$\mathbf{W} \mathbf{AIA}^{\circ}$ Document G710[°] – 2017

Architect's Supplemental Instructions

PROJECT: (name and address) 57-21113-00 - Rebid Dutchess Stadium New Left Field Clubhouse, Seating Bowl, & Restroom Building

CONTRACT INFORMATION: Contract For:

Date:

OWNER: (name and address) **Dutchess County** 22 Market St Poughkeepsie, NY 12601

ARCHITECT: (name and address) DLR Group inc., 33 East 33rd Street Suite 401 New York, NY 10016

ASI INFORMATION: ASI Number: 001

Date: April 7,2023

CONTRACTOR: (name and address) Piazza, Inc. 3 W Stevens Ave Hawthorne, NY 10532

The Contractor shall carry out the Work in accordance with the following supplemental instructions without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgment that there will be no change in the Contract Sum or Contract Time. (Insert a detailed description of the Architect's supplemental instructions and, if applicable, attach or reference specific exhibits.)

Modify the Contract Documents per the attachments and generally as follows:

- 1. Sheet G0.00.ii COVER SHEET a. Modifications per the attached sheet G0.00.ii.
- 2. Sheet A1.1A.ii FLOOR PLAN AREA A LEVEL 1 a. Modifications per the attached sheet A1.1A.ii.
- 3. Sheet A11.3.ii INTERIOR DETAILS a. Modifications per the attached sheet A11.3.ii.
- 4. Sheet A11.4.ii INTERIOR DETAILS
- a. Modifications per the attached sheet A11.4.ii.
- 5. Sheet A13.2A.ii FIRST FLOOR FF&E PLAN AREA A a. Modifications per the attached sheet A13.2A.ii.
- 6. Sheet A13.3A.ii SECOND FLOOR FF&E PLAN AREA A a. Modifications per the attached sheet A13.3A.ii.
- 7. Sheet S0.1.ii STRUCTURAL NOTES
- a. Modifications per the attached sheet S0.1.ii.
- 8. Sheet S1.1.ii FOUNDATION PLAN
- a. Modifications per the attached sheet S1.1.ii.
- 9. Sheet S3.2.ii FOUNDATION TYPICAL DETAILS
- a. Modifications per the attached sheet S3.2.ii.
- 10. Sheet P1.1A.ii UNDERGROUND PLUMBING PLAN AREA A a. Modifications per the attached sheet P1.1A.ii.
- 11. Sheet P2.1A.ii PLUMBING PLAN AREA A LEVEL 1
- a. Modifications per the attached sheet P2.1A.ii. 12. Sheet P6.2.ii - PLUMBING SCHEDULES
- a. Modifications per the attached sheet P6.2.ii.
- 13. Sheet M0.1.ii MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES a. Modifications per the attached sheet M0.1.ii.
- 14. Sheet M8.2.ii MECHANICAL SCHEDULES
- a. Modifications per the attached sheet M8.2.ii. 15. Sheet E0.1.ii - ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES a. Modifications per the attached sheet E0.1.ii.
- 16. Sheet E1.2A.ii LIGHTING PLAN AREA A LEVEL 2
- a. Modifications per the attached sheet E1.2A.ii.
- 17. Sheet E7.1.ii ELECTRICAL SCHEDULES

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a. Modifications per the attached sheet E7.1.ii.

18. Section 088000 Glazing

a. Modifications per the attached Section 088000 Glazing

ISSUED BY THE ARCHITECT:

DLR Group inc., a New York corporation ARCHITECT (Firm name)

W U SIGNATURE

Bob Carlson, AIA, LEED AP, Principal PRINTED NAME AND TITLE

April 07, 2023 DATE

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2



REBID DUTCHESS STADIUM NEW LEFT FIELD CLUBHOUSE, SEATING **BOWL, & RESTROOM BUILDING**

1500 ROUTE 9D FISHKILL, NY 12590

SINGLE PRIME CONTRACT RFB-DCB-18-22 NOVEMBER 4, 2022



ROBERT H. BALKIND, P.E. DUTCHESS COUNTY DPW COMMISSIONER

OWNER: DUTCHESS COUNTY 22 MARKET STREET POUGHKEEPSIE, NY 12601





LANDSCAPE ARCHITECTURE





Lincoln, NE 68508 Tel 402.475.1787

	A		В									
	Code Analysis	Chapter 8: Inte	erior Finishes									
	Project Name: <u>Dutchess Stadium New Left Field Clubhouse, Seating Bowl, & Restroom Building</u>	202 12 Interi	iar Einich Daguiraman	te Daead an Occu								
	Applicable Building Codes:	Interior wall an	d ceiling finish shall have a t	lame spread index pot	greater than th	at specified in Table 803-13 :	for the group and locati	on designated				
	2020 Building Code of New York State (IBC 2018 with amendments)	Interior wall and permitted to be	d ceiling finish materials tes e used where a Class A clas	ted in accordance wit	h NFPA 286 and ce with ASTM E8	meeting the acceptance crit 34 or UL 723 is required.	teria of Section 803.1.1.	1, shall be				
	2020 Existing Building Code of NYS (IEBC 2018 with amendments)	·										
	2020 Fire Code of NYS (IFC 2018 with amendments)		INTER	IOR WALL AND CEIL	TABLE 803.1	3 QUIREMENTS BY OCCUPANO	CY ^k					
	2020 Plumbing Code of NYS (IPC 2018 with amendments)		SF	RINKLERED		NON	SPRINKLERED					
1	2020 Machanical Code of NVS (IMC 2018 with amondmente)	GROUP	Interior exit stairways	Corridors and enclosure for exit	Rooms and	Interior exit stairways an	d Corridors and enclosure for exit	Rooms and				
'			and ramps and exit passageways ^{a, b}	access stairways and ramps	enclosed spaces ^c	ramps and exit passageways ^{a, b}	access stairways and ramps	enclosed spaces ^c				
	2020 Fuel Gas Code of NYS (IFGC 2018 with amendments)	A-1 & A-2	В	В	С	A	Ad	Be				
	National Electrical Code 2017 of NYS (NFPA 70, 2017)	A-3 ^f , A-4, A-5	В	В	С	A	Ad	с				
	2020 Energy Conservation Code of NYS (IECC 2018 with amendments)	B, E, M, R-1	В	Cm	С	A	В	с				
	Accessible and Usable Buildings and Facilities 2009 of New York State (A117.1, 2009)	R-4	с	c c	с	В	С	в				
	Safety Code for Elevators and Escalators 2016 of New York State (ASME A17.1, 2016)	Н	В	В	Cg	A	A	В				
	Building Code Requirements for Structural Concrete of New York State (ACI 318 2014)	I-1	В	с	С	A	В	В				
		I-2	В	В	B ^{h, i}	А	A	В				
	Building Code Sections	1-3	A	AJ B	C ph.i	A	A	В				
	Chapter 3: Occupancy Classification and Use	R-2	с	с	C	В	В	с				
	Occupancy: 303.6 Assembly Group A-5	R-3	с	с	с	С	с	с				
	Chapter 5: General Building Heights and Areas	S	С	C	с	В	В	С				
	Type of Construction: Type IIB	U	INC	o restrictions		NC) restrictions					
	Sprinklered: Yes	For SI: 1 inch =	: 25.4 mm, 1 square foot =	0.0929 m ² .								
	Allowable Building Height Above Grade Plane (Table 504.3): 75 Feet											
	Actual: 35'-8"	Chapter 9: Fire	Protection Systems				-					
	Allowable Number of Stories Above Grade Plane (Table 504.4): Unlimited	903.2.1.5 Grou 1,000 square fe	p A-5. An automatic sp eet (93 m2).	rinkler system shal	i be provided	for all enclosed Group A	-5 accessory use are	as in excess				
>	Actual: 2 Stories	903.2.1.6 Assei	mbly Occupancies on R	oofs								
-	Actual: Level 01 - 13.235S F	Where an occu occupancies, al	pied roof has an assem Il floors between the o	bly occupancy wit	h an occupant he level of exit	load exceeding 100 for	Group A-2 and 300 f	or other Gro atic sprinkler				
	Level 02 – 6,848 SF	system in accor	rdance with Section 90	3.3.1.1 or 903.3.1.2	2.							
	Concourse Toilet Building – 1,224 SF	905 Standpipe	Systems									
	Visitor Clubhouse Existing Area – 5,365 SF	905.3 Required systems are all	l Installation: Standpipe owed to be combined v	e Systems shall be i with automatic spri	nstalled wher inkler systems	e required by Sections 9 s.	05.3.1 through 905.3	3.8. Standpip				
	Required Fire Separation (Table 508.4): No Separation required between existing baseball stadium (A-5) and new Clubhouse Building	905.3.1 Standp	ipe system is not requi	red as none of the	conditions lis ⁻	ted in Section 905.3.1 ex	ist.					
	TABLE 509	907.2 Fire Alar	m An approved fire alar	rm system installed	l in accordanc	e with the provisions of	this code and NFPA	72 shall be				
	INCIDENTAL USES	accordance wit	th Section 907.5, unless	other requiremen	ts are provide	ed by another section of	this code.					
	ROOM OR AREA	Chapter 10: M	eans of Egress									
	Furnace room where any piece of equipment is over 400,000 Btu per hour input 1 hour or provide automatic sprinkler system	1004.9 Posting space posted in	Occupant Load: Every n a conspicuous place, r	room or space that near the main exit	t is an assemb or exit access	ly occupancy shall have doorway from the room	the occupant load of or space, for the int	the room or ended				
	Group I-3 cells equipped with padded surfaces 1 hour Waste and linen collection rooms located in either	configurations.	Posted signs shall be c	f an approved legi	ble permanen	t design and shall be ma	intained by the own	er or the ow				
	Group I-2 occupancies or ambulatory care facilities	1005 Means of	Egress Sizing									
	Waste and linen collection rooms over 100 square feet	Stairways (1005.3.1): 0.3 inch per occupant										
	Electrical installations and transformers 70 for protection and separation requirements. See Sections 110.26 through 110.34 and Sections 450.8 through 450.48 of NEPA Other Egress Components (1005.3.2): 0.2 inch per occupant											
	1006 Number of Exits and Exit Access Doorways Chapter 6: Types of Construction											
	Fire-Resistance Rating Requirements for Building Elements (Hours) Table 601: Type IIB											
	Primary Structural Frame (See Section 202): 0 Hours	Single Exit: Maximum Occupant Load: 49 Occupants										
	Bearing Walls, Interior and Exterior: 0 Hours		Three Exits: 500 to 1.0	000 Occupants								
3	Nonbearing Walls & Partitions, Exterior: 0 Hours if greater than 10 feet separation distance.		Four Exits: Greater th	an 1,000 Occupant	S							
	Nonbearing Walls and Partitions, Interior: 0 Hours	1007 Exit and E	Exit Access Doorway Co	nfiguration								
	Floor Construction and Associated Secondary Members: 0 Hours	1007.1.1 Two E	Exits or Exit Access Doo	rway: Exits shall be	laced a dista	nce apart equal to not le	ss than one-half of t	he length of				
	Roof Construction and Associated Secondary Members: 0 Hours	maximum over Except	ion 2: Where a building	is equipped throu	ghout with ar	ved measured in a straig	tem in accordance w	n. vith Section				
	603.1 Allowable Materials	903.3.1 diagon	1.1 or 903.3.1.2, the se	paration distance s	hall be not les	is than one-third of the l	ength of the maximu	ım overall				
	Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with	1009 Accessible	e Means of Egress	a serveu.								
	Sections 603.1.1 through 603.1.3.	1009.1 Accessi	ble Means of Egress Re	quired: Accessible	means of egre	ess shall comply with this	s section. Accessible	spaces shall				
	Chanter 7. Fire and Smales Protection Systems	provided with 1006.2 or 1006	not less than one acces 5.3 from any accessible	sible means of egro space, each access	ess. Where m ible portion o	ore than one means of e f the space shall be serve	gress is required by s ed by not less than ty	Section wo accessible				
	705 Exterior Walls	means of egres	SS.				,					
	705.2.1 Types I and II Construction	1009.2.1 Eleva	tors Required: Building	is less than four st	ories. Elevato	r does not need to be an	accessible means of	egress.				
	Projections from walls of Type I or II construction shall be of noncombustible materials or combustible materials as allowed	1009.3 Stairwa	YS	all have a d	dth of 40 · ·	os minimum hat	ndroile					
	by Sections 705.2.3.1 and 705.2.4.	Exception 1. Th	vay width: Stairways sr	hall have a clear with hes (1219 mm) het	ath of 48 inch ween handrai	es minimum between na	ings equipped throu	ighout with				
	713 Shaft Enclosures	an automatic s	prinkler system installe	d in accordance wi	th Section 90	3.3.1.1 or 903.3.1.2.	3- equipped till Ut	Streac Willi				
	713.4 Shaft Enclosures: Fire-resistance rating of 1 hour connecting less than 4 stories.	1009.3.3 Area o system	of Refuge: Not required	l per Exception 2 b	ecause the bu	ilding is equipped throu	ghout with an autom	natic sprinkle				
	following:	1010 Doors, Ga	ates, and Turnstiles									
	1. They shall be enclosed at the lowest level with construction of the same fire-resistance rating as the lowest floor through which	Minim	um Clear Opening Widt	h: 32 inches								
	2. They shall terminate in a room having a use related to the purpose of the shaft. The room shall be separated from the remainder	Maxim	um width of a swinging	door leaf: 48 inch	es							
	of the building by fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. The fire registance rating and opening protectives shall be not less than the protection required for	Minim	um Clear Opening Heig	ht: 80 inches								
1	the shaft enclosure.	Directi 50 pers	on of swing: Door Swin sons.	g in the direction o	of egress trave	I where serving a room o	or area containing ar	n occupant lo				
	3. They shall be protected by approved fire dampers installed in accordance with their listing at the lowest floor level within the shaft enclosure	1010.2 Gates										
	Exceptions:	1010.2.1 Stadiu	ums: Panic hardware is	not required on ga	ites surroundi lispersal areas	ng stadiums where such	gates are under con	stant immed				
	1. The fire-resistance-rated room separation is not required, provided that the only openings in or penetrations of	between the fe	ence and enclosed space	e. Such required sa	afe dispersal a	reas shall not be located	less than 50 feet (15	5 240 mm) fr				
	the shaft enclosure to the interior of the building occur at the bottom. The bottom of the shaft shall be closed off around the penetrating items with materials permitted by Section 718.3.1 for draftstopping, or the room shall be provided with	the enclosed sp	bace. See Section 1028.	5 for means of egr	ess from safe	dispersal areas.						
	an approved automatic sprinkler system. 2. A shaft enclosure containing a waste or linen chute shall not be used for any other purpose and shall discharge in a room	1011.2The requ	uired capacity of stairw	ays shall be detern	nined as speci	fied in Section 1005.1, b	ut the minimum wid	th shall be n				
	protected in accordance with Section 713.13.4. 3 The fire-resistance-rated room separation and the protection at the bottom of the shaft are not required provided that	less than 44 ind	ches (1118 mm). See Se	ection 1009.3 for a	ccessible mea	ns of egress stairways.						
	there are no combustibles in the shaft and there are no openings or other penetrations through the shaft enclosure to the interior of the building	1017 Exit Acces	um Exit Access Travel 5)istance: 250 fact (equipped the	Sughout with sutometic	sprinkler system)					
	713.12 Enclosure at the Top: A shaft enclosure that does not extend to the underside of the roof sheathing, deck or slab of the	1019 Exit Acces	ss Stairways and Ramo	s stance, 200 leet (-yaippeu (nri	- Honour With automatic	-printer system)					
-	building shall be enclosed at the top with construction of the same fire-resistance rating as the topmost floor penetrated by	1019.3 Exit acc	ess stairway does not r	need to be enclosed	d with a shaft	enclosure constructed ir	n accordance with Se	ection 713 pe				
	720 Thermal And Sound-Insulating Materials	Condition 1, Ex	it access stairways and stories shall not be on	ramps that serve of en to other stories	or atmospheri	cally communicate betw	een only two stories	. Such				
	- 720.2 Concealed installation. Insulating materials, where concealed as installed in buildings of any type of construction, shall have a	1020 Corridors	: Corridors are not requ	uired to be Fire Rat	ed because th	ne building is equipped w	vith an automatic spr	rinkler syster				
	flame spread index of not more than 25 and a smoke-developed index of not more than 450.	1020.2 Width a	and Capacity: Minimum	corridor width is 4	14 inches per	Table 1020.2.	- 1	,				
	Exception: Cellulose loose-fill insulation that is not spray applied, complying with the requirements of Section <u>720.6</u> , shall only be required to meet the smoke-developed index of not more than 450.	1020.4 Dead Ei	nds: Dead-end corridor	s do not exceed 20	feet in length	n. Exception 3 states A de	ead-end corridor sha	ll not be limi				
		iength where t	Begress Path Markings	Building is not a b	uian 2.5 time	s the least width of the c	ieau-end corridor.					
		1029.6.3 Open	-Air Assembly Seating:	In open-air assemb	bly seating, the	e required capacity in inc	ches (mm) of aisles s	hall be not le				
		than the total of multiplied by O	occupant load served b .06 (1.52 mm) where e	y the egress eleme gress is by level ais	nt multiplied les and rampo	by 0.08 (2.0 mm) where ed aisles.	egress is by stepped	aisle and				
-		Exception: The	required capacity in in	ches (mm) of aisles	s shall be pern	nitted to comply with Se	ction 1029.6.2 for th	e number of				
ן י		in the open-air	assembly seating when	e Section 1029.6.2	permits less	capacity.	aislas ere	orecti				
		distance shall k	pe measured along the	aisles and aisle acc	essways with	out travel over or on the	seats. Exception 3:	י seating, th				
		In facilities with	h open-air assembly sea	ating of Type I or II	construction,	the total exit access trav	vel distance shall not	be limited.				
		1103.2.2 Emplo	oyee Work Areas: Space	es and elements wi	ithin emplove	e work areas shall only b	e required to compl	y with				

Sections 907.5.2.3.1, 1009 and 1104.3.1 and shall be designed and constructed so that individuals with disabilities can approach, enter and exit the work area. Work areas, or portions of work areas, other than raised courtroom stations in accordance with Section 1108.4.1.4, that are less than 300 square feet (30 m2) in area and located 7 inches (178 mm) or more above or below the ground or finished floor where the change in elevation is essential to the function of the space shall be exempt from all requirements.

1103.2.9 Equipment Spaces: Spaces frequented only by service personnel for maintenance, repair or occasional monitoring of

equipment are not required to comply with this chapter. 1103.2.14 Walk-In Coolers and Freezers: Walk-in cooler and freezer equipment accessed only from employee work areas is not required to comply with this chapter.

1104.5 Location: Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall be interior. Where only one accessible route is provided, the accessible route shall not pass through kitchens, storage rooms, restrooms, closets or similar spaces.

1105.1 Public Entrances: In addition to accessible entrances required by Sections 1105.1.1 through 1105.1.7, at least 60 percent of

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1108.2 Assembly Area Seating: A building, room or space used for assembly purposes with fixed seating shall comply with Sections 1108.2.1 through 1108.2.5. Lawn seating shall comply with Section 1108.2.6. Assistive listening systems shall comply with Section 1108.2.7. Performance areas viewed from assembly seating areas shall comply with Section 1108.2.8. Dining areas shall comply with Section 1108.2.9.

1108.2.2 Wheelchair Spaces

all public entrances shall be accessible.

In rooms and spaces used for assembly purposes with fixed seating, accessible wheelchair spaces shall be provided in accordance with Sections 1108.2.2.1 through 1108.2.2.3.

1108.2.2.1 General Seating

Wheelchair spaces shall be provided in accordance with Table 1108.2.2.1.

TABLE 1108.2.2.1 ACCESSIBLE WHEELCHAIR SPACES

CCESSIBLE WHEELCHAIR SPACES					
CAPACITY OF SEATING IN ASSEMBLY AREAS	MINIMUM REQUIRED NUMBER OF WHEELCHAIR SPACES				
4 to 25	1				
26 to 50	2				
51 to 100	4				
101 to 300	5				
301 to 500	6				
501 to 5,000	6, plus 1 for each 150, or fraction thereof, between 501 through 5,000				
5,001 and over	36 plus 1 for each 200, or fraction thereof, over 5,000				
108.2.2.2 Luxum Boxos, Club Boxos and Suitos					

1108.2.2.2 Luxury Boxes, Club Boxes and Suites In each luxury box, club box and suite within arenas, stadiums and grandstands, wheelchair spaces shall be provided in accordance

with Table 1108.2.2.1. 1108.2.2.3 Other Boxes: In boxes other than those required to comply with Section 1108.2.2.2, the total number of wheelchair spaces provided shall be determined in accordance with Table 1108.2.2.1. Wheelchair spaces shall be located in not less than 20 percent of all boxes provided.

1108.2.3 Companion Seats: At least one companion seat shall be provided for each wheelchair space required by

Sections 1108.2.2.1 through 1108.2.2.3. 1108: Team/Player Seating: At least one wheelchair space shall be provided in team or player seating areas serving areas of sport

activity. 1108.2.9 Dining and Drinking Areas: In dining and drinking areas, all interior and exterior floor areas shall be accessible and be on an accessible route.

Exceptior

- 1. An accessible route between accessible levels and stories above or below is not required where permitted by Section 1104.4, Exception 1
- 2. An accessible route to dining and drinking areas in a mezzanine is not required, provided that the mezzanine contains less than 25 percent of the total combined area for dining and drinking and the same services, and decor are provided in the accessible area.
- 3. In sports facilities, tiered dining areas providing seating required to be accessible shall be required to have accessible routes serving at least 25 percent of the dining area, provided that accessible routes serve accessible seating and where

Where dining surfaces for the consumption of food or drink are provided, at least 5 percent, but not less than one, of the dining surfaces for the seating and standing spaces shall be accessible and be distributed throughout the facility and located on a level

1109.2.1 Family or Assisted-Use Toilet and Bathing Rooms: In assembly and mercantile occupancies, an accessible family or assisteduse toilet room shall be provided where an aggregate of six or more male and female water closets is required. In buildings of mixed occupancy, only those water closets required for the assembly or mercantile occupancy shall be used to determine the family or assisted-use toilet room requirement. In recreational facilities where separate-sex bathing rooms are provided, an accessible family or assisted-use bathing room shall be provided. Fixtures located within family or assisted-use toilet and bathing rooms shall be included in determining the number of fixtures provided in an occupancy.

Chapter 12 Interior Environment

1207.1 Minimum Room Widths: Habitable spaces, other than a kitchen, shall be not less than 7 feet (2134 mm) in any plan dimension. Kitchens shall have a clear passageway of not less than 3 feet (914 mm) between counter fronts and appliances or counter fronts and walls.

1207.2 Minimum Ceiling Heights: Occupiable spaces, habitable spaces and corridors shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) above the finished floor. Bathrooms, toilet rooms, kitchens, storage rooms and laundry rooms shall have a ceiling height of not less than 7 feet (2134 mm) above the finished floor.

Chapter 14 Exterior Walls

1402.2 Weather Protection

Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in Section 1404.4. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1403.2, and a means for draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be provided in accordance with Section 1404.3.

Exceptions: A weather-resistant exterior wall envelope shall not be required over concrete or masonry walls designed in accordance with Chapters 19 and 21, respectively.

1404.3 Vapor Retarders

Vapor retarders as described in Section 1404.3.3 shall be provided in accordance with Sections 1404.3.1 and 1404.3.2, or an approved design using accepted engineering practice for hydrothermal analysis.

1404.3.1 Class I and II Vapor Retarders

Class I and II vapor retarders shall not be provided on the interior side of frame walls in Zones 1 and 2. Class I vapor retarders shall not be provided on the interior side of frame walls in Zones 3 and 4 other than Marine 4. Class I or II vapor retarders shall be provided on the interior side of frame walls in Zones 5, 6, 7, 8 and Marine 4. The appropriate zone shall be selected in accordance with Chapter 3 [CE] of the Energy Conservation Code of New York State-Commercial Provisions.

Exceptions:

Basement walls.

Below-grade portion of any wall.

Construction where moisture or its freezing will not damage the materials.

Conditions where Class III vapor retarders are required in Section 1404.3.2.

1404.3.2 Class III Vapor Retarders

Class III vapor retarders shall be permitted where any one of the conditions in Table 1404.3.2 is met. Only Class III vapor retarders shall be used on the interior side of frame walls where foam plastic insulating sheathing with a perm rating of less than 1 is applied in accordance with Table 1404.3.2 on the exterior side of the frame wall.



TABLE 1404.3.2

Chapter 15 Roof Assemblies and Rooftop Structures

each tier is provided with the same services.

4. Employee-only work areas shall comply with Sections 1103.2.2 and 1104.3.1. 1108.2.9.1 Dining Surfaces

accessed by an accessible route.

INVITABLE C402

DING ENVELOPE FE	NESTRATION MAXIM	UM <i>U</i> -F	ACTOR	AND	SHGC REQUIREMENT
			-		

CLASS III V	/APOR RETARDERS	[NY] TABLE C402.4					
		BUILDING ENVELOPE	FENESTRATION MAXIM	10M <i>U</i> -F	ACTO	RANDS	HGC REQUIREMENTS
ZONE	CLASS III VAPOR RETARDERS PERMITTED FOR:		CLIMATE ZONE	4	5	6	
	Vented cladding over wood structural papels		Vertical fen	estratio	on		
			U-factor				
Marine	Vented cladding over fiberboard		Fixed fenestration	0.38	0.38	0.36	
Л	Vented cladding over gypsum		Operable fenestration	0.45	0.45	0.43	
4	Continuous insulation with R-value \ge R2.5 over 2 \times 4 wall		Entrance doors	0.77	0.77	0.77	
1	Continuous insulation with R-value ≥ R3.75 over 2 × 6 wall		SHGC				
			PF < 0.2	0.36	0.38	0.40	
1	Vented cladding over wood structural panels		0.2 ≤ PF < 0.5	0.43	0.46	0.48	
	Vented cladding over fiberboard		PF ≥ 0.5	0.58	0.61	0.64	
5	Vented cladding over gypsum		Skylig	thts			
	Continuous insulation with P value $> P5$ over 2×4 wall		U-factor	0.50	0.50	0.50	
			SHGC	0.40	0.40	0.40	
	Continuous insulation with R-value \geq R7.5 over 2 × 6 wall	PF = Projection Factor.					
	Vented cladding over fiberboard	C402.5.1.1 Air Barrie	er Construction				
	Vented cladding over gypsum	The continuous air b	oarrier shall be consti	ructed	to co	mply	with the following:
6	Continuous insulation with R-value ≥ R7.5 over 2 × 4 wall	The air barrier shall	be continuous for all	lassem	nblies	that a	re the thermal envelope
	Continuous insulation with R-value ≥ R11.25 over 2 × 6 wall	assemblies.					
		Air barrier joints and	seams shall be seale	ed, inc	ludin	g seali	ng transitions in places a
Zande	Continuous insulation with R-value \ge R10 over 2 \times 4 wall	be securely installed	l in or on the joint for	r its er	tire l	ength :	so as not to dislodge, loo
7 and 8	Continuous insulation with R-value \geq R15 over 2 × 6 wall	positive and negative	e pressure from wind	u, stac	k enfe	et and	mechanical ventilation.

materials and location. Sealing shall allow for expansion, contraction and mechanical vibration. Joints and seams associated with penetrations shall be sealed in the same manner or taped. Sealing materials shall be securely installed around the penetration so as Spray foam with a maximum permanence of 1.5 perms at the installed thickness applied to the interior cavity side of wood structure not to dislodge, loosen or otherwise impair the penetrations' ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or

ceilings.

Recessed lighting fixtures shall comply with Section C402.5.8. Where similar objects are installed that penetrate the air barrier, provisions shall be made to maintain the integrity of the air barrier.

panels, fiberboard, insulating sheathing or gypsum is deemed to meet the continuous insulation requirement where the spray foam R-value meets or exceeds the specified insulating sheathing R-value.

1404.3.3 Material Vapor Retarder Class

The vapor retarder class shall be based on the manufacturer's certified testing or a tested assembly. The following shall be deemed to meet the class specified:

Class I: Sheet polyethylene, nonperforated aluminum foil with a perm rating of

less than or equal to 0.1. Class Kraft-faced fiberglass batts or paint with a perm rating greater than 0.1

II: and less than or equal to 1.0.

Class Latex or enamel paint with a perm rating of greater than 1.0 and less than or equal to 10.0.

1404.4.2 Masonry: Flashing and weep holes in anchored veneer designed in accordance with Section 1404.6 shall be located not more than 10 inches (245 mm) above finished ground level above the foundation wall or slab. At other points of support including structural floors, shelf angles and lintels, flashing and weep holes shall be located in the first course of masonry above the support.

1507.1.2 Ice Barriers

In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier shall be installed for asphalt shingles, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles, and wood shakes. The ice barrier shall consist of not less than two layers of underlayment cemented together, or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building.

Exception: Detached accessory structures that do not contain conditioned floor area.

2020 Energy Conservation Code of NYS [NY] TABLE C402.1.3

[NY] TABLE C402.1.4

OPAQUE	THERMAL E REOL	INVELOPE I	NSULATIO	N COMPON METHOD ^{a, i}	ENT MINI	MUM		OPAQUE THERMA	L ENVELOP	E ASSEMB	LY MAXIMU HOD ^{a, b}	JM REQUI	REMENTS, U	/-FACTOR
CLIMATE	4 EXCEPT MARINE 5 AND MARINE 4 6			4 EXCEPT MADINE				6	;					
ZONE	All other	Group R	All other	Group R	All other	Group R		CLIMATE ZONE	All	Group	All	All Group		Group
			Roofs						other	R	other	R	other	R
nsulation entirely			B 00 -		B 99 -					R	oofs			
bove roof leck	K-SUCI	R-SUCI	R-SUCI	K-SUCI	K-SUCI	R-SUCI		Insulation entirely	U-0.032	U-0.032	U-0.032	U-0.032	U-0.032	U-0.032
/letal xuildings ^b	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-25 + R-11 LS	R-25 + R-11 LS		above roof deck	U-0 035	U-0 035	ULO 035	U-0.035	U-0 031	U-0.031
Attic and other	R-38	R-38	R-38	R-49	R-49	R-49		Attic and other	U-0.027	U-0.027	U-0.027	U-0.021	U-0.021	U-0.021
	I	Walls, a	above grad	le						Walls, at	ove grade			
/lass ^g	R-9.5ci	R-11.4ci	R-11.4ci	R-13.3ci	R-13.3ci	R-15.2ci		Mass ^g	U-0.104	U-0.090	U-0.090	U-0.080	U-0.080	U-0.071
/letal building	R-13 + R-13ci	R-13 + R-13ci	R-13 + R-13ci	R-13 + R-13ci	R-13 + R-13ci	R-13 + R-13ci		Metal building	U-0.052	U-0.052	U-0.052	U-0.052	U-0.052	U-0.052
letal framed	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-7.5ci	R-13 + R-7.5ci		Metal framed	U-0.064	U-0.064	U-0.064	U-0.064	U-0.064	U-0.064
Vood framed	R-13 + R-3.8ci	R-13 + R-3.8ci	R-13 + R-3.8ci	R-13 + R-7.5ci or R-20	R-13 + R-7.5ci or R-20	R-13 + R-7.5ci or R-20		and other ^c	U-0.064	U-0.064	U-0.064	U-0.064	U-0.051	U-0.051
ther or R-20 or R-20 or R-20 + R-3.8ci + R-3.8ci + R-3.8ci						Walls, below grade								
		Walls,	below grad	le				Below-grade	C 0 110	C 0 110 C 0	C 0 110	C 0 110	C 0 110	C 0 1 1 0
elow-grade vall ^c	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci		wall ^c	C-0.119	C-0.119	C-0.119	C-0.119	C-0.119	C-0.119
	1	I	Floors					Floors						
/lass ^e	R-10ci	R-10.4ci	R-10ci	R-12.5ci	R-12.5ci	R-12.5ci		Mass ^d	U-0.076	U-0.074	U-0.074	U-0.064	U-0.064	U-0.064
oist/framing	R-30	R-30	R-30	R-30	R-30	R-30 ^e		Joist/framing	U-0.033	U-0.033	U-0.033	U-0.033	U-0.033	U-0.033
		Slab-on	-grade floo	ors						Slab-on-g	rade floor:	5		
Jnheated	R-10 for	R-10 for	R-10 for	R-10 for	R-10 for	R-15 for		Unheated slabs	F-0.54	F-0.54	F-0.54	F-0.54	F-0.54	F-0.52
labs	24 below	24 below	24 below	24 below	24 below	below		Heated slabs ^f	F-0.86	F-0.86	F-0.79	F-0.79	F-0.79	F-0.69
	R-15 for 24"	R-15 for 24"	R-15 for 36"	R-15 for 36"	R-15 for 36"	R-20 for 48"			0.04	Opagi	le doors	0.04	0.55	0.00
leated slabs ^h	below + R-5	below + R-5 full	below + R-5	below + R-5 full	below + R-5	below + R-5 full		Swinging door	11.0.61	11.0.61	11.0.37	11.0.37	11.0.37	11.0.37
	full slab	slab	full slab	slab	full slab	slab		Swinging door	0-0.01	0-0.01	0-0.57	0-0.57	0-0.57	0-0.57
	1	Opa	que doors					<14%	U-0.31	U-0.31	U-0.31	U-0.31	U-0.31	U-0.31
lonswinging	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75		glazing						

	D SUBMITTALS TO AUTHORITY HAVING JURISDICTION
6 033000	CONCRETE MIXTURE DESIGN
(GROUT MIXTURE DESIGN
5 051200	STRUCTURAL STEEL CONNECTIONS
055113	METAL STAIRS
054000	COLD FORMED MTL FRAMING
055213	PIPE AND TUBE RAILINGS
057300	DECORATIVE METAL RAILINGS
077253	SNOW GUARDS
142400	HYDRAULIC ELEVATORS
144200	WHEELCHAIR LIFTS
211313	WET-PIPE SPRINKLER SYSTEMS
(323113	CHAIN LINK FENCES AND GATES
m	mmmmm

PLUMBING FIXTURES ASSEMBLY (STADIUMS FOR OUTDOOR SPORTING EVENTS)												
	Existing	Proposed	Required	l Fixtures			Required	l Fixtures	Provided Fixtures		Bathtubs/	
	Occupants	Occupants	(M	ale)	Provided Fixtures (Male)			(Fen	nale)	(Female)		Showers
			WC	Lavs	WC	Urinal	Lavs	WC	Lavs	WC	Lavs	
mum Code Required Fixtures			1 per 75*	1 per 200				1 per 40**	1 per 150			Not Required
1 Player Development												
01 (Players)	N/A	33	1	1	2	2	4	N/A	N/A	N/A	N/A	N/A
01 (Coaches & Staff & Other Occupants)	N/A	93	1	1	2	2	3	2	1	2	2	N/A
2 Hospitality												
02 (224 Club + 290 Party Deck)		514 (257 PER)	4	2	2	3	2	7	2	8	4	N/A
oor Stadium Seating (Concourse Toilet Building)												
02 (479 Armchairs + 90 Terrace)***		569 (285 PER)	3 @ 1/120	2	3	4	4	5 @ 1/60	2	8	3	N/A
nate #1 + Outdoor Stadium Seating												
nate #1 Enlarged Picnic Deck (999 Occupants) +												
oor Stadium Seating (569)		1568 (784 Per)	7 @ 1/120	4				14 @ 1/60	6	14	6	N/A

Occupants are divided equally between Male and Female

In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets for males according to Table 403.1 in assembly and educational occupancies. Family Toilet water closet and lavatory is included in the Female Fixture Count

* for the first 1500, 1 per 120 for remainder exceeding 1500 **for the first 1520 and 1 per 60 for the remainder exceeding 1520

Drinking	a .1
Fountains	Other
1 1 000	4
1 per 1,000	1 service sink
	1
	1
	1

REBID DUTCHESS STADIUM NEW LEFT	CLUBHOUSE, SEATING BOWL, & REST	OWNER: DUTCHESS COUNTY, 22 MARKET STREET POUGHKEEPSIE, NY 12601	1500 ROUTE 9D, FISHKILL, NY 12590
BID S 11.04.22 REVISION 1 CONSTR 2 ASI 001	ET IS UCTION DO	DCS	03.06.2 04.07.2
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ANALYSIS

CP0.1.ii

Penetrations of the air barrier shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction

ions in places and changes in materials. The joints and seals shall o dislodge, loosen or otherwise impair its ability to resist

rmal envelope of the building and across the joints and



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FIELD OOM I





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- STILE BEYOND - DO NOT CUT

- 3/4" MDF COUNTERTOP - CLAD WITH PLASTIC

— APPLIANCE AS SPECIFIED - REFER

- COUNTER TOP, SEE ELEVATIONS

- DRAWER W/ 150 LB FULL EXTENSION GLIDES, SEE ELEVATIONS FOR LOCATIONS

- HORIZONTAL PULLS TO BE CENTERED ON

THERMOFUSED MELAMINE OVER

· SEE ELEVATIONS FOR WALL FINISH

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INTERIOR DETAILS

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	REBID DUTCHESS STADIUM NEW LEFT FIELD CLUBHOUSE, SEATING BOWL, & RESTROOM BUILDING OWNER: DUTCHESS COUNTY, 22 MARKET STREET POUGHKEEPSIE, NY 12601 100 NOVE 50, FISHKIL, NY 1250
	BID SET 11.04.22 REVISIONS 1 CONSTRUCTION DOCS 03.06.23 2 ASI 001 04.07.23
TON SE R, RE: ELEC, PLUMB, & MECH DWGS ALL-FREEZER, NSF TEEL SE GET ICE, 500 LB STORAGE BIN EEL, NSF GLASS FRONT, NSF -OCK, NSF EN STORAGE	57-21113-00 FIRST FLOOR FF&E PLAN - AREA A

	Α	В
1	<text><section-header><section-header></section-header></section-header></text>	B CONCRETE RENFORCEMENT 1 RENFORCING STEEL SMULL BE ASTM ABIS, GRADE KD. RENFORCING STEEL TO BE WELDED SMULL BE ASTM AVES, GRADE BD. 2 CONCRETE COVER REQUEREMENTS FOR CAST-IN-PLACE, INN-PRESTRESSED CONCRETE UNESS OTHERINGE NOTE ON DETAILS. 3 CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH IN FORMED CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH EARTH STARS, MULLS, MULLS, MULLONGTES 4 CONCRETE INFORMATION OF THE CONTACT WITH EARTH STARS, MULLS, MULLS, MULLONGTES 1/2 4 BE REAR AND BALLER. 1/2 5 FIRMARY REINFORCEMENT. 1/2 6 BE REAR AND BALLER. 1/2 7 TESS STREAMES STREAMED THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF MARED BY THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF MARED BY THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF MARED BY THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF MARED BY THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF MARED BY THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF MARED BY THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF COMPRETE BY ACTIONS. DO NOT WE STORK REINFORCING SHALL BE TROPENT OF MARED BY THE CONTRACTOR. SECURE ALL REINFORCEMENT IN PLACE PROPENT OF MARED BY ALL WE DE SIGNING TO CONCRETE SHALL BE TROPENT. 6 LAPA ALL WELDED WIRE REINFORCING AT LEAST ONE FULL WIRE BRACENCY PLACE MARED. 6 LAPA ALL WELDED WIRE REINFORCING AT LEAST ONE F
4	 MINIMUM HYUSI JUEP INF 34. ALLOWABLE SOLE BEARING PRESSURE = 3.000 PSF EQUIVALENT ACTIVE (UNRESTRAINED) FLUID PRESSURE = 43 PCF EQUIVALENT ARASSIY RESTRAINED) FLUID PRESSURE = 300 PCF EQUIVALENT PASSIVE FLUID PRESSURE = 300 PCF EQUIVALENT PASSIVE FLUID PRESSURE = 300 PCF EQUIVALENT OF FRICTION 30.0 ALLOWABLE END BEARING PRESSURE (HIGH PLASTICITY CLAY) = 300 PSF ALLOWABLE SIN FRICTION (HIGH PLASTICITY CLAY) = 1.500 PSF SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL READ AND FAMILIARIZE HIMSELF WITH THE GEOTECHNICAL REPORT. IF DISCREPANCES EXIST BETWEEN PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT. IF DISCREPANCES EXIST BETWEEN PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT. IF DISCREPANCES EXIST BETWEEN PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT. THE DISCREPANCES EXIST BETWEEN PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT. THE DISCREPANCES EXIST BETWEEN PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT. THE DISCREPANCES SO THER. "WISE NOTED. CONNECTING CONSTRUCTION SHALL BE STRUCTURE, UNLESS OTHER. "WISE NOTED. CONNECTING CONSTRUCTION SHALL BE INSTALLED, INCLUDING SITALLATION OF FLOOR ROOF DIAPHRAGMS SHALL REACH 75%. OF REQUIRED 28 DAY COMPRESSIVE STRENGTH PRIOR TO BACKFILLING. WALLS ARE NOT DESIGNED TO WITHSTAND TEMPORARY CONSTRUCTION LOADS. INCLUDING WIND AND SEISMIC. CONTRACTOR'S ENGINEER IS RESPONSIBLE FOR DESIGN OF TEMPORARY SHORING. BACKFILLING AGAINST FOUNDATION WALLS WHERE GRADE IS PRESENT ON BOTH SIDES SHALL BE PERFORMED SUCH THAT THE DIFFERENCE IN SOLI HEIGHT ON EACH SIDE DOES NOT EXCEED 2 FEET. TEMPORARY FROST PROTECTION SHALL BE PROVIDED DURING COLD WEATHER FOR ALL FOUNDATIONS. CONTRACTOR SHALL PROVIDE FOR PROPER DEWATERING OF ALL EXCAVITONS. NEW FOOTINGS LOCATED IMMEDIATELY ADJACENT TO EXISTING FOOTINGS SHALL BE FOUNDED AT THE SAME ELEVATIONS AS	 PREUMABLY LARGE LARGE
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		С	D
TEEL TO BE WELDED		 CONCRETE MASONRY UNITS (CMU): 1. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY UNITS SHALL BE 2,800 PSI ON THE NET AREA, PROVIDING A STRUCTURAL DESIGN COMPRESSIVE STRENGTH OF 2,000 PSI MINIMUM PER THE INTERNATIONAL BUILDING CODE, SECTION 2105.1 AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6 TABLE 2). 2. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE CLAY MASONRY UNITS SHALL BE 3,250 	 STRUCTURAL STEEL: 1. FABRICATOR QUALIFICATIONS: A QUALIFIED FABRICATOR THAT PARTICIPATES IN THE AISC QUALITY CERTIFICATION PROGRAM AND IS DESIGNATED AN AISC-CERTIFIED PLANT, CATEGORY STD AND AN "APPROVED FABRICATOR" IN ACCORDANCE WITH IBC SECTION 1704.2, REGISTERED AND APPROVED BY THE LOCAL BUILDING DEPARTMENT. AISC CERTIFICATION SHALL BE SHOWN CLEARLY ON THE SHOP DRAWINGS TO AVOID SHOP DRAWINGS BEING REJECTED
RTH: 3" 2" 1 1 /2"		2. THE MINIMUM 20-DAY COMPRESSIVE STRENGTH OF THE CLAY MASONRY UNITS SHALL BE 3,350 PSI ON THE NET AREA, PROVIDING A STRUCTURAL DESIGN COMPRESSIVE STRENGTH OF 1,500 PSI PER THE INTERNATIONAL BUILDING CODE, SECTION 2105.1 AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6 TABLE 1).	 AS AN EXCEPTION, NON-AISC CERTIFIED FABRICATORS WILL BE ACCEPTED PROVIDED THE FABRICATOR INCLUDES IN THEIR BID THE SERVICES OF THE OWNER'S SPECIAL INSPECTION AND TESTING ACENCY TO PROVIDE INSPECTION/TESTING SERVICES FOR IN SHOR WORK TO
EARTH:		 MORTAR SHALL BE TYPE S IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, SECTION 2103.2, MORTAR PROPORTIONS, USING CEMENT LIME OR MORTAR CEMENT MIXES (MASONRY CEMENT IS NOT ACCEPTABLE). 	AND TESTING AGENCY TO PROVIDE INSPECTION/TESTING SERVICES FOR IN-SHOP WORK TO MEET THE REQUIREMENTS OF IBC SECTION 1704 AND ANY ADDITIONAL REQUIREMENTS NOTED IN THE CONSTRUCTION DOCUMENTS. FINAL COSTS OF THESE SERVICES WILL BE AS REQUIRED BY THE OWNER'S SPECIAL INSPECTION AND TESTING AGENCY, WHICH MAY OR
2" 1 1/2"		4. MINIMUM 28-DAY COMPRESSIVE STRENGTH OF GROUT SHALL BE THE GREATER OF 3,000 PSI OR THE COMPRESSIVE STRENGTH OF THE MASONRY UNITS, TESTED PER ASTM C 1019. GROUT SHALL CONFORM TO ASTM C476. DO NOT USE AIR ENTRAINMENT AND OTHER ADDITIVES UNITESS ACCEPTABLE IN GROUT MIX, GROUT SHALL HAVE A SUUMP OF 24 TO 30 INCHES. AS	RESPONSIBILITY FOR ESTIMATING THESE COSTS. COST WILL BE WITHHELD FROM THE FABRICATOR TO PAY FOR THESE SERVICES. REFER TO IBC SECTION 1705 FOR VERIFICATION AND INSPECTION REQ.
JIREMENTS OF ACI DRAWINGS. PROVIDE		DETERMINED BY ASTM C1611, AND HAS A VISUAL STABILITY INDEX (VSI) LESS THAN OR EQUAL TO 1, AS DETERMINED IN ACCORDANCE WITH ASTM C1611, APPENDIX X.1.	ALL INSPECTION COSTS INCURRED BY THE OWNER'S INSPECTION AND TESTING AGENCY FOR THIS EXCEPTION WILL BE TRACKED AND INVOICED TO THE OWNER INDEPENDENTLY OF OTHER SPECIAL INSPECTION COSTS TO ALLOW WITHHOLDING FROM THE RELEVANT
R. SECURE ALL TIONS. DO NOT WET		 MASONRY REINFORCING STEEL SHALL BE ASTM A015, GRADE 60. REINFORCING STEEL TO BE WELDED SHALL BE ASTM A706, GRADE 60. HORIZONTAL JOINT REINFORCING SHALL COMPLY WITH ASTM A 951 AND BE STANDARD 	 ALL COMPLETE JOINT PENETRATION WELDS SHALL BE ULTRASONIC TESTED BY THE INSPECTION AGENCY.
IG PLUS 2 INCHES. STAINING 125% Fv.		LADDER TYPE, GALVANIZED, AT 16-INCHES ON CENTER, UNLESS OTHERWISE NOTED ON PLAN. SPACE JOINT REINFORCING AT 8-INCHES ON CENTER AT NON-CAVITY MULTIWYTHE WALLS. COLLAR JOINT BETWEEN WYTHES OF NON-CAVITY MULTIWYTHE WALLS ARE TO BE	4. STRUCTURAL STEEL SHALL MEET ASTM A36 UNLESS NOTED OTHERWISE. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL MEET ASTM A992 (GRADE 50).
		MORTARED/GROUTED SOLID.	5. STEEL TUBE SHALL MEET ASTM A500, GRADE B.
		IN 12" WIDE BOND BEAMS. BOND BEAM REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL JOINTS EXCEPT AS NOTED ON TYPICAL MASONRY WALL OPENING DETAIL.	 STEEL PIPE SHALL MEET ASTM A53, TYPE E OR S. ROUTS AT STEEL TO STEEL CONNECTIONS SHALL BE 3/4-INCH DIAMETER. ASTM A325-N. AND
<u>C MAX AGG EXI</u> 3/4" 3/4" 1"	F1, C1 F2, C1 F0, C0	8. SPLICE LENGTHS FOR MASONRY REINFORCEMENT SHALL BE IN 48 TIMES THE REINFORCING BAR DIAMETER, UNLESS NOTED OTHERWISE.	TIGHTENED TO THE SNUG TIGHT CONDITION AS DEFINED BY AISC UNLESS OTHERWISE NOTED. WHERE CONNECTIONS ARE NOTED TO BE ASTM A 325-SC, BOLTS SHALL BE TIGHTENED TO THE MINIMUM PRETENSION FOR FULLY TIGHTENED BOLTS BY ONE OF THE AISC APPROVED METHODS
1" 1" 1" 3/4"	F3, C2 F0, C0 F3, C2 F1, C1	 PROVIDE BOND BEAMS AT TOP AND BOTTOM OF ALL WALLS, AT ROOFS, STRUCTURAL FLOORS, AND WHERE SHOWN ON THE DRAWINGS. REINFORCING SHALL BE HELD IN PLACE PRIOR TO GROUTING WITH WIRE POSITIONERS. 	 ANCHOR BOLTS IN CONCRETE OR MASONRY SHALL BE 3/4-INCH DIAMETER ASTM F1554 GRADE 55, WELDABLE, UNLESS NOTED OTHERWISE.
	.,	PLACED AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS NOR 10 FEET. PROVIDE POSITIONERS AT REINFORCING SPLICES.	9. FIELD BOLTING INSTALLATION SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND THE AISC MANUAL.
ONS INCLUDING		11. VERTICAL REINFORCING SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DETAILS. 8" CONC. BLOCK (1) #5 @ 2'-8" OC	10. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF THE AMERICAN WELDING SOCIETY CODE AWS D1.1. ELECTRODES SHALL MATCH BASE METALS AS SPECIFIED IN IBC. ALL
A SLUMP NOT T PLACEMENT		12. PROVIDE BOND BEAMS AT 48"OC (MAXIMUM) VERTICALLY WHERE STACK BOND CMU WALLS OCCUR. (REFER TO ARCHITECTURAL DRAWINGS)	WELDING OF ASTM A706 REINFORCING STEEL TO STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AWS D1.4 USING E70 ELECTRODES.
SLUMP SHALL NOT BE		13. PROVIDE VERTICAL REINFORCING AT JAMB OPENINGS, ENDS AND CORNERS OF ALL WALLS AND EACH SIDE OF CONTROL JOINTS, SPECIAL JAMB REINFORCING, WHERE REQUIRED, IS	11. THE TESTING LABORATORY SHALL VISUALLY INSPECT ALL FIELD WELDING. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.
E AND STRUCTURAL		CALLED OUT ON THE PLANS.	12. ALL BOLTS (HIGH STRENGTH, ANCHOR BOLTS, EXPANSION BOLTS, ADHESIVE ANCHORS, ETC.) SHALL BE INSTALLED WITH STEEL WASHERS.
ALL BE % MEASURED AT 28 ING AIR STORAGE.		 VERTICAL PANELS, CONDUITS, PIPES, FIRE EXTINGUISHER CABINETS, ETC., ARE TO BE LECTRICAL PANELS, CONDUITS, PIPES, FIRE EXTINGUISHER CABINETS, ETC., ARE TO BE 	13. ALL WELDS SHOWN ON THE DRAWINGS SHALL BE SHOP WELDS UNLESS NOTED OTHERWISE. CONTRACTOR MAY SUBSTITUTE FIELD WELDS FOR SHOP WELDS AT HIS DISCRETION. SHOP DRAWINGS SHALL CLEARLY NOTE SHOP AND FIELD WELDS.
ATED SPREAD		CONDUITS PASSING HORIZONTALLY THROUGH WALLS SHALL BE SLEEVED. MINIMUM SPACING OF SLEEVES SHALL BE THREE DIAMETERS.	14. THE CONTRACTOR SHALL RETAIN AN PROFESSIONAL ENGINEER LICENSED IN THE STATE WHICH THE PROJECT IS LOCATED TO DESIGN ALL STEEL CONNECTIONS NOT FULLY DETAILED IN THE DRAWINGS. CONNECTION DESIGN CALCULATIONS BEARING THE SEAL AND
RE LAP SPLICES ARE		16. ALL MASONRY BELOW HIGHEST ADJACENT GRADE SHALL BE GROUTED SOLID.	SIGNATURE OF THE ENGINEER RESPONSIBLE FOR THEIR PREPARATION SHALL BE SUBMITTED WITH THE SHOP DRAWING SUBMITTAL.
		AND RECONSOLIDATED IN ACCORDANCE WITH THE SPECIFICATIONS FOR MASONRY BUILDINGS ACI 530.1/ASCE 6/ TM S602, SECTION 3.5E.	15. CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE BUILDING SYSTEM AT ALL TIMES DURING THE ERECTION PROCESS. CONTRACTOR SHALL CONSIDER EFFECTS FROM WIND, SEISMIC, AND OTHER LOADING DURING CONSTRUCTION.
		 18. PROVIDE GROUT AND MASONRY UNIT TESTING PRIOR TO AND DURING CONSTRUCTION IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. 19. TESTING LABORATORY, IN ACCORDANCE WITH IBC REQUIREMENTS, SHALL INSPECT. 	16. CONNECTIONS SHALL BE DESIGNED TO SUSTAIN THE FACTORED (LRFD) REACTIONS NOTED WHERE NO REACTION HASBEEN PROVIDED, THE CONNECTION CAPACITY SHALL NOT BE
HORIZONTAL PLANE		REINFORCEMENT PLACEMENT, GROUT SPACES AND GROUTING OPERATION. MORTAR FINAL PROJECTION INTO THE GROUT SPACE SHALL NOT EXCEED 1/2 INCH.	CONSTRUCTION MANUAL FOR THE GIVEN SPAN.
T AGAINST THE		20. WHERE STONE IS VENEERED TO MASONRY, PROVIDE TRUSS TYPE (GALV.) JOINT REINFORCING AT 16 INCHES ON CENTER WITH "EYES".	 17. ALL BOLTED MOMENT CONNECTIONS SHALL UTILIZE HIGH STRENGTH SLIP CRITICAL BOLTS. 18. CONNECTIONS SHOWN ON CONSTRUCTION DOCUMENTS ARE FOR CONCEPTUAL
: SPECS) INSTALLED		21. SPACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0". REGARDLESS OF JOINT LAYOUT SHOWN ON ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOT PLACE CONTROL JOINTS ABOVE / BELOW OPENINGS OR WITHIN SCHEDULED JAMB EXTENTS. CONTROL JOINTS SHALL NOT JOG HORIZONTALLY, UNLESS NOTED OTHERWISE.	PURPOSES ONLY. 19. COORDINATE WITH ALL OTHER TRADES WHICH STEEL INTERACTS. THIS INCLUDES BUT IS NOT LIMITED TO COORDINATING WITH MASONRY, PRECAST CONCRETE, CAST-IN-PLACE CONCRETE, JOIST, AND METAL DECK SUPPLIERS. WHERE MISALIGNMENT OF STEEL CONNECTIONS DUE IMPROPER COORDINATION OCCURS, THE CONTRACTOR SHALL HIRE AN
SPECIFICATIONS. ECHNICAL REPORT. DTECHNICAL		22. SUBMIT SHOP DRAWINGS WITH PLANS AND ELEVATIONS CLEARLY INDICATING REBAR SIZE, SPACING, LAP LENGTHS, LINTELS, JAMBS, CONTROL JOINT LOCATIONS, FOOTING, SLAB, AND ROOF ELEVATIONS, WALL PENETRATIONS WITH DIMENSIONS, BOND BEAM ELEVATIONS, ETC . FOR REVIEW AND APPROVAL IN ADDITION TO ANY OTHER REQUIREMENTS LISTED INSPECIFICATIONS	 ENGINEER LICENSED IN THE STATE WHICH THE PROJECT IS LOCATED TO PRODUCE A REPAIR AND SUBMIT THE REPAIR DETAIL WITH CALCULATIONS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. 20. CONTRACTOR IS RESPONSIBLE FOR DESIGNING ALL STEEL TRUSS AND/OR BRACE CONNECTIONS FOR THE ULTIMATE MEMBER FORCES SHOWN IN ACCORDANCE WITH AISC
G. UNLESS W2.1XW2.1 WELDED		23. REFER TO ARCHITECTURAL DRAWINGS FOR ALL NON-LOAD BEARING CMU WALLS AND REINFORCE AS FOLLOWS UNLESS OTHERWISE NOTED: 8" CMU (1) #4 @48" OC	LRFD SPECIFICATIONS. IF A MEMBER FORCE IS NOT SHOWN, THE CONNECTION SHALL BE DESIGNED FOR THE FULL TENSION CAPACITY OF THE MEMBER. CONNECTIONS SHALL BE DESIGNED TO TRANSFER THE MAXIMUM COMBINATION OF THE FORCES OF ALL MEMBERS, FRAMING INTO THE JOINT.
BE INSTALLED		24. ALL CMU WALL OPENINGS REQUIRE LINTELS AS DEFINED IN THE "TYPICAL MASONRY LINTEL DETAIL/ SCHEDULE."	21. ALL MEMBER FORCES SHOWN ARE TO BE TRANSFERRED TO THE WORK POINT. THE WORK POINT IS DEFINED AS THE INTERSECTION OF ALL CENTROIDS OF THE MEMBERS FRAMING
		25. REFER TO TYPICAL DETAILS FOR MASONRY DETAILS AND REQUIREMENTS NOT SHOWN IN SECTIONS OR PLANS	INTO THE JOINT. AT BRACED FRAMES WHERE HORIZONTAL MEMBERS FRAMING INTO THE JOINT HAVE VARYING DEPTHS, AND SIMILAR TOP OF STEEL ELEVATIONS, THE WORK POINT SHALL BE BASED ON THE CENTER LINE OF THE HORIZONTAL MEMBER OF LEAST DEPTH (IE.
OUTE ALL PIPING		26. CONTRACTOR SHALL REMOVE AND REPLACE WALL AT HIS COST IF WALL IS FOUND TO BE CONSTRUCTED WITHOUT REBAR POSITIONERS.	THE WORKPOINT WILL NOT NECESSARILY CORRESPOND TO THE DEEPER MEMBER).
S WILL VARY DUE TO NESS AS REQUIRED		27. ALL CMU LOAD BEARING WALLS REQUIRE LEVEL B SPECIAL INSPECTION PER IBC SECTION 1705.4, AND SHALL BE SPECIAL INSPECTED FOR REINFORCING PLACEMENT, SIZE, POSITIONERS, AND LAP LENGTHS PRIOR TO POURING GROUT.	REDUCTION DUE TO BOLT HOLES. PROVIDE SHOP WELDED MEMBER END SUPPLEMENT PLATES WHERE REQUIRED FOR BOLT HOLE NET-AREA REDUCTION. ALL MEMBER END SUPPLEMENT PLATES, SPLICE PLATES, FILLER PLATES AND GUSSET PLATES OF TRUSS

BRICATORS WILL BE ACCEPTED PROVIDED THE ERVICES OF THE OWNER'S SPECIAL INSPECTION TION/TESTING SERVICES FOR IN-SHOP WORK TO 1704 AND ANY ADDITIONAL REQUIREMENTS 6. FINAL COSTS OF THESE SERVICES WILL BE AS ECTION AND TESTING AGENCY, WHICH MAY OR THE PROJECT. IT WILL BE THE FABRICATOR'S DSTS. COST WILL BE WITHHELD FROM THE

HALL BE 3/4-INCH DIAMETER, ASTM A325-N, AND AS DEFINED BY AISC UNLESS OTHERWISE TO BE ASTM A 325-SC, BOLTS SHALL BE FOR FULLY TIGHTENED BOLTS BY ONE OF THE

VISIONS OF THE AMERICAN WELDING SOCIETY H BASE METALS AS SPECIFIED IN IBC. ALL EL TO STRUCTURAL STEEL SHALL BE IN

LL BE SHOP WELDS UNLESS NOTED E FIELD WELDS FOR SHOP WELDS AT HIS RLY NOTE SHOP AND FIELD WELDS.

ESSIONAL ENGINEER LICENSED IN THE STATE 3N ALL STEEL CONNECTIONS NOT FULLY DESIGN CALCULATIONS BEARING THE SEAL AND E FOR THEIR PREPARATION SHALL BE

ABILITY OF THE BUILDING SYSTEM AT ALL TIMES CTOR SHALL CONSIDER EFFECTS FROM WIND,

ICH STEEL INTERACTS. THIS INCLUDES BUT IS ONRY, PRECAST CONCRETE, CAST-IN-PLACE IERS. WHERE MISALIGNMENT OF STEEL ION OCCURS, THE CONTRACTOR SHALL HIRE AN THE PROJECT IS LOCATED TO PRODUCE A

MBINATION OF THE FORCES OF ALL MEMBERS, RANSFERRED TO THE WORK POINT. THE WORK FALL CENTROIDS OF THE MEMBERS FRAMING RE HORIZONTAL MEMBERS FRAMING INTO THE TOP OF STEEL ELEVATIONS, THE WORK POINT

CONNECTIONS SHALL BE ASTM A572, GRADE 50.

INSTITUTE SPECIFICATIONS AND RECOMMENDATIONS.

DESIGNATED BY THE ARCHITECT WHERE APPLICABLE.

6. PROVIDE 2 INCHES MINIMUM BEARING AT DECK SUPPORTS.

THICKNESS AS NECESSARY TO ACCOMMODATE ACTUAL SPAN CONDITION.

2. ROOF DECK SHALL HAVE A MINIMUM YIELD STRENGTH, FY = 33 KSI

ITEMS INSIDE THE BUILDING.

STEEL DECK:

NOTED.

ELECTRODES.

LAYOUT FOR REVIEW.

23. REFER TO ARCHITECTURAL AND INTERIOR DRAWINGS FOR ADDITIONAL STRUCTURAL STEEL

1. STEEL DECK AND ACCESSORIES SHALL BE FROM STEEL CONFORMING TO ASTM A1008 OR ASTM A653. ALL METAL DECKING SHALL BE IN ACCORDANCE WITH THE STEEL DECK

3. ALL STEEL DECK SHALL HAVE ONE COAT OF MANUFACTURER'S STANDARD PRIMER PAINT UNLESS OTHERWISE NOTED. COORDINATE ALL LOCATIONS, IF ANY, SHOWN ON ARCHITECTURAL DRAWINGS THAT REQUIRE SPRAY APPLIED FIREPROOFING TO BE ADHERED TO THE METAL DECK. AT SUCH LOCATIONS, HOT DIP GALVANIZE DECK IN ACCORDANCE WITH ASTM A653 WITH MINIMUM COATING OF G60, UNLESS OTHERWISE

4. DECK WELDING SHALL COMPLY WITH THE BUILDING CODE AND AWS D1.3 USING E70XX

5. ROOF DECK SHALL BE ATTACHED TO SUPPORTING STRUCTURAL MEMBERS TO RESIST 300 PLF DIAPHRAGM SHEAR, UNLESS OTHERWISE NOTED ON DRAWINGS. ATTACH DECK AT PERIMETER TO MEET OR EXCEED THE MINIMUM FACTORY MUTUAL REQUIREMENTS

7. ALL DECK SHALL BE CONTINUOUS OVER 3 SPANS UNLESS OTHERWISE NOTED. WHERE LESS THAN 3 SPANS IS AVAILABLE, PROVIDE, FOR THE ACTUAL SPAN CONDITION, DECK GAGE CAPABLE OF SUPPORTING PUBLISHED DEAD AND LIVE LOAD CAPACITIES AND

CONSTRUCTION SPANS NOTED FOR 3 SPAN CONDITIONS. THE DECK SUPPLIER SHALL VERIFY THAT THE DECK SUPPLIED MEETS OR EXCEEDS THE REQUIRED CLEAR SPANS FOR THE ACTUAL PROJECT AND SHALL POST THE ALLOWABLE CONSTRUCTION CLEAR SPANS CLEARLY ON THE SHOP DRAWINGS. IF LOCATIONS EXIST ON THE PROJECT THAT EXCEED THE ALLOWABLE CONSTRUCTION CLEAR SPAN, THE SUPPLIER SHALL INCREASE THE DECK

8. LOADS EXCEEDING 50 LBS SHALL NOT BE PERMITTED TO BE HUNG FROM METAL DECKING. HANGERS FOR DUCTWORK, PIPING, ELECTRICAL CONDUITS, ETC SHALL BE HUNG DIRECTLY FROM STRUCTURAL STEEL OR ANCHORS EMBEDDED IN CONCRETE. SUBMIT HANGING LOAD

9. METAL DECK ATTACHMENTS SHALL BE INSPECTED BY TESTING LABORATORY.

- COLD-FORMED STEEL FRAMING: 1. FABRICATE AND ERECT COLD-FORMED STEEL STRUCTURAL MEMBERS PER THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE. WHERE REQUIRED, THE SEISMIC DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS SHALL BE IN ACCORDANCE WITH THE ADDITIONAL PROVISIONS OF SECTION 2211 OF THE IBC.
- 2. MINIMUM YIELD STRENGTH FOR 43 AND 33 MILS STUDS, JOISTS, STRAPS, BRIDGING, ETC., SHALL BE 33,000-PSI MINIMUM. YIELD STRENGTH FOR 97, 68, AND 54 MILS STUDS, JOISTS, STRAPS, BRIDGING, ETC., SHALL BE 50,000-PSI MINIMUM. ALL MEMBERS SHALL BE GALVANIZED.
- 3. PROVIDE COLD-FORMED METAL FRAMING MEMBERS WITH SECTION PROPERTIES AS MANUFACTURED BY MEMBERS OF THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA COMPLYING WITH ICBO REPORT 4943P AND THE INTERNATIONAL BUILDING CODE. 4. WELDERS EXPERIENCED IN WELDING LIGHT GAGE STEEL SHALL PERFORM ALL WELDING.
- POST-INSTALLED ANCHORS: 1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS.
- 2. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST- INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN -PLACE ANCHORS.
- 3. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR WHEN DRILLING HOLES. 4. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) AND ICC EVALUATION REPORTS CORRESPONDING TO THAT ANCHOR. INSTALL ANCHORS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE.
- 5. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE LISTED BELOW, SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES CODE REPORTS SHALL BE INCLUDED WITH SUBMITTAL PACKAGE.
- 6. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL ADHESIVE ANCHORS. PERIODIC SPECIAL INSPECTION SHALL BE PERFORMED FOR MECHANICAL ANCHORS.
- 7. ALL ANCHORS SHALL HAVE EMBEDMENT NOTED ON THE DRAWINGS OR EMBEDMENT AS RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 8. ADHESIVE ANCHORS MUST BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.
- 9. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS
- 10. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318. PROOF OF CURENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
- 11. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED FOR THAT PURPOSE BY THE BUILDING OFFICIAL.
- 12. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT FOR THE ANCHOR.
- 13. EXPANSION BOLTS IN MASONRY SHALL BE ONE OF THE FOLLOWING: A. SIMPSON STRONG-TIE WEDGE-ALL (ESR-1396) B. HILTI KWIK BOLT 3 MASONRY ANCHORS (ESR-1385)
- 14. SCREW ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING: A. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ESR-1056) B. HILTI KH-EZ SCREW ANCHOR (ESR-3056)
- 15. ADHESIVE ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING: A. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (ER-265) B. HILTI HY-270 FAST CURE ADHESIVE ANCHORS (ESR-4143)
- 16. EXPANSION BOLTS IN CONCRETE, ANCHORS SHALL BE ONE OF THE FOLLOWING: A. SIMPSON STRONG-TIE STRONG-BOLT 2 (ESR-3037) B. HILTI KWIK BOLT TZ CONCRETE ANCHORS (ESR-1917)
- 17. SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: A. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ESR-2713) B. HILTI KH-EZ SCREW ANCHOR (ESR-3027)
- 18. ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: A. SIMPSON STRONG-TIE SET-3G ADHESIVE ANCHORING SYSTEM (ESR-4057) B. SIMPSON STRONG-TIE AT-XP ADHESIVE ANCHORING SYSTEM (ER-263) C. HILTI HY-200 SAFE SET SYSTEM ADHESIVE ANCHORS (ESR-3187) D. HILTI RE-500 SD ADHESIVE ANCHORS (ESR-2322)
- 19. ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED ITS DESIGN STRENGTH. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS.
- FIRE RATINGS: 1. FOR FIRE-RATING REQUIREMENTS AND METHODS, SEE ARCHITECTURAL DRAWINGS.

- **EXISTING CONDITIONS:** 1. CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING ALL WORK AND MATERIALS NECESSARY TO INSTALL NEW WORK IN EXISTING BUILDING SHALL BE INCLUDED. 2. NOTIFY ARCHITECT/ENGINEER IMMEDIATELY IF EXISTING CONDITIONS DO NOT MATCH, OR
- SEEM IN CONFLICT WITH, INFORMATION SHOWN ON DRAWINGS. 3. DISCREPANCIES: CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND SHALL CONTACT THE ENGINEER OF RECORD IF ANY DISCREPANCIES ARE FOUND BEFORE PROCEEDING.
- 4. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION TO THE OWNER'S OPERATION AND TO PROVIDE PATRON, FACILITY STAFF AND WORKERS SAFETY.
- 5. EXCESSIVE NOISE AND VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE.
- 6. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT TO REMAIN FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION OPERATIONS PERFORMED UNDER THIS CONTRACT.
- 7. THE SEQUENCE OF CONSTRUCTION SHALL BE THE RESPONSIBILITY THE CONTRACTOR AND THEY SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY GUYS, BRACING, AND OTHER SUPPORTS AS NEEDED TO SAFELY RESIST ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING LOADS ERECTION EQUIPMENT AND ERECTION OPERATIONS, AND WIND OR SEISMIC FORCES COMPARABLE IN INTENSITY FOR WHICH THE STRUCTURE AS DESIGNED.
- 8. ALL ERECTION AND CONSTRUCTION PROCEDURES SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES AND ORDINANCES,
- 9. ALL FRAMING CONNECTION TO EXISTING STRUCTURE SHALL BE FIELD VERIFIED PRIOR TO SHOP DRAWING PRODUCTION AND FABRICATION. DEMOLITION:
- 1. DEMOLITION OF EXISTING STRUCTURE TO BE REMOVED SHALL BE PERFORMED BY THE CONTRACTOR USING MEANS NECESSARY TO PREVENT DAMAGE TO THE EXISTING STRUCTURE TO REMAIN. DAMAGE TO THE EXISTING STRUCTURE TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE USING METHODS REVIEWED BY THE STRUCTURAL ENGINEER. IF EXISTING CONDITIONS DIFFER FROM THOSE SHOWN IN THE CONTRACT DOCUMENTS CONTACT THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- SUBMITTALS GENERAL 1. THE CONTRACTOR SHALL DEVELOP AND SUBMIT A SUBMITTAL SCHEDULE CLEARLY INDICATING THE NUMBER OF STEEL SHOP DRAWINGS. CONCRETE REINFORCING DRAWINGS, AND OTHER SHOP DRAWINGS TO BE SUBMITTED EACH WEEK OVER THE DURATION OF THE PROJECT.
- THE SUBMITTAL SCHEDULE PROVIDED BY THE CONTRACTOR IS NECESSARY TO PROVIDE REASONABLE TIME TO STAFF APPROPRIATELY FOR THE SCHEDULED SUBMITTALS. THE SUBMITTAL ENGINEER'S REVIEW SCHEDULE IS SUBJECT STRICTLY TO THE SUBMITTAL SCHEDULE PROVIDED BY THE CONTRACTOR.
- 3. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM CONFORMANCE WITH THE INTENT OF THE DRAWINGS. REVIEW DOES NOT IMPLY OR STATE THAT THE FABRICATOR HAS CORRECTLY INTERPRETED THE CONSTRUCTION DOCUMENTS.
- 4. CONTRACTOR SHALL SUBMIT CALCULATIONS WITH THE SHOP DRAWINGS DESIGNATED AS DEFERRED SUBMITTALS, SIGNED AND SEALED BY THE ENGINEER, LICENSED IN THE STATE WHICH THE PROJECT IS LOCATED, RESPONSIBLE FOR THEIR PREPARATION WHEN REQUIRED IN THE SPECIFICATIONS (SEE ALSO 'DEFERRED SUBMITTALS').
- 5. COPIES OF THE CONTRACT DOCUMENTS SHALL NOT BE SUBMITTED AS SHOP DRAWINGS. CONTRACT DRAWINGS SHOW ONLY GENERAL DESIGN INTENT. FINAL SHOP DRAWING SECTIONS SHALL PROVIDE SIZES, LAYOUT, EXACT DIMENSIONS, ELEVATIONS, GRADES OF MATERIALS, ETC., SPECIFIC TO EACH LOCATION.
- 6. SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER PRIOR TO SUBMITTING TO DLR GROUP. REQUEST FOR INFORMATION FOR ITEMS SUCH AS OVERALL BUILDING GEOMETRY, ELEVATIONS, ETC. SUBMITTED THROUGH SHOP DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. IF GEOMETRY CANNOT BE DETERMINED FROM THE DRAWINGS, THE CONTRACTOR SHALL SUBMIT AN RFI AND COORDINATE THE RESPONSE WITH ALL AFFECTED TRADES PRIOR TO FABRICATION.
- DEFERRED SUBMITTALS: 1. THE FOLLOWING ARE DEFERRED SUBMITTAL ITEMS: CONCRETE MIXTURE DESIGN
 - GROUT MIXTURE DESIGN STRUCTURAL STEEL CONNECTIONS METAL STAIRS COLD FORMED METAL FRAMING
- 2. DEFERRED SUBMITTAL CALCULATIONS AND/OR SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THE ENGINEER RESPONSIBLE FOR THEIR PREPARATION AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW WITH THE SHOP DRAWING SUBMITTAL. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE BUILDING DEPARTMENT IS RECEIVED.
- 3. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

	ULTIM	ATE WIN	ID PRES	SURES	- COMP	ONENTS	6 & CLAE	DING
Roof	-				Surface Pres	sure (psf)		
Area	10 sf	20 sf	50 sf	100 sf	200 sf	350 sf	500 sf	1000 sf
Negative Zone 1	-68.1	-63.6	-57.7	-53.2	-48.7	-45.1	-42.7	-42.7
Negative Zone 1	-39.1	-39.1	-39.1	-39.1	-33.7	-29.3	-26.5	-21.0
Negative Zone 2	-89.8	-84	-76.4	-70.6	-64.9	-60.2	-57.2	-57.2
Negative Zone 3	-89.8	-84	-76.4	-70.6	-64.9	-60.2	-57.2	-57.2
Positive Zone 1 & 1'	17.4	16.3	16	16	16.0	16.0	16.0	16.0
Positive Zones 2 & 3	39.1	37.4	35.1	33.4	31.6	30.2	29.3	27.6
Overhang Zone 1&1	-61.6	-60.5	-59	-58	-48.6	-41.0	-36.2	-36.2
Overhang Zone 2	-83.3	-75.6	-65.4	-57.7	-50.0	-43.8	-39.8	-39.8
Overhang Zone 3	-83.3	-75.6	-65.4	-57.7	-50.0	-43.8	-39.8	-39.8
Ī	Negative zone	e 3 = zone 2, s	since parapet	>= 3ft.				
(Overhang pre	ssures in the t	able above a	ssume an inte	rnal pressure	coefficient (G	cpi) of 0.0	
(Overhang soff	fit pressure eq	uals adj wall p	pressure (whic	h includes int	ernal pressure	e of 6.5 psf)	
Parapet								
qp = 36.8 psf				Surfa	ace Pressure ((psf)		
	Solid Para	apet Pressure	10 sf	20 sf	50 sf	100 sf	200 sf	500 sf
-	CASE A:	Zone 2 :	117.7	110.1	100.0	92.4	84.8	74.7
		Zone 3 :	117.7	110.1	100.0	92.4	84.8	74.7
-	CASE B :	Interior zone :	-69.5	-66.0	-61.4	-57.8	-54.3	-49.7
		Corner zone :	-79.5	-74.2	-67.2	-61.9	-56.6	-49.7
-		•				·		
_	wall a =	10.0 ft						
Walls		GCp +/- GCpi			Surfa	ace Pressure a	at h	
Area	10 sf	100 sf	200 sf	500 sf	10 sf	100 sf	200 sf	500 sf
Negative Zone 4	-1.17	-1.01	-0.96	-0.90	-42.4	-36.6	-34.9	-32.6
Negative Zone 5	-1.44	-1.12	-1.03	-0.90	-52.2	-40.6	-37.2	-32.6
Positive Zone 4 & 5	1.08	0.92	0.87	0.81	39.1	33.4	31.6	29.3
-				•				

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BID SET 11.04.22 REVISIONS CONSTRUCTION DOCS 03.06.23 2 ASI 001

04.07.23

57-21113-00

STRUCTURAL NOTES

S0.1.ii

<u>) T E S</u>
QUAL TO SURVEY ELEVATION 152'-0"
JILDING GEOMETRY, WALL MENTS. CONFIRM WALL OPENINGS, NS WITH ARCHITECTURAL

11.04.22 REVISIONS

57-21113-00

FOUNDATION PLAN

S1.1.ii

Group

DLR

GENERAL: A. BASIS OF DESIGN MODEL NUMBERS ARE FOR REFERENCE ONLY. BID EQUIPMENT TO PRO LOCATION MATERIAL ID

1

TMV-1 A119 BLDG SERVICES

BRONZE BRONZ LT-1

TH	IERM	OST	ATIC	MIX	ING \	VAL\	VE S	SCH	IED	ULE				
ROVIDE TH	IE INDICATED	PERFORMA	NCE.											
	FLUID DATA VALVE DATA							BASIS OF D						
		LVG	ENT WATER	R TEMP (°F)		МАХ		CONN SIZE (IN) MAX MAX		MAX				
Η	TYPE	WATER TEMP SETPOINT (°F)	НОТ	COLD	FLOW (GPM)	MIN FLOW (GPM)	PRESS DROP (PSI)	INLET	OUTLET	ALLOW WORKING PRESS (PSI)	ALLOW WORKING TEMP (°F)	SPECIFICATION	MANUFACTURER	
ZE	DOM. WATER	110	140	50	32	0.3	3	2"	2"	125 psi	185	ASSE 1017 COMPLIANT DIGITAL MIXING VALVE	LEONARD	

LINT INTERCEPTOR SCHEDULE

GENERAL: A. BASIS OF DESIGN MODEL NUMBERS ARE FOR REFERENCE ONLY. BID EQUIPMENT TO PROVIDE THE INDICATED PERFORMANCE.

NOTES: 1. PROVIDE WITH EXTENSION AS NECESSARY FOR RECESSED INSTALLATION WITH TOP FLUSH WITH FINISHED FLOOR. 2. PROVIDE WITH FLOW CONTROL FITTING.

		LOCATION			DESIGN	PIPE CONNS (IN)		DIMENSIONS (FT-IN)				BASIS OF DESIGN	
ID	NO.	NAME	ТҮРЕ	MATERIAL FLC DESCRIPTION RA (GF	FLOW RATE (GPM)	INLET	OUTLET	LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)	MANUFACTURER	MODEL
-1	A118	LAUNDRY/EQUIP	RECESSED LINT TRAP	STEEL	110	4"	4"	4' - 3"	2' - 8"	3' - 8"	530	JAY R SMITH	8910-150

ABBREVIATIONS

DEMOLISHED HTWS EXISTING HUM RELOCATED ΗV DEGREES CELSIUS HVAC DEGREES FAHRENHEIT HWR DIAMETER HWS HX AMPERE AIR CONDITIONING(ER) AABC ASSOCIATED AIR BALANCE COUNCIL AAV AUTOMATIC AIR VENT ACC ACCESSIBLE ACCU AIR COOLED CONDENSING UNIT AD ACCESS DOOR INSUL ADJ ADJUSTABLE AIR FILTER KH AFG ABOVE FINISHED GRADE AIR-CONDITIONING HEATING AND AHRI LA REFRIGERATION INSTITUTE AHU AIR HANDLING UNIT AMBIENT AMB LIN AMERICAN BOILER MANUFACTURERS AMBA LOX ASSOCIATION LPG AMPERE LPR ACCESS PANEL LPS AS AIR SEPARATOR LTD ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS LV ASHRAE AMERICAN SOCIETY OF HEATING LVG REFRIGERATION AND AIR CONDITIONING ENGINEERS AMERICAN SOCIETY OF MECHANICAL ASME MAINT ENGINEERS MAN AUTOMATIC AUTO MATL ACID VENT AV/ MAU MAV BOILER MBH BUILDING AUTOMATION SYSTEM BAS MFRG BAT BATTERY MI BBO BOILER BLOW OFF MPG BALANCING COCK MTD BARE COPPER MTG BDD BACK DRAFT DAMPER MTWR BOILER FEED RF MTWS BFF **BELOW FINISH FLOOR** BFV BUTTERFLY VALVE N.C BHP BREAK HORSEPOWER N.O. BLKG BLOCKING NEC BLKHD BULKHEAD NEMA BMS BUILDING MANAGEMENT SYSTEM NO BOD BOTTOM OF DUCT NOM BOT BOTTOM BPIP BOILER PLANT INSTRUMENTATION PANEL O&M BTU BRITISH THERMAL UNIT OA BTUH BRITISH THERMAL UNIT PER HOUR OD CONDUIT COMBUSTION AIR CA P/T CAP CAPACITY CONSTRUCTION DOCUMENTS CD PCF CENT CENTRIFUGAL PD CUBIC FEET PERF CUBIC FEET PER HOUR CFH PERP CFM CUBIC FEET PER MINUTE CHILLER CIRC CIRCULATING CLR CLEAR PL CO CARBON MONOXIDE PLBG CARBON DIOXIDE CO2 PNEU COMB COMBINATION PNL CONV CONVECTOR POC CONDENSATE PUMP CP PR CPS CYCLES PER SECOND PSI CR CONDENSER WATER RETURN PVC CR CORROSION RESISTANT CRAC PWR COMPUTER ROOM AIR CONDITIONING UNIT CS COUNTERSINK RA CONDENSER WATER SUPPLY CS RAD COOLING TOWER CT RAD CONDENSING UNIT CU RAD CUH CABINET UNIT HEATER RCP CWR CHILLED WATER RETURN RCU CWS CHILLED WATER SUPPLY RD CYL CYLINDER REFR REG DIFFUSER REM DECIBEL DRY BULB DOUBLE RH DBL RH DUST COLLECTOR DC RHC DEPT DEPARTMENT RHG DUCT HEATER DH RI DISTILLED WATER RPM DIAG DIAGONAL RS DISCHARGE DIC RTU DISCH DISCHARGE DISTR DISTRIBUTION SA EACH EA SC EXHAUST AIR SD ENTERING AIR TEMPERATURE EAT ELECTRIC DUCT HEATER EDH EER ENERGY EFFICIENCY RATIO EXHAUST FAN FF SGL EFFICIENCY FFF SP EFF EFFICIENCY SPD ELECTRICAL HEATER ΕH SQ ELEV ELEVATOR SS EMER EMERGENCY STOR ENCL ENCLOSURE SUSP ENT ENTERING SV ESP EXTERNAL STATIC PRESSURE SWP EST ESTIMATE EXPANSION TANK EWT ENTERING WATER TEMPERATURE T&B EXH EXHAUST TΑ EXP EXPOSED TB FAHRENHEIT FURNACE TD TEMP FIELD VERIFY F.V. THK FACE TOD FAB FABRICATE(D) TS FCU FAN COIL UNIT TSP FIRE DAMPER **FINISH FLOOR** FLEX FLEXIBLE UC FME FLOW MEASURING EQUIPMENT UG FPM FEET PER MINUTE UH FLOW SWITCH FS FSD FIRE SMOKE DAMPER FIN TUBE GRILLE GAUGE VA GAL GALLON VAC GALV GALVANIZED VAV GROUND FAULT CIRCUIT INTERRUPTER GFI, GFCI GLYCOL-WATER HEATING RETURN VD GHR GLYCOL-WATER HEATING SUPPLY VEL GHS VENT GALLONS PER DAY GPD VFD GPH GALLONS PER HOUR VOL GALLONS PER MINUTE GPM VP GV GATE VALVE VSMP HCR HOT/CHILLED WATER RETURN HCS HOT/CHILLED WATER SUPPLY HGR HANGER WF HIGH INTENSITY DISCHARGE HID WC HORSE POWER HP WCC HEAT PUMP WFMD HIGH PRESSURE HP WH HPR HIGH PRESSURE STEAM RETURN WIR HIGH PRESSURE STEAM SUPPLY HPS WIS HR HOUR WP HTG HEATING WΤ HTR HEATER HTWR HIGH TEMPERATURE HOT WATER RETURN

HIGH TEMPERATURE HOT WATER SUPPLY HUMIDIFIER HEATING VENTILATING UNIT HEATING VENTILATING AND AIR CONDITIONING HEATING WATER RETURN HEATING WATER SUPPLY HEAT EXCHANGER HERTZ (FREQUENCY)

INDOOR AIR QUALITY IN ACCORDANCE WITH INSIDE DIAMETER INTAKE HOOD INSULATION

KITCHEN HOOD

LEAVING

LEAVING AIR TEMPERATURE LINEAR FOOT LENGTH (LONG) LINEAR LIQUID OXYGEN LIQUIFIED PETROLEUM GAS LOW PRESSURE STEAM RETURN LOW PRESSURE STEAM SUPPLY LINED TRANSFER DUCT LOUVER

MIXED AIR MAINTENANCE MANUAL MATERIAL MAKEUP AIR UNIT MANUAL AIR VENT THOUSAND BTU PER HOUR MANUFACTURING MOTORIZED LOUVER MEDIUM PRESSURE GAS MOUNTED MOUNTING MEDIUM TEMP HOT WATER RETURN MEDIUM TEMP HOT WATER SUPPLY

NORMALLY CLOSED NORMALLY OPEN NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURERS ASSN. NUMBER NOMINAL **OPERATION AND MAINTENANCE** OUTSIDE AIR

PUMP PRESSURE/TEMPERATURE TEST PORT PUSH BUTTON POUNDS PER CUBIC FOOT PRESSURE DROP PERFORATED PERPENDICULAR PRESSURE GAUGE POINT OF INTERSECTION PRESSURE INDICATOR PLATE PLUMBING PNEUMATIC PANEL

OUTSIDE DIAMETER

POINT OF CONNECTION PAIR POUNDS PER SQUARE INCH POLYVINYL CHLORIDE POWER

RETURN AIR RADIUS RADIATOR RADIATED REFLECTED CEILING PLAN RECIPROCATING CHILLER UNIT REFRIGERANT DISCHARGE REFRIGERANT REGISTER REMOVABLE RETURN FAN RELATIVE HUMIDITY RELIEF HOOD REHEAT COIL REFRIGERANT HOT GAS REFRIGERANT LIQUID **REVOLUTIONS PER MINUTE** REFRIGERANT SUCTION ROOF TOP UNIT

SMOKE DAMPER SUPPLY AIR SECURITY SMOKE DAMPER SMOKE DETECTOR SOAP DISPENSER STEAM EXHAUST VENT SINGLE STATIC PRESSURE (H2O) SURGE PROTECTION DEVICE SQUARE STAINLESS STEEL STORAGE SUSPENDED SOLENOID VALVE STEAM WORKING PRESSURE

THERMOSTAT TOP AND BOTTOM TRANSFER AIR TERMINAL BOX TEMPERATURE CONTROL TRANSFER DUCT TEMPERATURE THICK(NESS) TOP OF DUCT TEMPERATURE SENSOR TOTAL STATIC PRESSURE TEMPERATURE TRANSMITTER

UNIT COOLER UNDERGROUND UNIT HEATER UNDERWRITERS LABORATORIES UNIT VENTILATOR

VOLT VOLT-AMPERE VALVE VACUUM VARIABLE AIR VOLUME VOLUME DAMPER VELOCITY VENTALATOR(TION) VARIABLE FREQUENCY DRIVE VOLUME VACUUM PUMP VARIABLE SPEED MOTOR CONTROLLER

WIDE WATT WET BULB WATER COLUMN WATER COOLED CONDENSER WATER FLOW MEASURING DEVICE WATER HEATER WATER LOOP RETURN WATER LOOP SUPPLY WEATHERPROOF WEIGHT

MECHANICAL GENERAL NOTES: (APPLY TO ALL MECHANICAL SHEETS)

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK, LOCATIONS OF EQUIPMENT AND ROUTING OF DUCTWORK AND PIPING. PLANS ARE NOT MEANT TO BE SHOP DRAWINGS FROM WHICH MATERIALS CAN BE ORDERED OR INSTALLATION CAN BE ACCOMPLISHED WITHOUT FIELD MEASUREMENT AND COORDINATION BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW ALL PLANS AND FIELD CONDTIONS PRIOR TO FABRICATION OF ANY MATERIAL OR ORDERING OF EQUIPMENT. REVIEW THE GENERAL NOTES, SPECIFICATIONS, AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THESE PLANS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCRPANCIES PRIOR TO SUBMITTING BID.

- 2. ALL MECHANICAL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE 2020 MECHANICAL CODE OF NEW YORK STATE (2018 INTERNATIONAL MECHANICAL CODE WITH AMENDMENTS) INCLUDING ANY LOCAL AMENDMENTS.
- 3. REVIEW THE ENTIRE PROJECT DRAWING SET AND COORDINATE LOCATION OF ALL DUCTWORK AND PIPING WITH PLUMBING AND ELECTRICAL CONTRACTORS BEFORE HANGING ANY MATERIAL. EXTRAS WILL NOT BE PAID TO MOVE DUCT OR PIPING DUE TO CONFLICTS ARISING DUE TO LACK OF COORDINATION.
- 4. PROVIDE COORDINATION DRAWINGS AS REQUIRED BY THE SPECIFICATIONS. RFI'S RELATED TO COORDINATION ITEMS WILL NOT BE REVIEWED UNLESS COORDINATION DRAWINGS HAVE BEEN SUBMITTED.
- 5. IN SPACES WITH LIMITED CLEARANCE ABOVE CEILINGS, UNLESS NOTED OR SHOWN OTHERWISE, INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE AND TIGHT TO STRUCTURE. RUN DUCTS UP IN JOIST SPACE WHERE WHERE POSSIBLE. DO NOT INSTALL EQUIPMENT REQUIRING ACCESS AND SERVICING MORE THAN 24" ABOVE THE CEILING WITHOUT AUTHORIZATION FROM THE ARCHITECT OR ENGINEER. COORDINATE DUCT ROUTING WITH OTHER TRADES DURING PRODUCTION OF SCALED COORDINATION DRAWINGS AS REQUIRED BY THE SPECIFICATIONS.
- 6. PROVIDE 3'-0" CLEARANCE IN FRONT OF ELECTRICAL PANELS AND DEVICES AND CLEARANCE ABOVE DEVICES AS REQUIRED BY CODE. DO NOT ROUTE PIPING OR DUCTWORK ABOVE ELECTRICAL PANELS.
- DIMENSIONS AND DO NOT INCLUDE LINING.
- 8. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10'-0" MINIMUM CLEARANCE FROM INTAKES AND 2'-0" CLEARANCE FROM ALL OTHER EQUIPMENT
- 9. LIGHTING AND SPRINKLER HEAD LOCATIONS TAKE PRECEDENCE OVER DIFFUSER LOCATIONS. COORDINATE DIFFUSER LOCATIONS WITH FINAL LIGHTING LAYOUT OR EXISTING LAYOUT FOR WORK IN EXISTING SPACES.
- 10. COORDINATE EXACT FIRE AND/OR SMOKE RATING WITH ARCHITECTURAL CODE PLANS (CP SERIES PLANS). PROPERLY FIRESTOP ALL PENETRATIONS OF RATED CONSTRUCTION. PROVIDE AND INSTALL FIRE DAMPERS AT ALL DUCT PENETRATIONS OF FIRE RATED CONSTRUCTION AND COMBINATION FIRE/SMOKE DAMPERS AT ALL DUCT PENETRATIONS OF SMOKE RATED CONSTRUCTION.
- 11. PROVIDE ACCESS DOORS (AD) AT ALL FIRE DAMPER AND/OR SMOKE DAMPER (SD) LOCATIONS FOR ACCESS WHERE ACCESS CANNOT BE OBTAINED THROUGH REMOVABLE CEILING.

Mechanical Compliance Statement requirements listed in the Inspection Checklist. Jonathan Mesik - Mechanical Engineer

GENERAL SYMBOLS

13. SUPPLY, RETURN AND EXHAUST DUCTS ARE SIZED BASED ON 0.08"

DUCT OF EQUIVALENT CROSS ECTIONAL AREA TO DUCT SIZES

WC FRICTION LOSS PER 100 FEET OF DUCT. TRANSFER AND OUTSIDE

AIR DUCTS SIZED BASED ON 700 FPM VELOCITY. SQUARE OR ROUND

SHOWN ON PLAN MAY BE USED. TRANSITION DUCTS TO EQUIVALENT

CROSS SECTIONAL AREA AS REQUIRED TO CLEAR OBSTRUCTIONS.

14. CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT WITHIN 10'-0" OF

THE ROOF EDGE UNLESS INSTALLED IN MANNER PERMITTED BY

15. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE

NORMALLY OCCUPIED SPACES (NOT BACK OF HOUSE MECHANICAL

ROOMS, JANITOR'S CLOSETS, STORAGE AREAS, ETC.) SHALL HAVE A

16. UNLESS SHOWN OTHERWISE, ALL EXPOSED DUCTWORK IN

PAINT GRIP SURFACE AND BE PAINTED PER ARCHITECT'S

17. DUCT RUN-OUTS TO AIR DEVICES SHALL BE SIZED TO MATCH AIR

18. ALL DUCT FITTINGS SHALL BE PROVIDED WITH TURNING VANES

19. ALL EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S

ALLOW FOR MAINTENANCE. MECHANICAL EQUIPMENT WHICH

ABOVE FINISHED CEILING WITHOUT PRIOR APPROVAL OF THE

EQUIPMENT WITH LIGHTING LAYOUT (SEE REFLECTED CEILING

PLANS). DO NOT INSTALL EQUIPMENT DIRECTLY ABOVE LIGHTS.

20. FURNISH A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS

LOCATIONS OF EQUIPMENT CONTRARY TO THE CONSTRUCTION

21. FURNISH TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND

22. INSTALL VOLUME DAMPERS AT ALL POINTS ON SUPPLY. RETURN.

TO THE TAKE OFF FROM THE LARGER DUCT. DAMPERS IN AIR

23. BRANCH PIPING SIZES TO EQUIPMENT SHALL BE AS INDICATED IN

SIZES SHALL REMAIN LAST INDICATED UPSTREAM SUPPLY AND

24. THE DETAILS SHOWN ON THE DETAIL SHEETS APPLY TO ALL PLAN

MANUFACTURER'S INSTRUCTIONS ARE TO BE FOLLOWED IF

25. ALL MECHANICAL WORK SHALL BE FURNISHED AND INSTALLED IN

ACCORDANCE WITH THE 2020 ENERGY CONSERVATION CODE OF

APPROVAL CERTIFICATES FROM LOCAL AND STATE AUTHORITIES.

ANDEXHAUST SYSTEMS WHERE BRANCHES EXTEND FROM LARGER

DISTRIBUTION DEVICES SHALL NOT BE USED TO BALANCE SYSTEMS

SCHEDULES. WHERE SIZES ARE NOT INDICATED, ALL HYDRONIC PIPE

SHEETS. THE DETAILS ARE TO BE FOLLOWED FOR THE INSTALLATION

OF ALL COMPONENTS AND EQUIPMENT REPRESENTED WHETHER OR

NOT THE DETAIL IS SPECIFICALLY REFERENCED ON THE PLAN SHEET.

DUCTS TO POINTS OF TERMINATION. INSTALL AS CLOSE AS POSSIBLE

DOCUMENTS AFTER FINAL INSPECTION OF WORK.

TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED

ARCHITECT. COORDINATE PLACEMENT OF ABOVE CEILING

INSTRUCTIONS WITH ALL REQUIRED CLEARANCE AND SPACE TO

REQUIRES MAINTENANCE SHALL BE MOUNTED NO MORE THAN 24'

DEVICE CONNECTION SIZE UNLESS OTHERWISE NOTED.

APPLICABLE BUILDING CODE.

UNLESS NOTED OTHERWISE.

DOWNSTREAM RETURN SIZE.

REQUIREMENTS.

SPECIFICATIONS.

POINT OF DISCONNECT - DEMOLITION REMOVED FROM EXISTING POINT OF CONNECTION - NEW CONNECTS TO EXISTING AREA NOT IN CONTRACT

- 7. ALL DUCT DIMENSIONS SHOWN ON PLANS ARE INSIDE CLEAR
- NEW YORK STATE (2018 INTERNATIONAL ENERGY CONSERVATION CODE WITH AMENDMENTS) INCLUDING ANY LOCAL AMENDMENTS. 26. SUBMIT A PRELIMINARY COMMISSIONING REPORT FOR REVIEW AT

DIFFERENT THAN DETAIL(S) ON DRAWINGS.

THE END OF FUNCTIONAL TESTING.

ᡊ᠇ᠬ᠇ᠬ᠇ᠬ᠇ᠬ᠇ᠬ᠇ᠬ᠇ᠬ᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇ Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.4 and to comply with any applicable mandatory 3/28/2023

HVAC SYMBOLS

SCHEMATIC	3D	DESCRIPTION
) `		
		UAD FLUE EXMAUDI AIK
► EA		GENERAL EXHAUST AIR
├ GEA	GEA S	GREASE EXHAUST AIR
∠ RELA	RELA	RELIEF AIR
		SMOKE EXHAUST AIR
۲ ERA۲		ENERGY RECOVERY AIR
├ RA		RETURN AIR
та — т а		TRANSFER AIR
<u></u> ca		COMBUSTION AIR
		OUTSIDE AIR
→ SA →		SUPPLY AIR
		DIFFUSER (SUPPLY)
		GRILLE (RETURN)
		GRILLE (EXHAUST)
		WALL REGISTER
– ––		LINEAR DIFFUSER (SLOT)
		AIR FLOW MEASURING STATION
BDD r	BDD r	BACKDRAFT DAMPER
RD r	RD r	BAROMETRIC RELIEF DAMPER
		DIFFERENTIAL PRESSURE SENSOR
ы г <u> </u>		MOTORIZED DAMPER
PR 🗂	PR r	PRESSURE REDUCING DAMPER
SB r	SB 🗕 💳 -	SECURITY BARS
SP r	SP r	
		VOLUME DAMPER REMOTE VOLUME DAMPER
F		FIRE DAMPER
FS 📥 🗕	FS A	COMBINATION FIRE / SMOKE DAMPER
s 📥 🗕	s 🔺 🗌 -	SMOKE DAMPER
	$\underline{\otimes}$	ROUND DUCT UP
		RECTANGULAR DUCT UP
	$\overline{\aleph}$	OVAL DUCT UP
•		
		ROUND DUCT DOWN
		RECTANGULAR DUCT DOWN
		OVAL DUCT DOWN
Care		
		MITERED ELDOW WITH VANES
	-	
L_1	\rightarrow	MITERED ELBOW WITHOUT VANES
	-	
	Ι	RADIUSED ELBOW
- 30	(rec)	
		TEE WITH VANES
		RADIUSED TEE
 		DUCT WITH INSULATION
[<u>-</u>	
7	Ĩ	
		FLEXIBLE DUCT
		TRANSFER DUCT
(8	DUCT SMOKE DETECTOR
`		SUPPLY ARROW
	►	RETURN ARROW
«	1-	EXHAUST ARROW
U K		DOOR UNDERCUT ARROW WITH CFM
10	JU	
D 12":	-1	NECK SIZE (00"x00" - SQ / RECT) (0"Ø ROUND)
200		
24";	x12"	(WIDTH X DEPTH) SIZE INDICATED FREE AREA
	DDC-xx	- MECHANICAL EQUIPMENT TAG
	-	MECHANICAL EQUIPMENT CLEARANCE
C) 02	CARBON DIOXIDE SENSOR - WALL MOUNTED
Ç	02	CARBON DIOXIDE SENSOR - CEILING MOUNTED
	0 0	CARBON MONOXIDE SENSOR - WALL MOUNTED
<u>כ</u> רו	′O)	HUMIDISTAT - WALL MOLINITED
ים ביי ביי	-	
	02	NITROGEN DIOXIDE SENSOR - WALL MOUNTED
) 02	NITROGEN DIOXIDE SENSOR - CEILING MOUNTED
P) -	PRESSURE SENSOR - WALL MOUNTED
P)	PRESSURE SENSOR - CEILING MOUNTED
S S S) -)	
Ţ	,)	THERMOSTAT - WALL MOUNTED
	-	THERMOSTAT - CEILING MOUNTED

PIPING ANNOTATIONS

MECHANICAL PIPING SYSTEMS

SCHEMATIC	3D	DESCRIPTION
₽ DFR PFR	EDFR 3	DIESEL FUEL RETURN
₽DFS	EDFS B	DIESEL FUEL SUPPLY
∠ DFV 	EDFV S	DIESEL FUEL VENT
FOR FOR	FOR FOR	FUEL OIL RETURN
FOS	FOS FOS	FUEL OIL SUPPLY
FOV	FOV S	FUEL OIL VENT
HPR	E HPR 3	HIGH PRESSURE STEAM RETURN
HPS	E HPS S	HIGH PRESSURE STEAM SUPPLY
⊱LPR────	LPR	LOW PRESSURE STEAM RETURN
₽ LPS	LPS 3	LOW PRESSURE STEAM SUPPLY
₽ MPR - PR- PR- PR- PR- PR- PR- PR- PR- PR-	E MPR S	MEDIUM PRESSURE STEAM RETURN
<code>∠MPS</code>	E MPS S	MEDIUM PRESSURE STEAM SUPPLY
⊱ GWR──── २	GWRS	GEOTHERMAL WATER RETURN
⊱ GWS ∂	GWS	GEOTHERMAL WATER SUPPLY
₽HRWR	E HRWR	HEAT RECOVERY WATER RETURN
<mark>}</mark> HRWS−−−−	E HRWS	HEAT RECOVERY WATER SUPPLY
├ ──HTWR─── २	E HTWR	HIGH TEMPERATURE HOT WATER RETURN
אדws—-	E HTWS	HIGH TEMPERATURE HOT WATER SUPPLY
├ ──HWR─── २	E HWR	HOT WATER RETURN
<mark>}</mark> HWS───	E HWS	HOT WATER SUPPLY
HCR		HOT / CHILLED WATER RETURN
HCS	E HCS	HOT / CHILLED WATER SUPPLY
├ ───₩LR──── २	وetter wlr	WATER LOOP RETURN
≻ WLS `	EWLS 3	WATER LOOP SUPPLY
<u>→RD</u>	RD	REFRIGERANT DISCHARGE
├ ────────────────	ERHG	REFRIGERANT HOT GAS
├─── RL─── २	RL	REFRIGERANT LIQUID
⊱ RS २	RS RS	REFRIGERANT SUCTION
⊱ RV २	RV RV	REFRIGERANT VENT
∠ CWR ~	CWR 3	CHILLED WATER RETURN
∠ CWS २	cwss	CHILLED WATER SUPPLY
∠ CR `		CONDENSER WATER RETURN
⊱ CS ~	cs	CONDENSER WATER SUPPLY
⊱ CD そ	CD	CONDENSATE DRAIN
∠SCD	scd	SECONDARY CONDENSATE DRAIN

PIPING VALVES AND FITTINGS						
SCHEMATIC	3D	DESCRIPTION				
C →		PIPE DROP				
•		PIPE RISE				
		PIPE TEE DOWN				
∠ • →		PIPE TEE UP				
		CONCENTRIC REDUCER				
<u>}</u>		ECCENTRIC REDUCER				
	δ	PIPE CAP				
		PIPE ALIGNMENT GUIDE				
×		PIPE ANCHOR				
→ →→		FLOW DIRECTION				
		EXPANSION JOINT				
∠		FLEXIBLE CONNECTION				
		UNION				
		DIRECTION OF PIPE PITCH				
		AQUASTAT				
		EXPANSION LOOP				
		BALANCING VALVE				
		BALANCING VALVE W/ METERING POINTS				
∠ιδι		BALL VALVE				
		BUTTERFLY VALVE				
		CHECK VALVE				
		STEAM TRAP				
	·	MANUAL AIR VENT				
		AUTOMATIC AIR VENT				
		PLUG VALVE				
Č Č						
	^	SOLENOID VALVE				
		AUTOMATIC CONTROL VALVE 3-WAY				
		AUTOMATIC ELOW CONTROL VALVE				
		STRAINER				
		PRESSURE AND TEMPERATURE TEST PORT				
		THERMOMETER				
		PRESSURE REDUCING VALVE (WATER SYSTEMS) PRESSURE REGULATING VALVE (GAS SYSTEMS)				
		RELIEF VALVE				
		FLOW MEASURING DEVICE				
	── ₮⊖ ₮───	BACKFLOW PREVENTER				
<u>}</u>		UNION				

SHEET INDEX

<i>N</i> 0.1.ii	MECHANICAL SYMBOLS, AB
И1.1А.іі	HVAC PLAN - AREA A - LEVE
И1.2А.іі	HVAC PLAN - AREA A - LEVE
И1.3.іі	MECHANICAL ROOF PLAN
//3.1.ii	ENLARGED HVAC PLANS
//4.1.ii	MECHANICAL SECTIONS AN
И5.1.іі	CONTROLS DIAGRAMS
И5.2.іі	CONTROLS DIAGRAMS
И7.1.іі	MECHANICAL DETAILS
И7.2.іі	MECHANICAL DETAILS
И7.3.іі	MECHANICAL DETAILS
И8.1.іі	MECHANICAL SCHEDULES
И8.2.іі	MECHANICAL SCHEDULES

ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THE SYMBOLS AND ABBREVIATIONS

<u>* NOTE *</u>

LS, ABBREVIATIONS & NOTES - LEVEL 1 - LEVEL 2 LAN NS AND RISERS

dn

U L O L O

ABBREVIATIONS & NOTES M0.1.ii

MECHANICAL SYMBOLS,

57-21113-00

BID SET 11.04.22 REVISIONS CONSTRUCTION DOCS 03.06.23 2 PKG 2 - ASI 001

04.07.23

D

TO BE PAINTED TO MATCH ADJACENT SURFACE
SEE PLANS FOR NECK SIZE.
PROVIDE AIR SCOOP DEVICE

NOTES:

2. SEI 3. PR 4. TO 5. SEI	E PLANS FO OVIDE AIR S BE PAINTEE E PLANS FO	R NECK SIZE. COOP DEVICE.) TO MATCH DUCT. R FRAME SIZE.							
						FACE OF	MODULE		
	ID	DESCRIPTION	MATERIAL	FINISH	QTY	WIDTH	HEIGHT	THICKNESS	S
	D-1	PLAQUE FACE DIFFUSER	STEEL	WHITE ENAMEL	13	24"	24"		
	D-2	PLAQUE FACE DIFFUSER	ALUMINUM	WHITE ENAMEL	13	24"	24"		
	D-3	PLAQUE FACE DIFFUSER	ALUMINUM	WHITE ENAMEL	3	12"	12"		
	G-1	PERFORATED GRILLE	STEEL	WHITE ENAMEL	12	24"	24"		
	G-2	PERFORATED GRILLE	ALUMINUM	WHITE ENAMEL	6				
	G-3	PERFORATED GRILLE	ALUMINUM	WHITE ENAMEL	7	24"	24"		
	G-4	PERFORATED GRILLE	STEEL	WHITE ENAMEL	2				
	R-1	LOUVERED SINGLE DEFLECTION GRILLE	STEEL	PRIME	8			1/8"	
	R-2	HEAVY DUTY SINGLE DEFLECTION REGISTER	STEEL	PRIME	4			1/8"	
	R-3	LOUVERED DOUBLE DEFLECTION GRILLE	STEEL	PRIME	16			1/8"	
	R-4	LOUVERED DOUBLE DEFLECTION GRILLE	ALUMINUM	PRIME	1			1/8"	
	R-5	LOUVERED SINGLE DEFLECTION GRILLE	STEEL	PRIME	13			1/8"	
	R-6	DOUBLE DEFLECTION SPIRAL DUCT MOUNT	ALUMINUM	PRIME	15			1/8"	
	R-7	LOUVERED DOUBLE DEFLECTION GRILLE	STEEL	PRIME	6			1/8"	

			LINEAR S	SLO	ID	IFFC	JSER	SCH	EDI	JLE						
						LINEAR	DIFFUSER			NECK			INSTALLATION	OPTION		
DESCRIPTION	οτν		EINIGH	SLO	TC		PLENUM				Т	YPE		DAMDE		
DESCRIPTION	QIT	WAIERIAL	ГІЛІЭП	WIDTH	ΟΤΥ	NOM.			POUND	OVAL	Oval	Pound	BORDER TYPE	DESCRIPT		
				WIDTH	QII	LENGTH	INSULATED		ROOND	WIDTH HEIGHT	Ovai	Round				
LINEAR SLOT DIFFUSER	12	ALUMINUM	WHITE ENAMEL	1"	1	4' - 0"	Yes	Yes	8"		No	Yes	DEFAULT			
LINEAR SLOT DIFFUSER	10	ALUMINUM	WHITE ENAMEL	2"	1	4' - 0"	Yes	Yes	8"		No	Yes	DEFAULT			
_	DESCRIPTION LINEAR SLOT DIFFUSER LINEAR SLOT DIFFUSER	DESCRIPTIONQTYLINEAR SLOT DIFFUSER12LINEAR SLOT DIFFUSER10	DESCRIPTION QTY MATERIAL LINEAR SLOT DIFFUSER 12 ALUMINUM LINEAR SLOT DIFFUSER 10 ALUMINUM	DESCRIPTION QTY MATERIAL FINISH LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL	DESCRIPTION QTY MATERIAL FINISH SLO LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2"	LINEAR SLOID DESCRIPTION QTY MATERIAL FINISH SLOT LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1	LINEAR SLOT DIFFU DESCRIPTION QTY MATERIAL FINISH SLOT LINEAR LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'-0" LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1 4'-0"	LINEAR SLOT DIFFUSERDESCRIPTIONUNATERIALFINISHLINEAR DIFFUSERMATERIALFINISHLINEAR DIFFUSERUNATERIALFINISHLINEAR DIFFUSERUNATERIALFINISHLINEAR DIFFUSERUNATERIALFINISHLINEAR DIFFUSERUNATERIALFINISHLINEAR DIFFUSERLINEAR SLOT DIFFUSER12ALUMINUMWHITE ENAMEL1"14'-0"YesLINEAR SLOT DIFFUSER10ALUMINUMWHITE ENAMEL1"14'-0"YesLINEAR SLOT DIFFUSER10ALUMINUMWHITE ENAMEL2"14'-0"Yes	LINEAR SLOT DIFFUSER SCHDESCRIPTIONUNATERIALFINISHLINEAR DIFFUSERMATERIALFINISHLINEAR DIFFUSERUNATERIALFINISHLINEAR DIFFUSERLINEAR SLOT DIFFUSER12ALUMINUMWHITE ENAMEL1"14'-0"YesLINEAR SLOT DIFFUSER10ALUMINUMWHITE ENAMEL1"14'-0"YesYesLINEAR SLOT DIFFUSER12ALUMINUMWHITE ENAMEL1"14'-0"YesYesYesYesYesYesYes	LINEAR SLOT DIFFUSER SCIEDU DESCRIPTION ATERIAL FINISH LINEAR DIFFUSER PLENUM MATERIAL FINISH SLOT PLENUM OW PROFILE ROUND LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'-0" Yes Yes 8" LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1 4'-0" Yes Yes 8"	LINEAR SLOT DIFFUSER SCHEDULE DESCRIPTION NECK NATERIAL FINISH LINEAR DIFFUSER NECK MATERIAL FINISH LINEAR DIFFUSER NECK MATERIAL FINISH LINEAR DIFFUSER NECK MATERIAL FINISH INSULATED NECK MATERIAL NECK MATERIAL NECK MATERIAL NECK MATERIAL NECK MATERIAL NECK MIDTH NECK MIDTH NECK MIDTH NOM. 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LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'-0" Yes Yes 8" MOVAL No Yes LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1 4'-0" Yes Yes 8" MOVAL No Yes</td><td>LINEAR SLOT DIFFUSER SCHEDULE DESCRIPTION ATTERIAL FINISH LINEAR DIFFUSER NECK INSTALLATION MATERIAL FINISH SLOT PLENUM LOW PROFILE ROUND OVAL NOAL BORDER TYPE LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'-0" Yes Yes 8" Model No Yes DEFAULT No Yes No Yes No Yes DEFAULT LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1 4'-0" Yes Yes No Yes DEFAULT</td></th></td></th>	<td>LINEAR SLOT DIFFUSER SCREDULE DESCRIPTION NECK NATERIAL FINISH LINEAR DIFFUSER NECK MATERIAL FINISH SLOT PLENUM NECK MATERIAL FINISH SLOT PLENUM NECK UINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'' OVAL No LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'' No LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'' No LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1 4'' No LINEAR SLOT DIFFUSER <th colsp<="" td=""><td>LINEAR SLOT DIFFUSER SCHEDULE DESCRIPTION QTY MATERIAL FINISH LINEAR DIFFUSER NECK NECK MIDTH QTY NOM. 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LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'-0" Yes Yes 8" MOVAL No Yes LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1 4'-0" Yes Yes 8" MOVAL No Yes</td> <td>LINEAR SLOT DIFFUSER SCHEDULE DESCRIPTION ATTERIAL FINISH LINEAR DIFFUSER NECK INSTALLATION MATERIAL FINISH SLOT PLENUM LOW PROFILE ROUND OVAL NOAL BORDER TYPE LINEAR SLOT DIFFUSER 12 ALUMINUM WHITE ENAMEL 1" 1 4'-0" Yes Yes 8" Model No Yes DEFAULT No Yes No Yes No Yes DEFAULT LINEAR SLOT DIFFUSER 10 ALUMINUM WHITE ENAMEL 2" 1 4'-0" Yes Yes No Yes DEFAULT</td>	LINEAR SLOT DIFFUSER SCHEDULE DESCRIPTION QTY MATERIAL FINISH LINEAR DIFFUSER NECK NECK MIDTH QTY NOM. 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NOT 1. P 2. P 3. P	TES: ROVIDE WITH ROVIDE WITH ROVIDE WITH	H UNIT MO H UNIT MO H WALL M	OUNTED DISCONNECT OUNTED THERMOSTA OUNTING BRACKET.	г. Т.		1									•	ELE/			1	PASIS OF	
	ID	NO.	NAME	ТҮРЕ	ARRANGEMENT	AIR FLOW (CFM)	DRIVE		MC	TOR			P DB (°F)	HEA ELEN	TING MENT	AMPS (A)	VOLT (V)	РН	WEIGHT (LBS)	MANUFACTURER	DESIGN
	EUH-A100			STANDARD	CEILING - RECESSED	150	DIRECT	QTY	HP 0.01	RPM 1600	ECM No	ENT 68	LVG 90	QTY 1	KW 3	10.8	277	1	23	QMARK	
	EUH-A202B	A202B	ELEC	STANDARD	WALL HUNG	350	DIRECT	1	0.01	1600	No	68	90	1	3	11	277	1	27	QMARK	
	EUH-A250	A250	M. TLT.	STANDARD	WALL HUNG	650	DIRECT	1	0.03	1600	No	68	90	1	10	27.8	208	3	38	QMARK	
	EUH-A251A	A251	W. TLT.	STANDARD	WALL HUNG	650	DIRECT	1	0.03	1600	No	68	90	1	10	27.8	208	3	38	QMARK	
	EUH-A251B	A251	W. TLT.	STANDARD	WALL HUNG	650	DIRECT	1	0.03	1600	No	68	90	1	10	27.8	208	3	38	QMARK	
	EUH-A252	A252	FAMILY	STANDARD	WALL HUNG	350	DIRECT	1	0.01	1600	No	68	90	1	3	14.5	208	1	27	QMARK	N
	EUH-A253	A253	MECH	STANDARD	WALL HUNG	350	DIRECT	1	0.01	1600	No	68	90	1	3	14.5	208	1	27	QMARK	ſ

NERAL: BASIS OF DES SEE PLANS F(REVIEW MANI INSTALL UNIT EQUIPMENT S REFER TO SE	SIGN MOD OR EXACT UFACTUR PER MAN SELECTIO QUENCE	EL NUMBERS ARE FO TUNIT LOCATION AND ER'S RIGGING AND LI IUFACTURER'S INSTE N SHALL BE BASED C OF OPERATION DRAV	OR REFERENCE ONLY. BID EQUIP O CONFIGURATION. IFTING INSTRUCTIONS PRIOR TO RUCTIONS INCLUDING ALL FIELD ON ALTITUDE OF JOB SITE. VINGS FOR CONTROL REQUIREM	PMENT TO PROVIDE THE INDICATED P INSTALLATION. ASSEMBLY REQUIREMENTS. IENTS.	ERFORMANCE.		NOTES: 1. PROVIDE 2. PROVIDE 3. MOTORIZ 4. DIRECT I 5. PROVIDE	WITH STAN WITH ALUN ED BACKDF RIVE FAN V RUBBER-IN	NDARD PF MINUM BIF RAFT DAN WITH PRE N SHEAR I	Rewirei Rd Scre IPer, Po Wired I Solato	D POWER EEN. DWERED FAN SPEE DRS.	DISCO FROM F D CON	NNECT FAN CIR TROLLE	Mounte Cuit. Pf R.	ed exter Rovide ⁻	RNAL TO TH	IE FAN A	ND RAT	ED FOR THE	LOCATION WHERE INS	FALLED.	
	LOCATION		4054			FAN D				ΑΤΑ				SOUND	ELECT DA	RICAL	BASIS OF DESIGN		DESIGN			
ID	NO.	NAME	SERVED	ТҮРЕ	ARRANGEMENT	DESCRIPTION	AIRFLOW (CFM)	OUTLET VELOCITY (EPM)	ESP (IN WG)	RPM	DRIVE TYPE	QTY	MOTC HP	R DATA RPM	ECM	LEVEL (dBA)	VOLT (V)	РН	(LBS)	MANUFACTURER	MODEL	NOTES
EF-A111	A109	LOCKER ROOM	SPORTS MED	EXHAUST	INLINE	CENTRIFUGAL	200	599	0.3	1666	DIRECT	1	0.1	1725	No	50	120	1	28	LOREN COOK	GN-342	1,3,4,5
EF-A113		ROOF	RESTROOM	EXHAUST	UPBLAST	CENTRIFUGAL	50	123	0.25	1322	DIRECT	1	0.05	1550	No	41	120	1	29	LOREN COOK	70R15DM	1,2,3,4
EF-A202A		ROOF	CUSTODIAN	EXHAUST	UPBLAST	CENTRIFUGAL	75	185	0.25	1305	DIRECT	1	0.05	1550	No	43	120	1	29	LOREN COOK	70R15DH	1,2,3,4
EF-A202B	A202B	ELEC	ELECTRICAL ROOM	EXHAUST	INLINE	CENTRIFUGAL	150	449	0.25	1519	DIRECT	1	0.05	1600	No	43	120	1	28	LOREN COOK	GN-322	1,3,4,5
EF-A208		ROOF	RESTROOM	EXHAUST	UPBLAST	CENTRIFUGAL	650	757	0.25	1388	DIRECT	1	0.13	1550	No	57	120	1	39	LOREN COOK	101R15D	1,2,3,4
EF-A250	A250	M. TLT.	RESTROOM	EXHAUST	INLINE	CENTRIFUGAL	350	801	0.25	1094	DIRECT	1	0.16	1500	No	39	120	1	26	LOREN COOK	GN-642	1,3,4,5
EF-A251	A251	MEN	RESTROOM	EXHAUST	INLINE	CENTRIFUGAL	650	1,479	0.5	1527	DIRECT	1	0.4	1600	No	44	120	1	29	LOREN COOK	GN-740	1,3,4,5
	A252	MECH		FYHALIST		CENTRIELIGAL	125	370	0.25	801	DIRECT	1	0.08	1450	No	41	120	1	13		GN-188	13/1

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

B	LADE DESI	GN		INSTALLATION		OPTIONS		MAY		BASIS OF	F DESIGN
	DEFLECT	ION ANGLE DOUBLE	ORIENTATION	BORDER TYPE	DAMPER DESCRIPTION	EQUALIZING GRID	HEAVY DUTY FRAME	NC	SPECIFICATION	MANUFACTURER	
				TYPE 3 (LAY-IN)		No	No	25	STEEL SQUARE PLAQUE FACE DIFFUSER	TITUS	
				TYPE 3 (LAY-IN)		No	No	25	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	TITUS	
				TYPE 1 (SURFACE)		No	No	25	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	TITUS	
				TYPE 3 (LAY-IN)		No	No	25	STEEL PERFORATED FACE GRILLE	TITUS	
				TYPE 1 (SURFACE)		No	No	25	ALUMINUM PERFORATED FACE GRILLE	TITUS	
				TYPE 3 (LAY-IN)		No	No	25	ALUMINUM PERFORATED FACE GRILLE	TITUS	
				TYPE 1 (SURFACE)		No	No	25	STEEL PERFORATED FACE GRILLE	TITUS	
	35.0°	0.0°	SINGLE-LONG	DUCT MOUNT		Yes	No	25	STEEL SINGLE DEFLECTION REGISTER	TITUS	
	0.0°	0.0°	SINGLE-LONG	TYPE 1 (SURFACE)		Yes	Yes	25	STEEL HEAVY DUTY SINGLE DEFLECTION REGISTER	TITUS	
	0.0°	0.0°	DOUBLE-LONG	TYPE 1 (SURFACE)		No	No	25	STEEL DOUBLE DEFLECTION REGISTER	TITUS	
	0.0°	0.0°	DOUBLE-LONG	TYPE 1 (SURFACE)		No	No	25	ALUMINUM DOUBLE DEFLECTION REGISTER	TITUS	
	35.0°	0.0°	SINGLE-LONG	TYPE 1 (SURFACE)		Yes	No	25	STEEL SINGLE DEFLECTION REGISTER	TITUS	
	0.0°	0.0°	DOUBLE-LONG	DUCT MOUNT		Yes	No	25	ALUMINUM SPIRAL DUCT MOUNT REGISTER	TITUS	
	0.0°	0.0°	DOUBLE-LONG	DUCT MOUNT		No	No	25	STEEL DOUBLE DEFLECTION REGISTER	TITUS	

ELECTRIC CABINET UNIT HEATER SCHEDULE

		Ν	OTES
MO	DEL		
O	MNI		2
OMI	NI-AA		2
DIVII	NI-AA AR		2
PAI	R-AA		2,5
PA	R-AA		2
P	AR		2,5
35	5RL		105
30	ORL		1,2,5
30	0FL		1,2,5
35	5RL		1,2,5
US3	00FL		3,4
30	UKL		2,4,5
	DA OLO		
	BASIS		DIGIN
~~	MANUFACTU	RER	MODEL
JN			
	TITUS		FL-10
	TITUS		FL-20
MO	DEL	N	OTES
EFF	3007		1,2
	03-71		1,2,3
MUH	I-10-0 I-10-8		1,2,3
MUH	I-10-8		1,2,3
MUH	-03-81		1,2,3
MUH	-03-81		1,2,3
- ר			
J.			
			IOTES
мо	DEL	N	IOTES
MO	DEL	Ν	IOTES
MO GN	DEL -342	N	OTES
MO GN 70R ⁻ 70R	DEL -342 15DM 15DH	N	OTES ,3,4,5 ,2,3,4 ,2,3,4
MO GN 70R ⁻ 70R GN	DEL -342 15DM 15DH -322	N	OTES ,3,4,5 ,2,3,4 ,2,3,4 ,3,4,5
MO GN 70R ⁻ 70R GN 1011	DEL -342 15DM 15DH -322 R15D	N	0 TES ,3,4,5 ,2,3,4 ,2,3,4 ,3,4,5 ,2,3,4
MO GN 70R [:] 70R 1011 GN	DEL -342 15DM 15DH -322 R15D -642	N 1 1 1 1 1 1	OTES ,3,4,5 ,2,3,4 ,2,3,4 ,3,4,5 ,2,3,4 ,3,4,5
MO GN 70R 70R GN 101I GN GN	DEL -342 15DM 15DH -322 R15D -642 -740	N	0 TES ,3,4,5 ,2,3,4 ,2,3,4 ,3,4,5 ,2,3,4 ,3,4,5 ,3,4,5 ,3,4,5
MO GN 70R 70R 6N 101f GN GN GN	DEL -342 15DM 15DH -322 R15D -642 -740 -188	1 1 1 1 1 1 1	OTES ,3,4,5 ,2,3,4 ,2,3,4 ,3,4,5 ,3,4,5 ,3,4,5 ,3,4,5

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GE	NER/
1	MODIFIC MANUF

(D)	DEMOLISHED	GENERAL NOTES
(E) (R) Ø	EXISTING RELOCATED PHASE	1 MODIFICATIONS TO EXISTING POWER DISTRIBUTION EQUIPMENT: MATCH EXISTING MANUFACTURER, SWITCH TYPE, FUSE TYPE, BREAKER TYPE AND KAIC RATING FOR ALL INSTALLED DEVICES.
A		2 EXISTING PANEL DIRECTORIES AT PANELS AFFECTED BY WORK: PROVIDE UPDATED TYPED PANEL DIRECTORY. CONSULT OWNER FOR INPUT ON LABELING OF ALL EXISTING
AC	ABOVE COUNTER AMP FRAME (CIRCUIT BREAKER)	CIRCUITS. 3 DEVICES AND LIGHT FIXTURES DENOTED 'ER' ARE EXISTING TO BE RELOCATED. NOTIFY
AIC AL	AMPERE INTERRUPTING CAPACITY ALUMINUM	A/E IF DEVICES OR FIXTURES ARE DAMAGED. 4 ALL ELECTRICAL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE
AMP		2020 ENERGY CONSERVATION CODE OF NEW YORK STATE (2018 INTERNATIONAL ENERGY CONSERVATION CODE WITH AMENDMENTS) INCLUDING ANY LOCAL AMENDMENTS.
AT	AMP TRIP (CIRCUIT BREAKER OR FUSE)	5 SUBMIT A PRELIMINARY COMMISSIONING REPORT FOR REVIEW AT THE END OF
ATS AV	AUTOMATIC TRANSFER SWITCH AUDIO-VIDEO, AUDIO-VISUAL	6 PER NYSECC C105.2.2, THESE PLANS AND SPECIFICATIONS, TO THE BEST OF DLR
AWG	AMERICAN WIRE GAUGE	GROUP'S KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGMENT, ARE IN COMPLIANCE WITH THE ENERGY CODE.
BAS	BUILDING AUTOMATION SYSTEM	
BJ BKR	BONDING JUMPER BREAKER	
BMS	BUILDING MANAGEMENT SYSTEM	
С	CONDUIT	
CATV CB	CABLE TELEVISION CIRCUIT BREAKER	
CCTV	CLOSED CIRCUIT TELEVISION	
CFCI	CIRCUIT	
CU	COPPER	
DB DC	DECIBEL DIRECT CURRENT	
DISC	DISCONNECT	
DP DW	DISTRIBUTION PANELBOARD DISHWASHER	
FCS	EMERGENCY COMMUNICATION SYSTEM	
EGB	ELECTRICAL GROUNDING BUSBAR	GENERAL DEMOLITION NOTES
EMD EMGB	ESTIMATED MAXIMUM DEMAND ELECTRICAL MAIN GROUNDING BUSBAR	1 ITEMS INDICATED ON DEMOLITION PLANS ARE BASED ON AS-BUILT DRAWINGS AND FIELD
EP		OBSERVATIONS AND ARE INTENDED TO GIVE THE BIDDER A GENERAL REPRESENTATION OF EXISTING CONDITIONS.
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH	2 REMOVE ALL ITEMS SHOWN FULL-TONE OR NOTED ELSEWHERE IN THE DOCUMENTS TO BE REMOVED OR DEMOLISHED. DEMOLISH ADDITIONAL ITEMS NOT SHOWN ON
EWC	ELECTRIC WATER COOLER	DRAWINGS, BUT WHICH MUST BE REMOVED TO COMPLETE THE PROJECT.
FA		4 RELOCATE ITEMS DENOTED 'ER'. SEE LIGHTING, POWER AND/OR SPECIAL SYSTEM
FACP	FIRE ALARM ANNUNCIATOR FIRE ALARM CONTROL PANEL	5 EXISTING CONDUIT MAY REMAIN IF ALL THE FOLLOWING ARE TRUE:
FC FLA	FOOT CANDLE FULL LOAD AMPS	 A. IT CAN BE REUSED TO FEED DEVICES INSTALLED UNDER THIS CONTRACT. B. IT DOES NOT INTERFERE WITH OTHER TRADES.
FS	FLOW SWITCH	C. IT WAS ORIGINALLY INSTALLED MEETING SPECIFICATIONS RELATED TO THIS PROJECT D. IT WILL NOT BE EXPOSED IN A FINISHED AREA (UNLESS NOTED OTHERWISE).
FSD	FIRE SMOKE DAMPER	6 PROVIDE ELECTRICAL DEMOLITION ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED IN ADDITION TO DEVICES SHOWN REFER TO MECHANICAL AND
G GEN	EQUIPMENT GROUNDING CONDUCTOR	ARCHITECTURAL DEMOLITION SHEETS TO DETERMINE EQUIPMENT TO BE REMOVED.
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NOT LIMITED TO, TELECOM CABLING NETWORKS, INTERCOM, CLOCKS, FIRE ALARM,
GFPE GND	GROUND FAULT PROTECTION OF EQUIPMENT EQUIPMENT GROUNDING CONDUCTOR	INTERCONNECTIONS AS REQUIRED TO ACCOMMODATE CONSTRUCTION SCHEDULE.
uu		
HOA	HAND-OFF-AUTOMATIC	GENERAL SITE PLAN NOTES
HP	HORSE POWER	
IC		1 ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED 24" (MINIMUM) BELOW FINISHED GRADE.
10	ISOLATED SKOUND	2 ALL COMMUNICATIONS CONDUIT AND CABLES SHALL BE INSTALLED 36" (MINIMUM) BELOW FINISHED GRADE, UNLESS NOTED OTHERWISE.
JB	JUNCTION BOX	3 ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM UNLESS NOTED OTHERWISE
KAIC	THOUSAND AMPERE INTERRUPTING CIRCUIT	4 CONDUIT SIZE FOR EXTERIOR WORK SHALL BE 1-INCH MINIMUM, UNLESS NOTED
KVA	KILOVOLT AMPERES	0 THERWISE. 5 SLOPE ALL CONDUITS OUT OF BUILDING DOWN/AWAY FROM BUILDING TO REQUIRED
KW	KILOWATT	DEPTH OR HANDHOLE. 6 SEE CIVIL DRAWINGS FOR SITE COORDINATION COORDINATION
LT	LIGHT	
LIG	LIGHTING	
MCA MCB	MINIMUM CIRCUIT AMPACITY MAIN CIRCUIT BREAKER	
MCC	MOTOR CONTROL CENTER	GENERAL POWER NOTES
MH MLO	MANHOLE MAIN LUGS ONLY	
MOCP MRTS	MAXIMUM OVERCURRENT PROTECTION	FURNISHED UNDER DIVISION 23. IF REQUIRED, PROVIDE NEUTRAL.
MSB	MAIN SWITCHBOARD	2 PROVIDE DEDICATED 120-VOLT CIRCUITS TO ALL HVAC BAS CONTROL DEVICES AND PANELS. COORDINATE QUANTITY WITH DIVISION 23. UTILIZE NEAREST
MTD MTG	MOUNTED MOUNTING	SPARE 120-VOLT, 20/1 BREAKER. LABEL TYPED PANEL DIRECTORY ACCORDING TO LOAD BEING SERVED.
MTS	MAIN TRANSFER SWITCH	3 IN ADDITION TO DEVICES SHOWN, SEE SCHEDULE SHEETS FOR CONNECTIONS TO ALL MECHANICAL EQUIPMENT.
Ν	NEUTRAL	4 LOCATE SWITCHES FOR CONTROL OF FANS IN TWO-GANG BOX WITH LIGHT
N.C. N.O.	NORMALLY CLOSED NORMALLY OPEN	
NF	NON-FUSED	
NL	NIGHT LIGHT	
OFCI OS&Y	OWNER FURNISHED CONTRACTOR INSTALLED OUTSIDE SCREW AND YOKE	
5561		GENERAL LIGHTING NOTES
P PA	PUBLIC ADDRESS	
РВ РН	PULL BOX PHASE	1 SEE LIGHT FIXTURE SCHEDULE AND SYMBOLS LEGEND FOR MOUNTING HEIGHTS, UNLESS NOTED OTHERWISE.
PIV	POST INDICATOR VALVE	 PROVIDE #10AWG MINIMUM CONDUCTORS FOR ALL EXTERIOR LIGHTING CIRCUITS. SEE ARCHITECTURAL BUILDING FLEVATIONS FOR LOCATION OF RUILDING MOUNTED.
PWR	POWER	EXTERIOR LIGHT FIXTURES.
RCP	REFLECTED CEILING PLAN	4 PROVIDE BEAD OF SILICON SEALANT AROUND RECESSED BACK BOX PERIMETER AT ALL BUILDING MOUNTED EXTERIOR LIGHT FIXTURE LOCATIONS.
REF	REFERENCE	 5 CIRCUIT FIXTURES DENOTED WITH 'NL' AS UNSWITCHED NIGHT LIGHTS. 6 FIXTURES DENOTED WITH LOWER CASE LETTERS SHALL BE CONTROLLED BY SWITCHES
SCCR	SHORT CIRCUIT CURRENT RATING	DENOTED WITH THE SAME LOWER CASE LETTER IN EACH ROOM.
SD	SMOKE DAMPER	
SPD	SURGE PROTECTION DEVICE	
SWBD	SWITCHBOARD	
TBB	TELECOMMUNICATIONS BONDING BACKBONE TIME CLOCK	
TGB	TELECOMMUNICATIONS GRONDING BUSBAR	1 SEE SYMBOLS LEGEND THIS SHEET FOR MOUNTING HEIGHTS UNLESS NOTED OTHERWISE
TMGB TO	I ELECOMMUNICATIONS MAIN GRONDING BUSBAR TELECOMMUNICATIONS OUTLET	2 ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF BOXES UNLESS NOTES OTHERWISE.
TR	TELECOMMUNICATIONS ROOM	3 PROVIDE BOX EXTENDER FOR FLUSH INSTALLATION OF DEVICES LOCATED IN ARCHITECTURAL CASEWORK THAT IS FLUSH WITH ADJACENT WALL (SUCH AS
TV	TELEVISION	RECEPTACLES FOR GARBAGE DISPOSERS). 4 FLOOR BOXES: ORTAIN OWNER APPROVAL OF ALL BOX LOCATIONS PRIOR TO ROUGH IN
UG	UNDERGROUND	PROVIDE DEVICE PLATES AT DEVICES AND BLANK PLATES AT ALL UNUSED COMPARTMENTS.
UPS	UNINTERRUPTABLE POWER SUPPLY	5 COORDINATE LOCATION OF DEVICE BOXES FOR SWITCHES, RECEPTACLES, AND
V	VOLT	SYSTEMS DEVICES WITH MARKERBOARDS. ADJUST BOX LOCATIONS TO AVOID MARKERBOARDS.
VA VFD	VOLT-AMPERE VARIABLE FREQUENCY DRIVE	6 COORDINATE LOCATION OF DEVICE BOXES FOR SWITCHES, RECEPTACLES, AND SYSTEMS DEVICES WITH MARKERBOARDS AND TACKBOARDS. ADJUST BOX LOCATIONS
-		I O AVOID MARKERBOARDS AND TACKBOARDS. PROVIDE BOX EXTENDER FOR A FLUSH INSTALLATION WHERE DEVICES MUST BE MOUNTED AT TACKBOARD/TACKWALL.
vv WA	TELECOMMUNICATIONS WORK AREA	7 CEILING MOUNTED RECEPTACLES: AT SUSPENDED CEILINGS, ROUTE POWER TO RECEPTACLE VIA FLEXIBLE METALLIC CONDUIT WITH 6-FOOT SERVICE LOOP. FEED FMC
WG WP	WIRE GUARD WEATHER-PROOF (NFMA 3R)	FROM A J-BOX RIGIDLY SUPPORTED A MAXIMUM OF 24-INCHES ABOVE SUSPENDED CEILING OR AT BOTTOM OF STRUCTURE ABOVE. WHICHEVER IS LOWER. LOCATE J-BOX
		DIRECTLY ABOVE RECEPTACLE AND SUPPORT VIA STRUCTURE, OR VIA THREAD ROD AND UNISTRUT HUNG FROM STRUCTURE ABOVE IN HIGH STRUCTURE APPLICATIONS.
XFMR	IKANSFUKMEK	8 DEVICES RECESSED IN MULLIONS: BACK BOXES TO BE RECESSED FOR FLUSH
		UP TO WALL ABOVE AND STUB OUT ABOVE ACCESSIBLE CEILING. IN AREAS WITH NO
		CEILING, EXTEND CONDULT TOWARDS CABLING SOURCE TO ABOVE NEAREST ACCESSIBLE CEILING.

RAL NOTES

GENERAL SYMBOLS

? SIM ???	 DETAIL NUMBER CROSS REFERENCE SHEET NUMBER
? SIM	DETAIL REFERENCE
? East	BUILDING ELEVATION INTERIOR ELEVATION
?	KEYED NOTE
? — — —	COLUMN GRID LINE
ROOM NAME	ROOM NAME / ROOM NUMBER
?	DOOR NUMBER
$\langle \mathbf{x} \rangle$	EQUIPMENT TAG
	REVISION NUMBER

GENERAL SYSTEMS NOTES

DIVISION 26

- 1 TELECOMMUNICATIONS OUTLETS: PROVIDE TWO-GANG BOX (2.25-INCH DEEP MINIMUM) WITH SINGLE-GANG STRAP MOUNT PLASTER RING AND 1-INCH CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE FINISHED CEILING (EXCEPTION: VOICE-ONLY OR VIDEO-ONLY OUTLETS PER NOTE BELOW).
- 2 TELECOMMUNICATIONS OUTLET INDICATED AS ROUGH IN ONLY (NO SUBSCRIPTS): INSTALL PER NOTE ABOVE, WITH BLANK 302SS SINGLE-GANG
- WALLPLATE. 3 VOICE-ONLY OR VIDEO-ONLY TELECOMMUNICATIONS OUTLET: PROVIDE SINGLE-GANG BOX WITH 1-INCH CONDUIT STUBBED INTO ACCESSIBLE SPACE
- ABOVE FINISHED CEILING. 4 MISCELLANEOUS LOW VOLTAGE OUTLETS (CALL STATIONS, HANDSETS, VOLUME CONTROL, MICROPHONE OUTLETS, SURFACE-MOUNT WALL SPEAKERS AND FIRE ALARM DEVICES): PROVIDE SINGLE-GANG BOX WITH 3/4-INCH CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE FINISHED CEILING.
- INSULATED BUSHINGS: PROVIDE BUSHINGS ON ALL CONDUIT STUB UPS, INCLUDING BUT NOT LIMITED TO, OUTLETS FOR TELECOMMUNICATIONS, FIRE ALARM, SECURITY, ACCESS CONTROL, MASS NOTIFICATION, PUBLIC ADDRESS, ALL OTHER LOW VOLTAGE INTERCOMMUNICATIONS AND UNUSED STUB-UPS OR STUB-UPS INDICATED FOR FUTURE USE.
- 6 FLOOR BOXES CONTAINING TELECOMMUNICATIONS OUTLETS: FOR EACH LOW-VOLTAGE COMPARTMENT, ROUTE 1-INCH CONDUIT WITH PULL STRING UNDERFLOOR, UP NEAREST WALL, AND STUB INTO ACCESSIBLE SPACE ABOVE FINISHED CEILING. LABEL CONDUIT END 'FLOOR BOX'
- 7 SLEEVES FOR LOW VOLTAGE CABLES: PROVIDE 2-INCH SLEEVES UNLESS NOTED OTHERWISE. COORDINATE WITH PATH OF DUCTWORK AND GWB CEILING TO ENSURE ACCESSIBILITY, EXTEND SLEEVES AS REQUIRED. INSTALL ALL SLEEVES 4-INCHES ABOVE HIGHER CEILING OF TWO ADJACENT SPACES. REFER TO ROOM FINISH SCHEDULES AND REFLECTED CEILING PLANS FOR CEILING HEIGHTS. STUB SLEEVES INTO JOIST SPACE OF FINISHED ROOMS WITH EXPOSED STRUCTURE. PROVIDE INSULATED BUSHINGS ON BOTH ENDS OF ALL SLEEVES, INCLUDING UNUSED SLEEVES. PROVIDE GROUT OR ESCUTCHEONS TO SECURE
- SLEEVES TO WALL. PROVIDE FIRE-RATED SLEEVES AT ALL FIRE-RATED WALLS. PROVIDE ADDITIONAL CONDUIT, BOXES, CONDUCTORS AND OVERCURRENT PROTECTION FOR 120-VOLT BRANCH CIRCUITS NOT SPECIFICALLY COVERED UNDER DIVISION 26 WORK, BUT REQUIRED TO COMPLETE DIVISION 08 AND 28 WORK. DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO, POWER SUPPLIES FOR DOOR HARDWARE, ACCESS CONTROL, FIRE ALARM AND VIDEO
- SURVEILLANCE. 9 CARD READERS: PROVIDE RECESSED SINGLE-GANG BOX WITH GASKETED BLANK COVERPLATE AND EMPTY 1-INCH CONDUIT STUBBED INTO NEAREST ACCESSIBLE SPACE ABOVE FINISHED CEILING OR JOIST SPACE OF ADJACENT EXPOSED STRUCTURE. LABEL CONDUIT END 'CARD READER'.
- 10 PROVIDE WATERFALL DROPOUTS AT ALL CABLE TRAY LOCATIONS ABOVE RUNWAYS, WALL/FLOOR MOUNTED RACKS, AND EQUIPMENT ENCLOSURES. 11 AUDIO VISUAL (AV) SYSTEMS: PROVIDE RECESSED BOXES, CONDUIT AND PULL STRINGS FOR ALL SYSTEM COMPONENTS. REFER TO TA SERIES SHEETS.

GENERAL SYSTEMS NOTES

DIVISION 27 4 UTILIZE SLEEVES AND FIRE RATED SLEEVES AT RATED WALLS PROVIDED UNDER DIVISION 26 FOR INSTALLATION OF ALL LOW VOLTAGE CABLING. FOLLOW INDUSTRY STANDARDS TO MAINTAIN 40% FILL REQUIREMENTS IN ALL SLEEVES (SUPERSEDES NEC - DO NOT FILL SLEEVES TO CAPACITY). PROVIDE ADDITIONAL SLEEVES MEETING DIVISION 26 REQUIREMENTS AS REQUIRED.

GENERAL SYSTEMS NOTES

DIVISION 28

- 1 PROVIDE MINIMUM CANDELA RATINGS FOR ROOMS WITH WALL MOUNTED VISUAL NOTIFICATION APPLIANCES AS FOLLOWS: <20'x20' = 15cd <28'x28' = 30cd
- <40'x40' = 60cd >40'x40' = 110cd

SERVED)'.

- 2 PROVIDE MINIMUM CANDELA RATINGS FOR ROOMS WITH CEILING MOUNTED VISUAL NOTIFICATION APPLIANCES ON MAXIMUM 10' HIGH CEILING AS FOLLOWS: <20'x20' = 15cd <30'x30' = 30cd</p> <40'x40' = 60cd
- >40'x40' = 110cd
- INCREASE DEVICE RATINGS/SETTINGS WHEN LOCATED OFF-CENTER IN ROOMS TO MAINTAIN NFPA COVERAGE.
- 4 VISUAL DEVICES IN CORRIDORS SHALL BE 15cd. VISUAL DEVICES LOCATED IN OTHER AREAS SHALL BE 110cd UNLESS NOTED OTHERWISE.
- 5 IN ADDITION TO DEVICES SHOWN, SEE SCHEDULE SHEETS FOR FIRE ALARM SYSTEM DEVICES CONNECTIONS TO MECHANICAL EQUIPMENT.
- PROVIDE FIRE ALARM MONITORING OF ALL FLOW AND TAMPER SWITCHES. CONFIRM QUANTITIES AND LOCATION WITH DIVISION 21.
- 7 UTILIZE SLEEVES AND FIRE RATED SLEEVES AT RATED WALLS PROVIDED UNDER DIVISION 26 FOR INSTALLATION OF ALL LOW VOLTAGE CABLING. FOLLOW INDUSTRY STANDARDS TO MAINTAIN 40% FILL REQUIREMENTS IN ALL SLEEVES (SUPERSEDES NEC - DO NOT FILL SLEEVES TO CAPACITY). PROVIDE ADDITIONAL SLEEVES MEETING DIVISION 26 REQUIREMENTS AS REQUIRED.
- 8 SYSTEM PANEL LOCATIONS: AUXILIARY SYSTEM PANELS. POWER SUPPLIES OR OTHER EQUIPMENT ENCLOSURES SHALL NOT BE LOCATED IN TELECOM ROOMS UNLESS NOTED OTHERWISE. IF DRAWINGS DO NOT DEPICT LOCATIONS FOR AUXILIARY COMPONENTS, CONSULT OWNER OR A/E PRIOR TO EQUIPMENT INSTALLATION.
- 9 DUCT SMOKE DETECTION: DETERMINE QUANTITY AND PLACEMENT OF DETECTORS REQUIRED FOR COVERAGE OF DUCTWORK BASED ON NFPA REQUIREMENTS. PROVIDE MECHANICAL EQUIPMENT FAN SHUTDOWN RELAY AT ALL DUCT DETECTORS. SEE HVAC PLANS FOR EQUIPMENT LOCATIONS. COORDINATE SHUTDOWN CONTROL WITH DIVISION 23.
- 10 SMOKE DAMPERS AND FIRE-SMOKE DAMPERS: PROVIDE FIRE ALARM CONNECTION AND 120-VOLT POWER TO EACH FIRE/SMOKE DAMPER SHOWN ON HVAC PLANS. PROVIDE DEDICATED CIRCUIT NORMALLY CLOSED FIRE ALARM RELAY, MOUNTED ON WALL IN NEAREST ELECTRICAL ROOM. COORDINATE WITH DAMPER MANUFACTURER FOR SPECIFIC DAMPER LOAD REQUIREMENTS. RELAY SHALL BE CONTROLLED BY FACP. SUCH THAT, ON GENERAL ALARM DAMPERS CLOSE. FIRE ALARM CONNECTION TO DAMPER SHALL BE A SUPERVISORY CIRCUIT MONITORING STATUS OF INTEGRAL SMOKE DETECTOR, AND SHALL PROVIDE REMOTE FIRE/SMOKE DAMPER RESET. FACP SHALL INITIATE A SUPERVISORY SIGNAL WHEN INTEGRAL DETECTOR GOES INTO ALARM. FIRE/SMOKE DAMPERS MAY BE GROUPED TOGETHER ON SUPERVISORY CIRCUITS TO SIMPLIFY WIRING. COORDINATE REQUIREMENTS WITH FIRE/SMOKE DAMPER MANUFACTURER. UTILIZE SPARE 20/1 BREAKERS.

LABEL TYPED PANEL DIRECTORY 'FIRE/SMOKE DAMPERS - (INDICATE AREA

<u>LIGHTING</u>	FIXTURE TAG
	XXX XXX-X XXX-X
<u>LIGHTING</u>	<u>FIXTURES</u>
	LIGHTING FIXTURE
	LIGHTING FIXTURE
0	CEILING FIXTURE, S
٠	LIGHTING FIXTURE
⊢ <u>⊼ </u>	LIGHTING TRACK, T
$\vdash \rightarrow$	LIGHTING FIXTURE
⊢б⊣	WALL MOUNTED LI
•	WALL WASHER
\bigcirc	HIGH BAY LIGHTING
Ю	WALL MOUNTED LI
*	SELF CONTAINED E MOUNT 94-INCHES
$\bigotimes_{\longleftrightarrow}$	EXIT SIGN, CEILING DIRECTIONAL ARRO
$\stackrel{H}{\xrightarrow{\longrightarrow}}$	EXIT SIGN, WALL M AS INDICATED. MO

<u>AREA LIGHTING</u>

0	SITE LIGHTIN
-	POLE MOUN
∽□	POLE WITH F
Н	WALL MOUN
0	IN GRADE LIC
⊗	BOLLARD LIC
0	

LIGHTING	CONTROL DEVICES
<u>RPx</u>	LIGHTING CONTROL
<u>CVx</u>	CENTRAL INVERTER
R	LOW VOLTAGE REL
PO	PHOTOELECTRIC C
LC	LIGHTING CONTACT
BAT	REMOTE EMERGEN

/		
	Ð	CONDUIT TUP
	-0	CONDUIT TUP
L .	-	CONDUIT SEA
	\	CONDUIT CO
*	~	CONDUIT CO OTHER (* = S
	~	CONDUIT CO
-	\	CONDUIT CO OTHER (= S
r		EXPOSED CC
*		EXPOSED CO OTHER (* = S
E FRS	Э	FIRE RATED S
Т		TRANSFORM
XXX		BRANCH CIRC MOUNT 72-IN
		DISTRIBUTION 72-INCHES TO
		EQUIPMENT
		SWITCHBOAF
\boxtimes		MOTOR STAF
		DISCONNECT
\boxtimes		COMBINATIO
CT		CURRENT TR
M		METER
GEN	1	GENERATOR
ATS		AUTOMATIC 7
Ţ		SYSTEM GRO
$\vdash \textcircled{1}$		THERMOSTA
Î		MUSHROOM
MH		ELECTRICAL
HH		ELECTRICAL
\mathbb{M}		MOTOR CON
SF		FUSE AND SW
s _T		MANUAL CON
s _M		MANUAL CON
В		CIRCUIT BRE
PB		PULL BOX
		EQUIPMENT
<i>₹</i> <u>++++</u>	Ŧ	CABLE TRAY,
	=	CABLE TRAY

				Ē¢	FIRE ALARM SPEAKER WITH	I VISUAL WARNING SIGNAL	$\langle \mathbb{P} \rangle_{D}$	SMOKE DETECTOR - P (D = DUCT)
	POWE	<u>R</u>					$\langle \mathbf{I} \rangle$	SMOKE DETECTOR - IC
	CIRCUIT HOME RUN	RECEPT	ACLES: MOUNT 18-INCHES AFF, UNO					SMOKE DETECTOR - P
	CONDUIT TURNING UP	DIAGON	AL LINE THROUGH SYMBOL OR DENOTED 'AC'			NG SIGNAL CEILING		HEAT DETECTOR RATE
Ø	CONDUIT TURNING DOWN	INDICAT WHERE	ES MOUNT DEVICE ABOVE COUNTER. INDICATED AS 'MOUNT ABOVE COUNTER' MOUNT	Ψ		NG SIGNAL, CLILING		HEAT DETECTOR, RAT
——————————————————	CONDUIT STUB-UP	BOTTO	A OF BOX 2-INCHES ABOVE TOP OF BACKSPLASH	È	ECS SPEAKER, FLUSH IN CE	EILING	0	FIXEDTEMPERATURE,
E]	CONDUIT SLEEVE	EXISTS.	SHES ABOVE COUNTERTOF IF NO BACKSPEASH	Ē	ECS SPEAKER WITH VISUAL	WARNING SIGNAL, CEILING	$\langle \circ \rangle$	ONLY, 135 F
	CONDUIT SEAL	LABELS	SHALL BE MACHINE PRINTED, UNO	-È-	ECS VISUAL WARNING SIGN	IAL, CEILING	$\langle \bullet \rangle$	HEAT DETECTOR, FIXE
*	CONDUIT CONCEALED IN CEILING OR WALLS, POWER	Ю	SIMPLEX RECEPTACLE	I				2001
/ `	OTHER (* = SEE ABBREVIATIONS)	\oplus	DUPLEX RECEPTACLE DUPLEX RECEPTACLE GELTYPE			SECUR		
*	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWE	R 🕂	DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER					CONTROL
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, OTHER (* = SEE ABBREVIATIONS)		DUPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER					
J	EXPOSED CONDUIT, POWER	\Rightarrow	FOURPLEX RECEPTACLE		INTRUSION DETECTOR, CEI	ILING		DOORTAG
· · · · · · · · · · · · · · · · · · ·			FOURPLEX RECEPTACLE, GFI TYPE		INTRUSION DETECTOR, WA		ACP	ACCESS CONTROL SYS
FRS	OTHER (* = SEE ABBREVIATIONS)		FOURPLEX RECEPTACLE, GFI TYPE,		MOTION DETECTOR - LONG	G RANGE	Ρ	DOOR POSITION SWIT
			MOUNT ABOVE COUNTER	MD BR	MOTION DETECTOR - BROA	AD RANGE	PS	POWER SUPPLY, 120V
Т	TRANSFORMER	\Rightarrow	DUPLEX RECEPTACLE, FLUSH IN CEILING	MD 360	MOTION DETECTOR - 360 D	EGREES	CR	CARD READER MOUNT 36-INCHES AFF
XXX	BRANCH CIRCUIT PANELBOARD	ΗΦ	DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED	GB	GLASS BREAK DETECTOR		EL	DOOR WITH ELECTRIFI
XXX	DISTRIBUTION PANELBOARD MOUNT	ΗШ ΗČRD	DUPLEX RECEPTACLE, HORIZ. MTD, GETTYPE DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNTER	К	SECURITY KEYPAD			REFER TO DOOR HARE
	72-INCHES TO TOP		DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE,	v	MOUNT 48-INCHES AFF			
	EQUIPMENT CABINET, AS NOTED			<u>VIDEO SU</u>	IRVEILLANCE			
		≡	ROOF MOUNT 18-INCHES ABOVE ADJACENT	\times	VIDEO CAMERA - CEILING			
	SWITCHBOARD		STRUCTURE WITH A WEATHERPROOF, IN-USE COVER WEATHER RESISTANT GEI DUPI EX RECEPTACI E.	HXXXK	VIDEO CAMERA - WALL			
\boxtimes	MOTOR STARTER OR DRIVE	≡	MOUNT 18-INCHES AFF WITH A WEATHERPROOF,			..		
	DISCONNECT SWITCH		STD DUPLEX RECEPTACLE TO SERVE ELECTRIC			<u>ONE-LIN</u>	<u>IE DIA</u>	<u>GRAM</u>
$\boxtimes^{\!$	COMBINATION STARTER / DISCONNECT SWITCH	⇒ _{EW}	WATER COOLER, MOUNT AT HEIGHT PER CEQUIPMENT MANUFACTURER'S INSTALLATION			ENCLOSED CONTROLLER (A	CROSS-THE	-LINE UNO)
СТ	CURRENT TRANSFORMER ENCLOSURE		GUIDELINES. WIRE TO GFCI BKR IN PANELBOARD.			MOUNT 60-INCHES AFF TO TO X = STARTER NEMAS)P 3IZE	,
ĨMĨ	METER	$ \rightarrow $	DUPLEX RECEPTACLE TO SERVE TELEVISION,					
GEN	GENERATOR	──TV	OF ADJACENT TV OUTLET			ENCLOSED SWITCH; MOUNT XX/X = AMP RATING	60-INCHES	AFF TO TOP
					XX XX	XXAF = FUSE SIZE; AF	-=AMP FUSE	; NF=NO FUSE
		-	DUPLEX RECEPTACLE, EMERGENCY					
÷.			FOURPLEX RECEPTACLE, EMERGENCY			COMBINATION CONTROLLER XX/X = AMP RATING	\ DISCONNE / NO. OF PO'	ECT; MOUNT 60-INCHES A LES
ru A		\Rightarrow	DUPLEX RECEPTACLE, LOWER SWITCH		XX	XXAF = FUSE SIZE; AF XX = ENCLOSURE	·=AMP FUSE NEMA RATII	E; NF=NO FUSE NG; BLANK=NEMA 1; WP=I
⊥ 			DUPLEX RECEPTACLE, SWITCHED					
МН			RANGE RECEPTACLE, MOUNT 8-INCHES AFF		M	METER SOCKET/METER		
HH	ELECTRICAL HAND HOLE						:	
M	MOTOR CONNECTION, HORSEPOWER AS INDICATED		FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE LINO		3FD			
SF	FUSE AND SWITCH ASSEMBLY		MULTI-DEVICE FLOOR BOX WITH DUPLEX		. T			
ST	MANUAL CONTROLLER WITH THERMAL OVERLOAD		RECEPTACLE AND TELECOMMUNICATIONS		$\triangle XX$	T = TRANSFORMER	C	
SM	MANUAL CONTROLLER W/O THERMAL OVERLOAD	$\vdash 0$	USB ONLY RECEPTACLE		m	XX = SIZE		
В	CIRCUIT BREAKER ENCLOSURE		RECEPTACLE WITH USB PORTS		\uparrow			
PB	PULL BOX	\bigcirc						
	EQUIPMENT CONNECTION	J						
$\overline{\pm\pm\pm\pm\pm\pm}$	CABLE TRAY, WIRE BASKET TYPE OR RUNWAY	J _P	MOUNT 24-INCHES ABOVE SUSPENDED CEILING	1		BREAKER		
	CABLE TRAY	Ľ	BOX COVER 'PROJECTOR POWER'	L	XXX/X LSIG	XXX/X = AMP RATING LSIG = ADJUSTABLE	POLES SETTINGS (WHERE NOTED)
	MULTIOUTIET ASSEMBLIES		JUNCTION BOX ABOVE SUSPENDED CEILING WITH FLEX CONNECTION			L = LONG S = SHOR	TIME T TIME	
<u></u>	MOUNT 18-INCHES AFF, UNO	ΗJ	FLUSH JUNCTION BOX, WALL MOUNTED			I = INSTA G = GROU	NTANEOUS	PROTECTION OF EQUIPMI
		ΗJ	SURFACE JUNCTION BOX, WALL MOUNTED			GFPE = GROUND FAU ERMS = FNFRGY RFD	LT PROTEC	TION OF EQUIPMENT
	MOUNT 18-INCHES AFF, UNO	J	SURFACE JUNCTION BOX, CEILING MOUNTED					
DU 01 12 1		$\vdash \oplus$	HAND DRYER, INSTALL HAND DRYER	XXX/3	XXX	FUSIBLE SWITCH XXX/X = SWITCH AMP	RATING / P(DLES
			SPECIFIED IN DIV. 11	_ \		XXX = FUSE SIZE	=	
	SWITCH, PUSH BUTTON, DOUBLE				1			
Ľ	, ,				1		OTEM	

PUSH

SWITCH, PUSH BUTTON, TRIPLE

- T WHICH MUST BE REMOVED TO COMPLETE THE PROJECT. I HALF-TONE ARE EXISTING TO REMAIN. MS DENOTED 'ER'. SEE LIGHTING, POWER AND/OR SPECIAL SYSTEM NEW LOCATIONS. 'ER' IS DEFINED AS EXISTING (TO BE) RELOCATED. IDUIT MAY REMAIN IF ALL THE FOLLOWING ARE TRUE:
- REUSED TO FEED DEVICES INSTALLED UNDER THIS CONTRACT. T INTERFERE WITH OTHER TRADES. IGINALLY INSTALLED MEETING SPECIFICATIONS RELATED TO THIS PROJECT. F BE EXPOSED IN A FINISHED AREA (UNLESS NOTED OTHERWISE). CTRICAL DEMOLITION ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE ADDITION TO DEVICES SHOWN, REFER TO MECHANICAL AND AL DEMOLITION SHEETS TO DETERMINE EQUIPMENT TO BE REMOVED. CTIONALITY OF ALL EXISTING LOW VOLTAGE SYSTEMS INCLUDING, BUT O, TELECOM CABLING NETWORKS, INTERCOM, CLOCKS, FIRE ALARM,
- ECURITY DURING ALL PHASES OF CONSTRUCTION. PROVIDE TEMPORARY TIONS AS REQUIRED TO ACCOMMODATE CONSTRUCTION SCHEDULE.

SITE PLAN NOTES

POWER NOTES

LIGHTING NOTES

- TURE SCHEDULE AND SYMBOLS LEGEND FOR MOUNTING HEIGHTS, UNLESS WISE. WG MINIMUM CONDUCTORS FOR ALL EXTERIOR LIGHTING CIRCUITS.
- CTURAL BUILDING ELEVATIONS FOR LOCATION OF BUILDING MOUNTED HT FIXTURES.
- D OF SILICON SEALANT AROUND RECESSED BACK BOX PERIMETER AT ALL JNTED EXTERIOR LIGHT FIXTURE LOCATIONS.
- IRES DENOTED WITH 'NL' AS UNSWITCHED NIGHT LIGHTS. NOTED WITH LOWER CASE LETTERS SHALL BE CONTROLLED BY SWITCHES

EVICE BOX NOTES

- LEGEND THIS SHEET FOR MOUNTING HEIGHTS UNLESS NOTED OTHERWISE HEIGHTS ARE TO CENTERLINE OF BOXES UNLESS NOTES OTHERWISE. EXTENDER FOR FLUSH INSTALLATION OF DEVICES LOCATED IN AL CASEWORK THAT IS FLUSH WITH ADJACENT WALL (SUCH AS FOR GARBAGE DISPOSERS).
- OBTAIN OWNER APPROVAL OF ALL BOX LOCATIONS PRIOR TO ROUGH IN. CE PLATES AT DEVICES AND BLANK PLATES AT ALL UNUSED LOCATION OF DEVICE BOXES FOR SWITCHES, RECEPTACLES, AND
- ICES WITH MARKERBOARDS. ADJUST BOX LOCATIONS TO AVOID
- LOCATION OF DEVICE BOXES FOR SWITCHES, RECEPTACLES, AND ICES WITH MARKERBOARDS AND TACKBOARDS. ADJUST BOX LOCATIONS RERBOARDS AND TACKBOARDS. PROVIDE BOX EXTENDER FOR A FLUSH WHERE DEVICES MUST BE MOUNTED AT TACKBOARD/TACKWALL. TED RECEPTACLES: AT SUSPENDED CEILINGS, ROUTE POWER TO VIA FLEXIBLE METALLIC CONDUIT WITH 6-FOOT SERVICE LOOP. FEED FMC RIGIDLY SUPPORTED A MAXIMUM OF 24-INCHES ABOVE SUSPENDED BOTTOM OF STRUCTURE ABOVE, WHICHEVER IS LOWER. LOCATE J-BOX VE RECEPTACLE AND SUPPORT VIA STRUCTURE, OR VIA THREAD ROD AND NG FROM STRUCTURE ABOVE IN HIGH STRUCTURE APPLICATIONS. ESSED IN MULLIONS: BACK BOXES TO BE RECESSED FOR FLUSH OF DEVICE AND WALLPLATE. EXTEND CONCEALED CONDUIT IN MULLION BOVE AND STUB OUT ABOVE ACCESSIBLE CEILING. IN AREAS WITH NO
- ND CONDUIT TOWARDS CABLING SOURCE TO ABOVE NEAREST EILING.

 \cap

LIGHTING

SWITCHES AND WALL-BOX CONTROLS

FIXTURE TYPE ——— CKT DESIGNATION (PNL - CKT NO.) RELAY PANEL - RELAY NO. OR

LOCAL SWITCH DESIGNATION

IXTURE

XTURE ON EMERGENCY SYSTEM

TURE, SURFACE, RECESSED OR PENDANT IXTURE ON EMERGENCY SYSTEM

RACK, TRACK MOUNTED LIGHT FIXTURES

TED LIGHTING FIXTURE

IGHTING FIXTURE

TED LIGHTING FIXTURE

AINED EMERGENCY LIGHTING UNIT NCHES AFF, UNO

CEILING MOUNTED, LARROW(S) AS INDICATED

VALL MOUNTED, DIRECTIONAL ARROW(S) D. MOUNT 94-INCHES AFF, UNO

ING - POLE

NTED AREA LIGHTING FIXTURE POLE MOUNTED AREA LIGHTING FIXTURE NTED AREA LIGHTING FIXTURE IGHT FIXTURE IGHT FIXTURE ONTROL PANEL VERTER

GE RELAY TRIC CELL ONTACTOR

MERGENCY BATTERY PACK

		CONTROL FIXURE DENOTED WITH SAME LOWER CASE LETTER
	\$X	SWITCH SYMBOL
		LINE THRU SWITCH INDICATES A KEY OPERATED SWITCH
	S	SWITCH. SINGLE POLE
	S2	SWITCH, DOUBLE POLE
	S ₃	SWITCH, 3-WAY
	S ₄	SWITCH, 4-WAY
	s _D	SWITCH, DIMMER
	s _E	SWITCH, EMERGENCY
	s	SWITCH, LOW VOLTAGE
	s _M	SWITCH, MASTER
	s _o	SWITCH, WALL-BOX OCCUPANCY SENSOR
	s ₀	SWITCH, WALL-BOX OCCUPANCY SENSOR, 2-POLE
	s²	SWITCH WITH PILOT LIGHT
	s _R	SWITCH, LOW VOLTAGE, ASSOCIATED WITH RELAY PANEL
	s _T	SWITCH, TIMER
	s _V	SWITCH, WALL-BOX VACANCY SENSOR
	s _X	SWITCH, EXPLOSION-PROOF
	<u>Ceiling i</u> Maximun	MOUNTED LIGHTING CONTROL DEVICES
	OS	OCCUPANCY SENSOR
	VS	VACANCY SENSOR
		UNTED LIGHTING CONTROL DEVICES:
	WOUNT 9	4-INCRES AFF, UNO
	_ OS	OCCUPANCY SENSOR
	VS	VACANCY SENSOR
	THFATRI	CAL LIGHTING DEVICES
	LCD	MOUNT 50-INCHES AFF, UNO
	E	THEATRICAL LIGHTING ENTRY STATION MOUNT 42-INCHES AFF, UNO
	ТО	THEATRICAL OUTLET BOX MOUNT 18-INCHES AFF, UNO
	TN	THEATRICAL NETWORK OUTLET MOUNT 18-INCHES AFF, UNO
	TC	THEATRICAL CONTROL CONSOLE OUTLET MOUNT 18-INCHES AFF, UNO
Сг	C	
	7	
	RECEPT	ACLES: MOUNT 18-INCHES AFF, UNO
		AL LINE THROUGH SYMBOL OR DENOTED 'AC'

COMMUNICATIONS

<u>TELEC</u> UNO, A WHER	OMMUNICATIONS OUTLETS: MOUNT 18-INCHES AFF, AND WITHIN 8-INCHES OF ADJACENT RECEPTACLE E DENOTED 'AC'. MOUNT ABOVE COUNTER		BELLS, BUZZERS, CHIME MOUNT 94-INCHES AFF,
WHER	E DENOTED 'C', MOUNT FLUSH IN CEILING		CLASS PROGRAM BELL
] X,Y,Z		\Box	BUZZER
	X = QTY OF VOICE JACKS $Y = QTY OF DATA JACKS$ $Z = OTY OF VOICE JACKS$	C/	CHIME
1	TELECOM OUTLET ROUGH-IN. PROVIDE SINGLE-GANG	⊢Ś>	SPEAKER, WALL
\triangleleft	BACKBOX WITH 3/4-INCH C. AND PULLSTRING TO ABOVE NEAREST ACCESSBILE CEILING.	Ś	SPEAKER, FLUSH IN CEI BACKBOX WHERE EXPO
●<	TELECOMMUNICATIONS OUTLET MOUNTED IN FLOOR BOX	\$ PA	PUBLIC ADDRESS (A/V) S
A₽	WIRELESS ACCESS POINT	⊢Ĥ	SPEAKER/HORN, WALL
-AV>	WIRELESS ACCESS POINT WALL MOUNTED	·	
~			INTERCOM CALLBACK S MOUNT 42-INCHES AFF
	MOUNT 18-INCHES AFF, UNO. EQUIVALENT TO < 1,0,0 WHERE DENOTED 'W' MOUNT 50-INCHES AFF		TWO-WAY INTERCOM/C/ UNIT MOUNT 42-INCHES
\rightarrow	VIDEO ONLY TELECOM OUTLET (TELEVISION OUTLET) MOUNT 94-INCHES AFF, UNO. EQUIVALENT TO \triangleleft 0,0,1	⊢¢¢∕M	INTERCOM MASTER STA MOUNT 18-INCHES AFF
\overrightarrow{v}	TELEVISION OUTLET, FLUSH IN CEILING	$\overline{\mathbb{A}}$	INTERCOM HANDSET MOUNT 50-INCHES AFF
-AV	AV OUTLET. PROVIDE TWO BOXES PER DETAIL 23 / E6.03.	$\vdash \checkmark \!\!\! \checkmark \!\!\! \flat$	VOLUME CONTROL, WAI MOUNT 42-INCHES AFF
	FLOOR MOUNTED TELECOMMUNICATIONS RACK	$\vdash \hspace{-0.5mm} \hat{\mathbb{M}}$	MICROPHONE OUTLET, MOUNT 18-INCHES AFF
	CLOCKS: MOUNT 94-INCHES AFF, UNO	$\textcircled{\bullet}$	FLUSH FLOOR BOX WITH
-0	CLOCK - WALL MOUNT	⊢€D>	DIRECTORS HEADSET
	CLOCK - DOUBLE FACE		
⊖c	CLOCK - OUTLET		
-0- M	CLOCK - MASTER		
⊕s	CLOCK - CEILING MOUNT, DOUBLE FACE		

SAFETY

FACP FIRE ALARM CONTROL PANEL MOUNT CENTER OF DISPLAY 54-INCHES AFF

HIGHER, UNO

17101	MOUNT CENTER OF DISPLAY 54-INCHES AFF		SPRINKLER STSTEWS
FAA	FIRE ALARM ANNUNCIATOR PANEL MOUNT CENTER OF DISPLAY 54-INCHES AFF	D	FIRE ALARM MAGNETIC HOLDER MOUNT 74-IN
LOC	LOCAL OPERATOR'S CONSOLE MOUNT CENTER OF DISPLAY 54-INCHES AFF	L	REMOTE INDICATOR LA
NAC	NOTIFICATION APPLIANCE CIRCUIT CABINET MOUNT CENTER OF DISPLAY 54-INCHES AFF	OSY	OS&Y VALVE
	MANULAL FIRE ALARM PULL STATION	FS	WATER FLOW ALARM
F	MOUNT 42-INCHES AFF	TS	TAMPER SWITCH
RE ALAF	RM A/V DEVICES: MOUNT 94-INCHES -INCHES BELOW CEILING, WHICEVER IS	$\vdash \overline{\mathbf{T}}$	BEAM TRANSMITTER
IGHER, L		⊢⟨R⟩	BEAM RECEIVER
Fp	FIRE ALARM BELL	∢ FF	FIRE FIGHTERS TELEP
F⊲	FIRE ALARM HORN		
Ē	FIRE ALARM VISUAL WARNING SIGNAL	$\vdash \leftarrow$	DAS ANTENNA
Ē	FIRE ALARM BELL WITH VISUAL WARNING SIGNAL		
€	FIRE ALARM HORN WITH VISUAL WARNING SIGNAL	$\langle \overline{C} \rangle$	CARBON MONOXIDE D
(F)◀	MINI FIRE ALARM HORN WITH VISUAL WARNING SIGNAL	⟨I⟩ _D	SMOKE DETECTOR - IC
Ē¢	FIRE ALARM SPEAKER WITH VISUAL WARNING SIGNAL	$\langle \mathbb{P} \rangle_{D}$	SMOKE DETECTOR - P (D = DUCT)
		$\langle \mathbf{I} \rangle$	SMOKE DETECTOR - IC
	FIRE ALARM SPEAKER, FLUSH IN CEILING	$\langle P \rangle$	SMOKE DETECTOR - P
(F)	FIRE ALARM SPEAKER WITH VISUAL WARNING SIGNAL, CEILING	3	HEAT DETECTOR RATE
-¢-	FIRE ALARM VISUAL WARNING SIGNAL, CEILING	\bigcirc	FIXED TEMPERATURE,
		_	HEAT DETECTOR DAT

			200 F
	<u>SECUR</u>	ITY	
		ACCESS	CONTROL
ILING		XXX	DOOR TAG
LL		ACP	ACCESS CON

GROUNDING ELECTRODE SYSTEM

<u>S, CHIMES AND WALL SPEAKERS:</u> IES AFF, UNO

SH IN CEILING, ENCLOSED IN RE EXPOSED SS (A/V) SYSTEM SPEAKER, FLUSH WALL

LBACK STATION RCOM/CALL STATION COMBINATION -INCHES AFF STER STATION OUTLET ES AFF

ROL, WALL DUTLET, WALL IES AFF BOX WITH MICROPHONE OUTLET

S SPRINKLER SYSTEMS ELECTRIC BELL ALARM IC DOOR ICHES AFF AMP

SWITCH

PHONE

DETECTOR ONIZATION TYPE (D = DUCT) PHOTOELECTRIC TYPE ONIZATION TYPE PHOTOELECTRIC TYPE E-OF-RISE AND

, 135 F RATE-OF-RISE AND URE, 200 F , FIXED TEMPERATURE , FIXED TEMPERATURE ONLY,

L SYSTEM CONTROL PANEL SWITCH 120V INPUT

TRIFIED DOOR HARDWARE. HARDWARE SPECIFICATIONS.

HES AFF TO TOP

WP=NEMA 3R

UIPMENT

BID SET 11.04.22 REVISIONS CONSTRUCTION DOCS 03.06.23 2 PKG 2 - ASI 001

04.07.23

57-21113-00

ELECTRICAL SYMBOLS, **ABBREVIATIONS &** NOTES

E0.1.ii

	Г											7
	-	TYPE				Y ETERS	VOLT	DIMMING / CONTROL	MOUNTING		SPEC. NOTES	_
		E13	ACUITY (LITHONIA) COOPER (McGRAW EDISON) HUBBELL (BEACON) SIGNIFY (GARDCO)	USXULED * GLEON-AF-* VP-S-* ECF-S-*	COLOR TEMP.: CRI (MIN.): LUMENS (MIN): LPW (MIN): VA (MAX):	4000K 70 6,700 100 75	UNV	0-10V TO 10% INTEGRAL WIRELESS CONTROL DEVICE	POLE 15' ROUND STRAIGHT STEEL	AREA LIGHT - PEDESTRIAN SCALE DISTRIBUTION: E12=TYPE II, E13=TYPE III, E14=TYPE IV DIE-CAST ALUMINUM FRAME AND HEAT SINK, IP65 RATED MAX. BUG RATINGS: TYPE II/III/IV = B2-U0-G2 USEFUL LIFE 50,000 HRS @L70	4	
1	-	E23	ACUITY (LITHONIA) COOPER (McGRAW EDISON) HUBBELL (BEACON) SIGNIFY (GARDCO)	DSX2 LED * GLEON-AF-* VP-L-* ECF-S-*	Color Temp.: CRI (MIN.): LUMENS (MIN): LPW (MIN): VA (MAX):	4000K 70 19,500 100 225	UNV	0-10V TO 10% INTEGRAL WIRELESS CONTROL DEVICE	POLE 25' ROUND STRAIGHT STEEL W/ VIBRATION DAMPENER	AREA LIGHT DISTRIBUTION: E22=TYPE II, E23=TYPE III, E24=TYPE IV, E25=TYPE V DIE-CAST ALUMINUM FRAME AND HEAT SINK, IP65 RATED MAX. BUG RATINGS: TYPE II = B3-U0-G4, TYPE III/IV/V = B3-U0-G5 USEFUL LIFE 50,000 HRS @L70	4	_
	_	E34	LUMENPULSE EQUAL	LQS-* EQUAL	COLOR TEMP.: CRI (MIN.): LUMENS (MIN): LPW (MIN): VA (MAX):	4000K 70 1,050 70 15	UNV	NON-DIM	W = WALL-MOUNT HARDWARE WALL (BEAM) ADJUSTABLE KNUCKLE FOR AIMING	FINISH: BLACK EXTERIOR LOW PROFILE RECTANGULAR WALL PACK WITH ROUNDED CORNER DIE-CAST ALUMINUM HOUSING AND DOOR FRAME, IP66 RATING IMPACT-RESISTANT CLEAR TEMPERED GLASS LENS FLOOD-TYPE DISTRIBUTION (40-DEGREE BEAM SPREAD), ADJUSTABLE AIMING KNUCKLE USEFUL LIEE 250,000 HRS @L70		_
	-	E43 E43X E44 E44X	ACUITY (LITHONIA) COOPER (McGRAW EDISON) HUBBELL (BEACON) SIGNIFY (GARDCO)	DSXW1 LED * GWC * TRV-D * PWS *	COLOR TEMP.: CRI (MIN.): LUMENS (MIN): LPW (MIN): VA (MAX):	4000K 70 5,300 100 60	UNV	0-10V TO 10%	WALL 12' AFF UNO ON PLANS X= BATTERY	FINISH: BLACK EXTERIOR WALL PACK DISTRIBUTION E42=TYPE II, E43=TYPE III, E44=TYPE IV DIE-CAST ALUMINUM FRAME AND HEAT SINK, IP65 RATED MAX. BUG RATINGS: TYPE II = B2-U0-G2, TYPE III/IV = B1-U0-G2 USEFUL LIFE 50,000 HRS @L70		_
	-	E81	BEGA FC LIGHTING LIGMAN LIGHTING USA	33 165 * FCSL101-* ULE-40721-*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	4000K 80 400 35 15	UNV	NON-DIM	RECESSED CONCRETE POUR	STEP LIGHT DIE-CAST ALUMINUM MARINE GRADE HOUSING, IP 65 RATED FINISH: BLACK FROSTED OR OPAL GLASS LENS USEFUL LIFE 50,000 HRS @L70	3	
		E104	STRUCTURA EQUAL	LINW-* EQUAL	Color Temp.: CRI (MIN.): LUMENS (MIN): LPW (MIN): VA (MAX):	4000K 70 2,950 70 40	UNV	0-10V TO 10% INTEGRAL WIRELESS CONTROL DEVICE	WALL (COLUMN)	RECTANGULAR WALL-MOUNTED AREA LIGHT DISTRIBUTION: E104 = TYPE IV DIE-CAST ALUMINUM FRAME, WET LOCATION LISTED MAX. BUG RATING: TYPE IV = B1-U0-G1 USEFUL LIFE 90,000 HRS @L70 FINISH: BLACK		_
	-	E114	ACUITY (LITHONIA) COOPER (McGRAW EDISON) HUBBELL (BEACON) SIGNIFY (GARDCO)	DSX2 LED * GLEON-AF-* VP-L-* ECF-S-*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	5000K 80 70,000 110 600	UNV	0-10V TO 10% INTEGRAL WIRELESS CONTROL DEVICE	POLE 15' ROUND STRAIGHT STEEL	AREA LIGHT DISTRIBUTION: E22=TYPE II, E23=TYPE III, E24=TYPE IV, E25=TYPE V DIE-CAST ALUMINUM FRAME AND HEAT SINK, IP65 RATED MAX. BUG RATINGS: TYPE II = B3-U0-G4, TYPE III/IV/V = B3-U0-G5 USEFUL LIFE 50,000 HRS @L70 FINISH: BLACK	4	
2	_	E115	LSI INDUSTRIES EQUAL	OPS * (DRIVE DOWN TO 1000 DELIVERED LUMENS) EQUAL	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	4000K 70 1,000 125 10	UNV	NON-DIM	SURFACE	16-INCH OUTDOOR CIRCULAR PUCK DOWNLIGHT - MEDIUM DISTRIBUTION: E115 = TYPE V DIE-CAST ALUMINUM HOUSING, IP66 RATED MAX. BUG RATINGS: TYPE V = B1-U0-G1 USEFUL LIFE 50,000 HRS @L70 FINISH: BLACK		
	2	P62	ACUITY (GOTHAM) COOPER (PORTFOLIO) SIGNIFY (LIGHTOLIER)	EVO CYL * LSR* C6*	Color Temp.: CRI (MIN.): LUMENS (MIN): LPW (MIN): VA (MAX):	3500K 80 2,400 85 35	UNV	0-10V TO 10%	PENDANT	6-INCH PENDANT CYLINDER - MEDIUM ALUMINUM HOUSING, MATTE WHITE FINISH FROSTED ACRYLIC LENS RIGID STEM MOUNTING, FIELD CUT TO LENGTH PER PLANS SM/H RATIO OF 1.0 MIN. USEFUL LIFE 50,000 HRS @L70		
		P110	VISUAL COMFORT CO. EQUAL	TOB 500HAB EQUAL	Color Temp.: CRI (MIN.): LUMENS (MIN): LPW (MIN): VA (MAX):	3500K 80 2,000 80 25		0-10V TO 10%	PENDANT	DECORATIVE BOWL PENDANT SCREW-IN LED LAMP EHNSH-REONZE PROVIDE LABEL ON FIXTURE STATING MAX WATTAGE SHALL NOT EXCEED 25VA.	3	<u>2</u>
		P111	VISUAL COMFORT CO. EQUAL	BBL 5088BSL EQUAL	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 1,000 80 15	UNV	0-10V TO 10%	PENDANT	PENDANT CONE SCREW-IN LED LAMP ENSI-REONZE PROVIDE LABEL ON FIXTURE STATING MAX WATTAGE SHALL NOT EXCEED 15VA.	3	<u> </u>
		P200	TURF EQUAL	BEAM LED-* EQUAL	COLOR TEMP.: CRI (MIN.): LUMENS/FT: LPW (MIN): VA/FT (MAX):	3500K 70 500 110 20	UNV	0-10V TO 10%	PENDANT	8-INCH DEEP, 3-INCH WIDE CEILING BAFFLE LINEAR DIRECT PENDANT, LENGTH PER PLAN POLYESTER FELT HOUSING FINISH TO MATCH SURROUNDING BAFFLES AS SHOWN ON PLANS SATIN OR FROSTED FLUSH ACRYLIC LENS AIRCRAFT CABLE SUSPENSION USEFUL LIFE 50,000 HRS @L80		
3	-	P201	TURF EQUAL	BEAM LED-* EQUAL	Color Temp.: Cri (Min.): Lumens/FT: LPW (Min): VA/FT (MAX):	3500K 70 1,000 100 40	UNV	0-10V TO 10%	PENDANT	8-INCH DEEP, 3-INCH WIDE CEILING BAFFLE LINEAR DIRECT PENDANT, LENGTH PER PLAN POLYESTER FELT HOUSING FINISH TO MATCH SURROUNDING BAFFLES AS SHOWN ON PLANS SATIN OR FROSTED FLUSH ACRYLIC LENS AIRCRAFT CABLE SUSPENSION USEFUL LIFE 50,000 HRS @L80		
		R31	ACUITY (LITHONIA) COOPER (METALUX) HUBBELL (COLUMBIA) SIGNIFY (DAY-BRITE) WILLIAMS	EPANL * 24FP* CFP* 2FPZ* LP-*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 4,000 100 45	UNV	0-10V TO 10%	RECESS GRID	2x4 FLAT PANEL EXTRUDED ALUMINUM HOUSING / REFLECTOR MATTE WHITE FINISH FROSTED ACRYLIC OR PMMA LENS USEFUL LIFE 50,000 HRS @L70		
	-	R35	ACUITY (LITHONIA) COOPER (METALUX) HUBBELL (COLUMBIA) SIGNIFY (DAY-BRITE) WILLIAMS	EPANL * 22FP* CFP22* 2FXP* (UNDER DRIVE TO 3000 LUMENS) LP-* (UNDER DRIVE TO 3000 LUMENS)	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 3,000 105 40	UNV	0-10V TO 10%	RECESS GRID	2x2 FLAT PANEL EXTRUDED ALUMINUM HOUSING / REFLECTOR MATTE WHITE FINISH FROSTED ACRYLIC OR PMMA LENS USEFUL LIFE 50,000 HRS @L70		
	-	R36	ACUITY (LITHONIA) COOPER (METALUX) HUBBELL (COLUMBIA) SIGNIFY (DAY-BRITE) WILLIAMS	EPANL * 22FP* CFP22* (UNDER DRIVE TO 4000 LUMENS) 2FXP* LP-*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 4,000 105 45	UNV	0-10V TO 10%	RECESS GRID	2x2 FLAT PANEL EXTRUDED ALUMINUM HOUSING / REFLECTOR MATTE WHITE FINISH FROSTED ACRYLIC OR PMMA LENS USEFUL LIFE 50,000 HRS @L70		
	-	R40	A-LIGHT ARCHITECTURAL LIGHTING WORKS AXIS FINELITE LUMENWERX METALUMEN	D5-* LP3.5R*-*-EXT-* (UNDER DRIVE TO 400 LUMENS/FT) BBRLED-* HP-4-R-* VIARF-* RM4D-*	Color Temp.: Cri (Min.): Lumens/Ft (Min LPW (Min): VA/FT (MAX):	3500K 80 N): 400 85 5	UNV	0-10V TO 10%	RECESS GRID TYPE	4" WIDE RECESSED LED FIXTURE, LENGTH PER PLAN EXTRUDED ALUMINUM RAILS, BACK CHANNELS, AND END CAPS MATTE WHITE FINISH SATIN OR FROSTED FLUSH ACRYLIC LENS USEFUL LIFE 50,000 HRS @L70		
		R42	A-LIGHT ARCHITECTURAL LIGHTING WORKS AXIS FINELITE LUMENWERX METALUMEN	D5-* LP3.5R*-*-EXT-* BBRLED-* HP-4-R-* VIARF-* RM4D-*	Color Temp.: CRI (MIN.): LUMENS/FT (MIN LPW (MIN): VA/FT (MAX):	3500K 80 N): 900 85 15	UNV	0-10V TO 10%	RECESS GRID TYPE	4" WIDE RECESSED LED FIXTURE, LENGTH PER PLAN EXTRUDED ALUMINUM RAILS, BACK CHANNELS, AND END CAPS MATTE WHITE FINISH SATIN OR FROSTED FLUSH ACRYLIC LENS USEFUL LIFE 50,000 HRS @L70		
4		R60	ACUITY (GOTHAM) COOPER (PORTFOLIO) SIGNIFY (LIGHTOLIER)	EVO* LD6B* C6RN*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 1,000 90 15	UNV	0-10V TO 10%	RECESS	6-INCH DOWNLIGHT - MEDIUM SELF-FLANGED SEMI-SPECULAR FINISHING TRIM SM/H RATIO OF 1.0 MIN. USEFUL LIFE 60,000 HRS @L70		
		R61	ACUITY (GOTHAM) COOPER (PORTFOLIO) SIGNIFY (LIGHTOLIER)	EVO* LD6B* C6RN*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 1,500 85 25	UNV	0-10V TO 10%	RECESS	6-INCH DOWNLIGHT - MEDIUM SELF-FLANGED SEMI-SPECULAR FINISHING TRIM SM/H RATIO OF 1.0 MIN. USEFUL LIFE 60,000 HRS @L70		
		R62	ACUITY (GOTHAM) COOPER (PORTFOLIO) SIGNIFY (LIGHTOLIER)	EVO* LD6B* C6RN*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 2,400 85 30	UNV	0-10V TO 10%	RECESS	6-INCH DOWNLIGHT - MEDIUM SELF-FLANGED SEMI-SPECULAR FINISHING TRIM SM/H RATIO OF 1.0 MIN. USEFUL LIFE 60,000 HRS @L70		
		R63	ACUITY (GOTHAM) COOPER (PORTFOLIO) SIGNIFY (LIGHTOLIER)	EVO* LD6B* (UNDER DRIVE TO 3500 LUMENS) C6RN* (UNDER DRIVE TO 3500 LUMENS)	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 3,500 85 45	UNV	0-10V TO 10%	RECESS	6-INCH DOWNLIGHT - MEDIUM SELF-FLANGED SEMI-SPECULAR FINISHING TRIM SM/H RATIO OF 1.0 MIN. USEFUL LIFE 60,000 HRS @L70		
		R64	ACUITY (GOTHAM) COOPER (PORTFOLIO) SIGNIFY (LIGHTOLIER)	EVO* LD4B* C4RN*	Color Temp.: Cri (Min.): Lumens (Min): LPW (Min): VA (Max):	3500K 80 1,000 90 15	UNV	0-10V TO 10%	RECESS	4-INCH DOWNLIGHT - MEDIUM SELF-FLANGED SEMI-SPECULAR FINISHING TRIM SM/H RATIO OF 1.0 MIN. USEFUL LIFE 60,000 HRS @L70		
5		R200F	A-LIGHT ARCHITECTURAL LIGHTING WORKS AXIS FINELITE LUMENWERX METALUMEN	D5-* LP3.5R*-*-EXT-* BBRLED-* HP-4-R-* VIARF-* RM4D-*	Color Temp.: Cri (Min.): Lumens/Ft (Min LPW (Min): Va/Ft (Max):	3500K 80 N): 700 80 10	UNV	0-10V TO 10%	RECESS GRID TYPE F = FLANGE TYPE	4" WIDE RECESSED LED FIXTURE, LENGTH PER PLAN, CUSTOM CONFIGURATION PER PLAN EXTRUDED ALUMINUM RAILS, BACK CHANNELS, AND END CAPS MATTE WHITE FINISH SATIN OR FROSTED FLUSH ACRYLIC LENS USEFUL LIFE 50,000 HRS @L70		

В

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57-21113-00_Dutchess Stadium Ph II/57-21113-00_Dutchess_Stadium_PhII_MEP_20

С

	-				LIGH	T FIXTURE SCHEDULE			
TYPE	MANUFACTURER	CATALOG NUMBER	KEY PARAMETE	ERS	VOLT	DIMMING / CONTROL	MOUNTING	DESCRIPTION	SPEC. NOTES
	ACUITY (LITHONIA)	ZL1D-*	COLOR TEMP.:	3500K			SURFACE MTD IN	2-FT STRIP	
	COOPER (METALUX)	2SNI FD-*	CRI (MIN.):	80			ROOMS WITH CLGS	STEEL CHANNEL HOUSING	
S10	HUBBELL (COLUMBIA)		UMENS (MIN):	2,700	UNV	NON-DIM	CHAIN HANG AT	MATTE WHITE FINISH	
0.0	SIGNIEY (DAY-BRITE)	ESS*	I PW (MIN)	110			9-FT IN ROOMS W/O CLGS	WRAP AROUND EROSTED LENS, WIDE DISTRIBUTION	
				25					
				20			C = CHAIN-HANG		
	ACUITY (LITHONIA)	ZL1D-*	COLOR TEMP.:	3500K		· · · · · · · · · · · · · · · · · · ·	SURFACE MTD IN	4-FT STRIP	
	COOPER (METALUX)	4SNLED-*	CRI (MIN.):	80			ROOMS WITH CLGS	STEEL CHANNEL HOUSING	
S11		LCL*	LUMENS (MIN):	3.800	UNV	NON-DIM	CHAIN HANG AT	MATTE WHITE FINISH	
• • •	SIGNIEY (DAY-BRITE)	ESS*	I PW (MIN):	120			9-FT IN ROOMS W/O CLGS	WRAP AROUND FROSTED LENS, WIDE DISTRIBUTION	
			VA (MAX):	45			UNLESS NOTED OTHERWIS	EUSEFUL LIFE 50,000 HRS @L70	
			()				C = CHAIN-HANG		
	ACUITY (LITHONIA)	ZL1D-*	COLOR TEMP.:	3500K			SURFACE MTD IN	4-FT STRIP	
	COOPER (METALUX)	4SNLED-*	CRI (MIN.):	80			ROOMS WITH CLGS	STEEL CHANNEL HOUSING	
S12	HUBBELL (COLUMBIA)	LCL*	LUMENS (MIN):	5,500	UNV	NON-DIM	CHAIN HANG AT	MATTE WHITE FINISH	
S12X	SIGNIFY (DAY-BRITE)	FSS*	LPW (MIN):	110			9-FT IN ROOMS W/O CLGS	WRAP AROUND FROSTED LENS, WIDE DISTRIBUTION.	
			VA (MAX):	55			UNLESS NOTED OTHERWIS	EUSEFUL LIFE 50,000 HRS @L70	
							X = BATTERY		
	COOPER (FAIL-SAFE)	HVL8-* (UNDER DRIVE TO 2800 LUMENS)	COLOR TEMP.:	3500K				4-FT WET LOCATION WRAP	
	KENALL	MLHA8-* (UNDER DRIVE TO 2800 LUMENS)	CRI (MIN.):	80				MARINE GRADE ALUMINUM HOUSING W/ DIE CAST END CAPS	
S30	NEW STAR	VIC-4N-*	LUMENS (MIN):	2,800	UNV	NON-DIM	SURFACE	MATTE WHITE FINISH	
S30X	LC DOANE	VSA-4-* (UNDER DRIVE TO 2800 LUMENS)	LPW (MIN):	100			X = BATTERY	UV-STABILIZED HIGH IMPACT PEARLESCENT POLYCARBONATE LENS	
	VISCOR (LEVITON)	VRSE-3556-*	VA (MAX):	35				USEFUL LIFE 80,000 HRS @L70	
	COOPER (FAIL-SAFE)	HVL8-*	COLOR TEMP.:	3500K				4-FT WET LOCATION WRAP	
	KENALL	MLHA8-*	CRI (MIN.):	80				MARINE GRADE ALUMINUM HOUSING W/ DIE CAST END CAPS	
S31	NEW STAR	VIC-4N-*	LUMENS (MIN):	4,500	UNV	NON-DIM	SURFACE	MATTE WHITE FINISH	
	LC DOANE	VSA-4-*	LPW (MIN):	95				UV-STABILIZED HIGH IMPACT PEARLESCENT POLYCARBONATE LENS	
	VISCOR (LEVITON)	VRSE-3556-*	VA (MAX):	55				USEFUL LIFE 80,000 HRS @L70	
	KENALL	MLHA8-*	COLOR TEMP.:	3500K				4-FT WET LOCATION WRAP	
	COOPER (FAIL-SAFE)	HVL8-*	CRI (MIN.):	80				MARINE GRADE ALUMINUM HOUSING W/ DIE CAST END CAPS	
S33		VSA-4-*	LUMENS (MIN):	9,000	UNV	NON-DIM	SURFACE		
	VISCOR (LEVITON)	VRSE-3556-*		70				UV-STABILIZED HIGH IMPACT PEARLESCENT POLYCARBONATE LENS	
			VA (MAX):	100				USEFUL LIFE 80,000 HRS @L70	
V1	COUPER (SURE-LITES)							WITH DIRECTIONAL CHEVRON ARROWS AS INDICATED ON DRAWINGS	
A1					UNV	NON-DIM			2
								INIVEDSAL MOUNT	
				5			DRAWINGS		
		I FS W 2 R							
								WITH DIRECTIONAL CHEVRON ARROWS AS INDICATED ON DRAWINGS	
X2		SED R W					WALL OR CLG		2
ΛL		551 2 W R						WHITE HOUSING WHITE FACE RED LETTERS	
							DRAWINGS	UNIVERSAL MOUNT	
			VA (MAX):	5				AC ONLY (NO BATTERY)	
	ACUITY (LITHONIA)	LV S W 1 R 120/UNV						EXIT SIGN - HIGH ABUSE - ONE-SIDED	
	COOPER (SURE-LITES)	UX61RWH						DIE CAST ALUMINUM HOUSING, CLEAR POLYCARBONATE LENS	
X3	HUBBELL (DUAL LITE)	SEWL S R W			UNV	NON-DIM	WALL	WHITE HOUSING, WHITE FACE, RED LETTERS	2
	SIGNIFY (CHLORIDE)	60MLA 1 R W						ACCESSIBLE TEST SWITCH, MAGNETIC TEST SWITCH. OR	
								KEY CHAIN LASER FOR REMOTE TESTING	
			VA (MAX):	5				AC ONLY (NO BATTERY)	
	ACUITY (LITHONIA)	LV S W 2 R 120/UNV		-				EXIT SIGN - HIGH ABUSE - TWO-SIDED	
	COOPER (SURE-LITES)	UX6 2 R WH						WITH DIRECTIONAL CHEVRON ARROWS AS INDICATED ON DRAWINGS	
X4	HUBBELL (DUAL LITE)	SEWL D R W			UNV	NON-DIM	CLG	DIE CAST ALUMINUM HOUSING, CLEAR POLYCARBONATE LENS	2
	SIGNIFY (CHLORIDE)	60MLA 3 R W						WHITE HOUSING, WHITE FACE, RED LETTERS	
								ACCESSIBLE TEST SWITCH, MAGNETIC TEST SWITCH, OR KEY CHAIN LASER FOR REMOTE TESTIN	\$
			VA (MAX):	5				AC ONLY (NO BATTERY)	

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ABBREVIATIONS:	GENERAL NOTES
	A. FIXTURE MAN
AC:ALTERNATING CURRENT	B. PROVIDE UNI
CLG:CEILING	C. LUMEN VALU
CRI:COLOR RENDERING INDEX	D. DELIVERED L
ETD:EMERGENCY TRANSFER DEVICE	E. ALL FIXTURE
FC:FOOTCANDLES	F. PROVIDE MET
FT:FOOT	
INC.:INCANDESCENT	
LPW:LUMENS PER WATT	
M.H.:MOUNTING HEIGHT	
MTD:MOUNTED	SPECIFIC NOTES
O.C.:ON-CENTER	1. CIRCUIT FOR
PAF:PAINT AFTER FABRICATION	2. WALL MOUNTI
SM/H:SURFACE-TO-MOUNTING-HEIGHT RATIO	3. SEE LIGHTING
UNV:UNIVERSAL VOLTAGE	4. PEDESTAL (P
VA:VOLT-AMPERE	5. PROVIDE MO
W/:WITH	6. LOCATE REM
W/O:WITHOUT	7. DALI/DMX TUN

D

LIGHT FIXTURE SCHEDULE NOTES

ANUFACTURERS ARE LISTED ALPHABETICALLY AND NOT ACCORDING TO BASIS OF DESIGN.

NITS MEETING FIXTURE SCHEDULE DESCRIPTION AND SPECIFICATION REQUIREMENTS. THE FIXTURE CATALOG NUMBER IS NOT COMPLETE; USE ONLY AS A GUIDELINE.

UES IN KEY PARAMETERS COLUMN ARE MINIMUM DELIVERED LUMENS, INCLUDING OPTIONS AND ACCESSORIES. LUMENS SHALL NOT EXCEED 25% OF MINIMUM VALUES.

RES SHALL BE PAINTED AFTER FABRICATION. IETALLIC POLE BASE COVER, FINISH TO MATCH POLE AND FIXTURE HEADS.

OR CONTINUOUS POWER UNLESS NOTED OTHERWISE (DO NOT TAP OFF SWITCHLEGS), WALL OR CEILING MOUNT AS INDICATED ON PLANS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. INTING HEIGHT SHALL BE 6" ABOVE TOP OF ADJACENT DOOR FRAME OR 7'-10" WHERE NO DOOR OR SOFFIT IS BELOW SIGN, UNLESS NOTED OTHERWISE ON DRAWINGS.

ING CONTROL DETAILS AND/OR SCHEDULES AND RELAY PANEL SCHEDULES (WHERE APPLICABLE) FOR CONTROL REQUIREMENTS. (PREFERRED) OR STANCHION MOUNT ON CONCRETE BASE PER MANUFACTURER'S RECOMMENDATION.

MOUNTING HARDWARE AS REQUIRED TO RIGIDLY PENDANT MOUNT FIXTURE ACCORDING TO MANUFACTURER RECOMMENDATIONS. MOUNT SUCH THAT BOTTOM OF FIXTURE = BOTTOM OF JOISTS. NO HOOKS. EMOTE DRIVER (IF REQUIRED) IN NEAREST ACCESSIBLE PLENUM SPACE. DEVICE SHALL BE PLENUM-RATED OR IN NEMA 1 ENCLOSURE, LABEL DEVICE OR ENCLOSURE ACCORDING TO LOAD SERVED (I.E. 'DISPLAY CASE').

TUNABLE DRIVER IS ACCEPTABLE. PROVIDE COMPATIBLE TUNABLE DIMMING CONTROL DEVICE IN LIEU OF SWITCH TYPES INDICATED ON PLANS. COORDINATE DEVICE ROUGH-IN.

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SECTION 088000 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Glass products.
 - 2. Insulating glass.
 - 3. Glazing sealants.
 - 4. Glazing tapes.
 - 5. Miscellaneous glazing materials.
- B. Related Requirements:
 - 1. Section 088300 "Mirrors."

1.2 DEFINITIONS

- A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations in millimeters in accordance with ASTM C1036.
- C. IBC: International Building Code.
- D. Interspace: Space between lites of an insulating-glass unit.

1.3 COORDINATION

A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances to achieve proper safety margins for glazing retention under each design load case, load case combination, and service condition.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

GLAZING

2. Review temporary protection requirements for glazing during and after installation.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Glass Samples: For each type of glass product other than clear monolithic vision glass; 12 inches (300 mm) square.
- C. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturers of fabricated glass units.
- B. Sample Warranties: For special warranties.

1.7 QUALITY ASSURANCE

- A. Fabricated-Glass Manufacturer Qualifications: A qualified manufacturer of fabricated glass units who is approved by primary glass manufacturer.
- B. Installer Qualifications: A qualified glazing contractor for this Project who is certified under the North American Contractor Certification Program (NACC) for Architectural Glass & Metal (AG&M) contractors.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Protect glazing materials in accordance with manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
 - 1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or are below 40 deg F (4.4 deg C).

1.10 WARRANTY

- A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer agrees to replace coated-glass units that deteriorate within specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.
 - 1. Warranty Period: 10 years from date of Substantial Completion.
- B. Manufacturer's Special Warranty for Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is obstruction of vision by dust, moisture, or film on interior surfaces of glass.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Glass: Obtain glass from single source from single manufacturer for each glass type.
- B. Source Limitations for Glazing Accessories: For each product and installation method, obtain from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined in accordance with the IBC and ASTM E1300:
 - 1. Design Wind Pressures: As indicated on Drawings.
 - a. Wind Design Data: As indicated on Drawings.
 - 2. Design Snow Loads: As indicated on Drawings.

GLAZING

- 3. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1 inch (25 mm), whichever is less.
- C. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.
- D. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
 - 1. For monolithic-glass lites, properties are based on units with lites 6 mm thick.
 - 2. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
 - 3. U-Factors: Center-of-glazing values, in accordance with NFRC 100 and based on most current non-beta version of LBL's WINDOW computer program, expressed as Btu/sq. ft. x h x deg F (W/sq. m x K).
 - 4. SHGC and Visible Transmittance: Center-of-glazing values, in accordance with NFRC 200 and based on most current non-beta version of LBL's WINDOW computer program.
 - 5. Visible Reflectance: Center-of-glazing values, in accordance with NFRC 300.

2.3 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."
- B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- C. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the IGCC.
- D. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than thickness indicated.
 - 1. Minimum Glass Thickness for Exterior Lites: 6 mm.
 - 2. Thickness of Tinted Glass: Provide same thickness for each tint color indicated throughout Project.

E. Strength: Where annealed float glass is indicated, provide annealed float glass, heatstrengthened float glass, or fully tempered float glass. Where fully tempered float glass is indicated, provide fully tempered float glass.

2.4 GLASS PRODUCTS

- A. Clear Annealed Float Glass: ASTM C1036, Type I, Class 1 (clear), Quality-Q3.
- B. Fully Tempered Float Glass: ASTM C1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- C. Reflective- and Low-E-Coated Vision Glass: ASTM C1376.

2.5 INSULATING GLASS

- A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified in accordance with ASTM E2190.
 - 1. Sealing System: Dual seal, with polyisobutylene and silicone primary and secondary sealants.
 - 2. Perimeter Spacer: Stainless steel.
 - 3. Desiccant: Molecular sieve or silica gel, or a blend of both.

2.6 GLAZING SEALANTS

- A. General:
 - 1. Compatibility: Compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
 - 2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
 - 3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range of industry colors.
- B. Neutral-Curing Silicone Glazing Sealant, Class 100/50: Complying with ASTM C920, Type S, Grade NS, Use NT.

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide The Dow Chemical Company; Dow Corning® 790 Silicone Building Sealant or a comparable product by one of the following:
 - a. GE Construction Sealants; Momentive Performance Materials Inc.
 - b. Pecora Corporation.
 - c. Sika Corporation.
 - d. Tremco Incorporated.

2.7 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C1281 and AAMA 800 for products indicated below:
 - 1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
 - 2. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.
- B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:
 - 1. AAMA 810.1, Type 1, for glazing applications in which tape acts as primary sealant.
 - 2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.8 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, recommended in writing by manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks:
 - 1. Elastomeric with Shore A durometer hardness of 85, plus or minus 5.
- D. Spacers:
 - 1. Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks:

GLAZING

- 1. Elastomeric with Shore A durometer hardness per manufacturer's written instructions.
- F. Cylindrical Glazing Sealant Backing: ASTM C1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

2.9 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
 - 1. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
 - a. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
 - 2. Presence and functioning of weep systems.
 - 3. Minimum required face and edge clearances.
 - 4. Effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.
- B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that leave visible marks in the completed Work.

3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.
- C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.
- D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- F. Provide spacers for glass lites where length plus width is larger than 50 inches (1270 mm).
 - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
 - 2. Provide 1/8-inch- (3-mm-) minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and in accordance with requirements in referenced glazing publications.
- H. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- I. Set glass lites with proper orientation so that coatings face exterior or interior as specified.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
- K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended in writing by gasket manufacturer.

3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first, then to jambs. Cover horizontal framing joints by applying tapes to jambs, then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until right before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks, and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended in writing by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended in writing by gasket manufacturer.
- E. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 CLEANING AND PROTECTION

- A. Immediately after installation, remove nonpermanent labels and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.
 - 1. If, despite such protection, contaminating substances do contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.
- C. Remove and replace glass that is damaged during construction period.
- D. Wash glass on both exposed surfaces not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

3.8 MONOLITHIC GLASS SCHEDULE

- A. Clear Glass Type (CG): Annealed float glass.
 - 1. Minimum Thickness: 6 mm.
- B. Clear Glass Type (CTG): Fully tempered float glass.
 - 1. Minimum Thickness: 6 mm.
 - 2. Safety glazing required.

3.9 INSULATING GLASS SCHEDULE

- A. Low-E-Coated, Clear Insulating Glass Type (CIG):
 - 1. Basis-of-Design Product: Vitro Architectural Glass; Solarban 70.
 - a. Other Approved Manufacturers:
 - 1) ACG Glass Company North America.
 - 2) Guardian Glass.
 - 3) Viracon.
 - 2. Overall Unit Thickness: 1 inch (25 mm).
 - 3. Minimum Thickness of Each Glass Lite: 6 mm.
 - 4. Outdoor Lite: Annealed float glass.
 - 5. Interspace Content: Air.
 - 6. Indoor Lite: Annealed float glass.
 - 7. Low-E Coating: Sputtered on second surface.
 - 8. Winter Nighttime U-Factor: 0.28 maximum.
 - 9. Summer Daytime U-Factor: 0.26 maximum.
 - 10. Visible Light Transmittance: 64 percent minimum.
 - 11. SGHC: 0.27 maximum.
 - 12. Safety glazing required.
- B. Low-E-Coated, Clear Tempered Insulating Glass Type (CTIG-1):
 - 1. Basis-of-Design Product: Vitro Architectural Glass; Solarban 70.
 - a. Other Approved Manufacturers:
 - 1) ACG Glass Company North America.
 - 2) Guardian Glass.
 - 3) Viracon.
 - 2. Overall Unit Thickness: 1 inch (25 mm).
 - 3. Minimum Thickness of Each Glass Lite: 6 mm.
 - 4. Outdoor Lite: Fully tempered float glass.
 - 5. Interspace Content: Air.
 - 6. Indoor Lite: Fully tempered float glass.
 - 7. Low-E Coating: Sputtered on second surface.
 - 8. Winter Nighttime U-Factor: 0.28 maximum.
 - 9. Summer Daytime U-Factor: 0.26 maximum.
 - 10. Visible Light Transmittance: 64 percent minimum.
 - 11. SGHC: 0.27 maximum.
 - 12. Safety glazing required.
- C. Low-E-Coated, Clear Tempered Insulating Glass Type (CTIG-2):

- 1. Basis-of-Design Product: Vitro Architectural Glass; Solarban 70.
 - a. Other Approved Manufacturers:
 - 1) ACG Glass Company North America.
 - 2) Guardian Glass.
 - 3) Viracon.
- 2. Overall Unit Thickness: <u>1-3/8_1 1/8</u> inch (<u>35 mm) at aluminum storefront window, 1</u> inch at storefront doors.
- 3. Minimum Thickness of Outdoor Lite: 10 mm.
- 4. Minimum Thickness of Indoor Lite: 6 mm.
- 5. Outdoor Lite: Fully tempered float glass.
- 6. Interspace Content: Air.
- 7. Indoor Lite: Fully tempered float glass.
- 8. Low-E Coating: Sputtered on second surface.
- 9. Winter Nighttime U-Factor: 0.28 maximum.
- 10. Summer Daytime U-Factor: 0.26 maximum.
- 11. Visible Light Transmittance: 64 percent minimum.
- 12. SGHC: 0.27 maximum.
- 13. Safety glazing required.

END OF SECTION 088000