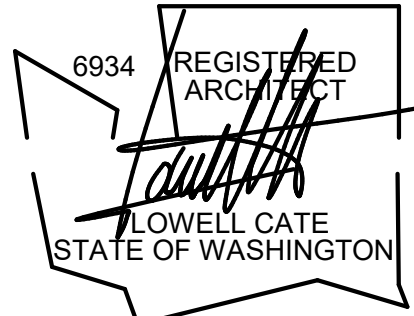


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AMERICAN INSTITUTE OF ARCHITECTS



HELIX DESIGN GROUP, INC.

4

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6

7 FLOOR PLANS & CODE INFORMATION

8 CITY OF FEDERAL WAY SITE STRUCTURES DEPARTMENTAL STORAGE SHEDS 1-3

FEDERAL WAY, WASHINGTON

REVISION DATE

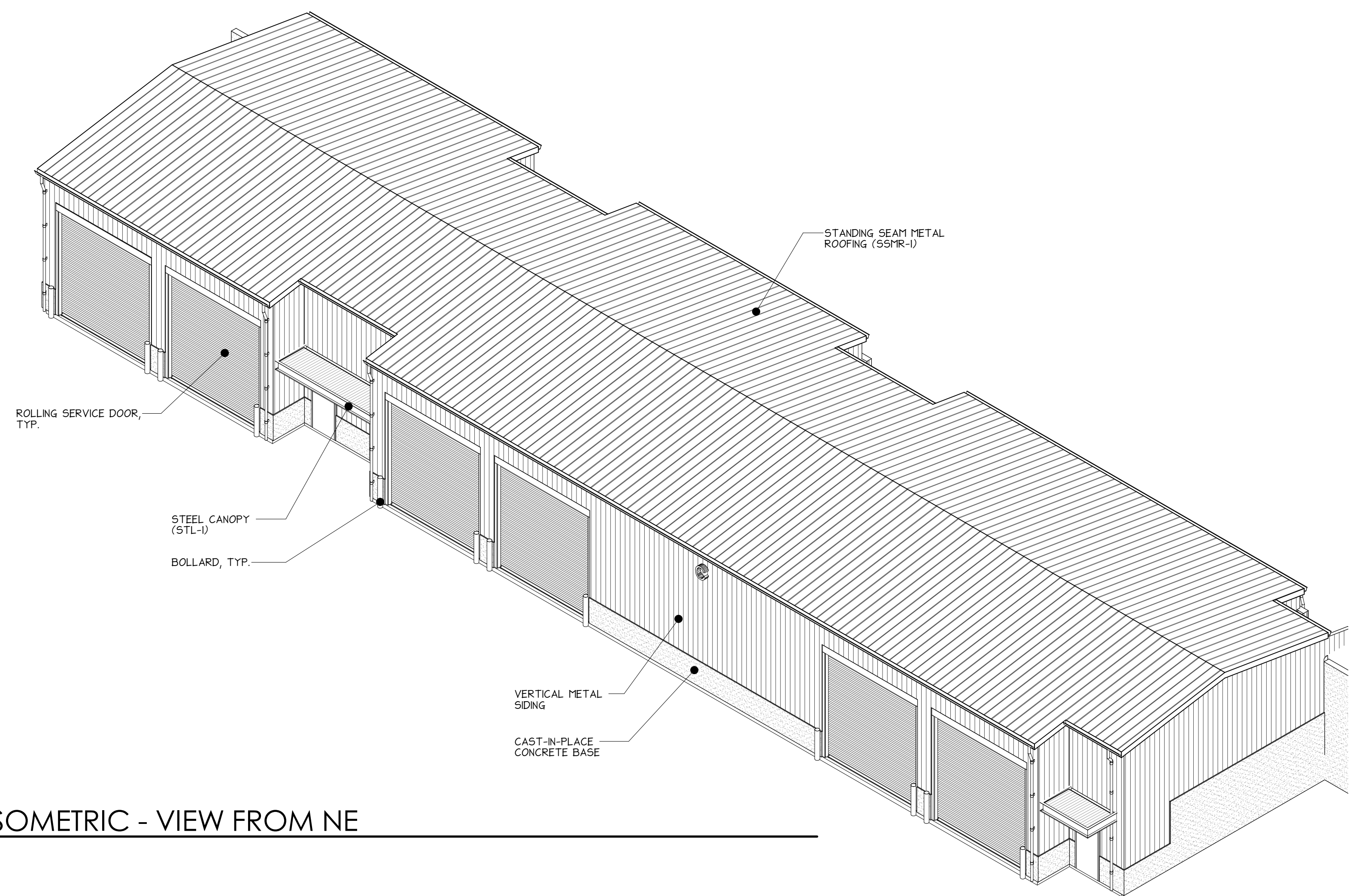
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DATE 05.06.24 JOB NO. 023-087

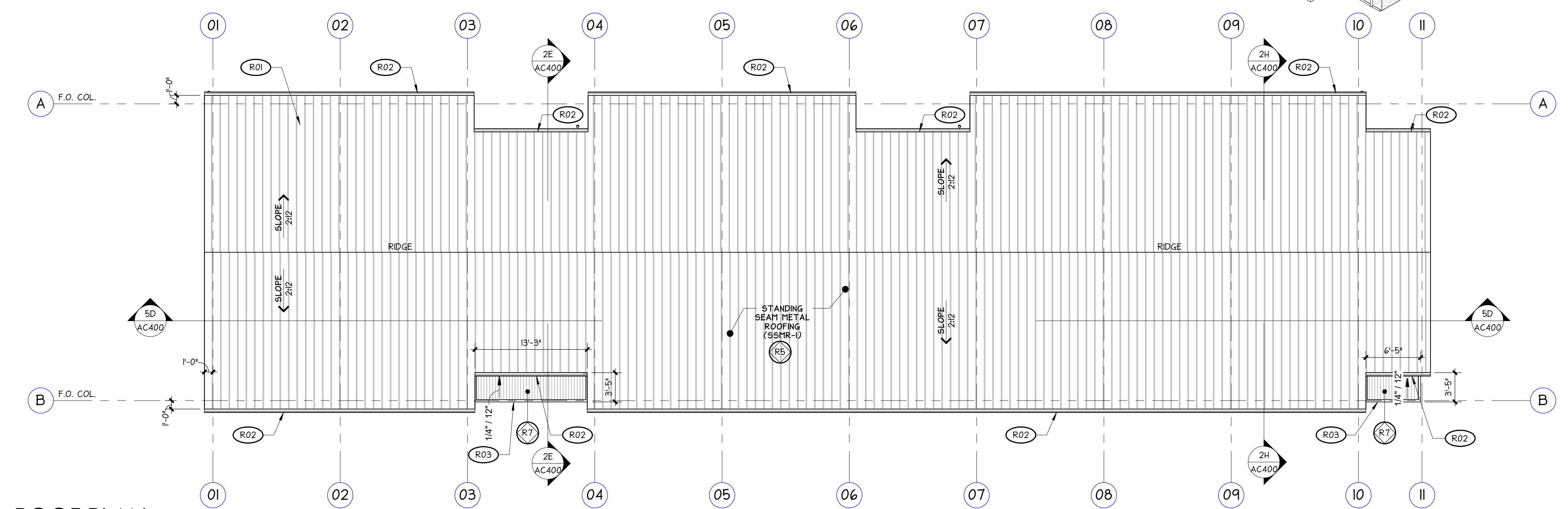
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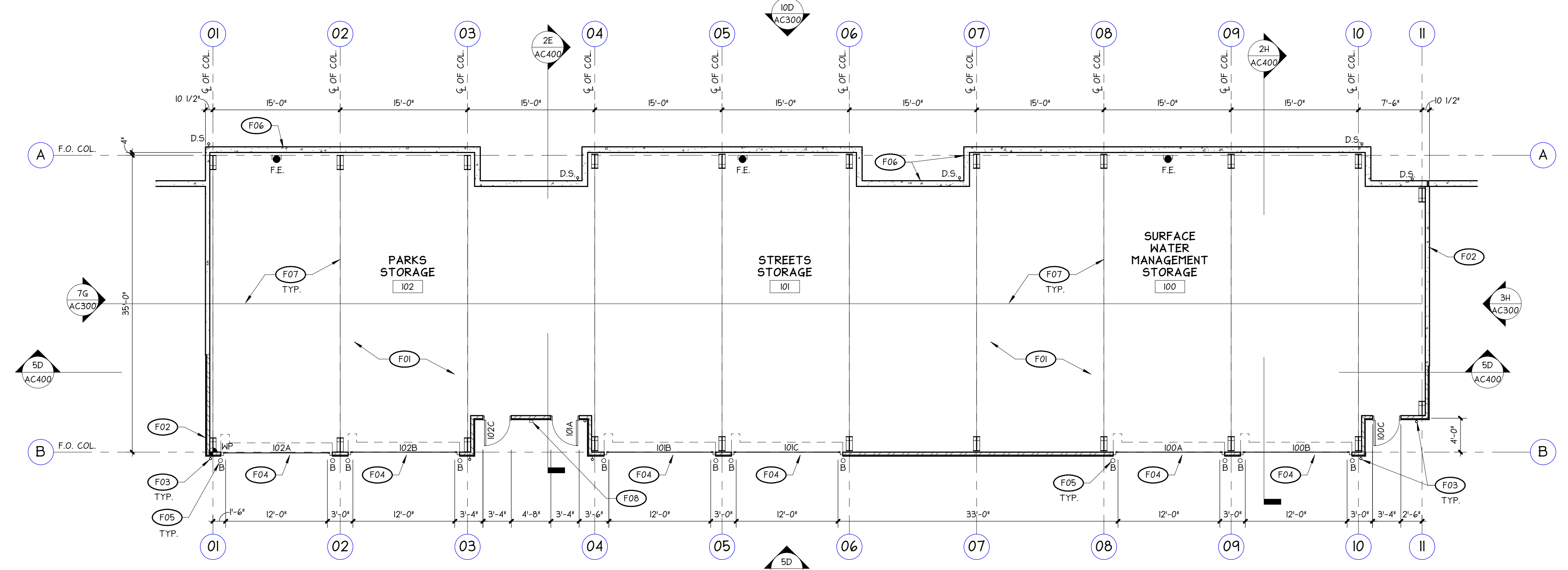
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4F ISOMETRIC - VIEW FROM NE



7D ROOF PLAN 1/8" = 1'-0"



10D FLOOR PLAN 1/8" = 1'-0"

FLOOR PLAN LEGEND

Table with 2 columns: DESCRIPTION, SYMBOL AND TEXT. Includes Room Identification, Swinging Door, Work Point, Downspout, Fire Extinguisher, and Bollard.

DOOR SCHEDULE

Table with columns: NO, WIDTH, HEIGHT, TYPE, MATERIAL, FINISH, GLAZING, RATING, HARDWARE GROUP, MATERIAL, FINISH, TYPE, GLAZING, NOTES.

SCHEDULE NOTES

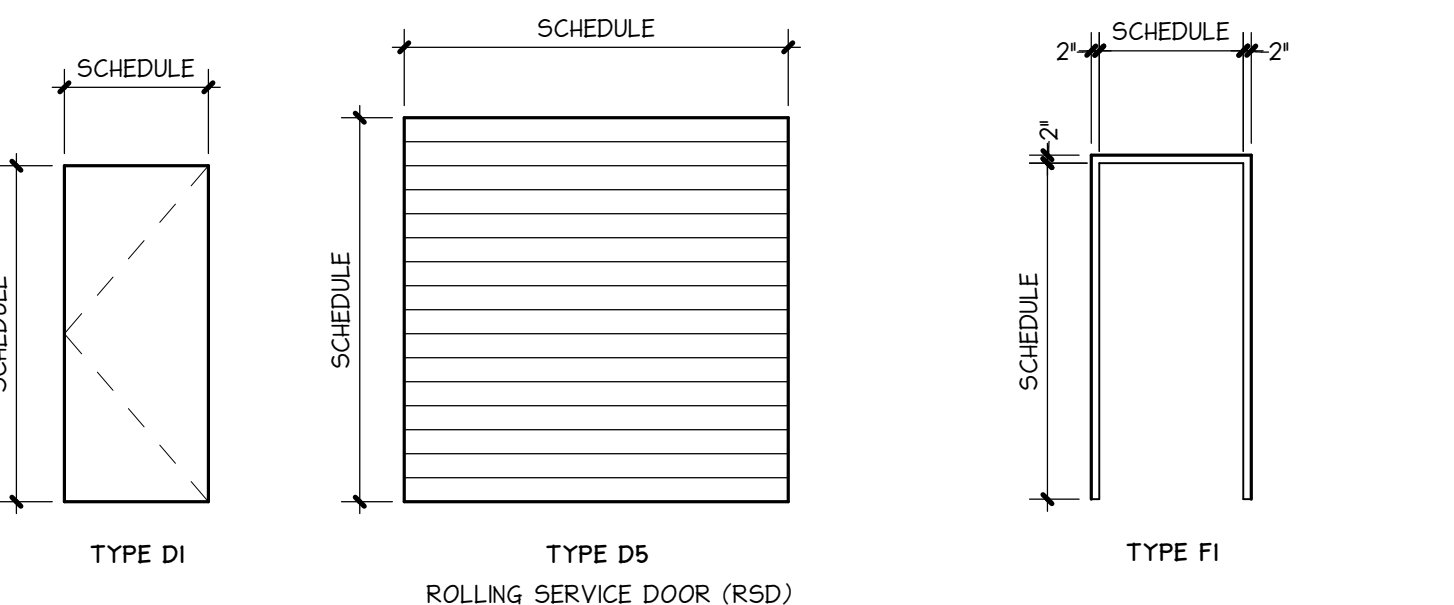
[E5] INSULATED 1/4" DOOR
[E7] INSULATED ROLLING SERVICE DOOR (RSD) : DOOR CONTROLS, HARDWARE, OPERATOR AND ACCESSORIES BY MANUFACTURER. REFER TO SPECIFICATION.

GENERAL NOTES

- 1. REFER TO PROJECT MANUAL, SECTION 08 71 00, 'DOOR HARDWARE' FOR HARDWARE GROUPS.
2. REFER TO COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
3. REFER TO PROJECT MANUAL, SECTION 08 81 00, 'GLAZING' FOR GLAZING TYPES. INSULATING GLASS UNITS SHALL BE LABELED AND NFRC CERTIFIED.
4. REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.
5. 'PAINT' (PT) IS A GENERIC TERM USED IN DOCUMENTS. REFER TO PROJECT MANUAL, SECTION 09 91 00, 'PAINTING' FOR SPECIFIC TYPE OF APPLIED FINISH. THE TERM 'PAINT' REFERS TO PAINTS, STAINS, SEALERS AND OTHER APPLIED COATINGS.
6. REFER TO PROJECT MANUAL, SECTION 07 25 00, 'WEATHER RESISTIVE BARRIER' FOR EXTERIOR HALL OPENING FLASHING REQUIREMENTS.
7. REFER TO BUILDING EXTERIOR OPENING PROTECTION LEGEND FOR FLASHING REQUIREMENTS OF EXTERIOR HALL OPENINGS.

FLOOR PLAN NOTES

Table with 2 columns: SYMBOL, NOTE. Includes F01 to F08 for various floor and wall treatments.



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

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

GENERAL NOTES

- 1. REFER TO BUILDING ASSEMBLY LEGEND ON SHEET G0002 FOR ASSEMBLY TYPES.
2. REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.
3. PRE-ENGINEERED METAL BUILDING, SEE SECTION 13 34 14.

ROOF PLAN LEGEND

Table with 2 columns: DESCRIPTION, SYMBOL AND TEXT. Includes Roofing Identification, Roof Ridge, and Slope Identification.

ROOF PLAN NOTES

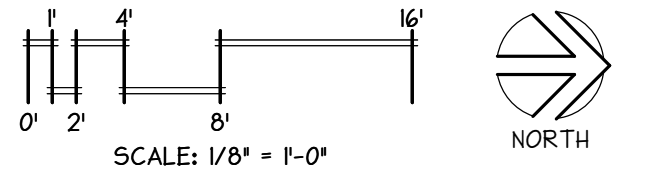
Table with 2 columns: SYMBOL, NOTE. Includes R01 to R03 for roofing materials.

CODE INFORMATION

Table with 3 columns: STRUCTURE C - DEPARTMENTAL STORAGE SHEDS 1-3, Occupancy Group, Construction Types, Proposed Design, Allowable Building Area, Proposed, Allowable Building Height, Proposed, Allowable Number of Stories, Fire Resistive Rating Requirements, Bearing Walls, Non-Bearing Walls, Risk Category, Fire Sprinkler System, Fire Alarm System.

PROJECT: 623-087 - CITY OF FEDERAL WAY
FILE PATH: C:\Users\helix\OneDrive\Documents\623-087 Fed Way 087 - Site Structure & Change Sheet - Central\23-087-0813.rvt

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SCALE: 1/8" = 1'-0" NORTH

FLOOR PLAN LEGEND

DESCRIPTION	SYMBOL AND TEXT
ROOM IDENTIFICATION room name room number	ROOM NAME 100
SHINGING DOOR door number, minimum door strike side clearance distances	
WORK POINT building corner, starting building layout reference point	
DOWNSPOUT refer to plan for size and locations	
FIRE EXTINGUISHER portable fire extinguisher in wall mounted bracket	

GENERAL NOTES

NOTE

- REFER TO BUILDING ASSEMBLY LEGEND ON SHEET 60002 FOR ASSEMBLY TYPES.
- REFER TO SHEET 6020 FOR STANDARD ABBREVIATIONS LIST.
- PRE-ENGINEERED METAL BUILDING, SEE SECTION B 34 14.

ROOF PLAN LEGEND

DESCRIPTION	SYMBOL AND TEXT
ROOFING IDENTIFICATION material type	
ROOF RIDGE ridge line	
SLOPE IDENTIFICATION direction indicator, rise/run	

ROOF PLAN NOTES

SYMBOL	NOTE
	STANDING SEAM METAL ROOF
	6" BOX METAL GUTTER, SRAQUA FIGURE 1-2, STYLE 'A'

WALL TYPES

DESCRIPTION	SYMBOL AND TEXT
WALL TYPE 1 4" CONCRETE BLOCK 4 x 8 x 16	
WALL TYPE 2 6" METAL STUDS # 16" O.C.	

FLOOR PLAN NOTES

SYMBOL	NOTE
	CONCRETE SLAB, SLOPE SLAB TO DRAIN TO OPENINGS.
	CAST-IN-PLACE CONCRETE BASE
	METAL DOWNSPOUT (3" DIA.)
	24" x 72" x 84" STORAGE CABINETS
	8" CAST-IN-PLACE CONCRETE WALL
	ROLLING SERVICE DOOR.
	24" DEEP x 34" HIGH PLASTIC LAMINATE COUNTERTOP WITH BACKSPLASH, PROVIDE POWER OUTLET
	TOOLED CONCRETE CONTROL JOINTS
	STEEL BOLLARDS, SEE 44/G005
	KNOX BOX (ACCESS BOX) PER FIRE DEPARTMENT REQUIREMENTS

CODE INFORMATION

STRUCTURE D - SWAT VEHICLE STORAGE (Enclosed) 4
COVERED GENERATOR STORAGE STRUCTURES (Open one side)

Occupancy Group: S-1 (Parking Garage 4 Storage) IBC Section 308

Construction Type: V-B Construction Type IBC Section 602

Proposed Design: V-B Construction Type

Allowable Building Area: 9,000 (NS) V-B IBC Table 506.2
NS = Not Equipped with Fire Sprinkler System

Proposed:
SWAT Storage: 900 sf
Generator Storage: 2,100 sf
3,000 sf < 9,000

Allowable Building Height: 40 ft IBC Table 504.3
Proposed: 20 ft. < 30 ft. avg. height per FMHC

Allowable Number of Stories: 2 Stories IBC Table 504.4
Proposed: Single Story Structure

Fire Resistive Rating Requirements IBC Table 601

Structural Frame	0 hr.	
Bearing Walls		
Exterior	0 hr.	
Interior	0 hr.	
Non-Bearing Walls		
Exterior	0 hr.	Table 602
Interior	0 hr.	
Floor Construction	0 hr.	
Roof Construction	0 hr.	

Risk Category: II IBC Table 1604.5

Fire Sprinkler System: Not Equipped with Fire Sprinkler System IBC Section 903

Fire Alarm System: Equipped with Fire Alarm System IBC Section 907

DOOR SCHEDULE

NO	DOOR										NOTES	
	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	GLAZING	RATING	HARDWARE GROUP	MATERIAL	FINISH		GLAZING
101A	20'-0"	12'-0"	D5	STL	FF	-	-	-	STL	FF	-	(7)
101B	3'-0"	7'-2"	D1	H1	PT	-	-	-	HDM-4A	H1	PT	(5)

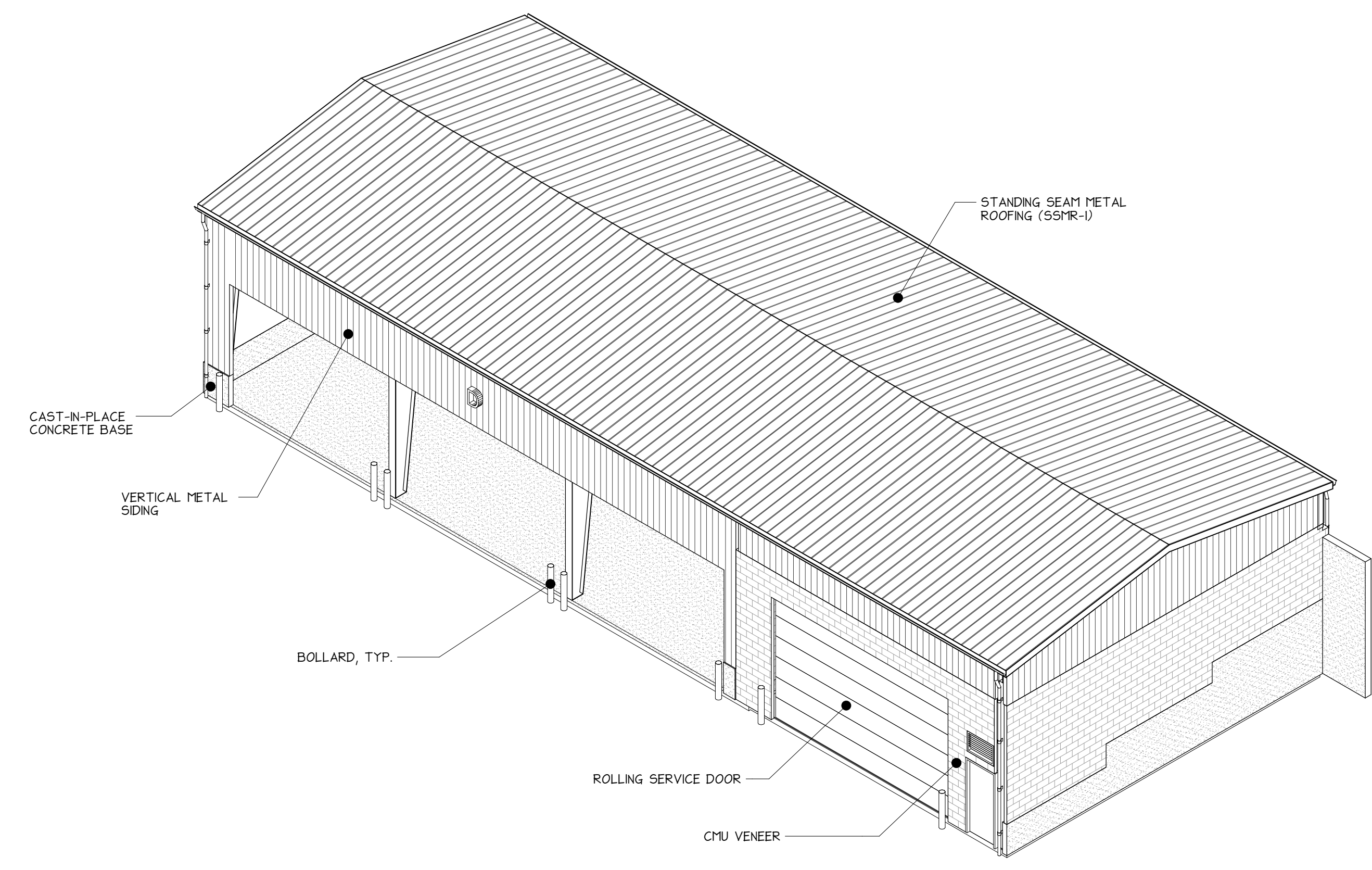
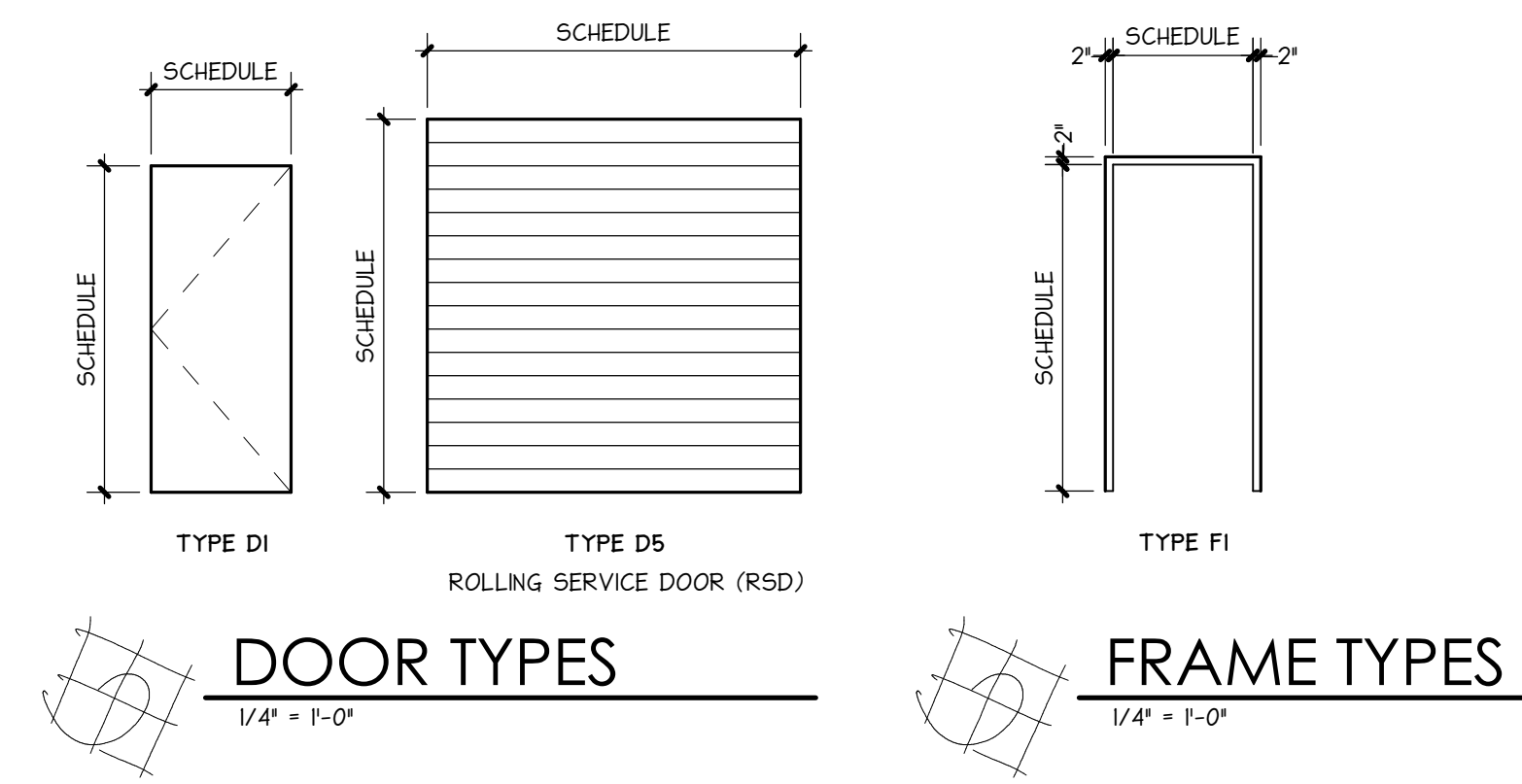
SCHEDULE NOTES

(5) INSULATED H.M. DOOR

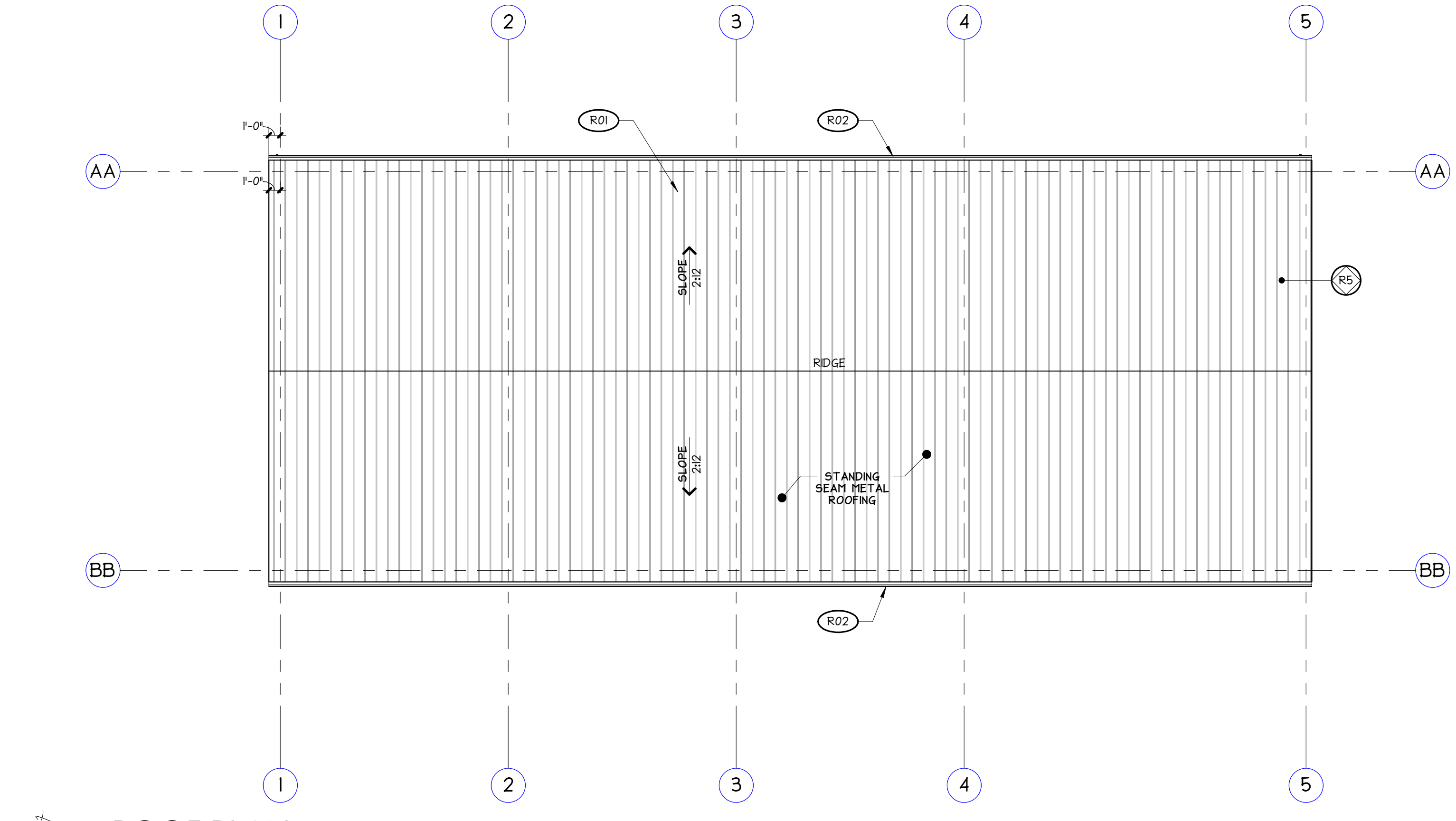
(7) INSULATED ROLLING SERVICE DOOR (RSD) : DOOR CONTROLS, HARDWARE, OPERATOR AND ACCESSORIES BY MANUFACTURER. REFER TO SPECIFICATION.

GENERAL NOTES

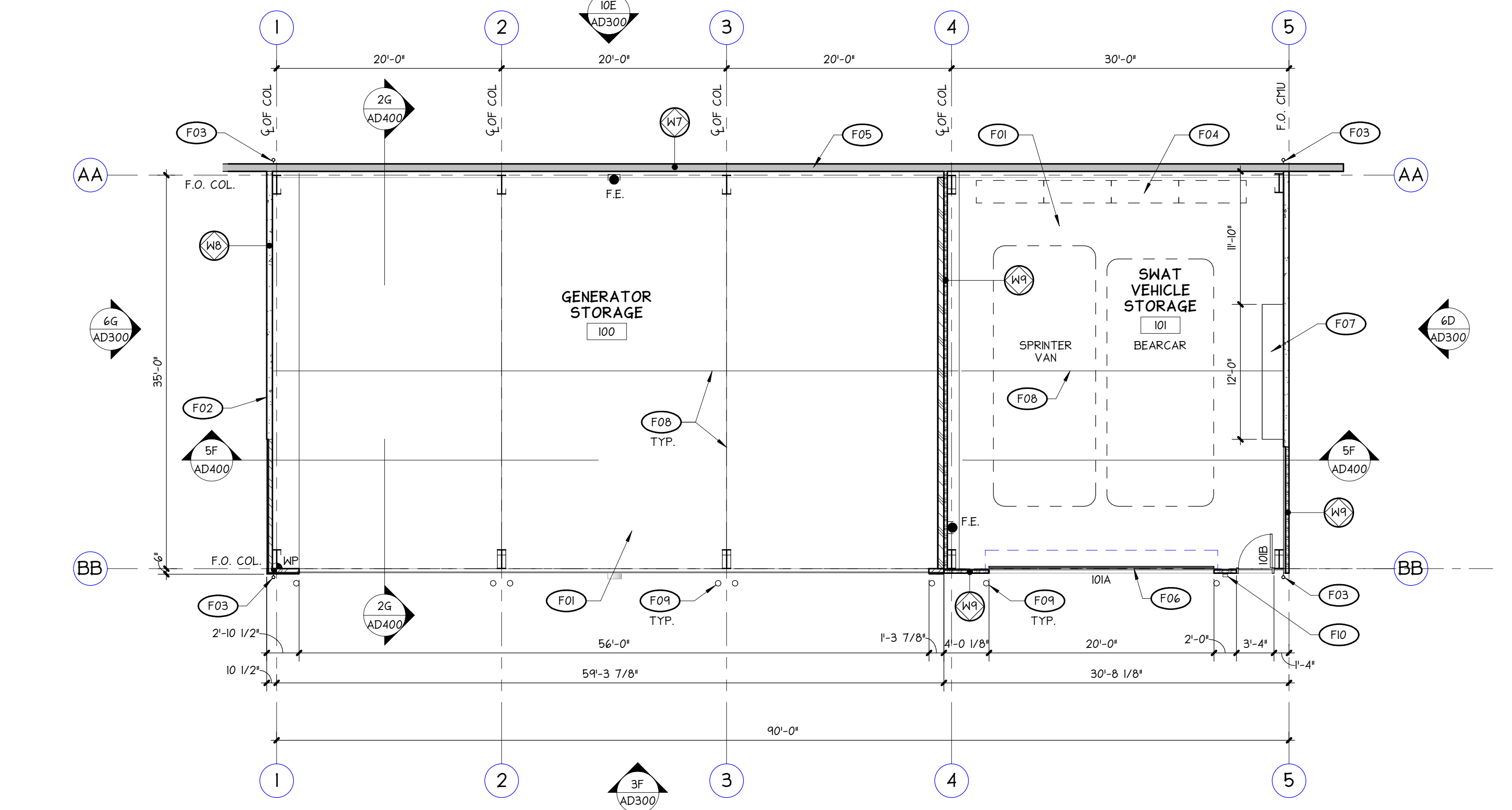
- REFER TO PROJECT MANUAL, SECTION 08 71 00, 'DOOR HARDWARE' FOR HARDWARE GROUPS.
- REFER TO COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
- REFER TO PROJECT MANUAL, SECTION 08 81 00 'GLAZING' FOR GLAZING TYPES. INSULATING GLASS UNITS SHALL BE LABELED AND NFRC CERTIFIED.
- REFER TO SHEET 6020 FOR STANDARD ABBREVIATIONS LIST.
- 'PAINT' (PT) IS A GENERIC TERM USED IN DOCUMENTS. REFER TO PROJECT MANUAL, SECTION 09 91 00, 'PAINTING' FOR SPECIFIC TYPE OF APPLIED FINISH. THE TERM 'PAINT' REFERS TO PAINTS, STAINS, SEALERS AND OTHER APPLIED COATINGS.
- REFER TO PROJECT MANUAL, SECTION 07 25 00, 'WEATHER RESISTIVE BARRIER' FOR EXTERIOR WALL OPENING FLASHING REQUIREMENTS.
- REFER TO BUILDING EXTERIOR OPENING PROTECTION LEGEND FOR FLASHING REQUIREMENTS OF EXTERIOR WALL OPENINGS.



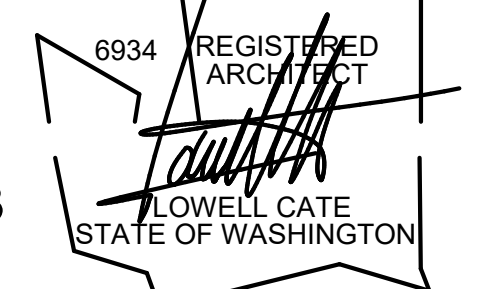
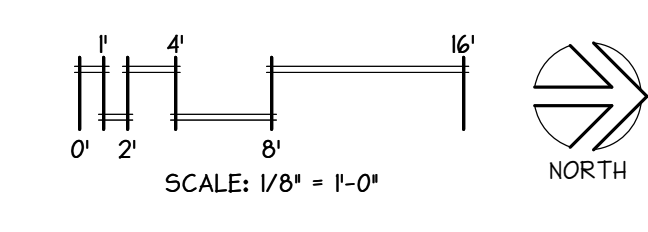
10A ISOMETRIC - VIEW FROM NE



6F ROOF PLAN
1/8" = 1'-0"



10F FLOOR PLAN
1/8" = 1'-0"



HELIX DESIGN GROUP, INC.

FLOOR PLANS & CODE INFORMATION

FEDERAL WAY O&M FACILITIES SWAT - VEHICLE AND GENERATOR STORAGE BUILDING
FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE: 05.06.24 JOB NO.: 023-087

BID SET
AD100

DRAWING NO.:
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PLOTTED: 5/10/2024 2:30:05 PM PROJECT: 623-087 - FEDERAL WAY O&M FACILITIES
 FILE PATH: C:\Users\helix\OneDrive\Documents\623-087 Fed Way O&M - Site Structure D.Generator Storage-Cad\10A-10F.dwg(0813)1.rvt

UNOFFICIAL COPY Official bid documents, plan holder's list, and addenda (if applicable) are available on B2VA.com

FLOOR PLAN LEGEND

DESCRIPTION	SYMBOL AND TEXT
ROOM IDENTIFICATION room name room number	ROOM NAME 100
WORK POINT building corner, starting building layout reference point	WP
DOWNSPOUT refer to plan for size and locations	D.S.
FIRE EXTINGUISHER portable fire extinguisher in wall mounted bracket	F.E.

FLOOR PLAN NOTES

SYMBOL	NOTE
F01	CONCRETE SLAB, SLOPE SLAB TO DRAIN TO OPENINGS
F02	CAST-IN-PLACE CONCRETE BASE
F03	METAL DOWNSPOUT (3" DIA.)
F04	TOOLED CONCRETE CONTROL JOINTS

WALL TYPES

DESCRIPTION	SYMBOL AND TEXT
WALL TYPE 1 3 5/8" METAL STUDS @ 16" O.C.	

GENERAL NOTES

- NOTE
- REFER TO BUILDING ASSEMBLY LEGEND ON SHEET GD002 FOR ASSEMBLY TYPES.
 - REFER TO SHEET GD20 FOR STANDARD ABBREVIATIONS LIST.
 - PRE-ENGINEERED METAL BUILDING, SEE SECTION B 34 14.

ROOF PLAN LEGEND

DESCRIPTION	SYMBOL AND TEXT
ROOFING IDENTIFICATION material type	STANDING SEAM METAL ROOFING
ROOF RIDGE ridge line	RIDGE
SLOPE IDENTIFICATION direction indicator, rise/run	SLOPE 1/2:12

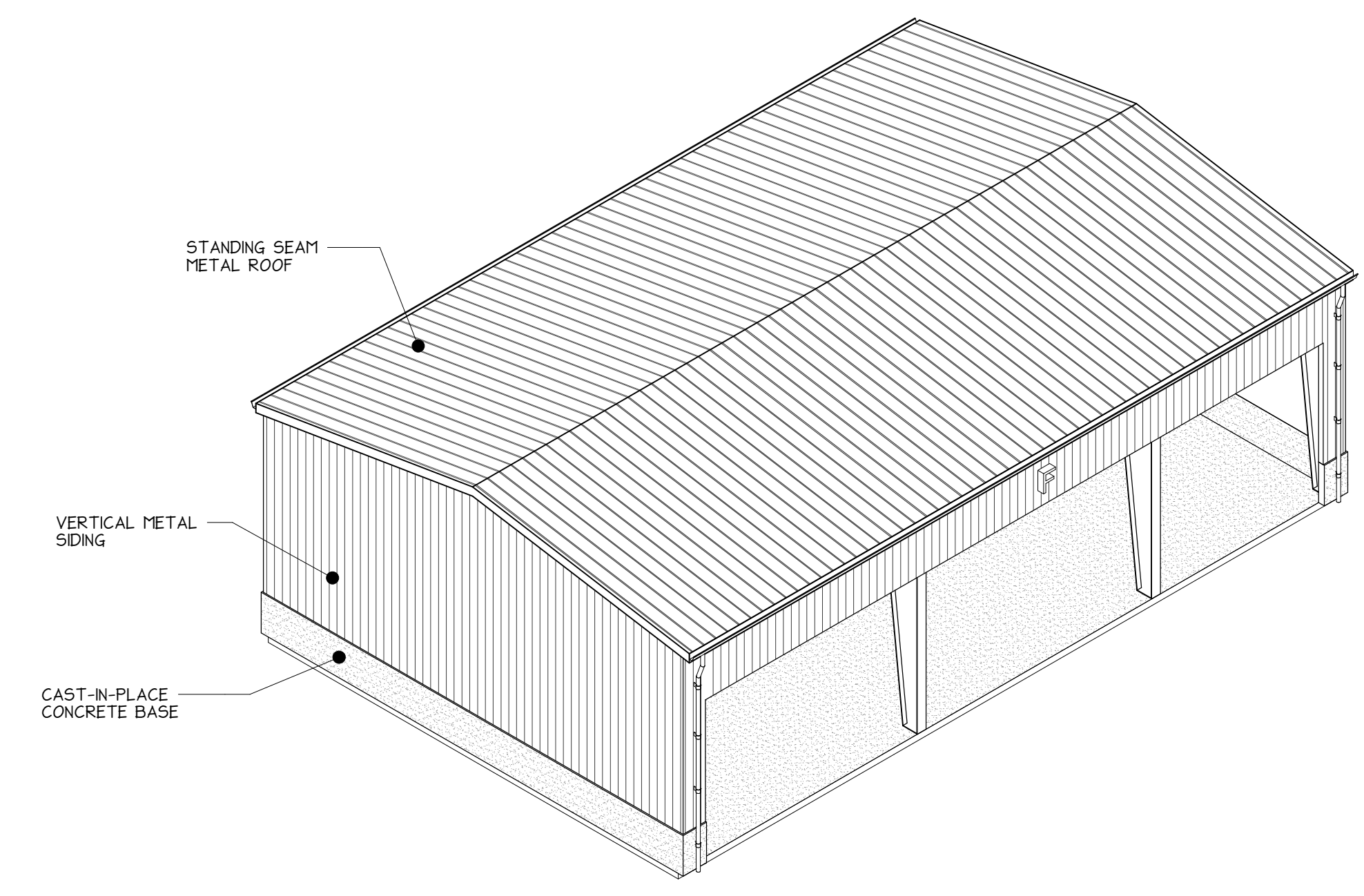
ROOF PLAN NOTES

SYMBOL	NOTE
R01	STANDING SEAM METAL ROOF
R02	6" BOX METAL GUTTER, SMACNA FIGURE I-2, STYLE 'A'

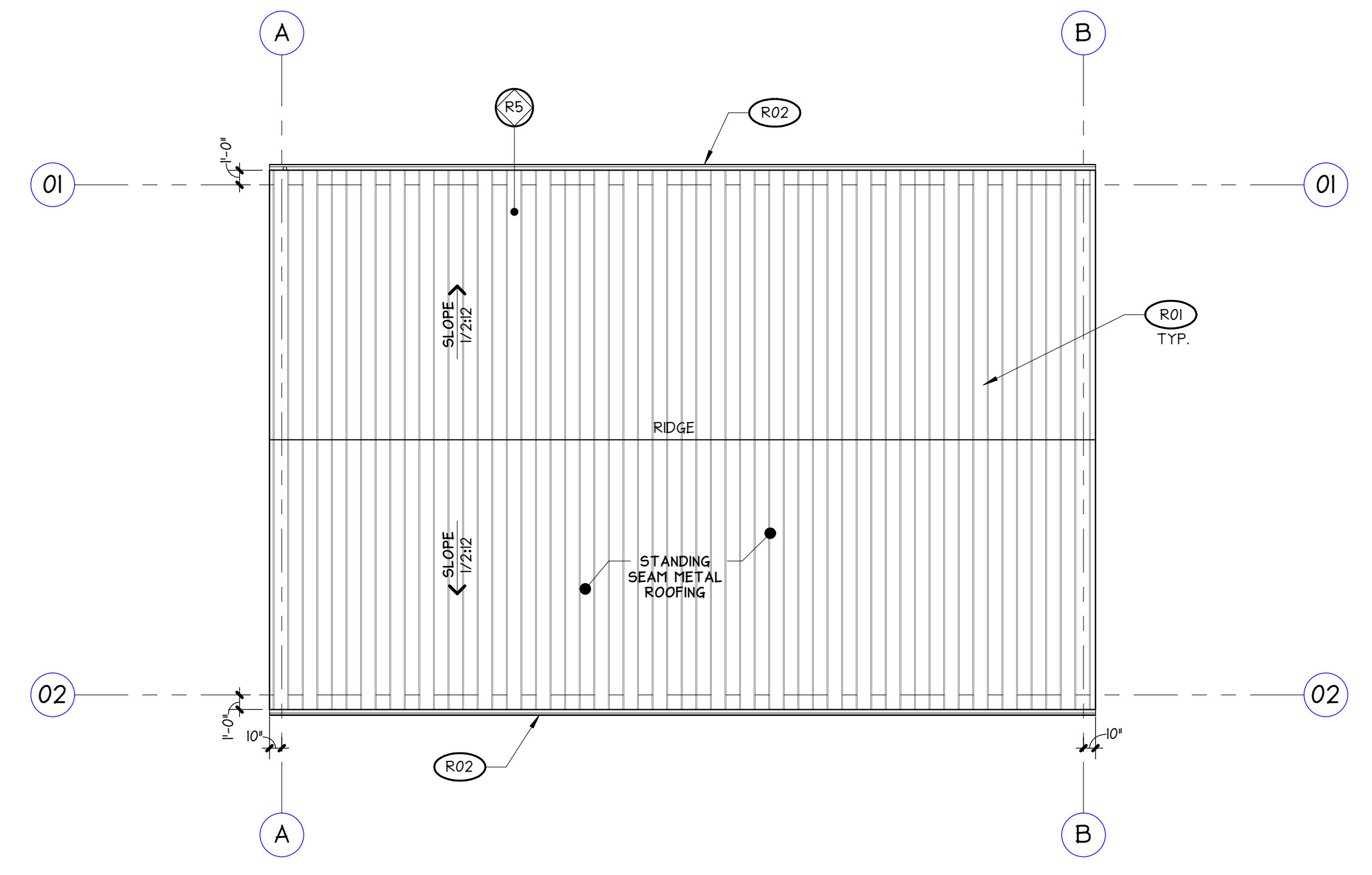
CODE INFORMATION

STRUCTURE F - COVERED SNOW FLEET STORAGE STRUCTURE (Open one side)

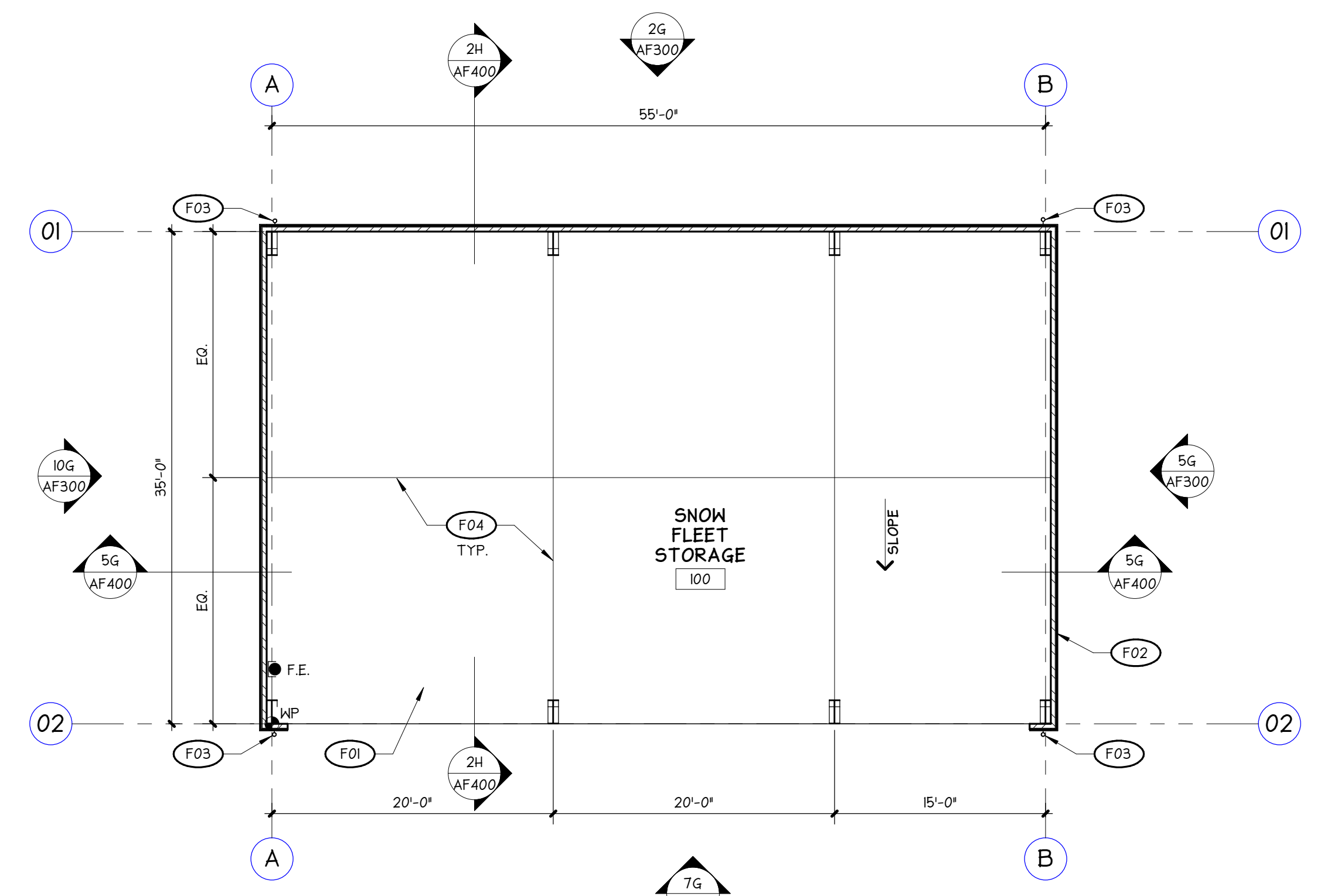
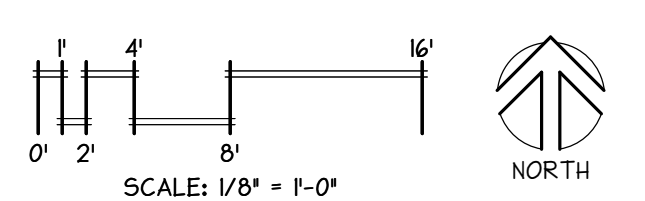
Occupancy Group:	S-1 (Parking Garage + Storage)	IBC Section 301
Construction Type:	V-B Construction Type	IBC Section 602
Allowable Building Area:	9,000 (NS) V-B	IBC Table 506.2
Proposed: NS = Not Equipped with Fire Sprinkler System		
Snow Fleet Storage:	1,925 sq. ft. < 9,000 sq. ft.	
Allowable Building Height:	40 ft.	IBC Table 504.3
Proposed: 20 ft. < 30 ft. avg. height per FINIC		
Allowable Number of Stories:	2 Stories	IBC Table 504.4
Proposed: Single Story Structure		
Fire Resistive Rating Requirements		
Structural Frame	0 hr.	IBC Table 601
Bearing Walls	0 hr.	
Exterior Interior	0 hr.	Table 602
Non-Bearing Walls	0 hr.	
Exterior Interior	0 hr.	
Floor Construction	0 hr.	
Roof Construction	0 hr.	
Risk Category:	II	IBC Table 1604.5
Fire Sprinkler System	Not Equipped with Fire Sprinkler System	IBC Section 903
Fire Alarm System	Not Equipped with Fire Alarm System	IBC Section 907



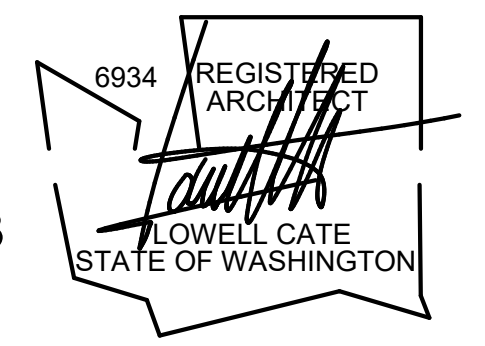
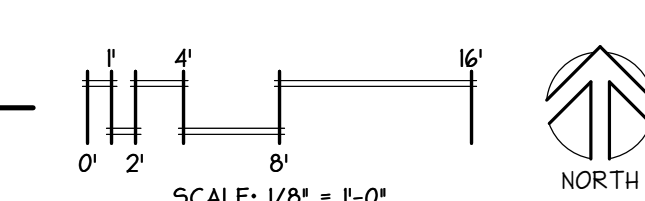
10C ISOMETRIC - VIEW FROM SW



5F ROOF PLAN
1/8" = 1'-0"



10F FLOOR PLAN
1/8" = 1'-0"



HELIX DESIGN GROUP, INC.

FLOOR PLANS & CODE INFORMATION

CITY OF FEDERAL WAY O&M FACILITIES
SNOW FLEET STORAGE BUILDING

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE: 05.06.24 JOB NO.: 023-087
BID SET

10 AF100

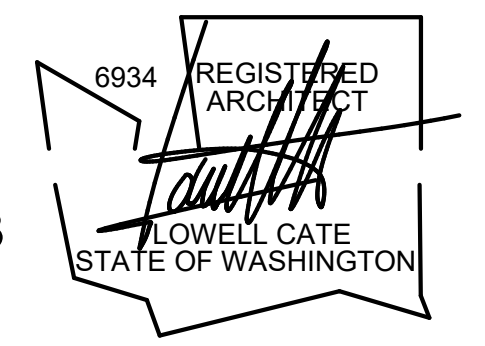
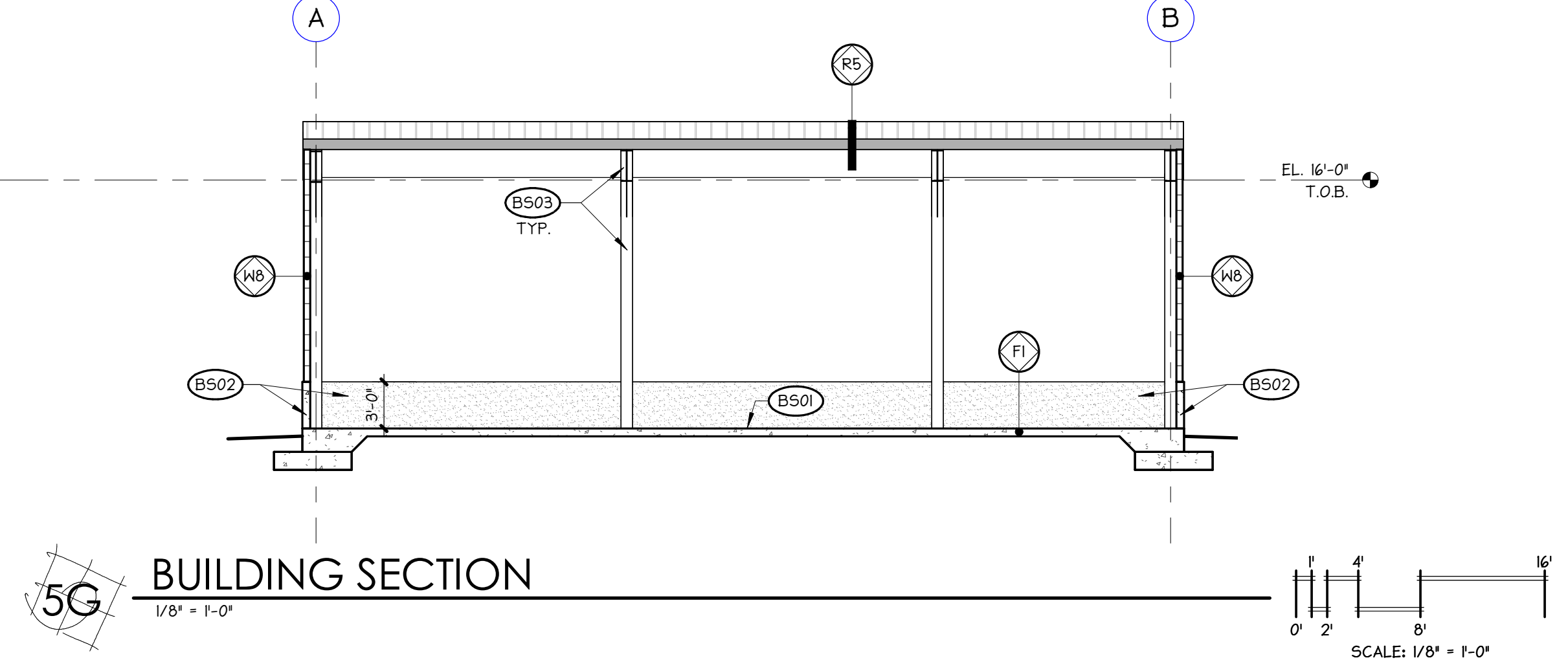
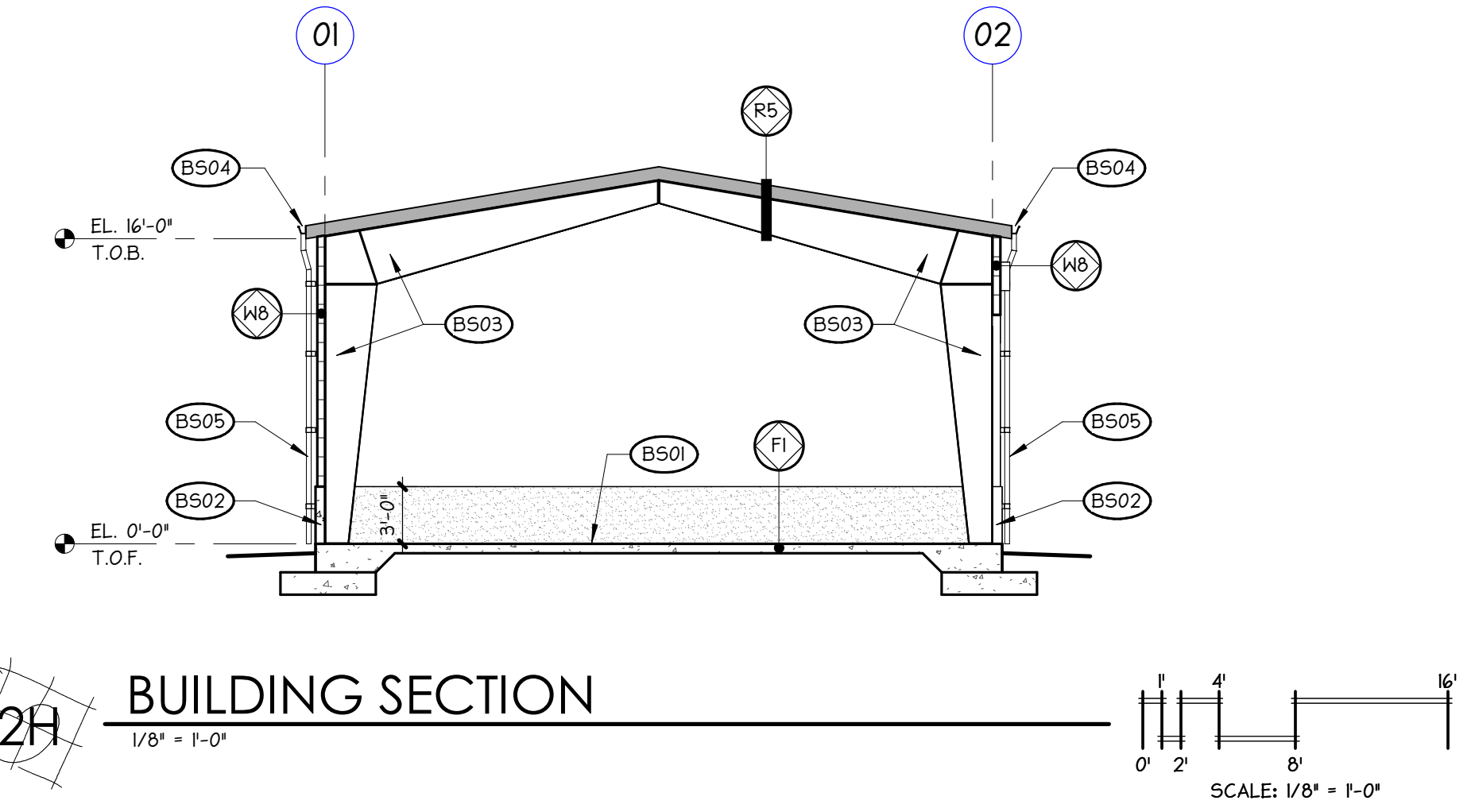
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SECTION LEGEND	
DESCRIPTION	SYMBOL AND TEXT
ASSEMBLY TYPES	
W = wall type	
R = roof type	
S = soffit type	
F = floor type	
ELEVATION	
surface type designation	T.O.F.
T.O.F. = top of floor	
T.O.B. = top of bearing	
T.O.M. = top of wall	
(E) = existing	

SECTION NOTES	
SYMBOL	NOTE
B501	CONCRETE SLAB
B502	CAST-IN-PLACE CONCRETE BASE
B503	PRE-ENGINEERED METAL STRUCTURE
B504	6" BOX METAL GUTTER SPACIA FIGURE 1-2, STYLE 'A'
B505	METAL DOWNSPOUT (3" DIA.)

GENERAL NOTES	
NOTE	
1.	REFER TO BUILDING ASSEMBLY LEGEND ON SHEET GD002 FOR ASSEMBLY TYPES.
2.	REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.
3.	PRE-ENGINEERED METAL BUILDING, SEE SECTION B3 34 PL.



HELIX DESIGN GROUP, INC

BUILDING SECTIONS

CITY OF FEDERAL WAY O&M FACILITIES SNOW FLEET STORAGE BUILDING

FEDERAL WAY, WASHINGTON	
REVISION	DATE
DATE	JOB NO.
05.06.24	023-087

BID SET

AF400

PLOTTED: 5/30/2024 2:35:11 PM PROJECT: 023-087 - CITY OF FEDERAL WAY O&M FACILITIES
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1. STRUCTURAL NOTES

1.1. ANY DISCREPANCY FOUND AMONG THE DRAWINGS, SPECIFICATIONS, THESE NOTES, AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT AND THE STRUCTURAL ENGINEER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. THE CONTRACTOR IS RESPONSIBLE FOR ALL ERECTION BRACING, FORMWORK AND TEMPORARY CONSTRUCTION SHORING.

1.2. BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE CONTRACTOR WARRANTS THAT:

1.2.1. THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE (INCLUDING AGENTS AND SUPPLIERS) HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS AND STRUCTURAL NOTES AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED.

1.2.2. THE CONTRACTOR HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND FROM THEIR OWN INVESTIGATIONS, THEY HAVE SATISFIED THEMSELVES AS TO THE NATURE AND LOCATION OF THE WORK, AS TO THE CHARACTER, QUALITY, AND QUANTITIES OF MATERIAL AND DIFFICULTIES TO BE ENCOUNTERED, AS TO THE EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK AND AS TO THE GENERAL AND LOCAL CONDITIONS, AND OTHER ITEMS WHICH MAY IN ANY WAY AFFECT THE WORK OR ITS PERFORMANCE.

1.2.3. THE CONTRACTOR AND ALL WORKERS THEY INTEND TO USE ARE SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE DRAWINGS AND DOCUMENTS BID UPON.

1.2.4. NEITHER THE CONTRACTOR NOR ANY OF THEIR EMPLOYEES, AGENTS, INTENDED SUPPLIERS, OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS ALLEGEDLY AUTHORIZED OR UNAUTHORIZED FROM THE OWNER OR ARCHITECT, ENGINEERS OR AGENTS, INCLUDING THE ARCHITECT OR ENGINEERS, IN ASSEMBLING THE BID FIGURES.

1.2.5. THE REQUIREMENTS CONTAINED WITHIN THIS SECTION SUPERSEDE REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES", AS WELL AS CASE DOCUMENT 962-D "A GUIDELINE ADDRESSING COORDINATION AND COMPLETENESS OF STRUCTURAL CONSTRUCTION DOCUMENTS".

1.2.6. THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE ARE AWARE OF AND ACKNOWLEDGE THAT CLOSE COORDINATION AMONG ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER TRADE DRAWINGS IS REQUIRED.

1.2.7. THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE SHALL RECOGNIZE THAT THE PROJECT CONTRACT DOCUMENTS INCLUDE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL AND OTHER TRADE DRAWINGS AND SPECIFICATIONS.

1.2.8. CONTRACTOR AND ALL SUBCONTRACTORS ACKNOWLEDGE THAT CLOSE COORDINATION BETWEEN DISCIPLINES INCLUDED WITHIN THE CONTRACT DOCUMENTS IS NECESSARY. ELEMENTS THAT WILL REQUIRE CLOSE COORDINATION BY THE CONTRACTOR INCLUDE (BUT ARE NOT LIMITED TO):

A. VERIFICATION OF ALL DIMENSIONS INDICATED ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS

B. DETERMINATION OF ALL COLUMN LOCATIONS

C. DETERMINATION OF TOP OF FLOOR, TOP OF STEEL WALL PLATE AND/OR TOP OF BEAM ELEVATIONS

D. DETERMINATION OF TOP OF FOOTING ELEVATIONS AND FOOTING STEP LOCATIONS

E. MECHANICAL/ELECTRICAL EQUIPMENT LOCATIONS AND WEIGHTS

F. LOCATION AND SIZE OF ALL MECHANICAL/ELECTRICAL PENETRATIONS THROUGH WALLS AND FLOORS/ ROOFS

G. COORDINATION WITH DESIGNERS/ SUPPLIERS OF PRE-ENGINEERED COMPONENTS (JOISTS, TRUSSES, STAIRS, ETC.)

1.2.9. THE CONTRACTOR ACKNOWLEDGES THAT TEMPORARY SHORING AND/OR BRACING MAY BE REQUIRED TO COMPLETE THE PROJECT DESIGN AND IMPLEMENTATION OF TEMPORARY SHORING AND/OR BRACING DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

1.2.10. THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE SHALL MAKE CONSIDERATION FOR AND INCLUDE MONIES FOR THE ABOVE IN THE PREPARATION OF THEIR BIDS.

1.2.11. THE CONTRACTOR SHALL NOT SCALE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF ELEMENTS NOTED ABOVE.

1.2.12. ELECTRONIC COPIES OF THE STRUCTURAL DRAWINGS (PDFS, CAD DRAWINGS OR BIM MODELS) MAY BE PROVIDED TO THE CONTRACTOR FOR THEIR USE. THESE FILES MAY BE PROVIDED AT THE REQUEST OF THE CONTRACTOR FOR THEIR CONVENIENCE ONLY. THE CONTRACTOR AGREES THAT THESE FILES SHALL NOT SUPERSEDE INFORMATION SHOWN ON THE ORIGINAL BID CONSTRUCTION DOCUMENTS. THE CONTRACTOR AGREES TO HOLD THE STRUCTURAL ENGINEER HARMLESS FOR ANY ERRORS OR DISCREPANCIES CONTAINED WITHIN THESE ELECTRONIC FILES.

1.2.13. THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN OR VERBAL REPRESENTATIONS.

1.3. CODES

1.3.1. ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED AND ADOPTED BY THE LOCAL BUILDING AUTHORITY.

1.3.2. ALL REFERENCES TO OTHER CODES, STANDARDS AND SPECIFICATIONS, (ACI, ASTM, ETC.), SHALL BE FOR THE EDITION CURRENTLY REFERENCED BY IBC AS AMENDED AND ADOPTED BY THE LOCAL BUILDING AUTHORITY.

1.4. DESIGN CRITERIA

1.4.1. UNIFORM LOADS:

LOCATION	LIVE LOAD	DEAD LOAD
ROOF	25 PSF (SNOW)*	ACTUAL
ROOF (SOLAR READINESS ZONE **)	25 PSF (SNOW)*	ACTUAL +4 PSF
SLAB ON GRADE	125 PSF	ACTUAL
DE 200M CONCENTRATED LOAD	25 PSF	ACTUAL
HANDRAILS AND GUARDS	50 PLF	ACTUAL
OR 200# CONCENTRATED LOAD	OR 200# CONCENTRATED LOAD	ACTUAL
** THIS IS NOT A GROUND SNOW LOAD		+175 PSF (INVERTER)

** SOLAR READINESS ZONE PER IWA STATE ENERGY CODE, COMMERCIAL PROVISIONS, CHAPTER 51-11C WAC.

WHERE LIVE LOADS OF COMMERCIAL OR INDUSTRIAL BUILDINGS EXCEED 50 PSF, SUCH DESIGN LOADS SHALL BE POSTED IN THAT PART OF EACH STORY IN WHICH THEY APPLY.

1.4.2. SNOW LOADS PER IBC SECTION 1608 AND CHAPTER 7 OF ASCE 7:

GROUND SNOW LOAD (P _g):	25.0 PSF
FLAT ROOF SNOW LOAD (P _f):	25.0 PSF
SNOW EXPOSURE FACTOR (C _e):	1.0
SNOW IMPORTANCE FACTOR (I _s):	1.0
THERMAL FACTOR (C _t):	1.0

1.4.3. CONCENTRATED LOADS: ALL MANUFACTURERS OF PRE-ENGINEERED COMPONENTS OR SYSTEMS SHALL LOCATE, COORDINATE, VERIFY WEIGHTS, ETC. OF MECHANICAL UNITS OR OTHER CONCENTRATED LOADS AND DESIGN THEIR SYSTEM FOR THESE LOADS.

1.4.4. WIND LOADS (PER IBC SECTION 1609 AND ASCE 7 CHAPTERS 26 THRU 30):

BASIC WIND SPEED (V):	98 MPH
RISK CATEGORY:	II
WIND EXPOSURE:	B
APPLICABLE INTERNAL PRESSURE COEFFICIENT:	
+0.18 (ENCLOSED OR OPEN)	
+0.05 (PARTIALLY ENCLOSED)	
TOPOGRAPHIC FACTOR (K _z):	1.0

COMPONENTS AND CLADDING: ULTIMATE DESIGN WIND PRESSURES TO BE USED FOR THE DESIGN OF EXTERIOR COMPONENT AND CLADDING MATERIALS IS AS FOLLOWS:

ZONE-1	+16.0/-31.9 PSF (10 SQ FT)
ZONE-2a	+16.0/-31.9 PSF (10 SQ FT)
ZONE-2b	+16.0/-40.3 PSF (10 SQ FT)
ZONE-2c	+16.0/-40.3 PSF (10 SQ FT)
ZONE-2d	+16.0/-40.3 PSF (10 SQ FT)
ZONE-3a	+16.0/-47.4 PSF (10 SQ FT)
ZONE-3b	+16.0/-47.4 PSF (10 SQ FT)
ZONE-4	+16.0/-17.1 PSF (10 SQ FT)
ZONE-5	+16.0/-21.1 PSF (10 SQ FT)

1.4.5. SEISMIC LOADS (PER IBC SECTION 1613 AND ASCE 7 CHAPTERS 11 THRU 13):

RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I _s):	1.0
S ₁ :	1.321
S ₂ :	0.453
SITE CLASS:	D
S _w :	0.881
S _u :	0.558
SEISMIC DESIGN CATEGORY:	D
V = C _s * W	
SEISMIC RESPONSE COEFFICIENT (C _d):	0.252
ANALYSIS PROCEDURE USED:	EQUILIBRIUM LATERAL FORCE PROCEDURE

SEISMIC FORCE-RESISTING SYSTEM	RESPONSE MODIFICATION COEFFICIENT, R	OVERSTRENGTH FACTOR, Ω _e
C. MOMENT-RESISTING FRAME SYSTEMS:		
1. STEEL ORDINARY MOMENT FRAMES	3 1/2	3
G. CANTILEVERED COLUMN SYSTEMS:		
1. STEEL ORDINARY CANTILEVER COLUMN SYSTEMS	1 1/4	1 1/4

NOTE: TABULATED OVERSTRENGTH FACTOR HAS BEEN REDUCED IN ACCORDANCE WITH ASCE 7 TABLE 12.2-1 FOOTNOTE B FOR STRUCTURES WITH FLEXIBLE DIAPHRAGMS.

1.5. STATEMENT OF SPECIAL INSPECTIONS

SEE STATEMENT OF SPECIAL INSPECTION AND TESTING SHEET SC010.

1.6. SHOP DRAWINGS

1.6.1. SUBMIT SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR THE FOLLOWING:

A. CONCRETE MIX DESIGN SUBMITTALS

B. REINFORCING STEEL

C. STRUCTURAL AND MISCELLANEOUS STEEL INCLUDING WELD INSERTS AND ANCHORS

D. CONCRETE/MASONRY COORDINATION DRAWINGS

E. PRE-ENGINEERED METAL BUILDING SYSTEMS & COMPONENTS *

F. PRE-ENGINEERED FALL PROTECTION SYSTEM *

G. PRE-ENGINEERED ECOLOGY BLOCK WALLS *

* DEFERRED SUBMITTALS: PRE-ENGINEERED ITEMS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AFTER REVIEW BY THE ENGINEER OR RECORD AS A DEFERRED SUBMITTAL.

1.6.2. SHOP DRAWING REVIEW NOTES

A. ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS FOR GENERAL CONFORMANCE WITH THE PROJECT CONSTRUCTION DOCUMENTS (PLANS AND SPECIFICATIONS).

B. ENGINEER OF RECORD REVIEW OF SHOP DRAWINGS SHALL NOT RELIEVE THE GENERAL CONTRACTOR OF THEIR RESPONSIBILITY FOR REVIEW OF THE SHOP DRAWINGS FOR COMPLIANCE WITH THE PROJECT REQUIREMENTS.

C. APPROVAL OF THE SHOP DRAWINGS BY THE ENGINEER OF RECORD SHALL NOT BE CONSIDERED AS A GUARANTEE BY THE ENGINEER THAT THE SHOP DRAWINGS COMPLY WITH ALL PROJECT REQUIREMENTS.

D. CONCURRENT SHOP DRAWING REVIEW SHALL ONLY BE PERMITTED IF APPROVED BY THE ARCHITECT/ENGINEER OF RECORD PRIOR TO THE START OF SHOP DRAWING REVIEW.

1.7. MISCELLANEOUS

1.7.1. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.

1.7.2. VERIFY SIZE AND LOCATION OF ALL OPENINGS IN THE FLOORS, ROOF AND WALLS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

1.7.3. CONSTRUCTION DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS OF SECTIONS OF THIS PROJECT AS APPROVED BY THE ARCHITECT/ENGINEER.

1.7.4. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR DIMENSIONS AND LOCATIONS OF OPENINGS NOT DIMENSIONED OR SHOWN ON STRUCTURAL PLANS.

1.7.5. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND WEIGHTS OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT INCLUDING HOUSEKEEPING PADS.

1.7.6. FOR PIPES, CONDUITS, DUCTS AND MECHANICAL EQUIPMENT SUPPORTED OR BRACED FROM STRUCTURE: CONFORM TO SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. PUBLICATION "APPENDIX E: SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS". ALL BRACING AND SUPPORTS SHALL BE DESIGNED FOR SEISMIC HAZARD LEVEL (SHL) B. SPRINKLER LINE ATTACHMENTS SHALL CONFORM TO NFPA Pamphlet 13.

1.7.7. THE STRUCTURE HAS BEEN DESIGNED TO RESIST COSEISMIC VERTICAL AND LATERAL FORCES AFTER THE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THIS RESPONSIBILITY INCLUDES BUT IS NOT LIMITED TO JOB SITE SAFETY, ERECTION MEANS, METHODS, AND SEQUENCES, TEMPORARY SHORING, FORMWORK, AND BRACING, USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES.

2. SITE PREPARATION/SOIL REMEDIATION

2.1. SOIL DATA

ALLOWABLE SOIL PRESSURE 2,500 PSF. ALLOW 33-1/3% INCREASE FOR LOADS FROM WIND OR SEISMIC DRIGIN. SEE GEOTECHNICAL ENGINEERING REPORT BY MIGOZI GROUP, INC. DATED JUNE 15, 2023. SEE GEOTECH REPORT FOR ALL SUBGRADE PREPARATION REQUIREMENTS AS WELL AS CAPILLARY BREAK AND VAPOR BARRIER RECOMMENDATIONS.

2.1.1. RETAINING WALL DESIGN CRITERIA:

A. ACTIVE EARTH PRESSURE:	35 PCF (ASSUMED)
B. AT-REST EARTH PRESSURE:	90 PCF (ASSUMED)
C. SEISMIC EARTH PRESSURE:	10 x 1' PSF (ASSUMED)
D. PASSIVE EARTH PRESSURE:	225 PCF *
E. FRICTION COEFFICIENT:	0.35 *

* INCLUDES FACTOR OF SAFETY OF 1.5

2.2. EXCAVATION

EXCAVATE TO DEPTH SHOWN AND TO FIRM UNDISTURBED MATERIAL. OVER-EXCAVATIONS SHALL BE BACKFILLED WITH LEAN CONCRETE (f' = 500-1200 PSI) OR STRUCTURAL FILL AT THE CONTRACTOR'S EXPENSE. EXERCISE EXTREME CARE DURING EXCAVATION TO AVOID DAMAGE TO BURIED LINES, TANKS, AND OTHER CONCEALED ITEMS. UPON DISCOVERY, DO NOT PROCEED WITH WORK UNTIL RECEIVING WRITTEN INSTRUCTIONS FROM THE ARCHITECT. A COMPETENT REPRESENTATIVE OF THE OWNER SHALL INSPECT ALL FOOTING EXCAVATIONS FOR SUITABILITY OF BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL. PROVIDE DRAINAGE AS NECESSARY TO AVOID WATER-SOFTENED SUBGRADE.

2.3. FILL, BACKFILL AND COMPACTION

BACKFILL AGAINST WALLS SHALL NOT BE PLACED UNTIL AFTER THE REMOVAL OF ALL MATERIAL SUBJECT TO ROT OR CORROSION. ALL FILL PLACED AGAINST RETAINING WALLS OR BASEMENT WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL. STRUCTURAL FILL OTHER THAN PEA GRAVEL SHALL BE GRANULAR PLACED IN 6-INCH LIFTS AND COMPACTED TO AT LEAST 90% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MOD PROCTOR). PEA GRAVEL FILL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3/8" DIAMETER.

3. STRUCTURAL CONCRETE

3.1. GENERAL

ALL CONCRETE SHALL BE HARD ROCK CONCRETE MEETING THE REQUIREMENTS OF ACI-301. SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. PROPORTIONING OF INGREDIENTS FOR EACH CONCRETE MIX SHALL BE BY METHOD 2 OR THE ALTERNATE PROCEDURE GIVEN IN ACI-301. PLACE CONCRETE PER ACI-304 AND CONFORM TO ACI-804 (206) FOR WINTER CONCRETING AND ACI-805 (305) FOR HOT WEATHER CONCRETING. USE INTERIOR MECHANICAL VIBRATORS WITH 7,000 RPM MINIMUM FREQUENCY. DO NOT OVER-VIBRATE. CONCRETE SHALL BE PLACED MONOLITHICALLY BETWEEN CONSTRUCTION OR CONTROL JOINTS. PROTECT ALL CONCRETE FROM PREMATURE DRYING, EXCESSIVE HOT OR COLD TEMPERATURE FOR SEVEN DAYS AFTER PLACING.

3.2. STRENGTH

TWENTY-EIGHT DAY COMPRESSIVE STRENGTHS (f'_c) SHALL BE AS FOLLOWS WITH EXPOSURE CATEGORY AND CLASS PER ACI TABLE 19.3.1.1 GIVEN IN PARENTHESIS:

SLABS ON GRADE (F' _c /S _W /W/C)	4000 PSI
FOOTINGS (F' _c /S _W /W/C)	3000 PSI
VERTICALLY FORMED WALLS (F' _c /S _W /W/C)	4000 PSI *

* MAXIMUM W/C RATIO SHALL BE 0.55

CONCRETE SUPPLIER TO PROVIDE TEST RECORDS PER SECTION 26.4 OF ACI 318. WHEN NO PRIOR EXPERIENCE OR TRAIL MIXTURE DATA ARE AVAILABLE, THE WATER/CEMENT RATIO FROM THE TABLE BELOW MAY BE USED, BUT ONLY WHEN SPECIAL PERMISSION IS GIVEN BY ENGINEER.

MAXIMUM ABSOLUTE WATER/CEMENT RATIO BY WEIGHT FOR CONCRETE MIXES WITHOUT TEST RECORDS SHALL BE AS FOLLOWS:

SPECIFIED COMPRESSIVE STRENGTH	NON-AIR ENTRAINMENT CONCRETE	AIR- ENTRAINMENT CONCRETE
3000 PSI	0.58	0.46
4000 PSI	0.44	0.35

3.3. MATERIALS

3.3.1. CEMENT: ASTM C150, TYPE I OR TYPE II. ENGINEER'S APPROVAL IS NEEDED FOR USE OF TYPE III CEMENT.

3.3.2. COARSE AND FINE AGGREGATE: ASTM C33.

3.3.3. WATER SHALL BE CLEAN AND POTABLE.

3.3.4. FLYASH: ASTM C910 CLASS C (CLASS F MAY BE ALLOWED IF APPROVED BY THE STRUCTURAL ENGINEER).

3.3.5. GROUND GRANULATED BLAST FURNACE SLAG (GGFS): ASTM C989 GRADE 100 OR 120. GGFS SHALL NOT BE PERMITTED UNLESS REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. MIX DESIGNS SUBMITTED INCLUDING GGFS SHALL INCLUDE SHRINKAGE TEST RESULTS AT 28 DAYS.

3.4. ADMIXTURES

3.4.1. WATER REDUCING ADMIXTURE: ASTM C494. ADMIXTURES SHALL BE USED IN EXACT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

3.4.2. WATER REDUCING ADMIXTURES SHALL BE USED AT ALL HEAVILY CONGESTED AREAS (I.E. CONCRETE BEAMS, COLUMNS AND WALLS WITH REINFORCING SPACING OF 4" OR LESS).

3.4.3. CONCRETE USING ADMIXTURES TO PRODUCE FLOWABLE CONCRETE MAY BE USED SUBJECT TO ENGINEER'S APPROVAL.

3.4.4. AIR ENTRAINMENT: ASTM C260 AND ASTM C494 ENTRAIN 5% PLUS/MINUS 1.5% BY VOLUME IN ALL CONCRETE EXPOSED TO WEATHER.

3.4.5. NO OTHER ADMIXTURES PERMITTED UNLESS APPROVED BY THE ENGINEER.

3.5. FORMWORK AND SHORING

3.5.1. FOLLOW RECOMMENDED PRACTICE FOR CONCRETE FORMWORK (ACI-347).

3.5.2. ALL SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMWORK SUPPORTS AND SHORING SHALL BE DESIGNED TO PROVIDE FINISHED CONCRETE SURFACES AT ALL FACES LEVEL, PLUMB AND TRUE TO THE DIMENSIONS AND ELEVATIONS SHOWN. TOLERANCES AND VARIATIONS SHALL BE AS SPECIFIED.

3.6. REINFORCING STEEL:

3.6.1. DETAIL, FABRICATE, AND PLACE PER ACI-315 AND ACI-318. SUPPORT REINFORCEMENT WITH APPROVED CHAIRS, SPACERS, OR TIES.

3.6.2. DEFORMED BAR REINFORCEMENT: ASTM A615 GR 60

3.6.3. WELDABLE DEFORMED BAR REINFORCEMENT: ASTM A706 GR 60 WHERE NOTED ON STRUCTURAL DRAWINGS

3.6.4. WELDED WIRE FABRIC: ASTM 1084 GR 65

3.6.5. EXCEPT AS NOTED SPECIFICALLY ON THE DRAWINGS, ALL CONCRETE REINFORCEMENT SHALL BE LAP-SPLICED AS FOLLOWS:

#6 AND SMALLER	48 X BAR DIAMETER
#7 AND LARGER	58 X BAR DIAMETER

NO MORE THAN 50% HORIZONTAL OR VERTICAL BARS SHALL BE SPLICED AT ONE LOCATION

3.6.6. EXCEPT AS NOTED SPECIFICALLY ON THE DRAWINGS, PROVIDE CORNER BARS TO MATCH QUANTITY AND DIAMETER OF HORIZONTAL REINFORCEMENT AND LAP WITH HORIZONTAL REINFORCEMENT AS FOLLOWS:

#6 AND SMALLER	48 X BAR DIAMETER
#7 AND LARGER	58 X BAR DIAMETER

THESE CORNER BARS SHALL BE PLACED AT ALL CORNERS AND INTERSECTIONS IN CONCRETE FOOTINGS AND WALLS.

3.6.7. LAP WELDED WIRE FABRIC 12" OR ONE SPACING PLUS 2", WHICHEVER IS MORE.

3.7. CONCRETE COVER ON REINFORCING SHALL BE AS FOLLOWS (UNLESS SHOWN OTHERWISE):

BOTTOM OF FOOTINGS	3"
FORMED EARTH FACE AND SLAB ON GRADE	2"
WALLS, WEATHER FACE	1-1/2"
WALLS, INSIDE FACE	1"

3.8. CONSTRUCTION OR CONTROL JOINTS

3.8.1. UNLESS NOTED OTHERWISE, LOCATION OF THE CONSTRUCTION OR CONTROL JOINTS IN SLAB ON GRADE SHALL NOT EXCEED THE DISTANCES NOTED BELOW. JOINTS SHALL BE LOCATED ON COLUMN GRIDS OR UNDER PERMANENT PARTITIONS TO THE GREATEST EXTENT POSSIBLE. ADDITIONAL JOINTS SHALL BE REQUIRED AT REINFORCING CORNERS AND CORNERS OF SLAB DEPRESSIONS OR PENETRATIONS. SEE ARCHITECTURAL DRAWINGS FOR JOINT LAYOUT AT EXPOSED CONCRETE CONDITIONS. PROVIDE JOINT SEALANT PER SPECIFICATIONS - INSTALL PER MANUFACTURER RECOMMENDATIONS.

6" SLAB ON GRADE	18'-0" OC
8" SLAB ON GRADE	20'-0" OC

3.8.2. CONSTRUCTION OR CONTROL JOINT SPACING IN WALLS SHALL NOT EXCEED 50' ON CENTER EXCEPT AS DIRECTED BY THE ARCHITECT/ENGINEER.

3.9. CONDUIT AND PIPING EMBEDDED IN CONCRETE

3.9.1. ELECTRICAL CONDUIT SHALL NOT BE PLACED WITHIN A SLAB ON GRADE BUT PLACED BELOW THE SLAB IN THE SUB-BASE.

3.10. GROUT FOR BEARING PLATES

THE NON-SHRINK GROUT SHALL MEET ASTM C1107 GRADE B OR EQUIVALENT (MASTERFLOW 928 BY BASF OR APPROVED EQUIVALENT). GROUT SHALL BE A PRE-PACKAGED HYDRAULIC CEMENT BASED MINERAL AGGREGATE GROUT, MIXED, PLACED AND CURED AS RECOMMENDED BY THE MANUFACTURER. COMPRESSIVE STRENGTH SHALL EXCEED 8000 PSI AT 28 DAYS.

3.11. ADHESIVE EXPANSIVE WATERSTOPS

ADHESIVE EXPANSIVE WATERSTOP SHALL BE VOLCLAY WATERSTOP-RX (AS MANUFACTURED BY GETCO), SWELSTOP OR HYDROTIGHT (GREENSTREAK), OR APPROVED EQUIVALENT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

3.12. ARCHITECTURALLY EXPOSED CAST IN PLACE CONCRETE

3.12.1. WHERE INDICATED ON ARCHITECTURAL AND STRUCTURAL DRAWINGS, THE APPEARANCE OF ARCHITECTURALLY EXPOSED CONCRETE ELEMENTS (BEAMS, COLUMNS AND WALLS) IS CRITICAL. EXTRA CARE SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE THAT APPEARANCE OF THESE NOTED ELEMENTS MEET THE ARCHITECTURAL REQUIREMENTS.

3.12.2. PRE-CONSTRUCTION MEETING AND REQUIRED MOCK-UPS SHALL BE PER THE PROJECT SPECIFICATIONS.

3.12.3. THE CONCRETE MIX DESIGN FOR ARCHITECTURALLY EXPOSED CAST IN PLACE CONCRETE ELEMENTS SHALL SUBSTITUTE CEMENTITIOUS MATERIAL WITH FLYASH (10% MINIMUM FOR BEAMS AND SLABS, 20% MINIMUM FOR COLUMNS AND WALLS) AND SHALL CONTAIN AT A MINIMUM A MID-RANGE WATER REDUCING ADMIXTURE (TYPE F GLENULM 3030 WATER REDUCING ADMIXTURE OR APPROVED EQUIVALENT).

3.12.4. THE CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT WORK PLAN THAT INDICATES PLACEMENT PROCEDURES FOR CONCRETE, NUMBER OF WORKMEN REQUIRED, VIBRATION EQUIPMENT, ETC. PRIOR TO THE PRE-CONSTRUCTION MEETING. REVIEW AND ACCEPTANCE OF THE CONCRETE PLACEMENT PLAN BY THE DESIGN TEAM IN NO WAY RELIEVES THE CONTRACTOR OF RESPONSIBILITY FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

3.13. CONCRETE COORDINATION DRAWINGS

PRIOR TO THE START OF CONCRETE WALL CONSTRUCTION THE CONTRACTOR SHALL SUBMIT CONCRETE COORDINATION DRAWINGS TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL. COORDINATION DRAWINGS SHALL INCLUDE DIMENSIONS AND SIZES FOR EMBED LOCATIONS, DOOR AND WINDOW OPENINGS, MECHANICAL PENETRATIONS, AND OTHER APPROPRIATE ITEMS.

4. MASONRY

4.1. MORTAR

CMU:

ASTM C270, TYPE S, f'_c = 1800 PSI AT 28 DAYS, OR ASTM C270, TYPE M, f'_c = 2500 PSI AT 28 DAYS.

BRICK VENEER:

ASTM C270, TYPE N, f'_c = 750 PSI AT 28 DAYS.

4.2. GROUT

ASTM C476, f'_c = 2500 PSI AT 28 DAYS. 5-1/2 SACK MIX (MINIMUM), 3/8" MAX AGGREGATE SLUMP 8" TO 11"

4.3. REINFORCEMENT: SEE STRUCTURAL CONCRETE MATERIALS SECTION OF THESE NOTES.

4.4. CONCRETE MASONRY UNITS (CMU)

CONFORM TO ASTM C90, MINIMUM FACE SHELL THICKNESS OF 1-1/4". GRADE N-1, MINIMUM COMPRESSIVE STRENGTH OF MASONRY (f'_m) SHALL BE 2000 PSI, UNLESS NOTED OTHERWISE.

4.5. INSTALLATION OF MASONRY UNITS.

PER THE IBC SECTION 2104 FOR UNIT MASONRY CONSTRUCTION REQUIREMENTS.

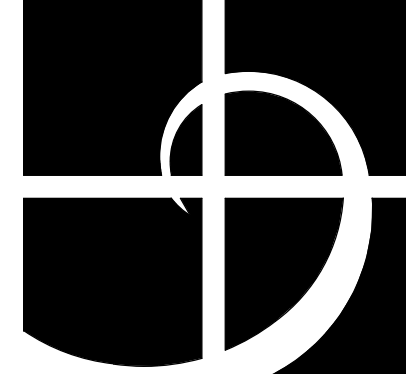
4.6. MASONRY COORDINATION DRAWINGS:

PRIOR TO THE START OF MASONRY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT MASONRY COORDINATION DRAWINGS TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL. COORDINATION DRAWINGS SHALL INCLUDE DIMENSIONS AND SIZES FOR EMBED LOCATIONS, DOOR AND WINDOW OPENINGS, MECHANICAL PENETRATIONS, AND OTHER APPROPRIATE ITEMS.

4.7. CONDUIT OR PIPING EMBEDDED IN MASONRY:

4.7.1. NO MASONRY UNITS SHALL BE SLEEVED FOR PIPING OR CONDUIT EXCEPT AS NOTED ON THE STRUCTURAL DRAWINGS OR AS APPROVED BY THE ENGINEER.

4.7.2. CONDUIT SHALL NOT BE PLACED WITHIN CELLS CONTAINING REINFORCING UNLESS APPROVED BY THE ENGINEER.



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STRUCTURAL NOTES

FEDERAL WAY O&M FACILITIES SITE STRUCTURES

FEDERAL WAY, WASHINGTON

REVISION DATE

DATE JOB NO.
05.06.24 023-087

BID SET

SC002

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- 4.8. ANCHORED MASONRY VENEER (BRICK, CMU OR STONE UNITS)
- 4.8.1. MATERIALS: SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS.
- 4.8.2. INSTALL PER IBC SECTION 1405 AND ACI 308. ANCHORS, SUPPORTS AND TIES SHALL BE NONCOMBUSTIBLE AND CORROSION RESISTANT AND SHALL BE DESIGNED TO RESIST A HORIZONTAL FORCE EQUAL TO AT LEAST TWICE THE WEIGHT OF THE VENEER.
- 4.8.3. MASONRY VENEER AND TIES (5" MAXIMUM IN THICKNESS)
- A. MASONRY AND STONE VENEER NOT EXCEEDING 5" IN THICKNESS SHALL BE ANCHORED DIRECTLY TO STRUCTURAL MASONRY, CONCRETE OR STUDS.
- B. WALL TIES SHALL BE SPACED SO AS TO SUPPORT NOT MORE THAN 2 SQUARE FEET OF WALL AREA BUT SHALL NOT BE MORE THAN 24 INCHES ON CENTER HORIZONTALLY.
- C. CORRUGATED SHEET METAL TIES SHALL NOT BE PERMITTED FOR VENEER TALLER THAN 8 FEET. FOR VENEER TALLER THAN 8 FEET, ADJUSTABLE ANCHORS WITH MINIMUM CLEARANCE BETWEEN PARTS OF 1/16 INCH AND DETAILED TO PREVENT DISENGAGEMENT SHALL BE USED. WALL TIES SHALL BE CORROSION RESISTANT.
- D. CORRUGATED SHEET METAL ANCHORS SHALL BE AT LEAST 7/8" WIDE WITH A BASE METAL THICKNESS OF 0.03 INCHES AND SHALL HAVE CORRUGATIONS WITH A WAVELENGTH OF 0.3-0.5 INCHES AND AN AMPLITUDE OF 0.09-0.10 INCHES.
- E. SHEET METAL ANCHORS SHALL BE AT LEAST 7/8" WIDE WITH A BASE METAL THICKNESS OF 0.06 INCHES AND SHALL BE BENT, NOTCHED, OR PUNCHED TO PROVIDE ADEQUATE PULL-OUT OR PUSH-THROUGH PERFORMANCE.
- F. WIRE ANCHORS SHALL BE AT LEAST WIRE SIZE W17 (0.148 INCH DIAMETER) AND SHALL HAVE ENDS BENT TO FORM AN EXTENSION FROM THE BEND OF AT LEAST 2 INCHES.
- G. PINTLE ANCHORS SHALL HAVE ONE OR MORE PINTLE LEGS OF WIRE SIZE W2.8 (0.189 INCH DIAMETER) AND AN OFFSET NOT EXCEEDING 1 1/4".
- H. WIRE COMPONENTS OF ANCHORS OR JOINT REINFORCING SHALL NOT HAVE DRIP BENDS.
- I. WALL TIES SHALL HAVE A LIP OR HOOK ON THE EXTENDED LEG THAT WILL ENGAGE OR ENCLOSE A HORIZONTAL W14 (0.148 INCH DIAMETER) JOINT REINFORCEMENT WIRE. THE JOINT REINFORCEMENT SHALL BE CONTINUOUS WITH BUTT SPLICES BETWEEN TIES PERMITTED.
- J. WALL TIE ASSEMBLIES SHALL BE BY HOHMANN BARNARD OR APPROVED EQUIVALENT. CONTRACTOR SHALL SUBMIT TO ENGINEER FOR APPROVAL OF PROPOSED WALL TIE SYSTEM (INCLUDING ANCHORAGE DETAILS).
- 4.8.4. AT OPENINGS IN MASONRY VENEER, THE GENERAL CONTRACTOR SHALL PROVIDE GALVANIZED LINTEL ANGLES OR GALVANIZED RELIEF ANGLES AS INDICATED ON STRUCTURAL DRAWINGS.

5. METALS
- 5.1. STRUCTURAL STEEL GENERAL REQUIREMENTS
- 5.1.1. ALL DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO AISC 360-16 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 341-16 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS" AND AISC 303-16 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCEPT AS AMENDED BY THESE STRUCTURAL NOTES.
- 5.2. STRUCTURAL STEEL
- 5.2.1. STEEL W SHAPES AND C & MC SHAPES 8" OR LARGER SHALL BE ASTM A992 (F_y=50 KSI).
- 5.2.2. STEEL M, S, HP AND L SHAPES SHALL BE ASTM A572 Gr. 50 (F_y=50 KSI).
- 5.2.3. STEEL PLATES THAT ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM SHALL BE ASTM A572 Gr. 50 (F_y=50 KSI).
- 5.2.4. OTHER STEEL PLATES AND C & MC SHAPES SMALLER THAN 8" SHALL BE ASTM A36 (F_y=36 KSI).
- 5.2.5. STEEL PIPE SECTIONS (PIPE) SHALL BE ASTM A53 Gr. B (F_y=35 KSI).
- 5.2.6. RECTANGULAR AND ROUND HOLLOW STEEL SECTIONS (HSS) OR TUBE STEEL SECTIONS (TS) SHALL BE ASTM A500, GR. C (F_y=50 KSI).
- 5.2.7. STRUCTURAL TEES SHALL BE CUT FROM W, M OR S SHAPES TO MAKE WT, MT AND ST SHAPES.
- 5.2.8. BOLTS
- A. MACHINE BOLTS NOT SPECIFIED AS HIGH STRENGTH SHALL BE ASTM A307 GRADE A.
- B. HIGH STRENGTH BOLTS SHALL BE ASTM F3125 GRADE A325 OR GRADE A490 AS INDICATED ON STRUCTURAL DRAWINGS. ALL BOLTS SHALL BE CONSIDERED BEARING TYPE WITH THREADS INCLUDED IN SHEAR PLANE (CONNECTION TYPE N) UNLESS NOTED OTHERWISE. ALL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE INSTALLED WITH NUTS CONFORMING TO ASTM A662 AND HARDENED WASHERS CONFORMING TO ASTM F436.
- C. HIGH STRENGTH BOLTS WITH TWIST OFF TYPE TENSION CONTROL MAY BE SUBSTITUTED FOR CONVENTIONAL BOLTS AND SHALL BE ASTM F3125 GRADE F1852 OR GRADE F2280, AND MAY BE USED FOR GRADE A325 OR GRADE A490 RESPECTIVELY.
- D. FULLY PRE-TENSIONED AND SLIP CRITICAL CONNECTIONS SHALL BE AT LOCATIONS NOTED ON THE STRUCTURAL DRAWINGS.
- E. AT FULLY PRE-TENSIONED AND SLIP CRITICAL CONNECTIONS WASHER TYPE INDICATING DEVICES (ASTM F959) OR TWIST-OFF TYPE TENSION CONTROL BOLT ASSEMBLIES (ASTM F3125 GRADE F1852 OR F2280) SHALL BE USED UNLESS ALTERNATE SYSTEMS ARE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER.
- F. ALL HIGH STRENGTH BOLTS SHALL BE INSTALLED PER THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS (LATEST EDITION) BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (WWW.BOLTCOUNCIL.ORG).

5.2.9. STEEL ANCHORAGE ELEMENTS:

A. THREADED RODS SHALL BE ALL-THREAD ASTM A36 (F_y=36 KSI) UNLESS NOTED OTHERWISE.

B. WELDED HEADED STUDS: "NELSON STUDS" SHALL BE BY NELSON STUD WELDING, INC. OR APPROVED EQUIVALENT COMPLYING WITH ASTM A108. STUDS SHALL HAVE A MINIMUM F_y OF 65 KSI.

C. ANCHOR RODS: ANCHOR RODS SHALL BE ASTM F1554, F_y=36 KSI WITH HOOKED, HEADED OR THREADED AND NUTTED ENDS AS INDICATED. AT COLUMN LOCATIONS ANCHOR RODS SHALL BE ASTM F1554, F_y=36 KSI WITH HEADED OR THREADED/NUTTED END. TACK WELD NUT TO ANCHOR ROD UNLESS NOTED OTHERWISE. WHERE NOTED, HIGH STRENGTH ANCHOR RODS SHALL BE ASTM F1554, F_y=105 KSI WITH DOUBLE NUTTED PLATE WASHER.

D. EXPANSION ANCHORS SHALL BE CARBON STEEL AS NOTED IN THE FOLLOWING TABLE. ANCHORS IN CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 308.4 AND/OR ICC-ES AC193 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. ANCHORS SHALL HAVE A CURRENT CODE REPORT THAT COMPLIES WITH THE CURRENT EDITION OF THE IBC AND SHALL BE RATED FOR USE IN THE SEISMIC DESIGN CATEGORY NOTED IN THE DESIGN CRITERIA SECTION OF THESE NOTES.

EXPANSION ANCHORS IN CONCRETE	CODE REPORT
HILTI KWIK BOLT TZ	ICC ESR-1917
SIMPSON STRONG-BOLT 2	ICC ESR-3037
DEWALT POWER-STUD+ SD2	ICC ESR-2502

EXPANSION ANCHORS IN GROUT FILLED CONCRETE MASONRY	CODE REPORT
HILTI KWIK BOLT 3	ICC ESR-1385
SIMPSON STRONG-BOLT 2	IAPMO ER-240
DEWALT POWER-STUD+ SD1	ICC ESR-2966

E. HEAVY DUTY CONCRETE/MASONRY SCREW ANCHORS SHALL BE USED IN DRY INTERIOR CONDITIONS AND SHALL BE AS NOTED IN THE FOLLOWING TABLE:

HEAVY DUTY CONCRETE/ MASONRY SCREW ANCHORS	CODE REPORT
HILTI KWIK HUS-EZ	ICC ESR-3027(CONC)
SIMPSON TITEN HD	ICC ESR-3056 (CMU)
DEWALT SCREW BOLT+	ICC ESR-2713 (CONC) ICC ESR-1059 (CMU) ICC ESR-3889 (CONC) ICC ESR-4042 (CMU)

F. ADHESIVE ANCHORS SHALL BE THREADED ANCHOR RODS OR REBAR DOWELS USING AN INJECTABLE ADHESIVE AS NOTED IN THE FOLLOWING TABLE. ANCHORS IN CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 308.4 AND/OR ICC-ES AC-308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. ANCHORS SHALL HAVE A CURRENT CODE REPORT THAT COMPLIES WITH THE CURRENT EDITION OF THE IBC AND SHALL BE RATED FOR USE IN THE SEISMIC DESIGN CATEGORY NOTED IN THE DESIGN CRITERIA SECTION OF THESE NOTES.

ADHESIVE ANCHORS IN CONCRETE (1) (2)	CODE REPORT
HILTI HIT HY-200 SAFE SET	ICC ESR-3187
SIMPSON AT-XP (3)	IAPMO ER-263
DEWALT AC208+ DUST-X	ICC ESR-4027

ADHESIVE ANCHORS IN GROUT FILLED CONCRETE MASONRY	CODE REPORT
HILTI HIT HY-270	ICC ESR-4143
SIMPSON AT-XP *	IAPMO ER-281
DEWALT AC100+ GOLD	ICC ESR-3200

- (1) ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION TO SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AA) AS CERTIFIED THROUGH ACI/CRS, OR AN APPROVED ALTERNATE WHEN SUBMITTED AND APPROVED BY THE ENGINEER. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
- (2) ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS.
- (3) SIMPSON SET-XP MAY BE USED WHERE BASE MATERIAL TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT OR FOR EMBEDMENT GREATER THAN 12-INCHES FOR LONGER GEL TIME. SEE ICC ESR-2908 (CONC) AND IAPMO ER-265 (MASONRY).

- G. POWDER ACTUATED FASTENERS: PDPS OR PAF'S SHALL BE A MINIMUM 1/32" DIA. MURKED SHANK FASTENERS AS NOTED IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. FASTENERS DRIVEN INTO STEEL SHALL BE DRIVEN SO THAT THE POINT OF THE FASTENER COMPLETELY PENETRATES THE STEEL BASE MATERIAL. AT TOPPING SLABS, FT SLABS OR SLABS WITH RADIANT HEAT TUBES EMBEDDED WITHIN THE SLAB, LIMIT THE POF PENETRATION TO 3/4" MAXIMUM AND COORDINATE WITH TENDON/TUBE PLACEMENT AND COVER.

POWDER ACTUATED FASTENERS	CODE REPORT
HILTI X-U	ICC ESR-2269
SIMPSON PDPA	ICC ESR-2138
DEWALT CSI PIN	ICC ESR-2024

H. CONCRETE/MASONRY SCREWS SHALL BE AS NOTED IN THE FOLLOWING TABLE:

CONCRETE/MASONRY SCREWS	CODE REPORT
HILTI KWIK CON II+	-
SIMPSON TITEN	-
DEWALT TAPPER+	ICC ESR-3068 (CONC) ICC ESR-3196 (MAS)

- 5.2.10. METAL PROTECTION: ALL STEEL EXPOSED TO WEATHER, MOISTURE, SOIL, OR AS NOTED SHALL BE GALVANIZED PER ASTM A123 OR A153 AS APPLICABLE. ALL OTHER STEEL SURFACES SHALL BE SHOP PRIMED AFTER FABRICATION.
- LINTEL ANGLES SHALL HAVE A MINIMUM OF 1.5 OZ OF ZINC SPELTER PER SQUARE FOOT OF SURFACE AREA.
- REPAIR ALL DAMAGED AREAS OF GALVANIZED PARTS SUCH AS FIELD WELDS, ETC. APPLY REPAIR COATING THICKNESS GREATER THAN OR EQUAL TO ORIGINAL ZINC COATING THICKNESS.
- 5.2.11. STEEL COLUMNS: ALL VERTICAL LOAD CARRYING MEMBERS HAVE BEEN NOTED AS "COLUMNS" ON THE STRUCTURAL DRAWINGS. THIS NOTATION DOES NOT IDENTIFY THESE MEMBERS AS "POSTS" OR "COLUMNS" AS DEFINED BY THE LATEST OSHA RULES REGARDING COLUMN ANCHORAGE REQUIREMENTS (OSHA 29 CFR PARTS 1926.751 AND 1926.755). THE GENERAL CONTRACTOR, STEEL DETAILER, AND STEEL ERECTOR SHALL BE RESPONSIBLE TO DETERMINE THE CORRECT OSHA DESIGNATION OF EACH MEMBER REGARDLESS OF THE NOTATION SHOWN ON THE STRUCTURAL DRAWINGS.
- 5.2.12. WELDED MARK NUMBERS ON STRUCTURAL STEEL MEMBERS EXPOSED TO VIEW ARE UNACCEPTABLE AND SHALL NOT BE PERMITTED. ANY WELDED MARKS SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. SEE ARCH SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

- 5.3. WELDING
- 5.3.1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE," AWS D1.1, AWS D1.4 AND AWS D1.8 AS APPROPRIATE.
- 5.3.2. ALL WELDING SHALL BE BY CERTIFIED WELDERS. USE 70 KSI LOW HYDROGEN FILLER METAL AND SHALL BE PROTECTED PER AWS D1.1 UNTIL USE. FOR ALL FULL PENETRATION WELDS, FILLER METAL SHALL BE NOTCH TOUGH TO MEET CHARPY V-NOTCH OF 20 FOOT-POUND AT -20°F.
- 5.3.3. NO WELDING OF REINFORCING STEEL SHALL BE ALLOWED EXCEPT WHERE SHOWN. ALL WELDING OF REINFORCEMENT SHALL BE PER ANSIAWS D1.4. THE FOLLOWING FILLER METAL SHALL BE USED WHEN WELDING REINFORCEMENT:
- A. FOR WELDING OF ASTM A706 GR 60 REBAR, 80 KSI FILLER METAL.
- B. FOR WELDING OF ASTM A615 GR 60 REBAR, NOT PERMITTED.
- C. FOR WELDING OF ASTM A615 GR 40 REBAR, NOT PERMITTED.
- 5.3.4. ALL FULL PENETRATION FIELD AND SHOP WELDS SHALL BE FULL TIME INSPECTED AND TESTED BY NON-DESTRUCTIVE PROCEDURES. RESULTS OF TESTS SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER.

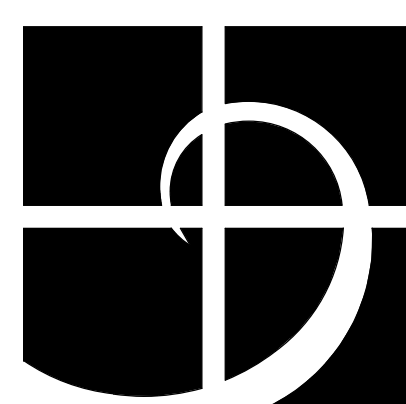
- 5.4. WELDING PROCEDURE SPECIFICATION (WPS)
- 5.4.1. FOR ALL WELDING OF REINFORCING STEEL, NON-PREQUALIFIED WELDS AND ALL WELDING OF COMPONENTS WHICH ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM, CONTRACTOR SHALL SUBMIT A WELDING PROCEDURE SPECIFICATION (WPS) TO ENGINEER FOR APPROVAL. PRIOR TO WELDING, EACH WPS SHALL INCLUDE ALL NECESSARY INFORMATION REQUIRED BY AWS D1.1, AWS D1.4 AND AWS D1.8 AND AS FOLLOWS:
- A. APPLICABLE BASE METAL TYPES AND THICKNESSES.
- B. SKETCH OF JOINT INDICATING APPLICABLE DIMENSIONS. INDIVIDUAL PASSES SHALL BE IDENTIFIED AND NUMBERED TO IDENTIFY THE SEQUENCE. THE SKETCH SHALL IDENTIFY THE MAXIMUM THICKNESS AND BEAD WIDTH. IN NO CASE SHALL THE LAYER THICKNESS EXCEED 1/4" NOR THE BEAD WIDTH EXCEED 5/8".
- C. PREHEAT REQUIREMENTS.
- D. ELECTRICAL CHARACTERISTICS (I.E. CURRENT, VOLTAGE, TRAVEL SPEED, ETC.).
- E. ELECTRODE REQUIREMENTS SHALL MEET THE REQUIREMENTS OF AWS A5.1, AWS A5.5, AWS A5.17, AWS A5.23, AWS A5.18, AWS A5.20, AWS A5.28, AND AWS A5.29, AS APPLICABLE FOR WELDING METHOD USED.

- 5.5. PRE-ENGINEERED BUILDINGS
- 5.5.1. THE METAL BUILDING MANUFACTURER SHALL BE CURRENTLY APPROVED BY ICC (INTERNATIONAL CODE COUNCIL).
- 5.5.2. STEEL FRAME MANUFACTURER SHALL PROVIDE ALL LABOR MATERIALS AND EQUIPMENT FOR THE STRUCTURAL DESIGN AND FABRICATION OF THE COMPLETE PRE-ENGINEERED BUILDING PACKAGE INCLUDING PRIMARY FRAMING SYSTEMS, LATERAL LOAD RESISTING SYSTEMS, BRACING, SECONDARY FRAMING, ROOFING, SIDING, FLASHING AND GUTTERS.
- 5.5.3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLOSE COORDINATION DURING BIDDING AND CONSTRUCTION AS THE BUILDING MANUFACTURER'S STANDARD BUILDING PACKAGE MAY NOT INCLUDE SOME STRUCTURAL STEEL MEMBERS REQUIRED BY THE DRAWINGS.
- 5.5.4. BAY SPACINGS, PLAN DIMENSIONS, COLUMN LOCATIONS, EAVE HEIGHTS AND ROOF SLOPE SHALL BE AS SHOWN ON ARCHITECTURAL/STRUCTURAL DRAWINGS.
- 5.5.5. PRE-ENGINEERED FRAME MEMBERS SHALL BE PROPORTIONED AS REQUIRED TO AVOID CONFLICTS WITH BUILDING CLEARANCE REQUIREMENTS AND TO AVOID CONFLICTS WITH BUILDING SKYLIGHTS, WINDOW ELEMENTS, ETC.
- 5.5.6. DESIGN LOADS:
- A. BUILDING MANUFACTURER SHALL DESIGN ROOF FRAMING TO SUPPORT A MINIMUM 5 PSF COLLATERAL DEAD LOAD AT ALL ROOFS UNLESS NOTED OTHERWISE. AT ROOFS SUPPORTING DROP OR HARD CEILINGS, BUILDING MANUFACTURER SHALL DESIGN ROOF FRAMING TO SUPPORT A COLLATERAL DEAD LOAD OF 10 PSF.
- B. SEE THE DESIGN CRITERIA SECTION OF THESE NOTES FOR ADDITIONAL LOADING REQUIREMENTS.
- 5.5.7. DOCUMENTS
- A. THE MANUFACTURER SHALL FURNISH COMPLETE DESIGN DRAWINGS (CAN BE SHOP AND ERECTION DRAWINGS), SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
- B. THE MANUFACTURER SHALL (PRIOR TO THE CONCRETE FOUNDATION WORK) FURNISH ALL ANCHOR BOLT SIZES AND PLACEMENT PLANS FOR APPROVAL.
- C. THE MANUFACTURER SHALL FURNISH DESIGN CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
- D. IT SHALL BE THE RESPONSIBILITY OF THE BUILDING MANUFACTURER TO PROVIDE ALL ADDITIONAL CLIPS, ANCHORS, AND FRAMING MEMBERS ETC. AS REQUIRED TO INTEGRATE THEIR STANDARD BUILDING COMPONENTS WITH WORK BY OTHERS. SEE ALSO SHOP DRAWINGS REQUIREMENTS.
- 5.5.8. PRE-ENGINEERED BUILDING MATERIALS
- A. ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBERS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS," LATEST EDITIONS.
- B. ALL COLD-FORMED STRUCTURAL MEMBERS AND EXTERIOR COVERINGS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
- C. STEEL RIGID FRAMES AND OTHER BUILT-UP PRIMARY FRAMING SHALL BE FABRICATED FROM HOT ROLLED STEEL PLATE PER ASTM A-572 (MINIMUM YIELD STRENGTH 50,000 PSI).
- D. LIGHT GAUGE Z AND C PURLINS, GIRTS AND SECONDARY FRAMING SHALL BE COLD FORMED UTILIZING HOT ROLLED STEEL COIL MEETING ASTM A570 (F_y = 55 KSI MINIMUM).
- E. STEEL ROOF AND WALL PANELS (SEE SPECIFICATIONS) SHALL BE COLD FORMED FROM HIGH STRENGTH (50 KSI) STEEL MEETING THE CHEMICAL REQUIREMENTS OF ASTM A446 GRADE D AND GALVANIZED WITH 1.25 OZ COMMERCIAL GRADE COATING MEETING THE BEND, COATING AND TOLERANCE REQUIREMENTS OF ASTM A563.
- F. FOUNDATION ANCHOR BOLTS AND TENSION RODS USED FOR WALL AND ROOF BRACING SHALL BE FABRICATED FROM A36 MATERIAL AS A MINIMUM EXCEPT AS NOTED. MACHINE BOLTS AND HIGH STRENGTH BOLTS SHALL BE AS INDICATED IN THE STRUCTURAL STEEL BOLTS SECTION OF THESE NOTES.

- 5.6. PRE-ENGINEERED FALL PROTECTION SYSTEM
- 5.6.1. THE FALL PROTECTION SYSTEM MANUFACTURER SHALL DESIGN THE FALL PROTECTION SYSTEM TO COMPLY WITH THE LATEST OSHA/WISHA REQUIREMENTS.
- 5.6.2. THE FALL PROTECTION SYSTEM MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
- 5.6.3. THE GENERAL CONTRACTOR SHALL COORDINATE ANCHOR LOCATIONS AND REQUIRED LOADS WITH THE ARCHITECT/ENGINEER AND ANY PRE-ENGINEERED FRAMING SYSTEM MANUFACTURERS WHOSE COMPONENTS SUPPORT THE FALL PROTECTION SYSTEM ANCHORS.

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7 QUALITY ASSURANCE PLAN

8 FEDERAL WAY O&M FACILITIES SITE STRUCTURES

FEDERAL WAY, WASHINGTON

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15.A REQUIRED SPECIAL INSPECTION AND TESTS OF STRUCTURAL STEEL CONSTRUCTION – INSPECTION OF WELDING

Table with columns: SPECIAL INSPECTION OR TEST TYPE, CONTINUOUS SPECIAL INSPECTION, PERIODIC SPECIAL INSPECTION, REFERENCED STANDARD. Includes sub-tables for AISC TABLE N5.4-1 and AISC 360 TABLE N5.4-2.

14.A REQUIRED SPECIAL INSPECTION AND TEST OF MASONRY CONSTRUCTION – MINIMUM VERIFICATION REQUIREMENTS

Table with columns: MINIMUM VERIFICATION REQUIREMENTS, REQUIRED FOR QUALITY ASSURANCE LEVEL 1, REQUIRED FOR QUALITY ASSURANCE LEVEL 2, REFERENCE FOR CRITERIA TMS 602.

14.B REQUIRED SPECIAL INSPECTION AND TEST OF MASONRY CONSTRUCTION – MINIMUM SPECIAL INSPECTION REQUIREMENTS

Table with columns: INSPECTION TASK, CONTINUOUS SPECIAL INSPECTION LEVEL 2, PERIODIC SPECIAL INSPECTION LEVEL 2, REFERENCE FOR CRITERIA TMS 602.

NOTE: SPECIAL INSPECTION PER TABLE 14.B NOT REQUIRED FOR QUALITY ASSURANCE LEVEL 1

- 14. SPECIAL INSPECTION AND VERIFICATION OF MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH TMS 402 AND TMS 602 QUALITY ASSURANCE REQUIREMENTS. AS NOTED IN THE TABLES ABOVE INCLUDING:
14.1.1. COMPRESSIVE STRENGTH OF MASONRY SHALL BE CONSIDERED SATISFACTORY IF THE COMPRESSIVE STRENGTH OF EACH MASONRY UNIT AND GROUTED COLLAR JOINT MEETS OR EXCEEDS THE SPECIFIED f_m.
14.1.2. COMPRESSIVE STRENGTH OF MASONRY SHALL BE DETERMINED IN ACCORDANCE WITH THE PROVISIONS OF TMS 602 USING THE UNIT STRENGTH METHOD.
14.1.3. FOR RISK CATEGORY I, II, OR III, MINIMUM QUALITY ASSURANCE LEVEL FOR BRICK VENEER SHALL BE LEVEL 1, AS NOTED IN TABLE 14A.
14.1.4. FOR RISK CATEGORY I, II, OR III, MINIMUM QUALITY ASSURANCE LEVEL FOR STRUCTURAL MASONRY SHALL BE LEVEL 2 AS NOTED IN TABLES 14A AND 14B.

13. REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

Table with columns: SPECIAL INSPECTION OR TEST TYPE, CONTINUOUS SPECIAL INSPECTION, PERIODIC SPECIAL INSPECTION, REFERENCED STANDARD, IBC REFERENCE.

- 13. CONCRETE: SPECIAL INSPECTION AND TESTING PER IBC TABLE 1705.3 AS NOTED IN TABLE 13, INCLUDING:
13.1.1. CONTINUOUS SPECIAL INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.
13.1.2. CONTINUOUS SPECIAL INSPECTION OF BOLTS INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE.
13.1.3. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE SHALL BE AS DESCRIBED IN THE RESEARCH REPORT ISSUED BY AN APPROVED SOURCE (ICC, IAPMO, ETC.).
13.2. SPECIAL INSPECTIONS AND TESTS SHALL NOT BE REQUIRED FOR THE FOLLOWING:
13.2.1. NON-STRUCTURAL CONCRETE SLABS ON GRADE.

11. STATEMENT OF SPECIAL INSPECTIONS

Table with columns: IBC, SI, SO, TITLE. Lists inspection items for steel, concrete, masonry, soils, and structural steel.

SI = SPECIAL INSPECTION
SO = STRUCTURAL OBSERVATION
✓ = ITEM IS REQUIRED
NR = ITEM IS NOT REQUIRED
SPECIAL INSPECTIONS INDICATED ARE FOR STRUCTURAL ELEMENTS ONLY. SEE ARCH, MECH AND ELEC DRAWINGS FOR ADDITIONAL SPECIAL INSPECTIONS.

- 11.1. INSPECTION/TESTING REQUIREMENTS: SEE DRAWINGS, SPECIFICATIONS, AND IBC SECTIONS 110, AND CHAPTER 17.
11.2. INSPECTIONS BY THE BUILDING OFFICIAL (IBC SECTION 110):
11.2.1. FOOTING AND FOUNDATION INSPECTIONS SHALL BE MADE AFTER EXCAVATIONS ARE COMPLETE AND ANY REQUIRED REINFORCING IS IN PLACE. ANY REQUIRED FORMS SHALL BE IN PLACE PRIOR TO INSPECTION.
11.2.2. CONCRETE SLAB AND UNDER FLOOR INSPECTIONS SHALL BE MADE AFTER ALL IN SLAB OR UNDER FLOOR REINFORCING, CONDUIT, PIPING AND OTHER ANCILLARY EQUIPMENT ITEMS AND ACCESSORIES ARE IN PLACE BUT PRIOR TO CONCRETE PLACEMENT OR FLOOR SHEATHING INSTALLATION.
11.2.3. FRAMING INSPECTIONS SHALL BE MADE AFTER ALL SHEATHING, FRAMING, BLOCKING AND BRACING ARE COMPLETE AND ALL PIPES, DUCTS, ELECTRICAL, PLUMBING, ETC., ARE INSTALLED AND APPROVED PRIOR TO COVER.
11.2.4. IN ADDITION TO THE INSPECTIONS SPECIFIED ABOVE, THE BUILDING OFFICIAL IS AUTHORIZED TO MAKE OR REQUIRE OTHER INSPECTIONS OF ANY CONSTRUCTION WORK TO ASCERTAIN COMPLIANCE WITH THE PROVISIONS OF THE IBC OR OTHER LAWS ENFORCED BY THE BUILDING OFFICIAL.
11.3. STRUCTURAL TESTS AND SPECIAL INSPECTIONS (IBC CHAPTER 17):
11.3.1. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
11.3.2. STRUCTURAL TESTS AND SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE IBC AS WELL AS ANY ADDITIONAL REQUIREMENTS OF THE BUILDING OFFICIAL. OMISSION FROM THE LIST BELOW OF TESTING AND INSPECTION REQUIREMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING TESTING AND INSPECTION REQUIRED BY THE SPECIFICATIONS, THE IBC AND THE BUILDING OFFICIAL.
11.3.3. TESTING AND SPECIAL INSPECTIONS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE IBC FOR THE ITEMS LISTED IN THIS SECTION.
11.4. STRUCTURAL OBSERVATION
11.4.1. STRUCTURAL OBSERVATION MAY BE PERFORMED DURING CONSTRUCTION IN A MANNER AS REQUIRED TO BECOME GENERALLY FAMILIAR WITH THE PLACE CONSTRUCTION.
11.4.2. STRUCTURAL OBSERVATION EXTENT SHALL BE AS INDICATED ABOVE. TIMING AND DURATION OF OBSERVATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR DURING CONSTRUCTION.
11.4.3. CONSTRUCTION OBSERVATION REPORTS AND FINDINGS SHALL NOT BE VIEWED AS A WARRANTY OR GUARANTEE BY THE STRUCTURAL ENGINEER.
11.5. SPECIAL INSPECTOR: SHALL BE CURRENTLY WABO CERTIFIED.
11.5.1. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
11.5.2. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, ENGINEER OF RECORD, ARCHITECT OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION, THEN, IF NOT IN CONFORMANCE, TO THE PROPER DESIGN AUTHORITY AND BUILDING OFFICIAL.
11.5.3. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.

12A. REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS

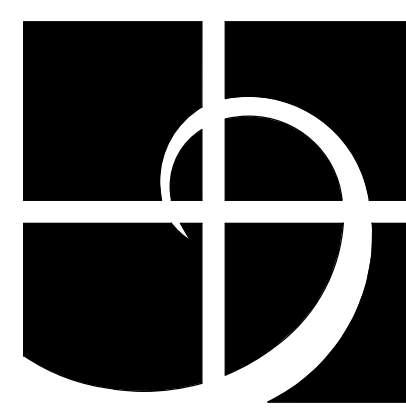
Table with columns: SPECIAL INSPECTION OR TEST TYPE, CONTINUOUS SPECIAL INSPECTION, PERIODIC SPECIAL INSPECTION. Lists soil inspection items.

- 12.1. SPECIAL INSPECTIONS AND TESTS FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT, AND LOAD-BEARING REQUIREMENTS PER IBC 1705.6, AS NOTED IN TABLE 12A.
12.1.1. THE APPROVED GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE REGISTERED DESIGN PROFESSIONALS SHALL BE USED TO DETERMINE COMPLIANCE.

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15.B REQUIRED SPECIAL INSPECTION AND TESTS OF STRUCTURAL STEEL CONSTRUCTION – INSPECTION OF BOLTING

Table with 4 columns: SPECIAL INSPECTION OR TEST TYPE, CONTINUOUS SPECIAL INSPECTION, PERIODIC SPECIAL INSPECTION, REFERENCED STANDARD. Includes sections for AISC 360 TABLE N5.6-1 and AISC 360 TABLE N5.6-2.

15.C REQUIRED SPECIAL INSPECTION AND TESTS OF COLD FORMED STEEL DECK

Table with 4 columns: SPECIAL INSPECTION OR TEST TYPE, CONTINUOUS SPECIAL INSPECTION, PERIODIC SPECIAL INSPECTION, REFERENCED STANDARD. Includes sections for SDI QA/QC TABLE 1.1 through 1.8.

15.

15.1. STRUCTURAL STEEL CONSTRUCTION:

SPECIAL INSPECTION AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH THE QUALITY CONTROL AND QUALITY ASSURANCE REQUIREMENTS OF AISC 360, AS NOTED IN TABLES 15A, 15B, AND AWS D1.1, INCLUDING:

- 15.1.1. INSPECTION OF ERECTED STEEL SYSTEM.
15.1.2. REVIEW OF MATERIAL TEST REPORTS AND CERTIFICATIONS FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
15.1.3. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE AS FOLLOWS:
15.1.4. OBSERVATION OF BOLTING OPERATIONS.
15.1.5. WHERE CONTINUOUS SPECIAL INSPECTION IS NOTED, IT SHALL BE PERFORMED FOR EACH JOINT OR MEMBER.
15.1.6. COLD FORMED STEEL DECK:
15.1.7. EPOXY ANCHORS:
15.1.8. EXPANSION ANCHORS:

18. REQUIRED SPECIAL INSPECTION AND TESTS FOR SEISMIC RESISTANCE

Table with 3 columns: SPECIAL INSPECTION OR TEST TYPE, CONTINUOUS SPECIAL INSPECTION, PERIODIC SPECIAL INSPECTION. Includes items for architectural components, plumb, mechanical and electrical components, and anchorage of storage racks.

18.

18.1. SPECIAL INSPECTIONS AND TESTING FOR SEISMIC RESISTANCE:

- 18.1.1. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE PER IBC 1705.12 SHALL BE REQUIRED FOR SEISMIC FORCE-RESISTING SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, E OR F PER TABLE 18 AND THE FOLLOWING:
18.1.2. TESTING AND QUALIFICATION FOR SEISMIC RESISTANCE PER IBC 1705.13 SHALL BE REQUIRED FOR SEISMIC FORCE-RESISTING SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F FOR THE FOLLOWING:
18.1.3. SPECIAL INSPECTION IS NOT REQUIRED FOR THE FOLLOWING:

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PROJECT: 2023087 - FEDERAL WAY O&M FACILITIES
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A B C D E F G H I J K

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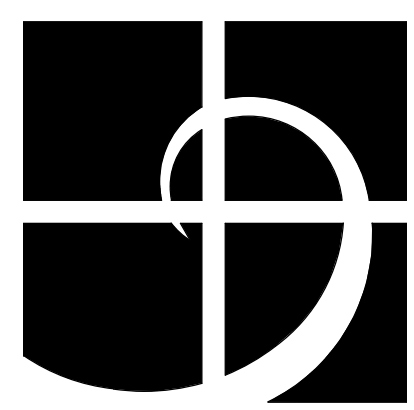
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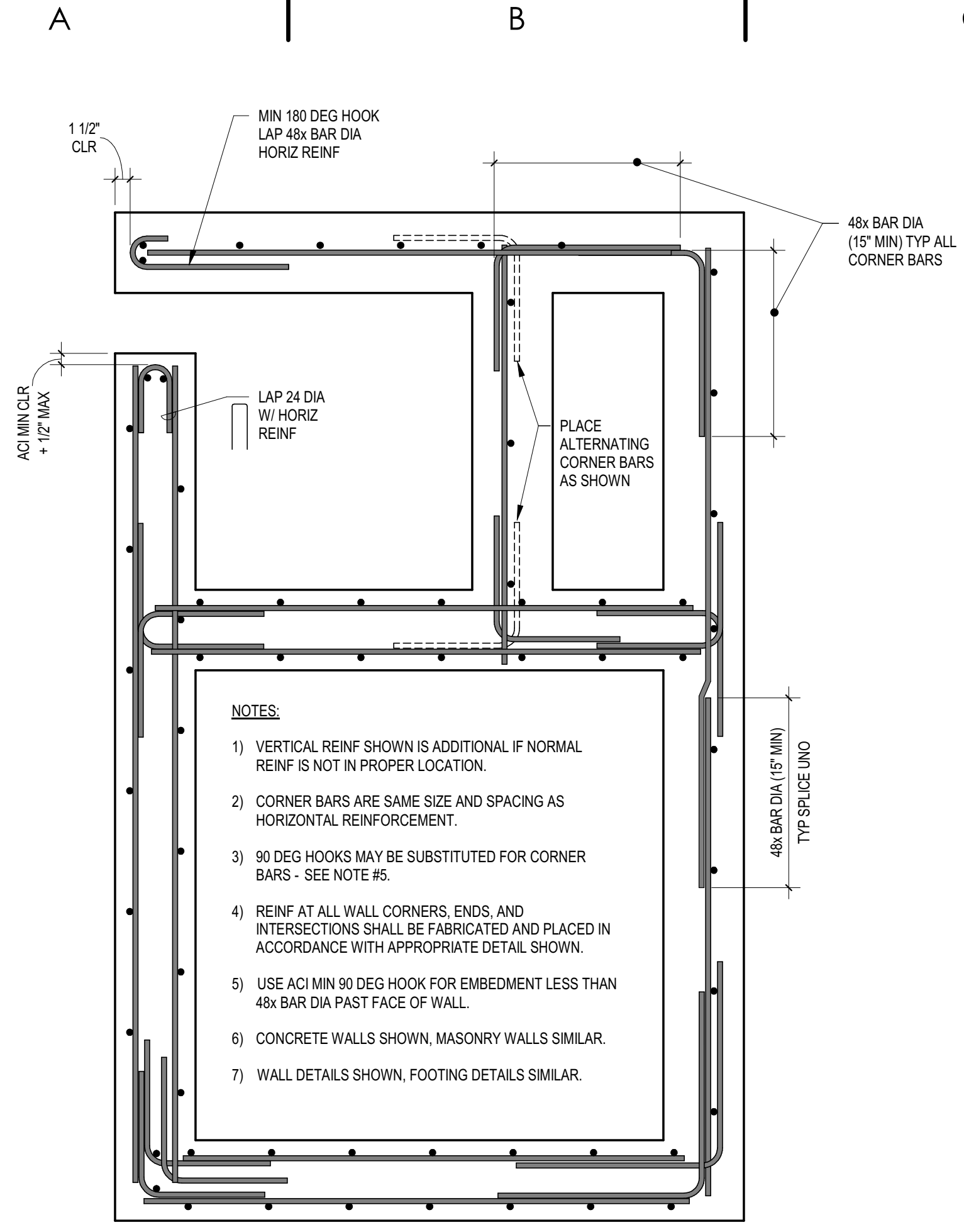
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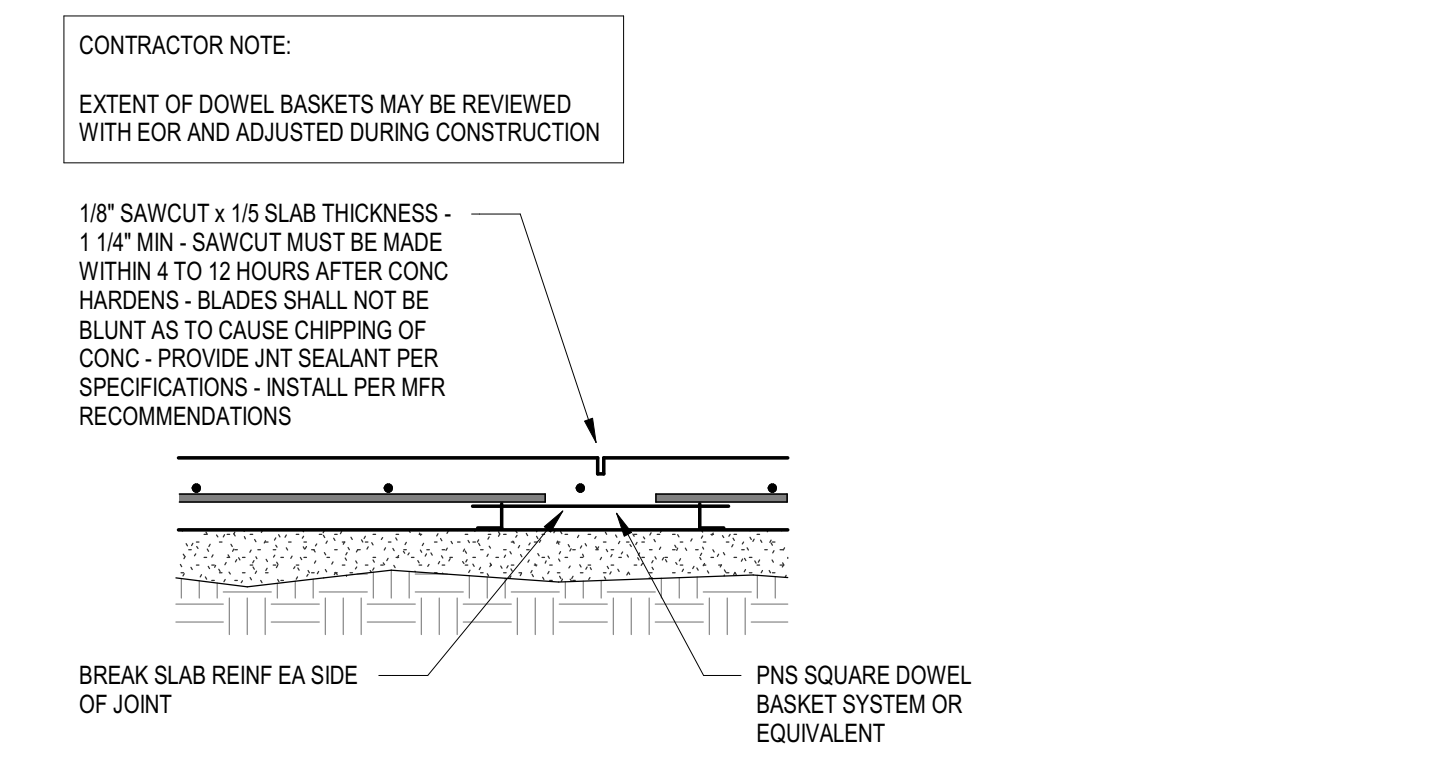


TACOMA SEATTLE SPOKANE TRICITIES
253.363.2422 TEL 253.363.2572 FAX www.ahl.com 918
2215 North 36th Street, Suite 300, Tacoma, WA 98403



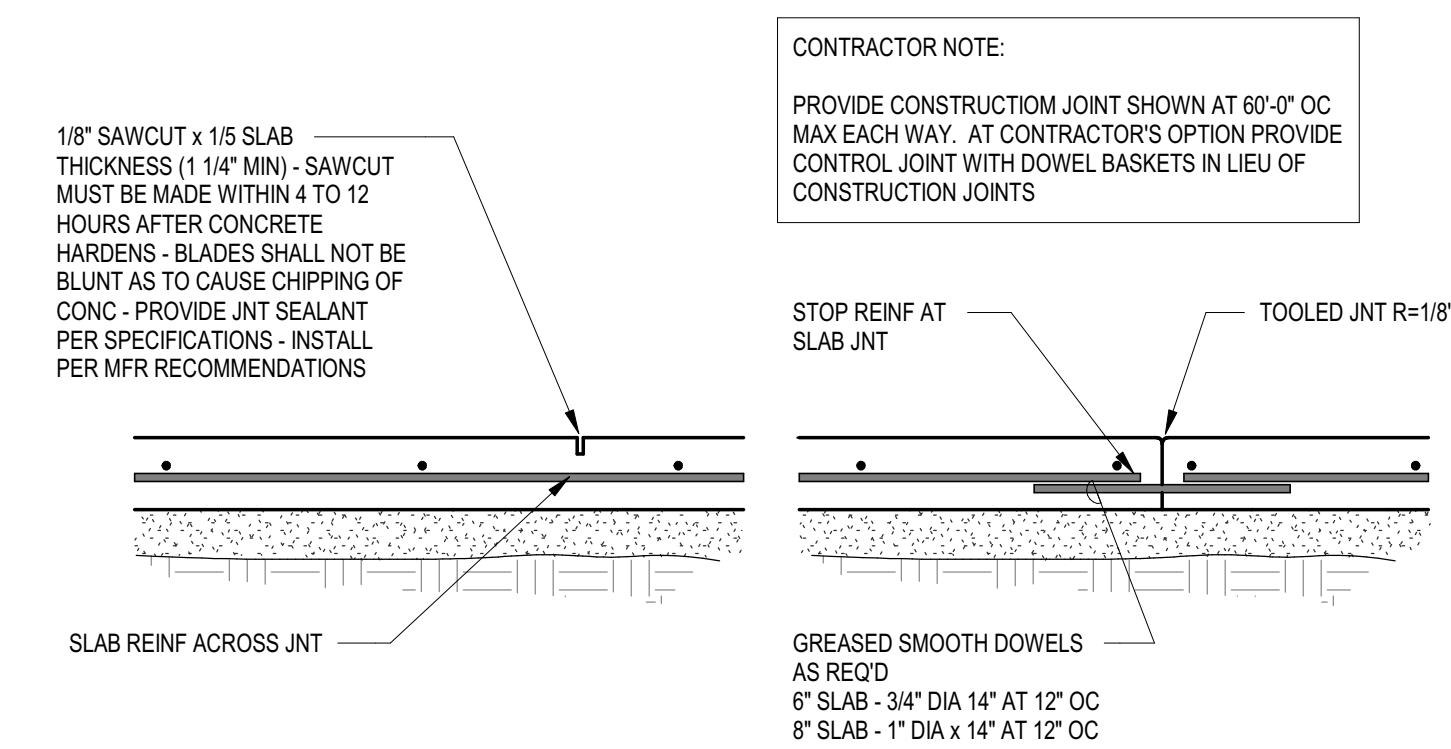
PLAN VIEW TYPICAL REINFORCEMENT PLACING DETAIL

1 TYPICAL
1" = 1'-0" SC020-1



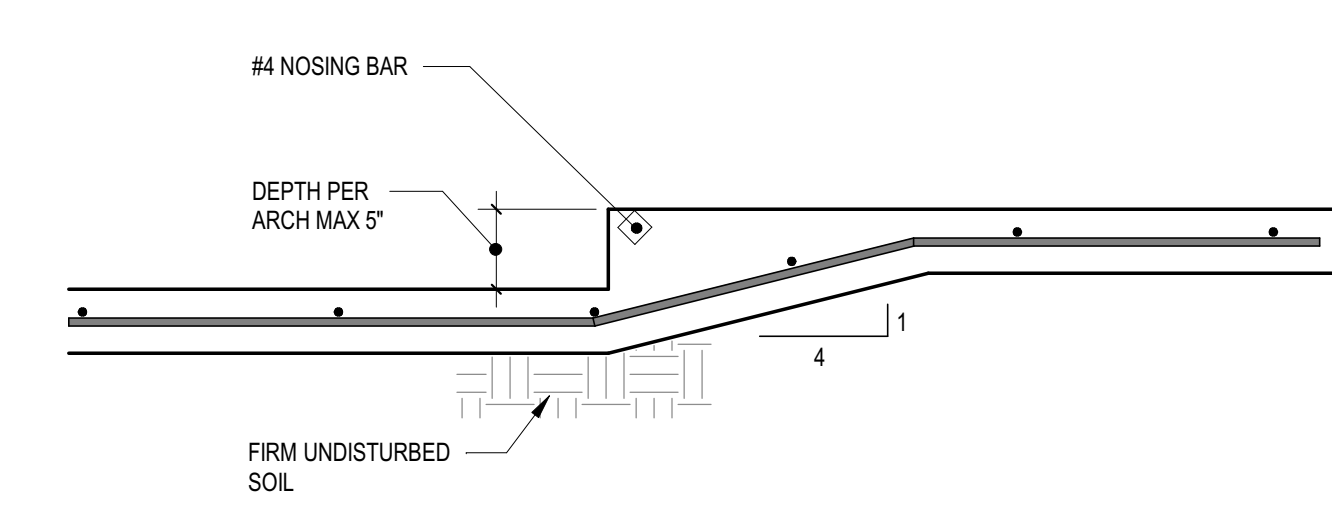
TYPICAL CONTROL JOINT W/ DOWEL BASKETS

2 TYPICAL
1" = 1'-0" TYPICAL



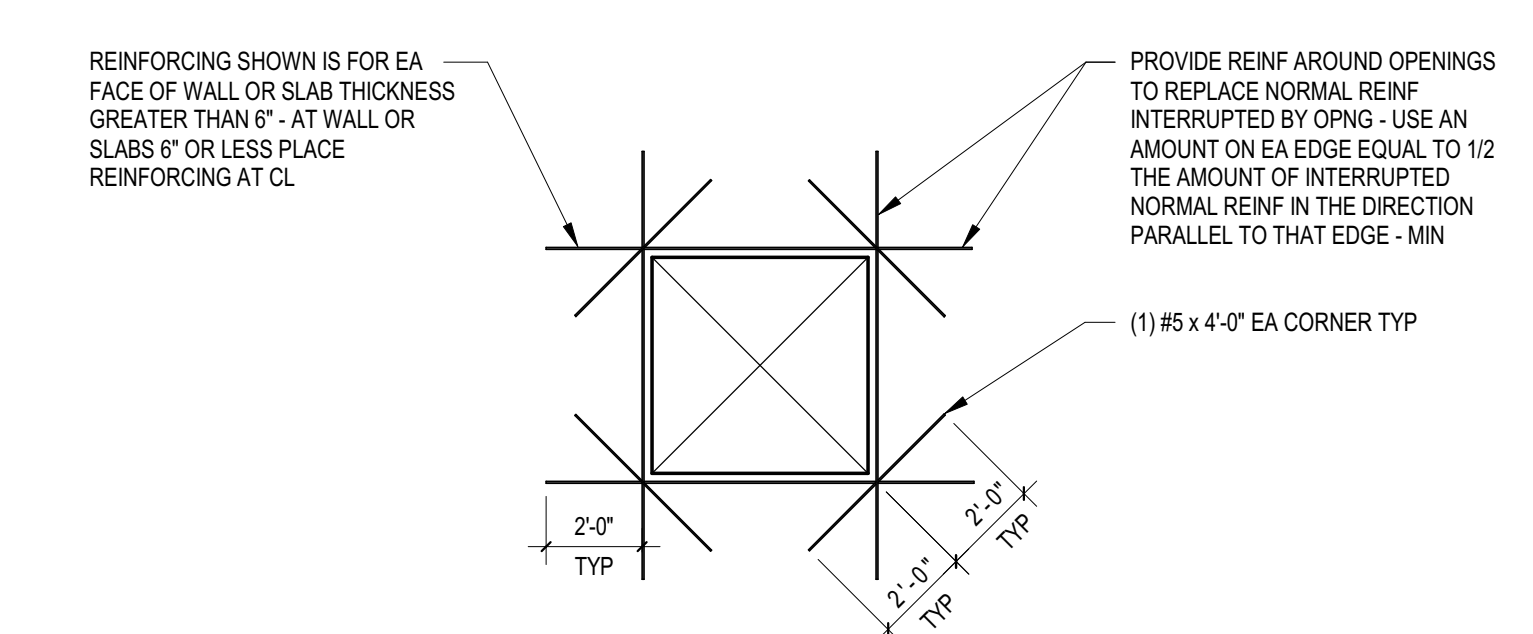
TYPICAL CONSTRUCTION JOINT

3 TYPICAL
1" = 1'-0" TYPICAL

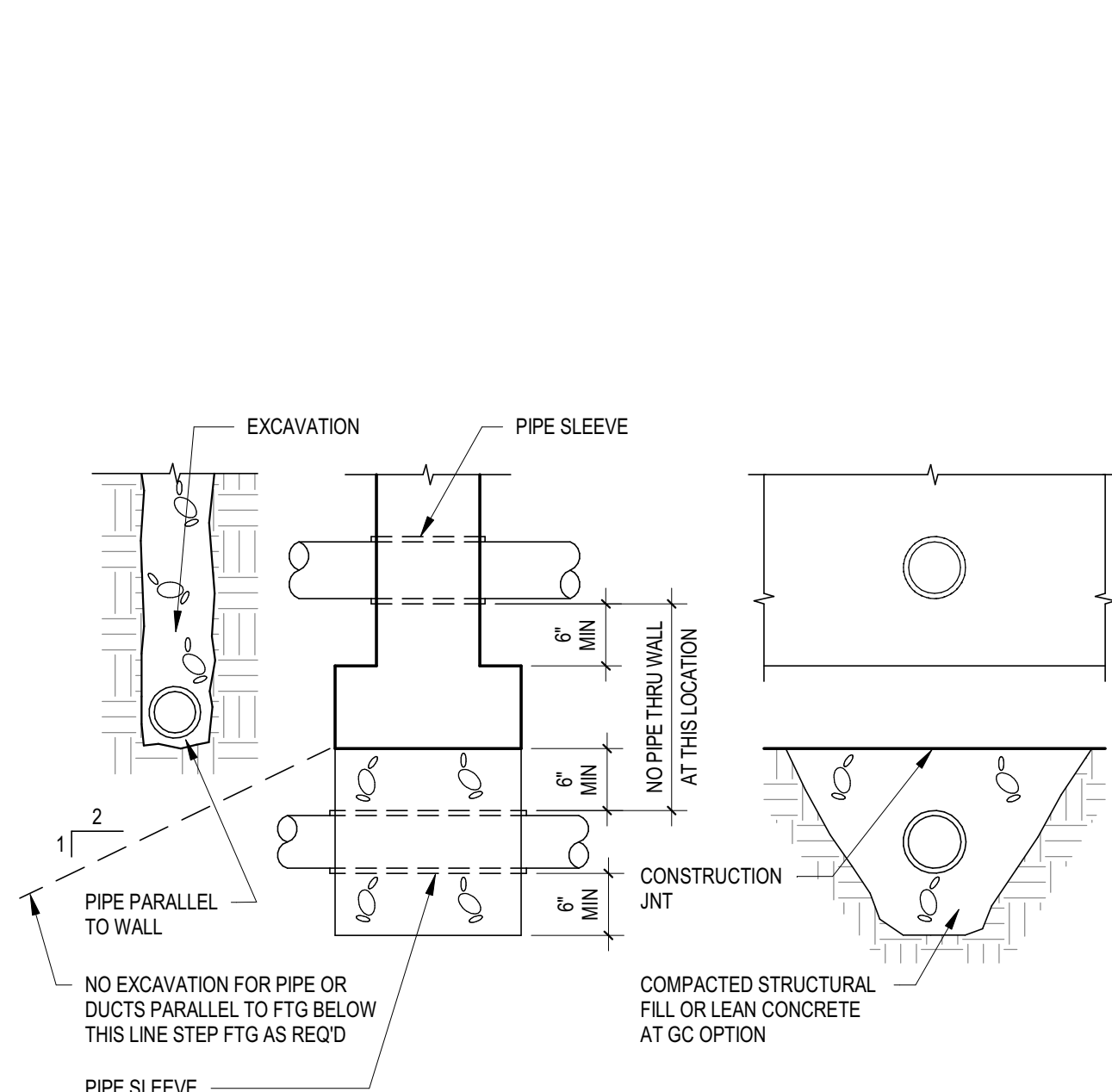


TYPICAL AT STEPS IN CONG SLAB ON GRADE

4 TYPICAL
1/4\"/>

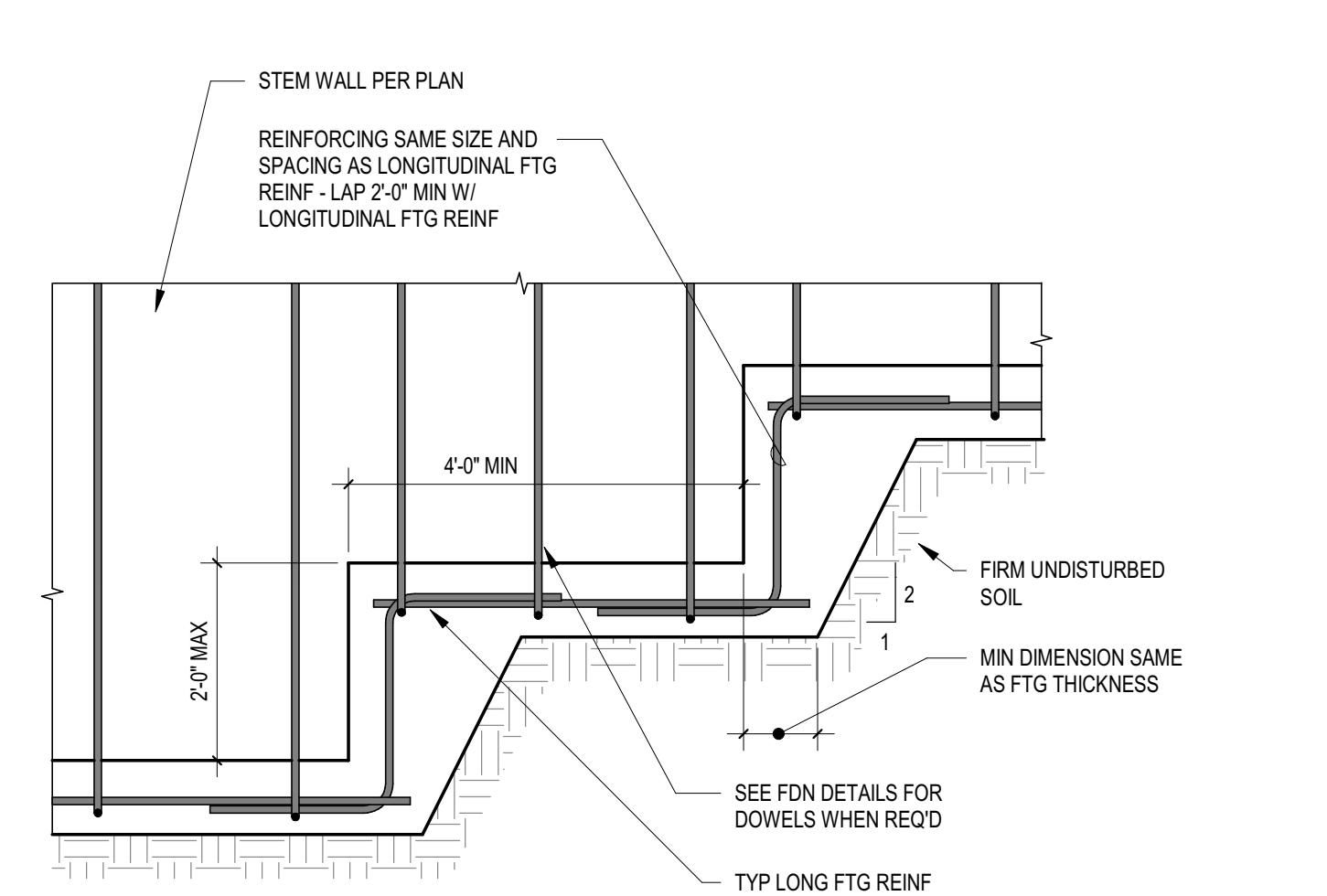


TYPICAL REINFORCING AT OPENINGS GREATER THAN 12" IN CONG WALL OR SLAB



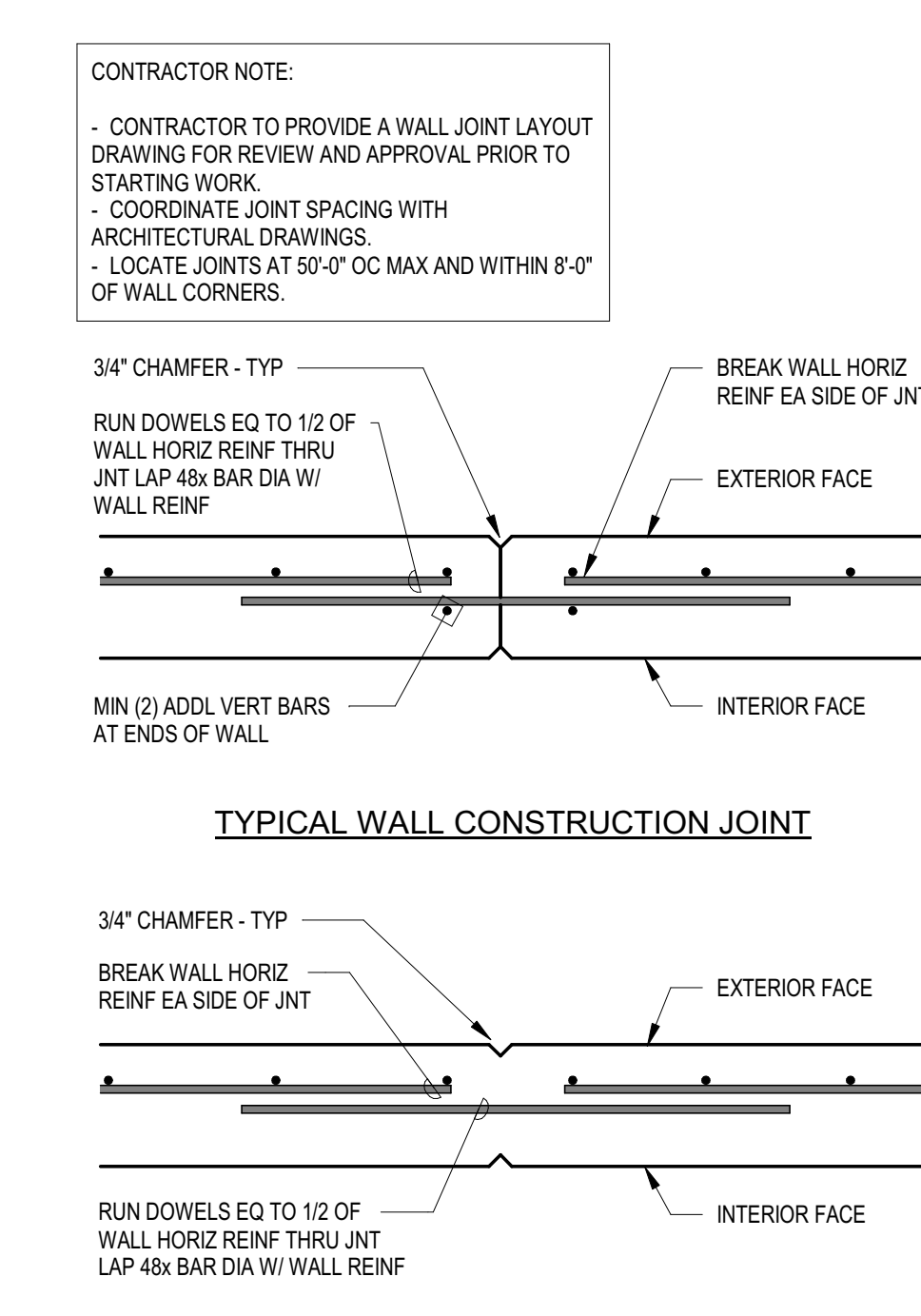
TYPICAL DETAIL OF PIPE AT CONCRETE FOOTING

5 TYPICAL
1" = 1'-0" TYPICAL



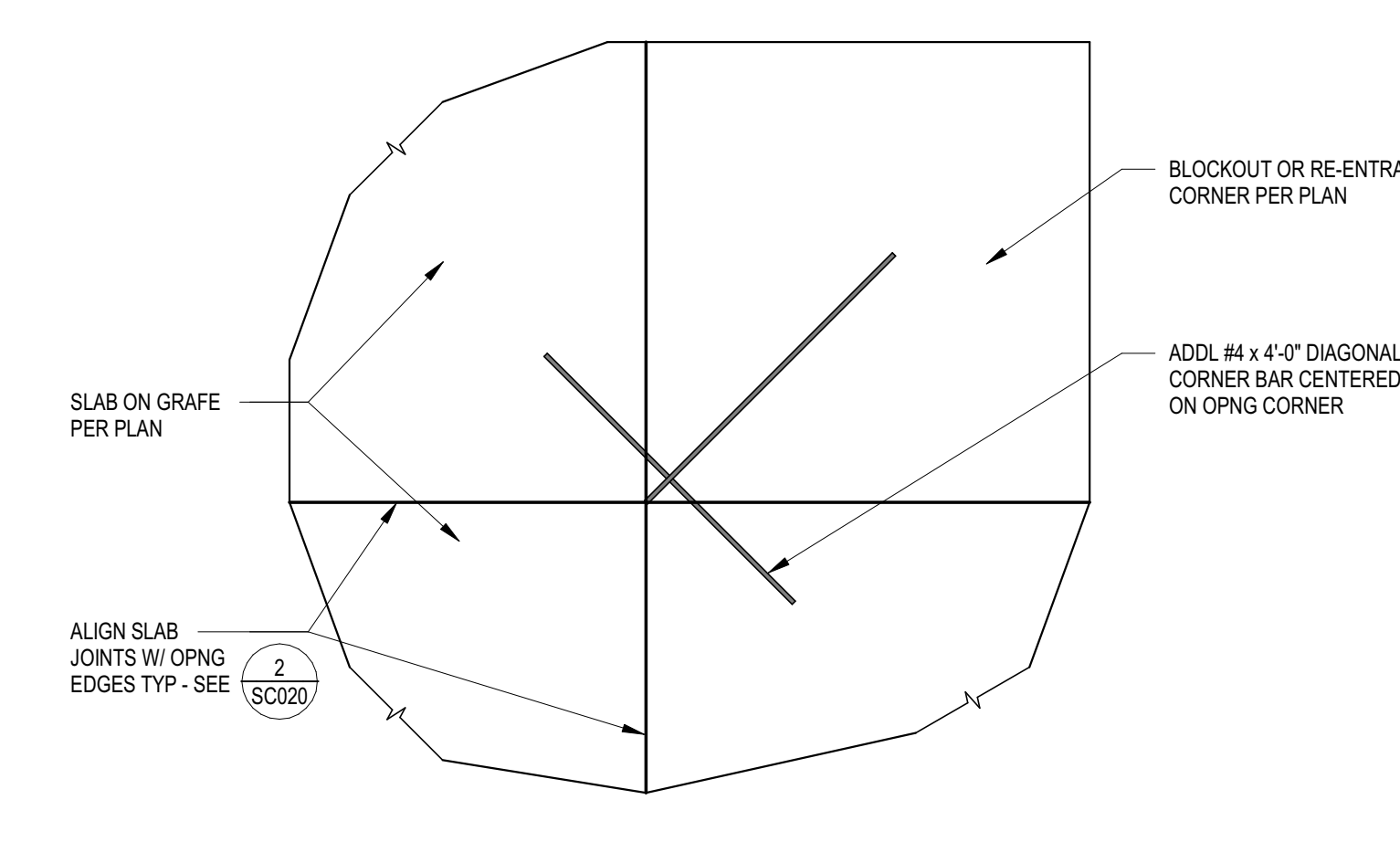
TYPICAL STEPPED FOOTING

6 TYPICAL
1" = 1'-0" TYPICAL



TYPICAL WALL CONTROL JOINT

7 TYPICAL
1" = 1'-0" TYPICAL



ADDL SLAB REINF AT CORNERS

8 TYPICAL
1/2\"/>

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TYPICAL DETAILS

FEDERAL WAY O&M FACILITIES SITE STRUCTURES

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE 05.06.24 JOB NO. 023-087

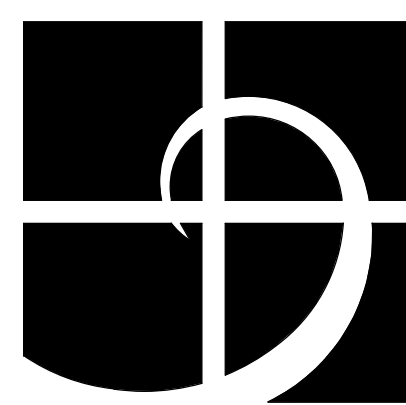
BID SET

SC020

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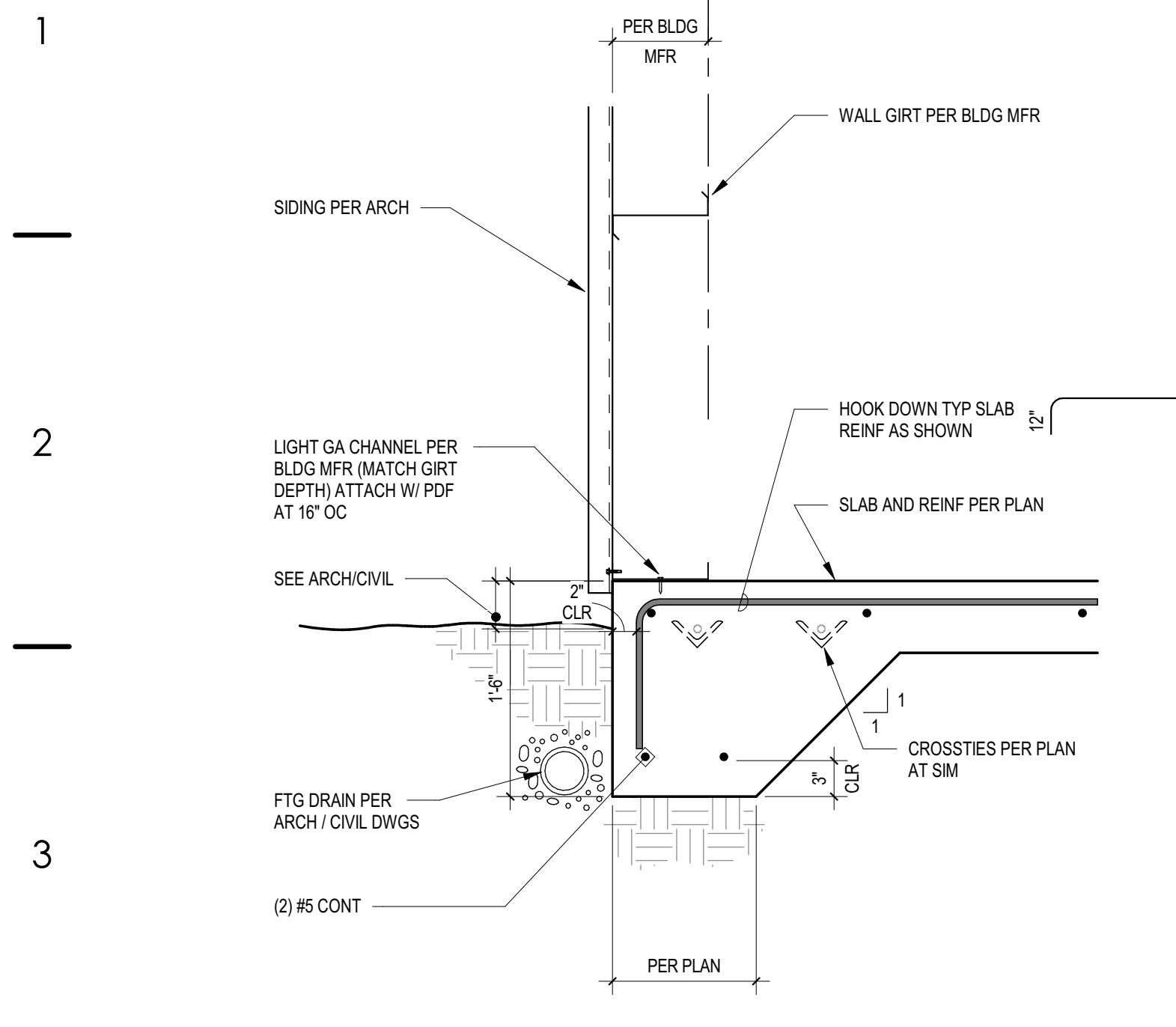


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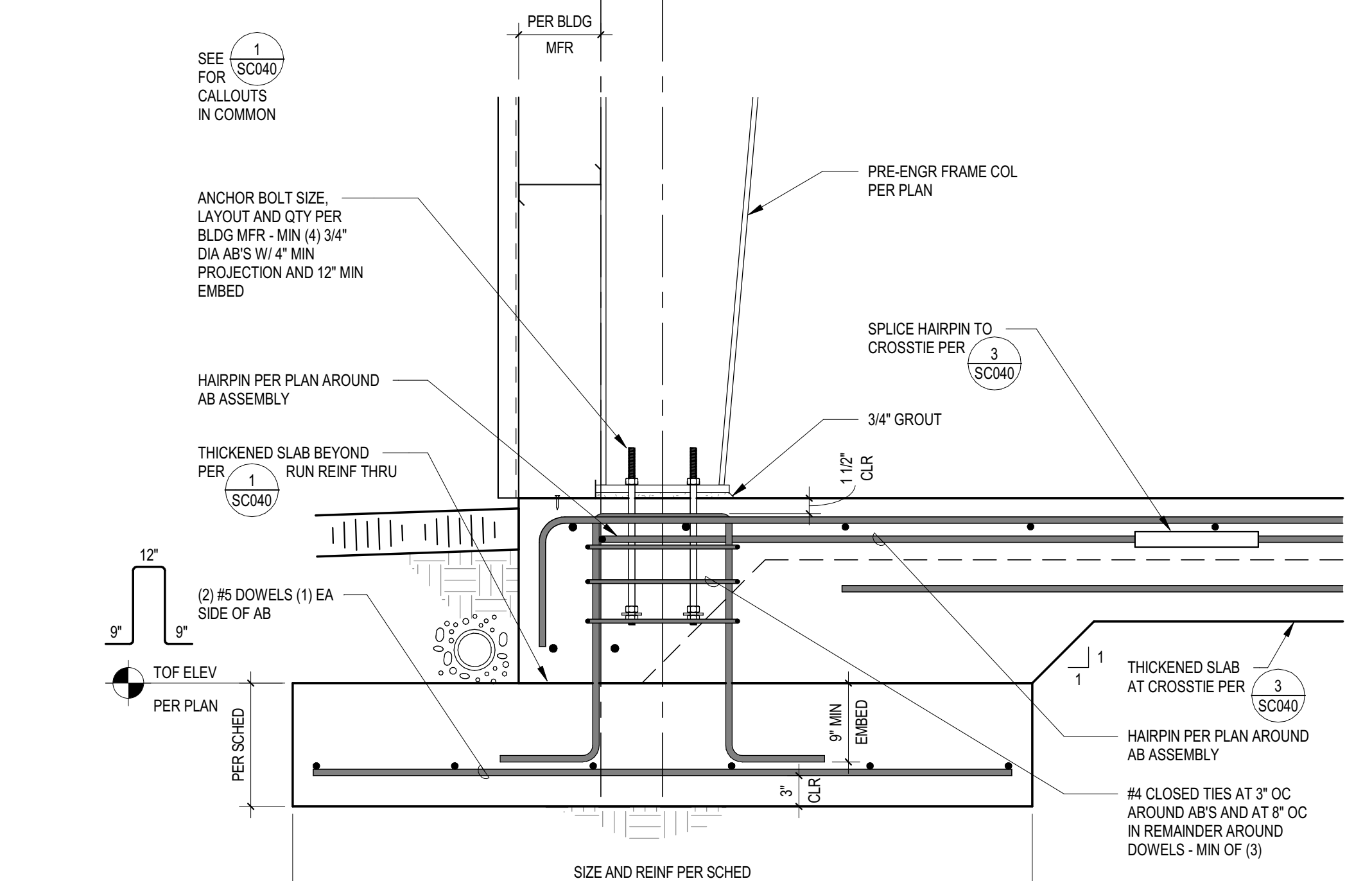


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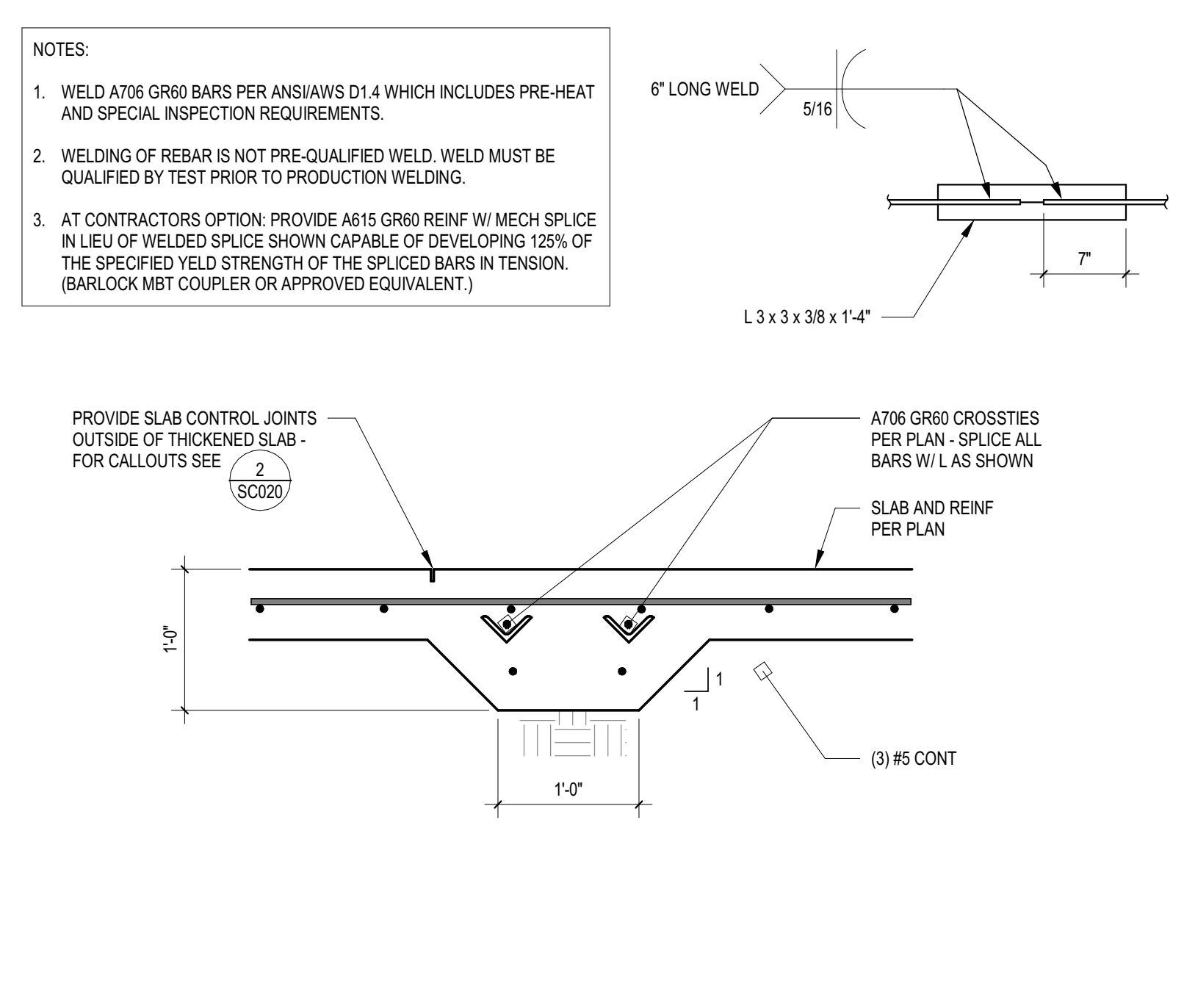
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1 SECTION
1" = 1'-0" SC040-1

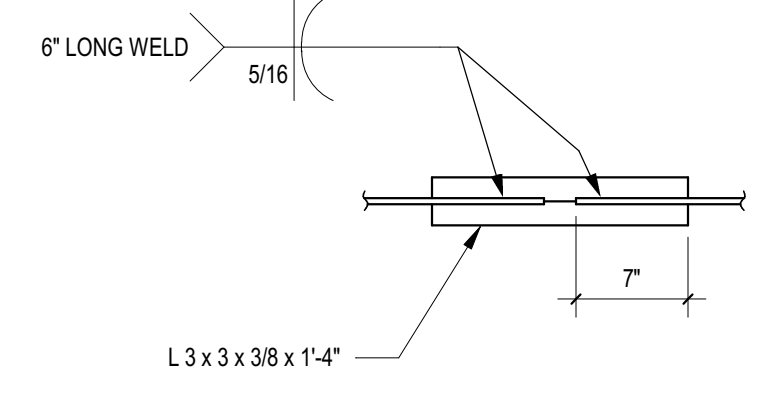


2 SECTION
1" = 1'-0" SC040-2

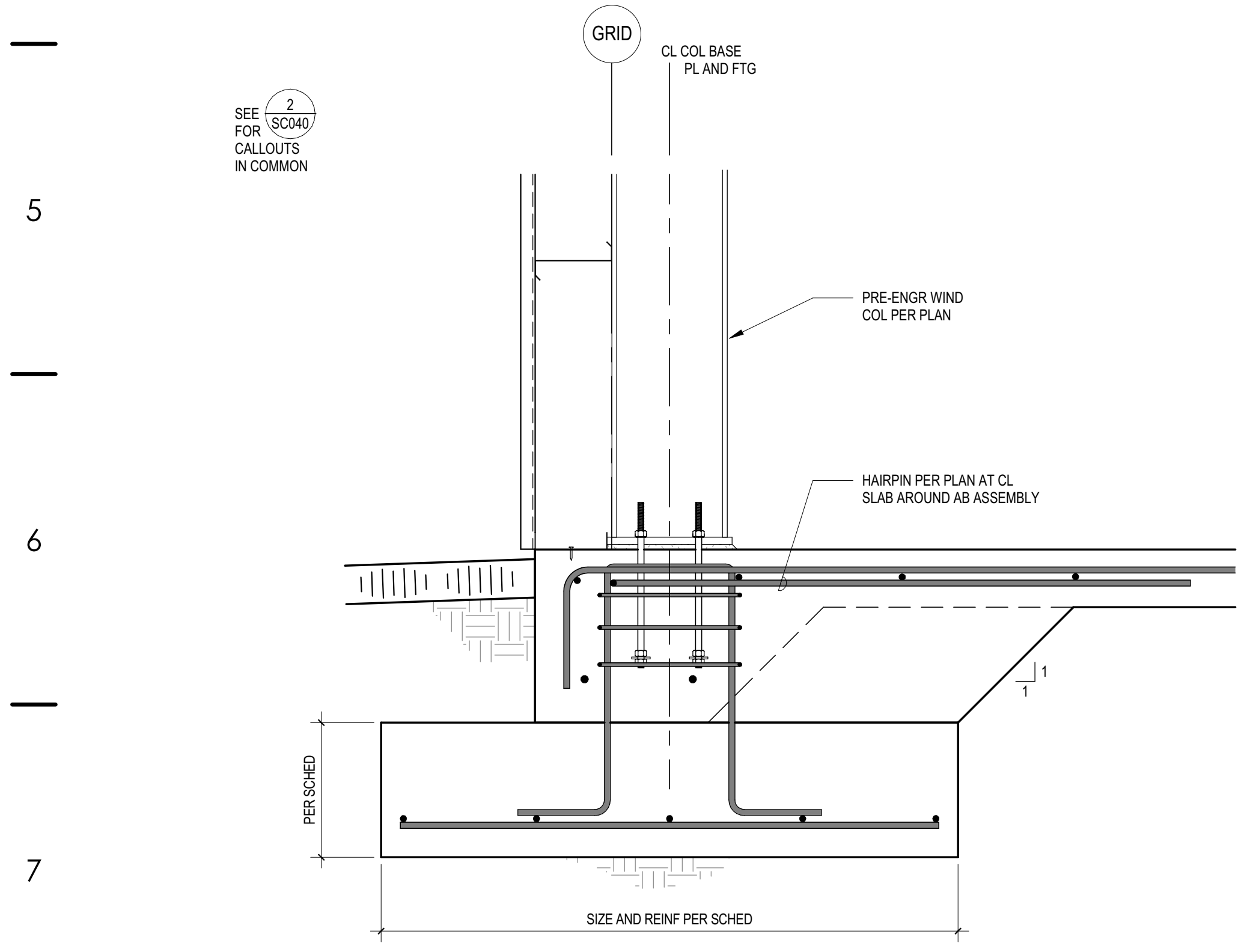


3 SECTION
1" = 1'-0" SC040-3

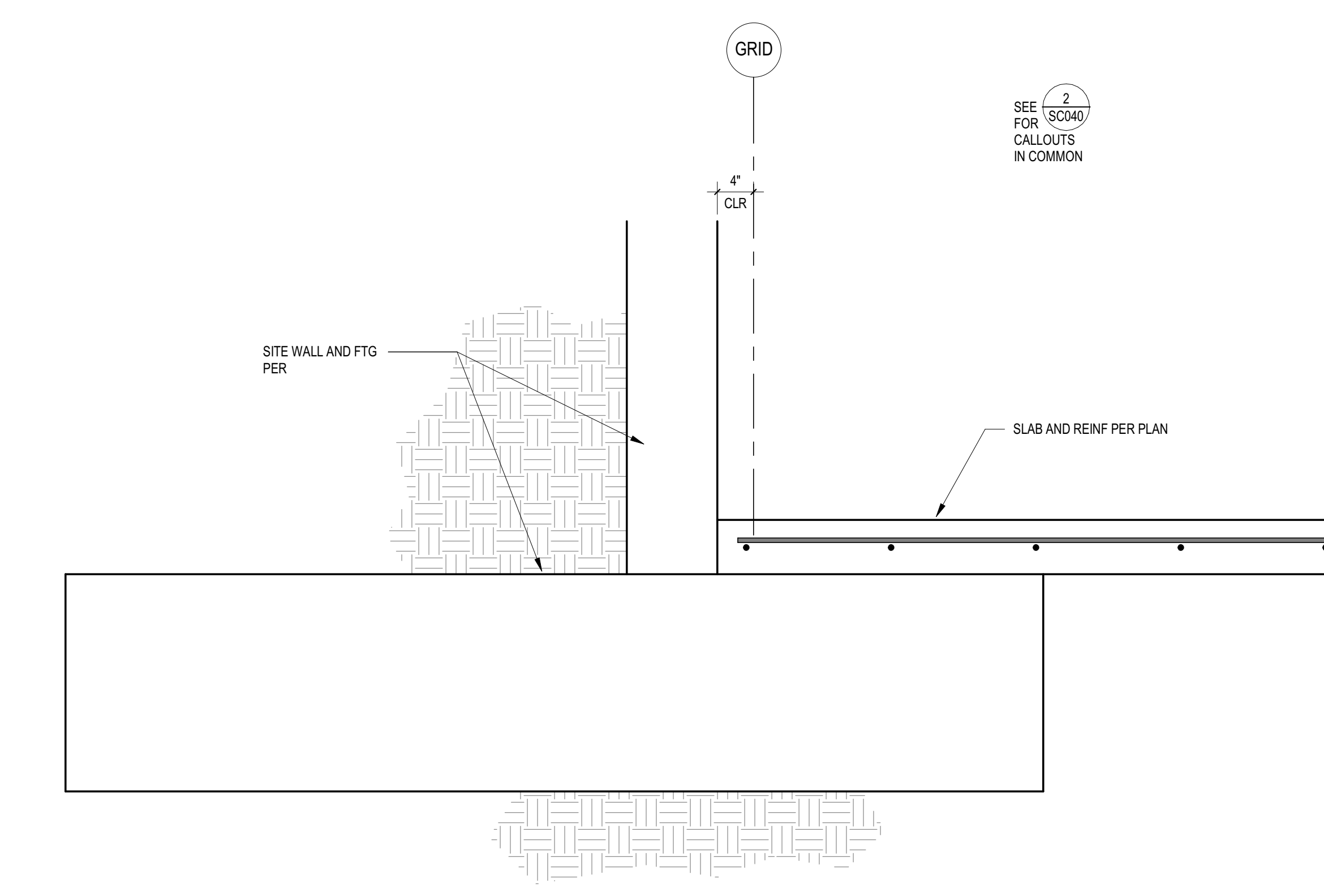
NOTES:
1. WELD A706 GR60 BARS PER ANSIAWIS D1.4 WHICH INCLUDES PRE-HEAT AND SPECIAL INSPECTION REQUIREMENTS.
2. WELDING OF REBAR IS NOT PRE-QUALIFIED WELD. WELD MUST BE QUALIFIED BY TEST PRIOR TO PRODUCTION WELDING.
3. AT CONTRACTORS OPTION, PROVIDE A615 GR60 REINF W/ MECH SPLICE IN LIEU OF WELDED SPLICE SHOWN CAPABLE OF DEVELOPING 125% OF THE SPECIFIED YIELD STRENGTH OF THE SPLICED BARS IN TENSION. (BARLOCK MBT COUPLER OR APPROVED EQUIVALENT.)



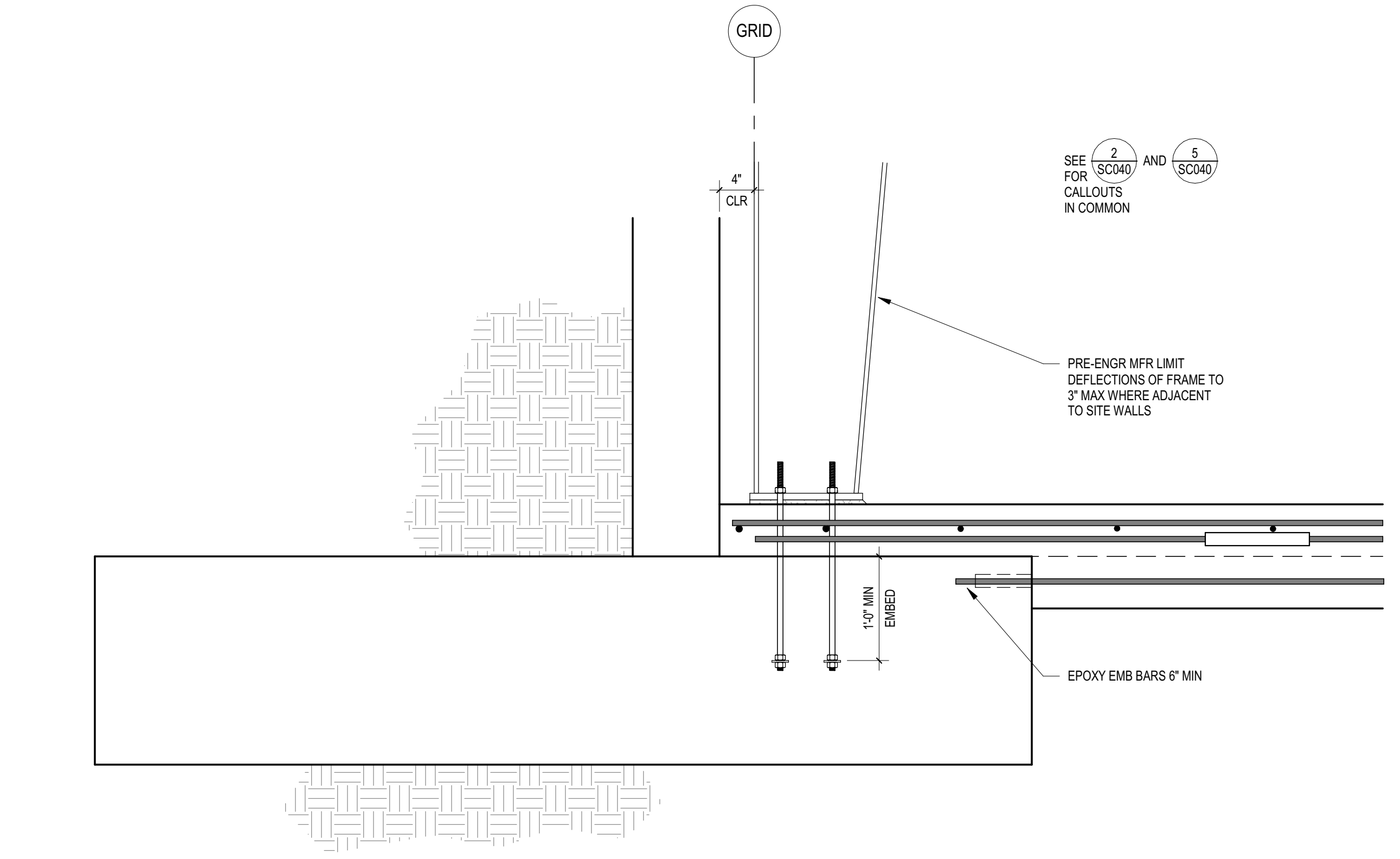
4



4 SECTION
1" = 1'-0" SC040-4

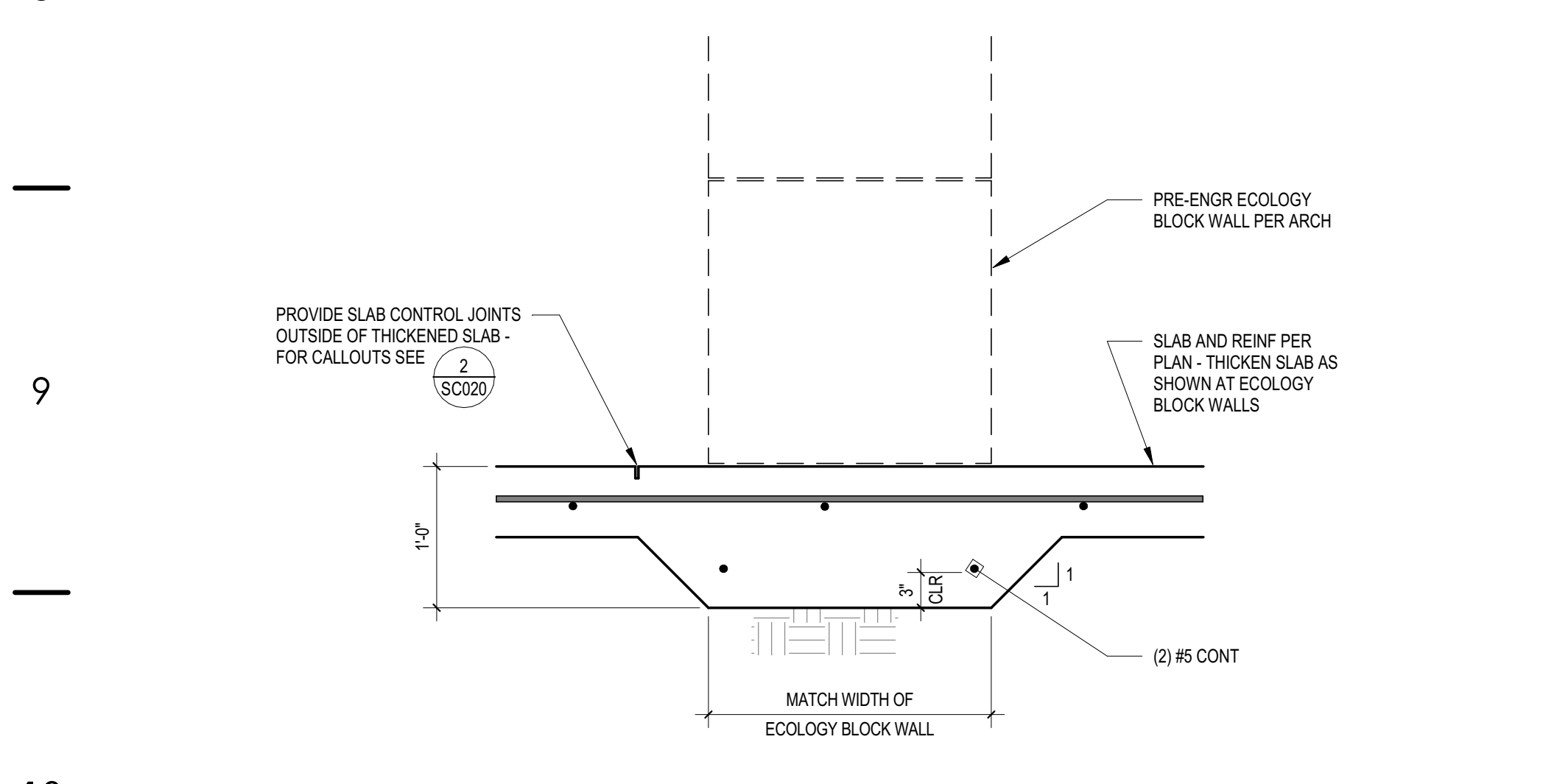


5 SECTION
1" = 1'-0" SC040-5

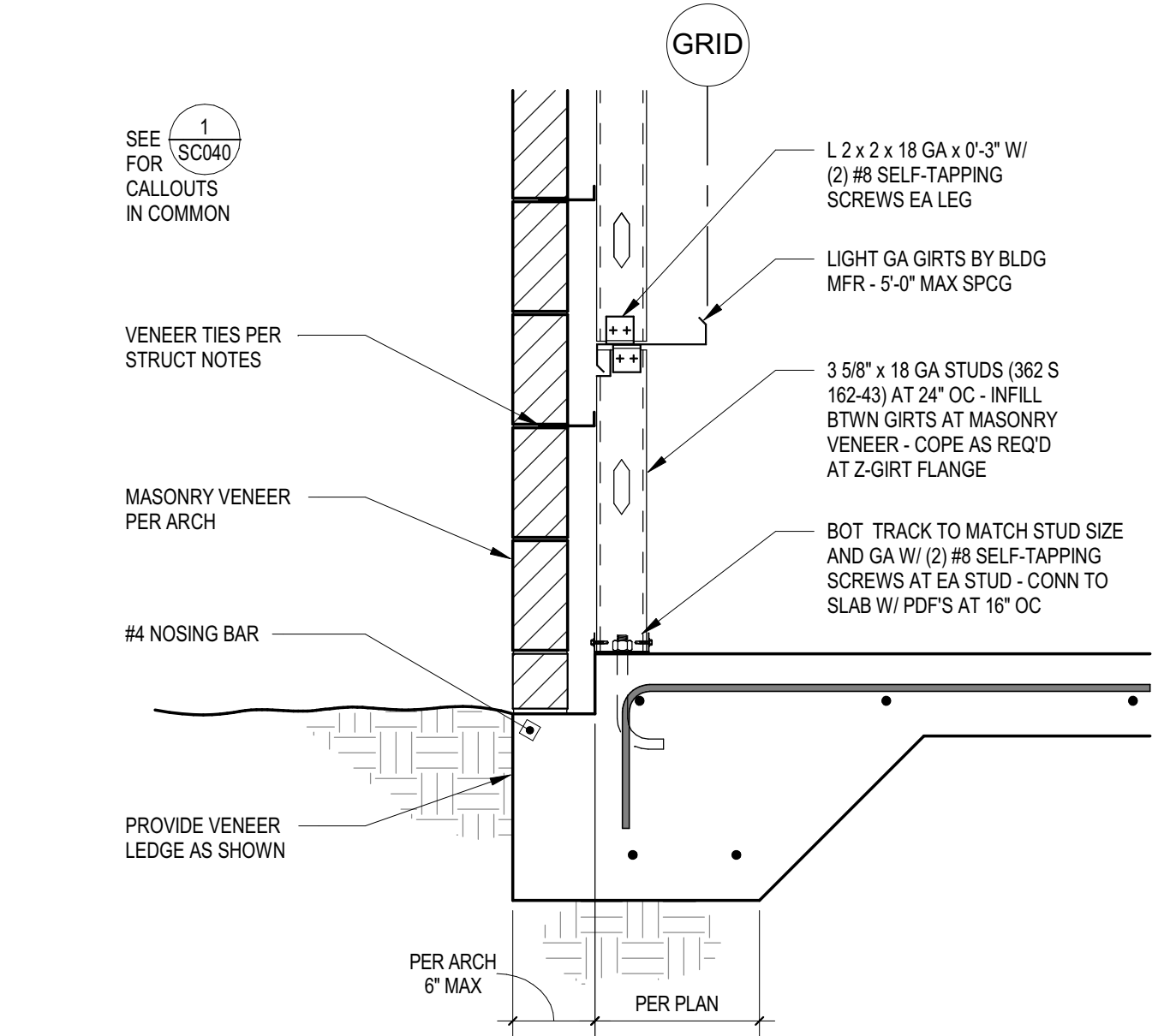


6 SECTION
1" = 1'-0" SC040-6

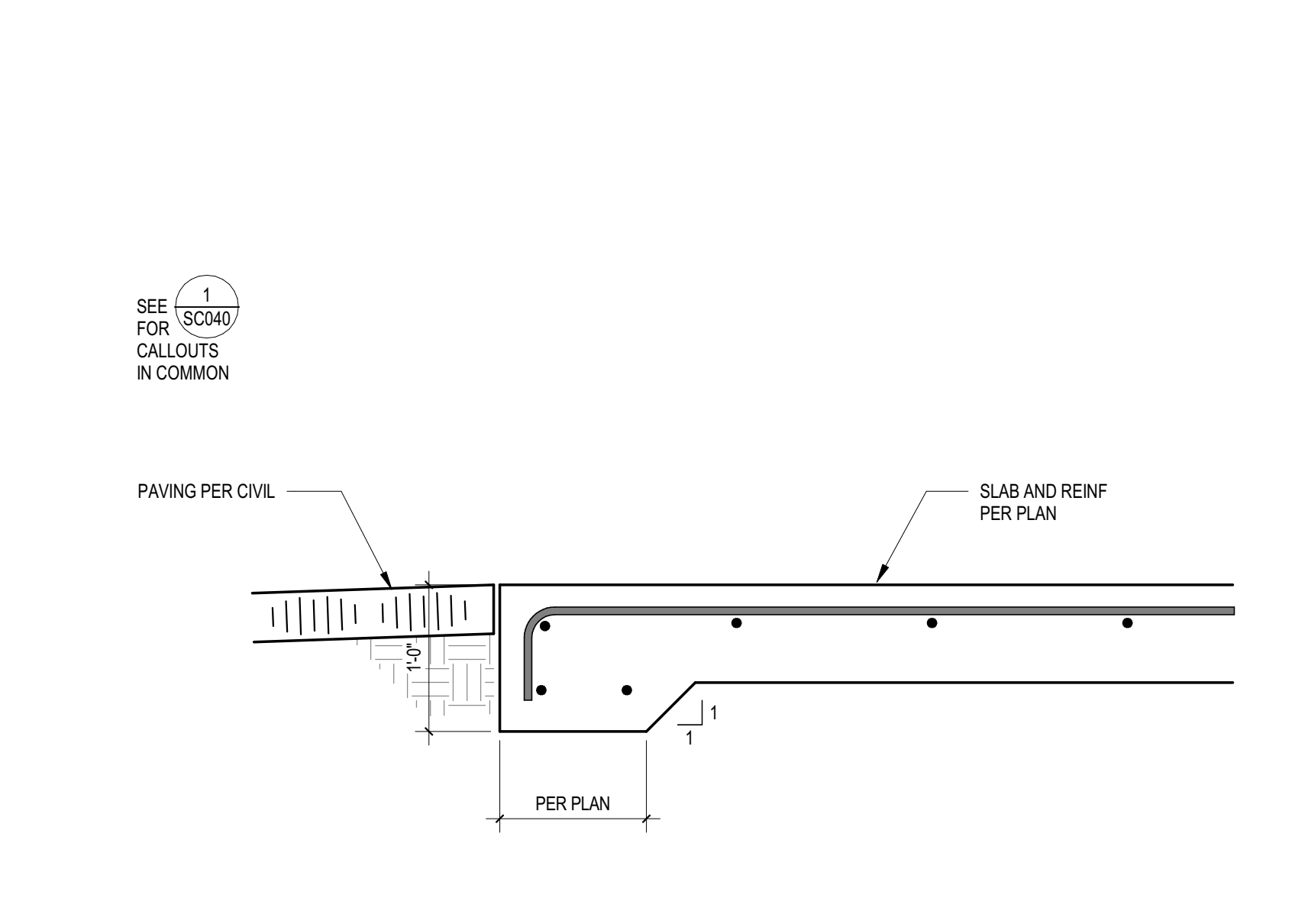
7



7 SECTION
1" = 1'-0" SC040-7



8 SECTION
1" = 1'-0" SC040-8



9 SECTION
1" = 1'-0" SC040-9

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A | B | C | D | E | F | G | H | J | K

7 FOUNDATION DETAILS

8 FEDERAL WAY O&M FACILITIES SITE STRUCTURES

Table with columns for REVISION and DATE. Includes fields for DATE (05.06.24) and JOB NO. (023-087). BID SET.

10 SC040

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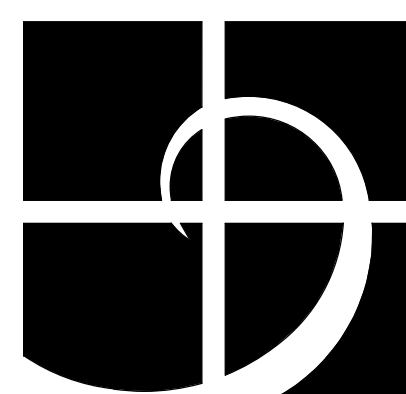
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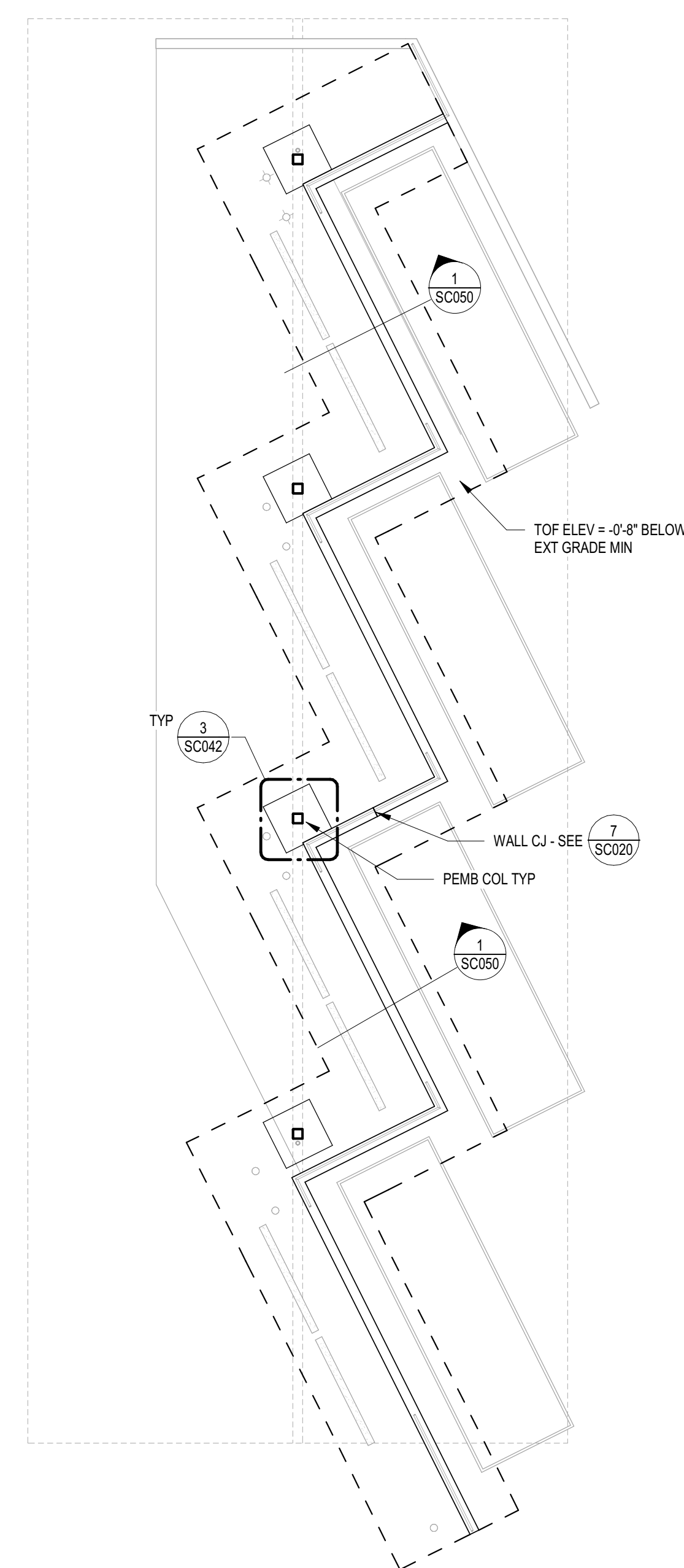


GENERAL PLAN NOTES

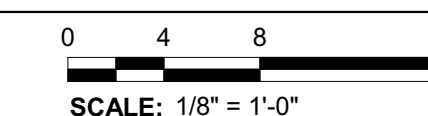
1. SEE SHEETS SC001 AND SC002 FOR STRUCTURAL NOTES.
2. SEE SHEETS SC010 AND SC011 FOR QUALITY ASSURANCE PLAN.
3. SEE SHEET SC030 FOR FRAMING NOTES AND SCHEDULES.
4. SEE SHEETS SC020 THRU SC021 FOR TYPICAL DETAILS.

CONTRACTOR NOTES:

- ALL EXTERIOR STEEL FRAMING SHALL BE HOT-DIPPED GALVANIZED
- PROVIDE MN G90 GALV COATING AT ALL LIGHT GAGE FRAMING AND METAL ROOF DECKING



1 FOUNDATION PLAN-G
1/8" = 1'-0"



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7 FOUNDATION PLAN

8 FEDERAL WAY O&M FACILITIES SITE STRUCTURES

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE: 05.06.24 JOB NO.: 023-087

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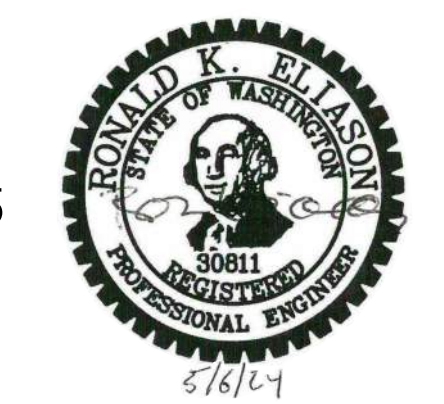
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MECHANICAL ABBREVIATIONS AND GENERAL NOTES

CITY OF FEDERAL WAY SITE

FEDERAL WAY, WASHINGTON

Table with columns for REVISION and DATE, containing multiple empty rows for revision tracking.

DATE 05.06.24 JOB NO. 023-087

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MD002

ABBREVIATIONS

Main table of abbreviations with columns for symbol, description, and units. Includes entries for diameter, phase, air amps, fire/smoke damper, etc.

GENERAL NOTES - MECHANICAL

- 1. COORDINATE MECHANICAL WORK WITH THAT OF OTHER TRADES (ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE). REFER TO ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE DRAWINGS AND SPECIFICATIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND/OR INSTALLATION OF ALL WORK.

MECHANICAL EQUIPMENT INSTALLATION NOTES

- 1. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT. VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

SHEET METAL NOTES

- 1. VOLUME DAMPERS: PROVIDE A MANUAL VOLUME DAMPER FOR EACH SUPPLY, RETURN, AND EXHAUST OPENING. LOCATED AS FAR UPSTREAM AS POSSIBLE FROM THE OPENING. PROVIDE A MANUAL VOLUME DAMPER FOR BRANCH MAINS SERVING MORE THAN ONE OPENING.

NON-STRUCTURAL MECHANICAL COMPONENT NOTES

- 1. THE COMPONENT IMPORTANCE FACTOR (Ip) FOR ALL NON-STRUCTURAL COMPONENTS SHALL BE: Ip = 1.5
- 2. THE FOLLOWING ITEMS ARE TAKEN DIRECTLY FROM THE 2018 INTERNATIONAL BUILDING CODE AND FROM THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 7. THE CONTRACTOR SHALL REFER TO THE ABOVE FOR ADDITIONAL INFORMATION, EXCEPTIONS, AND FURTHER DESCRIPTIONS. THE CONTRACTOR SHALL ADHERE TO REQUIREMENTS AND AS SUCH, SHALL BE INCLUDED WITHIN BID. ALSO REFER TO SPECIFICATION SECTION 230550.

PROJECT: a23-087 - CITY OF FEDERAL WAY - MECH - MECH_001.dwg

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FAN SCHEDULE

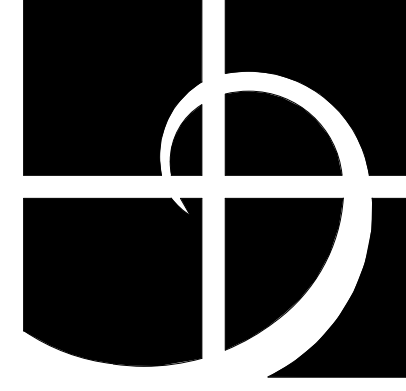
MARK	LOCATION	AREA SERVED	MANUFACTURER / MODEL NO.	FAN TYPE	AIRFLOW (CFM)	ESP (IN WG)	FAN RPM	FAN WHEEL				MOTOR				SPEED CONTROL	BACKDRAFT DAMPNER AT FAN	ELECTRICAL			PHYSICAL		SOUND INLET (SONES)	MOUNTING / SUPPORT	INTERLOCK DIV 23	INTERLOCK DIV 26	DETAIL / DIAGRAM REFERENCE	CONTROL DIAGRAM / SEQUENCE	NOTES	MARK
								TYPE	SIZE (IN)	DRIVE	CLASS	RPM	BHP	HP	V/Ø			MCA	MOCP	SCCR (KA)	DIAxH (INxIN)	WEIGHT (LBS)								
EF-D-01	ROOF	SWAT VEHICLE STORAGE 101	GREENHECK / G-099-VG	DOWNBLAST	800	0.35	1335	BI	11.188	DIRECT	I	1725	0.12	1/4	115/1	ECM	N	4	15	5	25x26	50	9.1	ROOF	Y	N	2 / MD801	1 / MD901	1, 2, 3, 4	EF-D-01

NOTES:
 1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
 2. PROVIDE WITH MOTORIZED DAMPER, BIRDSCREEN, NEMA 3R DISCONNECT, CURB SEAL, HINGED BASE, ROOF CURB IN ACCORDANCE WITH SPECIFICATION SECTION 233400, AND ECM MOTOR WITH 0-10 VDC INPUT.
 3. PROVIDE WITH VARI-GREEN HOA.
 4. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS.

AIR DEVICE SCHEDULE

MARK	MANUFACTURER / MODEL NO.	SUPPLY / RETURN / EXH	DESCRIPTION	TYPE (BORDER TYPE)	NECK SIZE (LxW) (IN)	FACE SIZE (LxW) (IN)	AIRFLOW RANGE < 25 NC	FRAME TYPE	FINISH	MATERIAL	ACC.	NOTES	MARK
E1	TITUS 33RL	RET/EXH	HEAVY DUTY RETURN GRILLE	DUCT OR SIDEWALL	PER PLANS	-	-	1	WHITE	STEEL	-	1	E1

NOTES:
 1. NONE.



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MECHANICAL SCHEDULES

CITY OF FEDERAL WAY SITE

FEDERAL WAY, WASHINGTON

REVISION	DATE

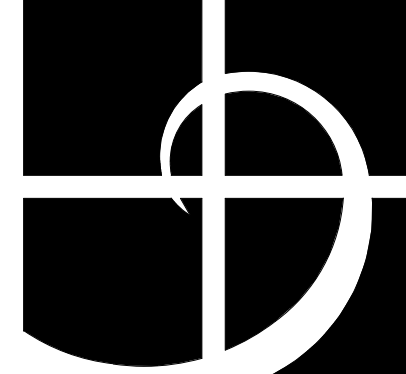
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5/6/2024

ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES

CITY OF FEDERAL WAY SITE

FEDERAL WAY, WASHINGTON

REVISION DATE

9

DATE JOB NO.

05.06.24 023-087

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DRAWING INDEX

EC001	ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES
EC100	ELECTRICAL PLAN - BUILDING C
EC901	ONLINE DIAGRAM
EC902	PANEL SCHEDULES
ED100	ELECTRICAL PLAN - BUILDING D
EE100	ELECTRICAL PLAN - BUILDING E
EF100	ELECTRICAL PLAN - BUILDING F
EG100	ELECTRICAL PLAN - BUILDING G
EH100	ELECTRICAL PLAN - BUILDING H

ABBREVIATIONS

A	AMPERE	MFR	MANUFACTURER
AC	AIR CONDITIONING; ALTERNATING CURRENT, ABOVE COUNTER	MH	MANHOLE
AF	AMP FRAME	MIN	MINIMUM
AFC	AVAILABLE FAULT CURRENT	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	MM	MULTIMODE
AG	ABOVE GRADE	MPOE	MAIN POINT OF ENTRY
AHJ	AUTHORITIES HAVING JURISDICTION	MPOP	MAIN POINT OF PRESENCE
AHU	AIR HANDLING UNIT	MTD	MOUNTED
AIC	AMPERE INTERRUPTING CAPACITY	MTS	MANUAL TRANSFER SWITCH
AL	ALUMINUM	MV	MEDIUM VOLTAGE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	(N)	NEW
AS	AMP SWITCH	N	NEUTRAL
AT	AMP TRIP	NAC	NOTIFICATION APPLIANCE CIRCUIT
ATM	ASYNCHRONOUS TRANSFER MODE	NEC	NATIONAL ELECTRICAL CODE
ATS	AUTOMATIC TRANSFER SWITCH	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AV	AUDIO VISUAL	NF	NON-FUSED
AWG	AMERICAN WIRE GAUGE	NIC	NOT IN CONTRACT
		NL	NIGHT LIGHT
BAS	BUILDING AUTOMATION SYSTEM	OFC	OPTICAL FIBER CABLE
BATT	BATTERIES	CHL	OVERHEAD LINE
BL	BASIC IMPULSE INSULATION LEVEL	OL	OVERLOAD
BKBD	BACKBOARD	OS	OCCUPANCY SENSOR
BKR	BREAKER	OSP	OUTSIDE PLANT
BLDG	BUILDING		
C	CONDUIT; DEGREES CELCIUS	P	POLE
CAB	CABINET	PB	PULL-BOX
CAT	CATEGORY	PF	POWER FACTOR
CATV	COMMUNITY ANTENNA TELEVISION	PH	PHASE
CB	CIRCUIT BREAKER	PIR	PASSIVE INFRARED
CCTV	CLOSED CIRCUIT TELEVISION	PIV	POST INDICATING VALVE
CLG	CEILING	PNL	PANEL
CM	CEILING-MOUNTED	PP	PATCH
CO	CONDUIT ONLY	PT	POTENTIAL TRANSFORMER
CR	CONTROLLED RECEPTACLE	PVC	POLYVINYL CHLORIDE
CT	CURRENT TRANSFORMER	RCP	REFLECTED CEILING PLANT
CU	COPPER	REC	RECEPTACLE
		REF	REFER TO
D	DEDICATED	REV	REVISION
DDC	DIRECT DIGITAL CONTROL	RM	ROOM
DEMARC	DEMARICATION POINT	RTRC	REINFORCED THERMOSETTING RESIN CONDUIT
DISC	DISCONNECT	RU	RACK UNIT
DIST	DISTRIBUTION		
DSL	DIGITAL SUBSCRIBER LINE	SHT	SHEET
DWG	DRAWING	SLC	SIGNALING LINE CIRCUIT
(E)	EXISTING	SM	SINGLEMODE
EA	EACH	SMFC	SURFACE-MOUNTED OPTICAL FIBER CABINET
EF	EXHAUST FAN	SMR	SURFACE METAL RACEWAY
EIA	ELECTRONIC INDUSTRIES ASSOCIATION	SONET	SYNCHRONOUS OPTICAL NETWORK
ELEV	ELEVATION	SP	SERVICE PROVIDER
EM	EMERGENCY	SPD	SURGE PROTECTIVE DEVICE
EMT	ELECTRICAL METALLIC TUBING	SPEC	SPECIFICATIONS
ENCL	ENCLOSURE	SPST	SINGLE POLE SINGLE THROW
EPM	ELECTRONIC POWER METER	ST	SHUNT TRIP
EPO	EMERGENCY POWER OFF	STP	SHIELDED TWISTED PAIR
EQUIP	EQUIPMENT	SVGA	SUPER VIDEO GRAPHICS ARRAY
ETP	EXISTING TO REMAIN	SW	SWITCH
EVCS	ELECTRIC VEHICLE CHARGING STATION	SWBD	SWITCHBOARD
EW	ELECTRIC WATER COOLER	TBB	TELECOMMUNICATIONS BONDING BACKBONE
F	FUSES; DEGREES FAHRENHEIT	TEL	TELEPHONE
FA	FIRE ALARM	TELCO	TELEPHONE COMPANY
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
FACP	FIRE ALARM CONTROL PANEL	TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
FEL	FURNISHED BY OWNER	TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR	TP	TAMPERPROOF
FOIO	FURNISHED BY OWNER INSTALLED BY OWNER	TR	TELECOMMUNICATIONS ROOM
FSD	FIRE SMOKE DAMPER	TV	TELEVISION
G	GROUND	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
GB	GROUND FAULT CIRCUIT INTERRUPTER BREAKER	TYP	TYPICAL
GRD	GROUND FAULT CIRCUIT INTERRUPTER	UG	UNDERGROUND
GFP	GROUND FAULT PROTECTION	UL	UNDERWRITERS LABORATORIES
GND	GROUND	UON	UNLESS OTHERWISE NOTED
GRS	GALVANIZED RIGID STEEL	UPS	UNINTERRUPTIBLE POWER SUPPLY
HC	HORIZONTAL CROSS CONNECT	USB	UNIVERSAL SERIAL BUS
HID	HIGH INTENSITY DISCHARGE	UTP	UNSHIELDED TWISTED PAIR
HP	HORSEPOWER	UV	UNIT VENTILATOR
HTR	HEATER	V	VOLTS
HZ	HERTZ	VA	VOLT AMPERES
J	JUNCTION	VFD	VARIABLE FREQUENCY DRIVE
K	KIRK KEY	W	WASTE, WATT, WIDE, WATER
KCMIL	THOUSAND CIRCULAR MILS	W/	WITH
kVA	KILOVOLT AMPERE	W/O	WITHOUT
KVAR	KILOVOLT AMPERE REACTIVE	WAN	WIDE AREA NETWORK
KW	KILOWATT	WG	WIRE GUARD
L	LOCAL AREA NETWORK	WH	WATT HOUR METER
LAN	LIGHTING CONTROL PANEL	WP	WEATHERPROOF
LEC	LOCAL EXCHANGE CARRIER	XFMR	TRANSFORMER
LT	LIGHT	Y	WYE
LTG	LIGHTING	Z	IMPEDANCE
M	METER		
MAN	METROPOLITAN AREA NETWORK		
MAX	MAXIMUM		
MC	MAIN CROSS CONNECT, METAL CLAD (CABLE)		
MCB	MAIN CIRCUIT BREAKER		
MCC	MOTOR CONTROL CENTER		
MDF	MAIN DISTRIBUTION FRAME		
MDP	MAIN DISTRIBUTION PANEL		

NON-STRUCTURAL ELECTRICAL COMPONENT NOTES

- THE FOLLOWING ITEMS ARE TAKEN DIRECTLY FROM THE 2018 INTERNATIONAL BUILDING CODE AND FROM THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 7. THE CONTRACTOR SHALL REFER TO THE ABOVE FOR ADDITIONAL INFORMATION, EXCEPTIONS, AND FURTHER DESCRIPTIONS. THE CONTRACTOR SHALL ADHERE TO REQUIREMENTS AND AS SUCH, SHALL BE INCLUDED WITHIN BID. ALSO REFER TO SPECIFICATIONS.
- 2018 IBC, 1613.1. SCOPE: ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND NON-STRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A.
- ASCE 7 CONTRACTOR RESPONSIBILITY: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN AND SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE AUTHORITY HAVING JURISDICTION AND TO THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE THE FOLLOWING:
 - ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
 - ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
 - PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS, AND
 - IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.
- DIVISION 26 RESPONSIBILITIES:
 - HANGERS AND SEISMIC BRACING FOR ELECTRICAL SYSTEMS SHALL BE DESIGNED AND SPECIFIED BY DIVISION 26. DIVISION 26 SHALL REFER TO THE ELECTRICAL DRAWINGS FOR LOCATIONS OF EQUIPMENT AND ELECTRICAL SYSTEMS AS STRUCTURAL DRAWINGS DO NOT SHOW THE LOCATIONS OF ELECTRICAL EQUIPMENT, RACEWAYS, AND OTHER COMPONENTS.
 - DIVISION 26 SHALL COORDINATE THE SUPPORT SYSTEMS AND DESIGN LOADS FOR HUNG RACEWAYS AND OTHER ELECTRICAL SYSTEMS (INCLUDING COMBINED MULTIPLE RACEWAY RUNS) WITH THE GENERAL CONTRACTOR AND THE STEEL AND WOOD JOIST MANUFACTURERS IN ADDITION TO OTHER TRADES THAT MAY BE IMPACTED.

GENERAL NOTES

- PERFORM WORK IN ACCORDANCE WITH APPLICABLE NATIONAL AND STATE CODES AS AMENDED LOCALLY AND ENFORCED BY THE AHJ.
- OBTAIN AND PAY FOR PERMITS REQUIRED FOR INSTALLATION OF WORK. ARRANGE AND SCHEDULE REQUIRED INSPECTIONS.
- COORDINATE WITH UTILITY COMPANIES FURNISHING SERVICES TO PROJECT. INSTALLATION OF UTILITY SERVICES SHALL BE IN ACCORDANCE WITH UTILITY REQUIREMENTS. VERIFY APPLICABLE INSTALLATION STANDARDS AND REQUIREMENTS. PROVIDE AND SUBMIT ELECTRICAL DRAWINGS TO UTILITY FOR APPROVAL PRIOR TO ROUGH-IN AND PRIOR TO ORDERING EQUIPMENT.
- DEVICE LOCATIONS ARE APPROXIMATE. COORDINATE DEVICE LOCATIONS AND ELEVATIONS WITH APPROPRIATE DOCUMENTS INCLUDING CASEWORK SHOP DRAWINGS AND ARCHITECT'S INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
- COORDINATE ELECTRICAL WORK WITH THAT OF OTHER TRADES. REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE DRAWINGS AND SPECIFICATIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND INSTALLATION OF WORK.
- COORDINATE LOCATION OF LIGHT FIXTURES WITH ARCHITECTURAL AND CIVIL PLANS AND ELEVATIONS.
- DEMOLISH EXISTING SYSTEMS AS INDICATED ON PLANS OR AS REQUIRED FOR INSTALLATION OF NEW WORK. MATERIAL SHALL BE REMOVED FROM SITE AND LEGALLY DISPOSED OF OFF SITE UNLESS OTHERWISE DIRECTED. RETURN ITEMS TO OWNER IN EXISTING CONDITION WHEN DIRECTED BY OWNER.
- COMPLETION OF WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE PROJECT SCHEDULE. SCHEDULE INSTALLATION WITH OTHER TRADES TO ENSURE PROJECT MILESTONES ARE MET.
- DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE COMPONENTS REQUIRED FOR COMPLETE AND OPERATIONAL SYSTEMS INCLUDING RACEWAYS, CONDUCTORS, BOXES, SUPPORTS AND SIMILAR ITEMS.

ENERGY CODE NOTES

- RECORD DRAWINGS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
- OPERATION AND MAINTENANCE MANUALS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
- THIS BUILDING AND ITS ENERGY SYSTEMS HAVE BEEN DESIGNED TO COMPLY WITH ENERGY CODE ENFORCED BY THE LOCAL AHJ. CONTRACTOR IS RESPONSIBLE FOR CORRECT INSTALLATION OF ENERGY CONSERVATION MEASURES.
- LIGHTING CONTROL SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS: TEST SYSTEMS TO ENSURE THAT BUILDING SYSTEMS HAVE BEEN INSTALLED AND FUNCTION PROPERLY AND EFFICIENTLY, AND CAN BE MAINTAINED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND OPERATIONAL REQUIREMENTS PER ENERGY CODE ENFORCED BY THE AHJ. REFER TO SPECIFICATIONS FOR ADDITIONAL COMMISSIONING REQUIREMENTS.

GENERAL

- EXISTING ELECTRICAL TO BE REMOVED
- EXISTING ELECTRICAL TO REMAIN
- NEW ELECTRICAL WORK
- MATCHLINE OR PROPERTY LINE
- ENLARGED PLAN BOUNDARY

- DETAIL/PLAN IDENTIFIER
- SECTION IDENTIFIER
- ELEVATION IDENTIFIER

REVISION DEFINITION AREA, AREA ENCIRCLED CONTAINS CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE

- REVISION CALLOUT
- FLAG NOTE CALLOUT
- DEMOLITION NOTE TAG
- EQUIPMENT TAG
- MECHANICAL EQUIPMENT TAG

- NORTH ARROW
- LOCATION WHERE PICTURE WAS TAKEN AND DIRECTION

LIGHTING

- WALL-MOUNTED LIGHTING FIXTURE
- EMERGENCY LIGHTING FIXTURES (REFER TO LIGHTING FIXTURES SCHEDULE FOR ADDITIONAL INFORMATION)
- POLE-MOUNTED LIGHTING FIXTURE, QUANTITY OF HEADS AS INDICATED
- DOUBLE HEAD, POLE-MOUNTED, LIGHTING FIXTURE

FIRE ALARM SYSTEM

- DEVICE SUBSCRIPTS (TYPICAL ALL SYSTEMS)
 - WIP, WIG OR OTHER SUBSCRIPT (NON-STANDARD MOUNTING HEIGHT)
- FIRE ALARM CONTROL PANEL
- FIRE ALARM ANNUNCIATOR PANEL
- NOTIFICATION APPLIANCE CIRCUIT
- AUDIBLE/VISUAL COMBINATION, WALL-MOUNTED
- AUDIBLE/VISUAL COMBINATION, CEILING-MOUNTED
- VISUAL ONLY, WALL-MOUNTED
- VISUAL ONLY, CEILING-MOUNTED
- BEAM SMOKE DETECTOR - TRANSMITTER
- BEAM SMOKE DETECTOR - RECEIVER
- MANUAL PULL STATION
- SMOKE DETECTOR
- COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- FIRE/SMOKE DAMPER
- HEAT DETECTOR
- MAGNETIC DOOR HOLD OPEN DEVICE
- FLOW SWITCH
- TAMPER SWITCH
- PRESSURE SWITCH
- RELAY
- DUCT SMOKE DETECTOR
- 10" EXTERIOR BELL - WEATHERPROOF
- KNOX BOX

POWER

- SWITCHBOARD/SWITCHGEAR
- PANELBOARD, FLUSH-MOUNTED
- PANELBOARD, SURFACE-MOUNTED
- TRANSFORMER
- MOTOR CONNECTION
- DISCONNECT SWITCH, NON-FUSED
- DISCONNECT SWITCH, FUSED
- ENCLOSED CIRCUIT BREAKER
- VARIABLE FREQUENCY DRIVE
- MANUAL MOTOR STARTER WITH THERMAL OVERLOADS
- COMBINATION STARTER/DISCONNECT
- MAGNETIC STARTER
- EQUIPMENT CONNECTION, CONFIRM CONNECTION WITH EQUIPMENT MANUFACTURER
- FIRE/SMOKE DAMPER
- PUSHBUTTON CONTROLLER (SINGLE OR MULTIPLE BUTTONS)
- EMERGENCY POWER OFF PUSHBUTTON

RECEPTACLES

- DEVICE SUBSCRIPTS
 - (CIRCUIT NUMBER)
 - (CIR. OR EM. OR GF. OR IS. OR TP. OR USB. OR WIP OR OTHER SUBSCRIPT)
 - (NON-STANDARD MOUNTING HEIGHT OR A.C.)
- SPECIAL RECEPTACLE
- DUPLEX RECEPTACLE
- FOURPLEX RECEPTACLE
- SPLIT WIRE RECEPTACLE
- SIMPLEX RECEPTACLE
- CORD DROP RECEPTACLE
- RETRACTABLE CORD REEL RECEPTACLE

RACEWAY AND BOXES

- JUNCTION BOX
- FURNITURE WALL FEED OUTLET BOX
- PULL BOX (WHERE INDICATED, SUBSCRIPT INDICATES PULL BOX NUMBER)
- HANDHOLE (WHERE INDICATED, SUBSCRIPT INDICATES HANDHOLE NUMBER)
- VAULT (WHERE INDICATED, SUBSCRIPT INDICATES VAULT TYPE)
- FLOORBOX (WHERE INDICATED, SUBSCRIPT INDICATES FLOOR BOX TYPE)
- POKE-THRU (WHERE INDICATED, SUBSCRIPT INDICATES FLOOR POKE-THRU TYPE)
- POWER POLE, FLOOR TO CEILING
- SURFACE METAL RACEWAY
 - RACEWAY CONCEALED IN-WALL OR IN-CEILING (EXPOSED IN UNFINISHED AREAS)
 - RACEWAY RUN BELOW FLOOR OR BELOW GRADE
- FLEXIBLE RACEWAY
- RACEWAY (CIRCLE DENOTES VERTICAL TRANSITION)
- RACEWAY CONTINUATION
- RACEWAY STUB WITH BUSHINGS
- RACEWAY SLEEVE WITH BUSHINGS
- FIRE STOPPING SLEEVE
- CABLE TRAY, 12"W x 4"H OVERHEAD, UNLESS OTHERWISE NOTED
- CABLE TRAY, OVERHEAD LADDER TYPE
- HOMERUN TO PANEL (INDICATES PANEL DESIGNATION AND CIRCUIT NUMBER)
 - (GAUGE OF WIRE OTHER THAN AWG#12)
 - NUMBER OF CONDUCTORS (GROUND CONDUCTORS)
 - (PHASE CONDUCTORS)
 - (NEUTRAL CONDUCTOR)

ONE-LINE DIAGRAM

- EQUIPMENT ENCLOSURE
- BUS
- WIRE
- TERMINAL / LUG
- CONNECTION
- DELTA
- WYE
- POWER TRANSFORMER
- CURRENT TRANSFORMER
- TRANSFER SWITCH
- CIRCUIT BREAKER, FIXED
- CIRCUIT BREAKER, DRAWOUT
- DISCONNECT SWITCH
- FUSED SWITCH
- FUSE
- FUSED CUTOUTS
- CIRCUIT BREAKER WITH GROUND FAULT PROTECTION
- CIRCUIT BREAKER WITH SHUNT TRIP OPERATOR
- CIRCUIT BREAKER WITH KIRK KEY
- FUSED SWITCH WITH GROUND FAULT PROTECTION
- MOTOR CONNECTION
- GENERATOR
- METERING DEVICE (WH = WATT HOUR METER (A = AMPMETER) (V = VOLTMETER))
- SHUNT TRIP
- GROUND FAULT PROTECTION
- ELECTRONIC POWER METER
- SURGE PROTECTIVE DEVICE
- GROUND
- AVAILABLE FAULT CURRENT (SYMMETRICAL) TAG
- FEEDER TAG
- PAD-MOUNTED TRANSFORMER
- TRANSFORMER
- PANELBOARD - MAIN LUGS ONLY
- PANELBOARD - MAIN CIRCUIT BREAKER

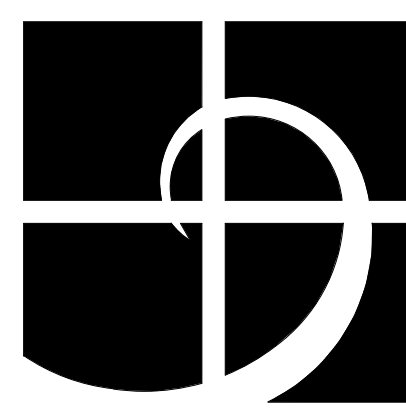
GROUNDING

- GROUNDING CONDUCTOR
- GROUNDING ROD
- GROUNDING BUSBAR
- EQUIPMENT GROUNDING CONNECTION
- GROUNDING STRAP

NOT ALL SYMBOLS MAY APPEAR ON THE DRAWINGS

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5/6/2024

ELECTRICAL
PLAN -
BUILDING C

CITY OF
FEDERAL WAY
SITE STRUCTURES

FEDERAL WAY, WASHINGTON

REVISION DATE

DATE JOB NO.

05.06.24 023-087

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LIGHTING CONTROL LEGEND

- OCUPANCY SENSOR CONTROL (STORAGE ROOMS)
- LIGHTING SHALL AUTOMATICALLY TURN ON UPON OCCUPANCY (EACH LIGHT FIXTURE IS A SEPARATE ZONE) WITH LIGHT OUTPUT DETERMINED BY PHOTOCELL.
- LIGHTING SHALL TURN OFF WITHIN 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE
- PROVIDE WALL SWITCH FOR ON/OFF MANUAL CONTROL

PRIMARY DAYLIGHT ZONE

SECONDARY DAYLIGHT ZONE

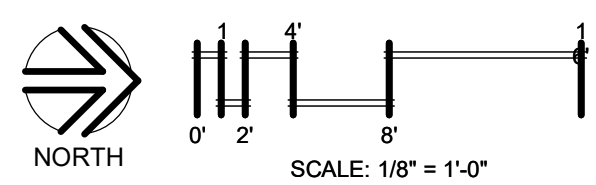
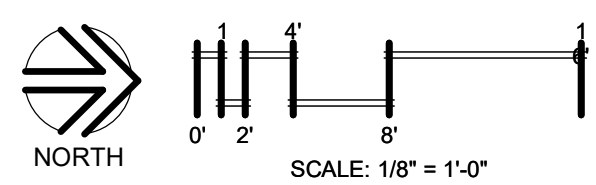
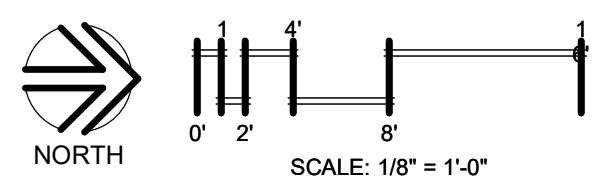
PROVIDE COMMISSIONING OF LIGHTING CONTROLS IN ACCORDANCE WITH AHJ AND CODE REQUIREMENTS.

SHEET NOTES

- CIRCUITS SHALL INCLUDE A DEDICATED NEUTRAL UNLESS OTHERWISE NOTED.
- EXIT SIGNS MOUNTED ABOVE DOORS SHALL BE CENTERED ON DOOR FRAME.
- PROVIDE UNSWITCHED HOT CONDUCTOR TO EXIT SIGNS.
- CONFIRM LOCATION OF ALL EXIT SIGNS WITH ARCHITECT. PROVIDE DIRECTIONAL ARROWS TO CORRESPOND WITH EGRESS PATHWAY.
- ALL FIXTURES CONNECTED TO EMERGENCY CIRCUIT SHALL BE CONTROLLED THROUGH UL924 RELAYS. THE UL924 CONTROL INPUT SHALL BE THE ADJACENT NORMAL CONTROLLED CIRCUIT (LIGHTING CONTROL PANEL, RELAY OUTPUT OR MANUAL SWITCH).
- PROVIDE ONE UL924 RELAY FOR EACH SWITCH LEG. PROVIDE 0-10V BYPASS CONTACT AS APPLICABLE. REFER TO DETAIL 1 ON SHEET EA801 FOR FURTHER INFORMATION.
- SURFACE MOUNT ALL ELECTRICAL EQUIPMENT, CONDUIT, AND OUTLET BOXES.
- STRUCTURE IS UNCONDITIONED ALL DEVICES (FIRE ALARM, ELECTRICAL) SHALL BE RATED FOR OPERATIONS IN AMBIENT CONDITIONS.
- REFER TO SITE VOLUME OF THE PROJECT FOR SITE PLAN, BRANCH CIRCUIT/FEEDER SCHEDULE AND ONE-LINE DIAGRAM FOR BRANCH CIRCUIT/FEEDER ROUTING, CONDUIT AND CONDUCTOR SIZING AND ANY ADDITIONAL INFORMATION.

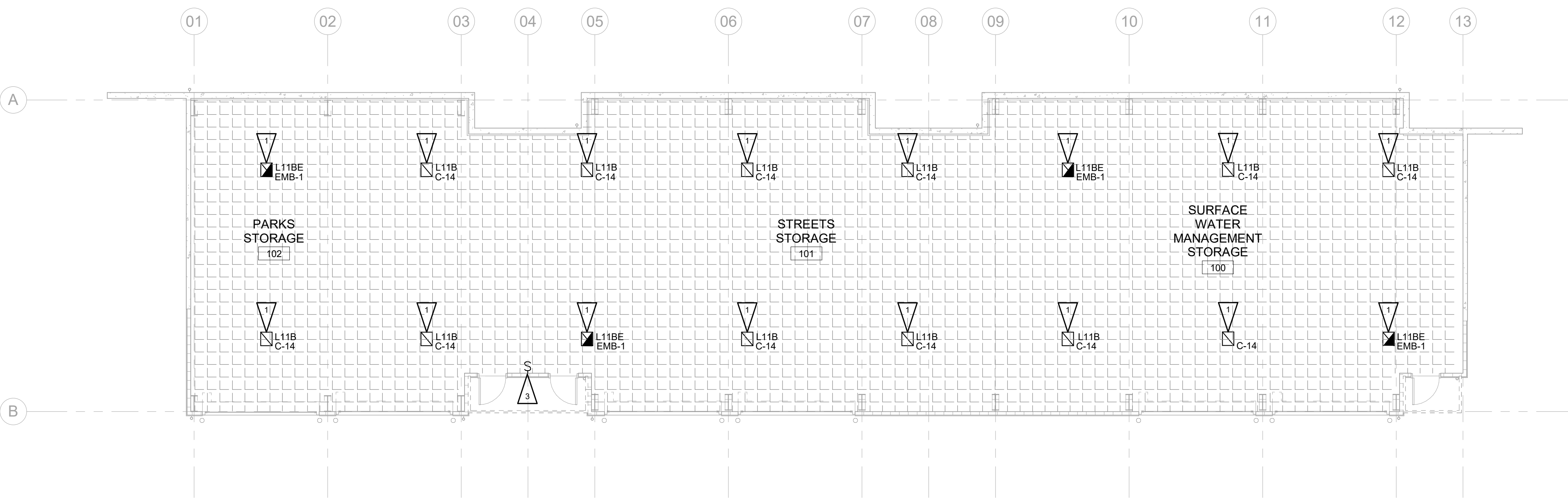
FLAG NOTES

- FIXTURE IS EQUIPPED WITH INTEGRAL OCCUPANCY SENSOR FOR AUTO ON/OFF OPERATION OF INDIVIDUAL FIXTURES.
- PROVIDE POWER CONNECTION TO OVERHEAD DOOR CONTROLLER. MOUNT DOOR CONTROLLER, DOOR CONTROLLER FURNISHED BY OTHERS. MOUNT DISCONNECT ADJACENT TO DOOR CONTROLLER. PROVIDE INTERCONNECTIONS TO DOOR MOTORS, AND DOOR OPERATORS. PROVIDE CONDUIT AND CONDUCTORS FOR DOOR SYSTEM INTERCONNECTIONS. REFER TO MANUFACTURERS MANUAL FOR INSTALLATION REQUIREMENTS.
- LIGHTING SWITCH TO OVERRIDE LIGHTING TO OFF.
- EXTEND NAC CIRCUIT FROM BUILDING B FAC.



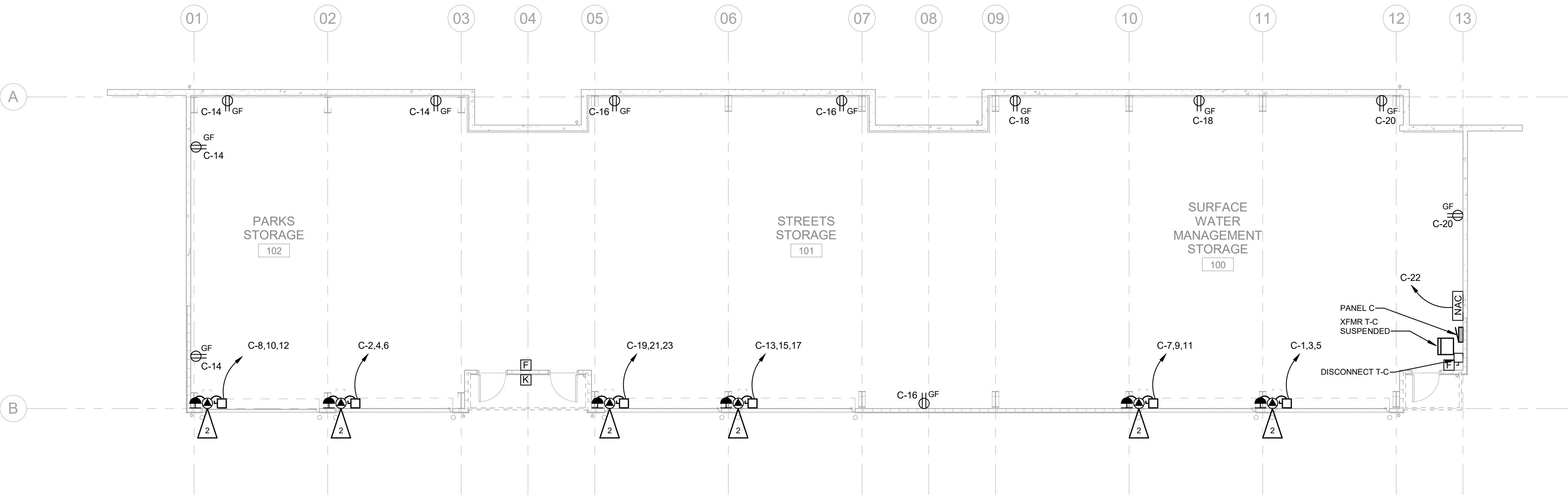
LIGHT FIXTURE SCHEDULE									
TYPE	DESCRIPTION	MANUFACTURER	MODEL	INPUT		REMARKS			
				VOLTS	WATTS				
L11B	LED RECTANGULAR HIGH BAY WITH INTEGRAL OCCUPANCY SENSOR AND DIMMING PHOTOCELL, WET RATED, ADJUSTABLE OUTPUT SET TO 69%	ACUTY LITHONIA	XB-L24-1200LM-AFMD-MVOLT-GZ10-35K-80CRNL-TAIR2-RMS0045-IBAC1205S	LED 3500K 9000 LM	UNV 54	1,2,3			
L11BE	LED RECTANGULAR HIGH BAY WITH INTEGRAL OCCUPANCY SENSOR AND DIMMING PHOTOCELL, WET RATED, ADJUSTABLE OUTPUT SET TO 69%, CONNECTED TO EMERGENCY POWER	ACUTY LITHONIA	XB-L24-1200LM-AFMD-MVOLT-GZ10-35K-80CRNL-TAIR2-RMS0045-IBAC1205S	LED 3500K 9000 LM	UNV 54	1,2,3			

REMARKS:
 1. SUSPEND FIXTURES 2'-0" BELOW ROOF STRUCTURE
 2. COORDINATE FINISH COLOR WITH ARCHITECT
 3. CONFIRM MOUNTING HARDWARE WITH STRUCTURAL PRIOR TO ORDERING



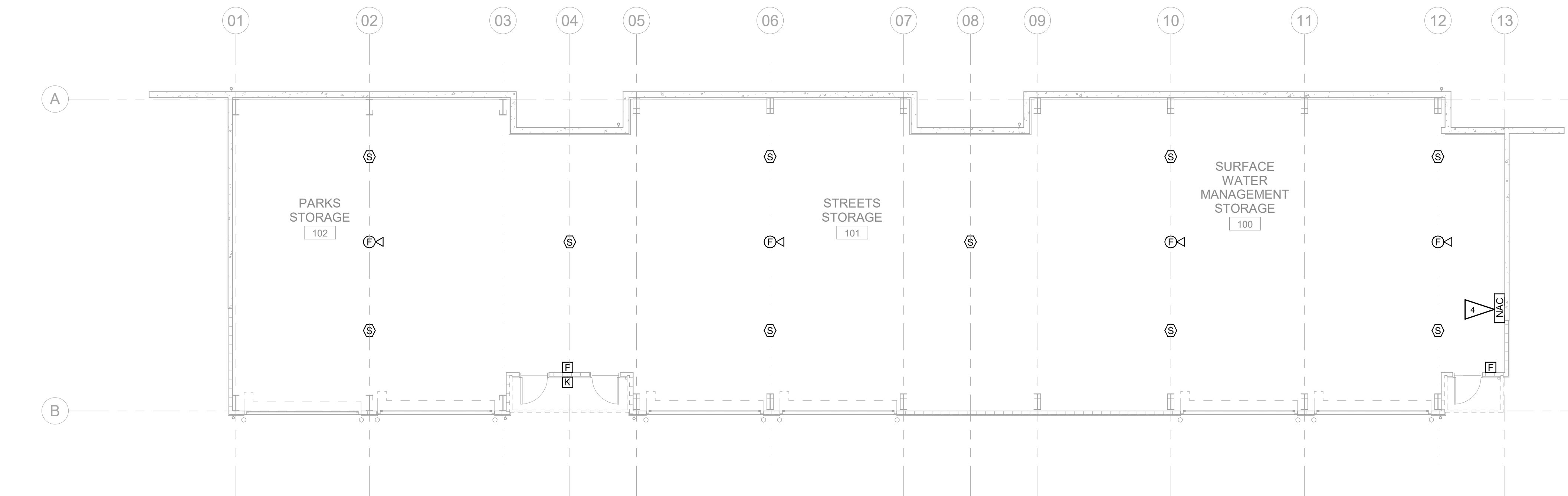
BUILDING C LIGHTING

1/8" = 1'-0"



BUILDING C POWER

1/8" = 1'-0"



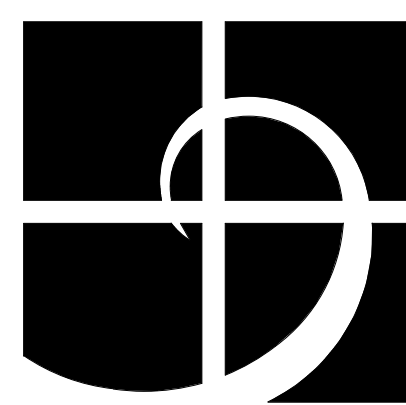
BUILDING C FIRE ALARM

1/8" = 1'-0"

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PANEL SCHEDULES

CITY OF FEDERAL WAY
SITE STRUCTURES

FEDERAL WAY, WASHINGTON

REVISION DATE

DATE JOB NO.

05.06.24 023-087

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PANEL SCHEDULE: 05/03/2024 PANEL 'C' PROJECT: Federal Way O&M Facility. Table with columns for item description, ckt no, breaker, load, and notes. Includes load calculations and summary.

PANEL SCHEDULE: 05/05/2024 PANEL 'D' PROJECT: Federal Way O&M Facility. Table with columns for item description, ckt no, breaker, load, and notes. Includes load calculations and summary.

PANEL SCHEDULE: 05/07/2024 PANEL 'HE' PROJECT: Federal Way O&M Facility. Table with columns for item description, ckt no, breaker, load, and notes. Includes load calculations and summary.

PANEL SCHEDULE: 04/30/2024 PANEL 'E' PROJECT: Federal Way O&M Facility. Table with columns for item description, ckt no, breaker, load, and notes. Includes load calculations and summary.

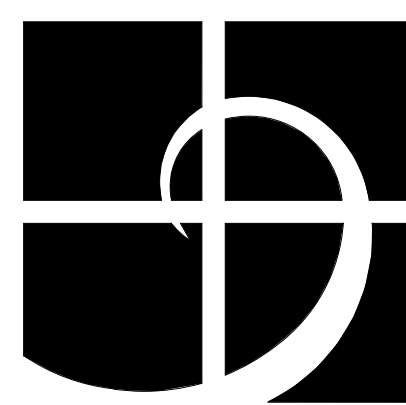
PANEL SCHEDULE: 05/07/2024 PANEL 'FS' PROJECT: Federal Way O&M Facility. Table with columns for item description, ckt no, breaker, load, and notes. Includes load calculations and summary.

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A | B | C | D | E | F | G | H | J | K



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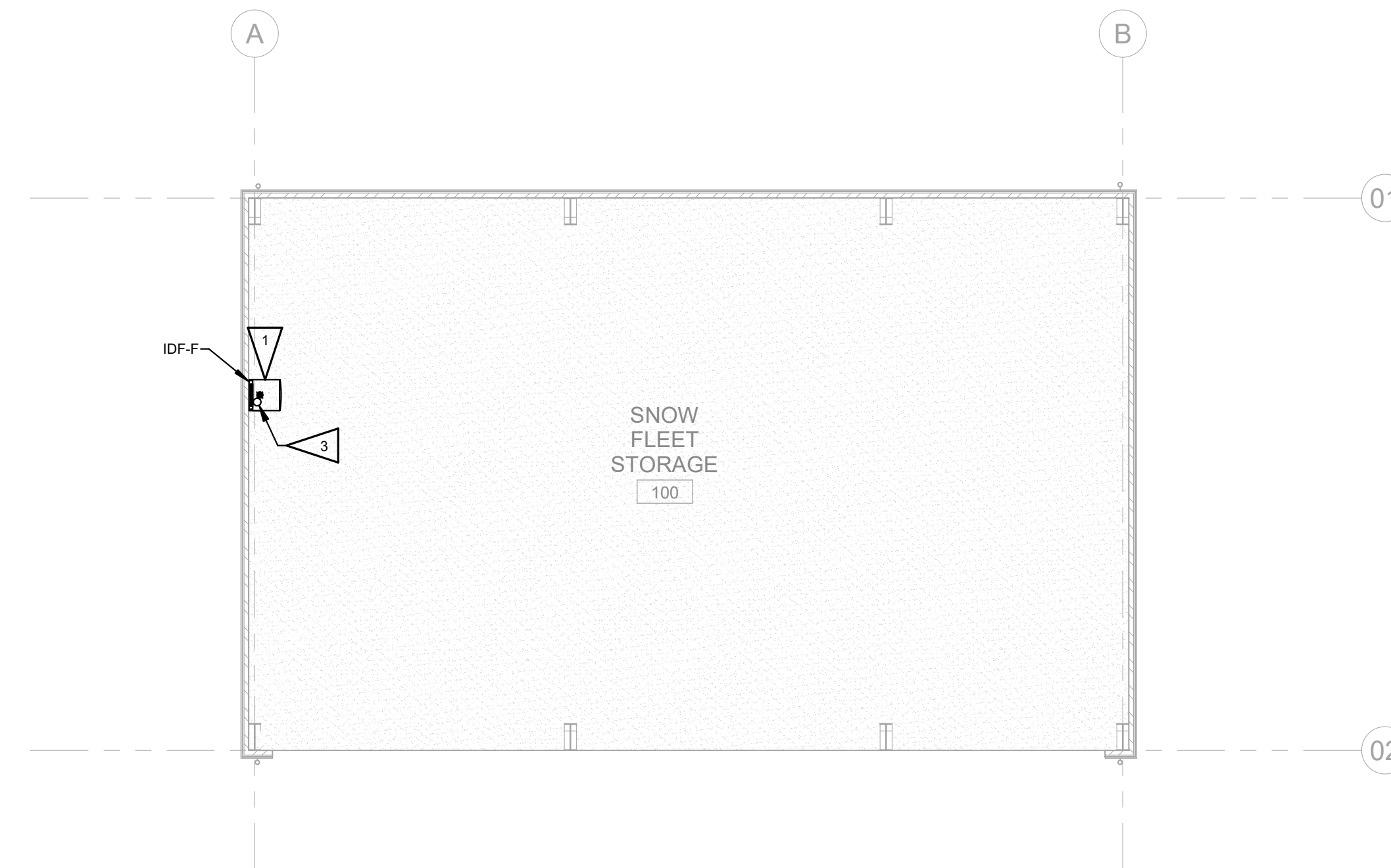
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SHEET NOTES

- SEE SHEET TC002 FOR BACK BOX AND CONDUIT ROUGH-IN REQUIREMENTS.
- COORDINATE DEVICE LOCATIONS AND HEIGHTS WITH ARCHITECTURAL ELEVATION DRAWINGS.
- OPEN CABLING PATHWAYS HAVE BEEN SHOWN FOR MAIN PATHWAYS ONLY. J-HOOKS SHALL BE PROVIDED TO EACH DEVICE LOCATION. J-HOOKS SHALL BE SPACED 4'-0" APART AND BE SUPPORTED BY DEDICATED HANGER/ROD FROM STRUCTURE AND/OR WALLS. PROVIDE SEPARATE J-HOOK PATHWAY FOR EACH LOW-VOLTAGE SYSTEM.

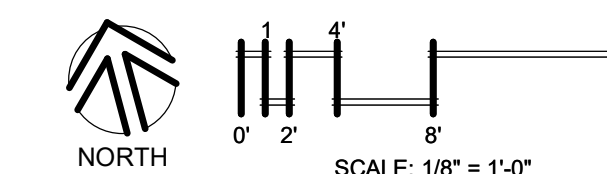
FLAG NOTES

- PROVIDE WALL-MOUNTED TELECOM ENCLOSURE. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION. SEE 1/T801 AND 2/T801 FOR ADDITIONAL INFORMATION.
- PROVIDE POLE-MOUNTED TELECOM ENCLOSURE. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION. SEE 2/T801 FOR ADDITIONAL INFORMATION.
- OSP PATHWAY. FIELD COORDINATE FINAL STUB-UP LOCATION PRIOR TO INSTALLATION. SEE T101 FOR ADDITIONAL INFORMATION.
- ACCESS CONTROL PANEL SHALL BE PROVIDED BY THE CITY'S SECURITY VENDOR.

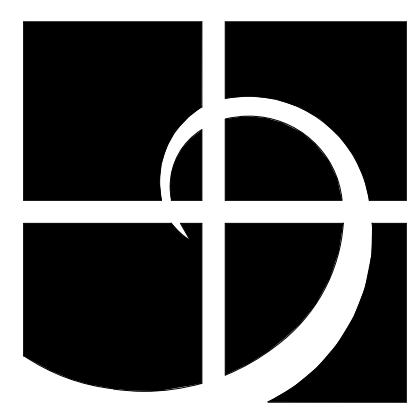


BUILDING F TELECOM PLAN
1/8" = 1'-0"

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Patrick D. Shannon
BICSI ID # 122533
Expires 12-31-24
RCDD # 122533

TELECOM
DETAILS

CITY OF FEDERAL
WAY
SITE

FEDERAL WAY, WASHINGTON

REVISION DATE

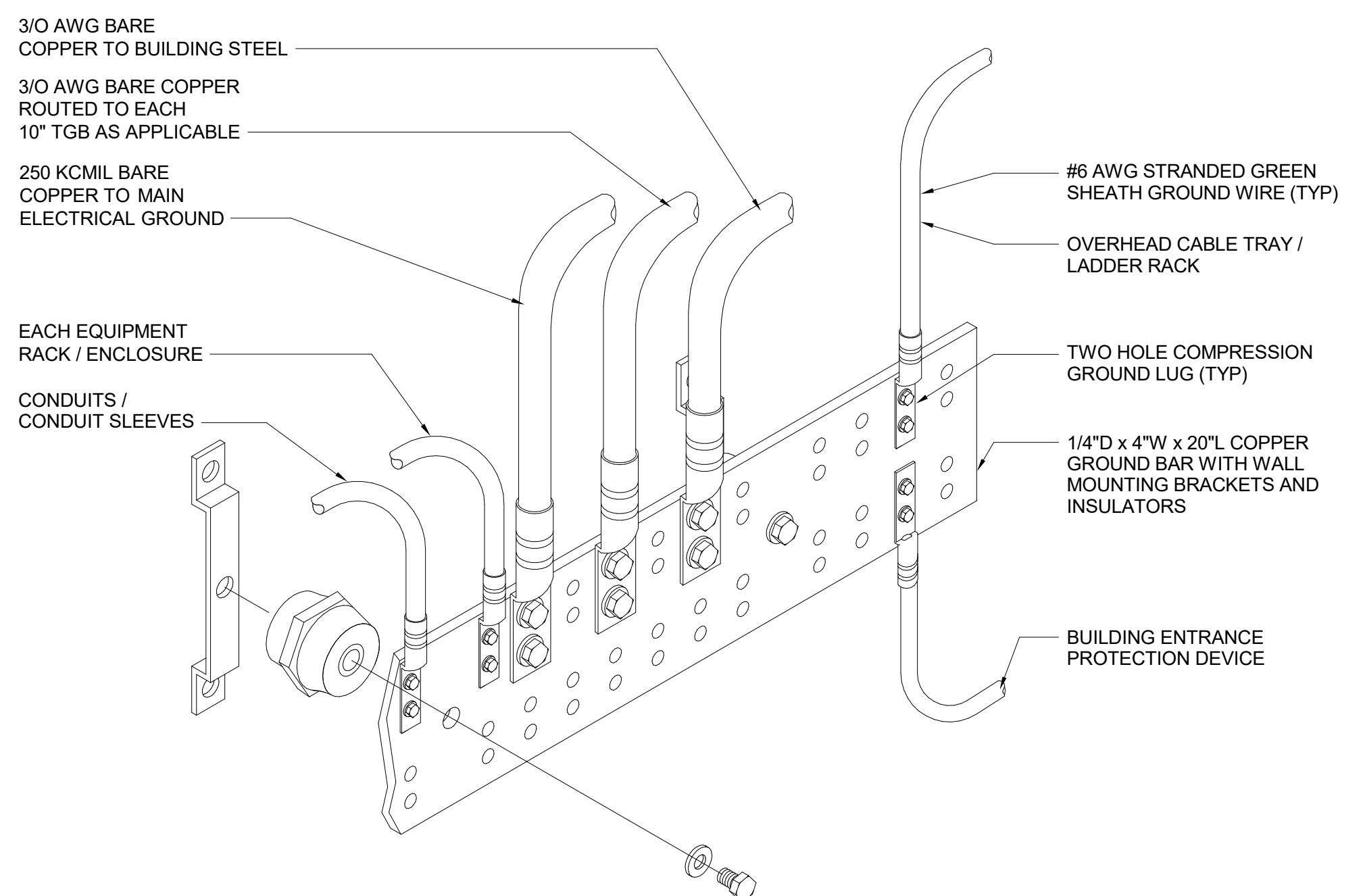
DATE JOB NO.

05.06.24 023-087

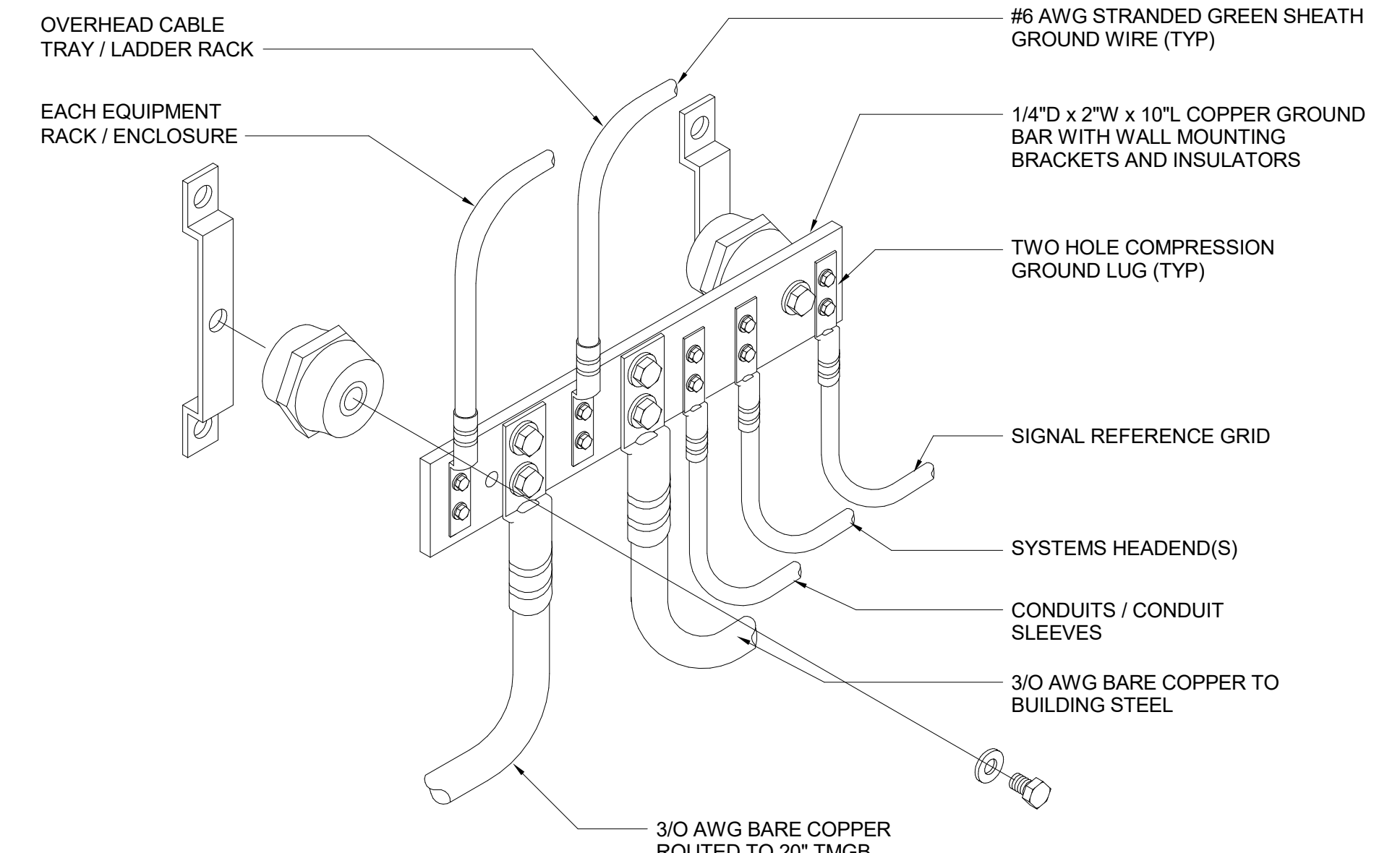
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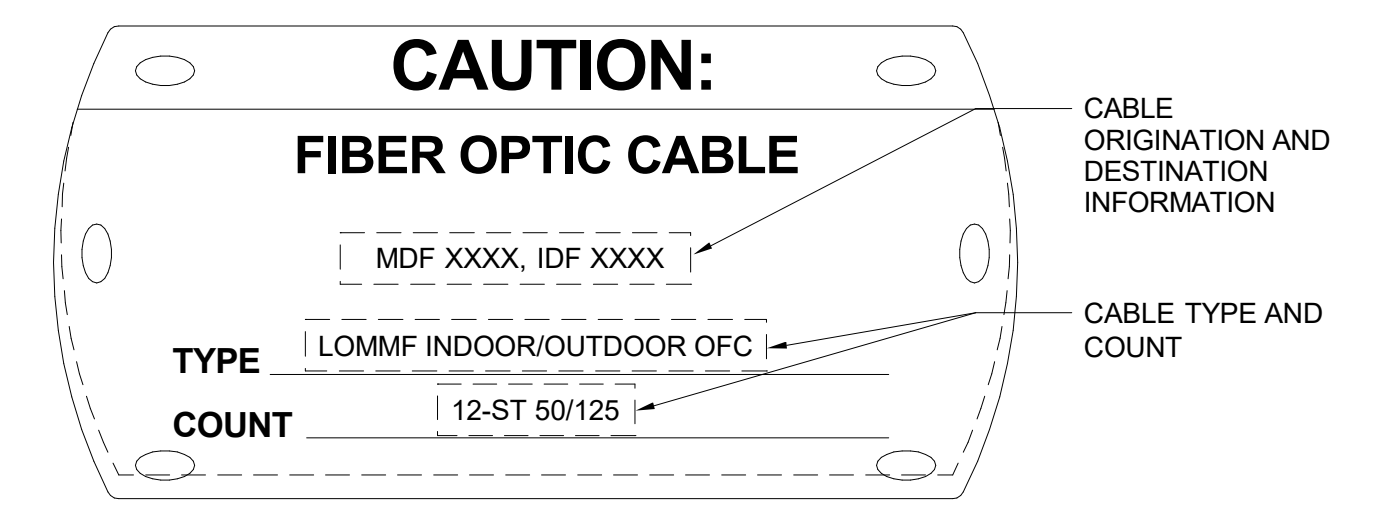


1
TC802 SCALE: NONE
**DETAIL - TELECOMMUNICATIONS
GROUND BUSBAR ASSEMBLY - 20"**



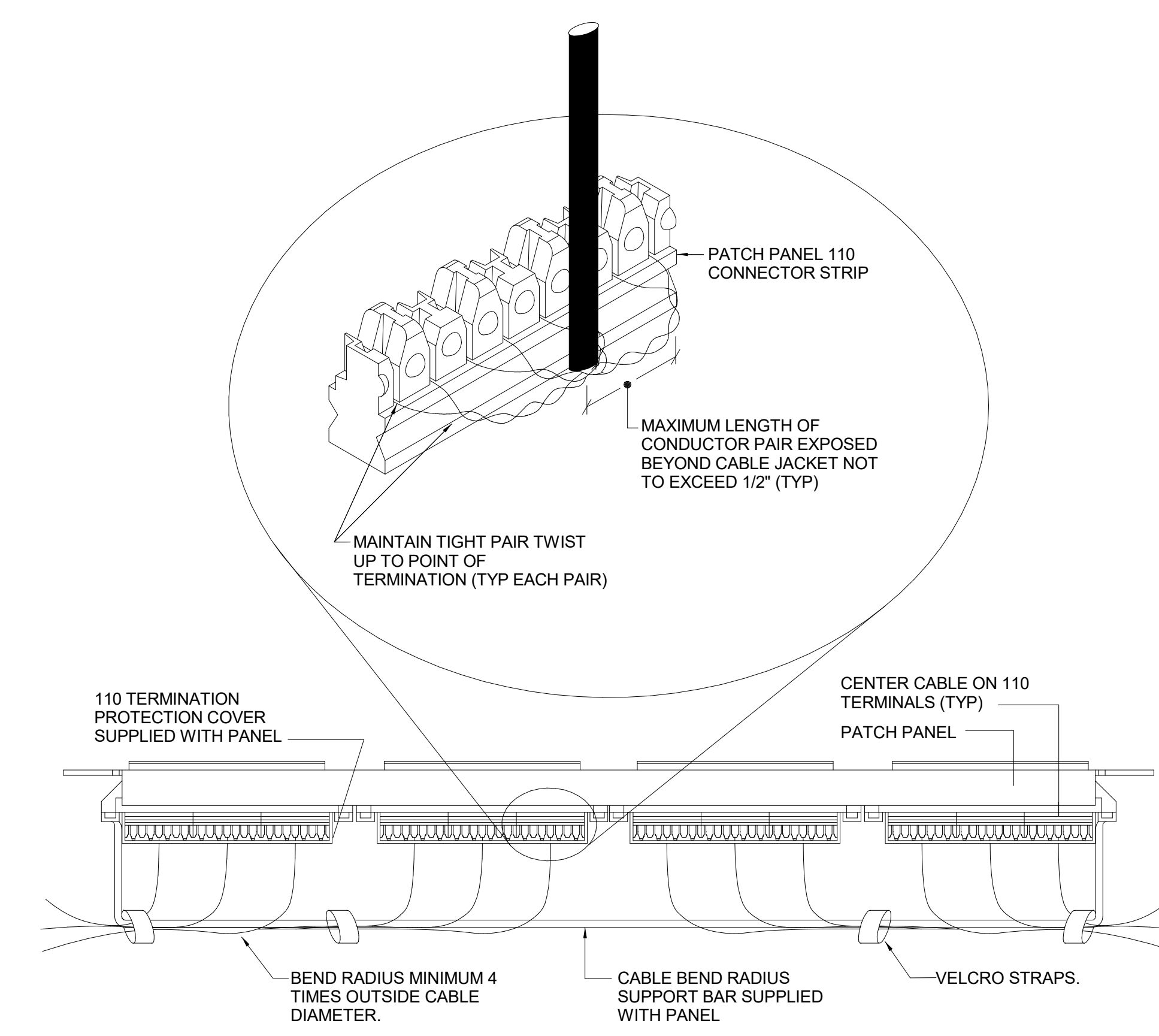
- NOTES**
1. NOT ALL PARTS AND PART NUMBERS ARE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR A COMPLETE WORKING INSTALLATION INCLUDING MISCELLANEOUS APPURTENANCES.
 2. ALL GROUNDING CONNECTORS SHALL BE DOUBLE LUG, DOUBLE COMPRESSION TERMINATIONS ON BOTH ENDS.

2
TC802 SCALE: NONE
**DETAIL - TELECOMMUNICATIONS
GROUND BUSBAR ASSEMBLY - 10"**



- CAUTION:**
FIBER OPTIC CABLE
- CABLE ORIGIN AND DESTINATION INFORMATION
MDF XXXX, IDF XXXX
CABLE TYPE AND COUNT
TYPE LOMMF INDOOR/OUTDOOR OFC
COUNT 12-ST 50/125
- NOTES:**
1. THE PART NUMBER AND TYPE ABOVE ARE EXAMPLES ONLY. PROVIDE THE CORRECT INFORMATION IN TAG PER SPECIFICATIONS OF INSTALLED TYPE. OTHER CABLE TYPES AND CONFIGURATIONS MAY VARY.
 2. REFER TO TELECOMMUNICATIONS RISER DIAGRAM AND TERMINATION SCHEDULES FOR CABLE ORIGIN AND DESTINATION LOCATIONS, CABLE TYPES, AND STRAND/PAIR COUNTS.

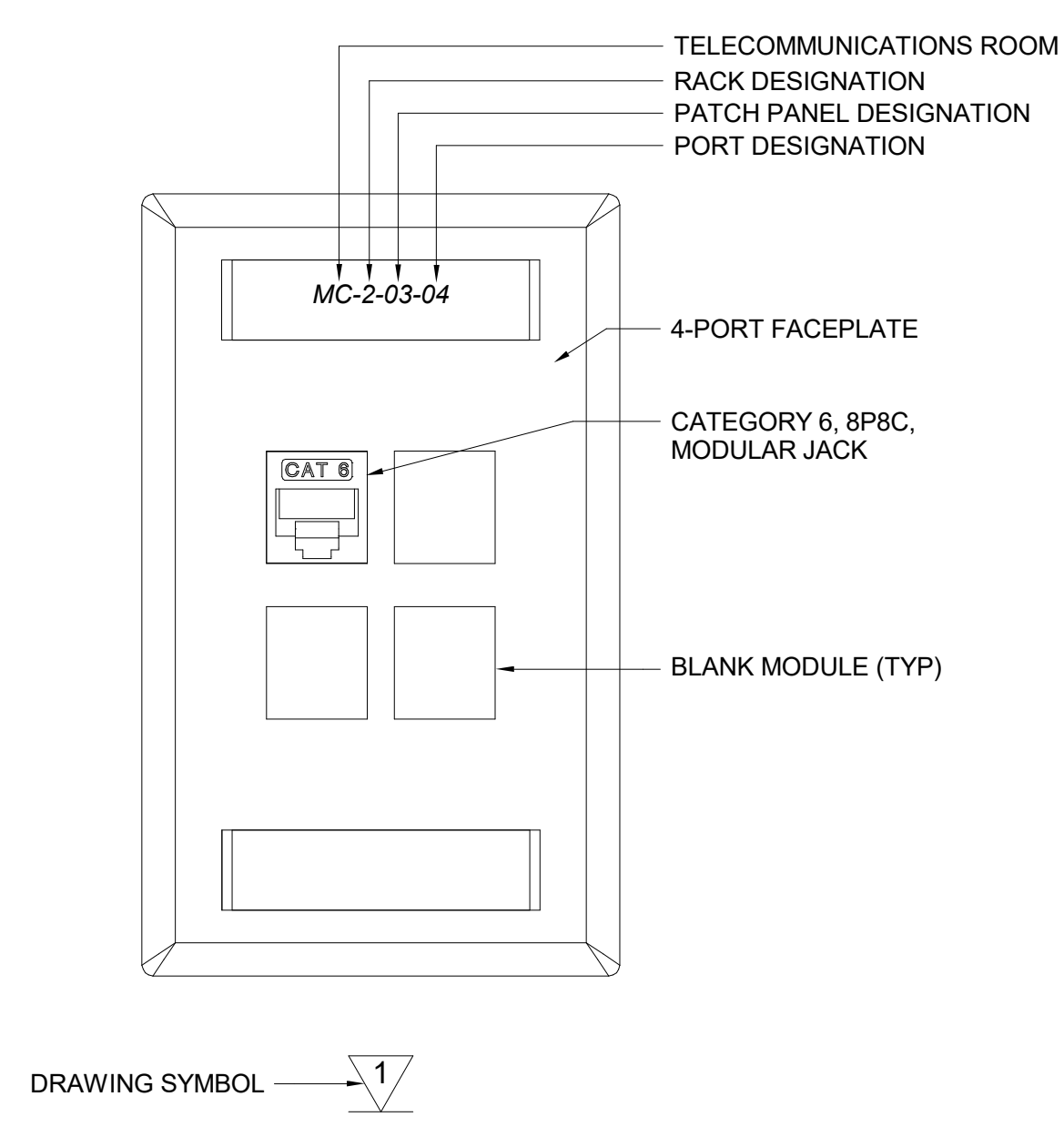
4
TC802 SCALE: NONE
DETAIL - OPTICAL FIBER CABLE MARKER DETAIL



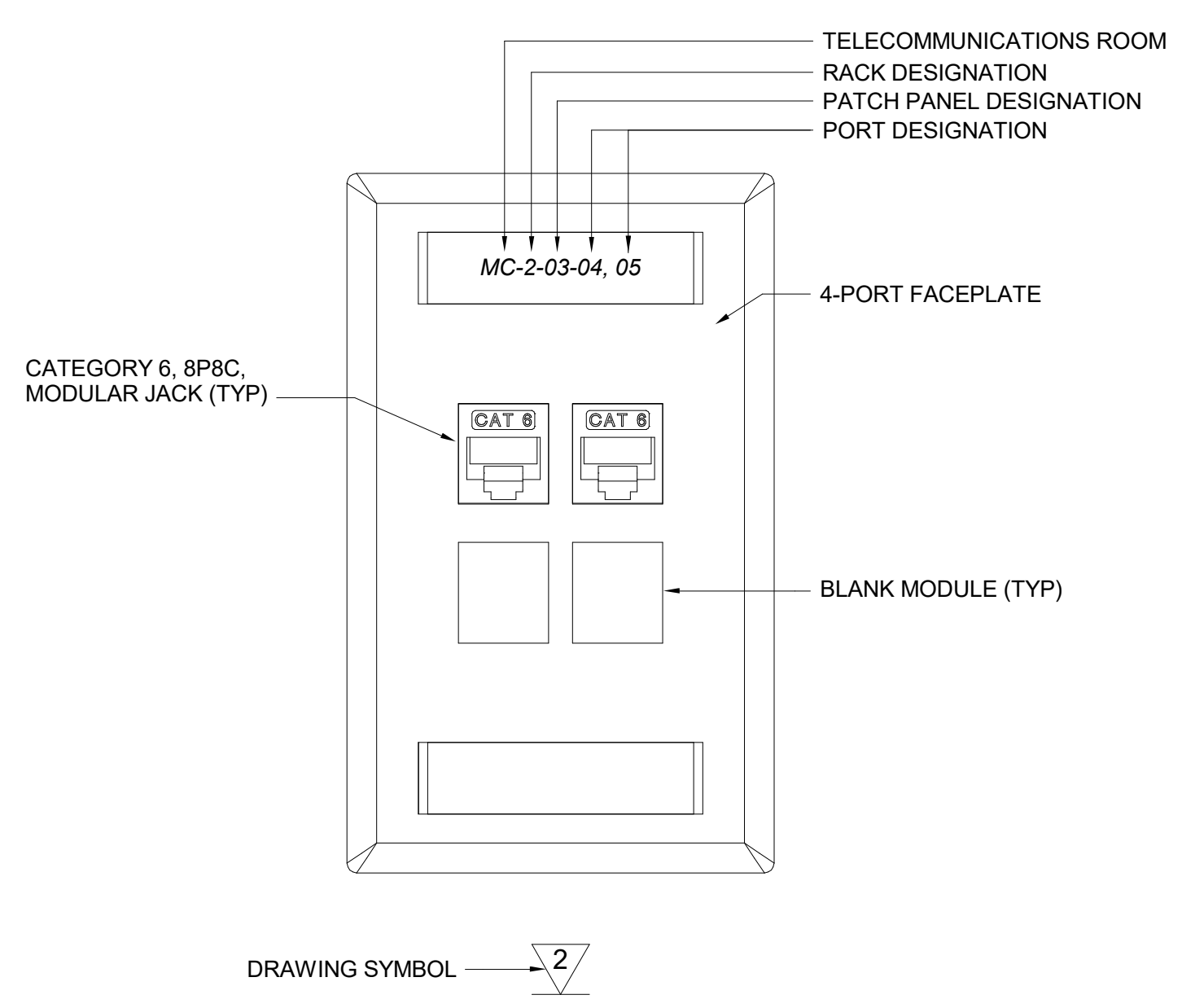
5
TC802 SCALE: NONE
DETAIL - UNIVERSAL PATCH PANEL TERMINATION

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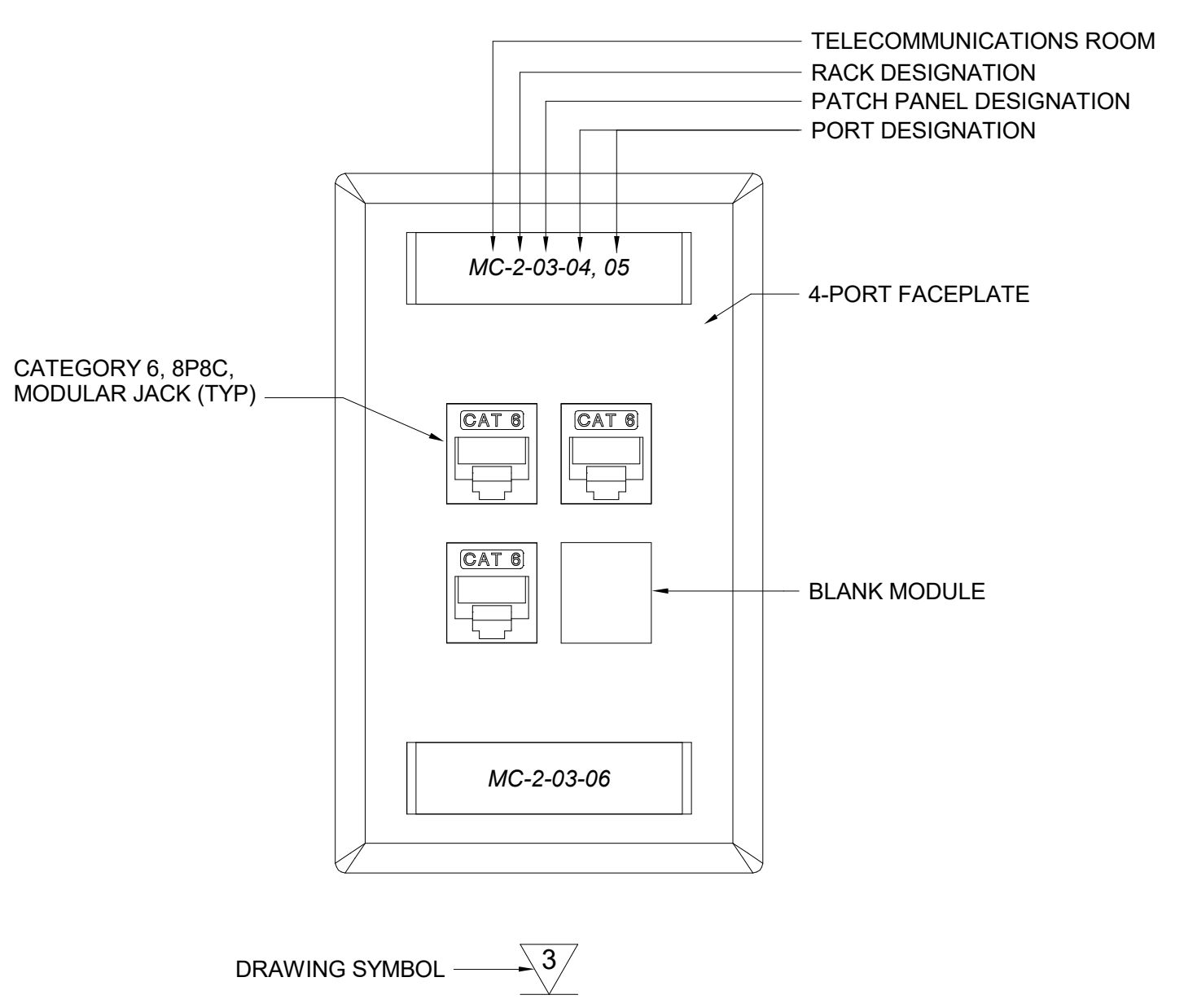
PROJECT: a23-087 - CITY OF FEDERAL WAY
FILE PATH: C:\Users\jw\Documents\23100\Federal Way OMF Site Structures - Elec\In\vo\TC802.rvt
PLOTTED: 5/6/2024 5:00:34 PM



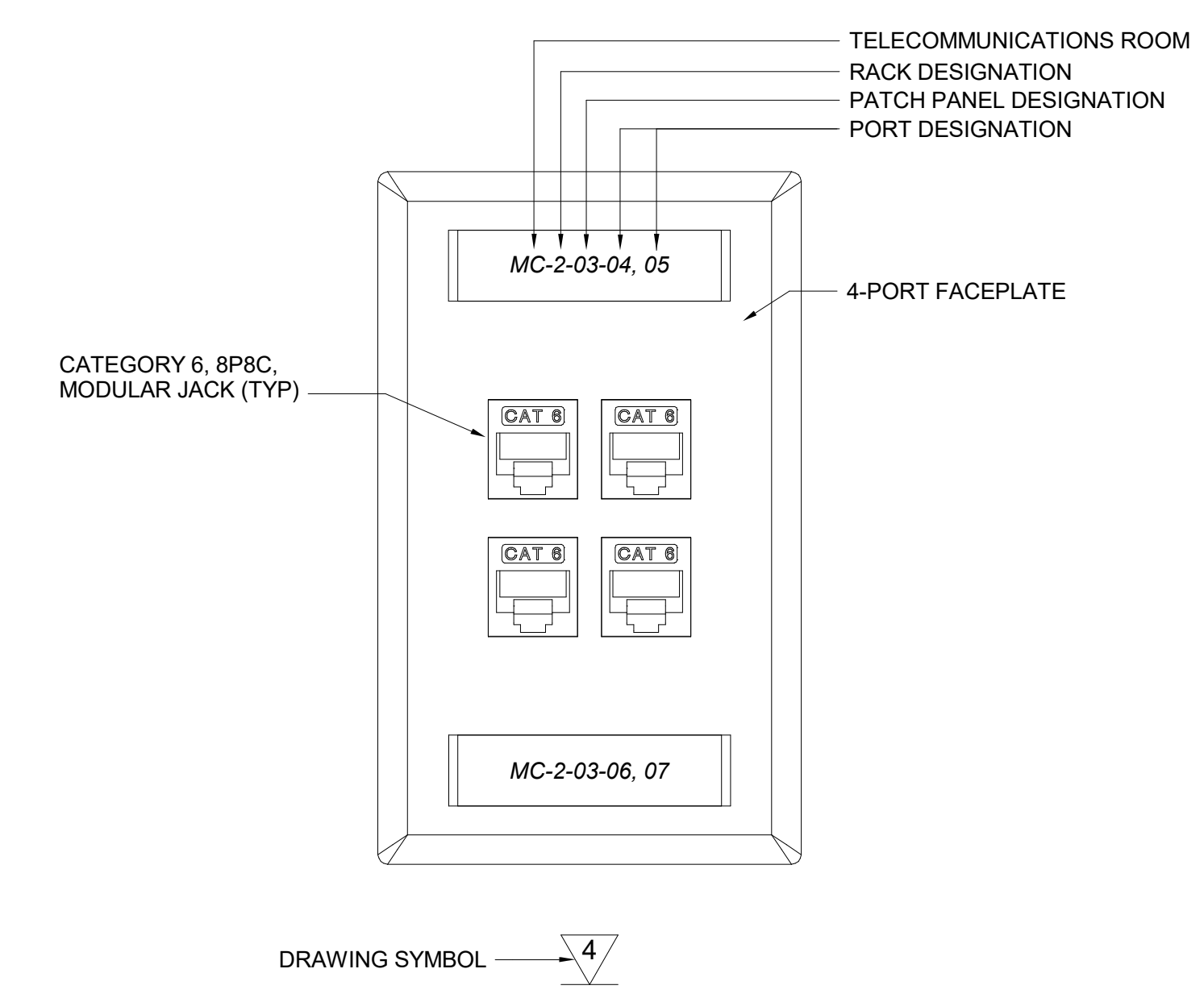
DRAWING SYMBOL



DRAWING SYMBOL

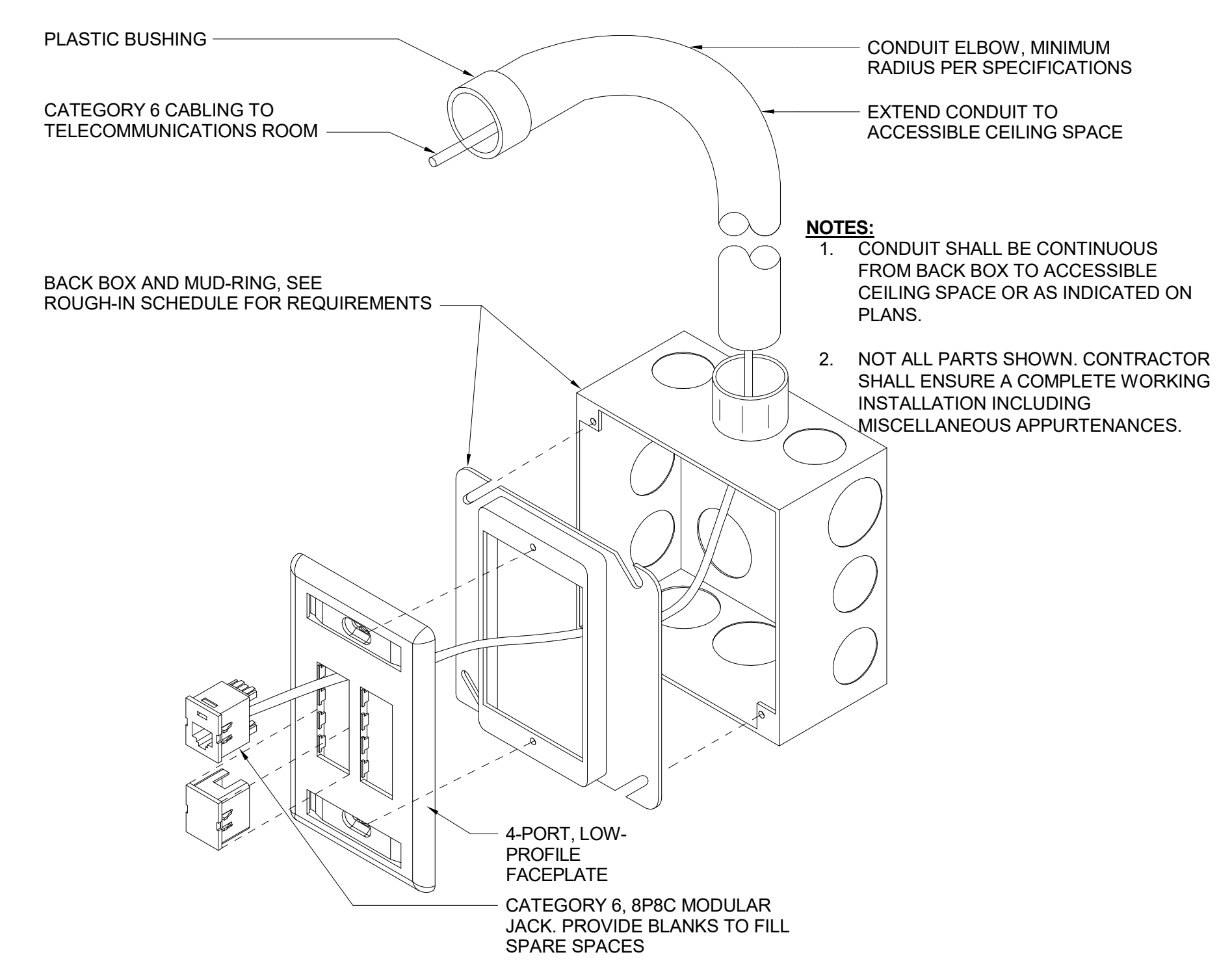


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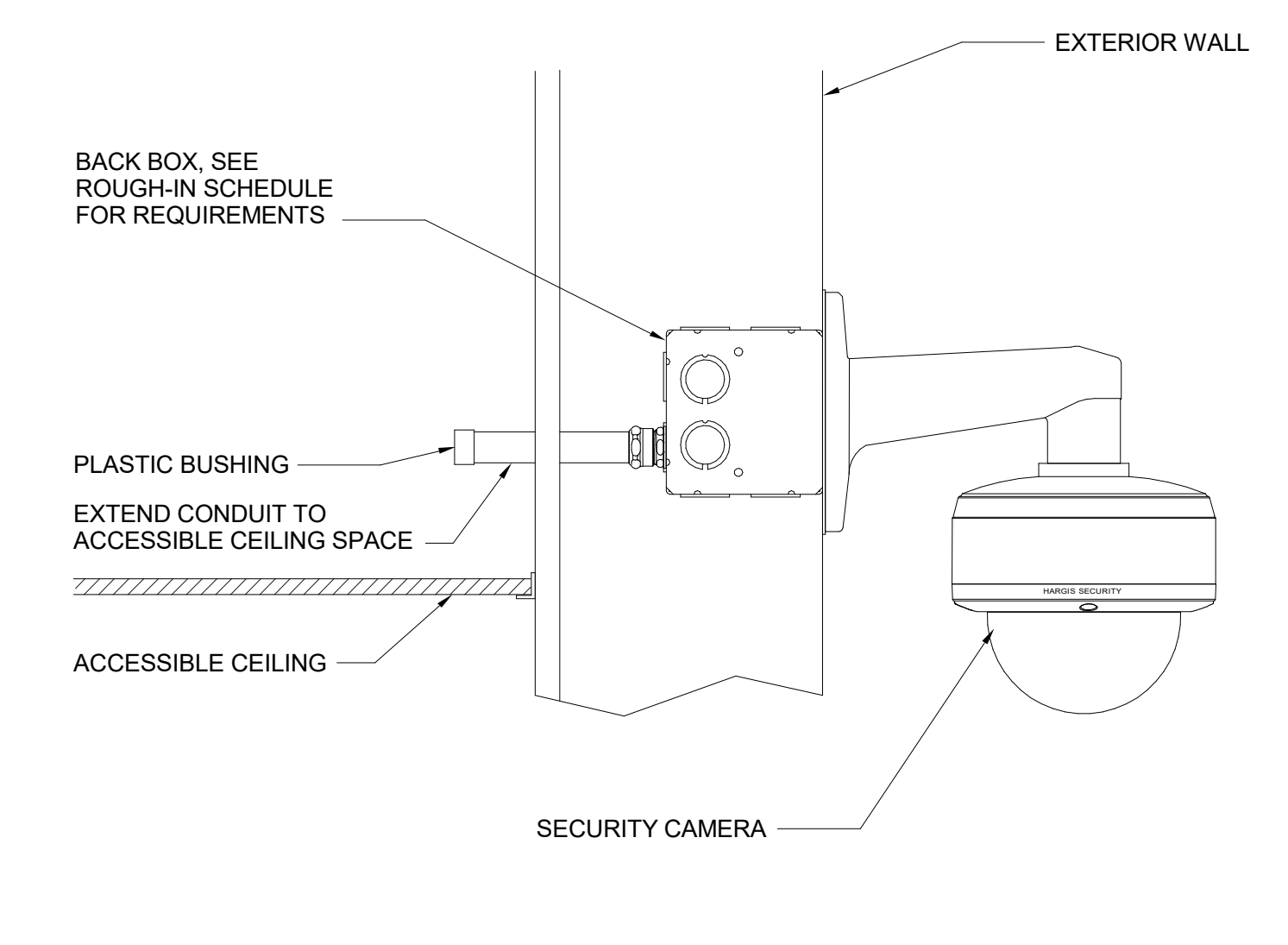


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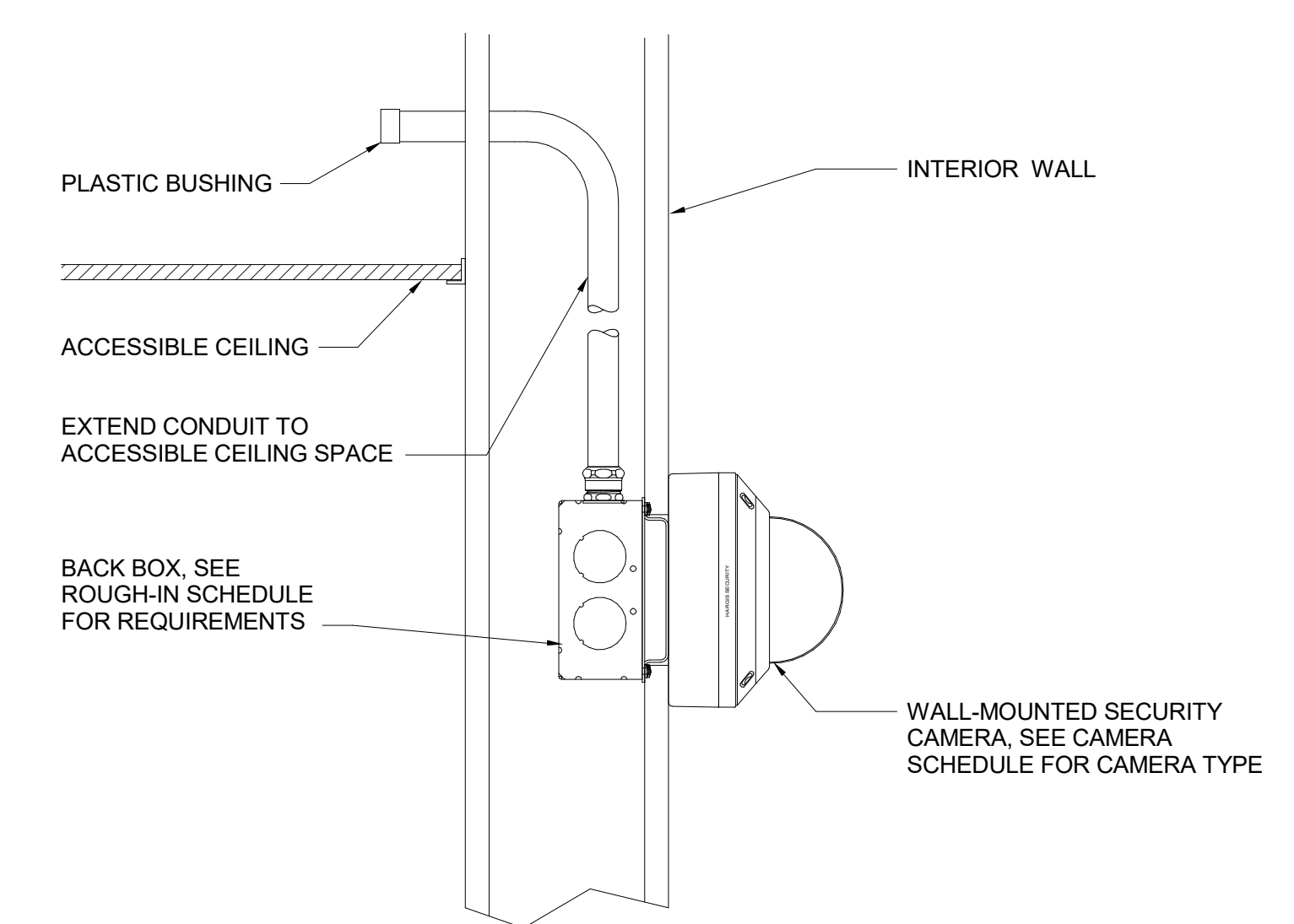
1 **DETAIL - ORGANIZATION AND LABELING**
TC803 SCALE: NONE



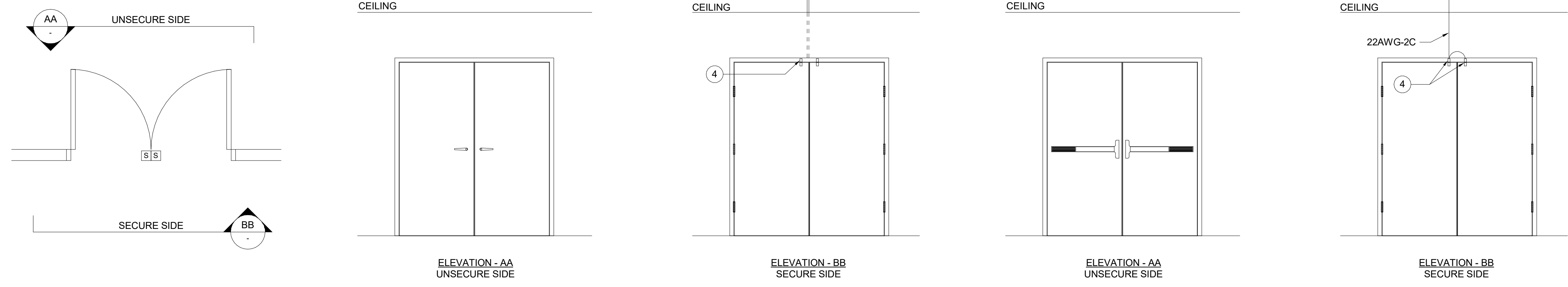
2 **DETAIL - TELECOMMUNICATIONS DEVICE ROUGH-IN**
TC803 SCALE: NONE



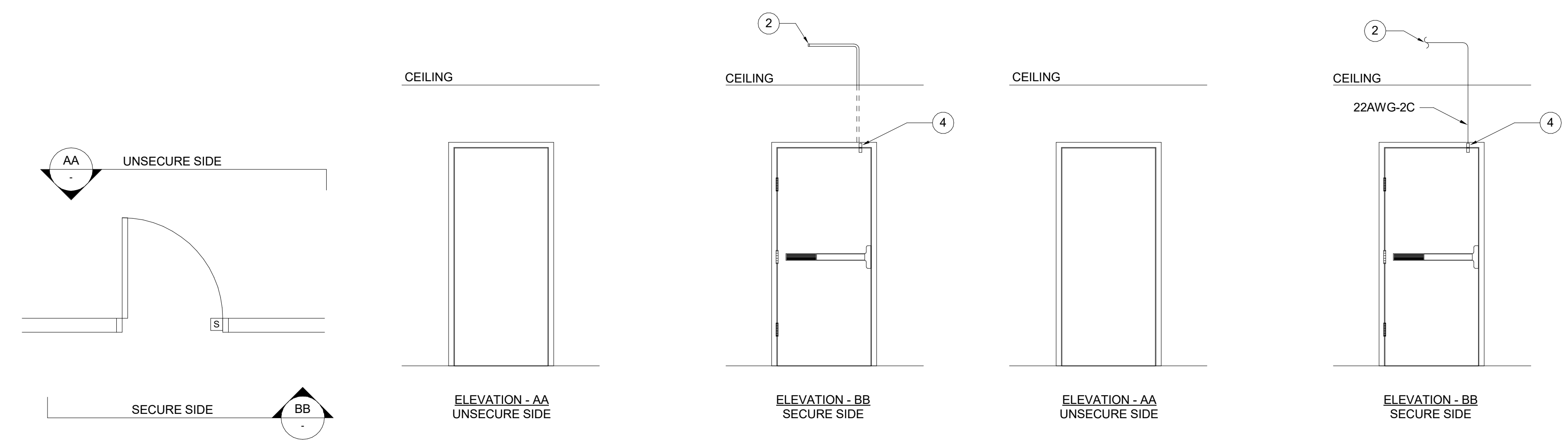
3 **DETAIL - EXTERIOR WALL MOUNT CAMERA W/ BRACKET**
TC803 SCALE: NONE



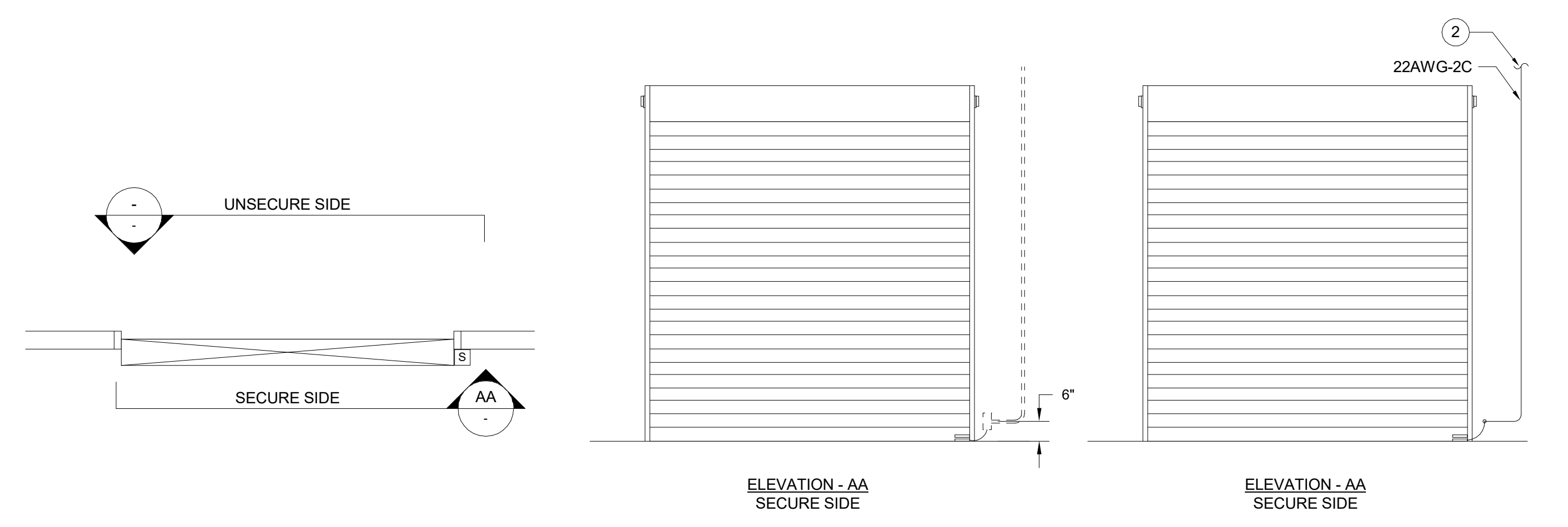
4 **DETAIL - INTERIOR WALL MOUNT CAMERA**
TC803 SCALE: NONE



1
TC805
DETAIL - DOUBLE DOOR EXIT ONLY
SCALE: NONE



2
TC805
DETAIL - SINGLE DOOR EXIT ONLY
SCALE: NONE



3
TC805
DETAIL - ROLLED-UP DOOR
SCALE: NONE

GENERAL NOTES

1. WIRE GAUGES NOTED ARE MINIMUM GAUGE REQUIREMENTS. COORDINATE GAUGE REQUIREMENTS WITH MANUFACTURER BASED ON ACTUAL WIRE LENGTHS.
2. DETAIL SHOWN IS A TYPICAL ELEVATION, REFER TO FLOOR PLANS FOR EXACT DOOR ORIENTATION, DEVICE TYPES AND DEVICE PLACEMENTS RELATIVE TO DOOR POSITION AND SWING.
3. CONDUIT SHALL BE 3/4" EMT UNLESS NOTED OTHERWISE.
4. DIVISION 26 & 28 SHALL PROVIDE CONDUIT AND CABLING AS INDICATED.

COMPONENTS

- 12" x 12" x 6" JUNCTION BOX (1 PER DOOR) SHALL BE MOUNTED +12" ABOVE ACCESSIBLE CEILING, WHERE NO CEILING EXIST MOUNT AT NEAREST ACCESSIBLE CEILING SPACE OR AS SHOWN ON THE FLOOR PLANS. PROVIDE (1/2" NIPPLE ON TOP OF BOX AND (1)1" C TO POWER SUPPLY/ CONTROL J-BOX WHERE APPLICABLE
- CABLING SHALL ROUTE TO DESIGNATED ACCESS CONTROL PANEL.
- CARD (IN) READER SHALL BE MOUNTED ON UNSECURE SIDE OF DOOR
- DOOR POSITION SWITCH SHALL BE RECESSED IN DOOR FRAME
- ELECTRIFIED MORTISE LOCKSET/EXIT DEVICE, FURNISHED BY DIV 08
- CABLING THROUGH DOOR FOR POWER AND INTEGRAL MICRO REX BUILT INTO DOOR HARDWARE
- POWER TRANSFER HINGE / POWER TRANSFER DEVICE
- MASONRY BACK BOX /MORTAR BOX SHALL BE MOUNTED TO ALLOW ACCESS TO WIRING FROM POWER TRANSFER HINGE/DEVICE
- AUTO OPERATOR CONTROLLER, FURNISHED BY DIV 08
- KEYED SWITCH, FURNISHED BY DIV 08
- AUTO OPERATOR ACTUATOR, FURNISHED BY DIV 08
- DOOR AUTO OPERATOR, FURNISHED BY DIV 08
- DOOR HARDWARE POWER SUPPLY, FURNISHED BY DIV [08/28]
- ELECTRIC STRIKE SURFACE/ FLUSH MOUNT
- REQUEST TO EXIT DEVICE



HELIX DESIGN GROUP, INC

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206.448.3376
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HARGIS ENGINEERS



SECURITY DETAILS

CITY OF FEDERAL WAY SITE

FEDERAL WAY, WASHINGTON	
REVISION	DATE
DATE	JOB NO.
05.06.24	023-087
BID SET	

10 TC-805

PLOTTED: 5/6/2024 5:00:35 PM PROJECT: a23-087 - CITY OF FEDERAL WAY
 FILE PATH: C:\Users\hvd\Documents\23100 Federal Way\017 Site Standards - Elec_31.mxd\TC805.rvt

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