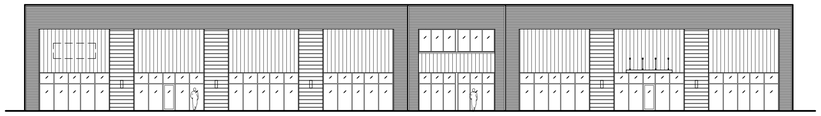


A NEW FACILITY FOR INTERESTED INDUSTRIES

D1 ### NO SCALE PROJECT TITLE

ARCHITECTURAL
GROUP 1.6 LLC
210 ALTAMONT ROAD
GREENVILLE, SC 29609
(864) 640-6014
CONTACT: DAVID NOCELLA

STRUCTURAL
PALMETTO STRUCTURAL ENGINEERING, LLC
104 HUNTER HILL CIRCLE
SIX MILE, SC 29682
864-436-8684
CONTACT: RYAN SUMMEY

MECHANICAL/PLUMBING
NATHANIEL REECE, PE
10 RUSSTON LANE
TAYLORS, SC. 29687
(864) 238-4292
CONTACT: NATHANIEL REECE

ELECTRICAL
BIRCH CONSULTING SERVICES
408 ASHLEY OAKS DRIVE
MOORE, SC 29369
(864) 6215868
CONTACT: RANDALL BIRCH

D3 ### NO SCALE CONSULTANTS

ARCHITECTURAL
CV DRAWING INDEX, GENERAL NOTES, LIFE SAFETY PLAN AND CODE ANALYSIS
A-1 FLOOR PLAN,DOOR AND WINDOW INFORMATION AND WALL TYPES
A-2 MEZZANINE PLAN, REFLECTED CEILING PLANS AND ENLARGED PLANS AND DETAILS
A-3 EXTERIOR ELEVATIONS AND DETAILS
A-4 BUILDING SECTIONS AND WALL SECTIONS
A-5 WALL SECTIONS

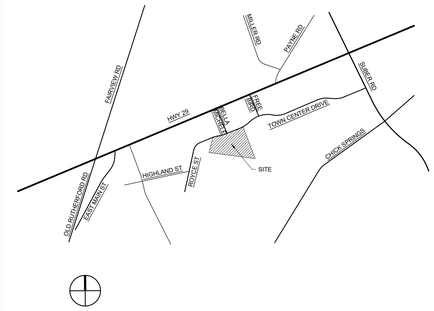
STRUCTURAL
S-0 GENERAL NOTES & DESIGN CRITERIA, SECTIONS & DETAILS
S-1 FOUNDATION, SLAB PLAN & MEZZANINE PLAN

MECHANICAL
M-1 HVAC FLOOR PLAN
M-2 HVAC DETAILS
M-3 HVAC SCHEDULES

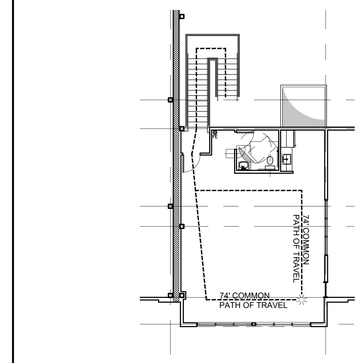
PLUMBING
P-1 FLOOR PLAN
P-2 PLUMBING FLOOR PLANS
P-3 PLUMBING DETAILS
P-4 PLUMBING SCHEDULES

ELECTRICAL
E-1 ELECTRICAL POWER & SYSTEMS PLANS
E-2 ELECTRICAL LIGHTING PLANS
E-3 ELECTRICAL RISER & PANEL SCHEDULES
E-4 ELECTRICAL LEGEND & SPECS
E-5 ELECTRICAL DETAILS

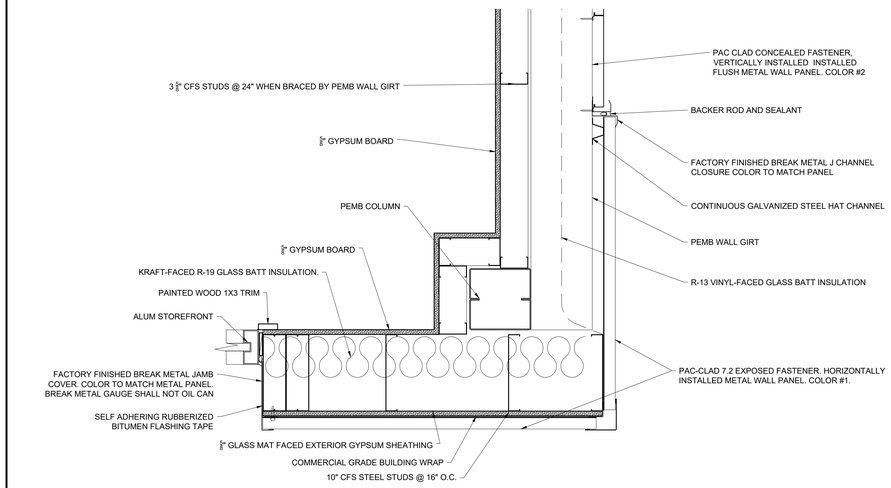
C4 ### NO SCALE DRAWING INDEX



D5 ### NTS LOCATOR MAP



C1 ### 3/32"=1'-0" MEZZANINE LIFE SAFETY PLAN



C2 ### 1 1/2"=1'-0" PLAN DETAIL

1. ALL WORK SHALL COMPLY WITH: INTERNATIONAL BUILDING CODE, 2021 EDITION; INTERNATIONAL MECHANICAL CODE, 2021 EDITION; INTERNATIONAL PLUMBING CODE; 2021 EDITION; INTERNATIONAL INTERNATIONAL ENERGY CONSERVATION CODE, 2009 EDITION; INTERNATIONAL FIRE CODE, 2021 EDITION; NATIONAL ELECTRIC CODE, 2020 EDITION; ANSI A117.1, 2017 EDITION

2. STORING, HANDLING AND INSTALLATION OF MATERIALS SHALL COMPLY WITH THE CUSTOMARY PROCEDURES AND PRACTICES OF EACH TRADE AS PRESCRIBED BY THEIR RESPECTIVE TRADE ORGANIZATION AND THE REQUIREMENTS OF THE MATERIAL MANUFACTURER.

3. CONTRACTOR AND SUBCONTACTORS SHALL REVIEW AND COORDINATE INFORMATION BETWEEN THE VARIOUS DISCIPLINES' DRAWINGS AND SHALL BE RESPONSIBLE FOR KNOWING THE EFFECT OF ANOTHER TRADES SCOPE OF WORK ON THEIR OWN SCOPE OF WORK.

4. CONTRACTOR SHALL REPORT ANY DISCREPANCIES IN THE DRAWINGS TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

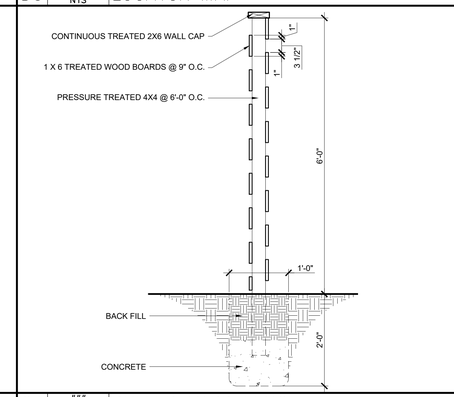
5. TRADES SHOULD INSPECT EXISTING CONDITIONS AND FIELD VERIFY ALL DIMENSIONS PRIOR TO OFF SITE FABRICATION OR ORDERING MATERIAL AND EQUIPMENT.

6. U.N.O. FURNISH AND INSTALL MATERIALS, EQUIPMENT AND ACCESSORIES REQUIRED TO COMPLETELY FINISH WORK DEPICTED IN DRAWINGS.

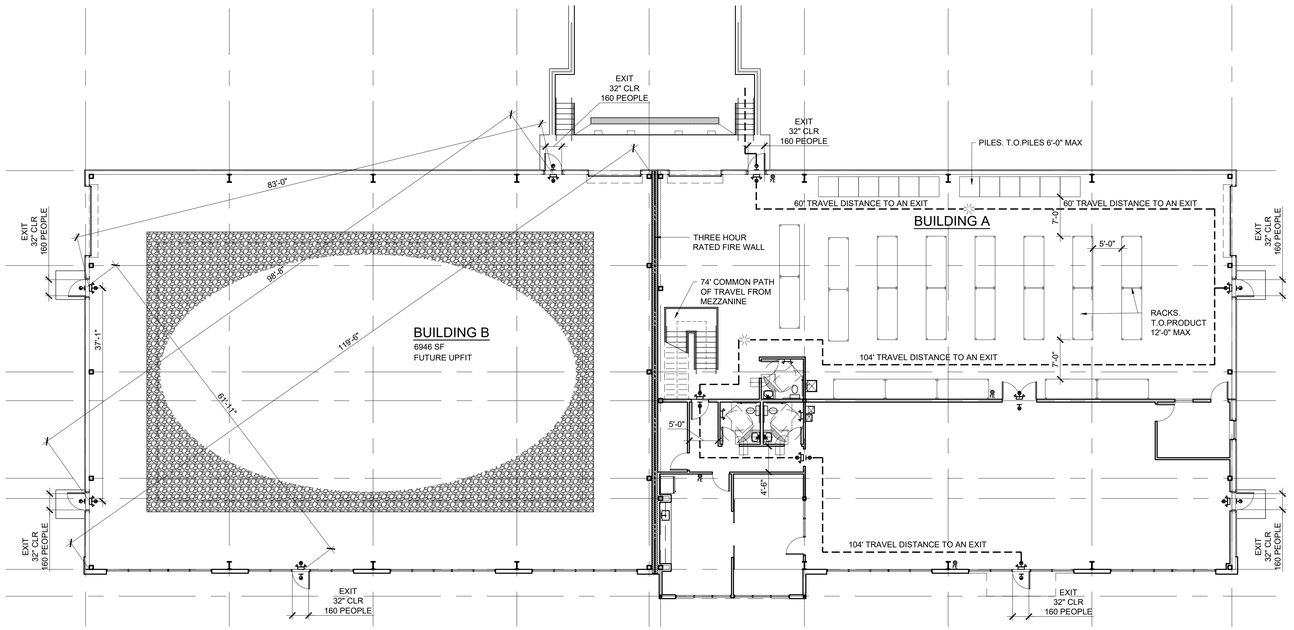
7. DO NOT ASSUME THAT THE INFORMATION SHOWN IN THE DRAWINGS IS COMPLETE. THE CONTRACTOR AND SUBCONTRACTORS SHALL CONSIDER CUSTOMARY PRACTICE AND PAST EXPERIENCE FOR THE WORK SHOWN. THE CONTRACTOR AND SUBCONTRACTORS SHALL REQUEST CLARIFICATION FROM THE ARCHITECT IF THERE IS A QUESTION REGARDING THE ENTIRE SCOPE OF WORK FOR THEIR SPECIALTY AS IT IS SHOWN IN THE DRAWINGS.

10. ROOF INSULATION: INSTALL R-25 VINYL FACED GLASS BATT PEMB INSULATION SYSTEM OVER SHOWROOM AND OFFICES AND R-19 ELSEWHERE.

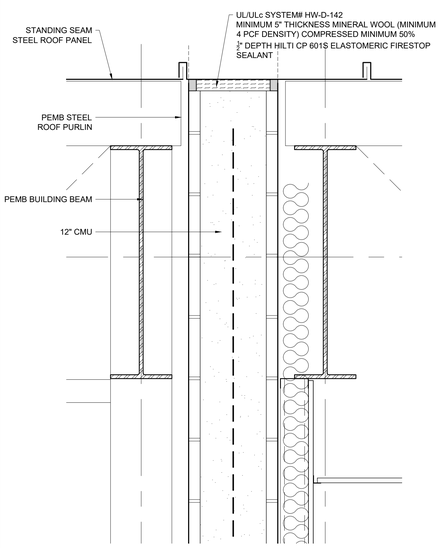
C4 ### NO SCALE GENERAL NOTES



C4 ### 3/4"=1'-0" BUFFER YARD FENCE



A1 ### 3/32"=1'-0" LIFE SAFETY PLAN



THREE HOUR RATED FIRE WALL
IBC TABLE 721.1(2)
12 " CALCAREOUS OR SILICEOUS GRAVEL CONCRETE MASONRY UNIT EQUIVALENT THICKNESS: 5.3"

UL/ULc SYSTEM# HW-D-142

A4 ### 1 1/2"=1'-0" FIRE RATED ASSEMBLIES

BUILDING A

OCCUPANCY: MIXED USE, UNSEPARATED: STORAGE (S-1) AND BUSINESS (B). ANALYZED AS S-1

MATERIALS STORED: TENANT IS A CERAMIC TILE INSTALLER. STORED PRODUCTS INCLUDE PRIMARILY BAGGED CEMENT IN PILES, PREMIXED THINSET CEMENT STORED IN 3.5 GALLON PLASTIC BUCKETS IN PILES AND ON RACKS, WALL TILE ADHESIVE STORED IN 1 AND 3.5 GALLON PLASTIC BUCKETS IN PILES AND ON RACKS, CERAMIC TILE IN BOXES STORED IN PILES AND ON RACKS, CEMENTITIOUS TILE BACKER BOARD STORED IN PILES, WATER-BASED ACRYLIC CEMENT ADDITIVES IN PLASTIC ONE GALLON JUGS ON RACKS, SMALL AMOUNTS OF PLASTIC THAT INCLUDE TILE SPACERS, WALL TRIM AND SOME PACKAGING. TOP OF PRODUCT ON RACK STORAGE WILL NOT EXCEED 12'-0". T.O PILE ON PILE STORAGE WILL NOT EXCEED 6'-0". PLASTIC AND COMBUSTIBLE WILL BE STORED BELOW SIX FEET.

CONSTRUCTION TYPE: TYPE IIB, NONSPRINKLERED

AREA PER STORY:
ALLOWABLE:
B: 23,000 SF
S-1: 17,500 SF
ACTUAL:
B: 3,176 SF
S-1: 4,015 SF
TOTAL: 7,191 SF
MEZZANINE: 852 SF

HEIGHT:
ALLOWABLE: 55 FEET
ACTUAL: 25 FEET

STORIES:
ALLOWABLE: 2
ACTUAL: 1

OCCUPANT LOAD :
B:
MAIN LEVEL: 3,176 SF / 150 SF PER PERSON =22 PEOPLE
MEZZANINE: 852 SF / 150 SF PER PERSON = 6 PEOPLE
S-1: 4,015 SF / 500 SF PER PERSON = 9 PEOPLE
TOTAL: 37 PEOPLE

NUMBER OF EXITS:
REQUIRED: 2
PROVIDED: 4

EGRESS CAPACITY
REQUIRED: 37 X .2" = 7.4";
2 DOORS @ 32" CLEAR = 64" CLEAR; CORRIDORS: 44" CLEAR
PROVIDED: 4 DOORS @ 32" CLEAR = 128" CLEAR; CORRIDORS: 54" CLEAR

COMMON PATH OF TRAVEL
ALLOWABLE: 75 FEET
ACTUAL: 74 FEET

TRAVEL DISTANCE TO AN EXIT
ALLOWABLE: 200 FEET
ACTUAL: 178 FEET

FIRE RESISTANT RATED ASSEMBLIES:
3 HOUR RATED FIRE WALL DEMISING STRUCTURE INTO TWO BUILDINGS FOR FUTURE RESALE AND FIRE AREAS LESS THAN 12,000 SF EACH
NONE REQUIRED WITHIN BUILDING A. BUILDING B TO BE DETERMINED WITH FUTURE UPFIT

FIRE EXTINGUISHERS: ABC TYPE 2A:20B:C EXTINGUISHER.
B: ONE EXTINGUISHER / 3000 AND 75 FEET OF FREE TRAVEL.
S-1: ONE EXTINGUISHER / 1500 AND 75 FEET OF FREE TRAVEL.

LOCATION OF FIRE EXTINGUISHERS ON LIFE SAFETY PLAN ARE SUGGESTED. FIRE MARSHAL CAN SELECT ALTERNATE LOCATION. FIRE EXTINGUISHERS HAVING A GROSS WEIGHT OF 40 LBS. OR LESS SHALL BE INSTALLED SO THAT TOP OF THE EXTINGUISHER IS NOT MORE THAN 5'-0" AFF. TOP OF ACCESSIBLE FIRE EXTINGUISHERS @ 4'-0" AFF.

INTERIOR FINISHES FOR B AND S-1
EXIT ENCLOSURE: NA
CORRIDORS: CLASS B OR BETTER
OTHER SPACES: CLASS C OR BETTER

CLASS A FINISH: FLAME SPREAD INDEX 0-25; SMOKE DEVELOPED INDEX 0-450
CLASS B FINISH: FLAME SPREAD INDEX 26-75; SMOKE DEVELOPED INDEX 0-450
CLASS C FINISH: FLAME SPREAD INDEX 76-200; SMOKE DEVELOPED INDEX 0-450

MINIMUM # OF REQUIRED PLUMBING FIXTURES

	WC	LAV	DF	SS
MEN	1	1		
WOMEN	1	1		
			1	1

A5 ### NO SCALE CODE ANALYSIS

g16 group LLC ARCHITECTS
210 ALTAMONT ROAD
GREENVILLE, SC 29609
864.640.6014

A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

STATE OF SOUTH CAROLINA
GROUP 1.6 LLC
LICENSE # 100606
REGISTERED ARCHITECTS

STATE OF SOUTH CAROLINA
DAVID NOCELLA
LICENSE # 5855
REGISTERED ARCHITECT
10-15-24

ISSUED FOR:
PERMITS:10/15/24

REVISIONS

DRAWING INDEX, GENERAL NOTES, LIFE SAFETY PLAN AND CODE ANALYSIS

A-1

G1.6 PROJECT # 2434

DOOR #	DOOR					FRAME						HDWR SETS	REMARKS
	SIZE	TYPE	MATERIAL	GLAZING	LABEL	TYPE	MATERIAL	GLAZING	HEAD	JAMB	SILL		
01	3'-0"X7'-0"	C	ALUMINUM	1" INSUL/TEMP	-	F-1	ALUMINUM	1" INSUL/TEMP	A2/A-5	J-9	S-1	SET 1	-
02	3'-0"X7'-0"	C	ALUMINUM	1" INSUL/TEMP	-	F-1	ALUMINUM	1" INSUL/TEMP	A2/A-5	J-9	S-1	SET 1	-
03	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-1	J-1	S-1	SET 2	-
04	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-1	J-1	S-1	SET 2	-
05	12'-0"X14'-0"	D	INSUL METAL	-	-	F-2	STEEL	-	A5/A-5	J-11	-	-	PROPRIETARY HARDWARE
06	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-1	J-1	S-1	SET 2	-
07	9'-0"X10'-0"	D	INSUL METAL	-	-	F-2	STEEL	-	A5/A-5	J-11	-	-	PROPRIETARY HARDWARE
08	9'-0"X10'-0"	D	INSUL METAL	-	-	F-2	STEEL	-	A5/A-5	J-11	-	-	PROPRIETARY HARDWARE
09	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-1	J-1	S-1	SET 2	-
10	12'-0"X14'-0"	D	INSUL METAL	-	-	F-2	STEEL	-	A5/A-5	J-11	-	-	PROPRIETARY HARDWARE
11	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-1	J-1	S-1	SET 2	-
12	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-1	J-1	S-1	SET 2	-
13	3'-0"X7'-0"	B	INSUL METAL	1/4" TEMP	-	F-2	HOL MTL	-	H-2	J-2	-	SET 3	6" CFS STUDS
14	3'-0"X7'-0"	B	SOLID WOOD	1/4" TEMP	-	F-2	HOL MTL	-	H-2	J-2	-	SET 3	3 5/8" CFS STUDS
15	(PR)3'-0"X7'-0"	A	INSUL METAL	"	-	F-2	HOL MTL	-	H-2	J-2	-	SET 4	6" CFS STUDS
16	3'-0"X7'-0"	-	-	"	-	F-2	HOL MTL	-	H-3	J-3	-	-	CASED OPENING
17	3'-0"X7'-0"	C	SOLID WOOD	1/4" TEMP	-	F-3	ALUMINUM	1/4" TEMP	H-5	J-5	-	SET 5	-
18	(PR)4'-6"X8'-0"	A	SOLID WOOD	"	-	F-2	HOL MTL	-	H-6	J-6	-	SET 7	8'-0"X7'-0" HOL MTL CASED OPENING FRAME, CUSTOM DOOR
19	3'-0"X7'-0"	B	SOLID WOOD	1/4" TEMP	-	F-2	HOL MTL	-	H-2	J-2	-	SET 5	3 5/8" CFS STUDS
20	3'-0"X7'-0"	A	SOLID WOOD	"	-	F-2	HOL MTL	-	H-2	J-2	-	SET 5	3 5/8" CFS STUDS
21	3'-0"X7'-0"	A	SOLID WOOD	"	-	F-2	HOL MTL	-	H-2	J-2	-	SET 6	3 5/8" CFS STUDS
22	3'-0"X7'-0"	A	SOLID WOOD	"	-	F-2	HOL MTL	-	H-2	J-2	-	SET 6	3 5/8" CFS STUDS
23	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-2	J-2	-	SET 5	3 5/8" CFS STUDS
24	3'-0"X7'-0"	A	INSUL METAL	"	-	F-2	HOL MTL	-	H-2	J-2	-	SET 6	3 5/8" CFS STUDS
25	3'-0"X7'-0"	B	INSUL METAL	INSUL/TEMP	-	F-2	HOL MTL	-	H-2	J-2	-	SET 3	3 5/8" CFS STUDS
26	3'-0"X7'-0"	A	SOLID WOOD	"	-	F-2	HOL MTL	-	H-2	J-2	-	SET 6	3 5/8" CFS STUDS

SET 1
DEADBOLT KEYED EXTERIOR
THUMB LATCH INTERIOR
HINGES PER MANUF. REQ
SURFACE MOUNTED CLOSER
PUSH AND PULL BARS
WEATHER SEALS
ACCESSIBLE ALUM THRESHOLD

SET 2
LOCKSET: LEVER TYPE
ENTRY FUNCTION
ANSI TYPE F82
3 SETS OF BALL BEARING
BUTT HINGES
SURFACE MOUNTED CLOSER
WEATHER SEAL AND SWEEP
ACCESSIBLE ALUM THRESHOLD

SET 3
LOCKSET: LEVER TYPE
OFFICE FUNCTION
ANSI TYPE F81
3 SETS OF BALL BEARING
BUTT HINGES
SILENCERS
DOOR STOP

SET 4
LOCKSET: LEVER TYPE
PASSAGE FUNCTION
ANSI TYPE F75
6 SETS OF BALL BEARING
BUTT HINGES
FLUSH BOLTS ON INACTIVE LEAF
SILENCERS
DOOR STOP

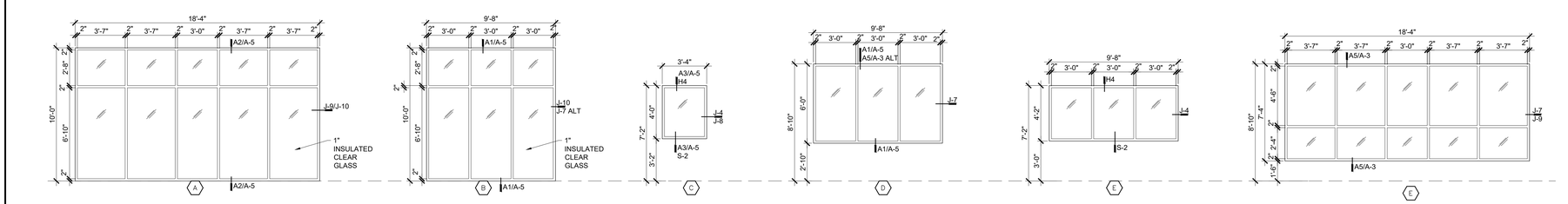
SET 5
LOCKSET: LEVER TYPE
PASSAGE FUNCTION
ANSI TYPE F75
3 SETS OF BALL BEARING
BUTT HINGES
SILENCERS
DOOR STOP

SET 6
LOCKSET: LEVER TYPE
PRIVACY FUNCTION
ANSI TYPE F76
3 SETS OF BALL BEARING
BUTT HINGES
SILENCERS
DOOR STOP

SET 7
PULLS
HEAVY DUTY BARN DOOR TRACK AND TROLLEYS
FLOOR MOUNTED DOOR GUIDES

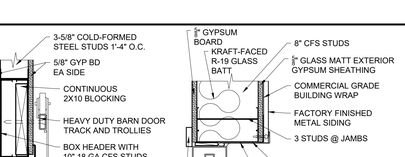
D1 ### / NO SCALE — DOOR SCHEDULE

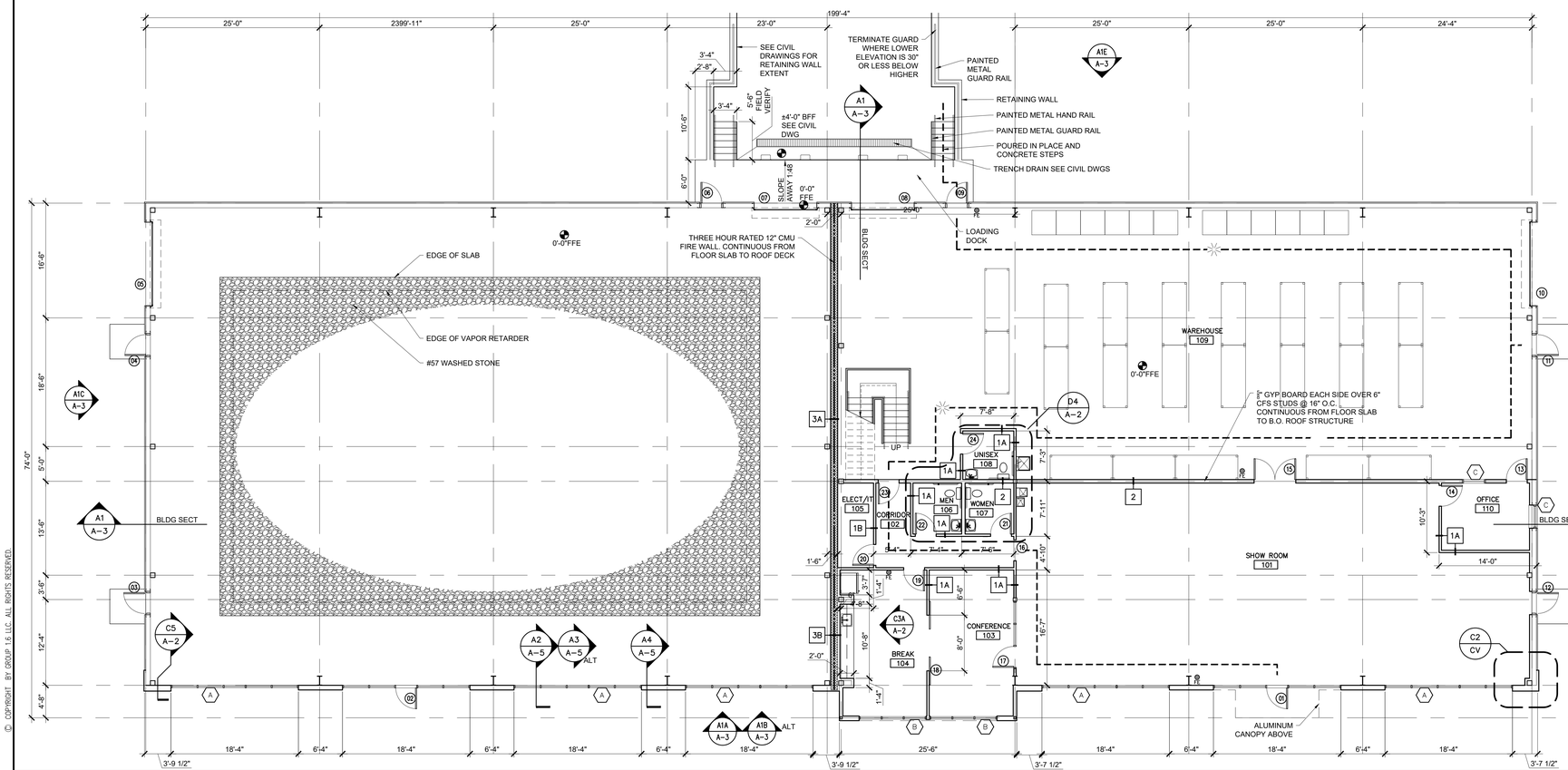
D3 ### / 1 1/2"=1'-0" — HEAD, JAMB AND SILL DETAILS



C1 ### / 1/4"=1'-0" — WINDOW TYPES

C5 ### / 1/4"=1'-0" — DOOR TYPES





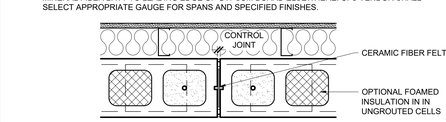
A1 ### / 1/8"=1'-0" — FLOOR PLAN

B5 ### / 1/4"=1'-0" — FRAME TYPES

1A 5/8" GYPSUM BOARD TO EACH SIDE OVER 3 5/8" COLD-FORMED STEEL STUDS @ 16" O.C. TERMINATE T.O.STUD AND GYPSUM BOARD AT UNDERSIDE OF BUILDING STRUCTURE DIRECTLY ABOVE. SOUND ATTENUATING GLASS OR MINERAL FIBER BATT TO LEADING EDGE OF GYPSUM BOARD

1B SAME AS WALL TYPE 1 WITH OUT SOUND ATTENUATING INSULATION

2 5/8" GYPSUM BOARD TO EACH SIDE OVER 6" COLD-FORMED STEEL STUDS @ 16" O.C. TERMINATE T.O.STUD AND GYPSUM BOARD AT UNDERSIDE OF BUILDING STRUCTURE DIRECTLY ABOVE. KRAFT-FACED R-19 GLASS BATT INSULATION CONTINUOUS FROM SLAB TO ROOF DECK AT WALLS THAT DEMISE CONDITIONED AND UNCONDITIONED SPACES. SOUND ATTENUATING GLASS OR MINERAL FIBER BATT TO LEADING EDGE OF GYPSUM BOARD ELSEWHERE. CFS VENDOR SHALL SELECT APPROPRIATE GAUGE FOR SPANS AND SPECIFIED FINISHES.



3A 3 HOUR RATED 12" REINFORCED CMU FIRE WALL. TERMINATE CMU AT UNDERSIDE OF ROOF PANEL. INSTALL CONTROL JOINTS IN MASONRY WALL @ 24' O.C. SEAL JOINT AT T.O.WALL WITH RATED JOINT SYSTEM

3B 5/8" GYPSUM BOARD OVER 3 5/8" CFS STUDS @ 24" O.C. WITH R-13 GLASS BATT INSULATION OVER 3 HOUR-RATE 12" REINFORCED CMU FIRE WALL. TERMINATE T.O.STUD AND GYPSUM BOARD AT UNDERSIDE OF BUILDING STRUCTURE DIRECTLY ABOVE. TERMINATE CMU WALL AT UNDERSIDE OF ROOF PANEL. INSTALL CONTROL JOINTS IN MASONRY WALL @ 24' O.C. SEAL JOINT AT T.O.WALL WITH RATED JOINT SYSTEM.

A5 ### / 1 1/2"=1'-0" — WALL TYPES

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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

STATE OF SOUTH CAROLINA
GROUP 1.6 LLC
LICENSE # 100600
REGISTERED ARCHITECTS

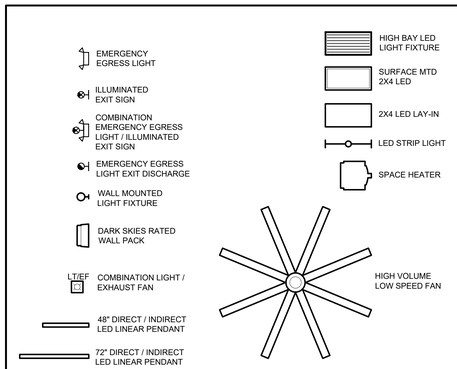
STATE OF SOUTH CAROLINA
DAVID NORDELL
LICENSE # 5835
REGISTERED ARCHITECT
10-15-24

ISSUED FOR:
PERMITS:10/15/24
REVISIONS

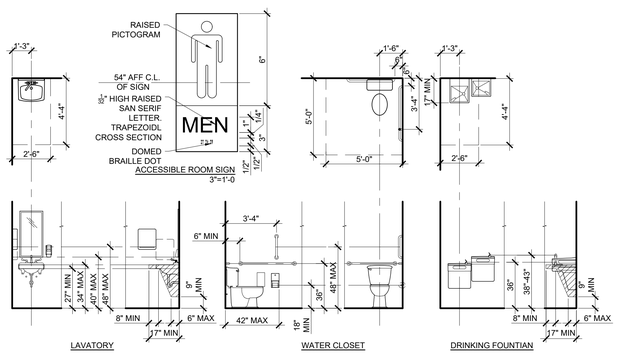
FLOOR PLAN,DOOR AND WINDOW INFORMATION AND WALL TYPES

A-1

G1.6 PROJECT # 2434



D1 ### NTS CEILING FIXTURE LEGEND

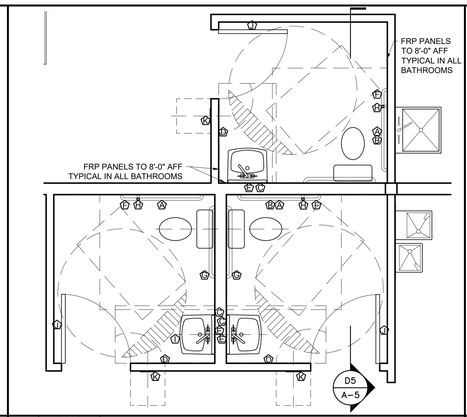


- TOILET PAPER DISPENSER: BOBRICK B-667 OR EQUAL
- SANITARY NAPKIN DISPOSAL WOMENS ROOM ONLY: BOBRICK B-270 OR EQUAL
- SOAP DISPENSER CL OF DISPENSER: BOBRICK B-155 OR EQUAL
- PAPER TOWEL DISPENSER: BOBRICK B-262 OR EQUAL
- 1'-6"x3'-0" SURFACE MOUNTED MIRROR
- 42" GRAB BAR: BOBRICK 5806 SERIES OR EQUAL
- 36" GRAB BAR: BOBRICK 5806 SERIES OR EQUAL
- 18" VERTICAL GRAB BAR: BOBRICK 5806 SERIES OR EQUAL
- PADDED PIPE COVERS
- COAT HOOK @ 48" AFF: BOBRICK B682 OR EQUAL
- ACCESSIBLE ROOM SIGN

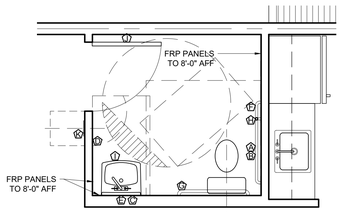
NOTES:
1. INSTALL BLOCKING IN WALL WHERE REQUIRED TO MOUNT ACCESSORIES
2. MIRRORS ARE OPTIONAL. CONTRACTOR TO VERIFY.

BATHROOM FIXTURE LEGEND

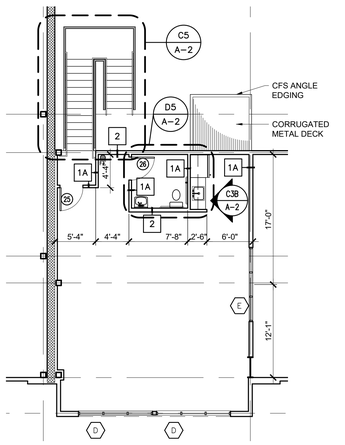
D2 ### 1/4"=1'-0" ACCESSIBLE MOUNTING HEIGHTS AND CLEARANCES AND ACCESSORY LEGEND



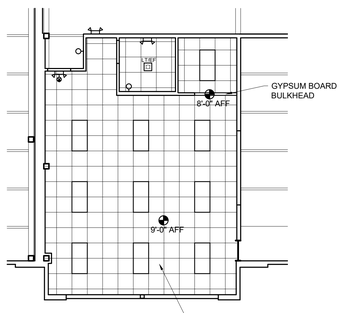
D4 ### 3/8"=1'-0" ENLARGED BATHROOM PLANS



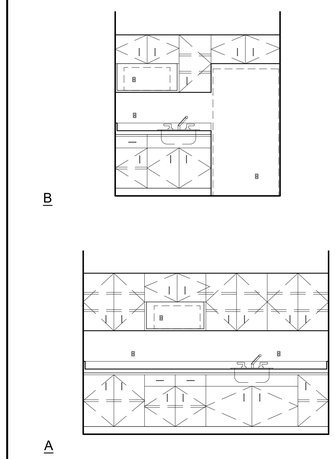
D5 ### 3/8"=1'-0" ENLARGED BATHROOM PLAN



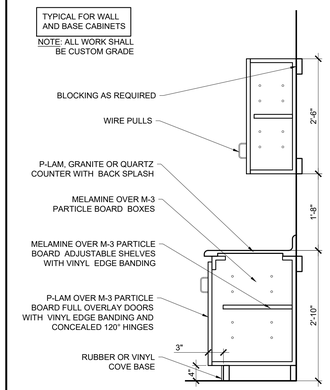
C1 ### 1/8"=1'-0" MEZZANINE PLAN



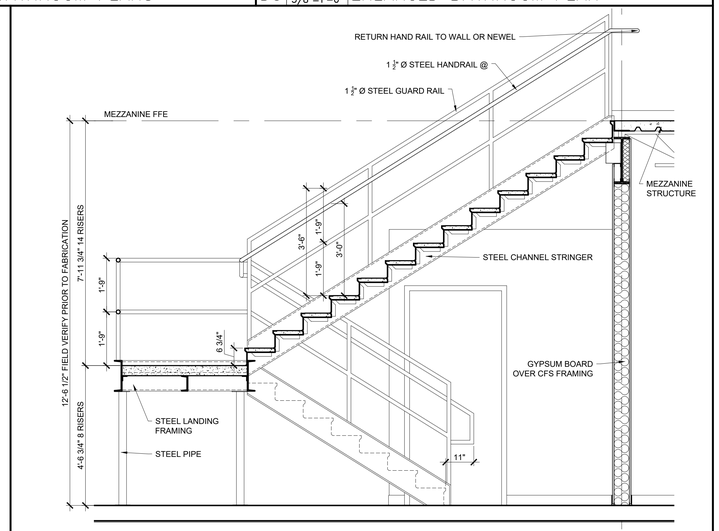
C2 ### 1/8"=1'-0" MEZZANINE REFLECTED CLNG PLAN



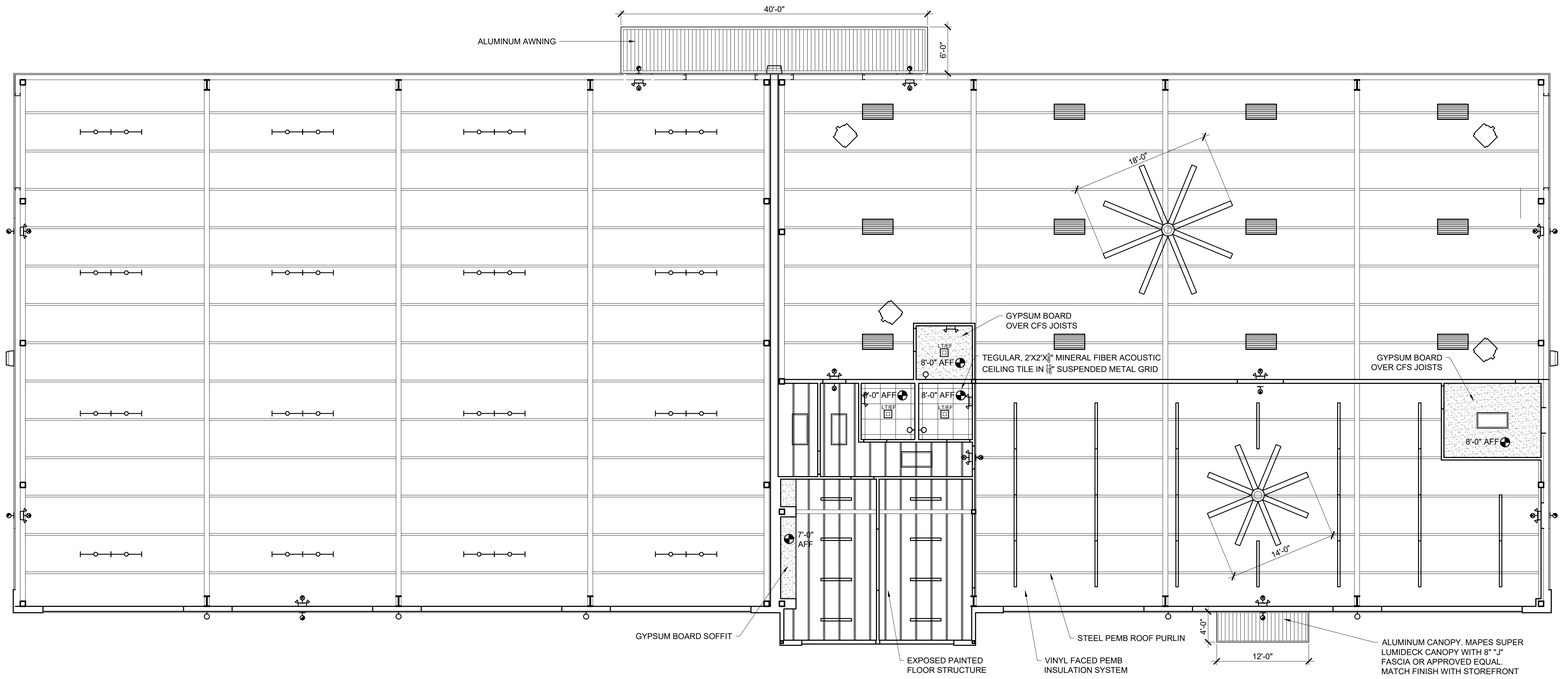
C3 ### 3/8"=1'-0" CASEWORK ELEVATIONS



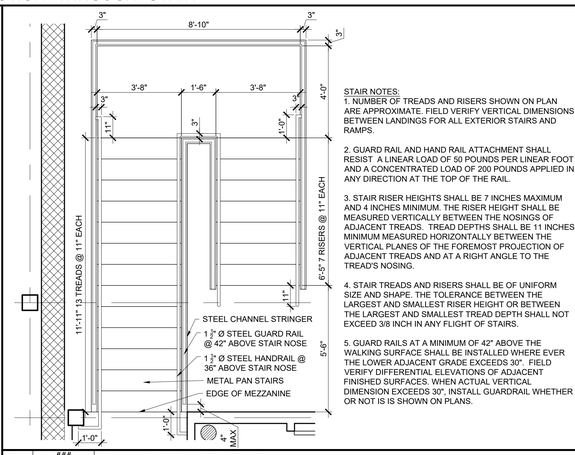
C4 ### 3/4"=1'-0" TYP. CASEWORK DTLS



C5 ### 1/2"=1'-0" SECTION THROUGH STAIR



A1 ### 1/8"=1'-0" REFLECTED CEILING PLAN



STAIR NOTES:
1. NUMBER OF TREADS AND RISERS SHOWN ON PLAN ARE APPROXIMATE. FIELD VERIFY VERTICAL DIMENSIONS BETWEEN LANDINGS FOR ALL EXTERIOR STAIRS AND RAMPS.

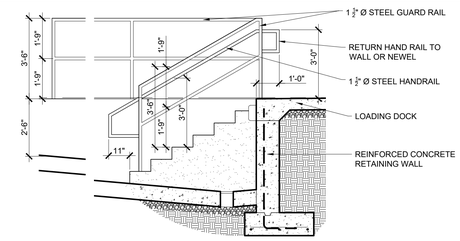
2. GUARD RAIL AND HAND RAIL ATTACHMENT SHALL RESIST A LINEAR LOAD OF 50 POUNDS PER LINEAR FOOT AND A CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION AT THE TOP OF THE RAIL.

3. STAIR RISER HEIGHTS SHALL BE 7 INCHES MAXIMUM AND 4 INCHES MINIMUM. THE RISER HEIGHT SHALL BE MEASURED VERTICALLY BETWEEN THE NOSINGS OF ADJACENT TREADS. TREAD DEPTHS SHALL BE 11 INCHES MINIMUM MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S NOSING.

4. STAIR TREADS AND RISERS SHALL BE OF UNIFORM SIZE AND SHAPE. THE TOLERANCE BETWEEN THE LARGEST AND SMALLEST RISER HEIGHT OR BETWEEN THE LARGEST AND SMALLEST TREAD DEPTH SHALL NOT EXCEED 3/8 INCH IN ANY FLIGHT OF STAIRS.

5. GUARD RAILS AT A MINIMUM OF 42" ABOVE THE WALKING SURFACE SHALL BE INSTALLED WHERE EVER THE LOWER ADJACENT GRADE EXCEEDS 30". FIELD VERIFY DIFFERENTIAL ELEVATIONS OF ADJACENT FINISHED SURFACES. WHEN ACTUAL VERTICAL DIMENSION EXCEEDS 30", INSTALL GUARDRAIL WHETHER OR NOT IS IS SHOWN ON PLANS.

B5 ### 1/2"=1'-0" ENLARGED STAIR PLAN



A5 ### 3/8"=1'-0" LOADING DOCK STAIR

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STATE OF SOUTH CAROLINA
GROUP 1.6 LLC
LICENSE # 100600
REGISTERED ARCHITECTS

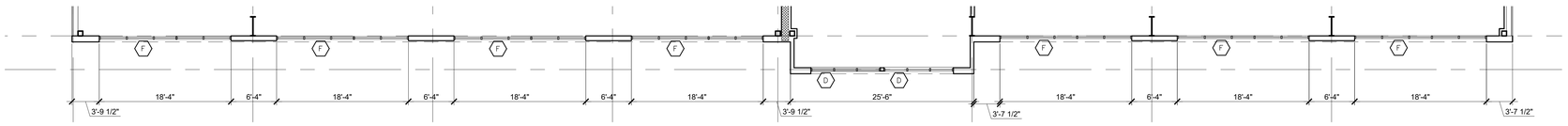
STATE OF SOUTH CAROLINA
DAVID NORRIS
LICENSE # 5855
REGISTERED ARCHITECT
10-15-24

ISSUED FOR:
PERMITS: 10/15/24
REVISIONS

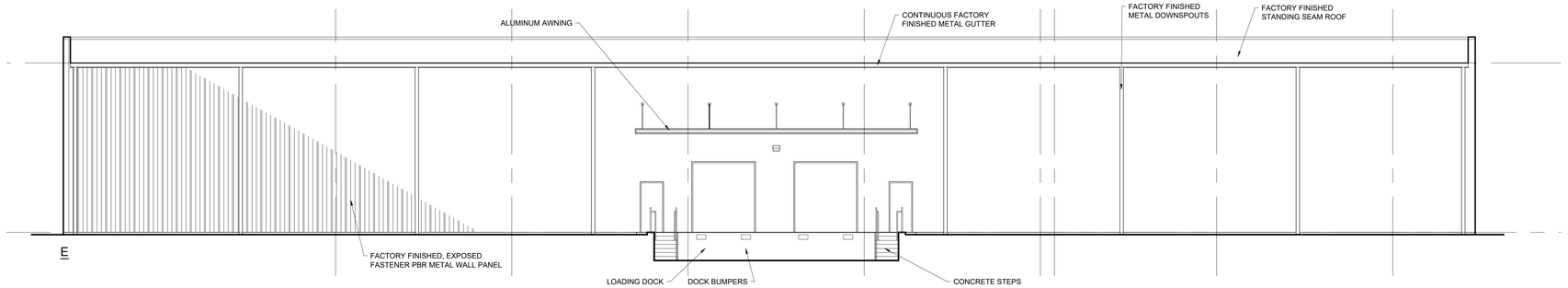
MEZZANINE PLAN, REFLECTED CEILING PLANS AND ENLARGED PLANS AND DETAILS

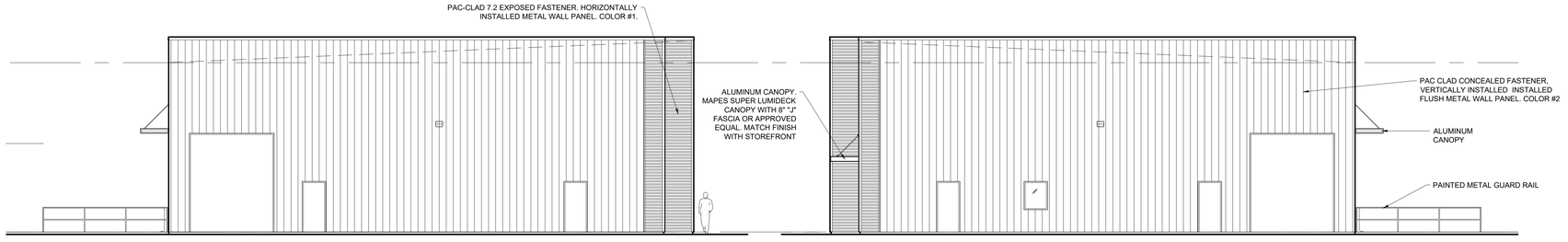
A-2

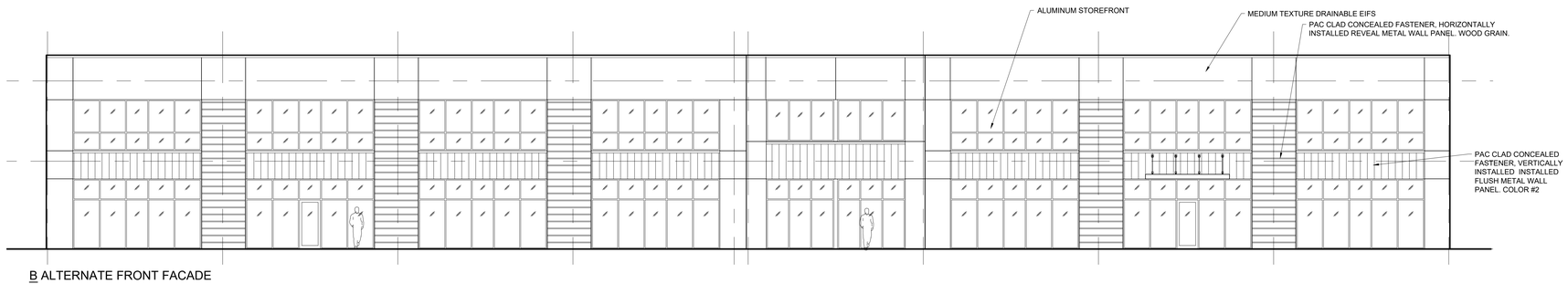
G1.6 PROJECT # 2434

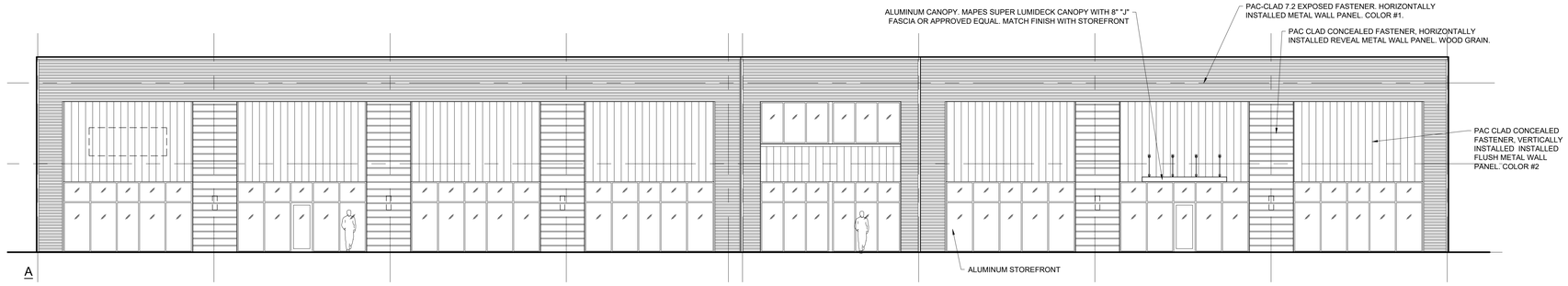


D1 1/8"=1'-0" UPPER LEVEL ALTERNATE FRONT FACADE PLAN

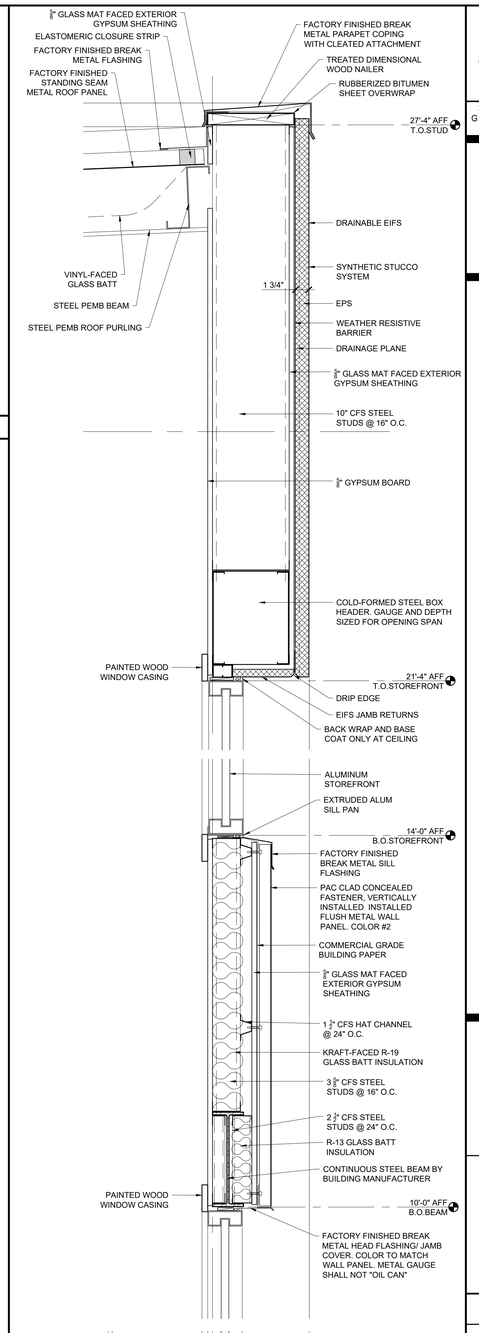


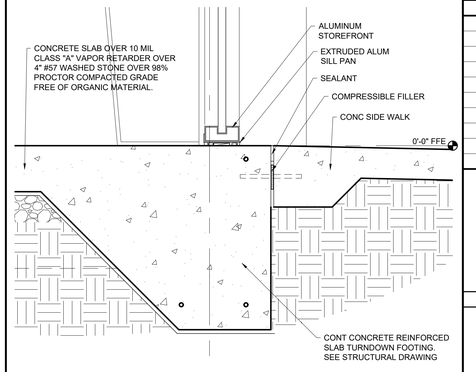






A1 1/8"=1'-0" EXTERIOR ELEVATIONS





A5 1 1/2"=1'-0" ALTERNATE WALL SECTION

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STATE OF SOUTH CAROLINA — DAVID NORELLA — LICENSE # 5855 — REGISTERED ARCHITECT

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PERMITS: 10/15/24

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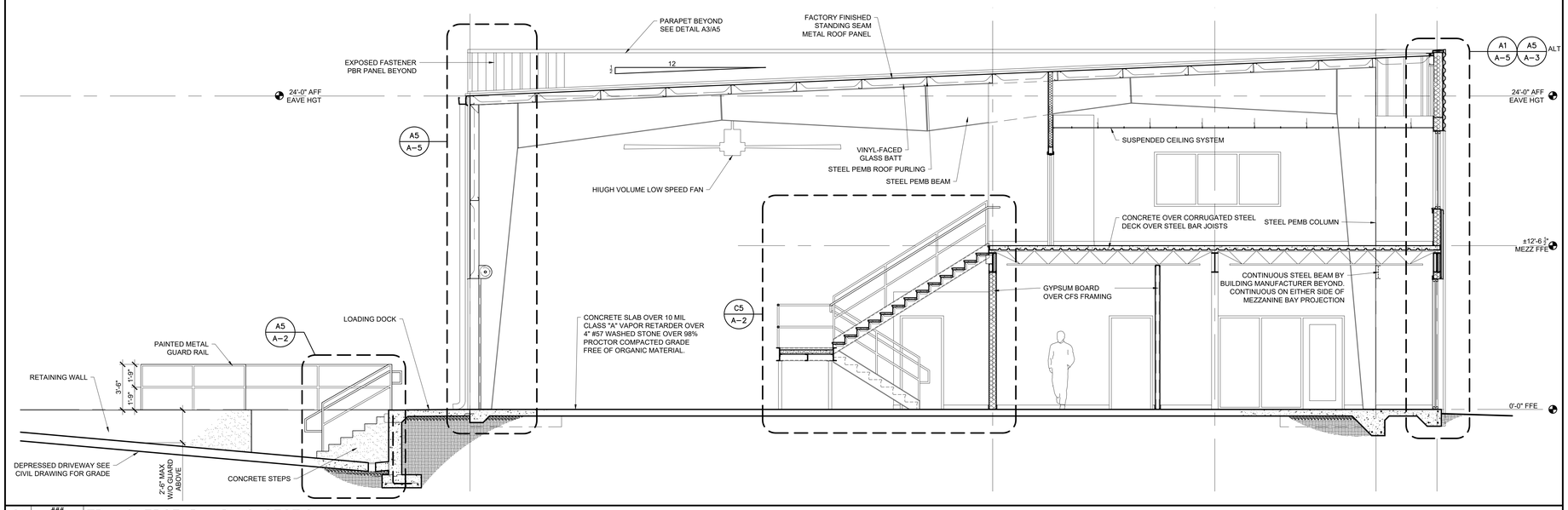
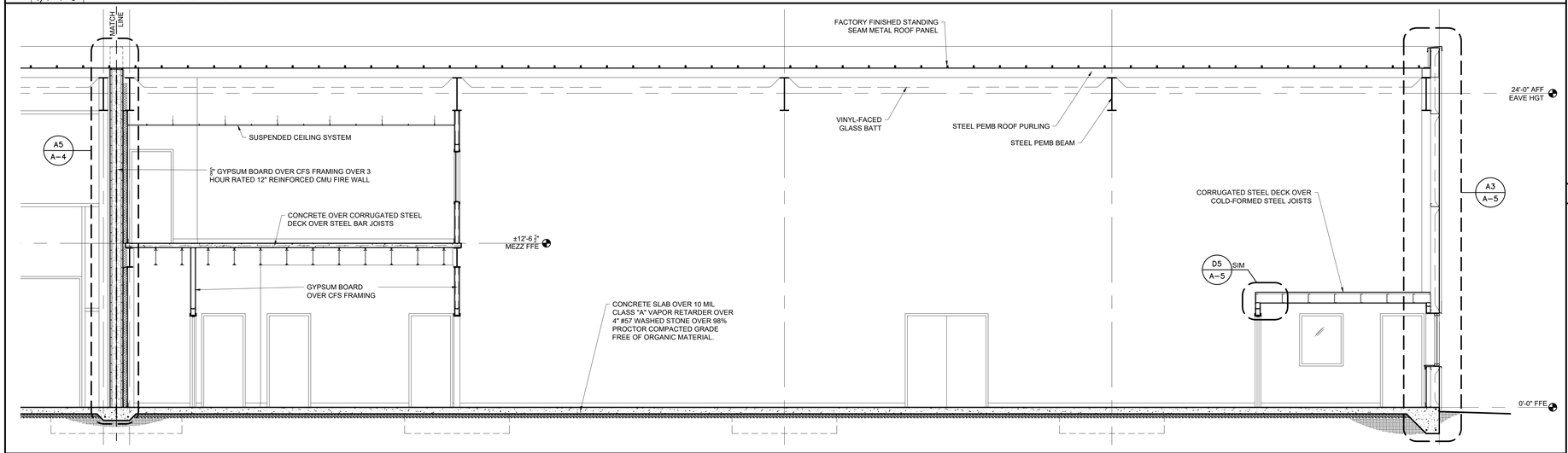
EXTERIOR ELEVATIONS AND DETAILS

A-3

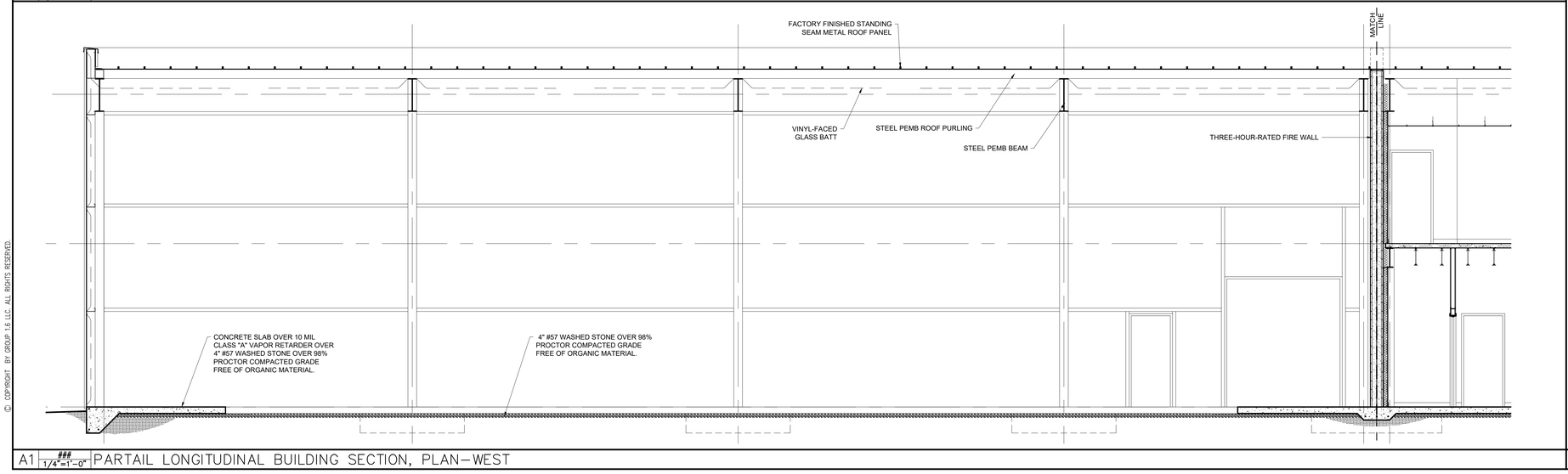
G1.6 PROJECT # 2434



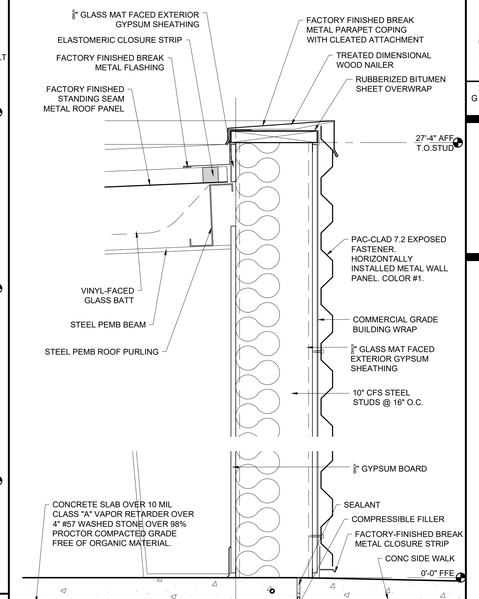
C1 ### 1/4"=1'-0" TRANSVERSE BUILDING SECTION



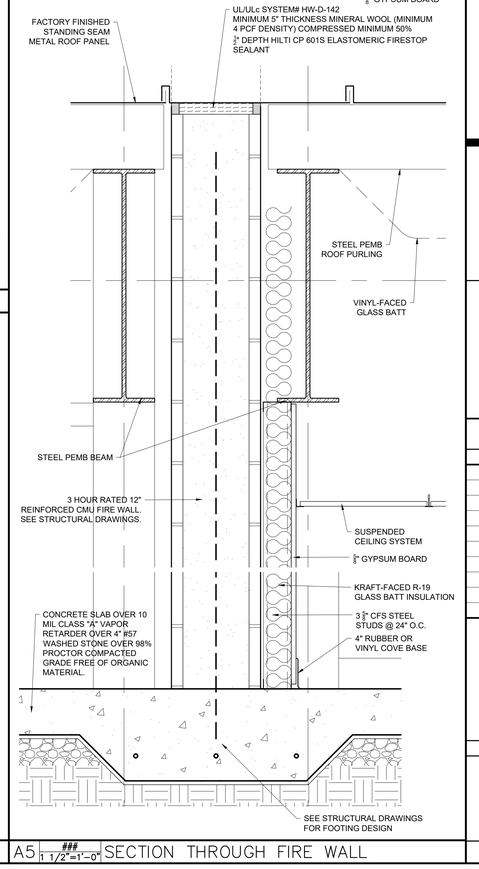
B1 ### 1/4"=1'-0" PARTAIL LONGITUDINAL BUILDING SECTION, PLAN–EAST



A1 ### 1/4"=1'-0" PARTAIL LONGITUDINAL BUILDING SECTION, PLAN–WEST



C5 ### 1 1/2"=1'-0" WALL SECTION



A5 ### 1 1/2"=1'-0" SECTION THROUGH FIRE WALL

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STATE OF SOUTH CAROLINA
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REGISTERED ARCHITECTS

STATE OF SOUTH CAROLINA
DAVID NOGGLE
LICENSE # 5855
REGISTERED ARCHITECT
10-15-24

ISSUED FOR:
PERMITS: 10/15/24
REVISIONS

BUILDING SECTIONS AND WALL SECTIONS

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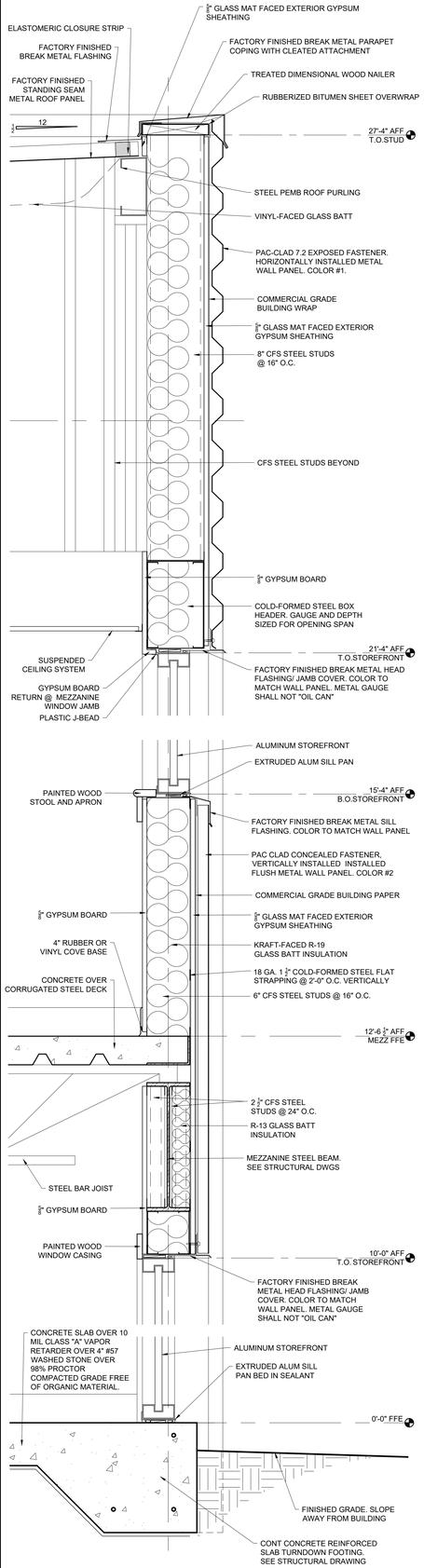
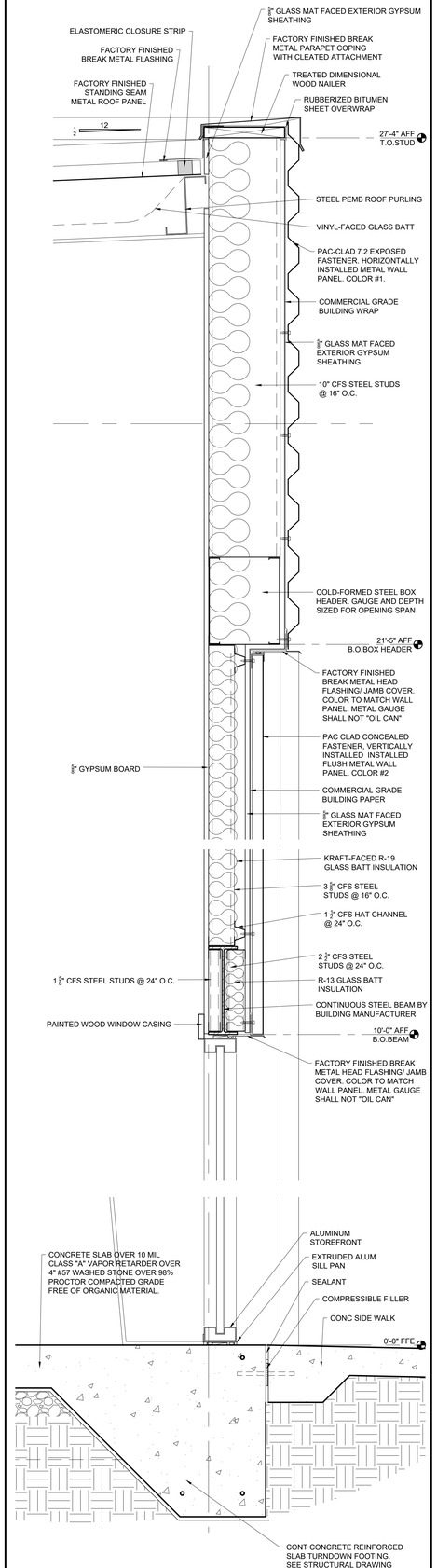
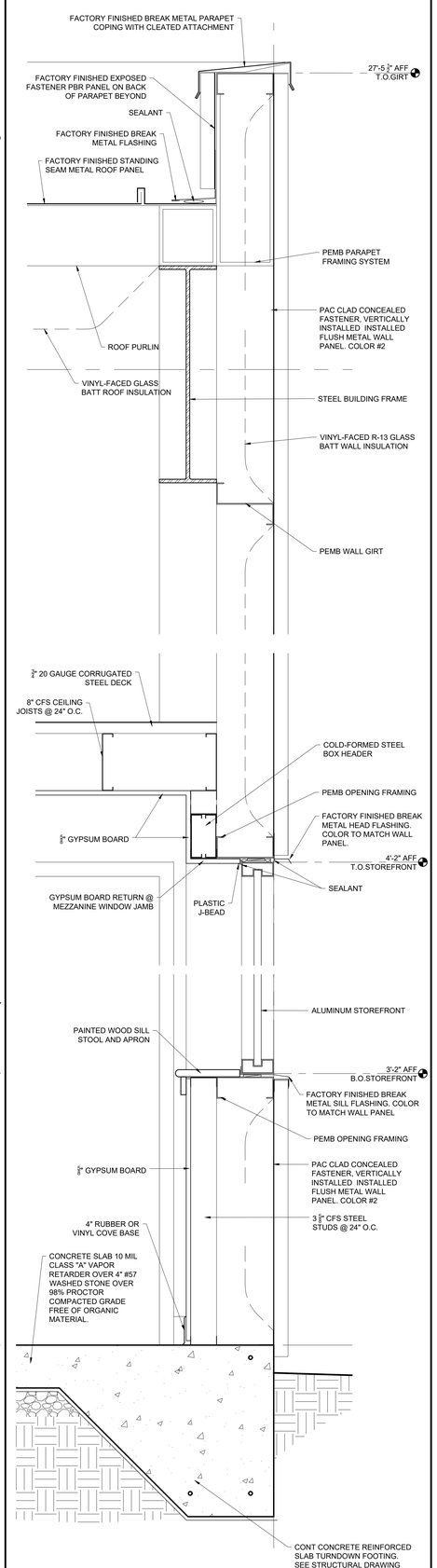
G1.6 PROJECT # 2434



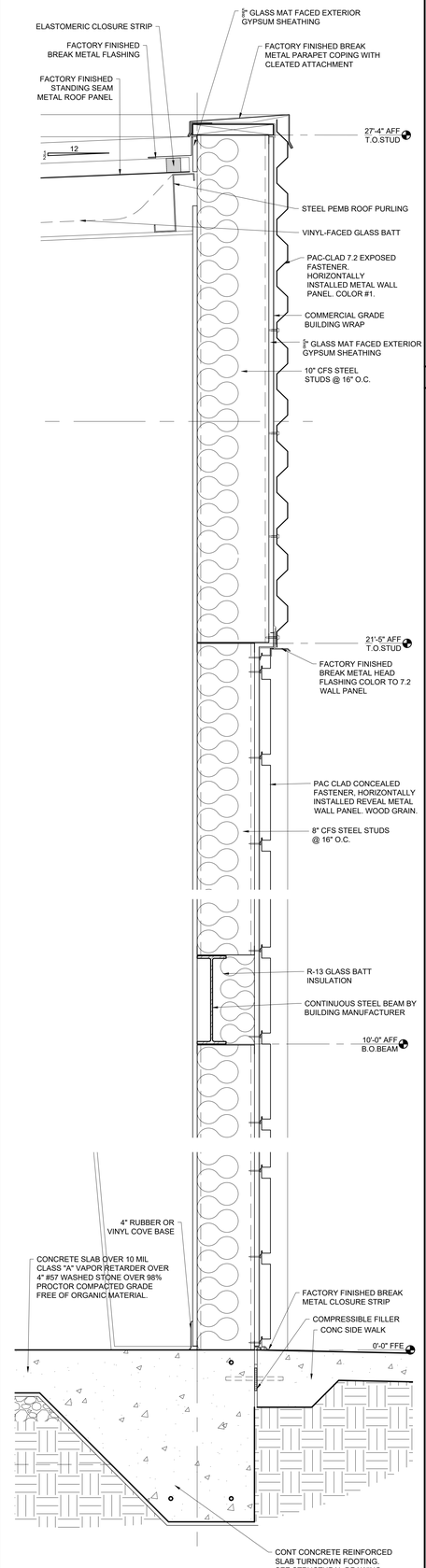
A1 ### 1 1/2"=1'-0" WALL SECTION



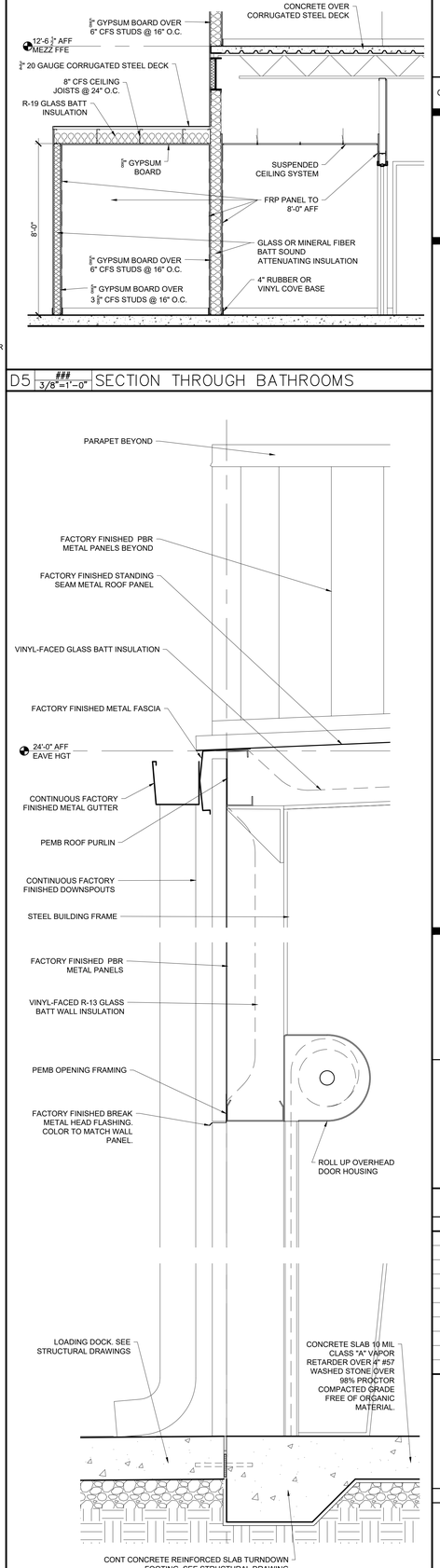
A2 ### 1 1/2"=1'-0" WALL SECTION



A3 ### 1 1/2"=1'-0" WALL SECTION



A4 ### 1 1/2"=1'-0" WALL SECTION



D5 ### 3/8"=1'-0" SECTION THROUGH BATHROOMS

A5 ### 1 1/2"=1'-0" WALL SECTION

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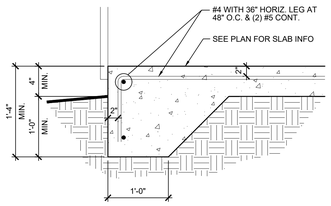
ISSUED FOR:
PERMITS: 10/15/24

REVISIONS

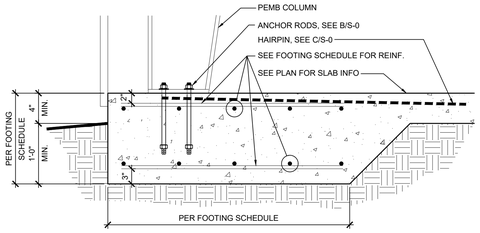
WALL SECTIONS

A-5

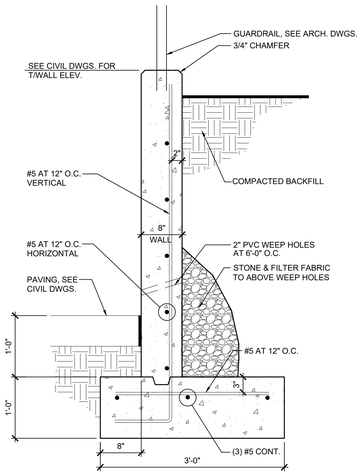
G1.6 PROJECT # 2434



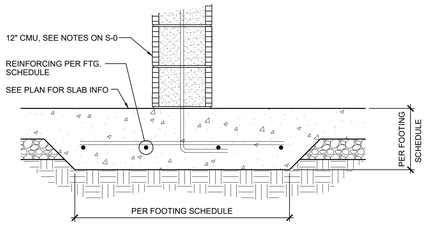
1 SECTION
1" = 1'-0"



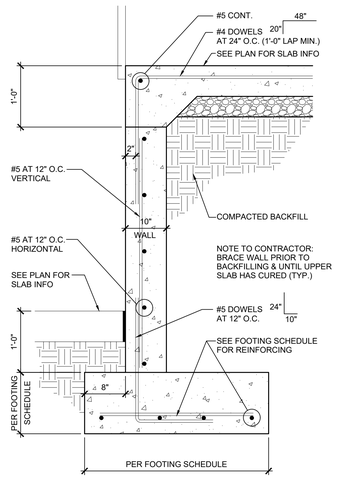
2 SECTION
1" = 1'-0"



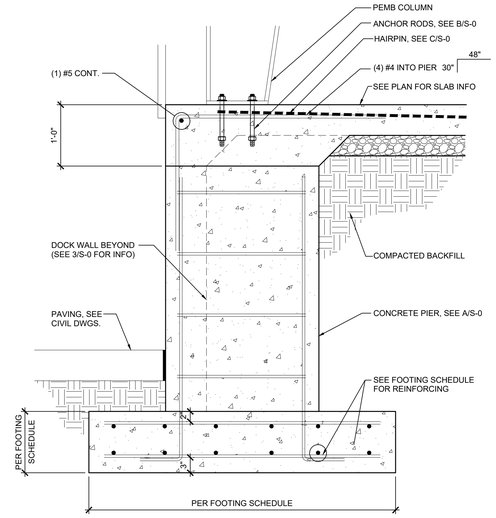
5 SECTION
1" = 1'-0"



6 SECTION
1" = 1'-0"



3 SECTION
1" = 1'-0"



4 SECTION
1" = 1'-0"

Structural Design Criteria

Structure Type
Pre-Engineered Metal Building with Ordinary Steel Moment Frames & Concentrically Braced Steel Frames.

Building Code
2021 International Building Code

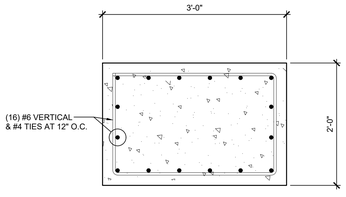
Building Use
Building Category 2.

Vertical Loads

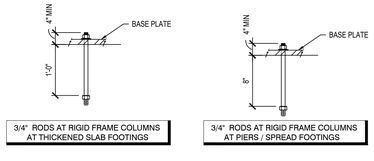
Dead Loads at Roof	
See Pre-Engineered Metal Building Drawings	
Live Loads at Roof	
Occupancy (Reducible for Slope, Area)	20 psf
Live Loads at Mezzanine	
Assembly	100 psf
Snow Loads	
Ground Snow Load	10 psf
Design Snow Load	7.7 psf

Lateral Loads

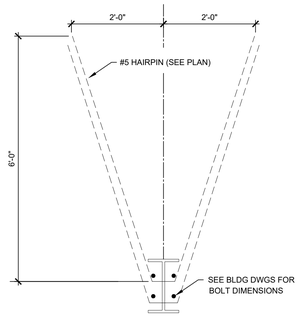
Wind Loads	
Velocity (3-Second Gust), Vultimate	115 mph
Exposure	C
Seismic Loads	
USGS Mapped 1 second	
Spectral Response, S_1	11%g
USGS Mapped short term	
Spectral Response, S_s	28%g
Site Class (Assumed)	D
Response Modification Coefficient	See PEMB Dwgs.
Spectral Response, Sds	See PEMB Dwgs.
Spectral Response, Sd1	See PEMB Dwgs.
Spectral Response Coefficient, Cs	See PEMB Dwgs.
Design Category	C
Analysis Type	ELF
Base Shear	See PEMB Dwgs.



A CONCRETE PIER DETAIL
1" = 1'-0"



B ANCHOR BOLT DETAIL
1" = 1'-0"



C HAIRPIN DETAIL
1" = 1'-0"

01000 GENERAL

1. The structure reflected on the drawings is structurally sound in its completed condition only. The design of any and all temporary shoring and bracing prior to the completed condition shall be the contractor's responsibility. The Structural Engineer of Record (EOR) shall not be responsible for the means, methods, techniques, sequences, procedures nor safety programs which are employed by the contractor to build the completed structure. Any deviations from the completed structure represented in the drawings must be submitted to the EOR for approval in writing.
2. The Contractor shall verify all conditions including existing structures (above and below grade) and shall notify of the EOR of any discrepancies. The Contractor shall perform all required field measurements.
3. The Sections and Details shown shall be considered to be typical for all similar conditions. The Contractor shall submit written Requests for Information for areas in question.
4. The Contractor shall submit shop drawings for each of the structural components shown on the drawings. Four copies of the shop drawings shall be submitted to the Architect for distribution.
5. The Contractor shall locate Anchor Rod locations with using the metal building drawings. Design of diameter of rod is by the metal building designer. Projection of rod is by metal building designer; embedment is by Palmetto Structural Engineering, LLC.
6. Foundations shown are based on estimated column reactions.
7. Palmetto Structural Engineering, LLC was contracted to provide slab and foundation design only using the building supplier's anchor setting plan and reactions. PSE did not review building framing or finishes.

01400 QUALITY CONTROL SERVICES:

1. A Testing Agency shall be retained by the Owner to perform necessary testing as required by Chapter 17 of the International Building Code. In addition, the testing agency, at the owner's expense, shall perform the following minimum tests. The Contractor shall provide shop drawings, specifications, and design drawings to the testing agency. Testing reports shall be submitted to the EOR within two weeks of performing the tests. The Contractor shall alert the owner to testing costs when submitting the job costs. The Contractor shall provide retesting required for nonconforming items.
2. Earthwork: Footing subgrades and fill placements to be reviewed and tested. Frequency of testing to be determined by the geotechnical engineer.
3. Concrete: Testing agency shall inspect placement of all reinforcing as shown on drawings and schedules. Concrete testing shall be in accordance with ACI 301 and applicable ASTM standards. The following tests should be performed for each day's first load and each 100 cubic yards:
   a. Weight of concrete, ASTM C 138.
   b. Slump, ASTM C 143.
   c. If required, Air content of freshly mixed concrete by pressure method, ASTM C 231 or volumetric method, ASTM C 173.
   d. Concrete temperature at placement time.
   e. Air temperature and weather (windy, cloudy, etc) at placement time.
   f. Strength determined in accordance with ASTM C 39.
4. Structural Steel:
   a. The testing agency shall verify that all welders have satisfactorily passed AWS qualification tests for the welds which they will perform. The testing agency shall visually inspect all field welded connections and bolted connections for compliance with applicable standards and contract documents. Twenty-five percent of the field welded braced frame connections shall be tested using Ultra-Sonic, Magnetic Particle, or other method deemed appropriate by the testing agency. If one weld is found defective, then fifty percent of the welds shall be tested. All welding shall be inspected and tested in accordance with AWS D1.1.
   b. The testing agency shall verify that the metal deck is attached to the structural steel in accordance with manufacturer's recommendations and approved shop drawings.

03000 FOUNDATIONS:

1. The Contractor shall notify the EOR of any below grade structure which may affect the foundation performance.
2. Foundations shall bear on residual soils or engineered fill capable of supporting an allowable pressure of 3000 psf. Soils shall be stable, and any expansive, compressible, or shifting material shall be removed to ensure a stable moisture content.
3. Retaining walls are design for At Rest Coefficients of 0.45; Active Coefficient of 0.33; Passive Coefficient of 3.0; Friction Factor of 0.35. Walls acting as retaining walls shall not be backfilled without shoring until all supporting structures and soil are in place. Provide adequate drainage behind walls to eliminate hydrostatic pressure on the wall.
4. Slab sub-base requirements:
   a. See the geotechnical report for stone base specifications. Stone base must meet requirements for Radon mitigation if appropriate.

03300 CAST-IN-PLACE CONCRETE:

1. All concrete work and materials shall be in accordance with ACI 318 and ACI 301.
2. Minimum Material Specifications:
   a. Portland Cement: ASTM C150, Type 1
   b. Fly Ash: ASTM C 618, Type F (limit to 20% of cementitious content)
   c. Maximum water/cementitious material ratio: 0.5
   d. No water may be added at the site without consent of the engineer.
3. Foundations:
   a. Foundations shall have a 28 day compressive strength of 3000 psi.
4. Foundation Walls:
   a. Walls shall have a 28 day compressive strength of 4000 psi.
   b. Walls and slab edges to be permanently exposed to view shall be rubbed, patching all honeycombing and voids.
   c. Provide vertical control joints in walls at 20'-0" centers. Form joint with back to back chamfer strip. Discontinue horizontal reinforcing at the joint. Provide ¾" x 18" smooth, greased dowels across joint at 16" o.c.
5. Slabs-on-grade:
   a. Interior slabs-on-grade and foundations shall have a 28 day compressive strength of 3000 psi, except where noted otherwise on plan.
   b. Interior slabs to receive a hard steel trowel finish with overall F_f =35 and F_l =25, and minimum local values of F_f = 24 and F_l = 17.
   c. Exterior slabs (under roof or floor) shall have air entraining admixture to provide 6% entrained air. Chamfer all exposed slab edge corners (3/4").
   d. Slabs shall be cured using a curing compound containing 30% solids following the manufacturer's specifications. Curing compound shall be compatible with floor finishes.
   e. Vapor barrier under slab shall meet permeability requirements of the floor finishes. As a minimum, a 10 mil vapor barrier is required, lapping and sealing all seams.
   f. Provide sawcut control joints or construction joints at 12'-0" (maximum) square pattern (see slab plan for other requirements). Cut 1" joints as soon as possible after finishing (within 12 hours of placement). Construction joints shall be formed by thickening the slab to 8" within 18" of the joint and installing a continuous key or ¾" dowels at 18" o.c. Joint filler specification to be by owner or architect.
   g. Welded Wire Fabric (ASTM A185) (if specified in slabs on grade) shall be installed 1" from the top face of the slab, lapping edges 6". WWF to be supplied in sheet stock only.
   h. Provide isolation joints at column boxouts, walls, and penetrations.
   i. Reinforce at all re-entrant corners with no control joints with (2) #3 x 4'-0" long centered on the corner, located in the top of the slab. Reinforce around all pipe or box penetrations greater than 3" with (4) #3 in diamond pattern.
   j. Specification of exterior concrete paving or sidewalks is by the Civil Engineer.
   k. Concrete splatter on walls or adjacent slabs shall be removed.
6. Reinforcing Steel:
   a. All detailing, fabrication, and placing shall be in accordance with ACI 315.
   b. Reinforcing steel shall be new billet bars conforming to ASTM A615, grade 60.
   c. Provide 3" concrete cover for all concrete cast against earth.
   d. Provide hooked dowels in footing equivalent in size and spacing to wall reinforcing. Extend dowels 48 bar diameters into wall. Lap splices in walls to be 48 bar diameters.
   e. Provide class B splices at horizontal bars in walls and wall corners.

04300 MASONRY:

1. Masonry work and materials shall comply with ACI 530. All CMU shall conform to ASTM C90, ASA A79.1 for light weight block. Mortar shall conform with ASTM C270, Type S. Masonry cement and Type N mortar are not allowed.
2. The minimum compressive strength of the system, f'm, shall be 1900 psi.
3. CMU to be laid in running bond.
4. Provide bond beams at the top of all walls and at 8'-0" o.c. vertically. Bond beams shall be low web type with (2) #5 continuous. Lap reinforcing at corners or bond beams.
5. As a minimum, provide (1) #6 vertical bar at 24" o.c. and 9 gage ladder type joint reinforcing at 16" o.c. Joint reinforcing to have prefabricated tees and corners. Fill all cells containing reinforcing with 3000 psi reinforced masonry grout meeting ASTM C476. Grout lifts are not to exceed 56". Provide joint reinforcing at 8" o.c. in all CMU below grade.
6. Provide control joints as noted on the architectural drawings or 30' maximum. Maintain 2 to 1 panel width to height. Provide a control joint with strap anchors at 16" o.c. where interior partitions meet exterior walls. Control joints shall have a reinforced control joint block on each side of the joint with a rubber or PVC t-shaped gasket. Discontinue joint reinforcing at the joint. Continue bond beam reinforcing through the joint. Specification of the caulk and backing rod is by the architect.
7. Where a wall crosses a floor slab control joint, provide an 8'-0" bond beam at the first course centered on the joint.
8. Provide masonry lintels or steel lintels at all openings. Galvanize steel lintels with G60 finish.

05120 STRUCTURAL STEEL:

1. Design, fabrication and erection of all structural steel shall be in accordance with the AISC Manual of Steel Construction, ASD.
2. Minimum material specifications:
   a. W-Structural Steel Shapes: ASTM A992
   b. Steel Pipe: ASTM A53 gr. B
   c. Hollow Structural Sections: ASTM A500 gr. B
   d. M, S, C, MC, HP Shapes: ASTM A36
   e. Plates: ASTM A36
   f. Angles: ASTM A36
   g. Anchor Rods: ASTM F1554 gr. 36
   h. Bolts: ASTM A325N
   i. Weld Electrodes: AWS E70xx
   j. Non-shrink grout: ASTM C 1107, non metallic – 5000 psi
3. Product Submittals:
   a. Typical shop fabrication and field erection drawings.
4. Provide 2 mils DFT of rust inhibitive primer after power tool cleaning. Provide asphaltic coating such as Sherwin Williams Tar Guard B69B60 for columns or any other steel below slab.
5. Field connections shall be bolted unless shown otherwise on the drawings. Bolted connections shall be made with A325N bolts. Connections shall be per ASD, 9th Edition Table II or Table III – case 1.

05210 STEEL JOISTS:

1. Design, fabrication and erection of all steel joists shall be in accordance with the Steel Joist Institute (SJI).
2. Bridging is to be designed and installed per SJI requirements. Bridging must be anchored at locations where the bridging cannot be continuous (interior beams, interior walls, exterior beams, or interior walls). Anchor by welding to steel beam or to angle bolted to wall (per SJI). Angles at walls to be L2x2x1/4 by joist depth w/ (1) 5/8" sleeve anchor in each end.
3. Joists shall receive a shop-coat of rust-inhibitive primer (1 mil DFT minimum).
4. Do not weld bottom chord struts or girders or joist bottom chord extensions to stabilizer plates unless noted on the drawings.
5. Hang piping, lights, ceiling, etc. from joists only at panel points. Any point load greater than 200 pounds must be reviewed by the EOR.
6. Joist vendor to coordinate sprinkler piping from sprinkler contractor's drawing.

05300 STEEL DECK:

1. Design, fabrication and erection of all steel deck shall be in accordance with the Steel Deck Institute. All welds shall be made following AWS D1.3 specifications by qualified welding operators.
2. Deck Sheet Steel shall conform with ASTM A611 and shall have FM Label attached.
3. Deck Vendor shall supply closures, ridge plates, valley plates, sump pans, etc. necessary to provide a finished roof surface. Deck Vendor shall supply pour stops, closures, and accessories required to provide a finished floor deck surface prior to placing concrete.

05400 LIGHT GAGE METAL FRAMING:

1. All structural members shall be designed in accordance with American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members." Members shall conform to ASTM A-653-SQ Grade 33 (UNO). The members listed below shall meet the minimum physical properties for the sizes and gages shown in the Clark Steel Framing Manual.
2. **All members and connections shall be designed by the vendor using the loads shown on the drawings and in the design criteria. Shop drawings prepared by the Vendor shall be submitted. All connections, headers, and other components shall be designed by the Vendor's engineer and calculations shall be submitted with the shop drawings. The sizes shown on the drawings are for preliminary pricing only. The Vendor is responsible for preliminary design for final pricing.**
3. Deflection Criteria for wall framing to be L/600 for 75% of the Components and Cladding loads of the ASCE 7.
4. Exterior or load bearing stud walls shall have horizontal bridging at 4'-0" centers (vertical spacing).

05511 CONCRETE FILLED METAL PAN STAIRS

1. Stairs shown on architectural drawings to be concrete filled metal pan stairs. Stairs to be designed by the miscellaneous metals fabricator. Shop drawings must bear the seal of a South Carolina licensed professional engineer. The stairs must be capable of resisting the following loading and performance criteria:
   a. Uniform load of 100 pounds per square foot.
   b. Concentrated load of 300 pounds applied on an area of 4 square inches.
   c. Framing must withstand railing loads as required per the IBC 2003 acting at the same time as the loads listed above.
   d. Limit deflection of treads, platforms, and framing members to the lesser of L/240 or ¼".
   e. Earthquake loads from ASCE 7.
   f. Supporting walls must be field measured prior to fabrication.

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21980 09-23-24 MATTHEW RYAN SUMMEY

PALMETTO STRUCTURAL ENGINEERING, LLC No. 4761 SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION

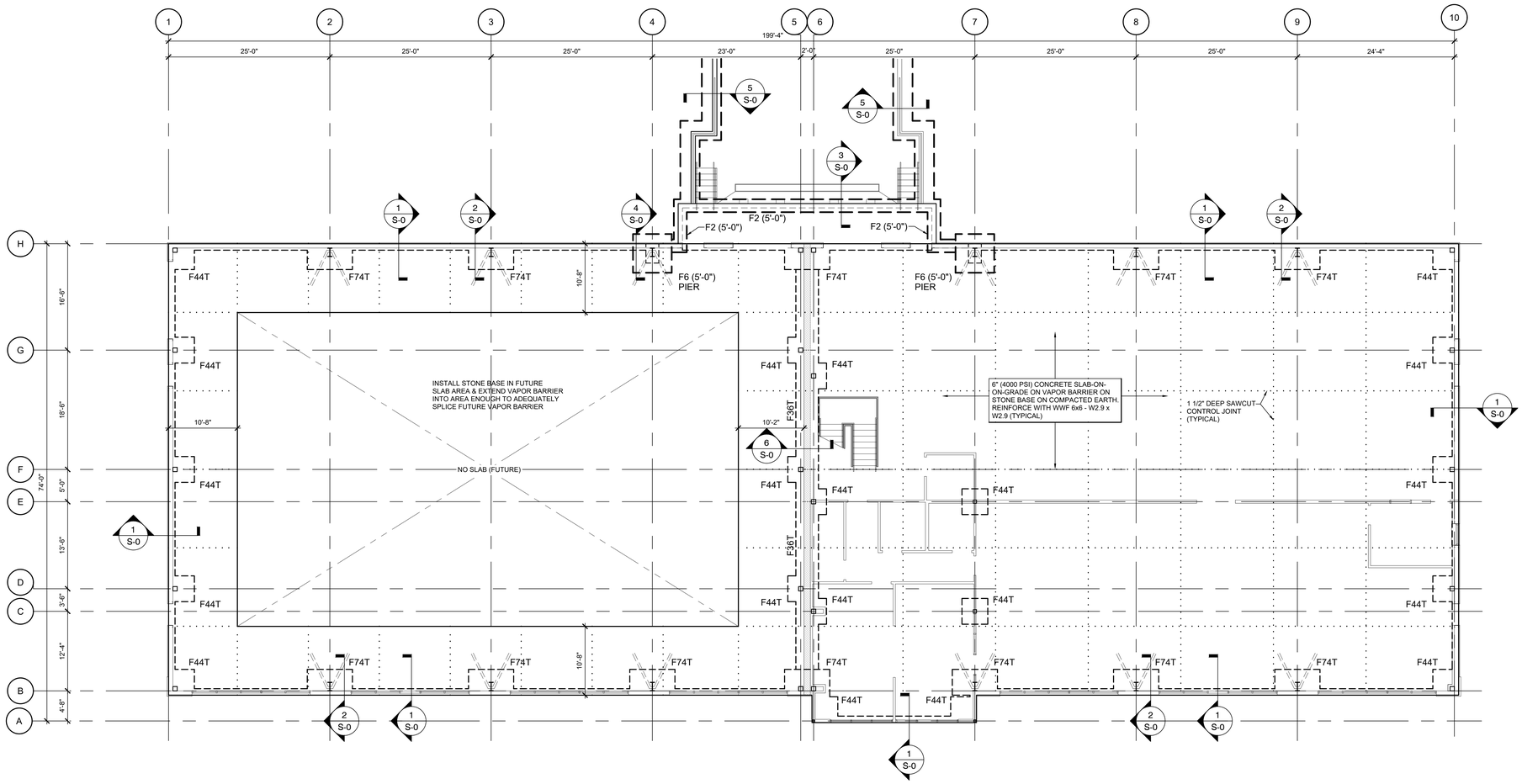
ISSUED FOR PERMIT

REVISIONS

GENERAL NOTES & DESIGN CRITERIA, SECTIONS & DETAILS

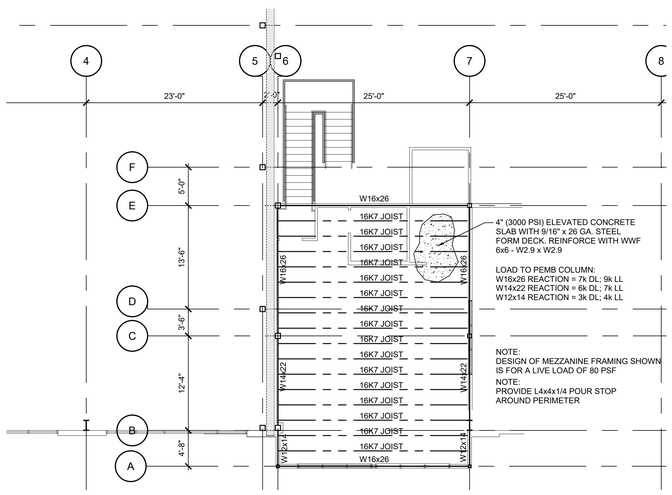
S-0

G1.6 PROJECT # 2434



A FOUNDATION / SLAB PLAN
1/8" = 1'-0"

Foundation Schedule			
TYPE	WIDTH X LENGTH	THICKNESS	REINFORCING
F2	2'-0" x CONT.	12"	(2) #5 CONT. & #4 x 1'-6" AT 24" O.C.
F44T	4'-0" x 4'-0"	18" THK'D SLAB	(5) #5 EA WAY
F6	6'-0" x 6'-0"	15"	(6) #6 EA WAY
F74T	7'-0" x 4'-0"	24" THK'D SLAB	(8) #6 EA WAY, TOP & BOTTOM
F36T	3'-0" x CONT.	12" THK'D SLAB	(4) #5 CONT. & #4 x 3'-0" AT 12" O.C.



A MEZZANINE FRAMING PLAN
1/8" = 1'-0"

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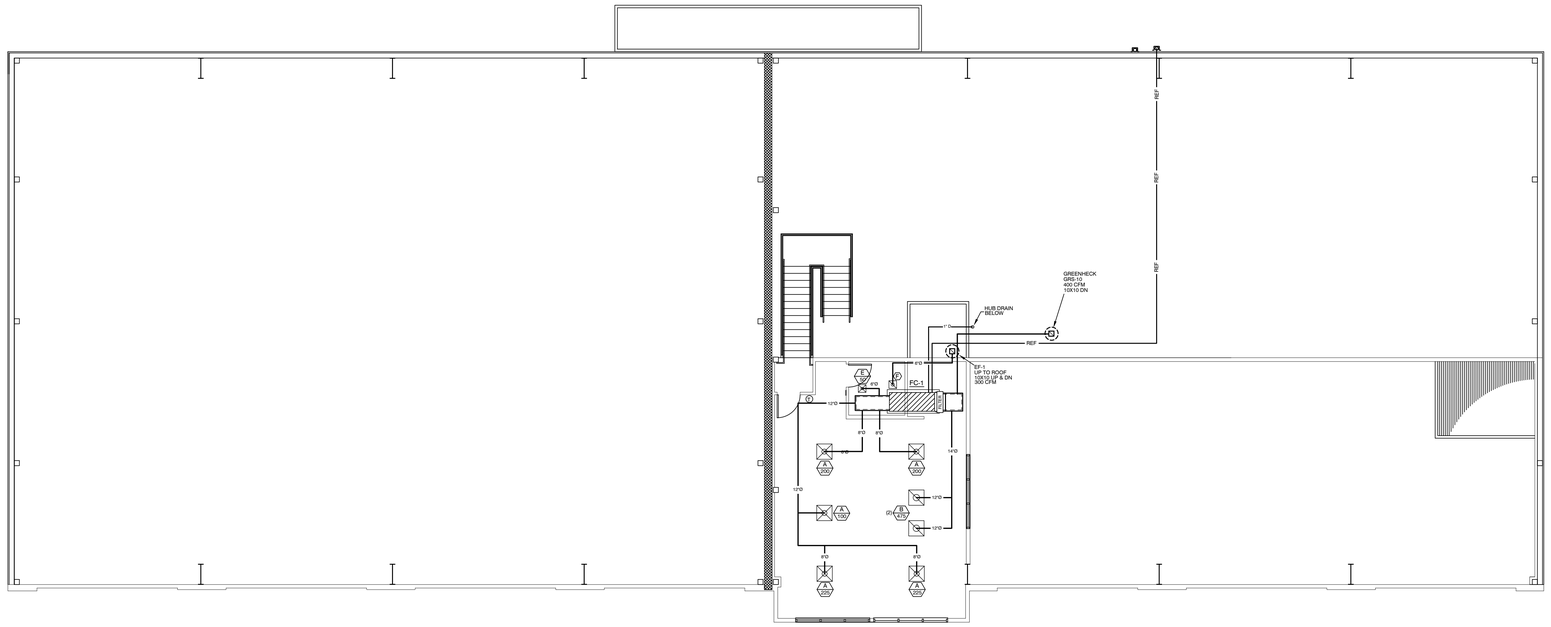
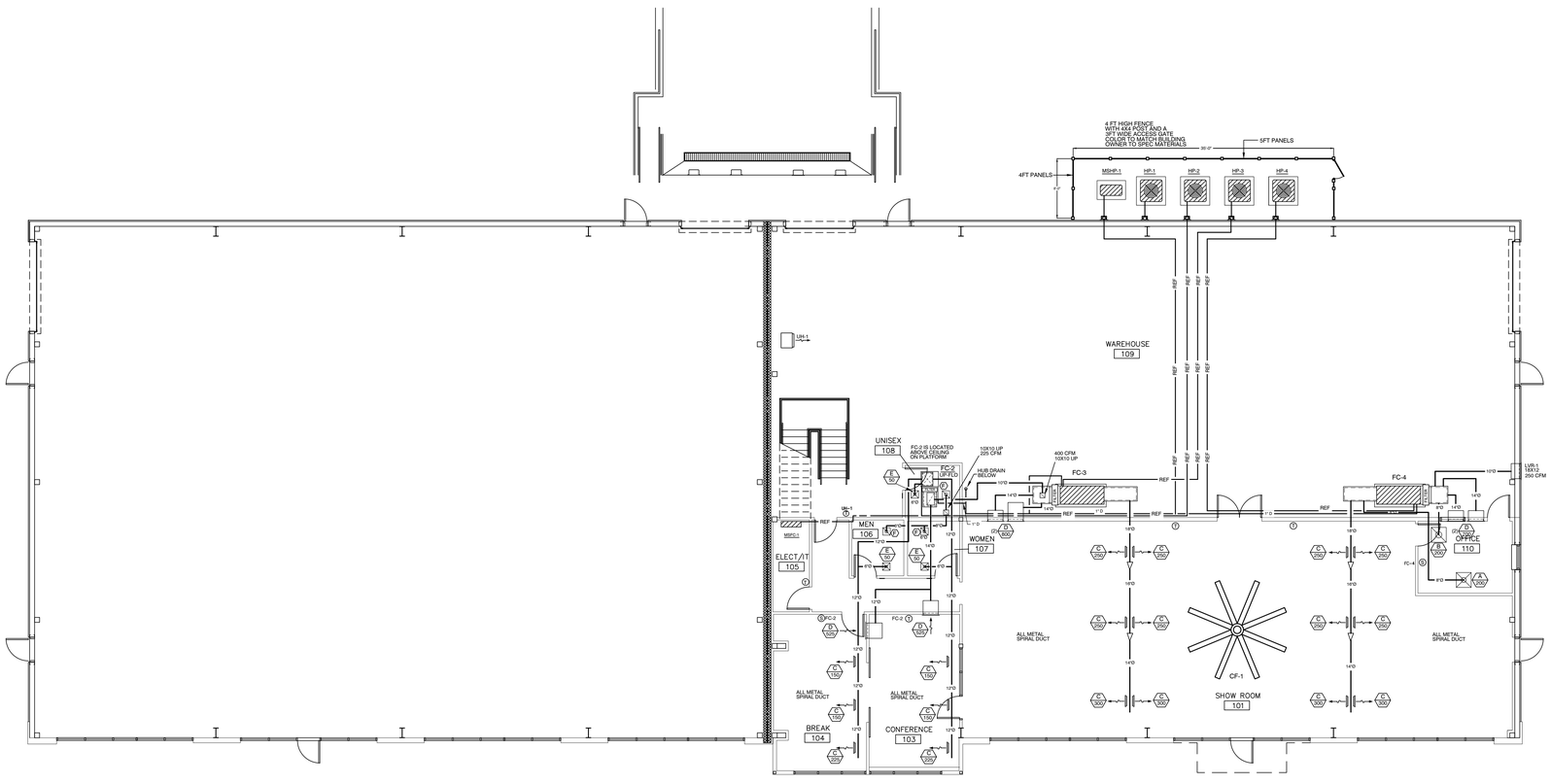
FOUNDATION / SLAB PLAN

S-1

G1.6 PROJECT # 2434



A1 ###/1/8"=1'-0" FLOOR PLAN



A1 ###/1/8"=1'-0" FLOOR PLAN

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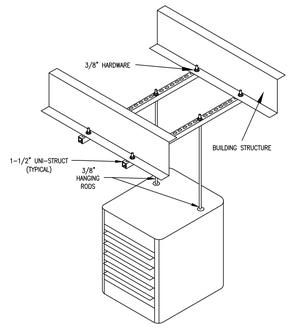
REVISIONS

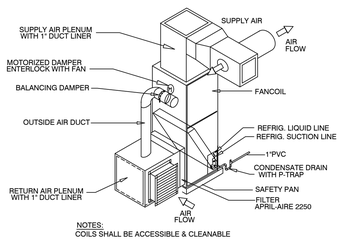
HVAC FLOOR PLAN

M-1

G1.6 PROJECT # 2434

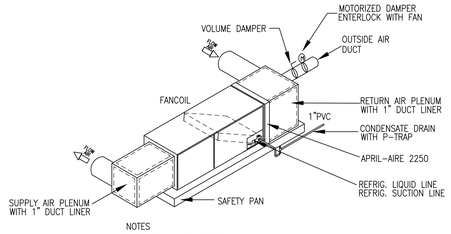


TYPICAL ELECTRIC UNIT HEATER INSTALLATION
NOT TO SCALE



NOTES:
COILS SHALL BE ACCESSIBLE & CLEANABLE

FAN COIL UNIT DETAIL
SCALE: NONE

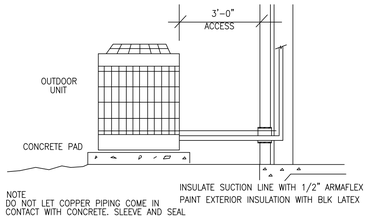


NOTES
COILS SHALL BE ACCESSABLE AND CLEANABLE
DETAIL IS TYPICAL FOR SINGLE UNITS.

HORIZONTAL FAN COIL DETAIL
NO SCALE

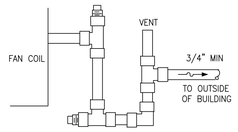
H.V.A.C. LEGEND

DUCT	FD FIRE DAMPER VERTICAL	(M/T) MONITOR THERMOSTAT
LINED DUCT	FD FIRE DAMPER HORIZONTAL	(T) SLAVE THERMOSTAT
SUPPLY AIR-(S/A) DIFFUSER	SD SPLITTER DAMPER	(SD) SMOKE DETECTOR
RETURN AIR-(R/A) EXHAUST AIR GRILLE	90° SHORT RADIUS ELL W/ SINGLE TURNING VANE	(X/XXX) AIR DISTRIBUTION DESIGNATION
VOLUME DAMPER VD	FLEXIBLE DUCT	NG NATURAL GAS
AD ACCESS DOOR	SPININ W/DAMPER	SQUARE TO ROUND
	SPININ W/SCOOP	
	SPININ W/SCOOP AND DAMPER	



NOTE
DO NOT LET COPPER PIPING COME IN CONTACT WITH CONCRETE. SLEEVE AND SEAL

CONDENSING UNIT DETAIL
NO SCALE



CONDENSATE TRAP DETAIL
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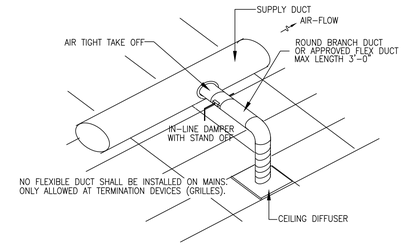

FLEX DUCT AND GRILLE DETAIL
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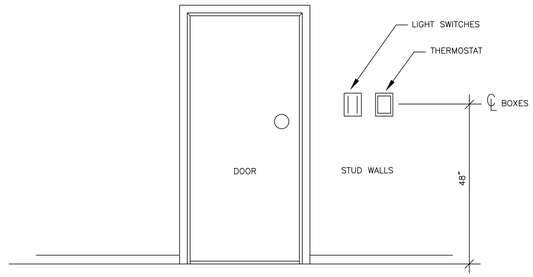
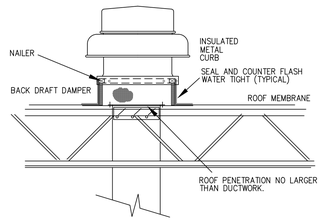
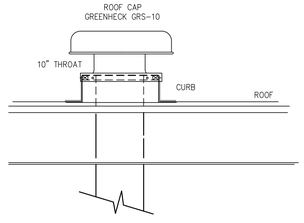


ROOM THERMOSTAT MOUNTING
SCALE: NOT TO SCALE



ROOF MOUNTED EXHAUST FAN DETAIL
NO SCALE



ROOF MOUNTED FRESH AIR HOOD
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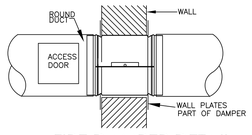
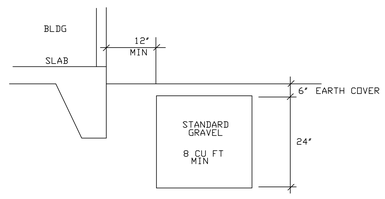


FIRE DAMPER DETAIL
RUSKIN FDR25
SCALE: NOT TO SCALE



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N. T. S.

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 9904 NATHANIEL REECE BURNETT

ISSUED FOR:
PERMITS:??/??/??
REVISIONS

HVAC DETAILS

M-2

G1.6 PROJECT # 2434

MECHANICAL SPECIFICATIONS

1. THESE COMMON PROVISIONS APPLY TO ALL WORK COVERED IN THIS CONTRACT.
   A. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, MACHINERY, SUPERVISION, MANAGEMENT, AND ALL OTHER ITEMS NECESSARY FOR THE COMPLETE PLUMBING SYSTEM. THE ENTIRE PLUMBING SYSTEMS SHALL BE INSTALLED, STARTED, TESTED, ADJUSTED AND TURNED OVER TO THE OWNER IN PROPER OPERATING CONDITION.
   B. ALL LABOR, EQUIPMENT, MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE INTERNATIONAL AND LOCAL CODES.
   C. ALL FIXTURES AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. WHERE THIS MAY CONFLICT WITH CODE REQUIREMENTS THE CODES SHALL HAVE PRECEDENCE.
   D. THE CONTRACTOR PERFORMING THE WORK. CONCURRENTLY HOLD ALL REQUIRED LICENSES TO PERFORM THE WORK SHOWN AND SPECIFIED ON THESE DRAWINGS.

2. DIMENSIONS: DRAWINGS SHOULD BE INTERPRETED AS GENERAL LAYOUT AND ARRANGEMENT DRAWINGS. THE DRAWINGS ARE NOT INTENDED TO SHOW AND CANNOT SHOW COMPLETE OR PRECISE MEASUREMENTS AND DETAILS OF THE BUILDING AND INSTALLATION IN EVERY RESPECT, AND THEY DO NOT INCLUDE ALL DETAILS OF MANUFACTURED EQUIPMENT, CONSTRUCTION, PIPING, DUCTWORK, ETC. MEASUREMENT FIGURES WRITTEN UPON THE DRAWINGS INDICATING DIMENSIONS SHALL BE USED INSTEAD OF SCALED MEASUREMENTS. NO SCALE MEASUREMENT TAKEN FROM A DRAWING SHALL BE RELIED UPON AS A DIMENSION FOR INSTALLATION PURPOSES. EXACT LOCATIONS AND MEASUREMENTS ARE TO BE DEFINED IN THE FIELD, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACCURACY AND USE IN CONSTRUCTION OF THE WORK.

3. INTERFERENCES: THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES IN ORDER TO ELIMINATE INTERFERENCES. HE SHALL EXAMINE IN ADVANCE THE LOCATION OF ELECTRICAL SYSTEMS, DUCTS, PIPING, STRUCTURES, CONDUITS, AND OTHER EQUIPMENT AND FACILITIES TO BE INSTALLED, AND PROPERLY COORDINATE THE INSTALLATION OF MECHANICAL WORK TO AVOID INTERFERENCES. THE ENGINEERS HAVE CONSIDERED EXISTING INTERFERENCES IN MAKING THE DRAWINGS, BUT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MODIFY, OFFSET, OR OTHERWISE ACCOMMODATE ALL EQUIPMENT TO THE STRUCTURE, UTILITIES, AND OTHER EQUIPMENT.

4. UTILITIES: UNLESS SPECIFICALLY NOTED OTHERWISE THE CONTRACTOR SHALL BE RESPONSIBLE FOR EVALUATING EXISTING UTILITIES. FIELD CHECK EXISTING SYSTEMS, BOTH SANITARY WASTE AND POTABLE WATER, FOR COMPLIANCE WITH THE SCOPE OF THIS WORK. DEFICIENCIES ARE TO BE BROUGHT TO THE OWNER'S ATTENTION BEFORE PURCHASING MATERIALS AND BEGINNING WORK.
   MEET WITH WATER TREATMENT AUTHORITIES BEFORE BEGINNING WORK. THEIR REQUIREMENTS MAY BE DIFFERENT THAN THE LOCAL IPC INSPECTORS.

5. SUBSTITUTIONS: THE MATERIALS, PRODUCTS, AND EQUIPMENT DESCRIBED IN THE DOCUMENTS ESTABLISH A STANDARD OF REQUIRED FUNCTION, DIMENSION, APPEARANCE, SERVICEABILITY, AVAILABILITY OF SPARE PARTS AND QUALITY TO BE MET BY ANY PROPOSED SUBSTITUTION. SUBSTITUTION OF EQUIPMENT, PRODUCTS, OR MATERIAL MUST BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THE SUBSTITUTION OF PRODUCTS, MATERIAL, OR EQUIPMENT WHICH REQUIRES REDESIGN OF ANY PORTION OF THE PACKAGE WILL BE PREPARED BY THE CONTRACTOR AT HIS EXPENSE AND APPROVED BY THE OWNER OR HIS REPRESENTATIVE.

6. SUBMITTALS: UNLESS SPECIFICALLY NOTED OTHERWISE THE CONTRACTOR SHALL PROVIDE SIX COPIES OF DETAIL CATALOG CUT SHEETS OF ALL MATERIAL AND EQUIPMENT HE IS PROVIDING AS SUBMITTAL DOCUMENTATION TO THE OWNER.
   A. THE CONTRACTOR SHALL PRESENT COMPLETE PERFORMANCE INFORMATION ON EACH PIECE OF EQUIPMENT.
   B. THE CONTRACTOR SHALL RECEIVE WRITTEN APPROVAL FROM THE OWNER OR HIS REPRESENTATIVE PRIOR TO INSTALLATION.

7. RECORD DRAWINGS: THE CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS ON THE JOB AND SHALL, AS CONSTRUCTION PROGRESSES, RECORD ANY CHANGES WHERE CONSTRUCTION IS DIFFERENT FROM DESIGN DOCUMENTS. AT THE TIME OF FINAL INSPECTION, ONE SET OF RECORD DRAWINGS IN ADDITION TO ONE SET OF APPROVED SUBMITTAL DOCUMENTS SHALL BE TURNED OVER TO THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST ASSOCIATED WITH THESE DOCUMENTS.

4. PIPING: PIPING MATERIALS SHALL BE IN ACCORDANCE WITH THE PIPE SERVICE TABLE THAT APPEARS ELSEWHERE IN THESE DOCUMENTS.
   A. ALL PIPE SHALL BE ADEQUATELY BRACED AND SUPPORTED. SUPPORT SPANS SHALL NOT EXCEED THOSE NOTED IN THE PIPE SUPPORT SPACING TABLE APPEARING ELSEWHERE IN THESE DOCUMENTS. IN ADDITION TO THE MAXIMUM ALLOWABLE SPACING BETWEEN SUPPORTS, HORIZONTAL PIPING SHALL BE SUPPORTED AT TERMINATION OF ALL HORIZONTAL RUNS OR BRANCHES, AND AT EACH CHANGE OF DIRECTION.
   B. UNDERGROUND STEEL PIPE SHALL HAVE A PROTECTIVE COAL–TAR EPOXY COATING APPLIED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF AWWA SPECIFICATIONS C203–86.
   C. OPEN PIPE ENDS SHALL BE COVERED AND FREE OF DEBRIS DURING CONSTRUCTION.
   D. WHERE THE SIZE OF REFRIGERANT PIPE IS NOT NOTED ON THE DRAWINGS, THE PIPE SHALL BE SIZED BY THE CONTRACTOR IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS RECOMMENDATIONS BASED ON THE LIFT AND RUN OF THE SPECIFIC INSTALLATION. THIS SHALL INCLUDE ACCUMULATORS AND/OR SOLENOID VALVES, IF REQUIRED.
   E. REFRIGERANT PIPE AND ASSOCIATED AIR CONDITIONING EQUIPMENT SHALL BE EVACUATED AND CHARGED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S STANDARDS.
   F. REFRIGERANT PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE WITH HYDRA ZORB CUSHIONED CLAMPS OR EQUAL. INSULATION AT PIPE SUPPORTS SHALL BE COVERED WITH A PVC SLEEVE OR OTHER SUITABLE MATERIAL TO PREVENT THE CRUSHING OF THE INSULATION.
   G. PVC PIPING SHALL NOT BE INSTALLED IN ANY AREA USED AS A SUPPLY OR RETURN AIR PLENUM.
   H. WHERE PIPES PASS THROUGH FIRE OR SMOKE RATED BUILDING COMPONENTS, THE PIPE ANNULUS SHALL BE SEALED WITH A UL RATED FIRE STOPPING MATERIAL. THE MATERIAL SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS BASED ON PIPE AND WALL CONSTRUCTION MATERIALS. ESCUTCHEON PLATES SHALL BE INSTALLED AT THE PENETRATION OF ALL FINISHED WALLS.
   I. UNLESS NOTED OTHERWISE ALL PENETRATIONS OF EXTERIOR WALL, FLOOR, OR ROOF STRUCTURES WITH DUCTWORK, PIPING, OR RELATED COMPONENTS SHALL BE SEALED WEATHER TIGHT WITH APPROPRIATE FLASHING AND/OR SEALING MATERIALS.

5. INSULATION: PIPE AND DUCTWORK SHALL BE INSULATED IN ACCORDANCE WITH THE PIPE SERVICE TABLE AND THE DUCTWORK SECTION OF THESE SPECIFICATIONS.
   A. INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPMENT RATING OF 50 OR LESS IN ACCORDANCE WITH UL 723.
   B. FIBERGLASS PIPE INSULATION SHALL BE EQUAL TO CERTAINTEED SNAP ON ASJ/SSL.
   C. FIBERGLASS INSULATION OF PIPE FITTINGS SHALL BE INSULATED WITH MOLDED FIBERGLASS FITTINGS WITH WHITE PVC JACKET.
   D. FIBERGLASS DUCTWRAP SHALL BE 2" THICK FIBERGLASS WITH VAPOR BARRIER EQUAL TO OWENS CORNING, R=8.0
   E. FIBERGLASS DUCT LINER SHALL BE 1" THICK EQUAL TO OWENS CORNING TYPE 150. LINER SHALL NOT SUPPORT FUNGAL OR BACTERIAL GROWTH IN ACCORDANCE WITH ASTM C 21 AND G22 TEST METHODS.
   F. INSULATED PIPE SHALL BE PROTECTED FROM DAMAGE OR COMPRESSION FROM HANGERS AT THE POINT OF SUPPORT USING HALF SLEEVE SHIELDS EQUAL TO GRINNEL FIG. 167.
   G. ARMAFLEX INSULATION SHALL BE EQUAL TO ARMSTRONG ARMAFLEX ELASTOMERIC FOAM INSULATION APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. OUTSIDE INSTALLATIONS SHALL RECEIVE TWO COATS OF WB ARMAFLEX FINISH.

6. DUCTWORK:
   A. UNLESS OTHERWISE NOTED ALL DUCT CONSTRUCTION AND SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF SMACNA HVAC DUCT CONSTRUCTION STANDARDS, LATEST EDITION, UL 181, AND LOCAL CODES.
   B. SUPPLY AIR, OUTSIDE AIR, AND RETURN AIR DUCTWORK TO AIR HANDLING EQUIPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF DUCT RATED FOR 0.5" W.G. DUCT MATERIAL SHALL BE LOCK FORMING QUALITY GALVANIZED STEEL SEALED IN ACCORDANCE WITH SMACNA CLASS C.
   C. DUCT SIZES NOTED ON THE DRAWINGS ARE BASED ON "FREE FLOW AREA". SHEET METAL SIZES WILL BE LARGER WHERE DUCT LINER IS SPECIFIED TO ACCOMMODATE THE LINER.
      ALL POTENTIAL POINTS OF LEAKAGE ON THE DUCTWORK SHALL BE SEALED WITH A SMOOTH WATER BASED DUCT SEALER CODED EDS–RS AS MANUFACTURED BY DURO DYNE CORPORATION OR EQUAL.
   D. MITERED SQUARE ELBOWS SHALL BE EQUIPPED WITH DOUBLE THICKNESS TURNING VANES.
   E. INSULATED FLEXIBLE DUCTWORK SHALL BE CONSTRUCTED OF AN INNER AIR BARRIER OVER A COILED STEEL WIRE STRUCTURE, COVERED WITH 1" FIBERGLASS INSULATION AND A FOIL OR VINYL VAPOR BARRIER. INSULATED FLEXIBLE DUCTWORK SHALL CONFORM TO THE REQUIREMENTS OF UL 181, CLASS I, AIR DUCT. LENGTH SHALL NOT EXCEED 8 FEET.
      DO NOT CONCEAL FLEXABLE DUCT IN WALL OR CEILING CAVITIES.
   F. FLEXIBLE DUCT TAKE–OFFS FROM RECTANGULAR DUCT SHALL BE AIR TIGHT TAPS WITH IN–LINE DAMPER WITH STAND OFF KEEPER.
   G. WHERE DUCTS PASS THROUGH FIRE OR SMOKE RATED BUILDING COMPONENTS, THE EXTERIOR OF THE DUCTS SHALL BE SEALED AND FRAMED IN ACCORDANCE WITH A UL RATED SYSTEM. A FIRE AND/OR SMOKE DAMPER SHALL BE INSTALLED IN THE DUCT SUCH THAT THE FIRE AND/OR SMOKE RATING OF THE WALL IS STRICTLY MAINTAINED.
   H. ACCESS DOORS SHALL BE FURNISHED AND INSTALLED AT ALL SMOKE/FIRE DAMPERS AND CONTROL DAMPERS.
   I. FIRE DAMPERS SHALL BE PROVIDED AT DUCT PENETRATIONS TO ALL FIRE RATED WALLS. FIRE DAMPERS SHALL BE UL 555 LISTED. DAMPER RATINGS SHALL BE SELECTED BY THE CONTRACTOR BASED ON RATINGS OF THE STRUCTURE THEY ARE TO BE INSTALLED IN TO RETAIN THE INTEGRITY OF THE RATED STRUCTURE. UNLESS NOTED OTHERWISE FIRE DAMPERS SHALL BE OF THE OF THE TYPE B CURTAIN TYPE AND SHALL HAVE FUSIBLE LINKS RATED FOR 165 DEGREES F. REVIEW ARCH DWGS FOR LOCATION OF FIRE WALLS AND CEILINGS.

7. EQUIPMENT LABELS:
   A. ALL EQUIPMENT SHALL HAVE A PERMANENTLY AFFIXED LABEL FROM THE MANUFACTURER. LABEL SHALL INCLUDE THE EQUIPMENT'S ELECTRICAL REQUIREMENTS, MANUFACTURER AND MODEL NUMBER OF THE EQUIPMENT, HEATING FUEL INPUT, BTU RATING, AND A SEAL INDICATING APPROVAL BY AN APPROVED TESTING AGENCY.
   B. CONTROLS SHALL INCLUDE THE FOLLOWING:
      –THERMOSTAT – PROGRAMABLE THERMOSTATS SHALL HAVE A MINIMUM DEAD BAND OF 3 DEGREES BETWEEN HEATING AND COOLING FUNCTIONS.
   C. INSTALL THE OUTDOOR UNIT ON PROPER FOUNDATION AS SHOWN ON THE DRAWINGS AND IN LOCATION THAT WILL NOT RESTRICT THE AIR ENTRY OR DISCHARGE FROM THE UNIT.
   D. AIR COOLED CONDENSING UNIT AND FURNACE SHALL BE THE MAKE AND MODEL NUMBER SHOWN ON THE DRAWINGS OR EQUIVALENT MODELS.

8. START–UP:
   A. EQUIPMENT SHALL BE CYCLED THROUGH ALL HEATING, COOLING, AND VENTILATION CYCLES TO INSURE PROPER OPERATION OF ALL COMPONENTS AND CONTROLS PRIOR TO TEST AND BALANCE.

9. TEST AND BALANCE:
   A. THE FINAL SUPPLY, EXHAUST, AND RETURN AIR FLOWS SHALL BE TESTED AND BALANCED IN ACCORDANCE WITH THE PROCEDURES OF THE NEBB OR AABC. THIS WORK TO BE PERFORMED BY CERTIFIED NEBB OR AABC CONTRACTOR
   B. RECORD VOLTAGE, AMPERAGE, AND TOTAL AIR FLOW ON ALL AIR CONDITIONING AND HEATING EQUIPMENT. ADJUST FAN SPEED AS REQUIRED TO MEET MINIMUM AIR FLOW REQUIREMENTS.
   C. DUCT LEAKAGE TEST MAY BE REQUIRED BY LOCAL CODE OFFICIAL. CHECK ALL LOCAL CODE REQUIREMENTS.
   D. CERTIFIED TEST AND BALANCE OF THE COMPLETE SYSTEM(S) ARE REQUIRED TO BE SUBMITTED TO THE BUILDING OFFICIAL PRIOR TO FINAL INSPECTION.

SPLIT SYSTEM HEAT PUMP SCHEDULE

MARK	MFG. OR EQUAL	AIR HANDLER MODEL #	COOL CAPACITY (BTUH)	HEAT CAPACITY @27F	CFM	O.A. CFM	HP	SP	INDOOR VOLTAGE PHASE	AUX HEAT CAPACITY	AUX HEAT CAPACITY BTUH	MCA	MAX. FUSE	UNIT WEIGHT	MARK	OUT DOOR UNIT	OUTDOOR VOLTAGE PHASE	MCA	MAX. FUSE	SEER	COMMENTS	HSPF	UNIT WEIGHT
FC–1	CARRIER	FY4ANF030	30,000	30,000	1000	--	--	--	208–230/1/60	8.0KW	25,100	38.0/41.9	40/45	120	HP–1	25HBB330	208/230/1/60	21.4	30	13	1,2,3,4,5,6	8.3	203
FC–2	CARRIER	FY4ANF036	36,000	36,000	1200	--	--	--	208–230/1/60	10.0KW	34,170	48.3/53.0	50/60	144	HP–2	25HBB336	208/230/1/60	22.2	35	13	1,2,3,4,5,6	8.3	207
FC–3,4	CARRIER	FY4ANF048	48,000	48,000	1600	--	--	--	208–230/1/60	15.0KW	47,100	73.1/80.3	80/80	170	HP–3,4	25HBB348	208/230/1/60	35.4	50	13	1,2,3,4,5,6	8.3	263

COMMENTS KEY: 1. FURNISH WITH FILTER RACK.
2. PROGRAMMABLE AUTOMATIC CHANGEOVER ELECTRINIC THERMOSTAT
3. COIL GUARDS
4. CONCRETE PAD
5. COORDINATE FUSE SIZE REQUIREMENTS OF EQUIP DELIVERED TO JOBSITE WITH ELECTRICAL CONTRACTOR.
6. EQUIP IS TO MEET OR EXCEDE THE IEC 2006 EFF REQUIREMENTS.

GRILLE AND DIFFUSER SCHEDULE

SYMBOL	DUTY	CFM	MFR. OR EQUAL	MODEL NO.	DIFFUSER NECK SIZE	GRILLE FACE SIZE	DISCHARGE PATTERN	SLOT LENGTH(FT)	REMARKS
A	SUPPLY	SEE PLAN	METAL–AIRE	5700–6	SEE PLAN	24X24	4–WAY	--	1,2,3
B	RETURN	SEE PLAN	METAL–AIRE	CC5–6	22X22	24X24	--	--	2,3,4,5
C	SUPPLY	SEE PLAN	LINDAB	RGS	--	21X3	--	--	1,2,3
D	RETURN	SEE PLAN	METAL–AIRE	RHF	--	20X20	--	--	1,2,3
E	SUPPLY	SEE PLAN	METAL–AIRE	5500S–2	SEE PLAN	12X12	4–WAY	--	1,2,3
F	EXHAUST	SEE PLAN	METAL–AIRE	EP–CC5–1	SEE PLAN	12X12	--	--	

1. PROVIDE WITH OPPOSED BLADE DAMPER.
2. COLOR TO BE OFF WHITE
3. DIFFUSER NECK SIZE EQUALS RUNOUT SIZE.
4. CUBE CORE FILTER GRILLE. DO NOT INSTALL FILTERS.
5. FURNISH SQ TO RND ADAPTER.

MECHANICAL CODE ANALYSIS

SCOPE OF WORK: NEW CONSTRUCTION

PERMIT DATA:

POWER BOILER, INCINERATORS, &/OR FURNACES
NO. OF UNITS UP TO 200,000 BTU PER HOUR
NO. OF UNITS 200.00 BTU PER HOUR AND UP

UNIT, SPACE, WALL, DUCT HEATERS
NO. OF UNITS: UP TO 200,00 BTU PER HOUR 1
NO. OF UNITS: 200,00 BTU PER HOUR AND UP
NO. OF GAS APPLICANCES _____ TOTAL BTU'S
NO. OF GAS WATER HEATERS

HEAT PUMP UNIT OR A/C UNITS UP TO 5–TON 4

REFRIGERATION
NO. OF WALK IN COOLER, FREEZERS, 1–TON AND UP

ADDITIONAL TONS FOR ALL SYSTEMS OVER 5–TONS

ADDITIONAL EQUIPMENT
NO. OF RANGE HOODS, EXHAUST SYSTEMS, DRYERS:
INSTALLATION OF GAS PIPING: YES____ NO_X_ SIZING_____
INSTALLATION OR ALT. OF DUCTWORK ONLY: YES_____ NO_X_

APPLICABLE CODES

2021 IBC WITH SCBC ADMENDMENTS
2021 IMC WITH SCMC ADMENDMENTS
2021 IPC WITH SCPC ADMENDMENTS
2009 INTERNATIONAL ENERGY CODE IECC

SUPPORT OF PIPING

STEEL PIPE		SMOOTH WALL TUBING	
NOMINAL SIZE OF PIPE	SPACING OF SUPPORTS	NOMINAL SIZE OF PIPE	SPACING OF SUPPORTS
1/2"	6 FT	1/2"	4 FT
3/4" OR 1"	8 FT	5/8" OR 3/4"	6 FT
1–1/4" OR LARGER–(HORZ)	10 FT	7/8" OR 1" LARGER–(HORZ)	8 FT
1–1/4"OR LARGER–(VERT)	EVERY FLR LEVEL	1" OR LARGER (VERTICAL)	EVERY FLR LEVEL

TABLE 415.1 IMC

MECHANICAL NOTES

THIS DRAWING IS FOR CONCEPT AND PERMITTING PURPOSES
FIELD SUPERVISION OR COORDINATION OF THE INSTALLATION NOT INCLUDED.

DO NOT SCALE DRAWINGS. ROUGH FROM EQUIPMENT MANUFACTURE'S AND ARCHITECTURAL DRAWINGS.

DIMENSIONS NOTED ON PLANS ARE IN INCHES UNLESS OTHERWISE NOTED.

DUCT SIZES NOTED ON PLANS ARE INTERIOR DIMENSIONS. ANY CHANGES IN SIZE OR DIRECTION INCLUDING OFFSETS MUST MEET LATEST S.M.A.N.A. DESIGN STANDARDS.

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION WITH OTHER TRADES. ALL OFFSETS, SPECIAL FITTINGS, OPENINGS, FRAME WORK, BRACING, SUPPORTS, AND HARDWARE ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

MECHANICAL CONTRACTOR SHALL INSPECT ACTUAL BUILDING AND LOCATION BEFORE SUBMITTING BID. ANY PORTION OF THESE PERMIT DRAWINGS FOUND TO NOT WORK AS SHOWN SHALL BE NOTED IN RELATED BID AS ALTERNATES.

ANY CHANGES MADE BY THE OWNER SHALL BE COORDINATED THROUGH THE RESPONSIBLE DESIGN PROFESSIONAL.

1-ZONE DUCTLESS SPLIT SYSTEM HP

MARK	ONE INDOOR FAN COILS					
	MFG. OR EQUAL	AIR HANDLER MODEL #	ROOM COOL CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	MAX CFM	INDOOR VOLTAGE PHASE
MSFC–1	LG	LSN090HFV3	9,000	10,900	459	FROM ODU

ONE OUTDOOR HEAT PUMP UNIT

MARK	LG OUT DOOR UNIT OR EQUAL	OUTDOOR VOLTAGE PHASE	COOL CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	MCA	MAX. FUSE	HSPF	SEER	COMMENTS
MSHP–1	LSU090HFV3	208/230,60,1	9,000	10,900	10.0	25	9.0	17.0	

COMMENTS KEY:
1. SIZE FUSES / BREAKERS USING INFORMATION ON EQUIPMENT.
2. PROGRAMMABLE AUTOMATIC CHANGEOVER 7–DAY THERMOSTAT
3. FURNISH ALL INTERCONNECTING ACCESSORIES REQUIRED FOR OPERATION.

MIN. OUTSIDE AIR CALC.

CLASSIFICATION	SQ.FT.	PEOPLE PER 1000sf	PEOPLE	UNIT PEOPLE CFM	PEOPLE CFM	UNIT FLOOR CFM	FLOOR CFM	TOTAL CFM
FC–1 CONFERENCE ROOM	805	50	40	5	200	0.06	50	250
FC–2 BREAK/CONFERENCE	797	25	20	5	100	0.06	50	150
FC–3,4 SALES	2140	15	32	7.5	240	0.12	260	500

LOUVER SCHEDULE

SYMBOL	MFG	MODEL NO.	SIZE	CFM	DRV ARR.	ACT. MODEL	MATERIAL	LOCATION	COMMENTS
LVR–1	NAILOR	1605WD	18X12	250	N/A	N/A	ALUMINUM	O.A.	W/ BIRD SCREEN

FURNISH WITH INTEGRAL FLANGED FRAMES

FAN SCHEDULE

TAG	MANUFACTURER–MODEL OR EQUAL	CFM	SP	MOUNTING	ELECTRICAL			NOTES
EF–1	GREENHECK G–090–D	300	0.250	ROOF	120/1/60	1/6	HP	1
CF–1	BIGASSFAN PFX3–12	---	--	CEILING	208/1/60	1.5	HP	2 12FT DIA. 245 LBS

1 – FURNISH WITH ROOF CURB AND BACK DRAFT DAMPER
2 – FURNISH CEILING FAN WITH ALL CONTACTORS AND SWITCHES REQUIRED FOR OPERATION.

UNIT HEATER SCHEDULE

TAG	MANUFACTURER–MODEL OR EQUAL	CFM EA	EXT SP IN WTR	MOUNTING	ELECTRICAL			NOTES
					VOLTAGE	KW	AMPS	
EUH–1	Q–MARK MUH–10–8	650	--	HIGH WALL	208/3/60	10	28.8	

FURNISH WITH WALL MOUNTING BRACKET AND TWO STAGE THERMOSTAT
UNIT IS FIELD CONVERTABLE TO SINGLE OR THREE PHASE.
MIN INSTALLATION HEIGHT 8'–0"

PIPE SPECIFICATIONS

SERVICE DESIGNATION	DESCRIPTION	PIPE DESCRIPTION	INSULATION	VALVES
CD	CONDENSATE DRAIN 0 PSIG 45°F	PVC – ASTM D2665 PVC SCH 40 SOLVENT WELD PRESSURE PIPE AND FITTINGS WITH ASTM D2466 SOCKET TYPE CONNECTIONS. EXTERIOR (EXPOSED): CPVC SCH40 SOLVENT WELD	3/8" ARMAFLEX N/A	N/A
R	REFRIGERANT	ASTM–B–88 TYPE "L" CLEANED AND CAPPED IN ACCORDANCE WITH ASTM–B–280 COLOR CODED AND MARKED"ACR".FITTINGS SHALL BE BRASS FORGED OR WROUGHT COPPER MARKED "ACR".SOLDER, ASTM–B32, JOINTS SHALL BE HIGH TEMPERATURE(1100 DEG.F MIN.) SILVER SOLDER ALLOY	INTERIOR–SUCTION LINE 1" ARMAFLEX OR EQUAL EXTERIOR–SUCTION LINE 1" ARMAFLEX W/ TWO COATS OF ARMAFLEX FINISH	ANSI/ASME B31.5

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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

SOUTH CAROLINA REECE ENGINEERING No. C01041 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LABOR AND REGULATION PROFESSIONAL ENGINEER No. 9904 NATHANIEL REECE BURNETT

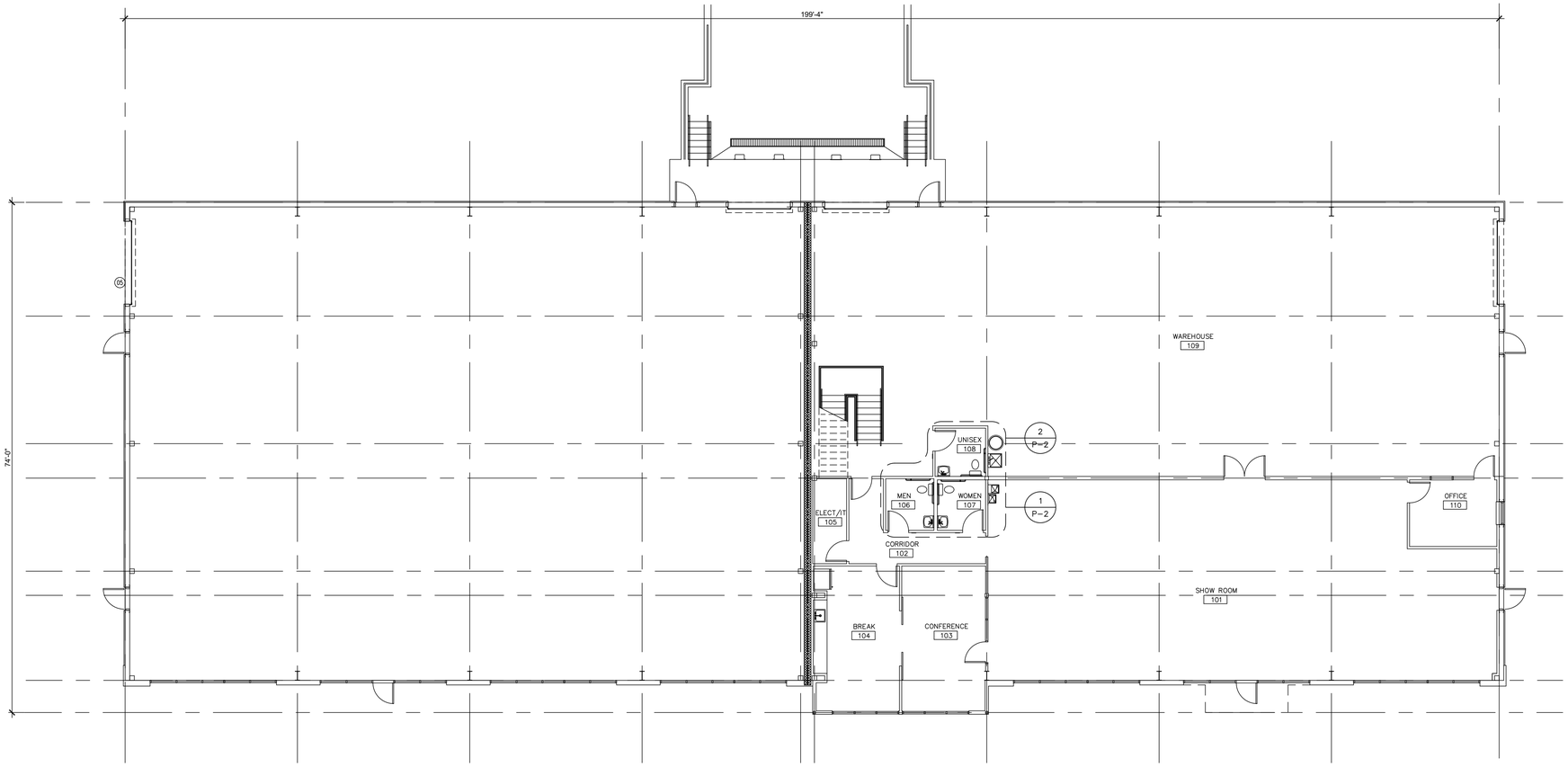
ISSUED FOR:
PERMITS:???????

REVISIONS

HVAC SCHEDULE

M-3

G1.6 PROJECT # 2434



A1 ### 1/8"=1'-0" FLOOR PLAN

g1.6 group LLC ARCHITECTS
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TOWN CENTER DRIVE
TAYLORS, SC 29687

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SOUTH CAROLINA REGISTERED No. 9904 NATHANIEL BURT REECE

09/16/24

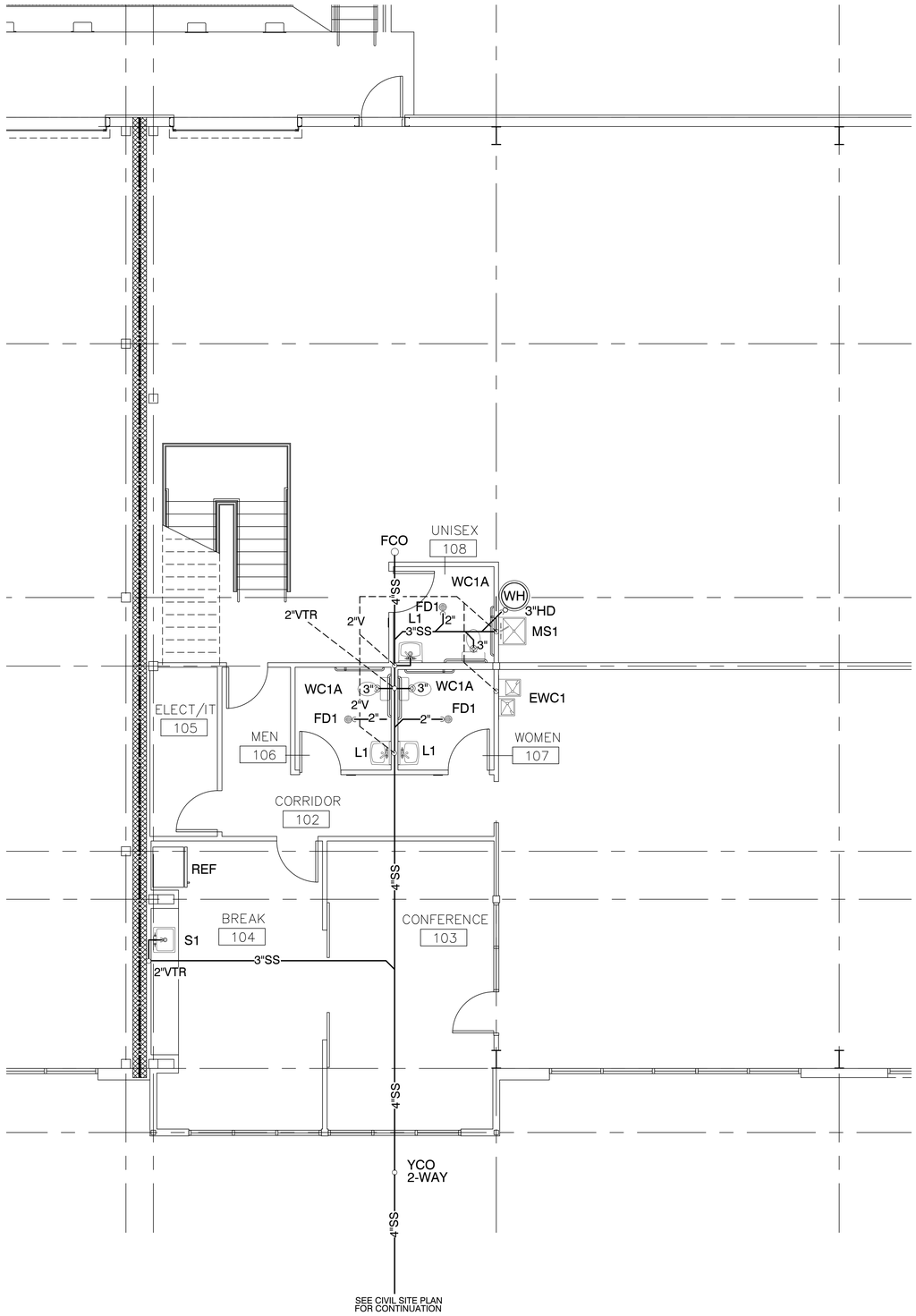
ISSUED FOR:
PERMITS:09/16/2024

REVISIONS

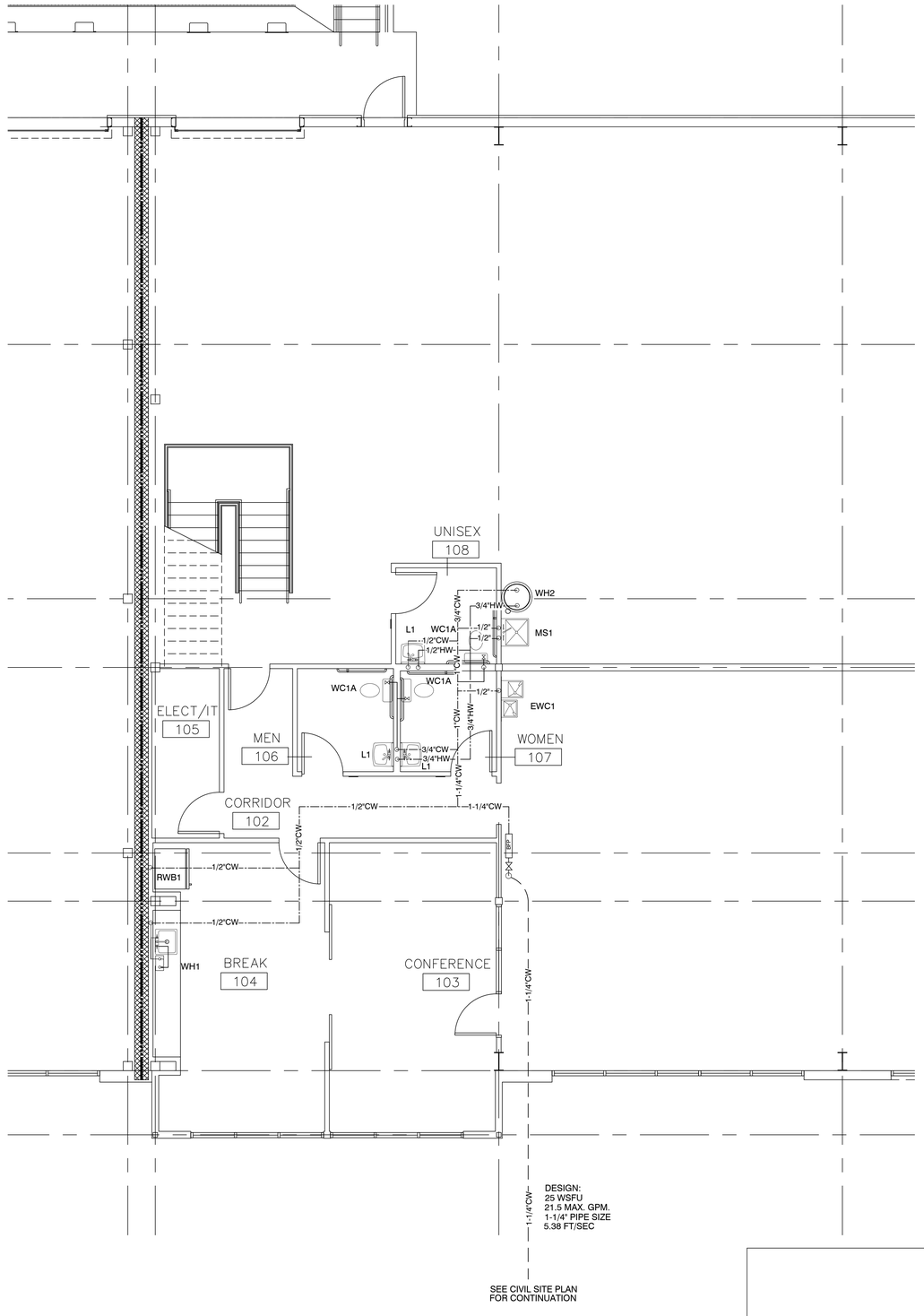
FLOOR PLAN

P-1

G1.6 PROJECT # 2434



A1 1/4"=1'-0" 2/P2 SANITARY WASTE PARTIAL FLOOR PLAN



A2 1/4"=1'-0" 1/P2 WATER SUPPLY PARTIAL FLOOR PLAN

g1.6 roup LLC ARCHITECTS
210 ALTAMONT ROAD
GREENVILLE, SC 29609
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TAYLORS, SC 29687

SOUTH CAROLINA REECE ENGINEERING No. C01041 CERTIFICATE OF AUTHORIZATION

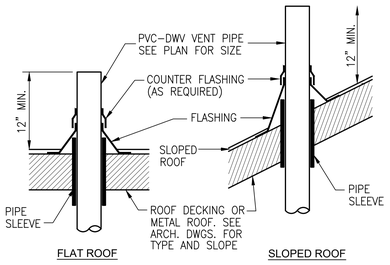
SOUTH CAROLINA REGISTERED No. 9904 PROFESSIONAL ENGINEER NATHANIEL BURT REECE 09/26/24

ISSUED FOR:
PERMITS:09/26/2024
REVISIONS

PLUMBING
FLOOR PLAN

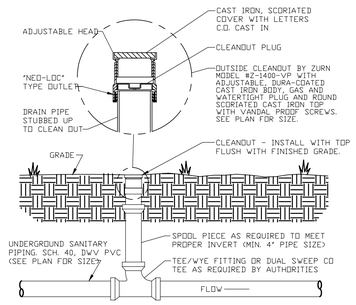
P-2

G1.6 PROJECT # 2434

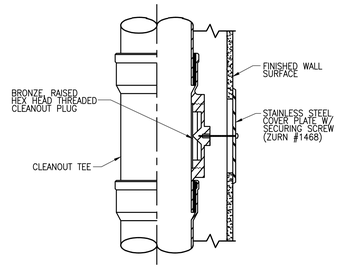


1. FLASHING MATERIAL AND THICKNESS TO BE AS RECOMMENDED BY MANUFACTURER TO SUIT ROOF TYPE AND FLASHING APPLICATION.
2. ALL ROOF PENETRATIONS SHALL BE FLASHED AND SEALED WATERTIGHT.
3. PAINT VENTS EXTENDING ABOVE ROOF WITH AN EPOXY BASED PAINT. COLOR TO MATCH ROOF.
4. USE EITHER FLAT ROOF OR SLOPED ROOF AS APPLICABLE.

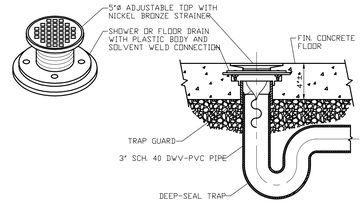
Typical Detail-Plumbing Vent Roof Detail
NO SCALE



Outside Cleanout Detail
NO SCALE



Wall Cleanout Detail
NO SCALE



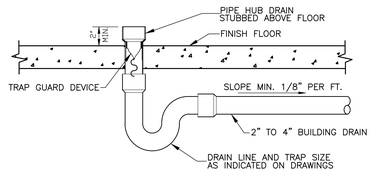
SEE FIXTURE SPECS FOR DESCRIPYION OF FLOOR DRAIN WITH "TRAP GUARD" DEVICE

Floor Drain with Trap Guard
NO SCALE

PLUMBING LEGEND

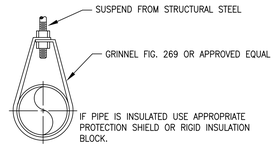
	SANITARY SEWER PIPING (BELOW SLAB/GRADE)		BALL VALVE
	SANITARY SEWER PIPING (OVERHEAD OR ABOVE SLAB)		GAS COCK
SD	STORM DRAIN PIPING (BELOW SLAB/GRADE)		BALANCING VALVE
SD	STORM DRAIN PIPING (OVERHEAD OR ABOVE SLAB)		INLINE PIPE UP
	COLD WATER		INLINE PIPE DOWN
	HOT WATER		PIPE UP
120°	120° HOT WATER LINE		PIPE UP TEE
REC	HOT WATER RETURN		PIPE DOWN
F	FIRE LINE		PIPE DOWN TEE
VTR	VENT LINE		FLOOR DRAIN
	VENT THRU ROOF	CO-1	CLEAN OUT IN FLOOR/GRADE
SS DS	SANITARY SEWER DOWNSPOUT (VERIFY LOCATION)		HYDRAULIC SHOCK ABSORBER WATER HAMMER ARRESTOR
2"V	2" VENT PIPE		BALL VALVE OR GATE
EFCO	EXISTING FLOOR CLEAN OUT		CONNECTION TO EXISTING UTILITY
CO	CLEAN OUT	CWD	DOMESTIC POTABLE COLD WATER
WCO	WALL CLEAN OUT	HWD	DOMESTIC POTABLE HOT WATER
YCO	YARD CLEAN OUT	WSFU	WATER SOURCE FIXTURE UNIT
WH1	WATER HEATER NO. 1	DFU	SS DRAINAGE FIXTURE UNIT
MS1	MOP SINK NO. 1	WC1	STANDARD WATER CLOSET NO.1
EWC1	ELECTRIC WATER COOLER NO.1	WC1A	ADA WATER CLOSET NO,1
S1	SINK NO.1	L1	LAVATORY NO.1
DW	DISH WASHER	UR1	URINAL NO.1
FS1	FLOOR SINK NO.1	PRV1	PRESSURE REDUCING VALVE NO.1
FD1	FLOOR DRAIN NO.1	BFP1	BACK FLOW PREVENTER NO.1
WMWB1	WASHING MACH WALL BOX NO.1	ET1	EXPANSION TANK NO.1
RWB1	REFRIGERATOR WALL BOX NO.1	HB1	HOSE BIBB NO.1
W	WASHING MACHINE	GR1	GREASE TRAP NO.1
D	DRYER		

NOIES: ALL DRAIN PIPING, WHERE EXPOSED, FROM FLOOR 10 10 FI AFF SHALL BE DUCILE IRON.

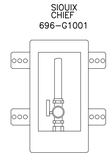


SEE FIXTURE SPECS FOOT NOTE FOR DESCRIPTION OF TRAP GUARD DEVICE

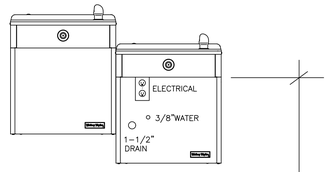
Hub Drain With "Trap Guard" Detail
NO SCALE



Hanger Detail - 1-1/2" and Smaller
NO SCALE



Ice Maker/Ref Wall Box
NO SCALE



Hc Water Cooler Detail
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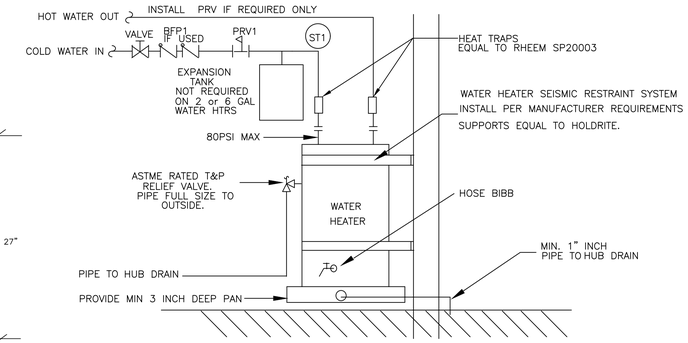

Typical Water Connection Detail
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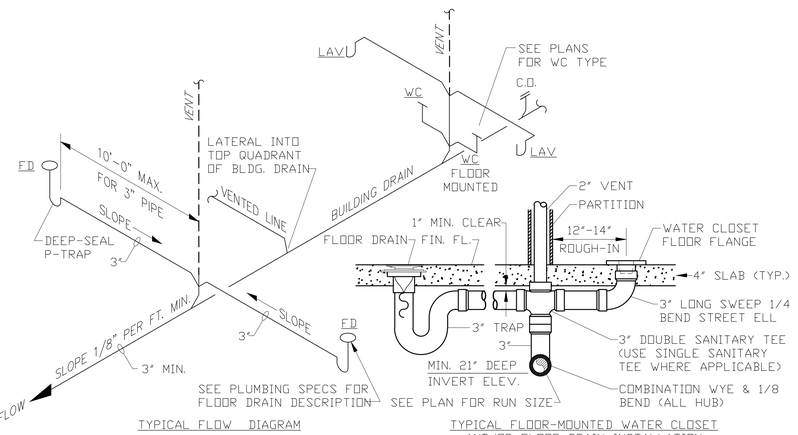

TYPICAL FLOW DIAGRAM

TYPICAL FLOOR-MOUNTED WATER CLOSET AND/OR FLOOR DRAIN INSTALLATION

NOTE: DOUBLE FIXTURE "BACK-TO-BACK" CONNECTION SHOWN. ADJUST FOR SINGLE INSTALLATION. THIS DETAIL IS APPLICABLE ONLY FOR THOSE FLOOR DRAIN PIPING CONNECTION(S) THAT ARE MADE DOWN STREAM OF A WATER CLOSET. FLOOR DRAIN WASTE PIPING UPSTREAM OF A WATER CLOSET MAY BE TIED DIRECTLY INTO A VENTED LINE WITHOUT VENTING AT THE TIE-IN CONNECTION WHEN INSTALLED PER CODE. COMPLY WITH ALL PROVISIONS OF THE STATE AND LOCAL PLUMBING CODES AS WELL AS WITH PROVISIONS OF THE LATEST, ADOPTED EDITION OF THE INTERNATIONAL OR STANDARD PLUMBING CODE. REFER TO THE AUTHORITIES HAVING JURISDICTION TO DETERMINE WHICH CODES AND STANDARDS ARE APPLICABLE.

(Typ) Connection of Fixture Drains into Building Drain System
NO SCALE

Watts Technical Information

Description	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

Air Side Pre-pressure	Water Side Volume at 150psi (gallons)			
(psi)	PLT-5	PLT-12	PLT-20	PLT-35
20	1.48	3.42	7.102	10.69
40	1.26	2.88	5.882	9.17
60	1.0	2.49	4.705	7.59
80	.8	1.85	4.009	6.07

Typical Expansion Tank Detail
NO SCALE

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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

SOUTH CAROLINA REECE ENGINEERING No. C01041 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 9904 NATHANIEL BURT REECE 09/26/24

ISSUED FOR:
PERMITS:09/26/2024
REVISIONS

PLUMBING DETAILS

P-3

G1.6 PROJECT # 2434

PLUMBING SPECIFICATIONS

1. THESE COMMON PROVISIONS APPLY TO ALL PLUMBING WORK COVERED IN THIS CONTRACT.
   A. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, MACHINERY, SUPERVISION, MANAGEMENT, AND ALL OTHER ITEMS NECESSARY FOR THE COMPLETE PLUMBING SYSTEM. THE ENTIRE PLUMBING SYSTEMS SHALL BE INSTALLED, STARTED, TESTED, ADJUSTED AND TURNED OVER TO THE OWNER IN PROPER OPERATING CONDITION.
   B. ALL LABOR, EQUIPMENT, MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE INTERNATIONAL AND LOCAL CODES.
   C. ALL FIXTURES AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. WHERE THIS MAY CONFLICT WITH CODE REQUIREMENTS THE CODES SHALL HAVE PRECEDENCE.
   D. THE CONTRACTOR PERFORMING THE WORK. CONCURRENTLY HOLD ALL REQUIRED LICENSES TO PERFORM THE WORK SHOWN AND SPECIFIED ON THESE DRAWINGS.

2. DIMENSIONS: DRAWINGS SHOULD BE INTERPRETED AS GENERAL LAYOUT AND ARRANGEMENT DRAWINGS. THE DRAWINGS ARE NOT INTENDED TO SHOW AND CANNOT SHOW COMPLETE OR PRECISE MEASUREMENTS AND DETAILS OF THE BUILDING AND INSTALLATION IN EVERY RESPECT, AND THEY DO NOT INCLUDE ALL DETAILS OF MANUFACTURED EQUIPMENT, CONSTRUCTION, PIPING, DUCTWORK, ETC.. MEASUREMENT FIGURES WRITTEN UPON THE DRAWINGS INDICATING DIMENSIONS SHALL BE USED INSTEAD OF SCALED MEASUREMENTS. NO SCALE MEASUREMENT TAKEN FROM A DRAWING SHALL BE RELIED UPON AS A DIMENSION FOR INSTALLATION PURPOSES. EXACT LOCATIONS AND MEASUREMENTS ARE TO BE DEFINED IN THE FIELD, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACCURACY AND USE IN CONSTRUCTION OF THE WORK.

3. INTERFERENCES: THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES IN ORDER TO ELIMINATE INTERFERENCES. HE SHALL EXAMINE IN ADVANCE THE LOCATION OF ELECTRICAL SYSTEMS, DUCTS, PIPING, STRUCTURES, CONDUITS, AND OTHER EQUIPMENT AND FACILITIES TO BE INSTALLED, AND PROPERLY COORDINATE THE INSTALLATION OF MECHANICAL WORK TO AVOID INTERFERENCES. THE ENGINEERS HAVE CONSIDERED EXISTING INTERFERENCES IN MAKING THE DRAWINGS, BUT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MODIFY, OFFSET, OR OTHERWISE ACCOMMODATE ALL EQUIPMENT TO THE STRUCTURE, UTILITIES, AND OTHER EQUIPMENT.

4. UTILITIES: UNLESS SPECIFICALLY NOTED OTHERWISE THE CONTRACTOR SHALL BE RESPONSIBLE FOR EVALUATING EXISTING UTILITIES. FIELD CHECK EXISTING SYSTEMS, BOTH SANITARY WASTE AND POTABLE WATER, FOR COMPLIANCE WITH THE SCOPE OF THIS WORK. DEFICIENCIES ARE TO BE BROUGHT TO THE OWNER'S ATTENTION BEFORE PURCHASING MATERIALS AND BEGINNING WORK. MEET WITH WATER TREATMENT AUTHORITIES BEFORE BEGINNING WORK. THEIR REQUIREMENTS MAY BE DIFFERENT THAN THE LOCAL IPC INSPECTORS.

5. SUBSTITUTIONS: THE MATERIALS, PRODUCTS, AND EQUIPMENT DESCRIBED IN THE DOCUMENTS ESTABLISH A STANDARD OF REQUIRED FUNCTION, DIMENSION, APPEARANCE, SERVICEABILITY, AVAILABILITY OF SPARE PARTS AND QUALITY TO BE MET BY ANY PROPOSED SUBSTITUTION. SUBSTITUTION OF EQUIPMENT, PRODUCTS, OR MATERIAL MUST BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THE SUBSTITUTION OF PRODUCTS, MATERIAL, OR EQUIPMENT WHICH REQUIRES REDESIGN OF ANY PORTION OF THE PACKAGE WILL BE PREPARED BY THE CONTRACTOR AT HIS EXPENSE AND APPROVED BY THE OWNER OR HIS REPRESENTATIVE.

6. SUBMITTALS: UNLESS SPECIFICALLY NOTED OTHERWISE THE CONTRACTOR SHALL PROVIDE SIX COPIES OF DETAIL CATALOG CUT SHEETS OF ALL MATERIAL AND EQUIPMENT HE IS PROVIDING AS SUBMITTAL DOCUMENTATION TO THE OWNER.
   A. THE CONTRACTOR SHALL PRESENT COMPLETE PERFORMANCE INFORMATION ON EACH PIECE OF EQUIPMENT.
   B. THE CONTRACTOR SHALL RECEIVE WRITTEN APPROVAL FROM THE OWNER OR HIS REPRESENTATIVE PRIOR TO INSTALLATION.

7. RECORD DRAWINGS: THE CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS ON THE JOB AND SHALL, AS CONSTRUCTION PROGRESSES, RECORD ANY CHANGES WHERE CONSTRUCTION IS DIFFERENT FROM DESIGN DOCUMENTS. AT THE TIME OF FINAL INSPECTION, ONE SET OF RECORD DRAWINGS IN ADDITION TO ONE SET OF APPROVED SUBMITTAL DOCUMENTS SHALL BE TURNED OVER TO THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST ASSOCIATED WITH THESE DOCUMENTS.

8. PIPING: PIPING MATERIALS SHALL BE IN ACCORDANCE WITH THE PIPE SERVICE TABLE THAT APPEARS ELSEWHERE IN THESE DOCUMENTS.
   A. ALL PIPE SHALL BE ADEQUATELY BRACED AND SUPPORTED. SUPPORT SPANS SHALL NOT EXCEED THOSE NOTED IN THE INTERNATIONAL PLUMBING CODE. IN ADDITION TO THE MAXIMUM ALLOWABLE SPACING BETWEEN SUPPORTS, HORIZONTAL PIPING SHALL BE SUPPORTED AT TERMINATION OF ALL HORIZONTAL RUNS OR BRANCHES, AND AT EACH CHANGE OF DIRECTION.
   B. ALL MATERIAL USED IN POTABLE WATER SUPPLY SHALL BE LISTED FOR SUCH APPLICATIONS BY THE LATEST INTERNATIONAL PLUMBING CODE
   C. UNDERGROUND PIPE SHALL BE LAID ON FIRM GROUND WITH TRENCH SLOPED IN ACCORDANCE WITH THE SPECIFICATIONS. ROCKS AND UNSTABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SAND TAMPED IN PLACE. UNDERGROUND STEEL PIPE SHALL HAVE A PROTECTIVE COAL-TAR EPOXY COATING APPLIED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF AWWA SPECIFICATIONS C203-86.
   D. DIELECTRIC UNIONS SHALL BE USED TO JOIN COPPER PIPE TO STEEL PIPE.
   E. SOLDERED/BRAZED POTABLE WATER PIPING SHALL BE JOINED WITH LEAD FREE 95-5 TIN ANTIMONY SOLDER.
   F. OPEN PIPE ENDS SHALL BE COVERED AND FREE OF DEBRIS DURING CONSTRUCTION.
   G. HORIZONTAL SANITARY SEWER PIPING INSTALLED IN THE BUILDING SHALL HAVE A MINIMUM SLOPE OF 1/8" PER LINEAR FOOT OF RUN.
   H. INSTALL WATER HAMMER ARRESTORS IN LOCATIONS RECOMMENDED BY ARRESTOR MANUFACTURER. SEE ARRESTOR INSTALLATION MANUAL.

9. PLUMBING:
   A. PLUMBING PIPING SHALL BE AS SPECIFIED IN PIPING SECTIONS OF THESE SPECIFICATIONS WHERE APPLICABLE, IN ACCORDANCE WITH THE PIPE SERVICE TABLE THAT APPEARS ELSEWHERE IN THESE DOCUMENTS, AND SHALL BE IN ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES.
   B. PLUMBING FIXTURES SHALL BE PROVIDED AS SPECIFIED IN THE PLUMBING FIXTURE TABLE WHICH APPEARS ELSEWHERE IN THESE DOCUMENTS. ALL PLUMBING FIXTURES SHALL BE NEATLY CALKED WITH SILICONE OR MILDEW RESISTANT ACRYLIC LATEX CAULKING COMPOUND WHERE THE FIXTURE MEETS THE WALL. FIXTURE LOCATIONS SHOWN ON THE PLUMBING DRAWINGS ARE APPROXIMATE; SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.
   C. WHERE PIPES PASS THROUGH FIRE RATED WALLS, THE PIPE ANNULUS SHALL BE SEALED WITH A UL RATED FIRE STOPPING MATERIAL. THE MATERIAL SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS BASED ON PIPE AND WALL CONSTRUCTION MATERIALS. ESCUTCHEON PLATES SHALL BE INSTALLED AT THE PENETRATION OF ALL FINISHED WALLS.
   D. ALL LINES SHALL BE TESTED IN ACCORDANCE WITH THE APPLICABLE CODES.
   E. THE POTABLE WATER SYSTEM SHALL BE DISINFECTED AND FLUSHED IN ACCORDANCE WITH THE IPC OR OTHER GOVERNING PLUMBING CODE, AND AWWA STANDARDS, PRIOR TO BEING TURNED OVER TO THE OWNER. PERFORM THIRD PARTY BACTERIOLOGICAL TEST SUBMIT TEST RESULTS TO BUILDING OFFICIAL PRIOR TO FINAL INSPECTION.
   F. PVC PIPING SHALL NOT BE INSTALLED IN ANY AREA USED AS A SUPPLY OR RETURN AIR PLENUM. NO-HUB DUCTILE IRON PIPE SHALL BE USED FOR SANITARY SEWER AND VENT PIPE IN PLENUM AREAS. (SEE PIPE SERVICE TABLE.)

10. INSULATION: PIPE AND SHALL BE INSULATED IN ACCORDANCE WITH THE PIPE SERVICE TABLE THAT APPEARS ELSEWHERE ON THESE DOCUMENTS.
    A. INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPMENT RATING OF 50 OR LESS IN ACCORDANCE WITH UL 723.
    B. FIBERGLASS PIPE INSULATION SHALL BE EQUAL TO CERTAINTEED SNAP ON ASJ/SSL.
    C. FIBERGLASS INSULATION OF PIPE FITTINGS SHALL BE INSULATED WITH MOLDED FIBERGLASS FITTINGS WITH WHITE PVC JACKET.
    D. INSULATED PIPE SHALL BE PROTECTED FROM DAMAGE OR COMPRESSION FROM HANGERS AT THE POINT OF SUPPORT USING HALF SLEEVE SHIELDS EQUAL TO GRINNEL FIG. 167.

11. START-UP
    A ALL NEW PIPING SHALL BE THOROUGHLY CHECKED FOR LEAKS IN ACCORDANCE WITH CODE REQUIREMENTS AND IN NO CASE AT LESS THAN NORMAL OPERATING PRESSURE. ALL LEAKS SHALL BE REPAIRED PRIOR TO PUTTING THE PIPING IN SERVICE.

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE TYPE	MANUFACTURER	MODEL #	DESCRIPTION
WC1A hc	WATER CLOSET	KOHLER	K-3989	"HIGHLINE" ELONGATED 18" SIPHON JET TOILET, 1.6 GPF ONLY OPEN FRONT SEAT W/SELF SUSTAINING CHECK HINGE ANGLE SUPPLY W/LOOSE KEY STOP WASTE 4", VENT 2", CW 1/2"
L1	LAVATORY - HC FAUCET DRAIN TRAP SUPPLIES CARRIER INSULATION KIT CONNECTION SIZES	KOHLER	K-2032	"GREENWICH" VITREOUS CHINA, WALL HUNG, 4" CENTERS CHROME FAUCET W/BLADE HANDLES, T&S BRASS B-0890 OFFSET, GRID STRAINER W/ 1-1/4" TAILPIECE 1-1/4" CAST BRASS P-TRAP W/C.O. PLUG ANGLE SUPPLIES W/LOOSE KEY STOPS CONCEALED ARM SUPPORT HANDI-GUARD, MOLDED CLOSED CELL VINYL INSULATION
WH1,2	WTR. HEATER	RHEEM	RTE9	TANKLESS WATER HEATER 1.5 GAL PER MIN 240VOLT; 38 AMP; 9KW
WH1	WTR. HEATER	RHEEM	PROE20	20 GALLON HOT WATER HEATER 90PH RECOVERY @ 90 DEG RISE; EF .95 FACTORY INSTALLED SAFETY VALVE(T&P VALVE) 120V-1-60; 16.7 AMPS; 2000 WATTS
S1	SINK FAUCET DRAIN TRAP SUPPLIES CONNECTION SIZES	ELKAY ELKAY	EFRU311610 LK99	SINGLE COMPART, STAINLESS STEEL, UNDERMOUNT CHROME GOOSENECK FAUCET W/BLADE HANDLES STANDARD DUO STRAINER W/1-1/2" TAILPIECE 1-1/2" CAST BRASS P-TRAP W/C.O. PLUG ANGLE SUPPLIES W/LOOSE KEY STOPS WASTE 1-1/2" VENT 1-1/4" H & CW 1/2"
EWC1	ELEC. WTR. COOLER-HC	ELKAY	EZSTL8LC	BI-LEVEL BARRIER FREE WALL HUNG COOLER, 1/5 HP, 115 VOLT 1-1/2" CAST BRASS P-TRAP W/C.O. PLUG ANGLE SUPPLIES W/LOOSE KEY STOPS FLOOR MOUNTED SUPPORT WASTE 1-1/4" VENT 1-1/4" CW 1/2" WATER COOLER MUST MEET OR EXCEED ANSI/NSF 61
MS1	MOP SINK FAUCET TRAP CONNECTION SIZES	FIAT	MSB 2424	MOLDED-STONE MOP SERVICE BASIN FAUCET W/VACUUM BREAKER, LOOSE KEY STOPS, HOSE PROVIDE WITH 2" DEEP SEAL TRAP. WASTE 2", VENT 1-1/2", H & CW 1/2"
HB1	HOSE BIBB CONNECTION SIZE	ZURN	Z-1321	AUTO DRAINING, FREEZELESS HYDRANT W/VACUUM BREAKER BACKFLOW PREVENTER CW 3/4"
HB2	HOSE BIBB CONNECTION SIZE	AMERICAN VALVE	M76QT	FULL PORT COMMERCIAL BALL VALVE TYPE. CW 3/4"
ST1	HAMMER ARRESTOR	SIOUX CHIEF	652-A OR EQ.	WATER HAMMER ARRESTORS SHALL BE SIOUX CHIEF HYDRARESTER 652-A OR EQUAL. INSTALL AT ALL LOCATIONS SPECIFIED BY MFG.
FD1	FLOOR DRAIN TRAP GUARD CONNECTION SIZES	ZURN	FD2210-PV2	FLOOR DRAIN W/5"NICKEL BRONZE STRAINER OATEY 43747 TRAP GUARD OR EQUAL 2" DWV
RWB1	ICE MAKER WALL BOX	SIOUIX CHIEF	696-G1010XF	MOUNTING HEIGHT 48" AFF OR FIELD DETERMINED.
ET1	EXPANSION TANK	WATTS	PLT-5	3.5 GAL THERMAL EXPANSION TANK WITH AIR CHARGING VALVE.
FCO	CLEANOUT	ZURN	ZN-1400	INTERIOR FLOOR
WCO	CLEANOUT	ZURN	ZN-1446	INTERIOR WALL W/ROUND ACCESS COVER
YCO	CLEANOUT	ZURN	Z-1400	EXTERIOR GRADE
PRV1	PRESS REDUCING VALVE IF REQUIRED	WILKINS	500YSBR	PRESSURE REDUCING VALVE-IF REQUIRED. 80 PSI MAX OUTLET PRESSURE SEE DRAWINGS FOR SIZE
BFP1	BACKFLOW PREVENTER	APOLLO OR WILKINS	4ALF207A2F SERIES 975-XLS	REDUCED PRESSURE BACKFLOW PREVENTER SEE DRAWINGS FOR SIZE

NOTE
ABOVE LISTED FIXTURES ARE FOR REFERENCE ONLY, USE ANY EQUAL SUBSTITUTE APPROVED BY OWNER.
INSTALL OATEY 43747(3"TRAP SEAL) OATEY 43745(2" TRAP SEAL) ON HUB DRAINS AND FLOOR DRAINS.
ALL MATERIALS LISTED ABOVE ARE CODE APPROVED MATERIALS. OWNER TO SELECT TYPE.
INSTALL WATER HAMMER ARRESTORS AS PER MFG INSTALLATION INSTRUCTIONS THAT COME WITH ARRESTOR.
PROVIDE ANTI-SCALD DEVICES ON ALL HAND SINKS USED BY PUBLIC.

PLUMBING NOTES

THIS DRAWING IS FOR PERMITTING PURPOSES ONLY AND DOES NOT INCLUDE ANY FIELD SUPERVISION OR COORDINATION OF THE INSTALLATION.

DO NOT SCALE DRAWINGS. ROUGH FROM EQUIPMENT MANUFACTURE'S AND ARCHITECTURAL DRAWINGS.

DIMENSIONS NOTED ON PLANS ARE IN INCHES UNLESS OTHERWISE NOTED.

PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION WITH OTHER TRADES. ALL OFFSETS, SPECIAL FITTINGS, OPENINGS, FRAME WORK, BRACING, SUPPORTS, AND HARDWARE ARE THE RESPONSILITY OF THE PLUMBING CONTRACTOR. THIS INCLUDES DIMENTIONAL LOCATIONS REQUIRED FOR INSTALLATION.

PLUMBING CONTRACTOR SHALL INSPECT ACTUAL BUILDING AND LOCATION BEFORE SUBMITTING BID. ANY PORTION OF THESE PERMIT DRAWINGS FOUND TO NOT WORK AS SHOWN SHALL BE NOTED IN RELATED BID AS ALTERNATES.

ANY CHANGES MADE BY THE OWNER SHALL BE COORDINATED THROUGH THE RESPONSIBLE DESIGN PROFESSIONAL.
REFER TO CIVIL SITE PLANS FOR PIPING 5 FT BEYOND BLDG PERIMETER

APPLICABLE CODES

2021 IBC WITH SCBC ADMENDMENTS
2021 IMC WITH SCMC ADMENDMENTS
2021 IPC WITH SCPC ADMENDMENTS
2009 INTERNATIONAL ENERGY CODE IECC

PLUMBING CODE ANALYSIS

SCOPE OF WORK:		ADDITION
PERMIT DATA:		
NUMBER OF PLUMBING FIXTURES:		13
SEPTIC:	NEW: ____ EXISTING:	
SEWER:	NEW: ____ EXISTING:	X
LENGTH IN FEET OF WASTE PIPING: (permitting underground only, or repairs)		
LENGTH IN FEET OF STORM DRAIN: (includes leaders and down spouts)		

PLUMBING FIXTURE DATA		QUANITY
WATER CLOSETS(4)	M: 1 F: 1	Unisex: 1
LAVATORIES(1)	M: 1 F: 1	Unisex: 1
URINALS(4)		
SERVICE SINKS(2)		1
SINKS(2)		1
DRINKING FOUNTAINS(0.5)		1
SHOWERS(2)		
DISH WASHER(2)		
WASHING MACHINE(2)		
FLOOR/HUB DRAINS(2)		3
WATER HEATERS		1
TOTAL DRAINAGE FIXTURE UNITS IPC TABLE 709.1		25.5

PIPE SERVICE TABLE

SERVICE DESIGNATION	DESCRIPTION	PIPE DESCRIPTION	INSULATION	VALVES
V SS	VENT, SANITARY SEWER 0 PSIG 70°F	PVC - ASTM D2665 PVC SCH 40 SOLVENT WELD DWV PIPE AND FITTINGS WITH ASTM D2466 SOCKET TYPE CONNECTIONS.	N/A	N/A
CD	CONDENSATE DRAIN 0 PSIG 45°F	PVC - ASTM D2665 PVC SCH 40 SOLVENT WELD PRESSURE PIPE AND FITTINGS WITH ASTM D2466 SOCKET TYPE CONNECTIONS. EXTERIOR (EXPOSED): CPVC SCH40 SOLVENT WELD	3/8" ARMAFLEX N/A	N/A
CW	COLD POTABLE WATER 20-100 PSIG 50-70°F ABOVE SLAB	COPPER - ASTM B88 TYPE L HARD DRAWN COPPER TUBING WITH WROT COPPER SOLDER TYPE FITTINGS. FLUSH AND CLEAN IN ACCORDANCE WITH AWWA RECOMMENDATIONS.	1/2" FIBERGLASS W/ALL SERVICE JACKET ABOVE GRADE	MSS-SP-80-87 125 LB BRONZE GATE
		BLUE RIGID PEX PIPING PEX VALVES AND FITTINGS TYPE A	1/2"FIBERGLASS OR 1/2" ARMAFLEX WITH 0.27 RESISTANCE.	PEX LEAD FREE VALVES
		FlowGuard Gold CPVC Pipe and Fittings ASTM D 2846 and ASTM F 493	1/2"FIBERGLASS OR 1/2" ARMAFLEX WITH 0.27 RESISTANCE.	
HW	HOT POTABLE WATER 20-100 PSIG 20-140°F ABOVE SLAB NOTE	COPPER - ASTM B88 TYPE L HARD DRAWN COPPER TUBING WITH WROT COPPER SOLDER TYPE FITTINGS. FLUSH AND CLEAN IN ACCORDANCE WITH AWWA RECOMMENDATIONS.	1/2" FIBERGLASS W/ALL SERVICE JACKET ABOVE GRADE	MSS-SP-80-87 125 LB BRONZE GATE
		RED RIGID PEX PIPING PEX VALVES AND FITTINGS TYPE A	1/2"FIBERGLASS OR 1/2" ARMAFLEX WITH 0.27 RESISTANCE.	PEX LEAD FREE VALVES
		FlowGuard Gold CPVC Pipe and Fittings ASTM D 2846 and ASTM F 493	1/2"FIBERGLASS OR 1/2" ARMAFLEX WITH 0.27 RESISTANCE.	

NOTE: DO NOT USE ROLLED OR COILED PIPE ABOVE SLAB.
PEX OR TYPE-K COPPER BELOW SLAB WITHOUT JOINTS
PIPING THAT CONVEYS 60F TO 105F FLUID ARE NOT REQUIRED BY IECC TO BE INSULATED.

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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

SOUTH CAROLINA REECE ENGINEERING No. C01041 CERTIFICATE OF AUTHORIZATION

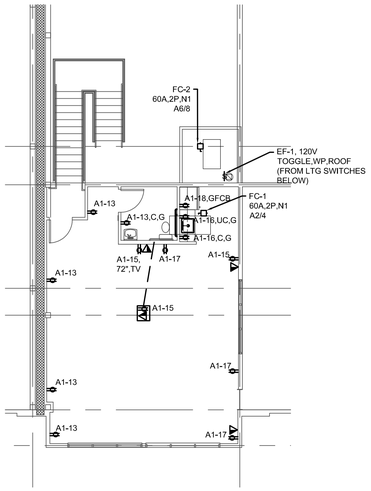
SOUTH CAROLINA REGISTERED No. 9904 PROFESSIONAL ENGINEER NATHANIEL BURT REECE 09/26/24

ISSUED FOR:
PERMITS:09/26/2024
REVISIONS

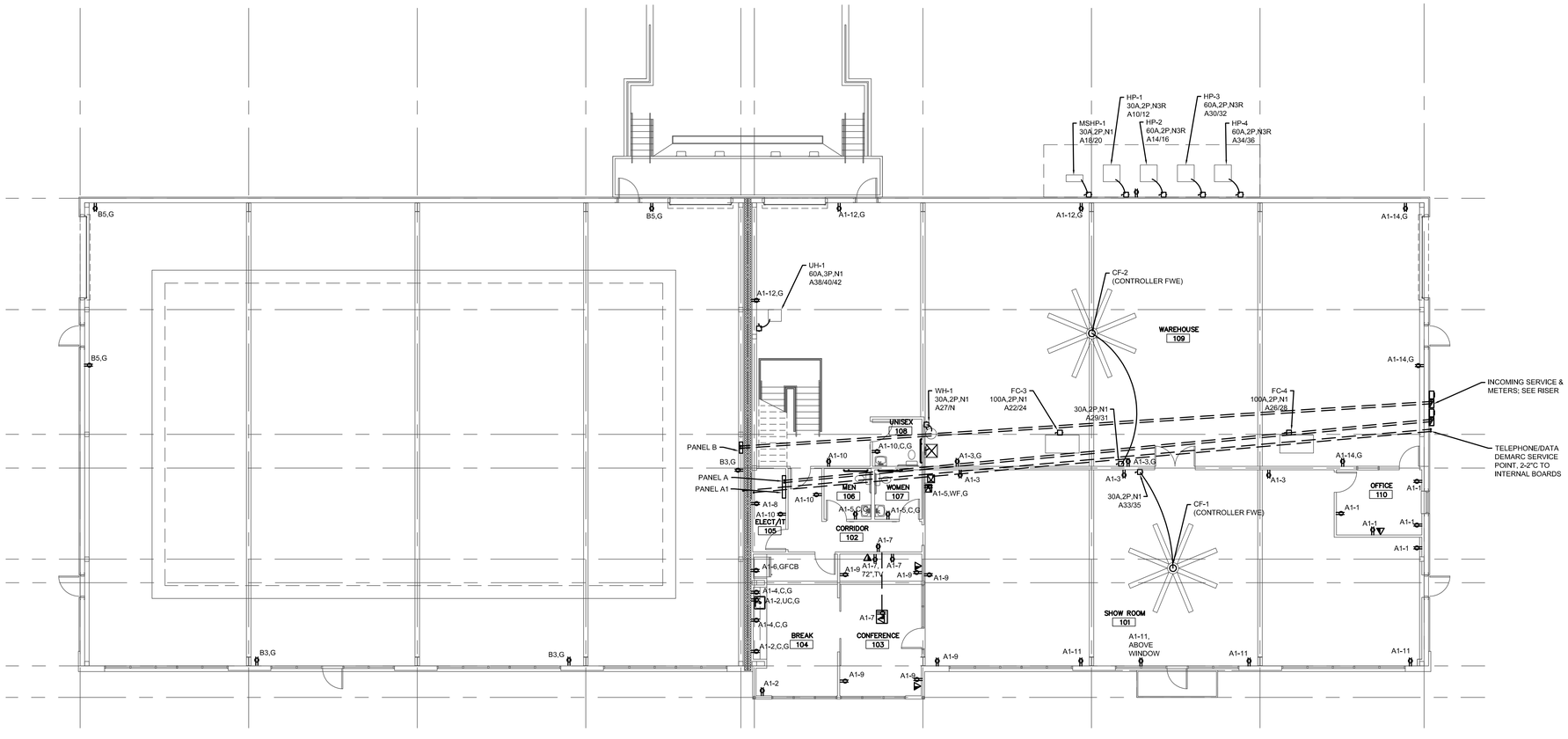
PLUMBING SCHEDULES

P-4

G1.6 PROJECT # 2434



2 1/8"=1'-0" POWER & SYSTEMS PLAN – MEZZANINE



1 1/8"=1'-0" POWER & SYSTEMS PLAN

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BIRCH CONSULTING SERVICES, LLC
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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
Kyle Kendall Birch
NO. 18298
10/15/24
KYLE KENDALL BIRCH

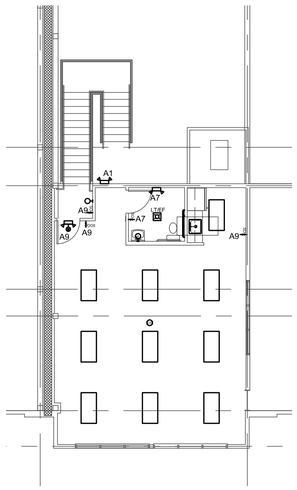
SOUTH CAROLINA
BIRCH CONSULTING SERVICES, LLC
NO. 3823
CERTIFICATE OF AUTHORIZATION

ISSUED FOR:
PERMITS
REVISIONS

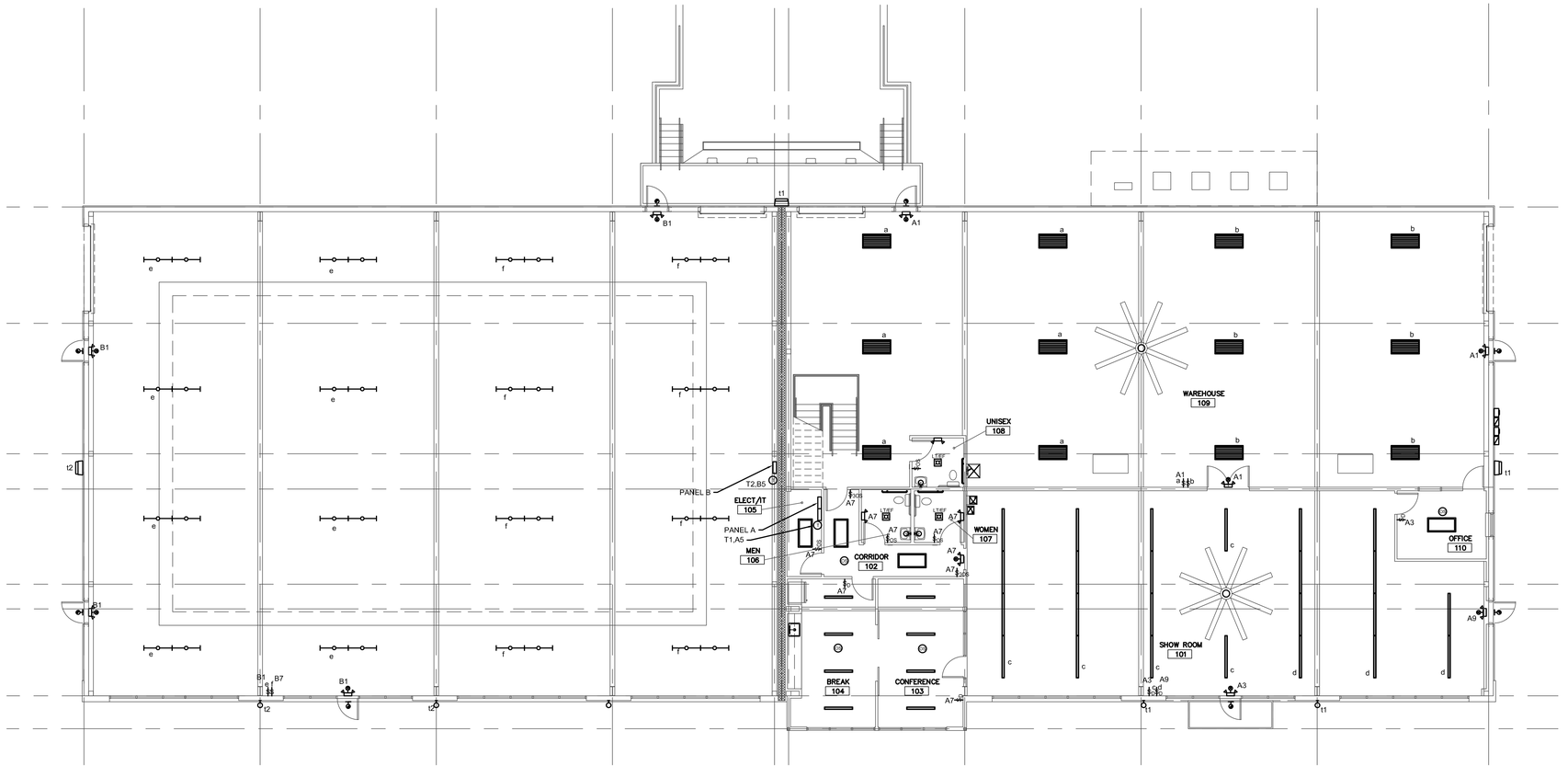
POWER &
SYSTEMS PLANS

E-1

G1.6 PROJECT # 2434



2 1/8"=1'-0" LIGHTING PLAN – MEZZANINE



1 1/8"=1'-0" LIGHTING PLAN

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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

SOUTH CAROLINA REGISTERED ARCHITECT RANDALL KYLE BIRCH NO. 18298 — Randall K Birch 10/15/24

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION BIRCH CONSULTING SERVICES, LLC NO. 3823

ISSUED FOR:
PERMITS
REVISIONS

LIGHTING PLANS

E-2

G1.6 PROJECT # 2434

PANELBOARD SCHEDULE A1

208Y/120V VOLTS 3 ø 4 W

100 AMP MAINS: ☒ LUGS ☐ BREAKER 100 AMPS.

ITEM	WIRE SIZE	AMP RATING	P	L	CIR. NO.	PHASE A.	PHASE B.	LOADING (KVA) C.	CIR. NO.	P	L	AMP RATING	WIRE SIZE	ITEM
RECEPTS	2#12,#12G	20	1		1	0.5	0.5		2	1		20	2#12,#12G	RECEPTS
RECEPTS	2#12,#12G	20	1		3		0.5	0.5	4	1		20	2#12,#12G	RECEPTS
RECEPTS	2#12,#12G	20	1		5			0.5	0.5	6	1	20-G	2#12,#12G	RECEPTS -FRIDGE
RECEPTS	2#12,#12G	20	1		7	0.5	0.5		8	1		20	2#12,#12G	RECEPTS
RECEPTS	2#12,#12G	20	1		9			0.5	10	1		20	2#12,#12G	RECEPTS -WH
RECEPTS	2#12,#12G	20	1		11			0.5	0.5	12	1	20	2#12,#12G	RECEPTS -WH
RECEPTS -2ND	2#12,#12G	20	1		13	0.5	0.5		14	1		20	2#12,#12G	RECEPTS -WH
RECEPTS -2ND	2#12,#12G	20	1		15		0.5	0.5	16	1		20	2#12,#12G	RECEPTS-2ND
RECEPTS -2ND	2#12,#12G	20	1		17			0.5	0.5	18	1	20-G	2#12,#12G	RECEPTS -FRIDGE
		20	1		19					20	1	20		
		20	1		21					22	1	20		
		20	1		23					24	1	20		
		20	1		25					26	1	20		
		20	1		27					28	1	20		
		20	1		29					30	1	20		
			1		31					32	1			
			1		33					34	1			
			1		35					36	1			
			1		37					38	1			
			1		39					40	1			
			1		41					42	1			
						1.5	1.5	1.5	1.5	1.5	1.5			
						3	3	3						

*-G" INDICATES GFI TYPE CIRCUIT BREAKER
"ST" INDICATES SHUNIT TRIP

TOTAL CONN. LOAD 9 KVA

INTEGRATED EQUIPMENT RATING 10,000 AMPS RMS. SYM.

PANELBOARD SCHEDULE A

208Y/120V VOLTS 3 ø 4 W

400 AMP MAINS: ☒ LUGS ☐ BREAKER 400 AMPS.

ITEM	WIRE SIZE	AMP RATING	P	L	CIR. NO.	PHASE A.	PHASE B.	LOADING (KVA) C.	CIR. NO.	P	L	AMP RATING	WIRE SIZE	ITEM
LTG-WAREHOUSE	2#12,#12G	20	1		1	1.6	4.5		2	2		40	2#6,#10G	FC-1
LTG	2#12,#12G	20	1		3		0.9	4.5	4					
LTG-EXTERNAL	2#12,#12G	20	1		5			0.7	5.5	6	2	50	2#6,#10G	FC-2
LTG-OFFICE	2#12,#12G	20	1		7	0.9	5.5		8					
LTG	2#12,#12G	20	1		9		0.9	2.5	10	2	30	2#10,#10G	HP-1	
		20	1		11			2.5	12					
		20	1		13		2.5		14	2	35	2#8,#10G	HP-2	
		20	1		15			2.5	16					
		20	1		17			1	18	2	25	2#10,#10G	MSHP-1	
		20	1		19	0.5	1		20					
		20	1		21		0.5	8.5	22	2	80	2#2,#8G	FC-3	
		20	1		23			8.5	24					
		20	1		25		8.5		26	2	80	2#2,#8G	FC-4	
WH-1	2#10,#10G	30	1		27		2	8.5	28					
CF-2	2#10,#10G	30	2		29			1	4	30	2	50	2#6,#10G	HP-3
					31	1	4		32					
CF-1	2#10,#10G	30	2		33		1	4	34	2	50	2#6,#10G	HP-4	
					35			1	4	36				
PANEL A2	SEE RISER	100	3		37	3	3.3		38	3	40	3#8,#10G	EUH-1	
					39		3	3.3	40					
					41			3	3.3	42				
						7	30	8	34	6	29			
						37	42		35					

*-G" INDICATES GFI TYPE CIRCUIT BREAKER
"ST" INDICATES SHUNIT TRIP

TOTAL CONN. LOAD 114 KVA

INTEGRATED EQUIPMENT RATING 10,000 AMPS RMS. SYM.

PANELBOARD SCHEDULE B

208Y/120V VOLTS 3 ø 4 W

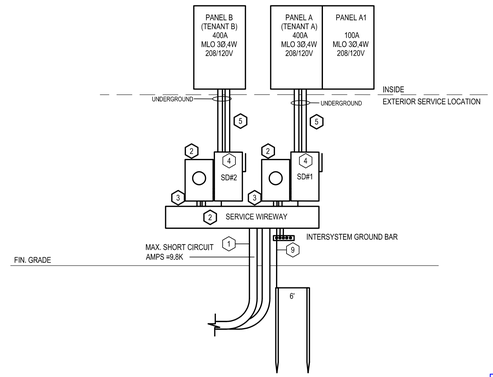
400 AMP MAINS: ☒ LUGS ☐ BREAKER 400 AMPS.

ITEM	WIRE SIZE	AMP RATING	P	L	CIR. NO.	PHASE A.	PHASE B.	LOADING (KVA) C.	CIR. NO.	P	L	AMP RATING	WIRE SIZE	ITEM
LTG	2#12,#12G	20	1		1	0.8			2	2				
RECEPTS	2#12,#12G	20	1		3		0.5		4					
RECEPTS	2#12,#12G	20	1		5			0.5	6	2				
LTG	2#12,#12G	20	1		7	0.8			8					
		20	1		9				10	2				
		20	1		11				12					
		20	1		13				14	2				
		20	1		15				16					
		20	1		17				18	2				
		20	1		19				20					
		20	1		21				22	1	20			
		20	1		23				24	1	20			
		20	1		25				26	1	20			
		20	1		27				28	1	20			
		20	1		29				30	1	20			
		20	1		31				32	1	20			
		20	1		33				34	1	20			
			1		35				36	1	20			
			1		37				38	1	20			
			1		39				40	1	20			
			1		41				42	1	20			
						1.8	0.5	0.5						
						2	1	1						

*-G" INDICATES GFI TYPE CIRCUIT BREAKER
"ST" INDICATES SHUNIT TRIP

TOTAL CONN. LOAD 4 KVA

INTEGRATED EQUIPMENT RATING 10,000 AMPS RMS. SYM.



ELECTRICAL RISER DIAGRAM

NTS

ELECTRICAL CODE ANALYSIS

Scope of Work: NEW SERVICE, 2 x 400A
Permit Data:
New Service:
# of Amps: 2X400A, 208V, 3PH, 4W
# of Branch Circuits: 41 CKTS, 2 PANELS, TOTAL OF 43
Service Change or Upgrade:
# of Amps:
# of Branch Circuits:
House Meter:
# of Amps:
# of Branch Circuits:

ELECTRICAL RISER NOTES

1. NEW UTILITY SERVICE; UNDERGROUND FEEDER; NOTE BELOW
   UTILITY SERVICE CONDUITS AND CONDUCTORS ANTICIPATED TO BE 2-3"C, 350K ALUM PER PHASE
2. SERVICE WIREWAY & METERBASES: PROVIDE PER UTILITY REQUIREMENTS, 400A 3Ø 4W METERBASES X 2; PROVIDE POLARIS, 4P, 400A, INSULATED LUGS FOR TAPPING INCOMING SERVICE CONDUCTORS
3. 2 SETS (COPPER - 4#3/0, 2"C) OR (ALUMINUM - 4#250KCMIL, 2.5"C)
4. SERVICE DISCONNECT, NEMA 3R, 400A, 208V, 3P, FUSED TYPE, 400A FUSES, NEUTRAL/GROUND BOND
   LABEL DISCONNECTS, SERVICE DISC. 1 OF 2 AND 2 OF 2 PER NEC REQUIREMENTS
5. 2 SETS (COPPER - 4#3/0, 1#4GND, 2"C) OR (ALUMINUM - 4#250KCMIL, 1#1GND,2.5"C)
6. 1#2/0 COPPER TO 2-8' GROUND RODS , 20' CONTINUOUS, TO INTERSYSTEM GROUND BAR, TO INCOMING METAL WATER PIPE, METAL FIRE RISER PIPING, AND BOND TO FOUNDATION REBAR IN TWO LOCATIONS

- NEW SERVICE SHALL BE COORDINATED WITH THE LOCAL UTILITY; CONFIRM REQUIREMENTS, ADJUST REQUIREMENTS IF NECESSARY
- PROVIDE CONCRETE PAD PER UTILITY REQUIREMENTS IF NECESSARY FOR PAD-MOUNT TRANSFORMER

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: Interested Industries
Project Type: New Construction
Exterior Lighting Zone: 1 (Developed rural area (LZ1))

Construction Site:
Taylors, SC

Owner/Agent:
Interested Industries
Taylors, SC

Designer/Contractor:
Randall Birch
Birch Consulting Services, LLC
408 Ashley Oaks Drive
Moore, SC 29369
864-621-5868
rkbirch9@gmail.com

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Warehouse	10481	0.8	8385
Office	4000	1	4000
		Total Allowed Watts =	12385

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Warehouse (10481 sq.ft.)				
LED 1: LED Panel 54W:	1	8	54	432
LED 2: LED Panel 44W:	1	13	46	598
LED 3: LED Panel 40W:	1	32	40	1280
LED 4: LED PAR 13W:	1	9	13	117
LED 5: LED Panel 70W:	1	24	70	1680
LED 6: LED Panel 112W:	1	162	12	1944
Office (4000 sq.ft.)				
			Total Proposed Watts =	6051

Section 4: Requirements Checklist

Interior Lighting PASSES: Design 51% better than code.

Lighting Wattage:

☑ 1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
12385	6051	YES

Controls, Switching, and Wiring:

☐ 2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.

☐ 3. Daylight zones have individual lighting controls independent from that of the general area lighting.

Exceptions:
- ☐ Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
- ☐ Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

☑ 4. Independent controls for each space (switch/occupancy sensor).

Exceptions:
- ☐ Areas designated as security or emergency areas that must be continuously illuminated.
- ☐ Lighting in stairways or corridors that are elements of the means of egress.

☐ 5. Master switch at entry to hotel/motel guest room.

☐ 6. Individual dwelling units separately metered.

☐ 7. Medical task lighting or arthritory display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.

☑ 8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.

Exceptions:
- ☐ Only one luminaire in space.
- ☐ An occupant-sensing device controls the area.
- ☐ The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
- ☐ Areas that use less than 0.6 Watts/sq.ft.

☐ 9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

Exceptions:
- ☐ Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.

☑ 10. Photocell/astronomical time switch on exterior lights.

Exceptions:
- ☐ Lighting intended for 24 hour use.

☐ 11. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:
- ☐ Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COMcheck Version 4.1.5.5 and to comply with the mandatory requirements in the Requirements Checklist.

Randall K. Birch — Name - Title
Randall K. Birch — Signature
10/15/24 — Date

COMcheck Software Version 4.1.5.5

Exterior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: Interested Industries
Project Type: New Construction
Project Type: New Construction
Exterior Lighting Zone: 1 (Developed rural area (LZ1))

Construction Site:
Taylors, SC

Owner/Agent:
Interested Industries
Taylors, SC

Designer/Contractor:
Randall Birch
Birch Consulting Services, LLC
408 Ashley Oaks Drive
Moore, SC 29369
864-621-5868
rkbirch9@gmail.com

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Main entry	6 ft of door width	20	Yes	120	52
Other door (not main entry)	18 ft of door width	20	Yes	360	75
			Total Tradable Watts* =	480	127
			Total Allowed Watts =	480	
			Total Allowed Supplemental Watts** =	500	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.
** A supplemental allowance equal to 500 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main entry (6 ft of door width): Tradable Wattage				
LED 2: LED PAR 13W:	1	4	13	52
Other door (not main entry) (18 ft of door width): Tradable Wattage				
LED 3: LED A Lamp 25W:	1	3	25	75
			Total Tradable Proposed Watts =	127

Section 4: Requirements Checklist

Lighting Wattage:

☑ 1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.
Compliance: Passes.

Controls, Switching, and Wiring:

☐ 2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.

☐ 3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.

☑ 4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.

☐ 5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

Exterior Lighting Efficacy:

☐ 6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt.

Exceptions:
- ☐ Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
- ☐ Lighting that is specifically designated as required by a health or life safety statue, ordinance, or regulation.
- ☐ Emergency lighting that is automatically off during normal building operation.
- ☐ Lighting that is controlled by motion sensor.

Exterior Lighting PASSES: Design 87% better than code.

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COMcheck Version 4.1.5.5 and to comply with the mandatory requirements in the Requirements Checklist.

Randall K. Birch — Name - Title
Randall K. Birch — Signature
10/15/24 — Date

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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — RANDALL K. BIRCH — NO. 18298 — 10/15/24 — REGISTERED PROFESSIONAL ENGINEER — STATE OF SOUTH CAROLINA

SOUTH CAROLINA LICENSED BUILDING CONTRACTOR — KYLE BIRCH — NO. 3823 — BIRCH CONSULTING SERVICES, LLC — STATE OF SOUTH CAROLINA

ISSUED FOR:
PERMITS

REVISIONS

ELECTRICAL RISER & SCHEDULES

E-3

G1.6 PROJECT # 2434

1 ### NONE ELECTRICAL RISER & SCHEDULES

GENERAL ELECTRICAL SPECIFICATIONS

1. ALL ELECTRICAL EQUIPMENT AND FEEDERS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE LOCAL AND STATE CODES AND WITH WITH THE EDITION OF THE NEC STATED BELOW.
2. PROVIDE ADDITIONAL SUPPORT FOR SWITCHES, STARTERS, RACEWAYS AND OTHER ELECTRICAL EQUIPMENT WHEREVER THE BUILDING STRUCTURE IS NOT SUITABLE FOR DIRECT MOUNTING.
3. DO NOT INSTALL MATERIALS OTHER THAN SPECIFIED EXCEPT FOR ALTERNATES ACCEPTED BY OWNER.
4. FIRESTOP, DRAFT STOP AND/OR PROTECT THE ANNULAR SPACE AROUND ALL PIPE, TUBE, CONDUIT, WIRE, CABLE, VENT AND DUCT PENETRATION THROUGH WALLS, PARTITIONS, FLOORS, CEILINGS AND ROOFS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (LATEST EDITION) AND UL LISTING REQUIREMENTS.
5. ALL 600V WIRE SHALL BE STRANDED COPPER SINGLE CONDUCTOR TYPE THWN INSULATION, AMPACITIES BASED ON NEC TABLE 310.15(B)(16), 60° FOR CONDUCTORS #1 AND SMALLER, 75° #10 AND LARGER. METAL CLAD ARMORED CABLE MAY BE USED IN WALL AND ABOVE CEILING FOR #10 AWG CABLE AND SMALLER.
6. VERIFY CEILING SUSPENSION SYSTEMS IN THE VARIOUS AREAS AND PROVIDE THE PROPER MOUNTING ACCESSORIES, TRIMS, ETC., TO SUIT THE PARTICULAR AREA.
7. SYMBOLS IN THE LEGENDS ARE APPLICABLE GENERALLY. FOR EXACT REQUIREMENTS REFER TO THE SCHEDULES, LAYOUTS AND DETAILS.
8. CONFIRM LOCATION OF EQUIPMENT WITH OTHER DISCIPLINES BEFORE ROUGH-INS.
9. ALL ELECTRICAL DEVICES SHALL BE NEMA 1 INDOORS, NEMA 3R OUTDOORS UNLESS NOTED OTHERWISE.
10. ALL CONDUIT EXPOSED TO PHYSICAL DAMAGE SHALL BE RIGID GALVANIZED STEEL, ALL OTHER TO BE EMT.
11. ALL CONDUIT CONCEALED WITHIN INTERIOR METAL-STUD WALLS OR ABOVE SUSPENDED CEILINGS SHALL BE ELECTRICAL METALLIC TUBING (EMT) AND OF A SIZE NO SMALLER THAN 1/2 INCH. CONDUIT FILL SHALL BE PER NEC CHAPTER 9 ARTICLE 358 FOR EMT, 40% FILL COLUMN..
12. PHASE IDENTIFICATION FOR INCOMING FEEDERS TO PANELBOARDS SHALL BE ACCOMPLISHED BY COLOR CODE TAPING AS FOLLOWS:
    FEEDERS RATED (208V)... PHASE
    "A" = BLACK
    "B" = RED
    "C" = BLUE
    NEUTRAL = WHITE
    GROUND = GREEN
13. ALL POWER CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR (BARE OR GREEN COLOR INSULATION) ROUTED IN CONDUIT AND SIZED AS INDICATED ON DRAWINGS.
14. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE ENERGY CONSERVATION CODES AS STATED BELOW.
15. ALL RECESSED FIXTURES SHALL BE TIED OFF TO CEILING STRUCTURE VIA WIRE AT OPPOSITES ENDS TO MEET SEISMIC CRITERIA THIS LOCATION.
16. SHARING OF NEUTRAL CONDUCTORS IN BRANCH CIRCUITS IS NOT PERMITTED.
17. ALL PANELBOARDS SHALL BE LABELED BY DESCRIPTIVE TYPE DIRECTORY.
18. WHERE NOTED ON PLANS, EXHAUST FAN IN TOILET ROOMS SHALL BE CONTROLLED AND POWERED VIA LIGHTING CIRCUIT.
19. WHERE NOTED ON PLANS, PROVIDE TOGGLE SWITCH FOR UC FIXTURES IF REQUIRED.
20. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABEL-LISTED BY A STATE APPROVED THIRD PARTY LISTING AGENCY.
21. CONFIRM REQUIREMENTS WITH TELECOM/DATA PROVIDER.
22. EMERGENCY LIGHTING CIRCUITS SHALL BE CONNECTED TO THE LINE SIDE OF THE CIRCUIT AND SWITCH THAT SERVES THAT PARTICULAR AREA.
23. ALL RECESSED LUMINAIRES SHALL BE IC RATED AND LABELED AS MEETING ASTM E283. ALL FLUSH OR RECESSED LUMINAIRES SHALL MEET SPECIAL REQUIREMENTS OF NEC 410.110 THRU 410.122.
24. A TYPE WRITTEN CIRCUIT DIRECTORY SHALL BE PROVIDED FOR EACH PANELBOARD AS TO CLEARLY IDENTIFY ITS SPECIFIC PURPOSE AS REQ'D TO MEET NEC 408.4.
25. CONFIRM POWER REQUIREMENTS FOR END USER EQUIPMENT BEFORE INSTALLATION. MODIFY BREAKERS/WIRE SIZE AS REQUIRED BEFORE INSTALLATION.
26. PROVIDE LED LOW WATTAGE UTILITY STRIP LUMINAIRE AND GFI RECEPTACLE AT EACH AHU IN ATTIC. PROVIDE TOGGLE SWITCH AT ATTIC ACCESS FOR CONTROL OF ALL LIGHTING.
27. ALL PRE-WIRED EQUIPMENT SHALL BE LISTED AND LABELED BY AN APPROVED TESTING AGENCY PER ARTICLE 110.3 (A, B, & C) OF THE NEC VERSION STATED BELOW.
28. PROPERLY TAG MULTIPLE SERVICE DISCONNECTS PER CODE REQUIREMENTS, 1 OF 1, ETC.

LUMINAIRE SCHEDULE

- DUAL HEAD EMERGENCY LED LUMINAIRE WITH BATTERY BACK-UP, 120V, MOUNTED AT 8'-0" AFF; UNSWITCHED LEG OF AREA CIRCUIT
- EXIT LUMINAIRE WITH BATTERY BACK-UP, 120V, 5W, MOUNTED AT 8'-0" AFF; UNSWITCHED LEG OF AREA CIRCUIT
- COMBINATION DUAL HEAD LED EMERGENCY AND EXIT LUMINAIRE WITH BATTERY BACK-UP, 120V, 5W, MOUNTED AT 8'-0" AFF; UNSWITCHED LEG OF AREA CIRCUIT
- DISCHARGE EXTERIOR EMERGENCY LED TWO HEAD COMPATIBLE WITH EXIT INTERIOR LUMINAIRE; COORDINATE LUMINAIRE WITH CANOPY
- EXTERIOR DARK SKY RATED UP/DOWN VERTICAL LED LUMINAIRE, 15W MAXIMUM, 4K
- EXTERIOR LED WALL PACK, 120V, 30W MINIMUM, MOUNTED 12'-18' PER ARCH RECOMMENDATIONS AND AREA WALL FACE & DOORS BELOW
- LT/EF — COMBINATION LED LUMAINAIRE/EXHAUST FAN, SEE HVAC FOR SPECS OF FAN, 13W LED LAMP ALLOWANCE
- PENDANT LED STRIP LUMINAIRE, DIRECT/INDIRECT, 6K LUMENS, 48", 54W ALLOWANCE, 4K
- PENDANT LED STRIP LUMINAIRE, DIRECT/INDIRECT, 8K LUMENS, 72", 70W ALLOWANCE, 4K
- HIGH BAY LUMINAIRE, 24K LUMENS, MOUNTED AT 20' - 24' VIA HANGERS FROM ROOF STRUCTURE, LITHONIA IBG OR EQUAL, WIDE DISTRIBUTION, 164W ALLOWANCE, 4K, PROVIDED WITH MOTION SENSING
- 2' X 4' LED RECESSED PANEL, 5600 LUMENS (MIN), 46W, 120V, DIMMABLE, 4K
- 2' X 4' LED SURFACE PANEL, 5600 LUMENS (MIN), 46W, 120V, DIMMABLE, 4K
- STRIP LED LUMINAIRE, 40W, 120V

APPLICABLE CODES

2020 NATIONAL ELECTRICAL CODE

2009 INTERNATIONAL ENERGY CONSERVATION CODE

ELECTRICAL SYMBOLS

- $ — SWITCH, 120V
- $3 — SWITCH, THREE-WAY, 120V
- $4 — SWITCH, FOUR-WAY, 120V
- $D — 0-10V DIMMING SWITCH, 120V, LV WIRING
- $3D — 0-10V DIMMING SWITCH, THREE WAY, 120V, LV WIRING
- $a — SWITCH LEG - LOWERCASE LETTER
- $OS — SWITCH, OCCUPANCY SENSOR, 120V
- $DOS — 0-10V DIMMING SWITCH, OCCUPANCY SENSOR, 120V, LV WIRING
- SAFETY DISCONNECT, RATINGS AS INDICATED
- # — 120V RECEPTACLE, TAMPER RESISTANT TYPE
  G=GROUND CIRCUIT INTERRUPTER
  W=WEATHERPROOF COVER, EXTRA DUTY
  Q=QUAD OUTLET
  WF=WATER FOUNTAIN; COORDINATE W/PLUMBING
  C=COUNTER; MOUNT ABOVE COUNTER
  UC=UNDER COUNTER; MOUNT UNDER COUNTER
  GCB=FED FROM GROUND FAULT CIRCUIT BREAKER
  TV=FIELD VERIFY LOCATIONS & MOUNTING HEIGHTS WITH OWNER
  D=DEDICATED 120V CIRCUIT
  GFCB =FED FROM GFI CIRCUIT BREAKER
- FLOOR MOUNTED RECEPTACLE OR CHAIR FLOOR BOX
- TELEPHONE/DATA DROP; CAT. 6 CABLE BACK TO TEL. SERVICE; COORDINATE LOCATIONS WITH OWNER.
- 208V RECEPTACLE, RATINGS AS INDICATED
- J — JUNCTION BOX
- T — TURCK ASTRONOMICAL TIME SWITCH, 20A CONTACTS
- OS — CEILING MOUNTED OCCUPANCY SENSOR, FUNCTIONS WITH WALL SENSOR, 0-10V, POWER SUPPLY AS REQ'D

1 | ### NONE | ELECTRICAL SPECS & LEGEND

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A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
TAYLORS, SC 29687

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — NO. 18298 — RANDALL KYLE BIRCH — 10/15/24

SOUTH CAROLINA — BIRCH CONSULTING SERVICES, LLC NO. 3823 — CERTIFICATE OF AUTHORIZATION

ISSUED FOR:
PERMITS

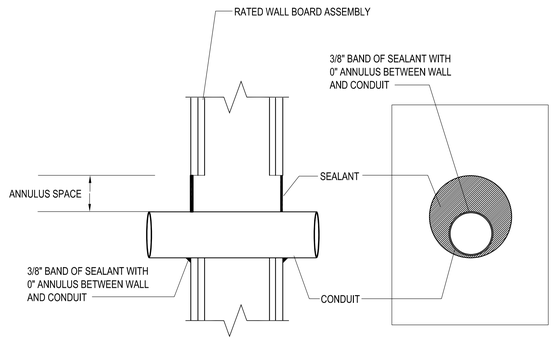
REVISIONS

ELECTRICAL SPECS & LEGEND

E-4

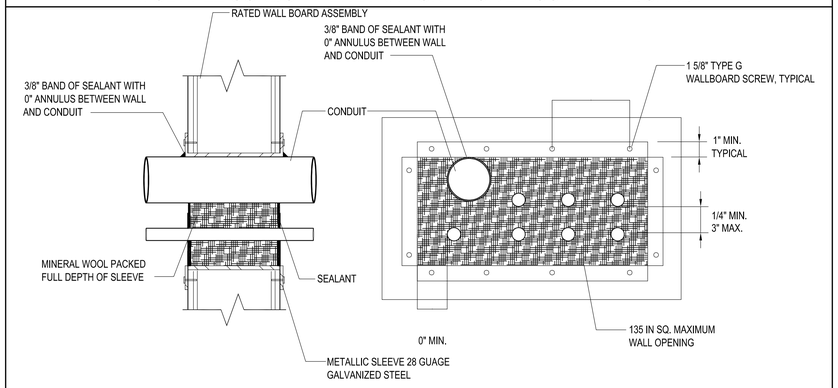
G1.6 PROJECT # 2434

SINGLE CONDUIT PENETRATION - 1 OR 2 HOUR WALLBOARD



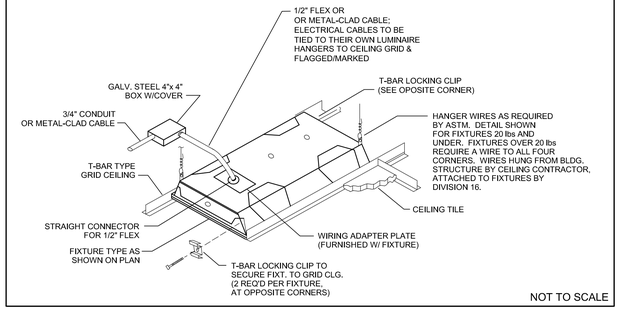
UL1479 SYSTEM NUMBER	CONDUIT TYPE	MAXIMUM CONDUIT DIAMETER	MINIMUM SEALANT THICKNESS	ANNULUS SPACE	SEALANT
WL1090	RIGID STEEL ELECTRICAL METALLIC TUBING	4"	5/8"	0" MINIMUM 1-1/2" MAX	SPEC SEAL LC150
WL1088	FLEXABLE METAL	1"	5/8"	0" MINIMUM 1-1/2" MAX	SPEC SEAL LC150

MULTIPLE CONDUIT PENETRATION - 1 OR 2 HOUR WALL BOARD



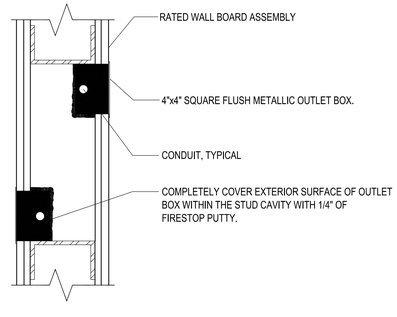
UL1479 SYSTEM NUMBER	CONDUIT TYPE	MAXIMUM CONDUIT DIAMETER	NUMBER OF CONDUITS	MINIMUM SEALANT THICKNESS	ANNULUS SPACE BETWEEN CONDUIT	ANNULUS SPACE BETWEEN WALL AND OPENINGS	SEALANT
WL-1127	RIGID STEEL ELECTRICAL METALLIC TUBING	4"	3 MAXIMUM COMBINED TOTAL	5/8"	1/4" MIN. 3" MAX	0" MINIMUM 3" MAX	SPEC SEAL LC150
WL-1127	RIGID STEEL ELECTRICAL METALLIC TUBING	2"	1 OR MORE	5/8"	1/4" MIN. 3" MAX	0" MINIMUM 3" MAX	SPEC SEAL LC150

RECESSED LUMINAIRE MOUNTING DETAIL



NOT TO SCALE

1 OR 2 HOUR RATED ELECTRICAL OUTLET BOX



TOP VIEW

1 ### AS NOTED ELECTRICAL DETAILS

g1.6 group LLC ARCHITECTS
210 ALTAMONT ROAD
GREENVILLE, SC 29609
864.640.6014

BIRCH CONSULTING SERVICES, LLC
408 Ashley Oaks Drive, Moore, SC 29369
rkbirch08@gmail.com, Ph. (864) 421-5068

A NEW FACILITY FOR INTERESTED INDUSTRIES

TOWN CENTER DRIVE
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SOUTH CAROLINA PROFESSIONAL ENGINEER
RUSSELL KYLE BIRCH
NO. 18298
10/15/24

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
BIRCH CONSULTING SERVICES, LLC
NO. 3823

ISSUED FOR:
PERMITS
REVISIONS

ELECTRICAL DETAILS

E-5

G1.6 PROJECT # 2434