PROJECT MANUAL
PINE BUSH CENTRAL SCHOOL DISTRICT
PINE BUSH 2025 CIP PHASE 2
1953 State Route 302, Circleville, NY 10919
Pine Bush, New York 12566
VOL 1: Divions 00-14

CPL PROJECT NO.:R25.17714.01
DOCUMENT DATE: July 8, 2026

NY ENGINEERING FIRM CERTIFICATE # 0021419

NEW YORK STATE EDUCATION DEPARTMENT CONTROL NUMBER(S):

Circleville Elementary School	44-04-01-06-0-009-018
Circleville Middle School	44-04-01-06-0-014-019
Pakanasink Elementary School	44-04-01-06-0-012-019
Pine Bush High School	44-04-01-06-0-007-032

ALTERATION WARNING STATEMENT
It is a violation of the New York State Education Law and the Commissioner's regulations for any person, unless acting under the direction of a licensed Architect, Engineer or Land Surveyor, to alter an item in any way. If an item bearing the seal of an Architect, Engineer or Land Surveyor is altered, the altering party shall affix to the item, their seal and the notation "ALTERED BY", followed by their signature and the date of such alteration, and a specific description of the alteration.

DESIGN PROFESSIONAL'S CERTIFICATION
The undersigned certifies that, to the best of his or her knowledge, information and belief, that the "Design conforms to all applicable provisions of the current New York State Uniform Fire Prevention Code, Building Code and Energy Conservation Code, the building standards of the New York State Education Department and that the “Work will involve known or suspected ACBM, and will be done in accordance with Industrial Code Rule #56".

ARCHITECT / ENGINEER	CONSTRUCTION MANAGER	OWNER
CPL	Pike Construction Services	Pine Bush Central School District
4 Crotty Lane	20 Loudonville Road	156 State Route 302
New Windsor, New York	Albany, NY 12204	Pine Bush, New York 12566
(845) 454-3411	1.800.264.PIKE	845-744-2031

This page intentionally left blank

SECTION 000110
TABLE OF CONTENTS

PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

000110 - Table of Contents
000115 - List of Drawing Sheets
001113 - Advertisement for Bids
002000 - Instructions to Bidders
002600 - Procurement Substitution Procedures
003126 - Existing Hazardous Material Information
003132 - Geotechnical Information
004010 - Form of Proposal - General Construction
004020 - Form of Proposal - Mechanical Construction
004030 - Form of Proposal - Electrical Construction
004040 - Form of Proposal - Plumbing Construction
004500 - Qualification Statement
005200 - A132 Agreement Cover (CMa)
006000 - Project Forms and Related Documents
006005 - Food Service Equipment Reference Documents
007200 - A232 General Conditions COver (CMa)
007343 - Wage Rate Requirements

SPECIFICATIONS

DIVISION 01 -- GENERAL REQUIREMENTS

011000 - Summary
011100 - Milestone Schedule
011200 - Multiple Contract Summary
012300 - Alternates
012500 - Substitution Procedures
012519 - Equivalents
012600 - Contract Modification Procedures
012900 - Payment Procedures
013100 - Project Management and Coordination
013200 - Construction Progress Documentation
013300 - Submittal Procedures
014000 - Quality Requirements
014119 - Regulatory Requirements (NYS ED)

014200 - References
014529 - Asbestos Test Laboratory Services (NYS)
014533 - Code-Required Special Inspections and Procedures
015001 - Temporary Facilities and Controls - Multiple Prime Contracts
016000 - Product Requirements
017300 - Execution
017700 - Closeout Procedures
017823 - Operation and Maintenance Data
017839 - Project Record Documents
017900 - Demonstration and Training

DIVISION 02 -- EXISTING CONDITIONS

020800 - Abatement Procedures
024119 - Selective Structure Demolition

DIVISION 03 -- CONCRETE

033000 - Cast-in-Place Concrete
035400 - Cast Underlayment

DIVISION 04 -- MASONRY

042000 - Unit Masonry

DIVISION 05 -- METALS

053100 - Steel Decking
055000 - Metal Fabrications
055133 - Metal Ladders

DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES

061000 - Rough Carpentry
062000 - Finish Carpentry

DIVISION 07 -- THERMAL AND MOISTURE PROTECTION

070150.71 - Rehabilitation Of Metal Roofing
075600.13 - Fluid-Applied Membrane Roofing, Insulated
076200.02 - Sheet Metal Flashing And Trim
077200 - Roof Accessories
078400 - Firestopping
079200 - Joint Sealants

DIVISION 08 -- OPENINGS

081113 - Hollow Metal Doors and Frames
083100 - Access Doors and Panels
084113 - Aluminum Framed Entrances and Storefronts

085113 - Aluminum Windows
086200 - Unit Skylights
087100 - Door Hardware
088000 - Glazing
088813 - Fire-Rated Glazing

DIVISION 09 -- FINISHES

090160 - Maintenance of Wood Athletic Flooring
090561 - Common Work Results for Flooring Preparation
092116 - Gypsum Board Assemblies
093000 - Tiling
095100 - Acoustical Ceilings
096500 - Resilient Flooring
096700 - Fluid-Applied Flooring
096813 - Tile Carpeting
096816 - Sheet Carpeting
097200 - Wall Coverings
098430 - Sound-Absorbing Wall and Ceiling Units
099000 - Painting and Coating

DIVISION 10 -- SPECIALTIES

102226 - Operable Partitions Acousti-Seal

DIVISION 12 -- FURNISHINGS

122400 - Window Shades
123600 - Countertops

DIVISION 13 -- SPECIAL CONSTRUCTION

131100 - Swimming Pools

DIVISION 22 -- PLUMBING

220500 - Common Work Results for Plumbing
220517 - Sleeves and Sleeve Seals for Plumbing Piping
220523 - General-Duty Valves for Plumbing Piping
220529 - Hangers and Supports for Plumbing Piping and Equipment
220553 - Identification for Plumbing Piping and Equipment
220719 - Plumbing Piping Insulation
221005 - Plumbing Piping
221006 - Plumbing Piping Specialties
221123 - Domestic Water Pumps
221429 - Sump Pumps

223000 - Plumbing Equipment

DIVISION 23 -- HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

230000 - General Provisions for Mechanical Work
230002 - Mechanical and Electrical Coordination
230130.51 - HVAC Air-Distribution System Cleaning
230513 - Common Motor Requirements for HVAC Equipment
230517 - Sleeves and Sleeve Seals for HVAC Piping
230519 - Meters and Gauges for HVAC Piping
230523 - General-Duty Valves for HVAC Piping
230529 - Hangers and Supports for HVAC Piping and Equipment
230550 - Wind Restraint for HVAC Systems
230553 - Identification for HVAC Piping and Equipment
230593 - Testing, Adjusting, and Balancing for HVAC
230713 - Duct Insulation
230716 - HVAC Equipment Insulation
230719 - HVAC Piping Insulation
230800 - Commissioning of HVAC
230913 - Instrumentation and Control Devices for HVAC
230923 - Direct-Digital Control System for HVAC
230934 - Variable-Frequency Motor Controllers
230993 - Sequence of Operations for HVAC Controls
232113 - Hydronic Piping
232114 - Hydronic Specialties
232123 - Hydronic Pumps
232300 - Refrigerant Piping
232513 - Water Treatment for Closed-Loop Hydronic Systems
233100 - HVAC Ducts and Casings
233300 - Air Duct Accessories
233423 - HVAC Power Ventilators
233600 - Air Terminal Units
233700 - Air Outlets and Inlets
236213 - Packaged Air-Cooled Refrigerant Compressor and Condenser Units
237313 - Modular Indoor Central-Station Air-Handling Units
237314 - Pool Dehumidification Units
237416 - Packaged Outdoor Central-Station Air-Handling Units
238200 - Convection Heating and Cooling Units

238300 - Radiant Heating and Cooling Units

DIVISION 26 -- ELECTRICAL

260010 - General Provisions for Electrical Work

260505 - Selective Demolition for Electrical Work

260519 - Low-Voltage Electrical Power Conductors and Cables

260526 - Grounding and Bonding for Electrical Systems

260529 - Hangers and Supports for Electrical Systems

260533.13 - Conduit for Electrical Systems

260533.16 - Boxes for Electrical Systems

260553 - Identification for Electrical Systems

260923 - Lighting Control Devices

262416 - Panelboards

262726 - Wiring Devices

265100 - Interior Lighting

DIVISION 27 -- COMMUNICATIONS

270000- Communications Installation Overview

271000 - Structured Cabling

DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY

284601 - Fire Alarm System (Existing System)

END OF SECTION 000110

This page intentionally left blank

SECTION 000115 - LIST OF DRAWING SHEETS

GENERAL

G000.2 COVER
S800.2 TYPICAL DETAILS
S900.2 STRUCTURAL NOTES
A800.2 TYPICAL DETAILS
I000.2 INTERIORS GENERAL
H000.2 HVAC SYMBOLS LEGENDS AND CONTRACTOR NOTES
H800.2 HVAC DETAILS
H801.2 HVAC DETAILS
H900.2 HVAC SCHEDULES
H901.2 HVAC SCHEDULES
E000.2 ELECTRICAL SYMBOLS, LEGENDS, NOTES AND SYSTEM DIAGRAMS
E800.2 ELECTRICAL DETAILS

CIRCLEVILLE ELEMNTARY SCHOOL

GENERAL

CES G001.2 FIRST FLOOR LIFE SAFETY PLAN
CES G002.2 SECOND FLOOR LIFE SAFETY PLAN

HAZARDOUS MATERIALS

CES HZ100.2 FIRST FLOOR ABATEMENT PLAN

STRUCTURAL

CES S201.2 BOILER ROOM ROOF NEW WORK FRAMING PLAN

ARCHITECTURAL

CES A100.2 FIRST FLOOR DEMOLITION PLAN
CES A101.2 SECOND FLOOR DEMOLTION PLAN
CES A102.2 DEMOLITION ROOF PLAN
CES A200.2 FIRST FLOOR NEW WORK PLAN
CES A201.2 SECOND FLOOR NEW WORK PLAN
CES A202.2 NEW WORK ROOF PLAN
CES A901.2 GLAZING SYSTEMS - TYPES & SCHEDULES

INTERIORS

CES I200.2 PARTIAL FIRST FLOOR FINISH PLAN- AREA A
CES I300.2 PARTIAL FIRST FLOOR PATTERN PLAN- AREA A

MECHANICAL

CES H100.2 FIRST FLOOR HVAC DEMOLITION PLAN- BOILER ROOM
CES H200.2 FIRST FLOOR HVAC NEW WORK PLAN- BOILER ROOM

PLUMBING

CES P000.2 PLUMBING LEGEND, NOTES AND SYSTEM DIAGRAMS
CES P001.2 FIRST FLOOR OVERALL PLUMBING PLAN
CES P700.2 ENLARGED KITCHEN PLUMBING DEMOLITION PLAN
CES P701.2 ENLARGED KITCHEN PLUMBING NEW WORK PLAN

ELECTRICAL

CES E002.2 FIRST FLOOR ELECTRICAL REFERENCE PLAN
CES E201.2 FIRST FLOOR POWER & SYSTEMS PLAN - ALTERNATE
CES E202.2 SECOND FLOOR POWER & SYSTEMS PLAN - ALTERNATE
CES E700.2 BOILER ROOM ELARGED ELECTRICAL PLANS

CIRCLEVILLE MIDDLE SCHOOL

GENERAL

CVMS G001.2 BASEMENT AND FIRST FLOOR LIFE SAFETY PLAN
CVMS G002.3 SECOND FLOOR LIFE SAFETY PLAN

STRUCTURAL

CVMS S201.2 LIBRARY & OFFICES ROOF NEW WORK FRAMING PLAN

ARCHITECTURAL

CVMS A100.2 PARTIAL BASEMENT AND FIRST FLOOR DEMOLITION PLNA - AREA A
CVMS A101.2 PARITIAL FIRST FLOOR DEMOLITION PLAN- AREA B
CVMS A102.2 SECOND FLOOR & PARTIAL PARTIAL ROOF DEMOLITION PLAN- AREA A
CVMS A200.2 PARTIAL BASEMENT& FIRST FLOOR NEW WORK PLANS- AREA A
CVMS A201.2 PARTIAL FIRST FLOOR NEW WORK PLAN- AREA B
CVMS A202.2 SECOND FLOOR & PARTIAL ROOF PLAN- AREA A
CVMS A600.2 PARTIAL FIRST & SECOND FLOOR REFLECTED CEILING PLANS- AREA A
CVMS A601.2 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN- AREA B
CVMS A900.2 GLAZING SYSTEMS - TYPES & SCHEDULES

INTERIORS

CVMS I200.2 FLOOR FINISH PLAN

MECHANICAL

CVMS H101.2 LIBRARY & OFFICES FIRST FLOOR HVAC DEMOLITION PLAN
CVMS H102.2 LIBRARY & OFFICES SECOND HVAC DEMOLITION PLAN
CVMS H103.2 LIBRARY & OFFICES ROOF HVAC DEMOLITION PLAN
CVMS H104.2 CAFETERIA HVAC PIPING DEMOLTION PLAN
CVMS H201.2 LIBRARY & OFFICES FIRST FLOOR DUCTOWORK NEW WORK PLAN
CVMS H202.2 LIBRARY & OFFICES SECOND FLOOR HVAC NEW WORK PLAN
CVMS H203.2 LIBRARY & OFFICES ROOF HVAC NEW WORK PLAN

CVMS H300.2 LIBRARY & OFFICES FIRST FLOOR PIPING NEW WORK PLAN
CVMS H301.2 CAFETERIA HVAC PIPING NEW WORK PLAN
CVMS H400.2 LIBRARY & OFFICES FIRST FLOOR RGD NEW WORK PLAN
CVMS H500.2 HVAC CONTROLS
CVMS H700.2 BOILER ROOM HVAC ENLARGED PLANS

PLUMBING

CVMS P000.2 PLUMBING SCHEDULES, DETAILS, SYMBOLS, LEGEND AND CONTRACTOR NOTES
CVMS P001.2 BASEMENT PLUMBING OVERALL PLAN
CVMS P701.2 BASMENT ENLARGED PLUMBING PLANS

ELECTRICAL

CVMS E101A.2 FIRST FLOOR ELECTRICAL DEMOLITION PLAN- AREA A
CVMS E101B.2 FIRST FLOOR ELECTRICAL DEMOLITION PLAN- AREA B
CVMS E102A.2 SECOND FLOOR ELECTRICAL DEMOLITION PLAN- AREA A
CVMS E103A.2 ROOF ELECTRICAL DEMOLITION PLAN- AREA A
CVMS E200.2 BASEMENT POWER & SYSTEMS AND ELEVATOR PLANS
CVMS E201A.2 FIRST FLOOR POWER & SYSTEMS PLAN - AREA A
CVMS E201B.2 FIRST FLOOR POWER & SYSTEMS PLAN- AREA B
CVMS E202A.2 SECOND FLOOR POWER & SYSTEMS PLAN- AREA A
CVMS E203A.2 ROOF POWER & SYSTEMS PLAN- AREA A
CVMS E301A.2 FIRST FLOOR LIGHTING PLAN- AREA A
CVMS E301B.2 FIRST FLOOR LIGHTING PLAN- AREA B
CVMS E302A.2 SECOND FLOOR LIGHTING PLAN- AREA A

PAKANASINK ELEMENTARY SCHOOL

GENERAL

PAK G001.2 FIRST FLOOR LIFE SAFETY PLAN
PAK G002.2 SECOND FLOOR LIFE SAFETY PLAN

HAZARDOUS MATERIALS

PAK HZ100.2 PARTIAL FIRST FLOOR ABATEMENT PLAN - AREA 1
PAK HZ101.2 PARTIAL FIRST FLOOR ABATEMENT PLAN - AREA 2
PAK HZ102.2 PARTIAL SECOND FLOOR ABATEMENT PLANS

STRUCTURAL

PAK S201.2 SECOND FLOOR AND ROOF NEW WORK FRAMING PLAN

ARCHITECTURAL

PAK A100.2 PARTIAL FIRST FLOOR DEMOLITION PLAN - AREA 1
PAK A101.2 PARTIAL FIRST FLOOR DEMOLITION PLAN - AREA 2
PAK A102.2 PARTIAL SECOND FLOOR DEMOLITION PLANS

PAK A103.2 PARTIAL DEMOLITION ROOF PLAN
PAK A200.2 PARTIAL FIRST FLOOR NEW WORK PLAN - AREA 1
PAK A201.2 PARTIAL FIRST FLOOR NEW WORK PLAN - AREA 2
PAK A202.2 PARTIAL SECOND FLOOR NEW WORK PLANS
PAK A203.2 PARTIAL NEW WORK ROOF PLAN
PAK A600.2 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN
PAK A900.2 DOOR PANELS, FRAME TYPES, GLAZING SYSTEM TYPES & SCHEDULES

INTERIORS
PAK I200.2 LEVEL 1 INTERIOR FINISH PLAN
PAK I300.2 GYM ATHLETIC FLOOR STRIPING PLAN

MECHANICAL
PAK H100.2 POOL AREA FIRST FLOOR HVAC DEMOLITION PLAN
PAK H101.2 POOL AREA SECOND FLOOR HVAC DEMOLITION PLAN
PAK H102.2 MUSIC ROOM HVAC DEMOLITION PLAN
PAK H200.2 POOL AREA FIRST FLOOR HVAC NEW WORK PLAN
PAK H201.2 POOL AREA SECOND FLOOR HVAC NEW WORK PLAN
PAK H202.2 POOL AREA ROOF HVAC NEW WORK PLAN
PAK H203.2 MUSIC ROOM HVAC NEW WORK PLAN
PAK H500.2 HVAC CONTROLS
PAK H501.2 HVAC CONTROLS
PAK H600.2 PAKANASNK POOL SYSTEM PIPING SCHEMATIC
PAK H700.2 POOL HVAC ENLARGED SECTION VIEWS AND DETAILS

PLUMBING
PAK P000.2 PLUMBING LEGEND, NOTES, & SYSTEM DIAGRAMS
PAK P001.2 FIRST FLOOR PLUMBING OVERALL PLAN
PAK P700.2 ENLARGED POOL EQUIPMENT PLUMBING PLANS

ELECTRICAL
PAK E100.2 POOL AREA FIRST FLOOR ELECTRICAL DEMOLITION PLAN
PAK E101.2 POOL AREA ROOF ELECTRICAL DEMOLITION PLAN
PAK E200.2 POOL AREA FIRST FLOOR ELECTRICAL NEW WORK PLAN
PAK E201.2 POOL AREA ROOF ELECTRICAL NEW WORK PLAN
PAK E300.2 POOL AREA FIRST FLOOR ELECTRICAL LIGHTING PLAN
PAK E700.2 ENLARGED POOL HOUSE ROOF ELECTRICAL DEMOLITION AND NEW WORK PLAN
PAK E900.2 ELECTRICAL SCHEDULESA ND PARTIAL ONE-LINE DIAGRAM

PINE BUSH HIGH SCHOOL
GENERAL
PBHS G001.2 BASEMENT & PARTIAL FIRST FLOOR LIFE SAFETY PLAN
PBHS G002.2 PARTIAL FIRST FLOOR LIFE SAFETY PLAN

PBHS G003.2 PARTIAL FIRST FLOOR & SECOND FLOOR LIFE SAFETY PLAN

GENERAL

PBHS S201.2 PARTIAL FIRST FLOOR NEW WORK PLAN - CAFETERIA & KITCHEN

ARCHITECTURAL

PBHS A100.2 PARTIAL FIRST FLOOR DEMOLITION PLAN - CAFETERIA & KITCHEN
PBHS A200.2 PARTIAL FIRST FLOOR NEW WORK PLAN - CAFETERIA & KITCHEN
PBHS A201.2 SERVING AREA & KITCHEN EQUIPMENT ENLARGED FLOOR PLAN
PBHS A202.2 PARTIAL ROOF PLAN - CAFETERIA & KITCHEN
PBHS A600.2 CAFETERIA & KITCHEN REFLECTED CEILING PLAN
PBHS A700.2 INTERIOR ELEVATIONS
PBHS A900.2 DOOR PANELS, FRAME TYPES, GLAZING SYSTEM TYPES & SCHEDULES

INTERIORS

PBHS I200.2 PARTIAL FIRST FLOOR FINISH PLAN - CAFETERIA & KITCHEN
PBHS I300.2 PARTIAL FIRST FLOOR PATTERN PLAN- CAFETERIA AND KITCHEN

MECHANICAL

PBHS H101.2 FIRST FLOOR CAFETERIA HVAC DEMOLITION PLAN
PBHS H201.2 FIRST FLOOR CAFETERIA HVAC NEW WORK PLAN

PLUMBING

PBHS P000.2 LEGENDS, NOTES AND SCHEMATICS
PBHS P101.2 FIRST FLOOR PLUMBING OVERALL PLAN
PBHS P701.2 PARTIAL FIRST FLOOR PLUMBING DEMOLITION PLAN
PBHS P702.2 PARTIAL FIRST FLOOR PLUMBING NEW WORK PLAN

ELECTRICAL

PBHS E101.2 CAFETERIA ELECTRICAL DEMOLITION PLAN
PBHS E201.2 CAFETERIA POWER AND SYSTEMS PLAN
PBHS E301.2 CAFETERIA LIGHTING PLAN

END OF SECTION 000115

This page intentionally left blank

ADVERTISEMENT FOR BIDS

The **Pine Bush Central School District** (Owner) invites bids for ***"2025 Capital Improvement Projects – Phase 2"*** which involves work at, **Pine Bush High School**, located at 118 NY-302 Pine Bush, NY 12566, **Circleville Elementary School**, located at 2000 State Route 302, Circleville, NY 10919, **Pakanasink Elementary School**, located at 1953 State Route 302, Circleville, NY 10919, **Circleville Middle School**, located at 1951 State Route 302, Circleville, NY 10919.

Separate sealed bids will be received at the Pine Bush Central School District, District Offices **(attention: Brian Weir, Assistant Superintendent for Business) 156 NY-302, Pine Bush, NY 12566**, until **1:00 pm (local time) on August 11th, 2026,** at which time they will be publicly opened and read aloud in the District Office Conference Room. Bids received after that time will not be accepted.

The Work of the project will be let for the following Contracts:

Contract 1	**General Construction**
Contract 2	**Mechanical**
Contract 3	**Electrical**
Contract 4	**Plumbing**

Complete digital sets of Bidding Documents may be obtained online as a download at www.cplteamplanroom.com under 'public projects' for a non-refundable reproduction fee of $100.00.

Complete sets of Bidding Documents, Drawings and Specifications, may be obtained from REVplans, 28 Church Street, Unit 7, Warwick, NY 10990 Tel: 1-877-272-0216, upon depositing the sum of $100.00 for each combined set of documents. Checks or money orders shall be made payable to Pine Bush Central School District. Plan deposit is refundable in accordance with the terms in the Instructions to Bidders to all submitting bids. Any bidder requiring documents to be shipped shall make arrangements with the printer and pay for all packaging and shipping costs.

Please note REVplans (CPLTEAMPLANROOM) is the designated location and means for distributing and obtaining all bid package information. Only those Contract Documents obtained in this manner will enable a prospective bidder to be identified as an official plan holder of record. The Provider takes no responsibility for the completeness of Contract Documents obtained from other sources. Contract Documents obtained from other sources may not be accurate or may not contain addenda that may have been issued.

All bid addenda will be transmitted to registered plan holders via email and will be available at www.cplteamplanroom.com. Plan holders who have paid for hard copies of the bid documents will need to make the determination if hard copies of the addenda are required for their use and coordinate directly with the printer for hard copies of addenda to be issued. There will be no charge for registered plan holders to obtain hard copies of the bid addenda.

A Bidder, upon 1) making the deposit required for the Bid Documents, 2) submitting a Proposal accompanied by a certified check or other security in accordance with the requirements contained in the plans and specifications and public advertisement for bids, and 3) returning the plans and specifications used by such Bidder in good condition within forty-five (45) days following the award of the Contract, or rejection of the Bid, shall have returned to them the full amount of the deposit for one copy of the plans and specifications.

Bidding Documents may be examined on or after **July 8th, 2026,** at www.cplteamplanroom.com.

A Pre-Bid Meeting/walk-through for this Project will be held on **July 16th, 2026,** starting at **9:30 am** at Pine Bush High School (Meet in the main lobby). Attendance by bidders is strongly recommended, but not required, for submitting a bid. Prospective bidders may visit the sites during normal business hours by appointment by contacting Daniel Wright (Construction Manager, Pike Construction Services, Inc.) at dwright@pikecs.com, (518) 371-5900.

Attention of the Bidder is particularly called to the Owner's sales tax exemption, the requirements as to conditions of employment to be observed, and the minimum wage rates to be paid under the Contract. In addition, the Bidding Documents contain detailed requirements for the qualification of Bidders. These include, among other things, rigid bonding and insurance requirements, financial statements, bank references, lists of lawsuits, arbitrations or other proceedings in which the Bidder has been named as a party, a statement of surety's intent to issue Performance and Payment Bonds, and a description of other projects of similar size and scope completed by the Bidder.

Bids shall be prepared as set forth in “INSTRUCTIONS TO BIDDERS”, enclosed in a sealed envelope bearing on its face the name and address of the Bidder and the title of the Work to which the bid enclosed relates.

Each Bidder shall deposit with its bid, security in an amount not less than five percent (5%) of the base bid in the form and subject to the conditions provided in the “INSTRUCTIONS TO BIDDERS.”

No Bidder may withdraw their bid within forty-five (45) days after the actual bid opening.

The Owner reserves the right to waive any and all informalities in, or to reject, any or all bids.

The Owner further reserves its right to disqualify Bidders for any material failure to comply with the “INSTRUCTIONS TO BIDDERS”.

Pine Bush Central School District
156 NY-302
Pine Bush, NY 12566

SECTION 002000
INSTRUCTIONS TO BIDDERS COVER

PART 1 GENERAL

2.01 SUMMARY

A. Attached is AIA Document A701-2018, Instructions to Bidders.
   1. AIA Document A701-2018 defines the conditions affecting award of contract and procedures with which Bidders must comply.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 002000

This page intentionally left blank

AIA® Document A701® – 2018

Instructions to Bidders

for the following Project:
(Name, location, and detailed description)
PINE BUSH CENTRAL SCHOOL DISTRICT
2025 CAPITAL IMPROVEMENT PROJECT – PHASE 2

Circleville Elementary School SED#44-04-01-06-0-009-018
2000 NY-302
Circleville, NY 10919

Circleville Middle School SED#44-04-01-06-0-014-019
1951 Rte 302
Circleville, NY 10919

Pakanasink Elementary School SED# 44-04-01-06-0-012-019
1953 Rte 302
Circleville, NY 10919

Pine Bush High School SED#44-04-01-06-0-007-032
118 State Route 302
Pine Bush, NY 12566

THE OWNER:
(Name, legal status, address, and other information)
Pine Bush Central School District
156 State Route 302
Pine Bush, NY 12566

THE ARCHITECT:
(Name, legal status, address, and other information)
CPL Architects, Engineers, and Landscape Architect, D.P.C. d/b/a CPL
4 Crotty Lane, Suite 104
New Windsor, NY 12553

THE CONSTRUCTION MANAGER:
(Name, legal status, and address)

Pike Construction Services, Inc.
20 Loudonville Road
Albany, NY 12204

ADDITIONS AND DELETIONS:
The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

TABLE OF ARTICLES

1 DEFINITIONS

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

2 BIDDER'S REPRESENTATIONS

3 BIDDING DOCUMENTS

4 BIDDING PROCEDURES

5 CONSIDERATION OF BIDS

6 POST-BID INFORMATION

7 PERFORMANCE BOND AND PAYMENT BOND

8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General and Supplementary (if required) Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, prior to the execution of the Contract, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- **.1** the Bidder has read and understands the Bidding Documents;
- **.2** the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- **.3** the Bid complies with the Bidding Documents;
- **.4** the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- **.5** the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- **.6** the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders may obtain Bidding Documents as designated in the Advertisement or Invitation to Bid, for the deposit sum and method stated therein.

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within thirty (30) days following the award of the Contract or rejection of the Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded. Good condition as used in this section means that the Bidding Documents must be returned bound as issued, legible, and containing only the markings necessary for bidding purposes.

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, shall consider federal, state and local Laws and Regulations and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing via email and shall be received by the Architect at least seven working days prior to the date for receipt of Bids, as follows:
(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

Via email to swisniewski@cplteam.com and dwright@pikecs.com

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner, including phone calls, shall not be binding, and Bidders shall not rely upon them.

§ 3.2.4 In the absence of an interpretation, correction or change, should the Drawings disagree in themselves or with the Specifications, the better quality, the costlier or the greater quantity of work or materials shall be estimated upon, and unless otherwise ordered, shall be furnished.
§ 3.2.5 Communications regarding the Bidding Documents shall be directed to Stephanie Wisniewski Telephone 845-926-5610

§ 3.2.6 EQUIVALENCY

§ 3.2.6.1 In the Specifications, if two or more kinds, types, brands, or manufacturers or materials are named, they shall be regarded as the required standard of quality, and are presumed to be equal. The Contractor may select one of these items or, if the Contractor desires to use any kind, type, brand, manufacturer or material other than those named in the Specification, he shall indicate in writing to the Architect and Owner, and prior to the award of Contract, what kind, type, brand or manufacturer is included in the Base Bid for the specified item. Refer to Specification 012519 Equivalents for Equivalent Certification Form.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents. The procedure for review and approval of Substitutions is set forth in the § 3.4.2 of the General and Supplementary (if required) Conditions of the Contract and in the General Requirements (Division 1 of the Specifications).

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents through the print method stated in the Advertisement or Invitation to Bid, or as follows:
(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

§ 4.1.6 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.7 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.1.8 In accordance with the Wicks Reform 2008, Single Prime Contracts for projects under the monetary threshold of $500,000 the bid shall be accompanied by a separate sealed envelope naming each subcontractor for the Plumbing, HVAC and Electrical work, with the amounts paid to each Contractor. This list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs. This list must be open for public inspection.

§ 4.1.9 Pursuant to New York State Department of Labor requirements for **State Public Work Projects or Covered Private Projects, Contractor to submit with the bid, a copy of their Contractor Certificate of Registration. Refer to DOL for details.**

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security: Bid Security of not less than five percent (5%) of the amount of the Bid, in the form of a Bid Bond or a Certified Check made payable to the Owner, or as follows.
(Insert the form and amount of bid security.)

§ 4.2.2 Except as stated under **§ 4.4.3,** the Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid, with the understanding that the Bid Security shall guarantee that the Bidder will not withdraw its Bid for a period of forty-five (45) days after the scheduled closing time for the receipt of Bids, and that if its Bid is accepted, the Bidder will enter into a formal contract with the Owner in accordance with the terms stated in the Bid and will furnish any required performance and payment bonds at the time required. In the event of the withdrawal of said Bid within the forty-five (45) day period or the failure of the successful Bidder to enter into the Contract with the Owner or the failure of the successful Bidder to furnish required performance and payment bonds at the time required, the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty, which represents the damage the Owner incurred as a result of the Bidder's default.In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The
Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginningdays after the opening of Bids, withdraw its Bid and request the return of its bid security.

Bid Securities shall be returned to all Bidders except the three (3) lowest Bidders within three (3) days after the formal opening of bids. The remaining Bid Securities will be returned within forty-eight (48) hours after the Owner and the successful Bidder have executed the Contract and executed performance and payment bonds have been approved by the Owner. If a Contract has not been executed or performance and payment bonds have not been approved by the Owner within forty-five (45) days after the scheduled closing time for the receipt of bids, then Bid Securities will be returned within three (3) days after the expiration of this forty-five (45) day period unless the Bid Security has been forfeited under § 4.2.2.

If Electronic submission is allowed, edit § 4.3.1 and § 4.3.2 accordingly.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as a paper Bid.

§ 4.3.2 Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within three days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be returned.

§ 4.4.4 *Unless a Bid error complies with* ***§ 4.4.3,*** *a Bid may not be modified, withdrawn or canceled by the Bidder for a period of forty-five (45) days following the time and date designated for the* receipt of Bids, and each Bidder agrees to this requirement in submitting a Bid.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner, for Public projects, to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, or other document included in the Project Manual, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

.1 a designation of the Work to be performed with the Bidder's own forces;
.2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
.3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 The Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 The cost of bonds shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall each be equal to one hundred (100) percent of the Contract Sum.
(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than ten (10) days after the Bidder has received notice of the acceptance of its Bidbut in no event shall bonds be delivered later than the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.

(Insert the complete AIA Document number, including year, and Document title.)

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.3 AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013.)

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

.7 Addenda:

Number	Date	Pages

.8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[ ] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017.)

[ ] The Sustainability Plan:

Title	Date	Pages

[ ] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents listed below:

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

ARTICLE 9: AUTODESK CONSTRUCTION CLOUD (ACC) REQUIREMENTS

9.1 After notification of selection for the award of the Contract, the Bidder shall be required to use Autodesk Construction Cloud (ACC) for the transfer of Submittals, Shop Drawings and RFI's. There will be no exceptions to this requirement. The contractor will be given a Login and Password free of charge.

ARTICLE 10: TAXES

10.1 The Owner is an organization, which is exempt from New York State and Local Sales and Use Taxes. Materials purchased for use in fulfilling this Contract will be exempt from New York Sales Tax. The Owner will provide the Contractor with a completed Form ST-119.1, Exempt Organization Certification. The Contractor shall present a copy of this Form and a completed Form ST-120.1, Contractor Exempt Purchase Certificate, to each supplier. Should sales tax be assessed, the Owner agrees that the Contract Sum shall be increased by the full amount of such assessment.

AIA Document A701 – 2018. Copyright © 1970, 1974, 1978, 1987, 1997 and 2018. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:23:52 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6b7b265b2a00c34c0c1c)

SECTION 002600
PROCUREMENT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 DEFINITIONS

A. Procurement Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Procurement and Contracting Documents, submitted prior to receipt of bids.

B. Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Contract Documents, submitted following Contract award. See Section 012500 "Substitution Procedures" for conditions under which Substitution requests will be considered following Contract award.

1.02 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.03 PROCUREMENT SUBSTITUTIONS

A. General: By submitting a bid, the Bidder represents that it's bid is based on materials and equipment described in the Procurement and Contracting Documents, including Addenda. Bidders are encouraged to request approval of qualifying substitute materials and equipment when the Specifications Sections list materials and equipment by product or manufacturer name.

B. Procurement Substitution Requests will be received and considered by Owner when the following conditions are satisfied, as determined by Architect; otherwise requests will be returned without action:

1. Extensive revisions to the Contract Documents are not required.
2. Proposed changes are in keeping with the general intent of the Contract Documents, including the level of quality of the Work represented by the requirements therein.
3. The request is fully documented and properly submitted.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 SUBMITTALS

A. Procurement Substitution Request: Submit to Architect. Procurement Substitution Request must be made in writing in compliance with the following requirements:

1. Requests for substitution of materials and equipment will be considered if received no later than 10 days prior to date of bid opening.
2. Submittal Format: Submit electronic copies of each written Procurement Substitution Request, using form bound in Project Manual.
   a. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specifications Sections and drawing numbers.
   b. Provide complete documentation on both the product specified and the proposed substitute, including the following information as appropriate:

1) Point-by-Point comparison of specified and proposed substitute product data, fabrication drawings and installation procedures.
2) Copies of current, independent third-party test data of salient product or system characteristics.
3) Samples where applicable or when requested by Architect.
4) Detailed comparison of significant qualities of the proposed substitute with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the work specified.
5) Material test reports from a qualified testing agency indicating and interpreting test results for compliace with requirements indicated.
6) Research reports, where applicable, evidencing compliance with building code in effect for Project, from ICC-ES.
7) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will become necessary to accommodate the proposed substitute.

B. Bidder, in submitting the Procurement Substitution Request, waives the right to additional payment or an extension of Contract Time because of the failure of the substitute to perform as represented in the Procurement Substitution Request.

C. Architect may request additional information or documentation necessary for evaluation of the Procurement Substitution Request. Architect will notify all bidders of acceptance of the proposed substitute by means of an Addendum to the Procurement and Contracting Documents.

D. Architect's approval of a substitute during bidding does not relieve Contractor of the responsbility to submit required shop drawings and to comply with all other requirements of the Contract Documents.

END OF SECTION 002600

SECTION 003126
EXISTING HAZARDOUS MATERIAL INFORMATION

PART 1 GENERAL

1.01 EXISTING HAZARDOUS MATERIAL INFORMATION

A. This Section with its referenced attachments is part of the Procurement and Contracting Requirements for the Pine Bush Central School District, Pine Bush Central School District 2025 CIP Phase 2- Roofing Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.

B. An existing asbestos, lead based paint, PCB report prepared by QuEST (Quality Environmental Solutions & Technologies, Inc., dated February 27, 2026, is appended to this Document.

C. Related Requirements:
   1. Revise list below to suit Project. Revise below if Work includes remediation of hazardous materials.
      a. Section 002000 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.
      b. Section 024119 "Selective Structure Demolition" for notification requirements if materials suspected of containing hazardous materials are encountered.
      c. Section 028213 “Asbestos Abatement” for procedures on the handling, removal and disposal of asbestos containing materials

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION 003126

This page intentionally left blank

QuES&T

Quality Environmental Solutions & Technologies, Inc.

PRE-RENOVATION ENVIRONMENTAL SURVEY REPORT FOR ASBESTOS-CONTAINING MATERIALS (ACM) LEAD-BASED PAINT (LBP) POLYCHLORINATED BIPHENYL (PCB)

Prepared for:

CLARK PATTERSON LEE
26 IBM Road
Poughkeepsie, NY 12601

at

PINE BUSH CSD
2025 CIP PHASE 1C & 2

Circleville Elementary School
2000 Route 302, Circleville, NY 10919

EJ Russell Elementary School
78 Holland Avenue, Pine Bush, NY 12566

Pakanasink Elementary School
1953 State Route 302, Circleville, NY 10919

Pine Bush Elementary School
21 Ulsterville Road, Pine Bush, NY 12566

Circleville Middle School
1951 Route 302, Circleville, NY 10919

Crispell Middle School
77 Maple Avenue, Pine Bush, NY 12566

Pine Bush High School
118 State Route 302, Pine Bush, NY 12566

February 27th, 2026
QuES&T Project #25-6919 & 25-7081

1376 Route 9, Wappingers Falls, NY 12590 Phone (845) 298-6031 Fax (845) 298-6251
NYS MWBD MBE Cert # 49952-2006 NYSUCP DBE Certified NJUCP DBE Certified www.Qualityenv.com

QuES&T

Quality Environmental Solutions & Technologies, Inc.

February 27th, 2026

Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

ATTN: Kate Range

Via E-mail: mailto:Krange@cplteam.com

Re: Pine Bush CSD - 2025 CIP PHASE 1C & 2 @ 7 Schools
Pre-Renovation Environmental Survey for Asbestos, Lead, and PCB's
QuES&T Project #25-6919 & 25-7081

Dear Ms. Range,

Attached is the Pre-Renovation Inspection Report for Asbestos-containing Materials (ACM) and Lead-Based Paints (LBP) identified throughout areas included within the above-referenced location(s) by **Qu**ality **E**nvironmental **S**olutions **& T**echnologies, Inc. **(QuES&T)**. The inspection included visual assessment of the location in question, and representative sampling, as required, in compliance with the requirements of all applicable federal, state, and local regulations.

The attached report summarizes the inspection protocol and inspection results for your review. **QuES&T** believes this report accurately reflects the material condition existing in the functional spaces at the time of our inspection.

Should you wish to discuss this matter further or require additional information concerning this submittal, please contact us at (845) 298-6031. **QuES&T** appreciates the opportunity to assist Clark Patterson Lee in the environmental services area.

Sincerely,

Dillon Stamper
Field Technician
NYS/AHERA Inspector/Project Monitor
Cert. #AH 25-6LUH4-SHAB
Niton-Certified XRF Technician

TABLE OF CONTENTS

EXECUTIVE SUMMARY **Page 1 - 2**

1.0 INTRODUCTON **Page 2**

2.0 ASBESTOS SURVEY **Page 2 - 4**

2.1 Inspection Summary

2.2 Sample Collection & Analytical Procedures

2.3 Identified Asbestos-containing Materials (ACM)

3.0 LEAD-BASED PAINT SURVEY **Page 5 - 6**

3.1 Inspection Summary

3.2 Identified Lead-based Paints (LBP)

4.0 PCB SURVEY **Page 6 - 7**

4.1 Inspection Summary

4.2 Identified PCBs

5.0 RECOMMENDATIONS **Page 7 - 8**

5.1 Asbestos

5.2 Lead

5.3 PCB

6.0 DISCLAIMERS **Page 8 - 9**

Table I **Identified Asbestos-containing Materials (ACM)** **Page 4**

Table II **Identified Lead-based Paints (LBP)** **Page 5**

Table III **Summation of Collected PCB Caulk Sample(s)** **Page 6 - 7**

Appendix A **Asbestos Sample Locations Drawings**

Appendix B **Sample Location Drawings & Analytical Data**

Appendix C **XRF Analytical Data**

Appendix D **PCB Analytical Data**

Appendix E **Laboratory, Company & Personnel Licenses & Certifications**

EXECUTIVE SUMMARY

Quality **E**nvironmental **S**olutions & **T**echnologies, Inc. (**QuES&T**) was retained by Clark Patterson Lee to conduct a Pre-Renovation Survey for the presence of Asbestos-containing Materials (ACM), Lead-based Paints (LBP), and Polychlorinated Biphenyls (PCBs) in support of the 2025 CIP Phase 1C and Phase 2 for Pine Bush Central School District at Circleville Elementary School, located at 2000 Route 302, Circleville, NY 10919; EJ Russell Elementary School located at 78 Holland Avenue, Pine Bush, NY 12566; Pakanasink Elementary School located at 1953 State Route 302, Circleville, NY 10919; Pine Bush Elementary School located at 21 Ulsterville Road, Pine Bush, NY 12566; Circleville Middle School located at 1951 Route 302, Circleville, NY 10919; Crispell Middle School located at 77 Maple Avenue, Pine Bush, NY 12566; and Pine Bush High School located at 118 State Route 302, Pine Bush, NY 12566.

The survey included a visual inspection/assessment for suspect hazardous material(s), as detailed above, which are likely to be affected by planned demolition/renovations/construction activities. Inspection and sampling was limited to areas/materials slated for demolition/renovation/construction.

The survey was conducted by **QuES&T** personnel on August 18th & 19th, 2025, December 10th & 15th, 2025, and January 13th & 15th, 2026. Asbestos, Lead, and PCB inspections and/or sampling were conducted by NYSDOL Asbestos Inspector(s) Jessica Lopez (Cert. #AH 25-6AJ9Y-SHAB), Abraham Catellanos (Cert. #AH 25-6ZVXY-SHAB), Caroline Annesi (Cert. #AH 25-6TL1I-SHAB), Damon Perron (Cert. #AH 25-6HBGJ-SHAB), De'Shawn Smith (Cert. #AH 25-6ZTJ0-SHAB), and Dillon Stamper (Cert. #AH 25-6LUH4-SHAB). The lead survey was conducted by Niton Certified XRF Technician Abraham Castellanos (Cert. #AH 25-6ZVXY-SHAB), utilizing X-Ray Fluorescence Technology (XRF).

ASBESTOS
Laboratory analysis and/or existing sampling data indicated the following materials as Asbestos-containing Materials (greater than 1% asbestos)

(Refer to Table I & Appendix A for details and locations)

LEAD
Based on review of the data generated by the Viken Pb200e Serial #3553 XRF Spectrum Analyzer, the following surfaces within the scope of work were identified as lead-based as defined by HUD/EPA (equal to or in excess of 1.0 milligram per square centimeter)

(**Refer to Table II & Appendix C for details**):

It should be noted that several components tested did in fact contain minimal lead-levels below the EPA threshold level of 1.0 mg/sq. cm for classification as Lead-Based Paint (LBP) and are considered lead-containing coatings by the OSHA Regulation, "Lead Exposure in Construction" (29 CFR 1926.62). OSHA does not recognize a minimum limit for lead concentrations in paint for the purposes of disturbance. Monitoring of workers performing demolition/cleaning/disturbance of painted surfaces shall be completed to document personnel occupational exposure. Items containing any amount of lead concentration are considered lead-containing coatings per 29 CFR 1926.62, OSHA Lead Exposure in Construction.

PCB

- Materials are considered to be hazardous if they contain greater than fifty (50) parts per million (ppm) of PCBs based on a sum of all Arocolors. Laboratory analysis indicates that the following materials are hazardous based on PCB concentrations of greater than 50 ppm

(**Refer to Table III for complete inventory of materials and quantities**):

1.0 INTRODUCTION:

Quality **E**nvironmental **S**olutions **&** **T**echnologies, Inc. **(QuES&T)** performed a Pre-Renovation Environmental Survey for the presence of Asbestos-containing Materials (ACM), Lead-based Paint (LBP), and Polychlorinated Biphenyls (PCBs) in conformance with the requirements of all applicable federal, state, and local regulations. The survey included a visual inspection/assessment, and representative sampling of suspect hazardous materials, as required, throughout accessible interior and exterior locations to be affected by the 2025 CIP Phase 1C and Phase 2 for Pine Bush Central School District at Circleville Elementary School, located at 2000 Route 302, Circleville, NY 10919; EJ Russell Elementary School located at 78 Holland Avenue, Pine Bush, NY 12566; Pakanasink Elementary School located at 1953 State Route 302, Circleville, NY 10919; Pine Bush Elementary School located at 21 Ulsterville Road, Pine Bush, NY 12566; Circleville Middle School located at 1951 Route 302, Circleville, NY 10919; Crispell Middle School located at 77 Maple Avenue, Pine Bush, NY 12566; and Pine Bush High School located at 118 State Route 302, Pine Bush, NY 12566.

Certified **QuES&T** personnel, Caroline Annesi, Damon Perron, Jessica Lopez, Abraham Castellanos, De'Shawn Smith, and Dillon Stamper conducted field inspection(s) on August 18th & 19th, 2025, December 10th & 15th, 2025, and January 13th & 15th, 2026. The inspection scope was established based on review of work scope drawings provided by Clark Patterson Lee.

QuES&T established functional spaces based either on physical barriers (i.e. walls, doors, etc.) or homogeneity of material. Within each functional space identified, a visual inspection was performed using reasonable care and judgment, to identify and assess location, quantity, friability, and/or condition, as applicable, of all accessible installed building materials observed at the affected portion of the building/structure.

Limited localized demolition of building surfaces was performed, as part of this survey, to access concealed surfaces. No disassembly of installed equipment was conducted as part of this inspection. ACM, LBP, and PCBs concealed within structural components and equipment interiors or that is accessible only through extensive mechanical or structural demolition may not have been identified as part of this survey.

Homogenous material types were established based on appearance, color and texture. The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. The findings and conclusions of this report are not meant to be indicative of future conditions at the site and does not warrant against conditions that were not evident from visual observations or historical information obtained from others.

2.0 ASBESTOS SURVEY:

2.1 INSPECTION SUMMARY

QuES&T performed a Pre-Renovation Survey, in conformance with Title 12 NYCRR Part 56-5.1, for Clark Patterson Lee in support of a 2025 CIP Phase 1C and Phase 2 for Pine Bush Central School District. The survey included a visual inspection / assessment for Presumed Asbestos-containing Materials (PACM) and suspect miscellaneous Asbestos-containing Materials (ACM) throughout accessible interior locations to be affected by future renovations, as detailed above.

Limited localized demolition of building surfaces was performed, as part of this survey, to access concealed surfaces. No disassembly of installed equipment was conducted as part of this inspection. ACM concealed within structural components and equipment interiors or that is accessible only through extensive mechanical or structural demolition may not have been identified as part of this survey. When any construction activity, such as demolition, remodeling, renovation or repair work, reveals PACM or suspect miscellaneous ACM that has not been identified, as part of this survey, all construction activities shall cease in the affected area.

The survey included both visual inspection of accessible spaces and representative sampling of suspect building materials for ACM. Samples collected were analyzed by a laboratory approved under the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). Samples were analyzed in the laboratory by Polarized Light Microscopy (PLM), Polarized Light Microscopy-NOB (PLM-NOB) and/or Quantitative Transmission Electron Microscopy (QTEM), as required. Sample collection and laboratory analysis were conducted in compliance with the requirements of Title 12 NYCRR Part 56-5.1, 29 CFR 1926.1101 and standard EPA & OSHA accepted methods. Samples consisting of multiple layers were separated and analyzed independently in the laboratory.

2.2 SAMPLE COLLECTION & ANALYTICAL PROCEDURES

Representative bulk sampling was performed on suspect building materials for laboratory analysis using PLM, PLM-NOB, and/or QTEM. The following is a summary of installed building materials sampled:

- Wall Materials – Sheetrock, Joint Compound, CMU, Mortar, Acoustical Wall Tile, Covebase Molding, Mastic, Plaster, Brick, Adhesive, .
- Flooring Materials – Cementitious Slab, Mastic, Floor Tile, Concrete, Quarry Tile, Grout, Rubber Floor, Adhesive.
- Ceiling Materials – Ceiling Tile, Insulated Backing, Acoustical Ceiling Tile.
- Thermal System Insulation Materials (TSI) – Pipe Insulation, Mudded Joint Packing, Insulation, Flue Packing, Duct Insulation, Packing.
- Miscellaneous Materials – Duct Sealant, Glue Dab, Vibration Dampener, Spray on Fireproofing, Tar Paper Vapor Barrier, Waterproofing Tar, Fire Stop, Gasket, Pin Mastic, Cementitious Sill, Caulk, Glazing.
- Roofing Materials – Gypsum, Fiber Board, Tar Paper, ISO Foam, EPDM, Adhesive, Rubber Membrane, Tar, Foam Board, Concrete, Tectum, Insulation, Mastic, Spray Adhesive, Perlite

Certified **QuES&T** personnel (Appendix E), Jessica Lopez (Cert. #AH 25-6AJ9Y-SHAB), Abraham Catellanos (Cert. #AH 25-6ZVXY-SHAB), Caroline Annesi (Cert. #AH 25-6TL1I-SHAB), Damon Perron (Cert. #AH 25-6HBGJ-SHAB), De'Shawn Smith (Cert. #AH 25-6ZTJ0-SHAB), and Dillon Stamper (Cert. #AH 25-6LUH4-SHAB) performed visual assessments throughout interior and exterior construction areas. A total of Six Hundred Eighty-Seven **(687)** samples of installed and accessible

suspect building materials were analyzed by a laboratory approved under the NYSDOH ELAP. Two Hundred Eighty-Eight (**288**) samples were analyzed using Polarized Light Microscopy (PLM) for friable materials; Two Hundred Ninety-Two (**292**) samples were analyzed using Polarized Light Microscopy (PLM-NOB) for non-friable organically bound materials; and One Hundred Seven (**107**) samples were analyzed by Confirmatory-QTEM following negative-determinations using PLM-NOB protocols.

2.3 IDENTIFIED ASBESTOS-CONTAINING MATERIALS (ACM)

TABLE I: IDENTIFIED ACM
Pine Bush CSD
Circleville Elementary School - 2000 Route 302, Circleville, NY 10919
EJ Russell Elementary School - 78 Holland Avenue, Pine Bush, NY 12566
Pakanasink Elementary School – 1953 NY-302, Circleville, NY 10919
(Refer to Appendix A for details)

KEY: **ACM** = Materials containing greater than 1% of asbestos;
LF = Linear Feet; **SF** = Square Feet; **PACM** = Presumed Asbestos-containing Materials;
Friable = ACM capable of being released into air, and which can be crumbled, pulverized, powdered, crushed or exposed by hand-pressure.

Location	Material	Approximate Quantity	Friable?	Condition
Circleville Elementary School - 2000 Route 302, Circleville, NY 10919				
Cafetorium, Wall, Acoustical Wall Tile to CMU	Glue Dab	600 SF	Yes	Good
Cafetorium 156, Storage Room 156A, OT/PT 120, Floor	Floor Tile & Mastic	2,750 SF	No	Good
EJ Russell Elementary School - 78 Holland Avenue, Pine Bush, NY 12566				
Kitchen/Cafeteria Storage Room, On Metal Fitting	Mudded Joint Packing[1]	8 SF	Yes	Good
Cafeteria Roof, Equipment Cut, On Wood Curb	Tar	20 SF	No	Good
PACM Boiler Interiors	(2) Boilers	300 SF/Boiler	Yes	Good
Pakanasink Elementary School – 1953 NY-302, Circleville, NY 10919				
Lower Cafeteria Roof, Field, Below Gypsum, On Metal	Tar Paper	200 SF	No	Good
Throughout School, Windowsills, Black	Cementitious Sills	350 SF	No	Good
Mechanical Room 002, On HVAC Equipment	Vibration Dampener	100 SF	No	Good

Note: 1. Locations and quantities of identified ACM are limited to areas potentially affected by future renovation activities. Functional spaces/components with identified ACM may exist in other spaces not included in this scope of work.

3.0 LEAD SURVEY:

3.1 INSPECTION SUMMARY

QuES&T conducted a Limited Pre-Renovation Lead Survey, utilizing X-Ray Fluorescence Technology (XRF), throughout specific interior areas for the 2025 CIP Phase 1C and Phase 2 for Pine Bush Central School District. The survey was limited to specific accessible, representative building components & immovable objects, potentially affected by scheduled renovation/construction activities.

Niton-certified XRF Technician(s) Jessica Lopez (Cert. #AH 25-6AJ9Y-SHAB), Abraham Catellanos (Cert. #AH 25-6ZVXY-SHAB), Caroline Annesi (Cert. #AH 25-6TL1I-SHAB), Damon Perron (Cert. #AH 25-6HBGJ-SHAB), De'Shawn Smith (Cert. #AH 25-6ZTJ0-SHAB), and Dillon Stamper (Cert. #AH 25-6LUH4-SHAB) of **QuES&T**, collected a total of Seventy-Six **(76)** samples (including calibrations) across the inspection dates August 18th & 19th, 2025, December 10th & 15th, 2025.

3.2 IDENTIFIED LEAD-BASED PAINT(S) (LBP)

Based on review of the data generated by the Viken Pb200e Serial #3553 XRF Spectrum Analyzer, the following surfaces tested were identified as lead-based as defined by HUD/EPA (equal to or in excess of 1.0 milligram per square centimeter):

TABLE II: IDENTIFIED LEAD-BASED PAINT
Pine Bush CSD
EJ Russell Elementary School - 78 Holland Avenue, Pine Bush, NY 12566
Crispell Middle School – 77 Maple Avenue, Pine Bush, NY 12566
(Refer to Appendix C for details)

Location	LBP Component	Substrate	Color	LBP Condition	Approximate Quantity
EJ Russell Elementary School - 78 Holland Avenue, Pine Bush, NY 12566					
Boiler Room, Stairs	Riser & Tread	Metal	Grey	Fair	75 SF
Crispell Middle School – 77 Maple Avenue, Pine Bush, NY 12566					
Stage & Girls Locker Room	Structural Beam	Metal	Tan/Red	Fair	100 SF
Pakanasink Elementary School – 1953 NY-302, Circleville, NY 10919					
Cafeteria	Window Frames	Metal	Black	Fair	75 SF
Hallways	Window Frames	Metal	Brown	Fair	250 SF
NOTE: Locations and quantities of identified LBP's are limited to areas potentially affected by future renovation activities. Surfaces/components with LBP's may exist in other spaces not included in this scope of work.					

It should be noted that several components tested did in fact contain minimal lead-levels below the EPA threshold level of 1.0 mg/sq. cm for classification as Lead-Based Paint (LBP) and are considered lead-containing coatings by the OSHA Regulation, "Lead Exposure in Construction" (29 CFR 1926.62). OSHA does not recognize a minimum limit for lead concentrations in paint for the purposes of disturbance. Monitoring of workers performing demolition/cleaning/disturbance of painted surfaces shall

be completed to document personnel occupational exposure. Items containing any amount of lead concentration are considered lead-containing coatings per 29 CFR 1926.62, OSHA Lead Exposure in Construction.

4.0 POLYCHLORINATED BIPHENYL (PCB) SURVEY:

4.1 INSPECTION SUMMARY

QuES&T conducted a Limited Pre-Construction Survey for the presence of PCBs in support of the NYSDOH Construction Project at Health Alliance's Mary's Avenue Campus, located at 105 Mary's Avenue, Kingston, NY 12401. Sampling was limited to representative, homogenous, exterior caulks potentially affected by renovations as detailed in work scope drawings, and as described by Health Alliance representatives during the pre-inspection walkthrough meeting.

Dillon Stamper and Damon Perron of **QuES&T** collected a total of Six **(6)** bulk samples on December 10th & 15th, 2025, consisting of Three (3) exterior caulk samples. Bulk samples were properly packaged and forwarded to York Analytical Laboratories, Inc., in Stratford, CT for analysis using method SW846-8082A. Copies of the analytical results are contained within attached appendices for review.

4.2 IDENTIFIED PCBS

A summation of samples collected and associated results are as follows:

TABLE III: SUMMATION OF COLLECTED PCB CAULK SAMPLES
Pine Bush CSD
Circleville Elementary School – 2000 Route 302, Circleville, NY 10919
Pine Bush High School – 156 NY-302, Pine Bush, NY 12566
Pakanasink Elementary School – 1953 NY-302, Circleville, NY 10919
(Refer to Appendix D for details)

Sample #	Location/Description	Material Matrix	Color	Substrate	Applicable Regulatory Standards (Most Stringent)	Classification Result Upon Lab analysis
Inspection 12-10-25: Pakanasink Elementary School – 1953 NY-302, Circleville, NY 10919						
7081-PCB-01	Exterior, Windows	Caulk	Grey	Metal/Brick	USEPA 40 CFR 761	**Not Detected** at The Reporting Limit (RL) or above.
Inspection 12-15-25: Circleville Elementary School – 2000 Route 302, Circleville, NY 10919						
7081-CES-PCB-01	Exterior, First Floor Window	Caulk	Black	Metal/Brick	USEPA 40 CFR 761	**Not Detected** at The Reporting Limit (RL) or above.
7081-CES-PCB-02	Interior, Second Floor Window, Staircase 2	Caulk	Black	Metal/CMU	USEPA 40 CFR 761	**Not Detected** at The Reporting Limit (RL) or above.

Pine Bush High School – 156 NY-302, Pine Bush, NY 12566						
7081-PHS-PCB-01	Exterior, Cafeteria, First Floor Window	Caulk	Red	Metal/CMU	USEPA 40 CFR 761	**Not Detected** at The Reporting Limit (RL) or above.
7081-PHS-PCB-02	Interior, Cafeteria, First Floor Window	Caulk	Red	Wood/Metal	USEPA 40 CFR 761	**Not Detected** at The Reporting Limit (RL) or above.
7081-PHS-PCB-03	Interior, Cafeteria, First Floor Window	Glazing/Caulk	Black	Glass/Metal	USEPA 40 CFR 761	**Not Detected** at The Reporting Limit (RL) or above.

5.0 RECOMMENDATIONS:

5.1 ASBESTOS

All construction personnel as well as individuals who have access to locations where asbestos containing materials (ACM) exists should be informed of its presence and the proper work practices in these areas. Conspicuous labeling of all ACM is suggested to ensure personnel is adequately informed. Personnel should be informed not to rest, lean or store material or equipment on or near these surfaces and not to cut, saw, drill, sand or disturb ACM. All removal, disturbance, and repair of ACM should be performed in compliance with Title 12 NYCRR Part 56 by persons properly trained to handle ACM. Facility custodial and maintenance personnel should receive training commensurate with their work activities; as defined in 29 CFR 1910.1001.

As specified in Title 12 NYCRR Part 56-5.1 (h) and (i), "If the building/structure asbestos survey finds that the portion of the building/structure to be demolished, renovated, remodeled, or have repair work contains ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material, which is impacted by the work, the owner or the owner's agent shall conduct, or cause to have conducted, asbestos removal performed by a licensed asbestos abatement contractor in conformance with all standards set forth in this Part. All ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material impacted by the demolition, renovation, remodeling or repair project shall be removed as per this Part, prior to access or disturbance by other uncertified trades or personnel. No demolition, renovation, remodeling or repair work shall be commenced by any owner or the owner's agent prior to the completion of the asbestos abatement in accordance with the notification requirements of this Part…All building/structure owners and asbestos abatement contractors on a demolition, renovation, remodeling, or repair project, which includes work covered by this part, shall inform all trades on the work site about PACM, ACM, asbestos material and suspect miscellaneous ACM…Bids may be advertised and contracts awarded for demolition, remodeling, renovation, or repair work, but no work on the current intermediate portion of the project shall commence on the demolition, renovation, remodeling or repair work by any owner or agent prior to completion of all necessary asbestos abatement work for the current intermediate portion of the entire project, in conformance with all standards set forth in this Part."

Prior to conducting demolition or construction work at the building, all ACM affected/impacted by such activities shall be removed utilizing a licensed asbestos abatement contractor and NYSDOL/EPA/NYC certified personnel prior to construction/demolition activities. All work conducted should be in accordance with all legal requirements, including but not limited to U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], New York State Industrial Code Rule 56 Asbestos Regulations (ICR 56) and Chapter 1 of Title 15 of the

Rules of the City of New York Regulations, as applicable. Advance notification of the asbestos project to the USEPA, NYSDOL, and NYCDEP may be required.

All suspect building materials not sampled during this survey should be considered ACM until these materials are sampled and analyzed for ACM in the laboratory. Concealed ACM: In addition to the ACMs identified at the site, there is a possibility that concealed ACM may exist at the subject facility. As such, if any concealed suspect ACM is encountered during future construction related activities, the work should immediately stop. Prior to resuming the work, the suspect ACM should either be 1) Sampled by an appropriately-certified asbestos professional and submitted to an Approved NYSDOH ELAP laboratory for asbestos analysis or 2) Presumed to be ACM (PACM) and removed by a licensed asbestos abatement contractor for disposal in accordance with all applicable regulations.

5.2 LEAD

In addition to any identified Lead-based Paints (LBP), several components tested did in fact contain minimal lead-levels below the EPA threshold level of 1.0 mg/sq. cm for classification as LBP and are considered lead-containing coatings by the OSHA Regulation, "Lead Exposure in Construction" (29 CFR 1926.62). OSHA does not recognize a minimum limit for lead concentrations in paint for the purposes of disturbance. Monitoring of workers performing demolition/cleaning/disturbance of painted surfaces shall be completed to document personnel occupational exposure. Items containing any amount of lead concentration are considered lead-containing coatings per 29 CFR 1926.62, OSHA Lead Exposure in Construction.

Activities involving the disturbance of LBP in homes, child-occupied facilities, and/or pre-schools built before 1978 must follow the requirements outlined by EPA regulations (40 CFR 745).

In areas where demolition and/or renovations are to occur and lead is present, the demolition debris waste stream should be further analyzed during segregation for compliance with EPA regulations to ensure proper disposal. TCLP testing can be performed prior to waste segregation, but results may not be indicative of the actual waste streams produced during demolition.

5.3 PCB CAULK

Materials are considered to be hazardous if they contain greater than fifty (50) parts per million (ppm) PCBs based on the sum of all Aroclors. All materials containing greater than 50 ppm PCBs potentially impacted by proposed renovations should be abated in accordance with any applicable federal, state, and/or local codes, rules, and regulations.

6.0 DISCLAIMERS

The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. Conditions may have changed since that time and the findings and conclusions of this report are not meant to be indicative of future conditions at the Site. This report does not warrant against conditions that were not evident from visual observations or historical information obtained, or conditions that could only be determined by physical sampling or other intrusive investigation techniques that are outside the proposed scope of work.

It should be noted that the information contained within this report is based solely upon site observations and the results of laboratory analysis for samples collected by **QuES&T.** These observations and results are time dependent, subject to changing site conditions and revisions to Federal, State and Local

regulations. **QuES&T** warrants that these findings have been promulgated after being prepared in general accordance with generally accepted practices in the abatement industries. **QuES&T** also recognizes that inspection laboratory data is not usually sufficient to make all abatement and management decisions.

Due to the potential for concealed Asbestos-containing Materials (ACM) or other regulated materials, this report should not be construed to represent all ACM or regulated materials within the site(s). All quantities of ACM or other regulated materials identified, and all dimensions listed within this report are approximate and should be verified On-site.

This inspection report is not intended to be used as the sole basis for soliciting pricing for regulated materials abatement. An abatement plan, specification, drawing and/or Variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project. The Linear and/or Square Footages (LF / SF) listed within this Report are only approximates. Abatement Contractor(s) are required to visit the building(s) in order to take actual field measurements within each listed location.

Appendix A:
ASBESTOS SAMPLE LOCATION DRAWINGS

SAMPLE LOCATION KEY	
	ACM Floor Tile & Mastic
	ACM Glue Dab

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 2/27/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

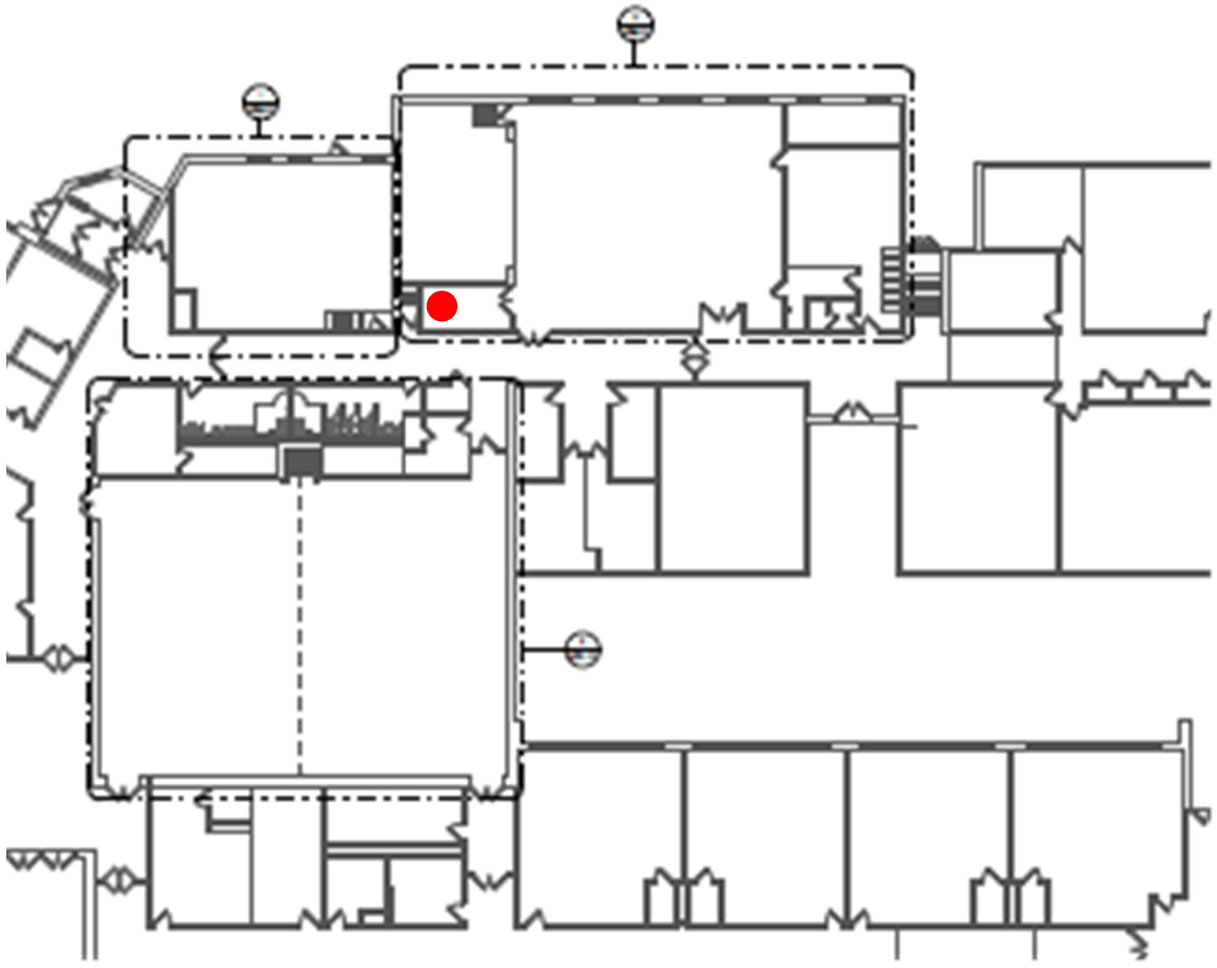
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Elementary School
2000 Route 302
Circleville, NY 10919

ACM Locations

ACM-01



ACM LOCATION KEY	
●	ACM Mudded Joint Packing

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/5/2025	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

EJ Russell Elementary School
78 Holland Avenue
Pine Bush, NY 12566

ACM Locations

ACM - 02

First Floor

Second Floor

ACM LOCATION KEY	
	ACM Windowsills
	ACM Vibration Dampeners

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 2/26/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 26-7081	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

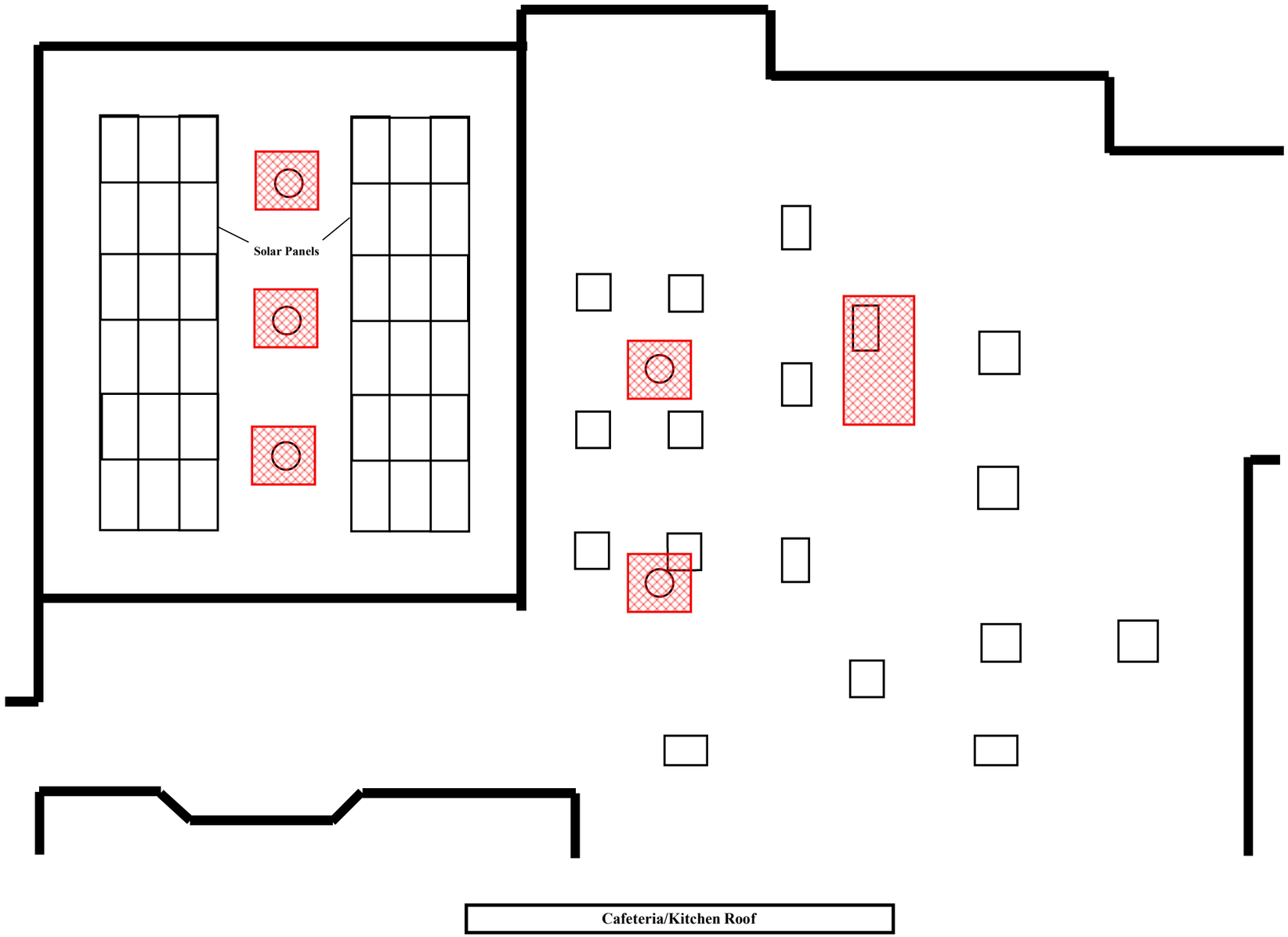
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pakanasink Elementary School
1953 NY-302
Circleville, NY 10919

Inspection: 12-10-25
Asbestos Containing Material Locations

ACM - 03



ACM Key	
	Tar Paper

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

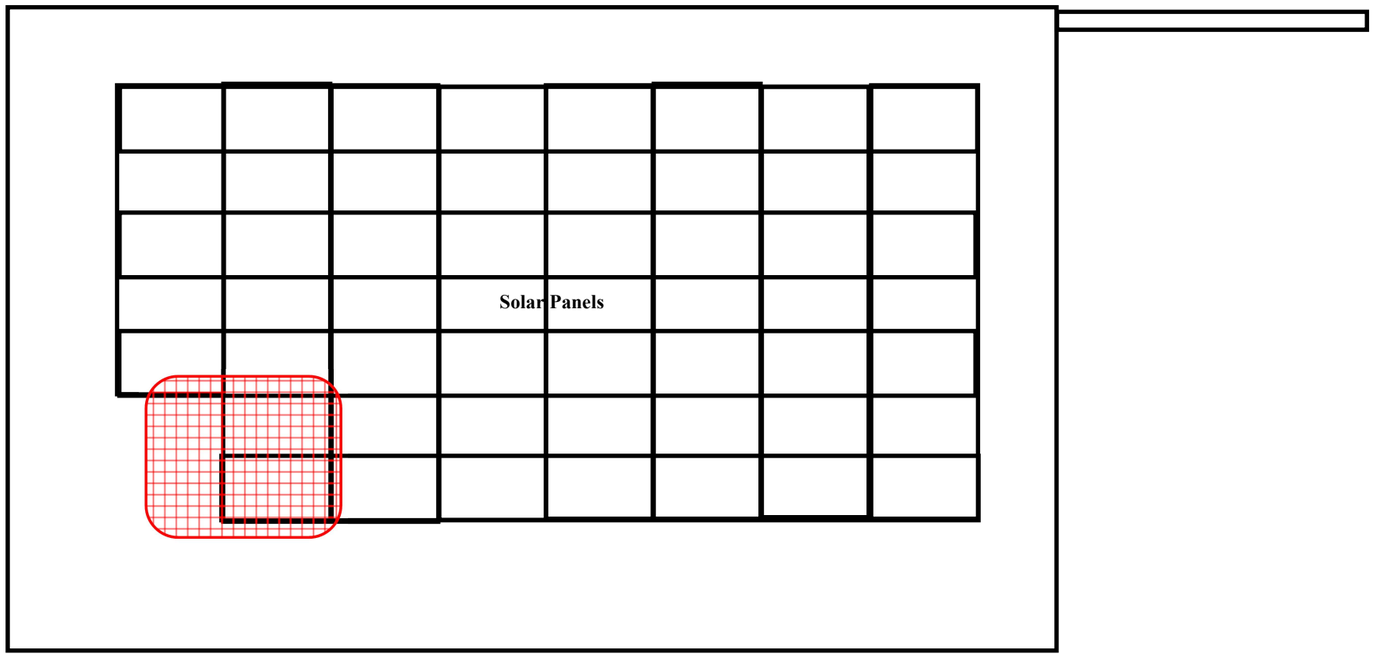
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pakanasink Elementary School
1953 NY-302
Circleville, NY 10919

ASB Locations

ACM - 04



Cafeteria/Kitchen Roof

ACM Key	
	ACM Tar

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

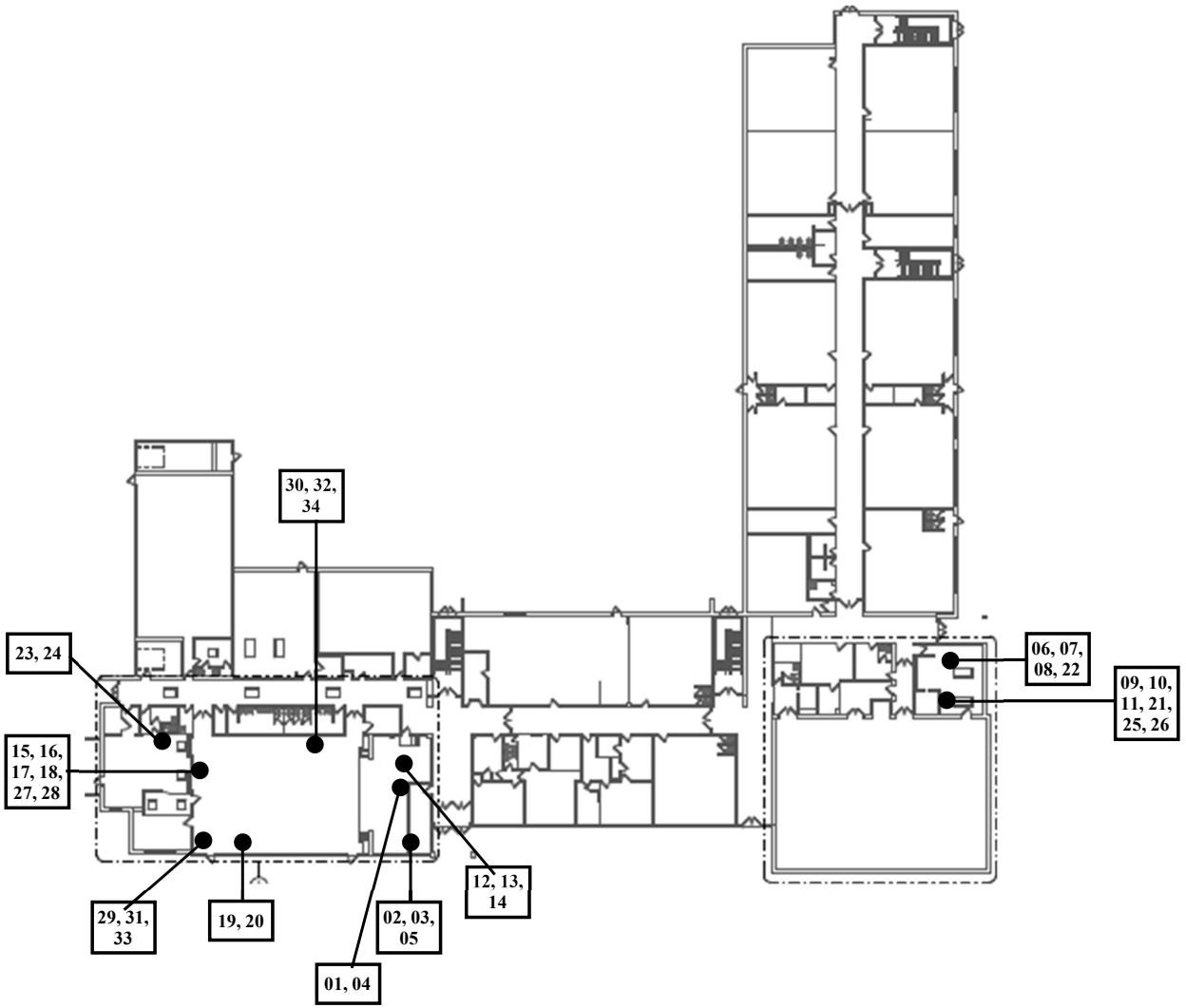
PROJECT LOCATION

E J Russell Elementary School
78 Holland Ave
Pine Bush, NY 12566

ASB Locations

ACM - 05

Appendix B:
SAMPLE LOCATION DRAWINGS & ANALYTICAL DATA



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/5/2025	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

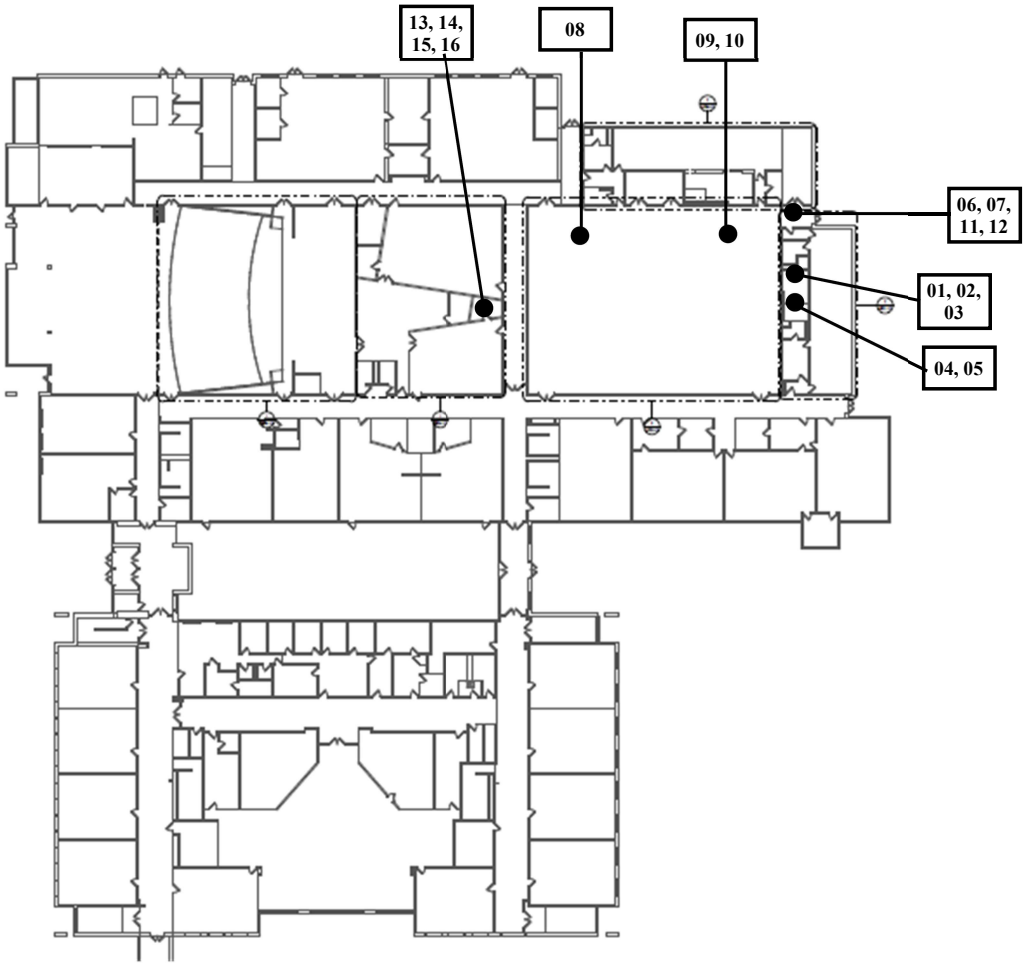
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Elementary School
2000 Route 302
Circleville, NY 10919

Sample Locations

SL-01



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/3/2025	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T
Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

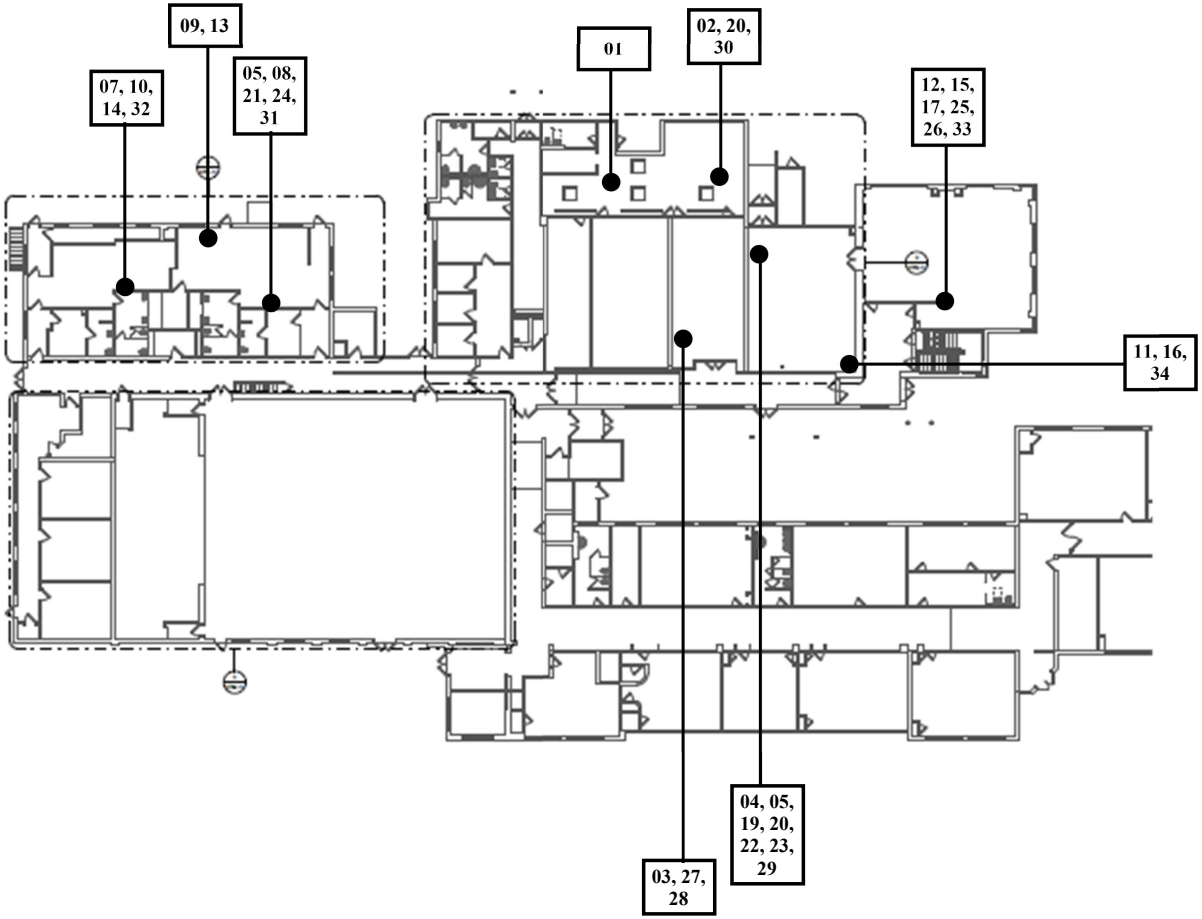
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Middle School
1951 Route 302
Circleville, NY 10919

Sample Locations

SL-02



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/5/2025	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

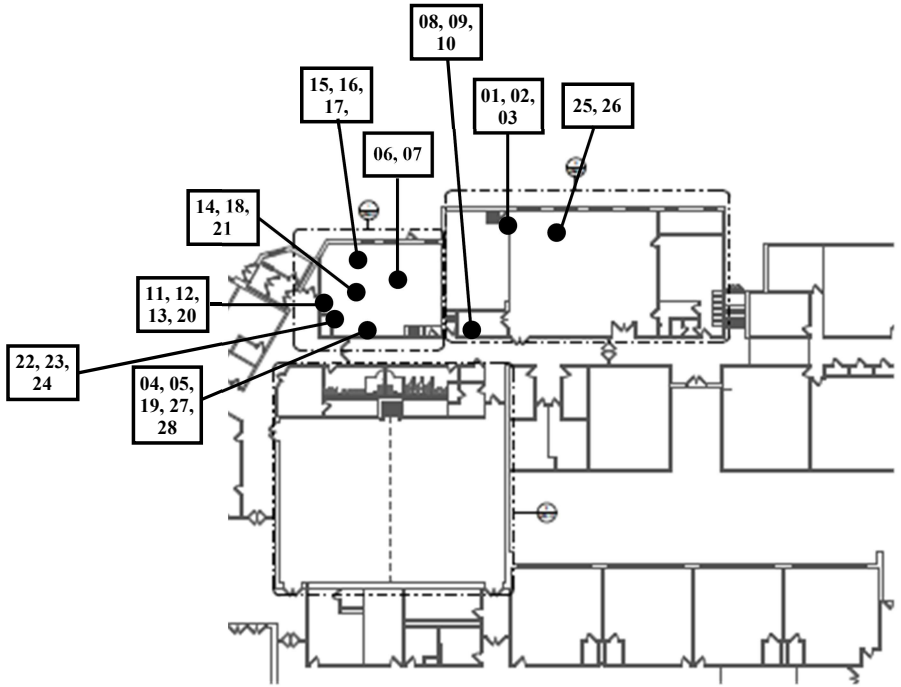
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Crispell Middle School
77 Maple Avenue
Pine Bush, NY 12566

Sample Locations

SL-03



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/3/2025	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

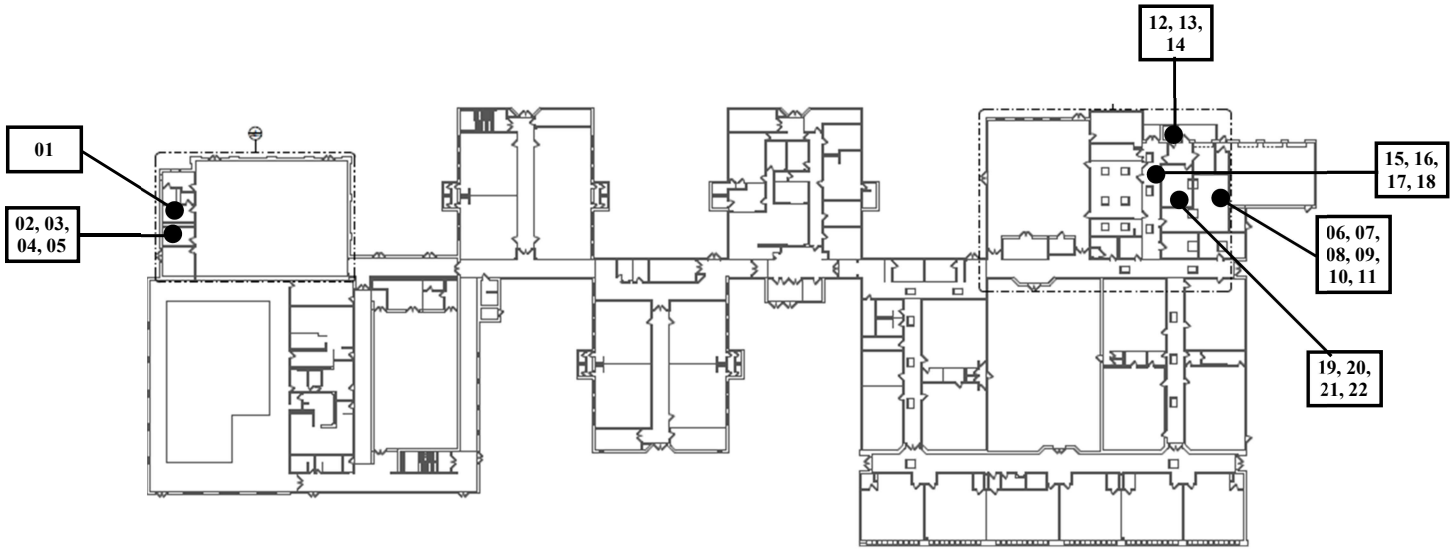
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

EJ Russell Elementary School
78 Holland Avenue
Pine Bush, NY 12566

Sample Locations

SL-04



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/5/2025	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

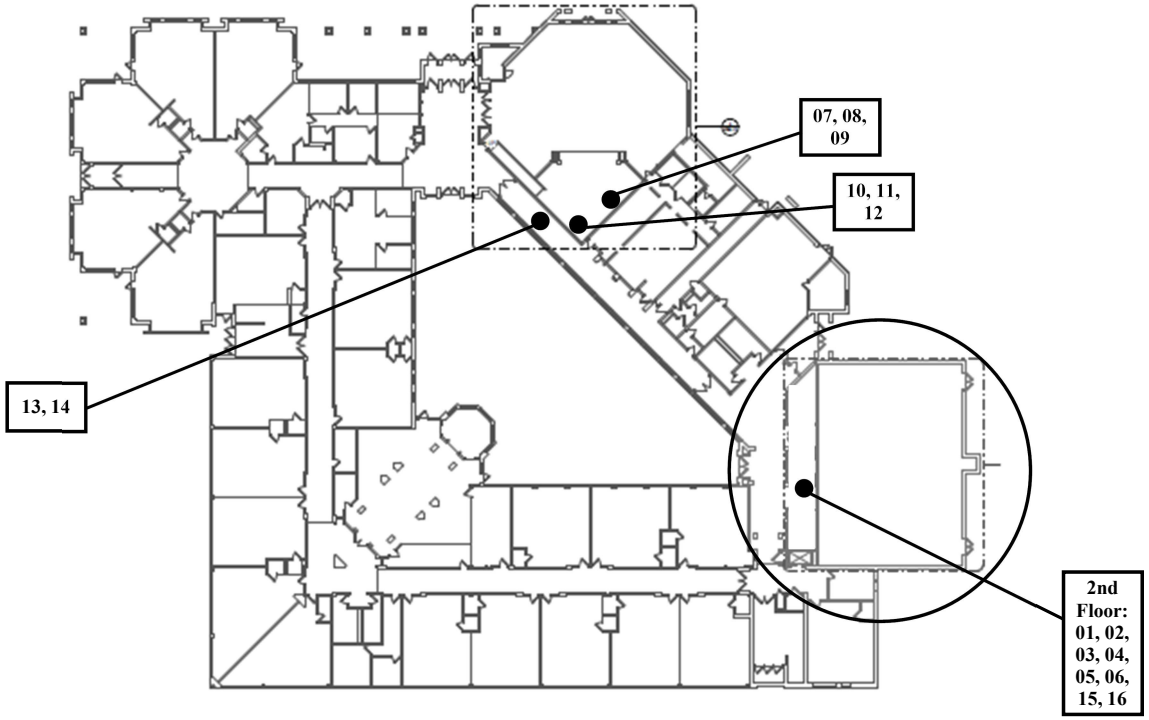
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pakanasink Elementary School
1953 State Route 302
Circleville, NY 10919

Sample Locations

SL-05



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/3/2025	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

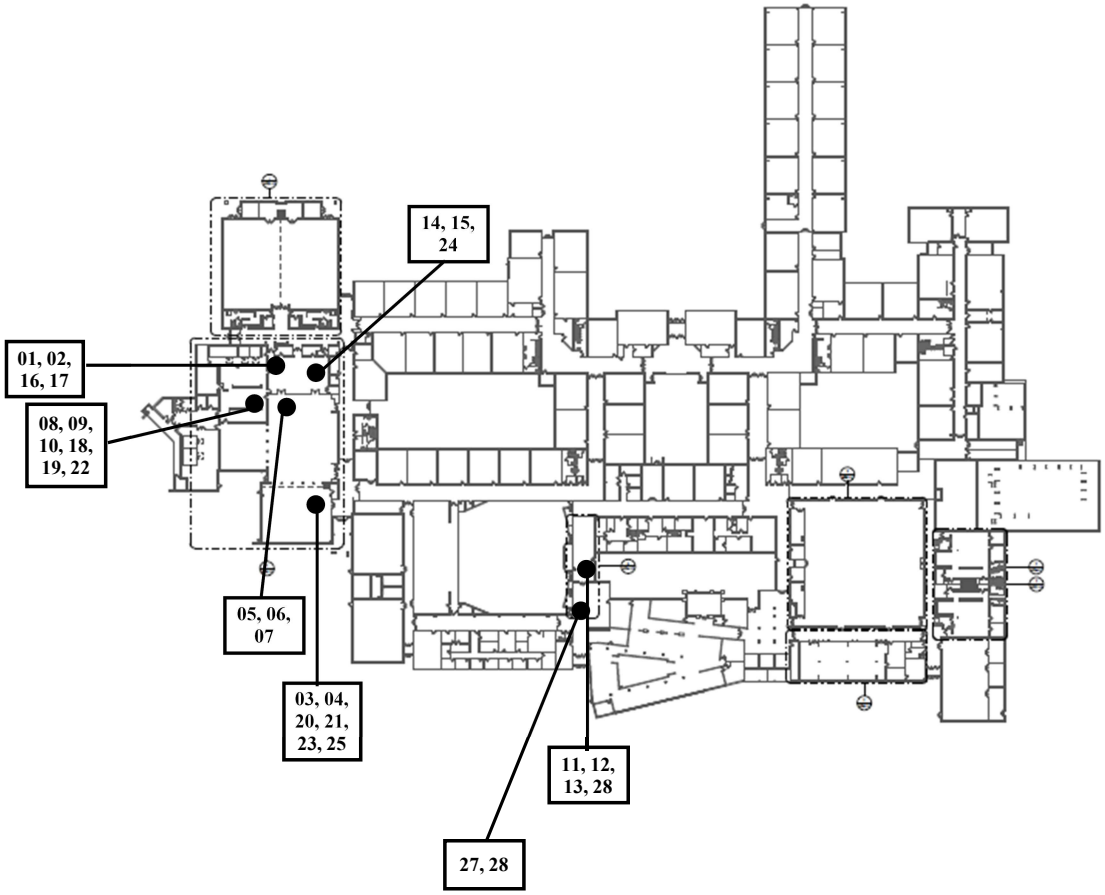
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush Elementary School
21 Ulsterville Road
Pine Bush, NY 12566

Sample Locations

SL-06



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 9/5/2025	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-6919	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

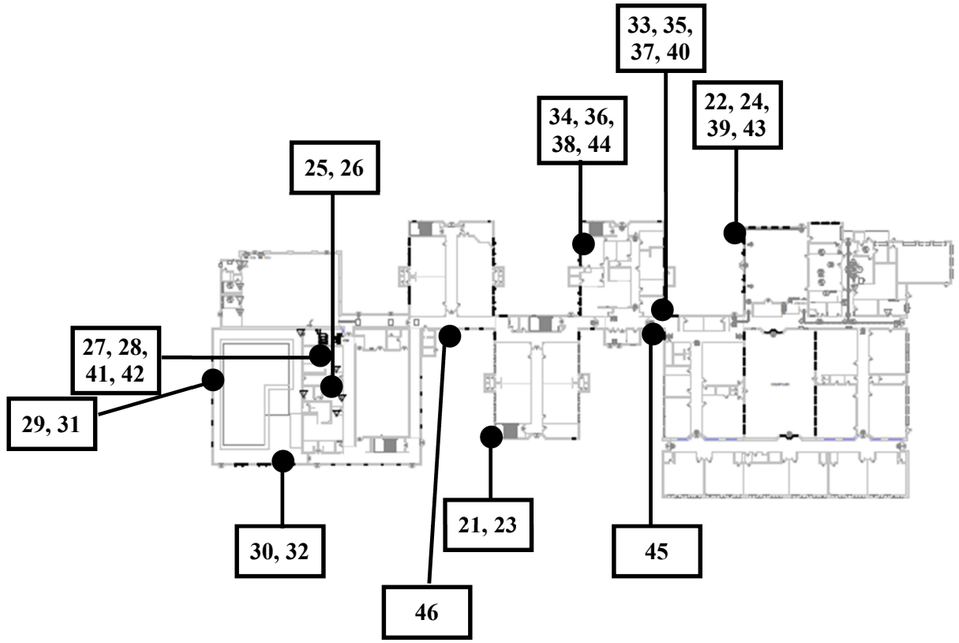
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

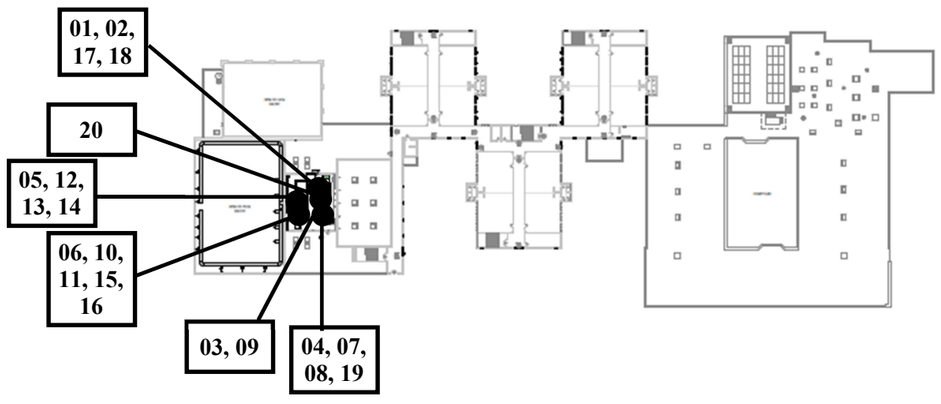
PROJECT LOCATION

Pine Bush High School
118 State Route 302
Pine Bush, NY 12566

Sample Locations

SL-07





SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 2/26/2026	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 26-7081	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

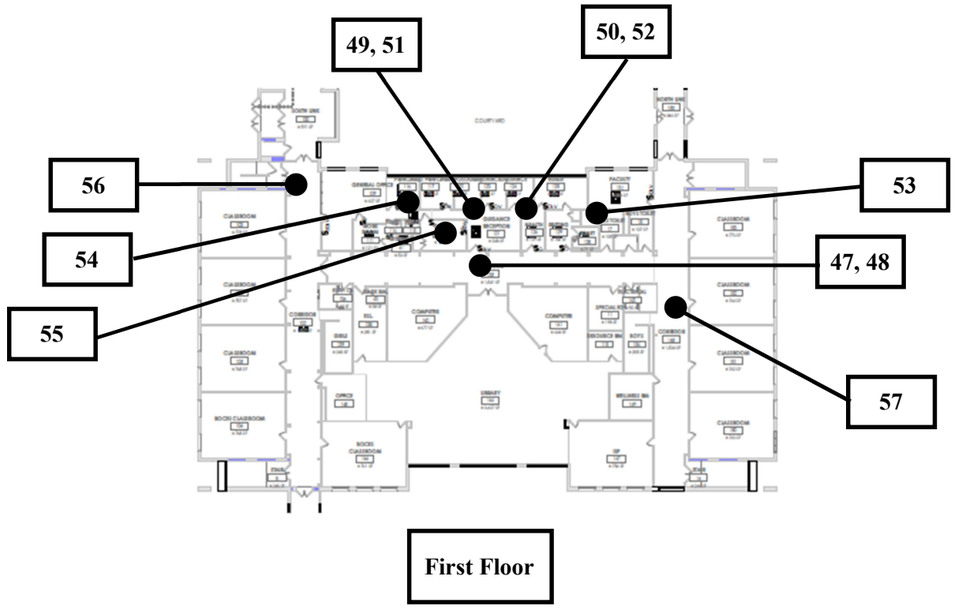
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

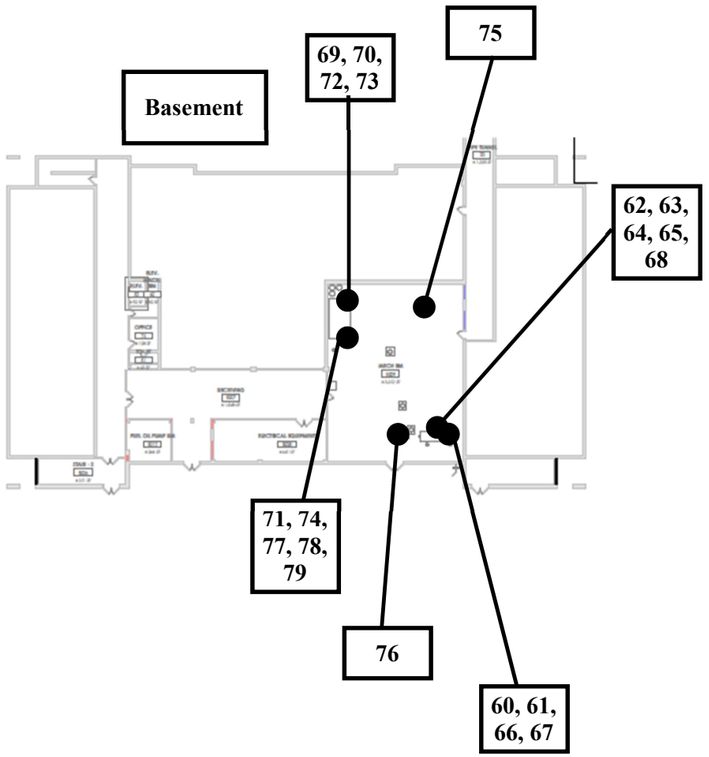
Pakanasink Elementary School
1953 NY-302
Circleville, NY 10919

Inspection: 12-10-25
Sample Locations

SL - 08



First Floor



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 2/26/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 26-7081	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

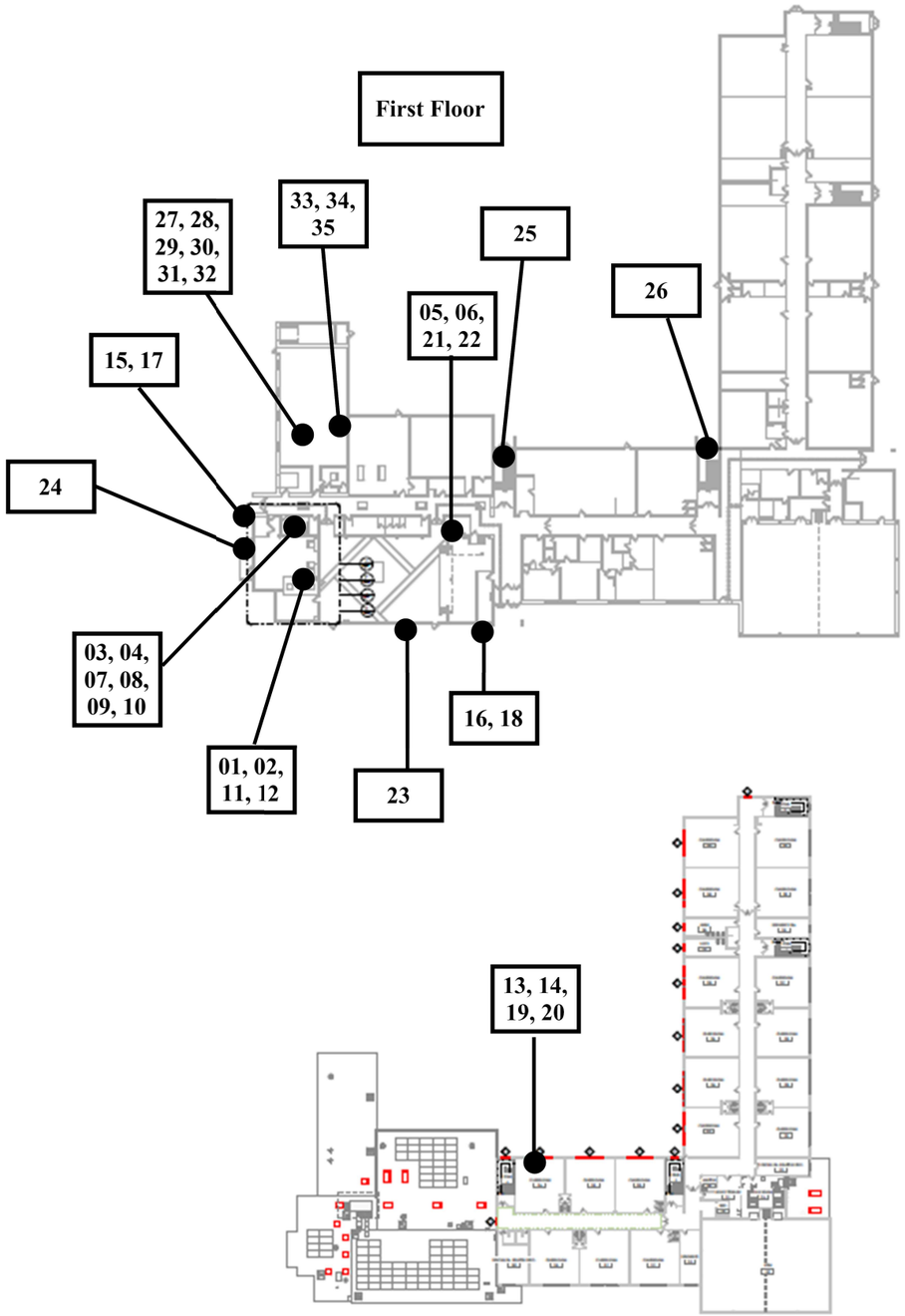
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Middle School
1951 NY-302
Circleville, NY 10919

Inspection: 12-10-25
Sample Locations

SL - 09



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 2/26/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 26-7081	
Project Manager: RWL	Prepared By: DS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

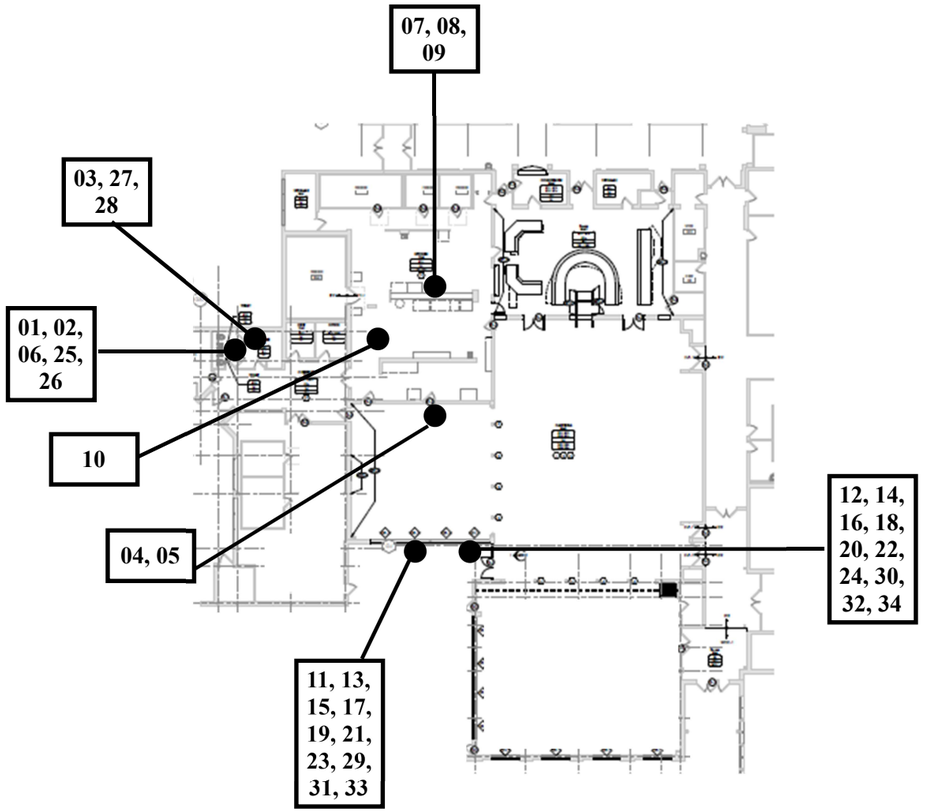
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Elementary School
2000 NY-302
Circleville, NY 10919

Inspection: 12-15-25
Sample Locations

SL - 10



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 2/26/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 26-7081	
Project Manager: RWL	**Prepared By:** DS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

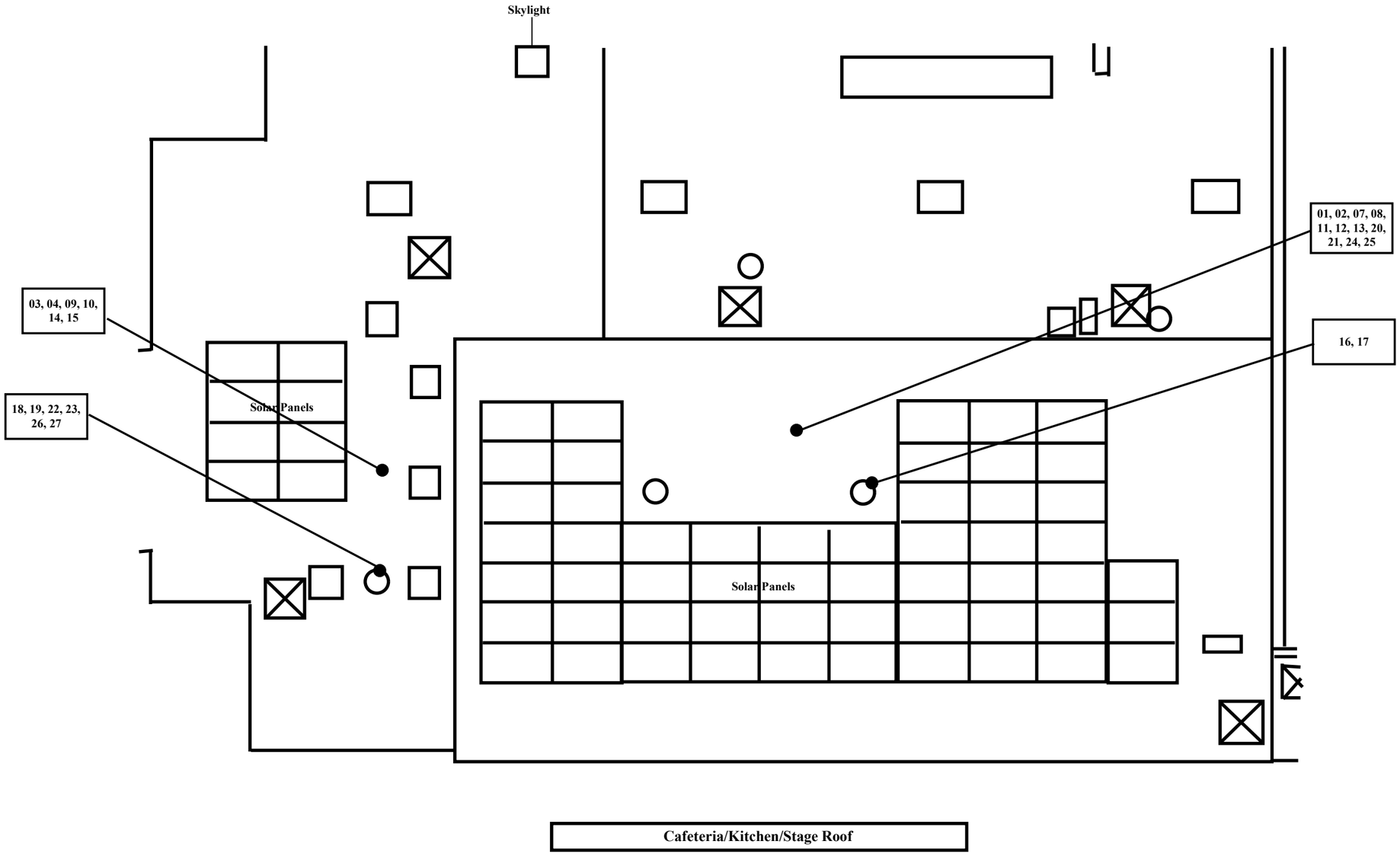
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush High School
156 NY-302
Pine Bush, NY 12566

Inspection: 12-15-25
Sample Locations

SL - 11



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

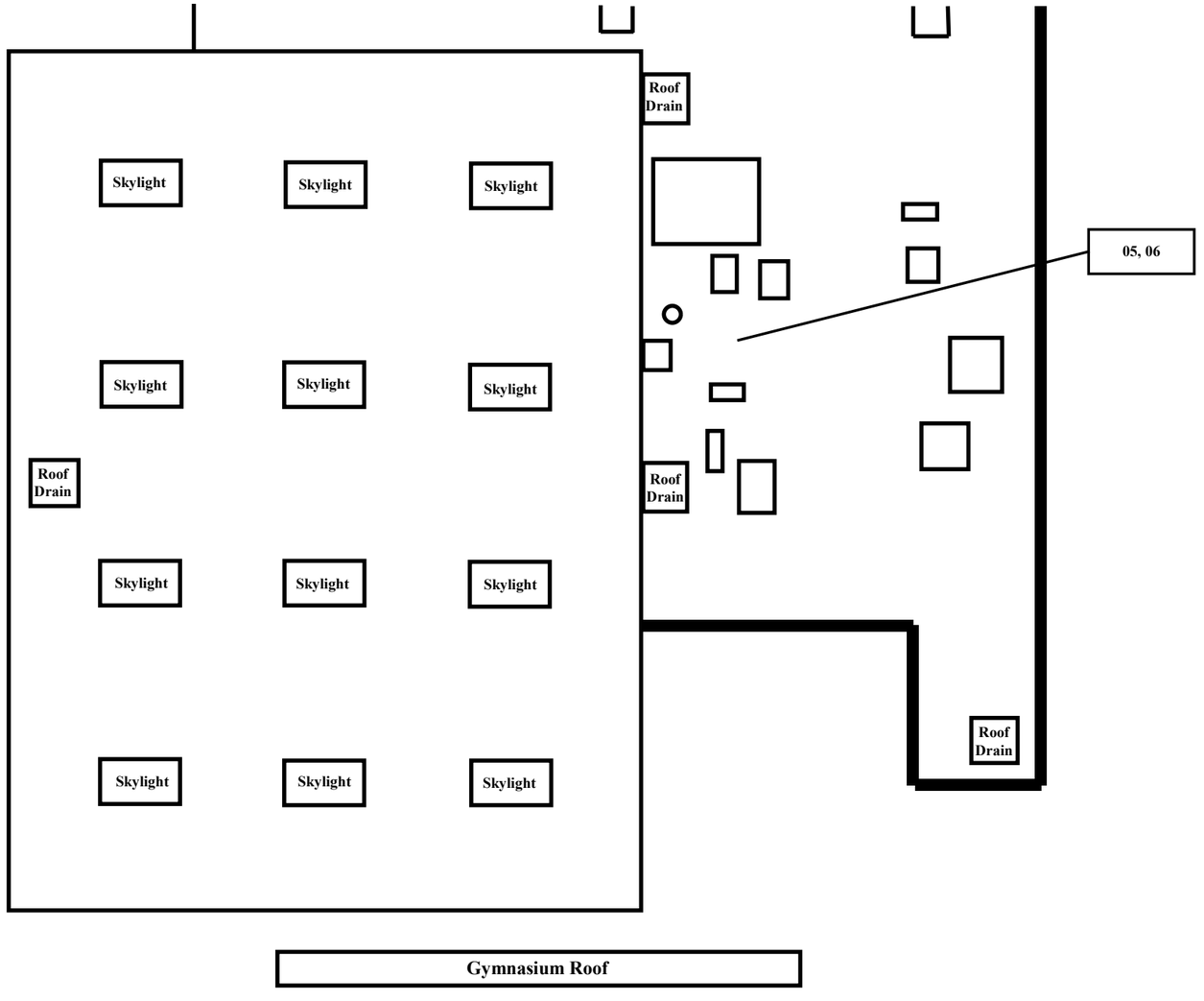
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Elementary School
2000 Route 302
Circleville, NY 10919

Inspection: 1-15-26
Sample Locations

SL - 12



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

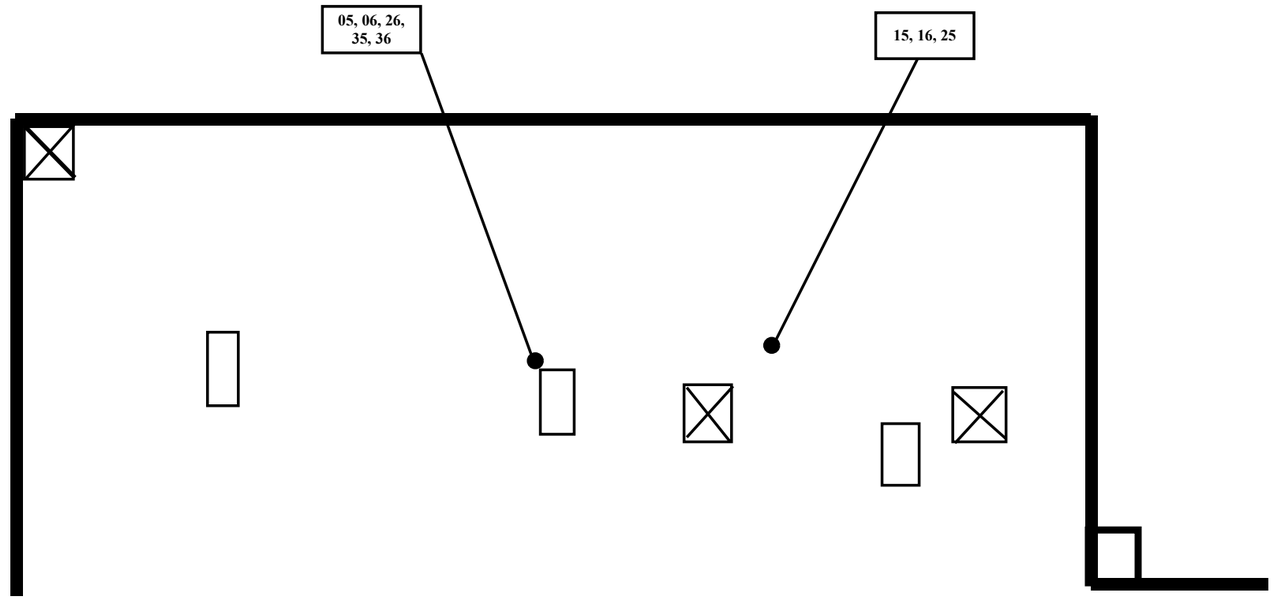
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Elementary School
2000 Route 302
Circleville, NY 10919

Inspection: 1-15-26
Sample Locations

SL - 13



Locker Rooms Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

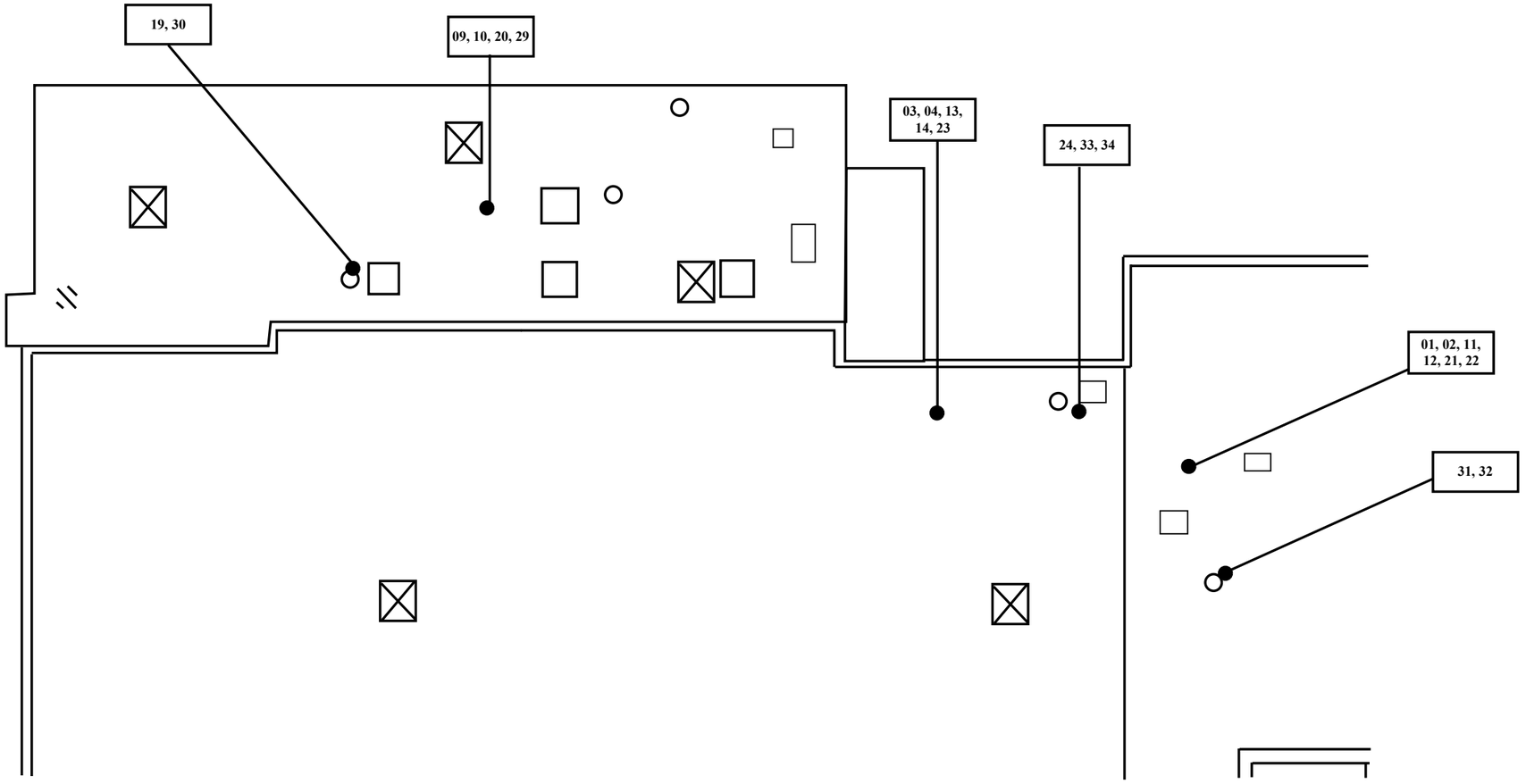
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Crispell Middle School
77 Maple Ave
Pine Bush, NY 12566

Inspection: 1- 13-26
Sample Locations

SL - 14



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

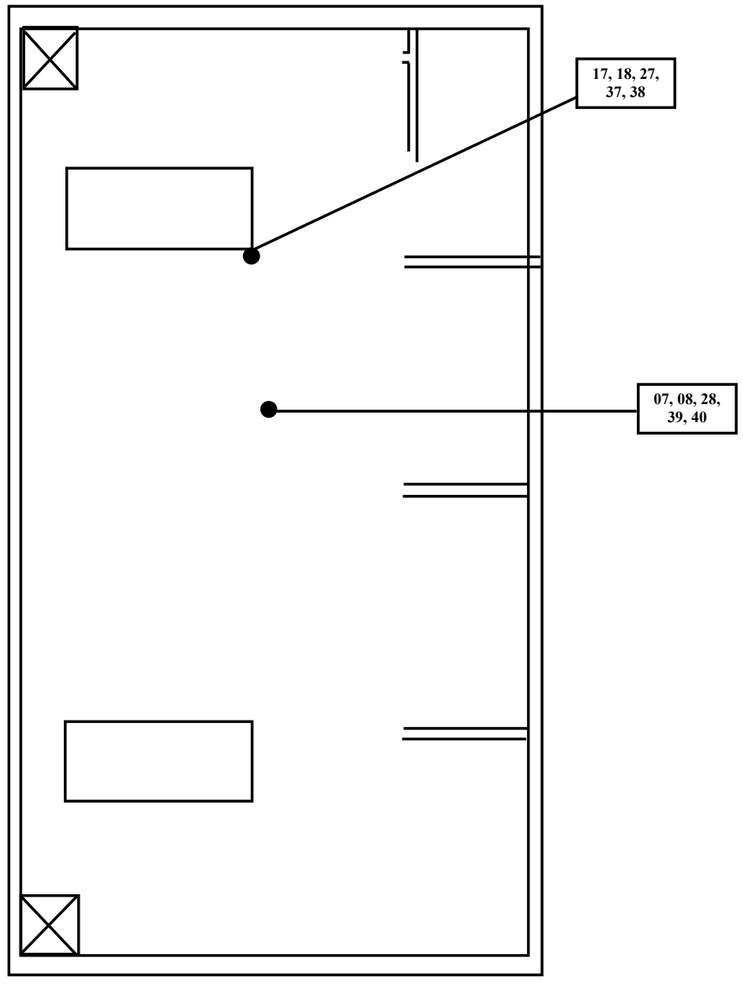
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Crispell Middle School
77 Maple Ave
Pine Bush, NY 12566

Inspection: 1- 13-26
Sample Locations

SL - 15



Gymnasium Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

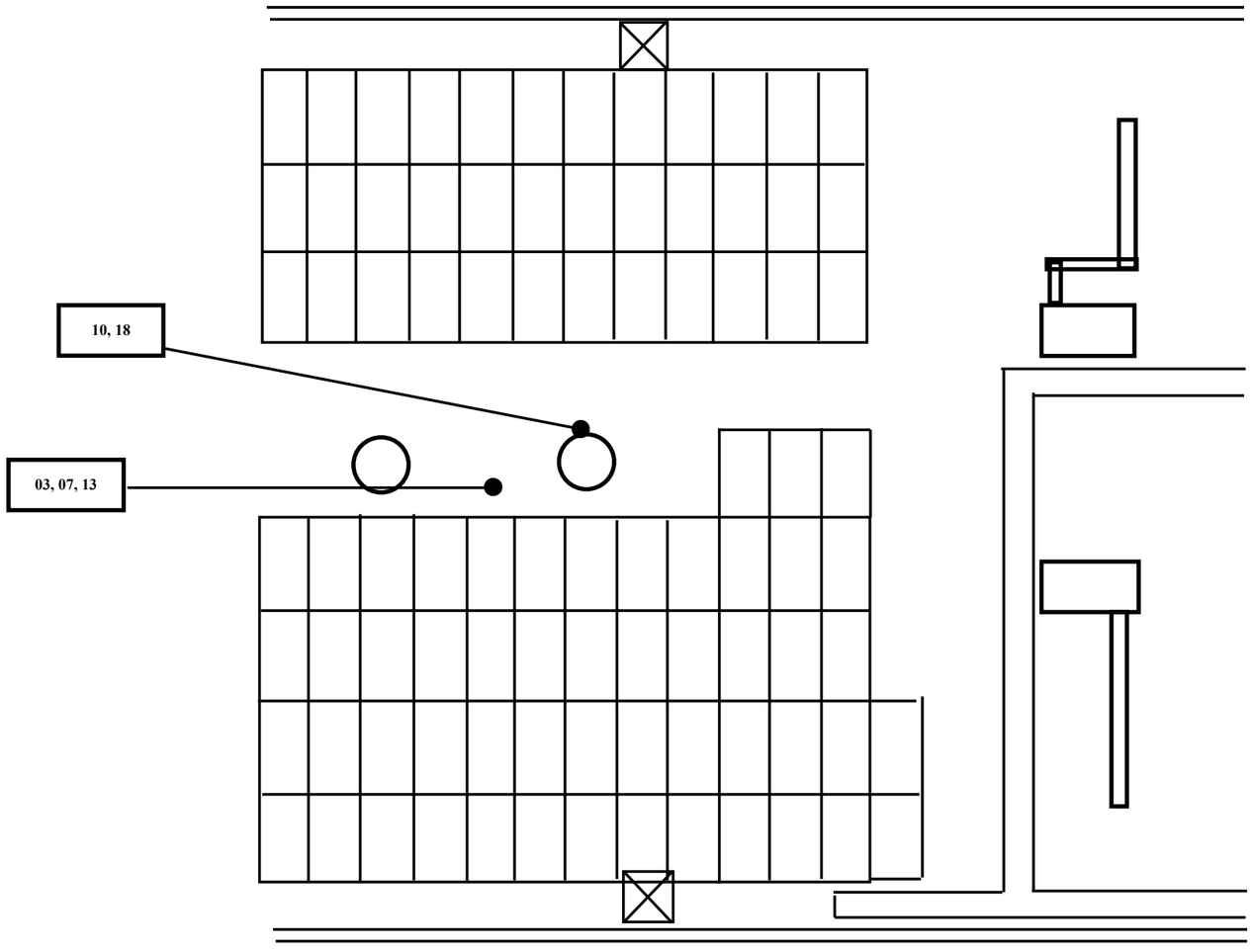
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Crispell Middle School
77 Maple Ave
Pine Bush, NY 12566

Inspection: 1- 13-26
Sample Locations

SL - 16



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

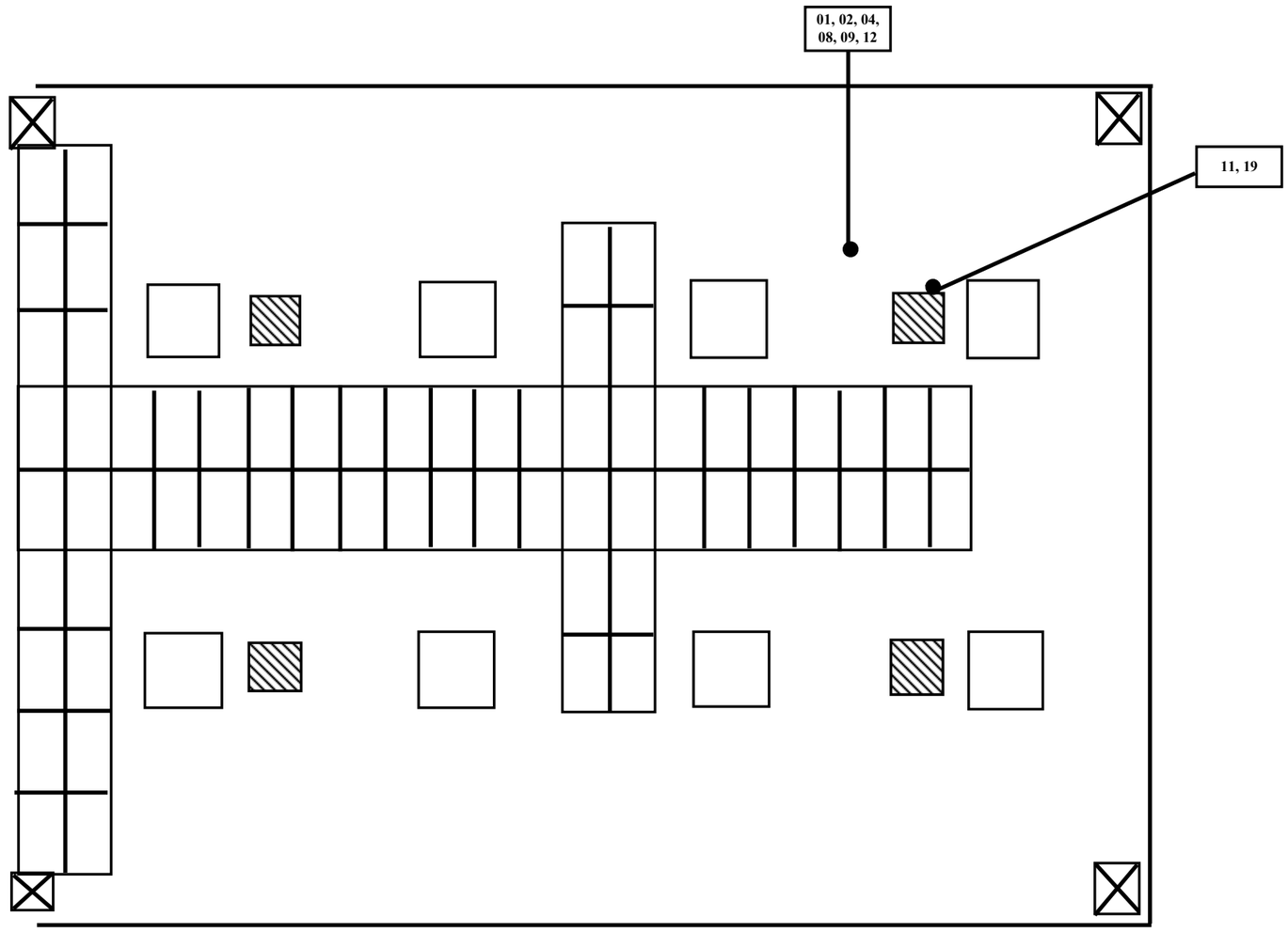
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Middle School
1951 NY-302
Circleville, NY 10919

Inspection: 1- 15-26
Sample Locations

SL - 17



Gymnasium Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

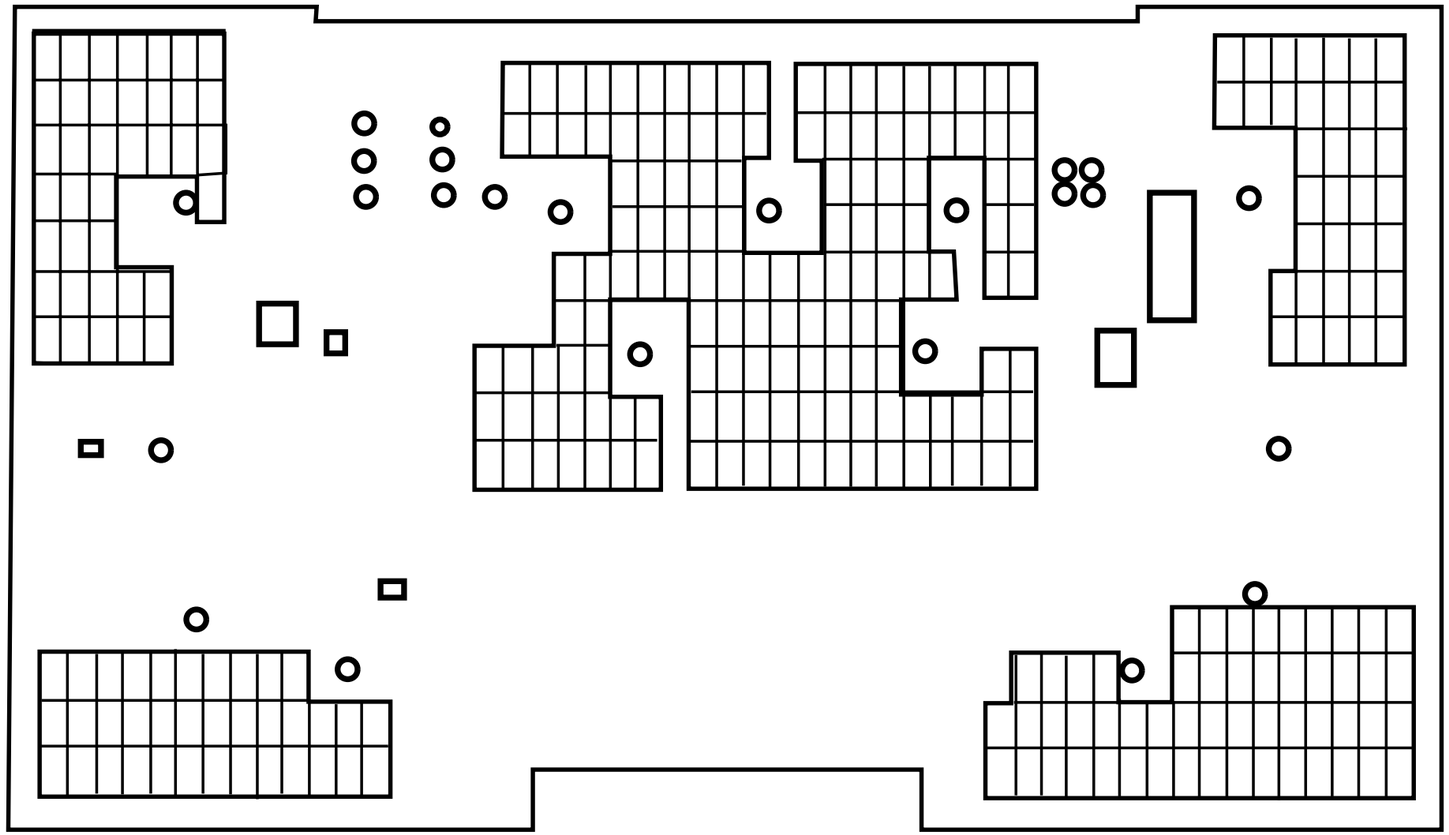
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Middle School
1951 NY-302
Circleville, NY 10919

Inspection: 1- 13-26
Sample Locations

SL - 18



Library/Main Office Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	Prepared By: DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

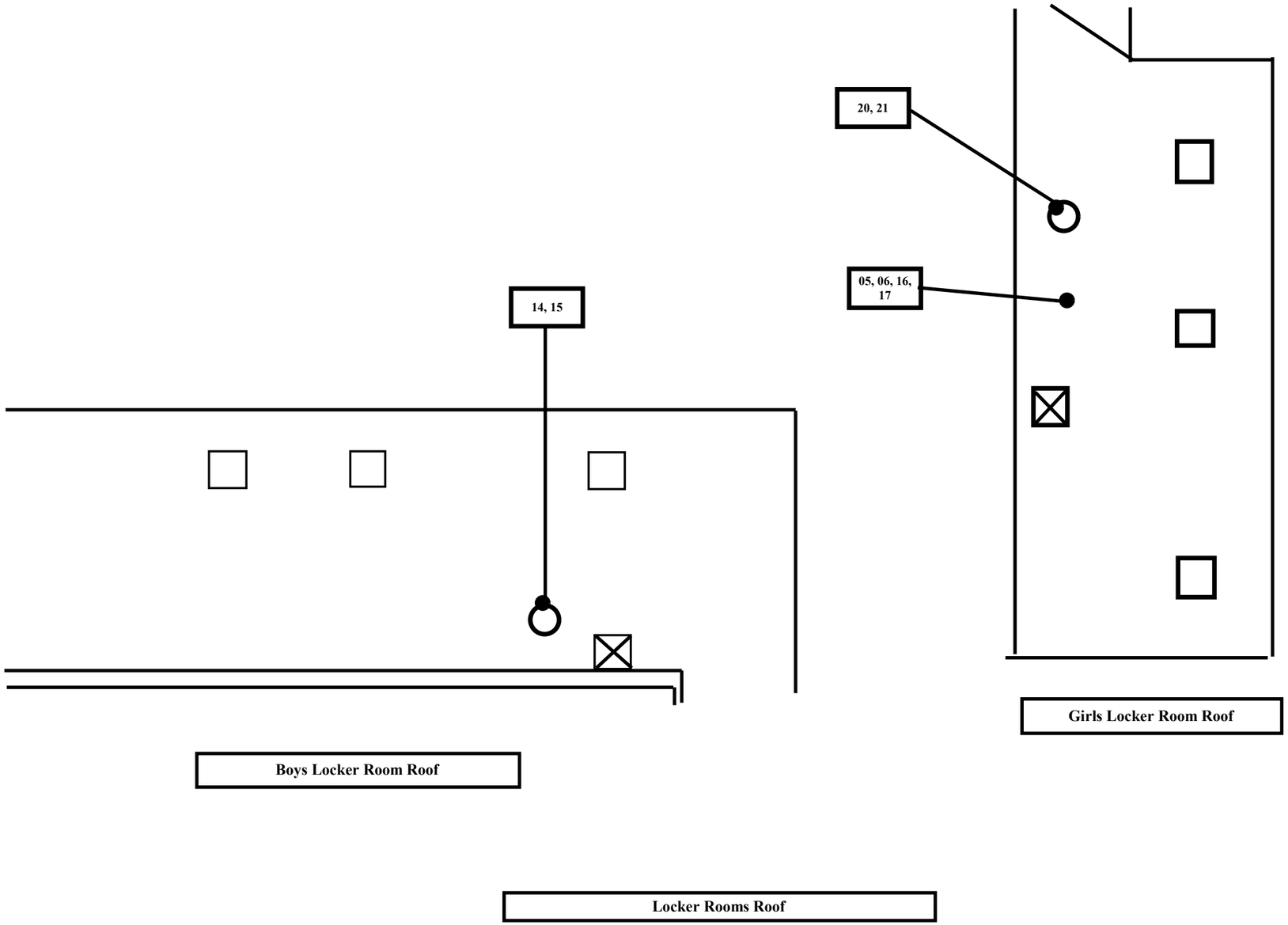
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Middle School
1951 NY-302
Circleville, NY 10919

Inspection: 1- 13-26
Sample Locations

SL - 19



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

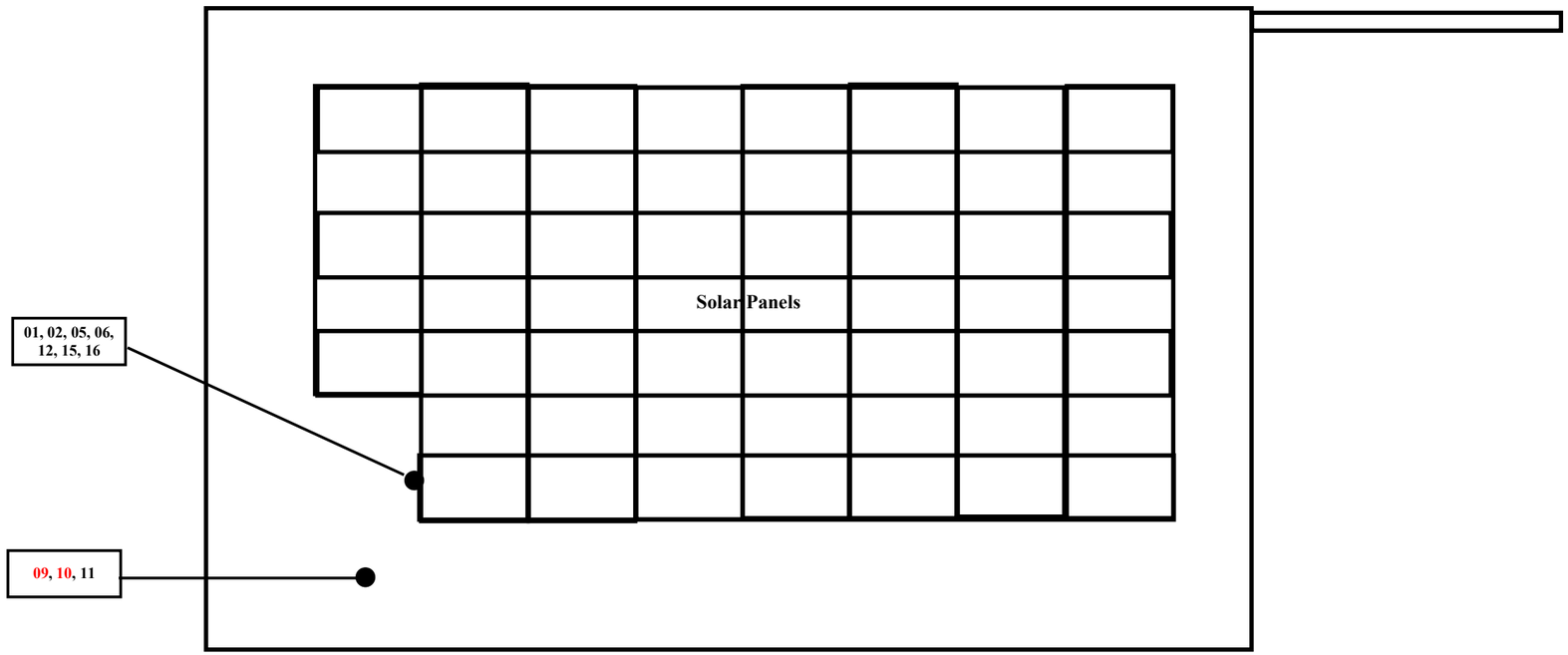
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Circleville Middle School
1951 NY-302
Circleville, NY 10919

Inspection: 1- 13-26
Sample Locations

SL - 20



Cafeteria/Kitchen Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

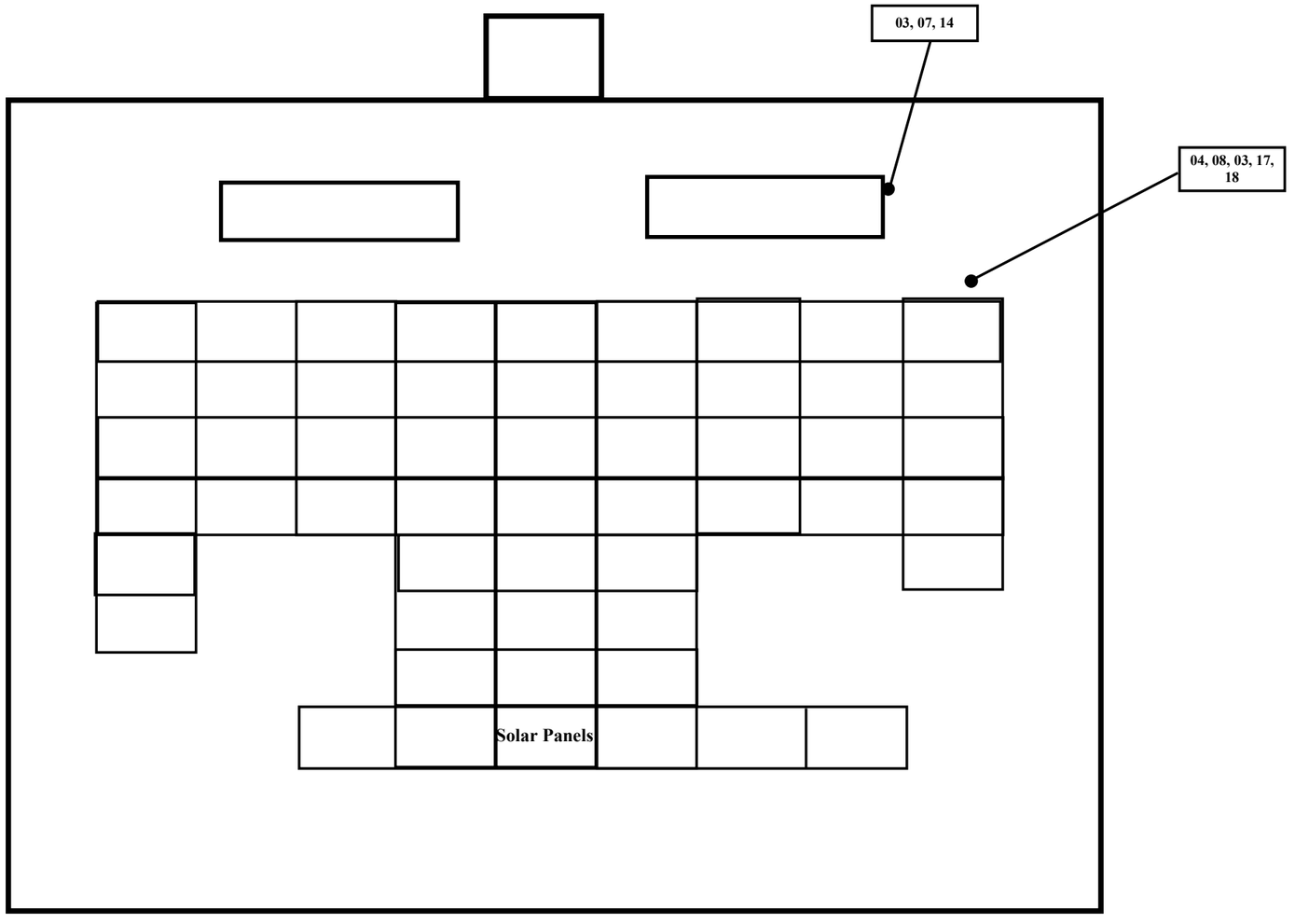
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

E J Russell Elementary School
78 Holland Ave
Pine Bush, NY 12566

Inspection: 1- 13-26
Sample Locations

SL - 21



Gymnasium Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	Prepared By: DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

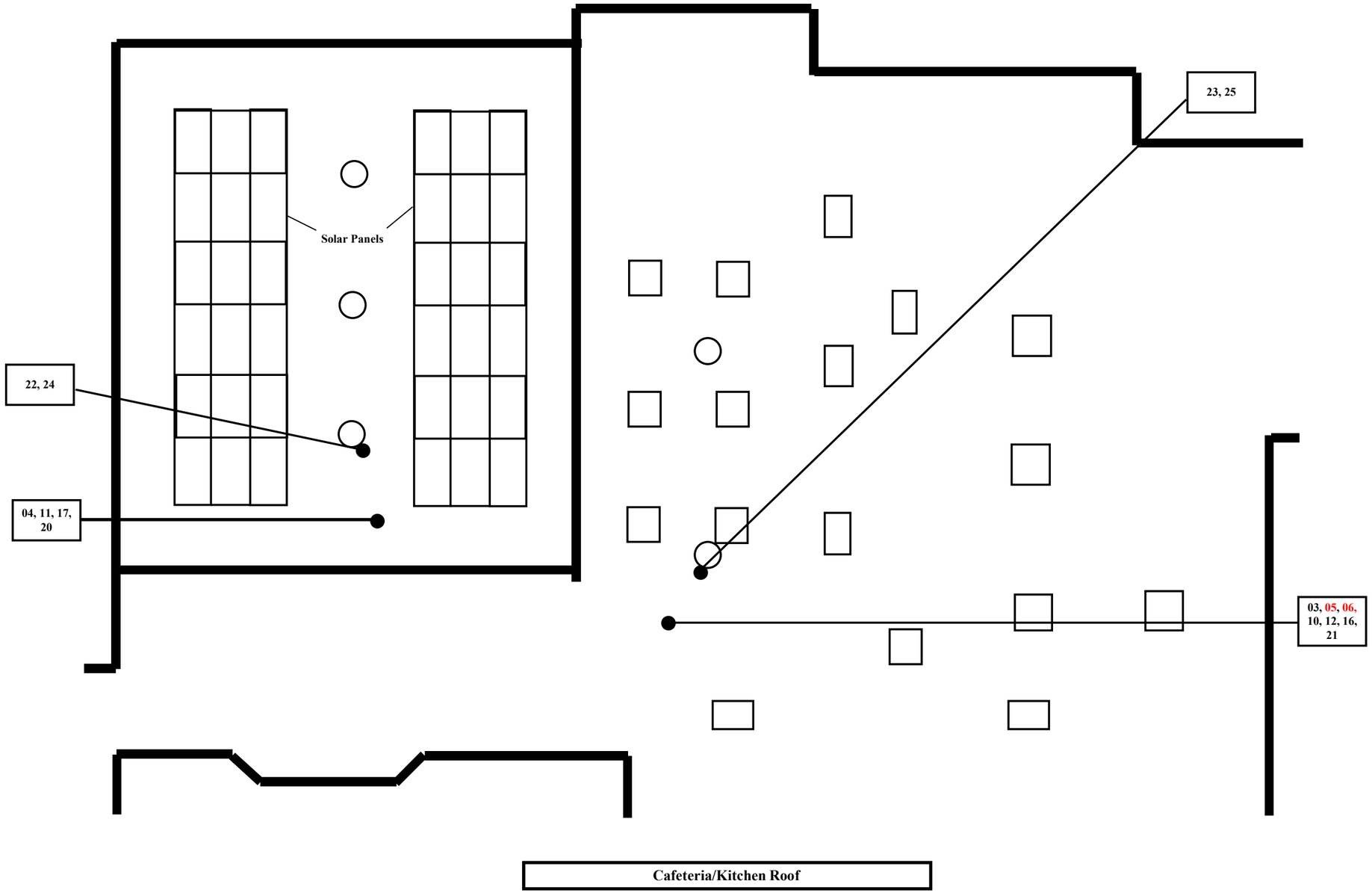
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

E J Russell Elementary School
78 Holland Ave
Pine Bush, NY 12566

Inspection: 1- 13-26
Sample Locations

SL - 22



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

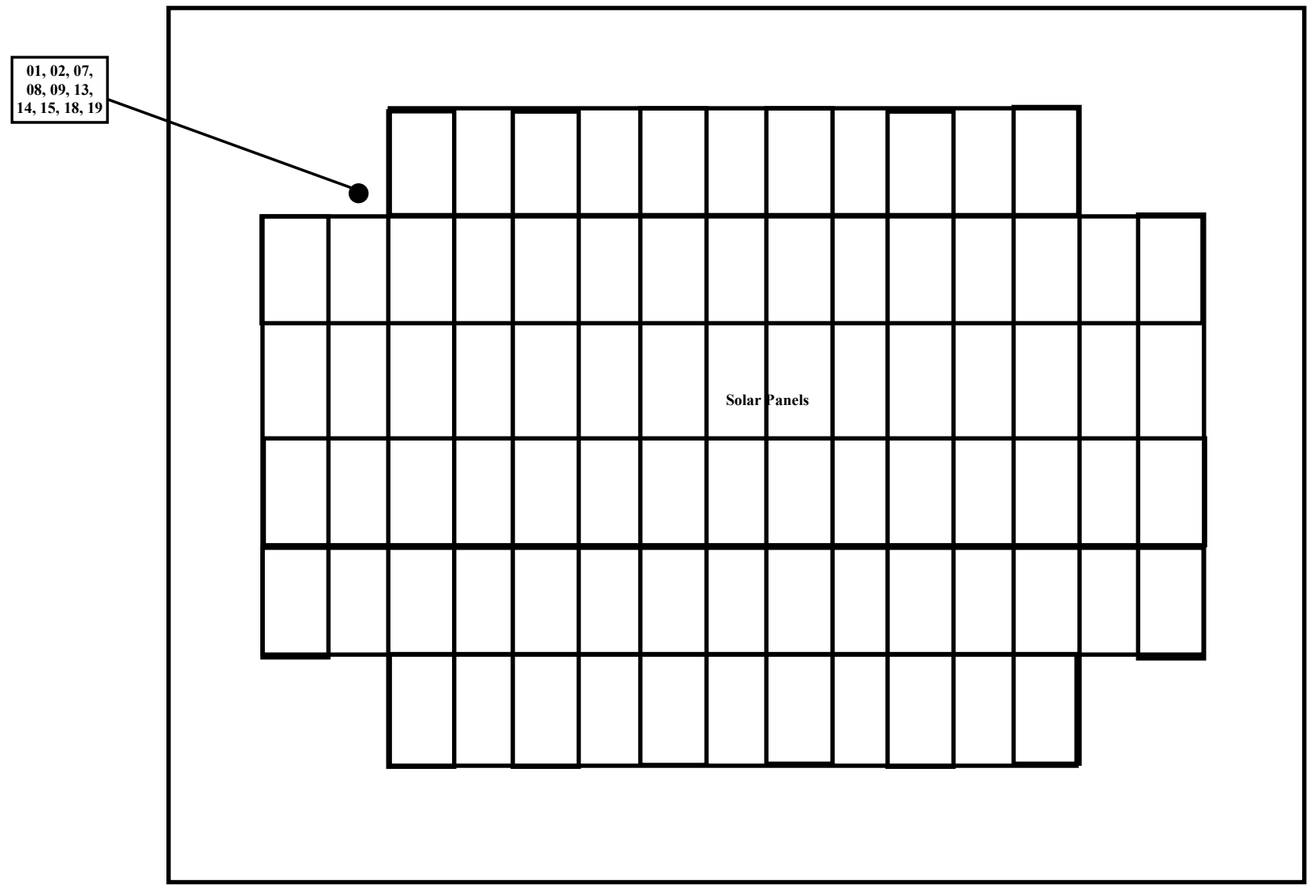
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pakanasink Elementary School
1953 NY-302
Circleville, NY 10919

Inspection: 1-15-26
Sample Locations

SL - 23



Gymnasium Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

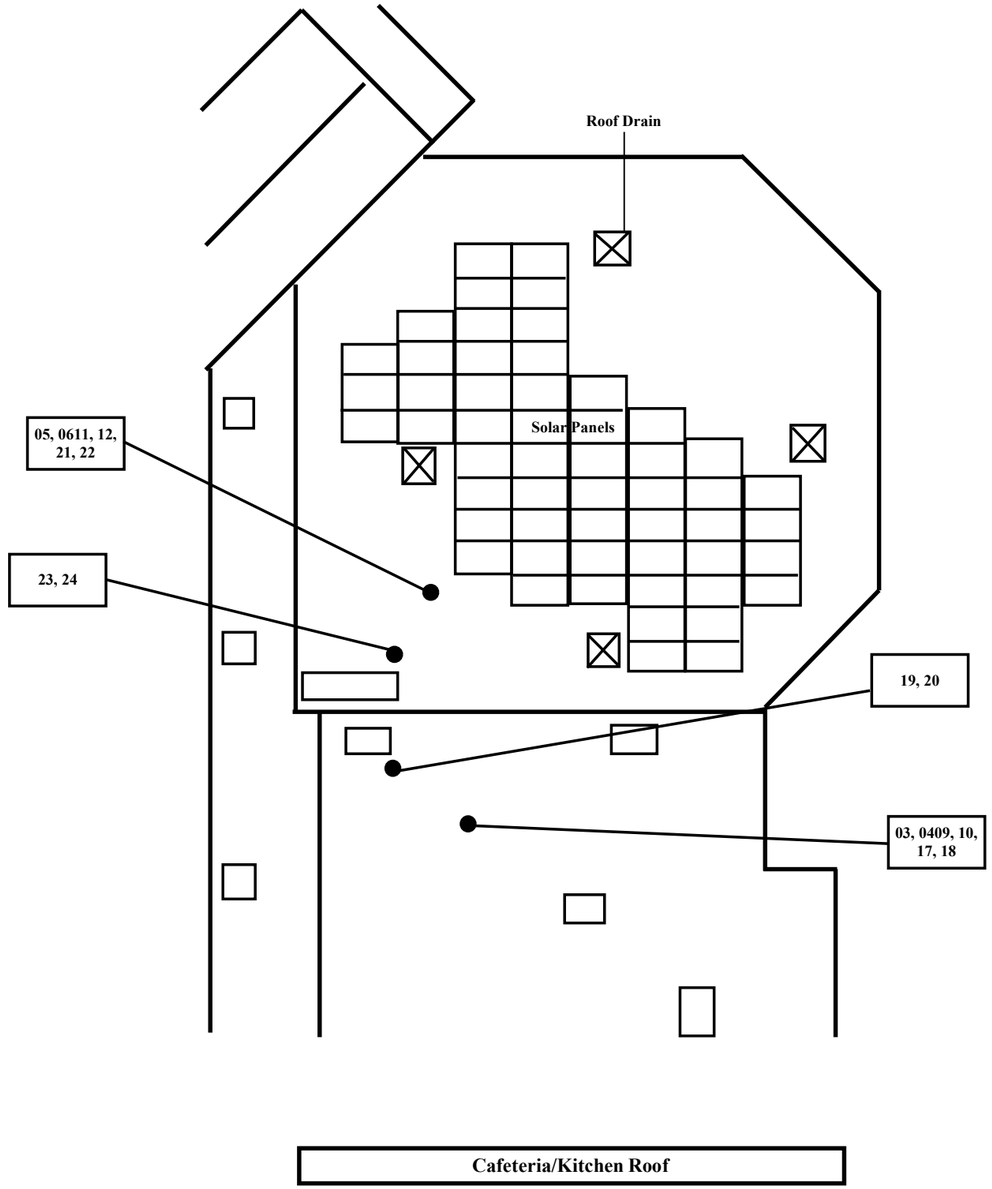
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pakanasink Elementary School
1953 NY-302
Circleville, NY 10919

Inspection: 1-15-26
Sample Locations

SL - 24



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

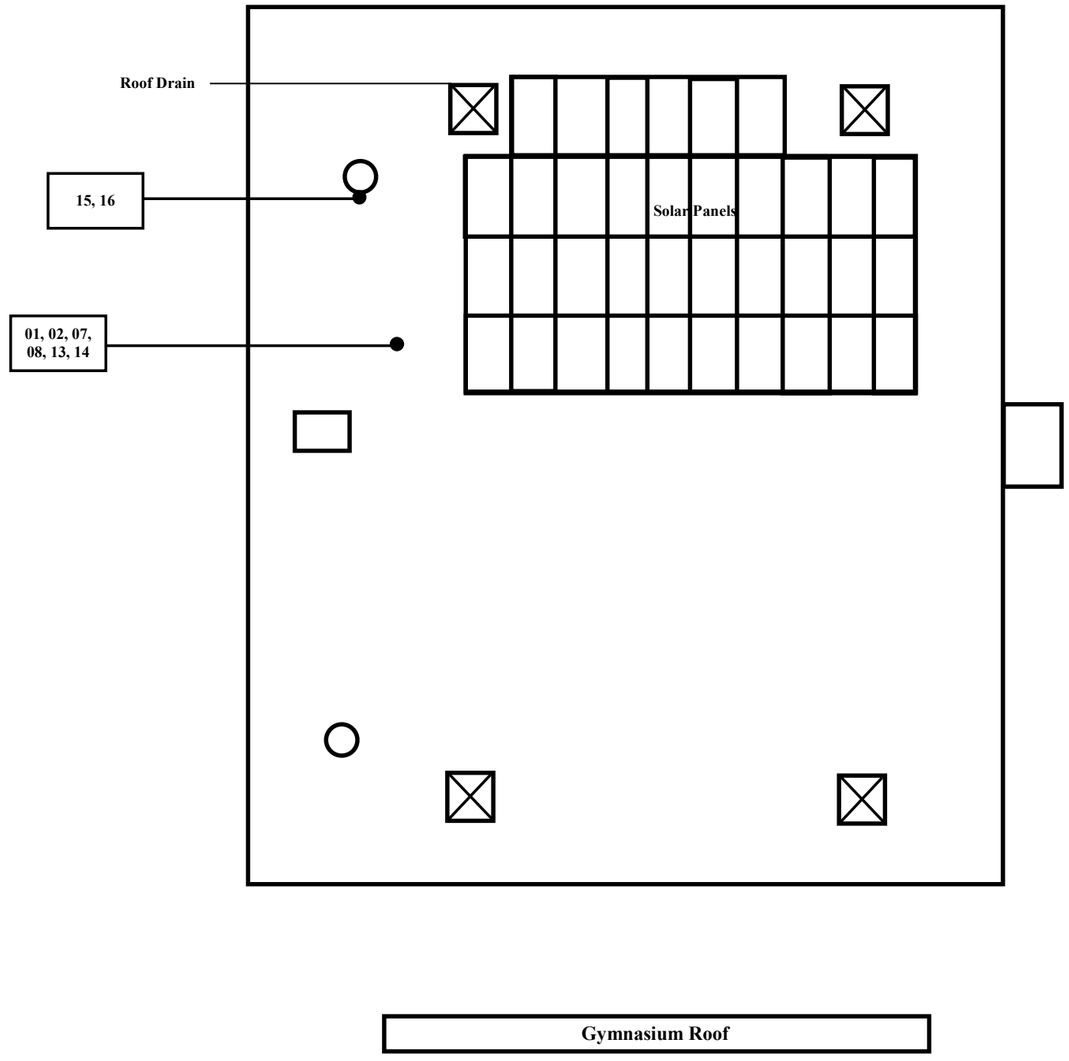
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush Elementary School
21 Ulsterville Road
Pine Bush, NY 12566

Inspection: 1-13-26
Sample Locations

SL - 25



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

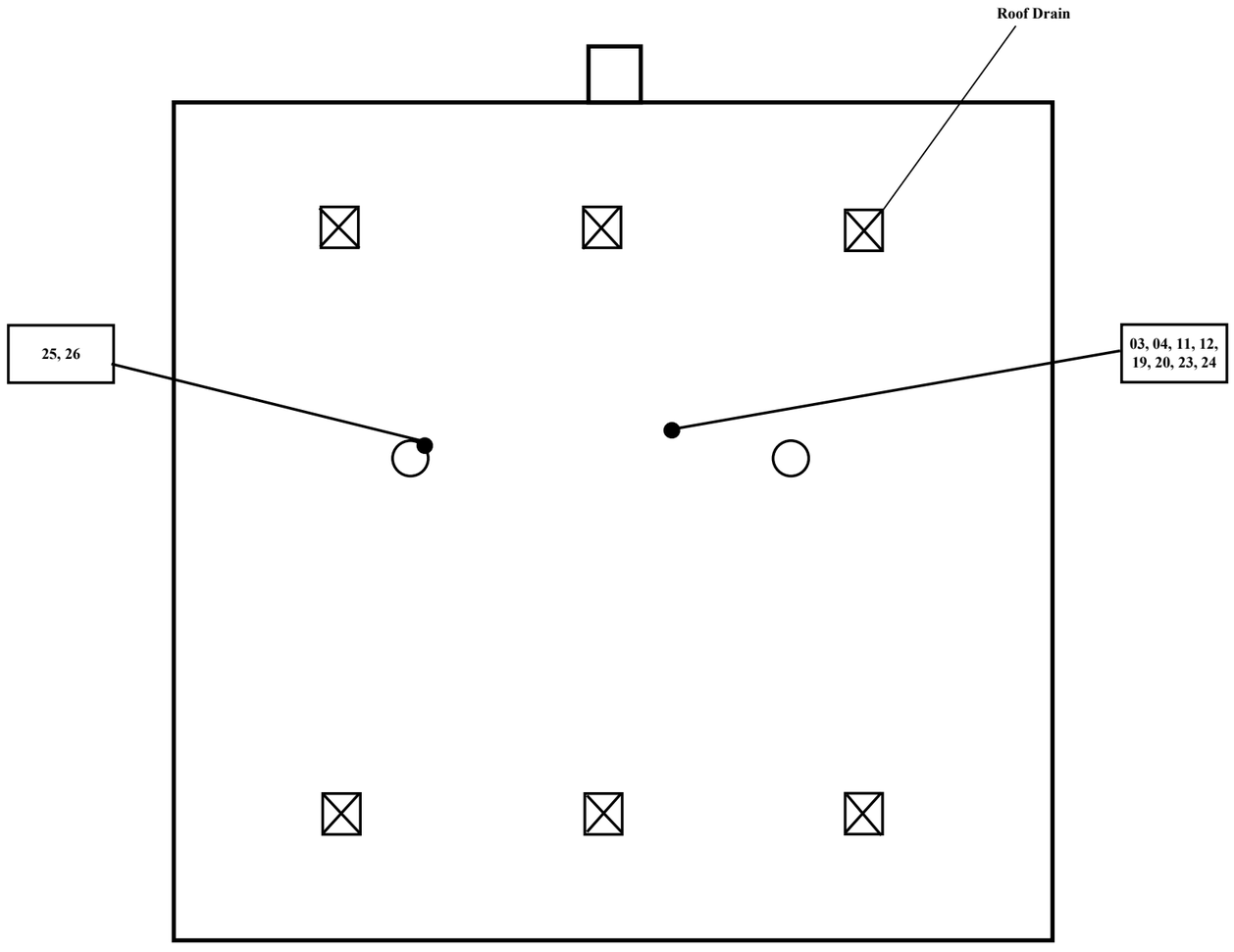
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush Elementary School
21 Ulsterville Road
Pine Bush, NY 12566

Inspection: 1-13-26
Sample Locations

SL - 26



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

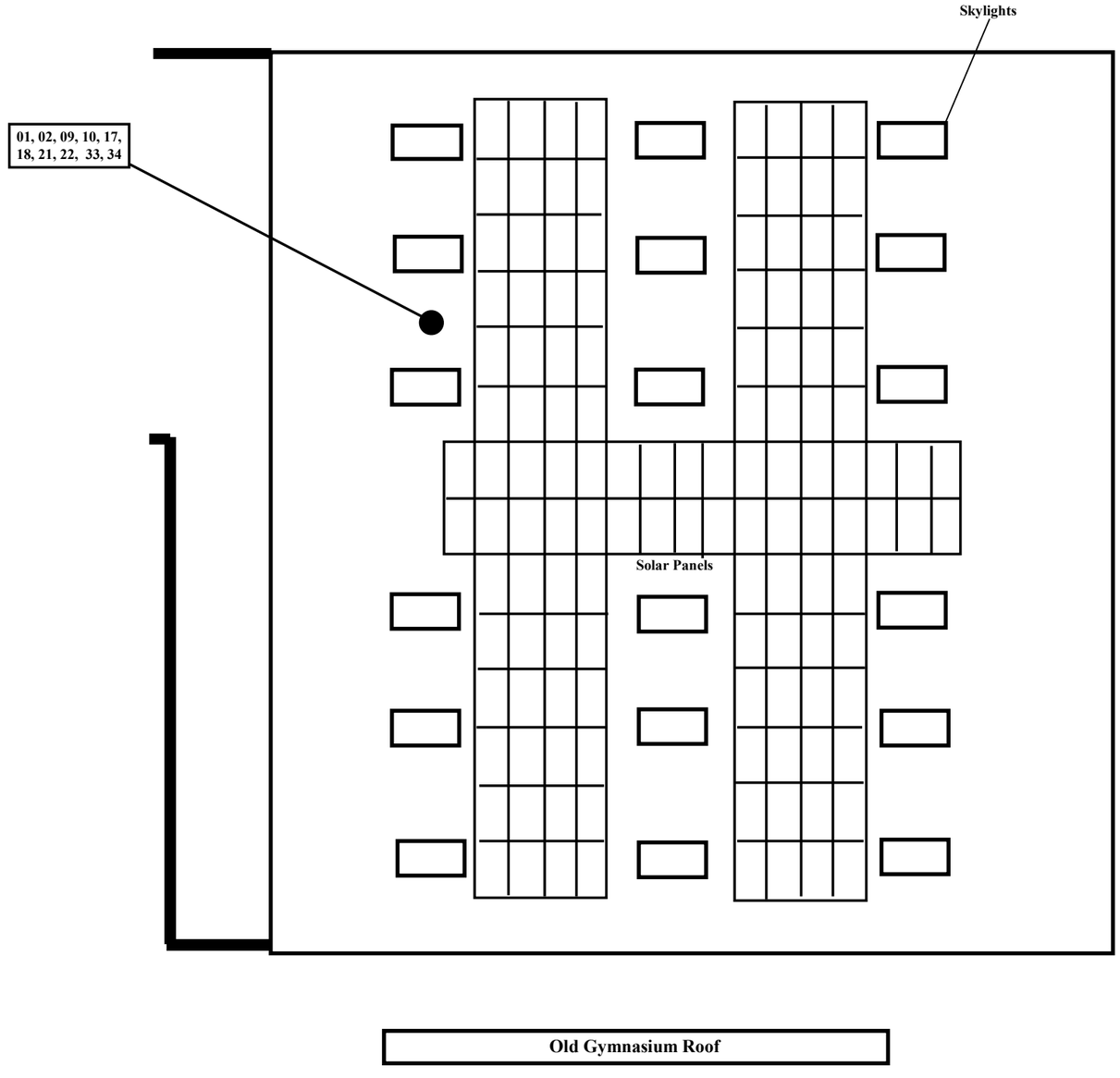
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush High School
156 NY 302
Pine Bush, NY 12566

Inspection: 1-13-26
Sample Locations

SL - 27



SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

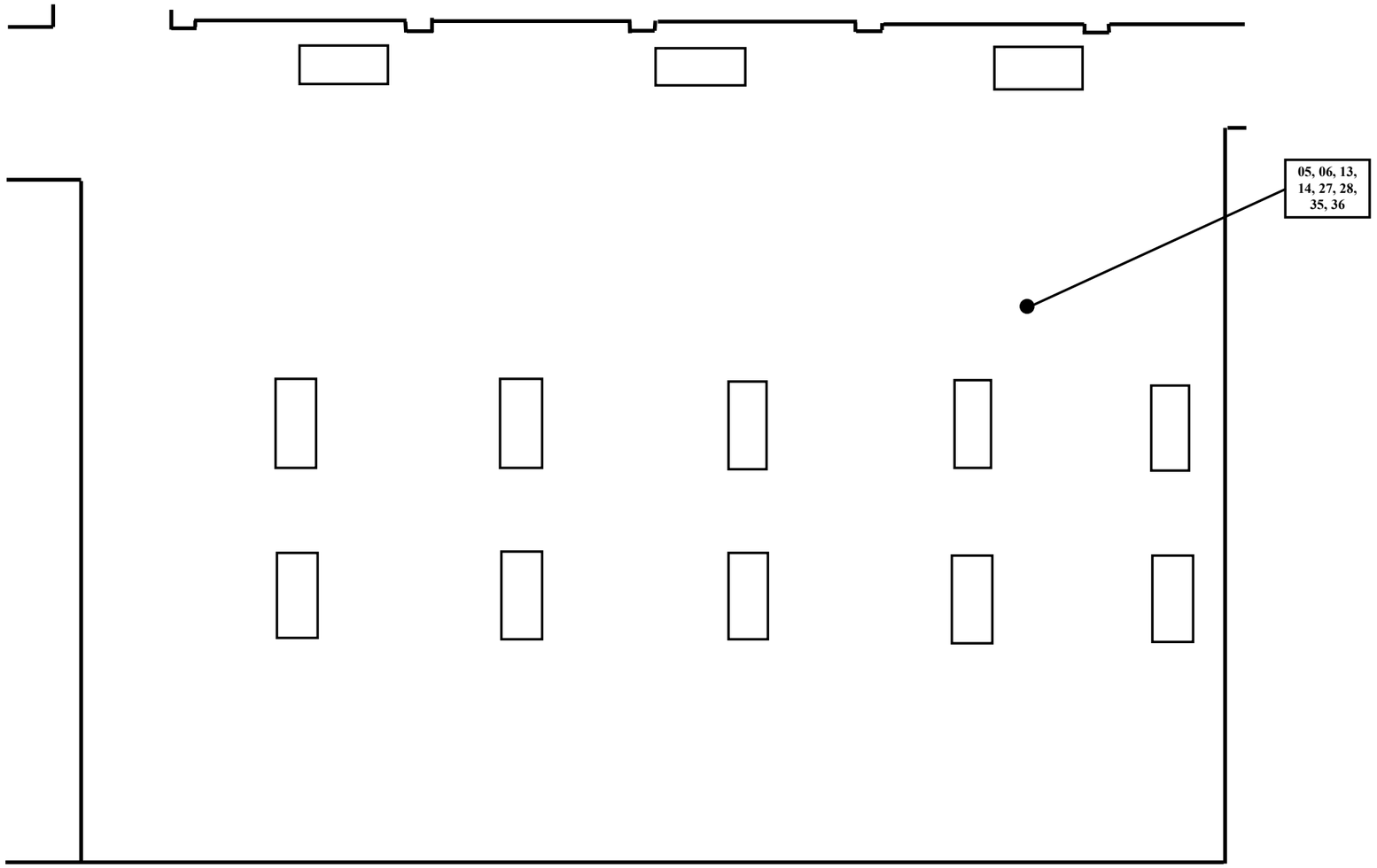
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush High School
156 NY 302
Pine Bush, NY 12566

Inspection: 1-13-26
Sample Locations

SL - 28



Locker Room Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

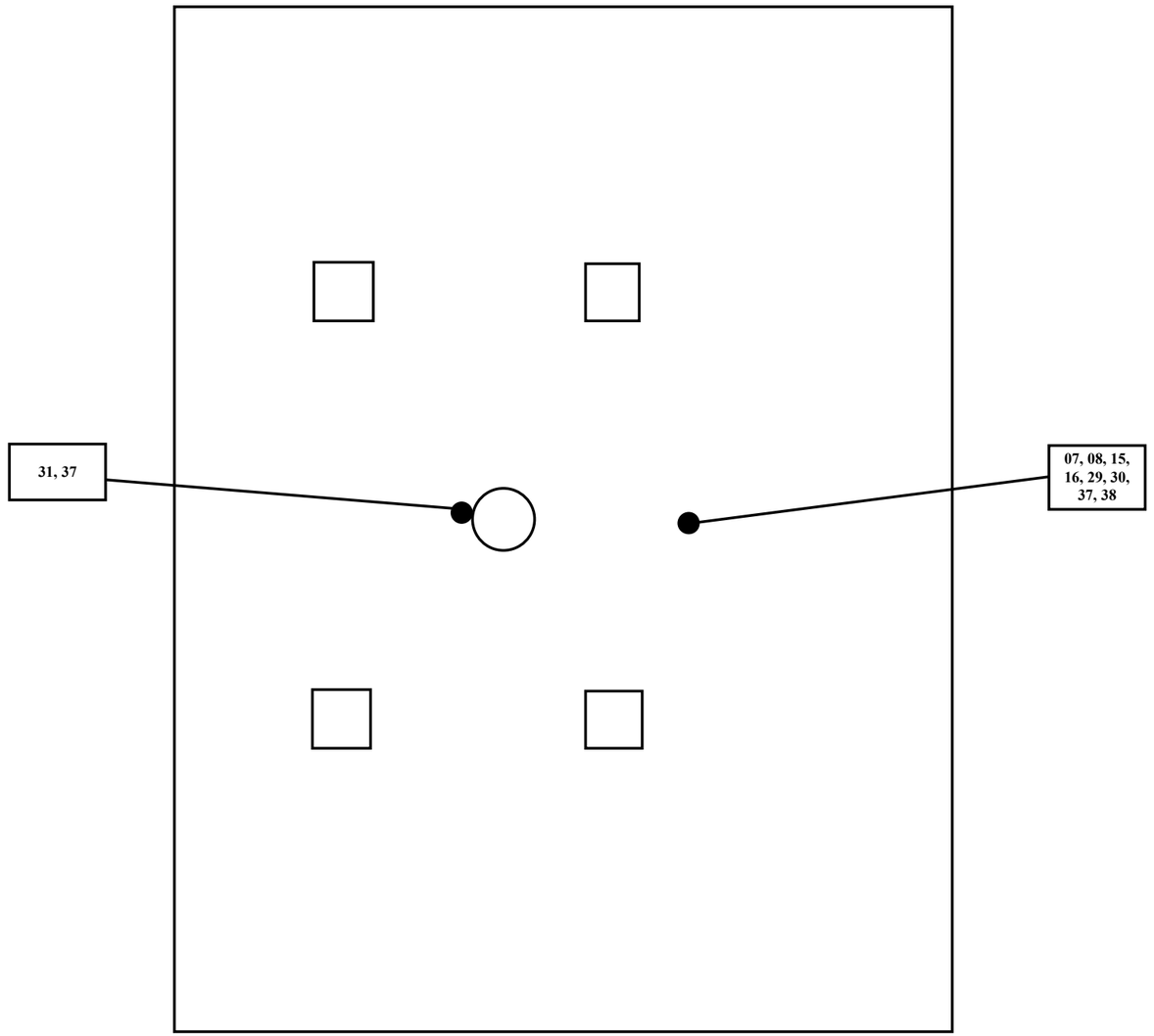
Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush High School
156 NY 302
Pine Bush, NY 12566

Inspection: 1-13-26
Sample Locations

SL - 29



Wrestling Room Roof

SAMPLE LOCATION KEY	
●	Sample Location

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 1/22/2026	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: 25-7081	
Project Manager: RL	**Prepared By:** DP

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

Clark Patterson Lee
26 IBM Road
Poughkeepsie, NY 12601

PROJECT LOCATION

Pine Bush High School
156 NY 302
Pine Bush, NY 12566

Inspection: 1-13-26
Sample Locations

SL - 30

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CES-01	6919-CES-02	6919-CES-03	6919-CES-04
Layer Number					
Lab ID Number		3110293	3110294	3110295	3110296
Sample Location		1st Floor, Stage, Partition Wall	1st Floor, Security Office, Partition Wall	1st Floor, Security Office, Partition Wall, On Sheetrock	1st Floor, Stage, Partition Wall, On Sheetrock
Sample Description		Sheetrock	Sheetrock	Joint Compound	Joint Compound
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	No	No
	Color	Gray/Brown	Gray/Brown/White	White	White
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	10.0	10.0	ND	ND
	% Cellulose	5.0	15.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	25.0	25.0
	% Carbonates	30.0	30.0	35.0	40.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	30.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CES-05	6919-CES-06	6919-CES-07	6919-CES-08
Layer Number					
Lab ID Number		3110297	3110298	3110299	3110300
Sample Location		1st Floor, Security Office, Partition Wall, On Sheetrock	2nd Floor, Fan Room, On Metal Pipe, Brown	2nd Floor, Fan Room, On Metal Pipe, Brown	2nd Floor, Fan Room, On Metal Pipe, Brown
Sample Description		Joint Compound	Pipe Insulation	Pipe Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	White	Gray/White/Silver	Gray/White/Silver	Gray/White/Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	45.0	40.0	45.0
	% Cellulose	ND	15.0	20.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	5.0	5.0	10.0
	% Carbonates	35.0	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	35.0	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CES-09	6919-CES-10	6919-CES-11	6919-CES-12
Layer Number					
Lab ID Number		3110301	3110302	3110303	3110304
Sample Location		2nd Floor, Fan Room, On Metal HVAC Duct, Yellow	2nd Floor, Fan Room, On Metal HVAC Duct, Yellow	2nd Floor, Fan Room, On Metal HVAC Duct, Yellow	1st Floor, Cafetorium Stage, On Metal Pipe
Sample Description		Pipe Insulation	Pipe Insulation	Pipe Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White/Silver	White	Yellow/White/Silver	Yellow/Brown/ Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	40.0	45.0	45.0
	% Cellulose	15.0	15.0	20.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	5.0	5.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	40.0	30.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-13	6919-CES-14	6919-CES-15	6919-CES-15
Layer Number				1	2
Lab ID Number		3110305	3110306	3110307	3110307
Sample Location		1st Floor, Cafetorium Stage, On Metal Pipe	1st Floor, Cafetorium Stage, On Metal Pipe	1st Floor, Cafetorium, Wall	1st Floor, Cafetorium, Wall
Sample Description		Pipe Insulation	Pipe Insulation	CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White/Silver	Yellow/White/Silver	Gray/Brown/White	Gray/White
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	40.0	ND	ND
	% Cellulose	15.0	15.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	10.0	25.0	20.0
	% Carbonates	ND	ND	25.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	50.0	50.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-16	6919-CES-16	6919-CES-21	6919-CES-22
Layer Number		1	2		
Lab ID Number		3110308	3110308	3110309	3110310
Sample Location		1st Floor, Cafetorium, Wall	1st Floor, Cafetorium, Wall	2nd Floor, Fan Room, Floor	2nd Floor, Fan Room, Floor
Sample Description		CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)	Cementitious Slab	Cementitious Slab
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Gray/Brown/White	Gray/White	Gray	Gray
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	25.0	25.0	25.0
	% Carbonates	25.0	30.0	30.0	35.0
	% Other	ND	ND	ND	ND
	% Unidentified	50.0	45.0	45.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CES-23	6919-CES-24
Layer Number			
Lab ID Number		3110311	3110312
Sample Location		1st Floor, Kitchen, Above Suspended Ceiling, Backing of Metal 12"x12" Ceiling Tile	1st Floor, Kitchen, Above Suspended Ceiling, Backing of Metal 12"x12" Ceiling Tile
Sample Description		Insulated Backing	Insulated Backing
Method of Quantification		Scanning Option	Scanning Option
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	Yes	Yes
	Color	Brown/Gray	Brown/Gray
Sample Treatment		None	None
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	60.0	65.0
	% Cellulose	ND	ND
	% Other	ND	ND
	% Unidentified	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0
	% Carbonates	ND	ND
	% Other	ND	ND
	% Unidentified	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-17	6919-CES-18	6919-CES-19	6919-CES-20
Layer Number					
Lab ID Number		3109740	3109741	3109742	3109743
Sample Location		1st Floor, Cafetorium, Wall, Glued to CMU	1st Floor, Cafetorium, Wall, Glued to CMU	1st Floor, Cafetorium, Suspended Ceiling	1st Floor, Cafetorium, Suspended Ceiling
Sample Description		Acoustical Wall Tile	Acoustical Wall Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige	Beige	Beige	Beige
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	10.0	10.3	13.7	14.1
	% Carbonates	24.0	36.1	30.2	10.2
	% Other Inorganic	66.0	53.6	56.1	75.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-25	6919-CES-26	6919-CES-27	6919-CES-28
Layer Number					
Lab ID Number		3109744	3109745	3109746	3109747
Sample Location		2nd Floor, Fan Room, On Metal HVAC Duct, Joint	2nd Floor, Fan Room, On Metal HVAC Duct, Joint	1st Floor, Cafetorium, Wall, Acoustical Wall Tile to CMU	1st Floor, Cafetorium, Wall, Acoustical Wall Tile to CMU
Sample Description		Duct Sealant	Duct Sealant	Glue Dab	Glue Dab
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Beige	Beige	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	6.9	9.3
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	6.9	9.3
Other Materials Present	% Organic	26.0	26.3	52.3	52.2
	% Carbonates	55.5	54.9	7.8	6.0
	% Other Inorganic	18.5	18.8	33.0	32.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-29	6919-CES-30	6919-CES-31	6919-CES-32
Layer Number					
Lab ID Number		3109748	3109749	3109750	3109751
Sample Location		1st Floor, Cafetorium, Floor, Below 12" x 12" Floor Tile	1st Floor, Cafetorium, Floor, Below 12" x 12" Floor Tile	1st Floor, Cafetorium, Floor, 12" x 12"	1st Floor, Cafetorium, Floor, 12" x 12"
Sample Description		Mastic	Mastic	Floor Tile	Floor Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Tan	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	1.7	3.8	0.3	0.2
	% Other	ND	ND	ND	ND
	% Total Asbestos	1.7	3.8	0.3 Inconclusive	0.2 Inconclusive
Other Materials Present	% Organic	50.3	66.8	30.8	32.0
	% Carbonates	21.4	12.6	47.6	53.0
	% Other Inorganic	26.6	16.8	21.3	14.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-33	6919-CES-33	6919-CES-34	6919-CES-34
Layer Number		1	2	1	2
Lab ID Number		3109752	3109752	3109753	3109753
Sample Location		1st Floor, Cafetorium, Wall, Base, 4 Inch Black	1st Floor, Cafetorium, Wall, Base, 4 Inch Black	1st Floor, Cafetorium, Wall, Base, 4 Inch Black	1st Floor, Cafetorium, Wall, Base, 4 Inch Black
Sample Description		Covebase Molding & Mastic (Molding Layer)	Covebase Molding & Mastic (Mastic Layer)	Covebase Molding & Mastic (Molding Layer)	Covebase Molding & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Tan	Black	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	62.9	69.9	61.4	68.4
	% Carbonates	35.5	1.5	36.9	2.3
	% Other Inorganic	1.6	28.6	1.7	29.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-17	6919-CES-18	6919-CES-19	6919-CES-20
Layer Number					
Lab ID Number		3109740	3109741	3109742	3109743
Sample Location		1st Floor, Cafetorium, Wall, Glued to CMU	1st Floor, Cafetorium, Wall, Glued to CMU	1st Floor, Cafetorium, Suspended Ceiling	1st Floor, Cafetorium, Suspended Ceiling
Sample Description		Acoustical Wall Tile	Acoustical Wall Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige	Beige	Beige	Beige
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	10.0	10.3	13.7	14.1
	% Carbonates	24.0	36.1	30.2	10.2
	% Other Inorganic	66.0	53.6	56.1	75.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

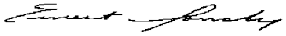
Sample ID Number		6919-CES-25	6919-CES-26	6919-CES-31	6919-CES-32
Layer Number					
Lab ID Number		3109744	3109745	3109750	3109751
Sample Location		2nd Floor, Fan Room, On Metal HVAC Duct, Joint	2nd Floor, Fan Room, On Metal HVAC Duct, Joint	1st Floor, Cafetorium, Floor, 12" x 12"	1st Floor, Cafetorium, Floor, 12" x 12"
Sample Description		Duct Sealant	Duct Sealant	Floor Tile	Floor Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Beige	Beige	Tan	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	< 0.2	0.9	10.8	7.5
	% Other	ND	ND	ND	ND
	% Total Asbestos	< 0.2	0.9	10.8	7.5
Other Materials Present	% Organic	26.0	26.3	30.8	32.0
	% Carbonates	55.5	54.9	47.6	53.0
	% Other Inorganic	18.5	17.9	10.8	7.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature : 
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CES-33	6919-CES-33	6919-CES-34	6919-CES-34
Layer Number		1	2	1	2
Lab ID Number		3109752	3109752	3109753	3109753
Sample Location		1st Floor, Cafetorium, Wall, Base, 4 Inch Black	1st Floor, Cafetorium, Wall, Base, 4 Inch Black	1st Floor, Cafetorium, Wall, Base, 4 Inch Black	1st Floor, Cafetorium, Wall, Base, 4 Inch Black
Sample Description		Covebase Molding & Mastic (Molding Layer)	Covebase Molding & Mastic (Mastic Layer)	Covebase Molding & Mastic (Molding Layer)	Covebase Molding & Mastic (Mastic Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Tan	Black	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	62.9	69.9	61.4	68.4
	% Carbonates	35.5	1.5	36.9	2.3
	% Other Inorganic	1.6	28.6	1.7	29.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
D. Stamper, D. Smith
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 NY-302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CES-01	1	1	Stage	Partition Wall	Sheetrock	3110293
6919-CES-02	1	1	Security Office	Partition Wall	Sheetrock	3110294
6919-CES-03	2	1	Security Office	Partition Wall, On Sheetrock	Joint Compound	3110295
6919-CES-04	2	1	Stage	Partition Wall, On Sheetrock	Joint Compound	3110296
6919-CES-05	2	1	Security Office	Partition Wall, On Sheetrock	Joint Compound	3110297
6919-CES-06	3	2	Fan Room	On Metal Pipe, Brown	Pipe Insulation	3110298
6919-CES-07	3	2	Fan Room	On Metal Pipe, Brown	Pipe Insulation	3110299
6919-CES-08	3	2	Fan Room	On Metal Pipe, Brown	Pipe Insulation	3110300
6919-CES-09	4	2	Fan Room	On Metal HVAC Duct, Yellow	Pipe Insulation	3110301
6919-CES-10	4	2	Fan Room	On Metal HVAC Duct, Yellow	Pipe Insulation	3110302
6919-CES-11	4	2	Fan Room	On Metal HVAC Duct, Yellow	Pipe Insulation	3110303
6919-CES-12	5	1	Cafetorium Stage	On Metal Pipe	Pipe Insulation	3110304
6919-CES-13	5	1	Cafetorium Stage	On Metal Pipe	Pipe Insulation	3110305
6919-CES-14	5	1	Cafetorium Stage	On Metal Pipe	Pipe Insulation	3110306
6919-CES-15	6	1	Cafetorium	Wall	CMU - Mortar	3110307

AS LABELED ON PAPERWORK
INITIAL/DATE MP / 08/22/2025

Comments:

SUBMITTED BY: Dillon Boyce
RECEIVED BY: M Dwisdale

DATE: 8.21.25
AUG 21 '25 13:50
DATE

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
D. Stamper, D. Smith
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 NY-302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CES-16	6	1	Cafetorium	Wall	CMU + Mortar	3110308
6919-CES-17	7	1	Cafetorium	Wall, Glued to CMU	Acoustical Wall Tile	
6919-CES-18	7	1	Cafetorium	Wall, Glued to CMU	Acoustical Wall Tile	
6919-CES-19	8	1	Cafetorium	Suspended Ceiling	Ceiling Tile	
6919-CES-20	8	1	Cafetorium	Suspended Ceiling	Ceiling Tile	
6919-CES-21	9	2	Fan Room	Floor	Cementitious Slab	3110309
6919-CES-22	9	2	Fan Room	Floor	Cementitious Slab	3110310
6919-CES-23	10	1	Kitchen	Above Suspended Ceiling, Backing of Metal 12"x12" Ceiling Tile	Insulated Backing	3110311
6919-CES-24	10	1	Kitchen	Above Suspended Ceiling, Backing of Metal 12"x12" Ceiling Tile	Insulated Backing	3110312
6919-CES-25	11	2	Fan Room	On Metal HVAC Duct, Joint	Duct Sealant	
6919-CES-26	11	2	Fan Room	On Metal HVAC Duct, Joint	Duct Sealant	
6919-CES-27	12	1	Cafetorium	Wall, Acoustical Wall Tile to CMU	Glue Dab	
6919-CES-28	12	1	Cafetorium	Wall, Acoustical Wall Tile to CMU	Glue Dab	
6919-CES-29	13	1	Cafetorium	Floor, Below 12"x12" Floor Tile	Mastic	
6919-CES-30	13	1	Cafetorium	Floor, Below 12"x12" Floor Tile	Mastic	

Comments:

SUBMITTED BY: Dillon Stamper DATE: 8-21-25

RECEIVED BY: MDW Weaver AUG 21 '25 13:56 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
D. Stamper, D. Smith
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 NY-302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CES-31	14	1	Cafetorium	Floor, 12"x12"	Floor Tile	
6919-CES-32	14	1	Cafetorium	Floor, 12"x12"	Floor Tile	
6919-CES-33	15	1	Cafetorium	Wall, Base, 4 inch Black	Covebase Molding + Mastic	
6919-CES-34	15	1	Cafetorium	Wall, Base, 4 inch Black	Covebase Molding + Mastic	

Comments:

SUBMITTED BY:

DATE: AUG 21 '25 13:50 8-21-25

RECEIVED BY:

DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Middle School - 1951 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CMS-01	6919-CMS-02	6919-CMS-03	6919-CMS-04
Layer Number					
Lab ID Number		3110339	3110340	3110341	3110342
Sample Location		1st Floor, Girls Locker Room, Bath/Shower Stall, Ceiling	1st Floor, Girls Locker Room, Bath/Shower Stall, Ceiling	1st Floor, Girls Locker Room, Bath/Shower Stall, Ceiling, On Sheetrock	1st Floor, Girls Locker Room, Bath/Shower Stall, Ceiling, On Sheetrock
Sample Description		Sheetrock	Sheetrock	Joint Compound	Joint Compound
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/Brown/White	Gray/Brown/White	White	White
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	10.0	5.0	ND	ND
	% Cellulose	15.0	20.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	25.0	30.0
	% Carbonates	30.0	25.0	35.0	35.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Middle School - 1951 NY-302 - Circleville, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CMS-05	6919-CMS-08	6919-CMS-09	6919-CMS-10
Layer Number					
Lab ID Number		3110343	3110344	3110345	3110346
Sample Location		1st Floor, Girls Locker Room, Bath/Shower Stall, Ceiling, On Sheetrock	1st Floor, Gym, On Metal Fitting	1st Floor, Gym, On Metal Fitting	1st Floor, Gym, On Metal Fitting
Sample Description		Joint Compound	Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	Yes	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	White	Gray/Brown	Gray/Brown	Gray/Brown
Sample Treatment		None	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	20.0	20.0	15.0
	% Cellulose	ND	10.0	5.0	10.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	10.0	15.0	15.0
	% Carbonates	40.0	20.0	20.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	40.0	40.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Middle School - 1951 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CMS-11	6919-CMS-12	6919-CMS-13	6919-CMS-14
Layer Number					
Lab ID Number		3110347	3110348	3110349	3110350
Sample Location		1st Floor, Girls Locker Room Vestibule, Above Suspended Ceiling, On Metal Pipe	1st Floor, Girls Locker Room Vestibule, Above Suspended Ceiling, On Metal Pipe	1st Floor, Room A32, Above Suspended Ceiling, On HVAC	1st Floor, Room A32, Above Suspended Ceiling, On HVAC
Sample Description		Pipe Insulation	Pipe Insulation	Insulation	Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Brown/ Silver	Brown/Silver	Brown/Silver	Brown/Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	50.0	50.0	50.0	45.0
	% Cellulose	10.0	15.0	15.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	5.0	5.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	25.0	30.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Middle School - 1951 NY-302 - Circleville, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CMS-06	6919-CMS-07	6919-CMS-15	6919-CMS-16
Layer Number					
Lab ID Number		3109764	3109765	3109766	3109767
Sample Location		1st Floor, Girl's Locker Room Vestibule, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Girl's Locker Room Vestibule, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Room A32, Above Suspended Ceiling, On HVAC	1st Floor, Room A32, Above Suspended Ceiling, On HVAC
Sample Description		Acoustical Ceiling Tile	Acoustical Ceiling Tile	Vibration Dampener	Vibration Dampener
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND
Other Materials Present	% Organic	14.4	15.1	91.1	90.8
	% Carbonates	22.2	32.6	7.8	8.6
	% Other Inorganic	63.4	52.3	1.1	0.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Circleville Middle School - 1951 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CMS-06	6919-CMS-07	6919-CMS-15
Layer Number				
Lab ID Number		3109764	3109765	3109766
Sample Location		1st Floor, Girl's Locker Room Vestibule, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Girl's Locker Room Vestibule, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Room A32, Above Suspended Ceiling, On HVAC
Sample Description		Acoustical Ceiling Tile	Acoustical Ceiling Tile	Vibration Dampener
Analytical Method		NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No
	Homogenous	No	No	Yes
	Fibrous	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Black
Asbestos Content	% Amosite	ND	ND	ND
	% Chrysotile	ND	ND	ND
	% Other	ND	ND	ND
	% Total Asbestos	ND	ND	ND
Other Materials Present	% Organic	14.4	15.1	91.1
	% Carbonates	22.2	32.6	7.8
	% Other Inorganic	63.4	52.3	1.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 19-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Circleville Middle School
PROJECT ADDRESS: 1951 NY-302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CMS-01	1	1	Girls Locker Room	Bath/Shower Stall, Ceiling	Sheetrock	3110339
6919-CMS-02	1	1	Girls Locker Room	Bath/Shower Stall, Ceiling	Sheetrock	3110340
6919-CMS-03	2	1	Girls Locker Room	Bath/Shower Stall, Ceiling, On Sheetrock	Joint Compound	3110341
6919-CMS-04	2	1	Girls Locker Room	Bath/Shower Stall, Ceiling, On Sheetrock	Joint Compound	3110342
6919-CMS-05	2	1	Girls Locker Room	Bath/Shower Stall, Ceiling, On Sheetrock	Joint Compound	3110343
6919-CMS-06	3	1	Girls Locker Room Vestibule	Ceiling, Suspended, 2'x4' Dot Speck	Acoustical Ceiling Tile	
6919-CMS-07	3	1	Girls Locker Room Vestibule	Ceiling, Suspended, 2'x4' Dot Speck	Acoustical Ceiling Tile	
6919-CMS-08	4	1	Gym	On Metal Fitting	Mudded Joint Packing	3110344
6919-CMS-09	4	1	Gym	On Metal Fitting	Mudded Joint Packing	3110345
6919-CMS-10	4	1	Gym	On Metal Fitting	Mudded Joint Packing	3110346
6919-CMS-11	5	1	Girls Locker Room Vestibule	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3110347
6919-CMS-12	5	1	Girls Locker Room Vestibule	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3110348
6919-CMS-13	6	1	Room A32	Above Suspended Ceiling, On HVAC	Insulation	3110349
6919-CMS-14	6	1	Room A32	Above Suspended Ceiling, On HVAC	Insulation	3110350
6919-CMS-15	7	1	Room A32	Above Suspended Ceiling, On HVAC	Vibration Dampener	

AS LABELED ON PAPERWORK
INITIAL/DATE MP, 08/22/2025

Comments:

SUBMITTED BY:
DATE: 8-21-25

RECEIVED BY:
AUG 21 '25 19:50
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 19-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Circleville Middle School
PROJECT ADDRESS: 1951 NY-302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CMS-16	7	1	Room A32	Above Suspended Ceiling, On HVAC	Vibration Dampener	

Comments:

SUBMITTED BY: Dillon Stagner DATE: 8-21-25

RECEIVED BY: M D Vrabel AUG 21 '25 19:50 DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CRISPMS-01	6919-CRISPMS-02	6919-CRISPMS-03	6919-CRISPMS-04
Layer Number					
Lab ID Number		3110313	3110314	3110315	3110316
Sample Location		1st Fl, Kitchen, Abv Suspended Ceiling, On Ceiling Deck & Abv Ceiling Components	1st Fl, Kitchen, Abv Suspended Ceiling, On Ceiling Deck & Abv Ceiling Components	1st Fl, Cafeteria, Abv Suspended Ceiling, On Ceiling Deck & Abv Ceiling Components	1st Fl, Cafeteria, Abv Suspended Ceiling, On Ceiling Deck & Abv Ceiling Components
Sample Description		Spray On Fire Proofing	Spray On Fire Proofing	Spray On Fire Proofing	Spray On Fire Proofing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray	Gray	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	25.0	30.0	30.0	30.0
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	5.0	10.0	10.0
	% Carbonates	25.0	25.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	40.0	35.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CRISPMS-05	6919-CRISPMS-06	6919-CRISPMS-07	6919-CRISPMS-08
Layer Number					
Lab ID Number		3110317	3110318	3110319	3110320
Sample Location		1st Fl, Cafeteria, Abv Suspended Ceiling, On Ceiling Deck & Abv Ceiling Components	1st Floor, Womens Locker Room, Wall, On Wire Lath	1st Floor, Mens Locker Room, Wall, On Wire Lath	1st Floor, Womens Locker Room, Wall, On Wire Lath
Sample Description		Spray On Fire Proofing	Plaster (Scratch Layer Only)	Plaster (Scratch Layer Only)	Plaster (Scratch Layer Only)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	No	No	No
	Color	Gray	Gray/White	Gray/White	Gray/White
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	25.0	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	30.0	30.0	30.0
	% Carbonates	25.0	20.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	50.0	45.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CRISPMS-09	6919-CRISPMS-10	6919-CRISPMS-11	6919-CRISPMS-12
Layer Number					
Lab ID Number		3110321	3110322	3110323	3110324
Sample Location		1st Floor, Womens Locker Room, Ceiling	1st Floor, Mens Locker Room, Ceiling	1st Floor, Room 100, Wall	1st Floor, Room 101, Wall
Sample Description		Sheetrock	Sheetrock	Sheetrock	Sheetrock
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	White/Brown	White/Brown	Gray/Brown/Blue	Gray/Brown/Blue
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	15.0	10.0	10.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	15.0	15.0
	% Carbonates	30.0	30.0	30.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	45.0	45.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CRISPMS-13	6919-CRISPMS-14	6919-CRISPMS-15	6919-CRISPMS-16
Layer Number					
Lab ID Number		3110325	3110326	3110327	3110328
Sample Location		1st Floor, Womens Locker Room, Ceiling, On Sheetrock	1st Floor, Mens Locker Room, Ceiling, On Sheetrock	1st Floor, Room 101, Wall, On Sheetrock	1st Floor, Room 100, Wall, On Sheetrock
Sample Description		Joint Compound	Joint Compound	Joint Compound	Joint Compound
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	No	No	No	No
	Color	White/Blue	White/Blue	White	White
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	25.0	25.0	25.0
	% Carbonates	35.0	40.0	40.0	35.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	35.0	35.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CRISPMS-17	6919-CRISPMS-18	6919-CRISPMS-19	6919-CRISPMS-20
Layer Number					
Lab ID Number		3110329	3110330	3110331	3110332
Sample Location		1st Floor, Room 101, Wall, On Sheetrock	1st Floor, Cafeteria, Above Suspended Ceiling, On Metal Pipe	1st Floor, Cafeteria, Above Suspended Ceiling, On Metal Pipe	1st Floor, Kitchen, Above Suspended Ceiling, On Metal Pipe
Sample Description		Joint Compound	Pipe Insulation	Pipe Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	Yes	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	White	Yellow/White/Silver	Yellow/White/Silver	Yellow/White/Silver
Sample Treatment		None	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	45.0	45.0	40.0
	% Cellulose	ND	20.0	15.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	5.0	10.0	5.0
	% Carbonates	35.0	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	30.0	30.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CRISPMS-21	6919-CRISPMS-22	6919-CRISPMS-23	6919-CRISPMS-24
Layer Number					
Lab ID Number		3110333	3110334	3110335	3110336
Sample Location		1st Floor, Womens Locker Room, Wall	1st Floor, Cafeteria, Wall	1st Floor, Cafeteria, Wall, On CMU	1st Floor, Womens Locker Room, Wall, On CMU
Sample Description		CMU	CMU	Mortar	Mortar
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	No	No	No	No
	Color	Gray/Brown	Gray/Brown	Gray	Gray
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	30.0	35.0	35.0
	% Carbonates	20.0	25.0	20.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	50.0	45.0	45.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CRISPMS-25	6919-CRISPMS-26	6919-CRISPMS-27	6919-CRISPMS-28
Layer Number					
Lab ID Number		3109754	3109755	3109756	3109757
Sample Location		1st Floor, Room 101, Ceiling, Suspended, 2' x 4' Smooth	1st Floor, Room 101, Ceiling, Suspended, 2' x 4' Smooth	1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Dot Canyon	1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Dot Canyon
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	Yes
	Homogenous	No	No	Yes	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Beige	Beige/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	16.6	16.7	32.1	27.4
	% Carbonates	17.3	9.0	37.7	26.0
	% Other Inorganic	66.1	74.3	30.2	46.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CRISPMS-29	6919-CRISPMS-30	6919-CRISPMS-31	6919-CRISPMS-32
Layer Number					
Lab ID Number		3109758	3109759	3109760	3109761
Sample Location		1st Floor, Cafeteria, Suspended Ceiling, 2' x 2' Dot Canyon	1st Floor, Kitchen, Suspended Ceiling, 2' x 2' Dot Canyon	1st Floor, Women's Locker Room, Wall, Between CMU Layers	1st Floor, Men's Locker Room, Wall, Between CMU Layers
Sample Description		Ceiling Tile	Ceiling Tile	Tar Paper Vapor Barrier & Waterproofing Tar	Tar Paper Vapor Barrier & Waterproofing Tar
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige	Beige	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	1.2	0.9	18.7	42.9
	% Carbonates	30.8	27.8	21.2	21.2
	% Other Inorganic	68.0	71.3	60.1	35.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CRISPMS-33	6919-CRISPMS-34
Layer Number			
Lab ID Number		3109762	3109763
Sample Location		1st Floor, Room 101, Above Suspended Ceiling, Wall	1st Floor, Room 100, Above Suspended Ceiling, Wall
Sample Description		Fire Stop	Fire Stop
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Red	Red
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	46.0	45.3
	% Carbonates	29.9	29.3
	% Other Inorganic	24.1	25.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CRISPMS-25	6919-CRISPMS-26	6919-CRISPMS-27	6919-CRISPMS-28
Layer Number					
Lab ID Number		3109754	3109755	3109756	3109757
Sample Location		1st Floor, Room 101, Ceiling, Suspended, 2' x 4' Smooth	1st Floor, Room 101, Ceiling, Suspended, 2' x 4' Smooth	1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Dot Canyon	1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Dot Canyon
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	Yes
	Homogenous	No	No	Yes	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Beige	Beige/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	16.6	16.7	32.1	27.4
	% Carbonates	17.3	9.0	37.7	26.0
	% Other Inorganic	66.1	74.3	30.2	46.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-CRISPMS-29	6919-CRISPMS-30	6919-CRISPMS-31	6919-CRISPMS-32
Layer Number					
Lab ID Number		3109758	3109759	3109760	3109761
Sample Location		1st Floor, Cafeteria, Suspended Ceiling, 2' x 2' Dot Canyon	1st Floor, Kitchen, Suspended Ceiling, 2' x 2' Dot Canyon	1st Floor, Women's Locker Room, Wall, Between CMU Layers	1st Floor, Men's Locker Room, Wall, Between CMU Layers
Sample Description		Ceiling Tile	Ceiling Tile	Tar Paper Vapor Barrier & Waterproofing Tar	Tar Paper Vapor Barrier & Waterproofing Tar
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige	Beige	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	1.2	0.9	18.7	42.9
	% Carbonates	30.8	27.8	21.2	21.2
	% Other Inorganic	68.0	71.3	60.1	35.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Crispell Middle School - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-CRISPMS-33	6919-CRISPMS-34
Layer Number			
Lab ID Number		3109762	3109763
Sample Location		1st Floor, Room 101, Above Suspended Ceiling, Wall	1st Floor, Room 100, Above Suspended Ceiling, Wall
Sample Description		Fire Stop	Fire Stop
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Red	Red
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Materials Present	% Organic	46.0	45.3
	% Carbonates	29.9	29.3
	% Other Inorganic	24.1	25.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Crispell Middle School
PROJECT ADDRESS: 77 Maple Avenue
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CRISPMS-01	1	1	Kitchen	Above Suspended Ceiling, On Ceiling Deck and Above Ceiling Components	Spray On Fire Proofing	3110313
6919-CRISPMS-02	1	1	Kitchen	Above Suspended Ceiling, On Ceiling Deck and Above Ceiling Components	Spray On Fire Proofing	3110314
6919-CRISPMS-03	1	1	Cafeteria	Above Suspended Ceiling, On Ceiling Deck and Above Ceiling Components	Spray On Fire Proofing	3110315
6919-CRISPMS-04	1	1	Cafeteria	Above Suspended Ceiling, On Ceiling Deck and Above Ceiling Components	Spray On Fire Proofing	3110316
6919-CRISPMS-05	1	1	Cafeteria	Above Suspended Ceiling, On Ceiling Deck and Above Ceiling Components	Spray On Fire Proofing	3110317
6919-CRISPMS-06	2	1	Womens Locker Room	Wall, On Wire Lathe	Plaster	3110318
6919-CRISPMS-07	2	1	Mens Locker Room	Wall, On Wire Lathe	Plaster	3110319
6919-CRISPMS-08	2	1	Womens Locker Room	Wall, On Wire Lathe	Plaster	3110320
6919-CRISPMS-09	3	1	Womens Locker Room	Ceiling	Sheetrock	3110321
6919-CRISPMS-10	3	1	Mens Locker Room	Ceiling	Sheetrock	3110322
6919-CRISPMS-11	4	1	Room 100	Wall	Sheetrock	3110323
6919-CRISPMS-12	4	1	Room 101	Wall	Sheetrock	3110324
6919-CRISPMS-13	5	1	Womens Locker Room	Ceiling, On Sheetrock	Joint Compound	3110325
6919-CRISPMS-14	5	1	Mens Locker Room	Ceiling, On Sheetrock	Joint Compound	3110326
6919-CRISPMS-15	5	1	Room 101	Wall, On Sheetrock	Joint Compound	3110327

AS LABELED ON PAPERWORK
MP 08/22/2025

Comments:

SUBMITTED BY: [signature] DATE: 8-21-25

RECEIVED BY: MD Warner AUG 21 '25 13:50 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Crispell Middle School
PROJECT ADDRESS: 77 Maple Avenue
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CRISPMS-16	5	1	Room 100	Wall, On Sheetrock	Joint Compound	3110328
6919-CRISPMS-17	5	1	Room 101	Wall, On Sheetrock	Joint Compound	3110329
6919-CRISPMS-18	6	1	Cafeteria	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3110330
6919-CRISPMS-19	6	1	Cafeteria	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3110331
6919-CRISPMS-20	6	1	Kitchen	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3110332
6919-CRISPMS-21	7	1	Womens Locker Room	Wall	CMU	3110333
6919-CRISPMS-22	7	1	Cafeteria	Wall	CMU	3110334
6919-CRISPMS-23	8	1	Cafeteria	Wall, On CMU	Mortar	3110335
6919-CRISPMS-24	8	1	Womens Locker Room	Wall, On CMU	Mortar	3110336
6919-CRISPMS-25	9	1	Room 101	Ceiling, Suspended, 2'x4' Smooth	Ceiling Tile	
6919-CRISPMS-26	9	1	Room 101	Ceiling, Suspended, 2'x4' Smooth	Ceiling Tile	
6919-CRISPMS-27	10	1	Cafeteria	Ceiling, Suspended, 2'x2' Dot Canyon	Ceiling Tile	
6919-CRISPMS-28	10	1	Cafeteria	Ceiling, Suspended, 2'x2' Dot Canyon	Ceiling Tile	
6919-CRISPMS-29	11	1	Cafeteria	Suspended Ceiling, 2'x2' Dot Canyon	Ceiling Tile	
6919-CRISPMS-30	11	1	Kitchen	Suspended Ceiling, 2'x2' Dot Canyon	Ceiling Tile	

Comments:

SUBMITTED BY: [signature] DATE: 8-21-25

RECEIVED BY: MD Worker AUG 21 '25 13:56 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Crispell Middle School
PROJECT ADDRESS: 77 Maple Avenue
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-CRISPMS-31	12	1	Womens Locker Room	Wall, Between CMU Layers	Tar Paper Vapor Barrier + Waterproofing Tar	
6919-CRISPMS-32	12	1	Mens Locker Room	Wall, Between CMU Layers	Tar Paper Vapor Barrier + Waterproofing Tar	
6919-CRISPMS-33	13	1	Room 101	Above Suspended Ceiling, Wall	Fire Stop	
6919-CRISPMS-34	13	1	Room 100	Above Suspended Ceiling, Wall	Fire Stop	

Comments:

SUBMITTED BY: [signature] DATE: 8.21.25

RECEIVED BY: [signature] AUG 21 '25 19:50 DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-EJRES-01	6919-EJRES-01	6919-EJRES-02	6919-EJRES-02
Layer Number		1	2	1	2
Lab ID Number		3110351	3110351	3110352	3110352
Sample Location		1st Floor, Cafeteria, Wall	1st Floor, Cafeteria, Wall	1st Floor, Cafeteria, Wall	1st Floor, Cafeteria, Wall
Sample Description		Plaster (Plaster Layer)	Plaster (Scratch Layer)	Plaster (Plaster Layer)	Plaster (Scratch Layer)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	White/Blue	Gray/Brown	White/Blue	Gray/Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	30.0	15.0	35.0
	% Carbonates	50.0	25.0	40.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	45.0	45.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-EJRES-03	6919-EJRES-03	6919-EJRES-04	6919-EJRES-04
Layer Number		1	2	1	2
Lab ID Number		3110353	3110353	3110354	3110354
Sample Location		1st Floor, Cafeteria, Wall	1st Floor, Cafeteria, Wall	Basement, Boiler Room, Wall	Basement, Boiler Room, Wall
Sample Description		Plaster (Plaster Layer)	Plaster (Scratch Layer)	CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	No	No	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	White/Blue	Gray/Brown	Gray/Black	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	35.0	25.0	30.0
	% Carbonates	45.0	25.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	40.0	50.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-EJRES-05	6919-EJRES-05	6919-EJRES-06	6919-EJRES-07
Layer Number		1	2		
Lab ID Number		3110355	3110355	3110356	3110357
Sample Location		Basement, Boiler Room, Wall	Basement, Boiler Room, Wall	Basement, Boiler Room, Floor	Basement, Boiler Room, Floor
Sample Description		CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)	Cementitious Slab	Cementitious Slab
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	Yes	No	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Gray/Black	Gray/White	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	30.0	25.0	20.0
	% Carbonates	25.0	20.0	35.0	35.0
	% Other	ND	ND	ND	ND
	% Unidentified	50.0	50.0	40.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-EJRES-08	6919-EJRES-09	6919-EJRES-10	6919-EJRES-11
Layer Number					
Lab ID Number		3110358	3110359	3110360	3110361
Sample Location		1st Floor, Storage Room, On Metal Fitting	1st Floor, Storage Room, On Metal Fitting	1st Floor, Storage Room, On Metal Fitting	Basement, Boiler Room, Metal to CMU
Sample Description		Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing	Flue Packing
Method of Quantification		Point Count	Point Count	Point Count	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	Yes
	Fibrous	Yes	Yes	Yes	No
	Color	Gray	Gray/Brown	Gray/Orange	Gray/White
Sample Treatment		Homogenized	Homogenized	Homogenized	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	20.0	18.2	17.4	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	20.0	18.2	17.4	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	10.0	13.6	13.0	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	ND	ND	ND	25.0
	% Carbonates	ND	ND	ND	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	70.0	68.2	69.6	55.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-EJRES-12	6919-EJRES-13	6919-EJRES-14	6919-EJRES-15
Layer Number					
Lab ID Number		3110362	3110363	3110364	3110365
Sample Location		Basement, Boiler Room, Metal to CMU	Basement, Boiler Room, Metal to CMU	Basement, Boiler Room, Boiler 2, Equipment Pad	Basement, Boiler Room, Boiler 1, Equipment Pad
Sample Description		Flue Packing	Flue Packing	Concrete	Concrete
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	No	No
	Color	Gray/White	Gray/White	Gray	Gray
Sample Treatment		None	None	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	25.0	30.0	30.0
	% Carbonates	20.0	25.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	55.0	50.0	45.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-EJRES-16	6919-EJRES-17	6919-EJRES-18	6919-EJRES-19
Layer Number					
Lab ID Number		3110366	3110367	3110368	3110369
Sample Location		Basement, Boiler Room, Boiler 1, Behind Metal Jacket	Basement, Boiler Room, Boiler 1, Behind Metal Jacket	Basement, Boiler Room, Boiler 2, Behind Metal Jacket	Basement, Boiler Room, On Metal Pipe
Sample Description		Insulation	Insulation	Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	Yes
	Homogenous	Yes	Yes	Yes	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Gray	Yellow/Gray	Yellow/Gray	Yellow/White/Silver
Sample Treatment		None	None	None	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	75.0	80.0	75.0	40.0
	% Cellulose	ND	ND	ND	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	5.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	20.0	15.0	20.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-EJRES-20	6919-EJRES-21	6919-EJRES-22	6919-EJRES-23
Layer Number					
Lab ID Number		3110370	3110371	3110372	3110373
Sample Location		Basement, Boiler Room, On Metal Pipe	Basement, Boiler Room, On Metal Pipe	Basement, Boiler Room, Exp. Tank	Basement, Boiler Room, Exp. Tank
Sample Description		Pipe Insulation	Pipe Insulation	Insulation	Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White	Yellow/White/Silver	Yellow/White/Silver	Yellow/White/Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	45.0	45.0	40.0
	% Cellulose	15.0	20.0	15.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	5.0	10.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	30.0	30.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number	6919-EJRES-24
Layer Number	
Lab ID Number	3110374
Sample Location	Basement, Boiler Room, Exp. Tank
Sample Description	Insulation
Method of Quantification	Scanning Option

Appearance	Layered	Yes
	Homogenous	No
	Fibrous	Yes
	Color	Yellow/White/Silver
Sample Treatment		Homogenized

Asbestos Content	% Amosite	ND
	% Chrysotile	ND
	% Other	ND
	% Total Asbestos	ND
Other Fibrous Materials Present	% Fibrous Glass	35.0
	% Cellulose	15.0
	% Other	ND
	% Unidentified	ND
Non-Fibrous Materials Present	% Silicates	10.0
	% Carbonates	ND
	% Other	ND
	% Unidentified	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-EJRES-25	6919-EJRES-26	6919-EJRES-27	6919-EJRES-28
Layer Number					
Lab ID Number		3109768	3109769	3109770	3109771
Sample Location		1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Textured	1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Textured	Basement, Boiler Room, By Pass Pipe Line	Basement, Boiler Room, By Pass Pipe Line
Sample Description		Ceiling Tile	Ceiling Tile	Gasket	Gasket
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Beige	Beige	Red	Red
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	21.9	21.8	36.5	36.8
	% Carbonates	6.4	15.2	15.9	13.3
	% Other Inorganic	71.7	63.0	47.6	49.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - EJ Russell Elementary School - 78 Holland Avenue - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-EJRES-25	6919-EJRES-26	6919-EJRES-27	6919-EJRES-28
Layer Number					
Lab ID Number		3109768	3109769	3109770	3109771
Sample Location		1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Textured	1st Floor, Cafeteria, Ceiling, Suspended, 2' x 2' Textured	Basement, Boiler Room, By Pass Pipe Line	Basement, Boiler Room, By Pass Pipe Line
Sample Description		Ceiling Tile	Ceiling Tile	Gasket	Gasket
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Beige	Beige	Red	Red
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	21.9	21.8	36.5	36.8
	% Carbonates	6.4	15.2	15.9	13.3
	% Other Inorganic	71.7	63.0	47.6	49.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
D. Stamper, D. Smith
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: EJ Russell Elementary School
PROJECT ADDRESS: 78 Holland Avenue
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-EJRES-01	1	1	Cafeteria	Wall	Plaster	3110351
6919-EJRES-02	1	1	Cafeteria	Wall	Plaster	3110352
6919-EJRES-03	1	1	Cafeteria	Wall	Plaster	3110353
6919-EJRES-04	2	Basement	Boiler Room	Wall	CMU + Mortar	3110354
6919-EJRES-05	2	Basement	Boiler Room	Wall	CMU + Mortar	3110355
6919-EJRES-06	3	Basement	Boiler Room	Floor	Cementitious Slab	3110356
6919-EJRES-07	3	Basement	Boiler Room	Floor	Cementitious Slab	3110357
6919-EJRES-08	4	1	Storage Room	On Metal Fitting	Mudded Joint Packing	3110358
6919-EJRES-09	4	1	Storage Room	On Metal Fitting	Mudded Joint Packing	3110359
6919-EJRES-10	4	1	Storage Room	On Metal Fitting	Mudded Joint Packing	3110360
6919-EJRES-11	5	Basement	Boiler Room	Metal to CMU	Flue Packing	3110361
6919-EJRES-12	5	Basement	Boiler Room	Metal to CMU	Flue Packing	3110362
6919-EJRES-13	5	Basement	Boiler Room	Metal to CMU	Flue Packing	3110363
6919-EJRES-14	6	Basement	Boiler Room	Boiler 2, Equipment Pad	Concrete	3110364
6919-EJRES-15	6	Basement	Boiler Room	Boiler 1, Equipment Pad	Concrete	3110365

AS LABELED ON PAPERWORK
AMP 08/22/2025

Comments:

SUBMITTED BY: [signature] DATE: 8-21-25

RECEIVED BY: MD WALKER AUG 21 '25 19:50 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
D. Stamper, D. Smith
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: EJ Russell Elementary School
PROJECT ADDRESS: 78 Holland Avenue
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-EJRES-16	7	Basement	Boiler Room	Boiler 1, Behind Metal Jacket	Insulation	3110366
6919-EJRES-17	7	Basement	Boiler Room	Boiler 1, Behind Metal Jacket	Insulation	3110367
6919-EJRES-18	7	Basement	Boiler Room	Boiler 2, Behind Metal Jacket	Insulation	3110368
6919-EJRES-19	8	Basement	Boiler Room	On Metal Pipe	Pipe Insulation	3110369
6919-EJRES-20	8	Basement	Boiler Room	On Metal Pipe	Pipe Insulation	3110370
6919-EJRES-21	8	Basement	Boiler Room	On Metal Pipe	Pipe Insulation	3110371
6919-EJRES-22	9	Basement	Boiler Room	Exp Tank	Insulation	3110372
6919-EJRES-23	9	Basement	Boiler Room	Exp. Tank	Insulation	3110373
6919-EJRES-24	9	Basement	Boiler Room	Exp. Tank	Insulation	3110374
6919-EJRES-25	10	1	Cafeteria	Ceiling, Suspended, 2'x2' Textured	Ceiling Tile	
6919-EJRES-26	10	1	Cafeteria	Ceiling, Suspended, 2'x2' Textured	Ceiling Tile	
6919-EJRES-27	11	Basement	Boiler Room	By Pass Pipe Line	Gasket	
6919-EJRES-28	11	Basement	Boiler Room	By Pass Pipe Line	Gasket	

Comments:

SUBMITTED BY: [signature] DATE: 8-21-25

RECEIVED BY: [signature] AUG 21 '25 19:50 DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PES-01	6919-PES-02	6919-PES-03	6919-PES-04
Layer Number					
Lab ID Number		3111056	3111057	3111058	3111059
Sample Location		1st Floor, Gym, Boys Bathroom, Ceiling	1st Floor, Gym, Girls Bathroom, Ceiling	1st Floor, Gym, Girls Bathroom, Ceiling, On Sheetrock	1st Floor, Gym, Girls Bathroom, Ceiling, On Sheetrock
Sample Description		Sheetrock	Sheetrock	Joint Compound	Joint Compound
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Gray	Gray	White	White
Sample Treatment		None	None	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	5.0	10.0	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	20.0	20.0	25.0	25.0
	% Carbonates	35.0	35.0	35.0	40.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	35.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PES-05	6919-PES-12	6919-PES-13	6919-PES-14
Layer Number					
Lab ID Number		3111060	3111061	3111062	3111063
Sample Location		1st Floor, Gym, Boys Bathroom, Ceiling, On Sheetrock	1st Floor, Loading Dock Door 47, Ceiling, On Metal Fitting	1st Floor, Loading Dock Door 47, Ceiling, On Metal Fitting	1st Floor, Loading Dock Door 47, Ceiling, On Metal Fitting
Sample Description		Joint Compound	Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	Yes	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	White	Gray	Gray	Gray
Sample Treatment		None	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	25.0	30.0	25.0
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	10.0	15.0	10.0
	% Carbonates	35.0	25.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	40.0	30.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/26/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PES-15	6919-PES-16	6919-PES-17	6919-PES-18
Layer Number					
Lab ID Number		3111064	3111065	3111066	3111067
Sample Location		1st Floor, Hallway by Door 46, Wall	1st Floor, Storage by Door 46, Wall	1st Floor, Hallway by Door 46, Wall, On CMU	1st Floor, Storage by Door 46, Wall, On CMU
Sample Description		CMU	CMU	Mortar	Mortar
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Gray/Brown	Gray/Brown	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	30.0	35.0	35.0
	% Carbonates	30.0	25.0	20.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	45.0	45.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PES-06	6919-PES-07	6919-PES-08	6919-PES-09
Layer Number					
Lab ID Number		3109772	3109773	3109774	3109775
Sample Location		1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Canyon	1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Canyon	1st Floor, Storage Room by Door 46, Ceiling, Susp, 2' x 2' Small Canyon, Dot Canyon	1st Floor, Storage Room by Door 46, Ceiling, Susp, 2' x 2' Small Canyon, Dot Canyon
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Beige/White	Beige/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	24.2	24.4	27.8	28.7
	% Carbonates	21.4	24.4	16.8	28.0
	% Other Inorganic	54.4	51.2	55.4	43.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PES-10	6919-PES-11	6919-PES-19	6919-PES-20
Layer Number					
Lab ID Number		3109776	3109777	3109778	3109779
Sample Location		1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Mechanical Room, On Metal HVAC Duct	1st Floor, Mechanical Room, On Metal HVAC Duct
Sample Description		Ceiling Tile	Ceiling Tile	Vibration Dampener	Vibration Dampener
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	17.7	17.6	81.3	80.2
	% Carbonates	8.8	26.2	8.2	11.4
	% Other Inorganic	73.5	56.2	10.5	8.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PES-21	6919-PES-22
Layer Number			
Lab ID Number		3109780	3109781
Sample Location		1st Floor, Mechanical Room, On Metal HVAC Duct	1st Floor, Mechanical Room, On Metal HVAC Duct
Sample Description		Pin Mastic	Pin Mastic
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Brown	Brown
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	61.9	61.7
	% Carbonates	4.3	4.2
	% Other Inorganic	33.8	34.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PES-06	6919-PES-07	6919-PES-08	6919-PES-09
Layer Number					
Lab ID Number		3109772	3109773	3109774	3109775
Sample Location		1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Canyon	1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Canyon	1st Floor, Storage Room by Door 46, Ceiling, Susp, 2' x 2' Small Canyon, Dot Canyon	1st Floor, Storage Room by Door 46, Ceiling, Susp, 2' x 2' Small Canyon, Dot Canyon
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Beige/White	Beige/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	24.2	24.4	27.8	28.7
	% Carbonates	21.4	24.4	16.8	28.0
	% Other Inorganic	54.4	51.2	55.4	43.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PES-10	6919-PES-11	6919-PES-19	6919-PES-20
Layer Number					
Lab ID Number		3109776	3109777	3109778	3109779
Sample Location		1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Storage Room by Door 46, Ceiling, Suspended, 2' x 4' Dot Speck	1st Floor, Mechanical Room, On Metal HVAC Duct	1st Floor, Mechanical Room, On Metal HVAC Duct
Sample Description		Ceiling Tile	Ceiling Tile	Vibration Dampener	Vibration Dampener
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	< 0.1	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	< 0.1	ND
Other Materials Present	% Organic	17.7	17.6	81.3	80.2
	% Carbonates	8.8	26.2	8.2	11.4
	% Other Inorganic	73.5	56.2	10.5	8.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pakanasink Elementary School - 1953 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PES-21	6919-PES-22
Layer Number			
Lab ID Number		3109780	3109781
Sample Location		1st Floor, Mechanical Room, On Metal HVAC Duct	1st Floor, Mechanical Room, On Metal HVAC Duct
Sample Description		Pin Mastic	Pin Mastic
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Brown	Brown
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Materials Present	% Organic	61.9	61.7
	% Carbonates	4.3	4.2
	% Other Inorganic	33.8	34.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 19-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC FIRE ALARM @ 7 Schools
PROJECT BUILDING: Pakanasink Elementary School
PROJECT ADDRESS: 1953 NY-302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-PES-01 *	1	1	Gym	Boys Bathroom, Ceiling	Sheetrock	3111056
6919-PES-02	1	1	Gym	Girls Bathroom, Ceiling	Sheetrock	3111057
6919-PES-03	2	1	Gym	Girls Bathroom, Ceiling, On Sheetrock	Joint Compound	3111058
6919-PES-04	2	1	Gym	Girls Bathroom, Ceiling, On Sheetrock	Joint Compound	3111059
6919-PES-05	2	1	Gym	Boys Bathroom, Ceiling, On Sheetrock	Joint Compound	3111060
6919-PES-06	3	1	Storage Room By Door 46	Ceiling, Suspended, 2'x4' Dot Canyon	Ceiling Tile	
6919-PES-07	3	1	Storage Room By Door 46	Ceiling, Suspended, 2'x4' Dot Canyon	Ceiling Tile	
6919-PES-08	4	1	Storage Room By Door 46	Ceiling, Suspended, 2'x2', Small Canyon, Dot Canyon	Ceiling Tile	
6919-PES-09	4	1	Storage Room By Door 46	Ceiling, Suspended, 2'x2', Small Canyon, Dot Canyon	Ceiling Tile	
6919-PES-10	5	1	Storage Room By Door 46	Ceiling, Suspended, 2'x4', Dot Speck	Ceiling Tile	
6919-PES-11	5	1	Storage Room By Door 46	Ceiling, Suspended, 2'x4', Dot Speck	Ceiling Tile	
6919-PES-12	6	1	Loading Dock Door 47	Ceiling, On Metal Fitting	Mudded Joint Packing	3111061
6919-PES-13	6	1	Loading Dock Door 47	Ceiling, On Metal Fitting	Mudded Joint Packing	3111062
6919-PES-14	6	1	Loading Dock Door 47	Ceiling, On Metal Fitting	Mudded Joint Packing	3111063
6919-PES-15	7	1	Hallway by Door 46	Wall	CMU	3111064

* AS LABELED ON PAPERWORK MP 08/26/2025

Comments:

SUBMITTED BY: [signature] DATE: 8-21-25

RECEIVED BY: MD WARNER AUG 21 '25 19:50 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 19-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM
TURN-AROUND TIME: 5-DAY

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Pakanasink Elementary School
PROJECT ADDRESS: 1953 NY-302
Circleville, NY 10919

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-PES-16	7	1	Storage by Door 46	Wall	CMU	3111065
6919-PES-17	8	1	Hallway by Door 46	Wall, On CMU	Mortar	3111066
6919-PES-18	8	1	Storage by Door 46	Wall, On CMU	Mortar	3111067
6919-PES-19	9	1	Mechanical Room	On Metal HVAC Duct	Vibration Dampener	
6919-PES-20	9	1	Mechanical Room	On Metal HVAC Duct	Vibration Dampener	
6919-PES-21	10	1	Mechanical Room	On Metal HVAC Duct	Pin Mastic	
6919-PES-22	10	1	Mechanical Room	On Metal HVAC Duct	Pin Mastic	

Comments:

SUBMITTED BY:

DATE: 8-21-25

RECEIVED BY: MD WARNER

AUG 21 '25 13:50

DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush Elementary School - 21 Ulsterville Rd - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBES-01	6919-PBES-02	6919-PBES-03	6919-PBES-04
Layer Number					
Lab ID Number		3111068	3111069	3111070	3111071
Sample Location		2nd Floor, Fan Room, On Metal HVAC Duct	2nd Floor, Fan Room, On Metal HVAC Duct	2nd Floor, Fan Room, On Metal HVAC Duct	2nd Floor, Fan Room, On Metal Pipe
Sample Description		Insulation	Insulation	Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Brown/ Silver	Yellow/Brown/ Silver	Yellow/Brown/ Silver	Yellow/White/Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	45.0	45.0	50.0	40.0
	% Cellulose	20.0	15.0	15.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	10.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	25.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush Elementary School - 21 Ulsterville Rd - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBES-05	6919-PBES-06	6919-PBES-07	6919-PBES-08
Layer Number					
Lab ID Number		3111072	3111073	3111074	3111075
Sample Location		2nd Floor, Fan Room, On Metal Pipe	2nd Floor, Fan Room, On Metal Pipe	1st Floor, Auditorium Stage, On HVAC Duct	1st Floor, Auditorium Stage, On HVAC Duct
Sample Description		Pipe Insulation	Pipe Insulation	Insulation	Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White/Silver	Yellow/White/Silver	Yellow/Brown/ Black	Yellow/Brown/ Black
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	50.0	40.0	40.0	40.0
	% Cellulose	15.0	20.0	15.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	10.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	25.0	30.0	35.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush Elementary School - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PBES-09	6919-PBES-10	6919-PBES-11	6919-PBES-12
Layer Number					
Lab ID Number		3111076	3111077	3111078	3111079
Sample Location		1st Floor, Auditorium Stage, On HVAC Duct	1st Floor, Auditorium Stage, On Metal Pipe	1st Floor, Auditorium Stage, On Metal Pipe	1st Floor, Auditorium Stage, On Metal Pipe
Sample Description		Insulation	Pipe Insulation	Pipe Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Brown/ Black/Silver	Yellow/Black/Silver	Yellow/Black/Silver	Yellow/Black/Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	45.0	45.0	40.0
	% Cellulose	15.0	15.0	10.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	5.0	5.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	35.0	40.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush Elementary School - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PBES-13	6919-PBES-14	6919-PBES-15	6919-PBES-16
Layer Number					
Lab ID Number		3109782	3109783	3109784	3109785
Sample Location		1st Floor, Hallway Outside Auditorium, Ceiling, Suspended, 2' x 2' Dot Canyon	1st Floor, Hallway Outside Auditorium, Ceiling, Suspended, 2' x 2' Dot Canyon	2nd Floor, Fan Rooom, On Metal HVAC Duct, Joint	2nd Floor, Fan Rooom, On Metal HVAC Duct, Joint
Sample Description		Ceiling Tile	Ceiling Tile	Vibration Dampener	Vibration Dampener
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Red/Gray/White	Red/Gray/White	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	26.0	27.2	32.5	34.9
	% Carbonates	8.4	4.9	6.3	5.0
	% Other Inorganic	65.6	67.9	61.2	60.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush Elementary School - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 08/20/2025
Collected By : Talsma/Castellanos/Stamper/Smith
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PBES-13	6919-PBES-14	6919-PBES-15	6919-PBES-16
Layer Number					
Lab ID Number		3109782	3109783	3109784	3109785
Sample Location		1st Floor, Hallway Outside Auditorium, Ceiling, Suspended, 2' x 2' Dot Canyon	1st Floor, Hallway Outside Auditorium, Ceiling, Suspended, 2' x 2' Dot Canyon	2nd Floor, Fan Rooom, On Metal HVAC Duct, Joint	2nd Floor, Fan Rooom, On Metal HVAC Duct, Joint
Sample Description		Ceiling Tile	Ceiling Tile	Vibration Dampener	Vibration Dampener
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Red/Gray/White	Red/Gray/White	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	26.0	27.2	32.5	34.9
	% Carbonates	8.4	4.9	6.3	5.0
	% Other Inorganic	65.6	67.9	61.2	60.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
D. Stamper, D. Smith
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Pine Bush Elementary School
PROJECT ADDRESS: 21 Ulsterville Road
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-PBES-01	1	2	Fan Room	On Metal HVAC Duct	Insulation	3111068
6919-PBES-02	1	2	Fan Room	On Metal HVAC Duct	Insulation	3111069
6919-PBES-03	1	2	Fan Room	On Metal HVAC Duct	Insulation	3111070
6919-PBES-04	2	2	Fan Room	On Metal Pipe	Pipe Insulation	3111071
6919-PBES-05	2	2	Fan Room	On Metal Pipe	Pipe Insulation	3111072
6919-PBES-06	2	2	Fan Room	On Metal Pipe	Pipe Insulation	3111073
6919-PBES-07	3	1	Auditorium Stage	On HVAC Duct	Insulation	3111074
6919-PBES-08	3	1	Auditorium Stage	On HVAC Duct	Insulation	3111075
6919-PBES-09	3	1	Auditorium Stage	On HVAC Duct	Insulation	3111076
6919-PBES-10	4	1	Auditorium Stage	On Metal Pipe	Pipe Insulation	3111077
6919-PBES-11	4	1	Auditorium Stage	On Metal Pipe	Pipe Insulation	3111078
6919-PBES-12	4	1	Auditorium Stage	On Metal Pipe	Pipe Insulation	3111079
6919-PBES-13	5	1	Hallway Outside Auditorium	Ceiling, Suspended, 2'x2' Dot Canyon	Ceiling Tile	
6919-PBES-14	5	1	Hallway Outside Auditorium	Ceiling, Suspended, 2'x2' Dot Canyon	Ceiling Tile	
6919-PBES-15	6	2	Fan Room	On Metal HVAC Duct, Joint	Vibration Dampener	

AS LABELED ON PAPERWORK
INITIAL / DATE MP 08/26/2025

Comments:

SUBMITTED BY: Dalton Stamper
AUG 21 '25 13:50
DATE: 8-21-25

RECEIVED BY: MD WARNER
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
D. Stamper, D. Smith
DATE SAMPLED: 20-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Pine Bush Elementary School
PROJECT ADDRESS: 21 Ulsterville Road
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-PBES-16	6	2	Fan Room	On Metal HVAC Duct, Joint	Vibration Dampener	

Comments:

SUBMITTED BY: [signature] DATE: AUG 21 '25 19:50 8-21-25

RECEIVED BY: [signature] DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 08/19/2025
Collected By : S. Talsman/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/28/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PBHS-01	6919-PBHS-01	6919-PBHS-02	6919-PBHS-02
Layer Number		1	2	1	2
Lab ID Number		3111080	3111080	3111081	3111081
Sample Location		1st Floor, Serving Room 181, Wall, Partition	1st Floor, Serving Room 181, Wall, Partition	1st Floor, Serving Room 181, Wall, Partition	1st Floor, Serving Room 181, Wall, Partition
Sample Description		CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)	CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Gray	Gray	Gray	Gray
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	30.0	30.0	30.0
	% Carbonates	25.0	25.0	25.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	50.0	45.0	45.0	50.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsman/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/28/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBHS-03	6919-PBHS-04	6919-PBHS-05	6919-PBHS-06
Layer Number					
Lab ID Number		3111082	3111083	3111084	3111085
Sample Location		1st Floor, Café/Meeting Area, 006E, HVAC Soffit	1st Floor, Café/Meeting Area, 006E, HVAC Soffit	1st Floor, Cafeteria, 006D, HVAC Soffit, On Sheetrock	1st Floor, Cafeteria, 006D, HVAC Soffit, On Sheetrock
Sample Description		Sheetrock	Sheetrock	Joint Compound	Joint Compound
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	No	No
	Color	Gray/Brown	Gray/Brown	White/Blue	White/Blue
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	10.0	5.0	ND	ND
	% Cellulose	15.0	20.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	25.0	25.0
	% Carbonates	30.0	25.0	35.0	40.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsman/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/28/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBHS-07	6919-PBHS-08	6919-PBHS-09	6919-PBHS-10
Layer Number					
Lab ID Number		3111086	3111087	3111088	3111089
Sample Location		1st Floor, Cafeteria, 006E, HVAC Soffit, On Sheetrock	1st Floor, Kitchen, Above Suspended Ceiling, On Metal Fitting	1st Floor, Kitchen, Above Suspended Ceiling, On Metal Fitting	1st Floor, Kitchen, Above Suspended Ceiling, On Metal Fitting
Sample Description		Joint Compound	Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	White/Blue	Gray/Brown	Gray/Brown	Gray/Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	20.0	20.0	15.0
	% Cellulose	ND	15.0	10.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	10.0	10.0	15.0
	% Carbonates	35.0	25.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	30.0	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsman/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/28/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBHS-11	6919-PBHS-12	6919-PBHS-13	6919-PBHS-22
Layer Number					
Lab ID Number		3111090	3111091	3111092	3111093
Sample Location		2nd Floor, Fan Room - 220B, On Metal Fitting	2nd Floor, Fan Room - 220B, On Metal Fitting	2nd Floor, Fan Room - 220B, On Metal Fitting	1st Floor, Kitchen, Above Suspended Ceiling, On HVAC Duct
Sample Description		Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing	Duct Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/Brown	Gray/Brown	Gray/Brown	Yellow/Brown/ Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	25.0	20.0	20.0	45.0
	% Cellulose	10.0	15.0	15.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	20.0	15.0	20.0	10.0
	% Carbonates	15.0	20.0	15.0	ND
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	30.0	30.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsman/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/28/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBHS-23	6919-PBHS-24	6919-PBHS-25	6919-PBHS-26
Layer Number					
Lab ID Number		3111094	3111095	3111096	3111097
Sample Location		1st Floor, Café/Meeting Area, Above Suspended Ceiling, On HVAC Duct	1st Floor, Serving Room 181, Above Suspended Ceiling, On Metal Pipe	1st Floor, Café/Meeting Area, Above Suspended Ceiling, On Metal Pipe	2nd Floor, Mechanical Room, Above Suspended Ceiling, On Metal Pipe
Sample Description		Duct Insulation	Pipe Insulation	Pipe Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Brown/ Silver	Yellow/Brown	Yellow/White/Silver	Yellow/Gray
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	40.0	40.0	75.0
	% Cellulose	20.0	25.0	20.0	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	5.0	10.0	5.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	30.0	30.0	20.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PBHS-14	6919-PBHS-15	6919-PBHS-16	6919-PBHS-17
Layer Number					
Lab ID Number		3109786	3109787	3109788	3109789
Sample Location		1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Textured	1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Textured	1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Dot Speck	1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Dot Speck
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	No	Yes	Yes
	Homogenous	No	Yes	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Red/Gray	Gray/White	Red/Gray	Red/Gray
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	17.8	20.7	16.9	17.6
	% Carbonates	4.4	4.2	3.4	5.1
	% Other Inorganic	77.8	75.1	79.7	77.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PBHS-18	6919-PBHS-19	6919-PBHS-20	6919-PBHS-21
Layer Number					
Lab ID Number		3109790	3109791	3109792	3109793
Sample Location		1st Floor, Kitchen, Ceiling, Suspended, 2'x2' Deep Textured	1st Floor, Kitchen, Ceiling, Suspended, 2'x2' Deep Textured	1st Floor, Café/Meeting Area, 006E, HVAC Soffit, Ceiling, Suspended, 2'x2' Textured	1st Floor, Café/Meeting Area, 006E, HVAC Soffit, Ceiling, Suspended, 2'x2' Textured
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/White	Gray/White	Gray/Tan	Gray/Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	18.2	21.3	30.8	31.8
	% Carbonates	4.3	2.2	4.3	6.3
	% Other Inorganic	77.5	76.5	64.9	61.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/24/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBHS-27	6919-PBHS-28
Layer Number			
Lab ID Number		3109794	3109795
Sample Location		2nd Floor, Mechanical Room, On HVAC Duct	2nd Floor, Fan Room- 220B, On HVAC Duct
Sample Description		Vibration Dampener	Vibration Dampener
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	Yes	Yes
	Color	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	40.0	36.5
	% Carbonates	4.8	6.0
	% Other Inorganic	55.2	57.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBHS-14	6919-PBHS-15	6919-PBHS-16	6919-PBHS-17
Layer Number					
Lab ID Number		3109786	3109787	3109788	3109789
Sample Location		1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Textured	1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Textured	1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Dot Speck	1st Floor, Serving Room 181, Ceiling, Suspended, 2'x2' Dot Speck
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	No	Yes	Yes
	Homogenous	No	Yes	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Red/Gray	Gray/White	Red/Gray	Red/Gray
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	17.8	20.7	16.9	17.6
	% Carbonates	4.4	4.2	3.4	5.1
	% Other Inorganic	77.8	75.1	79.7	77.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		6919-PBHS-18	6919-PBHS-19	6919-PBHS-20	6919-PBHS-21
Layer Number					
Lab ID Number		3109790	3109791	3109792	3109793
Sample Location		1st Floor, Kitchen, Ceiling, Suspended, 2'x2' Deep Textured	1st Floor, Kitchen, Ceiling, Suspended, 2'x2' Deep Textured	1st Floor, Café/Meeting Area, 006E, HVAC Soffit, Ceiling, Suspended, 2'x2' Textured	1st Floor, Café/Meeting Area, 006E, HVAC Soffit, Ceiling, Suspended, 2'x2' Textured
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/White	Gray/White	Gray/Tan	Gray/Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	18.2	21.3	30.8	31.8
	% Carbonates	4.3	2.2	4.3	6.3
	% Other Inorganic	77.5	76.5	64.9	61.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 256919 - CPL - Pine Bush CSD 2025 CIP Phase 1C HVAC/Fire Alarm @ 7 Schools - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 08/19/2025
Collected By : S. Talsma/A. Castellanos
Date Received : 08/21/2025
Date Analyzed : 08/27/2025
Analyzed By : Ernest Sanchez
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		6919-PBHS-27	6919-PBHS-28
Layer Number			
Lab ID Number		3109794	3109795
Sample Location		2nd Floor, Mechanical Room, On HVAC Duct	2nd Floor, Fan Room- 220B, On HVAC Duct
Sample Description		Vibration Dampener	Vibration Dampener
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	Yes	Yes
	Color	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Materials Present	% Organic	40.0	36.5
	% Carbonates	4.8	6.0
	% Other Inorganic	55.2	57.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-6919
SAMPLED BY: S. Talsma, A. Castellanos
DATE SAMPLED: 19-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM
TURN-AROUND TIME: 5-DAY

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 156 NY-302
Pine Bush, NY 12566

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-PBHS-01	1	1	Serving Room 181	Wall, Partition	CMU + Mortar	3111080
6919-PBHS-02	1	1	Serving Room 181	Wall, Partition	CMU + Mortar	3111081
6919-PBHS-03	2	1	Café/Meeting Area	006F, HVAC Soffit	Sheetrock	3111082
6919-PBHS-04	2	1	Café/Meeting Area	006E, HVAC Soffit	Sheetrock	3111083
6919-PBHS-05	3	1	Cafeteria	006D, HVAC Soffit, On Sheetrock	Joint Compound	3111084
6919-PBHS-06	3	1	Cafeteria	006D, HVAC Soffit, On Sheetrock	Joint Compound	3111085
6919-PBHS-07	3	1	Cafeteria	006E, HVAC Soffit, On Sheetrock	Joint Compound	3111086
6919-PBHS-08	4	1	Kitchen	Above Suspended Ceiling, On Metal Fitting	Mudded Joint Packing	3111087
6919-PBHS-09	4	1	Kitchen	Above Suspended Ceiling, On Metal Fitting	Mudded Joint Packing	3111088
6919-PBHS-10	4	1	Kitchen	Above Suspended Ceiling, On Metal Fitting	Mudded Joint Packing	3111089
6919-PBHS-11	5	2	Fan Room - 220B	On Metal Fitting	Mudded Joint Packing	3111090
6919-PBHS-12	5	2	Fan Room - 220B	On Metal Fitting	Mudded Joint Packing	3111091
6919-PBHS-13	5	2	Fan Room - 220B	On Metal Fitting	Mudded Joint Packing	3111092
6919-PBHS-14	6	1	Serving Room 181	Ceiling, Suspended, 2'x2' Textured	Ceiling Tile	
6919-PBHS-15	6	1	Serving Room 181	Ceiling, Suspended, 2'x2' Textured	Ceiling Tile	

AS LABELED ON PAPERWORK
INITIALS/DATE PMP, 08/20/2025

Comments:

SUBMITTED BY:
DATE: 8-21-25

RECEIVED BY:
AUG 21 '25 19:50
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-6919
SAMPLED BY: S. Talsma, A. Castellanos

DATE SAMPLED: 19-Aug-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pine Bush CSD 2025 CIP PHASE 1C HVAC/FIRE ALARM @ 7 Schools
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 156 NY-302
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
6919-PBHS-16	7	1	Serving Room 181	Ceiling, Suspended, 2'x2' Dot Speck	Ceiling Tile	
6919-PBHS-17	7	1	Serving Room 181	Ceiling, Suspended, 2'x2' Dot Speck	Ceiling Tile	
6919-PBHS-18	8	1	Kitchen	Ceiling, Suspended, 2'x2' Deep Textured	Ceiling Tile	
6919-PBHS-19	8	1	Kitchen	Ceiling, Suspended, 2'x2' Deep Textured	Ceiling Tile	
6919-PBHS-20	9	1	Café/Meeting Area	006E, HVAC Soffit, Ceiling, Suspended, 2'x2' Textured	Ceiling Tile	
6919-PBHS-21	9	1	Café/Meeting Area	006E, HVAC Soffit, Ceiling, Suspended, 2'x2' Textured	Ceiling Tile	
6919-PBHS-22	10	1	Kitchen	Above Suspended Ceiling, On HVAC Duct	Duct Insulation	3111093
6919-PBHS-23	10	1	Café/Meeting Area	Above Suspended Ceiling, On HVAC Duct	Duct Insulation	3111094
6919-PBHS-24	11	1	Serving Room 181	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3111095
6919-PBHS-25	11	1	Café/Meeting Area	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3111096
6919-PBHS-26	11	2	Mechanical Room	Above Suspended Ceiling, On Metal Pipe	Pipe Insulation	3111097
6919-PBHS-27	12	2	Mechanical Room	On HVAC Duct	Vibration Dampener	
6919-PBHS-28	12	2	Fan Room - 220B	On HVAC Duct	Vibration Dampener	

Comments:

SUBMITTED BY: [signature] DATE: 8-21-25

RECEIVED BY: [signature] AUG 21 '25 13:51 DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PES-01	7081-PES-02	7081-PES-03	7081-PES-04
Layer Number					
Lab ID Number		3139551	3139552	3139553	3139554
Sample Location		2nd Floor, Mechanical Room, On Metal Duct	2nd Floor, Mechanical Room, On Metal Duct	2nd Floor, Mechanical Room, On Metal Duct	2nd Floor, Mechanical Room, On Metal Pipe
Sample Description		Duct Insulation	Duct Insulation	Duct Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Brown/Silver	Yellow/Brown/Silver	Yellow/Brown/Silver	Yellow/White/Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	35.0	35.0	45.0
	% Cellulose	20.0	25.0	20.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	10.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	30.0	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-05	7081-PES-06	7081-PES-07	7081-PES-08
Layer Number					
Lab ID Number		3139555	3139556	3139557	3139558
Sample Location		2nd Floor, Mechanical Room, On Metal Pipe	2nd Floor, Mechanical Room, On Metal Pipe	2nd Floor, Mechanical Room, On Large Diameter Pipe, Brown	2nd Floor, Mechanical Room, On Large Diameter Pipe, Brown
Sample Description		Pipe Insulation	Pipe Insulation	Mudded Joint Packing	Mudded Joint Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White/Silver	Yellow/White/Silver	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	40.0	25.0	25.0
	% Cellulose	20.0	15.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	10.0	15.0
	% Carbonates	ND	ND	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-09	7081-PES-10	7081-PES-11	7081-PES-12
Layer Number					
Lab ID Number		3139559	3139560	3139561	3139562
Sample Location		2nd Floor, Mechanical Room, On Large Diameter Pipe, Brown	2nd Floor, Mechanical Room, On Small Diameter Pipe	2nd Floor, Mechanical Room, On Small Diameter Pipe	2nd Floor, Mechanical Room, On Small Diameter Pipe
Sample Description		Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	Yes	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray	Gray/Brown	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	30.0	20.0	25.0	30.0
	% Cellulose	ND	20.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	15.0	15.0
	% Carbonates	25.0	20.0	25.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	30.0	35.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-21	7081-PES-21	7081-PES-22	7081-PES-22
Layer Number		1	2	1	2
Lab ID Number		3139563	3139563	3139564	3139564
Sample Location		Exterior, Facade, Around Windows	Exterior, Facade, Around Windows	Exterior, Facade, Around Windows	Exterior, Facade, Around Windows
Sample Description		Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)	Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Red/Gray	Brown/Gray	Red/Gray	Brown/Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	35.0	30.0	35.0	30.0
	% Carbonates	ND	25.0	ND	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	65.0	45.0	65.0	50.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-23	7081-PES-23	7081-PES-24	7081-PES-24
Layer Number		1	2	1	2
Lab ID Number		3139565	3139565	3139566	3139566
Sample Location		1st Floor, Interior, Walls, Around Windows Throughout	1st Floor, Interior, Walls, Around Windows Throughout	2nd Floor, Interior, Walls, Around Windows Throughout	2nd Floor, Interior, Walls, Around Windows Throughout
Sample Description		CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)	CMU & Mortar (CMU Layer)	CMU & Mortar (Mortar Layer)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Gray/Blue	Gray	Gray/Blue	Gray
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	35.0	30.0	35.0	30.0
	% Carbonates	20.0	25.0	20.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	45.0	45.0	50.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-27	7081-PES-28	7081-PES-29	7081-PES-30
Layer Number					
Lab ID Number		3139567	3139568	3139569	3139570
Sample Location		1st Floor, Pump Room, Below Equipment	1st Floor, Pump Room, Below Equipment	1st Floor, Pool Room, Windows, Sill, Large	1st Floor, Pool Room, Windows, Sill, Large
Sample Description		Equipment Pad	Equipment Pad	Cementitious Sill	Cementitious Sill
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Gray	Gray	Gray/Black	Gray/Black
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	25.0	15.0	20.0
	% Carbonates	25.0	20.0	50.0	50.0
	% Other	ND	ND	ND	ND
	% Unidentified	50.0	55.0	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-31	7081-PES-32	7081-PES-33	7081-PES-34
Layer Number					
Lab ID Number		3139571	3139572	3139573	3139574
Sample Location		1st Floor, Pool Room, Windows, On Large Sill	1st Floor, Pool Room, Windows, On Large Sill	1st Floor, Main Offices Back Storage Area, Window Sill, Small	1st Floor, Main Office, Window Sill, Small
Sample Description		Mortar	Mortar	Cementitious Sill	Cementitious Sill
Method of Quantification		Scanning Option	Scanning Option	Point Count	Point Count
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Gray	Gray	Gray	Gray
Sample Treatment		None	None	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	3.3	4.2
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	3.3	4.2
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	25.0	ND	ND
	% Carbonates	25.0	25.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	50.0	96.7	95.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		70181-CMS-51	70181-CMS-52	70181-CMS-53	7081-CMS-58
Layer Number					
Lab ID Number		3139575	3139576	3139577	3139578
Sample Location		1st Floor, Principal Office, Above Suspended Ceiling, On Metal HVAC Duct	1st Floor, Principal Office, Above Suspended Ceiling, On Metal HVAC Duct	1st Floor, Principal Office, Above Suspended Ceiling, On Metal HVAC Duct	Basement, Boiler Room, Below Tank
Sample Description		Duct Insulation	Duct Insulation	Duct Insulation	Equipment Pad
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	No
	Color	Yellow/Silver/ Brown	Yellow/Silver/ Brown	Yellow/Silver/ Brown	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	50.0	40.0	45.0	ND
	% Cellulose	15.0	20.0	15.0	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	5.0	25.0
	% Carbonates	ND	ND	ND	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	35.0	50.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-59	7081-CMS-60	7081-CMS-61	7081-CMS-62
Layer Number					
Lab ID Number		3139579	3139580	3139581	3139582
Sample Location		Basement, Boiler Room, Below Tank	Basement, Boiler Room, South East Side Tank, On Metal Elbow Below Tank	Basement, Boiler Room, South East Side Tank, On Metal Elbow Below Tank	Basement, Boiler Room, South East Side Tank, On Metal Elbow Below Tank
Sample Description		Equipment Pad	Mudded Joint Packing	Mudded Joint Packing	Mudded Joint Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	Gray	Gray	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	20.0	20.0	15.0
	% Cellulose	ND	15.0	10.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	15.0	15.0	10.0
	% Carbonates	25.0	20.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	30.0	30.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-63	7081-CMS-64	7081-CMS-65	7081-CMS-66
Layer Number					
Lab ID Number		3139583	3139584	3139585	3139586
Sample Location		Basement, Boiler Room, South East Side Tank, Behind Metal Jacket	Basement, Boiler Room, South East Side Tank, Behind Metal Jacket	Basement, Boiler Room, South East Side Tank, Behind Metal Jacket	Basement, Boiler Room, South East Side Tank, On Metal Piping Below Tank
Sample Description		Insulation	Insulation	Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	Yes
	Homogenous	Yes	Yes	Yes	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown/Yellow	Brown/Yellow	Brown/Yellow	Brown/White/Silver
Sample Treatment		None	None	None	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	70.0	75.0	75.0	40.0
	% Cellulose	ND	ND	ND	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	5.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	20.0	15.0	20.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-67	7081-CMS-68	7081-CMS-69	7081-CMS-70
Layer Number					
Lab ID Number		3139587	3139588	3139589	3139590
Sample Location		Basement, Boiler Room, South East Side Tank, On Metal Piping Below Tank	Basement, Boiler Room, South East Side Tank, On Metal Piping Below Tank	Basement, Boiler Room, West Side Tank, Body (Side) of Tank	Basement, Boiler Room, West Side Tank, Body (Side) of Tank
Sample Description		Pipe Insulation	Pipe Insulation	Insulation	Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown/White/Silver	Brown/White/Silver	Yellow/White/Silver	Yellow/White/Silver
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	45.0	35.0	30.0
	% Cellulose	20.0	15.0	15.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	10.0	10.0
	% Carbonates	ND	ND	10.0	10.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	30.0	30.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-71	7081-CMS-72	7081-CMS-73	7081-CMS-74
Layer Number					
Lab ID Number		3139591	3139592	3139593	3139594
Sample Location		Basement, Boiler Room, West Side Tank, Body (Side) of Tank	Basement, Boiler Room, West Side Tank, End Cap, On Wire Lath	Basement, Boiler Room, West Side Tank, End Cap, On Wire Lath	Basement, Boiler Room, West Side Tank, End Cap, On Wire Lath
Sample Description		Insulation	Packing	Packing	Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	No	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White/Silver	Gray/Brown	Gray/Brown	Gray/Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	25.0	25.0	25.0	20.0
	% Cellulose	20.0	15.0	10.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	5.0	10.0	5.0
	% Carbonates	15.0	20.0	20.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	35.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/16/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-77	7081-CMS-78	7081-CMS-79
Layer Number				
Lab ID Number		3139595	3139596	3139597
Sample Location		Basement, Boiler Room, West Side Tank, On Connected Piping	Basement, Boiler Room, West Side Tank, On Connected Piping	Basement, Boiler Room, West Side Tank, On Connected Piping
Sample Description		Pipe Insulation	Pipe Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes
	Homogenous	No	No	No
	Fibrous	Yes	Yes	Yes
	Color	Yellow/Brown/ Silver	Yellow/Brown/ Silver	Yellow/Brown/ Silver
Sample Treatment		Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND
	% Chrysotile	ND	ND	ND
	% Other	ND	ND	ND
	% Total Asbestos	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	40.0	40.0	40.0
	% Cellulose	15.0	20.0	20.0
	% Other	ND	ND	ND
	% Unidentified	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	5.0	10.0
	% Carbonates	ND	ND	ND
	% Other	ND	ND	ND
	% Unidentified	35.0	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-13	7081-PES-14	7081-PES-15	7081-PES-16
Layer Number					
Lab ID Number		3139131	3139132	3139133	3139134
Sample Location		2nd Floor, Mechanical Room, On SF1, On Metal	2nd Floor, Mechanical Room, On SF1, On Metal	2nd Floor, Mechanical Room, Back Right, On Metal	2nd Floor, Mechanical Room, Back Right, On Metal
Sample Description		Vibration Dampener	Vibration Dampener	Vibration Dampener	Vibration Dampener
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	White/Black	White/Black	White/Black	White/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	38.8	34.1	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	38.8	34.1	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	24.4	23.1	26.8	38.9
	% Carbonates	7.7	8.6	18.4	55.2
	% Other Inorganic	29.1	34.2	54.8	5.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PES-17	7081-PES-18	7081-PES-19	7081-PES-20
Layer Number					
Lab ID Number		3139135	3139136	3139137	3139138
Sample Location		2nd Floor, Mechanical Room, Left Side of Entry, On Metal Duct, White	2nd Floor, Mechanical Room, Left Side of Entry, On Metal Duct, White	2nd Floor, Mechanical Room, HVAC Duct, On Duct Insulation Pin	2nd Floor, Mechanical Room, HVAC Duct, On Duct Insulation Pin
Sample Description		Vibration Dampener	Vibration Dampener	Pin Mastic	Pin Mastic
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	Yes	No	No
	Color	White/Black	White/Black	Brown	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	28.7	28.0	62.4	62.3
	% Carbonates	4.2	6.5	6.0	5.5
	% Other Inorganic	67.1	65.5	31.6	32.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-25	7081-PES-26	7081-PES-35	7081-PES-36
Layer Number					
Lab ID Number		3139139	3139140	3139141	3139142
Sample Location		1st Floor, Pool Storage, Suspended Ceiling, 2' x 4' Smooth	1st Floor, Pool Storage, Suspended Ceiling, 2' x 4' Smooth	1st Fl, Main Offices Back Storage Area, Window Interior, From Sill to Block, Black	1st Floor, Main Office, Window Interior, From Sill to Block, Black
Sample Description		Ceiling Tile	Ceiling Tile	Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Gray/White	Gray/White	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	2.4	2.5	34.3	29.4
	% Carbonates	37.5	36.4	64.2	68.8
	% Other Inorganic	60.1	61.1	1.5	1.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-37	7081-PES-38	7081-PES-39	7081-PES-40
Layer Number					
Lab ID Number		3139143	3139144	3139145	3139146
Sample Location		1st Fl, Main Offices Back Storage Area, Interior Windows, From Metal to Block, White	1st Floor, Main Office, Interior Windows, From Metal to Block, White	Exterior, Cafeteria, Window, Brick to Metal	Exterior, Main Office, Window, Brick to Metal
Sample Description		Caulk	Caulk	Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	White	White	Gray	Gray
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	29.1	28.8	20.9	21.0
	% Carbonates	69.3	69.4	77.2	73.6
	% Other Inorganic	1.6	1.8	1.9	5.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PES-41	7081-PES-42	7081-PES-43	7081-PES-44
Layer Number					
Lab ID Number		3139147	3139148	3139149	3139150
Sample Location		1st Floor, Pump Room, At Piping Flange Joint, Red	1st Floor, Pump Room, At Piping Flange Joint, Red	Exterior, Cafeteria, Window Frame to Glass, Gray	Exterior, Admin Office, Window Frame to Glass, Gray
Sample Description		Gasket	Gasket	Gasket	Gasket
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Red	Red	Gray	Gray
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND	ND
Other Materials Present	% Organic	31.3	31.5	62.6	69.0
	% Carbonates	67.0	64.3	37.0	30.7
	% Other Inorganic	1.7	4.2	0.4	0.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-45	7081-PES-46	7081-CMS-47	7081-CMS-48
Layer Number					
Lab ID Number		3139151	3139152	3139153	3139154
Sample Location		1st Floor, Small Narrow Windows, Sill to Metal Frame	1st Floor, Small Narrow Windows, Sill to Metal Frame	1st Floor, Hallway Outside Main Office, Suspended Ceiling, 2' x 4' Dot Canyon	1st Floor, Hallway Outside Main Office, Suspended Ceiling, 2' x 4' Dot Canyon
Sample Description		Caulk	Caulk	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	Yes	Yes
	Color	Black	Black	Beige	Beige
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	33.4	33.8	27.8	27.2
	% Carbonates	65.4	65.0	55.0	54.1
	% Other Inorganic	1.2	1.2	17.2	18.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-49	7081-CMS-50	7081-CMS-54	7081-CMS-55
Layer Number					
Lab ID Number		3139155	3139156	3139157	3139158
Sample Location		1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Speck	1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Speck	1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Canyon	1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Canyon
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	No	No	No
	Homogenous	No	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige	Beige	Beige
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	25.9	24.9	33.4	29.2
	% Carbonates	34.8	25.8	50.9	47.0
	% Other Inorganic	39.3	49.3	15.7	23.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/13/2025
Analyzed By : George Htay/Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-75	7081-CMS-76	7081-CMS-56	7081-CMS-57
Layer Number					
Lab ID Number		3139159	3139160	3139417	3139418
Sample Location		Basement, Boiler Room, Suspended Ceiling, 2' x 4' Textured	Basement, Boiler Room, Suspended Ceiling, 2' x 4' Textured	1st Floor, Corridor Near Main Office, Suspended Ceiling, 2' x 4' Tectum	1st Floor, Corridor Near Main Office, Suspended Ceiling, 2' x 4' Tectum
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Tan	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	14.2	19.3	55.3	55.9
	% Carbonates	57.4	62.9	35.5	32.1
	% Other Inorganic	28.4	17.8	9.2	12.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/14/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-15	7081-PES-16	7081-PES-17	7081-PES-18
Layer Number					
Lab ID Number		3139133	3139134	3139135	3139136
Sample Location		2nd Floor, Mechanical Room, Back Right, On Metal	2nd Floor, Mechanical Room, Back Right, On Metal	2nd Floor, Mechanical Room, Left Side of Entry, On Metal Duct, White	2nd Floor, Mechanical Room, Left Side of Entry, On Metal Duct, White
Sample Description		Vibration Dampener	Vibration Dampener	Vibration Dampener	Vibration Dampener
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	No	Yes
	Color	White/Black	White/Black	White/Black	White/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	26.8	38.9	28.7	28.0
	% Carbonates	18.4	55.2	4.2	6.5
	% Other Inorganic	54.8	5.9	67.1	65.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/14/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-19	7081-PES-20	7081-PES-25	7081-PES-26
Layer Number					
Lab ID Number		3139137	3139138	3139139	3139140
Sample Location		2nd Floor, Mechanical Room, HVAC Duct, On Duct Insulation Pin	2nd Floor, Mechanical Room, HVAC Duct, On Duct Insulation Pin	1st Floor, Pool Storage, Suspended Ceiling, 2' x 4' Smooth	1st Floor, Pool Storage, Suspended Ceiling, 2' x 4' Smooth
Sample Description		Pin Mastic	Pin Mastic	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Brown	Brown	Gray/White	Gray/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	62.4	62.3	2.4	2.5
	% Carbonates	6.0	5.5	37.5	36.4
	% Other Inorganic	31.6	32.2	60.1	61.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/14/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-35	7081-PES-36	7081-PES-37	7081-PES-38
Layer Number					
Lab ID Number		3139141	3139142	3139143	3139144
Sample Location		1st Fl, Main Offices Back Storage Area, Window Interior, From Sill to Block, Black	1st Floor, Main Office, Window Interior, From Sill to Block, Black	1st Fl, Main Offices Back Storage Area, Interior Windows, From Metal to Block, White	1st Floor, Main Office, Interior Windows, From Metal to Block, White
Sample Description		Caulk	Caulk	Caulk	Caulk
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	White	White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	34.3	29.4	29.1	28.8
	% Carbonates	64.2	68.8	69.3	69.4
	% Other Inorganic	1.5	1.8	1.6	1.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/14/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-39	7081-PES-40	7081-PES-41	7081-PES-42
Layer Number					
Lab ID Number		3139145	3139146	3139147	3139148
Sample Location		Exterior, Cafeteria, Window, Brick to Metal	Exterior, Main Office, Window, Brick to Metal	1st Floor, Pump Room, At Piping Flange Joint, Red	1st Floor, Pump Room, At Piping Flange Joint, Red
Sample Description		Caulk	Caulk	Gasket	Gasket
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Gray	Gray	Red	Red
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	20.9	21.0	31.3	31.5
	% Carbonates	77.2	73.6	67.0	64.3
	% Other Inorganic	1.9	5.4	1.7	4.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/14/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PES-45	7081-PES-46	7081-CMS-47	7081-CMS-48
Layer Number					
Lab ID Number		3139151	3139152	3139153	3139154
Sample Location		1st Floor, Small Narrow Windows, Sill to Metal Frame	1st Floor, Small Narrow Windows, Sill to Metal Frame	1st Floor, Hallway Outside Main Office, Suspended Ceiling, 2' x 4' Dot Canyon	1st Floor, Hallway Outside Main Office, Suspended Ceiling, 2' x 4' Dot Canyon
Sample Description		Caulk	Caulk	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	Yes	Yes
	Color	Black	Black	Beige	Beige
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	33.4	33.8	27.8	27.2
	% Carbonates	65.4	65.0	55.0	54.1
	% Other Inorganic	1.2	1.2	17.2	18.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/14/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-49	7081-CMS-50	7081-CMS-54	7081-CMS-55
Layer Number					
Lab ID Number		3139155	3139156	3139157	3139158
Sample Location		1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Speck	1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Speck	1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Canyon	1st Floor, Principal Office, Suspended Ceiling, 2' x 4' Dot Canyon
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	No	No	No
	Homogenous	No	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige	Beige	Beige
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	25.9	24.9	33.4	29.2
	% Carbonates	34.8	25.8	50.9	47.0
	% Other Inorganic	39.3	49.3	15.7	23.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Con Env Testing - Pine Bush CSD - Circleville MS/Pakanasink ES - 1951/1952 NY-302 - Circleville, NY

Date Collected : 12/10/2025
Collected By : Stamper/Castellanos/Annesi/Lopez/Smith
Date Received : 12/11/2025
Date Analyzed : 12/14/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-75	7081-CMS-76	7081-CMS-56	7081-CMS-57
Layer Number					
Lab ID Number		3139159	3139160	3139417	3139418
Sample Location		Basement, Boiler Room, Suspended Ceiling, 2' x 4' Textured	Basement, Boiler Room, Suspended Ceiling, 2' x 4' Textured	1st Floor, Corridor Near Main Office, Suspended Ceiling, 2' x 4' Tectum	1st Floor, Corridor Near Main Office, Suspended Ceiling, 2' x 4' Tectum
Sample Description		Ceiling Tile	Ceiling Tile	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Beige/White	Beige/White	Tan	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	14.2	19.3	55.3	55.9
	% Carbonates	57.4	62.9	35.5	32.1
	% Other Inorganic	28.4	17.8	9.2	12.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Stamper, A. Castellanos
C. Annesi, J. Lopez. D. Smith
DATE SAMPLED: 10-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pre-Construction Environmental Testing & Design Services
PROJECT BUILDING: Pine Bush CSD
PROJECT ADDRESS: Circleville MS/Pakanasink ES
1951/1952 NY-302, Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PES-01 *	1	2	Mechanical Room	On Metal Duct	Duct Insulation	3139551
7081-PES-02	1	2	Mechanical Room	On Metal Duct	Duct Insulation	3139552
7081-PES-03	1	2	Mechanical Room	On Metal Duct	Duct Insulation	3139553
7081-PES-04	2	2	Mechanical Room	On Metal Pipe	Pipe Insulation	3139554
7081-PES-05	2	2	Mechanical Room	On Metal Pipe	Pipe Insulation	3139555
7081-PES-06	2	2	Mechanical Room	On Metal Pipe	Pipe Insulation	3139556
7081-PES-07	3	2	Mechanical Room	On Large Diameter Pipe, Brown	Mudded Joint Packing	3139557
7081-PES-08	3	2	Mechanical Room	On Large Diameter Pipe. Brown	Mudded Joint Packing	3139558
7081-PES-09	3	2	Mechanical Room	On Large Diameter Pipe, Brown	Mudded Joint Packing	3139559
7081-PES-10	4	2	Mechanical Room	On Small Diameter Pipe	Mudded Joint Packing	3139560
7081-PES-11	4	2	Mechanical Room	On Small Diameter Pipe	Mudded Joint Packing	3139561
7081-PES-12	4	2	Mechanical Room	On Small Diameter Pipe	Mudded Joint Packing	3139562
7081-PES-13	5	2	Mechanical Room	On SF1, On Metal	Vibration Dampener	
7081-PES-14	5	2	Mechanical Room	On SF1, On Metal	Vibration Dampener	
7081-PES-15	6	2	Mechanical Room	Back Right of Mechanical Room, On Metal	Vibration Dampener	

* AS LABELED ON PAPERWORK
INITIAL/DATE MP 12/15/2025

Comments:

SUBMITTED BY: [signature] DATE: 12-11-25

RECEIVED BY: [signature] DEC 11 '25 20:03 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Stamper, A. Castellanos
C. Annesi, J. Lopez. D. Smith
DATE SAMPLED: 10-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pre-Construction Environmental Testing & Design Services
PROJECT BUILDING: Pine Bush CSD
PROJECT ADDRESS: Circleville MS/Pakanasink ES
1951/1952 NY-302, Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PES-16	6	2	Mechanical Room	Back Right of Mechanical Room, On Metal	Vibration Dampener	
7081-PES-17	7	2	Mechanical Room	Left Side on Entry, On Metal Duct, White	Vibration Dampener	
7081-PES-18	7	2	Mechanical Room	Left Side on Entry, On Metal Duct, White	Vibration Dampener	
7081-PES-19	8	2	Mechanical Room	HVAC Duct, On Duct Insulation Pin	Pin Mastic	
7081-PES-20	8	2	Mechanical Room	HVAC Duct, On Duct Insulation Pin	Pin Mastic	
7081-PES-21	9	Exterior	Exterior	Façade, Around Windows	Brick + Mortar	3139563
7081-PES-22	9	Exterior	Exterior	Façade, Around Windows	Brick + Mortar	3139564
7081-PES-23	10	1	Interior	Walls, Around Windows Throughout	CMU + Mortar	3139565
7081-PES-24	10	2	Interior	Walls, Around Windows Throughout	CMU + Mortar	3139566
7081-PES-25	11	1	Pool Storage	Suspended Ceiling, 2'x4' Smooth	Ceiling Tile	
7081-PES-26	11	1	Pool Storage	Suspended Ceiling, 2'x4' Smooth	Ceiling Tile	
7081-PES-27	12	1	Pump Room	Below Equipment	Equipment Pad	3139567
7081-PES-28	12	1	Pump Room	Below Equipment	Equipment Pad	3139568
7081-PES-29	13	1	Pool Room	Windows, Sill, Large	Cementitious Sill	3139569
7081-PES-30	13	1	Pool Room	Windows, Sill, Large	Cementitious Sill	3139570

Comments:

SUBMITTED BY: [signature] DATE: 12-11-25

RECEIVED BY: [signature] DEC 11 '25 20:03 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-7081
SAMPLED BY: D. Stamper, A. Castellanos
C. Annesi, J. Lopez. D. Smith
DATE SAMPLED: 10-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pre-Construction Environmental Testing & Design Services
PROJECT BUILDING: Pine Bush CSD
PROJECT ADDRESS: Circleville MS/Pakanasink ES
1951/1952 NY-302, Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PES-31	14	1	Pool Room	Windows, On Large Sill	Mortar	3139571
7081-PES-32	14	1	Pool Room	Windows, On Large Sill	Mortar	3139572
7081-PES-33	15	1	Main Offices Back Storage Area	Window Sill, Small	Cementitious Sill	3139573
7081-PES-34	15	1	Main Office	Window Sill, Small	Cementitious Sill	3139574
7081-PES-35	16	1	Main Offices Back Storage Area	Window Interior, From Sill to Block, Black	Caulk	
7081-PES-36	16	1	Main Office	Window Interior, From Sill to Block, Black	Caulk	
7081-PES-37	17	1	Main Offices Back Storage Area	Interior Windows, From Metal to Block, White	Caulk	
7081-PES-38	17	1	Main Office	Interior Windows, From Metal to Block, White	Caulk	
7081-PES-39	18	Exterior	Cafeteria Exterior	Window, Brick to Metal	Caulk	
7081-PES-40	18	Exterior	Main Office Exterior	Window, Brick to Metal	Caulk	
7081-PES-41	19	1	Pump Room	At Piping Flange Joint, Red	Gasket	
7081-PES-42	19	1	Pump Room	At Piping Flange Joint, Red	Gasket	
7081-PES-43	20	Exterior	Cafeteria Exterior	Window Frame to Glass, Grey	Gasket	
7081-PES-44	20	Exterior	Administrative Office Exterior	Window Frame to Glass, Grey	Gasket	
7081-PES-45	21	1	Small Narrow Windows	Sill to Metal Frame	Caulk	

Comments:

SUBMITTED BY: D. Stamper DATE: 12-11-25

RECEIVED BY: M. Wheeler DEC 11 '25 2003 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Stamper, A. Castellanos
C. Annesi, J. Lopez. D. Smith
DATE SAMPLED: 10-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pre-Construction Environmental Testing & Design Services
PROJECT BUILDING: Pine Bush CSD
PROJECT ADDRESS: Circleville MS/Pakanasink ES
1951/1952 NY-302, Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PES-46	21	1	Small Narrow Windows	Sill to Metal Frame	Caulk	
7081-CMS-47	22	1	Hallway Outside Main Office	Suspended Ceiling, 2'x4', Dot Canyon	Ceiling Tile	
7081-CMS-48	22	1	Hallway Outside Main Office	Suspended Ceiling, 2'x4', Dot Canyon	Ceiling Tile	
7081-CMS-49	23	1	Principal Office	Suspended Ceiling, 2'x4' Dot Speck	Ceiling Tile	
7081-CMS-50	23	1	Principal Office	Suspended Ceiling, 2'x4' Dot Speck	Ceiling Tile	
7081-CMS-51	24	1	Principal Office	Above Suspended Ceiling, On Metal HVAC Duct	Duct Insulation	3139575
7081-CMS-52	24	1	Principal Office	Above Suspended Ceiling, On Metal HVAC Duct	Duct Insulation	3139576
7081-CMS-53	24	1	Principal Office	Above Suspended Ceiling, On Metal HVAC Duct	Duct Insulation	3139577
7081-CMS-54	25	1	Principal Office	Suspended Ceiling, 2'x4' Dot Canyon	Ceiling Tile	
7081-CMS-55	25	1	Principal Office	Suspended Ceiling, 2'x4' Dot Canyon	Ceiling Tile	
7081-CMS-56	26	1	Corridor Near Main Office	Suspended Ceiling, 2'x4' Tectum	Ceiling Tile	78
7081-CMS-57	26	1	Corridor Near Main Office	Suspended Ceiling, 2'x4' Tectum	Ceiling Tile	
7081-CMS-58	27	Basement	Boiler Room	Below Tank	Equipment Pad	3139578
7081-CMS-59	27	Basement	Boiler Room	Below Tank	Equipment Pad	3139579
7081-CMS-60	28	Basement	Boiler Room	South East Side Tank, On Metal Elbow Below Tank	Mudded Joint Packing	3139580

Comments:

SUBMITTED BY: [signature] DATE: 12-11-25

RECEIVED BY: [signature] DEC 11 '25 20:03 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-7081
SAMPLED BY: D. Stamper, A. Castellanos
C. Annesi, J. Lopez. D. Smith
DATE SAMPLED: 10-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pre-Construction Environmental Testing & Design Services
PROJECT BUILDING: Pine Bush CSD
PROJECT ADDRESS: Circleville MS/Pakanasink ES
1951/1952 NY-302, Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CMS-61	28	Basement	Boiler Room	South East Side Tank, On Metal Elbow Below Tank	Mudded Joint Packing	3139581
7081-CMS-62	28	Basement	Boiler Room	South East Side Tank, On Metal Elbow Below Tank	Mudded Joint Packing	3139582
7081-CMS-63	29	Basement	Boiler Room	South East Side Tank. Behind Metal Jacket	Insulation	3139583
7081-CMS-64	29	Basement	Boiler Room	South East Side Tank, Behind Metal Jacket	Insulation	3139584
7081-CMS-65	29	Basement	Boiler Room	South East Side Tank. Behind Metal Jacket	Insulation	3139585
7081-CMS-66	30	Basement	Boiler Room	South East Side Tank, On Metal Piping Below Tank	Pipe Insulation	3139586
7081-CMS-67	30	Basement	Boiler Room	South East Side Tank, On Metal Piping Below Tank	Pipe Insulation	3139587
7081-CMS-68	30	Basement	Boiler Room	South East Side Tank, On Metal Piping Below Tank	Pipe Insulation	3139588
7081-CMS-69	31	Basement	Boiler Room	West Side Tank. Body (Side) of Tank	Insulation	3139589
7081-CMS-70	31	Basement	Boiler Room	West Side Tank, Body (Side) of Tank	Insulation	3139590
7081-CMS-71	31	Basement	Boiler Room	West Side Tank, Body (Side) of Tank	Insulation	3139591
7081-CMS-72	32	Basement	Boiler Room	West Side Tank, End Cap, On Wire Lathe	Packing	3139592
7081-CMS-73	32	Basement	Boiler Room	West Side Tank, End Cap, On Wire Lathe	Packing	3139593
7081-CMS-74	32	Basement	Boiler Room	West Side Tank. End Cap, On Wire Lathe	Packing	3139594
7081-CMS-75	33	Basement	Boiler Room	Suspended Ceiling, 2'x'4 Textured	Ceiling Tile	

Comments:

SUBMITTED BY: [signature] DATE: 12-11-25

RECEIVED BY: [signature] DATE: DEC 11 '25 20:03

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Stamper, A. Castellanos
C. Annesi, J. Lopez. D. Smith
DATE SAMPLED: 10-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: Pre-Construction Environmental Testing & Design Services
PROJECT BUILDING: Pine Bush CSD
PROJECT ADDRESS: Circleville MS/Pakanasink ES
1951/1952 NY-302, Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CMS-76	33	Basement	Boiler Room	Suspended Ceiling, 2'x'4 Textured	Ceiling Tile	
7081-CMS-77	34	Basement	Boiler Room	West Side Tank, On Connected Piping	Pipe Insulation	3139595
7081-CMS-78	34	Basement	Boiler Room	West Side Tank, On Connected Piping	Pipe Insulation	3139596
7081-CMS-79	34	Basement	Boiler Room	West Side Tank, On Connected Piping	Pipe Insulation	3139597

Comments:

SUBMITTED BY: [signature] DATE: 12-11-25

RECEIVED BY: [signature] DEC 11 '25 20:03 DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-01	7081-CES-02	7081-CES-03	7081-CES-04
Layer Number					
Lab ID Number		3140095	3140096	3140097	3140098
Sample Location		1st Floor, Kitchen Dishwash, On Floor	1st Floor, Kitchen Dishwash, On Floor	1st Floor, Kitchen Staff Bathroom, On Floor	1st Floor, Kitchen Staff Bathroom, On Floor
Sample Description		Quarry Tile	Quarry Tile	Floor Tile	Floor Tile
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Red	Red	Blue	Blue
Sample Treatment		None	None	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	30.0	35.0	35.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	70.0	70.0	65.0	65.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-07	7081-CES-07	7081-CES-08	7081-CES-08
Layer Number		1	2	1	2
Lab ID Number		3140099	3140099	3140100	3140100
Sample Location		1st Floor, Kitchen Staff Bathroom, On Wall, Cove Base	1st Floor, Kitchen Staff Bathroom, On Wall, Cove Base	1st Floor, Kitchen Staff Bathroom, On Wall, Cove Base	1st Floor, Kitchen Staff Bathroom, On Wall, Cove Base
Sample Description		Tile and Grout (Tile Layer)	Tile and Grout (Grout Layer)	Tile and Grout (Tile Layer)	Tile and Grout (Grout Layer)
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	No	No	Yes
	Fibrous	No	No	No	No
	Color	White/Gray	Gray	White/Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	40.0	25.0	40.0	25.0
	% Carbonates	ND	20.0	ND	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	60.0	55.0	60.0	50.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-09	7081-CES-10	7081-CES-11	7081-CES-12
Layer Number					
Lab ID Number		3140101	3140102	3140103	3140104
Sample Location		1st Floor, Kitchen Staff Bathroom, On Floor, In Between Tiles	1st Floor, Kitchen Staff Bathroom, On Floor, In Between Tiles	1st Floor, Kitchen Dishwash, On Floor, In Between Tiles	1st Floor, Kitchen Dishwash, On Floor, In Between Tiles
Sample Description		Grout	Grout	Grout	Grout
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	No	No
	Color	Gray	Gray	Brown/Gray	Brown/Gray
Sample Treatment		None	None	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	25.0	35.0	35.0
	% Carbonates	20.0	25.0	20.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	55.0	50.0	45.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-13	7081-CES-14	7081-CES-15	7081-CES-16
Layer Number					
Lab ID Number		3140105	3140106	3140107	3140108
Sample Location		2nd Floor, Room 216, Wall	2nd Floor, Room 216, Wall	1st Floor, Exterior of Building, Wall	1st Floor, Exterior of Building, Wall
Sample Description		CMU	CMU	Brick	Brick
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Gray/White	Gray/White	Pink/Gray	Pink/Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	30.0	40.0	35.0
	% Carbonates	20.0	25.0	10.0	10.0
	% Other	ND	ND	ND	ND
	% Unidentified	50.0	45.0	50.0	55.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-17	7081-CES-18	7081-CES-19	7081-CES-20
Layer Number					
Lab ID Number		3140109	3140110	3140111	3140112
Sample Location		1st Floor, Exterior of Building, On Wall	1st Floor, Exterior of Building, On Wall	2nd Floor, Room 216, Wall	2nd Floor, Room 216, Wall
Sample Description		Mortar	Mortar	Mortar	Mortar
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	No	No	No	No
	Color	Gray	Gray	Gray	Gray
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	30.0	35.0	35.0
	% Carbonates	25.0	20.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	50.0	40.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-27	7081-CES-28	7081-CES-29	7081-CES-30
Layer Number					
Lab ID Number		3140113	3140114	3140115	3140116
Sample Location		1st Floor, Boiler Room, On Metal, On Large Diameter Pipe	1st Floor, Boiler Room, On Metal, On Large Diameter Pipe	1st Floor, Boiler Room, On Metal, On Large Diameter Pipe	1st Floor, Boiler Room, On Metal, On 1" Pipe
Sample Description		Pipe Insulation	Pipe Insulation	Pipe Insulation	Pipe Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White/Silver	Yellow/White/Silver	Yellow/White/Silver	Yellow/Brown/ White
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	45.0	45.0	45.0	50.0
	% Cellulose	20.0	15.0	20.0	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	5.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	30.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-31	7081-CES-32	7081-CES-33	7081-CES-34
Layer Number					
Lab ID Number		3140117	3140118	3140119	3140120
Sample Location		1st Floor, Boiler Room, On Metal, On 1" Pipe	1st Floor, Boiler Room, On Metal, On 1" Pipe	1st Floor, Boiler Room, Ceiling, On Metal Pipe	1st Floor, Boiler Room, Ceiling, On Metal Pipe
Sample Description		Pipe Insulation	Pipe Insulation	Mudded Joint Packing	Mudded Joint Packing
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Brown/ White	Yellow/Brown/ White	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	55.0	55.0	25.0	30.0
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	10.0	20.0	15.0
	% Carbonates	ND	ND	20.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	35.0	35.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number	7081-CES-35
Layer Number	
Lab ID Number	3140121
Sample Location	1st Floor, Boiler Room, Ceiling, On Metal Pipe
Sample Description	Mudded Joint Packing
Method of Quantification	Scanning Option

Appearance	Layered	No
	Homogenous	No
	Fibrous	Yes
	Color	Gray
Sample Treatment		Homogenized
Asbestos Content	% Amosite	ND
	% Chrysotile	ND
	% Other	ND
	% Total Asbestos	ND
Other Fibrous Materials Present	% Fibrous Glass	30.0
	% Cellulose	ND
	% Other	ND
	% Unidentified	ND
Non-Fibrous Materials Present	% Silicates	15.0
	% Carbonates	20.0
	% Other	ND
	% Unidentified	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-05	7081-CES-06	7081-CES-21	7081-CES-22
Layer Number					
Lab ID Number		3139931	3139932	3139933	3139934
Sample Location		1st Floor, Cafeteria/ Stage Storage Room, On Floor	1st Floor, Cafeteria/ Stage Storage Room, On Floor	1st Floor, Cafeteria/ Stage Storage Room, On Floor, Under Floor Tile	1st Floor, Cafeteria/ Stage Storage Room, On Floor, Under Floor Tile
Sample Description		Floor Tile	Floor Tile	Mastic	Mastic
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	Yes	Yes
	Color	Tan	Tan	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	0.4	0.4	3.4	3.4
	% Other	ND	ND	ND	ND
	% Total Asbestos	0.4 Inconclusive	0.4 Inconclusive	3.4	3.4
Other Materials Present	% Organic	28.5	30.2	78.6	68.3
	% Carbonates	55.2	55.0	7.1	13.9
	% Other Inorganic	15.9	14.4	10.9	14.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-23	7081-CES-24	7081-CES-25	7081-CES-26
Layer Number					
Lab ID Number		3139935	3139936	3139937	3139938
Sample Location		1st Floor, Exterior of Building, Window Frame to Brick	1st Floor, Exterior of Building, Window Frame to Brick	2nd Floor, Stairwell 2, Window Frame to CMU	2nd Floor, Stairwell 3, Window Frame to CMU
Sample Description		Caulk	Caulk	Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	67.7	69.8	78.0	81.7
	% Carbonates	26.8	24.4	16.0	14.2
	% Other Inorganic	5.5	5.8	6.0	4.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-05	7081-CES-06	7081-CES-23	7081-CES-24
Layer Number					
Lab ID Number		3139931	3139932	3139935	3139936
Sample Location		1st Floor, Cafeteria/ Stage Storage Room, On Floor	1st Floor, Cafeteria/ Stage Storage Room, On Floor	1st Floor, Exterior of Building, Window Frame to Brick	1st Floor, Exterior of Building, Window Frame to Brick
Sample Description		Floor Tile	Floor Tile	Caulk	Caulk
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Tan	Tan	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	8.2	7.4	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	8.2	7.4	ND	ND
Other Materials Present	% Organic	28.5	30.2	67.7	69.8
	% Carbonates	55.2	55.0	26.8	24.4
	% Other Inorganic	8.1	7.4	5.5	5.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Circleville Elementary School - 2000 NY-302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-25	7081-CES-26
Layer Number			
Lab ID Number		3139937	3139938
Sample Location		2nd Floor, Stairwell 2, Window Frame to CMU	2nd Floor, Stairwell 3, Window Frame to CMU
Sample Description		Caulk	Caulk
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Black	Black
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Materials Present	% Organic	78.0	81.7
	% Carbonates	16.0	14.2
	% Other Inorganic	6.0	4.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT NAME: Pre-Construction Environmental Testing
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 NY-302
Circleville, NY 10919

PROJECT # : 25-7081
SAMPLED BY: C. Annesi, D. Perron

DATE SAMPLED: 15-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CES-01		1	Kitchen Dishwash	On Floor	Quarry Tile	3140095
7081-CES-02		1	Kitchen Dishwash	On Floor	Quarry Tile	3140096
7081-CES-03		1	Kitchen Staff Bathroom	On Floor	Floor Tile	3140097
7081-CES-04		1	Kitchen Staff Bathroom	On Floor	Floor Tile	3140098
7081-CES-05		1	Cafeteria Stage Storage Room	On Floor	Floor Tile	
7081-CES-06		1	Cafeteria Stage Storage Room	On Floor	Floor Tile	
7081-CES-07		1	Kitchen Staff Bathroom	On Wall, Cove Base	Tile and Grout	3140099
7081-CES-08		1	Kitchen Staff Bathroom	On Wall, Cove Base	Tile and Grout	3140100
7081-CES-09		1	Kitchen Staff Bathroom	On Floor, In Between Tiles	Grout	3140101
7081-CES-10		1	Kitchen Staff Bathroom	On Floor, In Between Tiles	Grout	3140102
7081-CES-11		1	Kitchen Dishwash	On Floor, In Between Tiles	Grout	3140103
7081-CES-12		1	Kitchen Dishwash	On Floor, In Between Tiles	Grout	3140104
7081-CES-13		2	Room 216	Wall	CMU	3140105
7081-CES-14		2	Room 216	Wall	CMU	3140106
7081-CES-15		1	Exterior of Building	Wall	Brick	3140107

* PAPERWORK
MP 12/17/2025

Comments:

SUBMITTED BY: C Annesi

DATE: 12/16/25

RECEIVED BY: MD Warner

DEC 16 '25 20:25
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT NAME: Pre-Construction Environmental Testing
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 NY-302
Circleville, NY 10919

PROJECT # : 25-7081
SAMPLED BY: C. Annesi, D. Perron

DATE SAMPLED: 15-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

TURN-AROUND TIME: 5-DAY

Sample	HA#	Floor	Space Name/ID #	Location	Material	Results
7081-CES-16		1	Exterior of Building	Wall	Brick	3140108
7081-CES-17		1	Exterior of Building	On Wall	Mortar	3140109
7081-CES-18		1	Exterior of Building	On Wall	Mortar	3140110
7081-CES-19		2	Room 216	Wall	Mortar	3140111
7081-CES-20		2	Room 216	Wall	Mortar	3140112
7081-CES-21		1	Cafeteria/Stage Storage Room	On Floor, Under Floor Tile	Mastic	
7081-CES-22		1	Cafeteria/Stage Storage Room	On Floor, Under Floor Tile	Mastic	
7081-CES-23		1	Exterior of Building	Window Frame to Brick	Caulk	
7081-CES-24		1	Exterior of Building	Window Frame to Brick	Caulk	
7081-CES-25		2	Stairwell 2	Window Frame to CMU	Caulk	
7081-CES-26		2	Stairwell 3	Window Frame to CMU	Caulk	
7081-CES-27		1	Boiler Room	On Metal, On Large Diameter Pipe	Pipe Isulation	3140113
7081-CES-28		1	Boiler Room	On Metal, On Large Diameter Pipe	Pipe Isulation	3140114
7081-CES-29		1	Boiler Room	On Metal, On Large Diameter Pipe	Pipe Isulation	3140115
7081-CES-30		1	Boiler Room	On Metal, On 1" Pipe	Pipe Isulation	3140116

Comments:

SUBMITTED BY: C Annesi DATE: 12/16/25

RECEIVED BY: MDWarner DEC 16 '25 20:25 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT NAME: Pre-Construction Environmental Testing
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 NY-302
Circleville, NY 10919

PROJECT # : 25-7081
SAMPLED BY: C. Annesi, D. Perron

DATE SAMPLED: 15-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CES-31		1	Boiler Room	On Metal, On 1" Pipe	Pipe Isulation	3140117
7081-CES-32		1	Boiler Room	On Metal, On 1" Pipe	Pipe Isulation	3140118
7081-CES-33		1	Boiler Room	Ceiling, On Metal Pipe	Mudded Joint Packing	3140119
7081-CES-34		1	Boiler Room	Ceiling, On Metal Pipe	Mudded Joint Packing	3140120
7081-CES-35		1	Boiler Room	Ceiling, On Metal Pipe	Mudded Joint Packing	3140121

Comments:

SUBMITTED BY: C Annesi DATE: 12/16/25

RECEIVED BY: MD Warner DEC 16 '25 20:25 DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-09	7081-PBHS-10	7081-PBHS-11	7081-PBHS-12
Layer Number					
Lab ID Number		3140278	3140279	3140280	3140281
Sample Location		1st Floor, Kitchen by Ice Maker, Floor, Under Rubber Flooring	1st Floor, Kitchen Floor, Under Ceramic Tiles	1st Floor, Cafeteria, On Wall, Window Sill	1st Floor, Cafeteria, On Wall, Window Sill
Sample Description		Slab	Slab	Stone	Stone
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	No	No	No	No
	Color	Gray	Gray	Gray	Gray
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	25.0	20.0	20.0	25.0
	% Carbonates	30.0	30.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	50.0	80.0	75.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-13	7081-PBHS-14	7081-PBHS-15	7081-PBHS-16
Layer Number					
Lab ID Number		3140282	3140283	3140284	3140285
Sample Location		1st Floor, Exterior of Cafeteria, Wall	1st Floor, Exterior of Cafeteria, Wall	1st Floor, Exterior of Cafeteria, On Wall, Trim	1st Floor, Exterior of Cafeteria, On Wall, Trim
Sample Description		Block	Block	Block	Block
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	White/Gray	Gray/White	Pink/Gray	Brown/Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	30.0	25.0	35.0	40.0
	% Carbonates	25.0	25.0	20.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	50.0	45.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-17	7081-PBHS-18	7081-PBHS-19	7081-PBHS-20
Layer Number					
Lab ID Number		3140286	3140287	3140288	3140289
Sample Location		1st Floor, Cafeteria, Wall	1st Floor, Cafeteria, Wall	1st Floor, Cafeteria, On Wall, In Between CMU	1st Floor, Cafeteria, On Wall, In Between CMU
Sample Description		CMU	CMU	Mortar	Mortar
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	No	No	No	No
	Color	Gray	Gray	Gray	Gray
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	20.0	25.0	30.0	30.0
	% Carbonates	35.0	35.0	20.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	40.0	50.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-21	7081-PBHS-22	7081-PBHS-23	7081-PBHS-24
Layer Number					
Lab ID Number		3140290	3140291	3140292	3140293
Sample Location		1st Floor, Cafeteria, On Window Sill, In Between Stone Sill	1st Floor, Cafeteria, On Window Sill, In Between Stone Sill	1st Floor, Exterior of Cafeteria, On Wall, On Block	1st Floor, Exterior of Cafeteria, On Wall, On Block
Sample Description		Mortar	Mortar	Grout	Grout
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Gray	Gray	Gray/Brown	Gray/Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	35.0	35.0	25.0	30.0
	% Carbonates	20.0	20.0	25.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	45.0	45.0	50.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-01	7081-PBHS-02	7081-PBHS-03	7081-PBHS-04
Layer Number					
Lab ID Number		3139939	3139940	3139941	3139942
Sample Location		1st Floor, Cafeteria Staff Bathroom, On Floor, On Slab, 12 x 12, Green	1st Floor, Cafeteria Staff Bathroom, On Floor, On Slab, 12 x 12, Green	1st Floor, Cafeteria Staff Locker Room, On Floor, On Slab, 12 x 12, Speckled Beige	1st Floor, Cafeteria, On Floor, On Slab, 12 x 12, Speckled Beige
Sample Description		Floor Tile	Floor Tile	Floor Tile	Floor Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Blue	Blue	Tan	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	18.1	17.8	19.6	20.1
	% Carbonates	77.1	65.8	77.4	76.8
	% Other Inorganic	4.8	16.4	3.0	3.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-05	7081-PBHS-05	7081-PBHS-06	7081-PBHS-06
Layer Number		1	2	1	2
Lab ID Number		3139943	3139943	3139944	3139944
Sample Location		1st Floor, Cafeteria, On Wall, Gray	1st Floor, Cafeteria, On Wall, Gray	1st Floor, Cafeteria Staff Bathrooom, On Wall, Gray	1st Floor, Cafeteria Staff Bathrooom, On Wall, Gray
Sample Description		Cove Base and Adhesive (Cove Base Layer)	Cove Base and Adhesive (Adhesive Layer)	Cove Base and Adhesive (Cove Base Layer)	Cove Base and Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Brown	Yellow	Brown	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	53.3	33.6	52.9	38.2
	% Carbonates	40.6	64.6	45.8	59.7
	% Other Inorganic	6.1	1.8	1.3	2.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-07	7081-PBHS-07	7081-PBHS-08	7081-PBHS-08
Layer Number		1	2	1	2
Lab ID Number		3139945	3139945	3139946	3139946
Sample Location		1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab
Sample Description		Rubber Floor and Adhesive (Floor Layer)	Rubber Floor and Adhesive (Adhesive Layer)	Rubber Floor and Adhesive (Floor Layer)	Rubber Floor and Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	Blue	Tan	Blue	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	72.6	63.1	72.1	47.3
	% Carbonates	15.8	6.6	14.2	18.5
	% Other Inorganic	11.6	30.3	13.7	34.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-25	7081-PBHS-26	7081-PBHS-27	7081-PBHS-28
Layer Number					
Lab ID Number		3139947	3139948	3139949	3139950
Sample Location		1st Floor, Cafeteria Staff Bathroom, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Bathroom, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Locker Room, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Locker Room, On Floor, Under Floor Tile, On Slab
Sample Description		Mastic	Mastic	Mastic	Mastic
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	73.6	62.9	60.5	57.5
	% Carbonates	10.7	17.8	33.9	31.2
	% Other Inorganic	15.7	19.3	5.6	11.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-29	7081-PBHS-30	7081-PBHS-31	7081-PBHS-32
Layer Number					
Lab ID Number		3139951	3139952	3139953	3139954
Sample Location		1st Floor, Cafeteria, Interior Windows, Glass to Metal Frame	1st Floor, Cafeteria, Interior Windows, Glass to Metal Frame	1st Floor, Cafeteria, Interior Windows, Wood Sill to Metal Frame	1st Floor, Cafeteria, Interior Windows, Wood Sill to Metal Frame
Sample Description		Glazing	Glazing	Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Red	Red
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	64.3	64.4	77.1	76.7
	% Carbonates	35.5	35.4	15.3	16.4
	% Other Inorganic	0.2	0.2	7.6	6.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-33	7081-PBHS-34
Layer Number			
Lab ID Number		3139955	3139956
Sample Location		1st Floor, Exterior of Cafeteria, Metal Window Frame to CMU	1st Floor, Exterior of Cafeteria, Metal Window Frame to CMU
Sample Description		Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Red	Red
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	70.0	65.7
	% Carbonates	23.0	21.6
	% Other Inorganic	7.0	12.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-01	7081-PBHS-02	7081-PBHS-03	7081-PBHS-04
Layer Number					
Lab ID Number		3139939	3139940	3139941	3139942
Sample Location		1st Floor, Cafeteria Staff Bathroom, On Floor, On Slab, 12 x 12, Green	1st Floor, Cafeteria Staff Bathroom, On Floor, On Slab, 12 x 12, Green	1st Floor, Cafeteria Staff Locker Room, On Floor, On Slab, 12 x 12, Speckled Beige	1st Floor, Cafeteria, On Floor, On Slab, 12 x 12, Speckled Beige
Sample Description		Floor Tile	Floor Tile	Floor Tile	Floor Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Blue	Blue	Tan	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	18.1	17.8	19.6	20.1
	% Carbonates	77.1	65.8	77.4	76.8
	% Other Inorganic	4.8	16.4	3.0	3.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-05	7081-PBHS-05	7081-PBHS-06	7081-PBHS-06
Layer Number		1	2	1	2
Lab ID Number		3139943	3139943	3139944	3139944
Sample Location		1st Floor, Cafeteria, On Wall, Gray	1st Floor, Cafeteria, On Wall, Gray	1st Floor, Cafeteria Staff Bathrooom, On Wall, Gray	1st Floor, Cafeteria Staff Bathrooom, On Wall, Gray
Sample Description		Cove Base and Adhesive (Cove Base Layer)	Cove Base and Adhesive (Adhesive Layer)	Cove Base and Adhesive (Cove Base Layer)	Cove Base and Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Brown	Yellow	Brown	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	53.3	33.6	52.9	38.2
	% Carbonates	40.6	64.6	45.8	59.7
	% Other Inorganic	6.1	1.8	1.3	2.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-07	7081-PBHS-07	7081-PBHS-08	7081-PBHS-08
Layer Number		1	2	1	2
Lab ID Number		3139945	3139945	3139946	3139946
Sample Location		1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab
Sample Description		Rubber Floor and Adhesive (Floor Layer)	Rubber Floor and Adhesive (Adhesive Layer)	Rubber Floor and Adhesive (Floor Layer)	Rubber Floor and Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	Blue	Tan	Blue	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	72.6	63.1	72.1	47.3
	% Carbonates	15.8	6.6	14.2	18.5
	% Other Inorganic	11.6	30.3	13.7	34.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-25	7081-PBHS-26	7081-PBHS-27	7081-PBHS-28
Layer Number					
Lab ID Number		3139947	3139948	3139949	3139950
Sample Location		1st Floor, Cafeteria Staff Bathroom, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Bathroom, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Locker Room, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Locker Room, On Floor, Under Floor Tile, On Slab
Sample Description		Mastic	Mastic	Mastic	Mastic
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	73.6	62.9	60.5	57.5
	% Carbonates	10.7	17.8	33.9	31.2
	% Other Inorganic	15.7	19.3	5.6	11.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-29	7081-PBHS-30	7081-PBHS-31	7081-PBHS-32
Layer Number					
Lab ID Number		3139951	3139952	3139953	3139954
Sample Location		1st Floor, Cafeteria, Interior Windows, Glass to Metal Frame	1st Floor, Cafeteria, Interior Windows, Glass to Metal Frame	1st Floor, Cafeteria, Interior Windows, Wood Sill to Metal Frame	1st Floor, Cafeteria, Interior Windows, Wood Sill to Metal Frame
Sample Description		Glazing	Glazing	Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Red	Red
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	64.3	64.4	77.1	76.7
	% Carbonates	35.5	35.4	15.3	16.4
	% Other Inorganic	0.2	0.2	7.6	6.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/17/2025
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-33	7081-PBHS-34
Layer Number			
Lab ID Number		3139955	3139956
Sample Location		1st Floor, Exterior of Cafeteria, Metal Window Frame to CMU	1st Floor, Exterior of Cafeteria, Metal Window Frame to CMU
Sample Description		Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Red	Red
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	70.0	65.7
	% Carbonates	23.0	21.6
	% Other Inorganic	7.0	12.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-01	7081-PBHS-02	7081-PBHS-03	7081-PBHS-04
Layer Number					
Lab ID Number		3139939	3139940	3139941	3139942
Sample Location		1st Floor, Cafeteria Staff Bathroom, On Floor, On Slab, 12 x 12, Green	1st Floor, Cafeteria Staff Bathroom, On Floor, On Slab, 12 x 12, Green	1st Floor, Cafeteria Staff Locker Room, On Floor, On Slab, 12 x 12, Speckled Beige	1st Floor, Cafeteria, On Floor, On Slab, 12 x 12, Speckled Beige
Sample Description		Floor Tile	Floor Tile	Floor Tile	Floor Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Blue	Blue	Tan	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	18.1	17.8	19.6	20.1
	% Carbonates	77.1	65.8	77.4	76.8
	% Other Inorganic	4.8	16.4	3.0	3.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-05	7081-PBHS-05	7081-PBHS-06	7081-PBHS-06
Layer Number		1	2	1	2
Lab ID Number		3139943	3139943	3139944	3139944
Sample Location		1st Floor, Cafeteria, On Wall, Gray	1st Floor, Cafeteria, On Wall, Gray	1st Floor, Cafeteria Staff Bathrooom, On Wall, Gray	1st Floor, Cafeteria Staff Bathrooom, On Wall, Gray
Sample Description		Cove Base and Adhesive (Cove Base Layer)	Cove Base and Adhesive (Adhesive Layer)	Cove Base and Adhesive (Cove Base Layer)	Cove Base and Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Brown	Yellow	Brown	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	53.3	33.6	52.9	38.2
	% Carbonates	40.6	64.6	45.8	59.7
	% Other Inorganic	6.1	1.8	1.3	2.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-07	7081-PBHS-07	7081-PBHS-08	7081-PBHS-08
Layer Number		1	2	1	2
Lab ID Number		3139945	3139945	3139946	3139946
Sample Location		1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab	1st Floor, Kitchen by Ice Maker, On Floor, On Slab
Sample Description		Rubber Floor and Adhesive (Floor Layer)	Rubber Floor and Adhesive (Adhesive Layer)	Rubber Floor and Adhesive (Floor Layer)	Rubber Floor and Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	Blue	Tan	Blue	Tan
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	72.6	63.1	72.1	47.3
	% Carbonates	15.8	6.6	14.2	18.5
	% Other Inorganic	11.6	30.3	13.7	34.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-25	7081-PBHS-26	7081-PBHS-27	7081-PBHS-28
Layer Number					
Lab ID Number		3139947	3139948	3139949	3139950
Sample Location		1st Floor, Cafeteria Staff Bathroom, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Bathroom, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Locker Room, On Floor, Under Floor Tile, On Slab	1st Floor, Cafeteria Staff Locker Room, On Floor, Under Floor Tile, On Slab
Sample Description		Mastic	Mastic	Mastic	Mastic
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	73.6	62.9	60.5	57.5
	% Carbonates	10.7	17.8	33.9	31.2
	% Other Inorganic	15.7	19.3	5.6	11.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing - Pine Bush High School - 156 NY-302 - Pine Bush, NY

Date Collected : 12/15/2025
Collected By : C. Annesi/D. Perron
Date Received : 12/16/2025
Date Analyzed : 12/18/2025
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-31	7081-PBHS-32	7081-PBHS-33	7081-PBHS-34
Layer Number					
Lab ID Number		3139953	3139954	3139955	3139956
Sample Location		1st Floor, Cafeteria, Interior Windows, Wood Sill to Metal Frame	1st Floor, Cafeteria, Interior Windows, Wood Sill to Metal Frame	1st Floor, Exterior of Cafeteria, Metal Window Frame to CMU	1st Floor, Exterior of Cafeteria, Metal Window Frame to CMU
Sample Description		Caulk	Caulk	Caulk	Caulk
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Red	Red	Red	Red
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	77.1	76.7	70.0	65.7
	% Carbonates	15.3	16.4	23.0	21.6
	% Other Inorganic	7.6	6.9	7.0	12.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT NAME: Pre-Construction Environmental Testing
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 156 NY-302
Pine Bush, NY 12566

PROJECT # : 25-7081
SAMPLED BY: C. Annesi, D. Perron

DATE SAMPLED: 15-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBHS-01		1	Cafeteria Staff Bathroom	On Floor, On Slab, 12 X 12, Green	Floor Tile	
7081-PBHS-02		1	Cafeteria Staff Bathroom	On Floor, On Slab, 12 X 12, Green	Floor Tile	
7081-PBHS-03		1	Cafeteria Staff Locker Room	On Floor, On Slab, 12 X 12, Speckled Beige	Floor Tile	
7081-PBHS-04		1	Cafeteria	On Floor, On Slab, 12 X 12, Speckled Beige	Floor Tile	
7081-PBHS-05		1	Cafeteria	On Wall, Gray	Cove Base and Adhesive	
7081-PBHS-06		1	Cafeteria Staff Bathroom	On Wall, Gray	Cove Base and Adhesive	
7081-PBHS-07		1	Kitchen By Ice Maker	On Floor, On Slab	Rubber Floor and Adhesive	
7081-PBHS-08		1	Kitchen By Ice Maker	On Floor, On Slab	Rubber Floor and Adhesive	
7081-PBHS-09		1	Kitchen By Ice Maker	Floor, Under Rubber Flooring	Slab	3140278
7081-PBHS-10		1	Kitchen Floor	Floor, Under Ceramic Tiles	Slab	3140279
7081-PBHS-11		1	Cafeteria	On Wall, Window Sill	Stone	3140280
7081-PBHS-12		1	Cafeteria	On Wall, Window Sill	Stone	3140281
7081-PBHS-13		1	Exterior of Cafeteria	Wall	Block	3140282
7081-PBHS-14		1	Exterior of Cafeteria	Wall	Block	3140283
7081-PBHS-15		1	Exterior of Cafeteria	On Wall, Trim	Block	3140284

AS LABELED ON PAPERWORK
IN BAGS MP 12/18/2025

Comments:

SUBMITTED BY: C Annesi
DATE: 12/16/25

RECEIVED BY: MD Warner
DEC 16 '25 20:25
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT NAME: Pre-Construction Environmental Testing
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 156 NY-302
Pine Bush, NY 12566

PROJECT # : 25-7081
SAMPLED BY: C. Annesi, D. Perron

DATE SAMPLED: 15-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBHS-16		1	Exterior of Cafeteria	On Wall, Trim	Block	3140285
7081-PBHS-17		1	Cafeteria	Wall	CMU	3140286
7081-PBHS-18		1	Cafeteria	Wall	CMU	3140287
7081-PBHS-19		1	Cafeteria	On Wall, In Between CMU	Mortar	3140288
7081-PBHS-20		1	Cafeteria	On Wall, In Between CMU	Mortar	3140289
7081-PBHS-21		1	Cafeteria	On Window Sill, In Between Stone Sill	Mortar	3140290
7081-PBHS-22		1	Cafeteria	On Window Sill, In Between Stone Sill	Mortar	3140291
7081-PBHS-23		1	Exterior of Cafeteria	On Wall, On Block	Grout	3140292
7081-PBHS-24		1	Exterior of Cafeteria	On Wall, On Block	Grout	3140293
7081-PBHS-25		1	Cafeteria Staff Bathroom	On Floor, Under Floor Tile, On Slab	Mastic	
7081-PBHS-26		1	Cafeteria Staff Bathroom	On Floor, Under Floor Tile, On Slab	Mastic	
7081-PBHS-27		1	Cafeteria Staff Locker Room	On Floor, Under Floor Tile, On Slab	Mastic	
7081-PBHS-28		1	Cafeteria Staff Locker Room	On Floor, Under Floor Tile, On Slab	Mastic	
7081-PBHS-29		1	Cafeteria	Interior Windows, Glass to Metal Frame	Glazing	
7081-PBHS-30		1	Cafeteria	Interior Windows, Glass to Metal Frame	Glazing	

Comments:

SUBMITTED BY: C Annesi DATE: 12/16/25

RECEIVED BY: MDWARNER DEC 16 '25 20:25 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT NAME: Pre-Construction Environmental Testing
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 156 NY-302
Pine Bush, NY 12566

PROJECT # : 25-7081
SAMPLED BY: C. Annesi, D. Perron

DATE SAMPLED: 15-Dec-25
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBHS-31		1	Cafeteria	Interior Windows, Wood Sill to Metal Frame	Caulk	
7081-PBHS-32		1	Cafeteria	Interior Windows, Wood Sill to Metal Frame	Caulk	
7081-PBHS-33		1	Exterior of Cafeteria	Metal Window Frame to CMU	Caulk	
7081-PBHS-34		1	Exterior of Cafeteria	Metal Window Frame to CMU	Caulk	

Comments:

SUBMITTED BY: C Annesi

RECEIVED BY: M D Warader

DATE: 12/16/25
DEC 16 '25 20:25
DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-01	7081-CES-02	7081-CES-03	7081-CES-04
Layer Number					
Lab ID Number		3144214	3144215	3144216	3144217
Sample Location		Upper Cafe Roof, Field Cut Under EPDM	Upper Cafe Roof, Field Cut Under EPDM	Lower Cafe Roof, Field Cut Under EPDM	Lower Cafe Roof, Field Cut Under EPDM
Sample Description		Gypsum	Gypsum	Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	Yes	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray	Gray/Brown	Gray	Gray
Sample Treatment		None	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	10.0	10.0	15.0	25.0
	% Cellulose	5.0	15.0	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	15.0	15.0
	% Carbonates	30.0	30.0	30.0	25.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	30.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-05	7081-CES-06
Layer Number			
Lab ID Number		3144218	3144219
Sample Location		Gym Roof, Field Cut Under Gypsum	Gym Roof, Field Cut Under Gypsum
Sample Description		Fiberboard	Fiberboard
Method of Quantification		Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes
	Homogenous	No	No
	Fibrous	Yes	Yes
	Color	Brown/Black	Brown/Black
Sample Treatment		Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND
	% Cellulose	55.0	50.0
	% Other	ND	ND
	% Unidentified	ND	ND
Non-Fibrous Materials Present	% Silicates	10.0	15.0
	% Carbonates	ND	ND
	% Other	ND	ND
	% Unidentified	35.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-07	7081-CES-08	7081-CES-09	7081-CES-10
Layer Number					
Lab ID Number		3143712	3143713	3143714	3143715
Sample Location		Upper Cafe Roof, Field Cut Under ISO	Upper Cafe Roof, Field Cut Under ISO	Lower Cafe Roof, Field Cut Under Rubber	Lower Cafe Roof, Field Cut Under Rubber
Sample Description		Tar Paper	Tar Paper	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Black	Black	Yellow	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND	ND
Other Materials Present	% Organic	87.8	88.1	99.1	99.6
	% Carbonates	4.7	5.2	0.8	0.2
	% Other Inorganic	7.5	6.7	0.1	0.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-11	7081-CES-12	7081-CES-13	7081-CES-14
Layer Number					
Lab ID Number		3143716	3143717	3143718	3143719
Sample Location		Upper Cafe Roof, Field Cut Under Rubber	Upper Cafe Roof, Field Cut Top Layer	Upper Cafe Roof, Field Cut Top Layer	Lower Cafe Roof, Field Cut Top Layer
Sample Description		ISO Foam	EPDM	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	Yes	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	Yellow	Black/White	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	99.5	71.0	70.0	73.1
	% Carbonates	0.4	10.8	11.0	10.9
	% Other Inorganic	0.1	18.2	19.0	16.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-15	7081-CES-16	7081-CES-16	7081-CES-17
Layer Number			1	2	1
Lab ID Number		3143720	3143721	3143721	3143722
Sample Location		Lower Cafe Roof, Field Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/White	Black/White	Yellow/Blue	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	71.7	77.1	58.2	76.8
	% Carbonates	10.2	5.8	33.4	4.6
	% Other Inorganic	18.1	17.1	8.4	18.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-17	7081-CES-18	7081-CES-18	7081-CES-19
Layer Number		2	1	2	1
Lab ID Number		3143722	3143723	3143723	3143724
Sample Location		Upper Cafe Roof, Equipment Cut Top Layer	Lower Cafe Roof, Equipment Cut Top Layer	Lower Cafe Roof, Equipment Cut Top Layer	Lower Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	No	No	No
	Homogenous	No	Yes	Yes	Yes
	Fibrous	Yes	Yes	No	Yes
	Color	Yellow/Blue	Black/White	Yellow	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND	ND Inconclusive
Other Materials Present	% Organic	47.4	76.8	93.8	74.6
	% Carbonates	45.6	5.0	5.9	5.1
	% Other Inorganic	7.0	18.2	0.3	20.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-19	7081-CES-20	7081-CES-21	7081-CES-22
Layer Number		2			
Lab ID Number		3143724	3143725	3143726	3143727
Sample Location		Lower Cafe Roof, Equipment Cut Top Layer	Upper Cafe Roof, Field Cut Under Gypsum	Upper Cafe Roof, Field Cut Under Gypsum	Lower Cafe Roof, Field Cut Under Gypsum
Sample Description		EPDM & Adhesive (Adhesive Layer)	EPDM/Rubber	EPDM/Rubber	Rubber Membrane
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	Yes
	Homogenous	Yes	Yes	Yes	No
	Fibrous	No	No	Yes	Yes
	Color	Yellow	Black/White	Black/White	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	94.1	76.6	76.6	84.8
	% Carbonates	5.3	4.6	5.3	3.9
	% Other Inorganic	0.6	18.8	18.1	11.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-23	7081-CES-24	7081-CES-25	7081-CES-26
Layer Number					
Lab ID Number		3143728	3143729	3143730	3143731
Sample Location		Lower Cafe Roof, Field Cut Under Gypsum	Upper Cafe Roof, Field Cut Bottom Layer on Metal	Upper Cafe Roof, Field Cut Bottom Layer on Metal	Lower Cafe Roof, Equipment Cut Under EPDM
Sample Description		Rubber Membrane	Tar	Tar	Tar
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	No	No	No
	Homogenous	No	Yes	Yes	Yes
	Fibrous	Yes	No	No	No
	Color	Black	Black	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND	ND	ND
Other Materials Present	% Organic	83.6	99.8	99.3	96.9
	% Carbonates	6.6	0.1	0.6	3.0
	% Other Inorganic	9.8	0.1	0.1	0.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number	7081-CES-27
Layer Number	
Lab ID Number	3143732
Sample Location	Lower Cafe Roof, Equipment Cut Under EPDM
Sample Description	Tar
Analytical Method	NOB Plm

Appearance	Layered	No
	Homogenous	Yes
	Fibrous	No
	Color	Black

Asbestos Content	% Amosite	ND
	% Chrysotile	ND
	% Other	ND
	% Total Asbestos	ND

Other Materials Present	% Organic	99.7
	% Carbonates	0.2
	% Other Inorganic	0.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/19/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-07	7081-CES-08	7081-CES-12	7081-CES-13
Layer Number					
Lab ID Number		3143712	3143713	3143717	3143718
Sample Location		Upper Cafe Roof, Field Cut Under ISO	Upper Cafe Roof, Field Cut Under ISO	Upper Cafe Roof, Field Cut Top Layer	Upper Cafe Roof, Field Cut Top Layer
Sample Description		Tar Paper	Tar Paper	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black	Black	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	87.8	88.1	71.0	70.0
	% Carbonates	4.7	5.2	10.8	11.0
	% Other Inorganic	7.5	6.7	18.2	19.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/19/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-14	7081-CES-15	7081-CES-16	7081-CES-16
Layer Number				1	2
Lab ID Number		3143719	3143720	3143721	3143721
Sample Location		Lower Cafe Roof, Field Cut Top Layer	Lower Cafe Roof, Field Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	Yes
	Homogenous	No	No	Yes	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/White	Black/White	Black/White	Yellow/Blue
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	73.1	71.7	77.1	58.2
	% Carbonates	10.9	10.2	5.8	33.4
	% Other Inorganic	16.0	18.1	17.1	8.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/19/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CES-17	7081-CES-17	7081-CES-18	7081-CES-19
Layer Number		1	2	1	1
Lab ID Number		3143722	3143722	3143723	3143724
Sample Location		Upper Cafe Roof, Equipment Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer	Lower Cafe Roof, Equipment Cut Top Layer	Lower Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	Yes	No	No
	Homogenous	Yes	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/White	Yellow/Blue	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	76.8	47.4	76.8	74.6
	% Carbonates	4.6	45.6	5.0	5.1
	% Other Inorganic	18.6	7.0	18.2	20.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville ES - 2000 Route 302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/19/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CES-20	7081-CES-21	7081-CES-22	7081-CES-23
Layer Number					
Lab ID Number		3143725	3143726	3143727	3143728
Sample Location		Upper Cafe Roof, Field Cut Under Gypsum	Upper Cafe Roof, Field Cut Under Gypsum	Lower Cafe Roof, Field Cut Under Gypsum	Lower Cafe Roof, Field Cut Under Gypsum
Sample Description		EPDM/Rubber	EPDM/Rubber	Rubber Membrane	Rubber Membrane
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	Black/White	Black/White	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	76.6	76.6	84.8	83.6
	% Carbonates	4.6	5.3	3.9	6.6
	% Other Inorganic	18.8	18.1	11.3	9.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron
DATE SAMPLED: 15-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 Route 302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CES-01	1	Roof	Upper Café Roof	Field Cut Under EPDM	Gypsum	3144214
7081-CES-02	1	Roof	Upper Café Roof	Field Cut Under EPDM	Gypsum	3144215
7081-CES-03	2	Roof	Lower Café Roof	Field Cut Under EPDM	Gypsum	3144216
7081-CES-04	2	Roof	Lower Café Roof	Field Cut Under EPDM	Gypsum	3144217
7081-CES-05	3	Roof	Gym Roof	Field Cut Under Gypsum	Fiberboard	3144218
7081-CES-06	3	Roof	Gym Roof	Field Cut Under Gypsum	Fiberboard	3144219
7081-CES-07	4	Roof	Upper Café Roof	Field Cut Under ISO	Tar Paper	
7081-CES-08	4	Roof	Upper Café Roof	Field Cut Under ISO	Tar Paper	
7081-CES-09	5	Roof	Lower Café Roof	Field Cut Under Rubber	ISO Foam	
7081-CES-10	5	Roof	Lower Café Roof	Field Cut Under Rubber	ISO Foam	
7081-CES-11	5	Roof	Upper Cafe Roof	Field Cut Under Rubber	ISO Foam	
7081-CES-12	6	Roof	Upper Café Roof	Field Cut Top Layer	EPDM	
7081-CES-13	6	Roof	Upper Café Roof	Field Cut Top Layer	EPDM	
7081-CES-14	7	Roof	Lower Café Roof	Field Cut Top Layer	EPDM	
7081-CES-15	7	Roof	Lower Café Roof	Field Cut Top Layer	EPDM	

AS LABELED ON PAPERWORK
MP 01/19/2026

Comments:

SUBMITTED BY: [signature] DATE: 1/15/26

RECEIVED BY: [signature] JAN 15 '26 20:23 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron
DATE SAMPLED: 15-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Circleville Elementary School
PROJECT ADDRESS: 2000 Route 302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CES-16	8	Roof	Upper Café Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-CES-17	8	Roof	Upper Café Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-CES-18	9	Roof	Lower Café Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-CES-19	9	Roof	Lower Café Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-CES-20	10	Roof	Upper Café Roof	Field Cut Under Gypsum	EPDM-Rubber	
7081-CES-21	10	Roof	Upper Café Roof	Field Cut Under Gypsum	EPDM/Rubber	
7081-CES-22	11	Roof	Lower Café Roof	Field Cut Under Gypsum	Rubber Membrane	
7081-CES-23	11	Roof	Lower Café Roof	Field Cut Under Gypsum	Rubber Membrane	
7081-CES-24	12	Roof	Upper Café Roof	Field Cut Bottom Layer on Metal	Tar	
7081-CES-25	12	Roof	Upper Café Roof	Field Cut Bottom Layer on Metal	Tar	
7081-CES-26	13	Roof	Lower Café Roof	Equipment Cut Under EPDM	Tar	
7081-CES-27	13	Roof	Lower Café Roof	Equipment Cut Under EPDM	Tar	

Comments:

SUBMITTED BY:

DATE: 1/15/26

RECEIVED BY:

JAN 15 '26 20:23
DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-01	7081-CMS-02	7081-CMS-03	7081-CMS-04
Layer Number					
Lab ID Number		3143787	3143788	3143789	3143790
Sample Location		RTH-1 Roof, Field Cut Under EPDM	RTH-1 Roof, Field Cut Under EPDM	Cafe Roof, Field Cut Under ISO	Cafe Roof, Field Cut Under ISO
Sample Description		Gypsum	Gypsum	Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/Green	Gray/Green	Gray/White	Gray/White
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	20.0	25.0	20.0	20.0
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	15.0	15.0
	% Carbonates	30.0	30.0	30.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	30.0	35.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-39	7081-CMS-40
Layer Number			
Lab ID Number		3143791	3143792
Sample Location		Gym Roof, Field Below ISO	Gym Roof, Field Below ISO
Sample Description		Concrete & Tar (Concrete Layer Only, Insufficient Tar)	Concrete & Tar (Concrete Layer Only, Insufficient Tar)
Method of Quantification		Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes
	Homogenous	No	No
	Fibrous	No	No
	Color	Gray/Black	Gray/Black
Sample Treatment		Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND
	% Cellulose	ND	ND
	% Other	ND	ND
	% Unidentified	ND	ND
Non-Fibrous Materials Present	% Silicates	20.0	20.0
	% Carbonates	25.0	25.0
	% Other	ND	ND
	% Unidentified	55.0	55.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-05	7081-CMS-06	7081-CMS-07	7081-CMS-08
Layer Number					
Lab ID Number		3143553	3143554	3143555	3143556
Sample Location		Locker Room Roof, Equipment Cut Under EPDM	Locker Room Roof, Equipment Cut Under EPDM	Gym Roof, Field Cut Under EPDM	Gym Roof, Field Cut Under EPDM
Sample Description		Foam Board Insulation	Foam Board Insulation	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White	Yellow/White	Yellow/Black	Yellow/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	63.1	65.4	96.2	95.7
	% Carbonates	31.3	26.8	1.1	1.2
	% Other Inorganic	5.6	7.8	2.7	3.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-09	7081-CMS-10	7081-CMS-11	7081-CMS-12
Layer Number					
Lab ID Number		3143557	3143558	3143559	3143560
Sample Location		Lower Kitchen Roof, Field Cut Under EPDM	Lower Kitchen Roof, Field Cut Under EPDM	RTH-1 Roof, Field Cut Under Gypsum	RTH-1 Roof, Field Cut Under Gypsum
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Black	Yellow/Black	Yellow/Black	Yellow/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	96.1	96.1	89.6	86.9
	% Carbonates	1.4	2.3	5.2	7.5
	% Other Inorganic	2.5	1.6	5.2	5.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-13	7081-CMS-14	7081-CMS-15	7081-CMS-16
Layer Number					
Lab ID Number		3143561	3143562	3143563	3143564
Sample Location		Cafe Roof, Field Cut Under EPDM	Cafe Roof, Field Cut Under EPDM	Locker Room Roof, Field Cut Under EPDM	Locker Room Roof, Field Cut Under EPDM
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Yellow	Yellow	Yellow/Black	Yellow/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	98.7	99.2	96.4	96.1
	% Carbonates	1.1	0.5	1.1	1.4
	% Other Inorganic	0.2	0.3	2.5	2.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-17	7081-CMS-18	7081-CMS-19	7081-CMS-19
Layer Number				1	2
Lab ID Number		3143565	3143566	3143567	3143567
Sample Location		Gym Roof, Equipment Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM	Lower Kitchen Roof, Equipment Cut Top Layer	Lower Kitchen Roof, Equipment Cut Top Layer
Sample Description		Foam Board Insulation	Foam Board Insulation	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	No
	Homogenous	No	No	No	Yes
	Fibrous	Yes	Yes	Yes	No
	Color	Yellow/White	Yellow/White	White/Gray/Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	62.0	65.8	73.0	91.0
	% Carbonates	31.0	27.1	8.9	5.9
	% Other Inorganic	7.0	7.1	18.1	3.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-20	7081-CMS-20	7081-CMS-21	7081-CMS-22
Layer Number		1	2		
Lab ID Number		3143568	3143568	3143569	3143570
Sample Location		Lower Kitchen Roof, Field Cut Top Layer	Lower Kitchen Roof, Field Cut Top Layer	RTH-1 Roof, Field Cut Top Layer	RTH-1 Roof, Field Cut Top Layer
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	No	Yes	Yes
	Homogenous	No	Yes	No	No
	Fibrous	Yes	No	Yes	Yes
	Color	White/Gray/Black	Brown	Gray/Black/White	Gray/Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	67.0	91.2	69.6	68.2
	% Carbonates	11.6	4.9	11.9	12.1
	% Other Inorganic	21.4	3.9	18.5	19.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-23	7081-CMS-24	7081-CMS-25	7081-CMS-26
Layer Number					
Lab ID Number		3143571	3143572	3143573	3143574
Sample Location		Cafe Roof, Field Cut Top Layer	Cafe Roof, Equipment Cut Top Layer	Locker Room Roof, Field Cut Top Layer	Locker Room Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/Black/White	Gray/Black/White	Black/Gray/White	Black/Gray/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	68.2	68.8	73.2	72.1
	% Carbonates	10.2	10.3	8.1	8.2
	% Other Inorganic	21.6	20.9	18.7	19.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-27	7081-CMS-28	7081-CMS-29	7081-CMS-29
Layer Number				1	2
Lab ID Number		3143575	3143576	3143577	3143577
Sample Location		Gym Roof, Equipment Cut Top Layer	Gym Roof, Field Cut Top Layer	Lower Kitchen Roof, Field Cut Top Layer	Lower Kitchen Roof, Field Cut Top Layer
Sample Description		EPDM	EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	No
	Homogenous	No	No	No	Yes
	Fibrous	Yes	Yes	Yes	No
	Color	Gray/White/Black	Gray/White/Black	Gray/White/Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	67.4	68.1	72.5	91.4
	% Carbonates	11.8	11.3	9.2	7.4
	% Other Inorganic	20.8	20.6	18.3	1.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-30	7081-CMS-30	7081-CMS-31	7081-CMS-31
Layer Number		1	2	1	2
Lab ID Number		3143578	3143578	3143579	3143579
Sample Location		Lower Kitchen Roof, Equipment Cut Top Layer	Lower Kitchen Roof, Equipment Cut Top Layer	RTH-1 Roof, Equipment Cut Under EPDM on Metal	RTH-1 Roof, Equipment Cut Under EPDM on Metal
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer) (Prepped, not Analyzed)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	No	No	No
	Homogenous	No	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	White/Gray/Black	Brown	Black/White	Yellow
Asbestos Content	% Amosite	ND	ND	ND	NA
	% Chrysotile	ND	ND	ND	NA
	% Other	ND	ND	ND	NA
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	NA
Other Materials Present	% Organic	68.2	84.7	74.7	NA
	% Carbonates	11.6	11.0	9.3	NA
	% Other Inorganic	20.2	4.3	16.0	NA

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-32	7081-CMS-32	7081-CMS-33	7081-CMS-33
Layer Number		1	2	1	2
Lab ID Number		3143580	3143580	3143581	3143581
Sample Location		RTH-1 Roof, Equipment Cut Under EPDM on Metal	RTH-1 Roof, Equipment Cut Under EPDM on Metal	Cafe Roof, Equipment Cut Under Vapor Barrier	Cafe Roof, Equipment Cut Under Vapor Barrier
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer) (Prepped, not Analyzed)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer) (Prepped, not Analyzed)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	Black/White	Yellow	Black/White	Gray
Asbestos Content	% Amosite	ND	NA	ND	NA
	% Chrysotile	ND	NA	ND	NA
	% Other	ND	NA	ND	NA
	% Total Asbestos	ND Inconclusive	NA	ND Inconclusive	NA
Other Materials Present	% Organic	76.3	NA	77.0	NA
	% Carbonates	8.0	NA	8.0	NA
	% Other Inorganic	15.7	NA	15.0	NA

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-34	7081-CMS-34	7081-CMS-35	7081-CMS-36
Layer Number		1	2		
Lab ID Number		3143582	3143582	3143583	3143584
Sample Location		Cafe Roof, Equipment Cut Under Vapor Barrier	Cafe Roof, Equipment Cut Under Vapor Barrier	Locker Room Roof, Equipment Cut Under Metal on Wood	Locker Room Roof, Equipment Cut Under Metal on Wood
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer) (Prepped, not Analyzed)	EPDM & Tar (EPDM Only, Insufficient Tar)	EPDM & Tar (EPDM Only, Insufficient Tar)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	No	No
	Color	Black/White	Gray	Black	Black
Asbestos Content	% Amosite	ND	NA	ND	ND
	% Chrysotile	ND	NA	ND	ND
	% Other	ND	NA	ND	ND
	% Total Asbestos	ND Inconclusive	NA	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	76.5	NA	77.4	77.9
	% Carbonates	8.5	NA	1.8	1.1
	% Other Inorganic	15.0	NA	20.8	21.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/15/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab No. 101646-0 (Testing)
NVLAP Lab Code : 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-37	7081-CMS-37	7081-CMS-38	7081-CMS-38
Layer Number		1	2	1	2
Lab ID Number		3143585	3143585	3143586	3143586
Sample Location		Gym Roof, Equipment Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Brown	Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	78.3	95.9	78.4	96.2
	% Carbonates	1.3	2.5	1.7	2.1
	% Other Inorganic	20.4	1.6	19.9	1.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-05	7081-CMS-06	7081-CMS-07	7081-CMS-08
Layer Number					
Lab ID Number		3143553	3143554	3143555	3143556
Sample Location		Locker Room Roof, Equipment Cut Under EPDM	Locker Room Roof, Equipment Cut Under EPDM	Gym Roof, Field Cut Under EPDM	Gym Roof, Field Cut Under EPDM
Sample Description		Foam Board Insulation	Foam Board Insulation	ISO Foam	ISO Foam
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White	Yellow/White	Yellow/Black	Yellow/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	63.1	65.4	96.2	95.7
	% Carbonates	31.3	26.8	1.1	1.2
	% Other Inorganic	5.6	7.8	2.7	3.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-09	7081-CMS-10	7081-CMS-11	7081-CMS-12
Layer Number					
Lab ID Number		3143557	3143558	3143559	3143560
Sample Location		Lower Kitchen Roof, Field Cut Under EPDM	Lower Kitchen Roof, Field Cut Under EPDM	RTH-1 Roof, Field Cut Under Gypsum	RTH-1 Roof, Field Cut Under Gypsum
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Black	Yellow/Black	Yellow/Black	Yellow/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	96.1	96.1	89.6	86.9
	% Carbonates	1.4	2.3	5.2	7.5
	% Other Inorganic	2.5	1.6	5.2	5.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-15	7081-CMS-16	7081-CMS-17	7081-CMS-18
Layer Number					
Lab ID Number		3143563	3143564	3143565	3143566
Sample Location		Locker Room Roof, Field Cut Under EPDM	Locker Room Roof, Field Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM
Sample Description		ISO Foam	ISO Foam	Foam Board Insulation	Foam Board Insulation
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Black	Yellow/Black	Yellow/White	Yellow/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	96.4	96.1	62.0	65.8
	% Carbonates	1.1	1.4	31.0	27.1
	% Other Inorganic	2.5	2.5	7.0	7.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-19	7081-CMS-19	7081-CMS-20	7081-CMS-20
Layer Number		1	2	1	2
Lab ID Number		3143567	3143567	3143568	3143568
Sample Location		Lower Kitchen Roof, Equipment Cut Top Layer	Lower Kitchen Roof, Equipment Cut Top Layer	Lower Kitchen Roof, Field Cut Top Layer	Lower Kitchen Roof, Field Cut Top Layer
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	Yes	No	Yes	No
	Color	White/Gray/Black	Brown	White/Gray/Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	73.0	91.0	67.0	91.2
	% Carbonates	8.9	5.9	11.6	4.9
	% Other Inorganic	18.1	3.1	21.4	3.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-21	7081-CMS-22	7081-CMS-23	7081-CMS-24
Layer Number					
Lab ID Number		3143569	3143570	3143571	3143572
Sample Location		RTH-1 Roof, Field Cut Top Layer	RTH-1 Roof, Field Cut Top Layer	Cafe Roof, Field Cut Top Layer	Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/Black/White	Gray/Black/White	Gray/Black/White	Gray/Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	69.6	68.2	68.2	68.8
	% Carbonates	11.9	12.1	10.2	10.3
	% Other Inorganic	18.5	19.7	21.6	20.9

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CMS-25	7081-CMS-26	7081-CMS-27	7081-CMS-28
Layer Number					
Lab ID Number		3143573	3143574	3143575	3143576
Sample Location		Locker Room Roof, Field Cut Top Layer	Locker Room Roof, Equipment Cut Top Layer	Gym Roof, Equipment Cut Top Layer	Gym Roof, Field Cut Top Layer
Sample Description		EPDM	EPDM	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/Gray/White	Black/Gray/White	Gray/White/Black	Gray/White/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	73.2	72.1	67.4	68.1
	% Carbonates	8.1	8.2	11.8	11.3
	% Other Inorganic	18.7	19.7	20.8	20.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-29	7081-CMS-29	7081-CMS-30	7081-CMS-30
Layer Number		1	2	1	2
Lab ID Number		3143577	3143577	3143578	3143578
Sample Location		Lower Kitchen Roof, Field Cut Top Layer	Lower Kitchen Roof, Field Cut Top Layer	Lower Kitchen Roof, Equipment Cut Top Layer	Lower Kitchen Roof, Equipment Cut Top Layer
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	Yes	No	Yes	No
	Color	Gray/White/Black	Brown	White/Gray/Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	72.5	91.4	68.2	84.7
	% Carbonates	9.2	7.4	11.6	11.0
	% Other Inorganic	18.3	1.2	20.2	4.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-31	7081-CMS-32	7081-CMS-33	7081-CMS-34
Layer Number		1	1	1	1
Lab ID Number		3143579	3143580	3143581	3143582
Sample Location		RTH-1 Roof, Equipment Cut Under EPDM on Metal	RTH-1 Roof, Equipment Cut Under EPDM on Metal	Cafe Roof, Equipment Cut Under Vapor Barrier	Cafe Roof, Equipment Cut Under Vapor Barrier
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/White	Black/White	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	74.7	76.3	77.0	76.5
	% Carbonates	9.3	8.0	8.0	8.5
	% Other Inorganic	16.0	15.7	15.0	15.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-35	7081-CMS-36	7081-CMS-37	7081-CMS-37
Layer Number				1	2
Lab ID Number		3143583	3143584	3143585	3143585
Sample Location		Locker Room Roof, Equipment Cut Under Metal on Wood	Locker Room Roof, Equipment Cut Under Metal on Wood	Gym Roof, Equipment Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM
Sample Description		EPDM & Tar (EPDM Only, Insufficient Tar)	EPDM & Tar (EPDM Only, Insufficient Tar)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	77.4	77.9	78.3	95.9
	% Carbonates	1.8	1.1	1.3	2.5
	% Other Inorganic	20.8	21.0	20.4	1.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Crispell MS - 77 Maple Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CMS-38	7081-CMS-38
Layer Number		1	2
Lab ID Number		3143586	3143586
Sample Location		Gym Roof, Equipment Cut Under EPDM	Gym Roof, Equipment Cut Under EPDM
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Black	Brown
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Materials Present	% Organic	78.4	96.2
	% Carbonates	1.7	2.1
	% Other Inorganic	19.9	1.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CVMS-01	7081-CVMS-02
Layer Number			
Lab ID Number		3144220	3144221
Sample Location		Gym Roof, Field Cut Under ISO	Gym Roof, Field Cut Under ISO
Sample Description		Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes
	Homogenous	No	No
	Fibrous	Yes	Yes
	Color	Gray/Brown	Gray/Brown
Sample Treatment		Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	10.0	10.0
	% Cellulose	20.0	15.0
	% Other	ND	ND
	% Unidentified	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0
	% Carbonates	25.0	25.0
	% Other	ND	ND
	% Unidentified	30.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-03	7081-CVMS-04	7081-CVMS-05	7081-CVMS-06
Layer Number					
Lab ID Number		3143733	3143734	3143735	3143736
Sample Location		Auditorium Roof, Field Cut Under EPDM	Gym Roof, Field Cut Under EPDM	Girls Locker Room Roof, Field Cut Under EPDM	Girls Locker Room Roof, Field Cut Under EPDM
Sample Description		Foam Board	Foam Board	Foam Board	Foam Board
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Gray	Yellow/Gray	Yellow/Gray	Yellow/Gray
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	67.1	71.0	70.7	72.5
	% Carbonates	30.7	27.2	27.6	25.1
	% Other Inorganic	2.2	1.8	1.7	2.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-07	7081-CVMS-08	7081-CVMS-09	7081-CVMS-10
Layer Number					1
Lab ID Number		3143737	3143738	3143739	3143740
Sample Location		Auditorium Roof, Field Cut Under Foam Board	Gym Roof, Field Cut Under Foam Board	Gym Roof, Field Cut Under Foam Board	Auditorium Roof, Equipment Cut
Sample Description		ISO Foam	ISO Foam	ISO Foam	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	Yes	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	Yellow	Yellow/Black	Yellow/Black	Black/Gray/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	99.3	94.8	97.3	71.0
	% Carbonates	0.5	1.1	1.4	8.9
	% Other Inorganic	0.2	4.1	1.3	20.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

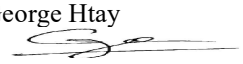
Sample ID Number		7081-CVMS-10	7081-CVMS-11	7081-CVMS-11	7081-CVMS-12
Layer Number		2	1	2	
Lab ID Number		3143740	3143741	3143741	3143742
Sample Location		Auditorium Roof, Equipment Cut	Gym Roof, Equipment Cut	Gym Roof, Equipment Cut	Gym Roof, Field Cut
Sample Description		EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	Yes	No	Yes
	Homogenous	Yes	No	Yes	No
	Fibrous	No	Yes	No	Yes
	Color	Yellow	Black/Gray/White	Yellow	Gray/White/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND Inconclusive	ND	ND Inconclusive
Other Materials Present	% Organic	95.7	71.0	94.6	66.5
	% Carbonates	4.1	8.2	4.6	13.5
	% Other Inorganic	0.2	20.8	0.8	20.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature : 
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

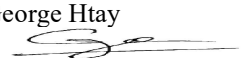
Sample ID Number		7081-CVMS-13	7081-CVMS-14	7081-CVMS-14	7081-CVMS-15
Layer Number			1	2	1
Lab ID Number		3143743	3143744	3143744	3143745
Sample Location		Auditorium Roof, Field Cut	Boys Locker Room Roof, Equipment Cut	Boys Locker Room Roof, Equipment Cut	Boys Locker Room Roof, Equipment Cut
Sample Description		EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	Yes
	Homogenous	No	No	Yes	No
	Fibrous	Yes	Yes	No	Yes
	Color	Gray/White/Black	Black/Gray/White	Yellow	Black/Gray/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND	ND Inconclusive
Other Materials Present	% Organic	65.9	70.5	94.9	69.3
	% Carbonates	15.6	8.6	4.4	10.7
	% Other Inorganic	18.5	20.9	0.7	20.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature : 
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-15	7081-CVMS-16	7081-CVMS-17	7081-CVMS-18
Layer Number		2			
Lab ID Number		3143745	3143746	3143747	3143748
Sample Location		Boys Locker Room Roof, Equipment Cut	Girls Locker Room Roof, Field Cut	Girls Locker Room Roof, Field Cut	Auditorium Roof, Equipment Cut Under EPDM on Metal
Sample Description		EPDM & Adhesive (Adhesive Layer)	EPDM	EPDM	Tar
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	Yes	Yes	No
	Homogenous	Yes	No	No	Yes
	Fibrous	No	Yes	Yes	Yes
	Color	Yellow	White/Gray/Black	White/Gray/Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	93.2	66.0	66.2	83.9
	% Carbonates	6.2	15.2	11.8	2.6
	% Other Inorganic	0.6	18.8	22.0	13.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-19	7081-CVMS-20	7081-CVMS-21
Layer Number				
Lab ID Number		3143749	3143750	3143751
Sample Location		Gym Roof, Equipment Cut Under EPDM on Metal	Girls Locker Room Roof, Equipment Cut Under EPDM on Metal	Girls Locker Room Roof, Equipment Cut Under EPDM on Metal
Sample Description		Tar	Tar	Tar
Analytical Method		NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No
	Homogenous	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes
	Color	Black	Black	Black
Asbestos Content	% Amosite	ND	ND	ND
	% Chrysotile	< 0.1	ND	ND
	% Other	ND	ND	ND
	% Total Asbestos	< 0.1 Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	88.1	75.3	76.2
	% Carbonates	4.9	3.2	4.4
	% Other Inorganic	7.0	21.5	19.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-03	7081-CVMS-04	7081-CVMS-05	7081-CVMS-06
Layer Number					
Lab ID Number		3143733	3143734	3143735	3143736
Sample Location		Auditorium Roof, Field Cut Under EPDM	Gym Roof, Field Cut Under EPDM	Girls Locker Room Roof, Field Cut Under EPDM	Girls Locker Room Roof, Field Cut Under EPDM
Sample Description		Foam Board	Foam Board	Foam Board	Foam Board
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Gray	Yellow/Gray	Yellow/Gray	Yellow/Gray
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	67.1	71.0	70.7	72.5
	% Carbonates	30.7	27.2	27.6	25.1
	% Other Inorganic	2.2	1.8	1.7	2.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-08	7081-CVMS-09	7081-CVMS-10	7081-CVMS-11
Layer Number				1	1
Lab ID Number		3143738	3143739	3143740	3143741
Sample Location		Gym Roof, Field Cut Under Foam Board	Gym Roof, Field Cut Under Foam Board	Auditorium Roof, Equipment Cut	Gym Roof, Equipment Cut
Sample Description		ISO Foam	ISO Foam	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Black	Yellow/Black	Black/Gray/White	Black/Gray/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	94.8	97.3	71.0	71.0
	% Carbonates	1.1	1.4	8.9	8.2
	% Other Inorganic	4.1	1.3	20.1	20.8

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-12	7081-CVMS-13	7081-CVMS-14	7081-CVMS-15
Layer Number				1	1
Lab ID Number		3143742	3143743	3143744	3143745
Sample Location		Gym Roof, Field Cut	Auditorium Roof, Field Cut	Boys Locker Room Roof, Equipment Cut	Boys Locker Room Roof, Equipment Cut
Sample Description		EPDM	EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (EPDM Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/White/Black	Gray/White/Black	Black/Gray/White	Black/Gray/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	66.5	65.9	70.5	69.3
	% Carbonates	13.5	15.6	8.6	10.7
	% Other Inorganic	20.0	18.5	20.9	20.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-CVMS-16	7081-CVMS-17	7081-CVMS-18	7081-CVMS-19
Layer Number					
Lab ID Number		3143746	3143747	3143748	3143749
Sample Location		Girls Locker Room Roof, Field Cut	Girls Locker Room Roof, Field Cut	Auditorium Roof, Equipment Cut Under EPDM on Metal	Gym Roof, Equipment Cut Under EPDM on Metal
Sample Description		EPDM	EPDM	Tar	Tar
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	White/Gray/Black	White/Gray/Black	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	< 0.1
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	< 0.1
Other Materials Present	% Organic	66.0	66.2	83.9	88.1
	% Carbonates	15.2	11.8	2.6	4.9
	% Other Inorganic	18.8	22.0	13.5	7.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Circleville MS - 1951 Route 302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-CVMS-20	7081-CVMS-21
Layer Number			
Lab ID Number		3143750	3143751
Sample Location		Girls Locker Room Roof, Equipment Cut Under EPDM on Metal	Girls Locker Room Roof, Equipment Cut Under EPDM on Metal
Sample Description		Tar	Tar
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	Yes	Yes
	Color	Black	Black
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	< 0.2
	% Other	ND	ND
	% Total Asbestos	ND	< 0.2
Other Materials Present	% Organic	75.3	76.2
	% Carbonates	3.2	4.4
	% Other Inorganic	21.5	19.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron
DATE SAMPLED: 15-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Circleville Middle School
PROJECT ADDRESS: 1951 Route 302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CVMS-01	1	Roof	Gym Roof	Field Cut Under ISO	Gypsum	3144220
7081-CVMS-02	1	Roof	Gym Roof	Field Cut Under ISO	Gypsum	3144221
7081-CVMS-03	2	Roof	Auditorium Roof	Field Cut Under EPDM	Foam Board	
7081-CVMS-04	2	Roof	Gym Roof	Field Cut Under EPDM	Foam Board	
7081-CVMS-05	3	Roof	Girls Locker Room Roof	Field Cut Under EPDM	Foam Board	
7081-CVMS-06	3	Roof	Girls Locker Room Roof	Field Cut Under EPDM	Foam Board	
7081-CVMS-07	4	Roof	Auditorium Roof	Field Cut Under Foam Board	ISO Foam	
7081-CVMS-08	4	Roof	Gym Roof	Field Cut Under Foam Board	ISO Foam	
7081-CVMS-09	4	Roof	Gym Roof	Field Cut Under Foam Board	ISO Foam	
7081-CVMS-10	5	Roof	Auditorium Roof	Equipment Cut	EPDM + Adhesive	
7081-CVMS-11	5	Roof	Gym Roof	Equipment Cut	EPDM + Adhesive	
7081-CVMS-12	6	Roof	Gym Roof	Field Cut	EPDM	
7081-CVMS-13	6	Roof	Auditorium Roof	Field Cut	EPDM	
7081-CVMS-14	7	Roof	Boys Locker Room Roof	Equipment Cut	EPDM + Adhesive	
7081-CVMS-15	7	Roof	Boys Locker Room Roof	Equipment Cut	EPDM + Adhesive	

ACCEPTANCE OF PAPERWORK
MP 01/19/2026

Comments:

SUBMITTED BY:

DATE: 1/15/26

RECEIVED BY: MD Warner

JAN 15 '26 20:23
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron
DATE SAMPLED: 15-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM
TURN-AROUND TIME: 5-DAY

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Circleville Middle School
PROJECT ADDRESS: 1951 Route 302
Circleville, NY 10919

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-CVMS-16	8	Roof	Girls Locker Room Roof	Field Cut	EPDM	
7081-CVMS-17	8	Roof	Girls Locker Room Roof	Field Cut	EPDM	
7081-CVMS-18	9	Roof	Auditorium Roof	Equipment Cut Under EPDM on Metal	Tar	
7081-CVMS-19	9	Roof	Gym Roof	Equipment Cut Under EPDM on Metal	Tar	
7081-CVMS-20	10	Roof	Girls Locker Room Roof	Equipment Cut Under EPDM on Metal	Tar	
7081-CVMS-21	10	Roof	Girls Locker Room Roof	Equipment Cut Under EPDM on Metal	Tar	

Comments:

SUBMITTED BY:

DATE: 1/15/26

RECEIVED BY: MD Warner

JAN 15 '26 20:23
DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - EJ Russell ES - 78 Holland Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-EJRES-01	7081-EJRES-02	7081-EJRES-03	7081-EJRES-04
Layer Number					
Lab ID Number		3143793	3143794	3143795	3143796
Sample Location		Cafe Roof, Field Cut Under EPDM	Cafe Roof, Field Cut Under EPDM	Gym Roof, Euipment Cut Under EPDM	Gym Roof, Field Cut Under EPDM
Sample Description		Gypsum	Gypsum	Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	White	White	White	White
Sample Treatment		None	None	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	10.0	15.0	10.0	10.0
	% Cellulose	ND	ND	5.0	5.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	20.0	20.0	15.0	20.0
	% Carbonates	30.0	30.0	30.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	35.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - EJ Russell ES - 78 Holland Avenue - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-WJRES-15	7081-WJRES-16	7081-WJRES-17	7081-WJRES-18
Layer Number					
Lab ID Number		3143797	3143798	3143799	3143800
Sample Location		Cafe Roof, Field Cut Under ISO	Cafe Roof, Field Cut Under ISO	Gym Roof, Field Cut Under ISO	Gym Roof, Field Cut Under ISO
Sample Description		Tectum	Tectum	Tectum	Tectum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown/Gray	Brown/Gray	Brown/Gray	Brown/Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	40.0	35.0	30.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	20.0	20.0	15.0
	% Carbonates	15.0	15.0	20.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	30.0	30.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - EJ Russell ES - 78 Holland Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-EJRES-05	7081-EJRES-06	7081-EJRES-07	7081-EJRES-08
Layer Number					
Lab ID Number		3143587	3143588	3143589	3143590
Sample Location		Cafe Roof, Field Cut Under Gypsum	Cafe Roof, Field Cut Under Gypsum	Gym Roof, Equipment Cut Under Gypsum	Gym Roof, Field Cut Under Gypsum
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Yellow	Yellow	Yellow	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND	ND Inconclusive
Other Materials Present	% Organic	80.0	86.3	97.8	94.6
	% Carbonates	4.1	2.2	1.9	4.1
	% Other Inorganic	15.9	11.5	0.3	1.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - EJ Russell ES - 78 Holland Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-EJRES-09	7081-EJRES-10	7081-EJRES-11	7081-EJRES-12
Layer Number					
Lab ID Number		3143591	3143592	3143593	3143594
Sample Location		Cafe Roof, Equipment Cut Under EPDM on Wood	Cafe Roof, Equipment Cut Under EPDM on Wood	Cafe Roof, Equipment Cut Top Layer	Cafe Roof, Field Cut Top Layer
Sample Description		Tar	Tar	EPDM & Adhesive (Insufficient Adhesive)	EPDM & Adhesive (Insufficient Adhesive)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	No	No
	Color	Black	Black	Black/Brown	Black/Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	5.0	3.0	< 0.1	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	5.0	3.0	< 0.1 Inconclusive	ND Inconclusive
Other Materials Present	% Organic	63.6	61.6	93.1	93.8
	% Carbonates	4.0	21.3	2.3	0.8
	% Other Inorganic	27.4	14.1	4.6	5.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - EJ Russell ES - 78 Holland Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-EJRES-13	7081-EJRES-14
Layer Number			
Lab ID Number		3143595	3143596
Sample Location		Gym Roof, Field Cut Top Layer	Gym Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes
	Homogenous	No	No
	Fibrous	Yes	Yes
	Color	Gray/Black	Gray/Black
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	71.6	69.7
	% Carbonates	11.5	12.1
	% Other Inorganic	16.9	18.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - EJ Russell ES - 78 Holland Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-EJRES-05	7081-EJRES-06	7081-EJRES-08	7081-EJRES-11
Layer Number					
Lab ID Number		3143587	3143588	3143590	3143593
Sample Location		Cafe Roof, Field Cut Under Gypsum	Cafe Roof, Field Cut Under Gypsum	Gym Roof, Field Cut Under Gypsum	Cafe Roof, Equipment Cut Top Layer
Sample Description		ISO Foam	ISO Foam	ISO Foam	EPDM & Adhesive (Insufficient Adhesive)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	Yes
	Homogenous	Yes	Yes	Yes	No
	Fibrous	No	No	No	No
	Color	Yellow	Yellow	Yellow	Black/Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	80.0	86.3	94.6	93.1
	% Carbonates	4.1	2.2	4.1	2.3
	% Other Inorganic	15.9	11.5	1.3	4.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - EJ Russell ES - 78 Holland Avenue - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-EJRES-12	7081-EJRES-13	7081-EJRES-14
Layer Number				
Lab ID Number		3143594	3143595	3143596
Sample Location		Cafe Roof, Field Cut Top Layer	Gym Roof, Field Cut Top Layer	Gym Roof, Equipment Cut Top Layer
Sample Description		EPDM & Adhesive (Insufficient Adhesive)	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes
	Homogenous	No	No	No
	Fibrous	No	Yes	Yes
	Color	Black/Brown	Gray/Black	Gray/Black
Asbestos Content	% Amosite	ND	ND	ND
	% Chrysotile	ND	ND	< 0.2
	% Other	ND	ND	ND
	% Total Asbestos	ND	ND	< 0.2
Other Materials Present	% Organic	93.8	71.6	69.7
	% Carbonates	0.8	11.5	12.1
	% Other Inorganic	5.4	16.9	18.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron, D. Stamper
DATE SAMPLED: 13-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: E J Russell Elementary School
PROJECT ADDRESS: 78 Holland Ave.
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-EJRES-01	1	Roof	Café Roof	Field Cut Under EPDM	Gypsum	3143793
7081-EJRES-02	1	Roof	Café Roof	Field Cut Under EPDM	Gypsum	3143794
7081-EJRES-03	2	Roof	Gym Roof	Equipment Cut Under EPDM	Gypsum	3143795
7081-EJRES-04	2	Roof	Gym Roof	Field Cut Under EPDM	Gypsum	3143796
7081-EJRES-05	3	Roof	Café Roof	Field Cut Under Gypsum	ISO Foam	
7081-EJRES-06	3	Roof	Café Roof	Field Cut Under Gypsum	ISO Foam	
7081-EJRES-07	4	Roof	Gym Roof	Equipment Cut Under Gypsum	ISO Foam	
7081-EJRES-08	4	Roof	Gym Roof	Field Cut Under Gypsum	ISO Foam	
7081-EJRES-09	5	Roof	Café Roof	Equipment Cut Under EPDM on Wood	Tar	
7081-EJRES-10	5	Roof	Café Roof	Equipment Cut Under EPDM on Wood	Tar	
7081-EJRES-11	6	Roof	Café Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-EJRES-12	6	Roof	Café Roof	Field Cut Top Layer	EPDM + Adhesive	
7081-EJRES-13	7	Roof	Gym Roof	Field Cut Top Layer	EPDM	
7081-EJRES-14	7	Roof	Gym Roof	Equipment Cut Top Layer	EPDM	
7081-EJRES-15	8	Roof	Café Roof	Field Cut Under ISO	Techdem	3143797

Comments:

SUBMITTED BY:

DATE: 1/14/26

RECEIVED BY:

JAN 14 '26 20:17
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron, D. Stamper
DATE SAMPLED: 13-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: E J Russell Elementary School
PROJECT ADDRESS: 78 Holland Ave.
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-EJRES-16	8	Roof	Café Roof	Field Cut Under ISO	Techdem	3143798
7081-EJRES-17	9	Roof	Gym Roof	Field Cut under ISO	Techdem	3143799
7081-EJRES-18	9	Roof	Gym Roof	Field Cut under ISO	Techdem	3143800

Comments:

SUBMITTED BY:

DATE: 1/14/26

RECEIVED BY:

JAN 14 '26 20:17
DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PAK-01	7081-PAK-02	7081-PAK-03	7081-PAK-04
Layer Number					
Lab ID Number		3144222	3144223	3144224	3144225
Sample Location		Gym Roof, Field Cut Under EPDM	Gym Roof, Field Cut Under EPDM	Lower Cafe Roof, Field Cut Under ISO	Upper Cafe Roof, Field Cut Under ISO
Sample Description		Gypsum	Gypsum	Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	No
	Homogenous	No	No	No	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray	Gray	Gray/Brown	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	15.0	20.0	10.0	10.0
	% Cellulose	5.0	5.0	20.0	5.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	15.0	15.0
	% Carbonates	30.0	30.0	25.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	30.0	30.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Client: QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PAK-13	7081-PAK-14	7081-PAK-15
Layer Number				
Lab ID Number		3144226	3144227	3144228
Sample Location		Gym Roof, Field Cut Under Gypsum on Metal	Gym Roof, Field Cut Under Gypsum on Metal	Gym Roof, Field Cut Under Gypsum on Metal
Sample Description		Insulation	Insulation	Insulation
Method of Quantification		Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	No
	Homogenous	No	No	No
	Fibrous	Yes	Yes	Yes
	Color	Yellow/White	Yellow/White	Yellow/White
Sample Treatment		Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND
	% Chrysotile	ND	ND	ND
	% Other	ND	ND	ND
	% Total Asbestos	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	60.0	65.0	60.0
	% Cellulose	5.0	5.0	5.0
	% Other	ND	ND	ND
	% Unidentified	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	5.0
	% Carbonates	10.0	5.0	10.0
	% Other	ND	ND	ND
	% Unidentified	20.0	20.0	20.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

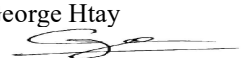
Sample ID Number		7081-PAK-05	7081-PAK-06	7081-PAK-07	7081-PAK-08
Layer Number					
Lab ID Number		3143887	3143888	3143889	3143890
Sample Location		Lower Cafe Roof, Field Cut Under Gypsum on Metal	Lower Cafe Roof, Field Cut Under Gypsum on Metal	Gym Roof, Field Cut Under ISO	Gym Roof, Field Cut Under Gypsum
Sample Description		Tar Paper	Tar Paper	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Black/Gray	Black/Gray	Yellow	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	13.5	12.8	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	13.5	12.8	ND	ND
Other Materials Present	% Organic	57.0	53.9	97.0	98.6
	% Carbonates	5.8	7.7	2.9	1.0
	% Other Inorganic	23.7	25.6	0.1	0.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature : 
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Sample ID Number		7081-PAK-09	7081-PAK-10	7081-PAK-11	7081-PAK-12
Layer Number					
Lab ID Number		3143891	3143892	3143893	3143894
Sample Location		Gym Roof, Field Cut Under ISO	Lower Cafe Roof, Field Cut Under Foam Board	Upper Cafe Roof, Field Cut Under Foam Board	Lower Cafe Roof, Field Cut Under Foam Board
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Yellow	Yellow	Yellow	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	98.4	99.4	99.8	99.7
	% Carbonates	1.3	0.5	0.1	0.1
	% Other Inorganic	0.3	0.1	0.1	0.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Sample ID Number		7081-PAK-16	7081-PAK-17	7081-PAK-18	7081-PAK-19
Layer Number					
Lab ID Number		3143895	3143896	3143897	3143898
Sample Location		Lower Cafe Roof, Field Cut Under EPDM	Upper Cafe Roof, Field Cut Under EPDM	Gym Roof, Field Cut Top Layer	Gym Roof, Field Cut Top Layer
Sample Description		Foam Board	Foam Board	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Gray	Yellow/Gray	Black/Gray/ White/Blue	Black/Gray/ White/Blue
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	64.5	65.5	71.2	69.9
	% Carbonates	31.4	30.8	12.0	13.9
	% Other Inorganic	4.1	3.7	16.8	16.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Sample ID Number		7081-PAK-20	7081-PAK-21	7081-PAK-22	7081-PAK-22
Layer Number				1	2
Lab ID Number		3143899	3143900	3143901	3143901
Sample Location		Upper Cafe Roof, Field Cut Top Layer	Lower Cafe Roof, Field Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	No
	Color	Black/Gray/White	Black/Gray/White	Black/Gray/White	Black/Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	73.4	70.9	74.9	90.3
	% Carbonates	8.1	10.6	6.5	7.1
	% Other Inorganic	18.5	18.5	18.6	2.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/20/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Sample ID Number		7081-PAK-23	7081-PAK-23	7081-PAK-24	7081-PAK-25
Layer Number		1	2		
Lab ID Number		3143902	3143902	3143903	3143904
Sample Location		Lower Cafe Roof, Equipment Cut Top Laye	Lower Cafe Roof, Equipment Cut Top Laye	Upper Cafe Roof, Equipment Cut Under EPDM	Lower Cafe Roof, Equipment Cut Under EPDM
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	Tar	Tar
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	No	No	No
	Color	Black/Gray/White	Black/Yellow	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	< 0.1
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND	< 0.1
Other Materials Present	% Organic	75.3	90.8	99.5	98.7
	% Carbonates	7.6	7.5	0.2	1.2
	% Other Inorganic	17.1	1.7	0.3	0.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PAK-16	7081-PAK-17	7081-PAK-18	7081-PAK-19
Layer Number					
Lab ID Number		3143895	3143896	3143897	3143898
Sample Location		Lower Cafe Roof, Field Cut Under EPDM	Upper Cafe Roof, Field Cut Under EPDM	Gym Roof, Field Cut Top Layer	Gym Roof, Field Cut Top Layer
Sample Description		Foam Board	Foam Board	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Gray	Yellow/Gray	Black/Gray/ White/Blue	Black/Gray/ White/Blue
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	64.5	65.5	71.2	69.9
	% Carbonates	31.4	30.8	12.0	13.9
	% Other Inorganic	4.1	3.7	16.8	16.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PAK-20	7081-PAK-21	7081-PAK-22	7081-PAK-22
Layer Number				1	2
Lab ID Number		3143899	3143900	3143901	3143901
Sample Location		Upper Cafe Roof, Field Cut Top Layer	Lower Cafe Roof, Field Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer	Upper Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	No
	Color	Black/Gray/White	Black/Gray/White	Black/Gray/White	Black/Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	73.4	70.9	74.9	90.3
	% Carbonates	8.1	10.6	6.5	7.1
	% Other Inorganic	18.5	18.5	18.6	2.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pakanasink ES - 1053 Route 302 - Circleville, NY

Client QuES&T, Inc.
1376 Route 9
30Wappingers Falls, NY 12590

Date Collected : 01/15/2026
Collected By : D. Perron
Date Received : 01/15/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PAK-23	7081-PAK-23
Layer Number		1	2
Lab ID Number		3143902	3143902
Sample Location		Lower Cafe Roof, Equipment Cut Top Laye	Lower Cafe Roof, Equipment Cut Top Laye
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes
	Homogenous	No	No
	Fibrous	Yes	No
	Color	Black/Gray/White	Black/Yellow
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Materials Present	% Organic	75.3	90.8
	% Carbonates	7.6	7.5
	% Other Inorganic	17.1	1.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT #: 25-7081
SAMPLED BY: D. Perron
DATE SAMPLED: 15-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Pakanasink Elementary School
PROJECT ADDRESS: 1053 Route 302
Circleville, NY 10919

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PAK-01	1	Roof	Gym Roof	Field Cut Under EPDM	Gypsum	3144222
7081-PAK-02	1	Roof	Gym Roof	Field Cut Under EPDM	Gypsum	3144223
7081-PAK-03	2	Roof	Lower Café Roof	Field Cut Under ISO	Gypsum	3144224
7081-PAK-04	2	Roof	Upper Café Roof	Field Cut Under ISO	Gypsum	3144225
7081-PAK-05	3	Roof	Lower Café Roof	Field Cut Under Gypsum on Metal	Tar Paper	
7081-PAK-06	3	Roof	Upper Café Roof	Field Cut Under Gypsum on Metal	Tar Paper	
7081-PAK-07	4	Roof	Gym Roof	Field Cut Under ISO	ISO Foam	
7081-PAK-08	4	Roof	Gym Roof	Field Cut Under Gypsum	ISO Foam	
7081-PAK-09	4	Roof	Gym Roof	Field Cut Under ISO	ISO Foam	
7081-PAK-10	5	Roof	Lower Café Roof	Field Cut Under Foam Board	ISO Foam	
7081-PAK-11	5	Roof	Upper Café Roof	Field Cut Under Foam Board	ISO Foam	
7081-PAK-12	5	Roof	Lower Café Roof	Field Cut Under Foam Board	ISO Foam	
7081-PAK-13	6	Roof	Gym Roof	Field Cut Under Gypsum on Metal	Insulation	3144226
7081-PAK-14	6	Roof	Gym Roof	Field Cut Under Gypsum on Metal	Insulation	3144227
7081-PAK-15	6	Roof	Gym Roof	Field Cut Under Gypsum on Metal	Insulation	3144228

[illegible] PAPERWORK
[illegible] MP, 01/19/2026

Comments:
SUBMITTED BY:
DATE: 1/15/26
RECEIVED BY: MD Warner
JAN 15 '26 20:23
DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron
DATE SAMPLED: 15-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM
TURN-AROUND TIME: 5-DAY

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Pakanasink Elementary School
PROJECT ADDRESS: 1053 Route 302
Circleville, NY 10919

Sample	IIM#	Floor	Space Name/ID #	Location	Material	Results
7081-PAK-16	7	Roof	Lower Café Roof	Field Cut under EPDM	Foamboard	
7081-PAK-17	7	Roof	Upper Café Roof	Field Cut Under EPDM	Foamboard	
7081-PAK-18	8	Roof	Gym Roof	Field Cut Top Layer	EPDM	
7081-PAK-19	8	Roof	Gym Roof	Field Cut Top Layer	EPDM	
7081-PAK-20	9	Roof	Upper Café Roof	Field Cut Top Layer	EPDM	
7081-PAK-21	9	Roof	Lower Café Roof	Field Cut Top Layer	EPDM	
7081-PAK-22	10	Roof	Upper Café Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-PAK-23	10	Roof	Lower Café Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-PAK-24	11	Roof	Upper Café Roof	Equipment Cut Under EPDM	Tar	
7081-PAK-25	11	Roof	Lower Café Roof	Equipment Cut Under EPDM	Tar	

Comments:

SUBMITTED BY:

DATE: 1/15/26

RECEIVED BY: M DWARNER

JAN 15 '26 20:23
DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/19/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PEBS-01	7081-PEBS-02	7081-PEBS-03	7081-PEBS-04
Layer Number					
Lab ID Number		3143955	3143956	3143957	3143958
Sample Location		Upper Roof, Field Cut Under EPDM	Upper Roof, Field Cut Under EPDM	Cafe Lower Roof, Field Cut Under EPDM	Cafe Lower Roof, Field Cut Under EPDM
Sample Description		Gypsum	Gypsum	Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	White/Gray	White/Gray	White	White
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	15.0	15.0	20.0	25.0
	% Cellulose	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	15.0	15.0
	% Carbonates	30.0	35.0	30.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	40.0	35.0	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/19/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PEBS-05	7081-PEBS-06
Layer Number			
Lab ID Number		3143959	3143960
Sample Location		Cafe Roof, Field Cut Under EPDM	Cafe Roof, Field Cut Under EPDM
Sample Description		Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes
	Homogenous	No	No
	Fibrous	Yes	Yes
	Color	White/Gray	White/Gray
Sample Treatment		Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	20.0	20.0
	% Cellulose	ND	ND
	% Other	ND	ND
	% Unidentified	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0
	% Carbonates	30.0	30.0
	% Other	ND	ND
	% Unidentified	35.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-07	7081-PBES-08	7081-PBES-09	7081-PBES-10
Layer Number					
Lab ID Number		3143597	3143598	3143599	3143600
Sample Location		Upper Roof, Field Cut under Gypsum	Upper Roof, Field Cut under Gypsum	Cafe Lower Roof, Field Cut under Gypsum	Cafe Lower Roof, Field Cut under Gypsum
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Yellow	Yellow	Yellow	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	99.6	99.6	87.6	92.8
	% Carbonates	ND	ND	9.9	5.6
	% Other Inorganic	0.4	0.4	2.5	1.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

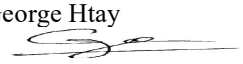
Sample ID Number		7081-PBES-11	7081-PBES-12	7081-PBES-13	7081-PBES-14
Layer Number					
Lab ID Number		3143601	3143602	3143603	3143604
Sample Location		Cafe Roof, Field Cut under Gypsum	Cafe Roof, Field Cut under Gypsum	Upper Roof, Field Cut Top Layer	Upper Roof, Field Cut Top Layer
Sample Description		ISO Foam	ISO Foam	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Yellow	Yellow	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	97.2	99.4	75.4	76.4
	% Carbonates	1.8	ND	2.9	2.9
	% Other Inorganic	1.0	0.6	21.7	20.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature : 
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-15	7081-PBES-15	7081-PBES-16	7081-PBES-16
Layer Number		1	2	1	2
Lab ID Number		3143605	3143605	3143606	3143606
Sample Location		Upper Roof, Equipment Cut Top Layer	Upper Roof, Equipment Cut Top Layer	Upper Roof, Equipment Cut Top Layer	Upper Roof, Equipment Cut Top Layer
Sample Description		EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Insufficient Mastic)	EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Insufficient Mastic)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	Black/White	Yellow	Black/White	Yellow
Asbestos Content	% Amosite	ND	NA	ND	NA
	% Chrysotile	ND	NA	ND	NA
	% Other	ND	NA	ND	NA
	% Total Asbestos	ND Inconclusive	NA	ND Inconclusive	NA
Other Materials Present	% Organic	61.3	NA	58.3	NA
	% Carbonates	7.0	NA	7.0	NA
	% Other Inorganic	31.7	NA	34.7	NA

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-17	7081-PBES-18	7081-PBES-19	7081-PBES-19
Layer Number				1	2
Lab ID Number		3143607	3143608	3143609	3143609
Sample Location		Cafe Lower Roof, Field Cut Top Layer	Cafe Lower Roof, Field Cut Top Layer	Cafe Lower Roof, Equipment Cut Top Layer	Cafe Lower Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM & Tar (EPDM Layer)	EPDM & Tar (Insufficient Tar)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	No
	Color	Black/White	Black/White	Black/White	Black
Asbestos Content	% Amosite	ND	ND	ND	NA
	% Chrysotile	ND	ND	ND	NA
	% Other	ND	ND	ND	NA
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	NA
Other Materials Present	% Organic	71.8	77.1	76.5	NA
	% Carbonates	7.7	7.9	6.3	NA
	% Other Inorganic	20.5	15.0	17.2	NA

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-20	7081-PBES-20	7081-PBES-21	7081-PBES-22
Layer Number		1	2		
Lab ID Number		3143610	3143610	3143611	3143612
Sample Location		Cafe Lower Roof, Equipment Cut Top Layer	Cafe Lower Roof, Equipment Cut Top Layer	Cafe Roof, Field Cut Top Layer	Cafe Roof, Field Cut Top Layer
Sample Description		EPDM & Tar (EPDM Layer)	EPDM & Tar (Insufficient Tar)	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	Yes
	Color	Black/White	Black	Black/White	Black/White
Asbestos Content	% Amosite	ND	NA	ND	ND
	% Chrysotile	ND	NA	ND	ND
	% Other	ND	NA	ND	ND
	% Total Asbestos	ND Inconclusive	NA	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	77.6	NA	78.4	76.2
	% Carbonates	6.0	NA	8.0	10.4
	% Other Inorganic	16.4	NA	13.6	13.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/16/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-23	7081-PBES-23	7081-PBES-24	7081-PBES-24
Layer Number		1	2	1	2
Lab ID Number		3143613	3143613	3143614	3143614
Sample Location		Cafe Roof, Equipment Cut Top Layer	Cafe Roof, Equipment Cut Top Layer	Cafe Roof, Equipment Cut Top Layer	Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Mastic Layer)	EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	Black/White	Brown	Black/White	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND	ND Inconclusive	ND
Other Materials Present	% Organic	78.2	93.3	78.0	93.9
	% Carbonates	7.7	6.4	10.5	5.6
	% Other Inorganic	14.1	0.3	11.5	0.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-09	7081-PBES-10	7081-PBES-13	7081-PBES-14
Layer Number					
Lab ID Number		3143599	3143600	3143603	3143604
Sample Location		Cafe Lower Roof, Field Cut under Gypsum	Cafe Lower Roof, Field Cut under Gypsum	Upper Roof, Field Cut Top Layer	Upper Roof, Field Cut Top Layer
Sample Description		ISO Foam	ISO Foam	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Yellow	Yellow	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	87.6	92.8	75.4	76.4
	% Carbonates	9.9	5.6	2.9	2.9
	% Other Inorganic	2.5	1.6	21.7	20.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-15	7081-PBES-16	7081-PBES-17	7081-PBES-18
Layer Number		1	1		
Lab ID Number		3143605	3143606	3143607	3143608
Sample Location		Upper Roof, Equipment Cut Top Layer	Upper Roof, Equipment Cut Top Layer	Cafe Lower Roof, Field Cut Top Layer	Cafe Lower Roof, Field Cut Top Layer
Sample Description		EPDM & Mastic (EPDM Layer)	EPDM & Mastic (EPDM Layer)	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/White	Black/White	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	61.3	58.3	71.8	77.1
	% Carbonates	7.0	7.0	7.7	7.9
	% Other Inorganic	31.7	34.7	20.5	15.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBES-19	7081-PBES-20	7081-PBES-21	7081-PBES-22
Layer Number		1	1		
Lab ID Number		3143609	3143610	3143611	3143612
Sample Location		Cafe Lower Roof, Equipment Cut Top Layer	Cafe Lower Roof, Equipment Cut Top Layer	Cafe Roof, Field Cut Top Layer	Cafe Roof, Field Cut Top Layer
Sample Description		EPDM & Tar (EPDM Layer)	EPDM & Tar (EPDM Layer)	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/White	Black/White	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	76.5	77.6	78.4	76.2
	% Carbonates	6.3	6.0	8.0	10.4
	% Other Inorganic	17.2	16.4	13.6	13.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush ES - 21 Ulsterville Rd - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/21/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBES-23	7081-PBES-24
Layer Number		1	1
Lab ID Number		3143613	3143614
Sample Location		Cafe Roof, Equipment Cut Top Layer	Cafe Roof, Equipment Cut Top Layer
Sample Description		EPDM & Mastic (EPDM Layer)	EPDM & Mastic (EPDM Layer)
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	Yes	Yes
	Color	Black/White	Black/White
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND	ND
Other Materials Present	% Organic	78.2	78.0
	% Carbonates	7.7	10.5
	% Other Inorganic	14.1	11.5

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron, D. Stamper
DATE SAMPLED: 13-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICI
PROJECT BUILDING: Pine Bush Elementary School
PROJECT ADDRESS: 21 Ulsterville Rd
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBES-01	1	Roof	Upper Roof	Field Cut Under EPDM	Gypsum	3143955
7081-PBES-02	1	Roof	Upper Roof	Field Cut Under EPDM	Gypsum	3143956
7081-PBES-03	2	Roof	Café Lower Roof	Field Cut Under EPDM	Gypsum	3143957
7081-PBES-04	2	Roof	Café Lower Roof	Field Cut Under EPDM	Gypsum	3143958
7081-PBES-05	3	Roof	Café Roof	Field Cut Under EPDM	Gypsum	3143959
7081-PBES-06	3	Roof	Café Roof	Field Cut Under EPDM	Gypsum	3143960
7081-PBES-07	4	Roof	Upper Roof	Field Cut under Gypsum	ISO Foam	
7081-PBES-08	4	Roof	Upper Roof	Field Cut under Gypsum	ISO Foam	
7081-PBES-09	5	Roof	Café Lower Roof	Field Cut under Gypsum	ISO Foam	
7081-PBES-10	5	Roof	Café Lower Roof	Field Cut under Gypsum	ISO Foam	
7081-PBES-11	6	Roof	Café Roof	Field Cut under Gypsum	ISO Foam	
7081-PBES-12	6	Roof	Cafe Roof	Field Cut under Gypsum	ISO Foam	
7081-PBES-13	7	Roof	Upper Roof	Field Cut Top Layer	EPDM	
7081-PBES-14	7	Roof	Upper Roof	Field Cut Top Layer	EPDM	
7081-PBES-15	8	Roof	Upper Roof	Equipment Cut Top Layer	EPDM - Mastic	

Comments:

SUBMITTED BY:

DATE: 1/14/26

RECEIVED BY:

JAN 14 '26 20:17

DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron, D. Stamper
DATE SAMPLED: 13-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Pine Bush Elementary School
PROJECT ADDRESS: 21 Ulsterville Rd
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBES-16	8	Roof	Upper Roof	Equipment Cut Top Layer	EPDM + Mastic	
7081-PBES-17	9	Roof	Café Lower Roof	Field Cut Top Layer	EPDM	
7081-PBES-18	9	Roof	Café Lower Roof	Field Cut Top Layer	EPDM	
7081-PBES-19	10	Roof	Café Lower Roof	Equipment Cut Top Layer	EPDM + Tar	
7081-PBES-20	10	Roof	Café Lower Roof	Equipment Cut Top Layer	EPDM + Tar	
7081-PBES-21	11	Roof	Café Roof	Field Cut Top Layer	EPDM	
7081-PBES-22	11	Roof	Café Roof	Field Cut Top Layer	EPDM	
7081-PBES-23	12	Roof	Café Roof	Equipment Cut Top Layer	EPDM + Mastic	
7081-PBES-24	12	Roof	Café Roof	Equipment Cut Top Layer	EPDM + Mastic	

Comments:

SUBMITTED BY:

DATE: 1/14/26

RECEIVED BY: MDWARNER

JAN 14 '26 20:17

DATE:

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/19/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-01	7081-PBHS-02	7081-PBHS-03	7081-PBHS-04
Layer Number					
Lab ID Number		3143963	3143964	3143965	3143966
Sample Location		Old Gym Roof, Field Cut Under EPDM	Old Gym Roof, Field Cut Under EPDM	New Gym Roof, Field Cut Under EPDM	New Gym Roof, Field Cut Under EPDM
Sample Description		Gypsum	Gypsum	Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	White/Gray/Pink	White/Gray	White/Brown	White/Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	20.0	20.0	5.0	5.0
	% Cellulose	ND	ND	15.0	20.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	15.0	15.0
	% Carbonates	30.0	30.0	30.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	35.0	35.0	35.0	30.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/19/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-05	7081-PBHS-06	7081-PBHS-07	7081-PBHS-08
Layer Number					
Lab ID Number		3143967	3143968	3143969	3143970
Sample Location		Locker Room Roof, Field Cut Under EPDM	Locker Room Roof, Field Cut Under EPDM	Wrestling Roof, Field Cut Under EPDM	Wrestling Roof, Field Cut Under EPDM
Sample Description		Gypsum	Gypsum	Gypsum	Gypsum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/White	Gray/White	Gray	Gray
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	25.0	25.0	5.0	5.0
	% Cellulose	ND	ND	5.0	5.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	15.0	15.0	15.0	15.0
	% Carbonates	30.0	25.0	35.0	35.0
	% Other	ND	ND	ND	ND
	% Unidentified	30.0	35.0	40.0	40.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/19/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-19	7081-PBHS-20	7081-PBHS-33	7081-PBHS-34
Layer Number					
Lab ID Number		3143971	3143972	3143973	3143974
Sample Location		New Gym Roof, Field Cut Under Gypsum on Metal	New Gym Roof, Field Cut Under Gypsum on Metal	Old Gym Roof, Field Cut Under Spray Adhesive	Old Gym Roof, Field Cut Under Spray Adhesive
Sample Description		Insulation	Insulation	Tectum	Tectum
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	Yes	No
	Homogenous	Yes	Yes	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Gray	Yellow/Gray	Gray/Brown/Black	Gray/Brown
Sample Treatment		None	None	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	70.0	70.0	ND	ND
	% Cellulose	5.0	10.0	35.0	35.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	15.0	15.0
	% Carbonates	5.0	5.0	10.0	15.0
	% Other	ND	ND	ND	ND
	% Unidentified	15.0	10.0	40.0	35.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/19/2026
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-35	7081-PBHS-36	7081-PBHS-37	7081-PBHS-38
Layer Number					
Lab ID Number		3143975	3143976	3143977	3143978
Sample Location		Locker Room Roof, Field Cut Under ISO Foam	Locker Room Roof, Field Cut Under ISO Foam	Wrestling Roof, Field Cut Under ISO Foam	Wrestling Roof, Field Cut Under ISO Foam
Sample Description		Perlite	Perlite	Perlite	Perlite
Method of Quantification		Scanning Option	Scanning Option	Scanning Option	Scanning Option
Appearance	Layered	No	No	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown/Gray	Brown/Gray	Brown/Gray/Black	Brown/Gray/Black
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Fibrous Materials Present	% Fibrous Glass	ND	ND	ND	ND
	% Cellulose	35.0	35.0	30.0	30.0
	% Other	ND	ND	ND	ND
	% Unidentified	ND	ND	ND	ND
Non-Fibrous Materials Present	% Silicates	5.0	5.0	10.0	10.0
	% Carbonates	ND	ND	ND	ND
	% Other	20.0 Perlite	25.0 Perlite	20.0 Perlite	15.0 Perlite
	% Unidentified	40.0	35.0	40.0	45.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. ND = Not Detected. Reporting Limit is <1%.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Samples received in acceptable condition unless otherwise noted.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-09	7081-PBHS-10	7081-PBHS-11	7081-PBHS-12
Layer Number					
Lab ID Number		3143615	3143616	3143617	3143618
Sample Location		Old Gym Roof, Field Cut Under Gypsum	Old Gym Roof, Field Cut Under Gypsum	New Gym Roof, Field Cut Middle Layer Under EPDM	New Gym Roof, Field Cut Middle Layer Under EPDM
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Black	Yellow/Black	Yellow/Black	Yellow/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	62.6	81.8	89.0	92.1
	% Carbonates	0.1	1.8	1.0	0.9
	% Other Inorganic	37.3	16.4	10.0	7.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-13	7081-PBHS-14	7081-PBHS-15	7081-PBHS-16
Layer Number					
Lab ID Number		3143619	3143620	3143621	3143622
Sample Location		Locker Room Roof, Field Cut Under Gypsum on Perlite	Locker Room Roof, Field Cut Under Gypsum on Perlite	Wrestling Roof, Field Cut Under EPDM	Wrestling Roof, Field Cut Under EPDM
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Yellow/White	Yellow/White	Yellow	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND	ND
Other Materials Present	% Organic	92.4	85.9	99.1	97.3
	% Carbonates	2.2	1.5	0.8	2.1
	% Other Inorganic	5.4	12.6	0.1	0.6

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-17	7081-PBHS-18	7081-PBHS-21	7081-PBHS-22
Layer Number					
Lab ID Number		3143623	3143624	3143625	3143626
Sample Location		Old Gym Roof, Field Cut Under ISO Foam on Tectum	Old Gym Roof, Field Cut Under ISO Foam on Tectum	Old Gym Roof, Field Cut Top Layer	Old Gym Roof, Field Cut Top Layer
Sample Description		Spray Adhesive	Spray Adhesive	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Pink/Black	Pink/Black	Black/Gray	Black/Gray
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	95.7	98.2	67.1	65.7
	% Carbonates	2.5	0.7	7.3	8.9
	% Other Inorganic	1.8	1.1	25.6	25.4

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-23	7081-PBHS-24	7081-PBHS-25	7081-PBHS-25
Layer Number				1	2
Lab ID Number		3143627	3143628	3143629	3143629
Sample Location		New Gym Roof, Field Cut Top Layer	New Gym Roof, Field Cut Top Layer	New Gym Roof, Equipment Cut Top Layer	New Gym Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Black	Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	77.0	77.3	66.4	91.5
	% Carbonates	6.8	5.4	9.1	5.5
	% Other Inorganic	16.2	17.3	24.5	3.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-26	7081-PBHS-26	7081-PBHS-27	7081-PBHS-28
Layer Number		1	2		
Lab ID Number		3143630	3143630	3143631	3143632
Sample Location		New Gym Roof, Equipment Cut Top Layer	New Gym Roof, Equipment Cut Top Layer	Locker Room Roof, Field Cut Top Layer	Locker Room Roof, Field Cut Top Layer
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM	EPDM
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Black	Brown	White/Gray/Black/ Blue	White/Gray/Black/ Blue
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	76.9	92.1	69.6	70.5
	% Carbonates	5.6	4.9	11.1	9.8
	% Other Inorganic	17.5	3.0	19.3	19.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-29	7081-PBHS-30	7081-PBHS-31	7081-PBHS-31
Layer Number				1	2
Lab ID Number		3143633	3143634	3143635	3143635
Sample Location		Wrestling Roof, Field Cut Top Layer	Wrestling Roof, Field Cut Top Layer	Wrestling Roof, Equipment Cut Top Layer	Wrestling Roof, Equipment Cut Top Layer
Sample Description		EPDM	EPDM	EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	No
	Color	White/Black	White/Black	Black/White	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	72.1	72.7	79.0	92.3
	% Carbonates	8.5	8.1	5.6	5.5
	% Other Inorganic	19.4	19.2	15.4	2.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Damien Warner
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-32	7081-PBHS-32
Layer Number		1	2
Lab ID Number		3143636	3143636
Sample Location		Wrestling Roof, Equipment Cut Top Layer	Wrestling Roof, Equipment Cut Top Layer
Sample Description		EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	Yes	No
	Color	Black/White	Yellow
Asbestos Content	% Amosite	ND	ND
	% Chrysotile	ND	ND
	% Other	ND	ND
	% Total Asbestos	ND Inconclusive	ND Inconclusive
Other Materials Present	% Organic	64.9	90.3
	% Carbonates	4.0	6.0
	% Other Inorganic	31.1	3.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected.
Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
These Results Cannot Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing (Unless "% Other Inorganic", As Reported Above, Is Less Than One Percent).
This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-09	7081-PBHS-10	7081-PBHS-11	7081-PBHS-12
Layer Number					
Lab ID Number		3143615	3143616	3143617	3143618
Sample Location		Old Gym Roof, Field Cut Under Gypsum	Old Gym Roof, Field Cut Under Gypsum	New Gym Roof, Field Cut Middle Layer Under EPDM	New Gym Roof, Field Cut Middle Layer Under EPDM
Sample Description		ISO Foam	ISO Foam	ISO Foam	ISO Foam
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/Black	Yellow/Black	Yellow/Black	Yellow/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	62.6	81.8	89.0	92.1
	% Carbonates	0.1	1.8	1.0	0.9
	% Other Inorganic	37.3	16.4	10.0	7.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-13	7081-PBHS-14	7081-PBHS-17	7081-PBHS-18
Layer Number					
Lab ID Number		3143619	3143620	3143623	3143624
Sample Location		Locker Room Roof, Field Cut Under Gypsum on Perlite	Locker Room Roof, Field Cut Under Gypsum on Perlite	Old Gym Roof, Field Cut Under ISO Foam on Tectum	Old Gym Roof, Field Cut Under ISO Foam on Tectum
Sample Description		ISO Foam	ISO Foam	Spray Adhesive	Spray Adhesive
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White	Yellow/White	Pink/Black	Pink/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	92.4	85.9	95.7	98.2
	% Carbonates	2.2	1.5	2.5	0.7
	% Other Inorganic	5.4	12.6	1.8	1.1

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-21	7081-PBHS-22	7081-PBHS-23	7081-PBHS-24
Layer Number					
Lab ID Number		3143625	3143626	3143627	3143628
Sample Location		Old Gym Roof, Field Cut Top Layer	Old Gym Roof, Field Cut Top Layer	New Gym Roof, Field Cut Top Layer	New Gym Roof, Field Cut Top Layer
Sample Description		EPDM	EPDM	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	Black/Gray	Black/Gray	Black	Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	67.1	65.7	77.0	77.3
	% Carbonates	7.3	8.9	6.8	5.4
	% Other Inorganic	25.6	25.4	16.2	17.3

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		7081-PBHS-25	7081-PBHS-25	7081-PBHS-26	7081-PBHS-26
Layer Number		1	2	1	2
Lab ID Number		3143629	3143629	3143630	3143630
Sample Location		New Gym Roof, Equipment Cut Top Layer	New Gym Roof, Equipment Cut Top Layer	New Gym Roof, Equipment Cut Top Layer	New Gym Roof, Equipment Cut Top Layer
Sample Description		EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)	EPDM & Adhesive (EPDM Layer)	EPDM & Adhesive (Adhesive Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Black	Brown	Black	Brown
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	66.4	91.5	76.9	92.1
	% Carbonates	9.1	5.5	5.6	4.9
	% Other Inorganic	24.5	3.0	17.5	3.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-27	7081-PBHS-28	7081-PBHS-29	7081-PBHS-30
Layer Number					
Lab ID Number		3143631	3143632	3143633	3143634
Sample Location		Locker Room Roof, Field Cut Top Layer	Locker Room Roof, Field Cut Top Layer	Wrestling Roof, Field Cut Top Layer	Wrestling Roof, Field Cut Top Layer
Sample Description		EPDM	EPDM	EPDM	EPDM
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	White/Gray/Black/ Blue	White/Gray/Black/ Blue	White/Black	White/Black
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	69.6	70.5	72.1	72.7
	% Carbonates	11.1	9.8	8.5	8.1
	% Other Inorganic	19.3	19.7	19.4	19.2

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 257081 - Clark Patterson Lee - Pre-Construction Environmental Testing and Design Services - Pine Bush HS - 118 State Rt. 302 - Pine Bush, NY

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 01/13/2026
Collected By : D. Perron/D. Stamper
Date Received : 01/14/2026
Date Analyzed : 01/18/2026
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0 (Testing)
NYS Lab No. 10851
Paul Stascavage ,Lab Director

Sample ID Number		7081-PBHS-31	7081-PBHS-31	7081-PBHS-32	7081-PBHS-32
Layer Number		1	2	1	2
Lab ID Number		3143635	3143635	3143636	3143636
Sample Location		Wrestling Roof, Equipment Cut Top Layer	Wrestling Roof, Equipment Cut Top Layer	Wrestling Roof, Equipment Cut Top Layer	Wrestling Roof, Equipment Cut Top Layer
Sample Description		EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Mastic Layer)	EPDM & Mastic (EPDM Layer)	EPDM & Mastic (Mastic Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	Yes	No	Yes	No
	Color	Black/White	Yellow	Black/White	Yellow
Asbestos Content	% Amosite	ND	ND	ND	ND
	% Chrysotile	ND	ND	ND	ND
	% Other	ND	ND	ND	ND
	% Total Asbestos	ND	ND	ND	ND
Other Materials Present	% Organic	79.0	92.3	64.9	90.3
	% Carbonates	5.6	5.5	4.0	6.0
	% Other Inorganic	15.4	2.2	31.1	3.7

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Samples received in acceptable condition unless otherwise noted. ND = Not Detected. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government.
AIHA LAP, LLC No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AL-709936

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron, D. Stamper
DATE SAMPLED: 13-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICI
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 118 State Rt. 302
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBHS-01	1	Roof	Old Gym Roof	Field Cut Under EPDM	Gypsum	3143963
7081-PBHS-02	1	Roof	Old Gym Roof	Field Cut Under EPDM	Gypsum	3143964
7081-PBHS-03	2	Roof	New Gym Roof	Field Cut Under ISO Foam	Gypsum	3143965
7081-PBHS-04	2	Roof	New Gym Roof	Field Cut Under ISO Foam	Gypsum	3143966
7081-PBHS-05	3	Roof	Locker Room Roof	Field Cut Under EPDM	Gypsum	3143967
7081-PBHS-06	3	Roof	Locker Room Roof	Field Cut Under EPDM	Gypsum	3143968
7081-PBHS-07	4	Roof	Wrestling Roof	Field Cut Under EPDM	Gypsum	3143969
7081-PBHS-08	4	Roof	Wrestling Roof	Field Cut Under EPDM	Gypsum	3143970
7081-PBHS-09	5	Roof	Old Gym Roof	Field Cut Under Gypsum	ISO Foam	
7081-PBHS-10	5	Roof	Old Gym Roof	Field Cut Under Gypsum	ISO Foam	
7081-PBHS-11	6	Roof	New Gym Roof	Field Cut Middle Layer Under EPDM	ISO Foam	
7081-PBHS-12	6	Roof	New Gym Roof	Field Cut Middle Layer Under EPDM	ISO Foam	
7081-PBHS-13	7	Roof	Locker Room Roof	Field Cut Under Gypsum on Pearlite	ISO Foam	
7081-PBHS-14	7	Roof	Locker Room Roof	Field Cut Under Gypsum on Pearlite	ISO Foam	
7081-PBHS-15	8	Roof	Wrestling Roof	Field Cut under EPDM	ISO Foam	

Comments:

SUBMITTED BY:

DATE: 1/14/26

RECEIVED BY:

JAN 14 '26 20:17 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron, D. Stamper
DATE SAMPLED: 13-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM
TURN-AROUND TIME: 5-DAY

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICE
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 118 State Rt. 302
Pine Bush, NY 12566

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBHS-16	8	Roof	Wrestling Roof	Field Cut Under EPDM	ISO Foam	
7081-PBHS-17	9	Roof	Old Gym Roof	Field Cut Under ISO Foam on Techdem	Spray Adhesive	
7081-PBHS-18	9	Roof	Old Gym Roof	Field Cut Under ISO Foam on Techdem	Spray Adhesive	
7081-PBHS-19	10	Roof	New Gym Roof	Field Cut Under Gypsum on Metal	Insulation	3143971
7081-PBHS-20	10	Roof	New Gym Roof	Field Cut Under Gypsum on Metal	Insulation	3143972
7081-PBHS-21	11	Roof	Old Gym Roof	Field Cut Top Layer	EPDM	
7081-PBHS-22	11	Roof	Old Gym Roof	Field Cut Top Layer	EPDM	
7081-PBHS-23	12	Roof	New Gym Roof	Field Cut Top Layer	EPDM	
7081-PBHS-24	12	Roof	New Gym Roof	Field Cut Top Layer	EPDM	
7081-PBHS-25	13	Roof	New Gym Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-PBHS-26	13	Roof	New Gym Roof	Equipment Cut Top Layer	EPDM + Adhesive	
7081-PBHS-27	14	Roof	Locker Room Roof	Field Cut Top Layer	EPDM	
7081-PBHS-28	14	Roof	Locker Room Roof	Field Cut Top Layer	EPDM	
7081-PBHS-29	15	Roof	Wrestling Roof	Field Cut Top Layer	EPDM	
7081-PBHS-30	15	Roof	Wrestling Roof	Field Cut Top Layer	EPDM	

Comments:

SUBMITTED BY: DATE: 1/14/26

RECEIVED BY: JAN 14 '26 20:17 DATE:

Quality Environmental Solutions and Technologies, Inc.
Bulk Sample Chain of Custody

CLIENT: Clark Patterson Lee
ADDRESS: 26 IBM Road
Poughkeepsie, NY 12601
CONTACT: Kate Range

PROJECT # : 25-7081
SAMPLED BY: D. Perron, D. Stamper
DATE SAMPLED: 13-Jan-26
STATE SAMPLED IN: New York
ANALYSIS METHOD: PLM, NOB-PLM, QTEM

PROJECT NAME: PRE-CONSTRUCTION ENVIRONMENTAL TESTING AND DESIGN SERVICI
PROJECT BUILDING: Pine Bush High School
PROJECT ADDRESS: 118 State Rt. 302
Pine Bush, NY 12566

TURN-AROUND TIME: 5-DAY

Sample	HM#	Floor	Space Name/ID #	Location	Material	Results
7081-PBHS-31	16	Roof	Wrestling Roof	Equipment Cut Top Layer	EPDM + Mastic	
7081-PBHS-32	16	Roof	Wrestling Roof	Equipment Cut Top Layer	EPDM Mastic	
7081-PBHS-33	17	Roof	Old Gym Roof	Field Cut Under Spray Adhesive	Techdem	3143973
7081-PBHS-34	17	Roof	Old Gym Roof	Field Cut Under Spray Adhesive	Techdem	3143974
7081-PBHS-35	18	Roof	Locker Room Roof	Field Cut under ISO Foam	Pearlite	3143975
7081-PBHS-36	18	Roof	Locker Room Roof	Field Cut Under ISO Foam	Pearlite	3143976
7081-PBHS-37	19	Roof	Wrestling Roof	Field Cut Under ISO Foam	Pearlite	3143977
7081-PBHS-38	19	Roof	Wrestling Roof	Field Cut Under ISO Foam	Pearlite	3143978

Comments:

SUBMITTED BY:

DATE: 1/14/26

RECEIVED BY: MDWhalen

JAN 14 '26 20:18 DATE:

QuES&T
Quality Environmental Solutions & Technologies, Inc.

Appendix C:
XRF ANALYTICAL DATA

Quality Environmental Solutions & Technologies
1376 Route 9
Wappingers Falls, NY 12590
(845) 298-6031

Limited XRF LBP Testing

CLARK PATTERSON LEE
Pinebush CSD
Project - #256919

Sample	Building/Address	Interior/Exterior	Floor	Space/Room/Description	Object	Component	Substrate	Color	Condition	Result	Pb Concentration
1	NIST (1.04 +/- 0.06)									Positive	0.9
2	NIST (<0.01)									Negative	0
3	Circleville Elementary	Interior	First	Security Office	Wall	Wall	Sheetrock	Blue	Good	Negative	-0.1
4	Circleville Elementary	Interior	First	Security Office	Wall	Wall	CMU	White	Good	Negative	-0.3
5	Circleville Elementary	Interior	First	Gym	Wall	Wall	CMU	White	Good	Negative	-0.2
6	Circleville Elementary	Interior	Second	Fan Room	Wall	Wall	CMU	White	Good	Negative	-0.1
7	Circleville Elementary	Interior	Second	Fan Room	Ceiling	Ceiling	Metal	Good	Good	Negative	-0.2
8	Pakanasink Elementary	Interior	First	Gym	Wall	Upper	CMU	White	Good	Negative	-0.1
9	Pakanasink Elementary	Interior	First	Gym Boys Bathroom	Wall	Wall	CMU	Yellow	Good	Negative	-0.3
10	Pakanasink Elementary	Interior	First	Gym Boys Bathroom	Ceiling	Ceiling	Sheetrock	White	Good	Negative	-0.2
11	Pakanasink Elementary	Interior	First	Mechanical Room By Door #47	Wall	Wall	CMU	White	Good	Negative	-0.1
12	Pakanasink Elementary	Interior	First	Mechanical Room By Door #47	HVAC Duct	Duct	Metal	White	Good	Negative	-0.1
13	Pakanasink Elementary	Interior	First	Hallway By Door #46	Wall	Wall	CMU	Blue	Good	Negative	-0.4
14	Pakanasink Elementary	Interior	First	Cafeteria	Wall	Wall	CMU	Grey	Good	Negative	-0.1
15	Pakanasink Elementary	Interior	First	Cafeteria	Wall	Wall	CMU	Light Blue	Good	Negative	-0.2
16	Pakanasink Elementary	Interior	First	Cafeteria	Vent	Vent	Metal	Silver	Good	Negative	0.1
17	Circleville Middle School	Interior	First	Bandroom	Wall	Lower	CMU	Blue	Good	Negative	-0.4
18	Circleville Middle School	Interior	First	Bandroom	Wall	Upper	CMU	White	Good	Negative	-0.2
19	Circleville Middle School	Interior	First	Gym	Wall	Upper	CMU	Grey	Good	Negative	-0.2
20	Circleville Middle School	Interior	First	Boys Locker Room	Wall	Wall	CMU	Blue	Good	Negative	-0.2
21	Circleville Middle School	Interior	First	Boy Locker Shower Area	Wall	Wall	Sheetrock	Grey	Good	Negative	-0.2
22	Circleville Middle School	Interior	First	Boy Locker Shower Area	Ceiling	Ceiling	Sheetrock	White	Good	Negative	0
23	Circleville Middle School	Interior	First	Boys Locker Room Vestibule	Wall	Wall	CMU	White	Good	Negative	-0.4
24	Circleville Middle School	Interior	First	Girls Locker Room	Wall	Wall	CMU	White	Good	Negative	-0.2
25	Circleville Middle School	Interior	First	Girls Locker Room	Ceiling	Deck	Metal	White	Good	Negative	0
26	Circleville Middle School	Interior	First	Girls Locker Shower Area	Ceiling	Ceiling	Sheetrock	White	Good	Negative	0.1
27	Circleville Middle School	Interior	First	Girls Locker Shower Area	Wall	Upper	Sheetrock	Yellow	Good	Negative	-0.1
28	Circleville Middle School	Interior	First	Room A32	Wall	Upper	CMU	Pink	Good	Negative	0.1
29	Circleville Middle School	Interior	First	Room A35	Wall	Upper	CMU	White	Good	Negative	-0.3
30	Pine Bush High School	Interior	First	Cafeteria Meeting Area	Wall	Wall	CMU	Green	Good	Negative	-0.2
31	Pine Bush High School	Interior	First	Cafeteria Meeting Area	HVAC Soffit	Soffit	Sheetrock	Green	Good	Negative	-0.2
32	Pine Bush High School	Interior	First	Serving Area	Wall	Wall	CMU	Grey	Good	Negative	0
33	Pine Bush High School	Interior	First	Kitchen	Wall	Wall	CMU	Blue	Good	Negative	-0.2
34	Pine Bush High School	Interior	First	School Store 221	Wall	Wall	CMU	Pink	Good	Negative	-0.1
35	Pine Bush High School	Interior	First	School Store 221	Wall	Wall	CMU	Pink	Good	Negative	-0.1
36	Pine Bush High School	Interior	First	Gym	Wall	Wall	CMU	White	Good	Negative	-0.2
37	Pine Bush High School	Interior	First	Gym	Wall	Wall	CMU	White	Good	Negative	0
38	Crispell Middle School	Interior	First	Kitchen	Wall	Wall	Sheetrock	Blue	Good	Negative	0.1
39	Crispell Middle School	Interior	First	Weight Room	Wall	Wall	Plaster	White	Good	Negative	0
40	Crispell Middle School	Interior	First	Weight Room	Ceiling	Ceiling	Plaster	White	Good	Negative	0
41	NIST (1.04 +/- 0.06)									Positive	0.9
42	NIST (<0.01)									Negative	-0.1
43	Crispell Middle School	Interior	First	Weight Room Vestibule	Wall	Wall	Plaster	Blue	Good	Negative	0.1
44	Crispell Middle School	Interior	First	Weight Room Vestibule	Ceiling	Ceiling	Plaster	White	Good	Negative	0.3
45	Crispell Middle School	Interior	First	Stage	Wall	Wall	Block	White	Good	Negative	-0.2
46	Crispell Middle School	Interior	First	Stage	Wall	Wall	CMU	Yellow	Good	Negative	-0.2
47	Crispell Middle School	Interior	First	Stage	Structural Support	Beam	Metal	Tan	Good	Positive	7.3
48	Crispell Middle School	Interior	First	Stage	Deck	Deck	Wood	Tan	Good	Negative	-0.3
49	Crispell Middle School	Interior	First	Girls Locker Room	Wall	Wall	Plaster	White	Good	Negative	0.1
50	Crispell Middle School	Interior	First	Girls Locker Room	Structural Support	Beam	Metal	Red	Good	Positive	3.8
51	Crispell Middle School	Interior	First	Girls Locker Room	Wall	Wall	CMU	White	Good	Negative	-0.2
52	Crispell Middle School	Interior	First	Girls Locker Room Office	Wall	Wall	Plaster	White	Good	Negative	0.2
53	Crispell Middle School	Interior	First	Office 107	Wall	Wall	CMU	White	Good	Negative	0
54	Crispell Middle School	Interior	First	Boys Locker Room	Wall	Wall	CMU	Blue	Good	Negative	-0.1
55	Crispell Middle School	Interior	First	Boys Locker Room Office	Wall	Wall	CMU	White	Good	Negative	-0.1
56	Crispell Middle School	Interior	First	Boys Locker Room Office	Wall	Wall	Plaster	White	Good	Negative	-0.2

Conducted: August 20th, 2025
Viken XRF Technician(s): Abraham Castellanos, Deshawn Smith

Quality Environmental Solutions & Technologies
1376 Route 9
Wappingers Falls, NY 12590
(845) 298-6031

Limited XRF LBP Testing

CLARK PATTERSON LEE
Pinebush CSD
Project - #256919

57	EJ Russell Elementary	Interior	Basement	Boiler Room	Tank	Tank	Metal	Blue	Good	Negative	0
58	EJ Russell Elementary	Interior	Basement	Boiler Room	Tank	End Cap	Metal	Blue	Good	Negative	0.1
59	EJ Russell Elementary	Interior	Basement	Boiler Room	Wall	Wall	CMU	Tan	Good	Negative	-0.1
60	EJ Russell Elementary	Interior	Basement	Boiler Room	Stairs	Railing	Metal	Grey	Good	Negative	0.9
61	EJ Russell Elementary	Interior	Basement	Boiler Room	Stairs	Riser	Metal	Grey	Good	Positive	1.9
62	EJ Russell Elementary	Interior	Basement	Boiler Room	Stairs	Tread	Metal	Grey	Good	Positive	2.4
63	EJ Russell Elementary	Interior	Basement	Boiler Room	Door	Door	Metal	Grey	Good	Negative	0.1
64	EJ Russell Elementary	Interior	Basement	Boiler Room	Door	Frame	Metal	Grey	Good	Negative	0.3
65	EJ Russell Elementary	Interior	Basement	Boiler Room	Tank	Tank	Metal	Green	Good	Negative	0.3
66	EJ Russell Elementary	Interior	Basement	Boiler Room	Wall	Wall	CMU	White	Good	Negative	0
67	EJ Russell Elementary	Interior	Basement	Boiler Room	Tank	Tank	Metal	Red	Good	Negative	0.2
68	EJ Russell Elementary	Interior	Basement	Boiler Room	Window	Frame	Metal	Black	Good	Negative	0
69	EJ Russell Elementary	Interior	First	Cafeteria	Wall	Wall	Plaster	White	Good	Negative	-0.3
70	EJ Russell Elementary	Interior	First	Stage	Wall	Wall	CMU	White	Good	Negative	-0.1
71	Pine Bush Elementary	Interior	First	Café Stage	Ceiling	HVAC Duct	Metal	Black	Good	Negative	0.1
72	Pine Bush Elementary	Interior	First	Café Stage	Wall	Wall	CMU	Black	Good	Negative	-0.2
73	Pine Bush Elementary	Interior	First	Hallway By 168A	Wall	Upper	CMU	Green	Good	Negative	-0.2
74	Pine Bush Elementary	Interior	First	Hallway By 168A	Wall	Middle	CMU	Blue	Good	Negative	-0.1
75	NIST (1.04 +/- 0.06)									Negative	0.8
76	NIST (<0.01)									Negative	-0.2

Conducted: August 20th, 2025
Viken XRF Technician(s): Abraham Castellanos, Deshawn Smith

Quality Environmental Solutions & Technologies
1376 Route 9
Wappingers Falls, NY 12590
(845) 298-6031

Limited XRF LBP Testing

Pine Bush CSD
Circleville MS/ Pakanasink ES
Quest project #257081

Sample	Building/Address	Interior/Exterior	Floor	Space/Room/Description	Object	Component	Substrate	Color	Condition	Result	Pb Concentration (mg/cm2)
1	NIST (<0.01)									Negative	0
2	**NIST (1.04 +/- 0.06)**									**Positive**	**1**
3	Pakanasink ES	Int	1	Cafeteria	Wall	Wall	CMU	Blue	Good	Negative	-0.2
4	Pakanasink ES	Int	1	Cafeteria	Window	Sill	Granite	Black	Good	Negative	-0.2
5	**Pakanasink ES**	**Int**	**1**	**Cafeteria**	**Window**	**Frame**	**Metal**	**Black**	**Good**	**Positive**	**1.2**
6	Pakanasink ES	Int	1	Cafeteria	Window	Upper Sill	Metal	Gray	Good	Negative	0.2
7	Pakanasink ES	Int	1	Cafeteria	Wall	Wall	CMU	Yellow	Good	Negative	0.2
8	Pakanasink ES	Int	1	Cafeteria	Heater	Cover	Metal	Yellow	Good	Negative	0.1
9	Pakanasink ES	Int	1	Classroom 114	Wall	Wall	CMU	Yellow	Good	Negative	0.1
10	Pakanasink ES	Int	1	Classroom 114	Window	Frame	Metal	Brown	Good	Negative	0.3
11	Pakanasink ES	Int	1	Classroom 114	Window	Sill	Granite	Black	Good	Negative	0
12	Pakanasink ES	Int	1	Classroom 118	Heater	Cover	Metal	Beige	Good	Negative	0.1
13	Pakanasink ES	Int	1	Classroom 118	Wall	Wall	CMU	Blue	Good	Negative	0.1
14	Pakanasink ES	Int	1	Classroom 118	Window	Frame	Metal	Brown	Good	Negative	0.2
15	Pakanasink ES	Int	1	Door 58	Door	Frame	Metal	Brown	Good	Negative	0.1
16	Pakanasink ES	Int	1	General Office	Wall	Wall	CMU	White	Good	Negative	0.1
17	Pakanasink ES	Int	1	General Office	Wall	Wall	CMU	Dark Blue	Good	Negative	0
18	Pakanasink ES	Int	1	Psychologist Office	Wall	Wall	CMU	Blue	Good	Negative	-0.3
19	Pakanasink ES	Int	1	Pump Room	Tank	Tank	Metal	Blue	Good	Negative	0.1
20	Pakanasink ES	Int	1	Pump Room	Motor	Motor	Metal	Blue	Good	Negative	0
21	Pakanasink ES	Int	1	Pump Room	Wall	Wall	CMU	White	Good	Negative	0.1
22	Pakanasink ES	Int	1	Pool Storage	Wall	Wall	CMU	White	Good	Negative	0
23	Pakanasink ES	Int	1	Pool Storage	Vent	Vent	Metal	Beige	Good	Negative	0
24	Pakanasink ES	Int	1	Pool	Wall	Wall	CMU	Blue	Good	Negative	0.1
25	Pakanasink ES	Int	1	Pool	Wall	Wall	CMU	White	Good	Negative	-0.2
26	Pakanasink ES	Int	1	Girls Locker Room	Wall	Wall	Sheetrock	Yellow	Good	Negative	-0.1
27	Pakanasink ES	Int	1	Girls Locker Room	Wall	Wall	CMU	White	Good	Negative	-0.2
28	Pakanasink ES	Int	1	Boys Locker Room	Wall	Wall	Sheetrock	Blue	Good	Negative	-0.1
29	Pakanasink ES	Int	1	Boys Locker Room	Wall	Wall	CMU	White	Good	Negative	-0.2
30	Pakanasink ES	Int	1	Boys Locker Room	Wall	Wall	Sheetrock	White	Good	Negative	-0.1
31	Pakanasink ES	Int	2	Mechanical Room	Motor	Motor	Metal	Green	Good	Negative	0
32	Pakanasink ES	Int	2	Mechanical Room	SF-1	SF-2	Metal	Gray	Good	Negative	0
33	Pakanasink ES	Int	2	Mechanical Room	Pulley Motor	Pulley Motor	Metal	Green	Good	Negative	0
34	Pakanasink ES	Int	2	Mechanical Room	Electrical Box	Electrical Box	Metal	Gray	Good	Negative	0.1
35	Pakanasink ES	Int	2	Mechanical Room	Fan	Fan	Metal	Green	Good	Negative	0
36	Pakanasink ES	Int	2	Mechanical Room	Door	Door	Metal	Gray	Good	Negative	0.1
37	Pakanasink ES	Int	2	Mechanical Room	Door	Frame	Metal	Gray	Good	Negative	0.4
38	Circleville Middle School	Int	1	Office	Wall	Wall	CMU	Beige	Good	Negative	0
39	Circleville Middle School	Int	1	Hallway outside of Office	Wall	Wall	CMU	Blue	Good	Negative	-0.2
40	Circleville Middle School	Int	1	Hallway outside of Office	Wall	Wall	CMU	Blue	Good	Negative	-0.1
41	**Circleville Middle Schoo**	**Int**	**2**	**Hallway near 203**	**Window**	**Frame**	**Metal**	**Brown**	**Good**	**Positive**	**57**
42	Circleville Middle School	Int	2	Hallway near 203	Window	Upper Sill	Metal	Brown	Good	Negative	0
43	Circleville Middle School	Int	2	Hallway near 212	Window	Frame	Metal	Brown	Good	Negative	0.1
44	Circleville Middle School	Int	2	Hallway near 213	Window	Upper Sill	Metal	Brown	Good	Negative	0.1
45	Circleville Middle School	Int	BSMT	Boiler Room	Boiler	Stand	Metal	Red	Good	Negative	0
46	Circleville Middle School	Int	BSMT	Boiler Room	Floor	Floor	Concrete	Red	Poor	Negative	0
47	Circleville Middle School	Int	BSMT	Boiler Room	Boiler	Cover	Metal	Blue	Good	Negative	-0.1
48	Circleville Middle School	Int	BSMT	Boiler Room	Boiler	Stand	Metal	Blue	Good	Negative	0.1

Conducted: December 10, 2025
Niton XRF Technician(s): Caroline Annesi (Cert. # 25-6TL1I-SHAB) and Jessica Lopez (Cert. # 25-6AJ9Y-SHAB)

Quality Environmental Solutions & Technologies
1376 Route 9
Wappingers Falls, NY 12590
(845) 298-6031

Limited XRF LBP Testing

Pine Bush CSD
Circleville MS/ Pakanasink ES
Quest project #257081

49	Circleville Middle School	Int	BSMT	Boiler Room	Motor	Motor	Metal	Teal	Good	Negative	-0.1
50	Circleville Middle School	***Int***	***BSMT***	***Boiler Room***	***Motor***	***Endcap***	***Metal***	***Brown***	***Good***	***Positive***	***16.6***
51	Circleville Middle School	Int	BSMT	Boiler Room	Motor	Motor	Metal	Red	Good	Negative	-0.2
52	Circleville Middle School	***Int***	***BSMT***	***Boiler Room***	***Motor***	***Endcap***	***Metal***	***Gold***	***Good***	***Positive***	***16***
53	Circleville Middle School	Int	BSMT	Boiler Room	Motor	Motor	Metal	Red	Good	Negative	-0.3
54	Circleville Middle School	Int	BSMT	Boiler Room	Motor	Endcap	Metal	Gold	Good	Negative	-0.1
55	Circleville Middle School	Int	BSMT	Boiler Room	Boiler	Endcap	Metal	Blue	Good	Negative	-0.2
56	Circleville Middle School	Int	BSMT	Boiler Room	Boiler	Endcap	Metal	Blue	Good	Negative	-0.2
57	Circleville Middle School	Int	BSMT	Boiler Room	Boiler	Boiler	Metal	Red	Poor	Negative	-0.4
58	Circleville Middle School	Int	BSMT	Boiler Room	Boiler	Boiler	Metal	Red	Poor	Negative	0.2
59	***NIST (1.04 +/- 0.06)***									***Positive***	***1***
60	NIST (<0.01)									Negative	0

Quality Environmental Solutions & Technologies
1376 Route 9
Wappingers Falls, NY 12590
(845) 298-6031

Limited XRF LBP Testing

Sample	Building/Address	Interior/Exterior	Floor	Space/Room/Description	Object	Component	Substrate	Color	Condition	Result	Pb Concentration
											(mg/cm2)
1	***NIST (1.04 +/- 0.06)***									***Positive***	***1***
2	NIST (<0.01)									Negative	0.1
3	Circleville Elementary	Int	1	Boiler Room	Gauge	Gauge	Metal	Blue	Good	Negative	-0.1
4	Circleville Elementary	Int	1	Boiler Room	Tank	Tank	Metal	Black	Good	Negative	0.1
5	Circleville Elementary	Int	1	Boiler Room	Transformer	Shield	Metal	Gray	Good	Negative	0.1
6	Circleville Elementary	Int	1	Boiler Room	Electrical	Panel	Metal	Gray	Good	Negative	-0.1
7	Circleville Elementary	Int	1	Boiler Room	Wall	Wall	CMU	White	Good	Negative	-0.1
8	Circleville Elementary	Int	1	Boiler Room	Pipe	Pipe	Metal	White	Good	Negative	-0.1
9	Circleville Elementary	Int	1	Boiler Room	Boiler	Stand	Metal	White	Good	Negative	-0.1
10	Circleville Elementary	Int	1	Boiler Room	Boiler	Support	Metal	White	Good	Negative	0
11	Circleville Elementary	Int	1	Boiler Room	Boiler	Tank	Metal	White	Good	Negative	0.1
12	Circleville Elementary	Int	1	Boiler Room	Window	Frame	Metal	Brown	Good	Negative	0.1
13	Circleville Elementary	Int	1	Boiler Room	TBS Pump #1	Endcap	Metal	Red	Good	Negative	0
14	Circleville Elementary	Int	1	Boiler Room	TBS Pump #1	Motor	Metal	Blue	Good	Negative	0
15	Circleville Elementary	Int	1	Boiler Room	TBS Pump #2	Motor	Metal	Red	Good	Negative	0
16	Circleville Elementary	Int	1	Boiler Room	Tank	Tank	Metal	White	Good	Negative	0.1
17	Circleville Elementary	Int	1	Boiler Room	Air Exchange Tank	Air Exchange Tank	Metal	Red	Poor	Negative	-0.1
18	Circleville Elementary	Int	1	Boiler Room	Air Exchange Tank	Endcap	Metal	Red	Poor	Negative	0
19	Circleville Elementary	Int	1	Cafeteria	Wall	Wall	CMU	White	Good	Negative	0.2
20	Circleville Elementary	Int	1	Cafeteria	Wall	Wall	CMU	Blue	Good	Negative	0.2
21	Circleville Elementary	Int	1	Cafeteria	Wall	Wall	CMU	Red	Good	Negative	-0.1
22	Circleville Elementary	Int	1	Cafeteria	Wall	Wall	CMU	Beige	Good	Negative	-0.1
23	Circleville Elementary	Int	1	Cafeteria	Pipe	Chase	Metal	Beige	Good	Negative	0.1
24	Circleville Elementary	Int	1	Cafeteria	Window	Sill	Metal	Black	Good	Negative	0.2
25	Circleville Elementary	Int	1	Cafeteria	Window	Frame	Metal	Black	Good	Negative	-0.2
26	Circleville Elementary	Int	2	Staircase	Wall	Wall	CMU	Red	Good	Negative	-0.1
27	Circleville Elementary	Int	2	Staircase	Window	Frame	Metal	Black	Good	Negative	0.1
28	Circleville Elementary	Int	2	Classroom 216	Window	Sill	Metal	Black	Good	Negative	0.3
29	Circleville Elementary	Int	2	Classroom 217	WIndow	Frame	Metal	Black	Good	Negative	-0.1
30	Circleville Elementary	Int	1	Library	Wall	Wall	CMU	Blue	Good	Negative	-0.1
31	Circleville Elementary	Int	1	Room 108	Wall	Wall	CMU	White	Good	Negative	0
32	***NIST (1.04 +/- 0.06)***									***Positive***	***1***
33	NIST (<0.01)									Negative	0.1
34	***NIST (1.04 +/- 0.06)***									***Positive***	***1***
35	NIST (<0.01)									Negative	0.1
36	Pine Bush High School	Int	1	Cafeteria	Window	Frame	Metal	Red	Good	Negative	0.1
37	Pine Bush High School	Int	1	Cafeteria	Wall	Wall	CMU	Green	Good	Negative	0.1
38	Pine Bush High School	Int	1	Cafeteria	Window	Sill	Slate	Black	Good	Negative	0.3
39	Pine Bush High School	Int	1	Kitchen	Wall	Wall	CMU	Green	Good	Negative	-0.1
40	Pine Bush High School	Int	1	Kitchen	Wall	Wall	Sheetrock	Green	Good	Negative	0.1
41	***NIST (1.04 +/- 0.06)***									***Positive***	***1***
42	NIST (<0.01)									Negative	0

Conducted: 12/15/2025
XRF Technician(s): Caroline Annesi (25-6TL1I-SHAB)

QuES&T
Quality Environmental Solutions & Technologies, Inc.

Appendix D:
PCB ANALYTICAL DATA

1376 Route 9, Wappingers Falls, NY 12590 Phone (845) 298-6031 Fax (845) 298-6251
NYS MWBD MBE Cert # 49952-2006 NYSUCP DBE Certified NJUCP DBE Certified www.Qualityenv.com

Technical Report

prepared for:

QuES & T
1376 Rt. 9
Wappingers Falls NY, 12590
Attention: Angela Holzapfel

Report Date: 12/16/2025
Client Project ID: 25-7081 Pre-Construction Env Testing & Design
York Project (SDG) No.: 25L0803

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 12/16/2025
Client Project ID: 25-7081 Pre-Construction Env Testing & Design
York Project (SDG) No.: 25L0803

QuES & T
1376 Rt. 9
Wappingers Falls NY, 12590
Attention: Angela Holzapfel

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 12, 2025 and listed below. The project was identified as your project: **25-7081 Pre-Construction Env Testing & Design**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

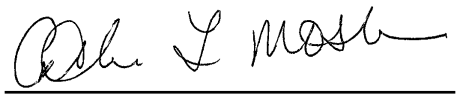
Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
25L0803-01	7081-PCB-01	Caulk	12/10/2025	12/12/2025

General Notes for York Project (SDG) No.: 25L0803

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NYDOH-NY10854, NJDEP-CT005, PADEP-68-04440, CTDPH-PH0840; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NYDOH-NY12058, NJDEP-NY037, CTDPH-PH0837, NHDES-NH2097, MDDEP-375, PADEP-68-06231.

Approved By:



Cassie Mosher
Laboratory Manager Stratford

Date: 12/16/2025

Client:	QuES & T	**York Sample ID:**	**25L0803-01**
Client Project:	25-7081 Pre-Construction Env Testing & Design	**Date Received:**	12/12/2025
Client Sample ID:	7081-PCB-01	**Collection Date/Time:**	12/10/25 15:00

Lab ID:	**25L0803-01**	**Laboratory:**	Stratford
Analysis:	**Polychlorinated Biphenyls by GC/ECD**	**Matrix:**	Caulk
Prep Method:	Sample Prepared by Method: EPA 3546 PPCB		

Parameter	Result	Flag	MDL	RL	Dilution	Units	Reference Method	Extracted	Analyzed	Analyst
Aroclor 1016	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF
Aroclor 1221	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF
Aroclor 1232	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF
Aroclor 1242	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF
Aroclor 1248	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF
Aroclor 1254	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF
Aroclor 1260	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF
* Total PCBs	ND		0.307	0.307	1	mg/kg	EPA 8082A	12/15/25 9:57	12/16/25 07:29	NF

Surrogate Recoveries	Result	Flag	Acceptance Range	Reference	Analyzed
Surrogate: Tetrachloro-m-xylene	*84.5 %*		*30-120*	*EPA 8082A*	*12/16/25 07:29*
Surrogate: Decachlorobiphenyl	*79.0 %*		*30-120*	*EPA 8082A*	*12/16/25 07:29*

Certified Analyses included in this Report

Analyte	CAS #	Certifications
EPA 8082A in Caulk		
Aroclor 1016	12674-11-2	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1221	11104-28-2	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1232	11141-16-5	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1242	53469-21-9	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1248	12672-29-6	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1254	11097-69-1	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1260	11096-82-5	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440

List of Certifications

Code	Description	Number	Expires
CTDPH-PH-0840	CTDPH - Stratford	PH-0840	06/30/2027
NJDEP-CT005	NJDEP Certification - Stratford	CT005	06/30/2026
NYSDOH-NY10854	NYSDOH NELAC/ELAP Program - Stratford	NY ELAP-10854	04/01/2026
PADEP-68-04440	PADEP Registration - Stratford	68-04440	09/30/2026

Analytical Batch Summary

Batch ID: BL51037	**Preparation Method:** EPA 3546 PPCB	**Prepared By:** JAA
YORK Sample ID	**Client Sample ID**	**Preparation Date**
25L0803-01	7081-PCB-01	12/15/25
BL51037-BLK1	Blank	12/15/25
BL51037-BS1	LCS	12/15/25
BL51037-BSD1	LCS Dup	12/15/25

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL51037 - EPA 3546 PPCB											
Blank (BL51037-BLK1)									Prepared: 12/15/2025 Analyzed: 12/16/2025		
Aroclor 1016	ND	0.450	mg/kg								
Aroclor 1221	ND	0.450	mg/kg								
Aroclor 1232	ND	0.450	mg/kg								
Aroclor 1242	ND	0.450	mg/kg								
Aroclor 1248	ND	0.450	mg/kg								
Aroclor 1254	ND	0.450	mg/kg								
Aroclor 1260	ND	0.450	mg/kg								
Total PCBs	ND	0.450	mg/kg								
Surrogate: Tetrachloro-m-xylene	*1.60*		*mg/kg*	*1.80*		*89.0*	*30-120*				
Surrogate: Decachlorobiphenyl	*1.35*		*mg/kg*	*1.80*		*75.0*	*30-120*				
LCS (BL51037-BS1)									Prepared: 12/15/2025 Analyzed: 12/16/2025		
Aroclor 1016	9.05	0.450	mg/kg	9.01		100	40-130				
Aroclor 1260	8.52	0.450	mg/kg	9.01		94.6	40-130				
Surrogate: Tetrachloro-m-xylene	*1.46*		*mg/kg*	*1.80*		*81.0*	*30-120*				
Surrogate: Decachlorobiphenyl	*1.28*		*mg/kg*	*1.80*		*71.0*	*30-120*				
LCS Dup (BL51037-BSD1)									Prepared: 12/15/2025 Analyzed: 12/16/2025		
Aroclor 1016	8.47	0.450	mg/kg	9.01		94.0	40-130		6.54	25	
Aroclor 1260	8.17	0.450	mg/kg	9.01		90.7	40-130		4.17	30	
Surrogate: Tetrachloro-m-xylene	*1.38*		*mg/kg*	*1.80*		*76.5*	*30-120*				
Surrogate: Decachlorobiphenyl	*1.22*		*mg/kg*	*1.80*		*67.5*	*30-120*				

Sample and Data Qualifiers Relating to This Work Order

E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
/\	Analyte is not certified but the state of sample origination offer certification for the Analyte

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

25L0803

BULK SAMPLE FORM

York Analytical Laboratories, Inc.
120 Research Drive
Stratford, CT 06615
ph. (203) 325-1371
fx. (203) 357-0166

Field Chain-of-Custody Record

Rec'd Chain 12-12-25 13:00
Rel Chain 12-12-25 15:30
Rec: 12/12/25 15:30 4.1°

Company: **QuES&T**
1376 Route 9
Wappingers Falls, NY 12590

Sampled By (Print): **Dillon Stamper**

Sampled By (Sign.):

Results Send Via: aholzalpfel@qualityenv.com

Invoice to: **Angela Hozalpfel**

Project #: **25-7081**

Project ID: **Pre-Construction Env Testing & Design**

SAMPLE #	*LOCATION*	*SAMPLE DATE*	*MATRIX*	*ANALYSIS REQUESTED*	*CONTAINER*
7081-PCB-01	Pakanasink ES, Exterior, Windows, Metal to Brick	12/10/2025	Caulk (Grey)	PCB	4 OZ Glass Jars

ANALYSIS TURNAROUND: **Standard TAT**

PAGE__1__OF__1__

Technical Report

prepared for:

QuES & T
1376 Rt. 9
Wappingers Falls NY, 12590
Attention: Angela Holzapfel

Report Date: 12/29/2025
Client Project ID: 25-7081 Pine Bush CSD-Circleville Elementary Ext/Int Caulk
York Project (SDG) No.: 25L0957

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 12/29/2025
Client Project ID: 25-7081 Pine Bush CSD-Circleville Elementary Ext/Int Caulk
York Project (SDG) No.: 25L0957

QuES & T
1376 Rt. 9
Wappingers Falls NY, 12590
Attention: Angela Holzapfel

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 17, 2025 and listed below. The project was identified as your project: **25-7081 Pine Bush CSD-Circleville Elementary Ext/Int Caulk**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

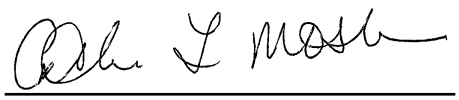
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
25L0957-01	ES-PCB-01 Exterior, First Floor Window, Metal t	Caulk	12/15/2025	12/17/2025
25L0957-02	B-02 Interior, Second Floor, Staircase 2, Window, I	Caulk	12/15/2025	12/17/2025

General Notes for York Project (SDG) No.: 25L0957

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NYDOH-NY10854, NJDEP-CT005, PADEP-68-04440, CTDPH-PH0840; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NYDOH-NY12058, NJDEP-NY037, CTDPH-PH0837, NHDES-NH2097, MDDEP-375, PADEP-68-06231.

Approved By: 

Cassie Mosher
Laboratory Manager Stratford

Date: 12/29/2025

Client:	QuES & T	**York Sample ID:**	**25L0957-01**
Client Project:	25-7081 Pine Bush CSD-Circleville Elementary Ext/Int Caulk	**Date Received:**	12/17/2025
Client Sample ID:	7081-CES-PCB-01 Exterior, First Floor Window, Metal to Brick	**Collection Date/Time:**	12/15/25 15:00

Lab ID:	**25L0957-01**	**Laboratory:**	Stratford
Analysis:	**Polychlorinated Biphenyls by GC/ECD**	**Matrix:**	Caulk
Prep Method:	Sample Prepared by Method: EPA 3546 PPCB		

Parameter	Result	Flag	MDL	RL	Dilution	Units	Reference Method	Extracted	Analyzed	Analyst
Aroclor 1016	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ
Aroclor 1221	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ
Aroclor 1232	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ
Aroclor 1242	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ
Aroclor 1248	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ
Aroclor 1254	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ
Aroclor 1260	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ
* Total PCBs	ND		0.382	0.382	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 08:47	BCJ

Surrogate Recoveries	Result	Flag	Acceptance Range	Reference Method	Analyzed
Surrogate: Tetrachloro-m-xylene	*56.0 %*		*30-120*	*EPA 8082A*	*12/28/25 08:47*
Surrogate: Decachlorobiphenyl	*49.5 %*		*30-120*	*EPA 8082A*	*12/28/25 08:47*

Client:	QuES & T	**York Sample ID:**	**25L0957-02**
Client Project:	25-7081 Pine Bush CSD-Circleville Elementary Ext/Int Caulk	**Date Received:**	12/17/2025
Client Sample ID:	7081-CES-PCB-02 Interior, Second Floor, Staircase 2, Window, Metal to CMU	**Collection Date/Time:**	12/15/25 15:00

Lab ID:	**25L0957-02**	**Laboratory:**	Stratford
Analysis:	**Polychlorinated Biphenyls by GC/ECD**	**Matrix:**	Caulk
Prep Method:	Sample Prepared by Method: EPA 3546 PPCB		

Parameter	Result	Flag	MDL	RL	Dilution	Units	Reference Method	Extracted	Analyzed	Analyst
Aroclor 1016	ND		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ
Aroclor 1221	ND		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ
Aroclor 1232	ND		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ
Aroclor 1242	**0.924**		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ
Aroclor 1248	ND		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ
Aroclor 1254	ND		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ
Aroclor 1260	ND		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ
* Total PCBs	**0.924**		0.455	0.455	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:00	BCJ

Surrogate Recoveries	Result	Flag	Acceptance Range	Reference Method	Analyzed
Surrogate: Tetrachloro-m-xylene	*56.0 %*		*30-120*	*EPA 8082A*	*12/28/25 09:00*
Surrogate: Decachlorobiphenyl	*55.5 %*		*30-120*	*EPA 8082A*	*12/28/25 09:00*

Certified Analyses included in this Report

Analyte	CAS #	Certifications
EPA 8082A in Caulk		
Aroclor 1016	12674-11-2	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1221	11104-28-2	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1232	11141-16-5	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1242	53469-21-9	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1248	12672-29-6	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1254	11097-69-1	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1260	11096-82-5	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440

List of Certifications

Code	Description	Number	Expires
CTDPH-PH-0840	CTDPH - Stratford	PH-0840	06/30/2027
NJDEP-CT005	NJDEP Certification - Stratford	CT005	06/30/2026
NYSDOH-NY10854	NYSDOH NELAC/ELAP Program - Stratford	NY ELAP-10854	04/01/2026
PADEP-68-04440	PADEP Registration - Stratford	68-04440	09/30/2026

Analytical Batch Summary

Batch ID: BL51686	**Preparation Method:** EPA 3546 PPCB	**Prepared By:** JLM
YORK Sample ID	**Client Sample ID**	**Preparation Date**
25L0957-01	7081-CES-PCB-01 Exterior, First Floor Win	12/24/25
25L0957-02	7081-CES-PCB-02 Interior, Second Floor, S	12/24/25
BL51686-BLK1	Blank	12/24/25
BL51686-BS1	LCS	12/24/25
BL51686-BSD1	LCS Dup	12/24/25

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL51686 - EPA 3546 PPCB											
Blank (BL51686-BLK1)									Prepared: 12/24/2025 Analyzed: 12/27/2025		
Aroclor 1016	ND	0.455	mg/kg								
Aroclor 1221	ND	0.455	mg/kg								
Aroclor 1232	ND	0.455	mg/kg								
Aroclor 1242	ND	0.455	mg/kg								
Aroclor 1248	ND	0.455	mg/kg								
Aroclor 1254	ND	0.455	mg/kg								
Aroclor 1260	ND	0.455	mg/kg								
Total PCBs	ND	0.455	mg/kg								
Surrogate: Tetrachloro-m-xylene	*1.20*		*mg/kg*	*1.82*		*66.0*	*30-120*				
Surrogate: Decachlorobiphenyl	*1.16*		*mg/kg*	*1.82*		*64.0*	*30-120*				
LCS (BL51686-BS1)									Prepared: 12/24/2025 Analyzed: 12/27/2025		
Aroclor 1016	7.41	0.455	mg/kg	9.09		81.5	40-130				
Aroclor 1260	7.53	0.455	mg/kg	9.09		82.9	40-130				
Surrogate: Tetrachloro-m-xylene	*1.25*		*mg/kg*	*1.82*		*69.0*	*30-120*				
Surrogate: Decachlorobiphenyl	*1.63*		*mg/kg*	*1.82*		*89.5*	*30-120*				
LCS Dup (BL51686-BSD1)									Prepared: 12/24/2025 Analyzed: 12/27/2025		
Aroclor 1016	7.62	0.455	mg/kg	9.09		83.8	40-130		2.82	25	
Aroclor 1260	7.64	0.455	mg/kg	9.09		84.1	40-130		1.44	30	
Surrogate: Tetrachloro-m-xylene	*0.00*		*mg/kg*	*1.82*			*30-120*				
Surrogate: Decachlorobiphenyl	*1.71*		*mg/kg*	*1.82*		*94.0*	*30-120*				

Sample and Data Qualifiers Relating to This Work Order

S-GC	Two surrogates are used for this analysis. One surrogate recovered within control limits therefore the analysis is acceptable.
S-08	The recovery of this surrogate was outside of QC limits.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
/\	Analyte is not certified but the state of sample origination offer certification for the Analyte

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

2510957

BULK SAMPLE FORM

York Analytical Laboratories, Inc.
120 Research Drive
Stratford, CT 06615
ph. (203) 325-1371
fx. (203) 357-0166

Field Chain-of-Custody Record

Rec'd Chain C 12-17-25 10:45
Rel Chain C 12-17-25 1405

Company: **QuES&T**

1376 Route 9

Wappingers Falls, NY 12590

Results Send Via: aholzalpfel@qualityenv.com

Invoice to: **Angela Hozalpfel**

Sampled By (Print): **Caroline Annesi & Damon Perron**

Sampled By (Sign.): C Annesi

REC: DP
12/17/25
14:05
5.1°

Project #: **25-7081**

Project ID: **Pine Bush CSD- Circleville Elementary Exterior/ Interior Caulking**

SAMPLE #	*LOCATION*	*SAMPLE DATE*	*MATRIX*	*ANALYSIS REQUESTED*	*CONTAINER*
7081-CES-PCB-01	Exterior, First Floor Window, Metal to Brick	12/15/2025	Caulk (Black)	PCB	4 OZ Glass jar
7081-CES-PCB-02	Interior, Second Floor, Staircase 2, Window, Metal to CMU	12/15/2025	Caulk (Black)	PCB	4 OZ Glass jar

ANALYSIS TURNAROUND: **Standard TAT**

PAGE__1__OF__1__

Technical Report

prepared for:

QuES & T
1376 Rt. 9
Wappingers Falls NY, 12590
Attention: Angela Holzapfel

Report Date: 12/29/2025
Client Project ID: 25-7081 Pine Bush CSD-Pine Bush HS Ext/Int Caulking
York Project (SDG) No.: 25L0959

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 12/29/2025
Client Project ID: 25-7081 Pine Bush CSD-Pine Bush HS Ext/Int Caulking
York Project (SDG) No.: 25L0959

QuES & T
1376 Rt. 9
Wappingers Falls NY, 12590
Attention: Angela Holzapfel

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 17, 2025 and listed below. The project was identified as your project: **25-7081 Pine Bush CSD-Pine Bush HS Ext/Int Caulking**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

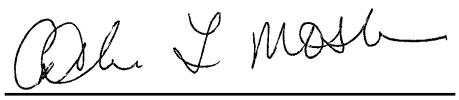
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
25L0959-01	CB-01 Exterior, Cafeteria, First Floor Window, M	Caulk	12/15/2025	12/17/2025
25L0959-02	'CB-02 Interior, Cafeteria, Window, Wood Sill to M	Caulk	12/15/2025	12/17/2025
25L0959-03	-PCB-03 Interior, Cafeteria, Window, Glass to Me	Caulk	12/15/2025	12/17/2025

General Notes for York Project (SDG) No.: 25L0959

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NYDOH-NY10854, NJDEP-CT005, PADEP-68-04440, CTDPH-PH0840; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NYDOH-NY12058, NJDEP-NY037, CTDPH-PH0837, NHDES-NH2097, MDDEP-375, PADEP-68-06231.

Approved By: 

Cassie Mosher
Laboratory Manager Stratford

Date: 12/29/2025

Client:	QuES & T	**York Sample ID:**	**25L0959-01**
Client Project:	25-7081 Pine Bush CSD-Pine Bush HS Ext/Int Caulking	**Date Received:**	12/17/2025
Client Sample ID:	7081-PHS-PCB-01 Exterior, Cafeteria, First Floor Window, Metal to CMU	**Collection Date/Time:**	12/15/25 15:00

Lab ID:	**25L0959-01**	**Laboratory:**	Stratford
Analysis:	**Polychlorinated Biphenyls by GC/ECD**	**Matrix:**	Caulk
Prep Method:	Sample Prepared by Method: EPA 3546 PPCB		

Parameter	Result	Flag	MDL	RL	Dilution	Units	Reference Method	Extracted	Analyzed	Analyst
Aroclor 1016	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ
Aroclor 1221	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ
Aroclor 1232	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ
Aroclor 1242	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ
Aroclor 1248	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ
Aroclor 1254	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ
Aroclor 1260	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ
* Total PCBs	ND		0.495	0.495	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:14	BCJ

Surrogate Recoveries	Result	Flag	Acceptance Range	Reference Method	Analyzed
Surrogate: Tetrachloro-m-xylene	*73.5 %*		*30-120*	*EPA 8082A*	*12/28/25 09:14*
Surrogate: Decachlorobiphenyl	*49.0 %*		*30-120*	*EPA 8082A*	*12/28/25 09:14*

Client:	QuES & T	**York Sample ID:**	**25L0959-02**
Client Project:	25-7081 Pine Bush CSD-Pine Bush HS Ext/Int Caulking	**Date Received:**	12/17/2025
Client Sample ID:	7081-PHS-PCB-02 Interior, Cafeteria, Window, Wood Sill to Metal Frame	**Collection Date/Time:**	12/15/25 15:00

Lab ID:	**25L0959-02**	**Laboratory:**	Stratford
Analysis:	**Polychlorinated Biphenyls by GC/ECD**	**Matrix:**	Caulk
Prep Method:	Sample Prepared by Method: EPA 3546 PPCB		

Parameter	Result	Flag	MDL	RL	Dilution	Units	Reference Method	Extracted	Analyzed	Analyst
Aroclor 1016	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ
Aroclor 1221	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ
Aroclor 1232	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ
Aroclor 1242	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ
Aroclor 1248	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ
Aroclor 1254	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ
Aroclor 1260	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ
* Total PCBs	ND		0.403	0.403	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:27	BCJ

Surrogate Recoveries	Result	Flag	Acceptance Range	Reference Method	Analyzed
Surrogate: Tetrachloro-m-xylene	*59.5 %*		*30-120*	*EPA 8082A*	*12/28/25 09:27*
Surrogate: Decachlorobiphenyl	*45.0 %*		*30-120*	*EPA 8082A*	*12/28/25 09:27*

Client:	QuES & T	**York Sample ID:**	**25L0959-03**
Client Project:	25-7081 Pine Bush CSD-Pine Bush HS Ext/Int Caulking	**Date Received:**	12/17/2025
Client Sample ID:	7081-PHS-PCB-03 Interior, Cafeteria, Window, Glass to Metal Frame	**Collection Date/Time:**	12/15/25 15:00

Lab ID:	**25L0959-03**	**Laboratory:**	Stratford
Analysis:	**Polychlorinated Biphenyls by GC/ECD**	**Matrix:**	Caulk
Prep Method:	Sample Prepared by Method: EPA 3546 PPCB		

Parameter	Result	Flag	MDL	RL	Dilution	Units	Reference Method	Extracted	Analyzed	Analyst
Aroclor 1016	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ
Aroclor 1221	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ
Aroclor 1232	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ
Aroclor 1242	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ
Aroclor 1248	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ
Aroclor 1254	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ
Aroclor 1260	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ
* Total PCBs	ND		0.485	0.485	1	mg/kg	EPA 8082A	12/24/25 8:07	12/28/25 09:41	BCJ

Surrogate Recoveries	Result	Flag	Acceptance Range	Reference Method	Analyzed
Surrogate: Tetrachloro-m-xylene	*66.0 %*		*30-120*	*EPA 8082A*	*12/28/25 09:41*
Surrogate: Decachlorobiphenyl	*58.5 %*		*30-120*	*EPA 8082A*	*12/28/25 09:41*

Certified Analyses included in this Report

Analyte	CAS #	Certifications
EPA 8082A in Caulk		
Aroclor 1016	12674-11-2	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1221	11104-28-2	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1232	11141-16-5	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1242	53469-21-9	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1248	12672-29-6	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1254	11097-69-1	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440
Aroclor 1260	11096-82-5	NYSDOH-NY10854,CTDPH-PH-0840,NJDEP-CT005,PADEP-68-04440

List of Certifications

Code	Description	Number	Expires
CTDPH-PH-0840	CTDPH - Stratford	PH-0840	06/30/2027
NJDEP-CT005	NJDEP Certification - Stratford	CT005	06/30/2026
NYSDOH-NY10854	NYSDOH NELAC/ELAP Program - Stratford	NY ELAP-10854	04/01/2026
PADEP-68-04440	PADEP Registration - Stratford	68-04440	09/30/2026

Analytical Batch Summary

Batch ID: BL51686	**Preparation Method:** EPA 3546 PPCB	**Prepared By:** JLM
YORK Sample ID	**Client Sample ID**	**Preparation Date**
25L0959-01	7081-PHS-PCB-01 Exterior, Cafeteria, First	12/24/25
25L0959-02	7081-PHS-PCB-02 Interior, Cafeteria, Wind	12/24/25
25L0959-03	7081-PHS-PCB-03 Interior, Cafeteria, Wind	12/24/25
BL51686-BLK1	Blank	12/24/25
BL51686-BS1	LCS	12/24/25
BL51686-BSD1	LCS Dup	12/24/25

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL51686 - EPA 3546 PPCB											
Blank (BL51686-BLK1)							Prepared: 12/24/2025 Analyzed: 12/27/2025				
Aroclor 1016	ND	0.455	mg/kg								
Aroclor 1221	ND	0.455	mg/kg								
Aroclor 1232	ND	0.455	mg/kg								
Aroclor 1242	ND	0.455	mg/kg								
Aroclor 1248	ND	0.455	mg/kg								
Aroclor 1254	ND	0.455	mg/kg								
Aroclor 1260	ND	0.455	mg/kg								
Total PCBs	ND	0.455	mg/kg								
Surrogate: Tetrachloro-m-xylene	*1.20*		*mg/kg*	*1.82*		*66.0*	*30-120*				
Surrogate: Decachlorobiphenyl	*1.16*		*mg/kg*	*1.82*		*64.0*	*30-120*				
LCS (BL51686-BS1)							Prepared: 12/24/2025 Analyzed: 12/27/2025				
Aroclor 1016	7.41	0.455	mg/kg	9.09		81.5	40-130				
Aroclor 1260	7.53	0.455	mg/kg	9.09		82.9	40-130				
Surrogate: Tetrachloro-m-xylene	*1.25*		*mg/kg*	*1.82*		*69.0*	*30-120*				
Surrogate: Decachlorobiphenyl	*1.63*		*mg/kg*	*1.82*		*89.5*	*30-120*				
LCS Dup (BL51686-BSD1)							Prepared: 12/24/2025 Analyzed: 12/27/2025				
Aroclor 1016	7.62	0.455	mg/kg	9.09		83.8	40-130		2.82	25	
Aroclor 1260	7.64	0.455	mg/kg	9.09		84.1	40-130		1.44	30	
Surrogate: Tetrachloro-m-xylene	*0.00*		*mg/kg*	*1.82*			*30-120*				
Surrogate: Decachlorobiphenyl	*1.71*		*mg/kg*	*1.82*		*94.0*	*30-120*				

Sample and Data Qualifiers Relating to This Work Order

S-GC	Two surrogates are used for this analysis. One surrogate recovered within control limits therefore the analysis is acceptable.
S-08	The recovery of this surrogate was outside of QC limits.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
/\	Analyte is not certified but the state of sample origination offer certification for the Analyte

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC. 25L0959

BULK SAMPLE FORM

York Analytical Laboratories, Inc.
120 Research Drive
Stratford, CT 06615
ph. (203) 325-1371
fx. (203) 357-0166

Field Chain-of-Custody Record

Rec'd Chris C 12-17-25 10:45
Rel Chris C 12-17-25 14:05
REC: DP 12/17/25 14:05 5,1°

Company: **QuES&T**

1376 Route 9

Wappingers Falls, NY 12590

Results Send Via: aholzalpfel@qualityenv.com

Invoice to: **Angela Hozalpfel**

Sampled By (Print): **Caroline Annesi & Damon Perron**

Sampled By (Sign.):

Project #: **25-7081**

Project ID: **Pine Bush CSD- Pine Bush High School Exterior/ Interior Caulking**

SAMPLE #	*LOCATION*	*SAMPLE DATE*	*MATRIX*	*ANALYSIS REQUESTED*	*CONTAINER*
7081-PHS-PCB-01	Exterior, Cafeteria, First Floor Window, Metal to CMU	12/15/2025	Caulk (Red)	PCB	4 OZ Glass jar
7081-PHS-PCB-02	Interior, Cafeteria, Window, Wood Sill to Metal Frame	12/15/2025	Caulk (Red)	PCB	4 OZ Glass jar
7081-PHS-PCB-03	Interior, Cafeteria, Window, Glass to Metal Frame	12/15/2025	Glazing (Black)	PCB	4 OZ Glass jar

ANALYSIS TURNAROUND: **Standard TAT**

PAGE__1__OF__1__

Appendix E:
PERSONNEL LICENSES & CERTIFICATIONS

NEW YORK STATE | Department of Labor

WORKING FOR YOU

DIVISION OF SAFETY & HEALTH LICENSE AND CERTIFICATE UNIT, STATE OFFICE CAMPUS, BLDG. 12, ALBANY, NY 12226

ASBESTOS HANDLING LICENSE

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9, Wappinger Falls, NY 12590

License Number: 29085
License Class: RESTRICTED
Date of Issue: 01/07/2026
Expiration Date: 01/31/2027
Duly Authorized Representative: Lawrence J Holzapfel

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Amy Phillips, Director
For the Commissioner of Labor

NEW YORK STATE

MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISE ("MWBE")

CERTIFICATION

Empire State Development's Division of Minority and Women's Business Development grants a

Minority Business Enterprise (MBE)

pursuant to New York State Executive Law, Article 15-A to:

Quality Environmental Solutions & Technologies Inc. DBA QuEST

Certification Awarded on: May 13, 2024
Expiration Date: May 13, 2029
File ID#: 49952

NEW YORK STATE OF OPPORTUNITY. Division of Minority and Women's Business Development

A Division of Empire State Development

United States Environmental Protection Agency

This is to certify that

Quality Environmental Solutions & Technologies, Inc.

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint renovation, repair, and painting activities pursuant to 40 CFR Part 745.89

In the Jurisdiction of:

All EPA Administered States, Tribes, and Territories

This certification is valid from the date of issuance and expires December 01, 2026

NAT-119213-3

Certification #

November 09, 2021

Issued On

Michelle Price, Chief

Lead, Heavy Metals, and Inorganics Branch

NEW YORK STATE DEPARTMENT OF HEALTH

RADIOACTIVE MATERIALS LICENSE

Pursuant to the Public Health Law, Part 16 of the New York State Sanitary Code, Industrial Code Rule 38, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing radioactive material(s) for the purpose(s), and at the place(s) designated below. The license is subject to all applicable rules, regulations, and orders now or hereafter in effect of all appropriate regulatory agencies and to any conditions specified below.

1. NAME OF LICENSEE	3. LICENSE NUMBER
FEIN 14-1800097 Quality Environmental Solutions and Technologies, Inc. Phone (845) 298-6031	C2939 4. EXPIRATION DATE **June 15, 2026**
2. ADDRESS OF LICENSEE	5a. REFERENCE / b. AMENDMENT NO.
1376 Route 9 Wappingers Falls, New York 12590	**DH 16-1** **DH 16-97** **5**

6. Radioactive Materials (elements in mass number)	7. Chemical and/or physical form	8. Maximum quantity licensee may possess at any one time
A. Cadmium 109	A. Sealed source	A. 28 millicuries

9. Authorized use.

A. The licensee is authorized to use any sealed source or associated portable x-ray fluorescence device which has been manufactured and distributed in accordance with a specific license issued by an Agreement State or the United States Nuclear Regulatory Commission. Combinations of sources and devices must be compatible for use as stated in a Sealed Source and Device Registration Certificate (i.e., stated in the registration certificate for the source or device).

B. No single source may exceed the maximum activity specified for that nuclide in the Sealed Source and Device Registration Certificate for any device in which the source is to be used.

C. Only portable x-ray fluorescence devices which require continuous activation by the operator, and which incorporate a mechanism to automatically return the source to its shielded position (e.g., a "dead-man" switch) may be obtained and used under this license. Devices which rely upon positive action by the operator to shield the source, such as operation of a key switch, or which do not require continuous operator activation during exposure, are not authorized under this license.

10. A. The Radiation Safety Officer (RSO) for this License is **Rudy Lipinski**.

    B. Licensed material shall be used by, or under the supervision of, the Radiation Safety Officer, by licensee personnel trained and certified by the manufacturer. The licensee shall maintain a complete and accurate record of the qualifications of each person permitted to use radiation sources under this license.

11. Except as specifically provided otherwise in this License, the licensee shall conduct its program in accordance with the statements, representation and procedures contained in the documents, including any enclosures, listed below. The Department's Regulations shall govern, unless the statements, representation and procedures in the licensee's application and correspondence are more restrictive than the Regulations.

    A. License Renewal Application dated March 13, 2006, signed by Vincent R. Lander, with attachments.

    B. License Renewal Request dated March 8, 2016, signed by Suann Lander, with attachments.

12. A. Licensed material shall be stored at the location indicated in Condition 2 and may be used at temporary job sites of the licensee anywhere within the State of New York, where the Department of Health exercises jurisdiction.

    B. Overnight storage at other locations shall be in accordance with statements referenced in Condition 11 of the license, provided that such storage may not be in a residence, or in an attached garage except within a vehicle. Any vehicle used for storage shall be driven only for purposes associated with use or transport of the contained radioactive material, by a person qualified to use the material, and no passengers shall be carried unless they are also involved in work under this license. Vehicular storage shall only be allowed if no other storage is possible and shall not exceed five (5) consecutive nights unless authorization to exceed this limit is obtained from the Department.

    C. Under no circumstances shall radioactive material authorized by this license be transferred to the custody of any person or firm other than the licensee, or be used or stored by another person or firm or its employees; unless that person or firm possesses a valid license to possess and use such radioactive material.

13. Sealed sources containing radioactive materials shall not be opened or removed from devices.

14. A. The licensee is not authorized to dismantle, repair or affect any changes in the source holders/devices.

    B. The licensee shall not alter labels attached to source holders or devices, and shall maintain labels in legible condition at all times.

NEW YORK STATE DEPARTMENT OF HEALTH

RADIOACTIVE MATERIALS LICENSE

3. License Number C2939 **5a. Reference DHs 16-1 & 16-97** **b. Amendment No. 5**

15. The licensee shall instruct persons who engage in work under the license, in accordance with 10 NYCRR 16.13(c). Such instruction shall include the licensee's operating and emergency procedures, and other information contained in documents incorporated in Condition 11.

16. The licensee shall conduct a physical inventory every six (6) months to account for all devices received and possessed under the License. The records of the inventories shall be maintained for three (3) years from the date of the inventory for inspection by the Department, and shall include the quantities and kinds of licensed material, manufacturer's name and model number, location of devices, the date of the inventory, and the name of the person who performed it.

17. A. The licensee shall maintain a utilization log containing the identification of devices used, dates removed and returned to storage, the location of use, and the identity of user.

B. The log shall be kept at the location of storage and shall contain sufficient detail to enable the licensee to inform the Department, at any time, of the exact location of each device.

18. Current copies of the following documents shall be maintained at temporary job sites for Department inspection:

A. The manufacturer's instruction manual and the licensee's operating and emergency procedures.

B. A copy of the results of the latest test for leakage and/or contamination performed on the sealed sources.

C. A copy of this license.

19. In the event that a theft, loss or other serious incident does occur, the Department shall be notified immediately by telephone and subsequent information acquired by the licensee shall be reported as it is received. All device users must carry the NYSDOH's current telephone number in their emergency procedures.

20. The licensee shall ensure that all persons authorized to use portable devices comply with safe use and maintenance procedures and that they do not leave a device unattended or unsecured at any time, even for a few minutes.

FOR THE NEW YORK STATE DEPARTMENT OF HEALTH

Date: JUN 15 2016

By _____

Daniel J. Samson, CHP, Chief
Radioactive Materials Section
Bureau of Environmental Radiation Protection

DJS/NAK:ks

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2026
Issued April 01, 2025

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL STASCAVAGE
EAS INC - EASTERN ANALYTICAL SERVICES INC
4 WESTCHESTER PLAZA
ELMSFORD, NY 105231610

NY Lab Id No: 10851

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual
	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Asbestos-Vermiculite-Containing Mate	Item 198.8 of Manual
Lead in Dust Wipes	EPA 7000B
Lead in Paint	EPA 7000B

Sample Preparation Methods

	EPA 3050B

Serial No.: 70280

Property of the New York State Department of Health. Certificates are valid only at the address shown and must be conspicuously posted by the laboratory. Continued accreditation depends on the laboratory's successful ongoing participation in the Program. Consumers may verify a laboratory's accreditation status online at https://apps.health.ny.gov/pubdoh/applinks/wc/elappublicweb/, by phone (518) 485-5570 or by email to elap@health.ny.gov.

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

ABRAHAM CASTELLANOS
CLASS(EXPIRES)
C ATEC (05/26) H PM (05/26)
D INSP (05/26) G SUPR (05/25)

CERT# 25-6ZVXY-SHAB
DMV# 209831209

MUST BE CARRIED ON ASBESTOS PROJECTS

01213 007535858 09

IF FOUND, RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12226

OSHA
Occupational Safety and Health Administration

20-006275721

This card acknowledges that the recipient has successfully completed:

10-hour Construction Safety and Health

This card issued to:

Abraham Castellanos

Robert Serino	6/28/2022
Trainer Name	Date Issued

OSHA Training Institute Education Centers®
University of South Florida

813-974-2284
usfotiec-cards@usf.edu

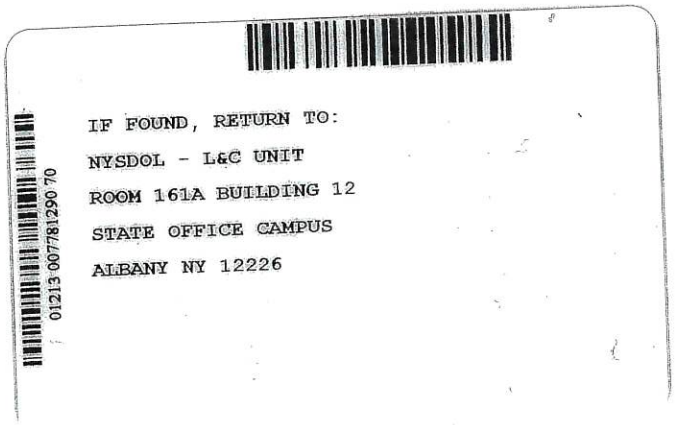
OSHA recommends Outreach Training Courses as an orientation to occupational safety and health for workers. Participation is voluntary. Workers must receive additional training on specific hazards of their job. This course completion card does not expire.

Use or distribution of this card for fraudulent purposes, including false claims of having received training, may result in prosecution under 18 U.S.C. 1001. Potential penalties include substantial criminal fines, imprisonment up to 5 years, or both.

To verify this training scan the QR code with your mobile device.

Rev. 1/2016

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE
N.Y.S
DAMON L PERRON
CLASS(EXPIRES)
D INSP (05/27) C ATEC (05/26)
H PM (05/26)
CERT# 25-6HBGJ-SHAB
DMV# 650873315
MUST BE CARRIED ON ASBESTOS PROJECTS


01213 007781290 70
IF FOUND, RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12226

360 TRAINING®

CERTIFICATE OF COMPLETION

This certifies that

Damon Perron

has successfully completed the course

OSHA 10 Hour Outreach Training Program - Construction

CEUs 1.0 | **Credit Hours** 10.00 | **Completion Date** 09/25/2025

ACCREDITED IACET PROVIDER

Jason Cole, Trainer C 26-0113289 and G 26-0084457

Scan to Verify

"As an OSHA Outreach Training Program trainer, I affirm that I have conducted this OSHA Outreach Training Program training class in accordance with OSHA Outreach Training Program requirements. I will document this class to my OSHA Authorizing Training Organization. Upon successful review of my documentation, I will provide each student their course completion card within 90 calendar days of the end of the class."

"As an IACET Accredited Provider, 360training.com, Inc. offers IACET CEUs for its learning events that comply with the ANSI/IACET Continuing Education and Training Standard."

THIS CERTIFICATE IS NON-TRANSFERABLE

6504 Bridge Point Parkway, Suite 100 | Austin, TX 78730 | 360training.com

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

DE'SHAWN D SMITH
CLASS(EXPIRES)
D INSP (04/26) H PM (04/26)
C ATEC (04/26)

CERT# 25-6ZTJO-SHAB
DMV# 415884974

MUST BE CARRIED ÔN ASBESTOS PROJECTS

OSHA
Occupational Safety and Health Administration

26-007525932

This card acknowledges that the recipient has successfully completed:

10-hour Construction Safety and Health

This card issued to:

DESHAWN SMITH

Jason Lane Cole	03/22/2024
Trainer Name	Date of Issue

OSHA Training Institute Education Centers
The University of Texas at Arlington

866-906-9190
www.uta.edu/ded/osha

OSHA recommends Outreach Training Courses as an orientation to occupational safety and health for workers. Participation is voluntary. Workers must receive additional training on specific hazards of their job. This course completion card does not expire.

Use or distribution of this card for fraudulent purposes, including false claims of having received training, may result in prosecution under 18 U.S.C. 1001. Potential penalties include substantial criminal fines, imprisonment up to 5 years, or both.

To verify this training, scan the QR code with your mobile device.

Rev. 1/2016

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

JESSICA E LOPEZ
CLASS(EXPIRES)
C ATEC (06/26) D INSP (06/26)
H PM (06/26)

CERT# 25-6AJ9Y-SHAB
DMV# 262028351

MUST BE CARRIED ON ASBESTOS PROJECTS

01213 007537451 22

IF FOUND, RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12226

OSHA
Occupational Safety and Health Administration

20-006275724

This card acknowledges that the recipient has successfully completed:

10-hour Construction Safety and Health

This card issued to:

Jessica Lopez

Robert Serino	6/28/2022
Trainer Name	Date Issued

OSHA Training Institute Education Centers®
University of South Florida

813-974-2284
usfotiec-cards@usf.edu

OSHA recommends Outreach Training Courses as an orientation to occupational safety and health for workers. Participation is voluntary. Workers must receive additional training on specific hazards of their job. This course completion card does not expire.

Use or distribution of this card for fraudulent purposes, including false claims of having received training, may result in prosecution under 18 U.S.C. 1001. Potential penalties include substantial criminal fines, imprisonment up to 5 years, or both.

To verify this training scan the QR code with your mobile device.

Rev. 1/2016

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

CAROLINE M ANNESI
CLASS(EXPIRES)
D INSP (03/26) H PM (03/26)
C ATEC (03/26)

CERT# 25-6TL1I-SHAB
DMV# 840820284

MUST BE CARRIED ON ASBESTOS PROJECTS

01213 007537467 81

IF FOUND, RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12226

OSHA
Occupational Safety and Health Administration

26-007453621

This card acknowledges that the recipient has successfully completed:

10-hour Construction Safety and Health

This card issued to:

CAROLINE ANNESI

Jason Lane Cole
Trainer Name

05/29/2023
Date of Issue

OSHA Training Institute Education Centers
The University of Texas at Arlington

866-906-9190
www.uta.edu/ded/osha

OSHA recommends Outreach Training Courses as an orientation to occupational safety and health for workers. Participation is voluntary. Workers must receive additional training on specific hazards of their job. This course completion card does not expire.

Use or distribution of this card for fraudulent purposes, including false claims of having received training, may result in prosecution under 18 U.S.C. 1001. Potential penalties include substantial criminal fines, imprisonment up to 5 years, or both.

To verify this training, scan the QR code with your mobile device.

Rev. 1/2016

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

DILLON T STAMPER
CLASS(EXPIRES)
C ATEC (12/26) D INSP (12/26)
H PM (12/26)

CERT# 25-6LUH4-SHAB
DMV# 190870975

MUST BE CARRIED ON ASBESTOS PROJECTS

01213 007784839 80

IF FOUND, RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12226

OSHA
Occupational Safety and Health Administration

20-006275725

This card acknowledges that the recipient has successfully completed:

10-hour Construction Safety and Health

This card issued to:

Dillon Stamper

Robert Serino	6/28/2022
Trainer Name	Date Issued

OSHA Training Institute Education Centers®
University of South Florida

813-974-2284
usfotiec-cards@usf.edu

OSHA recommends Outreach Training Courses as an orientation to occupati >nal safety and health for workers. Participation is voluntary. Workers must receive additional training on specific hazards of their job. This course completion card does not expire.

Use or distribution of this card for fraudulent purposes, including false claims of having received training, may result in prosecution under 18 U.S.C. 1001. Potential penalties include substantial criminal fines, imprisonment up to 5 years, or both.

To verify this training scan the QR code with your mobile device.

Rev. 1/2016

SECTION 003132
GEOTECHNICAL DATA

PART 1 GENERAL

1.01 GEOTECHNICAL DATA

A. This Section with its referenced attachments are part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.

B. Because subsurface conditions indicated by the soil borings are a sampling in relation to the entire construction area, and for other reasons, the Owner, the Architect, the Architect's consultants, and the firm reporting the subsurface conditions do not warranty the conditions below the depths of the borings or that the strata logged from the borings are necessarily typical of the entire site. Any party using the information described in the soil borings and geotechnical report shall accept full responsibility for its use.

C. A geotechnical investigation report for Project, prepared by Akshar Engineering LLC, dated November 18, 2025, is available for viewing and is appended to this Document.
   1. The opinions expressed in this report are those of a geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by a geotechnical engineer. Owner is not responsible for interpretations or conclusions drawn from the data.
   2. Any party using information described in the geotechnical report shall make additional test borings and conduct other exploratory operations that may be required to determine the character of subsurface materials that may be encountered.

D. Related Requirements:
   1. Section 002000 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.
   2. Section 003119 "Existing Condition Information" for information about existing conditions that is made available to bidders.
   3. Section 003126 "Existing Hazardous Material Information" for hazardous materials reports that are made available to bidders.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION 003132

This page intentionally left blank

REPORT OF GEOTECHNICAL INVESTIGATION

For

Pine Bush CSD – Phase 2 Site Improvements
(Pakanasink Elementary School & Circleville Middle School)

At
Pine Bush Center School District Circleville Schools
1951–1953 NYS Route 302,
Pine Bush, New York 12566

CPL Project No. R25.17714.00
Prepared For:
CHRIS LADANYI, AIA

CPL
ARCHITECTURE, ENGINEERING, AND PLANNING.

Prepared By:

AKSHAR ENGINEERING

AKSHAR ENGINEERING LLC
November 18, 2025

PREPARED BY:
MOULIK PANDYA

REVIEWED BY:
ARVIND V. NASIT, P.E.
AKSHAR ENGINEERING LLC

November 18, 2025
File No. 2025-134-002

Attention**:** CHRIS LADANYI, AIA
CPL ARCHITECTURE, ENGINEERING, AND PLANNING

REGARDING: REPORT OF GEOTECHNICAL ENGINEERING SERVICES
Pine Bush CSD – Phase 2 Site Improvements
Pakanasink Elementary School & Circleville Middle School
Circleville Schools 1951–1953 NYS Route 302,
Pine Bush, Orange County, New York 12566

Dear Mr. Ladanyi,

The enclosed report summarizes the results of our geotechnical investigation and recommendations conducted in support of the Proposed full depth replacement of asphalt pavement sections along the two access drive to Pakanasink Elementary School and Circleville Middle School, which connects to NYS Route 302 and Renton Road. The proposed development also includes construction of a new maintenance storage building with an asphalt access drive adjacent to the Circleville Middle School. The subsurface exploration was performed on October 29, 2025, through November 1, 2025, following our assumptions and scopes of services from our proposal dated September 19, 2025, followed by your authorizations on October 2, 2025.

We appreciate the opportunity to work with you on this project. Please contact us if you wish to discuss this report or any aspect of the project.

Sincerely,
AKSHAR ENGINEERING LLC
ARVIND V. NASIT, P.E

Detailed recommendations are presented in the following report.

Table of Contents

1.0 PROJECT BACKGROUND

1.1 GENERAL

1.2 SERVICES PERFORMED

1.3 PROPOSED CONSTRUCTION & EXISTING SITE CONDITIONS

2.0 FIELD INVESTIGATION

2.1 REGIONAL GEOLOGY REVIEW

2.2 SUBSURFACE CONDITIONS

2.3 GROUNDWATER

3.0 PROPOSED STRUCTURE SUPPORT RECOMMENDATIONS

3.1 GENERAL

3.2 FOUNDATIONS

3.2.1 SHALLOW FOUNDATION

3.3 SUGGESTED SOIL PARAMETERS FOR ANALYSIS AND DESIGN

3.4 SEISMIC SITE EVALUATION

3.5 LATERAL EARTH PRESSURES

3.6 PAVEMENT RECOMMENDATION

4.0 CONSTRUCTION, EARTHWORK, & ADDITIONAL CONSIDERATIONS

4.1 SUBGRADE PREPARATION AND FOUNDATION CONSIDERATIONS

4.2 GROUND FLOOR SLAB

4.3 BACKFILLING

4.3.1 GENERAL

4.3.2 COMPACTED GRANULAR FILL (CGF)

4.3.3 COMMON FILL

4.3.4 ONSITE SOIL

4.4 EXCAVATIONS

4.5 CONTROL OF GROUNDWATER

4.6 ADDITIONAL CONSIDERATIONS

5.0 LIMITATIONS

6.0 APPENDICES

APPENDIX A: SITE LOCATION

APPENDIX B: BORING LOCATION PLAN

APPENDIX C: SOIL BORING LOGS

APPENDIX D: GEOTECHNICAL TERMS, SYMBOLS, AND CLASSIFICATION

1.0 PROJECT BACKGROUND

1.1 General

The completion of ten (10) soil boreholes was performed for the proposed full depth replacement of asphalt pavement sections along the two-access drive to Pakanasink Elementary School and Circleville Middle School, which connects to NYS Route 302 and Renton Road. The proposed development also includes construction of a new maintenance storage building with an asphalt access drive adjacent to the Circleville Middle School, located at 1951–1953 NYS Route 302 in the Hamlet of Pine Bush, Orange County, New York. The results of our geotechnical investigation and corresponding recommendations are presented in this report. The foundation recommendations and this investigation report were prepared in accordance with our proposal dated September 19, 2025. This report has also been prepared in accordance with Section 1809.6 of the 2020 Building Code of New York State (BCNYS).

The following documents were provided to us by your office, which subsequently were utilized in preparation for our geotechnical report:

- An RFP for Geotechnical Services prepared by CPL dated September 4, 2025.
- A Geotechnical Scoping Plan prepared by CPL dated October 10, 2025.

1.2 Services Performed

This analysis, based on our field reconnaissance, subsurface investigation program, and geotechnical engineering study, determined the properties of the subsurface materials present at the site and serves as the basis for detailed recommendations concerning:

- The depth, type, and minimum size of foundations;
- Allowable bearing pressures to be used in foundation design;
- Groundwater control measures;
- Guideline construction procedures;
- Additional Geotechnical Engineering aspects of the project.

The purpose of the investigation was to identify the subsurface soil and foundation conditions in order to determine the relevant parameters for the design and construction of new foundations.

1.3 Proposed Construction & Existing Site Conditions

The proposed development sites are located at 1951–1953 NYS Route 302 in the Hamlet of Pine Bush, Orange County, New York. The property is part of the Pine Bush Central School District campus and includes the Pakanasink Elementary

School (ES) and Circleville Middle School (MS) facilities. The project areas are presently occupied by existing school buildings and associated paved access drives and circulation areas, with surrounding open land and an existing wetland system near the southern portion of the Circleville MS area between the campus and NYS Route 302, as indicated on the Site Location Plan. The broader campus is bordered by local roadways including NYS Route 302, Cardinal Trail, and Breezy Lane, with adjacent residential and undeveloped parcels beyond the school property limits, as shown on the attached figures.

The proposed development will consist of Phase 2 site improvements at the Pakanasink ES and Circleville MS portions of the campus. Planned improvements at Pakanasink ES include modifications to the existing access road and associated paved areas within the approximate paving limits shown on the plans. At Circleville MS, the proposed work will include a new 40-foot by 80-foot maintenance/storage building, paved building access, and associated access road and pavement improvements in the vicinity of the Phase 1 stadium site, with project limits extending toward the NYS Route 302 right-of-way and adjacent to the existing wetland. A detailed site location plan and boring layout, including the locations of borings B-1 through B-10, are provided in Appendix A and B of this report.

2.0 FIELD INVESTIGATION

2.1 Regional Geology Review

The subject site is situated within the Appalachian Ridge and Valley Physiographic Province of southeastern New York State, in the vicinity of the Shawangunk Kill and Wallkill River valleys. The local surficial geology is dominated by deposits associated with the advance and retreat of Pleistocene glaciation. Along this portion of Orange County, the valley floors and lower slopes contain irregular, mixed deposits of glacial outwash sand and gravel, ice-contact stratified drift, and glacial till derived from meltwater and ice-margin processes. These materials commonly include coarse sand and gravel with localized cobbles and boulders, consistent with the granular soils and practical refusal conditions encountered in the project borings.

Beneath the glacial overburden, the bedrock geology of the Town of Crawford and surrounding Orange County is underlain primarily by sedimentary rocks of Ordovician age, including the Martinsburg Formation and related units. These formations consist of interbedded dark gray shale, siltstone, and fine-grained graywacke, with local carbonate and quartzitic units present toward the Shawangunk Ridge. The strata are typically fissile to thinly laminated, with bedding ranging from massive to finely layered sequences. Fresh bedrock exposures tend to appear dark gray to black, while weathered surfaces exhibit brownish-gray to olive-gray tones. Weathering near the surface, combined with glacial erosion, has produced a subdued bedrock topography that is largely mantled by the overlying drift and outwash deposits.

The hydrogeologic setting in this portion of Orange County is characterized by sand-and-gravel valley-fill aquifers developed within the glacial outwash and ice-contact deposits along the Shawangunk Kill and upper Wallkill Valley. These mixed outwash–till sequences contain lenses and channels of coarse sand and gravel that form small but relatively permeable aquifers, some of which have been utilized historically for municipal and district water supplies in the Pine Bush area. The coarse granular deposits provide comparatively high permeability, while intervening zones of till, silt, or finer-grained sediments can locally create perched or semi-confined groundwater conditions.

The information presented above is based on a review of published geological and hydrogeologic data from the United States Geological Survey (USGS), New York State and Orange County mapping resources, and regional geologic literature for the Wallkill and Shawangunk Kill valleys.

2.2 Subsurface Conditions

The field exploration was conducted by drilling ten (10) boreholes, identified as B-1 through B-10, across the project site. The borings were advanced at locations selected to evaluate subsurface conditions beneath the planned Phase 2 building, access drives, and pavement improvements. Each boring was sampled and logged in accordance with standard geotechnical practice to document soil stratigraphy, collect representative samples, and observe groundwater conditions.

The exploration boreholes were completed using a tripod-mounted drilling rig in general accordance with ASTM D5783 and standard geotechnical practice. Soil samples were obtained using the Standard Penetration Test (SPT) method, in general accordance with ASTM D1586, employing a 1-3/8-inch inside diameter (I.D.) split spoon sampler driven by a 140-pound hammer free-falling 30 inches. The number of blows for each six inches of penetration was recorded on the soil exploration boring logs. Depth to groundwater was estimated based on visual observations of the moisture content in split spoon soil samples and directly measured after the completion of each boring. Unconfined compressive strength was measured for cohesive soil using a pocket penetrometer (ASTM WK27337). The soil matrix was classified in accordance with the Unified Soil Classification System (USCS).

The field exploration program was monitored and logged by a field engineer from Akshar Engineering. The soil boring locations were provided by the design team and are shown on the site plan. The locations are presumed to be accurate within a few feet. A total of ten (10) exploration boreholes, identified as B-1 through B-10, were drilled by Geotech Drilling LLC of East Orange, New Jersey, under the supervision of a representative from Akshar Engineering during the period of October 29, 2025, through November 1, 2025. Records of the borehole logs are provided in Appendix C of this report.

The subsurface materials encountered are detailed in the Soil Exploration Records in Appendix C. Stratification lines on the boring logs indicate approximate boundaries between soil types, though transitions may be gradual, and some strata may be absent in certain locations. Subsurface conditions at other locations across the property may differ from those observed at the soil exploration locations. Overall, the subsurface conditions are generally consistent with the regional geology. The borings revealed the following generalized strata in increasing depth below the surface.

Surface Cover: The exploration borings were drilled through surface covers consisting of approximately one (1) foot of topsoil and vegetated ground at borings B-1 through B-6, and about three (3) inches of asphalt pavement at borings B-7 through B-10.

Stratum I – Granular Fill Deposits (Fill): In the paved areas of the site, beneath the surface pavement, borings B-7 through B-10 encountered granular fill materials extending to depths of about 0.25 to 2.0 feet below the existing ground surface. These deposits typically consisted of blackish-brown coarse to fine sand with some gravel, moist. The fill was generally medium dense to dense.

Stratum II – Native Granular Sand Deposits (USCS: SM, SP, SC-SM, SC): Beneath the surface cover at borings B-1 through B-6, and underlying the granular fill at borings B-7 through B-10, the borings encountered native granular deposits across the site that extended to the termination depths of the explorations, ranging between approximately 6.75 feet and 14.7 feet below the existing ground surface. These deposits typically consisted of brown to dark brown and blackish-brown coarse to fine sand with varying amounts of gravel, trace to little silt, and occasional clay, with localized intervals of poorly graded sand (SP) and clayey/silty sand (SC-SM and SC) as logged in the boring records. The soils

were generally medium dense in the upper few feet, becoming dense to very dense with depth, with numerous high blow counts and practical refusal conditions recorded in several borings. Most borings were terminated between about 8 and 10 feet below grade, with the shallowest boring ending at approximately 6.75 feet and the deepest at approximately 14.7 feet, often due to SPT split-spoon refusal likely associated with cobbles or boulders within the granular matrix.

Note: Due to numerous visible exposed rock outcrops in the vicinity of the proposed storage garage area, several of the planned borings (B-1 through B-6) were offset slightly in the field to avoid drilling directly on the outcrop. The final boring locations and offsets are shown on the Boring Location Plan.

2.3 Groundwater

The presence of water was not observed within any of the boreholes. However, trapped groundwater conditions should be expected, especially on top of the dense to very dense materials and rock outcrops, as localized boulders and rock outcrops were observed and may be present in isolated locations throughout the property. Exposed rock outcrops were observed within the vicinity of the property. In addition, the presence of wetlands were noted around the perimeter of the subject site. This factor, added to the variability in grading conditions around the site, suggests the presence of additional trapped water conditions to be expected at additional locations.

Moisture was detected based on our observations of the soils obtained in our investigation and our judgement corresponding to our analysis of the area's geology and nearby water sources. Based on our experience with this area and the varying elevations and slopes present at the site; we expect that perched groundwater conditions may be developed in areas of changing elevations and especially following large periods of precipitation.

3. PROPOSED STRUCTURE SUPPORT RECOMMENDATIONS

3.1 General

Our geotechnical survey, consisting of the completion of ten (10) borings, included four (4) borings (B-1 through B-4) advanced within the proposed storage building footprint, two (2) borings (B-5 and B-6) advanced in the area of new pavement construction adjacent to the storage structure, and four (4) borings (B-7 through B-10) advanced within the existing pavement replacement areas. The borings within the proposed storage building footprint revealed the presence of native granular soils of Stratum II which are generally competent for shallow foundation support. Hence, it is our opinion that the proposed storage structure should be supported on shallow foundations bearing directly on the undisturbed native soils of Stratum II, following the removal of all surface covers and any additional highly disturbed materials, including disturbed natural soils. The proposed foundation bearing materials shall be thoroughly inspected and prepared to the satisfaction of the geotechnical inspecting engineer retained by the owner before the foundation work takes place.

The borings completed in the pavement areas (B-5 through B-10) indicate similar granular subsurface conditions that are generally suitable for support of the proposed pavement sections. Borings B-5 and B-6 are located within the limits of new pavement construction adjacent to the proposed storage structure, while borings B-7 through B-10 are located within the existing access drives where full-depth replacement of asphalt pavement sections is planned along the two access drives serving Pakanasink Elementary School and Circleville Middle School, which connect to NYS Route 302 and Renton Road. Pavement subgrades in these areas will be suitable for support of the proposed sections provided all existing pavement (where present), underlying granular fill of Stratum I (where present), and any loose, disturbed, or otherwise unsuitable materials are removed, and the exposed subgrade is properly proof-rolled, repaired as necessary, and compacted as directed by the geotechnical inspecting engineer. For detailed pavement design and thickness recommendations, refer to Section 3.6 of this report.

3.2 Foundations

Based on our understanding, the proposed development will include a new one-story storage/maintenance building with associated exterior slabs and new/reconstructed pavement areas. We recommend that the storage building and any ancillary at-grade structures be supported using conventional shallow foundations bearing on the prepared native soils of Stratum II.

Numerous exposed rock outcrops were observed in the vicinity of the proposed storage building area, and practical refusal encountered in several borings indicates the presence of boulders and/or rock outcrops within the granular matrix. As such, localized boulders or rock outcrops may be encountered within the proposed subgrade materials for foundation elements. Where sound rock is exposed at or near the design bearing elevation, shallow foundations bearing directly on

rock may be utilized, provided the bearing surface is cleaned, roughly level, and free of loose or deleterious materials prior to placement of foundation concrete.

3.2.1 Shallow Foundation

The relative densities of the native granular soils of Stratum II within the proposed storage building footprint consisted of medium dense to very dense materials, suitable for direct shallow foundation bearing under the proposed structure's superimposed loads. Thus, based on the anticipated structural loads of the proposed storage/maintenance building at Circleville Schools, individual spread footings and wall footings may be sized utilizing an allowable bearing pressure of 5,000 pounds per square foot (psf) bearing on undisturbed native soils of Stratum II. If loose or disturbed soils are present during inspection by the geotechnical engineer, they should be removed entirely from the building footprint and its zone of influence and replaced as necessary to reach competent subgrade bearing materials.

Given the presence of wetlands in the vicinity of the project site, it is likely that additional unsuitable or disturbed soil materials beyond those identified during our field investigation may be encountered in other areas of the site during construction. These materials may include soft, organic, or otherwise unstable soils that are not suitable for supporting the anticipated structural elements.

If such conditions are encountered, we recommend that these materials be completely removed and replaced with properly structural fill, in accordance with the guidelines provided in this report. The replacement fill should meet the specifications for controlled structural fill, including appropriate material type, placement procedures, and compaction requirements, to ensure long-term stability and performance of the proposed development.

Prior to the placement of reinforcing steel, the footing subgrades should be thoroughly cleaned of loose soil and mud, debris, and all other deleterious material. An engineer licensed in the State of New York should inspect the prepared subgrade. At the recommended bearing pressure of 5,000 psf, total and differential settlements of shallow foundations are expected to be within tolerable limits (generally less than about one inch), provided that the subgrade is prepared and inspected in accordance with the recommendations of this report and verified by a licensed Geotechnical Engineer. Subgrade preparation guidelines in Section 4.1 should be closely followed. Failure to implement these measures may result in excessive settlements under the proposed structures.

All excavation work should be executed with caution to prevent disturbance to the surrounding ground conditions and to maintain a stable working environment throughout construction.

3.3 Suggested Soil Parameters for Analysis and Design

Preliminary soil properties for preliminary engineering evaluation have been developed based on visual soil classification, penetration test data, published data, and our experience with similar formations in the area of the project. The suggested soil properties are provided in the following table. These preliminary properties have been used to develop the evaluation and recommendations contained in this report.

Soil Stratum	Unit Weight (pcf[1])		Strength Parameters			
	Total	Submerged	Drained Strength		Undrained Strength	
			c (psf)[2]	φ°	S_u (psf)	φ°
Fill (Stratum I)	118	56	0	30	0	30
Upper Native Sandy Deposits (Stratum II)	123	61	0	33	0	33
Dense Granular Outwash (Stratum II)	126	64	0	34	0	34

Notes: Pounds per cubic feet (pcf) & Pounds per square foot (psf)

3.4 Seismic Site Evaluation

Seismic Site Evaluation		
Description	Parameter	Parameter
Mapped Spectral acceleration for short periods:	Ss	0.2
Mapped Spectral acceleration for 1-sec period:	S1	0.054
Site Class	D	
Site Coefficient:	Fa	1.6
Site Coefficient:	Fv	2.40
Numeric seismic design for value at 0.2 second SA	SDS	0.213
Numeric seismic design for value at 1 second SA	SD1	0.086

Based on the soil properties found in our borehole and the previously mentioned seismic site evaluations, groundwater levels, and relative densities of soils, we anticipate the risk of liquefaction is negligible.

3.5 Lateral Earth Pressures

Foundation elements, including spread footings, strip footings, wall footings, and retaining walls, should be designed to resist lateral earth pressures exerted by the surrounding soils. The following lateral earth pressure parameters are recommended for use in the design of retaining structures and foundations, as applicable. These values assume that the walls are adequately drained or that a drainage system is installed in accordance with NYSBC 2020, Section 1610 specifications.

Lateral Earth Pressure Parameters						
Stratum	Unit Weight (pcf)	Friction Angle (Φ)	Cohesive Strength C_u (psf)	Active Earth Pressure Coefficient (k_a)	Passive Earth Pressure Coefficient (k_p)	At Rest Earth Pressure Coefficient (k_o)
Fill (Stratum I)	118	30	0	0.333	3.000	0.50
Upper Native Sandy Deposits (Stratum II)	123	33	0	0.295	3.392	0.46
Dense Granular Outwash (Stratum II)	126	34	0	0.283	3.537	0.44

3.6 Pavement Recommendation

New pavements and pavement replacements associated with the Phase 2 improvements at Pakanasink Elementary School and Circleville Middle School may be constructed on stabilized in-place native soils or newly placed and properly compacted load-bearing structural fill. Prior to pavement placement, all surface cover materials including topsoil, vegetation, existing asphalt pavement, and granular fill where present should be completely removed within the proposed pavement areas. The exposed subgrades should then be compacted using a minimum 10-ton smooth-drum roller and proof-rolled with a loaded tri-axle dump truck under the observation of the on-site representative of the Geotechnical Engineer to evaluate stability. Any zones exhibiting pumping, rutting, heaving, or general instability should be selectively undercut to competent granular material and replaced with well-graded granular subbase or approved load-bearing fill.

Borings B-5 and B-6 are located in the area of new pavement construction adjacent to the proposed storage building, while borings B-7 through B-10 fall within the existing asphalt access drives scheduled for full-depth pavement replacement. The replacement work includes reconstruction of the pavement sections along the two school access drives serving Pakanasink Elementary School and Circleville Middle School, which connect to NYS Route 302 and Renton Road. The subsurface conditions encountered in these borings generally consist of asphalt pavement underlain by granular fill (where present), followed by medium dense to very dense granular sand with varying amounts of silt and gravel, which is suitable for pavement support when properly prepared.

Depending on the time interval between subgrade preparation and paving operations, the contractor should anticipate localized remedial work to re-establish a stable platform prior to asphalt placement, as fluctuations in moisture and construction traffic may reduce stability. Proper scheduling of paving operations and control of construction equipment traffic will reduce the need for such remedial measures.

Provided the subgrade is prepared as recommended, we suggest that flexible pavement design be based on a California Bearing Ratio (CBR) value of 8, consistent with the granular soil conditions documented in the boring logs. Adequate drainage must be provided to protect the pavement structure, including maintaining positive surface drainage and installing underdrains or subdrains at inlets as needed to relieve seepage or localized perched water.

We recommend pavement sections be designed in accordance with NYSDOT Standard Specifications (e.g., Section 304 – Subbase Course and Section 402 – Hot Mix Asphalt (HMA)) and finalized based on site-specific traffic loading (ESAL counts) once available. At this stage, and consistent with anticipated school-related usage, pavement throughout the project area is expected to consist primarily of light-duty pavement suitable for passenger vehicles and parking areas, with heavy-duty sections provided along the bus and service access drives and other locations subject to regular school bus, delivery, and emergency/service vehicle traffic.

Recommended Pavement Sections (NYSDOT)				
Pavement Type	**Surface Course (HMA)**	**Binder/Base (HMA)**	**Granular Subbase**	**Notes**
Light-Duty (driveways, local access, parking stalls)	1.5 in. NYSDOT HMA Top Course (9.5 mm) per Sec. 402	2.0 in. NYSDOT HMA Binder (19.0 mm) per Sec. 402	6 in. NYSDOT Subbase Course, Type 2 per Sec. 304	Passenger vehicle traffic only
Heavy-Duty (bus loops, turnarounds, delivery/garbage pads, fire lanes)	1.5 in. NYSDOT HMA Top Course (9.5 mm) per Sec. 402	3.0 in. NYSDOT HMA Binder (19.0 mm) per Sec. 402	8–12 in. NYSDOT Subbase Course, Type 2 per Sec. 304	Regular school bus, delivery, and emergency/service vehicle traffic
Rigid Pavement (aprons, dumpster pads, high-load zones)	6 in. 4,000 psi reinforced concrete (air-entrained)	--	6 in. NYSDOT Subbase Course, Type 2 per Sec. 304	Provide contraction joints and load transfer per design; WWF or macrofiber reinforcement acceptable

4. CONSTRUCTION, EARTHWORK, & ADDITIONAL CONSIDERATIONS

4.1 Subgrade Preparation and Foundation Considerations

Prior to raising or restoring grades, all unsuitable materials (topsoil, pavements, buried structures, and additionally disturbed loose soils) should be removed to expose competent sandy subgrade. The exposed soils should be compacted to a firm, unyielding condition using a vibratory drum roller (minimum 10 tons) or, in confined areas, hand-guided equipment such as a trench compactor (dynamic force ≥5,000 lbs.) in lifts not exceeding six (6) inches. Where fines are present, compaction equipment should operate in static mode. Proof rolling in the presence of the Geotechnical Engineer should be performed to identify and remove soft or loose pockets.

If disturbed or unsuitable soils are encountered, they should be over-excavated (typically 1 ft or more as required) and replaced with compacted granular fill (CGF). Over-excavated surfaces should be re-compacted prior to placement of fill or foundations.

Surface water should be prevented from collecting on exposed bearing soils, and construction traffic over prepared subgrades should be minimized. Subgrades must be protected against freezing conditions. During cold weather, footings should be backfilled promptly to a depth of about four (4) feet or insulated/heated as necessary to prevent frost penetration.

4.2 Ground Floor Slab

The ground floor can be designed as a conventional slab on grade bearing in the natural soils or structural controlled fill. Structural fill shall be utilized in instances where loose soils or unsuitable materials are encountered within or below foundation bearing materials. These unsuitable materials should be removed and replaced by structural fill in a controlled manner in lifts of loose thicknesses of less than 12-inches. Subsequently, if excessive moisture is present, a six-inch layer of ¾-inch crushed stone should be spread on the prepared subgrade and a continuous vapor retarder should be placed between the crushed stone and the concrete slab. The crushed stone layer should drain into a sump pit(s) located at least three feet below the top of slab. These measures will help reduce humidity and slab dampness. A modulus of subgrade reaction of 240 kip/ft^2/ft for a one square foot plate may be used if preparations of subgrade and guidelines contained in this report are strictly enforced and inspected.

4.3 Backfilling

4.3.1 General:

Backfilling should consist of well-graded, clean granular fill. Existing fill materials may be reused following the removal of excessive debris and with the approval of the Geotechnical Engineer. Fill materials containing deleterious

matter should not be reused as structural fill and must be removed from the site. All fill particles larger than three (3) inches should be excluded.

Fill should be placed in controlled lifts not exceeding twelve (12) inches in loose thickness and compacted thoroughly to achieve at least 95 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557).

Moisture contents should be maintained within ±2 percent of the optimum moisture content determined by the Modified Proctor.

4.3.2 Compacted Granular Fill (CGF):

CGF should consist of clean, well-graded sand and gravel, free of organic matter, clay clumps, snow, ice, or other deleterious materials. CGF should conform to the following gradation requirements:

Sieve Size	Percent Finer by weight
3 in.	100
No. 4	30- 90
No. 40	10- 50
No. 200	0- 5

CGF should be placed in controlled lifts and compacted under the observation of the Geotechnical Engineer.

4.3.3 Common Fill:

Common Fill may be used in non-structural areas such as sidewalks, landscaped zones, and general site grading. Common Fill should consist of granular soil free from organics, debris, or frozen material, with no stones larger than three (3) inches. Gradation should not exceed 80 percent passing the No. 40 sieve and no more than 5 percent passing the No. 200 sieve.

Inorganic soils with higher fines content may be acceptable during favorable weather conditions if moisture and compaction requirements can be achieved, subject to the Geotechnical Engineer's approval.

4.3.4 Onsite Soil:

The native sandy deposits encountered at the site may be suitable for reuse as CGF or Common Fill, provided oversized particles and deleterious materials are removed and moisture conditioning is performed during wet periods. Final approval of onsite soils must be made by the Geotechnical Engineer during construction, based on visual observation and, if necessary, laboratory testing.

Sand deposits with fines contents exceeding 5 percent are not suitable for reuse as CGF/Common Fill and, if excavated, should be stockpiled and removed from the site. Where reused, the placement and compaction of onsite soils should be observed and documented by the Geotechnical Engineer.

The onsite soils are sensitive to disturbance and construction traffic, especially when wet. Care should be taken to protect exposed subgrades from water and precipitation. If disturbed, stabilization or replacement with CGF will be required prior to backfilling or foundation construction.

4.4 Excavations

At this time, it is our understanding that no below-grade spaces such as basements or underground utility rooms are proposed as part of the current development plan. However, in some areas, excavations may exceed five (5) feet in depth, especially to allow for removal of any unsuitable or disturbed soils, which could extend to depths on the order of 10 feet below existing grades in localized areas which could necessitate the implementation of temporary support of excavation (SOE) systems to ensure worker safety and maintain excavation stability.

Once final design grades and layout plans are available, all proposed excavations should be carefully evaluated by a Competent Person as defined by the Occupational Safety and Health Administration (OSHA), who is qualified to assess and manage excavation safety. All excavation work must be performed in strict compliance with OSHA standards as well as any applicable local building codes and municipal ordinances.

If the final excavation depths exceed OSHA's maximum allowable limits for unshored (unbraced) trench walls, or if the proposed excavations are located in close proximity to adjacent structures and could potentially impact neighboring foundation elements, the use of a properly designed SOE system will be required. The purpose of such systems is to prevent ground loss, soil movement, or undermining that could compromise site safety or the integrity of nearby structures.

The design of any required support of excavation system must be prepared by a licensed professional engineer registered in the State of New York, with experience in geotechnical and structural design. Depending on site constraints, common SOE systems may include soldier piles and lagging, sheet piling, trench boxes, or engineered shoring systems using bracing or tiebacks.

Should an SOE system be implemented, we strongly recommend that a comprehensive inspection and monitoring program be established throughout the duration of excavation activities. This should include regular verification of system installation, performance monitoring (e.g., movement or deflection readings), and compliance checks to ensure the excavation remains stable and safe.

4.5 Control of Groundwater

Construction operations are expected to take place above groundwater levels; therefore, the dewatering control should consist of minimum efforts consisting of directing rainwater or trapped water above the dense natural deposits away from the finished subgrade elevations. The presence of excessive moisture content will deteriorate the exposed subgrade materials, resulting in decreased bearing pressures, not suitable for shallow foundation support. Accordingly, exposed subgrade should be protected against any moisture deterioration. All foundation construction activities should be

performed in dry conditions. Dewatering systems, if ultimately utilized should be designed by a licensed engineer in the state of New York.

4.6 Additional Considerations

We recommend that all foundation-related construction activities be overseen by a licensed geotechnical engineer in the state of New York. Activities pertaining to, but not limited to, foundation bearing surface preparation, removal of unsuitable bearing materials, backfilling with the utilization of clean granular fill, excavation activities, etc. We should be notified when final design documents will become available and be provided with such to review and if required, adjust recommendations accordingly.

5.LIMITATIONS

The recommendations provided in this report reflect our professional assessment, derived from the soil conditions identified during the boring tests conducted and the structural and grading design criteria outlined in the report. It is important to note that deviations in structure types and design grading might differ from the assumed criteria used in preparing this report. AKSHAR should be notified of any changes in design criteria to enable an assessment for potential revisions in the design recommendations.

The nature and extent of variations in subsurface conditions between explorations may only become apparent during construction. Should such variations arise, it may be necessary to reassess the information presented in this report. Additionally, conditions encountered during construction may differ from those reported herein, necessitating further evaluation.

We advise that foundation construction, earthwork, and subgrade preparation be overseen by a qualified Geotechnical Engineer familiar with the anticipated conditions and the foundation design recommendations. Any variations encountered should be promptly communicated to us for reevaluation and potential modification of the recommendations provided in this report.

Our work adheres to current standards of practice for geotechnical engineering for buildings based on the exploration conditions encountered. However, no other warranties, either expressed or implied, are provided.

APPENDIX A

SITE LOCATION

AKSHAR ENGINEERING	**APPENDIX B:** **Site Location Plan**	**Proposed:** **Pine Bush CSD - Phase 2 Site Improvemets (pakanasink ES & Circleville MS)**	**Project Location:** **1951–1953 NYS Route 302, Pine Bush, New York 12566**

APPENDIX B

BORING LOCATION PLAN

LEGEND

APPROXIMATE BORING LOCATION

Notes:
BASE PLAN OBTAINED NOVEMBER 13, 2025, AND PROPOSED SOIL BORINGS LOCATION PLAN PREPARED BY CPL ARCHITECTURE, ENGINEERING, AND PLANNING

SOIL EXPLORATIONAS WERE LOCATED IN THE FIELD BY REPRESENTATIVE OF AKSHAR ENGINEERING. USING NORMAL TAPING PROCEDURES AND ESTIMATED RIGHT ANGLES FROM EXISTING SITE FEATURES AND ARE PRESIMED ACCURATE WITHIN FEW FEET.

THE SOIL EXPLORATION BORINGS (B-1 THROUGH B-10) WERE DRILLED BY GEOTECH DRILLING, LLC OF EAST ORANGE, NEW JERSEY IN THE PRESENCE OF AKSHAR ENGINEER BETWEEN OCTOBER 29, 2025 THROUGH NOVEMBER 1, 2025.

AKSHAR ENGINEERING

Boring Location Plan

Proposed:

Pine Bush CSD - Phase 2 Site Improvements
(Pakanasink ES & Circleville MS)

Project Location:

1951 - 1953 NYS Route 302,
Pine Bush, New York 12566

LEGEND

APPROXIMATE BORING LOCATION

Notes:
BASE PLAN OBTAINED NOVEMBER 13, 2025, AND PROPOSED SOIL BORINGS LOCATION PLAN PREPARED BY CPL ARCHITECTURE, ENGINEERING, AND PLANNING

SOIL EXPLORATIONAS WERE LOCATED IN THE FIELD BY REPRESENTATIVE OF AKSHAR ENGINEERING. USING NORMAL TAPING PROCEDURES AND ESTIMATED RIGHT ANGLES FROM EXISTING SITE FEATURES AND ARE PRESIMED ACCURATE WITHIN FEW FEET.

THE SOIL EXPLORATION BORINGS (B-1 THROUGH B-10) WERE DRILLED BY GEOTECH DRILLING, LLC OF EAST ORANGE, NEW JERSEY IN THE PRESENCE OF AKSHAR ENGINEER BETWEEN OCTOBER 29, 2025 THROUGH NOVEMBER 1, 2025.

EXISTING WETLAND

EXISTING WETLAND

PAVED BUILDING ACCESS

40X80 MAINTENANCE SHED

B-3

B-4

B-6

TWO (2). 15-FOOT PAVEMENT BORINGS

B-2

15-FOOT BORING, TYP FOR EACH CORNER OF THE BUILDING

B-1

B-5

607.71

100.0' WETLAND BUFFER

CIRCLEVILLE MIDDLE SCHOOL

B-7

10 FOOT DEEP BORING LOCATION

APPROXIMATE PAVING LIMITS

APPROXIMATE PAVING LIMITS

NYS ROUTE 302

PHASE 1 STADIUM SITE

AKSHAR ENGINEERING

Boring Location Plan

Proposed:

Pine Bush CSD - Phase 2 Site Improvements
(Pakanasink ES & Circleville MS)

Project Location:

1951 - 1953 NYS Route 302,
Pine Bush, New York 12566

APPENDIX C

SOIL BORING LOGS

AKSHAR ENGINEERING

B-1

Client: CPL Architecture, Engineering, and Planning.	**Project Name:** Propsed Pine Bush CSD - Phase 2 Site Improvements
Project Number: 2025-134-002	**Project Location:** 1951-1953 NYS Route 302, Pine Bush, NY
Date Started: 10/29/2025 **Completed:** 10/29/2025	**Ground Elevation:** ~ +/- 606' **Hole Size:** 4 in
Drilling Contractor: Geotech Drilling, LLC	
Driller: Freddy Navarro	**Drilling Method & Rig Type:** Trypod & Acker
Representative: M. Pandya	**Water Level Data**
NOTES:	**Date** / **Time** / **Bottom of Boring (ft)** / **Water (ft)**

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					Vegetation	
	S-1 8 in.	0- 2 ft	8 20 20 33	TP / SM	Top Soil -/+ 1 ft; Brown coarse to fine SAND, trace SILT, dense, moist.	
	S-2 10 in.	2- 4 ft	29 48 45 50	SM	Brown coarse to fine SAND, little SILT & CLAY, trace fine GRAVEL, very dense, moist.	
5	S-3 8 in.	4- 6 ft	34 37 22 30	SM	Dark brown coarse to fine SAND, little CLAY & SILT, trace fine GRAVEL, very dense, moist.	
	S-4 8 in.	6- 8 ft	21 25 33 40	SM	Dark brown coarse to fine SAND, little GRAVEL, trace SILT & CLAY, very dense, moist.	
	S-5 6 in.	8- 9.25 ft	20 24 100/3"	SM	Dark brown to brown coarse to fine SAND, little GRAVEL, very dense, moist. -/+ 9.25 ft	
10					B-1 was terminated at approximately 9.25 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	
15						

Summary	Overburden (Linear ft)	9.25	Rock Cored (Linear ft)	--	No. of Samples: 5

AKSHAR ENGINEERING

B-2

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-002

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 10/29/2025 **Completed:** 10/29/2025

Ground Elevation: ~ +/- 606'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					Vegetation	
	S-1 7 in.	0- 2 ft	4 12 25 50	TP SM	Top Soil -/+ 1 ft Brown coarse to fine SAND, little SILT, trace GRAVEL, medium dense, moist.	
	S-2 8 in.	2- 4 ft	25 30 35 40	SM	Brown coarse to fine SAND, little SILT, trace GRAVEL, very dense, moist.	
5	S-3 8 in.	4- 6 ft	40 42 45 40	SM	Brown coarse to fine SAND, little SILT, trace GRAVEL, very dense, moist.	
	S-4 10 in.	6- 8 ft	36 25 40 42	SM	Brown coarse to fine SAND, some GRAVEL, little SILT, very dense, moist.	
	S-5 6 in.	8- 8.75 ft	45 100/3"	SM	Dark brown to brown coarse to fine SAND, some GRAVEL, little SILT, very dense, moist. -/+ 8.75 ft	
10					B-2 was terminated at approximately 8.75 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	
15						

Summary	Overburden (Linear ft)	8.75	Rock Cored (Linear ft)	--	No. of Samples: 5

AKSHAR ENGINEERING

B-3

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 10/29/2025 **Completed:** 10/29/2025

Ground Elevation: ~ +/- 606.50'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					Vegetation	
	S-1 8 in.	0- 2 ft	6 11 20 38	TP	Top Soil -/+ 1 ft	
				SM	Light brown coarse to fine SAND, little SILT, trace GRAVEL, dense, moist.	
	S-2 8 in.	2- 4 ft	20 27 33 30	SM	Light brown coarse to fine SAND, little SILT, trace CLAY, trace fine GRAVEL, very dense, moist.	
5	S-3 8 in.	4- 6 ft	30 34 25 28	SM	Brown coarse to fine SAND, little GRAVEL, little SILT & CLAY, very dense, moist.	
	S-4 10 in.	6- 8 ft	10 17 22 30	SM	Brown coarse to fine SAND, little GRAVEL, little SILT & CLAY, dense, moist.	
	S-5 6 in.	8- 8.5 ft	25 100/0"	SM	Brown to dark brown coarse to fine SAND, some GRAVEL, very dense, moist. -/+ 8.5 ft	
10					B-3 was terminated at approximately 8.5 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	
15						

Summary	Overburden (Linear ft)	8.5	Rock Cored (Linear ft)	--	No. of Samples: 5

AKSHAR ENGINEERING

B-4

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 10/31/2025 **Completed:** 10/31/2025

Ground Elevation: ~ +/- 607'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					Vegetation	
	S-1 10 in.	0- 2 ft	3 5 5 9	TP	Top Soil -/+ 1 ft	
				SM	Light brown coarse to fine SAND, some GRAVEL, medium dense, moist.	
	S-2 8 in.	2- 4 ft	15 12 11 30	SP	Light brown coarse to fine SAND, some GRAVEL, medium dense, moist.	
5	S-3 10 in.	4- 6 ft	21 22 28 44	SM	Light brown to brown coarse to fine SAND, some GRAVEL, dense, moist.	
	S-4 10 in.	6- 8 ft	17 21 20 24	SC-SM	Borwn coarse to fine SAND, some GRAVEL, little CLAY & SILT dense, moist.	
	S-5 12 in.	8- 10 ft	13 18 22 15	SM	Borwn coarse to fine SAND, some GRAVEL, little SILT, dense, moist.	
10	S-6 7 in.	10- 11.08 ft	22 38 100/1"	SM	Brown to dark brown coarse to fine SAND, some GRAVEL, very dense, moist. -/+ 11.08 ft	
					B-4 was terminated at approximately 11.08 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	
15						

Summary	Overburden (Linear ft)	11.08	Rock Cored (Linear ft)	--	No. of Samples: 6

AKSHAR ENGINEERING

B-5

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 10/31/2025 **Completed:** 10/31/2025

Ground Elevation: ~ +/- 607'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					Vegetation	
	S-1 12 in.	0- 2 ft	2 25 41 50	TP SM	Top Soil Brown coarse to fine SAND, trace SILT, very dense, moist.	
	S-2 10 in.	2- 4 ft	7 68 52 32	SM	Brown coarse to fine SAND, little SILT, little GRAVEL, very dense, moist.	
5	S-3 10 in.	4- 6 ft	14 22 20 29	SM	Brown coarse to fine SAND, some GRAVEL, little SILT, very dense, moist.	
	S-4 6 in.	6- 6.75 ft	40 100/0"	SM	Brown coarse to fine SAND, little SILT, little GRAVEL, very dense, moist. -/+ 6.75 ft	
10					B-5 was terminated at approximately 6.75 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	
15						

Summary	Overburden (Linear ft)	6.75	Rock Cored (Linear ft)	--	No. of Samples: 4

AKSHAR ENGINEERING

B-6

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 10/31/2025 **Completed:** 10/31/2025

Ground Elevation: ~ +/- 609'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					Grass	
	S-1 14 in.	0- 2ft	2 4 10 31	SM	Dark brown coarse to fine SAND, little SILT, little GRAVEL, medium dense, moist.	
	S-2 12 in.	2- 4 ft	24 40 25 40	SM	Dark brown coarse to fine SAND, little coarse to fine GRAVEL, trace SILT & CLAY, very dense, moist.	
5	S-3 12 in.	4- 6 ft	23 36 50 52	SM	Dark brown coarse to fine SAND, little coarse to fine GRAVEL, trace SILT, very dense, moist.	
	S-4 14 in.	6- 8 ft	20 20 16 17	SM	Dark brown coarse to fine SAND, little coarse to fine GRAVEL, little SILT, dense, moist.	
	S-5 10 in.	8- 10 ft	7 20 34 40	SM	Dark brown coarse to fine SAND, little GRAVEL, little SILT, very dense, moist.	
10	S-6 8 in.	10- 12 ft	20 26 40 42	SM	Blackish brown coarse to fine SAND, some GRAVEL, little SILT, very dense, moist.	
	S-7 10 in.	12- 14 ft	20 26 32 40	SM	Blackish brown coarse to fine SAND, some GRAVEL, little SILT, very dense, moist.	
	S-8 6 in.	14- 14.67 ft	50 100/2"	SM	Blackish brown coarse to fine SAND, some GRAVEL, little SILT, very dense, moist.	
15					B-6 was terminated at approximately 14.67 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	

Summary	Overburden (Linear ft)	14.67	Rock Cored (Linear ft)	--	No. of Samples: 8

AKSHAR ENGINEERING

B-7

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 11/1/2025 **Completed:** 11/1/2025

Ground Elevation: ~ +/- 599'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					3 inch Ashphalt -/+ 0.25 ft	
	S-1 10 in.	0.25 - 2 ft	45 42 46 36	Fill	Blackish brown coarse to fine sand, some 3/4 inch gravel, moist -/+ 2 ft	
	S-2 12 in.	2- 4 ft	32 36 37 40	SM	Blackish to brown coarse to fine SAND, little coarse to fine GRAVEL, trace SILT & CLAY, veru dense, moist.	
5	S-3 8 in.	4- 6 ft	37 21 19 17	SM	Brown coarse to fine SAND, little GRAVEL, trace SILT & CLAY, dense, moist.	
	S-4 8 in.	6- 8 ft	17 22 20 23	SM	Brown coarse to fine SAND, little GRAVEL, trace SILT, dense, moist.	
	S-5 6 in.	8- 9 ft	12 23 100/0"	SM	Brown coarse to fine SAND, some GRAVEL, trace SILT, very dense, moist.	
10					B-7 was terminated at approximately 9.0 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	
15						

Summary	Overburden (Linear ft)	9	Rock Cored (Linear ft)	--	No. of Samples: 5

AKSHAR ENGINEERING

B-8

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 11/1/2025 **Completed:** 11/1/2025

Ground Elevation: ~ +/- 594'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					3 inch Ashphalt -/+ 0.25 ft	
	S-1 10 in.	0.25 - 2 ft	60 30 19 20	Fill	Blackish brown coarse to fine sand, some 3/4 inch gravel, moist -/+ 2 ft	
	S-2 14 in.	2- 4 ft	7 15 19 20	SM	Blakish gray coarse to fine SAND, little SILT & CLAY, trace GRAVEL, dense, moist.	
5	S-3 12 in.	4- 6 ft	20 18 26 20	SM	Borwn to gray coarse to fine SAND, little SILT & CLAY, trace GRAVEL, dense, moist.	
	S-4 12 in.	6- 8 ft	7 17 15 50	SM	Borwn to gray coarse to fine SAND, little SILT & CLAY, trace GRAVEL, dense, moist.	
	S-5 10 in.	8- 10 ft	19 25 25 60	SM	Borwn to gray coarse to fine SAND, little SILT & CLAY, trace GRAVEL, dense, moist. -/+ 10 ft	
10					B-8 was terminated at approximately 10.0 feet below existing grade (bgs).	
15						

Summary	Overburden (Linear ft)	10	Rock Cored (Linear ft)	--	No. of Samples: 5

AKSHAR ENGINEERING

B-9

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 11/1/2025 **Completed:** 11/1/2025

Ground Elevation: ~ +/- 594'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					3 inch Ashphalt -/+ 0.25 ft	
	S-1 10 in.	0.25 - 2 ft	50 36 28 31	Fill	Blackish brown coarse to fine sand, some 3/4 inch gravel, moist -/+ 2 ft	
	S-2 12 in.	2- 4 ft	18 18 20 20	SM	Brown coarse to fine SAND, some coarse to fine GRAVEL, trace SILT & CLAY, dense, moist.	
5	S-3 8 in.	4- 6 ft	20 25 27 49	SM	Yellow brown coarse to fine SAND, some coarse to fine GRAVEL, little SILT, very dense, moist.	
	S-4 6 in.	6- 8 ft	20 30 40 44	SM	Brown coarse to fine SAND, some GRAVEL, very dense, moist.	
	S-5 6 in.	8- 9.75 ft	22 30 41 100/3"	SM	Brow coarse to fine SAND, some GRAVEL, very dense, moist. -/+ 9.75 ft	
10					B-9 was terminated at approximately 9.75 feet below existing grade (bgs) due to SPT split-spoon refusal, likely on a boulder.	
15						

Summary	Overburden (Linear ft)	10	Rock Cored (Linear ft)	--	No. of Samples: 5

AKSHAR ENGINEERING

B-10

Client: CPL Architecture, Engineering, and Planning.

Project Name: Propsed Pine Bush CSD - Phase 2 Site Improvements

Project Number: 2025-134-Ph2

Project Location: 1951-1953 NYS Route 302, Pine Bush, NY

Date Started: 11/1/2025 **Completed:** 11/1/2025

Ground Elevation: ~ +/- 594'

Hole Size: 4 in

Drilling Contractor: Geotech Drilling LLC

Driller: Freddy Navarro

Drilling Method & Rig Type: Trypod & Acker

Representative: M. Pandya

Water Level Data

Date	Time	Bottom of Boring (ft)	Water (ft)

NOTES:

Depth (ft)	Sample No. & Rec. (in)	Sample Depth (ft)	Sampler Blows per 6 inches	USCS Symbol	Visual Classification	Remarks
0					3 inch Ashphalt -/+ 0.25 ft	
	S-1 10 in.	0.25 - 2 ft	42 33 36 30	Fill	Blackish brown coarse to fine sand, some 3/4 inch gravel, moist -/+ 2 ft	
	S-2 14 in.	2- 4 ft	44 28 30 60	SM	Dark brown coarse to fine SAND, little fine GRAVEL, trace SILT & CLAY very dense, moist.	
5	S-3 12 in.	4- 6 ft	34 20 16 17	SC	Black to gray coarse to fine SAND, some CLAY, little fine GRAVEL, dense, moist.	
	S-4 12 in.	6- 8 ft	12 17 21 25	SC	Brown-gray coarse to fine SAND, some CLAY, little GRAVEL, trace SILT, dense, moist.	
	S-5 10 in.	8- 10 ft	30 20 27 42	SC	Brown-gray coarse to fine SAND, some CLAY, little GRAVEL, trace SILT, dense, moist. -/+ 10 ft	
10					B-10 was terminated at approximately 10.0 feet below existing grade (bgs).	
15						

Summary	Overburden (Linear ft)	10	Rock Cored (Linear ft)	--	No. of Samples: 5

APPENDIX D

GEOTECHNICAL TERMS, SYMBOLS, AND CLASSIFICATION

Geotechnical Terms and Symbols

GEOTECHNICAL TERMS AND SYMBOLS

SAMPLE IDENTIFICATION

The Unified Soil Classification System is used to identify the soil unless otherwise noted.

SOIL PROPERTY SYMBOLS

N: Standard Penetration Value: Blows per ft. or a 140 lb. hammer falling 30" on a 2" O.D. split-spoon.
Qu: Unconfined compressive strength, TSF.
PP: Penetrometer value, unconfined compressive strength, TSF.
Mc: Moisture content, %
LL: Liquid limit, %
PI: Plasiticity index, %
δd: Natural dry density, PCF.
▼: Apparent groundwater level at time noted after completion of boring.
=

DRILLING AND SAMPLING SYMBOLS

NE: Not Encountered (Groundwater was not encountered)
SS: Split-Spoon – 1⅜" I.D., 2" O.D., except where noted
ST: Shelby Tube – 3" O.D., except where noted
AU: Auger Sample
OB: Diamond Bit
CB: Carbide Bit
WS: Washed Sample

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

Term (Non-Cohesive Soils)	Standard Penetration Resistance
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

Term (Cohesive Soils)	Qu (TSF)
Very Soft	0-0.25
Soft	0.25-0.50
Firm (Medium)	0.50-1.00
Stiff	1.00-2.00
Very Stiff	2.00-4.00
Hard	4.00 +

PARTICLE SIZE

Boulders	8 in. +	Coarse Sand	5mm-0.6mm	Silt	0.074mm-0.005mm
Cobbles	8 in. – 3 in.	Medium Sand	0.6mm-0.2mm	Clay	- 0.005mm
Gravel	3 in. – 5mm	Fine Sand	0.2mm – 0.074mm		

USCS Standard Classification System

UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D2488

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	**GRAVEL AND GRAVELLY SOILS** MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
		GRAVEL WITH ≥ 15% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
		SAND WITH ≥ 15% FINES		SM	Silty SAND
				SC	Clayey SAND
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

NOTES:

1) Sample descriptions are based on visual field and laboratory observations using classification methods of ASTM D2488. Where laboratory data are available, classifications are in accordance with ASTM D2487.

2) Solid lines between soil descriptions indicate change in interpreted geologic unit. Dashed lines indicate stratigraphic change within the unit.

3) Fines are material passing the U.S. Std. #200 Sieve.

SECTION 004010
FORM OF PROPOSAL – GENERAL CONSTRUCTION

PART 1 GENERAL

1.01 SUMMARY

A. Fill in information:

Date:
TO:
OWNER NAME & ADDRESS:
FROM:
BIDDER NAME & ADDRESS

1.02 GENERAL

A. Pursuant to, and in compliance with, the Procurement and Contracting Requirements, Conditions of the Contract, relative thereto and all of the Contract Documents, including any Addenda issued by the Architect and mailed or delivered to the undersigned prior to the opening of Bids, whether received by the undersigned or not,
we,_____

1. having visited the site and being familiar with all conditions and requirements of the Work, hereby propose to furnish all plant, labor, supplies, materials and equipment incidental to GENERAL CONSTRUCTION WORK as required by and in strict accord with the applicable provisions of the Drawings and Specifications entitled Pine Bush Central School District 2025 CIP Phase 2- Roofing all to the satisfaction and approval of the Architect and the Owner in accordance with the terms and conditions of the Contract Documents for the following sum:

	DOLLARS
($	)
BASE BID	

1.03 BID GUARANTEE

A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 45 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid.

1. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.04 TIME OF COMPLETION

A. It is agreed by the undersigned that after receipt of a Notice of Award and a consummation of a Contract Agreement in accord with the terms of the Contract Documents, he or she will start

work within 10 consecutive calendar days of the notice to proceed and fully complete the work by as indicated in the Contract Documents.

1.05 ALTERNATES (REFERENCE SPECIFICATION SECTION 012300)

A. Enter a whole dollar amount, even if it is zero ($ 0), for each Alternate. Circle "ADD" or "DEDUCT" for each Alternate Bid. If neither is circled, "DEDUCT" will be assumed. Do not leave any Alternate amount blank. If any amount is blank, it will be assumed the Bidder will provide that Alternate for no change, neither increase nor decrease, in Contract Price.

1. Alternate No. GC-01; (Select Windows at Circleville Elementary School (CES)):

ADD/DEDUCT	($)
	DOLLARS

2. Alternate No. GC-02; (Select Hallway Ceilings at Circleville Middle School (CVMS)):

ADD/DEDUCT	($)
	DOLLARS

3. Alternate No. GC-03; (Select Courtyard Windows at Circleville Middle School (CVMS)):

ADD/DEDUCT	($)
	DOLLARS

4. Alternate No. GC-04; (Select Windows at Circleville Middle School (CVMS)):

ADD/DEDUCT	($)
	DOLLARS

5. Alternate No. GC-05; (Select Courtyard Windows at Pakanasink Elementary School (PAK)):

ADD/DEDUCT	($)
	DOLLARS

6. Alternate No. GC-06; (Select Windows at Pakanasink Elementary School (PAK)):

ADD/DEDUCT	($)
	DOLLARS

1.06 BID SECURITY

A. Bid Security in the form of a Certified or Cashier's Check or a Bid Bond in the form required by the Contract Documents is attached to and made a part of this Proposal.

1.07 IRAN DIVESTMENT ACT CERTIFICATION

A. Contractor to submit with the bid, Iran Divestment Act Certification which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.08 CERTIFICATION UNDER EXECUTIVE ORDER NO. 16

A. Contractor to submit with the bid, Certification under Executive Order No. 16 which hereto is made a part of this Form of Proposal and is attachd at the end of this Form of Proposal.

1.09 NEW YORK STATE DEPARTMENT OF LABOR CONTRACTOR REGISTRY

A. Pursuant to New York State Department of Labor requirements, Contractor to submit with the bid, a copy of their Contractor Certificate of Registration along with, Labor Law 220-i Certification Form which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.10 REPRESENTATIONS

A. By submitting this Proposal the Bidder represents and certifies to the Owner and the Architect that
   1. It has examined the Contract Documents, the site of the proposed Work, is familiar with the local conditions at the place where the Work is to be performed and fully comprehends the requirements and intent of the plans and specifications for this Project in accordance with the drawings, specifications and other Contract Documents prepared by CPL the Owners Consultant, for this Project.
   2. It has examined and reviewed, where applicable, all information and data in the Contract Documents related to existing underground facilities at or contiguous to the site. Bidder shall require of the Owner or Architect no further investigations, explorations, tests or reports with respect to such underground facilities in order for the Bidder to perform the Work of the Proposal within the Contract Time and in accordance with the Contract Documents.
   3. It has given notice to the Architect, as required by the Contract Documents of any and all discrepancies it has discovered and accepts the resolution of those discrepancies offered by the Architect.
   4. Pursuant to New York State General Municipal Law section 103-d, by submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
      a. The prices in this bid have been arrived at independently without collusion, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
      b. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not be knowingly disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or competitor; and
      c. No attempt has been made or will be made by bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
      d. The proposal is based upon the materials, equipment and systems required by the Contract Documents, without exception, unless otherwise set forth in this Proposal in detail.

1.11 CHANGE ORDERS

A. We propose and agree that the above lump sum shall be adjusted for changes in the Contract Work not included in unit prices by addition of the following costs:
   1. Profit and overhead as permitted in the General Conditions.

1.12 NON-COLLUSIVE BIDDING CERTIFICATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
   1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
   2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and

3. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

1.13 ACCEPTANCE

A. When this Proposal is accepted, the undersigned agrees to enter into a Contract with the Owner as provided in the Form of Agreement.

1.14 AFFIRMS

A. The undersigned affirms and agrees that this Proposal is a firm one which remains in effect and will be irrevocable for a period of forty-five (45) days after opening of Bids.

1.15 TYPE OF BUSINESS

A. The undersigned hereby represents that it is a (select with circle):
   1. Corporation, Partnership, Individual.
   2. If a Corporation, then the undersigned further represents that it is duly qualified as a Corporation under the laws of New York State and it is authorized to do business in this State.

1.16 PLACE OF BUSINESS

A. The following is the name and address of the person to whom all notices required in connection with this Proposal may be telephoned, mailed, or delivered.

Name of Contact Person:	
Name of Business or Firm:	
Address:	
Address:	
Telephone:	Fax
Email Address:	
FEIN: Federal Employer Identification No.:	

1.17 EXECUTION OF CONTRACT

A. When written Notice of Acceptance of the Proposal is mailed or delivered to the undersigned within forty-five (45) days after the opening of Bids, or anytime thereafter should the Proposal not be withdrawn, the undersigned, within ten (10) days, will execute the Form of Agreement with the Owner.

1.18 ADDENDA

A. Any addenda issued by the Architect and mailed or delivered to the undersigned prior to the Bid opening date shall become part of the Contract Documents. The Bidder shall enter on this list any addenda issued after this Form of Proposal has been received and shall fill in the addenda number and date.

Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:

1.19 ASBESTOS

A. The bidder certifies that no asbestos or asbestos-containing materials will be incorporated into the Work of this Contract.

1.20 AUTHORIZED SIGNATURES FOR PROPOSALS

Individual or Legal Name of Firm or Corporation:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
If Corporation – provide Seal:

1.21 IRAN DIVESTMENT ACT CERTIFICATION

A. By submission of this bid, (DL & AV Equip 1315), or by assuming the responsibility of a Contract awarded hereunder, each bidder and each person signing on behalf of any bidders, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

1. That each bidder/contractor/assignee is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list created pursuant to paragraph (b) subdivision 3 of section 165-a of the New York State Finance Law and posted on the OGS website at http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize on such Contract any subcontractor that is identified on the Prohibited Entities List. Additionally, Bidder/Contractor is advised that should it seek to renew or extend a Contract awarded in response to the solicitation, it must provide the same certification at the time the Contract is renewed or extended. (See Article in the Instructions to Bidders.)

Individual or Legal Name of Firm or Corporation:
Mailing Address:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

1.22 SEXUAL HARASSMENT POLICY/TRAINING AFFIRMATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all its employees.

Name of Contractor:	
Name of Business or Firm:	
Address:	
Telephone:	Fax
Email Address:	
Signature and Title of Contractor:	
Date:	

CERTIFICATION UNDER EXECTUIVE ORDER NO. 16

PROHIBITING STATE AGENCIES AND AUTHORITIES FROM CONTRACTING WITH BUSINESSES CONDUCTING BUSINESS IN RUSSIA

Executive order No. 16 provided that"all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia." The complete text of the Executive Order No. 16 can be found at the following website; https://ogs.ny.gov/EO-16.

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from ward becasue of current businees operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations.

As defined in Exectuive Order No. 16, an entity conducting business operation in Russia" means an instituation or company, wherever located, conducting any cmmerical activity in Russia or transacting business with the Russian Government or with commerical entities headquartered in Russia or with their prinicipal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

Is vender an entity conducting business operations in Russia, as defined above? Please answer by circling one of the following numbers:

1.	No, Vender does not conduct business operations in Russia within the meaning of Executive Order No. 16
2.a.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion).
2.b.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extend necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being procided or the revelant laws, regulations, etc.).
3.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16.

The undersigned certifies under penalties of perjury that they are knowledgeable about the Vendor's business and operations and that the answer provided herein is true to the best of their knowledge and behalf.

Vendor Name:
(legal entity) _____
By:
(Signature) _____
Name: _____
Title: _____
Date: _____

LABOR LAW 220-I CERTIFICATION FORM

By submission of this bid, the person authorized to sign on behalf of the Bidder hereby certifies, under penalty of perjury, that :

1. The Bidder is registered with the New York State Department of Labor pursuant to Section 220-i of the New York Labor Labor Law, and
2. Each of the subcontractors engaged by the Bidder for this Project will be registered before commencing work.

Bidder further represents that;

1. A copy of the Bidder's Certificate of Registration issued by the Commissioner of the Department of Labor is attached to this Bid.
2. All Subcontractors will submit a copy of their Certificate of Registration issued by the Commissioner of the Department of Labor before commencing work.

Project:
Individual or Legal Name of Bidder or Corporation:
Bidder Address:
Signature of Representative of Bidder or Corporation:
Print Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

END OF SECTION 004010

SECTION 004020
FORM OF PROPOSAL – MECHANICAL CONSTRUCTION

PART 1 GENERAL

1.01 SUMMARY

A. Fill in information:

Date:
TO:
OWNER NAME & ADDRESS:
FROM:
BIDDER NAME & ADDRESS

1.02 GENERAL

A. Pursuant to, and in compliance with, the Procurement and Contracting Requirements, Conditions of the Contract, relative thereto and all of the Contract Documents, including any Addenda issued by the Architect and mailed or delivered to the undersigned prior to the opening of Bids, whether received by the undersigned or not,
we,_____

1. having visited the site and being familiar with all conditions and requirements of the Work, hereby propose to furnish all plant, labor, supplies, materials and equipment incidental to MECHANICAL CONSTRUCTION WORK as required by and in strict accord with the applicable provisions of the Drawings and Specifications entitled Pine Bush Central School District 2025 CIP Phase 2- Roofing all to the satisfaction and approval of the Architect and the Owner in accordance with the terms and conditions of the Contract Documents for the following sum:

	DOLLARS
($	)
BASE BID	

1.03 BID GUARANTEE

A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 45 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid.

1. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.04 TIME OF COMPLETION

A. It is agreed by the undersigned that after receipt of a Notice of Award and a consummation of a Contract Agreement in accord with the terms of the Contract Documents, he or she will start

work within 10 consecutive calendar days of the notice to proceed and fully complete the work by as indicated in the Contract Documents.

1.05 BID SECURITY

A. Bid Security in the form of a Certified or Cashier's Check or a Bid Bond in the form required by the Contract Documents is attached to and made a part of this Proposal.

1.06 IRAN DIVESTMENT ACT CERTIFICATION

A. Contractor to submit with the bid, Iran Divestment Act Certification which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.07 CERTIFICATION UNDER EXECUTIVE ORDER NO. 16

A. Contractor to submit with the bid, Certification under Executive Order No. 16 which hereto is made a part of this Form of Proposal and is attachd at the end of this Form of Proposal.

1.08 NEW YORK STATE DEPARTMENT OF LABOR CONTRACTOR REGISTRY

A. Pursuant to New York State Department of Labor requirements, Contractor to submit with the bid, a copy of their Contractor Certificate of Registration along with, Labor Law 220-i Certification Form which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.09 REPRESENTATIONS

A. By submitting this Proposal the Bidder represents and certifies to the Owner and the Architect that
   1. It has examined the Contract Documents, the site of the proposed Work, is familiar with the local conditions at the place where the Work is to be performed and fully comprehends the requirements and intent of the plans and specifications for this Project in accordance with the drawings, specifications and other Contract Documents prepared by CPL the Owners Consultant, for this Project.
   2. It has examined and reviewed, where applicable, all information and data in the Contract Documents related to existing underground facilities at or contiguous to the site. Bidder shall require of the Owner or Architect no further investigations, explorations, tests or reports with respect to such underground facilities in order for the Bidder to perform the Work of the Proposal within the Contract Time and in accordance with the Contract Documents.
   3. It has given notice to the Architect, as required by the Contract Documents of any and all discrepancies it has discovered and accepts the resolution of those discrepancies offered by the Architect.
   4. Pursuant to New York State General Municipal Law section 103-d, by submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
      a. The prices in this bid have been arrived at independently without collusion, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
      b. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not be knowingly disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or competitor; and
      c. No attempt has been made or will be made by bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

d. The proposal is based upon the materials, equipment and systems required by the Contract Documents, without exception, unless otherwise set forth in this Proposal in detail.

1.10 CHANGE ORDERS

A. We propose and agree that the above lump sum shall be adjusted for changes in the Contract Work not included in unit prices by addition of the following costs:
   1. Profit and overhead as permitted in the General Conditions.

1.11 NON-COLLUSIVE BIDDING CERTIFICATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
   1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
   2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
   3. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

1.12 ACCEPTANCE

A. When this Proposal is accepted, the undersigned agrees to enter into a Contract with the Owner as provided in the Form of Agreement.

1.13 AFFIRMS

A. The undersigned affirms and agrees that this Proposal is a firm one which remains in effect and will be irrevocable for a period of forty-five (45) days after opening of Bids.

1.14 TYPE OF BUSINESS

A. The undersigned hereby represents that it is a (select with circle):
   1. Corporation, Partnership, Individual.
   2. If a Corporation, then the undersigned further represents that it is duly qualified as a Corporation under the laws of New York State and it is authorized to do business in this State.

1.15 PLACE OF BUSINESS

A. The following is the name and address of the person to whom all notices required in connection with this Proposal may be telephoned, mailed, or delivered.

Name of Contact Person:	
Name of Business or Firm:	
Address:	
Address:	
Telephone:	Fax
Email Address:	
FEIN: Federal Employer Identification No.:	

1.16 EXECUTION OF CONTRACT

A. When written Notice of Acceptance of the Proposal is mailed or delivered to the undersigned within forty-five (45) days after the opening of Bids, or anytime thereafter should the Proposal not be withdrawn, the undersigned, within ten (10) days, will execute the Form of Agreement with the Owner.

1.17 ADDENDA

A. Any addenda issued by the Architect and mailed or delivered to the undersigned prior to the Bid opening date shall become part of the Contract Documents. The Bidder shall enter on this list any addenda issued after this Form of Proposal has been received and shall fill in the addenda number and date.

Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:

1.18 ASBESTOS

A. The bidder certifies that no asbestos or asbestos-containing materials will be incorporated into the Work of this Contract.

1.19 AUTHORIZED SIGNATURES FOR PROPOSALS

Individual or Legal Name of Firm or Corporation:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
If Corporation – provide Seal:

1.20 IRAN DIVESTMENT ACT CERTIFICATION

A. By submission of this bid, (DL & AV Equip 1315), or by assuming the responsibility of a Contract awarded hereunder, each bidder and each person signing on behalf of any bidders, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

1. That each bidder/contractor/assignee is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list created pursuant to paragraph (b) subdivision 3 of section 165-a of the New York State Finance Law and posted on the OGS website at http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize on such Contract any subcontractor that is identified on the Prohibited Entities List. Additionally, Bidder/Contractor is advised that should it seek to renew or extend a Contract awarded in response to the solicitation, it must provide the same certification at the time the Contract is renewed or extended. (See Article in the Instructions to Bidders.)

Individual or Legal Name of Firm or Corporation:
Mailing Address:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

1.21 SEXUAL HARASSMENT POLICY/TRAINING AFFIRMATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all its employees.

Name of Contractor:	
Name of Business or Firm:	
Address:	
Telephone:	Fax
Email Address:	
Signature and Title of Contractor:	
Date:	

CERTIFICATION UNDER EXECTUIVE ORDER NO. 16

PROHIBITING STATE AGENCIES AND AUTHORITIES FROM CONTRACTING WITH BUSINESSES CONDUCTING BUSINESS IN RUSSIA

Executive order No. 16 provided that"all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia." The complete text of the Executive Order No. 16 can be found at the following website; https://ogs.ny.gov/EO-16.

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from ward becasue of current businees operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations.

As defined in Exectuive Order No. 16, an entity conducting business operation in Russia" means an instituation or company, wherever located, conducting any cmmerical activity in Russia or transacting business with the Russian Government or with commerical entities headquartered in Russia or with their prinicipal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

Is vender an entity conducting business operations in Russia, as defined above? Please answer by circling one of the following numbers:

1.	No, Vender does not conduct business operations in Russia within the meaning of Executive Order No. 16
2.a.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion).
2.b.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extend necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being procided or the revelant laws, regulations, etc.).
3.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16.

The undersigned certifies under penalties of perjury that they are knowledgeable about the Vendor's business and operations and that the answer provided herein is true to the best of their knowledge and behalf.

Vender Name:
(legal entity) _____
By:
(signature) _____
Name: _____
Title: _____
Date: _____

LABOR LAW 220-I CERTIFICATION FORM

By submission of this bid, the person authorized to sign on behalf of the Bidder hereby certifies, under penalty of perjury, that :

1. The Bidder is registered with the New York State Department of Labor pursuant to Section 220-i of the New York Labor Labor Law, and
2. Each of the subcontractors engaged by the BIdder for this Project will be registered before commencing work.

Bidder further represents that;

1. A copy of the Bidder's Certificate of Registration issued by the Commissioner of the Department of Labor is attached to this Bid.
2. All Subcontractors will submit a copy of their Certificate of Registration issued by the Commissioner of the Department of Labor before commencing work.

Project:
Individual or Legal Name of Bidder or Corporation:
Bidder Address:
Signature of Representative of Bidder or Corporation:
Print Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

END OF SECTION 004020

SECTION 004030
FORM OF PROPOSAL – ELECTRICAL CONSTRUCTION

PART 1 GENERAL

1.01 SUMMARY

A. Fill in information:

Date:
TO:
OWNER NAME & ADDRESS:
FROM:
BIDDER NAME & ADDRESS

1.02 GENERAL

A. Pursuant to, and in compliance with, the Procurement and Contracting Requirements, Conditions of the Contract, relative thereto and all of the Contract Documents, including any Addenda issued by the Architect and mailed or delivered to the undersigned prior to the opening of Bids, whether received by the undersigned or not,
we,_____

1. having visited the site and being familiar with all conditions and requirements of the Work, hereby propose to furnish all plant, labor, supplies, materials and equipment incidental to ELECTRICAL CONSTRUCTION WORK as required by and in strict accord with the applicable provisions of the Drawings and Specifications entitled Pine Bush Central School District 2025 CIP Phase 2- Roofing all to the satisfaction and approval of the Architect and the Owner in accordance with the terms and conditions of the Contract Documents for the following sum:

	DOLLARS
($	)
BASE BID	

1.03 BID GUARANTEE

A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 45 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid.

1. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.04 TIME OF COMPLETION

A. It is agreed by the undersigned that after receipt of a Notice of Award and a consummation of a Contract Agreement in accord with the terms of the Contract Documents, he or she will start

work within 10 consecutive calendar days of the notice to proceed and fully complete the work by as indicated in the Contract Documents.

1.05 ALTERNATES (REFERENCE SPECIFICATION SECTION 012300.)

A. Enter a whole dollar amount, even if it is zero ($ 0), for each Alternate. Circle "ADD" or "DEDUCT" for each Alternate Bid. If neither is circled, "DEDUCT" will be assumed. Do not leave any Alternate amount blank. If any amount is blank, it will be assumed the Bidder will provide that Alternate for no change, neither increase nor decrease, in Contract Price.

1. Alternate No. EC-01; (Select Electrical Receptacle and Breakers at Windows at Circleville Elementary School (CES)):

ADD/DEDUCT	($)
	DOLLARS

2. Alternate No. EC-2; (Select Lighting at Hallway Ceilings at Circleville Middle School (CVMS)):

ADD/DEDUCT	($)
	DOLLARS

1.06 BID SECURITY

A. Bid Security in the form of a Certified or Cashier's Check or a Bid Bond in the form required by the Contract Documents is attached to and made a part of this Proposal.

1.07 IRAN DIVESTMENT ACT CERTIFICATION

A. Contractor to submit with the bid, Iran Divestment Act Certification which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.08 CERTIFICATION UNDER EXECUTIVE ORDER NO. 16

A. Contractor to submit with the bid, Certification under Executive Order No. 16 which hereto is made a part of this Form of Proposal and is attachd at the end of this Form of Proposal.

1.09 NEW YORK STATE DEPARTMENT OF LABOR CONTRACTOR REGISTRY

A. Pursuant to New York State Department of Labor requirements, Contractor to submit with the bid, a copy of their Contractor Certificate of Registration along with, Labor Law 220-i Certification Form which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.10 REPRESENTATIONS

A. By submitting this Proposal the Bidder represents and certifies to the Owner and the Architect that

1. It has examined the Contract Documents, the site of the proposed Work, is familiar with the local conditions at the place where the Work is to be performed and fully comprehends the requirements and intent of the plans and specifications for this Project in accordance with the drawings, specifications and other Contract Documents prepared by CPL the Owners Consultant, for this Project.
2. It has examined and reviewed, where applicable, all information and data in the Contract Documents related to existing underground facilities at or contiguous to the site. Bidder shall require of the Owner or Architect no further investigations, explorations, tests or reports with respect to such underground facilities in order for the Bidder to perform the Work of the Proposal within the Contract Time and in accordance with the Contract Documents.

3. It has given notice to the Architect, as required by the Contract Documents of any and all discrepancies it has discovered and accepts the resolution of those discrepancies offered by the Architect.
4. Pursuant to New York State General Municipal Law section 103-d, by submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
   a. The prices in this bid have been arrived at independently without collusion, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
   b. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not be knowingly disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or competitor; and
   c. No attempt has been made or will be made by bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
   d. The proposal is based upon the materials, equipment and systems required by the Contract Documents, without exception, unless otherwise set forth in this Proposal in detail.

1.11 CHANGE ORDERS

A. We propose and agree that the above lump sum shall be adjusted for changes in the Contract Work not included in unit prices by addition of the following costs:
   1. Profit and overhead as permitted in the General Conditions.

1.12 NON-COLLUSIVE BIDDING CERTIFICATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
   1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
   2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
   3. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

1.13 ACCEPTANCE

A. When this Proposal is accepted, the undersigned agrees to enter into a Contract with the Owner as provided in the Form of Agreement.

1.14 AFFIRMS

A. The undersigned affirms and agrees that this Proposal is a firm one which remains in effect and will be irrevocable for a period of forty-five (45) days after opening of Bids.

1.15 TYPE OF BUSINESS

A. The undersigned hereby represents that it is a (select with circle):
   1. Corporation, Partnership, Individual.

2. If a Corporation, then the undersigned further represents that it is duly qualified as a Corporation under the laws of New York State and it is authorized to do business in this State.

1.16 PLACE OF BUSINESS

A. The following is the name and address of the person to whom all notices required in connection with this Proposal may be telephoned, mailed, or delivered.

Name of Contact Person:	
Name of Business or Firm:	
Address:	
Address:	
Telephone:	Fax
Email Address:	
FEIN: Federal Employer Identification No.:	

1.17 EXECUTION OF CONTRACT

A. When written Notice of Acceptance of the Proposal is mailed or delivered to the undersigned within forty-five (45) days after the opening of Bids, or anytime thereafter should the Proposal not be withdrawn, the undersigned, within ten (10) days, will execute the Form of Agreement with the Owner.

1.18 ADDENDA

A. Any addenda issued by the Architect and mailed or delivered to the undersigned prior to the Bid opening date shall become part of the Contract Documents. The Bidder shall enter on this list any addenda issued after this Form of Proposal has been received and shall fill in the addenda number and date.

Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:

1.19 ASBESTOS

A. The bidder certifies that no asbestos or asbestos-containing materials will be incorporated into the Work of this Contract.

1.20 AUTHORIZED SIGNATURES FOR PROPOSALS

Individual or Legal Name of Firm or Corporation:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
If Corporation – provide Seal:

1.21 IRAN DIVESTMENT ACT CERTIFICATION

A. By submission of this bid, (DL & AV Equip 1315), or by assuming the responsibility of a Contract awarded hereunder, each bidder and each person signing on behalf of any bidders, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

1. That each bidder/contractor/assignee is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list created pursuant to paragraph (b) subdivision 3 of section 165-a of the New York State Finance Law and posted on the OGS website at http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize on such Contract any subcontractor that is identified on the Prohibited Entities List. Additionally, Bidder/Contractor is advised that should it seek to renew or extend a Contract awarded in response to the solicitation, it must provide the same certification at the time the Contract is renewed or extended. (See Article in the Instructions to Bidders.)

Individual or Legal Name of Firm or Corporation:
Mailing Address:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

1.22 SEXUAL HARASSMENT POLICY/TRAINING AFFIRMATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all its employees.

Name of Contractor:	
Name of Business or Firm:	
Address:	
Telephone:	Fax
Email Address:	
Signature and Title of Contractor:	
Date:	

CERTIFICATION UNDER EXECTUIVE ORDER NO. 16

PROHIBITING STATE AGENCIES AND AUTHORITIES FROM CONTRACTING WITH BUSINESSES CONDUCTING BUSINESS IN RUSSIA

Executive order No. 16 provided that"all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia." The complete text of the Executive Order No. 16 can be found at the following website; https://ogs.ny.gov/EO-16.

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from ward becasue of current businees operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations.

As defined in Exectuive Order No. 16, an entity conducting business operation in Russia" means an instituation or company, wherever located, conducting any cmmerical activity in Russia or transacting business with the Russian Government or with commerical entities headquartered in Russia or with their prinicipal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

Is vender an entity conducting business operations in Russia, as defined above? Please answer by circling one of the following numbers:

1.	No, Vender does not conduct business operations in Russia within the meaning of Executive Order No. 16
2.a.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion).
2.b.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extend necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being procided or the revelant laws, regulations, etc.).
3.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16.

The undersigned certifies under penalties of perjury that they are knowledgeable about the Vendor's business and operations and that the answer provided herein is true to the best of their knowledge and behalf.

Vender Name:
(legal entity) _____
By:
(signature) _____
Name: _____
Title: _____
Date: _____

LABOR LAW 220-I CERTIFICATION FORM

By submission of this bid, the person authorized to sign on behalf of the Bidder hereby certifies, under penalty of perjury, that :

1. The Bidder is registered with the New York State Department of Labor pursuant to Section 220-i of the New York Labor Labor Law, and
2. Each of the subcontractors engaged by the BIdder for this Project will be registered before commencing work.

Bidder further represents that;

1. A copy of the Bidder's Certificate of Registration issued by the Commissioner of the Department of Labor is attached to this Bid.
2. All Subcontractors will submit a copy of their Certificate of Registration issued by the Commissioner of the Department of Labor before commencing work.

Project:
Individual or Legal Name of Bidder or Corporation:
Bidder Address:
Signature of Representative of Bidder or Corporation:
Print Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

END OF SECTION 004030

SECTION 004040
FORM OF PROPOSAL – PLUMBING CONSTRUCTION

PART 1 GENERAL

1.01 SUMMARY

A. Fill in information:

Date:
TO:
OWNER NAME & ADDRESS:
FROM:
BIDDER NAME & ADDRESS

1.02 GENERAL

A. Pursuant to, and in compliance with, the Procurement and Contracting Requirements, Conditions of the Contract, relative thereto and all of the Contract Documents, including any Addenda issued by the Architect and mailed or delivered to the undersigned prior to the opening of Bids, whether received by the undersigned or not,
we,_____

1. having visited the site and being familiar with all conditions and requirements of the Work, hereby propose to furnish all plant, labor, supplies, materials and equipment incidental to PLUMBING CONSTRUCTION WORK as required by and in strict accord with the applicable provisions of the Drawings and Specifications entitled Pine Bush Central School District 2025 CIP Phase 2- Roofing all to the satisfaction and approval of the Architect and the Owner in accordance with the terms and conditions of the Contract Documents for the following sum:

	DOLLARS
($	)
BASE BID	

1.03 BID GUARANTEE

A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 45 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid.

1. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.04 TIME OF COMPLETION

A. It is agreed by the undersigned that after receipt of a Notice of Award and a consummation of a Contract Agreement in accord with the terms of the Contract Documents, he or she will start

work within 10 consecutive calendar days of the notice to proceed and fully complete the work by as indicated in the Contract Documents.

1.05 BID SECURITY

A. Bid Security in the form of a Certified or Cashier's Check or a Bid Bond in the form required by the Contract Documents is attached to and made a part of this Proposal.

1.06 IRAN DIVESTMENT ACT CERTIFICATION

A. Contractor to submit with the bid, Iran Divestment Act Certification which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.07 CERTIFICATION UNDER EXECUTIVE ORDER NO. 16

A. Contractor to submit with the bid, Certification under Executive Order No. 16 which hereto is made a part of this Form of Proposal and is attachd at the end of this Form of Proposal.

1.08 NEW YORK STATE DEPARTMENT OF LABOR CONTRACTOR REGISTRY

A. Pursuant to New York State Department of Labor requirements, Contractor to submit with the bid, a copy of their Contractor Certificate of Registration along with, Labor Law 220-i Certification Form which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

1.09 REPRESENTATIONS

A. By submitting this Proposal the Bidder represents and certifies to the Owner and the Architect that
   1. It has examined the Contract Documents, the site of the proposed Work, is familiar with the local conditions at the place where the Work is to be performed and fully comprehends the requirements and intent of the plans and specifications for this Project in accordance with the drawings, specifications and other Contract Documents prepared by CPL the Owners Consultant, for this Project.
   2. It has examined and reviewed, where applicable, all information and data in the Contract Documents related to existing underground facilities at or contiguous to the site. Bidder shall require of the Owner or Architect no further investigations, explorations, tests or reports with respect to such underground facilities in order for the Bidder to perform the Work of the Proposal within the Contract Time and in accordance with the Contract Documents.
   3. It has given notice to the Architect, as required by the Contract Documents of any and all discrepancies it has discovered and accepts the resolution of those discrepancies offered by the Architect.
   4. Pursuant to New York State General Municipal Law section 103-d, by submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
      a. The prices in this bid have been arrived at independently without collusion, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
      b. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not be knowingly disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or competitor; and
      c. No attempt has been made or will be made by bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

d. The proposal is based upon the materials, equipment and systems required by the Contract Documents, without exception, unless otherwise set forth in this Proposal in detail.

1.10 CHANGE ORDERS

A. We propose and agree that the above lump sum shall be adjusted for changes in the Contract Work not included in unit prices by addition of the following costs:
   1. Profit and overhead as permitted in the General Conditions.

1.11 NON-COLLUSIVE BIDDING CERTIFICATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
   1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
   2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
   3. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

1.12 ACCEPTANCE

A. When this Proposal is accepted, the undersigned agrees to enter into a Contract with the Owner as provided in the Form of Agreement.

1.13 AFFIRMS

A. The undersigned affirms and agrees that this Proposal is a firm one which remains in effect and will be irrevocable for a period of forty-five (45) days after opening of Bids.

1.14 TYPE OF BUSINESS

A. The undersigned hereby represents that it is a (select with circle):
   1. Corporation, Partnership, Individual.
   2. If a Corporation, then the undersigned further represents that it is duly qualified as a Corporation under the laws of New York State and it is authorized to do business in this State.

1.15 PLACE OF BUSINESS

A. The following is the name and address of the person to whom all notices required in connection with this Proposal may be telephoned, mailed, or delivered.

Name of Contact Person:	
Name of Business or Firm:	
Address:	
Address:	
Telephone:	Fax
Email Address:	
FEIN: Federal Employer Identification No.:	

1.16 EXECUTION OF CONTRACT

A. When written Notice of Acceptance of the Proposal is mailed or delivered to the undersigned within forty-five (45) days after the opening of Bids, or anytime thereafter should the Proposal not be withdrawn, the undersigned, within ten (10) days, will execute the Form of Agreement with the Owner.

1.17 ADDENDA

A. Any addenda issued by the Architect and mailed or delivered to the undersigned prior to the Bid opening date shall become part of the Contract Documents. The Bidder shall enter on this list any addenda issued after this Form of Proposal has been received and shall fill in the addenda number and date.

Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:
Addendum #	Dated:

1.18 ASBESTOS

A. The bidder certifies that no asbestos or asbestos-containing materials will be incorporated into the Work of this Contract.

1.19 AUTHORIZED SIGNATURES FOR PROPOSALS

Individual or Legal Name of Firm or Corporation:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
If Corporation – provide Seal:

1.20 IRAN DIVESTMENT ACT CERTIFICATION

A. By submission of this bid, (DL & AV Equip 1315), or by assuming the responsibility of a Contract awarded hereunder, each bidder and each person signing on behalf of any bidders, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

1. That each bidder/contractor/assignee is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list created pursuant to paragraph (b) subdivision 3 of section 165-a of the New York State Finance Law and posted on the OGS website at http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize on such Contract any subcontractor that is identified on the Prohibited Entities List. Additionally, Bidder/Contractor is advised that should it seek to renew or extend a Contract awarded in response to the solicitation, it must provide the same certification at the time the Contract is renewed or extended. (See Article in the Instructions to Bidders.)
2.

Individual or Legal Name of Firm or Corporation:
Mailing Address:
Signature of Representative of Firm or Corporation:
Printed Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

1.21 SEXUAL HARASSMENT POLICY/TRAINING AFFIRMATION

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all its employees.

Name of Contractor:	
Name of Business or Firm:	
Address:	
Telephone:	Fax
Email Address:	
Signature and Title of Contractor:	
Date:	

CERTIFICATION UNDER EXECTUIVE ORDER NO. 16

PROHIBITING STATE AGENCIES AND AUTHORITIES FROM CONTRACTING WITH BUSINESSES CONDUCTING BUSINESS IN RUSSIA

Executive order No. 16 provided that"all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia." The complete text of the Executive Order No. 16 can be found at the following website; https://ogs.ny.gov/EO-16.

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from ward becasue of current businees operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations.

As defined in Exectuive Order No. 16, an entity conducting business operation in Russia" means an instituation or company, wherever located, conducting any cmmerical activity in Russia or transacting business with the Russian Government or with commerical entities headquartered in Russia or with their prinicipal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

Is vender an entity conducting business operations in Russia, as defined above? Please answer by circling one of the following numbers:

1.	No, Vender does not conduct business operations in Russia within the meaning of Executive Order No. 16
2.a.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion).
2.b.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extend necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being procided or the revelant laws, regulations, etc.).
3.	Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16.

The undersigned certifies under penalties of perjury that they are knowledgeable about the Vendor's business and operations and that the answer provided herein is true to the best of their knowledge and behalf.

Vender Name:
(legal entity) _____
By:
(signature) _____
Name: _____
Title: _____
Date: _____

LABOR LAW 220-I CERTIFICATION FORM

By submission of this bid, the person authorized to sign on behalf of the Bidder hereby certifies, under penalty of perjury, that :

1. The Bidder is registered with the New York State Department of Labor pursuant to Section 220-i of the New York Labor Labor Law, and
2. Each of the subcontractors engaged by the BIdder for this Project will be registered before commencing work.

Bidder further represents that;

1. A copy of the Bidder's Certificate of Registration issued by the Commissioner of the Department of Labor is attacehd to this Bid.
2. All Subcontractors will submit a copy of their Certificate of Registration issued by the Commissioner of the Department of Labor before commencing work.

Project:
Individual or Legal Name of Bidder or Corporation:
Bidder Address:
Signature of Representative of Bidder or Corporation:
Print Name and Title:
Date:
SWORN to before me this date:
Notary Public Signature and Stamp:

END OF SECTION 004040

SECTION 004500
QUALIFICATION STATEMENT

PART 1 GENERAL

1.01 SUMMARY

A. Fill in information:

Project Number: R25.17714.01
Owner's Name: Pine Bush Central School District
Name of Bidder:
FEIN (Federal Employer'

1.02 STATEMENT OF BIDDER'S QUALIFICATIONS

A. Contract For:

PICK FROM THE FOLLOWING:

1. GC, MC, EC, PC

B. Notarized & Submitted By 3 Low Bidders Within 72 Hours of Architect or Construction Manager Request. All questions must be answered, and the data given must be clear and comprehensive. If necessary, questions may be answered on separate attached sheet.

1. Name of Bidder

2. Permanent main office address

3. When organized

4. If a corporation, where incorporated

5. How many years have you been engaged in the contracting business under your present firm or trade name?

6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)

7. General character of work performed by your company

8. Has any construction contract to which you have been a party been terminated by the OWNER; have you ever terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf; has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? If the answer to any portion of this question is "yes", please furnish details of

all such occurrences including name of owner, architect or Architect, and surety, and name and date of project.

9. Has any officer, partner, member or manager of your organization ever been an officer, partner, member or manager of another organization that had any construction contract terminated by the OWNER; terminated work on a project prior to its completion for any reason; had any surety which issued a performance bond complete the work in its own name or financed such completion; or had any surety expend any monies in connection with a contract for which they furnished a bond? If the answer to any portion of this question is “yes”, please furnish details of all such occurrences including name of owner, architect or Architect, and surety, and name and date of project.

10. List your experience in work similar to this project.

11. List the background and experience of the principal members of your organization, including officers.

12. List name of project, owner, architect or Architect, contract amount, percent complete and scheduled completion of the major construction projects your organization has in process on this date.

13. List name of project, owner, architect or Architect, contract amount, date of completion and percent of work with own forces of the major projects of the same general nature as this project which your organization has completed in the past five (5) years.

14. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?

15. List name, address and telephone number of a reference for each project listed under items 12 and 13 above.

16. List names and construction experience of the principal individuals of our organization.

17. List the states and categories of construction in which your organization is legally qualified to do business.

18. List name, address and telephone number of an individual who represents each of the following and whom OWNER may contact for a financial reference:
    a. One Surety:
    b. Two banks:
    c. Three major material suppliers:

19. Attach a financial statement, prepared on an accrual basis, in a form which clearly indicates assets, liabilities and net worth.
    a. Date of financial Statement:
    b. Name of firm preparing statement:

20. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications and that the answers to the foregoing questions and all statements therein contained are true and correct.

Date:
Name of Bidder:
Title:
State of:
County of:
Being duly sworn deposes and says that he is:
Of (Name of Firm or Corporation):
Subscribed and Sworn to before me:
Date:
Notary Public Signature and Stamp:

1.03 BIDDERS STATEMENT

A. Fill in information:

Name of Bidder:
Name of Firm or Corporation:
Name of Owner and Project Name:

B. The Bidder making the Bid for Construction of the above named Project, certifies that I or my authorized representative has personally inspected the job site. The Bidder has relied on its own knowledge and review and interpretation of the Bidding Documents and all relevant plans and specifications, boring logs and other data in submitting his bid and not on any representation made by the Owner, Architect, or any other person, with respect to the character, quality or quantities of Work to be performed, or materials or equipment to be furnished. Bidder acknowledges that any quantities are an estimate only so that Bidder agrees not to seek additional compensation or request an adjustment in any unit price as a result of any variation in quantities or unforeseen site conditions encountered for any reason whatsoever. The Bidder represents that it has reviewed and accepts the applicable Project schedule and all revisions thereto. The Bidder agrees and understands that any such project schedule is incorporated by reference in the Contract Documents and further acknowledges that its failure to adhere to any such project schedule will expose Owner to severe financial hardship. Accordingly, Bidder agrees to exonerate, indemnify and hold Owner harmless from and against any and all losses, damages (including claims made by other Contractors performing Work at the Project) and claims arising out of Bidder's failure to adhere to any project schedule or any modifications, updates or revisions thereto. The Bidder's failure to adhere to and maintain the project schedule, including any revisions thereto, shall be grounds for termination.

Print Name of Bidder:
Signature of Bidder:
Title:
Seal if Bidder is a Corporation:

1.04 PERFORMANCE BOND INFORMATION FORM

A. Fill in information:

City/Town/Village:
School District:
Construction Contract Number:
Name of Contract:
Name of Contractor:
Address:
Entity Issuing Security Bond:
Address:
Bonding Agent:
Address:
Amount of Bid:
Duration of Bond: From: To:

Bond Identification Number:

END OF SECTION 004500

SECTION 005200
A132 AGREEMENT COVER(CMA)

PART 1 GENERAL

1.01 SUMMARY

A. The following is a “Standard Form of Agreement Between Owner and Contractor – Stipulated Sum, Construction Manager-Adviser Edition,” AIA Document A132 - 2019, is bound with this Section. AIA Document A232 – 2019 is a standard form of agreement between Owner and Contractor for use on projects where the basis of payment is a stipulated sum (fixed price), and where, in addition to the Contractor and the Architect, a Construction Manager assists the Owner in an advisory capacity during design and construction. The document has been prepared for use with A232 – 2019 , General Conditions of the Contract for Construction, Construction Manager-Adviser Edition. This integrated set of documents is for use on projects where the Construction Manager only serves in the capacity of an adviser to the Owner, rather than as constructor.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 005200

This page intentionally left blank

AIA® Document A132® – 2019

Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition

AGREEMENT made as of the _____ day of _____ in the year Two Thousand Twenty-_____
(In words, indicate day, month, and year.)

BETWEEN the Owner:
(Name, legal status, address, and other information)

Pine Bush Central School District
156 Route 302
Pine Bush, NY 12566

and the Contractor:
(Name, legal status, address, and other information)

for the following Project:
(Name, location, and detailed description)

PINE BUSH CENTRAL SCHOOL DISTRICT
2025 CAPITAL IMPROVEMENT PROJECT – PHASE 2

Circleville Elementary School SED # 44-04-01-06-0-009-018
2000 NY-302
Circleville, NY 10919

Circleville Middle School SED # 44-04-01-06-0-014-019
1951 State Route 302
Circleville, NY 10919

Pakanasink Elementary School SED # 44-04-01-06-0-012-019
1953 Rte 302
Circleville, NY 10919

Pine Bush High School SED # 44-04-01-06-0-007-032
118 State Route 302
Pine Bush, NY 12566

ADDITIONS AND DELETIONS:
The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

AIA Document A232™–2019 is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

The Construction Manager:
(Name, legal status, address, and other information)

Pike Construction Services, Inc.
20 Loudonville Road
Albany, NY 12204

The Architect:
(Name, legal status, address, and other information)

CPL Architects, Engineers, and Landscape Architect, D.P.C. d/b/a CPL
4 Crotty Lane, Suite 104
New Windsor, NY 12253

The Owner and Contractor agree as follows.

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

6 DISPUTE RESOLUTION

7 TERMINATION OR SUSPENSION

8 MISCELLANEOUS PROVISIONS

9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS
EXHIBIT B DETERMINATION OF THE COST OF THE WORK

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

[ ] The date of this Agreement.

[X] A date set forth in a notice to proceed issued by the Owner.

[ ] Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work. The Contractor shall not

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

commence Work until receipt of a written Notice to Proceed issued by the Owner and evidence of all required insurance and bonds. Any mobilization or procurement prior to such written notice shall be at the Contractor's sole risk and expense.

§ 3.3 Substantial Completion of the Project or Portions Thereof

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the date of Substantial Completion of the Work of all of the Contractors for the Project will be:
(Insert the date of Substantial Completion of the Work of all Contractors for the Project.)

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of all of the Contractors for the Project are to be completed prior to Substantial Completion of the entire Work of all of the Contractors for the Project, the Contractors shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.4 When the Work of this Contract, or any Portion Thereof, is Substantially Complete

§ 3.4.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall substantially complete the entire Work of this Contract:
(Check one of the following boxes and complete the necessary information.)

[ ] Not later than ( ) calendar days from the date of commencement of the Work.

[ ] By the following date:

§ 3.4.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of this Contract are to be substantially complete prior to when the entire Work of this Contract shall be substantially complete, the Contractor shall substantially complete such portions by the following dates:

Portion of Work	Date to be substantially complete

§ 3.4.3 If the Contractor fails to substantially complete the Work of this Contract, or portions thereof, as provided in this Section 3.4, liquidated damages, if any, shall be assessed as set forth in Section 4.5. Liquidated damages shall not be construed as the exclusive remedy of the Owner, which retains all other rights and remedies at law or in equity, including actual damages.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:
(Check the appropriate box.)

[X] Stipulated Sum, in accordance with Section 4.2 below

[ ] Cost of the Work plus the Contractor's Fee, in accordance with Section 4.3 below

[ ] Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 4.4 below

(Based on the selection above, complete Section 4.2, 4.3 or 4.4 below.)

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

§ 4.2 Stipulated Sum

§ 4.2.1 The Contract Sum shall be ( ), subject to additions and deductions as provided in the Contract Documents. No payment shall be deemed to waive defects in the Work, or to constitute acceptance of Work not in full compliance with the Contract Documents.

§ 4.2.2 Alternates

§ 4.2.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.2.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.2.4 Unit prices, if any:
(Identify the item and state the unit price, and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.3 Cost of the Work Plus Contractor's Fee without a Guaranteed Maximum Price

§ 4.3.1 The Cost of the Work is as defined in Exhibit B, Determination of the Cost of the Work.

§ 4.3.2 The Contractor's Fee:
(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)

§ 4.3.3 The method of adjustment of the Contractor's Fee for changes in the Work:

§ 4.3.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

§ 4.3.5 Rental rates for Contractor-owned equipment shall not exceed percent (%) of the standard rental rate paid at the place of the Project.

§ 4.3.6 Unit prices, if any:

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.3.7 The Contractor shall prepare and submit to the Construction Manager, within 14 days of executing this Agreement, a written Control Estimate for the Owner's review and approval. The Control Estimate shall include the items in Section B.1 of Exhibit B, Determination of the Cost of the Work.

§ 4.4 Cost of the Work Plus Contractor's Fee with a Guaranteed Maximum Price

§ 4.4.1 The Cost of the Work is as defined in Exhibit B, Determination of the Cost of the Work.

§ 4.4.2 The Contractor's Fee:
(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)

§ 4.4.3 The method of adjustment of the Contractor's Fee for changes in the Work:

§ 4.4.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

§ 4.4.5 Rental rates for Contractor-owned equipment shall not exceed percent (%) of the standard rental rate paid at the place of the Project.

§ 4.4.6 Unit Prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.4.7 Guaranteed Maximum Price

§ 4.4.7.1 The Contract Sum is guaranteed by the Contractor not to exceed ($), subject to additions and deductions by Change Order as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

§ 4.4.7.2 Alternates

§ 4.4.7.2.1 Alternates, if any, included in the Guaranteed Maximum Price:

Item	Price

§ 4.4.7.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

§ 4.4.7.3 Allowances, if any, included in the Guaranteed Maximum Price:
(Identify each allowance.)

Item	Price

§ 4.4.7.4 Assumptions, if any, upon which the Guaranteed Maximum Price is based:
(Identify each assumption.)

§ 4.4.8 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes, or equipment, all of which, if required, shall be incorporated by Change Order.

§ 4.4.9 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 4.4.7.4. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 4.4.7.4 and the revised Contract Documents.

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any, to be assessed in accordance with Section 3.4.)

§ 4.6 Other:
(Insert provisions for bonus, cost savings or other incentives, if any, that might result in a change to the Contract Sum.)
No bonus or incentive shall be due unless expressly approved in writing by the Owner's Board of Education prior to performance of the related Work.

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Construction Manager by the Contractor, and Certificates for Payment issued by the Construction Manager and Architect, the Owner shall make progress payments on account of the Contract Sum, to the Contractor, as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

N/A

§ 5.1.3 Provided that an Application for Payment is received by the Construction Manager not later than the 5th day of a month, the Owner shall make payment of the undisputed amount certified to the Contractor not later than the 1st day of the preceding month. If an Application for Payment is received by the Construction Manager after the application date fixed above, payment of the undisputed amount certified shall be made by the Owner not later than 45 (forty-five) days after the Construction Manager receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Progress Payments Where the Contract Sum is Based on a Stipulated Sum

§ 5.1.4.1 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.4.2 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.4.3 In accordance with AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.4.3.1 The amount of each progress payment shall first include:

.1 That portion of the Contract Sum properly allocable to completed Work;

.2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and

.3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.4.3.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019; and

.5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.5 Progress Payments Where the Contract Sum is Based on the Cost of the Work without a Guaranteed Maximum Price

§ 5.1.5.1 With each Application for Payment, the Contractor shall submit the cost control information required in Exhibit B, Determination of the Cost of the Work, along with payrolls, petty cash accounts, receipted invoices, or invoices with check vouchers attached, and any other evidence required by the Owner, Construction Manager or Architect to demonstrate that payments already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor, plus payrolls for the period covered by the present Application for Payment, less that portion of the payments attributable to the Contractor's Fee.

§ 5.1.5.2 Applications for Payment shall show the Cost of the Work actually incurred by the Contractor through the end of the period covered by the Application for Payment and for which the Contractor has made or intends to make actual payment prior to the next Application for Payment.

§ 5.1.5.3 In accordance with AIA Document A232-2019 and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.5.3.1 The amount of each progress payment shall first include:

.1 The Cost of the Work as described in Exhibit B, Determination of the Cost of the Work;

.2 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified; and

.3 The Contractor's Fee computed upon the Cost of the Work described in the preceding Section 5.1.5.3.1.1 at the rate stated in Section 4.3.2; or if the Contractor's Fee is stated as a fixed sum in Section 4.3.2 an amount which bears the same ratio to that fixed-sum Fee as the Cost of the Work included in Section 5.1.5.3.1.1 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

§ 5.1.5.3.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019;

.5 The shortfall, if any, indicated by the Contractor in the documentation required by Section 5.1.5.1 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.5.4 The Owner, Construction Manager and Contractor shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors and the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

§ 5.1.5.5 In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor, and such action shall not be deemed to be a representation that (1) the Construction Manager and Architect have made a detailed examination, audit or arithmetic verification of the documentation submitted in accordance with Article 5 or other supporting data; (2) that the Construction Manager and Architect have made exhaustive or continuous on-site inspections; or (3) that the Construction Manager and Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

§ 5.1.5.6 Except with the Owner's prior written approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.1.5.7 If final completion of the Work is materially delayed through no fault of the Contractor, then the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A232-2019.

§ 5.1.6 Progress Payments Where the Contract Sum is Based on the Cost of the Work with a Guaranteed Maximum Price

§ 5.1.6.1 With each Application for Payment, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner, Construction Manager or Architect to demonstrate that payments already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

§ 5.1.6.2 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Guaranteed Maximum Price among: (1) the various portions of the Work; (2) any contingency for costs that are included in the Guaranteed Maximum Price but not otherwise allocated to another line item or included in a Change Order; and (3) the Contractor's Fee.

§ 5.1.6.2.1 The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.6.2.2 The allocation of the Guaranteed Maximum Price under this Section 5.1.6.2 shall not constitute a separate guaranteed maximum price for the Cost of the Work of each individual line item in the schedule of values.

§ 5.1.6.2.3 When the Contractor allocates costs from a contingency to another line item in the schedule of values, the

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

Contractor shall submit supporting documentation to the Architect and Construction Manager.

§ 5.1.6.3 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. The percentage of completion shall be the lesser of (1) the percentage of that portion of the Work which has actually been completed; or (2) the percentage obtained by dividing (a) the expense that has actually been incurred by the Contractor on account of that portion of the Work and for which the Contractor has made payment or intends to make payment prior to the next Application for Payment by (b) the share of the Guaranteed Maximum Price allocated to that portion of the Work in the schedule of values.

§ 5.1.6.4 In accordance with AIA Document A232-2019, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.4.1 The amount of each progress payment shall first include:

.1 That portion of the Guaranteed Maximum Price properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the Guaranteed Maximum Price allocated to that portion of the Work in the most recent schedule of values;

.2 That portion of the Guaranteed Maximum Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction or, if approved in writing in advance by the Owner, suitably stored off the site at a location agreed upon in writing;

.3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified; and

.4 The Contractor's Fee, computed upon the Cost of the Work described in the preceding Sections 5.1.6.4.1.1 and 5.1.6.4.1.2 at the rate stated in Section 4.4.2 or, if the Contractor's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum fee as the Cost of the Work included in Sections 5.1.6.4.1.1 and 5.1.6.4.1.2 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

§ 5.1.6.4.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019;

.5 The shortfall, if any, indicated by the Contractor in the documentation required by Section 5.1.6.1 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.6.5 The Owner and the Contractor shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors and the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

§ 5.1.6.6 In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor and such action shall not be deemed to be a representation that (1) the Construction Manager or Architect have made a detailed examination, audit, or arithmetic verification of the documentation submitted in accordance with Section 5.1.6.1 or other supporting data; (2) that the Construction Manager or Architect have made exhaustive or continuous on-site inspections; or (3) that the Construction Manager or Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits, and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

§ 5.1.6.7 Except with the Owner's prior written approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

§ 5.1.6.8 If final completion of the Work is materially delayed through no fault of the Contractor, then the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A232-2019.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to when the Work of this Contract is substantially complete, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Five percent (5%)

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

All items are subject to retainage

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to when the entire Work of this Contract is substantially complete, including modifications for completion of portions of the Work as provided in Section 3.4.2, insert provisions for such modifications.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, when the Work of this Contract is substantially complete, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted when the Work of this Contract is substantially complete shall not include retainage as follows:
(Insert any other conditions for release of retainage when the Work of this Contract is substantially complete, or upon Substantial Completion of the Work of all Contractors on the Project or portions thereof.)

The Owner shall pay the remaining amount of the contract balance less two times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged

§5.1.8 The Owner may, at any time, withhold payment to the extent reasonably necessary to protect against defective Work, third-party claims, failure to pay Subcontractors, or evidence that the remaining Work cannot be completed for the unpaid balance.

§ 5.2 Final Payment

§ 5.2.1 Final Payment Where the Contract Sum is Based on a Stipulated Sum

§ 5.2.1.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect.

.3 the Contractor provides satisfactory evidence of payment to all Subcontractors and suppliers, releases of liens, warranties, as-built drawings, and operation manuals. Acceptance of final payment shall constitute a full and final release of all claims against the Owner arising from this Contract.

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

§ 5.2.1.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

§ 5.2.2 Final Payment Where the Contract Sum is Based on the Cost of the Work with or without a Guaranteed Maximum Price

§ 5.2.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, and to satisfy other requirements, if any, which extend beyond final payment;

.2 the Contractor has submitted a final accounting for the Cost of the Work, pursuant to Exhibit B, Determination of the Cost of the Work and a final Application for Payment; and

.3 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect in accordance with Exhibit B, Determination of the Cost of the Work.

§ 5.2.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

§ 5.3 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

%

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Article 15 of AIA Document A232–2019, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A232–2019, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[ ] Arbitration pursuant to Article 15 of AIA Document A232–2019.

[X] Litigation in a court of competent jurisdiction. in Orange County, New York.

[ ] Other: *(Specify)*

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

The Contractor shall continue performance of the Work pending resolution of any dispute, without delay, unless directed otherwise in writing by the Owner.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 Where the Contract Sum is a Stipulated Sum

§ 7.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2019.

§ 7.1.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A232–2019, then ~~the Owner shall pay the Contractor a termination fee as follows:~~ payment shall be limited to actual, verifiable costs incurred for Work properly performed up to the date of termination. The Contractor shall not be entitled to anticipated profit or consequential damages.

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

§ 7.1.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2019.

§ 7.2 Where the Contract Sum is Based on the Cost of the Work with or without a Guaranteed Maximum Price

§ 7.2.1 Termination

§ 7.2.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2019.

§ 7.2.1.2 Termination by the Owner for Cause

§ 7.2.1.2.1 If the Owner terminates the Contract for cause as provided in Article 14 of AIA Document A232–2019, the Owner shall then only pay the Contractor an amount as follows:

.1 Take the Cost of the Work incurred by the Contractor to the date of termination;

.2 Add the Contractor's Fee, computed upon the Cost of the Work to the date of termination at the rate stated in Section 4.3.2 or 4.4.2, as applicable, or, if the Contractor's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum Fee as the Cost of the Work at the time of termination bears to a reasonable estimate of the probable Cost of the Work upon its completion;

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract the costs and damages incurred, or to be incurred, by the Owner under Article 14 of AIA Document A232–2019.

.5 Offset all costs incurred to complete or correct the Work, including reasonable legal and administrative expenses.

§ 7.2.1.2.2 When the Contract Sum is based on the Cost of the Work with a Guaranteed Maximum Price, if the Owner terminates the Contract for cause as provided in Article 14 of AIA Document A232-2019, the amount, if any, to be paid to the Contractor under Article 14 of AIA Document A232-2019 shall not cause the Guaranteed Maximum Price to be exceeded, nor shall it exceed the amount calculated in Section 7.2.1.2.1.

§ 7.2.1.2.3 The Owner shall also pay the Contractor fair compensation, either by purchase or rental at the election of the Owner, for any equipment owned by the Contractor that the Owner elects to retain and that is not otherwise included in the Cost of the Work under Section 7.2.1.2.1.1. To the extent that the Owner elects to take legal assignment of subcontracts and purchase orders (including rental agreements), the Contractor shall, as a condition of receiving the payments referred to in this Article 7, execute and deliver all such papers and take all such steps, including the legal assignment of such subcontracts and other contractual rights of the Contractor, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Contractor under such subcontracts or purchase orders. All Subcontracts, purchase orders and rental agreements entered into by the Contractor will contain provisions

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

allowing for assignment to the Owner as described above.

§ 7.2.1.3 Termination by the Owner for Convenience

If the Owner terminates the Contract for convenience in accordance with Article 14 of AIA Document A232–2019, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of or method for determining the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

§ 7.3 Suspension

The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2019; in such case, the Contract Sum and Contract Time shall be increased as provided in Article 14 of AIA Document A232–2019, except that the term "profit" shall be understood to mean the Contractor's Fee as described in Section 4.3.2 or 4.4.2, as applicable, of this Agreement.

Upon termination or suspension, the Contractor shall immediately deliver to the Owner all drawings, records, and materials relating to the Work, whether in progress or complete.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A232–2019 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

(Name, address, email address, and other information)

§ 8.3 The Contractor's representative:

(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A132™–2019, Exhibit A, and elsewhere in the Contract Documents.

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A232–2019, may be given in accordance with ~~a building information modeling exhibit,~~ AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:
(If other than in accordance with ~~a building information modeling exhibit,~~ AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Relationship of the Parties
Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

§ 8.8 Other provisions:
Nothing in this Agreement shall be construed as a waiver of any immunities, defenses, or limitations of liability available to the Owner under applicable law, including but not limited to New York Education Law and General Municipal Law. All payments are contingent upon lawful appropriation and availability of public funds.

The Contractor shall comply with all applicable federal, state, and local laws, including but not limited to Labor Law §§ 200, 220, and 240; General Municipal Law, and OSHA. The Contractor shall indemnify and hold harmless the Owner from all violations or penalties arising from its failure to comply.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS
§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition

.2 AIA Document A132™–2019, Exhibit A, Insurance and Bonds Exhibit

.3 AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

.4 AIA Document E203™–2013, Building Information Modeling ~~Exhibit, if completed:~~ and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

.7 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[ ] AIA Document A132™–2019, Exhibit B, Determination of the Cost of the Work

[ ] AIA Document E235™–2019, Sustainable Projects Exhibit, Construction Manager as Adviser Edition, dated as indicated below:

(Insert the date of the E235-2019 incorporated into this Agreement.)

[ ] The Sustainability Plan:

Title	Date	Pages

[ ] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A232–2019 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

This Agreement is entered into as of the day and year first written above.

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
(Printed name and title)	*(Printed name and title)*

AIA Document A132 – 2019. Copyright © 1975, 1980, 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:43:46 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403f10ba191c376ba0690b)

AIA® Document A132® – 2019 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the _____ day of _____ in the year Two Thousand Twenty-_____
(In words, indicate day, month, and year.)

for the following **PROJECT**:
(Name and location or address)

PINE BUSH CENTRAL SCHOOL DISTRICT
2025 CAPITAL IMPROVEMENT PROJECT – PHASE 2

Circleville Elementary School SED # 44-04-01-06-0-009-018
2000 NY-302
Circleville, NY 10919

Circleville Middle School SED # 44-04-01-06-0-014-019
1951 State Route 302
Circleville, NY 10919

Pakanasink Elementary School SED # 44-04-01-06-0-012-019
1953 Rte 302
Circleville, NY 10919

Pine Bush High School SED # 44-04-01-06-0-007-032
118 State Route 302
Pine Bush, NY 12566

THE OWNER:
(Name, legal status, and address)

Pine Bush Central School District
156 Route 302
Pine Bush, NY 12204

THE CONTRACTOR:
(Name, legal status, and address)

ADDITIONS AND DELETIONS:
The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Document A232™–2019, General Conditions of the Contract for Construction. Article 11 of A232™–2019 contains additional insurance provisions

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

TABLE OF ARTICLES

A.1 GENERAL

A.2 OWNER'S INSURANCE

A.3 CONTRACTOR'S INSURANCE AND BONDS

A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A232™–2019, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:
(Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss	Sub-Limit

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to false work and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's, Construction Manager's, and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:
(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage	Sub-Limit

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.
(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

[ ] **§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

[ ] **§ A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

[ ] **§ A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

[ ] **§ A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

[ ] **§ A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

[ ] **§ A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

[ ] **§ A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

[ ] **§ A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information.

(Indicate applicable limits of coverage or other conditions in the fill point below.)

[ ] **§ A.2.5.2 Other Insurance**

(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage	**Limits**

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies. The certificate of insurance must describe the services provided by the contractor (e.g., roofing, carpentry or plumbing) that are covered by the liability policies. A fully completed New York Construction Certificate of Liability Insurance Addendum (ACORD 855 2014/15) must be included with the certificates of insurance. For any "Yes" answers on Items G through L on this Form, additional details must be provided in writing. Policy exclusions may not be accepted. At the District's ~~/BOCES~~' request, the contractor shall provide a copy of the declaration page of the liability and umbrella/excess policies with a list of endorsements and forms. If requested, the contractor will provide a copy of the policy endorsements and forms. There will be no coverage restrictions and/or exclusions involving New York State Labor Law statutes or gravity related injuries. No policies containing escape

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

clauses or exclusions contrary to the Owner's interests will be accepted.

Add: Certificates of insurance and endorsements shall be submitted to the Owner before any work begins and kept current through completion. Failure to maintain required insurance shall be a material breach of contract. The Owner may withhold payment or suspend the Work until evidence of coverage is received and approved.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the ~~Contractor.~~Contractor and indemnify the District~~/BOCES~~ for applicable deductibles and self-insured retentions.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect and the Architect's consultants, and the Construction Manager and the Construction Manager's consultants, as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed ~~operations.~~ operations and provide coverage for the District~~/BOCES~~, its Board, employees and volunteers including a waiver of subrogation in favor of the District~~/BOCES~~ for all coverages including Workers Compensation. Additional insured status for General Liability coverage shall be provided by standard or other endorsements that extend coverage to the District~~/BOCES~~ for on-going operations (CG 20 38 or equivalent) and products and completed operations (CG 20 37 or equivalent). The decision to accept an endorsement rests solely with the District~~/BOCES~~. A completed copy of the endorsements must be attached to the Certificate of Insurance to include General Liability, Auto Liability and Umbrella/Excess coverages. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, and the Construction Manager and the Construction Manager's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an A.M. Best A-rated or better insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. A New York licensed and admitted insurer is required. Contractor acknowledges that failure to obtain such insurance on behalf of the District~~/BOCES~~ constitutes a material breach of contract and subjects it to liability for damages, indemnification and all other legal remedies available to the District~~/BOCES~~. The contractor is to provide the District~~/BOCES~~ with a certificate of insurance, evidencing the above requirements have been met, prior to the commencement of work. The failure of the District~~/BOCES~~ to object to the contents of the certificate or the absence of same shall not be deemed a waiver of any rights held by the District~~/BOCES~~. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.2.1.2 Subcontractors are subject to the same terms and conditions as stated above and must submit same to the District~~/BOCES~~ for approval prior to the start of any work.

.1 In the event the General Contractor fails to obtain the required certificates of insurance from the Subcontractor and a claim is made or suffered, the Contractor shall indemnify, defend, and hold harmless the District~~/BOCES~~, its Board, employees and volunteers from any and all claims for which the required insurance would have provided coverage. This indemnity obligation is in addition to any other indemnity obligation provided in the Contract.

§ A.3.2.2 Commercial General Liability

Add: Coverage shall not contain exclusions for New York Labor Law §§ 200, 240, or 241. Policies shall include contractual liability coverage supporting the Contractor's indemnification obligations.

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than one million dollars ($ 1,000,000.) each occurrence, ~~2~~3,000,000. ($ ~~two~~ three million dollars) general aggregate, and 2,000,000. ($ two million dollars) aggregate for products-completed operations hazard, one million dollars ($ 1,000,000.) personal and advertising injury, one hundred thousand dollars ($ 100,000.) fire damage, ten thousand dollars ($ 10,000.) medical expense, providing coverage for claims including

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

.1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
.2 personal injury and advertising injury;
.3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
.4 bodily injury or property damage arising out of completed operations; and
.5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.
.6 the general aggregate shall apply on a per-project basis.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

.1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
.2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
.3 Claims for bodily injury other than to employees of the insured.
.4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
.5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
.6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
.7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
.8 Claims related to roofing, if the Work involves roofing.
.9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
.10 Claims related to earth subsidence or movement, where the Work involves such hazards.
.11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, hired, borrowed and non-owned vehicles used, by the Contractor, with combined single policy limits of not less than one million dollars ($ 1,000,000.) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.4.1 Umbrella Excess Liability:
~~$5,000,000 each Occurrence and Aggregate for general construction and no work at elevation (1 story or 10 feet) and project values less than or equal to $1,000,000.~~
$10,000,000 each Occurrence and Aggregate. ~~for high-risk construction, work at elevation (>1 story or 10 feet) and project values greater than $1,000,000.~~
Umbrella/Excess coverage shall be on a follow-form basis or provide broader coverage over the General Liability and Auto Liability coverages.

§ A.3.2.5 Workers' Compensation ~~at statutory limits.~~and NYS Disability Insurance
Statutory Workers' Compensation (C-105.2 or U-26.3); and NYS Disability Insurance (DB-120.1) for all employees. Proof of coverage must be on the approved specific form, as required by the New York State Workers' Compensation Board. ACORD certificates are not acceptable. A person seeking an exemption must file a CE-200 Form with the state. The form can be completed and submitted directly to the WC Board online.

§ A.3.2.6 Employers' Liability with policy limits not less than ( ) ($) each accident, ( ) ($) each employee, and ( ) ($) policy limit.

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than ($) per claim and ($) in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than ($) per claim and ($) in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than ($) per claim and ($) in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than ($) per claim and ($) in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than ($) per claim and ($) in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

[ ] **§ A.3.3.2.1** If there is only one Contractor performing the Work on the Project, property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:

(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

[ ] **§ A.3.3.2.2 Railroad Protective Liability Insurance**, with policy limits of not less than ($) per claim and ($) in the aggregate, for Work within fifty (50) feet of railroad property.

[X] **§ A.3.3.2.3 Asbestos Abatement/Lead Abatement/Pollution Liability Insurance**, , if applicable. Such insurance shall include products and completed operations and coverage for the Contractor's operations including, but not limited to, removal, replacement, enclosure, encapsulation and/or disposal of asbestos, or any other hazardous material, along with any related pollution events, including coverage for third-party liability claims for bodily injury, property damage and clean-up costs. If a retroactive date is used, it shall pre-date the inception of the Contract. The limits applicable shall be the greater of the amounts indicated or the amounts carried by the Contractor:

.1 If covered by the Contractor's umbrella/excess liability policy, two million ($2,000,000) each occurrence and two million ($2,000,000) aggregate

.2 If NOT covered by the Contractor's umbrella/excess liability policy, six million ($6,000,000) each and ($) in occurrence and six million ($6,000,000) aggregate

~~the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.~~**.3** If the Contractor is using motor vehicles for transporting hazardous materials, the Contractor shall maintain pollution liability broadened coverage (ISO Endorsement CA 9948 or CA 01 12), as well as proof of MCS 90. Coverage shall fulfill all requirements of these specifications and shall extend for a period of three (3) years following acceptance by the District~~/BOCES~~ of the Certificate of Completion.

[ ] **§ A.3.3.2.4** Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

[ ] **§ A.3.3.2.5** Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

[X] **§ A.3.3.2.6 Other Insurance**

~~*(List below any* **other** *insurance coverage*~~ § A.3.3.2.6.1 Testing Company Errors and Omission Insurance, **if applicable, for the testing and other professional acts of the Contractor performed under the Contract with the District~~/BOCES~~.**

With policy limits not less than $1,000,000 per occurrence/$2,000,000 aggregate.

[X] § A.3.3.2.6.2 Owners Contractors Protective (OCP) Insurance

~~to be provided by~~ .1 For projects less than or equal to $1,000,000 and/or work on 1 story (10 feet) only; $1,000,000 per occurrence, $2,000,000 aggregate with the District~~/BOCES~~ as the Named Insured, no Additional Insureds on any OCP Policies.

~~the Contractor and any applicable limits.)~~.2 For projects greater than $1,000,000 and/or work over 1 story (10 feet); $2,000,000 per occurrence, $4,000,000 aggregate with the District~~/BOCES~~ as the Named Insured, no Additional Insureds on any OCP Policies.

~~**Coverage** **Limits**~~

§ A.3.4 Performance Bond and Payment Bond

Add: Surety shall remain bound until all warranty obligations, claims, and liens are resolved. The Owner may require extension of bonds if the completion period is extended. The Surety waives any right to assert defenses based on contract modifications or notice requirements.

§ A.3.4.1 The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located. The Contractor shall furnish a Performance Bond and Labor and Material Payment Bond meeting all statutory requirements of the jurisdiction where the Project is located, in form and substance satisfactory to the Owner and, without limitation, complying with the following specific requirements:

~~as follows:~~**.1** Except as otherwise required by statute, the form and substance of such bonds shall be satisfactory to the Owner in the Owner's sole judgment.

~~*(Specify type and penal sum of bonds.)*~~**.2** Bonds shall be executed by a responsible surety licensed in the jurisdiction

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

where the Project is located, with a Best's rating of no less than A/XII, and shall remain in effect for a period not less than two (2) years following the date of Substantial Completion or the time required to resolve any items of incomplete Work and the payment of any disputed amounts, whichever time period is longer.

.3 The Performance Bond and the Labor and Material Payment Bond shall each be in an amount equal to the Contract Sum and all subsequent increases.

.4 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power-of-attorney indicating the monetary limit of such power.

~~**Type**~~ ~~**Penal Sum ($0.00)**~~

~~Payment Bond~~

~~Performance Bond~~

.5 Every Bond under this Subparagraph 11.4.1 must display the Surety's Bond Number. A rider including the following provisions shall be attached to each Bond:

~~Payment and Performance~~ (i) The Surety hereby agrees that it consents to and waives notice of any addition, alteration, omission, change, or other modification of the Contract Documents. Any addition, alteration, change, extension of time, or other modification of the Contract Documents, or a forbearance on the part of either the Owner or the Contractor to the other, shall not release the Surety of its obligations hereunder, and notice to the Surety of such matters is hereby waived.

(ii) The Surety agrees that it is obligated under the bonds to any successor, grantee, or assignee of the Owner.

~~Bonds shall be AIA Document A312™, Payment Bond and Performance Bond,~~ **.6** Bonds shall be written on AIA Document 312, Payment Bond and Performance Bond.

~~or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.~~ **.7** If the surety on any Bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 11.4.1 Contractor shall within ten days thereafter substitute another Bond and surety, both of which must be acceptable to Owner.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

The Contractor shall comply with all applicable federal, state, and local laws, including Labor Law §§ 200, 220, 240, 241,and OSHA. Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

AIA Document A132 – 2019 Exhibit A. Copyright © 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This draft was produced at 08:24:31 EDT on 06/04/2025 under Subscription No.20240076547 which expires on 12/10/2025, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (68403ad2fc0f3086d16ebe67)

SECTION 006000
PROJECT FORMS AND RELATED DOCUMENTS

PART 1 GENERAL

1.01 SUMMARY

A. This Section lists the project forms used for administration of the project as well as documents used for administration and logistics

1.02 FORMS

A. The following forms are contained within the conditions of the contract section:
   1. FRONT END SUBMISSION LOG
   2. PROJECT REQUEST FOR INFORMATION (RFI) FORM
   3. SUBCONTRACTOR LIST
   4. ALLOWANCE DISBURSEMENT FORM
   5. SUBSTITUTION REQUEST FORM
   6. SUBMITTAL COVER
   7. INFORMATION BULLETIN

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 PROCEDURES

A. Front End Submission Log: This document is a checklist of the required submissions. Refer to Bidding Requirements, Section entitled “Instructions to Bidders” and Division 1, Specification Section entitled “SUBMITTAL PROCEDURES” for submission procedures.

B. Project Request For Information (RFI) Form: This form is to be used for information requests. The forms are filled out by any party to the contract and sent to the Architect/Engineer. The Architect/Engineer shall number RFI before processing.

C. Subcontractor List: This document is to be used identify subcontractors. The forms are filled out by each Prime Contractor for all proposed subcontractors and sent to the Architect/Engineer in accordance with. Division 1, section entitled “SUBMITTAL PROCEDURES”

D. Allowance Disbursement Form: the Architect/Engineer shall issue this document after all parties have agreed to the conditions of change to be charged to the Allowance Amount in accordance with Division 1, section entitled “ALLOWANCES”, if required.

E. Substitution Request Form: This document is to be used for a Contractor to propose substitutions. The forms are filled out by each Prime Contractor and sent to the Architect/Engineer in accordance with. Division 1, section entitled “SUBMITTAL PROCEDURES” and “PRODUCT REQUIREMENTS”.

F. Submittal Cover: This document is to be used for submittal submissions. The forms are filled out by each Prime Contractor and sent to the Architect/Engineer in accordance with. Division 1, section entitled “SUBMITTAL PROCEDURES”

G. Information Bulletin: The Architect/Engineer shall issue this document for 3 actions.
   1. PROPOSAL REQUEST: A quotations for changes in the Contract Sum and / or proposed modifications to the Contract Documents

2. SUPPLEMENTAL INSTRUCTIONS: Instructions for changes to the Contract Documents without additional cost or time
3. CONSTRUCTION CHANGE DIRECTIVE: A directive to immediately proceed with changes to the work of the contract and to submit final cost for inclusion into a Change Order

END OF SECTION 006000

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

FRONT END SUBMISSION LOG

PINE BUSH CSD_2025 CIP_PHASE 2: R25.17714.01

Contractor Name: _____

SUBMISSIONS

Submission	Date Submitted	Date Approved	Remarks
Contract:			
Schedule of Values:			
Bonds:			
Insurance:			
Workers Compensation:			
Automobile Insurance:			
Safety Program:			
Schedule:			
Submittal Schedule:			
Emergency Contact:			
Substitution List:			
Subcontractor List:			
Project Manager:			
Superintendent:			

This log is to be used by the contractor to monitor and complete the required front-end submissions.

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

REQUEST FOR INFORMATION	RFI #:
	Date:

PINE BUSH CSD_2025 CIP_PHASE 2: R25.17714.01

Contractor Name: _____

To: _____ Firm: _____

From: _____

WE REQUEST YOUR ATTENTION (OR CONFIRMATION) REGARDING THE FOLLOWING:

Subject: _____

_____

Location: _____

_____

Information is Requested By: _____

MESSAGE: _____

Contractors Name: _____

By: _____ Date: _____

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

SUBCONTRACTOR LIST

PINE BUSH CSD_2025 CIP_PHASE 2: R25.17714.01

To: **CPL**
4 Crotty Lane
New Windsor, NY 12553

From:
(Contractor) _____

Contractors
No.: _____

Contract For: _____

List Subcontractors proposed for use on this Project as required by the Construction Documents. Attach supplemental sheets if necessary.

Section
No.: _____ Section Title: _____
Firm
Name: _____ Contact: _____
Address: _____

Section
No.: _____ Section Title: _____
Firm
Name: _____ Contact: _____
Address: _____

Section
No.: _____ Section Title: _____
Firm
Name: _____ Contact: _____
Address: _____

Section
No.: _____ Section Title: _____
Firm
Name: _____ Contact: _____
Address: _____

Section
No.: _____ Section Title: _____

☐ Attachment(s)

Signed by: _____ Date: _____

Copies: ☐ **Owner** ☐ **Consultants** ☐ File
☐ ☐ ☐

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

ALLOWANCE DISBURSEMENT AUTHORIZATION

Owner	
Architect/Engineer	
Contractor	
Field	
Other	
Other	

PINE BUSH CSD_2025 CIP_PHASE 2: R25.17714.01

Allowance Disbursement No. _____ Initiation Date: _____

Contract For: _____

_____

To Contractor: _____

_____

Contract Date: _____

Not valid until signed by Owner, Architect/Engineer, [Construction Manager] and Contractor.

The Original Contract Allowance _____

Net Allowance Disbursements previously authorized _____

Charges to Contract Allowance as a result of this authorization

Current Contract Allowance Balance including this authorization _____

Owner:
Ossining Union Free School District

Architect/Engineer:
CPL

Contractor:
<**Contractor's Name**>

Construction Manager:
Arris Contracting Company, Inc.

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

SUBSTITUTION REQUEST FORM

PINE BUSH CSD_2025 CIP_PHASE 2: R25.17714.01

To:
CPL
4 Crotty Lane
New Windsor, NY 12553

From:
(Contractor) _____

Re: _____ Substitution Request Number: _____

Contract For: _____

Specification Title: _____ Description: _____

Section Number: _____ Page: _____ Part/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Installer: Address: Phone:

History: ☐ New product ☐ 2-5 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

☐ Point-by-point comparative data attached

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Architect/Engineer: _____

Contractor: _____ Owner: _____

_____ Date Installed: _____

Proposed substitution affects other parts of Work:

☐ No

☐ Yes, explain _____

Savings to Owner for accepting substitution: _____ ($ _____)

Proposed substitution changes Contract Time:

☐ Yes; explain ☐ No ☐ Yes [Add] [Deduct] _____ days

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted By: _____

Signed By: _____

Firm: _____

Address _____

_____

_____

Phone: _____

Attachments: _____

_____

_____

REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 013300.

☐ Substitution approved as noted - Make submittals in accordance with Specification Section 013300.

☐ Substitution rejected - Use specified materials.

☐ Substitution Request received too late - Use specified materials.

Signed By: _____ Date: _____

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ Architect/Engineer ☐ _____

_____

_____

_____

_____

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

SUBMITTAL COVER

(Attach to each submittal)

#
Submittal No. Contractor only

Architect Project Number: R25.17714.01
Contractors Number:
Project Name: PINE BUSH CSD_2025 CIP PHASE 2

Contractor:
Address:
Phone / Fax: ( )

Date returned:

TYPE OF SUBMITTAL
(Check one)

- ☐ Product Data
- ☐ Color Selection
- ☐ O&M Manual
- ☐ Shop Drawings
- ☐ Sample
- ☐ Record Document
- ☐ Other

DATE OF SUBMITTAL:

RESUBMITTED:

NUMBER OF ATTACHED:

SUBSTITUTION
See General Conditions

☐ **YES** ☐ **NO**

PRODUCT IDENTIFICATION

Specification Section No.:
Contract Dwg. No.:
Product Name:
Part/Paragraph:
Detail Reference:
Manufacturer:

CONTRACTOR APPROVAL

Identify that this submittal has been reviewed and approved by the Contractor in accordance with the General Conditions

By: Date:

Deviation from Contract Documents:

Contractor Comments:

FOR USE BY CPL

SHOP DRAWING

- ☐ No Exception Taken
- ☐ Revise & Resubmit
- ☐ Furnish as Corrected
- ☐ Rejected

Corrections or comments made on the shop drawings during this review do not relieve the Contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe satisfactory manner.

CPL

Date: By:

Architect's Comments:

RECEIVED STAMP

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

INFORMATION BULLETIN

PROJECT:	Pine Bush CSD 2025 CIP_PHASE 2	INFORMATION BULLETIN NO.:	
		DATE:	
OWNER:	Pine Bush Central School District	CPL PROJECT NO.:	R25.17714.01
CONTRACTOR:		CONTRACT NO.:	
		CONTRACT DATE:	

DESCRIPTION:

ATTACHMENT(S):

ACTION

☐ 1. *PROPOSAL REQUEST:* Submit an itemized quotation for changes in the Contract Sum and/or time required to implement the above proposed modifications to the Contract Documents. This is not authorization to proceed with the work.

☐ 2. *SUPPLEMENTAL INSTRUCTIONS:* Implement the above instructions without change to the Contract Sum and/or Time. Prior to proceeding, indicate acceptance below and return one copy to the Architect.

☐ 3. *CONSTRUCTION CHANGE AUTHORIZATION:* Proceed with the above described changes to the Contract Documents immediately. Submit final costs and/or change in Contract Time for inclusion in a subsequent Change Order.

Methods: ☐ Lump Sum ☐ Unit Price ☐ Time & Material Not-to-Exceed

Change in Contract Sum of _____

Change in Contract Time of _____ days

ISSUED:	ACCEPTED:	AUTHORIZED:
BY:_____	BY:_____	BY:_____
Architect Date	Owner Date	Contractor Date
Required for Actions 1,2,3	Required for Action 3	Required for Actions 2,3

☐ Owner ☐ Architect ☐ Structural ☐ Civil
☐ Contractor ☐ Field ☐ Mechanical/Electrical ☐ Other (Roofing)

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

CPL
ARCHITECTURE
ENGINEERING
PLANNING
CPLteam.com

ELECTRONIC DOCUMENT TRANSFER AGREEMENT

DATE:		**PROJECT #:**	R25.17714.01
PROJECT NAME	Pine Bush CSD_2025 CIP_PHASE 2	**CLIENT / LOCATION**	Pine Bush Central School District
COMPANY REQUESTING AND RECEIVING FILES:		**PERSON REQUESTING:**	
DESCRIPTION OF FILES:		**REASON FOR FILES:**	

1. The requested electronic file(s) (the "Files") remain the property of and are owned by CPL.
2. The Files are not Contract Documents. The use of the Files to alter or revise the scope of work is not permitted.
3. CPL makes no warranties or guarantees that the Files represent or reflect the complete scope of work and/or as-built condition, and CPL assumes no responsibility for data files supplied in electronic format. Such data is provided as a courtesy only.
4. The Company requesting the Files and users of the Files accept full responsibility for verifying the accuracy and completeness of the Files.
5. Files in Revit/Building Information Model format: Unless express written consent of CPL is given through the implementation of a Project Building Information Modeling Protocol Form (AIA® Document G202™ or similar); the information contained within the Files was compiled for the purposes of creating the contract documents and are graphic representations of approximate locations of materials. Therefore, information contained within these files should not be assumed to be accurate and users of the Files accept full responsibility for verifying the accuracy and completeness of the Files with field conditions and the contract documents.
6. Shop drawings shall not be based on reproduction of the contract documents or standard printed data. This includes reproductions of the Files, unless express written consent is given of CPL through the implementation of a Project Building Information Modeling Protocol Form.
7. The Company requesting the Files agrees to defend, indemnify and hold harmless CPL, its officers, employees, consultants, and agents from any claims or damages arising from the use of the Files.
8. In the event that any of the Files contain electronic copies of drawings with permits or professional seals, the Company requesting the Files shall immediately notify CPL and destroy such Files.
9. No use shall be made of the Files for any purpose other than that for which they were originally intended without the express written consent of CPL.
10. No retransmission of the Files in any form to third parties is permitted unless authorized in writing by CPL.
11. The handling fee for the time and effort it will take CPL Lee to deliver the requested Files is $150.00. Under no circumstances shall delivery of the Files be considered a sale by CPL.

Having read and understood the terms set forth in paragraphs 1-11 above, and in consideration of CPL providing electronic files, the undersigned agrees to be bound by these terms.

_____ _____

Signature of Authorized Representative Date

_____

Print Name and Title

The requested electronic files will only be released upon CPL's receipt of a signed Electronic Document Transfer Agreement by a duly authorized representative of the company requesting and receiving the files. CPL reserves the right to deny any request for copies of electronic files.

CPL
4 Crotty Lane
New Windsor, NY 12553
CPLteam.com
845.454.3411 TEL

SECTION 006005
FOOD SERVICE EQUIPMENT REFERENCE DOCUMENTS

PART 1 GENERAL

1.01 SUMMARY

A. This Section with its referenced attachments is part of the Procurement and Contracting Requirements for the Project. They provide Owner's information for Bidders convenience and are intended to supplement rather than serve in lieu of Bidder's own investigations. They are made available for Bidder's convenience and information, but are not a warranty of existing conditions. This Document and its attachements are not part of the Contract Documents, they are included for intent, information, coordination and convenience.

1.02 ATTACHMENTS

A. The following food service equipment drawings are appended to this section:
   1. LTI Sheet K1 of 2
   2. LTI Sheet K2 of 2

PART 2 PRODUCTS - NOT USED

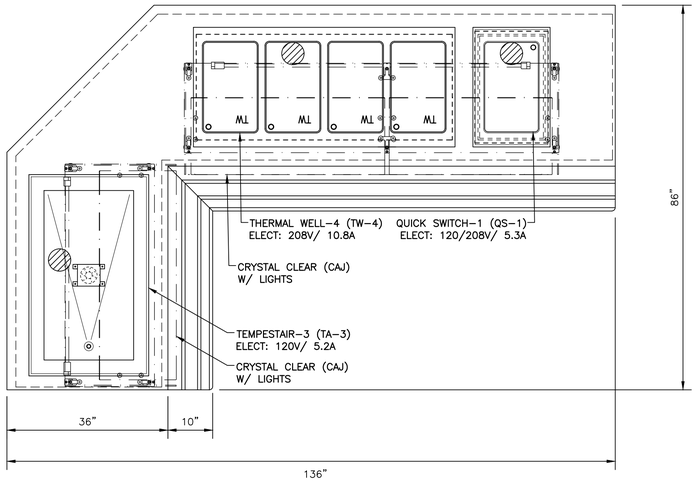
PART 3 EXECUTION - NOT USED

END OF SECTION 006005

This page intentionally left blank

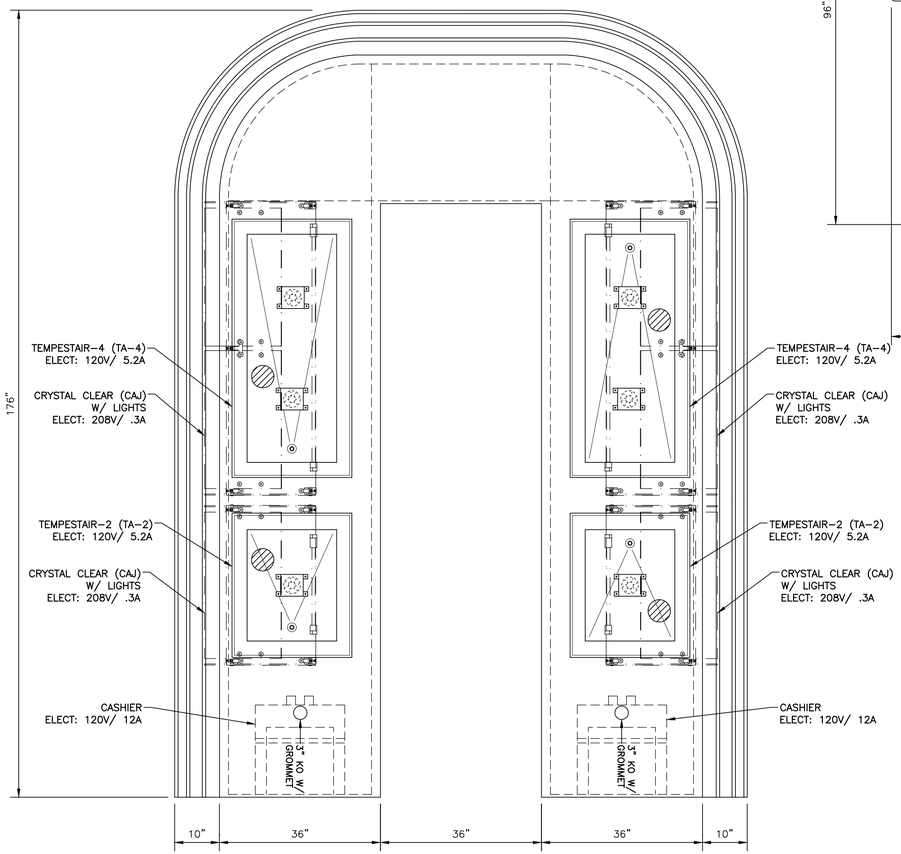
PLAN VIEW

ITEM# 1 – SELECTLINE (SLBT–1636–HC) SERVING COUNTER
QTY: ONE (1) REQ'D
ELECT: 120/208V/ 20A
PLUG: 14–30P



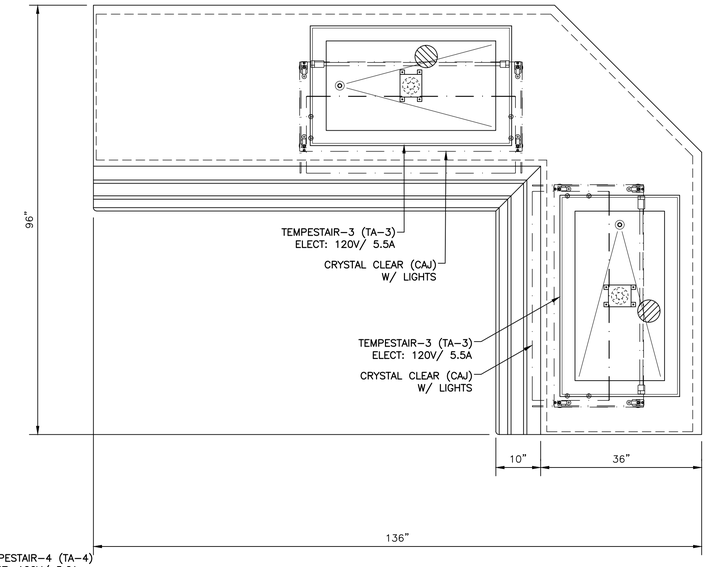
PLAN VIEW

ITEM# 5/6 – SELECTLINE (SLBT–1636–HC) SERVING COUNTER
QTY: ONE (1) REQ'D
ELECT: 120/208V/ 23.6A
PLUG: 14–30P



PLAN VIEW

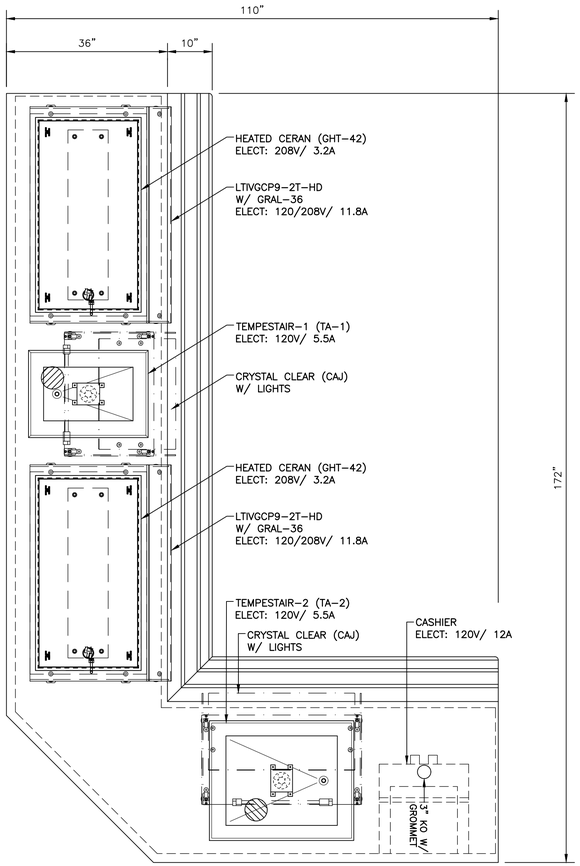
ITEM# 3 – SELECTLINE (SLBT–1636–C) SERVING COUNTER
QTY: ONE (1) REQ'D
ELECT: 120V/ 11A
PLUG: 5–15P



= DRAIN LOCATIONS

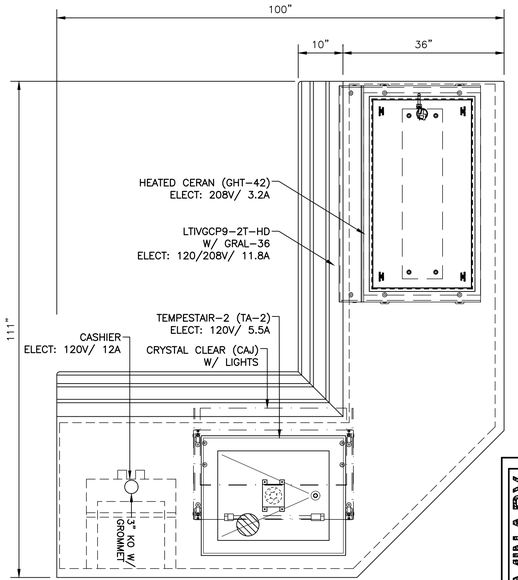
PLAN VIEW

ITEM# 2 – SELECTLINE (SLBT–2236–HC) SERVING COUNTER
QTY: ONE (1) REQ'D
ELECT: 120/208V/ 47.5A
PLUG: 14–60



PLAN VIEW

ITEM# 4 – SELECTLINE (SLBT–1736–HC) SERVING COUNTER
QTY: ONE (1) REQ'D
ELECT: 120/208V/ 27A
PLUG: 14–50P



PRELIMINARY
- NOT FOR APPROVAL -
REFER TO ONLY THE CUSTOMER ORDER ACKNOWLEDGEMENT FOR FINAL APPROVED ELECTRICAL, PLUMBING, DIMENSIONAL AND FINISH INFORMATION

DRAWN BY:	RF
REV1:	7/31/25 RF
REV2:	8/11/25 RF
REV3:	9/11/25 RF
REV4:	9/18/25 RF
SCALE	3/4" = 1'–0"
QUOTE #	

#1 - THIS DRAWING IS THE LEGAL PROPERTY OF LTI, INC. IT MAY NOT BE COPIED OR REPRODUCED WITHOUT THE WRITTEN CONSENT OF LTI. IF USED WHOLLY OR PARTIALLY TO FABRICATE OR PRODUCE EQUIPMENT OTHER THAN THAT FURNISHED BY LTI, LTI RESERVES THE RIGHT TO CHARGE 4% OF THE COST OF THE EQUIPMENT AS AN ENGINEERING AND DESIGN FEE

#2 - LTI, INC. IS NOT RESPONSIBLE FOR EQUIPMENT MEETING LOCAL CODES UNKNOWN TO LTI. IT IS THE RESPONSIBILITY OF THE FSEC TO NOTIFY LTI OF ANY LOCAL CODES THAT AFFECT CONSTRUCTION OR MATERIALS. FSEC IS REQUIRED TO REVIEW THIS DRAWING AND NOTIFY LTI OF ANY LOCAL CODES PRIOR TO FABRICATION OR WILL INCUR ADDITIONAL ASSOCIATED COSTS.

DEALER:

PROJECT: OPT9510 – PINE BUSH HIGH SCHOOL

C.O. #1	1 CHANGES:		
C.O. #2	2 CHANGES:		
C.O. #3	3 CHANGES:		

Changing how food is served.

lowtempind.com

LTI
1947 Bill Casey Parkway
Jonesboro, GA 30236
tel 770.478.8803
fax 770.471.3715

ORDER #	
DWG#	
DATE:	7/22/25
SHEET #	K1 OF 2

ANSI / NSF2, NSF4, NSF7

COUNTER CONSTRUCTION

TOP – ½" THICK SOLID SURFACE W/ 2" DROP–EDGE ON ALL EXPOSED EDGES – 4" HIGH SPLASH AT WALL – ½" REINFORCEMENT AND ¾" THICK PLYWOOD SUB–TOP AS REQUIRED BY MFG. VERIFY MFG, COLOR & DESIGN OF SOLID SURFACE.

CUTTING BOARD – 14 GA. S/S W/ EDGES TURNED DOWN, WELDED & POLISHED. MOUNT ON S/S FOLD–DOWN BRACKETS.

BODY – 18 GA. S/S FRONT, REAR, ENDS & PARTITIONS – FRONT COVERED W/ STANDARD GRADE LAMINATE PLASTIC – VERIFY MFG, COLOR & DESIGN.

SHELVES – 18 GA. S/S – SECTIONAL & REMOVABLE.

WOOD HINGED DOORS – LAMINATED ¾" PLYWOOD – MOUNT ON (3) BLUM CONCEALED HINGES AND FURNISH HAFELE ALUMINUM TAB TYPE DOOR PULL – FURNISH BLACK EXPANDED METAL BEHIND ALL DOOR VENTS

LEGS – 6" HIGH, ROUND S/S COUNTER TYPE W/ ADJ. S/S BULLET FEET.

THERMALWELL HOT FOOD UNITS – 12" x 20" DIE–STAMPED OPN'GS FOR DRY–MOIST ELECTRIC HEAT – U.L. RECOGNIZED WELLS W/ (563 WATT @208)(751 WATTS @120/240V) HEAT SOURCE & INDIVIDUAL SOLID STATE DIGITAL CONTROLS, PRE–WIRED TO CIRCUIT BREAKER – EACH HOT FOOD WELL TO BE PRE–PLUMBED THRU A COMMON MANIFOLD TO A ¼ TURN DRAIN VALVE BELOW THE BODY.

TEMPESTAIR COLD PAN – 9" DEEP 18 GA. S/S PAN W/ REFRIGERATION COILS BONDED TO UNDERSIDE IN MASTIC – FULLY INSULATED W/ URETHANE FOAM – FIT W/ AXIAL FANS AS SHOWN – FURN W/ 1" OPEN DRAIN EXTENDED TO SHUT–OFF VALVE BELOW.

CONDENSING UNIT – AIR–COOLED, HERMETICALLY SEALED – FACTORY TESTED & FULLY CONNECTED AS REQ'D – MADE READY TO PLUG IN – MOUNTED ON 18 GA. GALV. CHANNEL BASE – 18 GA. S/S REMOVABLE LOUVERED ACCESS PANELS – UNITS SIZED AS REQ'D.

QUICKSWITCH – 18 GA. S/S DIE–STAMPED PAN W/ ¾" DIA. OPEN DRAIN & FULLY INSULATED. REFRIGERATION COILS BONDED TO UNDERSIDE IN MASTIC – REFRIGERATION SYSTEM TO BE A HERMETICALLY SEALED COMPRESSOR. DRY–MOIST ELECTRIC HEAT W/ (500 WATT @208V) (661 WATTS @120/240V) HEAT SOURCE & INDIVIDUAL SOLID STATE DIGITAL CONTROLS – ALL SWITCHES AND CONTROLS ARE FULLY ACCESSIBLE.

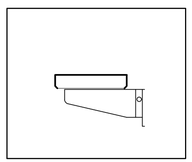
HOT CERAN GLASS – HTG
BLACK CERAN GLASS SURFACE SECURED TO STAINLESS STEEL PERIMETER FRAME.
600 WATT SILICON HEAT BLANKET ATTACHED TO GLASS FOR HEAT SOURCE.
FURNISHED WITH DIGITAL CONTROL FOR HEAT SYSTEM.
FURNISHED WITH CORD AND PLUG.

CASHIER RECESS – 18 GA. S/S LINER W/ 1" O.D. 16 GA. S/S TUBULAR FOOT REST & 15" X 15" X 3" DEEP CASH DRAWER W/ POWDER COATED STEEL LINER MOUNTED ON ROLLER SLIDES – FURN W/ LOCK & KEY

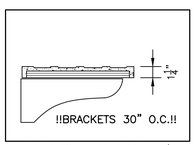
CORIAN TRAY SLIDE – ½" THICK SOLID SURFACE W/ 1 1/4" DROP–EDGE ON ALL EXPOSED EDGES ¾" THICK PLYWOOD SUB–TOP AS REQUIRED BY MFG. VERIFY MFG, COLOR & DESIGN OF SOLID SURFACE. MOUNTED ON FOLD DOWN S/S BRACKETS, BRACKETS ARE ON 30" ON CENTERS.

SERVING HEIGHT – 32"

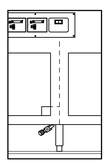
COUNTERTOP HEIGHT – 34"



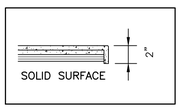
S/S FOLD DOWN CUTTING BOARD

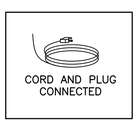


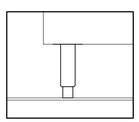
FIXED SOLID SURFACE W/ ROUTED RUNNERS



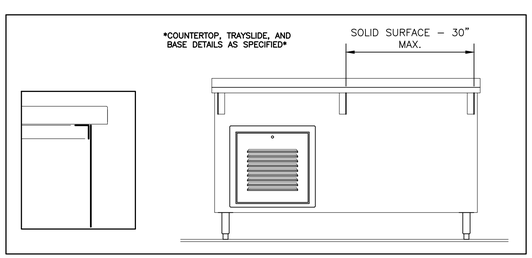
DRAIN VALVE UNDER COUNTER BODY



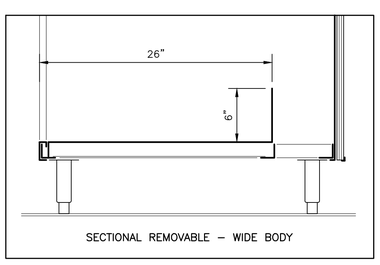




6" COUNTER LEG



(LAMINATED) S/S



SECTIONAL REMOVABLE – WIDE BODY

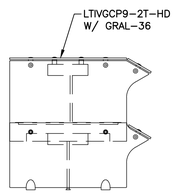
EQUIPMENT SCHEDULE ITEM# 1			
ITEM	QTY.	DESCRIPTION	NOTES
TEMPESTAIR–3 (TA–3)	1	(3) COLD WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120V/ 5.2A
THERMAL WELL–4 (TW–4)	1	(4) HOT WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 208V/ 10.8A
QUICK SWITCH–1 (QS–1)	1	(1) COLD/HOT WELL W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120/208V/ 5.3A

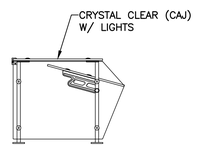
EQUIPMENT SCHEDULE ITEM# 2			
ITEM	QTY.	DESCRIPTION	NOTES
CASHIER	1	CASHIER DRAWER/ NEMA 5–15R W/ EMPTY DATA BOX	ELECTRICAL: 120V/ 12A
TEMPESTAIR–2 (TA–2)	1	(2) COLD WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120V/ 5.5A
HEATED CERAN (GHT–42)	2		ELECTRICAL: 208V/ 3.2A
LTIVGCP9–2T–HD	2	VERSA–GARD/ HEATED CERAN W/ HEAT LAMPS	ELECTRICAL: 120/208V/ 11.8
TEMPESTAIR–1 (TA–1)	1	(1) COLD WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120V/ 5.5A

EQUIPMENT SCHEDULE ITEM# 3			
ITEM	QTY.	DESCRIPTION	NOTES
TEMPESTAIR–3 (TA–3)	2	(3) COLD WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120V/ 5.5A

EQUIPMENT SCHEDULE ITEM# 4			
ITEM	QTY.	DESCRIPTION	NOTES
CASHIER	1	CASHIER DRAWER/ NEMA 5–15R W/ EMPTY DATA BOX	ELECTRICAL: 120V/ 12A
TEMPESTAIR–2 (TA–2)	1	(2) COLD WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120V/ 5.5A
HEATED CERAN (GHT–42)	1		ELECTRICAL: 208V/ 3.2A
LTIVGCP9–2T–HD	1	VERSA–GARD/ HEATED CERAN W/ HEAT LAMPS	ELECTRICAL: 120/208V/ 11.8

EQUIPMENT SCHEDULE ITEM# 5/6			
ITEM	QTY.	DESCRIPTION	NOTES
CASHIER	2	CASHIER DRAWER/ NEMA 5–15R W/ EMPTY DATA BOX	ELECTRICAL: 120V/ 12A
TEMPESTAIR–2 (TA–2)	2	(2) COLD WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120V/ 5.5A
TEMPESTAIR–4 (TA–4)	2	(4) COLD WELLS W/ CRYSTAL CLEAR ADJUSTABLE FOOD PROTECTOR & LED LIGHTS	ELECTRICAL: 120V/ 5.5A





PRELIMINARY

- NOT FOR APPROVAL -

- REFER TO ONLY THE CUSTOMER ORDER AS-BUILT DRAWING FOR FINAL/APPROVED ELECTRICAL, PLUMBING, DIMENSIONAL AND FINISH INFORMATION

DRAWN BY: RF
REV1: 7/31/25 RF
REV2: 8/11/25 RF
REV3: 9/11/25 RF
REV4: 9/18/25 RF
SCALE 3/4" = 1'–0"
QUOTE #

#1 - THIS DRAWING IS THE LEGAL PROPERTY OF LTI, INC. IT MAY NOT BE COPIED OR REPRODUCED WITHOUT THE WRITTEN CONSENT OF LTI. IF USED WHOLLY OR PARTIALLY TO FABRICATE OR PRODUCE EQUIPMENT OTHER THAN THAT FURNISHED BY LTI, LTI RESERVES THE RIGHT TO CHARGE 4% OF THE COST OF THE EQUIPMENT AS AN ENGINEERING AND DESIGN FEE

#2 - LTI, INC. IS NOT RESPONSIBLE FOR EQUIPMENT MEETING LOCAL CODES UNKNOWN TO LTI. IT IS THE RESPONSIBILITY OF THE FSEC TO NOTIFY LTI OF ANY LOCAL CODES THAT AFFECT CONSTRUCTION OR MATERIALS. FSEC IS REQUIRED TO REVIEW THIS DRAWING AND NOTIFY LTI OF ANY LOCAL CODES PRIOR TO FABRICATION OR WILL INCUR ADDITIONAL ASSOCIATED COSTS.

DEALER:

PROJECT: OPT9510 – PINE BUSH HIGH SCHOOL

C.O. #1	C.O. #2	C.O. #3
1 CHANGES:	2 CHANGES:	3 CHANGES:

Changing how food is served.

lowtempind.com

LTI
1947 Bill Casey Parkway
Jonesboro, GA 30236
tel 770.478.8803
fax 770.471.3715

ORDER #
DWG#
DATE: 7/22/25
SHEET # K2 OF 2

ANSI / NSF2, NSF4, NSF7

SECTION 007200
A232 GENERAL CONDITIONS COVER (CMA)

PART 1 - GENERAL

1.01 SUMMARY

A. The following are the “General Conditions of the Contract for Construction, Construction Manager – Advisor Edition”. AIA Document A232-2019, is bound with this Section. AIA Document A232-2019 sets forth the rights, responsibilities, and relationships of the Owner, Contractor, Architect and Construction Manager.

END OF SECTION 007200

This page intentionally left blank

AIA® Document A232® – 2019

General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

for the following PROJECT:
(Name, and location or address)

PINE BUSH CENTRAL SCHOOL DISTRICT
2025 CAPITAL IMPROVEMENT PROJECT – PHASE 2

Circleville Elementary School SED # 44-04-01-06-0-009-018
2000 NY-302
Circleville, NY 10919

Circleville Middle School SED # 44-04-01-06-0-014-019
1951 State Route 302
Circleville, NY 10919

Pakanasink Elementary School SED # 44-04-01-06-0-012-019
1953 Rte 302
Circleville, NY 10919

Pine Bush High School SED # 44-04-01-06-0-007-032
118 State Route 302
Pine Bush, NY 12566

THE CONSTRUCTION MANAGER:
(Name, legal status, and address)

Pike Construction Services, Inc.
20 Loudonville Road
Albany, NY 12204

THE OWNER:
(Name, legal status, and address)

Pine Bush Central School District
156 Route 302
Pine Bush, NY 12566

THE ARCHITECT:
(Name, legal status, and address)

CPL Architects, Engineers and Landscape Architect, D.P.C.
d/b/a CPL
4 Crotty Lane, Suite 104
New Windsor, NY 12253

TABLE OF ARTICLES

1 GENERAL PROVISIONS

2 OWNER

ADDITIONS AND DELETIONS:
The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

3 CONTRACTOR

4 ARCHITECT AND CONSTRUCTION MANAGER

5 SUBCONTRACTORS

6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

7 CHANGES IN THE WORK

8 TIME

9 PAYMENTS AND COMPLETION

10 PROTECTION OF PERSONS AND PROPERTY

11 INSURANCE AND BONDS

12 UNCOVERING AND CORRECTION OF WORK

13 MISCELLANEOUS PROVISIONS

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents. The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and the Construction Manager or the Construction Manager's consultants, (3) between the Owner and the Architect or the Architect's consultants, (4) between the Contractor and the Construction Manager or the Construction Manager's consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. The Construction Manager and Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of their duties.

§ 1.1.3 The Work. The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors, and by the Owner's own forces and Separate Contractors.

§ 1.1.5 Contractors. Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

§ 1.1.6 Separate Contractors. Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

§ 1.1.7 The Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.8 The Specifications. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

The Specifications may describe (or the Drawings may show) the general placement required of materials or equipment, but the actual required placement may vary depending on the specific material or equipment used by the Contractor or the existing field conditions. The Contractor shall bear all direct and indirect costs associated with such variations.
Some Specifications may be written in a condensed outline form and omitted words shall be included by interference. If the Specifications identify a task, it shall mean the "Contractor shall furnish, install and complete" the identified task unless otherwise stated.
Reference to standard specifications, manuals or codes shall mean reference to the latest standard specification, manual or code in effect at the time of the execution of the Owner-Contractor Agreement, unless otherwise stated. When reference is made to a manufacturer, trade association, reference standard or similar source (such as ASTM, ASA, AISC, ACI, etc.) the standards or requirements of such entity shall be incorporated into the Specifications and have the force and effect as though they were set forth expressly. Upon entering into the Owner-Contractor Agreement, the Contactor acknowledges its familiarity with those references, codes, etc. The date of the referenced standard shall be the

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

latest edition in effect at the time of the execution of the Owner-Contractor Agreement unless otherwise stated.

§ 1.1.9 Instruments of Service. Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.10 Initial Decision Maker. The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complimentary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. In the event of inconsistencies within or between parts of the Contract Documents, the Contractor shall (1) provide a better quality of Work or (2) comply with the more stringent requirements; either or both in accordance with the Architect's interpretation. The terms and conditions of the Subparagraph 1.2.1, however shall not relieve the Contractor of any of the obligations set forth elsewhere in this Agreement. All work shall conform to the Contract Documents. No significant change there from shall be made without prior written authorization by the Owner. Where only part of the Work is indicated, similar parts shall be considered repetition. When any detail is shown and the components therefore are fully described, similar details shall be construed and not mentioned in the other shall be of like effect as if shown or mentioned in both. Should the Specifications and Drawings fail to particularly describe a product or material shown to be used in any place, the Contractor shall furnish the product that would normally be used in that place. In the event of any conflict among the Contract Documents, the following order of precedence shall apply: (1) Modifications and Change Orders; (2) the Agreement; (3) Supplementary and General Conditions; (4) Specifications; (5) Drawings; (6) Addenda; and (7) the accepted Bid or Proposal, including responses incorporated by the Owner. The Contractor shall perform the Work to meet the higher-quality or more stringent requirement and shall promptly notify the Architect and Owner of any inconsistencies.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work, and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' written notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. Unless otherwise provided under the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 The Owner shall retain a construction manager adviser lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.4 If the employment of the Construction Manager or Architect terminates, the Owner shall employ a successor construction manager or architect to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Construction Manager or Architect, respectively.

§ 2.3.5 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.6 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.7 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3.8 The Owner shall forward all communications to the Contractor through the Construction Manager. Other communication shall be made as set forth in Section 4.2.6.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

§ 2.5.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to review by the Construction Manager and prior approval of the Architect, and the Construction Manager or Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Construction Manager's and Architect's and their respective consultants' additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

§ 2.5.2 The rights stated in this Article 2 and elsewhere in the Contract Documents are cumulative and not in limitation of any rights of the Owner or Contractor (1) granted in the Contract Documents; (2) law; or (3) in equity.
§ 2.5.3 In no event shall the Owner have control over, charge of, or any responsibility for construction means, methods, techniques, sequences, or procedures or for safety precautions and programs in connection with the Work. The Owner assumes no responsibility for liability for the safety of the Project site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work; provided that the Owner shall be responsible for, and the Contractor shall upon discovery notify the Owner in writing of, any unsafe condition created by the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

The Contractor shall rely on its own knowledge and its review and interpretation of the Contract Documents and data provided in entering into the Contract and not the representations of the Owner or other persons. The Contractor acknowledges that quantities provided in the Contract Documents are estimates only and Contractor shall not seek additional compensation or adjustment in price based on a variation in actual quantities.
Prior to execution of the Contract, the Contractor and each Subcontractor shall evaluate and satisfy themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation, (i) the location, condition, layout, and nature of the Project site and surrounding areas, (ii) generally prevailing climatic conditions, (iii) anticipated labor supply and costs, and (iv) availability and cost of materials, tools, and equipment.
The location of existing features shown on plans is intended for general information only. The Contractor, alone, is responsible for accurate determination of the location of all structures and shall not be entitled to any extra payment for discrepancies between the work as shown in the Contract Documents and existing conditions.
The locations, depths and data as to underground conditions have been obtained from records, surface indications and data furnished by others. Information furnished is solely for the convenience of the Contractor without any warranty, expressed or implied as to its accuracy or completeness. The Contractor shall verify all existing conditions prior to commencing the Work. The Contractor shall make no claim against the Owner or Architect with respect to the accuracy or completeness of such information if the conditions found after commencement of the Work are different from those as indicated.
The Contractor shall be solely responsible for the conditions which develop during construction and in the event any structure is dislocated, or over strained, or damaged so as to affect its usefulness, the Contractor shall correct or repair any dislocations, over strains or damages caused.
The Contractor is responsible for restorations and/or repair of utilities, private property, buildings, pavement, walkways, roads, etc. damaged by its activities during the performance of its Work.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.5, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Construction Manager and Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information submitted to the Construction Manager in such form as the Construction Manager and Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

The Contractor shall assume full responsibility for accuracy of measurements obtained at the site. No extra compensation will be allowed because of differences between actual measurements and dimensions indicated on the Drawings, nor for Contractor's failure to coordinate work with actual field measurements.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Construction Manager and Architect any nonconformity discovered by or made known to the Contractor as a request for information submitted to Construction Manager in such form as the Construction Manager and Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner, the Construction Manager, and the Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. The Construction Manager shall review the proposed alternative for sequencing, constructability, and coordination impacts on the other Contractors. Unless the Architect or the Construction Manager objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the written consent of the Owner, after evaluation by the Architect, in consultation with the Construction Manager, and in accordance with a Change Order or Construction Change Directive.

After the Contract has been executed, the Owner and Architect will consider written requests for the substitution of products in place of those specified only if the Contractor satisfies the procedural requirements set forth in the General Requirements (Division 01) of the Specifications. By making written requests for substitutions, the Contractor.

.1 Represents that it has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified.

.2 Represents that it will provide the same warranty for the substitution as it would have provided for the product specified;

.3 Certifies that the cost data presented is complete and includes all related costs for the substituted product ad for Work that must be changed as a result of the substitution, except for the Architect's redesign costs, and waives all claims for additional costs related to the substitution that may subsequently be incurred by the Contractor; and

.4 Shall coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

§ 3.4.2.1 The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Architect for reviewing the Contractor's proposed substitutions and making agreed upon changes in the Drawings and Specifications resulting from such substitutions. The Owner may seek reimbursement pursuant to the procedures set forth in **§ 9.5.1.**

§ 3.4.2.2 The Contractor shall bear all expenses resulting from substitutions including the cost General Conditions as well as any structural, plumbing, mechanical and electrical trade costs made necessary by the substitution.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner, Construction Manager, and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

§ 3.6.1 Owner is exempt from payment of New York State, and Local Sales and Compensation Use Taxes on all supplies and materials incorporated into and becoming an integral component part of the structures, buildings, or real property pursuant to this Contract. Such taxes are therefore not to be included in the Contractor's bid or Contract Sum. Owner shall deliver to Contractor the appropriate exemption certificate required to be supplied by the Owner, and Contractor and its Subcontractors and materialmen shall be solely responsible for obtaining and delivering any and all exemption or other certificates and for furnishing a Contractor Exempt Purchase Certificate or other appropriate certificates to all persons, firms, or corporations from whom they purchase supplies, materials, and equipment for the performance of the Work.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit. The Contractor shall secure and pay for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

.1 The Contractor shall promptly deliver copies of such documents to the Owner.

.2 If in connection with the Project, the Owner has obtained certain permits, licenses or agreements for the Project, the Owner will furnish copies of these documents to the Contractor. It is the Contractor's responsibility to comply with any conditions or limitations placed on the Project by these permits. The Contractor shall fully cooperate with the

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

Owner in meeting the permit requirements and accommodations of regulatory inspections / directives.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor fails to give such notices as applicable to the performance of the Work, the Contractor shall be liable for and shall indemnify and hold harmless the Owner against any and all resulting fines, penalties, judgments or damages, including reasonable attorney fees, imposed on or incurred by the parties indemnified, as a result of such failures by the Contractor.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner, Construction Manager, and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect and Construction Manager will promptly investigate such conditions and, if the Architect, in consultation with the Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify in writing the Owner, Construction Manager, and Contractor, stating the reasons. If the Owner or Contractor disputes the Architect's determination or recommendation, either party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner, Construction Manager, and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.7.6 Upon completion of the Work, the Contractor shall deliver to the Architect original copies of all required final certificates of inspection, the other documents evidencing that inspections required by authorities having jurisdiction over the Work have been performed.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- **.1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

communications given to the superintendent shall be as binding as if given to the Contractor.

The Contractor's superintendent shall not be removed from this Project until the Project punch list has been completed and the Project has been accepted by the Owner. Unless approved otherwise by the Owner in advance, the Contractor's superintendent shall be assigned solely to this Project and shall not perform any duties or superintendence on any other Project until completion of this Project.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect, through the Construction Manager, of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor, stating whether the Owner, the Construction Manager, or the Architect (1) has reasonable objection to the proposed superintendent or (2) require additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner, Construction Manager, or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's written consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information, and the Construction Manager's use in developing the Project schedule, a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Contractors, or the construction or operations of the Owner's own forces or Separate Contractors.

§ 3.10.1.1 In the event that any updated Construction Schedule indicates a projected Substantial Completion date that is more than thirty (30) days after the required Substantial Completion date (as the same may be extended by the Change Order for Excusable Delay), the Owner shall have the right to direct the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, facilities, (3) rescheduling activities, and (4) other similar measures (hereinafter referred to collectively as "Recovery Measures"). Such Recovery Measures shall continue until the progress of the Work complies with the state of completion required by the Construction Schedule. The Owner's right to require Recover Measures is solely for the purpose of ensuring the Contractor's compliance with the Construction Schedule.

.1 The Contractor shall not be entitled to see an adjustment in the Contract Sum in connection with Recovery Measures required by the Owner, unless they are incurred by the Contractor as directed in writing by the Owner to mitigate or offset an Excusable Delay.

.2 The Owner may exercise the rights furnished to the Owner under or pursuant to this Subparagraph 3.10.1.1 as frequently as is reasonably necessary to ensure that the Contractor's performance of the Work will comply with any milestone date or completion date set forth in the Construction Schedule.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Construction Manager's and Architect's approval. The Architect and Construction Manager's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Construction Manager and Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall participate with other Contractors, the Construction Manager, and the Owner in reviewing and coordinating all schedules for incorporation into the Project schedule that is prepared by the Construction Manager. The Contractor shall make revisions to the construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project schedule.

§ 3.10.4 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner, Construction Manager, and Architect, and incorporated into the approved Project schedule.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Construction Manager, Architect, and Owner, and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data, and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.10 through 4.2.12. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the Project submittal schedule approved by the Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Contractors, Separate Contractors, or the Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Construction Manager and Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner, the Architect, and the Construction Manager shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Construction Manager shall review submittals for sequencing, constructability, and coordination impacts on other Contractors.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

.1 Due to the site constraints, only materials and equipment that are to be used in the Work shall be brought to and stored on the Project site by the Contractor. After materials and equipment are no longer required for the Work, they shall be promptly removed from the Project site. Protection of materials and equipment stored at the Project site from weather, theft, damage, and all other adversity is solely the responsibility of the Contractor. The Contractor shall ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and adjacent areas.

.2 The Contractor shall not permit any workers to use existing facilities at the Project site, including, without limitation, lavatories, entrances and parking areas other than those designated and approved by the Owner.

.3 The Contractor shall comply with all rules and regulations promulgated by the Owner in connection with the use and occupancy of the Project site and the Building, as amended from time to time. The Contractor shall immediately notify the Owner in writing if during the performance of the Work, the Contractor finds compliance with any portion of such rules and regulations to be impracticable, setting forth the problems of such compliance and suggesting alternatives through which the same results intended by such portions of the rules and regulations can be achieved. The Owner may, in the Owner's sole discretion, adopt such suggestions, develop new alternatives, or require compliance with the existing requirements of the rules and regulations.

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager before using any portion of the site.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

§ 3.14.3 All cutting and patching work shall be done by the Contractor (or through the appropriate Subcontractor). Patches in finish surfaces shall match the adjacent surfaces in material, finish, detail, and quality. Patches in fire rated construction or construction required to be smoke tight shall be made in conformance with assemblies designed and tested by agencies recognized by governing codes. Any UL rated fire-safety materials, flanges, or other materials required by Code, the Contract Documents, or manufacturer's installation instructions for devices penetrating the work affected shall be applied and installed by an approved firestop subcontractor or qualified personnel from the applicable trade.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner's approval, may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner, Construction Manager, and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect through the Construction Manager.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Construction Manager, Architect, Construction Manager's and Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 The Construction Manager is the person or entity retained by the Owner pursuant to Section 2.3.3 and identified as such in the Agreement.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 4.1.3 Duties, responsibilities, and limitations of authority of the Construction Manager and Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Construction Manager, Architect, and Contractor. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment. The Construction Manager and Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager known deviations from the Contract Documents and defects and deficiencies observed in the Work.

§ 4.2.2.1 The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for site visits made necessary by the fault of the Contractor to maintain the Project Schedule or for defects and deficiencies in the Work. The Owner may seek reimbursement pursuant to the procedures set forth in **§ 9.5.1.**

§ 4.2.3 The Construction Manager shall provide one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. The Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect known deviations from the Contract Documents and the most recent Project schedule, and defects and deficiencies observed in the Work.

§ 4.2.4 The Construction Manager will schedule and coordinate the activities of the Contractor and other Contractors in accordance with the latest approved Project schedule.

§ 4.2.5 The Construction Manager, except to the extent required by Section 4.2.4, and Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of, or be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work.

§ 4.2.6 Communications. The Owner shall communicate with the Contractor and the Construction Manager's consultants through the Construction Manager about matters arising out of or relating to the Contract Documents. The Owner and Construction Manager shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Construction Manager otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with other Contractors shall be through the Construction Manager. Communications by and with the Owner's own forces and Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.7 The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9.

§ 4.2.8 The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents, and will notify each other about the rejection. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, upon written authorization of the Owner, whether or not the Work is fabricated, installed or completed. The foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations and decisions of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons performing any of the Work.

§ 4.2.9 Utilizing the submittal schedule provided by the Contractor, the Construction Manager shall prepare, and revise as necessary, a Project submittal schedule incorporating information from other Contractors, the Owner, Owner's consultants, Owner's Separate Contractors and vendors, governmental agencies, and participants in the Project under the management of the Construction Manager. The Project submittal schedule and any revisions shall be submitted to the Architect for approval.

§ 4.2.10 The Construction Manager will receive and promptly review for conformance with the submittal requirements of the Contract Documents, all submittals from the Contractor such as Shop Drawings, Product Data, and Samples. Where there are other Contractors, the Construction Manager will also check and coordinate the information contained within each submittal received from the Contractor and other Contractors, and transmit to the Architect those recommended for approval. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Construction Manager represents to the Owner and Architect that the Construction Manager has reviewed and recommended them for approval. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

§ 4.2.11 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

§ 4.2.12 Review of the Contractor's submittals by the Construction Manager and Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Construction Manager and Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Construction Manager and Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.13 The Construction Manager will prepare Change Orders and Construction Change Directives.

§ 4.2.14 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7, and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.15 Utilizing the documents provided by the Contractor, the Construction Manager will maintain at the site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples, and similar required submittals, in good order and marked currently to record all changes and selections made during construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner upon completion of the Project.

§ 4.2.16 The Construction Manager will assist the Architect in conducting inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

§ 4.2.17 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Construction Manager of any change in the duties, responsibilities and limitations of authority of the Project representatives.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 4.2.18 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of the Construction Manager, Owner, or Contractor through the Construction Manager. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.19 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions so rendered in good faith.

§ 4.2.20 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.21 The Construction Manager will receive and review requests for information from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing, through the Construction Manager, to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

§ 4.2.22 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

.1 The Contractor's request for information shall be prepared and submitted in accordance with the General Requirements (Division 01 of the Specifications) on the form included therein or as otherwise approved in advance. The Architect will return requests for information that do not conform to requirements of the Contract Documents.

.2 The Architect's response to a request for information (RFI), or issuance of a clarification or interpretation shall be considered an interpretation, clarification, supplemental information or an order for a minor change in the Work not involving an adjustment in Contract Sum or extension of Contract Time and not inconsistent with the intent of the Contract Documents, and shall be binding, unless indicated otherwise in the Architect's response to the RFI.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Construction Manager, for review by the Owner, Construction Manager and Architect, of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor whether the Owner, the Construction Manager or the Architect (1) has reasonable objection to any such proposed person or entity or, (2) requires additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

The listing required by this Section shall be submitted to the Architect no later than 30 days from the date of the Agreement. This list shall include the names of manufacturers, suppliers, and installers proposed for each of the products, equipment, and materials to be incorporated into the Project.

The Contractor shall furnish upon request adequate data on any named entity on the list in order to permit the Architect and the Owner to conduct a proper evaluation. Failure to object to a manufacturer shall not constitute a waiver of any of

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

the requirements of the Contract Documents and all products furnished by the listed manufacturer must conform to such requirements.
The Contractor shall, prior to any work being performed, obtain and provide to the Owner and Construction Manager, a copy of the Subcontractor(s) Contractor Certificate of Registration, pursuant to New York State Department of Labor requirements.
§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner, Construction Manager or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner, Construction Manager or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Construction Manager or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner, Construction Manager or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, that the Contractor, by these Contract Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract, provided that the Owner shall not be under any obligation to compensate the Subcontractor with respect to amounts that the Owner has already paid to the Contractor for such Subcontractor's work.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity, and, in New York State, request a copy of their Contractor Certificate of Registration. If the Owner assigns the subcontract to a successor Contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor Contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces or Separate Contractors, the Owner shall provide for coordination of such forces and Separate Contractors with the Work of the Contractor, who shall cooperate with them.

§ 6.1.3 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner's own forces, Separate Contractors, Construction Manager and other Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, Separate Contractors or other Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor or other Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's or other Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractors or other Contractors that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs, including costs that are payable to a Separate Contractors or to other Contractors, because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of delays, improperly timed activities, damage to the Work or defective construction by the Owner's own forces, Separate Contractors, or other Contractors.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner, Separate Contractors, and other Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, other Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Construction Manager, with notice to the Architect, will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor. A Construction Change Directive requires agreement by the Owner, Construction Manager and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

.1 The change in the Work;
.2 The amount of the adjustment, if any, in the Contract Sum; and
.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.1 Unless otherwise agreed to in writing by the Owner and the Contractor, the combined overhead and profit that shall be included in the total cost (or credit) to the Owner for a Change in the Work shall be based on the following schedule:

.1 For the Contractor, for Work performed by the Contractor's own forces:

1. 15% on the first $25,000 of the change order direct cost of self-performed work,
2. 10% on the portion of the change order direct cost of self-performed work between $25,000 and $50,000 and
3. 7.5% on the portion of the change order direct cost of self-performed work between $50,000 and $200,000 and
4. 5% on the portion of the change order direct cost of self-performed work greater than $200,000.

.2 For the Contractor, for Work performed by the Contractor's Subcontractor five percent (5%) of the amount due the Subcontractor,

.3 For each Subcontractor involved, for Work performed by that Subcontractor's own forces, fifteen percent (15%) of the cost,

.4 For each Subcontractor involved, for Work performed by the Subcontractor's Sub-subcontractors, five percent (5%) of the amount due the Sub-subcontractor,

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.7 and shall be itemized (including labor costs).

§ 7.2.2 A Change Order, when issued, shall be full compensation, or credit, for the extra Work performed, omitted, or substituted. It shall show on its face, any adjustment in time for completion of the Project as a result of the Change in the Work. Each Change Order shall include all costs related thereto, including all overhead, miscellaneous expenses, and incidentals.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Construction Manager and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
.2 Unit prices stated in the Contract Documents or subsequently agreed upon;
.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
.4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Construction Manager shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Construction Manager and Architect;

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;

.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and

.5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Construction Manager and Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured in accordance with Section 7.1.4.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Construction Manager and Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine to be reasonably justified. The interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Construction Manager and Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Construction Manager shall prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Construction Manager and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Construction Manager that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, or an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts and the Architect determines justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

In the event that the Owner, the Contractor or the Architect is delayed or hindered in or prevented from the performance of any act required by the Contract Documents by reason of a labor dispute, fire, failure of power, unusual delay in deliveries, adverse weather conditions not reasonably anticipatable, unavoidable casualties or other causes of a like nature beyond the Owner's, the Contractor's or the Architect's control, the Contractor (or its Subcontractors) shall not be entitled to any additional compensation.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15; however, the Contractor's Claims, if any, for any increase in Contract Time must be made in accordance with the time requirements of this Section. Claims for an increase in Contract Time must be made in writing to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims must be initiated within seven (7) days after the Contractor has notice of the delay (initial notice). Thereafter, the Contractor must provide full details and support documentation with regard to the cause of the delay within twenty-one (21) days of the initial notice of the delay. If either the initial notice or the supporting documentation is not submitted to the Initial Decision Maker with a copy to the Architect, if the Architect is not the Initial Decision Maker, in writing within the time periods prescribed in this Section, the Claim for an increase in Contract Time shall be waived. If the cause for the delay is a continuing one, then only one Claim is necessary. The Contractor's supporting documentation to the Initial Decision Maker and/or Architect shall include an estimate of cost, if any, and of the probable effect of the delay on the progress of the Work and the Project Schedule.

§ 8.3.3 Unless expressly provided otherwise in the Contract Documents, an extension of the Contract Time, to the extent permitted under Subparagraph 8.3.1 shall be the sole remedy of the Contractor for any (1) delay in the commencement, prosecution or completion of the Work, (2) hindrance or obstruction in the performance of the Work, (3) loss of productivity, or (4) other similar claims (collectively referred to in this Subparagraph 8.3.3 as "Delays") whether or not such Delays are foreseeable unless a Delay is caused by acts of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner (an "Owner-Caused Delay"), in which case the Contractor shall also be entitled to an equitable adjustment of the Contract Sum provided that the Contractor provides to the Owner written notice of such Owner-Caused Delay within ten (10) days of the occurrence of the event giving rise to such Owner-Caused Delay or within ten (10) days after the Contractor first recognizes the condition giving rise to such Owner-Caused Delay, whichever is later.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Construction Manager, before the first Application for Payment, allocating the entire Contract Sum to

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Construction Manager and the Architect. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Construction Manager shall forward to the Architect the Contractor's schedule of values. Any changes to the schedule of values shall be submitted to the Construction Manager and supported by such data to substantiate its accuracy as the Construction Manager and the Architect may require, and unless objected to by the Construction Manager or the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.2.1 The Contractor and each Subcontractor shall prepare a trade payment breakdown for the work for which it is responsible, such breakdown being submitted on a uniform standardized form reasonably approved by the Architect and Owner (AIA G703). The form shall be divided in detail sufficient to exhibit area, floors, and/or sections of the Work, and/or by convenient units and shall be updated as required by either the Owner or the Architect as necessary to reflect (1) description of Work (listing labor and material separately), (2) total value, (3) percent of the Work completed to date, (4) value of the work completed to date, (5) percent of previous amount billed, (6) previous amount billed, (7) current percent completed, and (8) value of Work completed to date. Any trade breakdown that unreasonably fails to include sufficient funds shall be withheld from future Applications for Payment to ensure an adequate reserve (including of normal retainage) to complete the Work.

§ 9.3 Applications for Payment

§ 9.3.1 At least fifteen days before the date established for each progress payment, the Contractor shall submit to the Construction Manager an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner, Construction Manager or Architect require, such as copies of requisitions, and releases of waivers of lien from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

The form Application for Payment, duly notarized, shall be the most recent authorized edition of AIA Document G702, Application and Certificate for Payment, supported by the most recent authorized edition of AIA Document G703, Continuation Sheet.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Construction Manager and Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 Each Application for Payment shall be submitted electronically and in four (4) hard copies and shall be accompanied by the following, in all form and substance reasonably satisfactory to the Owner, (1) a current conditional Contractor's waiver of claims and liens, and duly executed an acknowledged sworn statement showing all Subcontractors and material suppliers with whom the Contractor has entered into subcontracts, the amount of each such subcontract, the amount requested for any Subcontractor and material supplier in the requested progress payment, and the amount to be paid to the Contractor from such progress payment together with similar sworn statements from all such subcontractors and material suppliers; (2) duly executed unconditional waivers of claims and liens from all Subcontractors and, when appropriate, from material suppliers and lower tier Subcontractors establishing payment or satisfaction of payment of all amounts requested by the Contractor on behalf of such entities or information and materials required to comply with the requirements of the Contract Documents or reasonably requested by the Owner or the Architect or required by the Owner's title insurer.

§ 9.3.1.4 Unless otherwise agreed to in writing, until Substantial Completion, the Owner shall pay the Contractor ninety-five (95%) of the amount due the Contractor.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site. Such payment by the Owner for materials, equipment, fixtures and supplies stored on or off the Site shall not relieve the Contractor of its responsibility to provide reasonable protection of said materials, equipment, fixtures and supplies until there incorporation into the Work.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials and equipment relating to the Work.

§ 9.3.3.1 The Contractor further expressly undertakes to defend the Owner, against any actions, lawsuits, or proceedings brought against the Owner as a result of liens related to the Work unless the reason for the lien is the nonpayment by the Owner to the Contractor in accordance with the Contract Documents (referred to as "liens" in this Subparagraph). The Contractor hereby agrees to indemnify and hold the Owner harmless against any such liens or claims of liens and agrees to pay any final judgement or lien if the reason for the judgement or lien is the nonpayment by the Owner to Contractor in accordance with the Contract Documents.

§ 9.3.3.2 The Owner shall release any payments withheld due to lien or claim of lien if the Contractor obtains security acceptable to the Owner or a lien discharge bond that is (1) issued by a surety acceptable to the Owner; (2) in form and substance satisfactory to the Owner, and (3) in an amount required by law to release such lien claim. By posting a lien discharge bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or obligations under Subparagraph 9.3.3.1 including without limitation, the duty to defend and indemnify the Owner. The cost of any premiums incurred in connection with such bonds and security shall be the responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Sum.

§ 9.4 Certificates for Payment

§ 9.4.1 Where there is only one Contractor, the Construction Manager will, within seven days after the Construction Manager's receipt of the Contractor's Application for Payment, review the Application, certify the amount the Construction Manager determines is due the Contractor, and forward the Contractor's Application and Certificate for Payment to the Architect. Within seven days after the Architect receives the Contractor's Application for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Certificate for Payment, in the full amount of the Application for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the Architect's notice of withholding certification.

§ 9.4.2 Where there is more than one Contractor performing portions of the Project, the Construction Manager will, within seven days after the Construction Manager receives all of the Contractors' Applications for Payment: (1) review the Applications and certify the amount the Construction Manager determines is due each of the Contractors; (2) prepare a Summary of Contractors' Applications for Payment by combining information from each Contractor's application with information from similar applications for progress payments from the other Contractors; (3) prepare a Project Application and Certificate for Payment; (4) certify the amount the Construction Manager determines is due all Contractors; and (5) forward the Summary of Contractors' Applications for Payment and Project Application and Certificate for Payment to the Architect.

§ 9.4.2.1 Within seven days after the Architect receives the Project Application and Project Certificate for Payment and the Summary of Contractors' Applications for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Project Certificate for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Project Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Project Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward the Architect's notice of withholding certification to the Contractors.

§ 9.4.3 The Construction Manager's certification of an Application for Payment or, in the case of more than one Contractor, a Project Application and Certificate for Payment, shall be based upon the Construction Manager's evaluation of the Work and the data in the Application or Applications for Payment. The Construction Manager's certification will constitute a representation that, to the best of the Construction Manager's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.4 The Architect's issuance of a Certificate for Payment or, in the case of more than one Contractor, Project

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

Application and Certificate for Payment, shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and data in the Application for Payment or Project Application for Payment. The Architect's certification will constitute a representation that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Construction Manager or Architect.

§ 9.4.6 The issuance of a Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment or Project Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.3 and 9.4.4 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1 and 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment or a Project Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment or Project Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a Separate Contractor or other Contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- **.7** repeated failure to carry out the Work in accordance with the Contract Documents.

.8 any other reasonable grounds for objection or withholding as provided in the agreement or as permitted by law.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld. The Owner shall not be deemed in default by reason of withholding payment while any conditions described in 9.5.1 remain.

§ 9.5.3 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager, and both will reflect such payment on the next Certificate for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment or Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.2.1 The Contractor shall indemnify and hold the Owner harmless from laborers, mechanics and materialmen liens upon the Owner's properties or the premises upon which the work is located, arising out of the work performed or materials furnished by the Contractor or any of its Subcontractors or any material suppliers under the Contract.

§ 9.6.3 The Construction Manager will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner, Construction Manager nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Construction Manager and Architect do not issue a Certificate for Payment or a Project Certificate for Payment, through no fault of the Contractor, within fourteen days after the Construction Manager's receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Construction Manager and Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the list, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion.

.1 The Architect will perform no more than two (2) inspections to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for any additional inspections pursuant to Section 9.5.1

§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work of all of the Contractors, or designated portion thereof, is substantially complete, the Construction Manager will prepare, and the Construction Manager and Architect shall execute, a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor and Construction Manager shall jointly prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect after consultation with the Construction Manager.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Construction Manager, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a notice that the Work is ready for final inspection and acceptance, and shall also forward to the Construction Manager a final Contractor's Application for Payment. Upon receipt, the Construction Manager shall perform an inspection to confirm the completion of Work of the Contractor. The Construction Manager shall make recommendations to the Architect when the Work of all of the Contractors is ready for final inspection, and shall then forward the Contractors' notices and Application for Payment or Project Application for Payment, to the Architect, who will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment or Project Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

Architect's final Certificate for Payment or Project Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.1.1 The Architect will perform no more than two (2) inspections whether the Work or a designated portion thereof has attained Final Completion in accordance with the Contract Documents. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for any additional inspections. The Owner may seek reimbursement pursuant to Section 9.5.1.

§ 9.10.1.2 The final payment of retained amount due the Contractor on account of the Contract shall not become due until the Contractor has furnished the Owner, through the Architect, completion documents as enumerated below, or as otherwise required in the Contract Documents.

.1 One (1) hard copy and one (1) electronic Record Set of Drawings showing actual construction of all portions of the Work and incorporating all changes and amendments thereto, as redlined against the 100% Construction Drawings.

.2 Guarantees and Warranties required by specific Sections of the Specifications.

.3 Release and Waiver of Claims, conditioned upon Final Payment, by the General Contractor, Subcontractors, Sub-subcontractors and material suppliers.

.4 All mechanical and electrical installation, operating and maintenance manuals called for under the Specifications.

.5 All test reports and certifications required under the mechanical and electrical specifications.

.6 All forms required to be completed by the Contractor by regulatory governmental agencies with two copies delivered to the Architect.

.7 Shop Drawing submittals in accordance with Article 3.

.8 A copy of the unconditional Occupancy Permit or Certificate of Compliance issued by the local Building Inspection Department having Jurisdiction, unless such is not issued for any reason that is not the responsibility of the Contractor under the Contract Documents or is caused by circumstances beyond the Contractor's control.

.9 Manufacturer's current detailed installation instructions for fire dampers, ceiling radiation dampers, smoke dampers, and duct smoke detectors as applicable to the Project.

.10 One (1) copy of the equipment operational and maintenance manuals.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Construction Manager and Architect so confirm, the Owner shall, upon application by the Contractor and certification by the Construction Manager and Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect through the Construction Manager prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

.1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;

.2 failure of the Work to comply with the requirements of the Contract Documents;

.3 terms of special warranties required by the Contract Documents; or

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

.4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

.1 employees on the Work and other persons who may be affected thereby;

.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and

.4 construction or operations by the Owner, Separate Contractors, or other Contractors.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner, Construction Manager and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner, Construction Manager and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor, Construction Manager and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor, the Construction Manager and the Architect will promptly reply to the Owner in writing stating whether or not any of them has reasonable objection to the persons or entities proposed by the Owner. If the Contractor, Construction Manager or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor, the Construction Manager and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Construction Manager, Architect, their consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

(and such insurance shall be from a company that is A rated or better by A.M. Best Company) which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed.

.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employee;

.4 Claims for damages insured by usual personal injury liability coverage;

.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

.6 Claims for damages because of bodily injury, death or a person or property damage arising out of ownership, maintenance or use of a motor vehicle.

.7 Claims for bodily injury or property damage arising out of completed operations; and.8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The Insurance required by Section 11.1.1 or as described in the Agreement or other corresponding Exhibit setting forth the specific insurance requirements shall be written for not less than limits of liability specified by the Owner or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the
final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 **Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within not less than twenty (20) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide written notice directly to the Owner, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.1.5 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.1.6 INSURANCE REQUIREMENTS
Refer to A132EXHIBITA for Insurance Requirements.

§ 11.1.7 PERFORMANCE BOND AND PAYMENT BOND
Refer to A132EXHIBITA for Bond Requirements; or

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform both the Contractor and the Construction Manager, separately and in writing, prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice directly to the Contractor, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Construction Manager and Construction Manager's consultants; (3) the Architect and Architect's consultants; (4) other Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (5) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, other Contractors, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor, Architect, and Construction Manager for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Construction Manager, Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Construction Manager, Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Construction Manager's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Construction Manager or Architect has not specifically requested to examine prior to its being covered, the Construction Manager or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion, and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, Construction Manager or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Separate Contractors, or other Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.1.1 In all operations under the Contract, the Contractor agrees that it will comply with provisions of all State and Federal Laws (including OSHA) and all local ordinances which may affect such operations.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Construction Manager, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Construction Manager and Architect timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Construction Manager, Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Construction Manager and Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.4.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- **.1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- **.2** An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- **.3** Because the Construction Manager has not certified or the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees, or any other persons performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- **.1** repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

.2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
.3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
.4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, after consultation with the Construction Manager, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
.2 Accept assignment of subcontracts pursuant to Section 5.4; and
.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall, upon application, be certified by the Initial Decision Maker after consultation with the Construction Manager, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and the Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

.1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
.2 that an equitable adjustment is made or denied under another provision of this Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

.1 cease operations as directed by the Owner in the notice;
.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

§ 14.4.4 The Contractor shall include in each of its subcontracts a clause, similar in effect to the provisions in Paragraph 14.4, allowing the Contractor to terminate the subcontract for its sole convenience, subject only to the payment obligations set forth in Paragraph 14.4.3.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Construction Manager and Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary. The Contractor shall accompany the Claim with a written analysis with a proposed revision to the Schedule illustrating the claimed influence of the basis for delay on the critical path of the Work and the applicable deadlines that may be impacted. Contractor will exercise reasonable efforts to mitigate the potential impact of any delay but shall be compensated for any costs associated therewith.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction. The time for performance of this Contract, as set forth in the Construction Schedule, shall include an allowance for delays due to reasonably anticipated adverse weather for the area where the Work is located. For the purpose of establishing that abnormal adverse weather conditions have caused a delay, and determining the extent of delay attributed to such weather conditions, the Contractor shall furnish with its claim, National Oceanic and Atmospheric Administration (NOAA) National Weather Service records of climatic conditions during the same time interval for the previous five (5) years for the locality of the Work; the Contractor's daily job site logs/daily construction reports showing weather, job activities, and the effect of weather on the progress of the Work; and an impact schedule showing the effects of the weather event on the critical path of the Contractor's Construction Schedule. Time extension for weather delays and related impact do not entitle the Contractor to extended overhead recovery or to any other monetary compensation associated with that claim unless approved in

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

writing by the Owner.

§ 15.1.6.3 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which have concurrent or interrelated effects on the progress of the Work.

§ 15.1.7 Waiver of Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties, the Construction Manager, and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days of receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

AIA Document A232 – 2019. Copyright © 1992, 2009, and 2019. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 15:21:13 EDT on 07/08/2026 under Subscription No.20240076547 which expires on 12/11/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.
User Notes: (6a4e6acd842e1eaf949e8151)

SECTION 007343
WAGE RATE REQUIREMENTS COVER

PART 1 GENERAL

1.01 SUMMARY

A. Wage rates shall apply as shown in the Prevailing Rate Schedule prepared by the New York State Department of Labor for this project. The Prevailing Wage Case Number (PRC#) assigned to this project is 2026005554. The Schedule can be viewed at the following web site: https://apps.labor.ny.gov/wpp/publicViewProject.do?method=showIt&id=1608394. Upon award of the Contract to the successful bidder, a hard copy of the Schedule will be provided.

B. The Contractor shall be responsible for completing one copy of the Notice of Contract Award **(Form PW-16)**. Upon completion of the form, the Contractor shall mail the form to the Architect. Architect will forward a copy to the New York State Department of Labor.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 007343

SECTION 011000
SUMMARY

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Work restrictions.
5. Coordination with occupants.
6. Work under separate contracts.
7. Specification and drawing conventions.

B. Related Sections:
1. Division 00 Section “Preliminary Schedules” for anticipated project construction schedule.
2. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.02 PROJECT INFORMATION

A. Project Identification: Pine Bush 2025 CIP Phase 2

SED #
1. Circleville Elementary School44-04-01-06-0-009-018
2. Circleville Middle School44-04-01-06-0-014-019
3. Pakanasink Elementary School44-04-01-06-0-012-019
4. Pine Bush High School44-04-01-06-0-007-032

B. Project Location:
1. Circleville Elementary School,2000 NY-302, Circleville, NY 10919
2. Circleville Middle School, 1951 NY-302, Circleville, NY 10919
3. Pakanasink Elementary School, 1953 NY-302, Circleville, NY 10919
4. Pine Bush High School, 156 NY-302, Pine Bush, NY 12566

C. Owner: Pine Bush Central School District, 156 State Route 302, Pine Bush, NY 12566
1. Owner's Rep:Brian Weir, 845-744-2031
   a. Email: brian.weir@pinebushschools.org

D. Architect: CPL, 4 Crotty Lane**,**New Windsor, New York12553
1. Contact Person: Stephanie Wisniewski
   a. Email: SWisniewski@cplteam.com
   b. Telephone Number:845-926-5610

E. Construction Manager: **Pike Construction Services, 20 Loudonville Road, Albany, NY 12204, 518-376-8466**
1. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and each Contractor, according to a separate contract between Owner and Construction Manager.

F. Submittal Web Site: The Architect requires the use of Autodesk Construction Cloud for delivery and return of submittals, shop drawings and requests for information. There are **no exceptions** to this requirement.

1.03 DEFINITIONS

A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

1.04 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of the Project is defined by the Contract Documents and consists of the following:
   1. Window Replacements, HVAC improvements, flooring and ceiling replacements.

B. Type of Contract:
   1. Project will be constructed under coordinated, concurrent multiple contracts. See Division 01 Section "Multiple Contract Summary" for a description of work included under each of the multiple contracts and for the responsibilities of the Project coordinator.
   2. Before commencing Work, submit an updated copy of the Contractor's Construction Schedule showing the sequence, commencement and completion dates, (and move-out and -in dates of Owner's personnel) for all phases of Work.

1.05 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
   1. Driveways, Walkways and Entrances: Keep all driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
      a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
      b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.06 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.
   1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:30 a.m. to 3:30 p.m, Monday through Friday, except as otherwise indicated.
   1. School Vacations and Holidays: Work may occur at any times, as approved.
   2. Weekend Hours: Work may occur at any times, as approved.
   3. Hours for Utility Shutdowns: Only on weekends, holidays and school vacations as approved.
   4. Hours for Noisy Activity: For core drilling, powder-activated fasteners, and other disruptive activities, 3:30 p.m. to 11:00 p.m, or as otherwise approved.
   5. Special Events: The Owner will provide dates and times of special events that will restrict construction operations.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
   1. Notify Owner not less than two days in advance of proposed utility interruptions.
   2. Obtain Owner's written permission before proceeding with utility interruptions.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
   1. Notify Owner not less than two days in advance of proposed disruptive operations.
   2. Obtain Owner's written permission before proceeding with disruptive operations.

E. Nonsmoking Building: Smoking is not permitted within the building or grounds.

1.07 COORDINATION WITH OCCUPANTS

A. **Partial Owner Occupancy**: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
   1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
   2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

B. **Owner Limited Occupancy** of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
   1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
   2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
   3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
   4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.08 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
   1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
   2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
   3. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

4. Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:

B. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
   1. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 011000

SECTION 011100
MILESTONE SCHEDULE

PART 1 GENERAL

1.01 SUMMARY

A. The following Milestone schedule serves as a basis for bidding. Each Prime Contractor will coordinate activities, forward submittals, deliver materials and provide necessary manpower to meet the milestones attached.

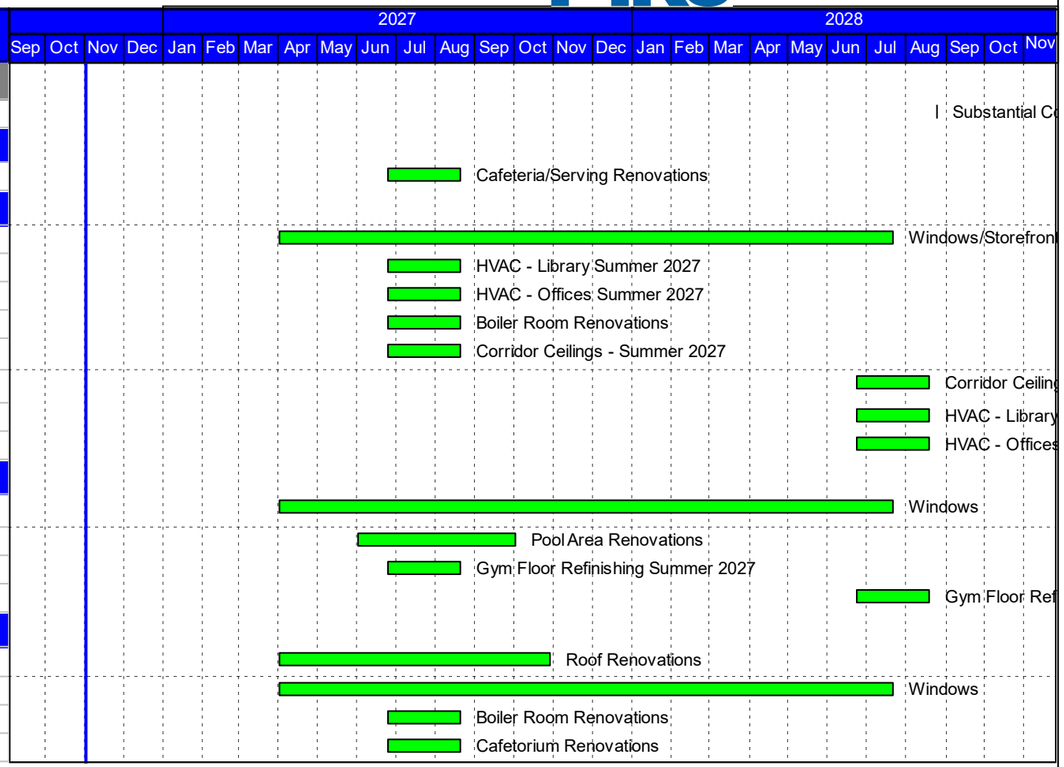
PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 011100

This page intentionally left blank

Activity ID	Activity Name	Original Duration	Actual Duration	Remaining Duration	Start	Finish
PINE BUSH CENTRAL SCHOOL DISTRICT - PH2 - BID SCHEDULE		367	0	367	01-Apr-27	25-Aug-28
A1000	Substantial Completion	1	0	1	25-Aug-28*	25-Aug-28
Pine Bush High School		41	0	41	25-Jun-27	20-Aug-27
PBHS1000	Cafeteria/Serving Renovations	41	0	41	25-Jun-27*	20-Aug-27
Cirvleville Middle School		362	0	362	01-Apr-27	18-Aug-28
CVMS2000	Windows/Storefront	342	0	342	01-Apr-27*	21-Jul-28
CVMS2020	HVAC - Library Summer 2027	41	0	41	25-Jun-27*	20-Aug-27
CVMS2030	HVAC - Offices Summer 2027	41	0	41	25-Jun-27*	20-Aug-27
CVMS2050	Boiler Room Renovations	41	0	41	25-Jun-27*	20-Aug-27
CVMS2040	Corridor Ceilings - Summer 2027	41	0	41	25-Jun-27*	20-Aug-27
CVMS2090	Corridor Ceilings - Summer 2028	41	0	41	23-Jun-28*	18-Aug-28
CVMS2060	HVAC - Library Summer 2028	41	0	41	23-Jun-28*	18-Aug-28
CVMS2070	HVAC - Offices Summer 2028	41	0	41	23-Jun-28*	18-Aug-28
Pakanasink Elementary School		362	0	362	01-Apr-27	18-Aug-28
PAK3000	Windows	342	0	342	01-Apr-27*	21-Jul-28
PAK3010	Pool Area Renovations	89	0	89	01-Jun-27*	01-Oct-27
PAK3020	Gym Floor Refinishing Summer 2027	41	0	41	25-Jun-27*	20-Aug-27
PAK3030	Gym Floor Refinishing Summer 2028	41	0	41	23-Jun-28*	18-Aug-28
Circleville Elementary School		342	0	342	01-Apr-27	21-Jul-28
CES4000	Roof Renovations	152	0	152	01-Apr-27*	29-Oct-27
CES4010	Windows	342	0	342	01-Apr-27*	21-Jul-28
CES4020	Boiler Room Renovations	41	0	41	25-Jun-27*	20-Aug-27
CES4030	Cafetorium Renovations	41	0	41	25-Jun-27*	20-Aug-27



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

SECTION 011200
MULTIPLE CONTRACT SUMMARY

PART 1 GENERAL

1.01 SUMMARY

A. This Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.

B. Specific requirements of each contract are also indicated in individual Specification Sections and on Drawings.

C. Related Sections include the following:
   1. Division 01 Section "Summary" for the Work covered by the Contract Documents, restrictions on use of the premises, Owner-occupancy requirements, and work restrictions.
   2. Division 01 Section "Project Management and Coordination" for general coordination requirements.
   3. Division 01 Section "Temporary Facilities and Controls" for specific requirements for temporary facilities and controls.

1.02 DEFINITIONS

A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.03 GENERAL REQUIREMENTS OF CONTRACTS

A. Extent of Contract: Unless the Agreement contains a more specific description of the Work, names and terminology on Drawings and in Specification Sections determine which contract includes a specific element of Project.
   1. Unless otherwise indicated, the Work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents. **Each contractor owns all of their own work as shown on all drawings and specifications within the contract documents and should familiarize themselves with the entire contract document set. This includes the work associated with the PBHS cafeteria and new serving lines.**
   2. Local custom and trade-union jurisdictional settlements do not control the scope of the Work of each contract. When a potential jurisdictional dispute or similar interruption of work is first identified or threatened, affected contractors shall negotiate a reasonable settlement to avoid or minimize interruption and delays.
   3. All contractors are responsible for the careful removal and reinstallation of ceiling where work must be installed above a ceiling not scheduled for removal.
   4. Trenches for the Work of each contract shall be provided by General Construction Contract.
   5. Cutting and Patching: Each contract shall perform its own cutting & patching unless otherwise noted.
   6. Through-penetration firestopping for the Work of each contract shall be provided by that contract for its own Work.
   7. Roof-mounted equipment curbs for the work of the Mechanical Construction contract shall be provided by the Mechanical Construction contract and installed by the General Contractor. All wood blocking is provided and installed by the General contractor. Layout to be by the Mechanical Contractor.

8. Project closeout requirements by each contractor.
9. Each Contractor shall review the facility asbestos report to become familiar with any materials that may contain asbestos. If the contractor encounters materials that have not been tested for asbestos he shall cease work and contact the CM. The Contractor will be held responsible for clean-up costs if they continue to remove materials that have not been tested for asbestos.
10. All contractors are required to submit a photo along with the name and address of each employee that will work on district property from at least 14 days prior to commencing work.

B. Substitutions: Each contractor shall cooperate with other contractors involved to coordinate approved substitutions with remainder of the Work.

C. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Division 01 Section "Temporary Facilities and Controls," each contractor is responsible for the following:
1. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, and costs and use charges associated with each facility.
2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
3. Its own field office, complete with necessary furniture, utilities, and telephone service.
4. Its own storage and fabrication sheds.
5. Its own dust protection to control dust where dust partition are not scheduled or shown on the drawings but are necessary to protect the building from dust contamination.
6. Temporary enclosures for its own construction activities.
7. Staging and scaffolding for its own construction activities.
8. General hoisting facilities for its own construction activities.
9. Waste disposal facilities, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials. Dumpsters by the GC.
10. Progress cleaning of its own areas on a daily basis.
11. Secure lockup of its own tools, materials, and equipment.
12. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
13. Temporary heat/cooling to protect to install and protect the work is place where scheduled temporary heat/cooling is not in place or not called for in the contract documents.

D. Temporary Heating, Cooling, and Ventilation: The Mechanical Contract is responsible for temporary heating, cooling, and ventilation, including utility-use charges, temporary meters, and temporary connections as described in Temp controls specification 015001.

E. Temporary ventilation: Each Contractor to control fumes from construction operations including interior painting and “off gassing” of new finish materials, as described in Temp controls specification 015001.

F. Temporary Water: The Plumbing contract is responsible for temporary water.

G. Each Contractor has been given the opportunity prior to bid to inspect the entire Project site for interferences to their Contract work and agrees to accept the site as it exists on the date of the bid opening.
1. It is the Owner's intention to continue to occupy the existing buildings and site for normal School operations during the Construction process. The Contractors all agree to:

a. Cooperate with the Owner's personnel in maintaining and facilitating access to the School buildings and its facilities by the School staff, Students, Owner's agents, service consultants and the public, throughout the construction process.
b. Keep driveways and entrances serving the occupied School buildings clear and available to the Owner, the Owner's employees, the public, and to emergency vehicles at all times. Do not obstruct access to, or use these areas for parking, staging of equipment or materials. All access through these existing areas must be coordinated in advance with the CM and in accordance with the Owner's usage and occupancy schedule.
c. Schedule construction operations so as to minimize and conflicts or interruptions to the daily school functions. Coordinate any necessary interruptions with the designated project representative
d. All existing Owner-occupied areas of buildings (not turned over to the Project Contractors) need to remain operational at all times. The contractors are responsible to maintain all systems, such as but not limited to egress, fire alarm, clocks, electric, public address system, gas service, heat, etc.

H. Each Prime Contractor shall:
1. Strive to maintain a safe environment for its employees, clients and vendors. The prime contractors' efforts for an effective response to the Novel Coronavirus (COVID-19) Pandemic will be guided by and in accordance with all applicable federal, state and local laws and guidelines issued by public health authorities such as the Centers for Disease Control and other governmental agencies.
2. Provide field-engineering services, in addition to those provided by the General Work Prime Contract, to install site utilities included in the applicable Prime Contract.
3. Create and coordinate construction schedule information in order to formulate one master schedule for the entire Project.
4. Provide all proper PPE to be worn by all on-site personnel at all times. Parties that do not abide by this requirement will be escorted off the premises.
5. Provide erosion and sediment control and dewatering as it relates to any excavation associated with its own Prime Contract.
6. Provide potable drinking water for its own employees.
7. Provide Sanitary Hand Solution and Personal Protective Equipment for its own employees.
8. Provide access to all concealed systems as required for system maintenance and repair for items installed in their Prime Contract. This specifically talks to access panels needed for future maintenance by the district. MC & EC to furnish and provide layout for access panels, GC to install.
9. Provide and maintain material lifting equipment required for the competion of their Contract requirements, and complying with NYS Labor Laws, OSHA Regulations, and other Federal, State, and local laws.
10. Provide and maintain additional temporary stairs, ladders, ramps, scaffolding, and platforms required specifically for completion of work of their own Contract, and as further detailed in this section. All work needs to comply with the NYS Labor Laws, OSHA regulation, and other Federal, State, and local laws.
11. Provide Fire Prevention materials and equipment for fire protection related to the work of their own Prime Contract. Provide fire extinguishers, fire blankets, adn fire watch during all cutting and welding operations.
12. Provide and supplemental lighting required to install the work of its own Contract, beyond the minimum OSHA levels provided under the Electrical Work Prime Contract.

13. Provide any supplemental heat required to install the work of its own Contract.
14. Provide traffic control for deliveries, and equipment needed to perform the work of their own Prime Contract.
15. Provide protection of its own finished Work, after installation, until accepted by the Architect & Owner.
16. Provide any office and storage trailers required to complete the work of their own Prime Contract.
17. Provide final cleaning as specified.
    a. Provide a general & thorough final cleaning of the site, building, and equipment provided under their Prime Contract immediately before the final inspection. Each Prime Contractor is responsible for cleaning and dust and debris generated from the work of their own Contract.
    b. Maintain areas in a cleaned condition until the Owner occupies the space.

1.04 GENERAL CONSTRUCTION CONTRACT

A. Work in the General Construction Contract includes, but is not limited to, the following:
   1. Remaining work not identified as work under other contracts.
   2. Asbestos Abatement.
   3. Selective demolition.
   4. Shoring braces and underpinning related to the General Construction work.
   5. Slabs-on-grade, including earthwork, subdrainage systems, and insulation.
   6. Below-grade building construction, including excavation, backfill, and thermal and moisture protection.
   7. Exterior closure, including walls, windows and louvers.
   8. Roofing, including coverings, flashings, and roof specialties.
   9. Interior construction, including ceilings.
   10. Fire-protection specialties.
   11. Interior finishes including flooring, finish carpentry and built-in casework.
   12. Miscellaneous items, including concrete equipment bases and painting of mechanical and electrical work.
   13. Professional cleaning upon substantial completion.

B. Temporary facilities and controls in the General Construction Contract include, but are not limited to, the following:
   1. Temporary enclosure for building exterior. Provide protection for any/all openings in the roof & walls left at the end of each day. Includes insulation for thermal protection.
   2. Temporary roads and paved areas.
   3. Excavation support and protection, unless required solely for the Work of another contract.
   4. Temporary signs.
   5. General waste disposal facilities including dumpsters for the project duration.
   6. Pest control.
   7. Temporary fire-protection equipment.
   8. Barricades, warning signs, and lights.
   9. Site enclosure fence.
   10. Security enclosure and lockup.
   11. Restoration of Owner's existing facilities used as temporary facilities.

C. Work in the General Construction Contract includes, but is not limited to, the work included in each of the following:

1. Division 00 “Procurement and Contracting Requirements” as it pertains to Work of this Contract.
2. Division 01 “General Requirements” as it pertains to Work of this Contract.
3. Division 2 “Existing Conditions”.
4. Division 3 “Concrete.”
5. Division 4 “Masonry.”
6. Division 5 “Metals.”
7. Division 6 “Wood, Plastics, and Composites.”
8. Division 7 “Thermal and Moisture Protection”.
9. Division 8 “Openings”.
    a. Section 083113 “Access Doors and Frames,” install access doors furnished by others.
10. Division 9 “Finishes”
11. Division 10 “Specialties.”
12. Division 11 “Equipment.”
13. Division 12 “Furnishings.”

D. Work in the General Construction Contract includes, but is not limited to, the work included in each of the following Drawings.
1. All Prefix “G” Drawings
2. All Prefix “HZ” Drawings
3. All Prefix “S” Drawings
4. All Prefix “P” Drawings
5. All Prefix “H” Drawings
6. All Prefix “E” Drawings
7. All Prefix “A” Drawings
8. All Prefix “I” Drawings
9. All references to other drawings from drawings listed above.

1.05 MECHANICAL CONTRACT

A. Work of the HVAC Contract includes, but is not limited to, the following:
1. HVAC systems and equipment.
2. HVAC instrumentation and controls.
3. HVAC testing, adjusting, and balancing.
4. Masonry openings, including steel lintels.
5. Ceiling removal/reinstallation.
6. Painting

B. Work in the Mechanical Contract includes, but is not limited to, the following:
1. Division 00 “Procurement and Contracting Requirements” as it pertains to Work of this Contract.
2. Division 01 “General Requirements” as it pertains to Work of this Contract.
3. Section 024119 “Selective Removals” for shutoff of utilities or removal of equipment and fixtures where indicated.
4. Division 4 “Masonry.”
5. Section 078413 “Penetration Firestopping.”
6. Section 083113 “Access Doors and Frames” for furnishing of access doors where required for installation by others.
7. Division 9 “Finishes”

8. Section 099123 “Interior Painting” for painting of pipes and ducts for identification where indicated.
9. Division 22 "Plumbing"
10. Division 23 “Heating Ventilating and Air Conditioning”

C. Temporary facilities and controls in the Mechanical Contract include, but are not limited to, the following:
1. Temporary facilities and controls as required.

D. Work in the Mechanical Construction Contract includes, but is not limited to, the work included in each of the following Drawings.
1. All Prefix “G” Drawings
2. All Prefix “HZ” Drawings
3. All Prefix “S” Drawings
4. All Prefix “P” Drawings
5. All Prefix “H” Drawings
6. All Prefix “E” Drawings
7. All Prefix “A” Drawings
8. All Prefix “I” Drawings
9. All references to other drawings.

1.06 ELECTRICAL CONTRACT

A. Work of the Electrical Contract includes, but is not limited to, the following:
1. Electrical service and distribution.
2. Interior lighting.
3. Cafeteria equipment connections.
4. Communication and security.
5. Electrical connections to equipment are furnished by the Mechanical and General Construction Contract.
6. Ceiling removal/reinstallation.

B. Work in the Electrical Contract includes, but is not limited to, the following:
1. Division 00 “Procurement and Contracting Requirements” as it pertains to Work of this Contract.
2. Division 01 “General Requirements” as it pertains to Work of this Contract.
3. Section 024119 “Selective Removals” for shutoff of utilities or removal of equipment and fixtures where indicated.
4. Section 078413 "Penetration Firestopping".
5. Division 26 “Electrical.”
6. Division 27 “Communications.”
7. Division 28 “Electronic Safety and Security.”

C. Temporary facilities and controls in the Electrical Contract include, but are not limited to, the following:
1. Electric power service and distribution.
2. Lighting, including site lighting.
3. Electrical connections to existing systems and temporary facilities and controls furnished by the Electrical Contract.

D. Work in the Electrical Construction Contract includes, but is not limited to, the work included in each of the following Drawings:

1. All Prefix “G” Drawings
2. All Prefix “HZ” Drawings
3. All Prefix “S” Drawings
4. All Prefix “P” Drawings
5. All Prefix “H” Drawings
6. All Prefix “E” Drawings
7. All Prefix “A” Drawings
8. All Prefix “I” Drawings
9. All references to other drawings from drawings listed above.

1.07 PLUMBING CONTRACT

A. Work of the Plumbing Contract includes, but is not limited to, the following:
   1. Plumbing systems and equipment.
   2. Underground plumbing systems.
   3. Cafeteria equipment connections.
   4. Pool systems, equipment and testing. Includes draining and refilling of the pool water.
   5. Masonry openings.
   6. Firestopping.
   7. Ceiling removal/reinstallation.
   8. Painting.

B. Work in the Plumbing Contract includes, but is not limited to, the following:
   1. Division 00 “Procurement and Contracting Requirements” as it pertains to Work of this Contract.
   2. Division 01 “General Requirements” as it pertains to Work of this Contract.
   3. Section 024119 “Selective Removals” for shutoff of utilities or removal of equipment and fixtures where indicated.
   4. Division 4 “Masonry.”
   5. Section 078413 “Penetration Firestopping.”
   6. Section 083113 “Access Doors and Frames” for furnishing of access doors where required for installation by others.
   7. Division 9 “Finishes”
   8. Section 099123 “Interior Painting” for painting of pipes and ducts for identification where indicated.
   9. Division 22 "Plumbing"
   10. Division 23 “Heating Ventilating and Air Conditioning”

C. Temporary facilities and controls in the Plumbing Contract include, but are not limited to, the following:
   1. Temporary facilities and controls as required.

D. Work in the Plumbing Construction Contract includes, but is not limited to, the work included in each of the following Drawings.
   1. All Prefix “G” Drawings
   2. All Prefix “HZ” Drawings
   3. All Prefix “S” Drawings
   4. All Prefix “P” Drawings
   5. All Prefix “H” Drawings
   6. All Prefix “E” Drawings
   7. All Prefix “A” Drawings

8. All Prefix “I’ Drawings
9. All references to other drawings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 011200

SECTION 012300
ALTERNATES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.02 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
   1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
   2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.03 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
   1. Include as part of each alternate miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.01 SCHEDULE OF ALTERNATES

A. GENERAL CONSTRUCTION
   1. Alternate No. GC-01: Select windows at Circleville Elementary School (CES)
      a. Base Bid: **No Work**
      b. Alternate GC-01: Provide general construction associated with select windows at Circleville Elementary School as noted in the drawings, to include window treatment and patching of existing finishes.
   2. Alternate No. GC-02: Select Hallway Ceilings at Circleville Middle School (CVMS)
      a. Base Bid: **No Work**
      b. Alternate GC-02: Provide general construction associated with the replacement of the ceiling in select areas of the corridors at Circleville Middle School, as shown on the drawings. Work to include demo of the existing tectum ceiling and gypsum cove, and new ACT ceiling as shown on drawings.

3. Alternate No. GC-03: Select Courtyard Windows at Circleville Middle School (CVMS)
   a. Base Bid: **No Work**
   b. Alternate GC-03: Provide general construction associated with select windows at Circleville Middle School, as noted in the drawings, to include window treatment and patching of existing finishes.
4. Alternate No. GC-04: Select Windows at Circleville Middle School (CVMS)
   a. Base Bid: **No Work** with the exception that Boces Classroom 146 and ISP 147 base bid will include the removal of existing window panel & AC window unit as per demolition keynote 11 on sheet CVMS A100.2. Base bid will also include providing new 1" insulated glazing at ac unit & window panel removal as per floor plan keynote 6 on sheet CVMS A200.2.
   b. Alternate GC-04: Provide general construction associated with select windows at Circleville Middle School, as noted in the drwaings, to include window treatment and patching of existing finishes.
5. Alternate No. GC-05: Select Courtyard Windows at Pakanasink Elementary School (PAK)
   a. Base Bid: **No Work**
   b. Alternate GC-05: Provide general construction associated with select windows at Pakanasink Elementary School, as noted in the drwaings, to include window treatment and patching of existing finishes.
6. Alternate No. GC-06: Select Windows at Pakanasink Elementary School (PAK)
   a. Base Bid: **No Work**
   b. Alternate GC-06: Provide general construction associated with select windows at Pakanasink Elementary School, as noted in the drwaings, to include window treatment and patching of existing finishes.

B. ELECTRICAL CONSTRUCTION
1. Alternate No. EC -01**:** Select electrical receptacle and breakers at windows at Circleville Elementary School (CES)
   a. Base Bid: **No Work**
   b. Alternate: Provide electrical construction associated with installation of new receptacle for window air conditioning unit and new circuit breaker in panelboard.
2. Alternate No. EC -02: Select lighting at hallway ceilings at Circleville Middle School (CVMS)
   a. Base Bid: **No Work**
   b. Alternate: Provide electrical construction associated with installation of new lighting when ceilings are replaced.

END OF SECTION 012300

SECTION 012500
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 GENERAL

A. Should the Contractor desire to substitute other articles, materials, apparatus, products or processes than those specified or approved as equal, the Contractor shall apply to the Architect in writing for approval of such substitution. It should be noted that the bid shall not be based on a substituted article, material, apparatus, product or process. With the application shall be furnished such information as required by the Architect to demonstrate that the article, material, apparatus, product or process he wishes to use is the equivalent of that specified in quality, finish, design, efficiency and durability and has been elsewhere demonstrated to be equally serviceable for the purpose for which it is intended. The Contractor shall set forth the reasons for desiring to make the substitution and shall further state what difference, if any, will be made in the construction schedule and the contract price for such substitution should it be accepted; it being the intent hereunder that any savings shall accrue to the benefit of the Owner.

B. The Architect shall reject any such desired substitution as not being specifically named in the contract, or if he shall determine that the adjustment in price in favor of the Owner is insufficient, the Contractor shall immediately proceed to furnish the designated article, material, apparatus, product or process.

C. Request for substitutes shall conform to the requirements of this Article.

D. Requests for substitutions shall, include full information concerning differences in cost, and any savings in cost resulting from such substitutions shall be passed on to the Owner.

E. Requests for utilization of substitutes will be reviewed during the course of the project. The impact on the project and the timeliness of submission will be of key consideration.

F. The approval of utilization of a substitute is subject to the sole and final discretion of the Architect.

1.02 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Sections:
   1. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
   2. Division 01 Section “Submittals” for submittal procedures.
   3. Divisions 02 through 49 Sections for specific requirements and limitations for substitutions.

1.03 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
   1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
   2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

B. Substitute Items (Or Equal): If in Architect/Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item it will be considered a proposed substitute item.

1.04 ACTION SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   1. Substitution Request Form: Use facsimile of form provided in Project Manual.
   2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
      a. Statement indicating why specified product or fabrication, or installation cannot be provided, if applicable.
      b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
      c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
      d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
      e. Samples, where applicable or requested.
      f. Certificates and qualification data, where applicable or requested.
      g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
      h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
      i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
      j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
      k. Cost information, including a proposal of change, if any, in the Contract Sum.
      l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
      m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
      n. See additional requirements in Article 2.3 DETAILED SUBSTITUTION PROCEDURES
   3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within five days of receipt of a request for substitution.

Architect will notify Contractor of acceptance or rejection of proposed substitution within ten days of receipt of request, or five days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.05 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

PART 2 PRODUCTS

2.01 SUBSTITUTION PROCEDURES (GENERAL)

A. Conditions: After the 'Notice of Award" and prior to the Contractor entering into a Formal Contract with the Owner, the Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
   1. Requested substitution is consistent with the Contract Documents and will produce indicated results.
   2. Substitution results in substantial cost savings to the Owner or substantial performance improvements.
   3. Substitution request is fully documented and properly submitted.
   4. Requested substitution will not adversely affect Contractor's construction schedule.
   5. Requested substitution has received necessary approvals of authorities having jurisdiction.
   6. Requested substitution is compatible with other portions of the Work.
   7. Requested substitution has been coordinated with other portions of the Work.
   8. Requested substitution provides specified warranty.
   9. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
   10. The substation is submitted in compliance with Article 2.3 DETAILED SUBSTITUTION PROCEDURES

B. If the Contractor does not present 'Substitutions" in the time frame noted above any future requests to substitute products will not be considered, unless the substitution is for cause.

C. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

2.02 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 20 days prior to time required for preparation and review of related submittals.
   1. Architect will consider Contractor's request for substitution when the following conditions are present.
      a. The specified product is not available

b. The specified product cannot be delivered in the time frame required under the Project Schedule.

2. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
   a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
   b. Substitution request is fully documented and properly submitted.
   c. Requested substitution will not adversely affect Contractor's construction schedule.
   d. Requested substitution has received necessary approvals of authorities having jurisdiction.
   e. Requested substitution is compatible with other portions of the Work.
   f. Requested substitution has been coordinated with other portions of the Work.
   g. Requested substitution provides specified warranty.
   h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect will consider requests for substitution if received 60 days after the Notice of Award and based on the following
   1. The proposed product substitution will result in a significant cost savings to the Owner.
   2. The proposed product has substantial performance improvements.
   3. The proposed product can be provided much earlier in the schedule enhancing the project completion date.
   4. The proposed product warranty is superior to the specified item.

2.03 DETAILED SUBSTITUTION REVIEW PROCEDURES

A. The Architect in addition to the requirements listed above will require compliance with the following requirements and procedures.
   1. Requests for approval of substitutions will be received and considered from Prime Contractors only and not from manufacturers, suppliers, Subcontractors, or other third parties.
   2. If the materials and equipment submitted are offered as substitutions to the Contract Documents or approved equal, the Contractor shall advise the Owner and the Architect of the requested substitutions and comply with the requirements hereinafter specified in this Article.
   3. Where the acceptability of substitution is conditioned upon a record of and the proposed substitution does not fulfill this requirement, the Architect, at the Architect’s sole discretion, may accept the substitution if the Contractor provides a bond or cash deposit which guarantees replacement at no cost to the Owner for any failure occurring within a specified time. The substitution item must meet all other technical requirements contained in the Specification.
   4. The Contractor shall furnish such information as required by the Architect to demonstrate that the equal article, material, apparatus, product or process is the equivalent of that specified in quality, finish, design, efficiency and durability and has been elsewhere demonstrated to be equally serviceable for the purpose for which it is intended and/or that it offers substantial benefits to the Owner in saving of time and/or cost. The Contractor shall set forth the reasons for desiring to make this substitution.
   5. Contractor shall submit:

a. For each proposed request for approved substitute sufficient details, complete descriptive literature and performance data together with samples of the materials, where feasible, to enable the Architect to determine if the proposed request for approval should be granted, including manufacturer's brand or trade names, model numbers, description of specification of item, performance data, test reports, samples, history of service, and other data as applicable.
b. Certified tests, where applicable, by an independent laboratory attesting to the performance of the substitute.
c. A list of installations where the proposed substitute equipment or materials is performing under similar conditions as specified.
d. A list of installations where the proposed substitute equipment or materials is performing under similar conditions as specified.

6. Where the approval of a substitute requires revision or redesign of any part of Work, including that of other Contracts, all such revision and redesign, and all new drawings and details required therefore, shall be provided by the Contractor at its own cost and expense, and shall be subject to the approval of the Architect.
7. In the event that the Architect is required to provide additional services, then the Architect's charges for such additional services shall be paid by the Contractor to the Owner.
8. Any modifications in the Work required under other contracts to accommodate the changed design will be incorporated in the appropriate contracts and any resulting increases in contract prices will be charged to the Contractor by the Owner who initiated the changed design.
9. In all cases, the Architect shall be the judge as to whether a proposed substitute is to be approved. The Contractor shall be bound by the Architect’s decision. No substitute items shall be used in the Work without written approval of the Architect.
10. In making request for approval of substitute, Contractor represents that:
    a. Contractor has investigated proposed substitute and determined that it is equal to or superior in all respects to the product, manufacturer or method specified or offers other specified advantages to the Owner.
    b. Contractor will provide the same or better warranties or bonds for proposed substitute as for product, manufacturer or method specified.
    c. Contractor waives all claims for additional costs or extension of time related to proposed substitute that subsequently may become apparent.
    d. Contractor shall have and make no claim for an extension of time or for damages by reason of the time taken by the Architect in considering a substitute proposed by the Contractor or by reason of failure of the Architect to approve a substitute proposed by the Contractor. Any delays arising out of consideration, approval, or utilization of a substitute shall be the sole responsibility of the Contractor requesting the substitute and it shall arrange its operations to make up the time lost.
11. Proposed substitute will not be accepted if:
    a. Acceptance will require substantial revision of Contract Documents.
    b. Acceptance will substantially change design concepts or Technical Specifications.
    c. Acceptance will delay completion of the Work, or the Work of other Contractors.
    d. If the Substitute item is not accompanied by formal request for approval of substitute from Contractor.
12. The Architect reserves the right to disapprove, for aesthetic reasons, any material or equipment on the basis of design or color considerations alone, without prejudice to the

quality of the material or equipment, if the manufacturer cannot meet the required colors or design.

13. All requests for approval of substitutes of materials or other changes from the contract requirements shall be accompanied by an itemized list of all other items affected by such substitution or change. The Architect shall have the right, if such is not done, to rescind any approvals for substitutions and to order such Work removed and replaced with Work conforming to the specified requirements of the contract, all at the Contractor's expense, or to assess all additional costs resulting from the substitution to the Contractor.
14. Approval of a substitute will not relieve Contractor from the requirement to submit Shop Drawings or any of the provisions of the Contract Documents.
15. In the event that the Architect is required to provide additional services as a result of a request for approval of a substitute results in changes by the Contractor in dimension, weight, power requirements, etc., of the equipment and accessories furnished, or as a result of Contractor's errors, omissions or failure to conform to the requirements of the Contract Documents or if the Architect is required to examine and evaluate any changes proposed by the Contractor solely for the convenience of the Contractor, or for evaluation of deviations from Contract Documents, then the Architect's charges in connection with such additional services shall be paid by the Contractor.
16. Structural design shown on the Drawings is based upon the configuration of and maximum loading for major items of equipment as indicated on the Drawings and as specified. If the substituted equipment furnished differs from said features, the Contractor shall pay to the Owner all costs of redesign and for any construction changes required to accommodate the equipment furnished, including the Architect's charges in connection therewith.

B. The Contractor shall respond to required submittals with complete information and with a degree of accuracy to achieve approvals within two (2) submissions. All costs to the Architect involved with subsequent submissions of Shop Drawings, Samples or other items requiring approval, will be paid by the Contractor to the Owner, by deducting such costs from payments due for Work completed. In the event an approved item is requested by the Contractor to be changed or substituted for, all costs involved in the reviewing and approval process will likewise be back charged to the Contractor unless determined by the Architect that the need for such substitution and/or deviation from Contract Documents is beyond the control of the Contractor.

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 012500

SECTION 012519
EQUIVALENTS

PART 1 GENERAL

1.01 SUMMARY:

A. Requirements set forth herein pertain to products specified in divisions included in project manual.

1.02 DEFINITIONS:

A. For the purpose of this contract, the words "similar", "equal to", "or equal", "equivalent" and such other words of similar content and meaning, shall be deemed to mean similar and equal to one of named products.

B. For the purpose of bidding documents, the word "products" shall be deemed to include the words "articles", "materials", "items", "equipment" and "methods". Whenever in contract documents one or more products are specified, words "similar, equivalent, and equal to" shall be deemed inserted.

1.03 EQUIVALENTS:

A. Where, in these specifications or on drawings, certain kinds, types, brands, or manufacturers of materials are named, they shall be regarded as required standard of quality. Where two or more are named these are presumed to be equal, and Contractor may select one of those items.

B. If Contractor desires to use any kind, type, brand, or manufacturer of material other than those named in specification, he may submit the request for approval to the Architect well in advance of the bid date.

C. Requests for approval of proposed equivalents will be received by Architect only from the Contractor.

D. If the Architect approves a proposed equivalent prior to receipt of Bids, such approval will be set forth in an Addendum.

E. After the bid opening the apparent low bidder or bidders will be notified by the Architect or Owner and shall submit to the Architect in writing, within ten (10) calendar days what equivalent kind, type, brand, or manufacture is included in bid in lieu of specified items. No equivalents will be considered after this submission.

F. Contractor shall have burden of proving, at Contractor’s own cost and expense, to satisfaction of Owner/Architect, that proposed product is similar and equal to named product. In making such determination Owner/Architect will be sole judge of objective and appearance criteria that proposed product must meet in order for it to be approved.
   1. Supporting data on equivalency is responsibility of bidder. For each equivalent to base specification, included in products list, submit information describing in specific detail -
      a. Wherein it differs from quality and performance required by base specification.
      b. Changes required in other elements of work because of equivalent.
      c. Effect on construction schedule.
      d. Any required license fees or royalties.
      e. Availability of maintenance service, and source of replacement materials.
      f. Such other information as may be required by Owner.

G. Owner, through Architect, shall be judge of acceptability of proposed equivalents. Risk of whether bid equivalents will be accepted is borne by Contractor.

1.04 CONTRACTOR'S REPRESENTATION:

A. Submission of an equivalent product and/or material constitutes a representation that Contractor:
   1. Has investigated proposed product and determined it is equal to or superior in all respects to that specified.
   2. Will provide same warranties or bonds for equivalent as for product specified.
   3. Will coordinate installation of an accepted equivalent into work and make such other changes as may be required to make work complete in all respects.
   4. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.
   5. Will provide, at own cost and expense, any different quantity and/or arrangement of ductwork, piping, wiring, conduit or any part of work from that specified, detailed or indicated in Contract Documents if required for proper installation of an approved equivalent.
   6. Will provide, at own cost and expense, all such revision and redesign and all new drawings and details required by Architect for approval if proposed equivalent product requires a revision or redesign of any part of work covered by this contract.
   7. Provide complete documentation on both the product specified and the proposed substitute, including the following information as appropriate:
      a. Point-by-point comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
      b. Copies of current, independent third-party test data of salient product or system characteristics.
      c. Samples where applicable or when requested by Architect.
      d. Detailed comparison of significant qualities of the proposed substitute with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
      e. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
      f. Research reports, where applicable, evidencing compliance with building code in effect for Project.
      g. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will become necessary to accommodate the proposed substitute.
   8. Provide certification by manufacturer that the substitute proposed is equal to or superior to that required by the Procurement and Contracting Documents, and that its in-place performance will be equal to or superior to the product or equipment specified in the application indicated.
   9. Bidder, in submitting the Procurement Substitution Request, waives the right to additional payment or an extension of Contract Time because of the failure of the substitute to perform as represented in the Procurement Substitution Request.

1.05 EQUIVALENT CERTIFICATION:

A. Contractor must sign the “Equivalent Certification” following this specification section and deliver it to the Architect along with a complete list of proposed equivalents within ten (10) calendar days after notification from the Architect or Owner. This is mandatory and must be done prior to award of contracts.

EQUIVALENT CERTIFICATION

Project Name: Pine Bush 2025 CIP Phase 2
Project Address: 1953 State Route 302, Circleville, NY 10919, Pine Bush, New York 12566
Project No.:R25.17714.01

REVIEWED MATERIAL:

AIA A701-2018 Instructions to Bidders
AIA A201-2017 General Conditions of the Contract
Specification Section: 012519 - Equivalents
Specification Section: 012500 - Substitution Procedures
Specification Section: 016000 - Product Requirements

CHECK THE FOLLOWING THAT APPLIES:

	No equivalents are proposed.
	Proposed equivalents are attached with supporting data as per Section 012519.

ALL EQUIVALENTS ARE HEREBY PRESENTED TO ARCHITECT AND OWNER FOR APPROVAL. NO FUTURE EQUIVALENTS WILL BE CONSIDERED.

Contractor Signature:
Printed Name of Contractor:
Date:

Signature of Reviewer:
Printed Name of Reviewer:
Approved as Noted Date:

END OF SECTION 012519

SECTION 012600
CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

B. Related Sections:
   1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.02 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on the Information Bulletin bound in the Project Forms Section of Project Manual.

1.03 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
   1. Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
   2. Within time specified in Proposal Request or 10 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
      a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
      b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
      c. Include costs of labor and supervision directly attributable to the change.
      d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
   1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
   2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
   3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
   4. Include costs of labor and supervision directly attributable to the change.
   5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times and

activity relationship. Use available total float before requesting an extension of the Contract Time.

6. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

1.04 ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
   1. Include installation costs in purchase amount only where indicated as part of the allowance.
   2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
   3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
   4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit claims within 5 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 5 days after such authorization.
   1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
   2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

1.05 ADMINISTRATIVE CHANGE ORDERS

A. Adjustment from Allowances: Refer to Division 01 Section "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

B. Adjustments from Unit Prices: Refer to Division 01 Section "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit price work.

1.06 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on the Information Bulletin bound in the Project Forms Section of Project Manual.

1.07 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on the Information Bulletin bound in the Project Forms Section of Project Manual.
   1. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

a. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

2. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
   a. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 012600

This page intentionally left blank

SECTION 012900
PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Sections:
   1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
   2. Division 01 Section "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.
   3. Division 01 Section "Submittal Procedures" for administrative requirements governing the preparation and submittal of the submittal schedule.

1.02 SCHEDULE OF VALUES

A. Schedule of Values: Furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

B. Coordination: Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:
   1. Application for Payment forms with continuation sheets. (Aia G732 and G703)
   2. Submittal schedule.
   3. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

C. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the schedule of values.
   1. Identification: Include the following Project identification on the schedule of values:
      a. Project name and location.
      b. Name of Architect.
      c. Architect's project number.
      d. Contractor's name and address.
      e. Date of submittal.
   2. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:
      a. Related Specification Section or Division.
      b. Description of the Work.
      c. Change Orders (numbers) that affect value.
      d. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
         1) Labor.
         2) Materials.
         3) Equipment.
   3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
   4. For New York State School facilities projects, each school building shall be separately itemized and detailed.

5. The following line items must be included on the continuation sheet.
   a. Project Bonds and Insurances
   b. Mobilization
   c. Shop Drawings
   d. Project Meetings
   e. Temporary Heat (where applicable)
   f. Progress Cleaning
   g. Lawn and Tree Watering (where applicable to establish new lawns and trees)
   h. Punch List
   i. Final Cleaning
   j. Close Out documents and Warranties
6. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
7. Submit draft of AIA Document G703 Continuation Sheets.
8. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
9. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
   a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
10. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.03 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
   1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
   1. Submit draft copy of Application for Payment 5 days prior to due date for review by Architect. (Work to be projected out to the end of the pay period).

C. Application for Payment Forms: Use AIA Document G732 and AIA Document G703 as form for Applications for Payment.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
   1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
   2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
   3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

4. The OWNER shall retain five percent (5%) of the amount due on each Application for both the work completed and materials stored, unless stated otherwise in Owner Contractor Agreement. The OWNER reserves the right to retain a greater percentage in the event the CONTRACTOR fails to make satisfactory progress or in the event there is other specific cause for greater withholding.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
   1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
   2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.

F. Provide copies of payroll records (including subcontractors) that are signed and notarized, documenting compliance with prevailing wage requirements.
   1. Per New York State Workman's Compensation Board copies of all payroll records for all out of state contractors shall be retained on the worksite for inspection is required by the New York State Dept. of Labor.

G. Transmittal: Submit four signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.

H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
   1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
   2. When an application shows completion of an item, submit conditional final or full waivers.
   3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
   4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.

I. Initial Application for Payment: Administrative actions and submittals that must precede submittal of first Application for Payment include the following:
   1. List of Substitutions
   2. Contractor or Notice to Proceed.
   3. Performance and Payment bonds.
   4. Liability, Auto, and Umbrella Insurance.
   5. Worker Compensation certificates.
   6. Proposed schedule of values for approval.
   7. List of Subcontractors
   8. Contractor's Safety Program
   9. Contractor's construction schedule (preliminary if not final)
   10. Submittal Schedule (preliminary if not final).
      a. First Payment WILL NOT be processed without a Submittal Schedule.
   11. Emergency Contacts List
   12. List of Contractor's staff assignments.

J. Initial Application for Payment: Administrative actions and submittals that must coincide with submittal of first Application for Payment include the following:
   1. Approved Schedule of values.
   2. List of subcontractors.
   3. Contractors Safety Program.
   4. Contractor's construction schedule (preliminary if not final).
   5. Submittal schedule (preliminary if not final).
      a. First Payment WILL NOT be processed without a Submittal Schedule.
   6. Emergency Contacts List.
   7. Certified Payroll.
   8. Schedule of unit prices.
   9. List of Contractor's staff assignments.
   10. List of Contractor's principal consultants.
   11. Copies of building permits.
   12. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
   13. Report of preconstruction conference.

K. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
   1. Administrative actions and submittals that shall precede or coincide with this application include:
      a. Occupancy permits and similar approvals
      b. List of incomplete Work, recognized as exceptions to Architect’s Certificate of Substantial Completion
      c. Record Drawings and Specifications
      d. Operations and Maintenance Manuals
      e. Maintenance Instructions and Training
      f. Start-up performance reports
      g. Test/adjust/balance records
      h. Warranties (guarantees) and maintenance agreements
      i. Final cleaning
      j. Change-over information related to Owner’s occupancy, use, operation and maintenance
      k. Application for reduction of retainage and consent of surety
      l. Advice on shifting insurance coverages
   2. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
   3. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

L. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
   1. Ensure that incomplete Work is not accepted and will be completed without undue delay.
   2. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

3. Evidence of completion of Project closeout requirements.
4. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
5. Updated final statement, accounting for final changes to the Contract Sum.
6. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
7. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
8. AIA Document G707, "Consent of Surety to Final Payment."
9. Evidence that all claims have been settled.
10. Final liquidated damages settlement statement.
11. Removal of temporary facilities and services.
12. Removal of surplus materials, rubbish, and similar elements.
13. Change of door locks to Owner's access.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 012900

This page intentionally left blank

SECTION 013100
PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. General project coordination procedures.
   2. Administrative and supervisory personnel.
   3. Requests for Information (RFIs).
   4. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

C. Related Sections:
   1. Division 01 Section " Summary" for Project Information and phasing requirements
   2. Division 01 Section "Multiple Contract Summary" for a description of the division of work among separate contracts and responsibility for coordination activities not in this Section.
   3. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
   4. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
   5. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.
   6. Division 01 Section "General Commissioning Requirements" for coordinating the Work with Owner's commissioning authority.

1.02 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information from each other during construction.

1.03 INFORMATIONAL SUBMITTALS

A. Use the Architects Autodesk Construction Cloud when uploading Submittals.

B. Subcontract list is required by AIA Document A232 to be submitted as soon as practical prior to award of the Contract. Coordinate with submittal requirements for subcontract list in Procurement Requirements and Contracting Requirements if any.

C. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use form provided in specification section 006000 of the Project Manual. Include the following information in tabular form:
   1. Name, address, and telephone number of entities performing subcontract or supplying products.
   2. Number and title of related Specification Section(s) covered by subcontract.
   3. Drawing number and detail references, as appropriate, covered by subcontract.
   4. Pursuant to New York State Department of Labor requirements, submit a copy of the Contractor(s), Contractor Certificate of Registration prior to **any** work being performed.

D. Key Personnel Names: Within 15 days following contract award, submit a list of key personnel assignments, including superintendents, project manager, ownership, including resumes and

other items for those who will be in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of listing in project meeting room, in temporary field office, on the Project Web site, **and** by each temporary telephone. Keep list current at all times.

1.04 COORDINATION

A. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations included in different Sections that depend on each other for proper installation, connection, and operation.
   1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair. All approved submittals shall be sent and made readily available for all contractors reference to ensure maximum coordination efforts are met.
   3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
   1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors, to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
   1. Preparation of Contractor's construction schedule.
   2. Preparation of the schedule of values.
   3. Installation and removal of temporary facilities and controls.
   4. Delivery and processing of submittals.
   5. Progress meetings.
   6. Preinstallation conferences.
   7. Project closeout activities.
   8. Startup and adjustment of systems.
   9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
   1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property. The owner reserves all rights to keep or dispose of any and all materials, or excess of, new or existing.

1.05 REQUESTS FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
   1. Do not submit an RFI if information is readily available in the contract documents. Verify by contacting and questioning the Architect prior to submitting an RFI.
   2. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
   3. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
   1. Project name.
   2. Project number.
   3. Date.
   4. Name of Contractor.
   5. Name of Architect.
   6. RFI number, numbered sequentially.
   7. RFI subject.
   8. Specification Section number and title and related paragraphs, as appropriate.
   9. Drawing number and detail references, as appropriate.
   10. Field dimensions and conditions, as appropriate.
   11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
   12. Contractor's signature.
   13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
      a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Form provided in specification section 00 6000 of the Project Manual.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
   1. The following RFIs will be refused without action:
      a. Requests for approval of submittals.
      b. Requests for approval of substitutions.
      c. Requests for information already indicated in the Contract Documents.
      d. Requests for adjustments in the Contract Time or the Contract Sum.
      e. Requests for interpretation of Architect's actions on submittals.
      f. Incomplete RFIs or inaccurately prepared RFIs.
   2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
   3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."

a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within ten (10) days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use software log that is part of Project Web site. Include the following:
1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.06 ARCHITECTS WEBSITE

A. The contractor will use Autodesk Construction Cloud for Submittals, Shop Drawings and RFI's Project Web site shall include the following functions:
1. Project directory.
2. Project correspondence.
3. Meeting minutes.
4. Contract modifications forms and logs.
5. RFI forms and logs.
6. Task and issue management.
7. Photo documentation.
8. Schedule and calendar management.
9. Submittals forms and logs.
10. Payment application forms.
11. Drawing and specification document hosting, viewing, and updating.
12. Online document collaboration.
13. Reminder and tracking functions.
14. Archiving functions.

1.07 PROJECT MEETINGS

A. General: The CM will schedule and conduct meetings and conferences with other contractors at Project site, as needed, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: The CM will prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting. After three days the minutes shall be considered final and closed for comments.

B. Preconstruction Conference: The Construction Manager will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than ten (10) days after execution of the Agreement.
1. Conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Architect and their consultants; Contractors and their superintendents; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to decide matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:
    a. Tentative construction schedule.
    b. Critical work sequencing and long-lead items.
    c. Designation of key personnel and their duties.
    d. Lines of communications.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for RFIs.
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Distribution of the Contract Documents.
    j. Submittal procedures using Autodesk Construction Cloud.
    k. Preparation of record documents
    l. Use of the premises and existing building.
    m. Work restrictions.
    n. Working hours.
    o. Owner's occupancy requirements and restrictions.
    p. Responsibility for temporary facilities and controls.
    q. Procedures for moisture and mold control.
    r. Procedures for disruptions and shutdowns.
    s. Construction waste management and recycling.
    t. Parking availability.
    u. Office, work, and storage areas.
    v. Equipment deliveries and priorities.
    w. First aid.
    x. Security.
    y. Progress cleaning.
4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
   1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Architect and CM of scheduled meeting dates.
   2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
      a. Contract Documents.
      b. Options.
      c. Related RFIs.
      d. Related Change Orders.
      e. Purchases.
      f. Deliveries.
      g. Submittals.
      h. Review of mockups.
      i. Possible conflicts.
      j. Compatibility problems.
      k. Time schedules.
      l. Weather limitations.
      m. Manufacturer's written recommendations.
      n. Warranty requirements.
      o. Compatibility of materials.
      p. Acceptability of substrates.
      q. Temporary facilities and controls.
      r. Space and access limitations.
      s. Regulations of authorities having jurisdiction.
      t. Testing and inspecting requirements.
      u. Installation procedures.
      v. Coordination with other work.
      w. Required performance results.
      x. Protection of adjacent work.
      y. Protection of construction and personnel.
   3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
   4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
   5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: The Construction Manager will determine and conduct progress meetings at regular weekly or bi-weekly intervals.
   1. Coordinate dates of meetings with preparation of payment requests.
   2. Attendees: In addition to representatives of Owner, Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these

meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
        1) Review schedule for next period.
    b. Review present and future needs of each entity present, including the following:
        1) Interface requirements
        2) Sequence of operations.
        3) Status of submittals.
        4) Deliveries.
        5) Off-site fabrication.
        6) Access.
        7) Site utilization.
        8) Temporary facilities and controls.
        9) Progress cleaning.
        10) Quality and work standards.
        11) Status of correction of deficient items.
        12) Field observations.
        13) Status of RFIs.
        14) Status of proposal requests.
        15) Pending changes.
        16) Status of Change Orders.
        17) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
    a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

E. Coordination Meetings: Conduct project coordination meetings at regular intervals as directed by the CM. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
1. Attendees: In addition to representatives of Owner, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
c. Review present and future needs of each contractor present, including the following:
    1) Interface requirements.
    2) Sequence of operations.
    3) Status of submittals.
    4) Deliveries.
    5) Off-site fabrication.
    6) Access.
    7) Site utilization.
    8) Temporary facilities and controls.
    9) Work hours.
    10) Hazards and risks.
    11) Progress cleaning.
    12) Quality and work standards.
    13) Change Orders.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

F. Daily Reports/Logs: Submit daily reports/logs to the CM at the end of every work shift.

G. Project Closeout Meeting: The Construction Manager will conduct a Project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
    a. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    b. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
    c. Preparation of Contractor's punch list.
    d. Responsibility for removing temporary facilities and controls.
    e. Requirements for preparing operations and maintenance data.

f. Requirements for the Submittal of written warranties.
g. Requirements for demonstration and training.
h. Requirements for submission of record documents, record specifications and record submittals.
i. Owner's partial occupancy requirements.
j. Responsibility and schedule for final cleaning
k. Installation of Owner's furniture, fixtures, and equipment.
l. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
m. Responsibility and schedule for final cleaning.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 013100

This page intentionally left blank

SECTION 013200
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
   1. Start-up construction schedule.
   2. Contractor's construction schedule.
   3. Master Schedule.
   4. Field Look Ahead Schedule.
   5. Daily construction reports.
   6. Material location reports.
   7. Field condition reports.
   8. Special reports.

B. Related Sections:
   1. Division 01 Section "Multiple Contract Summary" for preparing a combined Contractor's Construction Schedule.
   2. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
   3. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.02 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
   1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
   2. Predecessor Activity: An activity that precedes another activity in the network.
   3. Successor Activity: An activity that follows another activity in the network.

B. Cost Loading: The allocation of the schedule of values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum unless otherwise approved by Architect.

C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

E. Event: The starting or ending point of an activity.

F. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.03 INFORMATIONAL SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format(s):
   1. PDF electronic file.
B. Start-up construction schedule.
C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
D. Recovery Schedules: Submit as needed or as directed by the CM.
E. Daily Construction Reports: Submit at weekly intervals.
F. Field Condition Reports: Submit at time of discovery of differing conditions.
G. Special Reports: Submit at time of unusual event.

1.04 QUALITY ASSURANCE

A. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination". Review methods and procedures related to the preliminary construction schedule and Contractor's construction schedule, including, but not limited to, the following:
   1. Review software limitations and content and format for reports.
   2. Verify availability of qualified personnel needed to develop and update schedule.
   3. Discuss constraints, including phasing, work stages, area separations and partial Owner occupancy.
   4. Review delivery dates for Owner-furnished products.
   5. Review schedule for work of Owner's separate contracts.
   6. Review time required for review of submittals and resubmittals.
   7. Review requirements for tests and inspections by independent testing and inspecting agencies.
   8. Review time required for completion and startup procedures.
   9. Review and finalize list of construction activities to be included in schedule.
   10. Review submittal requirements and procedures.
   11. Review procedures for updating schedule.

1.05 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
   1. Secure time commitments for performing critical elements of the Work from entities involved.
   2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 PRODUCTS

2.01 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for commencement of the Work **to date of** Substantial Completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each room or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
   1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
   2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than (60) sixty days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
   3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
   4. Startup and Testing Time: Include not less than (30) fifteen days for startup and testing.
   5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
   6. Punch List and Final Completion: Include not more than (30) thirty days for punch list and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.
   1. Phasing: Arrange list of activities on schedule by phase.
   2. Work under More Than One Contract: Include a separate activity for each contract.
   3. Work Restrictions: Show the effect of the following items on the schedule:
      a. Coordination with existing construction.
      b. Limitations of continued occupancies.
      c. Uninterruptible services.
      d. Partial occupancy before Substantial Completion.
      e. Use of premises restrictions.
      f. Provisions for future construction.
      g. Seasonal variations.
      h. Environmental control.
   4. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
      a. Subcontract awards.
      b. Submittals.
      c. Purchases.
      d. Mockups.
      e. Fabrication.
      f. Sample testing.
      g. Deliveries.
      h. Installation.
      i. Tests and inspections.
      j. Adjusting.
      k. Curing.
      l. Startup and placement into final use and operation.

5. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
   a. Structural completion.
   b. Permanent space enclosure.
   c. Completion of mechanical installation.
   d. Completion of electrical installation.
   e. Substantial Completion.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

E. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.
   1. See Division 01 "Payment Procedures" for cost reporting and payment procedures.

F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
   1. Unresolved issues.
   2. Unanswered RFI's.
   3. Rejected or unreturned submittals.
   4. Notations on returned submittals.

G. Recovery Schedule: When periodic update indicates the Work is (7) seven or more calendar days behind the current approved schedule, submit a separate recovery schedule to the CM indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished. All costs resulting from recovery schedules shall be borne by the contractors.

2.02 START-UP CONSTRUCTION SCHEDULE (SCS)

A. Bar-Chart Schedule: Contractors shall submit start-up horizontal bar-chart-type construction schedule to the CM within (7) seven days of notice to award. Schedules shall be broken out by school.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first (90) ninety days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities. Include a specific schedule of major material lead times.

2.03 CONTRACTOR'S CONSTRUCTION SCHEDULE (CCS) (GANTT CHART)

A. Gantt-Chart Schedule: Contractors shall submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within thirty (30) days of date established for the Notice of Award. Base schedule on the startup construction schedule and additional information received since the start of Project. Schedules shall be broken out by school.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.04 MASTER BASELINE SCHEDULE (MBS)

A. Master Baseline Schedule: The construction manager will be in sole charge of creating, approving, issuing and updating the master schedule. This shall be created after each contractor submits their SCS and CCS to the CM. Full cooperation from each contractor is required.
   1. The master baseline schedule will be created based upon the data given by each contractor to the CM. It shall encompass all of the work within the contract documents.
   2. It shall be built collectively with the participation of all contractors in working scheduling sessions. These sessions shall be in person, at the CM's field office, as designated by the CM. The CM will coordinate days and times for these working sessions. All contractors are required to attend these sessions.
   3. After completion of the last session, all contractors shall sign off on the completed baseline schedule.
   4. If any contractor or contractors cannot come to an agreement or a cooperative collective agreement to sign off on the baseline, then the CM will, in its full capacity, edit the baseline as needed using the best common construction industry practices, and sign off on the master schedule on behalf of the contractors, and it will be considered approved, complete and final. Any and all costs arising out of the lack of cooperation and unwillingness to sign off on the master baseline shall be borne by each prime contractor accordingly. The owner or Architect will not issue any additional time or costs as a result of these actions.

B. Master Schedule Updates:
   1. At Monthly intervals, or more frequent as directed by the CM, the contractors shall provide updates as to the progress of their work. Updates shall include items such as, but not limited to, actual start & actual finish dates, remaining durations, RFI's, change orders, bulletins, stop work orders, etc. A narrative shall accompany each update from each contractor explaining in detail all items for that update. The narrative shall be coordinated to the activities of the master schedule.
   2. The CM will issue monthly update forms for each contractor to fill out. It is the full responsibility of the contractor to verify and communicate correct and accurate information that will be entered as their update. Incorrect information given shall not warrant additional time or money, but may require the contractor is issue and execute recovery schedule(s) for their work.

2.05 FIELD COORDINATION LOOK AHEAD SCHEDULES

A. Three week look ahead schedules: The look ahead schedules shall be put together projecting, coordinating and planning work out 3 weeks. They should be based off of the master schedule and include all items pertaining to the specific work taking place.

B. These shall be updated every week and submitted to the CM. Day and time for submitting to be determined by the CM.

2.06 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of Prime contractors at Project site.
2. List of subcontractors at Project site.
3. List of separate contractors at Project site.
4. Approximate count of personnel at Project site.
5. Equipment at Project site.
6. Material deliveries.
7. High and low temperatures and general weather conditions, including presence of rain or snow.
8. Accidents.
9. Meetings and significant decisions.
10. Unusual events (refer to special reports).
11. Stoppages, delays, shortages, and losses.
12. Meter readings and similar recordings.
13. Emergency procedures.
14. Orders and requests of authorities having jurisdiction.
15. Change Orders received and implemented.
16. Construction Change Directives received and implemented.
17. Services connected and disconnected.
18. Equipment or system tests and startups.
19. Partial completions and occupancies.
20. Substantial Completions authorized.

B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.07 SPECIAL REPORTS

A. General: Submit special reports directly to Owner within (1) one day of an occurrence. Distribute copies of report to parties affected by the occurrence.

B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 EXECUTION

3.01 MASTER SCHEDULE.

A. Distribution: Distribute copies of approved schedule to Owner, Architect, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
   1. Post copies in Project meeting rooms and temporary field offices.
   2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

This page intentionally left blank

SECTION 013300
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. This specification describes the procedures for submission of submittals and shop drawings using Autodesk Construction Cloud.
   1. **The Contractor will be required to use Autodesk Construction Cloud for the transfer of Submittals, Shop Drawings and RFI's. There will be no exceptions to this requirement. The contractor will be given a login and password free of charge. For more information follow the procedure below.**
      a. **Information and instructions for use are available for review by the contractor by contacting CPL. The Contractor is to provide an email address for the file to be sent. A PDF file will be emailed to the requesting contractor.**

C. Related Requirements:
   1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
   2. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
   3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
   4. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
   5. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
   6. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
   7. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
   8. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.02 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.03 SUBMITTAL GENERAL ADMINISTRATIVE REQUIREMENTS

A. The Contractor shall prepare a Submittal Log containing the information required to be submitted under the Submittal article from each respective Specification Section. With each item listed the Contractor shall provide anticipated dates for submission to the Architect. The Architect will review and accept or request that corrections be made for subsequent acceptance. This acceptance will constitute an approval for the submittal, shop drawings and sample submissions to commence. **No Submittals or Shop Drawings will be reviewed by the Architect until an approved Submittal Schedule is in place.**

B. The contractor shall prepare expected submittals in Autodesk Construction Cloud that correspond to all submittals listed on the submittal schedule at the time of submission of the submittal log. **These expected submittals are to follow the naming conventions laid out in section "1.5 Submittal Schedule" and "1.6 Submittal Identification**".

C. The Contractor is responsible for all costs for creating electronic files for the submittal process. The Architect will not provide this service.
   1. The Submittal Cover Sheet located in Specification Section 0 06000 Project Forms shall be used for all Submittals.
      a. An electronic form of the submittal cover is available from the Architect.
   2. The Submittal Cover sheet when scanned to a .PDF shall be the first page viewed in the individual file.
      a. Each product submitted within a specification section shall have a Submittal Cover sheet **attached**. Combined submittals with one cover page will not be accepted.
      b. Each Submittal Cover sheet shall be filled in completely. **Files that are sent with the Submittal Cover Sheet missing or not filled in correctly will not be reviewed**. The Architect will send a notice that the submittal is missing information. If the Contractor fails to correct or provide the proper submittal within 15 days, notice will be provided, and the submittal will be REJECTED.
   3. The Contractor(s) will be provided with a link to upload files to Autodesk Construction Cloud. The site address and a "log in" will be provided to the Contractor(s) free of charge.
   4. A read only Record Submittal Log and RFI Log will be available from Autodesk Construction Cloud for the Contractors reference in checking the status of the submittals and shop drawings.

D. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
   3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
   4. Coordinate transmittals of different types of submittals from related section for parts of the work so processing will not be delayed because of need to review submittals concurrently for coordination.
      a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received. Delays associated with the above are the not the Architects responsibility and rests solely with the Contractor.

E. Architect's Digital Data Files:

1. Architect makes no representation as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
2. Document Transfer Agreement - For Projects where Architect's work files are not a deliverable: The Contractor shall execute an Electronic Document Transfer Agreement for all electronic transfers of files, other than PDFs. The contractor must provide acknowledgement, accept the information regarding drawings, ownership and Limitations of Liability. Agreement is found with Project Forms.
    a. The following plot files will by furnished for each appropriate discipline:
        1) Floor plans.
        2) Reflected ceiling plans.

1.04 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list of submittals, order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and Construction Manager and additional time for handling and reviewing submittals required by those corrections.
    1. Submit a preliminary if not final Submittal Schedule for approval within 15 days after award of contract. **Failure to submit a submittal schedule within the required time frame will result in the refusal by the Architect to review any submittals. Delays associated with failure to receive the Submittal Schedule are the not the Architects responsibility and rest solely with the Contractor.**

B. The information is required to be submitted under the Submittal article from each respective Specification Section. With each item listed the Contractor shall provide anticipated dates for submission to the Architect. The Architect will review and accept or request that corrections be made for subsequent acceptance. This acceptance will constitute a review for the submittal, shop drawings and sample submissions may commence. **No Submittals or Shop Drawings will be reviewed by the Architect until an approved Submittal Schedule is in place.**
    1. The Submittal Schedule shall be coordinated with the overall Project Schedule to ensure that submittals are submitted and reviewed so as not to delay the Project Schedule.
    2. The Architect will not be responsible for ensuring that all required Shop Drawings, Product Data, Samples or similar submittals that are required to be submitted and reviewed under the Contract Documents are submitted by the Contractor. Submissions of Shop Drawings, Product Data, Samples or similar submittals are the Contractor's sole responsibility. Delays associated with the contractor's failure to provide the required submittals are the Contractors responsibility.
    3. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
    4. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 30 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
    5. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
        a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
    6. Format: Arrange the following information in a tabular format:
        a. Scheduled date for first submittal.
        b. Specification Section number and title.

c. Submittal Category: Action; informational.
d. Name of subcontractor.
e. Description of the Work covered.
f. Scheduled date for Architect's final release or approval.
g. Scheduled dates for purchasing.
h. Scheduled date of fabrication.
i. Scheduled dates for installation.

1.05 SUBMITTAL IDENTIFICATION

A. Submittal Cover Sheet: Attach one cover sheet for each product, shop drawing or sample. DO NOT combine submittals together with one cover sheet for multiple items. They will not be reviewed.

B. Submittal Information: Include the following information in each submittal. Use the submittal cover form found in specification section 00 6000 Project Forms. An electronic form can be sent to the contractor upon request
1. Contractor, Address, Phone/fax and or Email
2. Contractors Submittal Number.
3. Architects Project Number.
4. Project Name (if not filled in by the Architect)
5. Type of submittal being sent (select box)
6. Product Identification including the following: Provide one submittal cover sheet for each product within a specification section
   a. Specification Section Number
   b. Contract Drawing Number
   c. Product Name
   d. Specification Reference: Part/Paragraph
   e. Detail Reference
   f. Manufacturer
7. Contractors Approval: The contractor must acknowledge that they have reviewed the submittal for conformance with the Contract Documents and must sign and date the approval.
8. Deviation from the Contract Documents: Where the submittal may not meet all of the requirements of the specified item. The contractor must indicate how the submitted item differs from the specified item.
9. Contractor Comments: Any additional comments by the contractor should be indicated in this space. (Provide an attachment sheet for any other information required that will not fit on the cover sheet.)

C. Deviations and Additional Information: On each individual submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information, revisions, line by line comparison and other information requested by Architect. Indicate by highlighting on each submittal or noting on attached separate sheet. Identify options requiring selection by Architect.

D. File Naming (for uploading): Each submittal or shop drawing file uploaded to the project on the Autodesk Construction Cloud, shall have in the file name, the specification section number followed by the submittal number, the submittal abbreviation and the specification section name. For re-submissions an R1 would be added following submittal number. The file name must include the following information:

Example:

081416	001	PD	Flush Wood Door
Spec Section	Submittal No.	Submittal Abbrv	Specification Name

File to Read: 081416-001 PD - Flush Wood Doors

Re-submission to Read: 081416-001-R1-Flush Wood Doors

Submittal Abbr. required to be used in the file name on submittals are as follows:

CD	Coordination Drawings
CERT	Certifications
CLC	Calculations
DD	Design Data
EJ	Engineer's Judgement
LEED	LEED or PD/LEED
O&M	Operation and Maintenance Manuals
PD	Product Data
PHOTO	Photo
QD	Qualification Data
RPT	Report
SAMP	Sample
SCH	Schedule
SEL	Make a Selection
SD	Shop Drawing(s)
STDY	Study
TR	Test Results
WAR	Warranty

E. When uploading submittals or RFI's to the **Autodesk Construction Cloud**, complete the online transmittal. The information required is derived from the contractor's submittal cover sheet or RFI. Instructions using the **Autodesk Construction Cloud** are available from CPL. These instructions can be emailed to the contractor.

1.06 SUBMITTAL DATA AND TESTING REQUIREMENTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment. Each product within a specification section shall have a separate submittal cover.
   1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
   2. Mark each copy of each submittal to show which products and options are applicable. Send full submittals for each product. **Partial submittals will not be reviewed until all required submittal information is received. The architect will not be responsible for project delays due to the contractor's failure to submit the required submittal information in a complete package.**
   3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.
b. Manufacturer's product specifications.
c. Standard color charts.
d. Statement of compliance with specified referenced standards.
e. Testing by recognized testing agency.
f. Application of testing agency labels and seals.
g. Notation of coordination requirements.
h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:
   a. Wiring diagrams that show factory-installed wiring.
   b. Printed performance curves.
   c. Operational range diagrams.
   d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.

B. Shop Drawings: Prepare project-specific information for each shop drawing. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. (unless submittal based on Architect's digital data drawing files is otherwise permitted).
   1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
      a. Identification of products.
      b. Schedules.
      c. Compliance with specified standards.
      d. Notation of coordination requirements.
      e. Notation of dimensions established by field measurement.
      f. Relationship and attachment to adjoining construction clearly indicated.
      g. Description any conflicts with other trades.
      h. Seal and signature of professional engineer if specified.

C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
   1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package. If samples are delivered with product data, only the samples will be reviewed. The Product Data must be uploaded to Autodesk Construction Cloud. A duplicate submittal cover sheet is to be uploaded to Autodesk Construction Cloud as a record of sample delivery.
      a. The Product Data is to be loaded concurrent with the delivery of samples. Samples may be delivered/given to the Architect. In the remarks column of the transmittal place “given to the Architect”
   2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
      a. Project name and submittal number.
      b. Generic description of Sample.
      c. Product name and name of manufacturer.
      d. Sample source.
      e. Number and title of applicable Specification Section.
      f. Specification paragraph number and generic name of each item.

g. In addition to all hard copy and physical samples submitted, duplicate digital submittal is to be produced for review, record and tracking purposes through Autodesk Construction Cloud. Include same information as above as well as a high resolution, color, digital image of all samples with labeled information clearly visible for each physical sample.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
   a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
   b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
   a. Number of Samples: Submit one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
   a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record Sample.
      1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

D. Information requirements for each submittal: Where submittal is requiring Schedules, Product Data, Qualification Data, Design Data, Certificates and Tests use the following protocol.
   1. Schedules: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
   2. Product Data. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
      a. Manufacturer and product name, and model number if applicable.
      b. Number and name of room or space.
      c. Location within room or space.
   3. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

4. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
5. Certificates:
    a. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
    b. Insert definition of Contractor certificates here if required by individual Specification Sections. See the Evaluations.
    c. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
    d. Manufacturer Certificates: Submit written statements on manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
    e. Material Certificates: Submit written statements on manufacturer's letterhead, certifying that material complies with requirements in the Contract Documents.
    f. Product Certificates: Submit written statements on manufacturer's letterhead, certifying that product complies with requirements in the Contract Documents.
    g. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of AWS B2.1/B2.1M on AWS forms. Include names of firms and personnel certified.
    h. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
    i. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
    j. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
    k. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
6. Test and Research Reports:
    a. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
    b. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
    c. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
    d. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed

before installation of product, for compliance with performance requirements in the Contract Documents.

e. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

f. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
   1) Name of evaluation organization.
   2) Date of evaluation.
   3) Time period when report is in effect.
   4) Product and manufacturers' names.
   5) Description of product.
   6) Test procedures and results.
   7) Limitations of use.

E. Submit the following submittals: Within 15 days of contract award.
   1. Submittal Schedule including dates of anticipated review and approval.
      a. **No submittals will be reviewed without an approved Submittal Schedule in place.**
   2. Subcontractor List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
      a. Name, address, telephone number and email address of entities performing subcontract or supplying products.
      b. Number and title of related Specification Section(s) covered by subcontract.
   3. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
   4. Schedule of Values: Comply with requirements specified in Section 01 2900 "Payment Procedures."

F. Submit within the first 30 days after Contract Award
   1. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 01 4329 "Special Inspections."
   2. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
   3. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

G. Submit Field Test Reports during construction within 15 days of the testing date and as follows:
   1. Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

H. Submit a minimum 30 days prior to Project Closeout:

1. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
2. Maintenance Data: Comply with requirements specified in Division 01 Section 017823 "Operation and Maintenance Data."

1.07 SUBMITTAL PROCESSING

A. Processing Time: Allow time for submittal review, including time for re-submittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.

B. The architect will not be responsible for project delays due to the contractor’s failure to submit the required submittal information in time to allow for review based on the stipulated review time and to meet the project schedule.

C. Initial Review: Allow 10 Calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.

D. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.

E. Re-submittal Review: Allow 10 Calendar days for review of each re-submittal.

F. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 Calendar days for initial review of each submittal.

G. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 Calendar days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.

H. Where submittal are required to be approved that are part of an assembly or for items such as finishes where color selections are required. The submittal will be retained until all of the information related to these systems and color selections is provided and accepted.

I. Products with multiple submittals may be held until all necessary information has been submitted for architect to make a complete review. Submittals dependent on coordinating information from related or dependent products; or products with critical interface with other products may be held until all information is submitted for architect to make a complete review and coordinate all required information. (example door frames will not be reviewed without door hardware)

J. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
   1. Note date and content of previous submittal.
   2. Note date and content of revision in label or title block, and clearly indicate extent of revision.
   3. Resubmit submittals until they are marked with reviewed notation from Architect’s and Construction Manager's action stamp.

K. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

1.08 SUBMITTAL PROCEDURES

A. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

B. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

C. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

D. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

E. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

F. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

G. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

H. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

I. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
   1. Name of evaluation organization.
   2. Date of evaluation.
   3. Time period when report is in effect.
   4. Product and manufacturers' names.
   5. Description of product.
   6. Test procedures and results.
   7. Limitations of use.

J. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."

K. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

L. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

M. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

N. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

O. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

1.09 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Contractors Approval: Provide Contractor's approval signature and date on the Submittal Cover sheet certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

1.10 ARCHITECT'S ACTION

A. Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will respond to each submittal indicating one of the following actions required:

1. **No Exceptions Taken**: Architect takes no exception to the submittal. This part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
2. **Furnish as Corrected**: No exceptions taken except what is identified by the Architect. The part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance. Furnish any additional related information as requested.
3. **Revise and Re-Submit**: Revise the submittal based on the Architects comments and resubmit the submittal. Do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
   a. Do not permit submittals marked “Revise and Resubmit” to be used at the Project Site, or elsewhere where Work is in progress.
4. **Rejected**: The submittal is rejected. See Architects comments on why submittal was rejected.
   a. Submittal has not been reviewed by the Contractor and so noted.
   b. Submittal has been prepared without due regard for information called for or logically implied by the Contract Documents.
   c. Information is not sufficiently complete or accurate to verify that work represented is in accordance with the Contract Documents.
   d. Do not permit submittals marked “Rejected” to be used at the Project Site, or elsewhere where Work is in progress.
5. **No Action Taken**: The submittal is not required and will not be reviewed.

B. Submittals by Autodesk Construction Cloud: Architect and Construction Manager will indicate, on Autodesk Construction Cloud, the appropriate action.

C. Informational Submittals: Architect will review each submittal and will not return it or will return it if it does not comply with requirements. The Architects action will be noted in the Autodesk Construction Cloud.

D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect. The Architects action will be noted in the Autodesk Construction Cloud and noted as a partial review until a full submittal can be received.

E. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for re-submittal without review.

F. Submittals not required by the Contract Documents will not be reviewed and will receive no action.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 013300

This page intentionally left blank

SECTION 014000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
   1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
   2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
   3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Commissioning Authority, or authorities having jurisdiction are not limited by provisions of this Section.

C. Related Sections:
   1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
   2. Division 01 Section “Code-Required Special Inspections and Procedures” for tests and inspections ordered by the Owner.
   3. Divisions 02 through 49 Sections for specific test and inspection requirements.

1.02 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Construction Manager.

C. Mockups: Full size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
   1. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.
   2. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.

D. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
   1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.

J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.03 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.04 INFORMATIONAL SUBMITTALS

A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
   1. Seismic-force resisting system, designated seismic system, or component listed in the designated seismic system quality assurance plan prepared by the Architect.
   2. Main wind-force resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.

B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Entity responsible for performing tests and inspections.
3. Description of test and inspection.
4. Identification of applicable standards.
5. Identification of test and inspection methods.
6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

1.05 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
   1. Date of issue.
   2. Project title and number.
   3. Name, address, and telephone number of testing agency.
   4. Dates and locations of samples and tests or inspections.
   5. Names of individuals making tests and inspections.
   6. Description of the Work and test and inspection method.
   7. Identification of product and Specification Section.
   8. Complete test or inspection data.
   9. Test and inspection results and an interpretation of test results.
   10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
   11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
   12. Name and signature of laboratory inspector.
   13. Recommendations on retesting and re-inspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
   1. Name, address, and telephone number of technical representative making report.
   2. Statement on condition of substrates and their acceptability for installation of product.
   3. Statement that products at Project site comply with requirements.
   4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
   5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
   6. Statement whether conditions, products, and installation will affect warranty.
   7. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
   1. Name, address, and telephone number of factory-authorized service representative making report.
   2. Statement that equipment complies with requirements.

3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.06 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
   1. Contractor responsibilities include the following:
      a. Provide test specimens representative of proposed products and construction.
      b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
      c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
      d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
      e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
      f. When testing is complete, remove test specimens, assemblies, mockups; do not reuse products on Project.
   2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.07 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
   1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
   2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
   1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
   2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
   3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
   4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
   5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
   6. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including

service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."

D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

E. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

F. Testing Agency Responsibilities: Cooperate with Architect, Commissioning Authority, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
   1. Notify Architect, Commissioning Authority, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
   2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
   3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
   4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
   5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
   6. Do not perform any duties of Contractor.

G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
   1. Access to the Work.
   2. Incidental labor and facilities necessary to facilitate tests and inspections.
   3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
   4. Facilities for storage and field curing of test samples.
   5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
   6. Security and protection for samples and for testing and inspecting equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
   1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.08 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency / special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner as indicated in Statement of Special Inspections, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Commissioning Authority, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and re-inspecting corrected work.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.01 TEST AND INSPECTION LOG

A. Prepare a record of tests and inspections. Include the following:
   1. Date test or inspection was conducted.
   2. Description of the Work tested or inspected.
   3. Date test or inspection results were transmitted to Architect.
   4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.02 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
   1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

This page intentionally left blank

SECTION 014119
REGULATORY REQUIREMENTS - NYS EDUCATION DEPARTMENT

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
   1. “Uniform Safety Standards for School Construction and Maintenance Projects” for maintaining a Certificate of Occupancy during construction.

1.02 REFERENCES

A. Section 155.5 of the Regulations of the New York State Commissioner of Education “Uniform Safety Standards for School Construction and Maintenance Projects”.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.01 GENERAL REQUIREMENT

A. The occupied portion of any school building shall always comply with the minimum requirements necessary to maintain a certificate of occupancy.

3.02 HAZARDOUS BUILDING MATERIALS

A. Surfaces that will be disturbed during renovation or demolition have been tested for lead and asbestos. Results of the testing are available, upon request, from the Owner.

3.03 GENERAL SAFETY AND SECURITY STANDARDS FOR CONSTRUCTION

A. General safety and security standards for construction projects include the following:
   1. All construction materials shall be stored in a safe and secure manner.
   2. Fences around construction supplies or debris shall be maintained.
   3. Gates shall always be locked unless a worker is in attendance to prevent unauthorized entry.
   4. During exterior renovation work, overhead protection shall be provided for any sidewalks or areas immediately beneath the work site or such areas shall be fenced off and provided with warning signs to prevent entry.
   5. Workers shall be required to wear photo-identification badges at all times for identification and security purposes while working at occupied sites.

3.04 SEPARATION OF CONSTRUCTION AREAS FROM OCCUPIED AREAS

A. Construction areas which are under the control of a contractor and therefore not occupied by district staff or students shall be separated from occupied areas. Provisions shall be made to prevent the passage of dust and contaminants into occupied parts of the building. Periodic inspection and repairs of the containment barriers must be made to prevent exposure to dust or contaminants. Gypsum board must be used in exit ways or other areas that require fire rated separation. Heavy duty plastic sheeting may be used only for a vapor, fine dust or air infiltration barrier, and shall not be used to separate occupied spaces from construction areas.
   1. A specific stairwell and/or elevator should be assigned for construction worker use during work hours. In general, workers may not use corridors, stairs or elevators designated for students or school staff.

2. Large amounts of debris must be removed by using enclosed chutes or a similar sealed system. There shall be no movement of debris through halls of occupied spaces of the building. No material shall be dropped or thrown outside the walls of the building.
3. All occupied parts of the building affected by renovation activity shall be cleaned at the close of each workday. School buildings occupied during a construction project shall maintain required health, safety and educational capabilities at all times that classes are in session."

3.05 MAINTAINING EXITING DURING CONSTRUCTION

A. The Contractor will prepare a plan detailing how exiting required by the applicable building code will be maintained during construction. The plan shall indicate temporary construction required to isolate construction equipment, materials, people, dust, fumes, odors, and noise during the construction period. Temporary construction details shall meet code-required fire ratings for separation and corridor enclosure. At a minimum, required exits, temporary stairs, ramps, exit signs, and door hardware shall be provided at all times.

3.06 MAINTAINING VENTILATION DURING CONSTRUCTION

A. The Contractor will prepare a plan detailing how adequate ventilation will be maintained during construction. The plan shall indicate ductwork that must be rerouted, disconnected, or capped in order to prevent contaminants from the construction area from entering the occupied areas of the building. The plan shall also indicate how required ventilation to occupied spaces affected by the construction will be maintained during the project.

3.07 NOISE ABATEMENT DURING CONSTRUCTION

A. Construction and maintenance operations shall not produce noise in excess of 60 dba in occupied spaces or shall be scheduled for times when the building or affected building spaces are not occupied or acoustical abatement measures shall be taken

B. Noise level measurements (dba) shall be taken with a type 2 sound level meter in the occupied space in a location closest to the source of noise.

C. Each prime contractor shall have a type 2 sound level meter available on the project site at all times for use by the architect/engineer for the entire duration of the construction project.

3.08 CONTROL OF CHEMICAL FUMES, GASES AND OTHER CONTAMINANTS DURING CONSTRUCTION

A. The contractor shall be responsible for the control of chemical fumes, gases, and other contaminates produced by, including but not limited to, welding, gasoline or diesel engines, roofing, paving, or painting, to ensure they do not enter occupied portions of the building or air intakes.
   1. Contractors shall provide a plan indicating how and where welding, gasoline engine, roofing, paving, painting or other fumes will be exhausted from the work site. Contractors shall provide all temporary means to assure that fresh air intakes do not draw in such fumes.
   2. If any portion of the work will generate toxic gases that cannot be contained in an isolated area, the work shall be done when school classes and programs are not in session. The contractor shall include costs associated with this requirement in his bid. The building shall be properly ventilated and, the material shall be given proper time, as recommended by the manufacturer, to cure “off-gas” before re-occupancy.
   3. The contractor shall maintain all manufacturers’ Material Safety Data Sheets (MSDS) at the site for all products used in the project. Copies of the MSDS sheets shall be given to

the Architect and to the School District. MSDS sheets shall be provided to anyone who requests them.

3.09 CONTROL OF OFF-GASSING DURING CONSTRUCTION

A. The contractor shall be responsible to ensure that activities and materials which result in "off-gassing" of volatile organic compounds such as glues, paints, furniture, carpeting, wall covering, drapery, etc. are scheduled, cured or ventilated in accordance with manufacturers recommendations before a space can be occupied.
   1. Contractor shall provide, in their schedules for work of the construction, proper time for “off-gassing” or volatile organic compounds introduced during construction before occupancy is allowed. Specific attention is warranted for activities including glues, adhesives, paint, furniture, carpeting, wall coverings, and drapery. Manufacturers shall be contacted to obtain information regarding appropriate temperatures and times needed to cure or ventilate the product during use and before safe occupancy of the space can be assured. The contractor shall include the above-mentioned information and shall clearly highlight the information, as part of the shop drawing submittal.
   2. Building materials or furnishings which “off-gas” chemical fumes, gases, or other contaminants shall be aired out in a well ventilated heated warehouse before it is brought to the project for installation or, the manufacturer’s recommended “off-gassing” periods must be scheduled between installation and use of the space.
   3. The contractor shall maintain all manufacturers’ Material Safety Data Sheets (MSDS) at the site for all products used in the project. Copies of the MSDS sheets shall be given to the Architect and to the School District. MSDS sheets shall be provided to anyone who requests them.

3.10 ASBESTOS-CONTAINING BUILDING MATERIALS

A. Large and small asbestos abatement projects as defined by 12NYCRR56 shall not be performed while the building is occupied. The term "building", as referenced in this section, means a wing or major section of a building that can be completely isolated from the rest of the building with sealed noncombustible construction. The isolated portion of the building must contain exits that do not pass through the occupied portion and ventilation systems must be physically separated and sealed at the isolation barrier.

B. Exterior work such as roofing, flashing, siding, or soffit work may be performed on occupied buildings provided proper variances are in place as required, and complete isolation of ventilation systems and at windows is provided. Care must be taken to schedule work so that classes are not disrupted by noise or visual distraction.

C. For clearance sampling, the air sampling technician shall provide aggressive air sampling per Rule 56 and as follows: First direct the exhaust of a leaf blower, against all walls, ceilings, floors, ledges, and other surfaces in the work area. Continue agitation for at least five minutes per every 1,000 sf of floor space. Following this aggressive agitation, the air-sampling technician shall use at least one 20-inch fan per 10,000 cubic feet of work area space for continuous agitation. The fan shall be operated on low speed and pointed toward the ceiling. Sampling pumps shall be started after the fans are started and stopped before the fans are stopped.
   1. Samples shall be logged on a permanently bound logbook at the laboratory. No whiteout will be used to make corrections.
   2. All lab counts, data and analysis shall be recorded on a lab summary sheet for each sample.

3. Per the requirements of the New York State Education Department all Final Air Clearance Samples shall be (TEM) Transmission Electron Microscopy methodology.

3.11 LEAD-CONTAINING BUILDING MATERIALS

A. Surfaces that will be disturbed by reconstruction have been tested for the present of lead based paint materials. This information is provided in order that proper measures are taken, to train and protect workers per OSHA regulations. Refer to Division 0 Existing Hazardous Material Information for testing results.

B. Projects which disturb surfaces that contain lead shall have in the specifications a plan prepared by a certified Lead Risk Assessor or Supervisor which details provisions for occupant protection, worksite preparation, work methods, cleaning and clearance testing which are in general accordance with the HUD Guidelines.

END OF SECTION 014119

SECTION 014200
REFERENCES

PART 1 - GENERAL

1.01 KEY DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.02 DEFINITIONS

A. Air Handling Unit: A blower or fan used for the purpose of distributing supply air to a room, space or area.

B. Approved Agency: An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved according to the requirements established in this Section and as required by the Code Official having jurisdiction over this project.

C. Architect: Other terms including “Architect/Engineer” and “Engineer” have the same meaning as "Architect".

D. Company Field Adviser: An employee of the Company which lists and markets the primary components of the system under the name who is certified in writing by the Company to be technically qualified in design, installation, and servicing of the required products or an employee of an organization certified by the foregoing Company to be technically qualified in design, installation, and serving of the required products. Personnel involved solely in sales do not qualify.

E. Concealed Location: A location that cannot be accessed without damaging permanent parts of the building structure or finish surface. Spaces above, below or behind readily removable panels or doors shall not be considered as concealed.

F. Concealed Piping: Piping that is located in a concealed location. (See "concealed location".)

G. Connect: A term contraction and unless otherwise specifically noted is to mean " The labor and materials necessary to join or attach equipment, materials or systems to perform the functions intended".

H. Drain: Any pipe that carries wastewater or water-borne wastes in a building drainage system.

I. Drainage Fittings: Type of fitting or fittings utilized in the drainage system. Drainage fittings are similar to cast-iron fittings, except that instead of having a bell and spigot, drainage fittings are recessed and tapped to eliminate ridges on the inside of the installed pipe.

J. Drainage System: Piping within a public or private premise that conveys sewage, rainwater or other liquid wastes to a point of disposal. A drainage system does not include the mains of a public sewer system or a private or public sewage treatment or disposal plant.
   1. Building Gravity: A drainage system that drains by gravity into the building sewer.
   2. Sanitary: A drainage system that carries sewage and excludes storm, surface and ground water.
   3. Storm: A drainage system that carries rainwater, surface water, condensate, cooling water or similar liquid wastes.

K. Duct: A tube or conduit utilized for conveying air. The air passages of self-contained systems are not to be construed as air ducts.

L. Duct System: A continuous passageway for the transmission of air that, in addition to ducts, includes duct fittings, dampers, plenums, fans and accessory air-handling equipment and appliances.

M. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

N. Headroom: Minimum clearance between the floor and the underside of the point of lowest installed mechanical construction above. In case of stairways and walkways, the minimum clearance between the step or surface of the walkway and the lowest installed mechanical construction above the stairway or the walkway.

O. Include: When used in any form other than “inclusive”, is non-limiting and is not intended to mean “all-inclusive.”

P. Indicated: Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

Q. Inspection Certificate: Identification applied on a product by an approved agency containing the name of the manufacturer, the function and performance characteristics, and the name and identification of an approved agency that indicates that the product or material has been inspected and evaluated by an approved agency.

R. Installer: An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
   1. Trades: Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding

generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

2. Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.
3. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

S. Label: An identification applied on a product by the manufacturer that contains the name of the manufacturer, the function and performance characteristics of the product or material, and the name and identification of an approved agency and that indicates that the representative sample of the product or material has been tested and evaluated by an approved agency.

T. Location:
1. Damp Location: Partially protected locations under canopies, marquees, roofed open porches and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, some barns and some cold-storage warehouses.
2. Dry Location: A location not normally subject to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.
3. Wet Location: Installations underground or in concrete slabs or masonry in direct contact with the earth and locations subject to saturation with water or other liquids, such as vehicle-washing areas, and locations exposed to weather and unprotected.

U. Manufacturer’s Designation: Identification applied on a product by the manufacturer indicating that a product or material complies with a specified standard or set of rules (see also "Inspection Certificate," "Label" and "Mark").

V. Mark: An identification applied on a product by the manufacturer indicating the name of the manufacturer and the function of a product or material (see also "Inspection Certificate," "Label" and "Manufacturer's Designation").

W. Mechanical: Other terms including “HVAC”, “Plumbing”, “Sprinkler”, “Laboratory Equipment”, “Food Service Equipment”, “Laundry Equipment”, and “Refrigeration” have the same meaning as "Mechanical".

X. Owner: Pine Bush Central School District, 156 State Route 302, Pine Bush, NY 12566

Y. Piping: This term includes pipe, tube and appurtenant fittings, flanges, valves, traps, hangers and supports.

Z. Piping, Concealed: Piping built into construction and not accessible without removal of construction Work such as masonry, plaster or other finish material, and piping installed in floors, furred spaces, suspended ceilings, non-walk-in tunnels, conduits, and behind removable panels and cabinet doors.

AA. Piping, Distribution: Domestic water supply piping, starting with a connection to service piping, and continuing throughout the building to point of connection to equipment and fixture supply piping.

BB. Piping, Exposed: Piping directly accessible by normal accesses without removal of any construction Work or material.

CC. Piping, Service: Underground domestic water supply piping with a connection to a water main or supply as noted, and continuing to and into a building and terminating with the exposed fitting inside the building.

DD. Piping, Tunnel: Piping installed in walk-in or non-walk-in tunnels or conduits up to first shut-off valve inside building.

EE. Plumbing System: Includes the water supply and distribution pipes; plumbing fixtures and traps; water-treating or water-using equipment; soil, waste and vent pipes; and sanitary and storm sewers and building drains, in addition to their respective connections, devices and appurtenances within a structure or premises.

FF. Product: As used includes materials, systems and equipment.

GG. Registered Design Professional: An individual who is a registered architect (RA) in accordance with Article 147 of the New York State Education Law or a licensed professional engineer (PE) in accordance with Article 145 of the New York State Education Law.

HH. Space, Finished: A space which has a finishing material applied to walls or ceilings, such as paint, plaster, ceramic tile, enamel glazing, face brick, vinyl wall covering, etc. to provide a finished appearance or which will have such finishes applied under a related Contract.

II. Space, Unfinished: A space which does not meet the definition of a finished space.

JJ. Special Inspection: Inspection as herein required of the materials, installation, fabrication, erection, or placement of components and connections requiring special expertise to ensure compliance with approved construction documents and referenced standards.

KK. Steam-Heating Boiler: A boiler operated at pressures not exceeding 15 psi for steam.

LL. Supplier: Any person or organization who supplies materials or equipment for the work, including that fabricated to a special design.

MM. Utility: Any gas, steam, water, sanitary sewer, storm sewer, electrical or other such service.

NN. Water Supply System: The water service pipe, water distribution pipes, and the necessary connecting pipes, fittings, control valves and all appurtenances in or adjacent to the structure or premises.
1. Chilled: Water-cooled by refrigeration.
2. Cold: Water with at temperature between 33 degrees F and 80 degrees F and which is neither cooled nor heated mechanically.
3. Domestic: Water for use in buildings, except water used in connection with space heating and space cooling.
4. High Temperature: Water with a supply water temperature above 350 degrees.
5. Hot: Water at a temperature greater than or equal to 110ºF.

1.03 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels,

comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.04 ABBREVIATIONS AND ACRONYMS

AA	Aluminum Association, Inc. (The)
AABC	Associated Air Balance Council
AAALAC	Association for Assessment and Accreditation of Laboratory Animal Care
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	ACI International (American Concrete Institute)
ACPA	American Concrete Pipe Association
AF&PA	American Forest & Paper Association
AGA	American Gas Association
AGC	Associated General Contractors of America (The)
AHA	American Hardboard Association (part of CPA)
AI	Asphalt Institute
AIA	American Institute of Architects (The)
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute

ALSC	American Lumber Standard Committee, Incorporated
AMCA	Air Movement and Control Association International, Inc.
ANSI	American National Standards Institute
AOSA	Association of Official Seed Analysts, Inc.
APA	Architectural Precast Association
APA	APA - The Engineered Wood Association
ARI	Air-Conditioning & Refrigeration Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	ASME International
ASSE	American Society of Sanitary Engineering
ASTM	ASTM International
AWCMA	American Window Covering Manufacturers Association (WCSC)
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association (The)
CBM	Certified Ballast Manufacturers

CCC	Carpet Cushion Council
CDA	Copper Development Association
CISCA	Ceilings & Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CPA	Composite Panel Association
CRI	Carpet & Rug Institute (The)
CRSI	Concrete Reinforcing Steel Institute
CSI	Cast Stone Institute
CSI	Construction Specifications Institute (The)
CTI	Cooling Technology Institute
DHI	Door and Hardware Institute
EIA	Electronic Industries Alliance
EIMA	EIFS Industry Members Association
EJCDC	Engineers Joint Contract Documents Committee
EJMA	Expansion Joint Manufacturers Association, Inc.
ESD	ESD Association
FM Approvals	Factory Mutual Approvals
FSA	Fluid Sealing Association
GA	Gypsum Association
GANA	Glass Association of North America

GSI	Geosynthetic Institute
HI	Hydraulic Institute
HI	Hydronics Institute
HMMA	Hollow Metal Manufacturers Association
HPVA	Hardwood Plywood & Veneer Association
ICEA	Insulated Cable Engineers Association, Inc
ICRI	International Concrete Repair Institute, Inc.
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The)
IESNA	Illuminating Engineering Society of North America
IEST	Institute of Environmental Sciences and Technology
IGCC	Insulating Glass Certification Council
IGMA	Insulating Glass Manufacturers Alliance
ILI	Indiana Limestone Institute of America, Inc.
IPCEA	Insulated Power Cable Engineer Associates
ISO	International Organization for Standardization
ISSFA	International Solid Surface Fabricators Association
ITU	International Telecommunication Union
KCMA	Kitchen Cabinet Manufacturers Association
LEED	Leadership in Energy and Environmental Design

MBMA	Metal Building Manufacturers Association
MFMA	Maple Flooring Manufacturers Association, Inc.
MFMA	Metal Framing Manufacturers Association, Inc.
MIA	Marble Institute of America
MPI	Master Painters Institute
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.
NAAMM	National Association of Architectural Metal Manufacturers
NACE	NACE International
NADCA	National Air Duct Cleaners Association
NAIMA	North American Insulation Manufacturers Association
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NCTA	National Cable & Telecommunications Association
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NeLMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NETA	National Electrical Testing Association
NFHS	National Federation of State High School Associations
NFPA	National Fire Protection Association

NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NLGA	National Lumber Grades Authority
NOFMA	NOFMA: The Wood Flooring Manufacturers Association
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	NSF International (National Sanitation Foundation International)
NSSGA	National Stone, Sand & Gravel Association
NTMA	National Terrazzo & Mosaic Association, Inc. (The)
NWWDA	National Wood Window and Door Association (WDMA)
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting & Decorating Contractors of America
PDI	Plumbing & Drainage Institute
PGI	PVC Geomembrane Institute
PTI	Post-Tensioning Institute
RCSC	Research Council on Structural Connections
RFCI	Resilient Floor Covering Institute
SAE	SAE International
SDI	Steel Deck Institute

SDI	Steel Door Institute
SEFA	Scientific Equipment and Furniture Association
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers
SGCC	Safety Glazing Certification Council
SIA	Security Industry Association
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPIB	Southern Pine Inspection Bureau (The)
SPRI	Single Ply Roofing Industry
SSINA	Specialty Steel Industry of North America
SSPC	SSPC: The Society for Protective Coatings
STI	Steel Tank Institute
SWRI	Sealant, Waterproofing, & Restoration Institute
TCA	Tile Council of America, Inc.

1.05 FEDERAL GOVERNMENT AGENCIES:

A. Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers
CPSC	Consumer Product Safety Commission

DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDA	Food and Drug Administration
GSA	General Services Administration
HUD	Department of Housing and Urban Development
NIST	National Institute of Standards and Technology
OSHA	Occupational Safety & Health Administration
PHS	Office of Public Health and Science
SD	State Department
TRB	Transportation Research Board
USDA	Department of Agriculture
USPS	Postal Service

B. Codes, Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list.

ADAAG	Americans with Disabilities Act (ADA) Accessibility Guidelines
BCNYS	Building Code of New York State

CFR	Code of Federal Regulations
DOD	Department of Defense Military Specifications and Standards
FS	Federal Specification
MILSPEC	Military Specification and Standards

1.06 NEW YORK STATE GOVERNMENT AGENCIES:

A. Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

DASNY	Dormitory Authority of the State of New York
DEC	Department of Environmental Conservation
DHCR	Division of Housing and Community Renewal
DOH	Department of Health
NYSDOL	New York State Department of Labor
DOS	Department of State
DOT	Department of Transportation
NYSPA	New York State Power Authority
OGS	Office of General Services
OCFS	Office of Children and Family Services
OMRD	Office of Mental Retardation and Developmental Disabilities
OPRHP	Office of Parks, Recreation and Historic Preservation
NYSED	New York State Education Department (Department of Education)

SHPO	State Historic Preservation Office
SUCF	State University Construction Fund
SUNY	State University of New York

1.07 NEW YORK STATE CODES

A. Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

BCNYS	Building Code of New York State
9-NYCRR	New York State Dept. of Labor Title 9 State Building Code
10-NYCRR	New York State Dept. of Labor Title 10 State Hospital Code
19-NYCRR	Charter XXXIII, Sub Charter A, Uniform Fire Prevention and Building Code

B. Where references these references are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

BCNYS	Building Code of New York State
ECCNYS	Energy Conservation Code of New York State
PCNYS	Plumbing Code of New York State
MCNYS	Mechanical Code of New York State
FGCNYS	Fuel Gas Code of New York State
FCNYS	Fire Code of New York State

1.08 OTHER TERMS OR ACRONYMS:

A. Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name in the following list.

ACM	Asbestos Containing Materials
ACT	Acoustical Tile
ICRA	Infection Control Risk Assessment
RVT	Resilient Vinyl Tile
SAT	Suspended Acoustical Tile
SFRM	Spray on Fire Resistive Materials
TSI	Thermal Systems Insulation
VAT	Vinyl Asbestos Tile
VCT	Vinyl Composition Tile

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 014200

SECTION 014529
ASBESTOS TESTING LABORATORY SERVICES (NYS)

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Air monitoring services for asbestos removal provided by the Owner.
   2. Security expenses incurred by the District when building is unoccupied.

B. Related Sections:
   1. Division 01 Section "Summary" for use of premises and Owner-occupancy requirements.
   2. Division 01 Section "Temporary Facilities and Controls" for general temporary construction and environmental-protection measures for demolition operations.
   3. Division 02 Section “Asbestos Abatement” for air monitoring required by OSHA and other monitoring requirements within work areas.

1.02 PERFORMANCE REQUIREMENTS

A. General: Provide air monitoring for the Owner to verify that the building areas beyond the asbestos abatement work areas and the exterior environment remain uncontaminated.
   1. Upon completion of abatement activities, verify that elevated airborne fiber count encountered during abatement operations have been reduced to an acceptable level.

B. Regulatory Requirements: Comply with the current and applicable portions of the following:
   1. New York State Regulations:
      a. 12NYCRR56, referred to as “Code Rule 56” of the NYS Codes, Rules and Regulations (Statutory Authority: New York State Labor Law Section 906).
         1) Exception: Variances obtained in accordance with Article 30 of the Labor Law.
      b. New York State School Asbestos Safety Act (SASA).
   2. Regulations and Requirements of Federal Agencies:
      a. Occupational Safety and Health Administration (OSHA).
      b. United States Environmental Protection Agency (EPA).
      c. 40 CFR Part 763 Subpart E (AHERA) Appendix A unless permitted otherwise by the N.Y. State Department of Labor, EPA, and the Owner's Representative.

1.03 SUBMITTALS

A. Proposed Materials and Equipment: List by brand name and model number including, but not necessarily limited to, the following:
   1. Sampling pumps.
   2. Sampling stands.
   3. Flow meters.
   4. Sample cassettes.
   5. Sample filters.
   6. Aggressive sampling equipment.
   7. Microscopes.

B. Qualification Data: For qualified testing laboratory, including the following:
   1. Current NYS Asbestos Contractor’s License.
   2. Certificate of the Environmental Laboratory Approval Program (ELAP).
   3. List of the names, addresses and telephone numbers of all laboratory technical personnel employed on the project.

4. Current State and Federal licenses and certifications, analyst qualifications, respirator fit tests and medical screenings for all personnel.
5. Lab CIH and field supervisor CIH's, ABIH and/or PIH's Certificate.

C. Sampling Plan: Proposed plan for sampling based on the air monitor's understanding of the project. The plan shall include:
1. Number and type of samples to be collected on each date.
2. Proposed methodologies for collection and analyzing samples.

D. References: Not less than three (3) names and telephone numbers from New York State Public School Districts (K-12) in which asbestos project consultation has been approved.

1.04 QUALITY ASSURANCE

A. Daily Recordkeeping:
1. For all records, each sheet shall include all necessary “who, what, when, how” data by minimally including project, work area, location, dates, times, type, person doing the work, applicable observations, and sample I.D. instruments used.
2. Field sheets shall be kept for each sample during collection. Field sheets shall additionally include start/stop times of pumps, sample I.D. number, air volumes, machine used, filters, calibration data, Owner's Representative sign-off, etc. For exterior samples, include temperature, wind speed and direction, and precipitation data.
3. A chain of custody form shall be initiated for each sample in the field. The form shall be kept with the sample and updated as the sample changes possession.
4. Samples will be logged in at the laboratory, and a separate lab sheet (or combined with field sheet) shall be kept, for all lab data, for each sample, equipment used, count, methodology, calculations and interpretations.
5. Daily field sheets, lab analysis and chain of custody sheets, for each work area set of samples, shall be kept together with a summary cover sheet indicating general data above, specific fiber counts for each sample, plus applicable calculations, status of blanks, and interpretations of "pass" or "failed". Phone notification data shall also be included. These shall all be stapled together at the upper left-hand corner. This shall comprise a "Daily Progress Report" for that work area.
6. This Recordkeeping format shall also apply to samples taken prior to commencement of work and for final air clearance.

B. Documentation:
1. Weekly Air Monitoring Results: At the beginning of each week (Monday) written summary results of the prior week’s air samples shall be submitted to the School District's Environmental Safety Office. Each work area shall have a summary of daily analysis including a listing of counts for each sample with locations indicated and interpretation results.
2. Close-out Documentation: Within two weeks from the completion of the project, the air monitoring contractor shall submit three (3) bound copies of a final report; one (1) copy to the Project Inspector, two (2) copies to the School District's Environmental Safety Office. The final reports shall be broken down by each work area including:
a. Project Executive Summary per work area including an overall project description, a summary "Daily Progress Reports", dates of non-compliance, reasons, actions taken by Asbestos Abatement Contractor to bring into compliance. Final air clearance interpretation.
b. "Daily Progress Reports” includes field logs, calculations, lab logs, counts, interpretations, chain of custody documents. All organized consecutively by days.

c. Final Clearance PCM Sample Results, counts, calculations, and interpretations.
d. Final Clearance TEM Sample Results, counts, calculations, and interpretations.
e. Floor plans for each work area identifying exact sample locations including separate drawings for pre-abatement, during abatement, and final clearance sampling.
f. Certified Industrial Hygienist Certification (Stamp).
g. Air sample pump and rotometer calibration records.
h. A copy of all start of work submittals required in the SUBMITTALS article of this Section.

C. Worker Protection:
1. The air-monitoring contractor shall supply all air-sampling technicians with the proper respiratory protection and training.
2. The air-sampling technicians shall enter and exit the work areas using the protocols established for personal decontamination for asbestos projects.

D. Supervision: Supervise and certify by a CIH or a Professional Industrial Hygienist (PIH) all air monitoring practices and procedures. The PIH's responsibilities shall include:
1. Review and become familiar with the asbestos project specifications.
2. Attend at a minimum the initial pre-abatement meeting.
3. Review and document that preliminary, concurrent, and final air sampling and pump calibration techniques conform to AHERA and New York State asbestos abatement regulations.
4. Visit the project site at a minimum of one time per week, accompanied by School District's Director of Environmental Safety, to document and insure proper sampling techniques, methods and equipment are being utilized and conform to AHERA and New York State requirements.
5. Review and certify (stamp) final reports.

1.05 COORDINATION

A. General: Coordinate the activities of the air-sampling technicians with the abatement contractor and Owner's Representative.

B. Collect air samples, 24 hours a day, seven days a week, as instructed by the Owner's Representative.
1. Present the field sheet to the Owner's Representative to be initialed and dated prior to leaving the site.
2. Unless otherwise instructed by the Owner's Representative, air sampling shall be performed during the abatement contractor's shift.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. General: Provide all necessary and proper materials and equipment, canisters, filters, etc. to obtain and process air samples.

PART 3 EXECUTION

3.01 SAMPLES

A. Air sampling shall occur continuously during all shift hours of the contractors per Code Rule 56. Minimally this shall be assumed as 9 hours per day 7 days a week.

B. The air-sampling technician shall calibrate sampling pumps on site at least once before, once at the midpoint and once after the collection of samples, and record in the field sheets.

C. Where possible, sample locations shall be at least 3 feet from any wall or column and 2 feet above the floor. Sampler shall be supported by a stand.

D. For clearance sampling, the air sampling technician shall provide aggressive air sampling per Rule 56 and as follows:
   1. First direct the exhaust of a leaf blower against all walls, ceilings, floors, ledges, and other surfaces in the work area.
   2. Continue agitation for at least five minutes per every 1,000 sf of floor space. Following this aggressive agitation, the air-sampling technician shall use at least one 20-inch fan per 10,000 cubic feet of work area space for continuous agitation.
   3. The fan shall be operated on low speed and pointed toward the ceiling.
   4. Sampling pumps shall be started after the fans are started and stopped before the fans are stopped.

3.02 ANALYSIS

A. Samples shall be logged on a permanently bound logbook at the laboratory. No whiteout will be used to make corrections.

B. All lab counts, data and analysis shall be recorded on a lab summary sheet for each sample.

C. When both TEM and PCM Clearance samples are collected, PCM samples shall be analyzed first. TEM samples will be analyzed only if PCM samples pass clearance criteria.
   1. If TEM samples are analyzed, they shall be analyzed one at a time until the number of asbestos structures counted total 350, or one more sample is found to have 140 asbestos structures. If, and only if, neither of these cases is found, then all TEM samples will be analyzed.

D. Analytical Methods: The following methods shall be used in analyzing filters used to collect air samples:
   1. Cellulose ester filters (PCM) shall be analyzed using NIOSH 7400. This analysis shall be carried out at a laboratory located off the job site.
   2. Polycarbonate filers (TEM) shall be analyzed using AHERA Counting Protocol analysis per EPA.

E. If blank samples analysis causes that batch of samples to be suspect so as to cause resampling that shall be done at no cost to the Owner.

3.03 INTERPRETATIONS

A. Daily monitoring sample results shall be daily compared to all requirement levels per Rule 56. If they exceed background or .01 fibers per C.C., Air Monitoring Contractor shall fail the daily sample. If all samples are satisfactory, the summary sheet shall so indicate.
   1. Final Clearance Monitoring: Satisfactory levels.

B. For Code Rule 56 PCM Analysis: The clearance air monitoring results shall be considered satisfactory when every sample demonstrates an airborne concentration of asbestos fibers of less than 0.01 fibers per cubic centimeter, or the background level, whichever is greater.

C. For AHERA TEM Analysis: Clearance shall be satisfactory per AHERA protocols including: If the mean average of all the inside samples have asbestos structure concentrations at or below 70 s/mm' and the average airborne asbestos concentrations inside the area is not higher than the average outside calculated by the "Z" Test. All analysis to be per AHERA requirements.

D. Passing of PCM/56 criteria shall satisfy that requirement. Further work by the Asbestos Abatement Contractor, daily monitoring, and clearance retesting need only be done to satisfy the failed TEM method. If PCM/56 sampling fails, TEM samples will be discarded unanalyzed

and the clearance has failed. Recleaning and resampling is required for both the PCM and TEM.

3.04 NOTIFICATION

A. Results for pre-abatement and daily abatement sampling shall be reported to the Owner's Representative and the Asbestos Abatement Contractor within 48 hours with the exception that the few final daily sample results must be reported to the Owner's Representative within 24 hours of the clearance sampling. Results for clearance sampling and roofing work area samples shall be reported to the Owner's Representative and the Asbestos Abatement Contractor within 24 hours.

B. If any daily monitoring of clearance sampling fails, the Asbestos Abatement Contractor shall immediately notify the Owner's Representative and the applicable Asbestos Abatement Contractor. The Asbestos Abatement Contractor shall make note of possible reasons for failure, and what corrective actions the Asbestos Abatement Contractor undertakes.

C. All notifications shall occur first by telephone followed by written notices. Telephone notifications shall be recorded indicating who was notified, position, time, date, telephone number, etc. Telephone notification shall only be to acceptable people approved at the beginning of the project.

D. Final air clearance results shall be sent to the Commissioner of Labor per CR-56, minimally by certified mail with copies and certificate to the Owner's Representative.

3.05 SCHEDULE OF AIR SAMPLES

A. Before start of work, verify locations and number of samples, as well as methodology for approval. Submittal shall include pre-abatement, post-abatement and during-abatement phases. Comply with Part 56.

1. Per the requirements of the New York State Education Department all Final Air Clearance Samples shall be (TEM) Transmission Electron Microscopy Methodology.

END OF SECTION 014529

This page intentionally left blank

SECTION 014533
CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Code-required special inspections.

B. Testing services incidental to special inspections.

C. Submittals.

D. Manufacturers' field services.

E. Fabricators' field services.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 003119 - Existing Condition Information: Soil investigation data.

C. Document 007100 - General Conditions: Inspections and approvals required by public authorities.

D. Section 012100 - DO NOT USE BSD Allowances: Allowance for payment of testing services.

E. Section 013300 Submittal Procedures: Submittal procedures.

F. Section 014000 - BSD Quality Requirements.

G. Section 014200 - Reference Standards.

H. Section 016000 - Product Requirements: Requirements for material and product quality.

1.03 ABBREVIATIONS AND ACRONYMS

A. AHJ: Authority having jurisdiction.

B. IAS: International Accreditation Service, Inc.

C. NIST: National Institute of Standards and Technology.

1.04 DEFINITIONS

A. Code or Building Code: ICC (IBC)-2018, Edition of the International Building Code and specifically, Chapter 17 - Special Inspections and Tests.

B. Authority Having Jurisdiction (AHJ): Agency or individual officially empowered to enforce the building, fire and life safety code requirements of the permitting jurisdiction in which the Project is located.

C. Special Inspection:

1. Special inspections are inspections and testing of materials, installation, fabrication, erection or placement of components and connections mandated by the AHJ that also require special expertise to ensure compliance with the approved Contract Documents and the referenced standards.

2. Special inspections are separate from and independent of tests and inspections conducted by Owner or Contractor for the purposes of quality assurance and contract administration.

1.05 REFERENCE STANDARDS

A. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).

B. AISC 341 - Seismic Provisions for Structural Steel Buildings; 2016 (Revised 2018).

C. AISC 360 - Specification for Structural Steel Buildings; 2016.

D. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

E. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.

F. ASTM A706/A706M - Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement; 2016.

G. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2019a.

H. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete; 2017.

I. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2023.

J. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2020.

K. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2026.

L. ASTM E605/E605M - Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members; 2019 (Reapproved 2023).

M. ASTM E736/E736M - Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members; 2019 (Reapproved 2023).

N. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestops; 2019.

O. ASTM E2393 - Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers; 2010a (Reapproved 2015).

P. ASTM E2570/E2570M - Standard Test Methods for Evaluating Water-Resistive Barrier (WRB) Coatings Used Under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage; 2007 (Reapproved 2025).

Q. AWCI 117 - Technical Manual 12-B; Standard Practice for the Testing and Inspection of Field Applied Thin Film Intumescent Fire-Resistive Materials; an Annotated Guide; 2014.

R. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025, with Amendment (2026).

S. AWS D1.3/D1.3M - Structural Welding Code - Sheet Steel; 2018.

T. AWS D1.4/D1.4M - Structural Welding Code - Reinforcing Steel; 2018.

U. IAS AC89 - Accreditation Criteria for Testing Laboratories; 2018.

V. IAS AC291 - Accreditation Criteria for Special Inspection Agencies; 2017.

W. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

X. ICC (IBC)-2009 - International Building Code; 2009.

Y. ICC (IBC)-2012 - International Building Code; 2012.

Z. ICC (IBC)-2015 - International Building Code; 2015.

AA. ICC (IBC)-2018 - International Building Code; 2018.

BB. SDI QA/QC - Standard for Quality Control and Quality Assurance for Installation of Steel Deck; 2022.

CC. SJI 100 - Catalog of Standard Specifications Load Tables and Weight Tables for Steel Joists and Joist Girders; 2011.

DD. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

1.06 SUBMITTALS

A. See Section 013300 Submittal Procedures, for submittal procedures.

B. Special Inspection Agency Qualifications: Prior to the start of work, the Special Inspection Agency is required to:
   1. Submit agency name, address, and telephone number, names of full time registered Engineer and responsible officer.
   2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
   3. Submit certification that Special Inspection Agency is acceptable to AHJ.
   4. Submit documentation that Special Inspection Agency is accredited by IAS according to IAS AC291.

C. Testing Agency Qualifications: Prior to the start of work, the Testing Agency is required to:
   1. Submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
   2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
   3. Submit certification that Testing Agency is acceptable to AHJ.
   4. Submit documentation that Testing Agency is accredited by IAS according to IAS AC89.

D. Smoke Control Testing Agency Qualifications: Prior to the start of work, the Testing Agency is required to:
   1. Submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
   2. Submit documentary evidence that agency has appropriate credentials and documented experience in fire protection engineering, mechanical engineering and HVAC air balancing.
   3. Submit certification that Testing Agency is acceptable to AHJ.
   4. Submit documentation that Testing Agency is accredited by IAS according to IAS AC89.

E. Manufacturer's Qualification Statement: Manufacturer is required to submit documentation of manufacturing capability and quality control procedures. Include documentation of AHJ approval.

F. Fabricator's Qualification Statement: Fabricator is required to submit documentation of fabrication facilities and methods as well as quality control procedures. Include documentation of AHJ approval.

G. Special Inspection Reports: After each special inspection, Special Inspector is required to promptly submit at least two copies of report; one to Architect and one to the AHJ.
   1. Include:
      a. Date issued.
      b. Project title and number.
      c. Name of Special Inspector.
      d. Date and time of special inspection.
      e. Identification of product and specifications section.
      f. Location in the Project.
      g. Type of special inspection.
      h. Date of special inspection.
      i. Results of special inspection.
      j. Compliance with Contract Documents.
   2. Final Special Inspection Report: Document special inspections and correction of discrepancies prior to the start of the work.

H. Fabricator Special Inspection Reports: After each special inspection of fabricated items at the Fabricator's facility, Special Inspector is required to promptly submit at least two copies of report; one to Architect and one to AHJ.
   1. Include:
      a. Date issued.
      b. Project title and number.
      c. Name of Special Inspector.
      d. Date and time of special inspection.
      e. Identification of fabricated item and specification section.
      f. Location in the Project.
      g. Results of special inspection.
      h. Verification of fabrication and quality control procedures.
      i. Compliance with Contract Documents.
      j. Compliance with referenced standard(s).

I. Test Reports: After each test or inspection, promptly submit at least two copies of report; one to Architect and one to AHJ.
   1. Include:
      a. Date issued.
      b. Project title and number.
      c. Name of inspector.
      d. Date and time of sampling or inspection.
      e. Identification of product and specifications section.
      f. Location in the Project.
      g. Type of test or inspection.

h. Date of test or inspection.
i. Results of test or inspection.
j. Compliance with Contract Documents.

J. Certificates: When specified in individual special inspection requirements, Special Inspector shall submit certification by the manufacturer, fabricator, and installation subcontractor to Architect and AHJ, in quantities specified for Product Data.
1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect and AHJ.

K. Manufacturer's Field Reports: Submit reports to Architect and AHJ.
1. Submit report in duplicate within 30 days of observation to Architect for information.
2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in Contract Documents.

L. Fabricator's Field Reports: Submit reports to Architect and AHJ.
1. Submit report in duplicate within 30 days of observation to Architect for information.
2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in Contract Documents.

1.07 SPECIAL INSPECTION AGENCY

A. Owner or Architect will employ services of a Special Inspection Agency to perform inspections and associated testing and sampling in accordance with ASTM E329 and required by the building code.

B. The Special Inspection Agency may employ and pay for services of an independent testing agency to perform testing and sampling associated with special inspections and required by the building code.

C. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.08 TESTING AND INSPECTION AGENCIES

A. Owner or Architect may employ services of an independent testing agency to perform additional testing and sampling associated with special inspections but not required by the building code.

B. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.09 QUALITY ASSURANCE

A. Special Inspection Agency Qualifications:
1. Independent firm specializing in performing testing and inspections of the type specified in this section.
2. Accredited by IAS according to IAS AC291.

B. Testing Agency Qualifications:

1. Independent firm specializing in performing testing and inspections of the type specified in this section.
2. Accredited by IAS according to IAS AC89.

C. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SCHEDULE OF SPECIAL INSPECTIONS, GENERAL

A. Frequency of Special Inspections: Special Inspections are indicated as continuous or periodic.
1. Continuous Special Inspection: Special Inspection Agency is required to be present in the area where the work is being performed and observe the work at all times the work is in progress.
2. Periodic Special Inspection: Special Inspection Agency is required to be present in the area where work is being performed and observe the work part-time or intermittently and at the completion of the work.

3.02 SPECIAL INSPECTIONS FOR STEEL CONSTRUCTION

A. Structural Steel: Comply with quality assurance inspection requirements of ICC (IBC)-2018.

B. Cold-Formed Steel Deck: Comply with quality assurance inspection requirements of SDI QA/QC.

C. Open-Web Joists and Joist Girders: Comply with requirements of ICC (IBC), Table 1705.2.3.
1. End Connections - Welding or Bolted: Comply with requirements of SJI 100; periodic.
2. Bridging - Horizontal or Diagonal:
a. Standard Bridging: Comply with requirements of SJI 100; periodic.
b. Bridging That Differs From the SJI Specifications: Periodic inspection.

D. Cold-Formed Steel Trusses Spanning 60 feet or Greater: Special Inspector is required to verify that the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing are installed in accordance with the approved truss submittal package.

E. High-Strength Bolt, Nut and Washer Material:
1. Verify identification markings comply with ASTM standards specified in the approved contract and to AISC 360, Section A3.3; periodic.
2. Submit manufacturer's certificates of compliance; periodic.

F. High-Strength Bolting Installation: Verify items listed below comply with AISC 360, Section M2.5.
1. Snug tight joints; periodic.
2. Pretensioned and slip-critical joints with matchmarking, twist-off bolt or direct tension indicator method of installation; periodic.
3. Pretensioned and slip-critical joints without matchmarking or calibrated wrench method of installation; continuous.

G. Structural Steel and Cold Formed Steel Deck Material:

1. Structural Steel: Verify identification markings comply with AISC 360, Section M3.5; periodic.
2. Other Steel: Verify identification markings comply with ASTM standards specified in the approved Contract Documents; periodic.
3. Submit manufacturer's certificates of compliance and test reports; periodic.

H. Weld Filler Material:
1. Verify identification markings comply with AWS standards specified in the approved Contract Documents and to AISC 360, Section A3.5; periodic.
2. Submit manufacturer's certificates of compliance; periodic.

I. Welding:
1. Structural Steel and Cold Formed Steel Deck:
a. Complete and Partial Joint Penetration Groove Welds: Verify compliance with AWS D1.1/D1.1M; continuous.
b. Multipass Fillet Welds: Verify compliance with AWS D1.1/D1.1M; continuous.
c. Single Pass Fillet Welds Less than 5/16 inch Wide: Verify compliance with AWS D1.1/D1.1M; periodic.
d. Plug and Slot Welds: Verify compliance with AWS D1.1/D1.1M; continuous.
e. Single Pass Fillet Welds 5/16 inch or Greater: Verify compliance with AWS D1.1/D1.1M; continuous.
f. Floor and Roof Deck Welds: Verify compliance with AWS D1.3/D1.3M; continuous.

J. Steel Frame Joint Details: Verify compliance with approved Contract Documents.
1. Details, bracing and stiffening; periodic.
2. Member locations; periodic.
3. Application of joint details at each connection; periodic.

K. Cold-formed steel trusses spanning 60 feet or more; periodic.

3.03 SPECIAL INSPECTIONS FOR CONCRETE CONSTRUCTION

A. Reinforcement, Including Prestressing Tendons, and Verification of Placement: Verify compliance with ACI 318, Chapters 20, 25.2, 25.3, 26.6.1-26.6.3; periodic.

B. Anchors Cast in Concrete: Verify compliance with ACI 318; periodic.

C. Anchors Post-Installed in Hardened Concrete: Verify compliance with ACI 318.
1. Adhesive Anchors: Verify horizontally or upwardly-inclined orientation installations resisting sustained tension loads - Section 17.8.2.4; continuous.
2. Other Mechanical and Adhesive Anchors: Verify as per Chapter 17.8.2; periodic.

D. Design Mix: Verify plastic concrete complies with the design mix in approved Contract Documents and with ACI 318, Chapter 19, 16.4.3, 26.4.4; periodic.

E. Concrete Sampling Concurrent with Strength Test Sampling: Each time fresh concrete is sampled for strength tests, verify compliance with ASTM C172/C172M, ASTM C31/C31M and ACI 318, Chapter 26.5, 26.12, and record the following, continuous:
1. Slump.
2. Air content.
3. Temperature of concrete.

F. Concrete and Shotcrete Placement: Verify application techniques comply with approved Contract Documents and ACI 318, Chapter 26.5; continuous.

G. Specified Curing Temperature and Techniques: Verify compliance with ACI 318, Chapter 26.5.3 through 26.5.5; periodic.

H. Precast Concrete Members: Verify erection techniques and placement comply with approved Contract Documents and ACI 318, Chapter 26.9; periodic.

I. Formwork Shape, Location and Dimensions: Verify compliance with approved Contract Documents and ACI 318, Chapter 26.11.1.2(b); periodic.

J. Materials: If the Contractor cannot provide sufficient data or documentary evidence that concrete materials comply with the quality standards of ACI 318, the AHJ will require testing of materials in accordance with the appropriate standards and criteria in ACI 318, Chapters 19 and 20.

3.04 SPECIAL INSPECTIONS FOR MASONRY CONSTRUCTION

A. Masonry Structures Subject to Special Inspection:
   1. Masonry construction when required by the quality assurance program of TMS 402/602.
   2. Engineered masonry in structures classified as "Standard Hazard" (Category II.)
      a. Perform inspections in accordance with Level B Quality Assurance.

B. Verify each item below complies with approved Contract Documents and the applicable articles of TMS 402/602.
   1. Inspections and Approvals:
      a. Verify compliance with the required inspection provisions of the approved Contract Documents; periodic.
      b. Verify approval of submittals required by Contract Documents; periodic.
   2. Compressive Strength of Masonry: Verify compressive strength of masonry units prior to start of construction unless specifically exempted by code; periodic.
   3. Slump Flow and Visual Stability Index (VSI): Verify compliance as self consolidating grout arrives on site; continuous.
   4. Joints and Accessories: When masonry construction begins, verify:
      a. Proportions of site prepared mortar; periodic.
      b. Construction of mortar joints; periodic.
      c. Location of reinforcement, connectors, prestressing tendons, anchorages, etc; periodic.
      d. Prestressing technique; periodic.
      e. Grade and size of prestressing tendons and anchorages; periodic.
   5. Structural Elements, Joints, Anchors, Protection: During masonry construction, verify:
      a. Size and location of structural elements; periodic.
      b. Type, size and location of anchors, including anchorage of masonry to structural members, frames or other construction; periodic.
      c. Size, grade and type of reinforcement, anchor bolts and prestressing tendons and anchorages; periodic.
      d. Welding of reinforcing bars; continuous.
      e. Preparation, construction and protection of masonry against hot weather above 90 degrees F and cold weather below 40 degrees F; periodic.

f. Application and measurement of prestressing force; continuous.

6. Grouting Preparation: Prior to grouting, verify:
   a. Grout space is clean; periodic.
   b. Correct placement of reinforcing, connectors, prestressing tendons and anchorages; periodic.
   c. Correctly proportioned site prepared grouts and prestressing grout for bonded tendons; periodic.
   d. Correctly constructed mortar joints; periodic.
7. Preparation of Grout Specimens, Mortar Specimens and Prisms: Observe preparation of specimens; periodic.

C. Engineered Masonry in Buildings Designated as "Essential Facilities": Verify compliance of each item below with approved Contract Documents and the applicable articles of TMS 402/602.
   1. Inspections and Approvals:
      a. Perform inspections in accordance with Level C Quality Assurance.
      b. Verify compliance with the required inspection provisions of the approved Contract Documents; periodic.
      c. Verify approval of submittals required by Contract Documents; periodic.
   2. Compressive Strength of Masonry: Verify compressive strength of masonry units prior to start of construction and upon completion of each 5,000 square feet increment of masonry erected during construction; periodic.
   3. Preblended Mortar and Grout: Verify proportions of materials upon delivery to site; periodic.
   4. Slump Flow and Visual Stability Index (VSI): Verify compliance as self consolidating grout arrives on site; continuous.
   5. Engineered Elements, Joints, Anchors, Grouting, Protection: Verify compliance of each item below with approved Contract Documents and referenced standards.
      a. Proportions of site prepared mortar; periodic.
      b. Placement of masonry units and construction of mortar joints; periodic.
      c. Placement of reinforcement, connectors, prestressing tendons, anchorages, etc.; periodic.
      d. Grout space prior to grouting; continuous.
      e. Placement of grout; continuous.
      f. Placement of prestressing grout; continuous.
      g. Size and location of structural elements; periodic.
      h. Type, size and location of anchors, including anchorage of masonry to structural members, frames or other construction; continuous.
      i. Size, grade and type of reinforcement, anchor bolts and prestressing tendons and anchorages; periodic.
      j. Welding of reinforcing bars; continuous.
      k. Preparation, construction and protection of masonry against hot weather above 90 degrees F and cold weather below 40 degrees F; periodic.
      l. Application and measurement of prestressing force; continuous.
   6. Preparation of Grout Specimens, Mortar Specimens and Prisms: Observe preparation of specimens; continuous.

3.05 SPECIAL INSPECTIONS FOR PREFABRICATED AND SITE-BUILT WOOD CONSTRUCTION

A. High Load Diaphragms: Verify compliance of each item below with approved Contract Documents.
   1. Grade and thickness of sheathing.
   2. Nominal size of framing members at adjacent panel edges.
   3. Nail or staple diameter and length.
   4. Number of fastener lines.
   5. Fastener spacing at lines and at edges.

B. Metal Plate Connected Wood Trusses with Clear Span of 60 feet or More: Verify compliance of each item below with approved Contract Documents in general and with approved truss submittal package in particular.
   1. Temporary restraint and bracing.
   2. Permanent individual truss member restraint and bracing.

3.06 SPECIAL INSPECTIONS FOR SOILS

A. Materials and Placement: Verify each item below complies with approved construction documents and approved geotechnical report.
   1. Design bearing capacity of material below shallow foundations; periodic.
   2. Design depth of excavations and suitability of material at bottom of excavations; periodic.
   3. Materials, densities, lift thicknesses; placement and compaction of backfill: continuous.
   4. Subgrade, prior to placement of compacted fill verify proper preparation; periodic.

B. Testing: Classify and test excavated material; periodic.

3.07 STRUCTURAL OBSERVATIONS FOR STRUCTURES

A. Provide Observations: For structure where one or more of the following conditions exist:
   1. The structure is classified as Risk Category IV.
   2. The structure is a high-rise building.
   3. Such observation is required by the registered design professional responsible for the structural design.
   4. Such observation is specifically required by AHJ.

3.08 SPECIAL INSPECTION AGENCY DUTIES AND RESPONSIBILITIES

A. Special Inspection Agency shall:
   1. Verify samples submitted by Contractor comply with the referenced standards and the approved Contract Documents.
   2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
   3. Perform specified sampling and testing of products in accordance with specified reference standards.
   4. Ascertain compliance of materials and products with requirements of Contract Documents.
   5. Promptly notify Architect and Contractor of observed irregularities or non-compliance of work or products.

6. Perform additional tests and inspections required by Architect.
7. Attend preconstruction meetings and progress meetings.
8. Submit reports of all tests or inspections specified.

B. Limits on Special Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency may not approve or accept any portion of the work.
3. Agency may not assume any duties of Contractor.
4. Agency has no authority to stop the work.

C. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.

D. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.09 TESTING AGENCY DUTIES AND RESPONSIBILITIES

A. Testing Agency Duties:
1. Test samples submitted by Contractor.
2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
3. Perform specified sampling and testing of products in accordance with specified standards.
4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
5. Promptly notify Architect and Contractor of observed irregularities or non-compliance of work or products.
6. Perform additional tests and inspections required by Architect.
7. Attend preconstruction meetings and progress meetings.
8. Submit reports of all tests or inspections specified.

B. Limits on Testing or Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency may not approve or accept any portion of the work.
3. Agency may not assume any duties of Contractor.
4. Agency has no authority to stop the work.

C. On instructions by Architect, perform re-testing required because of non-compliance with specified requirements, using the same agency.

D. Contractor will pay for re-testing required because of non-compliance with specified requirements.

3.10 CONTRACTOR DUTIES AND RESPONSIBILITIES

A. Contractor Responsibilities, General:
1. Deliver to agency at designated location, adequate samples of materials for special inspections that require material verification.

2. Cooperate with agency and laboratory personnel; provide access to approved documents at project site, to the work, to manufacturers' facilities, and to fabricators' facilities.
3. Provide incidental labor and facilities:
   a. To provide access to work to be tested or inspected.
   b. To obtain and handle samples at the site or at source of Products to be tested or inspected.
   c. To facilitate tests or inspections.
   d. To provide storage and curing of test samples.
4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing or inspection services.
5. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Retain special inspection records.

B. Contractor Responsibilities, Seismic Force-Resisting System, Designated Seismic System, and Seismic Force-Resisting Component: Submit written statement of responsibility for each item listed in the Statement of Special Inspections to AHJ and Owner prior to starting work. Statement of responsibility shall acknowledge awareness of special construction requirements and other requirements listed.

C. Contractor Responsibilities, Wind Force-Resisting System and Wind Force-Resisting Component: Submit written statement of responsibility for each item listed in the Statement of Special Inspections to AHJ and Owner prior to starting work. Statement of responsibility shall acknowledge awareness of special construction requirements and other requirements listed.

3.11 MANUFACTURER'S AND FABRICATOR'S FIELD SERVICES

A. When specified in individual specification sections, require material suppliers, assembly fabricators, or product manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, to test, adjust, and balance equipment and _____ as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect 30 days in advance of required observations.
   1. Observer subject to approval of Architect.
   2. Observer subject to approval of Owner.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.12 STATEMENT OF SPECIAL INSPECTIONS

A. Refer to attached form, “Statement of Special Inspections”, at the end of this section.

B. Refer to attached, “Schedule of Special Inspections”, at the end of this section.

3.13 SPECIAL INSPECTION REPORTS

A. Report Requirement: Special Inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the code enforcement official, and to the registered design professional in responsible charge.

1. Reports shall indicate that work inspected was done in conformance to approved construction documents.
2. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the code enforcement official and to the registered design professional in responsible charge prior to the completion of that phase of the work.

B. Periodic Report: On the first day of each month, the special inspector shall furnish to the Architect five copies of the combined progress reports of the special inspector's observations. These progress reports shall list all special inspections of construction or reviews of testing performed during that month, note all uncorrected deficiencies, and describe the corrections made both to these deficiencies and to previously reported deficiencies.
1. Each monthly report shall be signed by all special inspectors who performed special inspections of construction or reviewed testing during that month, regardless of whether they reported any deficiencies.
2. Each monthly report shall be signed by the Contractor.

C. Final Report: At completion of construction, each special inspector shall prepare and sign a final report attesting that all work they inspected and all testing and test reports they reviewed were completed in accordance with the approved construction documents and that deficiencies identified were satisfactorily corrected.
1. The Special Inspector shall submit a combined final report containing the signed final reports.
2. The Contractors shall sign the combined final report attesting that all final reports of special inspectors that performed work to comply with these construction documents are contained therein, and that the Contractor has reviewed and approved all of the individual inspector's final reports.
3. Refer to attached form, “Special Inspections Report”, attached at the end of this section.

STATEMENT OF SPECIAL INSPECTIONS

Name of Project:	
Address or Legal **Description:**	
Owner's Name:	
AUTHORITY HAVING JURISDICTION:	
Signed:	
I , as the structural engineer of record, certify that I have prepared the following special inspections program as required by the **XXXX** Building Code for the construction project located at the site listed above.	
Printed Name:	
	Seal Signature: Date:
List of work requiring special inspections: See following schedule.	

SPECIAL INSPECTIONS REPORT

Report Type: ____Continuous ____Periodic ____Final
Work/Material Inspected:
Project Name:
Address or Legal Description:
Owner's Name:
Phone:
email:
Approved Inspection Agency:
Address:
Phone:
email:
Authority Having Jurisdiction:
Address:
Phone:
email:
Registered Design Professional of Record:
Address:
Phone:
email:
Statement of Conformance:
Discrepancies:
____None
Contractor review:
Contractor signature:
Contractor correction:
Outstanding Discrepancies:
____None
Authority Having Jurisdiction review:
Registered Design Professional review:

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1704.2.5 INSPECTION OF FABRICATORS				
Verify fabrication / quality control procedures	In-plant review		Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.1.1 SPECIAL CASES				
1. Work that is unusual in its nature, such as, but not limited to:				
A. Construction materials and systems that are alternatives to materials and systems prescribed by the Building Code	Submittal review, shop[3] and / or field inspection		Y	Periodic
B. Unusual design applications of materials described in the Building Code	Submittal review, shop[3] and / or field inspection		Y	Periodic
C. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in the Building Code or in standards referenced by the Building Code	Submittal review, shop[3] and / or field inspection		Y	Periodic
2. Inspection of anchors post-installed in solid grouted masonry per research reports including verification of:				
A. Anchor type and dimensions	Field inspection		Y	Periodic
B. Hole dimensions and cleaning procedures	Field inspection		Y	Periodic
C. Anchor spacing and edge distances	Field inspection		Y	Periodic
D. Masonry unit, grout, masonry compressive strength	Field inspection		Y	Periodic
E. Anchor embedment and tightening torque	Field inspection		Y	Periodic

3. Aggregate piers				
A. Prior to construction:				
a. Review of aggregate pier designer's use of soil parameters as presented in the project soils report	Field inspection		N	Periodic
B. During construction:				
a. Verification of aggregate properties	Field inspection		N	Periodic
b. Type and number of lifts of aggregate	Field inspection		N	Periodic
c. Verify compliance of with design results of qualitative tests on production aggregate pier elements such as modulus load testing, uplift pull-out testing, bottom stabilization tests and dynamic cone penetration tests	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.2 STEEL CONSTRUCTION				
1. Fabricator and erector documents	Submittal review	AISC 360, Section N3.2	Y	Each submittal
2. Material verification of structural steel	Shop[3] and field inspection		Y	Periodic
3. Structural steel welding:				
A. Inspection tasks prior to welding:				
Observe, or perform for each welded joint or member in accordance with QA tasks	Shop[3] and field inspection	AISC 360, Table N5.4-1	Y	Observe or Perform as noted[4]
B. Inspection tasks during welding:				
Observe, or perform for each welded joint or member in accordance with QA tasks	Shop[3] and field inspection	AISC 360, Table N5.4-2	Y	Observe[4]
C. Inspection tasks after welding:				
Observe, or perform for each welded joint or member in accordance with QA tasks	Shop[3] and field inspection	AISC 360, Table N5.4-3	Y	Observe or Perform as noted[4]

D. Nondestructive testing (NDT) of welded joints:				
a) Complete penetration groove welds 5/16" or greater in risk category III or IV	Shop[3] or field ultrasonic testing - 100%		Y	Periodic
b) Complete penetration groove welds 5/16" or greater in risk category II	Shop[3] or field ultrasonic testing - 10% of welds minimum		Y	Periodic
c) Welded joints subject to fatigue when required	Shop[3] or field radiographic or Ultrasonic testing	AISC 360, Appendix 3, Table A3.1	Y	Periodic
d) Fabricator's NDT reports when fabricator performs NDT	Verify reports		Y	Periodic
4. Structural steel bolting:	Shop[3] and field inspection			
a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks		AISC 360, Table N5.6-1	Y	Observe or Perform as noted[4]
b. Inspection tasks During Bolting in accordance with QA tasks		AISC 360, Table N5.6-2	Y	Observe[4]
1) Pre-tensioned and slip-critical joints:				
a) Turn-of-nut with matching markings			Y	Periodic
b) Direct tension indicator			Y	Periodic
c) Twist-off type tension control bolt			Y	Periodic
d) Turn-of-nut without matching markings			Y	Continuous
e) Calibrated wrench			Y	Continuous
2) Snug-tight joints			Y	Periodic
Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks		AISC 360, Table N5.6-3	Y	Perform[4]
5. Visual inspection of exposed cut surfaces of galvanized structural steel main members and exposed corners of the rectangular HSS for cracks subsequent to galvanizing	Shop[3] or field inspection		Y	Periodic

6. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)	Field inspection		Y	Periodic
7. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents	Field inspection		Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.2.2 COLD FORMED STEEL DECK				
1. Manufacturer documents (Verify reports and certificates with Paragraphs 2.1 and 2.2 for compliance with construction documents)		SDI QA/QC Section 2	Y	
2. Material verification of steel deck, mechanical fasteners and welding materials	Shop[3] and field inspection		Y	Periodic
3. Cold-formed steel deck placement:	Shop[3] and field inspection			
a. Inspection tasks Prior to Deck Placement (Perform the QA tasks)		SDI QA/QC, Appendix 1, Table 1.1	Y	Perform[4]
b. Inspection tasks After Deck Placement (Perform the QA tasks)		SDI QA/QC, Appendix 1, Table 1.2	Y	Perform[4]
4. Cold-formed steel deck welding:	Shop[3] and field inspection			
a. Inspection tasks Prior to Welding (Observe the QA tasks)		SDI QA/QC, Appendix 1, Table 1.3	Y	Observe[4]
b. Inspection tasks During Welding (Observe the QA tasks)		SDI QA/QC, Appendix 1, Table 1.4	Y	Observe[4]
c. Inspection tasks After Welding (Perform the QA tasks)		SDI QA/QC, Appendix 1, Table 1.5	Y	Perform[4]

5. Cold-formed steel deck mechanical fastening:	Shop[3] and field inspection			
a. Inspection tasks Prior to Mechanical Fastening (Observe the QA tasks)		SDI QA/QC, Appendix 1, Table 1.6	Y	Observe[4]
b. Inspection tasks During Mechanical Fastening (Observe the QA tasks)		SDI QA/QC, Appendix 1, Table 1.7	Y	Observe[4]
c. Inspection tasks After Mechanical Fastening (Perform the QA tasks)		SDI QA/QC, Appendix 1, Table 1.8	Y	Perform[4]

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.2.3 OPEN-WEB STEEL JOISTS AND JOIST GIRDERS				
1. Installation of open-web steel joists and joist girders.				
a. End connections - welding or bolted.	per SJI CJ or SJI 100		Y	Periodic
b.. Bridging - horizontal or diagonal.				
1) Standard bridging.	per SJI CJ or SJI 100		Y	Periodic
2) Bridging that differs from the specifications listed in SJI CJ or SJI 100.			Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.2.4 COLD-FORMED STEEL TRUSSES SPANNING 60 FEET OR GREATER				
Verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package	Field Inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.3 CONCRETE CONSTRUCTION				
1. Inspect reinforcement, including prestressing tendons, and verify placement.	Shop[3] and field inspection	ACI 318: 20, 25.2, 25.3, 26.6.2-26.6.3	Y	Periodic
2. Reinforcing bar welding:				
a. Verification of weldability of bars other than ASTM A706.		AWS D1.4	N	Periodic
b. Inspection of single-pass fillet welds 5/16 or less in size.		ACI 318: 26.6.4	N	Periodic
c. Inspection of all other welds.			N	Continuous
3. Inspection of anchors cast in concrete.	Shop[3] and field inspection		Y	Periodic
4. Inspection of anchors post-installed in hardened concrete members per research reports, or, if no specific requirements are provided, requirements shall be provided by the registered design professional and approved by the building official, including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Field inspection		Y	Periodic or as required by the research report issued by an approved source
a. Adhesive anchors installed in horizontal or upward-inclined orientation that resist sustained tension loads.	Field inspection	ACI 318: 17.8.2.4	Y	Continuous
b. Mechanical and adhesive anchors note defined in 4a.	Field inspection	ACI 318: 17.8.2	Y	Periodic
5. Verify use of approved design mix	Shop[3] and field inspection	ACI 318: 19, 26.4.3, 26.4.4	Y	Periodic
6. a. Prior to placement, fabricate specimens for strength tests, fresh concrete sampling, perform slump or	Shop[3] and field inspection	ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	Y	Continuous

slump flow, and air content density tests, and determine temperature of concrete.				
6. b. Verify that concrete specimens for strength tests are maintained in the required initial curing and laboratory curing environment, and that the maximum and minimum temperatures during the initial curing period are reported.	Shop[3] and field inspection		Y	Continuous
7. Inspection of concrete and shotcrete placement for proper application techniques	Shop[3] and field inspection	ACI 318: 26.5	Y	Continuous
8. Verify maintenance of specified curing temperature and techniques	Shop[3] and field inspection	ACI 318: 26.5.3-26.5.5	Y	Periodic
9. Inspection of prestressed concrete:	Shop[3] and field inspection			
a. Application of prestressing force		ACI 318: 26.10	N	Continuous
b. Grouting of bonded prestressing tendons		ACI 318: 26.10	N	Continuous
10. Inspect erection of precast concrete members		ACI 318: 26.9	Y	Periodic
11. Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs	Review field testing and laboratory reports	ACI 318: 26.11.2	N	Periodic
12. Inspection of formwork for shape, lines, location and dimensions	Field inspection	ACI 318: 26.11.1.2(b)	Y	Periodic
13. Concrete strength testing and verification of compliance with construction documents	Field testing and review of laboratory reports		Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.4 MASONRY CONSTRUCTION				
MINIMUM VERIFICATION REQUIREMENTS				
(A) Level A, B and C Quality Assurance:				

1. Prior to construction, verification of compliance of submittals	Submittal Review	TMS 602: 1.5	Y	Prior to Construction
(B) Level B and C Quality Assurance:				
1. Prior to construction verification of f'm and f'_{AAC} except where specifically exempted by the code	Testing by unit strength method or prism test method	TMS 602: 1.4B	Y	Prior to Construction
2. During construction, verification of proportions of materials as delivered to the project site for premixed or pre-blended mortar, prestressing grout, and grout other than self-consolidating grout.	Testing by unit strength method or prism test method		Y	Periodic
(C) Level C Quality Assurance:				
1. During construction, verification of f'm and f'_{AAC} for every 5,000 SF	Testing by unit strength method or prism test method	TMS 602: 1.4B	Y	Periodic
2. During construction, verification of proportions of materials as delivered to the project site for premixed or pre-blended mortar, prestressing grout, and grout other than self-consolidating grout.	Field inspection		Y	Periodic
MINIMUM SPECIAL INSPECTION REQUIREMENTS				
(D) Levels B and C Quality Assurance:				
1. As masonry construction begins, verify that the following are in compliance:				
a. Proportions of the site-prepared mortar	Field inspection	TMS 602: 2.1, 2.6A	Y	Periodic
b. Grade and size of prestressing tendons and anchorages	Field inspection	TMS 602: 2.4B, 2.4H	Y	Periodic
c. Grade, type, and size of reinforcement, anchor bolts, and prestressing tendons and anchorages	Field inspection		Y	Periodic
d. Prestressing technique	Field inspection	TMS 602: 3.6B	N	Periodic
e. Properties of thin-bed mortar for AAC masonry (b) Required for the first 5,000 square feet (c) Required after the first 5,000 square feet	Field inspection	TMS 602: 2.1C	N	Level B - Continuous[(b)] Level B - Periodic[(c)]
			N	Level C - Continuous
f. Sample panel construction	Field inspection		Y	Level B - Periodic

			Y	Level C - Continuous
2. Prior to grouting, verify that the following are in compliance:				
a. Grout space	Field Inspection	TMS 602: 3.2D, 3.2F	Y	Level B - Periodic
			Y	Level C - Continuous
b. Placement of prestressing tendons and anchorages	Field Inspection		Y	Periodic
c. Placement of reinforcement, connectors, and anchor bolts	Field Inspection		Y	Level B - Periodic
			Y	Level C - Continuous
d. Proportions of site-prepared grout and pre-stresssing grout for bonded tendons	Field Inspection		Y	Periodic
3. Verify compliance of the following during construction:				
a. Materials and procedures with the approved submittals	Field inspection		Y	Periodic
b. Placement of masonry units and mortar joint construction	Field inspection		Y	Periodic
c. Size and location of structural members	Field inspection	TMS 602: 3.3F	Y	Periodic
d. Type, size, location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	Field inspection	TMS 402: 1.2.1(e), 6.1.4.3, 6.2.1	Y	Level B - Periodic
			Y	Level C - Continuous
e. Welding of reinforcement	Field inspection	TMS 402: 8.1.6.7.2, 9.3.3.4, 11.3.3.4(b)	N	Continuous
f. Preparation, construction, and protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F)	Field inspection	TMS 602: 1.8C, 1.8D	Y	Periodic
g. Application and measurement of prestressing force	Field testing	TMS 602: 3.6B	N	Continuous
h. Placement of grout and prestressing grout for bonded tendons is in compliance	Field inspection	TMS 602: 3.5, 3.6C	N	Continuous

i. Placement of AAC masonry units and construction of thin-bed mortar joints (b) Required for the first 5,000 square feet (c) Required after the first 5,000 square feet	Field inspection	TMS 602: 3.3B.9, 3.3F.1.b	Y	Level B - Continuous[(b)] Level B - Periodic[(c)]
			Y	Level C - Continuous
4. Observe preparation of grout specimens, mortar specimens, and/or prisms	Field inspection	TMS 602: 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, 1.4B.4	Y	Level B - Periodic
			Y	Level C - Continuous

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.5 WOOD CONSTRUCTION				
1. For prefabricated wood structural elements, inspection of the fabrication process and assemblies in accordance with Section 1704.2.5.	In-plant review[(3)]		Y	Periodic
2. For high-load diaphragms, verify grade and thickness of structural panel sheathing agree with approved building plans.	Field inspection		Y	Periodic
3. For high-load diaphragms, verify nominal size of framing members at adjoining panel edges, nail or staple diameter and length, number of fastener lines, and that spacing between fasteners in each line and at edge margins agree with approved building plans	Field inspection		Y	Periodic
4. Metal-plate-connected wood trusses:				
a. Verification that permanent individual truss member restraint/bracing has been installed in accordance with the approved truss submittal package when the truss height is greater than or equal to 60".	Field inspection		Y	Periodic

b. For trusses spanning 60 feet or greater: verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package	Field inspection		Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.5.3 MASS TIMBER CONSTRUCTION				
1. Inspection of anchorage and connection of mass timber construction to timber deep foundation systems.	Field inspection		N	Periodic
2. Inspect erection of mass timber construction.	Field inspection		N	Periodic
3. Inspection of connections where installation methods are required to meet design loads.				
a. Threaded Fasteners				
1) Verify use of proper installation equipment.	Field inspection		N	Periodic
2) Verify use of pre-drilled holes where required.	Field inspection		N	Periodic
3) Inspect screws, including diameter, length, head type, spacing, installation angle, and depth.	Field inspection		N	Periodic
b. Adhesive anchors installed in horizontal or upwardly inclined orientation to resist sustained tension loads.	Field inspection		N	Periodic
c. Other adhesive anchors.	Field inspection		N	Periodic
d. Bolted connections.	Field inspection		N	Periodic
e. Concealed connections	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES	
PROJECT	

MATERIAL / ACTIVITY	SERVICE	REFERENCED STANDARD	APPLICABLE	
			Y/N	FREQUENCY
1705.6 SOILS				
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Field inspection		Y	Periodic
2. Verify excavations are extended to proper depth and have reached proper material.	Field inspection		Y	Periodic
3. Perform classification and testing of compacted fill materials.	Field inspection		Y	Periodic
4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill	Field inspection		Y	Continuous
5. Prior to placement of controlled fill, inspect subgrade and verify that site has been prepared properly	Field inspection		Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.7 DRIVEN DEEP FOUNDATIONS				
1. Verify element materials, sizes and lengths comply with requirements	Field inspection		N	Continuous
2. Determine capacities of test elements and conduct additional load tests, as required	Field inspection		N	Continuous
3. Inspect driving operations and maintain complete and accurate records for each element	Field inspection		N	Continuous
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element	Field inspection		N	Continuous

5. For steel elements, perform additional inspections per Section 1705.2	See Section 1705.2		N	See Section 1705.2
6. For concrete elements and concrete-filled elements, perform tests and additional inspections per Section 1705.3	See Section 1705.3		N	See Section 1705.3
7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge	Field inspection		N	In accordance with construction documents

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.8 CAST-IN-PLACE DEEP FOUNDATIONS				
1.Inspect drilling operations and maintain complete and accurate records for each element	Field inspection		N	Continuous
2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes	Field inspection		N	Continuous
3. For concrete elements, perform tests and additional inspections in accordance with Section 1705.3	See Section 1705.3		N	See Section 1705.3

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.9 HELICAL PILE FOUNDATIONS				
Verify installation equipment, pile dimensions, tip elevations, final depth, final installation torque and other	Field inspection		N	Continuous

installation data as required by construction documents.				

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.10 FABRICATED ITEMS				
1. List of fabricated items requiring special inspection during fabrication:	Shop inspection		Y	As noted in each applicable shop activity
Open-web steel joists				
Joist Girders				
Structural steel fabricator				
2. List of fabricated items to be fabricated on the premises of a fabricator approved to perform such work without special inspection (including name of approved agency providing periodic auditing):	Shop inspection		Y	As noted in each applicable shop activity
Open-web joists				
Joist girders				
Structural steel fabricator				

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.11.1 STRUCTURAL WOOD SPECIAL INSPECTIONS FOR WIND RESISTANCE				
1. Inspection of field gluing operations of elements of the main wind force-resisting system	Field inspection		N	Continuous
2. Inspection of nailing, bolting, anchoring and other fastening of components within the main wind force-resisting system, including wood shear walls, wood diaphragms, drag	Shop[(3)] and field inspection		N	Periodic

struts, braces and hold-downs.				

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.11.2 COLD-FORMED STEEL SPECIAL INSPECTIONS FOR WIND RESISTANCE				
1.Inspection during welding operations of elements of the main wind force-resisting system	Shop[3] and field inspection		N	Periodic
2. Inspection of screw attachment, bolting, anchoring and other fastening of components within the main wind force-resisting system, including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs.	Shop[3] and field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.11.3 WIND-RESISTING COMPONENTS				
1. Roof covering, roof deck and roof framing connections.	Shop[3] and field inspection		N	Periodic
2. Exterior wall covering and wall connections to roof and floor diaphragms.	Shop[3] and field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.1 STRUCTURAL STEEL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
1. Seismic force-resisting systems in SDC B, C, D, E, or F.	Shop[3] and field inspection		N	In accordance with AISC 341
2. Structural steel elements in SDC B, C, D, E, or F other than those in Item 1.	Shop[3] and field inspection		N	In accordance with AISC 341

including struts, collectors, chords and foundation elements.				

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.2 STRUCTURAL WOOD SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
1. Field gluing operations of elements of the seismic-force resisting system for SDC C, D, E or F.	Shop[3] and field inspection		N	Continuous
2. Nailing, bolting, anchoring and other fastening of components within the seismic-force-resisting system including wood shear walls, wood diaphragms, drag struts, shear panels and hold-downs for SDC C, D, E or F.	Shop[3] and field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.3 COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
1. During welding operations of elements of the seismic-force-resisting system for SDC C, D, E or F.	Shop[3] and field inspection		N	Periodic
2. Screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs for SDC C, D, E or F.	Shop[3] and field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES			
PROJECT			
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED**	**APPLICABLE**

		STANDARD	Y/N	FREQUENCY
1705.12.4 DESIGNATED SEISMIC SYSTEMS VERIFICATION SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
For SDC C, D, E or F, inspect and verify that that the component label, anchorage or mounting conforms to the certificate of compliance in accordance with ASCE 7 Section 13.2.2.	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.5 ARCHITECTURAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
1. For SDC D, E or F, inspection during the erection and fastening of exterior cladding and interior or exterior veneer more than 30 feet above grade or walking surface and weighing more than 5 psf.	Field inspection		N	Periodic
2. For SDC D, E or F, inspection during the erection and fastening of interior nonloadbearing walls more than 30 feet above grade or walking surface and weighing more than 15 psf.	Field inspection		N	Periodic
3. For SDC D, E or F, inspection during the erection and fastening of exterior nonloadbearing walls more than 30 feet above grade or walking surface.	Field inspection		N	Periodic
4. For SDC D, E or F, inspection during anchorage of access floors	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.6 PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				

1. Inspection during the anchorage of electrical equipment for emergency or standby power systems in SDC C, D, E or F	Field inspection		N	Periodic
2. Inspection during the anchorage of other electrical equipment in SDC E or F	Field inspection		N	Periodic
3. Inspection during installation and anchorage of piping systems designed to carry hazardous materials, and their associated mechanical units in SDC C, D, E or F	Field inspection		N	Periodic
4. Inspection during the installation and anchorage of HVAC ductwork designed to contain hazardous materials in SDC C, D, E or F	Field inspection		N	Periodic
5. Inspection during the installation and anchorage of vibration isolation systems in SDC C, D, E or F where nominal clearance of 1/4 inch or less is required by the approved construction documents	Field inspection		N	Periodic
6. Inspection during installation of mechanical and electrical equipment, including duct work, piping systems and their structural supports, where automatic fire sprinkler systems are installed in structures assigned to SDC C, D, E, or F to verify one of the following unless flexible sprinkler hose fittings are used:				
a. Minimum required clearances have been provided.	Field inspection	ASCE/SEI 7: 13.2.3	N	Periodic
b. A three inch or greater nominal clearance has been provided between fire protection sprinkler system drops and sprigs and: structural members not used collectively or independently to support the sprinklers; equipment attached to the building structure; and other systems' piping.	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.7 STORAGE RACKS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
Inspection during the anchorage of storage racks 8 feet or greater in height in structures assigned to SDC D, E or F.	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.8 SEISMIC ISOLATION SYSTEMS				
Inspection during the fabrication and installation of isolator units and energy dissipation devices used as part of the seismic isolation system in structures assigned to SDC B, C, D, E or F.	Shop[(3)] and field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.12.9 COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES				
Inspection of installation of cold-formed steel special bolted moment frames in the seismic force-resisting systems in structures assigned to SDC D, E or F.	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.13.1 STRUCTURAL STEEL TESTING FOR SEISMIC RESISTANCE				

1. Nondestructive testing of structural steel in the seismic force-resisting systems in accordance with AISC 341 in structures assigned to SDC B, C, D, E or F.	Field test		N	Periodic
2. Nondestructive testing of structural steel elements in the seismic force-resisting systems not covered in 1 above including struts, collectors, chords and foundation elements in accordance with AISC 341 in structures assigned to SDC B, C, D, E or F.	Field test		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.13.2 SEISMIC CERTIFICATION ON NON-STRUCTURAL COMPONENTS				
Review certificate of compliance for designated seismic system components in structures assigned to SDC B, C, D, E or F.	Certificate of compliance review		N	Each submittal

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.13.3 SEISMIC CERTIFICATION OF DESIGNATED SEISMIC SYSTEMS				
Review certificate of compliance for designated seismic system components in structures assigned to SDC C, D, E or F	Certificate of compliance review		N	Each submittal

SCHEDULE OF SPECIAL INSPECTION SERVICES			
PROJECT			
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED**	**APPLICABLE**

		STANDARD	Y/N	FREQUENCY
1705.13.4 SEISMIC ISOLATION SYSTEMS				
Test seismic isolation system in structures assigned to SDC B, C, D, E or F.	Prototype testing	ASCE 7: 17.8	N	Per ASCE 7

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.14 SPRAYED FIRE-RESISTANT MATERIALS				
1. Verify surface condition preparation of structural members	Field inspection		N	Periodic
2. Verify minimum thickness of sprayed fire-resistant materials applied to structural members	Field inspection		N	Periodic
3. Verify density of the sprayed fire-resistant material complies with approved fire-resistant design	Field inspection		N	Per Section 1705.14.5
4. Verify the cohesive/adhesive bond strength of the cured sprayed fire-resistant material	Field inspection		N	Per Section 1705.14.6
5. Condition of finished application	Field inspection		N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.13.15 MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS				
Inspect and test mastic and intumescent fire-resistant coatings applied to structural elements and decks	Field inspection and testing	AWCI 12-B	N	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES			
PROJECT			
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED**	**APPLICABLE**

		STANDARD	Y/N	FREQUENCY
1705.13.16 EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)				
Inspection of water-resistive barrier over sheathing substrate	Field inspection		Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.13.17 FIRE-RESISTANT PENETRATIONS AND JOINTS				
1. Inspect penetration firestop systems	Field testing		Y	Per ASTM E2174
2. Inspect fire-resistant joint systems	Field testing		Y	Per ASTM E2393

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.13.18 SMOKE CONTROL SYSTEMS				
1. Leakage testing and recording of device locations prior to concealment	Field testing		Y	Periodic
2. Prior to occupancy and after sufficient completion, pressure difference testing, flow measurements, and detection and control verification	Field testing		Y	Periodic

SCHEDULE OF SPECIAL INSPECTION SERVICES				
PROJECT				
MATERIAL / ACTIVITY	**SERVICE**	**REFERENCED STANDARD**	**APPLICABLE**	
			Y/N	**FREQUENCY**
1705.13.19 SEALING OF MASS TIMBER CONSTRUCTION				
1. Inspect sealants and adhesives to resist passage of air in buildings of Type IV-A, IV-B, and IV-C.	Field testing		N	Periodic
a. At abutting edges and intersections of mass timber building elements	Field testing		N	Periodic

required to be fire-resistance rated.				
b. At abutting intersections of mass timber building elements and building elements of other materials where both are required to be fire-resistance rated.	Field testing		N	

*** INSPECTION AGENTS**

FIRM NO.	**ADDRESS**	**TELEPHONE**
1.		
2.		
3.		
4.		

Notes:
1. The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional.
2. The list of Special Inspectors may be submitted as a separate document, if noted so above.
3. Shop Inspections of fabricated items are not required where the fabricator is approved in accordance with IBC Section 1704.2.5.1 and listed in activity 1709.2.
4. Observe: Observe on a random basis, operations need not be delayed pending these inspections. Perform: These tasks shall be performed for each welded joint, bolted connection, or steel element.
5. NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ. Refer to AISC 360, N6.

Are Special Inspections for Seismic Resistance included in the Statement of Special Inspections? **Yes** **No**

Are Special Inspections for Wind Resistance included in the Statement of Special Inspections? ***Yes*** ***No***

DATE: _ _ _ _ _ _ _ _ _ _

END OF SECTION 014533

This page intentionally left blank

SECTION 015001
TEMPORARY FACILITIES & CONTROLS-MULTIPLE PRIME CONTRACTS

PART 1 GENERAL

1.01 SUMMARY

A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection for Multiple Prime Contract projects.

B. Temporary utilities include, but are not limited to, the following:
   1. Water service and distribution.
   2. Temporary electric power and light.
   3. Temporary heat.
   4. Ventilation and Humidity Control
   5. Telephone and internet service.
   6. Sanitary facilities, including drinking water.
   7. Storm and sanitary sewer.

C. Support facilities include, but are not limited to, the following:
   1. Field offices and storage containers.
   2. Temporary roads and paving.
   3. Dewatering facilities and drains.
   4. Temporary partitions and enclosures.
   5. Hoists and temporary elevator use.
   6. Temporary project identification sign and project signage.
   7. Waste disposal services and dumpsters.
   8. Construction aids and miscellaneous services and facilities.

D. Security and protection facilities include, but are not limited to, the following:
   1. Temporary fire protection.
   2. Barricades, warning signs, and lights.
   3. Environmental protection.
   4. Tree and plant protection.
   5. Security enclosure and lockup.
   6. Temporary enclosures.
   7. Temporary partitions.
   8. Sidewalk Bridge for maintaining legal exits.
   9. Enclosure fence for the work site.
   10. Environmental Protection

E. Related Sections:
   1. Division 01 Section "Summary" for work restrictions and limitations on utility interruptions.

1.02 INFORMATIONAL SUBMITTALS

A. Temporary Utilities: Each prime contractor shall submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

B. Implementation and Termination Schedule: Within 15 days of the date established for submittal of the Contractor's Construction Schedule, each prime contractor shall submit a schedule indicating implementation and termination of each temporary utility for which the Contractor is responsible.

C. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

E. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage, including delivery, handling, and storage provisions for materials subject to water absorption or water damage, discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water damaged Work.
   1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
   2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
   3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.

F. Dust-Control and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust-control and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
   1. Locations of dust-control partitions at each phase of the work.
   2. HVAC system isolation schematic drawing.
   3. Location of proposed air filtration system discharge.
   4. Other dust-control measures.
   5. Waste management plan.

G. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.03 DEFINITIONS

A. Temporary Enclosure: As determined by Architect, temporary roofing is complete, insulated, all exterior wall openings are closed with temporary closures.

B. Permanent Enclosure: As determined by Architect, permanent roofing is complete, insulated, and weather tight; exterior walls are insulated and weather tight; and all openings are closed with permanent construction or substantial temporary closures.

C. Temporary Facilities: Construction, fixtures, fittings, and other built items required to accomplish the work, but which are not incorporated into the finished work.

D. Temporary Utilities: A type of temporary facility, primary sources of electric power, water, natural gas supply, etc., obtained from public utilities, other main distribution systems, or temporary sources constructed for the project, but not including the fixtures and equipment served.

E. Temporary Services: Activities required during construction, which do not directly accomplish the work.

1.04 QUALITY ASSURANCE

A. Regulations: The contractor shall comply with industry standards and with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
   1. Building code requirements.
   2. NYSED Rules & Regulations.
   3. Health and safety regulations.
   4. Utility company regulations.
   5. Police, fire department and rescue squad rules.
   6. Environmental protection regulations.

B. Standards: The Contractor shall comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."

C. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdictions.

D. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.05 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, Construction Manager, testing agencies, and authorities having jurisdiction.
   1. Water from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
   2. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

B. Other entities using temporary services and facilities include, but are not limited to, the following:
   1. Other nonprime contractors.
   2. The Owner's work forces.
   3. Occupants of the Project.
   4. The Architect.
   5. Construction Manager.
   6. Testing agencies.
   7. Personnel of government agencies.

1.06 PROJECT CONDITIONS

A. Temporary Utilities: Each prime contractor shall prepare a schedule indicating dates for implementation and termination of each temporary utility for which the Contractor is responsible. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

C. Temporary Use of Permanent Facilities: If the Owner permits temporary use of the permanent facilities the Installer of each permanent service shall assume responsibility for its operation, maintenance, and protection during use as a construction facility prior to the Owner's acceptance, regardless of previously assigned responsibilities.

1.07 DIVISION OF RESPONSIBILITIES

A. General: These Specifications assign each prime contractor specific responsibilities for providing certain temporary facilities used by other prime contractors and other entities at the site. The Contractor for General Construction is responsible for providing temporary facilities and controls that are not normal construction activities of other prime contractors and are not specifically assigned otherwise by this specification.

B. **EACH PRIME CONTRACTOR** is responsible for the following:
   1. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, as well as the costs and use charges associated with each facility.
   2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
   3. Its own field office, complete with necessary furniture, utilities, and internet service.
   4. Its own storage containers for tools and storage of materials not incorporated into the building construction. Size, quantity and location to be coordinated with the CM.
   5. Dewatering for their own construction operations.
   6. Temporary heat, ventilation, humidity control, and enclosure of the building prior to “Permanent Enclosure” where these facilities are necessary for its construction activity to protect the work but have not yet been completed by the responsible prime contractor.
      a. Temporary ventilation to control temperature and humidity is required by the Contractor responsible for installing the specified finish and equipment as these finishes may be damaged be excessive humidity or promote the growth of mold. The permanent HVAC system shall not be relied upon to provide the necessary ventilation or conditioning of the humidity in the building. Each Contractor is required to protect their work in place and provide the necessary ventilation and or humidity control.
   7. Dust and Silica control for its own work. To be submitted with each contractors Health & Safety Plan.
   8. Temporary safety railings and stairs.
   9. Collection and disposal of its own hazardous, dangerous, unsanitary, or other harmful waste material.
   10. Collection of its waste material and transporting to a dumpster. Dumpster provided by the GC.
   11. Secure lockup of its own tools, materials, and equipment.
   12. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.

C. The **General Construction Contractor** is responsible for the following:
   1. Barricades, warning signs, and lights related to the building work

2. Owner/CM Field office trailer continued leases.
3. Temporary toilets, including disposable supplies.
4. Temporary wash facilities, including disposable supplies.
5. Temporary enclosure of the building's roof, windows and doors. Prior to "Permanent Enclosure".
6. Temporary partitions indicated on the drawings or specifically called for in specifications or as directed by the Construction Manager, required for project phasing or necessary to perform the work.
7. Furnish dumpsters for all contractors. Location of dumpsters shall be directed by the CM. Hazardous waste disposal shall be by each contractor performing that work.
8. Security enclosure and lockup.
9. Directional signage and safety signage.

D. The **Mechanical/ HVAC Contractor** is responsible for the following:
1. Temporary heat, cooling, humidity, and ventilation control after "Permanent Enclosure" where the permanent HVAC system is not ready for use or cannot be used.

E. The **Plumbing Contractor** is responsible for the following:
1. Temporary water service. Includes obtaining all required permits and associated costs.

F. **The Electrical Contractor** is responsible for the following:
1. Temporary electric power service and branch distribution.

Temporary generator(s) for all contractors use. To keep portions of the building in service during power shutdowns or replacement of main services. **Other contractors' work shall not be stopped as a result of shutdowns or the work of the EC. During shutdowns all life safety, Fire safety, data, and security items shall stay intact and fully operational.**

2. Temporary lighting.
3. Electric Power Service: With the exception of the project office trailers at the Site, use electric power from the Owner's existing system without metering and without payment of use charges.

PART 2 PRODUCTS

2.01 MATERIALS

A. General: Each prime contractor shall provide new materials. If acceptable to the Architect, undamaged, previously used materials in serviceable condition may be used. Provide materials suitable for use intended.

B. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."
1. For job-built sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
2. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch- thick exterior plywood.

C. Gypsum Wallboard: Provide 5/8 type x gypsum wallboard on interior walls of temporary offices or temporary partitions.

D. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary offices, shops, and sheds.

E. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.

F. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.

G. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.

H. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

I. Water: Provide potable water approved by local health authorities.

J. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide galvanized steel bases for supporting posts.

K. Open-Mesh Fencing: Provide 0.12-inch- thick, galvanized 2-inch chain link fabric fencing 6 feet high and galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts.

2.02 EQUIPMENT

A. General: Each prime contractor shall provide new equipment. If acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.

B. Water Hoses: Provide 3/4-inch heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.

C. Backflow Prevention: Provide all necessary backflow prevention for the use of water.

D. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.

E. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

F. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.

G. Heating and ventilating units: Provide temporary heating and ventilating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.

1. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
    a. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
    b. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
    c. Retain MERV of 8 for LEED-NC or LEED-CI Credit EQ 3.1.

2. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in system and remove at end of construction and clean HVAC system as required in Division 01 Section "Closeout Procedures".
3. Air Filtration Units: HEPA primary and secondary filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously. Provide a plan for air filtration and ventilation for each work area.

H. Temporary Toilet Units: The General Contractor shall provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar non-absorbent material.

I. Fire Extinguishers: Each prime contractor will provide hand-carried, portable, UL-rated; Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

2.03 TEMPORARY SUPPORT FACILITIES

A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Temporary Field Offices: Each prime contractor will be allowed to provide its own prefabricated or mobile units. Size and location of each will be at the construction managers discretion. Provide heated and air-conditioned units on foundations adequate for normal loading.

C. Architect's Representative, Owner, CM Field Office: General Construction Contractor will continue the lease and provide the following items for the office trailer to accommodate the needs of the owner's construction administration personnel. Keep office clean and orderly, providing bi-weekly cleaning service. The GC of this contract shall coordinate with the GC of the first phase, 1C HVAC and Fire Alarm Upgrades, and the next work phase, transferring all items currently under lease/rental and shall not interrupt any services. The time frame for these items, including rented/leased items, is from October 1, 2027 – December 31, 2028. All lease information can be made readily available by contacting the Phase 1C General construction contract holder: Vinco Builders, LLC. 5 Veschi Lane S., Mahopac, NY 10541. (845) 520-9566.
1. Provide snow removal services for any snow event with accumulation over 2". Includes salting and ice removal.
2. Include all associated costs for the rental and maintenance of **ALL** trailer items including but not limited to, hurricane tie down package, vinyl skirting to match trailer color with 2" insulation board around the full perimeter of the trailer with access for the waste storage tank, integrated heating and cooling equipment, restroom with a flushable toilet and sink, exterior potable water storage tank, waste holding tank to fit under the trailer, including temperature control measures for the water storage and waste holding tanks operation during cold weather, weekly service for the potable water filling and waste pumping, including payment for service, stairs for access at all doors, etc., through the specified duration listed above.
3. Location: 7 Edmunds Lane, Pine Bush, NY 12566. District lot directly across Edmunds Lane from Crispell Middle School parking lot.

4. Continue to provide rental costs and furnishings as listed:
   a. Copier: Ricoh MP C3504ex. Capable of printing letter, legal and tabloid/ledger, continued supply of paper, color/B&W toner/ink, and routine maintenance at the construction manager's request. This shall be provided under a lease for the duration specified in 2.03, C.
   b. Spectrum business class internet, 1 Gbps service.
   c. (1) refill of the First aid cabinet: Global Industrial, model #WB761296A. Includes refills, as needed, throughout the course of the contract.
   d. 5-gallon bottled water and cups with scheduled weekly water delivery and cup refills.

D. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
   1. Store combustible materials apart from building.

2.04 TEMPORARY UTILITIES

A. Telephone Service: Each contractor is responsible for his or her own telephone service.
   1. Provide at least one telephone at each site.
   2. Display construction-related phone numbers at contractor trailer.
      1) Fire emergency number.
      2) Rescue emergency number.
      3) Hospital.
      4) Prime Contractors' home offices.
      5) Owner's representative.
      6) Architect's representative
   3. Equip each project superintendent with a cellular telephone. This person shall be able to receive emergency calls 24 hrs. a day, 7 days a week. This person shall also be fluent in the English language.

PART 3 EXECUTION

3.01 INSTALLATION

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. Each prime contractor shall provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY UTILITY INSTALLATION

A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
   1. Arrange with the company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
   2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
   3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.

B. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

C. The contractor shall provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

D. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged.
   1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
   2. Connect temporary sewers to the municipal system as directed by sewer department officials.
   3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.

E. Sanitary Facilities: The General Contractor will provide temporary toilets for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
   1. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.
   2. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.

F. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use. Where the owner’s existing water facilities are not available the PC shall provide temporary water for use.

G. Drinking-Water Facilities: Each Contractor shall provide containerized, tap-dispenser, drinking-water units, including paper cup supply.

H. Temporary Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
   1. Connect temporary service to Owner's existing power source, as directed by the CM.

I. Upon “Permanent Enclosure” of the building as determined by Article 1.03 of this spec section the Mechanical Contractor shall provide temporary heat, cooling, and humidity control, until the permanent heating system can be utilized.
   1. Temporary heat, cooling, humidity control: Provide temporary heat in all existing areas that are under construction and/or have their permanent heat temporarily or permanently shut off for construction reasons.
   2. Temporary heat must not damage any materials, new or existing, within or without the Project limits, on school property, nor shall it cause noxious odors or fumes or some other nuisance.

J. Ventilation: The General Contractor will provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.

K. Cellular Phones: Each prime contractors superintendent shall have cellular phone service with an active, and not full voice mailbox. The cellular phone number shall be provided throughout the construction period for all personnel engaged in construction activities.

L. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
   1. Prior to commencing work, The Mechanical Contractor will isolate the HVAC system in area where work is to be performed in accordance with approved coordination drawings.
      a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
      b. The General Contractor will maintain negative air pressure within work area using HEPA-equipped air filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
   2. The Contractor performing the work will maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust containment devices.
   3. Each Contractor will perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

3.03 SUPPORT FACILITIES INSTALLATION

A. Each prime contractor will locate field offices, storage trailers, sanitary facilities, and other temporary construction and support facilities in coordination with the CM.
   1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
   2. Locations of storage trailers shall be assigned by the CM.

B. Storage trailers/ containers: Each prime contractor may install storage containers equipped to accommodate materials and equipment involved. Storage trailers may potentially be located at each site in a designated staging areas given by the CM.

C. Temporary Roads and Parking areas: Unless otherwise noted on the drawings, the General Contractor will construct and maintain temporary roads and parking areas to support the indicated loading adequately and to withstand exposure to traffic during the construction period as directed by the CM. Locate temporary roads, storage areas, as directed by the CM.
   1. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
   2. Temporary Roads and Parking areas: Use granular materials that will support the intended loading and traffic and maintain the areas throughout the construction period.
   3. Install temporary paving to minimize the need to rework the installations and result in permanent roads and paved areas without damage or deterioration when occupied by the Owner.
   4. Extend temporary roads in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.

D. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

E. Temporary Parking: Parking at most sites is limited to the staging areas and shall be designated by the CM. Parking on the street or in owners designated lots is prohibited.

F. Temporary Parking/Staging and Access Roads
1. Construction parking will not be allowed adjacent to the construction site.
   a. See site plan for construction parking or as directed by the CM.
2. The General Contractor will provide access for suitable staging areas. Re-grade and re-seed store any areas disturbed by parking/ staging.
   a. Parking Areas: Includes contractors' employees and construction vehicle parking. Minimum of 6-inch reference Item. #304.3 course.
   b. Access Roads: Includes access roads for delivery through staging area to building work areas, and to equipment and storage areas and sheds. Minimum of 10-feet wide, 9-inch reference Item. #304.3 course.
   c. Temporary parking by construction personnel shall be allowed only in areas designated by the CM. Owner does not have space for construction parking in existing parking lots or roadways and will subsequently have vehicles in violation of parking prohibitions towed from site and back charged with all fees to the Contractor.
3. Traffic Regulations:
   a. Access through Owner's entrances shall be limited
   b. Utilize only entrances/temporary roads as designated
   c. Maintain all site traffic regulations.

G. Dewatering Facilities and Drains: Each Contractor will comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. The General Contractor will dispose of rainwater or temporary water in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
2. The General Contractor will remove snow and ice as required to minimize accumulations and provide safe working environments in the staging and construction work areas or as directed by the CM. This includes snow and ice removal from the parking lot and stairs at the CM trailer's location.

H. Collection and Disposal of Waste: Each prime contractor will collect waste from their construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. The owner will enforce requirements strictly. Waste is to be removed same day, every day. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly.

I. Each Prime Contractor will provide waste-collection containers in sizes adequate to handle waste from their construction operations. The General Construction Contractor will provide dumpsters at the site for use by all other contractors.
1. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

J. Existing Stair Usage: Use of Owner's existing stairs will be permitted, as long as stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If, despite such protection, stairs become damaged, restore damaged areas so no evidence remains of correction work.

K. Temporary lifts, cranes and hoists: Each prime contractor will provide means for hoisting and lifting their own materials. Where cranes are to be used OSHA 29 CFR Part 1926 Subpart CC shall be strictly followed.

3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.

B. Protection of Existing Facilities: Each contractor will protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

C. Environmental Protection: Each contractor will provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.. Avoid using tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.
1. Comply with work restrictions specified in Division 01 Section "Summary."

D. Pest Control: The General Contractor shall engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.

E. Barricades, Warning Signs, and Lights: The General Contractor will comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

F. Project Identification and Temporary Signs : The General Contractor will prepare signs in sizes indicated and as directed by the architect. Install signs where indicated to inform public and persons seeking entrance to Project. Contractors are not permitted to hang or post any company signage with company logo’s or literature on the project property.
1. Engage an experienced sign manufacturer in project identification signs. Comply with details given by the architect.
2. Support on posts or framing of preservative-treated wood or steel.
   a. Size: 4-feet by 8-feet by 3/4-inch thick.

G. Temporary Signs: The General Contractor will prepare signs to provide directional information to construction personnel and visitors for each site. Unauthorized signs are not permitted.
1. For construction traffic control/flow at entrances/exits, as designated by the CM.
2. For warning signs as required
3. Per OSHA standards as necessary
4. For trailer identification
5. For “No Smoking” safe work site at multiple locations.

H. Temporary Egress: The General Contractor will maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

I. Covered Walkway: Where required during the progress of the work the Contractor performing work near exits will erect a structurally adequate, protective covered walkway for safe passage required at legal exits. Coordinate with entrance doors, access to construction areas, excavations and obstructions. Comply with regulations of authorities having jurisdiction.
   1. Construct covered walkways using scaffold or shoring framing. Provide wood plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage. Extend the back wall beyond the structure to complete the enclosure fence. Paint and maintain in a manner acceptable to the Owner and the Architect.
   2. Provide overhead decking, protective enclosure walls, handrails, barricades, warning signs, exit signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
   3. Paint and maintain appearance of walkway for duration of the Work.

J. Temporary Enclosures: Each prime contractor will provide temporary enclosure for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
   1. Where heat is needed and the “Permanent Enclosure” is not complete, the contractor responsible for the work will provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
   2. Install fire rated tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.
   3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction. Wood shall then be covered with a waterproof membrane material to keep the building water tight.
   4. Where temporary wood or plywood is used, use UL labeled, fire-retardant-treated material for framing and main sheathing.
   5. Temporary closures for specific openings for the contractor to perform their work are the responsibility of Contractor creating the opening and shall be installed to protect building from exterior elements.

K. Temporary Partitions: General Contractor will provide floor-to-ceiling dustproof partitions and fire rated partitions to limit dust, dirt migration, fumes and noise to separate areas occupied by the Owner. All costs associated with partitions and the removal/installation of damaged existing conditions and/or new work shall be borne by the GC. All damaged items shall be replaced in kind.
   1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.
   2. Construct dustproof partitions with 2 layers of 3-mil polyethylene sheet on each side. Cover floor with 2 layers of 3-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant plywood.
      a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.
   3. Insulate partitions to provide noise protection to occupied areas.
   4. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.

5. Protect air-handling equipment.
6. Weather strip openings.
7. Provide walk-off mats at each entrance through temporary partition.

L. Temporary Fire Protection: Each prime contractor until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10, "Standard for Portable Fire Extinguishers," and NFPA 241, "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
   1. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
   2. Prohibit smoking in construction areas.
   3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
   4. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
   5. Store combustible materials in containers in fire-safe locations
   6. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

M. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection system, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

N. Security Enclosure and Lockup: The General Contractor will install substantial temporary enclosure of partially completed areas of construction. Provide temporary doors and locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
   1. Storage: Each prime contractor is responsible at for their materials and equipment to be stored, and are of value or attractive for theft, provide a secure lockup. Coordinate work in connection with the installation and control release of material to minimize the opportunity for theft and vandalism.

3.05 MOISTURE AND MOLD CONTROL

A. Contractor's Moisture-Protection Plan: Each Contractor is to submit a moisture protection plan and avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
   1. Protect porous materials from water damage.
   2. Protect stored and installed material from flowing or standing water.
   3. Keep porous and organic materials from coming into prolonged contact with concrete.
   4. Remove standing water from decks.
   5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Phase: After installation of weather barriers but before Permanent Enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed buildings.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard, replace or clean stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

D. Controlled Construction Phase of Construction: After completing and sealing of the permanent building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use permanent HVAC system to control humidity.
3. Mechanical Contractor is to provide temporary dehumidification and ventilation until the building systems are operational and the spaces are substantially completed.
4. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
   a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
   b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record daily readings over a forty-eight hour period. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
   c. Remove materials that can not be completely restored to their manufactured moisture level in 48 hours.

3.06 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

B. Maintenance: Maintain facilities and good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

C. Operate Project-identification-sign lighting daily from dusk until 12:00 midnight.

D. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

E. Termination and Removal: Unless the Architect requests that it be maintained longer each prime contractor will remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of

interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are the property of each prime contractor.
2. The General Contractor will remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority. The General Construction Contractor will remove any temporary paving that was noted as General Contractor on the phasing drawings or installed to execute the work.

F. At Substantial Completion: Each prime contractor shall repair, renovate, and clean permanent facilities related to their contract used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015001

SECTION 016000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Requirements:
1. Section 012100 "Allowances" for products selected under an allowance.
2. Section 012300 "Alternates" for products selected under an alternate.
3. Section 012500 "Substitution Procedures" for requests for substitutions.
4. Section 012519 “Equivalents” for equivalent products submitted prior to Contract award.
5. Section 014200 "References" for applicable industry standards for products specified.

1.02 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.03 ACTION SUBMITTALS

A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor through Construction Manager of approval or rejection of proposed comparable product request within ten (10) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
a. Form of Approval: As specified in Section 01 3300 "Submittal Procedures."

b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 3300 "Submittal Procedures." Show compliance with requirements.

1.04 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
   1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
   2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:
   1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
   2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
   3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
   4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:
   1. Store products to allow for inspection and measurement of quantity or counting of units.
   2. Store materials in a manner that will not endanger Project structure.
   3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
   4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
   5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
   6. Protect stored products from damage and liquids from freezing.
   7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.06 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
   1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
   1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
   2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
   3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 PRODUCTS

2.01 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
   1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
   2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
   3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
   4. Where products are accompanied by the term "as selected," Architect will make selection.
   5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
   6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:
   1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
   2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
   3. Products:
      a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience **will not** be considered.
      b. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
   4. Manufacturers:
      a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.

Comparable products or substitutions for Contractor's convenience will not be considered.

b. Non-restricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 01 2500 "Substitution Procedures" for proposal of product.

D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.02 EQUIVALENT PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for equivalent product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

B. Refer to specification section 01 2519 Equivalents for additional equivalent product requirements required to be furnished by the contractor prior to execution of the contract.

PART 3 EXECUTION (NOT USED)

END OF SECTION 016000

SECTION 017300
EXECUTION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
   1. Construction layout.
   2. Field engineering and surveying.
   3. Installation of the Work.
   4. Cutting and patching.
   5. Coordination of Owner-installed products.
   6. Progress cleaning.
   7. Starting and adjusting.
   8. Protection of installed construction.

B. Related Requirements:
   1. Division 01 "Summary" for limits on use of Project site.
   2. Division 01 "Submittal Procedures" for submitting surveys.
   3. Division 01 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.02 DEFINITIONS

A. Cutting: Removal of in-place construction, existing or new, necessary to permit installation or performance of other work.

B. Patching: Fitting and repair work required to restore construction to original conditions, existing or new, after installation of other work.

1.03 INFORMATIONAL SUBMITTALS

A. Cutting and Patching Plan: Submit a plan describing procedures, such as exterior envelope modifications or removal of structural elements, at least ten (10) days prior to the time cutting and patching will be performed. Include the following information:
   1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
   2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
   3. Products: List products to be used for patching and firms or entities that will perform patching work.
   4. Dates: Indicate when cutting and patching will be performed.
   5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
      a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.

B. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.04 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
   1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection, unless directed by the Architect.
   2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
      a. Primary operational systems and equipment.
      b. Fire separation assemblies.
      c. Air or smoke barriers.
      d. Fire-suppression systems.
      e. Mechanical systems piping and ducts.
      f. Control systems.
      g. Communication systems.
      h. Fire-detection and -alarm systems.
      i. Electrical wiring systems.
      j. Operating systems of special construction.
   3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
      a. Water, moisture, or vapor barriers.
      b. Membranes and flashings.
      c. Exterior curtain-wall construction.
      d. Sprayed fire-resistive material.
      e. Equipment supports.
      f. Piping, ductwork, vessels, and equipment.
   4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 PRODUCTS

2.01 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible. Materials shall be of the same quality, make and workmanship as installed or better.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Submit to Architect for approval per Section 012500 "Substitution Procedures".

PART 3 EXECUTION

3.01 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities**,** mechanical and electrical systems and other construction affecting the Work.
   1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
   2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
   1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
   2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
   3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
   1. Description of the Work.
   2. List of detrimental conditions, including substrates.
   3. List of unacceptable installation tolerances.
   4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.02 PREPARATION

A. Existing Utility Information: Furnish information to owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with architect and authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

3.03 INSTALLATION

A. General: Cutting & patching shall be by the contractor performing the work requiring it, unless otherwise noted.

B. The General Construction Contractor shall provide the sawcutting, trenching, backfill, for all underground plumbing work. The GC shall also provide the concrete slab on grade, and complete finishes restoration. The Plumbing construction contractor shall provide all layout and elevations required for its work. Includes shimming and fine grading for setting of their piping.

C. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
   1. Make vertical work plumb and make horizontal work level.
   2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
   3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
   4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.

D. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

E. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

F. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

G. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

H. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

I. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

J. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
   1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
   2. Allow for building movement, including thermal expansion and contraction.
   3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

K. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

L. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.04 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
   1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original or new condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 1000 "Summary."

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
   1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
   3. Cutting and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
   4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
   5. Proceed with patching after construction operations requiring cutting are complete.
   6. Provide a work plan when cutting any item with silica present. OSHA guidelines for Silica must be followed.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
   1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
   a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
   b. Restore damaged pipe covering to its original condition.
3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.05 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
   1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
   2. Do not hold waste materials for more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
   3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
      a. Use containers intended for holding waste materials of type to be stored.
   4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
   1. Remove liquid spills promptly.
   2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 5001 "Temporary Facilities and Controls-Multiple Prime Contracts"

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.06 STARTING AND ADJUSTING

A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."

B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

E. Manufacturer's Field Service: Comply with qualification requirements in Section 01 4000 "Quality Requirements."

3.07 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturers' written instructions for temperature and relative humidity.

END OF SECTION 017300

This page intentionally left blank

SECTION 017700
CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
   1. Substantial Completion procedures.
   2. Final completion procedures.
   3. Warranties.
   4. Final cleaning.
   5. Repair of the Work.

B. Related Requirements:
   1. Section 017300 "Execution" for progress cleaning of Project site.
   2. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
   3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
   4. Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.02 ACTION SUBMITTALS

A. Product Data: For cleaning agents.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.03 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

1.04 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete. **The Architect will not perform a punch list inspection until the contractor's punch list is received and reviewed.**

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 30 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
   1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
   2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.

3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Construction Manager. Label with manufacturer's name and model number where applicable.
    a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Construction Manager's signature for receipt of submittals.
5. Submit test/adjust/balance records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 30 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Complete startup and testing of systems and equipment
3. Submit test/adjust/balance records.
4. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
5. Perform preventive maintenance on equipment used prior to Substantial Completion. Complete startup testing of systems.
6. Touch up paint and otherwise repair and restore damaged finishes.
7. Complete final cleaning requirements, including touchup painting

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 30 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
    a. **The Architects basic services include (1) initial punch list and (1) follow-up punch list inspection to ensure all corrective action and or incomplete work has been finished. The Contractor is responsible to the Owner for all costs incurred by the Architect for additional services to provide multiple punch lists for the same work area. The cost for these additional services, may be deducted from the Contractors Contract by deduct Change Order.**
2. Results of completed inspection will form the basis of requirements for final completion.

1.05 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Section 01 2900 "Payment Procedures."

2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirments.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Advise Owner of pending insurance changeover requirements.
6. Advise Owner of changeover in heat and other utilities.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
10. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
11. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
12. Prepare and submit Project Record Documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.

B. Inspection: Submit a written request for final inspection to determine acceptance, a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect and/or Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
   1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.06 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.
   1. Organize list of spaces in sequential order.
   2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
   3. Include the following information at the top of each page:
      a. Project name.
      b. Date
      c. Name of Architect and Contruction Manager
      d. Name of Contractor.
      e. Page number.
   4. Submit list of incomplete items in the following format:

a. PDF electronic file. Architect , through Construction Manager**,** will return annotated file.

1.07 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within fifteen (15) days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
   1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
   2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
   3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
   4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 PRODUCTS

2.01 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 EXECUTION

3.01 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and anti-pollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
   1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
      a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
      b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
      c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.

d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Sweep concrete floors broom clean in unoccupied spaces.
i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
k. Remove labels that are not permanent.
l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
    1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
q. Leave Project clean and ready for occupancy.

C. Construction Waste Disposal: Comply with waste disposal requirements in Section 015001 "Temporary Facilities and Controls."

3.02 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
    1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
    2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show eidence of repair or restoration.
        a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in flourescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017823
OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
   1. Operation and maintenance documentation directory.
   2. Emergency manuals.
   3. Operation manuals for systems, subsystems, and equipment.
   4. Product maintenance manuals.
   5. Systems and equipment maintenance manuals.

B. Related Requirements:
   1. Section 011200 "Multiple Contract Summary" for coordinating operation and maintenance manuals covering the Work of multiple contracts.
   2. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
   3. Section 019113 "General Commissioning Requirements" for verification and compilation of data into operation and maintenance manuals.
   4. Divisions 02 through 49 Sections for any specific closeout requirements for the Work in those Sections.

1.02 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.03 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
   1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
   2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operations and maintenance manuals in the following format:
   1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
      a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
      b. Enable inserted reviewer comments on draft submittals.
   2. After approval of digital copy submit **Two** paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two copies.

C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.

D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
   1. Correct or revise each manual to comply with Architect comments. Submit copies of each corrected manual within 15 days of receipt of Architect comments and prior to commencing demonstration and training.

PART 2 PRODUCTS

2.01 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
   1. List of documents.
   2. List of systems.
   3. List of equipment.
   4. Table of contents.

B. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
   1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
   2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

C. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.02 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
   1. Title page.
   2. Table of contents.
   3. Manual contents.

B. Title Page: Include the following information:
   1. Subject matter included in manual.
   2. Name and address of Project.
   3. Name and address of Owner.
   4. Date of submittal.
   5. Name and contact information for Contractor.
   6. Name and contact information for Construction Manager.
   7. Name and contact information for Architect.

8. Name and contact information for Commissioning Authority.
9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
10. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
   1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
   1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
   2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
   1. Binders: Heavy-duty, three-ring, vinyl-covered, loose leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
      a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
      b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name. Indicate volume number for multiple-volume sets.
   2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
   3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
   4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
   5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
      a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.

b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.03 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:
1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

D. Emergency Procedures: Include the following, as applicable:
1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

2.04 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.

2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed and identify color-coding where required for identification.

2.05 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Product Information: Include the following, as applicable:
1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
   1. Include procedures to follow and required notifications for warranty claims.

2.06 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
   1. Standard maintenance instructions and bulletins.
   2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
   3. Identification and nomenclature of parts and components.
   4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
   1. Test and inspection instructions.
   2. Troubleshooting guide.
   3. Precautions against improper maintenance.
   4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
   5. Aligning, adjusting, and checking instructions.
   6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
   1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
   2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
   1. Include procedures to follow and required notifications for warranty claims.

PART 3 EXECUTION

3.01 MANUAL PREPARATION

A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.

B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
   1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
   2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
   1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
   1. Do not use original project record documents as part of operation and maintenance manuals.
   2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."

G. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

This page intentionally left blank

SECTION 017839
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for project record documents, including the following:
   1. Record Drawings.
   2. Record Specifications.
   3. Record Product Data.
   4. Miscellaneous record submittals.

B. Related Requirements:
   1. Division 01 "Execution" for final property survey.
   2. Division 01 "Closeout Procedures" for general closeout procedures.
   3. Division 01 "Operation and Maintenance Data" for operation and maintenance manual requirements.
   4. Divisions 02 through 49 Sections for specific requirements for project record documents of the Work in those Sections.

1.02 CLOSEOUT SUBMITTAL

A. Record Drawings: Comply with the following:
   1. Number of Copies: Submit copies of record Drawings as follows:
      a. Initial Submittal:
         1) Submit PDF electronic files of scanned record prints.
      b. Final Submittal:
         1) Submit PDF electronic files of scanned record prints and two (2) sets of prints.
         2) Print each drawing, whether or not changes and additional information were recorded.

B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.

C. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.
   1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.

E. Reports: Submit written report weekly indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

1.03 RECORD DRAWINGS

A. Record Drawings: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
   1. Preparation: Mark record drawings to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
b. Accurately record information in an acceptable drawing technique.
c. Record data as soon as possible after obtaining it.
d. Record and check the markup before enclosing concealed installations.
e. Cross-reference record prints to corresponding archive photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:
a. Dimensional changes to Drawings.
b. Revisions to details shown on Drawings.
c. Locations and depths of underground utilities.
d. Revisions to routing of piping and conduits.
e. Revisions to electrical circuitry.
f. Actual equipment locations.
g. Duct size and routing.
h. Locations of concealed internal utilities.
i. Changes made by Change Order or Constructive Change Directive.
j. Changes made following Architect's written orders.
k. Details not on the original Contract Drawings.
l. Field records for variable and concealed conditions.
m. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record drawings with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
1. Format: Annotated PDF electronic file with comment function enabled.
2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
3. Refer instances of uncertainty to Architect for resolution.
4. Architect will furnish Contractor one set of digital data PDF files of the Contract Drawings for use in recording information.
a. See Section 013300 "Submittal Procedures" for requirements related to use of Architect's digital data files.
b. Architect will provide data file layer information. Record markups in separate layers.

C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Format: Submit record Drawings as annotated PDF electronic file.

3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. name each file with the sheet identification. Include identification in each digital data file.
4. Identification: As follows:
   a. Project name.
   b. Date.
   c. Designation "PROJECT RECORD DRAWINGS".
   d. Name of Architect.
   e. Name of Contractor.

1.04 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
   1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
   2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
   3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
   4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
   5. Note related Change Orders , record Product Data, and record Drawings where applicable.

1.05 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
   1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
   2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
   3. Note related Change Orders and record Drawings where applicable.

B. Format: Submit record Product Data as annotated PDF electronic file.
   1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

1.06 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Format: Submit miscellaneous record submittals as PDF electronic file.
   1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 2 PRODUCT (NOT USED)

PART 3 EXECUTION

3.01 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 017900
DEMONSTRATION AND TRAINING

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
   1. Demonstration of operation of systems, subsystems, and equipment.
   2. Training in operation and maintenance of systems, subsystems, and equipment.
   3. Demonstration and training video recordings.

1.02 INFORMATIONAL SUBMITTALS

A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
   1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.

B. Qualification Data: For instructor.

C. Attendance Record: For each training module, submit list of participants and length of instruction time.

D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.03 CLOSEOUT SUBMITTALS

A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
   1. Identification: On each copy, provide an applied label with the following information:
      a. Name of Project.
      b. Name and address of videographer.
      c. Name of Architect.
      d. Name of Construction Manager.
      e. Name of Contractor.
      f. Date of video recording.
   2. Transcript: Prepared in PDF electronic format. Include a cover sheet with same label information as the corresponding video recording and a table of contents with links to corresponding training components. Include name of Project and date of video recording on each page.
   3. At completion of training, submit complete training manual(s) for Owner's use prepared and bound in format matching operation and maintenance manuals**.**

1.04 QUALITY ASSURANCE

A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.

B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.

C. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
   1. Inspect and discuss locations and other facilities required for instruction.
   2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
   3. Review required content of instruction.
   4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.05 COORDINATION

A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.

B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

1.06 INSTRUCTION PROGRAM

A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.

B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
   1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
      a. System, subsystem, and equipment descriptions.
      b. Performance and design criteria if Contractor is delegated design responsibility.
      c. Operating standards.
      d. Regulatory requirements.
      e. Equipment function.
      f. Operating characteristics.
      g. Limiting conditions.
      h. Performance curves.
   2. Documentation: Review the following items in detail:
      a. Emergency manuals.
      b. Operations manuals.
      c. Maintenance manuals.
      d. Project record documents.
      e. Identification systems.
      f. Warranties and bonds.
      g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:
   a. Instructions on meaning of warnings, trouble indications, and error messages.
   b. Instructions on stopping.
   c. Shutdown instructions for each type of emergency.
   d. Operating instructions for conditions outside of normal operating limits.
   e. Sequences for electric or electronic systems.
   f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
   a. Startup procedures.
   b. Equipment or system break-in procedures.
   c. Routine and normal operating instructions.
   d. Regulation and control procedures.
   e. Control sequences.
   f. Safety procedures.
   g. Instructions on stopping.
   h. Normal shutdown instructions.
   i. Operating procedures for emergencies.
   j. Operating procedures for system, subsystem, or equipment failure.
   k. Seasonal and weekend operating instructions.
   l. Required sequences for electric or electronic systems.
   m. Special operating instructions and procedures.
5. Adjustments: Include the following:
   a. Alignments.
   b. Checking adjustments.
   c. Noise and vibration adjustments.
   d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
   a. Diagnostic instructions.
   b. Test and inspection procedures.
7. Maintenance: Include the following:
   a. Inspection procedures.
   b. Types of cleaning agents to be used and methods of cleaning.
   c. List of cleaning agents and methods of cleaning detrimental to product.
   d. Procedures for routine cleaning
   e. Procedures for preventive maintenance.
   f. Procedures for routine maintenance.
   g. Instruction on use of special tools.
8. Repairs: Include the following:
   a. Diagnosis instructions.
   b. Repair instructions.
   c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
   d. Instructions for identifying parts and components.
   e. Review of spare parts needed for operation and maintenance.

1.07 PREPARATION

A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."

B. Set up instructional equipment at instruction location.

1.08 INSTRUCTION

A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.

B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
   1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
   2. Owner will furnish an instructor to describe Owner's operational philosophy.
   3. Owner will furnish Contractor with names and positions of participants.

C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
   1. Schedule training with Owner **through Construction Manager,** with at least seven days' advance notice.

D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

E. **Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.**

F. **Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.**

1.09 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
   1. At beginning of each training module, record each chart containing learning objective and lesson outline.

B. Video: Provide minimum 1080 video resolution converted to format file type acceptable to Owner, on electronic media.
   1. Electronic Media: Read-only format compact disc with commercial-grade graphic label or flash drive as acceptable to Owner,
   2. File Hierarchy: Organize folder structure and file locations according to project manual table of contents. Provide complete screen-based menu.
   3. File Names: Utilize file names based upon name of equipment generally described in video segment, as identified in Project specifications.
   4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the Equipment Demonstration and Training DVD that describes the following for each Contractor involved on the Project, arranged according to Project table of contents:
      a. Name of Contractor/Installer.

b. Business address.
c. Business phone number.
d. Point of contact.
e. E-mail address.

C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.
1. Film training session(s) in segments not to exceed 15 minutes.
a. Produce segments to present a single significant piece of equipment per segment.
b. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.
c. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause training session. Begin training session again upon commencement of new filming segment.

D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.
1. Furnish additional portable lighting as required.

E. Narration: Describe scenes on video recording by audio narration by microphone while or dubbing audio narration off-site after video recording is recorded. Include description of items being viewed.

F. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.

G. Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

END OF SECTION 017900

SECTION 020800
ASBESTOS ABATEMENT PROCEDURES

PART I – GENERAL

1.01 DESCRIPTION

A. All work under this contract shall be performed in strict accordance with the specifications and all applicable laws for asbestos removal projects. The Abatement Contractor shall furnish all labor, materials, supervision, services, insurance and equipment necessary for the complete and total removal of Asbestos-containing Materials (ACM) as described herein, in attachments to the specification, Job Specific Variance(s) and/or as directed by Pine Bush CSD (here-in-after the "Owner") and/or the Owners Representative(s) to support the ***Pine Bush CSD – 2025 CIP Phase 2.***

B. Abatement Contractor shall provide for personnel air monitoring to satisfy OSHA regulation 29 CFR Parts 1926.1101(f). All work performed shall be in strict accordance with applicable provisions and regulations promulgated under New York State Department of Labor, Industrial Code 56 (ICR-56).

C. The Abatement Contractor shall satisfy the requirements for asbestos projects issued by the New York State Department of Labor concerning licensing and certification; notification; equipment; removal and disposal procedures; engineering controls; work area preparation; decontamination and clean-up procedures; and personnel air monitoring.

D. The Abatement Contractor shall be responsible for submittal of asbestos project notification(s) and applicable fees to EPA and NYSDOL concerning this project. Project notification(s) shall be made for the cumulative total of ACM to be removed as required by ICR-56-3.4. Work practices for each individual work area established shall be consistent with the quantity of ACM contained within that work area as defined in ICR-56-2.

E. The scope of work under this contract shall include the following:

1. All asbestos-containing materials (ACM) shall be removed in accordance with these specifications. The Abatement Contractor is responsible for field verification of estimated quantities, locations and other site conditions that may affect work.

2. All fixed objects remaining within the work area(s) shall be protected as required by Title 12 NYCRR Section 56-7.10(b) and as described in these specifications.

3. The containerization, labeling and disposal of all asbestos waste in accordance with applicable city, state and federal regulations and these specifications.

4. The Abatement Contractor will be responsible for repairing all building components damaged during abatement including, but not limited to, ceiling tiles, ceiling finishes, wall finishes and/or floor finishes, etc.

5. The Abatement Contractor shall be responsible for any and all demolition required to access materials identified in scope of work and on associated drawings.

6. Concealed conditions that are exposed and may require additional work shall be brought to the attention of the Owner(s) immediately. The Abatement Contractor shall not abate these

areas without a written notice to proceed. If the Abatement Contractor removes additional asbestos prior to the order to proceed the additional work will not be acknowledged.

7. Permissible working hours shall be Monday through Friday 7:00 A.M. to 4:00 P.M. and/or as defined by the Owner(s) and/or Owner's Representative(s). Holidays shall be considered weekends and not included for working days. Upon written approval from the Owner, the Abatement Contractor may work past these hours. The Abatement Contractor will incur any and all costs associated for work performed beyond the defined schedule including, but not limited to: abatement activities, project/air monitoring, custodial/staffing labor, overtime, mobilizations, etc.

8. Buildings will be turned over to the Abatement Contractor as is. At that time, all electrical services and HVAC systems in the proposed work areas will be shut down. Electricity and water supply will be maintained in the building for use by the Abatement Contractor. The Abatement Contractor is responsible for securing all power in the work area(s) and establishing all temporary GFCI hookups necessary to complete his work.

9. The Abatement Contractor shall remove all identified Asbestos-containing Materials (ACM) to building substrate(s); in areas indicted. Subsequent to final air clearances, the substrate(s) shall be washed with a neutralizing agent to prepare the substrate to accept new floor covering and eliminate residual odors.

10. The Abatement Contractor must coordinate location of waste containers with the Facility and the Owner. Deliveries and storage of equipment must be coordinated with the Facility and the Owner.

11. All "Large" and "Small" asbestos abatement projects, as defined by 12 NYCRR56 shall not be performed while the building is occupied. The term "building" means a wing or major section of a building that can be completely isolated from the rest of the building with sealed non-combustible construction. The isolated portion of the building must contain exits that do not pass through the occupied portion(s) and ventilation systems must be physically separated and sealed at the isolation barriers.

1.02 PRE-CONTRACT SUBMITTALS

Within three (3) days after bids are opened, the three (3) apparent low bidders shall be required to submit the following documentation:

A. Resume': Shall include the following:

1. Provide a list of projects of similar nature performed within the past two (2) years and include the dollar value of all projects. Provide project references to include owner, consultant, and air monitoring firms' name, contact person, address, and phone number, include location of project and date of completion.
2. Abatement Contractor license issued by New York State Department of Labor for asbestos work in accordance with ICR-56-3.

3. A list of owned equipment available to be used in the performance of the project.

4. The number of years engaged in asbestos removal.

5. An outline of the worker training courses, and medical surveillance program conducted by the

Abatement Contractor.

6. A standard operating procedures manual describing work practices and procedures, equipment, type of decontamination facilities, respirator program, special removal techniques, etc.

7. Documentation to the satisfaction of the Owner pertaining to the Abatement Contractor's financial resources available to perform the project. Such data shall include, but not be limited to, the firm's balance sheet for the last fiscal year.

B. Citations/Violations/Legal Proceedings

1. Submit a notarized statement describing any citations, violations, criminal charges, or legal proceedings undertaken or issued by any law enforcement, regulatory agency, or consultant concerning performance on previous asbestos abatement contracts. Briefly describe the circumstances citing the project and involved persons and agencies as well as the outcome of any actions.

2. Answer the question: "Has your firm or its agents been issued a Stop Work order on any project within the last two years?" If "Yes" provide details as discussed above.

3. Answer the question: "Are you now, or have you been in the past, a party to any litigation or arbitrations arising out of your performance on Asbestos Abatement Contracts?" If "Yes" provide details as discussed in 1. above.

4. Describe any liquidated damages assessed within the last two years.

C. Preliminary Schedule

1. Provide a detailed schedule including work dates, work shift times, estimate of manpower to be utilized and the start and completion date for completion of each major work area.

1.03 DOCUMENTATION

A. The Abatement Contractor shall be required to submit the following and receive the Consultant's approval prior to commencing work on this project:

1. Provide documentation of worker training for each person assigned to the project. Documentation shall include copies of each workers valid New York State asbestos handler certificates (for those employees who may perform asbestos removal), documentation of current respirator fit test and current OSHA required training and medical examination.

2. The attached "Asbestos Employee Medical Examination Statement" and "Asbestos Employee Training Statement" forms shall be completed, signed and submitted for each worker assigned to the project. Records of all employee training and medical surveillance shall be maintained for at least forty (40) years. Copies of the records shall be submitted to the Consultant prior to commencement.

3. The Abatement Contractor shall submit proof of a current, valid license issued by the New York State Department of Labor pursuant to the authority vested in the Commissioner by section 906 of the Labor Laws, and that the employees performing asbestos related work on this project are certified by the State of New York as required in Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York latest edition. Copies of all licenses shall

be submitted prior to the commencement of the project.

4. The Abatement Contractor shall submit a written respiratory protection program meeting the requirements of 29 CFR 1910.134 to the Consultant.

5. The name, address, social security number and NYS DOL certificate number of the person(s) who will supervise the asbestos project.

6. The name and address of the deposit or waste disposal site or sites where the asbestos materials are to be deposited or disposed of. This site must be approved by the Owner. The manifesting procedure must also be specified.

7. The name, address and New York State Dept. of Environmental Conservation ID Number of any transporters that are to be used to transport waste.

8. A written Standard Operation Procedure (SOP) that is designed and implemented to maximize protection against human exposure to asbestos dust. The SOP shall take into consideration the workers, visitors, building employees, general public and environment. As a minimum the procedures must include the following:

   a. Security for all work areas on an around-the-clock basis against unauthorized access.

   b. Project organization chart including the phone numbers of at least two responsible persons who shall be authorized to dispatch men and equipment to the project in the event of an emergency; including weekends.

   c. Description of protective clothing and NIOSH approved respirators to be used.

   d. Description of all removal methods to be used, including HEPA air filtration and decontamination sequence with special emphasis on any procedure that may deviate from these specifications.

   e. A list of manufacturers' certificates stating that all vacuums, negative air filtration equipment, respirators and air supply equipment meet OSHA and EPA requirements.

   f. A list of all materials proposed to be furnished and used under this contract.

   g. Emergency evacuation procedures in the event of fire, smoke or accidents such as injury from falling, heat exposure, electrical shock, etc.

   h. The name, address and ELAP number of the New York State Department of Health Certified Analytical Testing Laboratory the Contractor proposes to use for the OSHA monitoring.

9. A detailed plan, in triplicate, for the phasing of the project, division of work areas and location of decontamination facilities, waste containers and temporary office.

10. Work schedule, identifying firm dates and completion for actual areas. Bar chart or critical path chart indicating phases is required.

B. The Abatement Contractor shall post their NYS DOL contractor's license and maintain a daily log documenting the dates and time of the following items within each personal decontamination unit:

1. Meetings; purpose, attendants, discussion (brief)

2. Sign-in and sign-out of all persons entering the work area including name, date, time, social security number, position or function and general description of daily activity.

3. Testing of barriers and enclosure systems using smoke tubes prior to the beginning of abatement activities and at least once a day thereafter until satisfactory clearance air monitoring results have been achieved.

4. Inspection of all plastic barriers, twice daily, by the asbestos supervisor.

5. Loss of enclosure integrity; special or unusual events, barrier breaches, equipment failures, etc.

6. Daily cleaning of enclosures.

7. Personnel air monitoring test results for OSHA Compliance. Results shall be posted at the work site within 24 hours of testing and copies supplied to the Owner within five (5) days of testing. Abnormalities shall be supplied to the Owner immediately.

C. Documentation with confirmation signature of Consultant's representative of the following shall be provided by the Abatement Contractor at the final closeout of the project.

1. Testing of barriers and enclosure systems using smoke tubes shall be performed prior to the beginning of abatement activities and at least once a day thereafter until satisfactory clearance air monitoring results have been achieved.

2. Inspection of all plastic barriers.

3. Removal of all polyethylene barriers.

4. Consultant's inspections prior to encapsulation.

5. Removal of waste materials.

6. Decontamination of equipment (list items).

7. Consultant's final inspection/final air tests.

D. The Abatement Contractor shall provide records of all project information, to include the following which shall be submitted upon completion of the project and prior to approval of the Abatement Contractor's payment application:

1. The location and description of the abatement project.

2. The name, address and social security number of the person(s) who supervised the asbestos project.

3. Certified payroll documentation Pursuant to Article 8, Section 220 of the NYS Labor Law

4. Copies of EPA/NYSDOL Asbestos Certificates for all Workers and Supervisors employed on the Project.

5. Copies of Medical Approval and Respirator Fit Testing for all Asbestos Workers and Supervisors employed on the Project.

6. Copies of Abatement Contractors Daily Sign-In Sheets & Logs for persons entering and leaving the work area. – Title 12 NYCRR Part 56-7.3.

7. Copies of Abatement Contractor's personal air sampling laboratory results.

8. The amounts and type of asbestos materials that was removed, enclosed, encapsulated, or disturbed.

9. The name and address of the deposit or waste disposal site or sites where the asbestos waste materials were deposited or disposed of and all related manifests, receipts and other documentation associated with the disposal of asbestos waste.
10. The name and address of any transporters used to transport waste and all related manifests, receipts and other documentation associated with the transport of asbestos waste.

11. All other information that may be required by state, federal or local regulations.

12. Copy of the Supervisor's Daily Project Log of events as described in 1.03 B, above.

1.04 NOTIFICATIONS AND PERMITS

A. The Abatement Contractor shall be required to prepare and submit notifications to the following agencies at least ten (10) days prior to the commencement of the project:

1. Asbestos NESHAPS Contact
   U.S. Environmental Protection Agency
   NESHAPS Coordinator, Air Facilities Branch
   26 Federal Plaza
   New York, New York 10007
   (212) 264-7307

2. State of New York Department of Labor
   Division of Safety and Health
   Asbestos Control Bureau
   State Office Building Campus, Building 12, Room 454
   Albany, New York 12240

3. Owner(s): Pine Bush CSD
   156 Route 302
   Pine Bush, NY 12566
   ATTN: Jonathan Muro, Assistant Director of Facilities III
   Ph. (845) 744-2031 X3053
   E-mail. jonathan.muro@pinebushschools.org

4. Environmental Consultant(s): Quality Environmental Solutions & Technologies, Inc. (QuES&T)
   1376 Route 9
   Wappingers Falls, New York 12590
   ATTN: Rudy Lipinski, Director of Field Operations
   Ph. (845) 298-6031
   Fx. (845) 298-6251

E-mail. rlipinski@qualityenv.com

B. The notification shall include but not be limited to the following information:

1. Name and address of Owner.

2. Name, address and asbestos handling license number of the Abatement Contractor.

3. Address and description of the building, including size, age, and prior use of the building or area; the amount, in square feet or linear feet of asbestos material to be removed; room designation numbers or other local information where asbestos material is found, including the type of asbestos material (friable or non-friable).

4. Scheduled starting and completion dates for removal.

5. Methods to be employed in abating asbestos containing materials.

6. Procedures and equipment, including ventilating/exhaust systems, that will be employed to comply with the Code of Federal Regulation (CFR) Title 40, Part 61 of the U.S. Environmental Protection Agency.

7. The name and address of the carting company and of the waste disposal site where the asbestos waste will be deposited.

NOTE: Notifications shall be submitted using standard forms as may be used by the respective agency.
For DOL (NYS) include "Asbestos Project Notification" form (DOSH-483) with proper fee, if required.
For EPA include "Notification of Demolition and Renovation"; 40 CFR Part 61.

C. The Abatement Contractor shall secure any permits required by the city, town, county, or state that may be required and the cost for obtaining the permit shall be included in his base bid.

D. The Abatement Contractor shall erect warning signs around the work space at every point of potential entry into the work area in accordance with OSHA 1926.58k (2), (i). These signs shall bear the following information:

DANGER

CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING
ARE REQUIRED IN THIS AREA

E. The Abatement Contractor shall post at entrances to the work place and immediate adjacent areas, notifications to building occupants which include the name and license number of the contractor, project location and size, amount and type of ACM, abatement procedures, dates of expected occurrence and name and address of the air monitor and laboratory in compliance with ICR 56-3.6.

F. The Abatement Contractor shall post a list of emergency telephone numbers at the job site which

shall include the Owner's Representative, police, emergency squad, local hospital, Environmental Protection Agency, N.Y. State Department of Labor, Occupational Safety and Health Administration and the local Department of Health.

1.05 APPLICABLE STANDARDS

Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, applicable standards of the construction industry have the same force and effects (and are made a part of contract documents by reference) as if copied directly into contract documents, or as if published copies were bound herewith. Resolution of overlapping and conflicting requirements, which result from the application of several different industry standards to the same unit of work, shall be by adherence to the most stringent requirement.

A. Applicable standards listed in these Specifications form a part of this Specification and include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:

1. ANSI:
   American National Standards Institute
   1430 Broadway
   New York, New York 10018

2. ASHRAE:
   American Society for Heating, Refrigerating
   and Air Conditioning Engineers
   1791 Tullie Circle NE
   Atlanta, Georgia 30329

3. ASTM:
   American Society for Testing and Materials
   1916 Race Street
   Philadelphia, Pennsylvania 19103

4. CFR
   Code of Federal Regulations Available
   from Government Printing Office
   Washington, District of Columbia 20402

5. CGA
   Compressed Gas Association
   1235 Jefferson Davis Highway
   Arlington, Virginia 22202

6. CS
   Commercial Standard of NBS
   (US Dept. of Commerce)
   Government Printing Office

7. EPA
   Environmental Protection Agency, Region II
   26 Federal Plaza
   New York, New York 10007
   Asbestos Coordinator - Room 802
   (212) 264-9538

Part 61, Sub-Parts A & B
National Emission Standard for Asbestos

8. FEDERAL SPECS
   Federal Specification (General Services Administration)
   7th and D Street, SW
   Washington, District of Columbia 20406

9. NBS
   National Bureau of Standards
   (US Department of Commerce)
   Gaithersburg, Maryland 20234

10. NEC
    National Electrical Code (by NFPA)

11. NFPA
    National Fire Protection Association
    Batterymarch Park
    Quincy, Massachusetts 02269

12. NIOSH
    National Institute for Occupational Safety and Health
    26 Federal Plaza
    New York, New York 10007

13. NYSDOH
    New York State Department of Health
    Bureau of Toxic Substance Assessment
    Room 359 - 3rd Floor
    Tower Building Empire State Plaza
    Albany, New York 12237

14. NYSDEC
    New York State Department of Environmental Conservation
    Room 136
    50 Wolf Road
    Albany, New York 12233-3245

15. NYSDOL
    State of New York Department of Labor
    Division of Safety and Health
    Asbestos Control Program
    State Campus
    Building 12
    Albany, New York 12240

16. OSHA
    Occupational Safety and Health Administration
    (US Department of Labor)
    New York Regional Office - room 3445
    1515 Broadway

New York, New York 10036

17. UL

Underwriters Laboratories
333 Pfingsten Road
Northbrook, Illinois 60062

B. Federal Regulations: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:

1. U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA):

a. Asbestos Regulations
Title 29, Part 1910, of the Code of Federal Regulations.

b. Respiratory Protection
Title 29, Part 1910, Section 134 of the Code of Federal Regulations.

c. Construction Industry
Title 29, Part 1926, of the Code of Federal Regulations.

d. Access to Employee Exposure & Medical Records
Title 29, Part 1910, Section 20 of the Code of Federal Regulations.

e. Hazard Communication
Title 29, Part 1910, Section 1200 of the Code of Federal Regulations.

f. Specifications for Accident Prevention Signs and Tags
Title 29, Part 1910, section 145 of the Code of Federal Regulations.

2. U.S. Environmental Protection Agency (EPA):

a. Asbestos Hazard Emergency Response Act (AHERA) Regulation Asbestos Containing Materials in Schools Final Rule & Notice Title 40, Part 763, Subpart E of the Code of Federal Regulations.

b. Worker Protection Rule
40 CFR Part 763, Subpart G, CPTS 62044, FLR 2843-9
Federal Register, Vol. 50, No. 134, 7/12/85, P28530-28540

c. Regulation for Asbestos
Title 40, Part 61, Subpart A of the Code of Federal Regulations

d. National Emission Standard for Asbestos
Title 40, Part 61, Subpart M (Revised Subpart B) of the Code of Federal Regulations

e. Resource Conservation and Recovery Act (RCRA) 1976, 1980
Hazardous and Solid Waste Amendments (HSWA) 1984
Subtitle D, Subtitle C

3. U.S. Department of Transportation (DOT):

a. Hazardous Substances: Final Rule Regulation 49 CFR, Part 171 and 172.

C. State Regulations: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:

1. New York State Department of Environmental Conservation (DEC) Regulations regarding waste collection registration. Title 6, Part 364 of the New York State Official Compilation of Codes, Rules and Regulations - 6NYCRR 364.

2. New York State Right-To-Know Law

3. New York State Department of Labor Asbestos Regulations Industrial Code Rule 56.

4. New York State Department of Health, Title 10 Part 73 Asbestos Safety Program Requirements.

D. Standards: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:

1. American National Standards Institute (ANSI)

a. Fundamentals Governing the Design and Operation of Local Exhaust Systems Publication Z9.2-79

b. Practices for Respiratory Protection Publication Z88.2-80

E. Guidance Documents: Those that discuss asbestos abatement work or hauling, and disposal of asbestos waste materials are listed below only for the Abatement Contractor's information. These documents do not describe the work and are not a part of the work of this contract.

EPA:

1. Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book) EPA560/5-85-024.

2. Asbestos Waste Management Guidance EPA 530-SW-85-007.

F. Patents and Royalties: The Abatement Contractor shall pay all royalties and/or license fees. The Abatement Contractor shall defend all suits and claims for infringement of any patent rights and save the Owner and Consultant harmless from loss including attorney fees on account thereof.

1.06 DEFINITIONS

As used in or in connection with these specifications the following are terms and definitions.

Abatement - Procedure to control release from asbestos material. This includes removal, encapsulation and enclosure.

Aggressive sampling - A method of sampling in which the person collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.

AIHA - The American Industrial Hygiene Association, 475 Wolf Ledges Parkway, Akron, Ohio 44311.

Airlock - A system for permitting entrance and exit while restricting air movement between a containment area and an uncontaminated area. It consists of two curtained doorways separated by a distance of at least three feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.

Air sampling - The process of measuring the content of a known volume of air collected during a specific period of time.

Amended water - Water to which a surfactant has been added.

Approved asbestos safety program - A program approved by the Commissioner of Health providing training in the various disciplines that may be involved in an asbestos project.

Area air sampling - Any form of air sampling or monitoring where the sampling device is placed at some stationary location.

Asbestos - Any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cumingtonite-gunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.

Asbestos contract - An oral or written agreement contained in one or more documents for the performance of work on an asbestos project and includes all labor, goods and service.

Asbestos handler - An individual who installs, removes, applies, encapsulates, or encloses asbestos or asbestos material, or who disturbs friable asbestos. Only individuals certified by NYS Department of Labor shall be acceptable for work under this specification.

Asbestos handling certificate - A certificate issued by the Commissioner of Labor of the State of New York, to a person who has satisfactorily completed an approved asbestos safety program.

Asbestos project - Work undertaken by a contractor which involves the installation, removal, encapsulation, application or enclosure of any ACM or the disturbance of friable ACM.

Asbestos Safety Technician (AST) - Individual designated to represent the Consultant, perform third party monitoring and perform compliance monitoring at the job site during the asbestos project.

Asbestos waste material - Asbestos material or asbestos contaminated objects requiring disposal.

Authorized visitor - The building owner, his or her representative or any representative of a regulatory or other agency having jurisdiction over the project.

Background level monitoring - A method used to determine ambient airborne concentrations inside and outside of a building or structure prior to starting an abatement project.

Building owner - The person in whom legal title to the premises is vested unless the premises are held in land trust, in which instance Building Owner means the person in whom beneficial title is vested.

Clean room - An uncontaminated area or room that is a part of the personal decontamination enclosure with provisions for storage of persons' street clothes and protective equipment.

Cleanup - The utilization of HEPA vacuuming to control and eliminate accumulations of asbestos material and asbestos waste material.

Clearance air monitoring - The employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers upon conclusion of an asbestos abatement project.

Commissioner - Commissioner of the New York State Department of Labor.

Contractor - A company, unincorporated association, firm, partnership or corporation and any owner or operator thereof, which engages in an asbestos project or employs persons engaged in an asbestos project.

Curtained doorway - A device that consists of at least three overlapping sheets of plastic over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and the left side. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.

Decontamination enclosure system - A series of connected rooms, separated from the work area and from each other by air locks, for the decontamination of persons, materials, equipment, and authorized visitors.

Encapsulant (sealant) or encapsulating agent - A liquid material that can be applied to asbestos material and which prevents the release of asbestos from the material by creating a membrane over the surface.

Enclosure - The construction of airtight walls, ceilings and floors between the asbestos material and the facility environment, or around surfaces coated with asbestos materials, or any other appropriate procedure that prevents the release of asbestos materials.

Equipment room - A contaminated area or room that is part of the personal decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.

Fixed object - A unit of equipment, furniture or other fixture in the work area which cannot be readily removed from the work area.

Friable Asbestos Material - That condition of crumbled, pulverized, powdered, crushed or exposed asbestos capable of being released into the air by hand pressure.

Friable material containment - The encapsulation or enclosure of any friable asbestos material.

Glovebag technique - A method for removing asbestos material from heating, ventilating, and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other nonplanar surfaces in a noncontained work area. The glovebag assembly is a manufactured device consisting of a

glovebag constructed of at least six mil transparent plastic, two inward-projecting longsleeve gloves, which may contain an inward projecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle or portion for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and to contain all asbestos fibers released during the abatement process.

HEPA filter - A high efficiency particulate air filter capable of trapping and retaining 99.97 percent of particulate greater than 0.3 microns equivalent aerodynamic diameter.

HEPA vacuum equipment - Vacuuming equipment with a high efficiency particulate air filtration system.

Holding area - A chamber in the waste decontamination enclosure located between the washroom and an adjacent uncontaminated area.

Homogeneous work area - A site within the abatement work area that contains one type of asbestos material and where one type of abatement is used.

Large asbestos project - An asbestos project involving the installation, removal, disturbance, enclosure, or encapsulation of 160 square feet or more of asbestos or asbestos material or 260 linear feet or more of asbestos or asbestos material.

Minor asbestos project - An asbestos project involving the installation, removal, disturbance, enclosure, or encapsulation of 10 square feet or less of asbestos or asbestos material, or 25 linear feet or less of asbestos or asbestos material.

Movable object - A unit of equipment, furniture or fixture in the work area that can be readily removed from the work area.

Negative air pressure equipment - A local exhaust system equipped with HEPA filtration. The system shall be capable of creating and maintaining a negative pressure differential between the outside and the inside of the work area.

Non-asbestos material - Any material containing one percent or less asbestos by weight.

Occupied area - Any frequented portion of the work site where abatement is not taking place.

Outside air - The air outside the building or structure.

Personal air monitoring - A method used to determine an individual’s exposure to airborne contaminants. The sample is collected outside the respirator in the person's breathing zone.

Plasticize - To cover floors, walls, ceilings and other surfaces with 6 mil fire retardant plastic sheeting as herein specified.

Project - Any form of work performed in connection with the abatement of asbestos or alteration, renovation, modification or demolition of a building or structure that may disturb asbestos or asbestos material.

Removal - The stripping of any asbestos material.

Repair - Corrective action using required work practices to control fiber release from damaged areas.

Respiratory protection - Respiratory protection required of licensed asbestos workers and authorized visitors in accordance with the applicable laws.

Satisfactory clearance air monitoring results - For all post- abatement samples, airborne concentrations of total fibers that are less than 0.01 fibers per cubic centimeter or background levels, whichever are greater, using phase contrast microscopy (PCM).

Shower room - A room between the clean room and the equipment room in the personal decontamination enclosure with hot and cold running water controllable at the top and arranged for complete showering during decontamination.

Small asbestos project - An asbestos project involving the installation, removal, disturbances, enclosure, or encapsulation of more than 10 and less than 160 square feet of asbestos or asbestos material of more than 25 and less than 260 linear feet of asbestos or asbestos material.

Staging area - The area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.

Surfactant - A chemical wetting agent added to water to improve its penetration.

Visible emissions - An emission of particulate material that can be seen without the aid of instruments.

Washroom - A room between the work area and the holding area in the waste decontamination enclosure system, where equipment and waste containers are wet cleaned and/or HEPA vacuumed.

Waste decontamination enclosure system - An area, consisting of a washroom and a holding area, designated for the controlled transfer of materials and equipment.

Wet cleaning - The process of eliminating asbestos contamination from surfaces, equipment or other objects by using cloths, mops, or other cleaning tools.

Work area - Designated rooms, spaces, or areas where asbestos abatement takes place.

Work site - Premises where asbestos abatement is taking place.

Work Surface - Substrate surface from which asbestos-containing material has been removed.

1.07 UTILITIES, SERVICE AND TEMPORARY FACILITIES

A. The Owner shall make available to the Abatement Contractor all reasonable amounts of water and electrical power at no charge.

B. The Abatement Contractor shall provide, at his own expense, all electrical, water, and waste connections, extensions, and construction materials, supplies, etc. All connections must be approved in advance by the Owner and all work relative to the utilities must be in accordance with the applicable building codes.

C. The Abatement Contractor shall provide scaffolding, ladders and staging, etc. as necessary to accomplish the work of this contract. The type, erection and use of all scaffolding, ladders and staging, etc. shall comply with all applicable OSHA provisions.

D. All connections to the Owner's water system shall include reduced pressure backflow protection or double check and double gate valves. Valves shall be temperature and pressure rated for operation of the temperatures and pressures encountered. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water will not damage existing finishes or equipment.

E. The Abatement Contractor shall use only heavy-duty abrasion resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water to each work area and to each decontamination unit. Provide fittings as required to allow for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles and equipment. All water must be shut off at the end of each shift.

F. The Abatement Contractor shall provide service to decontamination unit electrical subpanel with minimum 60-amp, 2 pole circuit breaker or fused disconnect and ground-fault circuit interrupters (GFCI), reset button and pilot light, connected to the building's main distribution panel. Subpanel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work. This electrical subpanel shall be used for hot water heater, PAPR battery recharging and air sampling pumps.

G. The Abatement Contractor shall provide UL rated 40-gallon electric hot water heater to supply hot water for the decontamination unit shower. Activate from 30-amp circuit breaker on the electrical subpanel located within the decontamination unit. Provide with relief valve compatible with water heater operation, relief valve down to drip pan on floor with type L copper. Wiring of the hot water heater shall follow NEMA, NEC, and UL standards.

H. The Abatement Contractor shall provide identification warning signs at power outlets, which are other than 110-120-volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 plugs into higher voltage outlets. Dry transformers shall be provided where required to provide voltages necessary for work operations. All outlets or power supplies shall be protected by ground fault circuit interrupter (GFCI) at the power source.

I. The Abatement Contractor shall use only grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas of work.

J. The Abatement Contractor shall provide general service incandescent lamps of wattage indicated or required for adequate illumination; Protect lamps with guard cages or tempered glass enclosures; Provide exterior fixtures where fixtures are exposed to moisture.

K. The Abatement Contractor shall provide temporary heat or air conditioning as necessary to maintain comfortable working temperatures inside and immediately outside the work areas. Heating and A/C equipment shall have been tested and labeled by UL, FM or another recognized trade association related to the fuel being used. Fuel burning heaters shall not be used inside containment areas. The Contractor shall also provide a comfortable working environment for occupied areas that are impacted by the asbestos removal.

L. The Abatement Contractor shall comply with recommendations of the NFPA standard in regard to

the use and application of fire extinguishers. Locate fire extinguishers where they are most convenient and effective for their intended purpose but provide not less than one extinguisher in each work area, equipment room, clean room and outside the work area.

1.08 REMOVAL OF FIXTURES

A. In locations where the Abatement Contractor is directed to dispose of fixtures, he shall either decontaminate the fixtures and dispose of them as non-asbestos containing materials or he shall place them in an appropriate container and dispose of them as asbestos containing material.

B. In locations where the Abatement Contractor is directed to remove and reinstall fixtures, the fixtures shall be removed, decontaminated, labeled, protected with plastic and stored by the contractor in a location as directed by the Owner.

C. Upon completion of the asbestos removal and upon receiving satisfactory clearance air monitoring results, all items to be replaced shall be restored to their original location and reinstalled by the Abatement Contractor.

PART 2 – PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. GENERAL REQUIREMENTS

1. Materials shall be stored off the ground, away from wet or damp surfaces and under protective cover to prevent damage or contamination.

2. Damaged or deteriorating materials shall not be used and shall be removed from the premises.

3. Power tools used to drill, cut into, or otherwise disturb asbestos material shall be equipped with HEPA filtered local exhaust ventilation.

4. The Abatement Contractor shall make available to authorized visitors, ladders and/or scaffolds of sufficient dimension and quantity so that all work surfaces can be easily and safely reached for inspection. Scaffold joints and ends shall be sealed with tape to prevent incursion of asbestos. Scaffolds and ladders shall comply with all applicable codes.

B. PLASTIC BARRIERS (POLYETHYLENE)

1. In sizes and shapes to minimize the number of joints.

   a. Six mil. (.006") fire-retardant for vertical protection (walls, entrances and openings).

   b. Six mil. (.006") fire-retardant for horizontal protection (fixed equipment) and heating grilles.

   c. Six mil. (.006") reinforced fire-retardant for floors of decon units.

2. Provide two (2) layers over all roof, wall and ceiling openings. Floor penetrations shall be sealed with a rigid material prior to plasticizing to prevent tripping and fall hazards. All seams within a layer shall be separated by a minimum distance of six feet and sealed airtight. All seams between layers shall be staggered.

3. Barrier Attachment - Commercially available duct tape (fabric or paper) and spray-on adhesive.

Duct tape shall be capable of sealing joints of adjacent sheets of plastic, facilitating attachment of plastic sheets to finished or unfinished surfaces of dissimilar materials and adhering under both dry and wet conditions.

C. SIGNS

1. Danger signs shall be provided and shall conform to 29 CFR 1926.1101 and be 14" x 20". These signs shall bear the following information:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
RESPIRATORS AND PROTECTIVE
CLOTHING
ARE REQUIRED IN THIS AREA

D. DANGER LABELS AND TAPE

1. Labels shall be affixed to any asbestos contaminated material in accordance with the requirements of 29 CFR 1910.1200 (f) of OSHA's Hazard Communication Standard, and shall contain the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID BREATHING DUST
CANCER AND LUNG DISEASE HAZARD

2. A label shall be affixed on each container of asbestos waste in accordance with the requirements of 49 CFR Parts 171 and 172, Hazardous Substances; Final Rule (U.S. Department of Transportation), and shall contain the following information:

RQ HAZARDOUS SUBSTANCE
SOLID, NOS, ORM-E, NA 9188
(ASBESTOS)

3. A label shall be affixed on each container of asbestos waste in accordance with the requirements of 40 CFR Part 61.150, NESHAP; Asbestos; Final Rule (USEPA) and shall contain the name of the waste generator and the location at which the waste was generated.
NOTE: All containers marked as above (1,2 and 3) shall be disposed of as asbestos waste.

4. Provide 3" red barrier tape printed with black lettered "DANGER ASBESTOS REMOVAL". Locate barrier tape across all corridors, entrances and access routes to asbestos work area.

E. PROTECTIVE EQUIPMENT

1. Respiratory Requirements

   a. Where fiber levels permit, and in compliance with regulatory requirements, Powered Air Purifying Respirators are the minimum allowable respiratory protection permitted to be utilized during removal operations.

   b. Where not in violation of NIOSH, OSHA, and any other regulatory requirements, the Abatement Contractor shall provide the following minimum respiratory protection to the maximum use concentrations indicated:

MSHA/NIOSH Approved Respiratory Protection	Maximum Use Concentration
Half-Mask Air Purifying with HEPA Filters	10x PEL
Full-Facepiece Air Purifying HEPA Filters and Quantitative Fit Test	10x PEL
Powered Air Purifying (PAPR), Loose fitting Helmet or Hood, HEPA Filter	25x PEL
Powered Air Purifying (PAPR), Full Facepiece, HEPA Filter	50x PEL
Supplied Air, Continuous Flow Loose fitting Helmet or Hood	25x PEL
Supplied Air, Continuous Flow Full Facepiece, HEPA Filter	50x PEL
Full Facepiece-Supplied Air Pressure Demand, HEPA Filter	100x PEL
Full Facepiece-Supplied Air Pressure Demand, with Aux. SCBA, Pressure Demand or Continuous Flow	>100x PEL

2. Disposable Clothing -"Tyvek" manufactured by Dupont or approved equal.

3. NIOSH approved safety goggles to protect eyes.

4. Polyethylene bags, 6 mil. (.006") thick (use double bags).

NOTE: Workers must always wear disposable coveralls and respirator masks while in the work area. Contaminated coveralls or equipment must be left in work area and not worn into other parts of the building.

F. TOOLS AND EQUIPMENT

1. Airless Sprayer - An airless sprayer, suitable for application of encapsulating material, shall be used.

2. Scaffolding - Scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations.

3. Transportation Equipment - Transportation equipment, as required, shall be suitable for loading, temporary storage, transport and unloading of contaminated waste without exposure to persons or property. Watertight, hard wall containers shall be provided to retain and dispose of any asbestos waste material with sharp-edged components that may tear plastic bags or sheeting. The containers shall be marked with danger labels.

4. Surfactant - Wetting Agents - "Asbestos-Wet" - Aquatrols Corp. of America or approved equal and shall be non-carcinogenic.

5. Portable (negative air pressure) asbestos filtration system - by Micro-Trap or approved equal.

6. Vacuum, HEPA type equal to "Nilfisk" #GA73, or "Pullman/Holt" #75 ASA.

7. Amended Water Sprayer - The water sprayer shall be an airless or other low-pressure sprayer for amended water application.

8. Other Tools and Equipment - The Abatement Contractor shall provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to: hand-held scrapers, nylon brushes, sponges, rounded edge shovels, brooms, and carts.

PART 3 – EXECUTION

3.01 PRE-ABATEMENT WORK AREA PREPARATION

A. The work area shall be vacated by the occupants prior to work area preparation and not reoccupied until satisfactory clearance air monitoring results have been achieved.

B. Caution signs shall be posted at all locations and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted that permit a person to read the sign and take the necessary protective measures to avoid exposure.

C. Shut down and lock out electric power to all work areas. The Abatement Contractor shall provide temporary power and lighting and ensure safe installation of temporary power sources and equipment used where high humidity and/or water shall be sprayed in accordance with all applicable codes. All power to work areas shall be brought in from outside the area through a ground-fault interrupter at the source.

D. Isolate the work area HVAC system.

E. The personnel decontamination enclosure system shall be installed or constructed prior to preparatory work in the work area and in particular before the disturbance of asbestos material. The waste decontamination enclosure system shall be installed or constructed prior to commencement of abatement activities.

F. Movable objects within the work area shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning and such objects shall be removed from the work area to an uncontaminated

location. If disposed of as asbestos waste material, cleaning is not required.

G. Fixed objects and other items, which are to remain within the work area, shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning. Such objects shall be enclosed with two layers of at least six mil plastic sheeting and sealed with tape.

H. The work area shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall be prohibited. Asbestos material shall not be disturbed during pre-cleaning.

I. Isolation barriers that seal off all openings, including windows, corridors, doorways, ducts, and any other penetrations of the work area, shall be constructed using two layers of at least six mil fire-retardant plastic sheeting sealed with tape. Also, all seams in mechanical system components that pass through the work area shall be sealed. Doorways and corridors, which shall not be used for passage during work, shall also be sealed.

J. Removal of mounted objects. After isolation barriers are in place, objects such as light fixtures, electrical track, alarm systems, ventilation equipment and other items not previously sealed, shall be double sealed with six mil fire-retardant plastic sheeting. Localized HEPA filtered vacuum equipment shall be used during fixture removal to reduce asbestos dispersal.

K. Individual roof and floor drains shall be sealed watertight using two layers of 6-mil fire-retardant plastic sheeting and tape prior to plasticizing. Openings in floor shall be fully covered with plywood sheeting secured to the floor in such a way as to minimize a tripping hazard prior to plasticizing.

L. Emergency and fire exits from the work area shall be maintained or alternate exits shall be established according to all applicable codes.

M. Adequate toilet facilities shall be supplied by the Abatement Contractor and shall be located either in the clean area of the personnel decontamination enclosure or shall be readily accessible to the personnel decontamination enclosure.

3.02 LARGE ASBESTOS PROJECT PERSONNEL DECONTAMINATION ENCLOSURE SYSTEM (ICR 56-7.5)

A. The personnel decontamination enclosure shall be constructed prior to preparatory work in the work area and in particular before the disturbance of asbestos material.

1. Construction and use of personnel decontamination enclosure systems shall be in accordance with ICR-56 and any Applicable or Site-Specific Variances utilized on this project. Such systems may consist of existing rooms outside of the work area, if the layout is appropriate, that can be enclosed is plastic sheeting and are accessible from the work area. When this situation does not exist, enclosure systems may be constructed out of metal, wood or plastic support.

2. The personnel decontamination enclosure system shall consist of a clean room, a shower room, and an equipment room, in series, separated from each other and from the work area by three airlocks.

3. There shall be one shower per six full shift abatement persons calculated on the basis of the largest shift.

4. The personnel decontamination enclosure system shall be fully framed, sheathed for safety and

constructed to prevent unauthorized entry.

5. Personnel decontamination enclosure systems constructed at the work site shall utilize at least six mil fire-retardant opaque plastic sheeting. At least two layers of six mil fire-retardant reinforced plastic sheeting shall be used for the flooring of this area.

6. All prefabricated decontamination units shall be completely decontaminated and sealed prior to separation and removal from the work area. Mobile decontamination units shall remain in place until satisfactory clearance results have been attained.

7. The clean room shall be sized to accommodate all authorized persons. Benches, lockers and hooks shall be provided for street clothes. Shelves for storing respirators shall also be provided. Clean clothing, replacement filters for respirators, towels and other necessary items shall be provided. The clean room shall not be used for the storage of tools, equipment or materials. It shall not be used for office space. A lockable door shall be provided to permit access to the clean room from outside the work area or enclosure. It shall be used to secure the work area and decontamination enclosure during off-shift hours.

8. The shower room shall contain one or more showers. Each shower head shall be supplied with hot and cold water adjustable at the tap. The shower enclosure shall be constructed to ensure against leakage of any kind. Uncontaminated soap, shampoo and towels shall be available at all times. Shower water shall be drained, collected and filtered through a system with at least 5.0 micron particle size collection capability. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered wastewater shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste. The shower room shall be constructed in such way that travel through the decontamination unit shall be through the shower.

9. The equipment room shall be used for the storage of equipment and tools after decontamination using a HEPA filtered vacuum and/or wet cleaning. A one day supply of replacement filters, in sealed containers, for HEPA vacuums and negative pressure ventilation equipment, extra tools, containers of surfactant and other materials and equipment that may be required during the abatement project may also be stored here. A walk-off pan filled with water shall be located in the work area just outside the equipment room for persons to clean foot covering when leaving the work area. A drum lined with a labeled, at least six mil plastic bag is required for collection of clothing and shall be located in this room. Contaminated footwear and work clothes shall be stored in this area.

3.03 WASTE DECONTAMINATION ENCLOSURE SYSTEM (ICR 56-7.5)

A. General Requirements

1. A waste decontamination enclosure system shall consist of the following:

   a. A washroom/cleanup room shall be constructed with an airlock doorway to the work area and another airlock doorway to the holding area.

   b. The holding area shall be constructed with an airlock doorway to the washroom/cleanup room and another lockable door to the outside.

2. Where there is only one egress from the work area, the holding area of the waste decontamination enclosure system may branch off from the equipment decontamination room,

which doubles as a waste washroom, of the personnel decontamination enclosure.

3. The waste washroom shall be equipped with a drain installed to collect water and deliver it to the shower drain where it shall be filtered through a system with at least 5.0 micron particle size collection capability. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered wastewater shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.

4. The waste washroom shall be constructed in such a way that travel through the rooms shall be through the waste washroom

3.04 WORK AREA ENTRY AND EXIT PROCEDURES

A. The following procedures shall be followed throughout the asbestos abatement project until satisfactory clearance air monitoring results have been achieved:

1. All persons shall enter and exit the work area through the personnel decontamination enclosure system.

2. All persons who enter the work area or an enclosure shall sign the entry/exit log, located in the clean room, upon every entry and exit.

3. All persons, before entering the work area, or an enclosure shall read and be familiar with all posted regulations, personal protection requirements, including work area entry and exit procedures, and emergency procedures. The entry/exit log headings shall indicate, and the signatures shall be used to acknowledge, that these have been reviewed and understood by all persons prior to entry.

4. All persons shall proceed first to the clean room, remove all street clothing, store these items in clean sealable plastic bags or lockers and don coveralls, head covering, foot covering and gloves. All persons shall also don NIOSH approved respiratory protection. Clean respirators and protective clothing shall be utilized, by each person, for each separate entry into the work area. Respirators shall be inspected prior to each use and tested for proper seal using quantitative or qualitative fit checks.

5. Persons wearing designated personal protective equipment shall proceed from the clean room through the shower room to the equipment room, where necessary tools are collected and any additional clothing shall be donned, before entry into the work area.

6. Before leaving the work area, all persons shall remove gross contamination from the outside of respirators and protective clothing by brushing, wet cleaning, and/or HEPA vacuuming.

7. Persons shall proceed to the equipment room where all coveralls, head covering, foot covering and gloves shall be removed. Disposable clothing shall be deposited into labeled containers for disposal. Reusable contaminated clothing, footwear, head gear and gloves shall be stored in the equipment room when not being used in the work area.

8. Still wearing respirators, persons shall proceed to the shower area, clean the outside of the respirator and the exposed face area under running water prior to removal of the respirator, and then fully and vigorously shower and shampoo to remove residual asbestos contamination. Respirators shall be washed thoroughly with soap and water. Some types of respirators will

require slight modification of these procedures. An airline respirator with HEPA filtered disconnect protection shall be disconnected in the equipment room and worn into the shower. A powered air-purifying respirator facepiece shall be disconnected from the filter/power pack assembly prior to entering the shower.

9. After showering and drying, all persons shall proceed to the clean room and don clean personal protective equipment if returning to the work area or street clothing if exiting the enclosure.

3.05 EQUIPMENT AND WASTE CONTAINER DECONTAMINATION & REMOVAL PROCEDURES

A. The following procedures shall be followed throughout the asbestos abatement project until satisfactory clearance air monitoring results have been achieved.

1. External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the work area before moving such items into the waste decontamination enclosure system airlock by persons assigned to this duty. These work area persons shall not enter the airlock.

2. These contaminated items shall be removed from the airlock by persons stationed in the washroom during waste removal operations. These washroom persons shall remove gross contamination from the exterior of their respirators and protective clothing by brushing, HEPA vacuuming and/or wet cleaning.

3. Once in the waste decontamination enclosure system, external surfaces of contaminated containers and equipment shall be cleaned a second time by wet cleaning.

4. The cleaned containers of asbestos material and equipment are to be dried of any excessive pooled or beaded liquid, placed in uncontaminated plastic bags or sheeting and sealed airtight.

5. The clean recontainerized items shall be moved into the airlock that leads to the holding area. The washroom persons shall not enter this airlock or the work area until waste removal is finished for that period.

6. Containers and equipment shall be moved from the airlock and into the holding area by persons dressed in clean personal protective equipment, who have entered from uncontaminated areas.

7. The cleaned containers of asbestos material and equipment shall be placed in water tight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding area pending removal. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.

8. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.

9. Where the waste removal enclosure is part of the personnel decontamination enclosure, waste removal shall not occur during shift changes or when otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.

10. Containers labeled with Asbestos hazard warnings shall not be used to dispose of non asbestos waste.

3.06 ENGINEERING CONTROLS

A. Ventilation.

1. The Abatement Contractor shall employ HEPA equipped vacuums or negative air pressure equipment for ventilation as required.

2. All negative air pressure equipment ventilation units shall be equipped with HEPA filtration. The Contractor shall provide a manufacturer's test certificate for each unit documenting the capability of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns equivalent aerodynamic diameter.

3. A power supply shall be available to satisfy the requirements of the total of all ventilating units.

4. On electric power failure, abatement shall stop immediately and shall not resume until power is restored and exhaust units are operating fully. On extended power failure, longer than one hour, the decontamination facilities, after the evacuation of all persons from the work area, shall be sealed airtight.

5. If extending the exhaust of the ventilation units 50 feet from the building would result in an exhaust location either in the road, blocking driveway access to the facility or within 50 feet of other buildings, a second unit will be run in series with the primary unit.

3.07 MAINTENANCE OF DECONTAMINATION ENCLOSURE SYSTEMS AND WORK AREA BARRIERS

A. GENERAL REQUIREMENTS

1. The Consultant must review and approve installation before commencement of work. Upon completion of the construction of all plastic barriers and decontamination system enclosures and prior to beginning actual abatement activities.

2. All plastic barriers inside the work area, in the personnel decontamination enclosure system, in the waste decontamination enclosure system and at partitions constructed to isolate the work area from occupied areas, shall be inspected by the asbestos supervisor at least twice daily. The barriers shall be inspected before the start of and following the completion of the day's abatement activities. Inspections and observations shall be documented in the project log.

3. Damage and defects in the barriers and/or enclosure systems shall be repaired immediately upon discovery and prior to resumption of abatement activities.

4. At any time during the abatement activities, if visible emissions are observed outside of the work area of if damage occurs to the barriers, work shall be stopped, repairs made and visible residue immediately cleaned up using HEPA vacuuming methods prior to the resumption of abatement activities.

5. The Abatement Contractor shall HEPA vacuum and/or wet clean the waste decontamination enclosure system and the personnel decontamination enclosure system at the end of each day of abatement activities.

3.08 HANDLING AND REMOVAL PROCEDURES

The Abatement Contractor may utilize existing provisions of ICR-56, Applicable Variances or a Site-Specific Variance, approved by the Owner's Consultant, to permit the conduct of this work.

3.09 ABATEMENT PROCEDURES

A. AIR SAMPLING - By Owner
   1. Air sampling and analysis shall be conducted according to the requirements of Subpart 56-4 before the start, during and after the completion of the asbestos removal project.

   2. In addition to the requirements of Subpart 56-4, air monitoring shall be conducted in accordance with any approved job specific variance(s) or applicable variance utilized.

   3. Clearance samples may be analyzed using PCM to maintain compliance with ICR-56.

   4. If applicable, clearance samples will be analyzed using TEM to maintain compliance with ICR-56 and 40 CFR 763.90[i].

B. The provisions of the Applicable Variances or a Job Specific Variance shall apply only in those areas where approval has been granted by the NYS DOL and the Contractor has obtained concurrence from the Owner's Consultant. All other applicable provisions of Industrial Code Rule 56-1 through 56-12 shall be complied.

C. A copy of the NYS DOL Job Specific or Applicable Variance, if applicable, shall be conspicuously posted at the work area(s).

D. The Abatement Contractor shall construct a decontamination unit at the work site. The Abatement Contractor shall, as a minimum, comply with the requirements of 29 CFR 1926.1101(j); Hygiene facilities and practices for employees.

3.10 ENCAPSULATION PROCEDURES

The following procedures shall be followed to seal in non-visible residue, after obtaining satisfactory clearance air monitoring results, while conducting lockdown encapsulation on any surfaces which were the subject of removal or other remediation activities:

A. Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 USEPA contract shall be used for lockdown encapsulation.

B. Sealants considered for use in encapsulation shall first be tested to ensure that the sealant is adequate for its intended use. A section of the work surface shall be evaluated following this initial test application of the sealant to quantitatively determine the sealant's effectiveness in terms of penetrating and locking down the asbestos fibers. The American Society of Testing and Materials (ASTM) Committee E06.21.06E on Encapsulation of Building Materials has developed a guidance document to assist in the selection of an encapsulant.

C. The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon.

D. Encapsulants shall be applied using airless spray equipment.

1. Spraying is to occur at the lowest pressure range possible to minimize fiber release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.

E. Encapsulation shall be utilized as a surface sealant once all asbestos containing materials have been removed in a work area. In no event shall encapsulant be applied to any surface that was the subject of removal or other remediation activities prior to obtaining satisfactory clearance air monitoring.

3.11 CLEANUP PROCEDURES

A. The following cleanup procedures shall be required.

1. Cleanup of accumulations of loose asbestos material shall be performed whenever enough loose asbestos materials have been removed to fill a single leak tight container of the type commensurate with the material properties. In no case shall cleanup be performed less than once prior to the close of each working day. Asbestos material shall be kept wet until cleaned up.

2. Accumulations of dust shall be cleaned off all surfaces on a daily basis using HEPA vacuum cleaning methods.

3. Decontamination enclosures shall be HEPA vacuumed at the end of each shift.

4. Accumulations of asbestos waste material shall be containerized utilizing HEPA vacuums or rubber or plastic dust pans, squeegees or shovels. Metal shovels shall not be used to pick up or move waste.

5. Excessive water accumulation or flooding in the area shall require work to stop until the water is collected and disposed of properly.

B. The following cleanup procedures shall be required after completion of all removal activities.

1. All accumulations of asbestos waste material shall be containerized utilizing HEPA vacuums or rubber or plastic dust pan, squeegees or shovels. Metal shovels shall not be used to pick up or move waste. HEPA vacuums shall be used to clean all surfaces after gross cleanup.

2. Cleaning. All surfaces in the work area shall be HEPA vacuumed. To pick up excess liquid and wet debris, a wet purpose shop vacuum may be used and shall be decontaminated prior to removal from the work area.

3. Windows, doors, HVAC system vents and all other openings shall remain sealed. Decontamination enclosure systems shall remain in place and be utilized.

4. All containerized waste shall be removed from the work area and the holding area.

5. All tools and equipment shall be decontaminated and removed from the work area.

6. A final visual inspection and clearance air monitoring, as per the schedule for air sampling and analysis, shall be conducted.

7. The isolation barriers and decontamination unit shall be removed only after satisfactory clearance air monitoring results have been achieved.

3.12 SAFETY MONITORING – CONSULTANT:

The Consultant will designate an Asbestos Safety Technician (AST) to represent the Owner during the removal program. The AST must be on the job site at all times during abatement work. Absolutely no abatement or preparation work will occur without the presence of the AST.

The AST will conduct four (4) milestone inspections.

1. Pre-commencement inspection shall be conducted as follows:

   a. Notification in writing to the Consultant shall be made by the Abatement Contractor to request a pre-commencement inspection at least 48 hours in advance of the desired date of inspection. This inspection shall be requested prior to beginning preparatory work in another work area.

   b. The AST shall ensure that:

      i. The job site is properly prepared and that all containment measures are in place;

      ii. The designated supervisor shall present to the inspector a valid supervisor's license issued by the New York Department of Labor;

      iii. All workers shall present to the inspector a valid handler's license issued by the New York Department of Labor;

      iv. Measures for the disposal of removed asbestos material are in place and shall conform to the adopted standards;

      v. The Abatement Contractor has a list of emergency telephone numbers at the job site which shall include the monitoring firm employed by the Owner and telephone numbers for fire, police, emergency squad, local hospital and health officer.

   c. If all is in order, the AST shall issue a written notice to proceed in the field. If the job site is not in order, then any needed corrective action must be taken before any work is to commence. Conditional approvals shall not be granted.

Progress inspection shall be conducted as follows:

   a. Primary responsibility for ensuring that the abatement work progresses in accordance with these technical specifications and regulatory requirements rests with the Abatement Contractor. The AST shall continuously be present to observe the progress of work and perform required tests.

   b. If the AST observes irregularities at any time, he shall direct such corrective action as may be necessary. If the Abatement Contractor fails to take the corrective action required, or if the Abatement Contractor or any of their employees habitually and/or excessively violate the requirements of any regulation, then the AST shall inform the Owner who shall issue a Stop Work Order to the Abatement Contractor and have the work site secured until all violations are abated.

Clean-up inspections shall be conducted as follows:

   a. Notice for clean-up inspection shall be requested by the Abatement Contractor at least 24 hours in advance of the desired date of inspection;

b. The clean-up inspection shall be conducted prior to the removal of any isolation or critical barriers and before final air clearance monitoring;

c. The AST shall ensure that:

i. The work site has been properly cleaned and is free of visible asbestos containing material and debris.

ii. All removed asbestos has been properly placed in a locked secure container outside of the work area.

d. If all is in order, the AST shall issue a written notice of authorization to remove surface barriers from the work area. All isolation barriers shall remain in place until satisfactory clearance air sampling has been completed.

4. Clearance Visual Inspection shall be conducted after the removal of non-critical plastic sheeting. The AST shall insure that:

a. The work area is free of all visible asbestos or suspect asbestos debris and residue.

b. All waste has been properly bagged and removed from the work area.

c. Should clearance visual inspection identify residual debris, as determined by the AST, the Abatement Contractor is responsible for recleaning the area at his own cost and shall bear all costs of reinspection until acceptable levels are achieved.

B. The Abatement Contractor shall be required to receive written approval before proceeding after each milestone inspection.

3.13 PERSONNEL AIR MONITORING – CONTRACTOR (29 CFR 1926.1101)

A. Personnel air monitoring shall be provided to determine both short-term (STEL) and full shift during when abatement activities occur. Personnel sampling shall be performed in each work area in order to accurately determine the concentrations of airborne asbestos to which workers may be exposed.

B. The Abatement Contractor shall have a qualified "Competent Person" (as specified in 29 CFR 1926 OSHA) to conduct personnel air monitoring.

C. The laboratory performing the air sample analysis shall be certified by NYS DOH ELAP and approved by the consultant.

D. Personnel air monitoring test results for OSHA Compliance. Results shall be posted at the work site within 24 hours of testing and copies supplied to the Owner within five (5) days of testing. Abnormalities shall be supplied to the Owner immediately.

3.14 CLEARANCE AIR MONITORING

A. Air samples will be collected in and around the work areas at the completion of abatement activities.

B. Clearance samples may be analyzed using PCM to maintain compliance with ICR-56.

C. If applicable, clearance samples will be analyzed using TEM to maintain compliance with ICR-56 and 40 CFR part 763 “Asbestos-Containing Materials in Schools; Final Rule and Notice” section 763.90.

D. ***RETESTING***
Should clearance air monitoring yield fiber concentrations above the “Clearance” criteria of either 0.01 fibers per CC and/or background levels (PCM) –OR- seventy (70) structures per square millimeter (TEM/AHERA), the Abatement Contractor is responsible for re-cleaning the area at his own cost and shall bear all costs associated with the retesting of the work area(s) including monitoring labor, sampling, analysis, etc. until such levels are achieved.

3.15 RESPIRATORY PROTECTION REQUIREMENT

A. Respiratory protection shall be worn by all individuals inside the work area from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring in accordance with these specifications. The Abatement Contractor shall keep available at all times two PAPR's with new filters and charged batteries for use by authorized visitors.

B. All respiratory protection shall be MSHA/NIOSH approved in accordance with the provisions of 30 CFR Part II. All respiratory protection shall be provided by the Abatement Contractor and used by workers in conjunction with the written respiratory protection program.

C. The Abatement Contractor shall provide respirators that meet the requirements of 29 CFR Parts 1910 and 1926.

1. Full facepiece Type C supplied-air respirators operated in pressure demand mode equipped with an auxiliary self- contained breathing apparatus, operated in pressure demand or continuous flow, shall be worn during gross removal, demolition, renovation and/or other disturbance of ACM whenever airborne fiber concentrations inside the work area are greater than 10.0 f/cc.

2. Full facepiece Type C supplied-air respirators operated in pressure demand mode with HEPA filter disconnect protection shall be work during gross removal, demolition, renovation and/or other disturbance of ACM with an amphibole content and/or whenever airborne fiber concentrations inside the work area are equal to or greater than 0.5 f/cc and less than or equal to 10.0 f/cc.

3. Full facepiece powered air-purifying respirators (PAPR) equipped with HEPA filters shall be worn during the removal, encapsulation, enclosure, repair and/or other disturbance of friable ACM if airborne fiber concentrations inside the work area are less than 0.5 f/cc. A supply of charged replacement batteries, HEPA filters and flow test meter shall be available in the clean room for use with powered air-purifying respirators. HEPA filters shall be changed daily or as flow testing indicates change is necessary. Any Type C supplied-air respirator operated in continuous flow, with HEPA filter disconnect protection, may be substituted for a powered air-purifying respirator.

4. Loose fitting helmets or hoods with powered air-purifying respirators (PAPR) equipped with HEPA filters may be worn during the removal, encapsulation, enclosure, repair and/or other disturbance of friable ACM if airborne fiber concentrations inside the work area are less than 0.25 f/cc. A supply of charged replacement batteries, HEPA filters and flow test meter shall be available in the clean room for use with powered air-purifying respirators. HEPA filters shall be changed daily or as flow testing indicates change is necessary. Any Type C supplied-air respirator operated in continuous flow may be substituted for a powered air- purifying respirator.

5. Half-mask or full-face air-purifying respirators with HEPA filters shall be worn only during the preparation of the work area and final clean up procedures provided airborne fiber concentrations inside the work area are less than 0.1 f/cc.

6. Use of single use dust respirators is prohibited for the above respiratory protection.

D. Workers shall be provided with personally issued and individually marked respirators. Respirators shall not be marked with any equipment that will alter the fit of the respirator in any way. Only waterproof identification markers shall be used.

E. The Abatement Contractor shall ensure that the workers are qualitatively or quantitatively fit tested by an Industrial Hygienist initially and every six months thereafter with the type of respirator he/she will be using.

F. Whenever the respirator design permits, workers shall perform the positive and negative air pressure fit test each time a respirator is worn. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.

G. No facial hair, which interferes with the face-to-mask sealing surface, shall be permitted to be worn when wearing respiratory protection that requires a mask-to-face seal.

H. Contact lenses shall not be worn in conjunction with respiratory protection.

I. If a worker wears glasses, a spectacle kit to fit their respirator shall be provided by the Abatement Contractor at the Abatement Contractor's expense.

J. Respiratory protection maintenance and decontamination procedures shall meet the following requirement:

1. Respiratory protection shall be inspected and decontaminated on a daily basis in accordance with OSHA 29 CFR 1910.134(b); and

2. HEPA filters for negative pressure respirators shall be changed after each shower; and

3. Respiratory protection shall be the last piece of worker protection equipment to be removed. Workers must wear respirators in the shower when going through decontamination procedures; and

4. Airline respirators with HEPA filtered disconnect shall be disconnected in the equipment room and worn into the shower. Powered air-purifying respirator facepieces shall be worn into the shower. Filtered/power pack assemblies shall be decontaminated in accordance with manufacturers' recommendations; and

5. Respirators shall be stored in a dry place and in such a manner that the facepiece and exhalation valves are not distorted; and

6. Organic solvents shall not be used for washing of respirators.

K. No visitors shall be allowed to enter the contaminated area if they do not have their medical certification and training certificate. Authorized visitors shall be provided with suitable PAPR respirators and instructions on the proper use of respirators whenever entering the work area.

3.16 DISPOSAL OF WASTE

A. APPLICABLE REGULATIONS

1. All asbestos waste shall be stored, transported and disposed of as per, but not limited to, the following Regulations:

   a. NYS Code Rule 56

   b. U.S. Department of Transportation (DOT)
   Hazardous Substances
   Title 29, Part 171 and 172 of the code of Federal Regulations
   regarding waste collector registration

   c. Regulations regarding waste collector registration Title 6, part 364 of the New York State Official Compilation of Codes, Rules and Regulations – 6 NYCRR 364

   d. USEPA NESHAPS 40 CRF 61

   e. USEPA ASBESTOS WASTE MANAGEMENT GUIDANCE EPA/530-SW-85-007

B. TRANSPORTER OR HAULER - The Abatement Contractor shall bear full responsibility for proper characterization, transportation and disposal of all solid or liquid waste, generated during the project, in a legal manner. The Owner shall approve all transportation and disposal methods.

1. The Abatement Contractor's Transporter (hauler) and disposal site shall be approved by the Owner. The Abatement Contractor shall remove within 48 hours all asbestos waste from the site after completing the clean up.

2. The Transporter must possess and present to the Owner’s representative a valid New York State Department of Environmental Conservation Part 364 asbestos hauler’s permit to verify license plate and permit numbers. The Owner’s representative will verify the authenticity of the hauler’s permit with the proper authority.

3. The Abatement Contractor shall give 24 hour notification prior to removing any waste from the site. All waste shall be removed from site only during normal working hours. No waste may be taken from the site without authorization from the Owner’s representative.

4. The Abatement Contractor shall have the Transporter give the date and time of arrival at the disposal site.

5. The Transporter with the Abatement Contractor and Owner’s consultant shall inspect all material in the transport container prior to taking possession and signing the Waste Manifest. The Transporter shall not have any off site transfers or be combined with any other off-site asbestos material.

6. The Transporter must travel directly to the disposal site with no unauthorized stops.

C. WASTE STORAGE CONTAINER

1. During loading and on site storage, the asbestos waste container shall be labeled with EPA Danger signage:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2. The NYS DEC Hauler's Permit number shall be on both sides and back of the container.

3. The Container will not be permitted to leave the site without the proper signage.

4. A copy of the completed waste manifest shall be forwarded directly to the Owner's Consultant by the disposal facility.

5. Packaging of Non-friable Asbestos. Use of an open top container shall require written request, by the Contractor, and written approval by the Owners Representative, and be performed in compliance with all applicable regulations.

   a) A chute, if used, shall be air/dust tight along its lateral perimeter and at the terminal connection to the dumpster at ground level (solid wall and top container). The upper end of the chute shall be furnished with a hinged lid, to be closed when the chute is not being used.

   b) The container shall be lined with a minimum of two (2) layers of 6 mil. Fire-retardant polyethylene draped loosely over the sides so as to facilitate being wrapped over the top of the load and sealed prior to transport from the site.

   c) Prior to transport from the work site the Dumpster will be disconnected from the chute and sealed air/dust tight utilizing six mil plastic and tape. The waste material will be transported as an asbestos containing material by appropriate legal methods.

6. Packaging Friable Asbestos.

   a) The container shall be a solid wall, hard top and lockable container.

   b) The container shall be locked upon arrival at the site to restrict access. Security shall be provided at the entrance to the container during the loading process and immediately locked upon completion.
   c) The interior walls, floor and ceiling shall be lined with two (2) layers of 6 mil. Fire-retardant polyethylene.

   d) The waste shall be loaded in such a manner as to protect the integrity of the individual waste packages.

   e) Prior to transport from the work site the interior of the Dumpster will sealed air/dust tight utilizing six mil plastic and tape. The waste material will be transported as an asbestos containing material by appropriate legal methods.

D. WASTE DISPOSAL MANIFEST

1. The Asbestos Waste Manifest shall be equivalent to the “Waste Shipment Record” included in 40 CFR 61. A copy of the Contractor’s manifest shall be reviewed by the Owner’s Consultant and shall be the only manifest used.

2. The Manifest shall be verified by the Owner’s Consultant indicating that all the information and amounts are accurate and the proper signatures are in place.

3. The Manifest shall have the signatures of the Abatement Contractor and the Transporter prior to any waste being removed from the site.

4. The Manifest shall be signed by the Disposal Facility owner or operator to certify receipt of asbestos containing materials covered by the manifest.

5. A copy of the completed manifest shall be provided by the Abatement Contractor to the Owner’s Consultant and remain on site for inspection.

6. Abatement Contractor shall maintain a waste disposal log which indicates load number, date and time left site, container size, type of waste, quantity of waste, name of hauler, NYS DES permit number, trailer and tractor license number, and date manifest was returned to Consultant.

7. The Disposal Facility owner or operator shall return a signed copy of the Waste Manifest directly to:

Pine Bush CSD
156 Route 302
Pine Bush, New York 12566
ATTN: Jonathan Muro – Assistant Director of Facilities III

8. Copies of the completed Waste Manifest are to be sent by the disposal facility to the Hauler and Abatement Contractor.

9. Submit signed dump tickets and manifests with final payment request.

10. Final payment request will not be honored without signed dump ticket or manifests accounting for all asbestos waste removed from the site.

E. VIOLATIONS OF SPECIFICATIONS

1. Violations of the safety, hygiene, environmental, procedures herein, any applicable federal, state of local requirement s or failure to cooperate with the Owner’s representative shall be grounds for dismissal and/or termination of this contract.

F. VIOLATIONS OF NO SMOKING POLICY

1. The Federal Pro Children Act of 1994 prohibits School District Officials from smoking in any buildings or on the grounds that is property of the School District. The District shall be considered smoke free. The School District strongly enforces its’ No Smoking Policy. It is the Contractor’s responsibility to inform all workers of this policy. Any worker(s) involved with this project that are found smoking or using tobacco products will be informed that they are in violation of the Federal and State Law and School Board Policy and will be removed from site.

3.17 LOCATION OF "ABATEMENT WORK"

(Please see attached Drawings for approximate locations)

1) <u>CIRCLEVILLE ELEMENTARY SCHOOL (INTERIOR ABATEMENT)</u>

- Abatement Contractor responsible for total and complete removal and disposal of approximately 2,750 SF of non-friable asbestos-containing floor tiles, mastics and/or floor fillers, as detailed on the attached ACM Location Drawing. Removals shall include all flooring system layers to building substrate(s) beneath. Abatement Contractor responsible for all demolition required to access material(s), as well as for providing all equipment necessary to access material(s). See below for breakdown:

  OT/PT 120
  - Floor Tile and Mastic (240 SF)

  Cafetorium 156
  - Floor Tile and Mastic (2,400 SF)

  Storage 156A
  - Floor Tile and Mastic (110 SF)

2) <u>PAKANASINK ELEMENTARY SCHOOL (INTERIOR/EXTERIOR ABATEMENT)</u>

- Abatement Contractor responsible for total and complete removal and disposal of approximately 100 SF non-friable asbestos-containing Vibration Dampeners (Approx. 10 Dampeners) between metal ductwork sections, as detailed on attached ACM Location Drawings. Abatement Contractor responsible for all demolition required to access material(s), as well as for providing all equipment necessary to access material(s). See below for breakdown:

  Mechanical Room 002
  - Vibration Dampeners (100 SF, 10 Vibration Dampeners)

- Abatement Contractor responsible for total and complete removal and disposal of approximately 415 SF of non-friable asbestos-containing Cementitious Window Sills (Approx. 129 Sills), as detailed on attached ACM Location Drawings. Abatement Contractor responsible for all demolition required to access material(s), as well as for providing all equipment necessary to access material(s). See below for breakdown:

  Windows
  - ACM Cementitious Sills (180 SF, 56 Window Sills)(Base Bid)
  - ACM Cementitious Sills (55 SF, 17 Window Sills)(Alternate GC-05)
  - ACM Cementitious Sills (180 SF, 56 Window Sills)(Alternate GC-06)

Note #1: Abatement of ACM cementitious window sills to be performed from the exterior of the building in compliance with ICR56-11.6 Exterior Project Removal of Non-friable ACM Roofing, Siding Caulking, Glazing Compound, Transite, Sealers, Coatings, and other NOB ACMs.

Note #2: Window systems may be removed prior to abatement of ACM cementitious window sills, provided the ACM cementitious window sills are not disturbed during window removals.

END OF LOCATION OF WORK

3.18 GENERAL

A. The Abatement Contractor will be responsible for repairing all building components damaged during abatement including, but not limited to: ceiling tiles, ceiling finishes, wall finishes, floor finishes, etc.

B. The Abatement Contractor shall be responsible for all demolition required to access materials identified in scope of work and on associated drawings.

C. Concealed conditions that are exposed and may require additional work shall be brought to the attention of the Owner immediately. The Abatement Contractor shall not abate these areas without a written notice to proceed. Additional asbestos abatement performed prior to the order to proceed will not be acknowledged.

D. The Abatement Contractor shall remove asbestos-containing floor covering to the building substrate beneath; in areas indicted. Subsequent to final air clearance the substrate shall be washed with a neutralizing agent to prepare the substrate to accept new floor covering and eliminate residual odors.

E. Power tools used to drill, cut into or otherwise disturb asbestos containing material shall be equipped with HEPA filtered local exhaust ventilation.

F. The Abatement Contractor shall provide access to GFCI electrical power, required to perform the area air monitoring for this project, within and immediately adjacent to each work area.

G. Unwrapped or unbagged ACM shall be immediately placed in an impermeable waste bag or wrapped in plastic sheeting.

H. Coordinate all removal operations with the Owner.

Asbestos Employee Medical Examination Statement
Certificate of Worker Release
Asbestos Employee Training Statement
CERTIFICATE OF WORKERS'S ACKNOWLEDGEMENT

PROJECT NAME: **Pine Push CSD: 2025 CIP Phase 2**

CONTRACTOR'S NAME:_____

WORKING WITH ASBESTOS INVOLVES POTENTIAL EXPOSURE TO AIRBORNE ASBESTOS FIBERS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER AND RESPIRATORY DISEASES. SMOKING CIGARETTES AND INHALATION OF ASBESTOS FIBERS INCREASES THE RISK THAT YOU WILL DEVELOP LUNG CANCER ABOVE THAT OF THE NON-SMOKING PUBLIC.

The Contract for this project requires your employer to 1) supply proper respiratory protection devices and training on their use 2) provide training on safe work practices and on use of the equipment used on the project 3) provide a medical examination meeting the requirements of 29 CFR 1926.1101. Your signature on this certificate, documents that your employer has fulfilled these contractual obligations and you understand the information presented to you.

************DO NOT SIGN THIS FORM UNLESS YOU FULLY UNDERSTAND THIS INFORMATION*********

RESPIRATORY PROTECTION: I have been trained in the proper use and limitations of the type of respiratory protection devices to be used on this project. I have reviewed the written respiratory protection program manual and a copy is available for my use. Respiratory protection equipment has been proved, by the Contractor, at no cost to me.

TRAINING COURSE: I have been trained in the risks and dangers associated with handling asbestos, breathing asbestos dust, proper work procedures, personal protection and engineering controls. I have satisfactorily completed and Asbestos Safety Training Program for New York State and have been issued a New York State Department of Health Certificate of Asbestos Safety Training.

MEDICAL EXAMINATION: I have satisfactorily completed a medical examination within the last 12 months that meets the OSHA requirement for an asbestos worker and included at least 1) medical history 2) pulmonary function 3) medical examination 4) approval to wear respiratory protection devises and may have included an evaluation of a chest x-ray.

Signature:_____Date_____

Printed Name:_____SS#:_____

Witness:_____Date:_____

Pine Bush CSD: 2025 CIP Phase 2

ESTIMATE OF ACM QUANTITIES

****

EACH ABATEMENT CONTRACTOR SHALL READ AND ACKNOWLEDGE THE FOLLOWING NOTICE. A SIGNED AND DATED COPY OF THIS ACKNOWLEDGMENT SHALL BE SUBMITTED WITH THE ABATEMENT CONTRACTOR'S BID FOR THIS PROJECT. FAILURE TO DO SO MAY, AT THE SOLE DISCRETION OF THE OWNER, RESULT IN THE BID BEING CONSIDERED NON-RESPONSIVE AND RESULT IN DISQUALIFICATION OF THE ABATEMENT CONTRACTOR'S BID ON THIS PROJECT.

****

***** NOTICE *****

The linear and square footages listed within this specification are approximates. Abatement Contractor is required to visit the work locations prior to bid submittal in order to take actual field measurements within each listed location. The Abatement Contractor shall base their bid on actual quantities determined, by them, at the site walkthrough. Estimates provided in these specifications are for informational purposes only and shall not be considered a basis for Change Orders on this project.

****

Acknowledgment: I have read and understand the above **NOTICE** regarding removal quantity estimates and understand that estimates provided in these specifications are for informational purposes only and shall not be considered a basis for Change Orders on this project. The Abatement Contractor's signatory represents to the Owner that he/she has the authority of the entity he/she represents to sign this agreement on its behalf.

Company Name: _____
Type or Print

BY: _____ _____ _____
Signature Title Date

Print Name: _____

SECTION 024119
SELECTIVE STRUCTURE DEMOLITION

PART 1 GENERAL

1.01 SUMMARY

A. This Section includes the following:
   1. Demolition and removal of selected portions of building or structure.
   2. Salvage of existing items to be reused or recycled.

B. Related Sections include the following:
   1. Division 01 Section "Summary" for use of premises and Owner-occupancy requirements.
   2. Division 01 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.
   3. Division 01 Section "Execution" for cutting and patching procedures.
   4. Division 02 Section “Asbestos Abatement” for related Asbestos demolition work
   5. Division 31 Section "Site Clearing" for site clearing and removal of above- and below-grade improvements.

1.02 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.03 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.

1.04 INFORMATIONAL SUBMITTALS

A. Qualification Data: For refrigerant recovery technician.

B. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property , for dust control and, for noise control. Indicate proposed locations and construction of barriers.

C. Schedule of Selective Demolition Activities: Indicate the following:
   1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
   2. Interruption of utility services. Indicate how long utility services will be interrupted.
   3. Coordination for shutoff, capping, and continuation of utility services.
   4. Use of elevator and stairs.
   5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

D. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.

E. Predemolition Photographs or Video: Submit before Work begins.

F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

G. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.05 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.06 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI A10.6 and NFPA 241.

1.07 PROJECT CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: Hazardous materials are present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials is included in the Project Manual. Examine report to become aware of locations where hazardous materials are present.
   1. Hazardous material remediation is specified elsewhere in the Contract Documents.
   2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
   1. Maintain fire-protection facilities in service during selective demolition operations.

1.08 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties. Notify warrantor before proceeding.

B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Survey of Existing Conditions: Record existing conditions by use of measured drawings and photographs.

3.02 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
   1. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
   2. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.

C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.03 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
   2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.

3.04 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
9. Dispose of demolished items and materials promptly.
10. Removed and Salvaged Items:
11. Clean salvaged items.
12. Pack or crate items after cleaning. Identify contents of containers.
13. Store items in a secure area until delivery to Owner.
14. Transport items to Owner's storage area on-site.
15. Protect items from damage during transport and storage.

B. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.05 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.

B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

D. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.
1. If tile is removed by asbestos abatement refer to specific removal requirements in part 3 of the asbestos abatement specification.

E. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weather tight. See Division 7 " for new roofing requirements.
1. Remove existing roof membrane, flashings, copings, and roof accessories.
2. Remove existing roofing system down to substrate.

3.06 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.07 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

This page intentionally left blank

SECTION 033000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete formwork.

B. Floors and slabs on grade.

C. Concrete reinforcement.

D. Joint devices associated with concrete work.

E. Miscellaneous concrete elements, including equipment pads, equipment pits, light pole bases, flagpole bases, thrust blocks, and manholes.

F. Concrete curing.

G. Concrete repair materials.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 079200 - Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.

1.03 REFERENCE STANDARDS

A. ACI 117 - Specifications for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).

B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).

C. ACI 301 - Specifications for Structural Concrete; 2016.

D. ACI 302.1R - Guide to Concrete Floor and Slab Construction; 2015.

E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).

F. ACI 305R - Guide to Hot Weather Concreting; 2010.

G. ACI 306R - Guide to Cold Weather Concreting; 2016.

H. ACI 308R - Guide to External Curing of Concrete; 2016.

I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).

J. ACI 347R - Guide to Formwork for Concrete; 2014, with Errata (2017).

K. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.

L. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2024.

M. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2024a.

N. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2020.

O. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2020.

P. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2026.

Q. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2020.

R. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete; 2016.

S. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2016.

T. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).

U. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2019.

V. ASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete; 2017a.

W. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020.

X. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2019.

Y. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2019.

Z. ASTM C827/C827M - Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures; 2016.

AA. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2015.

BB. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2013.

CC. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2017.

DD. ASTM C1202 - Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration; 2019.

EE. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2020.

FF. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete; 2019.

GG. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2012.

HH. ASTM C1708/C1708M - Standard Test Methods for Self-leveling Mortars Containing Hydraulic Cements; 2019.

II. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2018.

JJ. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2018a.

KK. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017.

LL. COE CRD-C 572 - Corps of Engineers Specifications for Polyvinylchloride Waterstop; 1974.

MM. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair; 2013.

NN. NSF 61 - Drinking Water System Components - Health Effects; 2025, with Addendum

OO. NSF 372 - Drinking Water System Components - Lead Content; 2024.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.

C. Mix Design: Submit proposed concrete mix design.
   1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.
   2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 - Concrete Quality, Mixing and Placing.

D. Samples: Submit samples of underslab vapor retarder to be used.

E. Test Reports: Submit report for each test or series of tests specified.

F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

G. Reinforcement Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices

H. Reports: Submit certified copies of mill test report of reinforcement materials analysis.

1.05 QUALITY ASSURANCE

A. Perform work of this section in accordance with ACI 301 and ACI 318.

B. Follow recommendations of ACI 305R when concreting during hot weather.

C. Follow recommendations of ACI 306R when concreting during cold weather.

D. For slabs required to include moisture vapor reducing admixture (MVRA), do not proceed with placement unless manufacturer's representative is present for every day of placement.

1.06 WARRANTY

A. Slabs with Moisture Vapor Reducing Admixture (MVRA): Provide warranty to cover cost of flooring failures due to moisture migration from slabs for life of the concrete.
   1. Include cost of repair or removal of failed flooring, placement of topical moisture remediation system, and replacement of flooring with comparable flooring system.
   2. Provide warranty by admixture manufacturer matching terms of flooring adhesive or primer manufacturer's material defect warranty.

B. Moisture Emission-Reducing Curing and Sealing Compound, Membrane-Forming: Provide warranty to cover cost of flooring delamination failures for 10 years.
   1. Include cost of repair or removal of failed flooring, remediation with a moisture vapor impermeable surface coating, and replacement of flooring with comparable flooring system.

C. Moisture Emission-Reducing Curing and Sealing Compound, Penetrating: Provide non-prorated warranty to cover cost of flooring delamination failures for 20 years.

1. Include cost of repair or removal of failed flooring, remediation with a moisture vapor impermeable surface coating, and replacement of flooring with comparable flooring system.

PART 2 PRODUCTS

2.01 FORMWORK

A. Formwork Design and Construction: Comply with guidelines of ACI 347R to provide formwork that will produce concrete complying with tolerances of ACI 117.

B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
   1. Form Facing for Exposed Finish Concrete: Steel.
   2. Earth Cuts: Do not use earth cuts as forms for vertical surfaces. Natural rock formations that maintain a stable vertical edge may be used as side forms.
   3. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.
   4. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches of concrete surface.

2.02 REINFORCEMENT MATERIALS

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).

B. Steel Welded Wire Reinforcement (WWR): Plain type, ASTM A1064/A1064M.
   1. Form: Flat Sheets.
   2. WWR Style: As noted on drawings.

C. Reinforcement Accessories:
   1. Tie Wire: Annealed, minimum 16 gauge, 0.0508 inch.
   2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

2.03 CONCRETE MATERIALS

A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
   1. Acquire cement for entire project from same source.

B. Fine and Coarse Aggregates: ASTM C33/C33M.
   1. Acquire aggregates for entire project from same source.

C. Lightweight Aggregate: ASTM C330/C330M.

D. Fly Ash: ASTM C618, Class C or F.

E. Calcined Pozzolan: ASTM C618, Class N.

F. Silica Fume: ASTM C1240, proportioned in accordance with ACI 211.1.

G. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.04 ADMIXTURES

A. General: Concrete supplier(s) permitted to select and use chemical admixtures indicated in this Section in concrete mix designs to enhance the placement, workability, and other characteristics of the wet concrete properties. Concrete supplier(s) shall review project schedule and coordinate the use of accelerators, retarders, etc. as necessary to facilitate concrete placement in accordance with Hot Weather and/or Cold Weather concreting practice

guidelines. Concrete contractor shall also review compatability of all admixtures selected for use in each individual mix design submitted.

B. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

C. Air Entrainment Admixture: ASTM C260/C260M.

D. High Range Water Reducing and Retarding Admixture: ASTM C494/C494M Type G.

E. High Range Water Reducing Admixture: ASTM C494/C494M Type F.

F. Water Reducing and Accelerating Admixture: ASTM C494/C494M Type E.

G. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.

H. Accelerating Admixture: ASTM C494/C494M Type C.

I. Moisture Vapor Reducing Admixture (MVRA): Liquid, inorganic admixture free of volatile organic compounds (VOCs). Closes capillary systems formed during concrete curing to reduce moisture vapor emission and transmission. Reduces concrete shrinkage with no adverse effect on concrete properties or applied flooring.
   1. Provide admixture in slabs to receive adhesively applied flooring or roofing.
   2. Products:
      a. Barrier One, Inc; Barrier One Moisture Vapor Reduction Admixture (MVRA-CPS): www.barrierone.com/#sle.
      b. Hycrete, Inc: www.hycrete.com/#sle.
      c. ISE Logik Industries, Inc; MVRA 900: www.iselogik.com/#sle.
      d. Specialty Products Group; Vapor Lock 20/20: www.spggogreen.com/#sle.

J. Waterproofing Admixture: Admixture formulated to reduce permeability to liquid water, with no adverse effect on concrete properties.
   1. Admixture Composition: Crystalline, functioning by growth of crystals in capillary pores.
   2. Products:
      a. Aquafin, Inc: www.aquafin.net/#sle.
      b. Euclid Chemical Company; Eucon Vandex AM-10: www.euclidchemical.com/#sle.
      c. Kryton International, Inc; Krystol Internal Membrane (KIM): www.kryton.com/#sle.
      d. Penetron, Inc.; Penetron Admix.: www.penetron.com
      e. Sika USA; Sika WT-240P: www.usa.sika.com
      f. Xypex Chemical Corporation; XYPEX Admix C-500: www.xypex.com/#sle.

2.05 ACCESSORY MATERIALS

A. Underslab Vapor Retarder:
   1. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.
   2. Products:
      a. Fortifiber Building Systems Group ; Moistop Ultra 10: www.fortifiber.com/#sle.
      b. ISI Building Products; Viper VaporCheck II 10-mil (Class A): www.isibp.com/#sle.
      c. Stego Industries, LLC10-mil: www.stegoindustries.com/#sle.
      d. W. R. Meadows, Inc; PERMINATOR Class A - 10 mils (0.25 mm): www.wrmeadows.com/#sle.

B. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
   1. Grout: Comply with ASTM C1107/C1107M.

2. Height Change, Plastic State; when tested in accordance with ASTM C827/C827M:
   a. Maximum: Plus 4 percent.
   b. Minimum: Plus 1 percent.
3. Minimum Compressive Strength at 28 Days, ASTM C109/C109M: 7,000 pounds per square inch.

C. Architectural Concrete Floor Topping and Resurfacer:
1. Minimum Compressive Strength at 28 Days, ASTM C109/C109M: 6,000 pounds per square inch.
2. Compressive Strength: Minimum 5000 pounds per square inch, tested per ASTM C472.

D. Self-Leveling Cementitious Concrete Floor Topping:
1. Minimum Compressive Strength at 28 Days, ASTM C1708/C1708M: 7,000 pounds per square inch.
2. Products:
   a. LATICRETE International, Inc; LATICRETE SUPERCAP SC650-MC: www.laticrete.com/#sle.

2.06 BONDING AND JOINTING PRODUCTS

A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.
1. Products:
   a. Euclid Chemical Company; AKKRO-7T: www.euclidchemical.com/#sle.
   b. Kaufman Products Inc; SureBond: www.kaufmanproducts.net/#sle.
   c. Kaufman Products Inc; SureWeld: www.kaufmanproducts.net/#sle.
   d. SpecChem, LLC; Strong Bond Acrylic Bonder: www.specchemllc.com/#sle.
   e. W. R. Meadows, Inc; ACRY-LOK-: www.wrmeadows.com/#sle.

B. Epoxy Bonding System:
1. Complying with ASTM C881/C881M and of Type required for specific application.
2. Products:
   a. Adhesives Technology Corporation; Crackbond SLV-302, Crackbond LR-321, Crackbond LR-321 LPL, Ultrabond 2100 LPL, Ultrabond 2100, Ultrabond 1, Ultrabond 2, or Ultrabond HS200: www.atcepoxy.com/#sle.
   b. Euclid Chemical Company; DURAL FAST SET LV: www.euclidchemical.com/#sle.
   c. Euclid Chemical Company; DURALFLEX GEL: www.euclidchemical.com/#sle.
   d. Euclid Chemical Company; DURALFLEX LV: www.euclidchemical.com/#sle.
   e. Euclid Chemical Company; DURAL 452 GEL, DURAL 452 LV, or DURAL 452 MV: www.euclidchemical.com/#sle.
   f. SpecChem, LLC; SpecPoxy 1000, SpecPoxy 2000, SpecPoxy 3000, or SpecPoxy 3000FS: www.specchemllc.com/#sle.
   g. W. R. Meadows, Inc; Rezi-Weld Gel Paste, Rezi-Weld Gel Paste State, Rezi-Weld 1000: www.wrmeadows.com/#sle.

C. Waterstops: PVC, complying with COE CRD-C 572.

D. Waterstops: Bentonite and butyl rubber, complying with NSF 61 and NSF 372.

E. Reglets: Formed steel sheet, galvanized, with temporary filler to prevent concrete intrusion during placement.

F. Slab Isolation Joint Filler: 1/2 inch thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after removal.

1. Material: ASTM D1751, cellulose fiber.

G. Slab Contraction Joint Device: Preformed linear strip intended for pressing into wet concrete to provide straight route for shrinkage cracking.

H. Slab Construction Joint Devices: Combination keyed joint form and screed, galvanized steel, with rectangular or round knockout holes for conduit or rebar to pass through joint form at 6 inches on center; ribbed steel stakes for setting.

I. Dowel Sleeves: Plastic sleeve for smooth, round, steel load-transfer dowels.

J. Plate Dowel System: Steel plate dowel and plastic dowel sleeve; with integral fasteners for attachment to formwork.

2.07 CURING MATERIALS

A. Resin Curing Compound: Solvent-based liquid, membrane-forming.
1. Comply with ASTM C309, Types 1 and 1D, Classes A and B.
2. VOC Content: Less than 350 g/L.
3. Products:
a. Euclid Chemical Company: KUREZ DR-100: www.euclidchemical.com/#sle.
b. Euclid Chemical Company: KUREZ DR-VOX: www.euclidchemical.com/#sle.
c. Euclid Chemical Company: Tammscure WB: www.euclidchemical.com/#sle..

B. Curing and Sealing Compound, Moisture Emission-Reducing, Membrane-Forming: Clear, liquid sealer for application to newly-placed concrete; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission.
1. Use this product to cure and seal all slabs to receive adhesively applied flooring or roofing.
2. Comply with ASTM C309 and ASTM C1315 Type I Class A.
3. VOC Content: Less than 100 g/L.

C. Curing and Sealing Compound, Moisture Emission-Reducing, Penetrating: Clear, water-based, non-film-forming curing agent; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission, moisture vapor emission, and alkalinity.
1. Use this product to cure and seal all slabs to receive adhesively applied flooring or roofing.
2. Compressive Strength of Treated Concrete: Equal to or greater than strength after 28-day water cure when tested according to ASTM C39/C39M.
3. Chloride Ion Resistance of Treated Concrete: Equal to or greater than strength after 28-day water cure when tested according to ASTM C1202.
4. Comply with ASTM C309 and ASTM C1315 Type I Class A.
5. Products:
a. Green Umbrella Architectural Concrete Systems, Inc. 20 Jetview Dr. Rochester, NY 14624, basis of design manufacturer. Technical and Architectural Support:(844) 200-7336, info@greenumbrellasystems.com.

D. Moisture-Retaining Sheet: ASTM C171.
1. Polyethylene film, white opaque, minimum nominal thickness of 4 mil, 0.004 inch.

2.08 REPAIR MATERIALS

A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.

1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by underlayment manufacturer.
4. Compressive Strength: Not less than 4100 psi at 28 days when tested according to ASTM C 109.

B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.
1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by topping manufacturer.
4. Compressive Strength: Not less than 5000 psi at 28 days when tested according to ASTM C 109.

2.09 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.

C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.

D. Normal Weight Concrete: Footings and Buried Foundations. (Exposure Category F0)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,500 pounds per square inch.
2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
3. Cement Content: Minimum 540 pounds per cubic yard.
4. Water-Cement Ratio: Maximum 50 percent by weight.
5. Total Air Content: 6 percent (+/- one percent), determined in accordance with ASTM C173/C173M.
6. Maximum Slump: 3 1/2 inches (+/- one inch)
7. Maximum Aggregate Size: 1 inch.
8. Provide crystaline waterproofing admixture in elevator footings and foundation walls.

E. Normal Weight Concrete: Exposed Foundations and Retaining Walls (Exposure Category F3)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 5,000 pounds per square inch.
2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
3. Cement Content: Minimum 660 pounds per cubic yard.
4. Water-Cement Ratio: Maximum 40 percent by weight.
5. Total Air Content: 6 percent (+/- one percent), determined in accordance with ASTM C173/C173M.

6. Maximum Slump: 3 1/2 inches (+/- one inch.)
7. Maximum Aggregate Size: 1 inch.

F. Normal Weight Concrete: Slab-on-Grade (interior). (Exposure Category F0)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,500 pounds per square inch.
2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
3. Cement Content: Minimum 590 pounds per cubic yard.
4. Water-Cement Ratio: Maximum 45 percent by weight.
5. Maximum Slump: 3 1/2 inches (+/- one inch.)
6. Maximum Aggregate Size: 3/4 inch.
7. Provide Moisture Vapor Reducing Admixture (MVRA) admixture in slabs to receive adhesively applied flooring.

G. Normal Weight Concrete: Exterior Slabs. (Exposure Category F3)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 5,000 pounds per square inch.
2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
3. Cement Content: Minimum 660 pounds per cubic yard.
4. Water-Cement Ratio: Maximum 40 percent by weight.
5. Total Air Content: 5 percent (+/- one percent) determined in accordance with ASTM C173/C173M.
6. Maximum Slump: 3 1/2 inches (+/- one inch.)
7. Maximum Aggregate Size: 3/4 inch.

H. Structural Normal Weight Concrete: Roof slabs on deck. (Exposure Category F0)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,500 pounds per square inch..
2. Cement Content: Minimum 590 pounds per cubic yard.
3. Water-Cement Ratio: Maximum 45 percent by weight.
4. Maximum Slump: 4 inches (+/- one inch.)
5. Maximum Aggregate Size: 5/8 inch.
6. Provide Moisture Vapor Reducing Admixture (MVRA) admixture in slabs to receive adhesively applied roofing.

I. Structural Light Weight Concrete: Interior slabs on deck. (Exposure Category F0)

J. Structural Light Weight Concrete (Pump Mix): Interior slabs on deck. (Exposure Category F0)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,500 pounds per square inch..
2. Water-Cement Ratio: Maximum 45 percent by weight.
3. Total Air Content: 6 percent (+/- one percent), determined in accordance with ASTM C173/C173M.
4. Maximum Slump: 7 inches (+/- one inch) with High Range Water Reducer.
5. Maximum Aggregate Size: 1/2 inch.
6. Provide Moisture Vapor Reducing Admixture (MVRA) admixture in slabs to receive adhesively applied flooring.

K. Structural Normal Weight Concrete: Toppings and Fill for Stair Pans. (Exposure Category F0)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch.
2. Cement Content: Minimum 590 pounds per cubic yard.

3. Water-Cement Ratio: Maximum 45 percent by weight.
4. Total Air Content: 5 percent (+/- one percent), determined in accordance with ASTM C173/C173M.
5. Maximum Slump: 4 inches (+/- one inch.)
6. Maximum Aggregate Size: 3/8 inch.

L. Structural Normal Weight Concrete: Vehicular Parking Slabs and Aprons. (Exposure Category F3)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 5,000 pounds per square inch.
2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
3. Cement Content: Minimum 750 pounds per cubic yard.
4. Water-Cement Ratio: Maximum 40 percent by weight.
5. Total Air Content: 6 percent (+/- one percent) determined in accordance with ASTM C173/C173M.
6. Maximum Slump: 3 1/2 inches (+/- one inch.)
7. Maximum Aggregate Size: 3/4 inch.
8. Provide a silane sealer on vehicle parking slabs.

M. Structural Normal Weight Concrete: Site Slip-form Curbs. (Exposure Category F3)
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4500 pounds per square inch.
2. Cement Content: Minimum 675 pounds per cubic yard.
3. Water-Cement Ratio: Maximum 45 percent by weight.
4. Total Air Content: 5 percent (+/- one percent), determined in accordance with ASTM C173/C173M.
5. Maximum Slump: 1 inch (+/- one-half inch.)
6. Maximum Aggregate Size: 5/8 inch.

N. Controlled Low Strength Material (CLSM)
1. Permanent Material.
a. Material shall meet the requirements of ACI 229R with a minimum compressive strength of 400 lb./sq. in
2. Removable Material.
a. Material shall meet the requirements of ACI 229R with a minimum compressive strength of 50 to 100 lb./sq. in.

2.10 MIXING

A. Transit Mixers: Comply with ASTM C94/C94M.

B. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.

C. Do not use shrinkage-reducing admixture (SRA) in same concrete batch with MVRA or PIA.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.

B. Verify that forms are clean and free of rust before applying release agent. Coat contact surfaces of forms with form-release agent before placing reinforcement.

C. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.

F. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
   1. Class A, 1/8 inch for smooth-formed finished surfaces.
   2. Class C, 1/2 inch for rough-formed finished surfaces.

G. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
   1. Install keyways, reglets, recesses, and the like, for easy removal.
   2. Do not use rust-stained steel form-facing material.

H. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

I. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

J. Chamfer exterior corners and edges of permanently exposed concrete.

K. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

L. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

M. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

N. Prepare existing concrete surfaces to be repaired according to ICRI 310.2R.

O. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
   1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
   2. Use latex bonding agent only for non-load-bearing applications.

P. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Comply with ASTM E1643. Lap joints minimum 6 inches. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.

3.03 INSTALLING REINFORCEMENT, ANCHOR RODS, AND OTHER EMBEDDED ITEMS

A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.
   1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
   2. Allow six hours between completion of reinforcement installation and placement of concrete for special inspection.

B. Bend steel reinforcement in accordance with ACI 318.
   1. Do not heat steel reinforcement for bending. Bend or straighten bars cold.
   2. Do not bend partially embedded steel reinforcement, except as approved.

C. Clean reinforcement of dirt, grease, scale, loose rust, oil, paint and other foreign matter prior to installation.

D. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

E. Splicing of Reinforcement: Conform to ACI 318 Chapter 25 for wired lap splices and embedment lengths.

F. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

G. Install welded wire reinforcement in maximum possible lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Splice laps with tie wire.

H. "Wet Sticking", "Hooking-up" or "Walking-in" of any reinforcement will not be permitted.

I. Maintain required concrete cover dimensions indicated. Coordinate placement of conduit and inserts with reinforcement. Protect installed reinforcement from damage or displacement prior to and during concrete placement.

J. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

K. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
   1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303. Misplaced or damaged anchor rods shall be subject to re-engineering fees.
   2. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.
   3. Install dovetail anchors in concrete structures as indicated.

3.04 REMOVING AND REUSING FORMS

A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.

1. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.05 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R. Verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed and corrections made.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
   a. Supplement mechanical consolidation by hand, spading, rodding, or tamping.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

D. Place concrete for floor slabs in accordance with ACI 302.1R. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

E. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

F. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.

G. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.

H. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.06 JOINTING

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
   1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
   2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
   3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
   4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
   5. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
   6. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
   7. Provide waterstops as indicated, and at all construction joints below grade adjacent to usable spaces.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness or a minimum of 1-inch as follows:
   1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
   2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
   3. Spacing of joints shall not exceed 30 times (24 times for exposed concrete floor surface) the thickness of the slab nor 15 feet on center. All panels should be square or nearly so. Joints shall typically isolate columns and run between columns, with intermediate joints located at equal spaces between column lines.
   4. Joints produced using conventional processes shall be made within 4 or 12 hours after the slab in that area has been finished- within 4 hours in hot weather and within 12 hours in cold weather.
   5. Joints produced using early-entry dry-cut saws shall be made within 1 or 4 hours after the slab in that area has been finished- within 1 hour in hot weather and within 4 hours in cold weather.
   6. Hand tooled joints shall be done immediately following edging, or at the same time.
   7. For floors to be covered with quarry tile, ceramic tile, or terrazzo, the joints shall be aligned with joints in the rigid floor coverings.

D. Contraction Joints in Walls: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Provide adequate shear reinforcement as indicated or directed. Construct contraction joints as follows:
   1. Joints shall be constructed to provide for the installation of watertight joint and sealant, and filled with sealant.
   2. Provide waterstops as indicated, and at all joints below grade adjacent to usable spaces.
   3. Spacing of joints shall be located 4 feet from corners and intersections, and then at 25 feet on center thereafter.

E. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
   1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
   2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface where joint sealants, specified in Division 07 Section "Joint Sealants," are indicated.
   3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

F. Anchor joint fillers and devices to prevent movement during concrete placement.

G. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.

H. Saw Cut Contraction Joints: Saw cut joints before concrete begins to cool, within 4 to 12 hours after placing; use 3/16 inch thick blade and cut at least 1 inch deep but not less than one quarter (1/4) the depth of the slab.

3.07 FLOOR FLATNESS AND LEVELNESS TOLERANCES

A. Maximum Variation of Surface Flatness:
   1. Exposed Concrete Floors: 1/8 inch in 10 feet.
   2. Under Seamless Resilient Flooring: 1/16 inch in 10 feet.
   3. Under Carpeting: 1/8 inch in 10 feet.

B. Correct the slab surface if tolerances are less than specified.

C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.08 CONCRETE FINISHING

A. Repair surface defects, including tie holes, immediately after removing formwork.

B. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
   1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.

C. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
   1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 302.1R; thin floor coverings include carpeting, resilient flooring, seamless flooring, resinous matrix terrazzo, thin set quarry tile, and thin set ceramic tile.
   2. Other Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing burnish marks and other appearance defects.

D. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal.

3.09 CURING AND PROTECTION

A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

C. Surfaces Not in Contact with Forms:
   1. Slabs and Floors To Receive Adhesive-Applied Flooring: Curing compounds and other surface coatings are usually considered unacceptable by flooring and adhesive manufacturers. If such materials must be used, either obtain the approval of the flooring and adhesive manufacturers prior to use or remove the surface coating after curing to flooring manufacturer's satisfaction.
   2. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water-fog spray or saturated burlap.
      a. Ponding: Maintain 100 percent coverage of water over floor slab areas, continuously for 4 days.
      b. Spraying: Spray water over floor slab areas and maintain wet.
      c. Saturated Burlap: Saturate burlap-polyethylene and place burlap-side down over floor slab areas, lapping ends and sides; maintain in place.
   3. Final Curing: Begin after initial curing but before surface is dry.
      a. Curing Compound: Apply in two coats at right angles, using application rate recommended by manufacturer.

3.10 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - BSD Quality Requirements.

B. Provide free access to concrete operations at project site and cooperate with appointed firm.

C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.

D. Compressive Strength Tests: ASTM C39/C39M, for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards or less of each class of concrete placed.

E. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

F. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

G. Slab Testing: Cooperate with manufacturer of specified moisture vapor reducing admixture (MVRA) to allow access for sampling and testing concrete for compliance with warranty requirements.

3.11 DEFECTIVE CONCRETE

A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.

B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.

C. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

3.12 PROTECTION

A. Do not permit traffic over unprotected concrete floor surface until fully cured.

END OF SECTION 033000

This page intentionally left blank

SECTION 042000
UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete block.

B. Mortar and grout.

C. Reinforcement and anchorage.

D. Flashings.

E. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 033000 - CAST-IN-PLACE CONCRETE: Installation of dovetail slots for masonry anchors.

B. Section 055000 - METAL FABRICATIONS: Loose steel lintels.

C. Section 061000 - Rough Carpentry: Nailing strips built into masonry.

D. Section 072100 - Thermal Insulation: Insulation for cavity spaces.

E. Section 072500 - Weather Barriers: Water-resistive barriers or air barriers applied to the exterior face of the backing sheathing or masonry.

F. Section 076200 - Sheet Metal Flashing and Trim: Through-wall masonry flashings.

G. Section 078400 - Firestopping: Firestopping at penetrations of fire-rated masonry and at top of fire-rated walls.

H. Section 079200 - Joint Sealants: Sealing control and expansion joints.

1.03 REFERENCE STANDARDS

A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary; 2019 (Reapproved 2022).

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.

C. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.

D. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2019 (Reapproved 2025).

E. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement; 2016, with Editorial Revision (2018).

F. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2024.

G. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction; 2012 (Reapproved 2019).

H. ASTM C55 - Standard Specification for Concrete Building Brick; 2017.

I. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2021.

J. ASTM C91/C91M - Standard Specification for Masonry Cement; 2018.

K. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2017.

L. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2018.

M. ASTM C150/C150M - Standard Specification for Portland Cement; 2024.

N. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2018.

O. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale); 2021.

P. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019a, with Editorial Revision.

Q. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2018.

R. ASTM C476 - Standard Specification for Grout for Masonry; 2020.

S. ASTM E154/E154M - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover; 2008a, with Editorial Revision (2013).

T. BIA Technical Notes No. 7 - Water Penetration Resistance – Design and Detailing; 2017.

U. BIA Technical Notes No. 13 - Ceramic Glazed Brick Exterior Walls; 2017.

V. BIA Technical Notes No. 28B - Brick Veneer/Cold-Formed Steel Framed Walls; 2025.

W. ICC-ES AC219 - Acceptance Criteria for Exterior Insulation and Finish Systems; 2009, with Editorial Revision (2022).

X. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

Y. UL (FRD) - Fire Resistance Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.

C. Shop Drawings: Indicate pertinent dimensions, materials, anchorage, size and type of fasteners, and accessories for brickwork support system.

D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.

E. Test Reports: Concrete masonry manufacturer's test reports for units with integral water repellent admixture.

F. Manufacturer's Qualification Statement.

G. Installer's Qualification Statement.

1.05 QUALITY ASSURANCE

A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.

B. Fire Rated Assemblies: Comply with applicable code for all requirements for fire rated masonry construction.

C. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section with minimum three years of documented experience.

D. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 MOCK-UP

A. Construct a masonry wall as a mock-up panel sized 8 feet long by 6 feet high; include mortar, accessories, structural backup, and flashings (with lap joint, corner, and end dam) in mock-up.

B. Locate where directed.

C. Mock-up may remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

A. Concrete Block: Comply with referenced standards and as follows:
   1. Size: Standard units with nominal face dimensions of 16 by 8 inches (400 by 200 mm) and nominal depths as indicated on drawings for specific locations.
   2. Load-Bearing Units: ASTM C90, normal weight.
      a. Hollow block, as indicated.
   3. Non-Loadbearing Units: ASTM C129.
      a. Hollow block, as indicated.
      b. Lightweight.

2.02 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C91/C91M, Type S.

B. Portland Cement: ASTM C150/C150M, Type I.

C. Hydrated Lime: ASTM C207, Type S.

D. Mortar Aggregate: ASTM C144.

E. Grout Aggregate: ASTM C404.

F. Water: Clean and potable.

2.03 REINFORCEMENT AND ANCHORAGE

A. Manufacturers:
   1. Blok-Lok Limited: www.blok-lok.com/#sle.
   2. Hohmann & Barnard, Inc: www.h-b.com/#sle.
   3. WIRE-BONDwww.wirebond.com/#sle.
   4. Heckmann Building Products www.heckmannbuildingprods.com.
   5. Substitutions: See Section 016000 - Product Requirements.

B. Reinforcing Steel: ASTM A615/A615M, Grade 60 60,000 psi, deformed billet bars; galvanized.

C. Joint Reinforcement: Use ladder type joint reinforcement where vertical reinforcement is involved and truss type elsewhere, unless otherwise indicated.

D. Single Wythe Joint Reinforcement: ASTM A951/A951M.
   1. Type: Truss or ladder.
   2. Material: ASTM A1064/A1064M steel wire, mill galvanized to ASTM A641/A641M Class 3.
   3. Size: 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not less than 5/8 inch of mortar coverage on each exposure.

E. Multiple Wythe Joint Reinforcement: ASTM A951/A951M.

1. Type: Truss.
2. Material: ASTM A1064/A1064M steel wire, mill galvanized to ASTM A641/A641M Class 3.
3. Size: 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not less than 5/8 inch of mortar coverage on each exposure.

F. Strap Anchors: Bent steel shapes, 1-1/2 inch width, 0.105 inch thick, 24 inch length, with 1-1/2 inch long, 90 degree bend at each end to form a U or Z shape or with cross pins, hot dip galvanized to ASTM A153/A153M Class B.

G. Flexible Anchors: 2-piece anchors that permit differential movement between masonry and building frame, sized to provide not less than 5/8 inch of mortar coverage from masonry face.

H. Two-Piece Wall Ties: Formed steel wire, 0.1875 inch thick, adjustable, eye and pintle type, hot dip galvanized to ASTM A153/A153M, Class B, sized to provide not less than 5/8 inch of mortar coverage from masonry face and to allow vertical adjustment of up to 1-1/4 inch.

I. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and structural backup, hot dip galvanized to ASTM A153/A153M, Class B.
1. Anchor plates: Not less than 0.075 inch thick, designed for fastening to structural backup through sheathing by two fasteners; provide design with legs that penetrate sheathing and insulation to provide positive anchorage.
2. Wire ties: Manufacturer's standard shape, 0.1875 inch thick.
3. Vertical adjustment: Not less than 3-1/2 inches.

J. Break-away Melt-away Firewall Anchors: Anchors designed to be used in a firewall that will provide structural capability by detaching during a fire.
1. FERO Break Away Fire Release Connectors
a. Manufacturered by FERO Corp. in Edmonton Alberta, Canada.
b. Slotted Steel support angle with fusible nylon washer against a grooved edge.
c. Size:
1) Steel support with dimensions, configuration and spacing as indicated on drawings.

2.04 FLASHINGS

A. Metal Flashing Materials: Copper, as specified in Section 076200.

B. Metal Flashing Materials:
1. Copper Flashing: ASTM B370, 060 soft annealed; 20 oz/sq ft 0.03 inch thick; natural finish.

C. Combination Non-Asphaltic Flashing Materials - Copper:
1. Copper/Polymer Film or Fabric Flashing: 3 oz/sq ft (0.915 kg/sq m) copper sheet laminated between two sheets of polyethylene film. Minimum Puncture Resistance of 780 psi, when measured in accordance with ASTM E154/E154M.
a. Manufacturers:
b. Hohmann & Barnard, Inc; Copper-Fabric NA: www.h-b.com/#sle.
c. STS Coatings, Inc; www.stscoatings.com/#sle.
d. WIRE-BOND; www.wirebond.com/#sle.
e. York Manufacturing, Inc; Multi-Flash 500 Series: www.yorkmfg.com/#sle.
f. Substitutions: See Section 016000 - Product Requirements.

D. Drip Edge: Stainless steel; angled drip with hemmed edge; compatible with membrane and adhesives.
1. Manufacturers:

a. Mortar Net Solutions; Metal Drip Edges: www.mortarnet.com/#sle.
b. Substitutions: See Section 016000 - Product Requirements.

E. Lap Sealants and Tapes: As recommended by flashing manufacturer; compatible with membrane and adhesives.

2.05 ACCESSORIES

A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
1. Manufacturers:
a. Blok-Lok Limited: www.blok-lok.com/#sle.
b. Hohmann & Barnard, Inc: www.h-b.com/#sle.

B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.
1. Manufacturers:
a. Hohmann & Barnard, Inc: www.h-b.com/#sle.
b. WIRE-BOND: www.wirebond.com/#sle.

C. Cavity Mortar Control: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity drainage.
1. Mortar Diverter: Semi-rigid mesh designed for installation at flashing locations.
a. Manufacturers:
1) Advanced Building Products, Inc; Mortar Break DT: www.advancedbuildingproducts.com/#sle.
2) Mortar Net Solutions; MortarNet: www.mortarnet.com/#sle.

D. Nailing Strips: Softwood lumber, preservative treated; as specified in Section 061000.

E. Weeps:
1. Type: Polyester mesh.
2. Color(s): As selected by Architect from manufacturer's full range.
3. Manufacturers:
a. Advanced Building Products, Inc: www.advancedbuildingproducts.com/#sle.
b. Blok-Lok Limited: www.blok-lok.com/#sle.
c. CavClear/Archovations, Inc: www.cavclear.com/#sle.
d. Mortar Net Solutions; WeepVent: www.mortarnet.com/#sle.

F. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.06 MORTAR AND GROUT MIXING

A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
1. Masonry below grade and in contact with earth: Type S.

B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.

C. New Mortar for Old Brick: Proportion by volume only; no more than 20 percent of the total volume of Portland cement and lime combined to be Portland cement.
1. Repointing Mortar: Use proportions from 1 part lime to 2 parts sand with no Portland cement, up to 2 parts Portland cement to 3 parts lime to 6 parts sand.

D. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.

E. Admixtures: Add to mixture at manufacturer's recommended rate and in accordance with manufacturer's instructions; mix uniformly.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive masonry.

B. Verify that related items provided under other sections are properly sized and located.

C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

A. Direct and coordinate placement of metal anchors supplied for installation under other sections.

B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 COLD AND HOT WEATHER REQUIREMENTS

A. Maintain materials and surrounding air temperature to minimum 40 degrees Fahrenheit prior to, during, and 48 hours after completion of masonry work.

B. Maintain materials and surrounding air temperature to maximum 90 degrees Fahrenheit prior to, during, and 48 hours after completion of masonry work.

3.04 COURSING

A. Establish lines, levels, and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

C. Concrete Masonry Units:
   1. Bond: Running.
   2. Coursing: One unit and one mortar joint to equal 8 inches.
   3. Mortar Joints: Concave.

D. Brick Units:
   1. Bond: Running.
   2. Coursing: Three units and three mortar joints to equal 8 inches.
   3. Mortar Joints: Concave.

3.05 PLACING AND BONDING

A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.

B. Lay hollow masonry units with face shell bedding on head and bed joints.

C. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.

D. Remove excess mortar and mortar smears as work progresses.

E. Remove excess mortar with water repellent admixture promptly. Do not use acids, sandblasting or high pressure cleaning methods.

F. Interlock intersections and external corners, except for units laid in stack bond.

G. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.

H. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

I. Cut mortar joints flush where wall tile is scheduled or resilient base is scheduled.

J. Isolate masonry partitions from vertical structural framing members with a control joint as indicated.

K. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

3.06 WEEPS/CAVITY VENTS

A. Install weeps in veneer and cavity walls at 24 inches on center horizontally on top of through-wall flashing above shelf angles and lintels and at bottom of walls.

3.07 CAVITY MORTAR CONTROL

A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.

B. For cavity walls, build inner wythe ahead of outer wythe to accommodate accessories.

C. Install cavity mortar diverter at base of cavity and at other flashing locations as recommended by manufacturer to prevent mortar droppings from blocking weep/cavity vents.

3.08 REINFORCEMENT AND ANCHORAGE - GENERAL, SINGLE WYTHE MASONRY, AND CAVITY WALL MASONRY

A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches on center.

B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.

C. Place continuous joint reinforcement in first and second joint below top of walls.

D. Embed longitudinal wires of joint reinforcement in mortar joint with at least 5/8 inch mortar cover on each side.

E. Lap joint reinforcement ends minimum 6 inches.

F. Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Unless otherwise indicated on drawings or closer spacing is indicated under specific wall type, space anchors at maximum of 36 inches horizontally and 16 inches vertically.

G. Embed ties and anchors in mortar joint and extend into masonry unit a minimum of 1-1/2 inches with at least 5/8 inch mortar cover to the outside face of the anchor.

3.09 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER

A. Masonry Back-Up: Embed anchors to bond veneer at maximum 16 inches on center vertically and 36 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.

B. Stud Back-Up: Secure veneer anchors to stud framed back-up and embed into masonry veneer at maximum 16 inches on center vertically and 24 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.

C. Seismic Reinforcement: Connect veneer anchors with continuous horizontal wire reinforcement before embedding anchors in mortar.

3.10 MASONRY FLASHINGS

A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
   1. Extend flashings full width at such interruptions and at least 6 inches, minimum, into adjacent masonry or turn up flashing ends at least 1 inch, minimum, to form watertight pan at non-masonry construction.
   2. Remove or cover protrusions or sharp edges that could puncture flashings.
   3. Seal lapped ends and penetrations of flashing before covering with mortar.

B. Terminate flashing up 8 inches minimum on vertical surface of backing:
   1. Install vertical leg of flashing behind water-resistive barrier sheet over backing.
   2. Terminate vertical leg of flashing into bed joint in masonry or reglet in concrete.
   3. Anchor vertical leg of flashing into backing with a termination bar and sealant.

C. Extend metal flashings through exterior face of masonry and terminate in an angled drip with hemmed edge. Install joint sealer below drip edge to prevent moisture migration under flashing.

3.11 CONTROL AND EXPANSION JOINTS

A. Do not continue horizontal joint reinforcement through control or expansion joints.

B. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.

C. Size control joints as indicated on drawings; if not indicated, 3/4 inch wide and deep.

D. Form expansion joint as detailed on drawings.

3.12 BUILT-IN WORK

A. As work progresses, install built-in metal door frames and glazed frames and other items to be built into the work and furnished under other sections.

B. Install built-in items plumb, level, and true to line.

C. Bed anchors of metal door and glazed frames in adjacent mortar joints. Fill frame voids solid with grout.

D. Do not build into masonry construction organic materials that are subject to deterioration.

3.13 TOLERANCES

A. Maximum Variation from Alignment of Columns: 1/4 inch.

B. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.

C. Maximum Variation from Plane of Wall: 1/4 inch in 10 feet and 1/2 inch in 20 feet or more.

D. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.

E. Maximum Variation from Level Coursing: 1/8 inch in 3 feet and 1/4 inch in 10 feet; 1/2 inch in 30 feet.

F. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.

G. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch.

3.14 CUTTING AND FITTING

A. Cut and fit for chases, pipes, conduit, sleeves, and grounds. Coordinate with other sections of work to provide correct size, shape, and location.

3.15 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - BSD Quality Requirements.

3.16 CLEANING

A. Remove excess mortar and mortar droppings.

B. Replace defective mortar. Match adjacent work.

C. Clean soiled surfaces with cleaning solution.

3.17 PROTECTION

A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION 042000

This page intentionally left blank

SECTION 053100
STEEL DECKING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Roof deck.

B. Composite floor deck.

C. Metal form deck.

D. Supplementary framing for openings up to and including 18 inches (450 mm).

E. Bearing plates and angles.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 033000 - Cast-in-Place Concrete: Concrete topping over metal deck.

C. Section 042000 - Unit Masonry: Placement of anchors for bearing plates embedded in unit masonry assemblies.

D. Section 051200 - Structural Steel Framing: Placement of embedded steel anchors for bearing plates in cast-in-place concrete.

E. Section 052100 - Steel Joist Framing: Placement of embedded steel anchors for bearing plates and joist seats in cast-in-place concrete.

F. Section 055000 - Metal Fabrications: Steel angle concrete stops at deck edges.

1.03 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.

B. ASTM A510/A510M - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, and Alloy Steel; 2020.

C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

D. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).

E. AWS D1.3/D1.3M - Structural Welding Code - Sheet Steel; 2018.

F. ICC-ES AC43 - Acceptance Criteria for Steel Deck Roof and Floor Systems; 2022.

G. ICC-ES AC70 - Acceptance Criteria for Power-Actuated Fasteners Driven into Concrete, Steel and Masonry Elements; 2019, with Editorial Revision (2021).

H. SDI (DM) - Publication No.30, Design Manual for Composite Decks, Form Decks, and Roof Decks; 2007.

I. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.

J. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittals procedures.

B. Product Data: Provide deck profile characteristics, dimensions, structural properties, and finishes.

C. Shop Drawings: Indicate deck plan, support locations, projections, openings, reinforcement, pertinent details, and accessories.

1.05 QUALITY ASSURANCE

A. Design deck layout, spans, fastening, and joints under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Cut plastic wrap to encourage ventilation.

B. Separate sheets and store deck on dry wood sleepers; slope for positive drainage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Steel Deck:
1. Canam Steel Corporation: www.canam-steeljoists.ws.
2. New Millennium Building Systems (subsidiary of Steel Dynamics, Inc.): www.newmill.com.
3. Nucor-Vulcraft Group: www.vulcraft.com/#sle.

2.02 STEEL DECK

A. All Deck Types: Select and design metal deck in accordance with SDI Design Manual.
1. Calculate to structural working stress design and structural properties specified.

B. Roof Deck: Non-composite type, fluted steel sheet:
1. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230, with G90/Z275 galvanized coating.
2. Structural Properties:
a. Span Design: Multiple.
3. Minimum Base Metal Thickness: 22 gauge, 0.0299 inch (0.76 mm).
4. Nominal Height: 1-1/2 inch (38 mm).
5. Profile: Fluted; SDI WR.
6. Formed Sheet Width: 36 inch (900 mm).
7. Side Joints: Lapped, mechanically fastened.
8. End Joints: Lapped, mechanically fastened.

C. Composite Floor Deck: Fluted steel sheet embossed to interlock with concrete:
1. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230, with G90/Z275 galvanized coating.
2. Structural Properties:
3. Span Design: Multiple.
4. Minimum Base Metal Thickness: 20 gauge, 0.0359 inch (0.91 mm).
5. Nominal Height: as indicated on drawings.
6. Profile: Fluted as indicated on drawings.
7. Formed Sheet Width: 24 inch (600 mm).
8. Side Joints: Lock seam.

D. Metal Form Deck: Corrugated sheet steel, with provision for ventilation of concrete:
1. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230, with G90/Z275 galvanized coating.

2. Primer: Shop coat of manufacturer's standard primer paint over cleaned and phosphatized substrate.
3. Minimum Base Metal Thickness: ___ gauge, ___ inch (___ mm).
4. Nominal Height: ____ inch (____ mm).
5. Formed Sheet Width: 24 inch (600 mm).
6. Side Joints: Lapped, welded.
7. End Joints: Lapped, welded.

2.03 ACCESSORY MATERIALS

A. Bearing Plates and Angles: ASTM A36/A36M steel, galvanized per ASTM A123/A123M.

B. Welding Materials: AWS D1.1/D1.1M.

C. Fasteners: Galvanized hardened steel, self tapping.

D. Powder Actuated Mechanical Fasteners: Steel; with knurled shank and forged ballistic point. Comply with applicable requirements of ICC-ES AC70.
1. Design Requirements: Provide number and type of fasteners that comply with the applicable requirements of SDI (DM) design method for roof deck and floor deck applications and ICC-ES AC43.
2. Material: Steel; ASTM A510/A510M.
   a. Hardness: Rockwell C 54.5, minimum.
   b. Tensile Strength: 285 kips per square inch (1965 MPa), minimum.
   c. Shear Strength: 175 kips per square inch (1205 MPa), minimum.
   d. Washers:
      1) Steel Bar Joist Framing Applications: 0.472 inch (12 mm) diameter, minimum.
      2) Exposed Roof Deck Applications: 0.591 inch (15 mm) diameter, minimum.

E. Mechanical Fasteners: Steel; hex washer head, self-drilling, self-tapping.

F. Weld Washers: Mild steel, uncoated, 3/4 inch (19 mm) outside diameter, 1/8 inch (3 mm) thick.

G. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

H. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, complying with VOC limitations of authorities having jurisdiction.

2.04 FABRICATED DECK ACCESSORIES

A. Sheet Metal Deck Accessories: Metal closure strips, wet concrete stops, and cover plates, 22 gauge, 0.0299 inch (0.76 mm) thick sheet steel; of profile and size as indicated; finished same as deck.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions prior to beginning work.

3.02 INSTALLATION

A. Erect metal deck in accordance with SDI Design Manual and manufacturer's instructions. Align and level.

B. Clinch lock seam side laps.

C. At mechanically fastened male/female side laps fasten at 24 inches (600 mm) on center maximum.

D. Drive mechanical sidelap connectors completely through adjacent lapped sheets; positively engage adjacent sheets with minimum three-thread penetration.

E. At welded male/female side laps weld at 18 inches (450 mm) on center maximum.

F. Weld deck in accordance with AWS D1.3/D1.3M.

G. Immediately after welding deck and other metal components in position, coat welds, burned areas, and damaged surface coating, with touch-up primer.

END OF SECTION 053100

SECTION 055000
METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Shop fabricated steel and aluminum items.

B. Loose steel lintels.

C. Metal Ladders

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 033000 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.

C. Section 042000 - Unit Masonry: Placement of metal fabrications in masonry.

D. Section 053100 - Steel Decking: Bearing plates for metal deck bearing, including anchorage.

1.03 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.

B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2024.

C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

D. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2024.

E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.

F. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2021.

G. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2018a.

I. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.

J. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength; 2021.

K. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.

L. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).

M. AWS D1.2/D1.2M - Structural Welding Code - Aluminum; 2014, with Errata (2020).

N. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.

O. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

P. SSPC-SP 2 - Hand Tool Cleaning; 2018.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
   1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
   2. Design data: Submit drawings and supporting calculations, signed and sealed by a qualified professional structural engineer.
      a. Include the following, as applicable:
         1) Design criteria.
         2) Engineering analysis depicting stresses and deflections.
         3) Member sizes and gauges.
         4) Details of connections.
         5) Support reactions.
         6) Bracing requirements.

1.05 QUALITY ASSURANCE

A. Design _____ under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

B. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.2/D1.2M and dated no more than 12 months before start of scheduled welding work.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Wide-flange Steel Sections: ASTM A36/A36M.

B. Steel Channel and Angle Sections: ASTM A36/A36M.

C. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.

D. Plates: ASTM A283/A283M.

E. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.

F. Stainless Steel, General: ASTM A666/A666M, Type 304.

G. Slotted Channel Fittings: ASTM A1011/A1011M.

H. Mechanical Fasteners: Same material as or compatible with materials being fastened; type consistent with design and specified quality level.

I. Common Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.

J. Structural Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, plain. Includes:
   1. Grade A325/A325M
   2. Grade A490/A490M

K. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

L. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

M. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

E. Furnish components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

A. Bollards: Steel pipe, concrete filled, crowned cap, as detailed; prime paint finish.

B. Ledge Angles, Shelf Angles, Channels, and Plates Not Attached to Structural Framing: For support of metal decking; prime paint finish.

C. Lintels: As detailed; galvanized finish.

D. Sill Angles for Tempered Glass Railing Assemblies: ASTM A36/A36M steel angles with anchoring devices and sizes as indicated in shop drawings for railing assembly, drilled and tapped for fastener types, sizes, and spacing indicated, prime paint finish.

E. Door Frames for Overhead Door Openings, Wall Openings, and _____: Channel sections; prime paint finish.

F. Slotted Channel Framing: Fabricate channels and fittings from structural steel complying with the referenced standards; factory-applied, rust-inhibiting thermoset acrylic enamel finish.

2.04 METAL LADDERS

A. General:
   1. Comply with ANSI A14.3 unless otherwise indicated
   2. For Elevator Pit ladders, comply with ASME A17.1

B. Steel Ladders:
   1. Space siderails 24 inces apart unless otherwise indicated.
   2. Siderails: Continuous, 1/2 by 2 1/2 inch steel flat bars, with eased edges.
   3. Rungs: 3/4 inch diameter steel bars
   4. Fit rungs in centerline of siderails; plug-weld and grind smooth on out rail faces.
   5. Provide non-slip surfaces on top of each rung, either by coating rung with aluminum-oxide granules set in epoxy-resin adhesive or by using a type of manufactured rung filled with aluminum-oxide grout.
      a. Products: Subject to compliance with requirements, available products that may be incorparated into the Work include, but are not li
         1) IKG Industries, a division of Harsco Corporation; Mebac
         2) SlipNOT Metal Safety Flooring, a W.S. Molnar company; SlipNOT

b. Support each ladder at top and bottom and not more than 60 inches o.c. with welded or bolted steel brackets.
c. Galvanize exterior ladders, including brackets and fasteners.

2.05 FINISHES - STEEL

A. Prime paint steel items.
1. Exceptions: Galvanize items to be embedded in concrete, items to be embedded in masonry, and items specified for _____ finish.
2. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.

B. Prepare surfaces to be primed in accordance with SSPC-SP2.

C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

D. Prime Painting: One coat.

E. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating. (Provide minimum 530 g/sq m galvanized coating.)

F. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

G. Slotted Channel Framing: ASTM A653/A653M, Grade 33.

H. Stainless Steel Finish: No. 4 Bright Polished finish.

2.06 FABRICATION TOLERANCES

A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch (1.5 mm).

C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.5 mm).

D. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).

E. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Furnish setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components as indicated on drawings.

D. Perform field welding in accordance with AWS D1.1/D1.1M.

E. Obtain approval prior to site cutting or making adjustments not scheduled.

F. After erection, prime welds, abrasions, and surfaces not shop primed , except surfaces to be in contact with concrete.

3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch (6 mm).

C. Maximum Out-of-Position: 1/4 inch (6 mm).

END OF SECTION 055000

This page intentionally left blank

SECTION 055000
METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Shop fabricated steel items.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 033000 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.

C. Section 042000 - Unit Masonry: Placement of metal fabrications in masonry.

D. Section 053100 - Steel Decking: Bearing plates for metal deck bearing, including anchorage.

E. Section 055133 - METAL LADDERS.

1.03 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.

B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2024.

C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

D. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2024.

E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.

F. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2021.

G. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.

H. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.

I. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2025.

J. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength; 2021.

K. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.

L. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2021, with Errata (2023).

M. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025, with Amendment (2026).

N. AWS D1.2/D1.2M - Structural Welding Code - Aluminum; 2014, with Errata (2020).

O. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.

P. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

Q. SSPC-SP 2 - Hand Tool Cleaning; 2018.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
   1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
   2. Design data: Submit drawings and supporting calculations, signed and sealed by a qualified professional structural engineer.
      a. Include the following, as applicable:
         1) Design criteria.
         2) Engineering analysis depicting stresses and deflections.
         3) Member sizes and gauges.
         4) Details of connections.
         5) Support reactions.
         6) Bracing requirements.

C. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.

1.05 QUALITY ASSURANCE

A. Design under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

B. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.2/D1.2M and dated no more than 12 months before start of scheduled welding work.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.

C. Plates: ASTM A283/A283M.

D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.

E. Stainless Steel, General: ASTM A666/A666M, Type 304.

F. Slotted Channel Fittings: ASTM A1011/A1011M.

G. Mechanical Fasteners: Same material as or compatible with materials being fastened; type consistent with design and specified quality level.

H. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.

I. Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, plain.

J. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

K. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

L. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

E. Furnish components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

A. Bollards: Steel pipe, concrete filled, crowned cap, as detailed; prime paint finish.

B. Ledge Angles, Shelf Angles, Channels, and Plates Not Attached to Structural Framing: For support of metal decking; prime paint finish.

C. Lintels: As detailed; galvanized finish.

D. Door Frames for Overhead Door Openings and Wall Openings: Channel sections; prime paint finish.

E. Elevator Hoistway Divider Beams: Beam sections; prime paint finish.

F. Slotted Channel Framing: Fabricate channels and fittings from structural steel complying with the referenced standards; factory-applied, rust-inhibiting thermoset acrylic enamel finish.

2.04 FINISHES - STEEL

A. Prime paint steel items.
   1. Exceptions: Galvanize items to be embedded in concrete and items to be embedded in masonry.
   2. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.

B. Prepare surfaces to be primed in accordance with SSPC-SP2.

C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

D. Prime Painting: One coat.

E. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating.

F. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

G. Slotted Channel Framing: ASTM A653/A653M, Grade 33.

H. Stainless Steel Finish: No. 4 Bright Polished finish.

2.05 FABRICATION TOLERANCES

A. Squareness: 1/8 inch maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch.

C. Maximum Misalignment of Adjacent Members: 1/16 inch.

D. Maximum Bow: 1/8 inch in 48 inches.

E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Furnish setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components as indicated on drawings.

D. Perform field welding in accordance with AWS D1.1/D1.1M.

E. Obtain approval prior to site cutting or making adjustments not scheduled.

F. After erection, prime welds, abrasions, and surfaces not shop primed , except surfaces to be in contact with concrete.

3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch.

C. Maximum Out-of-Position: 1/4 inch.

END OF SECTION 055000

SECTION 055133
METAL LADDERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Shop-fabricated metal ladders.

B. Prefabricated ladders.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 099000 - Painting and Coating: Paint finish.

1.03 REFERENCE STANDARDS

A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).

B. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.

C. ANSI A14.3 - American National Standard for Ladders - Fixed - Safety Requirements; 2008 (Reaffirmed 2018).

D. ASME A17.1 - Safety Code for Elevators and Escalators Includes Requirements for Elevators, Escalators, Dumbwaiters, Moving Walks, Material Lifts, and Dumbwaiters with Automatic Transfer Devices; 2022.

E. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.

F. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2024.

G. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

H. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2024.

I. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.

J. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2023.

K. ASTM B210/B210M - Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes; 2026.

L. ASTM B211/B211M - Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold Finished Bar, Rod, and Wire; 2023.

M. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.

N. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2021, with Errata (2023).

O. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025, with Amendment (2026).

P. AWS D1.2/D1.2M - Structural Welding Code - Aluminum; 2014, with Errata (2020).

Q. IAS AC172 - Accreditation Criteria for Fabricator Inspection Programs for Structural Steel; 2018.

R. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.

S. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

T. SSPC-SP 2 - Hand Tool Cleaning; 2018.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorages for casting into concrete. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.05 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data; For the following:
   1. Paint products.
   2. Manufacturer's data sheets on each ladder safety system product to be used, including installation instructions.

C. Shop Drawings:
   1. Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
   2. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

D. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.

E. Designer's Qualification Statement.

F. Fabricator's Qualification Statement: Provide documentation showing steel fabricator is accredited under IAS AC172.

G. Specimen warranty.

H. Executed warranty.

1.06 QUALITY ASSURANCE

A. Design ladder(s) under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

B. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.2/D1.2M and dated no more than 12 months before start of scheduled welding work.

C. Fabricator Qualifications: A qualified steel fabricator that is accredited by IAS AC172.

1.07 WARRANTY

A. See Section 017700 - Closeout Procedures, for additional warranty requirements.

B. Manufacturer Warranty: Provide 5-year manufacturer warranty for material and workmanship. Complete forms in Owner's name and register with manufacturer.

1.08 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal ladders by field measurements before fabrication.

PART 2 PRODUCTS

2.01 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.02 MANUFACTURERS

A. Source Limitations: Furnish products produced by single manufacturer and obtained from single supplier.

B. The manufacturer and model number(s) or series listed below are Basis-of-Design.
   1. Subject to compliance with requirements of product identified as basis-of-design, other manufacturers shall be considered for bidding as an equivalent when the bidder provides a written request for equivalency to the Architect prior to bidding.
   2. Follow all instructions as indicated in Section 012519 - Equivalent Procedures.

2.03 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Tubing: ASTM A500/A500M Grade B cold-formed structural tubing.

C. Plates, Shapes and Bars: ASTM A283/A283M.

D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.

E. Mechanical Fasteners: Same material or compatible with materials being fastened; type consistent with design and specified quality level.

F. Bolts, Nuts, and Washers: ASTM A307, plain.

G. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

H. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

I. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.04 MATERIALS - ALUMINUM

A. Extruded Aluminum: ASTM B211/B211M, 6005 alloy, T5 temper.

B. Aluminum-Alloy Drawn Seamless Tubes: ASTM B210/B210M6005 alloyT5 temper.

C. Aluminum-Alloy Bars: ASTM B211/B211M, 6005 alloy, T5 temper.

D. Bolts, Nuts, and Washers: Stainless steel.

E. Welding Materials: AWS D1.2/D1.2M; type required for materials being welded.

2.05 FABRICATION

A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Continuously seal joined members by continuous welds.

D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.06 SHOP FABRICATED LADDERS

A. General:
   1. Ladders: Steel; in compliance with ANSI A14.3; with mounting brackets and attachments; prime paint finish.
   2. Elevator Pit Ladders: Steel; in compliance with ASME A17.1; with mounting brackets and attachments; prime paint finish.
   3. Side Rails: 3/8 by 2 inches members spaced at 20 inches.
   4. Elevator Pit Side Rails: 3/8 by 2 inches members spaced at 12 inches.
   5. Rungs: One inch diameter solid round bar spaced 12 inches on center.
   6. Space rungs 7 inches from wall surface.
   7. Fit rungs in centerline of siderails; plug-weld and grind smooth on outer rail faces.
   8. Provide nonslip surfaces on top of each rung, either by coating rung with aluminum-oxide granules set in epoxy-resin adhesive or by using a type of manufactured rung filled with aluminum-oxide grout.
      a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
         1) IKG Industries; Mebac: www.ikg.com/#sle.
         2) Slipnot Metal Safety Flooring; SlipNOT: www.slipnot.com/#sle.
         3) Substitutions: See Section 016000 - Product Requirements.
   9. Support each ladder at top and bottom and not more than 60 inches o.c. with welded or bolted steel brackets.
   10. Galvanize exterior ladders, including brackets and fasteners.

2.07 PREFABRICATED LADDERS

A. Prefabricated Ladder: Welded metal unit complying with ANSI A14.3; factory fabricated to greatest degree practical and in the largest components possible.
   1. Components: Manufacturer's standard rails, rungs, treads, handrails. returns, platforms and safety devices complying with the requirements of the MATERIALS article of this section.
   2. Materials: Aluminum; 6061 alloy, T6 temper.
   3. Finish: Powder coat; color to be selected by Architect from manufacturer's standard range.
   4. Finish: Manufacturer's standard clear anodized coating, comply with AAMA 611, Class 1.
   5. Manufacturers:
      a. **(Basis of Design)** O'Keeffe's Inc; Model 502: www.okeeffes.com/#sle.
      b. Precision Ladders, LLC; Fixed Aluminum Wall Ladder: www.precisionladders.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

2.08 FINISHES - STEEL

A. Prime paint steel items.
   1. Do not prime surfaces in direct contact with concrete.
   2. Do not prime surfaces where field welding is required.

B. Prepare surfaces to be primed in accordance with SSPC-SP2.

C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

D. Prime Painting: One coat.

E. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating.

F. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

2.09 FINISHES - ALUMINUM

A. Class I Color Anodized Finish: AAMA 611 AA-M12C22A42 Integrally colored anodic coating not less than 0.7 mils thick; _____.

B. Class I Color Anodized Finish: AAMA 611 AA-M12C22A44 Electrolytically deposited colored anodic coating not less than 0.7 mils thick; _____.

C. Pigmented Organic Coating System: AAMA 2603 polyester or acrylic baked enamel finish; color as indicated.

D. Apply one coat of bituminous paint to concealed aluminum surfaces in contact with cementitious or dissimilar materials.

2.10 FABRICATION TOLERANCES

A. Squareness: 1/8 inch maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch.

C. Maximum Misalignment of Adjacent Members: 1/16 inch.

D. Maximum Bow: 1/8 inch in 48 inches.

E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal and aluminum where site welding is required.

B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components as indicated on shop drawings.

D. Perform field welding in accordance with AWS D1.1/D1.1M.

E. Obtain approval prior to site cutting or making adjustments not scheduled.

F. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized , except surfaces to be in contact with concrete.

3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch.

C. Maximum Out-of-Position: 1/4 inch.

END OF SECTION 055133

SECTION 061000
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Sheathing.
B. Roof-mounted curbs.
C. Preservative treated wood materials.
D. Fire retardant treated wood materials.
E. Miscellaneous framing and sheathing.
F. Communications and electrical room mounting boards.
G. Concealed wood blocking, nailers, and supports.
H. Miscellaneous wood nailers, furring, and grounds.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
B. Section 077200 - Roof Accessories: Prefabricated roof curbs.

1.03 REFERENCE STANDARDS

A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
B. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus; 2026.
C. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2017.
D. ASTM D2898 - Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing; 2010 (Reapproved 2024).
E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
F. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples; 2021.
G. AWPA U1 - Use Category System: User Specification for Treated Wood; 2025.
H. ICC-ES AC01 - Acceptance Criteria for Expansion Anchors in Masonry Elements; 2015.
I. PS 1 - Structural Plywood; 2023.
J. PS 2 - Performance Standard for Wood Structural Panels; 2019.
K. PS 20 - American Softwood Lumber Standard; 2020.
L. SPIB (GR) - Standard Grading Rules; 2021.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.
B. Product Data: Provide technical data on wood preservative materials and application instructions.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

C. Evaluation Reports: For the following, from ICC-ES:
1. Wood-preservative-treated plywood.
2. Fire-retardant-treated plywood.
3. Power-driven fasteners.
4. Post-installed anchors.
5. Air-barrier and water-resistant glass-mat gypsum sheathing.

D. ABAA Field Quality Control Submittals: Submit third-party reports of testing and inspection required by ABAA QAP.

E. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.

F. ABAA Manufacturer Qualification: Submit documentation of current evaluation of proposed manufacturer and materials.

G. ABAA Installer Qualification: Submit documentation of current contractor accreditation and current installer certification. Keep copies of all contractor accreditation and installer certification on site during and after installation. Present on-site documentation upon request.

H. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Air Barrier Association of America (ABAA) Quality Assurance Program (QAP); www.airbarrier.org/#sle:
1. Installer Qualification: Use accredited contractor, certified installers, evaluated materials, and third-party field quality control audit.
2. Manufacturer Qualification: Use evaluated materials from a single manufacturer regularly engaged in air barrier material manufacture. Use secondary materials approved in writing by primary material manufacturer.

B. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.06 DELIVERY, STORAGE, AND HANDLING

A. General: Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, and installation.

1.07 WARRANTY

A. See Section 017700 - Closeout Procedures, for additional warranty requirements.

B. Correct defective work within a two-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations: Obtain specified products from single source and from single manufacturer.

B. The manufacturer and model number(s) or series listed below are Basis-of-Design.
   1. Subject to compliance with requirements of product identified as Basis-Of-Design, other manufacturers shall be considered for bidding as an equivalent when the BIDDER provides a written request for equivalency to the Architect prior to bidding.
   2. Follow all instructions as indicated in Section 012519 - Equivalent Procedures.

2.02 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
   2. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness 15 percent for 2-inch nominal thickness or less; no limit for more than 2-inch nominal thickness unless otherwise indicated.

2.03 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).

B. Sizes: Nominal sizes as indicated on drawings, S4S.

C. Moisture Content: Kiln-dry or MC15.

D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
   1. Lumber: S4S, No. 2 or Standard Grade.
   2. Boards: Standard or No. 3.

2.04 CONSTRUCTION PANELS

A. Wall Sheathing: PS 2 type.
   1. Bond Classification: Exterior.
   2. Grade: Structural I Sheathing.
   3. Span Rating: 24.
   4. Performance Category: 5/16 PERF CAT.
   5. Edge Profile: Square edge.

B. Wall Sheathing: Plywood, PS 1, Grade C-D, Exposure I.

C. Wall Sheathing, For exterior rainscreen system: Glass mat faced gypsum, ASTM C1177/C1177M, 5/8 inch Type X fire resistant.
   1. Edges: Square.
   2. Products:

D. Communications and Electrical Room Mounting Boards: PS 1 A-D plywood, or medium density fiberboard; 3/4 inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.

E. Other Applications:
   1. Plywood Concealed From View But Located Within Exterior Enclosure: PS 1, C-C Plugged or better, Exterior grade.
      a. Thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

2.05 ACCESSORIES

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

B. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01 or as appropriate for the substrate.

C. Metal and Finish of Fasteners:
   1. Fire-Retardant-Treated Wood:
      a. Nails, timber rivets, wood screws, and lag screws: Hot-dip galvanized steel complying with ASTM A153/A153M Class D.
   2. Preservative-Treated Wood:
      a. Nails, timber rivets, wood screws, and lag screws - general use: Hot-dip galvanized steel complying with ASTM A153/A153M Class D.
   3. Untreated Wood: Hot-dip galvanized steel complying with ASTM A153/A153M Class D.

D. Anchors: Expansion shield and lag bolt type for anchorage to solid masonry or concrete.

E. Fasteners and Anchors; Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture:
   1. Nails, Brads, and Staples: ASTM F1667.
   2. Power-Driven Fasteners: NES NER-272.
   3. Wood Screws: ASME B18.6.1.
   4. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
   5. Screws for Fastening Gypsum Sheathing to Cold-Formed Metal Framing: Steel drill screws, in length recommended by sheathing manufacturer for thickness of sheathing to be attached, with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B117.
   6. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
   7. Anchors: Toggle bolt type for anchorage to hollow masonry.

2.06 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
   1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.

2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

B. Fire Retardant Treatment:
   1. Exterior Type: AWPA U1, Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.
      a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
   2. Interior Type A: AWPA U1, Use Category UCFA, Commodity Specification H, low temperature, low hygroscopic type, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
      a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
      b. Treat rough carpentry items as indicated.

C. Preservative Treatment:
   1. Preservative Pressure Treatment of Plywood Above Grade: AWPA U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative to 0.25 lb/cu ft retention.
      a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
      b. Application: Treat all miscellaneous carpentry unless otherwise indicated.
         1) Wood blocking, plywood, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

PART 3 EXECUTION

3.01 PREPARATION

A. Coordinate installation of rough carpentry members specified in other sections.

3.02 INSTALLATION - GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.

D. Install plywood backing panels by fastening to studs or block; coordinate locations with utilities requiring backing panels. Install fire-retardant-treated plywood backing panels with classification marking of testing agency exposed to view.

E. Securely attach to substrate by fastening as indicated, complying with the following:
   1. Chapter 23, "Fastening Schedule" in Building Code of New York State.

F. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.

G. Coordinate wall and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

H. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

I. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

J. Select material sizes to minimize waste.

K. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

L. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

M. Securely attach carpentry work to substrate by anchoring and fastening as indicated

3.03 BLOCKING, NAILERS, AND SUPPORTS

A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

B. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

C. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

D. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to authorities having jurisdiction may be used in lieu of solid wood blocking.

E. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.

F. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

G. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

H. Provide nonstructural framing and blocking to support the following:
   1. Cabinets and shelf supports.
   2. Wall brackets.
   3. Handrails.
   4. Grab bars.

5. Towel and bath accessories.
6. Wall-mounted door stops.
7. Markerboards and Tackboards.
8. Wall paneling and trim.
9. Joints of rigid wall coverings that occur between studs.
10. Other wall- or ceiling-mounted items indicated on drawings.

3.04 ROOF-RELATED CARPENTRY

A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

B. Provide wood curb at each roof opening except where prefabricated curbs are specified and where specifically indicated otherwise; form corners by alternating lapping side members.

3.05 INSTALLATION OF CONSTRUCTION PANELS

A. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.

B. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board.
   1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
   2. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
   3. Install adjacent boards without gaps.

3.06 FIELD QUALITY CONTROL

A. See Section 014500 - Quality Requirements, for additional requirements.

B. Coordination of ABAA Tests and Inspections:
   1. Provide testing and inspection required by ABAA QAP.
   2. Notify in ABAA writing of schedule for air barrier work. Allow adequate time for testing and inspection.
   3. Cooperate with ABAA testing agency.
   4. Allow access to air barrier work areas and staging.
   5. Do not cover air barrier work until tested, inspected, and accepted.

3.07 CLEANING

A. Waste Disposal: See Section 017419 - Construction Waste Management and Disposal.
   1. Comply with applicable regulations.
   2. Do not burn scrap on project site.
   3. Do not burn scraps that have been pressure treated.
   4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or “waste-to-energy” facilities.

B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.

C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION 061000

This page intentionally left blank

SECTION 062000
FINISH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Finish carpentry items.

1.02 RELATED REQUIREMENTS

A. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 064100 - Architectural Wood Casework: Shop fabricated custom cabinet work.

1.03 REFERENCE STANDARDS

A. AWI (QCP) - Quality Certification Program; Current Edition.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

C. AWMAC (GIS) - Guarantee and Inspection Services Program; Current Edition.

D. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

E. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data:
   1. Provide manufacturer's product data, storage and handling instructions for factory-fabricated units.

C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
   1. Scale of Drawings: 1-1/2 inch to 1 foot, minimum.
   2. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).
   3. Include certification program label.

D. Samples: Submit two samples of High Pressure Laminate

E. Certificate: Submit labels and certificates required by quality assurance and quality control programs.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
   1. Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.

B. Quality Certification:
   1. Comply with AWI (QCP) woodwork association quality certification service/program in accordance with requirements for work specified in this section: www.awiqcp.org/#sle.
   2. Provide labels or certificates indicating that work complies with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade or grades specified.
   3. Provide designated labels on shop drawings as required by certification program.
   4. Provide designated labels on installed products as required by certification program.

5. Submit certifications upon completion of installation that verifies this work is in compliance with specified requirements.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect from moisture damage.

B. Handle materials and products to prevent damage to edges, ends, or surfaces.

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

2.02 PLASTIC LAMINATE MATERIALS

A. Plastic Laminate: NEMA LD 3; Type HPL-1 Basis of Design: Refer to Interior Finish Schedule
   1. Manufacturers:
      a. Arborite; _____: www.arborite.com/#sle.
      b. Panolam Industries International, Inc; _____: www.panolam.com/#sle.
      c. Formica; www.formica.com/#sle..
      d. Substitutions: See Section 016000 - Product Requirements.

2.03 ACCESSORIES

A. Adhesive: Type recommended by fabricator to suit application.

2.04 FABRICATION

A. Shop assemble work for delivery to site, permitting passage through building openings.

B. Cap exposed plastic laminate finish edges with material of same finish and pattern.

C. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

D. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify adequacy of backing and support framing.

3.02 INSTALLATION

A. Install custom fabrications in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.

B. Set and secure materials and components in place, plumb and level.

C. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

END OF SECTION 062000

SECTION 077200
ROOF ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Curbs.

B. Equipment rails.

C. Roof penetrations mounting curbs.

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 053100 - Steel Decking.

C. Section 076200 - Sheet Metal Flashing and Trim: Roof accessory items fabricated from sheet metal.

1.03 REFERENCE STANDARDS

A. ANSI/SPRI ES1 - Wind Test Design Standard For Edge Systems Used With Low Slope Roofing Systems.

B. 29 CFR 1910.23 - Ladders; Current Edition.

C. 29 CFR 1910.29 - Fall Protection Systems and Falling Object Protection - Criteria and Practices; Current Edition.

D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

E. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.

F. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.

G. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.

1.04 SUBMITTALS

A. See Section 013300 Submittal Procedures, for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used.
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
   4. Maintenance requirements.

C. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
   1. Non-penetrating Rooftop Supports: Submit design calculations for loadings and spacings, sealed and signed by a Professional Engineer experienced in design of this type and licensed in the state of New York.
   2. Submit shop drawings sealed and signed by a Professional Engineer experienced in design of this type of work and licensed in the State of New York.

D. Warranty Documentation:
   1. Submit manufacturer warranty.
   2. Ensure that forms have been completed in Owner's name and registered with manufacturer.
   3. Submit documentation that roof accessories are acceptable to roofing manufacturer, and do not limit the roofing warranty.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store products under cover and elevated above grade.

1.06 WARRANTY

A. See Section 017700 - Closeout Procedures, for additional warranty requirements.

B. Correct defective Work within a One year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 GENERAL

A. Source Limitations: Obtain specified products from single source from single manufacturer.

B. The manufacturer and model number(s) or series listed below are Basis-of-Design.
   1. Subject to compliance with requirements of product identified as basis-of-design, other manufacturers shall be considered for bidding as an equivalent when the bidder provides a written request for equivalency to the Architect prior to bidding.
   2. Follow all instructions as indicated in Section 012519 - Equivalent Procedures.

2.02 ROOF CURBS

A. Manufacturers:
   1. AES Industries Inc: www.aescurb.com/#sle.
   2. **(Basis of Design)** The Pate Company: www.patecurbs.com/#sle.
   3. Substitutions: See Section 016000 - Product Requirements.

B. Roof Curbs Mounting Assemblies: Factory fabricated hollow sheet metal construction, internally reinforced, and capable of supporting superimposed live and dead loads and designated equipment load with fully mitered and sealed corner joints welded or mechanically fastened, and integral counterflashing with top and edges formed to shed water.
   1. Applications: Roof curbs used for roof penetrations/openings as indicated on drawings.
   2. Roof Curb Mounting Substrate: Curb substrate consists of steel roof deck.
   3. Sheet Metal Material:
      a. Aluminum: 0.080 inch minimum thickness, with 3003 alloy, and H14 temper.
         1) Finish: Mill finish.
   4. Provide layouts and configurations indicated on drawings.

C. Curbs Adjacent to Roof Openings: Provide curb on each side of opening, with top of curb horizontal for equipment mounting.
   1. Provide preservative treated wood nailers along top of curb.
   2. Insulate inside curbs with 1-1/2 inch thick fiberglass insulation.
   3. Height Above Finished Roof Surface: 8 inches, minimum.

D. Equipment Rail Curbs: Straight curbs on each side of equipment, with top of curbs horizontal and level with each other for equipment mounting.
   1. Provide preservative treated wood nailers along top of rails.

2. Height Above Finished Roof Surface: 8 inches, minimum.
3. Manufacturers:
   a. MKT Metal Manufacturing; Equipment Rails: www.mktduct.com/#sle.
   b. Substitutions: See Section 016000 - Product Requirements.

2.03 NON-PENETRATING ROOFTOP SUPPORTS/ASSEMBLIES

A. Non-Penetrating Rooftop Support/Assemblies: Manufacturer-engineered and factory-fabricated, with pedestal bases that rest on top of roofing membrane, and not requiring any attachment to roof structure and not penetrating roofing assembly.
   1. Design Loadings and Configurations: As required by applicable codes.
   2. Height: Provide minimum clearance of 8 inches under supported items to top of roofing.
   3. Support Spacing and Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
   4. Steel Components: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
   5. Hardware, Bolts, Nuts, and Washers: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A153/A153M.
   6. Manufacturers:
      a. Portals Plus: www.portalsplus.com/#sle.
      b. Substitutions: See Section 016000 - Product Requirements.

B. Non-Penetrating Pedestals: Steel pedestals with square, round, or rectangular bases.
   1. Bases: High density polypropylene.
   2. Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
   3. Steel Components: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
   4. Manufacturers:
      a. Portals Plus; Pedestal Plus: www.portalsplus.com/#sle.
      b. Substitutions: See Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable results for applicable substrate under project conditions.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.

3.04 CLEANING

A. Clean installed work to like-new condition.

3.05 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION 077200

SECTION 078400
FIRESTOPPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Firestopping systems.

B. Firestopping of joints and penetrations in fire-resistance-rated and smoke-resistant assemblies, whether indicated on drawings or not, and other openings indicated.

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 017300 - Execution: Cutting and patching.

C. Section 078100 - Applied Fire Protection.

D. Section 092116 - Gypsum Board Assemblies: Gypsum wallboard fireproofing.

1.03 REFERENCE STANDARDS

A. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2026.

B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2024.

C. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems; 2015 (Reapproved 2019).

D. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestops; 2019.

E. ASTM E2307 - Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-Story Test Apparatus; 2025b.

F. ASTM E2393 - Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers; 2010a (Reapproved 2015).

G. ASTM E2837 - Standard Test Method for Determining the Fire Resistance of Continuity Head-of-Wall Joint Systems Installed between Rated Wall Assemblies and Nonrated Horizontal Assemblies; 2023a, with Editorial Revision (2024).

H. FM (AG) - FM Approval Guide; Current Edition.

I. FM 4991 - Approval Standard of Firestop Contractors; 2013.

J. ITS (DIR) - Directory of Listed Products; current edition.

K. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).

L. UL (DIR) - Online Certifications Directory; Current Edition.

M. UL (FRD) - Fire Resistance Directory; Current Edition.

N. UL 1479 - Standard for Fire Tests of Penetration Firestops; Current Edition, Including All Revisions.

O. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.

C. Product Data: Provide data on product characteristics, performance ratings, and limitations.

D. Sustainable Design Submittal: Submit VOC content documentation for nonpreformed materials.

E. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.

F. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

G. Manufacturer's qualification statement.

H. Installer's qualification statement.

1.05 QUALITY ASSURANCE

A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
   1. Listing in UL (FRD) will be considered as constituting an acceptable test report.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

C. Installer Qualifications: Company specializing in performing the work of this section and:
   1. Trained by manufacturer.
   2. Approved by Factory Mutual Research Corporation under FM 4991, or meeting any two of the following requirements:
   3. Verification of minimum five years documented experience installing work of this type.
   4. Verification of at least five satisfactorily completed projects of comparable size and type.
   5. Licensed by local authorities having jurisdiction (AHJ).

1.06 FIELD CONDITIONS

A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.

B. Provide ventilation in areas where solvent-cured materials are being installed.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations: Obtain specified products from single source from single manufacturer.

B. The manufacturer and model number(s) or series listed below are Basis-of-Design.
   1. Subject to compliance with all specified requirements, provide products by one of the following, for each type of product listed, or equivalent:

C. Firestopping Manufacturers:
   1. 3M Fire Protection Products: www.3m.com/firestop/#sle.
   2. Hilti, Inc: www.us.hilti.com/#sle.
   3. RectorSeal, a CSW Industrials Company; Metacaulk 150+ General Purpose Firestop Sealant: www.rectorseal.com/firestop-solutions/#sle.
   4. Tremco Commercial Sealants & Waterproofing; TREMstop Acrylic: www.tremcosealants.com/#sle.
   5. Substitutions: See Section 016000 - Product Requirements.

2.02 MATERIALS

A. Firestopping Materials: Any materials meeting requirements.

B. Prohibited Materials: Do not use any product with an asbestos component.

C. Volatile Organic Compound (VOC) Content: Provide products having VOC content lower than that required by SCAQMD 1168.

D. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials as required for tested firestopping assembly.

E. Fire Ratings: Refer to drawings for required systems and ratings.

2.03 FIRESTOPPING ASSEMBLY REQUIREMENTS

A. Perimeter Fire Containment Firestopping: Use system that has been tested according to ASTM E2307 to have fire resistance F Rating equal to required fire rating of floor assembly.
   1. Movement: Provide systems that have been tested to show movement capability as indicated.

B. Head-of-Wall (HW) Joint System Firestopping at Joints Between Fire-Rated Wall Assemblies and Non-Rated Horizontal Assemblies: Use system that has been tested according to ASTM E2837 to have fire resistance F Rating equal to required fire rating of wall assembly.

C. Floor-to-Floor (FF), Floor-to-Wall (FW), Head-of-Wall (HW), and Wall-to-Wall (WW) Joints, Except Perimeter, Where Both Are Fire-Rated: Use system that has been tested according to ASTM E1966 or UL 2079 to have fire resistance F Rating equal to required fire rating of the assembly in which the joint occurs.
   1. Listing by FM (AG), ITS (DIR), UL (DIR), or UL (FRD) in their certification directories will be considered evidence of successful testing.

D. Through Penetration Firestopping: Use system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.
   1. Listing by FM (AG), ITS (DIR), UL (DIR), or UL (FRD) in their certification directories will be considered evidence of successful testing.

2.04 FIRESTOPPING FOR PERIMETER CONTAINMENT

A. Perimeter Joint Systems That Have Not Been Tested For Movement Capabilities (Static-S):
   1. 2 Hour Construction: UL System CW-S-2015; RectorSeal MetaCaulk 1200 Spray.
   2. 2 Hour Construction: UL System CW-S-2017; RectorSeal MetaCaulk 1200 Spray.

B. Perimeter Joint Systems That Have Movement Capabilities (Dynamic-D):
   1. 2 Hour Construction: Intertek System BP-120-03; RectorSeal MetaCaulk 1200 Spray.
   2. 2 Hour Construction: Intertek System BP-120-05; RectorSeal MetaCaulk 1200 Spray.
   3. 2 Hour Construction: Intertek System BP-120-09; RectorSeal MetaCaulk 1200 Spray.
   4. 2 Hour Construction: Intertek System BP-120-12; RectorSeal MetaCaulk 1200 Spray.
   5. 2 Hour Construction: UL System CW-D-2014; RectorSeal MetaCaulk 1200 Spray.
   6. 2 Hour Construction: UL System CW-D-2016; RectorSeal MetaCaulk 1200 Spray.
   7. 2 Hour Construction: UL System CW-D-2018; RectorSeal MetaCaulk 1200 Spray.
   8. 2 Hour Construction: UL System CW-D-2047; RectorSeal MetaCaulk 1200 Spray.
   9. 2 Hour Construction: UL System CW-D-2049; RectorSeal MetaCaulk 1200 Spray.

2.05 FIRESTOPPING FOR FLOOR-TO-FLOOR, FLOOR-TO-WALL, HEAD-OF-WALL, AND WALL-TO-WALL JOINTS

A. Concrete and Concrete Masonry Walls and Floors:
   1. Floor-to-Floor Joints:
      a. 4 Hour Construction: UL System FF-D-0023; RectorSeal MetaCaulk 150+.

b. 3 Hour Construction: UL System FF-D-1024; RectorSeal MetaCaulk 1200 Spray.
c. 3 Hour Construction: UL System FF-D-1027; RectorSeal MetaCaulk 150+.
d. 3 Hour Construction: UL System FF-D-1077; RectorSeal MetaCaulk 835+.
e. 2 Hour Construction: UL System FF-D-0024; RectorSeal MetaCaulk 150+.
f. 2 Hour Construction: UL System FF-D-0053; RectorSeal MetaCaulk Joint Strip.
g. 2 Hour Construction: UL System FF-D-0084; RectorSeal MetaCaulk Joint Strip.
h. 2 Hour Construction: UL System FF-D-1013; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
i. 2 Hour Construction: UL System FF-D-1085; Tremco, TREMstop Acrylic Firestop Sealant.

2. Head-of-Wall Joints at Concrete/Concrete Masonry Wall to Concrete Over Metal Deck Floor:
   a. 2 Hour Construction: UL System HW-D-0058; RectorSeal MetaCaulk 1200 Spray.
   b. 2 Hour Construction: UL System HW-D-0149; RectorSeal MetaCaulk 150+.
   c. 2 Hour Construction: UL System HW-D-0181; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   d. 2 Hour Construction: UL System HW-D-1037; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
3. Head-of-Wall Joints at Concrete/Concrete Masonry Wall to Concrete Floor:
   a. 3 Hour Construction: UL System HW-D-1058; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   b. 3 Hour Construction: UL System HW-D-0166; RectorSeal MetaCaulk 1200 Spray.
   c. 2 Hour Construction: UL System HW-D-0268; Hilti CP 606 Flexible Firestop Sealant.
   d. 2 Hour Construction: UL System HW-D-0312; Specified Technologies Inc. SIL Silicone Sealant.
4. Concrete/Concrete Masonry Wall-to-Wall Joint Systems That Have Not Been Tested For Movement Capabilities (Static-S):
   a. 2 Hour Construction: UL System WW-S-1025; RectorSeal MetaCaulk 835+.
   b. 2 Hour Construction: UL System WW-S-1038; RectorSeal MetaCaulk 835+.
5. Concrete/Concrete Masonry Wall-to-Wall Joint Systems That Have Movement Capabilities (Dynamic-D):
   a. 4 Hour Construction: UL System WW-D-0054; RectorSeal MetaCaulk Joint Strip.
   b. 3 Hour Construction: UL System WW-D-0023; RectorSeal MetaCaulk 1200 Spray.
   c. 3 Hour Construction: UL System WW-D-0095; RectorSeal MetaCaulk 150+.
   d. 3 Hour Construction: UL System WW-D-1028; RectorSeal MetaCaulk 1200 Spray.
   e. 2 Hour Construction: UL System WW-D-0025; RectorSeal MetaCaulk 1200 Spray.
   f. 2 Hour Construction: UL System WW-D-0027; RectorSeal MetaCaulk 150+.
   g. 2 Hour Construction: UL System WW-D-0110; RectorSeal MetaCaulk 150+.
   h. 2 Hour Construction: UL System WW-D-1077; Tremco, TREMstop Acrylic Firestop Sealant.
   i. 2 Hour Construction: UL System WW-D-0017; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   j. 2 Hour Construction: UL System WW-D-0032; Hilti CP 606 Flexible Firestop Sealant.

B. Gypsum Board Walls:
   1. Wall-to-Wall Joints That Have Not Been Tested For Movement Capabilities (Static-S):
      a. 2 Hour Construction: UL System WW-S-0089; RectorSeal MetaCaulk 150+.
   2. Wall-to-Wall Joints That Have Movement Capabilities (Dynamic-D):

a. 3 Hour Construction: UL System WW-D-0101; RectorSeal MetaCaulk 150+.
b. 2 Hour Construction: UL System WW-D-0067; Hilti CP 606 Flexible Firestop Sealant.
c. 1 Hour Construction: UL System WW-D-0067; Hilti CP 606 Flexible Firestop Sealant.

3. Head-of-Wall Joints at Underside of Steel Beam and Concrete Over Metal Deck Floor with Sprayed On Fireproofing:
   a. 2 Hour Construction: UL System HW-D-0259; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   b. 1 Hour Construction: UL System HW-D-0259; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
4. Head-of-Wall Joints at Underside of Flat Concrete:
   a. 4 Hour Construction: UL System HW-D-0108; RectorSeal MetaCaulk 1200 Spray.
   b. 2 Hour Construction: UL System HW-D-0798; RectorSeal Blaze Foam.
   c. 2 Hour Construction: UL System HW-D-1068; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   d. 2 Hour Construction: UL System HW-D-0757; Hilti CFS-TTS Top Track Seal.
   e. 2 Hour Construction: UL System HW-D-0016; Tremco, TREMstop Acrylic Firestop Sealant.
   f. 2 Hour Construction: UL System HW-D-0017; Tremco, TREMstop Acrylic Firestop Sealant.
   g. 2 Hour Construction: UL System HW-D-1072; Tremco, TREMstop Acrylic Firestop Sealant.
   h. 1 Hour Construction: UL System HW-D-1068; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   i. 1 Hour Construction: UL System HW-D-0757; Hilti CFS-TTS Top Track Seal.
   j. 1 Hour Construction: UL System HW-D-0016; Tremco, TREMstop Acrylic Firestop Sealant.
5. Head-of-Wall Joints at Concrete Over Metal Deck:
   a. 2 Hour Construction: UL System HW-D-0144; RectorSeal MetaCaulk 150+.
   b. 2 Hour Construction: UL System HW-D-0256; Tremco, TREMstop Acrylic Firestop Sealant.
   c. 1 Hour Construction: UL System HW-D-0256; Tremco, TREMstop Acrylic Firestop Sealant.
6. Head-of-Wall Joints at Concrete Over Metal Deck, Wall Parallel to Ribs:
   a. 2 Hour Construction: UL System HW-D-0049; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   b. 2 Hour Construction: UL System HW-D-0184; Hilti CP 606 Flexible Firestop Sealant.
   c. 1 Hour Construction: UL System HW-D-0049; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   d. 1 Hour Construction: UL System HW-D-0184; Hilti CP 606 Flexible Firestop Sealant.
7. Head-of-Wall Joints at Concrete Over Metal Deck, Wall Perpendicular to Ribs, Cut to Fit Ribs:
   a. 2 Hour Construction: UL System HW-D-0045; Hilti CP 606 Flexible Firestop Sealant.
   b. 1 Hour Construction: UL System HW-D-0045; Hilti CP 606 Flexible Firestop Sealant.
8. Head-of-Wall Joints at Concrete Over Metal Deck, Wall Perpendicular to Ribs, Not Cut to Fit:
   a. 2 Hour Construction: UL System HW-D-0042; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   b. 2 Hour Construction: UL System HW-D-0045; Hilti CP 606 Flexible Firestop Sealant.

c. 1 Hour Construction: UL System HW-D-0042; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
d. 1 Hour Construction: UL System HW-D-0045; Hilti CP 606 Flexible Firestop Sealant.

2.06 FIRESTOPPING FOR FLOOR-TO-WALL MOVABLE JOINTS

A. Floor-To-Wall Joint System That Have Movement Capabilities (Dynamic-D):
1. 2 Hour Construction: UL System FW-D-1069; Tremco, TREMstop Acrylic Firestop Sealant.

2.07 FIRESTOPPING PENETRATIONS THROUGH CONCRETE AND CONCRETE MASONRY CONSTRUCTION

A. Blank Openings:
1. In Floors or Walls:
a. 4 Hour Construction: UL System C-AJ-0042; RectorSeal MetaCaulk Fire Rated Mortar.
b. 4 Hour Construction: UL System C-AJ-0088; RectorSeal MetaCaulk Composite Sheet.
c. 3 Hour Construction: UL System C-AJ-0045; RectorSeal MetaCaulk Fire Rated Putty.
d. 2 Hour Construction: UL System C-AJ-0090; Hilti FS-ONE MAX Intumescent Firestop Sealant.

B. Penetrations Through Floors or Walls By:
1. Multiple Penetrations in Large Openings:
a. 3 Hour Construction: UL System C-AJ-8047; RectorSeal MetaCaulk 1000.
b. 3 Hour Construction: UL System C-AJ-8099; Hilti FS-ONE MAX Intumescent Firestop Sealant.
c. 3 Hour Construction: UL System C-AJ-8110; Hilti CFS-BL Firestop Block.
d. 3 Hour Construction: UL System C-AJ-8133; RectorSeal Fire Rated Mortar.
e. 2 Hour Construction: UL System C-AJ-8143; Hilti FS-ONE MAX Intumescent Firestop Sealant.
f. 2 Hour Construction: UL System C-AJ-8042; RectorSeal MetaCaulk 1000.
g. 2 Hour Construction: UL System C-AJ-8129; RectorSeal MetaCaulk 1200 Spray.
h. 2 Hour Construction: UL System C-AJ-8149; RectorSeal MetaCaulk 1000.
i. 2 Hour Construction: UL System C-AJ-8171; RectorSeal MetaCaulk Wrap Strip.
2. Bathtub Drains:
a. Up to 3 Hour Construction: UL System F-A-1037, F-A-1038, F-A-2094, or F-A-2095; Hilti CP 681 Tub Box Kit.
3. Uninsulated Metallic Pipe, Conduit, and Tubing:
a. 3 Hour Construction: UL System C-AJ-1076; RectorSeal MetaCaulk 950.
b. 3 Hour Construction: UL System C-AJ-1184; Hilti FS-ONE MAX Intumescent Firestop Sealant.
c. 3 Hour Construction: UL System C-AJ-1226; Hilti FS-ONE MAX Intumescent Firestop Sealant.
d. 3 Hour Construction: UL System C-AJ-1261; RectorSeal MetaCaulk 1000.
e. 3 Hour Construction: UL System C-AJ-1320; RectorSeal MetaCaulk 1000.
f. 3 Hour Construction: UL System C-AJ-1421; Hilti FS-ONE MAX Intumescent Firestop Sealant or CP 604 Self-Leveling Firestop Sealant.

g. 3 Hour Construction: UL System C-AJ-1425; Hilti CFS-S SIL GG Firestop Silicone Sealant Gun-Grade.
h. 2 Hour Construction: UL System C-AJ-1036; RectorSeal MetaCaulk 950.
i. 2 Hour Construction: UL System C-AJ-1090; Specified Technologies Inc. SSP Firestop Putty.
j. 2 Hour Construction: UL System C-AJ-1186; RectorSeal MetaCaulk 950.
k. 2 Hour Construction: UL System C-AJ-1226; Hilti FS-ONE MAX Intumescent Firestop Sealant.
l. 2 Hour Construction: UL System C-AJ-1425; Hilti CFS-S SIL GG Firestop Silicone Sealant Gun-Grade.
m. 1 Hour Construction: UL System C-AJ-1039; RectorSeal MetaCaulk 950.

4. Uninsulated Non-Metallic Pipe, Conduit, and Tubing:
   a. 3 Hour Construction: UL System C-AJ-2109; Hilti CP 643N/644 Firestop Collar.
   b. 3 Hour Construction: UL System C-AJ-2151; RectorSeal MetaCaulk 1200.
   c. 3 Hour Construction: UL System C-AJ-2220; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   d. 3 Hour Construction: UL System C-AJ-2342; Hilti CP-E/S Firestop Wrap Strip.
   e. 3 Hour Construction: UL System C-AJ-2661; RectorSeal MetaCaulk 1000.
   f. 2 Hour Construction: UL System C-AJ-2047; RectorSeal MetaCaulk 1000.
   g. 2 Hour Construction: UL System C-AJ-2167; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   h. 2 Hour Construction: UL System C-AJ-2109; Hilti CP 643N/644 Firestop Collar.
   i. 2 Hour Construction: UL System C-AJ-2348; RectorSeal MetaCaulk 150+.
   j. 2 Hour Construction: UL System C-AJ-2707; RectorSeal MetaCaulk 1000.
   k. 2 Hour Construction: UL System C-BJ-2021; Hilti CP 643N Firestop Collar.
5. Electrical Cables Not In Conduit:
   a. 3 Hour Construction: UL System C-AJ-3095; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   b. 3 Hour Construction: UL System C-AJ-3208; Hilti CP 618 Firestop Putty Stick.
   c. 2 Hour Construction: UL System C-AJ-3216; Hilti CFS-PL Firestop Plug.
   d. 2 Hour Construction: UL System C-AJ-3283; Hilti CP653 Speed Sleeve.
   e. 2 Hour Construction: UL System C-AJ-3283; Hilti CFS-SL SK Firestop Sleeve Kit.
   f. 2 Hour Construction: UL System C-AJ-3283; Hilti CFS-SL SK Firestop Sleeve Kit with Hilti CFS-SL GP Gangplate.
   g. 2 Hour Construction: UL System W-J-3198; Hilti CFS-SL RK Retrofit Sleeve Kit for Existing Cables.
   h. 2 Hour Construction: UL System W-J-3199; Hilti CFS-SL SK Firestop Sleeve Kit.
6. Cable Trays with Electrical Cables:
   a. 3 Hour Construction: UL System C-AJ-4093; Hilti CFS-BL Firestop Block.
   b. 2 Hour Construction: UL System C-AJ-4094; Hilti CFS-BL Firestop Block.
7. Electrical Busways:
   a. 3 Hour Construction: UL System C-AJ-6017; Hilti FS-ONE MAX Intumescent Firestop Sealant.
8. Insulated Pipes:
   a. 3 Hour Construction: UL System C-AJ-5090; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   b. 2 Hour Construction: UL System C-AJ-5048; Hilti FS-ONE MAX Intumescent Firestop Sealant, CP 606 Flexible Firestop Sealant, CP 601S Elastomeric Firestop

Sealant, CP 604 Self-Leveling Firestop Sealant or CFS-S SIL GG Firestop Silicone Sealant Gun-Grade.
c. 2 Hour Construction: UL System C-AJ-5091; Hilti FS-ONE IMAX Intumescent Firestop Sealant.

9. HVAC Ducts, Uninsulated:
a. 3 Hour Construction: UL System C-AJ-7051; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. 2 Hour Construction: UL System C-AJ-7111; Hilti FS-ONE MAX Intumescent Firestop Sealant.

C. Penetrations Through Floors By:
1. Multiple Penetrations in Large Openings:
a. 4 Hour Construction: UL System F-A-0019; RectorSeal Cast-in-Place Firestop Device.
b. 3 Hour Construction: UL System F-A-1023; Hilti CP 680-P/M Cast-In Device.
c. 2 Hour Construction: UL System F-A-0021; RectorSeal Cast-in-Place Firestop Device.
d. 2 Hour Construction: UL System F-A-8012; Hilti CFS-S SIL GG Firestop Silicone Sealant Gun-Grade or CFS-S SIL SL Firestop Silicone Sealant Self-Leveling.

2. Uninsulated Metallic Pipe, Conduit, and Tubing:
a. 3 Hour Construction: UL System F-A-1017; Hilti CP 680-P/M Cast-In Device.
b. 2 Hour Construction: UL System F-A-1016; Hilti CP 680-P/M Cast-In Device.
c. 2 Hour Construction: UL System F-A-1110; Specified Technologies Inc. CID Cast-In Device.
d. 2 Hour Construction: UL System F-A-1129; Specified Technologies Inc. Closet Flange Firestop Gasket.

3. Uninsulated Non-Metallic Pipe, Conduit, and Tubing:
a. 3 Hour Construction: UL System F-A-2054; Hilti CP 680-P Cast-In Device.
b. 3 Hour Construction: UL System F-A-2066; Hilti CP 680-P Cast-In Device.
c. 3 Hour Construction: UL System F-A-2213; Hilti CFS-DID Drop-In Device.
d. 2 Hour Construction: UL System F-A-2065; Hilti CP 680-P Cast-In Device.
e. 2 Hour Construction: UL System F-A-2213; Hilti CFS-DID Drop-In Device.
f. 2 Hour Construction: UL System F-A-2053; Hilti CP 680-P Cast-In Device.

4. Electrical Cables Not In Conduit:
a. 3 Hour Construction: UL System F-A-3033; Hilti CP 680-P/M Cast-In Device.
b. 2 Hour Construction: UL System F-A-3033; Hilti CP 680-P/M Cast-In Device.

5. Electrical Busways:
a. 3 Hour Construction: UL System C-AJ-6017; Hilti CFS-S SIL GG Firestop Silicone Sealant Gun-Grade or CFS-S SIL SL Firestop Silicone Sealant Self-Leveling.
b. 2 Hour Construction: UL System F-A-6002; Hilti CP 604 Self-Leveling Firestop Sealant.

6. Insulated Pipes:
a. 3 Hour Construction: UL System F-A-5016; Hilti CP 680-P Cast-In Device.
b. 3 Hour Construction: UL System F-A-5018; Hilti CP 680-P Cast-In Device.
c. 2 Hour Construction: UL System F-A-5015; Hilti CP 680-P/M Cast-In Device.
d. 2 Hour Construction: UL System F-A-5017; Hilti CP 680-P/M Cast-In Device.

D. Penetrations Through Walls By:
1. Uninsulated Metallic Pipe, Conduit, and Tubing:

a. 2 Hour Construction: UL System W-J-1067; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. 1 Hour Construction: UL System W-J-1067; Hilti FS-ONE MAX Intumescent Firestop Sealant.

2. Electrical Cables Not In Conduit:
   a. 2 Hour Construction: UL System C-AJ-3095; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   b. 2 Hour Construction: UL System C-AJ-3216; Hilti CFS-PL Firestop Plug.
3. Insulated Pipes:
   a. 2 Hour Construction: UL System C-AJ-5090; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   b. 2 Hour Construction: UL System C-AJ-5091; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   c. 1 Hour Construction: UL System C-AJ-5090; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   d. 1 Hour Construction: UL System C-AJ-5091; Hilti FS-ONE MAX Intumescent Firestop Sealant.
4. HVAC Ducts, Uninsulated:
   a. 2 Hour Construction: UL System W-J-7109; Hilti FS-ONE MAX Intumescent Firestop Sealant, or CP 606 Flexible Firestop Sealant.
5. HVAC Ducts, Insulated:
   a. 2 Hour Construction: UL System W-J-7112; Hilti FS-ONE MAX Intumescent Firestop Sealant.

2.08 FIRESTOPPING PENETRATIONS THROUGH GYPSUM BOARD WALLS

A. Blank Openings:
   1. 2 Hour Construction: UL System W-L-3334; Hilti CP 653 Speed Sleeve.
   2. 1 Hour Construction: UL System W-L-3334; Hilti CP 653 Speed Sleeve.

B. Penetrations By:
   1. Multiple Penetrations in Large Openings:
      a. 2 Hour Construction: UL System W-L-1408; Hilti FS-ONE MAX Intumescent Firestop Sealant.
      b. 2 Hour Construction: UL System W-L-8013; Hilti CFS-BL Firestop Block.
      c. 2 Hour Construction: UL System W-L-8071; Hilti FS-ONE MAX Intumescent Firestop Sealant.
      d. 2 Hour Construction: UL System W-L-8079; Hilti FS-ONE MAX Intumescent Firestop Sealant.
      e. 1 Hour Construction: UL System W-L-1408; Hilti FS-ONE MAX Intumescent Firestop Sealant.
      f. 1 Hour Construction: UL System W-L-8013; Hilti CFS-BL Firestop Block.
      g. 1 Hour Construction: UL System W-L-8071; Hilti FS-ONE MAX Intumescent Firestop Sealant.
      h. 1 Hour Construction: UL System W-L-8073; Specified Technologies Inc. Composite Sheet.
      i. 1 Hour Construction: UL System W-L-8079; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   2. Uninsulated Metallic Pipe, Conduit, and Tubing:

a. 2 Hour Construction: UL System W-L-1054; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. 2 Hour Construction: UL System W-L-1164; Hilti FS-ONE MAX Intumescent Firestop Sealant.
c. 2 Hour Construction: UL System W-L-1506; Hilti CFS-D Firestop Cable Disc.
d. 1 Hour Construction: UL System W-L-1054; Hilti FS-ONE MAX Intumescent Firestop Sealant.
e. 1 Hour Construction: UL System W-L-1164; Hilti FS-ONE MAX Intumescent Firestop Sealant.
f. 1 Hour Construction: UL System W-L-1506; Hilti CFS-D Firestop Cable Disc.

3. Uninsulated Non-Metallic Pipe, Conduit, and Tubing:
   a. 2 Hour Construction: UL System W-L-2078; Hilti CP 643N/644 Firestop Collar.
   b. 2 Hour Construction: UL System W-L-2128; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   c. 1 Hour Construction: UL System W-L-2078; Hilti CP 643N/644 Firestop Collar.
   d. 1 Hour Construction: UL System W-L-2128; Hilti FS-ONE MAX Intumescent Firestop Sealant.
4. Electrical Cables Not In Conduit:
   a. 2 Hour Construction: UL System W-L-3065; Hilti FS-ONE MAX Intumescent Firestop Sealant, CP 606 Flexible Firestop Sealant, CD 601S Elastomeric Firestop Sealant, or CP 618 Firestop Putty Stick.
   b. 2 Hour Construction: UL System W-L-3334; Hilti CP 653 Speed Sleeve.
   c. 2 Hour Construction: UL System W-L-3393; Hilti CFS-SL RK Retrofit Sleeve Kit for Existing Cables.
   d. 2 Hour Construction: UL System W-L-3395; Hilti CP653 Speed Sleeve.
   e. 2 Hour Construction: UL System W-L-3395; Hilti CFS-SL SK Firestop Sleeve Kit.
   f. 2 Hour Construction: UL System W-L-3395; Hilti CFS-SL SK Firestop Sleeve Kit with Hilti CFS-SL GP Gangplate.
   g. 2 Hour Construction: UL System W-L-3414; Hilti CFS-D Firestop Cable Disc.
   h. 1 Hour Construction: UL System W-L-3065; Hilti FS-ONE MAX Intumescent Firestop Sealant, CP 606 Flexible Firestop Sealant, CD 601S Elastomeric Firestop Sealant, or CP 618 Firestop Putty Stick.
   i. 1 Hour Construction: UL System W-L-3334; Hilti CP 653 Speed Sleeve.
   j. 1 Hour Construction: UL System W-L-3393; Hilti CFS-SL RK Retrofit Sleeve Kit for Existing Cables.
   k. 1 Hour Construction: UL System W-L-3414; Hilti CFS-D Firestop Cable Disc.
5. Cable Trays with Electrical Cables:
   a. 2 Hour Construction: UL System W-L-4011; Hilti CFS-BL Firestop Block.
   b. 2 Hour Construction: UL System W-L-4060; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   c. 1 Hour Construction: UL System W-L-4011; Hilti CFS-BL Firestop Block.
   d. 1 Hour Construction: UL System W-L-4060; Hilti FS-ONE MAX Intumescent Firestop Sealant.
6. Insulated Pipes:
   a. 2 Hour Construction: UL System W-L-5028; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   b. 2 Hour Construction: UL System W-L-5029; Hilti FS-ONE Intumescent Firestop Sealant.

c. 1 Hour Construction: UL System W-L-5028; Hilti FS-ONE MAX Intumescent Firestop Sealant.
d. 1 Hour Construction: UL System W-L-5029; Hilti FS-ONE Intumescent Firestop Sealant.

7. HVAC Ducts, Insulated:
a. 2 Hour Construction: UL System W-L-7156; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. 1 Hour Construction: UL System W-L-7156; Hilti FS-ONE MAX Intumescent Firestop Sealant.

2.09 FIRESTOPPING SYSTEMS

A. Firestopping: Any material meeting requirements.
1. Fire Ratings: Use system that is listed by FM (AG), ITS (DIR), or UL (FRD) and tested in accordance with ASTM E814, ASTM E119, or UL 1479 with F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and in compliance with other specified requirements.
2. See drawings for fire rating requirements of all construction elements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify openings are ready to receive the work of this section.

3.02 PREPARATION

A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.

B. Remove incompatible materials that could adversely affect bond.

C. Install backing materials to prevent liquid material from leakage.

3.03 INSTALLATION

A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.

B. Do not cover installed firestopping until inspected by authorities having jurisdiction.

C. Install labeling required by code.

3.04 FIELD QUALITY CONTROL

A. Independent Testing Agency: Inspection agency employed and paid by Owner, will examine penetration firestopping in accordance with ASTM E2174 and ASTM E2393.

B. Repair or replace penetration firestopping and joints at locations where inspection results indicate firestopping or joints do not meet specified requirements.

3.05 CLEANING

A. Clean adjacent surfaces of firestopping materials.

3.06 PROTECTION

A. Protect adjacent surfaces from damage by material installation.

END OF SECTION 078400

This page intentionally left blank

SECTION 079200
JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Nonsag gunnable joint sealants.

B. Self-leveling pourable joint sealants.

C. Joint backings and accessories.

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 078400 - FIRESTOPPING: Firestopping sealants.

C. Section 087100 - Door Hardware: Setting exterior door thresholds in sealant.

D. Section 088000 - Glazing: Glazing sealants and accessories.

E. Section 092116 - Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.

F. Section 092116 - Gypsum Board Assemblies: Sealing between framing and adjacent construction in acoustical and sound-rated walls and ceilings.

G. Section 093000 - Tiling: Sealant between tile and plumbing fixtures and at junctions with other materials and changes in plane.

1.03 REFERENCE STANDARDS

A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022).

B. ASTM C794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants; 2018 (Reapproved 2022).

C. ASTM C834 - Standard Specification for Latex Sealants; 2017.

D. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications; 2024.

E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

F. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2023.

G. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

H. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022.

I. ASTM C1311 - Standard Specification for Solvent Release Sealants; 2022.

J. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants; 2023.

K. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).

1.04 SUBMITTALS

A. See Section 013300 – Submittal Procedures, for submittal procedures.

B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.

1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
2. List of backing materials approved for use with the specific product.
3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
4. Substrates the product should not be used on.
5. Substrates for which use of primer is required.
6. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
7. Sample product warranty.
8. Certification by manufacturer indicating that product complies with specification requirements.

C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

D. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

E. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

F. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.

G. Manufacturer's Qualification Statement.

H. Installer's Qualification Statement.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
   1. Sealant and Waterproofing Specialist: Engage an experienced sealant and waterproofing firm to perform work of this Section. Firm shall have completed work similar to extent to that indicated for this Project with a record of successful in-service performance. Experience in only installing sealants is insufficient experience for this work.
      a. Field Supervision: Sealant and waterproofing specialist firms shall maintain experienced full-time supervisors on Project site during times that sealant and waterproofing work is in progress.
   2. Provide a list of a minimum of 5 projects where sealant and waterproofing work was successfully installed

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

C. Installer Qualifications: Company specializing in performing the work of this section and with at least five years of documented experience.

D. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.
   1. Adhesion Testing: In accordance with ASTM C794.
   2. Compatibility Testing: In accordance with ASTM C1087.
   3. Allow sufficient time for testing to avoid delaying the work.
   4. Deliver to manufacturer sufficient samples for testing.

5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
6. Testing is not required if sealant manufacturer provides data showing previous testing, not older than 24 months, that shows satisfactory adhesion, lack of staining, and compatibility.

1.06 WARRANTY

A. See Section 017700 - Closeout Procedures, for additional warranty requirements.

B. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: Two years from date of Substantial Completion.

C. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: 10 years from date of Substantial Completion.

D. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
   1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
   2. Disintegration of joint substrates from causes exceeding design specifications.
   3. Mechanical damage caused by individuals, tools, or other outside agents.
   4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

E. Correct defective work within a five year period after Date of Substantial Completion.

F. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal , exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations: Obtain specified products from single source from single manufacturer.

B. The manufacturer and model number(s) or series listed below are Basis-of-Design.
   1. Subject to compliance with all specified requirements, provide products by one of the following, for each type of product listed, or equivalent:

C. Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
   1. Dow Chemical Company: consumer.dow.com/en-us/industry/ind-building-construction.html/#sle.
   2. Hilti, Inc: www.us.hilti.com/#sle.
   3. Momentive Performance Materials, Inc (formerly GE Silicones): www.momentive.com/#sle.
   4. Sika Corporation: www.usa-sika.com/#sle.
   5. Substitutions: See Section 016000 - Product Requirements.

2.02 JOINT SEALANT APPLICATIONS

A. Scope:

1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
   a. Wall expansion and control joints.
   b. Joints between door, window, and other frames and adjacent construction.
   c. Joints between different exposed materials.
   d. Openings below ledge angles in masonry.
   e. Other joints indicated below.
2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
   a. Joints between door, window, and other frames and adjacent construction.
   b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wall/ceiling and other construction; and other flanking sound paths.
   c. Other joints indicated below.
3. Do not seal the following types of joints.
   a. Intentional weepholes in masonry.
   b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
   c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
   d. Joints where installation of sealant is specified in another section.
   e. Joints between suspended panel ceilings/grid and walls.

B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.

C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
2. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
3. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.

D. Interior Wet Areas: Bathrooms, restrooms, kitchens, and food service areas; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.

E. Sound-Rated Assemblies: Walls and ceilings identified as "STC-rated", "sound-rated", or "acoustical".

2.03 JOINT SEALANTS - GENERAL

A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.

B. Colors: Selected by Architect from manufacturer's full range

2.04 NONSAG JOINT SEALANTS

A. Non-Staining Silicone Sealant: ASTM C920, Type S, Grade NS, Class 50, Use NT.
1. Movement Capability: Plus and minus 50 percent, minimum.
2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
4. Color: To be selected by Architect from manufacturer's full range.

5. Manufacturers:
    a. Dow Chemical Company; DOWSIL 795 Silicone Building Sealant: consumer.dow.com/en-us/industry/ind-building-construction.html/#sle.

B. Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: Plus and minus 25 percent, minimum.
2. Hardness Range: 15 to 35, Shore A, when tested in accordance with ASTM C661.
3. Color: To be selected by Architect from manufacturer's standard range.
4. Cure Type: Single-component, neutral moisture curing
5. Service Temperature Range: Minus 65 to 180 degrees F.
6. Manufacturers:
    a. Dow Chemical Company; DOWSIL 999-A Building and Glazing Sealant: consumer.dow.com/en-us/industry/ind-building-construction.html/#sle.

C. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
1. Color: Clear.
2. Manufacturers:
    a. Sika Corporation; Sikasil GP: www.usa-sika.com/#sle.

2.05 SELF-LEVELING SEALANTS

A. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
1. Movement Capability: Plus and minus 25 percent, minimum.
2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
3. Color: To be selected by Architect from manufacturer's standard range.

2.06 ACCESSORIES

A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type C - Closed Cell Polyethylene.
2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type C - Closed Cell Polyethylene.
3. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.

B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.

D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.

E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that joints are ready to receive work.

B. Verify that backing materials are compatible with sealants.

C. Verify that backer rods are of the correct size.

3.02 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in inconspicuous area to verify that it does not stain or discolor slab.

3.03 INSTALLATION

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Perform installation in accordance with ASTM C1193.

C. Perform acoustical sealant application work in accordance with ASTM C919.

D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.

E. Measure joint dimensions and size joint backers to achieve the following, unless otherwise indicated:
   1. Width/depth ratio of 2:1.
   2. Neck dimension no greater than 1/3 of the joint width.
   3. Surface bond area on each side not less than 75 percent of joint width.

F. Install bond breaker backing tape where backer rod cannot be used.

G. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

H. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

I. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

3.04 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.05 FIELD QUALITY CONTROL

A. Perform field quality control inspection/testing as specified in PART 1 under QUALITY ASSURANCE article.

B. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.

END OF SECTION 079200

This page intentionally left blank

SECTION 081113
HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Non-fire-rated hollow metal doors and frames.

B. Fire-rated hollow metal doors and frames.

C. Thermally insulated hollow metal doors with frames.

D. Hollow metal borrowed lites glazing frames.

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 087100 - Door Hardware.

C. Section 088000 - Glazing: Glass for doors and borrowed lites.

D. Section 099000 - Painting and Coating.

1.03 ABBREVIATIONS AND ACRONYMS

A. ANSI: American National Standards Institute.

B. HMMA: Hollow Metal Manufacturers Association.

C. NAAMM: National Association of Architectural Metal Manufacturers.

D. NFPA: National Fire Protection Association.

E. SDI: Steel Door Institute.

F. UL: Underwriters Laboratories.

1.04 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2024.

C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2023.

D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2025.

E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.

F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2025.

G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2025.

H. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2020.

I. ASTM C476 - Standard Specification for Grout for Masonry; 2020.

J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

K. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016.

L. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

M. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames; 2002.

N. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames; 2024.

O. NAAMM HMMA 840 - Guide Specifications for Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2024.

P. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames; 2014.

Q. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2022.

R. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.

S. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames; 2023.

T. UL (DIR) - Online Certifications Directory; Current Edition.

U. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.05 SUBMITTALS

A. See Section 013300 – Submittal Procedures, for submittal procedures.

B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.

C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

D. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.

E. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

F. Manufacturer's Qualification Statement.

G. Installer's Qualification Statement.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years of documented experience.

C. Maintain at project site copies of reference standards relating to installation of products specified.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Hollow Metal Doors and Frames:
   1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
   2. Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle.
   3. Steelcraft, an Allegion brand: www.allegion.com/#sle.

2.02 PERFORMANCE REQUIREMENTS

A. Requirements for Hollow Metal Doors and Frames:
   1. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
   2. Accessibility: Comply with ICC A117.1 and ADA Standards.
   3. Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.
   4. Door Edge Profile: Manufacturers standard for application indicated.
   5. Typical Door Face Sheets: Flush.
   6. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturer's standard.
   7. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

A. Exterior Doors: Thermally insulated.
   1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
      a. Level 2 - Heavy-duty.
      b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
      c. Model 1 - Full Flush.
      d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
      e. Zinc Coating: A60/ZF180 galvannealed coating; ASTM A653/A653M.
   2. Door Core Material: Polystyrene, 1 lbs/cu ft minimum density.
      a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
   3. Door Thermal Resistance: R-Value of 6.0 minimum, for installed thickness of polystyrene.
   4. Door Thickness: 1-3/4 inches, nominal.
   5. Top Closures for Outswinging Doors: Flush with top of faces and edges.
   6. Door Face Sheets: Flush.
   7. Weatherstripping: Refer to Section 087100.
   8. Door Finish: Factory primed and field finished.

B. Interior Doors, Non-Fire-Rated:
   1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
      a. Level 2 - Heavy-duty.

b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
c. Model 1 - Full Flush.
d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.

2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
3. Door Thickness: 1-3/4 inches, nominal.
4. Door Face Sheets: Flush.
5. Door Finish: Factory primed and field finished.

C. Fire-Rated Doors:
1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
a. Level 2 - Heavy-duty.
b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
c. Model 1 - Full Flush.
d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
3. Provide units listed and labeled by UL (DIR).
a. Attach fire rating label to each fire rated unit.
4. Door Core Material: Manufacturers standard core material/construction in compliance with requirements.
5. Door Thickness: 1-3/4 inches, nominal.
6. Door Face Sheets: Flush.
7. Door Finish: Factory primed and field finished.

2.04 HOLLOW METAL FRAMES

A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

B. Exterior Door Frames: Full profile/continuously welded type.
1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A40/ZF120 coating.
2. Frame Metal Thickness: 16 gauge, 0.053 inch, minimum.
3. Frame Finish: Factory primed and field finished.
4. Weatherstripping: Separate, see Section 087100.

C. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
1. Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch, maximum, above floor at 45 degree angle.
2. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.
3. Frame Finish: Factory primed and field finished.

D. Door Frames, Fire-Rated: Full profile/continuously welded type.
1. Fire Rating: Same as door, labeled.
2. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.
3. Frame Finish: Factory primed and field finished.

E. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.

F. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.

G. Transom Bars: Fixed, of profile same as jamb and head.

H. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.

I. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches high to fill opening without cutting masonry units.

J. Frames Wider than 48 inches: Reinforce with steel channel fitted tightly into frame head, flush with top.

2.05 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

B. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15 mil, 0.015 inch dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
   1. Fire-Rated Frames: Comply with fire rating requirements indicated.

2.06 ACCESSORIES

A. Glazing: As specified in Section 088000, factory installed.

B. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.

C. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

D. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 PREPARATION

A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.03 INSTALLATION

A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

B. Install fire rated units in accordance with NFPA 80.

C. Coordinate frame anchor placement with wall construction.

D. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.

E. Install door hardware as specified in Section 087100.

F. Comply with glazing installation requirements of Section 088000.

G. Coordinate installation of electrical connections to electrical hardware items.

H. Touch up damaged factory finishes.

3.04 TOLERANCES

A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.

B. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.05 ADJUSTING

A. Adjust for smooth and balanced door movement.

END OF SECTION 081113

SECTION 083100
ACCESS DOORS AND PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wall- and ceiling-mounted access units.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 042000 - Unit Masonry: Anchoring and grouting access door frames set in masonry construction.

C. Section 087100 - Door Hardware: Mortise cylinder and core hardware.

D. Section 092116 - Gypsum Board Assemblies: Anchoring access doors frames installed in stud and gypsum board walls.

E. Section 099000 - Painting and Coating: Field paint finish.

1.03 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.

B. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2025.

C. NACE No. 1 - Joint Surface Preparation Standard White Metal Blast Cleaning; Current Edition.

D. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2022.

E. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.

F. NFPA 288 - Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal Fire Resistance-Rated Assemblies; 2022.

G. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).

H. SSPC-SP 5 - White Metal Blast Cleaning; 2007.

I. SSPC-SP 8 - Pickling; current edition.

J. UL (FRD) - Fire Resistance Directory; Current Edition.

K. UL 10B - Standard for Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Verification: Determine specific locations and sizes for access doors needed to gain access to concealed plumbing, mechanical, or other concealed work, and indicate in the schedule specified in "Submittals" Article.

1.05 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data: For each type of access door and frame indicated, provide sizes, types, fire ratings, materials, individual components, profiles, finishes, hardware, scheduled locations, and details of connections at adjoining work.

C. Access Door and Frame Schedule: Provide complete access door and frame schedule, including types, locations, sizes, latching or locking provisions, and other data pertinent to installation.

D. Shop Drawings: Indicate exact position of each access door and/or panel unit.
   1. Include plans, elevations, sections, details, and attachments to other work.
   2. Detail fabrication and installation of access doors and frames for each type of substrate.

E. Samples: For each door face material, submit two units, 3 by 5 inchesin size indicating specified finish.

F. Manufacturer's Installation Instructions: Indicate installation requirements and rough-in dimensions.

G. Manufacturer's qualification statement.

H. Installer's qualification statement.

I. Speciment warranty.

J. Project Record Documents: Record actual locations of each access unit.

1.06 QUALITY ASSURANCE

A. Fire-Rated Access Doors and Frames: Units complying with NFPA 80 that are identical to access door and frame assemblies tested for fire-test-response characteristics and that are listed and labeled by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

B. Size Variations: Obtain Architect's acceptance of manufacturer's standard-size units, which may vary slightly from sizes indicated.

C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

D. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years documented experience.

1.07 WARRANTY

A. Manufacturer's standard warranty against manufacturing defects and workmanship.

B. Manufacturer's standard 1 year warranty against premature deterioration due to weathering.

C. Fill out forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations: Obtain specified products from single source from single manufacturer.

B. The manufacturer and model number(s) or series listed below are Basis-of-Design.
   1. Subject to compliance with requirements of product identified as basis-of-design, other manufacturers shall be considered for bidding as an equivalent when the bidder provides a written request for equivalency to the Architect prior to bidding.
   2. Follow all instructions as indicated in Section 012519 - Equivalent Procedures.

2.02 MATERIALS

A. Steel Sheet: Uncoated cold-rolled steel sheet substrate complying with ASTM A1008/A1008M, Commercial Steel (CS), exposed.

B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.

C. Steel Finishes: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
   1. Surface Preparation for Steel Sheet, Plates, Shapes and B: Clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, or other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1 or SSPC-SP 8.
   2. Factory-Primed Finish: Apply shop primer immediately after cleaning and pretreating.

D. Drywall Beads: Edge trim formed from 0.0299 inch zinc-coated steel sheet formed to receive joint compound and in size to suit thickness of gypsum board.

2.03 PERFORMANCE REQUIREMENTS

A. Fire-Rated Access Doors and Frames: Units complying with NFPA 80 that are identical to access door and frame assemblies tested for fire-test-response characteristics according to the following test method and that are listed and labeled by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
   1. NFPA 252 or UL 10B for fire-rated access door assemblies installed vertically.
   2. NFPA 288 for fire-rated access door assemblies installed horizontally.

2.04 ACCESS DOORS AND PANELS ASSEMBLIES

A. Wall-Mounted Units:
   1. Location: As indicated on drawings.
   2. Panel Material: Steel, hot-dipped zinc or zinc-aluminum-alloy coated.
   3. Size: As indicated on drawings.
   4. Wall Mounting Criteria: Provide surface-mounted face frame and door surface flush with frame surface.
   5. Gypsum Board Mounting Criteria: Provide drywall bead frame with door surface flush with wall surface.
   6. Masonry Mounting Criteria: Provide surface-mounted frame with door surface flush with frame surface.

B. Wall-Mounted Units in Wet Areas:
   1. Location: As indicated on drawings.
   2. Panel Material: Stainless steel, Type 304.
   3. Size: As indicated on drawings.
   4. Wall Mounting Criteria: Provide surface-mounted face frame and door surface flush with frame surface.
   5. Gypsum Board Mounting Criteria: Provide drywall bead frame with door surface flush with wall surface.
   6. Masonry Mounting Criteria: Provide surface-mounted frame with door surface flush with frame surface.

C. Fire-Rated Wall-Mounted Units:
   1. Wall Fire-Rating: As indicated on drawings.
   2. Panel Material: Steel, hot-dipped zinc, or zinc-aluminum-alloy coated.
   3. Size: As indicated on drawings.
   4. Door/Panel: Insulated double-surface panel.

2.05 WALL- AND CEILING-MOUNTED ACCESS UNITS

A. Manufacturers:
   1. Milcor, a Duravent Group Company: www.milcorinc.com/#sle.

a. Wall or Ceiling Units, non fire rated: Milcor, Series DW.
b. Wall or Ceiling Units, fire rated: Milcor, Series UFR DW.

2. Substitutions: See Section 016000 - Product Requirements.

B. Wall- and Ceiling-Mounted Units: Factory-fabricated door and frame, fully assembled units with corner joints welded, filled and ground flush; square and without rack or warp; coordinate requirements with type of installation assembly being used for each unit.

1. Dry Location Material: Steel, hot-dipped zinc or zinc-aluminum-alloy coated.
2. Wet Location Material: Stainless steel, Type 304.
3. Style: Exposed frame with door surface flush with frame surface.
4. Door Style, Non Fire Rated: Single thickness with rolled or turned in edges.
5. Door Style, Fire Rated: Double-skinned hollow panel with 2 inch mineral fiber insulation.
6. Frames: 16-gauge, 0.0598-inch minimum thickness.
7. Single Steel Sheet Door Panels: 16-gauge, 0,0625-inch minimum thickness.
8. Double-Skinned Hollow Steel Sheet Door Panels: 20-gauge, 0.0396-inch minimum thickness, on both sides and along each edge.
9. Insulation: Non-combustible mineral wool or glass fiber.
10. Units in Fire-Rated Assemblies: Fire rating as required by applicable code for fire-rated assembly that access doors are being installed.
    a. Provide products listed by UL (FRD) as suitable for purpose indicated.
    b. Provide certificate of compliance from authorities having jurisdiction indicating approval of fire rated doors.
11. Stainless Steel Finish: No.4 brushed finish.
12. Primed and Factory Finish: Polyester powder coat; color as selected by Architect from manufacturer's standard colors.
13. Door/Panel Size: As indicated on the drawings.
14. Hardware:
    a. Hardware for Fire-Rated Units: As required for listing.
    b. Hinges for Non-Fire-Rated Units: Concealed, constant force closure spring type.
    c. Handle: No handle.
    d. Latch/Lock: Cylinder lock-operated cam latch, two keys for each unit.
        1) Mortise cylinder and core as specified in Section 087100.
    e. Number of Locks/Latches Required: As recommended by manufacturer for size of unit.
    f. Gasketing: Extruded neoprene, around perimeter of door panel.

2.06 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access panels to types of supports indicated.

D. Latching Mechanisms: Furnish number required to hold doors in flush, smooth plane when closed.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that rough openings are correctly sized and located.

B. Begin installation only after substrates have been properly prepared, and if the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to proceeding with this work.

B. Prepare surfaces using methods recommended by manufacturer for applicable substrates in accordance with project conditions.

3.03 INSTALLATION

A. Install units in accordance with manufacturer's instructions.

B. Install frames plumb and level in openings, and secure units rigidly in place.

C. Install doors flush with adjacent finish surfaces or recessed to receive finish material.

D. Position units to provide convenient access to concealed equipment when necessary.

3.04 ADJUSTING AND CLEANING

A. Adjust doors and hardware after installation for proper operation.

B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

END OF SECTION 083100

This page intentionally left blank

SECTION 084113
ALUMINUM FRAMED ENTRANCES AND STOREFRONTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section covers Aluminum Storefront Systems, including perimeter trims, stools, accessories, shims and anchors, and perimeter sealing of storefront units.

B. Aluminum Storefront Systems

C. Aluminum Entrances

D. Related Sections:
   1. 079200: Joint Sealants
   2. 083213: Sliding Aluminum-Framed Glass Doors
   3. 085113: Aluminum Windows
   4. 088000: Glazing

1.03 DEFINITIONS

A. For fenestration industry standard terminology and definitions, refer to the Fenestration & Glazing Industry Alliance (FGIA) Glossary (AAMA AG-13).

1.04 REFERENCE STANDARDS

A. AAMA 503 - Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls and Sloped Glazing Systems; 2014.

B. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).

C. AAMA 1801 - Voluntary Specification for the Acoustical Rating of Exterior Windows, Doors, Skylights and Glazed Wall Sections; 2021.

D. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.

E. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.

F. ASTM - Ameican Society for Testing and Materials; Current.

G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.

H. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

I. ASTM C1401 - Standard Guide for Structural Sealant Glazing; 2023.

J. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2023).

K. ASTM E783 - Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors; 2002 (Reapproved 2018).

L. ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference; 2015 (Reapproved 2023).

M. ASTM E1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials; 2019.

N. ASTM E1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes; 2023.

O. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.

1.05 PERFORMANCE REQUIREMENTS

A. General Performance:
   1. Product to comply with the specified performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction, as determined by testing of aluminum storefront systems representing those indicated for this project.
   2. Aluminum storefront systems shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
   3. Failure includes any of these events:
      a. Thermal stresses transferring to building structure
      b. Glass breakage
      c. Loosening or weakening of fasteners, attachments, and other components
      d. Failure of operating units

B. Delegated Design:
   1. Design aluminum storefront systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

C. Wind Loads:
   1. The storefront system shall include anchorage that is capable of withstanding the following wind load design pressures:
      a. Inward: (_____) psf or (_____) Pa
      b. Outward: (_____) psf or (_____) Pa
   2. The design pressures are based on the 2025 NYS Building Code.

D. Air Leakage:
   1. The test specimen shall be tested in accordance with ASTM E 283.
   2. With interior seal, air leakage rate shall not exceed 0.06 cfm/ft2 (0.3 l/s · m2) at a static air pressure differential of 6.2 psf (300 Pa).
   3. Without interior seal, air leakage rate shall not exceed 0.06 cfm/ft2 (0.3 l/s · m2) at a static air pressure differential of 1.6 psf (75 Pa).
   4. CSA A440 Fixed Rating

E. Water Resistance:
   1. The test specimen shall be tested in accordance with ASTM E331.
   2. There shall be no leakage at a minimum static air pressure differential of 10 psf (479 Pa) as defined in AAMA 501.
   3. CSA A440 B5 Rating

F. Uniform Load Structural:
   a. A static air design load of 30 psf (1436 Pa) shall be applied in the positive and negative direction in accordance with ASTM E 330.
   b. There shall be no deflection in excess of L/175 of the span of any framing member.
   c. At a structural test load equal to 1.5 times the specified design load, no glass breakage or permanent set in the framing members in excess of 0.2% of their clear spans shall occur.
   d. CSA A440 C2 Rating

G. Thermal Transmittance (U-factor):
   a. Thermal transmittance test results are based upon 1" 1 inch clear high-performance insulating glass 1/4" (e=0.035, #2), 1/2" warm edge spacer and argon fill gas, 1/4".
   b. When tested to AAMA Specification 1503, the thermal transmittance (U-factor) shall not be more than listed here:
      1) Trifab® Versaglaze® 601T Framing System, Center Plane (0.28 COG) .40 or project specific (____) Btu/hr/ft2/°F per AAMA 507 or (____) Btu/hr/ft2/°F per NFRC 100.

H. Condensation Resistance Factor (CRF) or Condensation Index (CI):
   a. If using CRF: When tested to AAMA Specification 1503, the CRF shall not be less than listed here:
      1) Trifab® Versaglaze® 601T Framing System, Center Plane 69frame and 70glass (low-e)
   b. Sound transmission loss test results in accordance with AAMA 1801 are based upon 1" 1 inch clear double laminated insulating glass with PVB interlayer (1/8", 0.030", 1/8", 1/2" AS, 1/8", 0.030", 1/8").
   c. Ratings shall not be less than listed here:
      1) Trifab® VersaGlaze® 601/601T/601UT Framing System, Center Plane laminated glass STC 37 and OITC 31
      2) Trifab® VersaGlaze® 601/601T/601UT Framing System, Front Plane laminated glass STC 36 and OITC 30
      3) Trifab® VersaGlaze® 601/601T/601UTFraming System, Front Plane non-laminated glass STC 31 and OITC 25

1.06 SUBMITTALS

A. Product Data:
   1. For each type of aluminum-framed storefront system indicated, include:
      a. Construction details
      b. Material descriptions
      c. Dimensions of individual components and profiles
      d. Hardware
      e. Finishes
      f. Installation instructions

B. Shop Drawings:
   1. For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details and attachments to other work. Shop drawings for curtian wall systems shall be signed and sealed by the qualified New York State professional Engineer responsible for their preparation.

a. Include details of provisions for assemly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
b. Show connection to and continuity with adjacent thermal, weather, air and vapor barriers.

C. Samples for Initial Selection:
1. Provide samples for units with factory-applied color finishes.
2. Provide samples of hardware and accessories involving color selection.

D. Samples for Verification:
1. Provide a verification sample for aluminum-framed storefront system and required components.

E. Product Test Reports:
1. Provide test reports for each type of aluminum-framed storefront used in the project.
2. Test reports must be based on evaluation of comprehensive tests performed by a qualified preconstruction testing agency.
3. Test reports must indicate compliance with performance requirements.

F. Fabrication Sample:
1. Provide a fabrication sample of each vertical-to-horizontal intersection of aluminum-framed systems, made from 12" [12] inch ([304.8] mm) lengths of full-size components and showing details of the following:
a. Joinery, including concealed welds
b. Anchorage
c. Expansion provisionsGlazingFlashing and drainage
d. Glazing
e. Flashing and drainage

G. Entrance Door Hardware Schedule:
1. Schedule shall be prepared by or under the supervision of supplier.
2. Schedule shall detail fabrication and assembly of entrance door hardware, including procedures and diagrams.
3. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.

1.07 QUALITY ASSURANCE

A. Installer Qualifications:
1. Installer must have successfully installed the same or similar units required for the project and other projects of similar size and scope.

B. Manufacturer Qualifications:
1. Manufacturer must be capable of providing aluminum-framed storefront systems that meet or exceed performance the stated performance requirements.
2. Manufacturer must document this performance by the inclusion of test reports and calculations.

C. Source Limitations:
1. Obtain aluminum-framed storefront system through one source from a single manufacturer.

D. Product Options:

1. Drawings indicate size, profiles, and dimensional requirements of aluminum-framed storefront system and are based on the specific system indicated. Refer to Division 01 Product Requirements Section. Do not modify size and dimensional requirements.
2. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

E. Pre-installation Conference:
1. Conduct conference at project site to comply with requirements in Division 01 Project Management and Coordination Section.

F. Structural-Sealant Glazing must comply with ASTM C1401, “Guide for Structural Sealant Glazing” for design and installation of structural-sealant-glazed systems.

G. Structural-Sealant Joints: Design reviewed and approved by structural-sealant manufacturer.

1.08 PROJECT CONDITIONS

A. Field Measurements:
1. Verify actual dimensions of aluminum-framed storefront openings by field measurements before fabrication.
2. Indicate measurements on shop drawings.

1.09 WARRANTY

A. Submit manufacturer's standard warranty for owner's acceptance.
1. Warranty Period: Two years from Date of Substantial Completion of the project provided however that in no event shall the Limited Warranty begin later than six months from date of shipment by manufacturer.

B. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed entrances and strorefronts that do not comply with requirements or that fail in materials or workmanship with specified warranty period.
1. Failures include, but are not limited to, the following:
a. Structural failures including, but not limited to, excessive deflection.
b. Noise or vibration created by wind and thermal and structural movements.
c. Deterioration of metals, metal finishes and other materials beyond normal weathering.
d. Water penetration through fixed glazing and framing areas.
e. Failure o
2. Warranty Period: 10 years from date of Substantial Completion.

C. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory applied finishes within specified warranty period.
1. Deterioration includes, but is not limited to, the following:
a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling or failure of paint to adhere to bare metal.
2. Warranty Period: 20 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis-of-Design Product: Kawneer Company, Inc.

1. Trifab® Versaglaze® 601T Framing System
    a. 2" x 6" [2] inch ([50.8] mm) x [6] inch ([152.4] mm)) nominal dimension
    b. Thermal
    c. Center Plane
    d. Screw Spline Fabrication

B. Subject to compliance with requirements, provide a comparable product by the following:
1. Manufacturers:
    a. EFCO

C. Substitutions:
    a. Refer to Division 01 Substitutions Section for procedures and submission requirements.
    b. Pre-Contract (Bidding Period) Substitutions:
        1) Submit written requests ten (10) days prior to bid date.
    c. Post-Contract (Construction Period) Substitutions:
        1) Submit written request in order to avoid installation and construction delays.
    d. Product Literature and Drawings:
        1) Submit product literature and drawings modified to suit specific project requirements and job conditions.
    e. Certificates:
        1) Submit certificate(s) certifying that the substitute manufacturer (1) attests to adherence to specification requirements for storefront system performance criteria, and (2) has been engaged in the design, manufacture, and fabrication of aluminum storefronts for a period of not less than ten (10) years. (Company Name)
    f. Test Reports:
        1) Submit test reports verifying compliance with each test requirement required by the project.
    g. Samples:
        1) Provide samples of typical product sections and finish samples in manufacturer's standard sizes.

D. Substitution Acceptance:
    a. Acceptance will be in written form, either as an addendum or modification.
    b. Acceptance will be documented by a formal change order signed by the owner and contractor.

2.02 MATERIALS

A. Aluminum Extrusions:
    a. Alloy and temper recommended by aluminum storefront manufacturer for strength, corrosion resistance, and application of required finish.
    b. Not less than 0.070" 0.07 inch wall thickness at any location for the main frame
    c. Complying with ASTM B221: 6063-T6 alloy and temper

B. Fasteners:
    a. Nonmagnetic stainless steel or other materials must be non-corrosive and compatible with aluminum members, trim hardware, anchors, and other components.

C. Anchors, Clips, and Accessories:
    a. Anchors, clips, and accessories shall provide sufficient strength to withstand the design pressure indicated.

D. Reinforcing Members:

E. Sealant:
   a. For sealants required within fabricated storefront system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.

F. Tolerances:
   a. References to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

2.03 STOREFRONT FRAMING SYSTEM

A. Thermal Barrier:
   1. Trifab® Versaglaze® 601T:
      a. Kawneer IsoLock™ Thermal Break with a nominal 1/4" [0.25] inch ([6.4] mm) separation consisting of a two-part chemically curing, high-density polyurethane, which is mechanically and adhesively joined to aluminum storefront sections.

B. Brackets and Reinforcements:
   1. Manufacturer's standard high-strength aluminum with non-staining, non-ferrous shims for aligning system components.

C. Fasteners and Accessories:
   1. Manufacturer's standard corrosion-resistant, non-staining, non-bleeding fasteners and accessories must be compatible with adjacent materials.
   2. Where exposed, fasteners and accessories shall be stainless steel.

D. Perimeter Anchors:
   1. When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.

E. Packing, Shipping, Handling, and Unloading:
   1. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

F. Storage and Protection:
   1. Store materials so that they are protected from exposure to harmful weather conditions.
   2. Handle material and components to avoid damage.
   3. Protect material against damage from elements, construction activities, and other hazards before, during, and after installation.

2.04 GLAZING SYSTEMS

A. Glazing to meet requirements in Division 08 Glazing Section.
   1. Glazing Gaskets:Manufacturer's standard compression typesReplaceable, extruded EPDM rubber
   2. Replaceable, extruded EPDM rubber

B. Spacers and Setting Blocks:Manufacturer's standard elastomeric type

C. Bond-Breaker Tape:
   1. Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.

D. Glazing Sealants for structural-sealant-glazed systems as recommended by manufacturer for joint type, and as follows:

1. Weatherseal sealant:
    a. ASTM C920 for Type S, Grade NS, Class 25, Uses NT, G, A, and O
    b. Single-component neutral-curing formulation that is compatible with the structural sealant and other system components with which it comes in contact
    c. Recommended by structural-sealant, weatherseal-sealant, and aluminum-framed-system manufacturers for this use
    d. Color: Matching structural sealant

2.05 ENTRANCE DOOR SYSTEMS

A. Basis of Design: Kawneer 500 Heavy Wall™ Swing Door:
    1. Wide stile
    2. Vertical face dimension: 5" (127.0 mm)
    3. Top Rail: 5" (127.0 mm)
    4. Bottom Rail: 10" (254.0 mm)
    5. Depth: 2" (50.8 mm)
    6. Wall thickness: 3/16" (4.8 mm) for high traffic applications

B. Major portions of the door members shall be 0.188" (4.8 mm) nominal thickness.

C. Glazing molding shall be 0.05" (1.3 mm) thick.

D. Glazing gaskets shall be either EPDM elastomeric extrusions or a thermoplastic elastomer.

E. Provide adjustable glass jacks to help center the glass in the door opening.

F. Subject to compliance with requirements, provide a comparable product by the following:
    1. EFCO

2.06 ACCESSORY MATERIALS

A. Fastebers and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent amaterials.
    1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal an structural movements, wind loads or vibration.
    2. Reinforce members as required to receive fastener threads.
    3. Use exposed fasteners with countersunk Philips screw heads, finished to match framing system.
    4.

B. Bituminous Paint:
    1. Cold-applied asphalt-mastic paint
    2. Complies with SSPC-Paint 12 requirements except containing no asbestos
    3. Formulated for 30-mil (0.762 mm) thickness per coat

2.07 FABRICATION

A. Form or extrude aluminum shapes before finishing

B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or gridning.

C. Fabricate framing member components that, when assembled, have the following characteristics:
    1. Profiles that are sharp, straight, and free of defects or deformations
    2. Accurately fitted joints that are flush, hairline, and weatherproof

3. Means to drain water passing joints, condensation within framing members, and moisture migrating within the system to exterior
4. Physical and thermal isolation of glazing from framing members
5. Accommodations for thermal and mechanical movements of glazing and framing that maintain required glazing edge clearances
6. Provisions for field replacement of glazing
7. Fasteners, anchors, and connection devices that are concealed from view to the greatest extent possible

D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.

E. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.

F. Storefront Framing: Fabricate components for assembly using manufacturer’s standard installation instructions.

G. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.
1. At exterior doors, provide compression weather sripping at fixed stops

H. After fabrication, clearly mark components to identify their locations in project according to shop drawings.

2.08 ALUMINUM FINISHES

A. Finish designations that are prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. Factory Finishing:

C. Kawneer Permanodic® AA-M10C21A44, AAMA 611, Architectural Class I Color Anodic Coating (Color : Dark Bronze)

D. Kawneer Permafluor™ (70% PVDF), AAMA 2605, Fluoropolymer Coating (Color: As selected by Architect from Manufacturer's Full Range)

PART 3 EXECUTION

3.01 EXAMINATION

A. With installer present, examine openings, substrates, structural support, anchorage, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of work:

B. Verify rough opening dimensions.

C. Verify levelness of sill plate.

D. Verify operational clearances.

E. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components for proper water management.

F. Masonry Surfaces:
1. Masonry surfaces must be visibly dry and free of excess mortar, sand, and other construction debris.

G. Metal Surfaces:
1. Metal surfaces must be dry and clean (free of grease, oil, dirt, rust, corrosion, and welding slag).

2. Ensure that metal surfaces are without sharp edges or offsets at joints.

H. Proceed with installation only after correcting unsatisfactory conditions.

3.02 INSTALLATION

A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing aluminum-framed storefront system, accessories, and other components.

B. Install aluminum-framed storefront system so that components:
1. Are level, plumb, square, and true to line
2. Are without distortion and do not impede thermal movement
3. Are anchored securely in place to structural support
4. Are in proper relation to wall flashing and other adjacent construction

C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.

D. Install aluminum-framed storefront system and components to drain condensation, water penetrating joints, and moisture migrating within aluminum-framed storefront system to the exterior.

E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.03 FIELD QUALITY CONTROL

A. Field Tests:
1. Architect shall select storefront units to be tested as soon as a representative portion of the project has been installed, glazed, perimeter caulked and cured.
2. Conduct tests for air infiltration and water penetration with manufacturer’s representative present.
3. Tests that do not meet the specified performance requirements and units that have deficiencies shall be corrected as part of the contract amount.
4. Testing shall be performed per AAMA 503 by a qualified independent testing agency. Refer to Testing Section for payment of testing and testing requirements.
5. Air Infiltration Tests:
   a. Conduct tests in accordance with ASTM E783.
   b. Allowable air infiltration shall not exceed 1.5 times the amount indicated in the performance requirements or 0.09 cfm/ft2, whichever is greater.
6. Water Infiltration Tests:
7. Conduct tests in accordance with ASTM E1105.
   a. No uncontrolled water leakage is permitted when tested at a static test pressure of two-thirds the specified water penetration pressure but not less than 6.2 psf (300 Pa).

B. Manufacturer's Field Services:
1. Upon owner’s written request, provide periodic site visit by manufacturer’s field service representative.

3.04 ADJUSTING, CLEANING, AND PROTECTION

A. Adjusting: Not applicable.

B. Protection:

C. Protect installed product’s finish surfaces from damage during construction.

D. Cleaning:
1. Clean glass immediately after installation.

a. Comply with glass manufacturer's written recommendations for final cleaning and maintenance.
b. Remove non-permanent labels and clean surfaces.

2. Clean aluminum surfaces.
3. Avoid damaging protective coatings and finishes.
4. Remove excess sealants, glazing materials, dirt, and other substances.
5. Repair or replace damaged installed products.
6. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during the construction period.
7. Remove construction debris from project site and legally dispose of debris.

4.01 FINISH SCHEDULE:

4.02

END OF SECTION 084113

This page intentionally left blank

SECTION 085113
ALUMINUM WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Extruded aluminum windows.

B. Factory glazing.

C. Operating hardware.

D. Insect screens.

1.02 RELATED REQUIREMENTS

A. Section 061000 - ROUGH CARPENTRY: Rough opening framing.

B. Section 061000 - ROUGH CARPENTRY: Wood perimeter shims.

C. Section 079200 - JOINT SEALANTS: Sealing joints between window frames and adjacent construction.

D. Section 088000 - Glazing.

1.03 REFERENCE STANDARDS

A. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.

B. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).

C. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.

A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights; 2022, with Errata (2023).

B. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2026.

C. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2023).

D. ASTM E2112 - Standard Practice for Installation of Exterior Windows, Doors and Skylights; 2023.

E. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene one week before starting work of this section.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Include component dimensions, information on glass and glazing, internal drainage details, and descriptions of hardware and accessories.

C. Shop Drawings: Indicate opening dimensions, elevations of different types, framed opening tolerances, anchorage locations, and installation requirements.

D. Samples:
   1. Finish samples

E. Grade Substantiation: Prior to submitting shop drawings or starting fabrication, submit one of the following showing compliance with specified grade:
   1. Evidence of AAMA Certification.
   2. Evidence of WDMA Certification.
   3. Evidence of CSA Certification.
   4. Test report(s) by independent testing agency itemizing compliance and acceptable to authorities having jurisdiction.

F. Manufacturer's Installation Instructions: Include complete preparation, installation, and cleaning requirements.

G. Installer's qualification statement.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect finished surfaces with wrapping paper or strippable coating during installation. Do not use adhesive papers or sprayed coatings that bond to substrate when exposed to sunlight or weather.

1.08 FIELD CONDITIONS

A. Do not install sealants when ambient temperature is less than 40 degrees F.

B. Maintain this minimum temperature during and 24 hours after installation of sealants.

1.09 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Correct defective work within a five year period after Date of Substantial Completion.

C. Manufacturer Warranty: Provide 5-year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units. Complete forms in Owner's name and register with manufacturer.

D. Manufacturer Warranty: Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Aluminum Window Manufacturers:
   1. Kawneer: www.kawneer.us (Basis of Design)
   2. EFCO
   3. TRACO: www.traco.com/#sle.

2.02 PERFORMANCE REQUIREMENTS- EXTERIOR GLAZING ASSEMBLIES

A. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
   1. Center of Glass U-Value: Comply at minimum with U-value indicated in Building Codes of NYS (Table C402.5).
      a. Climate Zone 5, Maximum U value:
         1) Fixed Fenestration: .34
         2) Operable Fenestration: .43
         3) Entrance Doors: .63
   2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
      a. Comply with SHGC requirements indicated in Building Codes of NYS (Table C402)
         1) Climate Zone 5, PF<0.2: .33

2.03 RESCUE WINDOW REQUIREMENTS

A. Provide rescue windows as shown on the drawings.

B. Rescue windows are to conform to the standards in the 2025 NYS Building Code, and the 2022 NYSED Manual of Planning Standards.

C. The minimum clear opening area for rescue windows to be at least 6 square feet. The minimum dimension (width and height) to be 24".

D. Approved window types for rescue windows are: Double Hung, Casement, Sliding.
   1. Casement windows to have hardware that permits the window to open to at least 90 degrees.

E. Window Hardware at Rescue Windows to be a maximum of 54" off of the Finished Floor.

F. Rescue Windows to be labeled. Labels shall be:
   1. Bright yellow background with black letters.
   2. Size: 3" x 5".
   3. Text: Rescue Window readable from each side of the window.

2.04 BASIS OF DESIGN - AW PERFORMANCE CLASS WINDOWS

A. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 having Performance Class of AW, and Performance Grade at least as high as specified design pressure.

B. Fixed, Thermally-Broken:
   1. Basis of Design: Kawneer: OptiQAA 5450 Series; 4 5/8 inch frame depth,; www.kawneer.us.com/#sle.
      a. OptiQAA 4325 series to be used as fixed panels in units that have project out or casement panels.

C. Horizontal Sliding; with Matching Fixed Units:
   1. Basis of Design: Kawneer: OptiQAA 5450 Series; 4 5/8 inch frame depth, Thermally Broken.

D. Casement:
   1. Basis of Design: Kawneer: OptiQAA 4325 Series; 3 1/4 inch frame depth, Thermally Broken.

E. Project-Out:
   1. Basis of Design: Kawneer: OptiQAA 4325 Series, 3 1/4 inch frame depth, Thermally Broken.

2.05 ALUMINUM WINDOWS

A. Aluminum Windows: Extruded aluminum frame and sash, factory fabricated, factory finished, with operating hardware, related flashings, and anchorage and attachment devices.
   1. Provide factory-glazed units.
   2. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors; fasteners and attachments concealed from view; reinforced as required for operating hardware and imposed loads.
   3. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
   4. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
   5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
   6. Thermal Movement: Design to accommodate thermal movement caused by 180 degrees F surface temperature without buckling stress on glass, joint seal failure, damaging loads on structural elements, damaging loads on fasteners, reduction in performance or other detrimental effects.

B. Fixed, Non-Operable Type:
   1. Construction: Thermally broken.
   2. Glazing: Double; tinted; low-e.
      a. U Factor: Meet code requirements listed in section 2.02.
      b. SGHC= Meet code requirements listed in section 2.02.
   3. Exterior Finish: Class I natural anodized.
   4. Interior Finish: Class I natural anodized.

C. Outswinging Casement Type.
   1. Construction: Same manufacturer and series as Fixed window.
   2. Comply with size requirements for rescue window, refer to drawings.
   3. Provide screens.
      a. Do not provide screens at rescue windows
   4. Glazing: Safety glass, double, tinted, low-e.
      a. U-Factor: Meet code requirements listed in section 2.02.
      b. SGHC: Meet code requirements listed in section 2.02.
   5. Exterior Finish: Class I natural anodized.
   6. Interior Finish: Class I natural anodized.

D. Project Out Type.
   1. Construction: Same manufacturer and series as Fixed window.
   2. Provide screens.
   3. Glazing: Safety glass, double, tinted, low-e.
   4. U-Factor: Meet code requirements listed in section 2.02.
   5. SGHC: Meet code requirements listed in section 2.02.
   6. Exterior Finish: Class I natural anodized.
   7. Interior Finish: Class I natural anodized.

E. Horizontal Sliding Type:
   1. Construction: Thermally broken.
   2. Rescue Window where noted on drawings

3. Provide screens.
    a. Do not provide screens at rescue windows.
4. Glazing: Double; tinted; low-e.
    a. U-Factor: Meet code requirements listed in section 2.02.
    b. SGHC: Meet code requirements listed in section 2.02.
5. Exterior Finish: Class I natural anodized.
6. Interior Finish: Class I natural anodized.

2.06 COMPONENTS

A. Insect Screens: Extruded aluminum frame with mitered and reinforced corners; screen mesh taut and secure to frame; secured to window with adjustable hardware allowing screen removal without use of tools.
    1. Hardware: Spring loaded steel pins; four per screen unit.
    2. Screen Mesh: Vinyl-coated fiberglass, window manufacturer's standard mesh.
    3. Frame Finish: Same as frame and sash.

B. Sealant for Setting Sills and Sill Flashing: Non-curing butyl type.

2.07 HARDWARE

A. Sash lock: Lever handle with cam lock.

2.08 FINISHES

A. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41, clear anodic coating not less than 0.7 mil thick.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that wall openings and adjoining water-resistive barrier materials are ready to receive aluminum windows.

3.02 PRIME WINDOW INSTALLATION

A. Install windows in accordance with manufacturer's instructions.

B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.

C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

D. Install sill and sill end angles.

E. Provide thermal isolation where components penetrate or disrupt building insulation. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

F. Install operating hardware not pre-installed by manufacturer.

3.03 TOLERANCES

A. Maximum Variation from Level or Plumb: 1/16 inches every 3 ft non-cumulative or 1/8 inches per 10 ft, whichever is less.

3.04 CLEANING

A. Remove protective material from factory finished aluminum surfaces.

B. Wash surfaces by method recommended and acceptable to window manufacturer; rinse and wipe surfaces clean.

C. Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

D. Remove excess glazing sealant by moderate use of mineral spirits or other solvent acceptable to sealant and window manufacturer.

END OF SECTION 085113

SECTION 086200
UNIT SKYLIGHTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Skylights with integral frame.

1.02 REFERENCE STANDARDS

A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights; 2022, with Errata (2023).

B. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.

C. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Include structural, thermal, and daylighting performance values.

C. Shop Drawings: Indicate configurations, dimensions, locations, fastening methods, and installation details.

D. Grade Substantiation: Prior to submitting shop drawings or starting fabrication, submit one of the following showing compliance with specified grade:
   1. Evidence of AAMA Certification.
   2. Evidence of WDMA Certification.
   3. Evidence of CSA Certification.
   4. Test report(s) by independent testing agency itemizing compliance and acceptable to authorities having jurisdiction.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with not less than three years documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

1.05 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Manufacturer Warranty: Provide five-year manufacturer warranty including coverage for leakage due to defective skylight materials or construction. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Unit Skylights:
   1. American Skylights a Division of the Andi Group; Standard Curb Mount (Model CM): www.americanskylights.com/#sle.
   2. Kingspan Light + Air, LLC; Series 1200 Polycarbonate Unit Skylight: www.kingspanlightandair.us/#sle.

3. Velux America, Inc; VELUX Dynamic Dome: www.veluxusa.com/#sle.

2.02 SKYLIGHTS

A. Skylights: Factory-assembled glazing in aluminum frame, free of visual distortion, and weathertight.
   1. Shape: Square dome.
   2. Glazing: Double.
   3. Operation: None; fixed.
   4. Nominal Size: As indicated on drawings.

2.03 PERFORMANCE REQUIREMENTS

A. Provide unit skylights that comply with the following:
   1. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific skylight type:
   2. Allow for expansion and contraction within system components caused by a cycling surface temperature range of 170 degrees F without causing detrimental effects to system or components.

2.04 COMPONENTS

A. Double Glazing: Acrylic plastic; factory sealed.
   1. Outer Glazing: White translucent.
   2. Inner Glazing: Clear transparent.
   3. Thermal Transmittance (U-Value), _____: .48, maximum.
   4. Solar Heat Gain Coefficient (SHGC): .38 , maximum.

B. Frames: ASTM B221 ASTM B221M Extruded aluminum thermally broken, reinforced and welded corner joints, integral curb frame mounting flange and counterflashing to receive roofing flashing system, with integral condensation collection gutter, glazing retainer; clear anodized finish.
   1. Insulated curb R-Value: 5, minimum.

2.05 ACCESSORIES

A. Skylight Protection System: OSHA-compliant; nonpenetrating fall protection.

B. Protective Back Coating: Zinc molybdate alkyd.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that openings and substrate conditions are ready to receive work of this section.

3.02 PREPARATION

A. Apply protective back coating on aluminum surfaces of skylight units that will be in contact with cementitious materials or dissimilar metals.

3.03 INSTALLATION

A. Install aluminum curb assembly, fastening securely to roof decking; flash curb assembly into roofing system.

B. Install skylight units and mount securely to curb assembly; install counterflashing as required.

C. Apply sealant to achieve watertight assembly.

3.04 CLEANING

A. Remove protective material from prefinished aluminum surfaces.
B. Wash down exposed surfaces; wipe surfaces clean.
C. Remove excess sealant.

END OF SECTION 086200

This page intentionally left blank

SECTION 087100
DOOR HARDWARE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware for:

    a. Swinging doors.

2. Electronic access control devices.
3. Field verification, preparation and modification of existing doors and frames to receive new door hardware.
4. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this section for:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section.
2. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.

3. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.
4. Division 26 sections for connections to electrical power system and for low-voltage wiring.
5. Division 28 sections for coordination with other components of electronic access control system.

1.03 REFERENCES

A. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Key Systems and Nomenclature

B. ANSI - American National Standards Institute

1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

1.04 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 requirements.
2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, “EXAMINATION” article, herein.

B. Action Submittals:

1. Product Data: Technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:

a. Wiring Diagrams: For power, signal, and control wiring and including:
1) Details of interface of electrified door hardware and building safety and security systems.

2) Schematic diagram of systems that interface with electrified door hardware.
3) Point-to-point wiring.
4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated, and tagged with full description for coordination with schedule.

   a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:

   a. Door Index; include door number, heading number, and Architects hardware set number.
   b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
   c. Quantity, type, style, function, size, and finish of each hardware item.
   d. Name and manufacturer of each item.
   e. Fastenings and other pertinent information.
   f. Location of each hardware set cross-referenced to indications on Drawings.
   g. Explanation of all abbreviations, symbols, and codes contained in schedule.
   h. Mounting locations for hardware.
   i. Door and frame sizes and materials.
   j. Name and phone number for local manufacturer's representative for each product.
   k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components). Operational description should include operational descriptions for: egress, ingress (access), and fire/smoke alarm connections.
      1) Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

5. Key Schedule:

a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
b. Use ANSI/BHMA A156.28 “Recommended Practices for Keying Systems” as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
    1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.

f. Prepare key schedule by or under supervision of supplier, detailing Owner’s final keying instructions for locks.

6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory or shop prepared for door hardware installation.

C. Informational Submittals:

1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
2. Product data for electrified door hardware:

    a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.

3. Warranty: Special warranty specified in this Section.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

    a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
    b. Catalog pages for each product.
    c. Factory order acknowledgement numbers (for warranty and service)
    d. Name, address, and phone number of local representative for each manufacturer.
    e. Parts list for each product.
    f. Final approved hardware schedule, edited to reflect conditions as-installed.
    g. Final keying schedule
    h. Copies of floor plans with keying nomenclature

i. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
j. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.05 QUALITY ASSURANCE

A. Supplier Qualifications and Responsibilities: Recognized architectural hardware supplier with record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.

1. Warehousing Facilities: In Project's vicinity.
2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
4. Coordination Responsibility: Assist in coordinating installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related subcontractors.

    a. Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.

B. Architectural Hardware Consultant Qualifications: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC).
2. Can provide installation and technical data to Architect and other related subcontractors.
3. Can inspect and verify components are in working order upon completion of installation.
4. Capable of producing wiring diagrams.
5. Capable of coordinating installation of electrified hardware with Architect and electrical engineers.

C. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

D. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed products tested by Underwriters Laboratories, Intertek Testing

Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

E. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

F. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in “REFERENCES” article, herein.

G. Keying Conference

1. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:

    a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
    b. Preliminary key system schematic diagram.
    c. Requirements for key control system.
    d. Requirements for access control.
    e. Address for delivery of keys.

H. Pre-installation Conference

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Inspect and discuss preparatory work performed by other trades.
3. Inspect and discuss electrical roughing-in for electrified door hardware.
4. Review sequence of operation for each type of electrified door hardware.
5. Review required testing, inspecting, and certifying procedures.

I. Coordination Conferences:

1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

1. Deliver each article of hardware in manufacturer’s original packaging.

C. Project Conditions:

1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
2. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

D. Protection and Damage:

1. Promptly replace products damaged during shipping.
2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

E. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

F. Deliver keys and permanent cores to Owner by registered mail or overnight package service.

1.07 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

E. Existing Openings: Where existing doors, frames and/or hardware are to remain, field verify existing functions, conditions and preparations and coordinate to suit opening conditions and to provide proper door operation.

1.08 WARRANTY

A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Beginning from date of Substantial Completion, for durations indicated.

a. Locksets
1) Mechanical: 10 years.
2) Electrified: 1 year.

b. Closers:
1) Mechanical: 25 years
2) Electrified: 2 years.

c. Exit Devices:
1) Mechanical: 10 years.
2) Electrified: 1 year.

d. Continuous Hinges: Lifetime warranty.
e. Key Blanks: Lifetime

2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.09 MAINTENANCE

A. Maintenance Tools: Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Approval of manufacturers and/or products other than those listed as “Scheduled Manufacturer” or “Acceptable Manufacturers” in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.

B. Approval of products from manufacturers indicated in “Acceptable Manufacturers” is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer’s product.

C. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fasteners

1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
4. Install hardware with fasteners provided by hardware manufacturer.

B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.

1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
2. Use materials which match materials of adjacent modified areas.
3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.

C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.03 HINGES

A. Butt Hinges

1. Manufacturers:

a. Scheduled Manufacturer: PBB.
b. Acceptable Manufacturers: Hager, Stanley.

2. Requirements:

a. Hinges are to meet or exceed ANSI/BHMA A156.1 requirements.
b. Provide template produced hinges installed on hollow metal doors and frames.
c. Hinge Size: Provide the size listed in the hardware sets.
d. Hinge Type: Provide the type as listed in the hardware sets.

2.04 CONTINUOUS HINGES

A. Aluminum Geared

1. Manufacturers:

a. Scheduled Manufacturer: Select.
b. Acceptable Manufacturers: Ives, PBB.

2. Requirements:

a. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
b. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
c. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
d. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
e. On fire-rated doors, provide aluminum geared continuous hinges that are classified for use on rated doors by testing agency acceptable to authority having jurisdiction.

f. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with sufficient number and wire gage to accommodate electric function of specified hardware.
g. Install hinges with fasteners supplied by manufacturer.
h. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.05 FLUSH BOLTS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless-steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.06 ELECTRIC STRIKES

A. Rim Strikes

1. Manufacturers:

a. Scheduled Manufacturer: HES.
b. Acceptable Manufacturers: Von Duprin, Trine.

2. Requirements:

a. Provide electric strikes designed for use with type of locks shown at each opening.
b. Provide electric strikes UL Listed as burglary resistant that are tested to a minimum endurance test of 1,000,000 cycles.
c. Where required, provide electric strikes UL Listed for fire doors and frames.
d. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.07 MECHNICAL LOCKING AND LATCHING DEVICES

A. Cylindrical Locks:

1. Manufacturers and Products:

    a. Scheduled Manufacturer: TownSteel CEI Series.
    b. Acceptable Manufacturers: Best 9K Series, Schlage ND Series.

B. Requirements:

1. Locks shall meet or exceed ANSI/BHMA A156.2 Series 4000 Operation Grade 1 requirements.
2. Locks are to be non-handed and fully field reversible.
3. Backset: 2 ¾" unless noted otherwise.
4. Lock trim and function as shown in hardware sets.
5. Latchbolt: Provide deadlocking latchbolt for all locks with a keyed function.

2.08 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: TownSteel ED1000
2. Acceptable Manufacturers and Products: Precision Apex series, Von Duprin 98 Series**.**

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with dead latching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide flush end caps for exit devices.
7. Provide exit devices with manufacturer's approved strikes.
8. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
9. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
10. Provide cylinder or hex-key dogging as specified at non fire-rated openings.

11. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
12. All removeable mullions shall be steel powder coated.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double or single tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.09 CYLINDERS

A. Manufacturers and Products:

1. Scheduled Manufacturers: Best.
2. Acceptable Manufacturers: No Substitution.

B. Requirements:

1. Provide cylinders compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.

    a. Verify with architect to match existing system.

C. Construction Keying:

1. Replaceable Construction Cores.

    a. Provide temporary keyed construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
        1) 3 construction control keys.
        2) 12 construction change (day) keys.

    b. Owner or Owner's Representative will replace temporary construction cores with permanent cores.
        1) Permanent cores by Owner.

2.10 KEYING

A. Permanent keying, keys by Owner.

2.11 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: TownSteel TDC40 series.
2. Acceptable Manufacturers and Products: LCN 4040XP series, Norton 9500.

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with cast aluminum cylinder.
3. Closer Body: Cast iron, 1-1/2 inch (38 mm) diameter with 11/16 inch (17 mm) diameter heat-treated pinion journal and full complement bearings.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and all weather requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and back check.
7. Pressure Relief Valve (PRV) Technology: Not permitted.
8. Provide stick on templates, special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.12 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Burns, Rockwood.

B. Requirements:

1. Provide push plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick and beveled 4 edges. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
2. Provide push bars of solid bar stock, diameter and length as scheduled. Provide push bars of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
3. Provide offset pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
4. Provide flush pulls as scheduled. Where required, provide back-to-back mounted model.
5. Provide pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
6. Provide pull plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
7. Provide wire pulls of solid bar stock, diameter and length as scheduled.

2.13 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer: Rockwood.
2. Acceptable Manufacturers: Ives, Trimco.

B. Requirements:

1. Shall meet ANSI/BHMA A156.6 requirements.
2. Protection plates fabricated from 300 grade stainless steel. .050” thick.
3. Size: Fabricate protection plates not more than 1 1/2" less than door width (LDW) on stop side of single doors and 1” LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates.
4. Kick plates are to be installed on push side of door, unless stated otherwise.
5. Provide Plates with beveled edges and countersunk screw holes.
6. Height: 10”, unless noted otherwise.

2.14 OVERHEAD STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Glynn Johnson.
2. Acceptable Manufacturer: Rixson, ABH.

B. Requirements

1. Stops and Holders shall meet or exceed ANSI/BHMA A156.8, Grade 1 requirements.
2. Provide units that are through bolted.
3. Coordinate with door closer installation, special templating may be required.
4. Where stops and holders are specified, coordinate with door manufacturer to insure proper application, installation, and operation.
5. Functions as show in Hardware Sets.

2.15 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Door Stops and Holders shall comply with ANSI/BHMA A156.16, Grade 1 requirements.
2. Provide wall bumpers, either convex or concave types as required.
3. Provide Door stops with anchorage required based upon wall or floor application.
4. Do not mount floor stops where they will impede traffic.
5. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

2.16 MAGNETIC HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: LCN
2. Acceptable Manufacturer: Rixson, ABH.

2.17 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer: KN Crowder.
2. Acceptable Manufacturers: Zero International, National Guard.

B. Requirements:

1. Provide thresholds, weather-stripping (including door sweeps, seals, and astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Size of thresholds:

    a. Saddle Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width

4. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.18 FINISHES

A. Finish: As listed in hardware sets.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.

C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Where on-site modification of doors and frames is required:

1. Carefully remove existing door hardware and components being reused. Clean, protect, tag, and store in accordance with storage and handling requirements specified herein.
2. Field modify and prepare existing door and frame for new hardware being installed.

3. When modifications are exposed to view, use concealed fasteners, when possible.
4. Prepare hardware locations and reinstall in accordance with installation requirements for new door hardware and with:

    a. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
    b. Wood Doors: DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
    c. Doors in rated assemblies: NFPA 80 for restrictions on on-site door hardware preparation.

3.03 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

B. Install each hardware item in compliance with manufacturer’s instructions and recommendations, using only fasteners provided by manufacturer.

C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

H. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Owner shall replace construction cores with permanent cores as indicated in keying section.

I. Wiring: Coordinate with Division 26, ELECTRICAL sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Testing and labeling wires with Architect's opening number.

J. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.

K. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

L. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

M. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

N. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

O. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.04 FIELD QUALITY CONTROL

A. Engage qualified manufacturer trained representative to perform inspections and to prepare inspection reports.

1. Representative will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.05 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of

heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, Installer's Architectural Hardware Consultant must examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.06 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.07 DOOR HARDWARE SCHEDULE

ABBREVIATION	Name
BES	Best Locking Systems
GLY	Glynn-Johnson Corp
IVE	H.B. Ives
KNC	K.N. Crowder Mfg. Inc.
LCN	LCN Commercial Division
PBB	Pbb Inc
ROC	Rockwood Manufacturing Co.
SEL	Select Products Ltd
TOW	Townsteel Inc

Legend:
Link to catalog cut sheet
Electrified Opening

Hardware Group No. 01

For use on Door #(s):
184A-1 184A-2

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONTINUOUS HINGE	SL24 HD		628	SEL
1	EA	EXIT DEVICE	ED1100 CD		630	TOW
1	EA	EXIT DEV TRIM	ED203R		626	TOW
2	EA	RIM OR MORTISE CYLINDER	AS REQUIRED		626	BES
2	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
1	EA	SURFACE CLOSER	TDC40 SCUSH		689	TOW
1	EA	WEATHER STRIPPING	W-20S		CLR	KNC
1	EA	SWEEP	W-35-1		CLR	KNC
1	EA	THRESHOLD	CT-46		MIL	KNC

Hardware Group No. 02

For use on Door #(s):
181-3 181-5 184-6

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	4B81 4.5" NRP			US26D	PBB
1	EA	EXIT DEVICE	EF1100		✓	630	TOW
1	EA	EVIT DEVICE TRIM	MKS-08-R-S			626	TOW
1	EA	RIM OR MORTISE CYLINDER	AS REQUIRED			626	BES
1	EA	SFIC PERMANENT CORE	BY OWNER			626	BES
1	EA	SURFACE CLOSER	TDC40 EDA			689	TOW
1	EA	KICK PLATE	K1050 10"			US32D	ROC
1	EA	MAGNET	SEM7830 12V/24V/120V		✓	689	LCN
1	EA	GASKETING	W-66			BK	KNC

DOOR CAN BE HELD OPEN BY WALL MAGNET.
AUTOMATIC RELEASE UPON SMOKE/FIRE ALARM ACTIVATION.

Hardware Group No. 03

For use on Door #(s):
181-4 184-5 184-7

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
6	EA	HINGE	4B81 4.5" NRP			US26D	PBB
2	EA	FIRE EXIT DEVICE	EF1200 LBR			630	TOW
2	EA	EVIT DEVICE TRIM	MKS-08-R-S			626	TOW
2	EA	RIM OR MORTISE CYLINDER	AS REQUIRED			626	BES
2	EA	SFIC PERMANENT CORE	BY OWNER			626	BES
2	EA	SURFACE CLOSER	TDC40 EDA			689	TOW
2	EA	KICK PLATE	K1050 10"			US32D	ROC
2	EA	MAGNET	SEM7830 12V/24V/120V		✓	689	LCN
1	EA	GASKETING	W-66			BK	KNC

DOORS CAN BE HELD OPEN BY WALL MAGNETS.
AUTOMATIC RELEASE UPON SMOKE/FIRE ALARM ACTIVATION.

Hardware Group No. 04

For use on Door #(s):
181-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	4B81 4.5" NRP		US26D	PBB
1	EA	CLASSROOM LOCK	CEI-84-S		626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
1	EA	SURFACE CLOSER	TDC40 EDA		689	TOW
1	EA	KICK PLATE	K1050 10"		US32D	ROC
1	EA	MAGNET	SEM7830 12V/24V/120V	✓	689	LCN
1	EA	GASKETING	W-66		BK	KNC

DOOR CAN BE HELD OPEN BY WALL MAGNET.
AUTOMATIC RELEASE UPON SMOKE/FIRE ALARM ACTIVATION.

Hardware Group No. 05

For use on Door #(s):
181B-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	4B81 4.5"	US26D	PBB
1	EA	CLASSROOM LOCK	CEI-84-S	626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER	626	BES
1	EA	KICK PLATE	K1050 10"	US32D	ROC
1	EA	WALL STOP	WS406/407CVX	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 06

For use on Door #(s):
181-2

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	4B81 4.5"			US26D	PBB
1	EA	CLASSROOM LOCK	CEI-84-S			626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER			626	BES
1	EA	FIRE/LIFE HOLDER	4040SEH SEH 24V AC/DC		✓	689	LCN
1	EA	SURFACE CLOSER	TDC40 CUSH			689	TOW
1	EA	KICK PLATE	K1050 10"			US32D	ROC
1	EA	GASKETING	W-66			BK	KNC

DOOR CAN BE HELD OPEN ELECTRONICALLY.
AUTOMATIC RELEASE UPON SMOKE/FIRE ALARM ACTIVATION.

Hardware Group No. 07

For use on Door #(s):
181A-1 184B-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	4B81 4.5"		US26D	PBB
1	EA	CLASSROOM LOCK	CEI-84-S		626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
1	EA	OH STOP	90S		630	GLY
1	EA	KICK PLATE	K1050 10"		US32D	ROC
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 08

For use on Door #(s):
181-6

Provide each RU door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	RIM OR MORTISE CYLINDER	AS REQUIRED	626	BES
1	EA	SFIC PERMANENT CORE	BY OWNER	626	BES
1			BALANCE OF HARDWARE BY DOOR MANUFACTURER		

VERIFY CYLINDER REQUIREMENTS WITH DOOR SUPPLIER/MANUFACTURER.

Hardware Group No. 09

For use on Door #(s):
181A-2

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	4B81 4.5"		US26D	PBB
1	EA	CLASSROOM LOCK	CEI-84-S		626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
1	EA	OH STOP	90S		630	GLY
1	EA	SURFACE CLOSER	TDC40		689	TOW
1	EA	KICK PLATE	K1050 10"		US32D	ROC
1	EA	GASKETING	W-66		BK	KNC

Hardware Group No. 10

For use on Door #(s):
181C-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	4B81 4.5" NRP		US26D	PBB
1	EA	CLASSROOM LOCK	CEI-84-S		626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
1	EA	OH STOP	90S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 11

For use on Door #(s):
184-2

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	4B81 4.5" NRP		US26D	PBB
1	EA	EXIT DEVICE	EF1100		630	TOW
1	EA	EVIT DEVICE TRIM	MKS-08-R-S		626	TOW
1	EA	RIM OR MORTISE CYLINDER	AS REQUIRED		626	BES
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
1	EA	SURFACE CLOSER	TDC40 EDA		689	TOW
1	EA	KICK PLATE	K1050 10"		US32D	ROC
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	GASKETING	W-66		BK	KNC

Hardware Group No. 12

For use on Door #(s):
184-3 184-4

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	4B81 4.5" NRP		US26D	PBB
1	EA	MANUAL FLUSH BOLT	FB458		626	IVE
1	EA	CLASSROOM LOCK	CEI-84-S		626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
2	EA	WALL STOP/HOLDER	FS495		626	IVE
2	EA	SILENCER	SR64		GRY	IVE

MOUNT FLUSH BLT TOP ONLY, INACTIVE LEAF.

Hardware Group No. 13

For use on Door #(s):
184A-3

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	4B81 4.5" NRP		US26D	PBB
2	EA	FIRE EXIT DEVICE	EF1200 LBR		630	TOW
1	EA	EVIT DEVICE TRIM	MKS-08-R-S		626	TOW
1	EA	RIM OR MORTISE CYLINDER	AS REQUIRED		626	BES
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
2	EA	SURFACE CLOSER	TDC40 EDA		689	TOW
2	EA	KICK PLATE	K1050 10"		US32D	ROC
2	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	GASKETING	W-66		BK	KNC

Hardware Group No. 14

For use on Door #(s):
1

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	4B81 4.5"		US26D	PBB
1	EA	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	CLASSROOM LOCK	CEI-84-S		626	TOW
1	EA	SFIC PERMANENT CORE	BY OWNER		626	BES
1	EA	COORDINATOR	COR7G		626	IVE
2	EA	OH STOP	90S		630	GLY
2	EA	SURFACE CLOSER	TDC40		689	TOW
2	EA	KICK PLATE	K1050 10"		US32D	ROC
1	EA	GASKETING	W-66		BK	KNC

Hardware Group No. 15

For use on Door #(s):
42-1 42-2

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONTINUOUS HINGE	SL11 HD			628	SEL
1	EA	EXIT DEVICE	ED1100 CD			630	TOW
2	EA	RIM OR MORTISE CYLINDER	AS REQUIRED			626	BES
2	EA	SFIC PERMANENT CORE	BY OWNER			626	BES
1	EA	ELECTRIC STRIKE	9600 LBM			630	HES
1	EA	90 DEG OFFSET PULL	8190EZHD 10" STD			630-316	IVE
1	EA	SURFACE CLOSER	TDC40 SCUSH			689	TOW
1	EA	BLADE STOP SPACER	TDC BLADE-40			689	TOW
1	EA	CUSH SHOE SUPPORT	TDC CUSH-SUPPORT			689	TOW
1	EA	INTEGRAL GASKETING	BY DOOR AND FRAME MFR.				
1	EA	SWEEP	W-35-1			CLR	KNC
1	EA	THRESHOLD	CT-45			MIL	KNC
1	EA	CARD READER	BY SECURITY CONTRACTOR				
1	EA	DOOR CONTACT	BY SECURITY CONTRACTOR			BLK	
1	EA	SMART PAC III	2005M3				HES
1	EA	REQUEST TO EXIT	BY SECURITY CONTRACTOR				
1	EA	POWER SUPPLY	BY SECURITY CONTRACTOR				

END OF SECTION 087100

SECTION 088000
GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulating glass units.

B. Glazing units.

C. Metal Insulated Panels.

D. Privacy Film

E. Glazing compounds.

1.02 RELATED REQUIREMENTS

A. Section 081113 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.

B. Section 081416 - Flush Wood Doors: Glazed lites in doors.

C. Section 085113 - Aluminum Windows: Glazing provided by window manufacturer.

D. Section 088813 - Fire-Rated Glazing.

1.03 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.

B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).

C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

D. ASTM C1036 - Standard Specification for Flat Glass; 2021.

E. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.

F. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

G. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.

H. GANA (SM) - GANA Sealant Manual; 2008.

I. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.

J. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data on Glazing Units: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.

C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.

D. Samples: Submit two samples 4-inch x 4-inch in size of glass units.

E. Manufacturer's qualification statement.

F. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
   1. Provide certified glass products through ANSI accredited certifications that include plant audits and independent laboratory performance testing.
      a. Safety Glazing Certification Council (SGCC).

1.06 FIELD CONDITIONS

A. Do not install glazing when ambient temperature is less than 40 degrees F.

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.07 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

C. Heat Soaked Tempered Glass: Provide a five (5) year manufacturer warranty to include coverage for spontaneous breakage of fully tempered glass caused by nickel sulfide (NiS) inclusions.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Glass Manufacturers:
   1. Cardinal Glass Industries: www.cardinalcorp.com/#sle.
   2. Guardian Glass, LLC: www.guardianglass.com/#sle.
   3. Pilkington North America Inc: www.pilkington.com/na/#sle.
   4. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle.

B. Fabricator: Certified by glass manufacturer for type of glass, coating, and treatment involved and capable of providing specified warranty.

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.

B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.

C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
   1. Center of Glass U-Value: Comply at minimum with U-value indicated in Building Codes of NYS (Table C402.5).
      a. Climate Zone 5, Maximum U value:
         1) Fixed Fenestration: .34
         2) Operable Fenestration: .43
         3) Entrance Doors: .63

2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
    a. Comply with SHGC requirements indicated in Building Codes of NYS (Table C402)
        1) Climate Zone 5, PF<0.2: .33

2.03 GLASS MATERIALS

A. Float Glass: Provide float glass based glazing unless otherwise indicated.
    1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
    2. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.
    3. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
    4. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.
    5. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

2.04 INSULATING GLASS UNITS

A. Insulating Glass Units: Types as indicated.
    1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
    2. Metal-Edge Spacers: Aluminum, bent and soldered corners.
    3. Spacer Color: Grey.
    4. Edge Seal:
        a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
        b. Color: Grey.
    5. Purge interpane space with dry air, hermetically sealed.

B. Type IG-1 - Insulating Glass Units: Vision glass, double glazed.
    1. Applications: Exterior glazing unless otherwise indicated.
    2. Space between lites filled with air.
    3. Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
        a. Tint: Clear.
        b. Coating: Low-E (passive type), on #2 surface.
    4. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
        a. Tint: Clear.
    5. Total Thickness: 1 inch.
    6. Thermal Transmittance (U-Value): Comply with Building Code.

2.05 METAL PANELS

A. PANELS – LAMINATED
    1. Laminated metal faced Mapes-R panels as manufactured by Mapes Industries, Inc.
    2. Acceptable alternatives: Panels having similar composite construction and finish providing manufacturer has a minimum of 25 years panel laminating experience and comparable published warranties.

B. FINISH
    1. Exterior: Standard Kynar
    2. Interior: Standard KynarColor: As selected by Architect from Manufacturer's full range. PANEL FRABRICATIONExterior Substrate: Tempered HardboardCore: PolystyreneInterior Substrate: Tempered HardboardTolerances - .8% of panels dimension

length and width - (+/-) 1/16" thicknessPanel Thickness - 1"R-Value - 4.68U-Value - 0.21 ACCESSORIESRecommended for use as an infill panel component in window and curtain wall systems. Related material to complete installation as recommended by the manufacturer.Seals against moisture intrusion as recommended by the manufacturer. Polyurethane and silicone-based sealant with a 20-year life are recommended.

3. Color: As selected by Architect from Manufacturer's full range.

C. PANEL FRABRICATION
1. Exterior Substrate: Tempered Hardboard
2. Core: Polystyrene
3. Interior Substrate: Tempered Hardboard
4. Tolerances - .8% of panels dimension length and width - (+/-) 1/16" thickness
5. Panel Thickness - 1"
6. R-Value - 4.68
7. U-Value - 0.21

D. ACCESSORIES
1. Recommended for use as an infill panel component in window and curtain wall systems. Related material to complete installation as recommended by the manufacturer.
2. Seals against moisture intrusion as recommended by the manufacturer. Polyurethane and silicone-based sealant with a 20-year life are recommended.

2.06 PLASTIC FILMS

A. PF-1 - Decorative Plastic Film: Polyester type.
1. Application: Locations as indicated on drawings.
2. Series Type: Frost/ Matte.
3. Color: Milky Milky.
4. Manufacturers:
a. 3M; Fasara Glass Finishes: www.3m.com/#sle (Basis of Design)
b. Substitutions: See Section 016000 - Product Requirements.

2.07 GLAZING COMPOUNDS

A. Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; nonbleeding, nonstaining; ASTM C920 Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; _____ color.

B. Manufacturers:
1. Bostik Inc: www.bostik-us.com/#sle.
2. Dow Corning Corporation: www.dowcorning.com/construction/#sle.
3. Pecora Corporation: www.pecora.com/#sle.
4. Tremco Commercial Sealants & Waterproofing; Proglaze SSG: www.tremcosealants.com/#sle.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

C. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

A. Erect panels plumb, level and true.

B. Glaze panels securely and in accordance with approved shop drawings and manufacturer’s instructions to allow for necessary thermal movement and structural support.

C. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

D. Separate dissimilar metals using gasketed fasteners and blocking to eliminate the possibility of electrolytic reaction.

3.04 CLEANING

A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

B. Remove nonpermanent labels immediately after glazing installation is complete.

C. Clean glass and adjacent surfaces after sealants are fully cured.

D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.05 SCHEDULES

A. Refer to Drawings.

END OF SECTION 088000

This page intentionally left blank

SECTION 088813
FIRE-RATED GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire-rated glazing units.

1.02 RELATED REQUIREMENTS

A. Section 081113 - Hollow Metal Doors and Frames: Glazed lites in doors, borrowed lites, and transoms.

1.03 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.

B. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

C. GANA (SM) - GANA Sealant Manual; 2008.

D. ITS (DIR) - Directory of Listed Products; current edition.

E. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data on Glazing Unit Glazing Types: Provide structural, physical, and environmental characteristics, size limitations, special handling and installation requirements.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Fire-Resistance-Rated Glass:
   1. Fabricators:
      a. GGI - General Glass International: www.generalglass.com/#sle.
      b. McGrory Glass, Inc: www.mcgrory.com/#sle.
   2. Manufacturers:
      a. SAFTIFIRST, a division of O'Keeffe's Inc; SuperLite II-XL: www.safti.com/#sle.
      b. Technical Glass Products; Pilkington Pyrostop: www.fireglass.com/#sle.
      c. Vetrotech North America; Contraflam 60: www.vetrotechusa.com/#sle.

2.02 GLAZING UNITS

A. Type FR-1 - Fire-Resistance-Rated Glazing: Type, thickness, and configuration of glazing that contains flames, smoke, and blocks radiant heat, as required to achieve indicated fire rating period exceeding 45 minutes.
   1. Applications:
      a. Glazing in fire-rated door assembly.
   2. Provide products listed by ITS (DIR) or UL (DIR) and approved by authorities having jurisdiction.
   3. Safety Glazing Certification: 16 CFR 1201 Category II.
   4. Fire Rating Period: As indicated in Door Schedule on Drawings.

5. Compliance: ASTM E119 or UL 263.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers unless more stringent requirements are indicated, including those in referenced glazing standards.

B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

F. Prevent glass from contact with contaminating substances that may result from construction operations including, but not limited to weld spatter, fire-safing, plastering, mortar droppings, etc.

3.02 CLEANING

A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

B. Remove nonpermanent labels immediately after glazing installation is complete.

C. Clean glass and adjacent surfaces after sealants are fully cured.

D. Clean glass on both exposed surfaces not more than four days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.03 SCHEDULES

A. Refer to Door Schedule and Schedules on Drawings.

END OF SECTION 088813

SECTION 090160
MAINTENANCE OF WOOD ATHLETIC FLOORING

PART 1 GENERAL

1.01 SUMMARY

A. This Section includes the following:
   1. Refinishing Maple, strip flooring.

1.02 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data: For each type of product indicated.

C. Samples for Initial Selection: Manufacturer's color charts showing colors and glosses available for the following:
   1. Clear Sealer.
   2. Tinted Sealer.
   3. Game-line and marker paint.

D. Shop Drawing: Staining and striping plan.

E. Samples for Verification: For each type of wood flooring, game-line and marker paint, finish, and accessory required; approximately 12 inches long and of same thickness and material indicated for the Work. Include sample sets showing the full range of normal color and texture variations expected.

F. Manufacturer’s Literature:
   1. Installation recommendations including sanding and finishing.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: An experienced wood flooring refinisher who has completed projects similar in material, design, and extent to that indicated for this Project and whose work has resulted in a record of successful in-service performance.

B. Maple Flooring: Comply with MFMA, Industry Recommendations for Sanding, Sealing, Court Lining, Finishing and Resurfacing of Maple Gym Floors.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
   1. Product name or title of material.
   2. Product description (generic classification or binder type).
   3. Manufacturer's stock number and date of manufacture.
   4. Contents by volume, for pigment and vehicle constituents.
   5. Thinning instructions.
   6. Application instructions.
   7. Color name and number.
   8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.05 PROJECT CONDITIONS

A. Conditioning: Avoid air currents that carry dust and dirt. Indoor temperatures and all sealers, paints and finishes should be approximately 65 degrees Fahrenheit or higher during application. Allow adequate ventilation for proper drying. Maintain normal humidity conditions inside the facility to avoid blistering, flaking and abnormally long drying and cure times.
   1. Close spaces to traffic during flooring installation and for time period after installation recommended in writing by flooring and finish manufacturer, but not less than 10 days.

1.06 GUARANTEE

A. Approved wood floor finish installer shall issue written warranty against faulty materials and workmanship for a period of two (2) years from date of issuance of the Certificate of Substantial Completion.

1.07 MAINTENANCE INSTRUCTIONS

A. Upon completion of installation, wood floor system manufacturer shall provide Owner with care and maintenance instructions.

1.08 COORDINATION WITH OTHER TRADES

A. Coordinate with all other trades for items to be removed prior to gym floor refinishing that will be reinstalled after completion of gym floor refinishing.

PART 2 PRODUCTS

2.01 FINISHING MATERIALS

A. Wood Floor Finish System; Basis-Of-Design: Sealers and paints as manufactured by Poloplaz or equivalent.
   1. Cleaning Solvent: as recommended by floor finish manufacturer.
   2. Sealer: Basis of design: Poloplaz Low VOC Sealer.
   3. Tinted Sealer: Basis of Design Poloplaz Low VOC Tinted Sealer.
      a. Color as indicated on Interior Finish Schedule
   4. Line Paint: Basis of Design: Poloplaz “Fastbreak” paints.
      a. Color as indicated on Interior Finish Schedule
   5. Finish Coats: Basis of Design: Poloplaz Low VOC “Magnum” finish.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with the Applicator present, under which refinishing will be performed for compliance with application requirements.

3.02 PREPARATION

A. Repair or replace any split boards or seriously damaged areas of the surface or subfloor.

B. Remove all layers of finish and game lines down to raw wood.
   1. Sand wood flooring using drum sander, edger, buffer and hand scraper as required.
   2. After sanding with drum sander, buff entire floor using 100 grit screenback or equal grit sandpaper, with a heavy-duty buffing machine.
   3. Vacuum floor before starting finishing operations.
   4. Floor shall present a smooth surface without drum stop marks, gouges, streaks or shiners.

C. After sanding, thoroughly vacuum the floor surface with a heavy-duty commercial type vacuum to remove sanding dust and grit prior to sealing and finishing.

3.03 FINISHING & PAINTING

A. Inspect entire area of floor to insure that surface is acceptable for finishing, completely free from sanding dust.

B. Seal flooring as soon as possible after final sanding is completed.

C. Tack rag with approved solvent to remove all dust, and allow floor to thoroughly dry after final tack ragging.
   1. Do not use steel wool if applying a water-based product.

D. Apply first coat of SEALER.

E. After first coat of sealer is thoroughly dry, abrade, vacuum and tack rag. Layout areas to be stained and apply one coat of TINTED SEALER.

F. After coat of tinted sealer is thoroughly dry, abrade, vacuum and tack rag. Apply second coat of SEALER to entire floor including tinted areas.
   1. Do not use steel wool if applying a water-based product.

G. After second coat of sealer is thoroughly dry, abrade, vacuum and tack rag. Layout and PAINT game lines and scheduled painted areas.
   1. When using masking tape, pull it up as soon as the paint begins to dry or set.
   2. After the game markings have thoroughly dried, lightly abrade using steel wool or a pad recommended by the finish manufacturer.
   3. Vacuum and tack rag the entire floor surface.

H. Apply first coat of FINISH.

I. After first coat of finish is thoroughly dry, abrade, vacuum and tack rag. Apply final coat of FINISH.

J. After final finish coat is thoroughly dry, take necessary precautions to protect floor from damage caused by traffic of any type or from any other source.

3.04 PROTECTION

A. Protect wood flooring during remainder of construction period to allow finish to cure and to ensure that flooring and finish are without damage or deterioration at time of Substantial Completion.

END OF SECTION 090160

This page intentionally left blank

SECTION 090561
COMMON WORK RESULTS FOR FLOORING PREPARATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
   1. Resilient tile.
   2. Broadloom carpet.
   3. Porcelain and ceramic tile.
   4. Concrete Coatings

B. Removal of existing floor coverings.

C. Preparation of new and existing concrete floor slabs for installation of floor coverings.

D. Testing of concrete floor slabs for moisture and alkalinity (pH).

E. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
   1. Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is indicated by testing agency's report and is due to a condition not under Contractor's control or could not have been predicted by examination prior to entering into the contract, a contract modification will be issued.

F. Patching compound.

G. Remedial floor coatings.

H. Remedial floor treatment.

1.02 RELATED REQUIREMENTS

A. Section 012200 - Unit Prices: Bid pricing for remediation treatments if required.

B. Section 014000 - Quality Requirements: Additional requirements relating to testing agencies and testing.

C. Section 033000 - Cast-in-Place Concrete: Moisture emission reducing curing and sealing compound for slabs to receive adhered flooring, to prevent moisture content-related flooring failures; to remain in place, not to be removed.

D. Section 033000 - Cast-in-Place Concrete: Concrete admixture for slabs to receive adhered flooring, to prevent moisture content-related flooring failures.

E. Section 033000 - Cast-in-Place Concrete: Limitations on curing requirements for new concrete floor slabs.

1.03 PRICE AND PAYMENT PROCEDURES

A. Unit Prices: See Section 012200 - DO NOT USE BSD Unit Prices.

1.04 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2026.

B. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020.

C. ASTM D4259 - Standard Practice for Preparation of Concrete by Abrasion Prior to Coating Application; 2024.

D. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

E. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

F. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.

G. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.05 ADMINISTRATIVE REQUIREMENTS

A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

1.06 SUBMITTALS

A. Visual Observation Report: For existing floor coverings to be removed.

B. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
   1. Moisture and alkalinity (pH) limits and test methods.
   2. Manufacturer's required bond/compatibility test procedure.

C. Remedial Materials Product Data: Manufacturer's published data on each product to be used for remediation.
   1. Manufacturer's qualification statement.
   2. Test reports indicating compliance with specified performance requirements, performed by nationally recognized independent testing agency.
   3. Manufacturer's installation instructions.
   4. Specimen Warranty: Copy of warranty to be issued by coating manufacturer and certificate of underwriter's coverage of warranty.

D. Testing Agency's Report:
   1. Description of areas tested; include floor plans and photographs if helpful.
   2. Summary of conditions encountered.
   3. Moisture and alkalinity (pH) test reports.
   4. Copies of specified test methods.
   5. Recommendations for remediation of unsatisfactory surfaces.
   6. Product data for recommended remedial coating.
   7. Submit report to Architect.
   8. Submit report not more than two business days after conclusion of testing.

E. Adhesive Bond and Compatibility Test Report.

F. Floor Moisture Testing Technician Certificate: International Concrete Repair Institute (ICRI) Concrete Slab Moisture Testing Technician- Grade I certificate.

G. Copy of RFCI (RWP).

1.07 QUALITY ASSURANCE

A. Moisture and alkalinity (pH) testing shall be performed by an independent testing agency employed and paid by Contractor.

B. Contractor may perform adhesive and bond test with Contractor's own personnel or hire a testing agency.

C. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified.
   1. Submit evidence of experience consisting of at least 3 test reports of the type required, with project Owner's project contact information.

D. Contractor's Responsibility Relating to Independent Agency Testing:
   1. Provide access for and cooperate with testing agency.
   2. Confirm date of start of testing at least 10 days prior to actual start.
   3. Allow at least 4 business days on site for testing agency activities.
   4. Achieve and maintain specified ambient conditions.
   5. Notify Architect when specified ambient conditions have been achieved and when testing will start.

E. Floor Moisture Testing Technician Qualifications: International Concrete Repair Institute (ICRI) Concrete Slab Moisture Testing Technician Certification- Grade I.

F. Remedial Coating Installer Qualifications: Company specializing in performing work of the type specified in this section, trained by or employed by coating manufacturer, and able to provide at least 3 project references showing at least 3 years' experience installing moisture emission coatings.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, handle, and protect products in accordance with manufacturer’s instructions and recommendations.

B. Deliver materials in manufacturer’s packaging; include installation instructions.

C. Keep materials from freezing.

1.09 FIELD CONDITIONS

A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F or more than 85 degrees F.

B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

PART 2 PRODUCTS

2.01 MATERIALS

A. Source Limitations: Obtain specified products from single source and from single manufacturer.

B. The manufacturer and model number(s) or series listed below are Basis-of-Design
   1. Subject to complaince with requirements of product identified as basis-of-design, other manufacturers shall be considered for bidding as an equivalent when the bidder provides a writen request for equivalency to the Architect prior to bidding.

C. Follow all instructions as indicated in Section 012519 - Equivalent Procedures.

D. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:

1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
2. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, ehichever is appropriate.
3. Products:
   a. ARDEX Engineered Cements; ARDEX Feather Finish: www.ardexamericas.com/#sle.
   b. LATICRETE International, Inc; SKIM LITE: www.laticrete.com/#sle.
   c. CMP: Level-1, Self Leveling Underlayment: www.cmpsp.com/#sle..
   d. Substitutions: See Section 016000 - Product Requirements.

E. Remedial Floor Coating: Single or multi-layer coating or coating/overlay combination intended by its manufacturer to resist water, vapor transmission to degree sufficient to meet flooring manufacturer's emission limits, resistant to the level of alkalinity (pH) found, and suitable for adhesion of flooring without further treament.
   1. Thickness: As required for application and in accordance with manufacturer's installation instructions
   2. Products:
      a. ARDEX Engineered Cements; ARDEX MC RAPID: www.ardexamericas.com/#sle
      b. LATICRETE International, Inc; LATICRETE NXT Vapor Reduction Coating with LATICRETE NXT Level Plus: www.laticrete.com/#sle.
      c. CMP; LockDown EVB, Moisture Vapor Barrier Coating: www.smpsp.com/#sle.
      d. Substitutions: See Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

A. Follow recommendations of testing agency.

B. Perform following operations in the order indicated:
   1. Existing concrete slabs (on-grade and elevated) with floor coverings:
      a. Visual observation of existing floor covering, for adhesion, water damage, alkaline deposits, and other defects.
      b. Removal of existing floor covering.
   2. Existing and new concrete slabs (on-grade and elevated):
      a. Preliminary cleaning.
      b. Moisture vapor emission tests; 3 tests in the first 1000 square feet and one test in each additional 1000 square feet, unless otherwise indicated or required by flooring manufacturer.
      c. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
      d. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
      e. Specified remediation, if required.
      f. Patching, smoothing, and leveling, as required.
      g. Other preparation specified.
      h. Adhesive bond and compatibility test.
      i. Protection.

C. Remediations:
   1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; re-test after correction.
   2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating or remedial sheet membrane over entire suspect floor area.
   3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.

3.02 REMOVAL OF EXISTING FLOOR COVERINGS

A. Comply with local, State, and federal regulations and recommendations of RFCI (RWP), as applicable to floor covering being removed.

B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

C. Comply with Asbestos Removal Specification Section 028200.

3.03 PRELIMINARY CLEANING

A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.

B. Do not use solvents or other chemicals for cleaning.

3.04 MOISTURE VAPOR EMISSION TESTING

A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.

B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.

C. Test in accordance with ASTM F1869 and as follows.

D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.

E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet per 24 hours.

F. Report: Report the information required by the test method.

3.05 ALKALINITY TESTING

A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.

B. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.06 PREPARATION

A. See individual floor covering section(s) for additional requirements.

B. Comply with recommendations of testing agency.

C. Comply with requirements and recommendations of floor covering manufacturer.

D. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.

E. Do not fill expansion joints, isolation joints, or other moving joints.

3.07 ADHESIVE BOND AND COMPATIBILITY TESTING

A. Comply with requirements and recommendations of floor covering manufacturer.

3.08 APPLICATION OF REMEDIAL FLOOR COATING

A. Comply with requirements and recommendations of coating manufacturer.

3.09 APPLICATION OF REMEDIAL FLOOR TREATMENT

A. Comply with requirements and recommendations of treatment manufacturer.

3.10 PROTECTION

A. Cover prepared floors with building paper or other durable covering.

END OF SECTION 090561

SECTION 092116
GYPSUM BOARD ASSEMBLIES - USG

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Metal stud wall framing.

B. Metal grid or channel ceiling framing.

C. Gypsum wallboard.

D. Gypsum sheathing.

E. Cementitious backing board.

F. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 054000 - Cold-Formed Metal Framing: Structural steel stud framing.

C. Section 072500 - Weather Barriers: Water-resistive barrier over sheathing.

1.03 REFERENCE STANDARDS

A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2022).

B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.

C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.

D. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2025.

E. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).

F. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2024.

G. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.

H. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2025.

I. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.

J. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.

K. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.

L. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2024.

M. ASTM C1280 - Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing; 2025.

N. ASTM C1288 - Standard Specification for Fiber-Cement Interior Substrate Sheets; 2023.

O. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2024.

P. ASTM C1629/C1629M - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels; 2024.

Q. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.

R. ASTM E2178 - Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials; 2021a.

S. ASTM E2357 - Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies; 2025.

T. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).

U. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.

V. GA-226 - Application of Gypsum Board to Form Curved Surfaces; 2025.

W. GA-600 - Fire Resistance and Sound Control Design Manual; 2024.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data: Include data on metal framing, gypsum board, glass mat faced gypsum board, sheathing, accessories, and joint finishing system.

C. Product Data: Include manufacturer's data on partition head to structure connectors, showing compliance with requirements.

D. Test Reports: For stud framing products that do not comply with ASTM C645 or ASTM C754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 METAL FRAMING MATERIALS

A. Manufacturers - Metal Framing, Connectors, and Accessories:
   1. ClarkDietrich; ____: www.clarkdietrich.com/#sle.
   2. Marino; ____: www.marinoware.com/#sle.
   3. Substitutions: See Section 016000 - Product Requirements.

B. Structural Steel Framing for Application of Gypsum Board: See Section 054000.

C. Non-structural Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.
   1. Studs: "C" shaped with knurled or embossed faces.
   2. Runners: U shaped, sized to match studs.
   3. Furring Members: Hat-shaped sections, minimum depth of 7/8 inch.
   4. Resilient Furring Channels: Single leg configuration; 1/2 inch channel depth.

D. Shaft Wall Studs and Accessories: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 and specified performance requirements.
   1. Products:
      a. Same manufacturer as other framing materials.

E. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws, and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
   1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
   2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.
   3. Provide components UL-listed for use in UL-listed fire-resistance-rated head of partition joint systems indicated on drawings.

F. Non-structural Framing Accessories:
   1. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
   2. Partial Height Wall Framing Support: Provides stud reinforcement and anchored connection to floor.
      a. Materials: ASTM A36/A36M formed sheet steel support member with factory-welded ASTM A1003/A1003M steel plate base.
      b. Height: 35-3/4 inches.
   3. Framing Connectors: ASTM A653/A653M G90 galvanized steel clips; secures cold rolled channel to wall studs for lateral bracing.
      a. Products:

G. Direct Suspension Systems: G40 galvanized steel grid system of main and cross tees, suspended from structure above.
   1. Products:
      a. USG Corporation; DGLW Drywall Suspension System - Flat Ceilings: www.usg.com/#sle.

2.03 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:
   1. USG Corporation: www.usg.com/#sle.
   2. Georgia-Pacific Gypsum; ____: www.gpgypsum.com/#sle.
   3. National Gypsum Company: www.nationalgypsum.com/#sle.

B. Gypsum Board: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
   2. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
   3. Thickness:
      a. Vertical Surfaces: As indicated on drawings.
      b. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
   4. Moisture- and Mold-Resistant Paper-Faced Board Products:

C. Impact-Resistant Wallboard:
   1. Application: High-traffic areas indicated.
   2. Surface Abrasion: Level 3, minimum, when tested in accordance with ASTM C1629/C1629M.

3. Indentation: Level 2, minimum, when tested in accordance with ASTM C1629/C1629M.
4. Hard Body Impact: Level 3, minimum, when tested in accordance with ASTM C1629/C1629M.
5. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
6. Edges: Tapered.

D. Backing Board For Wet Areas:
1. Application: Surfaces behind tile in wet areas including tub and shower surrounds, shower ceilings, and Janitors Closets.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
3. ASTM Cement-Based Board: Non-gypsum-based, cementitious board complying with ASTM C1288, suitable for decoration using paint, wallpaper, natural stone, tile, or resilient flooring in internal wet and dry areas.
   a. Thickness: 1/2 inch.

E. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Ceilings, unless otherwise indicated.
2. Thickness: 1/2 inch.
3. Edges: Tapered.

F. Exterior Sheathing Board: Sizes to minimize joints in place; ends square cut.
1. Application: Exterior sheathing, unless otherwise indicated.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
3. Fungal Resistance: No fungal growth when tested in accordance with ASTM G21.
4. Glass Mat Faced Sheathing: Glass mat faced gypsum substrate as defined in ASTM C1177/C1177M.
5. Boards with Air and Water Barrier Coating:
   a. Type: Manufacturer's standard coating factory-applied at minimum 0.020 inch dry-film thickness.
   b. Air Permeance: Meet or exceed requirements of .
      1) Acceptable Test Results: 0.004 cfm/sq ft of surface area at 1.57 lbf/sq ft, maximum.
   c. Sheathing Assembly Air Leakage: Meet or exceed requirements of .
      1) Acceptable Test Results: 0.04 cfm/sq ft of surface area at 1.57 lbf/sq ft, maximum.
6. Core Type: Regular and Type X, as indicated.
7. Edges: Square.
8. Glass-Mat-Faced Products:
   a. USG Corporation; USG Securock Brand Glass-Mat Sheathing Regular 5/8 inch: www.usg.com/#sle.
   b. Substitutions: Not permitted.

G. Shaftwall and Coreboard: Type X; 1 inch thick by 24 inches wide, beveled long edges, ends square cut.
1. Paper-Faced Type: Gypsum shaftliner board or gypsum coreboard as defined ASTM C1396/C1396M; water-resistant faces.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
3. Paper-Faced Products:

a. USG Corporation; USG Sheetrock Brand Gypsum Liner Panels 1 inch. SLX: www.usg.com/#sle.
b. USG Corporation; USG Sheetrock Brand Mold Tough Gypsum Liner Panels 1 inch. SLX: www.usg.com/#sle.

4. Framing: Gypsum Liner Panels attach to metal; CH studs. Refer to product data sheet for additional information.
   a. Same manufacturer as other framing materials.

2.04 GYPSUM WALLBOARD ACCESSORIES

A. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.

B. Water-Resistive Barrier: See Section 072500.

C. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless otherwise indicated.
   1. Types: As detailed or required for finished appearance.
   2. Special Shapes: In addition to conventional corner bead and control joints, provide L-bead at exposed panel edges.

D. Beads, Joint Accessories, and Other Trim: ASTM C1047, galvanized steel or rolled zinc, unless otherwise indicated.
   1. Corner Beads: Low profile, for 90 degree outside corners.
   2. Expansion Joints:
      a. Type: V-shaped metal with factory-installed protective tape.

E. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
   1. Paper Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
   2. Joint Compound: Setting type, field-mixed.

F. Finishing Compound: Surface coat and primer, takes the place of skim coating.

G. High Build Drywall Surfacer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.

H. Drywall Ceiling Installation Accessories: Products recommended by gypsum board manufacturer.

I. Fasteners and Adhesives: Products recommended by gypsum board manufacturer.
   1. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
   2. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant.

J. Air-and-Water Barrier-Faced Sheathing System Accessories: Products recommended by sheathing manufacturer.
   1. Detailing Sealant: High-performance, medium-modulus, low-VOC, UV stable, non-sag polyurethane sealant.
   2. Transition Membrane Adhesive: Ultra-low modulus, high-performance, one-part moisture curing silicone joint sealant.
   3. Transition Membrane: Flat, single-ribbed, pre-engineered silicone extrusion.

4. Impermeable Membrane: 0.022 inch thick, composite self-adhered sheet comprised of butyl and high-density polypropylene facer layers.
5. Reinforcing Mesh: Manufacturer's standard, designed for full embedment in fluid-applied air-barrier membrane.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.

B. Suspended Ceilings and Soffits: Space framing and furring members at 16 inches on center.
   1. Level ceiling system to a tolerance of 1/1200.
   2. Laterally brace entire suspension system.
   3. Install bracing as required at exterior locations to resist wind uplift.

C. Studs: Space studs as indicated.
   1. Extend partition framing to structure where indicated and to ceiling in other locations.
   2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
   3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.

D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

E. Standard Wall Furring: Install at _____ walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.
   1. Orientation: Horizontal.
   2. Spacing: As indicated.

F. Acoustic Furring: Install resilient channels at maximum 24 inches on center. Locate joints over framing members.

G. Resilient Sound Isolation Clips: Install resilient sound isolation clips, and where applicable, associated furring sections and channels, in accordance with clip manufacturer's written instructions.

H. Furring for Fire-Resistance Ratings: Install as required for fire-resistance ratings indicated and to GA-600 requirements.

I. Blocking: Install mechanically fastened steel sheet blocking for support of:
   1. Wall-mounted cabinets.
   2. Plumbing fixtures.
   3. Toilet partitions.
   4. Toilet accessories.
   5. Wall-mounted door hardware.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
   1. Place continuous bead at perimeter of each layer of gypsum board.
   2. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.04 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.

D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

E. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.

F. Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of nonrated double-layer assemblies, which may be installed by means of adhesive lamination.

G. Curved Surfaces: Apply gypsum board to curved substrates in accordance with GA-226.

3.05 SHAFT WALL INSTALLATION

A. Shaft Wall Framing: Install in accordance with manufacturer's installation instructions.
   1. Install studs at spacing required to meet performance requirements.

B. Shaft Wall Liner: Cut panels to accurate dimensions and install sequentially between special friction studs.
   1. On walls over sixteen feet high, screw-attach studs to runners top and bottom.

3.06 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
   1. Not more than 30 feet apart on walls and ceilings over 50 feet long.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.07 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.
   2. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   3. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
   4. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.

C. _____ apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

D. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

3.08 SHEATHING INSTALLATION

A. Wall Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.
   1. At wall assemblies designed to achieve a fire-resistance rating install sheathing in accordance with reports of fire resistance tests, engineering evaluations, or listings from recognized fire-resistance laboratories.
   2. At wall assemblies designed to achieve specified sound transmission loss performance install sheathing in accordance with acoustical test report of an assembly that has met these requirements.
   3. Metal Framing Application: Install wall sheathing with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using self-tapping screws.

3.09 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION 092116

SECTION 093000
TILING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Tile for floor applications.

B. Ceramic accessories.

C. Ceramic trim.

D. Non-ceramic trim.

1.02 RELATED REQUIREMENTS

A. Section 071400 - Fluid-Applied Waterproofing.

B. Section 079200 - Joint Sealants: Sealing joints between tile work and adjacent construction and fixtures.

C. Section 079513 - Expansion Joint Cover Assemblies: Expansion joint components.

D. Section 090561 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

1.03 REFERENCE STANDARDS

A. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2023.

B. ANSI A108.1b - Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set, Modified Dry-Set, or Improved Modified Dry-Set Cement Mortar; 2023.

C. ANSI A108.1c - Contractor's Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set, Modified Dry-Set, or Improved Modified Dry-Set Cement Mortar; 2023.

D. ANSI A108.2 - American National Standard General Requirements: Materials, Environmental and Workmanship; 2019.

E. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesive or Water Cleanable Tile-Setting Epoxy Adhesive; 2023.

F. ANSI A108.5 - Setting of Ceramic Tile with Dry-Set Cement Mortar, Modified Dry-Set Cement Mortar, EGP (Exterior Glue Plywood) Modified Dry-Set Cement Mortar, or Improved Modified Dry-Set Cement Mortar; 2023.

G. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grout Epoxy; 2023.

H. ANSI A108.8 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (Reaffirmed 2024).

I. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 2023.

J. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 2017 (Reaffirmed 2022).

K. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2023.

L. ANSI A108.12 - Installation of Ceramic Tile with EGP (Exterior Glue Plywood) Modified Dry-Set Mortar; 2023.

M. ANSI A108.13 - American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2005 (Reaffirmed 2021).

N. ANSI A108.19 - American National Standard Specifications for Interior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs by the Thin-Bed Method Bonded with Modified Dry-Set Cement Mortar or Improved Modified Dry-Set Cement Mortar; 2020.

O. ANSI A108.20 - American National Standard Specifications for Exterior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs; 2020.

A. ANSI A108/A118/A136 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2024.

B. ANSI A118.3 - American National Standard Specifications for Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy and Water Cleanable Tile-Setting Epoxy Adhesive; 2021.

C. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2023.

D. ANSI A118.10 - American National Standard Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2023.

E. ANSI A118.12 - American National Standard Specifications for Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2014 (Reaffirmed 2024).

F. ANSI A137.1 - American National Standard Specifications for Ceramic Tile; 2022.

G. ASTM C373 - Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products; 2018 (Reapproved 2023).

H. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

I. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

J. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.

K. TCNA (HB-GP) - Handbook for Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs Installation; 2025-2026.

L. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2026.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

D. Samples: Provide two full-size samples for each tile, trim, and accessory for each color and finish required.

E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

F. Installer's Qualification Statement:
   1. Submit documentation of National Tile Contractors Association (NTCA) or Tile Contractors' Association of America (TCAA) accreditation.
   2. Submit documentation of completion of apprenticeship and certification programs.

G. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Tile: 5 percent of each size, color, and surface finish combination, but not less than one full box of each type.

1.05 QUALITY ASSURANCE

A. Maintain one copy of ANSI A108/A118/A136, TCNA (HB), and TCNA (HB-GP) on-site.

B. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum five years of documented experience.

C. Installer Qualifications:
   1. Company specializing in performing tile installation, with minimum of five years of documented experience.
      a. Accredited Five-Star member of the National Tile Contractors Association (NTCA) or Trowel of Excellence member of the Tile Contractors' Association of America (TCAA).

1.06 WARRANTY

A. See Section 017700 - Closeout Procedures, for additional warranty requ

B. Correct defective work within a [5-year] period after Date of Substantial Completetion.

C. Manufacturer's Warranty: Include coverage for degredation of color finish. Complete form in Owner's name and register with manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.08 FIELD CONDITIONS

A. Do not install solvent-based products in an unventilated environment.

B. Maintain ambient and substrate temperature above 50 degrees F and below 100 degrees F during installation and curing of setting materials.

PART 2 PRODUCTS

2.01 TILE

A. The manufacturer and model number(s) or series listed bleow are Basis-of-Design.
   1. Subject to compliance with requirements of product identified as basis-of-design, other manufacturers shall be considered for bidding as an equivalent when the bidder provides a written request for equivalency to the Architect prior to bidding.

B. Manufacturers: Provide **Basis-of-Design Product as listed on Interior Finish Schedule.**

C. Substitutions: See Section016000-Product Requirements.

D. Porcelain Tile, Type TF: ANSI A137.1 standard grade.

E. Moisture Absorption: < 0.20% percent as tested in accordance with ASTM C373.
   1. Size: As Indicated on Drawings
   2. Thickness: 5/16 inch.
   3. Edges: Square.
   4. Surface Finish: Unpolished with Cross-Sheen.
   5. Color(s): As indicated on drawings.
   6. Pattern: As indicated on drawings.
   7. Trim Units: Matching cove base shapes in sizes coordinated with field tile.
   8. Products: **Basis of Design:** Refer to I000 Finish Schedule

2.02 TRIM AND ACCESSORIES

A. Non-Ceramic Trim: Satin natural anodized extruded aluminum, style and dimensions to suit application, set with tile mortar or adhesive.
   1. Applications:
      a. Transition between floor finishes of different heights.
      b. Thresholds at door openings.
      c. Borders and other trim as indicated on drawings.
      d. Provide connectiors and 90 degree corner trim pieces as required for complete installation of non-ceramic trim system.
   2. Manufacturers: Provide **Basis-of-Design:** product as listed on Interior Finish Schedule or comparable product by one of the following:
      a. Profilitec: www.profilitec.com/#sle
      b. Kuberit USA: www.kuberitusa.com/#sle
      c. Schluter-Systems; Schiene: www.schluter.com/#sle.
      d. Substitutions: See Section 016000 - Product Requirements.

2.03 SETTING MATERIALS

A. Provide setting and grout materials from same manufacturer.

B. Manufacturers:
   1. Custom Building Products; _____: www.custombuildingproducts.com/#sle.
   2. Mapei Corporation; _____: www.mapei.com/#sle.
   3. LATICRETE International, Inc: www.laticrete.com/#sle.
   4. Substitutions: See Section 016000 - Product Requirements.

C. Epoxy Adhesive and Mortar Bond Coat: ANSI A118.3.
   1. Products:
      a. Custom Building Products; EBM-Lite Epoxy Bonding Mortar: www.custombuildingproducts.com/#sle.
      b. LATICRETE International, Inc; LATICRETE LATAPOXY 300 Adhesive: www.laticrete.com/#sle.
      c. Mapei Corporation; Kerapoxy 410: www.mapei.com/#sle.
      d. Substitutions: See Section 016000 - Product Requirements.

2.04 GROUTS

A. Provide setting and grout materials from same manufacturer.

B. Manufacturers: Provide **Basis-of-Design** Product as listed on Interior Finish Schedule or comparable product by one of the following:

1. Custom Building Products; _____: www.custombuildingproducts.com/#sle.
2. LATICRETE International, Inc; _____: www.laticrete.com/#sle.
3. Mapei Corporation; _____: www.mapei.com/#sle.
4. Substitutions: See Section 016000 - Product Requirements.

C. Epoxy Grout: ANSI A118.3 chemical resistant and water-cleanable epoxy grout.
1. Color(s): As indicated on drawings.
2. Products:
   a. Custom Building Products; CEG-IG 100% Solids Industrial Grade Epoxy Grout: www.custombuildingproducts.com/#sle.
   b. LATICRETE International, Inc; LATICRETE SPECTRALOCK PRO Premium Grout: www.laticrete.com/#sle.
   c. Mapei Corporation; Kerapoxy CQ: www.mapei.com/#sle.
   d. Substitutions: See Section 016000 - Product Requirements.

2.05 MAINTENANCE MATERIALS

A. Tile Sealant: Gunnable, silicone, siliconized acrylic, or urethane sealant; moisture and mildew resistant type.
1. Applications: Between tile and plumbing fixtures.
2. Color(s): As selected by Architect from manufacturer's full line.
3. Products:
   a. Substitutions: See Section016000-Product Requirements.
   b. LATICRETE International, Inc; LATICRETE LATASIL: www.laticrete.com/#sle.

B. Grout Sealer: Liquid-applied, moisture and stain protection for existing or new Portland cement grout.
1. Composition: Water-based colorless silicone.
2. Color(s): As selected by Architect from manufacturer's full line.
3. Products:
   a. Substitutions: See Section016000-Product Requirements.
   b. STONETECH, a Division of LATICRETE International, Inc; STONETECH Heavy Duty Grout Sealer: www.laticrete.com/#sle.

C. Tile Sealer: Stain protection for ceramic tile and natural stone tile.
1. Products:
   a. Substitutions: See Section016000-Product Requirements.
   b. STONETECH, a Division of LATICRETE International, Inc; STONETECH BulletProof Stone Sealer: www.laticrete.com/#sle.

2.06 ACCESSORY MATERIALS

A. Concrete Floor Slab Crack Isolation Membrane: Material complying with ANSI A118.12; not intended as waterproofing.
1. Crack Resistance: No failure at 1/8 inch gap, minimum.
2. Fluid or Trowel Applied Type:
   a. Material: Synthetic rubber or Acrylic.
   b. Thickness: 20 mils, maximum.
   c. Products:
      1) LATICRETE International, Inc; LATICRETE FRACTURE BAN SC: www.laticrete.com/#sle.
      2) Mapei Corporation; Mapelastic CI: www.mapei.com/#sle.

3) Substitutions: See Section 016000 - Product Requirements.

B. Waterproofing Membrane at Floors: Specifically designed for bonding to cementitious substrate under thick mortar bed or thin-set tile; complying with ANSI A118.10.
   1. Crack Resistance: No failure at 1/16 inch gap, minimum; comply with ANSI A118.12.
   2. Fluid or Trowel Applied Type:
      a. Material: Synthetic rubber.
      b. Thickness: 25 mils, minimum, dry film thickness.
      c. Products:
         1) LATICRETE International, Inc; LATICRETE HYDRO BAN: www.laticrete.com/#sle.
         2) Mapei Corporation; Mapelastic AquaDefense: www.mapei.com/#sle.
         3) Substitutions: See Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

C. Verify that subfloor surfaces are dust free and free of substances that could impair bonding of setting materials to subfloor surfaces.

D. Cementitious Subfloor Surfaces: Verify that substrates are ready for tiling installation by testing for moisture and alkalinity (pH).
   1. Test as Follows:
      a. Alkalinity (pH): ASTM F710.
      b. Internal Relative Humidity: ASTM F2170.
      c. Moisture Vapor Emission: ASTM F1869.
   2. Obtain instructions if test results are not within limits recommended by tiling material manufacturer and setting material manufacturer.

E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Protect surrounding work from damage.

B. Vacuum clean surfaces and damp clean.

C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

D. Install backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.

E. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

3.03 INSTALLATION - GENERAL

A. Install tile and thresholds and grout in accordance with applicable requirements of ANSI A108.1a through ANSI A108.20, manufacturer's instructions, and TCNA (HB) or TCNA (HB-GP) recommendations, as applicable.

B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.

D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.

E. Form internal angles square and external angles square.

F. Install ceramic accessories rigidly in prepared openings.

G. Install non-ceramic trim in accordance with manufacturer's instructions.

H. Sound tile after setting. Replace hollow sounding units.

I. Keep control and expansion joints free of mortar, grout, and adhesive.

J. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

K. Grout tile joints unless otherwise indicated.

L. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

3.04 INSTALLATION - FLOORS - THIN-SET METHODS

A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F113, dry-set or latex-Portland cement bond coat, with standard grout, unless otherwise indicated.
   1. Use uncoupling membrane under all tile unless other underlayment is indicated.
   2. Where waterproofing membrane is indicated, install in accordance with TCNA (HB) Method F122, with latex-Portland cement grout.
   3. Where epoxy bond coat and grout are indicated, install in accordance with TCNA (HB) Method F131.

B. Install tile-to-tile floor movement joints in accordance with TCNA (HB) Method EJ171F.

3.05 CLEANING

A. Clean tile and grout surfaces.

3.06 PROTECTION

A. Do not permit traffic over finished floor surface for 4 days after installation.

END OF SECTION 093000

This page intentionally left blank

SECTION 095100
ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Suspended metal grid ceiling system.

B. Acoustical units.

1.02 RELATED REQUIREMENTS

A. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions.

1.03 REFERENCE STANDARDS

A. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.

B. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.

C. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2023.

D. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.

E. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019 (Reapproved 2025).

F. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.

G. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

H. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2026.

I. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2024a.

J. ASTM E795 - Standard Practices for Mounting Test Specimens during Sound Absorption Tests; 2023.

K. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

L. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2024.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Do not install acoustical units until after interior wet work is dry.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on suspension system components and acoustical units.

C. Samples: Submit two samples 6 x 6 in size illustrating material and finish of acoustical units.

D. Samples: Submit two samples each of suspension system main runner, cross runner, and perimeter molding.

E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

F. Manufacturer's qualification statement.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.
   3. Extra Suspension System: 5 percent of each size, profile, and finish specified, but not less than one piece at manufacturer's full standa

1.06 QUALITY ASSURANCE

A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.07 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acoustical Tiles/Panels/Suspension Systems: Basis of Design: Refer to Interior Finish Schedule
   1. Manufacturers:
      a. Armstrong World Industries, Inc: www.armstrong.com.
      b. CertainTeed Corporation: www.certainteed.com.
      c. USG: www.usg.com.
      d. Substitutions: See Section016000-Product Requirements.

B. Suspension Systems: Same manufacturer as Acoustic Tiles/Panels.

2.02 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Rating: Determined in accordance with test procedures in ASTM E119.

2.03 ACOUSTICAL UNITS

A. Acoustical Tiles, Type ACT-1: Wet-formed mineral fiber withthe following characteristics:
   1. Classification: ASTM E1264 Type IV.
   2. Size: 24 by 48 inches.
   3. Thickness: 7/8 inch.
   4. Light Reflectance: 85 percent, determined in accordance with ASTM E1264.
   5. NRC Rating: .75 , determined in accordance with ASTM E1264.
   6. Articulation Class (AC): 170, determined in accordance with ASTM E1264.
   7. Ceiling Attenuation Class (CAC): 35, determined in accordance with ASTM E1264.
   8. Tile Edge: Square.
   9. Color: White.

10. Suspension System: Exposed grid.
11. Products: **Basis of Design; Refer to I000 Finish Schedule.**
    a. Substitutions: See Section 016000 - Product Requirements.

B. Acoustical Panels, Type ACT-2: Mineral fiber, with the following characteristics:
1. Classification: ASTM E1264 Type III.
2. Size: 24 by 48 inches.
3. Scrubbable Finish.
4. Thickness: 5/8 inch.
5. Light Reflectance: 89 percent, determined in accordance with ASTM E1264.
6. Ceiling Attenuation Class (CAC): 33, determined in accordance with ASTM E1264.
7. Panel Edge: Square.
8. Color: White.
9. Suspension System Type Exposed grid.
10. Products: Basis of Design; **Refer to I000 Finish Schedule.**

2.04 SUSPENSION SYSTEM(S)

A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
1. Basis of Design Products:
    a. Armstrong Prelude XL 15/16 inch grid system.
    b. USG Drywall Suspension System: DGLW424 4 foot cross tees & DGLW26 12 foot main tees.

B. Exposed Suspension System: Hot-dipped galvanized steel grid with steel cap.
1. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
2. Profile: Tee; 15/16 inch face width.
3. Finish: Baked enamel.
4. Color: White.
5. **Products: Basis of Design; Refer to I000 Finish Schedule.**
    a. Substitutions: See Section 016000 - Product Requirements.

2.05 ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application seismic requirements, and ceiling system flatness requirement specified.

B. Hanger Wire: 12 gauge, 0.08 inch (2 mm) galvanized steel wire.

C. Hold-Down Clips: Manufacturer's standard clips to suit application.

D. Face sleeve.

E. Perimeter Molding: Same metal and finish as grid.
1. Size: As required for installation conditions and specified Seismic Design Category
2. Angle Molding: L-shaped, for mounting at same elevation as face of grid.
3. Shadow Molding: Shaped to create a perimeter reveal.
4. Channel Molding: U-shaped, for hold-down type installations.
5. Acoustical Sealant For Perimeter Moldings: Non-hardening, non-skinning, for use in conjunction with suspended ceiling system.

F. Metal Edge Trim for Suspension Systems: Extruded aluminum; provide attachment clips, splice plates, and preformed corner pieces for complete trim system.
   1. Trim Height: 6 inches (152 mm).
   2. Finish: Baked enamel.
   3. Color: Refer to I000 Finish Schedule.
   4. Products: **Basis of Design; Refer to I000 Finish Schedule.**
      a. Substitutions: See Section 016000 - Product Requirements.

G. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

3.02 PREPARATION

A. Install after major above-ceiling work is complete.

B. Coordinate the location of hangers with other work.

3.03 INSTALLATION - SUSPENSION SYSTEM

A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

B. Locate system on room axis according to reflected plan.

C. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Use longest practical lengths.

D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

H. Do not eccentrically load system or induce rotation of runners.

I. Form expansion joints ____. Form to accommodate plus or minus 1 inch movement. Maintain visual closure.

3.04 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit border trim neatly against abutting surfaces.

D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

E. Cutting Acoustical Units:
   1. Make field cut edges of same profile as factory edges.

3.05 TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.06 CLEANING

A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

B. Clean surfaces.

C. Replace damaged or abraded components.

END OF SECTION 095100

This page intentionally left blank

SECTION 096500
RESILIENT FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Resilient tile flooring.

B. Resilient base.

C. Installation accessories.

1.02 RELATED REQUIREMENTS

A. Section 033000 - Cast-in-Place Concrete: Restrictions on curing compounds for concrete slabs and floors to receive adhesive-applied resilient flooring.

B. Section 090561 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

C. Section 090561 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

1.03 REFERENCE STANDARDS

A. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2025a.

B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

C. ASTM F970 - Standard Test Method for Measuring Recovery Properties of Floor Coverings after Static Loading; 2017.

D. ASTM F1861 - Standard Specification for Resilient Wall Base; 2016.

E. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

F. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.

G. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2023.

H. NSF 332 - Sustainability Assessment for Resilient Floor Coverings; 2015.

I. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Shop Drawings: Field verified shop drawings outlining layouts, patterns, and special conditions.

D. Verification Samples: Submit two samples, full size samples illustrating color and pattern for each resilient flooring and accessory product specified.

E. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.

F. Certification: Prior to installation of flooring, submit written certification by flooring manufacturer and adhesive manufacturer that condition of subfloor is acceptable.

G. Manufacturer's Qualification Statement.

H. Installer's Qualification Statement.

I. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

J. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Flooring Material: Quantity equivalent to 5 percent of each type and color.
   3. Extra Wall Base: Quantity equivalent to 5 percent of each type and color.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years documented experience.

B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience and approved by flooring manufacturer.

C. Testing Agency Qualifications: Independent firm specializing in performing concrete slab moisture testing and inspections of the type specified in this section.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.

B. Store all materials off of the floor in an acclimatized, weather-tight space. Cartons to be stored on a flat, dry, level surface.

C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

D. Protect roll materials from damage by storing on end.

E. Do not double stack pallets.

F. Maintain ambient temperatures within range recommended manufacturers.

1.07 FIELD CONDITIONS

A. Environmental Conditions: Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer in accordance with the Product Data. Do not install products under environmental conditions outside manufacturer's absolute limits.

B. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.08 WARRANTY

A. See Section 01770 - Closeout Procedures, for additional warranty requirements.

B. Correct defective work within a [5-year] period after Date of Substantial Completion.

C. Manufacturer's Warranty: Include coverage for degradtion of color finish. Complete form in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 RESILIENT TILE FLOORING

A. Refer to Interior Drawings and Finish Schedule for Manufacturer, Product and Color.

B. Solid Vinyl Tile, Type SVT: Solid vinyl with color and pattern throughout thickness.
   1. Manufacturers: **ProvideBasis of Design product as listed on I000 Finish Schedule.**
      a. Subject to compliance with requirements of product identified as Basis-of-Design. Other manufacturers shall be considered when the bidder provides a written request for equivalency to the Architect prior to bidding.
      b. Substitutions: See Section 016000 - Product Requirements.
   2. Minimum Requirements: Comply with ASTM F1700, of Class corresponding to type specified.
   3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
   4. Square Tile Size: Refer to Interior Drawings
   5. Total Thickness: 0.125 inches
   6. Pattern: Refer to Interior Drawings.
   7. Color: Refer to I000 Finish Schedule.

2.02 RESILIENT BASE

A. Refer to Interior Drawings for Manufacturer, Product, and Color.
   1. Resilient Base, Type RB: ASTM F1861, Type TP, rubber, thermoplastic. **Basis of Design: Product as listed on Interior Finish Schedule.**
      a. Subject to compliance with requirements of product identified as Basis-of-Design, other manufacturers shall be considered when the bidder provides a written request for equivalency to the Architect prior to bidding.
      b. Substitutions: See Section 016000 - Product Requirements.
   2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
   3. Height: Refer to I000 Finish Schedule.
   4. Thickness: 1/4 inch.
   5. Finish: Satin.
   6. Length: Roll.
   7. Color: Refer to drawing I000 Finish Schedule.

B. Accessories: Premolded external corners and internal corners, as provided by manufacturer.

2.03 ACCESSORIES

A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.

B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
   1. VOC Content Limits: As specified in Section 016116.

C. Adhesive for Vinyl Flooring: Type as recommended by flooring manufacturer

D. Transition and Edge Strips: Metal: As indicated on Interior Drawings and Finish Schedule.
   1. Manufacturers: **Basis of Design, Schluter Systems, Refer to drawing I000 Finish Schedule**
      a. Substitutions: See Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
   1. Test as Follows:
      a. Alkalinity (pH): ASTM F710.
      b. Internal Relative Humidity: ASTM F2170.
      c. Moisture Vapor Emission: ASTM F1869.
   2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
   3. Follow moisture and alkalinity remediation procedures in Section 090561.

D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Remove existing resilient flooring and flooring adhesives; follow the recommendations of RFCI (RWP).

B. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.

C. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with portland cement based subfloor filler and leveling compounds to achieve smooth, flat, hard surface.

D. Prohibit traffic until filler is fully cured.

E. Clean substrate.

F. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

C. Adhesive-Applied Installation:
   1. Spread only enough adhesive to permit installation of materials before initial set.
   2. Fit joints and butt seams tightly.
   3. Set flooring in place, press with heavy roller to attain full adhesion.

D. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.

E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
   1. Metal Strips: Attach to substrate before installation of flooring using stainless steel screws.

F. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints. Provide flexible silicone joints where resilient flooring is adjacent to ceramic wall tile.

G. Install flooring in recessed floor access covers, maintaining floor pattern.

3.04 INSTALLATION - TILE FLOORING

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Lay flooring with joints and seams parallel to building lines to produce symmetrical pattern.

C. Install square tile in pattern indicated on Interior Drawing and Finish Schedule. Allow minimum 1/2 full size tile width at room or area perimeter.

D. Roll the tile with a 3-section 100 lb. roller. Re-roll the floor within the working time of the adhesive. Continue to roll the floor throughout the working day to ensure a proper bond.

3.05 INSTALLATION - RESILIENT BASE

A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.

B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.

C. Install base on solid backing. Bond tightly to wall and floor surfaces.

D. Scribe and fit to door frames and other interruptions.

3.06 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's written instructions.

3.07 PROTECTION

A. Prohibit traffic on resilient flooring for 72 hours after installation.

B. Install Ram Board with Vapor Cure Seam Tape for protection after installation

END OF SECTION 096500

This page intentionally left blank

SECTION 096700
FLUID-APPLIED FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fluid-applied flooring and base.

1.02 RELATED REQUIREMENTS

A. Section 090561 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available.

C. Samples: Submit two samples, 6 by 6 inch in size illustrating color and pattern for each floor material for each color specified.

D. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.

E. Manufacturer's Qualification Statement.

F. Applicator's Qualification Statement.

G. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Top Coat Materials: 2 gallons.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

B. Applicator Qualifications: Company specializing in performing the work of this section.
   1. Minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store resin materials in a dry, secure area.

B. Store materials for three days prior to installation in area of installation to achieve temperature stability.

1.07 FIELD CONDITIONS

A. Maintain minimum temperature in storage area of 55 degrees F.

B. Store materials in area of installation for minimum period of 24 hours prior to installation.

C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

PART 2 PRODUCTS

2.01 GENERAL

A. The manufacturer and model number(s) or series listed below are Basis-of-Design.
   1. Subject to compliance with requirements of product identified as basis-of-design, other manufacturers shall be considered for bidding as an equivalent when the bidder provides a written request for equivalency to the Architect prior to bidding.
   2. Follow all instructions as indicated in Section 012519 - Equivalent Procedures.

2.02 FLUID-APPLIED FLOORING SYSTEMS

A. Fluid-Applied Flooring: Epoxy base coat(s), with broadcast aggregate. **Basis of Design: As Indicated on Interior Finish Schedule.**
   1. Aggregate: Quartz granules.
   2. Top Coat: Polyurethane.
   3. System Thickness: 1/8 inch, nominal, dry film thickness (DFT).
   4. Texture: Orange peel.
   5. Sheen: High gloss.
   6. Color: As indicated on drawings.
   7. Manufacturers:
      a. Sherwin-Williams High-Performance Flooring; POLY-CRETE: www.sherwin-williams.com/resin-flooring/#sle.
      b. Stonhard; Stonclad: www.stonhard.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

2.03 ACCESSORIES

A. Base Caps: Extruded anodized aluminum with projecting base of 1/8 inch; color as selected.

B. Cant Strips: Molded of flooring resin material.

C. Subfloor Filler: Type recommended by fluid-applied flooring manufacturer.

D. Primer: Type recommended by fluid-applied flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive flooring.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for fluid-applied flooring installation by testing for moisture and alkalinity (pH).
   1. Test in accordance with Section 090561.
   2. Obtain instructions if test results are not within limits recommended by fluid-applied flooring manufacturer.
   3. Follow moisture and alkalinity remediation procedures in Section 090561.

D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Remove subfloor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with subfloor filler.

B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.

C. Vacuum clean substrate.

D. Apply primer to surfaces required by flooring manufacturer.

3.03 INSTALLATION - ACCESSORIES

A. Install cant strips at base of walls where flooring is to be extended up wall as base.

B. Install terminating cap strip at top of base; attach securely to wall substrate.

3.04 INSTALLATION - FLOORING

A. Apply in accordance with manufacturer's instructions.

B. Apply each coat to minimum thickness required by manufacturer.

C. Finish to smooth level surface.

3.05 PROTECTION

A. Prohibit traffic on floor finish for 48 hours after installation.

B. Barricade area to protect flooring until fully cured.

END OF SECTION 096700

This page intentionally left blank

SECTION 096813
TILE CARPETING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Carpet tile, fully adhered.

B. Removal of existing carpet tile.

1.02 RELATED REQUIREMENTS

A. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 017419 - Construction Waste Management and Disposal: Reclamation/Recycling of new carpet tile scrap, removed carpet tile, and _____.

C. Section 090561 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

D. Section 090561 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

1.03 REFERENCE STANDARDS

A. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2016 (Reapproved 2021).

B. CRI 104 - Standard for Installation of Commercial Carpet; 2018.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

C. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.

D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

E. Installer's Qualification Statement.

F. Operation and Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.05 FIELD CONDITIONS

A. Store materials in area of installation for minimum period of 24 hours prior to installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Tile Carpeting: Basis of Design: As indicated on Interior Finish Schedule
   1. Interface, Inc; ____: www.interface.com/#sle.
   2. Mannington Commercial; _____: www.manningtoncommercial.com#sle.

3. Patcraft; www.patcraft.com.
4. Substitutions: See Section 016000 - Product Requirements.

2.02 MATERIALS

A. Tile Carpeting, Type CPT-1: Provide Basis of Design as Indicated on Interior Finish Schedule
   1. Manufactured in one color dye lot.
   2. Tile Size: As Indicated on Drawings
   3. Color: As Indicated on Drawings.
   4. Pattern: As Indicated on Drawings.
   5. Gauge: 1/12 inch.
   6. Finished Pile Thickness: 0.083 inches.
   7. Average Density: 7373 oz/yd³
   8. Primary Backing Material: Non-Woven Synthetic.
   9. Secondary Backing Material: EcoWorx Tile.
   10. Total Thickness: 0.239 inches.
   11. Tufted Yarn Weight: 17 oz/yd².

2.03 ACCESSORIES

A. Subfloor Filler: _____; type recommended by flooring material manufacturer.

B. Edge Strips: As indicated on Interior Finish Schedule

C. Carpet Tile Adhesive: Recommended by carpet tile manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor surfaces.

3.02 PREPARATION

A. Remove existing carpet tile.

B. Prepare floor substrates for installation of flooring in accordance with Section 090561.

C. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

D. Remove subfloor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with subfloor filler.

E. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

F. Vacuum clean substrate.

3.03 INSTALLATION

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install carpet tile in accordance with manufacturer's instructions.

C. Blend carpet from different cartons to ensure minimal variation in color match.

D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

E. Lay carpet tile in ashlar pattern, with pile direction parallel to next unit, set As Indicated on Drawings.

F. Locate change of color or pattern between rooms under door centerline.

G. Fully adhere carpet tile to substrate.

H. Trim carpet tile neatly at walls and around interruptions.

I. Complete installation of edge strips, concealing exposed edges.

3.04 CLEANING

A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

B. Remove excess adhesive without damage, from floor, base, and wall surfaces.

C. Clean and vacuum carpet surfaces.

END OF SECTION 096813

This page intentionally left blank

SECTION 096816
SHEET CARPETING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Carpet, direct-glued and Hybrid Resilient Carpeting, direct glued.

B. Removal of existing carpet.

1.02 RELATED REQUIREMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 090561 - Common Work Results for Flooring Preparation: Independent agency testing of concrete slabs, removal of existing floor coverings, cleaning, and preparation.

1.03 REFERENCE STANDARDS

A. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2016 (Reapproved 2021).

B. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2025a.

C. CRI 104 - Standard for Installation of Commercial Carpet; 2018.

D. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2023.

1.04 SUBMITTALS

A. See Section 013300 - Submittal Procedures, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

C. Shop Drawings: Indicate seaming plan, method of joining seams, direction of carpet pile and pattern, location of edge moldings and edge bindings.

D. Samples: Submit two samples 24 by 24 inch in size illustrating color and pattern for each carpet and cushion material specified.

E. Manufacturer's Installation Instructions: Indicate special procedures.

F. Installer's Qualification Statement.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional requirements.
   2. Extra Carpet: 10 sq ft of each type, color, and pattern installed.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in installing carpet with minimum five years documented experience.

1.06 FIELD CONDITIONS

A. Store materials in area of installation for minimum period of 24 hours prior to installation.

B. Maintain minimum 70 degrees F ambient temperature 24 hours prior to, during and 24 hours after installation.

C. Ventilate installation area during installation and for 72 hours after installation.

PART 2 PRODUCTS

2.01 GENERAL

A. Source Limitations: Obtain specified products from single source from single manufacturer.

B. Basis-Of-Design: As Indicated on Interior Finish Schedule.

2.02 MANUFACTURERS

A. Carpet:
   1. J & J Industries, Inc: www.jjindustries.com/#sle.
   2. Milliken & Company: www.milliken.com/#sle.
   3. Tarkett; Powerbond Hybrid Carpet: www.tarkett.com/#sle. Basis of Design
   4. Substitutions: See Section 016000 - Product Requirements.

2.03 CARPET

A. Carpet, Type WOC-1:
   1. Product: Powerbond manufactured by Tarkett.
   2. Roll Width: 6 ft.
   3. Color: As indicated on Drawings.
   4. Pattern: As indicated on Drawings.
   5. Critical Radiant Flux: Minimum of 0.22 watts/sq cm, when tested in accordance with ASTM E648 or NFPA 253.
   6. Surface Flammability Ignition: Pass ASTM D2859 (the "pill test").

2.04 ACCESSORIES

A. Subfloor Filler: Type recommended by carpet manufacturer.

B. Moldings and Edge Strips: Refer to Interior Finish Schedule

C. Seam Adhesive: Recommended by carpet manufacturer.

D. Carpet Adhesive: Recommended by carpet manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive carpet.

B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesives to subfloor surfaces.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for flooring installation by testing for moisture and alkalinity (pH).
   1. Test in accordance with Section 090561.
   2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Remove existing carpet and carpet cushion.

B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

C. Remove subfloor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with subfloor filler.

D. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

E. Clean substrate.

3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install carpet and cushion in accordance with manufacturer's instructions and CRI 104 (Commercial).

C. Verify carpet match before cutting to ensure minimal variation between dye lots.

D. Lay out carpet and locate seams in accordance with shop drawings.
   1. Locate seams in area of least traffic, out of areas of pivoting traffic, and parallel to main traffic.
   2. Do not locate seams perpendicular through door openings.
   3. Align run of pile in same direction as anticipated traffic and in same direction on adjacent pieces.
   4. Locate change of color or pattern between rooms under door centerline.
   5. Provide monolithic color, pattern, and texture match within any one area.

E. Install carpet tight and flat on subfloor, well fastened at edges, with a uniform appearance.

3.04 DIRECT-GLUED CARPET

A. Double cut carpet seams, with accurate pattern match. Make cuts straight, true, and unfrayed. Apply seam adhesive to cut edges of woven carpet immediately.

B. Apply contact adhesive to floor uniformly at rate recommended by manufacturer. After sufficient open time, press carpet into adhesive.

C. Apply seam adhesive to the base of the edge glued down. Lay adjoining piece with seam straight, not overlapped or peaked, and free of gaps.

D. Roll with appropriate roller for complete contact of adhesive to carpet backing.

E. Trim carpet neatly at walls and around interruptions.

3.05 CLEANING

A. Remove excess adhesive from floor and wall surfaces without damage.

B. Clean and vacuum carpet surfaces.

END OF SECTION 096816

SECTION 097200
WALL COVERINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation and prime painting.

B. Digitall Printed Vinyl Wall Covering.

1.02 RELATED REQUIREMENTS

A. Section 099123 - Interior Painting: Preparation and priming of substrate surfaces.

1.03 REFERENCE STANDARDS

A. ASTM D1308 - Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Coating Systems; 2020.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

C. ASTM F793/F793M - Standard Classification of Wall Coverings and Ceiling Coverings by Use Characteristics; 2025.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on wall covering and adhesive.

C. Shop Drawings: Indicate wall elevations with field verified dimesnions and the locations of any obstructions.

D. Samples: Submit one scaled strike off indicating pattern, colors and textures of each digitally printed wall covering specified.
   1. Digital Wall Covering: Submit [one] scaled strike off indicating pattern, colors and textures of each digitally printed wall covering specified.
   2. Rigid Vinyl Panel: Submit one samples of wall covering, 8 by 10 inch in size illustrating color, finish, and texture.

E. Test Reports: Indicate verification of flame and smoke ratings, when tested by UL.

F. Manufacturer's Installation Instructions: Indicate special procedures.

G. Maintenance Data: Submit data on cleaning, touch-up, and repair of covered surfaces.

H. Manufacturer's Qualification Statement.

I. Installer's Qualification Statement.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Inspect roll materials at arrival on site, to verify acceptability.

B. Protect packaged adhesive from temperature cycling and cold temperatures.

C. Do not store roll goods on end.

1.07 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the adhesive or wall covering product manufacturer.

B. Maintain these conditions 24 hours before, during, and after installation of adhesive and wall covering.

C. Provide lighting level of 80 ft candles measured mid-height at substrate surfaces.

PART 2 PRODUCTS

2.01 WALL COVERINGS

A. General Requirements:
   1. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84.
   2. Chemical and Stain Resistance: No visible staining or discoloration and no damage to surface texture when tested in accordance with ASTM D1308.

B. Products: **Basis of Design:** Refer to I000 Finish Schedule & I000 Digital Wall Graphic Schedule.

C. Wall Covering - Type DWG: 100% Vinyl on 100% Gypsum Cement Liner
   1. Comply with ASTM F793/F793M, Category VI, Type III.
   2. Total Weight: 35 oz. per linear yard
   3. Roll Width: As indicated on drawings. Contractor to field very all dimensions prior to placing order.
   4. Backing: Jute
   5. Color: Refer to I000 Digital Wall Graphic Schedule.
   6. Pattern: Refer to I000 Digital Wall Graphic Schedule.
   7. Overcoating: Surcoat; Stain and abrasion-resistant topcoat
   8. Manufacturers: Refer to I000 Finish Schedule & I001 Digital Graphic Schedule
      a. Substitutions: See Section 016000 - Product Requirements.
   9. Adhesive: Type recommended by wall covering manufacturer to suit application to subtrate.
   10. Wall Liner:
      a. Product:
         1) Stronghold by Wolf Gordon: Basis-of-Design
         2) Approved Equal
         3) Provide liner and adhesive recommended by manufacturer for substrate.
   11. Termination Trim: Extruded plastic, as required per field conditions.
   12. Substrate Primer and Sealer: Acrylic or latex primer/sealer complying with requirements in Interior Painting and recommended in writing by primer/sealer manufacturer and wall protection manufacturer for intended substrate.

D. Wall Covering- Type SWP: Rigid vinyl panel.
   1. Comply with ASTM D543 standards as established by the manufacturer.
   2. Panel Size: 4 feet by 8 feet.
   3. Rigid Vinyl Thickness: 0.040 inches
   4. Panel Edge Treatment: Square.
   5. Accessories: Provide manufacturer's standard Inside and outside trim at corners. For all vertical seams use clear caulk suggested by the manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are prime painted and ready to receive work, and comply with requirements of wall covering manufacturer.

B. Measure moisture content of surfaces using an electronic moisture meter. Do not apply wall coverings if moisture content of substrate exceeds level recommended by wall covering manufacturer.

C. Verify flatness tolerance of surfaces does not vary more than 1/8 inch in 10 feet nor vary at a rate greater than 1/16 inch/ft.

3.02 PREPARATION

A. Prepare substrates to achieve a smooth, dry, clean, structurally sound surface free of flaking, unsound coatings, cracks, and defects. The finished surface should be at least Level 4 per the Gypsum Association guidelines, although Level 5 is preferred.

B. Wash impervious surfaces with tetra-sodium phosphate, rinse and neutralize; wipe dry.

C. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

D. Surfaces: Correct defects and clean surfaces that affect work of this section. Remove existing coatings that exhibit loose surface defects.

E. Check paint surfaces for pigment bleeding, moisture resilience, and adhesion. Sand glass, semi-gloss, or eggshell finish with fine sandpaper.

F. Vacuum clean surfaces free of loose particles.

G. Acclimate wall protection in the installation area for at least six days prior to and after installaing at 70 - 90 degrees Ferenheit, with relative humidity at 50% or less.

3.03 INSTALLATION

A. Apply adhesive and wall covering in accordance with manufacturer's instructions.

B. Apply adhesive to wall surface immediately prior to application of wall covering.

C. Use wall covering in roll number sequence.

D. Razor trim edges on flat work table. Do not razor cut on gypsum board surfaces.

E. Apply wall covering smooth, without wrinkles, gaps or overlaps. Eliminate air pockets and ensure full bond to substrate surface.

F. Butt edges tightly.

G. Overlap adjacent panels as recommended by manufacturer.

H. Horizontal seams are not acceptable.

I. Do not seam within 2 inches of internal corners or within 6 inches of external corners.

J. Install wall covering before installation of bases and items attached to or spaced slightly from wall surface, unless otherwise recommended by manufacturer.

K. Do not install wall covering more than 1/8 inch below top of resilient base.

L. Cover spaces above and below windows, above doors, in pattern sequence from roll.

M. Wall covering is required behind fin tube cabinets.

N. Where wall covering tucks into reveals, or metal wallboard or plaster stops, apply with contact adhesive within 6 inches of wall covering termination. Ensure full contact bond.

O. Install termination trim.

P. Remove excess adhesive while wet from seam before proceeding to next wall covering sheet. Wipe clean with dry cloth.

3.04 CLEANING

A. Clean wall coverings of excess adhesive, dust, dirt, and other contaminants.

B. Reinstall wall plates and accessories removed prior to work of this section.

3.05 PROTECTION

A. Do not permit construction activities at or near finished wall covering areas.

END OF SECTION 097200

SECTION 098430
SOUND-ABSORBING WALL AND CEILING UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Sound-absorbing panels.

1.02 REFERENCE STANDARDS

A. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2023.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's printed data sheets for products specified.

C. Shop Drawings: Fabrication and installation details, panel layout and fabric orientation.

D. Verification Samples: Fabricated samples of each type of panel specified; 12 by 12 inch, showing construction, edge details, and fabric covering.

1.04 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical componentss and installation compenents by a single maunfacturer.

B. Coordination of Work: Coordinate acoustical component work with installers of related work including, but not limited to light fixtures, mechanical systems, elctrical systems, and sprinklers.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Protect acoustical units from moisture during shipment, storage, and handling. Deliver acoustical components to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Store units flat, in dry, well-ventilated space; do not stand on end.

C. Protect edges from damage.

D. Before installing, allow acoustic components to gradually reach room temperature and a stabilized moisture content.

PART 2 PRODUCTS

2.01 SOUND-ABSORBING UNITS

A. Basis of Design: As Indicated on Interior Finish Schedule

B. Manufacturers:
   1. Frasch; BLADE BAFL: www.frasch.com/#sle.
   2. Kinetics Noise Control, Inc; _____: www.kineticsnoise.com/#sle.
   3. CSI Creative; www.csicreative.com/#sle.
   4. Substitutions: See Section 016000 - Product Requirements.

C. General:

D. Acoustical Panels for Walls and Ceilings:

1. Panel Core: Manufacturer's standard PET core.
2. Panel Size: As Indicated on Drawings.
3. Panel Thickness: [12-48mm]
4. Corners: Square.
5. Color: As indicated.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates for conditions detrimental to installation of acoustical units. Proceed with installation only after unsatisfactory conditions have been corrected; and all wet work is completed.

3.02 INSTALLATION

A. Clean substrates and attachment points of dirt, oils, and other substances that could cause issues during installation.

B. Adesive Direct Installation. Install acoustical units in locations as indicated, following manufacturer's installation instructions.
   1. Install mounting accessories and supports in accordance with shop drawings.
   2. Align panels accurately, with edges plumb and top edges level. Scribe to fit accurately at adjoining work and penetrations.

3.03 CLEANING

A. Clean sound-absorptive panels upon completion of installation from dust and other foreign materials, following manufacturer's instructions.

3.04 PROTECTION

A. Provide protection of installed acoustical panels until Date of Substantial Completion.

B. Replace panels that cannot be cleaned and repaired to satisfaction of the Architect.

END OF SECTION 098430

SECTION 099000
PAINTING AND COATING - K-12 EDUCATION FACILITY GUIDE SPECIFICATION - SHERWIN-WILLIAMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Interior painting and coating systems.

C. Exterior painting and coating systems.

D. Scope:

1. Finish surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
    a. Interior:
        1) Concrete, Walls and Ceilings: Cast-in-place concrete, precast concrete, unglazed brick, fiber cement board, tilt-up, and plaster.
        2) Concrete Masonry Units: Concrete, split face, scored, smooth, high density, low density, and fluted.
        3) Metal: Aluminum and galvanized.
        4) Metal, Galvanized: Ceilings and ductwork.
        5) Metal: Structural steel columns, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and other ferrous metal.
        6) Drywall: Walls, ceilings, gypsum board, and similar items.
        7) Concrete: Floors, non-vehicular.
2. Do not paint or finish the following:
    a. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory-finished.
    b. Items indicated to recieve other finishes.
    c. Items indicated to remain unfinished.
    d. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
    e. Floors, unless specifically indicated
    f. Glass
    g. Concrete masonry units in utility, mechanical, and electrical spaces.
    h. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions.

C. Section 099600 - High-Performance Coatings.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Product characteristics.
   2. Surface preparation instructions and recommendations.
   3. Primer requirements and finish specification.
   4. Storage and handling requirements and recommendations.
   5. Application methods.
   6. Clean-up information.

C. Samples: Submit two paper draw down samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.

D. Maintenance Data: Submit coating maintenance manual including product technical data sheets, safety data sheets (SDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements for additional provisions.
   2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
   3. Label each container with color in addition to manufacturer's label.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years experience and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, product name, product code, color designation, VOC content, batch date, environmental handling, surface preparation, application, and use instructions.

C. Paint Materials: Store at a minimum of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

A. Do not apply materials when environmental conditions are outside the ranges required by manufacturer.

B. Follow manufacturer's recommended procedures for producing the best results, including testing substrates, moisture in substrates, and humidity and temperature limitations.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The manufacturer and model number(s) or series listed below are Basis-of-Design.

B. Subject to complaince with requirments of product identified as basis-of-design. Other manufacturers shall be considered for bidding as an equivalent when the bidder provides a written request for equivalency to the Architect prior to bidding.

C. Manufacturers: Provide **Basis-of-Design Product as listed on Interior Finish Schedule.**

2.02 PAINTINGS AND COATINGS

A. General:
   1. Provide factory-mixed coatings unless otherwise indicated.
   2. Do not reduce, thin, or dilute coatings or add materials to coatings unless specifically indicated in manufacturer's instructions.

B. Volatile Organic Compound (VOC) Content: Comply with Section 016116.

C. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

2.03 PAINT SYSTEMS - INTERIOR

A. Concrete, Walls and Ceilings: Poured concrete, precast concrete, unglazed brick, cement board, tilt-up, cast-in-place concrete, and plaster.
   1. Latex Systems:
      a. Semi-Gloss Finish High Performance (HP):
         1) 1st Coat: Sherwin-Williams Loxon Concrete and Masonry Primer Sealer, LX02W50 Series: www.sherwin-williams.com/#sle.
            (a) 8 mils wet, 3.2 mils dry per coat.
         2) 2nd and 3rd Coat: Sherwin-Williams ProMar 200 HP Zero VOC Latex Semi-Gloss, B31-1950 Series: www.sherwin-williams.com/#sle.
            (a) 4 mils wet, 1.6 mils dry per coat.
      b. Eg-Shel Finish:
         1) 1st Coat: Sherwin-Williams Loxon Concrete and Masonry Primer Sealer, LX02W50 Series: www.sherwin-williams.com/#sle.
         2) 2nd and 3rd Coat: Sherwin-Williams ProMar 200 Zero VOC Eg-Shel, B20-2600 Series: www.sherwin-williams.com/#sle.

B. Masonry CMU: Concrete, split face, scored, smooth, high density, low density, and fluted.
   1. Latex Systems:
      a. Eg-Shel/Satin Finish High Performance (HP):
         1) 1st Coat: Sherwin-Williams PrepRite Block Filler, B25W25: www.sherwin-williams.com/#sle.
            (a) 75 to 125 sq ft/gal.
         2) 2nd and 3rd Coat: Sherwin-Williams ProMar 200 HP Zero VOC Eg-Shel, B20-1950 Series: www.sherwin-williams.com/#sle.
            (a) 4 mils wet, 1.7 mils dry per coat.
   2. Epoxy Systems, Water-Based:
      a. Eg-Shel/Low Luster Finish:
         1) 1st Coat: Sherwin-Williams Loxon Block Surfacer, LX01W200: www.sherwin-williams.com/#sle.
            (a) 50 to 100 sq ft/gal.
         2) 2nd and 3rd Coat: Sherwin-Williams Pro Industrial Pre-Catalyzed Waterbased Epoxy, K45 Series: www.sherwin-williams.com/#sle.
            (a) 4 mils wet, 1.5 mils dry per coat.

C. Metal: Aluminum and galvanized.
   1. Latex Systems:
      a. Semi-Gloss Finish:
         1) 1st Coat: Sherwin-Williams Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series: www.sherwin-williams.com/#sle.

(a) 5 mils wet, 2 mils dry per coat.
2) 2nd and 3rd Coat: Sherwin-Williams Pro Industrial Acrylic Semi-Gloss, B66-650 Series: www.sherwin-williams.com/#sle.
(a) 2 to 4 mils dry per coat.

D. Metal, Galvanized: Ceilings and ductwork.
1. Dryfall Waterborne Topcoats:
a. Flat Finish:
1) 1st and 2nd Coat: Sherwin-Williams Pro Industrial Waterborne Acrylic Dryfall, B42-181 Series: www.sherwin-williams.com/#sle.
(a) 6 mils wet, 1.7 mils dry per coat.

E. Metal: Structural steel columns, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.
1. Latex Systems:
a. Semi-Gloss Finish:
1) 1st Coat: Sherwin-Williams Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series: www.sherwin-williams.com/#sle.
(a) 5 mils wet, 2 mils dry per coat.
2) 2nd and 3rd Coat: Sherwin-Williams Pro Industrial Acrylic Semi-Gloss, B66-650 Series: www.sherwin-williams.com/#sle.
(a) 2 to 4 mils dry per coat.

F. Drywall: Walls, ceilings, gypsum board, and similar items.
1. Latex Systems:
a. Eg-Shel Finish High Performance (HP):
1) 1st Coat: Sherwin-Williams ProMar 200 Zero VOC Interior Latex Primer, B28W2600: www.sherwin-williams.com/#sle.
(a) 4 mils wet, 1.5 mils dry per coat.
2) 2nd and 3rd Coat: Sherwin-Williams ProMar 200 HP Zero VOC Eg-Shel, B20-1950 Series: www.sherwin-williams.com/#sle.
(a) 4 mils wet, 1.7 mils dry per coat.
b. Flat Finish: GYP Ceilings
1) 1st Coat: Sherwin-Williams ProMar 200 Zero VOC Interior Latex Primer, B28W2600: www.sherwin-williams.com/#sle.
(a) 4 mils wet, 1.5 mils dry per coat.
2) 2nd and 3rd Coat: Sherwin-Williams ProMar 200 Zero VOC Latex Flat, B30-2600 Series: www.sherwin-williams.com/#sle.
(a) 4 mils wet, 1.6 mils dry per coat.
2. Epoxy Systems, Water-Based:
a. Eg-Shel/Low Luster Finish:
1) 1st Coat: Sherwin-Williams ProMar 200 Zero VOC Interior Latex Primer, B28W2600: www.sherwin-williams.com/#sle.
(a) 4 mils wet, 1.5 mils dry per coat.
2) 2nd and 3rd Coat: Sherwin-Williams Pro Industrial Pre-Catalyzed Waterbased Epoxy, K45 Series: www.sherwin-williams.com/#sle.
(a) 4 mils wet, 1.5 mils dry per coat.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Gypsum Board: Fill minor defects with filler compound; sand smooth and remove dust prior to painting.

3.03 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's written instructions.

C. Apply coatings at spread rate required to achieve manufacturer's recommended dry film thickness.

3.04 PRIMING

A. Apply primer to all surfaces unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

B. Primers specified in painting schedules may be omitted on items factory primed or factory finished items if acceptable to top coat manufacturers.

3.05 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

B. Clean surfaces immediately of overspray, splatter, and excess material.

C. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

3.06 PROTECTION

A. Protect finished coatings from damage until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION 099000

This page intentionally left blank

SECTION 102226
OPERABLE PARTITIONS ACOUSTI-SEAL

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes the following:
   1. Manually operated, individual panel operable partitions.

B. Related Sections include the following:
   1. Division 03 Sections for concrete tolerances required.
   2. Division 05 Sections for primary structural support, including pre-punching of support members by structural steel supplier per operable partition supplier's template.
   3. Division 06 Sections for wood framing & supports, and all blocking at head and jambs as required.
   4. Division 09 Sections for wall and ceiling framing at head and jambs.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified in writing by the operable partition manufacturer, as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.

B. Acoustical Performance: Test operable partitions in an independent acoustical laboratory in accordance with ASTM E90 test procedure and classified in accordance with ASTM E413 to attain no less than the STC rating specified. Provide a complete and unedited written test report by the testing laboratory upon request.

C. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.

D. The operable wall must be manufactured by a certified ISO 9001-2015 company or an equivalent quality control system.

E. Indoor Air Quality: Operable partition, movable wall manufacturer’s non-wood products must meet the SCS Indoor Advantage™ Gold Certification or equivalent. This approval guarantees conformance to indoor air concentrations meeting Indoor Advantage Gold Indoor Air Quality Certified to SCS-105 v4.2-2023 Conforms to ANSI/BIFMA M7.1 and X7.1 and the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 conducted in an independent third-party air quality testing laboratory.

1.04 REFERENCE STANDARDS

A. ASTM International
   1. ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
   2. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
   3. ASTM C1036 - Standard Specification for Flat Glass.
   4. ASTM C1048 - Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.
   5. ASTM E84 - Surface Burning Characteristics of Building Materials.

6. ASTM E413 - Classification for Rating Sound Insulation

B. Health Product Declaration Collaborative
   1. Health Product Declaration Open Standard v2.1

C. International Standards Organization
   1. ISO 14021 - Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labeling).
   2. ISO 14025:2011-10, Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures.
   3. ISO 14040:2009-11, Environmental Management - Life Cycle Assessment - Principles and Framework.
   4. ISO 14044:2006-10, Environmental Management - Life Cycle Assessment - Requirements and Guidelines.
   5. ISO 21930 – Sustainability in Buildings and Civil Engineering Works — Core Rules for Environmental Product Declarations of Construction Products and Services.

D. Other Standards
   1. ADA – Americans with Disabilities Act.
   2. ANSI Z97.1 - Safety Glazing Materials Used in Buildings.
   3. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
   4. NEMA LD 3 - High Pressure Decorative Laminates.

1.05 SUBMITTALS

A. Product Data: Material descriptions, construction details, finishes, installation details, and operating instructions for each type of operable partition, component, and accessory specified.

B. Shop Drawings: Show location and extent of operable partitions. Include plans, elevations, sections, details, attachments to other construction, and accessories. Indicate dimensions, weights, conditions at openings, and at storage areas, and required installation, storage, and operating clearances. Indicate location and installation requirements for hardware and track, including floor tolerances required and direction of travel. Indicate blocking to be provided by others.

C. Setting Drawings: Show imbedded items and cutouts required in other work, including support beam punching template.

D. Samples: Color samples demonstrating full range of finishes available by architect. Verification samples will be available in same thickness and material indicated for the work.

E. Reports: Provide a complete and unedited written sound test report indicating test specimen matches product as submitted.

F. Create spaces that are healthy for occupants.
   1. Furnish products and materials with Health Product Declaration (HPD), Manufacturer Inventory, or other material health disclosure documentation. Products without an HPD or other disclosure documentation are not acceptable.

G. Furnish materials that generate the least amount of pollution.
   1. Furnish products and materials that have third party verified environmental product declarations (EPD’s). Consider products and materials that have optimized environmental performance (reduced life cycle impacts). Products without an EPD or other disclosure documentation are not acceptable.

H. Buy American: Folding door to be manufactured in the United States in compliance with applicable U.S. Federal Trade Commission (FTC) and U.S. Customs Service and Border Protections regulations and be labeled "Made in America".

1.06 DELIVERY, STORAGE, AND HANDLING

A. Clearly mark packages and panels with numbering systems used on Shop Drawings. Do not use permanent markings on panels.

B. Protect panels during delivery, storage, and handling to comply with manufacturer's direction and as required to prevent damage.

1.07 WARRANTY

A. Provide written warranty by manufacturer of operable partitions agreeing to repair or replace any components with manufacturing defects.

B. OP-01: Warranty period: Eight (8) years.

PART 2 – PRODUCTS

2.01 MANUFACTURERS, PRODUCTS, AND OPERATION

A. Manufacturers: Subject to compliance with requirements, provide product by the following:
   1. Basis of Design: Modernfold, Inc.
      a. Contact:
         1) ModernfoldStyles, Inc.; 15 Empire Blvd., South Hackensack, NJ 07606
         2) Alex Rodriguez- Sales Representative
         3) O: 201-329-6266
         4) M: 551-966-7453
         5) email: arodriguez@modernfoldstyles.com
   2. Substitutions: See Section 016000 - Product Requirements.

B. Doors to be manufactured in the U.S.A.

C. Products: Subject to compliance with the requirements, provide the following product:
   1. OP-01: Acousti-Seal Legacy – Single Panel (931) manually operated individual panel operable partition.

2.02 OPERATION

A. OP-01: Acousti-Seal Legacy – Single Panel (931): Series of individual flat panels, manually operated, top supported with operable floor seals.

B. Final Closure:
   1. OP-01: Horizontally expanding panel edge with removable crank

2.03 PANEL CONSTRUCTION

A. OP-01: Nominal 3-inch (76mm) thick panels in manufacturer's standard 48-inch (1220mm) widths. All panel horizontal and vertical framing members fabricated from minimum 16-gage formed steel with overlapped and welded corners for rigidity. Top channel is reinforced to support suspension system components. Frame is designed so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.

B. Panel skin shall be:
   1. OP-01: Roll-formed steel wrapping around panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction. Acoustical ratings of panels with this construction minimum:
      a. 50 STC

C. Hinges for Closure Panels, Pass Doors, and Pocket Doors shall be:
   1. OP-01: Full leaf butt hinges, attached directly to the panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame. Lifetime warranty on hinges. Hinges mounted into panel edge or vertical astragal are not acceptable.

D. Panel Trim: No vertical trim required or allowed on edges of panels; minimal groove appearance at panel joints.

E. Panel Weights:
   1. OP-01: 50 STC - 8 lbs./square foot

2.04 PANEL FINISH

A. Panel finish shall be:
   1. OP-01: Reinforced vinyl with woven backing weighing not less than 20 ounces (567 grams) per lineal yard.

B. Panel Trim: Exposed panel trim of one consistent color:
   1. OP-01: To Be Advised

2.05 SOUND SEALS

A. Vertical Interlocking Sound Seals between panels: Roll-formed steel astragals, with reversible tongue and groove configuration in each panel edge for universal panel operation. Rigid plastic or aluminum astragals or astragals in only one panel edge are not acceptable.

B. Horizontal Top Seals: Continuous contact extruded vinyl bulb shape with pairs of non-contacting vinyl fingers to prevent distortion without the need for mechanically operated parts.

C. Horizontal bottom floor seals shall be:
   1. OP-01: SM2 - Manually activated seals providing nominal 2-inch 2.01 inch operating clearance with an operating range of +1/2-inch (0.51 inch) to –1-1/2-inch (1.5 inch). Seal shall be operable from panel edge or face. Extended seal shall exert nominal 120 pounds (54 kg) downward force to the floor throughout operating range.

2.06 SUSPENSION SYSTEM

A. OP-01: RT100 Suspension System – Multi-Directional
   1. Suspension Tracks: Precision heat-treated extruded aluminum. Track to be supported by pairs of 3/8-inch 0.37 inch diameter threaded rods.
      a. Exposed track soffit: Track soffit to be integral to track shape and shall be powder-coated off-white paint finish. Track must accommodate termination of plenum sound barriers on both sides of track for maximum sound control.
   2. Carriers: Shall have horizontal counter-rotating wheels with heavy duty steel thrust bearings. Carriers permit panels to traverse L, T, or X intersections without mechanical switching.
   3. Warranty period: Five (5) years.

2.07 OPTIONS

A. (NONE SELECTED)

PART 3 – EXECUTION

3.01 INSTALLATION

A. General: Comply with ASTM E557, operable partition manufacturer's written installation instructions, Drawings and approved Shop Drawings.

B. Install operable partitions and accessories after other finishing operations, including painting have been completed.

C. Match operable partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.

D. Broken, cracked, chipped, deformed or unmatched panels are not acceptable.

3.02 CLEANING AND PROTECTION

A. Clean partition surfaces upon completing installation of operable partitions to remove dust, dirt, adhesives, and other foreign materials according to manufacturer’s written instructions.

B. Provide final protection and maintain conditions in a manner acceptable to the manufacturer and Installer that ensure operable partitions are without damage or deterioration at time of Substantial Completion.

3.03 ADJUSTING

A. Adjust operable partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and other moving parts.

3.04 EXAMINATION

A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable partitions. Proceed with installation only after unsatisfactory conditions have been corrected.

3.05 DEMONSTRATION

A. Demonstrate proper operation and maintenance procedures to Owner's representative.

B. Provide Operation and Maintenance Manual to Owner's representative.

END OF SECTION 102226

This page intentionally left blank

SECTION 122400
WINDOW SHADES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Interior manual roller shades.

1.02 RELATED REQUIREMENTS

A. Section 061000 - ROUGH CARPENTRY: Concealed wood blocking for attachment of headrail brackets.

B. Section 079200: Joint Sealants for sealing the perimeter of installation accessories for light-blocing shades with sealant.

C. Section 092116: Gypsum Board Wall Accessories

D. Section 095123: Acoutical Tile Ceilings

1.03 REFERENCE STANDARDS

A. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films; 2023, with Errata.

B. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems; Current Edition, Including All Revisions.

C. WCMA A100.1 - Standard for Safety of Window Covering Products; 2022.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Sequencing:
   1. Do not fabricate shades until field dimensions for each opening have been taken with field conditions in place.
   2. Do not install shades until final surface finishes and painting are complete.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's standard catalog pages and data sheets, including materials, finishes, fabrication details, dimensions, profiles, mounting requirements, and accessories.

C. Shop Drawings: Include shade schedule indicating field verified dimensions, location and keys to details, head, jamb and sill details, mounting dimension requirements for each product and condition, and operation direction.

D. Selection Samples: For each exposed product and for each color and texture specified

E. Verification Samples: Minimum size 10 inches square, representing actual materials, color and pattern.

F. Manufacturer's Instructions: Include instructions for storage, handling, protection, examination, preparation, and installation of product.

G. Operation and Maintenance Data: List of all components with part numbers, sources of supply, and operation and maintenance instructions; include copy of shop drawings.

H. Warranty: Submit sample of manufacturer's warranty and documentation of final executed warranty completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of documented experience.

B. Installer Qualifications: Company specializing in performing work of this type with minimum five years of documented experience with shading systems of similar size and type.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver shades in manufacturer's unopened packaging, labeled to identify each shade for each opening.

B. Handle and store shades in accordance with manufacturer's recommendations.

1.08 FIELD CONDITIONS

A. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.09 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Provide manufacturer's warranty from Date of Substantial Completion, covering the following:
   1. Shade Hardware: five years.
   2. Fabric: five years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Interior Manually Operated Roller Shades: **Basis of Design: As Indicated on Interior Finish Schedule**

B. Substitutions: See Section016000-Product Requirements.
   1. Draper, Inc; Clutch Operated FlexShade: www.draperinc.com/#sle.
   2. Hunter Douglas Architectural; RB500 Manual Roller Shades: www.hunterdouglasarchitectural.com/#sle.
   3. MechoShade Systems LLC; Mecho/5 System: www.mechoshade.com/#sle.

2.02 ROLLER SHADES

A. General:
   1. Provide shade system components that are easy to remove or adjust without removal of mounted shade brackets.
   2. Provide shade system that operates smoothly when shades are raised or lowered.

B. Roller Shades, Type WT:
   1. **Basis of Design: Refer to Interior Finish Schedule**
   2. Description - Interior Roller Shades: Single roller, manually operated fabric window shade system complete with mounting brackets, roller tubes, hembars, hardware, and accessories.
      a. Roll Direction: Roll down, closed position is at window sill.
      b. Mounting: Window jamb mounted - inside, between jambs.
      c. Size: Contractor to confirm final dimensions in field
      d. Fabric: Refer to I000 Finish Schedule
   3. Brackets and Mounting Hardware: As recommended by manufacturer for mounting indicated and to accommodate shade fabric roll-up size and weight.
   4. Roller Tubes: As required for type of shade operation.

a. Material: Extruded aluminum, clear anodized finish.
b. Size: As recommended by manufacturer; selected for suitability for installation conditions, span, and weight of shades.
c. Fabric Attachment: Utilize extruded channel in tube to accept vinyl spline welded to fabric edge.

5. Hembars: Designed to maintain bottom of shade straight and flat.
   a. Style: Full wrap fabric covered bottom bar, flat profile with heat sealed closed ends.
6. Manual Operation for Interior Shades:
   a. Clutch Operator: Manufacturer's standard material and design, permanently lubricated.
   b. Drive Chain: Continuous loop beaded ball chain, 95 pounds minimum breaking strength. Provide upper and lower limit stops.
7. Accessories:
   a. Fascia: Extruded aluminum, size as required to conceal shade mounting, attachable to brackets without exposed fasteners; Finish to be selected from manufacturer's full range.
      1) Color: Refer to I000 Finish Schedule
      2) Profile: L-Shaped.
   b. End Caps: Provide manufacturer's standard end caps to cover exposed ends of brackets.
   c. Interior Side Channels: As required for light sealing room-darkening shade applications.

2.03 SHADE FABRIC

A. Fabric - Type WT-1: Nonflammable, color-fast, impervious to heat and moisture, and able to retain its shape under normal operation.
   1. Manufacturers: **Basis of Design: Mermet Corporation, Refer to drawing I000 Finish Schedule**
      a. Substitutions: See Section 016000 - Product Requirements.
   2. Material: 36% Fiberglass 64% Vinyl.
   3. Performance Requirements:
      a. Flammability: Pass NFPA 701 large and small tests.
   4. Openness Factor: Refer to I000 Finish Schedule
   5. Roll Width: As required to meet width of window. Verify in field.
   6. Color: Refer to I000 Finish Schedule

2.04 RESCUE WINDOW LABEL

A. Provide a Rescue Window Label at all Window Shade locations at Rescue Windows.
   1. Refer to Life Safety Plans for Rescue Window Locations.
   2. Place label so that it is readable when Shade is down.
   3. Rescue Window Labels:
      a. Color: bright yelow background with black letters.
      b. Size: 3 inches by 5 inches.
      c. Text: Rescue Window

2.05 ROLLER SHADE FABRICATION

A. Field measure finished openings prior to ordering or fabrication.

B. Dimensional Tolerances: Fabricate shades to fit openings within specified tolerances.

1. Vertical Dimensions: Fill openings from head to sill with 1/2 inch space between bottom bar and window stool.
2. Horizontal Dimensions - Inside Mounting: Fill openings from jamb to jamb.
3. Horizontal Dimensions - Inside Mounting: Provide symmetrical light gaps on both sides of shade not to exceed 3/4 inch total.
4. Horizontal Dimensions - Outside Mounting: Cover window frames, trim, and casings completely.
5. Horizontal Dimensions - Outside Mounting: Extend shades 2 inches beyond jambs on each side.

C. At openings requiring continuous multiple shade units with separate rollers, locate roller joints at window mullion centers; butt rollers end-to-end.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine finished openings for deficiencies that may preclude satisfactory installation.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Start of installation shall be considered acceptance of substrates.

3.02 PREPARATION

A. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.

B. Coordinate with window installation and placement of concealed blocking to support shades.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved shop drawings, using mounting devices as indicated.

B. Replace shades that exceed specified dimensional tolerances at no extra cost to Owner.

C. Adjust level, projection, and shade centering from mounting bracket. Verify there is no telescoping of shade fabric. Ensure smooth shade operation.

3.04 CLEANING

A. Clean soiled shades and exposed components as recommended by manufacturer.

B. Replace shades that cannot be cleaned to "like new" condition.

3.05 CLOSEOUT ACTIVITIES

A. See Section 017800 - Closeout Submittals, for closeout submittals.

B. Demonstration: Demonstrate operation and maintenance of window shade system to Owner's personnel.

3.06 PROTECTION

A. Protect installed products from subsequent construction operations.

B. Touch-up, repair, or replace damaged products before Substantial Completion.

3.07 MAINTENANCE

A. See Section 017000 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.

END OF SECTION 122400

This page intentionally left blank

SECTION 123600
COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops for casework.

1.02 REFERENCE STANDARDS

A. ANSI A208.1 - American National Standard for Particleboard; 2022.

B. ASTM B211/B211M - Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold Finished Bar, Rod, and Wire; 2023.

C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

D. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

E. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

F. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.

G. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

H. PS 1 - Structural Plywood; 2023.

1.03 SUBMITTALS

A. See Section 013300 - Submittal Procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Cleaning recommendations.
   4. Specimen warranty.

C. Shop Drawings: Complete field verified details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.

D. Verification Samples: For each finish product specified, minimum size 2 inches, representing actual product, color, and patterns.

E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

F. Installer's qualification statement.

G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 COUNTERTOPS

A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

B. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
   1. Flat Sheet Thickness: 1/2 inch, minimum.
   2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
      a. Manufacturers:
         1) Basis of Design; Refer to Interior Finish Schedule.
         2) Substitutions: See Section 016000 - Product Requirements.
      b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
      c. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
      d. Color and Pattern: As indicated on drawings.
   3. Other Components Thickness: 1/2 inch, minimum.
   4. Exposed Edge Treatment at countertops: Built up to minimum 1-1/4 inch thick; edge profile as indicated on drawings.
   5. Exposed Edge Treatment at window sills: edge profile as indicated on drawings.
   6. Back and End Splashes: Same sheet material, square top; minimum 4 inches high.
   7. Fabricate in accordance with manufacturer's standard requirements.

2.02 MATERIALS

A. Extruded Aluminum: ASTM B211/B211M, 6463 alloy, T5 temper.

B. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.

C. Particleboard for Supporting Substrate: ANSI A208.1 Grade 2-M-2, 45 pcf minimum density; minimum 3/4 inch thick; join lengths using metal splines.

D. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

E. Joint Sealant: Mildew-resistant silicone sealant, white.

2.03 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
   1. Join lengths of tops using best method recommended by manufacturer.
   2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall, or unless otherwise indicated on drawings.
   3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
   1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
   2. Height: 4 inches, unless otherwise indicated.

C. Solid Surfacing: Fabricate tops and wall panels up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

D. Wall-Mounted Counters: Provide brackets and braces as indicated on drawings.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

B. Seal joint between back/end splashes and vertical surfaces.

3.04 TOLERANCES

A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.

B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.

C. Field Joints: 1/8 inch wide, maximum.

3.05 CLEANING

A. Clean countertops surfaces thoroughly.

3.06 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION 123600

This page intentionally left blank

SECTION 131103
SWIMMING POOLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Work of this sections includes, but is not necessarily limited to, the following:
   1. Provide and install the pool circulation system, complete and functional as shown on the drawing and specified herein. This includes all piping, filter equipment, pumps and disinfection/sanizing system and other equipment equipment as require for a functional and NYS code compliant Pool. System shall be in compliance with NY State Sanitary Code 6-1 for swimming pools and as approved by the local County Health Department.
   2. Provide a manual for pool operation and maintenance, for all pumps and other equipment as required by the NY State Sanitary Code 6-1 for swimming pools.
   3. Provide start-up services, supervision and training for owner/operators, including a recorded session on DVD or thumb drive to turn over to owner. Start-up services and training shall occur at least 30 days prior to negotiated pool grand opening date.

1.02 RELATED REQUIREMENTS

A. Section 221005 - Plumbing Piping: Piping, valves, and fittings.

1.03 SYSTEM PERFORMANCE REQUIREMENTS.

A. All work in this division shall be according to applicabel local, state, and international codes and regulations

1.04 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, rated capacities, and accessories for each type of equipment indicated.

B. Shop Drawings: For the following swimming pool system components, include plans, elecations, sections, details and attachments to other work.

C. Certificates: Submit certificates attesting that the materials furnished meet the requirements specified herein.

D. Test Report: Submit results of domestic water analysis.

E. Manufacturer's Qualification Statement. Min. 5 years experience with similar size/type pool

F. Installer's Qualification Statement. Min. 5 years experience with similar size/type pool

G. Operation Data: Provide operating instructions .

H. Operation and Maintenance Data: A complete, bound, operations and maintenance manual must be prepared and turned over to the owner on substantial completion of this project, including documentation on all pool equipment. All Operations and Maintenance Manual shall be prepared in accordance with the protocols as outlined in the State Sanitary Code Subpart 6-1.29.13.2.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer to perform work of this Section who has had at least five (5) years experience in the construction of the type of swimming pool herein specified and must list at least ten (10) pools of this type, each with a water surface area of not less than this pool which the Pool Contractor has constructed and which, upon

investigation, would be found to have been completed in a satisfactory manner and in operation at least three (3) years.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this Section with minimum Five years documented experience.

C. The Owner and the Architect have made a detailed investigation before selecting the specified swimming pool re-circulation, filtration and other special pool equipment. All base bids shall include this equipment without substitution since the operation and maintenance of this swimming pool facility has been predicated upon the specified equipment.

D. If any Contractor wishes to submit a price on a swimming pool with alternate equipment, the materials, products and equipment described in these specifications establish a standard of required function, dimension, appearance and quantity. The base proposal must be for supplying equipment as specified, however, the Contractor, at his option, may offer products of other manufacturers which meet the requirements of the specifications. Plans and specifications that clearly indicate all alternate equipment and any changes required in the pool structure or building construction shall accompany any such offering. Any product offered as an alternate must be a proven design with at least ten (10) installations in service for five (5) years. Such alternate proposal shall be clearly indicated in the space provided on the bid sheet. Alternates not submitted as outlined at the time of the bid with the base bid proposal will not be considered.

E. Special attention is directed to the materials, products and equipment described in these specifications. They establish a standard of required function, dimension, appearance and quality.
   1. Where references are made to Federal Specifications, American Society for Testing and Materials, American Standards Association, American Institute of Steel Construction, Steel Institute, and similar associations, organizations and standards, it shall be construed to mean their current specifications and designations as amended as of the date of bid opening.
   2. The Pool Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner, the Contractor and Architect harmless from loss on account thereof, except that the Pool Contractor shall not be responsible for all such loss when a particular manufacturer or manufacturers is specified, but if the Pool Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Contractor, Owner and Architect

1.06 DELIVERY, STORAGE AND HANDLING

A. Do not deliver materials until operations that could damage items have been completed in installation areas. If materials must be stored in other-than-installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

B. Deliver manufactured materials to site in manufacturers' original unbroken packages or containers bearing manufacturers; name and brand labels. Keep cemetitious materials dry until ready to be used and stored off the ground, under cover and away from damp surfaces.

1.07 COORDINATION

A.

1.08 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components that fail in materials or workmanship within specified warranty period.
   1. Warranty Period: 1 year from date of Substantial Completion.

B. The deck equipment shall be guaranteed for a period of one year against defects in workmanship or material.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

A. Comply with applicable codes for pools and associated equipment. New York State Sanitary Code 6-1.

2.02 PIPE AND FITTINGS - FOR POOL CIRCULATION PIPING (I.E. MAIN DRAIN, GUTTER, RETURN)

A. Exposed Piping: Schedule 80 CPVC

B. Concealed Piping: Schedule 80 CPVC

C. Valves and Fittings: Provide Wafer type or as otherwise noted on plans type. Normally used for Swimming pools, NSF listed and materials matching piping.

D. All exposed piping to be painted/labeled/color coded to comply with NYS SSC 6-1.

2.03 POOL FILTRATION EQUIPMENT

A. Refer to equipment schedule on Pool Plans for basis of design equipment and pool components.

B. All materials must be NSF listed as required by NYS SSC 6-1, and/or provided by Pool equipment vendors who specialize in that type of equipment. No field fabricated equipment will be allowed.

C. Filter shall be high pressure sand type equal to Paddock. Contractor is responsible to confirm clearence through existing door/frames for delivery before final filter submittal selection.

D. Redundant pool pumps. Each selected for 100% rated capacity (350 gpm each), with VFD contoller. Pumps interlocked to not run at the same time. Pumps interlocked with chemical controller to shut off chemical injection system when pool pumps are off. Connect potable water supply, through backflow device, as required by manufacturer for priming.

E. Chemical Controller equal to BECSYS5 or Chemtrol PC2100. Controller shall be connected to pool piping and disinfection/ph systems as required by manufacturers. Contractor is responsible for all control wiring and piping related to controller installation. System shall shut down chemical injection equipment when pool pump is OFF.

F. Manual Water Level control. Potable water with Manual valve at accessible height, through air gap to balance tank.

G. Liquid chlorine tanks and associated chemical feed pumps. Refer to schedule on plans.

H. Additional Filter room equipment as shown on P700.2 Equipment Schedule, P700.2 plan, and detail P000.2 Pool Pipe Schematic:
   1. Flow Meter (with 350 gpm in mid-range) for Pump VFD control. Required straight pipe as per manufacturer.
   2. Pressure Gauges. After pump, before and after filter
   3. Compound Gauges before pump

4. Flow meter at location visible from standing position on floor. On Return, after filter, but Upstream of all chemical injection points. On backwash discharge pipe. Required straight pipe as per manufacturer.
5. Flow control will be via VFD on pool pump. VFD panels on redundant pumps set to automatically lead/lag pumps at least weekly.
6. Relocate existing CO2 tanks and controller. Provide new Rated and ventilated cabinet for CO2 ph tanks. Size of cabinet as required for existing CO2 tank. Refer to Mechanical plans for coordination for Associated Exhaust fan, sized for 1 air change for every 3 minutes.
7. 2" supply and return with by-pass valves, connected to New pool Heat exchanger from Building Boiler Heating Hot Water System. Refer to Mechanical plans for coordination. Pumps and Heat exchanger NSF listed.
8. 2" supply and return with by-pass valves, connected to New Roof Top HVAC dehumidification equipment. Refer to Mechanical plans for coordination. Pumps and equipment NSF listed.
9. All Controls wiring related to pool equipment, by this contract. Coordinate with Electric for 110V, 208V, etc supply connection.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify excavation surfaces are clean, smooth, and without voids or irregularities.

B. Verify grounding of electrical and metallic components. Refer to electrical plans. All bonding and grounding shall be in compliance with NEC and shall be inspected and approved by 3rd party electrical inspector. Provide documentation from electrical inspection for submission to Health Department.

3.02 INSTALLATION - EQUIPMENT

A. Provide all pool filtration equipment as shown on contract documents and as required by manufacturer.

B. Pool will need to be drained below floor level of Balance Tank to perform work. Owner responsible for pool emptying and refilling. Contractor responsible for dewatering during construction.

3.03 INSTALLATION - ACCESSORIES

A. Install pool accessories and fittings in accordance with component manufacturer's instructions.

3.04 PATCHING, POINTING, AND CLEANING UP

A. Leave tile surfaces in clean, unblemished condition ready for pool filing.

B. Remove protective coverings from adjoining surfaces.

C. Remove rubbish and debris from the site.

3.05 COMMISIONING AND START UP

A. Engage a manufacturers/installer service representative to perform startup service.
   1. Verify that pool and pool equiipment is connected and functioining according to published specifications.

B. Complete installation and startup checks according to Pool manufacturer's written instructions.

C. Operational Test: Start up all pumps to confirm proper motor rotation and unit operation. Remove malfunctioning units, replace with new units, and retest.

D. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

E. Notifiy Arch/Engineer 4 weeks before completion, to schedule final Engineering punchlist and certification. Pool must be full, and all systesm operational at the required flow rate. Health Department walk through and approval is required before pool can be used.

3.06 CLOSE OUT DOCUMENTS

A. Provide Operation Manual per NYS Subpart 6-1. Include all manufacturer parts diagrams, preventative maintenance protocol and warrenties.

B. Provide start-up services for all equipment, including manufacturer designated representation, with minimum 5 year experience, for pumps, filters, chemical systems, etc.

C. Provide Owner training, including video documentation, of all systems and procedures. Schedule owner training within 30 days prior to turn over and Pool re-Opening.

D. Engage a Pool manufacturers/installer representative to train Owner's maintenance personnel to adjust, operate, and maintain pool equipment.
   1. Train Owner's maintenance personnel on procedures and schedules for starting and stopping, troubleshooting, servicing, and maintaining equipment and schedules.
   2. Review data in maintenance manuals. Refer to Division 1 Sections.
   3. Schedule training with Owner, through Architect, with at least seven days' advance notice.

END OF SECTION 131103

This page intentionally left blank