

CENTRAL LYON COMMUNITY SCHOOL DISTRICT
2024 FACILITY IMPROVEMENTS
HARK BOULEVARD
ROCK RAPIDS, IA 51246

BID PACKAGE A - BUS BARN
BID PACKAGE B - PEDESTRIAN BRIDGE REPAIRS



SHEET INDEX

CONTACT INFORMATION

ARCHITECT

FEH DESIGN
604 E. GRAND AVE.
DES MOINES, IA 50309

PH: (515)288-2000

STRUCTURAL

FEH DESIGN
604 E. GRAND AVE.
DES MOINES, IA 50309

PH: (515)288-2000

CIVIL

DGR ENGINEERING
6115 WHISPERING CREEK DR
SIOUX CITY, IA 51106

PH: (712)266-1554

ELECTRICAL

EDA ENGINEERS DESIGN ASSOCIATES, INC.
385 12TH STREET NE
SIOUX CENTER, IOWA 51250

PH: (712)722-0228

PLUMBING

EDA ENGINEERS DESIGN ASSOCIATES, INC.
385 12TH STREET NE
SIOUX CENTER, IOWA 51250

PH: (712)722-0228

MECHANICAL

EDA ENGINEERS DESIGN ASSOCIATES, INC.
385 12TH STREET NE
SIOUX CENTER, IOWA 51250

PH: (712)722-0228

ARCHITECTURAL
TS TITLE SHEET

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FEH DESIGN

ARCHITECTURE / ENGINEERING / INTERIORS

SIOUX CITY, IA
(712) 252-3889

DES MOINES, IA
(515) 288-2000

DUBUQUE, IA
(563) 583-4900

OCONOMOWOC, WI
(262) 968-2055

IN ASSOCIATION WITH

EDA

Engineering Design Associates, Inc.
385 12th Street NE
Sioux Center, Iowa 51250
712-722-0228
www.edaengineers.com

SHEET TITLE
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PROJECT TITLE
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2024 FACILITY IMPROVEMENTS

BID PACKAGE A
BUS BARN

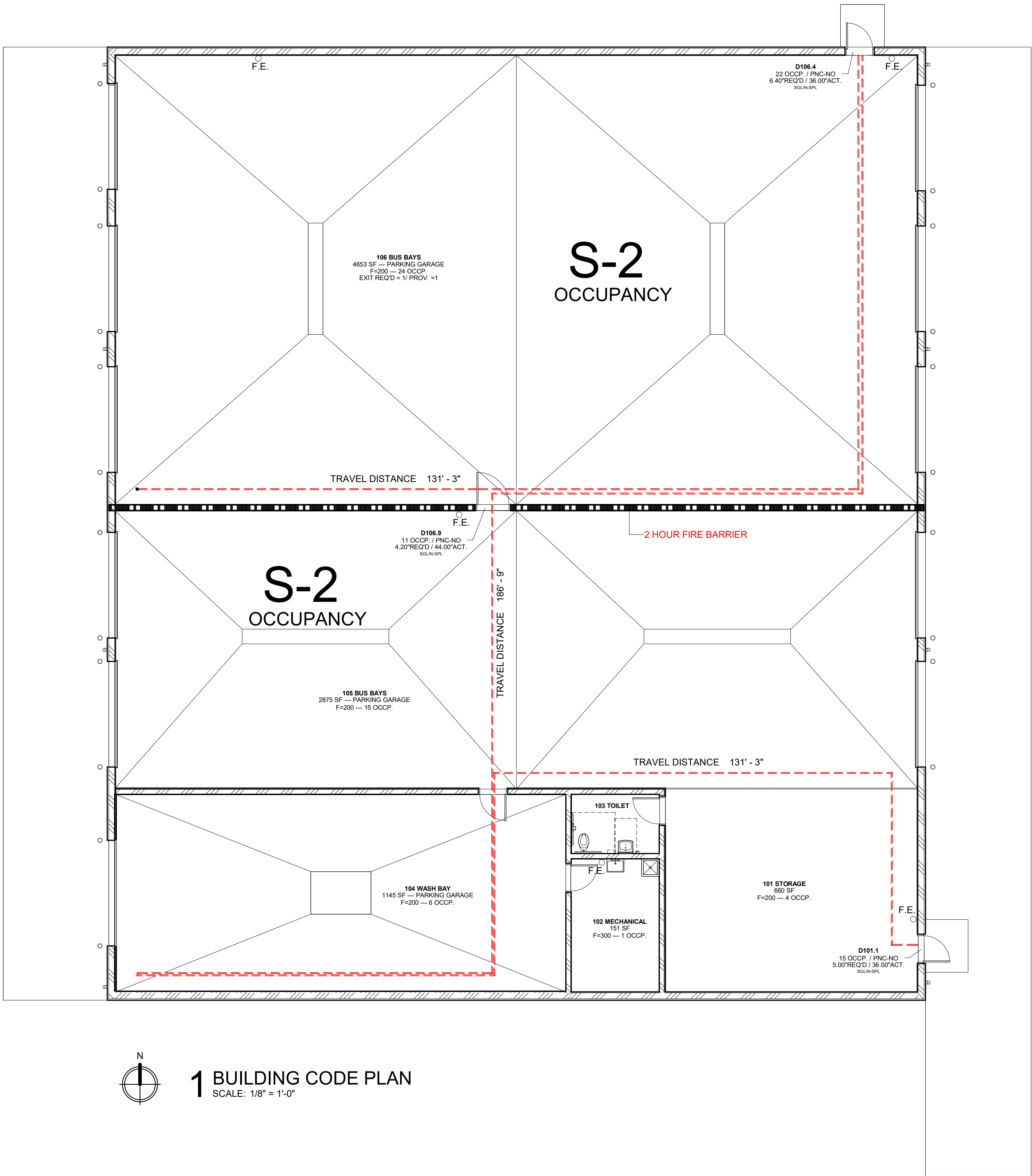
HARK BOULEVARD
ROCK RAPIDS, IA 51246

DATE ISSUED 10/17/2023
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2022018.07

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CODE PLAN LEGEND

TRAVEL DISTANCE 1" = 0"

ROOM TAG
ROOM NUMBER ROOM NAME
AREA (SF) --- FUNCTION OF SPACE PER TABLE 1004.1.2
OCCUPANT LOAD FACTOR --- OCCUPANT LOAD
EXITS REQUIRED --- EXIST PROVIDED

DOOR TAG
DOOR NUMBER - FIRE RATING (IF APPLICABLE)
OCCUPANT LOAD SERVED / PANIC HARDWARE
REQUIRED WIDTH / ACTUAL WIDTH
SINGLE OR DOUBLE DOOR / SPRINKLER OR NON-SPRINKLER

FIRE SEPARATION LEGEND

2 HOUR FIRE BARRIER (90M DOORS, W-120 FIRE-RESISTANCE-RATED ASSEMBLIES)

CODE INFORMATION

PROJECT DESCRIPTION:
THIS BUILDING IS A PRE-ENGINEERED METAL BUILDING FOR THE STORAGE OF DISTRICT BUSES AND LIGHT MAINTENANCE.

APPLICABLE CODES:
2015 - INTERNATIONAL BUILDING CODE
2018 - STATE MECHANICAL CODE
2018 - STATE PLUMBING CODE
2012 - INTERNATIONAL ENERGY CODE
2017 - STATE ELECTRICAL CODE
2015 - INTERNATIONAL FIRE CODE
2010 - ADAAG

OCCUPANCY TYPE (CHAPTER 3)
TYPE S-2 OCCUPANCY

BUILDING HEIGHTS AND AREAS (CHAPTER 5)
BASIC ALLOWABLE
13,500 GROSS SQ. FT.
2 STORIES

PROPOSED BUILDING
9,701 GROSS SQ. FT.
TYPE S-2 OCCUPANCY = 9506 SF

TYPES OF CONSTRUCTION (CHAPTER 6)
TYPE V-B CONSTRUCTION

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601)
PRIMARY STRUCTURAL FRAME 0 HOUR
BEARING WALLS 0 HOUR
EXTERIOR 0 HOUR
INTERIOR 0 HOUR
NONBEARING WALLS AND PARTITIONS - EXTERIOR 0 HOUR
NONBEARING WALLS AND PARTITIONS - INTERIOR 0 HOUR
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS - 0 HOUR
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS --- 0 HOUR

FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602)
X < 5 FT 1 HOUR
5 FT ≤ X < 10 FT 1 HOUR
10 FT ≤ X < 30 FT 0 HOUR
X ≥ 30 FT 0 HOUR

FIRE PROTECTION SYSTEMS (CHAPTER 9)
FIRE ALARM PROVIDED
FIRE ALARM CONTROL PANEL PROVIDED
SMOKE DETECTION REQUIRED-PROVIDED
HEAT DETECTION NOT REQUIRED-NOT PROVIDED
FIRE EXTINGUISHERS PROVIDED: PER NFPA 10

MEANS OF EGRESS (CHAPTER 10)
1004 DESIGN OCCUPANT LOADS
TOTAL OCCUPANTS 50
1005.1 EGRESS WIDTH
MEANS OF EGRESS CAPACITY FACTOR = 0.2 INCH (1005.3.2)
1008 MEANS OF EGRESS ILLUMINATION
TO BE ILLUMINATED ALL TIMES (1008.2)
1009.1 ACCESSIBLE MEANS OF EGRESS
1 MOE = 1 REQUIRED
MORE THAN 2 MOE = NOT LESS THAN TWO REQUIRED
1010.1.1 WIDTH OF DOOR
MINIMUM CLEAR WIDTH OF 32 INCHES
1010.1.2.1 DOOR SWING
SWING IN THE DIRECTION OF EGRESS TRAVEL (50 OR MORE OCCUPANT LOAD)
1013.1 EXIT SIGNS
NO MORE THAN 100 FEET VIEWING DISTANCE
NOT REQUIRED IN ROOMS OR AREAS THAT REQUIRE ONLY ONE EXIT OR EXIT ACCESS
1013.5, 1013.6 EXIT SIGN ILLUMINATION
EXIT SIGNS SHOULD BE INTERNALLY OR EXTERNALLY ILLUMINATED
1017.2 EXIT ACCESS TRAVEL DISTANCE (TABLE 1017.2)
300 FEET WITHOUT SPRINKLER
1020.2 MINIMUM CORRIDOR WIDTH (TABLE 1020.2)
WITH AN OCCUPANT LOAD OF LESS THAN 50 36 INCHES
1022 EXITS
AS SHOWN ON THE PLAN
1026.1 EXIT DISCHARGE
EXITS SHALL DISCHARGE DIRECTLY TO THE EXTERIOR OF THE BUILDING

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (CHAPTER 15)
1505.1 FIRE CLASSIFICATION (TABLE 1505.1)
MINIMUM ROOF COVERING CLASSIFICATION C

IN ASSOCIATION WITH



SHEET TITLE
BUILDING CODE PLAN

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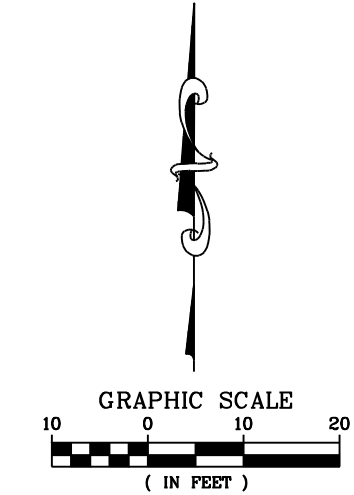
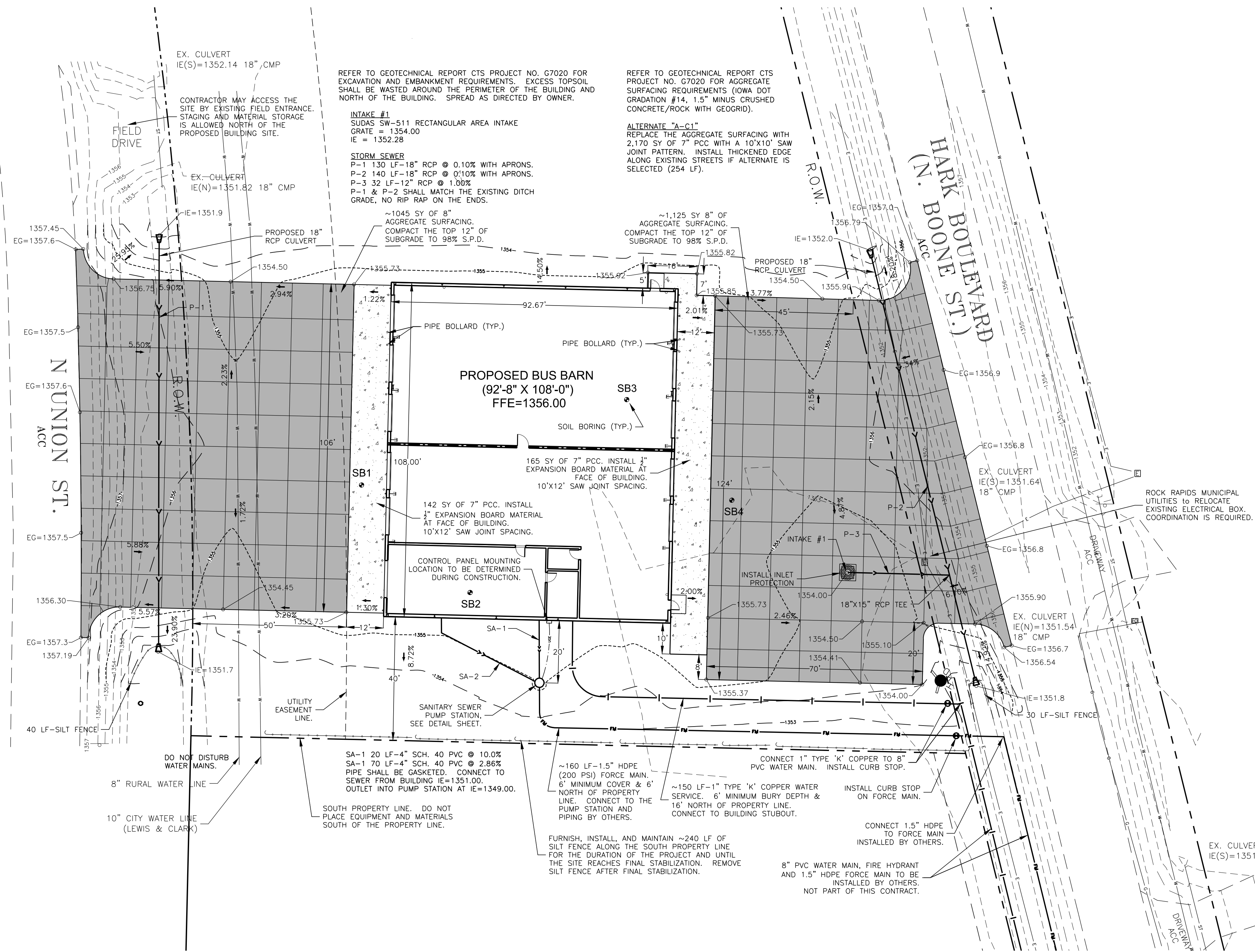


ARCHITECTURE / ENGINEERING / INTERIORS
DES MOINES, IA
DUBUQUE, IA
SIoux CITY, IA
(515) 252-3889
(515) 288-2000
(663) 583-4900
(262) 988-2055
OCONOMOWOC, WI

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SITE IMPROVEMENTS



PLAN NOTATION:
CSP = CORRUGATED STEEL PIPE
RCP = REINFORCED CONCRETE PIPE
CP = CONCRETE PIPE
PE = POLYETHYLENE
PVC = POLYVINYL CHLORIDE
RE = RIM ELEVATION
IE = INVERT ELEVATION
INT = STORM SEWER INTAKE
DMH = DRAINAGE MANHOLE
SMH = SANITARY SEWER MANHOLE
CT = GUTTER ELEVATION
ER = END OF RADIUS LOCATION
BVCS = BEGIN VERTICAL CURVE STATION
EVCS = END VERTICAL CURVE STATION
SA = SANITARY SEWER LINE
OHE = OVERHEAD ELECTRICAL LINE
UGE = UNDERGROUND ELECTRICAL LINE
T = TELEPHONE LINE
HMA = HOT MIX ASPHALT
WCP = WITHEED CLAY PIPE
FFE = FINISHED FLOOR ELEVATION
GT = GUTTER ELEVATION
FG = FINISHED PAVING GRADE
TYP = TYPICAL
T/C = TOP OF DROP CURB
TC = TOP OF CURB

LEGEND		
EXISTING	PROPOSED	DESCRIPTION
---	---	LOT LINE
---	---	EASEMENT LINE
---	---	CENTER LINE
---	---	TELEPHONE BOX, CABLE TV LINE
SA-@	SA-@	SANITARY SEWER, MANHOLE
FM	FM	SANITARY SEWER FORCE MAIN
ST-@-ST	ST-@-ST	STORM SEWER, MANHOLE, INTAKE
---	---	SUBDRAIN
---	---	CURB & GUTTER
---	---	PCC PAVEMENT
W-@-@	W-@-@	WATER MAIN, HYDRANT, VALVE
UGE-@	UGE-@	UNDERGROUND ELECTRIC LINE, BOX, LIGHT POLE
Q	Q	POWER POLE, GUY WIRE
OHE	OHE	OVERHEAD ELECTRIC LINE
GAS-@	GAS-@	GAS LINE, VALVE
TEL	TEL	TELEPHONE LINE
EVERGREEN, BUSH, TREE	EVERGREEN, BUSH, TREE	EVERGREEN, BUSH, TREE
SIGN POST, MAILBOX	SIGN POST, MAILBOX	SIGN POST, MAILBOX
FO-@-@	FO-@-@	FIBER OPTIC LINE
1455	1455	CONTOURS
---	---	PAVEMENT REMOVALS
---	---	INLET PROTECTION
---	---	WADDLE OR DITCH CHECK
---	---	SILT FENCE
---	---	DRAINAGE FLOW DIRECTION ARROW

CONSTRUCTION NOTES

- ALL SITE WORK CONSTRUCTION AND MATERIALS SHALL CONFORM TO IOWA S.U.D.A.S., THE PROJECT SPECIFICATIONS AND THE IOWA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION. IOWA S.U.D.A.S. SPECIFICATIONS ARE AVAILABLE AT THIS WEBSITE: <http://www.iowasudas.org/specs.cfm>
 - THE CONTRACTOR SHALL COMPLY WITH THE STORM WATER DISCHARGE PERMIT AND PREVENT EROSION OCCURRING AND SEDIMENT FROM LEAVING THE SITE. CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCE AND OTHER EROSION CONTROL MEASURES AS NEEDED. THE CONTRACTOR SHALL MONITOR ALL EROSION CONTROL DEVICES AND MAINTAIN WEEKLY REPORTS AND REPORTS WITHIN 24 HOURS OF THE 0.5" OR GREATER STORM EVENT. THE CONTRACTOR SHALL REFER TO AND ABIDE BY THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS AVAILABLE FROM THE ENGINEER. THE CONTRACTOR SHALL SIGN THE CONTRACTOR'S STATEMENT ATTACHED TO THE STORM WATER POLLUTION PREVENTION PLAN AND MAINTAIN A COPY OF THE SWPPP AND RECORDS ONSITE. INSTALL SILT FENCE AROUND THE PERIMETER OF DISTURB AREAS AND EMBANKMENT STOCKPILES.
 - CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, SAFETY FENCE, ETC. TO PROTECT THE WORK FROM AUTOMOBILE AND PEDESTRIAN TRAFFIC. MAINTAIN EXISTING FIELD ENTRANCE AND INSTALL A ROCK CONSTRUCTION ENTRANCE IN ORDER TO PREVENT MUD TRACKING OFF SITE.
 - CONTRACTOR SHALL STRIP, SALVAGE, AND STOCKPILE EXISTING TOPSOIL IN AREAS TO BE DISTURBED. STOCKPILE LOCATION TO BE DETERMINED DURING CONSTRUCTION. CONTRACTOR SHALL PERFORM SITE GRADING TO INSURE POSITIVE DRAINAGE AWAY FROM THE BUILDING SITE. PLACE A MINIMUM OF 6" OF TOPSOIL FREE OF DEBRIS ON ALL DISTURBED AREAS TO BE SEED. CONTRACTOR SHALL PROVIDE TOPSOIL FREE OF DEBRIS IF NOT ENOUGH TOPSOIL IS GENERATED ON SITE.
 - CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT CTS PROJECT NO. G7020 PREPARED BY CERTIFIED TESTING SERVICES. THE 'SITE PREPARATION' SECTION SPECIFIES THE FILL REQUIREMENTS. REMOVE TOPSOIL AS REQUIRED BY THE REPORT. THE APPROXIMATE IN-PLACE FILL VOLUME BETWEEN THE FINISHED GROUND SURFACE AND THE EXISTING SURFACE ARE AS FOLLOWS:

BUILDING FOOTPRINT	770 C.Y.
EAST APPROACH/PARKING	990 C.Y.
WEST APPROACH/PARKING	940 C.Y.
SIDES OF SLOPES	400 C.Y.
TOTAL IN-PLACE FILL VOLUME	3,100 C.Y.
- THE BUILDING FOOTPRINT VOLUME IS FROM THE EXISTING GROUND TO THE BOTTOM OF THE FLOOR SLAB. THE CONTRACTOR WILL NEED TO STRIP TOPSOIL (WASTE ON SITE) AS PER THE GEOTECHNICAL REPORT. THE STRIPPING OF TOPSOIL WILL ADD TO THE FILL VOLUME. THE THICKNESS OF THE PAVEMENT AND AGGREGATE SURFACING IN THE APPROACH/PARKING AREAS WILL NEED TO BE SUBTRACTED FROM THE FILL VOLUME.
- THE OVER EXCAVATION AND FILL BENEATH OR WITHIN THE BUILDING SHALL BE REPLACED WITH ON SITE SUITABLE FILL MATERIAL OR IMPORTED SUITABLE MATERIAL FROM OFF SITE AS PER THE GEOTECHNICAL REPORT. COORDINATE REVIEW OF UNSUITABLE SOIL EXCAVATION AND PLACEMENT OF FILL WITH CERTIFIED TESTING SERVICES, INC.
 - ANY EXCESS UNSUITABLE MATERIAL SHALL BE WASTED AROUND THE PERIMETER OF THE BUS BARN.
 - EXTEND SANITARY SEWER SERVICE TO WITHIN 5' OF PROPOSED BUILDING USING 4" SCH. 40 GASKETED PVC INSTALL CLEAN-OUT WHERE CHANGE IN ALIGNMENT. SEE MECHANICAL PLANS FOR CONTINUATION AND CLEAN OUTS.
 - ALL STORM SEWER CONNECTIONS SHALL BE WATER TIGHT. CONNECT TO EXISTING PVC STORM SEWER WITH A FERNCO STRONG BACK RC SERIES COUPLING. CONNECTIONS THAT A FERNCO IS NOT ADEQUATE SHALL BE INSTALLED USING A PCC COLLAR INCLUDING RCP STORM SEWER, STORM SEWER PIPE AND CONNECTION SHALL CONFORM TO CLASS 20000 RCP PIPE. ALL CONCRETE COLLAR INSTALLATIONS ON SITE SHALL UTILIZE IDOT CLASS C-4 OR C-4WR.
 - FURNISH, INSTALL, MAINTAIN AND REMOVE INLET PROTECTION ONCE SURFACE INTAKES ARE INSTALLED.
 - FURNISH, INSTALL, MAINTAIN AND REMOVE (AFTER FINAL STABILIZATION) 250-300 OF SILT FENCE ALONG THE SOUTH SIDE OF THE CONSTRUCTION SITE. ADDITIONAL SILT FENCE WILL BE NEEDED AROUND STOCK PILES AS NEEDED.
 - TRENCHING, BACKFILLING & COMPACTING: CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR MAY NEED TO ADJUST GRADES DURING CONSTRUCTION TO AVOID ELEVATION CONFLICTS, INCIDENTAL. BACKFILL SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D698.
 - RAPID STABILIZATION: GRADE, SEED, FERTILIZE, AND MULCH THE ALL DISTURBED AREAS WITHIN 7 DAYS OF COMPLETING THE GRADING. REMOVE ALL AGGREGATE AND FOREIGN MATTER, PROVIDED TOPSOIL EXCAVATED FROM THE SITE. INSTALL SEEDING FERTILIZING AND MULCHING ACCORDING TO S.U.D.A.S. STANDARD SPECIFICATIONS SECTION 9010, TYPE 4 (URBAN TEMPORARY EROSION CONTROL MIXTURE). SEED THE APPROPRIATE MIXTURE ACCORDING TO SEEDING DATES. TEMPORARY SEEDING WILL BE REPLACED WITH PERMANENT SEEDING AT THE END OF THE PROJECT. FINISH GRADE ALL DISTURBED AREAS FOR SEED, FERTILIZE, AND MULCH BY OWNER. REMOVE ALL AGGREGATE AND FOREIGN MATTER, PROVIDED TOPSOIL EXCAVATED FROM THE SITE.

WATER SERVICE TO BUS BARN:

- SERVICE PIPE: SHALL BE 1" (INSIDE DIAMETER) TYPE K COPPER.
- CURB STOP: FORD B44-444N-NL FOR 1" INSIDE DIAMETER PIPE, MINNEAPOLIS PATTERN.
- CURB BOX: MINNEAPOLIS PATTERN BASE, SIZE 1.25".
- SERVICE SADDLE: FORD FS313-905-CC4
- CORPORATION STOP: FORD F1000-4-NL

'OR EQUAL' FITTINGS ARE ACCEPTABLE.

VERIFY CONNECTION LOCATIONS WITH MECHANICAL DRAWINGS. CONNECT TO EXISTING 8" PVC WATER MAIN TO BE INSTALLED BY OTHERS.

SANITARY SEWER SERVICE:

- SERVICE PIPE: SHALL BE 1.5" (INSIDE DIAMETER) 200 PSI POLYETHYLENE (NO SPLICES) WITH STIFFENERS AT CORPORATION AND CURB STOP CONNECTIONS.
- CURB STOP: FORD - B61-666M FOR 1.5" INSIDE DIAMETER PIPE, MINNEAPOLIS PATTERN.
- CURB BOX: MINNEAPOLIS PATTERN BASE, SIZE 1.25".
- STAINLESS STEEL STIFFENERS: FORD - FOR 1.5" POLYETHYLENE PIPE.
- CHECK VALVE: INLINE SINGLE CHECK, AY McDONALD STYLE 701 FOR 1.5" SERVICE LINE. INSTALL IN PUMP STATION BASIN.

'OR EQUAL' FITTINGS ARE ACCEPTABLE.

EROSION CONTROL NOTES:

THE CONTRACTOR SHALL PROVIDE INLET PROTECTION AT ALL TIMES UNTIL FINAL STABILIZATION IS ACHIEVED. THE CONTRACTOR WILL NEED TO CHANGE THE TYPE OF INLET PROTECTION TO FIT THE WORK BEING PERFORMED. THE DETAILS SHOWN ARE TO BE USED AND DETERMINED BY THE PLACE OF CONSTRUCTION. OTHER TYPES OF INLET PROTECTION MAY BE ALLOWED.

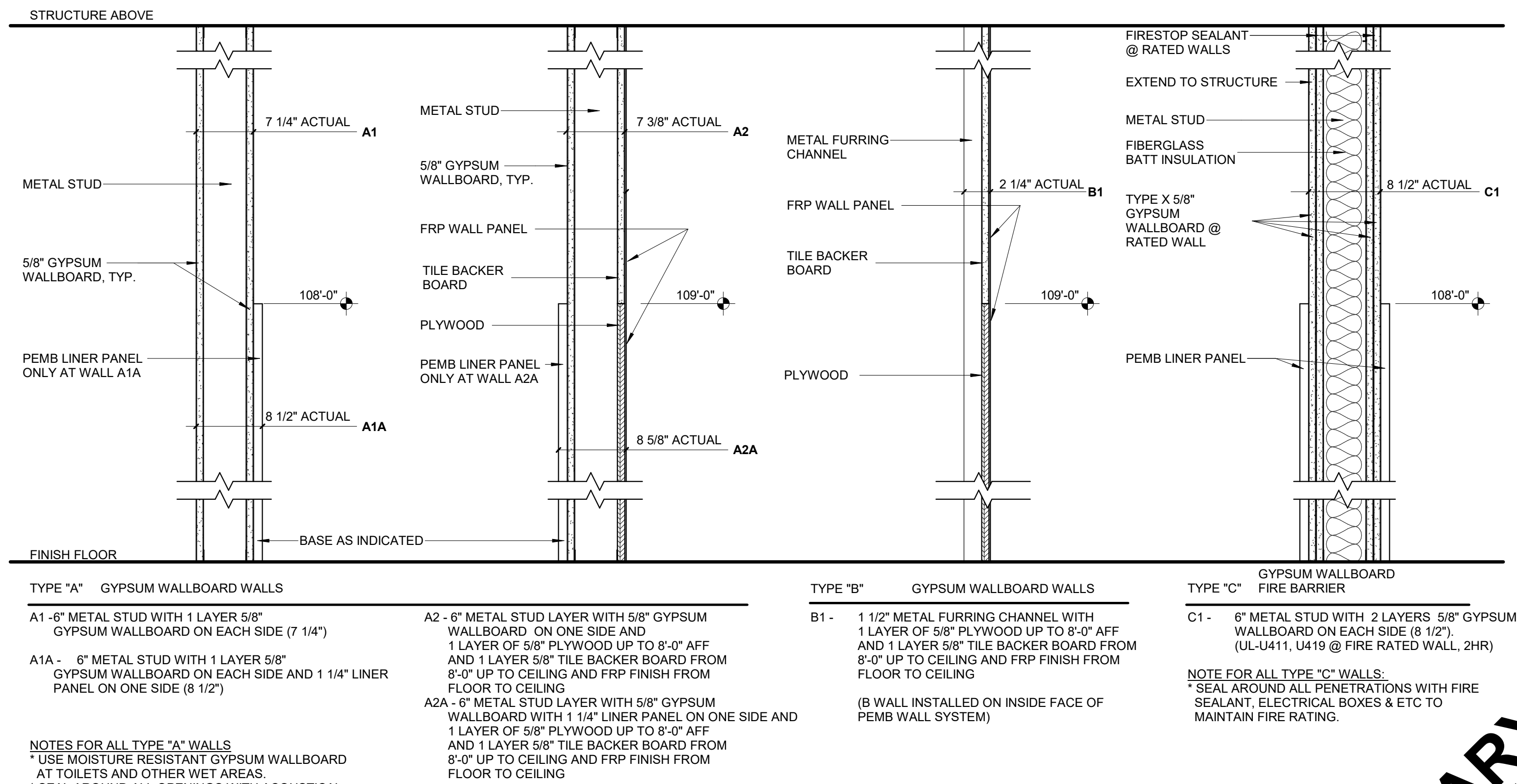
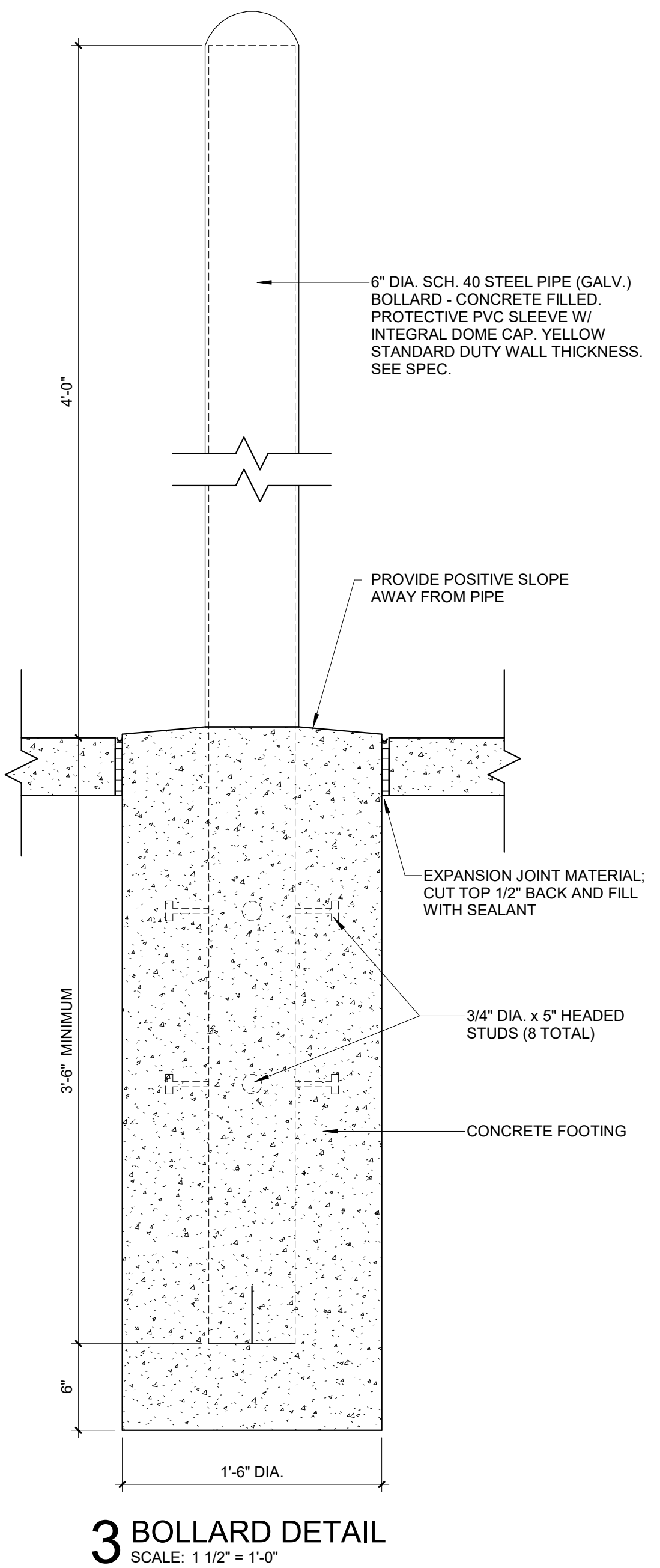
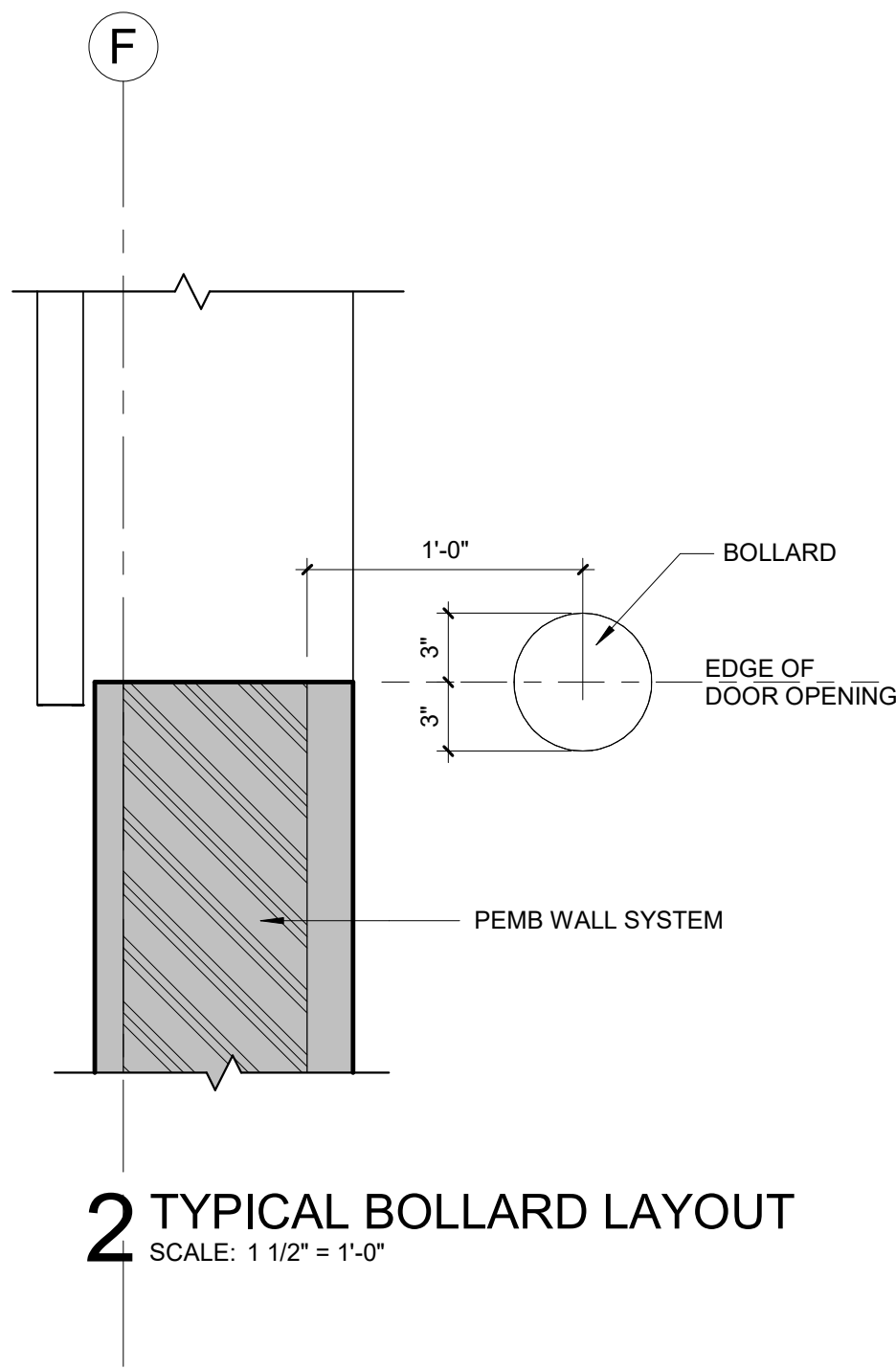
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY AND AFTER ALL WEATHER EVENTS, NON-COMPLYING EQUIPMENT SHALL BE FIXED WITHIN THE WORKING DAY.

THE CONTRACTOR SHALL TAKE STEPS TO CONTROL SOIL EROSION AND FUGITIVE DUST DURING CONSTRUCTION. IF NECESSARY, CHECK DAMS, SEDIMENT TRAPS OR ADDITIONAL SILT FENCE (NOT INDICATED ON THE PLANS) SHALL BE USED TO RETAIN SILT AND PREVENT SILT FROM ENTERING THE SEWER SYSTEM. THIS WORK SHALL BE PAID FOR AS PER PAY ITEMS IN THE PROPOSAL. THE CONTRACTOR SHALL CONSTRUCT EROSION CONTROL PRIOR TO ANY GRADING ON THE PROJECT IN ORDER TO PREVENT SILT TRANSPORT AND SOIL TRACKING INTO PUBLIC RIGHT-OF-WAY. CONTRACTOR SHALL MAINTAIN AND WATER HAIL ROADS TO CONTROL FUGITIVE DUST.

SILT FENCE SHOULD BE INSPECTED WEEKLY AND AFTER RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM BEHIND FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO 1/3 THE HEIGHT OF THE FENCE ABOVE GRADE. INSPECT THE BASE OF THE FENCE TO ENSURE THAT NO GAPS HAVE DEVELOPED AND RE-TRENCH AS NECESSARY. INSPECT FENCE POSTS TO ENSURE THAT THEY ARE PROPERLY SUPPORTING THE FENCE. STRAIGHTEN, RESET AND ADD ADDITIONAL POSTS IF NECESSARY. IF FILTER FABRIC IS RIPPED, DAMAGED OR DETERIORATED, REPLACE IT IN ACCORDANCE WITH THE ORIGINAL SPECIFICATIONS & DETAILS.

THE CONTRACTOR SHALL MAKE PROVISIONS TO MAINTAIN DRAINAGE ON/ALONG ALL STREETS ADJACENT TO THE PROJECT THROUGHOUT THE CONSTRUCTION PERIOD.

CONTRACTOR SHALL HAVE A PERSON ON CALL TO RESPOND TO FLOODING THAT MAY OCCUR DURING NON-WORKING HOURS. CONTRACTOR SHALL HAVE PUMPING EQUIPMENT ON SITE IN CASE OF A LARGE STORM EVENT. CONTRACTOR SHALL PUMP STORM WATER OFF SITE IF NEEDED AT NO ADDITIONAL COST TO THE PROJECT. CONTRACTOR SHALL NOT PUMP WATER CONTAINING SEDIMENT OFF SITE. MAKE PROVISIONS FOR FILTERING WATER TO BE PUMPED.



SEAL AROUND ALL PENETRATIONS WITH FIRE
SEALANT, ELECTRICAL BOXES & ETC TO
MAINTAIN FIRE RATING


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1. THESE CONSTRUCTION DRAWINGS SHEETS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT MANUAL.
2. WHEN DRAWINGS AND PROJECT MANUAL CONFLICT, BIDDER SHALL REQUEST WRITTEN CLARIFICATION FROM THE ARCHITECT PRIOR TO BIDDING. IF CLARIFICATION IS NOT OBTAINED PRIOR TO BIDDING, THE FOLLOWING SHALL BE USED: MATERIALS, TYPE AND QUANTITY SHALL BE DETERMINED BY DRAWINGS, QUALITY IS DETERMINED BY PROJECT MANUAL.
3. INCONSISTENCIES OR CONFLICTS ARE TO BE REPORTED IMMEDIATELY TO THE ARCHITECT.
4. STRUCTURAL DRAWINGS GOVERN FOR SIZES, SPACING, AND CONNECTIONS OF ALL STRUCTURAL MATERIALS AND MEMBERS. IN THE CASE OF DISCREPANCIES, CONSULT WITH THE ARCHITECT PRIOR TO CONSTRUCTION.
5. INSTALL VAPOR BARRIERS DIRECTLY BELOW ALL CONCRETE INTERIOR SLAB-ON-GRADE.
6. REFER TO STRUCTURAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF FLOOR OPENINGS. COORDINATE ADDITIONAL OPENINGS REQUIRED WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7. PROVIDE AND MAINTAIN PROPER PROTECTION OF EXISTING WORK. MAINTAIN CLEAR ACCESS TO ALL EXISTING AND NEW WORK THROUGHOUT. PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC. AS REQUIRED TO PROTECT THE PUBLIC DURING THE PERIOD OF CONSTRUCTION. DAMAGE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL LEFTOVER MATERIALS, DEBRIS, TOOLS, AND EQUIPMENT INVOLVED AT THE CONCLUSION OF THE INSTALLATION. THE CONTRACTOR SHALL KEEP ALL WORK AREAS CLEAN. ALL FIXTURES AND RELATED MATERIALS TO BE STORED OR EXPOSED AS PER OWNER'S INSTRUCTIONS.
9. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT WORKERS FROM INJURY OR EXPOSURE TO DANGEROUS MATERIALS DURING THE WORK BY THE CONTRACTOR, AS PER OSHA REGULATIONS.
10. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT / ENGINEER IF ADDITIONAL DIMENSIONS ARE REQUIRED OR DISCREPANCIES DISCOVERED.
11. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SHOP DRAWING APPROVAL AND CONSTRUCTION. SEE PROJECT MANUAL WHERE FIELD VERIFICATION CANNOT BE OBTAINED PRIOR TO SHOP DRAWING APPROVAL.
12. DIMENSIONS ARE NOMINAL. DIMENSIONS FOR MASONRY WALLS ARE GIVEN FROM FACE TO FACE OF WALL. DIMENSIONS FOR STUD WALL IS TO FACE OF FINISH WALL OR TO CENTER OF WALL, UNLESS NOTED.
13. ABBREVIATIONS AND MATERIAL REPRESENTATIONS ON ARCHITECTURAL DRAWINGS ARE SHOWN ON 'ABBREVIATIONS' AND 'MATERIAL LEGEND'.
14. SEE TYPICAL MOUNTING HEIGHTS FOR EQUIPMENT AND FIXTURES ON SHEET A-A.7.
15. FOR ADDITIONAL INFORMATION REFER TO PARTIAL ENLARGED PLANS OR DETAILS AS NOTED ON THE DRAWINGS.
16. REFER TO CIVIL DRAWINGS FOR ALL STEEL PIPE BOLLARDS REQUIRED.

SCALE: 1 1/2" = 1'-0" NOTE: REFER TO UL FIRE-RESISTANCE DESIGN FOR ADDITIONAL INFORMATION @ FIRE RATED WALLS

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SHEET
A-A1.1



FEH DESIGN
ARCHITECTURE / ENGINEERING / INTERIORS

SIOUX CITY, IA
(712) 252-3889

DES MOINES, IA
(515) 288-2000


DUBUQUE, IA
(563) 583-4900

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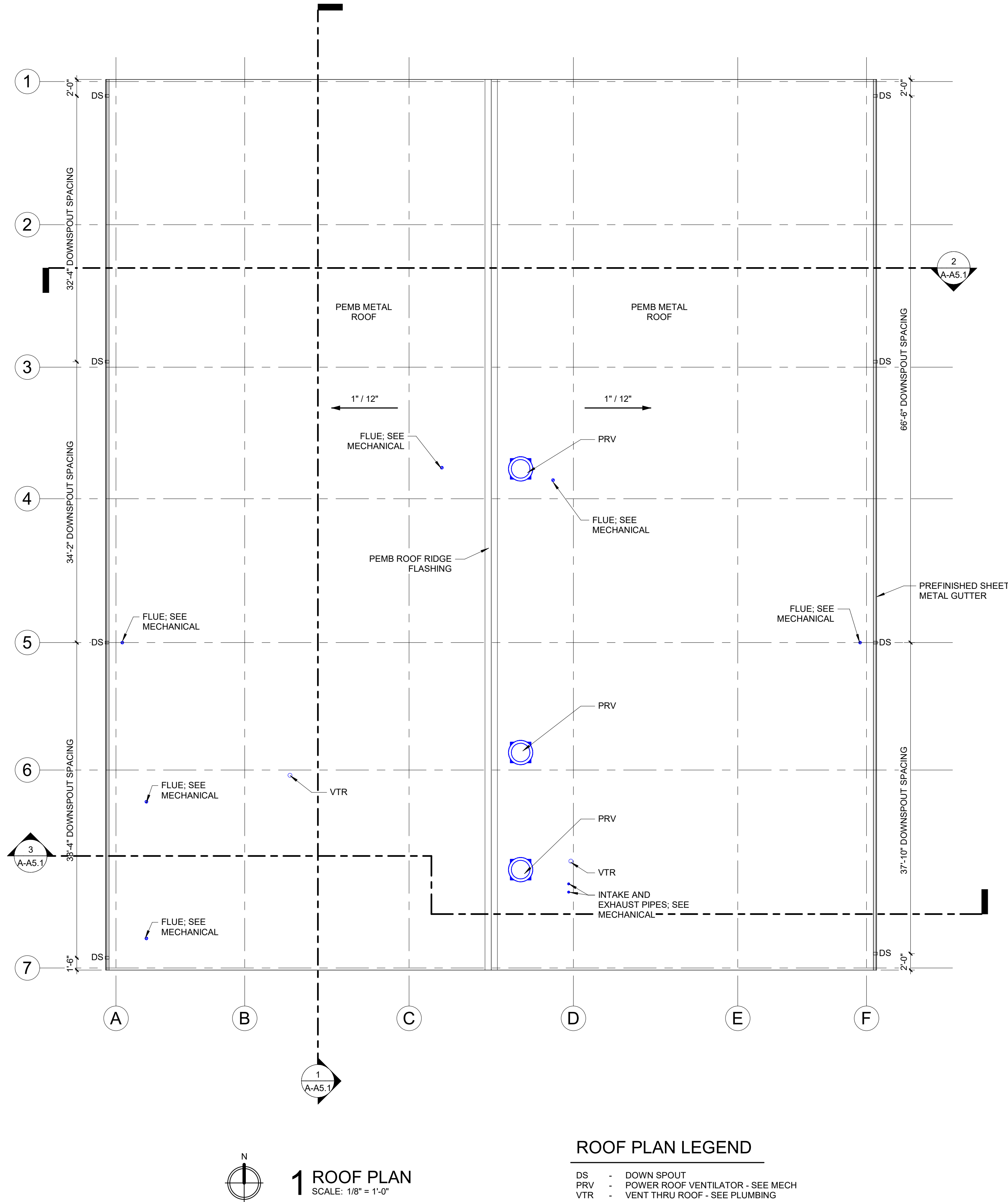
Stress Control, Inc.

383 12th Street, NE
Stress Control, Iowa 51250
712-722-0028
www.stresscontrol.com

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RAPIDS, IA 51246

A-A1.1



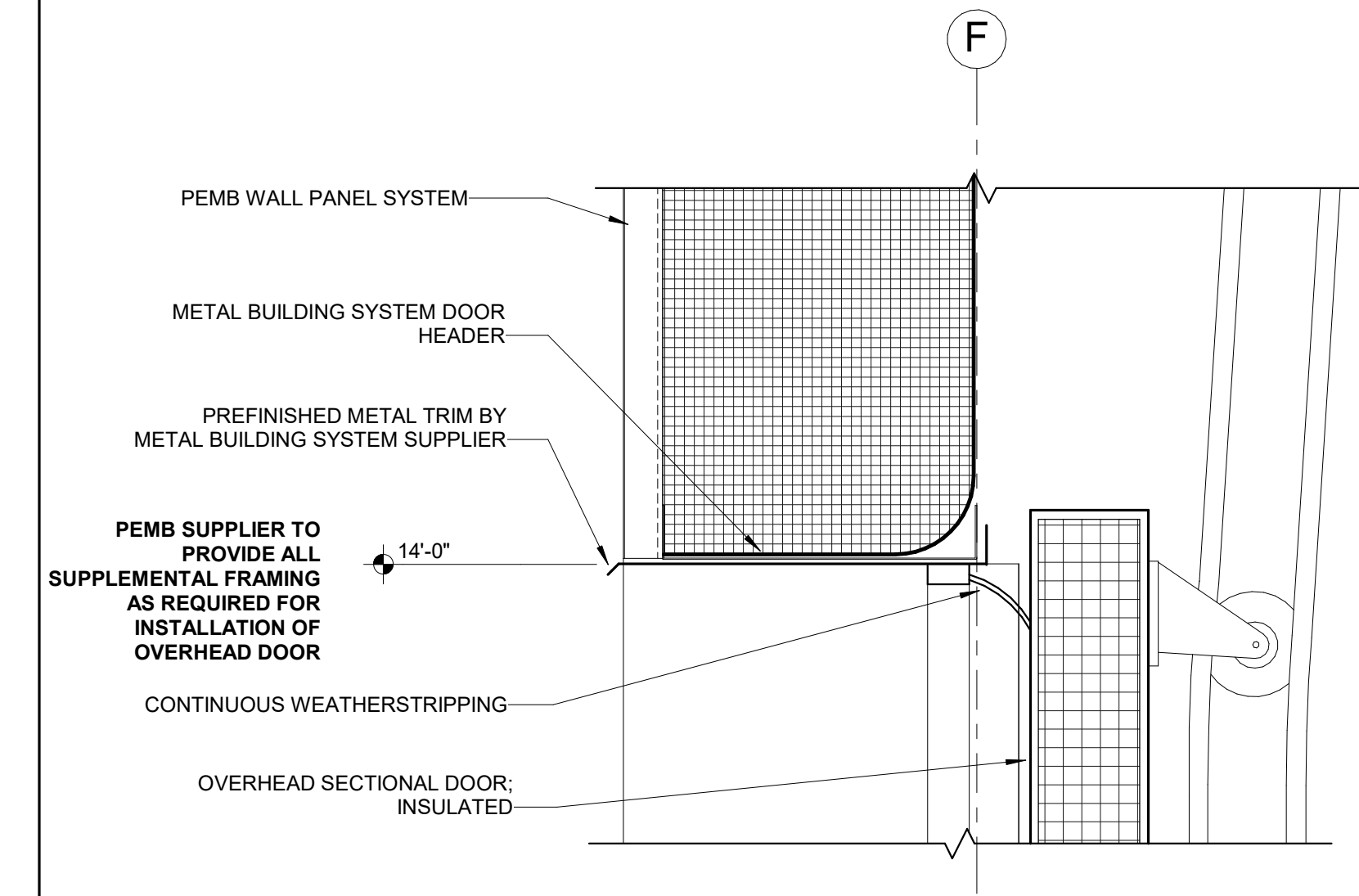
1 ROOF PLAN
SCALE: 1/8" = 1'-0"

ROOF PLAN LEGEND

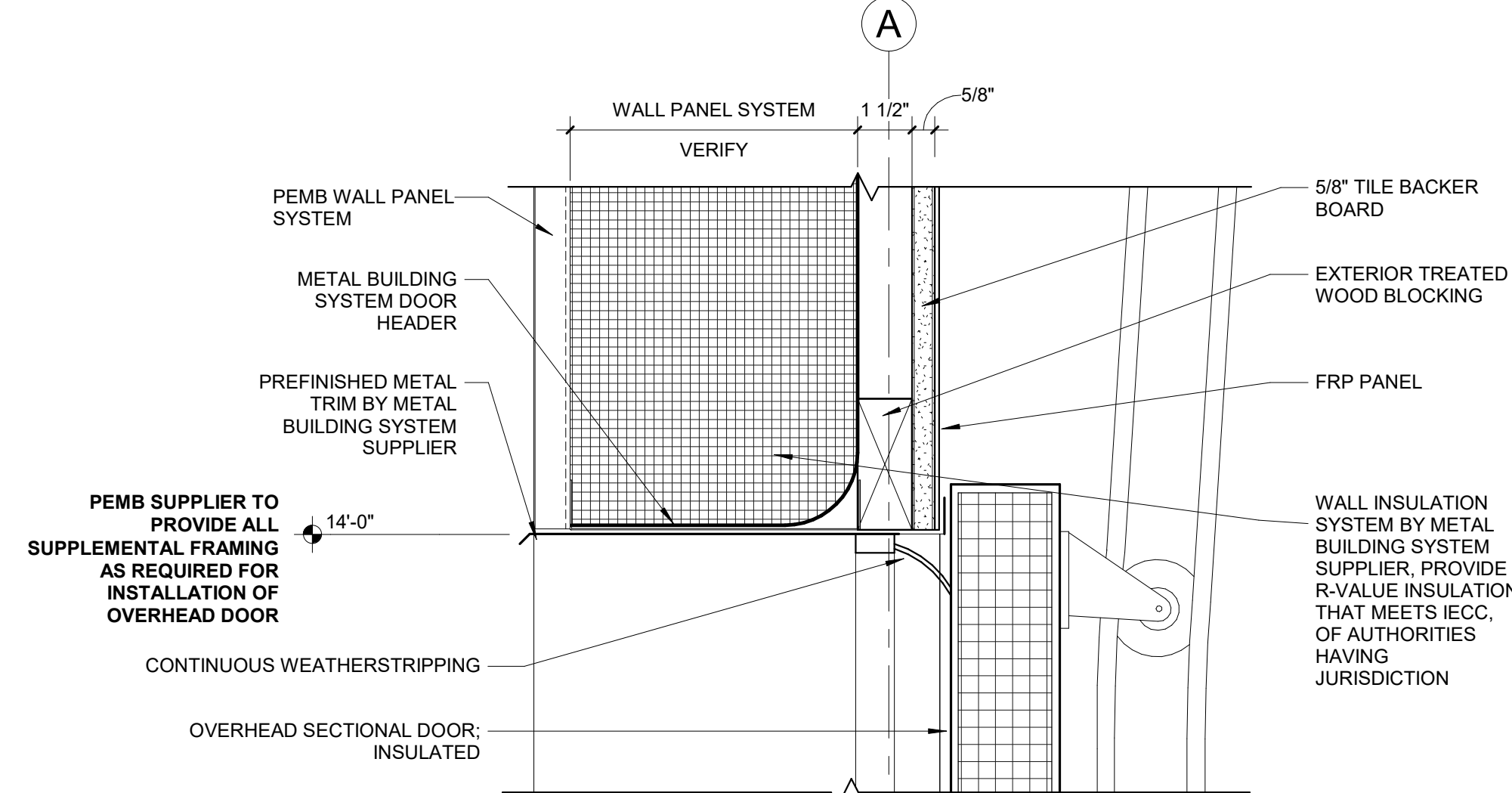
- DS - DOWN SPOUT
- PRV - POWER ROOF VENTILATOR - SEE MECH
- VTR - VENT THRU ROOF - SEE PLUMBING

PRELIMINARY
NOT FOR CONSTRUCTION

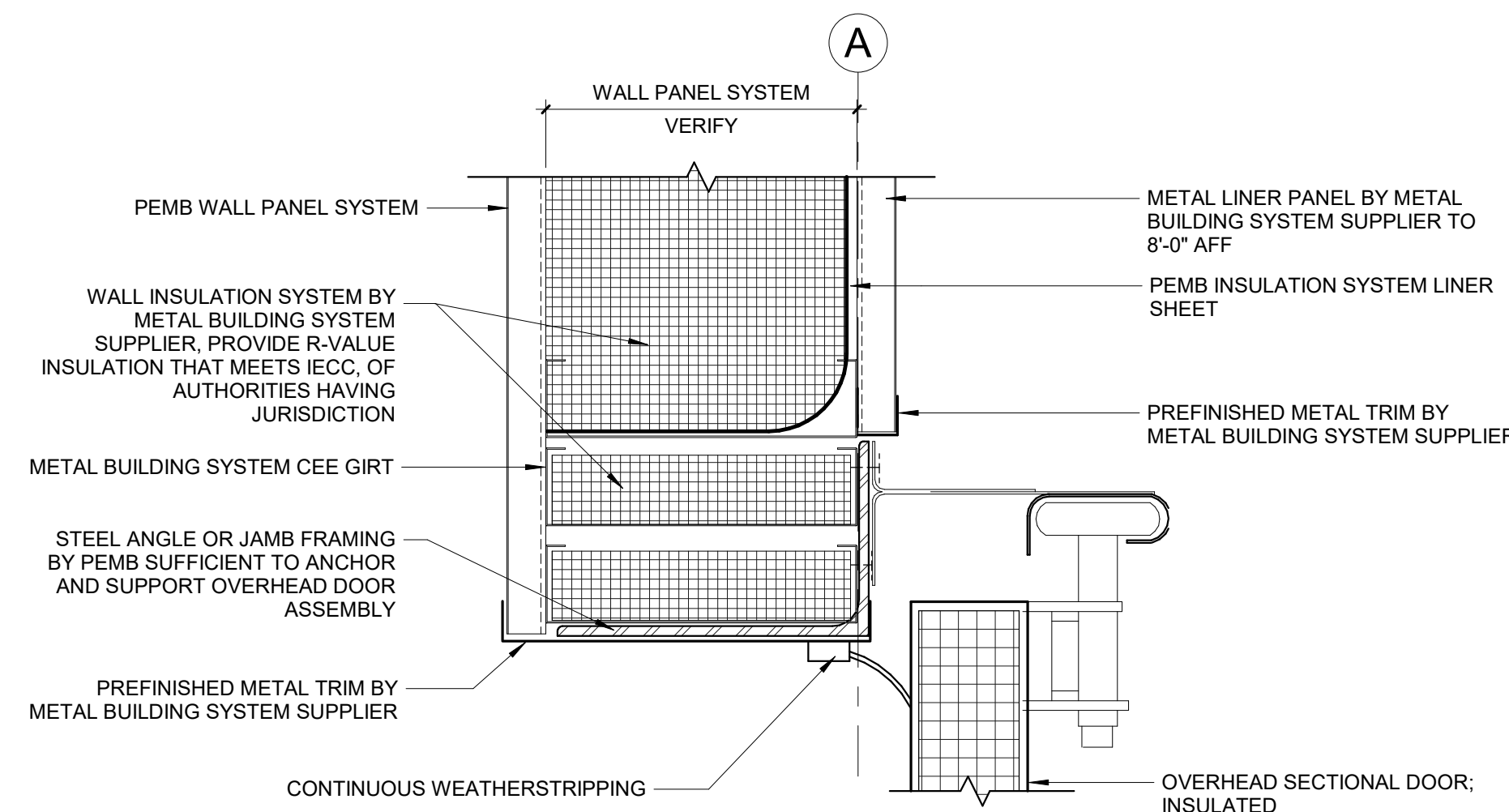
 ARCHITECTURE / ENGINEERING / INTERIORS SIOUX CITY, IA (712) 252-3889 DES MOINES, IA (515) 288-2000 DUBUQUE, IA (663) 593-4900 OCONOMOWOC, WI (262) 968-2055 © FEH DESIGN FEHDESIGN.COM		 Engineering Design Associates, Inc. 385 5 th Street, NE Sioux City, IA 51101 712-252-3889 www.edaengineers.com
	IN ASSOCIATION WITH	
PROJECT TITLE CENTRAL LYON COMMUNITY SCHOOL DISTRICT 2024 FACILITY IMPROVEMENTS HARK BOULEVARD ROCK RAPIDS, IA 51246	SHEET TITLE ROOF PLAN	BID PACKAGE A BUS BARN
DATE ISSUED 10/17/2023	REV. NO.	DATE
PROJECT NUMBER 2022018.07	SHEET A-A2.1	



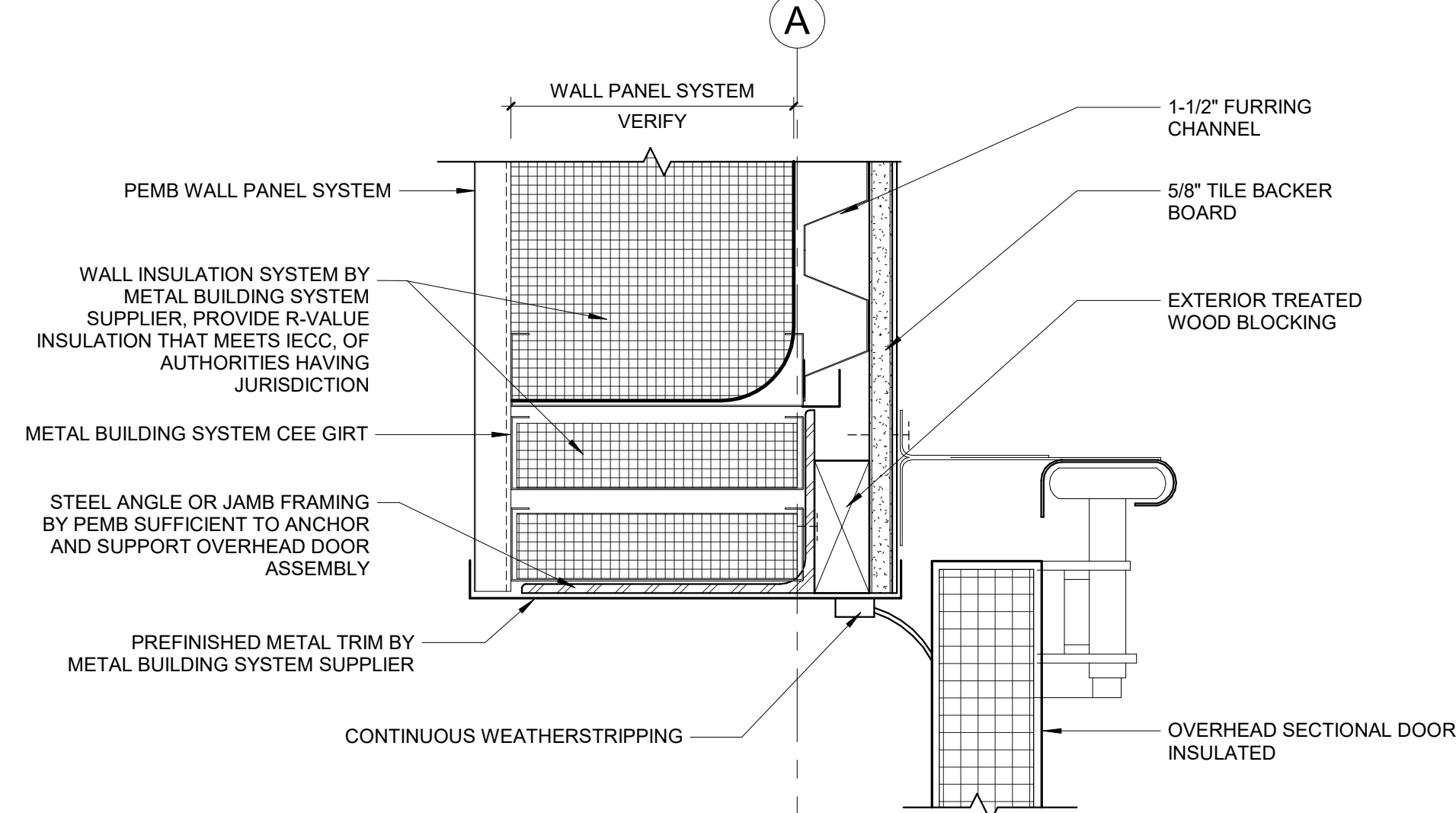
1 OH DOOR HEAD FRAME DETAIL
SCALE: 3" = 1'-0"



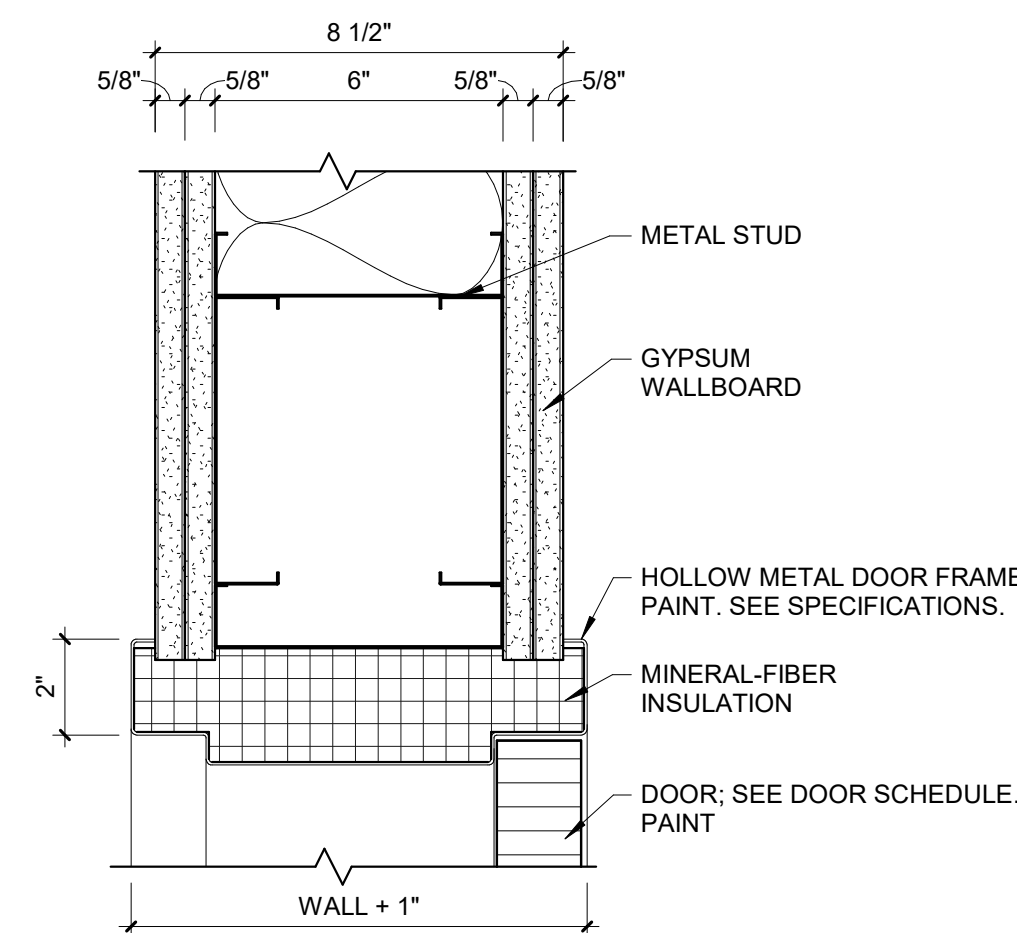
2 WASHBAY OH DOOR HEAD FRAME
SCALE: 3" = 1'-0"



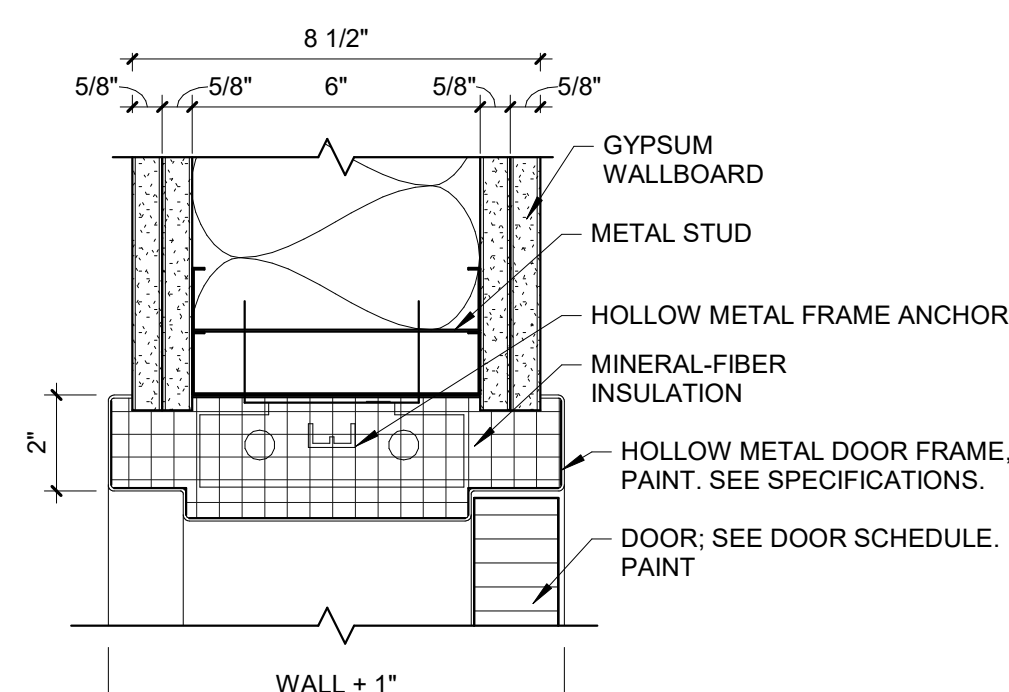
3 OH DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



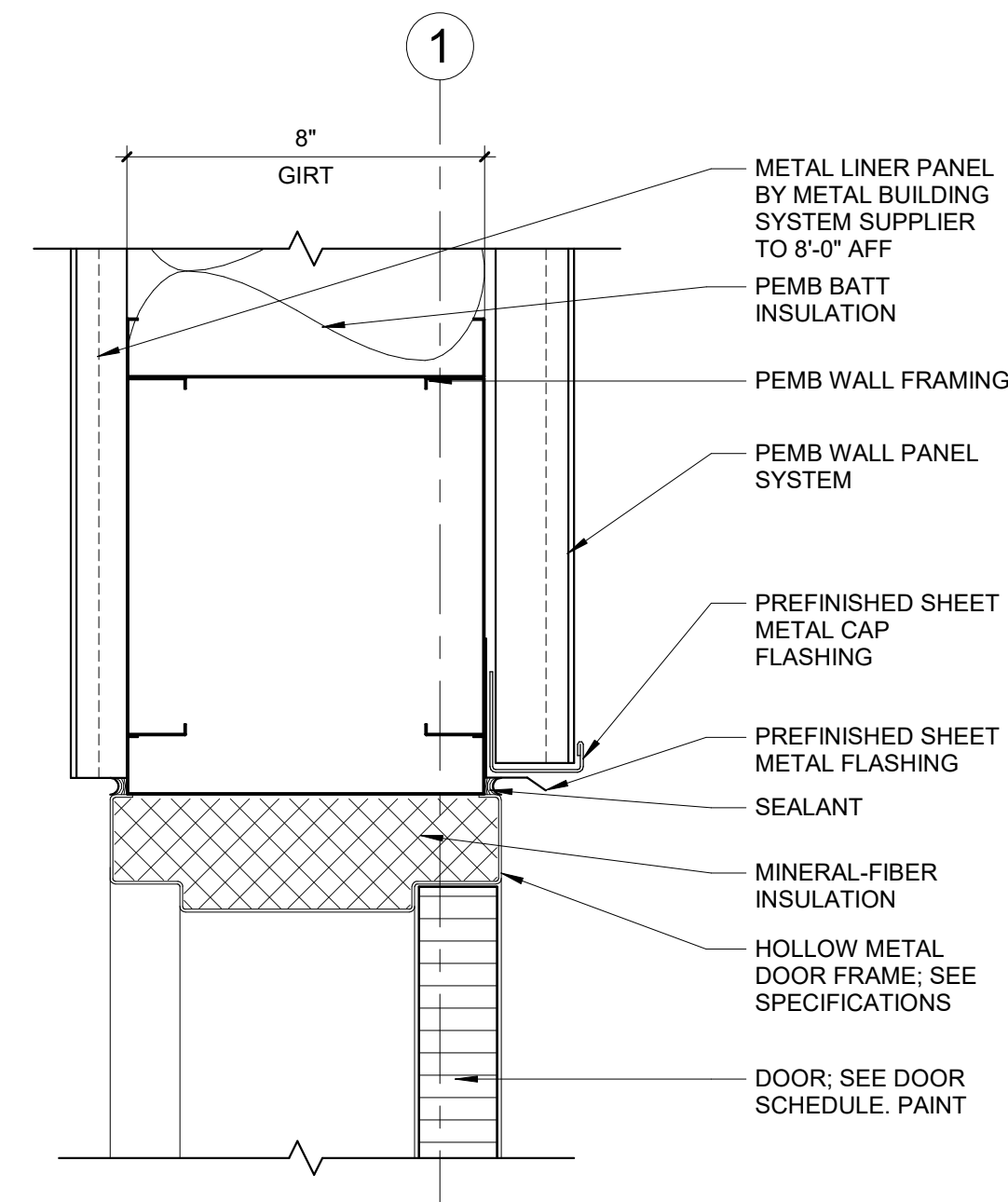
4 WASHBAY OH DOOR JAMB
SCALE: 3" = 1'-0"



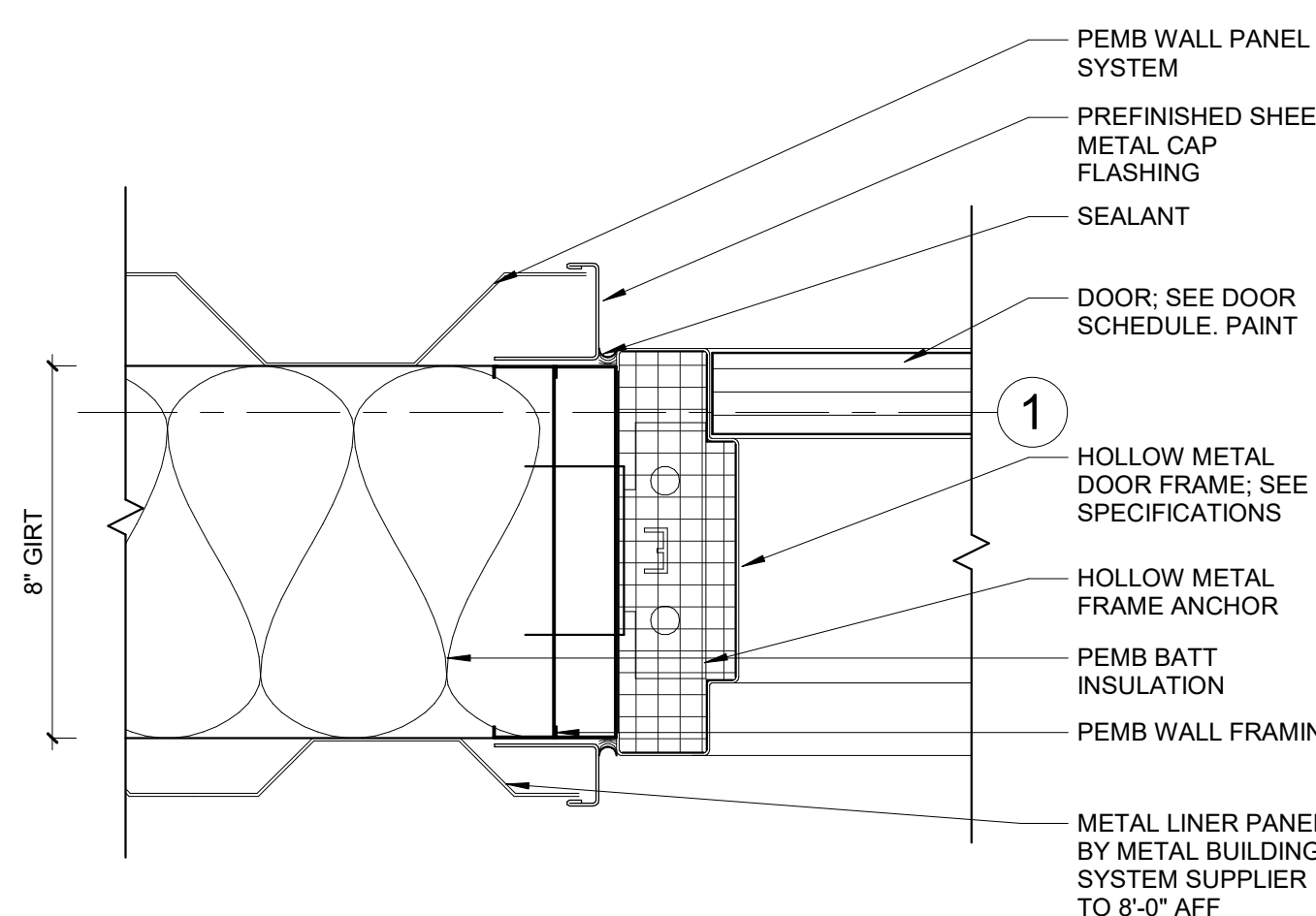
7 HEAD
SCALE: 3" = 1'-0"



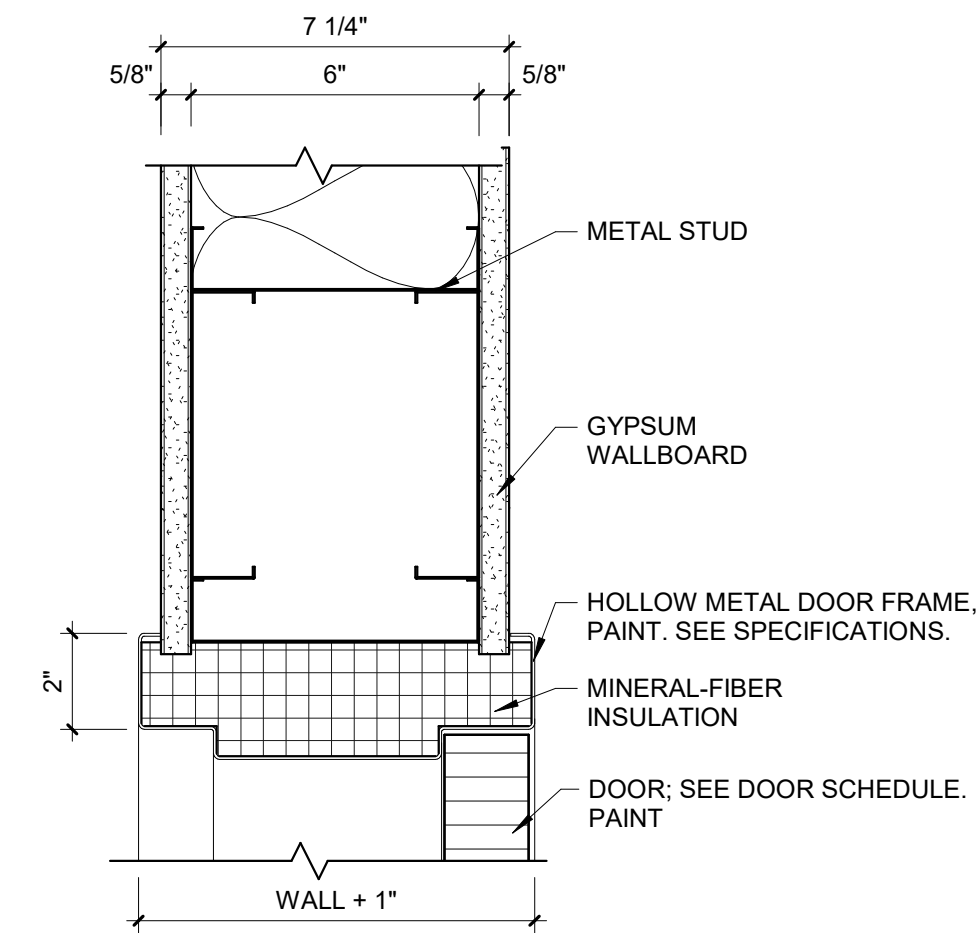
8 JAMB
SCALE: 3" = 1'-0"



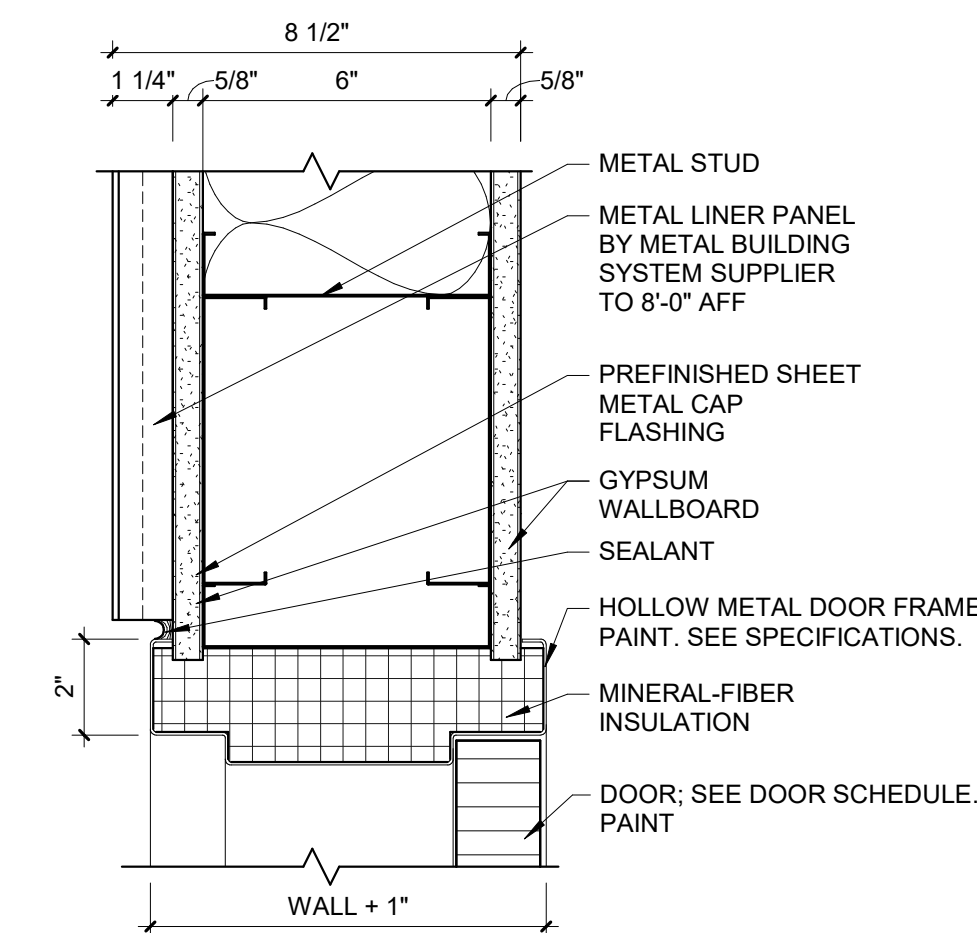
9 EXTERIOR DOOR HEAD
SCALE: 3" = 1'-0"



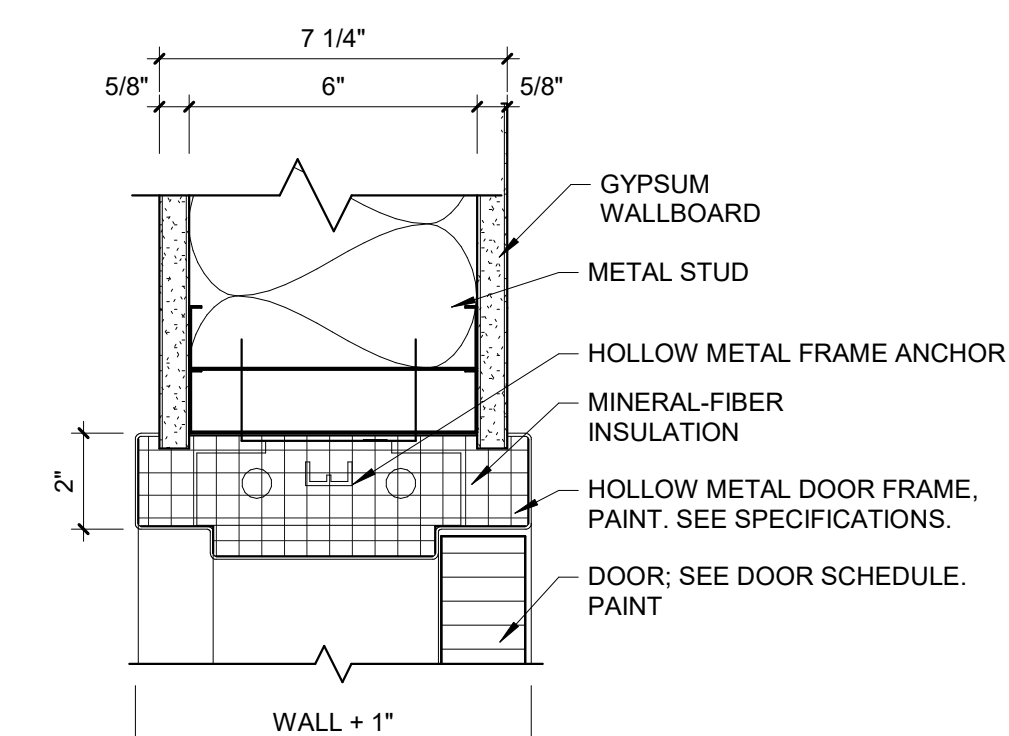
10 EXTERIOR DOOR JAMB
SCALE: 3" = 1'-0"



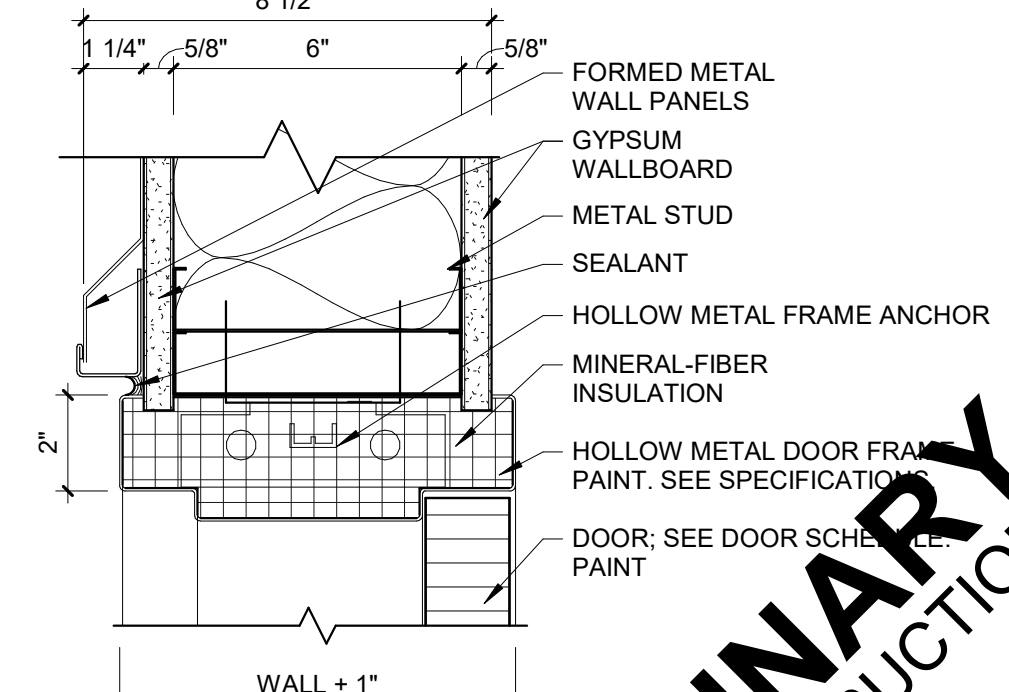
5 HEAD
SCALE: 3" = 1'-0"



11 HEAD
SCALE: 3" = 1'-0"



6 JAMB
SCALE: 3" = 1'-0"



12 JAMB
SCALE: 3" = 1'-0"

NUMBER	DOOR SCHEDULE												HARDWARE SET	COMMENTS
	DOOR					FRAME				DETAILS				
	SIZE		DOOR TYPE	DOOR MATERIAL	GLAZING	SIZE		FRAME HEIGHT	FRAME TYPE	HEAD	JAMB	SILL		
	WIDTH	HEIGHT				FRAME WIDTH	FRAME TYPE							
D101.1	3'-0"	7'-0"	F	HM	-	3'-4"	7'-2"	HM-1	9/A-A3.1	10/A-A3.1	-	1		
D102.1	3'-0"	7'-0"	F	HM	-	3'-4"	7'-2"	HM-1	11/A-A3.1	12/A-A3.1	-	3		
D103.1	3'-0"	7'-0"	F	HM	-	3'-4"	7'-2"	HM-1	5/A-A3.1	6/A-A3.1	-	4		
D104.1	3'-0"	7'-0"	F	HM	-	3'-4"	7'-2"	HM-1	11/A-A3.1	12/A-A3.1	-	2		
D104.2	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	2/A-A3.1	4/A-A3.1	4/A-S1.0	-		
D105.1	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D105.2	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D105.3	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D105.4	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D106.1	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D106.2	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D106.3	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D106.4	3'-0"	7'-0"	F	HM	-	3'-4"	7'-2"	HM-1	9/A-A3.1	10/A-A3.1	-	1A		
D106.6	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D106.7	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D106.8	12'-0"	14'-0"	OH	ST	-	12'-0"	14'-0"	-	1/A-A3.1	3/A-A3.1	4/A-S1.0	-		
D106.9	3'-6"	7'-0"	F	HM	-	4'-0"	7'-2"	HM-1	7/A-A3.1	8/A-A3.1	-	2A		
														90 MIN RATED

DOOR / WINDOW SCHEDULE LEGEND

MATERIAL

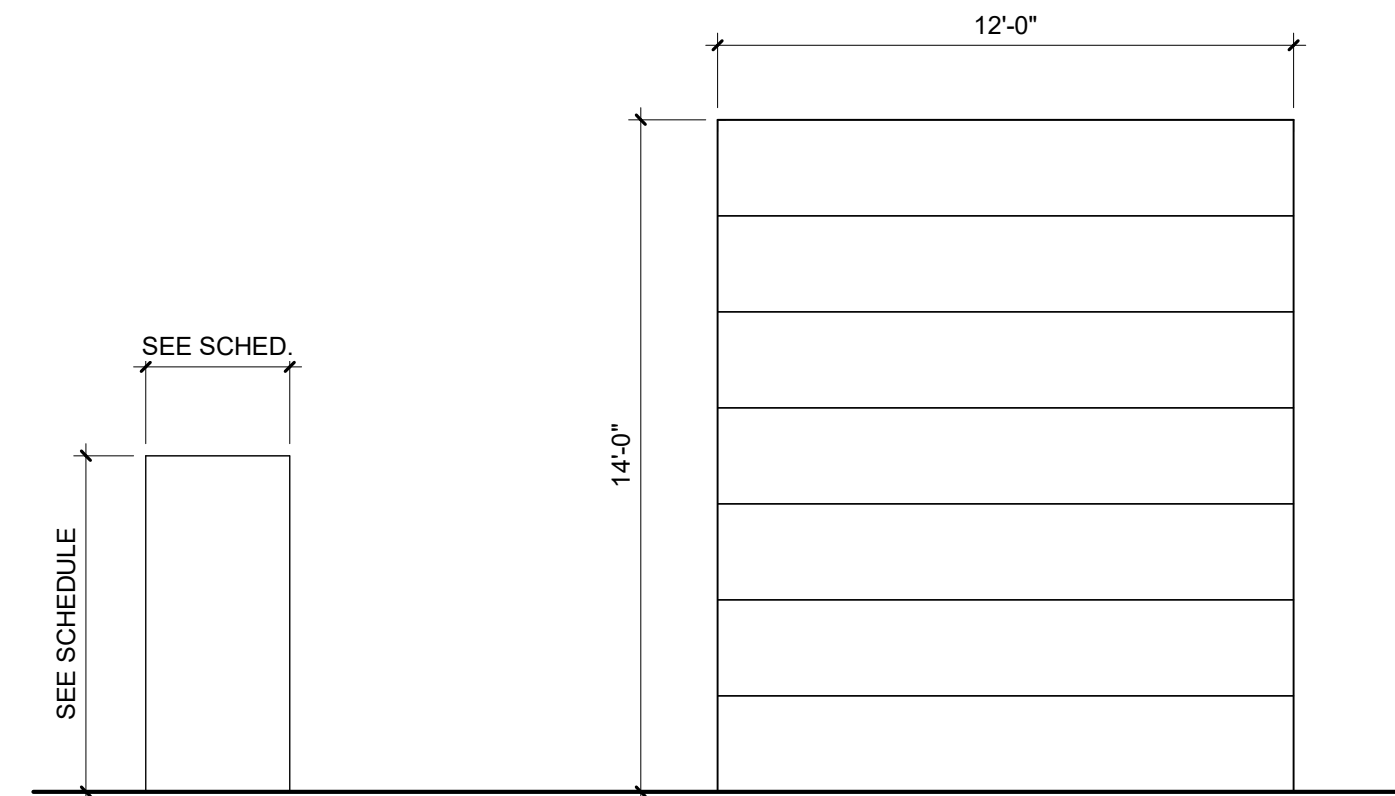
HM HOLLOW METAL
OH OVERHEAD DOOR - SECTIONAL
ST STEEL

GLAZING

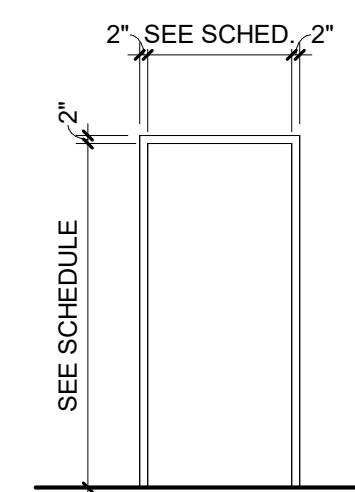
IG INSULATED GLAZING
SG SAFETY GLAZING

DOOR NOTES

- ALL DOORS TO BE 1-3/4" THICK U.O.N.
- ADJUST DOOR CLOSERS SO THAT MAXIMUM EFFORTS TO OPERATE DOORS SHALL NOT EXCEED 5 LBS. FOR INTERIOR DOORS (EXCEPT FIRE DOORS) AS PER STATE HANDICAP REQUIREMENTS.
- GLASS AND GLAZING SHALL COMPLY WITH THE CURRENT INTERNATIONAL BUILDING CODE (IBC) FOR HUMAN IMPACT. GLASS DOORS, ADJACENT PANELS, AND ALL GLAZED OPENINGS WITHIN 18" OF ADJACENT FLOOR SHALL BE OF GLASS APPROVED FOR IMPACT HAZARD.
- DIMENSIONS FOR DOORS, WINDOWS, AND LOUVERS IN CONCRETE MASONRY WALLS ARE NOMINAL FRAME SIZES. COORDINATE MANUFACTURER'S REQUIREMENTS WITH ACTUAL ROUGH OPENING DIMENSIONS.
- WHERE METAL THRESHOLDS ARE CUT TO FIT DOOR JAMBS, PROVIDE SEALANT ALONG EDGES OF THRESHOLD AT JAMB.



DOOR TYPE ELEVATIONS
SCALE: 1/4" = 1'-0"



FRAME TYPE ELEVATION - HM
SCALE: 1/4" = 1'-0"

IN ASSOCIATION WITH



PROJECT TITLE
DOOR SCHEDULE, DOOR, WINDOW AND
FRAME ELEVATIONS, DETAILS

PROJECT TITLE
CENTRAL LYON COMMUNITY SCHOOL DISTRICT
2024 FACILITY IMPROVEMENTS

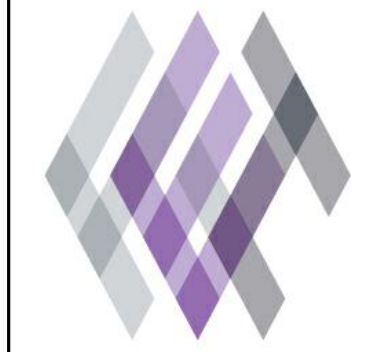
DATE ISSUED 10/17/2023
REV. NO. DATE

PROJECT NUMBER
2022018.07

SHEET
A-A3.1

BID PACKAGE A
BUS BARN

HARK BOULEVARD
ROCK RAPIDS, IA 51246



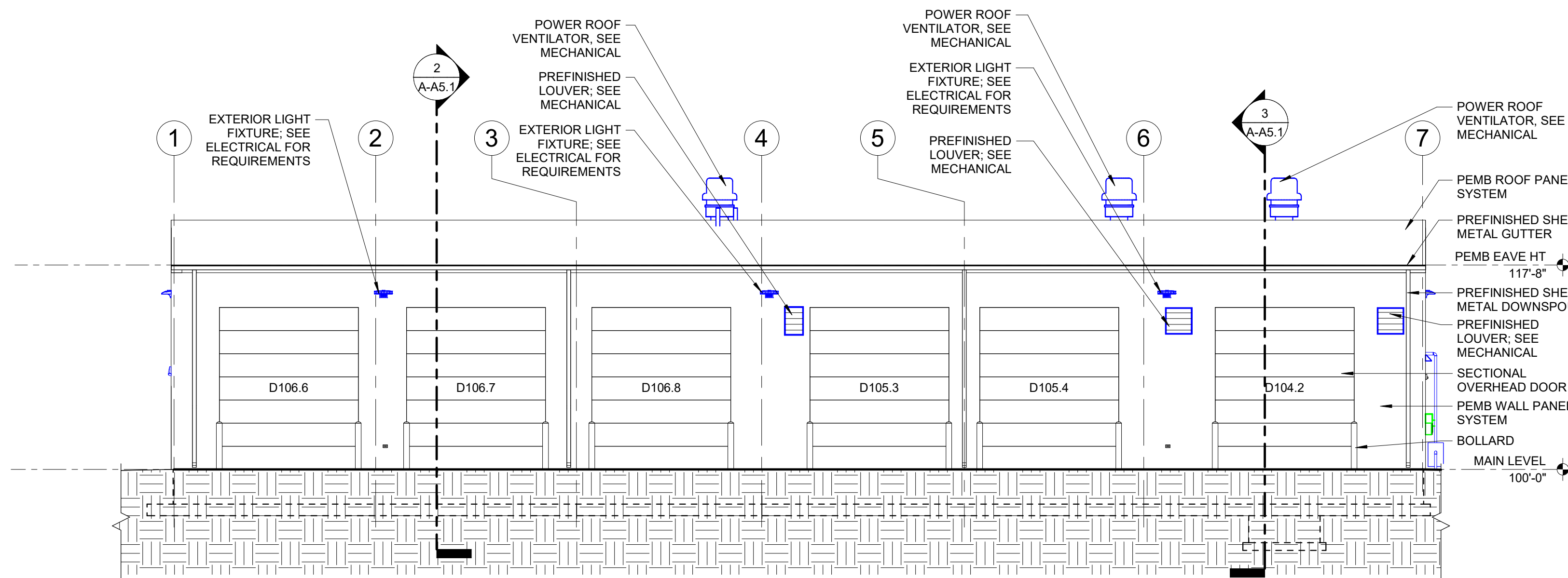
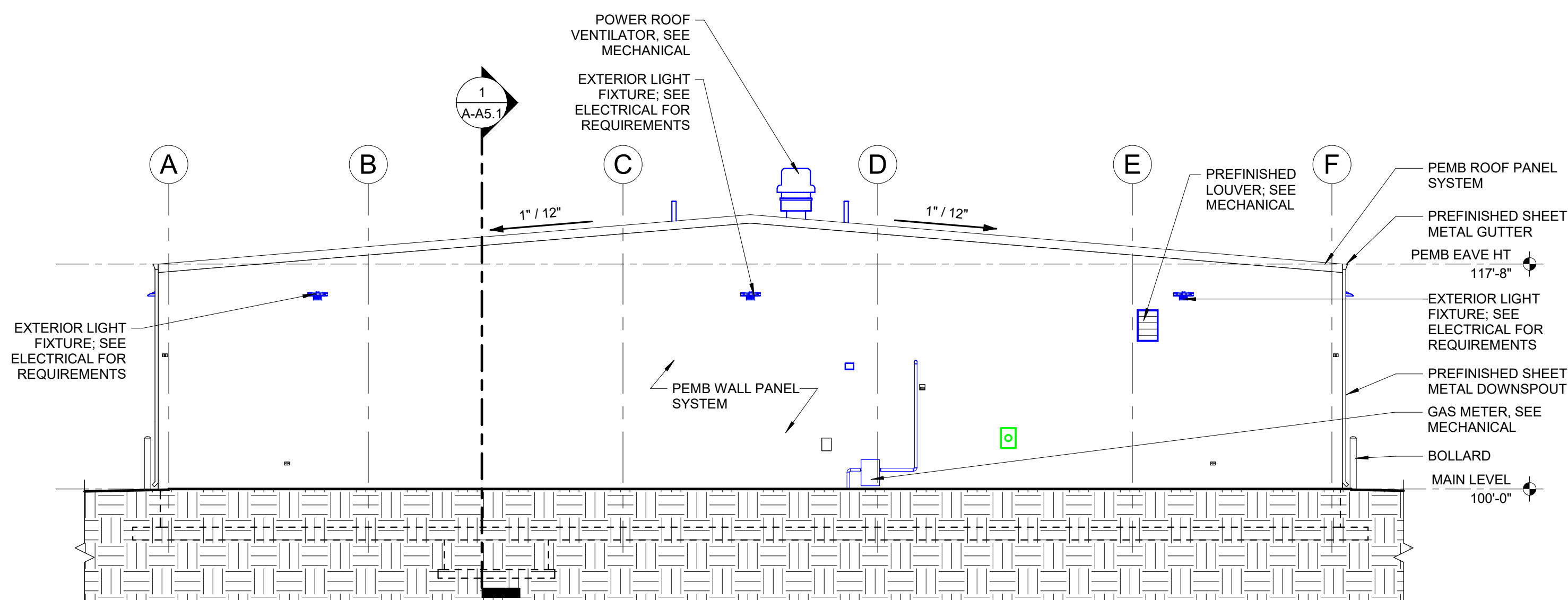
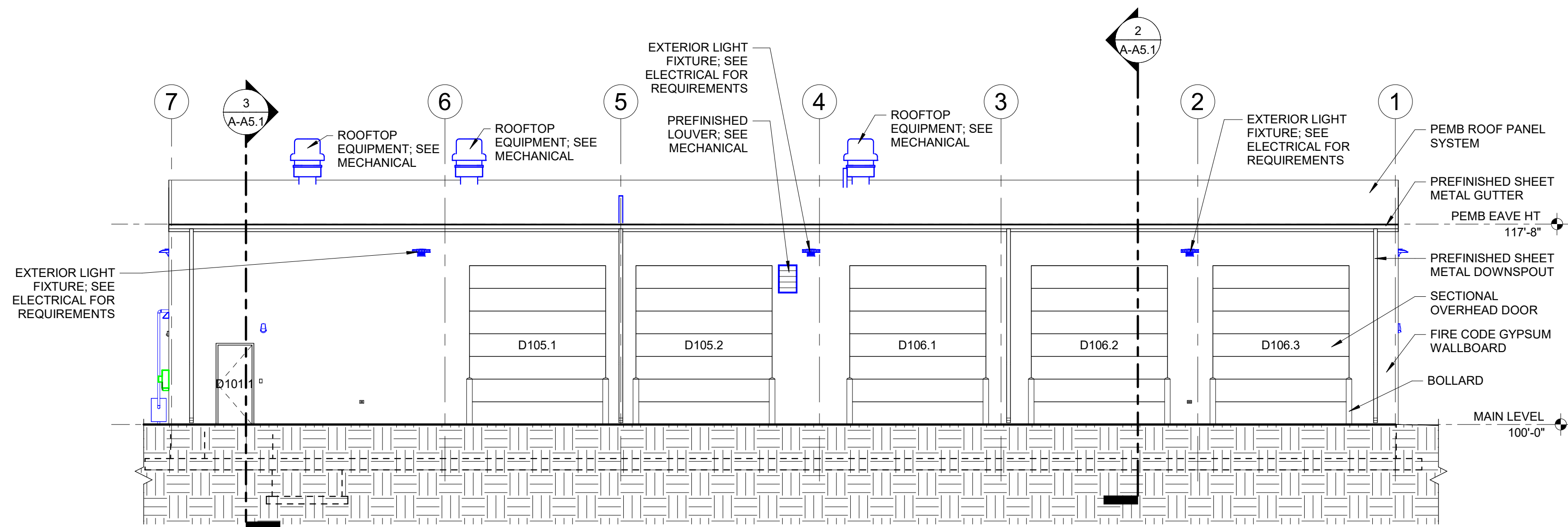
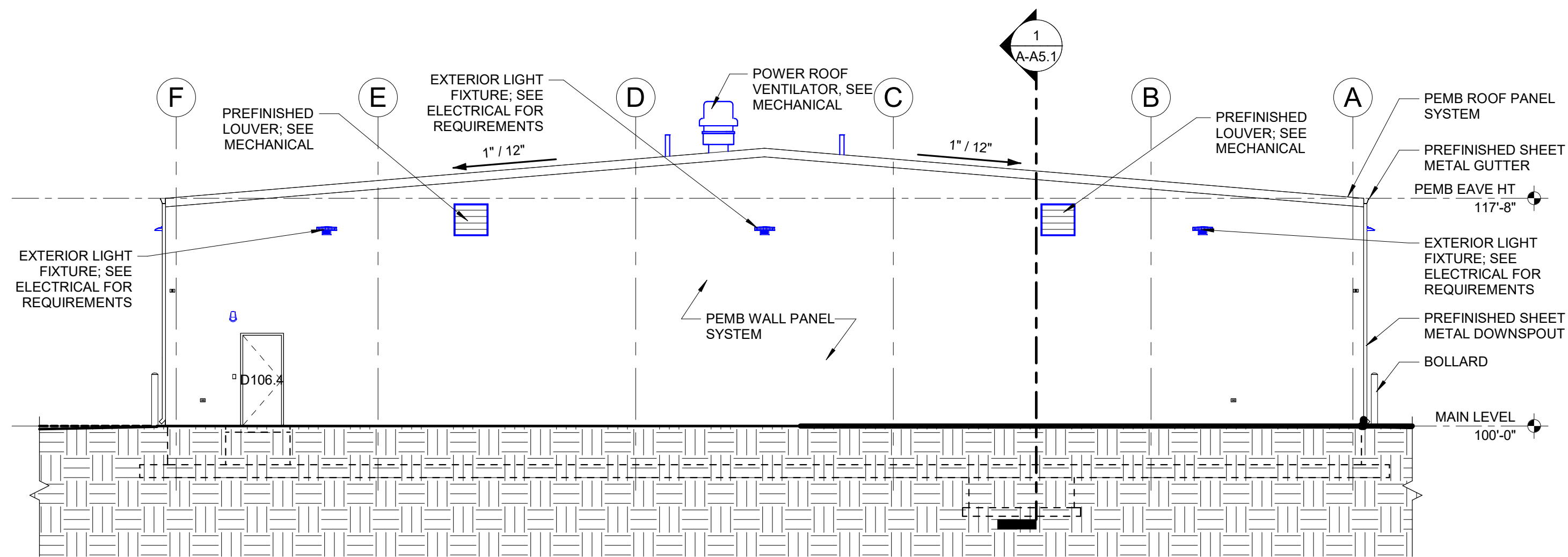
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SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT TITLE
CENTRAL LYON COMMUNITY SCHOOL DISTRICT
2024 FACILITY IMPROVEMENTS

BID PACKAGE A
BUS BARN

DATE ISSUED 10/17/2023
REV. NO. DATE

PROJECT NUMBER
2022018.07

SHEET
A-A4.1

IN ASSOCIATION WITH



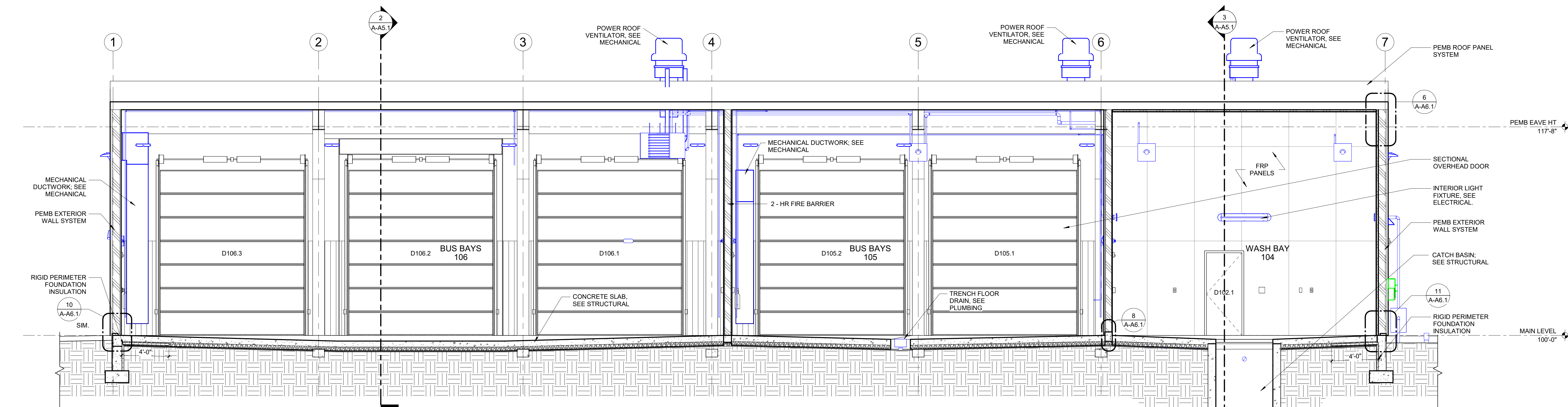
DGR
ENGINEERING



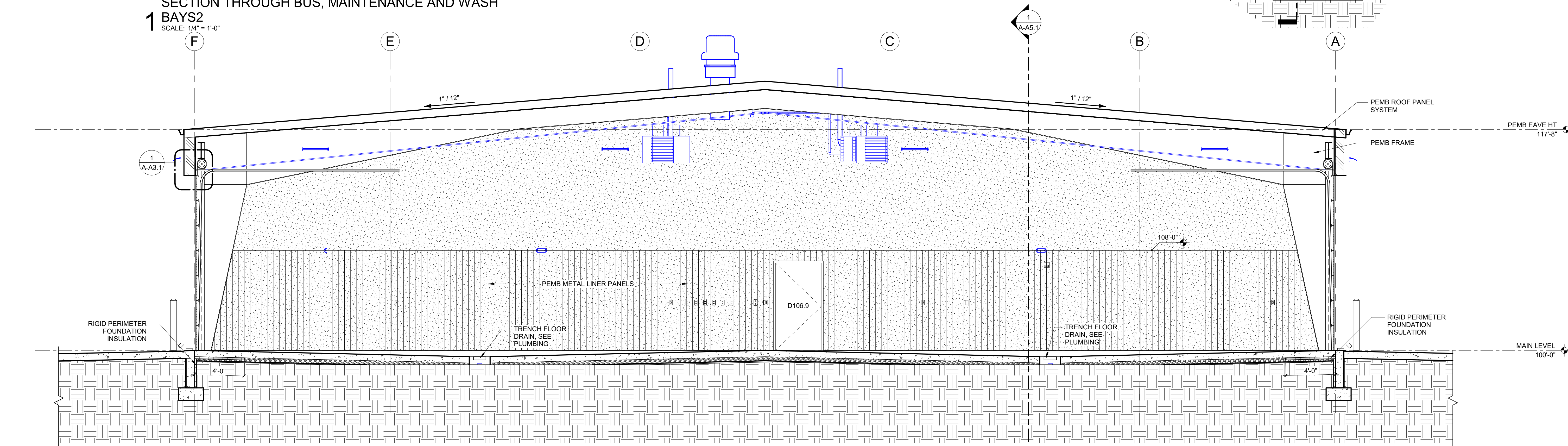
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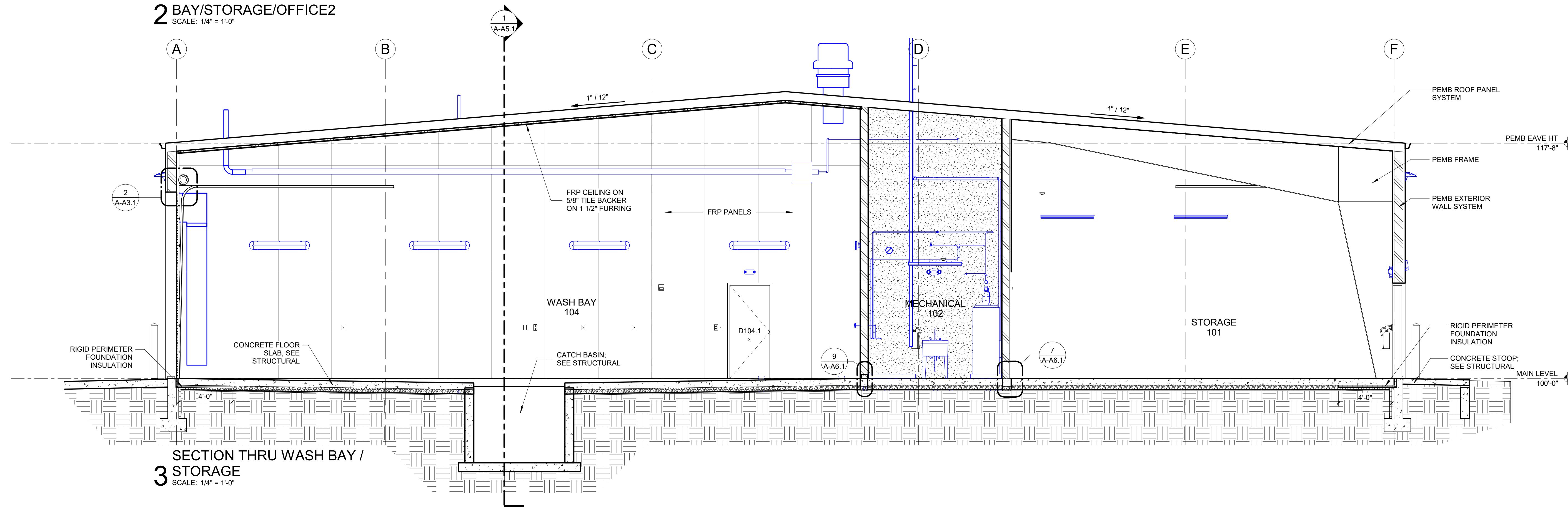
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SECTION THROUGH BUS, MAINTENANCE AND WASH BAYS2
1
SCALE: 1/4" = 1'-0"



SECTION THROUGH MAINTENANCE BAY/STORAGE/OFFICE2
2
SCALE: 1/4" = 1'-0"



SECTION THRU WASH BAY / STORAGE
3
SCALE: 1/4" = 1'-0"

IN ASSOCIATION WITH

SHEET TITLE
BUILDING SECTIONS

PROJECT TITLE
CENTRAL LYON COMMUNITY SCHOOL DISTRICT
2024 FACILITY IMPROVEMENTS

BID PACKAGE A
BUS BARN

HARK BOULEVARD
ROCK RAPIDS, IA 51246

DATE ISSUED 10/17/2023
REV. NO. DATE

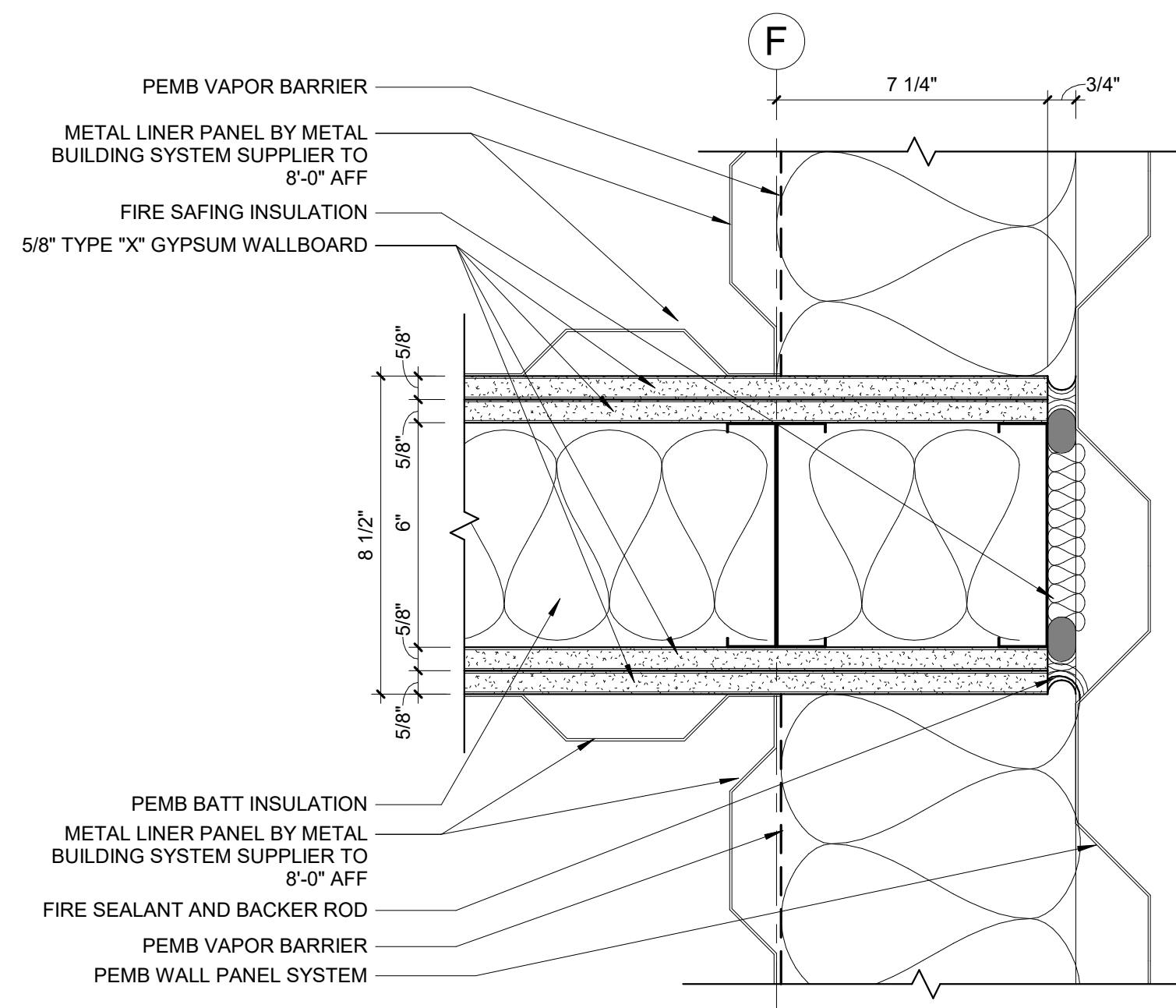
PROJECT NUMBER
2022018.07

SHEET
A-A5.1

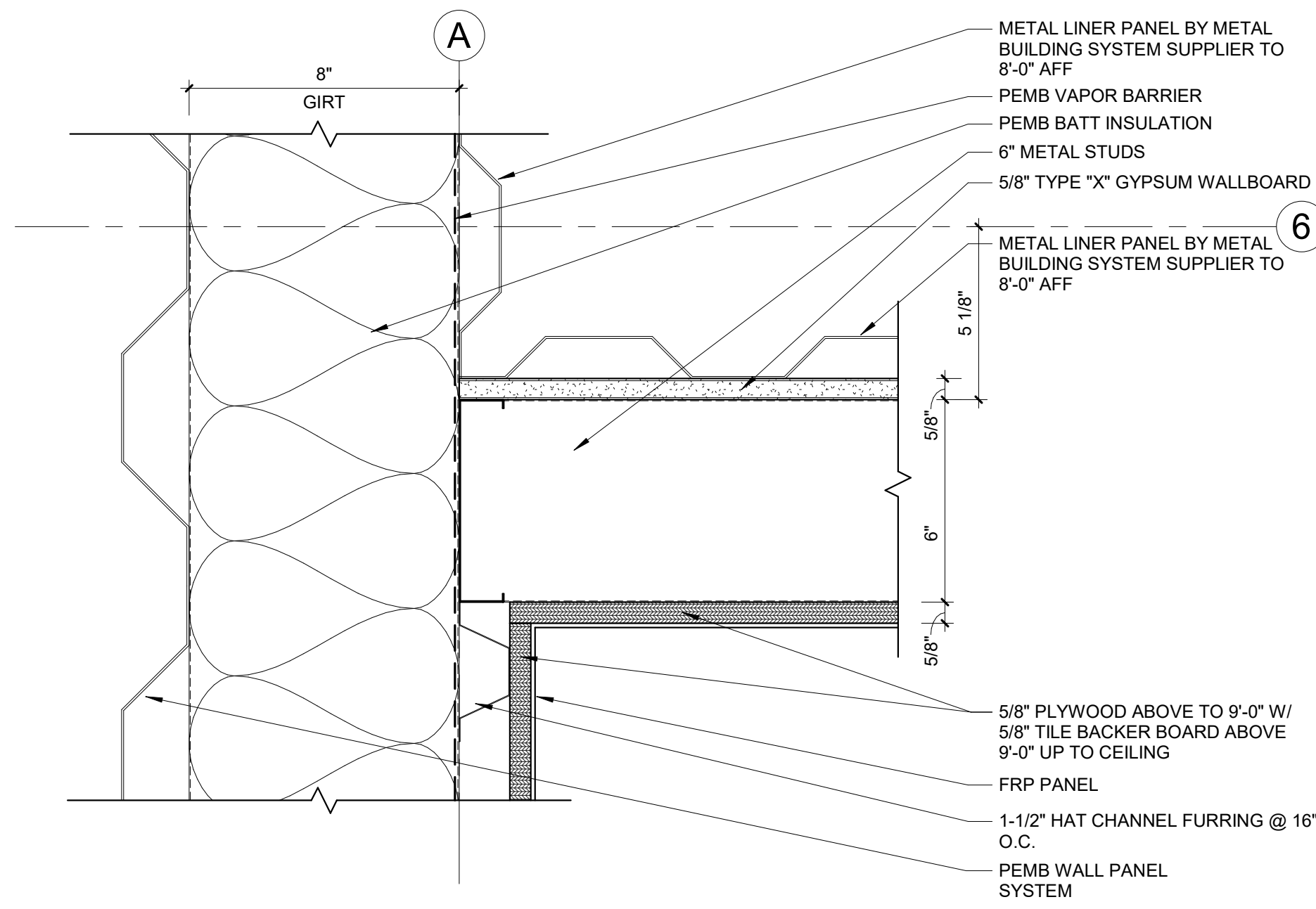
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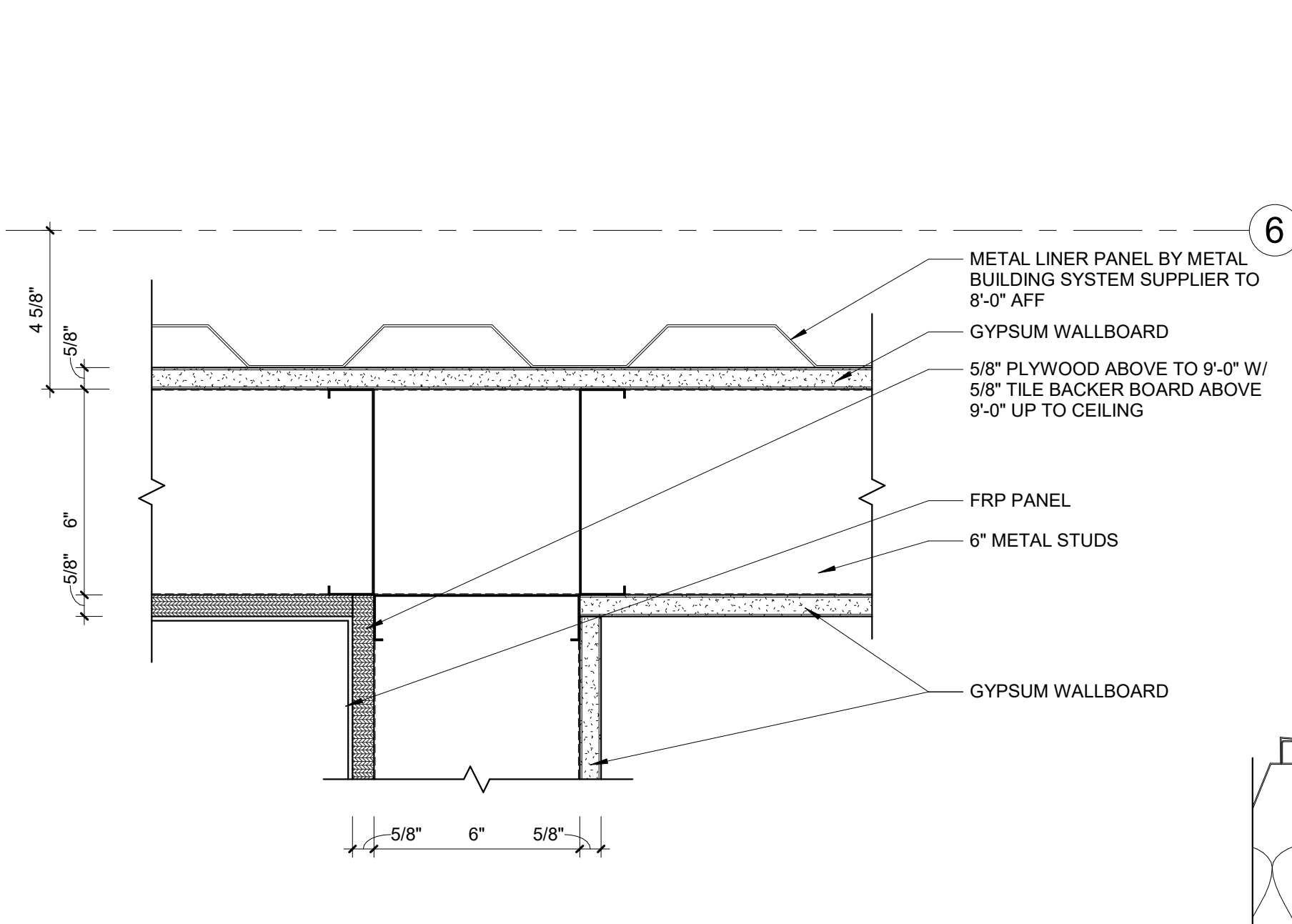
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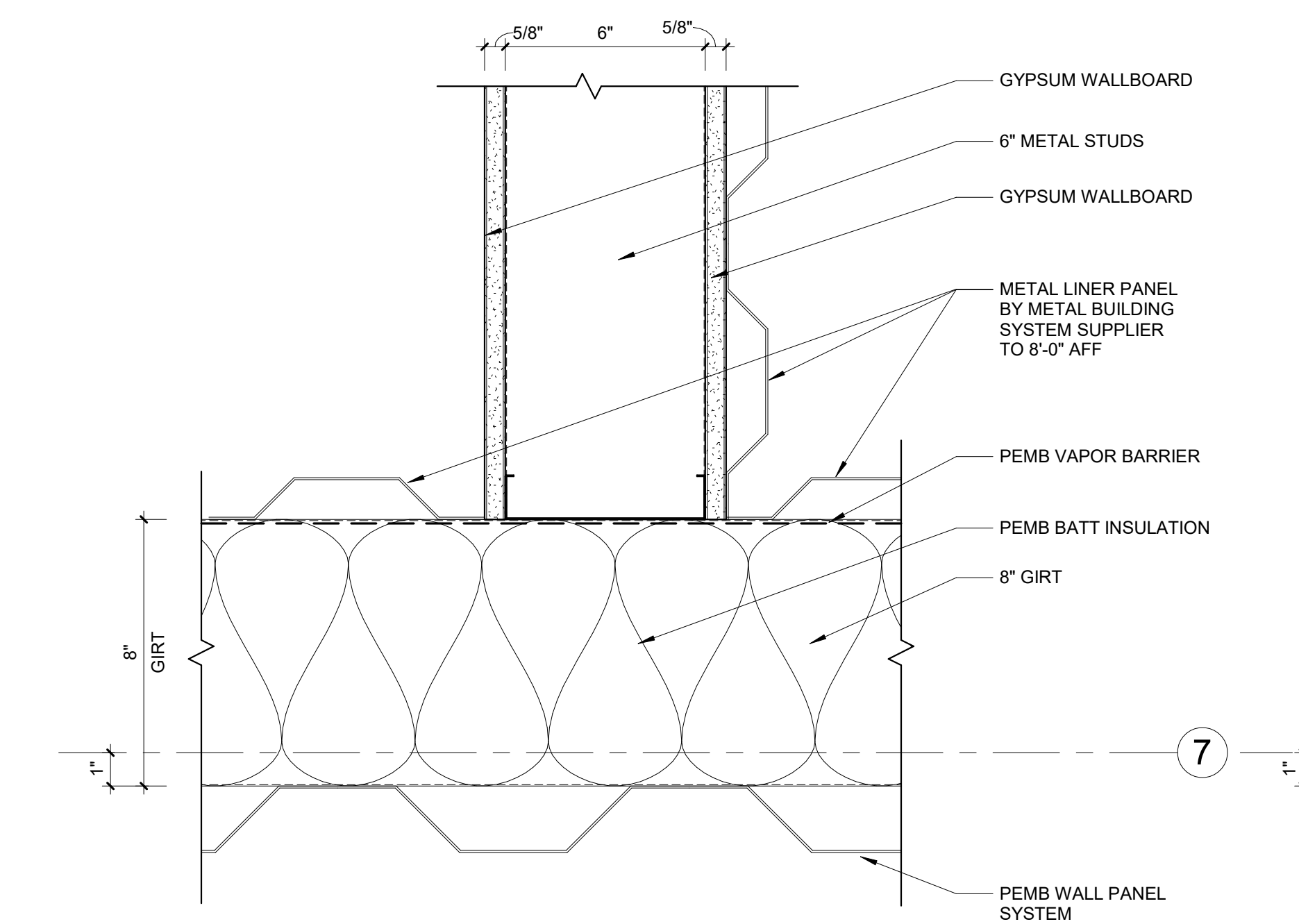
1 2-HR FIRE BARRIER @ EXT WALL
SCALE: 3" = 1'-0"



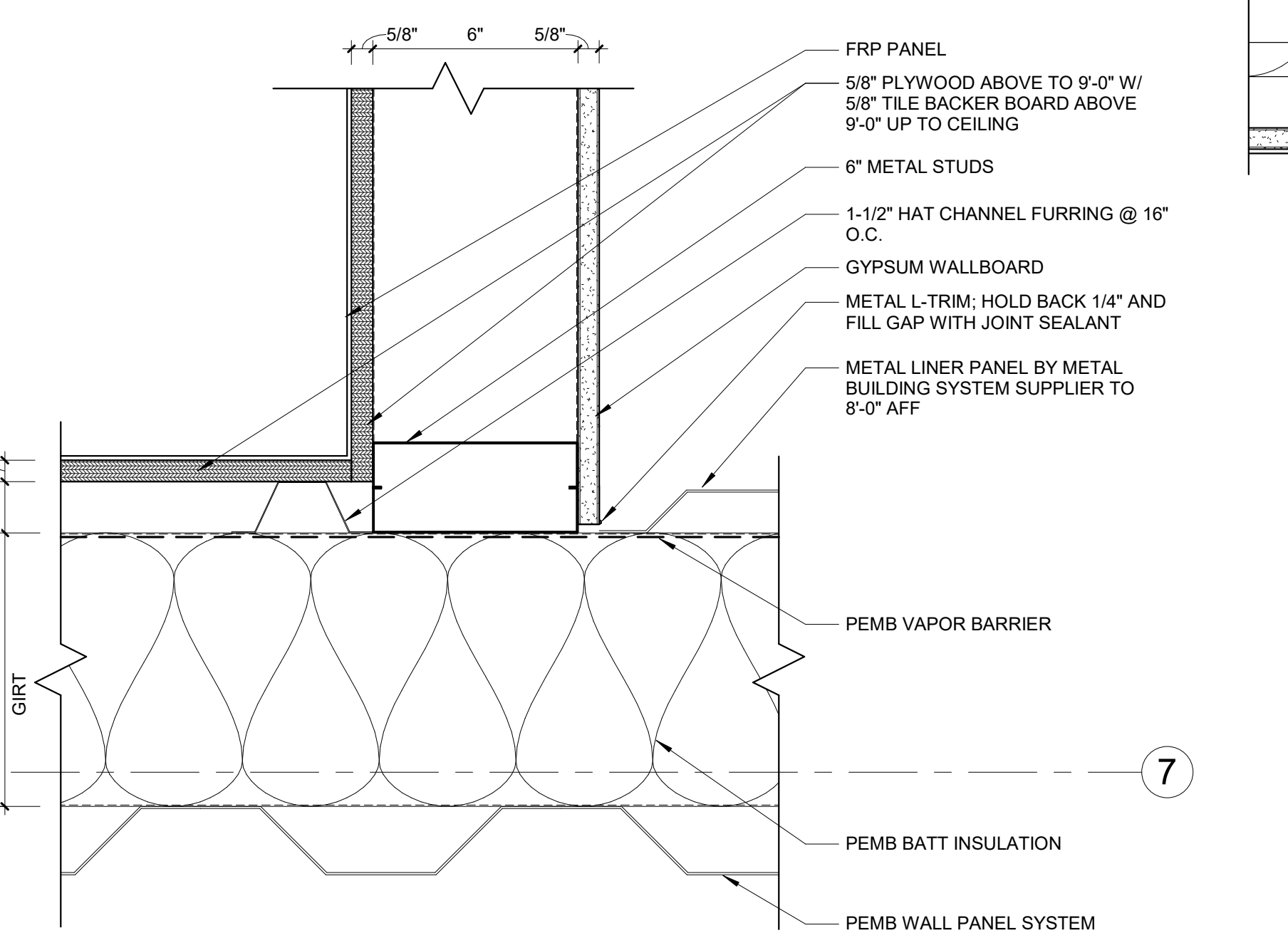
2 INTERIOR WALL TO EXTERIOR CONNECTION
SCALE: 3" = 1'-0"



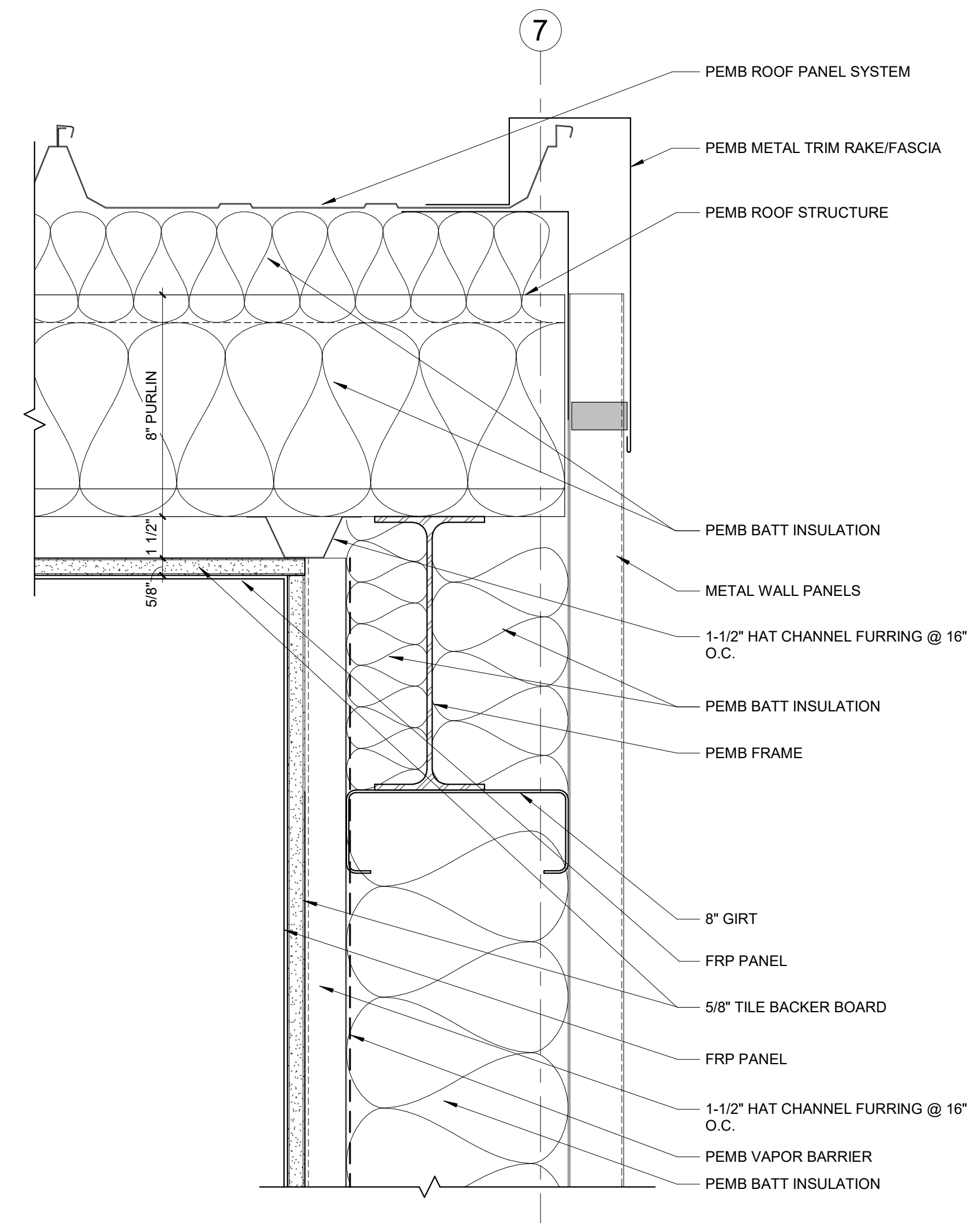
3 INTERIOR WALL @ WASH BAY & RESTROOM
SCALE: 3" = 1'-0"



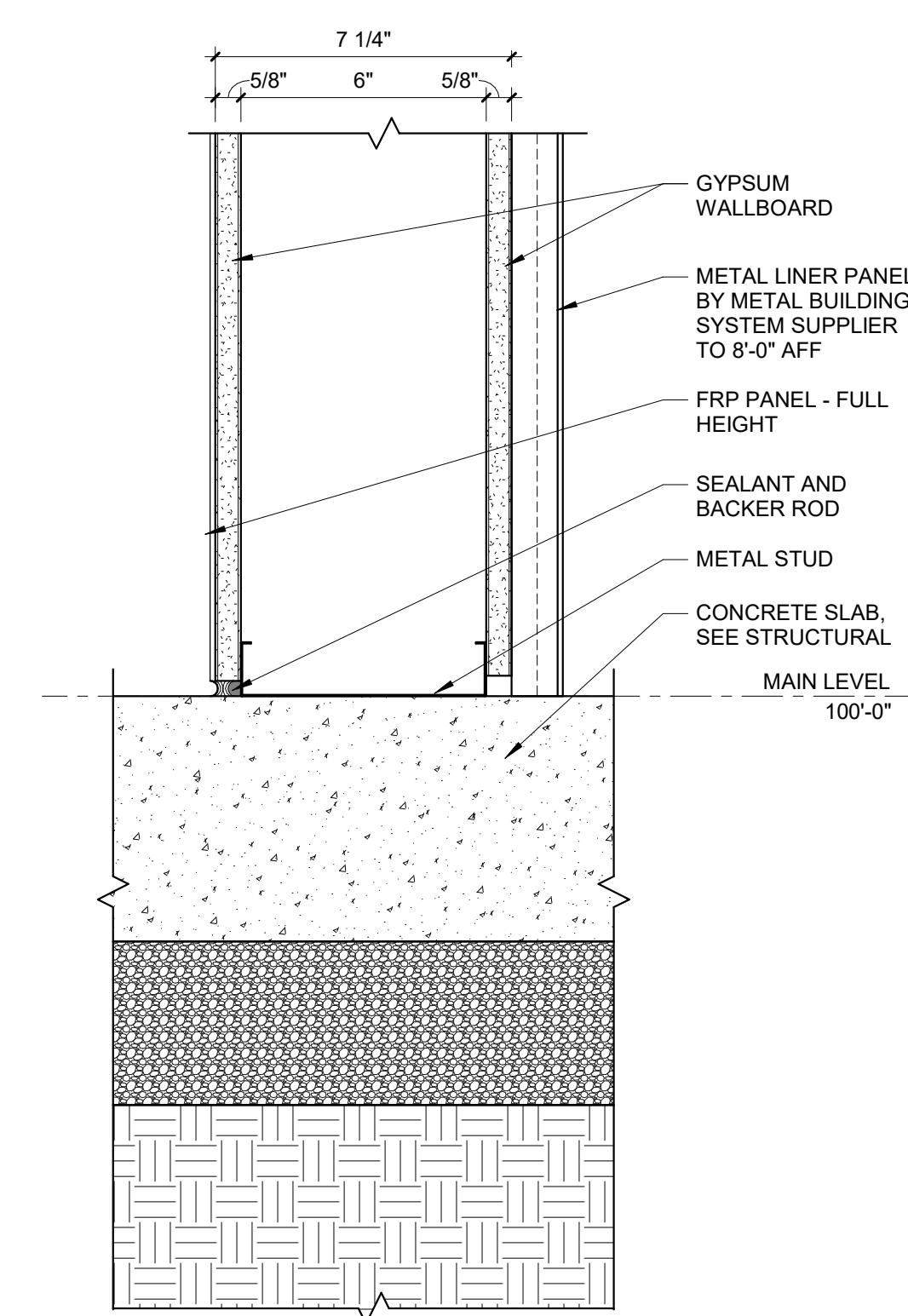
4 INTERIOR WALL @ MECHANICAL & STORAGE
SCALE: 3" = 1'-0"



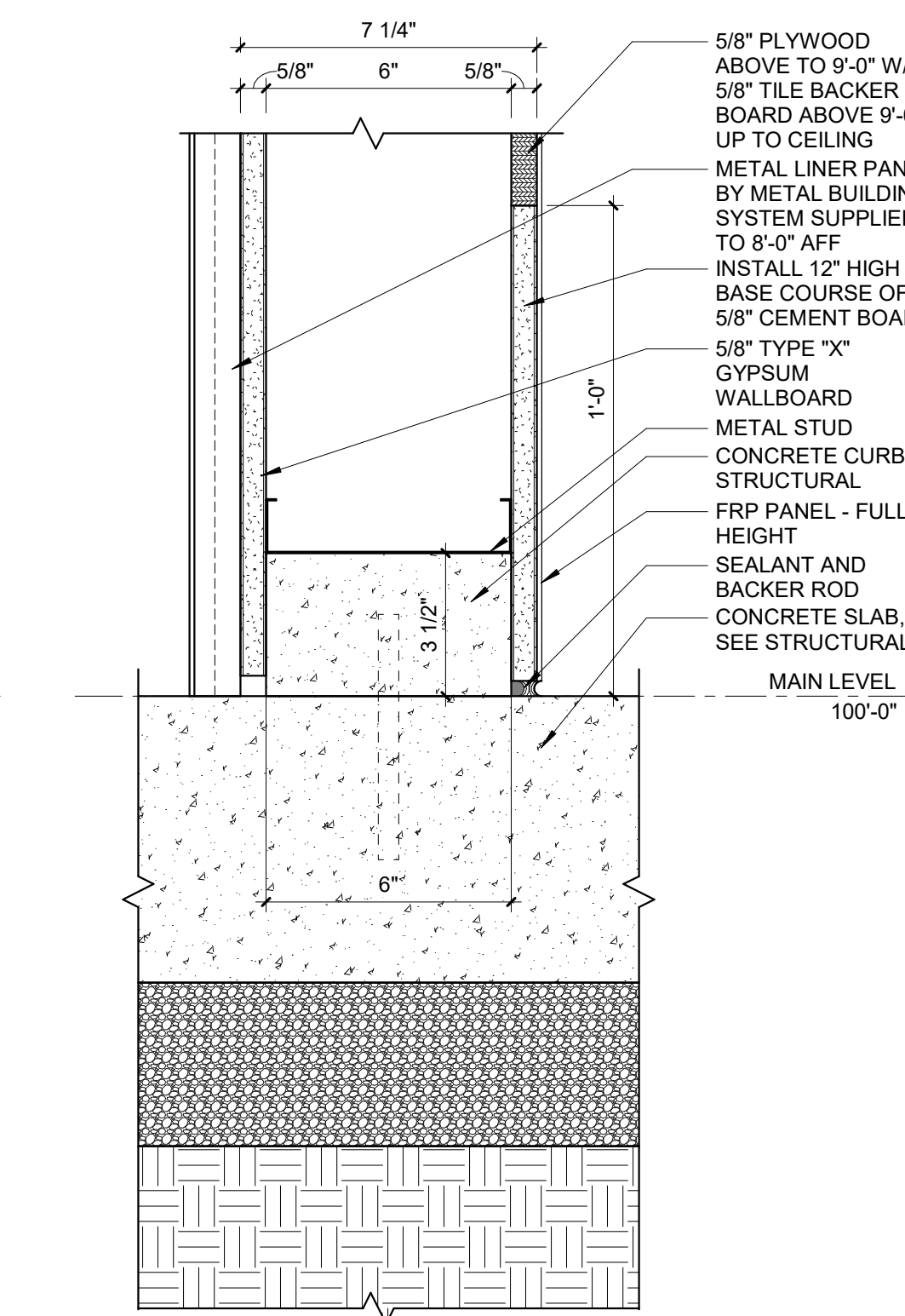
5 INTERIOR WALL @ WASH BAY & MECHANICAL
SCALE: 3" = 1'-0"



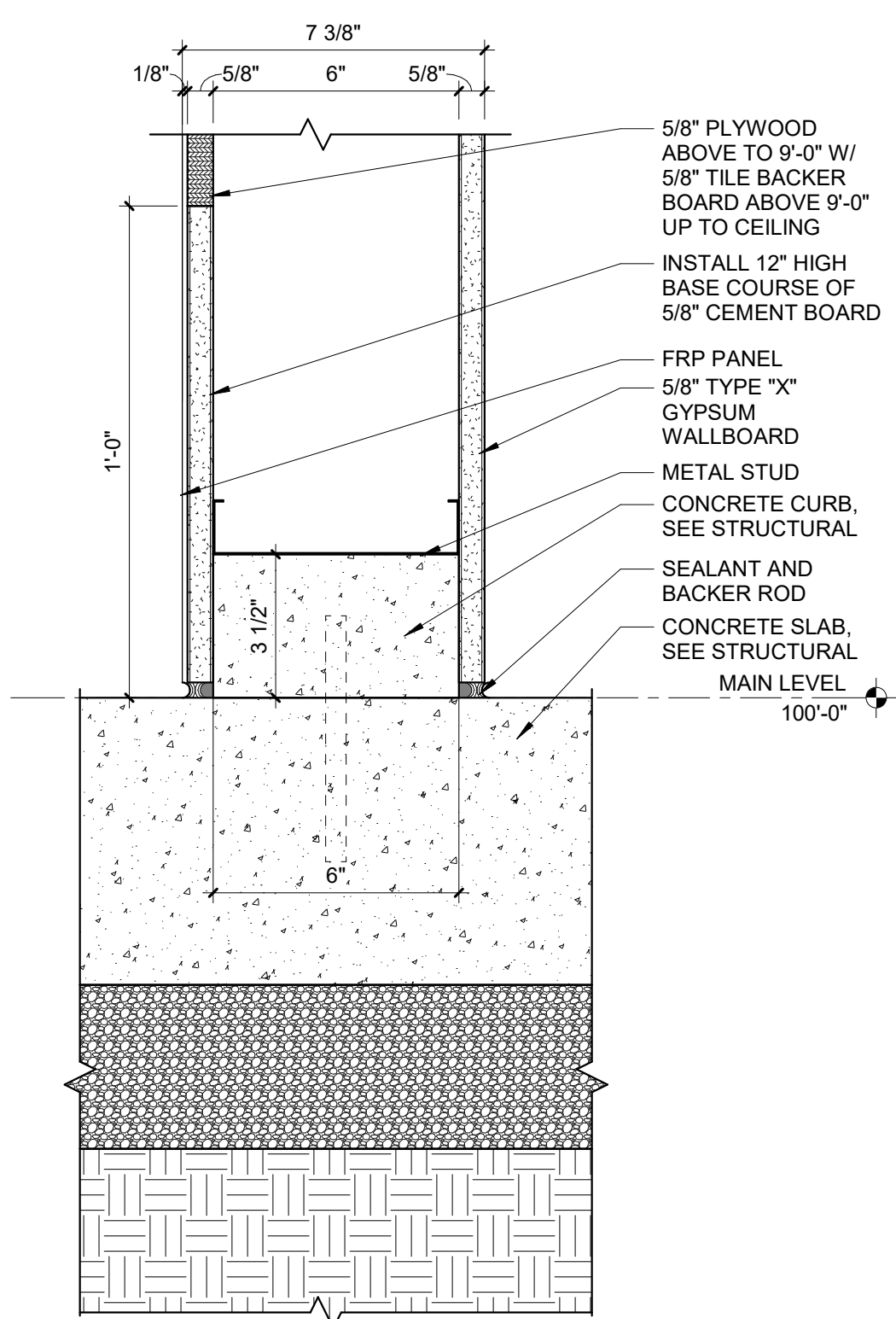
6 WASH BAY EXT WALL - ROOF
SCALE: 3" = 1'-0"



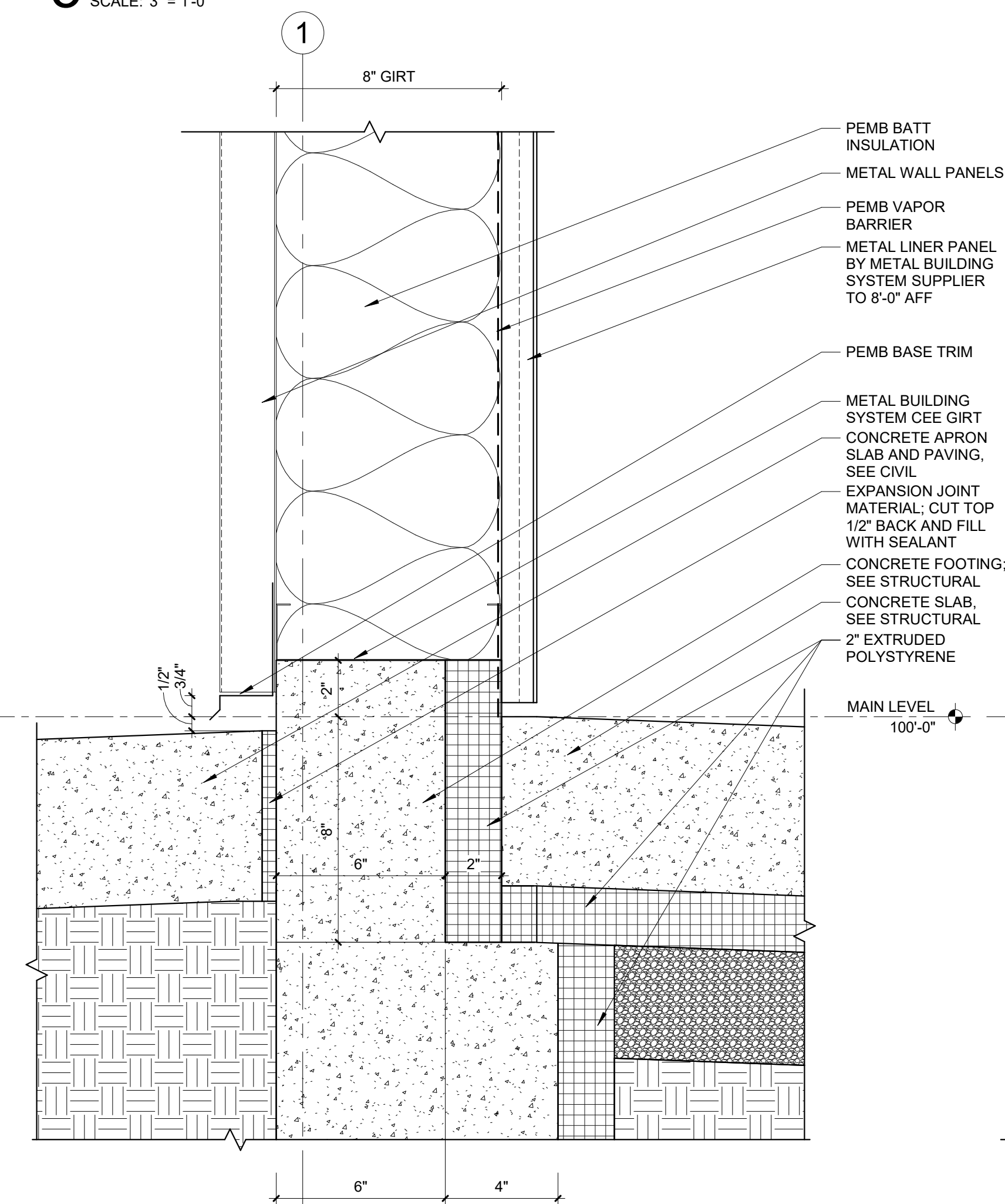
7 BASE OF WALL @ EAST STORAGE
SCALE: 3" = 1'-0"



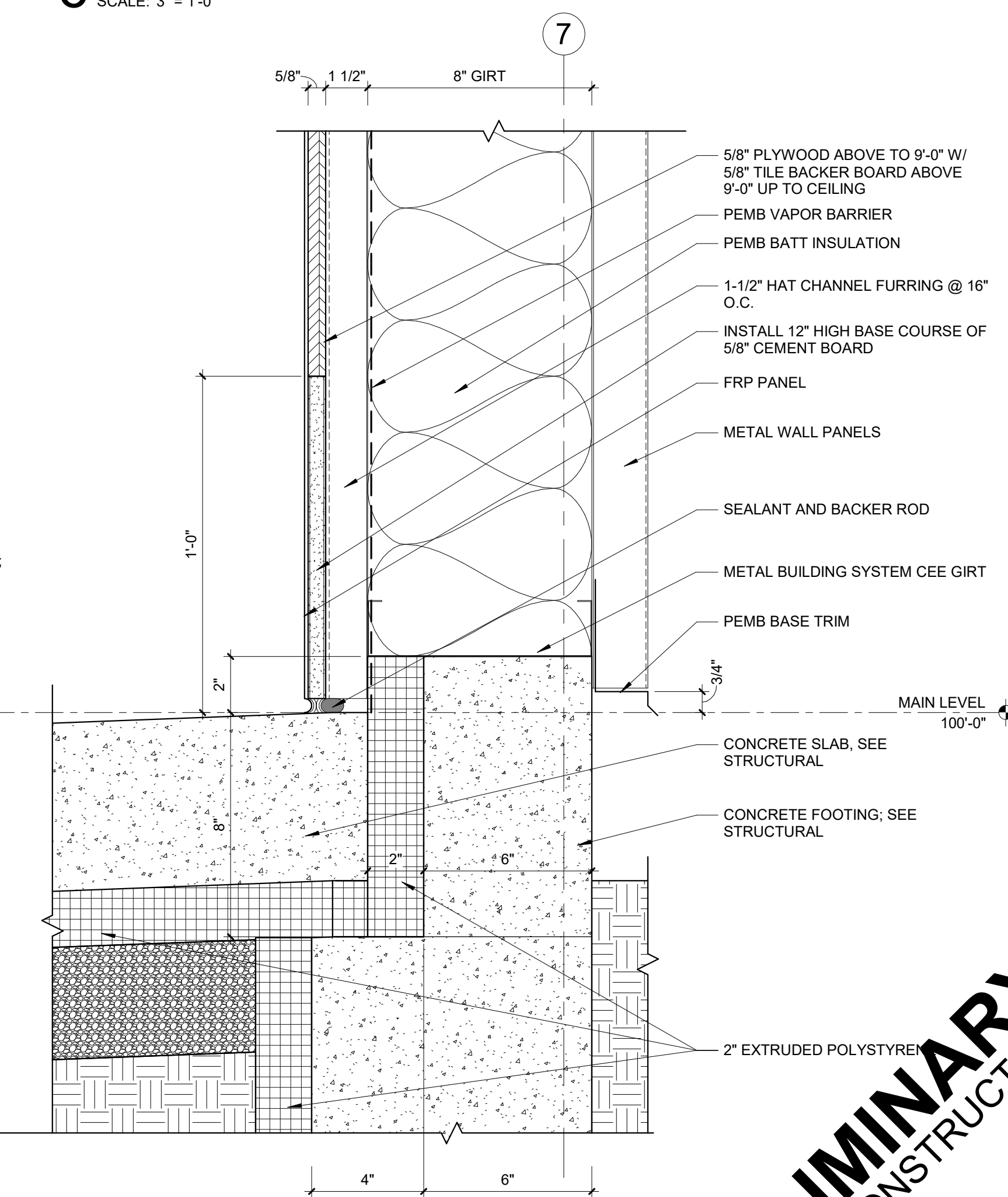
8 BASE OF WALL @ NORTH WASH BAY
SCALE: 3" = 1'-0"



9 BASE OF WALL @ EAST WASH BAY
SCALE: 3" = 1'-0"

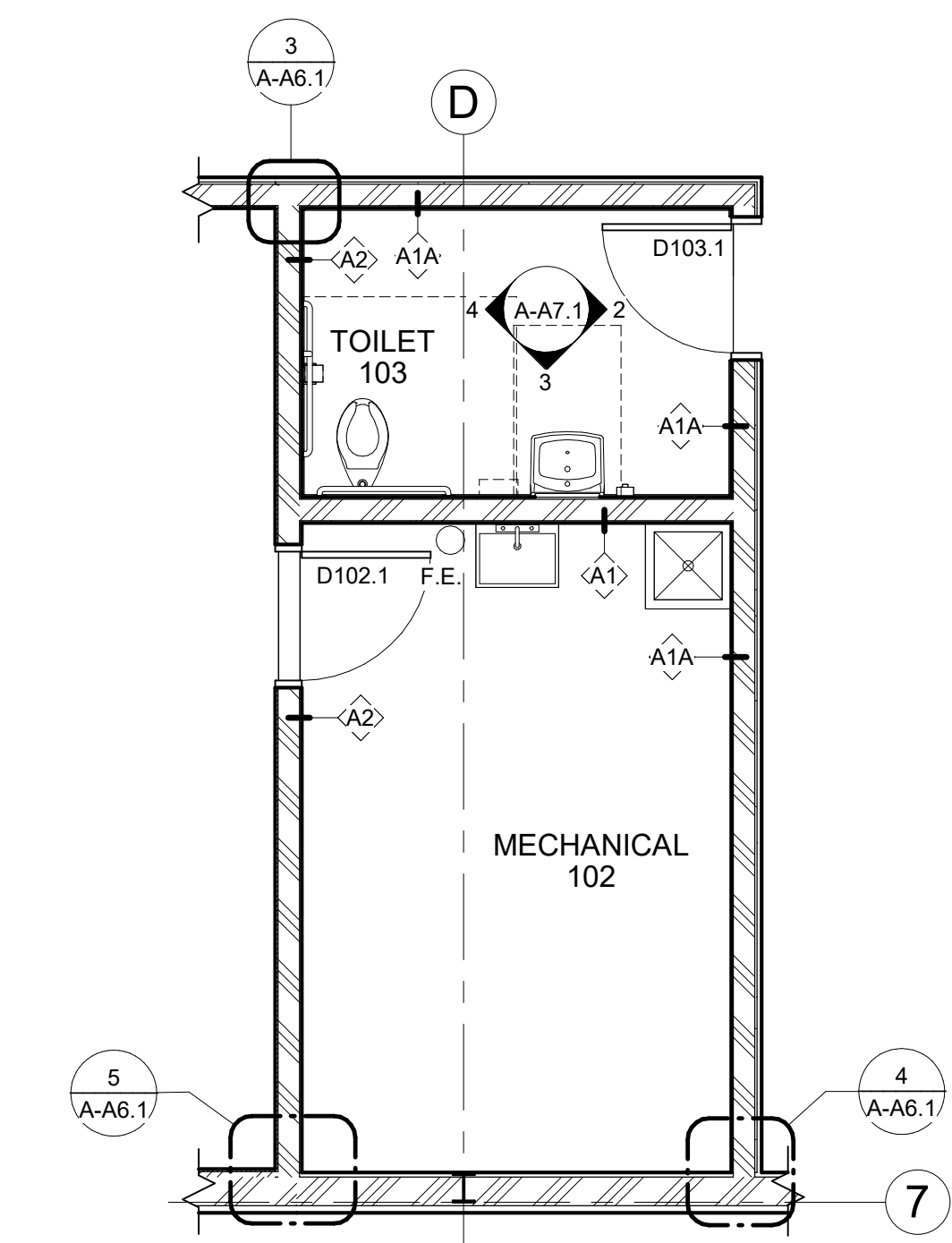


10 EXTERIOR WALL BASE @ APRON SLAB
SCALE: 3" = 1'-0"

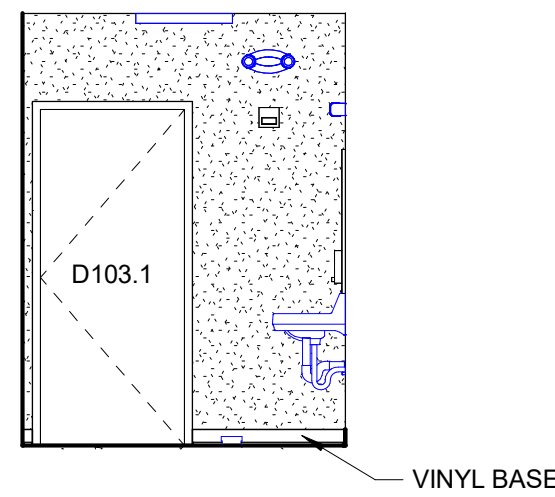


11 EXTERIOR WALL BASE @ WASH BAY
SCALE: 3" = 1'-0"

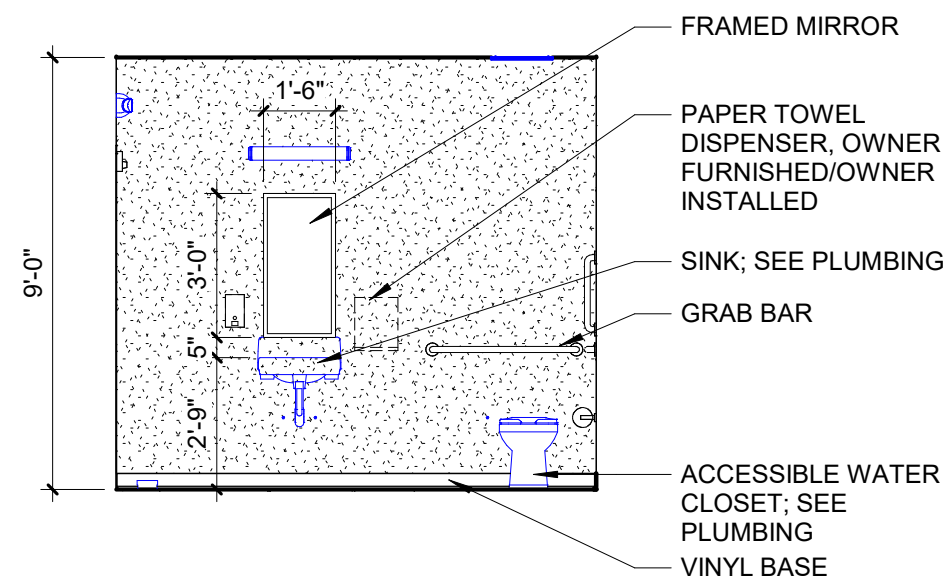
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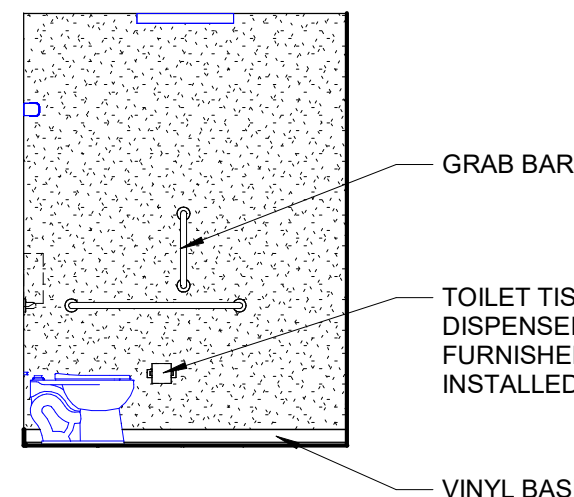
1 ENLARGED TOILET PLAN2
SCALE: 1/4" = 1'-0"



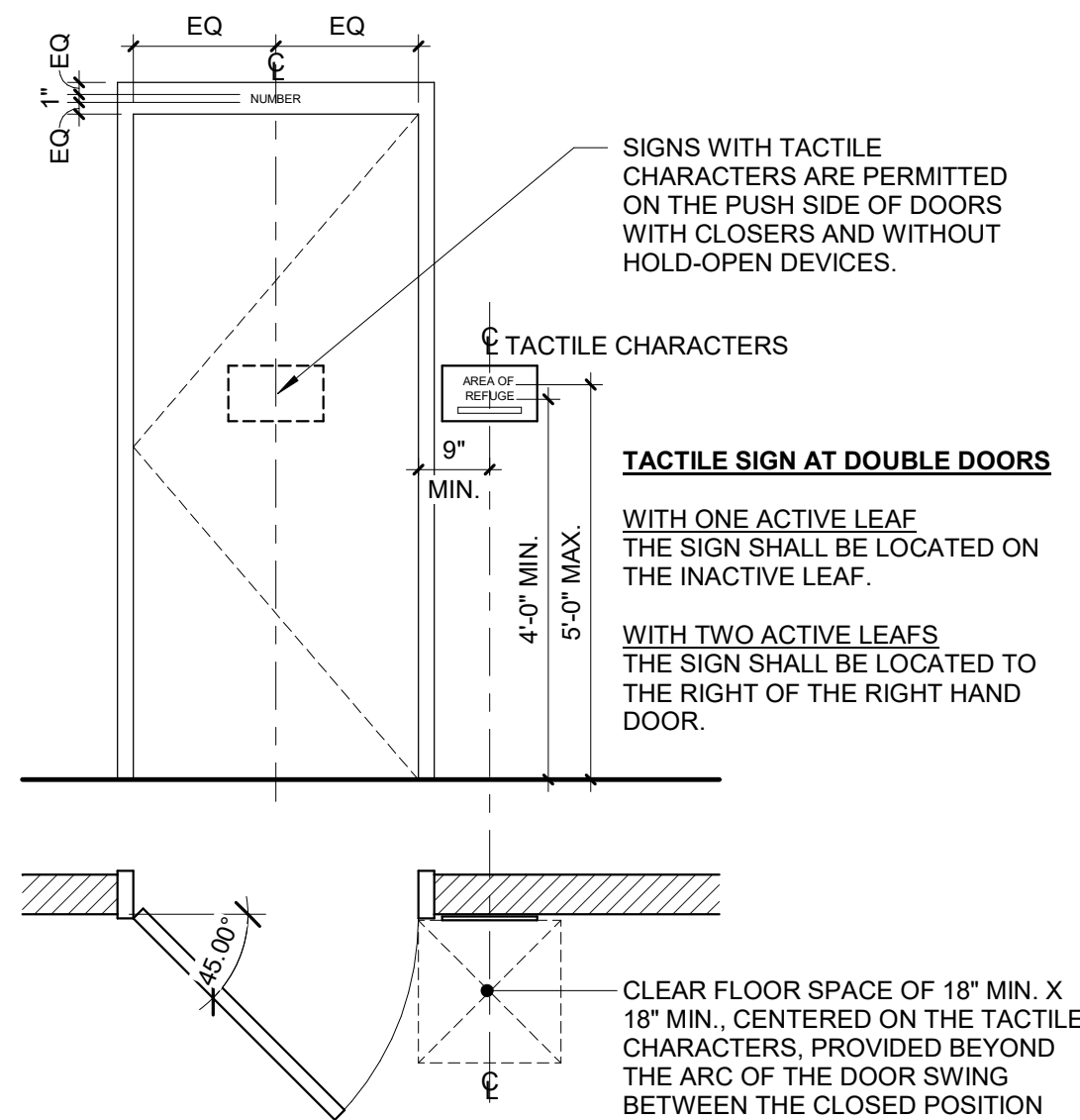
2 TOILET 103 - EAST
SCALE: 1/4" = 1'-0"



3 TOILET 103 - SOUTH
SCALE: 1/4" = 1'-0"



4 TOILET 103 - WEST
SCALE: 1/4" = 1'-0"



5 SIGNAGE TYPES
SCALE: 1/2" = 1'-0"

ROOM FINISH SCHEDULE									
NUMBER	NAME	FLOOR FINISH	BASE FINISH	WALL				CEILING FINISH	COMMENTS
				NORTH	SOUTH	EAST	WEST		
101	STORAGE	SC	VB	-	MLP	MLP	GB-PNT/MLP	EXP	MLP TO 8'-0"
102	MECHANICAL	SC	VB	GB-PNT	MLP	GB-PNT	GB-PNT	EXP	MLP TO 8'-0"
103	TOILET	SC	VB	GB-PNT	GB-PNT	GB-PNT	GB-PNT	EXP	CEILING @ 9'-0"AFF
104	WASH BAY	SC	-	FRP	FRP	FRP	FRP	FRP	MLP TO 8'-0"
105	BUS BAYS	SC	-	MLP/GB-PNT	MLP/GB-PNT	MLP	MLP	EXP	MLP TO 8'-0"
106	BUS BAYS	SC	-	MLP	MLP/GB-PNT	MLP	MLP	EXP	MLP TO 8'-0"

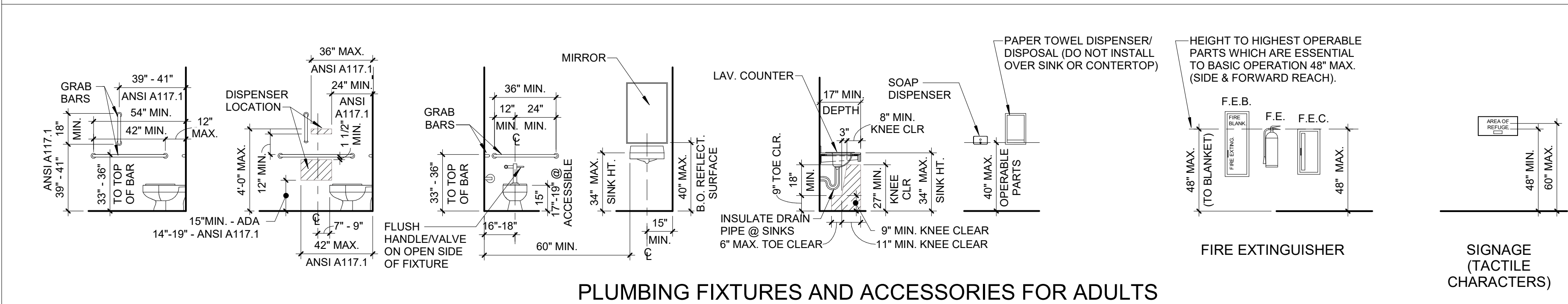
ROOM FINISH SCHEDULE LEGEND

FLOORS	WALL	CEILING
SC SEALED CONCRETE	EPNT EPOXY PAINT	EXP EXPOSED STRUCTURE, NO PAINT
	PNT PAINT	FRP FIBERGLASS REINFORCED PANELS
	MLP METAL LINER PANEL	GB-PNT GYPSUM BOARD, PAINT
	GB-PNT GYPSUM BOARD, PAINT	

ROOM FINISH NOTES

- ELECTRICAL PANELS AND ACCESS DOOR PANELS SHALL BE PRIMED AND PAINTED TO MATCH ADJACENT WALLS (VERIFY WITH OWNER).
- ALL FLOORS SHALL RECEIVE SEALER PER THE PROJECT MANUAL. CONCRETE FLOORS ARE TO BE CLEANED OF ALL FOREIGN MATERIAL PRIOR TO THE APPLICATION OF THE SEALER.
- PROVIDE EXPANSION JOINTS AT ALL SLAB EDGES AGAINST EXTERIOR WALLS. REFER TO STRUCTURAL.
- SLOPE INTERIOR FLOOR SLAB TO DRAIN AT 1/8" PER FOOT WHERE SLOPED SLABS ARE INDICATED. U.N.O.
- FLOOR SLAB TO BE SLOPED DOWN AROUND DRAINS WHERE FLOOR SLAB IS NOT INDICATED TO BE SLOPED. REFER TO MECHANICAL DRAWINGS FOR ALL FLOOR DRAINS.
- FLOOR DRAINS AND TRENCH DRAINS INDICATED FOR LOCATION AND CONFIGURATION ONLY. REFER TO MECHANICAL DRAWINGS FOR PRODUCT AND PIPING INFORMATION.
- SEE STRUCTURAL FOR CONCRETE SLAB FLOOR JOINT PATTERN.
- NOTE FOR WALLS NOT RECEIVING FINISHES: COORDINATE OPENINGS SO AS NOT TO LEAVE SPACES I.E. THAT WOULD OTHERWISE BE CAULKED AND PAINTED.

ACCESSIBLE & STANDARD MOUNTING HEIGHTS - 2010 ADA STANDARD FOR ACCESSIBLE DESIGN AND ANSI A117.1



PLUMBING FIXTURES AND ACCESSORIES FOR ADULTS

NOTE:
REFERENCE ADA 2010 STANDARDS FOR ACCESSIBLE DESIGN FOR FURTHER INFORMATION.
ELEVATIONS SHOWN ARE FOR MOUNTING LOCATIONS ONLY AND NOT FOR SPECIFIC ROOMS. SEE ELEVATIONS ELSEWHERE FOR SPECIFIC ROOM ELEVATIONS.
ALL DIMENSIONS ARE FROM FINISHED SURFACE.
CONSULT ARCHITECT IF DISCREPANCIES ARE DISCOVERED BETWEEN THESE DIMENSIONS AND DETAIL DIMENSIONS.
REFER TO PROJECT MANUAL FOR ACCESSORY MODEL NUMBERS.
REFER TO SECTION 22 & 26 OF THE PROJECT MANUAL FOR FURTHER REQUIREMENTS.
NOT ALL ITEMS SHOWN MAY BE APPLICABLE.

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GENERAL NOTES

DESIGN CRITERIA:

- CODES AND STANDARDS:
2018 IBC/ASCE 7-16
OCCUPANCY/RISK CATEGORY II
- DESIGN DEAD LOADS:
ROOF DEAD LOAD TO BE DETERMINED BY PRE-ENGINEERED METAL BUILDING SUPPLIER
- DESIGN LIVE LOADS:
ROOF:
MINIMUM LIVE LOAD: 20 PSF
GROUND SNOW LOAD: $P_g = 40$ PSF
SNOW EXPOSURE FACTOR: $C_e = 1.0$
SNOW THERMAL FACTOR: $C_t = 1.1$
SNOW LOAD IMPORTANCE FACTOR: 1.0
PLUS ALLOWANCE FOR DRIFTED AND UNBALANCED SNOW
- FLOOR:
MECHANICAL ROOMS: 150 PSF OR POSTED M.E.P. LOADS
SIDEWALKS AND VEHICULAR DRIVEWAYS SUBJECT TO TRUCKING: 125PSF
- WIND LOAD:
BASIC WIND SPEED: 112 M.P.H.
WIND EXPOSURE: C
WIND DIRECTIONAL FACTOR: 0.85
TOPOGRAPHIC FACTOR: 1.0
WIND ANALYSIS FOR LOW RISE BUILDING BASED ON ASCE 7-16/2018 IBC.
SUPPLIER OF COMPONENTS OF STRUCTURE RESPONSIBLE FOR CALCULATING WIND LOADS BASED ON THE VALUES LISTED ABOVE.
UPLIFT PRESSURE TO BE CONSIDERED ON ALL ROOF COMPONENTS.
- SEISMIC LOAD:
SPECTRAL ACCELERATIONS: $S_s = 0.078$
SPECTRAL ACCELERATIONS: $S_1 = 0.036$
SITE COEFFICIENTS: $F_a = 1.6$
 $F_v = 2.4$
DESIGN SPECTRAL RESPONSE ACCELERATION: $S_{ds} = 0.083$
DESIGN SPECTRAL RESPONSE ACCELERATION: $S_{d1} = 0.058$
RISK/OCCUPANCY CATEGORY: II
IMPORTANCE FACTOR: $I = 1.0$
SITE CLASS: D
SEISMIC DESIGN CATEGORY: A

MISCELLANEOUS

- STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.
 - NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
 - NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
 - OPENINGS 1'-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SUCH OPENINGS.
 - THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
 - THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
 - UNLESS OTHERWISE NOTED, FIRE PROOFING METHODS AND MATERIALS FOR STRUCTURAL MEMBERS ARE NOT SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATING REQUIREMENTS, FIRE PROOFING METHODS AND MATERIALS.
 - DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS.
 - CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS COMPLETE.
 - THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECT'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS HE HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
 - ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT BEFORE THE EFFECTED WORK PROCEEDS.
 - CHECK ALL DIMENSIONS AGAINST REQUIREMENTS OF OTHER CONTRACT DOCUMENTS. FIELD VERIFY DIMENSIONS RELATING TO EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS AND FABRICATION.
 - NO MODIFICATION, ALTERATION OR REPAIR SHALL BE MADE WITHOUT PRIOR REVIEW BY STRUCTURAL ENGINEER. SUBMIT DETAILS AND CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN STATE WHERE PROJECT IS LOCATED AND EMPLOYED BY CONTRACTORS.
- DESIGN:
- THE FOUNDATION HAS BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE ON THE GEOTECHNICAL EXPLORATION REPORT BY CERTIFIED TESTING SERVICES, CTS PROJECT NO. G7020 (DATED MAY 23, 2023)
 - BACKFILLING:
 - DO NOT BACKFILL PIT WALLS UNTIL ADEQUATE TEMPORARY BRACING IS INSTALLED.
 - BACKFILL UNDER FOUNDATION WITH CONCRETE OR AS APPROVED BY SOILS ENGINEER.
 - SOIL MODULUS OF SUBGRADE REACTION (K_s) = 72 KIPS PER CUBIC FOOT.
- SPREAD FOOTINGS:
- FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUSTAINING A NET BEARING PRESSURE UNDER FULL SERVICE LIVE AND DEAD LOAD AS FOLLOWS:
2,000 PSF FOR FOUNDATIONS BEARING ON SUITABLE NATIVE SOILS OR ENGINEERED FILL
 - TOP OF FOOTING (TOF) ELEVATIONS ARE SHOWN ON THE PLANS.
 - FOOTING MAY BE EARTH FORMED.
 - ALL BEARING MATERIAL SHALL BE INSPECTED BY A QUALIFIED TECHNICIAN PRIOR TO CONCRETE PLACEMENT. A QUALIFIED TECHNICIAN SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED. OVEREXCAVATION MAY BE REQUIRED.
 - BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR A MINIMUM OF 4'-0" BELOW FINAL GRADE.
 - SLIDING RESISTANCE (VALUES INCLUDE A 1.50 SAFETY FACTOR)
 - COEFFICIENT OF FRICTION = 0.3

INTERIOR SLAB JOINT PLACEMENT

- INTERIOR CONSTRUCTION JOINTS:
 - PROVIDE CONSTRUCTION JOINTS:
 - AT ALL COLD JOINTS IN SLABS
 - AS REQUIRED BY THE DRAWINGS
- INTERIOR CONTROL JOINTS:
 - EXPPOSED SLABS (THOSE WHICH RECEIVE NO FINISHED FLOOR SURFACE MATERIAL) SHALL BE POURED IN LONG STRIPS WITH SAWED OR TOOLED CONTROL JOINTS. STRIP WIDTHS SHALL NOT EXCEED . AT CONTRACTOR'S OPTION, CONCRETE MAY BE PLACED IN A CHECKER BOARD PATTERN, ALLOWING 72 HOURS BETWEEN ADJACENT POURS. DISTANCE BETWEEN CONTROL JOINTS SHALL NOT EXCEED TABULATED VALUES, SHALL BE . LOCATED TO CONFORM TO BAY SPACING WHENEVER POSSIBLE (AT COLUMN CENTERLINES, HALF BAYS, ETC.), AND BE LOCATED AS REQUIRED BY THE DRAWINGS.
 - ALL CONTROL JOINTS ARE TO BE FILLED WITH THE SEALANT INDICATED IN THE SPECIFICATIONS. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION.
 - COVERED SLABS (THOSE WHICH RECEIVE FINISHED FLOOR SURFACE MATERIALS) SHALL BE MONOLITHICALLY POURED IN AREAS AS LARGE AS CONTRACTOR DESIRES. JOINTS SHALL CONFORM TO CONSTRUCTION JOINT DESIGN.
- INTERIOR ISOLATION JOINTS:
 - PROVIDE ISOLATION JOINTS:
 - AT ALL COLUMNS
 - AT ALL JUNCTIONS OF SLABS AND VERTICAL SURFACES
 - AS REQUIRED BY DRAWINGS

CONCRETE

- CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH AND DENSITY, IN ACCORDANCE WITH THE SPECIFICATION.
- REINFORCING SHALL CONFORM TO A.S.T.M. A615, GR. 60, INCLUDING TIES AND STIRRUPS.
- ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED, IN ACCORDANCE WITH A.C.I. DETAILING MANUAL.
- ALL REINFORCING SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH C.R.S.I. "REINFORCING BAR DETAILING".
- MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE:
 - UNFORMED SURFACE IN CONTACT WITH THE GROUND: 3 IN.
 - FORMED SURFACES EXPOSED TO EARTH OR WEATHER: 1 1/2 IN. FOR #5 BAR OR SMALLER 2 IN FOR #6 BAR OR LARGER
 - FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER:
 - WALLS, SLABS: 3/4 IN.
 - BEAMS, GIRDERS AND COLUMNS (TO TIES OR STIRRUPS): 1 1/2 IN.
- ALL CONSTRUCTION JOINTS SHOWN ON DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE, UNLESS THEIR ELIMINATION IS APPROVED BY THE ENGINEER. ADDITIONAL CONSTRUCTION JOINTS, REQUIRED TO FACILITATE CONSTRUCTION, SHALL BE LOCATED AT POINTS OF MINIMUM SHEAR AND SHALL BE DETAILED ON SHOP DRAWINGS. REINFORCEMENT SHALL PASS CONTINUOUSLY THROUGH THE JOINT.
- ALL ABUTTING CONCRETE MEMBERS SHALL BE DOWELED TOGETHER, UNLESS POURED MONOLITHICALLY. DOWELS SHALL BE EQUAL IN SIZE AND SPACING TO THE REINFORCING IN THE ADJACENT MEMBER.
- UNLESS OTHERWISE SHOWN IN THE ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFERS AT ALL EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE.
- SEE ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIP SLOTS, REGLETS, MASONRY ANCHORS, PRECAST BEARING LEDGES, BRICK LEDGE ELEVATIONS AND FOR MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC.
- REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES. WHERE FINISH IS NOT SPECIFIED, CONFORM TO REQUIREMENTS OF A.C.I. 301.
- MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS SHALL BE REFERRED TO FOR DRAINS, SLEEVES, OUTLET BOXES, CONDUIT, ANCHORS, ETC.
- LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE. UNLESS NOTED OTHERWISE, WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B"; CASE 2 SPLICES. $f_c = 4000$ PSI, $f_y = 60,000$ PSI

TENSION LAP SPlice FOR TOP BARS, GRADE 60		
LAP SPlice LENGTH (INCHES)		
BAR SIZE	$f_c = 4,000$ P.S.I.	
#3	37	
#4	49	
#5	61	
#6	73	
#7	106	
#8	121	

* "TOP BARS" ARE DEFINED AS ANY BAR WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.

COMPRESSION LAP SCHED. LAP LENGTH (INCHES)	
$f_c = 3,000$ P.S.I. OR GREATER	
BAR SIZE	30 db
#3	12
#4	15
#5	19
#6	23
#7	26
#8	30

NOTES:

- TABLES ARE BASED ON ACI 318-05 SEC. 12.2.2.
 - ALL SPLICES TO BE CLASS "B" TENSION SPlice UNLESS OTHERWISE NOTED.
 - SPLICE PLAIN WELDED WIRE FABRIC BY LAPPING ONE FULL MESH SPACE PLUS 2 INCHES.
 - FOR LIGHT WEIGHT CONCRETE, MULTIPLY LENGTHS IN TABLE BY 1.3
 - FOR EPOXY COATED REINFORCEMENT, MULTIPLY LENGTHS IN TABLE BY 1.5.
 - COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS
- ON SHOP DRAWINGS, INDICATE ABOVE REINFORCING AS "PER GENERAL NOTES". SUCH REINFORCING MAY BE REVISED OR RELOCATED BY STRUCTURAL ENGINEER DURING SHOP DRAWING REVIEW.
- PROVIDE CONCRETE EQUIPMENT PADS, INERTIA BASES AND CURBS AS NOTED ELSEWHERE IN CONTRACT DOCUMENTS. UNLESS NOTED, DOWEL PADS WITH #4 x 0'-6" PROJECTING 3" FROM CONCRETE BELOW AT 18" O.C. EACH WAY. REINFORCE PADS WITH #4@16 EACH WAY TOP AND BOTTOM.
 - PROVIDE STANDARD HOOKS ON BARS TERMINATING AT A CONCRETE FACE UNLESS NOTED (E.G.: EDGES OF OPENINGS, SLAB EDGES, EXPANSION JOINTS, ENDS OF BEAMS, AND AT TOP, BOTTOM AND ENDS OF WALLS, ETC.,).
 - PROVIDE 2-#5 (MIN.) @ EACH SIDE OF OPENING. EXTEND 2'-0" BEYOND OPENINGS.

DEFERRED SUBMITTALS

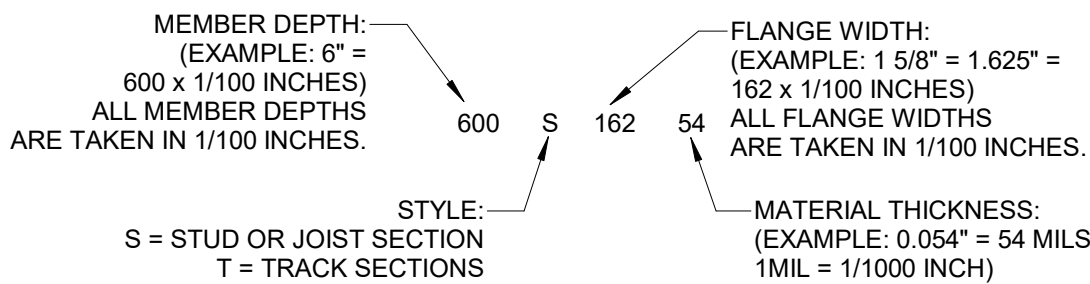
- PER IBC SECTION 106.3.4.2 THE FOLLOWING ITEMS ARE DEFERRED SUBMITTALS ITEMS:
PRE-ENGINEERED METAL BUILDING (PEMB)
- DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL IS RECEIVED.

COLD-FORMED STEEL

- ALL SIZING BASED ON STEEL STUD MANUFACTURERS ASSOCIATION (ICBO ER-4943P) PRODUCT TECHNICAL INFORMATION.
- MATERIALS SHALL CONFORM TO THE FOLLOWING:
 - GALVANIZED MATERIAL:
 - ALL GALVANIZED STUDS AND JOISTS 12, 14 AND 16 GAUGE SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF ASTM A653 S5, GRADE 50, CLASS 1 OR 3 WITH A MINIMUM YIELD OF 50,000 PSI.
 - ALL GALVANIZED 18 AND 20 GAUGE STUDS AND JOISTS: ALL GALVANIZED TRACK, BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A653 S5, GRADE 33 WITH A MINIMUM YIELD OF 33,000 PSI.
 - ALL GALVANIZED STUDS, JOISTS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A525.
 - PROPERTIES:
 - THE PHYSICAL AND STRUCTURAL PROPERTIES LISTED BY THE STEEL STUD MANUFACTURER ASSOCIATION AND AISI DESIGN MANUAL SHALL BE CONSIDERED THE MINIMUM PERMITTED FOR ALL FRAMING MEMBERS. SPECIFICALLY, THE FOLLOWING MINIMUM PROPERTIES, CALCULATED IN ACCORDANCE WITH THE LATEST AISI SPECIFICATION SHALL BE PROVIDED: 1X (IN-3), AREA (IN-2), RX (IN.), FY (KSI), RESISTING MOMENT (IN.-LB.).
 - SUBSTITUTIONS:
 - ANY SUBSTITUTIONS MUST BE APPROVED IN WRITING PRIOR TO DELIVERY, BY THE ARCHITECT AND/OR ENGINEER OF RECORD.
- INSTALLATION OF STUDS SHALL BE AS PER ASTM C1007-00 "INSTALLATION OF LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS AND ACCESSORIES", ASTM C995-00a "SPECIFICATION FOR LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS, RUNNERS (TRACK), AND BRACING OR BRIDGING FOR SCREW APPLICATION OR GYPSUM BOARD AND METAL PLASTER BASES" AND ASTM C754-00 "SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREW ATTACHED GYPSUM BOARD".
- ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
- ALL TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT-WELDED OR SPliced TOGETHER.
- ALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED ACCORDING TO DETRICH INDUST. RECOMMENDATION.
- TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED.
- STUD ENDS MUST BE SQUARELY SEATED AGAINST THE TRACK WEB. BOTH STUD FLANGES MUST BE ATTACHED TO TRACK MEMBERS AT TOP AND BOTTOM.
- STUD BRIDGING SHALL BE PROVIDED BY 1-1/2" COLD ROLLED U-CHANNEL. THE U-CHANNEL MUST BE ATTACHED TO EACH STUD BY WELDING OR ATTACHING WITH CLIP ANGLES AND SCREWS. HORIZONTAL STRAPPING AND SOLD BRIDGING WITH TRACK MEMBERS CAN ALSO BE USED FOR BRIDGING. BRIDGING SHALL BE SPACED AT 4'-0" O.C. MAX.

THE FOLLOWING MINIMUM COLD FORMED STEEL ATTACHMENTS SHALL BE PROVIDED U.N.O.:

- | | | |
|---------------------------|-----|---|
| TRACK TO STUD | (1) | #10 TEK SCREW EACH FLANGE, EACH STUD |
| TRACK TO STRUCTURAL STEEL | (1) | 1/4" DIA. POWER DRIVEN FASTENER @ 2'-4" O.C. |
| TRACK TO CONCRETE | (1) | 1/4" DIA. POWER DRIVEN FASTENER @ 16" O.C. |
| TRACK TO METAL DECK | (1) | #10 TEK SCREW @ 1'-4" O.C. |
| TRACK TO MASONRY | (1) | 1/4" DIA. POWER DRIVEN FASTENER @ 2'-4" O.C. |
| STUD TO STRUCTURAL STEEL | (1) | L2x 2x - 14 GA. CLIP ANGLE CONNECTION W/ |
| | (3) | #10 TEK SCREWS INTO METAL STUD AND |
| | (3) | 1/4" DIA. POWER DRIVEN FASTENERS INTO STRUCTURAL STEEL OR |
| | (3) | 1/4" TEK SCREWS INTO STRUCTURAL STEEL. |



SPECIAL INSPECTIONS

- THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTIONS PER IBC 2015, OWNED TO FURNISH INSPECTION UNLESS INSTRUCTED OTHERWISE BY THE CONSTRUCTION CONTRACT.
 - SPECIAL INSPECTION IN NOT A SUBSTITUTE FOR INSPECTION BY A CITY/COUNTY INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE CITY/COUNTY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
 - THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE CITY/COUNTY TO PERFORM THE TYPES OF INSPECTION SPECIFIED.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANYWORK THAT REQUIRES SPECIAL INSPECTION. A WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.
 - SUBMIT WRITTEN REPORTS WITHIN TWO DAYS OF TESTING TO ENGINEER OF RECORD.

TABLE N5.4-2
INSPECTION TASKS DURING WELDING

INSPECTION TASKS DURING WELDING	QC	QA
USE OF QUALIFIED WELDERS	O	O
CONTROL AND HANDLING OF WELDING CONSUMABLES <ul style="list-style-type: none">PACKAGINGEXPOSURE CONTROL	O	O
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS <ul style="list-style-type: none">WIND SPEED WITHIN LIMITSPRECIPITATION AND TEMPERATURE	O	O
WPS FOLLOWED <ul style="list-style-type: none">SETTINGS ON WELDING EQUIPMENTTRAVEL SPEEDSELECTED WELDING MATERIALSSHIELDING GAS TYPE/FLOW RATEPREHEAT APPLIEDINTERPASS TEMPERATURE MAINTAINED (MIN./MAX.)PROPER POSITION (F. V. H. OH)	O	O
WELDING TECHNIQUES <ul style="list-style-type: none">INTERPASS AND FINAL CLEANINGEACH PASS WITHIN PROFILE LIMITATIONSEACH PASS MEETS QUALITY REQUIREMENTS	O	O

P: PERFORM - THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT OR MEMBER
O: OBSERVE - THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

TABLE 1705.6
REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	----	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	----	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	----	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	----
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	----	X

TABLE 1705.3
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	----	X	ACI 318: Ch. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
2. REINFORCING BAR WELDING: <ol style="list-style-type: none">VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 705;INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; ANDINSPECT ALL OTHER WELDS	----	X	AWS D1.4 ACI 318: 26.5.4	----
3. INSPECT ANCHORS CAST IN CONCRETE	----	X	ACI 318: 17.8.2	----
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE MEMBERS: <ol style="list-style-type: none">ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	X	X	ACI 318: 17.8.2	----
5. VERIFYING USE OF REQUIRED DESIGN MIX.	----	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS; PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	----	ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	----	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	----	X	ACI 318: 26.4.7-26.4.9	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: <ol style="list-style-type: none">APPLICATION OF PRESTRESSED FORCES; ANDGROUTING OF BONDED PRESTRESSING TENDONS.	X	----	ACI 318: 26.9.2.1 ACI 318: 26.9.2.3	----
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	----	X	ACI 318: Ch. 26.8	----
11. VERIFY IN-SITU CONCRETE STRENGTH. PRIOR TO STRESSING OF TENSONS IN POSTTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	----	X	ACI 318: 26.10.2	----
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	----	X	ACI 318: 26.10.1(d)	----

A. TESTING OF POST-INSTALLED ANCHORS MUST ALSO COMPLY WITH THE ANCHOR MANUFACTURER'S RECOMMENDED TESTING AND VERIFICATION AS WELL AS THE TESTING AND VERIFICATION INDICATED IN THAT PRODUCT'S ICC-ES REPORT.

TABLE N5.4-1
INSPECTION TASKS PRIOR TO WELDING

INSPECTION TASKS PRIOR TO WELDING	QC	QA
WELDING PROCEDURE SPECIFICATIONS (WPS.) AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
MATERIAL IDENTIFICATIONS (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM ¹	O	O
FIT-UP GROOVE WELDS (INCLUDING JOINT GEOMETRY) <ul style="list-style-type: none">JOINT PREPARATIONDIMENSIONS (ALIGNMENT, ROOT OPENING, ROOTFACES, BEVEL)CLEANLINESS (CONDITION OF STEEL SURFACES)TACKING (TACK WELD QUALITY AND LOCATION)BACKING TYPE AND FIT (IF APPLICABLE)	O	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
FIT-UP OF FILLET WELDS <ul style="list-style-type: none">DIMENSIONS (ALIGNMENT, GAPS AT ROOT)CLEANLINESS (CONDITION OF STEEL SURFACES)TACKING (TACK WELD QUALITY AND LOCATION)	O	O
CHECK WELDING EQUIPMENT	O	----
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O

¹ THE FABRICATOR/ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OF A MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE

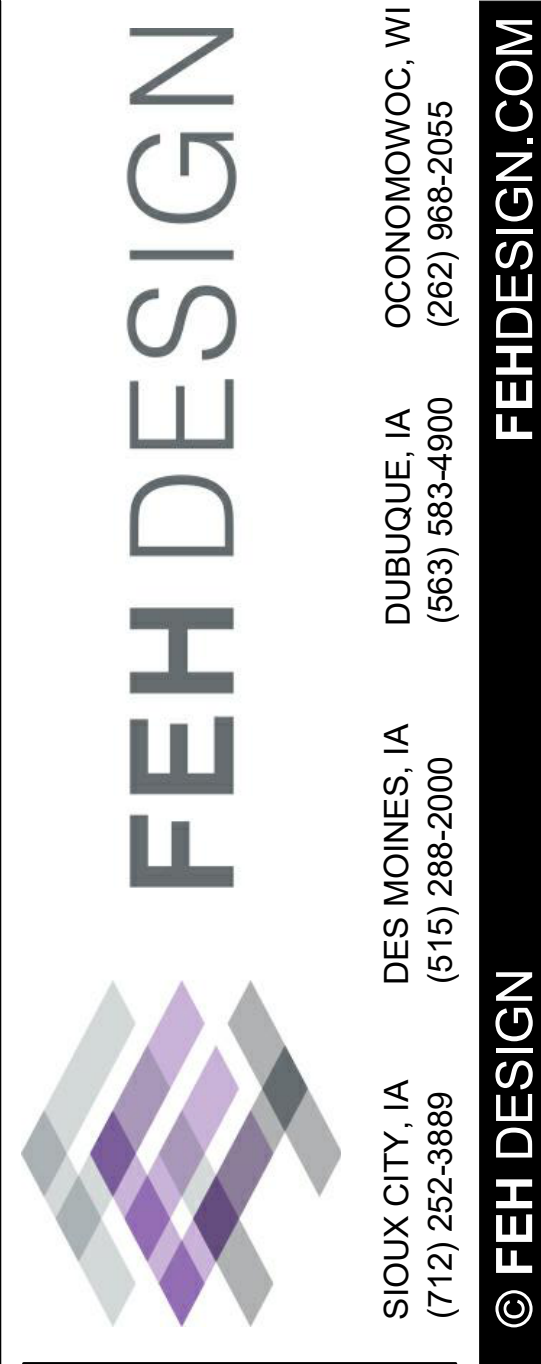
P: PERFORM - THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT OR MEMBER
O: OBSERVE - THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

TABLE N5.4-3
INSPECTION TASKS AFTER WELDING

INSPECTION TASKS AFTER WELDING	QC	QA
WELDS CLEANED	P	P
SIZE LENGTH AND LOCATION OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA <ul style="list-style-type: none">CRACK PROHIBITIONWELDBASE-METAL FUSIONCRATER CROSS SECTIONWELD PROFILESWELD SIZEUNDERCUTPOROSITY	O	O
ARC STRIKES	O	O
K-AREA ¹	O	O
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	O	O
REPAIR ACTIVITIES	O	O
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	O	O

¹ WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 in. (75 mm) OF THE WELD.

P: PERFORM - THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT OR MEMBER
O: OBSERVE - THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS



SHEET TITLE
GENERAL NOTES AND SPECIAL INSPECTIONS

PROJECT TITLE
CENTRAL LYON COMMUNITY SCHOOL DISTRICT
2024 FACILITY IMPROVEMENTS

DATE ISSUED: 10/17/2023
REV. NO. DATE

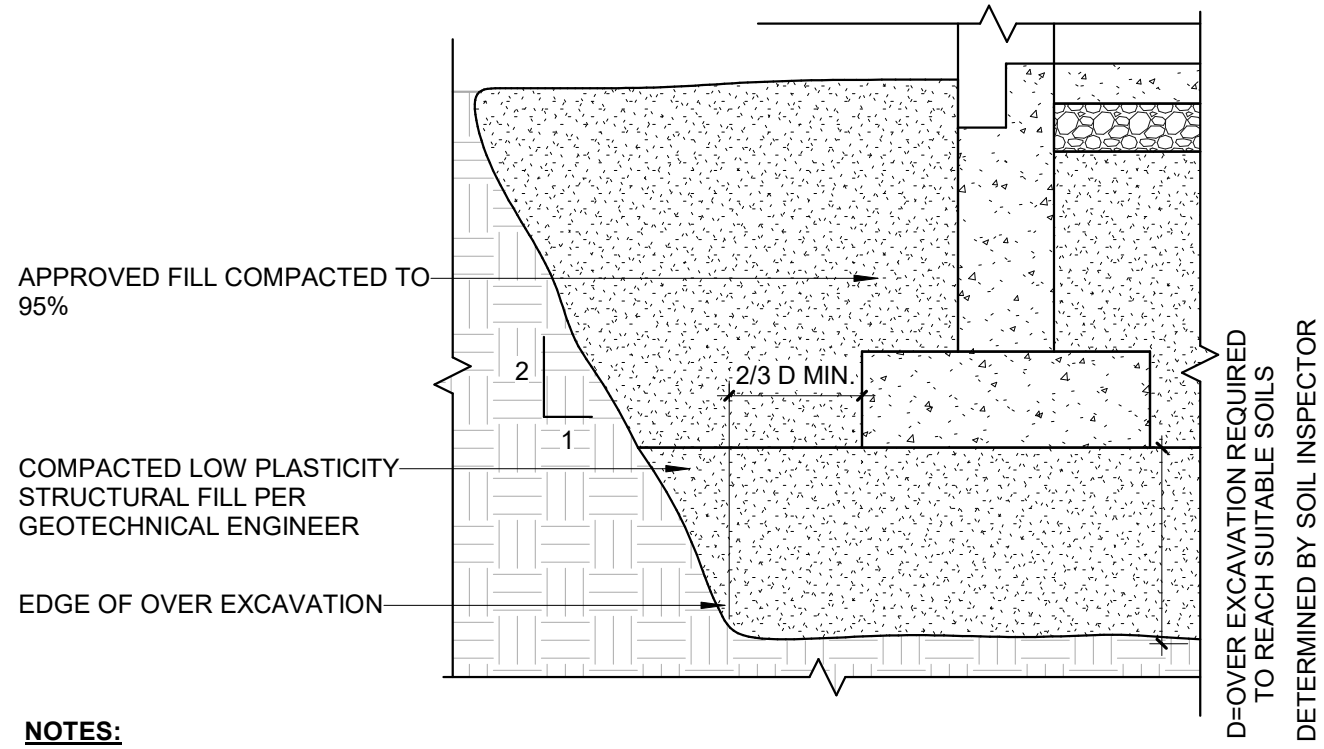
PROJECT NUMBER
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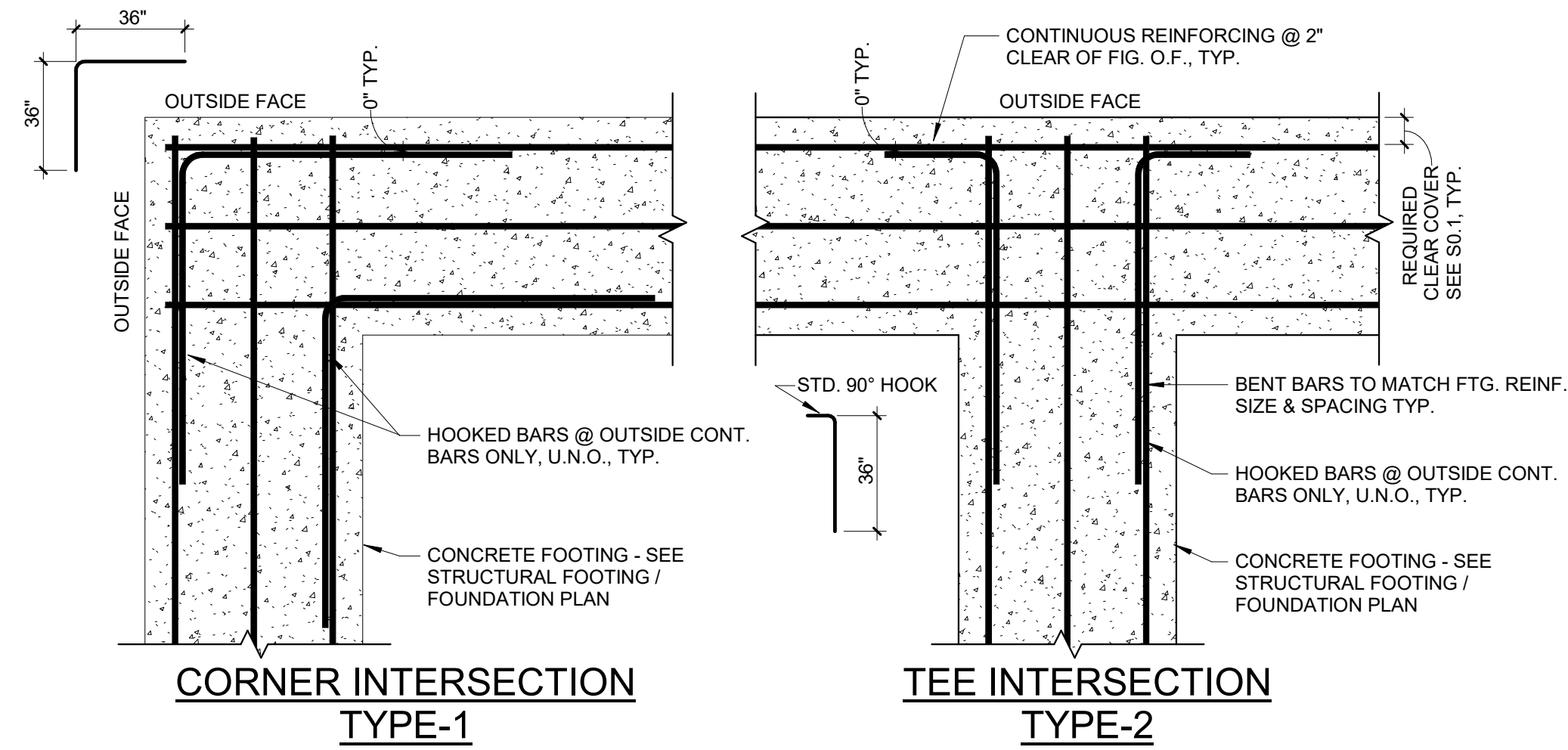
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HARK BOULEVARD
ROCK RAPIDS, IA 51246

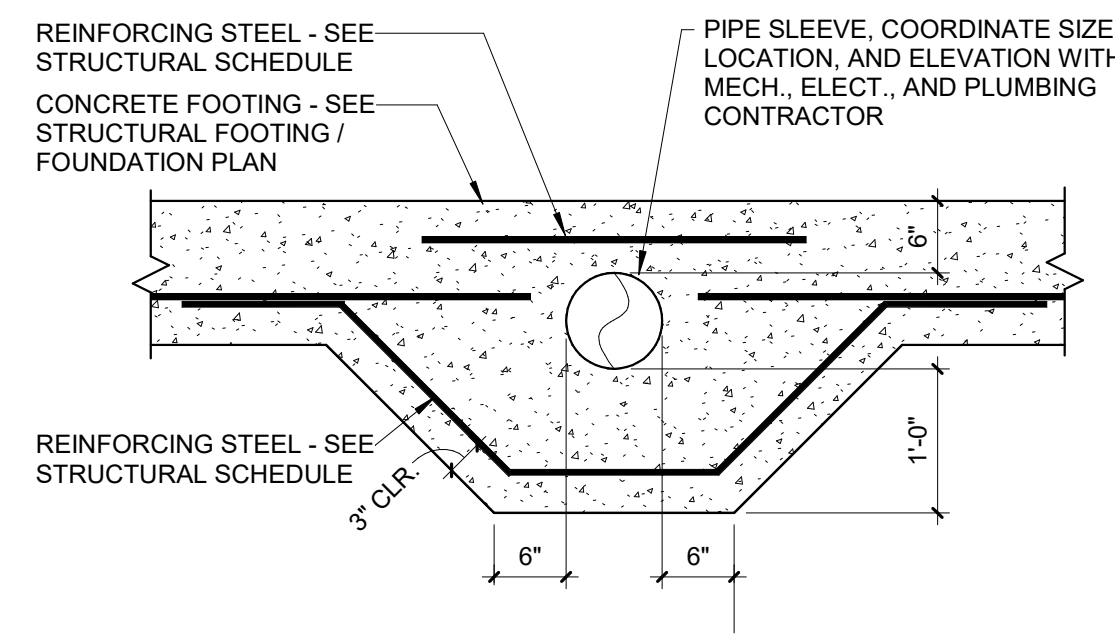
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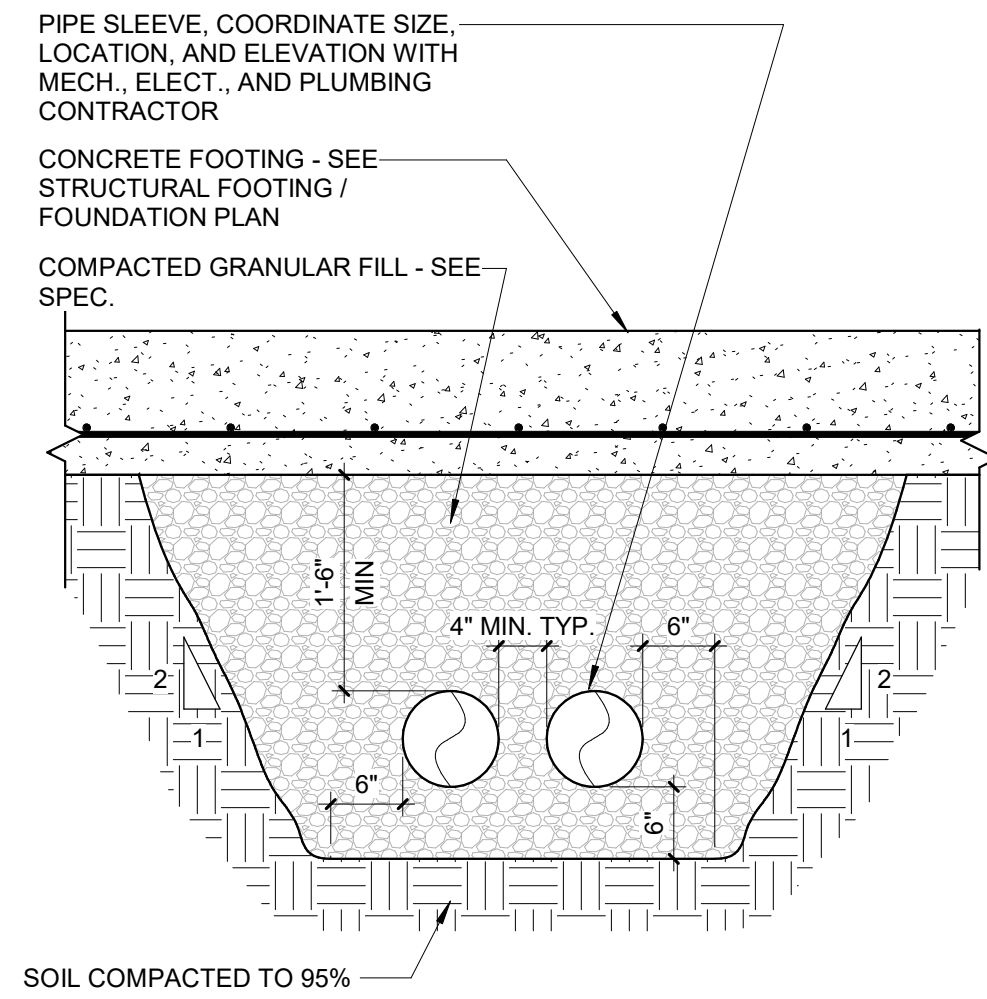
1 TYPICAL OVEREXCAVATION DETAIL
SCALE: 1/2" = 1'-0"



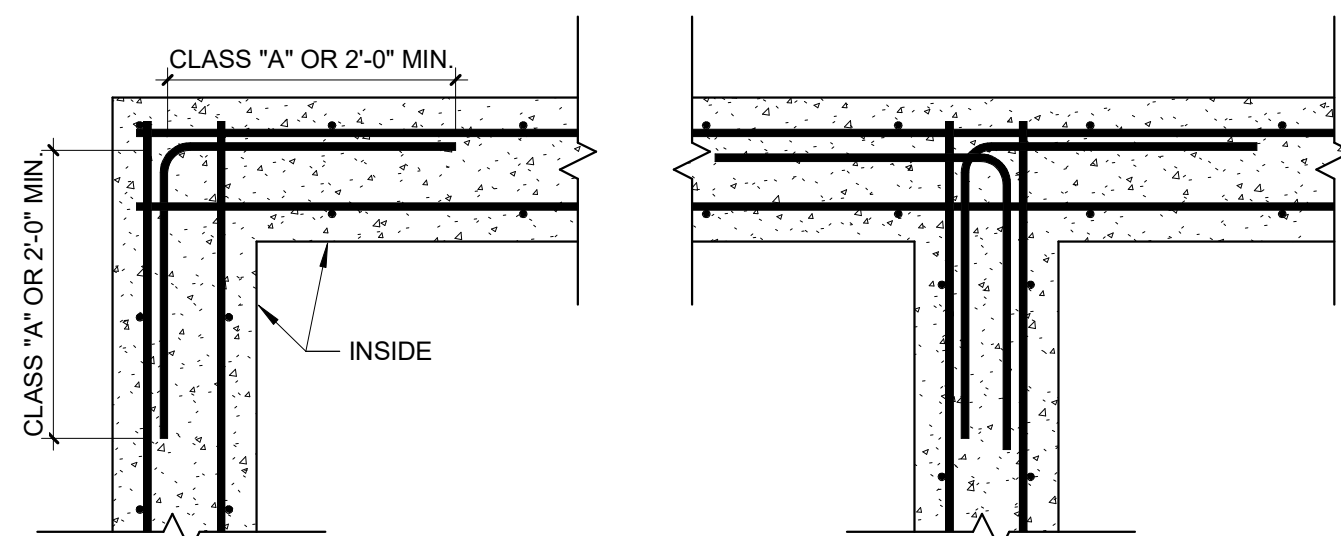
2 TYPICAL FOOTING INTERSECTION REINFORCEMENT
SCALE: 3/4" = 1'-0"



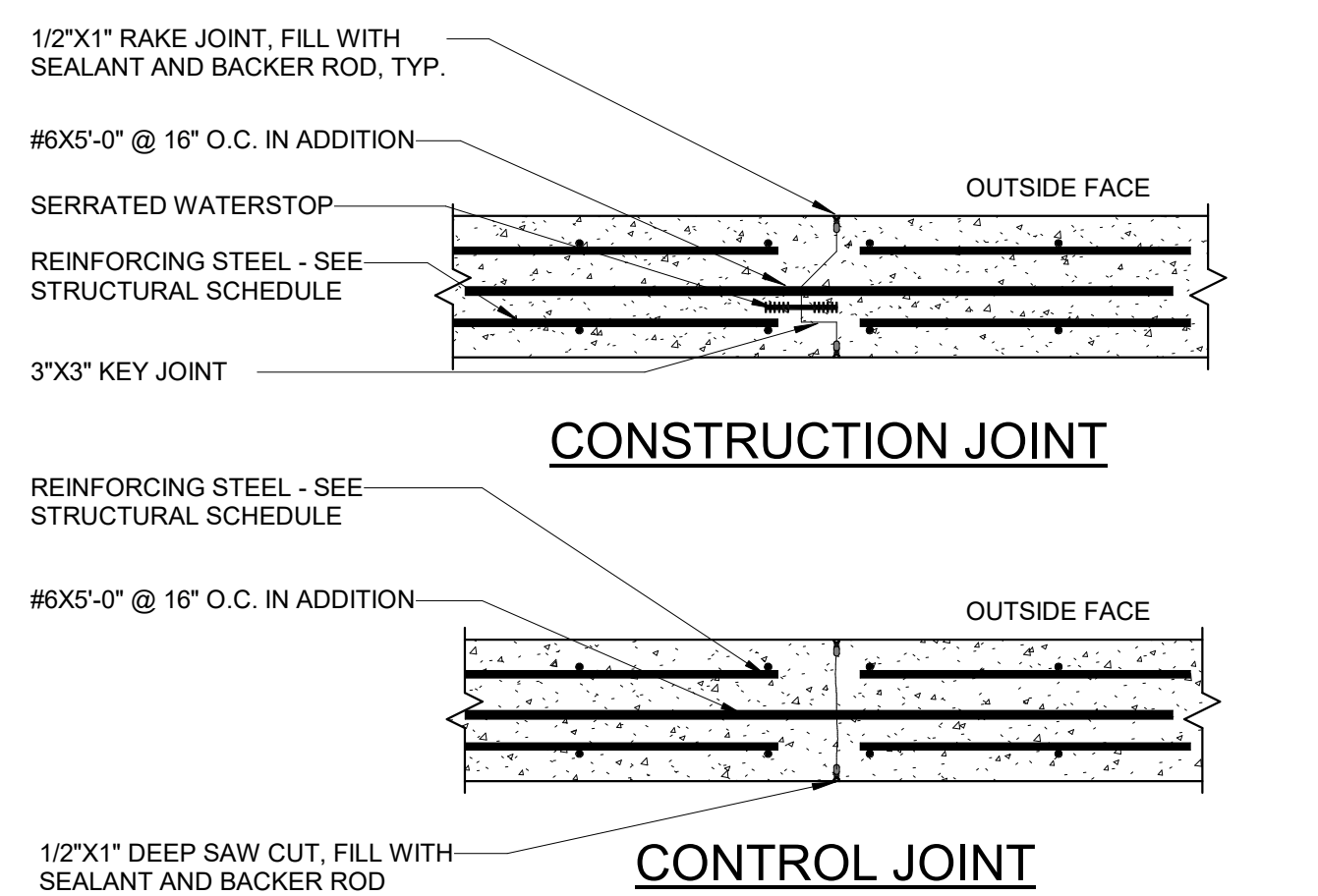
3 TYPICAL PIPE SLEEVE THROUGH CONTINUOUS FOOTING
SCALE: 3/4" = 1'-0"



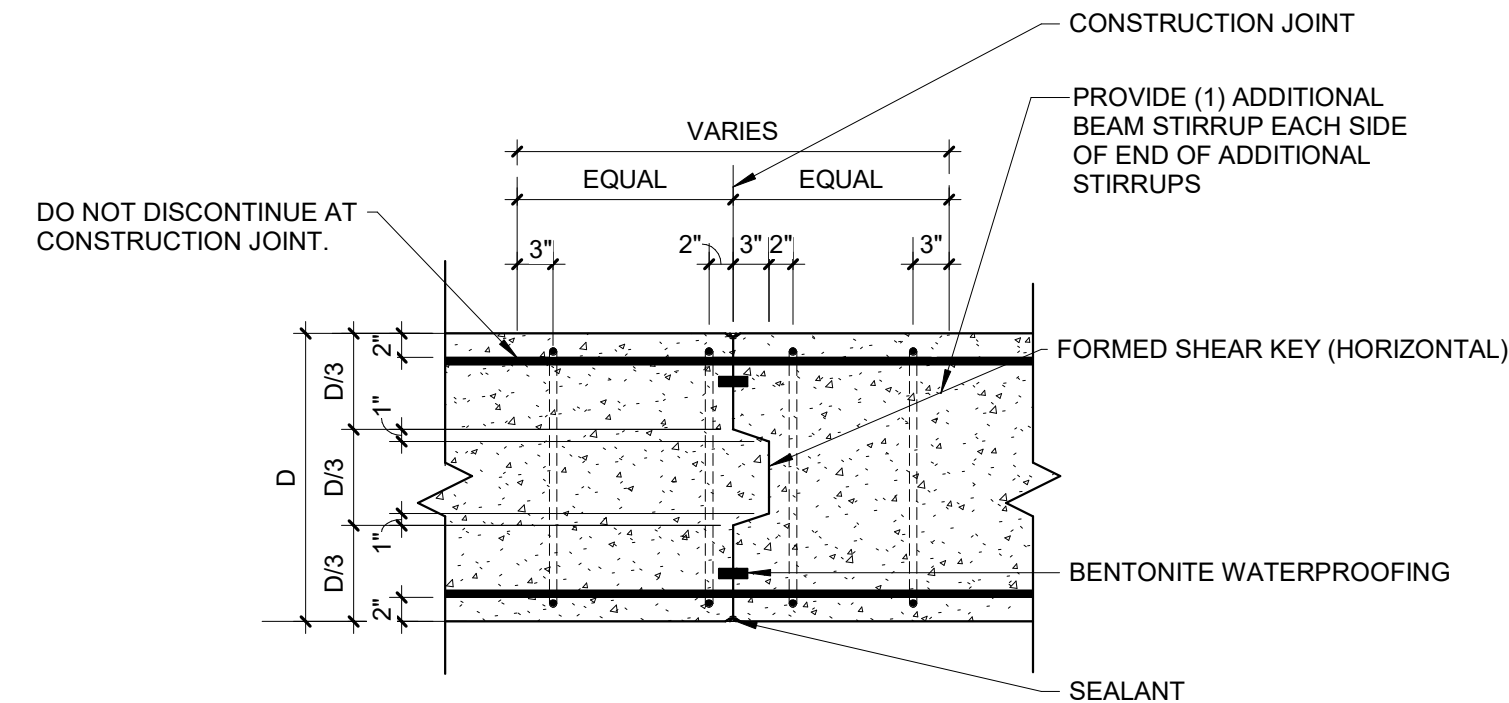
4 TYPICAL PIPE SLEEVE UNDER CONTINUOUS FOOTING
SCALE: 3/4" = 1'-0"



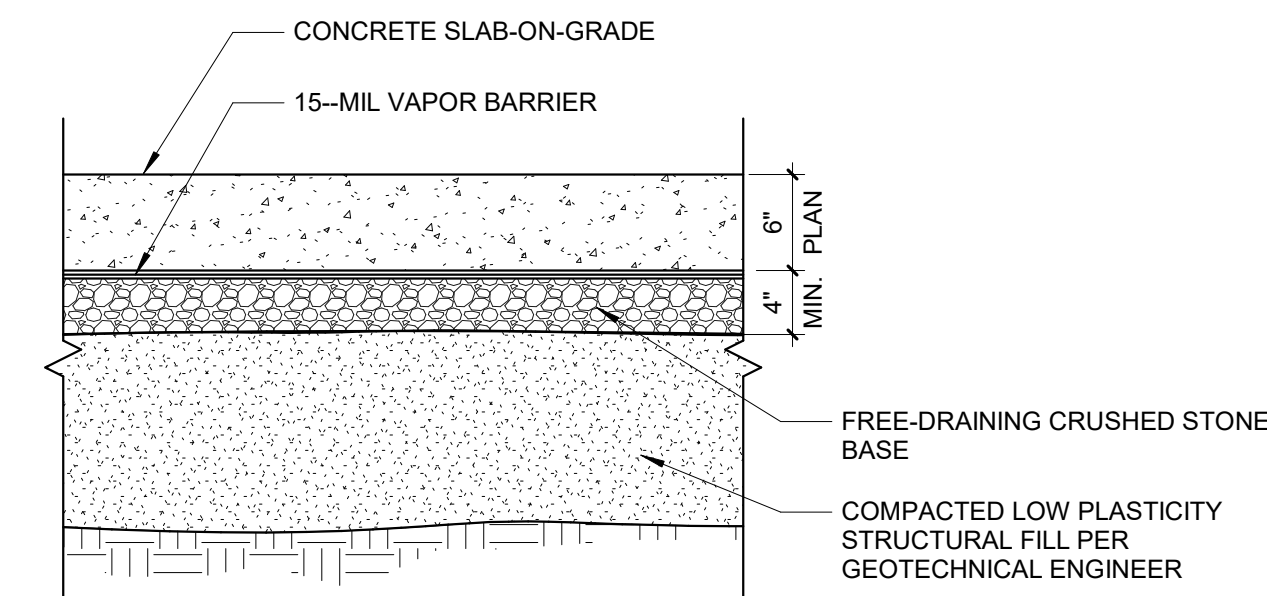
5 TYPICAL CORNER BAR DETAIL
SCALE: 3/4" = 1'-0"



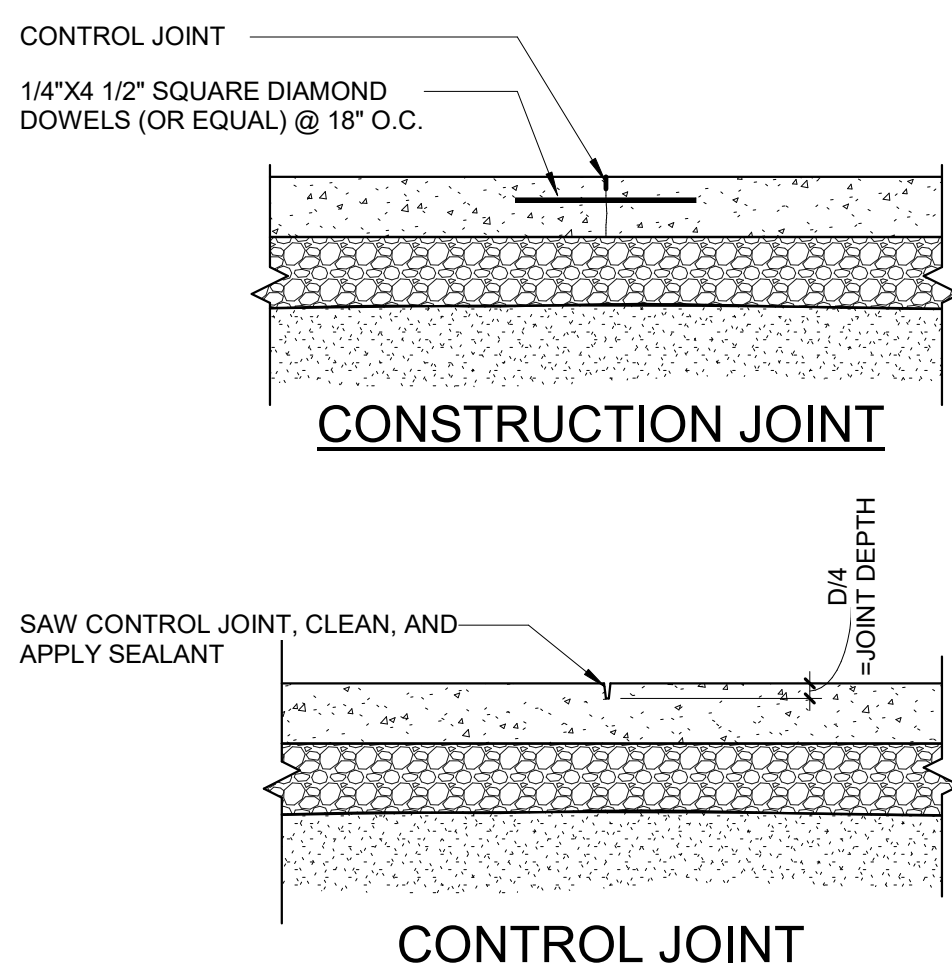
6 TYPICAL DETAIL OF VERTICAL CONSTRUCTION AND CONTROL JOINT IN CONCRETE WALLS
SCALE: 3/4" = 1'-0"



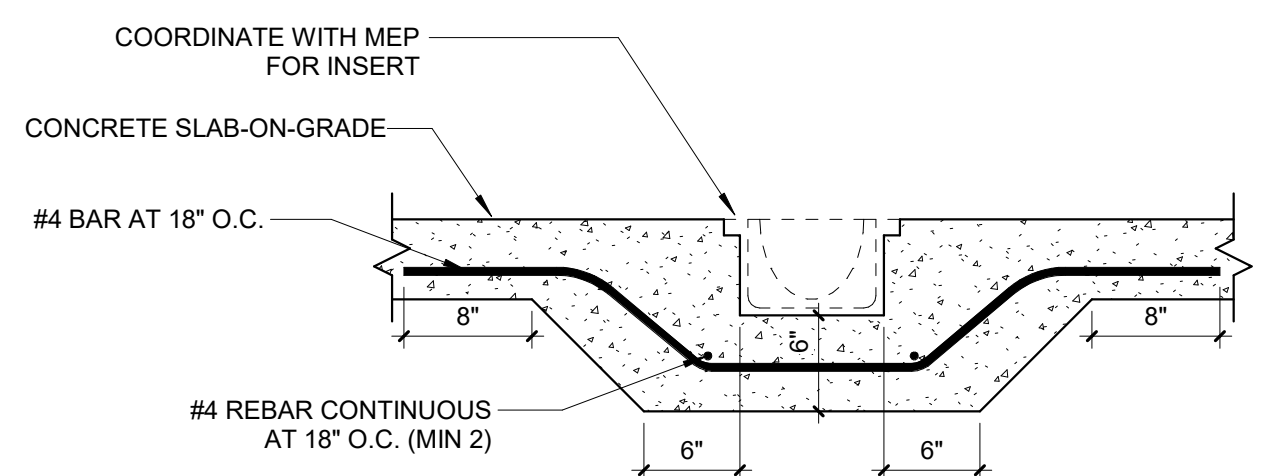
7 TYPICAL GRADE BEAM CONSTRUCTION JOINT DETAIL
SCALE: 3/4" = 1'-0"



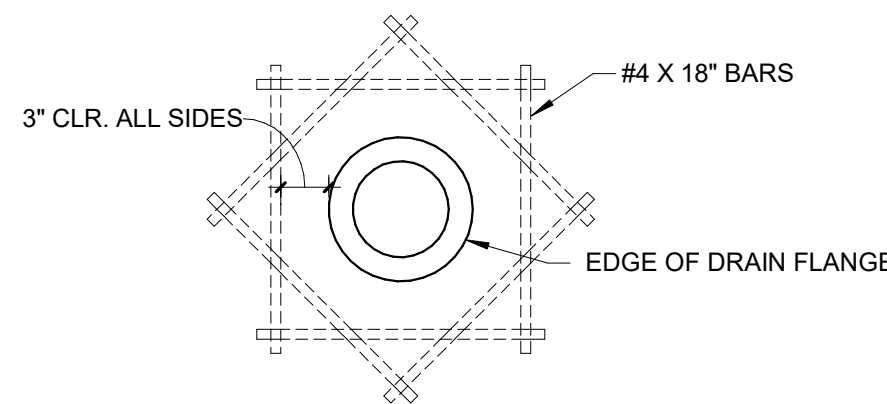
8 TYPICAL SLAB-ON-GRADE DETAIL
SCALE: 1" = 1'-0"



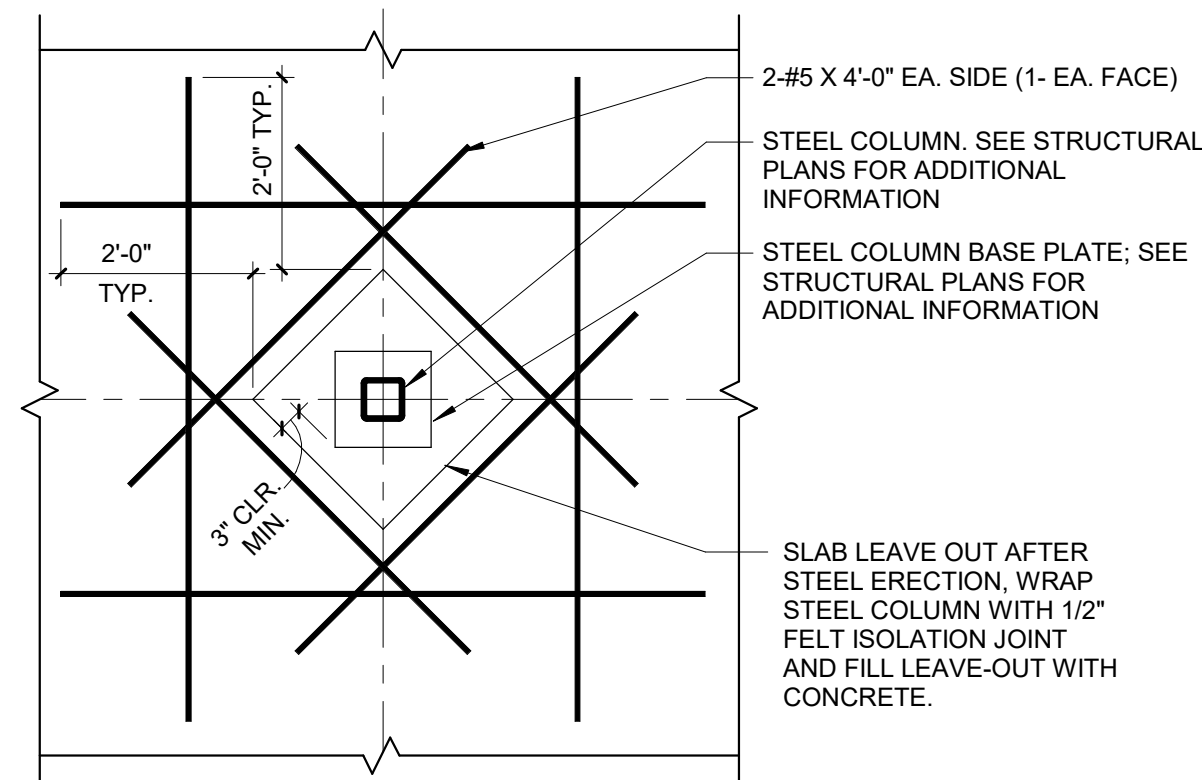
9 TYPICAL SLAB-ON-GRADE CONTROL AND CONSTRUCTION JOINTS DETAIL
SCALE: 3/4" = 1'-0"



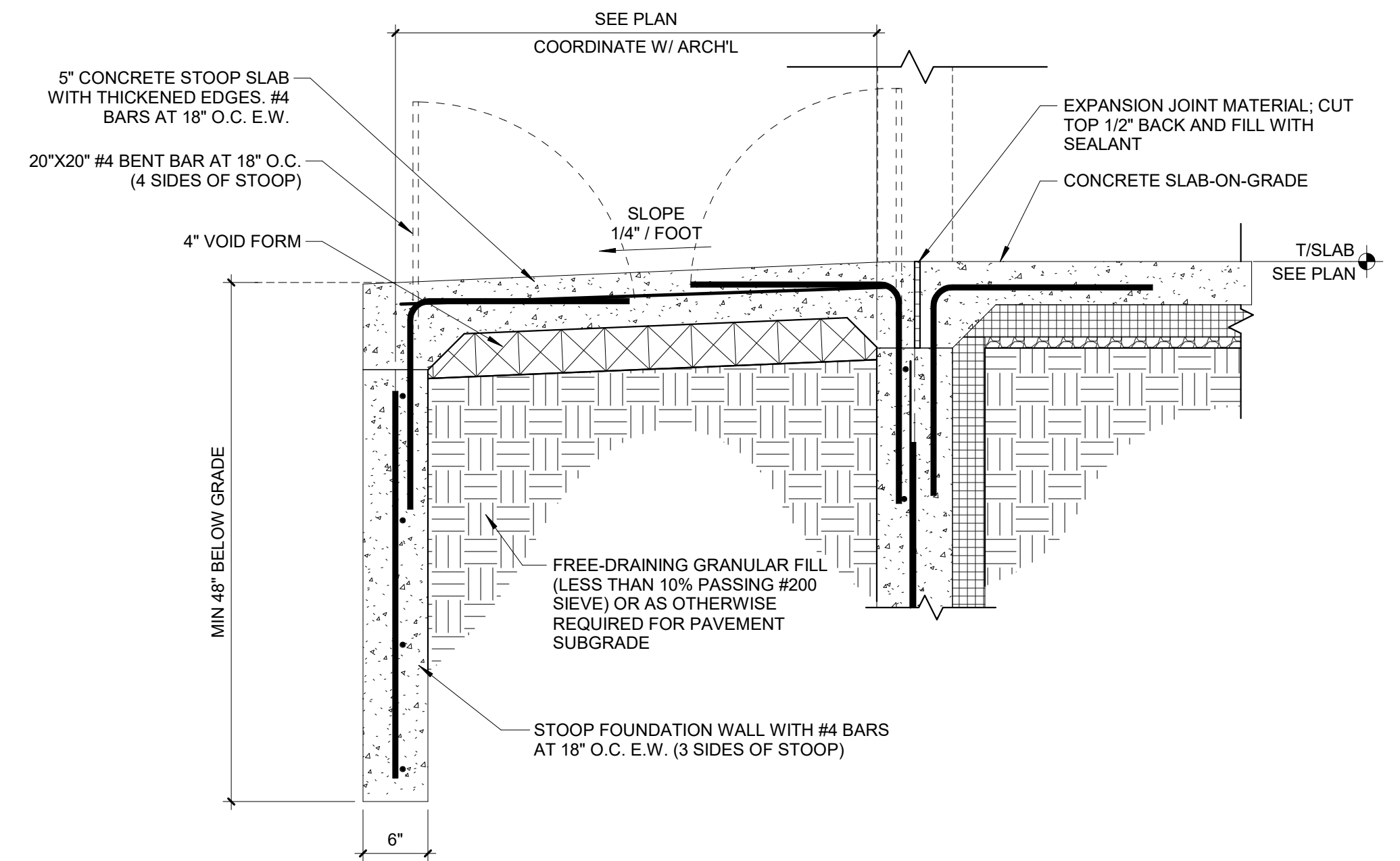
10 TYPICAL TRENCH DRAIN/RECESS SLAB DETAIL
SCALE: 1" = 1'-0"



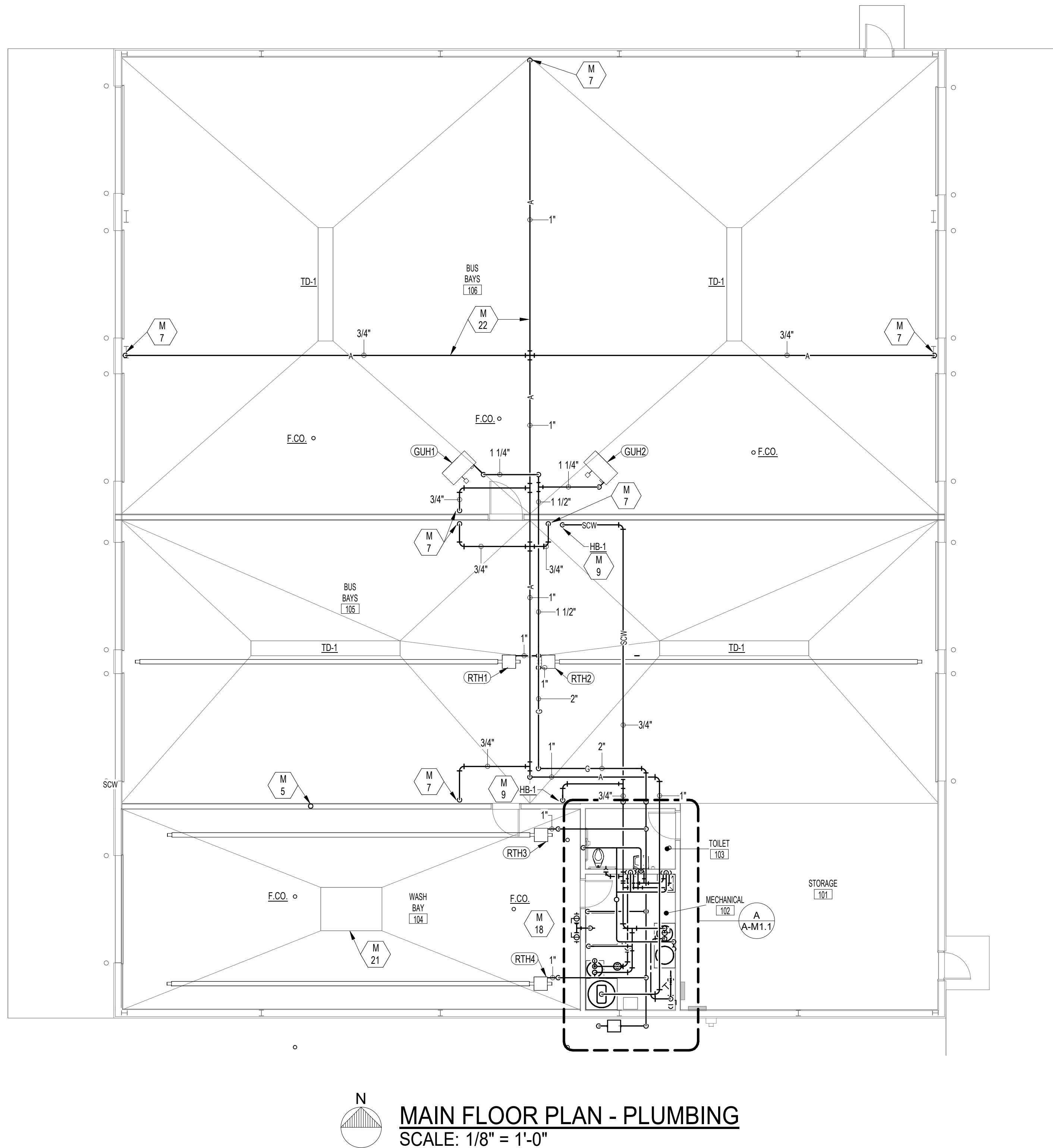
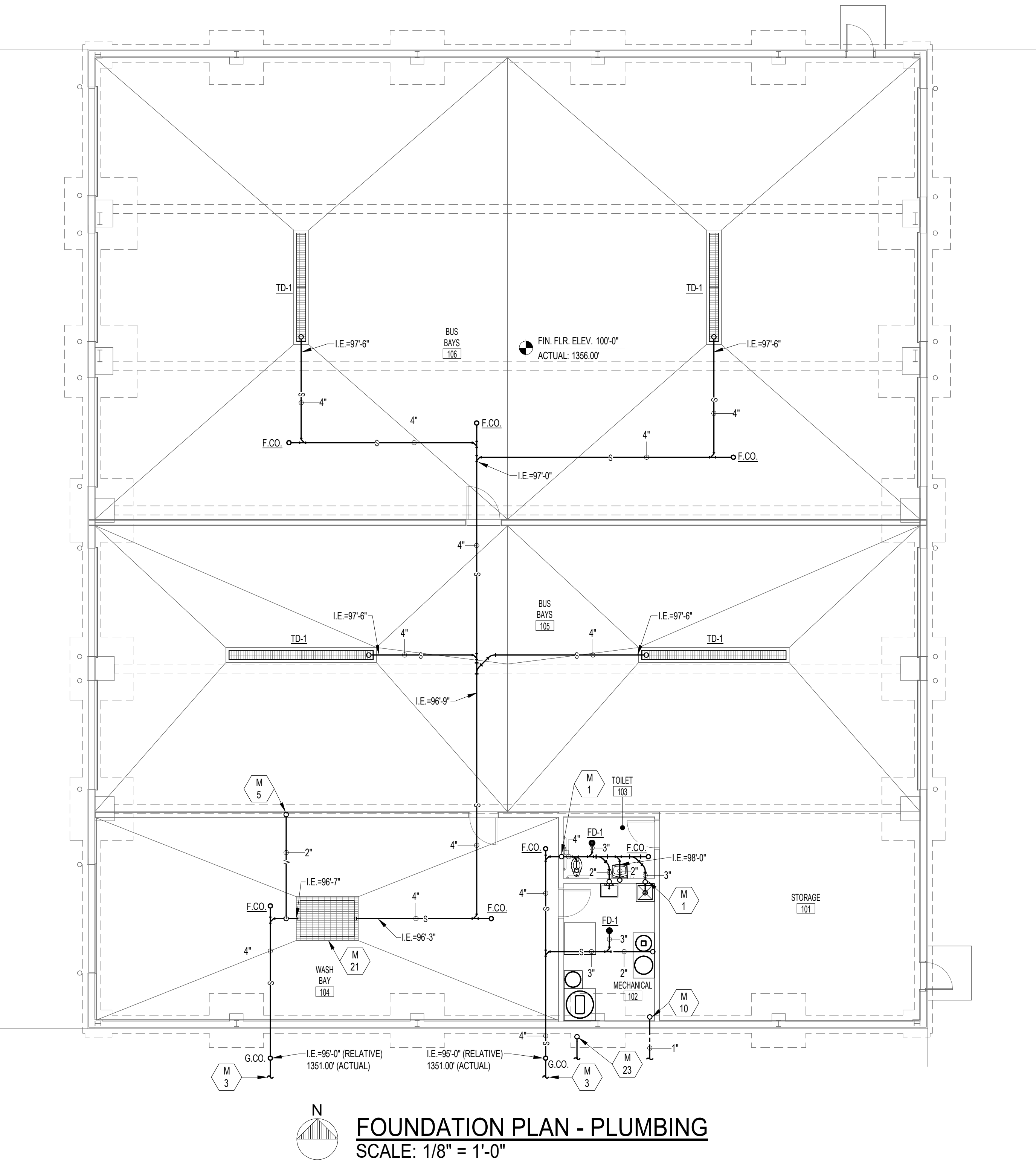
11 TYPICAL REINFORCING AT FLOOR DRAIN
SCALE: 1" = 1'-0"

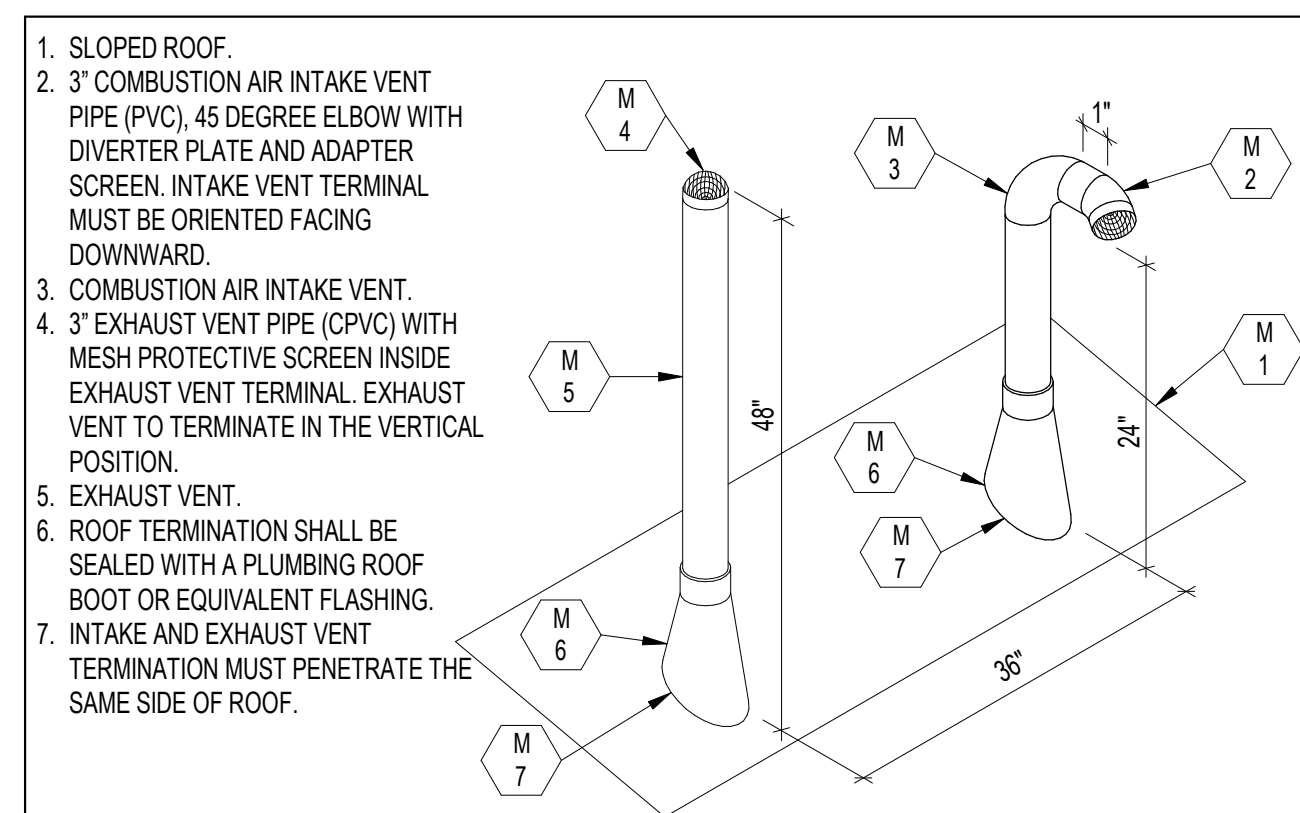


12 TYPICAL ISOLATION JOINT DETAIL
SCALE: 1/2" = 1'-0"

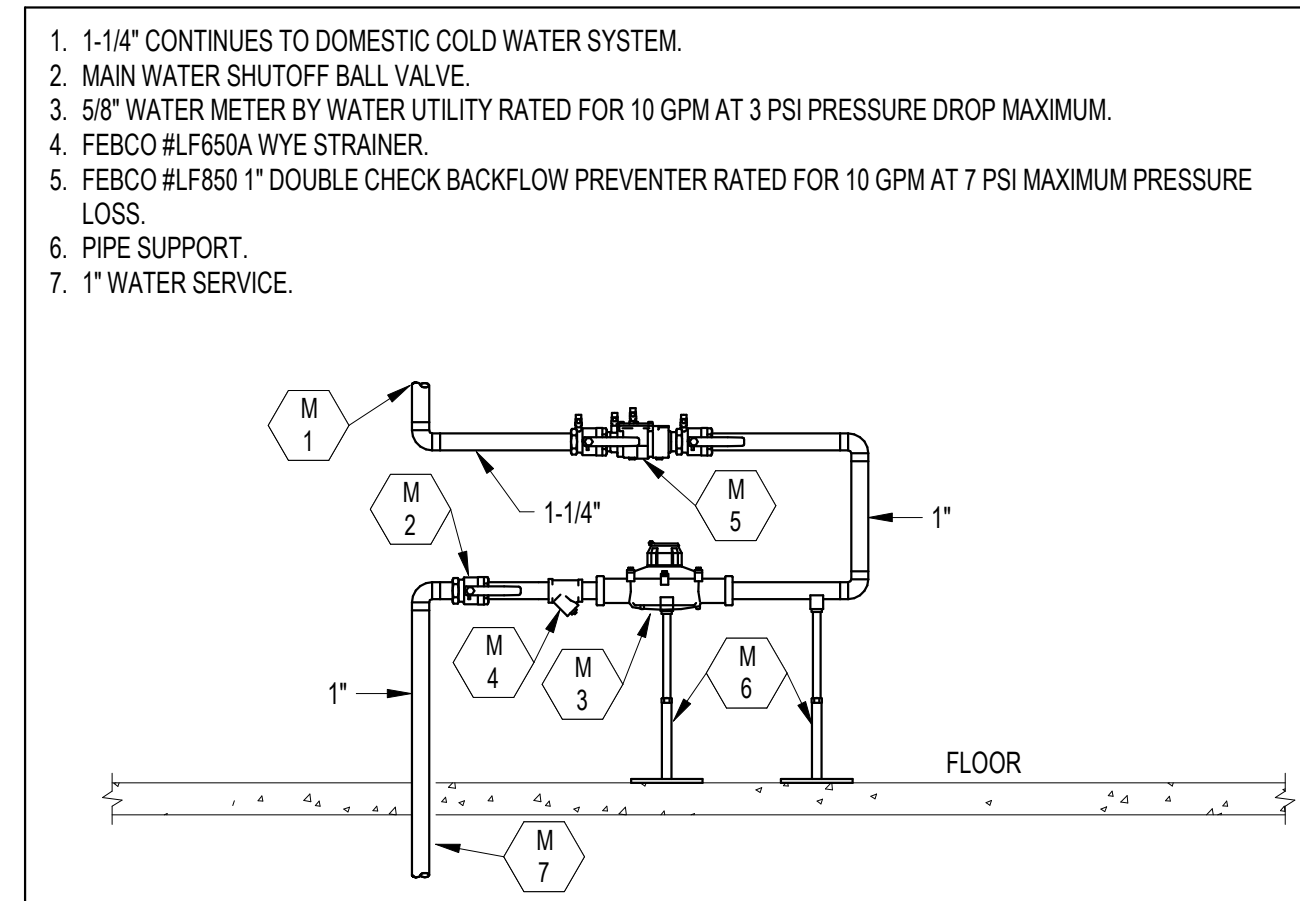


13 NEW STOOP DETAIL
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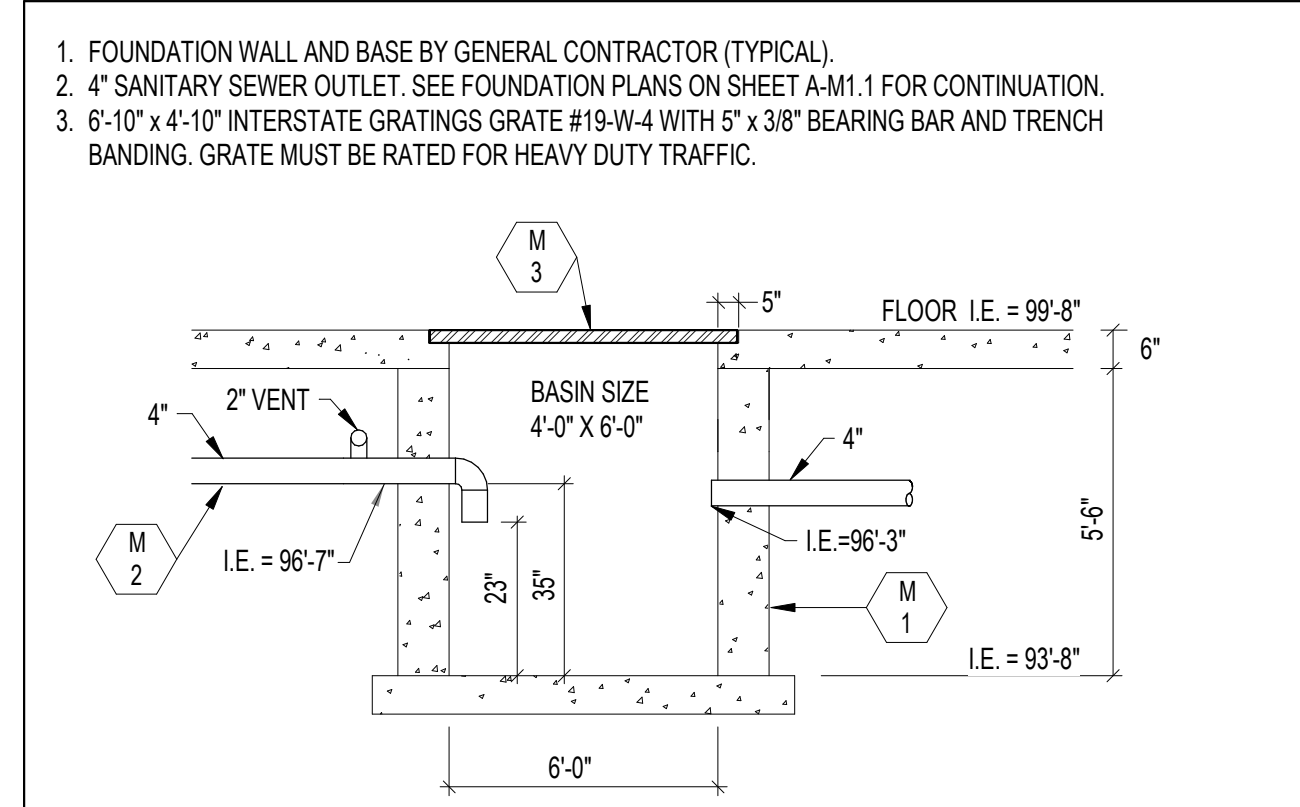




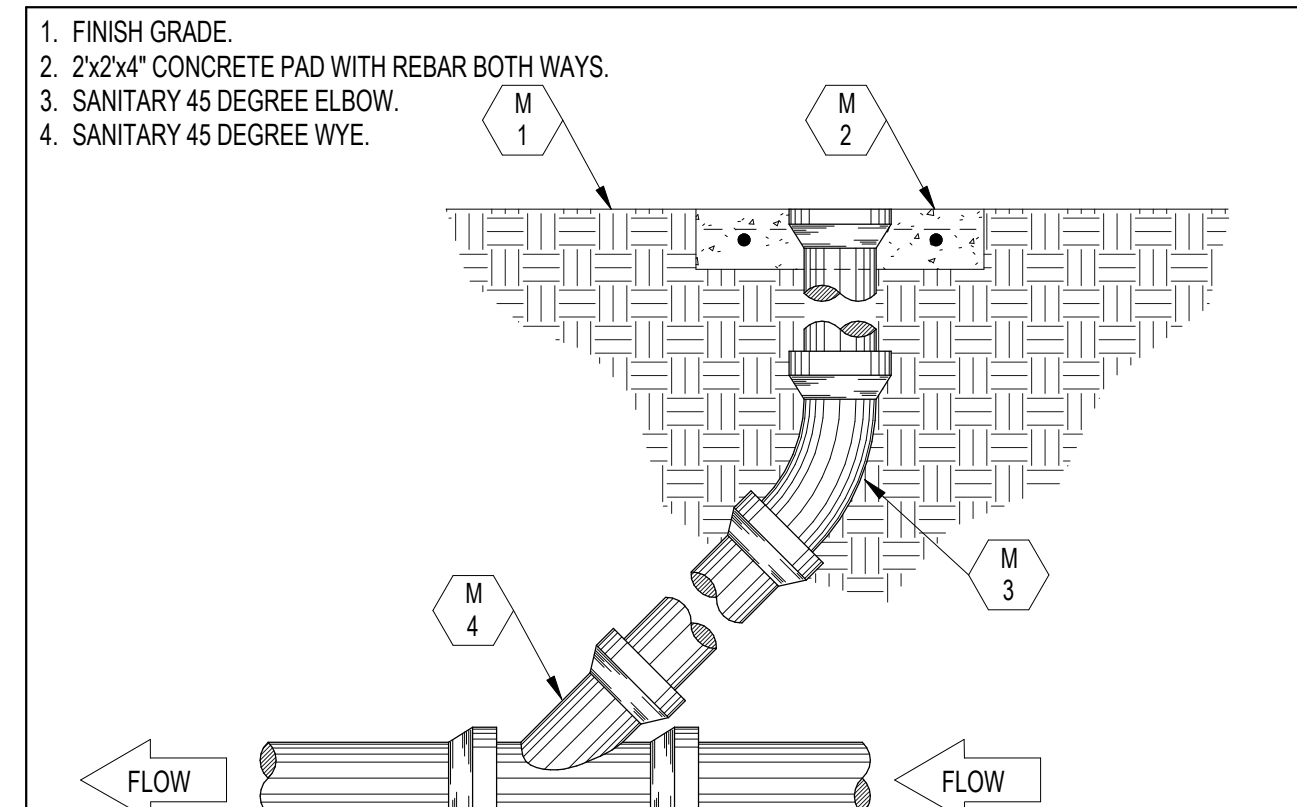
1	CAR WASH WATER HEATER INTAKE/EXHAUST VENT DETAIL	NO SCALE
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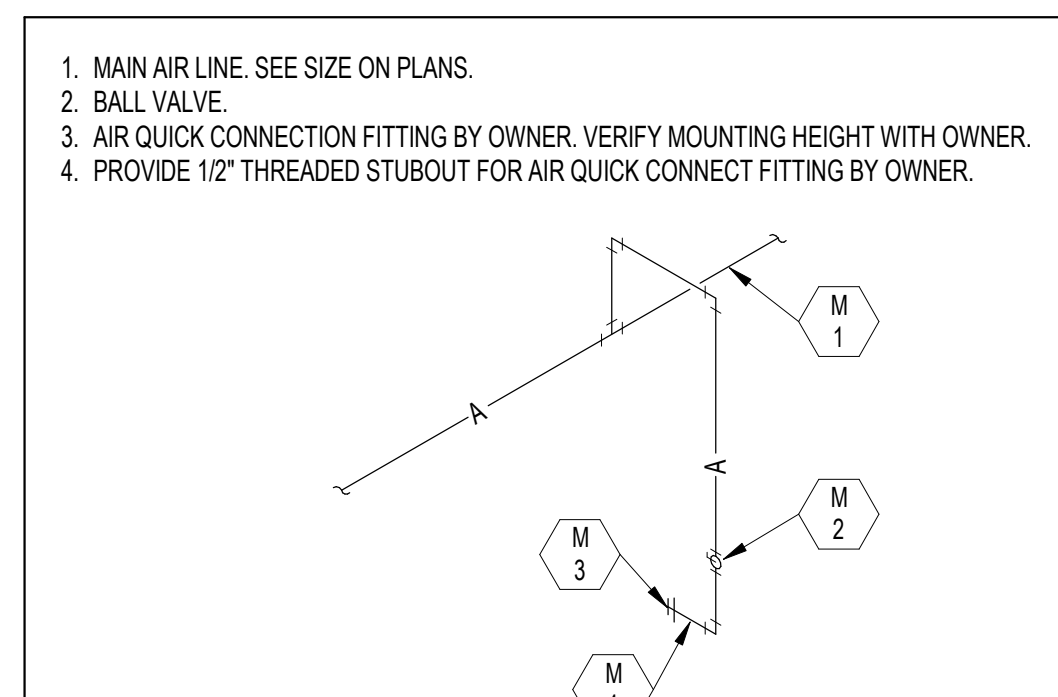
2	DOMESTIC WATER SERVICE DETAIL	NO SCALE
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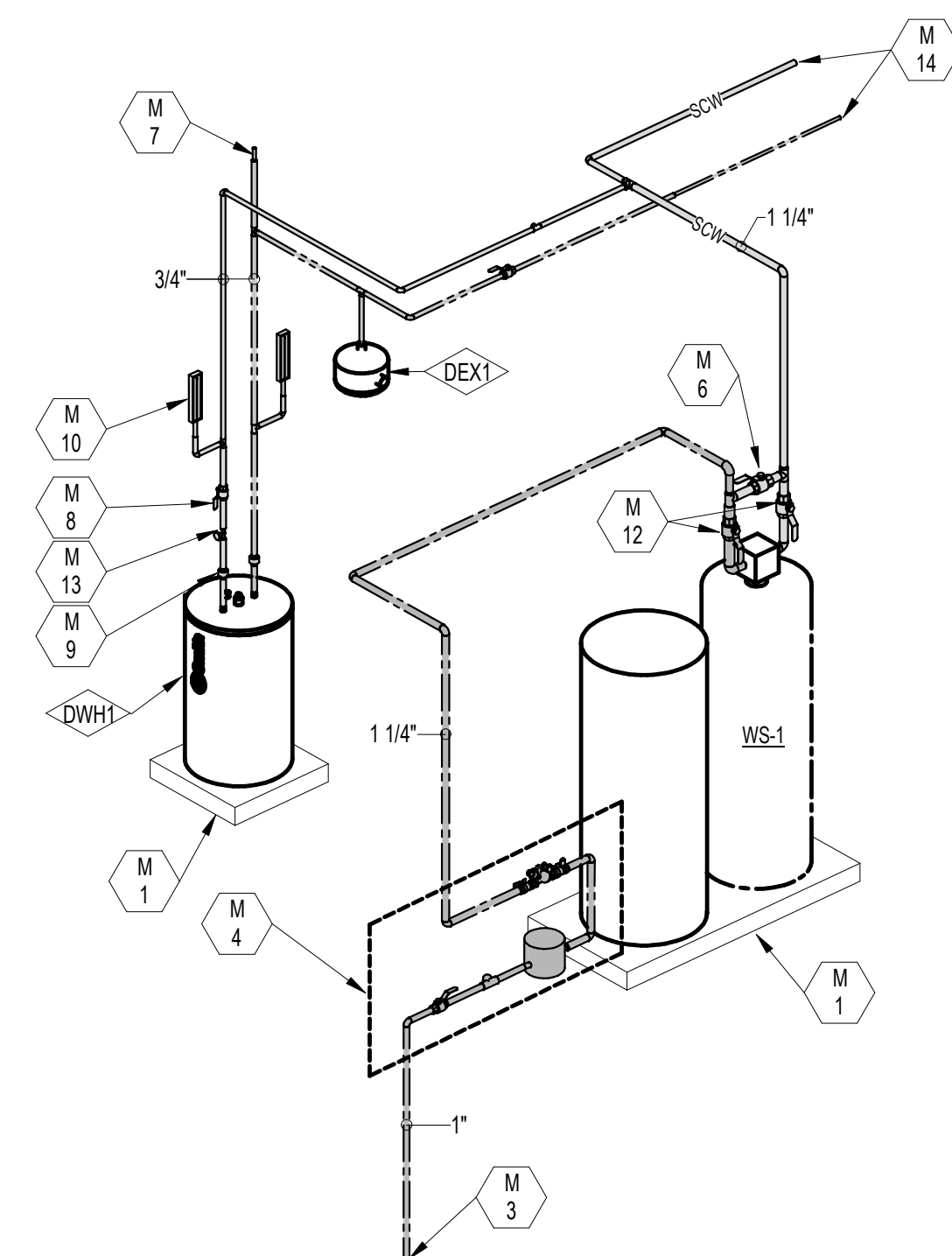
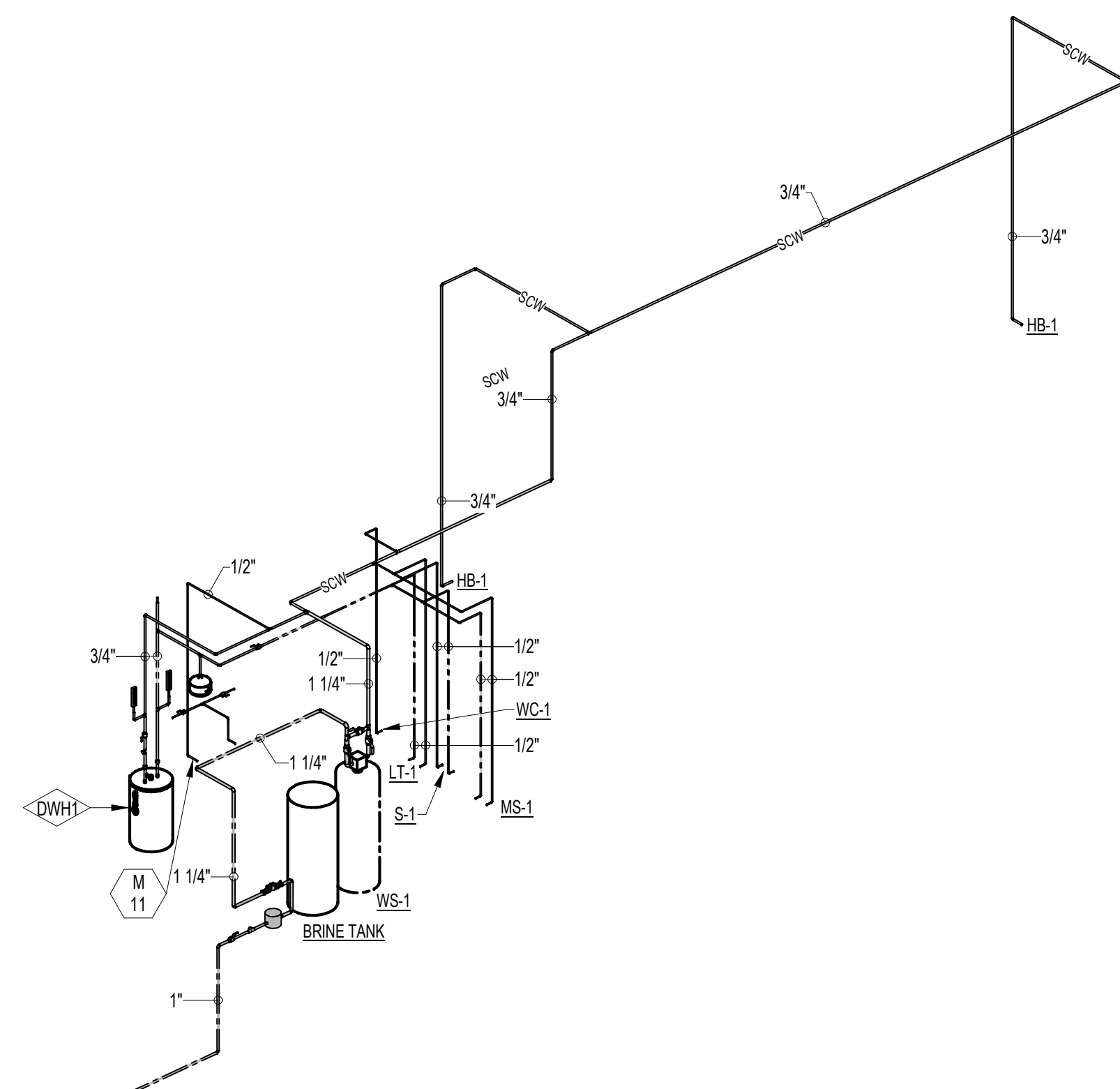
4 WASH BAY 104 SAND CATCH BASIN DETAIL




5	GRADE CLEAN-OUT DETAIL	NO SCALE
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6 AIR CONNECTION DETAIL NO SCALE



EXPANSION TANK SCHEDULE							
SYMBOL	MNFR	MODEL	TANK VOLUME	ACCEPTANCE GALLONS	FILL PRESSURE	SERVES	REMARKS
							
DEX1	AMTROL	ST-5	2 gal.	0.9	50 psia	DOMESTIC HW	

DOMESTIC ELECTRIC WATER HEATER SCHEDULE												
SYMBOL ◇	MNF#	MODEL	DOMESTIC WATER DATA			ELECTRICAL DATA				UEF	SERVES	REMARKS
			STORAGE (gal.)	RECOVERY (gph)	WATER TEMP.	KW	VOLTS	PHASE	MFS			
DWH1	RHEEM	ME30238C	30	17	120°F	4.5	230	1	25	0.92	BUILDING 1	
1 PROVIDE NON-SIMULTANEOUS ELEMENT OPERATION												

AIR COMPRESSOR SCHEDULE													
SYMBOL	MNFR	MODEL	TANK SIZE (GAL.)	CAPACITY CFM	PSIG	MOTOR PEAK HP	STAGES	VOLTS	PHASE	FLA	MOP	SERVES	REMARKS
AC1	AIRCO	A050V060	60	15	175	5	2	230	1	20.3	30	BUILDING	1,2

1. PROVIDE WITH FP FULL PACKAGE INCLUDING AFTERCOOLER, AUTOMATIC TANK DRAIN, AND INSTALLATION KIT.

2. QUINCY, INGERSOLL RAND, AND INDUSTRIAL AIR BRANDS SHALL BE CONSIDERED EQUAL.

Provide chrome plated, brass loose-key stops for all fixtures. Provide two keys to the Owner. Items indicated by an asterisk (*) are furnished by others and installed by the Mechanical Contractor. All other items to be furnished and installed by the Mechanical Contractor. Installation includes rough-in, connection, continuous waste and p-traps (verify connections). All mounting heights are to the top of the rim unless otherwise noted.									
MARK	FUNCTION	MNFR. & MODEL	MTG. HT.	WASTE	VENT	HW	SCW	CW	REMARKS
WC-1	GRAVITY TANK TYPE ADA WALL CLOSET	KÖHLER "HIGHLINE" K-3979 CLASS FIVE (1.6 GPF) BEMIS #3155SCT SEAT	17"	4"	2"	--	1/2"	--	1
L-1	WALL HUNG ADA LAVATORY WITH MANUAL FAUCET FLOOR DRAIN	KÖHLER "GREENWICH" K-2032 DELTA 22C151 FAUCET	34"	1-1/2"	1-1/2"	1/2"	1/2"	--	2, 3, 4, 5, 6
FD-1		ZURN #ZN-415 WITH TYPE 'B' STRAINER	--	3"	2"	--	--	--	
F.CO.	FLOOR CLEAN-OUT	ZURN #ZN-1400	--	VARIES	--	--	--	--	
W.CO.	WALL CLEAN-OUT	ZURN #Z-1440	--	--	--	--	--	--	
G.CO.	WITH ROUND ACCESS COVER GRADE CLEAN-OUT	WITH #Z-1469 ACCESS COVER ZURN #Z-1400	--	VARIES	--	--	--	--	
MS-1	MOP SINK	MUSTEE #63M. 63.600A FAUCET 65.700 HOSE AND BRACKET (2) 63.401 GUARDS	--	3"	1-1/2"	1/2"	1/2"	--	
HB-1	HOSE BIBB (CW)	WOODFORD #26P-3/4	SEE PLANS	--	--	--	3/4"	--	
LT-1	LAUNDRY TUB	MUSTEE #18F WITH CHICAGO FAUCET #891-369-LSVB	--	1-1/2"	1-1/2"	1/2"	1/2"	--	
TD-1	TRENCH DRAIN SYSTEM	ZURN #2882 TRENCH DRAIN	--	4"	--	--	--	--	7, 8

1. TANK TRIP LEVEL, FLUSH VALVE HANDLE OR SENSOR SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS ON ALL ADA WALL CLOSETS.

2. PROVIDE WITH ZURN #Z-1231 WALL CARRIER.

3. P-TRAP DRAIN AND EXPOSED SUPPLY PIPES SHALL BE INSULATED WITH TRUEBRO, HANDI LAV-GUARD2 MODEL 102E-Z INSULATION KIT, WHITE COLOR.

4. COORDINATE ROUGH-IN HEIGHTS FOR ADA CLEARANCES.

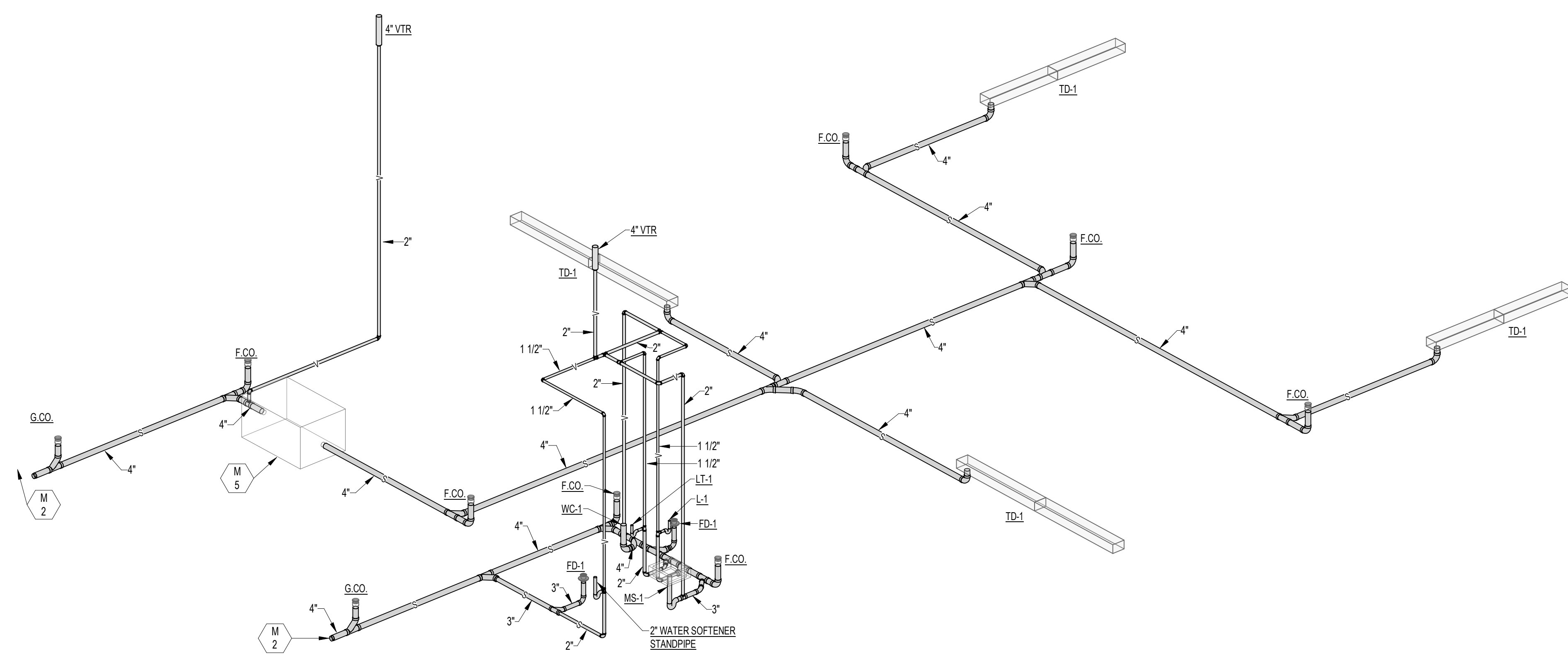
5. PROVIDE METAL GRIP STRAINER.

6. PROVIDE LAWLIER MIXING VALVE #570. SET TEMPERATURE TO 105°.

7. VERIFY NUMBER OF SECTIONS NEEDED AT EACH BAY. MECHANICAL CONTRACTOR TO CUT TO REQUIRED LENGTH.

8. PROVIDE TRENCH DRAIN WITH DUCTILE IRON SLOTTED GRATE WITH A CLASS C RATING AND 4" BOTTOM OUTLET.

WATER SOFTENER SCHEDULE																	
MARK	MNFR	MODEL	TYPE	DESIGN FLOW		CONTINUOUS FLOW		PEAK FLOW		RESIN CU. FT.	SOFTENING CAPACITY			BRINE TANK SIZE	SOFTENER TANK SIZE	CONNECTION SIZES	REMARKS
				GPM	PSI DROP	GPM	PSI DROP	GPM	PSI DROP		SALT USAGE (Kgr)	MIN. CAP. (Kgr)					
WS-1	CULLIGAN	HE 1.0	DUPLEX	10	9.2	10.6	11	12.8	15	3.0	88	60	24" x 42"	14" x 65"	1"	1, 2, 3	
1. UNIT MUST MEASURE MINIMUM FLOW DOWN TO 1.0 GPM.																	
2. CAPACITIES LISTED ARE PER TANK.																	
3. WATER SOFTENER SHALL BE PURCHASED BY THE OWNER AND INSTALLED BY THE PLUMBING CONTRACTOR.																	



WASTE & VENT RISER DIAGRAM
NO SCALE



ARCHITECTURE / ENGINEERING / INTERIORS



RISE Riser Diagrams, Details & Schedules - Plumbing

PROJECT TITLE CENTRAL LYON COMMUNITY SCHOOL DISTRICT

2024 FACILITY IMPROVEMENTS

BID PACKAGE A
BUS BARN

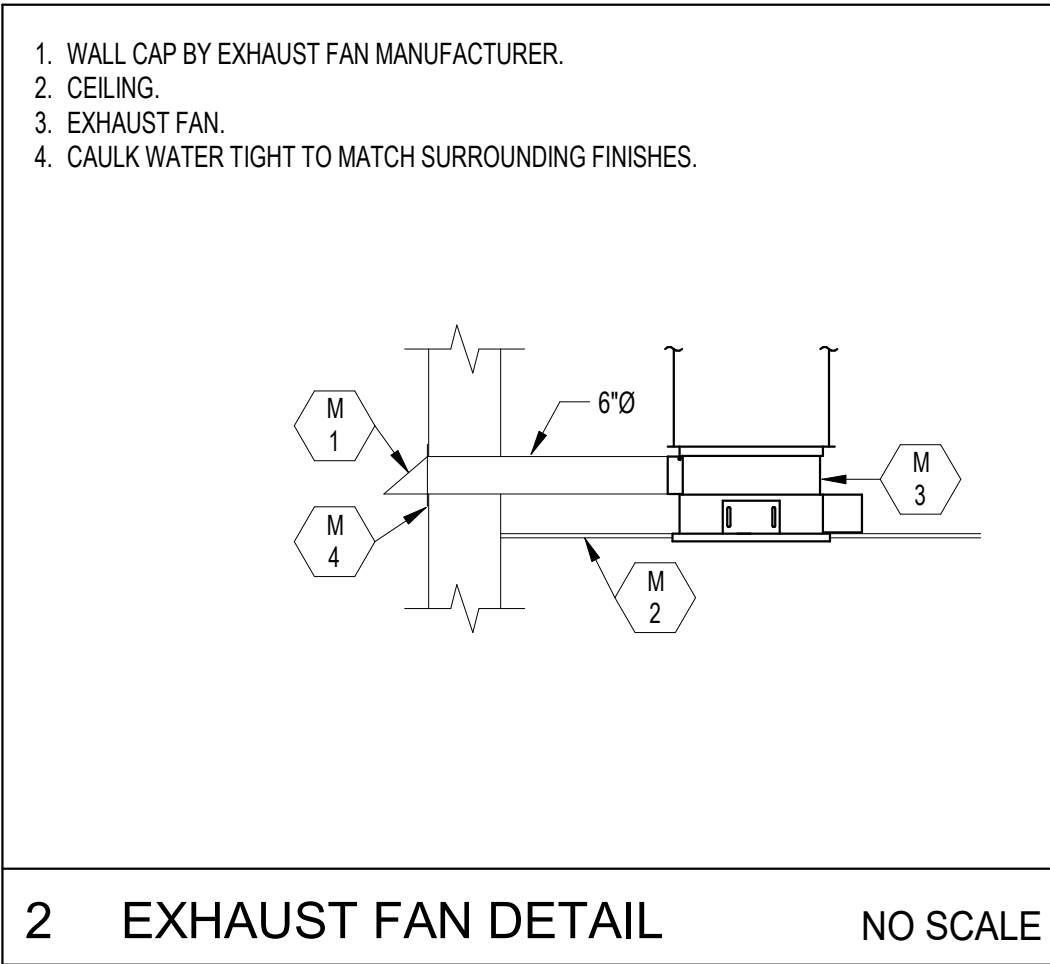
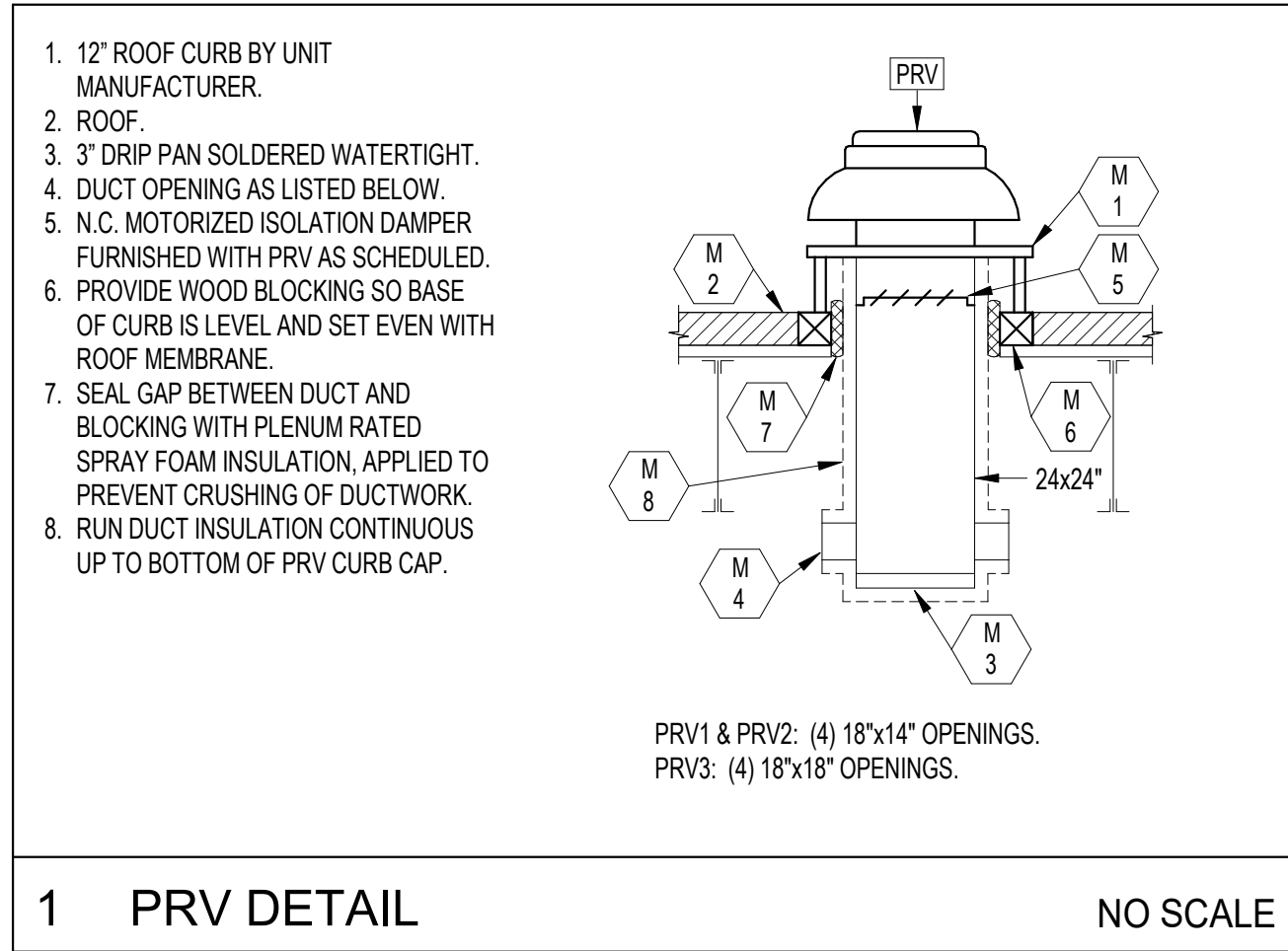
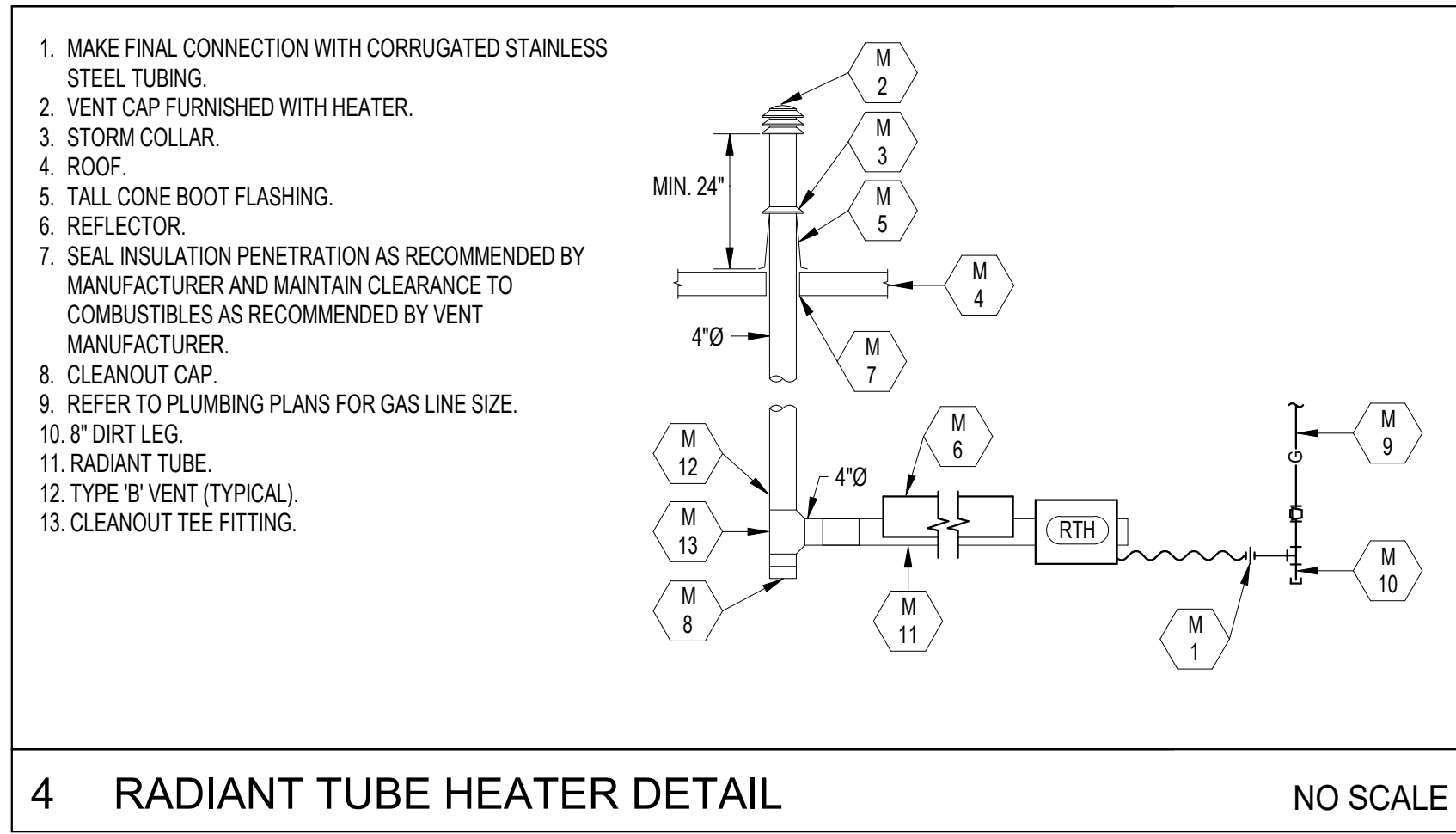
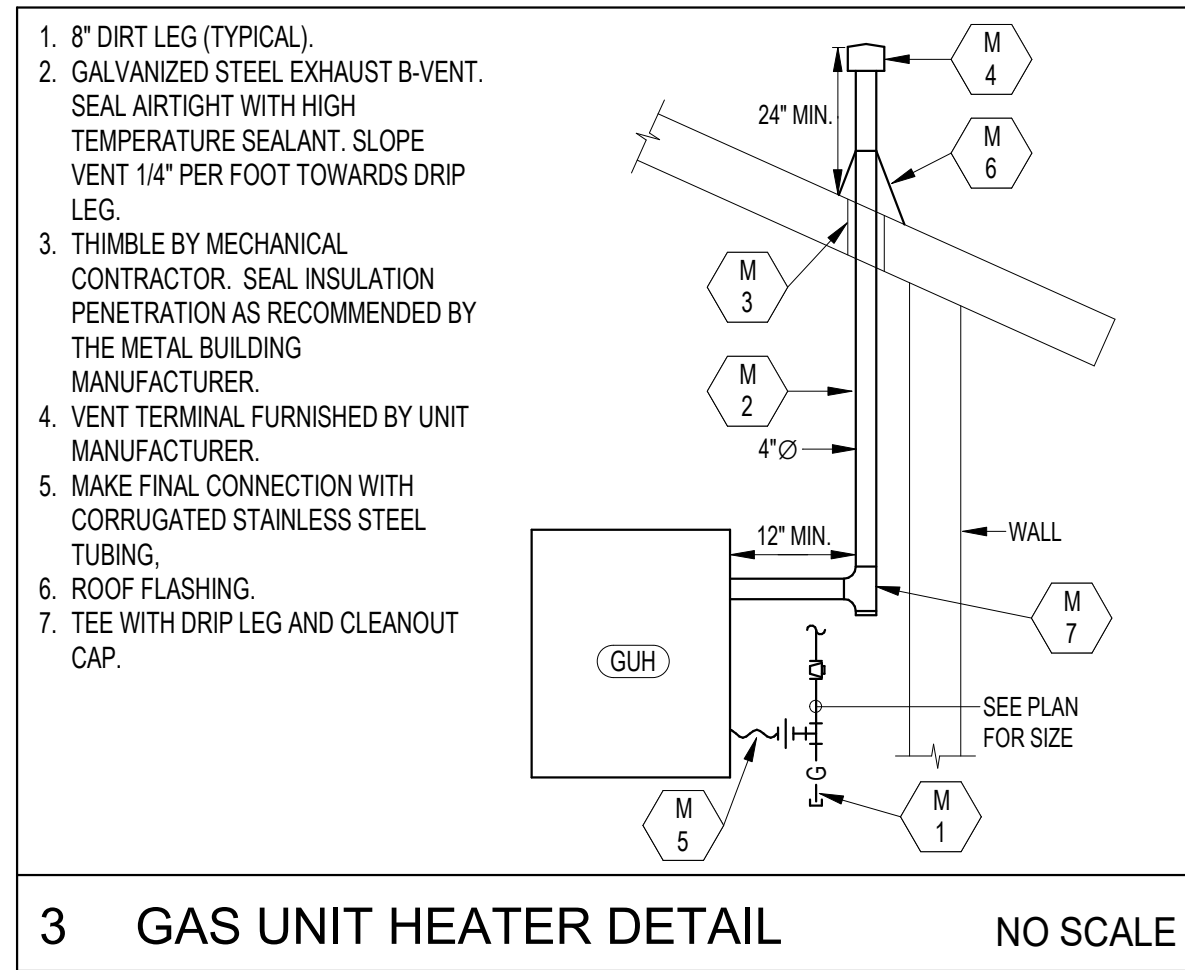
HARK BOULDEVARD
ROCK RAPIDS, IA 51246

DATE ISSUED 10/17/2023

PROJECT NUMBER
2022018 07

SHEET

A-M2.1



GAS DETECTION SYSTEM									
SYMBOL	MNFR	MODEL	GASES DETECTED	VOLT	PHASE	FLA	AREA OF COVERAGE	SERVES	REMARKS
GS1	MACURCO	CX-12	CO/NO2	120	1	1.0	5,000 SQ.FT.	BUS BAYS 105	1, 3
GS2	MACURCO	CX-12	CO/NO2	120	1	1.0	5,000 SQ.FT.	WASH BAY 104	2, 4
GS3	MACURCO	CX-12	CO/NO2	120	1	1.0	5,000 SQ.FT.	BUS BAYS 106	1, 5
1. FURNISH WITH HORN AND AMBER STROBE. 2. FURNISH WITH HORN, AMBER STROBE, AND WEATHERPROOF HOUSING KIT. 3. CONTROL WIRING BETWEEN GS1, PRV1, L1, L2 & L3 SHALL BE BY ELECTRICAL CONTRACTOR. 4. CONTROL WIRING BETWEEN GS2, PRV2, L4 & L5 SHALL BE BY ELECTRICAL CONTRACTOR. 5. CONTROL WIRING BETWEEN GS3, PRV3, L6 & L7 SHALL BE BY ELECTRICAL CONTRACTOR.									

POWER ROOF VENTILATOR SCHEDULE									
SYMBOL	MNFR	MODEL	CFM	ESP (*w.c.)	MOTOR VOLTS HP	SONE*	SERVES	REMARKS	
PRV1	GREENHECK	G-180-VG	2,665	0.30	120 3/4	8.1	BUS BAYS 105	1, 2	
PRV2	GREENHECK	G-180-VG	2,300	0.30	120 3/4	7.5	WASH BAY 104	1, 2	
PRV3	GREENHECK	G-200-VG	3,490	0.30	120 1.0	10.2	BUS BAYS 106	1, 2	
* MAXIMUM INLET SONES PER AMCA STANDARD 301 AT 5 FT. 1. FURNISH WITH 12" HIGH ROOF CURB, MOTORIZED DAMPER AND DISCONNECT. 2. FURNISH WITH 120V ACTUATOR, SPRING RETURN, FAILING CLOSED ON LOSS OF POWER.									

EXHAUST FAN SCHEDULE									
SYMBOL	MNFR	MODEL	CFM	ESP (*w.c.)	MOTOR DATA VOLTS PHASE HP	SONE*	SERVES	REMARKS	
EF1	GREENHECK	SP-A90	60	0.25	120 1 16.9W	0.6	TOILET 103	1	
* MAXIMUM INLET SONES PER AMCA STANDARD 301 AT 5 FT. 1. FURNISH WITH WC-6 ROUND WALL CAP.									

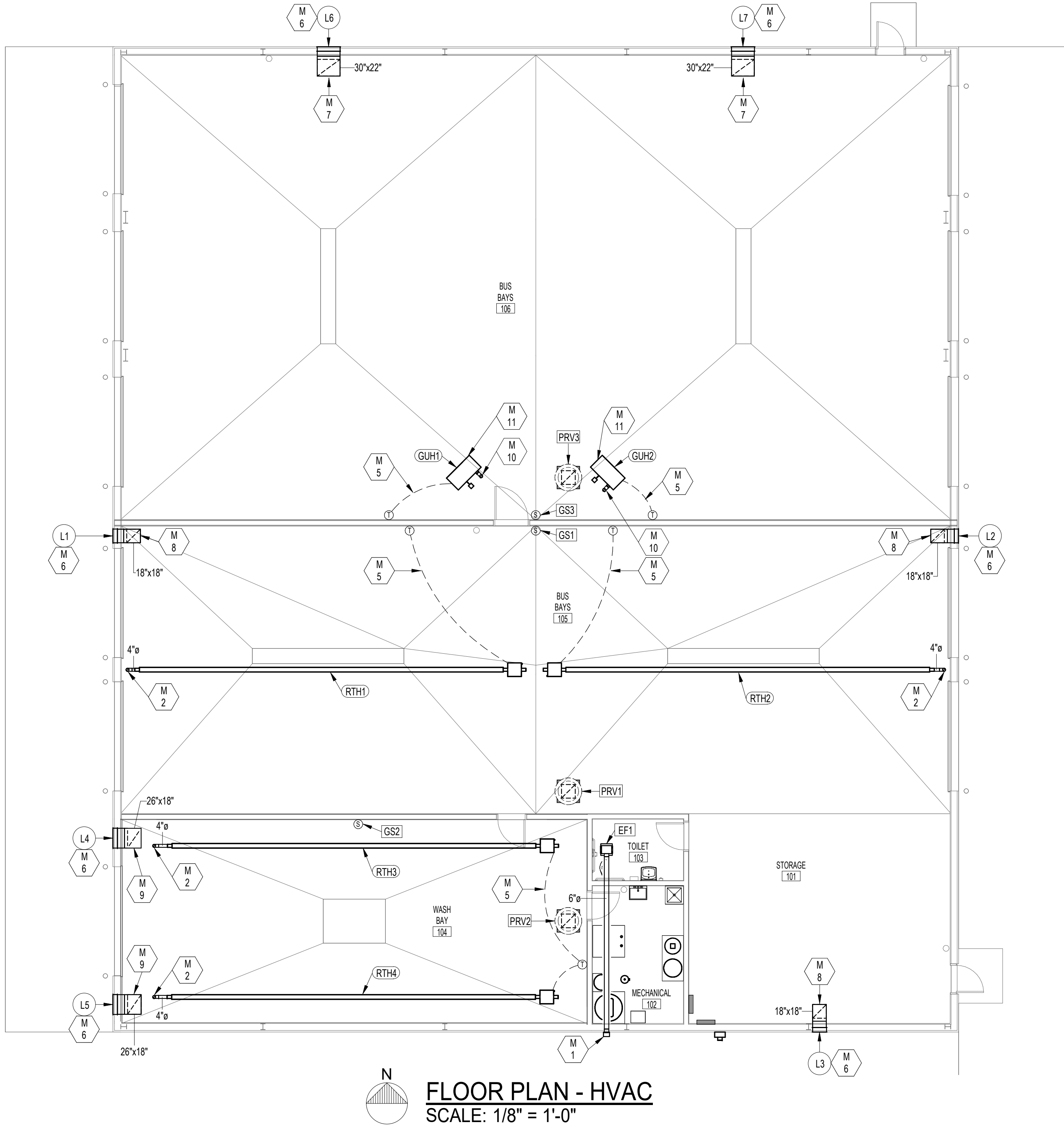
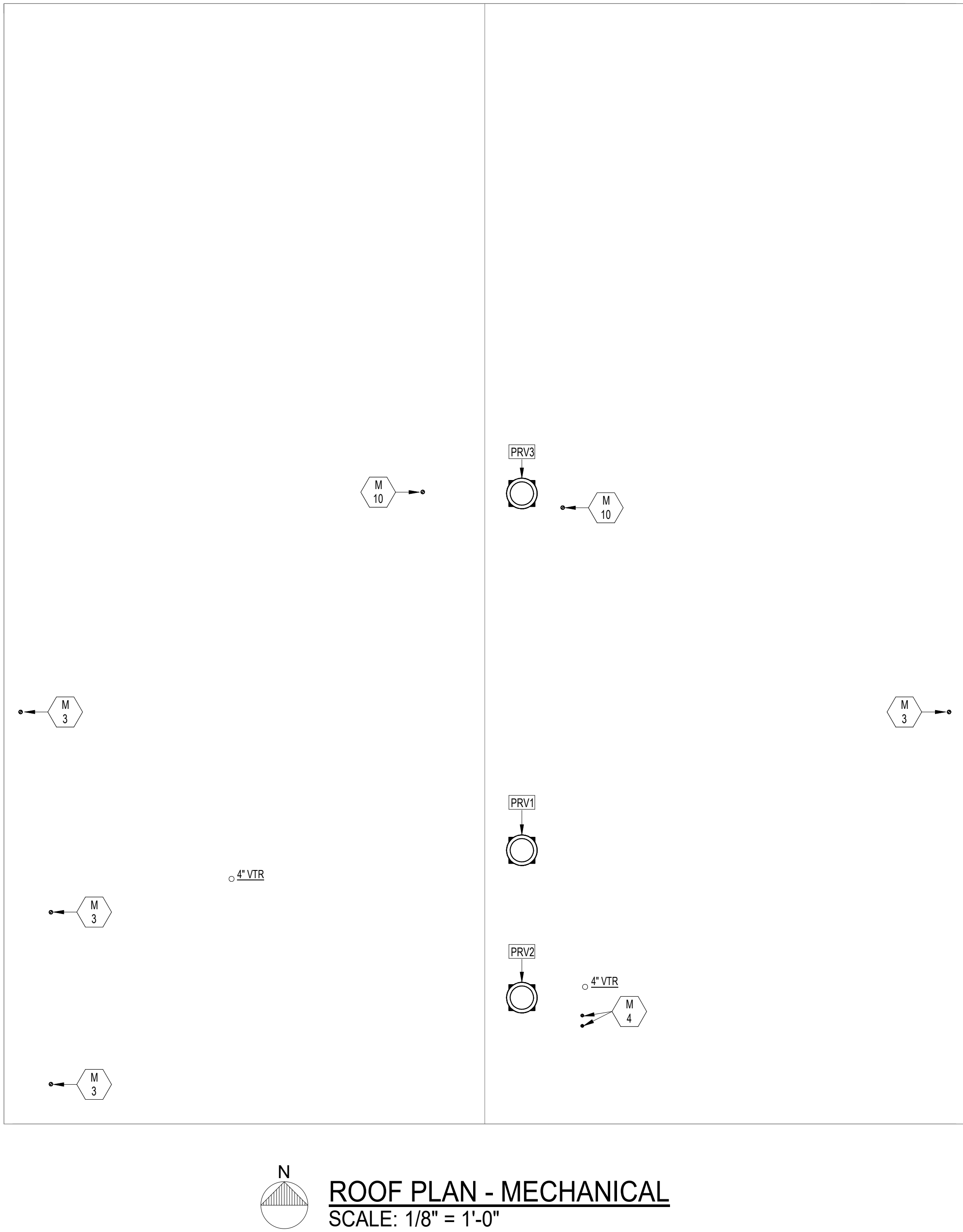
GAS FIRED UNIT HEATER SCHEDULE												
SYMBOL	MNFR	MODEL	TOTAL CFM	MOTOR HP	VOLTS	PHASE	HEATING FUEL PRESS. (*w.c.)	INPUT (MBH)	OUTPUT (MBH)	EAT (°F)	LAT (°F)	AFUE
GUH1	MODINE	PTP-175	2,725	1/6	120	1	NAT. GAS 6.0-7.0	175	143.5	40	88	82%
GUH2	MODINE	PTP-175	2,725	1/6	120	1	NAT. GAS 6.0-7.0	175	143.5	40	88	82%
1. FURNISH WITH 30" DOWNWARD AIR DEFLECTOR HOOD, 2-STAGE GAS CONTROLS AND 2-STAGE HEAT THERMOSTAT (HONEYWELL TH5220D1003 OR EQUAL). 2. FURNISH EXHAUST VENT TEE WITH DRIP LEG, ROOF THIMBLE AND CLEANOUT CAP AT LOW POINT OF THE VENT SYSTEM. 3. FURNISH WITH VERTICAL OUTLET VENT TERMINATION CAP.												

RADIANT TUBE HEATER SCHEDULE														
SYMBOL	MNFR	MODEL	FUEL	FUEL PRESS. (*w.c.)	MBH-HIGH	INPUT MBH-LOW	TUBE LENGTH	VOLTAGE	PH	FLA	MOUNTING HEIGHT*	MOUNTING ANGLE	CLEARANCE TO COMBUSTIBLES SIDE (FRONT) SIDE (BEHIND) TOP BELOW	SERVES
RTH1-2	DETROIT RADIANT	HL3-40-150	NAT. GAS	5.0 - 14.0	150	100	40'	120	1	4.8	15'-6"	0°	9" 9" 6" 60/30"	BUS BAYS 105
RTH3-4	DETROIT RADIANT	HL2-SS-40-125	NAT. GAS	5.0 - 14.0	125	82	40'	120	1	4.8	15'-6"	45°	9" 9" 6" 60/30"	1, 2, 5 3, 4, 5
* ESTIMATE TO CENTERLINE OF TUBE. VERIFY ON SITE AND MOUNT TUBES AS HIGH AS POSSIBLE. CLEARANCES ARE FROM EDGE OF REFLECTOR (SIDE), BOTTOM OF TUBE (BELOW) AND TOP OF REFLECTOR (TOP). SHORTER "BELOW" CLEARANCE IS 20" FROM BURNER. 1. FURNISH EACH UNIT WITH ALUMINIZED COATED STEEL TUBES, ALUMINUM REFLECTORS, 2-STAGE BURNER, AND CONTROL BOX. 2. FURNISH UNIT WITH 4" ROOFTOP VENTING KIT WITH CAP, AND 24 VOLT, 2-STAGE THERMOSTAT. 3. FURNISH EACH UNIT WITH 16 GAUGE 304 S.S. STEEL TUBES, ALUMINUM REFLECTORS, 2-STAGE BURNER, AND S.S. CONTROL BOX. 4. FURNISH UNIT WITH 4" ROOFTOP VENTING KIT WITH CAP, AND 24 VOLT, 2-STAGE, NEMA 4X WEATHERPROOF THERMOSTAT. 5. FURNISH UNIT WITH "S" CLIPS AND CHAINS FOR CEILING SUSPENSION AS RECOMMENDED BY UNIT MANUFACTURER. VERIFY CHAIN LENGTH PRIOR TO ORDERING.														

KEYNOTES

- WALL CAP FURNISHED WITH EXHAUST FAN. INSTALL CENTER AT APPROXIMATELY 9'-6" A.F.F.
- 4"Ø RADIANT TUBE HEATER FLUE UP THROUGH ROOF. SEE DETAIL ON THIS SHEET AND CONTINUATION ON ROOF PLAN - MECHANICAL ON THIS SHEET (TYPICAL).
- 4"Ø RADIANT TUBE HEATER FLUE. SEE DETAIL ON THIS SHEET AND CONTINUATION ON FLOOR PLAN - HVAC ON THIS SHEET.
- 3" INTAKE AND EXHAUST PIPES DOWN THROUGH ROOF TO INSTANTANEOUS WATER HEATER FOR CAR WASH EQUIPMENT. SEE DETAIL ON SHEET A-M1 AND CONTINUATION ON ENLARGED FLOOR PLAN - PLUMBING ON SHEET A-M1.1. VERIFY LOCATION OF PIPES WITH CAR WASH VENDOR.
- ALL RADIANT TUBE HEATER AND UNIT HEATER THERMOSTAT CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR. CONDUIT FOR WIRING SHALL BE BY ELECTRICAL CONTRACTOR.
- INSTALL TOP OF LOUVER OPENINGS AT SAME ELEVATION AS TOP OF OVERHEAD DOOR OPENING, APPROXIMATELY 14'-2" A.F.F. (TYPICAL).
- 30"x22" DUCT DROP TO 18" A.F.F.
- 18"x18" DUCT DROP TO 18" A.F.F.
- 26"x18" DUCT DROP TO 18" A.F.F.
- 4"Ø FLUE UP THROUGH ROOF.
- INSTALL BOTTOM OF UNIT HEATER AT 15'-0" A.F.F.

COMBINATION LOUVER/DAMPER SCHEDULE									
SYMBOL	MNFR	MODEL	CFM	SIZE (w x h)	FREE AREA (sq. ft.)	APD (*w.c.)	SERVES	REMARKS	
L1	GREENHECK	EACA-601	890	18"x28"	1.25	0.06	BUS BAYS 105	1, 2	
L2	GREENHECK	EACA-601	890	18"x28"	1.25	0.06	BUS BAYS 105	1, 2	
L3	GREENHECK	EACA-601	890	18"x28"	1.25	0.06	STORAGE 101	1, 2	
L4	GREENHECK	EACA-601	1,150	26"x26"	1.49	0.07	WASH BAY 104	1, 2	
L5	GREENHECK	EACA-601	1,150	26"x26"	1.49	0.07	WASH BAY 104	1, 2	
L6	GREENHECK	EACA-601	1,745	30"x28"	2.24	0.07	BUS BAYS 106	1, 2	
L7	GREENHECK	EACA-601	1,745	30"x28"	2.24	0.07	BUS BAYS 106	1, 2	
1. FURNISH WITH BIRD SCREEN. 2. FURNISH WITH 120V ACTUATOR, SPRING RETURN, FAILING CLOSED ON LOSS OF POWER.									



SHEET TITLE
FLOOR PLAN, ROOF PLAN, DETAILS &
SCHEDULES - MECHANICAL

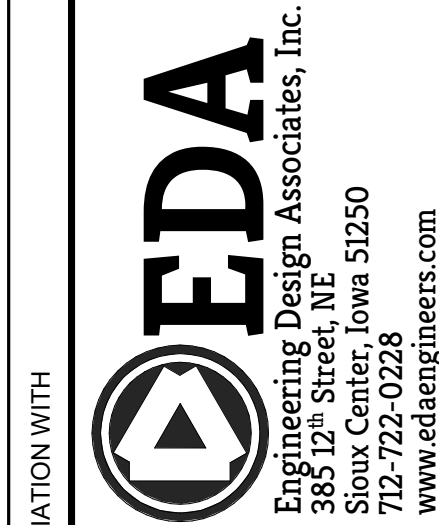
PROJECT TITLE
CENTRAL LYON COMMUNITY SCHOOL DISTRICT
2024 FACILITY IMPROVEMENTS

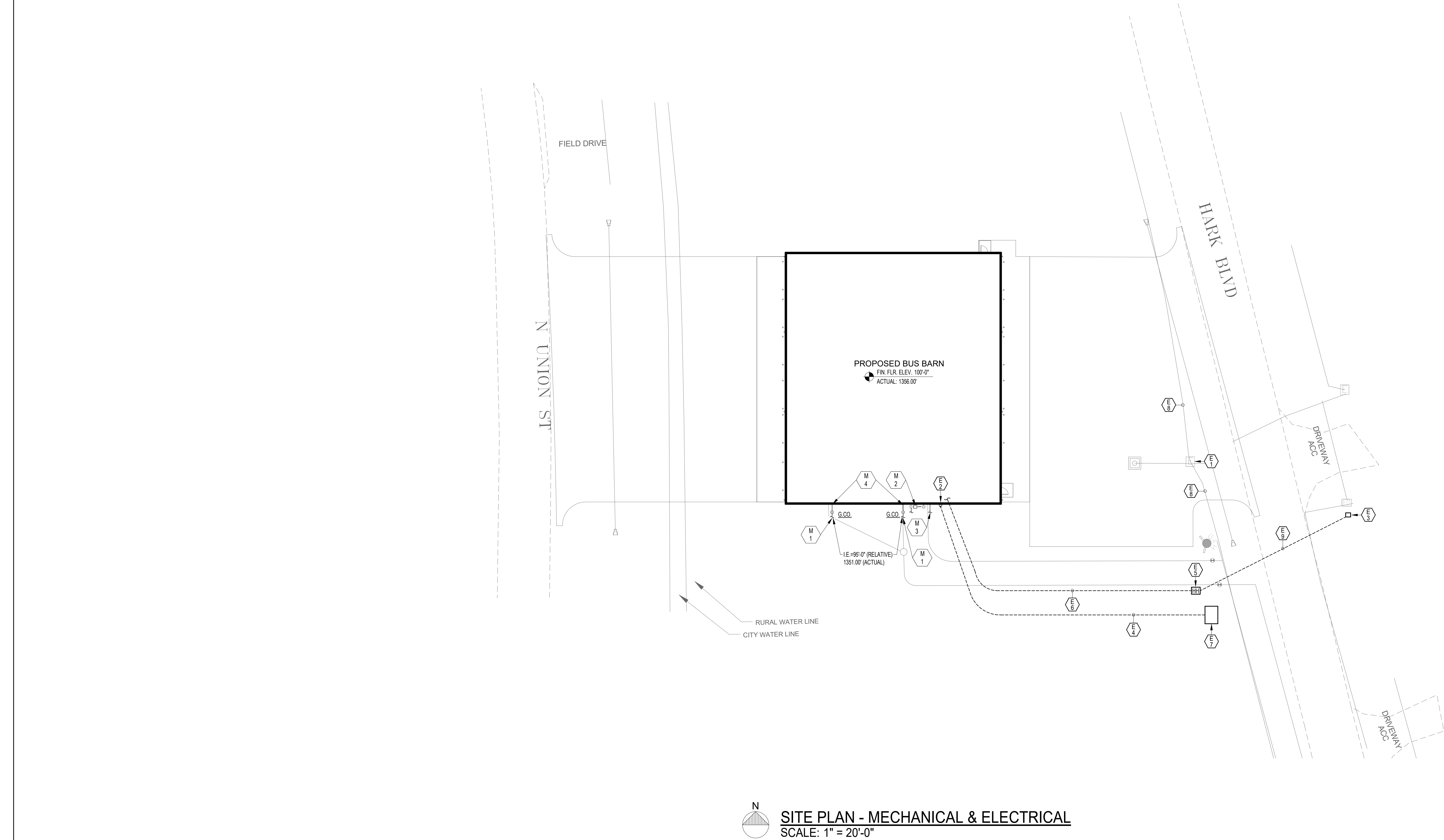
DATE ISSUED 10/17/2023
REV. NO. DATE

PROJECT NUMBER
2022018.07

SHEET

A-M3.1





MECHANICAL KEYNOTES SHEET A-ME0.1

1. 4" SANITARY SEWER TO 5'-0" OUTSIDE BUILDING. SEE INVERT ELEVATIONS ON SHEET A-M1.1.
2. GAS SERVICE, METER AND REGULATOR BY GAS UTILITY.
3. 1" DOMESTIC WATER SERVICE TO 5'-0" OUTSIDE BUILDING.
4. 4" SANITARY SEWER INTO BUILDING. SEE CONTINUATION ON FOUNDATION PLAN - PLUMBING ON SHEET A-M1.1.

ELECTRICAL GENERAL NOTES SHEET A-ME0.1

- A. ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF ALL UNDERGROUND UTILITIES FOR ENTIRE TRENCHING PATH OF UNDERGROUND CONDUIT RUNS.
- B. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING AND COMPACTING FOR ENTIRE LENGTH OF TRENCH REQUIRED.
- C. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE CITY OF ROCK RAPIDS MUNICIPAL UTILITIES AS REQUIRED FOR WORK INDICATED ON SITE PLAN. NOTE THAT THE CITY OF ROCK RAPIDS MUNICIPAL UTILITIES IS REFERRED TO AS THE "UTILITY" ON DRAWINGS.
- D. ALL UNDERGROUND CONDUIT SHALL BE 42" BELOW GRADE IN GREEN SPACE AREAS AND 36" BELOW GRADE IN PARKING LOT OR SIDEWALK AREAS UNLESS NOTED OTHERWISE.

ELECTRICAL KEYNOTES SHEET A-ME0.1

1. EXISTING UTILITY CONNECTION CABINET TO BE RELOCATED BY THE UTILITY. COORDINATE SEQUENCING OF THE WORK WITH THE UTILITY. VERIFY NEW CONNECTION CABINET LOCATION ON THE SITE WITH THE OTHER SITE UTILITIES SHOWN.
2. METER SOCKET IS FURNISHED BY THE ELECTRICAL CONTRACTOR. METER AND ALL METER CONTROLS WIRING ARE BY THE UTILITY. METER SHALL BE MOUNTED TO THE BUILDING BY THE ELECTRICAL CONTRACTOR. SEE FLOOR PLANS FOR ADDITIONAL INFORMATION ON THE METER.
3. APPROXIMATE LOCATION OF THE EXISTING COMMUNICATIONS PEDESTAL TO REMAIN. ROUTE NEW CONDUIT TO THE PEDESTAL BASE. COORDINATE CONDUIT TERMINATION AT THE PEDESTAL BASE WITH THE COMMUNICATIONS UTILITY.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE SECONDARY LATERAL FROM THE UTILITY TRANSFORMER TO THE NEW BUS BARN BUILDING SERVICE ENTRANCE. SEE DETAIL 1/A-E3.1 FOR ADDITIONAL INFORMATION ON THE SECONDARY WIRING.
5. NEW IN GRADE BOX FOR THE COMMUNICATIONS CABLE. PROVIDE QUARTZITE BOX MODEL #PG2436040 IN THE GREEN SPACE. HAND HOLE IS 24" BY 36" WITH SOLID BOTTOM. PROVIDE 41 1" DRAIN HOLES IN THE IN GRADE BOX BOTTOM AND PROVIDE ALL DRAINAGE UNDER THE BOX AS RECOMMENDED BY THE MANUFACTURER. PROVIDE MATCHING COVER FOR THE IN GRADE BOX. COVER SHALL READ "COMMUNICATIONS". PROVIDE SHOP DRAWINGS.
6. PROVIDE (1) 3/12" CONDUIT FROM THE IN GRADE BOX TO THE UTILITY PEDESTAL. CONDUIT IS FOR THE COMMUNICATIONS UTILITY. VERIFY TERMINATION LOCATION AT THE EXISTING PEDESTAL WITH THE COMMUNICATIONS UTILITY.
7. NEW PAD MOUNTED UTILITY TRANSFORMER LOCATION FOR SERVING THE BUS BARN BUILDING. UTILITY SHALL PROVIDE FIBERGLASS VAULT AT THE TRANSFORMER AND ALL PRIMARY WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE SECONDARY LATERAL WIRING AND LUGS FOR CONNECTIONS AT THE TRANSFORMER. COORDINATE CONSTRUCTION SCHEDULING WITH THE UTILITY.
8. EXISTING PRIMARY WIRING SHOWN FOR REFERENCE. ALL WORK ON THE ELECTRICAL PRIMARY WIRING SYSTEM IS BY THE UTILITY.
9. PROVIDE (1) 3/12" CONDUIT FROM THE IN GRADE BOX TO THE EXISTING UTILITY PEDESTAL. WHERE NEW CONDUITS ARE RUN UNDER THE EXISTING ROADWAY, THE ELECTRICAL CONTRACTOR SHALL BORE THE CONDUIT UNDER THE ROAD.

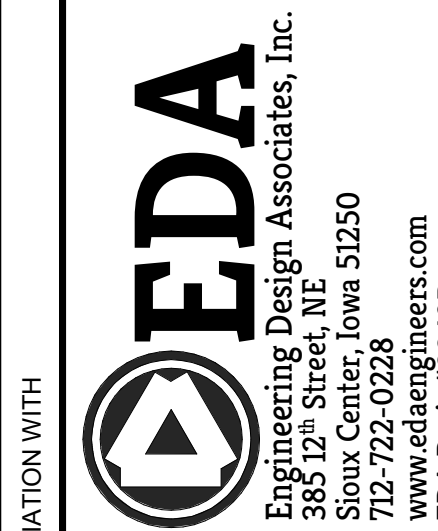
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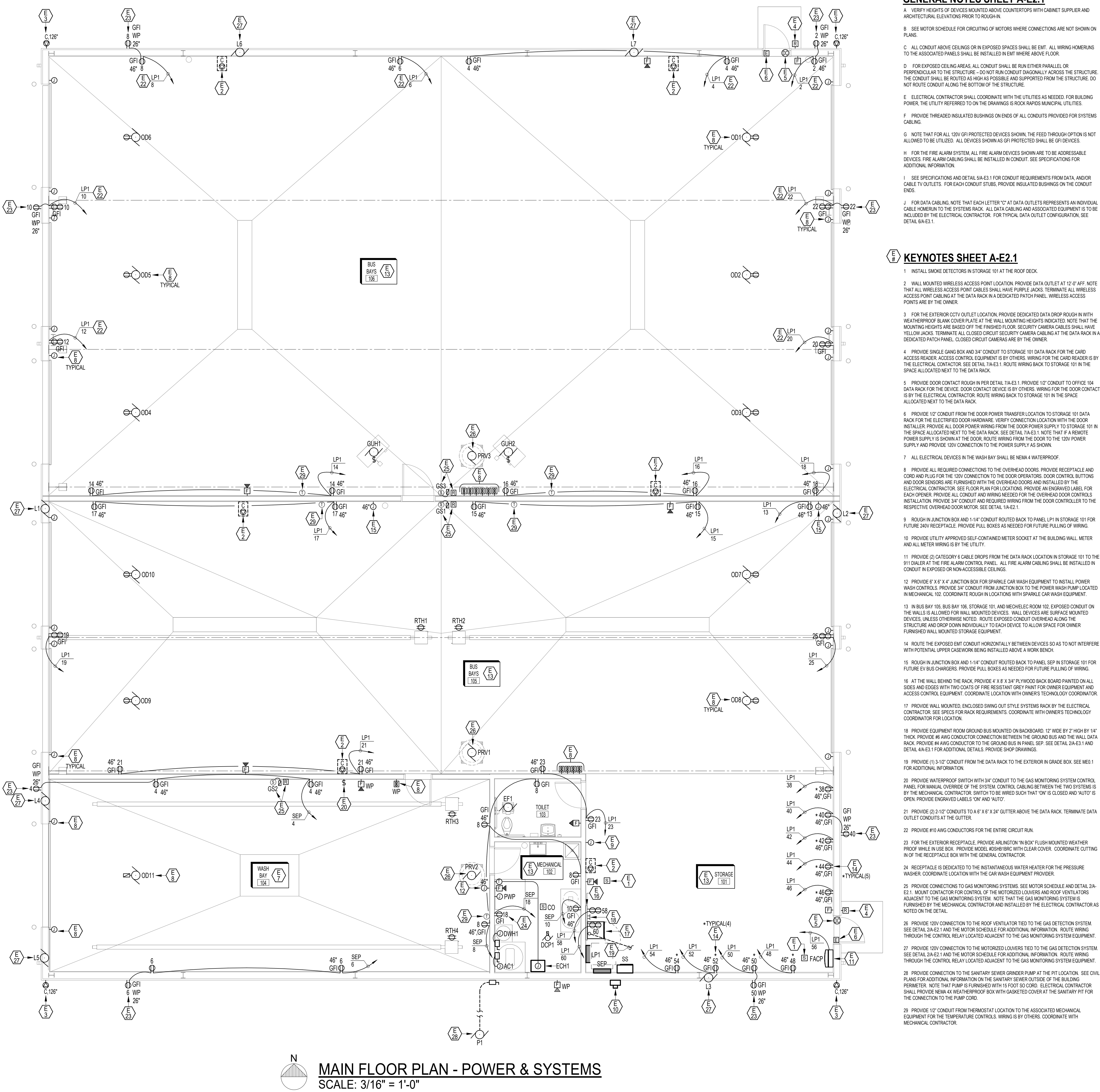
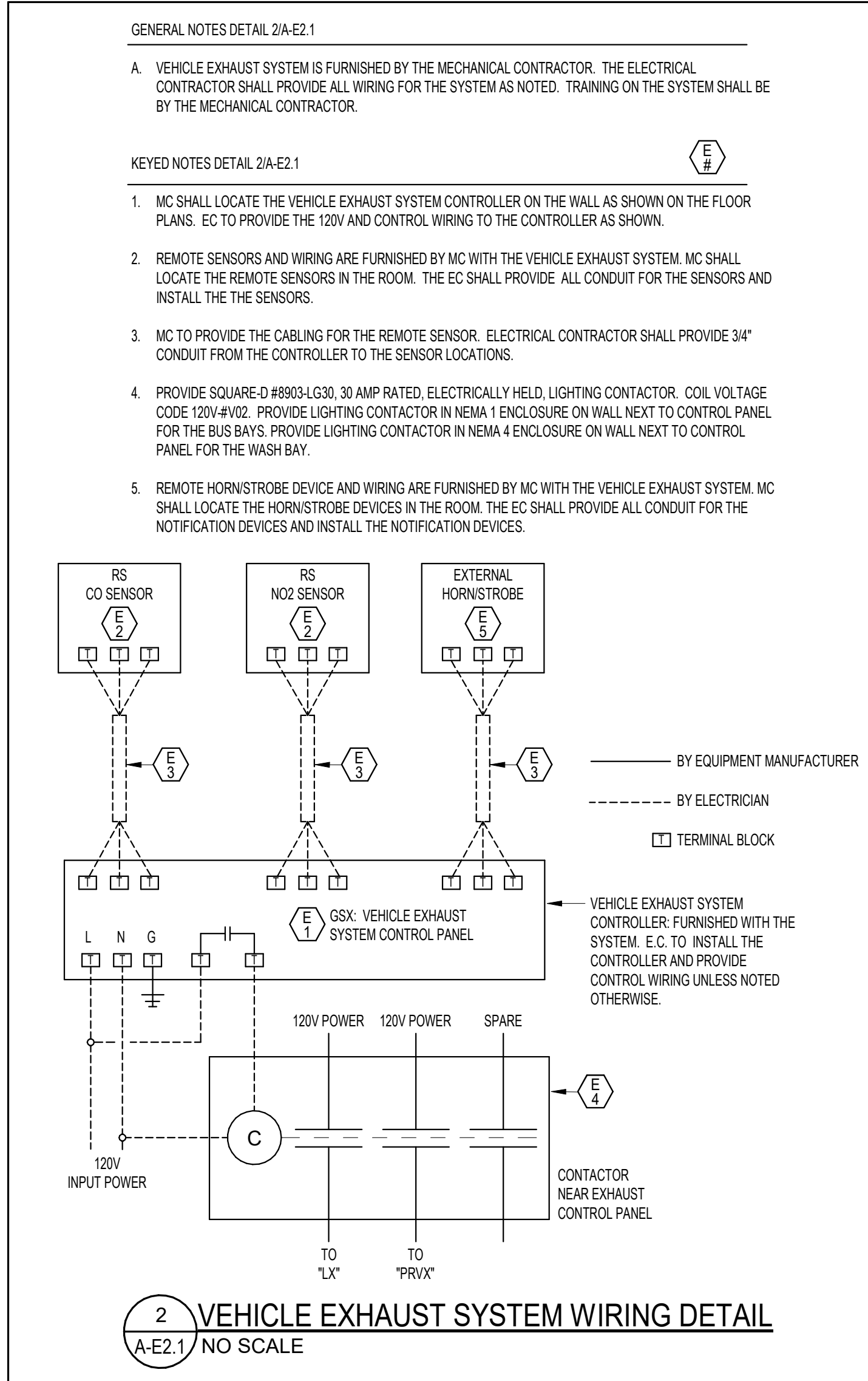
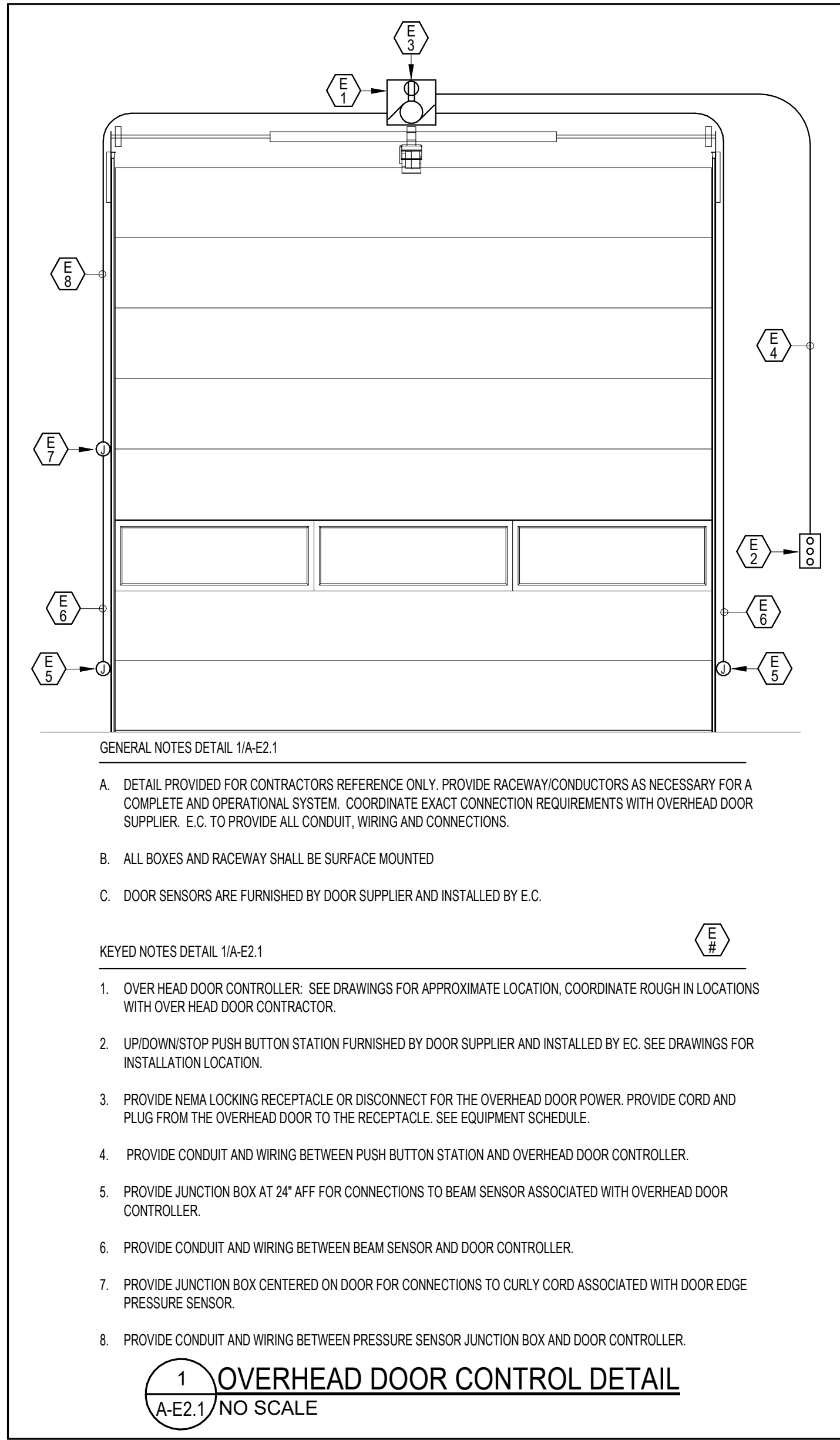
PROJECT TITLE
CENTRAL LYON COMMUNITY SCHOOL DISTRICT
2024 FACILITY IMPROVEMENTS

PROJECT NUMBER
2022018.07
SHEET
A-ME0.1

HARK BOULDEVARD
ROCK RAPIDS, IA 51246

BID PACKAGE A
BUS BARN





GENERAL NOTES SHEET A-E2.1

- A. VERIFY HEIGHTS OF DEVICES MOUNTED ABOVE COUNTERTOPS WITH CABINET SUPPLIER AND ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- B. SEE MOTOR SCHEDULE FOR CIRCUITING OF MOTORS WHERE CONNECTIONS ARE NOT SHOWN ON PLANS.
- C. ALL CONDUIT ABOVE CEILINGS OR IN EXPOSED SPACES SHALL BE EMT. ALL WIRING HANGERS TO THE ASSOCIATED PANELS SHALL BE INSTALLED IN EMT WHERE ABOVE FLOOR.
- D. FOR EXPOSED CEILING AREAS, ALL CONDUIT SHALL BE RUN EITHER PARALLEL OR PERPENDICULAR TO THE STRUCTURE DIAGONALLY ACROSS THE STRUCTURE. THE CONDUIT SHALL BE ROUTED AS HIGH AS POSSIBLE AND SUPPORTED FROM THE STRUCTURE. DO NOT ROUTE CONDUIT ALONG THE BOTTOM OF THE STRUCTURE.
- E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UTILITIES AS NEEDED FOR BUILDING POWER. THE UTILITY REFERRED TO ON THE DRAWINGS IS ROCK RAPIDS MUNICIPAL UTILITIES.
- F. PROVIDE THREADED INSULATED BUSHINGS ON ENDS OF ALL CONDUITS PROVIDED FOR SYSTEMS CABLEING.
- G. NOTE THAT FOR ALL 120V GFI PROTECTED DEVICES SHOWN, THE FEED THROUGH OPTION IS NOT ALLOWED TO BE UTILIZED. ALL DEVICES SHOWN AS GFI PROTECTED SHALL BE GFI DEVICES.
- H. FOR THE FIRE ALARM SYSTEM, ALL FIRE ALARM DEVICES SHOWN ARE TO BE ADDRESSABLE DEVICES. FIRE ALARM CABLING SHALL BE INSTALLED IN CONDUIT. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- I. SEE SPECIFICATIONS AND DETAIL 3/A-E3.1 FOR CONDUIT REQUIREMENTS FROM DATA, AND/OR CABLE TV OUTLETS. FOR EACH CONDUIT STUBS, PROVIDE INSULATED BUSHINGS ON THE CONDUIT ENDS.
- J. FOR DATA CABLING, NOTE THAT EACH LETTER "C" AT DATA OUTLETS REPRESENTS AN INDIVIDUAL CABLE HANGING TO THE SYSTEM RACK. ALL DATA CABLING AND ASSOCIATED EQUIPMENT IS TO BE INCLUDED BY THE ELECTRICAL CONTRACTOR. FOR TYPICAL DATA OUTLET CONFIGURATION, SEE DETAIL 6/A-E3.1.

KEYNOTES SHEET A-E2.1

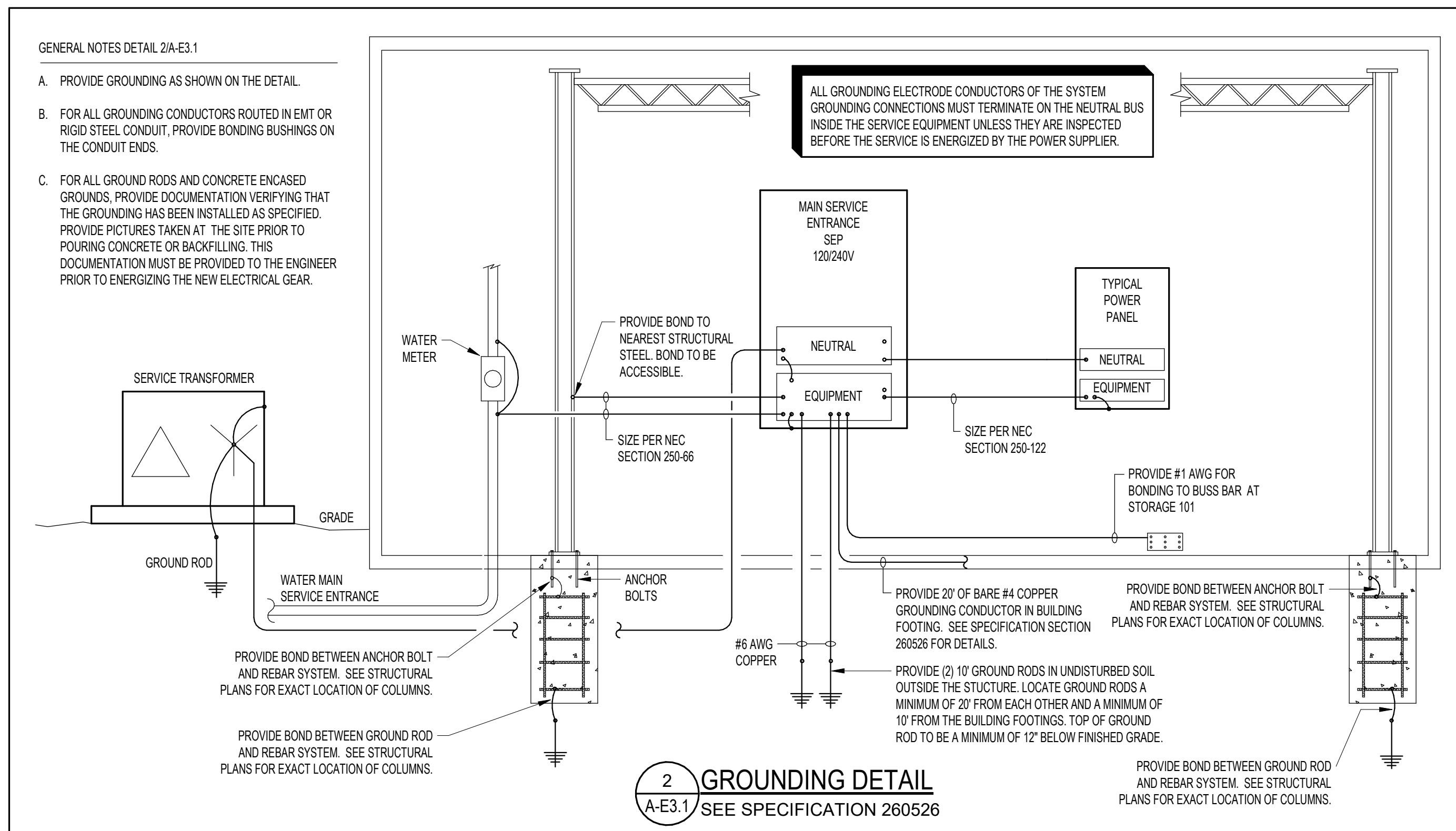
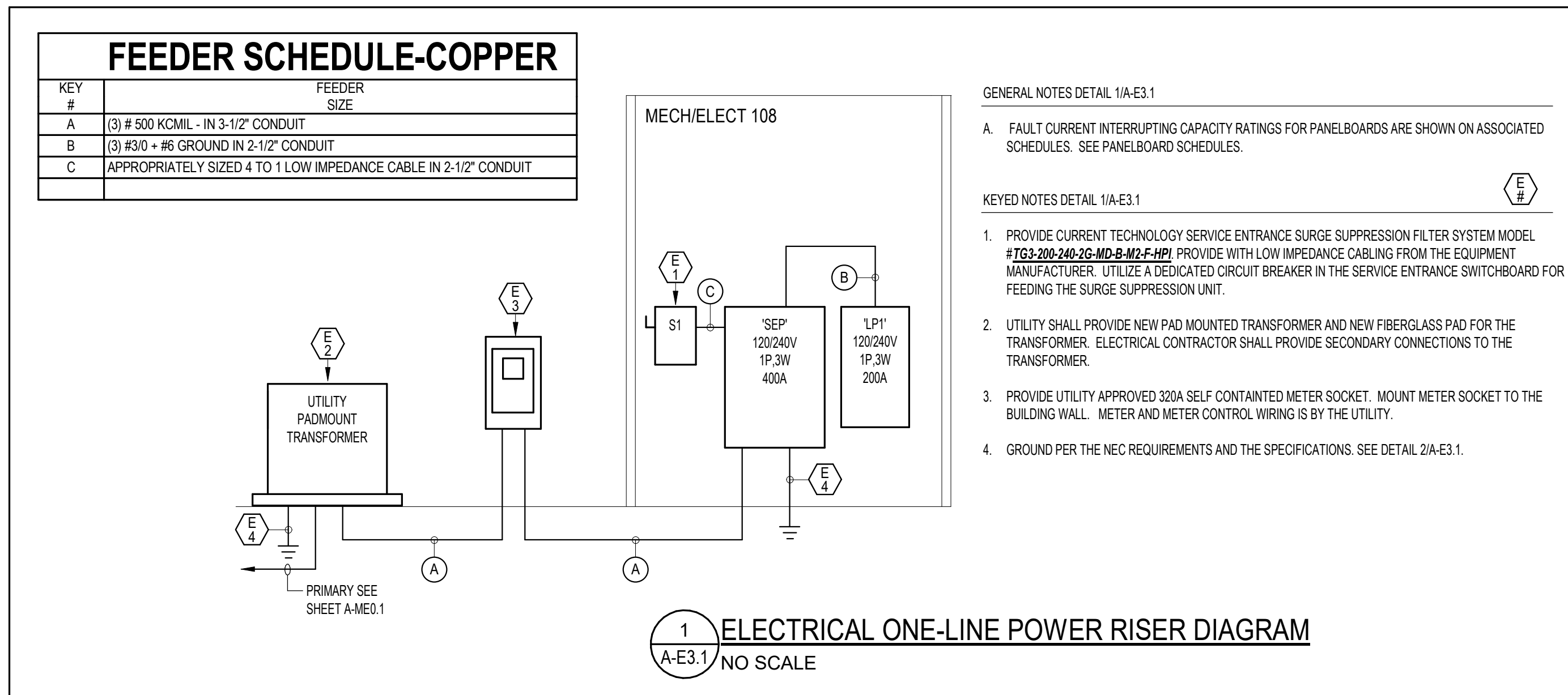
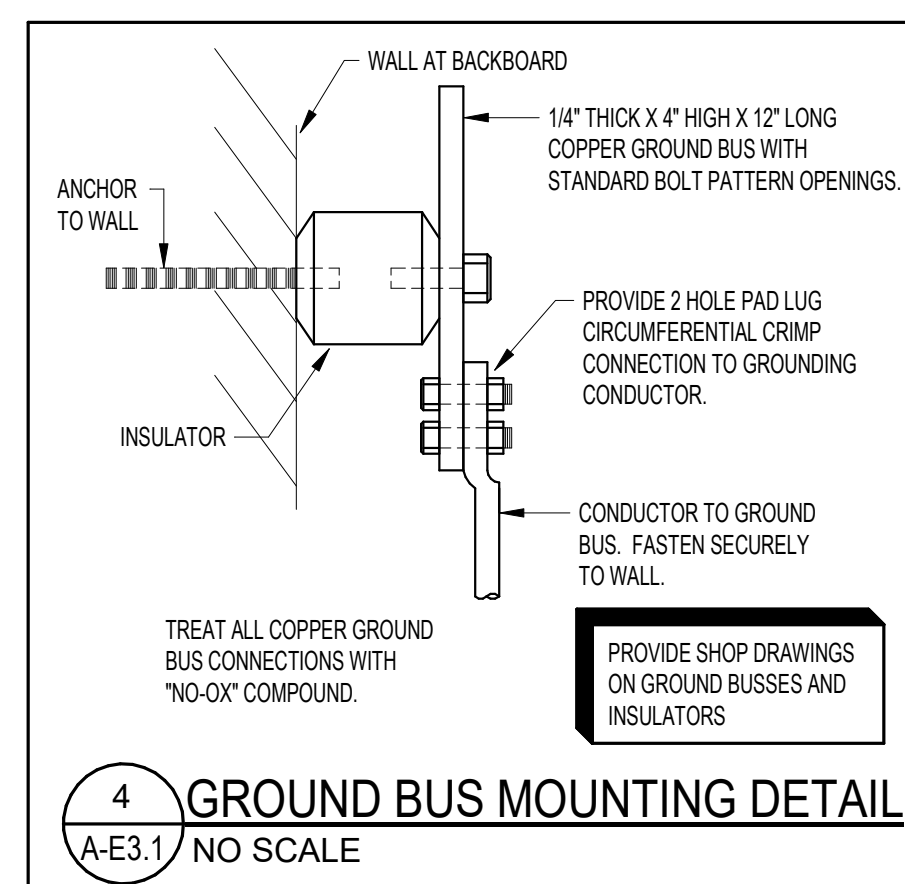
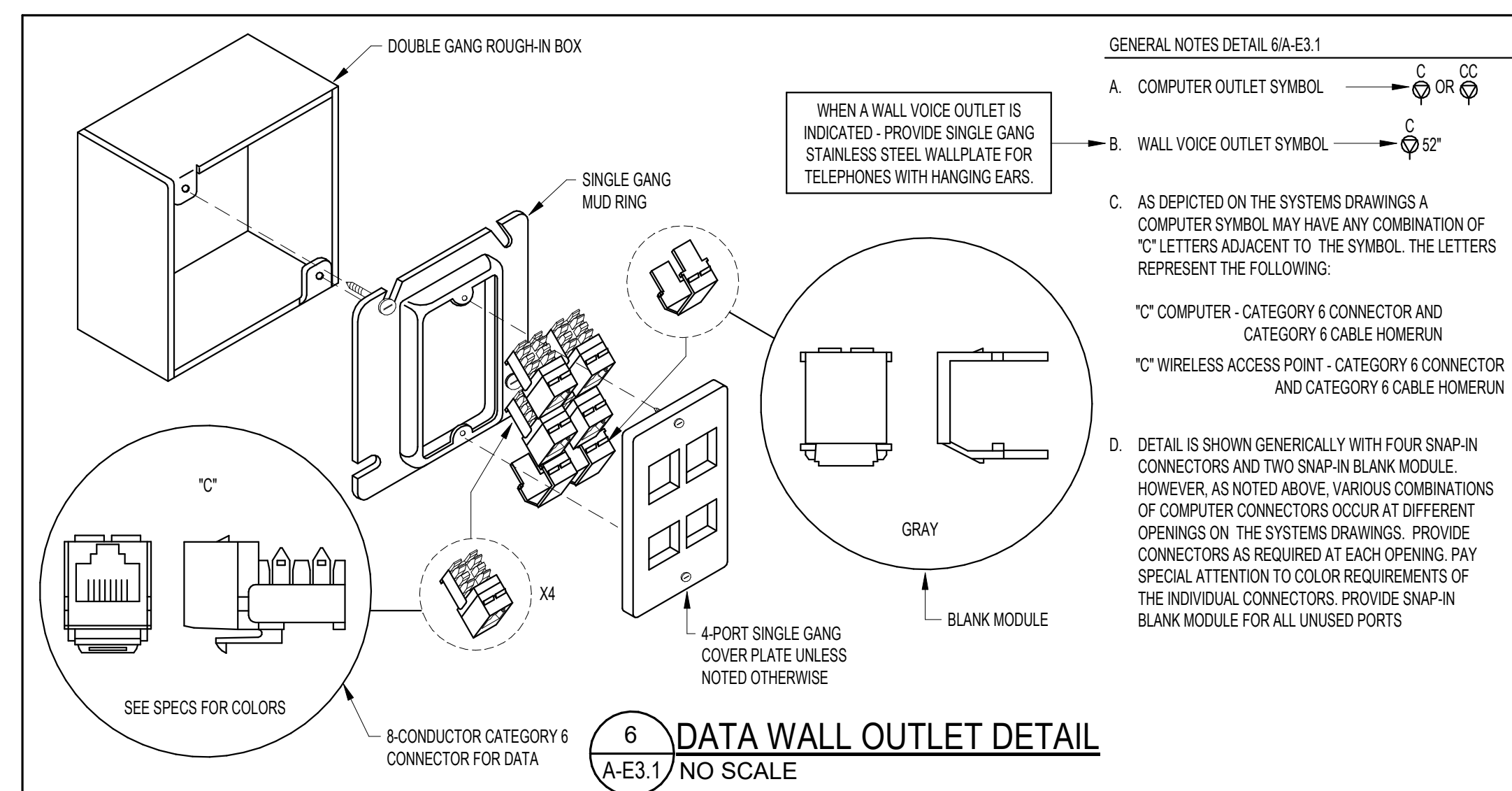
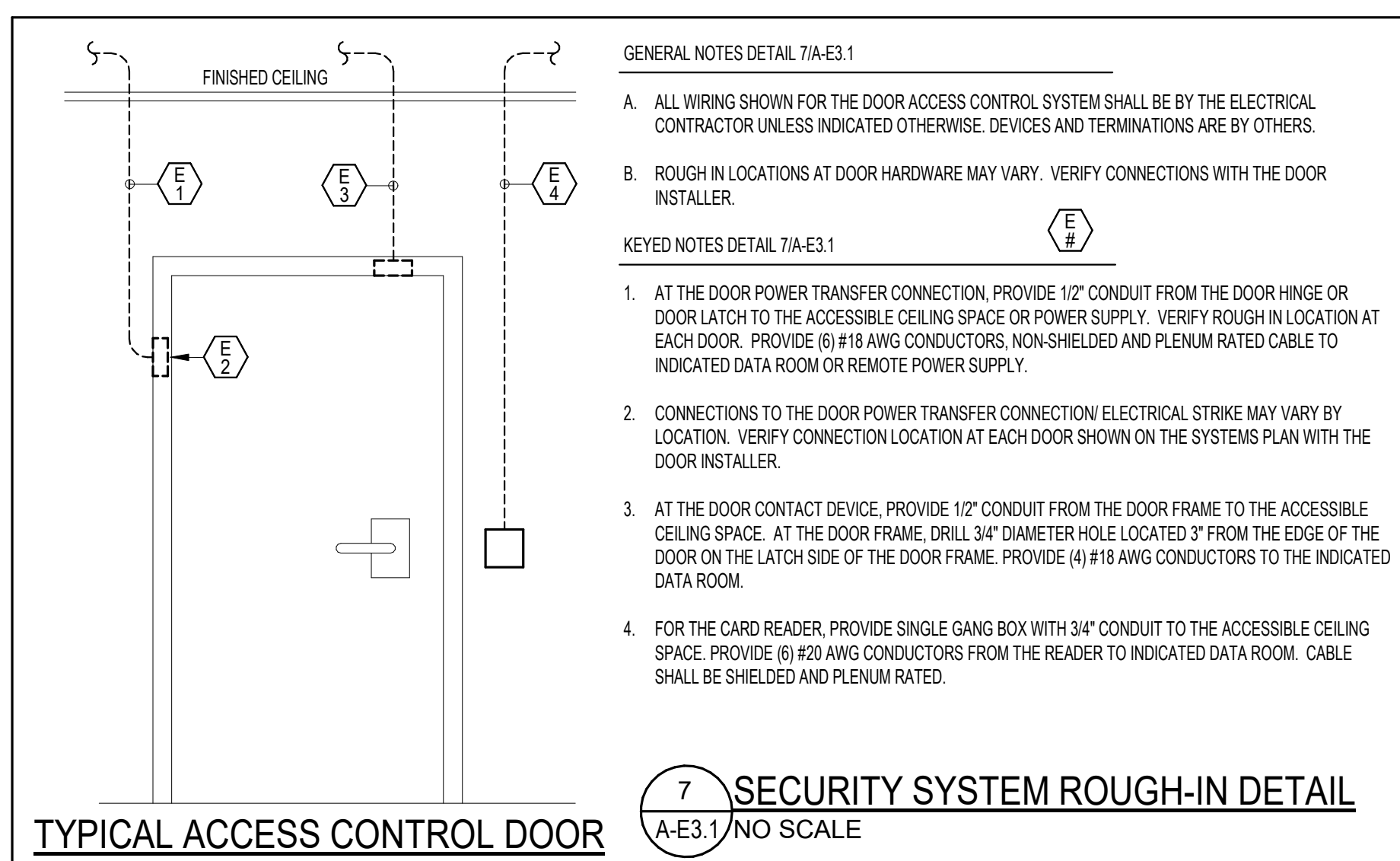
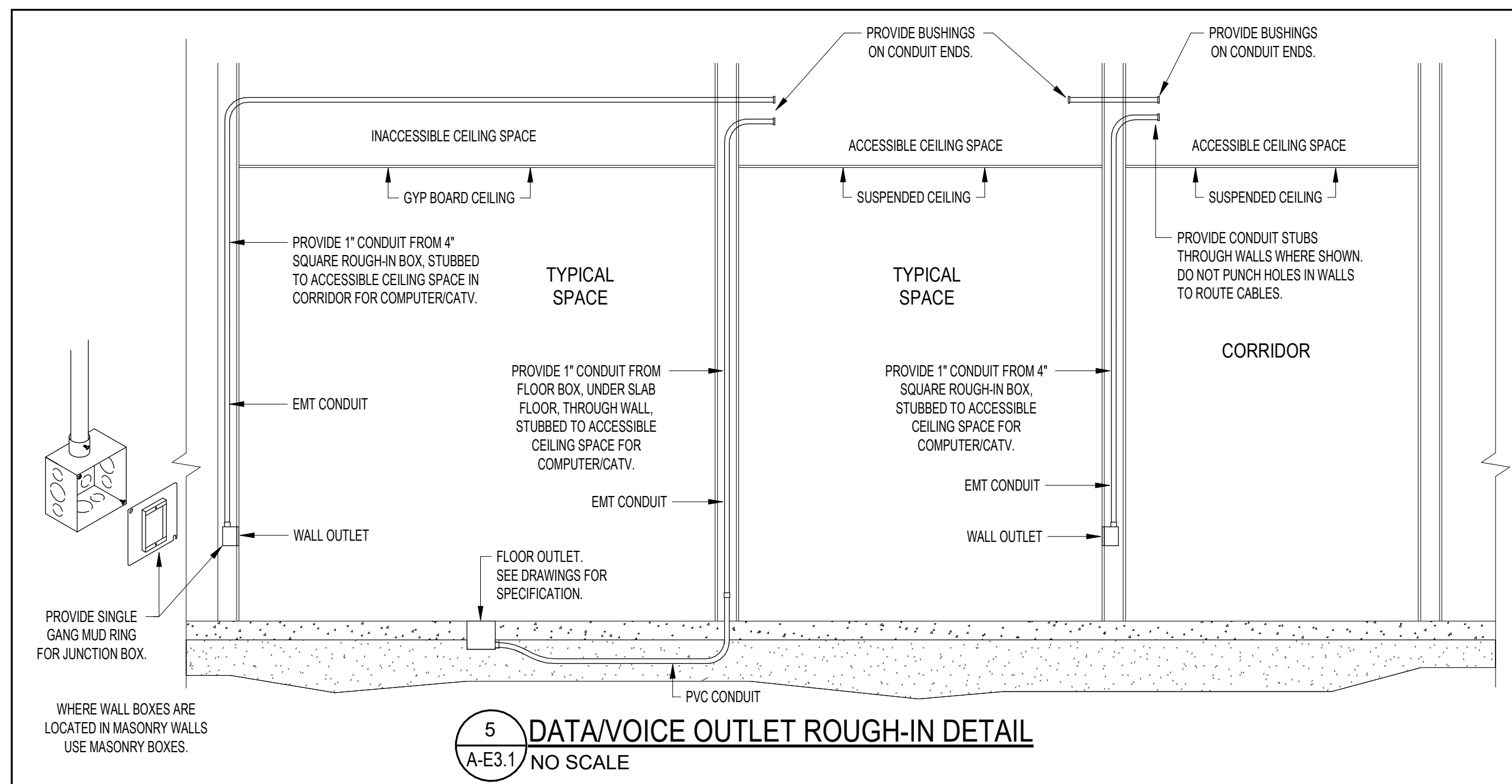
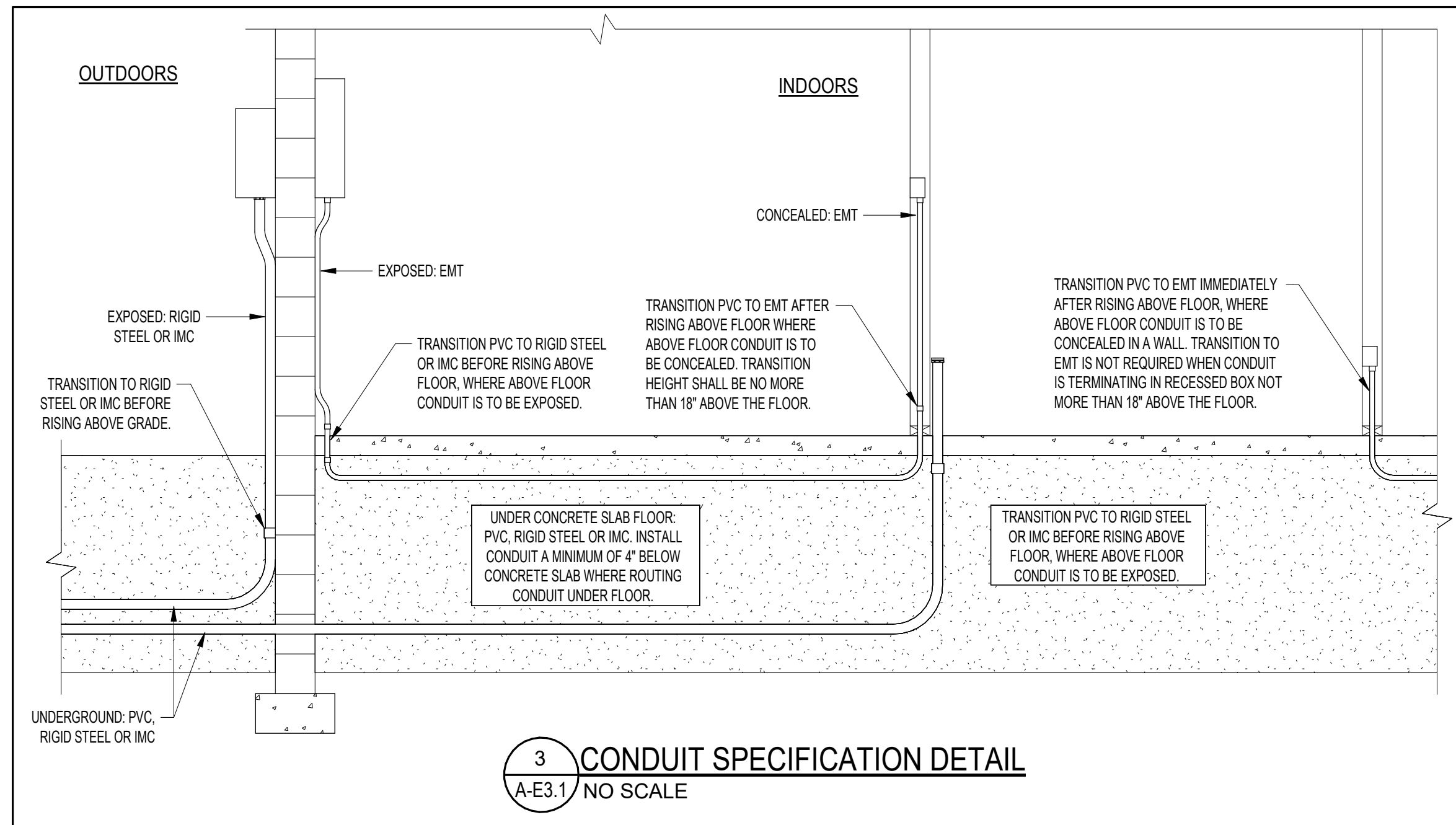
- 1. INSTALL SMOKE DETECTORS IN STORAGE 101 AT THE ROOF DECK.
- 2. WALL MOUNTED WIRELESS ACCESS POINT LOCATION: PROVIDE DATA OUTLET AT 12'-0" AFF. NOTE THAT ALL WIRELESS ACCESS POINT CABLES SHALL HAVE PURPLE JACKS. TERMINATE ALL WIRELESS ACCESS POINT CABLING AT THE DATA RACK IN A DEDICATED PATCH PANEL. WIRELESS ACCESS POINTS ARE BY THE OWNER.
- 3. FOR THE EXTERIOR CCTV OUTLET LOCATION, PROVIDE DEDICATED DATA DROP ROUGH IN WITH WEATHERPROOF BLANK COVER PLATE AT THE WALL MOUNTING HEIGHTS INDICATED. NOTE THAT THE MOUNTING HEIGHTS ARE BASED OFF THE FINISHED FLOOR. SECURITY CAMERA CABLES SHALL HAVE YELLOW JACKS. TERMINATE ALL CLOSED CIRCUIT SECURITY CAMERA CABLING AT THE DATA RACK IN A DEDICATED PATCH PANEL. CLOSED CIRCUIT CAMERAS ARE BY THE OWNER.
- 4. PROVIDE SINGLE GANG BOX AND 3/4" CONDUIT TO STORAGE 101 DATA RACK FOR THE CARD ACCESS READER. ACCESS CONTROL EQUIPMENT IS BY OTHERS. WIRING FOR THE CARD READER IS BY THE ELECTRICAL CONTRACTOR. ROUTE WIRING BACK TO STORAGE 101 IN THE SPACE ALLOCATED NEXT TO THE DATA RACK.
- 5. PROVIDE DOOR CONTACT ROUGH IN PER DETAIL 7/A-E3.1. PROVIDE 1/2" CONDUIT TO OFFICE 104 DATA RACK FOR THE DEVICE. DOOR CONTACT DEVICE IS BY OTHERS. WIRING FOR THE DOOR CONTACT IS BY THE ELECTRICAL CONTRACTOR. ROUTE WIRING BACK TO STORAGE 101 IN THE SPACE ALLOCATED NEXT TO THE DATA RACK.
- 6. PROVIDE 1/2" CONDUIT FROM THE DOOR POWER TRANSFER LOCATION TO STORAGE 101 DATA RACK FOR THE ELECTRIFIED DOOR HARDWARE. VERIFY CONNECTION LOCATION WITH THE DOOR INSTALLER. PROVIDE ALL DOOR POWER WIRING FROM THE DOOR POWER SUPPLY TO STORAGE 101 IN THE SPACE ALLOCATED NEXT TO THE DATA RACK. SEE DETAIL 7/A-E3.1. NOTE THAT IF A REMOTE POWER SUPPLY IS SHOWN AT THE DOOR, ROUTE WIRING FROM THE DOOR TO THE 120V POWER SUPPLY AND PROVIDE 120V CONNECTION TO THE POWER SUPPLY AS SHOWN.
- 7. ALL ELECTRICAL DEVICES IN THE WASH BAY SHALL BE NEMA 4 WATERPROOF.
- 8. PROVIDE ALL REQUIRED CONNECTIONS TO THE OVERHEAD DOORS. PROVIDE RECEPTACLE AND CORD AND PLUG FOR THE 120V CONNECTION TO THE DOOR OPERATORS. DOOR CONTROLS, BUTTONS AND DOOR SENSORS ARE FURNISHED WITH THE OVERHEAD DOORS AND INSTALLED BY THE ELECTRICAL CONTRACTOR. SEE DETAIL 1/A-E2.1 FOR LOCATIONS. PROVIDE AN UNGATED LABEL FOR EACH OPERATOR. PROVIDE ALL CONDUIT AND WIRING NEEDED FOR THE OVERHEAD DOOR CONTROLS. INSTALLATION PROVIDE 3/4" CONDUIT AND REQUIRED WIRING FROM THE DOOR CONTROLLER TO THE RESPECTIVE OVERHEAD DOOR MOTOR. SEE DETAIL 1/A-E2.1.
- 9. ROUGH IN JUNCTION BOX AND 1-1/4" CONDUIT ROUTED BACK TO PANEL, LP1 IN STORAGE 101 FOR FUTURE 240V RECEPTACLE. PROVIDE PULL BOXES AS NEEDED FOR FUTURE PULLING OF WIRING.
- 10. PROVIDE UTILITY APPROVED SELF-CONTAINED METER SOCKET AT THE BUILDING WALL. METER AND ALL METER WIRING IS BY THE UTILITY.
- 11. PROVIDE (2) CATEGORY 6 CABLE DROPS FROM THE DATA RACK LOCATION IN STORAGE 101 TO THE RIT DUKER AT THE FIRE ALARM CONTROL PANEL. ALL FIRE ALARM CABLING SHALL BE INSTALLED IN CONDUIT IN EXPOSED OR NON-ACCESSIBLE CEILING.
- 12. PROVIDE 8" X 6" X 4" JUNCTION BOX FOR SPARKLE CAR WASH EQUIPMENT TO INSTALL POWER WASH CONTROLS. PROVIDE 3/4" CONDUIT FROM JUNCTION BOX TO THE POWER WASH PUMP LOCATED IN MECHANICAL 102. COORDINATE ROUGH IN LOCATIONS WITH SPARKLE CAR WASH EQUIPMENT.
- 13. IN BUS BAY 102, BUS BAY 106, STORAGE 101, AND MECHANICAL ROOM 102, EXPOSED CONDUIT ON THE WALLS IS ALLOWED FOR WALL MOUNTED DEVICES. WALL DEVICES ARE SURFACE MOUNTED DEVICES, UNLESS OTHERWISE NOTED. ROUTE EXPOSED CONDUIT OVERHEAD ALONG THE STRUCTURE AND DROP DOWN INDIVIDUALLY TO EACH DEVICE TO ALLOW SPACE FOR OWNER FURNISHED WALL MOUNTED STORAGE EQUIPMENT.
- 14. ROUTE THE EXPOSED EMT CONDUIT HORIZONTALLY BETWEEN DEVICES SO AS TO NOT INTERFERE WITH POTENTIAL UPPER CASEWORK BEING INSTALLED ABOVE A WORK BENCH.
- 15. ROUGH IN JUNCTION BOX AND 1-1/4" CONDUIT ROUTED BACK TO PANEL, SEP IN STORAGE 101 FOR FUTURE EV BUS CHARGERS. PROVIDE PULL BOXES AS NEEDED FOR FUTURE PULLING OF WIRING.
- 16. AT THE WALL BEHIND THE RACK, PROVIDE 4" X 8" X 3/4" PLWOOD BACK BOARD PAINTED ON ALL SIDES AND DICES WITH TWO COATS OF FIRE RESISTANT GROUT PAINT FOR OWNER EQUIPMENT AND ACCESS CONTROL EQUIPMENT. COORDINATE LOCATION WITH OWNER'S TECHNOLOGY COORDINATOR FOR LOCATION.
- 17. PROVIDE WALL MOUNTED, ENCLOSED SWING OUT STYLE SYSTEMS RACK BY THE ELECTRICAL CONTRACTOR. SEE SPECS FOR RACK REQUIREMENTS. COORDINATE WITH OWNER'S TECHNOLOGY COORDINATOR FOR LOCATION.
- 18. PROVIDE EQUIPMENT ROOM GROUND BUS MOUNTED ON BACKBOARD, 12" WIDE BY 2" HIGH BY 1/4" THICK. PROVIDE #4 AWG CONDUCTOR CONNECTION BETWEEN THE GROUND BUS AND THE WALL DATA RACK. PROVIDE #4 AWG CONDUCTOR TO THE GROUND BUS IN PANEL, SEP. SEE DETAIL 2/A-E3.1 AND DETAIL 4/A-E3.1 FOR ADDITIONAL DETAILS. PROVIDE SHOP DRAWINGS.
- 19. PROVIDE (1) 3/12" CONDUIT FROM THE DATA RACK TO THE EXTERIOR IN GRADE BOX. SEE ME1.1 FOR ADDITIONAL INFORMATION.
- 20. PROVIDE WATERPROOF SWITCH WITH 3/4" CONDUIT TO THE GAS MONITORING SYSTEM CONTROL PANEL FOR MANUAL OVERRIDE OF THE SYSTEM. CONTROL CABLING BETWEEN THE TWO SYSTEMS IS BY THE MECHANICAL CONTRACTOR. SWITCH TO BE WIRED SUCH THAT "ON" IS CLOSED AND "AUTO" IS OPEN. PROVIDE ENERGIZED LABELS "ON" AND "AUTO".
- 21. PROVIDE (2) 3/12" CONDUITS TO A 6" X 6" X 24" GUTTER ABOVE THE DATA RACK. TERMINATE DATA OUTLET CONDUITS AT THE GUTTER.
- 22. PROVIDE #10 AWG CONDUCTORS FOR THE ENTIRE CIRCUIT RUN.
- 23. FOR THE EXTERIOR RECEPTACLE, PROVIDE ARRLINGTON 1/4" BOX FLUSH MOUNTED WEATHER PROOF WHILE IN USE BOX. PROVIDE MODEL WD54BIBC WITH CLEAR COVER. COORDINATE CUTTING IN OF THE RECEPTACLE BOX WITH THE GENERAL CONTRACTOR.
- 24. RECEPTACLE IS DEDICATED TO THE INSTANTANEOUS WATER HEATER FOR THE PRESSURE WASHERS. COORDINATE LOCATION WITH THE CAR WASH EQUIPMENT PROVIDER.
- 25. PROVIDE CONNECTIONS TO GAS MONITORING SYSTEMS. SEE MOTOR SCHEDULE AND DETAIL 2/A-E3.1. MOUNT CONTACTORS FOR CONTROL OF THE MOTORIZED LOUVERS AND ROOF VENTILATORS ADJACENT TO THE GAS MONITORING SYSTEM. NOTE THAT THE GAS MONITORING SYSTEM IS FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS NOTED ON THE DETAIL.
- 26. PROVIDE 120V CONNECTION TO THE ROOF VENTILATOR TIED TO THE GAS DETECTION SYSTEM. SEE DETAIL 2/A-E3.1 AND THE MOTOR SCHEDULE FOR ADDITIONAL INFORMATION. ROUTE WIRING THROUGH THE CONTROL RELAY LOCATED ADJACENT TO THE GAS MONITORING SYSTEM EQUIPMENT.
- 27. PROVIDE 120V CONNECTION TO THE MOTORIZED LOUVERS TIED TO THE GAS DETECTION SYSTEM. SEE DETAIL 2/A-E3.1 AND THE MOTOR SCHEDULE FOR ADDITIONAL INFORMATION. ROUTE WIRING THROUGH THE CONTROL RELAY LOCATED ADJACENT TO THE GAS MONITORING SYSTEM EQUIPMENT.
- 28. PROVIDE CONNECTION TO THE SANITARY SEWER GROUND PUMP AT THE PIT LOCATION. SEE CIVIL PLANS FOR ADDITIONAL INFORMATION ON THE SANITARY SEWER OUTSIDE OF THE BUILDING PERIMETER. NOTE THAT PUMP IS FURNISHED WITH 15 FOOT 50' CORD. ELECTRICAL CONTRACTOR SHALL PROVIDE NEMA 4X WEATHERPROOF BOX WITH GASKETED COVER AT THE SANITARY PIT FOR THE CONNECTION TO THE PUMP CORD.
- 29. PROVIDE 1/2" CONDUIT FROM THERMOSTAT LOCATION TO THE ASSOCIATED MECHANICAL EQUIPMENT FOR THE TEMPERATURE CONTROLS. WIRING IS BY OTHERS. COORDINATE WITH MECHANICAL CONTRACTOR.

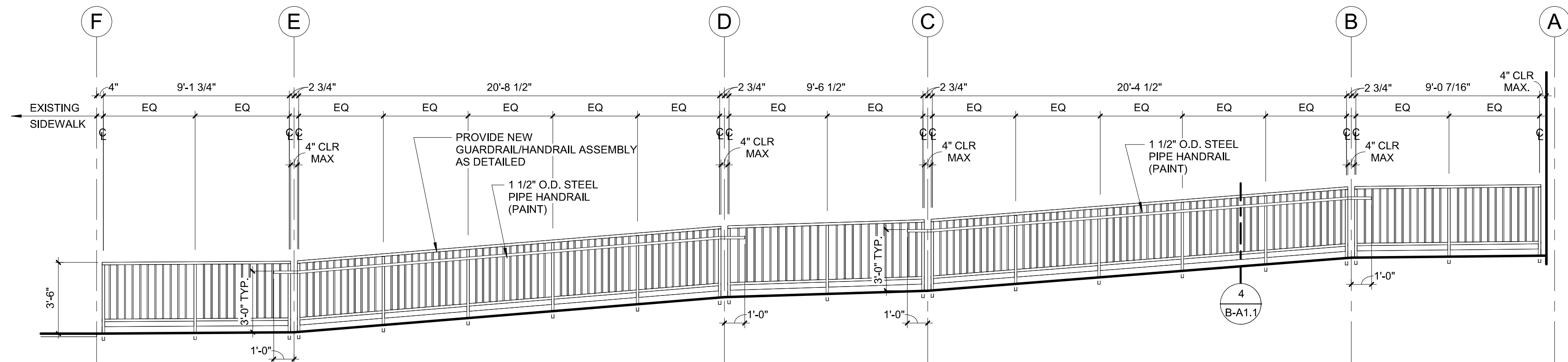
INSTALL EQUIPMENT GROUNDING CONDUCTOR WITH CIRCUIT CONDUCTORS FOR ALL FEEDERS AND BRANCH CIRCUITS, LIGHTING CIRCUITS, RECEPTACLE CIRCUITS, MOTOR OR APPLIANCE BRANCH CIRCUITS AND FLEXIBLE RACEWAY RUNS. USING THE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUND IS NOT ACCEPTABLE.

EQUIPMENT GROUNDING CONDUCTOR TO HAVE GREEN COLOR INSULATION. BARE EQUIPMENT GROUNDING CONDUCTOR IS NOT ACCEPTABLE. COMPLY WITH NEC ARTICLE 250 FOR TYPES, SIZES AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS, EXCEPT WHERE SPECIFIC TYPES, LARGER SIZES, OR MORE CONDUCTORS THAN REQUIRED BY THE NEC ARE INDICATED.

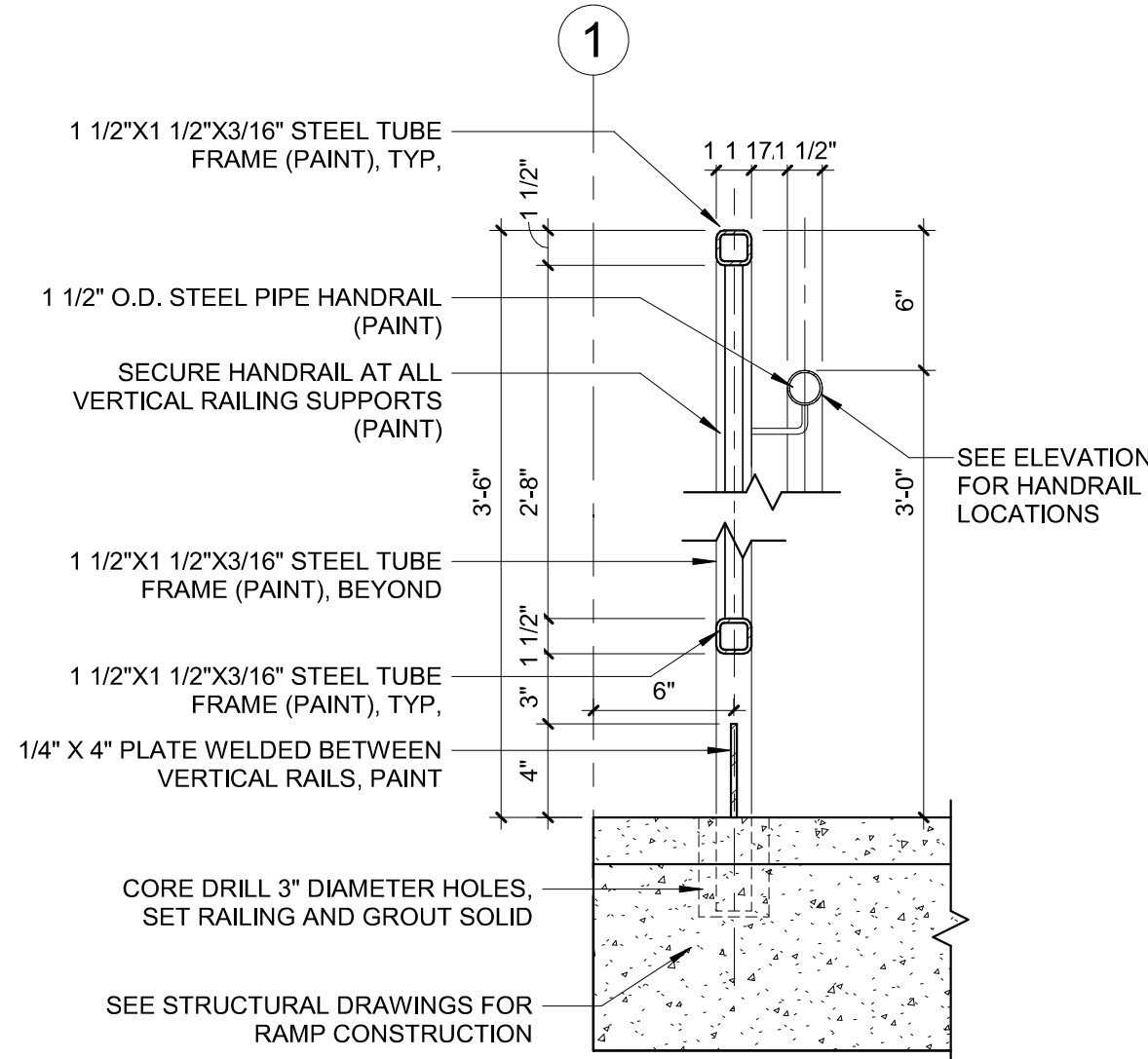
THE ELECTRICAL CONTRACTOR SHALL PROVIDE #12 MINIMUM (UNLESS NOTED OTHERWISE) CONDUCTORS IN QUANTITIES AS REQUIRED TO ACCOMPLISH THE GENERAL POWER, LIGHTING AND SWITCHING CIRCUITING AS SHOWN ON THIS SHEET. FOLLOW THE NEC FOR DERATING AND CONDUIT FILL AS IT APPLIES TO MULTIPLE CIRCUITS. CONDUIT SIZE SHALL BE 1/2" SIZE MINIMUM.

ELECTRICAL SYMBOL LEGEND		
POWER		
	DUPLEX RECEPTACLE	18" A.F.F. UNLESS NOTED OTHERWISE
	DOUBLE DUPLEX RECEPTACLE	18" A.F.F. UNLESS NOTED OTHERWISE
	DISCONNECT SWITCH	
	SINGLE PHASE MMS - MANUAL MOTOR STARTER	
	MOTOR - SEE MECHANICAL & ELECTRICAL MOTOR SCHEDULES	
	JUNCTION BOX	
	SPECIAL PURPOSE POWER RECEPTACLE	18" A.F.F. UNLESS NOTED OTHERWISE
	CONTROL STATION PUSH BUTTON	48" A.F.F. UNLESS NOTED OTHERWISE
	RELAY/CONTACTOR	
	TRANSFORMER	
	POWER PANEL	
	HOMERUN	
	PANEL CIRCUIT	
LIGHTING		
(SEE LIGHT FIXTURE SCHEDULE)		
	2x4" LIGHT FIXTURE - TYPICAL TYPE A, CIRCUIT 12, SWITCH LESS "hda"	
	2x2" LIGHT FIXTURE	
	LIGHT FIXTURE - RECESSED OR HANGING - SEE DRAWINGS AND LIGHT FIXTURE SCHEDULE	
	PHOTOCELL FOR LIGHTING CONTROL - SEE LIGHTING SHEETS, DETAILS & SPECIFICATIONS	
	RELAY FOR LIGHTING CONTROL - SEE LIGHTING SHEETS, DETAILS & SPECIFICATIONS	
	TIME CLOCK FOR LIGHTING CONTROL - SEE LIGHTING SHEETS, DETAILS & SPECIFICATIONS	
	EMERGENCY BATTERY UNIT - WALL OR CEILING MOUNTED	
	EXIT/EMERGENCY LIGHT - WALL OR CEILING MOUNTED	
	EMERGENCY REMOTE HEAD	SEE DRAWING NOTES FOR MOUNTING
	EXTERIOR WALL MOUNTED LIGHT FIXTURE	SEE DRAWING NOTES & DETAILS
	LIGHT SWITCH	48" A.F.F. UNLESS NOTED OTHERWISE
	3-WAY LIGHT SWITCH	48" A.F.F. UNLESS NOTED OTHERWISE
	4-WAY LIGHT SWITCH	48" A.F.F. UNLESS NOTED OTHERWISE
	OCCUPANCY SENSOR FOR LIGHTING CONTROL - SEE LIGHTING SHEETS, DETAILS & SPECIFICATIONS	
	LOW VOLTAGE CONTROL STATION - SEE LIGHTING SHEETS, DETAILS & SPECIFICATIONS	48" A.F.F. UNLESS NOTED OTHERWISE
SIGNAL		
	DATA OUTLET - SEE DETAILS	18" A.F.F. UNLESS NOTED OTHERWISE
	DATA OUTLET - PHONE STATION	52" A.F.F. UNLESS NOTED OTHERWISE
	COMPUTER/TELEPHONE OUTLET - ROUGH-IN ONLY	18" A.F.F. UNLESS NOTED OTHERWISE
	WIRELESS ACCESS POINT CABLE DROP	
FIRE ALARM		
(DEVICES ARE ADDRESSABLE - SEE SPECIFICATIONS)		
	SMOKE DETECTOR	
	FIRE ALARM PULL STATION	48" A.F.F. UNLESS NOTED OTHERWISE
	HORN/STROKE DEVICE	52" A.F.F. UNLESS NOTED OTHERWISE
	STROBE LIGHT ONLY DEVICE	52" A.F.F. UNLESS NOTED OTHERWISE
	HORN ONLY DEVICE WEATHERPROOF	96" A.F.F. UNLESS NOTED OTHERWISE
	SPRINKLER ZONE FLOW SWITCH CONNECTION	
	SPRINKLER TAMPER SWITCH CONNECTION	
	SPRINKLER POST INDICATING VALVE CONNECTION	
	FIRE ALARM CONTROL PANEL	
	REMOTE FIRE ALARM ANNUNCIATOR PANEL	
SECURITY AND ACCESS CONTROL		
	SECURITY SYSTEM DOOR CONTACT	TOP OF DOOR JAMB
	DOOR ACCESS READER - SINGLE GANG JUNCTION BOX WITH SINGLE GANG MUD RING AND 3/4" CONDUIT STUBBED TO ACCESSIBLE SPACE ABOVE CEILING	48" A.F.F. UNLESS NOTED OTHERWISE
	ELECTRIC LATCH RETRACTION DEVICE	LATCH OR HINGE SIDE OF DOOR JAMB
CONDUIT		
(AS SHOWN ON PLANS)		
	CONDUIT CONCEALED IN WALL OR CEILING	
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND	
	SURFACE CONDUIT STRAIGHT WITH BUILDING LINES	
NOTE: ALL MEASUREMENTS ARE TO CENTER UNLESS NOTED OTHERWISE		
ABBREVIATIONS		
FACP	FIRE ALARM CONTROL PANEL	
RFAP	REMOTE FIRE ALARM ANNUNCIATOR PANEL	
EC OR E.C.	ELECTRICAL CONTRACTOR - DIVISION 28 UNLESS NOTED OTHERWISE	
MC OR M.C.	MECHANICAL CONTRACTOR	
GC OR G.C.	GENERAL CONTRACTOR	
NEC OR N.E.C.	NATIONAL ELECTRICAL CODE	
AFR OR A.F.F.	ABOVE FINISHED FLOOR	
GI	GROUND FAULT INTERRUPTER	
WP	WEATHER PROOF	
WG	WIRE GUARD	
VR	VANDAL RESISTANT	
NL	NIGHT LIGHT	
TP	TYPICAL	
SP	SURGE SUPPRESSION UNIT - SEE POWER RISER DIAGRAM	
CONTRACTOR DIVISIONS OF WORK		
(AS NOTED ON PLANS)		
ELECTRICAL CONTRACTOR	REFERS TO THE DIVISION 26, 27, AND 28 CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE	
MECHANICAL CONTRACTOR	GENERAL REFERENCE TO DIVISION 21, 22, OR 23 CONTRACTORS - SEE MECHANICAL PLANS FOR WORK DIVISIONS	
FIRE SUPPRESSION CONTRACTOR	REFERS TO THE DIVISION 21 CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE	
PLUMBING CONTRACTOR	REFERS TO THE DIVISION 22 CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE	
TEMPERATURE CONTROL CONTRACTOR	REFERS TO THE DIVISION 23 CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE	

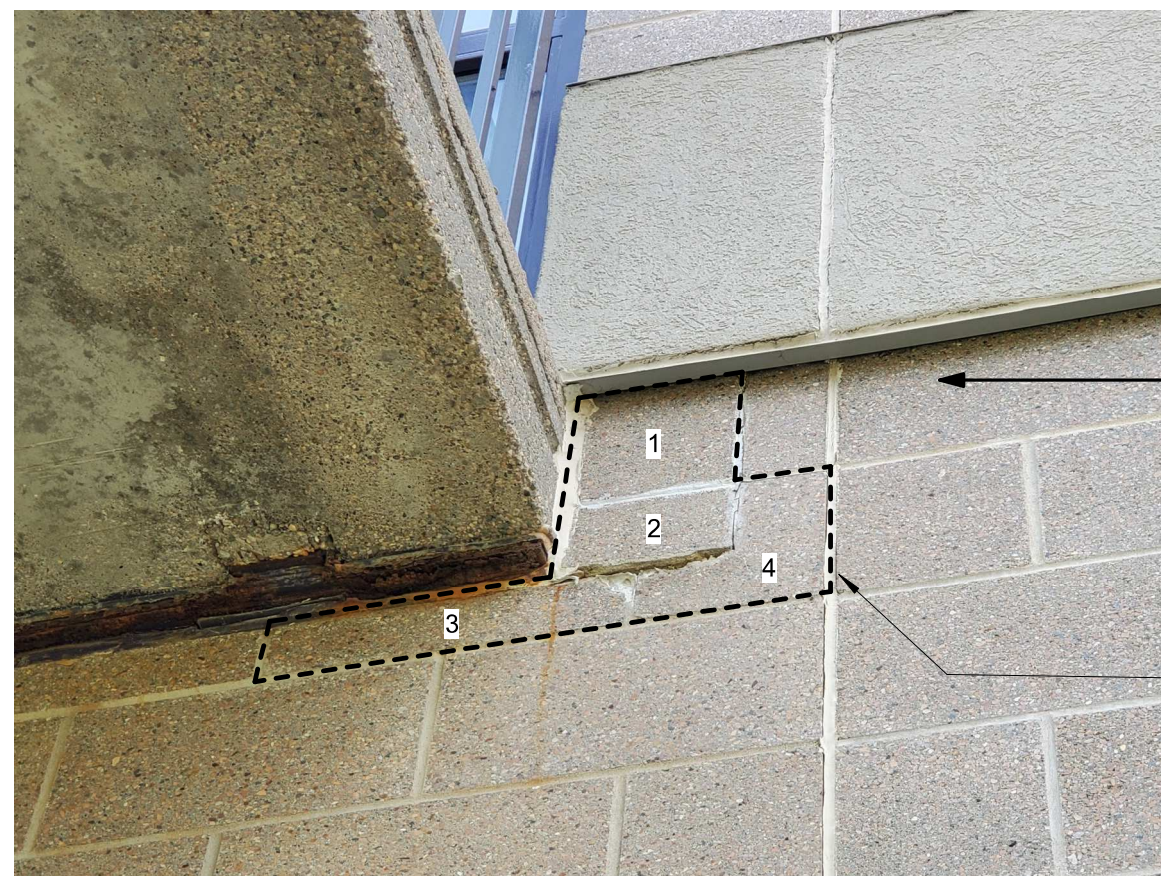




3 RAILING ELEVATION
SCALE: 1/4" = 1'-0"
TYPICAL AT BOTH SIDES OF RAMP



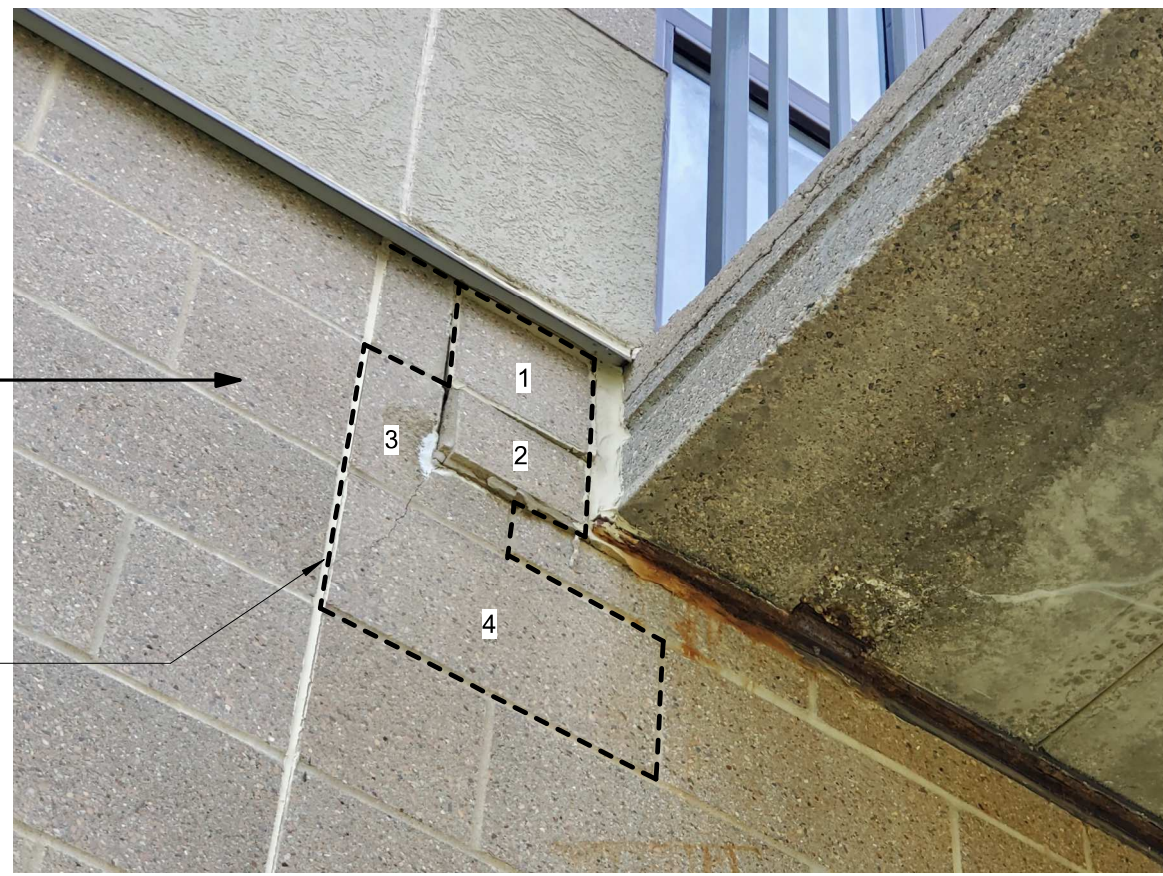
4 RAILING DETAIL
SCALE: 1 1/2" = 1'-0"



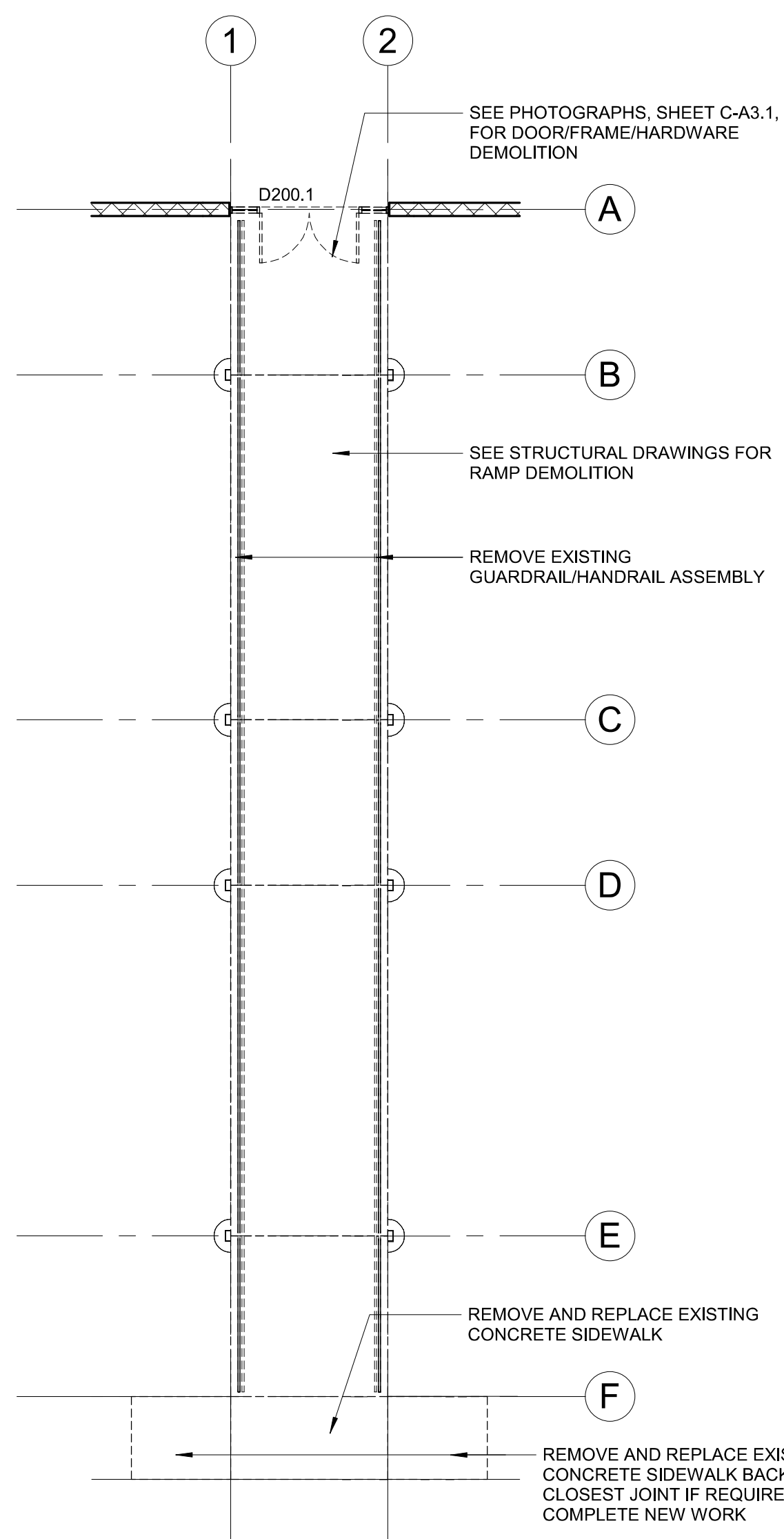
5 WALL REPAIR AT BRIDGE - NORTH
SCALE: 12" = 1'-0"

NOTE: REMOVE ADDITIONAL EXISTING GROUND FACE CMU AROUND BRIDGE BEARING AS NEEDED TO COMPLETE NEW WORK. SALVAGE AND INSTALL OR REPLACE WITH NEW CMU.

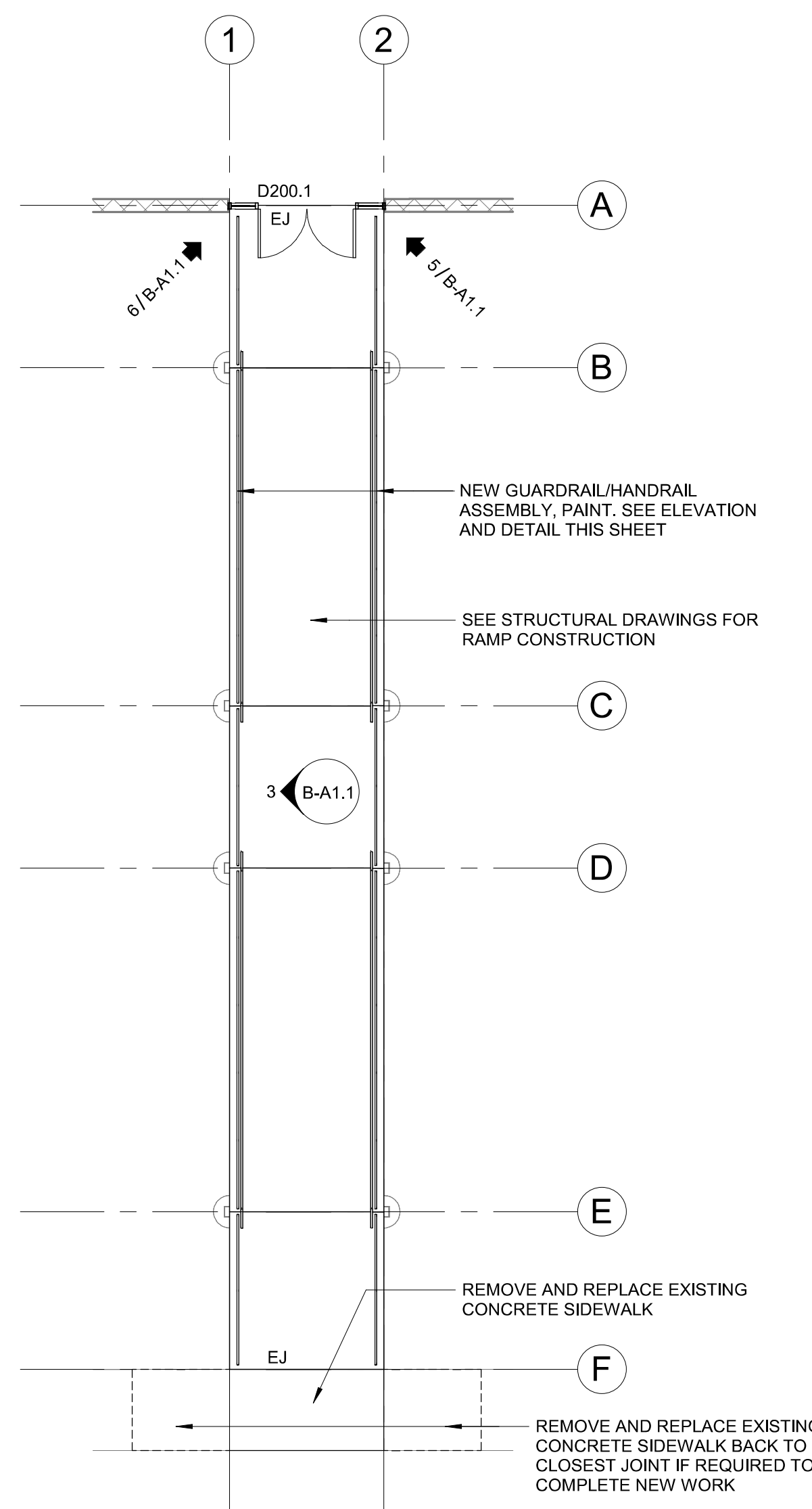
REMOVE DAMAGED GROUND FACE CMU UNITS. CLEAN GROUT/CAULK FROM OPENING. SALVAGE EXISTING OR PROVIDE NEW GROUND FACE CMU TO MATCH. ATTACH WITH TAPCON ANCHORS TO BACKUP CMU WALL.



6 WALL REPAIR AT BRIDGE - SOUTH
SCALE: 12" = 1'-0"



1 MIDDLE SCHOOL BRIDGE DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



2 MIDDLE SCHOOL BRIDGE FLOOR PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN

30" X 42" C:\Users\lms\Documents\2022018 Central Lyon Bridge\STRUC\2022_018\B-S1-1.rvt 11/21/2022 12:31:27 PM

MAIN FLOOR FRAMING PLAN NOTES:

GENERAL

- FOR GENERAL NOTES, SPECIAL INSPECTIONS, AND MATERIAL STRENGTHS SEE THIS SHEET AND SPECIFICATIONS.
- COORDINATE OPENINGS IN WALLS AND SLABS WITH OTHER TRADES.
- NO FIELD CUTTING OF OPENINGS ALLOWED.
- REFER TO THE ARCHITECTURAL DRAWINGS AND/OR COORDINATE WITH THE ARCHITECT REGARDING ADDITIONAL DIMENSIONS AND ELEVATIONS.

STEEL BEAM

- SERVICE REACTIONS FOR STEEL BEAM CONNECTION DESIGN ARE INDICATED AS (xxx) ON PLAN, WHERE NOT NOTED, STEEL SUPPLIER TO PROVIDE CONNECTIONS PER STRUCTURAL GENERAL NOTES.
- ADDITIONAL TENSION/COMPRESSION (AXIAL) CONNECTION DESIGN LOADS INDICATED (xxx) ON PLAN.
- TIE-BEAM ELEVATION AT DECK BEARING ELEVATION OR AT JOIST BEARING ELEVATION (IF SUPPORTING JOISTS) UNLESS NOTED OTHERWISE.

PRECAST PLANK:

- PRECAST TOP OF SLAB ELEVATION PER PLAN INDICATES ELEVATION OF THE 2" TOPPING SLAB FOR SLABS THAT HAVE A TOPPING LAYER. FOR SLABS THAT DO NOT HAVE A TOPPING LAYER, TOP OF SLAB ELEVATION PER PLAN INDICATED ELEVATION OF THE PRECAST MEMBER, BEARING ELEVATION VARIES DEPENDING ON MEMBER DEPTH.
- INDICATES SPAN DIRECTION OF PRECAST PLANK.
- PRECAST SUPPLIER TO DESIGN FOR THE LIVE LOADS INDICATED PER GENERAL NOTES, ADD 10 PSF MISCELLANEOUS SUPERIMPOSED DEAD LOAD IN ADDITION TO CONCRETE TOPPING AT FLOORS.
- REFER TO THE ARCHITECTURAL DRAWINGS AND/OR COORDINATE WITH THE ARCHITECT REGARDING ADDITIONAL DIMENSIONS.
- PROVIDED PLANK-TO-PLANK SHEAR CONNECTIONS SUFFICIENT TO TRANSFER DIAPHRAGM SHEAR BETWEEN PLANKS, MIN. 500 PLF.
- INSTALLED PLANK CAMBER SHALL NOT EXCEED 1 1/2" WHERE 2" TOPPING IS SPECIFIED

STRUCTURAL STEEL

- STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
 - ALL WF (U.N.O.): A992 GRADE 50 (FY=50)
 - ALL ANGLE, BASE PLATES, CONN. PLATES (U.N.O.): A36 (FY=36)
 - STRUCTURAL PIPE: A53 (FY=35)
 - STRUCTURAL TUBE: A501 GRADE B (FY=46)
- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
- CONNECTIONS MAY BE BOLTED OR WELDED. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF CONNECTIONS NOT DESIGNED ON THE DRAWINGS. GENERALLY, CONNECTIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE SCHEMATIC AND ARE ONLY INTENDED TO SHOW THE RELATIONSHIP OF MEMBERS CONNECTED. ANY CONNECTION THAT IS NOT SHOWN OR IS NOT COMPLETELY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY AN ENGINEER, REGISTERED IN DESIGN BY AN ENGINEER, REGISTERED IN THE STATE OF IOWA, RETAINED BY THE FABRICATOR. COMPLETELY DETAILED MEANS THE FOLLOWING INFORMATION IS SHOWN ON THE DETAIL:
 - ALL PLATE DIMENSIONS AND GRADES.
 - ALL WELD SIZES, LENGTHS, FITTINGS, AND RETURNS.
 - ALL HOLE SIZES AND SPACINGS.
 - NUMBER AND TYPES OF BOLTS: WHERE BOLTS ARE SHOWN BUT NO NUMBER IS GIVEN, THE CONNECTION HAS NOT BEEN COMPLETELY DETAILED.
 - WHERE PARTIAL INFORMATION IS GIVEN, IT SHALL BE THE MINIMUM REQUIREMENT FOR THE CONNECTION.

DESIGN CALCULATIONS FOR TYPICAL BEAM CONNECTIONS AND ALL PRIMARY BRACING AND HANGER CONNECTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

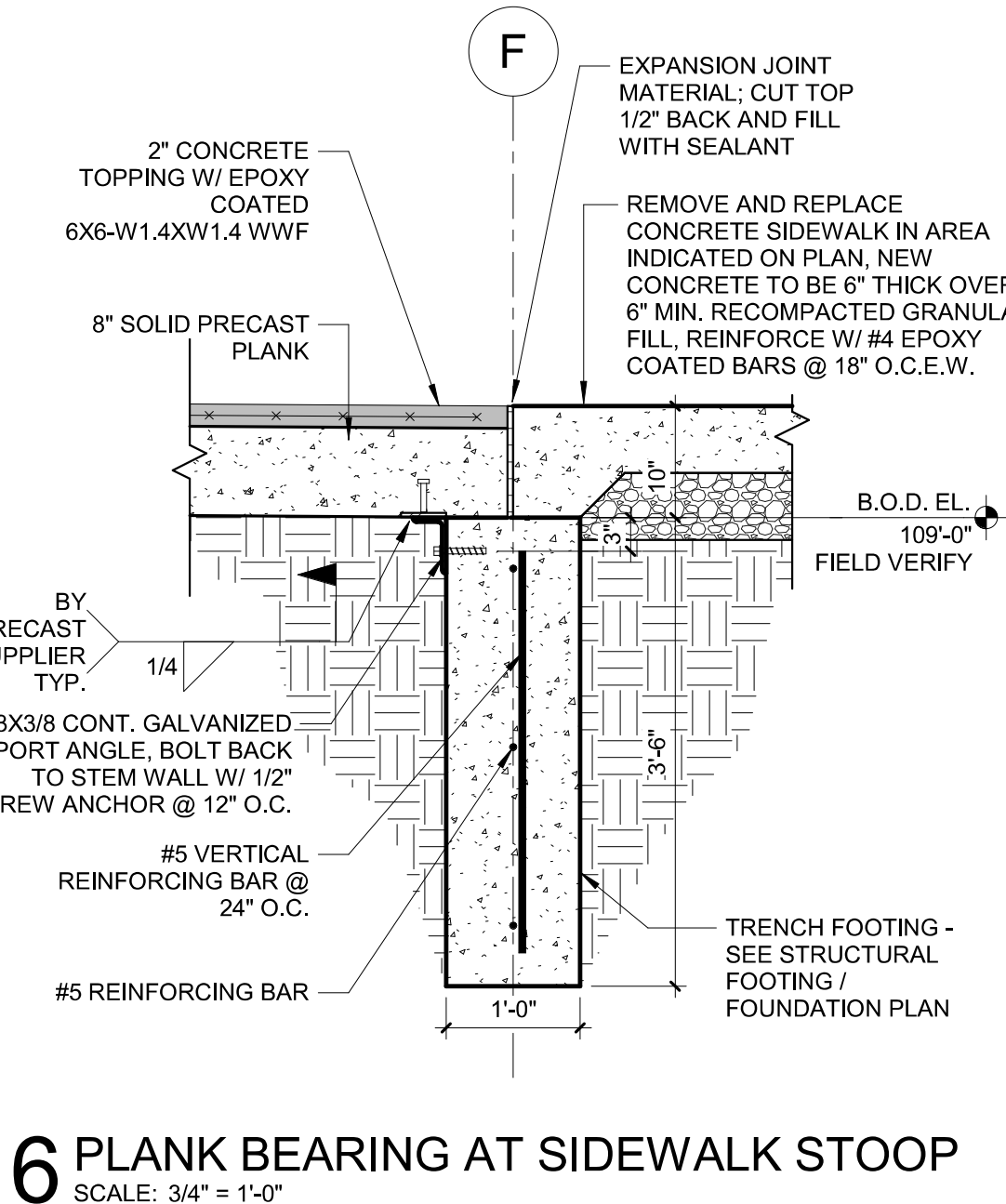
CONNECTION DESIGN FORCES:

- BEAMS, GREATER OF:
 - 55% OF TOTAL ALLOWABLE UNIFORM LOAD CAPACITY FROM AISC 14TH EDITION TABLES FOR ALLOWABLE LOADS ON BEAMS, WOL
 - REACTIONS SHOWN ON DRAWINGS
 - 10 KIPS.
- MOMENT CONNECTIONS INDICATED ON THE DRAWINGS THUS: DESIGN FOR MOMENT SHOWN OR, IF NOT SHOWN, DEVELOP MOMENT CAPACITY OF MEMBER WITH $R = 0.66 F_y$.
- MAINTAIN TENSION CAPACITY OF COLUMNS, DIAGONALS AND MEMBERS SUBJECT TO TENSION AT BOLT HOLES, NOTCHES, OR COPIES.
- CONNECTION FORCE NOTATION
 - P [] = AXIAL FORCE IN KIPS: (+) TENSION, (-) COMPRESSION
 - V OR [] = SHEAR IN KIPS
 - M = MOMENT IN FOOT KIPS
 - T = TORSION IN FOOT KIPS

STRUCTURAL STEEL CONT.

5. THE MINIMUM PLATE THICKNESS SHALL BE 3/8."

- BOLTED CONNECTIONS:
 - MINIMUM BOLT DIAMETER = 3/4"
 - SLIP CRITICAL CONNECTIONS OF A325SC OR A490SC BOLTS SHALL BE USED FOR ALL BOLTED CONNECTIONS OF BRACING MEMBERS, MOMENT CONNECTIONS, CANTILEVERS, AND AS SHOWN ON THE DRAWINGS. OVERSIZED AND LONG-SLOTTED HOLES ARE ALLOWED FOR FRICTION CONNECTIONS.
 - ALL OTHER BOLTED CONNECTIONS SHALL BE BEARING TYPE USING A325N OR A490N BOLTS. OVERSIZED HOLES AND LONG-SLOTTED HOLES ARE NOT ALLOWED UNLESS SHOWN ON THE DRAWINGS.
 - A307 BOLTS MAY BE USED WHERE INDICATED ON THE DRAWINGS.
 - PROTRUDING BOLT HEADS, SHAFTS OR NUTS SHALL NOT EXTEND INTO NOR PROHIBIT THE APPLICATION OF ARCHITECTURAL FINISHES AND THEY SHALL NOT EXTEND INTO NOR PROHIBIT THE PLACEMENT OF STEEL DECKING TO THE CORRECT LINE AND ELEVATION.
 - THE FABRICATOR IS RESPONSIBLE FOR VERIFYING THE TENSION CAPACITY OF AXIALLY LOADED MEMBERS AFTER A SECTION IS REDUCED FOR BOLT HEADS. MEMBER SIZE MAY BE INCREASED OR CONNECTION PLATES ADDED AS REQUIRED.
 - SHOP DRAWINGS SHALL INDICATE THE TYPE OF BOLT USED IN EACH CONNECTION AND THE ALLOWABLE VALUES USED FOR THE VARIOUS BOLT TYPES.
- WELDED CONNECTIONS:
 - WELDS ARE CONTINUOUS UNLESS NOTED.
 - ALL FILLET WELDS: A.I.S.C. MINIMUM BUT NOT LESS THAN 1/8" UNLESS NOTED OTHERWISE.
 - ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE" (A.W.S. D1.1) PUBLISHED BY THE AMERICAN WELDING SOCIETY. ELECTRODES FOR WELDING SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 4.1.1 OF (A.W.S. D1.1).
 - ALL GROOVE WELDS SHALL BE COMPLETE PENETRATION UNLESS NOTED OTHERWISE.
- SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
- NO CHANGE IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS SHALL BE MADE OF HOLES, SLOTS, CUTS, ETC., AND ARE NOT PERMITTED THROUGH ANY MEMBER UNLESS THEY ARE DETAILED ON THE APPROVED SHOP DRAWINGS.
- NO FINAL BOLTING OR WELDING SHALL BE MADE UNTIL, AS MUCH OF THE STRUCTURE HAS BEEN PROPERLY ALIGNED AND WILL THEREBY BE STIFFENED.
- UNLESS NOTED OTHERWISE, BEAMS SHALL BEAR 8" MINIMUM ON CONCRETE OR MASONRY. ANCHOR BEAMS TO MASONRY WITH A GOVERNMENT-TYPE ANCHOR.
- FABRICATE ALL BEAMS WITH THE MILL CAMBER UP.
- EXPANSION BOLTS:
 - UNLESS NOTED OTHERWISE, EXPANSION BOLTS SHALL HAVE THE FOLLOWING MINIMUM SERVICE LOAD CAPACITIES WHEN DRILLED INTO CONCRETE WITH A MINIMUM DESIGN STRENGTH OF 4000 P.S.I. SERVICE LOAD CAPACITIES SHALL PROVIDE FOR A MINIMUM FACTOR OF SAFETY = 4:
 - DIAMETER, SHEAR, TENSION
 - 1/2" 2450 LBS 2400 LBS
 - 3/4" 5120 LBS 4800 LBS
 - SEE SPECIFICATIONS
- SHEAR STUDS: CONFORM TO A.W.S. D1.1, SHOP WELD EXCEPT WHERE APPLIED THROUGH METAL DECK.
- TESTING OF EXPANSION BOLTS AND EPOXY ANCHORS:
 - EXPANSION BOLTS: THE CONTRACTOR SHALL TEST 25% OF ALL EXPANSION BOLTS ACCORDING TO THE MANUFACTURER'S REQUIRED TORQUES.
 - EPOXY ANCHORS: THE CONTRACTOR SHALL TEST 25% OF ALL EPOXY ANCHORS WITH PULL TEST EQUAL TO 150% TIMES THE ALLOWABLE BOLT TENSILE CAPACITIES.
 - NOTE: THE EPOXY ANCHORS ARE TO BE STORED IN A COOL LOCATION ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
- MATERIALS AND JOINTS FOR MOMENT CONNECTIONS AND CONNECTIONS FOR VERTICALLY BRACED ELEMENTS SHALL CONFORM TO THE FOLLOWING:
 - MATERIALS SHALL CONFORM TO SEISMIC PROVISIONS, SECTION 6 AND SUPPLEMENT NO. 1.
 - STEEL PLATES AND SHAPES SHALL HAVE A MINIMUM CHART V-NOTCH TOUGHNESS CONFORMING TO SEISMIC PROVISIONS SECTION 6.3, AND SUPPLEMENT NO. 1.
 - BOLTED AND WELDED JOINTS TO CONFORM TO SEISMIC PROVISION SECTIONS 7, AND SUPPLEMENT NO. 1.



6 PLANK BEARING AT SIDEWALK SLOOP
SCALE: 3/4" = 1'-0"

GENERAL NOTES

DESIGN CRITERIA:

- CODES AND STANDARDS:
 - 2015 IBC/ASCE 7-16
 - OCCUPANCY/RISK CATEGORY II
- DESIGN DEAD LOADS:
 - 8" PRECAST WITH TOPPING: 125 PSF
- DESIGN LIVE LOADS:
 - MINIMUM LIVE LOAD: 100 PSF
 - GROUND SNOW LOAD: $P_g = 40$ PSF
 - SNOW EXPOSURE FACTOR: $C_e = 1.0$
 - SNOW THERMAL FACTOR: $C_t = 1.2$
 - SNOW LOAD IMPORTANCE FACTOR: 1.0
- WIND LOAD:
 - BASIC WIND SPEED: 112 M.P.H.
 - WIND EXPOSURE: C
 - WIND DIRECTIONAL FACTOR: 0.85
 - TOPOGRAPHIC FACTOR: 1.0
 - WIND ANALYSIS FOR LOW RISE BUILDING BASED ON ASCE 7-16/IBC2015.
 - SUPPLIER OF COMPONENTS OF STRUCTURE RESPONSIBLE FOR CALCULATING WIND LOADS BASED ON THE VALUES LISTED ABOVE.
 - UPLIFT PRESSURE TO BE CONSIDERED ON ALL ROOF COMPONENTS.
- SEISMIC LOAD:
 - SPECTRAL ACCELERATIONS: $S_s = 0.077$
 - SPECTRAL ACCELERATIONS: $S_1 = 0.036$
 - SITE COEFFICIENTS: $F_a = 1.6$
 - DESIGN SPECTRAL RESPONSE ACCELERATION: $S_{ds} = 0.083$
 - DESIGN SPECTRAL RESPONSE ACCELERATION: $S_{d1} = 0.058$
 - RISK/OCCUPANCY CATEGORY: II
 - IMPORTANCE FACTOR: $I = 1.0$
 - SITE CLASS: D
 - SEISMIC DESIGN CATEGORY: A

POST-INSTALLED ANCHORS

- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- ANCHORS INSTALLED IN CONCRETE BASE MATERIAL SHALL HAVE CURRENT ICC ESR FOR BOTH CRACKED AND UNCRACKED CONCRETE IN ACCORDANCE WITH ACI 308.2, ICC ESR AC1083 AND ICC ESR AC308.
- THREADED ANCHOR RODS ADHESIVE ANCHORS SHALL BE ASTM A36 OR ASTM F1554 GRADE 36. ADHESIVE USED SHALL BE A STRUCTURAL GRADE, TWO-PART EPOXY THAT MEETS THE REQUIREMENTS OF ASTM C-881 TYPES I AND IV, GRADE 3, CLASSES A & B OR C.
- ADHESIVE ANCHORS SHALL NOT BE USED IN OVERHEAD APPLICATIONS. OVERHEAD CONDITIONS ARE SUBJECT TO SUSTAINED DEAD LOADS RESULTING FROM ADHESIVE CREEP. EXPANSION, SCREW, WEDGE OR OTHER MECHANICAL TYPE ANCHORS SHALL BE USED IN THIS TYPE OF APPLICATION.
- AVOID CONFLICTS WITH EXISTING REBAR WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM ENDJOIST AND/OR SPACING REQUIREMENTS.
- ADHESIVE ANCHORS SHALL BE INSTALLED WITHIN THE TEMPERATURE REQUIREMENTS PROVIDED BY THE ADHESIVE MANUFACTURER. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER IF TEMPERATURES ARE NOT WITHIN THE PROPER RANGE.
- SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE LISTED BELOW, SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEERING IN THE STATE OF IOWA SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE IBC BUILDING CODE. PRODUCT ICC-ES CODE REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE.

THE FOLLOWING ANCHOR PRODUCTS ARE PRE-APPROVED FOR ADHESIVE ANCHORS.

BASE MATERIAL	ADHESIVE ANCHOR PRODUCT	ICC ESR REPORT
CONCRETE	HLTI HIT RE-500-V3	ESR-3814
CONCRETE	HLTI HIT HY-200	ESR-3187
MASONRY	HLTI HIT HY-270	ESR-1433/4144

THE FOLLOWING ANCHOR PRODUCTS ARE PRE-APPROVED FOR EXPANSION ANCHORS.

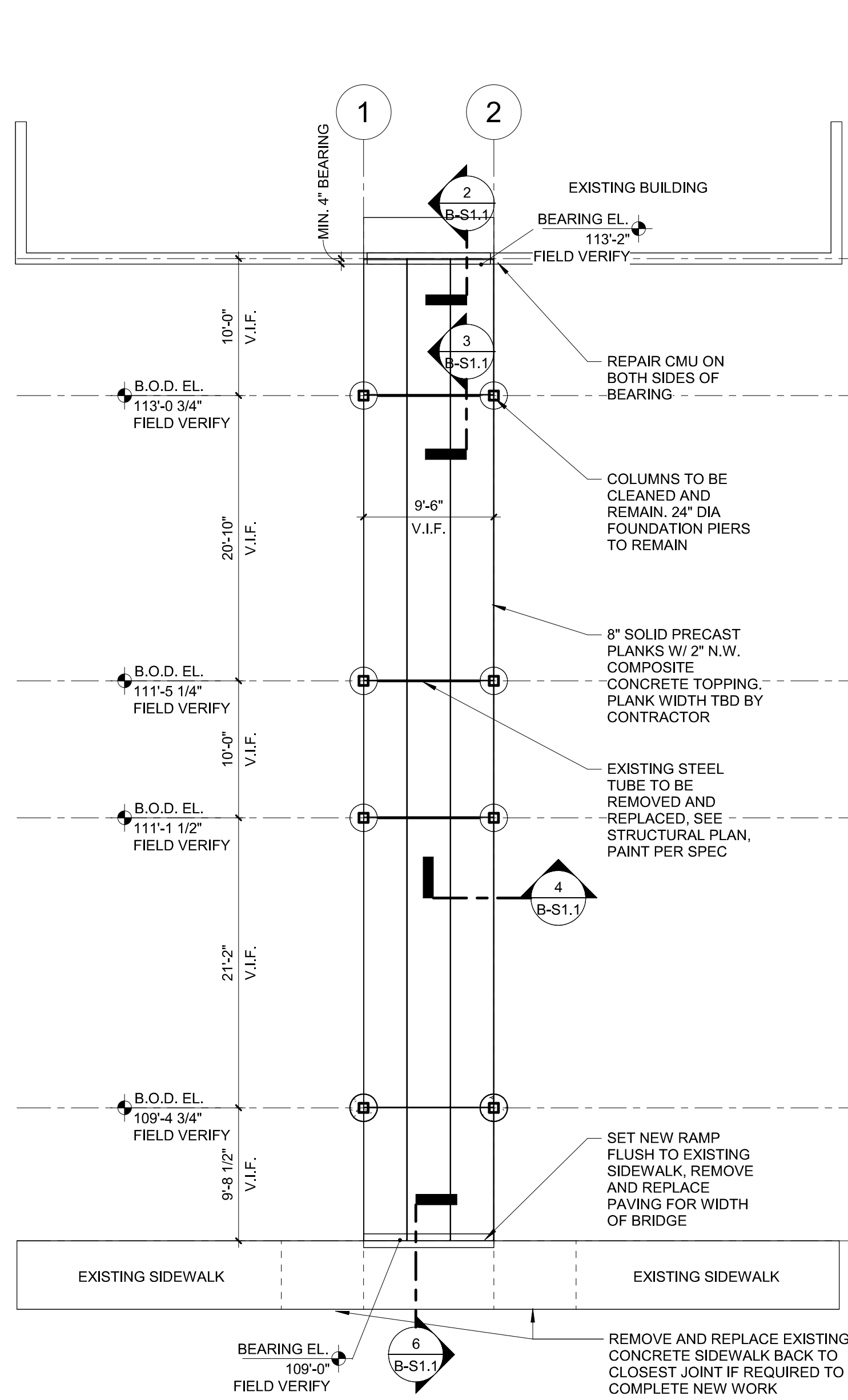
BASE MATERIAL	EXPANSION ANCHOR PRODUCT	ICC ESR REPORT
CONCRETE	SIMPSON STRONG-BOLT	ESR-1771
CONCRETE	HLTI KWIK BOLT TZ	ESR-1971

THE FOLLOWING ANCHOR PRODUCTS ARE PRE-APPROVED FOR SCREW ANCHORS.

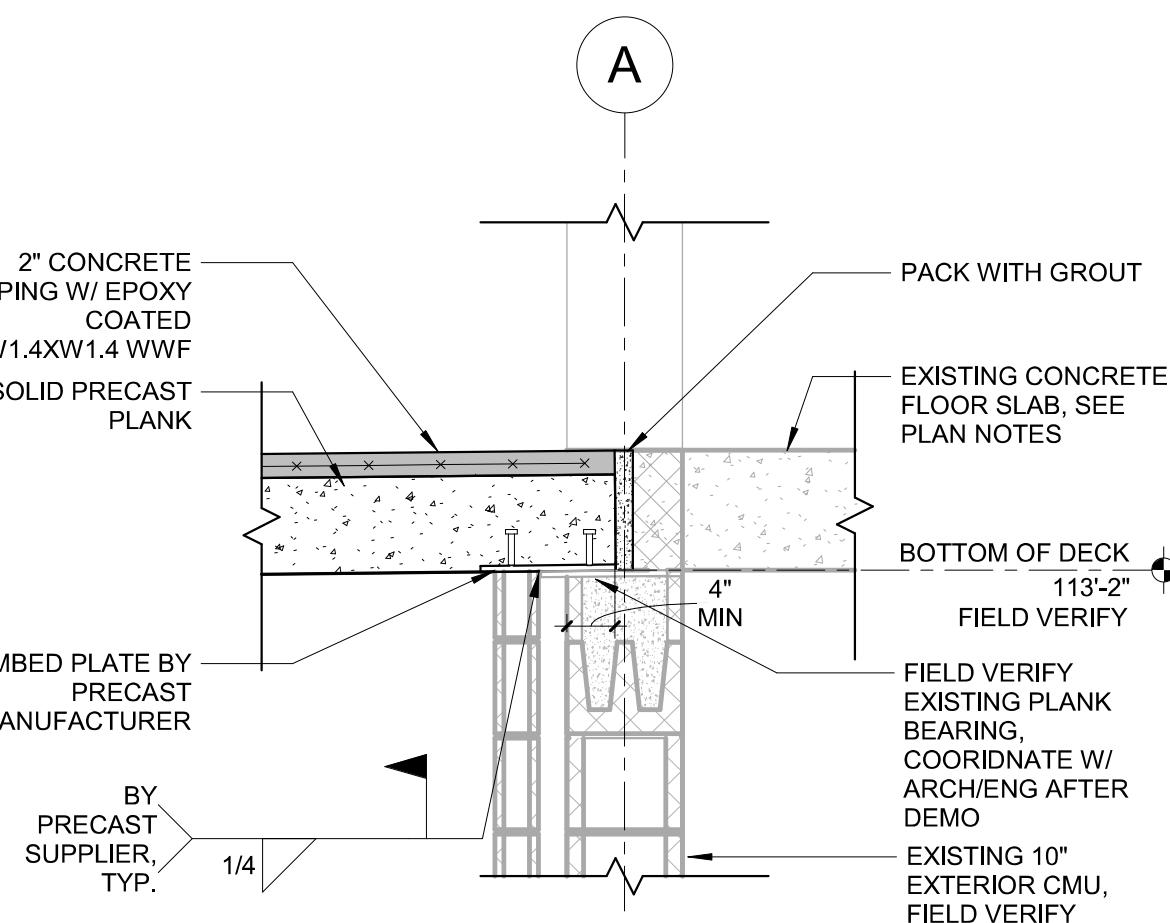
BASE MATERIAL	ANCHOR PRODUCT	ICC ESR REPORT
CONCRETE	SIMPSON TITENHD	ESR-2715
MASONRY	HLTI KWIK HUS-EZ	ESR-3056

EXISTING REWORK NOTES:

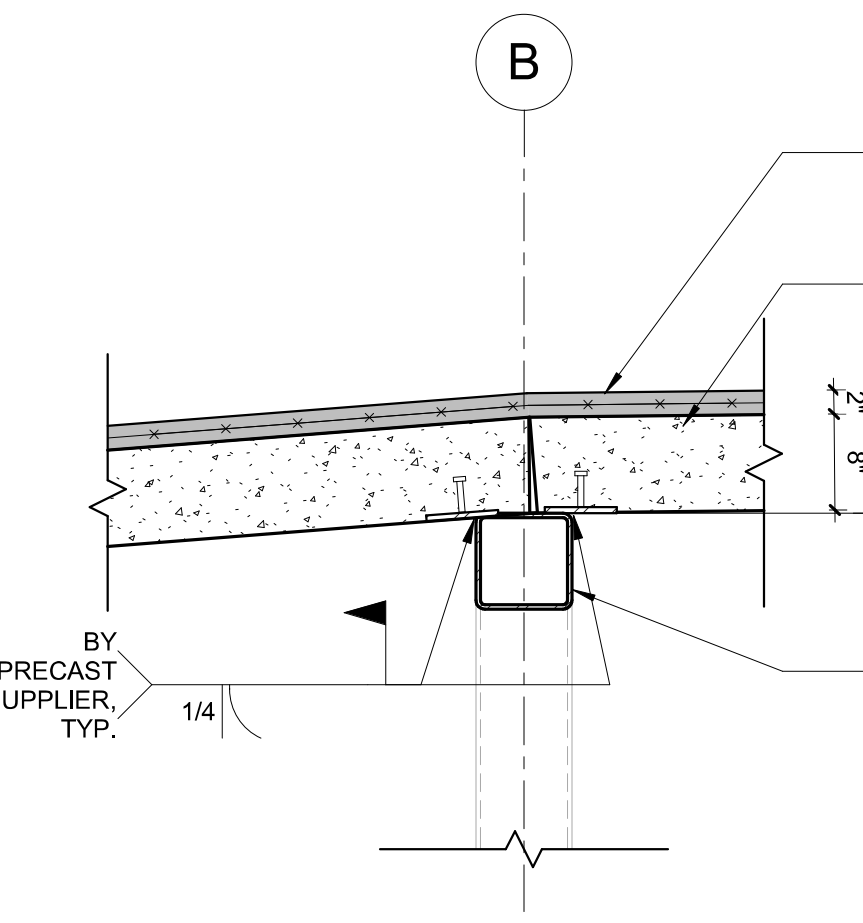
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, SUCH AS DIMENSIONS, ELEVATIONS, CONNECTIONS, AND DETAILS OF EXISTING STRUCTURES AND CONDITIONS WHERE THEY AFFECT NEW CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF ANY DEVIATIONS FROM ANTICIPATED CONDITIONS ARE DISCOVERED.
- COORDINATION W/ COMPLETE SET OF CONTRACT DOCUMENTS: THE CONTRACT DOCUMENTS ARE ONE COMPLETE, COMPREHENSIVE AND INCLUSIVE DOCUMENT CONSISTING OF THE DESIGN OF DRAWINGS AND SPECIFICATIONS FOR ALL OF THE DISCIPLINES' DIVISIONS (E.G. SITE, CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, ETC.). NO SINGLE DISCIPLINE DIVISION IS AUTONOMOUS NOR DOES IT STAND-ALONE FROM ANY OR ALL OTHER DISCIPLINE DIVISIONS.
- VERIFY ALL DIMENSIONS, ELEVATIONS, DEPRESSIONS, INSERTS, EMBEDDED ITEMS, EQUIPMENT PADS AND SUPPORTS, OPENINGS, DETAILS, AND CONDITIONS BY CROSS-REFERENCING TO ARCHITECTURAL AND ALL OTHER DISCIPLINE SECTION DRAWINGS, PARTICULARLY CIVIL, MECHANICAL, AND ELECTRICAL SECTIONS.
- SEE ARCHITECTURAL AND ALL OTHER DISCIPLINE SECTION DRAWINGS FOR DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- STRUCTURAL DRAWINGS DO NOT SHOW ALL REQUIRED OPENINGS THROUGH STRUCTURAL MEMBERS.
- VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND ALL OTHER DISCIPLINE SECTION DRAWINGS.
- NOTES REGARDING USE OF DRAWINGS: DRAWING SCALES ARE NOTED FOR REFERENCE ONLY. NOT ALL ITEMS ARE DRAWN TO SCALE, AND DRAWINGS SHOULD NOT BE SCALED TO OBTAIN DIMENSIONS OR ELEVATIONS NOT INDICATED.



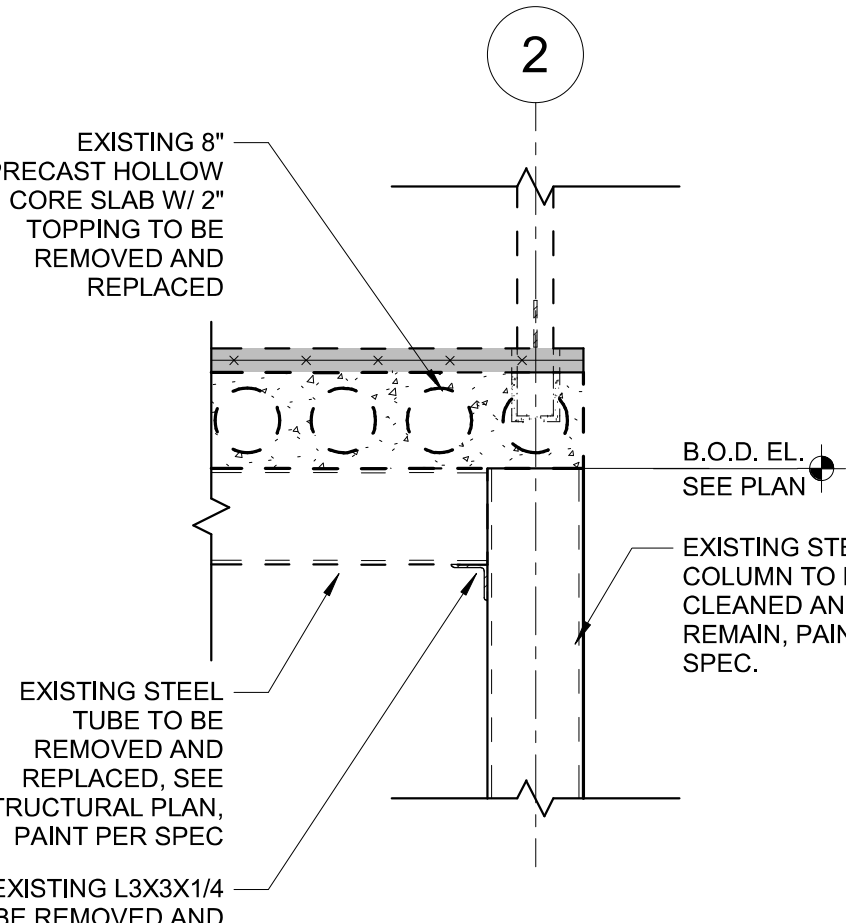
1 BRIDGE REPAIR/REPLACEMENT PLAN
SCALE: 1/8" = 1'-0"



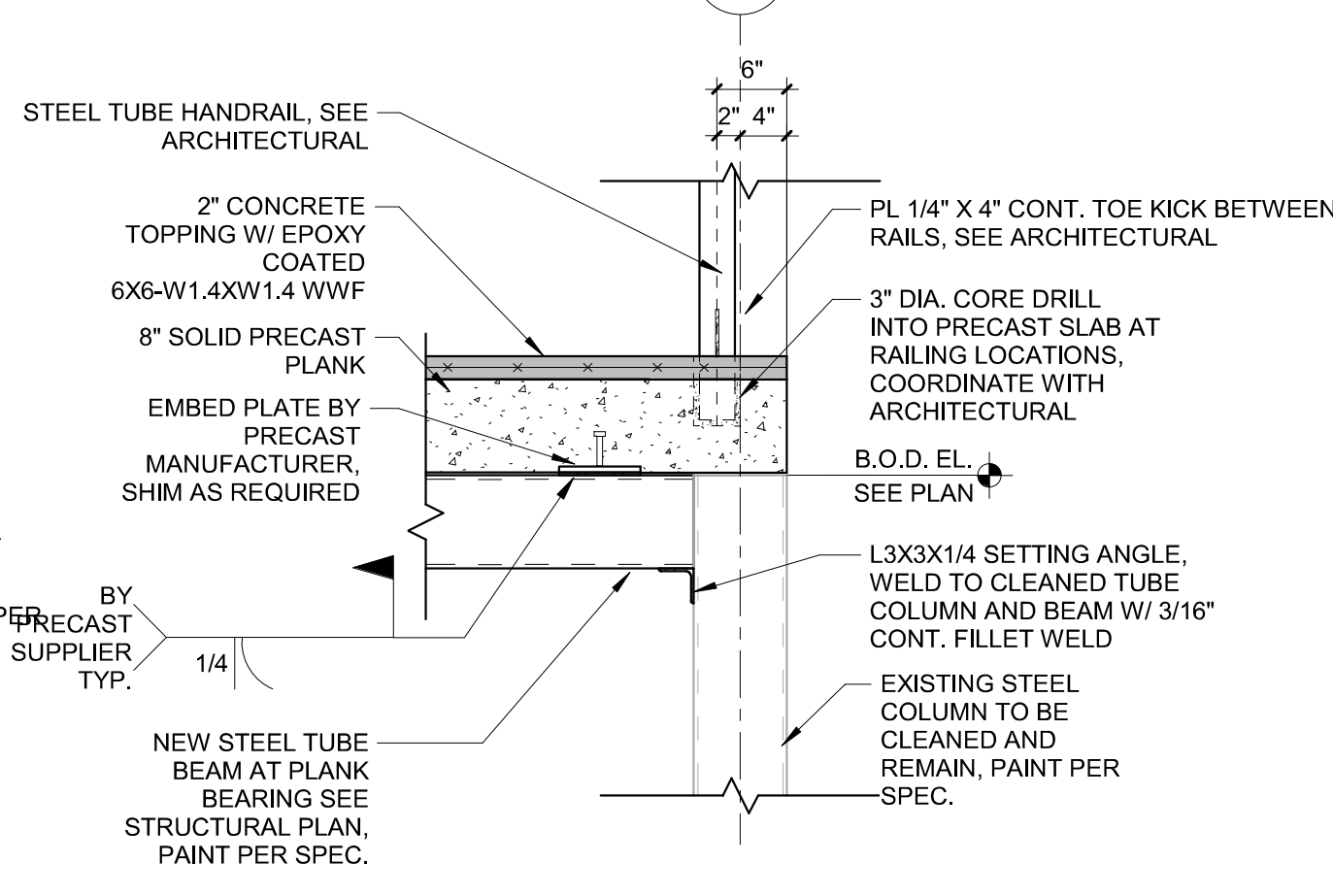
2 PLANK BEARING AT EXISTING CMU
SCALE: 3/4" = 1'-0"



3 PLANK BEARING AT STEEL TUBE FRAME
SCALE: 3/4" = 1'-0"



4 PLANK AND BEAM REMOVAL
SCALE: 3/4" = 1'-0"



5 PLANK AND BEAM REPLACEMENT
SCALE: 3/4" = 1'-0"

PRECAST CONCRETE PLANK

- PRECAST CONCRETE PLANK CONSTRUCTION SHALL CONSIST OF THE DESIGN, MANUFACTURE, TRANSPORTATION AND ERECTION OF SOLID CORE FLOOR PLANKS.
- DESIGN OF PRECAST MEMBERS SHALL BE IN ACCORDANCE WITH A.C.I. 318.
- PRECAST CONCRETE MEMBERS SHALL HAVE A MINIMUM FIRE RESISTANCE CLASSIFICATIONS IF REQUIRED ON THE ARCHITECTURAL DRAWING.
- PRECAST MEMBERS MAY BE CONVENTIONALLY REINFORCED AND/OR PRESTRESSED, CONSISTENT WITH THE DESIGN LOADS, SPANS, HANDLING STRESSES, ETC. DESIGN LOADS ARE SHOWN ON THE DRAWINGS.
- PRECAST CONTRACTOR SHALL FURNISH COMPLETE DESIGN CALCULATIONS, INCLUDING DETAILS OF CONNECTIONS, BEARINGS, FITTINGS AND ANTICIPATED CAMBERS. CALCULATIONS ARE TO BE STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF IOWA.
- PRECAST CONTRACTOR SHALL FURNISH AND PLACE ANY TEMPORARY SHORING, BRACING ETC., REQUIRED FOR ERECTION OF THE PRECAST WORK.
- PRECAST CONTRACTOR SHALL FURNISH ALL PLATES, INSERTS, ANGLES, RODS, ETC., REQUIRED TO CONNECT PRECAST TO PRECAST OR CAST-IN-PLACE MEMBERS OR TO STRUCTURAL STEEL DETAILED PLACING PLANS SHALL BE FURNISHED FOR ALL ITEMS TO BE EMBEDDED IN CAST-IN-PLACE CONCRETE.
- PRECAST MANUFACTURER SHALL CAST IN STRUCTURAL INSERTS, BOLTS, PLATES, ANGLES, DOWELS, KEYWAYS, AS DETAILED IN THE CONTRACT DRAWINGS.
- ERECTION OF PRECAST MEMBERS SHALL INCLUDE THE FURNISHING AND PLACING OF MILD STEEL REINFORCING, WET CAST OR DRY PACKED CONCRETE AT CLOSURES OF CONNECTIONS OUTSIDE OF THE PRECAST ELEMENT.
- IN ORDER TO ACCOMMODATE VARYING MANUFACTURING AND ERECTION PROCEDURES, SHOP PRACTICES, ETC., DEVIATIONS FROM THE DETAILS AND MEMBER SIZES SHOWN IN THE CONTRACT WILL BE CONSIDERED. SUCH DEVIATIONS WILL BE PERMITTED ONLY AFTER THE ARCHITECT'S APPROVAL OF THE MANUFACTURER'S PROPOSED DEVIATION SUPPORTED BY COMPLETE DESIGN CALCULATIONS AND/OR DETAIL DRAWINGS.
- PRECAST SOLID CORE FLOOR PLANK SHALL BE DESIGNED TO SUPPORT THE LOADS SHOWN ON THE DRAWINGS, PLUS ADDITIONAL CONCENTRATIONS, SUCH AS PARTITIONS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR OPENINGS REQUIRED THROUGH THE PLANK. PRECASTER SHALL LAY OUT HIS PLANK, CONSIDERING SUCH OPENINGS, AND SHALL FURNISH ANY HEADERS OR SUPPORTS AS REQUIRED. LOCATIONS OF FIELD CUT OPENINGS SHALL BE COORDINATED WITH THE PLANK LAYOUT. PRECASTER SHALL GRANT ALL JOINTS BETWEEN PLANK. PLANK SHALL NOT EXCEED THE FOLLOWING UNIT WEIGHT (GROUTED WEIGHTS EXCLUSIVE OF TOPPING): AS CALLED OUT IN THE DESIGN CRITERIA.
- PRECAST CONTRACTOR MUST MAKE PROVISIONS FOR ANCHORAGE REQUIREMENTS OF ALL CLADDING AND SHALL PROVIDE NECESSARY HARDWARE REQUIRED TO BE CAST INTO THE SLAB, COORDINATE THESE REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND CLADDING DETAILS.

MISCELLANEOUS

- STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.
- NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
- OPENINGS 1'-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SUCH OPENINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- UNLESS OTHERWISE NOTED, FIRE PROOFING METHODS AND MATERIALS FOR STRUCTURAL MEMBERS ARE NOT SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATING REQUIREMENTS, FIRE PROOFING METHODS AND MATERIALS.
- DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.
- CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS COMPLETE.
- THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECT'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS HE HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND SPECIFICATIONS WILL BE CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLIGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT BEFORE THE EFFECTED WORK PROCEEDS.
- CHECK ALL DIMENSIONS AGAINST REQUIREMENTS OF OTHER CONTRACT DOCUMENTS. FIELD VERIFY DIMENSIONS RELATING TO EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS AND FABRICATION.
- WHERE DIMENSIONS OR WEIGHTS OF EQUIPMENT OR SYSTEMS ARE VARIABLE FROM MANUFACTURER TO MANUFACTURER, VERIFY DIMENSIONS AND WEIGHTS SHOWN ON DRAWINGS WITH SELECTED MANUFACTURER PRIOR TO ORDERING MATERIALS, NOTIFY STRUCTURAL ENGINEER OF DISCREPANCIES. DO NOT PLACE EQUIPMENT WHEN SHIPPING OR OPERATING WEIGHT EXCEEDS WEIGHT.
- DO NOT PLACE EQUIPMENT WHEN SHIPPING OR OPERATING WEIGHTS EXCEEDS WEIGHTS INDICATED ON STRUCTURAL DRAWINGS.
- NO MODIFICATION, ALTERATION OR REPAIR SHALL BE MADE WITHOUT PRIOR REVIEW BY STRUCTURAL ENGINEER. SUBMIT DETAILS AND CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN STATE WHERE PROJECT IS LOCATED AND EMPLOYED BY CONTRACTORS.
- EPOXY / ADHESIVE ANCHORS SHALL BE INSTALLED WITHIN THE TEMPERATURE REQUIREMENTS PROVIDED BY THE EPOXY / ADHESIVE MANUFACTURER. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT / ENGINEER IF TEMPERATURES ARE NOT WITHIN THE PROPER RANGE.

TENSION LAP SPICE FOR OTHER BARS,

GRADE 60

CLASS A, B, LAP SPICE LENGTH (INCHES)

BAR SIZE	CLASS	1	2	1	2
#3	CASE	15	22	19	28
#4		19	29	25	37
#5		24	36	31	47
#6		29	43	37	56
#7		42	63	54	81
#8		48	72	62	93
#9		54	81	70	105
#10		61	91	79	118
#11		67	101	87	131

NOTES:

- TABLES ARE BASED ON ACI 318-05 SEC. 12.2.2.
- ALL SPLICES TO BE CLASS "B" TENSION SPLICE UNLESS OTHERWISE NOTED.
- SPLICE PLAIN WELDED WIRE FABRIC BY LAPPING ONE FULL MESH SPACE PLUS 2 INCHES.
- FOR LIGHT WEIGHT CONCRETE, MULTIPLY LENGTHS IN TABLE BY 1.3.
- FOR EPOXY COATED REINFORCEMENT, MULTIPLY LENGTHS IN TABLE BY 1.5.
- COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS
- BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES, ETC., BELOW GRADE SHALL BE COVERED WITH A MINIMUM OF 3" CONCRETE.
- WHERE REINFORCING IS NOT INDICATED OR DEFINED, INCLUDE FOR BID PURPOSES ONLY.
 - SLABS: #5 EACH WAY TOP AND BOTTOM, SPACING IN INCHES = 100/(SLAB THICKNESS IN INCHES) BUT NOT OVER 18" O.C.
- ON SHOP DRAWINGS, INDICATE ABOVE REINFORCING AS "PER GENERAL NOTES". SUCH REINFORCING MAY BE REVISED OR RELOCATED BY STRUCTURAL ENGINEER DURING SHOP DRAWING REVIEW.
- PROVIDE STANDARD HOOKS ON BARS TERMINATING AT A CONCRETE FACE UNLESS NOTED (E.G. EDGES OF OPENINGS, SLAB DECKING, EXPANSION JOINTS, ENDS OF BEAMS, AND AT TOP, BOTTOM AND ENDS OF WALLS, ETC.,).
- PROVIDE 2-#5 (MIN.) @ EACH SIDE OF OPENING. EXTEND 2'-0" BEYOND OPENINGS.
- SEE MISC. NOTE #16 FOR EPOXY / ADHESIVE ANCHORS.
- GROUT ALL BEAM POCKETS SOLID WITH NON-SHRINK GROUT AFTER BEAM INSTALLATION AND DEAD LOAD FULLY APPLIED, U.N.O.

DEFERRED SUBMITTALS

1. PER IBC SECTION 106.3.4.2 THE FOLLOWING ITEMS ARE DEFERRED SUBMITTALS ITEMS: PRECAST CONCRETE PLANK

- DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW, ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL IS RECEIVED.

IN ASSOCIATION WITH

STRUCTURAL GENERAL NOTES AND DETAILS

SHEET TITLE

2024 FACILITY IMPROVEMENTS

CENTRAL LYON COMMUNITY SCHOOL DISTRICT

BID PACKAGE B

PEDESTRIAN BRIDGE REPAIR

1010 S GREENE STREET
ROCK RAPIDS, IA 51246

PROJECT TITLE

DATE ISSUED 10/17/2023

REV. NO.

DATE

PROJECT NUMBER

2022018.07

SHEET

B-S1.1