



REVISIONS	
NUMBER	DATE



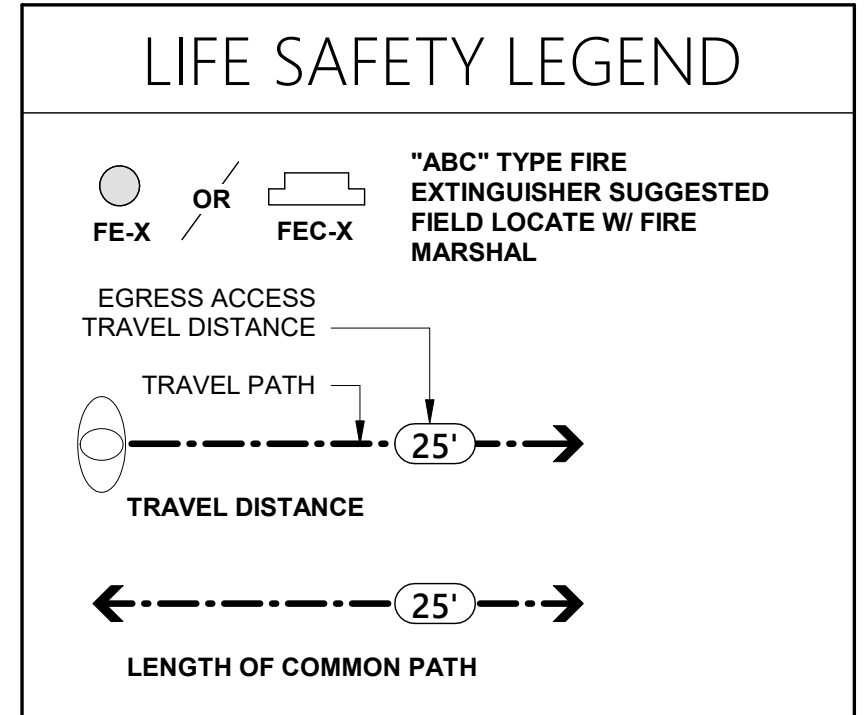
220 PROGRESS DRIVE, FUQUAY-VARINA, NC

919-550-7717  
 Tony@TonyJohnsonArchitect.com  
 104 North Lumbers St  
 Clayton, NC 27520  
 TonyJohnsonArchitect.com



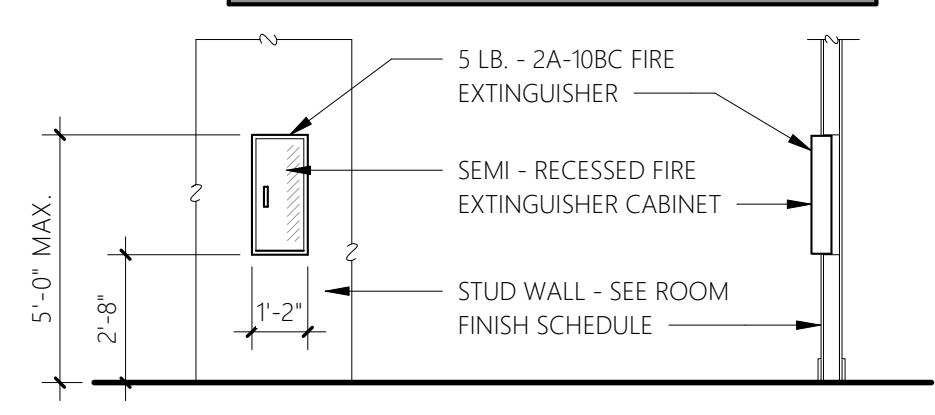
DATE	7/23/2020 11:16:47 AM
PROJECT #	2020.021
LIFE SAFETY PLAN	
SHEET	A-0.2

- ▨ F-1: 8,768 SQFT / 100 = 88 PERSONS
  - ▨ F-1 (STORAGE): 260 SQFT / 300 = 1 PERSON
  - ▨ B: 627 SQFT / 100 = 7 PERSONS
- 
- TOTAL OCCUPANTS: 96**



② LIFE SAFETY LEGEND  
 1/8" = 1'-0"

NOTE:  
 1. SURFACE MOUNTED FIRE EXTINGUISHER, IF APPLICABLE, SHALL BE MOUNTED SAME HEIGHT AS THE FLUSH CABINET.  
 2. PROVIDE BLOCKING FOR SURFACE MOUNTED FIRE EXTINGUISHERS.  
 3. ALL FIRE EXTINGUISHERS TO BE MOUNTED WITHIN A 75' MAXIMUM DISTANCE FROM ANY POINT.

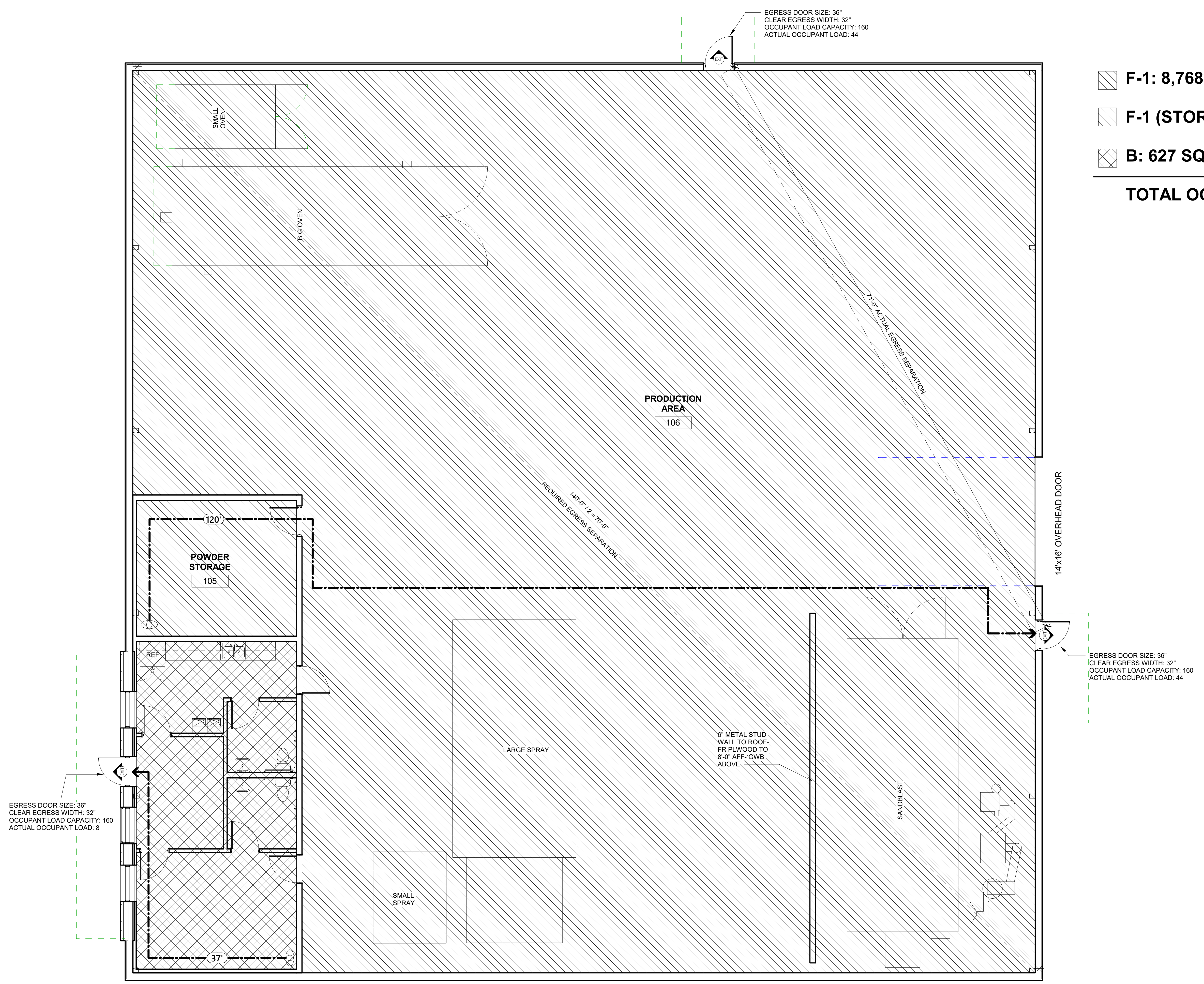
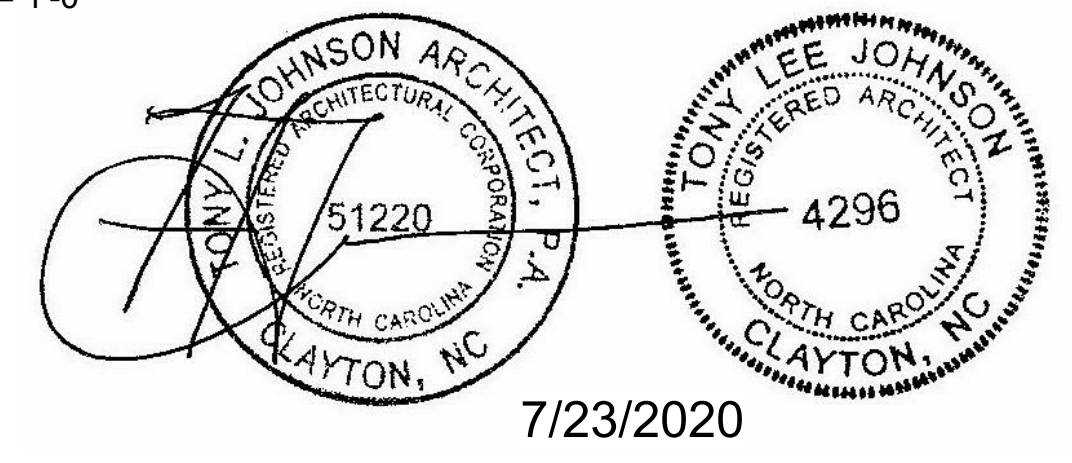


③ TYPICAL "ABC" FIRE EXTINGUISHER  
 1/4" = 1'-0"

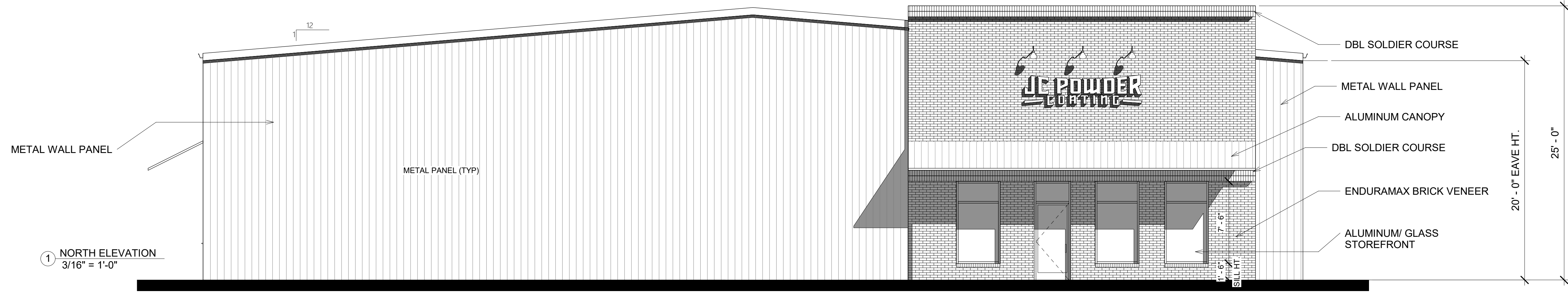
Floor, Room or Space	MINIMUM NUMBER OF EXITS		TRAVEL DISTANCE (Feet)	
	Required (Table - 1006.3.1)	Shown on Plans	Allowable Travel Distance (Table - 1017.2)	Actual Travel Distance Shown on Plans
BUSINESS	1	1	100'	37' - 0"
PRODUCTION	2	2	200'	120' - 0"

**Notes**  
 1. Corridor dead ends (section 1020.4)  
 2. Building with single exits (Tables 1006.2.1). Spaces with one means of egress (Table - 1009.1)  
 3. Common Path of Travel (Section 1006.2.1)

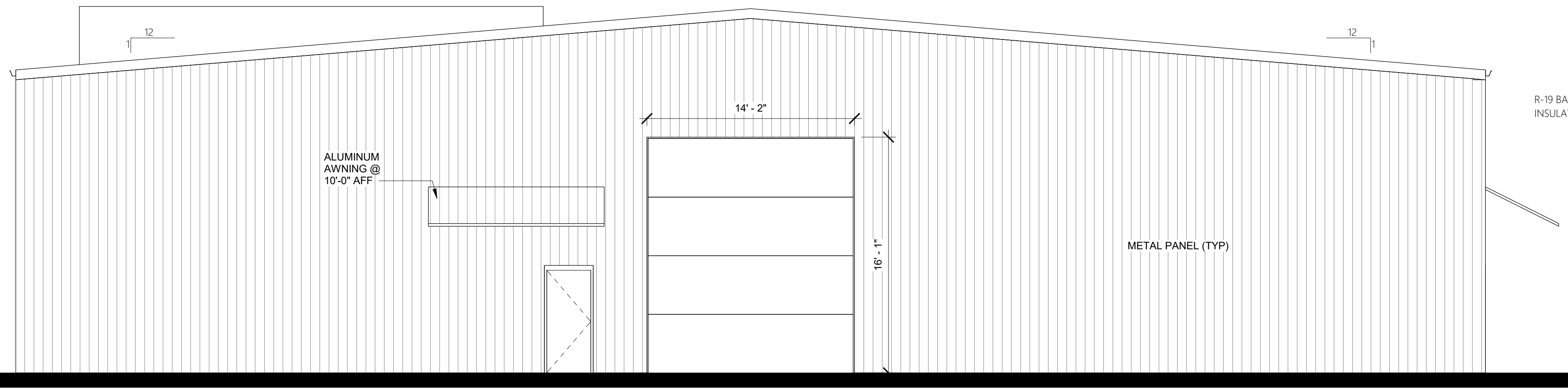
④ LEGEND REQUIREMENTS  
 1/4" = 1'-0"



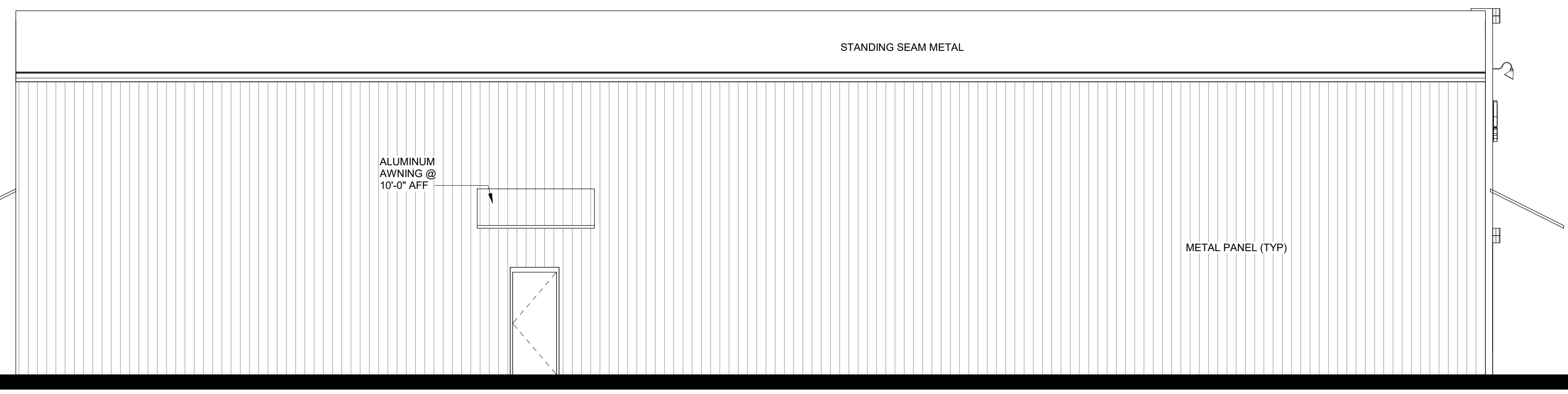
① LIFE SAFETY PLAN  
 3/16" = 1'-0"



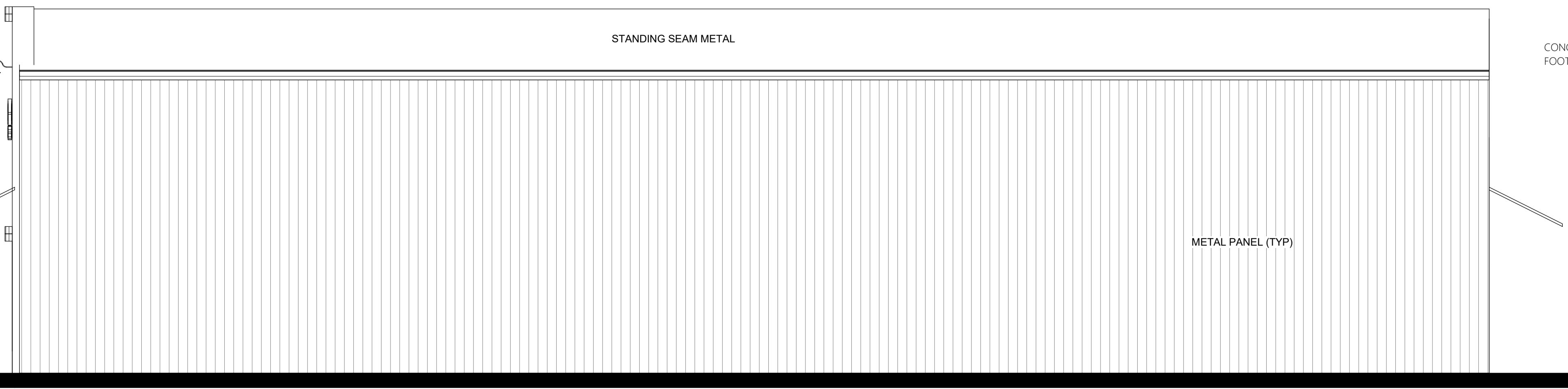
1 NORTH ELEVATION  
3/16" = 1'-0"



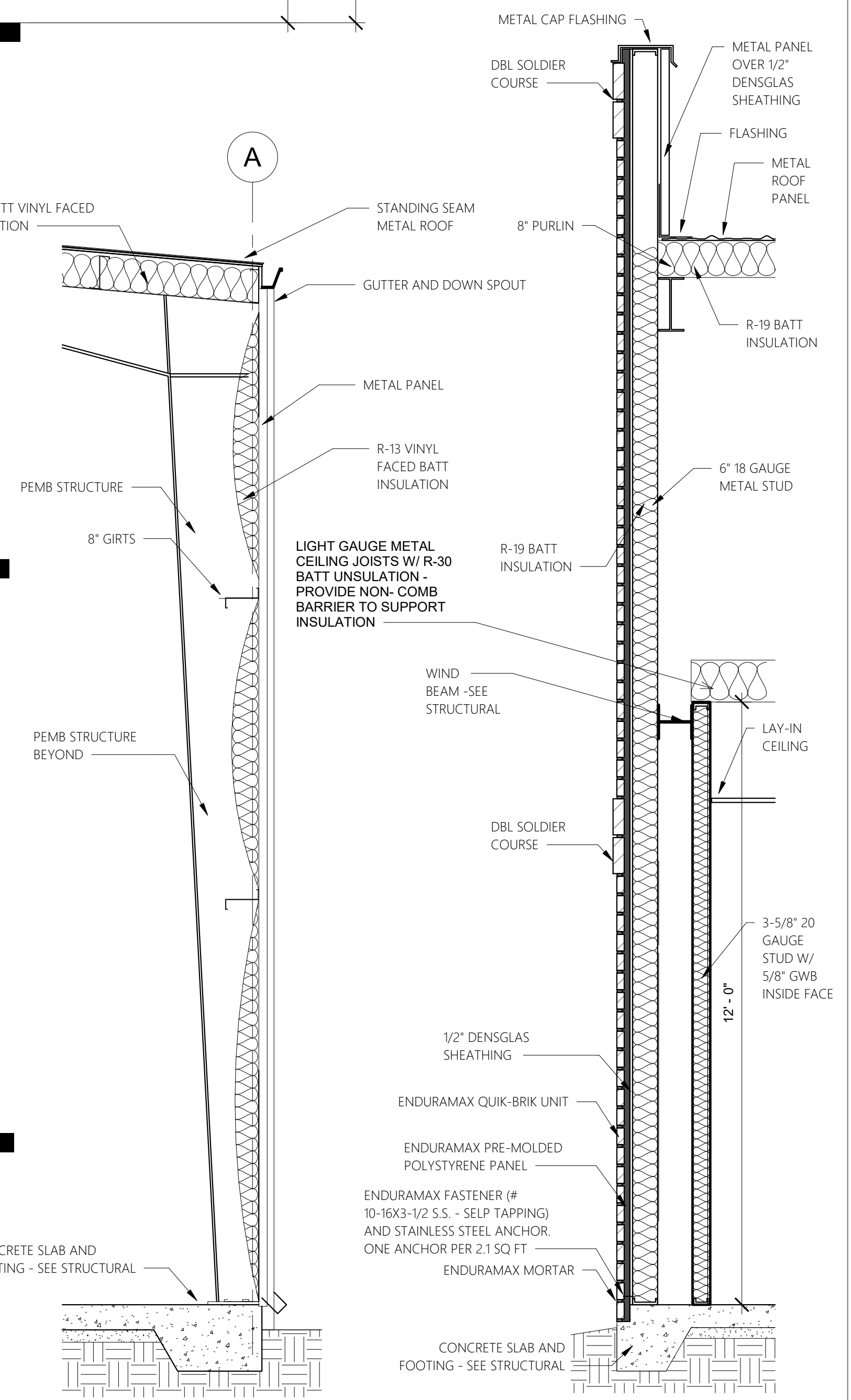
2 SOUTH ELEVATION  
3/16" = 1'-0"



3 EAST ELEVATION  
3/16" = 1'-0"



4 WEST ELEVATION  
3/16" = 1'-0"



5 SECTION ONE  
1/2" = 1'-0"

6 SECTION TWO  
1/2" = 1'-0"

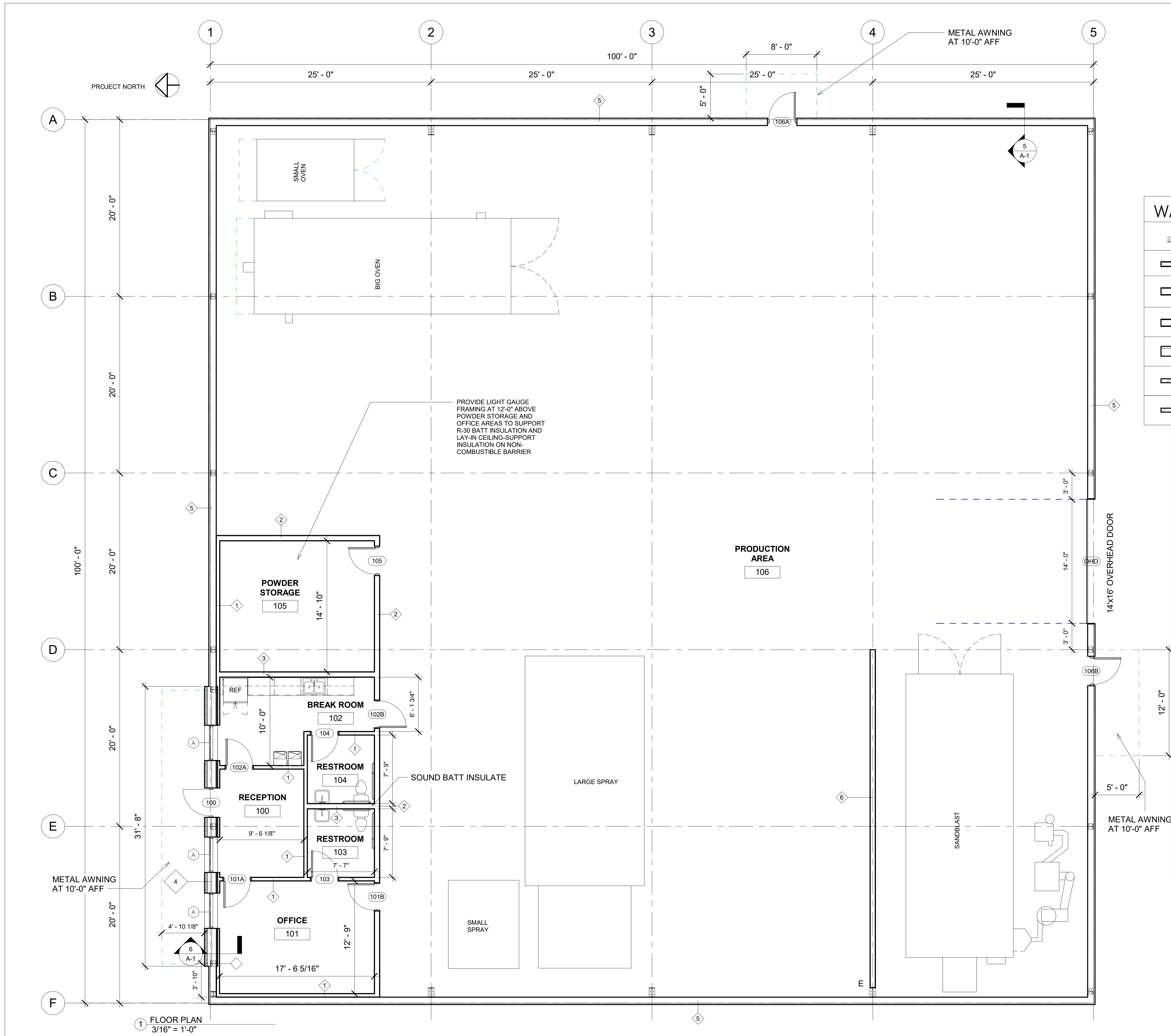
Professional seals for Tony Johnson Architecture and Tony Lee Johnson, Registered Architect, North Carolina. The seal for Tony Johnson Architecture includes the number 51220 and the seal for Tony Lee Johnson includes the number 4296. The date 7/23/2020 is stamped below the seals.

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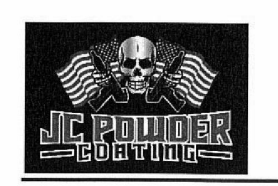
DATE	7/23/2020 11:16:50 AM
PROJECT #	2020.021
ELEVATIONS	
SHEET	A-1



- ### FLOOR PLAN NOTES
1. FIELD VERIFY ALL EXISTING CONDITIONS BEFORE CONSTRUCTION BEGINS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES. DIMENSIONS SHOWN ARE FROM WALL FACE TO WALL FACE. U.N.O. - ALL DIMENSIONS REFERENCED HEREIN ARE IMPERIAL STANDARD. U.N.O.
  2. ALL INTERIOR WALLS TO RECEIVE BATT INSULATION. PROVIDE SOUND BATT INSULATION @ RESTROOM.
  3. PROVIDE WATER RESISTANT GYPSUM WALL BOARD AT ALL WET WALLS INCLUDING, BUT NOT LIMITED TO, WALLS AT BATHROOMS AND BREAK ROOM.
  4. PROVIDE SUPPLEMENTAL FRAMING, METAL BLOCKING / STRAPPING AND BRACING AS REQ'D FOR SUPPORT OF FIXTURES, EQUIPMENT, TOILET ACCESSORIES, FURNISHINGS, FURNITURE / EQUIPMENT, AND SIMILAR CONSTRUCTION.

### WALL TYPES

SYMBOL	TAG	DESCRIPTION
	1	INTERIOR - 3-5/8" 20 GAUGE METAL STUD @ 16" O.C. 5/8" GYPSUM WALL BOARD BOTH SIDES, BATT INSULATION, 12'-0" HGT. U.N.O.
	2	INTERIOR - 6" 20 GAUGE METAL STUD @ 16" O.C. 5/8" GYPSUM WALL BOARD BOTH SIDES, R-19 BATT INSULATION TO 12'-0", EXTEND STUDS AND FACTORY SIDE GWB TO TO UNDERSIDE OF DECKING.
	3	INTERIOR - 6" 20 GAUGE METAL STUD @ 16" O.C. 5/8" GYPSUM WALL BOARD BOTH SIDES, R-19 BATT INSULATION TO 12'-0", EXTEND TO 12'-0" HGT. U.N.O.
	4	EXTERIOR - PEMB WALL W/ ENDURAMAX QUIK-BRIK SYSTEM. SEE WALL DETAIL A-3.
	5	EXTERIOR - PEMB WALL.
	6	INTERIOR - 6" 20 GAUGE METAL STUD @ 16" O.C. W/ FR PLYWOOD TO 8'-0" AFF AND GYPSUM BOARD ABOVE ON EACH SIDE. EXTEND TO ROOF.



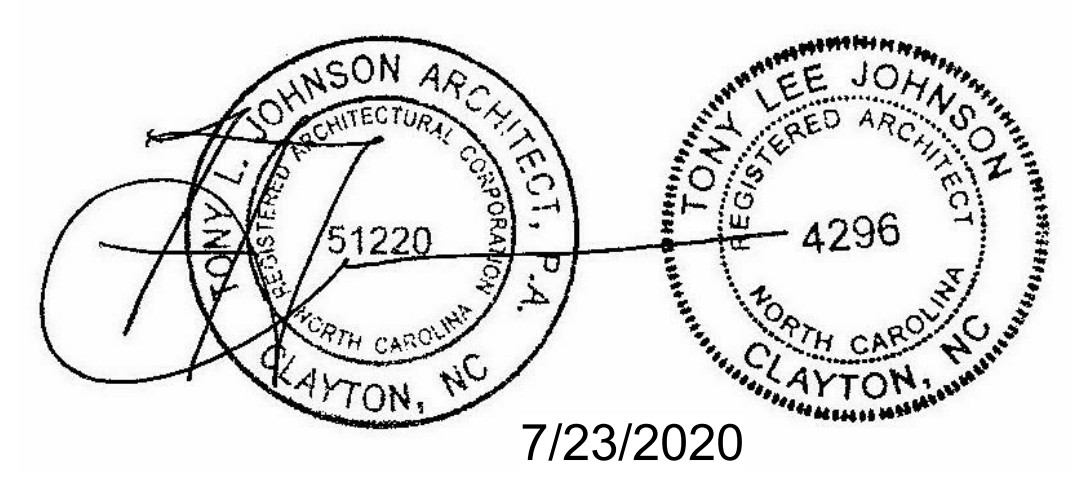
June 1, 2020

To Whom It May Concern:

Our Architect has informed us that, based on the occupant load of the building and the requirements of the 2018 NC Plumbing Code, the fixture count of the building we are planning to build would be far greater than what we need. The calculated occupant load is 88 persons in the Factory-Industrial area, 7 persons in the Business area, and 1 person in the F-1 Storage area for a total calculated occupant load of 96 persons. This is a significantly higher occupant load than we ever anticipate having in the space. We currently employ 2 persons, and do not anticipate ever having more than 10 employees and/or customers at this location at any time. **Per Section 403.6 of the 2018 North Carolina Plumbing Code, we respectfully request that the occupant load be adjusted to reflect a count of no more than 10 persons as it relates to plumbing fixture count.** We will certify that at no time will more than 10 persons be in the Building

Sincerely:  
*Carla Trepper*  
 Carla Trepper  
 JC Powder Coating

919-375-2930  
 jcpowdercoating922@gmail.com



### REVISIONS

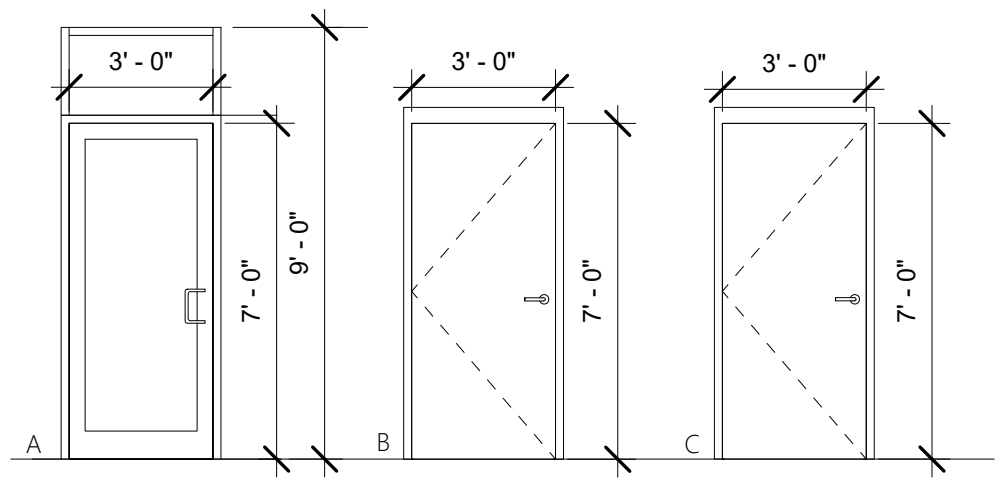
NUMBER	DATE



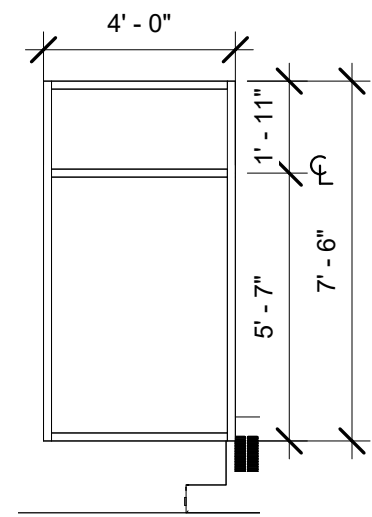
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DATE	7/23/2020 11:16:54 AM
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FLOOR PLAN	
SHEET	A-2



DOOR TYPES  
1/4" = 1'-0"

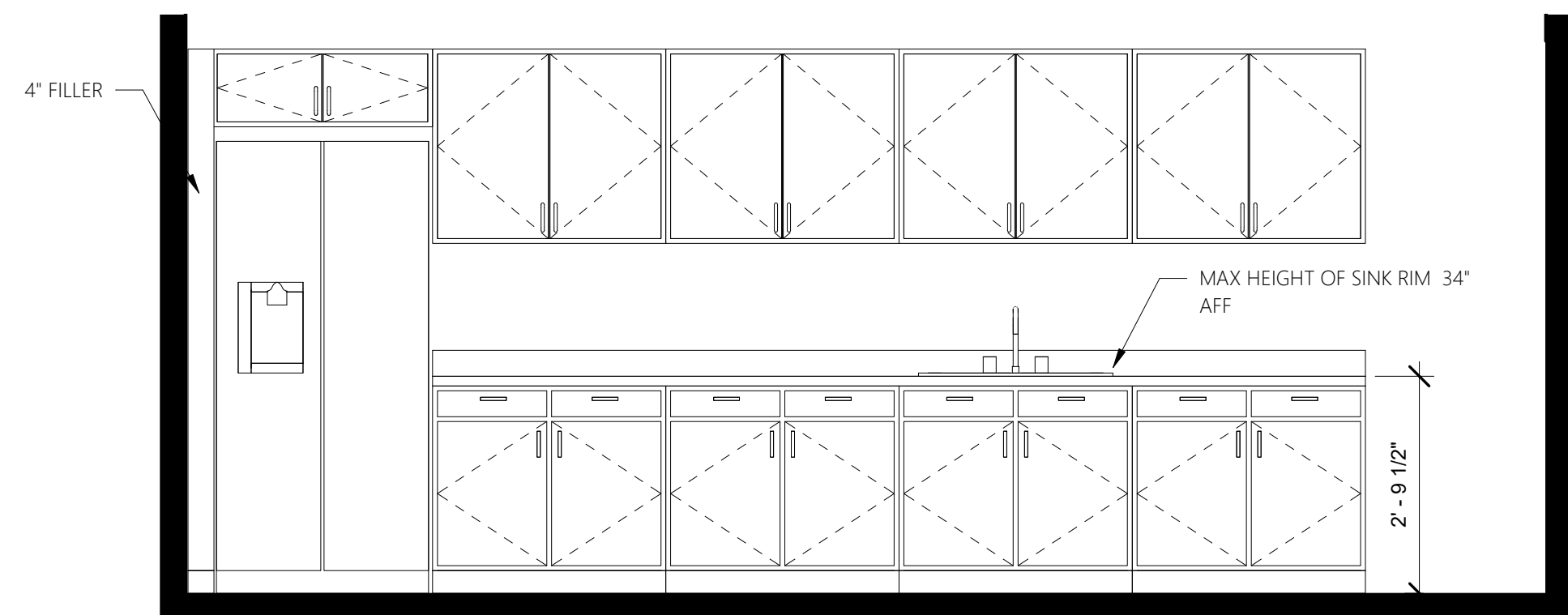


WINDOW TYPES  
1/4" = 1'-0"

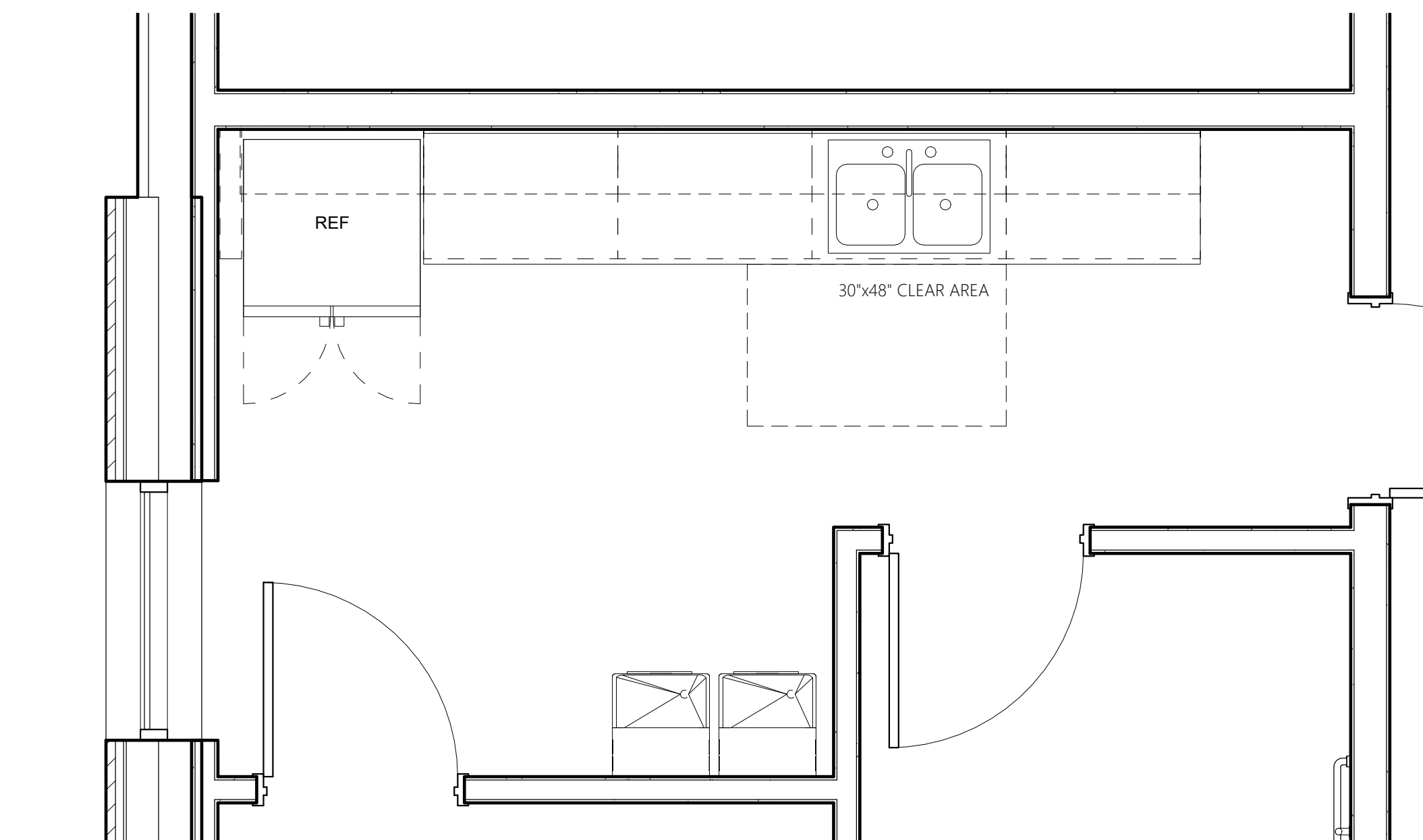
MARK	DOOR		ELEVATIONS	DOOR TYPE	DOOR			CLOSER	HARDWARE	COMMENTS
	W	H			FINISH	FRAME	FRAME FINISH			
100	3'-0"	7'-0"	A	STOREFRONT ALUMINUM / GLASS	ANODIZED	ALUMINUM	ANODIZED	YES	MANUFACTURERS STANDARD PUSH/PULL W/ DEADBOLT	TRANSOM ABOVE
101A	3'-0"	7'-0"	B	SOLID CORE WOOD	STAIN	METAL	PAINTED	NO	LEVER HANDLE	
101B	3'-0"	7'-0"	B	SOLID CORE WOOD	STAIN	METAL	PAINTED	YES	LEVER HANDLE	
102A	3'-0"	7'-0"	B	SOLID CORE WOOD	STAIN	METAL	PAINTED	NO	LEVER HANDLE	
102B	3'-0"	7'-0"	B	SOLID CORE WOOD	STAIN	METAL	PAINTED	YES	LEVER HANDLE	
103	3'-0"	7'-0"	B	SOLID CORE WOOD	STAIN	METAL	PAINTED	NO	LEVER HANDLE / PRIVACY LOCKSET	
104	3'-0"	7'-0"	B	SOLID CORE WOOD	STAIN	METAL	PAINTED	NO	LEVER HANDLE / PRIVACY LOCKSET	
105	3'-0"	7'-0"	C	INSULATED METAL	PAINT	METAL	PAINTED	NO	LEVER HANDLE	
106A	3'-0"	7'-0"	C	INSULATED METAL	PAINT	METAL	PAINTED	YES	LEVER HANDLE	
106B	3'-0"	7'-0"	C	INSULATED METAL	PAINT	METAL	PAINTED	YES	LEVER HANDLE	
OHD	14'-0"	16'-0"	-					N/A		OVERHEAD DOOR

WINDOW SCHEDULE				
MARK	WIDTH	HEIGHT	OPERATION	NOTES
A	4'-0"	7'-6"	FIXED	STOREFRONT WINDOW

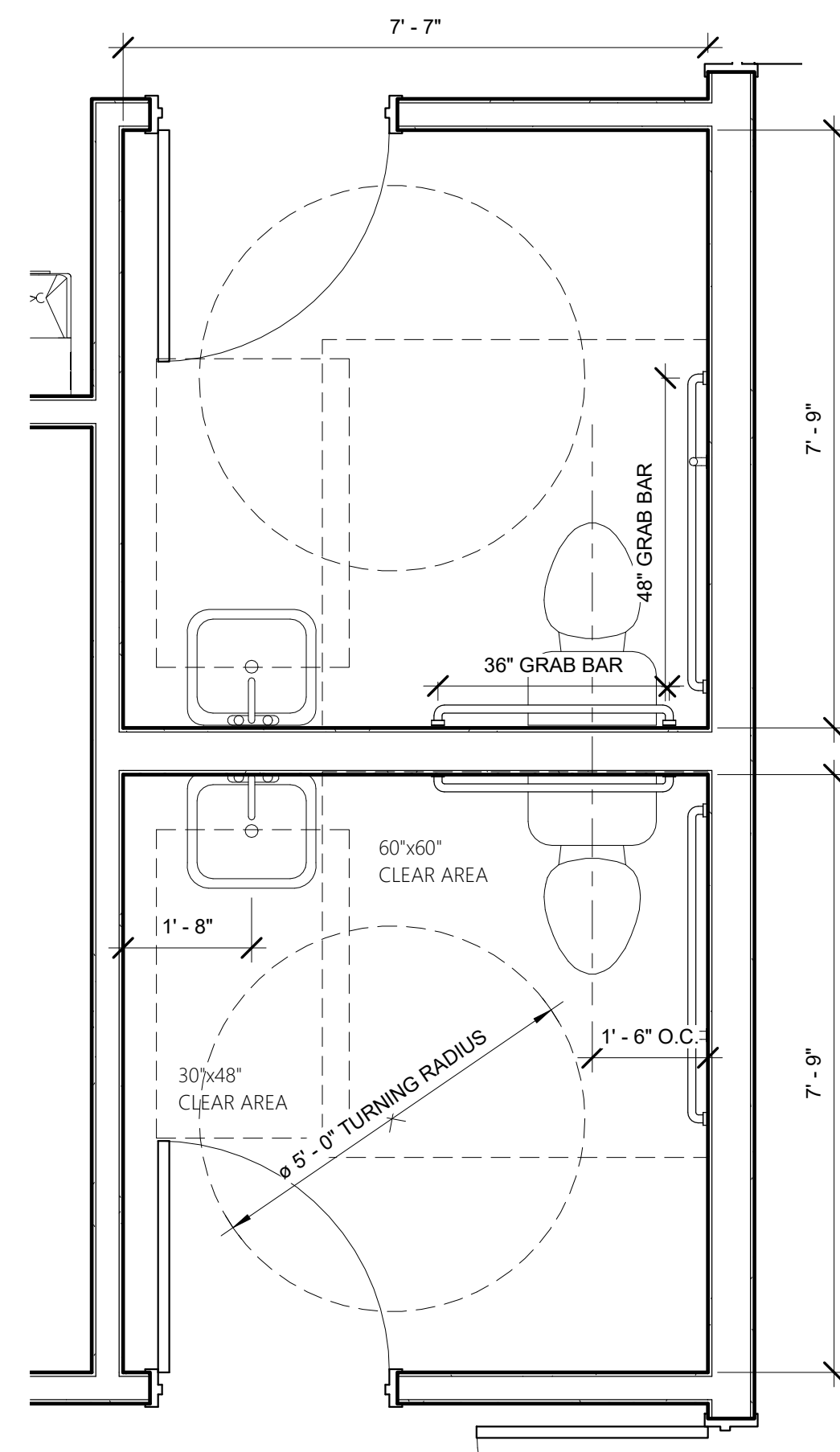
FINISH SCHEDULE							
#	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	CEILING HEIGHT	COMMENTS
100	RECEPTION	SEALED CONCRETE	RUBBER COVE BASE	PAINT	LAY-IN	10'-0"	
101	OFFICE	SEALED CONCRETE	RUBBER COVE BASE	PAINT	LAY-IN	10'-0"	
102	BREAK ROOM	SEALED CONCRETE	RUBBER COVE BASE	PAINT	LAY-IN	10'-0"	
103	RESTROOM	SEALED CONCRETE	RUBBER COVE BASE	EPOXY PAINT	LAY-IN	10'-0"	
104	RESTROOM	SEALED CONCRETE	RUBBER COVE BASE	EPOXY PAINT	LAY-IN	10'-0"	
105	POWDER STORAGE	SEALED CONCRETE	RUBBER COVE BASE	PAINT	LAY-IN	10'-0"	
106	PRODUCTION AREA	SEALED CONCRETE					



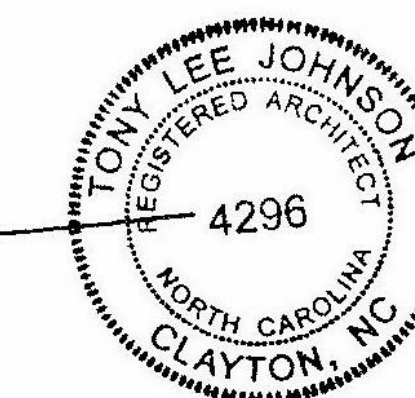
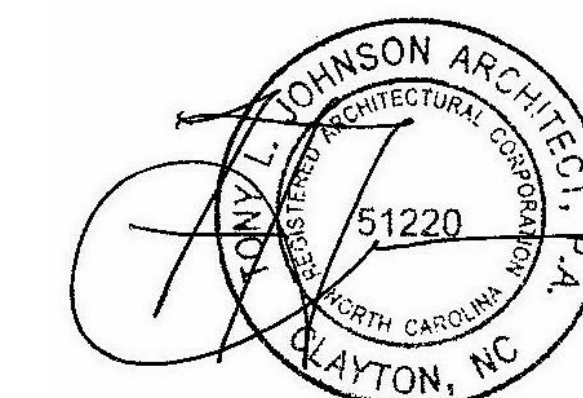
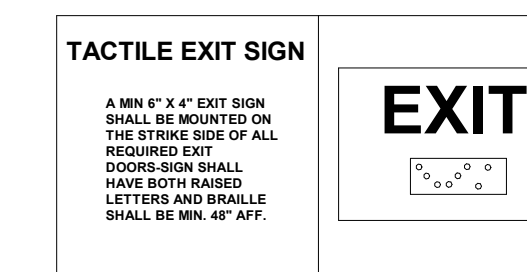
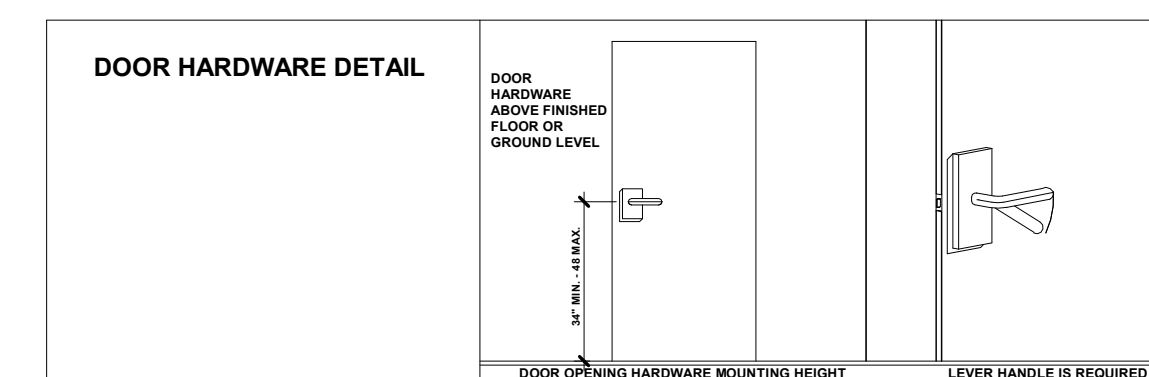
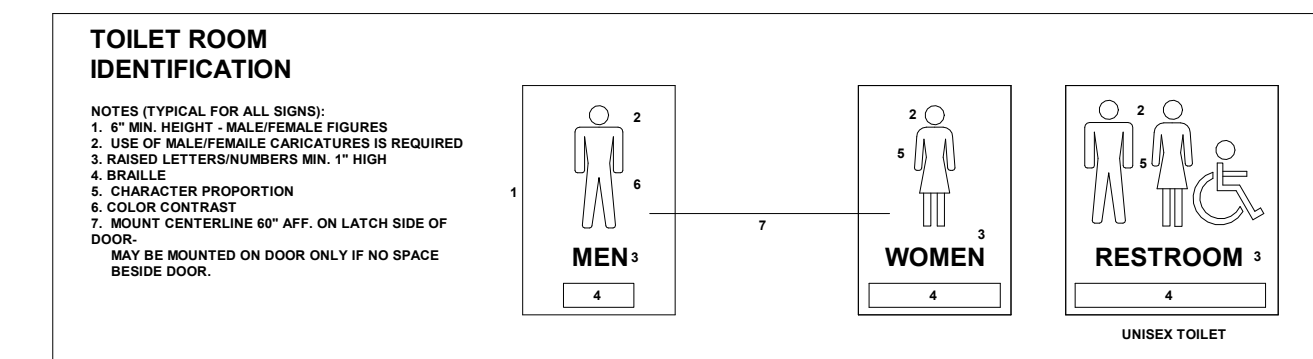
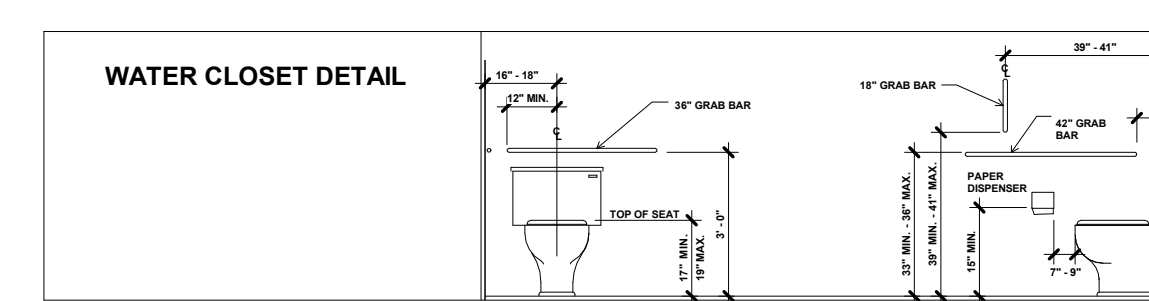
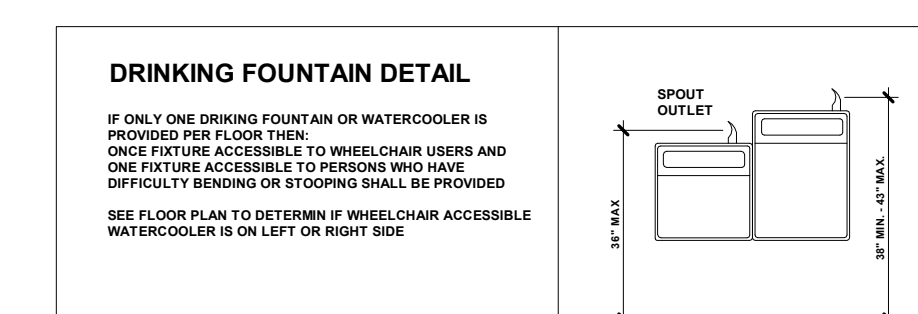
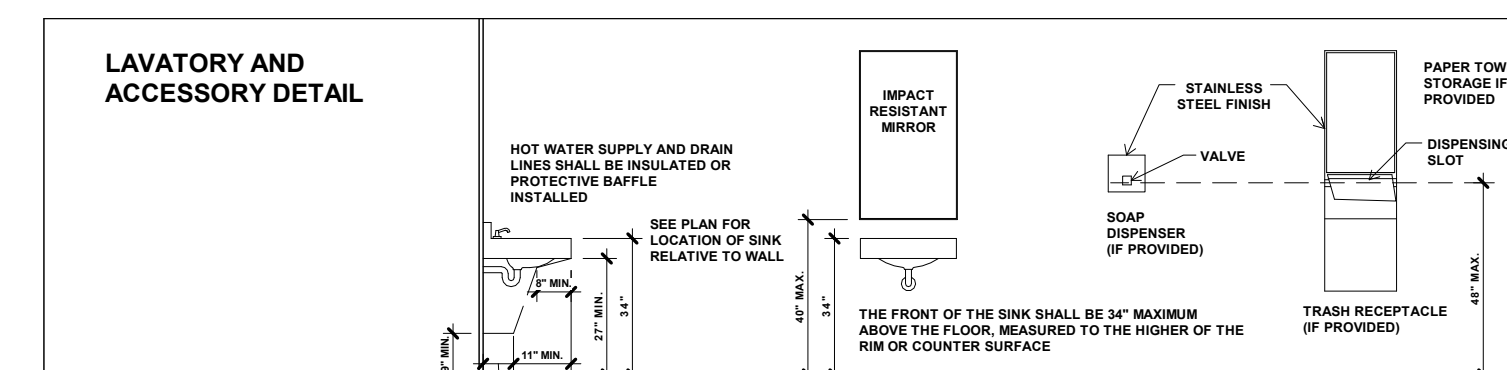
BREAK ROOM ELEVATION  
1/2" = 1'-0"



ENLARGED BREAKROOM PLAN  
1/2" = 1'-0"



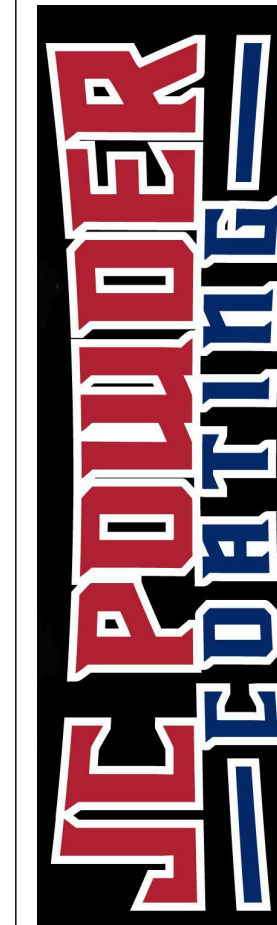
ENLARGED RESTROOM PLANS  
1/2" = 1'-0"



7/23/2020

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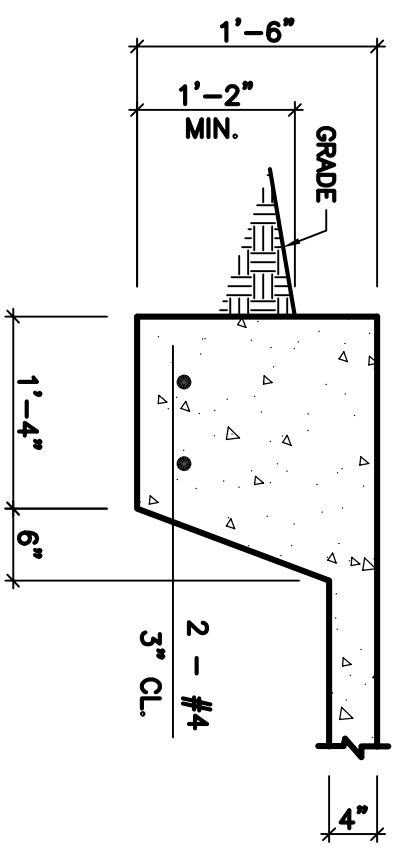
DATE 7/23/2020  
11:16:57 AM

PROJECT # 2020.021

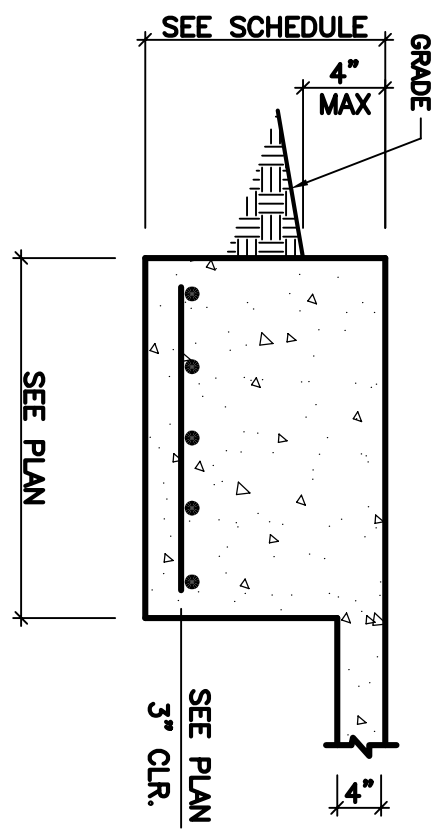
DETAILS

SHEET

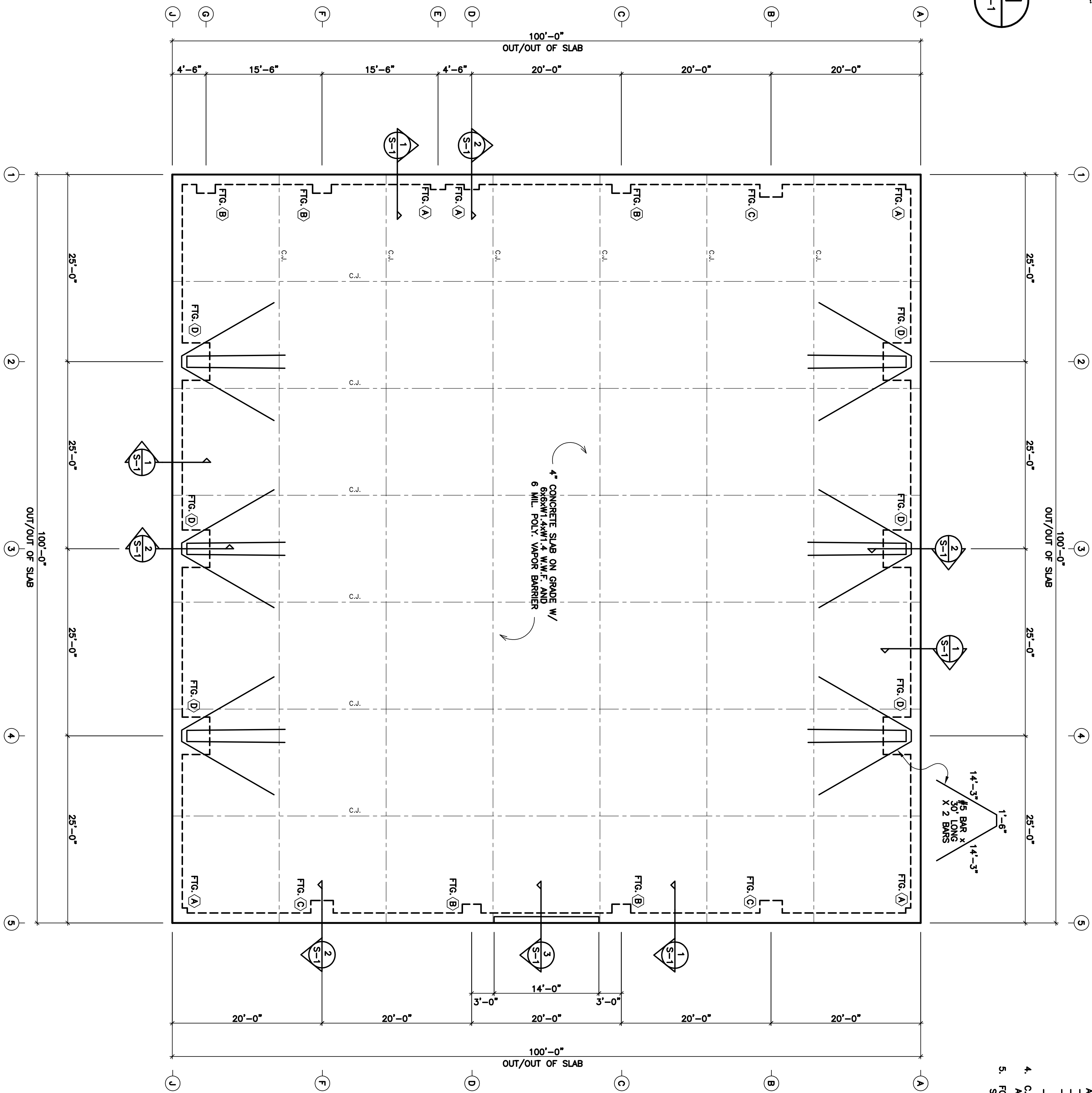
A-3



SECTION 1  
SCALE: 3/4" = 1'-0"



SECTION 2  
SCALE: 3/4" = 1'-0"

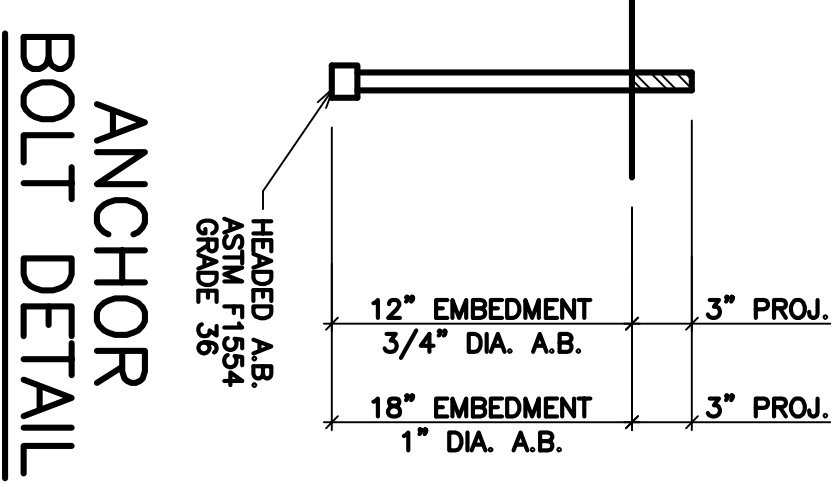


FOUNDATION PLAN  
SCALE: 1/8" = 1'-0"

**GENERAL NOTES**

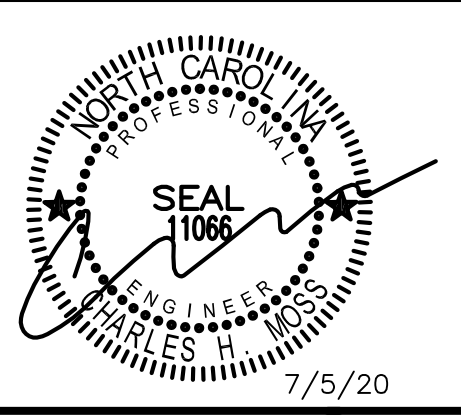
- CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING ALL WORK DURING CONSTRUCTION.
- FOOTINGS ARE DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 2000 P.S.F.
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 P.S.I. WITH A 4" MAXIMUM SLUMP. DETAILS NOT SHOWN SHALL BE ACCORDING TO ACI 318 AND ACI 301 SPECIFICATIONS FOR CONCRETE CONSTRUCTION.
- REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60 (TIES MAY BE GRADE 40) WITH A MINIMUM LAP OF 4'-28".
- MINIMUM COVER: 3" UNO.
- C.I. ON PLANS INDICATE CONTROL JOINT 1/8" x 1" DEEP SAWN WITHIN 24 HOURS AFTER PLACING CONCRETE. METAL JOINT MATERIAL MAY BE USED.
- FOUNDATION BASED ON REACTIONS FURNISHED BY PEAK STEEL BUILDINGS. DRAWING NO. S200B243A DATED 7/1/20

TYPE	SIZE	REINFORCING
FIG. (A)	2'-0" x 2'-0" x 1'-6"	3 - #4 E.W.
FIG. (B)	2'-6" x 2'-6" x 1'-6"	4 - #4 E.W.
FIG. (C)	3'-0" x 3'-0" x 1'-6"	4 - #4 E.W.
FIG. (D)	5'-0" x 5'-0" x 2'-0"	6 - #4 E.W.



SECTION 3  
SCALE: 3/4" = 1'-0"

**C.H. MOSS, P.E.**  
SOLE PROPRIETOR  
928 BLACKLAWN RD.  
CONYERS, GA 30094  
PH: (770) 786-3163



NO	DATE	REVISION	BY

FOUNDATION PLAN FOR:  
**JC POWDER COATING**  
FUQUAY-VARINA, NC

DRAWING NUMBER  
**2252**  
SHEET OF  
S-1 1



PROJECT NUMBER: S2008243A  
 PROJECT NAME: JC Powder Coating  
 PROJECT LOCATION: Fuquay-Varina, NC 27526  
 CUSTOMER: JC Powder Coating

## Notes and Specifications

### Building Erection Notes

1) The general contractor and/or erector is responsible to safely and properly erect the metal building system in conformance with these drawings, OSHA requirements and metal building system in conformance with these drawings, OSHA requirements and either MBMA or CSA S16 standards pertaining to proper erection. This includes, but is not limited to, the correct use of temporary guys and bracing where needed for squaring, plumbing, and securing the structural and secondary framing. Secondary wall framing members (girts or bar joists) are not designed to function as a work platform or provide safety tie-off attachment in accordance with OSHA requirements. Secondary roof framing members (purlins or bar joists) are not designed to provide safety tie-off attachment in accordance with OSHA requirements.

2) **A325 & A490 Bolt tightening requirements:**  
 It is the responsibility of the erector to ensure proper bolt tightness in accordance with applicable regulations. See the **RCSC Specification for Structural Joints Using A325 or A490 Bolts** for more information.

The following criteria may be used to determine the bolt tightness (i.e., "snug-tight" or "fully-pre-tensioned"), unless required otherwise by local jurisdiction or contract requirements:

- A) All A490 bolts shall be "fully-pre-tensioned".  
 B) All A325 bolts in primary framing (rigid frames and bracing) may be "snug-tight", except as follows:  
**"Fully-pre-tension" A325 bolts if:**  
 a) Building supports a crane system with a capacity greater than 5 tons.  
 b) Building supports machinery that creates vibration, impact or stress-reversals on the connections. The Engineer-of-Record for the project should be consulted to evaluate for this condition.  
 c) The project site is located in a high seismic area. For IBC-based codes, "High Seismic Area" is defined as "Seismic Design Category" of "D", "E", or "F". See the "Building Loads" section of this page for the defined seismic design category for this project.  
 d) Any connection designated in these drawings as "A325-SC". "Slip-Critical (SC)" connections must be free of paint, oil, or other materials that reduce friction at contact surfaces. Galvanized or lightly rusted surfaces are acceptable.

C) In **Canada**, all A325 and A490 bolts shall be "fully pre-tensioned", except for secondary members (purlins, girts, opening framing, etc.) and flange bracing.  
 D) Secondary members (purlins, girts, opening framing, etc.) and flange brace connections may always be "snug-tight", unless indicated otherwise in these drawings.

- 3) The metal building supplier shall be notified prior to any field modifications. Modifications shall be approved by the metal building supplier before work is undertaken.
- 4) Common Abbreviations:  
 a) TYP UNO - Typical Unless Noted Otherwise  
 b) SLV - Short Leg Vertical  
 c) LLV - Long Leg Vertical  
 d) NS & FS - Near Side and Far Side  
 e) O.A.L. - Overall Length  
 f) SIM - Similar  
 g) NIC - Not in Contract  
 h) SL - Steel Line  
 i) N/A - Not Applicable  
 j) MBS - Metal Building Supplier
- 5) Construction loads shall not be placed on any structural steel framework unless such framework is safely bolted, welded, or otherwise adequately secured.
- 6) Purlins and girts shall not be used as an anchorage point for a fall arrest system unless written approval is obtained from the metal building supplier.
- 7) Purlins may only be used as a walking/working surface when installing safety systems, after all permanent bridging has been installed and fall protection is provided.
- 8) Construction loads may be placed only within a zone that is within 8 feet of the center line of the primary support member. CFR bundles should be placed directly over the rigid frames.
- 9) All lifting devices must meet OSHA or MSHA standards and in no case is it acceptable to use structural members supplied by the MBS as a spreader bar or lifting device.

### General Design Notes

- 1) All structural steel sections and welded plate members are designed in accordance with ANSI/AISC 360 "Specifications for Structural Steel Buildings" or the CAN/CSA S16 "Limit States Design of Steel Structures", as required by the specified building code.
- 2) All welding of structural steel is based on either AWS D1.1 "Structural Welding Code - Steel" or CAN/CSA W59 "Welded Steel Construction (Metal Arc Welding)", as required by the specified building code.
- 3) All cold formed members are designed in accordance with ANSI/AISI S100 or CAN/CSA S136 "Specifications for the Design of Cold Formed Steel Structural Members", as required by the specified building code.
- 4) All welding of cold formed steel is based on AWS D1.3 "Structural Welding Code - Sheet Steel" or CAN/CSA W59 "Welded Steel Construction (Metal Arc Welding)", as required by the specified building code.
- 5) This Metal Building Supplier facility is IAS AC-472 Accredited and CAN/CSA A660 and W47.1 Certified (if applicable) for the design and manufacturing of Metal Building Systems.
- 6) If joints are included with this project, they are supplied as a part of the systems engineering and are fabricated in accordance with the requirements of Section 1928.758 of the OSHA safety standards for steel erection, dated January 18, 2001.

### Material Specifications

Plate and Flange Material:  
 5" - 12" Wide, to 1 1/4" Th. \_\_\_\_\_ A529 Grade 55  
 Others \_\_\_\_\_ A572 Grade 50

Built-Up Structural Web \_\_\_\_\_ A1011 SS (or HSLAS Class 1) Grade 55  
 Hot-Rolled Structural \_\_\_\_\_ A36 or A572 Grade 50 or A992 Grade 50  
 Structural Tube \_\_\_\_\_ A500 Grade B (46 KSI)  
 Structural Pipe \_\_\_\_\_ A500 Grade B (42 KSI)  
 Cold-Formed Structural \_\_\_\_\_ A1011 or A1039 SS (or HSLAS Class 1) or A653 Grade 55  
 Thru-Fastened Roof Panel \_\_\_\_\_ A792 Grade 80  
 Standing Seam Roof Panel \_\_\_\_\_ A792 Grade 50, Class 1  
 All Wall Panel Profiles \_\_\_\_\_ A653 Grade 80, Class 1 or A792 Grade 80, Class 1  
 Roof Bracing \_\_\_\_\_ A529 Grade 50  
 Welds \_\_\_\_\_ AWS D1.1/D1.3 or CSA W59 per Building Code  
 High-Strength Bolts \_\_\_\_\_ A325 Type 1 or A490 Type 1 Heavy Hex  
 Machine Bolts \_\_\_\_\_ A307 Grade A Hex

PRIMARY AND SECONDARY STEEL PRIMER COLOR: **RED**

ROOF SHEETING, TYPE: SS 24 GAUGE, FINISH: Galvalume Plus

ROOF PANEL CLIP TYPE: Tall

THERMAL BLOCKS: Yes EPS FOAM SPACER: No

COMPOSITE CFR DECK, TYPE: N/A GAUGE, FINISH: \_\_\_\_\_

ROOF LINE TRIM, PAINTED: Dark Bronze PVDF

EXTERIOR WALL SHEETING, TYPE: CW 26 GAUGE, FINISH: Desert Sand PVDF

EXTERIOR WALL CORNER TRIM FINISH: Dark Bronze PVDF

EXTERIOR BASE TRIM, PAINTED: Desert Sand PVDF

FRAMED OPENING TRIM, PAINTED: Desert Sand PVDF

WALL FRAMED OPENING, SIZES: FSW none  
BSW (1)3'-0" X 7'-0"  
LEW ( 2) Open Bay  
REW (1)3'-0" X 7'-0" (1)14'-0" X 16'-0"

INTERIOR WALL SHEETING, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_

INTERIOR CEILING LINER, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_

INTERIOR WALL TRIM, PAINTED: \_\_\_\_\_

YES NO  
  DOWNSPOUTS PAINTED: Dark Bronze PVDF GUTTERS PAINTED: Dark Bronze PVDF

WALKDOORS, QUANTITY: 2 PAINTED: 3070KD

WINDOWS: \_\_\_\_\_ PAINTED: \_\_\_\_\_

INSULATION (NOT BY MBS), ROOF: 6 INCH WALLS: 4 INCH

CRANES (SEE CRANE PLAN FOR ADDITIONAL CRANE INFORMATION)

MEZZANINE (SEE MEZZANINE PLAN FOR ADDITIONAL MEZZANINE INFO)

WALL TRANSLUCENT PANELS: \_\_\_\_\_

ROOF TRANSLUCENT PANELS: \_\_\_\_\_

INSULATED PANELS YES  NO

PIPE JACKS, SIZE: \_\_\_\_\_ QUANTITY: \_\_\_\_\_

ROOF FRAMED OPENINGS, SEE ROOF FRAMING PLAN FOR SIZES

RIDGE VENTS, 10'-0" LONG X 9" THROAT. QUANTITY: \_\_\_\_\_

FOR OCCUPANCY (RISK) CATEGORY I OR II IBC PROVISIONS INDICATE THAT SINGLE-STORY BUILDINGS SHALL HAVE "NO DRIFT LIMIT" PROVIDED THAT INTERIOR WALLS, PARTITIONS, CEILINGS OR EXTERIOR WALL SYSTEMS HAVE BEEN DESIGNED TO ACCOMMODATE THE SEISMIC STORY DRIFTS. INTERIOR WALLS, PARTITIONS, CEILINGS, OR EXTERIOR WALL SYSTEMS NOT PROVIDED BY THE METAL BUILDING MANUFACTURER SHALL BE DESIGNED AND DETAILED BY OTHERS TO ACCOMMODATE THE STORY DRIFTS. SEISMIC DRIFT VALUES MAY BE OBTAINED FROM THE METAL BUILDING MANUFACTURER.

IF SNOW GUARDS OR OTHER DEVICES INTENDED TO HOLD SNOW AND/OR ICE ACCUMULATION ON THE ROOF SYSTEM ARE TO BE USED ON THIS PROJECT, THEY MUST BE INSTALLED UNDER THE GUIDANCE OF THE PROJECT "ENGINEER OF RECORD" (EOR), NOT THE METAL BUILDING MANUFACTURER, SO AS NOT TO EXCEED THE DESIGN SNOW LOAD ON THIS PROJECT.

THE SPANDREL BEAMS AND/OR SPANDREL CHANNELS SUPPORTING THE TOP OF THE MASONRY WALLS MUST BE ATTACHED TO THE WALLS WITH A SPACING NOT TO EXCEED 4'-0" O.C. (MAX.). THE SPANDRELS MUST ALSO BE RIGIDLY ATTACHED TO THE WALL NO MORE THAN 6" AWAY FROM EACH PAIR OF INTERMEDIATE STIFFENERS. THIS ATTACHMENT IS DESIGNED AND PROVIDED BY OTHERS (NOT BY THE METAL BUILDING MANUFACTURER). FIELD DRILLING OF THE SPANDRELS FOR A BOLTED CONNECTION (IF USED) WILL BE REQUIRED.

THE WALL SYSTEM BY OTHERS MUST WEIGH NO MORE THAN 45 PSF.

YES NO  
  FASCIA, PROJECTION: \_\_\_\_\_ TOP OF FASCIA HEIGHT: \_\_\_\_\_  
 FACE PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 BACK PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 CAP TRIM PAINTED: \_\_\_\_\_ BASE TRIM PAINTED: \_\_\_\_\_

CLOSED SYSTEM, CLEAR UNDER SOFFIT TRIM:  
 SOFFIT PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 SOFFIT TRIM AT BUILDING LINE PAINTED: \_\_\_\_\_

OPEN SYSTEM, (NO SOFFIT PANEL PROVIDED)  
 CLEAR UNDER FASCIA: \_\_\_\_\_

PARAPET SYSTEM  
 STRUCTURAL PARAPET  NON-STRUCTURAL PARAPET  
 TOP OF PARAPET HEIGHT: \_\_\_\_\_  
 BACKER PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_

CANOPY, PROJECTION: \_\_\_\_\_  
 AT EAVE LINE  BELOW EAVE   
 ROOF PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 SOFFIT PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 SOFFIT TRIM AT BUILDING LINE PAINTED: \_\_\_\_\_  
 CLEAR UNDER CANOPY BEAM: \_\_\_\_\_

EAVE EXTENSION, PROJECTION: \_\_\_\_\_  
 SOFFIT PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 SOFFIT TRIM AT BUILDING LINE PAINTED: \_\_\_\_\_

RAKE EXTENSION, PROJECTION: \_\_\_\_\_  
 SOFFIT PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 SOFFIT TRIM AT BUILDING LINE PAINTED: \_\_\_\_\_

PARTITION WALL SHEETING  
 PANEL TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 PARTITION WALL TRIM COLOR: \_\_\_\_\_

WAINSCOT  
 WALL PANEL, TYPE: \_\_\_\_\_ GAUGE, FINISH: \_\_\_\_\_  
 BASE TRIM PAINTED: \_\_\_\_\_ JAMB TRIM PAINTED: \_\_\_\_\_  
 TRANSITION TRIM PAINTED: \_\_\_\_\_

### ERECTOR NOTE:

ALTERNATE FASTENERS HAVE BEEN SUBSTITUTED ON THIS BUILDING. WHERE THE DRAWINGS INDICATE AN H1040 STRUCTURAL FASTENER, H1041 FASTENERS WITH WASHERS HAVE BEEN SUPPLIED. WHERE THE DRAWINGS INDICATE AN H1060 TRIM FASTENER, H1061 FASTENERS WITH WASHERS HAVE BEEN SUPPLIED.

ACCESSORIES (DOORS, WINDOWS, ETC.) NOT PROVIDED BY THE METAL BUILDING MANUFACTURER MUST BE DESIGNED AS "COMPONENTS AND CLADDING" IN ACCORDANCE WITH THE SPECIFIC WIND PROVISIONS OF THE REFERENCED BUILDING CODE DISPLAYED ON THE COVER PAGE OF THIS DRAWING PACKET.

THE BUILDING CODE REQUIRES CONSIDERATION OF SNOW SURCHARGES FOR ANY LOWER ROOF OF A STRUCTURE LOCATED WITHIN 20 FT. OF A HIGHER STRUCTURE. INFORMATION PROVIDED TO THE METAL BUILDING MANUFACTURER DOES NOT INDICATE THE PRESENCE OF A SHADOWING STRUCTURE WITHIN THIS 20 FT. ENVELOPE, THEREFORE SNOW SURCHARGES HAVE NOT BEEN CONSIDERED IN THE DESIGN.

## BUILDING LOADS

DESIGN CODE: NCBC 18  
 ROOF LIVE LOAD: 20.00 PSF MBMA OCC. CLASS: II  
 LIFE LOAD REDUCIBLE Yes  
 GROUND SNOW LOAD: 15.0 PSF SNOW EXP. FACTOR, Ce: 1.0000  
 SNOW IMPORTANCE FACTOR, Is: 1.00

WIND: 117 / 91 MPH  
 (Vult) / (Vasd)

C & C PRESSURES (PSF): 23 / -30  
 EXPOSURE: B  
 UL 90 NO

**Classic Roof-Const. No. 161 ; Classic Roof w/ Translucent Panel-Const. No. 167**  
**CFR Roof-Const. No. 552 ; CFR Roof w/ Translucent Panel-Const. No. 590 ;**  
**Composite CFR Roof-Const. No. 552A ; VR16 II Roof-Const. No. 332 .**

SEISMIC INFORMATION **Ss: 0.175 S1: 0.084**

Design Sds/Sd1: 0.187 / 0.134 Site Class: D  
 Seismic Imp. Factor: 1.00 Seismic Design Category: C  
**Analysis Procedure:** Equivalent Lateral Force Method  
**Basic SFRS:** Not Detailed for Seismic

### NOTES:

1) COLLATERAL DEAD LOADS, UNLESS OTHERWISE NOTED, ARE ASSUMED TO BE UNIFORMLY DISTRIBUTED. WHEN SUSPENDED SPRINKLER SYSTEMS, LIGHTING, HVAC EQUIPMENT, CEILINGS, ETC., ARE SUSPENDED FROM ROOF MEMBERS, CONSULT THE M.B.S. IF THESE CONCENTRATED LOADS EXCEED 500 POUNDS (USING THE WEB MOUNT DETAIL) OR 200 POUNDS (USING THE FLANGE MOUNT DETAIL), OR IF INDIVIDUAL MEMBERS ARE LOADED SIGNIFICANTLY MORE THAN OTHERS.

2) THE DESIGN OF STRUCTURAL MEMBERS SUPPORTING GRAVITY LOADS IS CONTROLLED BY THE MORE CRITICAL EFFECT OF ROOF LIVE LOAD OR ROOF SNOW LOAD, AS DETERMINED BY THE APPLICABLE CODE.

3) Pm IS BASED ON THE MINIMUM ROOF SNOW LOAD CALCULATED PER BUILDING CODE OR THE CONTRACT SPECIFIED SNOW LOAD, WHICHEVER IS GREATER. THIS VALUE, Pm, IS ONLY APPLIED IN COMBINATION WITH THE DEAD AND COLLATERAL LOADS. ROOF SNOW IN OTHER LOADING CONDITIONS IS DETERMINED PER THE SPECIFIED BUILDING CODE.

	BUILDING
ROOF DEAD (PSF):	3.00
PRJ. COL (PSF):	3.00
SEC. COL (PSF):	3.00
SNOW Ct: 1.00	
SNOW Cs: 1.00	
ROOF SNOW Ps (PSF):	10.50
ROOF SNOW Pm (PSF):	15.00
WIND ENCLOSURE:	Closed
Gcpi:	%0.18
SEISMIC R:	3
SEISMIC Cs:	0.062
BASE SHEAR (KIPS):	7.00

### ERECTION MANUALS REQUIRED

(ERECTION MANUALS ARE SHIPPED WITH THE BUILDING IN A WAREHOUSE PACKING CRATE)

CFR ROOF  H9600 OR  H8250  SINGLE CURB (H9850)  
 CLASSIC ROOF  H9420 OR  H8201  DOUBLE CURB (H9800)  
 VR16 II (H925)

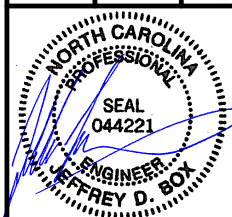
## DRAWING INDEX

COVERSHEET	<u>C1</u>
ANCHOR BOLT DRAWINGS	<u>F1, F2</u>
COLUMN BASE REACTIONS	<u>R1</u>
STRUCTURAL/SHEETING DRAWINGS	<u>E1 - E7</u>
DETAILS	_____

DATE	ISSUE
7/1/2020	PERMITS
	ISSUE
	MBS
	DANW
	KL
	JDB
	PE

PEAK STEEL BUILDINGS  
 PO BOX 1275  
 MADISON, GA 30650  
 PHONE: (944) 333-PEAK  
 FAX: (706) 343-1988

JC POWDER COATING  
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526  
 CUSTOMER NAME  
 JC POWDER COATING  
 NEW HILL, NC 27562  
 JOB NUMBER  
 S2008243A



THESE DRAWINGS AND THE MATERIALS SPECIFIED THEREON ARE THE PROPERTY OF PEAK STEEL BUILDINGS. THESE DRAWINGS ARE NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF PEAK STEEL BUILDINGS.  
 SHEET  
 C 1 of 1

**ANCHOR BOLT SUMMARY**

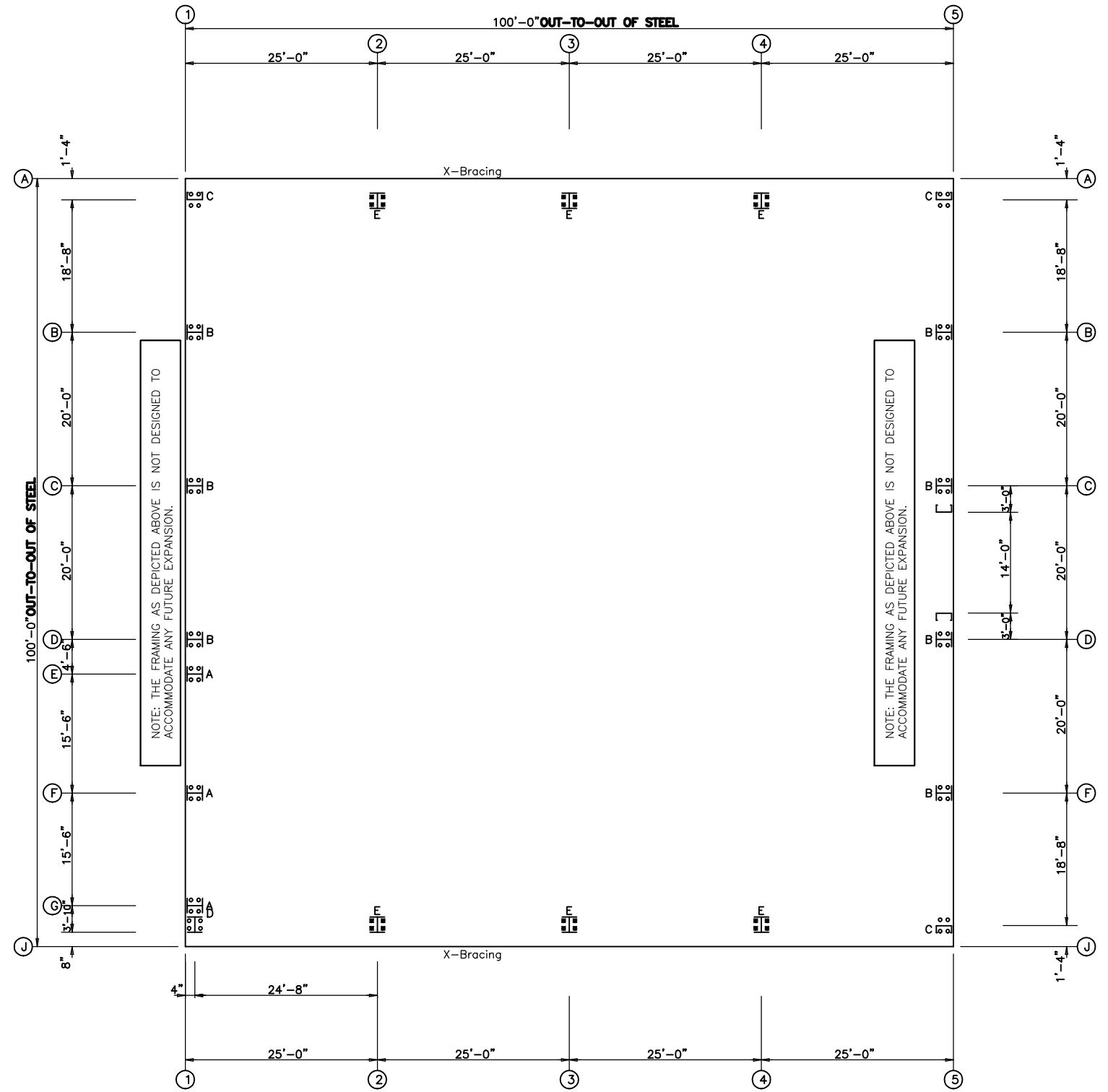
Qty	Locate	Dia (in)	Type	Proj (in)
○ 56	Endwall	3/4"	F1554	3.00
⊗ 24	Frame	1"	F1554	3.00

DATE	ISSUE	PERMITS
7/1/2020		

**ANCHOR BOLT PLAN**

**GENERAL NOTES**

1. THE SPECIFIED ANCHOR ROD DIAMETER ASSUMES F1554 GRADE 36 UNLESS NOTED OTHERWISE. ANCHOR ROD MATERIAL OF EQUAL DIAMETER MEETING OR EXCEEDING THE STRENGTH REQUIREMENTS SET FORTH ON THESE DRAWINGS MAY BE UTILIZED AT THE DISCRETION OF THE FOUNDATION DESIGN ENGINEER. ANCHOR ROD EMBEDMENT LENGTH SHALL BE DETERMINED BY THE FOUNDATION DESIGN ENGINEER.
2. METAL BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR PROJECT FOUNDATION DESIGN. THE FOUNDATION DESIGN IS THE RESPONSIBILITY OF A REGISTERED PROFESSIONAL ENGINEER, FAMILIAR WITH LOCAL SITE CONDITIONS.
3. ALL ANCHOR RODS, FLAT WASHERS FOR ANCHOR RODS, EXPANSION BOLTS, AS WELL AS ALL CONCRETE/MASONRY EMBEDMENT PLATES ARE NOT BY METAL BUILDING MANUFACTURER.
4. THIS DRAWING IS NOT TO SCALE.
5. FINISHED FLOOR ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.
6. "SINGLE" CEE COLUMNS SHALL BE ORIENTED WITH THE "TOES" TOWARD THE LOW EAVE UNLESS NOTED OTHERWISE.
7. ANCHOR RODS ARE REQUIRED ONLY IN THE QUANTITIES SPECIFIED. BASEPLATES MAY BE FABRICATED WITH MORE HOLES THAN NEEDED FOR THIS PROJECT.
8. THE ANCHOR BOLT LOCATIONS PROVIDED BY METAL BUILDING MANUFACTURER SATISFY PERTINENT REQUIREMENTS FOR THE DESIGN OF THE MATERIALS SUPPLIED BY THE METAL BUILDING MANUFACTURER. PLEASE NOTE THAT THESE REQUIREMENTS MAY NOT SATISFY ALL ANCHOR BOLT CONCRETE EDGE DISTANCE REQUIREMENTS DEPENDING ON THE DETAILS OF THE FOUNDATION DESIGN. BECAUSE FOUNDATION DESIGN IS NOT WITHIN THE METAL BUILDING MANUFACTURER'S SCOPE OF WORK, IT IS THE RESPONSIBILITY OF THE QUALIFIED PROFESSIONAL DESIGNING THE FOUNDATION TO MAKE CERTAIN THAT SUFFICIENT CONCRETE EDGE DISTANCE IS PROVIDED FOR THE ANCHOR BOLTS IN THE DETAILS OF THE FOUNDATION DESIGN.



**ANCHOR BOLT PLAN**  
NOTE: All Base Plates @ 100'-0" (U.N.)

○ Dia= 3/4"  
⊗ Dia=1"

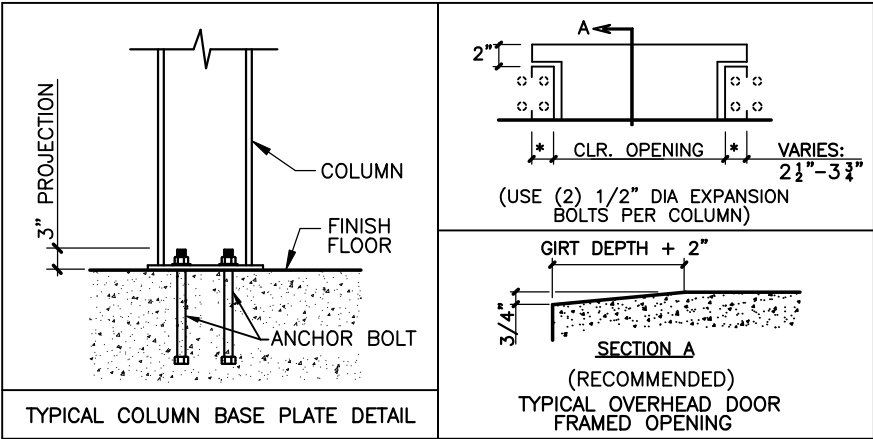
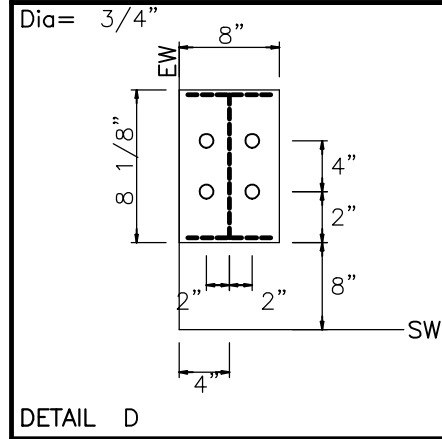
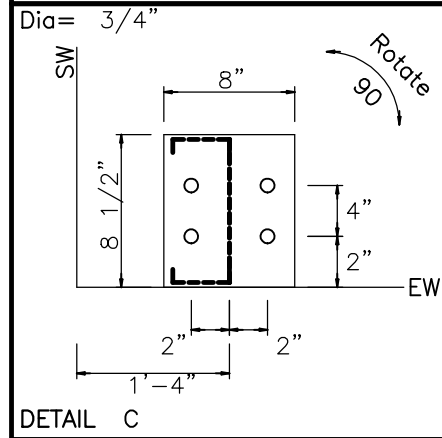
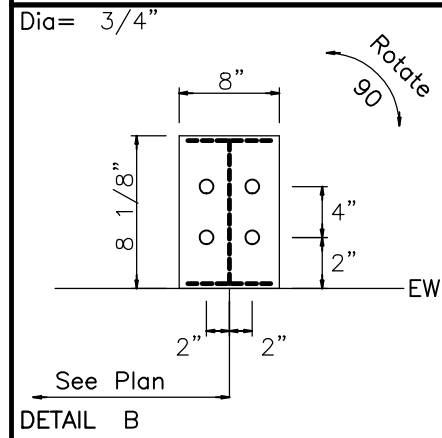
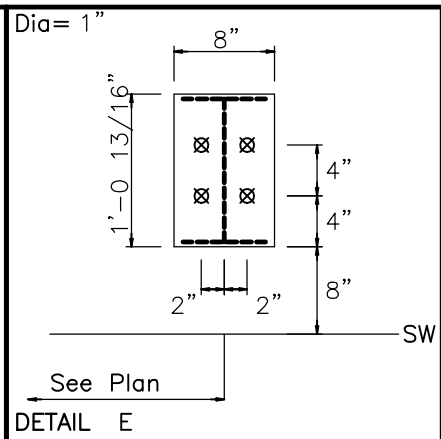
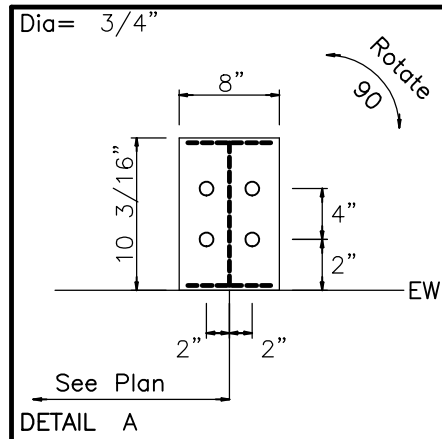
**PEAK STEEL BUILDINGS**  
PO BOX 1275  
MADISON, GA 30650  
PHONE: (944) 333-PEAK  
FAX: (706) 343-1988

**PROJECT NAME**  
JC POWDER COATING  
220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526  
**CUSTOMER NAME**  
JC POWDER COATING  
NEW HILL, NC 27562  
**JOB NUMBER**  
S2008243A  
**SHEET TITLE**



**07/01/2020**  
This seal certifies only the work performed by the registered professional engineer or architect whose name and license number are on the seal. The seal is the property of the State Board of Professional Engineers and Architects and shall not be loaned, sold, or otherwise disposed of. The seal shall not be used for any work not performed by the registered professional engineer or architect whose name and license number are on the seal.





**FOUNDATION DESIGN NOTES:**

1. THE ORIENTATION OF THE ANCHOR BOLT DETAILS SHOWN ON THIS PAGE MAY NOT COINCIDE WITH THE ACTUAL COLUMN ORIENTATION SHOWN ON THE ANCHOR BOLT DRAWING. PLEASE REFERENCE THE SIDEWALL (SW) AND ENDWALL (EW) STEEL LINES SHOWN ON THE ANCHOR BOLT DETAILS WITH THE ANCHOR BOLT PLAN DURING LAYOUT OF COLUMN AND ANCHOR BOLT LOCATIONS.
2. COLUMN BASE PLATES MAY HAVE MORE HOLES THAN ARE REQUIRED DUE TO PRODUCTION LIMITATIONS. PLEASE FOLLOW ANCHOR BOLT DETAILS FOR QUANTITY OF ANCHOR BOLTS REQUIRED. EXTRA BASE PLATE HOLES DO NOT NEED INFILLED PER THE MBS DESIGN SPECIFICATIONS.

DATE	7/1/2020
PE	JDB
ENGR	KI
CHK	DAW
ISSUE	MBS
PERMITS	

PROJECT NAME  
PEAK STEEL BUILDINGS

CUSTOMER NAME  
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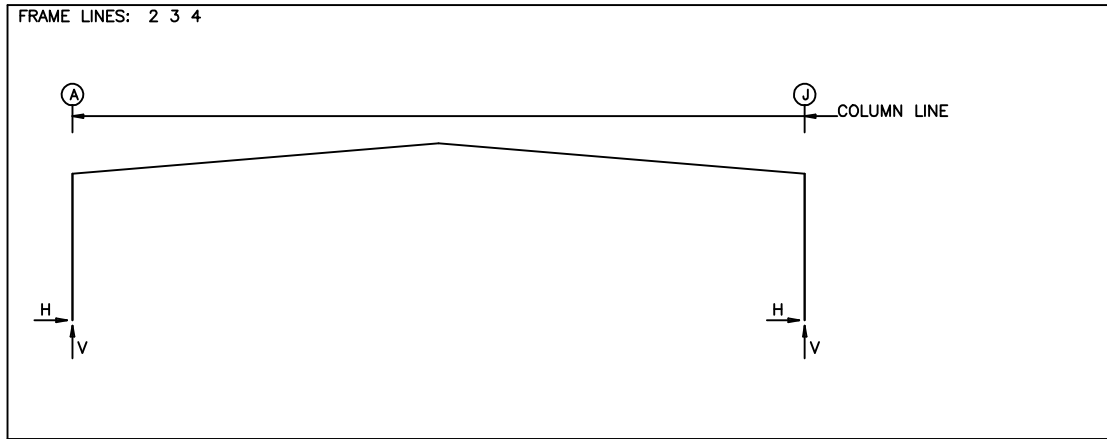
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NEW HILL, NC 27562

JOB NUMBER  
S2008243A



THIS SEAL IS VALID ONLY FOR THE PROJECTS SPECIFICALLY LISTED ON THE BACK OF THIS SEAL. THE SEAL IS THE PROPERTY OF THE BOARD OF PROFESSIONAL ENGINEERS AND SURVEYORS OF NORTH CAROLINA. IT IS TO BE USED ONLY BY THE REGISTERED PROFESSIONAL ENGINEER OR SURVEYOR WHOSE NAME IS ON THE SEAL. IT IS TO BE USED ONLY ON THE PROJECTS LISTED ON THE BACK OF THIS SEAL. IT IS TO BE USED ONLY ON THE PROJECTS LISTED ON THE BACK OF THIS SEAL.

SHEET  
F2 of 2



**RIGID FRAME: ANCHOR BOLTS & BASE PLATES**

Frm Line	Col Line	Anc. Bolt Qty	Anc. Dia	Base Plate (in)			Elev. (in)
				Width	Length	Thick	
2*	A	4	1.000	8.000	12.81	0.375	0.0
2*	J	4	1.000	8.000	12.81	0.375	0.0
2* Frame lines:		2 3 4					

**ENDWALL COLUMN: ANCHOR BOLTS & BASE PLATES**

Frm Line	Col Line	Anc. Bolt Qty	Anc. Dia	Base Plate (in)			Elev. (in)
				Width	Length	Thick	
1	A	4	0.750	8.000	8.500	0.375	0.0
1	B	4	0.750	8.000	8.125	0.375	0.0
1	C	4	0.750	8.000	8.125	0.375	0.0
1	D	4	0.750	8.000	8.125	0.375	0.0
1	E	4	0.750	8.000	10.19	0.375	0.0
1	F	4	0.750	8.000	10.19	0.375	0.0
1	G	4	0.750	8.000	10.19	0.375	0.0
1	J	4	0.750	8.000	8.125	0.375	0.0
5	J	4	0.750	8.000	8.500	0.375	0.0
5	F	4	0.750	8.000	8.125	0.375	0.0
5	D	4	0.750	8.000	8.125	0.375	0.0
5	C	4	0.750	8.000	8.125	0.375	0.0
5	B	4	0.750	8.000	8.125	0.375	0.0
5	A	4	0.750	8.000	8.500	0.375	0.0

**GENERAL NOTES**

- ALL LOADING CONDITIONS ARE EXAMINED. THE MAXIMUM AND MINIMUM HORIZONTAL (H) AND VERTICAL (V) REACTIONS AND THE CORRESPONDING VERTICAL (V) OR HORIZONTAL (H) REACTIONS ARE REPORTED.
- REACTIONS ARE PROVIDED BY LOAD CASE IN ORDER TO AID THE FOUNDATION ENGINEER IN DETERMINING THE APPROPRIATE LOAD FACTORS AND COMBINATION TO BE USED WITH EITHER WORKING STRESS OR ULTIMATE STRENGTH DESIGN METHODS. WIND LOAD CASES ARE GIVEN FOR EACH PRIMARY WIND DIRECTION.
- FOR ASCE7-10 AND LATER BASED BUILDING CODES THE UNFACTORED LOAD CASE REACTIONS DUE TO WIND ARE GENERATED USING ULTIMATE DESIGN WIND SPEEDS (Vult).
- POSITIVE (+) REACTIONS ARE AS SHOWN ABOVE. FOUNDATION LOADS ARE IN OPPOSITE DIRECTIONS.
- BRACING REACTIONS ARE IN THE PLANE OF THE BRACE WITH THE HORIZONTAL REACTION (H) ACTING AWAY FROM THE BRACED BAY AND THE VERTICAL REACTION (V) ACTING DOWNWARD.

\*\*\*\*\* RIGID FRAME LOAD CASE ABBREVIATIONS: \*\*\*\*\*  
 Wind\_L1/Wind\_R1: LATERAL WIND FROM THE LEFT/RIGHT, CASE 1  
 Wind\_L2/Wind\_R2: LATERAL WIND FROM THE LEFT/RIGHT, CASE 2  
 Wind\_Ln1/Wind\_Ln2: LONGITUDINAL WIND, CASE 1/2  
 Seismic\_L/Seismic\_R: LATERAL SEISMIC LOAD FROM LEFT/RIGHT  
 LWIND#\_L/E/LWIND#\_R#: LONGITUDINAL WIND EDGE ZONES  
 F#UNB\_SL\_L/F#UNB\_SL\_R: UNBALANCED ROOF SNOW WITH WIND FROM LEFT/RIGHT  
 F#PAT\_LL #/F#PAT\_SL #: PARTIAL LIVE/SNOW LOADING FOR CONTINUOUS BEAM SYSTEMS

\*\*\*\*\* ENDWALL COLUMN LOAD CASE ABBREVIATIONS: \*\*\*\*\*  
 Collat: COLLATERAL LOAD  
 Rafter Wind\_L/Rafter Wind\_R: LATERAL WIND FROM THE LEFT/RIGHT  
 Brace Wind\_L/Brace Wind\_R: LATERAL WIND FROM THE LEFT/RIGHT  
 Wind\_P/Wind\_S: LONGITUDINAL WIND PRESSURE/SUCTION ON COLUMNS  
 Wind\_Ln: LONGITUDINAL WIND SUCTION ON ROOF  
 Seis\_L/Seis\_R: LATERAL SEISMIC LOAD FROM LEFT/RIGHT  
 E#UNB\_SL\_L/E#UNB\_SL\_R: UNBALANCED ROOF SNOW WITH WIND FROM LEFT/RIGHT  
 E#PAT\_LL #/E#PAT\_SL #: PARTIAL LIVE/SNOW LOADING FOR CONTINUOUS BEAM SYSTEMS

**RIGID FRAME: BASIC COLUMN REACTIONS (k)**

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert
2*	A	4.6	6.3	3.2	4.0	12.9	15.7	11.3	13.8	-20.9	-23.0	-9.0	-15.8
2*	J	-4.6	6.3	-3.2	4.0	-12.9	15.7	-11.3	13.8	9.0	-15.8	20.9	-23.0
Frame Line	Column Line	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert
2*	A	-15.5	-13.2	-3.6	-6.0	-12.0	-21.5	-12.8	-17.3	-1.4	-0.5	1.4	0.5
2*	J	3.6	-6.0	15.5	-13.2	12.8	-17.3	12.0	-21.5	-1.4	0.5	1.4	-0.5
Frame Line	Column Line	MIN_SNOW Horiz	MIN_SNOW Vert	F1UNB_SL_L Horiz	F1UNB_SL_L Vert	F1UNB_SL_R Horiz	F1UNB_SL_R Vert						
2*	A	16.1	19.7	10.2	14.2	10.2	8.4						
2*	J	-16.1	19.7	-10.2	8.4	-10.2	14.2						

2\* Frame lines: 2 3 4

**ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)**

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind_Left1 Vert	Wind_Right1 Vert	Wind_Left2 Vert	Wind_Right2 Vert	Wind Press Horiz	Wind Suct Horiz	Wind Long1 Vert	Wind Long2 Vert
1	A	0.5	0.3	2.2	1.2	-2.6	-2.1	-1.7	-1.1	-1.8	2.2	-3.1	-1.6
1	B	1.3	0.8	5.6	2.9	-8.0	-4.2	-5.7	-2.0	-3.8	4.2	-7.5	-4.8
1	C	1.3	0.8	5.4	2.8	-5.9	-3.6	-4.1	-1.8	-4.2	4.6	-5.9	-3.6
1	D	1.4	0.9	6.1	3.2	-2.8	-4.1	-1.5	-2.7	-2.6	2.8	-2.9	-3.9
1	E	0.3	0.0	-0.3	-0.2	-1.0	-2.3	-0.4	-1.7	-0.5	0.5	-0.9	-2.4
1	F	1.3	0.7	4.6	2.4	-3.2	-5.6	-1.6	-3.9	0.0	0.0	-3.3	-5.6
1	G	1.0	0.5	3.4	1.8	-2.5	-4.9	-1.2	-3.6	-0.3	0.4	-3.0	-4.4
1	J	0.1	-0.1	-0.3	-0.2	-0.2	0.6	-0.2	0.5	-0.5	0.6	0.3	0.0
Frm Line	Col Line	Seis Left Vert	Seis Right Vert	MIN_SNOW Horiz	MIN_SNOW Vert	E1UNB_SL_L Horiz	E1UNB_SL_L Vert	E1UNB_SL_R Horiz	E1UNB_SL_R Vert				
1	A	0.0	0.1	0.0	1.7	0.0	1.1	0.0	0.7				
1	B	-0.1	0.0	0.0	4.2	0.0	3.6	0.0	0.8				
1	C	0.0	0.0	0.0	4.1	0.0	4.3	0.0	1.0				
1	D	0.0	0.0	0.0	4.5	0.0	1.2	0.0	3.3				
1	E	0.0	0.0	0.0	-0.2	0.0	-0.2	0.0	1.2				
1	F	0.0	0.0	0.0	3.4	0.0	0.7	0.0	2.3				
1	G	0.0	-0.1	0.0	2.6	0.0	0.5	0.0	2.1				
1	J	0.1	0.0	0.0	-0.3	0.0	0.2	0.0	-0.2				
Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind_Left1 Vert	Wind_Right1 Vert	Wind_Left2 Vert	Wind_Right2 Vert	Wind Press Horiz	Wind Suct Horiz	Wind Long1 Vert	Wind Long2 Vert
5	F	0.5	0.3	2.0	1.2	-2.7	-1.9	-1.7	-1.0	-1.8	2.2	-3.0	-1.6
5	D	1.3	0.8	5.2	2.9	-7.8	-4.2	-5.6	-2.0	-3.7	4.1	-7.4	-4.5
5	C	1.3	0.8	5.3	2.9	-6.0	-3.7	-4.2	-1.8	-4.1	4.5	-6.0	-3.7
5	B	1.3	0.8	5.2	2.9	-3.7	-6.0	-1.8	-4.2	-4.1	4.5	-3.7	-6.0
5	A	0.5	0.3	2.0	1.2	-4.2	-7.8	-2.0	-5.6	-3.7	4.1	-4.5	-7.4
5	A	0.5	0.3	2.0	1.2	-1.9	-2.7	-1.0	-1.7	-1.8	2.2	-1.6	-3.0
Frm Line	Col Line	Seis Left Vert	Seis Right Vert	MIN_SNOW Horiz	MIN_SNOW Vert	E2UNB_SL_L Horiz	E2UNB_SL_L Vert	E2UNB_SL_R Horiz	E2UNB_SL_R Vert	E2PAT_LL_1 Horiz	E2PAT_LL_1 Vert	E2PAT_LL_2 Horiz	E2PAT_LL_2 Vert
5	J	0.0	0.0	0.0	1.7	0.0	1.1	0.0	0.6	0.0	2.5	0.0	-0.3
5	F	0.0	0.0	0.0	4.1	0.0	3.4	0.0	0.8	0.0	2.1	0.0	3.2
5	D	0.0	0.0	0.0	4.2	0.0	4.4	0.0	1.0	0.0	2.9	0.0	2.2
5	C	0.0	0.0	0.0	4.2	0.0	1.0	0.0	4.4	0.0	2.9	0.0	2.2
5	B	0.0	0.0	0.0	4.1	0.0	0.8	0.0	3.4	0.0	2.1	0.0	3.2
5	A	0.0	0.0	0.0	1.7	0.0	0.6	0.0	1.1	0.0	2.5	0.0	-0.3
Frm Line	Col Line	E2PAT_LL_3 Horiz	E2PAT_LL_3 Vert	E2PAT_LL_4 Horiz	E2PAT_LL_4 Vert	E2PAT_LL_5 Horiz	E2PAT_LL_5 Vert	E2PAT_LL_6 Horiz	E2PAT_LL_6 Vert				
5	J	0.0	2.0	0.0	-0.1	0.0	2.4	0.0	-0.6				
5	F	0.0	5.8	0.0	1.9	0.0	2.3	0.0	2.9				
5	D	0.0	2.3	0.0	6.3	0.0	2.3	0.0	2.9				
5	C	0.0	2.9	0.0	2.3	0.0	6.3	0.0	2.3				
5	B	0.0	2.9	0.0	2.3	0.0	1.9	0.0	5.8				
5	A	0.0	-0.6	0.0	2.4	0.0	-0.1	0.0	2.0				

**BUILDING BRACING REACTIONS**

Wall Loc	Col Line	± Reactions(k)				Panel Shear (lb/ft)		Note
		Wind Horiz	Wind Vert	Seismic Horiz	Seismic Vert	Wind	Seis	
L_EW	1							(i)
F_SW	J	2,3	9.0	6.4	3.7	2.6		
R_EW	5							(i)
B_SW	A	3,2	9.0	6.4	3.7	2.6		

(i) Bracing in roof to rigid frame

DATE	ISSUE	PERMITS
7/1/2020		
DATE	ISSUE	PERMITS
7/1/2020		

**PEAK STEEL BUILDINGS**  
 PO BOX 1275  
 MADISON, GA 30650  
 PHONE: (944) 333-PEAK  
 FAX: (706) 343-1988

**PROJECT NAME**  
 JC POWDER COATING  
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526

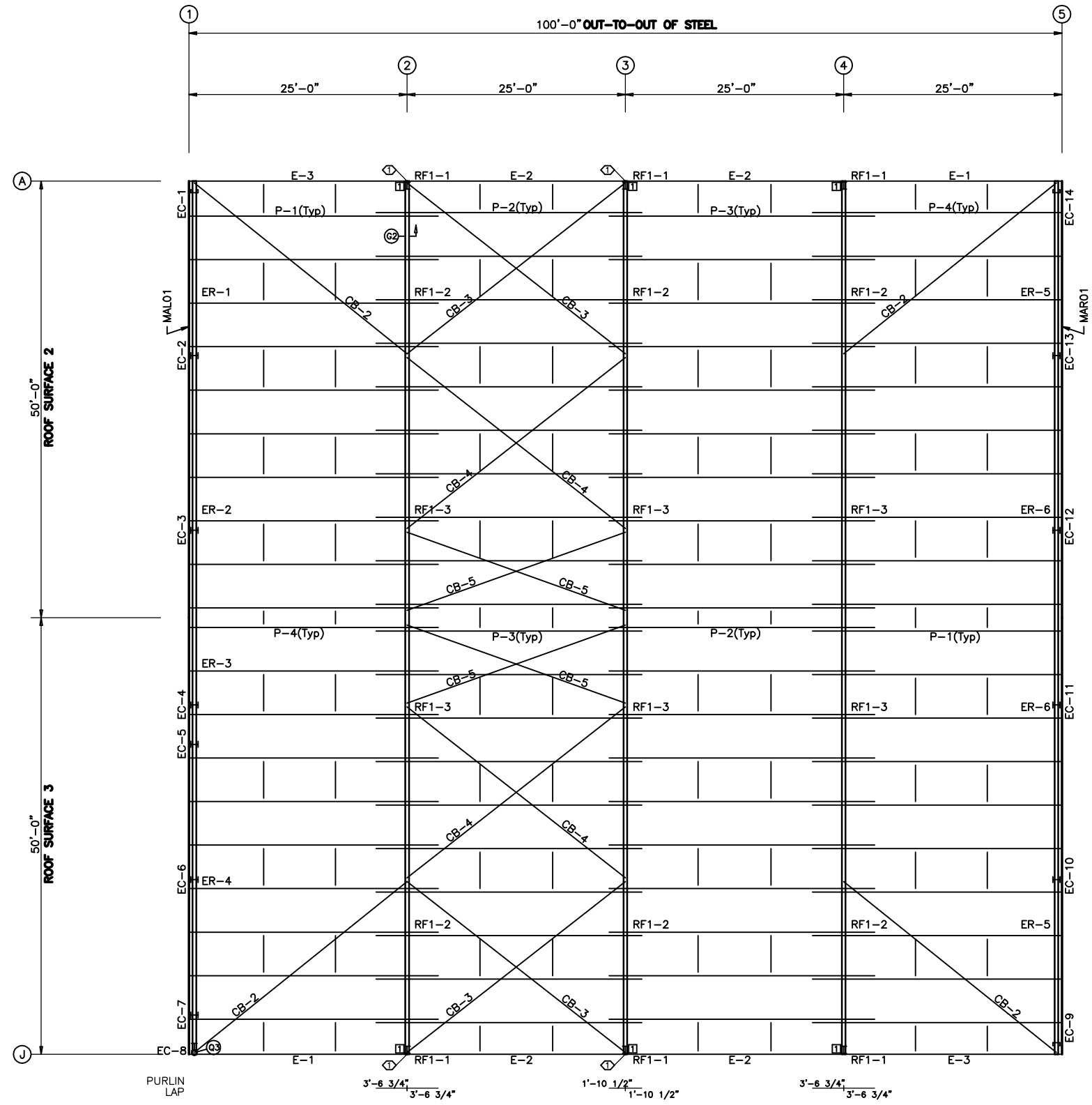
**CUSTOMER NAME**  
 JC POWDER COATING  
 NEW HILL, NC 27562

**JOB NUMBER**  
 S2008243A

**NORTH CAROLINA PROFESSIONAL ENGINEER SEAL**  
 044221  
 JEFFREY D. BOY  
 07/01/2020

This seal certifies only the person's qualifications and the person's registration with the State Board of Engineering and Surveying. The seal does not certify the quality of the work performed by the engineer or the manufacturer. The registered professional engineer whose seal appears on these drawings is employed by the Metal Building Manufacturer and does not serve as or represent the project engineer of record and shall not be construed as such.

**SHEET**  
 R1 of 1



**ROOF FRAMING PLAN**

SPECIAL BOLTS				
ROOF PLAN				
Ø ID	QUAN	TYPE	DIA	LENGTH WASH
1	4	A325	1/2"	2" 1

TRIM TABLE			
ROOF PLAN			
◇ ID	PART	LENGTH	DETAIL
1	RGB01	121.000	TRIM_953
2	RGB02	242.000	TRIM_953

MEMBER TABLE		
ROOF PLAN		
MARK	PART	LENGTH
P-1	10Z060	342.500
P-2	10Z060	365.250
P-3	10Z060	365.250
P-4	10Z060	342.500
E-1	10E060	299.625
E-2	10E060	299.750
E-3	10E060	299.625
CB-2	RDB-	370.000
CB-3	RDB-	376.000
CB-4	RDB-	381.000
CB-5	RDB-	324.000

CONNECTION PLATES	
ROOF PLAN	
□ ID	MARK/PART
1	ESC02

**ROOF FRAMING PLAN**

**GENERAL NOTES**

- PLACE TAGGED END OF RAFTERS TOWARDS THE LOW EAVE.
- STD. ROD/CABLE SIZES PER PART PREFIX ARE:
 

ROD	CABLE
RDB- = 5/8" ROD	CAA- = 1/4" CABLE
RDC- = 3/4" ROD	CAB- = 3/8" CABLE
RDD- = 7/8" ROD	CAC- = 1/2" CABLE
RDE- = 1" ROD	
RDF- = 1 1/8" ROD	
RDG- = 1 1/4" ROD	
- PURLIN AND EAVE STRUT CONNECTIONS UTILIZE BOTH A307 AND A325 BOLTS. REFER TO THE DETAILS FOR SPECIFIC USAGE REQUIREMENTS.
- THIS DRAWING IS NOT TO SCALE.

602.000" (50)

602.000" (50)

**ROOF SHEETING**  
 PANELS: 24 Ga. SS  
 Galvalume Plus

DATE	ISSUE	BY	CHK	APP
7/1/2020	PERMITS	JDB	PE	

**PEAK STEEL BUILDINGS**  
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**PROJECT NAME**  
 JC POWDER COATING  
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526

**CUSTOMER NAME**  
 JC POWDER COATING  
 NEW HILL, NC 27562

**JOB NUMBER**  
 S2008243A

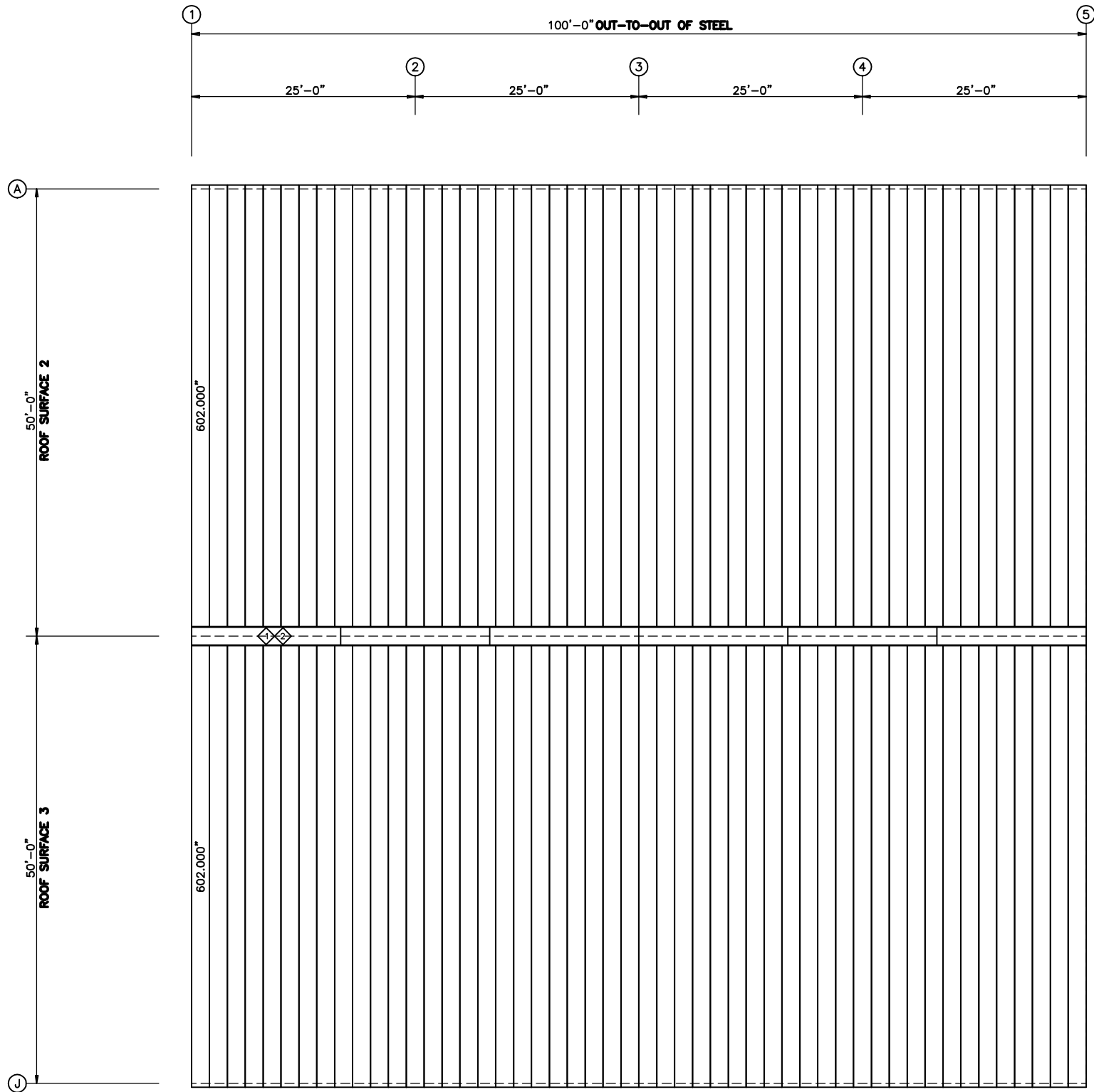
**SHEET TITLE**  
 ROOF FRAMING PLAN



**07/01/2020**

**JEFFREY D. BOX**  
 ENGINEER

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TRIM TABLE			
ROOF PLAN			
◇ ID	PART	LENGTH	DETAIL
1	RGB01	121.000	TRIM_953
2	RGB02	242.000	TRIM_953

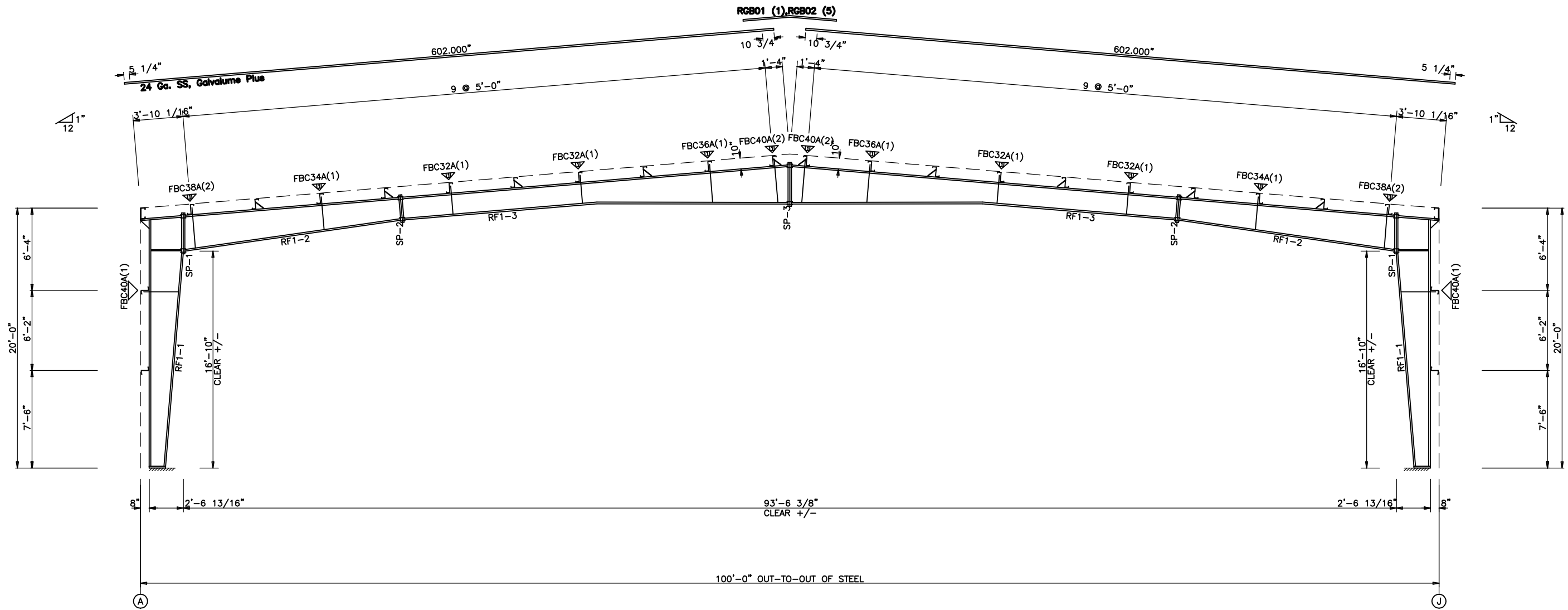
**ROOF SHEETING PLAN**  
**PANELS: 24 Ga. SS - Galvalume Plus**

<p><small>This seal certifies only the professional engineer and does not constitute an endorsement of the manufacturer. The drawings and the metal buildings which they represent are the product of the Metal Building Manufacturer. The registered professional engineer whose seal appears on these drawings is employed by the Metal Building Manufacturer and does not serve as or represent the project engineer of record and shall not be construed as such.</small></p>	<p align="center">   <b>JEFFREY D. BOX</b>  <b>ENGINEER</b>  <b>SEAL 044221</b>  <b>07/01/2020</b> </p>	<p>PROJECT NAME  <b>JC POWDER COATING</b>  <b>220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526</b></p> <p>CUSTOMER NAME  <b>JC POWDER COATING</b>  <b>NEW HILL, NC 27562</b></p> <p>JOB NUMBER  <b>S2008243A</b></p>	<p>PEAK STEEL BUILDINGS          PO BOX 1275          MADISON, GA 30650          PHONE:          (944) 333-PEAK          FAX:          (706) 343-1988</p>
<p>PERMITS</p>		<p>ISSUE</p>	
<p>DOWN</p>	<p>CHK</p>	<p>REV</p>	<p>DATE</p>
<p>MBS</p>	<p>DAW</p>	<p>KI</p>	<p>JDB</p>
<p>7/1/2020</p>			

SPLICE PLATE & BOLT TABLE									
Mark	Qty		Int	Type	Dia	Length	Width	Thick	Length
	Top	Bot							
SP-1	4	4	0	A325	1.000	3.25	8"	1"	3'-3"
SP-2	4	4	0	A325	0.625	2.25	6"	1/2"	2'-0 3/4"
SP-3	4	4	0	A325	0.625	2.25	6"	1/2"	3'-3 3/8"

MEMBER TABLE						
Mark	Web Depth		Web Plate		Outside Flange	Inside Flange
	Start/End	Thick	Thick	Length	W x Thk x Length	W x Thk x Length
RF1-1	12.0/30.0	0.220	0.313	197.7	8 x 5/16" x 229.6	8 x 1/2" x 198.4
	30.0/30.0	0.313		34.5	8 x 5/8" x 38.1	
RF1-2	30.0/18.0	0.220		202.6	6 x 1/2" x 200.1	6 x 5/8" x 202.9
RF1-3	18.0/18.0	0.164		180.0	6 x 1/2" x 360.0	6 x 1/4" x 180.0
	18.0/32.8	0.164		180.0		6 x 1/4" x 177.9

CONNECTION PLATES	
ID	Mark/Part
1	FBL&N01



RIGID FRAME ELEVATION: FRAME LINE 2 3 4

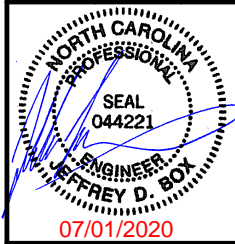
**GENERAL NOTES**

- ▽ INDICATES FLANGE BRACING LOCATIONS. (1) = ONE SIDE; (2) = TWO SIDES.
- IF FLANGE BRACING IS REQUIRED ON BOTH SIDES OF AN EXPANDABLE RIGID FRAME, THE OPPOSITE SIDE FLANGE BRACES WILL HAVE TO BE INSTALLED AT THE TIME OF FUTURE EXPANSION. THESE FLANGE BRACES HAVE BEEN PROVIDED, AS REQUIRED, FOR THIS FUTURE CONDITION.
- RIGID FRAMES SHALL HAVE 50% OF THEIR BOLTS INSTALLED AND TIGHTENED ON BOTH SIDES OF THE WEB ADJACENT TO EACH FLANGE BEFORE THE HOISTING EQUIPMENT IS RELEASED.
- INTERIOR COLUMN METAL TAG IS ORIENTED TOWARD THE LOW EAVE OF THE BUILDING.

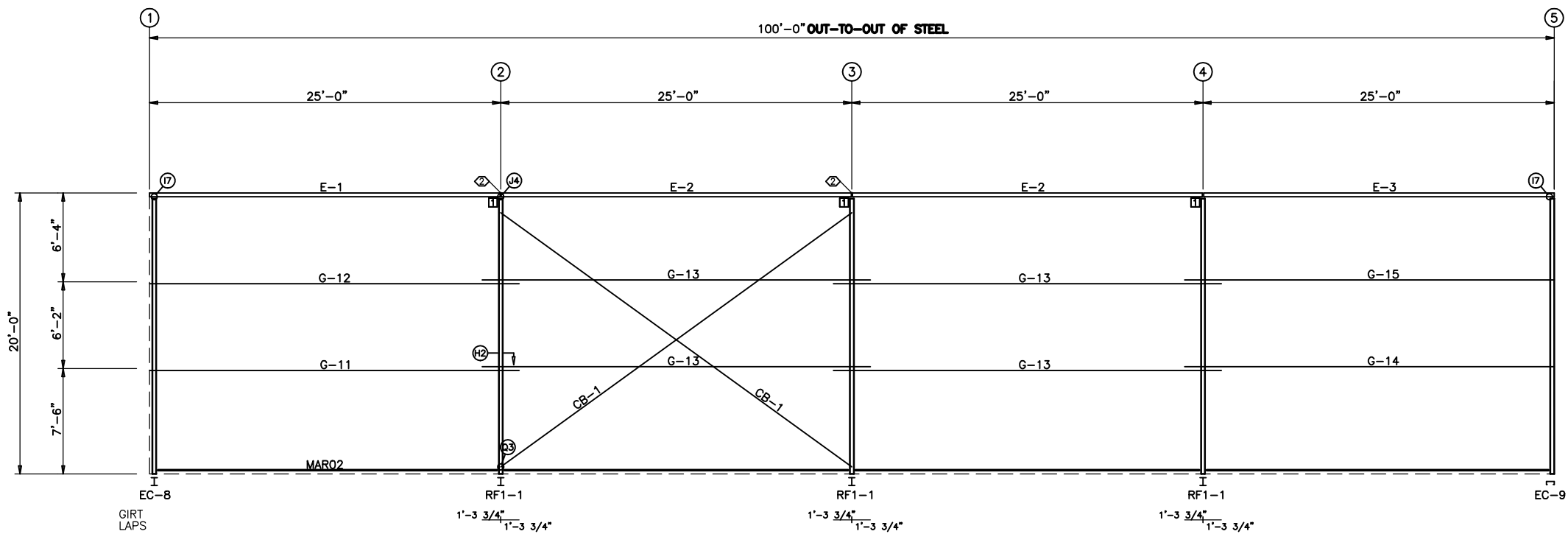
DATE	BY	CHK	ISSUE
7/1/2020	JDB	PE	
	KI	PE	
	DAW	CHK	
	MBS	CHK	
		ISSUE	
		PERMITS	

PEAK STEEL BUILDINGS  
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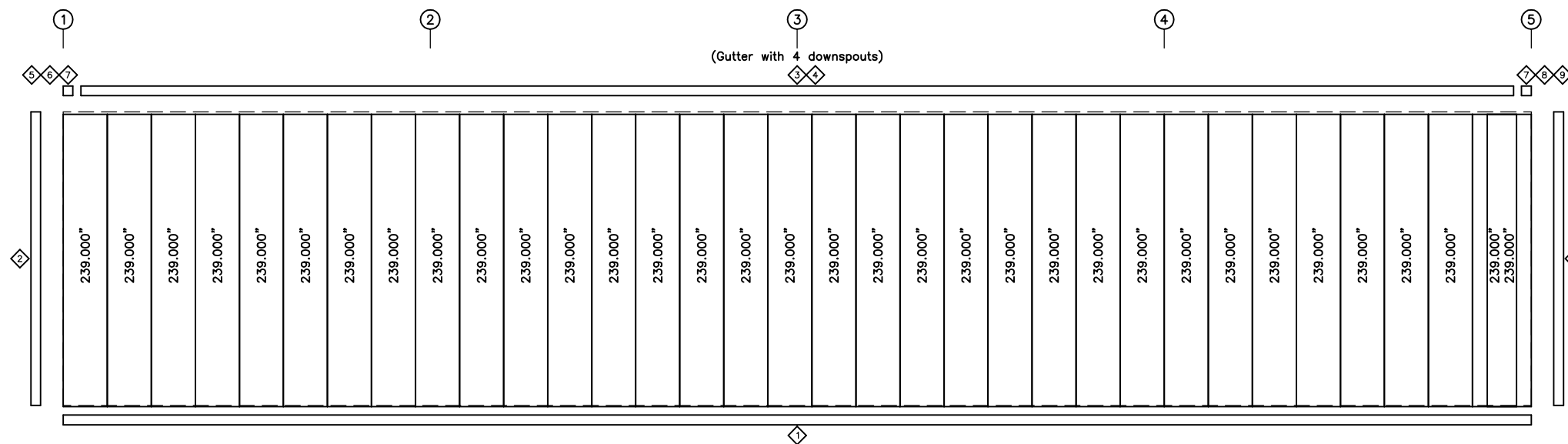
PROJECT NAME  
 JC POWDER COATING  
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526  
 CUSTOMER NAME  
 JC POWDER COATING  
 NEW HILL, NC 27562  
 JOB NUMBER  
 S2008243A  
 SHEET TITLE



THIS SEAL IS VALID ONLY FOR THE PROJECTS  
 SPECIFICALLY LISTED BY THE REGISTERED  
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 SEAL APPEARS ON THESE DRAWINGS IS  
 EMPLOYED BY THE METAL BUILDING  
 MANUFACTURER AND DOES NOT SERVE AS OR  
 REPRESENT THE PROJECT ENGINEER OF RECORD AND  
 SHALL NOT BE CONSIDERED AS SUCH.  
 SHEET  
 E3 of 7



**SIDEWALL FRAMING: FRAME LINE J**



**SIDEWALL SHEETING & TRIM: FRAME LINE J**  
 PANELS: 26 Ga. CW - Desert Sand PVDF

TRIM TABLE FRAME LINE J			
ID	PART	LENGTH	DETAIL
1	BSD01	122.000	TRIM_200
2	OCA01	242.000	TRIM_79
3	GTA01	121.000	TRIM_951
4	GTA02	242.000	TRIM_951
5	H4000	5.000	TRIM_21
6	RCA01	9.250	
7	GRA01	8.000	
8	H4000	5.000	
9	RCA02	9.250	

SPECIAL BOLTS				
ID	QUAN	TYPE	DIA	LENGTH WASH
2	4	A325	1/2"	2" 1

MEMBER TABLE FRAME LINE J		
MARK	PART	LENGTH
E-1	10E060	299.625
E-2	10E060	299.750
E-3	10E060	299.625
G-11	08Z067	315.500
G-12	08Z060	315.500
G-13	08Z060	331.500
G-14	08Z067	315.500
G-15	08Z060	315.500
CB-1	RDB-	379.000

CONNECTION PLATES FRAME LINE J	
ID	MARK/PART
1	ESC02

**SIDEWALL FRAMING PLAN**

GENERAL NOTES

- STD. ROD/CABLE SIZES PER PART PREFIX ARE:  
 ROD: RDB- = 5/8" ROD, RDC- = 3/4" ROD, RDD- = 7/8" ROD, RDE- = 1" ROD, RDF- = 1 1/8" ROD, RDG- = 1 1/4" ROD  
 CABLE: CAA- = 1/4" CABLE, CAB- = 3/8" CABLE, CAC- = 1/2" CABLE
- ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRTS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
- FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
- THIS DRAWING IS NOT TO SCALE.

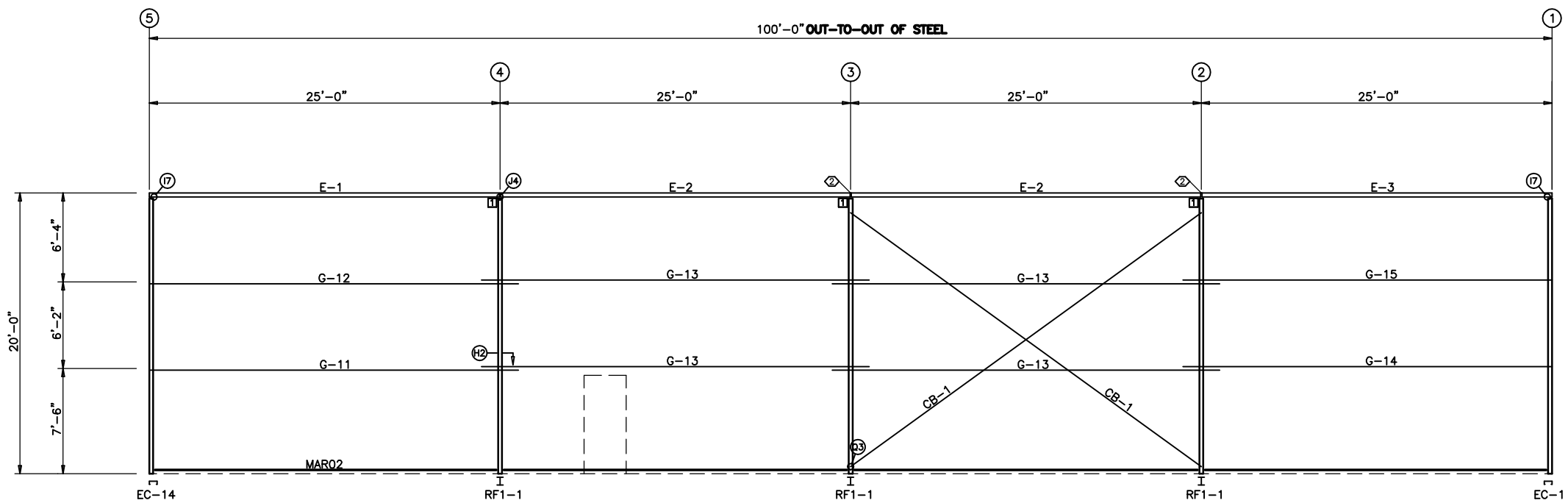
DATE	ISSUE	PERMITS
7/1/2020		

PEAK STEEL BUILDINGS  
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PROJECT NAME  
**JC POWDER COATING**  
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526  
 CUSTOMER NAME  
**JC POWDER COATING**  
 NEW HILL, NC 27562  
 JOB NUMBER  
**S2008243A**



07/01/2020  
 SHEET  
**E4 of 7**



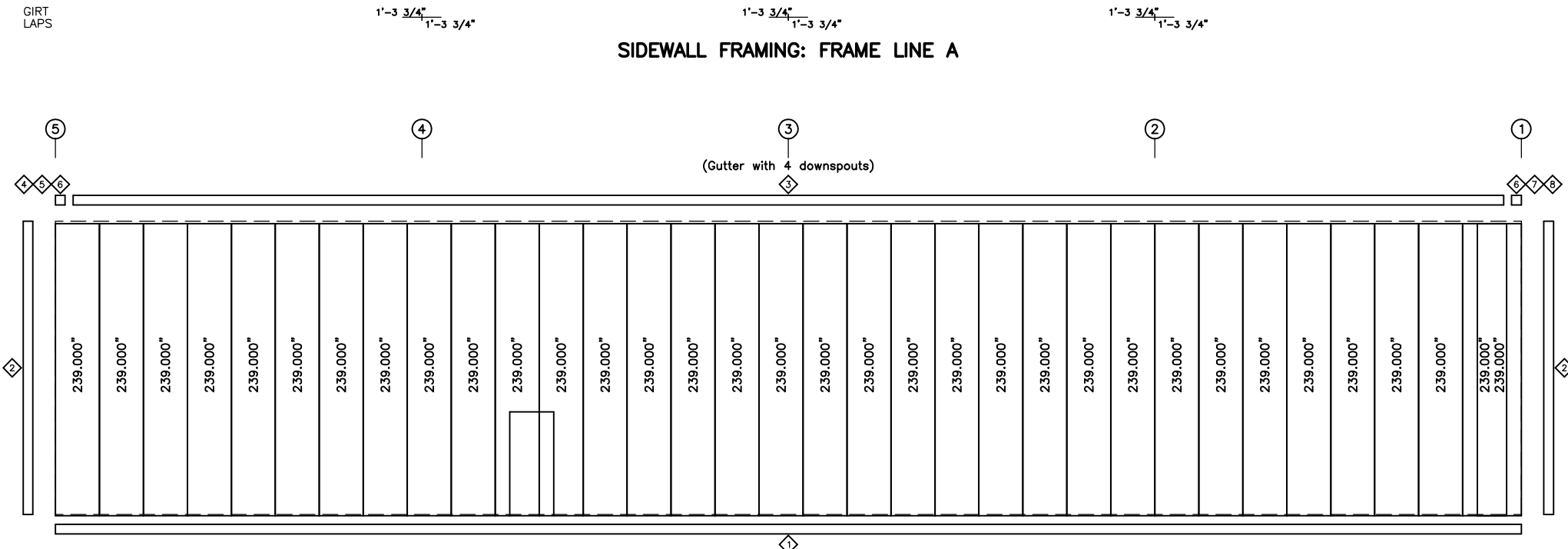
TRIM TABLE FRAME LINE A			
ID	PART	LENGTH	DETAIL
1	BSD01	122.000	TRIM_200
2	OCA01	242.000	TRIM_79
3	GTA02	242.000	TRIM_951
4	H4000	5.000	TRIM_21
5	RCA01	9.250	
6	GRA01	8.000	
7	H4000	5.000	
8	RCA02	9.250	

SPECIAL BOLTS					
ID	QUAN	TYPE	DIA	LENGTH	WASH
2	4	A325	1/2"	2"	1

MEMBER TABLE FRAME LINE A		
MARK	PART	LENGTH
E-1	10E060	299.625
E-2	10E060	299.750
E-3	10E060	299.625
G-11	08Z067	315.500
G-12	08Z060	315.500
G-13	08Z060	331.500
G-14	08Z067	315.500
G-15	08Z060	315.500
CB-1	RDB-	379.000

CONNECTION PLATES FRAME LINE A		
ID	MARK/PART	
1	ESC02	

SIDEWALL FRAMING: FRAME LINE A



SIDEWALL SHEETING & TRIM: FRAME LINE A  
PANELS: 26 Ga. CW - Desert Sand PVDF

**SIDEWALL FRAMING PLAN**

**GENERAL NOTES**

- STD. ROD/CABLE SIZES PER PART PREFIX ARE:  

ROD	CABLE
RDB- = 5/8" ROD	CAA- = 1/4" CABLE
RDC- = 3/4" ROD	CAB- = 3/8" CABLE
RDD- = 7/8" ROD	CAC- = 1/2" CABLE
RDE- = 1" ROD	
RDF- = 1 1/8" ROD	
RDG- = 1 1/4" ROD	
- ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRTS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
- FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
- THIS DRAWING IS NOT TO SCALE.

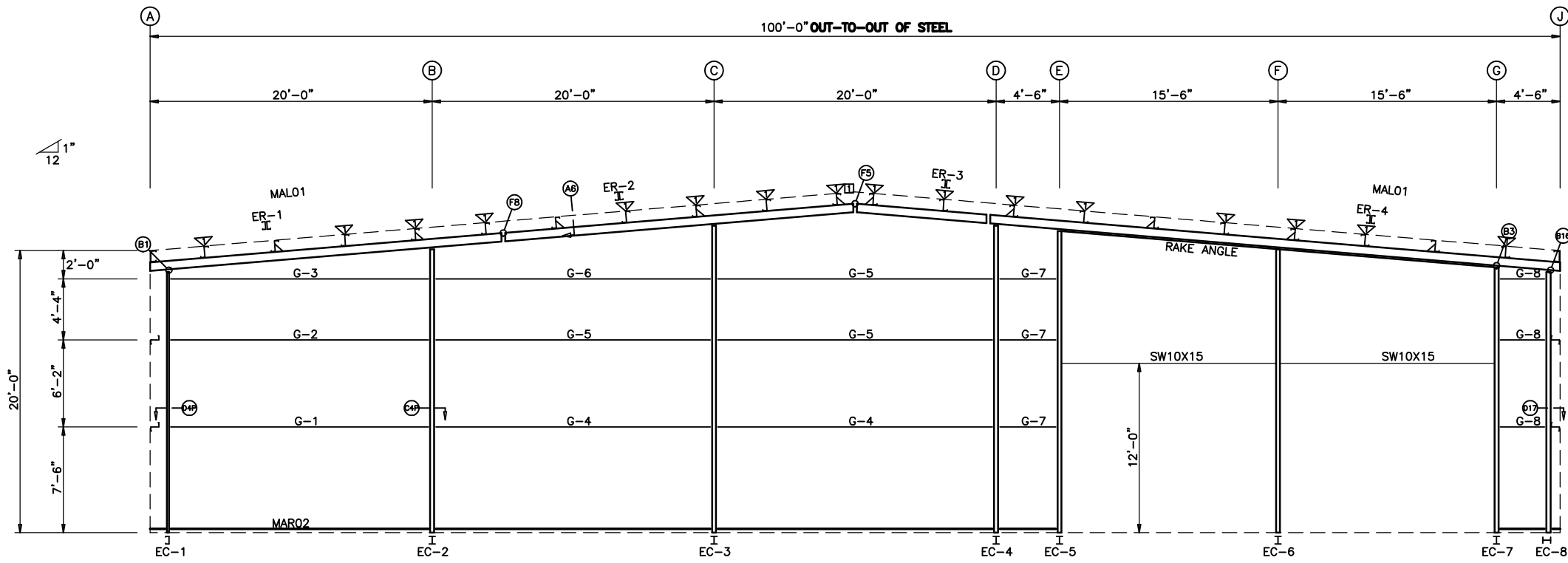
DATE	ISSUE	BY	CHK	APP
7/1/2020		JDB		
		DAW		
		MBS		

PEAK STEEL BUILDINGS  
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PROJECT NAME  
**JC POWDER COATING**  
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 CUSTOMER NAME  
**JC POWDER COATING**  
 NEW HILL, NC 27562  
 JOB NUMBER  
**S2008243A**



07/01/2020  
 SHEET  
**E5 of 7**



**ENDWALL FRAMING: FRAME LINE 1**

NOTE: THE FRAMING AS DEPICTED ABOVE IS NOT DESIGNED TO ACCOMMODATE ANY FUTURE EXPANSION.

**BOLT TABLE**  
FRAME LINE 1

LOCATION	QUAN	TYPE	DIA	LENGTH
ER-1/ER-2	8	A325	5/8"	2 1/4"
ER-2/ER-3	4	A325	1/2"	2"
ER-3/ER-4	8	A325	5/8"	2 1/4"
EC-1/ER-1	6	A325	1/2"	2"
Int_Column/Raf	4	A325	1/2"	2"
EC-8/ER-4	4	A325	1/2"	2"

**TRIM TABLE**  
FRAME LINE 1

ID	PART	LENGTH	DETAIL
1	BSD01	122.000	TRIM_200
2	BSD01	Use Drop	TRIM_200
3	OCA01	242.000	TRIM_79
4	RTA02	242.000	TRIM_952
5	RRA01	121.000	TRIM_952
6	LEE10	121.000	
7	RRA01	121.000	
8	RTA02	242.000	TRIM_902
9	MPB01	26.440	
10	MPP01	14.380	
11	JTA145	145.000	TRIM_98
12	JTA121	121.000	TRIM_98

**MEMBER TABLE**  
FRAME LINE 1

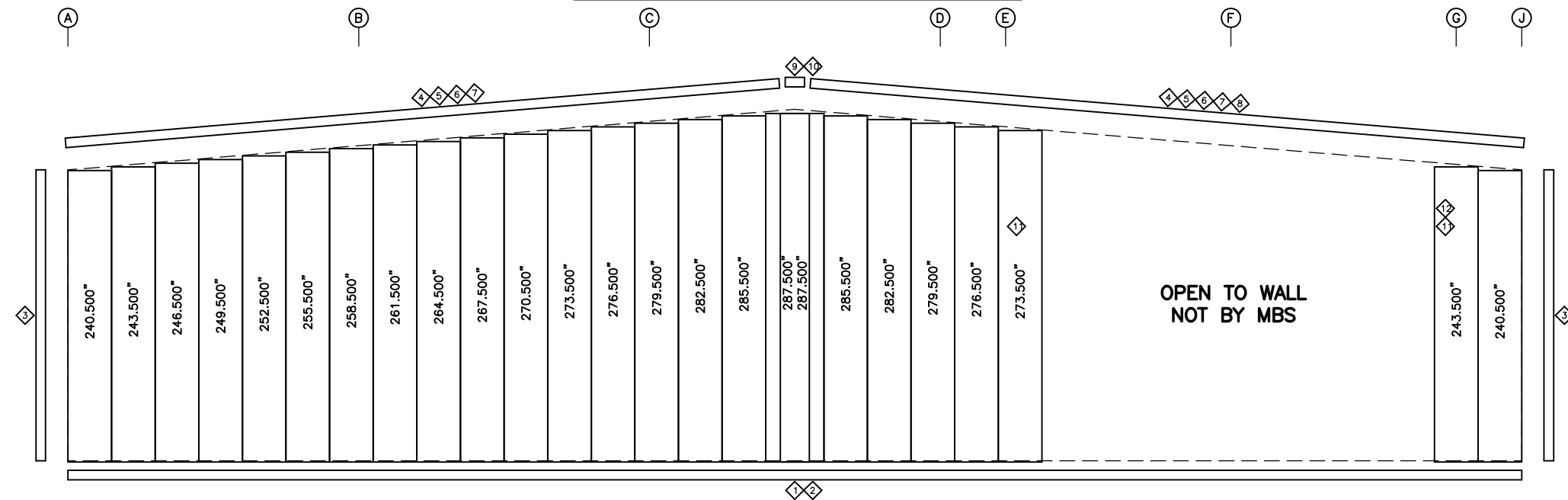
MARK	PART	LENGTH
EC-1	W08S075	223.250
EC-2	W8x10	242.125
EC-3	W8x10	262.125
EC-4	W8x10	262.125
EC-5	W10x15	257.625
EC-6	W10x22	242.188
EC-7	W10x15	226.625
EC-8	W8x10	223.250
ER-1	W08SD099	301.438
ER-2	W08SD099	299.500
ER-3	W08SD099	103.500
ER-4	W08SD099	497.438
G-1	08Z075	215.500
G-2	08Z060	215.500
G-3	08Z054	215.500
G-4	08Z075	231.500
G-5	08Z060	231.500
G-6	08Z054	231.500
G-7	08Z054	45.500
G-8	08Z054	33.375

**FLANGE BRACE TABLE**  
FRAME LINE 1

ID	#	MARK	CLIP
1	1	FBE01	FBL&N01

**CONNECTION PLATES**  
FRAME LINE 1

ID	MARK/PART
1	NCR03



**ENDWALL SHEETING & TRIM: FRAME LINE 1**

PANELS: 26 Ga. CW - Desert Sand PVDF

**ENDWALL FRAMING PLAN**

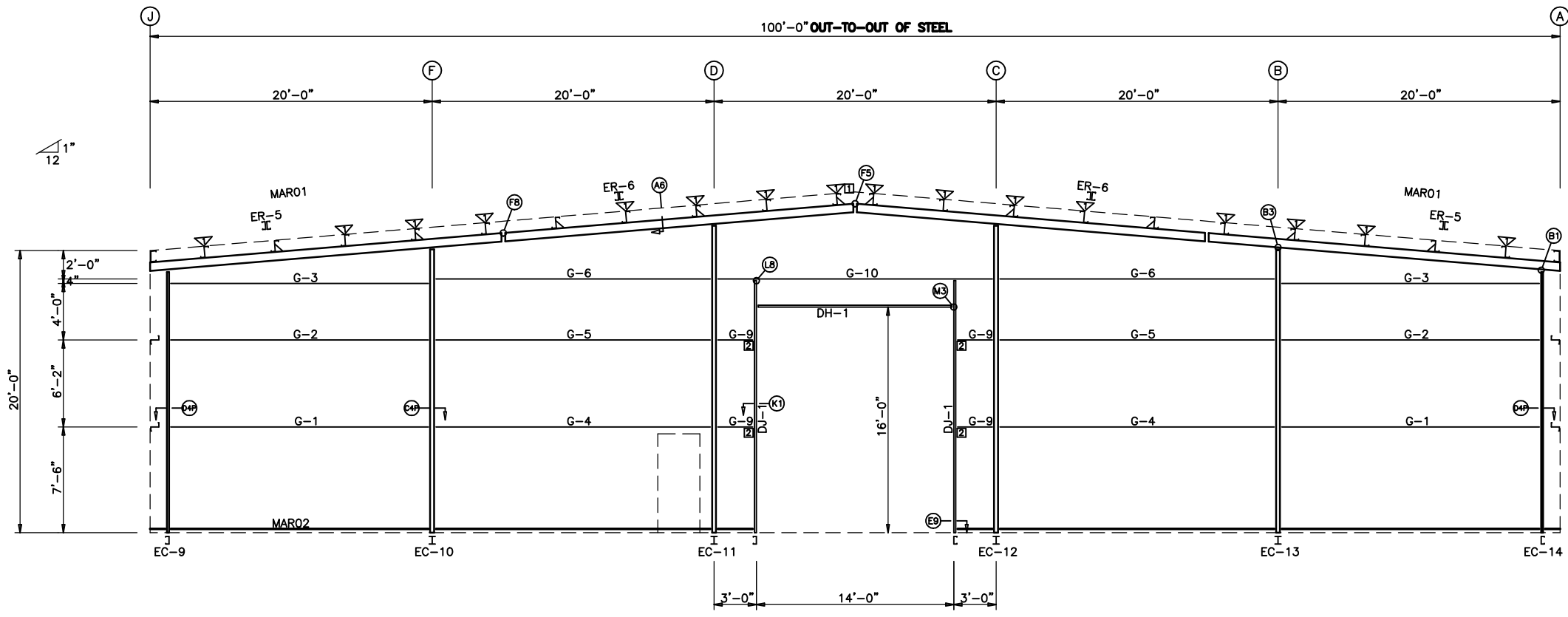
**GENERAL NOTES**

- STD. ROD/CABLE SIZES PER PART PREFIX ARE:  

ROD	CABLE
RDB- = 5/8" ROD	CAA- = 1/4" CABLE
RDC- = 3/4" ROD	CAB- = 3/8" CABLE
RDD- = 7/8" ROD	CAC- = 1/2" CABLE
RDE- = 1" ROD	
RDF- = 1 1/8" ROD	
RDG- = 1 1/4" ROD	
- ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRT CONDITIONS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
- FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
- THIS DRAWING IS NOT TO SCALE.

PROJECT NAME <b>JC POWDER COATING</b> 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526	CUSTOMER NAME <b>JC POWDER COATING</b> NEW HILL, NC 27562	PROJECT NO. S2008243A	SHEET TITLE PEAK STEEL BUILDINGS	DATE 7/1/2020	DRAWN MBS	CHECKED DAW	PERMITS NONE
PO BOX 1275 MADISON, GA 30650 PHONE: (944) 333-PEAK FAX: (706) 343-1988							
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**ENDWALL FRAMING: FRAME LINE 5**

NOTE: THE FRAMING AS DEPICTED ABOVE IS NOT DESIGNED TO ACCOMMODATE ANY FUTURE EXPANSION.

**BOLT TABLE  
FRAME LINE 5**

LOCATION	QUAN	TYPE	DIA	LENGTH
ER-5/ER-6	8	A325	5/8"	2' 1/4"
ER-6/ER-6	4	A325	1/2"	2"
Cor_Column/Raf	6	A325	1/2"	2"
Int_Column/Raf	4	A325	1/2"	2"

**TRIM TABLE  
FRAME LINE 5**

ID	PART	LENGTH	DETAIL
1	BSD01	122.000	TRIM_200
2	OCA01	242.000	TRIM_79
3	RTA02	242.000	TRIM_952
4	RRA01	121.000	TRIM_952
5	MPB01	26.440	
6	MPP01	14.380	
7	CCA193	193.000	TRIM_19
8	JTA193	193.000	TRIM_98
9	CCA169	169.000	TRIM_19
10	HTA172	172.000	TRIM_98

**MEMBER TABLE  
FRAME LINE 5**

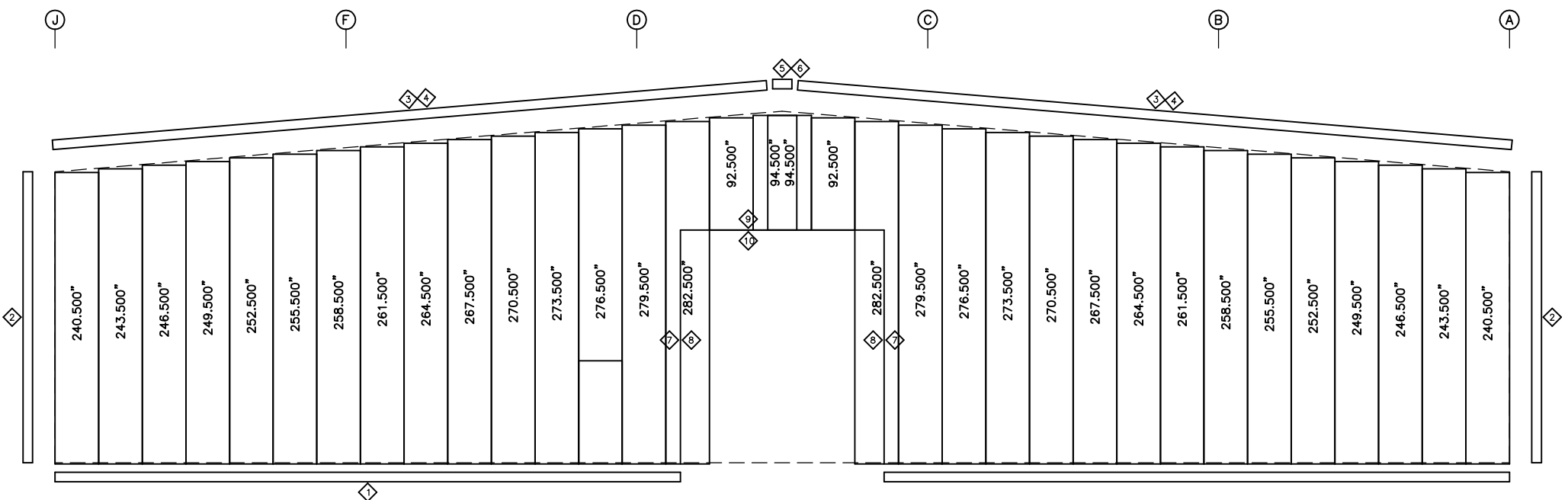
MARK	PART	LENGTH
EC-9	W08S075	219.250
EC-10	W8x10	238.063
EC-11	W8x10	258.063
EC-12	W8x10	258.063
EC-13	W8x10	238.063
EC-14	W08S075	219.250
ER-5	W12SD089	301.438
ER-6	W12SD089	299.188
DJ-1	J08C060	216.000
DH-1	J08C060	168.000
G-1	08Z075	215.500
G-2	08Z060	215.500
G-3	08Z054	215.500
G-4	08Z075	231.500
G-5	08Z060	231.500
G-6	08Z054	231.500
G-9	08Z054	28.500
G-10	08Z089	231.500

**FLANGE BRACE TABLE  
FRAME LINE 5**

ID	#	MARK	CLIP
1	1	FBE01	FBL&N01

**CONNECTION PLATES  
FRAME LINE 5**

ID	MARK/PART
1	NCRO3
2	JCA&P02



**ENDWALL SHEETING & TRIM: FRAME LINE 5**

PANELS: 26 Ga. CW - Desert Sand PVDF

**ENDWALL FRAMING PLAN**

**GENERAL NOTES**

- STD. ROD/CABLE SIZES PER PART PREFIX ARE:  
 ROD = 5/8" ROD      CABLE = 1/4" CABLE  
 RDB = 3/4" ROD      CAB = 3/8" CABLE  
 RDC = 7/8" ROD      CAC = 1/2" CABLE  
 RDD = 1" ROD  
 RDE = 1 1/8" ROD  
 RDF = 1 1/4" ROD
- ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRT CONDITIONS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
- FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
- THIS DRAWING IS NOT TO SCALE.

PROJECT NAME: JC POWDER COATING  
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526  
 CUSTOMER NAME: JC POWDER COATING  
 NEW HILL, NC 27562

JOB NUMBER: S2008243A

DATE: 7/1/2020

PEAK STEEL BUILDINGS  
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PROJECT NAME: JC POWDER COATING  
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526  
 CUSTOMER NAME: JC POWDER COATING  
 NEW HILL, NC 27562

JOB NUMBER: S2008243A



THIS DRAWING IS THE PROPERTY OF THE MANUFACTURER. THE DRAWINGS AND THE METAL BUILDINGS WHICH THEY REPRESENT ARE THE PRODUCT OF THE METAL BUILDING MANUFACTURER. THE REGISTERED PROFESSIONAL ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS EMPLOYED BY THE METAL BUILDING MANUFACTURER AND DOES NOT SERVE AS OR REPRESENT THE PROJECT ENGINEER OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

SHEET  
E7 of 7

GENERAL PLUMBING NOTES:

ADMINISTRATIVE:

- 1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR,
MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR,
FASC - FIRE ALARM SYSTEM CONTRACTOR.
2. PROVIDE MEANS TO FURNISH AND INSTALL THE PLUMBING CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR.
3. THE PC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
4. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED AT AN APPROVED LOCATION. PC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE PC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
5. ALL MATERIALS USED SHALL BE NEW AND FREE OF DEFECTS. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED AT NO EXPENSE TO THE OWNER. ALL MATERIALS AND EQUIPMENT SHALL BEAR APPROVAL FROM UL OR AN APPROVED THIRD PARTY AGENCY, WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, IT IS TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL BE ACCEPTED.
6. THE PLUMBING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2018 NORTH CAROLINA PLUMBING CODE AND ANY APPLICABLE LOCAL CODES, WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
7. THE PC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
8. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
9. THESE PLANS ARE DIAGRAMMATIC. THE PC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, FIXTURES, PIPING, ETC. TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BONDS, OFFSETS, AND FITTINGS THAT WILL BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE PC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER. THE PC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. TO AVOID POTENTIAL CONFLICTS, COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION. ALL UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO ANY DIGGING, TRENCHING, COMPACTING, AND BACKFILL SHALL BE BY PC AND SHALL BE IN ACCORDANCE WITH SECTION 306 OF THE NC PLUMBING CODE. UNDERGROUND LINES SHALL BE LOCATED SUCH THAT THEY DO NOT OBSTRUCT FOOTINGS OR FOUNDATION WALLS.
11. THE PC SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS OF RATED FLOOR/CEILING ASSEMBLIES AND RATED WALL ASSEMBLIES TO PRESERVE OR RESTORE THE FIRE RESISTANCE RATING. SEAL ALL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THE PROJECT.
12. SYSTEM TESTING SHALL BE PERFORMED BY PLUMBING CONTRACTOR IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE, SECTIONS 312.2, 312.3 AND 312.5.
13. PC SHALL DISINFECT THE ENTIRE DOMESTIC WATER PIPING SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.
14. AT THE COMPLETION OF WORK AND prior TO ACCEPTANCE BY OWNER, THE PC SHALL CLEAN ALL EXPOSED FIXTURES, MATERIALS, AND EQUIPMENT UNDER THIS CONTRACT.
15. PC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

MATERIALS:

- 1. ALL OVERHEAD DOMESTIC WATER PIPING SHALL BE TYPE L COPPER WITH 95/5 LEAD FREE SOLDER, AND ALL BELOW GRADE WATER PIPING SHALL BE TYPE K COPPER WITH NO JOINTS. ALL PIPING SHALL HAVE MANUFACTURER'S NAME AND THE APPLICABLE STANDARD TO WHICH IT WAS MANUFACTURED CLEARLY MARKED ON EACH LENGTH. PIPING SHALL COMPLY WITH ASTM B-88. USE BRAZED JOINTS ON ALL COPPER PIPING 1-1/2 INCH AND LARGER. \*\*\* PC MAY USE PEX (ASTM F 877) WITH APPROVED FITTINGS (ASTM F 1807) WITH OWNER'S APPROVAL. \*\*\* CPVC PIPING (ASTM D 2846 OR ASTM F 441) WITH APPROVED FITTINGS (ASTM D 2846, ASTM F 438, OR ASTM F 439) MAY ALSO BE USED WHERE NOT LOCATED IN PLENUMS. ALL PLASTIC PIPE, FITTINGS, AND COMPONENTS SHALL BE THIRD PARTY CERTIFIED AS CONFORMING TO NSF 14. ALL PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, USED IN THE WATER DISTRIBUTION SYSTEM SHALL HAVE A MAXIMUM LEAD CONTENT OF .25-PERCENT AND SHALL CONFORM TO NSF 61. HOT WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 180°F. COLD WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 160 PSI AT 73.4°F. DO NOT INSTALL HOT OR CPVC PIPING IN RETURN AIR PLENUMS.
2. BALL VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED BALL, WITH TEFLON SEATS, 150 PSI WSP, AND COMPLY WITH MSS SP-110. GATE VALVES SHALL HAVE BRONZE BODY, CLASS 150, AND COMPLY WITH MSS SP-80, TYPE 2 STANDARD. VALVE BODY SHALL BE ASTM B 62, BRONZE WITH INTERNAL SEAT AND UNION BONO BONNET. ENDS SHALL BE THREADED OR SOLDER WITH COPPER-SILICON BRONZE STEM AND SOLID-WEDGE BRONZE DISC. INSTALL VALVES IN LOCATIONS THAT PERMIT EASY ACCESS WITHOUT DAMAGE TO BUILDING OR FINISHED MATERIALS; PROVIDE ACCESS DOORS IF REQUIRED. VALVES SHALL BE BY INCO, WAITS, OR SMOORHAM.
3. COLD WATER LINES SHALL BE INSULATED WITH 1/2 INCH THICK FIBROUS GLASS INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. HOT WATER LINES UP TO 2 INCHES DIAMETER SHALL HAVE 1 INCH THICK INSULATION CONFORMING TO THE SAME STANDARD. PIPING LARGER THAN 2 INCHES SHALL RECEIVE 1-1/2 INCH THICK INSULATION. CLOSED CELL RUBBER INSULATION MEETING THE SMOKE AND FLAME RATINGS ABOVE MAY BE SUBSTITUTED FOR FIBROUS GLASS TYPE IF SO DESIRED. INSULATION INSTALLED ON PIPING OPERATING BELOW AMBIENT TEMPERATURES MUST HAVE A CONTINUOUS VAPOR RETARDER. ALL JOINTS, SEAMS AND FITTINGS MUST BE SEALED. ON SYSTEMS OPERATING ABOVE AMBIENT, THE BUTT JOINTS SHOULD NOT BE SEALED. ON COLD SURFACES WHERE A VAPOR SEAL MUST BE MAINTAINED, INSULATION SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN MOISTURE AND VAPOR RETARDER. ALL HANGERS, SUPPORTS, ANCHORS, OR OTHER PROJECTIONS SECURED TO COLD SURFACES SHALL BE INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES EXCEPT WHERE FIRESTOP OR FIRESTOPPING MATERIALS ARE REQUIRED. INSULATION SHALL HAVE A FACTORY APPLIED ALL-SERVICE JACKET WITH SELF-SEALING LAP. WHITE-KRAFT PAPER BONDED TO ALUMINUM FOL AND REINFORCED WITH GLASS FIBERS; CONFORMING TO ASTM C 1136 TYPE 1; VAPOR RETARDER; WITH A SELF-SEALING ADHESIVE. VERIFY THAT PIPING HAS BEEN TESTED, SURFACES ARE CLEAN AND DRY, AND ALL FOREIGN MATERIALS ARE REMOVED BEFORE APPLYING INSULATION MATERIALS. INSULATION SHALL BE BY KWEIF, ARMACELL, JOHNS-MANVILLE, OR OWENS-CORNING.
4. ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED

- INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578 91. ALL INSULATION SHALL BE LOW-EMITTING WITH NOT GREATER THAN 0.05 PPM FORMALDEHYDE EMISSIONS. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES.
5. FAUCETS AND FIXTURE FITTINGS SHALL CONFORM TO ASME A112.18.1. FAUCETS AND FIXTURE FITTINGS THAT SUPPLY DRINKING WATER FOR HUMAN CONSUMPTION SHALL CONFORM TO THE REQUIREMENTS OF NSF 61. SECTION 9. FIXTURE FITTINGS, FAUCETS, AND DISHERS SHALL BE INSTALLED AND ADJUSTED SO THAT THE FLOW OF HOT WATER FROM THE FITTINGS CORRESPONDS TO THE LEFT HAND SIDE OF THE FIXTURE FITTING.
6. BACKFLOW PREVENTION SHALL BE IN ACCORDANCE WITH SECTION 608.13 OF THE NC PLUMBING CODE AND THE LOCAL AUTHORITY HAVING JURISDICTION. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTERS SHALL CONFORM TO ASSE 1013 OR ANNA C511. THE RELIEF OPENING SHALL DISCHARGE BY AIR GAP. AIR GAPS SHALL COMPLY WITH ASME A112.1.1 AND AIR GAP FITTINGS WITH ASME A112.1.3. DOUBLE CHECK VALVE ASSEMBLIES SHALL CONFORM TO ASSE 1015 OR ANNA C510. ACCESS TO BACKFLOW PREVENTERS SHALL BE PROVIDED AS SPECIFIED BY THE INSTALLATION INSTRUCTIONS OF THE APPROVED MANUFACTURER.
7. FOR BELOW GRADE SANITARY WASTE PIPING, PC SHALL USE SERVICE WEIGHT CAST IRON PIPE WITH COMPRESSION JOINTS (ASTM A 74). USE MINIMUM 2 INCH SIZE UNDERGROUND. SOLID WALL SCHEDULE 40 PVC (ASTM D 2865) WITH SCHEDULE 40 SOCKET TYPE PIPE FITTINGS (ASTM D 3311) MAY ALSO BE USED. DO NOT USE PVC PIPE FOR APPLICATIONS WHERE THE WASTE WATER TEMPERATURE EQUALS OR EXCEEDS 140°F OR IF THE BUILDING HEIGHT EXCEEDS 75 FEET. PROVIDE ABOVE GRADE SANITARY WASTE AND VENT PIPING USE SERVICE WEIGHT CAST IRON NO-HUB TYPE WITH COUPLINGS (CSPR 301). SOLID WALL SCHEDULE 40 PVC (ASTM D 2865) WITH SCHEDULE 40 SOCKET TYPE FITTINGS (ASTM D 3311) MAY BE USED IF PERMITTED BY LOCAL CODE, EXCEPT IN BUILDINGS EXCEEDING 75 FEET IN HEIGHT. DO NOT INSTALL PVC IN RETURN AIR PLENUMS. ALL VENT AND BRANCH VENT PIPES SHALL BE SO GRADED AND CONNECTED AS TO DRAIN BACK TO THE DRAINAGE PIPE BY GRAVITY. BRANCH VENTS EXCEEDING 40 FEET IN DEVELOPED LENGTH SHALL BE INCREASED BY ONE NOMINAL SIZE FOR THE ENTIRE DEVELOPED LENGTH OF THE PIPE.
9. PC SHALL PROVIDE ALL WATER HEATERS (WATAGE/INPUT AND CAPACITY AS NOTED IN SCHEDULE). ALL WATER HEATERS SHALL BE THIRD PARTY CERTIFIED; PROVIDE PANS FOR WATER HEATERS IN ACCORDANCE WITH 504.7 OF THE NC PLUMBING CODE. ELECTRICAL CONNECTIONS SHALL BE BY ELECTRICAL CONTRACTOR. PC SHALL COORDINATE WITH EC ON ELECTRICAL CHARACTERISTICS OF THE EQUIPMENT PROVIDED.
METHODS:
1. EXTEND DOMESTIC WATER PIPE FROM FIVE (5) FEET OUTSIDE THE BUILDING INTO THE BUILDING AS INDICATED ON THE PLANS AND INSTALL DOMESTIC WATER DISTRIBUTION PIPING TO ALL FIXTURES AND EQUIPMENT REQUIRING THE SAME WATER SERVICE PIPE AND THE BUILDING SEWER SHALL BE SEPARATED BY 5 FEET OF UNDISTURBED OR COMPACTED EARTH IN ACCORDANCE WITH 603.2. PROVIDE ALL FITTINGS, VALVES, AND OTHER ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION. ALL DOMESTIC WATER PIPING SHALL BE CONCEALED IN FINISHED AREAS. ANY OPEN ENDS SHALL BE PROTECTED UNTIL FINAL CONNECTIONS ARE MADE.
2. ABOVE GRADE DOMESTIC WATER PIPING SHALL BE SLOPED AT A MINIMUM OF 1/32 INCH PER FOOT AND ARRANGED TO DRAIN AT LOW POINTS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. ROUTE PIPING IN AN ORDERLY MANNER-PARALLEL OR PERPENDICULAR TO WALLS WHEN POSSIBLE-AND MAINTAIN GRADE. EACH SERVING BRANCH LINE SERVING MORE THAN ONE FIXTURE SHALL HAVE A SHUTOFF VALVE INSTALLED TO ISOLATE ALL FIXTURES AND PIECES OF EQUIPMENT SUPPLIED BY THE BRANCH LINE. THE SHUTOFF VALVE SHALL BE LABELED AND LOCATED AS CLOSE TO THE CONNECTION TO THE SERVICE MAIN AND RISER AS POSSIBLE. PROVIDE A FULL-OPEN VALVE ON THE BASE OF EVERY WATER RISER PIPE AND ON THE TOP OF EVERY WATER DOWN-FEED PIPE. PROVIDE VALVE HANDLE EXTENSIONS AS NECESSARY FOR INSULATION.
3. IT SHALL BE THE RESPONSIBILITY OF THE PC TO SUSPEND AND SUPPORT ALL PIPING SYSTEMS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALLY ACCEPTED PIPE HANGERS AND SUSPENSION EQUIPMENT. ALL FIXTURES, DEVICES, AND EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE FIXTURE OR EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS: THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT AND PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING. USE STEEL HANGERS FOR STEEL AND PLASTIC PIPE AND COPPER OR COPPER-PLATED HANGERS FOR COPPER PIPE. PROVIDE PROTECTION FOR COPPER PIPING IN CONTACT WITH DISSIMILAR METALS. WHERE COPPER PIPING IS SUPPORTED ON HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS. IN GENERAL, HANGERS SHALL BE CLEVIS TYPE, STANDARD WEIGHT. FOR PIPING, HANGER SPACING SHALL BE IN ACCORDANCE WITH TABLE 308.5 OF THE NC PLUMBING CODE. HANGERS AND ACCESSORIES SHALL BE CORNELL, WASON, OR B-LINE.
4. FLOORS: SLEEVES IN FLOORS AND INTERIOR WALLS OF POURED IN PLACE CONCRETE, BRICK, TILE, OR MASONRY SHALL BE SCHEDULE 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD WALLS SHALL BE 22 GAUGE, ROLLED GALVANIZED SHEET METAL. TACK WELD ON THE LONGITUDINAL SEAM. PROVIDE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE AND BELOW CEILING. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER. SLEEVES IN WALLS SHALL BE INSTALLED FLUSH WITH THE WALL. SLEEVES IN FLOORS SHALL EXTEND 3/4 INCH ABOVE THE FLOOR-EXCEPT THEY SHALL BE FLUSH FOR 2 HOUR RATED FLOORS-AND SHALL BE FLUSH WITH THE STRUCTURE BELOW EACH SLEEVE SHALL HAVE AN INSIDE DIAMETER 1 INCH LARGER THAN THE OUTSIDE DIAMETER OF THE COVERING OF EACH COVERED PIPE TO ALLOW CONTINUOUS INSULATION-BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN EACH UNCOVERED. ANNUAL SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER.
5. THE TOP OF WATER PIPES INSTALLED BELOW GRADE OUTSIDE THE BUILDING SHALL BE BELOW THE FROST LINE OR A MINIMUM OF 12 INCHES BELOW FINISHED GRADE WHICHEVER IS GREATER. WATER PIPING INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED UTILITY ROOM OR UNCONDITIONED ATTIC SHALL BE INSULATED TO A MINIMUM OF R6.5 DETERMINED IN ACCORDANCE WITH ASTM C 117.
6. HOT WATER PROVIDED TO PUBLIC HAND-WASHING FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.3.
7. INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES, SINKS, AND ELECTRIC WATER COOLERS WITH THE HAND-LAV GUARD INSULATION KIT BY TRUESBORO OR EQUAL.
8. POTABLE WATER OUTLETS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH 608.15. PRESSURE TYPE VACUUM BREAKERS SHALL CONFORM TO ASSE 1020 AND SPL/PROOF VACUUM BREAKERS SHALL COMPLY WITH ASSE 1056. HOSE-CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE 1011, ASSE 1019, ASSE 1025, OR ASSE 1052. CONNECTIONS TO BEVERAGE DISPENSERS, COFFEE MACHINES, AND NON-CARBONATED BEVERAGE DISPENSERS SHALL BE PROTECTED BY A BACKFLOW PREVENTER IN ACCORDANCE WITH ASSE 1022.
9. THE PC SHALL INSTALL WATER HAMMER ARRESTORS ON BRANCH LINES WITH QUICK CLOSING VALVES PER MANUFACTURER'S INSTALLATION

INSTRUCTIONS: WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010.

- 10. THE PC SHALL PROVIDE CHECK VALVES AT ALL FIXTURES WITH THREADED OUTLETS AS REQUIRED BY CODE. TRAP PRIMERS SHALL BE PROVIDED AS SHOWN ON THE PLANS OR AS REQUIRED.
11. ADJUST STOPS AND VALVES FOR INTENDED FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW.
12. BEFORE COMMENCING WORK, CHECK INVERT ELEVATIONS REQUIRED FOR SEWER CONNECTIONS, CONFIRM INVERTS, AND VERIFY THESE CAN BE PROPERLY CONNECTED TO WITH SLOPE FOR DRAINAGE AND COVER TO AVOID FREEZING. ONCE INVERTS AND FALL HAVE BEEN ESTABLISHED, EXTEND SANITARY SEWER PIPING TO 5 FEET OUTSIDE THE BUILDING AND INSTALL ALL DRAINS, STACKS, VENTS, FLOOR DRAINS, AND CLEANOUTS NECESSARY FOR A COMPLETE INSTALLATION.
13. ALL SANITARY SEWER PIPING IS BELOW GRADE OR WITHIN WALLS UNLESS OTHERWISE NOTED. ALL SANITARY VENT PIPING IS ABOVE THE CEILING OR WITHIN WALLS UNLESS OTHERWISE NOTED. SOIL AND WASTE PIPING SHALL BE INSTALLED TO PROVIDE PROTECTION AGAINST FREEZING PER 305.6.1. WASTE AND SOIL LINES LEAVING THE BUILDING MUST HAVE A MINIMUM COVER OF 3 INCHES.
14. SOIL AND WASTE LINES 2-1/2 INCHES AND SMALLER SHALL BE SLOPED AT 1/4 INCH PER FOOT MINIMUM. SOIL AND WASTE LINES 3 INCHES TO 6 INCHES IN DIAMETER SHALL BE SLOPED AT 1/8 INCH PER FOOT MINIMUM.
15. FOR WATER CLOSET WASTE CONNECTIONS, A 4 INCH BY 3 INCH CLOSET BEND SHALL BE ACCEPTABLE. WHERE A 3 INCH BEND IS UTILIZED ON WATER CLOSETS, A 4 INCH BY 3 INCH FLANGE SHALL BE INSTALLED TO RECEIVE THE FIXTURE HORN.
16. FOR PLASTIC PIPE SIZES GREATER THAN 6 INCHES, AND OTHER PIPE SIZES GREATER THAN 4 INCHES, RESTRAINTS SHALL BE PROVIDED FOR DRAIN PIPES AT ALL CHANGES IN DIRECTION AND AT ALL CHANGES IN DIAMETER GREATER THAN TWO PIPE SIZES. BRACES, BLOCKS, RODDING, BACKFILL, AND OTHER SUITABLE METHODS AS SPECIFIED BY THE COUPLING MANUFACTURER SHALL BE UTILIZED.
17. BASES OF STACKS SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, VIRGIN OR COMPACTED EARTH, OR OTHER SUITABLE MATERIAL TO SUPPORT THE WEIGHT OF THE PIPING.
18. HORIZONTAL DRAIN PIPES SHALL HAVE CLEANOUTS IN ACCORDANCE WITH 708.10. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH A MIXTURE OF GRAPHITE AND LINED OIL. ENSURE CLEARANCE AT ALL CLEANOUTS FOR ROODING OF DRAINAGE SYSTEM. INSTALL FLOOR CLEANOUTS AT AN ELEVATION TO ACCOMMODATE ENOUGH CLEARANCE. EVERY CLEANOUT SHALL BE INSTALLED TO ALLOW CLEANING IN THE DIRECTION OF FLOW OF THE DRAINAGE PIPE OR AT RIGHT ANGLES THERETO. CLEANOUTS ON 6 INCH AND SMALLER PIPES SHALL BE PROVIDED WITH A CLEARANCE OF NOT LESS THAN 18 INCHES FOR ROODING.
19. DRAINAGE PIPING FOR FIXTURES SHALL TERMINATE WITH AN APPROVED CAP OR PLUG.
20. AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DWV TESTING REQUIRED BY SECTIONS 312.2 AND 312.3. PROVIDE ACCESS TO ALL AIR ADMITTANCE VALVES PER CODE. INSTALLATION OF ALL AIR ADMITTANCE VALVES SHALL CONFORM TO SECTION 917 OF THE NC PLUMBING CODE. AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1050 OR 1051.
21. INDIRECT WASTE PIPING THAT EXCEEDS 2 FEET IN DEVELOPED LENGTH MEASURED HORIZONTALLY, OR 4 FEET IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED. THE AIR GAP BETWEEN THE INDIRECT WASTE PIPE AND THE FLOOD LEVEL RIM OF THE WASTE RECEPTOR SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE PIPE.
22. THE PC SHALL PROVIDE UNIONS FOR DISASSEMBLY AND SERVICE OF ALL FIXTURES AND OTHER RELEVANT PLUMBING EQUIPMENT. UNIONS SHALL BE GROUND-JOINT WITH BRASS SEAT. PROVIDE INSULATING UNIONS AT EACH JUNCTION OF DISSIMILAR MATERIALS.
23. THE PC SHALL ACCURATELY ROUGH-IN ALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION DIMENSIONS AND INSTRUCTIONS. OFFSET ADAPTERS AND FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE. FLUSH HANDLES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS FOR ADA COMPLIANCE. INSTALL EACH FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. SEAL ALL SELF-RIMMING LAVATORIES AND SINKS (VITREOUS CHINA AND STAINLESS STEEL) WITH A COMMERCIAL GRADE PLUMBER'S PUTTY OR ACRYLIC LATEX CALK APPLIED TO THE UNDERSIDE OF THE FIXTURE RIM A GENEROUS AMOUNT SO THAT WHEN FIXTURE IS SET, SEALANT SHALL OZZE OUT.
24. ALL VENT THRU THE ROOF (VTR) PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PC SHALL PROVIDE FLASHING MATERIAL REQUIRED FOR VTRS. JOINTS AT THE ROOF AND AROUND VENT PIPES SHALL BE MADE WATER TIGHT BY THE USE OF LEAD, COPPER, GALVANIZED STEEL, ALUMINUM, OR OTHER APPROVED FLASHINGS OR FLASHING MATERIAL. MAINTAIN MINIMUM 10 FEET FROM ALL OUTSIDE AIR INTAKES.

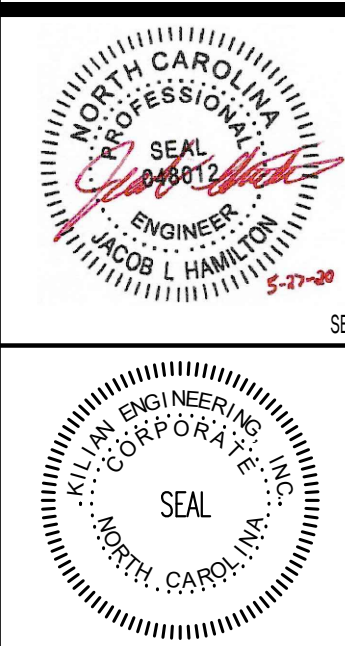
PLUMBING FIXTURE SCHEDULE table with columns: SYMBOL, FIXTURE, MANUFACTURER, FITTING, HW, CW, WASTE. Rows include PHH, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, FCD, WCD, AAV.

PLUMBING LINES SIZING TABLE with columns: FIXTURE TYPE, OCCUPANCY, QTY, DRAINAGE FIXTURE UNITS (EACH, TOTAL), WATER SUPPLY FIXTURE UNITS (CV, HW, CV & HW, HW TOTAL, TOTAL).

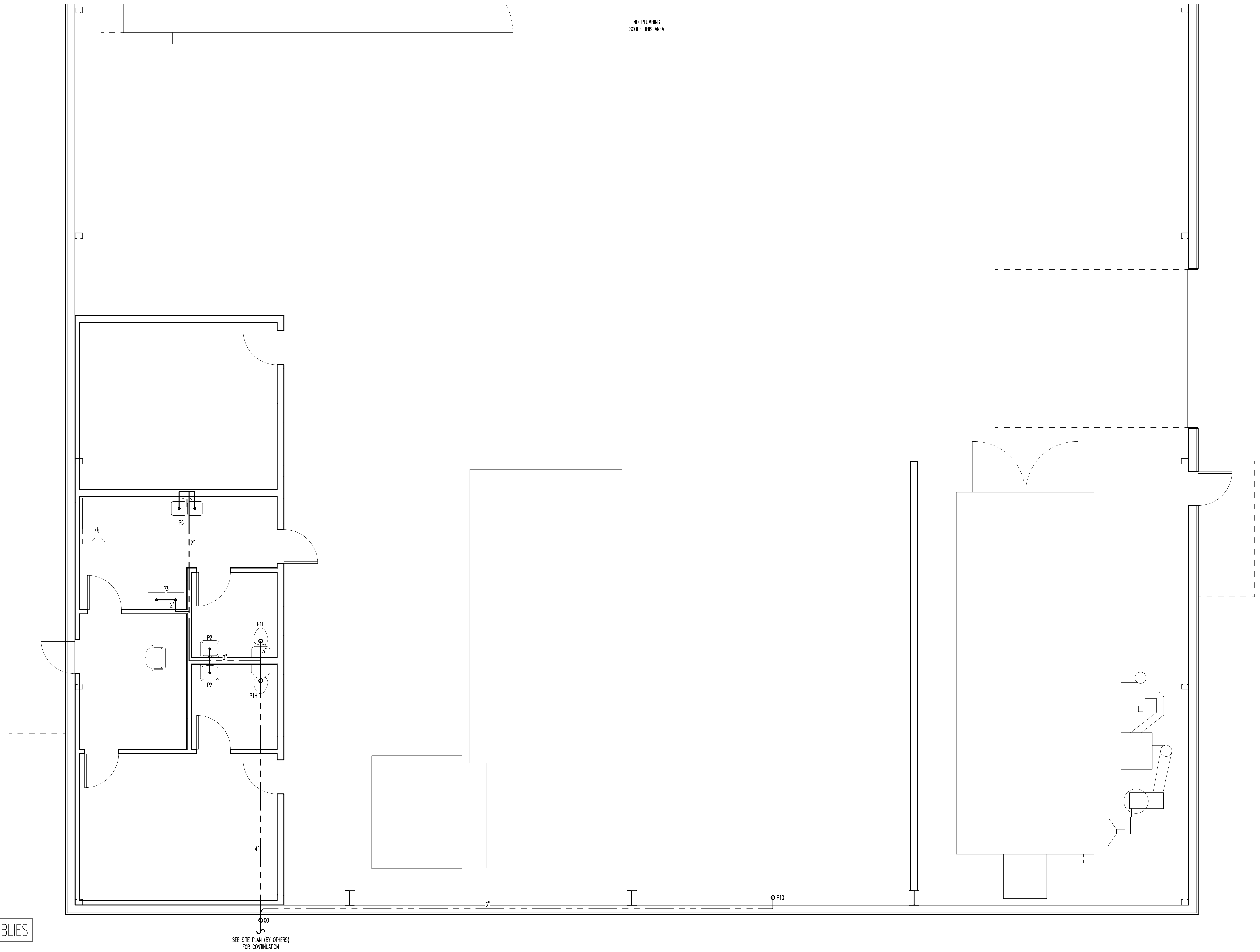
ELECTRIC WATER HEATER SCHEDULE table with columns: MARK, MFG, MODEL, TANK VOL., INPUT, RECOVERY, SET POINT, POWER, CONNECTIONS, OPTIONS.

- 1. PROVIDE GALVANIZED STEEL SAFETY PAN
2. UL 174 LISTED
3. PROVIDE ASME LISTED TEMPERATURE AND PRESSURE RELIEF VALVE
4. MEET OR EXCEED ENERGY FACTOR REQUIREMENTS OF ASHRAE 90.1-2007
5. OR EQUAL BY A.O. SMITH, BRADFORD WHITE, OR STATE

LINE TYPE LEGEND table with columns: LINE TYPE, SYMBOL, NAME.



REVISION and ISSUED sections with tables for recording changes and issues, including fields for description, date, and initials.



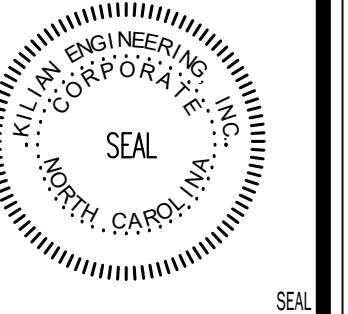
REVISION:


ISSUED:


DRAWN BY: JLP  
 CHECKED BY: MNK/CML  
 SANITARY SEWER PLAN

SHEET NO.

P-2



NEW BUILDING FOR:  
**JC POWDERCOATING**  
 FLOUQUA VARIANA, NORTH CAROLINA

REVISION:


ISSUED:


DRAWN BY: JLF  
 CHECKED BY: MJK/CML  
**DOMESTIC SUPPLY PLAN**

SHEET NO.  
**P-3**

NO PLUMBING  
 SCOPE THIS AREA

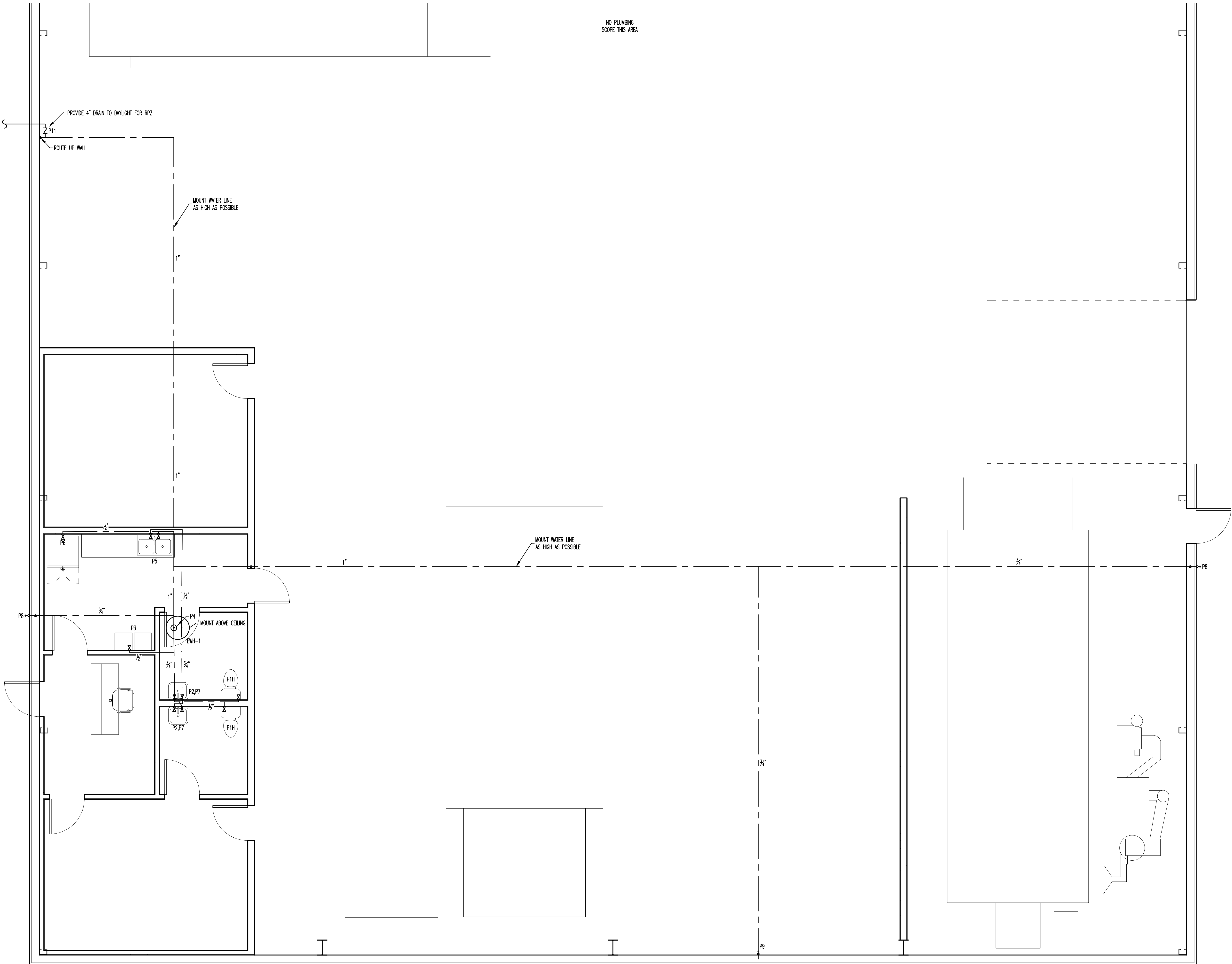
SEE SITE PLAN  
 (BY OTHERS) FOR  
 CONTINUATION

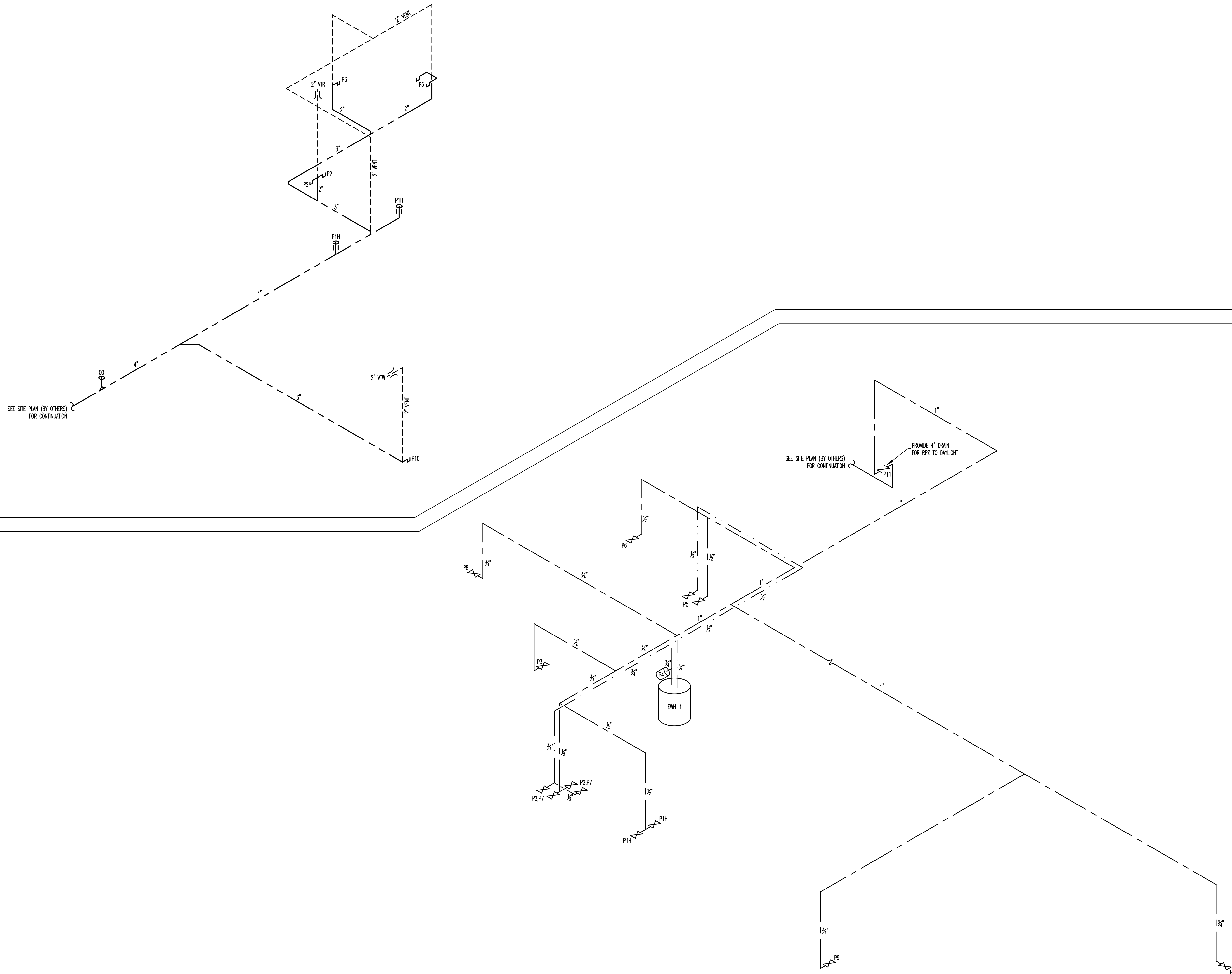
PROVIDE 4" DRAIN TO DAYLIGHT FOR RP2

ROUTE UP WALL

MOUNT WATER LINE  
 AS HIGH AS POSSIBLE

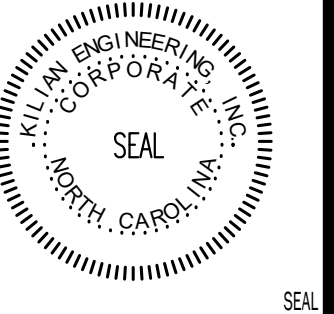
MOUNT WATER LINE  
 AS HIGH AS POSSIBLE





SANITARY SEWER RISER - NO SCALE 1

DOMESTIC SUPPLY RISER - NO SCALE 2



NEW BUILDING FOR:  
**JC POWDERCOATING**  
 FLOQUAY VILLAGE, NORTH CAROLINA

REVISION:


ISSUED:


DRAWN BY: JLP  
 CHECKED BY: MWK/CMJ  
 PLUMBING RISERS

SHEET NO.  
**P-4**

PROJECT NO: 20139



REVISION:

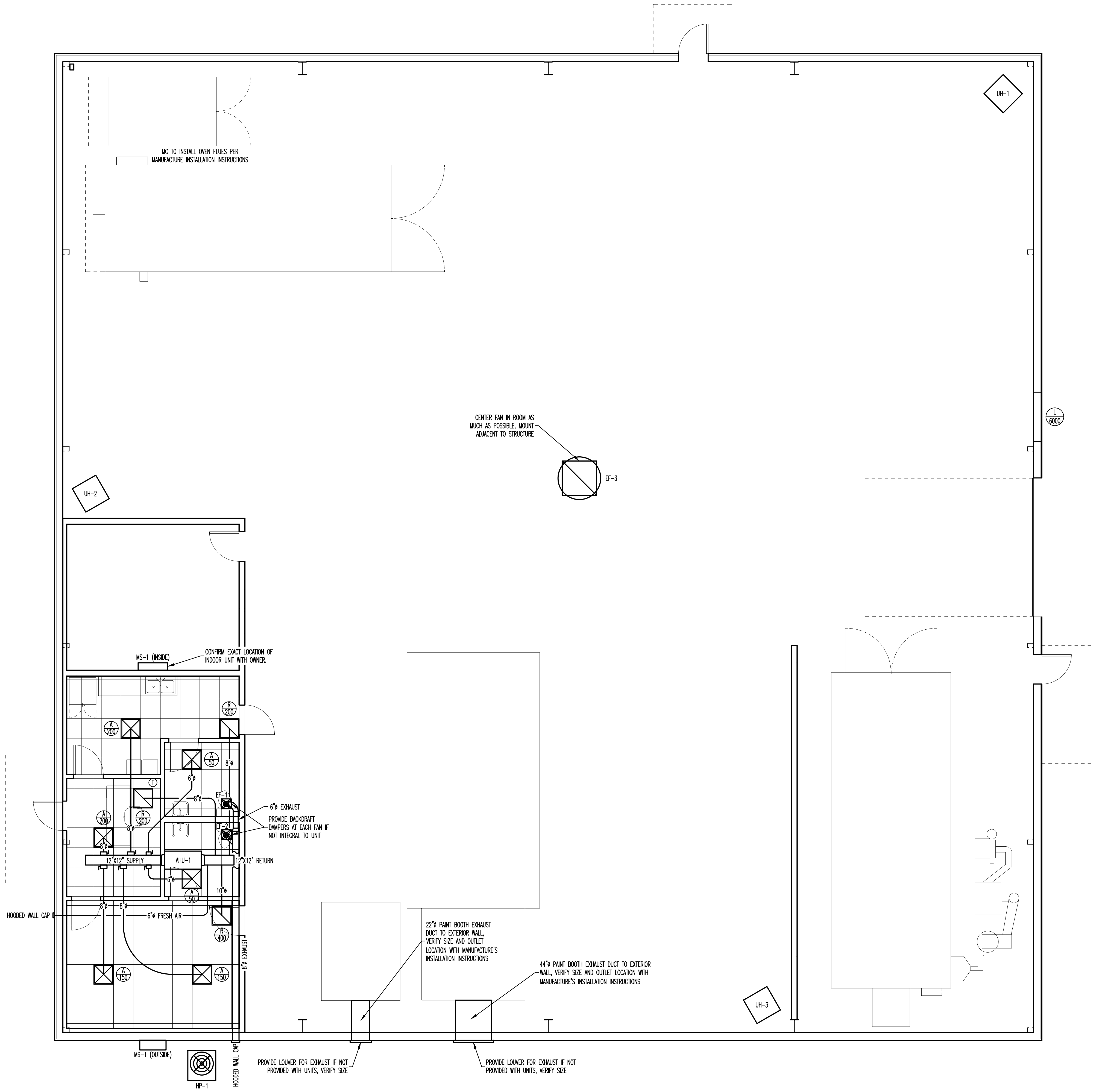

ISSUED:


DRAWN BY: JAH  
 CHECKED BY: MMW (JML)  
 MECHANICAL PLAN

SHEET NO.

M-2

PROJECT NO: 20139



NO FIRE RATED ASSEMBLIES

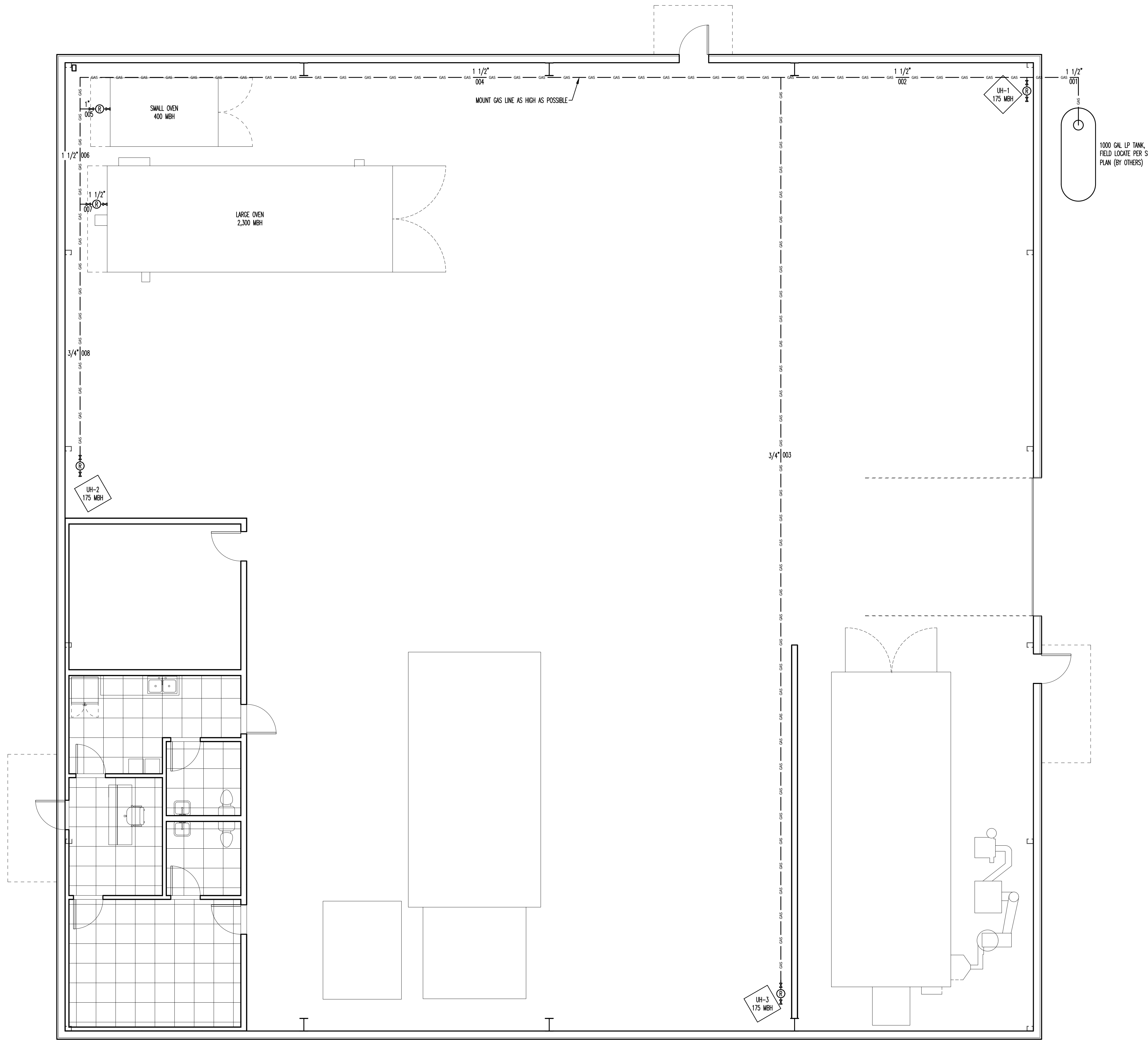
GENERAL GAS LINE PIPING NOTES

1. THE GAS PIPING CONTRACTOR (GPC) SHALL PROVIDE ALL MATERIALS AND LABOR AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
2. THE GPC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA FUEL GAS CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MORE STRINGENT SHALL BE USED. THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
3. THE GPC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
4. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
5. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS.
6. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR SHALL INSTALL HIGH PRESSURE REGULATORS AT EACH PIECE OF EQUIPMENT AS NECESSARY.
8. INSTALL A TRIP LEE IN GAS LINE AT EACH POINT WHERE CONDENSATE COULD COLLECT. ALL TRIP LEE SHALL BE READILY ACCESSIBLE FOR CLEANING OR EMPTYING.
9. PIPING SHALL BE SCHEDULE 40 STEEL OR WROUGHT IRON AND COMPLY WITH ANS/ASME B36.10, ASTM A 53, OR ASTM A 106. ALL PIPES AND FITTINGS SHALL BE NEW, FREE OF DEFECTS, AND RATED FOR THE APPLICATION.
11. ALL PIPING SHALL BE INSTALLED SO AS NOT TO BE SUBJECT TO PHYSICAL DAMAGE.
12. PVC VENT PIPING SHALL NOT BE INSTALLED INDOORS.
13. THE TYPE OF PIPING JOINT USED SHALL BE SUITABLE FOR THE PRESSURE-TEMPERATURE CONDITIONS AND SHALL BE SELECTED CONSIDERING JOINT TIGHTNESS AND MECHANICAL STRENGTH UNDER THE SERVICE CONDITIONS.
14. PIPE JOINTS SHALL BE THREADED, FLANGED, BRAZED, OR WELDED.
15. FLEXIBILITY SHALL BE PROVIDED BY THE USE OF BENDS, LOOPS, OFFSETS, OR COUPLINGS OF THE SLIP TYPE. PROVISIONS SHALL BE MADE TO ABSORB THERMAL CHANGES BY THE USE OF EXPANSION JOINTS OF THE BELLOWS TYPE OR BY THE USE OF "BALL" OR "SMOKE" JOINTS. DO NOT USE EXPANSION JOINTS OF THE SLIP TYPE INSIDE THE BUILDING. PIPE ALIGNMENT GUIDES SHALL BE USED WITH EXPANSION JOINTS PER THE MFG.
16. ALL GAS PIPING SHALL BE LABELED TO INDICATE THE PRESSURE.
17. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO ANS/MSS SP-58.
18. BENDS SHALL BE MADE ONLY WITH BENDING TOOLS AND PROCEDURES INTENDED FOR THAT PURPOSE. DO NOT BEND PIPE THROUGH AN ARC OF MORE THAN 90°. ALL BENDS SHALL BE SMOOTH AND FREE OF CRACKS, BUCKLING, OR OTHER EVIDENCE OF DAMAGE.
19. INSTALL GAS SHUTOFF VALVES UPSTREAM OF EACH GAS REGULATOR. VALVES SHALL BE READILY ACCESSIBLE AND NOT SUBJECT TO PHYSICAL DAMAGE.
20. WHERE A SEDIMENT TRAP IS NOT INCORPORATED AS PART OF THE APPLIANCE, A SEDIMENT TRAP SHALL BE INSTALLED DOWNSTREAM OF THE APPLIANCE SHUTOFF VALVE AS CLOSE TO THE INLET OF THE APPLIANCE AS PRACTICAL.
21. PRIOR TO ACCEPTANCE BY THE OWNER, ALL GAS PIPING INSTALLATIONS SHALL BE INSPECTED AND PRESSURE TESTED IN ACCORDANCE WITH SECTION 406 OF THE NC FUEL GAS CODE.

GAS LINE SIZING VERIFICATION TABLE				
PER 2018 NC FUEL GAS CODE TABLE 402.4 (27)				
SECTION	GAS LOAD MBTU/H	LINE SIZE INCHES	CAPACITY	
			CFH	PSI
001	3225	1 1/2	6410	2
002	3050	1 1/2	6410.0	2
003	175	3/4	1110	2
004	2875	1 1/2	6410.0	2
005	400	1	2080	2
006	2475	1 1/2	6410.0	2
007	2300	1 1/2	6410.0	2
008	175	3/4	1110	2

EQUIVALENT LENGTH: 200FT

NO FIRE RATED ASSEMBLIES



1000 GAL LP TANK, FIELD LOCATE PER SITE PLAN (BY OTHERS)

**Kilian Engineering Inc.**  
www.kilianengineering.com  
PO Box 301, Henderson, NC 27536  
LP 252.438.8718 | CORPORATE LICENSE C2217

NORTH CAROLINA PROFESSIONAL ENGINEERING SEAL  
JACOB L. HAMILTON, ENGINEER  
5-27-20

KILIAN ENGINEERING INC. CORPORATE SEAL  
NORTH CAROLINA

NEW BUILDING FOR:  
**JC POWDERCOATING**  
FLUQUAY/VARINA, NORTH CAROLINA

REVISION:

NO.	DATE	DESCRIPTION

ISSUED:

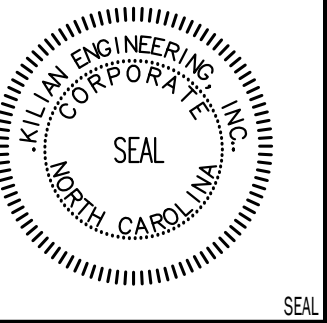
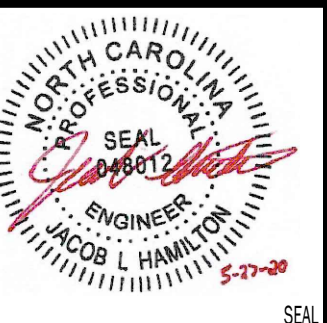
NO.	DATE	DESCRIPTION

DRAWN BY: JAH  
CHECKED BY: MMW, CML  
LP GAS PLAN

SHEET NO. **M-3**







NEW BUILDING FOR:  
**JC POWDERCOATING**  
 FLOUQUA/VARINA, NORTH CAROLINA

REVISION:

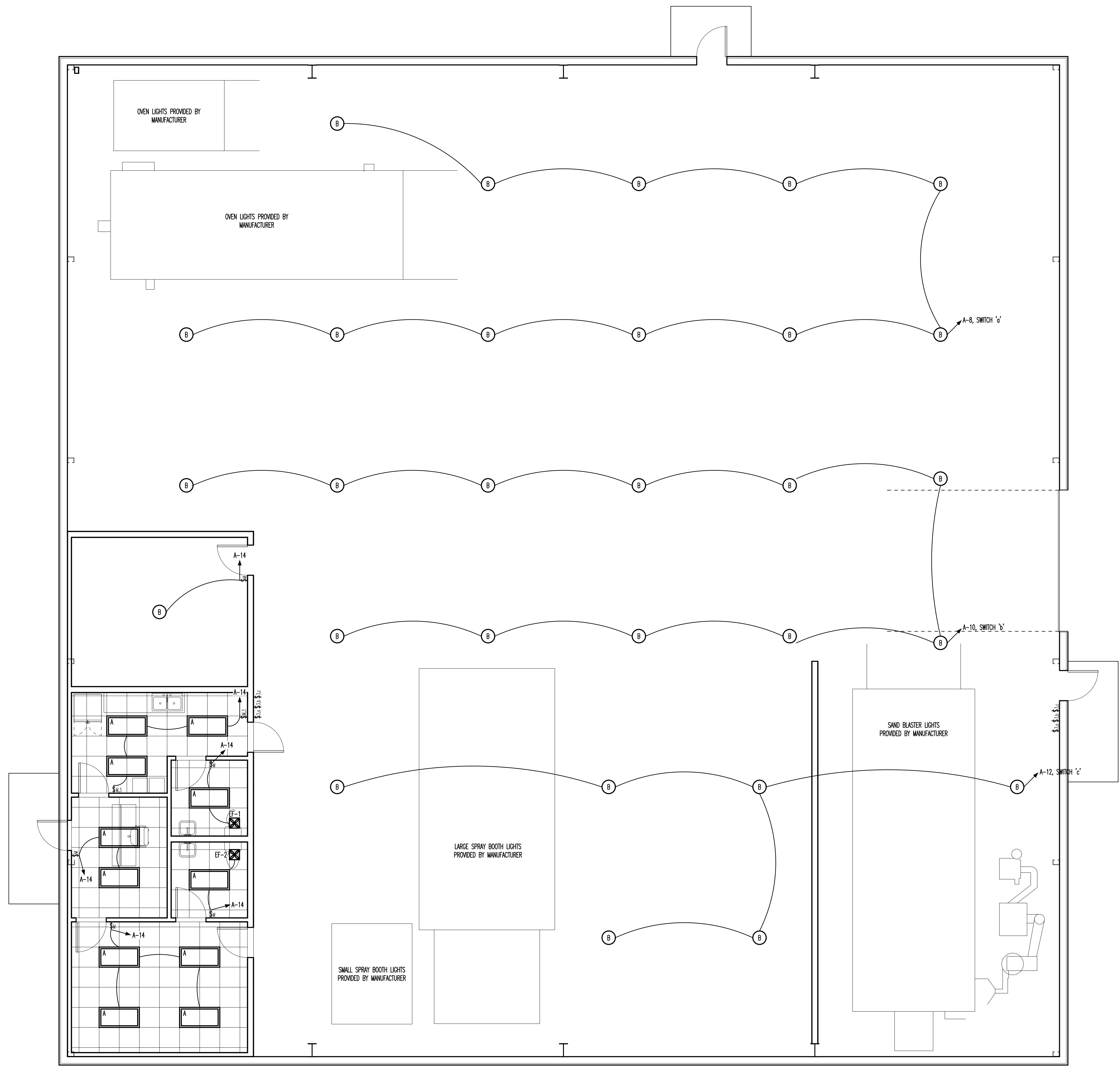
NO.	DATE	DESCRIPTION

ISSUED:

NO.	DATE	DESCRIPTION

DRAWN BY: JAH  
 CHECKED BY: MMW/CML  
 LIGHTING PLAN

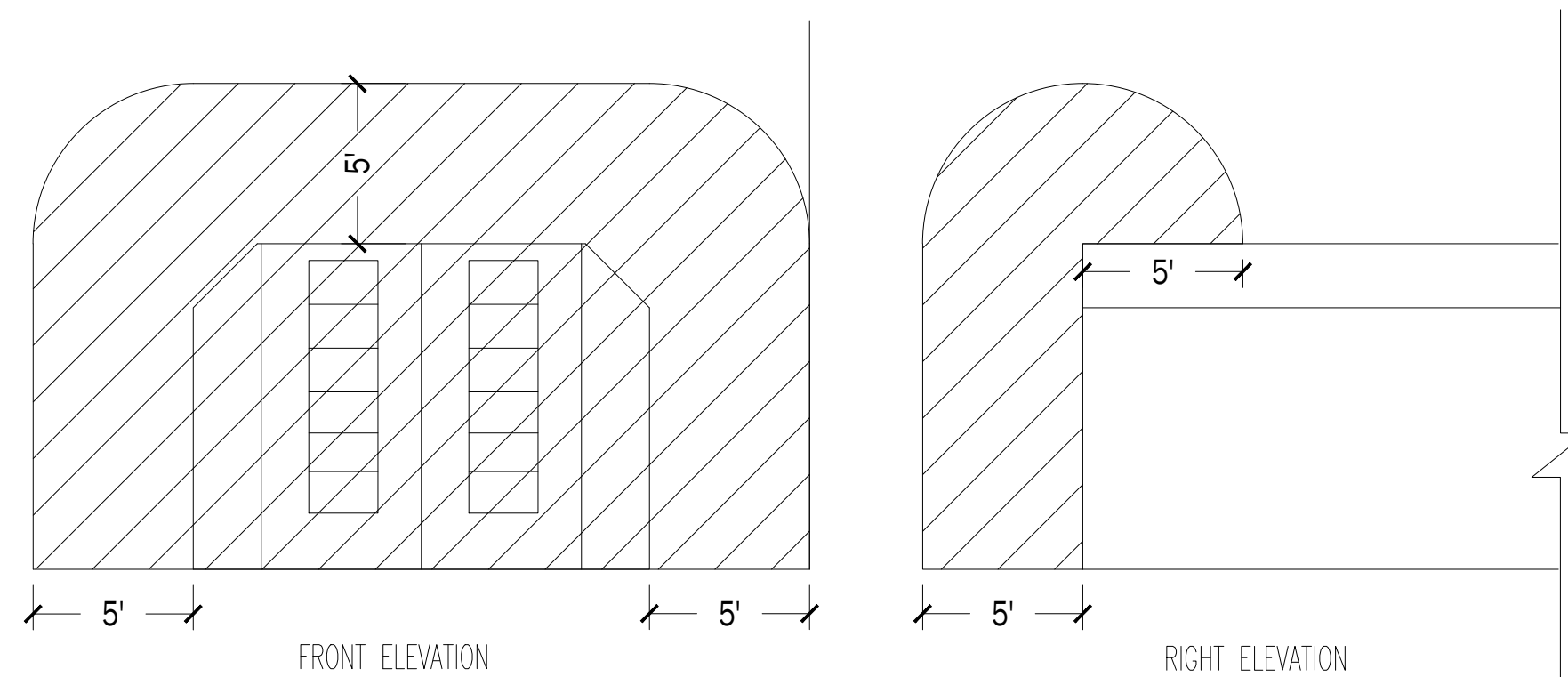
SHEET NO.  
**E-2**



NO FIRE RATED ASSEMBLIES

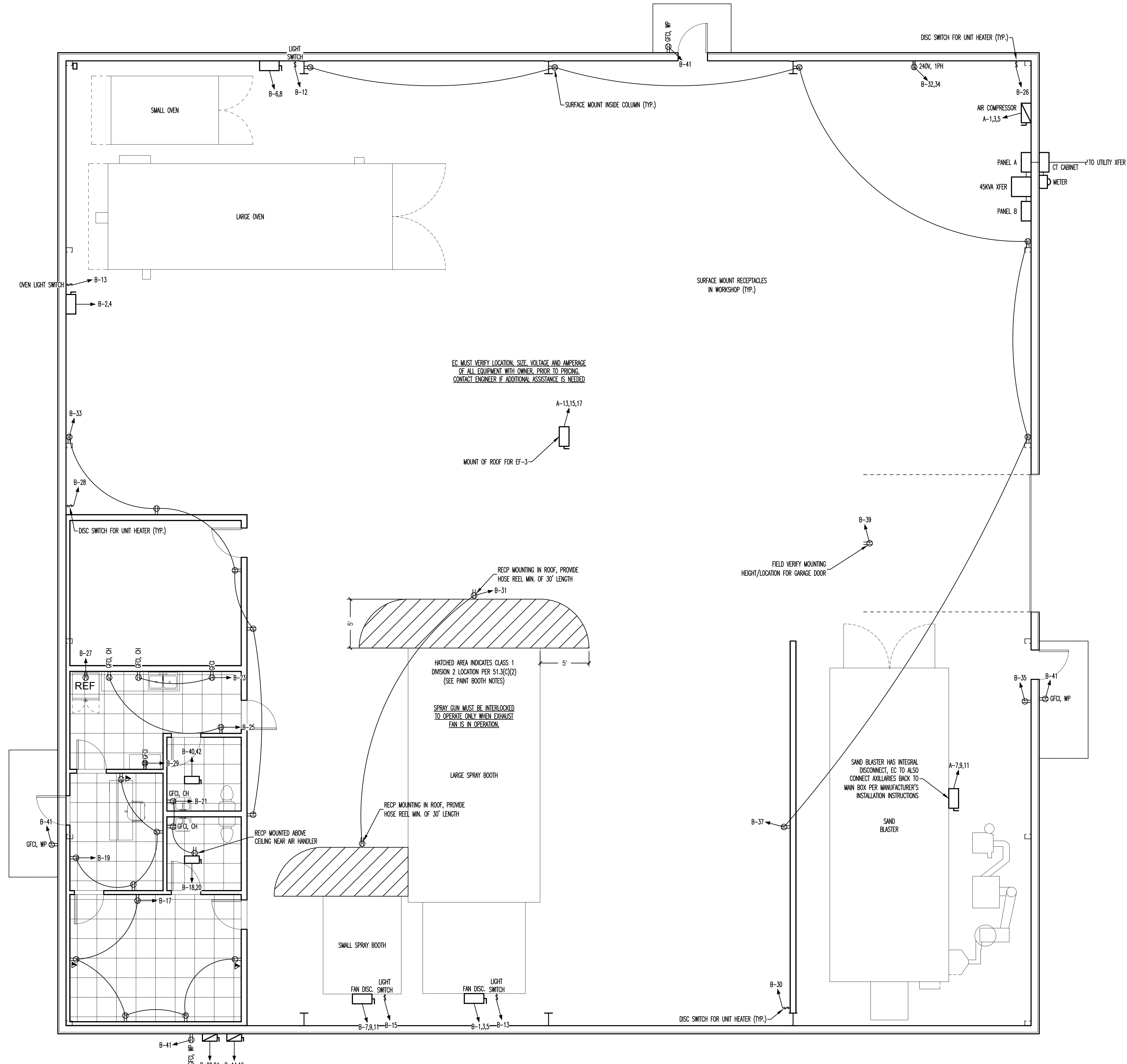
PAINT BOOTH NOTES

1. INSIDE OF PAINT BOOTH IS CLASS 1 DIVISION 1. INSIDE OF EXHAUST DUCT FOR PAINT BOOTH IS CLASS 1, DIVISION 1.
2. THE DIVISION 2 LOCATION SHALL EXTEND 5 FEET HORIZONTALLY AND 3 FEET VERTICALLY FROM THE OPEN FACE OR OPEN FRONT OF THE BOOTH. SEE NEC FIGURE 516.3(C)(2).
3. WIRING METHODS WITHIN THESE ZONES SHALL COMPLY WITH NEC 501. THREADED RIGID METAL CONDUIT OR THREADED INTERMEDIATE METAL CONDUIT, TYPE MI CABLE WITH TERMINATION FITTINGS LISTED FOR THE LOCATION ARE PERMITTED. WHERE FLEXIBLE CONNECTIONS ARE REQUIRED, FLEXIBLE FITTINGS LISTED FOR CLASS 1, DIVISION 1 IS PERMITTED.
4. CONDUIT SEALS SHALL BE PROVIDED IN ACCORDANCE WITH 501.15. IN PARTICULAR, ALL CONDUITS ENTERING ENCLOSURES MUST HAVE A SEAL FITTING WITHIN 18" OF SAID ENCLOSURE. CONDUITS LEAVING A CLASS 1, DIVISION 1 BOUNDARY AND A CLASS 1, DIVISION 2 BOUNDARY SHALL HAVE A SEAL FITTING INSTALLED ON EITHER SIDE OF THE BOUNDARY WITHIN 10 FEET.
5. PORTABLE ELECTRIC LUMINAIRES OR OTHER UTILIZATION EQUIPMENT SHALL NOT BE USED IN A SPRAY AREA DURING SPRAY OPERATIONS.
6. ALL ELECTRICALLY CONDUCTIVE OBJECTS IN THE SPRAY AREA SHALL BE ADEQUATELY GROUNDED. SEE NEC 516 FOR MORE DETAILS.
7. SIGNAGE SHALL BE POSTED AROUND THE SPRAY BOOTH TO INDICATE THE FOLLOWING:
  - 7.1. DESIGNATE THE PROCESS ZONE AS DANGEROUS WITH REGARD TO FIRE AND ACCIDENT.
  - 7.2. IDENTIFY THE GROUNDING REQUIREMENTS FOR ALL ELECTRICALLY CONDUCTIVE OBJECTS IN THE SPRAY AREA.
  - 7.3. RESTRICT ACCESS TO QUALIFIED PERSONNEL ONLY.
8. SPRAY APPARATUS MUST BE INTERLOCKED WITH EXHAUST FAN OPERATION—EXHAUST FAN MUST BE RUNNING FOR SPRAY APPLICATION EQUIPMENT TO OPERATE.
9. ALL FIXED WIRING ABOVE THE CLASS 1 LOCATION SHALL BE IN METAL RACEWAYS, TYPE MC, TYPE MI, OR TYPE TC CABLE.
10. EQUIPMENT THAT MAY PRODUCE SPARKS, ARCS, OR PARTICLES OF HOT METAL THAT ARE LOCATED ABOVE CLASS 1 LOCATIONS SHALL COMPLY WITH 516.7(B). THIS MAY NECESSITATE RELOCATED OR ELIMINATE SOME FIXED LIGHTING ABOVE THE PAINT BOOTH. (NEC 516.7 WIRING AND EQUIPMENT NOT WITHIN CLASS 1 AND II LOCATIONS (A) ALL FIXED WIRING ABOVE THE CLASS I AND II LOCATIONS SHALL BE IN METAL RACEWAYS, RIGID NONMETALLIC CONDUIT, OR ELECTRICAL NONMETALLIC TUBING, OR SHALL BE TYPE MI, TC, OR MC CABLE. CELLULAR METAL FLOOR RACEWAYS SHALL BE PERMITTED ONLY FOR SUPPLYING CEILING OUTLETS OR EXTENSIONS TO THE AREA BELOW THE FLOOR OF A CLASS I OR II LOCATION, BUT SUCH RACEWAYS SHALL HAVE NO CONNECTIONS LEADING INTO OR THROUGH THE CLASS I OR II LOCATION ABOVE THE FLOOR UNLESS SUITABLE SEALS ARE PROVIDED. (B) EQUIPMENT THAT MAY PRODUCE ARCS, SPARKS, OR PARTICLES OF HOT METAL SUCH AS LAMPS AND LAMPHOLDERS FOR FIXED LIGHTING, CUTOUTS, SWITCHES, RECEPTACLES, MOTORS, OR OTHER EQUIPMENT HAVING MAKE-AND-BREAK OR SLIDING CONTACTS, WHERE INSTALLED ABOVE A CLASS I OR II LOCATION OR ABOVE A LOCATION WHERE FRESHLY FINISHED GOODS ARE HANDLED, SHALL BE OF THE TOTALLY ENCLOSED TYPE OR BE CONSTRUCTED SO AS TO PREVENT THE ESCAPE OF SPARKS OR HOT METAL PARTICLES.)



HATCHED AREA INDICATES CLASS 1 DIVISION 2 LOCATION PER 516.3(C)(2) (SEE PAINT BOOTH NOTES)

NO FIRE RATED ASSEMBLIES



PAINT BOOTH DETAIL - NO SCALE | 1

POWER PLAN - SCALE: 1/4" = 1' | 2

REVISION:


ISSUED:


DRAWN BY: JAH  
 CHECKED BY: MMW/CML

POWER PLAN

SHEET NO.

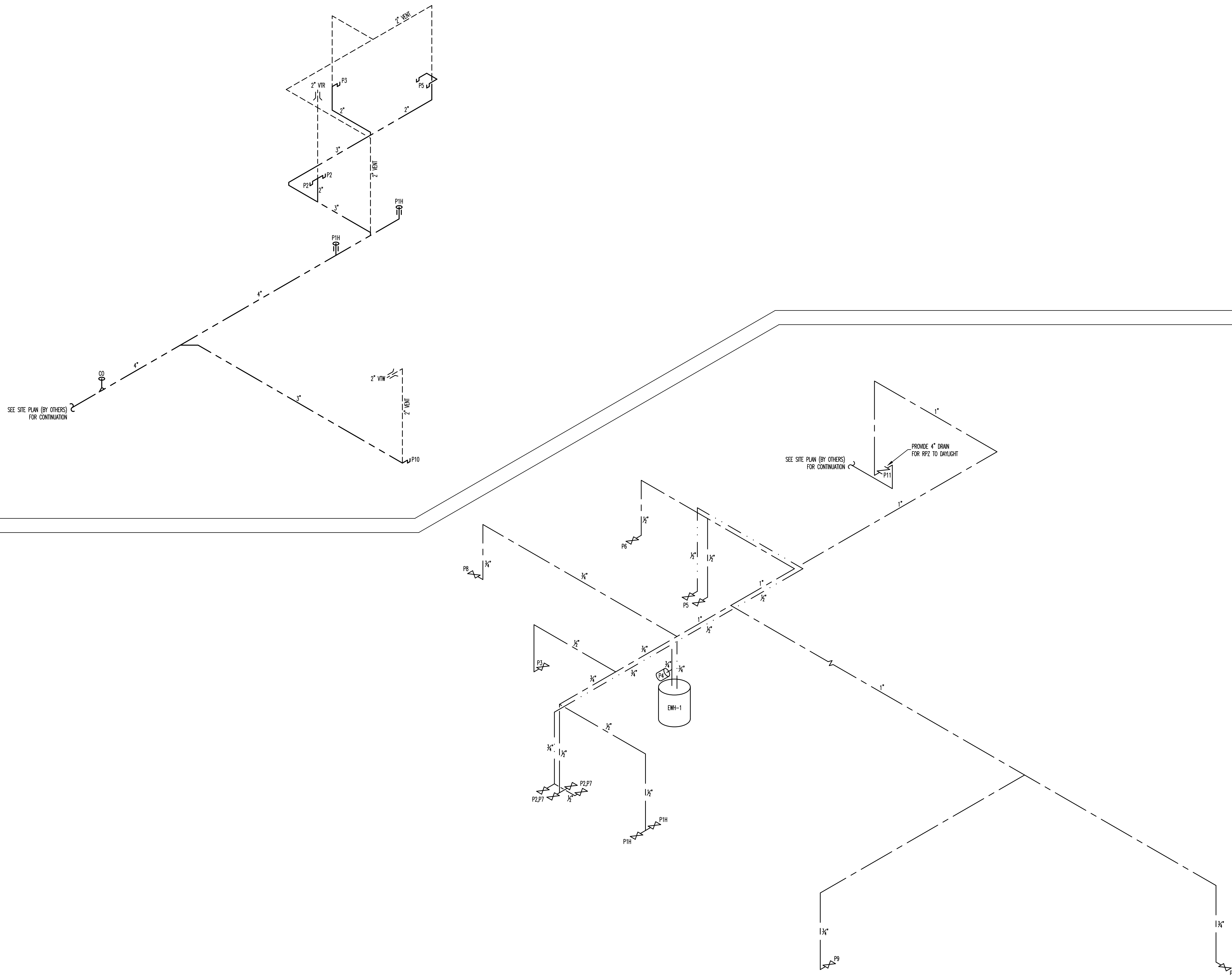
E-3







SANITARY SEWER RISER - NO SCALE | 1



NEW BUILDING FOR:  
**JC POWDERCOATING**  
 FLOQUAY VILLAGE, NORTH CAROLINA

REVISION:


ISSUED:


DRAWN BY: JLP  
 CHECKED BY: MJK/CML  
 PLUMBING RISERS

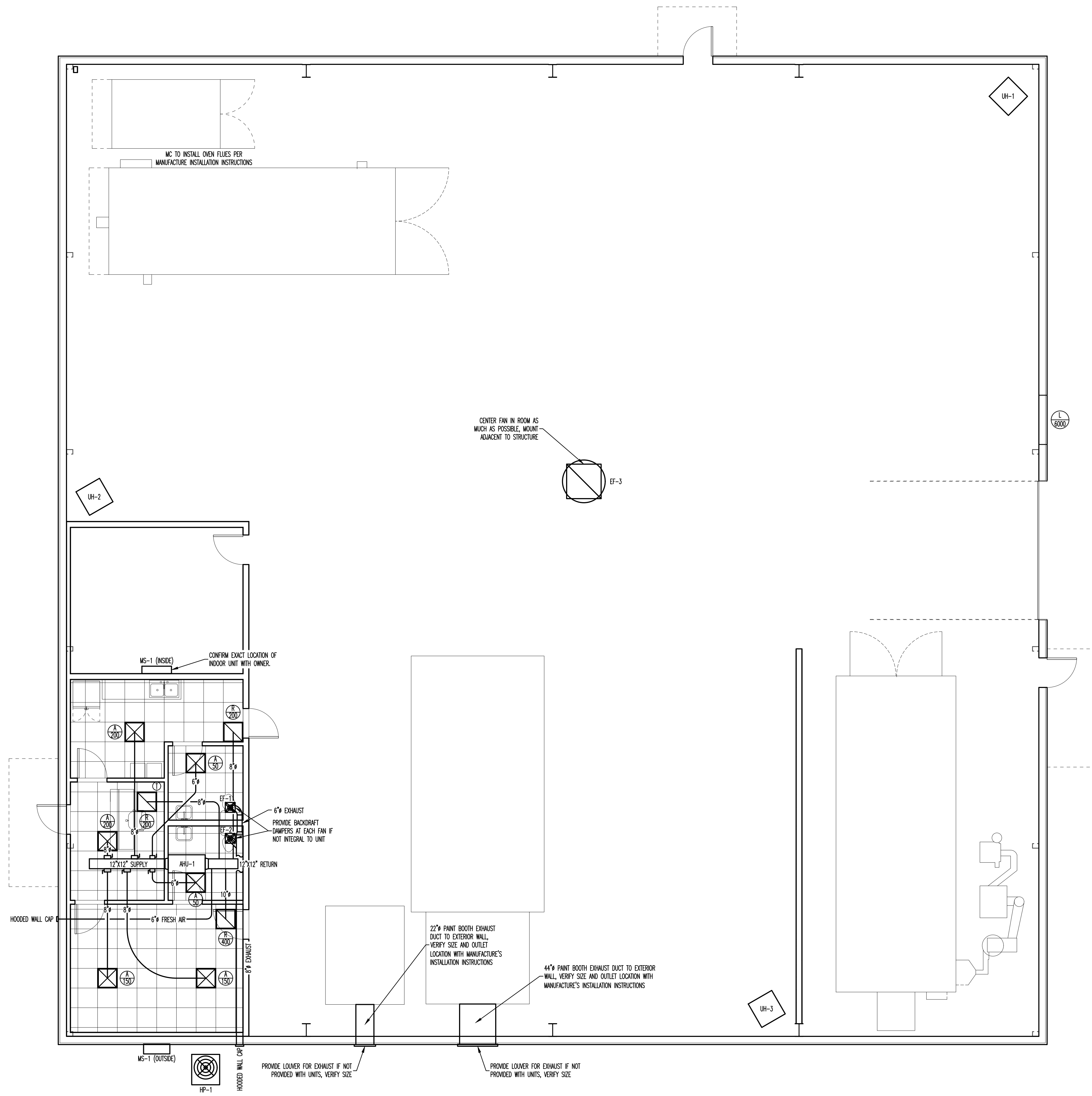
SHEET NO.  
**P-4**

DOMESTIC SUPPLY RISER - NO SCALE | 2

PROJECT NO: 20139







NO FIRE RATED ASSEMBLIES

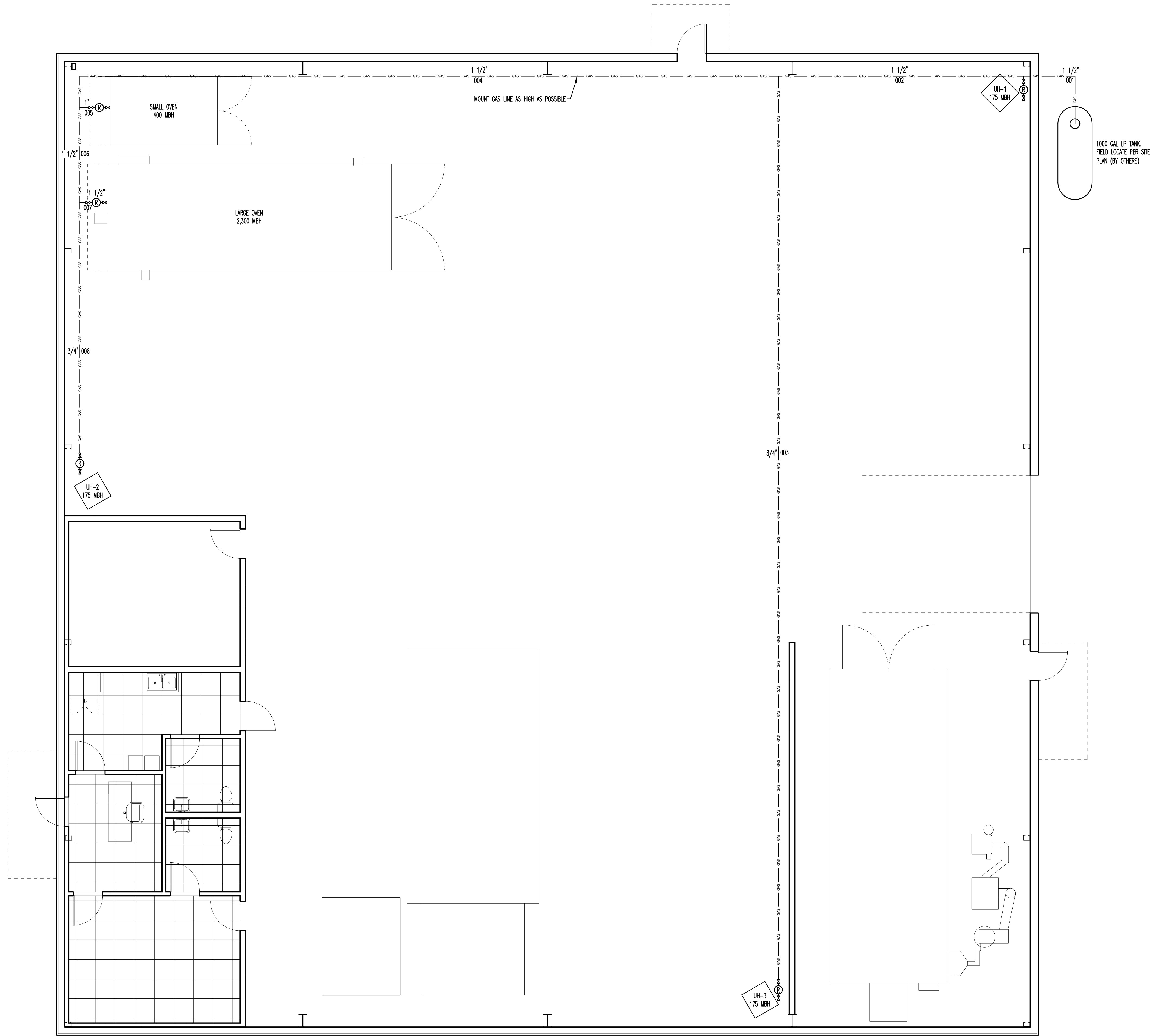
GENERAL GAS LINE PIPING NOTES

1. THE GAS PIPING CONTRACTOR (GPC) SHALL PROVIDE ALL MATERIALS AND LABOR AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
2. THE GPC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA FUEL GAS CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MORE STRINGENT SHALL BE USED. THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
3. THE GPC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
4. DO NOT SCALE THESE DRAWINGS—REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
5. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS.
6. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR SHALL INSTALL HIGH PRESSURE REGULATORS AT EACH PIECE OF EQUIPMENT AS NECESSARY.
8. INSTALL A TRIP LEAS IN GAS LINE AT EACH POINT WHERE CONDENSATE COULD COLLECT. ALL TRIP LEAS SHALL BE READILY ACCESSIBLE FOR CLEANING OR EMPTYING.
9. PIPING SHALL BE SCHEDULE 40 STEEL OR WROUGHT IRON AND COMPLY WITH ANSI/ASME B36.10, ASTM A 53, OR ASTM A 106. ALL PIPES AND FITTINGS SHALL BE NEW, FREE OF DEFECTS, AND RATED FOR THE APPLICATION.
11. ALL PIPING SHALL BE INSTALLED SO AS NOT TO BE SUBJECT TO PHYSICAL DAMAGE.
12. PVC VENT PIPING SHALL NOT BE INSTALLED INDOORS.
13. THE TYPE OF PIPING JOINT USED SHALL BE SUITABLE FOR THE PRESSURE-TEMPERATURE CONDITIONS AND SHALL BE SELECTED CONSIDERING JOINT TIGHTNESS AND MECHANICAL STRENGTH UNDER THE SERVICE CONDITIONS.
14. PIPE JOINTS SHALL BE THREADED, FLANGED, BRAZED, OR WELDED.
15. FLEXIBILITY SHALL BE PROVIDED BY THE USE OF BENDS, LOOPS, OFFSETS, OR COUPLINGS OF THE SLIP TYPE. PROVISIONS SHALL BE MADE TO ABSORB THERMAL CHANGES BY THE USE OF EXPANSION JOINTS OF THE BELLOWS TYPE OR BY THE USE OF "BALL" OR "SMOKE" JOINTS. DO NOT USE EXPANSION JOINTS OF THE SLIP TYPE INSIDE THE BUILDING. PIPE ALIGNMENT GUIDES SHALL BE USED WITH EXPANSION JOINTS PER THE MFG.
16. ALL GAS PIPING SHALL BE LABELED TO INDICATE THE PRESSURE.
17. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO ANSI/MSS SP-58.
18. BENDS SHALL BE MADE ONLY WITH BENDING TOOLS AND PROCEDURES INTENDED FOR THAT PURPOSE. DO NOT BEND PIPE THROUGH AN ARC OF MORE THAN 90°. ALL BENDS SHALL BE SMOOTH AND FREE OF CRACKS, BUCKLING, OR OTHER EVIDENCE OF DAMAGE.
19. INSTALL GAS SHUTOFF VALVES UPSTREAM OF EACH GAS REGULATOR. VALVES SHALL BE READILY ACCESSIBLE AND NOT SUBJECT TO PHYSICAL DAMAGE.
20. WHERE A SEDIMENT TRAP IS NOT INCORPORATED AS PART OF THE APPLIANCE, A SEDIMENT TRAP SHALL BE INSTALLED DOWNSTREAM OF THE APPLIANCE SHUTOFF VALVE AS CLOSE TO THE INLET OF THE APPLIANCE AS PRACTICAL.
21. PRIOR TO ACCEPTANCE BY THE OWNER, ALL GAS PIPING INSTALLATIONS SHALL BE INSPECTED AND PRESSURE TESTED IN ACCORDANCE WITH SECTION 406 OF THE NC FUEL GAS CODE.

GAS LINE SIZING VERIFICATION TABLE				
PER 2018 NC FUEL GAS CODE TABLE 402.4 (27)				
SECTION	GAS LOAD	LINE SIZE	CAPACITY	PRESSURE
	MBTU/H	INCHES	CFH	PSI
001	3225	1 1/2	6410	2
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003	175	3/4	1110	2
004	2875	1 1/2	6410.0	2
005	400	1	2080	2
006	2475	1 1/2	6410.0	2
007	2300	1 1/2	6410.0	2
008	175	3/4	1110	2

EQUIVALENT LENGTH= 200FT

NO FIRE RATED ASSEMBLIES



**Kilian Engineering Inc.**  
 PO Box 301, Henderson, NC 27536 | www.kilianeengineering.com  
 LP 252-438-8718 | CORPORATE LICENSE C2217

**NORTH CAROLINA PROFESSIONAL ENGINEERING SEAL**  
 JACOB L. HAMMOND  
 ENGINEER  
 5-27-20

**KILIAN ENGINEERING INC. CORPORATE SEAL**  
 NORTH CAROLINA

NEW BUILDING FOR:  
**JC POWDERCOATING**  
 FLOQUAY-VARINA, NORTH CAROLINA

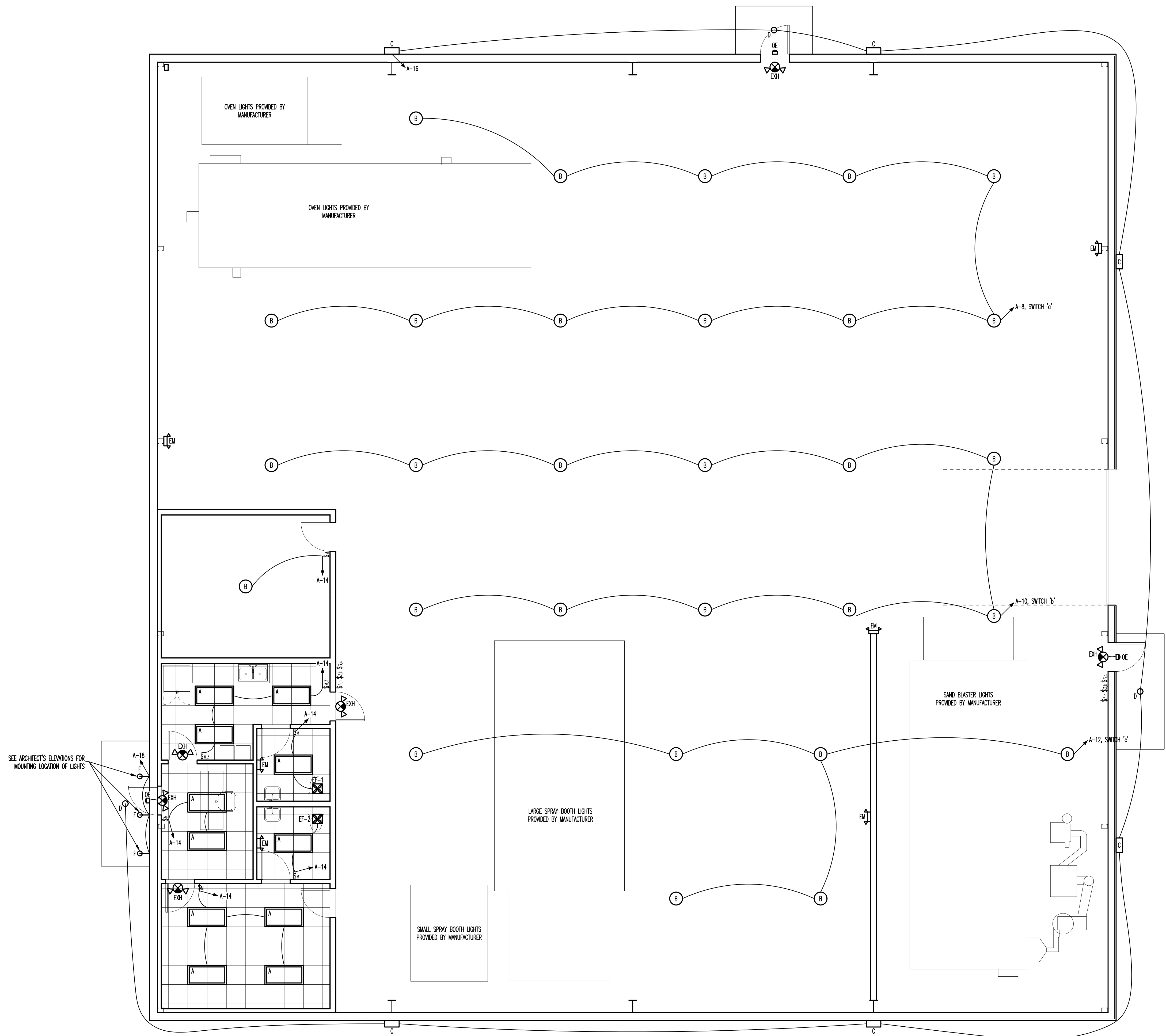
REVISION:


ISSUED:


DRAWN BY: JAH  
 CHECKED BY: MMW, DMU  
 LP GAS PLAN

SHEET NO.  
**M-3**





NO FIRE RATED ASSEMBLIES

REVISION:

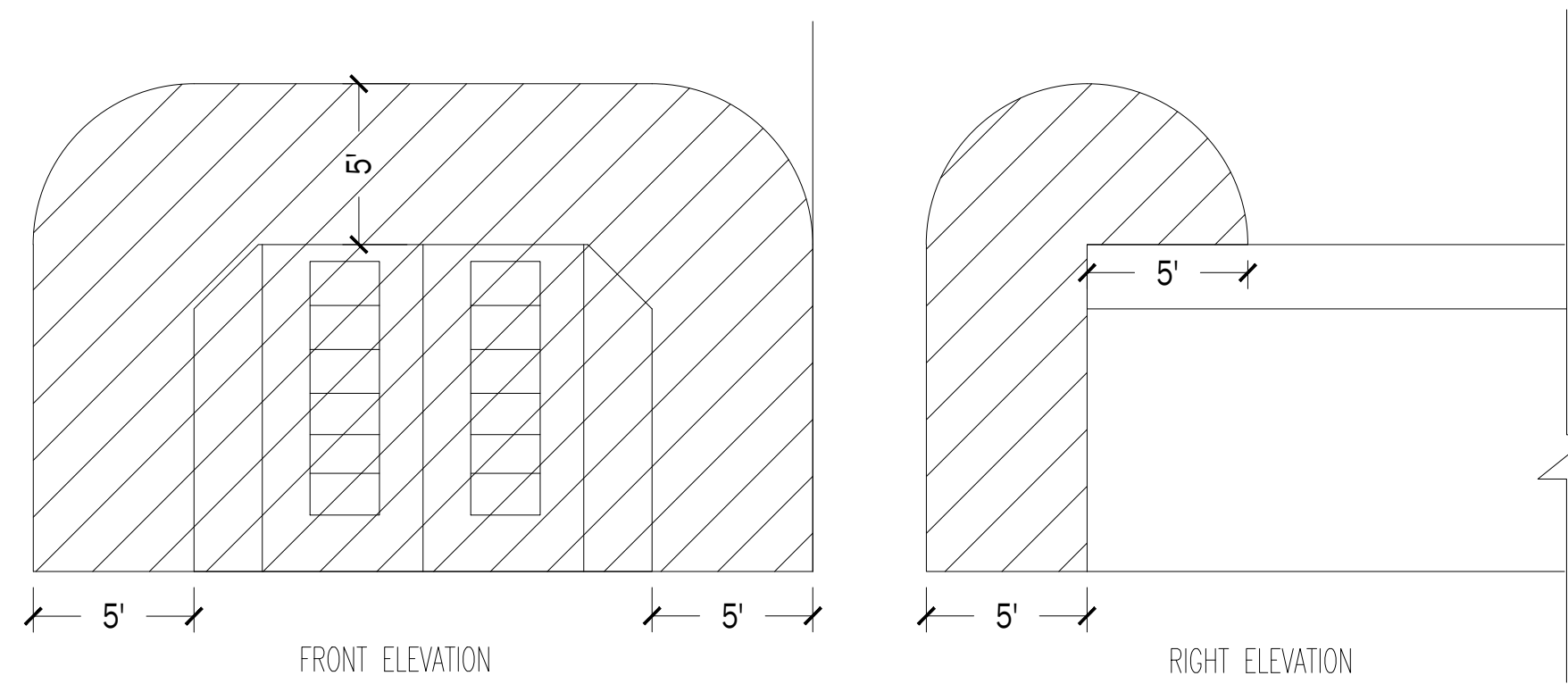

ISSUED:


DRAWN BY: JAH  
 CHECKED BY: MWW/CML  
 LIGHTING PLAN

SHEET NO.  
**E-2**  
 PROJECT NO: 20139

**PAINT BOOTH NOTES**

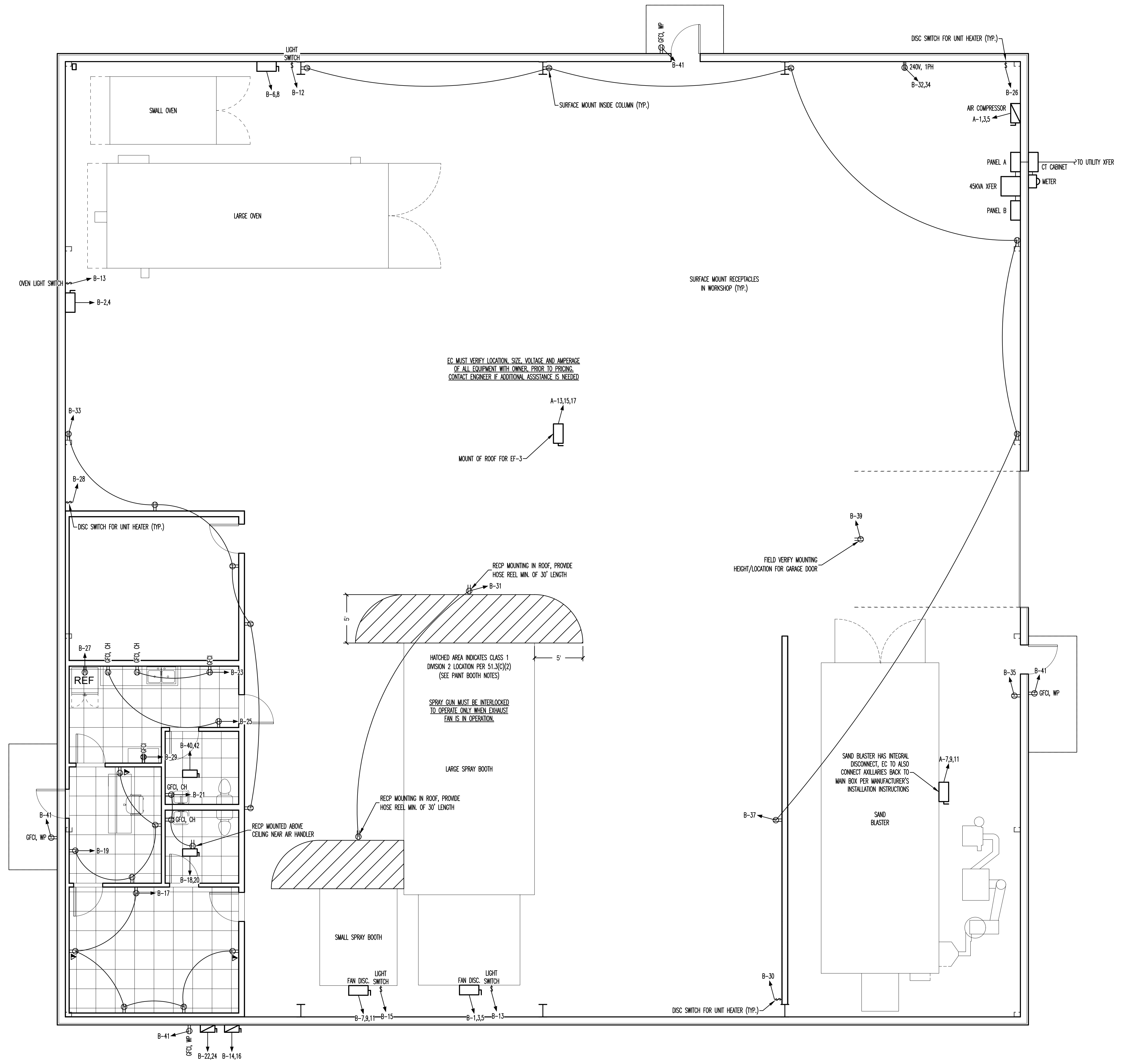
1. INSIDE OF PAINT BOOTH IS CLASS 1. INSIDE OF EXHAUST DUCT FOR PAINT BOOTH IS CLASS 1, DIVISION 1.
2. THE DIVISION 2 LOCATION SHALL EXTEND 5 FEET HORIZONTALLY AND 3 FEET VERTICALLY FROM THE OPEN FACE OR OPEN FRONT OF THE BOOTH. SEE NEC FIGURE 516.3(C)(2).
3. WIRING METHODS WITHIN THESE ZONES SHALL COMPLY WITH NEC 501. THREADED RIGID METAL CONDUIT OR THREADED INTERMEDIATE METAL CONDUIT, TYPE MI CABLE WITH TERMINATION FITTINGS LISTED FOR THE LOCATION ARE PERMITTED. WHERE FLEXIBLE CONNECTIONS ARE REQUIRED, FLEXIBLE FITTINGS LISTED FOR CLASS 1, DIVISION 1 IS PERMITTED.
4. CONDUIT SEALS SHALL BE PROVIDED IN ACCORDANCE WITH 501.15. IN PARTICULAR, ALL CONDUITS ENTERING ENCLOSURES MUST HAVE A SEAL FITTING WITHIN 18" OF SAID ENCLOSURE. CONDUITS LEAVING A CLASS 1, DIVISION 1 BOUNDARY AND A CLASS 1, DIVISION 2 BOUNDARY SHALL HAVE A SEAL FITTING INSTALLED ON EITHER SIDE OF THE BOUNDARY WITHIN 10 FEET.
5. PORTABLE ELECTRIC LUMINAIRES OR OTHER UTILIZATION EQUIPMENT SHALL NOT BE USED IN A SPRAY AREA DURING SPRAY OPERATIONS.
6. ALL ELECTRICALLY CONDUCTIVE OBJECTS IN THE SPRAY AREA SHALL BE ADEQUATELY GROUNDED. SEE NEC 516 FOR MORE DETAILS.
7. SIGNAGE SHALL BE POSTED AROUND THE SPRAY BOOTH TO INDICATE THE FOLLOWING:
  - 7.1. DESIGNATE THE PROCESS ZONE AS DANGEROUS WITH REGARD TO FIRE AND ACCIDENT.
  - 7.2. IDENTIFY THE GROUNDING REQUIREMENTS FOR ALL ELECTRICALLY CONDUCTIVE OBJECTS IN THE SPRAY AREA.
  - 7.3. RESTRICT ACCESS TO QUALIFIED PERSONNEL ONLY.
8. SPRAY APPARATUS MUST BE INTERLOCKED WITH EXHAUST FAN OPERATION—EXHAUST FAN MUST BE RUNNING FOR SPRAY APPLICATION EQUIPMENT TO OPERATE.
9. ALL FIXED WIRING ABOVE THE CLASS 1 LOCATION SHALL BE IN METAL RACEWAYS, TYPE MC, TYPE MI, OR TYPE TC CABLE.
10. EQUIPMENT THAT MAY PRODUCE SPARKS, ARCS, OR PARTICLES OF HOT METAL THAT ARE LOCATED ABOVE CLASS 1 LOCATIONS SHALL COMPLY WITH 516.7(B). THIS MAY NECESSITATE RELOCATED OR ELIMINATE SOME FIXED LIGHTING ABOVE THE PAINT BOOTH. (NEC 516.7 WIRING AND EQUIPMENT NOT WITHIN CLASS I AND II LOCATIONS (A) ALL FIXED WIRING ABOVE THE CLASS I AND II LOCATIONS SHALL BE IN METAL RACEWAYS, RIGID NONMETALLIC CONDUIT, OR ELECTRICAL NONMETALLIC TUBING, OR SHALL BE TYPE MI, TC, OR MC CABLE. CELLULAR METAL FLOOR RACEWAYS SHALL BE PERMITTED ONLY FOR SUPPLYING CEILING OUTLETS OR EXTENSIONS TO THE AREA BELOW THE FLOOR OF A CLASS I OR II LOCATION, BUT SUCH RACEWAYS SHALL HAVE NO CONNECTIONS LEADING INTO OR THROUGH THE CLASS I OR II LOCATION ABOVE THE FLOOR UNLESS SUITABLE SEALS ARE PROVIDED. (B) EQUIPMENT THAT MAY PRODUCE ARCS, SPARKS, OR PARTICLES OF HOT METAL SUCH AS LAMPS AND LAMP HOLDERS FOR FIXED LIGHTING, CUTOUPS, SWITCHES, RECEPTACLES, MOTORS, OR OTHER EQUIPMENT HAVING MAKE-AND-BREAK OR SLIDING CONTACTS, WHERE INSTALLED ABOVE A CLASS I OR II LOCATION OR ABOVE A LOCATION WHERE FRESHLY FINISHED GOODS ARE HANDLED, SHALL BE OF THE TOTALLY ENCLOSED TYPE OR BE CONSTRUCTED SO AS TO PREVENT THE ESCAPE OF SPARKS OR HOT METAL PARTICLES.)



HATCHED AREA INDICATES CLASS 1 DIVISION 2 LOCATION PER 516.3(C)(2) (SEE PAINT BOOTH NOTES)

NO FIRE RATED ASSEMBLIES

PAINT BOOTH DETAIL - NO SCALE | 1



POWER PLAN - SCALE: 1/4" = 1' | 2

REVISION:

NO.	DESCRIPTION	DATE

ISSUED:

NO.	DESCRIPTION	DATE

DRAWN BY: JAH  
 CHECKED BY: MWW/CML  
**POWER PLAN**