

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 & 2)**

Name of Project: **JC POWDER COATING**
 Address: **220 PROGRESS DRIVE, FUQUAY-VARINA** Zip Code: **27526**
 Owner/Authorized Agent: **JUSTIN & CARLA TREPPER** Phone# **919-375-2930** E-Mail **JCPOWDERCOATING922@GMAIL.COM**
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City County **HARNETT COUNTY** State

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE#	EMAIL
Architectural	TONY JOHNSON ARCHITECT	TONY JOHNSON	4296	919-550-7717	tony@tonyjohnsonarchitect.com
Civil					
Electrical	KILIAN ENGINEERING	MICHAEL KILIAN	17304	252-438-8778	mkilian@kilianengineering.com
Fire Alarm					
Plumbing	KILIAN ENGINEERING	MICHAEL KILIAN	17304	252-438-8778	mkilian@kilianengineering.com
Mechanical	KILIAN ENGINEERING	MICHAEL KILIAN	17304	252-438-8778	mkilian@kilianengineering.com
Sprinkler-Standpipe					
Structural					
Retaining Walls > 5' high					
Other					

(*Other* should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE EDITION:

New Building: New building Renovation
 First time interior completion (upfit) Shell/Core
 Addition Phased Construction

2018 EXISTING BUILDING CODE:

Check all that apply:
 Prescriptive Compliance Work Area Compliance Performance Compliance
 Change of Use Historic Property Addition Repair Relocated

Alteration: Level I (Renovation) Level II (Alteration) Level III (Reconstruction)

Constructed: (date) _____ Current Occupancy (S) (Ch. 3): _____

Renovated: (date) _____ Proposed Occupancy (S) (Ch. 3): F-1 _____

Risk Category (Table 1604.5): Current: I II III IV
 Proposed: I II III IV

BASIC BUILDING DATA:

Construction Type: I-A II-A III-A IV V-A
 I-B II-B III-B V-B

Mixed construction: No Yes Partial Types
 No Yes Partial NFPA 13-07 NFPA 13R-07 NFPA 13D-07
 Standpipes: No Yes Class: I II III Wet Dry NFPA 14-07
 Primary Fire District: No Yes Flood Hazard Area: No Yes
 Special Inspections Required: No Yes

GROSS BUILDING AREA TABLE:

Floor	Existing (sq.ft.)	New (sq.ft.)	Renovated (sq.ft.)	Sub-Total
3 rd Floor				
2 nd Floor				
Mezzanine		9,736		9,736
1 st Floor				
Basement				
Total	9,736			

ALLOWABLE AREA: CHAPTER 5

OCCUPANCY
 Primary Occupancy:
 Assembly 303 A-1 A-2 A-3 A-4 A-5
 Business 304 B
 Educational 305 E
 Factory 306 F-1 Moderate F-2 Low
 Hazardous 307 H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
 Institutional 308 I-1 I-2 I-3 I-4 Day Care
 I-3 Use Condition 1 2 3 4 5
 Mercantile 309 M
 Residential 310 R-1 R-2 R-3 R-4
 Storage 311 S-1 Moderate S-2 Low High-piled
 Parking Garage Open Enclosed Repair Garage
 Utility and Miscellaneous 312 U

Accessory Occupancies (<= 10%):
 Assembly 303 A-1 A-2 A-3 A-4 A-5
 Business 304 B
 Educational 305 E
 Factory 306 F-1 Moderate F-2 Low
 Hazardous 307 H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
 Institutional 308 I-1 I-2 I-3 I-4 Day Care
 I-3 Use Condition 1 2 3 4 5
 Mercantile 309 M
 Residential 310 R-1 R-2 R-3 R-4
 Storage 311 S-1 Moderate S-2 Low High-piled
 Parking Garage Open Enclosed Repair Garage
 Utility and Miscellaneous 312 U

INCIDENTAL USES:

- Furnace room where any piece of equipment is over 400,000 Btu per hour input
- Room with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
- Refrigerant machine room
- Hydrogen cutoff rooms, not classified as Group H
- Incinerator rooms
- Paint shops, not classified as Group H, located in occupancies other than Group F
- Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
- Laundry room over 100 square feet
- Group I-3 cells equipped with padded surfaces
- Group I-2 waste and linen collection rooms
- Waste and linen collection rooms over 100 square feet
- Stationary storage batter systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power, or uninterrupted power supplies
- Rooms containing fire pumps
- Room containing Life-Safety generator
- Room containing primary transformers
- Group I-2 storage rooms over 100 square feet
- Group I-2 commercial kitchens
- Group I-2 laundries equal to or less than 100 square feet
- Group I-2 room or spaces that contain fuel-fired heating equipment

Special Uses: 402 403 404 405 406 407 408 409 410 411 412
 413 414 415 416 417 418 419 420 421 422 423 424 425
 426 427

Special Provisions: 510.2 510.3 510.4 510.5 510.6 510.7 510.8 510.9

Mixed Occupancy: No Yes Separation: _____ Hr. Exception: _____

Select one
 Actual Area of Occupancy A + Allowable Area of Occupancy A + Actual Area of Occupancy B + Allowable Area of Occupancy B ≤ 1
 = < 100

ALLOWABLE AREA

Story Number	Description and Use	A	B	C	D	E	F
		Building Area Per Story (Actual)	Table 506.2 Area	Area for Frontage Increase	Area for Sprinkler Increase	Allowable Area or Unlimited	Maximum Building Area
1	TYPE II-B: F-1	9,736	15,500	---	---		15,500

- Frontage area increases from Section 506.2 are computed thus:
 a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
 b. Total Building Perimeter = _____ (P)
 c. Ratio (F/P) = _____ (F/P)
 d. W = Minimum width of public way = _____ (W)
 e. Percent of frontage increase I(f) = (F/P - 0.25) x W/30 = _____ (%)
- The sprinkler increase per Section 506.3 is as follows:
 a. Multi-story building (S) = 200 percent
 b. Single story building (S) = 300 percent
- Unlimited area applicable under conditions of Sections Group B, F, M, S, A-4 (507.3), A-3 (507.6), Group A motion picture (507.11), Covered Mall Buildings (507.12), and H-2 aircraft paint hangers (507.9).
- Maximum Building Area = total number of stories in the building x E, But not greater than 3xE (506.4.1).
- The maximum area of a single-use parking garage shall be permitted to comply with Table 406.3.5. The maximum area of air traffic control towers must comply with table 412.3.2.

ALLOWABLE HEIGHT: CHAPTER 5

Type of Construction	Allowable (Table 504.3)	Increased for Sprinklers (506.3)	Shown on Plans	Code Reference
Type: II-B	Type: II-B	Type: II-B		
Building Height in Feet	Feet= 55'	Feet= H + 20' = 75'	Feet= 25'	
Building Height in Stories	Stories= 2	Stories + 1 = 3	Stories= 1	

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4

FIRE PROTECTION REQUIREMENTS: CHAPTER 6 (TABLE 601)

Building Element	Fire Separation Distance (Feet)	Rating*		Detail # and Sheet #	Design # for Rated Assembly	Design # for Rated Penetration	Design # for Rated Joints
		Required	Provided (w/ * Reduction)				
Structural frame, including columns, girders, trusses	>30	0					
Bearing Walls							
Exterior							
North	0						
East	0						
West	0						
South	0						
Interior							
Nonbearing walls and partitions							
Exterior walls (T602)							
North	>30	0					
East	>30	0					
West	>30	0					
South	>30	0					
Interior walls and partitions							
Floor Construction***							
***Including supporting beams and joists	0						
Roof Construction including supporting beams and joists	0						
Shaft Enclosures- Exit	0						
Shaft Enclosures- Other	0						
Corridor Separation	0						
Occupancy/ Fire Barrier Separation	0						
Party/ Fire Wall Separation	0						
Smoke Barrier Separation	0						
Tenant/ Dwelling Unit Separation	0						
Incidental Use Separation	0						

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS:

Fire Separation Distance (Feet) From Property Lines	Degree of Openings Protection (Table 705.8)	Allowable Area (%)	Actual Shown on Plans (%)
NORTH: >30'-0"	UNPROTECTED, NONSPRINKLERED	NO LIMIT	
EAST: >30'-0"	UNPROTECTED, NONSPRINKLERED	NO LIMIT	
SOUTH: 25'-0"	UNPROTECTED, NONSPRINKLERED	70%	0%
WEST: >30'-0"	UNPROTECTED, NONSPRINKLERED	NO LIMIT	

LIFE SAFETY SYSTEM REQUIREMENTS: Chapters 9 and 10

Emergency Lighting: S1006 No Yes
 Exit Signs: S1011 No Yes
 Fire Alarm: S907, NFPA 72-07 No Yes
 Smoke Detection Systems: S907 No Yes
 Carbon Monoxide Detection: No Yes Partial _____

LIFE SAFETY PLAN REQUIREMENTS:

Life Safety Plan Sheet #, if Provided: _____
 Fire and/or smoke rated wall locations (Chapter 7) Actual occupant load for each exit door
 Assumed and real property line locations (If not on site plan) A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
 Exterior wall opening area with respect to distance to assumed property lines (705.8) Location of doors with panic hardware (1010.1.10)
 Existing structures within 30' of the proposed building Location of doors with delayed egress locks and the amount of delay (1010.19.7)
 Occupancy types for each area as it relates to amount of delay calculation (Table 1004.1.2) Location of doors with electromagnetic egress locks (1010.19.9)
 Occupant loads for each area Location of doors equipped with hold-open devices
 Exit access travel distances (1017) Location of emergency escape windows (1030)
 Common path of travel distances (1006.2.1 & 1006.3.2(1)) The square footage of each fire area (202)
 Dead end lengths (1020.4) The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
 Clear exit widths for each exit door Note any code exceptions or table notes that may have been utilized regarding the items above
 Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)

ACCESSIBLE DWELLING UNITS: (Section 1107)

Total Units	Accessible Units Req'd	Type A Units Req'd	Type A Units Provided	Type B Units Req'd	Type B Units Provided	Total Accessible Units Provided

ACCESSIBLE PARKING REQUIREMENTS: (Section 1106)

Lot or Parking Area	Total Number of Parking Spaces		# of Accessible Spaces Provided			Total # Accessible Provided
	Required	Provided	Regular with 5' Access Aisle	Van Space Access Aisle 132" Access	8' Access	
TOTAL						

Note: one out of every six accessible parking spaces shall be for van accessible parking.

PLUMBING FIXTURE REQUIREMENTS: Chapter 29 (Table 2902.1)

Occupancy Use Group and/or Space Designation	Waterclosets			Urinals Plum-Sec. (419.2)			Lavatories			Showers/Tubs		Drinking Fountains Plum-Sec. (410)	
	Male	Female	Unisex	Male	Female	Unisex	Male	Female	Unisex	Regular	Accessible		
Space Existing													
New	1	1					1	1				1	1
Req'd	1	1					1	1				1	1

SPECIAL APPROVAL: Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard design vs annual energy cost for the proposed design.

Existing building envelope complies with code: No Yes

Exempt Building: No Yes (E) 1301.1.1 CRITERIA. EXCEPTION: PER N.C.G.S. 143-138 (b)18). NO ENERGY CONSERVATION CODE PROVISIONS SHALL APPLY TO ANY STRUCTURE FOR WHICH THE PRIMARY OCCUPANCY CLASSIFICATION IS GROUP F, S, U OR U. THIS EXCLUSION SHALL APPLY TO THE ENTIRE BUILDING AREA.

Climate Zone: 3A 4A 5A
 Method of Compliance:
 Prescriptive (Energy Code) Prescriptive (ASHRAE 90.1)
 Performance (Energy Code) Performance (ASHRAE 90.1)

THERMAL ENVELOPE:

Roof/ceiling Assembly (each assembly)
 Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____
 Skylights in each assembly: _____
 U-Value of skylight: _____
 Total square footage of skylight in each assembly: _____

Exterior Walls (each assembly)
 Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____
 Openings (windows or doors with glazing)
 U-Value of assembly: _____
 Solar heat gain coefficient: _____
 Projection factor: _____
 Door R-Value: _____

Walls Below Grade (each assembly)
 Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____

Floors over unconditioned space (each assembly)

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____

Floors slab on grade

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____
 Horizontal/vertical requirement: _____
 Slab heated: _____

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)**

DESIGNS LOADS:

Importance Factors: Snow (I_s) .80 1.0 1.1 1.2
 Seismic (I_e) 1.0 1.25 1.5
 Live Loads: Roof (live & snow) _____ (psf)
 Mezzanine _____ (psf)
 Floor _____ (psf)
 Ground Snow Load: _____ (psf)
 Wind Load: Basic Wind Speed _____ (mph ASCE 7)
 Exposure Category B C D

SEISMIC DESIGN CATEGORY:

A B C D

Risk Category (Table 1604.5) I II III IV

Spectral Response Acceleration S_s _____ %g S₁ _____ %g

Site Classification (ASCE 7) A B C D E F

Data Source: Field Test Presumptive Historical Data

Basic Structural System: (check one)

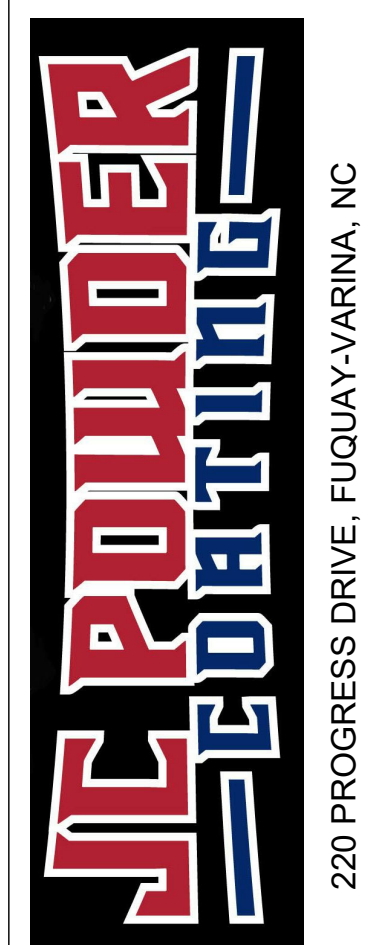
Bearing Wall Dual w/ Special Moment Frame
 Building Frame Dual w/ Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
 Analysis Procedure: Simplified Modal Equivalent Lateral Force
 Architectural, Mechanical, Components Anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake Wind

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) _____ (psf)
 Presumptive Bearing Capacity _____ (psf)
 Pile

REVISIONS	
NUMBER	DATE

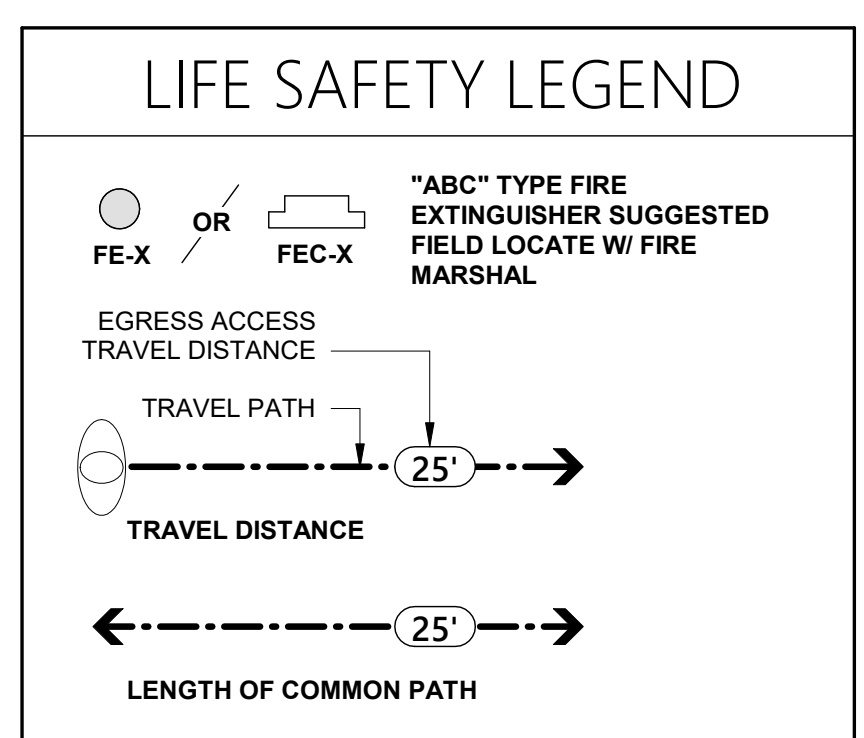


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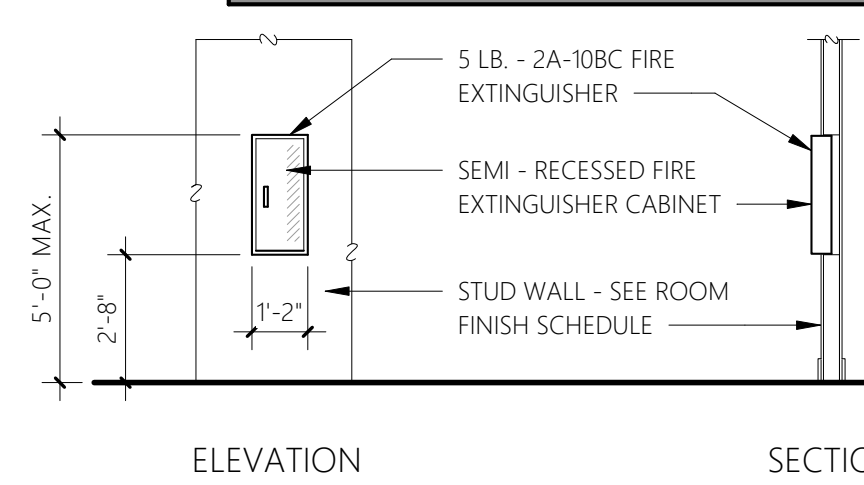
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PROJECT #	2020.021
LIFE SAFETY PLAN	
SHEET	A-0.2

- ▨ 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.

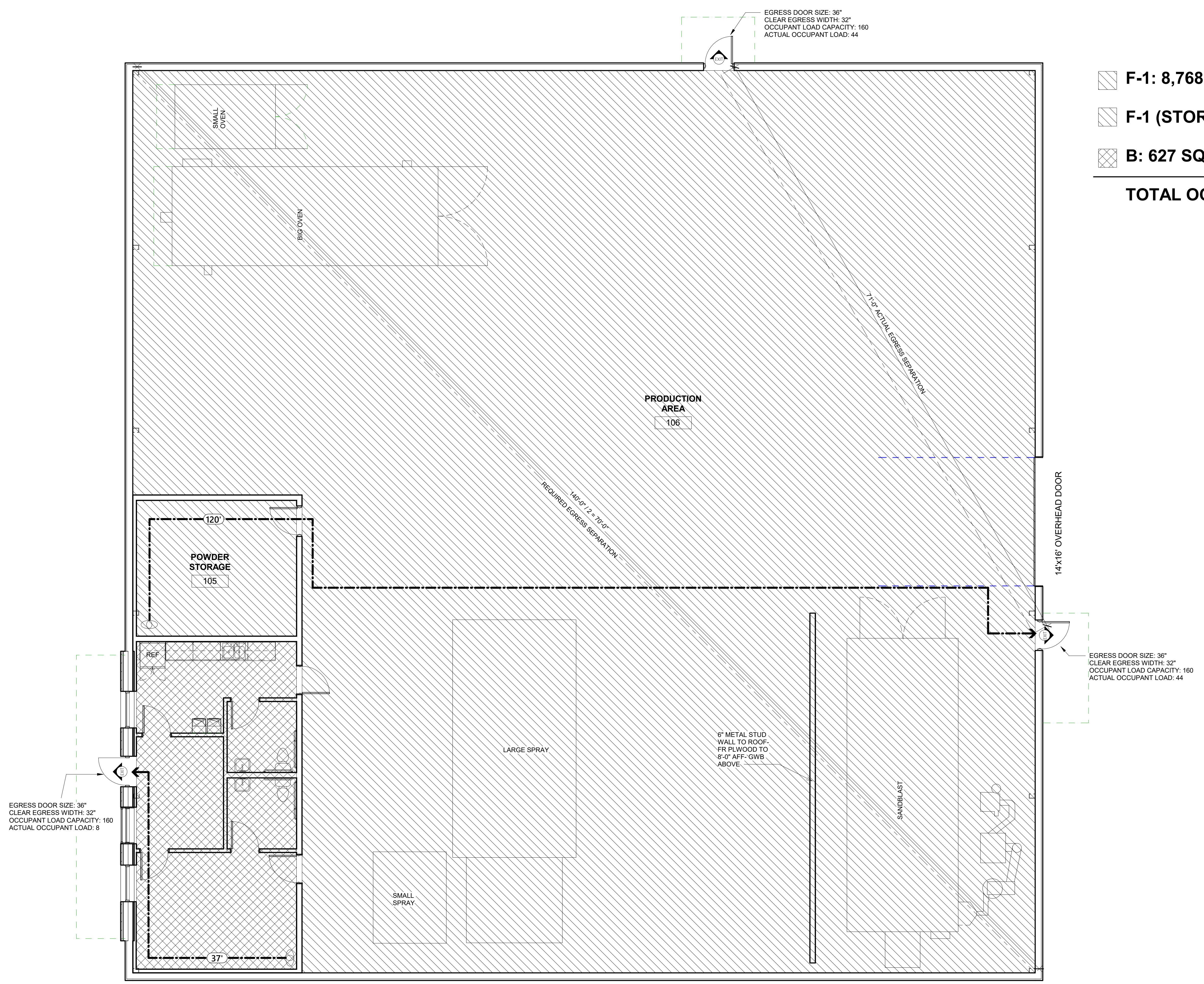
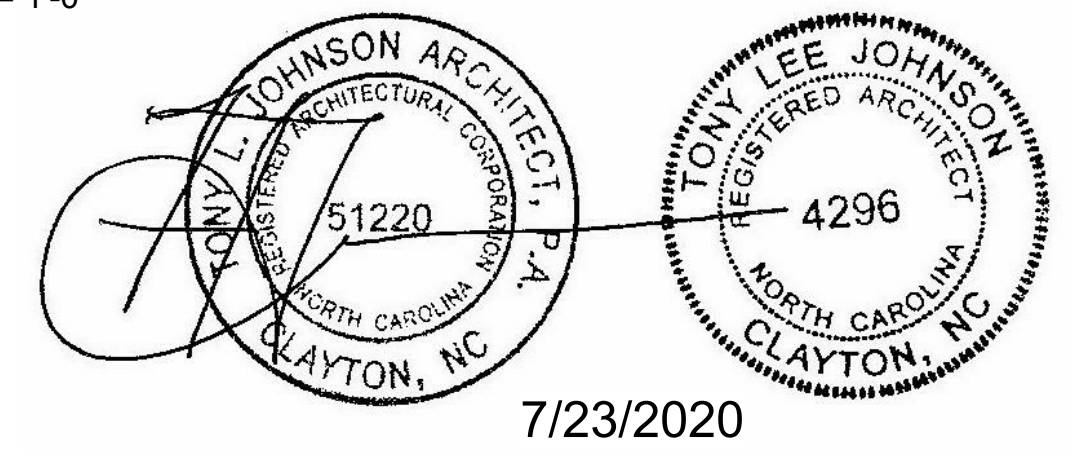


③ TYPICAL "ABC" FIRE EXTINGUISHER
 1/4" = 1'-0"

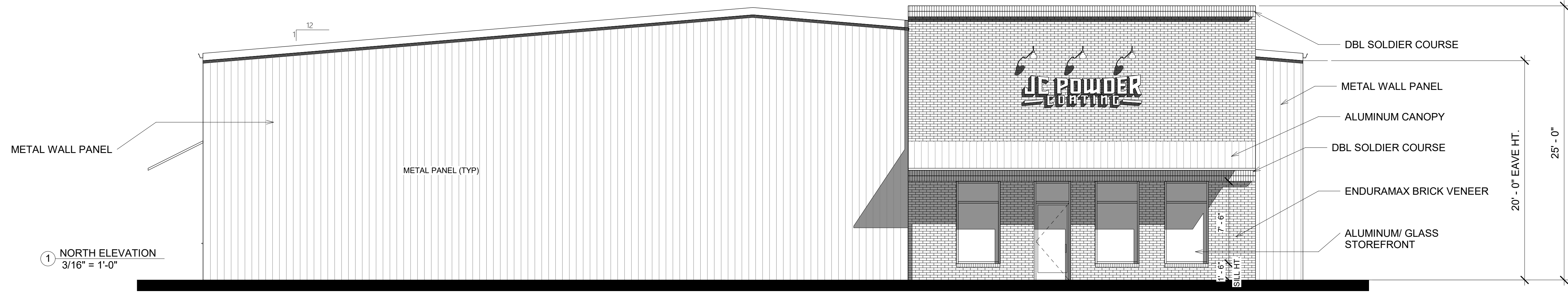
Floor, Room or Space	MINIMUM NUMBER OF EXITS		TRAVEL DISTANCE (Feet)	
	Required (Table - 1006.3.1)	Shown on Plans	Allowable Travel Distance (Table - 1017.2)	Actual Travel Distance Shown on Plans
BUSINESS	1	1	100'	37' - 0"
PRODUCTION	2	2	200'	120' - 0"

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)

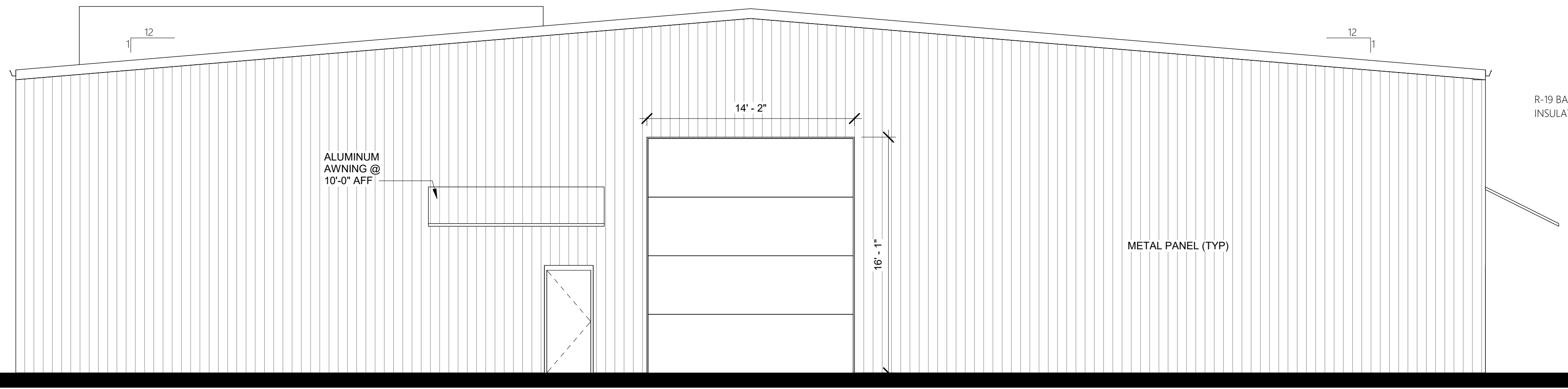
④ LEGEND REQUIREMENTS
 1/4" = 1'-0"



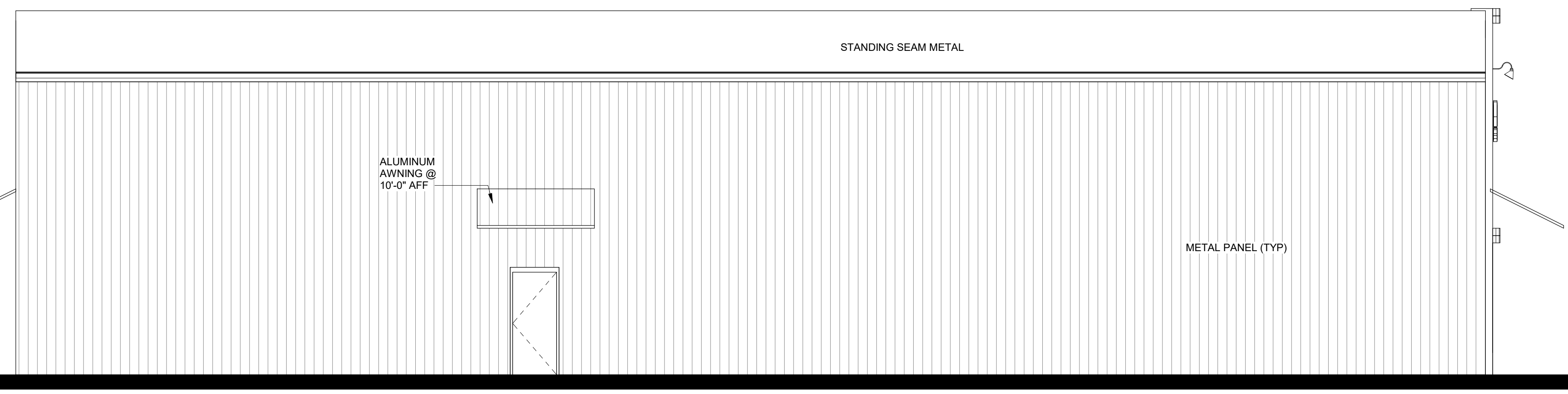
① LIFE SAFETY PLAN
 3/16" = 1'-0"



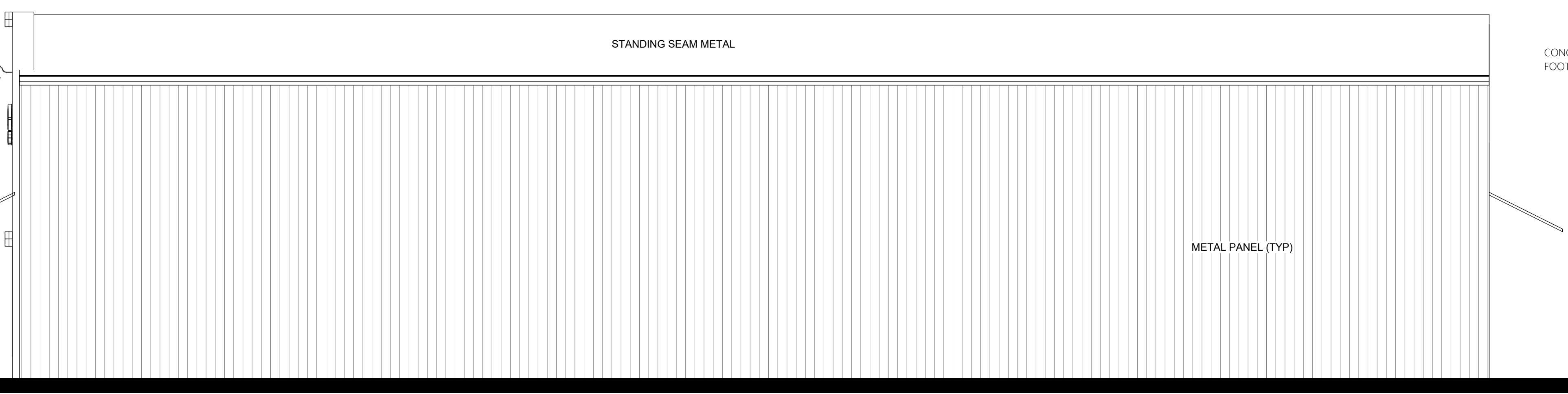
1 NORTH ELEVATION
3/16" = 1'-0"



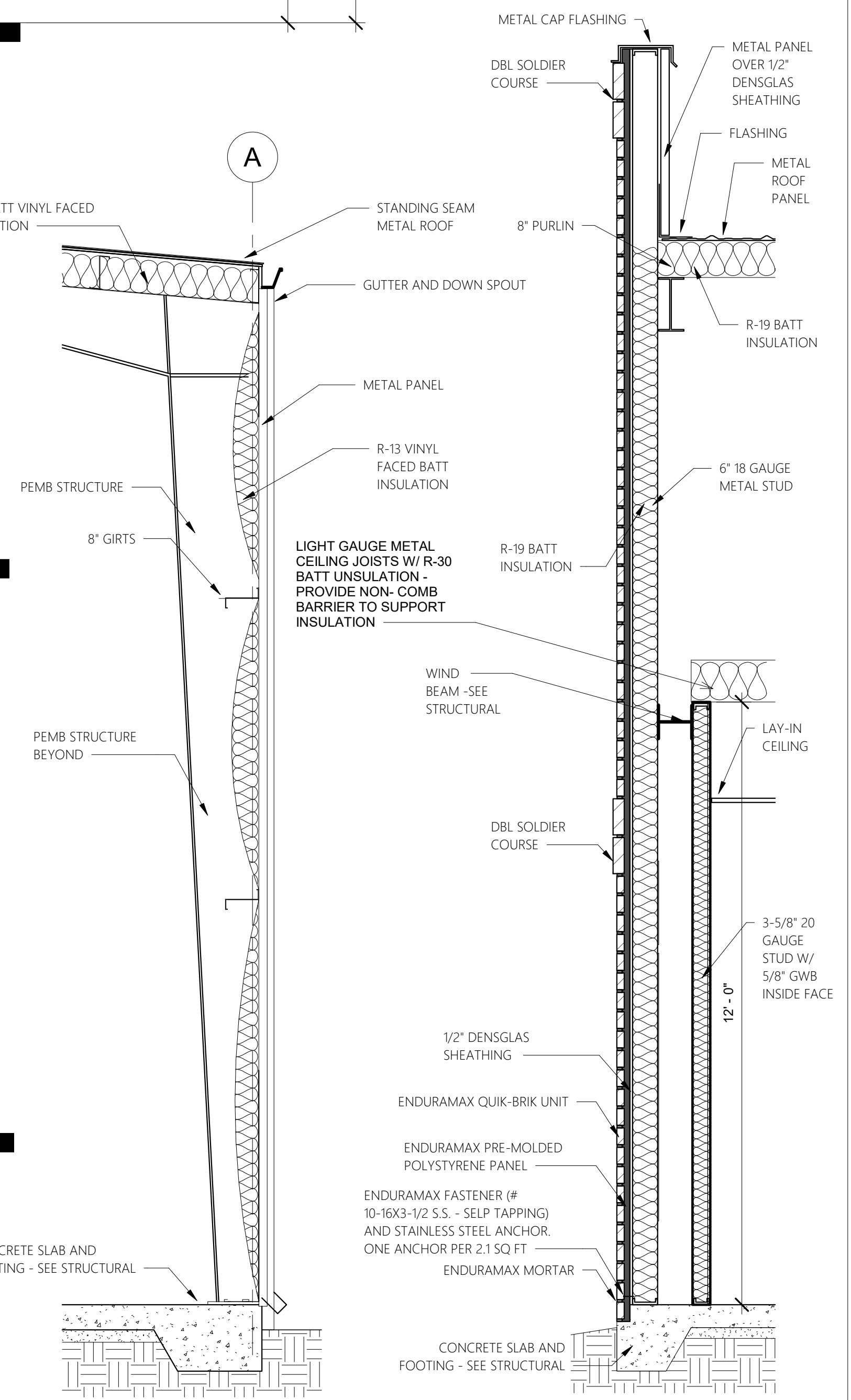
2 SOUTH ELEVATION
3/16" = 1'-0"



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

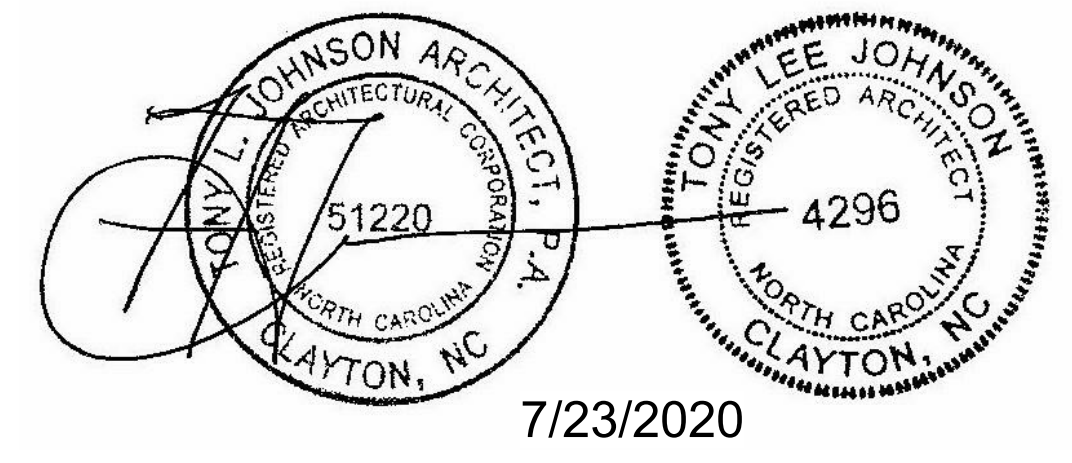


4 WEST ELEVATION
3/16" = 1'-0"



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

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



REVISIONS	
NUMBER	DATE

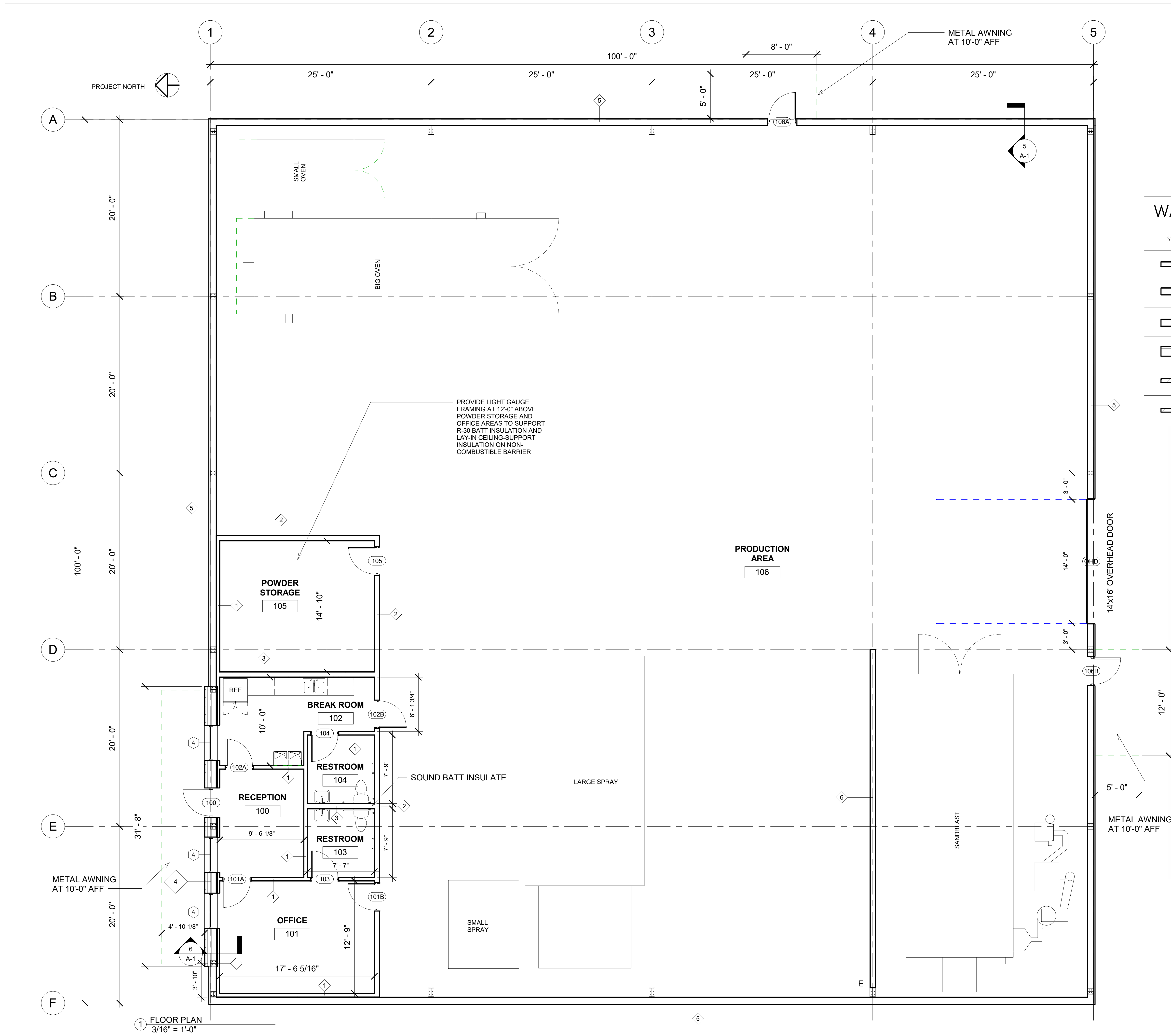


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ELEVATIONS	
SHEET	A-1

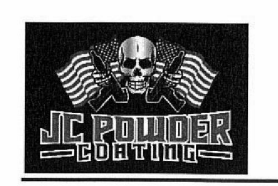
220 PROGRESS DRIVE, FUQUAY-VARINA, NC



- ### FLOOR PLAN NOTES
- 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.
 - ALL INTERIOR WALLS TO RECEIVE BATT INSULATION. PROVIDE SOUND BATT INSULATION @ RESTROOM.
 - PROVIDE WATER RESISTANT GYPSUM WALL BOARD AT ALL WET WALLS INCLUDING, BUT NOT LIMITED TO, WALLS AT BATHROOMS AND BREAK ROOM.
 - 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



7/23/2020

REVISIONS

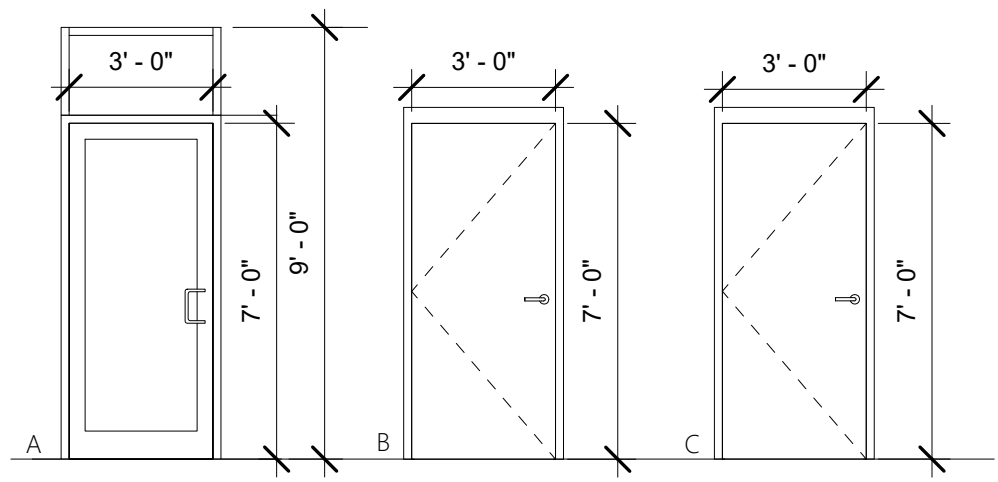
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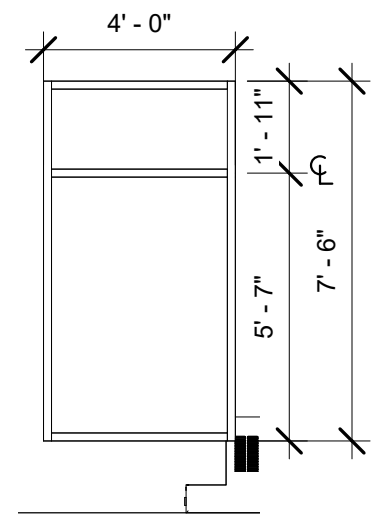
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FLOOR PLAN	
SHEET	A-2



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

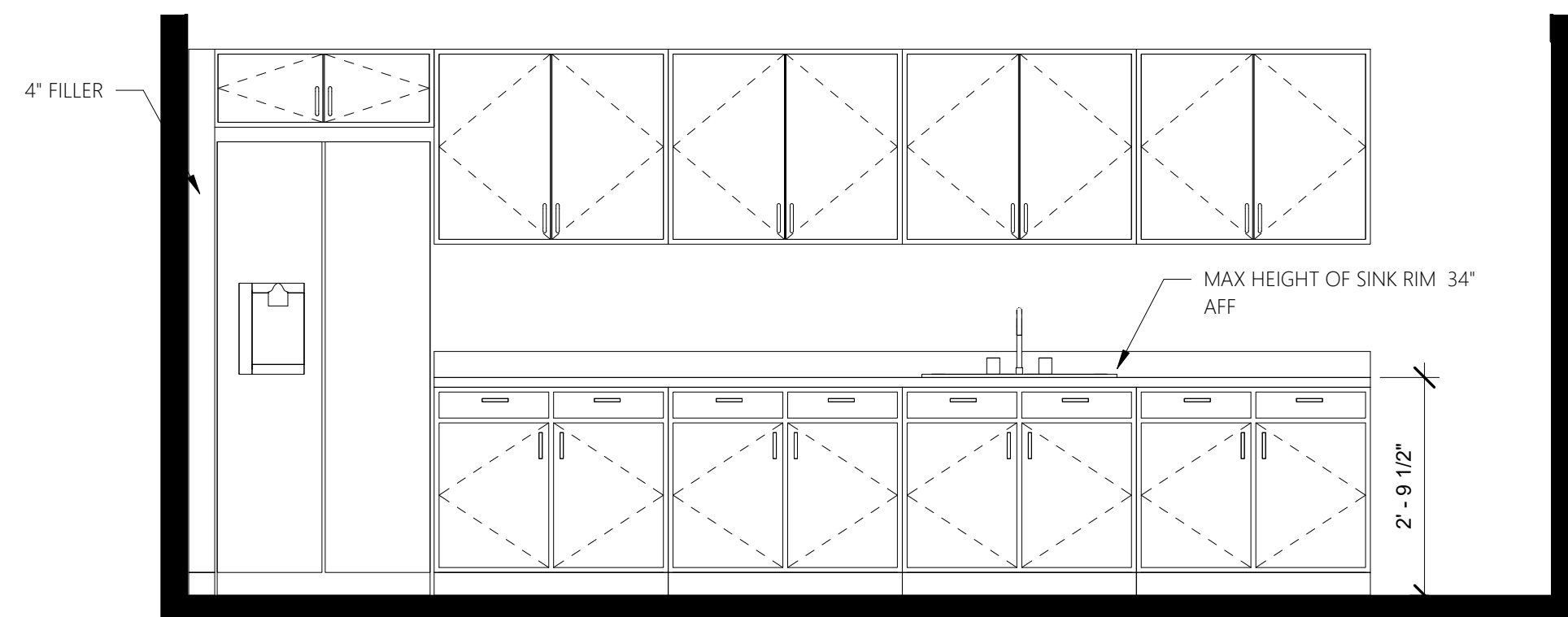


WINDOW TYPES
1/4" = 1'-0"

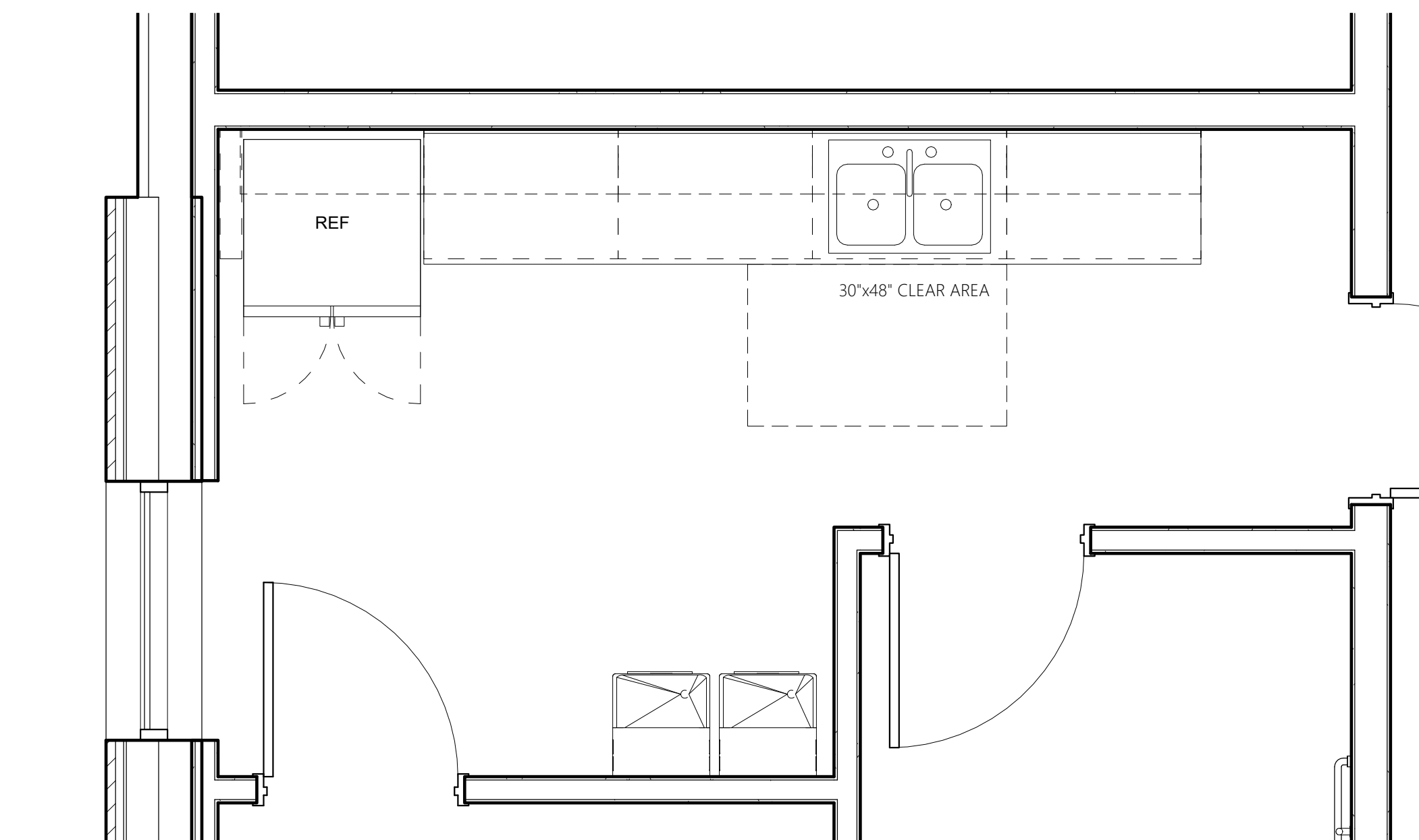
DOOR SCHEDULE										
MARK	DOOR		ELEVATIONS	DOOR TYPE	DOOR			CLOSER	HARDWARE	COMMENTS
	W	H			FINISH	FRAME	FRAME FINISH			
100	3'-0"	7'-0"	A	STOREFRONT ALUMINUM / GLASS	ANODIZED	ALUMINUM	ANODIZED	YES	MANUFACTURERS STANDARD PUSH/PULL W/ DEADBOLT	TRANSOM ABOVE
101A	3'-0"	7'-0"	B	SOLID CORE WOOD	STAIN	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

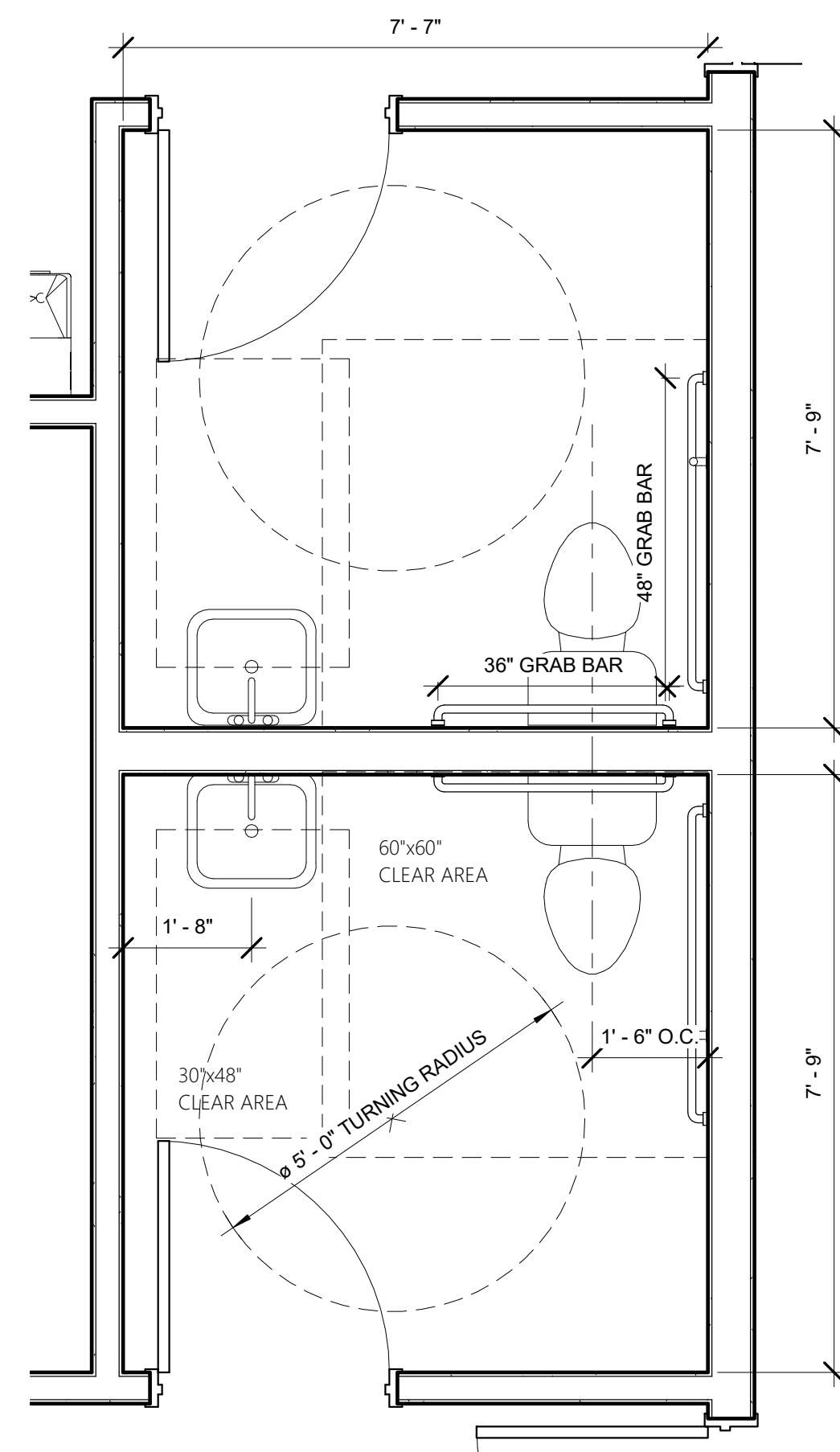
FINISH SCHEDULE							
#	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	CEILING HEIGHT	COMMENTS
100	RECEPTION	SEALED CONCRETE	RUBBER COVE BASE	PAINT	LAY-IN	10'-0"	
101	OFFICE	SEALED CONCRETE	RUBBER COVE BASE	PAINT	LAY-IN	10'-0"	
102	BREAK ROOM	SEALED CONCRETE	RUBBER COVE BASE	PAINT	LAY-IN	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					



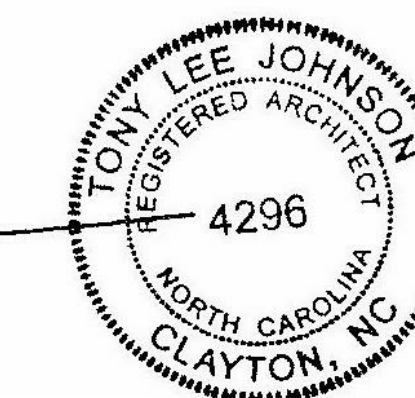
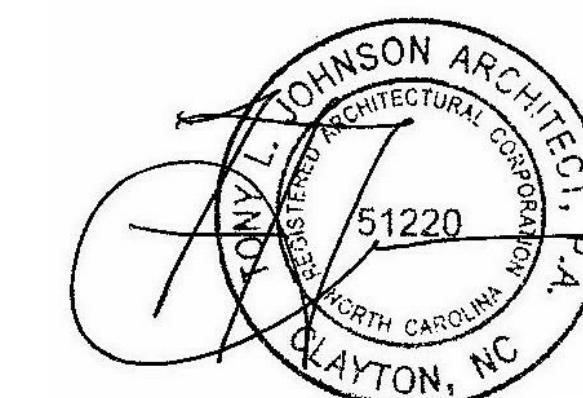
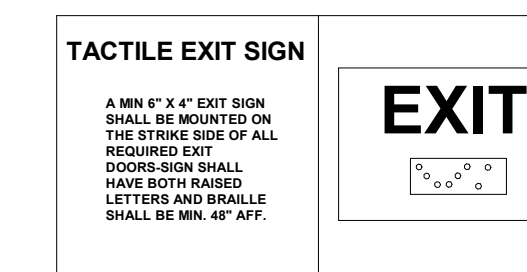
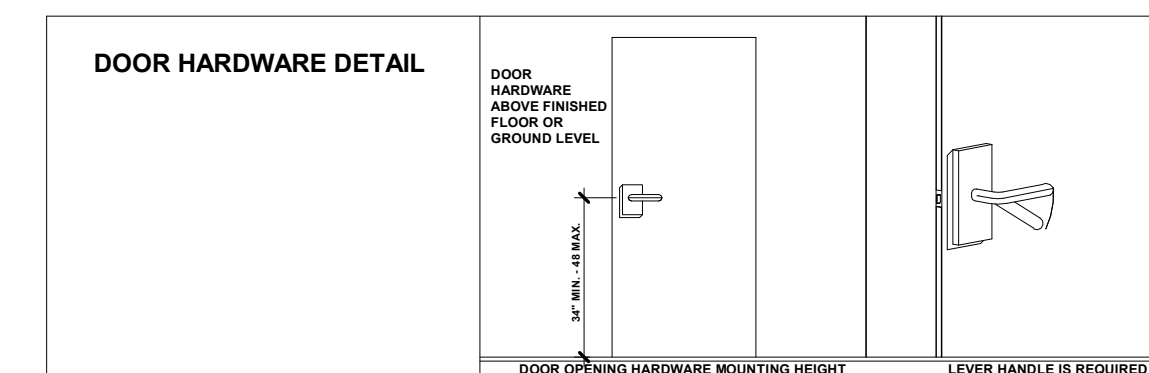
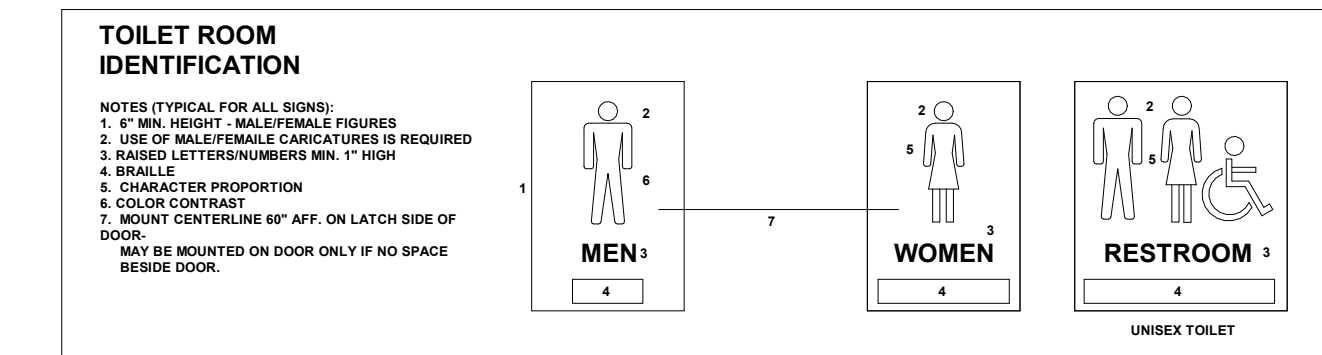
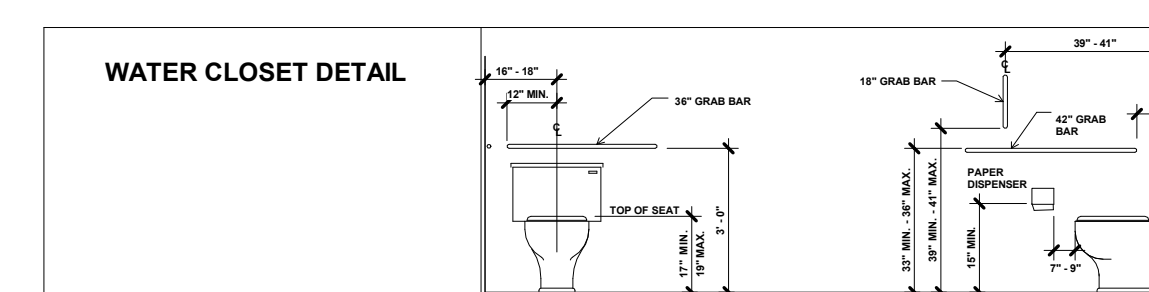
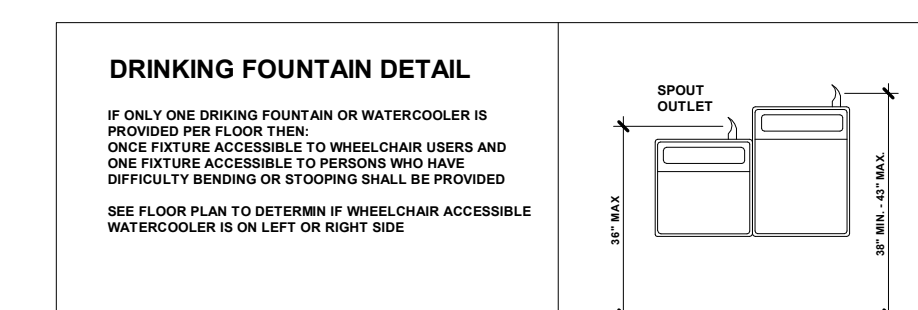
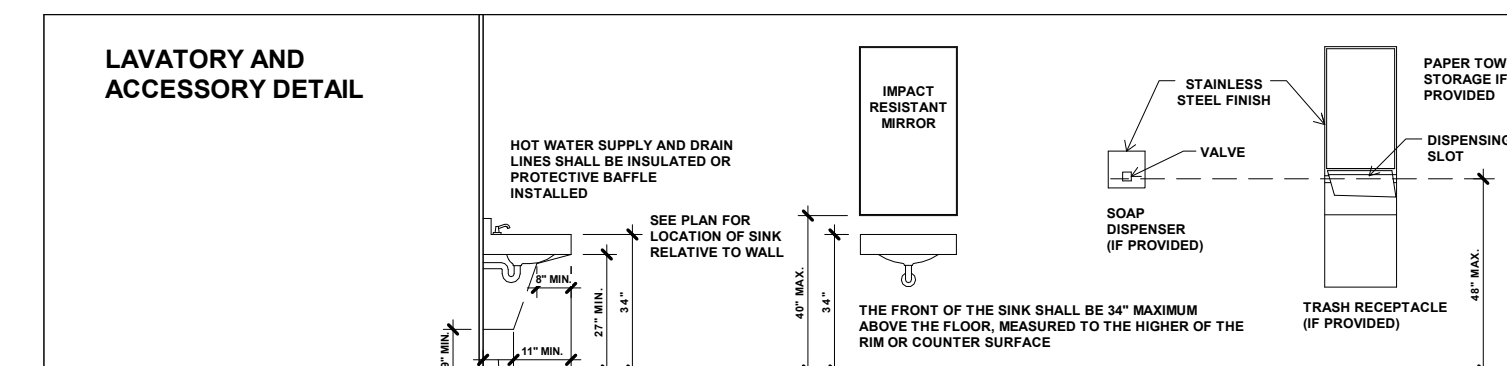
BREAK ROOM ELEVATION
1/2" = 1'-0"



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



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



7/23/2020

REVISIONS

NUMBER	DATE



220 PROGRESS DRIVE, FUQUAY-VARINA, NC

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



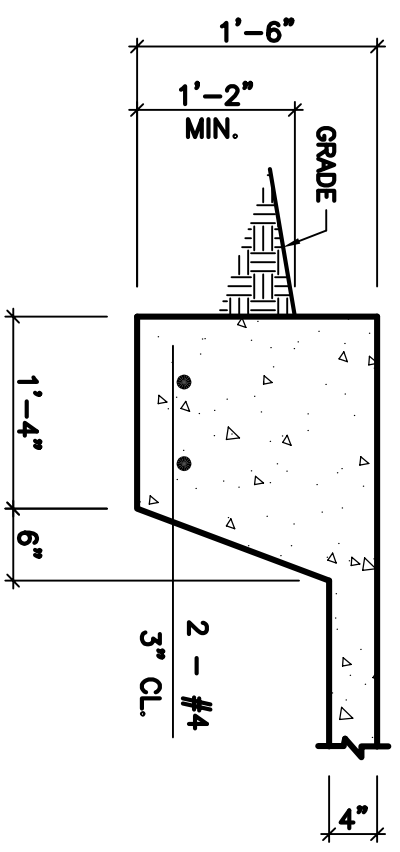
DATE 7/23/2020
11:16:57 AM

PROJECT # 2020.021

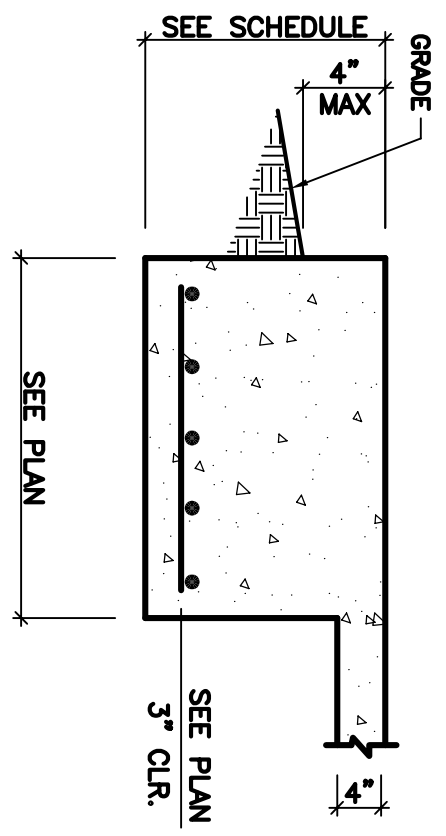
DETAILS

SHEET

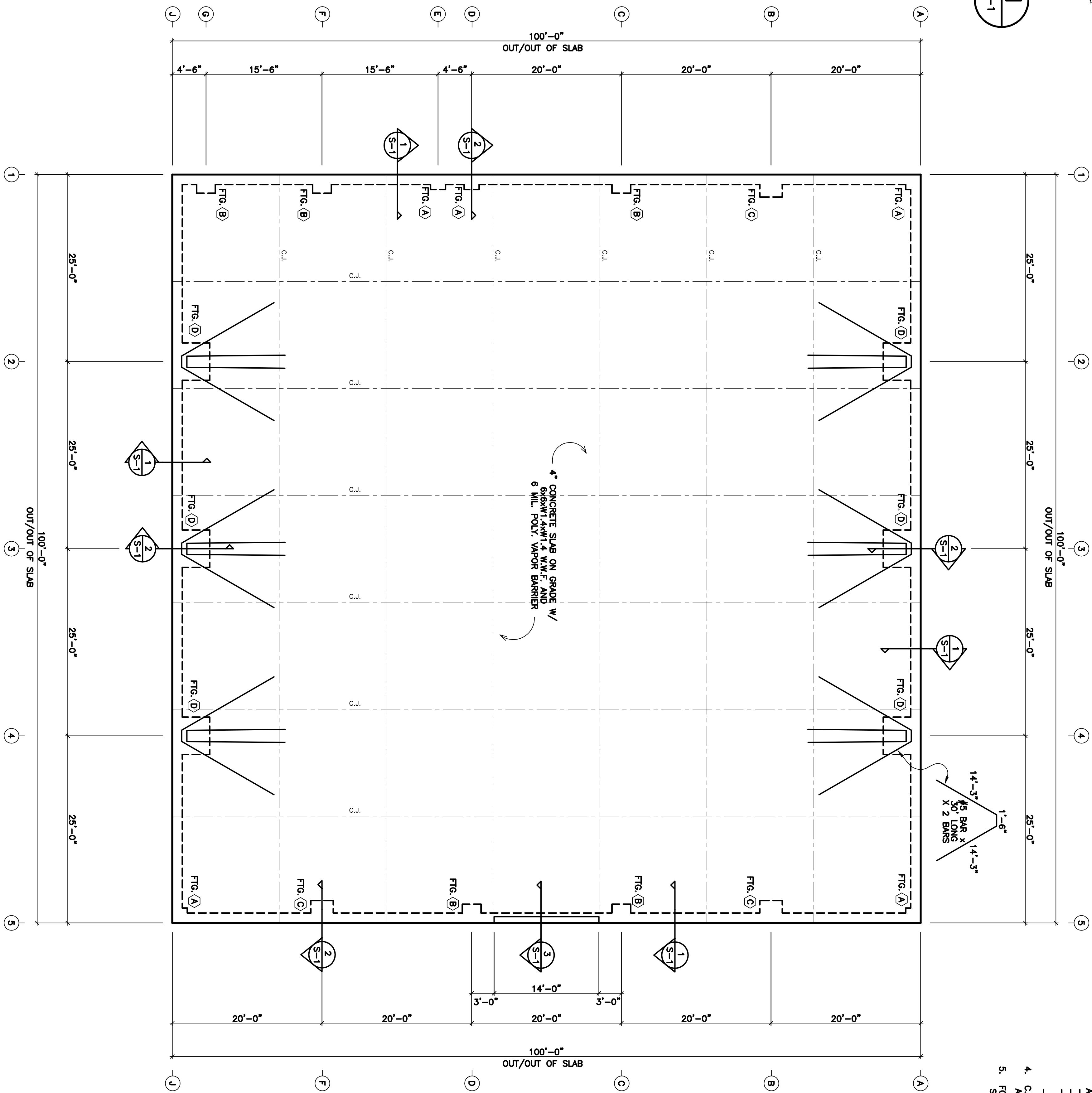
A-3



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



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

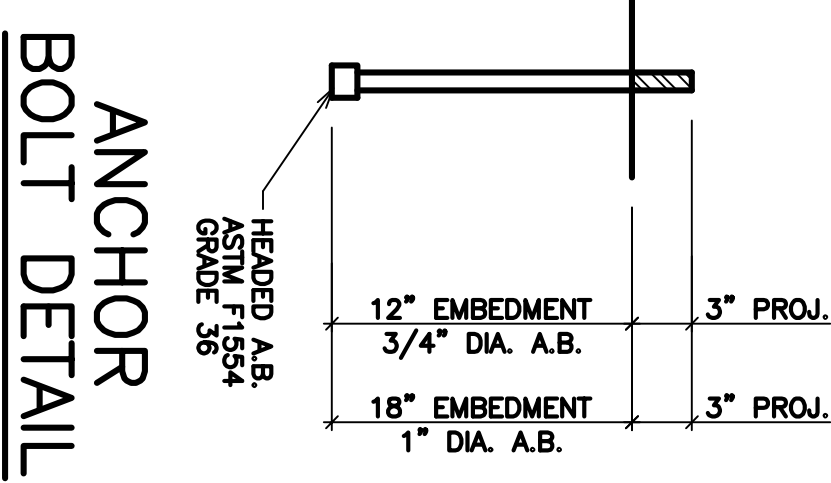


FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

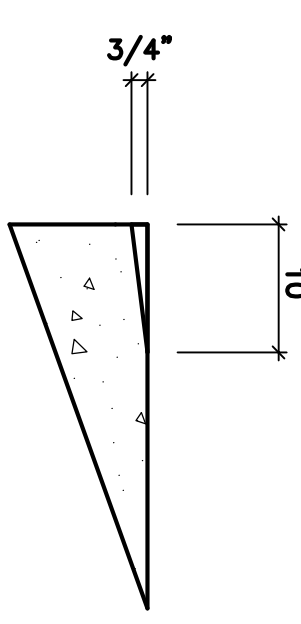
GENERAL NOTES

- 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.
- 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

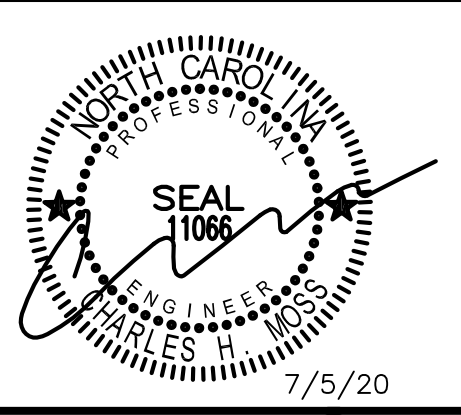
TYPE	SIZE	REINFORCING
FIG. (A)	2'-0" x 2'-0" x 1'-6"	3 - #4 E.W.
FIG. (B)	2'-6" x 2'-6" x 1'-6"	4 - #4 E.W.
FIG. (C)	3'-0" x 3'-0" x 1'-6"	4 - #4 E.W.
FIG. (D)	5'-0" x 5'-0" x 2'-0"	6 - #4 E.W.



ANCHOR BOLT DETAIL



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

JOB NO. S200B243A
 COMPUTED BY:
 DRAWN BY: NR
 CHECKED BY: HM
 DATE: JULY 5, 2020
 SCALE: 1/8" = 1'-0"

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

- 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.
- A325 & A490 Bolt tightening requirements:** It is the responsibility of the erector to ensure proper bolt tightness in accordance with applicable regulations. See the RCSA 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-pretensioned"), unless required otherwise by local jurisdiction or contract requirements:
 A) All A490 bolts shall be "fully-pretensioned".
 B) All A325 bolts in primary framing (rigid frames and bracing) may be "snug-tight", except as follows:
 "Fully-pretension" 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 braces.
 D) Secondary members (purlins, girts, opening framing, etc.) and flange brace connections may always be "snug-tight", unless indicated otherwise in these drawings.
- 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.
- 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
- Construction loads shall not be placed on any structural steel framework unless such framework is safely bolted, welded, or otherwise adequately secured.
- 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.
- 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.
- 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.
- 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

- 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.
- 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.
- 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.
- 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.
- 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.
- 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
 Rod 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.

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.

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.

BUILDING LOADS

DESIGN CODE: NCBC 18

ROOF LIVE LOAD: 20.00 PSF MBMA OCC. CLASS: II

LIVE 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) / (Vead)

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:

- 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.
- 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.
- 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
PRI. 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
Gcp:	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)			
<input type="checkbox"/> CFR ROOF	<input type="checkbox"/> H9600 OR <input type="checkbox"/> H8250	<input type="checkbox"/> SINGLE CURB (H9850)	
<input checked="" type="checkbox"/> CLASSIC ROOF	<input type="checkbox"/> H9420 OR <input checked="" type="checkbox"/> H8201	<input type="checkbox"/> DOUBLE CURB (H9800)	
		<input type="checkbox"/> VR16 II (H9925)	

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	

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

ISSUE: _____

PERMITS: _____

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

SEAL
 044221
 ENGINEER
 JEFFREY D. BOY
 07/01/2020

THESE DRAWINGS ARE THE PROPERTY OF PEAK STEEL BUILDINGS. THEY ARE TO BE USED ONLY FOR THE PROJECT AND AT THE LOCATION SPECIFIED HEREON. ANY REPRODUCTION OR TRANSMISSION OF THESE DRAWINGS WITHOUT THE WRITTEN PERMISSION OF PEAK STEEL BUILDINGS IS STRICTLY PROHIBITED.

SHEET
 C1 of 1

ANCHOR BOLT SUMMARY

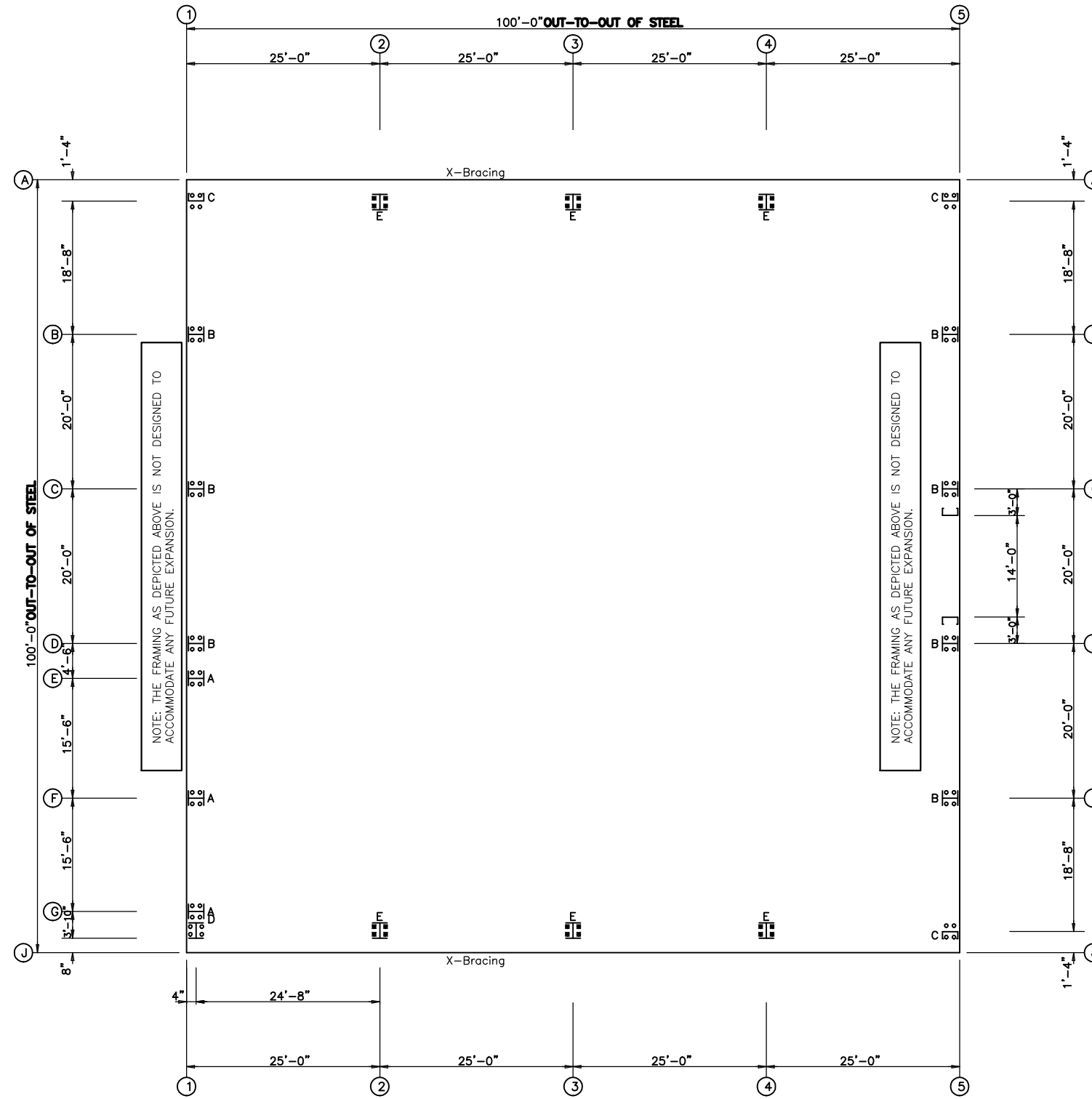
Qty	Locate	Dia (in)	Type	Proj (in)
○ 56	Endwall	3/4"	F1554	3.00
⊗ 24	Frame	1"	F1554	3.00

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

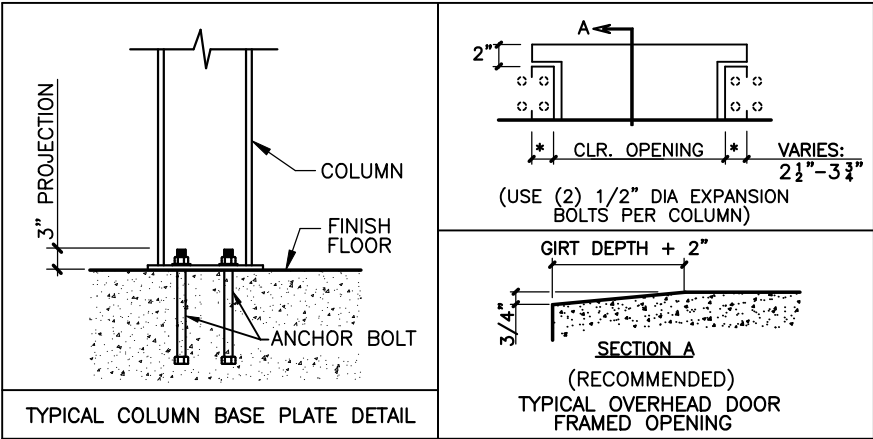
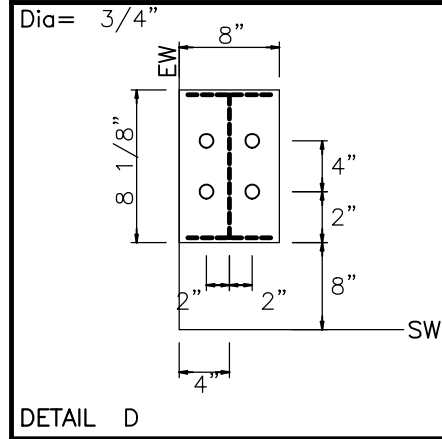
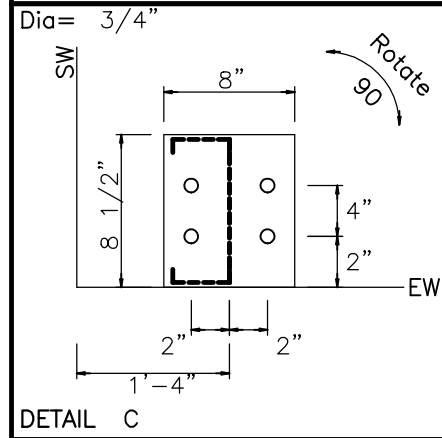
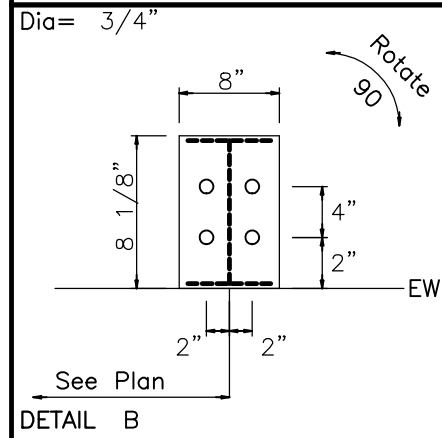
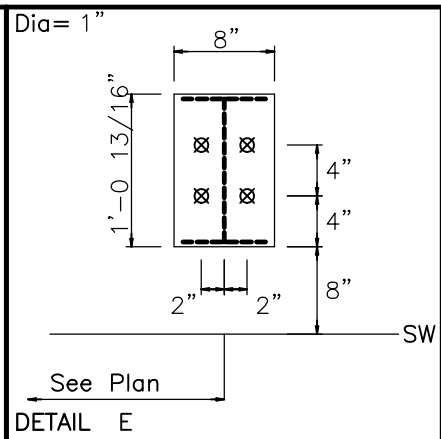
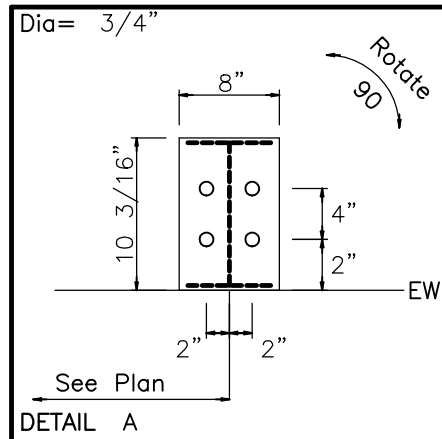
JOB NUMBER
S2008243A



07/01/2020

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SHEET
F1 of 2



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
JC POWDER COATING
NEW HILL, NC 27562

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

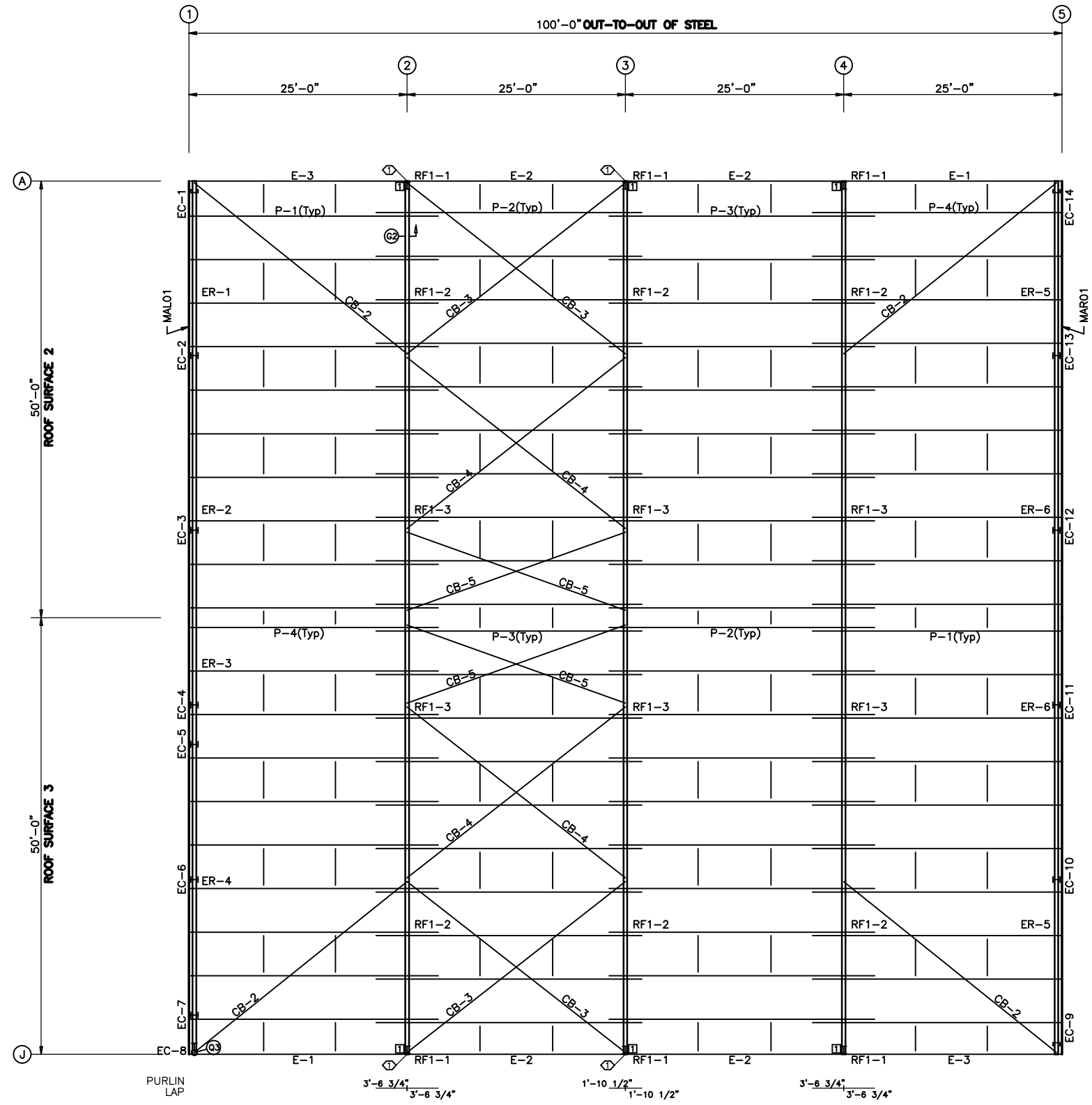
CUSTOMER NAME
JC POWDER COATING
NEW HILL, NC 27562

JOB NUMBER
S2008243A



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SHEET
F2 of 2



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.

ROOF SHEETING
 PANELS: 24 Ga. SS
 Galvalume Plus

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

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
 ROOF FRAMING PLAN



07/01/2020

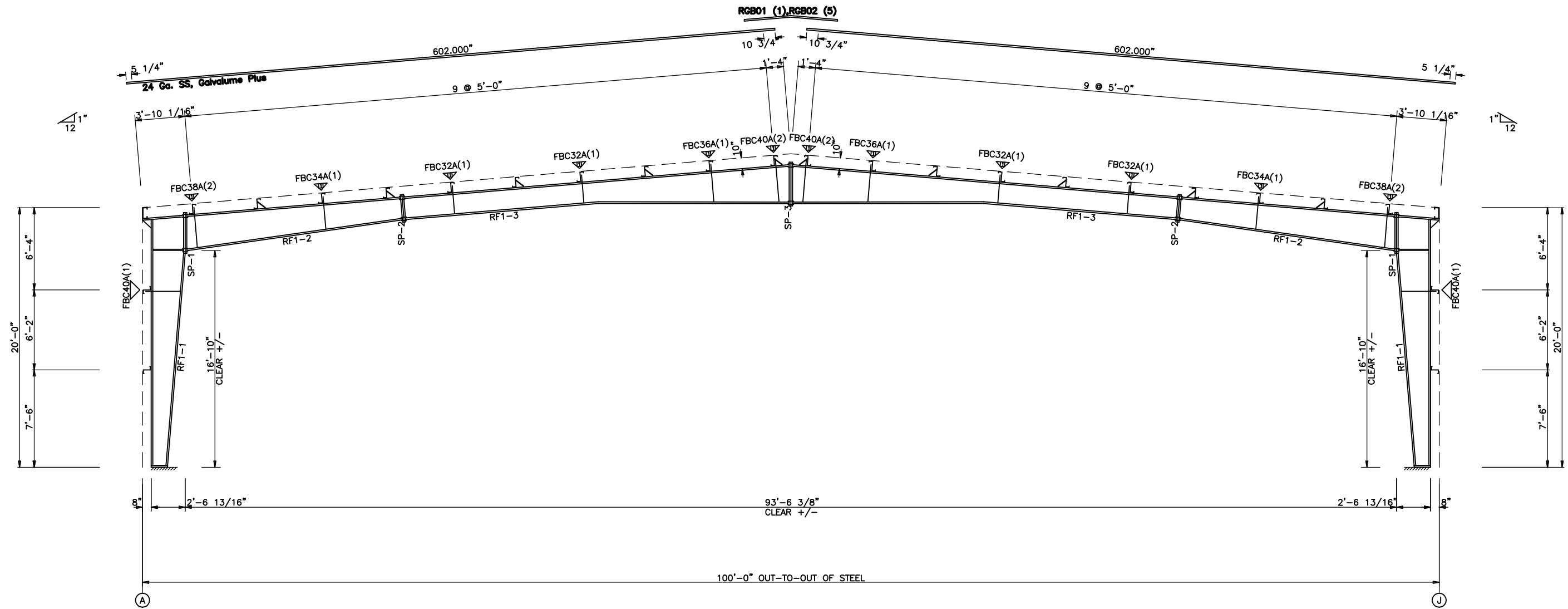
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E1 of 7

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	Length	Thick	W x Thk x Length	W x Thk x Length
RF1-1	12.0/30.0	0.220	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

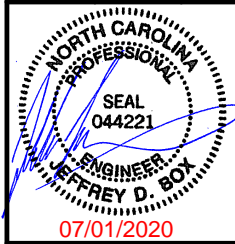
GENERAL NOTES

- ▽ 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.

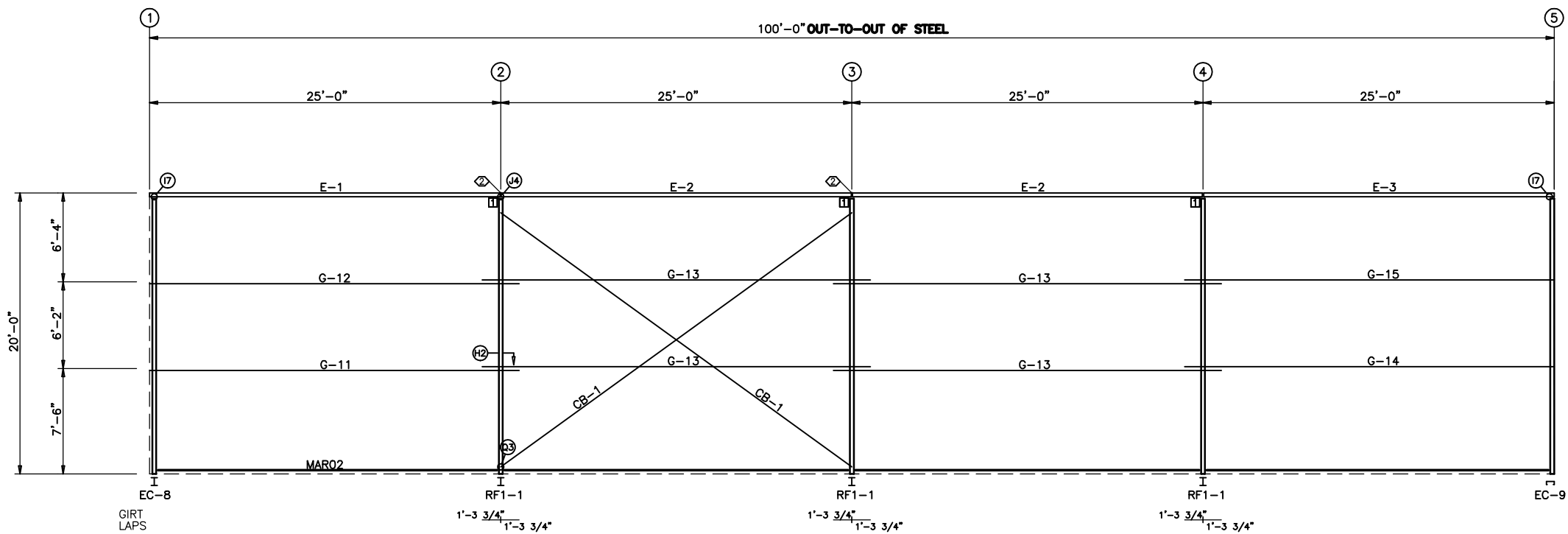
DATE	ISSUE	PERMITS
7/1/2020		

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

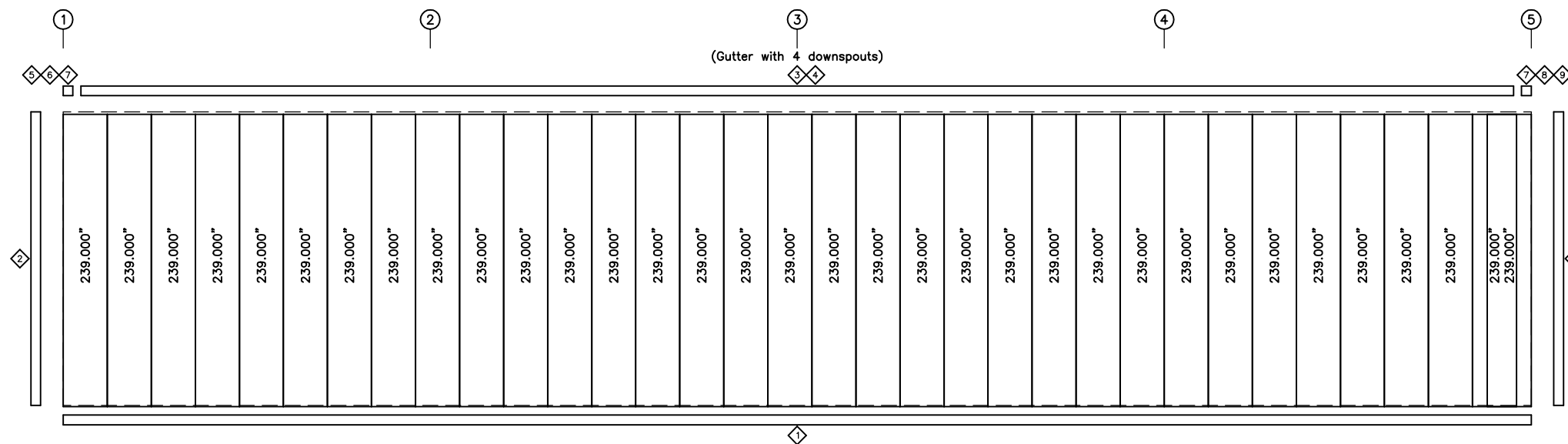
PROJECT NAME
 JC POWDER COATING
 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526
 CUSTOMER NAME
 JC POWDER COATING
 NEW HILL, NC 27562
 JOB NUMBER
 S2008243A
 SHEET TITLE



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 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	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.

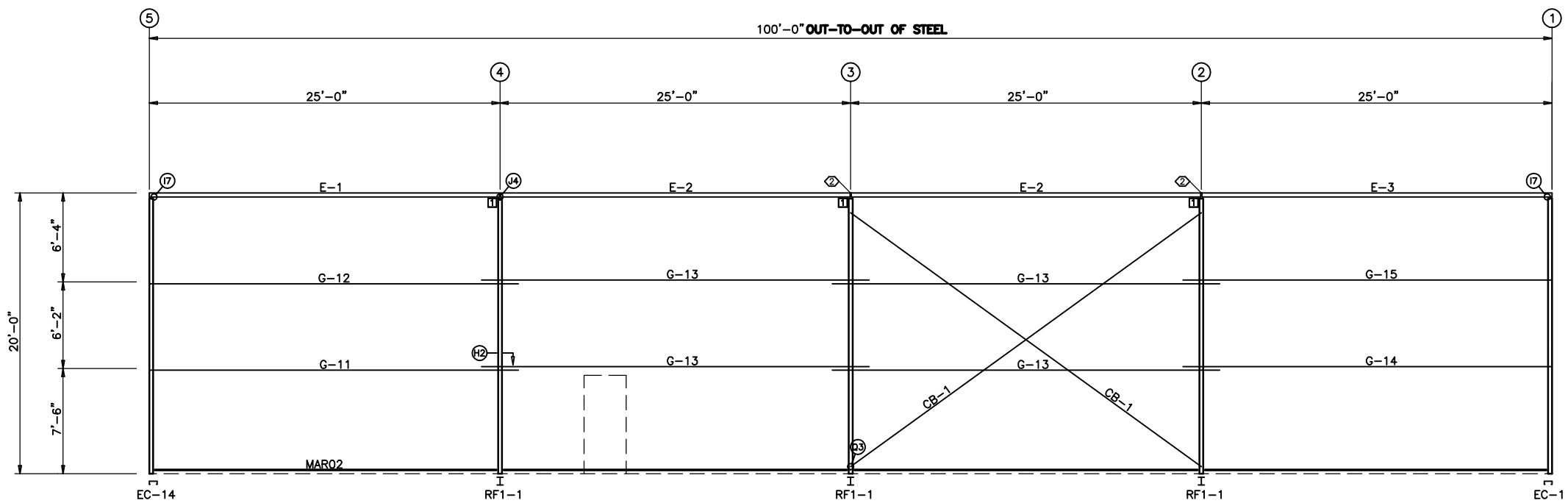
DATE	ISSUE	PERMITS
7/1/2020		

PEAK STEEL BUILDINGS
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 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



THIS DRAWING IS NOT TO SCALE.
 THE DESIGNER AND MANUFACTURER SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF THE BUILDING.
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 SHEET
E4 of 7



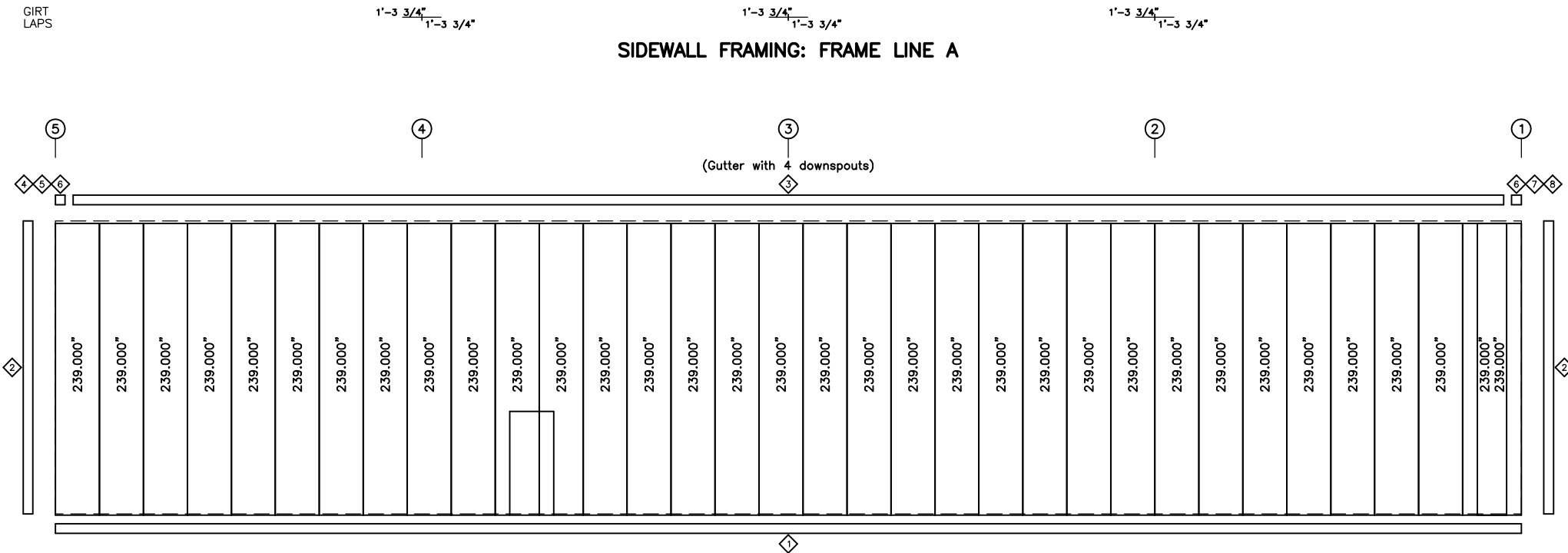
TRIM TABLE FRAME LINE A			
ID	PART	LENGTH	DETAIL
1	BSD01	122.000	TRIM_200
2	OCA01	242.000	TRIM_79
3	GTA02	242.000	TRIM_951
4	H4000	5.000	TRIM_21
5	RCA01	9.250	
6	GRA01	8.000	
7	H4000	5.000	
8	RCA02	9.250	

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

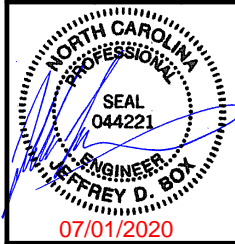
- STD. ROD/CABLE SIZES PER PART PREFIX ARE:

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 GIRTS 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		

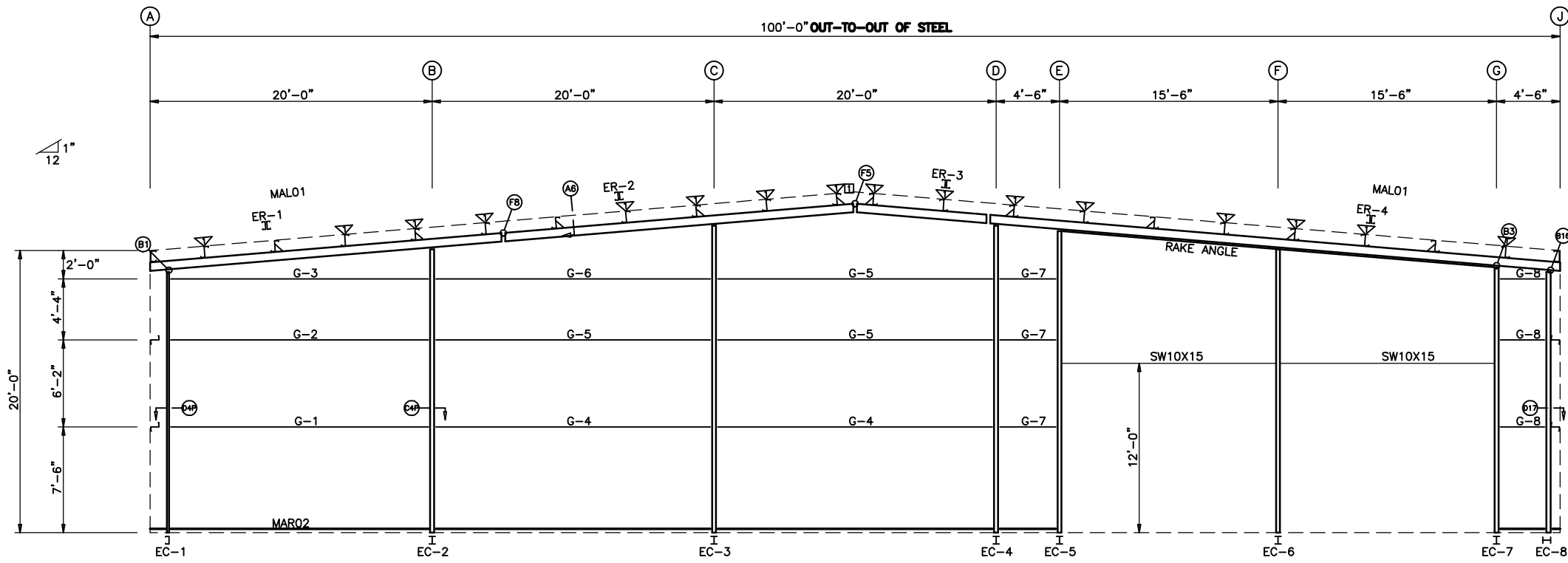
PEAK STEEL BUILDINGS
 PO BOX 1275
 MADISON, GA 30650
 PHONE: (944) 333-PEAK
 FAX: (706) 343-1988

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



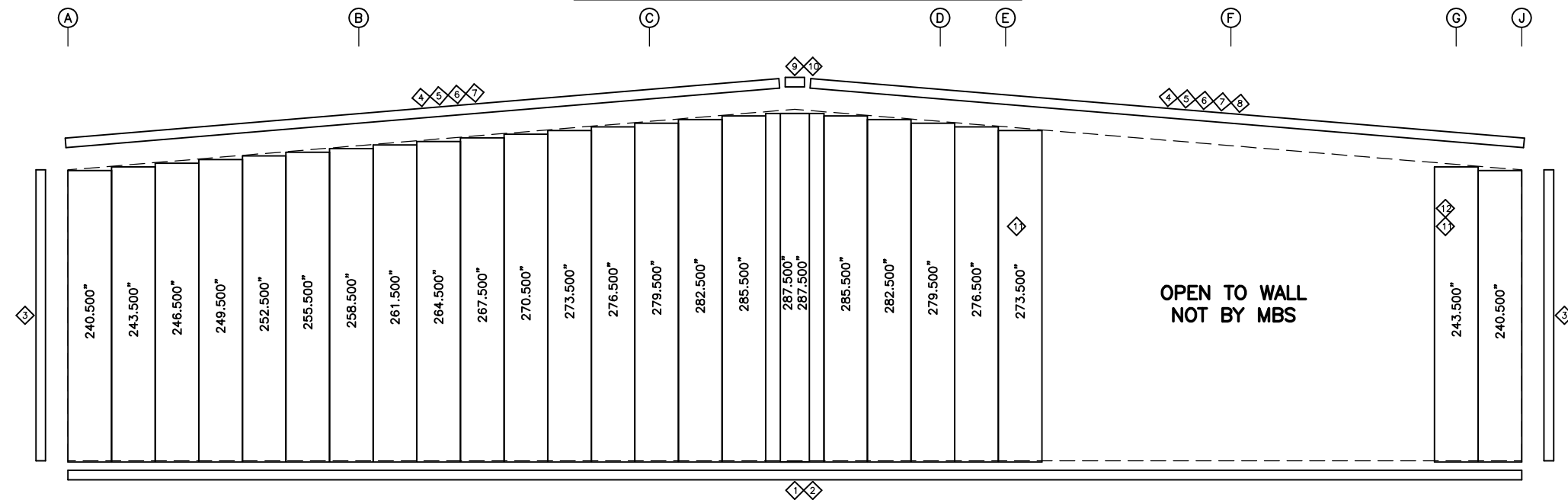
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SHEET
E5 of 7



ENDWALL FRAMING: FRAME LINE 1

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



ENDWALL SHEETING & TRIM: FRAME LINE 1

PANELS: 26 Ga. CW - Desert Sand PVDF

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

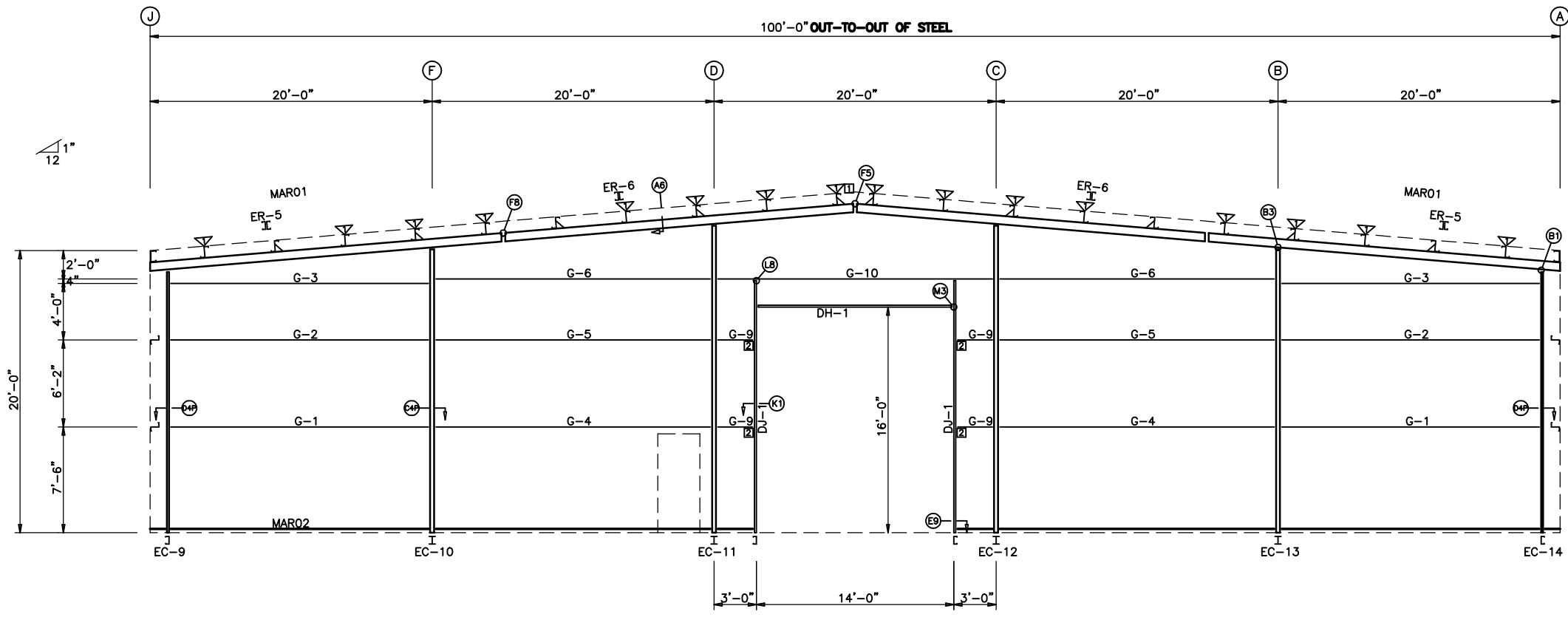
ENDWALL FRAMING PLAN

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 JC POWDER COATING 220 PROGRESS DRIVE, FUQUAY-VARINA, NC 27526	CUSTOMER NAME JC POWDER COATING NEW HILL, NC 27562	PROJECT NO. S2008243A	DATE 7/1/2020	DRAWN MBS	CHECKED DAW	PERMITS ISSUED
PEAK STEEL BUILDINGS PO BOX 1275 MADISON, GA 30650 PHONE: (944) 333-PEAK FAX: (706) 343-1988						
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SHEET E6 of 7						



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**

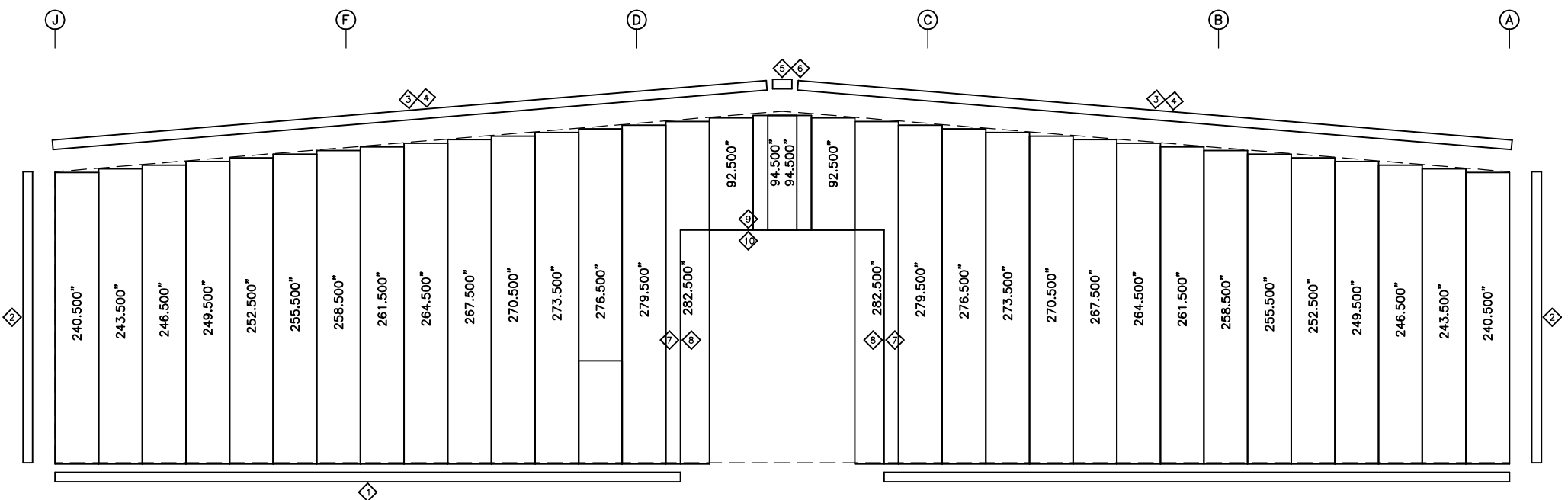
MARK	PART	LENGTH
EC-9	W08S075	219.250
EC-10	W8x10	238.063
EC-11	W8x10	258.063
EC-12	W8x10	258.063
EC-13	W8x10	238.063
EC-14	W08S075	219.250
ER-5	W12SD089	301.438
ER-6	W12SD089	299.188
DJ-1	J08C060	216.000
DH-1	J08C060	168.000
G-1	08Z075	215.500
G-2	08Z060	215.500
G-3	08Z054	215.500
G-4	08Z075	231.500
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, 3/4" ROD, 7/8" ROD, 1" ROD, 1 1/8" ROD, 1 1/4" ROD
 CABLE = 1/4" CABLE, 3/8" CABLE, 1/2" CABLE
- 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: PEAK STEEL BUILDINGS

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MADISON, GA 30650
PHONE: (944) 333-PEAK
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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

PROFESSIONAL ENGINEER SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER

SEAL 044221

JEFFREY D. BOY

07/01/2020

GENERAL MECHANICAL NOTES:

ABBREVIATIONS:

- 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.
- "PROVIDE" MEANS TO FURNISH AND INSTALL. MC SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND GENERAL CONTRACTOR AS SHOWN ON THE PLANS OR NECESSARY FOR A COMPLETE INSTALLATION.
- THE MC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
- ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE CONTRACTOR AT AN APPROVED LOCATION. THE MC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL RETURN THE PROPERTY OF THE MC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
- THE MC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL AND BUILDING CODES AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MC SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
- THE MC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
- DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
- THE MC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
- ALL MECHANICAL MATERIALS SHALL BE NEW AND FREE OF DEFECT AND LISTED AND LABELED BY UL OR AN APPROVED THIRD PARTY AGENCY. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE MC WITHOUT ADDITIONAL COST TO THE OWNER. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, THE CITED EXAMPLE IS INTENDED TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. SUCH EXAMPLES ARE USED TO CONVEY A GENERAL STYLE, TYPE, CHARACTER, AND QUALITY OF THE PRODUCT DESIRED; PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL BE ACCEPTED.
- THESE PLANS ARE DIAGRAMMATIC. THE MC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, DUCTS, REGISTERS, GRILLES, ETC. TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE MC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER CONNECTIONS TO THE MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING.
- IT IS THE MC'S RESPONSIBILITY TO VERIFY THAT ITEMS FURNISHED FOR THIS CONTRACT WILL FIT IN THE SPACE AVAILABLE. THE MC SHALL MAKE FIELD MEASUREMENTS AS NECESSARY TO DETERMINE SPACE REQUIREMENTS. IF THE MC MUST ALTER EQUIPMENT DUE TO SPACE CONSIDERATIONS, THE MC SHALL PROVIDE SIZES AND SHAPES THAT FIT THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS.
- MC SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR REGARDING THE ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT BEING PROVIDED.
- MAINTAIN CLEARANCES FOR ALL EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR SERVICEABILITY. ALL ROOFTOP EQUIPMENT MUST BE A MINIMUM OF 10 FEET FROM ROOF EDGE.
- MC SHALL FURNISH A BOUND SET OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT TO THE OWNER UPON COMPLETION OF THE PROJECT. MC SHALL PROVIDE ALL DOCUMENTATION TO THE OWNER AS NECESSARY TO SUBMIT FOR FACTORY WARRANTIES.
- CONTRACTOR SHALL PROTECT ALL HVAC EQUIPMENT FROM CONSTRUCTION AND SHEET ROCK DUST DURING CONSTRUCTION. ALL FILTERS SHALL BE REPLACED WITH NEW AT THE COMPLETION OF THE PROJECT.
- ALL EQUIPMENT INSTALLED ON ROOF MUST BE WITHIN THE ROOF SCREEN.
- IF A ROOF PENETRATION IS REQUIRED AND THE ROOF IS UNDER WARRANTY, USE THE AUTHORIZED ROOFER TO PROVIDE DOCUMENTATION.
- ALL PIPING, WIRING, CONDUIT, INSULATION, EQUIPMENT, SUPPORTS, ETC. SHALL BE SUITABLE FOR INSTALLATION IN A RETURN PLENUM AS NECESSARY. COORDINATE WITH OTHER TRADES ON LOCATIONS OF ALL PLENUMS.
- MC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

MATERIALS:

- THE MC SHALL PROVIDE ALL DX UNITARY HEATING AND COOLING EQUIPMENT AS SCHEDULED ON THE DRAWINGS. AIR-COOLED SPLIT SYSTEM HEAT PUMPS AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. AIR-COOLED ROOFTOP PACKAGE HEAT PUMPS, GAS-ELECTRIC UNITS, AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. GAS FURNACES SHALL BE BY TRANE, CARRIER, OR YORK. THE MC SHALL PROVIDE FACTORY AND FIELD INSTALLED ACCESSORIES AS SCHEDULED OR AS NECESSARY FOR A COMPLETE AND OPERATIONAL HVAC SYSTEM.
- THE MC SHALL PROVIDE ALL EXHAUST AND SUPPLY FANS AS SCHEDULED. FANS SHALL BE BY GREENHECK, LOREN COOK, TWIN CITY, OR PENNBARRY.
- DUCTWORK IS SHOWN WITH FREE AREA DIMENSIONS. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT STANDARD, 2 INCH S.P.
- EXTERNAL DUCT INSULATION AND FACTORY-INSULATED FLEXIBLE DUCT SHALL BE LESBY-PRINTED OR IDENTIFIED AT INTERVALS NOT GREATER THAN 36 INCHES WITH THE NAME OF THE MANUFACTURER, THE THERMAL RESISTANCE R-VALUE AT THE SPECIFIED INSTALLED THICKNESS AND THE FLAME SPREAD AND SMOKE-DEVELOPED INDEXES OF THE COMPOSITE MATERIALS. ALL DUCT INSULATION PRODUCT R-VALUES SHALL BE BASED ON INSULATION ONLY, EXCLUDING AIR FILMS, VAPOR RETARDERS OR OTHER DUCT COMPONENTS, AND SHALL BE BASED ON TESTED C-VALUES AT 75°F MEAN TEMPERATURE. AT THE INSTALLED THICKNESS IN ACCORDANCE WITH RECOGNIZED INDUSTRY PROCEDURES, THE INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUES SHALL BE DETERMINED AS FOLLOWS:
4.1. FOR DUCT BOARD, DUCT LINER AND FACTORY-MADE RIGID DUCTS NOT NORMALLY SUBJECTED TO COMPRESSION, THE NOMINAL INSULATION THICKNESS SHALL BE USED.
4.2. FOR DUCT WRAP: THE INSTALLED THICKNESS SHALL BE ASSUMED TO BE 75 PERCENT (25-PERCENT COMPRESSION) OF NOMINAL THICKNESS.
4.3. FOR FACTORY-MADE FLEXIBLE AIR DUCTS, THE INSTALLED THICKNESS SHALL BE DETERMINED BY DIVIDING THE DIFFERENCE BETWEEN THE ACTUAL OUTSIDE DIAMETER AND NOMINAL INSIDE DIAMETER BY TWO.
- 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. ALL INSULATION SHALL HAVE FORMALDEHYDE EMISSIONS NOT GREATER THAN 0.05 PPM. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.
- WASTIC USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A-95 OR UL 181B-96. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURER OF ADHESIVES, MASTICS, AND INSULATION CEMENTS. DO NOT INSTALL DUCT SEALANT WHEN TEMPERATURES ARE LESS THAN THOSE RECOMMENDED BY THE SEALANT MANUFACTURER.
- ALL ADHESIVES AND SEALANTS SHALL HAVE VOC CONTENT BELOW 20 GRAMS PER LITER AND WHICH MEET THE REQUIREMENTS OF THE MANUFACTURER OF THE PRODUCTS BEING ADHERED OR INVOLVED. ADHESIVES AND SEALANTS SHALL CONTAIN NO HEAVY METALS OR FORMALDEHYDE.
- FACTORY-MADE AIR DUCTS AND CONNECTORS SHALL COMPLY WITH UL 181-96. FLEXIBLE DUCT SHALL BE UL LISTED CLASS 0 OR CLASS 1, INSULATED, AND COMPLY WITH UL 151. FLEXIBLE DUCT SHALL BE FACTORY FURNISHED WITH SPIRAL WOUND CORROSION RESISTANT WIRE BONDED TO AN INNER FABRIC LINER. DUCT SHALL BE FACTORY INSULATED WITH A FOIL VAPOR BARRIER JACKET. CONNECT TO RIGID DUCT WITH SPIN-IN FITTING AND DAMPER. FLEXIBLE DUCTS AND AIR CONNECTORS SHALL NOT PASS THROUGH ANY FIRE RESISTANCE RATED ASSEMBLY.

- THE MC SHALL PROVIDE ALL DIFFUSERS, GRILLES, LOUVERS, AND OTHER AIR DISTRIBUTION OUTLETS AND INLETS, LOUVERS, GRILLES, AND DIFFUSERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. FOR LAT-IN CEILING, INSTALL SUPPORT FROM THE STRUCTURE FOR EACH DIFFUSER OR DAMPER. AIR DISTRIBUTION OUTLETS AND INLETS SHALL BE BY HART & COOLEY, PRICE, METAL-AIRE, NALOR, OR CARNES.
- AIR FILTERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 605 OF THE 2018 NC MECHANICAL CODE.
- THE MC SHALL PROVIDE ALL REFRIGERATION PIPING, ALL PIPE AND FITTINGS SHALL BE TYPE ACR HARD COPPER TUBING WITH SWEAT FITTINGS. REFRIGERATION LINES SHALL BE RUN NEATLY: WHERE A GROUP OF LINES ARE RUN, TRAP/TEE HANGERS MAY BE USED. DO NOT USE CHAIN OR WIRE HANGERS. WRAP TUBING WITH RUBBER TAPE AT EACH CLAMP OR HANGER. FOR COVERED PIPES, HANGERS SHALL FIT AROUND THE OUTSIDE OF THE COVERING WITH 12 GAUGE GALVANIZED STEEL SHIELDS OF A LENGTH EQUAL TO THE OUTSIDE DIAMETER OF THE INSULATION AND COVERING 3/4 OF THE CIRCUMFERENCE OF THE INSULATION. GAS SHALL NOT BE PERMISSIBLE. HORIZONTAL LINES SHALL BE RUN WITH NO MORE THAN 1 INCH IN 40 FEET. INSULATE WITH 1 INCH CLOSED CELL ARMARLEX TYPE INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50. ALL JOINTS AND SPLICES IN INSULATION SHALL BE TAPED AND AIR TIGHT. SOLDER REFRIGERATION LINES USING 15 PERCENT SILVER SOLDER AND EVACUATE LINES TO 300 MICRONS. PROVIDE MOISTURE INDICATING SIGHT GLASS AND FILTER DRYER IN LIQUID LINE. PROVIDE OIL TRAPS AND DOUBLE RESERS IN REFRIGERANT SUCTION AND HOT GAS LINES. WHERE REQUIRED TO PREVENT OIL SLUGGING AT THE COMPRESSOR AND INSURE PROPER LUBRICATION. MC SHALL BE RESPONSIBLE FOR SEALING LINE SET PENETRATIONS OF ANY RATED ASSEMBLIES IN ACCORDANCE WITH A SYSTEM LISTED IN THE UL DIRECTORY FOR THE SPECIFIC ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR A LIST OF ALL UL FIRE RATED ASSEMBLIES.

METHODS:

- INSULATE DUCTWORK WITH FIBERGLASS DUCT WRAP; INSTALLED R-VALUE SHALL BE A MINIMUM R-6. COVERINGS AND LININGS, INCLUDING ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL NEW DUCTWORK SHALL RECEIVE INSULATION ON THE OUTSIDE. INSTALL DUCT WRAP INSULATION WITH FACING OUTSIDE SO THAT TAPE FLAP OVERLAPS INSULATION AND FACING OF ADJACENT PIECE OF DUCT WRAP. INSULATION SHALL BE TIGHTLY BUTTED. FOR RECTANGULAR DUCTS, INSTALL SO INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. STAPLE SEAMS APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLIPPING STAPLES. SEAL SEAMS WITH PRESSURE SENSITIVE TAPE MATCHING THE FINISH FOR RECTANGULAR DUCTS 24 INCHES IN WIDTH OR GREATER. SECURE DUCT WRAP TO THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SPACED 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING ALL TEARS, FRACTURES, ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM. INSULATION SHALL BE BY KNAUF INSULATION, OWENS CORNING CORP, OR CERTAINTED CORPORATION.
- VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS. VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL PRIOR TO INSULATING. DUCT COVERINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR REQUIRED TO BE FIRE BLOCKED.
- WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET IS SMALLER THAN LOUVER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOUVER AREA AROUND DUCT. USE SAME MATERIAL AS DUCT, PAINTED BLACK ON EXTERIOR SIDE; SEAL TO LOUVER FRAME AND DUCT.
- PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, COMBINATION FIRE AND SMOKE DAMPERS.
- CONSTRUCT T's, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE. WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE TURNING VANGES.
- INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE; MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
- IT SHALL BE THE RESPONSIBILITY OF THE MC TO SUSPEND AND SUPPORT ALL EQUIPMENT, DUCTWORK, DIFFUSERS, AND OTHER MATERIALS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC 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 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 OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL BEAMS.
- DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, GIRDERS, OR BEAMS.
- CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
- PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DIFFUSERS, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES AT SITE ALTITUDE.
- MC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTERIOR FACTORY SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2018 NC MECHANICAL CODE. PROVIDE ACCESS PANELS FOR TESTING AND SERVICE AS NECESSARY. MC SHALL PROVIDE RADIATION DAMPERS AND THERMAL BLANKETS FOR ALL PENETRATIONS OF RATED CEILING ASSEMBLIES. RADIATION DAMPERS SHALL BE UL LABELED (UL 555C) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS. FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND CEILING RADIATION DAMPERS SHALL BE BY RUSKIN, NALOR, OR LLOYD INDUSTRIES.
- MC SHALL INSTALL A SMOKE DETECTOR-UL LISTED FOR DUCT INSTALLATION (UL 268A) IN EACH UNIT'S RETURN UPSTREAM OF ANY FILTERS, OUTSIDE AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72. DUCT SMOKE DETECTOR SUPERVISION SHALL COMPLY WITH 906.4.1 OF THE 2018 NC MECHANICAL CODE. IF THE BUILDING IS (10) EQUIPPED WITH A FIRE ALARM SYSTEM, THE FIRE ALARM SYSTEM CONTRACTOR SHALL FURNISH AND WIRE ALL DUCT SMOKE DETECTORS. IF THE BUILDING IS NOT PROVIDED WITH A FIRE ALARM SYSTEM, THE MC SHALL FURNISH AND WIRE THE DUCT SMOKE DETECTORS AND A DEVICE. IT SHALL BE THE RESPONSIBILITY OF THE MC TO INSTALL ALL SMOKE DUCT DETECTORS PER NFPA AND MFG'S INSTALLATION INSTRUCTIONS REGARDLESS OF WHO FURNISHES THE DEVICES.
- MC SHALL INSTALL PROGRAMMABLE THERMOSTATS AS SHOWN ON THE PLANS. THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION C403.2.4 OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.
- FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING THRU ROOFS.
- MC SHALL INSTALL ALL EXHAUST FANS AND VENT TO THE BUILDING'S EXTERIOR. EC SHALL SWITCH FANS WITH LIGHTS OR ON SEPARATE SWITCH AS SHOWN.
- P-TRAPS MUST BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUDIARY DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC OIL-OFF FLOAT SWITCH FOR EACH P-TRAP AND CONDENSATE LINES SHALL BE 1 INCH.
- P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLENUMS; OTHERWISE, THEY SHALL BE TYPE M COPPER.
- INSTALL BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST DUCTS WHERE THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION CODE C402.5.5

MARK	MFG / MODEL #	NOMINAL CAPACITY TONS	REF LINES		MOTORS			EFFICIENCIES				ELECTRICAL			WEIGHT LBS	REMARKS
			GAS	L1Q	COMPRESSOR	COND. FAN	SEER	COP @ 17"	HSPF	V/PH	MCA	MDCP	V/PH	MCA		
HP-1	TRANE 4TRV02441	2	5/8	3/8	1	1	17.25/13.5	2.70	9.0	208/1	15	25	236	1-9		

MARK	MFG / MODEL #	NOMINAL CAPACITY TONS	AIR FLOW		FAN MOTORS		HEATING CAPACITY			COOLING CAPACITY		ELECTRICAL			WEIGHT LBS	REMARKS	
			SUPPLY	MIN. DA	SUPPLY	ESP	OUTPUT	AUX ELEC HEAT	EAT WB/DB	TOTAL	SENSIBLE	V/PH	MCA	MDCP			
AHU-1	TRANE TAMB0303V31	2.5	800	100	1	0.25	15.0	2.88	1	67/80	24.5	18.7	208/1	22	25	138	2-10

- PROVIDE CONCRETE PAD FOR UNIT TO SIT ON
- PROVIDE HEAT STRIP OUTDOOR TEMPERATURE LOCKOUT TO PREVENT SUPPLEMENTAL HEAT OPERATION IN RESPONSE TO THE THERMOSTAT BEING CHANGED TO A WARMER SETTING. SET NO LOWER THAN 35°F AND NO HIGHER THAN 40°F.
- REPLACE ALL FILTERS AT PROJECT'S COMPLETION
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHT-TIME SET BACK
- CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 60FT
- HEATER RATED AT 208V
- OR EQUAL BY CARRIER, LENNIX, OR YORK
- ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI)
- MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES
- AIR HANDLER UPSIZED TO MEET MIN ENERGY REQUIREMENTS, AHU MAY BE SUBSTITUTED FOR 2-TON UNIT WITH EQUAL EFFICIENCIES (SEE NOTE 8).

MARK	OUTSIDE UNIT MFG / MODEL #	INSIDE UNIT MODEL #	NOM CAPACITY TONS	SUPPLY AIR CFM	HEATING @ 17°F MBH	TOT COOLING MBH	SEN COOLING MBH	VOLT/PH	SEER	HSPF	MCA AMPS	MDCP AMPS	NOTE

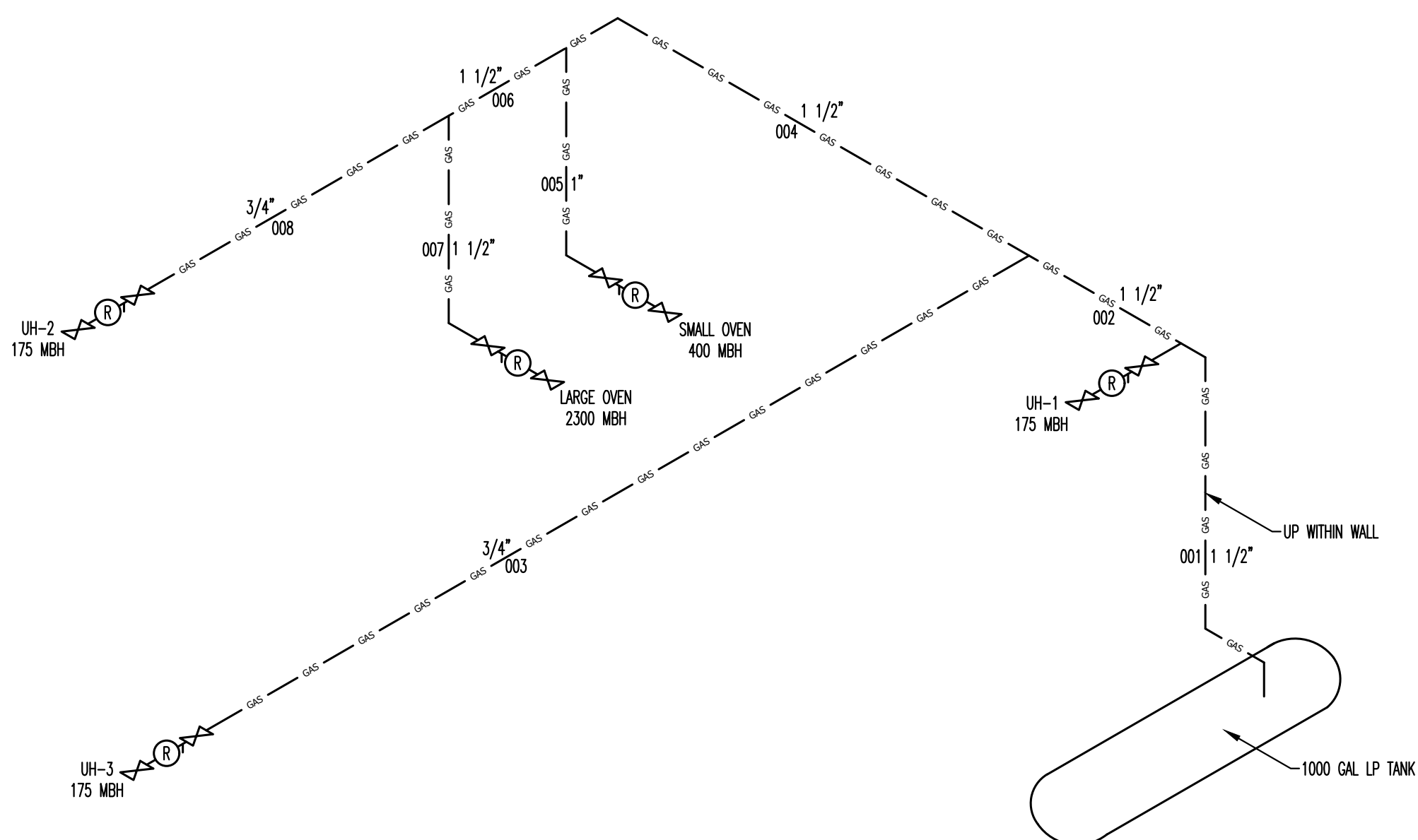
- PROVIDE CONCRETE PAD FOR OUTDOOR UNIT TO SIT ON
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHT-TIME SET BACK
- HEATER RATED AT 208V
- OR EQUAL BY DAIKIN, LG, OR SAMSUNG
- ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI)
- MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

Room Name(s)	Zone Type	Area (sq.ft.)	Rp	Ra	Default Occupancy	Pz	Ez	Airflow to Zone (cfm)	Required Exhaust (cfm)
Office Area	Office Space	630	5	0.06	5	3.15	0.8	800	0
	N/A		0	0	0	0.00	0.8	0	0
	N/A		0	0	0	0.00	0.8	0	0
	N/A		0	0	0	0.00	0.8	0	0
	N/A		0	0	0	0.00	0.8	0	0
K-12 School?	No		Maximum Zp:	0.083672					
			Ev:	1					
			Actual System Population:	5					
Uncorrected Intake	63 cfm								
Outdoor Air Intake	63 cfm								
Percent of Unit Air	8%								

Room Name(s)	Zone Type	Area (sq.ft.)	Rp	Ra	Default Occupancy	Pz	Ez	Airflow to Zone (cfm)	Required Exhaust (cfm)
Workshop	Wood/Metal Shop	9050	10	0.18	20	181.00	0.8	5600	4525
	N/A		0	0	0	0.00	0.8	0	0
	N/A		0	0	0	0.00	0.8	0	0
	N/A		0	0	0	0.00	0.8	0	0
	N/A		0	0	0	0.00	0.8	0	0
K-12 School?	No		Maximum Zp:	0.767634					
			Ev:	0.3					
			Actual System Population:	5					
Uncorrected Intake	1679 cfm								
Outdoor Air Intake	5597 cfm								
Percent of Unit Air	100%								

PER 2018 NC FUEL GAS CODE TABLE 402.4 (27)				
SECTION	GAS LOAD MBTU/H	LINE SIZE INCHES	CAPACITY CFH	PRESSURE 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



MARK	MFG / MODEL #	TYPE	ESP (in WD)	CFM	VOLT/PH	FLA	SONES	NOTES
EF-1,2	COOK - GC-148	CEILING	0.40	100	277/1	0.8	2.5	1-3
EF-3	COOK - 330ACEB	ROOF	0.10	6000	480/3	7.6	4.8	1-3

- PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLOPED ROOF, OR HEMMED WALL WITH BACKDRAFT DAMPER CAP AS APPLICABLE.
- PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY
- OR EQUAL BY GREENHECK OR PENNBARRY OR TWIN CITY

MARK	MFG	MODEL #	SIZE	MOUNTING	DESCRIPTION	NOTES
A	HART & COOLEY	HVS	24X24	LAY-IN	4-WAY DIFFUSER, BRIGHT WHITE	1,2
R	HART & COOLEY	94AT	24X24	LAY-IN	STEEL, LAY IN, RETURN GRILLE	1

- OR EQUAL BY PRICE, METAL-AIRE, CARNES, TITUS OR NALOR.
- PROVIDE WITH FOIL LINED, MOLDED INSULATION BLANKET.

MARK	MFG / MODEL #	INPUT MBH	HEAT OUTPUT MBH	AIR FLOW CFM	VOLT/PH	FLA AMPS	MDCP AMPS	WEIGHT LBS	NOTES
UH-1,2,3	TRANE / GYPE-175	175.0	145.2	2000	120V/1	14.2	20.0	250.0	1

- PROVIDE REMOTE THERMOSTAT.

MARK	MFG	MODEL #	SIZE	DESCRIPTION	NOTES
L	RUSKIN	ELM6375DX	60X60	ALL ALUMINUM DRAINABLE LOUVER	1-3

- OR APPROVED EQUAL.
- PROVIDE BIRD/INSECT SCREEN.
- PRESSURE RELIEF OPEN WITH SPRING CLOSE.

MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE: THERMAL ZONE PRESCRIPTIVE ZONE 4A

EXTERIOR DESIGN CONDITIONS:

HEATING DESIGN DRY BULB 23.1°F
COOLING DESIGN DRY BULB 91.7°F
COOLING DESIGN WET BULB 75.6°F

INTERIOR DESIGN CONDITIONS:

HEATING DESIGN DRY BULB 70°F
COOLING DESIGN DRY BULB 75°F
COOLING RELATIVE HUMIDITY 50%

OFFICE AREA:

HEATING LOAD: 11,000 BTU/H
SENSIBLE COOLING LOAD: 8,750 BTU/H
LATENT COOLING LOAD: 4,000 BTU/H

WORKSHOP AREA:

HEATING LOAD: 405,000 BTU/H

MECHANICAL SPACING CONDITIONING SYSTEM:

UNITARY DESCRIPTION OF UNIT(S): AIR COOLED DX SPLIT SYSTEMS
BOILER: N/A
TOTAL BOILER OUTPUT: N/A
CHILLER: N/A
TOTAL CHILLER CAPACITY: N/A

EQUIPMENT EFFICIENCIES:

SEE SCHEDULES

EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS):

SEE SCHEDULES

DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE, THE MECHANICAL DESIGN FOR THIS BUILDING COMPLIES WITH MECHANICAL AND EQUIPMENT REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE AND 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.

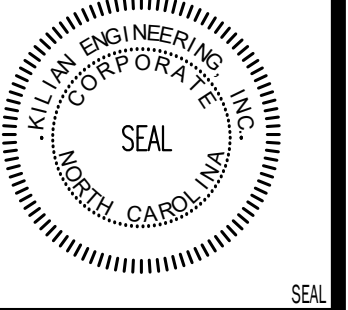
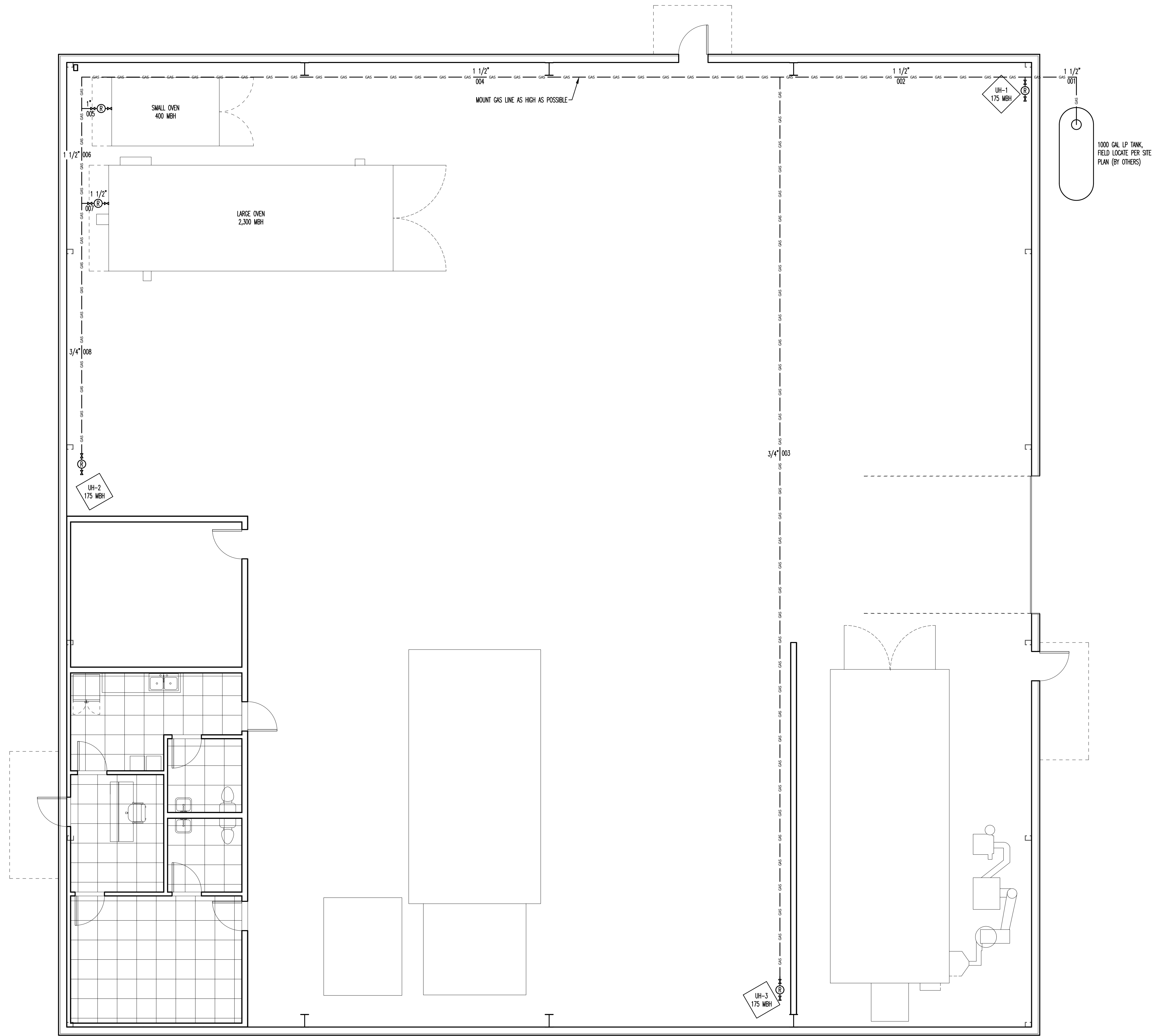
GENERAL GAS LINE PIPING NOTES

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 "SMOUL" 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 MBTU/H	LINE SIZE INCHES	CAPACITY CFH	PRESSURE 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



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

GENERAL ELECTRICAL NOTES:

- ADMINISTRATIVE:
1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR, MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR, FACS - FIRE ALARM SYSTEM CONTRACTOR.
2. 'PROVIDED' MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR AS REQUIRED.
3. EC SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY AND REASONABLY INCIDENTAL TO INSURE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. MINOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY WEARABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
4. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 'STANDARD PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING.'
5. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. THE ELECTRICAL CONTRACTOR SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE ELECTRICAL CONTRACTOR UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
6. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
7. TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTIONS SHALL BE PERMITTED IF APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF EQUIPMENT.
9. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
10. GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. A GREEN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC TABLE 250-122, SHALL BE RUN IN ALL POWER RACEWAYS. FOR NON-ISOLATED GROUND CIRCUITS PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN FOR ISOLATED GROUND CIRCUITS, PROVIDE ONE NEUTRAL AND ONE ISOLATED GROUND WIRE FOR EACH CIRCUIT. IN ADDITION, PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. MAIN BONDING JUMPERS AND SYSTEM BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH 250.28 OF THE NEC. FOR BUILDINGS OR STRUCTURES SUPPLIED BY FEEDERS OR BRANCH CIRCUITS, GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH 250.32. SEPARATELY DERIVED AC SYSTEMS SHALL BE GROUNDING IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS. ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED PER 250.56 AS NECESSARY.
11. THE ELECTRICAL CONTRACTOR SHALL ALSO COORDINATE WITH THE GENERAL CONTRACTOR REGARDING THE BONDING OF THE FOOTING REBAR, SO THAT IT WILL BE IN PLACE AND READY AT ALL TIME OF FOOTING INSPECTION.
12. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS' LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR UL RE-EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED FOR THE EQUIPMENT.
13. CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. BEFORE ORDERING ELECTRICAL EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUCTOR, CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE.
14. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THE FOLLOWING MATERIALS ARE RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT: LIGHT FIXTURES, INCLUDING PROPER DISPOSAL OF BALLASTS, FLUORESCENT LIGHT BULBS, AND TRANSFORMERS, WIRING AND ELECTRICAL EQUIPMENT, AND INSULATION. WASTE MATERIALS CONTAINING LEAD, ASBESTOS, PCBs (FLUORESCENT LAMP BALLASTS), OR OTHER HAZARDOUS SUBSTANCES SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND REQUIREMENTS CONCERNING HAZARDOUS WASTE.
15. ALL WORK SHALL CONFORM TO 2017 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

- MATERIALS:
1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, RECEPTACLES, TERMINALS, ETC. UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS NOTED OTHERWISE BY OTHER DISCIPLINES.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SERVICE ENTRANCE EQUIPMENT, SUB PANELS, AND OTHER ELECTRICAL DISTRIBUTION EQUIPMENT AS NECESSARY FOR A COMPLETE INSTALLATION. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH UTILITY REGARDING SERVICE AND METERING DETAILS, PRIOR TO ORDERING EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE AVAILABLE FAULT CURRENT OR TRANSFORMER SIZE AND IMPEDANCE FROM THE UTILITY AND CONTACT THE ENGINEER IF THE VALUE EXCEEDS THE EQUIPMENT SPECIFIED. PANEL BOARDS AND SWITCH BOARDS SHALL BE SQUARE D, CUTLER-HAMMER, SIEMENS, OR GE. BUSES SHALL BE COPPER UNLESS OTHERWISE APPROVED BY THE ENGINEER. RECESSED PANEL BOARDS SHALL BE INSTALLED FLUSH WITH THE WALL FINISH. METER BASES SHALL COMPLY WITH THE UTILITY'S SPECIFICATIONS AND SHALL BE MOUNTED AT A HEIGHT APPROVED BY THE UTILITY. ALL EQUIPMENT IDENTIFIED FOR SERVICE ENTRANCE USE SHALL BE SO LABELED AND UL LISTED FOR SUCH USE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT WITH CLEARANCES PER NEC 110.26. ELECTROROOM SHALL PERMANENTLY LABEL EQUIPMENT PER NEC 110.24.
3. ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCATABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE BUSS-IN IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY FUSION, LITTELFUSE, OR MERSEN.
4. OCCUPANCY SENSORS SHALL BE BY WATSTOPPER, LUTRON, LEVITON, SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.
5. CIRCUIT BREAKERS SHALL BE MOLDED-CASE, THERMAL MAGNETIC TYPE WITH QUICK-WAKE, QUICK-BREAK MECHANISM. COMMON TRIP ON MULTI-POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER, FULLY RATED FOR THE SYSTEM, OR SERIES RATED WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.
6. ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUGS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
7. THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THHN/THWN OR XHHW. ALL WIRING INSTALLED BELOW GRADE OR IN MOST OR WET LOCATIONS SHALL HAVE TYPE THHN OR XHHW INSULATION. INSULATION VOLTAGE RATINGS SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED COPPER CONDUCTORS. CONDUCTORS SHALL BE BY CERRO WIRE, INC., INDUSTRIAL WIRE & CABLE, INC., OR SOUTHWIRE COMPANY.
8. JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL 'WIRE NUTS', 3M 'SCOTCH LOCK', OR TAB 'PICS' CONNECTORS IN JUNCTION BOXES, OUTLET BOXES AND LIGHTING FIXTURES. JOINTS IN STRANDED CONDUCTORS SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS AND GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WHEN OUTLET OR JUNCTION BOXES, TROUGH, OR OUTLETS, WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING TYPE INSULATED BUSHING SHALL BE PROVIDED.
9. ALL LUMINAIRES SHALL BE LISTED. LUMINAIRES IN WET OR DAMP LOCATIONS SHALL BE MARKED AS SUITABLE FOR THE RESPECTIVE USE. EMERGENCY LIGHTING SHALL BE INSTALLED AS SHOWN. FINAL LOCATIONS OF ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.
10. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR O-1/2 (GENERAL). COUPLINGS SHALL BE THREADED, SET-SCREW, OR COMPRESSION TYPE. WRENCH OR CRAMP TYPE ARE NOT PERMITTED. CONDUIT FITTINGS AT ALL ELECTRICAL BOXES INCLUDING PULL, JUNCTION, AND OUTLET BOXES, SHALL HAVE INSULATED THROATS TO PREVENT INSULATION SCORING. DIE CAST FITTINGS ARE NOT PERMITTED.
11. EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS

- INSTITUTE-AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALIC TUBING (EMT), ANSI C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. INTERMEDIATE METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242.
12. METAL CONDUIT SHALL BE BY ALLOY TUBING & CONDUIT, BECK MANUFACTURING, INC. OR WHEATLAND TUBE COMPANY. FLEXIBLE METAL CONDUIT, LIQUID-TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC. ELECTRA-FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

- METHODS:
1. EC SHALL REVIEW THE MECHANICAL PLANS TO ESTABLISH POINTS OF CONNECTION AND THE EXTENT OF THE ELECTRICAL WORK TO BE PROVIDED IN THE CONTRACT.
2. ALL CIRCUIT BREAKERS AND SWITCHES WITHIN PANELS SHALL BE HUBBELL BREAKERS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG IN 3/4 IN CONDUIT. EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE SOURCE PER NEC 210.4(B). GROUP ALL CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT PER 210.4(D) WITH WIRE TIES OR SIMILAR MEANS. DO NOT EXCEED THREE HOMERUNS PER CONDUIT. DO NOT INSTALL ISOLATED GROUND AND NON-ISOLATED GROUND CIRCUITS IN THE SAME CONDUIT. INSTALLED CONDUCTORS OF DIFFERENT VOLTAGES IN SEPARATE CONDUITS.
3. COLOR CODE CONDUCTORS PER NEC FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK AND RED FOR PHASES A AND B RESPECTIVELY ON 120/240 VOLT SINGLE-PHASE SYSTEMS AND WHITE FOR THE NEUTRAL. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL, TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLenums.
4. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. COORDINATE LIGHTING LAYOUT WITH CEILING GRID, MECHANICAL EQUIPMENT, DUCTWORK AND SPRINKLER HEADS AS NECESSARY. SEE REFLECTED CEILING PLAN FOR DETAILS. FLUORESCENT FIXTURES UTILIZING DOUBLE-ENDED LAMPS MUST HAVE A DISCONNECTING MEANS COMPLYING WITH NEC 410.130(C).
5. MOUNT LIGHT SWITCHES AT 48 IN AFF. MULTIPLE SWITCHES AT SAME LOCATION SHALL BE UNDER ONE WALL PLATE. VERIFY WALL PLATE COLOR AND MATERIAL WITH THE ARCHITECT/OWNER. INSTALL SWITCHES WITH #6 POSITION DOWN. ALL SWITCHES SHALL BE HEAVY DUTY, MORY PLASTIC WITH TOGGLE HANDLE, RATED 120V-277V AC, AND COMPLYING WITH NEMA WD 6 AND WD 1. SWITCHES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. PROVIDE BOX DEVICE PARTITION/DIVIDERS FOR MULTI-GANG BOXES FOR COMPLIANCE WITH NEC 404.8(B).
6. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. SEAL 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 THIS PROJECT.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. REFRIGERATORS AND WATER COOLERS MUST HAVE A DEDICATED GFCI BREAKER. EACH OUTDOOR HVAC UNIT MUST HAVE A GFCI RECEPTACLE WITHIN 25 FEET FOR SERVICE. GFCI RECEPTACLES SHALL CONFORM TO UL 943 CLASS A AND UL 498 STANDARDS. RECEPTACLES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. ALL RECEPTACLES SHALL BE 125V RATED, HEAVY DUTY, AND COMPLY WITH NEMA WD 6 AND WD 1.
8. LOCATIONS AND HEIGHTS OF ALL WALL-MOUNTED DEVICES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION.
9. CONSIDER ALL CONDUIT EXCEPT IN MECHANICAL ROOMS OR UNFINISHED AREAS AS NOTED. USE EMT CONDUIT FOR ALL BRANCH CIRCUITS AND FEEDERS INSIDE THE BUILDING. TYPE MC CABLE AND TYPE AC CABLE MAY BE INSTALLED WITH WALLS IF ALL NEUTRAL WIRES, ISOLATED GROUND WIRES, AND EQUIPMENT GROUND WIRES AS LISTED ABOVE ARE CONTAINED IN THE CABLE. FLEXIBLE CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SHALL BE MADE USING WEATHERPROOF FLEXIBLE CONDUIT. FOR LAY-IN LIGHT FIXTURES, USE MAXIMUM OF SIX (6) FEET OF FLEXIBLE MC CABLE (OR THE FLEXIBLE CONDUIT PROVIDED BY THE FIXTURE MANUFACTURER). SCHEDULE 40 PVC CONDUIT MAY BE USED FOR THE SECONDARY UNDERGROUND SERVICE, UNDERGROUND TELEPHONE SERVICE, AND BRANCH AND FEEDER CIRCUITS UNDER SLAB OR EXTERIOR TO THE BUILDING. EXPOSED EXTERIOR CONDUIT SHALL BE SCHEDULE 80 PVC. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED WITH UNDERGROUND LINE MARKING TAPE 6-8 IN BELOW GRADE DIRECTLY ABOVE THE RACEWAY. PROVIDE PULL WIRE IN EMPTY CONDUITS. UPSIZE CONDUIT FROM MINIMUM SIZE AS NECESSARY FOR LONGER PULVS. UNDERGROUND RACEWAYS THAT STUB INTO THE BOTTOM OF SWITCHBOARDS, OUTDOOR TRANSFORMERS, GENERATORS, ETC., SHALL RISE AT LEAST 2 IN ABOVE THE FINISHED SLAB TO PREVENT WATER FROM DRAINING INTO THE RACEWAYS. RACEWAYS THAT PENETRATE EXTERIOR WALLS OR INTERIOR PARTITIONS SEPARATING SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(G), 300.7(A), AND 300.5(E) OF THE NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT-TO-POINT. ROUTE EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.
10. CABLES, RACEWAYS, OR BOXES, INSTALLED IN EXPOSED OR CONCEALED LOCATIONS UNDER METAL-CORRUGATED SHEET ROOF DECKING, SHALL BE INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1-1/2 IN MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX. A CABLE, RACEWAY, OR BOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN METAL-CORRUGATED, SHEET DECKING-TYPE ROOF. SEE NEC 300.4(E).
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. ALL OUTLET AND JUNCTION BOXES SHALL BE GALVANIZED STEEL TYPE BY APPLETON, STEEL CITY, OR RACO. EXTERIOR BOXES SHALL BE TYPE FS. VAPORITE BOXES SHALL BE TYPE OS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND THEIR FACEPLATES SHALL HAVE ROUNDED CORNERS. BOXES INSTALLED IN FLOORS SHALL BE RATED FOR THE APPLICATION. MOUNT JUNCTION AND OUTLET BOXES FLUSH WITH FINISH SURFACES UNLESS OTHERWISE NOTED. WHERE MOUNTING HEIGHTS ARE GIVEN, THEY SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTER OF THE BOX. ALL BOXES SHALL BE SIZED PER NEC ARTICLE 314. ALL OUTLET AND JUNCTION BOXES SHALL HAVE A COVER PLATE, PROVIDED BY THE ELECTRICAL CONTRACTOR. OUTLET BOXES IN RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE 712.3.2 (MAXIMUM BOX SIZE IS 16 SQUARE IN AND MAXIMUM OF SIX (6) BOXES PER 100 SQUARE FEET). INSTALL OUTLET BOXES IN RATED WALLS SUCH THAT OPENINGS OCCUR IN ONE SIDE ONLY WITHIN ANY GIVEN STUD SPACE. ALL CLEARANCES BETWEEN THE OUTLET BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK-TO-BACK. SURFACE MOUNTED FIXTURES SHALL BE FED THROUGH FLUSH MOUNTED 4X4 OCTAGONAL OR SQUARE BOXES.

- 12. ALL CONDUIT, BOXES, AND ELECTRICAL EQUIPMENT SHALL BE FIRMLY AND SECURELY FASTENED TO OR SUPPORTED FROM THE BUILDING STRUCTURAL MEMBERS OR EMBEDDED IN CONCRETE OR MASONRY. ELECTRICAL SUPPORTS SHALL NOT BE ATTACHED TO DUCTWORK, PIPING, OR THEIR SUPPORTS. HANGERS SHALL BE CATALOG ITEMS COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. FOR METAL ROOF DECK INSTALLATIONS, 1 IN DMT CONDUIT MAXIMUM AND 4 IN JUNCTION BOXES MAXIMUM MAY BE SUPPORTED BY DECKING. THE SUSPENDED CEILING SYSTEM SHALL NOT BE USED FOR THE SUPPORT OF ELECTRICAL RACEWAY SYSTEMS OR SUPPORT OF COMMUNICATIONS OR DATA SYSTEMS WIRING. CONTRACTOR SHALL COMPLY WITH 1613 OF THE NORTH CAROLINA GENERAL CONSTRUCTION BUILDING CODE.
13. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
14. ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH-IN ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET SHALL BE 4 IN SQUARE BY 2-1/8 IN DEEP BOX WITH 3/4 IN KNOCK-OUTS AND A 3/4 IN CONDUIT STUBBED FROM THE OUTLET BOX TO ABOVE THE CEILING. PROVIDE A NON-METALLIC INSULATING BUSHING ON ALL CONDUITS STUBBED ABOVE THE CEILING. PROVIDE A BLANK COVER PLATE ON ALL OUTLET BOXES.
15. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HANGROED EQUIPMENT AND APPLIANCES OR PROVIDE BREAKERS CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NEC 422.31. FOR MOTOR DRIVEN APPLIANCES, PROVIDE A DISCONNECTING MEANS PER NEC 422.31 AND 430 PART IX. WHERE AN INDIVIDUAL DISCONNECT SWITCH, CIRCUIT BREAKER, STARTER, ETC. IS SHOWN ON THE PLANS ADJACENT TO ITS LOAD AND NOT LOCATED ON A WALL, PROVIDE NECESSARY MATERIALS AND LABOR TO SUPPORT THE DEVICE.
16. ELECTRICAL CONTRACTOR SHALL FIELD IDENTIFY ALL SWITCH BOARDS, PANEL BOARDS, CONTROL PANELS, METER SOCKETS, ETC., TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS PER 110.16 OF NEC.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT, AND BACK WITH WHITE CORE, WHITE ENGRAVED LETTERS (1/4 IN MINIMUM) ETCHED INTO THE WHITE CORE. ELECTRICAL CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD THAT ACCURATELY IDENTIFIES CIRCUITS INSIDE EACH PANEL. HANDWRITTEN LABELS ARE NOT ACCEPTABLE.

PANEL A
Table with columns: CKT, LOAD, BKR, LOAD (kVA, PH), BKR, LOAD, CKT. Includes entries for AIR COMPRESSOR (60HP), SAND BLASTER, ET-3 (CN ROOF), SPACE, and various WORKSHOP LIGHTS.

VOLTAGE/PHASE: 277/480V, 3P, 4W
BUS RATING: 400A
MAIN CIRCUIT BREAKER RATING: 300A MB
AIC RATING: 22K
SERVICE ENTRANCE RATED: YES
ENCLOSURE: NEMA 1
MOUNTING: SURFACE

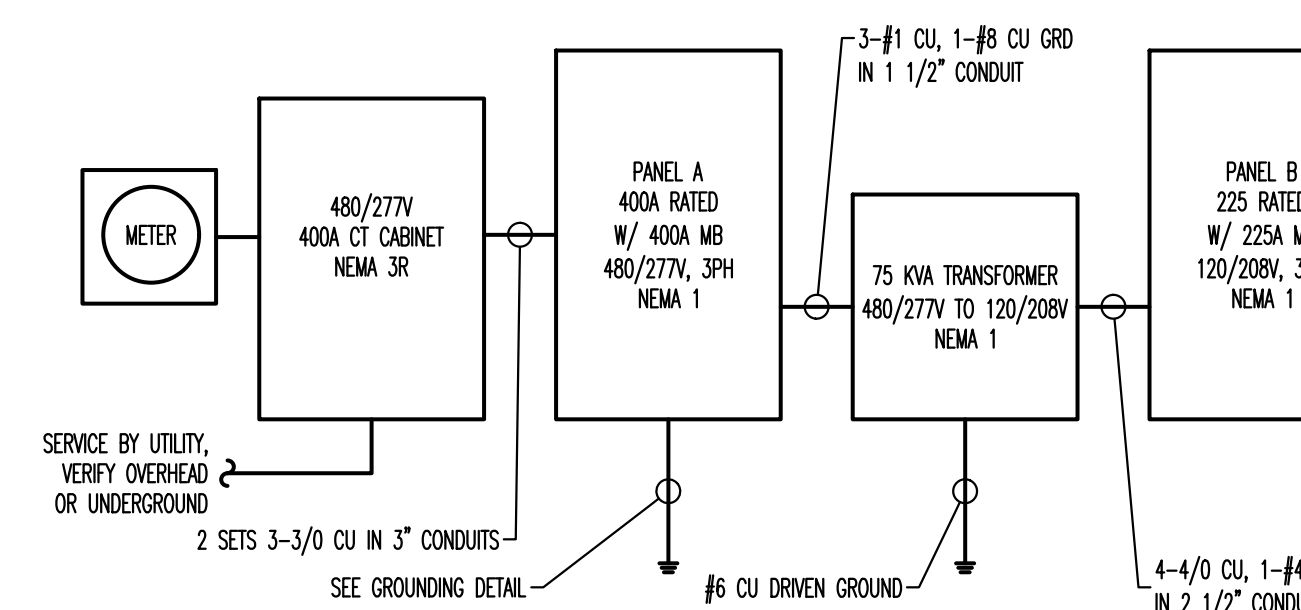
- 1. VERIFY BREAKER SIZE WITH EQUIPMENT MANUFACTURER

PANEL B
Table with columns: CKT, LOAD, BKR, LOAD (kVA, PH), BKR, LOAD, CKT. Includes entries for LARGE SPRAY BOOTH, SMALL SPRAY BOOTH, LARGE SPRAY BOOTH LIGHTS, SMALL SPRAY BOOTH LIGHTS, OFFICE RECP, LOBBY RECP, RESTROOM RECP, BREAKROOM RECP 1, BREAKROOM RECP 2, BREAKROOM FRIDGE, BREAKROOM DRINKING FOUNTAIN, HOSE REELS, WORKSHOP RECPs 1, MINI SANDBLASTING CABINET, WORKSHOP RECPs 3, GARAGE DOOR, EXTERIOR RECPs.

VOLTAGE/PHASE: 208Y/120V, 3P, 4W
BUS RATING: 225A
MAIN CIRCUIT BREAKER RATING: 225A MAIN
AIC RATING: 22K
SERVICE ENTRANCE RATED: NO
ENCLOSURE: NEMA 1
MOUNTING: SURFACE

- 1. VERIFY BREAKER SIZE WITH EQUIPMENT MANUFACTURER

PANEL SCHEDULE 2



ELECTRICAL NOTES 1

POWER RISER - NO SCALE 3

LIGHT FIXTURE SCHEDULE
Table with columns: MARK, DESCRIPTION, LOUVER/LENS, CCT, VOLTAGE, INPUT WATTAGE, MOUNTING, REMARKS, MFG, MODEL. Includes entries for 2x4 LED TROFFER, LED HIGH BAY, LED WALL PACK, EXTERIOR DUAL LED EMERGENCY LIGHT, LED EXIT SIGN W/ BATTERY BACKUP, LED EXIT/COMBO W/ BATTERY BACKUP, and DUAL HEAD EMERGENCY FIXTURE.

- 1. FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION.
2. OR EQUAL BY COOPER, PHILIPS OR DAY-BRITE LIGHTING

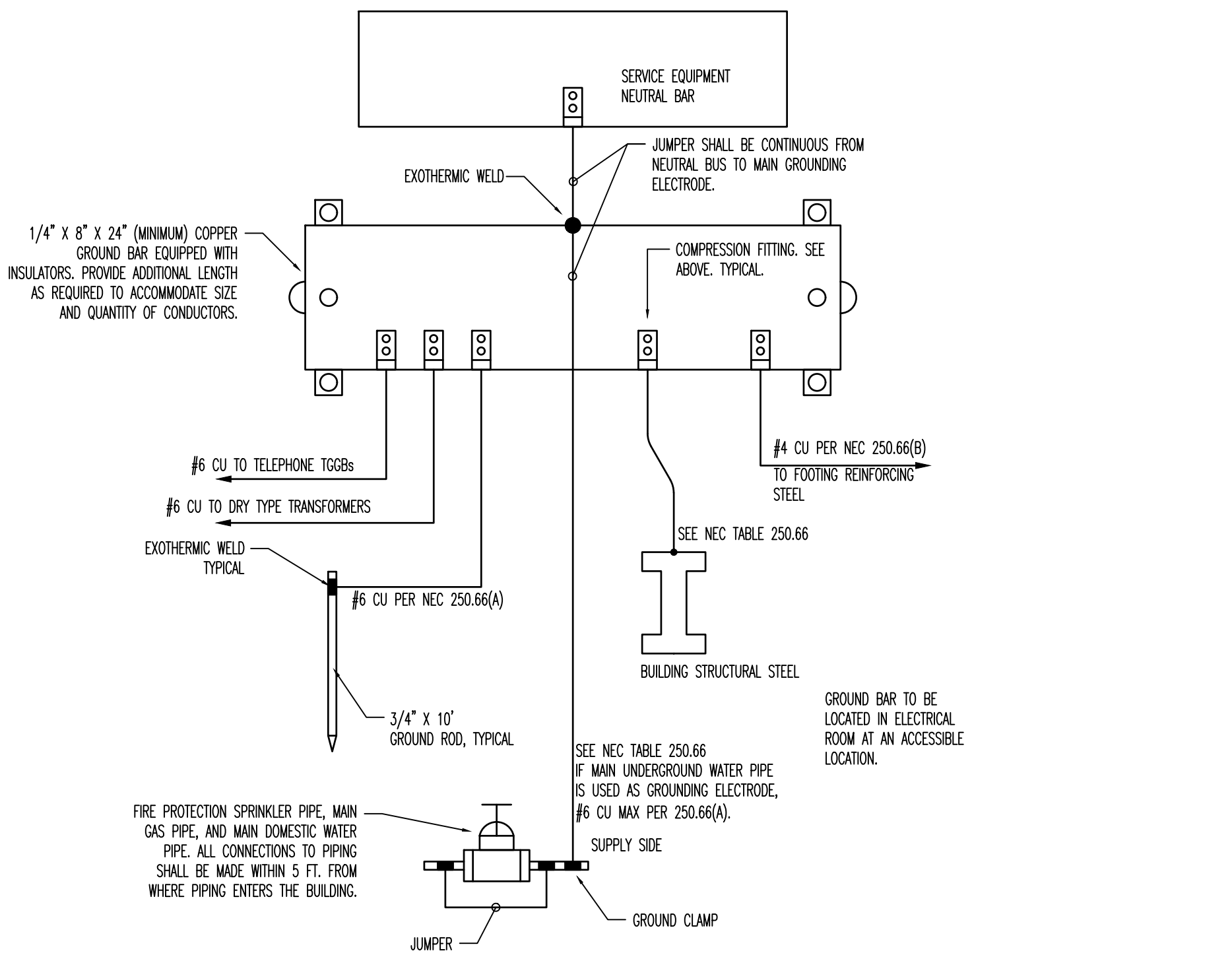
ELECTRICAL DESIGNER'S STATEMENT OF COMPLIANCE
Table with columns: LIGHTING SCHEDULE, LAMP TYPE, NUMBER OF LAMPS PER FIXTURE, BALLAST TYPE, NUMBER OF BALLASTS, TOTAL WATTAGE PER FIXTURE, TOTAL INTERIOR WATTAGE, OCCUPANCY, OFFICE, WORKSHOP, TOTAL, EQUIPMENT SCHEDULES, MOTOR HORSEPOWER, NUMBER OF PHASES, MINIMUM EFFICIENCY, MOTOR TYPE, NUMBER OF POLES, DESIGNER STATEMENT.

LIGHTING DEVICE LEGEND
Table with columns: SYMBOL, DESCRIPTION, REMARKS. Includes entries for SINGLE POLE WALL SWITCH, WALL MOUNTED OCCUPANCY SENSOR, LOW VOLTAGE SWITCH, 3 WAY SWITCH, CEILING OCCUPANCY SENSOR, SWITCHING PHOTOSENSOR, POWER PACK, JUNCTION BOX, EXHAUST FAN.

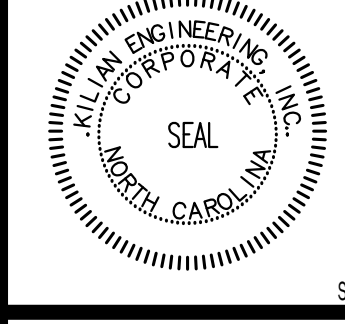
POWER DEVICE LEGEND
Table with columns: SYMBOL, DESCRIPTION, REMARKS. Includes entries for DATA AND TELEPHONE JACK, DUPLEX RECEPTACLE, DUPLEX FLOOR RECEPTACLE, FUSIBLE DISCONNECT SWITCH, DISCONNECT SWITCH, JUNCTION BOX.

NEC ELECTRIC DEMAND SUMMARY 480Y/277V, 3P, 4W
Table with columns: EQUIPMENT, DEMAND FACTOR, A, B, C, LOAD KVA, NEC REFERENCE, NOTES/CALCULATIONS. Includes entries for LIGHTING, RECEPTACLES < 10 KVA, HVAC, WATER HEATER, SHIP EQUIPMENT.

ELECTRICAL SCHEDULES 3



GROUNDING DETAIL - NO SCALE 3



REVISION:
Table with columns: NO., DATE, DESCRIPTION.

ISSUED:
Table with columns: NO., DATE, DESCRIPTION.

