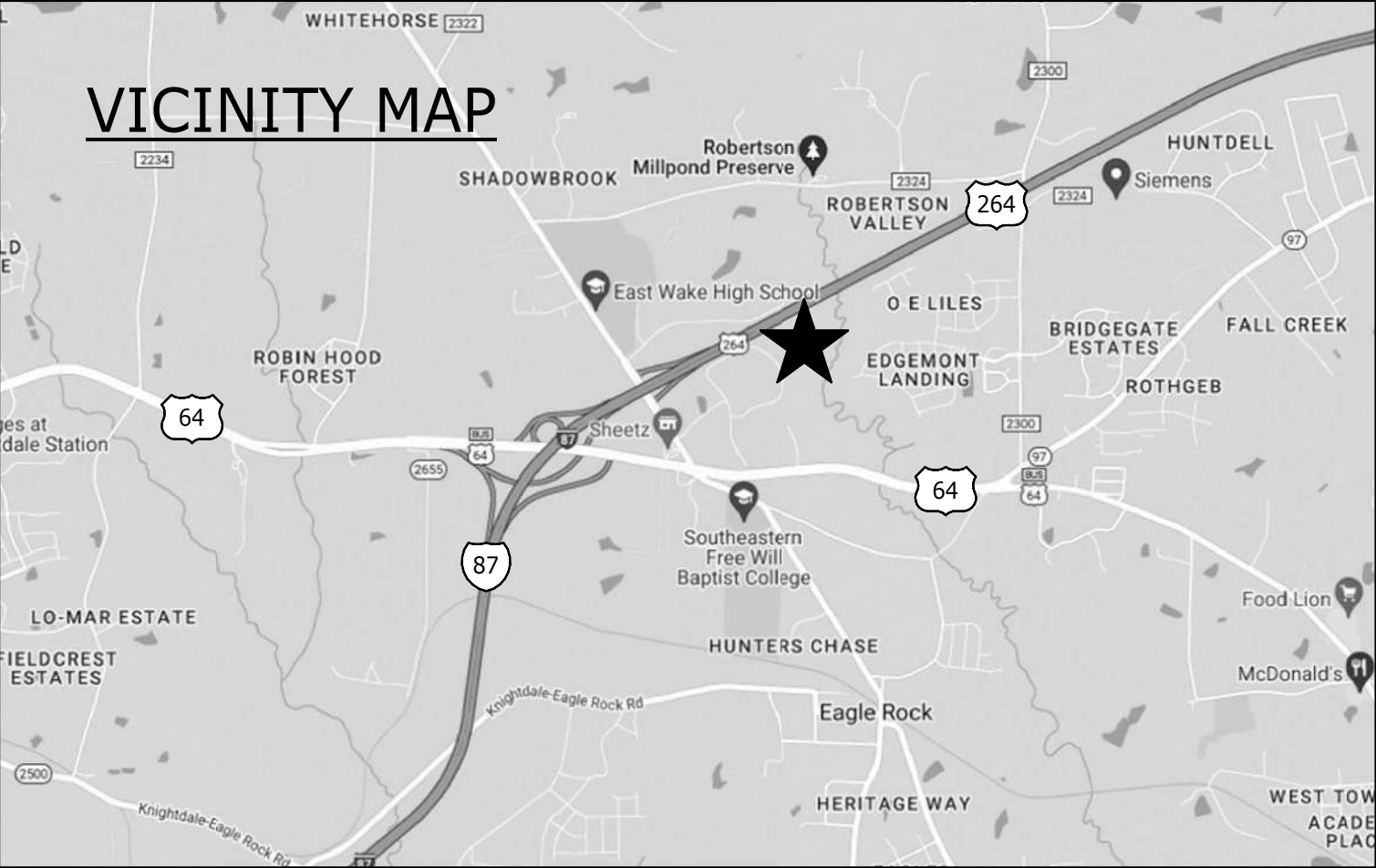


# WTCC EWS - FIRE & RESCUE TRAINING CENTER

## WAKE TECHNICAL COMMUNITY COLLEGE

5345 ROLESVILLE RD, WENDELL, NC 27591

NCCCS NO. 2303



HH

ARCHITECTURE

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Raleigh, NC 27609  
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RESTROOM BUILDING



BURN BUILDING



TRAINING TOWER

### DRAWING LIST

00 - COVER/GENERAL	
G000	COVER SHEET
G001	GENERAL ARCHITECTURAL NOTES
G002	BUILDING CODE SUMMARY - RESTROOM BLDG
G003	BUILDING CODE SUMMARY - COVERED STORAGE BLDG
G111	RESTROOM BUILDING - LIFE SAFETY PLAN

01 - CIVIL	
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C-101	STRIPING PLAN
C-102	PAVEMENT MATERIALS PLAN
C-103	NOT USED
C-104	NOT USED
C-105	SITE DETAILS
C-106	SITE DETAILS
C-200	STORMWATER PLAN
C-201	WET POND 01 DETAIL
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C-400	EROSION CONTROL PHASE 1
C-401	EROSION CONTROL PHASE 2
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D-101	EROSION CONTROL DETAILS
D-102	EROSION CONTROL DETAILS
D-103	EROSION CONTROL DETAILS
D-104	SANITARY SEWER DETAILS
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NCG01-1	NPDES STABILIZATION PLAN
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FP117	PLANS - BURN BUILDING
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BB203	BURN BUILDING - THIRD FLOOR PLAN
BB204	BURN BUILDING - FOURTH FLOOR PLAN
BB205	BURN BUILDING - FIFTH FLOOR PLAN
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BB402	BURN BUILDING - SECOND FLOOR FRAMING PLAN
BB403	BURN BUILDING - THIRD FLOOR FRAMING PLAN
BB404	BURN BUILDING - FOURTH FLOOR FRAMING PLAN
BB405	BURN BUILDING - FIFTH FLOOR FRAMING PLAN
BB406	BURN BUILDING - SIXTH FLOOR FRAMING PLAN
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TT202	TRAINING TOWER - THIRD & FOURTH FLOOR PLANS
TT203	TRAINING TOWER - FIFTH FLOOR & HIGH ROOF PLANS
TT301	TRAINING TOWER - WEST & SOUTH ELEVATIONS
TT302	TRAINING TOWER - EAST & NORTH ELEVATIONS
TT303	TRAINING TOWER - PERSPECTIVES
TT304	TRAINING TOWER - PERSPECTIVES
TT305	TRAINING TOWER - PERSPECTIVES
TT401	TRAINING TOWER - FOUNDATION & SECOND FLOOR FRAMING PLAN
TT402	TRAINING TOWER - THIRD & FOURTH FLOOR FRAMING PLAN
TT403	TRAINING TOWER - FIFTH FLOOR & HIGH ROOF FRAMING PLAN
TT501	TRAINING TOWER - TYPICAL CONCRETE DETAILS
TT502	TRAINING TOWER - STRUCTURAL STEEL FRAMING DETAILS
TT503	TRAINING TOWER - CONCRETE SLAB SECTIONS
TT504	TRAINING TOWER - EXTERIOR STEEL STAIR DETAILS
TT505	TRAINING TOWER - CONCRETE STAIR SECTIONS
TT601	TRAINING TOWER - TYPICAL MASONRY DETAILS
TT602	TRAINING TOWER - TYPICAL SCUPPER DETAILS
TT603	TRAINING TOWER - DOOR DETAILS & SCHEDULES
TT604	TRAINING TOWER - TYPICAL WINDOW SHUTTER DETAILS
TT605	TRAINING TOWER - TYPICAL RAILING DETAILS
TT606	TRAINING TOWER - GUARDRAIL GATE AT PARAPET
TT607	TRAINING TOWER - MISCELLANEOUS DETAILS
TT608	TRAINING TOWER - MISCELLANEOUS DETAILS

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### PROJECT NARRATIVE

WAKE TECHNICAL COMMUNITY COLLEGE (WTCC) IS UNDERTAKING THE CREATION OF A NEW DEDICATED FIRE AND RESCUE TRAINING CENTER TO SUPPORT THE SPECIALIZED TRAINING REQUIREMENT OF THE FIRE AND RESCUE COMMUNITY OF WAKE COUNTY AND THE SURROUNDING REGION. THE NEW CENTER WILL BE LOCATED ON THE RECENTLY CONSTRUCTED EASTERN WAKE SITE (EWS) IN WENDELL, NC. THIS NEW FACILITY EXPANDS AND ENHANCES THE COLLEGE'S PUBLIC SAFETY EDUCATIONAL PROGRAMS.

THE PRIMARY FOCUS OF THE NEW FIRE AND RESCUE TRAINING CENTER IS TO PROVIDE SPECIALIZED TRAINING FACILITIES WHICH CAN BE USED TO PREPARE STUDENTS AND RECRUITS FOR REAL-WORLD EMERGENCY SCENARIOS. THE CENTER WILL ALSO BE USED TO SUPPORT ACTIVE FIRST RESPONDERS IN MAINTAINING CERTIFICATIONS AND UPDATED TRAINING AS THE RESPONSE TO VARIOUS EMERGENCY SITUATIONS EVOLVES.

DEVELOPMENT OF THE TRAINING GROUNDS WILL PROVIDE AREAS THAT SUPPORT THE VARIOUS TRAINING PROPS. THE PRIORITY OF THE PROJECT WILL BEGIN WITH THE BURN BUILDING (LIVE FIRE TRAINING STRUCTURE) AND THE TRAINING TOWER. THESE ARE MULTI-STORY STRUCTURES BUILT TO PROVIDE VARIABLE TRAINING CONDITIONS UNDER LIVE BURN CONDITIONS AND TO SIMULATE ELEVATED TECHNICAL RESCUE CIRCUMSTANCES.

ANCILLARY STRUCTURES TO SUPPORT THE TRAINING FUNCTIONS INCLUDE A SHADE STRUCTURE/SHOWER & TOILET ROOMS, AND A STORAGE STRUCTURE FOR BURN MATERIALS.

ISSUE FOR CONSTRUCTION

03/14/2025

NO.	REVISION	DATE

JOB NUMBER  
**22-086**

DATE ISSUED  
**03/14/2025**

PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**

SHEET  
**COVER SHEET**

G000



ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR	F.E.	FIRE EXTINGUISHER	MECH	MECHANICAL	SQ. FT.	SQUARE FEET
A.R.A.	AREA OF RESCUE ASSISTANCE	F.F.E.	FURNITURE, FIXTURES, EQUIPMENT	MFR	MANUFACTURER	SQ. IN.	SQUARE INCH
ADJ	ADJACENT	F.O.E.W.	FACE OF EXISTING WALL	MIN	MINIMUM	STD	STANDARD
ALUM	ALUMINUM	F.O.M.	FACE OF MASONRY	MISC	MISCELLANEOUS	STL	STEEL
APC	ACOUSTICAL PANEL CEILING	F.O.S.	FACE OF STUD	MTL	METAL	STRUC	STRUCTURAL
APPROX	APPROXIMATE	F.P.H.B	FREEZE-PROOF HOSE BIB				
		FACT	FACTORY FINISH	N.I.C.	NOT IN CONTRACT	T.O.S.	TOP OF STEEL
BD	BOARD	FE (SM)	SURFACE MOUNTED	N.T.S.	NOT TO SCALE	TELE	TELEPHONE
BLDG	BUILDING	FE (SR)	SEMI-RECESSED	NOM	NOMINAL	THR'LD	THRESHOLD
BOT	BOTTOM	FIN	FINISH			TYP	TYPICAL
BSMT	BASEMENT	FLR	FLOOR	O.C.	ON CENTER		
		FLUR	FLUORESCENT	O.D.	OUTSIDE DIAMETER	U.N.O.	UNLESS NOTED OTHERWISE
C.J.	CONTROL JOINTS	FRP	FIBERGLASS REINFORCED PANELS	O.H.	OPPOSITE HAND		
C.O.	CLEAN OUT	FTG	FOOTING	OVHD	OVERHEAD	V.C.T.	VINYL COMPOSITION TILE
C.T.	CERAMIC TILE					V.W.C.	VINYL WALL COVERING
CLG	CEILING	G.C.	GENERAL CONTRACTOR	P.L.	PLASTIC LAMINATE	VERT	VERTICAL
CLR	CLEAR	G.D.S.	GUTTER DOWNSPOUT	P.S.F.	POUNDS PER SQ. FOOT		
CMU	CONCRETE MASONRY UNIT	GA	GAUGE	P.S.I.	POUNDS PER SQ. INCH	W.C.	WATER CLOSET
COL	COLUMN	GALV	GALVANIZED	PART	PARTITION	W.G.	WIRE GLASS
CONC	CONCRETE	GWB	GYPSTUM WALL BOARD	PLY	PLYWOOD	W.W.F.	WELDED WIRE FABRIC
CONST	CONSTRUCTION			PROP	PROPERTY	W/	WITH
CONT	CONTINUOUS	H.D.	HEAVY DUTY	PT	PAINT	WD	WOOD
CPT	CARPET	H.M.	HOLLOW METAL	PVC	POLYVINYL CHLORIDE		
		HDW	HARDWARE				
		HT	HEIGHT	R	RADIUS		
DEPT	DEPARTMENT			R.D.	ROOF DRAIN		
DIA	DIAMETER	I.D.	INSIDE DIAMETER	R.D.L.	ROOF DRAIN LEADER		
DIM	DIMENSION	INSUL	INSULATION	R/A	RETURN AIR		
DWG	DRAWING	INT	INTERIOR	REBAR	REINFORCING BAR		
				REF	REFERENCE		
E.J.	EXPANSION JOINT			REINF	REINFORCING		
E.W.C.	ELECTRIC WATER COOLER	JT	JOINT	REQ'D	REQUIRED		
EA	EACH			REV	REVISION		
ELEC	ELECTRICAL	K	KIPS	RM	ROOM		
ELEV	ELEVATION						
EQ	EQUAL	LAM	LAMINATE				
EQUIP	EQUIPMENT	LAV	LAVATORY	S.C.	SOLID CORE		
EXIST	EXISTING			S.S.	STAINLESS STEEL		
EXT	EXTERIOR	M.O.	MASONRY OPENING	SHT	SHEET		
		MAT'L	MATERIAL	SIM.	SIMILAR		
F.D.	FLOOR DRAIN	MAX	MAXIMUM	SPEC	SPECIFICATION		

KEYNOTES - OVERALL

033000	CAST-IN-PLACE CONCRETE
033000.A	CAST-IN-PLACE CONCRETE, SEE STRUCTURAL
033000.B	UNDER SLAB VAPOR BARRIER
042000	UNIT MASONRY
042000.B8	CONCRETE MASONRY UNITS, 8x8x16 NOMINAL, SEE STRUCTURAL
042000.K	MASONRY JAMB ANCHOR
051200	STRUCTURAL STEEL FRAMING, SEE STRUCTURAL
052100	STEEL JOIST FRAMING, SEE STRUCTURAL
053100	STEEL DECKING, SEE STRUCTURAL
054000.M2	COLD-FORMED METAL FRAMING, C-SHAPED STUDS, 2 1/2"
054000.M6	COLD-FORMED METAL FRAMING, C-SHAPED STUDS, 6"
054000.M10	COLD-FORMED METAL FRAMING, C-SHAPED STUDS, 10"
061000.B	P.T. WOOD BLOCKING
061600.C	PLYWOOD SHEATHING
072100.A.1	EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD (XPS), R-7.5
072100.B.10	FIBERGLASS BATT INSULATION, R-35
074113	STANDING SEAM METAL ROOF SYSTEM
074113.A	STANDING SEAM METAL ROOF PANELS
074113.F	PREFINISHED METAL FASCIA WITH DRIP EDGE
074213.B	SUB-FRAMING & FURRING
074213.F	ROOF PANEL METAL RIDGE CAP
074293.A	METAL SOFFIT PANELS
074293.B	METAL SOFFIT PANEL FLASHING & TRIM
076200.D	CONTINUOUS HEAD FLASHING
076200.M	PREFINISHED HANGING GUTTER
076200.Q	PREFINISHED DOWNSPOUT
076200.S	1x8 PREFINISHED METAL WRAPPED EXTERIOR GRADE TRIM
079200.A	JOINT SEALANTS
079200.B	BACKER ROD & JOINT SEALANT
081113	HOLLOW METAL DOORS AND FRAMES
087100.B	DOOR HARDWARE, ALUMINUM THRESHOLD
089119.A	FIXED LOUVER
092216.M3	STEEL STUD FRAMING, 3 5/8"
092216.M6	STEEL STUD FRAMING, 6"
092900.A	GYPSTUM WALLBOARD, 5/8"
092900.D	GLASS-MAT BACKING BOARD, 5/8"
092900.F	SOUND ATTENUATION BLANKET
092900.K	GLASS-MAT CEILING BOARD, 5/8"
102800.01	GRAB BAR 54"x42"
102800.02	GRAB BAR 18"
102800.03	TOILET TISSUE DISPENSER; OWNER PROVIDED, OWNER INSTALLED
102800.05	PAPER TOWEL DISPENSER; OWNER PROVIDED, OWNER INSTALLED
102800.07	SOAP DISPENSER; OWNER PROVIDED, OWNER INSTALLED
102800.08	SANITARY NAPKIN DISPOSAL; OWNER PROVIDED, OWNER INSTALLED
102800.09	SEAT COVER-DISPENSER; OWNER PROVIDED, OWNER INSTALLED
102800.12	SHOWER CURTAIN & ROD
102800.13	FOLDING SHOWER SEAT
102800.15	CUSTODIAL MOP AND BROOM HOLDER
102800.16	MIRROR UNIT
102800.18	SHOWER GRAB BAR 18"x36"
102800.19	GRAB BAR 24"
104313	AED CABINET. TYPE AIVIA 200 OUTDOOR. CFCI
104316	FIRST AID CABINET/LIFE SAFETY STATIONS. TYPE AED.US SKU:LSSO
104413.C	EXTERIOR GRADE FIRE EXTINGUISHER & CABINET. TYPE SAFETY ONE MODEL HDOC-10-SS
220000.C	ACCESSIBLE SHOWER STALL & ACCESSORIES.-SLOPE STALL FLOOR TO DRAIN AND FINISH WITH EPOXY PAINT SYSTEM; SEE PLUMBING
220000.D	WATER COOLER; SEE PLUMBING
220000.F	FREEZE-PROOF HOSE BIBB; SEE PLUMBING
220000.M	MOP SINK 36"x36"; SEE PLUMBING
220000.S	ACCESSIBLE SHOWER HEAD; SEE PLUMBING
233100.1	EXHAUST DUCT; SEE MECHANICAL
235543.1	WALL MOUNTED UNIT HEATER; SEE MECHANICAL
238116.N	DUCTLESS SPLIT SYSTEM INDOOR UNIT; SEE MECHANICAL
238116.O	DUCTLESS SPLIT SYSTEM OUTDOOR UNIT; SEE MECHANICAL
265000.A	LINEAR LIGHT FIXTURE; SEE ELECTRICAL

SYMBOLS LEGEND

ROOM NAME	ROOM / AREA
101	
101	DOOR ID.
N	NORTH ARROW
01 A101	DETAIL
01 A000	EXTERIOR ELEVATION CALLOUT
01/A000	INTERIOR ELEVATION CALLOUT
01 A000	SECTION CALLOUT
12' - 0"	CEILING ELEVATION HEIGHT (SEE FINISH SCHEDULE FOR CEILING TYPE)
X' - X"	SPOT ELEVATION
A	WINDOW TYPE
MXXX	PARTITION TYPE
CW-X	CASEWORK TYPE

GENERAL ARCHITECTURAL NOTES

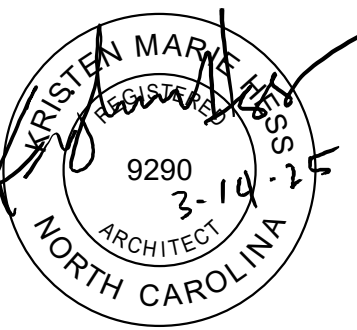
1. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS, ELEVATIONS, AND OTHER REQUIREMENTS NECESSARY FOR CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
2. SEE SITE, CIVIL, AND LANDSCAPE PLANS FOR CONTINUATION OF WORK OUTSIDE OF BUILDING.
3. PROVIDE TEMPERED GLASS AT DOOR AND WINDOW LITES.
4. ALL DIMENSIONS ARE TO THE FACE OF CMU, FACE OF EXISTING WALL, OR FACE OF STUD.
5. ALL DOOR HINGE-SIDE JAMBS TO BE 4" FROM FACE OF THE PERPENDICULAR WALL TO THE INSIDE FACE OF THE METAL JAMB, TYP., U.N.O.
6. REFERENCED FIRST FLOOR ELEVATION = 0'-0".
7. FOR FINISHES, NEW AND EXISTING, SEE FINISH PLAN SHEETS.
8. KEYNOTES ARE PROVIDED FOR REFERENCE ONLY. GENERAL CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS. KEYNOTES DO NOT EXCLUDE CONTRACTOR FROM REPAIRING AND PATCHING ALL FLOORS, WALLS AND CEILINGS AS NEEDED AS A RESULT OF DEMOLITION WORK. GENERAL CONTRACTOR TO PREPARE ALL FLOORS AND WALL SUBSTRATES AS REQUIRED TO APPLY NEW FINISH AS INDICATED IN THE FINISH PLANS AND SPECIFICATIONS.



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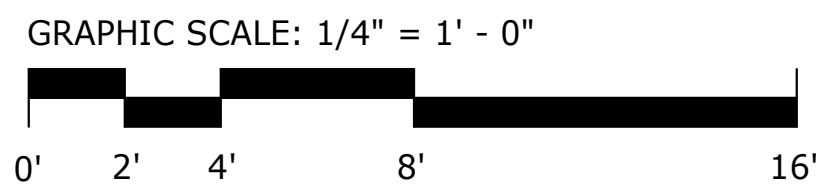
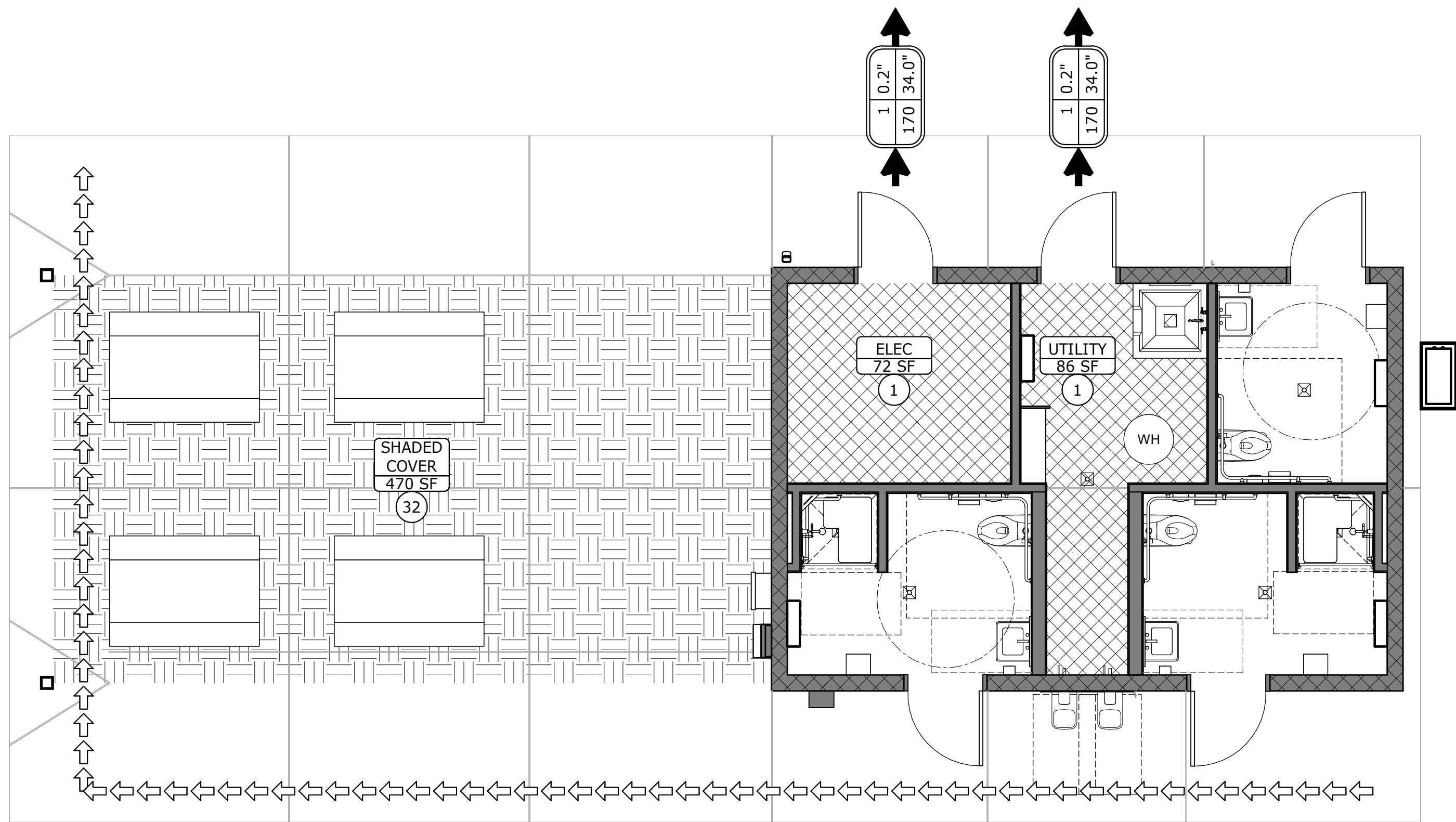






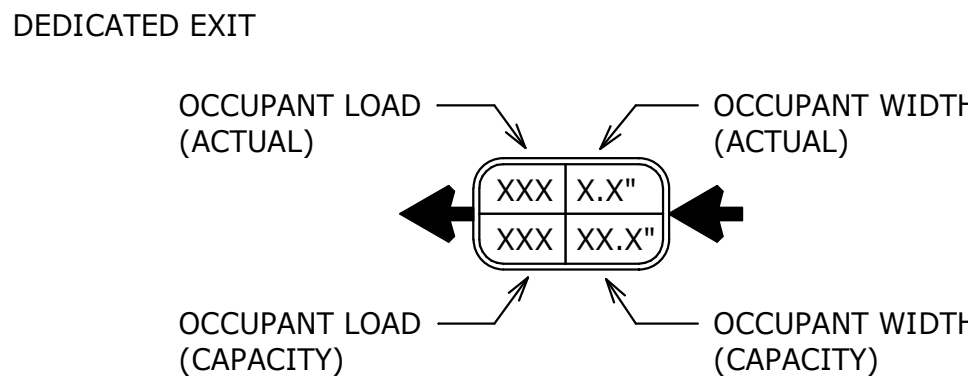






## LIFE SAFETY PLAN LEGEND

- ⇨⇨⇨⇨⇨ WORST-CASE TRAVEL DISTANCE = 76'-8"  
(MAX. ALLOWABLE 200')
- ◆◆◆◆◆ WORST-CASE TO COMMON PATH OF TRAVEL = N/A  
(MAX ALLOWABLE 75')
- WORST-CASE DEAD END CORRIDOR = N/A  
(MAX ALLOWABLE 20')
- ⊙ ROOM EXIT
- NUMBER OF OCCUPANTS



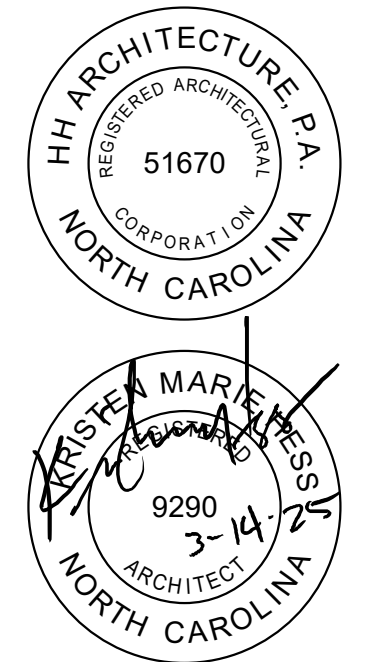
- DENOTES **A-5 OCCUPANCY**  
ASSEMBLY W/ UNCONCENTRATED SEATS  
(1 PERSON PER **15SF NET**)
- DENOTES **S-1 OCCUPANCY**  
STORAGE  
(1 PERSON PER **300 SF GROSS**)
- DENOTES **UNOCCUPIED SPACE**  
BATHROOM/CORRIDOR  
(0 - OCCUPANTS CONSIDERED  
PART OF PRIMARY OCCUPANCY A-5)

## OCCUPANCY SCHEDULE

NAME	OCCUPIABLE	S.F.PER PERSON	OCCUPANT LOAD
ELEC	72 SF	300	1
UTILITY	86 SF	300	1
SHADED COVER	470 SF	15	32
	628 SF		34

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**WTCC EWS - FIRE & RESCUE TRAINING CENTER**  
WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



NO.	REVISION	DATE

JOB NUMBER  
**22-086**

DATE ISSUED  
**03/14/2025**

PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**

SHEET  
**RESTROOM BUILDING - LIFE SAFETY PLAN**

G111



1. LOCATION AND SIZE OF EXISTING UTILITIES ARE SHOWN AS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTAL AND VERTICAL LOCATION AND THE DEPTH OF ALL UTILITIES. UTILITIES SHOWN (AND NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE.
2. BOUNDARY INFORMATION TAKEN FROM OWNER SUPPLIED COPY OF AN ALTA SURVEY PREPARED BY DAVID B. JORDAN PREPARED 10-08-2020.
3. TOPOGRAPHIC & UTILITY INFORMATION, EXCEPT AS NOTED, TAKEN FROM AN ELECTRONIC COPY OF A SURVEY PREPARED BY SEPIENGINEERING, DATED FEBRUARY 18, 2021, DATUM 1985. ADDITIONAL CADASTRAL AND UTILITY INFORMATION OBTAINED FROM WAKE COUNTY G.I.S. AND ARE SHOWN FOR REFERENCE ONLY. EXISTING CONDITIONS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO STARTING AND WORK.
4. ADDITIONAL INFORMATION TAKEN FROM WTCG EWS - PHASE ONE SITE INFRASTRUCTURE PLANS PROVIDED BY OWNER.
5. EXISTING TOWN OF WENDELL SEWER EASEMENTS TRANSFERRED TO RALEIGH AFTER MERGER.



ENGINEERS & CONSULTANTS, INC.  
 AGENCY PARKWAY  
 MC 27518  
 851.1912 [www.NV5.com](http://www.NV5.com)

# F-1333  
ALYX Engineers & Consultants



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WAKE TECHNICAL COMMUNITY COLLEGE  
5401 ROLESVILLE ROAD WENDELL, NC 27591  
NCCCS NO. 2303

[illegible]

NUMBER  
**086**

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**7/14/2025**

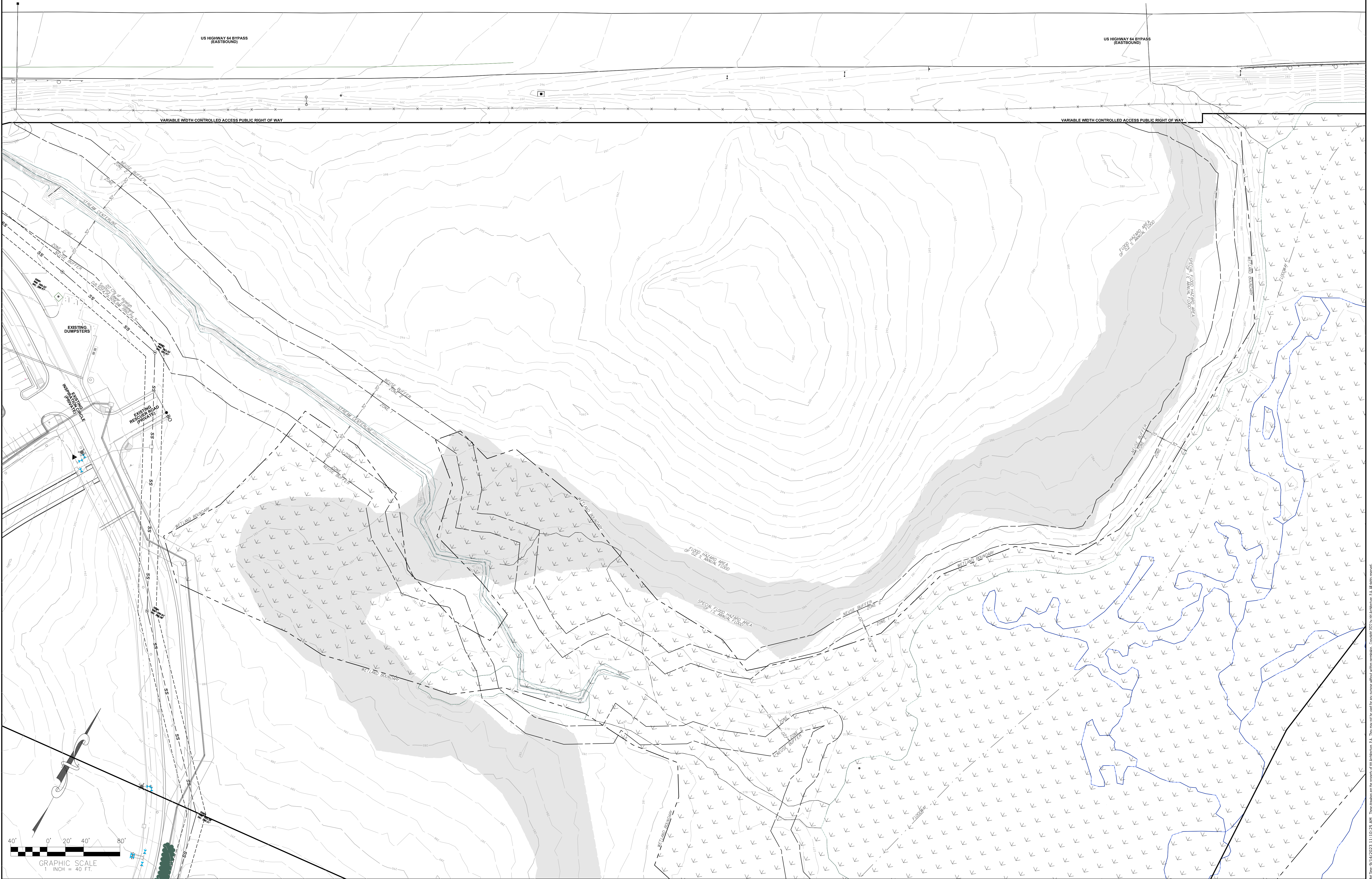
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JECT STATUS  
**SUE FOR  
NSTRUCTION**

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ET  
**EXISTING  
CONDITIONS**

C-001





1. REFER TO SHEET C-102 FOR PAVEMENT TYPES.
2. ALL PROPOSED SIGNS TO MATCH EXISTING CAMPUS SIGNAGE

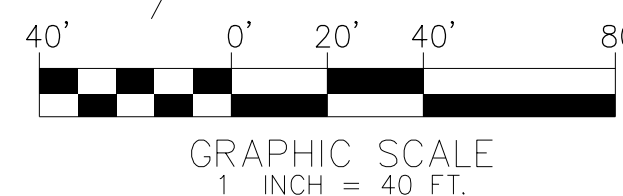
<u>BUILDING SQUARE FOOTAGE</u>	
PROPOSED RESTROOM BUILDING:	882 SF
FUTURE CLASSROOM BUILDING:	8,000 SF
FUTURE APPARATUS BAY:	3,600 SF
TOTAL BUILDING SQUARE FOOTAGE:	12,482 SF

PARKING REQUIRED: 25 SPACES  
(2 SPACES PER 1,000 SF):

PARKING PROVIDED: 45 SPACES  
(INCLUDES 2 ADA SPACES)

NOTE: ADDITIONAL PARKING PROVIDED FOR OUTDOOR PROP AREA.

BICYCLE PARKING REQUIRED: (1/20 AUTO SPACES):	2.5 SPACES
BICYCLE PARKING PROVIDED: (ADDITIONAL SPACES WILL BE PROVIDED WITH CLASSROOM BUILDING)	2 SPACES

[illegible]

JOB NUMBER  
**22-086**

DATE ISSUED  
**03/14/2025**

PROJECT STATUS  
**ISSUE FOR  
CONSTRUCTION**

SHEET  
**SITE  
PLAN**

# C-100



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NCCCS NO. 2303



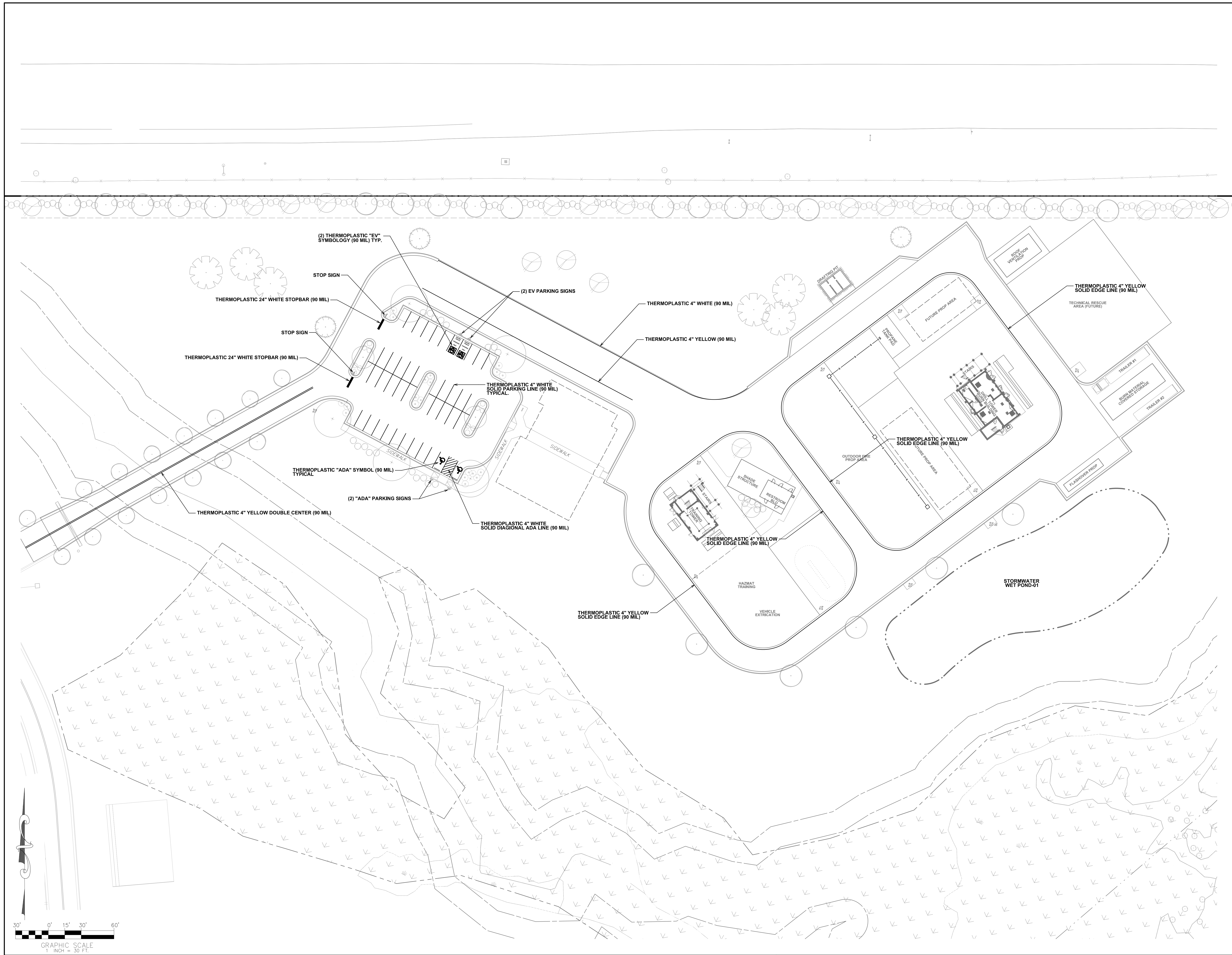
**ARCHITECTURE**  
10 Dresser Court  
Raleigh, NC 27609  
Phone 919.828.2301  
Email office@hh-arch.com

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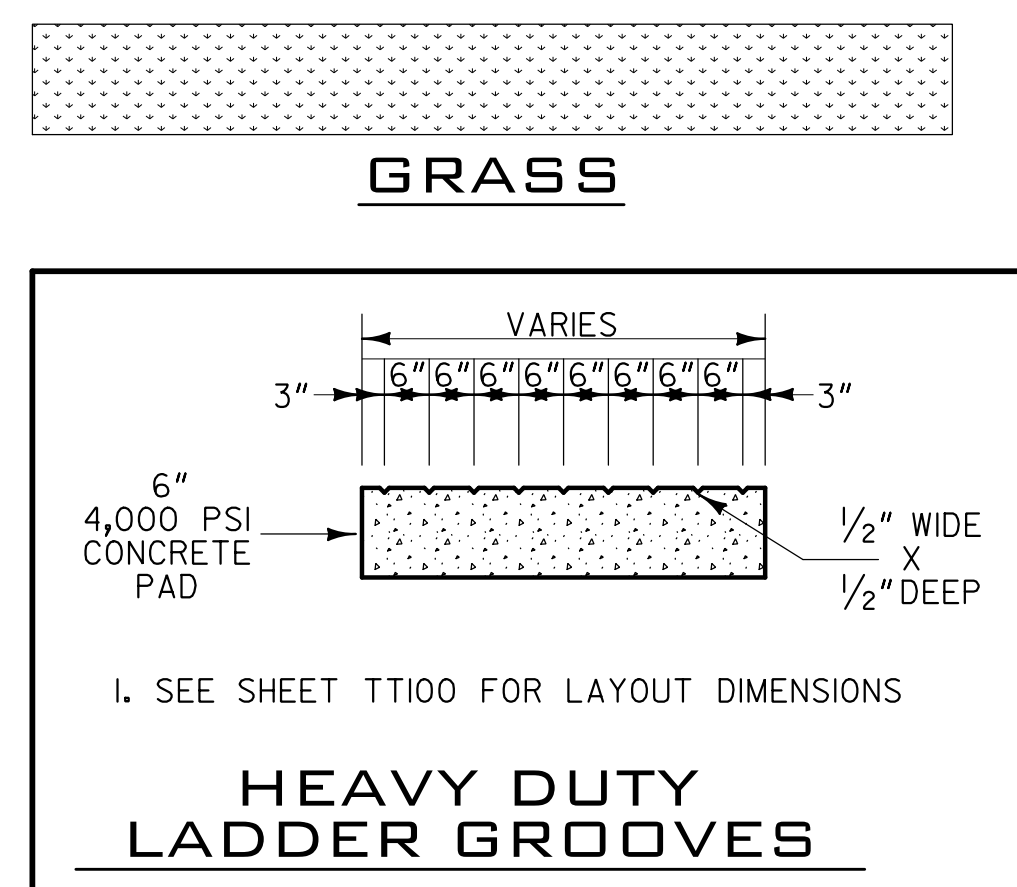
NV5 ENGINEERS & CONSULTANTS, INC.  
100 REGENCY PARKWAY  
Raleigh, NC 27518  
919.851.1912 [www.NV5.com](http://www.NV5.com)

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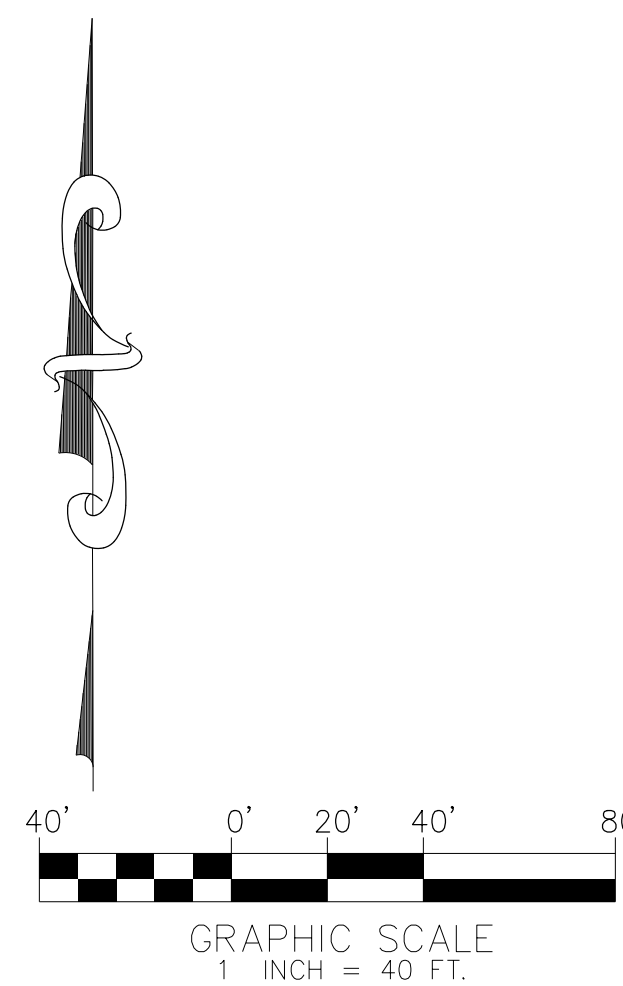








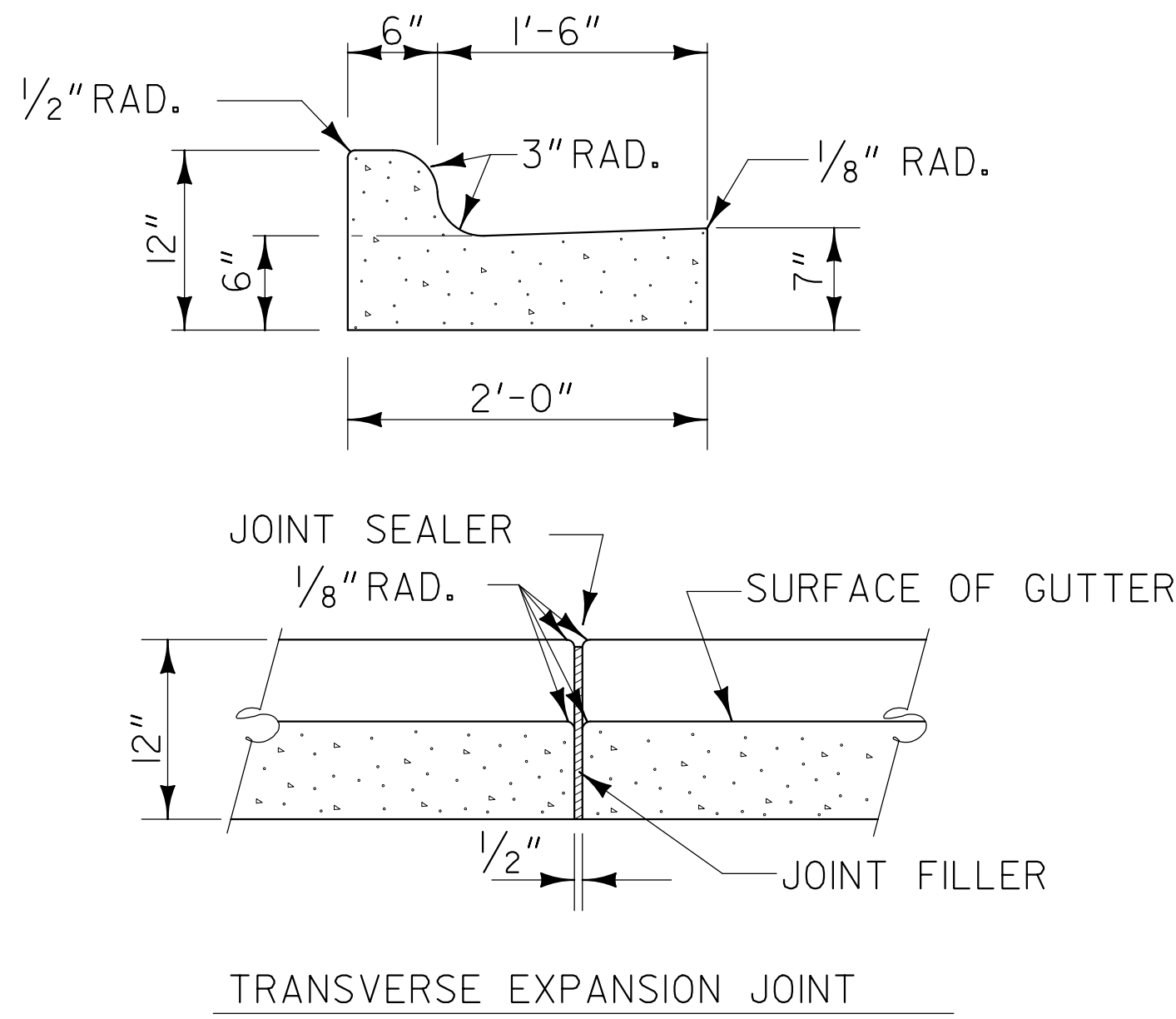
CONCRETE LADDER  
GROOVES (SEE DETAIL  
ON THIS SHEET). REFER  
TO FIRE PROTECTION  
DRAWINGS





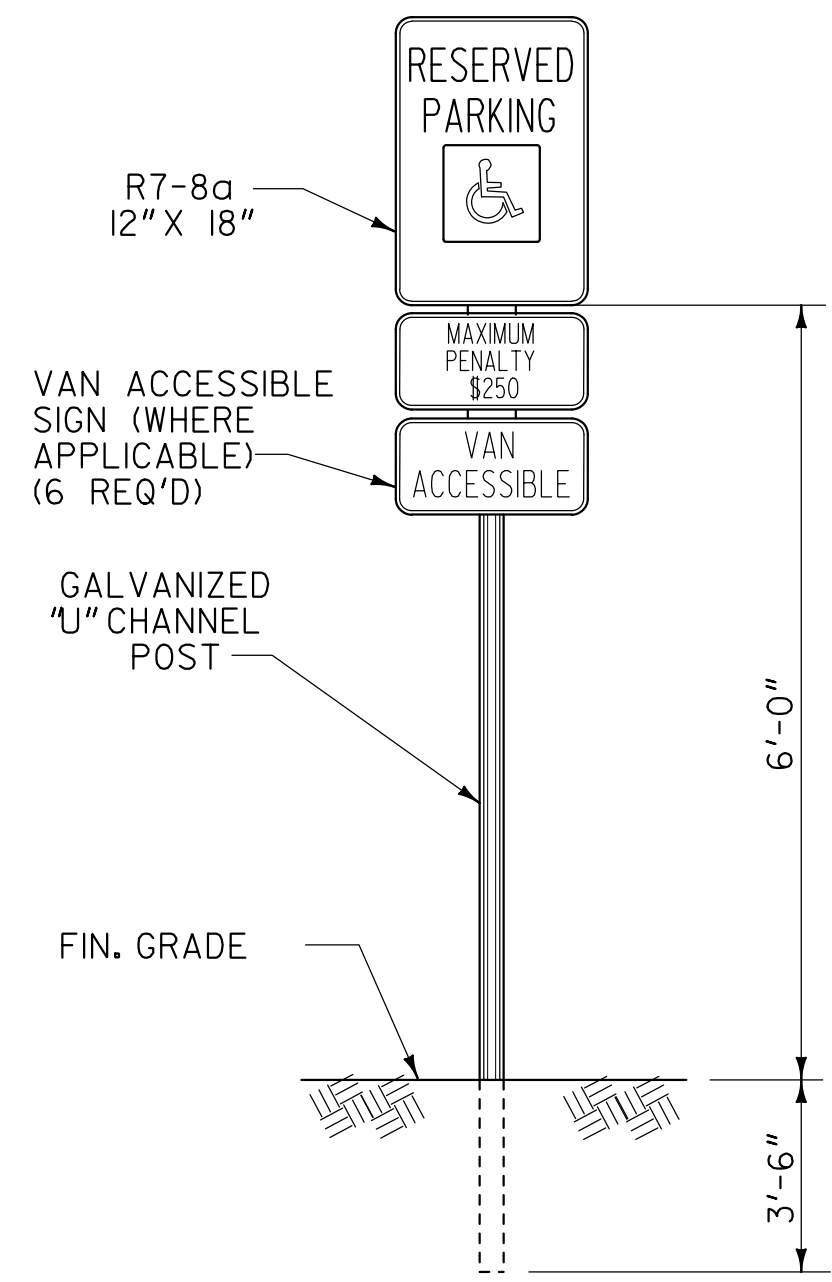




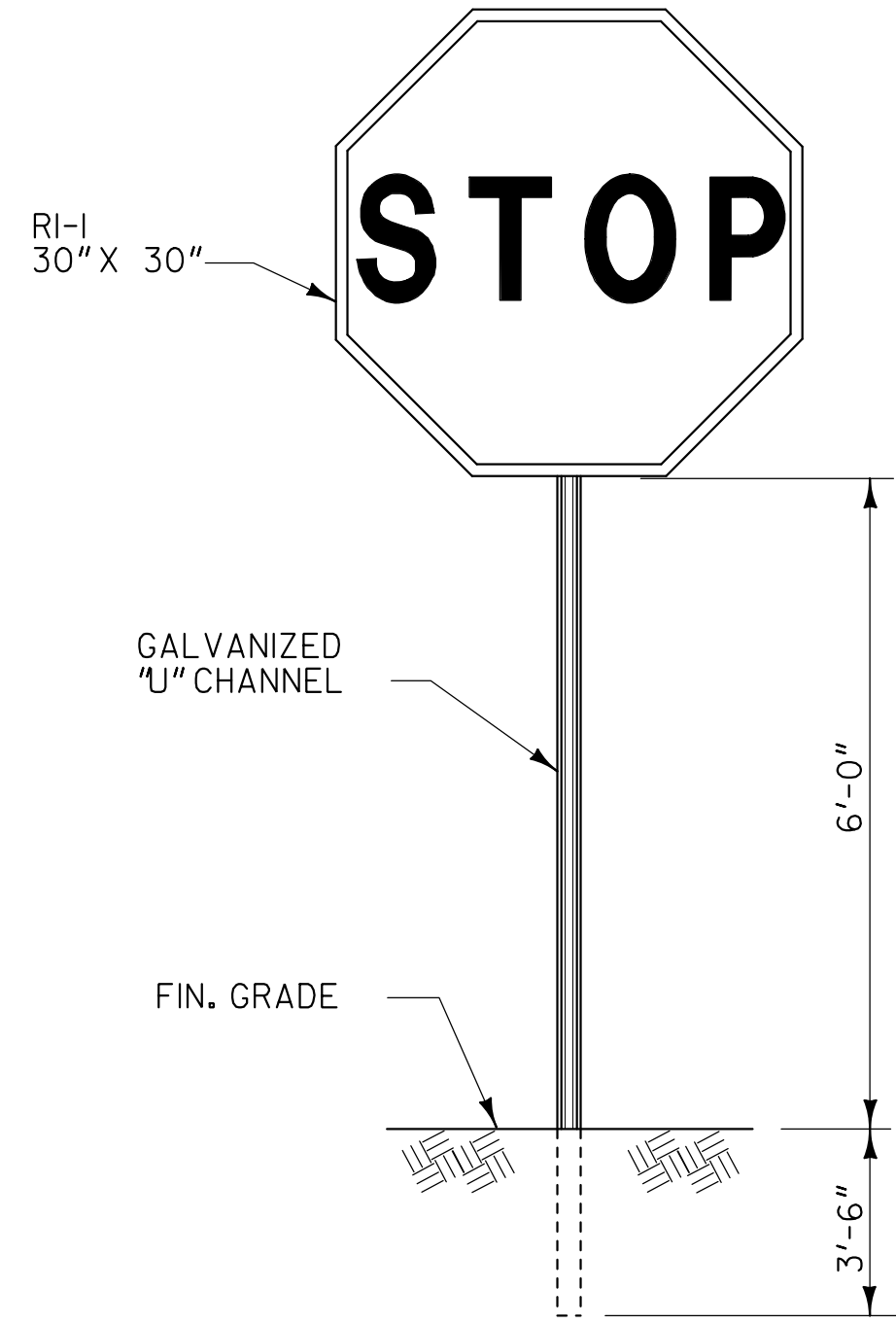


24" CURB & GUTTER

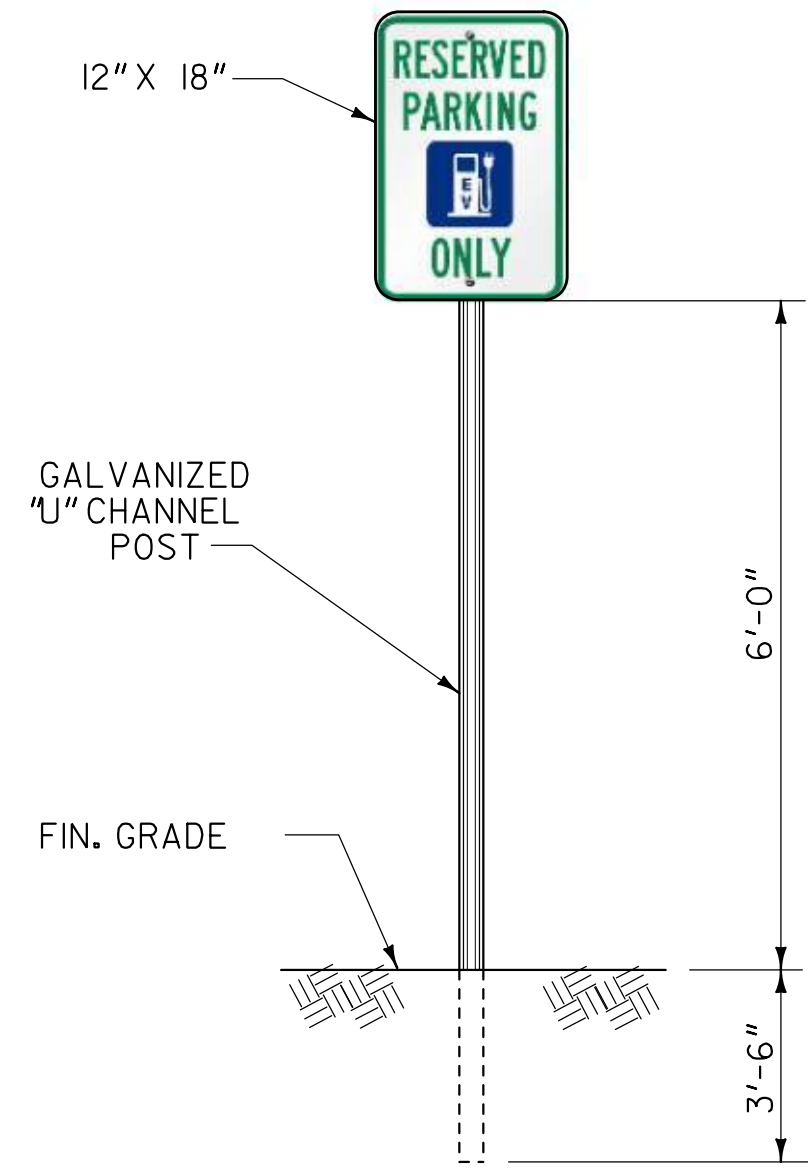
1. SEE TOWN OF WENDELL STANDARD DETAIL "CURB & GUTTER" SHEET C-105 FOR ADDITIONAL NOTES.



HANDICAP SIGN



STOP SIGN



ELECTRIC VEHICLE  
PARKING SIGN

HH

ARCHITECTURE

1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com

NV|5

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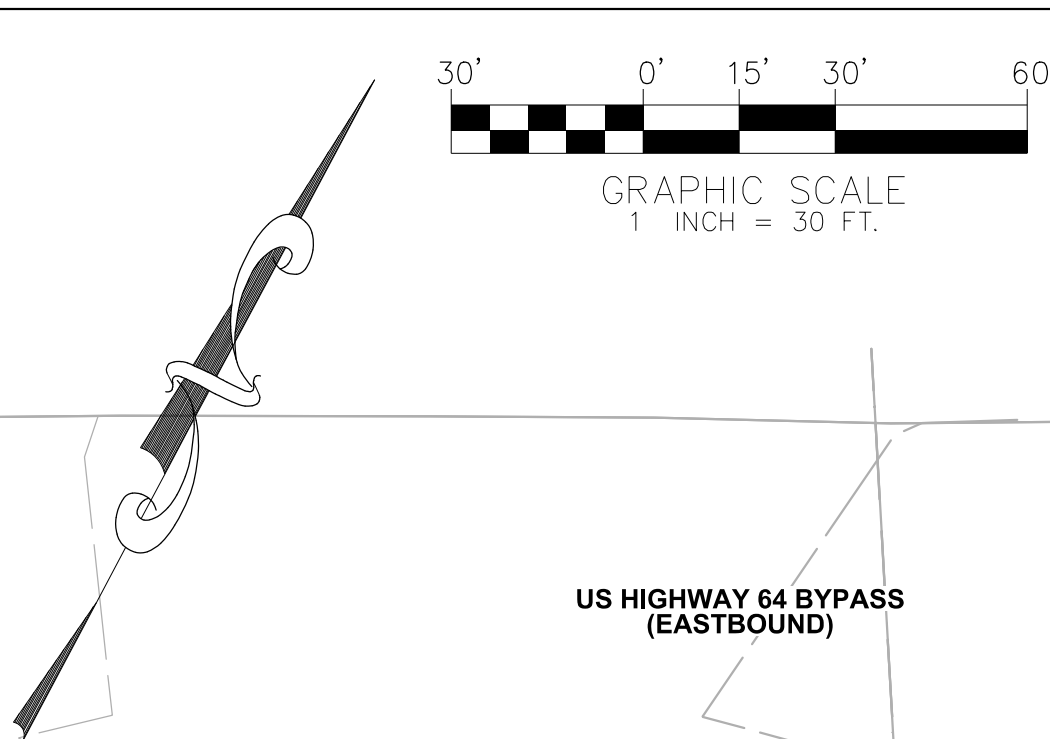
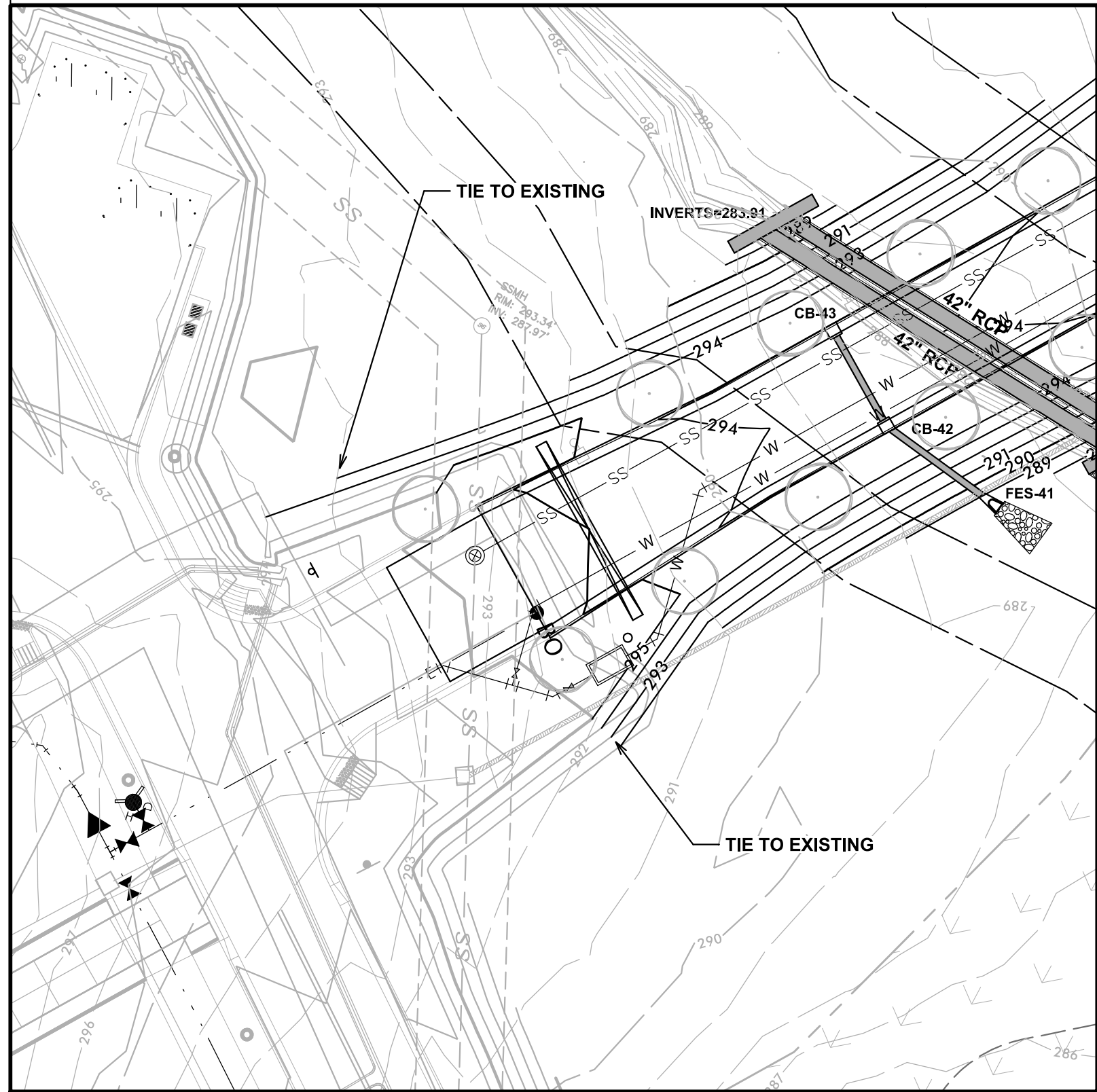
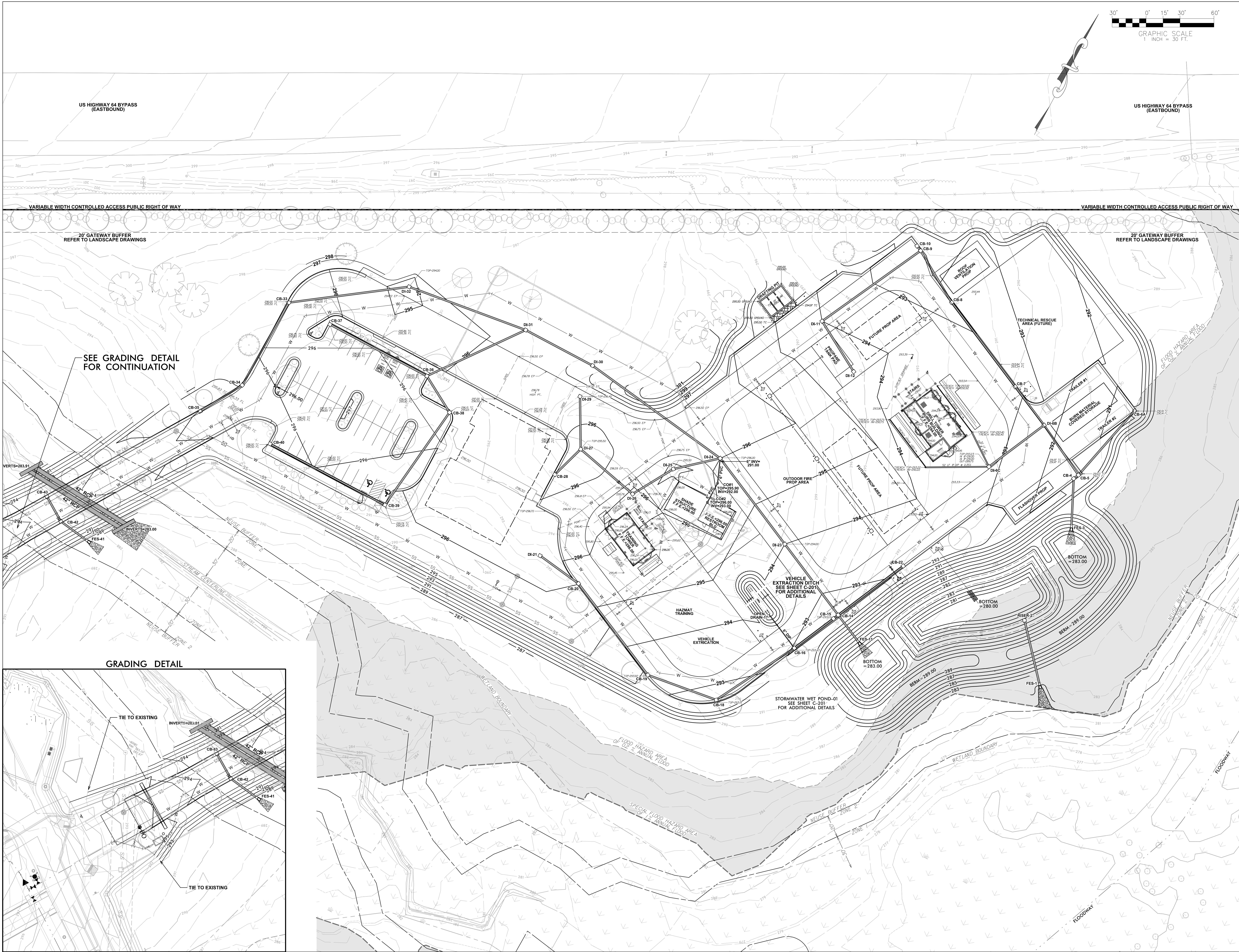
File Date: 03/14/2025 3:11:02:35 AM These drawings are the property of HH Architecture, P.A. They may not be used for any purpose without written permission. Copyright 2023 by HH Architecture, P.A. All rights reserved.

NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**SITE DETAILS**

C-106





**HH**  
ARCHITECTURE  
1100 Dresser Court  
Raleigh, NC 27609  
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Email office@hh-arch.com

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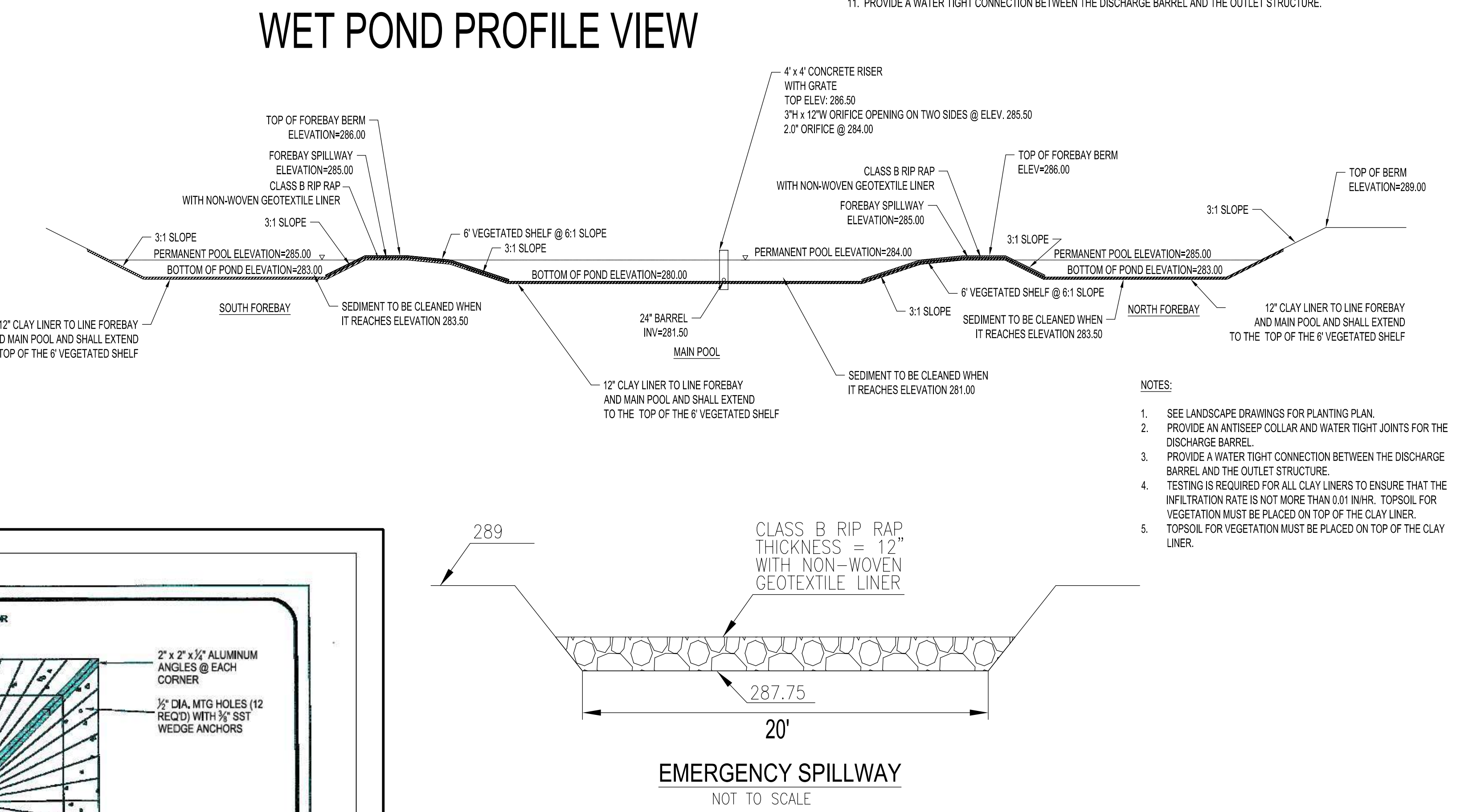
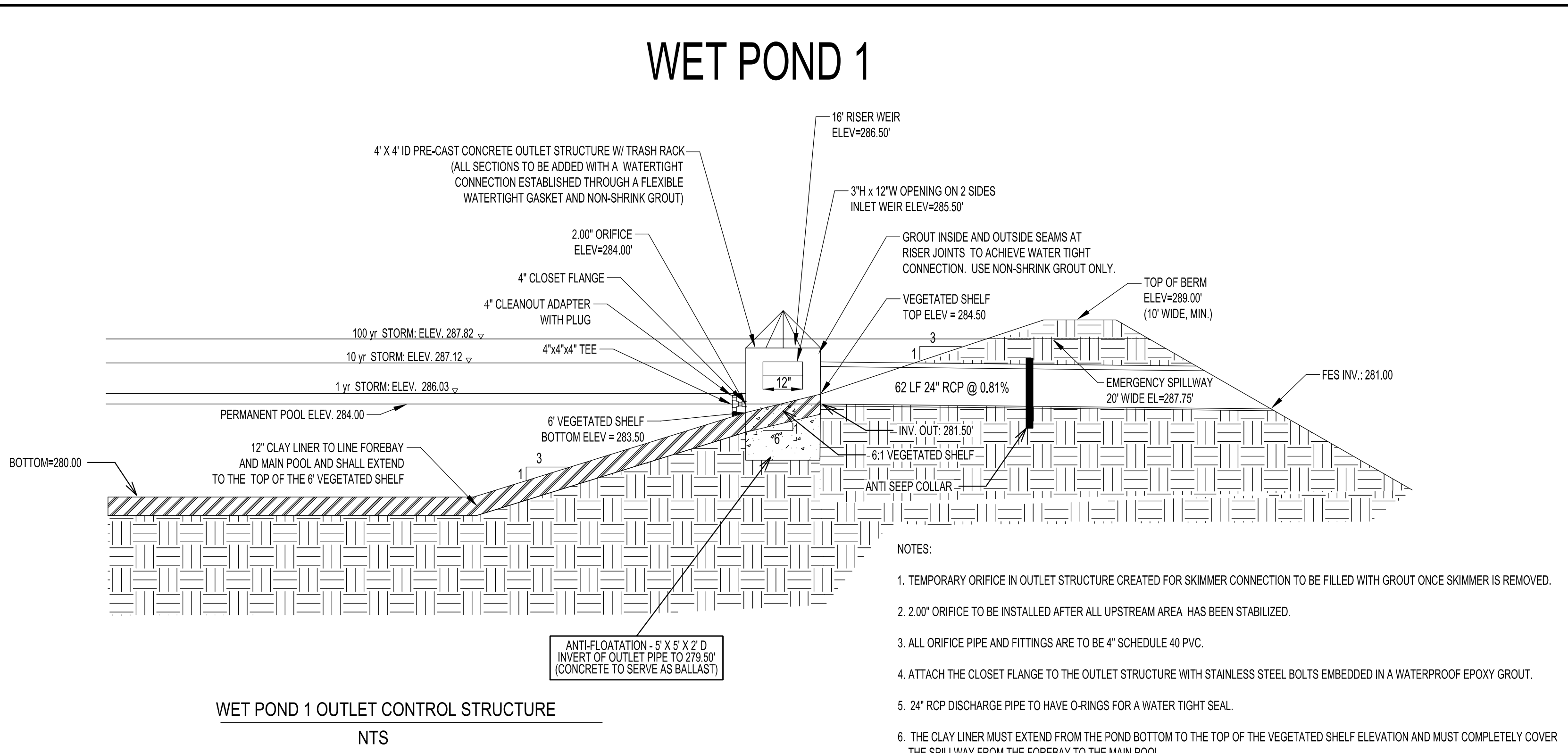
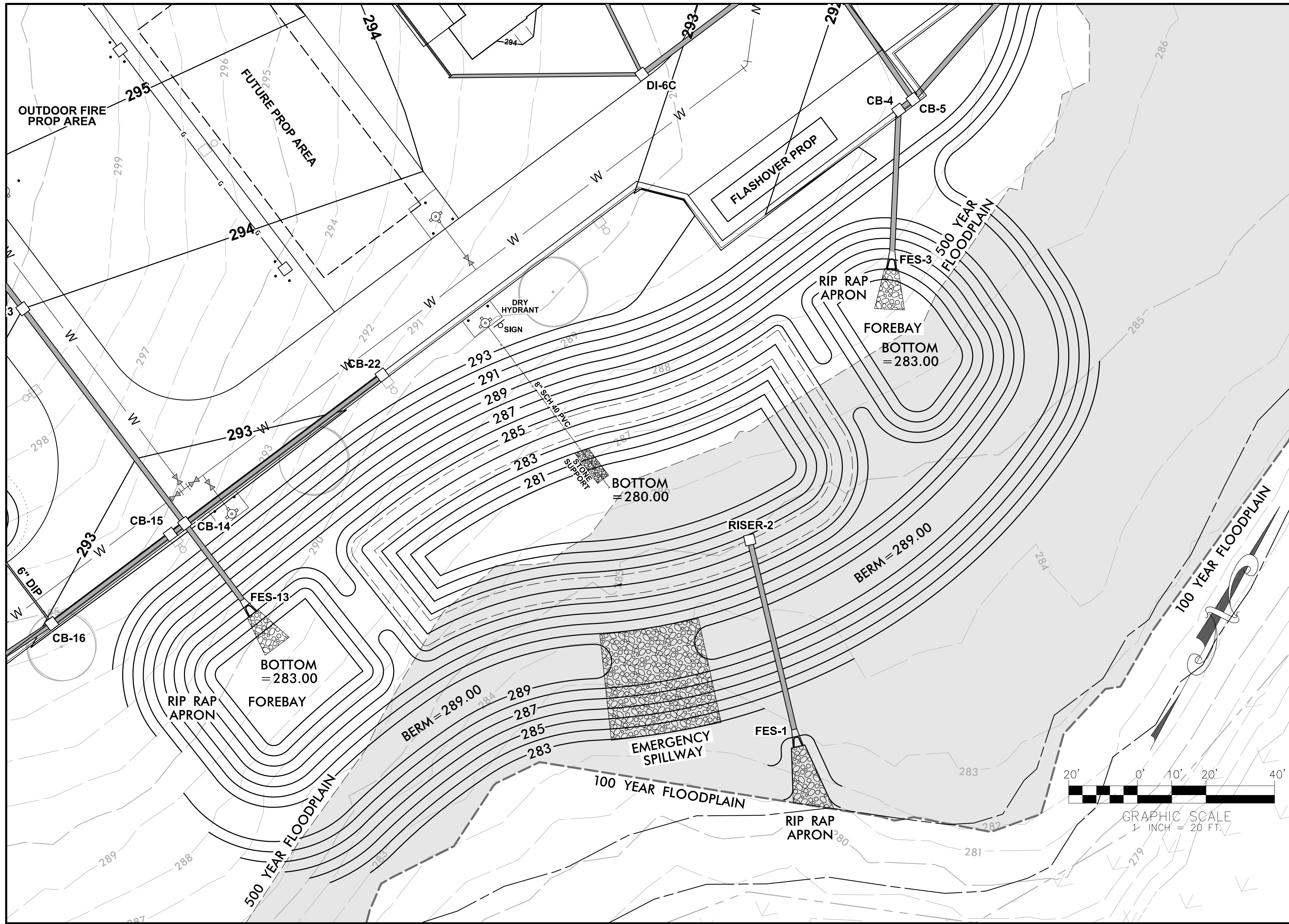
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**STORMWATER & GRADING PLAN**

C-200





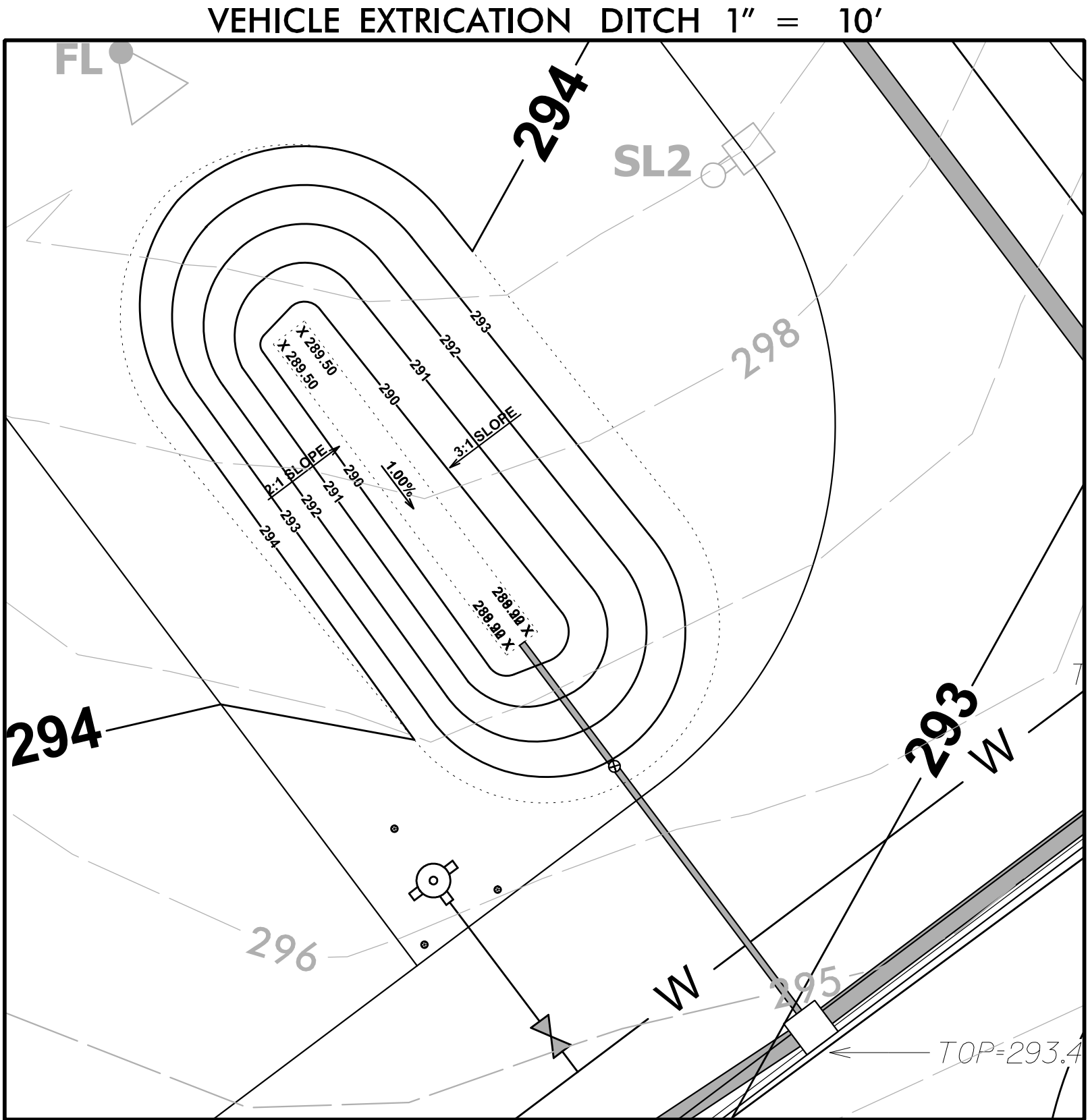
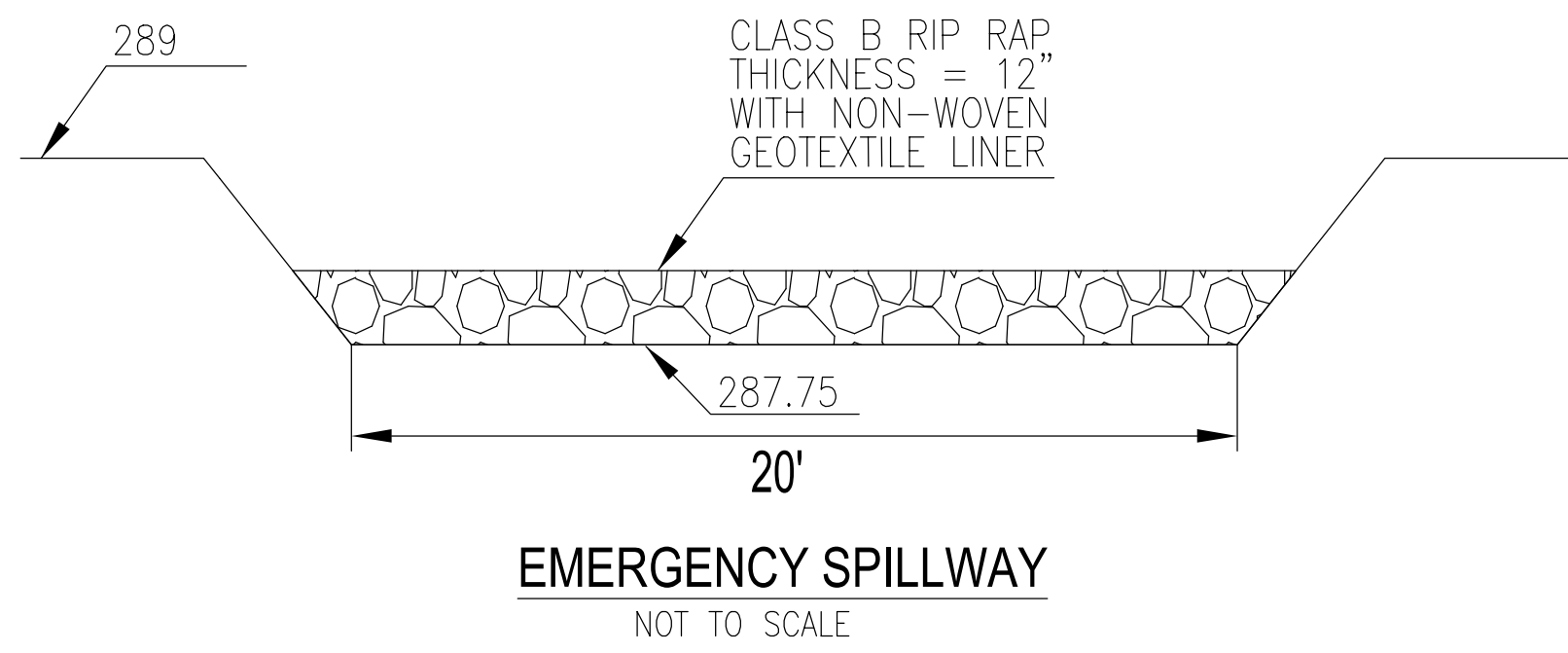
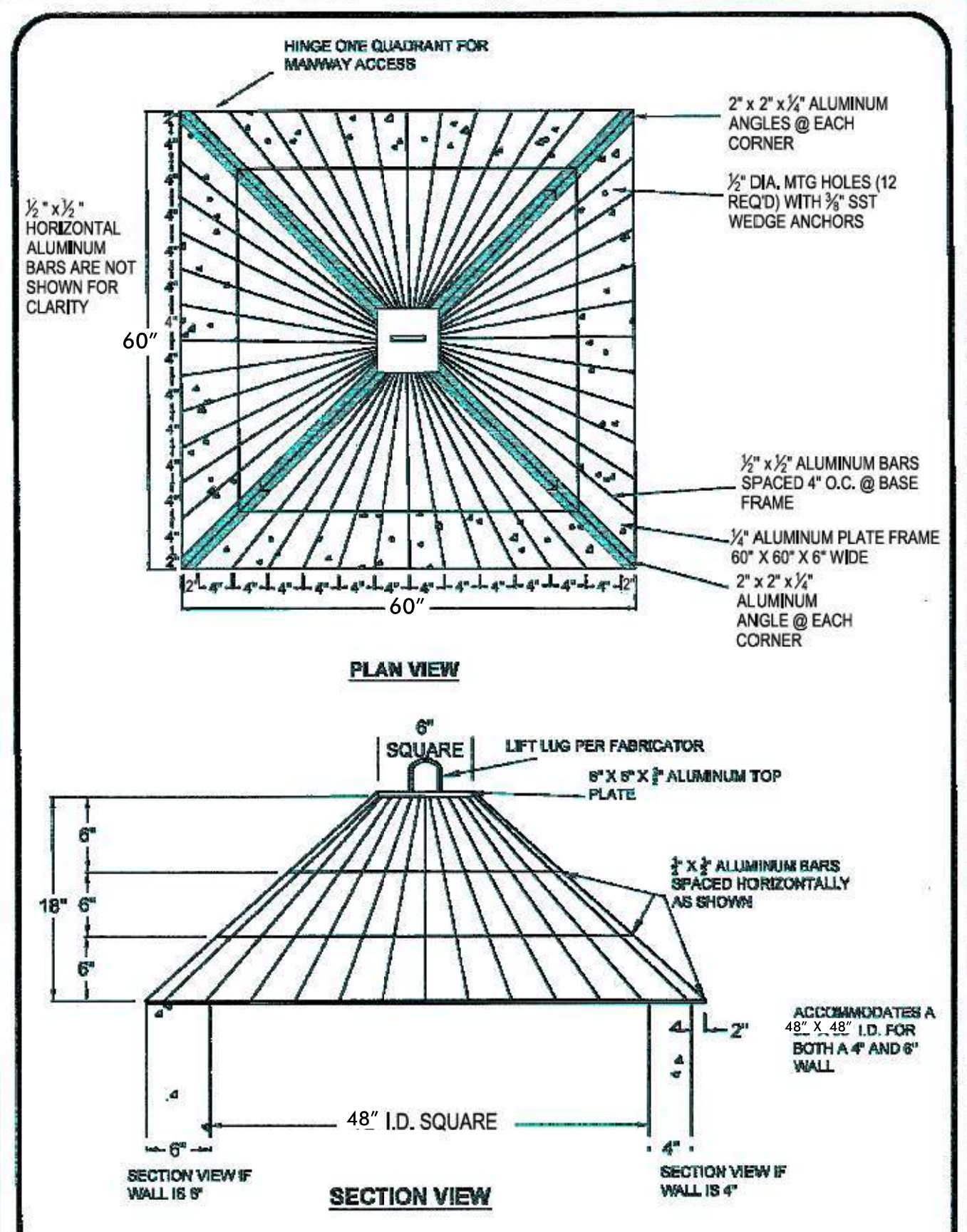
## DRAINAGE TABLE

ALL DROP INLETS LOCATED WITHIN PAVEMENT OR CONCRETE SHALL BE TRAFFIC RATED.

STORM STRUCTURE TABLE - STORM NETWORK 1				
NAME	R/W (TOP FOR CB)	INVERT IN	INVERT OUT	NEXT STRUCTURE
TRENCH-2	293.00		292.40	DI-6C
TRENCH-1	293.70		292.22	DI-6C
CB-40	296.00		291.60	CB-39
CB-35	295.50		291.50	CB-34
CB-34	296.00	291.25 (15" RCP, CB-35)	291.05	CB-33
CB-39	295.70	290.90 (15" RCP, CB-40)	290.70	CB-38
CB-33	296.00	290.60 (15" RCP, CB-34)	290.40	DI-32
CB-37	296.00		290.30	CB-36
DI-12	294.40		290.00	DI-9
CB-38	296.10	290.10 (15" RCP, CB-39)	290.00	DI-27
DI-6C	293.20	291.40 (8" RCP, TRENCH-2) 291.40 (8" RCP, TRENCH-1)	291.75	DI-6B
DI-12	294.00	289.80 (15" RCP, CB-33)	289.60	DI-31
DI-29	296.40	289.60	289.60	DI-27
CB-22	293.70		289.50	CB-14
DI-9	294.00	289.70 (15" RCP, DI-12)	289.50	CB-9
CB-36	296.00	289.70 (15" RCP, CB-38) 289.70 (15" RCP, CB-37)	289.50	DI-31
CB-28	296.50		289.40	DI-27
DI-21	296.50		289.30	CB-30
OPEN DRAIN-17	290.10		289.50	CB-16
DI-27	295.50	289.20 (15" RCP, DI-29) 289.20 (15" RCP, CB-28)	289.00	DI-26
CB-20	296.00	288.90 (15" RCP, DI-21)	288.70	CB-19
CB-10	292.20		288.40	CB-9
DI-31	296.00	288.75 (15" RCP, DI-32) 288.75 (15" RCP, CB-36)	288.50	DI-30
CB-9	292.20	288.60 (15" RCP, DI-9) 288.60 (15" RCP, CB-10)	288.40	CB-8
DI-26	295.50	288.50 (15" RCP, DI-27)	288.30	DI-25
DI-30	298.90	288.15 (18" RCP, DI-31)	287.95	DI-24
CB-8	293.20	288.00 (15" RCP, CB-9)	287.80	CB-7
CB-19	293.90	288.00 (15" RCP, CB-20)	287.80	CB-18
DI-25	295.50	288.00 (15" RCP, DI-26)	287.80	DI-24
DI-18	293.10	287.40 (15" RCP, CB-19)	287.20	CB-16
DI-24	296.00	287.15 (18" RCP, DI-30) 287.40 (15" RCP, DI-25)	286.95	CB-23
CB-6A	290.90		286.00	CB-5
CB-16	293.40	286.70 (15" RCP, CB-18) 288.70 (8" RCP, OPEN DRAIN-17)	286.50	CB-15
CB-7	293.60	286.00 (15" RCP, CB-8)	286.40	DI-6B
CB-23	294.00	286.45 (18" RCP, DI-24)	286.25	CB-14
DI-6B	292.30	286.30 (18" RCP, CB-7) 286.00 (15" RCP, DI-6C)	286.20	CB-5
CB-15	293.00	286.20 (15" RCP, CB-16)	286.00	CB-14
CB-5	291.60	285.60 (18" RCP, DI-6B) 286.00 (15" RCP, CB-6A)	285.65	CB-4
CB-14	293.00	285.70 (18" RCP, CB-23) 285.95 (15" RCP, CB-15) 289.00 (15" RCP, CB-22)	285.50	FES-13
CB-4	291.60	285.60 (18" RCP, CB-5)	285.40	FES-3
F x 3' Riser-2	286.50		281.50	FES-1
FES-13	4.88	285.00 (18" RCP, CB-14)		
FES-1	284.70	281.00 (24" RCP, F x 3' Riser-2)		
FES-3	286.94	285.00 (15" RCP, CB-4)		

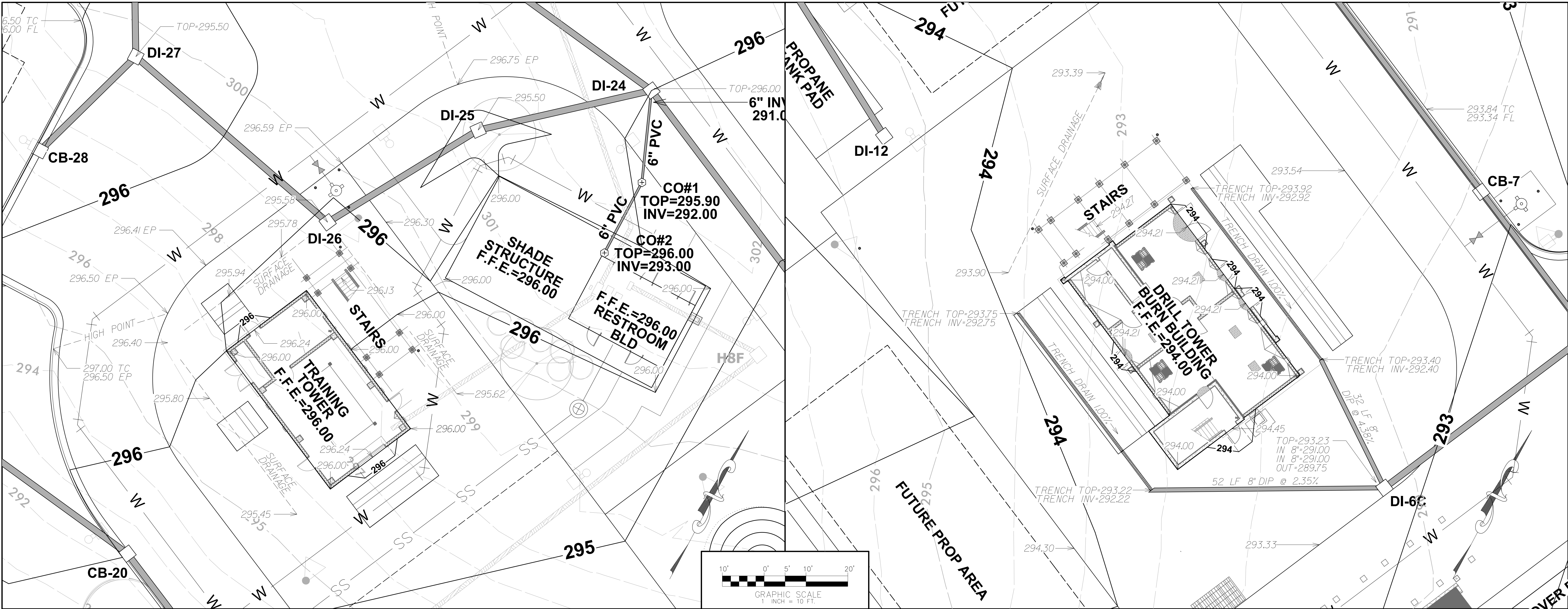
PIPE TABLE - STORM NETWORK 1						
PIPE NAME	DIAMETER	LENGTH	START INVERT	END INVERT	SLOPE	PIPE MATERIAL
TRENCH-2 TO DI-6C	8.00	31.47	292.40	291.40	3.18%	DIP
TRENCH-1 TO DI-6C	8.00	53.21	292.22	291.40	1.54%	DIP
CB-40 TO CB-39	15.00	108.51	291.60	290.90	0.65%	Reinforced Concrete Pipe
CB-35 TO CB-34	15.00	39.34	291.50	291.25	0.64%	Reinforced Concrete Pipe
CB-34 TO CB-33	15.00	79.47	291.05	290.60	0.57%	Reinforced Concrete Pipe
CB-39 TO CB-38	15.00	97.62	290.70	290.10	0.61%	Reinforced Concrete Pipe
CB-33 TO DI-32	15.00	104.02	290.40	289.80	0.58%	Reinforced Concrete Pipe
CB-37 TO CB-36	15.00	90.52	290.30	289.70	0.66%	Reinforced Concrete Pipe
DI-12 TO DI-9	15.00	49.61	290.00	289.70	0.60%	Reinforced Concrete Pipe
CB-38 TO CB-36	15.00	35.24	289.90	289.70	0.57%	Reinforced Concrete Pipe
DI-6C TO DI-6B	15.00	37.57	289.75	289.00	1.30%	Reinforced Concrete Pipe
DI-29 TO DI-27	15.00	41.31	289.60	289.20	0.92%	Reinforced Concrete Pipe
DI-32 TO DI-31	15.00	106.65	289.60	288.75	0.80%	Reinforced Concrete Pipe
CB-22 TO CB-14	15.00	68.02	289.50	289.00	0.74%	Reinforced Concrete Pipe
DI-9 TO CB-9	15.00	104.55	289.50	288.60	0.86%	Reinforced Concrete Pipe
CB-36 TO DI-31	15.00	91.51	289.50	288.75	0.82%	Reinforced Concrete Pipe
CB-20 TO DI-27	15.00	28.13	289.40	289.20	0.71%	Reinforced Concrete Pipe
DI-21 TO CB-20	15.00	18.02	289.30	288.90	1.65%	Reinforced Concrete Pipe
OPEN DRAIN-17 TO CB-16	6.00	35.38	289.20	288.70	1.41%	DIP
DI-27 TO DI-26	15.00	57.02	289.00	288.50	0.88%	Reinforced Concrete Pipe
CB-20 TO CB-19	15.00	97.53	288.70	288.00	0.72%	Reinforced Concrete Pipe
CB-10 TO CB-9	15.00	2.04	288.60	288.60	1.90%	Reinforced Concrete Pipe
DI-31 TO DI-30	18.00	63.99	288.50	288.15	0.53%	Reinforced Concrete Pipe
CB-9 TO CB-8	15.00	49.35	288.40	288.00	0.81%	Reinforced Concrete Pipe
DI-30 TO DI-25	15.00	99.12	288.30	288.00	0.77%	Reinforced Concrete Pipe
DI-30 TO DI-24	18.00	136.40	287.95	287.15	0.59%	Reinforced Concrete Pipe
DI-25 TO DI-24	15.00	38.85	287.80	287.40	1.05%	Reinforced Concrete Pipe
CB-8 TO CB-7	15.00	49.20	287.80	286.80	1.12%	Reinforced Concrete Pipe
CB-19 TO CB-18	15.00	60.57	287.80	287.40	0.66%	Reinforced Concrete Pipe
CB-18 TO CB-16	15.00	79.14	287.20	286.70	0.63%	Reinforced Concrete Pipe
DI-24 TO CB-23	18.00	91.85	286.95	286.45	0.54%	Reinforced Concrete Pipe
CB-6A TO CB-5	15.00	72.38	286.60	286.10	0.69%	Reinforced Concrete Pipe
CB-16 TO CB-15	15.00	38.84	286.50	286.20	0.77%	Reinforced Concrete Pipe
CB-7 TO DI-6B	18.00	38.91	286.45	286.20	0.64%	Reinforced Concrete Pipe
CB-23 TO CB-14	18.00	76.87	286.25	285.70	0.72%	Reinforced Concrete Pipe
DI-6B TO CB-5	18.00	50.78	286.20	285.85	0.69%	Reinforced Concrete Pipe
CB-15 TO CB-14	15.00	1.74	286.00	285.95	2.88%	Reinforced Concrete Pipe
CB-5 TO CB-4	18.00	1.95	285.65	285.61	2.09%	Reinforced Concrete Pipe
CB-14 TO FES-13	18.00	29.13	285.50	285.00	1.72%	Reinforced Concrete Pipe
CB-4 TO FES-3	15.00	42.70	285.41	285.00	0.96%	Reinforced Concrete Pipe
F x 3' Riser-2 TO FES-1	24.00	60.44	281.50	281.00	0.83%	Reinforced Concrete Pipe

## ALUMINUM TRASH RACK (BY POMONA PIPE OR EQUAL)

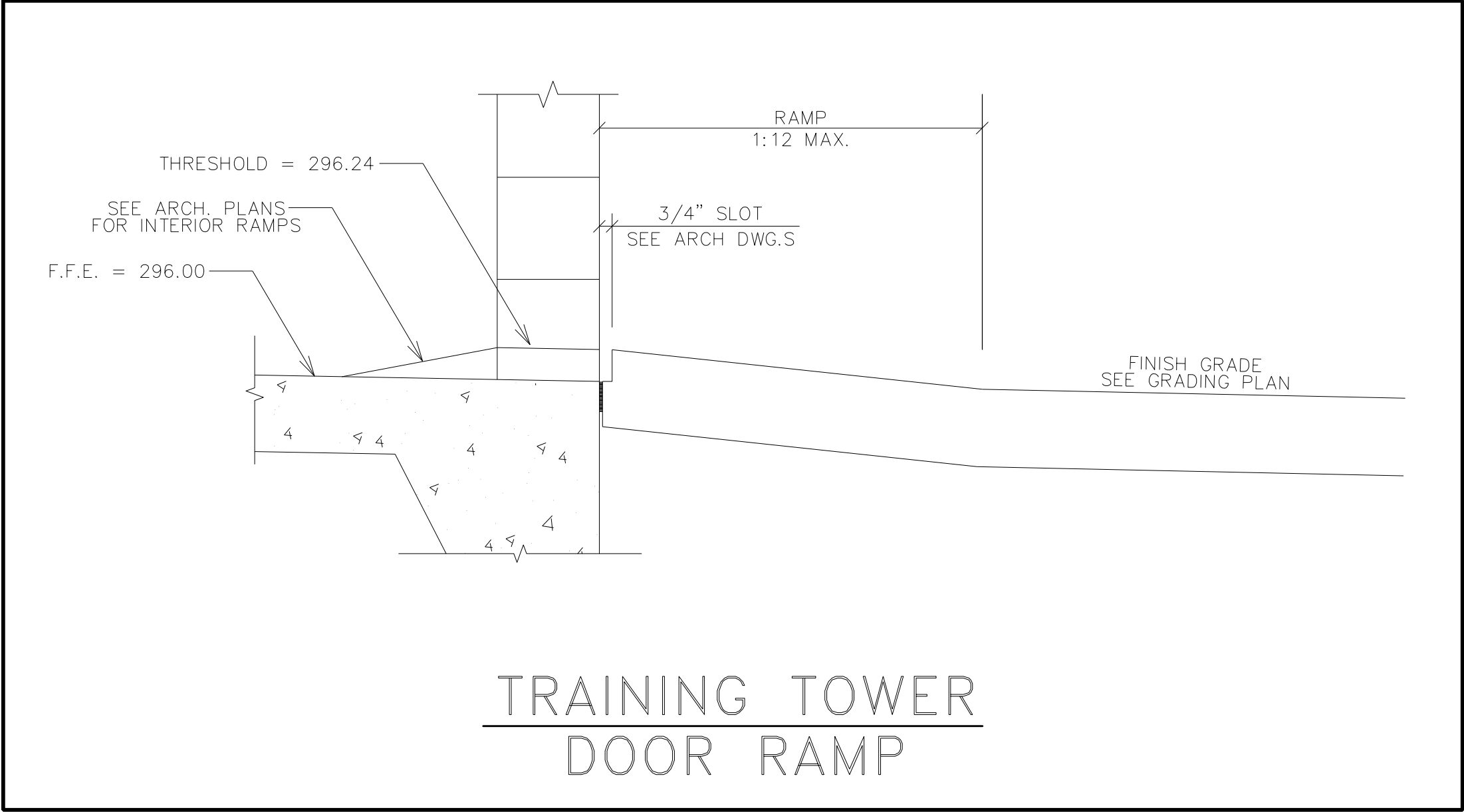


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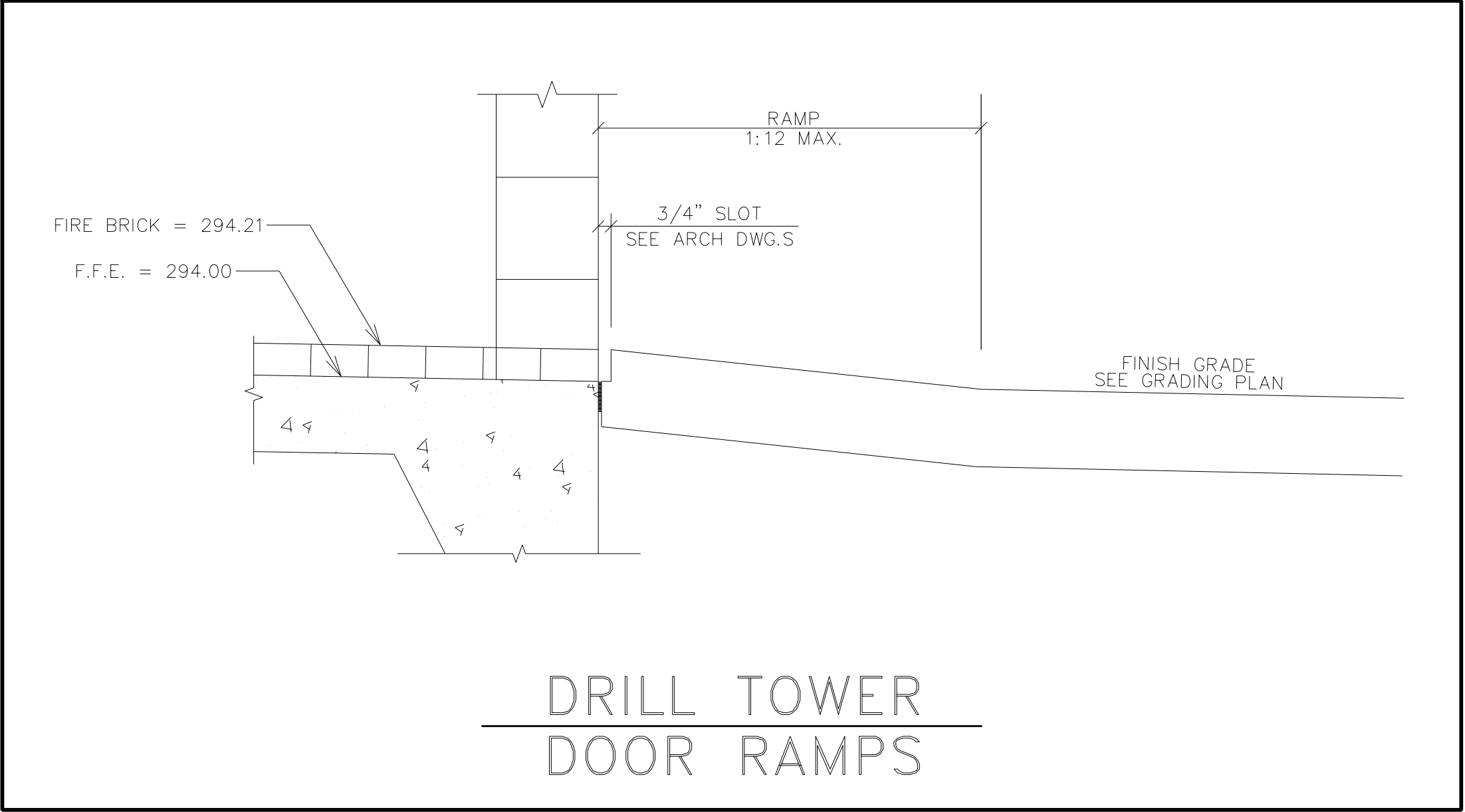


TRAINING TOWER  
GRADING ENLARGEMENT



TRAINING TOWER  
DOOR RAMP

DRILL TOWER  
GRADING ENLARGEMENT



DRILL TOWER  
DOOR RAMPS



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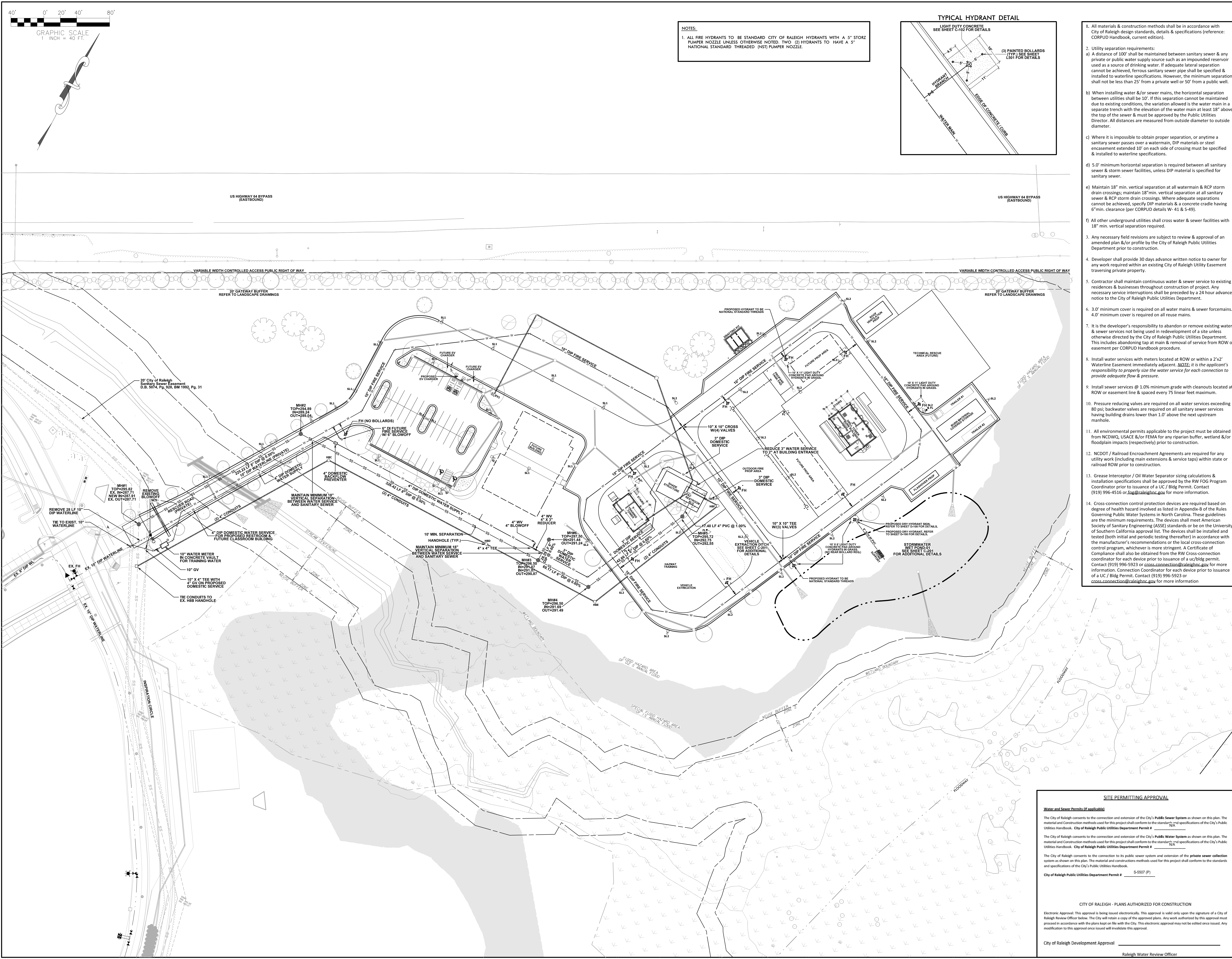
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NCCCS NO. 2303

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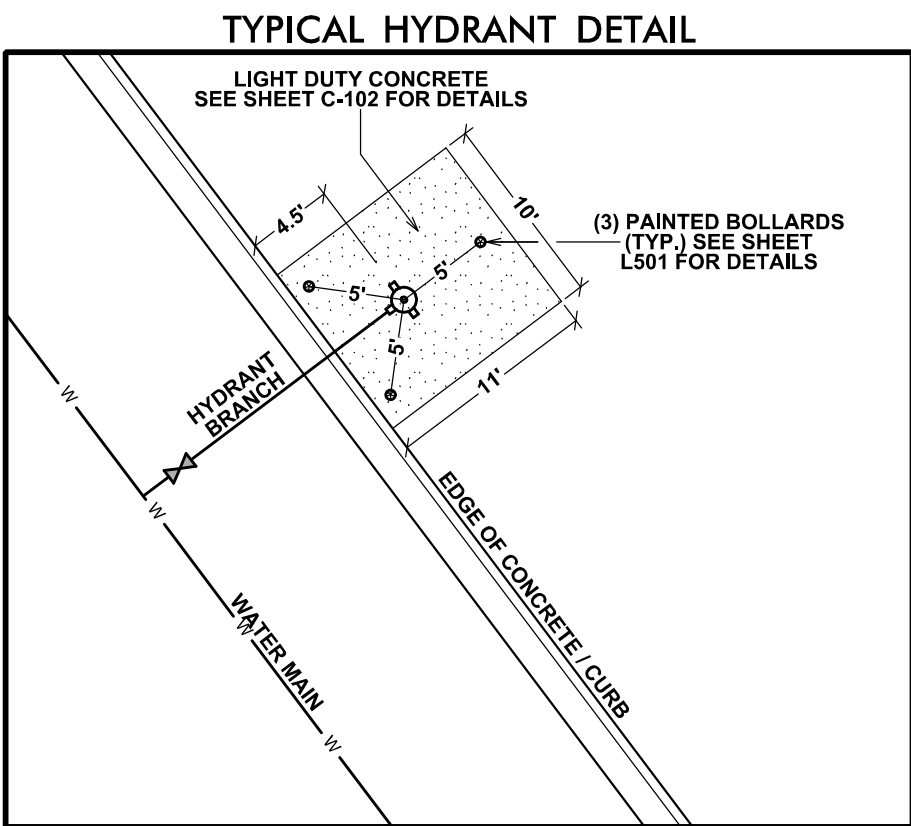
NO.	REVISION	DATE

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PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**Grading Enlargement**





NOTES:  
1. ALL FIRE HYDRANTS TO BE STANDARD CITY OF RALEIGH HYDRANTS WITH A 5" STORZ PUMPER NOZZLE UNLESS OTHERWISE NOTED. TWO (2) HYDRANTS TO HAVE A 5" NATIONAL STANDARD THREADED (NST) PUMPER NOZZLE.



1. All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition).
2. Utility separation requirements:  
a) A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to wateline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.  
b) When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.  
c) Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to wateline specifications.  
d) 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer.  
e) Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49).
3. Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
4. Developer shall provide 30 days advance written notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property.
5. Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department.
6. 3.0' minimum cover is required on all water mains & sewer forcemains. 4.0' minimum cover is required on all reuse mains.
7. It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure.
8. Install water services with meters located at ROW or within a 2"x2' Waterline Easement immediately adjacent. *NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure.*
9. Install sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum.
10. Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole.
11. All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
12. NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction.
13. Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the RW FOG Program Coordinator prior to issuance of a UC / Bldg Permit. Contact: (919) 996-4516 or [rog@raleighnc.gov](mailto:rog@raleighnc.gov) for more information.
14. Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. A Certificate of Compliance shall also be obtained from the RW Cross-connection coordinator for each device prior to issuance of a u/bldg permit. Contact: (919) 996-5923 or [cross.connection@raleighnc.gov](mailto:cross.connection@raleighnc.gov) for more information. Connection Coordinator for each device prior to issuance of a UC / Bldg Permit. Contact: (919) 996-5923 or [cross.connection@raleighnc.gov](mailto:cross.connection@raleighnc.gov) for more information

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**WTCC EWS - FIRE & RESCUE TRAINING CENTER**  
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NCCCS NO. 2303

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NO.	REVISION	DATE

**SITE PERMITTING APPROVAL**

Water and Sewer Permit (if applicable)

The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # N/A

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # N/A

The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # S-5507 (P)

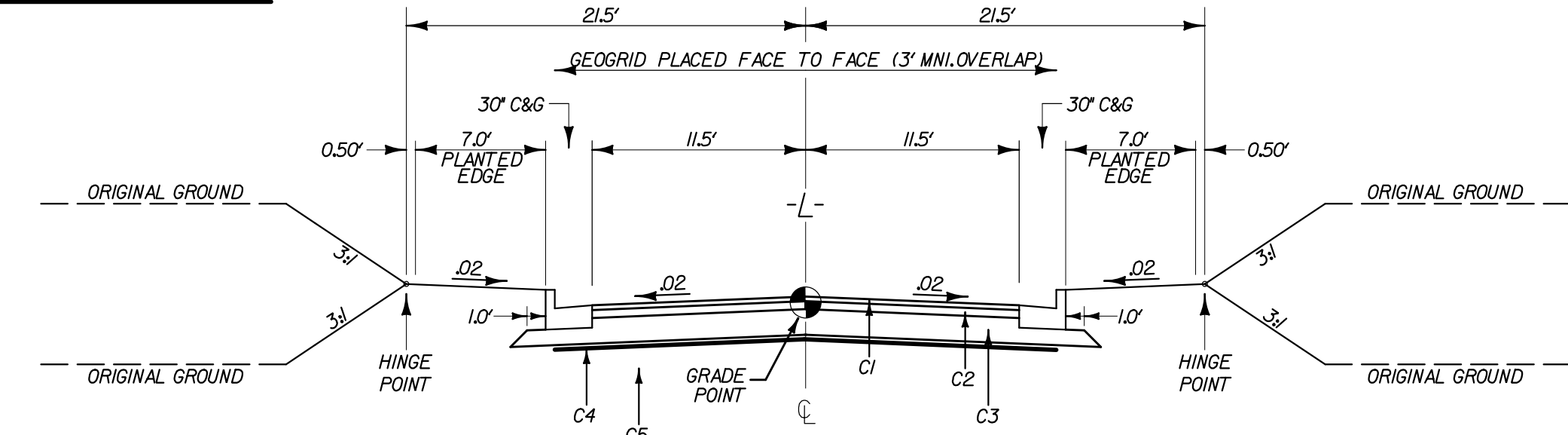
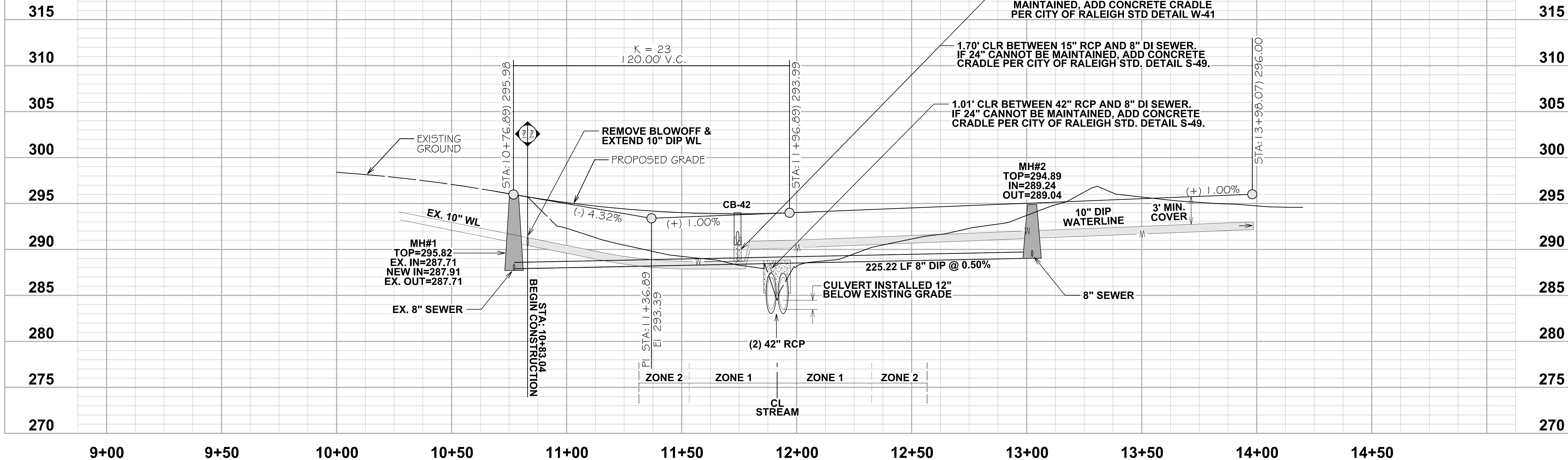
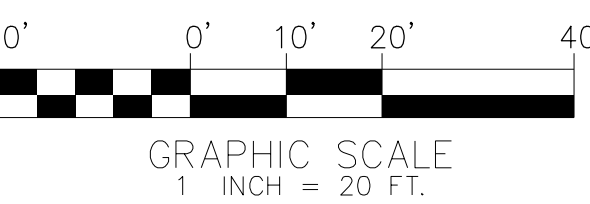
**CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION**

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval \_\_\_\_\_  
Raleigh Water Review Officer \_\_\_\_\_



1. STREAM BANK/ALLUUVIAL SOIL MECHANICAL STABILIZATION MAY BE ACHIEVED BY COMPACTING NCDOT CLASS B OR CLASS A RIP-RAP INTO THE EXPOSED SOFT WET SOILS USING TRACK MOUNTED EQUIPMENT SUCH AS A DOZER. ONCE INITIAL MECHANICAL STABILIZATION IS ACHIEVED WITH RIP-RAP, PROGRESSIVELY SMALLER CRUSHED STONE SUCH AS NCDOT TYPE #4 OR NCDOT TYPE #56 SHOULD BE PLACED OVER THE RIP-RAP TO PROVIDE SIMILAR TRACK MOUNTED EQUIPMENT. AFTER SUFFICIENT MECHANICAL SOIL STABILIZATION IS ACHIEVED, A NCDOT TYPE 4 GEOTEXTILE FABRIC SHOULD BE PLACED OVER THE CRUSHED STONE PRIOR TO STRUCTURAL FILL SOIL PLACEMENT AND COMPACTATION IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE ACCUMULATION OF THE GEOTEXTILE FABRIC OVER THE SOIL OF THE GEOTECHNICAL ENGINEER'S REPRESENTATIVE SHOULD BE OBSERVED. MECHANICAL SOIL STABILIZATION ACTIVITIES ON A FULL-TIME BASIS AND PROVIDE STABILIZATION OF THE EXPOSED STREAM BANKS TO THE ACTUAL SUBGRADE SOIL CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION.



<b>PAVEMENT SCHEDULE</b>	
C1	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S 9.5B
C2	4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I 19.0C
C3	8" ABC
C4	GEOGRID (BX1200 OR EQUIVALENT)
C5	COMPACTED SUBGRADE

**WICCEWS - FIRE & RESCUE TRAINING CENTER**  
WAKE TECHNICAL COMMUNITY COLLEGE  
5401 ROLESVILLE ROAD WENDELL, NC 27591  
NCCCS NO. 2303

REVISION	DATE

NUMBER  
**-086**

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**/14/2025**

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**SUE FOR**  
**STRUCTION**

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**TREAM**  
**CROSSING**  
**LAN**

C-301





**HH**  
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JOB NUMBER  
**22-086**

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DATE ISSUED  
**03/14/2025**

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PROJECT STATUS  
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CONSTRUCTION**

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SHEET  
**PROPOSED GAS  
DISTRIBUTION  
LAYOUT**

C-302

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PHASE I CONSTRUCTION SEQUENCE

1. EROSION AND SEDIMENT CONTROL (E&S) PERMIT AND CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES (INCLUDING TIMBERING AND DEMOLITION) OCCUR. THE COC CAN BE OBTAINED BY FILING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT [HTTPS://WWW.DEQ.NC.GOV/NCNOI](https://www.deq.nc.gov/ncnoi). PLEASE NOTE: THE E-NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS ARE APPROVED. A COPY OF THE E&S PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTIONS.
2. CONTACT NCDEMLR RALEIGH REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO COMMENCING THE LAND-DISTURBING ACTIVITY. THE CONTACT NUMBER IS (919) 791-4200 (15A NCAC 04B .106(b)).
3. ADD GRAVEL CONSTRUCTION ENTRANCE.
4. IF CULVERTS ARE NOT INSTALLED AND ACCESS IS NEEDED ON-SITE, INSTALL TEMPORARY STREAM CROSSING PER DETAIL ON SHEET D-102. ALL TIMBER MAT CROSSINGS SHOULD HAVE SOLID DECKS WITH NO GAPS OR SPACES THAT INCLUDE SIDE BOARDS WHICH ARE AT LEAST 4 INCHES TALL. INSTALL WASHED STONE APPROACHES THAT EXTEND A MINIMUM OF 30' ON EACH SIDE OF THE CROSSING WITH BERM TO DIRECT RUN-OFF TO SILT FENCE OUTLETS.
5. INSTALL SILT FENCE, AND SILT FENCE OUTLETS CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
6. INSTALL SKIMMER SEDIMENT BASIN(S) ACCORDING TO PLAN, SEED, MULCH AND ANCHOR BERM AND SOILS AROUND AND BELOW BASIN UPON CONSTRUCTION. USE REOF FOR STABILIZATION OF ALL 2:1 SLOPES. PLACE SILT FENCE ON DOWNHILL SIDE OF SOIL STOCKPILES.
7. CONTACT NCDEMLR AT (919) 791-4200 FOR INSPECTION OF THESE MEASURES. UPON APPROVAL, INSTALL TEMPORARY DIVERSION DITCHES AND THE REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE PLAN.
8. LIMIT DISTURBANCES TO THE LENGTH THAT CAN STABILIZED AT THE END OF THE WORKDAY (15A NCAC 04B .0106(d)).

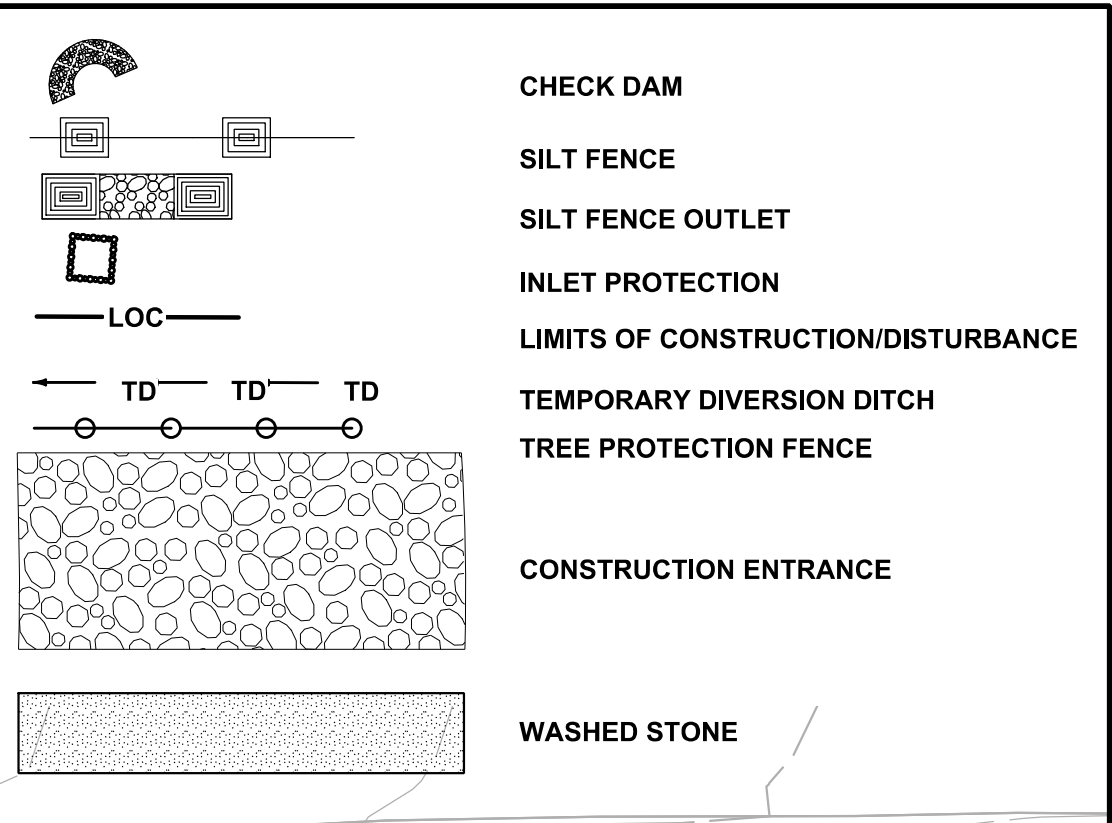
- RIPARIAN BUFFER RULES**
1. DUE TO THE LOCATION OF THIS PROJECT, IT SHOULD BE NOTED THAT A RULE TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE RIVER BASIN BECAME EFFECTIVE ON JULY 22, 1997. THE NEUSE RIVER RIPARIAN AREA PROTECTION AND MAINTENANCE RULE (15A NCAC 2B.0233) APPLIES TO ALL PERENNIAL AND INTERMITTENT STREAMS, LAKES, PONDS AND ESTUARIES IN THE NEUSE RIVER BASIN WITH FOREST VEGETATION ON THE ADJACENT LAND OR "RIPARIAN AREA".

TOTAL DISTURBED AREA = 403,349 SF / 9.260 ACRES

SKIMMER SEDIMENT BASIN SCHEDULE

BASIN #	DRAINAGE AREA (ACRES)	LENGTH (FT)	WIDTH (FT)	BOTTOM ELEVATION	TOP OF BERM ELEVATION	WEIR LENGTH (FT)	WEIR ELEVATION	SKIMMER SIZE (IN)	ORIFICE SIZE (IN)	SKIMMER INVERT
#1	5.21	NA	NA	284	289	20	287.75	2.0	1.75	285.00

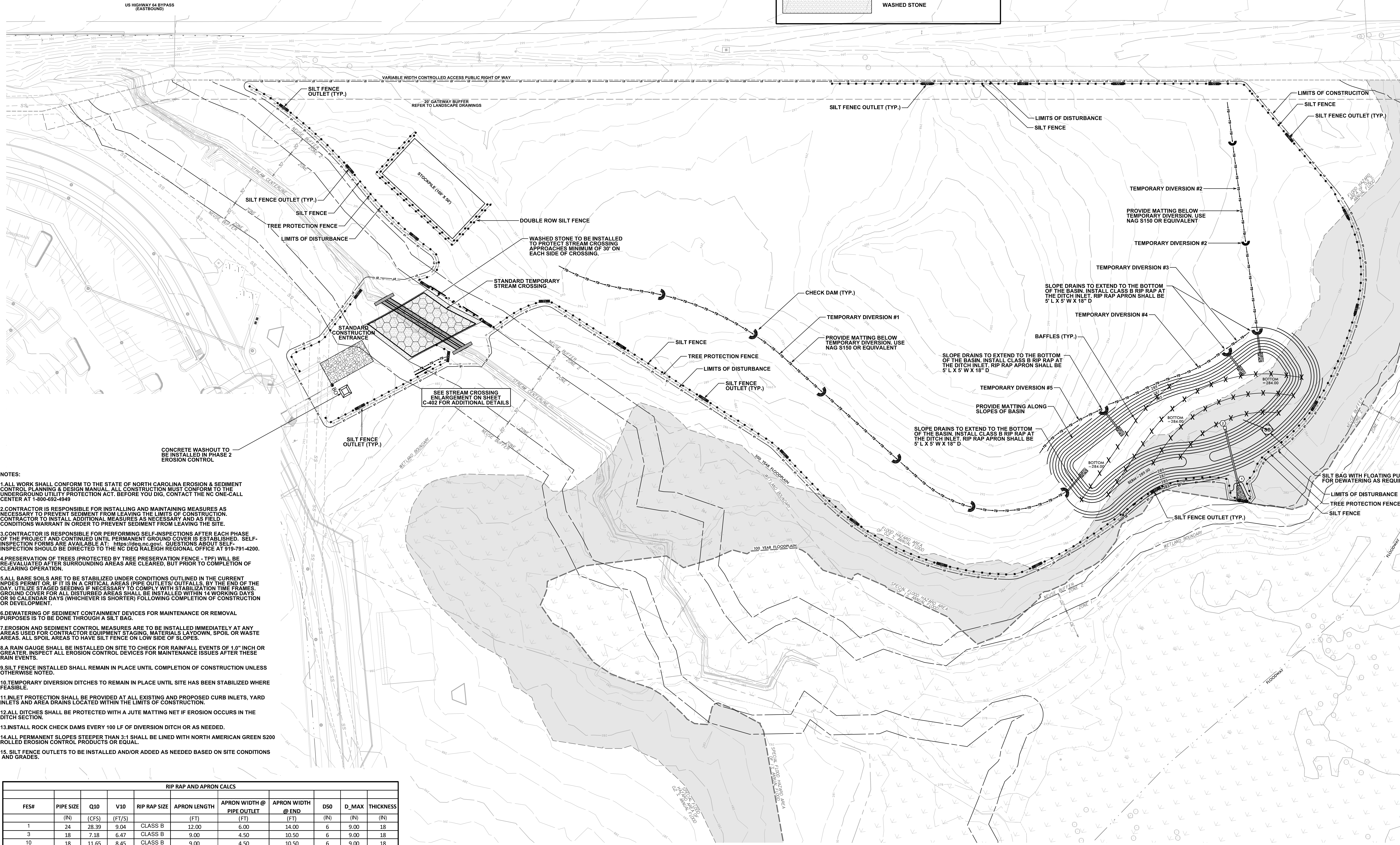
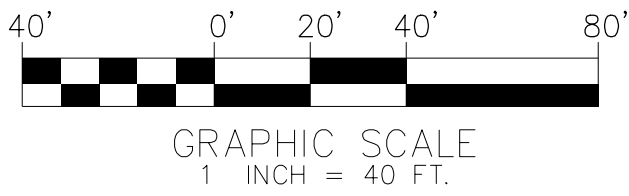
TOTAL DISTURBED AREA = 9.260 ACRES



TEMPORARY DIVERSION SPECIFICATIONS

DITCH #	LINER TYPE	BOTTOM WIDTH	SIDE SLOPE	DEPTH
1	NAG-S150	0 FT	2:1	2 FEET
2	NAG-S150	0 FT	2:1	2 FEET
3	NAG-S150	0 FT	2:1	2 FEET
4	NAG-S150	0 FT	2:1	2 FEET
5	NAG-S150	0 FT	2:1	2 FEET

TEMPORARY DIVERSION DITCHES SHALL BE INSPECTED ONCE A WEEK AND AFTER EVERY RAINFALL EVENT IN EXCESS OF 1" IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.



NOTES:

1. ALL WORK SHALL CONFORM TO THE STATE OF NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG, CONTACT THE NC ONE-CALL CENTER AT 1-800-692-4949.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING MEASURES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NECESSARY AND AS FIELD CONDITIONS WARRANT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-INSPECTIONS AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SELF-INSPECTION FORMS ARE AVAILABLE AT: <https://deq.nc.gov/>. QUESTIONS ABOUT SELF-INSPECTION SHOULD BE DIRECTED TO THE NC DEQ RALEIGH REGIONAL OFFICE AT 919-791-4200.
4. PRESERVATION OF TREES (PROTECTED BY TREE PRESERVATION FENCE - TPF) WILL BE RE-EVALUATED AFTER SURROUNDING AREAS ARE CLEARED, BUT PRIOR TO COMPLETION OF CLEARING OPERATION.
5. ALL BARE SOILS ARE TO BE STABILIZED UNDER CONDITIONS OUTLINED IN THE CURRENT NPDES PERMIT OR IF IT IS IN A CRITICAL AREA (PIPE OUTLETS) OUTFALLS, BY THE END OF THE DAY. UTILIZE STAGED SEEDING IF NECESSARY TO COMPLY WITH STABILIZATION TIME FRAMES. GROUND COVER FOR ALL DISTURBED AREAS SHALL BE INSTALLED WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
6. DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE OR REMOVAL PURPOSES IS TO BE DONE THROUGH A SILT BAG.
7. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IMMEDIATELY AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREAS. ALL SPOIL AREAS TO HAVE SILT FENCE ON LOW SIDE OF SLOPES.
8. A RAIN GAUGE SHALL BE INSTALLED ON SITE TO CHECK FOR RAINFALL EVENTS OF 1.0" INCH OR GREATER. INSPECT ALL EROSION CONTROL DEVICES FOR MAINTENANCE ISSUES AFTER THESE RAIN EVENTS.
9. SILT FENCE INSTALLED SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
10. TEMPORARY DIVERSION DITCHES TO REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED WHERE FEASIBLE.
11. INLET PROTECTION SHALL BE PROVIDED AT ALL EXISTING AND PROPOSED CURB INLETS, YARD INLETS AND AREA DRAINS LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
12. ALL DITCHES SHALL BE PROTECTED WITH A JUTE MATTING NET IF EROSION OCCURS IN THE DITCH SECTION.
13. INSTALL ROCK CHECK DAMS EVERY 100 LF OF DIVERSION DITCH OR AS NEEDED.
14. ALL PERMANENT SLOPES STEEPER THAN 3:1 SHALL BE LINED WITH NORTH AMERICAN GREEN S200 ROLLED EROSION CONTROL PRODUCTS OR EQUAL.
15. SILT FENCE OUTLETS TO BE INSTALLED AND/OR ADDED AS NEEDED BASED ON SITE CONDITIONS AND GRADES.

RIP RAP AND APRON CALCS										
FESH	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
1	24	28.39	9.04	CLASS B	12.00	6.00	14.00	6	9.00	18
3	18	7.18	6.47	CLASS B	9.00	4.50	10.50	6	9.00	18
10	18	11.65	8.45	CLASS B	9.00	4.50	10.50	6	9.00	18

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NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**EROSION CONTROL PHASE 1**

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C-400



# PHASE II CONSTRUCTION SEQUENCE

1. COMPLETE PHASE I CONSTRUCTION SEQUENCE.
2. PERFORM GRADING OPERATIONS. AS SITE IS BROUGHT TO GRADE, CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND TO ENSURE THAT ALL SEDIMENT LADEN WATER IS DIRECTED INTO THE SKIMMER BASIN.
3. INSTALL EXCAVATED INLET PROTECTION DEVICES AS SOON AS INLETS ARE INSTALLED. ALL STORM DRAINAGE SHALL BE ROUTED INTO SKIMMER BASINS VIA TEMPORARY PIPES SHOWN ON PLANS.
4. CLEAN SEDIMENT BASIN AND EXCAVATED INLET PROTECTION DEVICES WHEN THEY ARE HALF-FULL AND MONITOR FOR MAINTENANCE OF ALL EROSION CONTROL DEVICES WEEKLY OR AFTER EVERY 1" OF RAIN.
5. SOIL STOCKPILES SHALL BE STABILIZED IF INACTIVE FOR MORE THAN 7 DAYS.
6. ANY OFF-SITE BORROW AND WASTE REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN. A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT OR PER DIVISION OF SOLID WASTE MANAGEMENT OR DIVISION OF WATER RESOURCES RULES AND REGULATIONS.
7. MAINTAIN EROSION CONTROL MEASURES UNTIL ALL UPSTREAM AREA HAS BEEN STABILIZED AND PERMANENT GROUND COVER IS ESTABLISHED PER LANDSCAPE PLANS.
8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE. SEDIMENT BASINS MAY NOT BE REMOVED OR CONVERTED TO PERMANENT SCMS UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. NCDEQ SHOULD BE NOTIFIED 10-DAYS PRIOR TO THE REMOVAL OF A BASIN. (GS 113A-57(3), 15A NCAC 04B .0113).

# PHASE II CONSTRUCTION SEQUENCE CONTINUED.

8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE. SEDIMENT BASINS MAY NOT BE REMOVED OR CONVERTED TO PERMANENT SCMS UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. NCDEQ SHOULD BE NOTIFIED 10-DAYS PRIOR TO THE REMOVAL OF A BASIN. (GS 113A-57(3), 15A NCAC 04B .0113).
9. ONCE APPROVAL IS GIVEN FOR REMOVAL OR CONVERSION OF THE SKIMMER BASINS: THE TEMPORARY DIVERSION DITCHES AND INLET PROTECTION SHALL BE REMOVED PER THE FOLLOWING:
  - A. REMOVE SEDIMENT FROM DITCHES.
  - B. REMOVE CHECK DAMS FROM DITCHES.
  - C. BRING DITCHES TO FINAL GRADE AND PERMANENTLY STABILIZE PER THE GRADING PLAN.
  - D. REMOVE SEDIMENT FROM TEMPORARY INLET PROTECTION AND REMOVE TEMPORARY INLET PROTECTIONS.
  - E. BRING AREAS AROUND DRAINAGE STRUCTURES TO PERMANENT GRADE AND STABILIZE PER GRADING PLANS.
  - F. REMOVE SLOPE DRAINS FROM SKIMMER BASINS.
10. THE SKIMMER BASINS SHALL BE DEWATERED THROUGH A SILT BAG. ONCE THE SKIMMER BASINS HAVE BEEN CLEANED OF SEDIMENT AND DRAINED, THEY SHALL BE BROUGHT TO FINAL GRADE, PERMANENTLY STABILIZED AND PLANTED IN ACCORDANCE WITH THE GRADING AND STORM PLAN.
11. WHEN THE PROJECT IS COMPLETE, AND PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION HAS BEEN ESTABLISHED, THE PERMITTEE SHALL CONTACT NCDEMR TO CLOSE OUT THE EASC PLAN. AFTER NCDEMR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT <https://www.deq.nc.gov/ncgci> TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A \$120 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.

# RIPARIAN BUFFER RULES

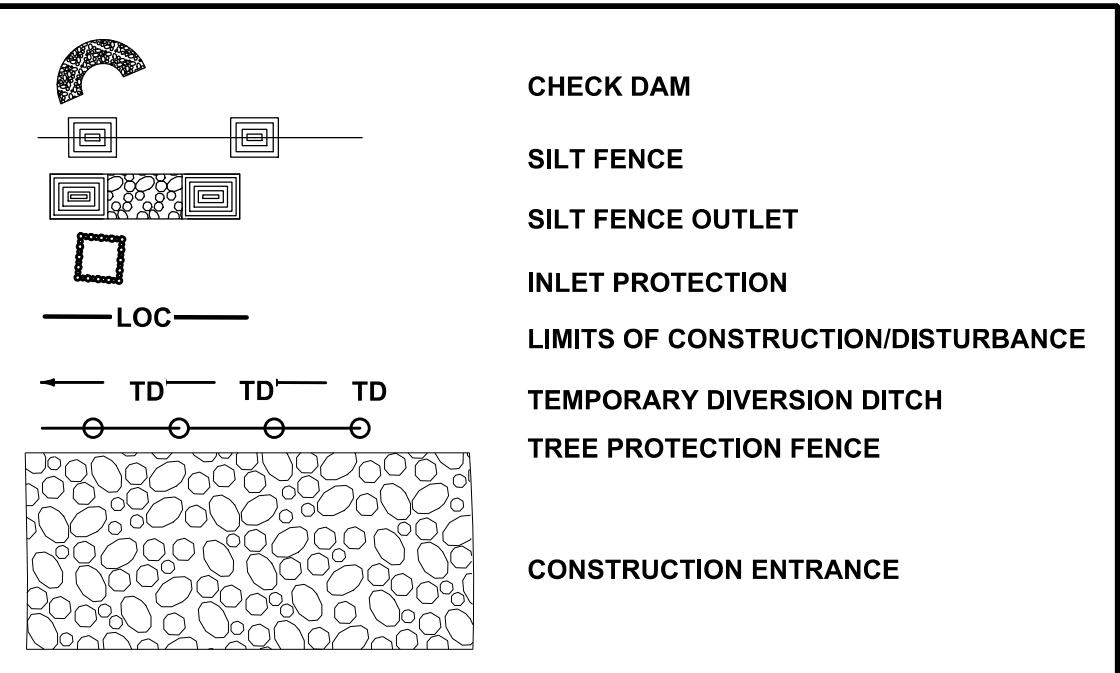
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TOTAL DISTURBED AREA = 403,349 SF / 9.260 ACRES

# SKIMMER SEDIMENT BASIN SCHEDULE

BASIN #	DRAINAGE AREA (ACRES)	LENGTH (FT)	WIDTH (FT)	BOTTOM ELEVATION	TOP OF BERM ELEVATION	WEIR LENGTH (FT)	WEIR ELEVATION	SKIMMER SIZE (IN)	ORIFICE SIZE (IN)	SKIMMER INVERT
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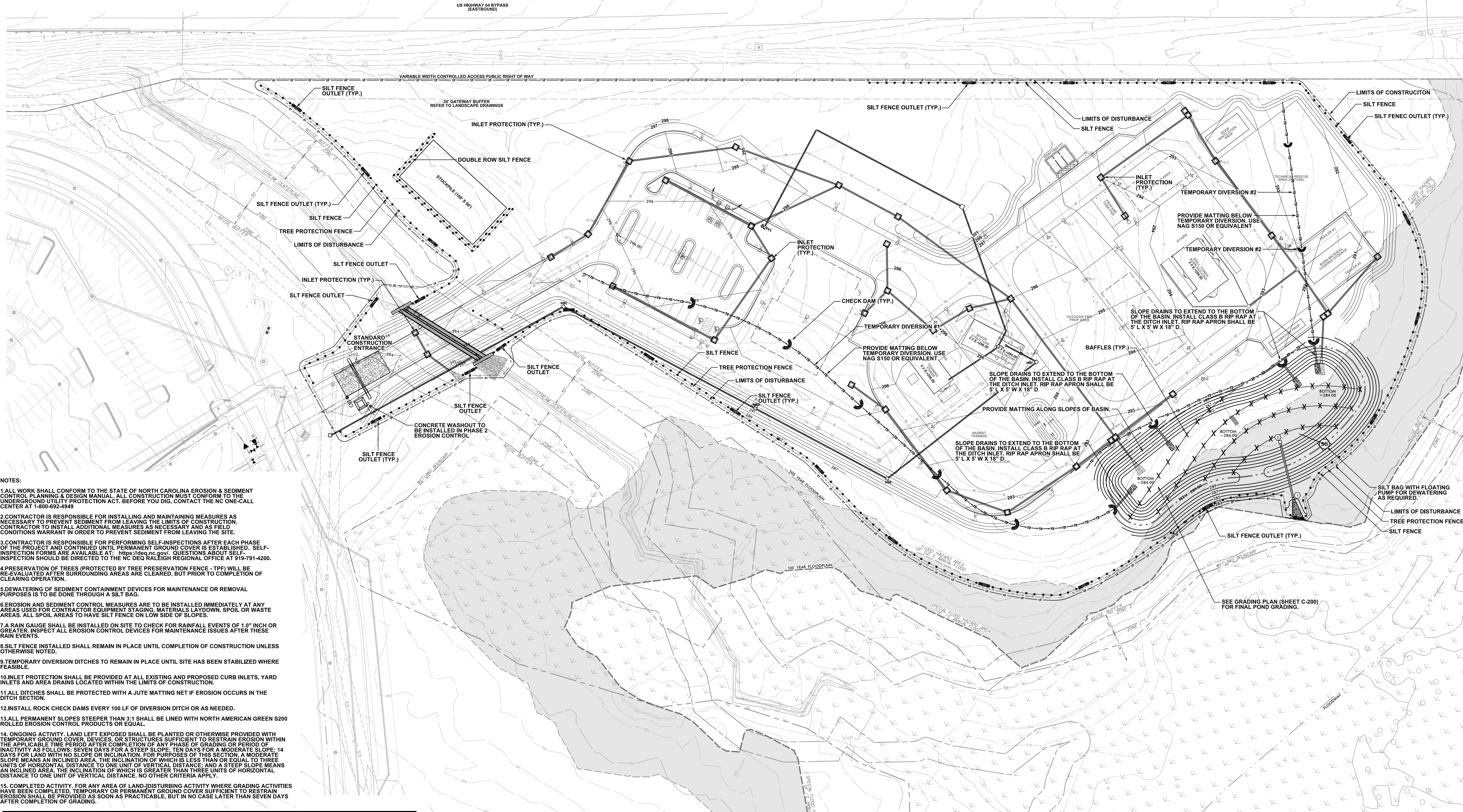
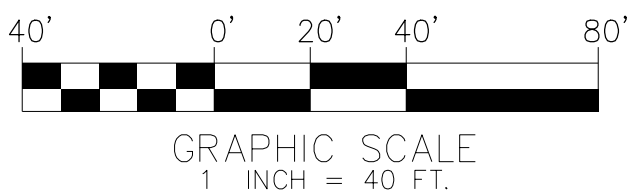
TOTAL DISTURBED AREA = 9,260 ACRES



# TEMPORARY DIVERSION SPECIFICATIONS

DITCH #	LINER TYPE	BOTTOM WIDTH	SIDE SLOPE	DEPTH
1	NAG-S150	0 FT	2:1	2 FEET
2	NAG-S150	0 FT	2:1	2 FEET
3	NAG-S150	0 FT	2:1	2 FEET
4	NAG-S150	0 FT	2:1	2 FEET
5	NAG-S150	0 FT	2:1	2 FEET

TEMPORARY DIVERSION DITCHES SHALL BE INSPECTED ONCE A WEEK AND AFTER EVERY RAINFALL EVENT IN EXCESS OF 1". IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.



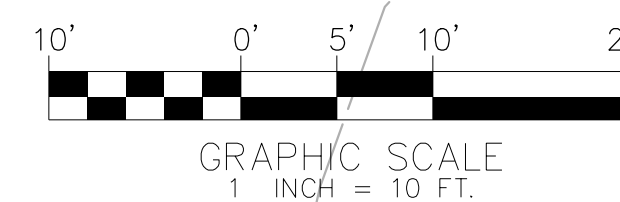
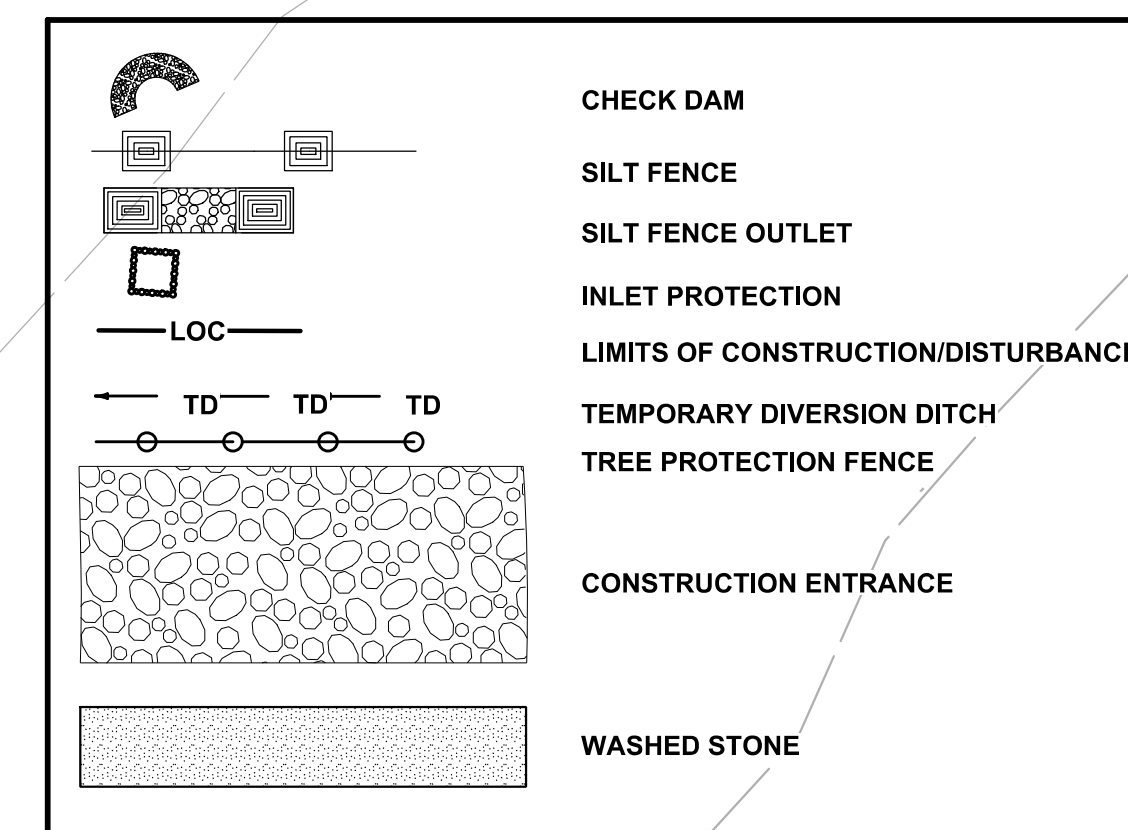
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1. ALL WORK SHALL CONFORM TO THE STATE OF NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG, CONTACT THE NC ONE-CALL CENTER AT 1-800-692-4549.
  2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING MEASURES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NECESSARY AND AS FIELD CONDITIONS WARRANT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
  3. CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-INSPECTIONS AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SELF-INSPECTION FORMS ARE AVAILABLE AT: <https://deq.nc.gov/>. QUESTIONS ABOUT SELF-INSPECTION SHOULD BE DIRECTED TO THE NC DEQ RALEIGH REGIONAL OFFICE AT 919-791-4200.
  4. PRESERVATION OF TREES (PROTECTED BY TREE PRESERVATION FENCE - TPF) WILL BE RE-EVALUATED AFTER SURROUNDING AREAS ARE CLEARED, BUT PRIOR TO COMPLETION OF CLEARING OPERATION.
  5. DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE OR REMOVAL PURPOSES IS TO BE DONE THROUGH A SILT BAG.
  6. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IMMEDIATELY AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREAS. ALL SPOIL AREAS TO HAVE SILT FENCE ON LOW SIDE OF SLOPES.
  7. A RAIN GAUGE SHALL BE INSTALLED ON SITE TO CHECK FOR RAINFALL EVENTS OF 1.0" INCH OR GREATER. INSPECT ALL EROSION CONTROL DEVICES FOR MAINTENANCE ISSUES AFTER THESE RAIN EVENTS.
  8. SILT FENCE INSTALLED SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
  9. TEMPORARY DIVERSION DITCHES TO REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED WHERE FEASIBLE.
  10. INLET PROTECTION SHALL BE PROVIDED AT ALL EXISTING AND PROPOSED CURB INLETS, YARD INLETS AND AREA DRAINS LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
  11. ALL DITCHES SHALL BE PROTECTED WITH A JUTE MATTING NET IF EROSION OCCURS IN THE DITCH SECTION.
  12. INSTALL ROCK CHECK DAMS EVERY 100 LF OF DIVERSION DITCH OR AS NEEDED.
  13. ALL PERMANENT SLOPES STEEPER THAN 3:1 SHALL BE LINED WITH NORTH AMERICAN GREEN S200 ROLLED EROSION CONTROL PRODUCTS OR EQUAL.
  14. ONGOING ACTIVITY: LAND LEFT EXPOSED SHALL BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION WITHIN THE APPLICABLE TIME PERIOD AFTER COMPLETION OF ANY PHASE OF GRADING OR PERIOD OF INACTIVITY AS FOLLOWS: SEVEN DAYS FOR A STEEP SLOPE; TEN DAYS FOR A MODERATE SLOPE; 14 DAYS FOR LAND WITH NO SLOPE OR INCLINATION. FOR PURPOSES OF THIS SECTION, A MODERATE SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS LESS THAN OR EQUAL TO THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE; AND A STEEP SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS GREATER THAN THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE. NO OTHER CRITERIA APPLY.
  15. COMPLETED ACTIVITY: FOR ANY AREA OF LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICABLE, BUT IN NO CASE LATER THAN SEVEN DAYS AFTER COMPLETION OF GRADING.

RIP RAP AND APRON CALCS										
FES#	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
1	24	28.39	9.04	CLASS B	12.00	6.00	14.00	6	9.00	18
3	18	7.18	6.47	CLASS B	9.00	4.50	10.50	6	9.00	18
10	18	11.65	8.45	CLASS B	9.00	4.50	10.50	6	9.00	18

NO.	REVISION	DATE



1. STREAM CROSSING CONSTRUCTION SEQUENCE
2. STREAM CROSSING TO COMPLY WITH ALL PERMITTING REQUIREMENTS IDENTIFIED IN THE APPROVED 401 PERMIT (ISSUED BY NCEOD) AND THE FEDERAL AND STATE REGULATIONS
3. KEEP CLEARING AND EXCAVATION ON THE STREAM BANKS AND BED AND APPROACH SECTIONS TO A MINIMUM.
4. REMOVE TEMPORARY STREAM CROSSING IF PREVIOUSLY INSTALLED.
5. DIVERT ALL SURFACE WATER FROM THE CONSTRUCTION SITE ONTO UNDISTURBED AREAS ADJOINING THE STREAM. LINE UNSTABLE STREAM WITH TEMPORARY OR PERMANENT PROTECTIVE GROUND COVERS TO PREVENT INSTALL. WATTLING AS IDENTIFIED ON THE DRAWINGS TO RETAIN THE EMENT COVERED BY THE STREAM CROSSING.
6. INSTALL STILLING BASIN/SILL BAG.
7. INSTALL TEMPORARY DIVERSION CHANNEL WITH 2:1 SLOPES AND 5' DEPTH WIDTH. PROTECT CHANNEL WITH LINER (GEOTEXTILE FOR SOIL STABILIZATION, TYPE 4).
8. INSTALL IMPERVIOUS DIKES AND DIVERT STREAM TO TEMPORARY DIVERSION CHANNEL.
9. INSTALL PERMANENT CULVERT, HEADWALLS, AND OUTLET PROTECTION. PUMP ANY EFFLUENT THAT COLLECTS IN THE EXCAVATION TO THE STILLING BASIN/SILL BAG.
10. REMOVE IMPERVIOUS DIKES AND DIVERT STREAM TO NEW CULVERT.
11. UPON COMPLETION OF THE CROSSING, FILL, COMPACT, AND STABILIZE THE SPAS AND APPROACHES. INSTALL PROTECTIVE GROUND COVERS TO PROVIDE PERMANENT EROSION PROTECTION. PROVIDE WETLANDS RESTORATION AND REPAIR TO THE STREAM CROSSING AS IDENTIFIED IN THE LANDSCAPE DRAWINGS.
12. CONSTRUCT ROADWAY OVER NEWLY CONSTRUCTED CULVERT.



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N|V|5

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5401 ROLESVILLE ROAD WENDELL, NC 27591  
NCCCS NO. 2303

[illegible]

JOB NUMBER  
**22-086**

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DATE ISSUED  
**03/14/2025**

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PROJECT STATUS  
**ISSUE FOR  
CONSTRUCTION**

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SHEET

**EROSION  
CONTROL  
STREAM  
CROSSING**

C-402

FIGURE 1. EFFECT OF THE ANGLE OF THE ANCHOR ON THE MAXIMUM OF THE PULL-OUT FORCE.  $\theta = 0^\circ$  (HORIZONTAL),  $\theta = 45^\circ$  (45 DEGREE),  $\theta = 90^\circ$  (VERTICAL),  $\theta = 135^\circ$  (135 DEGREE),  $\theta = 180^\circ$  (VERTICAL),  $\theta = 225^\circ$  (225 DEGREE),  $\theta = 270^\circ$  (HORIZONTAL),  $\theta = 315^\circ$  (135 DEGREE),  $\theta = 360^\circ$  (HORIZONTAL).







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**Mulching Materials and Application Rates**

Material	Organic Mulches	Rate Per Acre	Quality	Notes
Straw		1-2 tons	Dry, unchopped, unweathered, avoid weeds.	Should come from wheat or oats, spread by hand or machine, must be tacked down.
Wood Chips		5-6 tons	Air dry	Treat with 12 lbs nitrogen/ton. Apply with mulch blower, chip handle, or by hand. Not for use in fine turf.
Wood Fiber		0.5-1 tons		Also referred to as wood cellulose. May be hydroseeded. Do not use in hot, dry weather.
Bark		35 cubic yards	Air dry, shredded or hammer-milled, or chips.	Apply with mulch blower, chip handle, or by hand. Do not use asphalt tack.
Corn Stalks		4-6 tons	Cut or shredded in 4-6 inch lengths.	Apply with mulch blower or by hand. Not for use in fine turf.
Sericea Lespedeza seed-bearing stems		1-3 tons	Green or dry, should contain mature seed.	
<b>Nets and Mats*</b>				
Jute net	Cover area	Heavy, uniform, woven of single jute yarn.	Withstands waterflow. Best when used with organic mulch.	
Fiberglass net	Cover area		Withstands waterflow. Best when used with organic mulch.	
Excelsior (wood fiber net)	Cover area		Withstands waterflow.	
Fiberglass roving	0.5-1 tons	Continuous fibers of drawn glass, bound together with a non-toxic agent.	Apply with a compressed air ejector. Tack with emulsified asphalt at a rate of 25-35 gal/1,000 sq. ft.	
<b>Chemical Stabilizers**</b>				
Aquatain Aerospray CuraSol AK Perforated SB Terra Tack Crust 500 Genqua 743 M-145	Follow Manufacturer's specifications			Not beneficial to plant growth

\*Refer to Practice No. 6.30, Grass Lined Channels in the NC DEQ E&S Planning and Design Manual  
\*\*Use of trade names does not imply endorsement of product.

**Effective Date: 9/1/2023**  
In accordance with the 2013 Design Manual Updates

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**MULCHING**

STAKES AT 3'-5' INTERVALS

CHECK SLOTS AT 25' INTERVALS

INITIAL CHANNEL ANCHOR TRENCH

TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH

3" MIN. OVERLAP

6" MIN. OVERLAP

ANCHOR 6"X6" MIN. TRENCH AND STAPLE AT 12" INTERVALS

STAPLE OVERLAPS MAX. 5" SPACING

BRING MATERIAL DOWN TO A LEVEL AREA, TURN THE END UNDER 4" AND STAPLE AT 12" INTERVALS.

OVERLAP 6" MIN.

OVERCUT CHANNEL 2" TO ALLOW BUILDING DURING SEEDBED PREPARATION

DESIGN DEPTH

LONGITUDINAL ANCHOR TRENCH

TYPICAL INSTALLATION WITH EROSION CONTROL BLANKETS OR TARP REINFORCEMENT MATS

INTERMITTENT CHECK SLOT

LONGITUDINAL ANCHOR TRENCH

SINGLE-LAP SPICED ENDS OR BEGIN NEW ROLL IN AN INTERMITTENT CHECK SLOT

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS OR OTHER TEMPORARY CHANNEL LINER SYSTEMS

NOTES:

- Lime, fertilize and seed before installation. Planting of shrubs, trees, etc. should occur after installation.
- Slope surface shall be smooth before placement for proper soil contact.
- Design velocities exceeding 2 feet/second require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
- Terminal anchor trenches are required at RECP end and intermittent check slots must be constructed across channels at 25 foot intervals.
- Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width. Intermittent check slots should be 6 inches deep and 6 inches wide.
- For installation on a slope, place RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill and compact. Unroll the RECP down the slope maintaining direct contact between the soil and RECP. Secure using staples or pins in a 3 foot center-to-center pattern.
- 11 gauge, at least 6 inch by 1 inch staples or 12 inch minimum length wooden stakes are recommended for anchoring.
- Grass-lined channels with design velocities exceeding 6 feet/second should include turf reinforcement mats.
- Check slots to be constructed per manufacturers specifications.
- Staking or stapling layout per manufacturers specification.
- If there is a berm at the top of slope, anchor up-slope of the berm.
- Do not stretch blankets/matting tight, allow the rolls to conform to any irregularities.
- For slopes less than 3H:1V, rolls may be placed in horizontal strips.

**Effective Date: 9/1/2023**  
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**Temporary Seeding Recommendations**

Common Name	Scientific Name	Rate per Acre	Optimal Planting Date
Rye Grain	Secale Cereale	30 lbs	Aug. 15 - May 15
Wheat	Triticum Aestivum	30 lbs	Aug. 15 - May 15
German Millet	Setaria Italica	10 lbs	May 15 - Aug. 15
Browntop Millet	Urochloa Ramosa	10 lbs	May 15 - Aug. 15

**Permanent Seeding Recommendations**

Type: Cold Season

Common Name	Scientific Name	Optimal Planting Dates	% of Mix	Soil Drainage Adaptation	Shade Tolerance	Height
Indian Woodoats	Chasmananthum latifolium	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	1-10%	Well-drained to Droughty	Moderate	4
Virginia Wildrye	Elymus virginicus	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	5-25%	Well-drained to Droughty	Moderate	3
Eastern Bottle-brush Grass	Elymus hystrix	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	5-10%	Well-drained to Droughty	Moderate	3
Rough Bentgrass	Agrostis scabra	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	10-20%	Poorly-drained	Poor	2.5
Winter Bentgrass	Agrostis hyemalis	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	2-5%	Well-drained	Moderate	3.5

Type: Wetland

Common Name	Scientific Name	Optimal Planting Dates	% of Mix	Soil Drainage Adaptation	Shade Tolerance	Height
Soft Rush	Juncus effusus	Dec. 1 - May 1, Sep. 1 - Nov. 1	1-10%	Poorly-drained	Poor	4
Shallow Sedge	Carex lurida	Dec. 1 - May 1, Sep. 1 - Nov. 1	1-10%	Poorly-drained	Poor	3
Fox Sedge	Carex vulpinoidea	Dec. 1 - May 1, Sep. 1 - Nov. 1	1-10%	Poorly-drained	Poor	3
Leathery Rush	Juncus caracicus	Dec. 1 - May 1, Sep. 1 - Nov. 1	2-5%	Poorly-drained	Poor	2

**Permanent Seeding Recommendations**

Type: Warm Season

Common Name	Scientific Name	Cultivars	Optimal Planting Dates	% of Mix	Soil Drainage Adaptation	Shade Tolerance	Height
Switchgrass	Panicum virgatum	Cave-in-rock - well drained Blackwell - well drained Shelley - well drained Karlow - poorly drained Carthage - well drained	Dec. 1 - Apr. 1	10-15%	Cultivar Dependent	Poor	6
Switchgrass	Panicum virgatum	Alamo - poorly drained	Dec. 1 - May 1	10-15%	Cultivar Dependent	Poor	6
Indiangrass	Sorghastrum nutans	Rumsey, Osage, Cheyenne	Dec. 1 - Apr. 1	10-30%	Well-drained to Droughty	Poor	6
Indiangrass	Sorghastrum nutans	Lonestar	Dec. 1 - May 1	10-30%	Well-drained to Droughty	Poor	6
Deerwallow	Eleocharis acicularis	Tompa	Dec. 1 - Apr. 1	5-25%	Poorly-drained to Droughty	Moderate	2
Big Bluestem	Andropogon gerardii	Roundtree, Kaw, Earl	Dec. 1 - Apr. 1	10-30%	Well-drained to Droughty	Poor	6
Little Bluestem	Sporobolus vaginatus	Cimarron	Dec. 1 - Apr. 1	10-30%	Well-drained to Droughty	Poor	4
Sweet Woodreed	Cinna arundinacea		Dec. 1 - Apr. 1	1-10%	Poorly-drained to Well-drained	Moderate	5
Rice Cutgrass	Lernia oryzoides		Dec. 1 - Apr. 1	5-25%	Poorly-drained	Poor	5
Redtop Panograss	Panicum polystachyon		Dec. 1 - Apr. 1	10-20%	Well-drained	Poor	3.5
Baked Panograss	Panicum anapsis		Dec. 1 - Apr. 1	10-20%	Poorly-drained	Moderate	3.5
Purple Top	Tridens flavus		Dec. 1 - Apr. 1	5-10%	Well-drained to Droughty	Poor	2.5
Eastern Gamagrass	Tripsacum dactyloides		Dec. 1 - Apr. 1	5-10%	Well-drained to Poorly-drained	Poor	4.5

**Permanent Seeding:**

- Soil analysis should be performed to determine nutrient and lime needs of each site.
- Riparian buffers regulated for nutrient management may be limited to a single application of fertilizer.
- Apply seed uniformly with a cyclone seeder, drop-type spreader, drill or hydroseeder on a firm, friable seedbed.
- When using a drill, equipment should be calibrated in the field for the desired seeding rate.
- Mulch all plantings immediately after seeding (see 6.14, Mulching). If planting on stream banks steeper than 10% or areas subject to flooding, a biodegradable RECP (6.17, Rolled Erosion Control Products) is recommended to hold seed and soil in place.

**Maintenance:**

- Many of the recommended permanent grass species may require two years of establishment, depending on site conditions.
- Inspect seeded areas for failure and make necessary repairs, soil amendments, and reseeds.
- If weedy exotic species have overtaken the area after the first growing season, the invading species must be eradicated to allow native species to grow.
- Monitor the site until long term stability has been established.

**Effective Date: 9/1/2023**  
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**RIP RAP**

Subgrade Preparation:

- Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans.
- Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap.
- Remove brush, trees, stumps, and other objectionable material.

**Sand and Gravel Filter Blanket:**

- Place the filter blanket immediately after the ground foundation is prepared.
- When using gravel, spread filter stone in a uniform layer to the specified depth.
- When more than one layer of filter material is used, spread the layers with minimal mixing.

**Synthetic Filter Fabric:**

- Place the cloth filter directly on the prepared foundation.
- Overlap the edges by at least 12 inches, and space anchor pins every 3 feet along the overlap.
- Bury the upstream end of the cloth a minimum of 12 inches below ground and bury the lower end of the cloth or over lap with the next section as required.
- If damage occurs while placing riprap, remove the riprap, and repair the sheet by adding another layer of filter material with a minimum overlap of 12 inches around the damaged area. If damage is extensive, remove and replace the entire sheet.
- If placing large stones or machine placing is difficult, a 4 inch layer of fine gravel or sand may be needed to protect the filter cloth.

**Maintenance:**

In general, once a riprap installation has been properly designed and installed it requires very little maintenance. Riprap should be inspected periodically for scour or dislodged stones. Control of weed and brush growth may be needed in some locations.

**Size of Riprap stones**

Weight (lb)	Mean Spherical Diameter (ft)	Length (ft)	Rectangular Shape Width/Height (ft)
50	0.8	1.4	0.5
100	1.1	1.8	0.6
150	1.3	2.0	0.7
300	1.6	2.6	0.9
500	1.9	3.0	1.0
1000	2.2	3.7	1.3
1500	2.6	4.7	1.5
2000	2.8	5.4	1.8
4000	3.6	6.0	2.0
6000	4.0	6.9	2.3
8000	4.5	7.6	2.5
20,000	6.1	10.0	3.3

**Stone Placement:**

- Placement of riprap should follow immediately after placement of the filter.
- Place so that riprap forms a dense, well-graded mass of stone with a minimum of voids.
- Place to its full thickness in one operation.
- Do not place by dumping through chutes or other methods that cause segregation of stone sizes.
- Take care not to dislodge underlying base or filter when placing stone.
- The toe of the riprap slope should be keyed to a stable foundation at its base.
- The toe should be excavated to a depth about 1.5 times the design thickness of the riprap and extend horizontally from the slope, as shown above.
- Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth, uniform surface.

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**TEMPORARY DIVERSIONS**

**TEMPORARY EARTHEN DIVERSION DIKE**

COMPACTED SOIL

2' MIN.

2:1 MAX

18" MIN.

6' TYPICAL

FLOW

**TEMPORARY GRAVEL DIVERSION DIKE FOR VEHICLE CROSSING**

COURSE AGGREGATE

3:1 MAX

18" MIN.

9' TYPICAL

FLOW

**Effective Date: 9/1/2023**  
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**TEMPORARY SLOPE DRAINS**

**Size of Slope Drain**

Max. Drainage Area per Pipe (Acres)	Pipe Diameter (Inches)
0.50	12
0.75	15
1.00	18
>1.00*	as designed

\* Inlet design becomes more complex beyond this size.

**NOTES:**

- Place slope drains on undisturbed soil or well compacted fill at locations and elevations shown on the plan.
- Slightly slope the section of pipe under the dike toward its outlet.
- Hand tamp the soil under and around the entrance section in lifts not to exceed 6 inches.
- Fill over the drain at the top of the slope to a minimum of 1.5 feet depth, 4 feet top width and 3:1 side slopes.
- Ensure all slope drain connections are watertight. Compact fill material and securely fasten the exposed section of the drain with grommets or stakes spaced no more than 10 feet apart.
- Extend the drain beyond the toe of the slope, and adequately protect the outlet from erosion.
- Make the compacted, settled dike ridge no less than 1 foot above the top of the pipe at every point.
- Immediately stabilize all disturbed areas following construction.

**Maintenance:**

- Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater, repair immediately.

**Effective Date: 9/1/2023**



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PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL

PLAN

SECTION A

La = Length of Riprap Apron  
d = Thickness of Riprap Apron

NOTES:

1. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.
3. Filter cloth, when used, must meet design requirements, and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece over the damaged area. If the damage is extensive, replace the entire filter cloth.
4. All connecting joints should overlap so the top layer is above the downstream layer a minimum of 1 foot.
5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter but not less than 6".
6. Riprap may be field stone or rough quarry stone. It should be hard, angular highly weather-resistant and well graded.
7. Construct the apron on zero grade with no overfill at the end. Make the top of the riprap at the downstream end level with the receiving area or slightly below it.
8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed, place in the upper section of the apron.

MAINTENANCE:

1. Inspect outlet structures at least weekly and after each rainfall of 1.0 inch or greater.
2. Check outlets for erosion around or below riprap and for if stones have been dislodged. Make repairs immediately to prevent further damage.

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NOTES:

1. Install temporary sediment basins to the approved design. If the basin will eventually be converted to a permanent SCM device, the basin must function as a temporary sediment basin and meet the following parameters until completion of the project:
  - Maximum Drainage Area: 100 acres
  - Minimum Sediment Storage Volume: 1900 cubic feet per acre of disturbed area
  - Minimum Surface Area: 435 square feet per cfs of  $Q_{10}$  peak inflow
2. Clear, grub, and strip topsoil from areas under the embankment to remove trees, vegetation, roots, and other objectionable material. Delay clearing the pool area until the dam is complete. Stockpile all topsoil or soil containing organic matter for use on the outer shell of the embankment to facilitate vegetative establishment.
3. Place temporary sediment control measures below the basin and stockpile as needed.
4. Excavate a cut-off trench along the center line of the earth fill embankment. Cut trench to stable soil material, but in no case make it less than 2 feet deep with maximum side slopes no steeper than 1:1. Compaction requirements are the same as those for the embankment.
5. Extend the cut-off trench into both abutments to at least the elevation of the riser crest.
6. Keep the trench dry during backfilling and compaction operations.
7. Fill material should be clean mineral soil, free of roots, woody vegetation, rocks, and other objectionable material. Areas of approved fill should be shown on the plans.
8. Scarify areas on which fill is to be placed prior to placing. Ensure that fill material contains sufficient moisture so it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction.
9. Place fill material in 6 to 8 inch continuous layers over the entire length of fill area and compact.
10. Construct the embankment to an elevation 10% higher than the design height to allow for settling.
11. Securely attach the riser to the barrel or barrel stub to make a watertight structural connection. All connections should be made using approved watertight assemblies.
12. If no riser structure is to be used, couple the skimmer arm directly into the embankment 1 foot from the bottom of the basin.
13. The arm pipe connecting the skimmer to the riser shall have a minimum length of 6 feet.
14. Place barrel and riser on a firm, smooth foundation of impervious soil.
15. Do not use pervious material such as sand, gravel, or crushed stone as backfill around the pipe or anti-seep collars.
16. Place fill material around the pipe spillway in 8-inch layers, and compact it under and around the pipe to at least the same density as the adjacent embankment.
17. Place a minimum depth of 2 feet of compacted backfill over the pipe spillway before crossing it with any construction equipment.
18. Anchor riser in place by concrete or other satisfactory means to prevent flotation.
19. In no case should the pipe conduit be installed by cutting a trench through the dam after the embankment is complete.
20. Install the emergency spillway in undisturbed soil.
21. Discharge water into the basin in a manner to prevent erosion.
22. Construct basin so that the disturbed area is minimized, divert surface water from bare areas and complete the embankment before the area is cleared.
23. Stabilize the emergency spillway embankment and all other disturbed area above the crest of the principal spillway immediately after construction.
24. Seed and place matting for erosion control on interior and exterior side slopes.
25. Install Porous Baffles as specified on following sheets.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any repairs immediately.
2. Remove sediment and restore basin to its original dimensions when it accumulates to one-half the design depth.
3. Place removed sediment in an area with sediment control measures to ensure no loss of sediment off-site.
4. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement.
5. Remove all trash and other debris from the riser and pool area.

Acceptable Dimensions for Basin Embankment

Fill Height	Minimum Top Width
Less than 10.0 ft	6.0 ft
10.0 ft to 15.0 ft	10.0 ft

Effective Date: 9/1/2023  
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DRAPe Baffle Material OVER WIRE STRAND AND SECURE WITH PLASTIC TIES AT POSTS AND ON WIRE EVERY 12"

EXTEND 9 GAUGE WIRE TO BASIN SIDE OR INSTALL T-POST TO ANCHOR Baffle TO SIDE OF BASIN AND SECURE TO VERTICAL POST.

4" MAX.

3" MIN.

9 GAUGE MIN. HIGH TENSION WIRE STRAND SHALL BE SECURED TO POST TO SUPPORT Baffle MATERIAL

BAFFLE MATERIAL

SECURE BOTTOM OF Baffle TO GROUND WITH 12" STAPLES AT 12" MAXIMUM SPACING

STEEL POST

11 GAUGE LANDSCAPING STAPLE

BAFFLE MATERIAL SHOULD BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater and repair immediately.
2. Maintain access to baffles. If the fabric collapses, tears, decomposes, or becomes ineffective, replace immediately.
3. Remove sediment deposits when it reaches half full. Replace if baffle fabric is damaged during clean-out operations. Sediment depth should never exceed half the designed storage depth.

Effective Date: 9/1/2023  
In accordance with the 2013  
Design Manual Updates

DATE: PAGE:

DEWATERING

CONCRETE BLOCKS

2:1 SLOPE GRAVEL FILTER

TEMPORARY SEDIMENT POOL

WIRE SCREEN

DEWATERING

1' MIN.  
2' MAX.

SEDIMENT

DROP INLET WITH GRATE

NOTES:

1. Lay one block, on each side of the structure, on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. Place the bottom row of blocks against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, give lateral support to subsequent rows by placing 2 inch x 4 inch wood studs through block openings.
2. Carefully fit hardware cloth or comparable wire mesh with 1/2-inch openings over all block openings to hold gravel in place.
3. Use clean gravel 1/2 to 3/4 inch in diameter, placed 2 inches below the top of the block on a 2:1 slope or flatter and smooth it to an even grade. NCDOT #57 washed stone is recommended.

MAINTENANCE:

1. Inspect all measures at least weekly and after every rainfall of 1.0 inch or greater; repair immediately.
2. Remove sediment as necessary to provide adequate storage volume for subsequent rains.
3. When the contributing drainage area has been adequately stabilized, remove all materials and any unstable soil, and either salvage or dispose of it properly. Bring the disturbed area to proper grade, then smooth and compact before stabilizing.

Effective Date: 9/1/2023  
In accordance with the 2013  
Design Manual Updates

DATE: PAGE:

8' MAX. STANDARD STRENGTH FABRIC WITH WIRE FENCE  
6' MAX. EXTRA STRENGTH FABRIC WITHOUT WIRE FENCE

STEEL POST

WIRE FENCE

18-24"

24"

8" DOWN & 4" FORWARD ALONG THE TRENCH

WIRE FENCE

STEEL POST

PLASTIC OR WIRE

24"

4" MIN.

8" MIN.

CROSS SECTION VIEW

Max. Slope Length and Slope for Which Sediment Fence is Applicable

Slope	Slope Length (ft)	Max. Area (ft <sup>2</sup> )
<2%	100	10,000
2 to 5%	75	7,500
5 to 10%	50	5,000
10 to 20%	25	2,500
>20%	15	1,500

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any required repairs immediately.
2. Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.
3. Remove sediment deposits as necessary to provide adequate storage volume for the next rain and reduce pressure on the fence. Take care to avoid undermining the fence during cleanouts.
4. Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

Effective Date: 9/1/2023  
In accordance with the 2013  
Design Manual Updates

DATE: PAGE:

5' MAX. BANK HEIGHT

SURFACE FLOW DIVERSION

ORIGINAL STREAMBANK

STONE APPROACH SECTION  
5:1 MAX. SLOPE ON ROAD

CLEAN STONE OVER GEOTEXTILE FABRIC

TEMPORARY FORD CROSSING SECTION VIEW

TEMPORARY CULVERT SECTION VIEW

Flow

CLASS B EROSION STONE

TEMPORARY CULVERT PLAN VIEW

NOTES:

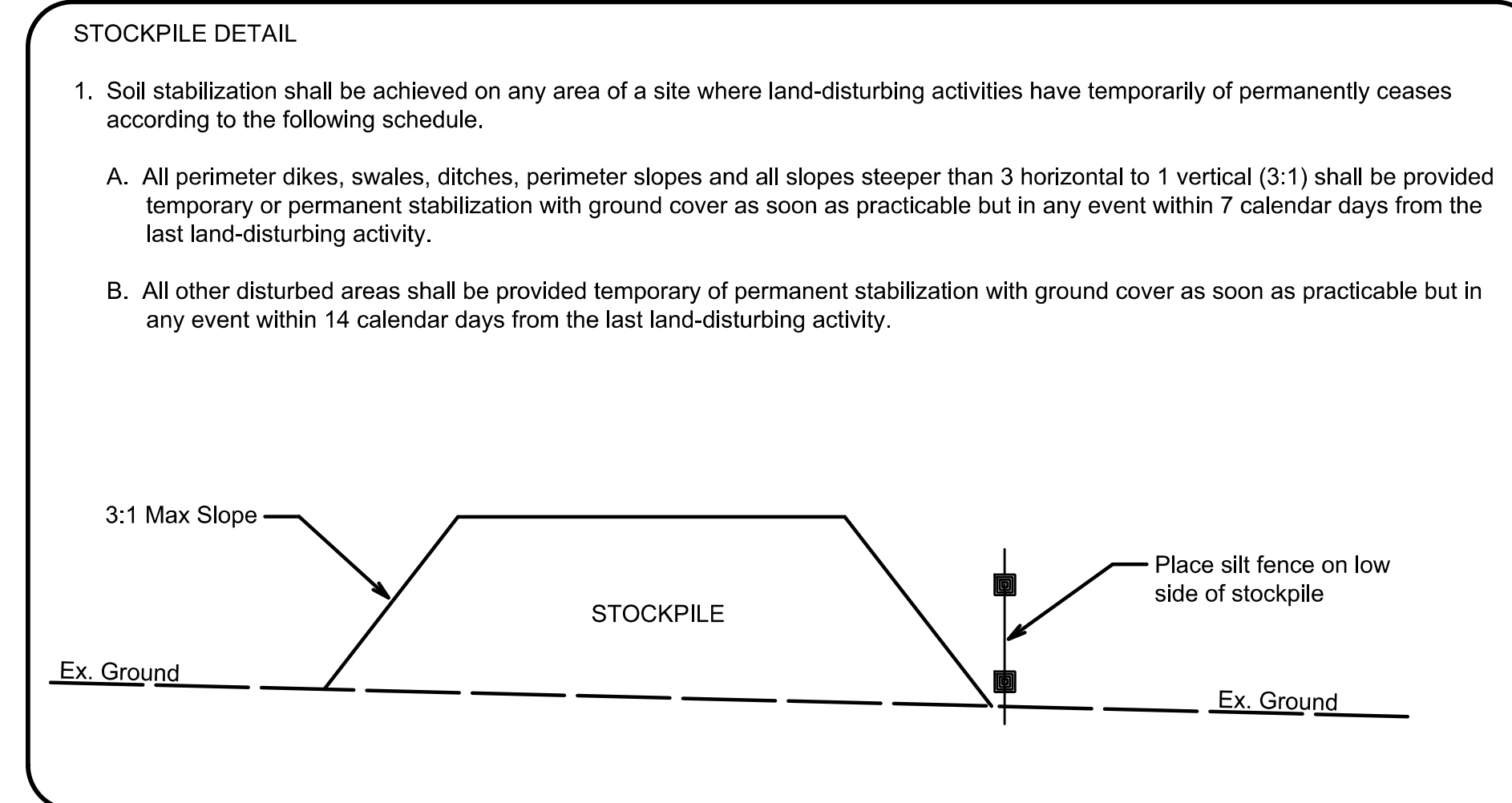
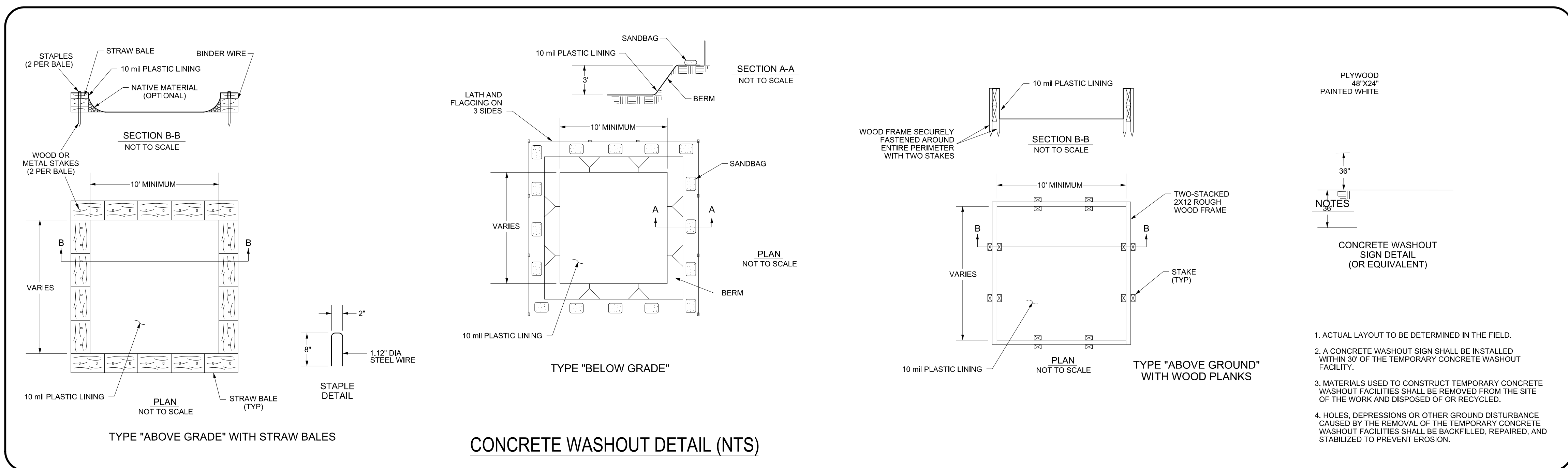
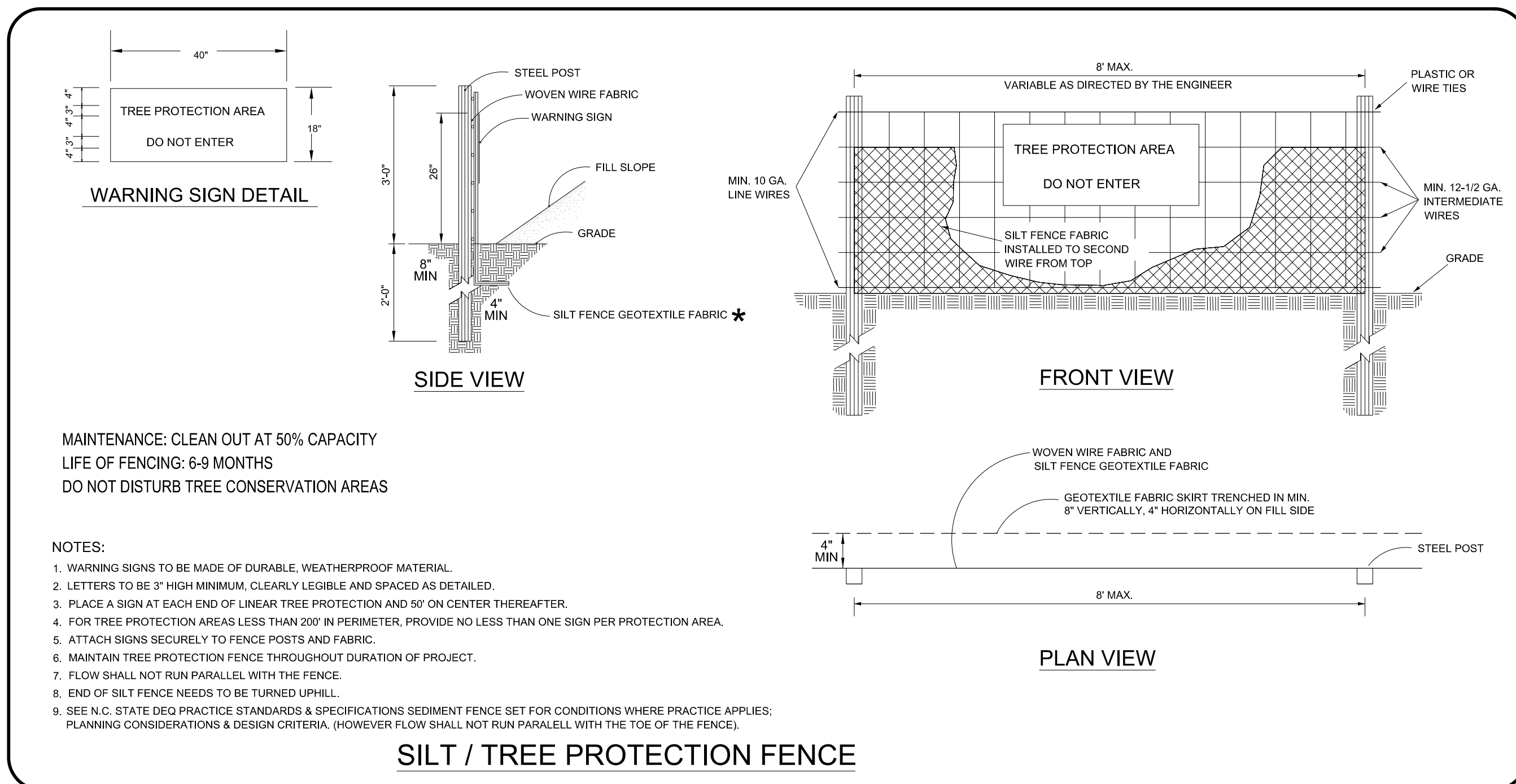
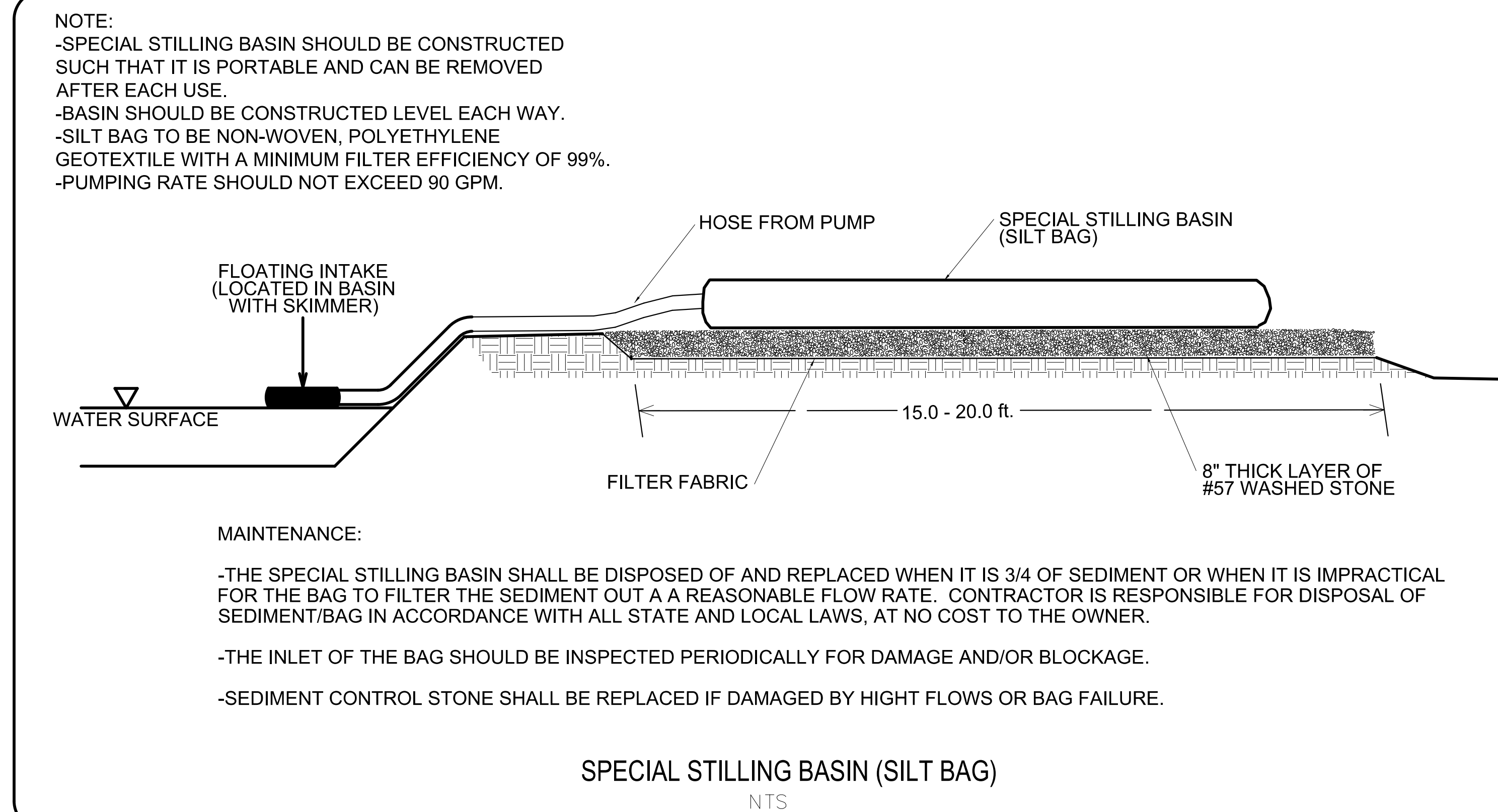
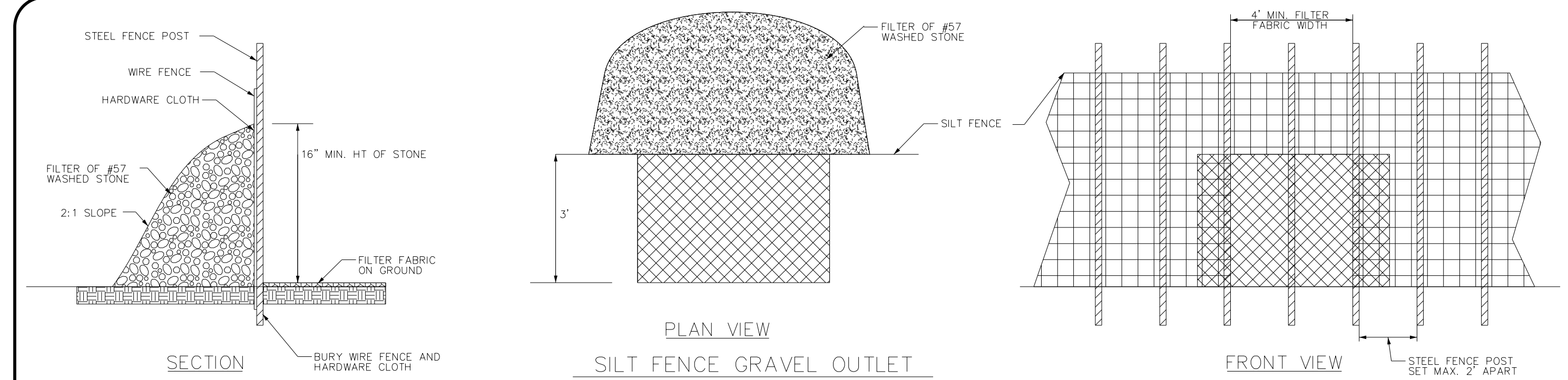
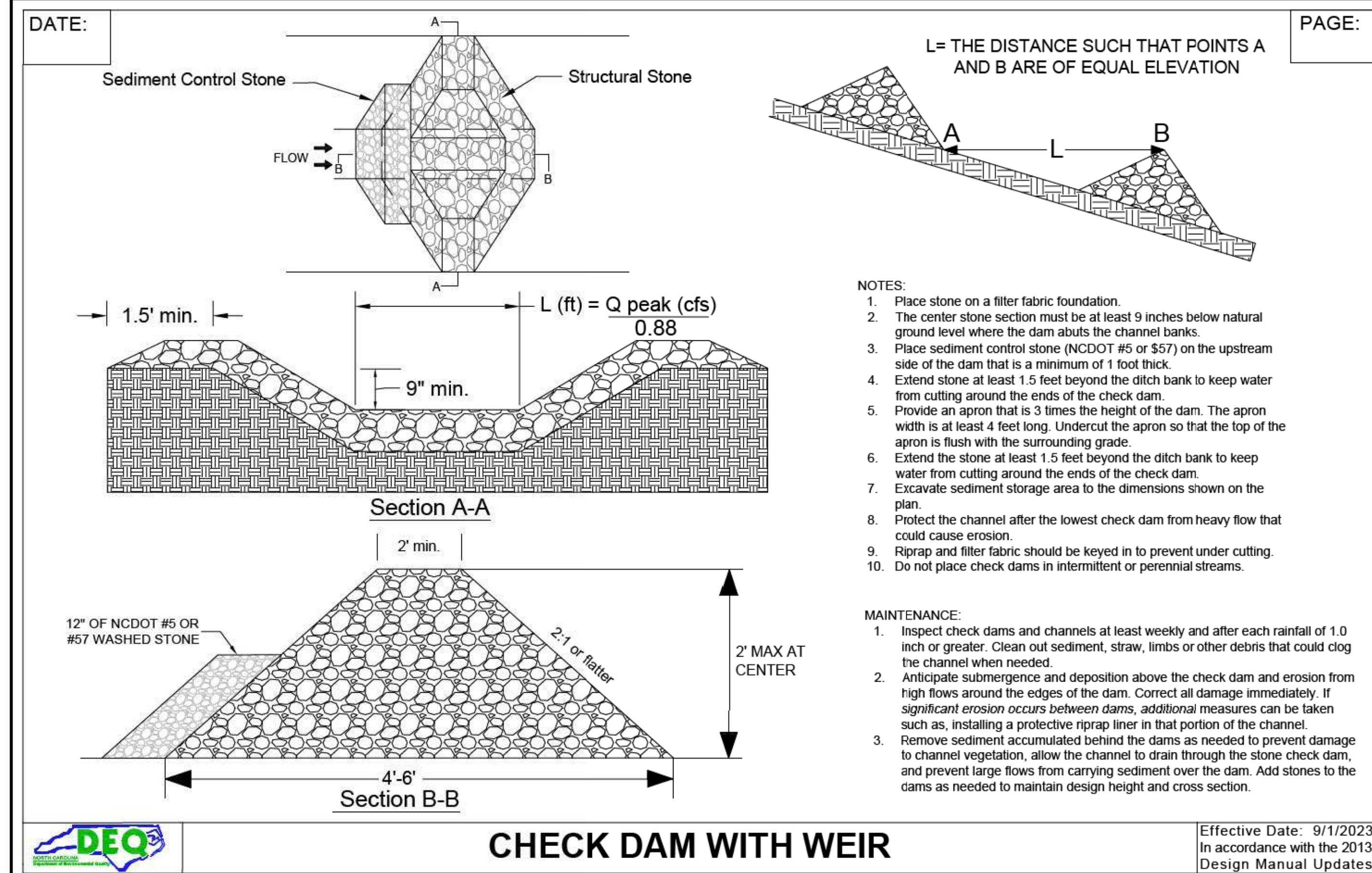
1. Stream crossings shall adhere to all permitting requirements from the U.S. Army Corps of Engineers (Permit 404) and NC Division of Water Quality (Permit 401).
2. If permanent utility crossings are planned, stream crossings at those locations should be considered to minimize stream impacts.
3. Keep clearing and excavation of the stream banks, bed and approach sections to a minimum.
4. Divert all surface water from the construction site onto undisturbed areas adjoining the stream.
5. Keep all stream crossings at right angles to the stream flow.
6. Align road approaches with the center line of the crossing for a minimum distance of 30 feet. Raise bridge abutments and culvert fills a minimum of 1 foot above the adjoining approach sections to prevent erosion from surface runoff and to allow flood flows to pass around the structure.
7. Ford approaches shall not exceed a slope of 5:1.
8. Bank heights at ford crossings shall not exceed 5 feet at any point.
9. Stabilize all disturbed areas subject to flowing water, including planned overflow areas, with riprap or other suitable means if design velocity exceed the allowable for in-place soil.
10. Ensure that bypass channels necessary to dewater the crossing site are stable before diverting the stream. Upon completion of the crossing; fill, compact, and stabilize all disturbed areas.
11. Remove temporary stream crossings immediately when they are no longer needed. Restore channel to its original cross-section, smooth and appropriately stabilize all disturbed area.

MAINTENANCE:

1. Inspect temporary stream crossings at least weekly and after each rainfall of 1.0 inch or greater.
2. Check for blockage in the channel, erosion of abutments, channel scour, riprap displacement, or piping.
3. Make all repairs immediately to prevent further damage to the installation.

Effective Date: 9/1/2023  
In accordance with the 2013  
Design Manual Updates



[illegible]

JOB NUMBER  
**22-086**

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DATE ISSUED  
**03/14/2025**

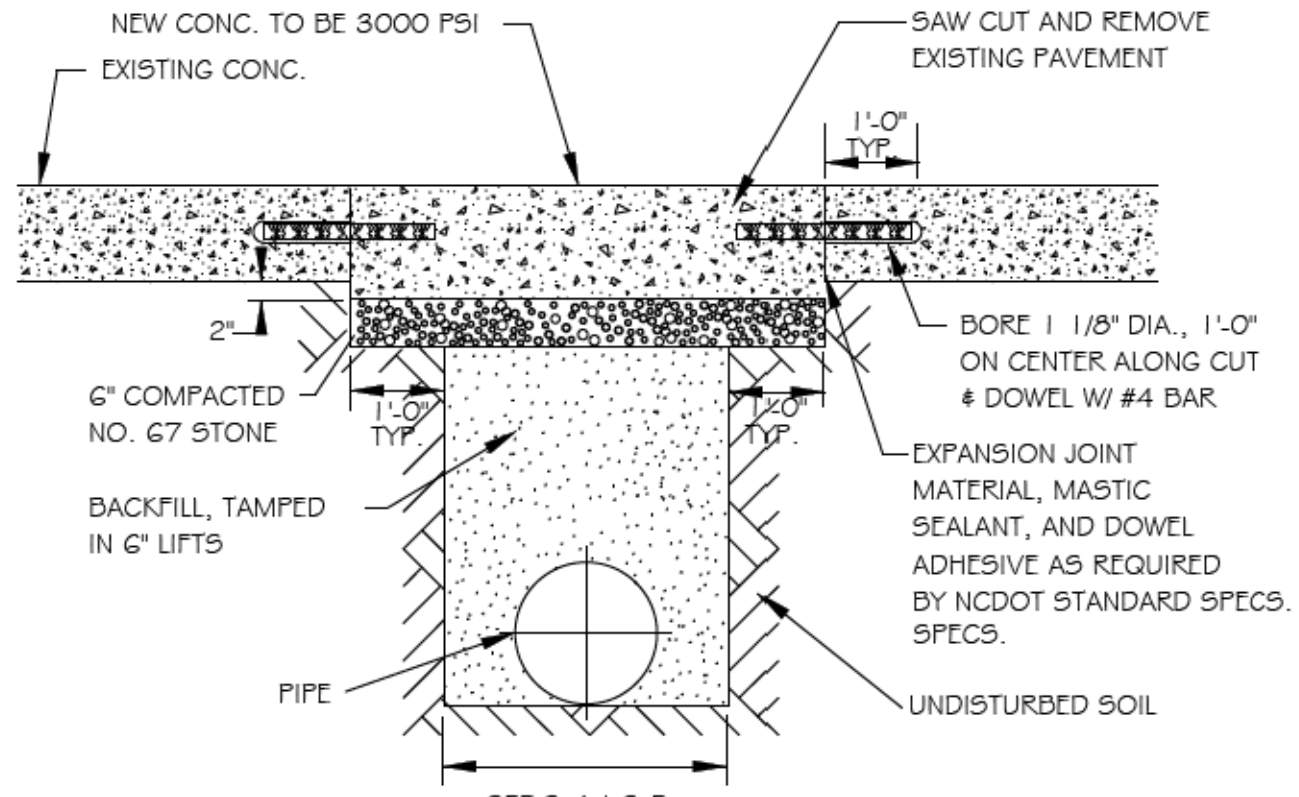
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PROJECT STATUS  
**ISSUE FOR  
CONSTRUCTION**

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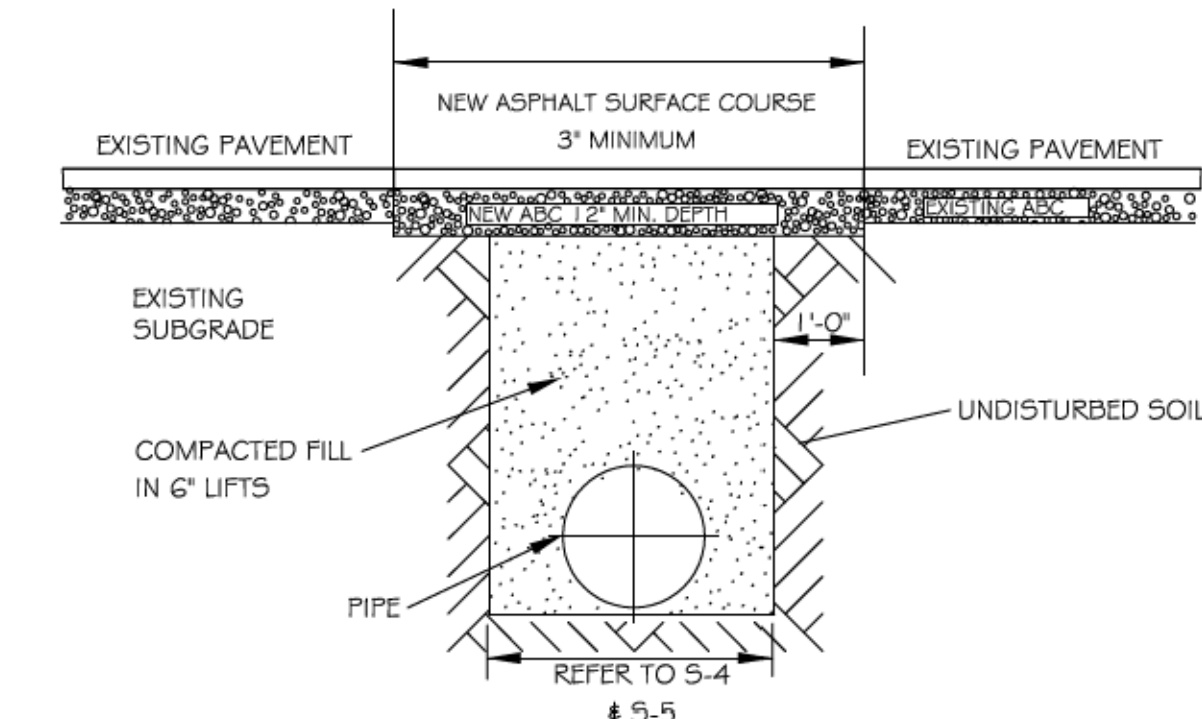
SHEET  
**EROSION  
CONTROL  
DETAILS**





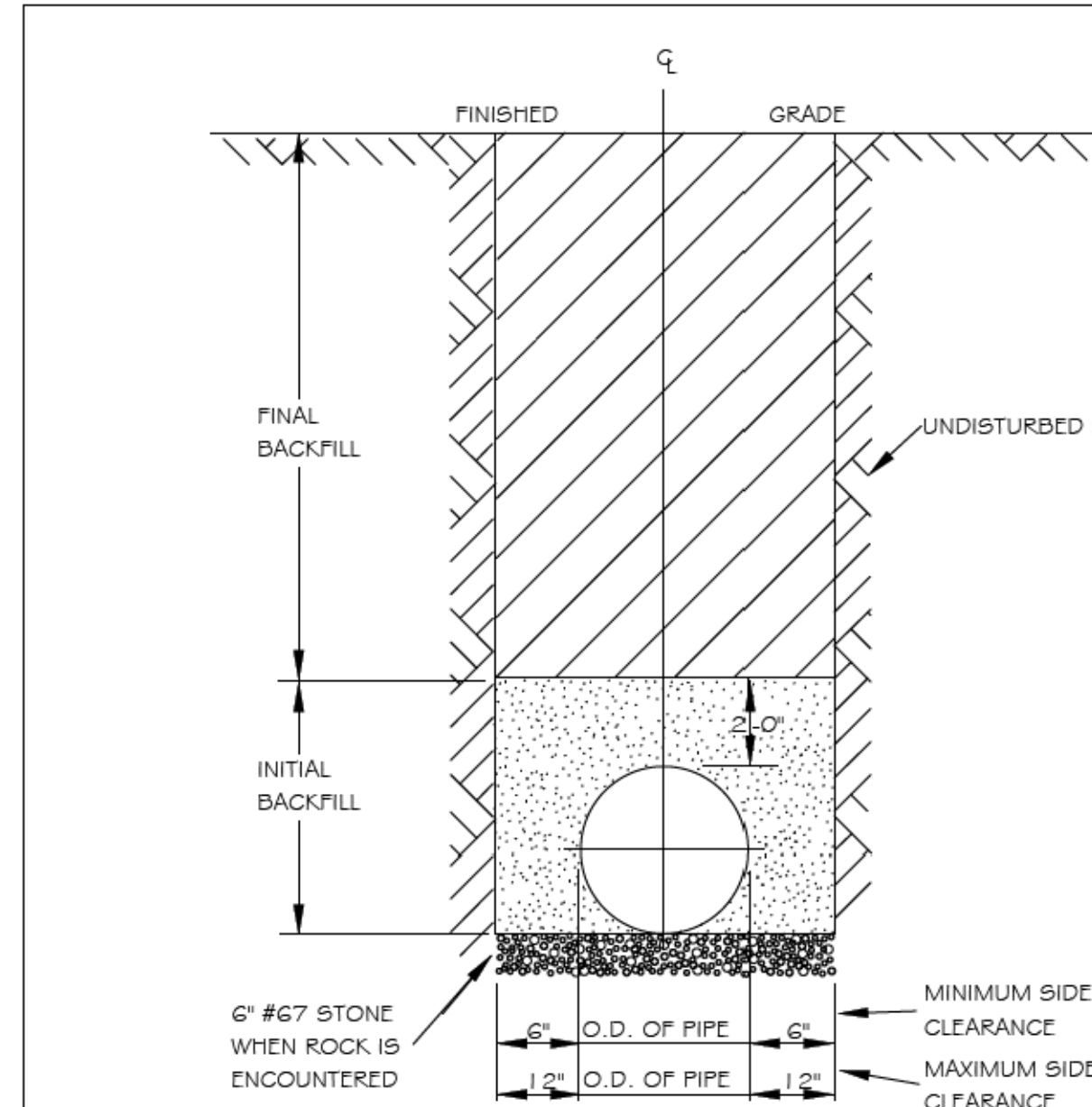
- NOTES:
1. See City of Raleigh standards for trenches and pipe bedding (S-4 & S-5) for additional details.
  2. Pavement cuts over 5'-0" in width shall be reinforced to N.C.D.O.T. standards.
  3. Pavement cuts shall be made with an appropriate saw cut machine.
  4. Pavement cuts within NCDOT ROW shall conform to the approved on site encroachment permit.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD CONCRETE				
PAVEMENT PATCH DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-2	D.W.C.	6-23-99	A.B.B.	4-19-04
	RRH	3-30-00	J.F.S.	10-8-10



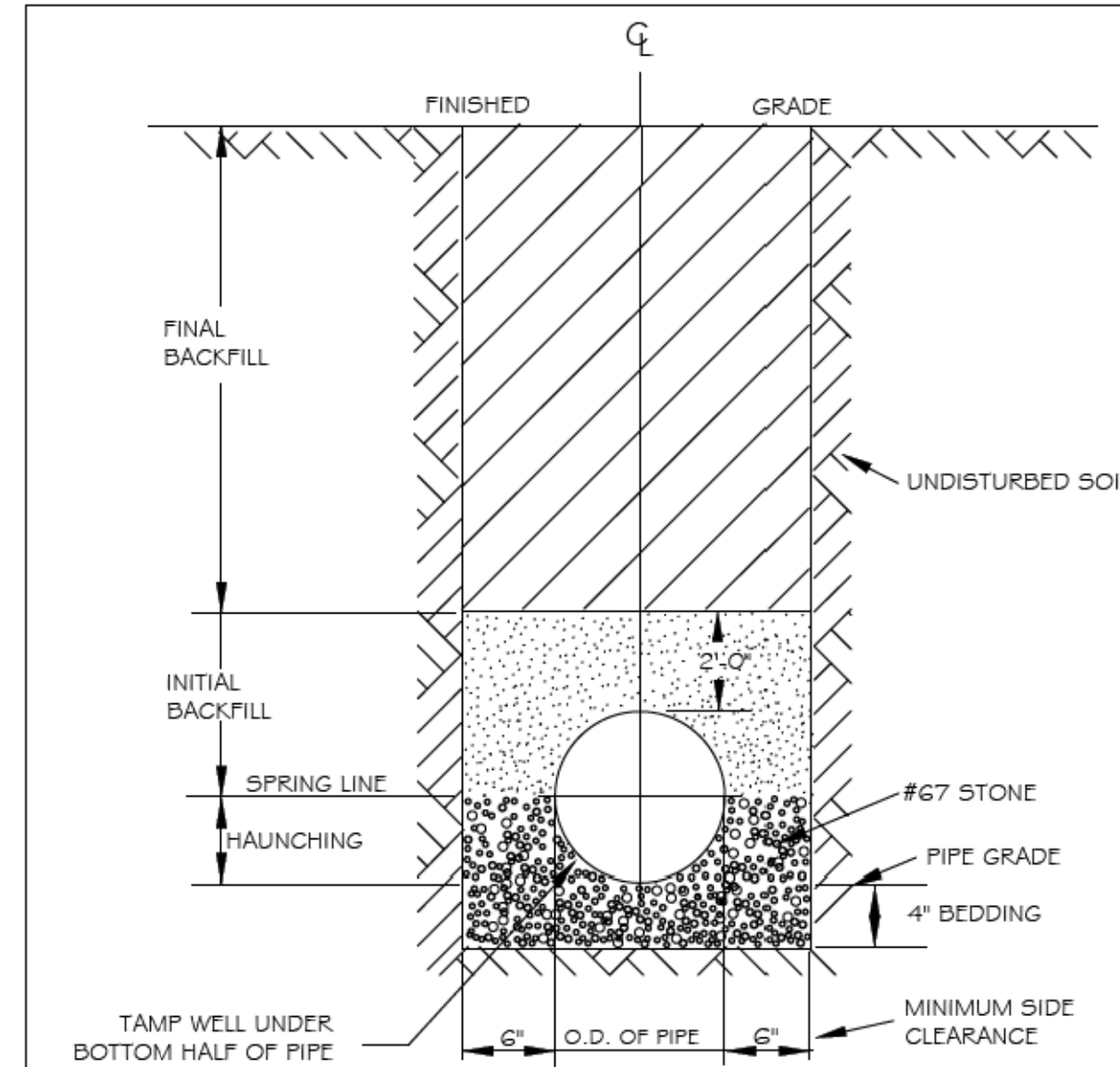
- NOTES:
1. IN NCDOT MAINTAINED ROADWAYS ENCROACHMENT PAVEMENT PATCH REQUIREMENTS SHALL TAKE PRECEDENCE.
  2. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAWCUT MACHINE.
  3. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
  4. THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
  5. THE ENTIRE THICKNESS AND VERTICAL EDGE OF CUT SHALL BE TACKED.
  6. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
  7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
  8. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING (S-4 & S-5) FOR ADDITIONAL DETAILS.
  9. NO HAND PATCHING ALLOWED.
  10. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD ASPHALT				
PAVEMENT PATCH DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-3	D.W.C.	11-1-99	A.B.B.	4-19-04
	RRH	3-30-00	J.F.S.	10-8-10



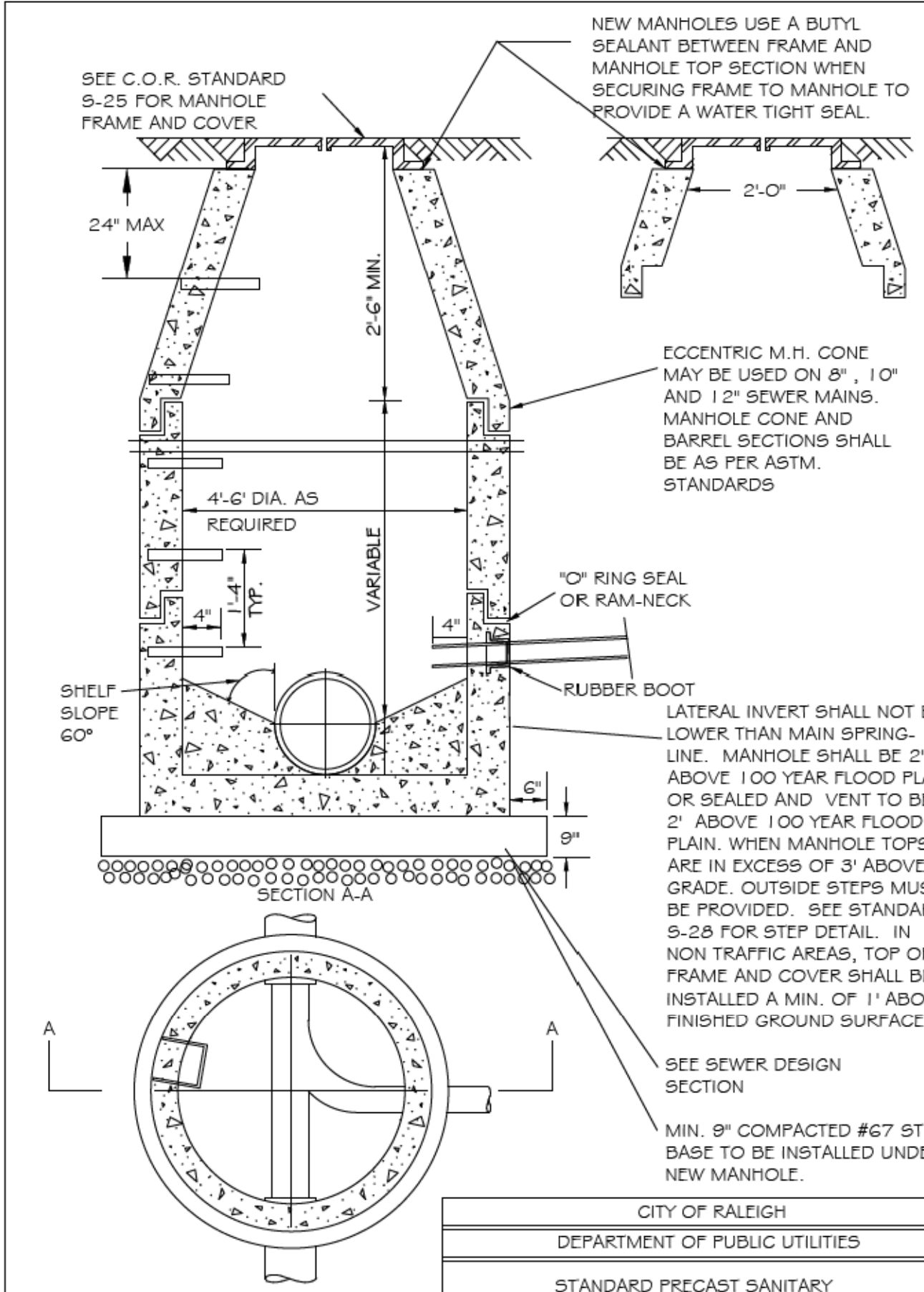
- NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
  2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
  3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
  4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
  5. ACHIEVE 80% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.
  6. IF IN EASEMENT 4" TOPSOIL, AND 12" CLEAN SELECT FILL MAY BE REQUIRED.
  7. NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TRENCH BOTTOM DIMENSIONS & BACKFILLING				
REQUIREMENTS FOR DUCTILE IRON				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-4	D.W.C.	9-3-99		
	RRH	3-30-00		

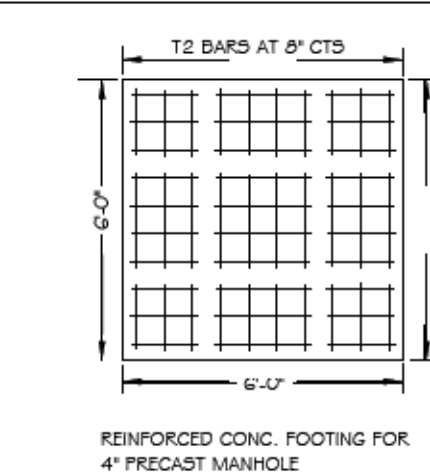


- NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
  2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
  3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
  4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

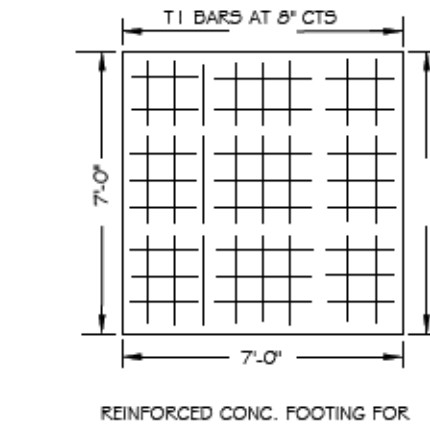
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TRENCH BOTTOM DIMENSIONS AND BACKFILLING				
REQUIREMENTS FOR PVC GRAVITY SEWER MAIN				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-5	TO NOTES	3-1-97	D.W.C.	9-3-99
		7-2-82	RRH	8-30-00



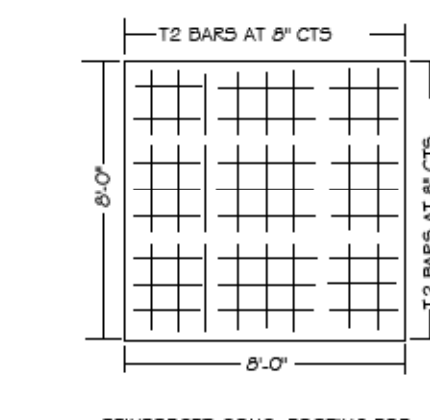
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD PRECAST SANITARY SEWER MANHOLE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20	Y.C.A.	12-31-92	ABD	2-21-06
	RRH	3-30-00	D.H.L.	6-16-08



BILL OF MATERIAL FOR 4' MANHOLE				
BAR	SIZE	LENGTH	NO.	WT. LBS.
T2	#6	6'-6"	18	103
CL. 1/4" CONCRETE TOTAL CU. YDS.				.000



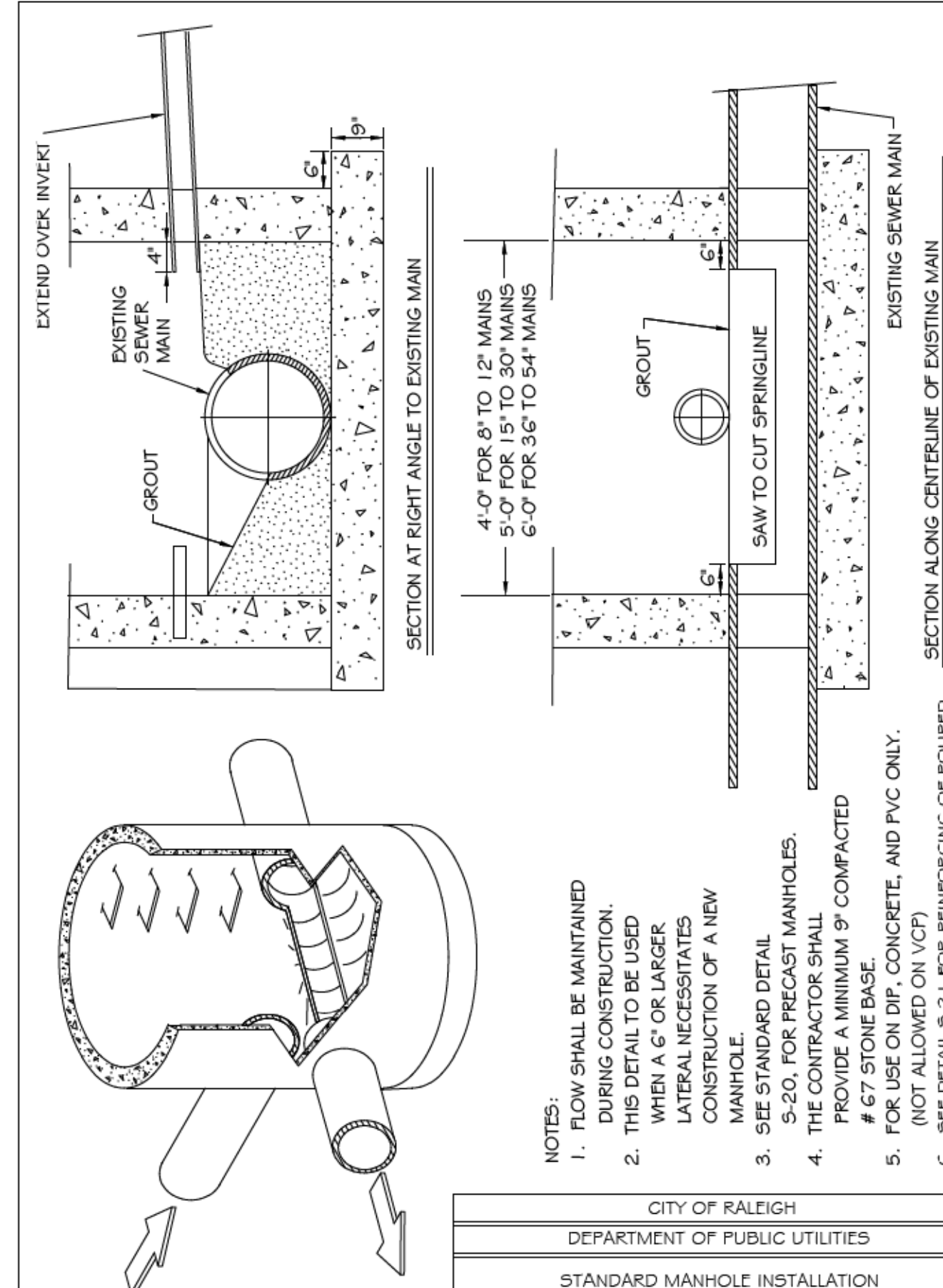
BILL OF MATERIAL FOR 6' MANHOLE				
BAR	SIZE	LENGTH	NO.	WT. LBS.
T1	#6	7'-6"	20	136
CL. 1/4" CONCRETE TOTAL CU. YDS.				.361



BILL OF MATERIAL FOR 6' MANHOLE				
BAR	SIZE	LENGTH	NO.	WT. LBS.
T2	#6	7'-6"	24	166
CL. 1/4" CONCRETE TOTAL CU. YDS.				.778

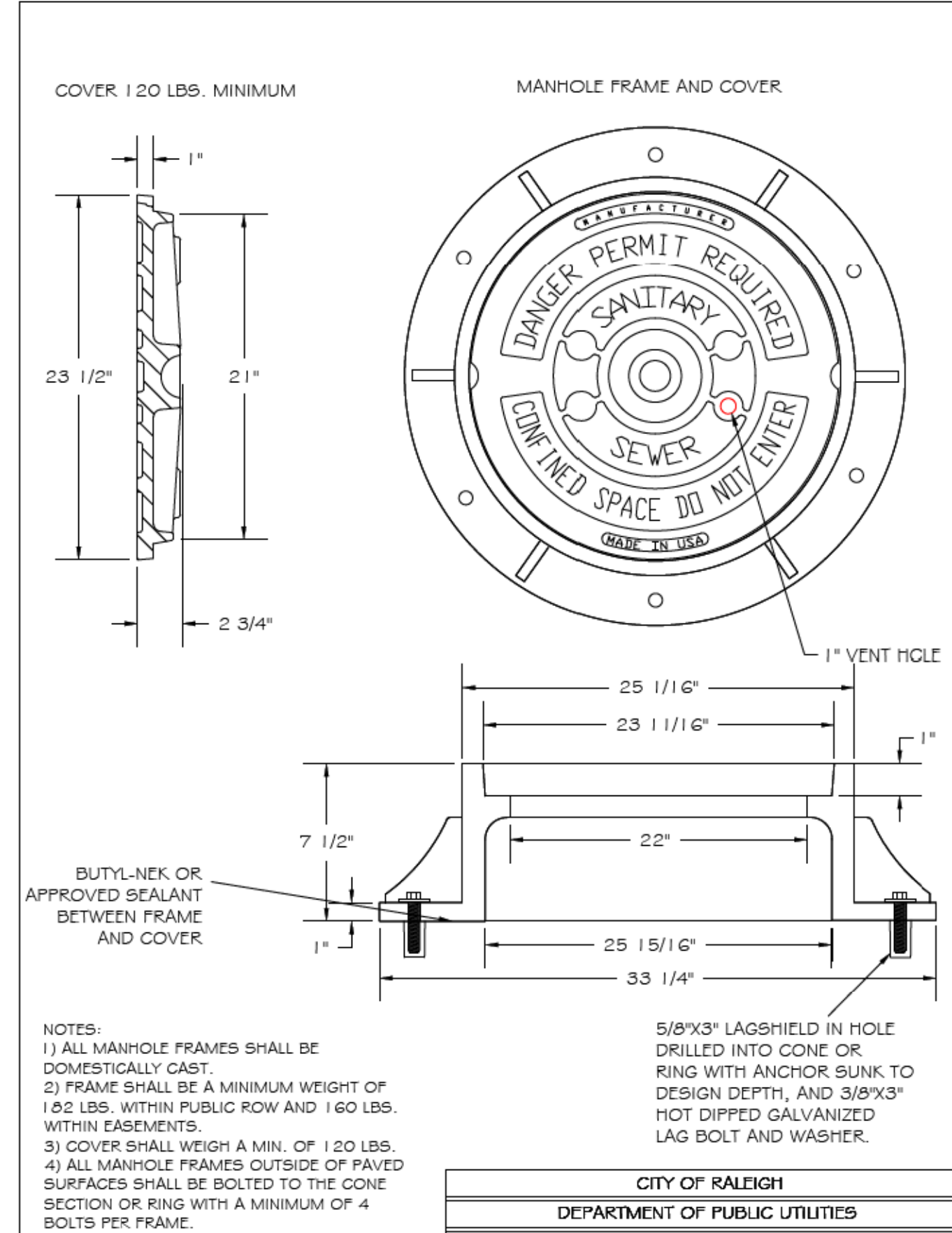
\* ALL BASES ARE MINIMUM 9" THICK

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
EXTENDED BASE OR CAST-IN-PLACE REINFORCED CONCRETE BASE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-21	RRH	3-1-97	ABD	2-2-06
		3-30-00		



- NOTES:
1. FLOW SHALL BE MAINTAINED DURING CONSTRUCTION.
  2. THIS DETAIL TO BE USED WHEN A 6" OR LARGER LATERAL REQUIRES CONSTRUCTION OF A NEW MANHOLE.
  3. SEE STANDARD DETAIL S-20 FOR PRECAST MANHOLES.
  4. THE CONTRACTOR SHALL PROVIDE A MINIMUM 9" COMPACTED #67 STONE BASE.
  5. FILL WITH CLEAN GRANULAR MATERIAL, SAND, GRAVEL, AND PVC ONLY.
  6. SEE DETAIL S-21 FOR REINFORCING OF FOUND IN-PLACE BASE

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD MANHOLE INSTALLATION OVER EXISTING SEWER MAIN				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-22	Y.C.A.	12-31-91	A.B.B.	1-19-06
	RRH	3-30-00	D.H.L.	6-16-08



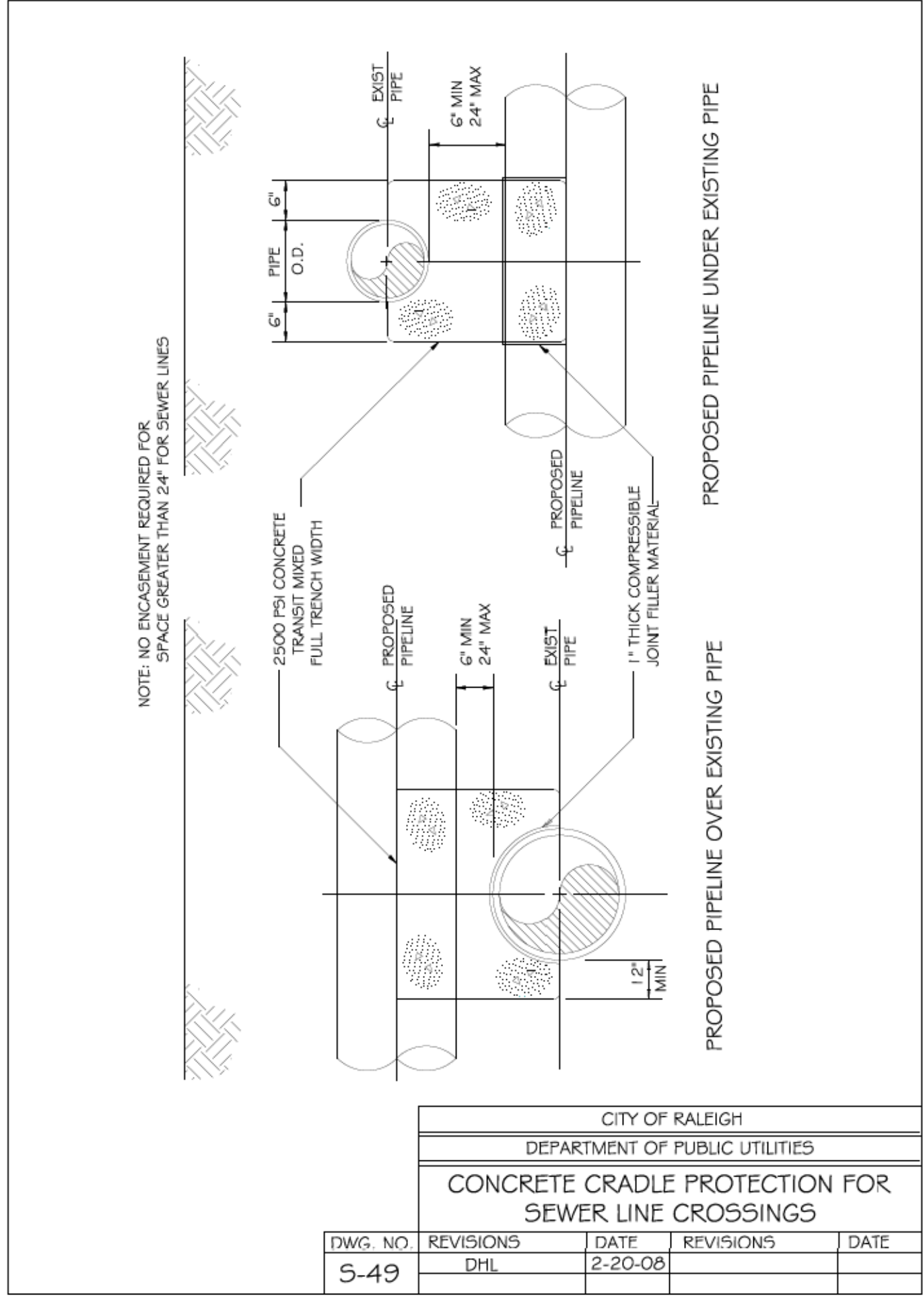
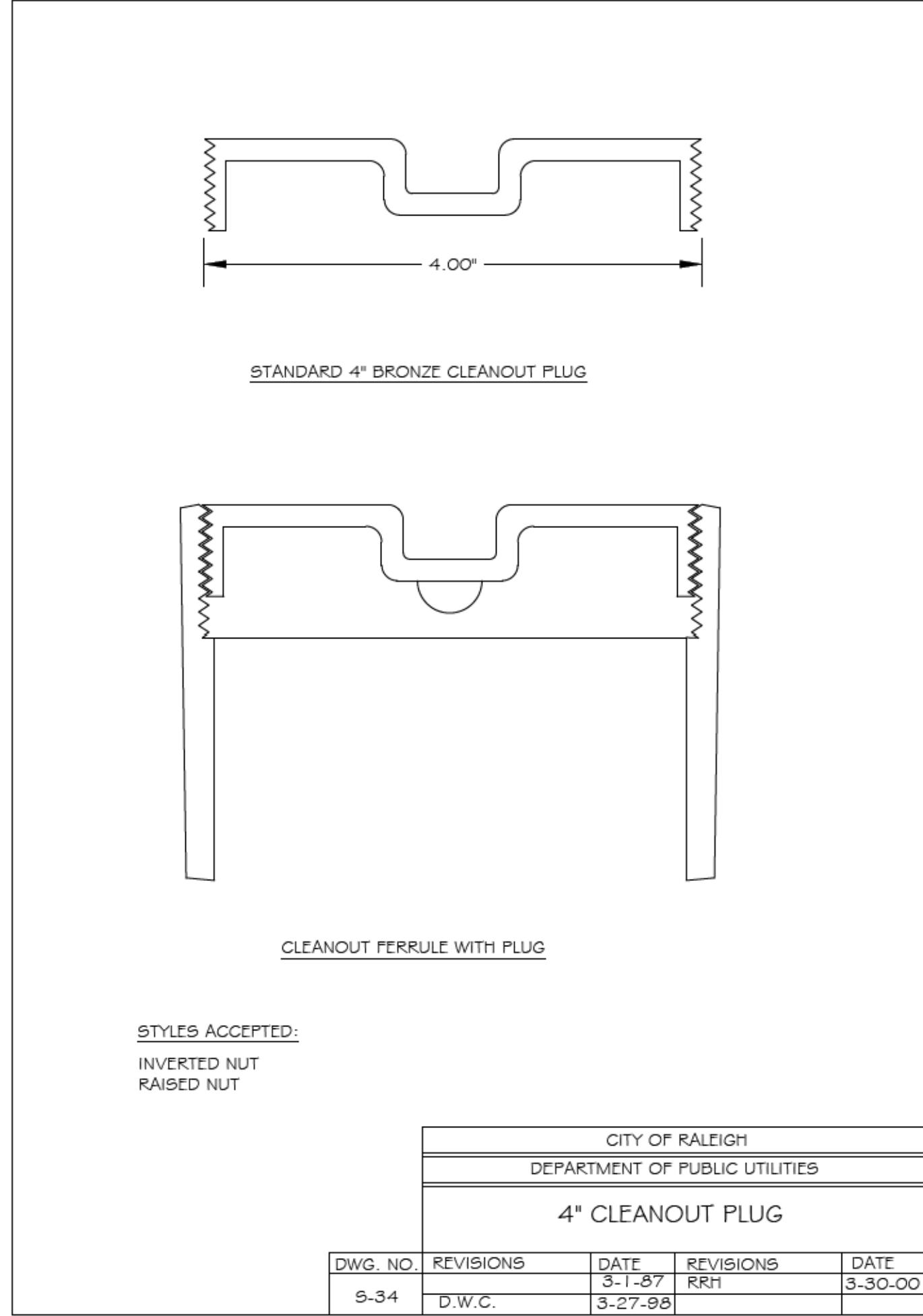
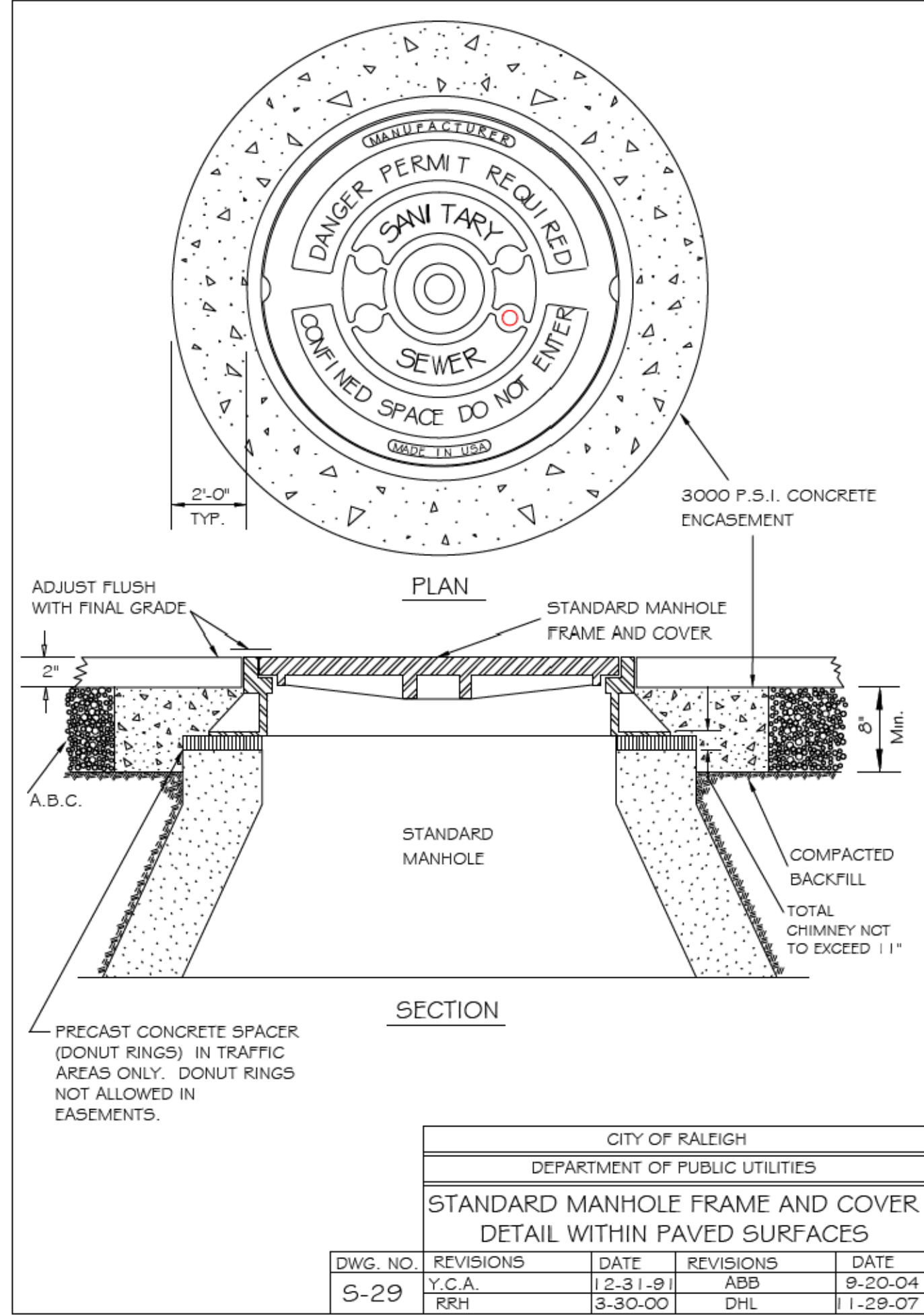
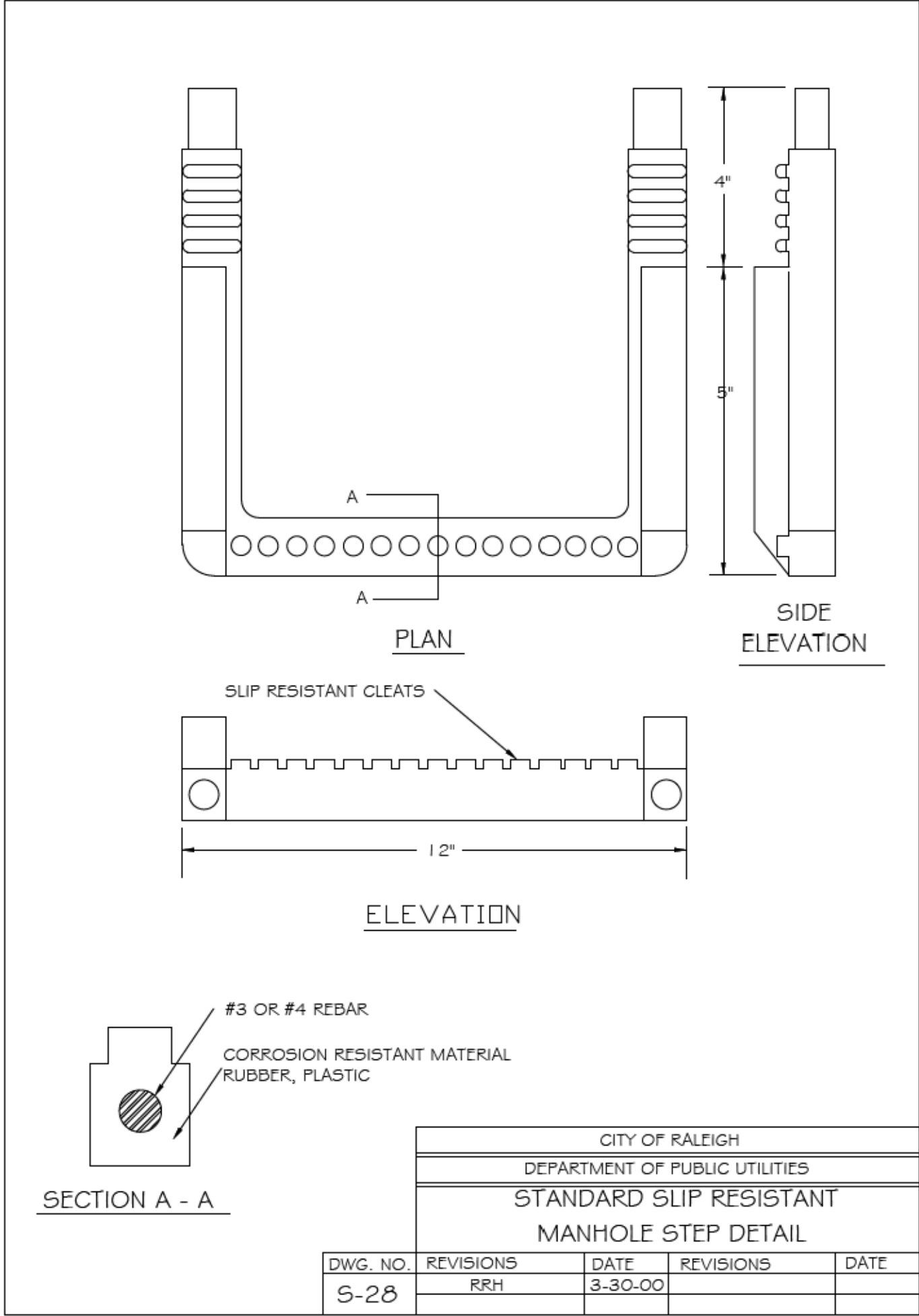
- NOTES:
- 1) ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
  - 2) FRAME SHALL BE A MINIMUM WEIGHT OF 120 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
  - 3) COVER SHALL WEIGH A MIN. OF 120 LBS.
  - 4) ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

5/8"x3" LAGSHEILD IN HOLE DRILLED INTO CONE OR RING WITH ANCHOR SUNK TO DESIGN DEPTH, AND 3/8"x3" HOT DIPPED GALVANIZED LAG BOLT AND WASHER.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD MANHOLE COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-25	3-1-97	3-1-97	A.B.B.	2-9-05
	RRH	3-30-00	D.H.L.	6-16-08

NO.	REVISION	DATE



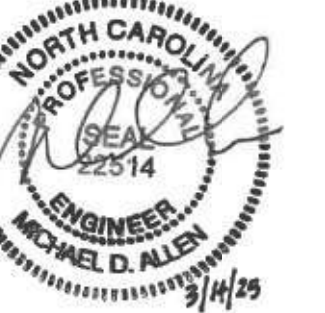


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WTCC EWS - FIRE & RESCUE TRAINING CENTER

WAKE TECHNICAL COMMUNITY COLLEGE  
5401 ROLESVILLE ROAD WENDELL, NC 27591  
NCCCS NO. 2303

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NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**SANITARY SEWER DETAILS**

D-105

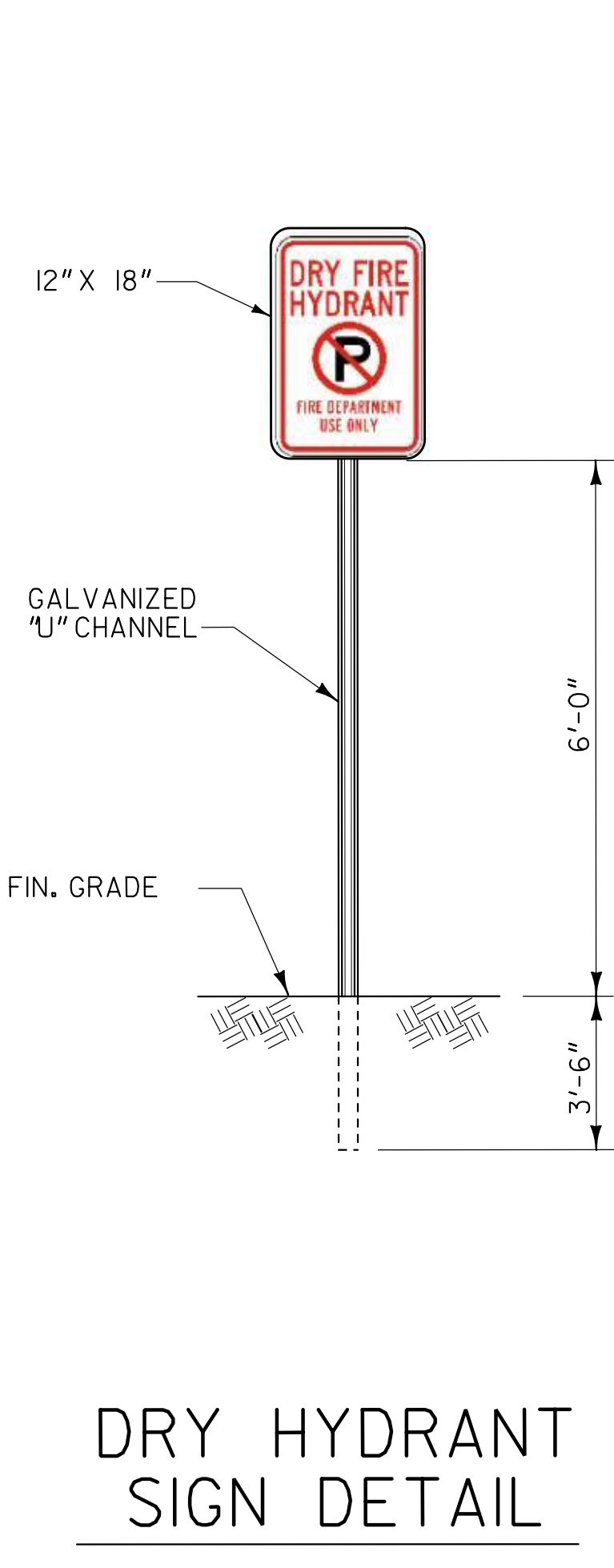
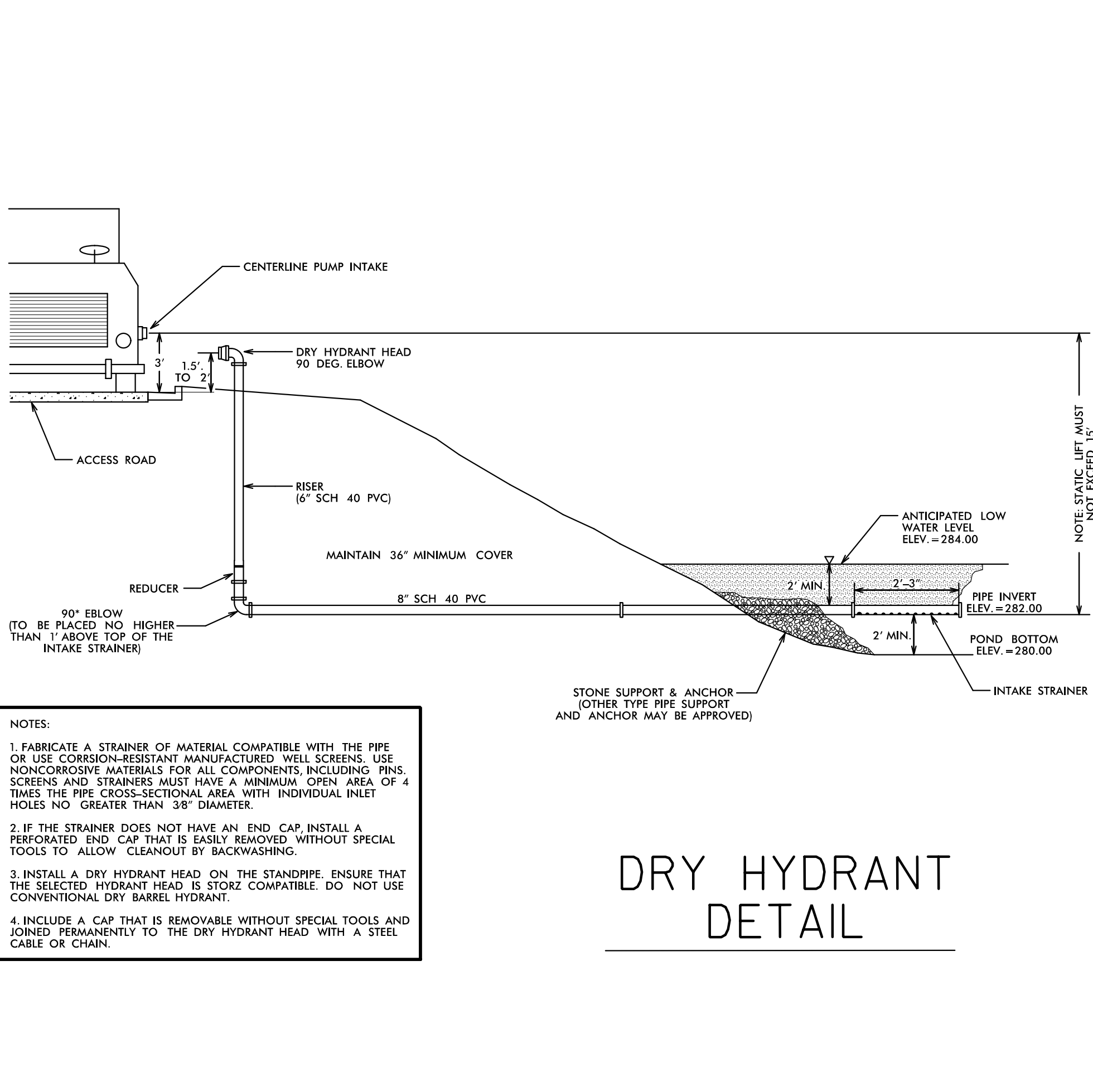
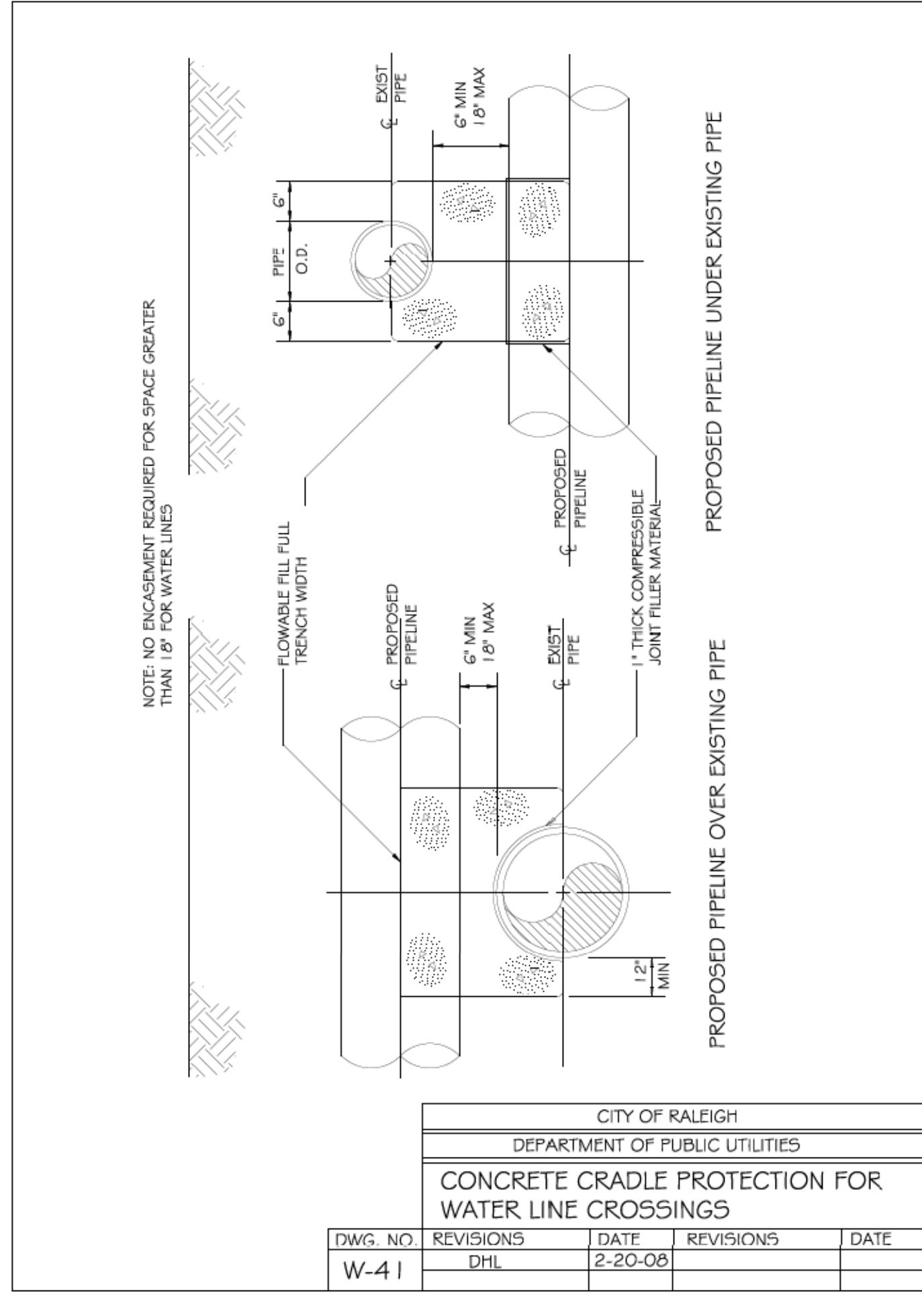
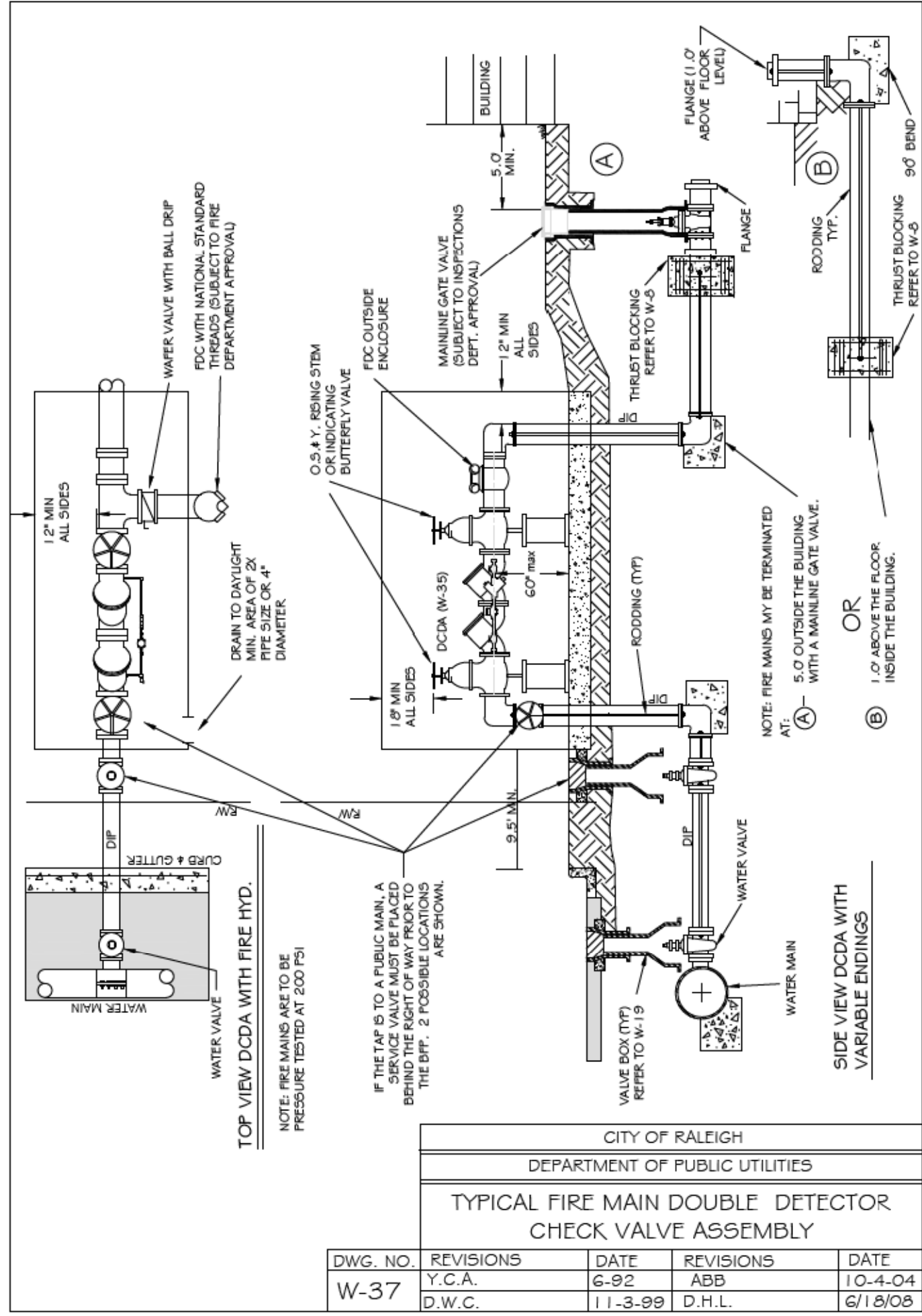
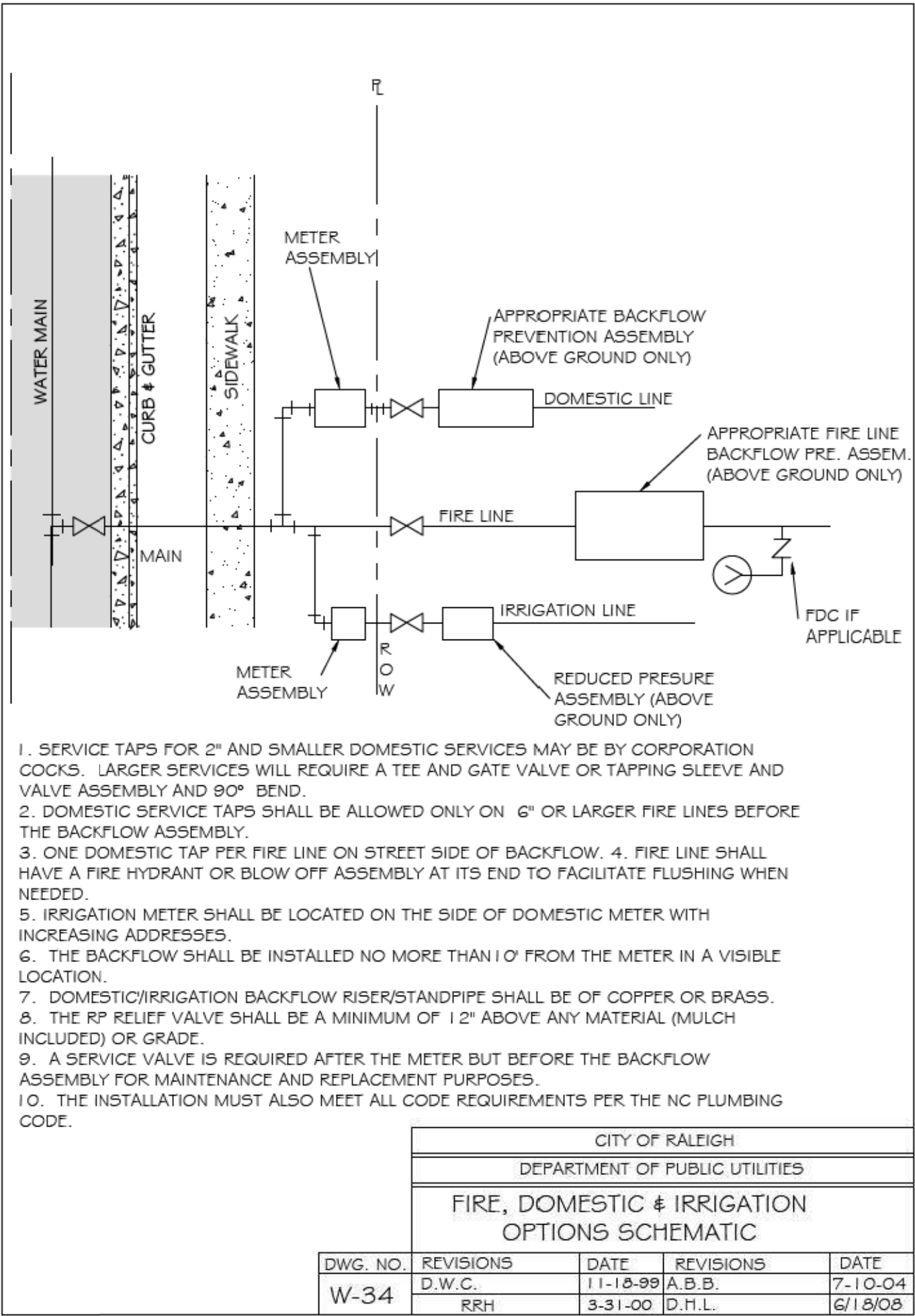
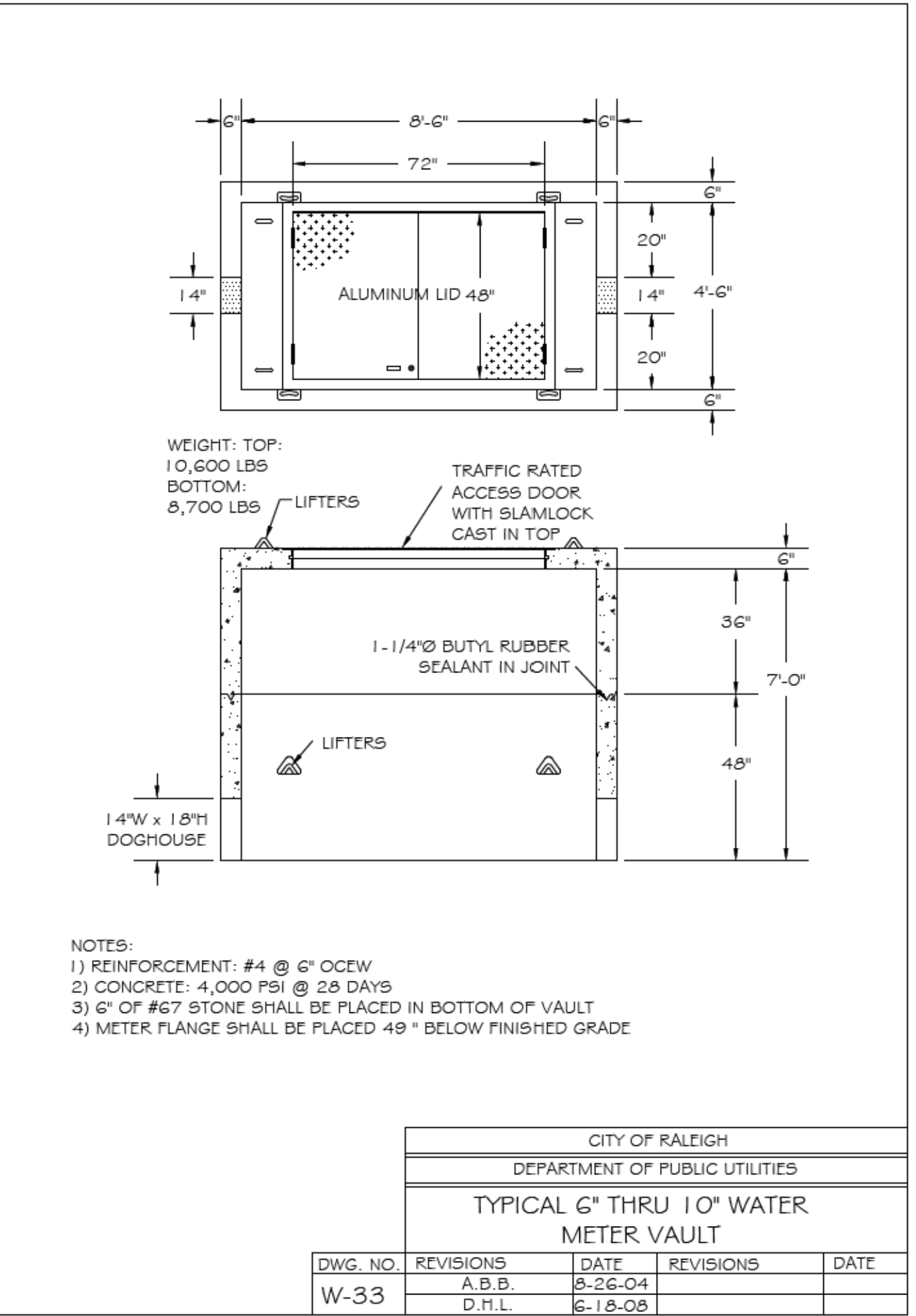
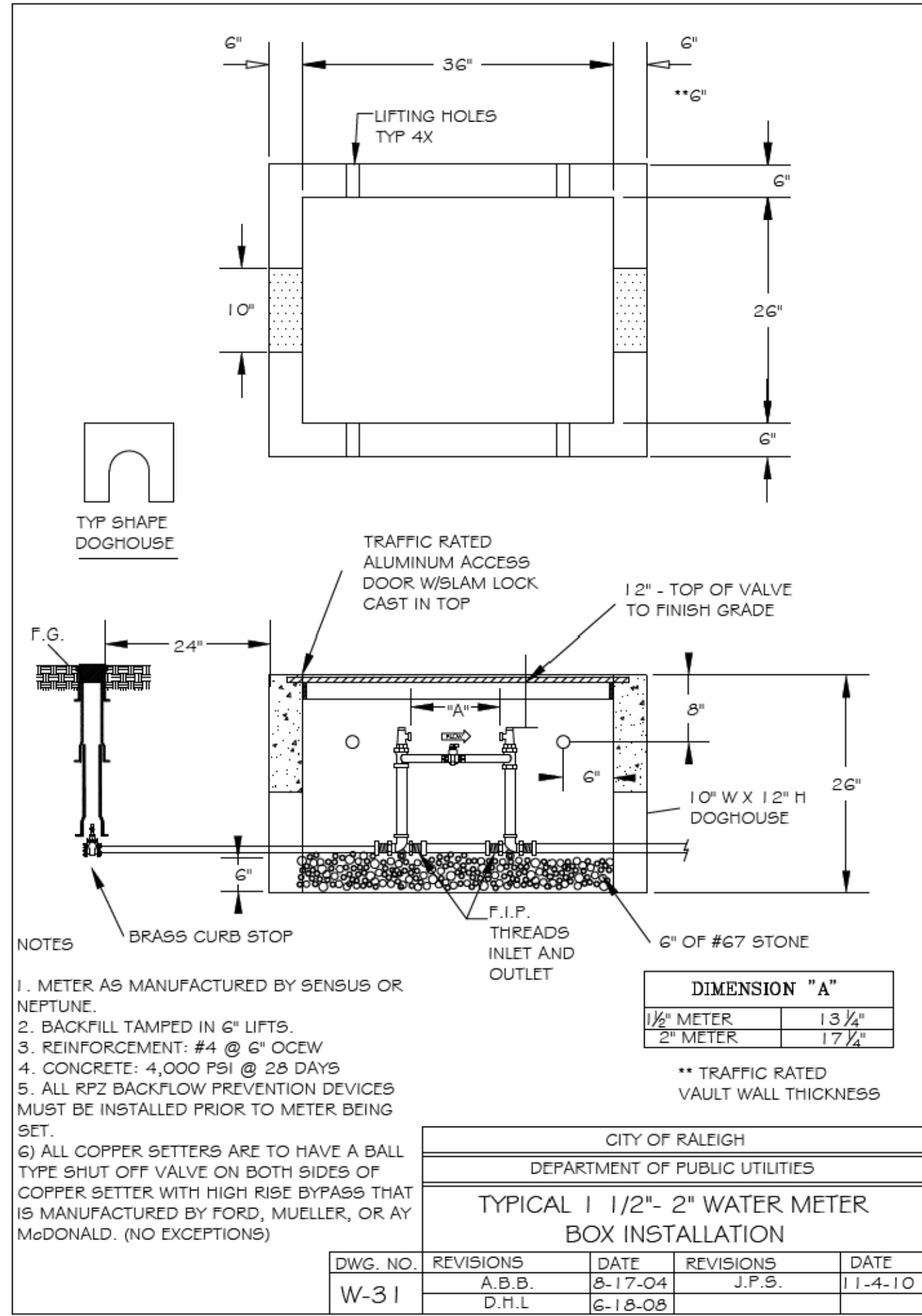
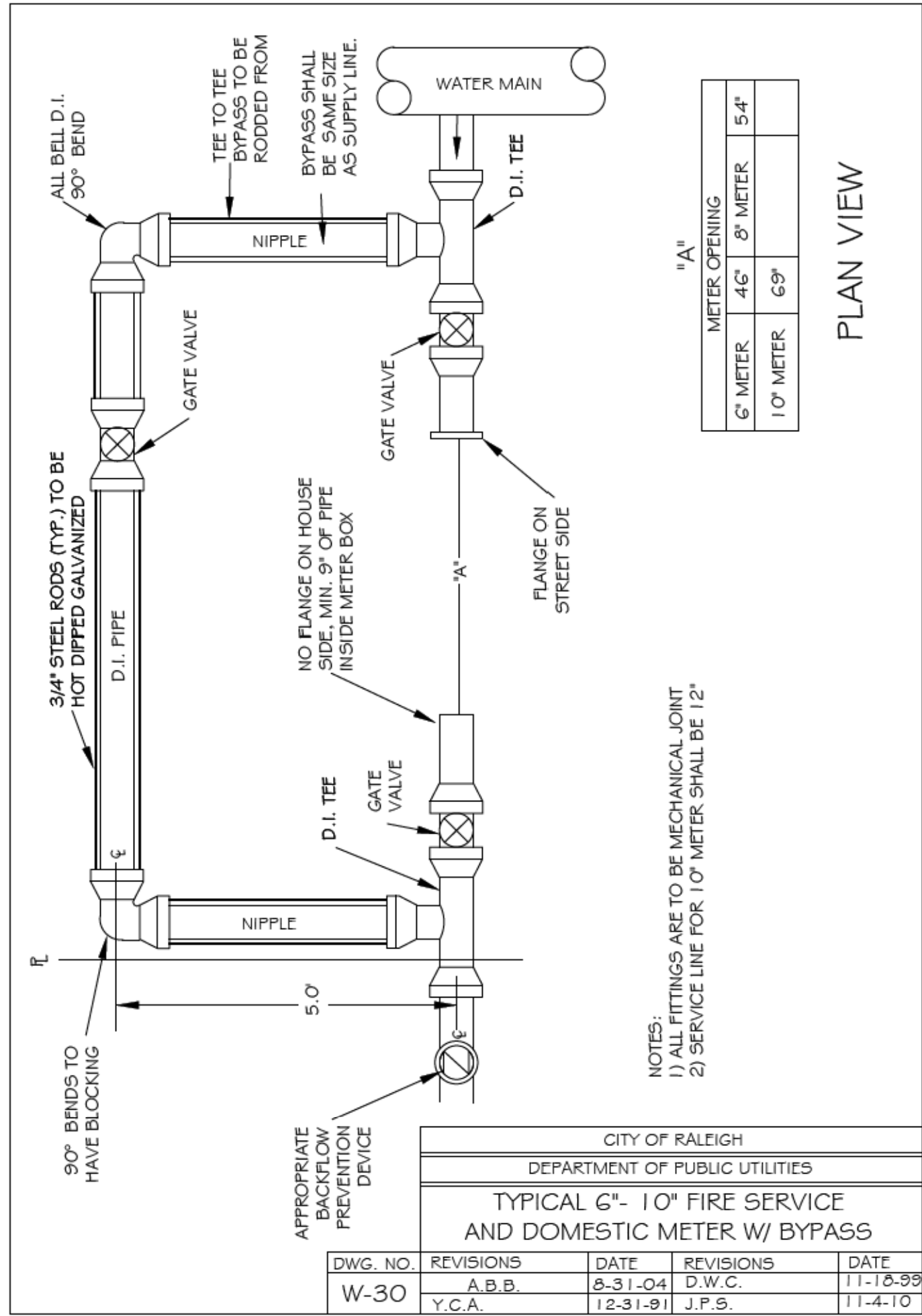












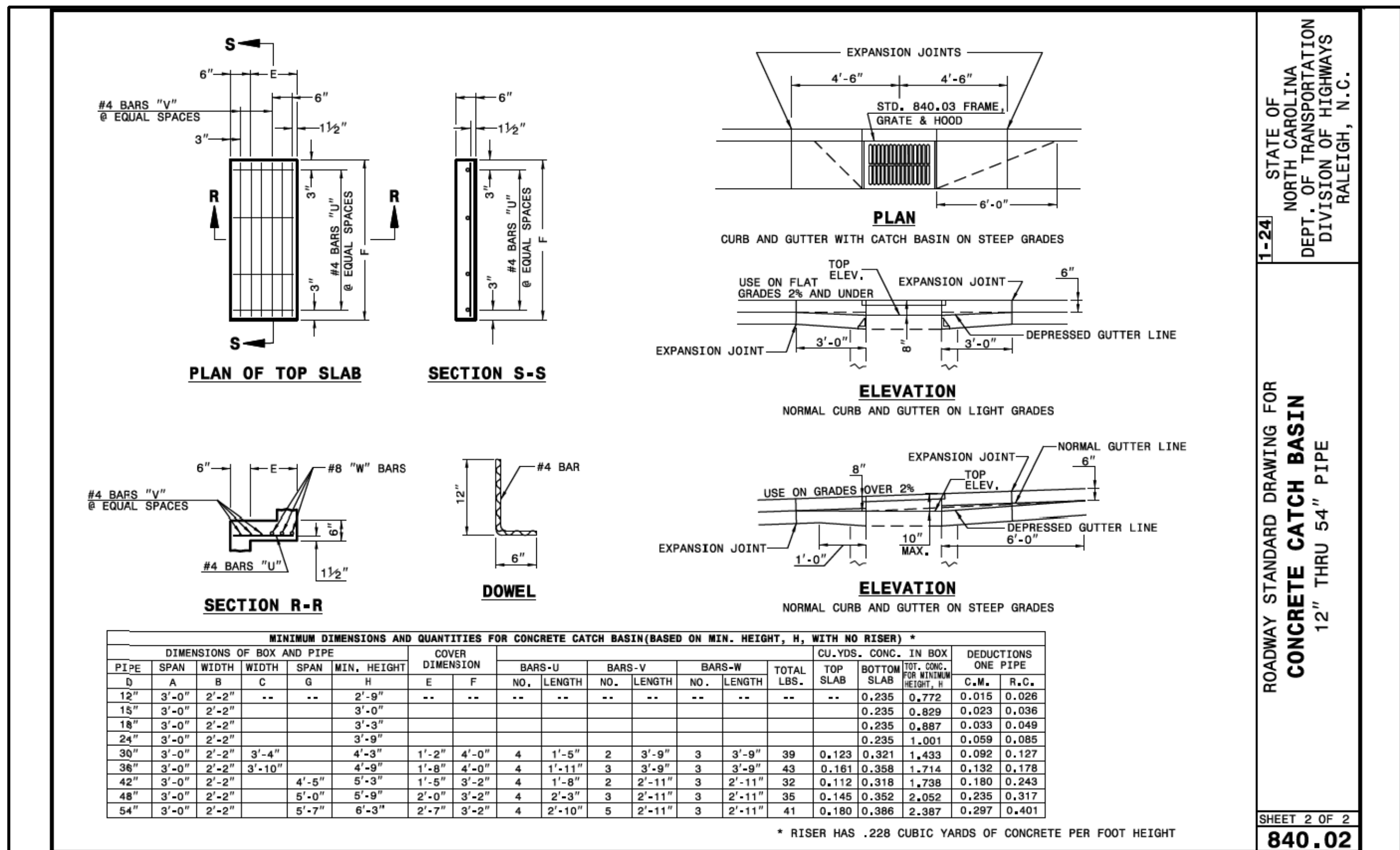
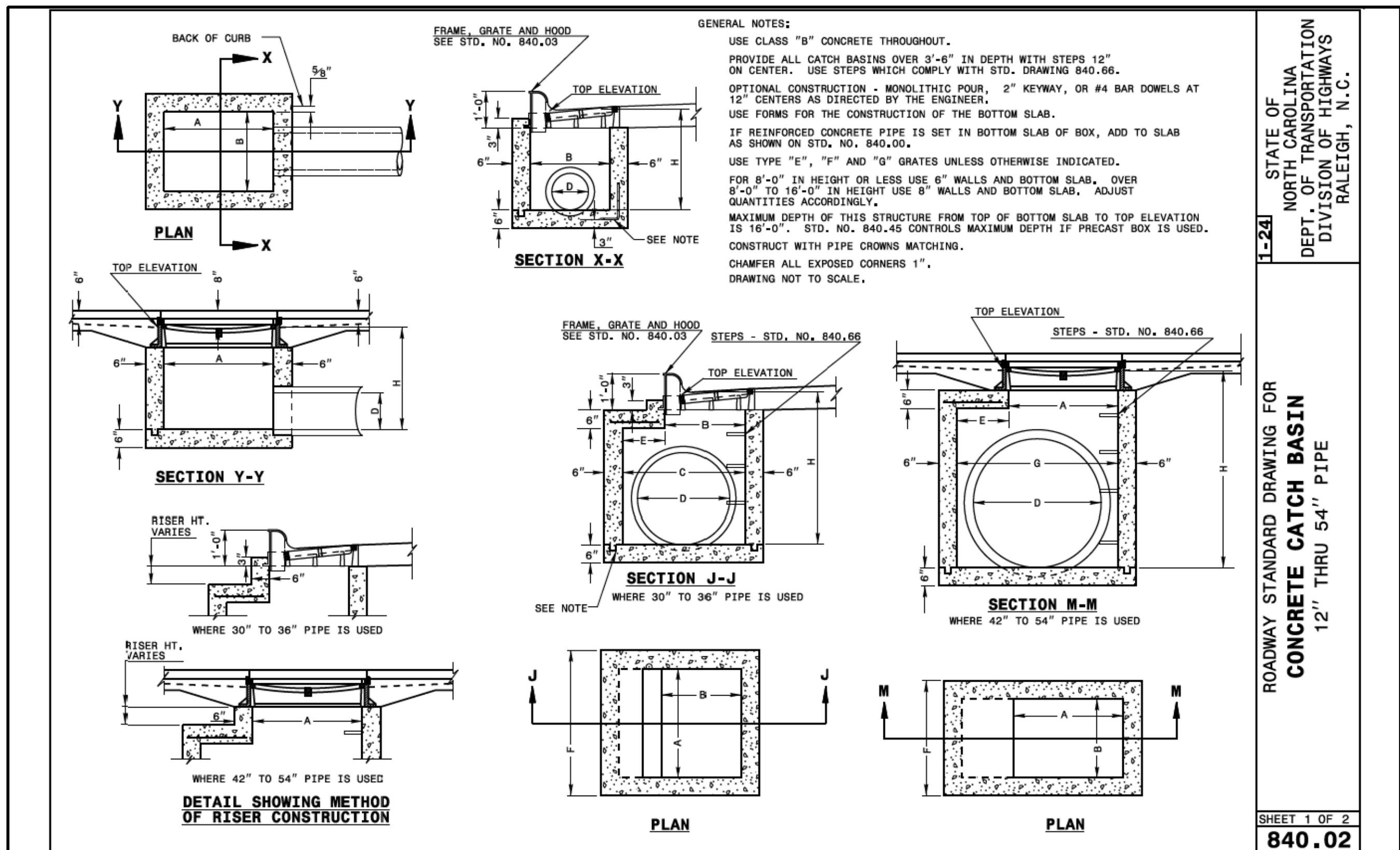
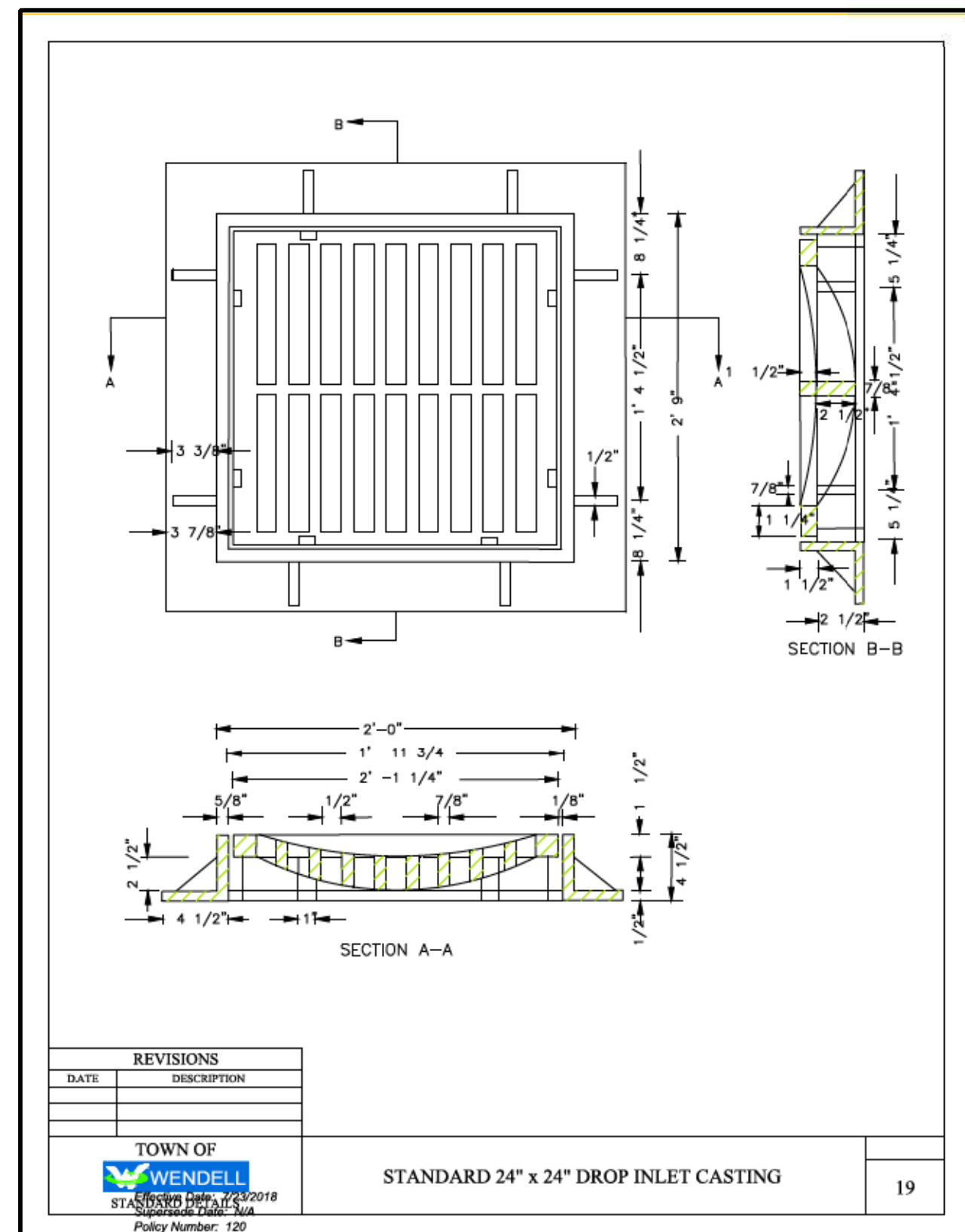
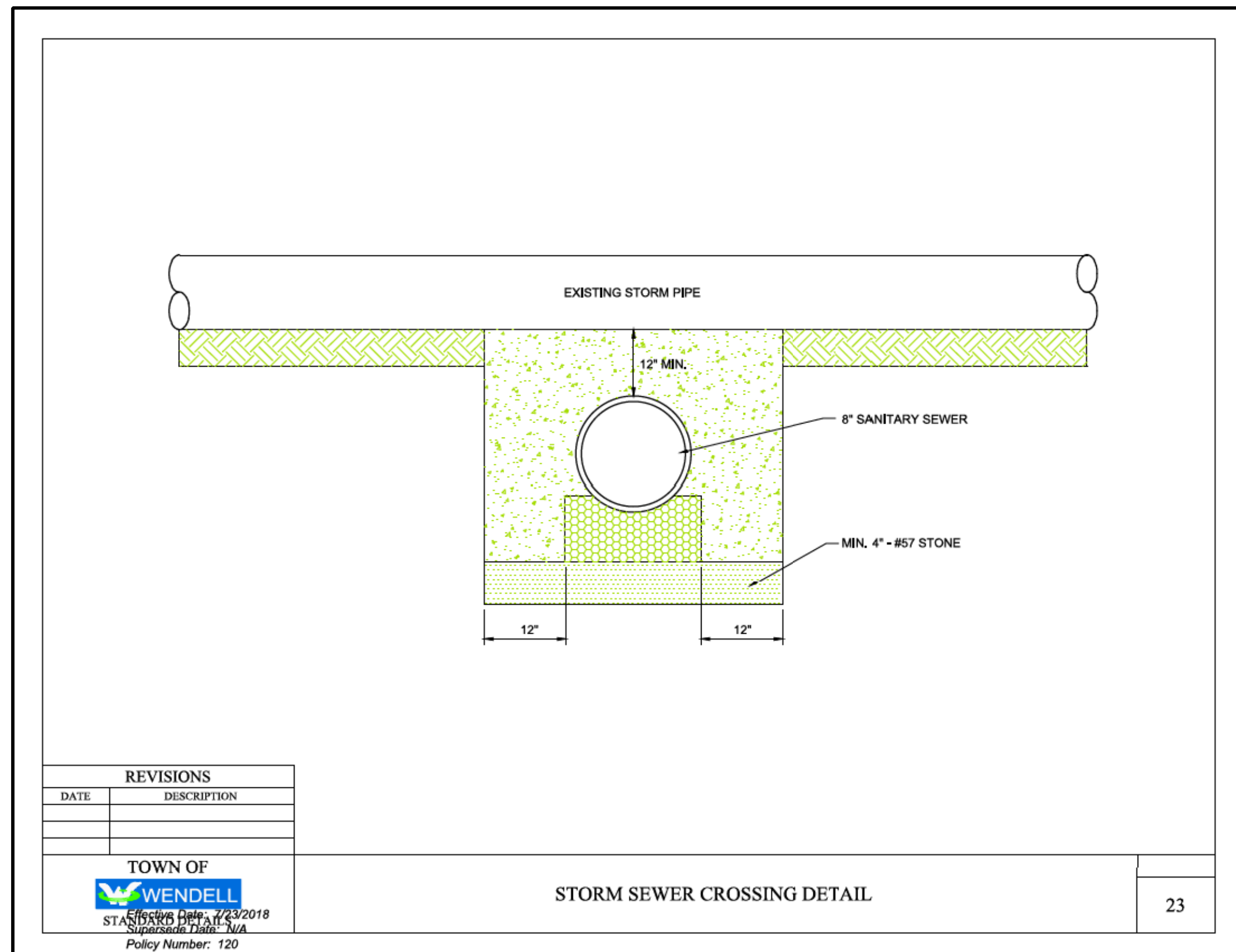
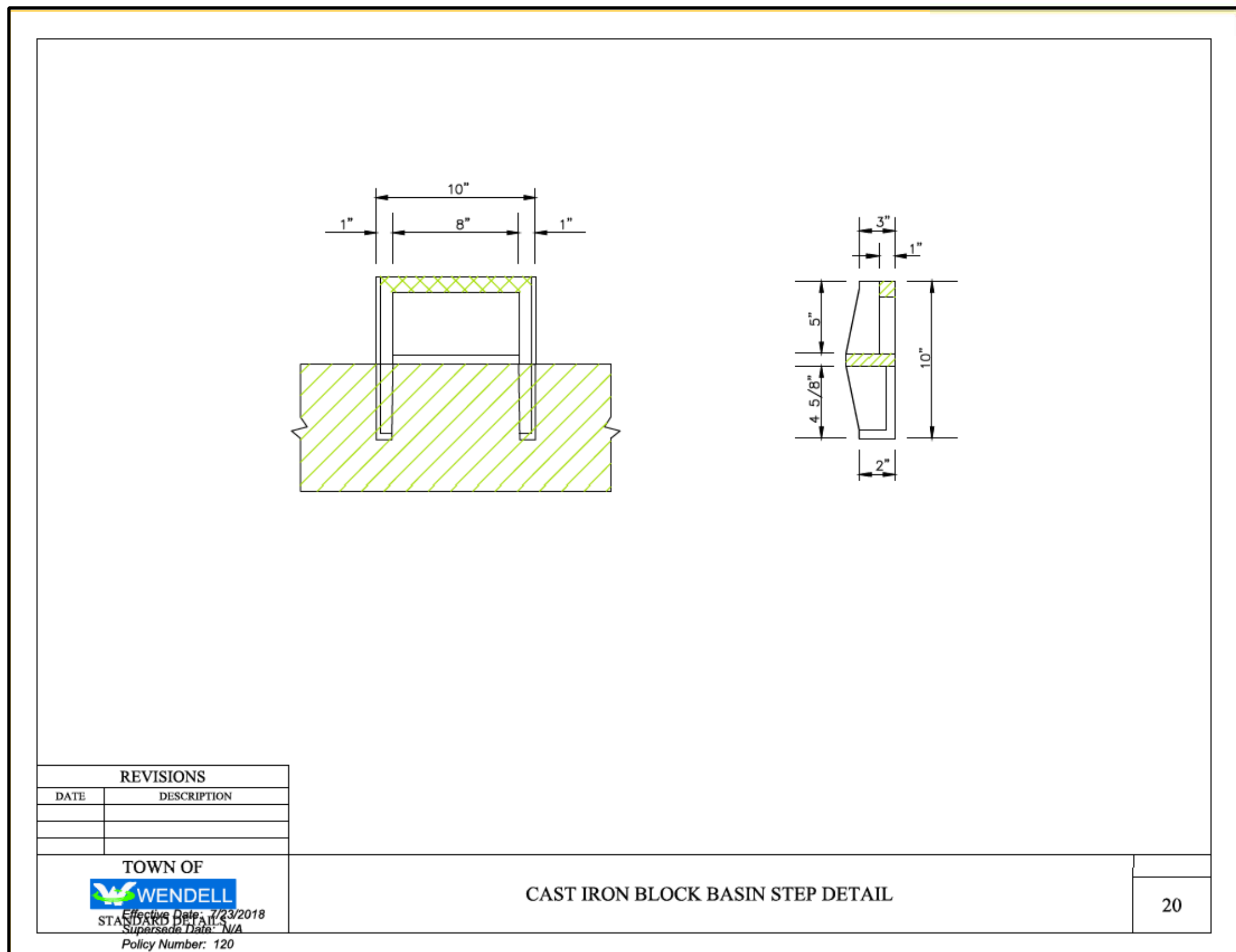
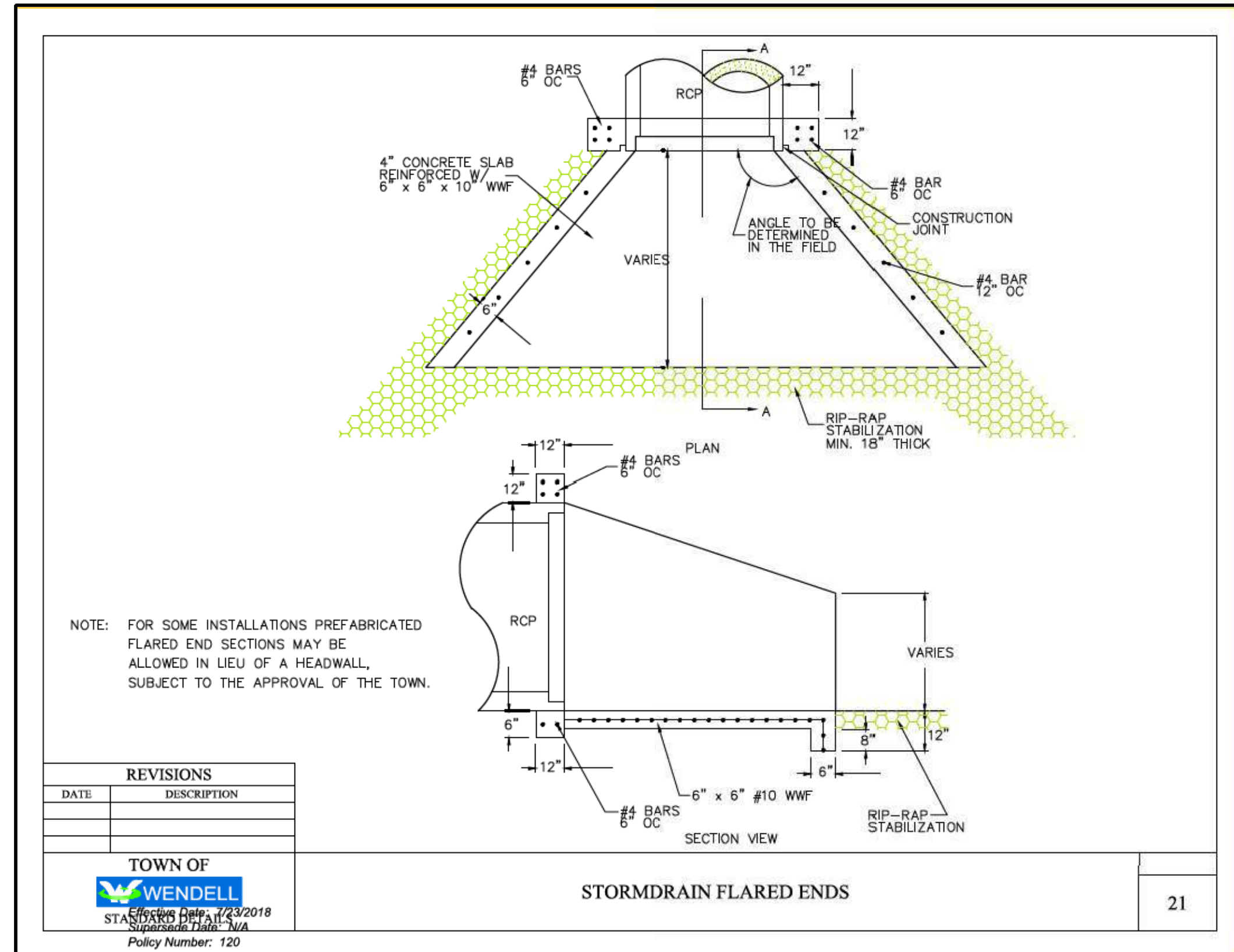
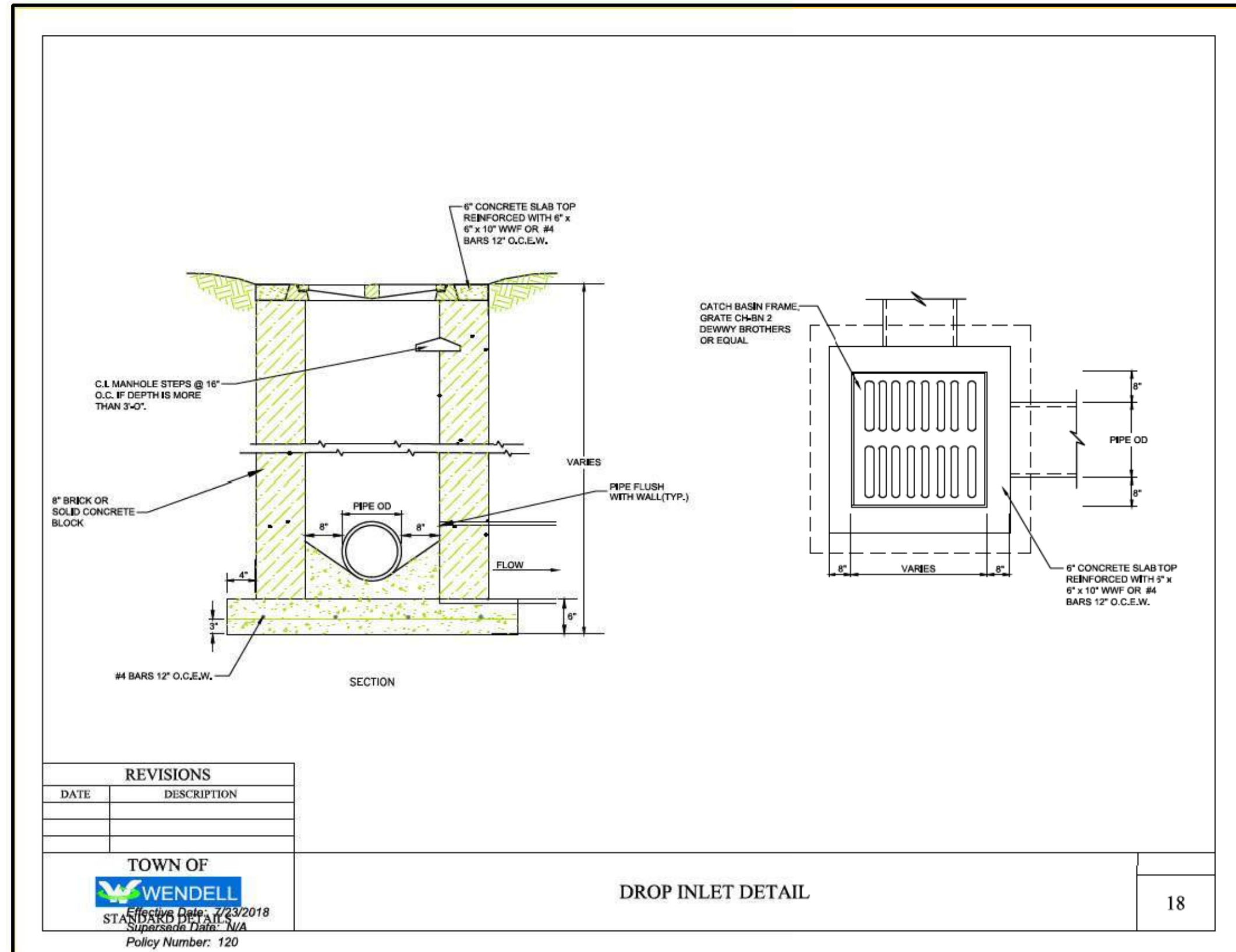
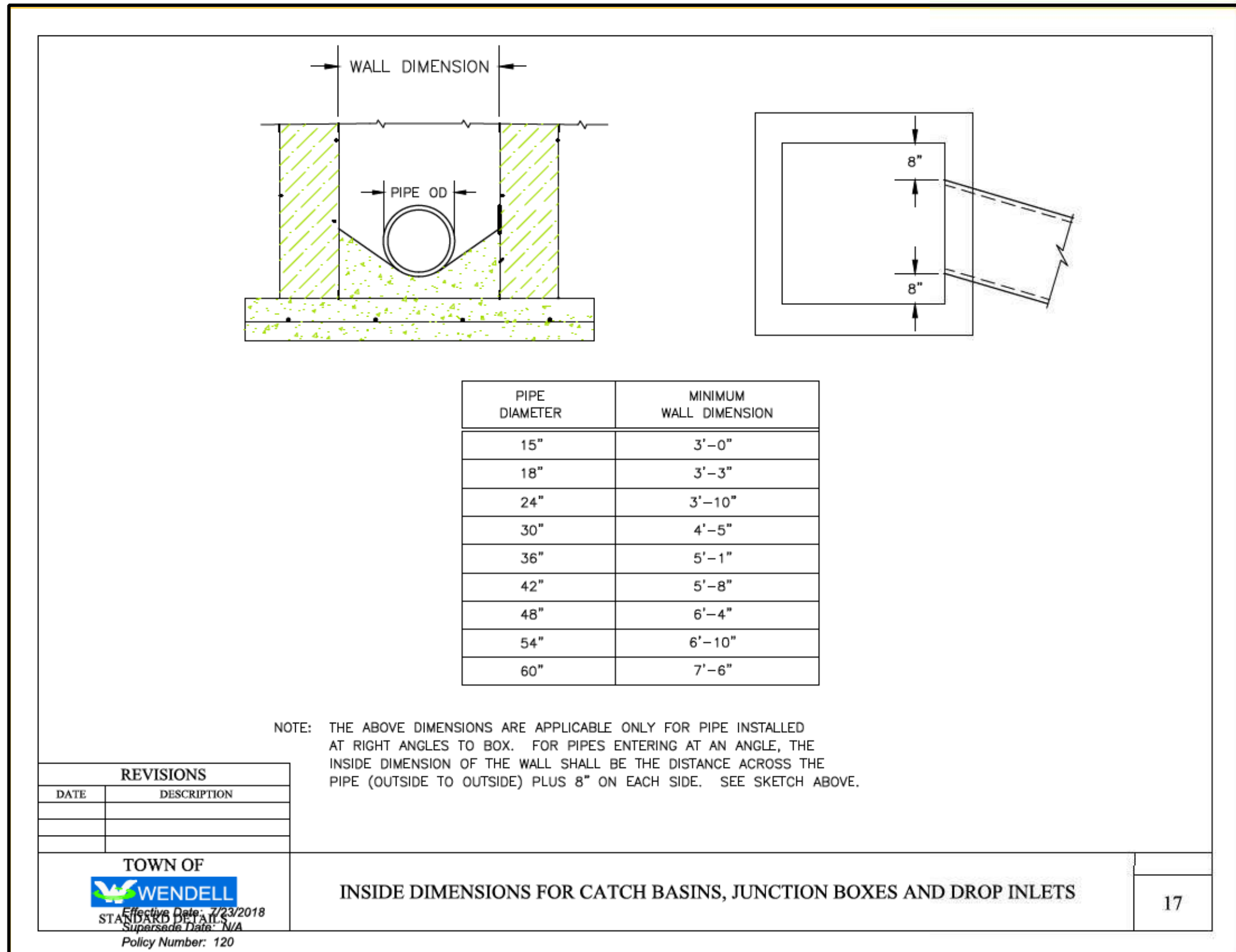
NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
 DATE ISSUED  
**03/14/2025**  
 PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
 SHEET  
**WATER DETAILS**



NO.	REVISION	DATE

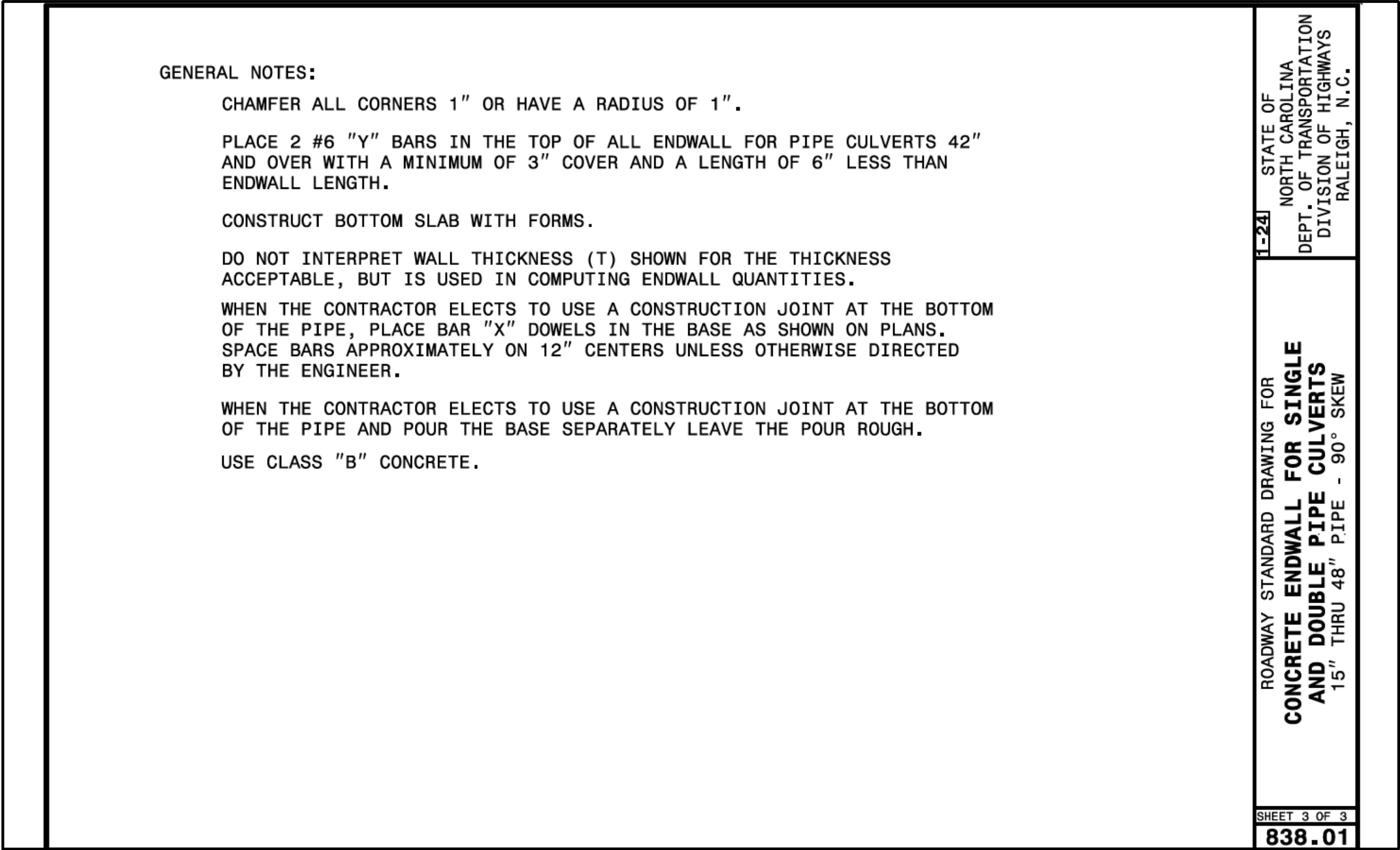
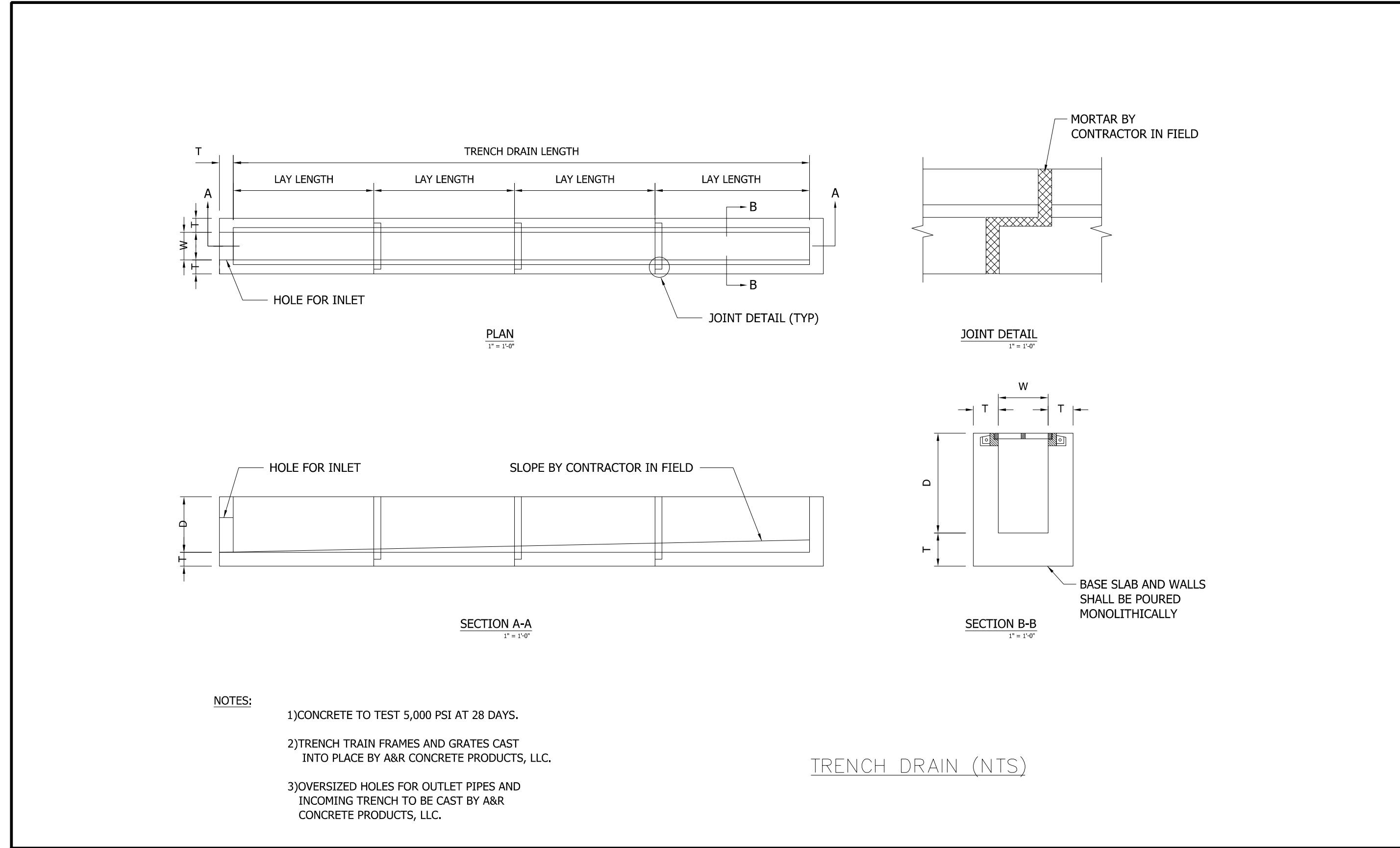
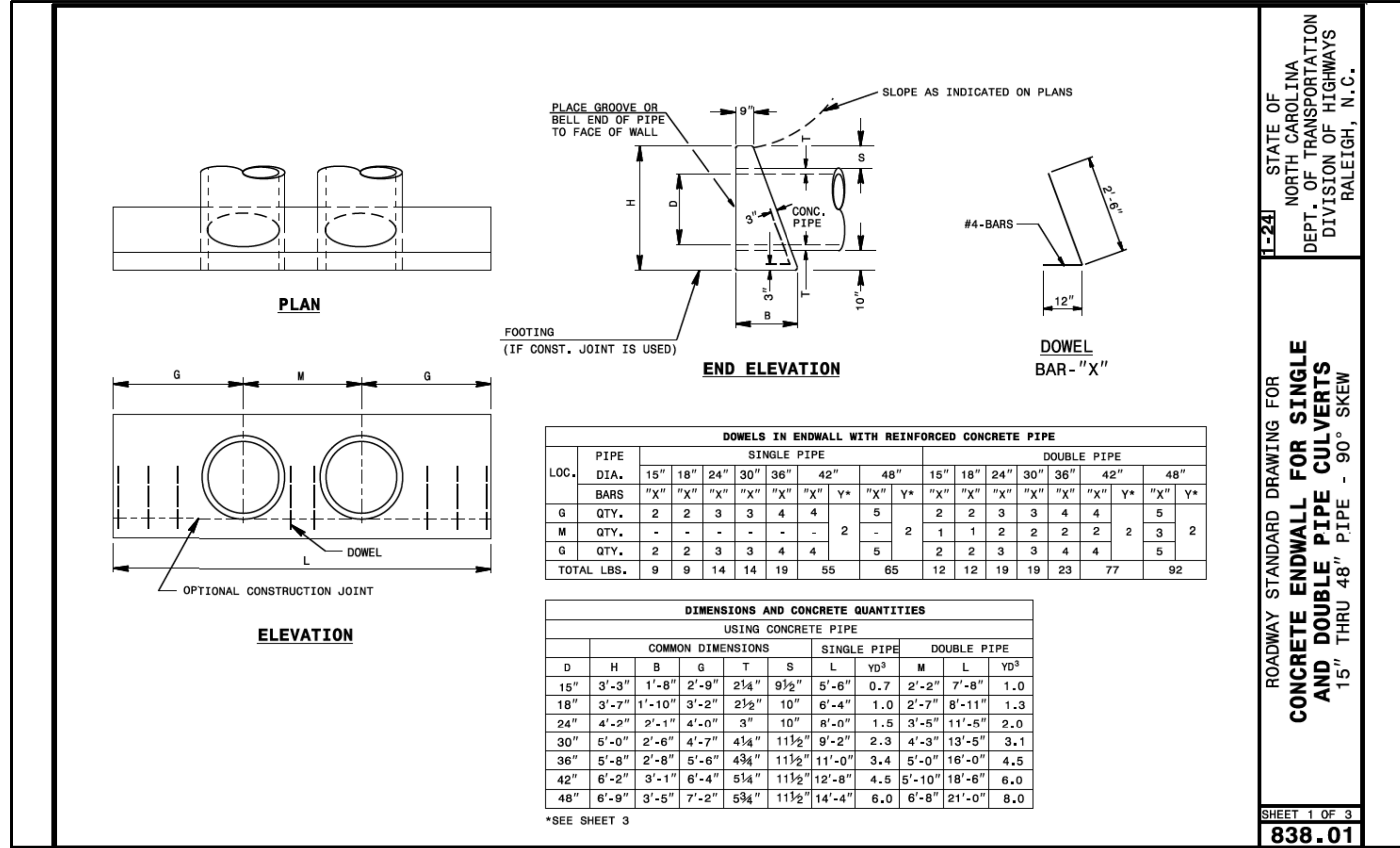
JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**STORM WATER DETAILS**













LEGEND






7 DAY GROUND COVER

40' 0' 20' 40' 80'

GRAPHIC SCALE  
1" = 40'

North Arrow



STABILIZATION TIMEFRAMES (Effective Aug. 3, 2015)		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
 Perimeter dikes, swales, ditches, slopes	7 days	None
 High Quality Water (HQW) Zones	7 days	None
 Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
 Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
 All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

HH  
ARCHITECTURE

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NV5

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NCCCS NO. 2303

NPDES Stormwater Discharge Permit for Construction Activities (NCGO1) NCEM/DIVision of Energy, Mineral and Land Resources

NO.	REVISION	DATE

JOB NUMBER  
22-086  
DATE ISSUED  
03/14/2025  
PROJECT STATUS  
ISSUE FOR CONSTRUCTION  
SHEET  
NPDES STABILIZATION PLAN

NCGO1-1



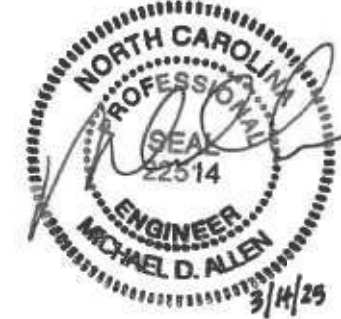


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## GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

### SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones
(e) Areas with slopes flatter than 4:1	14	-10 days for Falls Lake Watershed -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

### GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"><li>Temporary grass seed covered with straw or other mulches and tackifiers</li><li>Hydroseeding</li><li>Rollled erosion control products with or without temporary grass seed</li><li>Appropriately applied straw or other mulch</li><li>Plastic sheeting</li></ul>	<ul style="list-style-type: none"><li>Permanent grass seed covered with straw or other mulches and tackifiers</li><li>Geotextile fabrics such as permanent soil reinforcement matting</li><li>Hydroseeding</li><li>Shrubs or other permanent plantings covered with mulch</li><li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li><li>Structural methods such as concrete, asphalt or retaining walls</li><li>Rollled erosion control products with grass seed</li></ul>

### POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

### EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

### LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

### PAINT AND OTHER LIQUID WASTE

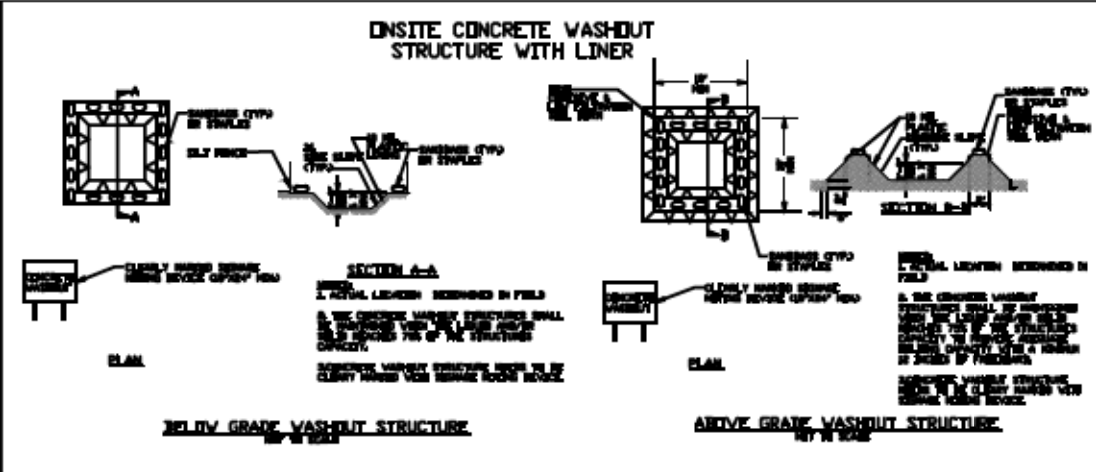
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sited and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

### PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

### EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



### CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout must not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

### HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

### HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

## NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

### PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

#### SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual day rainfall information is available, record the cumulative rain measurement; for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain monitoring device approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event $\geq 1.0$ inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event $\geq 1.0$ inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event $\geq 1.0$ inch in 24 hours	1. Visible sedimentation is found outside site limits, then a record of the following shall be made: a. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event $\geq 1.0$ inch in 24 hours	1. If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: a. Description, evidence and date of corrective actions taken, and b. Records of the required reports to the appropriate Division 24-hour Office per Part III, Section C, Item (2)(d) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (consolidation of perimeter E&S measures, clearing and grubbing, installation of storm drainage facilities, completion of all final disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an extension that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

### PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

#### SECTION B: RECORDKEEPING

##### 1. E&S Plan Documentation

The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&S measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S plan.	Initial and date each E&S measure on a copy of the approved E&S plan or complete, date and sign an inspection report that lists each E&S measure shown on the approved E&S plan. This documentation is required upon the initial installation of the E&S measures or if the E&S measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&S plan.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S measures.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

##### 2. Additional Documentation to be Kept on Site

In addition to the E&S plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.

- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

##### 3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

### PART II, SECTION G, ITEM (4)

#### DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

## NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

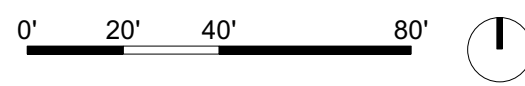
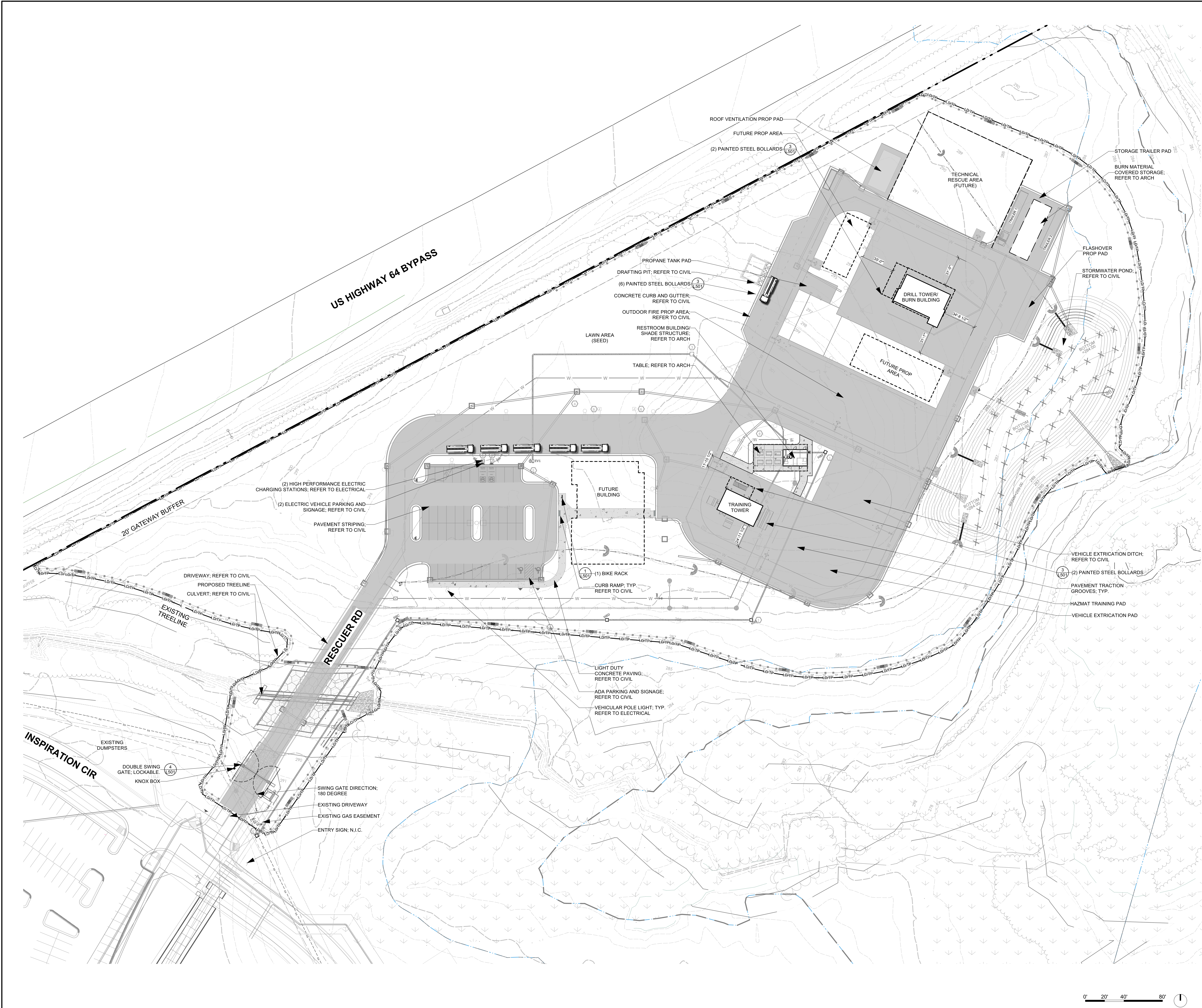
EFFECTIVE: 04/01/19

NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**NPDES  
DETAIL  
SHEET**

NCG01-2





MATERIAL LEGEND		QUANTITY	
	PAINTED STEEL BOLLARD	52	3 L501

HH

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WTCC EWS - FIRE & RESCUE TRAINING CENTER

WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



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JOB NUMBER  
**22-086**

DATE ISSUED  
**03/14/2025**

PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**

SHEET  
**LANDSCAPE MATERIAL PLAN**

L131

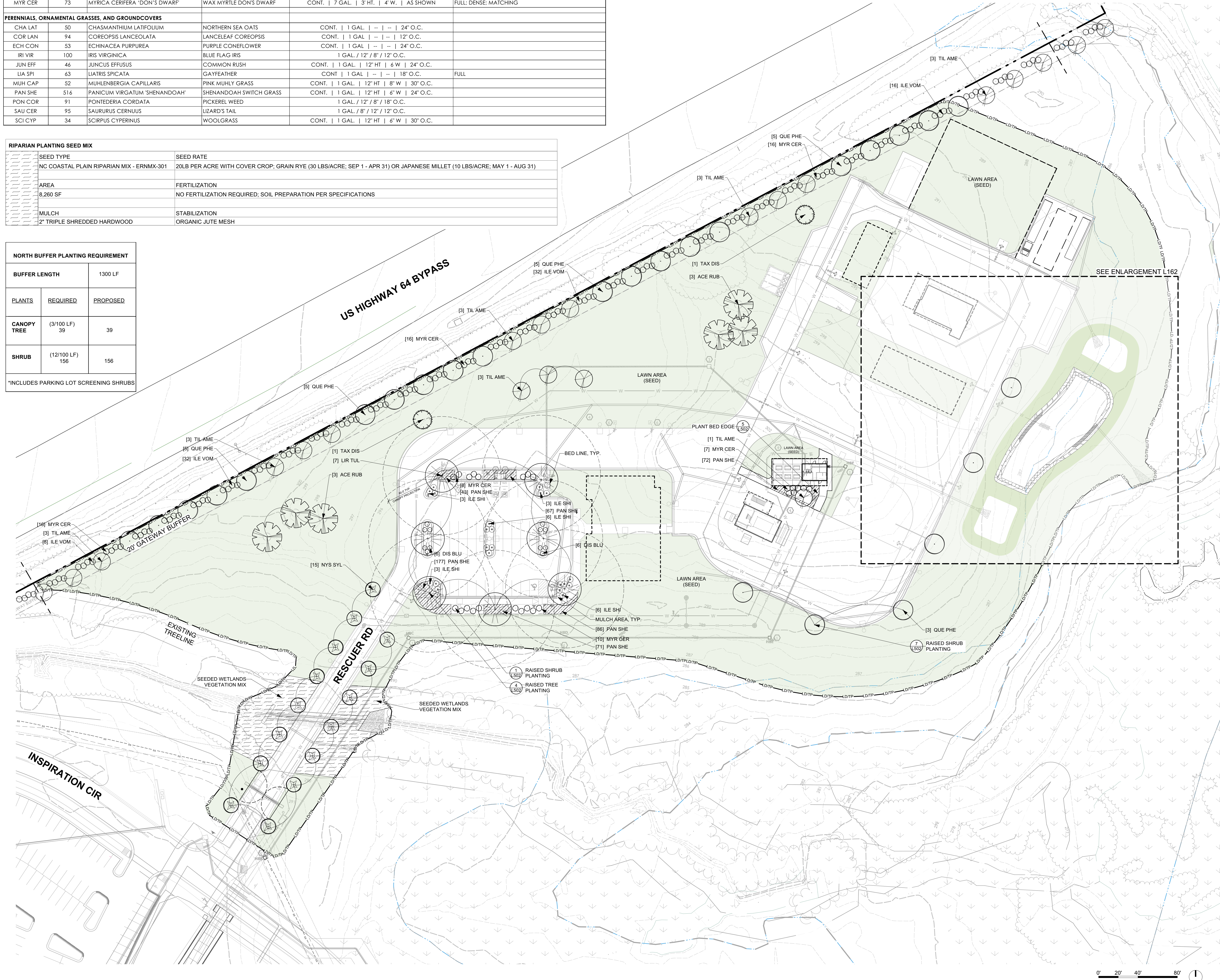
- SITE PLANNING NOTES**
1. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AS AMENDED, AND ARE THE CONTRACTOR'S RESPONSIBILITY.
  2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC CONTROL IN OR ADJACENT TO NCDOT OR CITY RIGHT-OF-WAY. ALL METHODS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
  3. CONTRACTOR SHALL PROVIDE SAW CUTS AT THE UNION BETWEEN EXISTING CONDITIONS AND PROPOSED CONSTRUCTION UNLESS OTHERWISE NOTED. REFER TO PLANS FOR ADDITIONAL INFORMATION.
  4. UNLESS NOTED ON THE DRAWINGS ALL BUFFERS, WETLANDS, STREAM CHANNELS, SETBACKS AND TREE PROTECTION AREAS SHALL BE PROTECTED WITH NO CONSTRUCTION ACCESS, STORAGE OR USE OF ANY KIND. THE CONTRACTOR SHALL KEEP CONSTRUCTION ACTIVITIES WITHIN THE "PROJECT LIMITS" SHOWN ON THE DRAWINGS.
  5. ALL DIMENSIONS INDICATING "VERIFY" SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO STARTING CONSTRUCTION - REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT.
  6. ALL DIMENSIONS LABELED "EQ" ARE TO INDICATE EQUAL MEASUREMENTS BETWEEN THE DIMENSIONS END POINTS ON THE DRAWING.
  7. REFER TO CIVIL DRAWINGS FOR ALL STREET DIMENSIONS.
  8. THE CONTRACTOR SHALL STAKE THE LAYOUT AND ALIGNMENT OF ALL PAVEMENTS, WALLS, AND OTHER SITE FEATURES IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO START OF CONSTRUCTION.
  9. THE CONTRACTOR SHALL PROVIDE SMOOTH LAYOUT ALIGNMENTS BETWEEN EXISTING CONDITIONS AND PROPOSED SITE IMPROVEMENTS.
  10. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  11. UNLESS OTHERWISE NOTED, CONCRETE SCORE AND EXPANSION JOINTS SHALL BE ALIGNED WITH BUILDING FEATURES AND WITH CORNERS OF PAVEMENT. SPACE THE ADDITIONAL JOINTS BETWEEN THESE POINTS EQUALLY.
  12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE EXISTING CONDITIONS AFFECTING THE WORK SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR POSSIBLE CLARIFICATION OR RECONCILIATION.
  13. ITEMS LABELED AS "BY OTHERS" OR "NIC" ARE FOR COORDINATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ANY SUCH ITEMS WITH THE OWNER'S REPRESENTATIVE.

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KEY	QTY	LATIN NAME	COMMON NAME	CONTAINER   SIZE   HT   W   SPACING	COMMENTS
<b>TREES</b>					
ACE RUB	6	ACER RUBRUM	RED MAPLE	B&B   3' CAL.   16' HT.   8' W.   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
LIR LUT	7	LIRODENDRON TULIPIFERA	TULIP POPLAR	B&B   3' CAL.   16' HT.   8' W.   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
NYS SYL	15	NYSSA SYLVATICA	BLACK GUM	B&B   3' CAL.   12' HT   6' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
QUE PHE	20	QUERCUS PHELLOS 'RT3'	UPPERTOWN WILLOW OAK	B&B   3' CAL.   12' HT   6' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
TAX DIS	2	TAXODIUM DISTICHUM 'SOFINE'	AUTUMN GOLD BALD CYPRESS	B&B   3' CAL.   9' HT   4' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
TIL AME	23	TILIA AMERICANA	AMERICAN BASSWOOD	B&B   3' CAL.   12' HT   6' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
<b>SHRUBS</b>					
DIS BLU	12	DISTYLUM 'BLUE CASCADE'	BLUE CASCADE DISTYLUM	CONT.   7 GAL.   3' HT.   4' W.   AS SHOWN	FULL; DENSE
ILE VOM	108	ILEX VOMITORIA	YAUPOIN HOLLY	CONT.   7 GAL.   3' HT   18" W   3' O.C.	N/A
ILE SHI	21	ILEX VOMITORIA 'SCHILLINGS DWARF'	DWARF YAUPOIN HOLLY	CONTAINER / 24' / 18" / AS SHOWN	FULL; DENSE; MATCHING
MYR CER	73	MYRICIA CERIFERA 'DON'S DWARF'	WAX MYRTLE DON'S DWARF	CONT.   7 GAL.   3' HT.   4' W.   AS SHOWN	FULL; DENSE; MATCHING
<b>PERENNIALS, ORNAMENTAL GRASSES, AND GROUNDCOVERS</b>					
CHA LAT	50	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	CONT.   1 GAL.   --   --   24" O.C.	
COR LAN	94	COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	CONT.   1 GAL   --   --   12" O.C.	
ECH CON	53	ECHINACEA PURPUREA	PURPLE CONEFLOWER	CONT.   1 GAL   --   --   24" O.C.	
IRI VIR	100	IRIS VIRGINICA	BLUE FLAG IRIS	1 GAL. / 12' / 8' / 12" O.C.	
JUN EFF	46	JUNCUS EFFUSUS	COMMON RUSH	CONT.   1 GAL.   12' HT   6' W   24" O.C.	
LIA SPI	63	LIATRIS SPICATA	GAYFEATHER	CONT   1 GAL   --   --   18" O.C.	FULL
MUH CAP	52	MUEHLERBERGIA CAPILLARIS	PINK MUHLY GRASS	CONT.   1 GAL.   12' HT   8" W   30" O.C.	
PAN SHE	516	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	CONT.   1 GAL.   12' HT   6" W   24" O.C.	
PON COR	91	PONTEREDIA CORDATA	PICKEREL WEED	1 GAL. / 12' / 8' / 18" O.C.	
SAU CER	95	SAURURUS CERNUUS	LIZARD'S TAIL	1 GAL. / 8' / 12' / 12" O.C.	
SCI CYP	34	SCIRPUS CYPERINUS	WOOLGRASS	CONT.   1 GAL.   12' HT   6" W   30" O.C.	

NORTH BUFFER PLANTING REQUIREMENT		
BUFFER LENGTH		1300 LF
PLANTS	REQUIRED	PROPOSED
CANOPY TREE	(3/100 LF) 39	39
SHRUB	(12/100 LF) 156	156
*INCLUDES PARKING LOT SCREENING SHRUBS		



1. EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. IDENTIFY LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.
2. PLANT LIST IS PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF DISCREPANCIES BETWEEN THE PLAN AND PLANT LIST QUANTITIES, THE PLAN SHALL TAKE PRECEDENCE.
3. AFTER THE SITE IS STABILIZED AND FREE OF SEDIMENTATION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES (SILT, RIP RAP AND TEMPORARY STONE STAGING AREAS FOR REPLACEMENT WITH PLANTING SOIL). PROVIDE PLANTING ACCORDING TO THE LANDSCAPE PLAN.
4. TEMPORARY EROSION CONTROL SEED MUST BE FULLY REMOVED PRIOR TO PREPARATION OF PERMANENT SEED, SOD OR LANDSCAPE BEDS.
5. UNLESS OTHERWISE NOTED IN THE PLANT LIST, OWNER SHALL OBTAIN AND INSTALL ONLY PLANT MATERIAL THAT IS GROWN ON ITS OWN ROOT - GRAFTED OR BUDDED PLANT MATERIAL WILL BE REJECTED.
6. ALL TREES SHALL BE OBTAINED FROM THE NURSERY WITH EXPOSED ROOT CROWNS. 8&B MATERIAL DELIVERED TO SITE WITH BURIED OR RECENTLY BURIED ROOT CROWNS WILL BE REJECTED.
7. OWNER WILL NOTIFY LANDSCAPE ARCHITECT OF PLANT SUBSTITUTIONS IN ANY MEASUREMENT OR SPECIES INDICATED. SEE SPECIFICATIONS FOR FULL NOTIFICATION REQUIREMENTS.
8. CONTRACTOR SHALL STAKE ALL PLANT LOCATIONS IN THE FIELD. OBTAIN APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO STARTING PLANT INSTALLATIONS
9. DO NOT PLANT IN STORM WATER CONVEYANCE SWALES OR PROVIDE FINE GRADING THAT DISRUPTS FLOW OR CHANGES LONGITUDINAL SLOPES.
10. PLANT THE OUTER EDGES OF EACH PLANTING GROUP FOLLOWING THE BED OUTLINE ACCORDING TO THE PLAN. ONCE A SATISFACTORY MATCHED OUTER SHAPE IS OBTAINED, FILL THE CENTER OF EACH AREA WITH PLANTS ACCORDING TO THE PLAN AND SPACING NOTES.
11. THE PLANTING LAYOUT WITHIN PLANTING BEDS SHOULD BE SHIFTED TO MINIMIZE CONFLICTS WITH EXISTING TREE ROOTS AND OTHER STRUCTURES.
12. DISTURBED EARTH AREAS BEYOND PROJECT LIMITS THAT ARE DIRECTLY CAUSED BY CONTRACTOR MEANS AND METHODS SHALL BE RESTORED WITH FESCUE SOD UNLESS OTHERWISE NOTED.
13. ALL LANDSCAPING SHALL BE MAINTAINED IN PERPETUITY.
14. ALL HOTOBBES AND OTHER ON GROUND/FREESTANDING MECHANICAL SHALL BE SCREENED WITH VEGETATION PRIOR TO THE ISSUANCE OF CERTIFICATE OF A COMPLIANCE/OCCUPANCY.

1. DURING INITIAL CONTRACT BIDDING, LANDSCAPE CONTRACTOR SHALL REVIEW THE PLANT SCHEDULE AND INQUIRE WITH NURSERIES ABOUT AVAILABILITY OF SPECIFIED PLANTS. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO REASONABLY DETERMINE SUBMITTED BID ADEQUATELY REFLECTS THE PROPOSED PLANTING PLAN. AT THE TIME OF PLANT INSTALLATION, REQUESTS FOR PLANT SUBSTITUTIONS DUE TO UNAVAILABILITY OF SPECIFIED PLANTS ARE GRANTED TO BE AVAILABLE TO BE OBTAINED FROM OTHER REPUTABLE NURSERY SOURCES. NURSERY SOURCES SHALL NOT BE LIMITED TO THE LOCAL VICINITY OF THE PROJECT.
2. LANDSCAPE CONTRACTOR IS REQUIRED TO COORDINATE WITH GENERAL CONTRACTOR ALL ANTICIPATED PROJECT SCHEDULING REQUIREMENTS FOR PLANT MATERIAL. LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO SUBMIT LANDSCAPE RELATED SUBMITTALS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT.
3. LANDSCAPE CONTRACTOR SHALL SOURCE ALL PLANT MATERIAL EARLY IN THE CONSTRUCTION PROCESS TO ALLOW ADEQUATE TIME FOR PLANT PROCUREMENT. LANDSCAPE CONTRACTOR SHALL SUBMIT SUBSTITUTION REQUESTS DUE TO SPECIFICATION ALLOWED REASONS.
4. SEE SPECIFICATIONS FOR PLANT PRE-APPROVAL REQUIREMENTS INCLUDING SUBMISSION OF NURSERY STOCK PHOTOS VERIFYING PLANTS TO BE USED ON THE PROJECT MEET SPECIFICATION REQUIREMENTS IN SIZE, SHAPE, AND NUMBER. SUBMITTED PHOTOS SHALL CLEARLY BE CAPTIONED FOR LANDSCAPE ARCHITECT TO REPRESENT THE ACTUAL NURSERY AND NURSERY STOCK INTENDED TO BE USED ON THE PROJECT.
5. REFER TO PLANTING NOTES AND SPECIFICATIONS FOR FULL REQUIREMENTS RELATED TO SUBSTITUTIONS. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL SUBSTITUTIONS TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL ISSUES IN WRITING AND PROPOSING SUBSTITUTIONS IN WRITING FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT.
6. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DELIVERING HEALTHY PLANT MATERIAL SATISFYING ALL SPECIFICATION REQUIREMENTS. OWNER SHALL NOT BE RESPONSIBLE FOR ANY SUBSTITUTIONS OR ANY REJECTED PLANT MATERIAL NOT MEETING PROJECT SPECIFICATIONS.



PLANT SCHEDULE - CONTRACTOR SHALL SATISFY ALL MEASUREMENTS NOTED - EXCEED SIZES UPON APPROVAL

KEY	QTY	LATIN NAME	COMMON NAME	CONTAINER   SIZE   HT   W   SPACING	COMMENTS
TREES					
ACE RUB	6	ACER RUBRUM	RED MAPLE	B&B   3" CAL.   16' HT.   8' W.   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
LIR TUL	7	LIRIODENDRON TULIPIFERA	TULIP POPLAR	B&B   3" CAL.   16' HT.   8' W.   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
NYS SYL	15	NYSSA SYLVATICA	BLACK GUM	B&B   3" CAL.   12' HT   6' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
QUE PHE	20	QUERCUS PHELLOS 'RT3'	UPPERTON WILLOW OAK	B&B   3" CAL.   12' HT   6' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
TAX DIS	2	TAXODIUM DISTICHUM 'SOFINE'	AUTUMN GOLD BALD CYPRESS	B&B   3" CAL.   9' HT   4' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
TIL AME	23	TILIA AMERICANA	AMERICAN BASSWOOD	B&B   3" CAL.   12' HT   6' W   AS SHOWN	STRONG CENTRAL LEADER; EVENLY BRANCHED; FULL
SHRUBS					
DIS BLU	12	DISTYLIUM 'BLUE CASCADE'	BLUE CASCADE DISTYLIUM	CONT.   7 GAL.   3' HT.   4' W.   AS SHOWN	FULL; DENSE
ILE YOM	108	ILEX VOMITORIA	YAUPON HOLLY	CONT.   7 GAL.   3' HT   18" W   3" O.C.	N/A
ILE SHI	21	ILEX VOMITORIA 'SCHILLINGS DWARF'	DWARF YAUPON HOLLY	CONTAINER / 24" / 18" / AS SHOWN	FULL; DENSE; MATCHING
MYR CER	73	MYRICA CERIFERA 'DON'S DWARF'	WAX MYRTLE DON'S DWARF	CONT.   7 GAL.   3' HT.   4' W.   AS SHOWN	FULL; DENSE; MATCHING
PERENNIALS, ORNAMENTAL GRASSES, AND GROUNDCOVERS					
CHA LAT	50	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	CONT.   1 GAL.   --   --   24" O.C.	
COR LAN	94	COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	CONT.   1 GAL.   --   --   12" O.C.	
ECH CON	53	ECHINACEA PURPUREA	PURPLE CONEFLOWER	CONT.   1 GAL.   --   --   24" O.C.	
IRI VIR	100	IRIS VIRGINICA	BLUE FLAG IRIS	1 GAL. / 12" / 8" / 12" O.C.	
JUN EFF	46	JUNCUS EFFUSUS	COMMON RUSH	CONT.   1 GAL.   12" HT   6 W   24" O.C.	
LIA SPI	63	LIATRIS SPICATA	GAYFEATHER	CONT   1 GAL.   --     --   18" O.C.	FULL
MUH CAP	52	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	CONT.   1 GAL.   12" HT   8" W   30" O.C.	
PAN SHE	516	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	CONT.   1 GAL.   12" HT   6" W   24" O.C.	
PON COR	91	PONTEDERIA CORDATA	PICKEREL WEED	1 GAL. / 12" / 8" / 18" O.C.	
SAU CER	95	SAURURUS CERNUUS	LIZARD'S TAIL	1 GAL. / 8" / 12" / 12" O.C.	
SCI CYP	34	SCIRPUS CYPERINUS	WOOLGRASS	CONT.   1 GAL.   12" HT   6" W   30" O.C.	



- PLANTING NOTES:**
- EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. IDENTIFY LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.
  - PLANT LIST IS PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF DISCREPANCIES BETWEEN THE PLAN AND PLANT LIST QUANTITIES, THE PLAN SHALL TAKE PRECEDENCE.
  - AFTER THE SITE IS STABILIZED AND FREE OF SEDIMENTATION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES, SILT RIF RAP AND TEMPORARY STONE STAGING AREAS FOR REPLACEMENT WITH PLANTING SOIL. PROVIDE PLANTING ACCORDING TO THE LANDSCAPE PLAN.
  - TEMPORARY EROSION CONTROL SEED MUST BE FULLY REMOVED PRIOR TO PREPARATION OF PERMANENT SEED, SOD OR LANDSCAPE BEDS.
  - UNLESS OTHERWISE NOTED IN THE PLANT LIST, OWNER SHALL OBTAIN AND INSTALL ONLY PLANT MATERIAL THAT IS GROWN ON ITS OWN ROOT - GRAFTED OR BUDDED PLANT MATERIAL WILL BE REJECTED.
  - ALL TREES SHALL BE OBTAINED FROM THE NURSERY WITH EXPOSED ROOT CROWNS. B&B MATERIAL DELIVERED TO SITE WITH BURIED OR RECENTLY BURIED ROOT CROWNS WILL BE REJECTED.
  - OWNER WILL NOTIFY LANDSCAPE ARCHITECT OF PLANT SUBSTITUTIONS IN ANY MEASUREMENT OR SPECIES INDICATED. SEE SPECIFICATIONS FOR FULL NOTIFICATION REQUIREMENTS.
  - CONTRACTOR SHALL STAKE ALL PLANT LOCATIONS IN THE FIELD. OBTAIN APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO STARTING PLANT INSTALLATIONS
  - DO NOT PLANT IN STORM WATER CONVEYANCE SWALES OR PROVIDE FINE GRADING THAT DISRUPTS FLOW OR CHANGES LONGITUDINAL SLOPES.
  - PLANT THE OUTER EDGES OF EACH PLANTING GROUP FOLLOWING THE BED OUTLINE ACCORDING TO THE PLAN. ONCE A SATISFACTORY MATCHED OUTER SHAPE IS OBTAINED, FILL THE CENTER OF EACH AREA WITH PLANTS ACCORDING TO THE PLAN AND SPACING NOTES.
  - THE PLANTING LAYOUT WITHIN PLANTING BEDS SHOULD BE SHIFTED TO MINIMIZE CONFLICTS WITH EXISTING TREE ROOTS AND OTHER STRUCTURES.
  - DISTURBED EARTH AREAS BEYOND PROJECT LIMITS THAT ARE DIRECTLY CAUSED BY CONTRACTOR MEANS AND METHODS SHALL BE RESTORED WITH FESCUE SOD UNLESS OTHERWISE NOTED.
  - ALL LANDSCAPING SHALL BE MAINTAINED IN PERPETUITY.
  - ALL HOTBOXES AND OTHER ON GROUND/FREESTANDING MECHANICAL SHALL BE SCREENED WITH VEGETATION PRIOR TO THE ISSUANCE OF CERTIFICATE OF A COMPLIANCE/OCCUPANCY.

- PLANTING PROCUREMENT REQUIREMENTS**
- DURING INITIAL CONTRACT BIDDING, LANDSCAPE CONTRACTOR SHALL REVIEW THE PLANT SCHEDULE AND INQUIRE WITH NURSERIES ABOUT AVAILABILITY OF SPECIFIED PLANTS AT THE ANTICIPATED FUTURE TIME OF INSTALLATION TO REASONABLY DETERMINE SUBMITTED BID ADEQUATELY REFLECTS THE PROPOSED PLANTING PLAN. AT THE TIME OF PLANT INSTALLATION, REQUESTS FOR PLANT SUBSTITUTIONS DUE TO UNAVAILABILITY WILL NOT BE ACCEPTED WHEN PLANTS ARE DETERMINED TO BE AVAILABLE FROM OTHER REPUTABLE NURSERY SOURCES. NURSERY SOURCES SHALL NOT BE LIMITED TO THE LOCAL VICINITY OF THE PROJECT.
  - LANDSCAPE CONTRACTOR IS REQUIRED TO COORDINATE WITH GENERAL CONTRACTOR ALL ANTICIPATED PROJECT SCHEDULING REQUIREMENTS FOR THE LANDSCAPE TO ENSURE ADEQUATE TIME IS GIVEN FOR LANDSCAPE RELATED SUBMITTALS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT.
  - LANDSCAPE CONTRACTOR SHALL SOURCE ALL PLANT MATERIAL EARLY IN THE CONSTRUCTION PROCESS TO ALLOW ADEQUATE TIME FOR PLANT PRE-APPROVAL PROCEDURES, INCLUDING ANY SUBSTITUTION REQUESTS DUE TO SPECIFICATION ALLOWED REASONS.
  - SEE SPECIFICATIONS FOR PLANT PRE-APPROVAL REQUIREMENTS INCLUDING SUBMISSION OF NURSERY STOCK PHOTOS VERIFYING PLANTS TO BE USED ON THE PROJECT MEET SPECIFICATION REQUIREMENTS IN SIZE, SHAPE, AND FORM. ALL SUBMITTAL PHOTOS SHALL ONLY BE ACCEPTABLE IF PHOTOS REPRESENT THE ACTUAL NURSERY AND NURSERY STOCK INTENDED TO BE USED ON THE PROJECT.
  - REFER TO PLANTING NOTES AND SPECIFICATIONS FOR FULL REQUIREMENTS RELATED TO SUBSTITUTIONS. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ENVIRONMENTAL CONDITIONS OR PLANT AVAILABILITY ISSUES IN WRITING AND PROPOSING SUBSTITUTIONS IN WRITING FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT.
  - LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DELIVERING HEALTHY PLANT MATERIAL SATISFYING ALL SPECIFICATION REQUIREMENTS. OWNER SHALL NOT BE FINANCIALLY RESPONSIBLE FOR ANY REJECTED PLANT MATERIAL NOT MEETING PROJECT SPECIFICATIONS.

NO.	REVISION	DATE



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JOB NUMBER  
**22-086**

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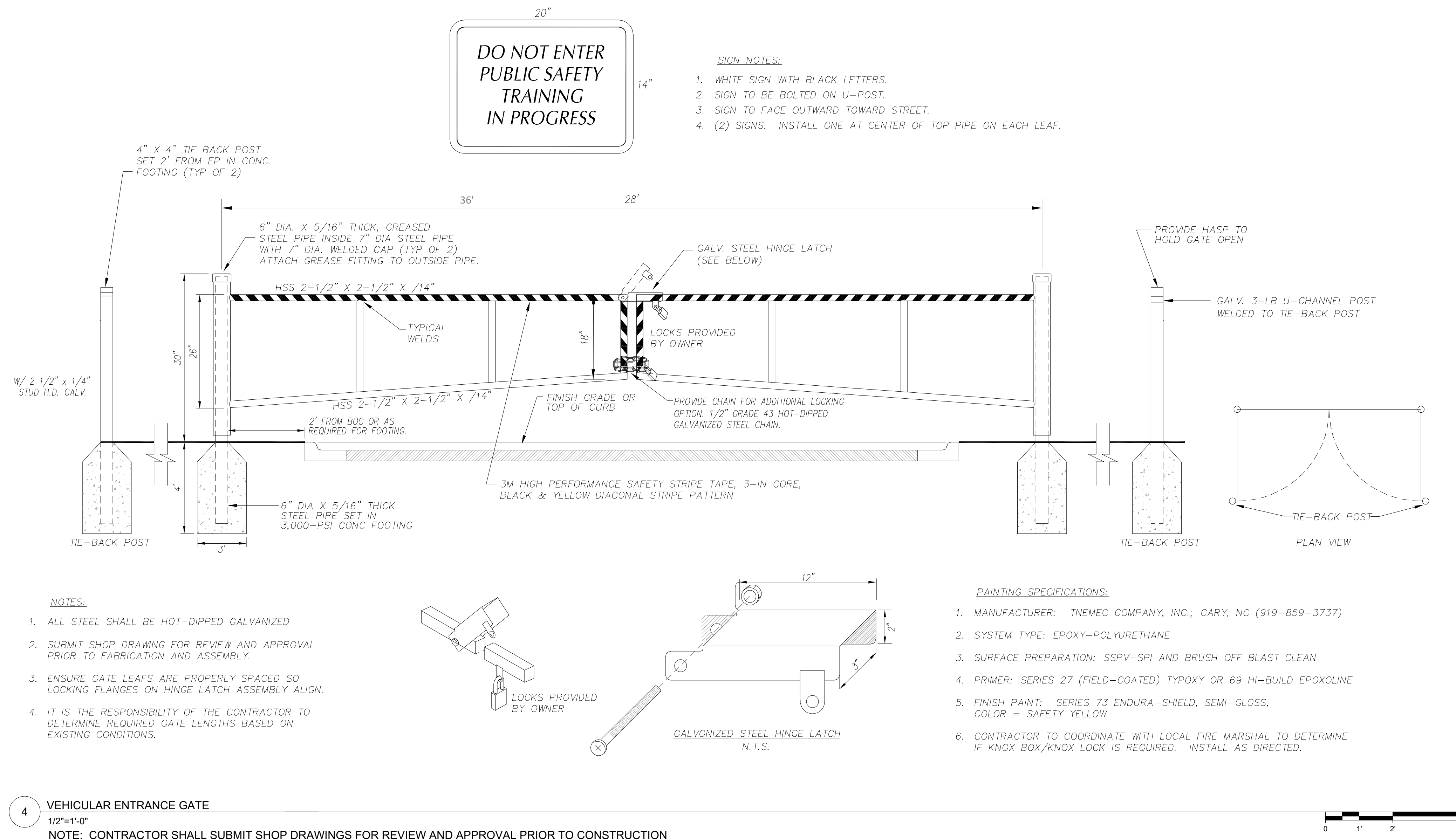
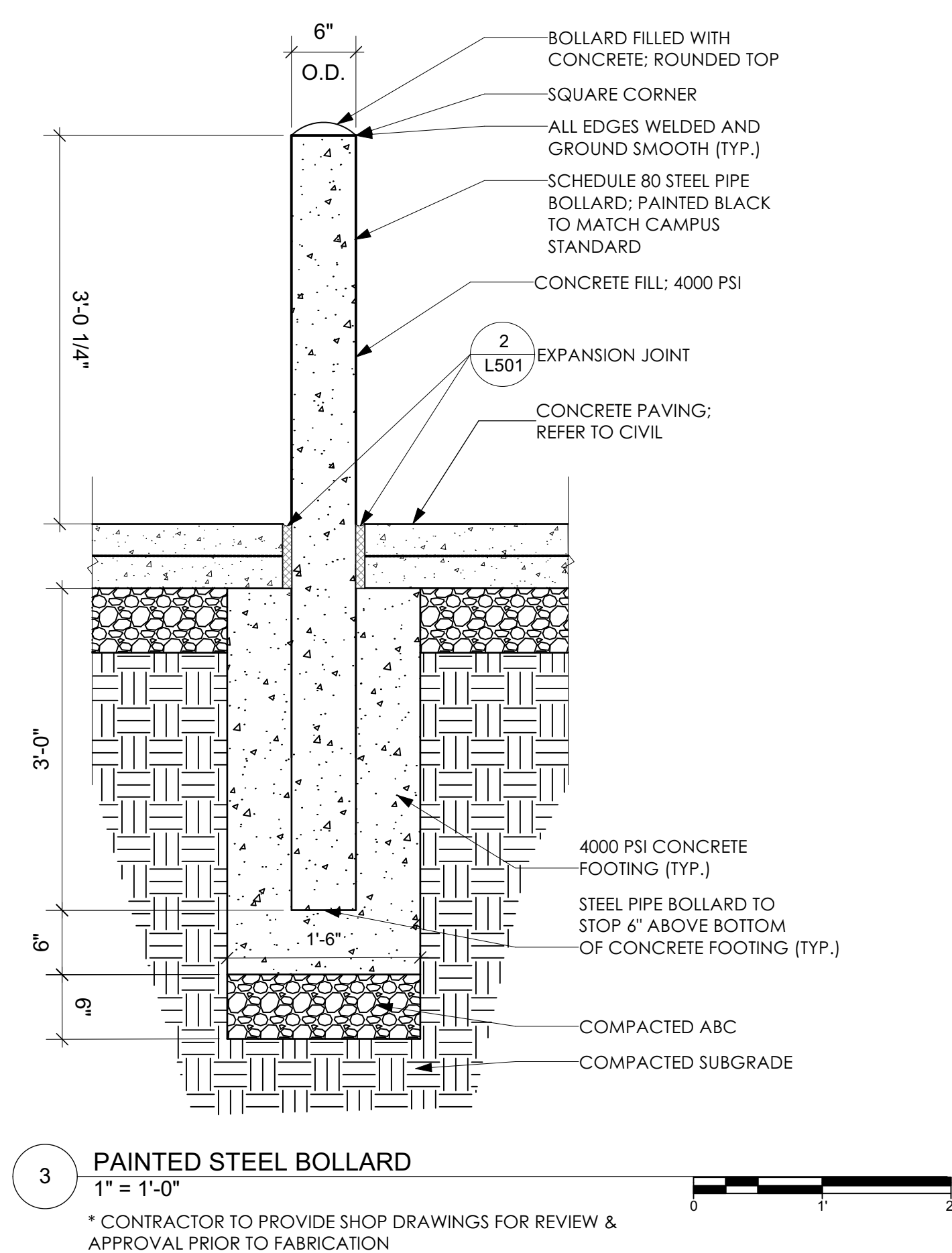
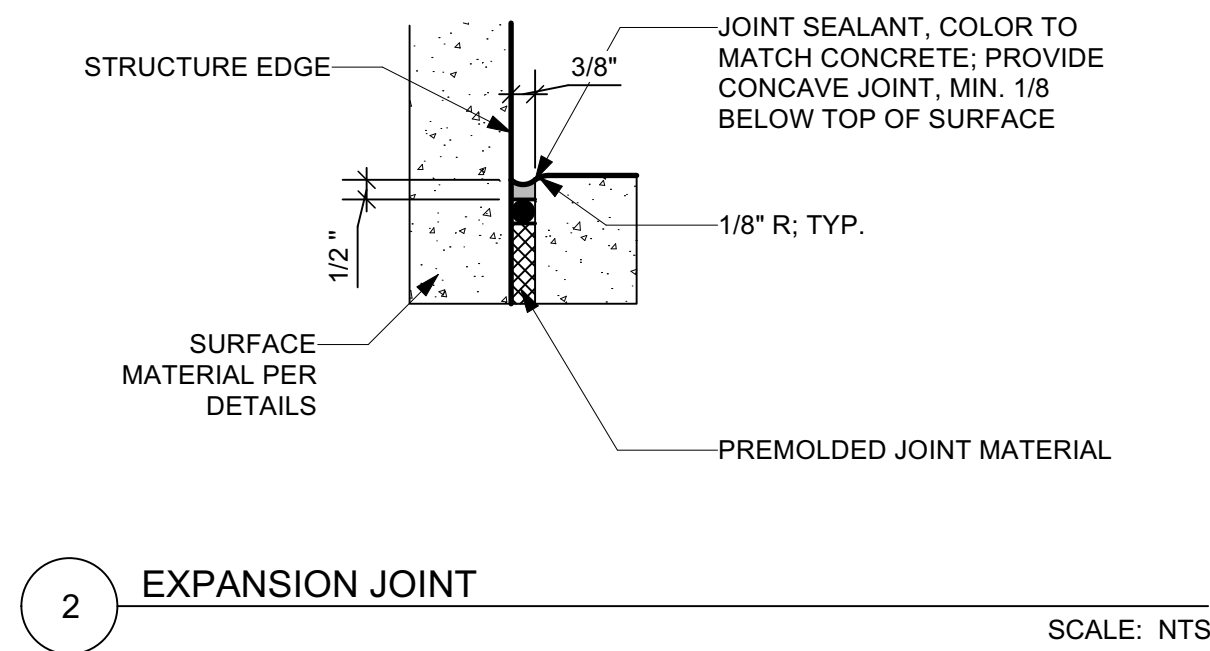
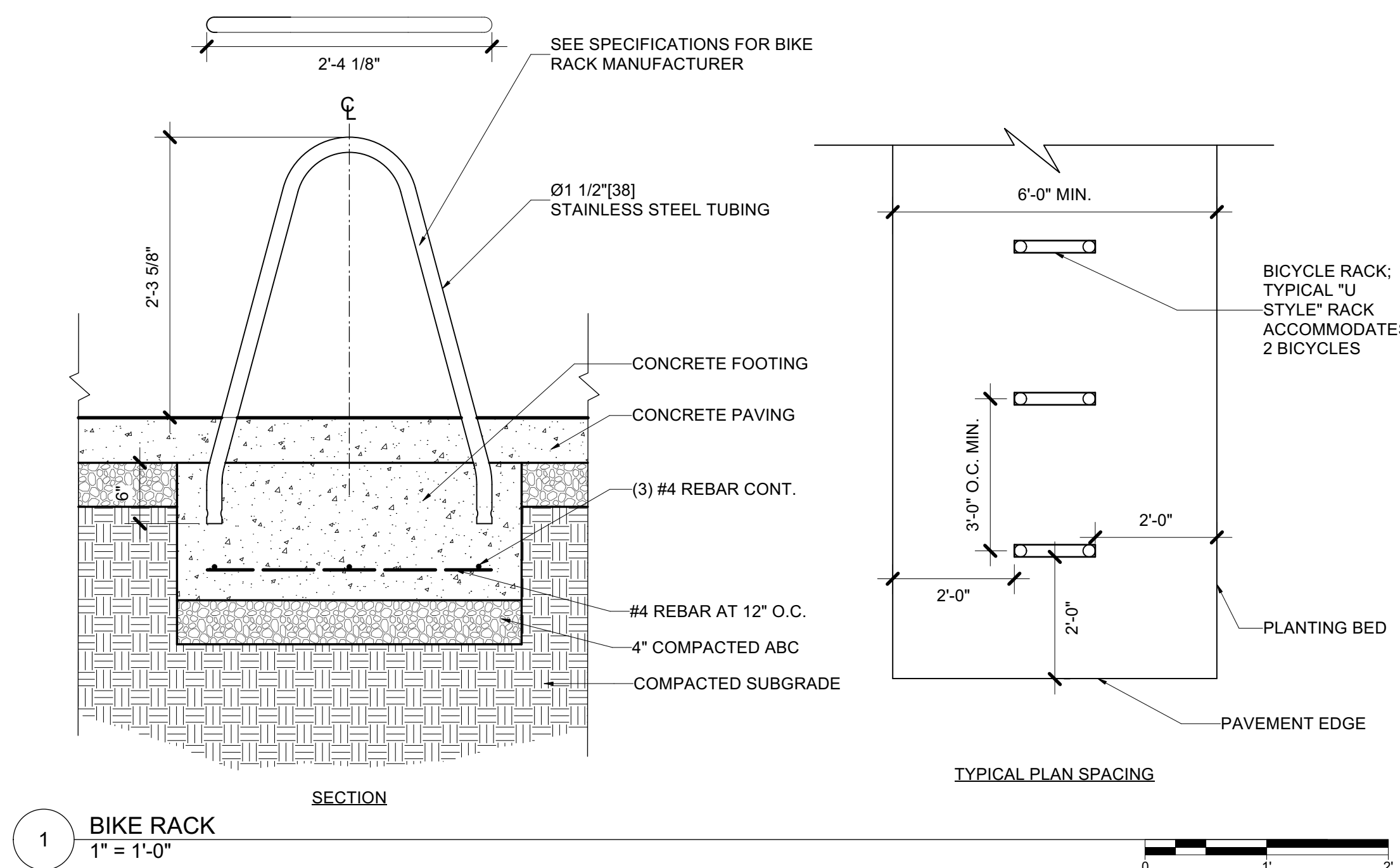
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**03/14/2025**

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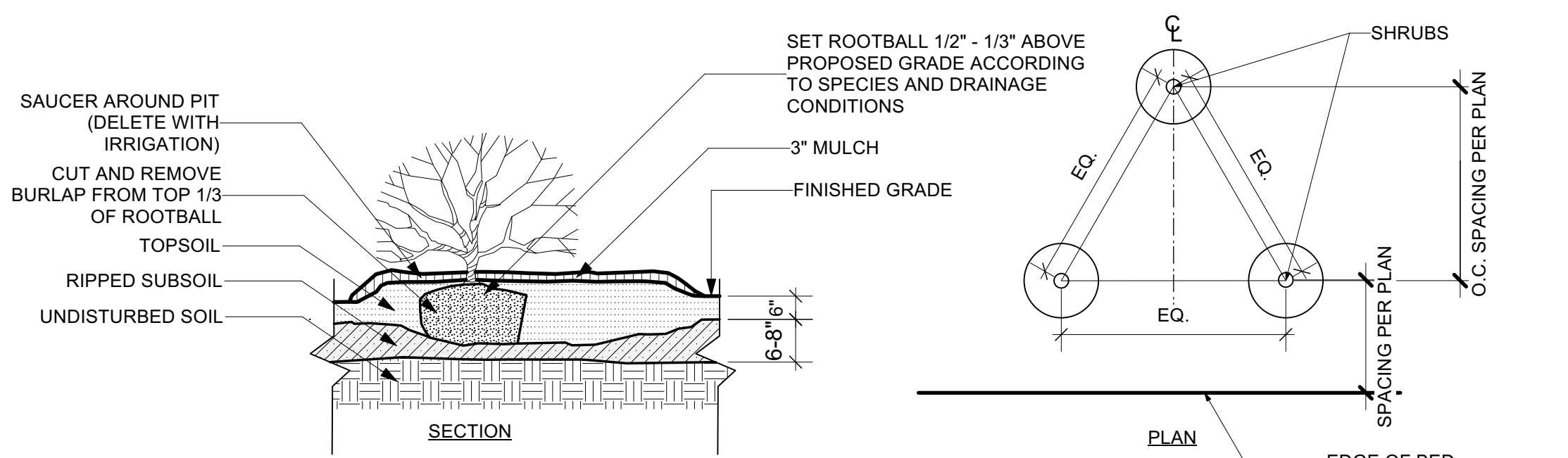
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**ISSUE FOR  
CONSTRUCTION**

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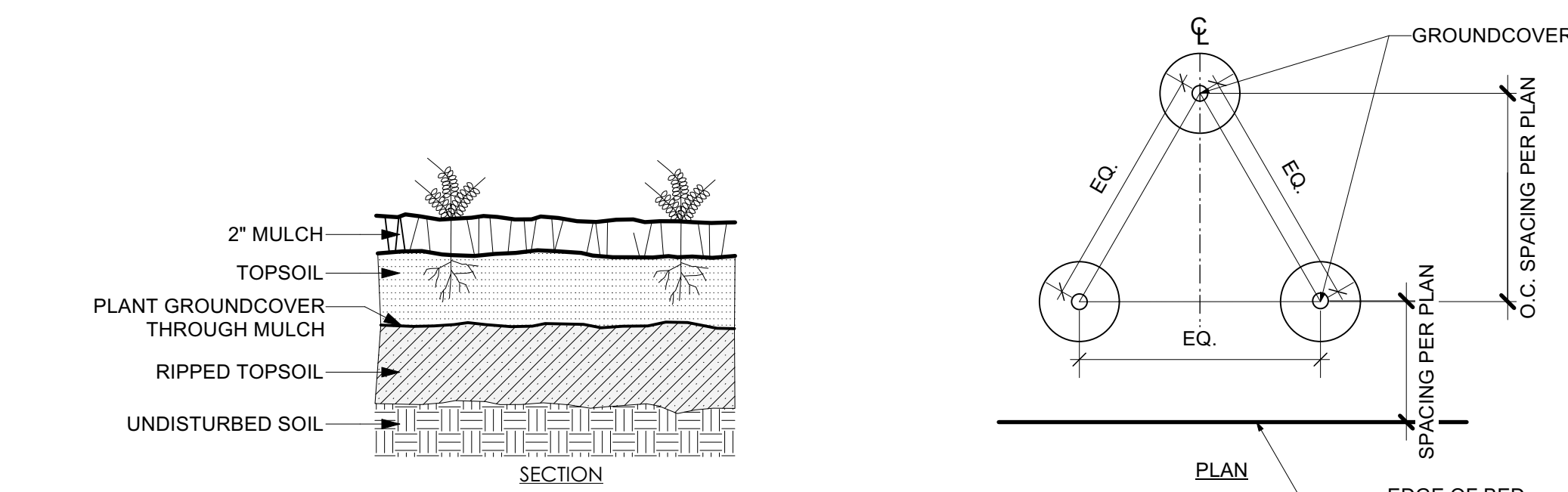
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**LANDSCAPE  
DETAILS**



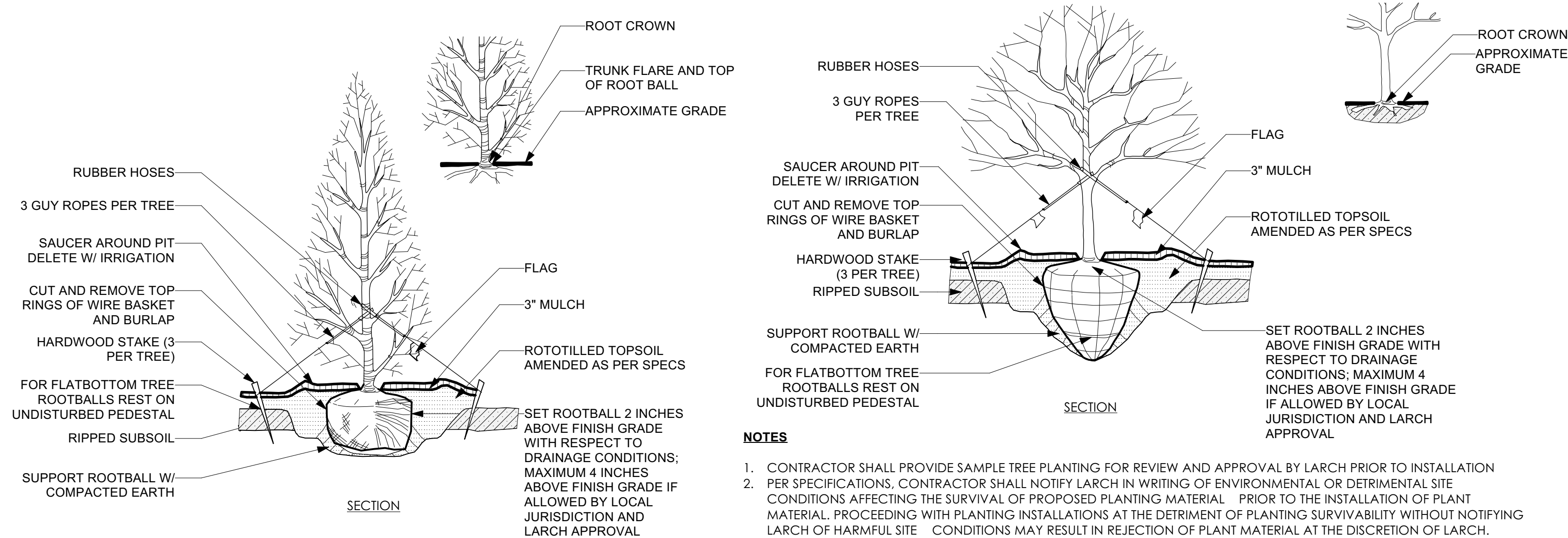




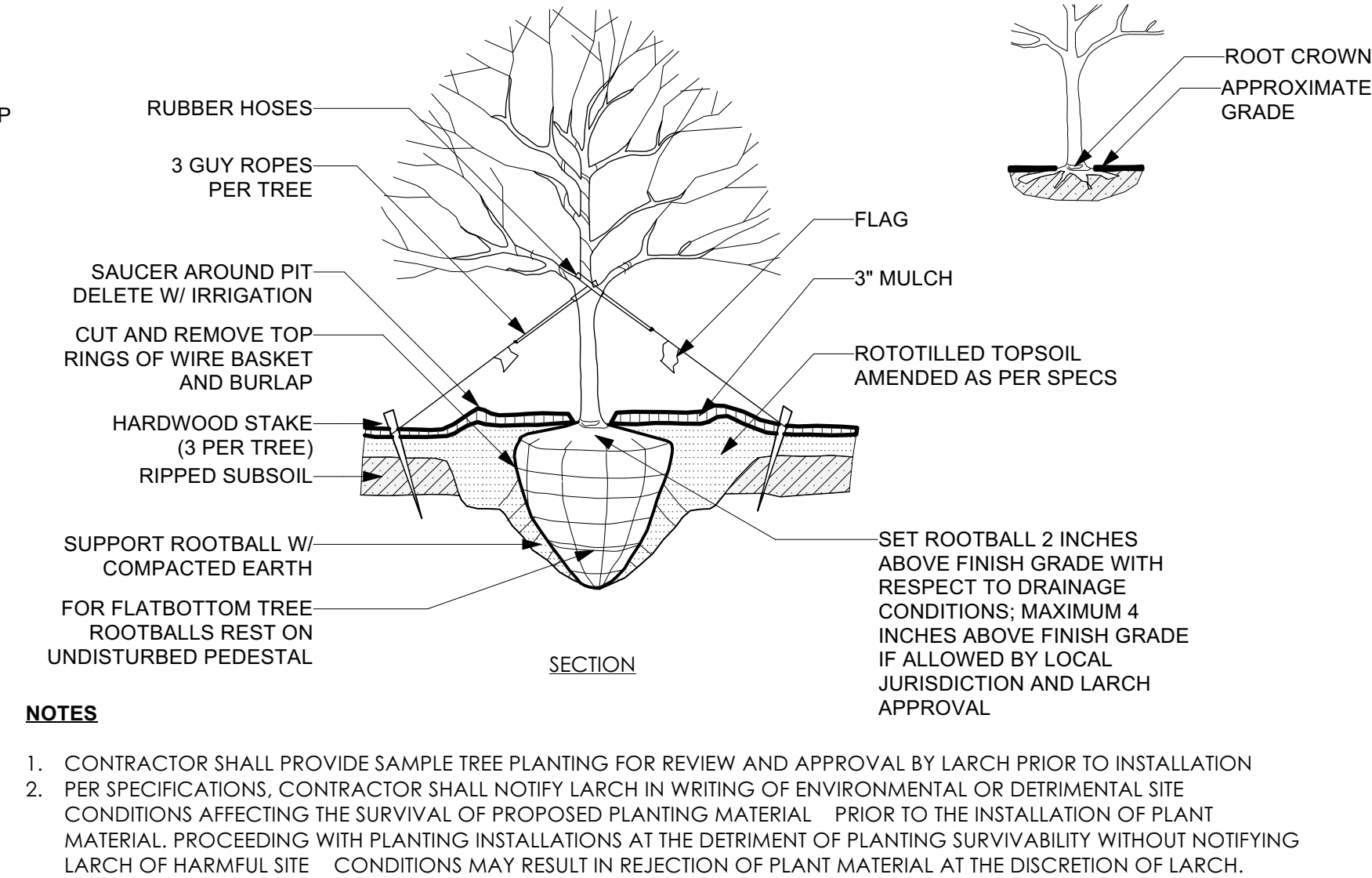
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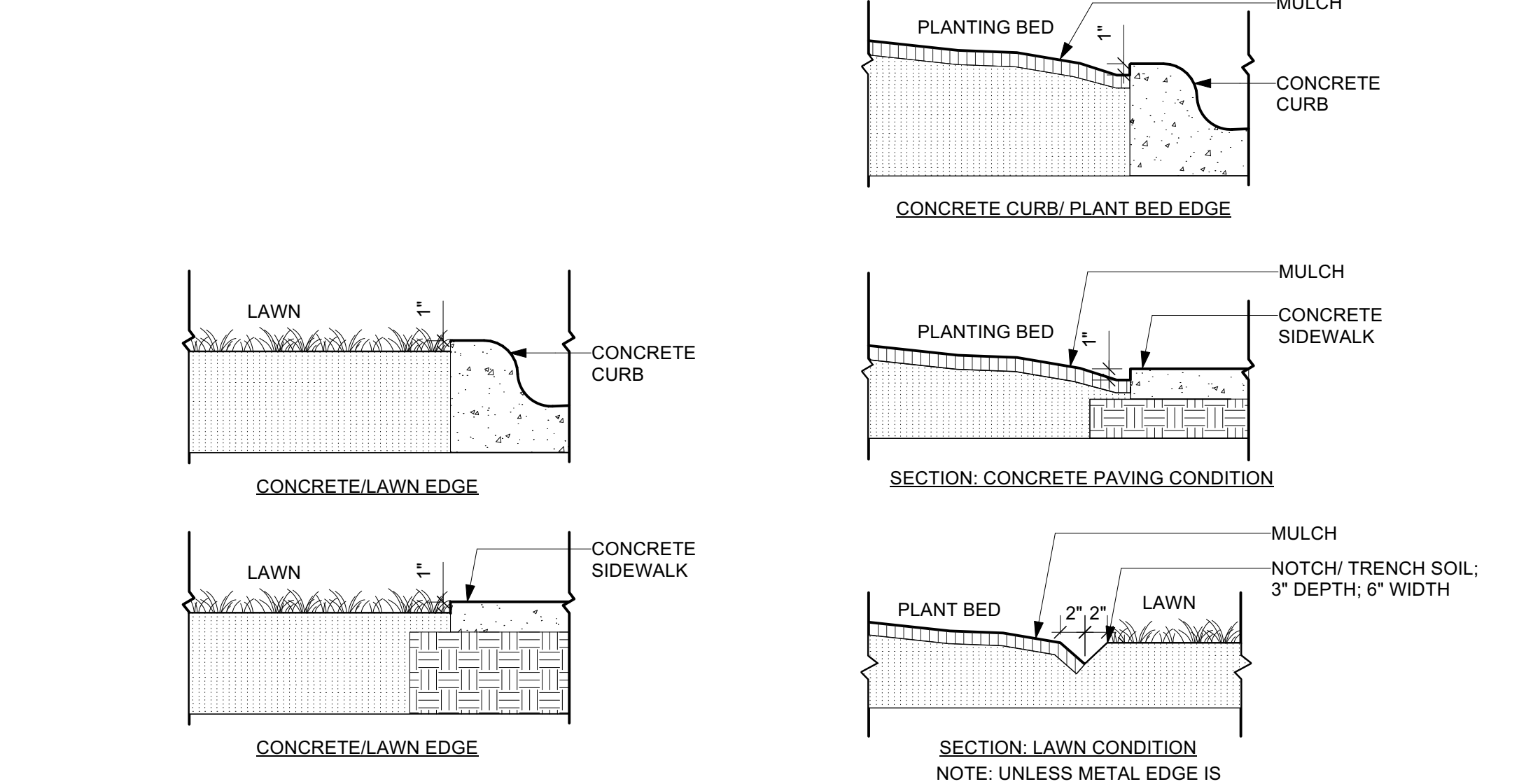
2 GROUNDCOVER/PERENNIAL PLANTING  
SCALE: NTS



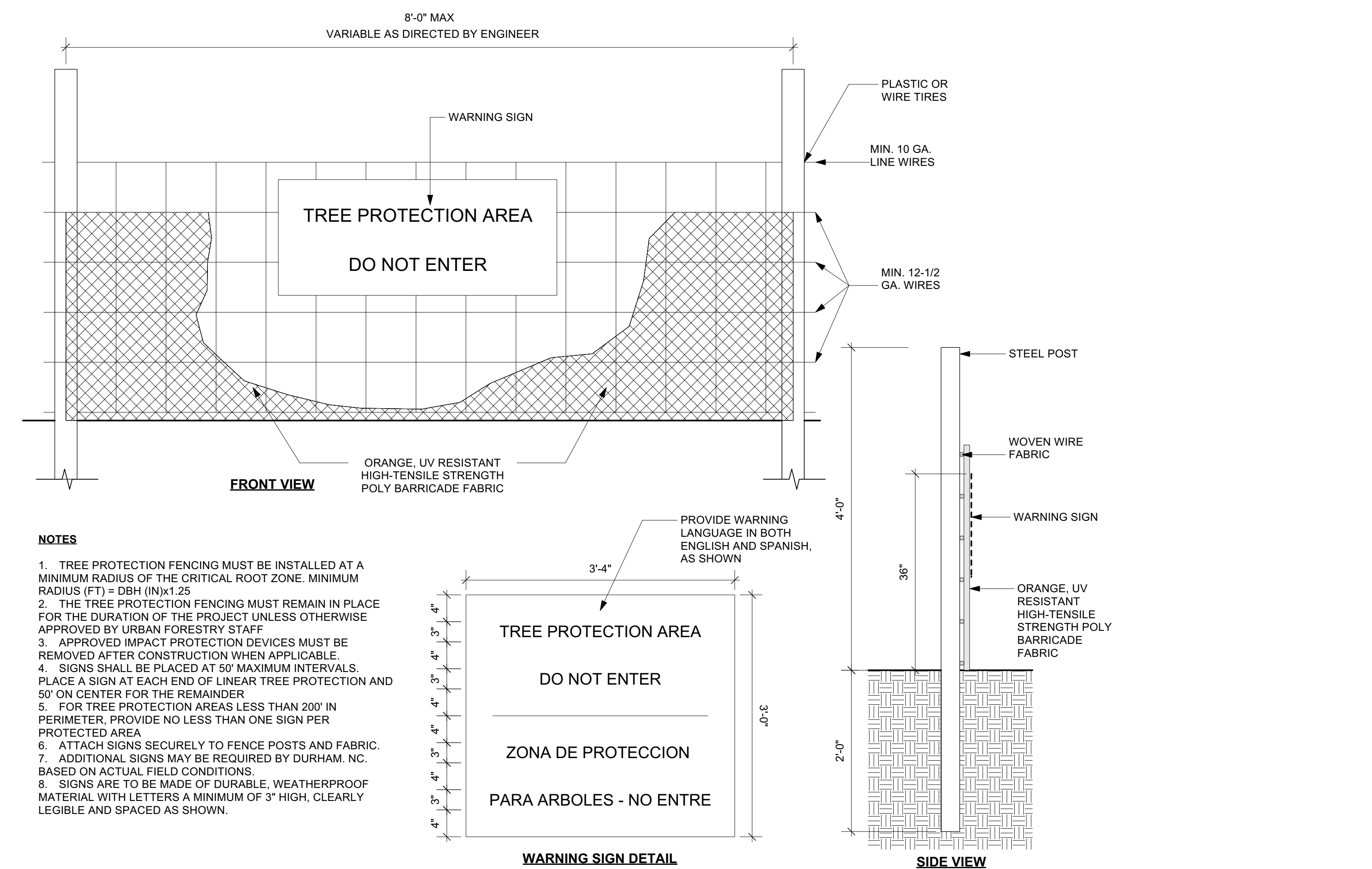
3 EVERGREEN TREE PLANTING  
SCALE: NTS



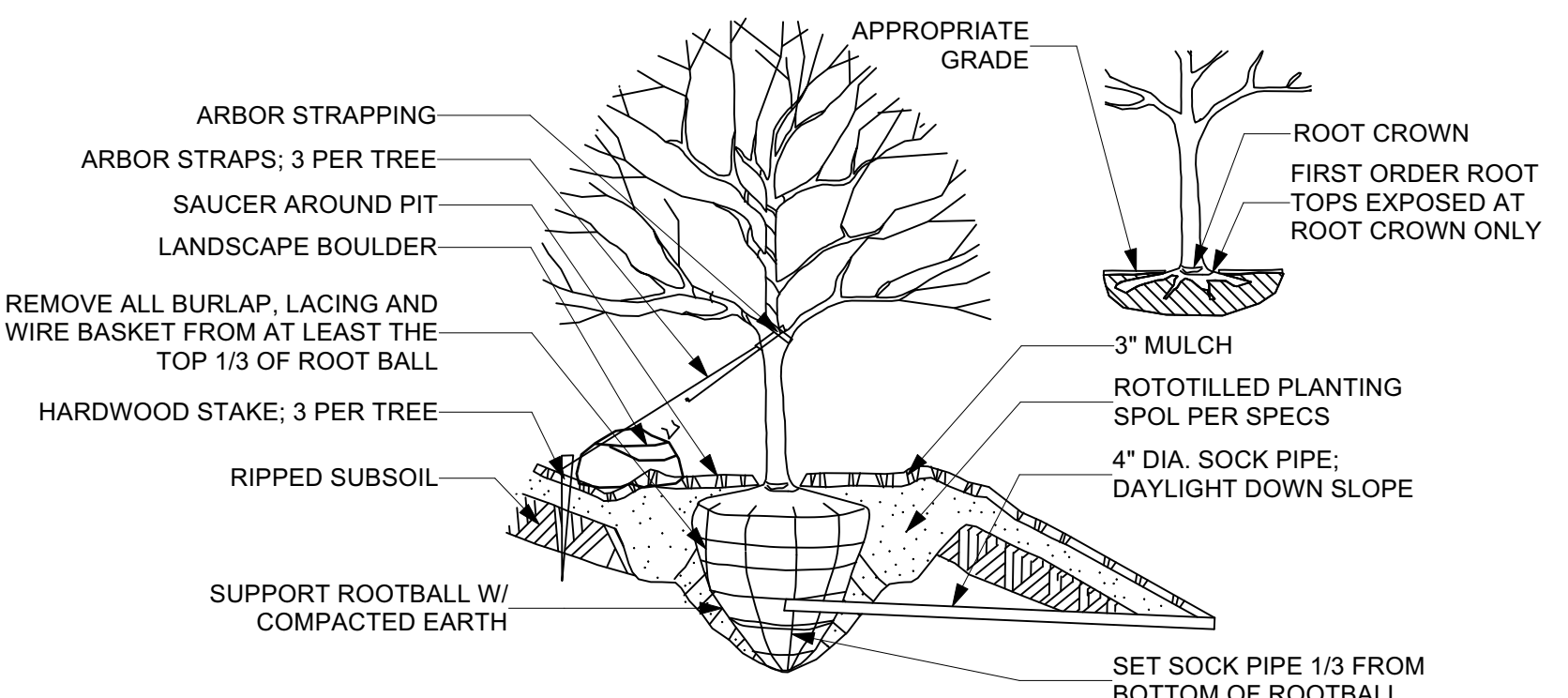
4 RAISED TREE PLANTING  
SCALE: NTS



5 PLANTING BED EDGE  
1" = 1'-0"



6 TREE PROTECTION FENCE  
1" = 1'-0"



7 TREE PLANTING ON SLOPE  
SCALE: NTS

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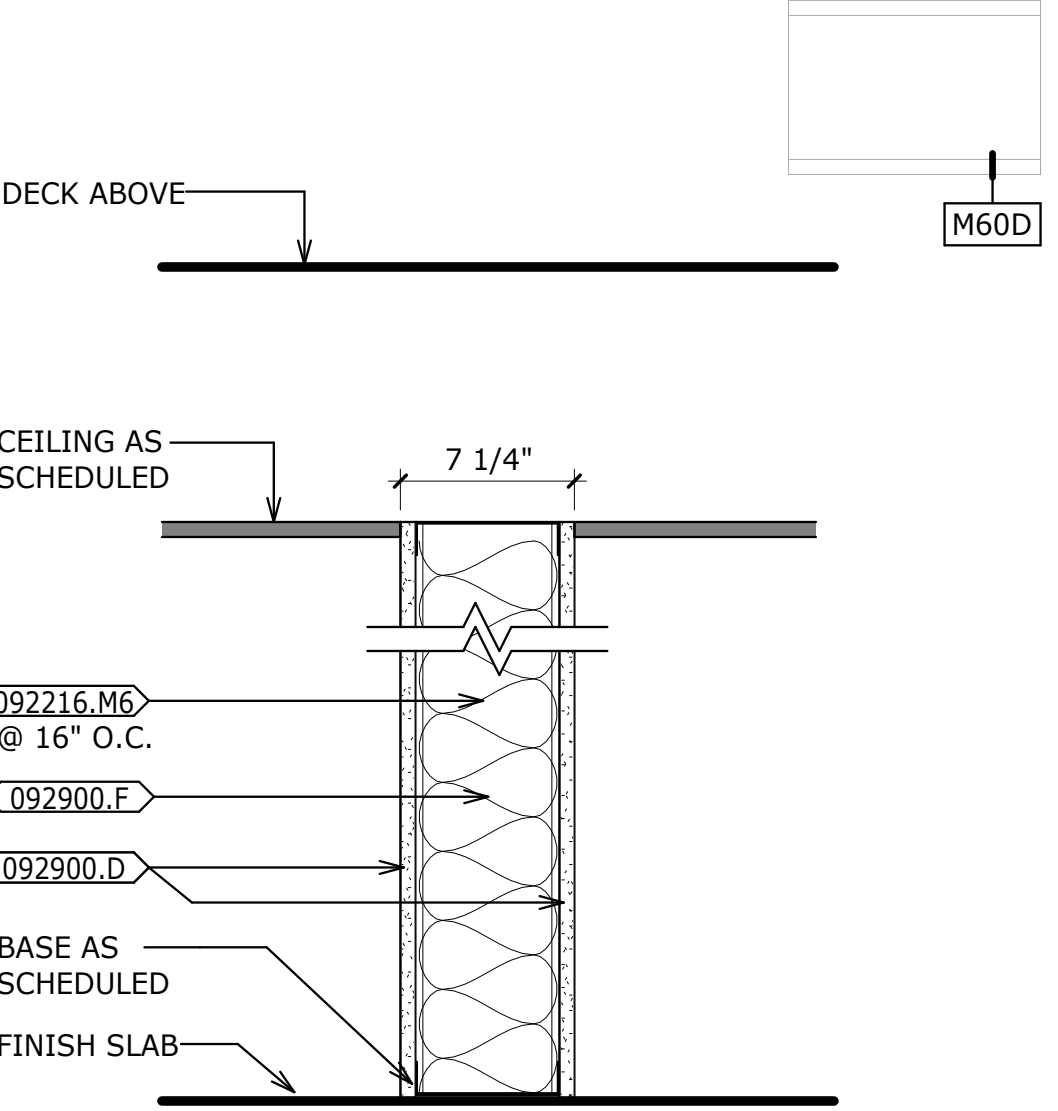
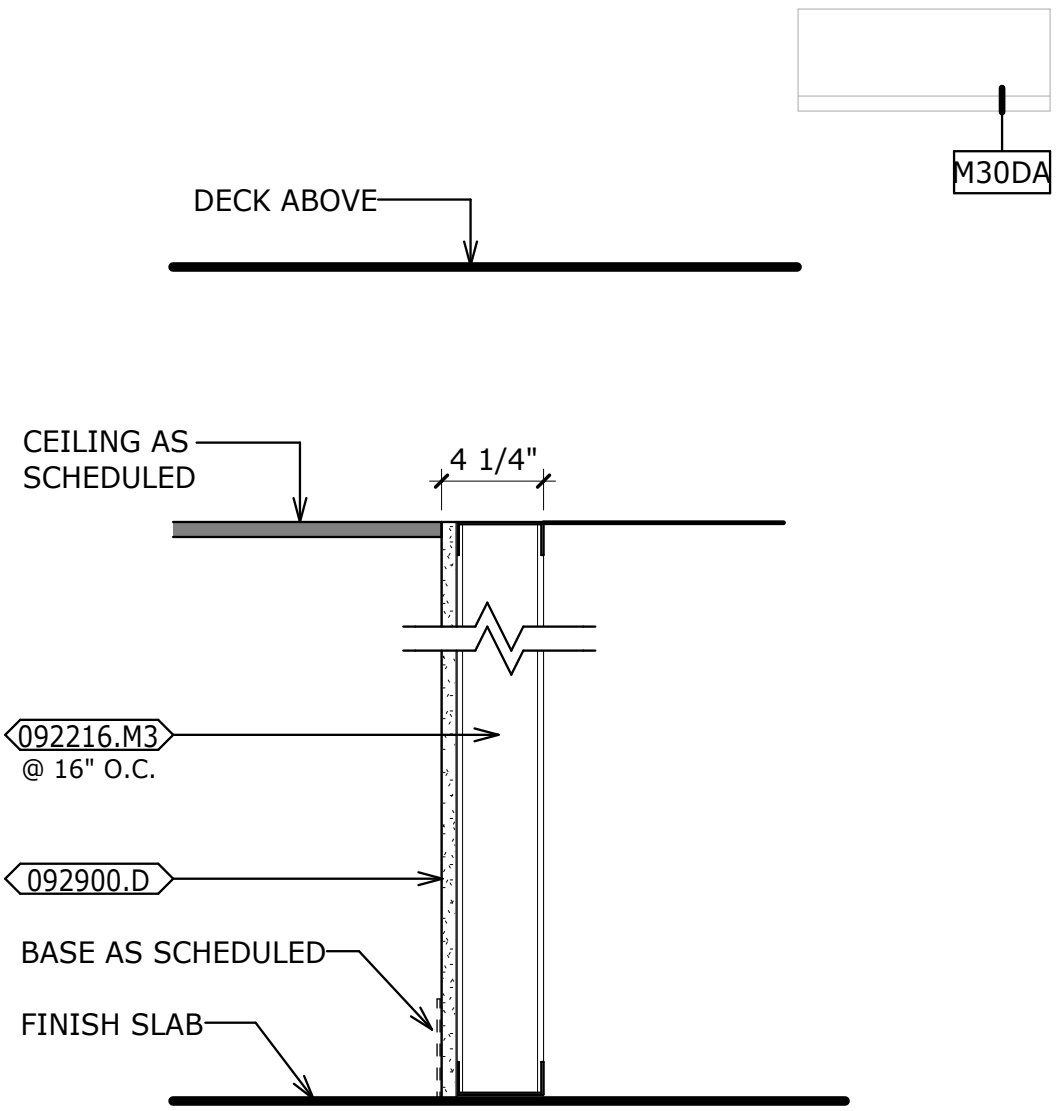
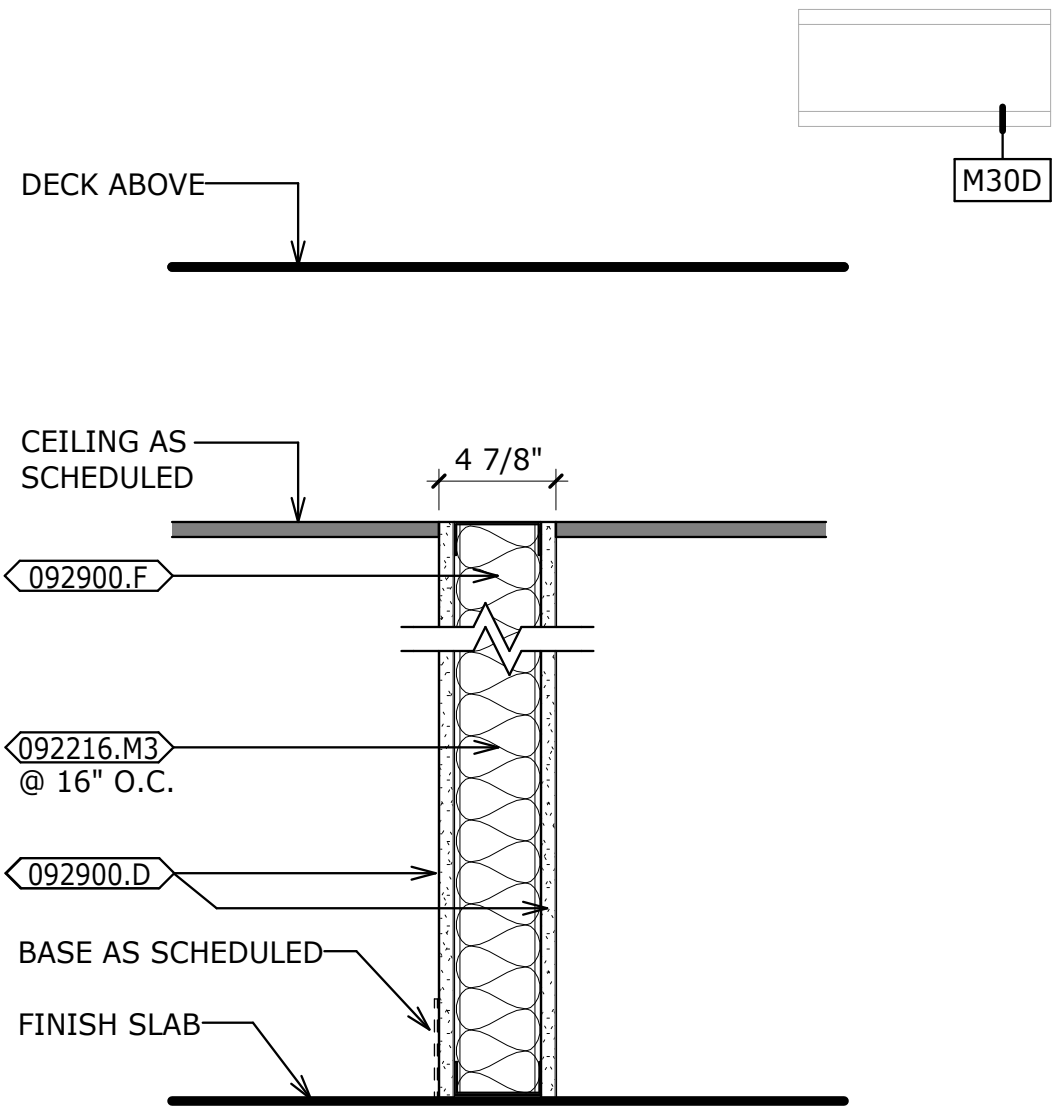
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NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**LANDSCAPE DETAILS**



INTERIOR ASSEMBLIES - WALLS



M30D

3-5/8" METAL STUDS TO DECK, 5/8" GLASS-MAT BACKING BOARD BOTH SIDES

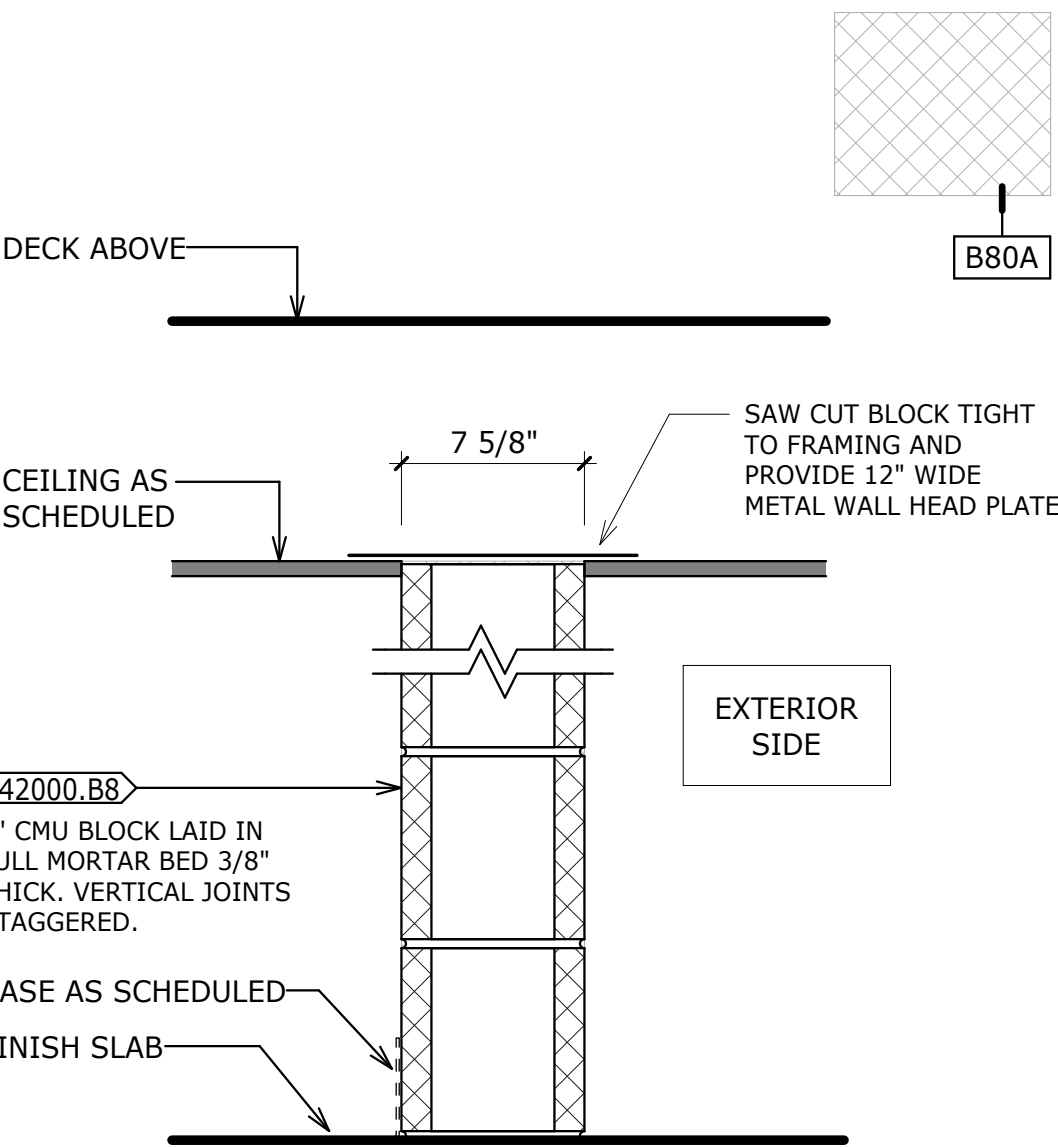
M30DA

3-5/8" METAL STUDS TO DECK, 5/8" GLASS-MAT BACKING BOARD ONE SIDE

M60D

6" METAL STUDS TO DECK, 5/8" GLASS-MAT BACKING BOARD BOTH SIDES

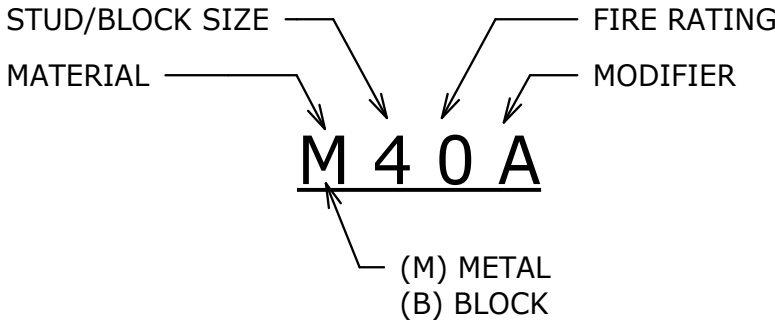
EXTERIOR WALL ASSEMBLY



B80A

8" CMU, WALL TO EXTEND TO UNDERSIDE OF DECK, U.N.O.

INTERIOR PARTITION NAMING LEGEND



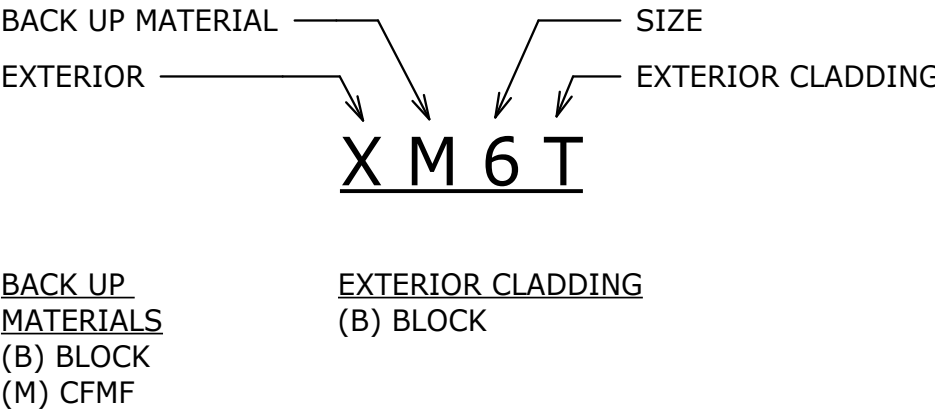
KEYNOTES

- 042000.B8 CONCRETE MASONRY UNITS, 8x8x16 NOMINAL, SEE STRUCTURAL
- 092216.M3 STEEL STUD FRAMING, 3 5/8"
- 092216.M6 STEEL STUD FRAMING, 6"
- 092900.D GLASS-MAT BACKING BOARD, 5/8"
- 092900.F SOUND ATTENUATION BLANKET

PARTITION NOTES:

- U.N.O. ALL INTERIOR PARTITIONS TO BE TYPE 'M30A'; SEE PLANS FOR PARTITION TYPES.
- SEAL PERIMETER OF ALL WALLS, TYP.
- USE 5/8" CEMENTITIOUS TILE BACKING SHEETS IN LIEU OF 5/8" GWB IN SHOWER AND RESTROOM ROOMS, TYPICAL.
- SEE FINISH SCHEDULE AND FINISH PLANS FOR WALL FINISHES.
- INTERIOR WALLS AND PARTITION FRAMING SHALL EXTEND OR BE BRACED TO THE DECK ABOVE WITH 45-DEGREE KICKERS AT A MINIMUM OF 4'-0" O.C. TO PROVIDE ADEQUATE STRENGTH AND STIFFNESS TO RESIST THE LOADS TO WHICH THEY ARE TO BE SUBJECTED BUT NO LESS THAN A HORIZ. LOAD OF 5 PSF.
- PROVIDE CONTINUOUS DEFLECTION TRACK AT ALL PARTITIONS THAT EXTEND TO UNDERSIDE OF DECKING OR STRUCTURE ABOVE.

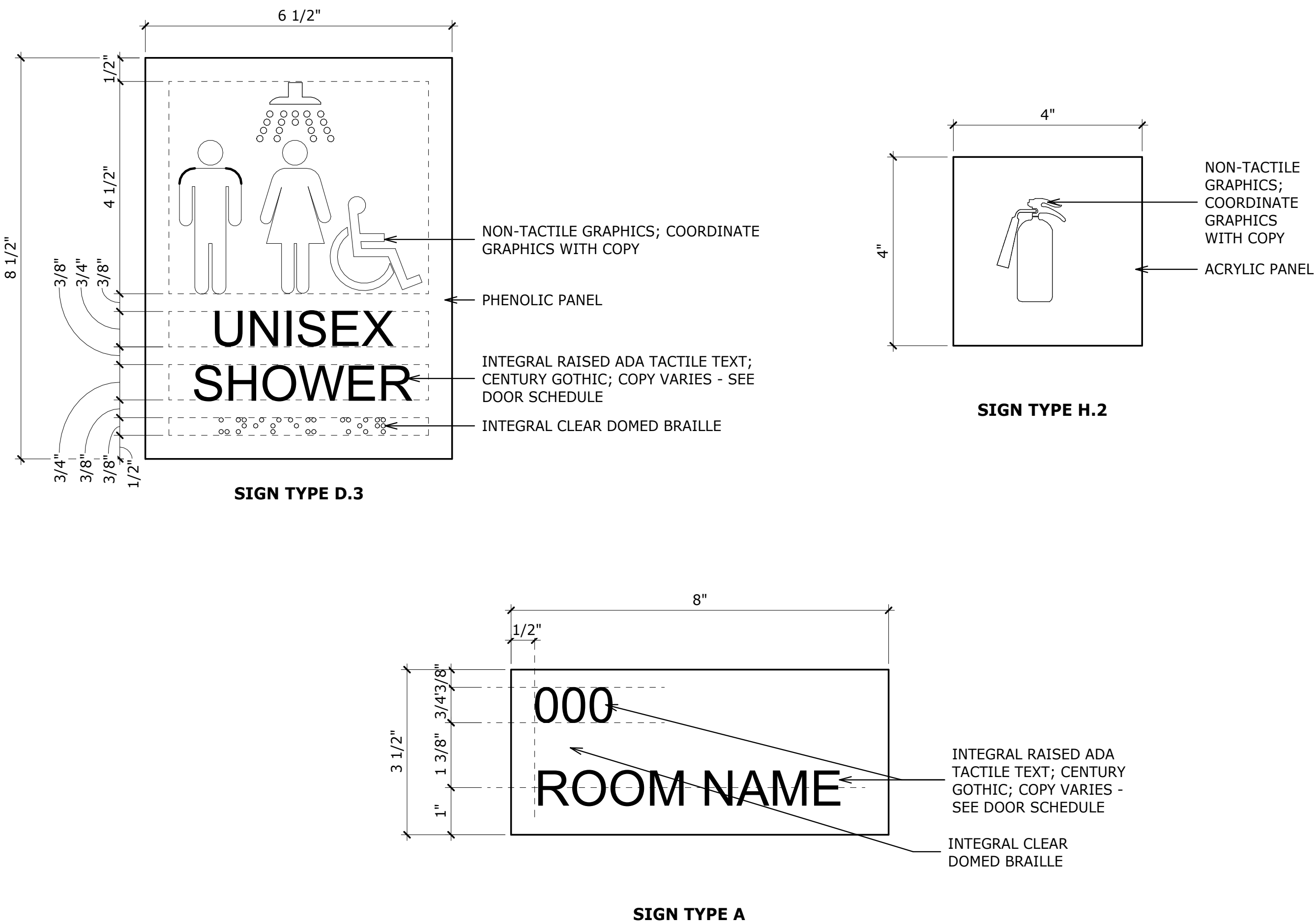
EXTERIOR WALL ASSEMBLIES NAMING LEGEND



DOOR SCHEDULE

DOOR #	ROOM	DOOR							FRAME			THR'LD	HARDWARE SET	COMMENTS
		ELEV.	WIDTH	HEIGHT	THICK	MAT'L	FINISH		ELEV.	MAT'L	FINISH			
101	SHOWER ROOM	L	3' - 0"	7' - 0"	1 3/4"	HM	PT		I	HM	PT	ALUM	004	SEE 4 & 7/A601 FOR DOOR DETAILS
102	SHOWER ROOM	L	3' - 0"	7' - 0"	1 3/4"	HM	PT		I	HM	PT	ALUM	004	SEE 4 & 7/A601 FOR DOOR DETAILS
103	TOILET ROOM	L	3' - 0"	7' - 0"	1 3/4"	HM	PT		I	HM	PT	ALUM	004	SEE 4 & 7/A601 FOR DOOR DETAILS
104	UTILITY ROOM	L	3' - 0"	7' - 0"	1 3/4"	HM	PT		I	HM	PT	ALUM	005	SEE 4 & 7/A601 FOR DOOR DETAILS
105	ELEC/ IT	L	3' - 0"	7' - 0"	1 3/4"	HM	PT		I	HM	PT	ALUM	005	SEE 4 & 7/A601 FOR DOOR DETAILS

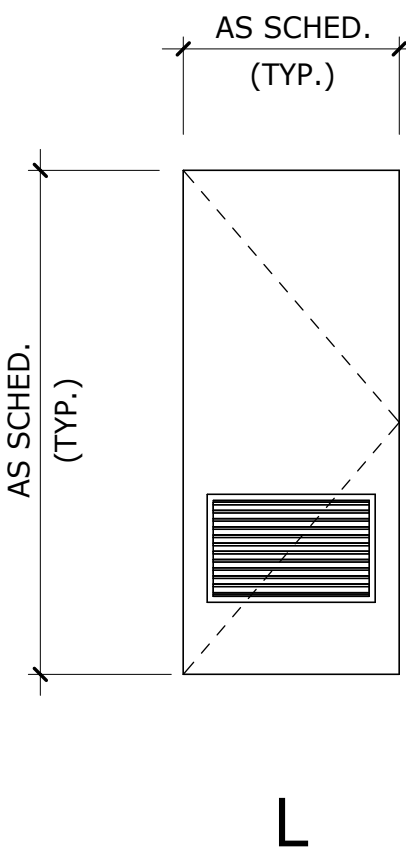
SIGNAGE TYPE DETAILS



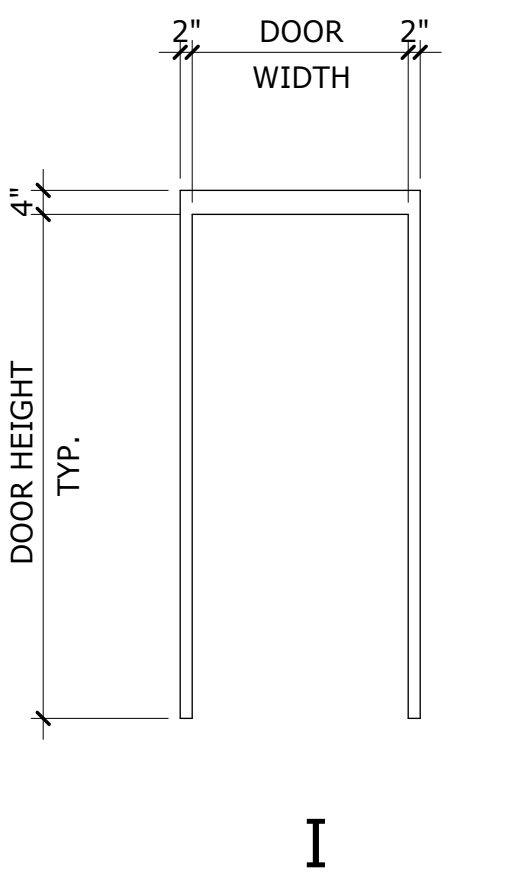
DOOR & FRAME NOTES

- SEE DETAILS FOR HEAD, JAMB, AND THRESHOLD CONDITIONS AT DOORS.
- ALL HOLLOW METAL FRAMES TO BE 2" WIDE FACE FRAME, U.N.O.
- AT RATED DOORS WITH GLAZING, PROVIDE FIRE-RATED IMPACT-SAFETY GLAZING IN ACCORDANCE WITH REQUIRED RATING; SEE SPECIFICATIONS.
- ALL GLAZING TO BE TEMPERED SAFETY GLAZING, U.N.O.
- ALL FRAMES AT MASONRY WALLS 6" DEEP, TYPICAL, U.N.O.
- EXTERIOR DOORS ARE TO BE RECESSED 1-1/2" FROM FACE OF EXTERIOR MASONRY, TYP. U.N.O.
- VERIFY FRAME DEPTH AT ALL WALL CONDITIONS.

DOOR ELEVATIONS



FRAME ELEVATIONS



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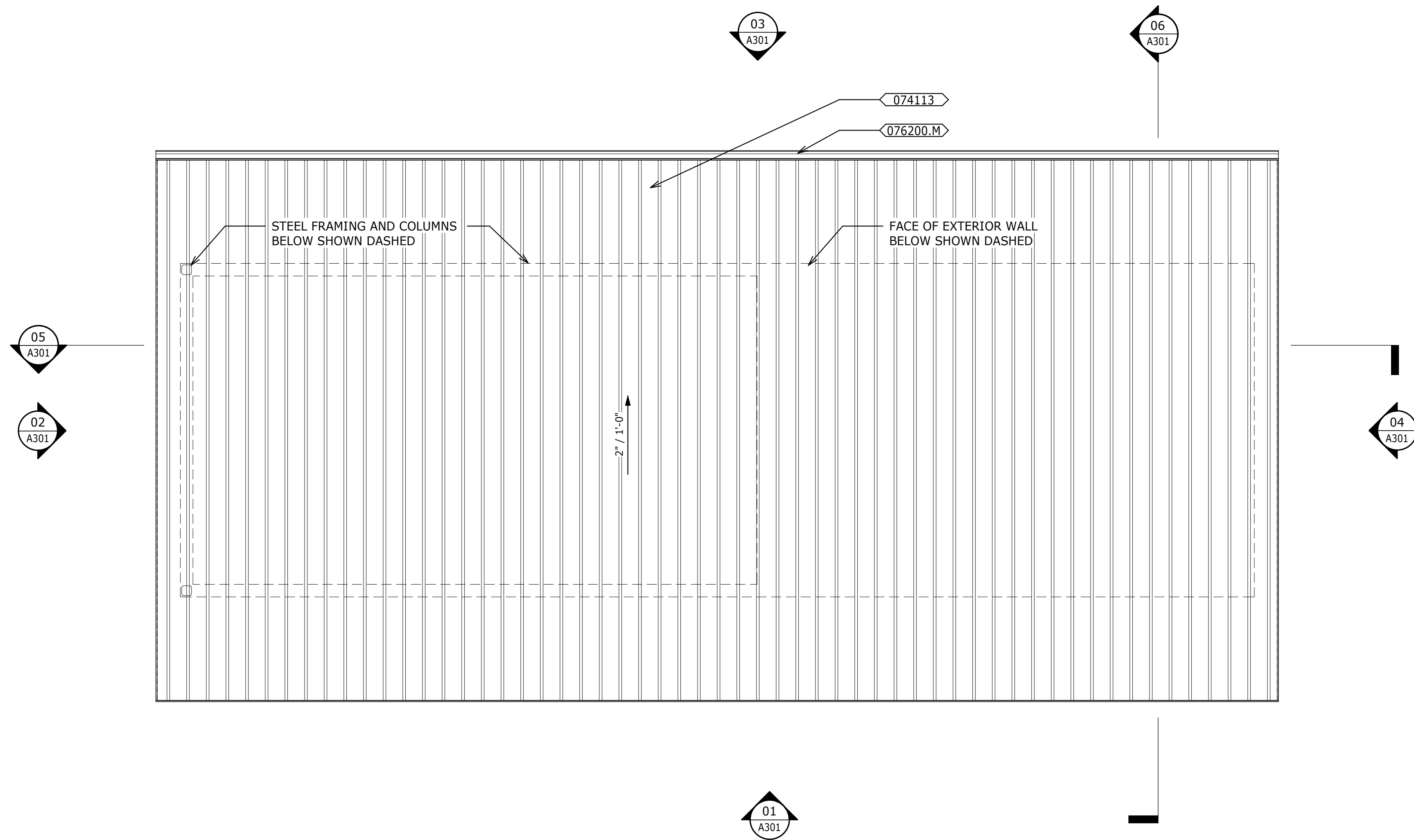
NO.	REVISION	DATE

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22-086  
DATE ISSUED  
03/14/2025  
PROJECT STATUS  
ISSUE FOR CONSTRUCTION  
SHEET  
WALL, DOOR, LOUVER TYPES & SIGNAGE

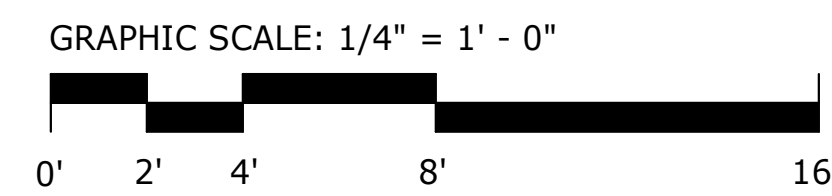
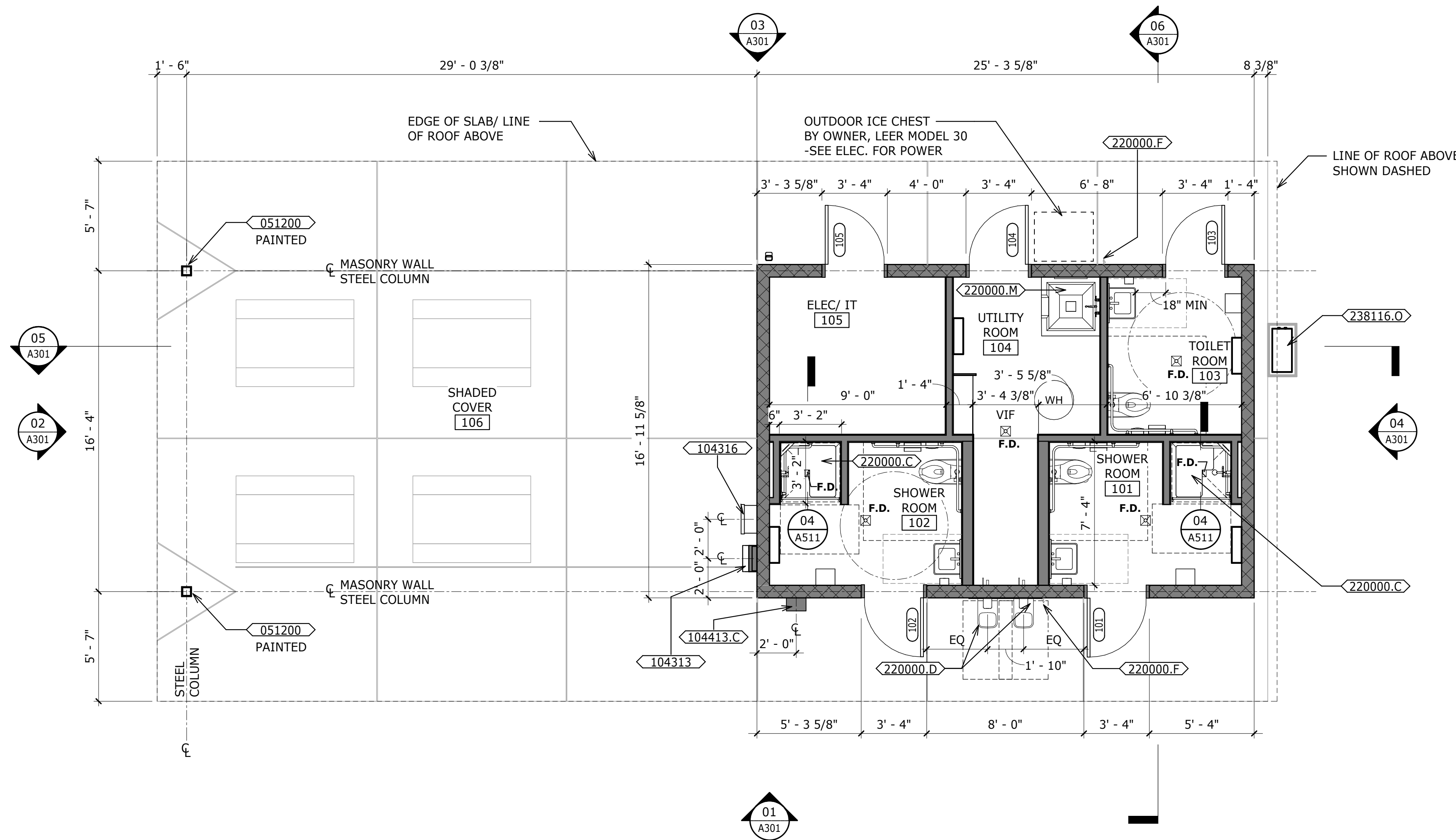
A001



01 ROOF PLAN - RESTROOM/SHADE STRUCTURE  
1/4" = 1'-0"



02 FLOOR PLAN - RESTROOM/SHADE STRUCTURE  
1/4" = 1'-0"



## KEYNOTES

- 051200** STRUCTURAL STEEL FRAMING, SEE STRUCTURAL  
**074113** STANDING SEAM METAL ROOF SYSTEM  
**076200.M** PREFINISHED HANGING GUTTER  
**104313** AED CABINET. TYPE AIVIA 200 OUTDOOR. CFCI  
**104316** FIRST AID CABINET/LIFE SAFETY STATIONS. TYPE AED.US SKU-LSSO  
**104413.C** EXTERIOR GRADE FIRE EXTINGUISHER & CABINET. TYPE SAFETY ONE MODEL HD0C-10-SS  
**220000.C** ACCESSIBLE SHOWER STALL & ACCESSORIES.-SLOPE STALL FLOOR TO DRAIN AND FINISH WITH EPOXY PAINT SYSTEM; SEE PLUMBING  
**220000.D** WATER COOLER; SEE PLUMBING  
**220000.F** FREEZE-PROOF HOSE BIBB; SEE PLUMBING  
**220000.M** MOP SINK 36"X36"; SEE PLUMBING  
**238116.O** DUCTLESS SPLIT SYSTEM OUTDOOR UNIT; SEE MECHANICAL

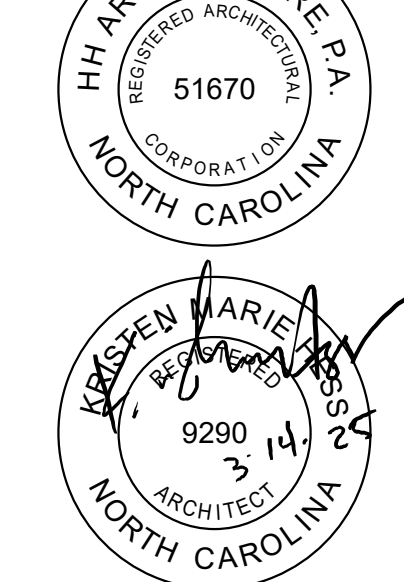
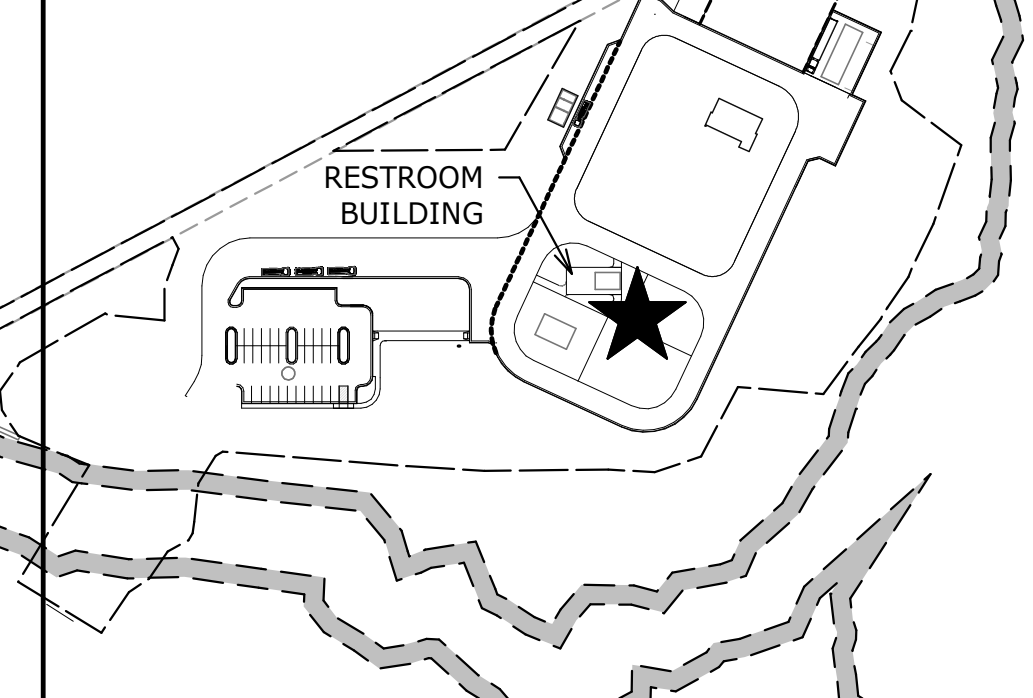
## PLAN LEGEND

NEW WALL CONSTRUCTION

## AREA SCHEDULE

RESTROOM/SHADE STRUCTURE (GROSS ENCLOSED): 429 SQ. FT.  
ROOF: 1,722 SQ. FT.

## KEY PLAN



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DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
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**PLANS - RESTROOM BUILDING**

A111

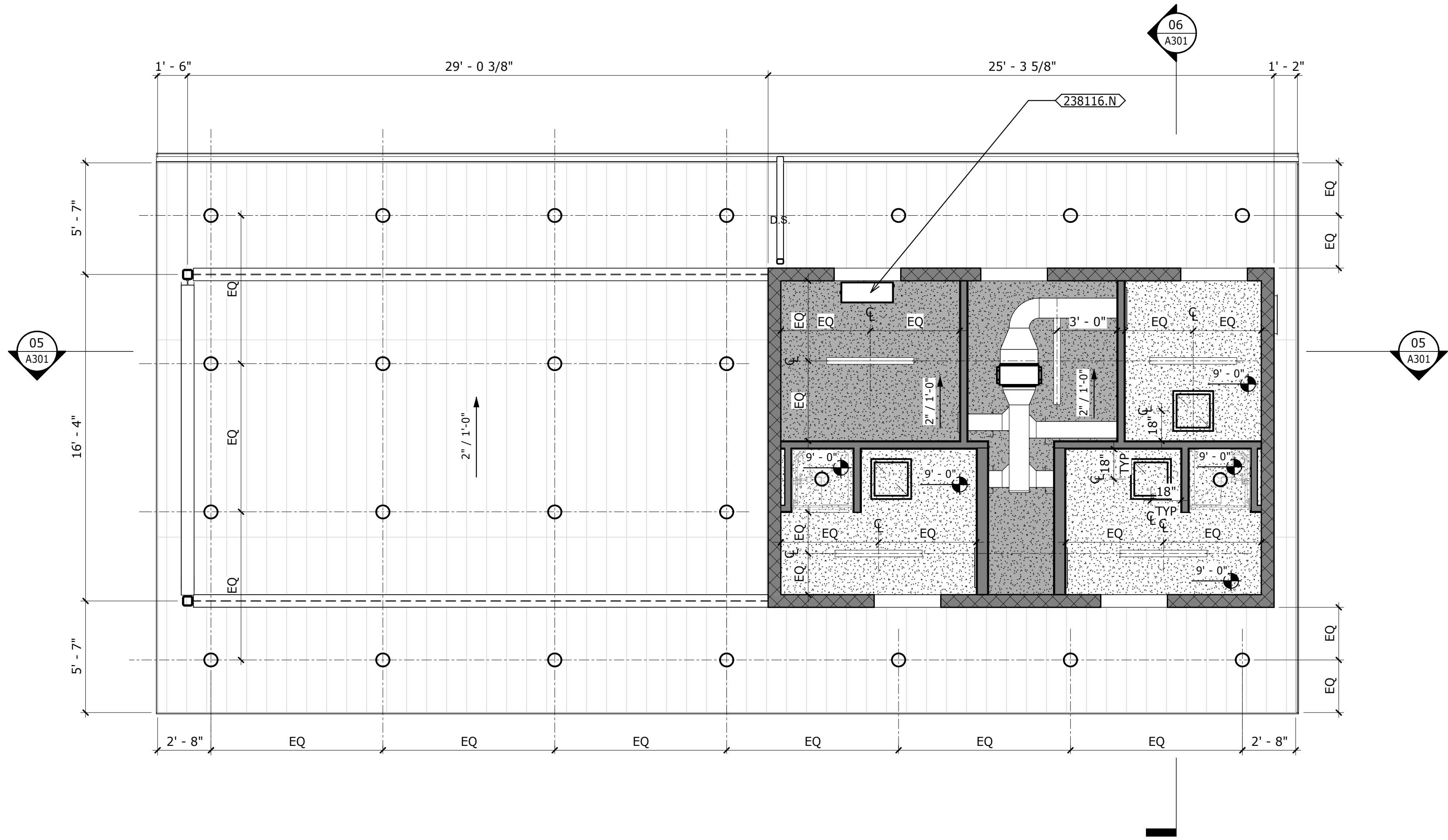
HH ARCHITECTURE, P.A. REGISTERED ARCHITECT NO. 51670 NORTH CAROLINA  
KASPER MARIE ARCHITECTS, P.A. REGISTERED ARCHITECT NO. 9290 NORTH CAROLINA  
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NCCCS NO. 2303

**HH**  
**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com





01 REFLECTED CEILING PLAN - RESTROOM/SHADE STRUCTURE  
A112 1/4" = 1'-0"

## RCP GENERAL NOTES

- GC IS REQUIRED TO PROVIDE COORDINATION DRAWINGS FOR ALL MEP SYSTEMS OVERHEAD AND IN CEILINGS.
- SEE MEP SHEETS FOR ADDITIONAL CEILING NOTES.

## KEYNOTES

238116.N DUCTLESS SPLIT SYSTEM INDOOR UNIT; SEE MECHANICAL

## RCP LEGEND

- NEW GFRB CEILING; PAINT PT-4  
-RETAIN BATT INSULATION WITHIN  
JOIST SPACE ABOVE CEILING
- NEW SLOPED GFRB CEILING;  
PAINT PT-4
- PRE-FINISHED METAL SOFFIT PANEL
- NEW RECESSED LIGHT FIXTURE INSTALLED  
BETWEEN JOISTS; SEE ELECTRICAL
- NEW LINEAR LIGHT FIXTURE;  
SEE ELECTRICAL
- MECHANICAL REGISTER;  
SEE MECHANICAL

## FINISH PLAN GENERAL NOTES

- ALL MATERIALS TO BE FIELD VERIFIED PRIOR TO ORDERING. DO NOT SCALE FROM DRAWINGS.
- ALL MATERIALS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS WITH APPROVED ADHESIVES.
- IF THERE ARE QUESTIONS ABOUT THE DESIGN INTENT OF ANY PATTERN OR MATERIAL TO BE INSTALLED, THE GC SHALL SUBMIT A REQUEST FOR INFORMATION TO THE DESIGNER FOR CLARIFICATION PRIOR TO ORDERING THE MATERIALS.
- THE GC SHALL PROVIDE ALL FINISHING PIECES AND TRANSITIONS WHERE DIFFERENT FLOORING THICKNESSES MEET, U.N.O. THE GC SHALL SUBMIT A SAMPLE OF THE COLOR/FINISH TO THE DESIGNER FOR APPROVAL.
- ALL WALLS TO BE FIELD PAINT, EPX-1, U.N.O. ALL GYP. BD. PARTITIONS TO RECEIVE A LEVEL 4 FINISH.
- ALL INTERIOR DOOR FRAMES EXPOSED STEEL STRUCTURE TO RECEIVE PAINT IN GLOSS FINISH, PT-2, U.N.O.
- ALL INTERIOR GYP. BD. PARTITIONS TO RECEIVE RUBBER BASE, RB-1, U.N.O.

## FINISH PLAN KEY

- EPX-F RESINOUS EPOXY FLOOR SYSTEM WITH  
4" COVE WALL BASE -
- SC SEALED CONCRETE

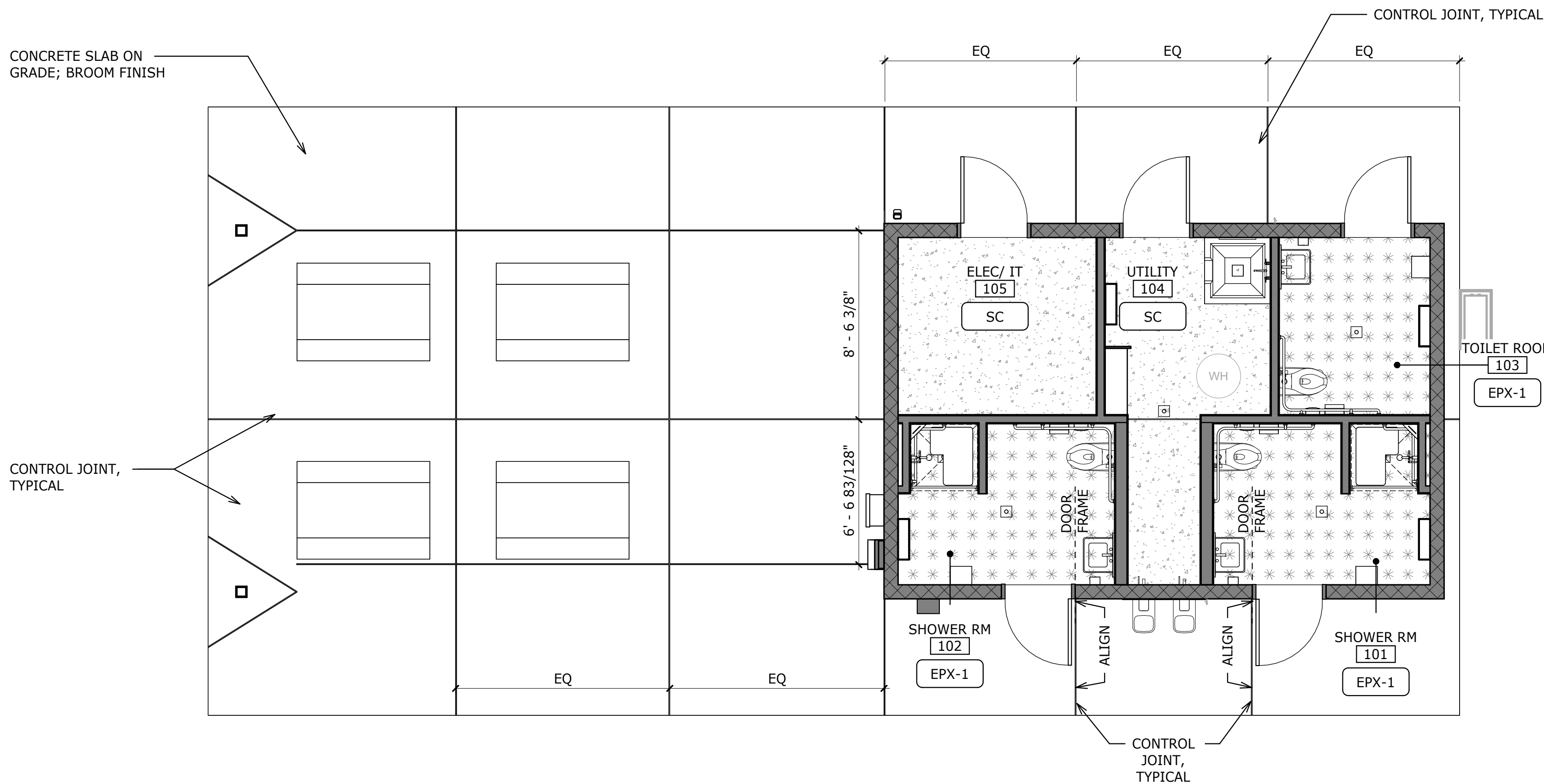
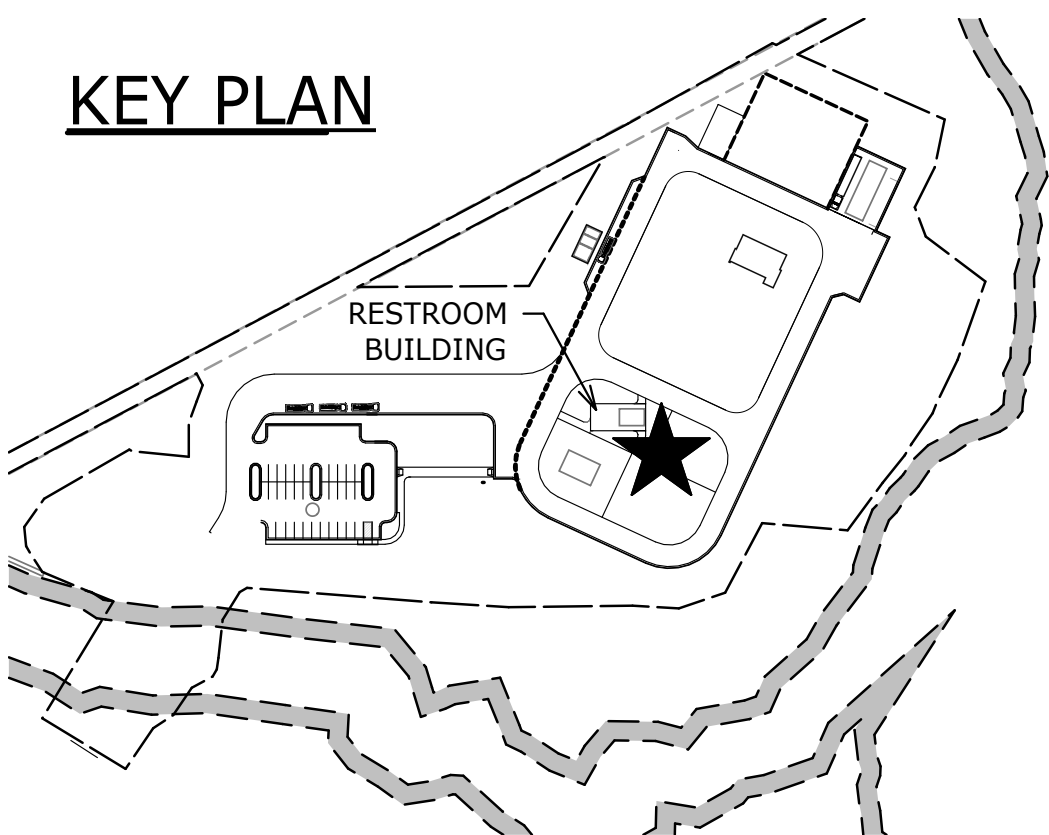
## FINISH PLAN LEGEND

- ACCENT PAINT CALLOUT
- WALL TILE

## FINISH SCHEDULE

ROOM #	ROOM NAME	BASE	FLOOR	WALL	CEILING
101	SHOWER ROOM	EB-1	EPX-1	EPX-1	EPX-1
102	SHOWER ROOM	EB-1	EPX-1	EPX-1	EPX-1
103	TOILET ROOM	EB-1	EPX-1	EPX-1	EPX-1
104	UTILITY ROOM	NONE	SC	PT-1	PT-1
105	ELEC/ IT	RB	SC	PT-1	PT-1
106	SHADED COVER	RB	SC	CMU	PREFIN
121	BAY 1	NONE	SC	PT-2	PT-2
122	BAY 2	NONE	SC	PT-2	PT-2
123	BAY 3	NONE	SC	PT-2	PT-2

## KEY PLAN



02 FINISH PLAN - RESTROOM/SHADE STRUCTURE  
A112 1/4" = 1'-0"

GRAPHIC SCALE: 1/4" = 1'-0"



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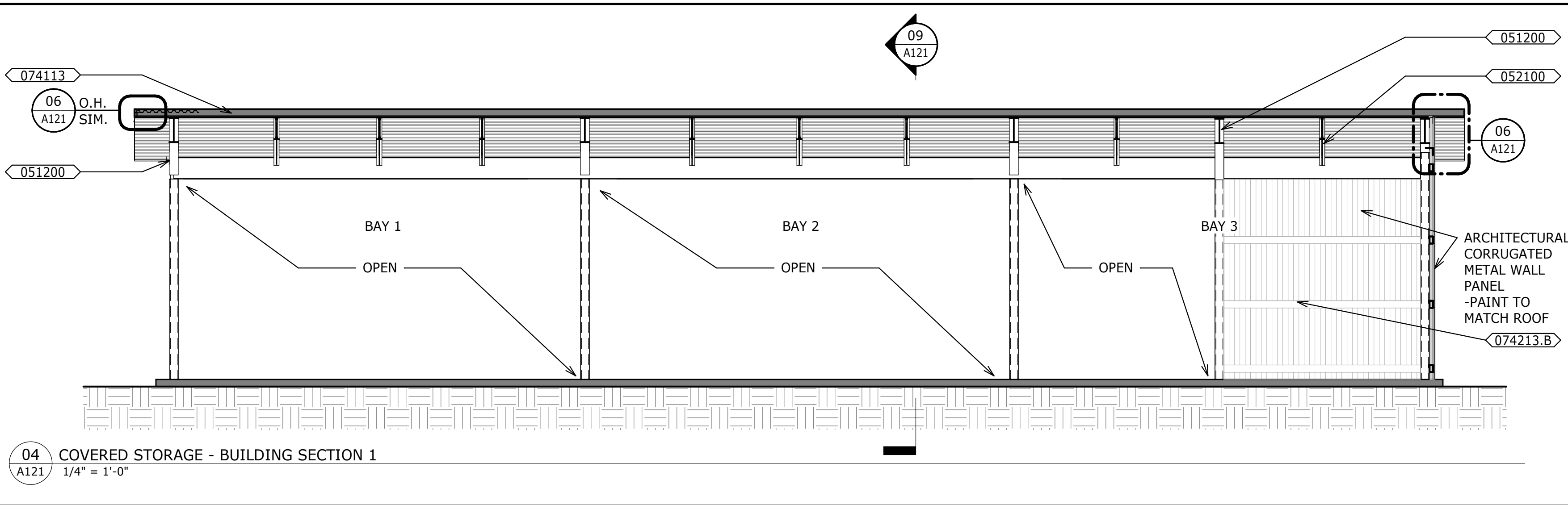
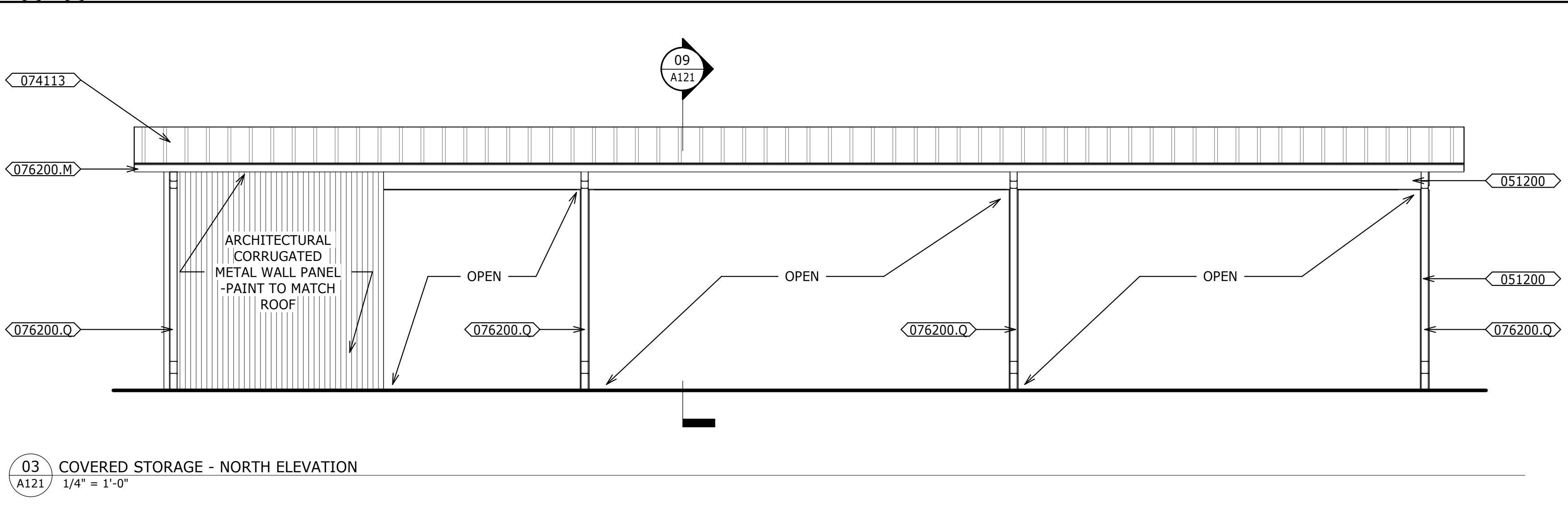
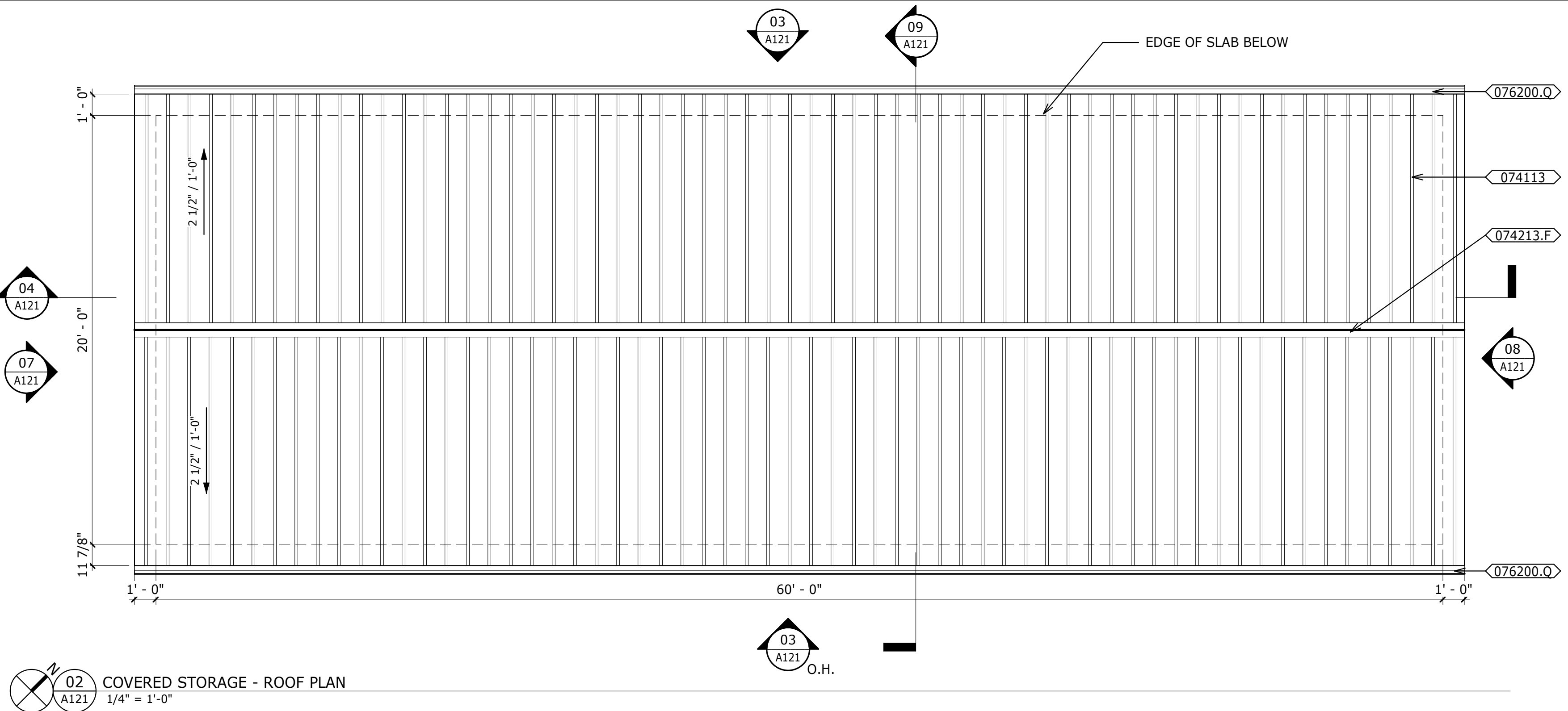
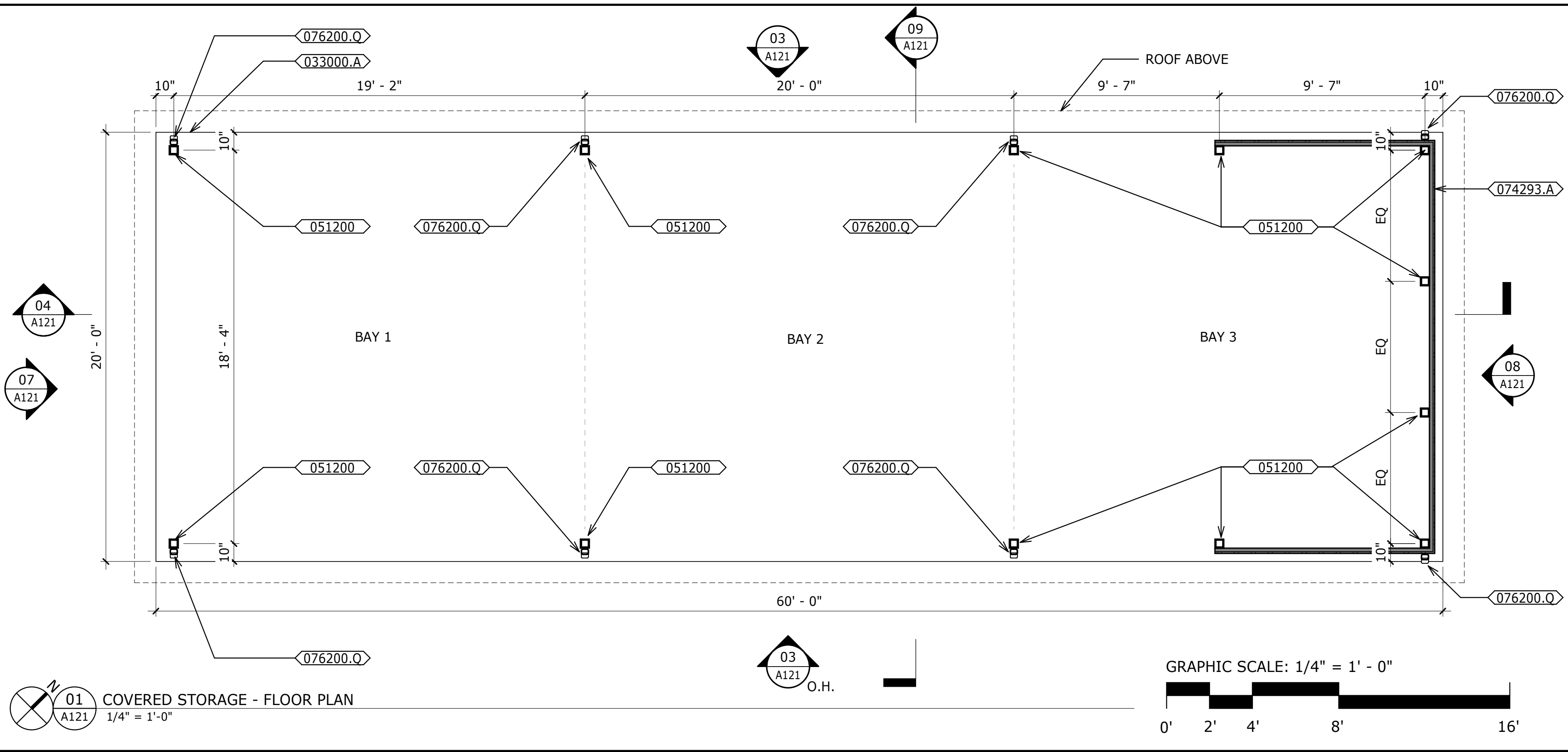
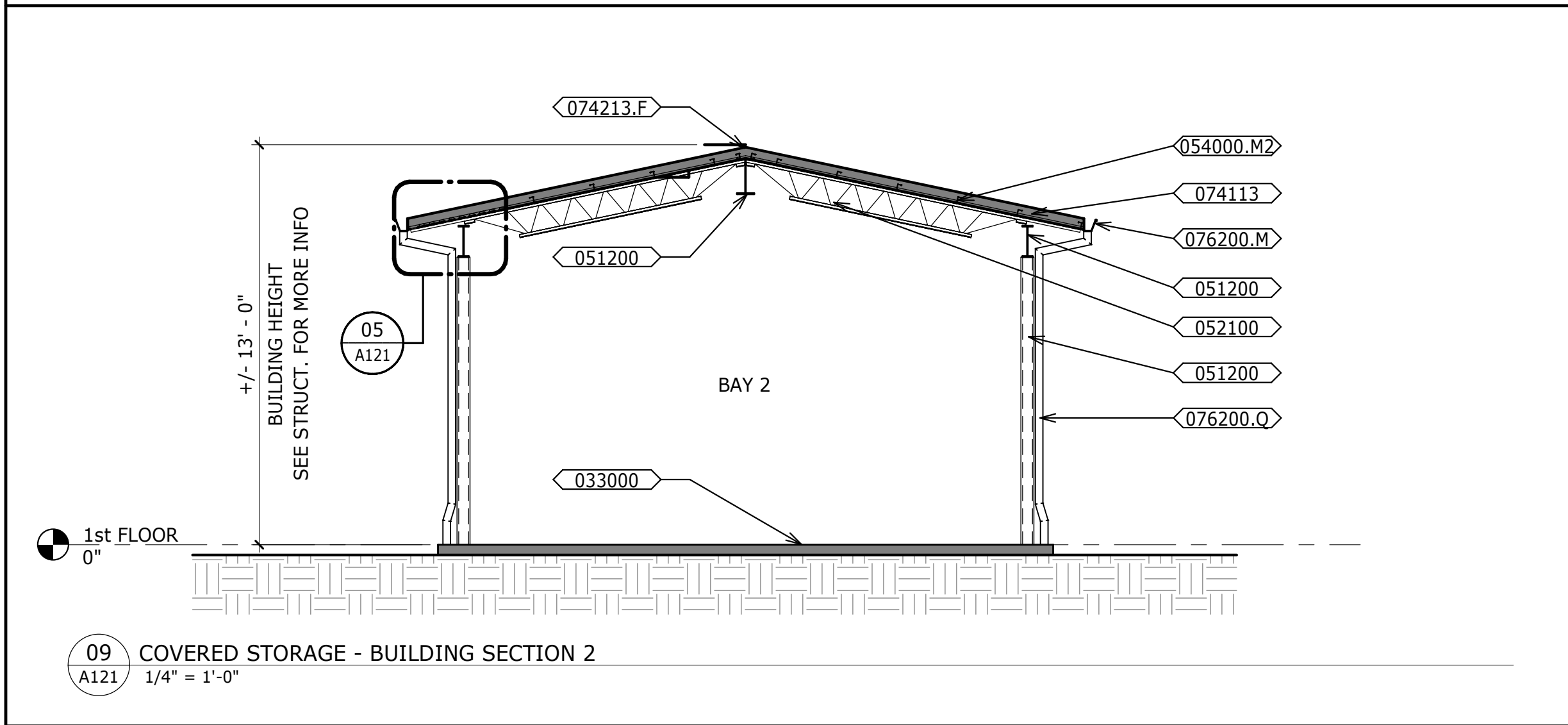
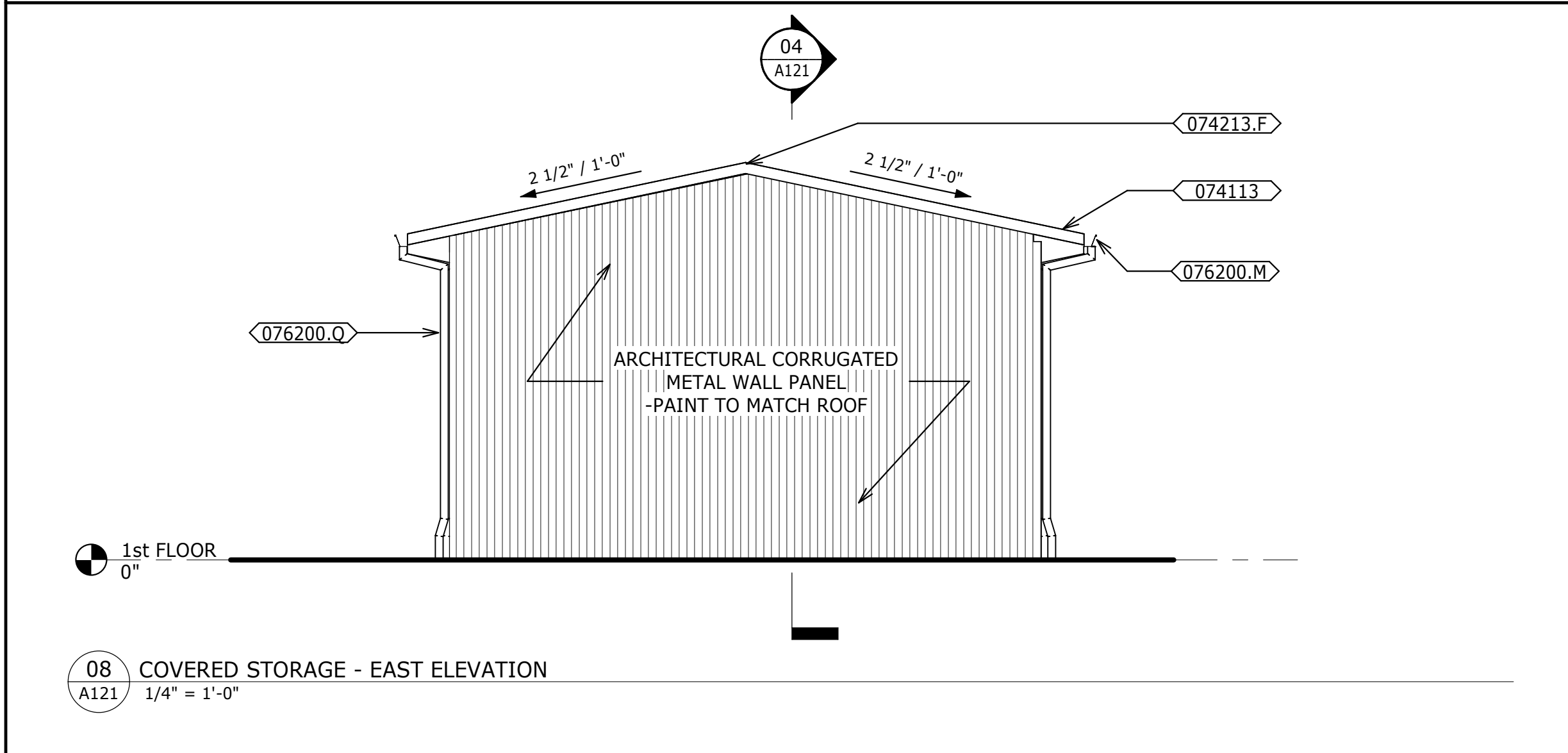
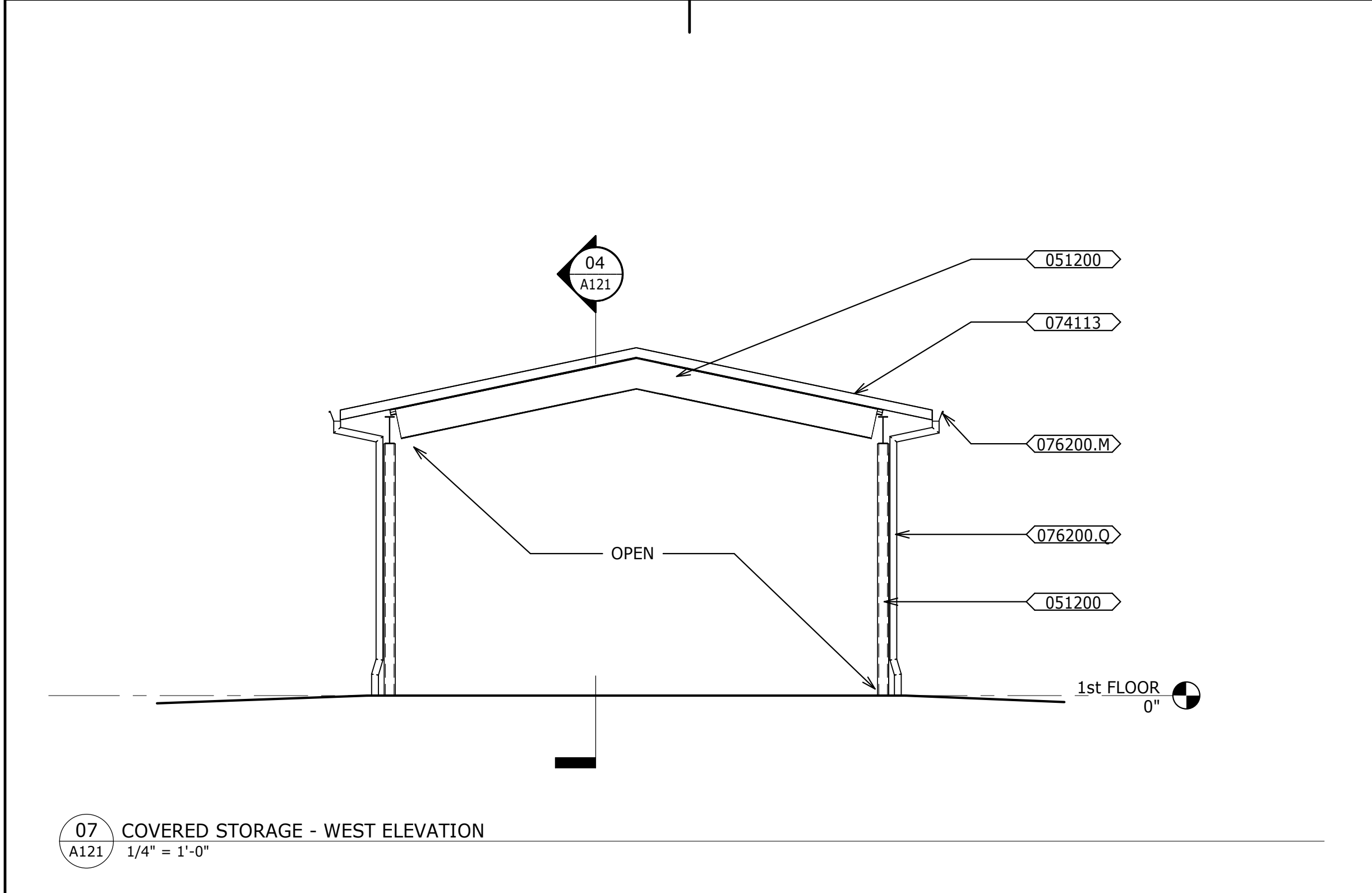
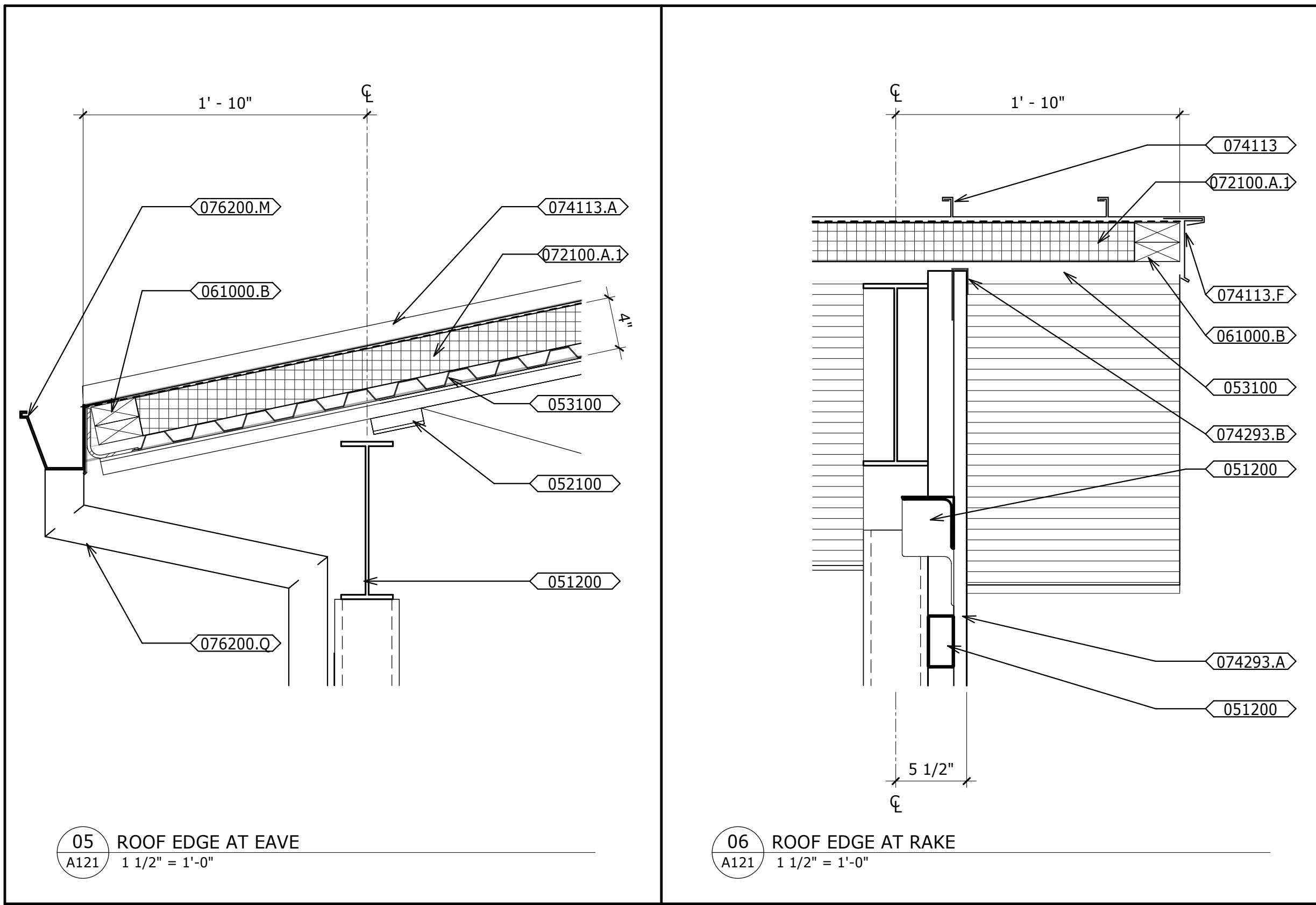


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**RCP & FINISH PLAN - RESTROOM BUILDING**

A112





## KEYNOTES

- 033000 CAST-IN-PLACE CONCRETE  
033000.A CAST-IN-PLACE CONCRETE, SEE STRUCTURAL  
051200 STRUCTURAL STEEL FRAMING, SEE STRUCTURAL  
052100 STEEL JOIST FRAMING, SEE STRUCTURAL  
053100 STEEL DECKING, SEE STRUCTURAL  
054000.M2 COLD-FORMED METAL FRAMING, C-SHAPED STUDS, 2 1/2"  
061000.B P.T. WOOD BLOCKING  
072100.A.1 EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD (XPS), R-7.5  
074113 STANDING SEAM METAL ROOF SYSTEM  
074113.A STANDING SEAM METAL ROOF PANELS  
074113.F PREFINISHED METAL FASCIA WITH DRIP EDGE  
074213.B SUB-FRAMING & FURRING  
074213.F ROOF PANEL METAL RIDGE CAP  
074293.A METAL SOFFIT PANELS  
074293.B METAL SOFFIT PANEL FLASHING & TRIM  
076200.M PREFINISHED HANGING GUTTER  
076200.Q PREFINISHED DOWNSPOUT

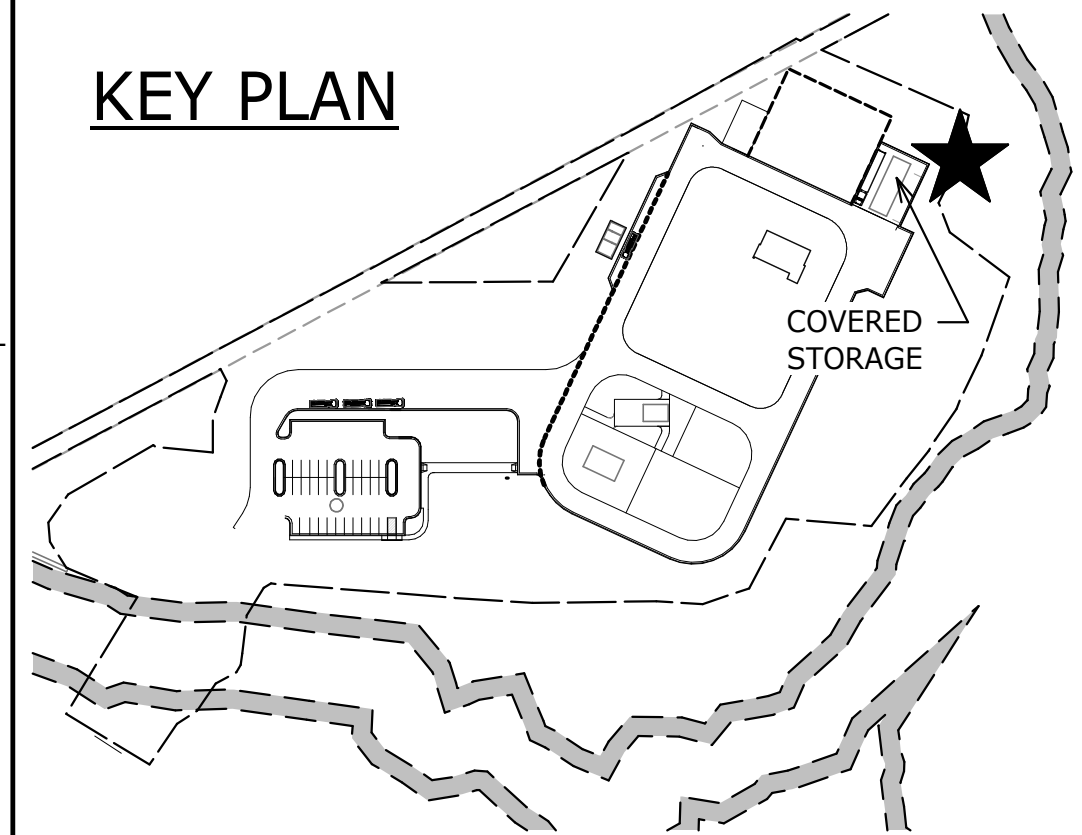
## PLAN LEGEND

NEW WALL CONSTRUCTION

## AREA SCHEDULE

BURN BUILDING STORAGE: 1,200 SQ. FT.  
ROOF: 1,393 SQ. FT.

## KEY PLAN



NO.	REVISION	DATE



KEYNOTES

- 042000 UNIT MASONRY
- 051200 STRUCTURAL STEEL FRAMING, SEE STRUCTURAL
- 074113 STANDING SEAM METAL ROOF SYSTEM
- 076200.M PREFINISHED HANGING GUTTER
- 076200.Q PREFINISHED DOWNSPOUT
- 081113 HOLLOW METAL DOORS AND FRAMES
- 089119.A FIXED LOUVER
- 092900.K GLASS-MAT CEILING BOARD, 5/8"
- 102800.07 SOAP DISPENSER, OWNER PROVIDED, OWNER INSTALLED
- 102800.16 MIRROR UNIT
- 104313 AED CABINET, TYPE AVIA 200 OUTDOOR, CFCI
- 104316 FIRST AID CABINET/LIFE SAFETY STATIONS, TYPE AED.US SKU:LSSO
- 104413.C EXTERIOR GRADE FIRE EXTINGUISHER & CABINET, TYPE SAFETY ONE MODEL HD0C-10-SS
- 220000.D WATER COOLER, SEE PLUMBING
- 233100.1 FREEZE-PROOF HOSE BIBB, SEE PLUMBING
- 238116.0 EXHAUST DUCT, SEE MECHANICAL
- 265000.A DUCTLESS SPLIT SYSTEM OUTDOOR UNIT, SEE MECHANICAL
- 265000.A LINEAR LIGHT FIXTURE, SEE ELECTRICAL

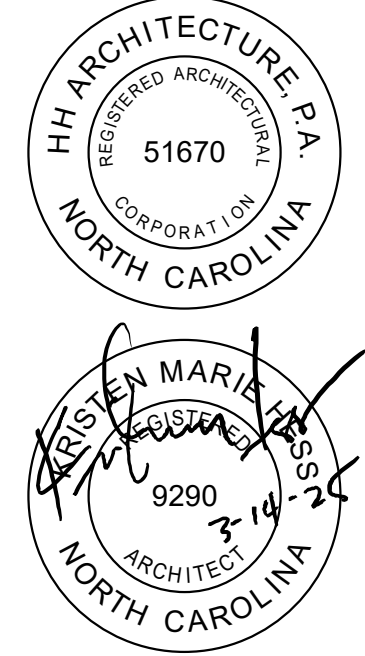
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ELEVATION LEGEND

MASONRY UNIT WALL  
COLOR: INTEGRAL DARK GRAY  
(CONFIRM SELECTION WITH OWNER)

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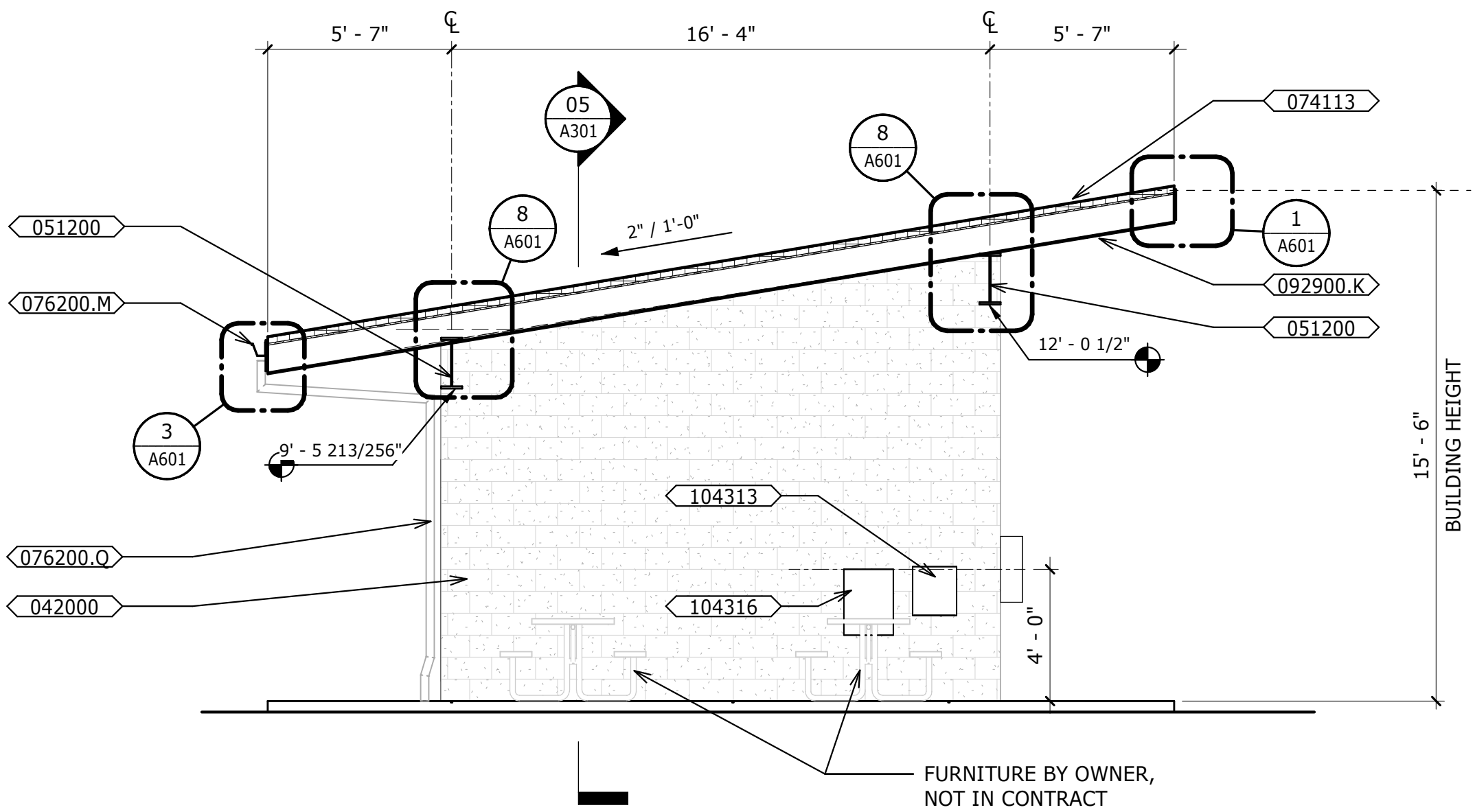
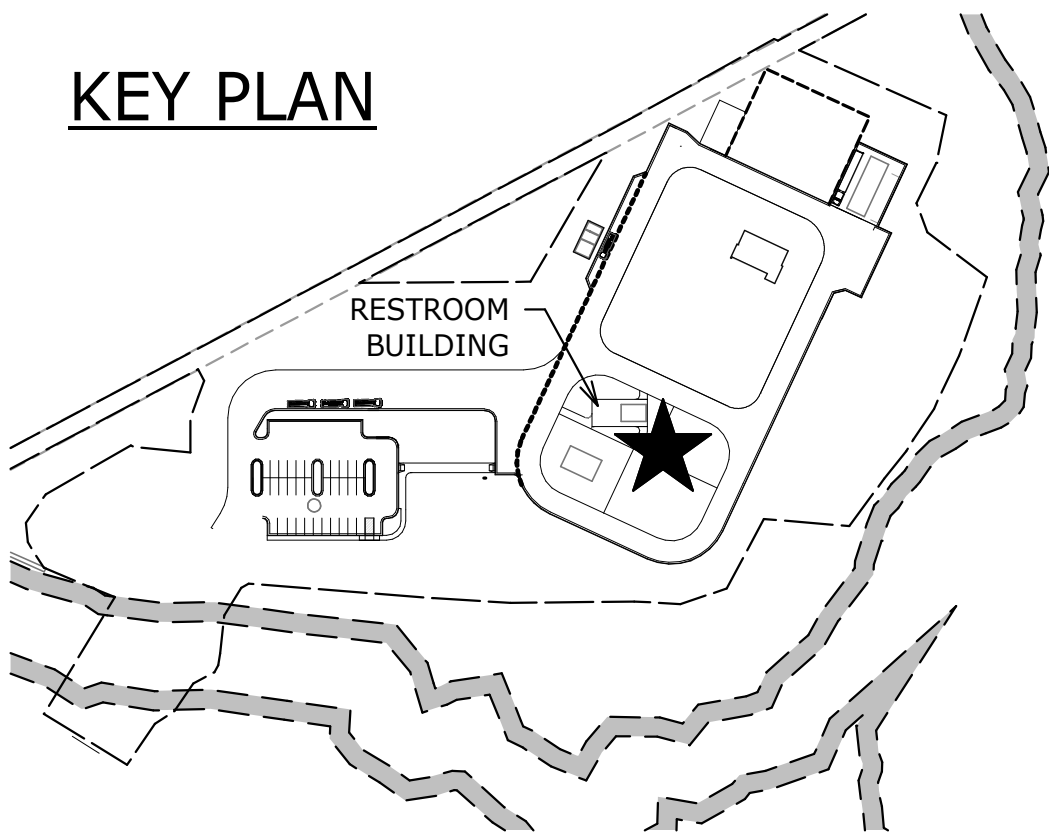
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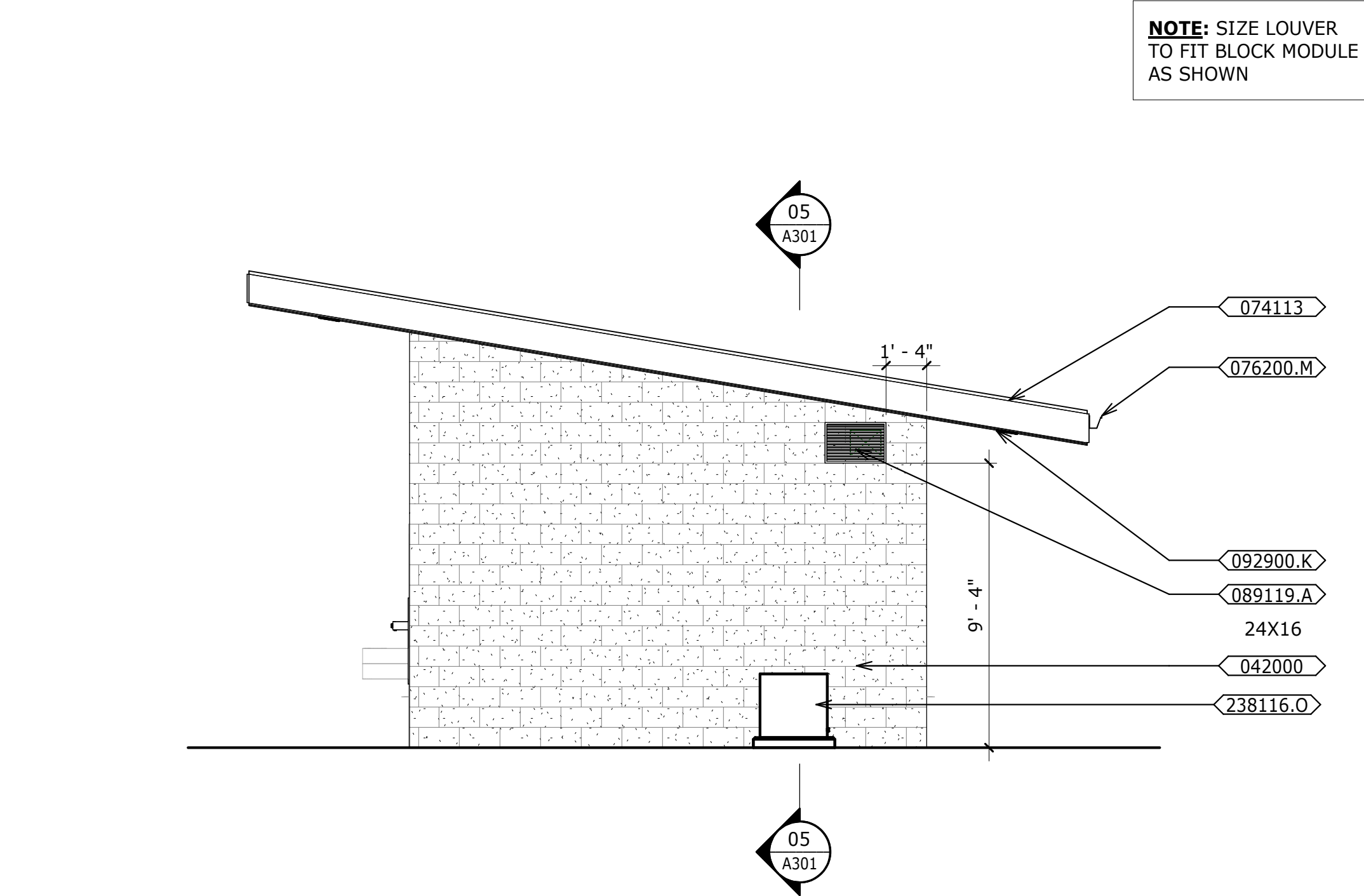
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BUILDING ELEVATIONS & SECTIONS - RESTROOM BLDG

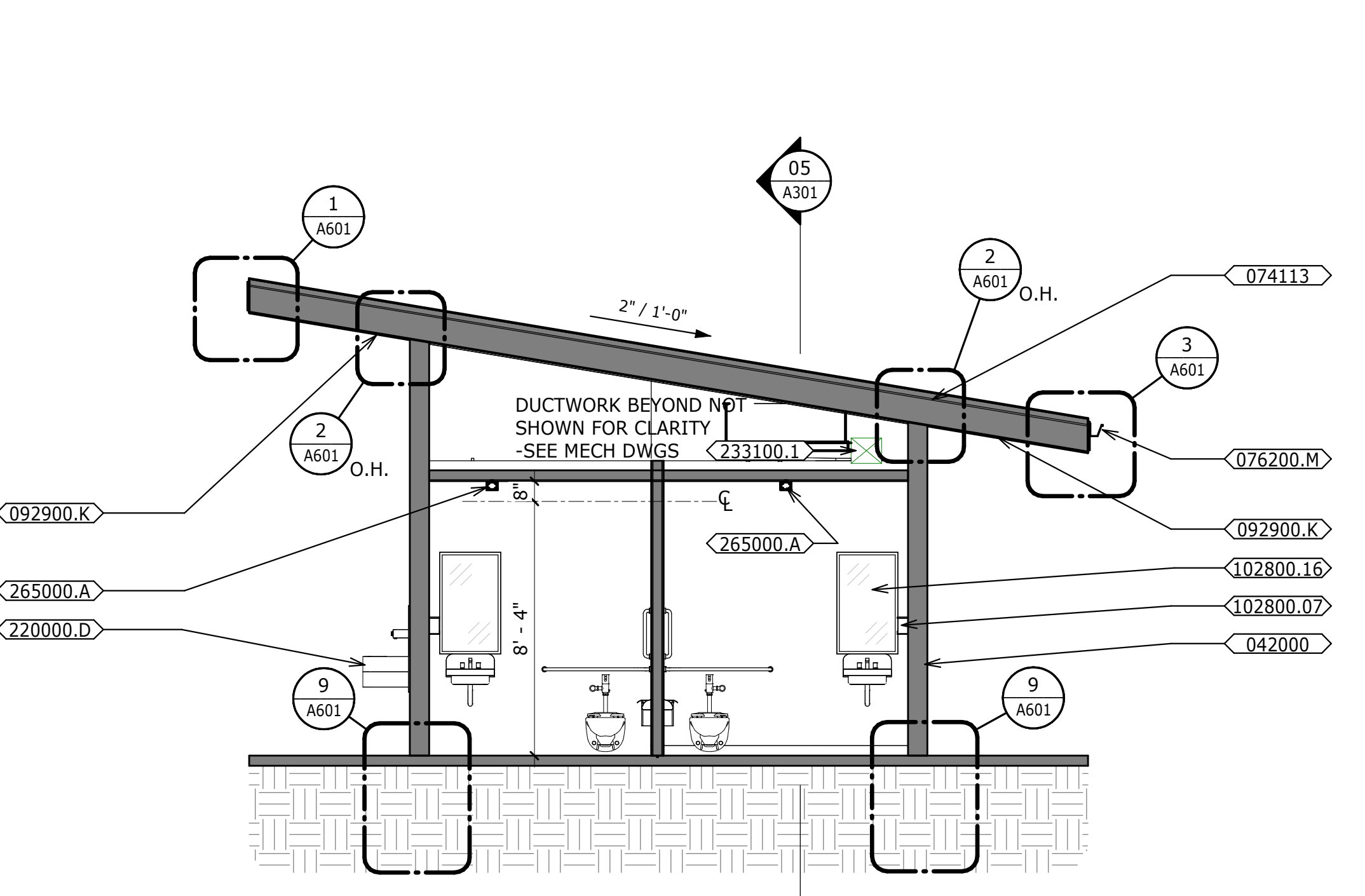
KEY PLAN



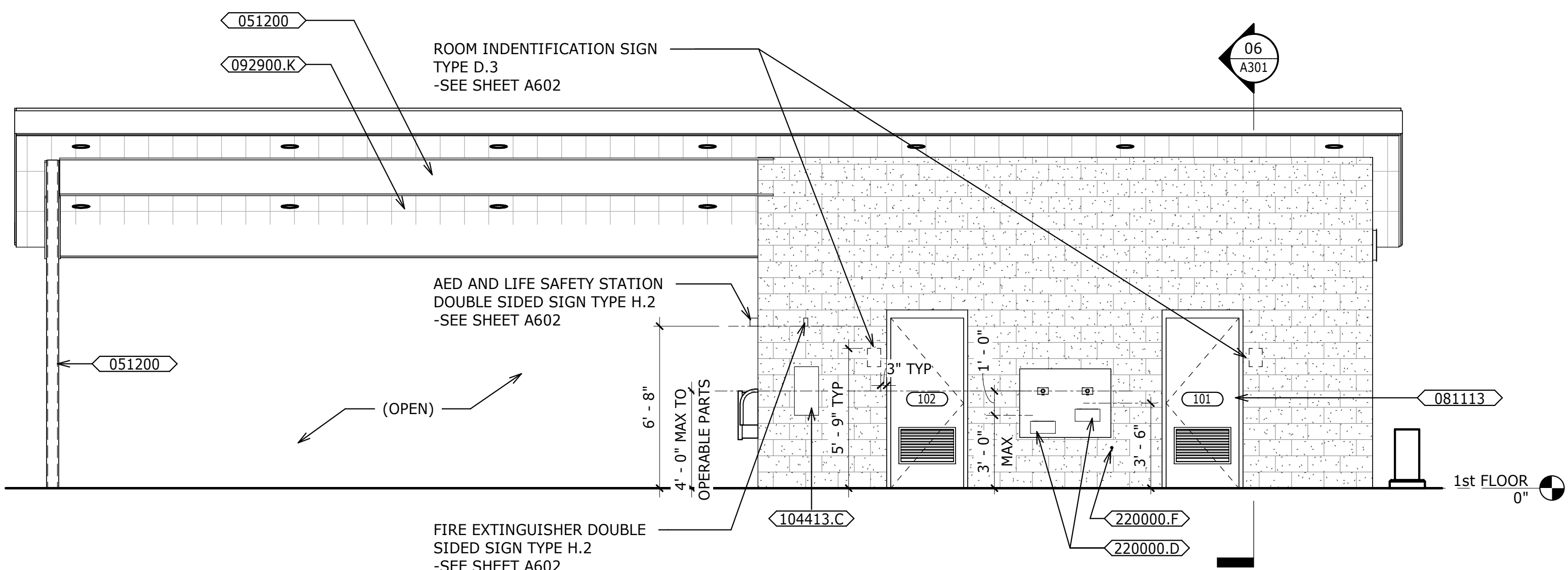
02 ELEVATION - EAST  
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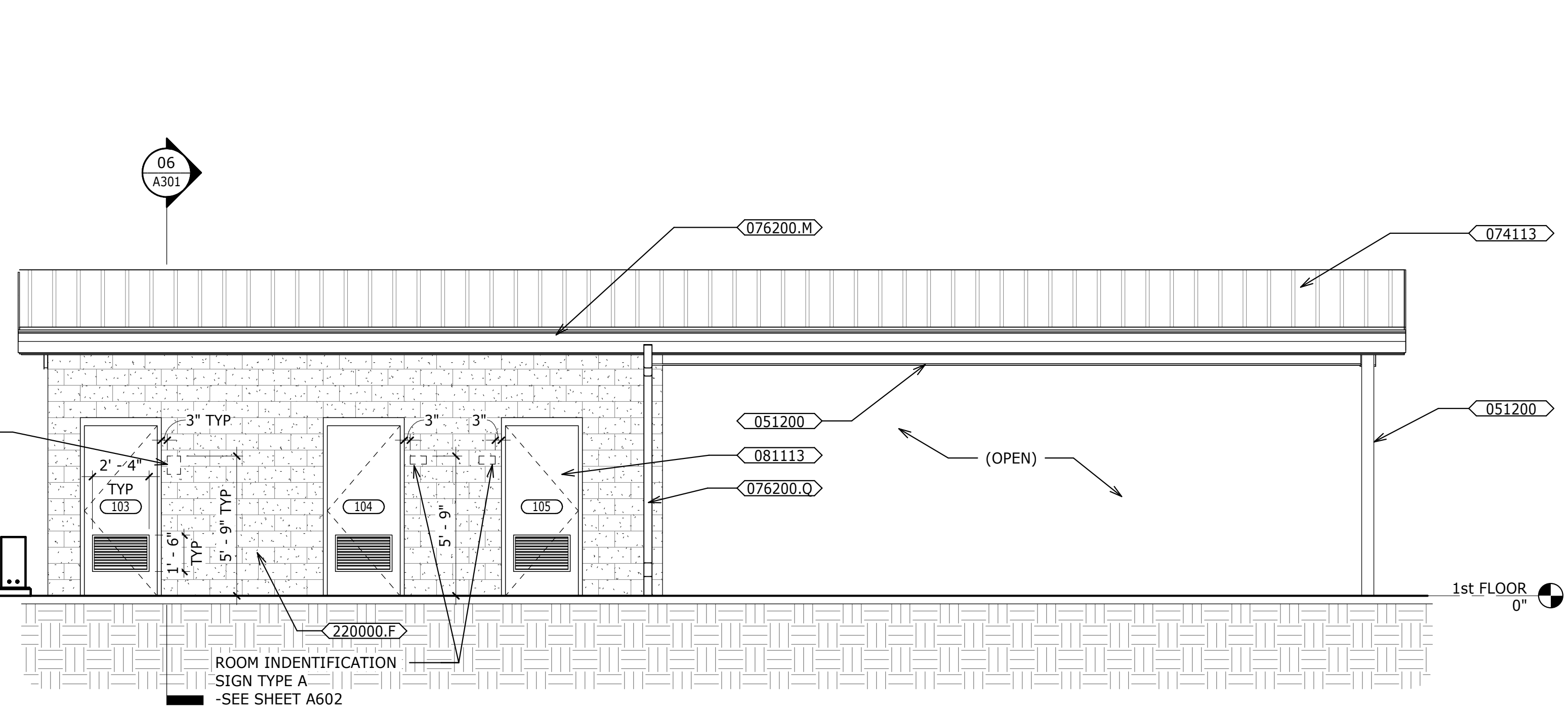
04 ELEVATION - WEST  
A301 1/4" = 1'-0"



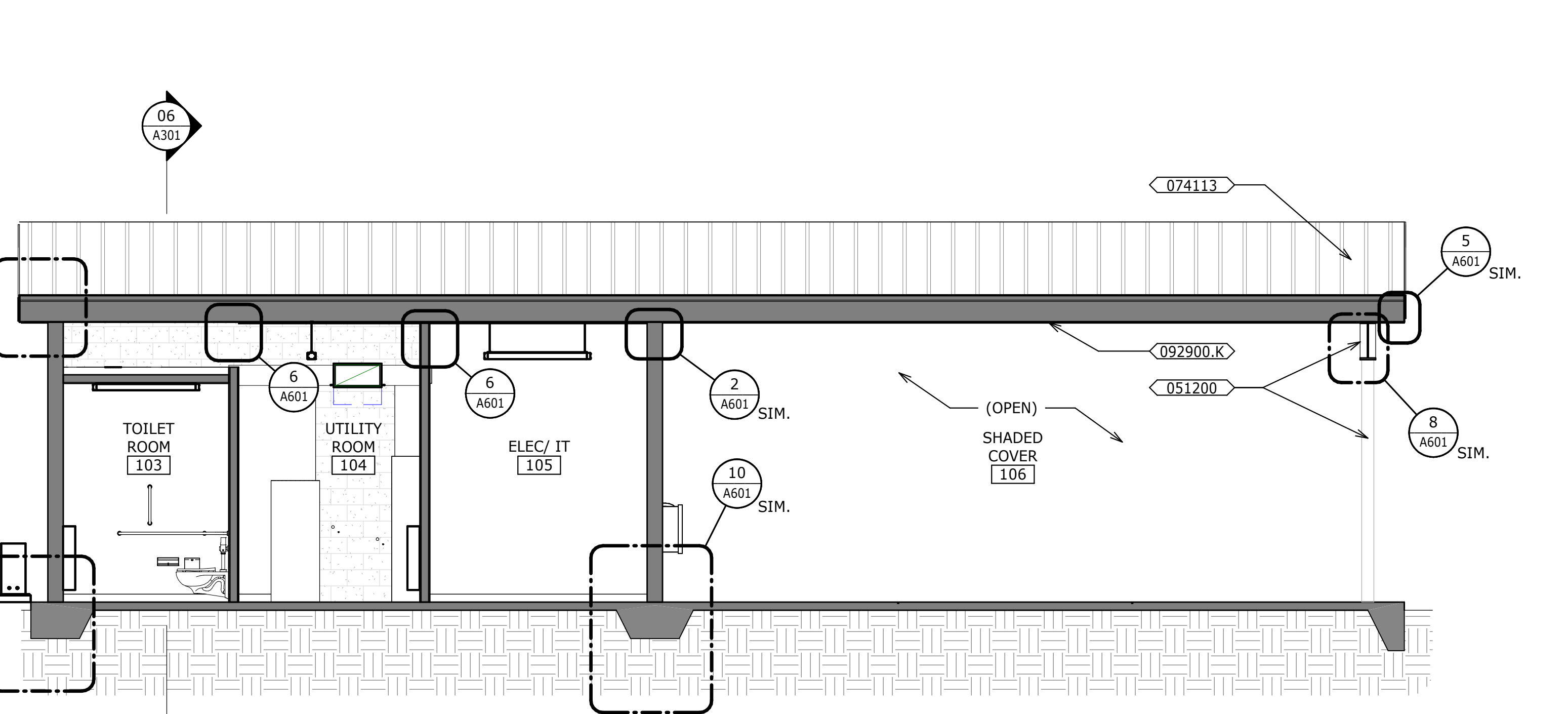
06 NORTH-SOUTH BUILDING SECTION  
A301 1/4" = 1'-0"



01 ELEVATION - NORTH  
A301 1/4" = 1'-0"



03 ELEVATION - SOUTH  
A301 1/4" = 1'-0"



05 EAST-WEST BUILDING SECTION  
A301 1/4" = 1'-0"



KEYNOTES

- 102800.01 GRAB BAR 54"x42"  
102800.02 GRAB BAR 18"  
102800.03 TOILET TISSUE DISPENSER; OWNER PROVIDED, OWNER INSTALLED  
102800.07 SOAP DISPENSER; OWNER PROVIDED, OWNER INSTALLED  
102800.08 SANITARY NAPKIN DISPOSAL; OWNER PROVIDED, OWNER INSTALLED  
102800.09 SEAT COVER-DISPENSER; OWNER PROVIDED, OWNER INSTALLED  
102800.12 SHOWER CURTAIN & ROD  
102800.13 FOLDING SHOWER SEAT  
102800.15 CUSTODIAL MOP AND BROOM HOLDER  
102800.18 SHOWER GRAB BAR 18"x36"  
220000.S ACCESSIBLE SHOWER HEAD; SEE PLUMBING

TOILET ACCESSORIES  
GENERAL NOTES

1. COORDINATE BLOCKING FOR ALL WALL-MOUNTED ACCESSORIES.  
2. PROVIDE TOILET ACCESSORIES NOTED AT EACH PLAN LOCATION OF CORRESPONDING TYPICAL KEYED FIXTURE ELEVATION, AND AS NOTED OTHERWISE.  
3. ALL ACCESSIBLE DETAILS TO COMPLY WITH CURRENT NC ACCESSIBILITY CODE.  
4. FOR ALL PLUMBING FIXTURES, SEE PLUMBING.  
5. COORDINATE THERMAL INSULATION AT ALL EXPOSED PIPING BELOW SINKS / LAVATORIES.

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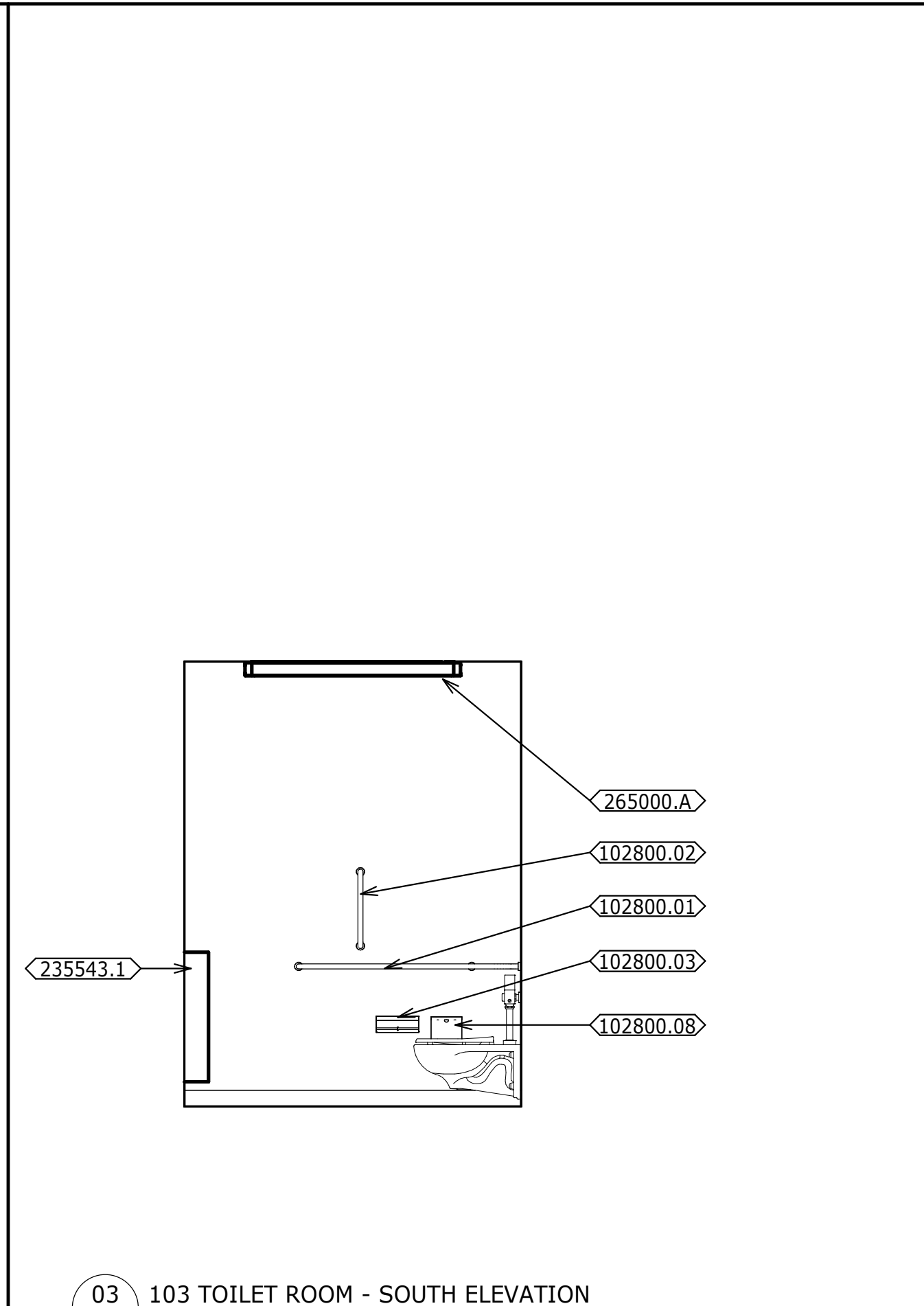
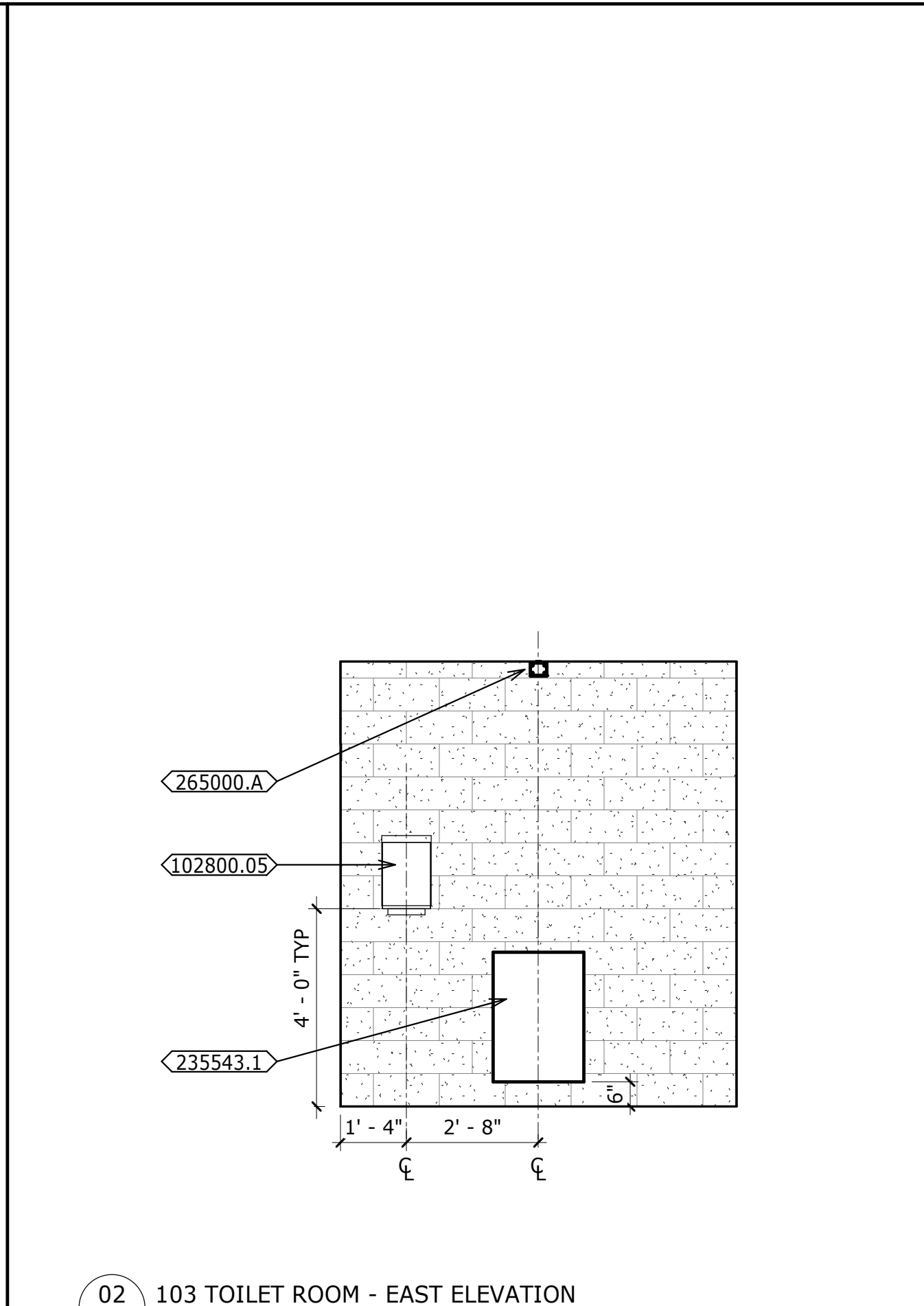
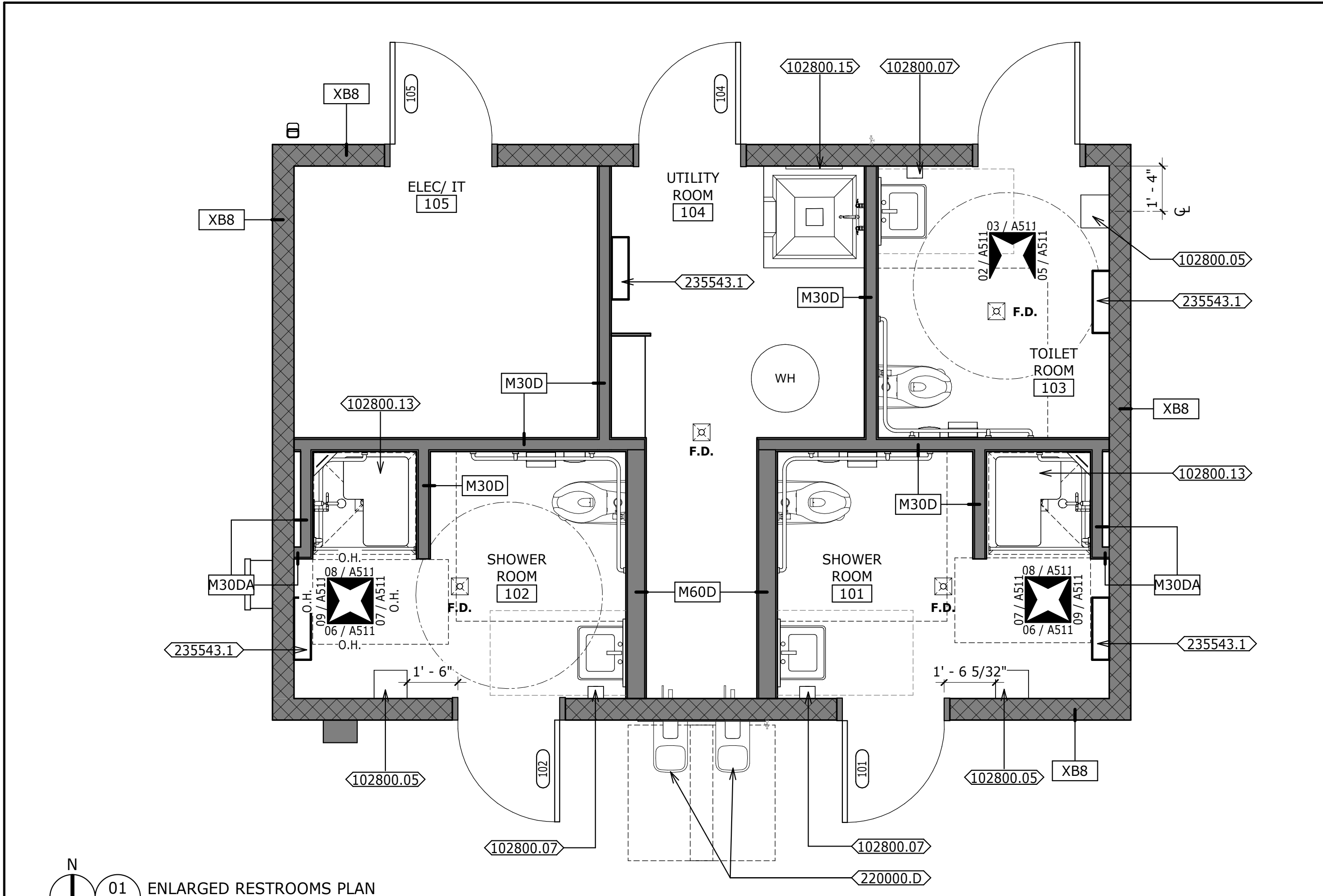
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TYPICAL TOILET AND BATH ACCESSORIES

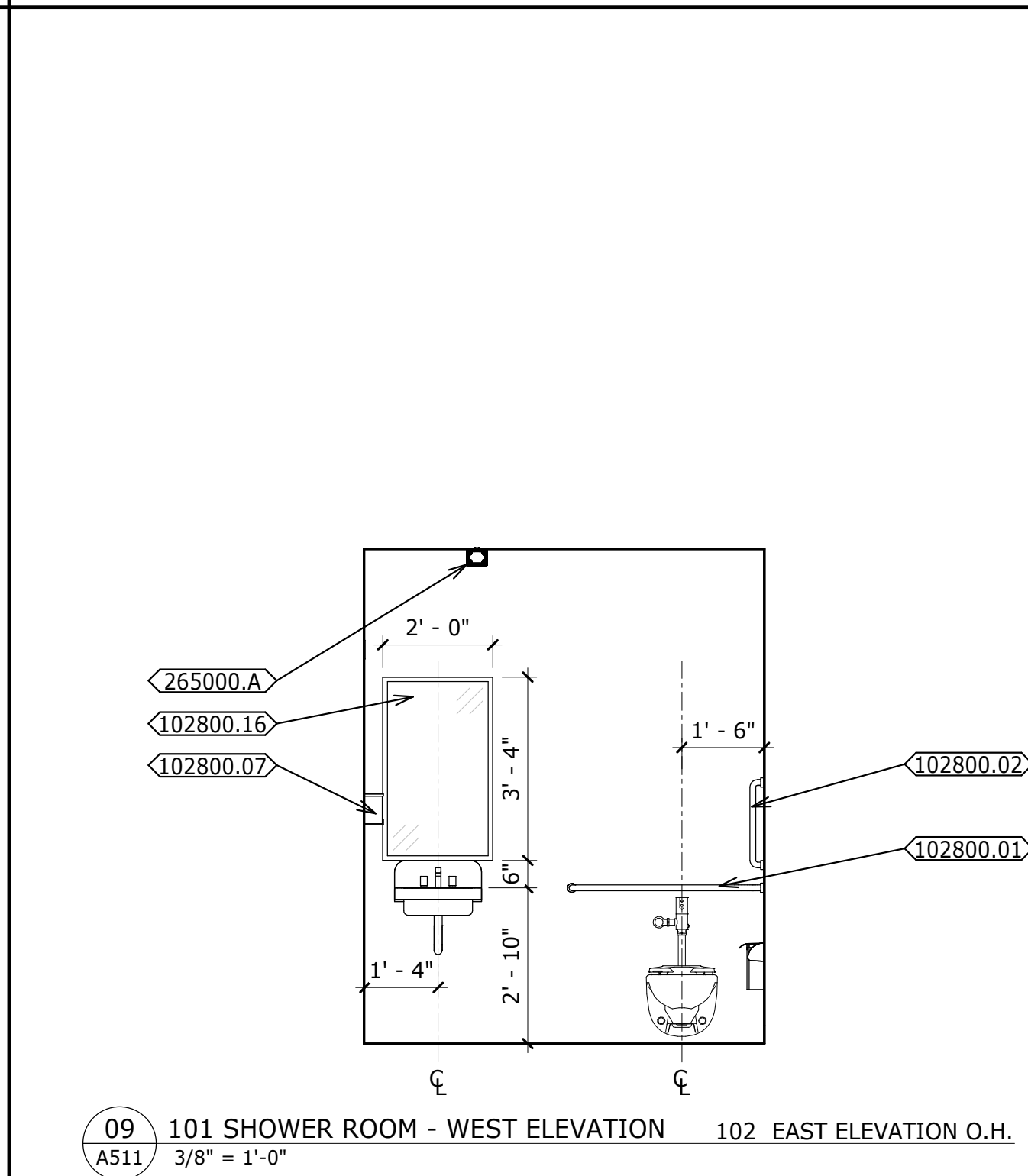
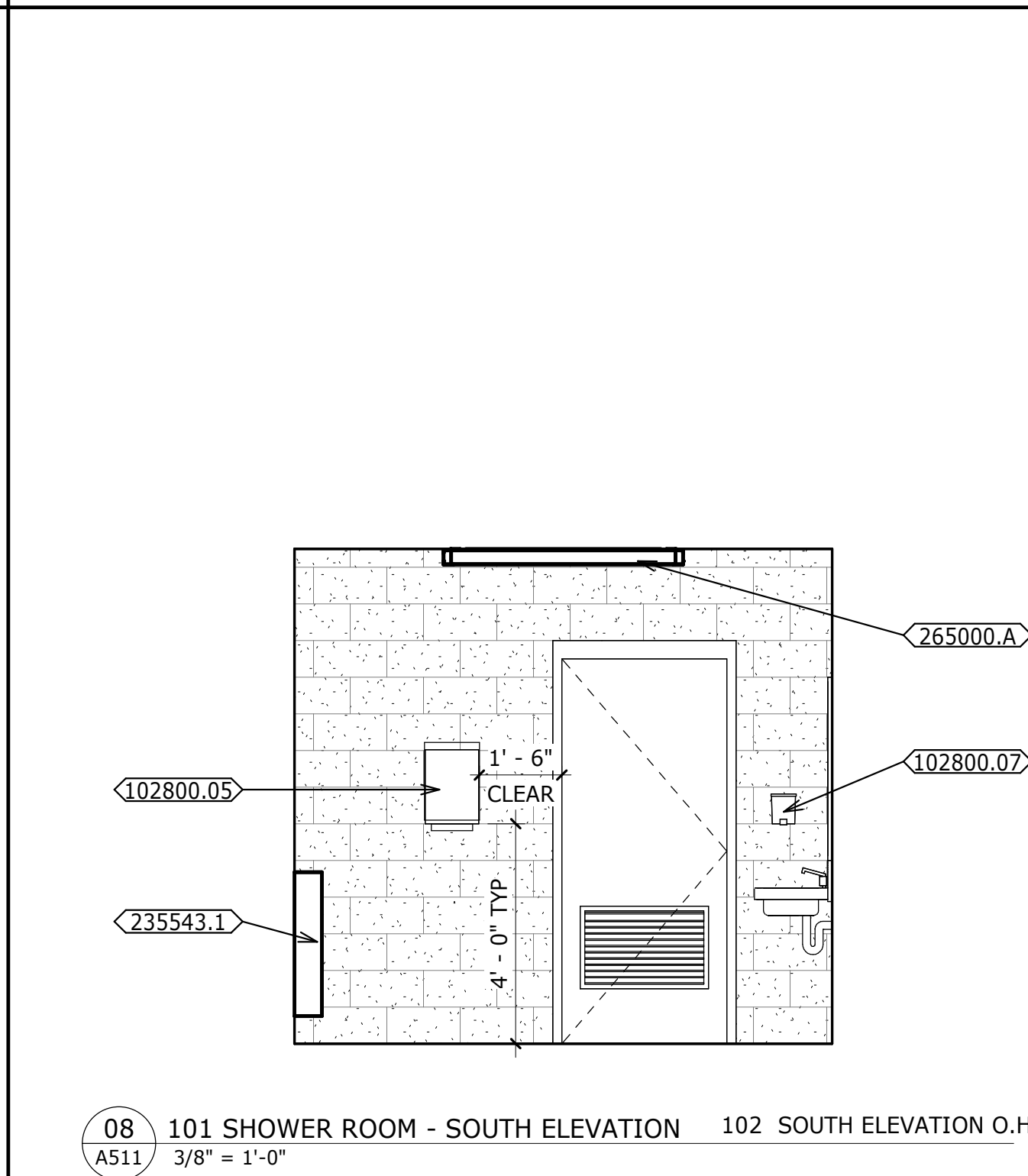
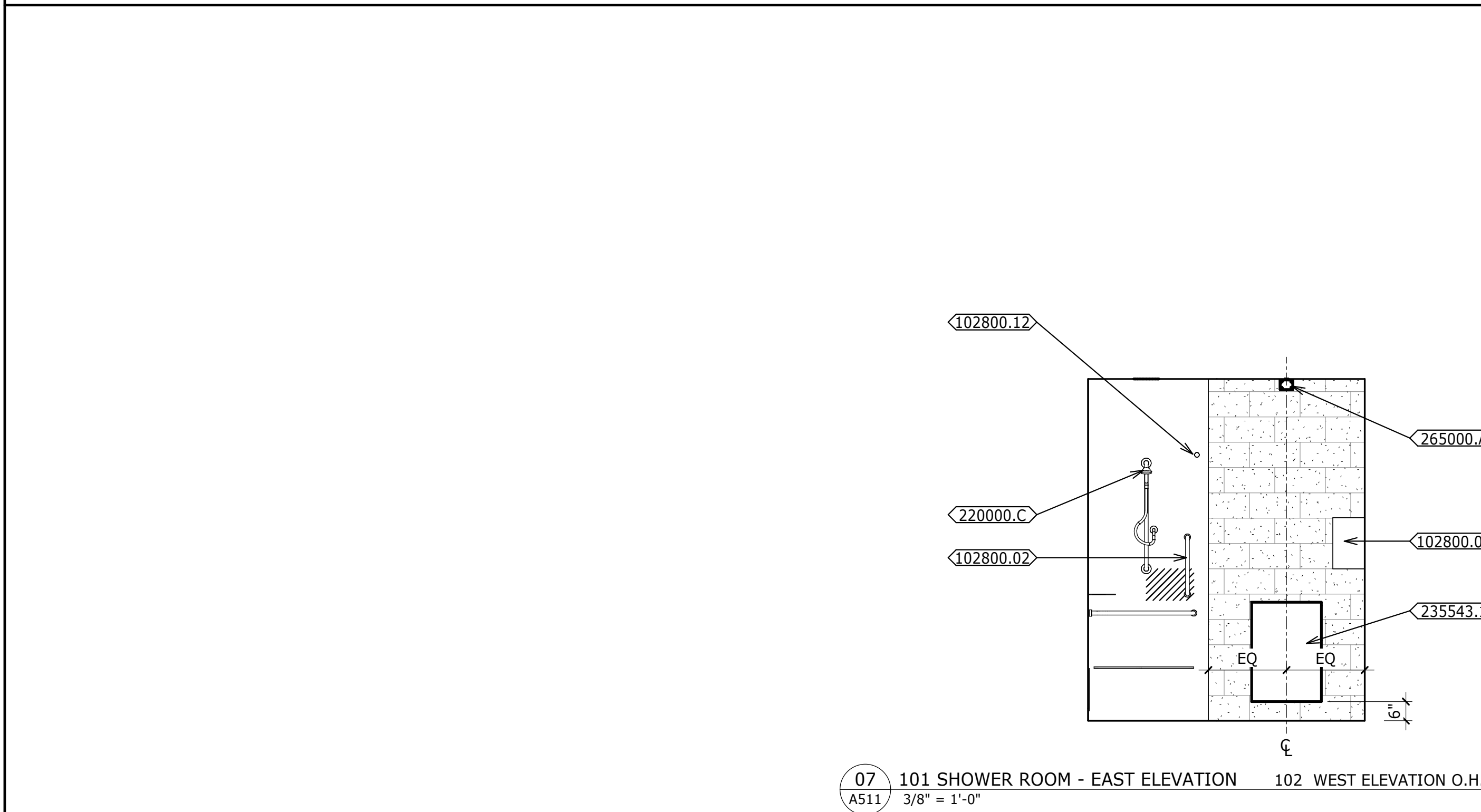
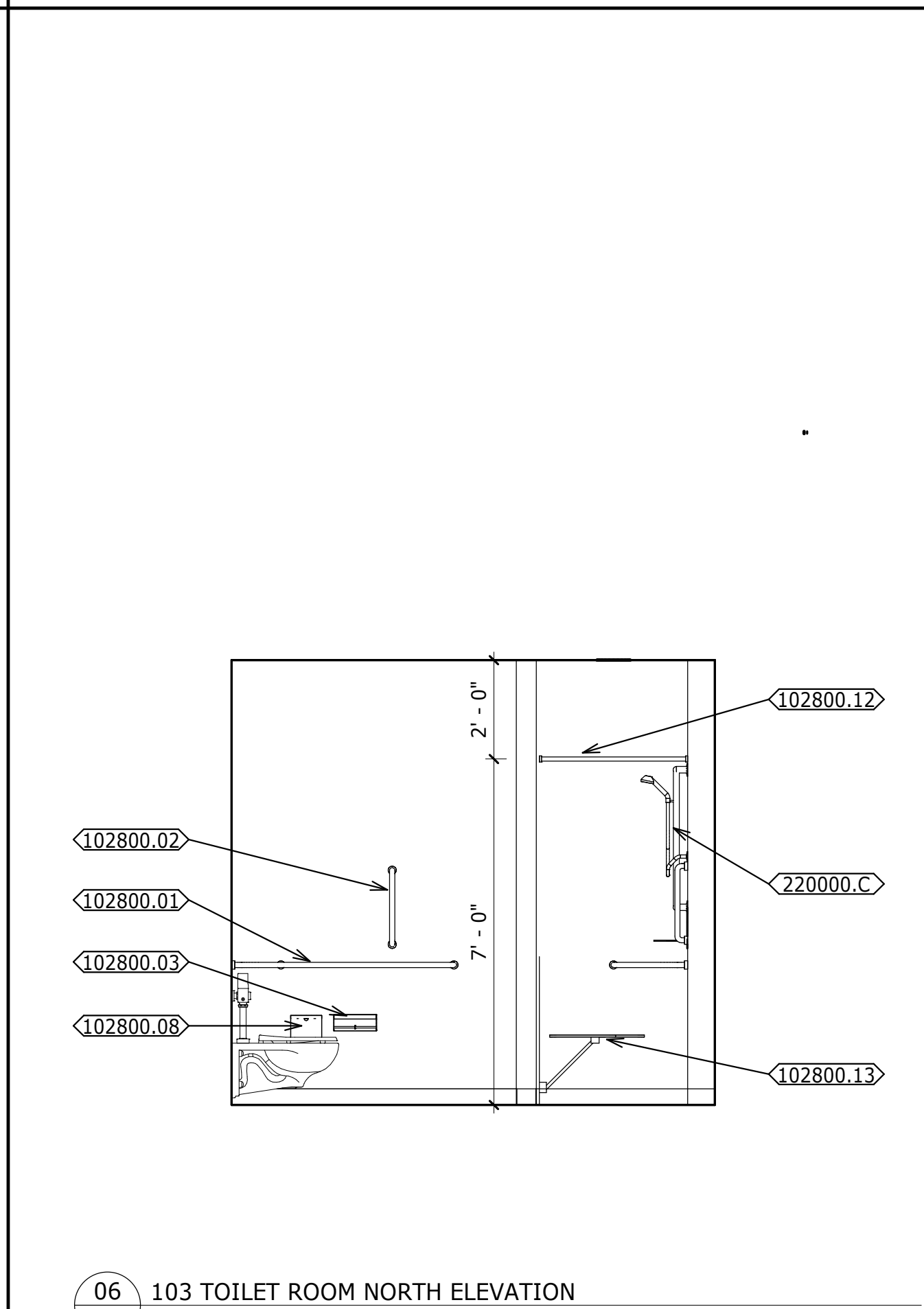
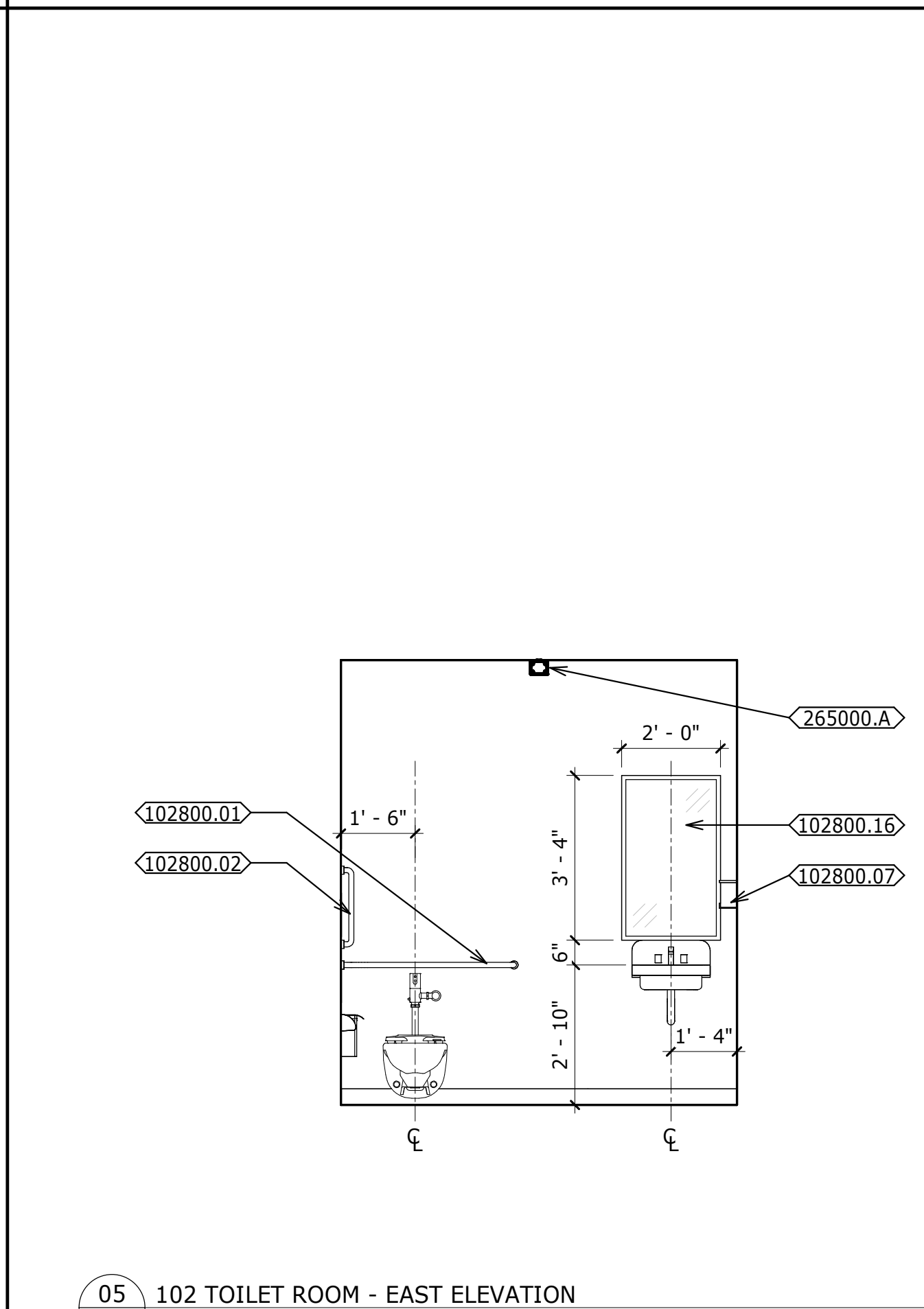
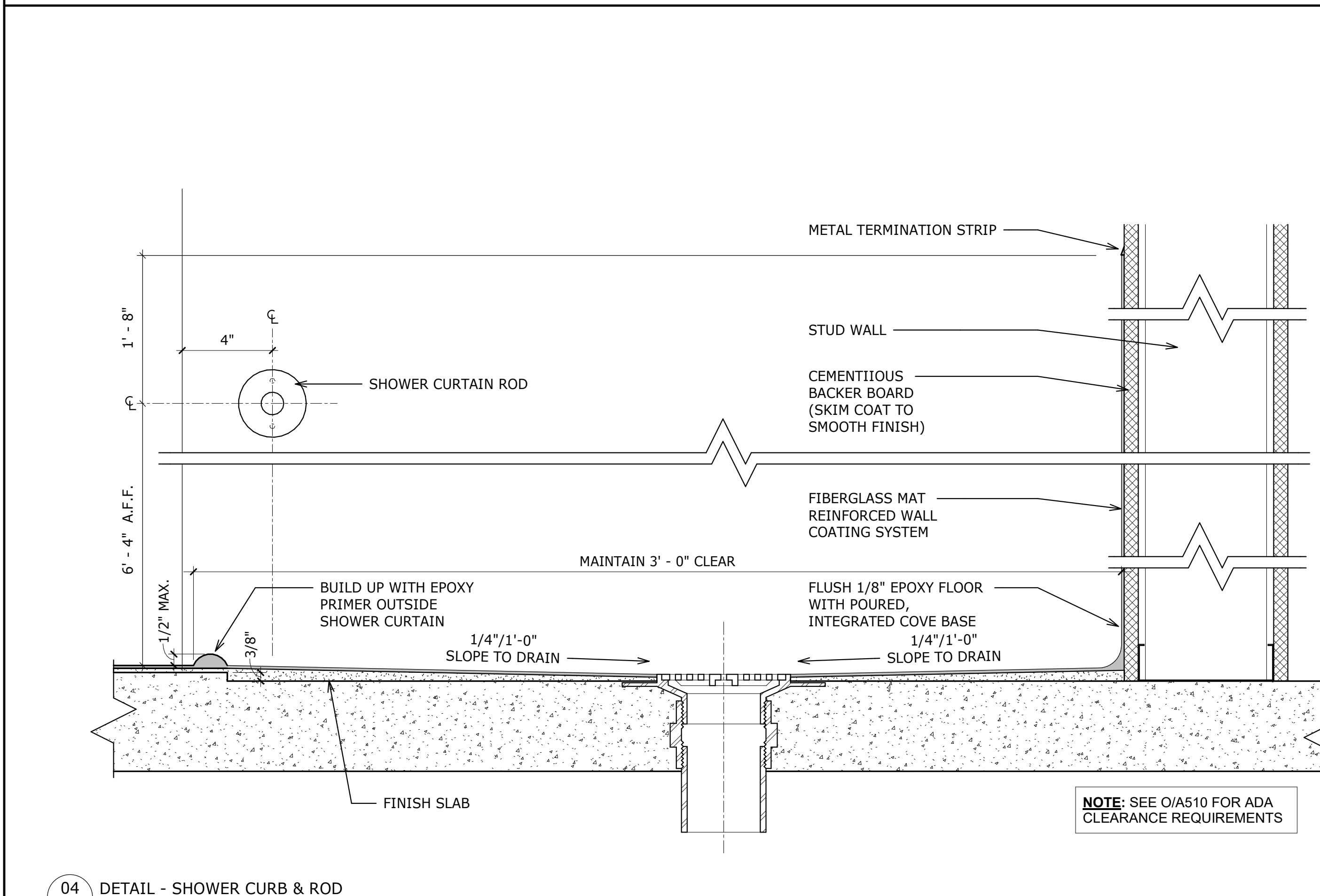
A510





### KEYNOTES

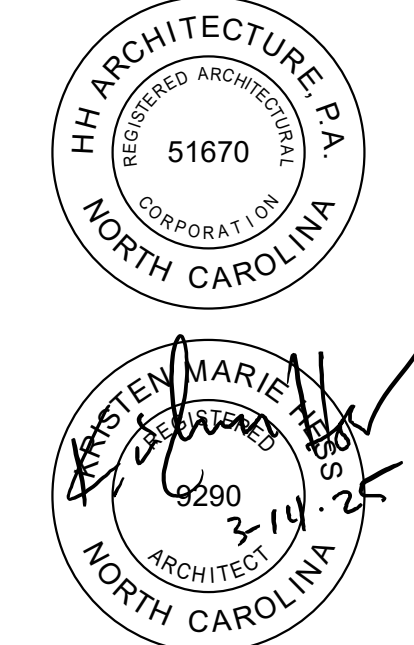
- 102800.01** GRAB BAR 54"x42"
- 102800.02** GRAB BAR 18"
- 102800.03** TOILET TISSUE DISPENSER; OWNER PROVIDED, OWNER INSTALLED
- 102800.05** PAPER TOWEL DISPENSER; OWNER PROVIDED, OWNER INSTALLED
- 102800.07** SOAP DISPENSER; OWNER PROVIDED, OWNER INSTALLED
- 102800.08** SANITARY NAPKIN DISPOSAL; OWNER PROVIDED, OWNER INSTALLED
- 102800.12** SHOWER CURTAIN & ROD
- 102800.13** FOLDING SHOWER SEAT
- 102800.15** CUSTODIAL MOP AND BROOM HOLDER
- 102800.16** MIRROR UNIT
- 220000.C** ACCESSIBLE SHOWER STALL & ACCESSORIES -SLOPE STALL FLOOR TO DRAIN AND FINISH WITH EPOXY PAINT SYSTEM; SEE PLUMBING
- 220000.D** WATER COOLER; SEE PLUMBING
- 235543.1** WALL MOUNTED UNIT HEATER; SEE MECHANICAL
- 265000.A** LINEAR LIGHT FIXTURE; SEE ELECTRICAL



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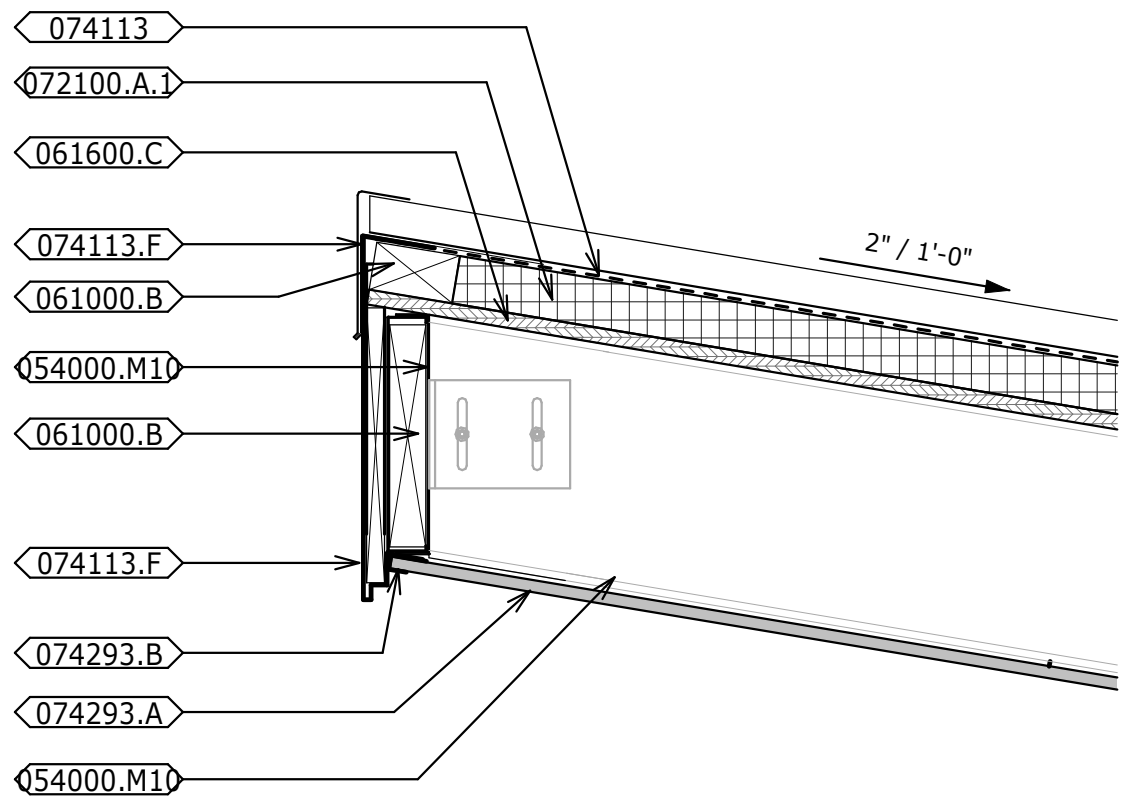


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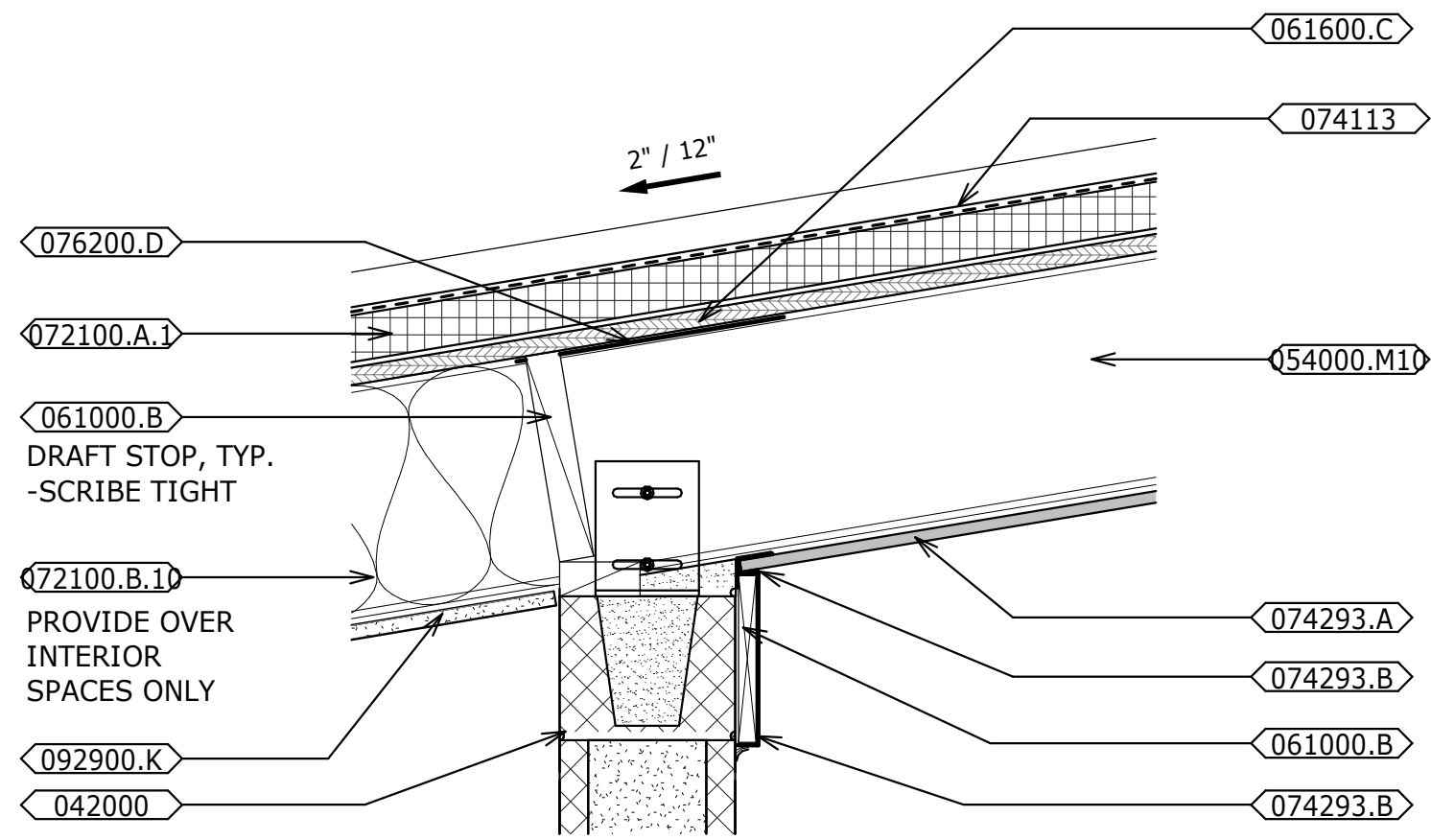
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**TOILET ELEVATIONS - RESTROOM BUILDING**

A511

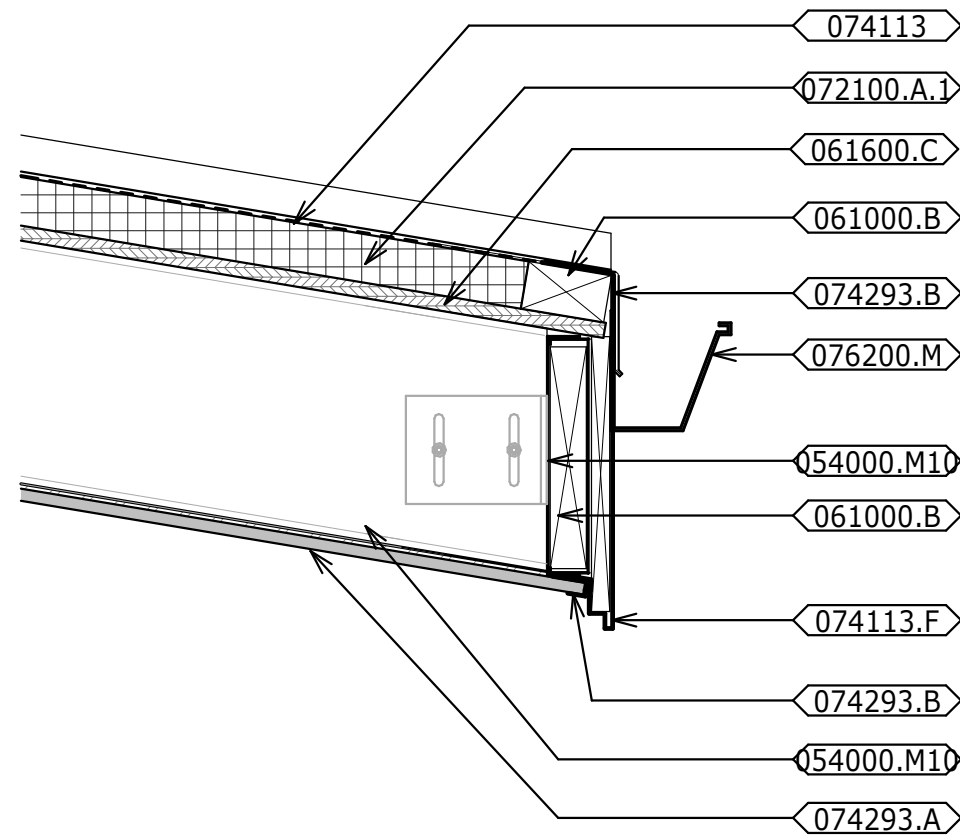




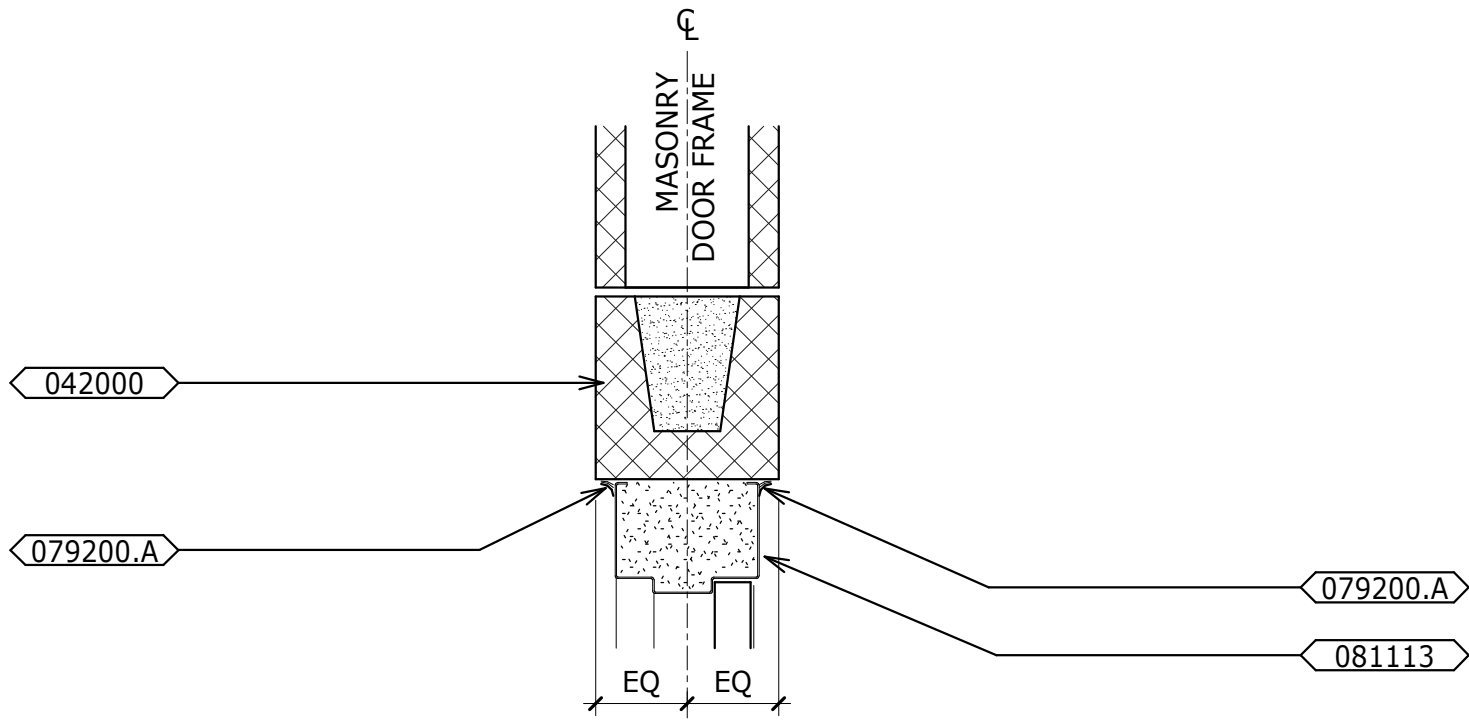
1 DETAIL - ROOF EDGE AT HIGH EAVE  
1 1/2" = 1'-0"



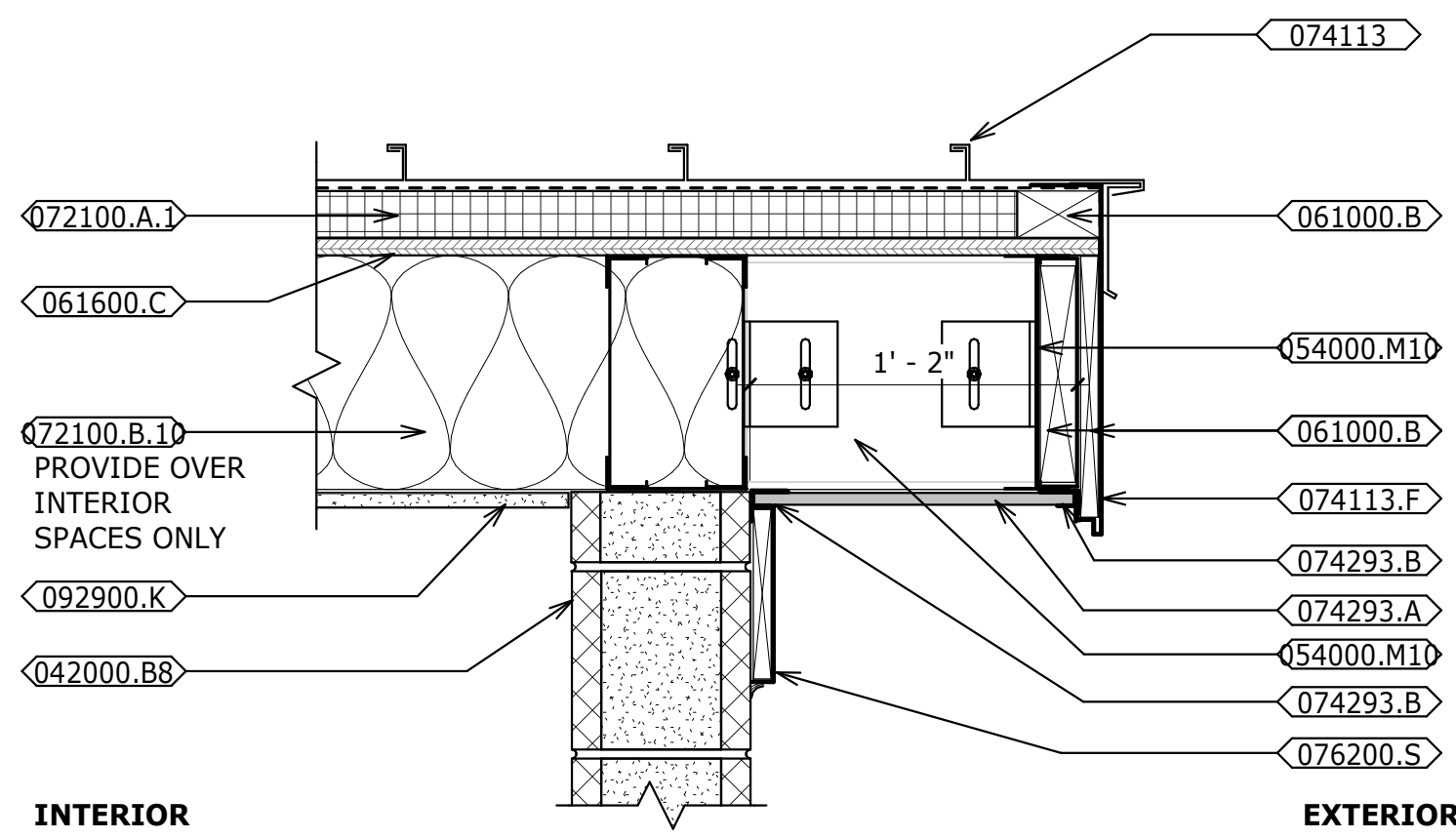
2 DETAIL - ROOF AT OVERHANG  
1 1/2" = 1'-0"



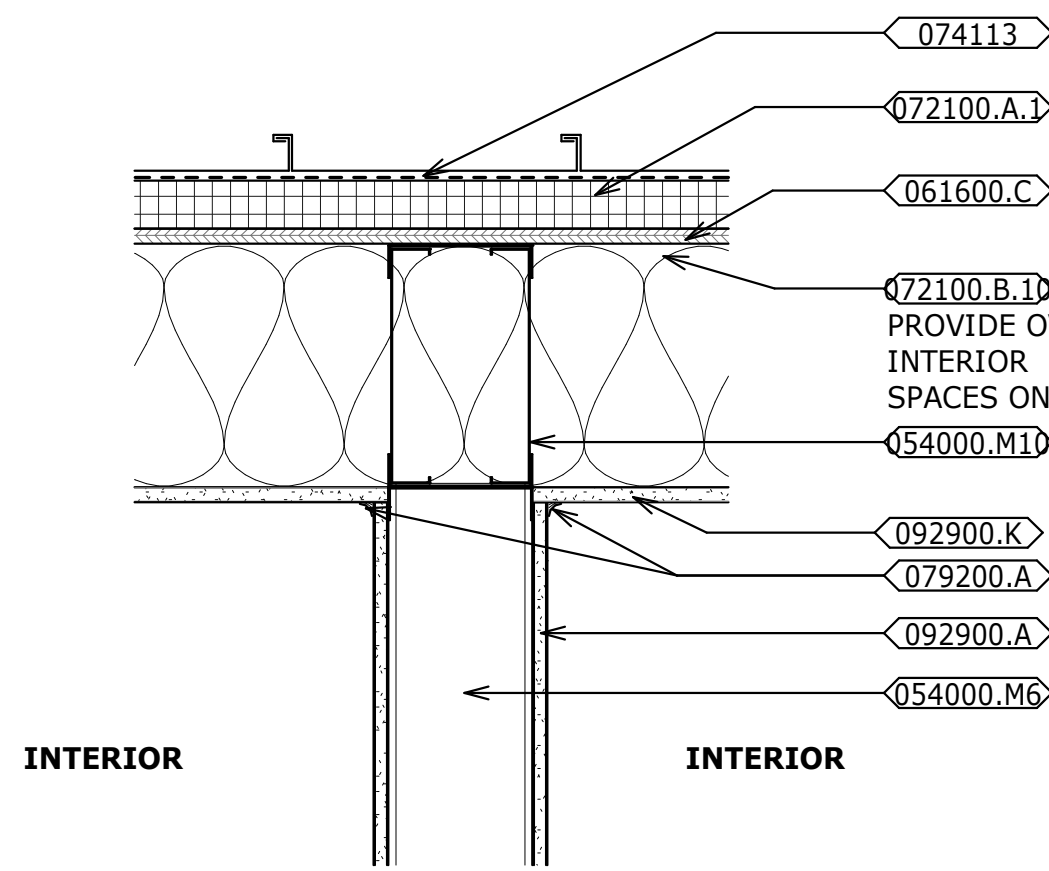
3 DETAIL - ROOF EDGE AT LOW EAVE & GUTTER  
1 1/2" = 1'-0"



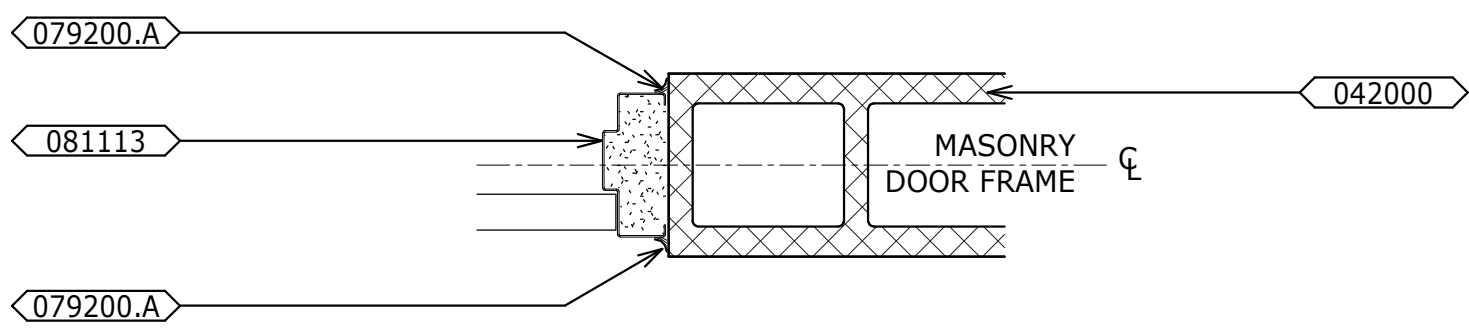
4 DETAIL - EXTERIOR H.M. DOOR HEAD  
1 1/2" = 1'-0"



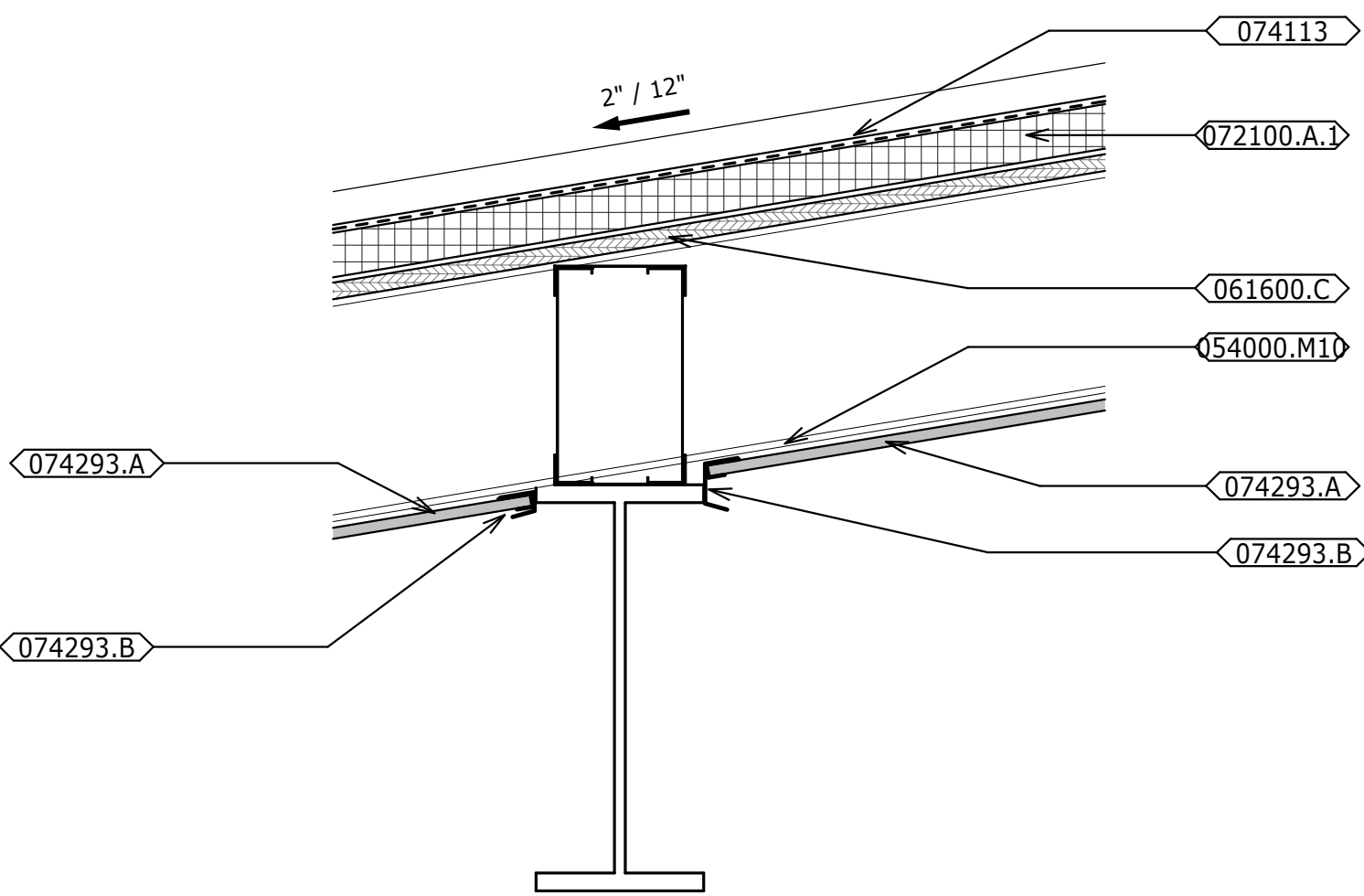
5 DETAIL - ROOF RAKE  
1 1/2" = 1'-0"



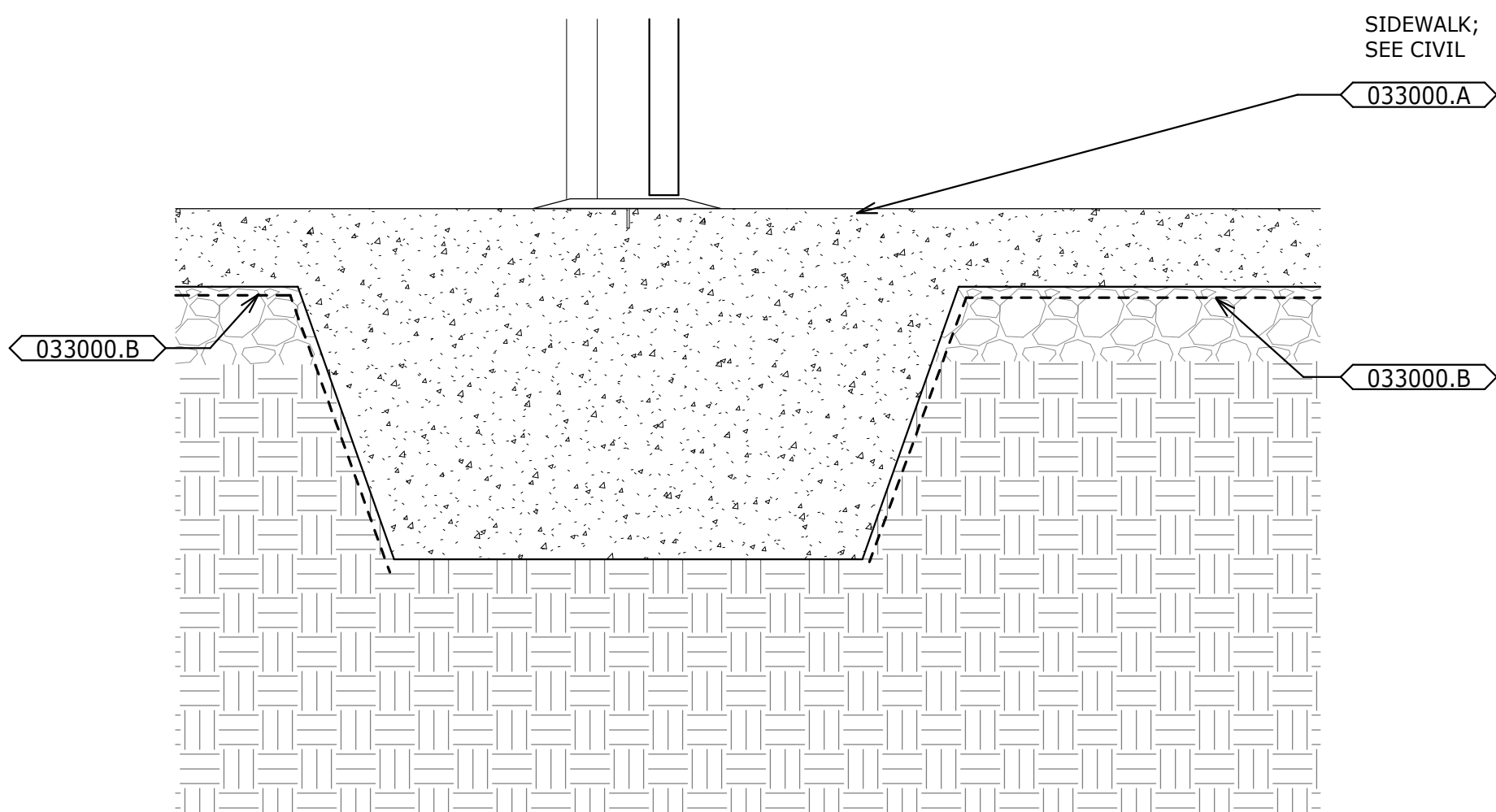
6 DETAIL - ROOF AT INTERIOR WALL  
1 1/2" = 1'-0"



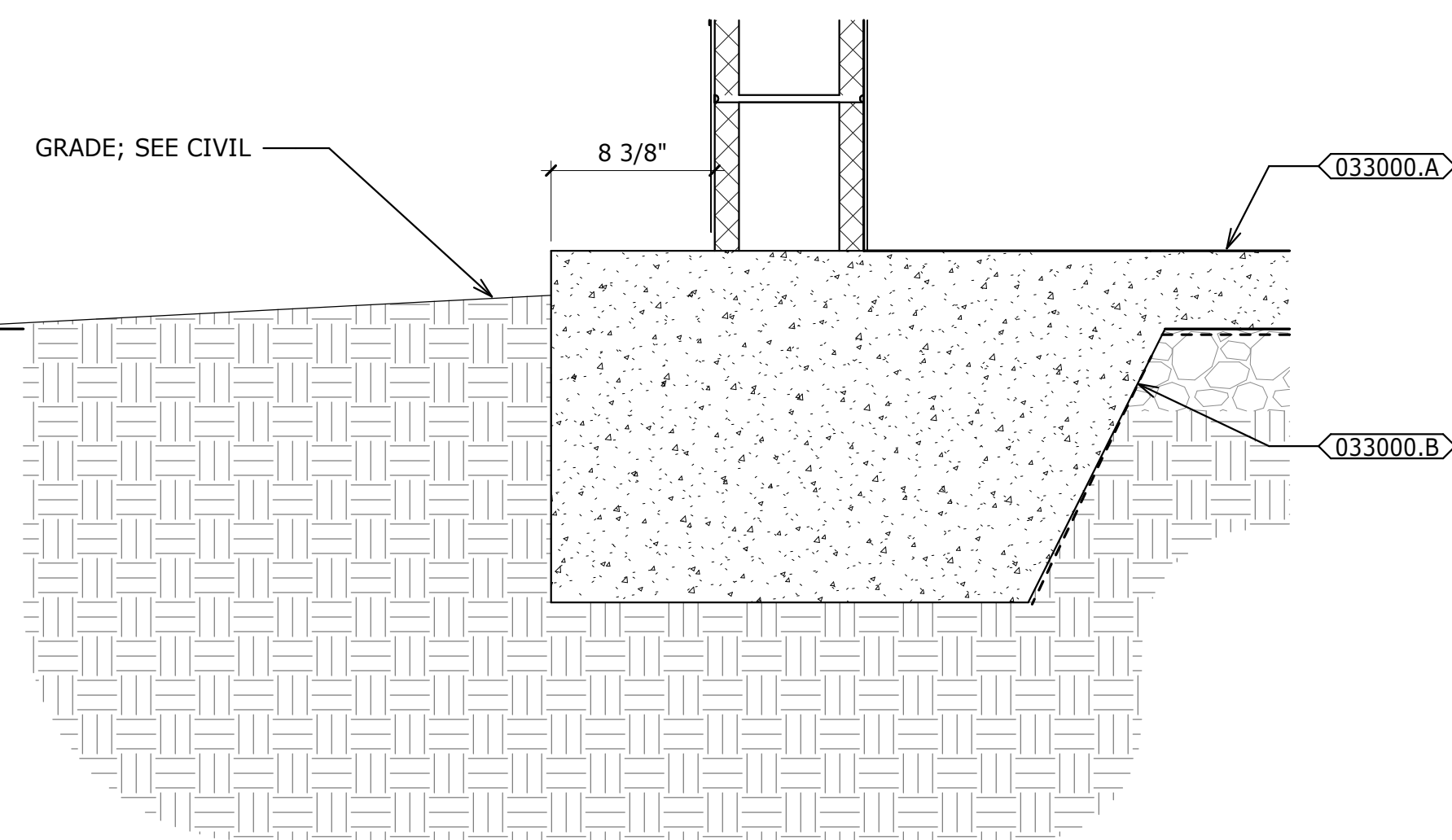
7 DETAIL - EXTERIOR H.M. DOOR JAMB  
1 1/2" = 1'-0"



8 SOFFIT AT STEEL BEAM DETAIL  
1 1/2" = 1'-0"



9 DETAIL - FOUNDATION AT H.M. DOOR THRESHOLD  
1 1/2" = 1'-0"



10 DETAIL - FOUNDATION AT NORTH EXTERIOR WALL  
1 1/2" = 1'-0"

## KEYNOTES

- 033000.A** CAST-IN-PLACE CONCRETE, SEE STRUCTURAL  
**033000.B** UNDER SLAB VAPOR BARRIER  
**042000** UNIT MASONRY  
**042000.B8** CONCRETE MASONRY UNITS, 8x8x16 NOMINAL, SEE STRUCTURAL  
**054000.M6** COLD-FORMED METAL FRAMING, C-SHAPED STUDS, 6"  
**054000.M10** COLD-FORMED METAL FRAMING, C-SHAPED STUDS, 10"  
**061000.B** P.T. WOOD BLOCKING  
**061600.C** PLYWOOD SHEATHING  
**072100.A.1** EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD (XPS), R-7.5  
**072100.B.10** FIBERGLASS BATT INSULATION, R-35  
**074113** STANDING SEAM METAL ROOF SYSTEM  
**074113.F** PREFINISHED METAL FASCIA WITH DRIP EDGE  
**074293.A** METAL SOFFIT PANELS  
**074293.B** METAL SOFFIT PANEL FLASHING & TRIM  
**076200.D** CONTINUOUS HEAD FLASHING  
**076200.M** PREFINISHED HANGING GUTTER  
**076200.S** 1x8 PREFINISHED METAL WRAPPED EXTERIOR GRADE TRIM  
**079200.A** JOINT SEALANTS  
**081113** HOLLOW METAL DOORS AND FRAMES  
**092900.A** GYPSUM WALLBOARD, 5/8"  
**092900.K** GLASS-MAT CEILING BOARD, 5/8"

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**RESTROOM BUILDING - DETAILS**

A601



GENERAL NOTES:

1. THE STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS, AND THE SPECIFICATIONS. THE CONTRACTOR MUST VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION.
3. THE CONTRACTOR MUST PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE.
4. DISCREPANCIES WITHIN DRAWINGS, BETWEEN THE SPECIFICATIONS AND THE DRAWINGS, OR WITHIN THE SPECIFICATIONS, MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER DURING THE BIDDING PROCESS IN TIME TO PERMIT CLARIFICATION BY ADDENDUM. IF INCONSISTENCIES, DISCREPANCIES OR CONTRADICTIONS IN THE CONTRACT DOCUMENTS ARE DISCOVERED AFTER THE CLOSE OF BIDDING QUESTIONS, THE CONTRACTOR MUST BE DEEMED BY SUBMITTAL OF THEIR BID, TO HAVE BID THE MOST COSTLY AS TO LABOR, MATERIALS, DURATION, SEQUENCE AND METHOD OF CONSTRUCTION TO PROVIDE THE WORK.
5. THESE STRUCTURAL DRAWINGS ARE ISSUED ON THE DATE INDICATED FOR THE PURPOSE DESIGNATED. THESE DRAWINGS MUST NOT BE ISSUED OR RELEASED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN AUTHORIZATION OF THE STRUCTURAL ENGINEER OF RECORD.
6. DETAILS LABELED "TYPICAL DETAIL" WITHIN THE DOCUMENTS APPLY TO SITUATIONS ON THE PROJECT THAT MAY OCCUR THROUGHOUT THE PROJECT. SUCH DETAILS APPLY WHETHER OR NOT THE DETAIL IS SPECIFICALLY REFERENCED AT EACH INSTANCE. NOTIFY ENGINEER IF CLARIFICATIONS ARE REQUIRED REGARDING THE APPLICABILITY OF THE "TYPICAL DETAIL".
7. DESIGN CRITERIA:

CLASSIFICATION OF BUILDING  
RISK CATEGORY

II

SUPERIMPOSED ROOF DEAD LOADS - UNIFORM:

1 1/2" INSULATION AND ROOF MEMBRANE	.3 PSF
CEILING	.2 PSF
SPRINKLERS	.3 PSF
DUCTS, LIGHTS, MISC. MECHANICAL	.3 PSF

LIVE LOADS - UNIFORM:

SLAB ON GRADE	.100 PSF
ROOF	.20 PSF

LIVE LOADS - CONCENTRATED:

FLOOR	1,000#
ROOFS	300#

UNLESS OTHERWISE NOTED, CONCENTRATED LOADS ARE APPLIED UNIFORMLY OVER 2'-6" x 2'-6" AREA.

SPECIAL LOADS:

MAXIMUM CONSTRUCTION LOADS ON STEEL DECK . . . . .20 PSF

RAIN LOADS:

RAIN INTENSITY (15 MINUTE) . . . . .6.2 IN/HR

SNOW LOADS:

GROUND SNOW LOAD (Pg)	.15 PSF
FLAT ROOF LOAD (Pi)	.15 PSF
IMPORTANCE FACTOR (Is)	1.0
THERMAL FACTOR (Ci)	1.2
EXPOSURE FACTOR (Ce)	1.2

WIND LOADS:

BASIC WIND SPEED (Vult)	115 MPH
EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	+0.18
COMPONENT AND CLADDING PRESSURES:	
WALLS, ZONE 5 (10 SF)	.39 PSF
ROOF, ZONE 3 (10 SF)	.82 PSF
COVERED STORAGE	
VE-W	2.5 KIPS
VN-S	10.7 KIPS
RESTROOM AND SHADE STRUCUTRE:	
VE-W	3.6 KIPS
VN-S	11.5 KIPS

SEISMIC LOADS:

SITE CLASSIFICATION	D
SEISMIC DESIGN CATEGORY	B
IMPORTANCE FACTOR (IE)	1.0
SPECTRAL RESPONSE ACCELERATIONS:	
Ss	0.147
S1	0.074
Sms	0.236
Sml	0.178
Sds	0.157
Sdl	0.118

ANALYSIS PROCEDURE . . . . .EQUIVALENT LATERAL FORCE

COVERED STORAGE:

LATERAL FORCE	STEEL SYSTEMS NOT SPECIFICALLY DETAILED
RESISTING SYSTEM	FOR SEISMIC RESISTANCE
RESPONSE MODIFICATION FACTOR	3.0
SEISMIC RESPONSE COEFFICIENT (Cs)	0.052
ULTIMATE SEISMIC BASE SHEAR	2.0K

RESTROOM AND SHADE STRUCUTRE:

LATERAL FORCE	INTERMEDIATE REINFORCED MASONRY WALLS
RESISTING SYSTEM	
RESPONSE MODIFICATION FACTOR	3.5
SEISMIC RESPONSE COEFFICIENT (Cs)	0.045
ULTIMATE SEISMIC BASE SHEAR	5.0K

CONTROLLING LATERAL LOADS:

COVERED STORAGE:

VE-W	WIND
VN-S	WIND

RESTROOM AND SHADE STRUCTURE:

VE-W	SEISMIC
VN-S	WIND

FOUNDATION NOTES:

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT PREPARED BY NV5 ENGINEERS AND CONSULTANTS, INC., DATED JANUARY 11, 2024.
2. FOUNDATIONS HAVE BEEN DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF.
3. TOP OF FOOTING ELEVATIONS MUST BE A MINIMUM DEPTH OF 2'-0" BELOW LOWEST ADJACENT SOIL GRADE.
4. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS MUST BE INSPECTED BY THE OWNER'S GEOTECHNICAL TESTING AGENCY TO EXPLORE THE EXTENT OF LOOSE, SOFT, EXPANSIVE, OR OTHERWISE UNSATISFACTORY SOIL MATERIAL AND TO VERIFY DESIGN BEARING PRESSURE. DIRECTION FOR CORRECTIVE ACTION WILL BE PROVIDED BY THE OWNER'S GEOTECHNICAL TESTING AGENCY WHERE UNSATISFACTORY SOILS ARE PRESENT.
5. CONTROL GROUNDWATER AND SURFACE RUNOFF THROUGHOUT THE CONSTRUCTION PROCESS. INUNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES WHICH RESULT IN DETERIORATION OF BEARING MUST BE PREVENTED.

CAST-IN-PLACE CONCRETE NOTES:

1. CONCRETE MUST BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301 AND 318.
2. CONCRETE MUST BE NORMAL WEIGHT AND MUST OBTAIN 28 DAY COMPRESSIVE STRENGTHS AS NOTED IN THE CONCRETE MIX DESIGN NOTES.
3. REINFORCING MATERIALS MUST BE AS FOLLOWS:  
A. REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED.  
B. WELDED WIRE REINFORCEMENT - ASTM A1064, WELDED STEEL WIRE REINFORCEMENT; PROVIDE SHEET TYPE, ROLL TYPE IS NOT ACCEPTABLE.
4. ALL REINFORCING STEEL AND EMBEDDED ITEMS SUCH AS ANCHOR RODS AND WELD PLATES MUST BE ACCURATELY PLACED AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.
5. CONCRETE COVER TO REINFORCING STEEL MUST CONFORM TO THE MINIMUM COVER RECOMMENDATIONS IN ACI 318, UNLESS THE DRAWINGS SHOW GREATER COVER REQUIREMENTS.
6. LAP CONTINUOUS REINFORCING STEEL 57 X BAR DIAMETER, TYPICAL UNLESS OTHERWISE NOTED.

CONCRETE MASONRY NOTES:

1. CONCRETE MASONRY MATERIALS AND CONSTRUCTION MUST CONFORM TO THE AMERICAN CONCRETE INSTITUTE (ACI) 530.
2. CONCRETE MASONRY UNITS MUST CONFORM TO ASTM C90 AND MUST BE MADE WITH NORMAL WEIGHT AGGREGATE. MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY UNITS MUST BE 2,000 PSI AT 28 DAYS.
3. COMPRESSIVE STRENGTH OF MASONRY MUST BE DETERMINED BY THE UNIT STRENGTH METHOD AS SET FORTH IN ACI 530.1. THE NET AREA COMPRESSIVE STRENGTH OF MASONRY, fm, MUST BE 2,000 PSI AT 28 DAYS.
4. MORTAR MUST BE TYPE 'M' OR 'S' AND MUST COMPLY WITH ASTM C270, PROPORTIONS OR PROPERTIES SPECIFICATION.
5. GROUT MUST COMPLY WITH EITHER THE PROPORTIONS OR PROPERTIES SPECIFICATION OF ASTM C476 AND AS FOLLOWS:  
A. PROPORTIONS SPECIFICATION: THIS MIX CANNOT CONTAIN ADMIXTURES. WATER MUST BE ADDED IN THE FIELD IN ORDER TO ACHIEVE A SLUMP OF 8-11 INCHES WHEN PLACED IN THE CONCRETE MASONRY UNITS. MORTAR, PEA GRAVEL, CONCRETE, OR "CHART" MIXES ARE NOT ACCEPTABLE SUBSTITUTES FOR THE SPECIFIED GROUT.  
B. PROPERTIES SPECIFICATION: THIS MIX MUST BE PROPORTIONED TO OBTAIN A DOCUMENTED 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI, WITH AN 8-11 INCH SLUMP WHEN PLACED IN THE CONCRETE MASONRY UNITS.
6. GROUT MUST COMPLY WITH EITHER THE PROPORTIONS OR PROPERTIES SPECIFICATION OF ASTM C476 AND THIS MIX MUST BE PROPORTIONED TO OBTAIN A DOCUMENTED 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI, WITH AN 8-11 INCH SLUMP WHEN PLACED IN THE CONCRETE MASONRY UNITS.
7. REINFORCING STEEL MUST COMPLY WITH ASTM A615, GRADE 60. SHOP FABRICATE REINFORCING BARS WHICH ARE SHOWN TO BE BENT OR HOOKED.
8. ALL BOND BEAMS, REINFORCED CELLS AND CELLS WITH EXPANSION BOLTS, EMBED PLATES OR OTHER ANCHORS AND ALL CELLS BELOW GRADE MUST BE GROUTED SOLID. GROUT PROCEDURE MUST COMPLY WITH ACI 530.1.
9. ALL CMU WALLS MUST BE REINFORCED CONTINUOUSLY FROM FOUNDATION TO TOP OF WALL. WHERE REINFORCING IS INTERRUPTED, OFFSET AND LAP ADDITIONAL BARS PER THE "TYPICAL OFFSET SPLICE AT MASONRY WALL DETAILS."
10. LAP ALL REINFORCING PER SCHEDULE BELOW, TYPICAL UNLESS OTHERWISE NOTED:

MASONRY LAP SCHEDULE		
REINF SIZE	52 x BAR DIAMETER	
#5	33"	

11. ALL WALLS MUST BE REINFORCED WITH #5 VERTICAL BARS AT 24 INCHES ON CENTER, TYPICAL UNLESS OTHERWISE NOTED.
12. PROVIDE REINFORCING STEEL DOWELS OF THE SAME SIZE AND SPACING AS VERTICAL REINFORCING FROM THE SUPPORTING STRUCTURE. DOWELS MUST HAVE STANDARD ACI HOOKS. DOWELS MAY BE POST-INSTALLED AT THE CONTRACTOR'S OPTION.
13. PROVIDE STANDARD 9 GAGE LADDER TYPE HORIZONTAL JOINT REINFORCING IN CMU WALLS AT 16 INCHES ON CENTER AND IN TWO JOINTS IMMEDIATELY ABOVE AND BELOW ALL OPENINGS, EXTENDING A MINIMUM OF 2 FEET BEYOND THE JAMB ON EACH SIDE OF THE OPENING, EXCEPT AT CONTROL JOINTS.
14. PROVIDE HORIZONTAL BOND BEAMS WITH CONTINUOUS REINFORCING AS SHOWN IN THE SECTIONS AND DETAILS. DISCONTINUE ALL HORIZONTAL REINFORCING AT CONTROL JOINTS.
15. DO NOT LOCATE CONTROL JOINTS WITHIN TWO FEET OF STEEL BEAM BEARING LOCATIONS.

CONCRETE MIX DESIGN NOTES:

1. MIX DESIGNS COMPRESSIVE STRENGTHS (fc) BASED ON 28 DAY DESIGN STRENGTH, UNLESS OTHERWISE NOTED.
2. CONCRETE NOT OTHERWISE NOTED:  
A. MINIMUM COMPRESSIVE STRENGTH (fc) = 3000 PSI
3. FOUNDATIONS (SPREAD FOOTINGS, MAT FOOTINGS):  
A. EXPOSURE CLASS = ACI 318 F0, S0, W0, C1  
B. MINIMUM COMPRESSIVE STRENGTH (fc) = 3,000PSI  
C. MAXIMUM W/CM = 0.5  
D. BLENDED HYDRAULIC CEMENT = ASTM C595 TYPE 1L  
E. SLUMP = 5" MAX PLUS OR MINUS 1", OR 8" MAX, PLUS OR MINUS 1" FOR CONCRETE WITH A VERIFIED SLUMP OF 3" PLUS OR MINUS 1" BEFORE ADDING HIGH-RANGE WATER-REDUCING OR PLASTICIZING ADMIXTURE  
F. AIR CONTENT = NO REQUIREMENTS  
G. AGGREGATE = NORMAL WEIGHT, ¾" NOMINAL  
H. LIMIT WATER-SOLUBLE, CHLORIDE-ION CONTENT IN HARDENED CONCRETE TO 0.30 PERCENT BY WEIGHT OF CEMENT
4. SLAB-ON-GRADE:  
A. EXPOSURE CLASS = ACI 318 F1, S0, W0, C2  
B. MINIMUM COMPRESSIVE STRENGTH (fc) = 5,000PSI  
C. MAXIMUM W/CM = 0.4  
D. BLENDED HYDRAULIC CEMENT = ASTM C595 TYPE 1L  
E. SLUMP = 5" MAX PLUS OR MINUS 1", OR 8" MAX, PLUS OR MINUS 1" FOR CONCRETE WITH A VERIFIED SLUMP OF 3" PLUS OR MINUS 1" BEFORE ADDING HIGH-RANGE WATER-REDUCING OR PLASTICIZING ADMIXTURE  
F. AIR CONTENT = 0.06  
G. AGGREGATE = NORMAL WEIGHT, ¾" NOMINAL  
H. LIMIT WATER-SOLUBLE, CHLORIDE-ION CONTENT IN HARDENED CONCRETE TO 0.15 PERCENT BY WEIGHT OF CEMENT

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL MUST BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360.
2. STRUCTURAL STEEL FABRICATOR MUST PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM AND BE A DESIGNATED AISC-CERTIFIED PLANT.
3. STRUCTURAL STEEL INSTALLER MUST PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM AND BE A DESIGNATED AISC-CERTIFIED ERECTOR.
4. STRUCTURAL STEEL MUST COMPLY WITH THE FOLLOWING SPECIFICATIONS:  
A. STRUCTURAL STEEL SHAPES, PLATES AND BARS UNLESS OTHERWISE NOTED - ASTM A572, Fy = 50 KSI  
B. STRUCTURAL STEEL W-SHAPES - ASTM A992, Fy = 50 KSI  
C. HOLLOW STRUCTURAL SECTIONS (HSS):  
a. SQUARE & RECTANGULAR - ASTM A500, GRADE C, Fy = 50 KSI  
b. ROUND - ASTM A500, GRADE C, Fy = 46 KSI  
D. ANCHOR RODS - ASTM F1554, GRADE 36  
E. HIGH STRENGTH BOLTS - ASTM A325 (TYPICAL UON)  
F. WASHERS - ASTM F436  
G. NUTS - ASTM A563  
H. HEADED STUDS - ASTM A29, GRADE 1010 THROUGH 1020
5. UNLESS OTHERWISE NOTED, ALL REQUIRED DESIGN STRENGTHS AND REACTIONS INDICATED ARE BASED ON THE "LOADING COMBINATIONS USING STRENGTH DESIGN OR LOAD AND RESISTANCE FACTOR DESIGN" PER SECTION 1605.2 OF THE BUILDING CODE.
6. STRUCTURAL STEEL FRAME IS CONSIDERED AS UNRESTRAINED FOR FIRE PROTECTION PURPOSES.
7. ALL STEEL CONNECTIONS AND MEMBER REINFORCEMENT MUST BE DESIGNED BY FABRICATOR'S QUALIFIED PROFESSIONAL ENGINEER FOR LOADS INDICATED ON THE DRAWINGS, PER OPTION 3B OF ANSI/AISC 303 AND COMPLETE THE FOLLOWING:  
A. SUBMIT STRUCTURAL CALCULATIONS SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA RESPONSIBLE FOR THEIR PREPARATION.  
B. THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN MUST REVIEW THE SHOP DRAWINGS PRIOR TO SUBMITTAL TO VERIFY THAT THE CONNECTIONS AS DETAILED ON THE SHOP DRAWINGS COMPLY WITH THE CONNECTION DESIGN REQUIREMENTS OF THE FINAL CALCULATIONS.  
C. A REVIEW LETTER, SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN MUST BE PROVIDED WITH THE SHOP DRAWINGS AND CALCULATION SUBMITTAL STATING THAT THIS REVIEW AND VERIFICATION HAS BEEN COMPLETED.
8. HIGH STRENGTH BOLTS MAY BE TIGHTENED TO THE "SNUG TIGHT" CONDITION, UNLESS OTHERWISE NOTED.
9. BOLTED CONNECTIONS MAY USE NON-STANDARD HOLES, EXCEPT IN THE FOLLOWING LOCATIONS:  
ALL FRAMING CONNECTIONS AT MOMENT FRAMES.
10. PROVIDE ANGLE FRAMING AROUND OPENINGS LARGER THAN 6 INCHES IN ANY DIMENSION (INCLUDING ROOF DRAINS) TO SUPPORT STEEL DECK. REFERENCE PLANS AND TYPICAL DETAILS FOR SIZING REQUIREMENTS.
11. WELDING MUST BE IN ACCORDANCE WITH AWS D1.1, "STRUCTURAL WELDING CODE - STEEL." WELD ELECTRODES MUST BE E70XX LOW HYDROGEN, UNLESS OTHERWISE NOTED. PROVIDE CONTINUOUS FILLET WELDS WITH MINIMUM SIZE REQUIRED BY TABLE J2.4 AISC 360.
12. SHOP PRIME STEEL SURFACES, EXCEPT THE FOLLOWING:  
A. SURFACES EMBEDDED IN CONCRETE OR MORTAR. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO A DEPTH OF 2 INCHES.  
B. SURFACES TO BE WELDED.  
C. SURFACES TO RECEIVE SPRAYED FIRE-RESISTIVE MATERIALS.  
D. GALVANIZED SURFACES.  
E. SURFACES ENCLOSED IN INTERIOR CONSTRUCTION.
13. CLEAN ALL STEEL SURFACES TO BE PAINTED. REMOVE LOOSE RUST, MILL SCALE, SPATTER, SLAG, OR FLUX DEPOSITS. PREPARE SURFACES IN ACCORDANCE WITH SSPC-SP3 SPECIFICATION AND STANDARD.
14. HOT-DIP GALVANIZE AFTER FABRICATION THE FOLLOWING:  
A. ANGLES AND PLATES SUPPORTING MASONRY IN EXTERIOR WALLS.  
B. LINTELS AND LINTEL ASSEMBLIES SUPPORTING MASONRY IN EXTERIOR WALLS.  
C. ALL STEEL EXPOSED TO WEATHER IN THE FINAL CONSTRUCTION.  
D. ITEMS IDENTIFIED AS GALVANIZED ON ARCHITECTURAL OR STRUCTURAL DRAWINGS.
15. STEEL MEMBERS MUST BE SPLICED ONLY WHERE INDICATED.

STEEL JOIST NOTES:

1. STEEL JOISTS MUST BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE (SJI) STANDARD SPECIFICATIONS.
2. JOIST BRIDGING MUST CONFORM TO SJI SPECIFICATIONS, INCLUDING BRIDGING REQUIRED FOR JOISTS SUBJECTED TO UPLIFT LOADS. PROVIDE CROSS-BRIDGING AT ENDS OF BRIDGING LINES AND CHANGES IN JOIST DEPTH AND AT ROLLED STEEL SHAPES RUNNING PARALLEL TO JOISTS. BRIDGING SHOWN MUST BE PROVIDED, IN ADDITION TO THE REQUIRED STANDARD BRIDGING. ENDS OF ALL BRIDGING LINES MUST BE ANCHORED TO WALLS OR BEAMS.
3. ROOF JOISTS MUST BE DESIGNED FOR A NET UPLIFT LOAD (LRFD) OR (ULTIMATE) OF 42 PSF.
4. ALL JOISTS MUST BE DESIGNED FOR A CONCENTRATED LOAD OF 300 LBS. HUNG FROM THE JOIST TOP OR BOTTOM CHORD AT ANY POINT ALONG THE SPAN.
5. PERMANENT SUSPENDED LOADS MUST NOT BE SUPPORTED BY JOIST BRIDGING.
6. COMPLY WITH OSHA SAFETY STANDARDS FOR THE ERECTION OF STEEL JOISTS.

STEEL DECK NOTES:

1. STEEL DECK MUST BE IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI), "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND THE STEEL DECK INSTITUTE (SDI), "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS."
2. STEEL DECK INSTALLATION MUST COMPLY WITH THE FOLLOWING:  
ROOF DECK: 1 1/2" x 20 GAGE TYPE 'B' GALVANIZED, UNLESS OTHERWISE NOTED. ATTACH DECK TO SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS IN ALL RIBS WHERE END LAPS OCCUR AND AT 16 INCHES ON CENTER ALONG SUPPORTS WITH A 36/4 PATTERN. FASTEN SIDE LAPS WITH #10 SELF-TAPPING HEX HEAD SCREWS AT 1/3 POINTS BETWEEN SUPPORTS. FASTEN EDGE/MOST DECK PANEL TO STEEL FRAMING WITH 5/8 INCH DIAMETER PUDDLE WELDS AT SAME SPACING AS SIDELAP FASTENERS.
3. STEEL DECK MUST BE INSTALLED PERPENDICULAR TO SUPPORTS AND MUST HAVE A MINIMUM OF THREE CONTINUOUS SPANS. ENDLAPS MUST ONLY OCCUR AT SUPPORTS.
4. WELDING MUST BE IN ACCORDANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL".
5. PERMANENT SUSPENDED LOADS MUST NOT BE SUPPORTED BY STEEL ROOF DECK.

COLD-FORMED METAL FRAMING NOTES:

1. COLD-FORMED METAL FRAMING MUST BE IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS".
2. SUBMITTED SHOP DRAWINGS MUST INCLUDE PLACING DRAWINGS FOR FRAMING MEMBERS SHOWING SIZE AND GAGE DESIGNATIONS, NUMBER, TYPE, LOCATION AND SPACING. INDICATE CONNECTIONS, SUPPLEMENTAL STRAPPING, BRACING, SPLICES, BRIDGING, ACCESSORIES AND DETAILS AND CONSTRUCTION SEQUENCE REQUIRED FOR PROPER AND SAFE INSTALLATION.
3. WELDING MUST BE IN ACCORDANCE WITH AWS D1.3, "STRUCTURAL WELDING CODE - SHEET STEEL". TOUCH UP ALL WELDS WITH SPECIFIED COATING SYSTEMS.
4. COLD-FORMED METAL FRAMING MEMBERS MUST CONFORM TO ASTM C955, AND BE FORMED OF CORROSION-RESISTANT STEEL CONFORMING TO ASTM A653 AND ASTM C955 WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL AND THINNER MEMBERS AND 50 KSI FOR ALL OTHER MEMBERS.
5. MEMBER SECTION PROPERTIES MUST CONFORM TO PART 'I' OF THE "COLD-FORMED STEEL DESIGN MANUAL."

ROUGH CARPENTRY NOTES:

1. ROUGH CARPENTRY MUST BE IN ACCORDANCE WITH THE AMERICAN WOOD COUNCIL (AWC) "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION."
2. WOOD STRUCTURAL PANELS (WSP) MUST COMPLY WITH PS 1 "U.S. PRODUCT STANDARD FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD" FOR PLYWOOD CONSTRUCTION PANELS AND THE FOLLOWING REQUIREMENTS:  
A. ROOF SHEATHING: 9/16" INCH, APA RATED SHEATHING, EXTERIOR EXPOSURE DURABILITY CLASSIFICATION. PROVIDE TONGUE-AND-GROOVE EDGES OR USE "PLY-CLIPS" AT MID-SPAN BETWEEN EACH SUPPORT.
3. ALL CONNECTION HARDWARE IN CONTACT WITH PRESERVATIVE TREATED WOOD MUST BE HOT-DIP GALVANIZED COATED.
4. POWDER ACTUATED FASTENERS (PAF) MUST HAVE A MINIMUM ALLOWABLE CAPACITY INTO THE BASE MATERIAL AS FOLLOWS UNLESS OTHERWISE NOTED:  
A. STEEL: SHEAR = 800 LBS  
TENSION = 250 LBS

POST-INSTALLED ANCHOR NOTES:

1. ALL POST INSTALLED ANCHORS INDICATED ON THE DRAWINGS ARE BY HILTI, INC. AND MUST BE CONSIDERED THE BASIS OF DESIGN PRODUCT. WHERE NOT EXPLICITLY INDICATED IN THE DRAWINGS, THE FOLLOWING ANCHORS/ADHESIVES MUST BE USED:  
A. ANCHORAGE TO CONCRETE  
1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:  
a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM SYSTEM (VC 20-U OR VC40U) WITH STEEL THREADED ROD PER ICC ESR-3187.  
2. SCREW ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:  
a. HILTI KWIK HUS EZ SCREW ANCHORS PER ICC ESR-3027.  
B. REBAR DOWELING INTO CONCRETE  
1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:  
a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM SYSTEM (VC 20-U OR VC 40-U) WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187.  
C. ANCHORAGE TO SOLID GROUTED MASONRY  
1. ADHESIVE ANCHORS USE:  
a. HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM (ICC PENDING).  
b. STEEL ANCHOR ELEMENT MUST BE HILTI HAS-E CONTINUOUSLY THREADED ROD.  
2. MECHANICAL ANCHORS USE:  
a. HILTI KWIK HUS EZ SCREW ANCHORS PER ICC ESR 3056.
2. ALTERNATE POST INSTALLED ANCHOR PRODUCTS MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW AND POSSIBLE APPROVAL. ALL SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE. ALTERNATE PRODUCTS MAY REQUIRE MODIFICATIONS TO ANCHOR DIAMETER, SPACING, AND EMBEDMENT.
3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
4. THE CONTRACTOR MUST ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF ANCHOR INSTALLATION.
5. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
6. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR MUST LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY FERROSCAN OR GPR.
7. ALL POST INSTALLED ANCHORS REQUIRE CONTINUOUS INSPECTIONS BY THE OWNER'S MATERIALS TESTING AGENCY TO VERIFY INSTALLATION HAS BEEN PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

SHOP DRAWINGS AND SUBMITTALS:

1. THESE DRAWINGS SHALL BE CHECKED AND COORDINATED WITH OTHER MATERIALS AND CONTRACTS BY THE GENERAL CONTRACTOR. SHOP DRAWINGS AND SUBMITTALS MUST BEAR THE CONTRACTOR'S REVIEW STAMP WITH CHECKER'S INITIALS BEFORE BEING SUBMITTED TO THE ARCHITECT FOR APPROVAL.
2. WHEN THE FABRICATOR HAS BEEN AUTHORIZED TO USE THE ARCHITECT'S AND / OR ENGINEER'S DRAWINGS AS ERECTION DRAWINGS, THE FABRICATOR MUST REMOVE ALL TITLE BLOCKS, PROFESSIONAL SEALS, AND ANY OTHER REFERENCE TO THE ARCHITECT AND / OR ENGINEER FROM THAT ERECTION DRAWING.
3. WHERE DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION COULD AFFECT THE NEW CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE FIELD MEASUREMENTS REQUIRED FOR INCORPORATION IN THE SHOP DRAWING AND PRIOR TO FABRICATION.

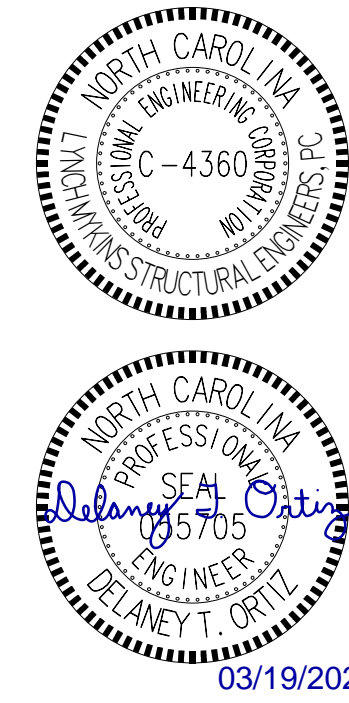
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5345 ROLESVILLE RD, WENDELL, NC 27591

NCCCS NO. 2303



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LM Project Number: LM23.030.1  
Corporation No. C-4360

NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/19/2025**  
PROJECT STATUS  
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GENERAL NOTES

S001



ABBREVIATIONS			
AFF	ABOVE FINISHED FLOOR	KCJ	KEYED CONSTRUCTION JOINT
ARCH	ARCHITECT	Ld	REBAR TENSION
BD	BAR DIAMETER	Ldc	DEVELOPMENT LENGTH
BF	BRACED FRAME	Ldh	REBAR COMPRESSION
BEJ	BUILDING EXPANSION JOINT	Ldh	DEVELOPMENT LENGTH
BLDG	BUILDING	Ls	HOOKED REBAR TENSION
BM	BEAM	Ls	DEVELOPMENT LENGTH
BOD	BOTTOM OF DECK	Lsc	REBAR TENSION SPLICE
BOS	BOTTOM OF STEEL	Lsc	LENGTH
BOT, B	BOTTOM	Lsc	REBAR COMPRESSION SPLICE
BRG	BEARING	L	LENGTH
BTWN	BETWEEN	L	LOW
C TO C	CENTER TO CENTER	LLH	LONG LEG HORIZONTAL
CFMF	COLD-FORMED METAL FRAMING	LLV	LONG LEG VERTICAL
CJ	CONTROL JOINT	LSH	LONG SIDE HORIZONTAL
CL	CENTERLINE	LSV	LONG SIDE VERTICAL
CLR	CLEAR	LTWT	LIGHTWEIGHT
CMU	CONCRETE MASONRY UNIT	LWC	LIGHTWEIGHT CONCRETE
COL	COLUMN	MAS	MASONRY
CONC	CONCRETE	MATL	MATERIAL
CONN	CONNECTION	MAX	MAXIMUM
CONSTR	CONSTRUCTION	MECH	MECHANICAL
CONT	CONTINUOUS	MF	MOMENT FRAME
COORD	COORDINATE	MFR	MANUFACTURER
CTR	CENTER	MID	MIDDLE
CTRD	CENTERED	MIN	MINIMUM
DBA	DEFORMED BAR ANCHOR	MOD	MODIFY
DBL	DOUBLE	MOS	MIDDEPTH OF SLAB
DC	DIAPHRAGM CHORD	NOM	NOMINAL
DCJ	DOWELED CONSTRUCTION JOINT	NS	NEAR SIDE
DIA, Ø	DIAMETER	NTS	NOT TO SCALE
DIST	DISTANCE	OC	ON CENTER
DJ	DOUBLE JOIST	OPH	OPPOSITE HAND
DWGS	DRAWINGS	OPNG	OPENING
EA	EACH	PAF	POWDER ACTUATED FASTENER
EF	EACH FACE	PAR	PARALLEL
EJ	EXPANSION JOINT	PC	PIECE
EL	ELEVATION	PEMB	PRE-ENGINEERED METAL BUILDING
ELEV	ELEVATOR	PEN	PENETRATE, PENETRATION
EMBED	EMBEDMENT	PERP	PERPENDICULAR
EOD	EDGE OF DECK	PL	PLATE
EOS	EDGE OF SLAB	PT	POST-TENSIONED (CONC)
EQ	EQUAL	PT	PRESSURE TREATED (WOOD)
EW	EACH WAY	R	RADIUS
EXIST	EXISTING	REF	REFERENCE, REFER TO
EXP	EXPANSION	REINF	REINFORCE, REINFORCED, REINFORCING
EXT	EXTERIOR	REQD	REQUIRED
FD	FLOOR DRAIN	REQMTS	REQUIREMENTS
FDN	FOUNDATION	SCHED	SCHEDULE
FO	FACE OF	SF	STEPPED FOOTING
FF EL	FINISHED FLOOR ELEVATION	SGB	STEPPED GRADE BEAM
FIN	FINISH	SIM	SIMILAR
FIN FLR	FINISHED FLOOR	SJ	SAWED JOINT
FOB	FACE OF BUILDING	SL	SLOPE
FOC	FACE OF CONCRETE	SOG	SLAB-ON-GRADE
FOM	FACE OF MASONRY	SPF	SIDEPLATE FRAME
FOS	FACE OF SLAB/ STUD	STD	STANDARD
FRMG	FRAMING	STIFF	STIFFENER
FTG	FOOTING	TBE	TRUSS BEARING ELEVATION
FS	FAR SIDE	T&B	TOP & BOTTOM
FV, ±	FIELD VERIFY	T&G	TONGUE AND GROOVE
GALV	GALVANIZED	THK	THICKNESS
GC	GENERAL CONTRACTOR	TOC	TOP OF CONCRETE
GEN	GENERAL	TOF	TOP OF FOOTING
GR BM	GRADE BEAM	TOM	TOP OF MASONRY
H	HIGH	TOCP	TOP OF CONCRETE PEDESTAL
HK	HOOK	TOS	TOP OF STEEL
HORIZ	HORIZONTAL	TS	THICKENED SLAB
HSS	HOLLOW STRUCTURAL SECTION	TS/STR	THICKENED SLAB AT STAIR
HSA	HEADED STUD ANCHOR	TYP	TYPICAL
HT	HEIGHT	UON	UNLESS OTHERWISE NOTED
HVY	HEAVY	VERT	VERTICAL
INT	INTERIOR	W/	WITH
JBE	JOIST BEARING ELEVATION	WP	WORKING POINT
JT	JOINT	WSP	WOOD STRUCTURAL PANEL(S)
KCJ	KEYED CONSTRUCTION JOINT	WWR	WELDED WIRE REINFORCING

DRAWINGS LEGEND		
GENERAL ANNOTATIONS	ELEVATIONS	MASONRY
<div>SECTIONS</div> <div><div><div>X</div><div>SX</div></div><div>SECTION/DETAIL NUMBER/LETTER = SECTION/DETAIL MARK</div><div>SHEET NUMBER WHERE SECTION/DETAIL MARK IS DRAWN</div></div>	<div>FOUNDATIONS</div> <div><div><div>(-X'-X")</div><div>=</div><div>TOP OF FOOTING ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"</div></div><div><div><div>X'-X"</div><div>=</div><div>TOP OF SLAB ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"</div></div></div></div> <div>FLOORS AND ROOF</div> <div><div><div>BOD = +X'-X"</div><div>=</div><div>BOTTOM OF DECK ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"</div></div><div><div><div>TOS = +X'-X"</div><div>=</div><div>TOP OF STEEL ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"</div></div><div><div><div>BOS = +X'-X"</div><div>=</div><div>BOTTOM OF STEEL ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"</div></div><div><div><div>TOM = +X'-X"</div><div>=</div><div>TOP OF MASONRY ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"</div></div><div><div><div>TBE = +X'-X"</div><div>=</div><div>TRUSS BEARING ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"</div></div></div></div></div></div></div>	<div>WALLS</div> <div><div><div><div></div><div>=</div><div>BEARING WALL EXTENDING ABOVE FLOOR / ROOF</div></div><div><div><div></div><div>=</div><div>BEARING WALL TERMINATING BELOW FLOOR / ROOF</div></div><div><div><div></div><div>=</div><div>NON-BEARING WALL BEARING ON FLOOR BELOW</div></div></div></div></div></div>
<div>COLUMNS</div> <div><div><div>GRID</div><div>=</div><div>COLUMN GRID MARK</div></div></div>		
<div>GENERAL PLANS</div> <div><div><div>X</div><div>=</div><div>PLAN KEY NOTE MARK</div></div><div><div>±</div><div>=</div><div>FIELD VERIFY</div></div><div><div><div>SL</div><div>=</div><div>DIRECTION OF SLOPE</div></div><div><div><div></div><div>=</div><div>CHANGE IN ELEVATION</div></div><div><div><div></div><div>=</div><div>CHANGE IN SLOPE</div></div></div></div></div></div>	<div>STEEL</div> <div><div>CONNECTIONS</div><div><div><div></div><div>=</div><div>MOMENT CONNECTION</div></div><div><div><div></div><div>=</div><div>KNUCKLED BEAM</div></div></div></div></div>	
<div>SHALLOW FOUNDATIONS</div> <div><div><div></div><div>=</div><div>SLAB-ON-GRADE JOINT</div></div><div><div><div>WFX</div><div>=</div><div>WALL FOOTING MARK</div></div><div><div><div>CFX</div><div>=</div><div>COLUMN FOOTING MARK</div></div></div></div></div>		

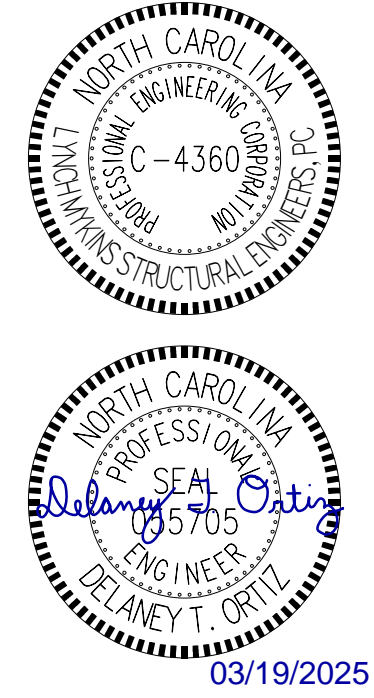
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ABBREVIATIONS / DRAWINGS LEGENDS

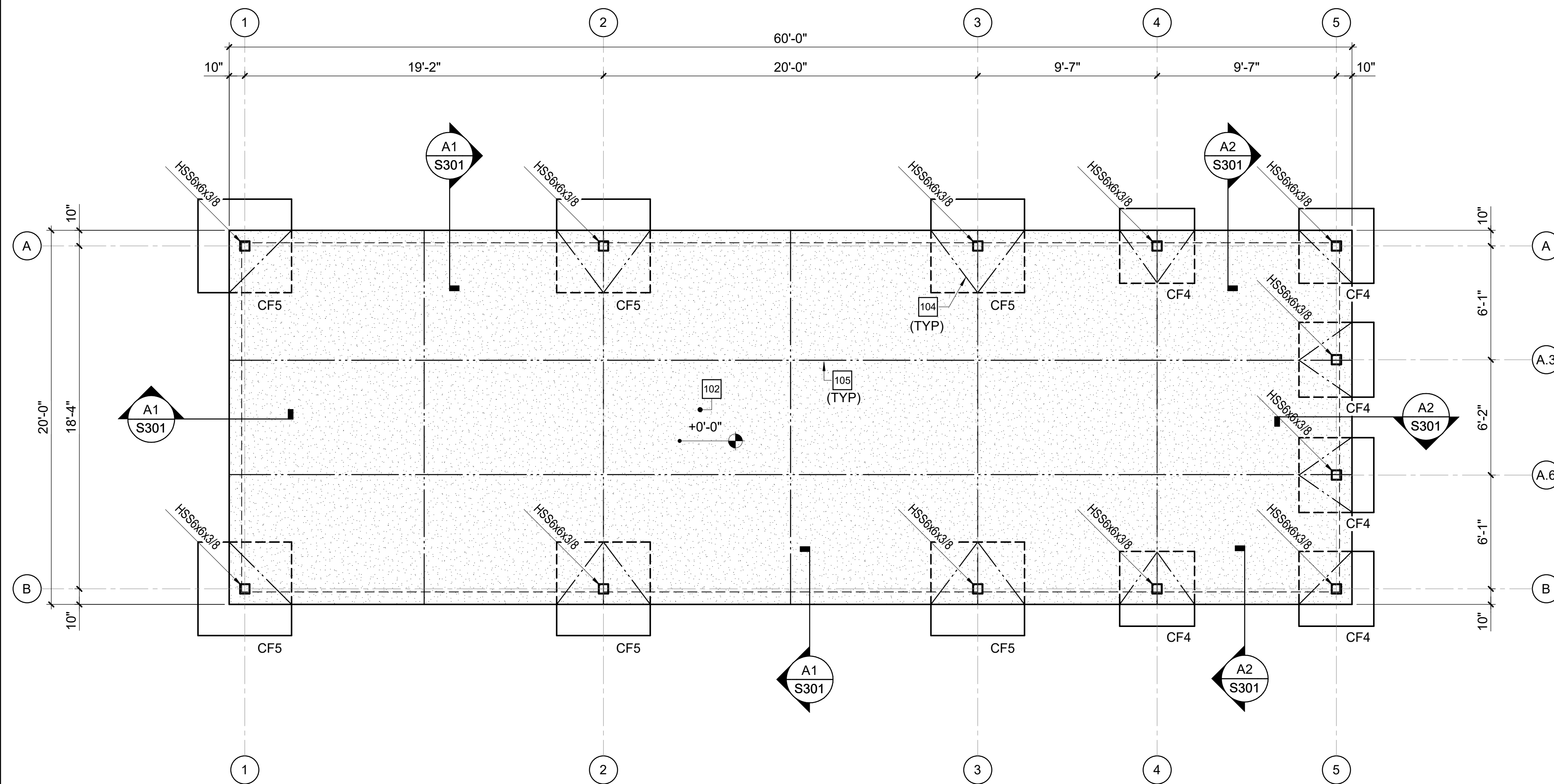


### FOUNDATION AND SLAB PLAN NOTES

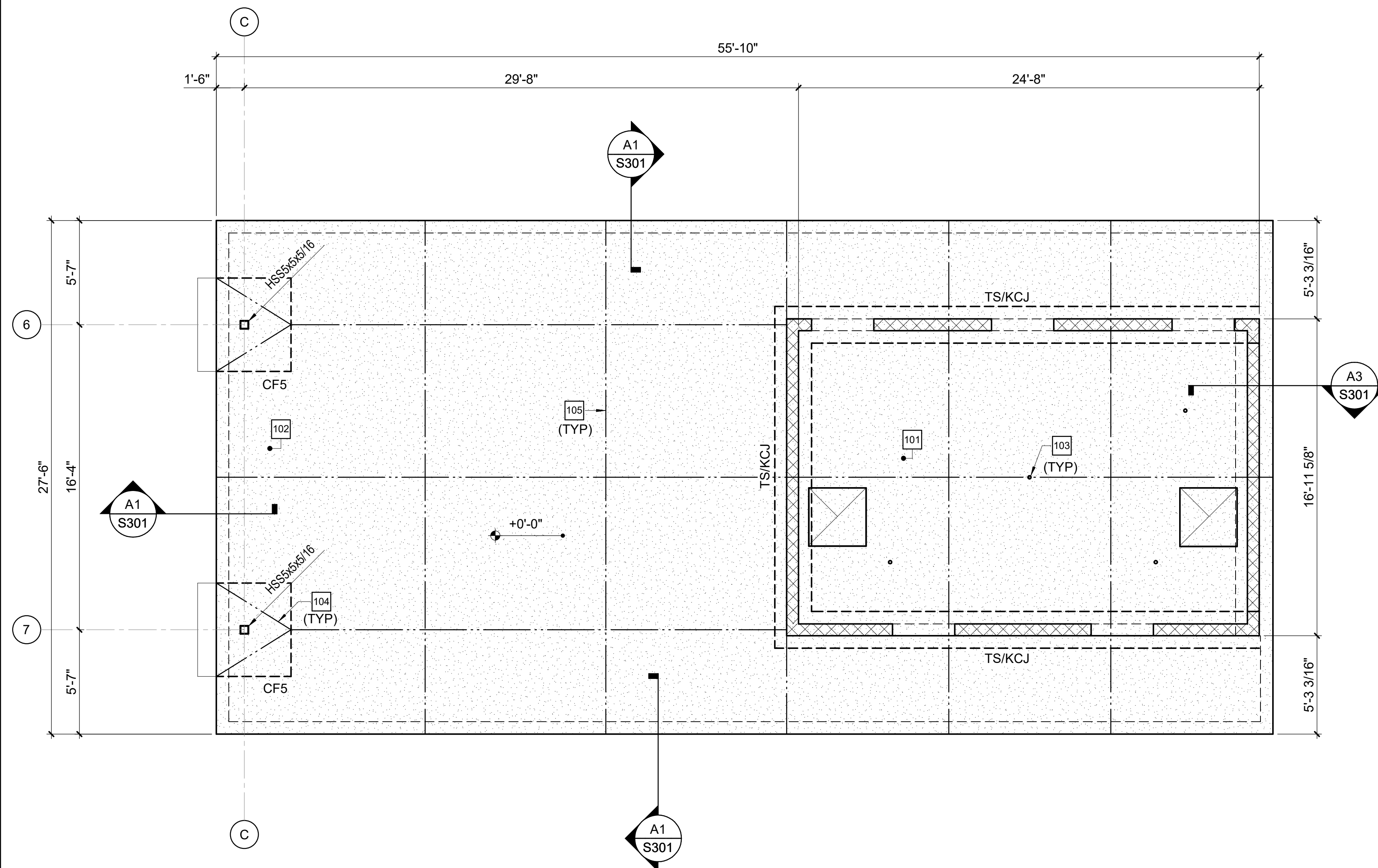
- A. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NONBEARING WALLS, WALL CONTROL JOINTS AND OPENINGS.
- B. UNLESS OTHERWISE NOTED, ALL ELEVATIONS ARE BASED ON A FINISHED FIRST FLOOR REFERENCE OF 0'-0" ACTUAL FINISHED FLOOR ELEVATION IS +288'-0" FOR THE COVERED STORAGE AND +296'-0" FOR THE RESTROOM AND SHADE STRUCTURE. REFERENCE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR MATERIALS.
- C. TOP OF ALL FOOTINGS MUST BE AT ELEVATION -2'-0" UNLESS OTHERWISE NOTED.
- D. NO UTILITY LOCATIONS ARE SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. THE CONTRACTOR MAY, AT HIS/HER OPTION, SLEEVE THE UTILITY THROUGH THE FOUNDATION PER THE "TYPICAL PIPE SLEEVE AT TURN DOWN FOOTING DETAILS."
- E. DIMENSIONS SHOWN ON FOUNDATION PLAN ARE TO COLUMN GRIDLINES, SLAB EDGE, AND OUTSIDE FACE OF CMU WALLS, UNLESS OTHERWISE NOTED.
- F. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LIMITS OF SLAB DEPRESSIONS AND OMITTED SLABS.
- G. NOT ALL FLOOR SINKS AND DRAINS ARE NOT SHOWN ON PLAN. REFERENCE PME DRAWINGS FOR LOCATIONS.
- H. REFERENCE CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE SLABS AND PAVING.
- I. SLAB-ON-GRADE JOINTS MUST BE SAWED JOINTS OR KEVED CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED. CONTRACTOR MUST COORDINATE ALL SLAB JOINTS WITH JOINTS IN BONDED FLOOR FINISHES. REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR FINISH JOINT LOCATIONS.

## KEY NOTES

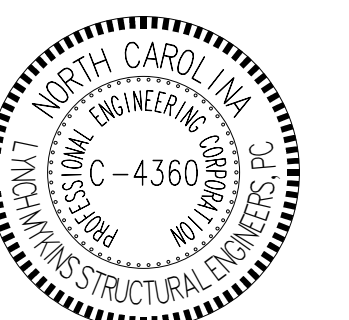
- 101 4" CONCRETE SLAB-ON-GRADE. OVER VAPOR RETARBER AND 4"  
DEPTH OF POROUS FILL UNLESS OTHERWISE INDICATED.  
REINFORCE SLAB WITH 6x6-W2.9xW2.9 PLACED 1'12" CLEAR BELOW  
TOP OF SLAB. MAINTAIN REINFORCEMENT IN POSITION ON  
BOLSTERS, CHAIRS OR SPACERS DURING CONCRETE PLACEMENT.
- 102 6" CONCRETE SLAB-ON-GRADE. OVER VAPOR RETARBER AND 4"  
DEPTH OF POROUS FILL UNLESS OTHERWISE INDICATED.  
REINFORCE SLAB WITH 6x6-W2.9xW2.9 PLACED 1'12" CLEAR BELOW  
TOP OF SLAB. MAINTAIN REINFORCEMENT IN POSITION ON  
BOLSTERS, CHAIRS OR SPACERS DURING CONCRETE PLACEMENT.
- 103 FLOOR DRAINS. REFERENCE ARCHITECTURAL AND PME DRAWINGS.
- 104 DENOTES DIAMOND ISOLATION POUR. REFERENCE "TYPICAL  
COLUMN ISOLATION JOINT DETAILS." B4/S501.
- 105 DENOTES SAWCUT CONTROL JOINTS. REFERENCE "TYPICAL SAWED  
JOINT DETAIL." B1/S501



 **B1** FOUNDATION AND SLAB PLAN - COVERED STORAGE  
1/4" = 1'-0"



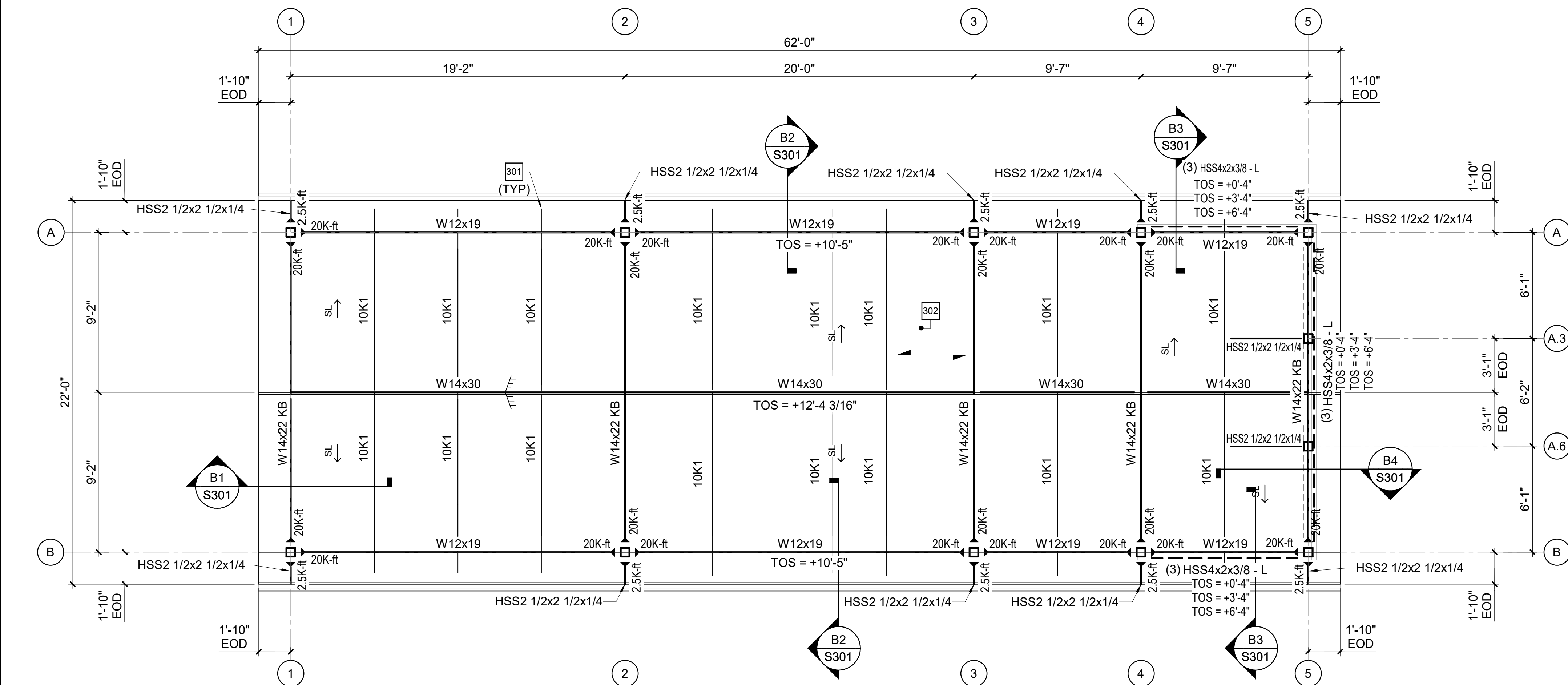
 **A1** FOUNDATION AND SLAB PLAN - RESTROOM AND SHADE STRUCTURE  
1/4" = 1'-0"



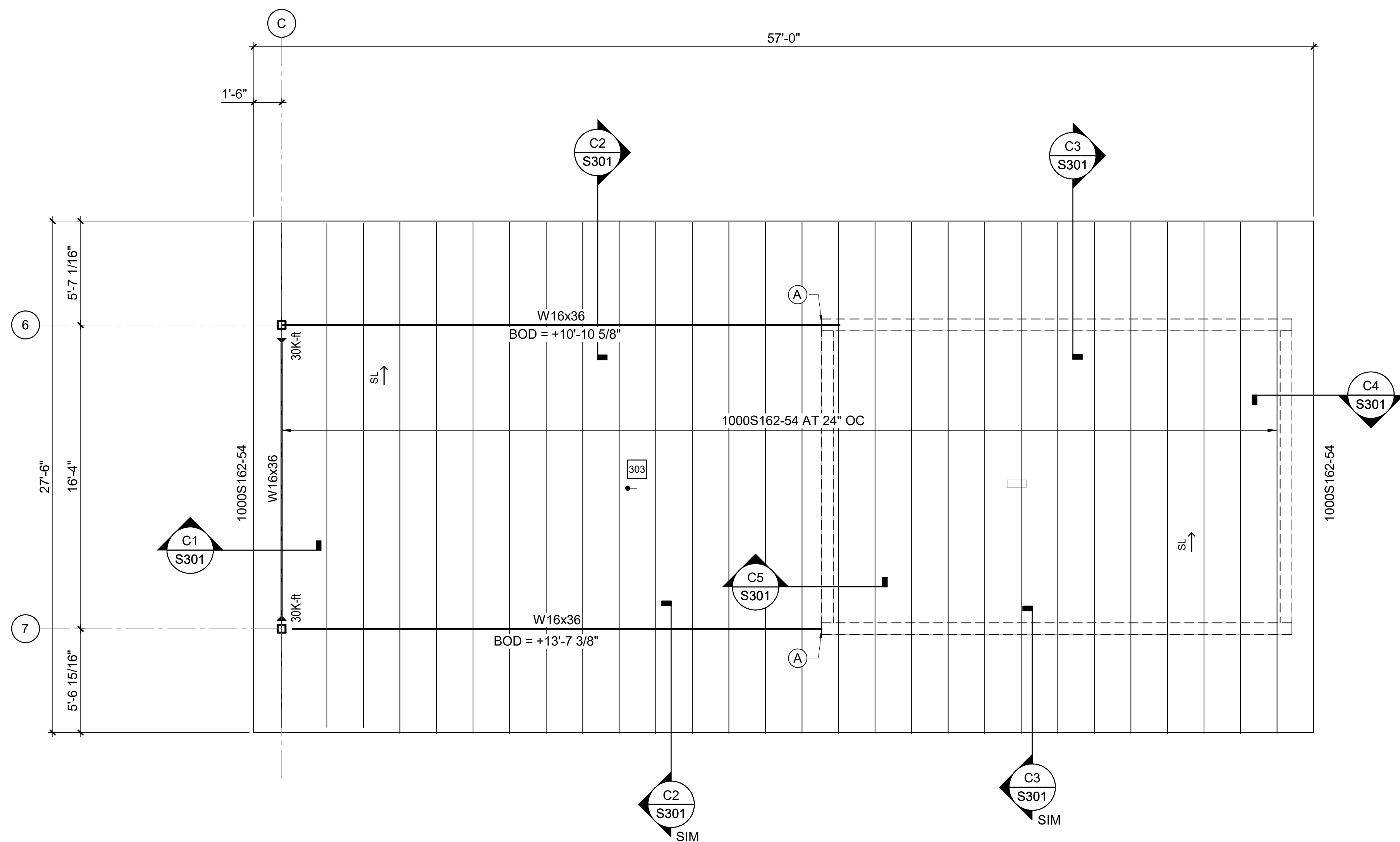
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**B1** ROOF FRAMING AND DECK PLAN - COVERED STORAGE  
1/4" = 1'-0"



**A1** ROOF FRAMING AND DECK PLAN - RESTROOM AND SHADE STRUCTURE  
1/4" = 1'-0"

## FRAMING PLAN NOTES

- REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- STEEL ROOF FRAMING SUPPORTING 1 1/2" STEEL ROOF DECK MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 5'-0" ON-CENTER).
- AT STEEL ROOF FRAMING, BOTTOM OF DECK ELEVATIONS ARE SHOWN ON PLAN. INTERMEDIATE ELEVATIONS MUST BE STRAIGHT LINES BETWEEN GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE NOTED.
- COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.

## KEY NOTES

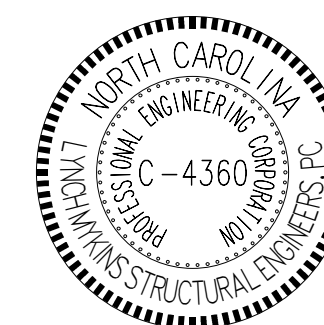
- R1 TOP CHORD EXTENSION.
- 1" x 20 GAGE ROOF DECK. REFERENCE "STEEL DECK NOTES" ON SHEET S-001 OF THE GENERAL NOTES.
- PLYWOOD SHEATHING. REFERENCE "ROUGH CARPENTRY NOTES" ON SHEET S-001 OF THE GENERAL NOTES.

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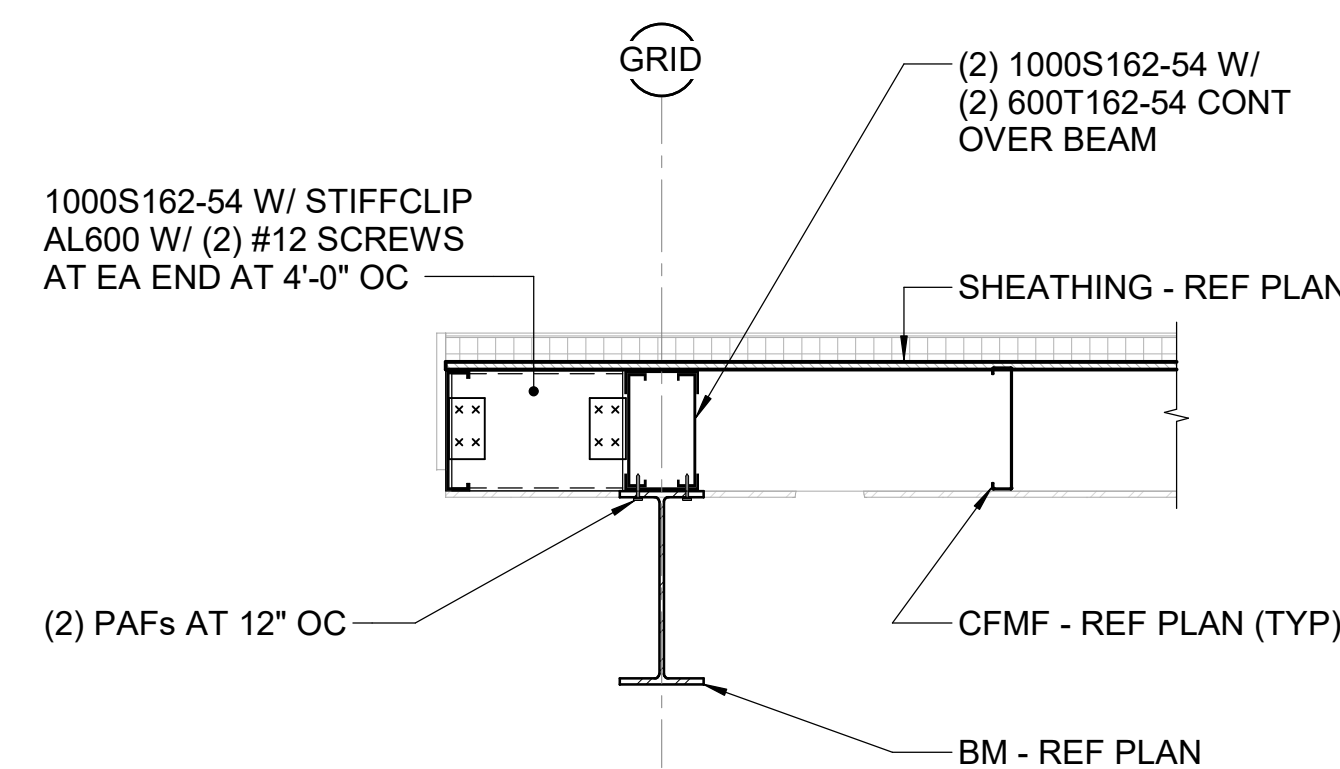
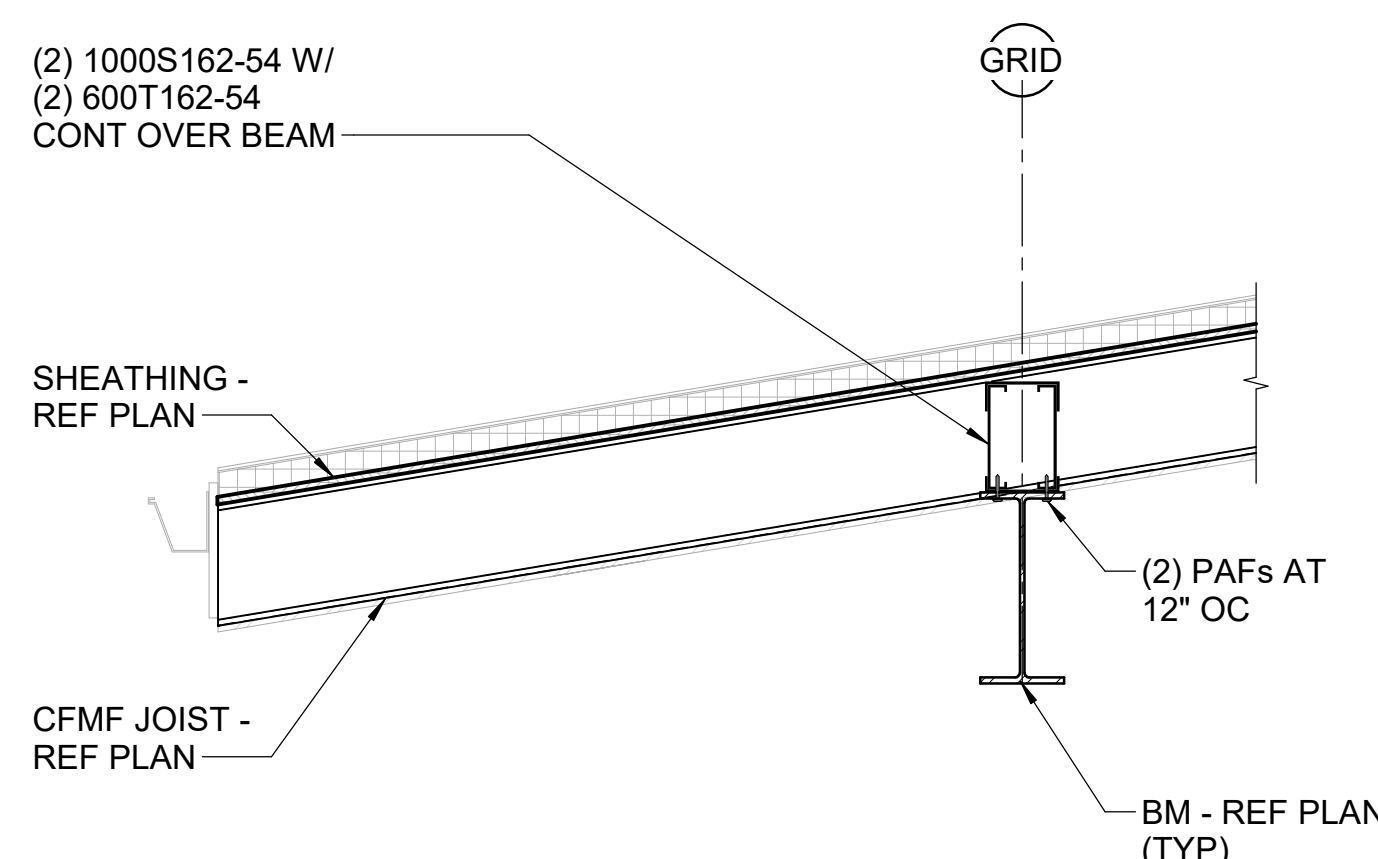
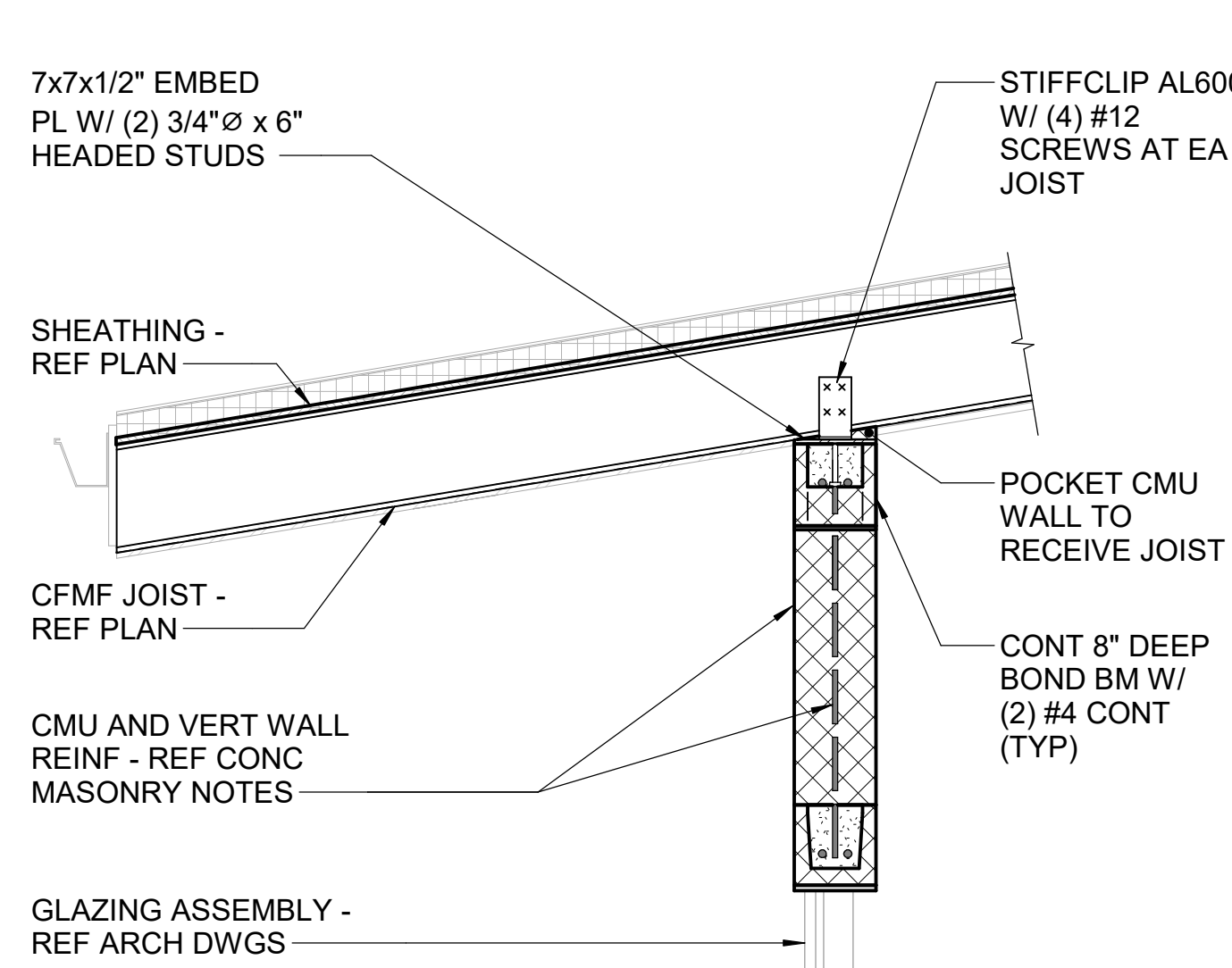
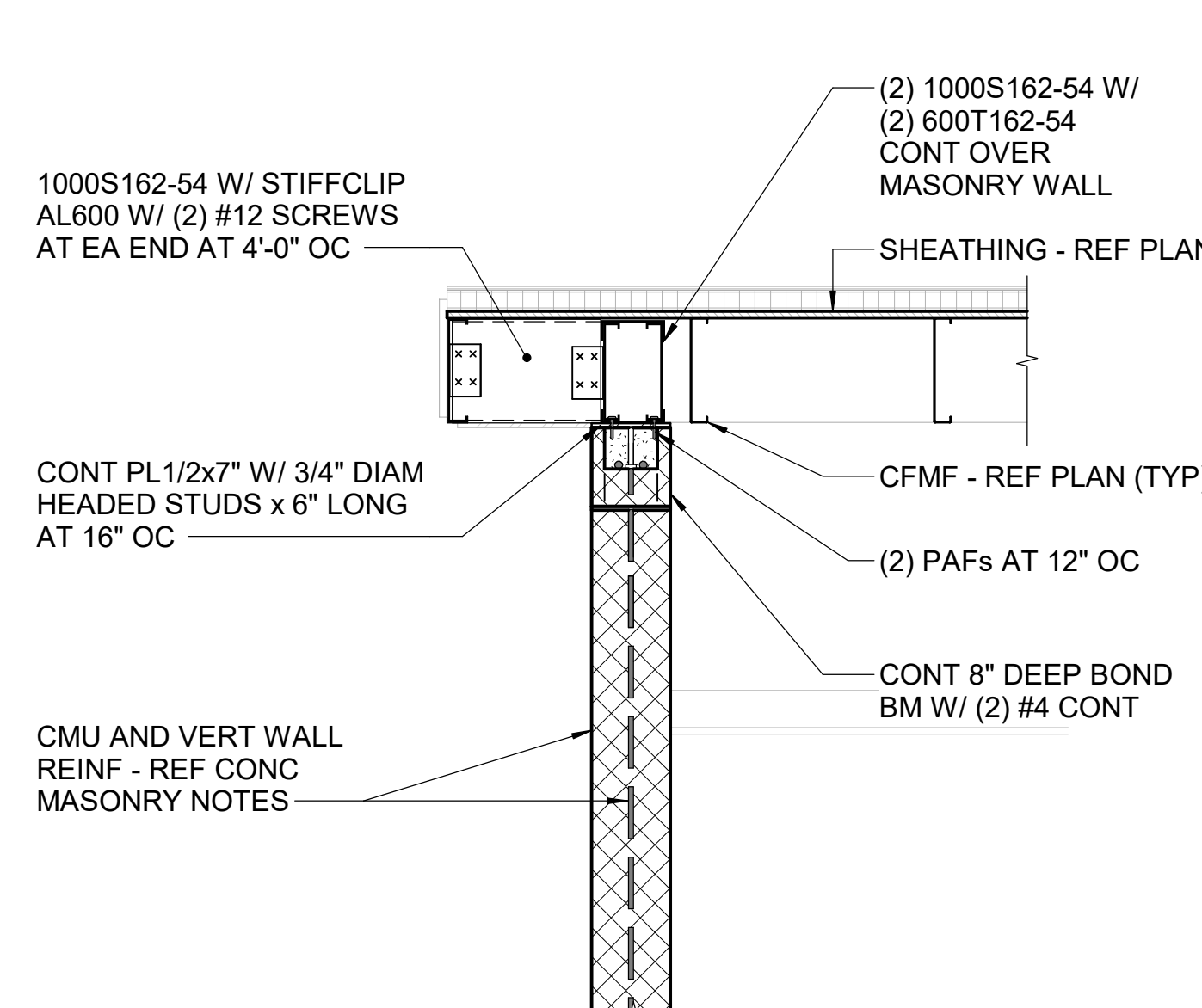
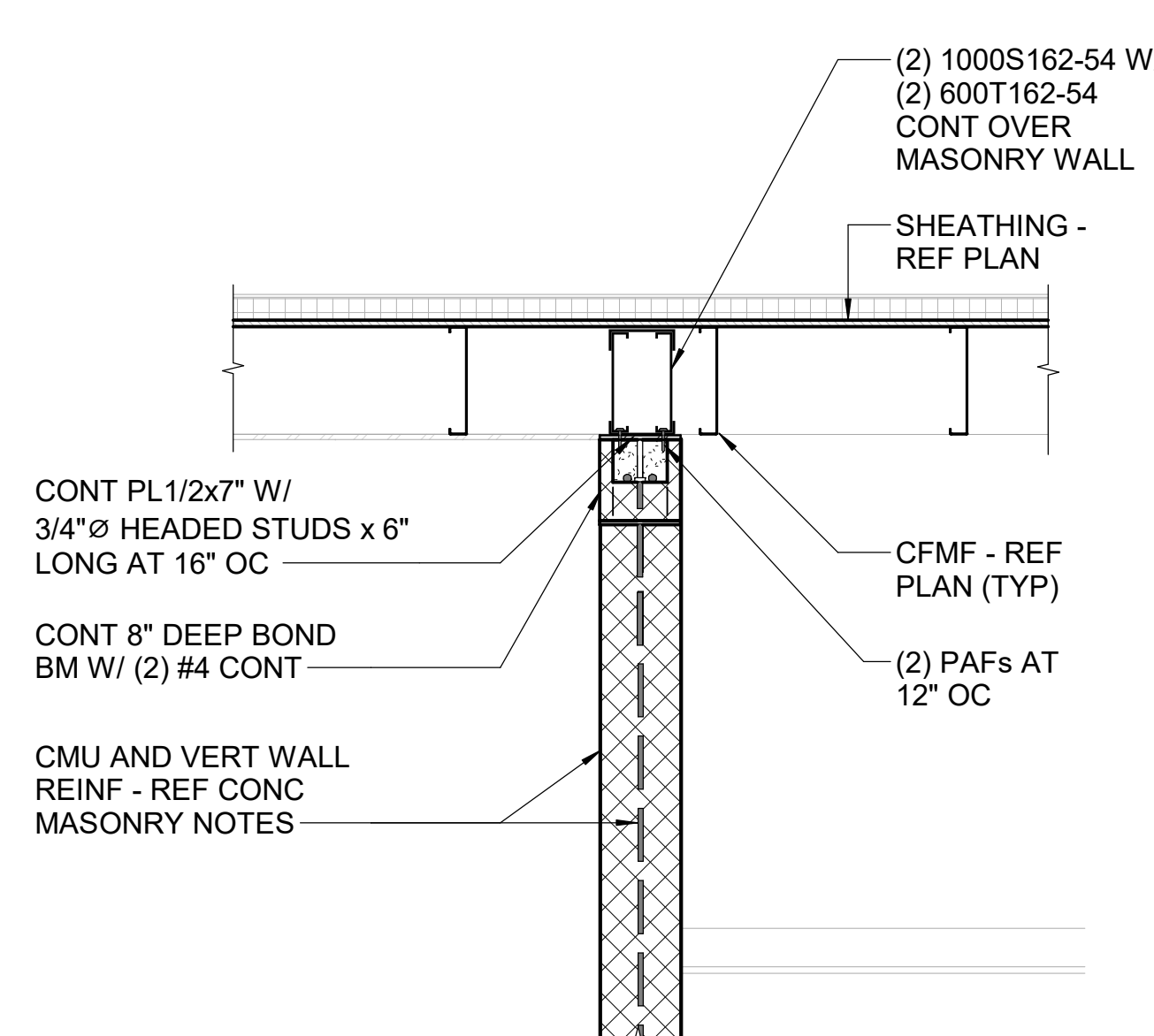
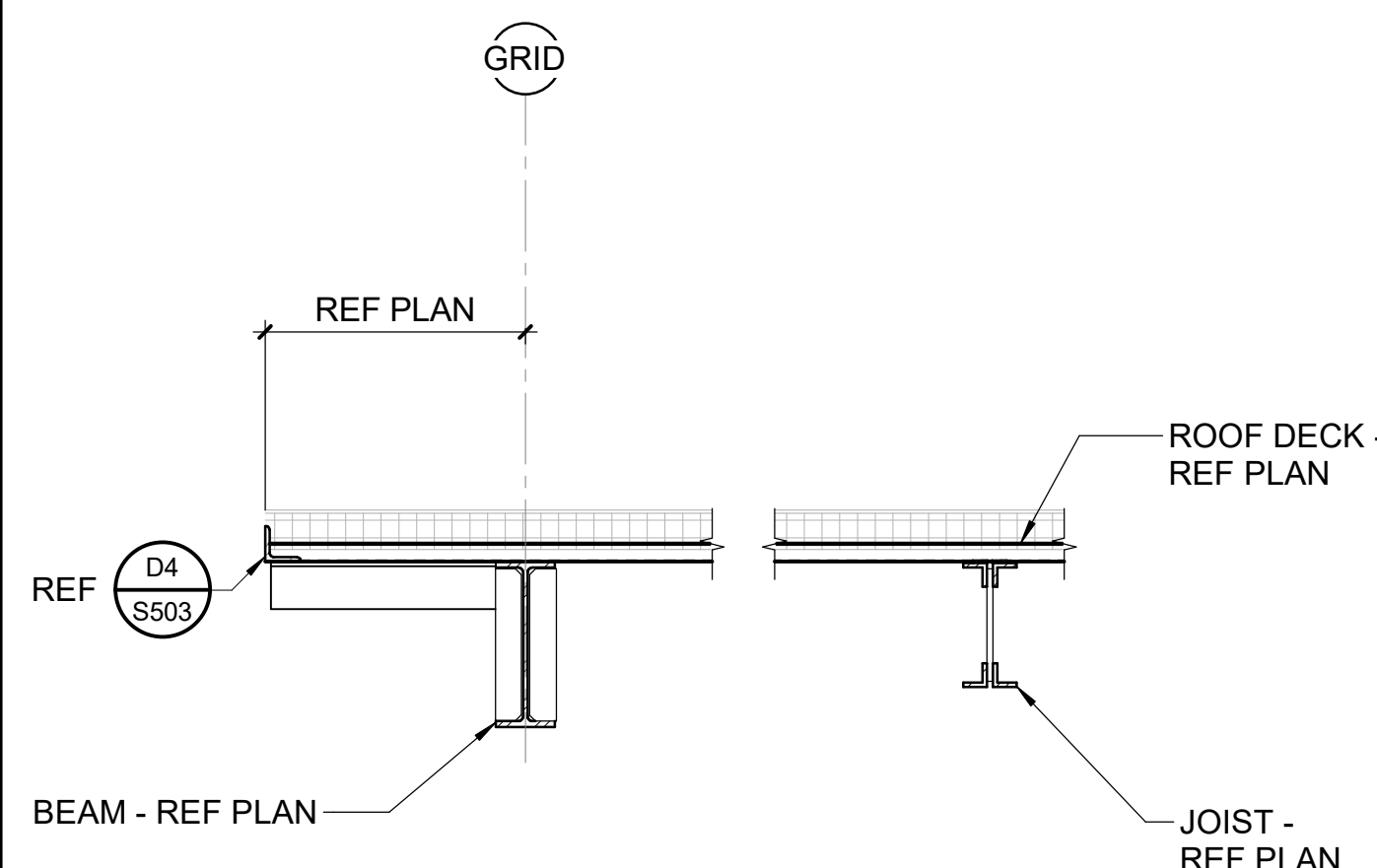
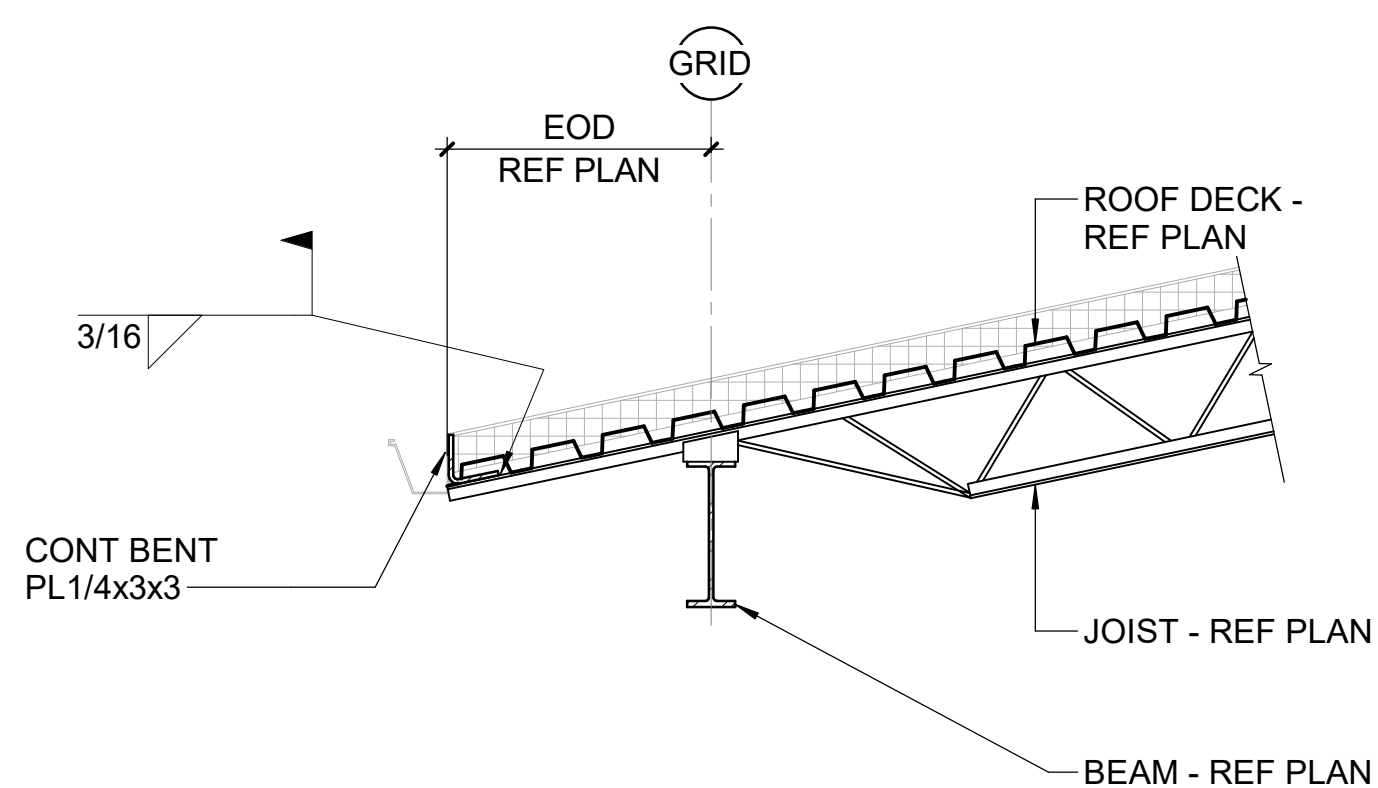
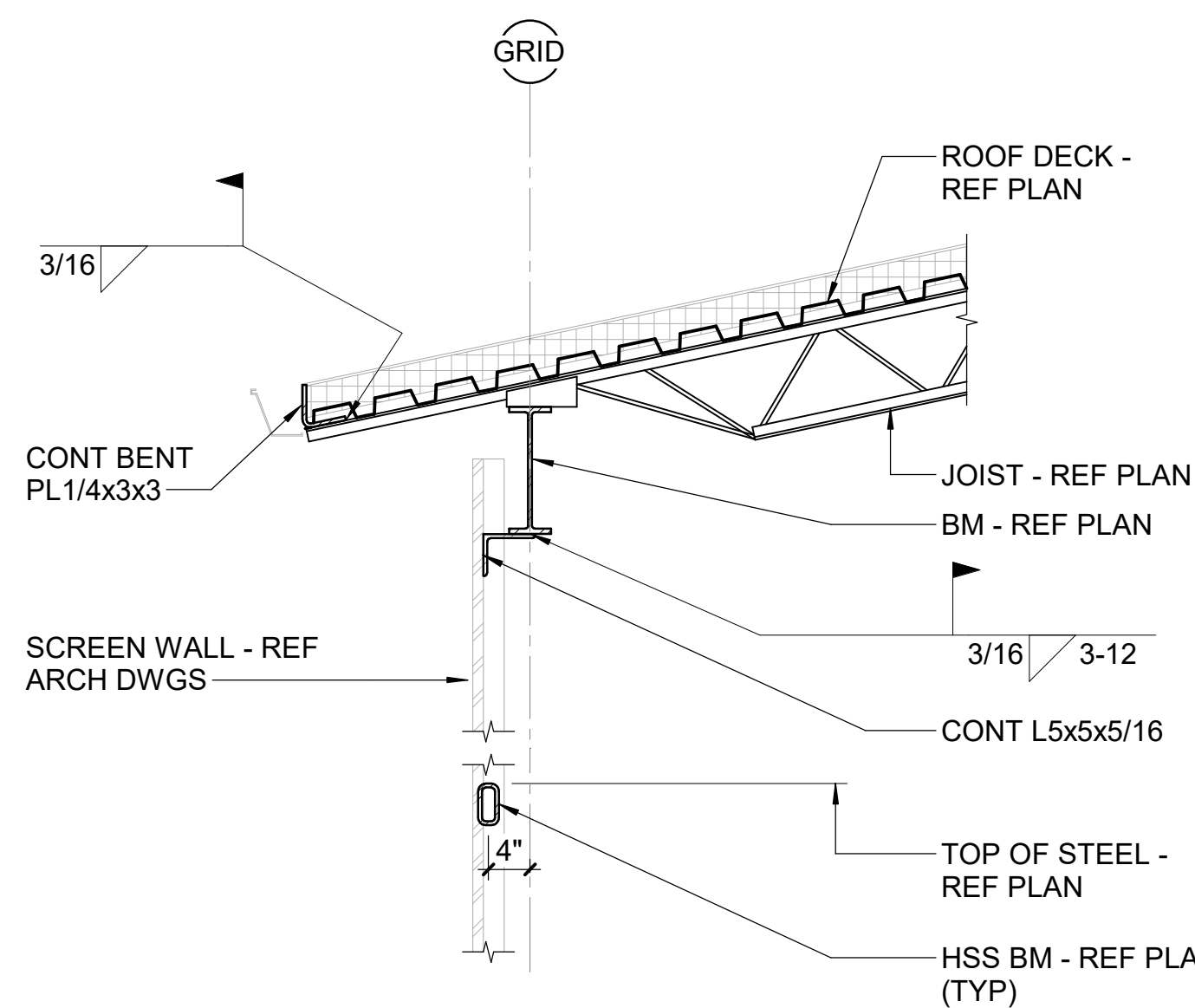
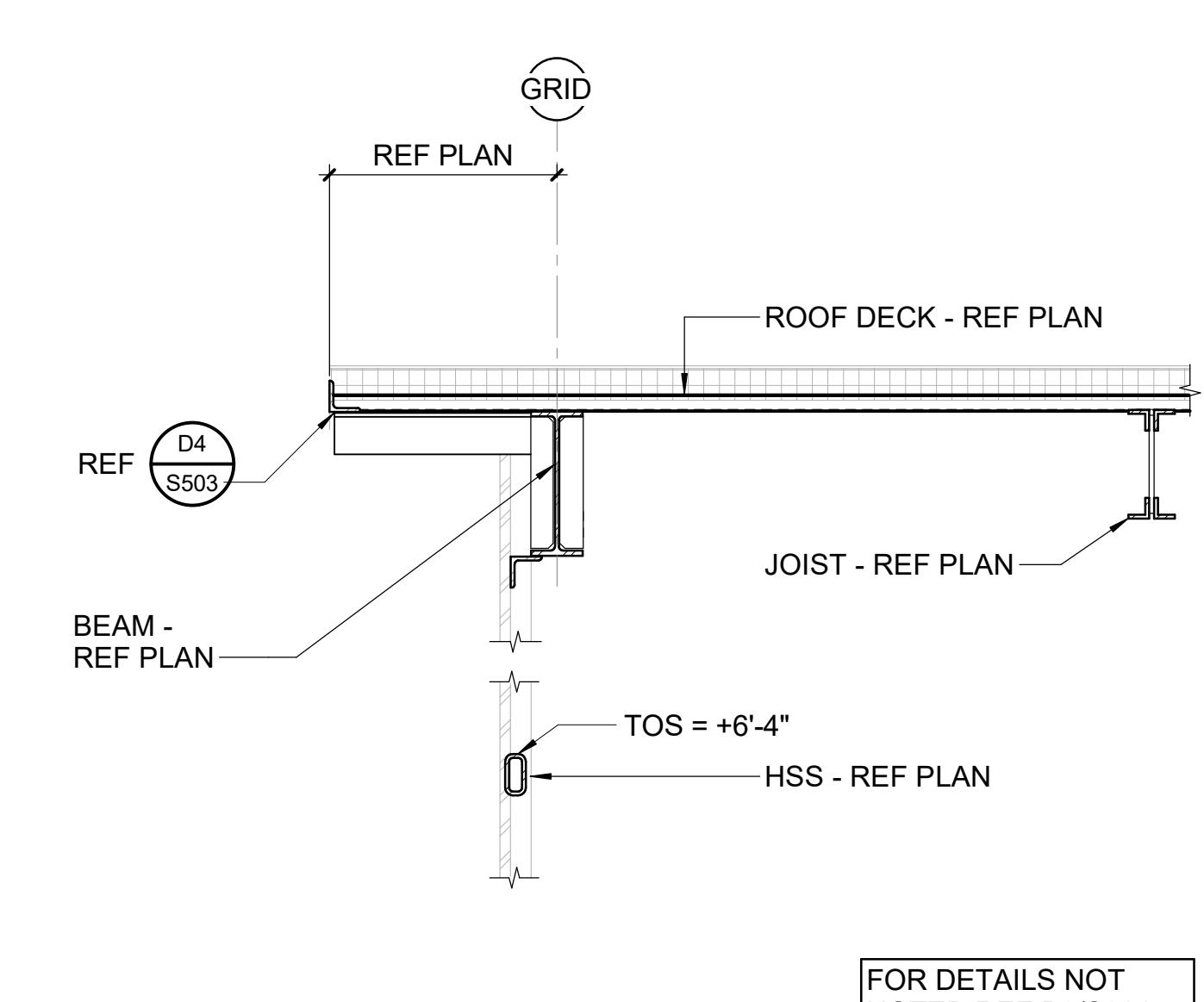
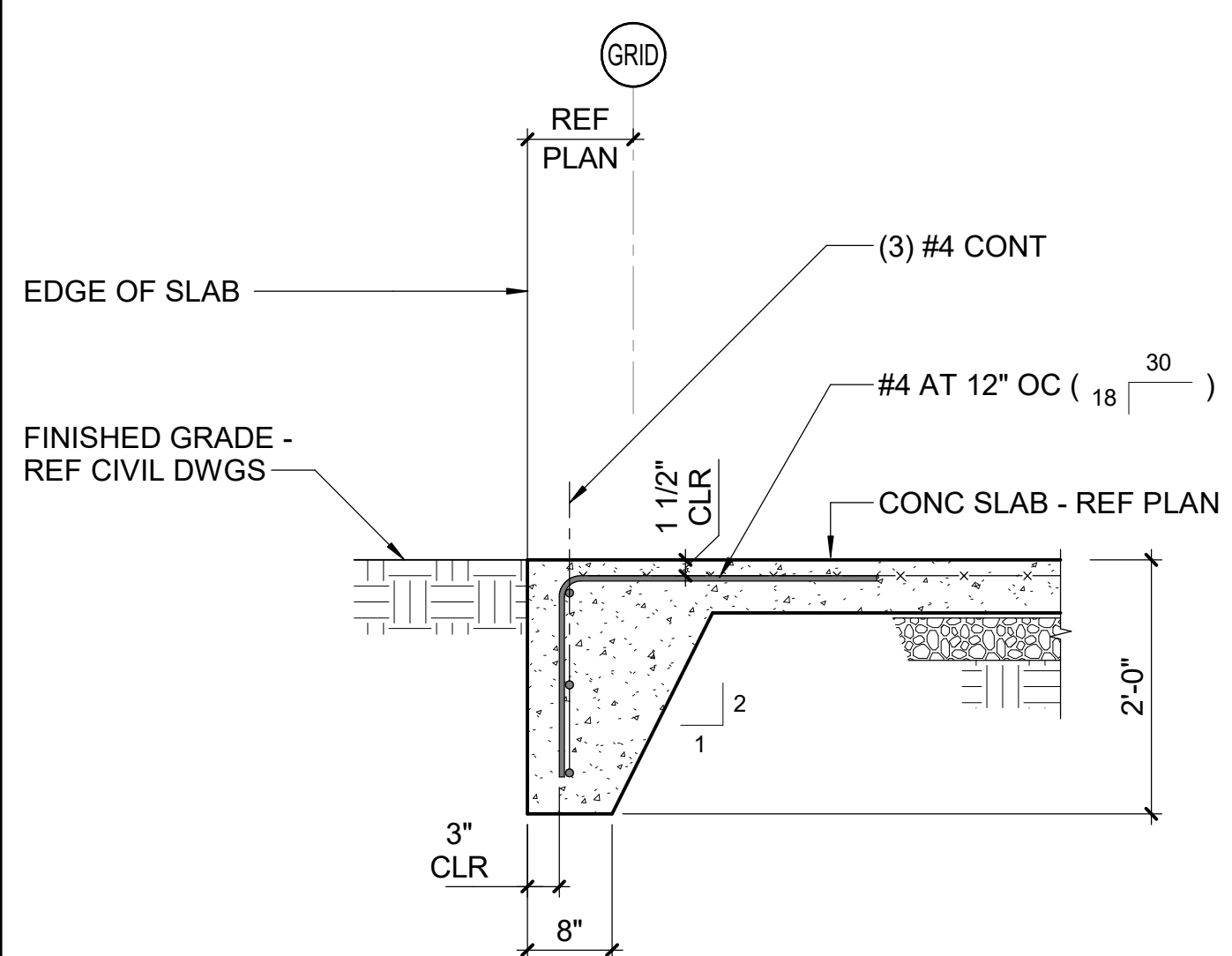
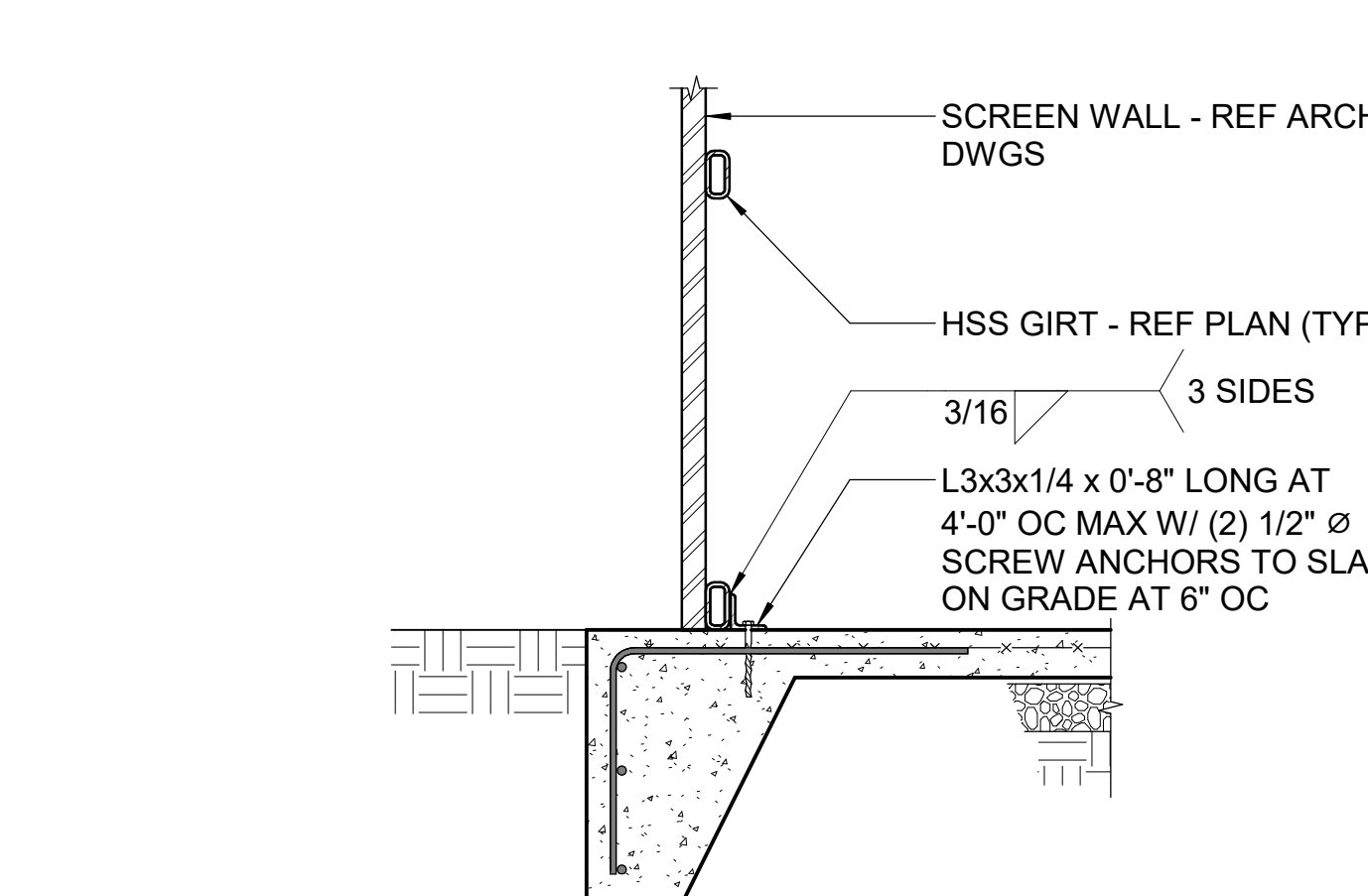
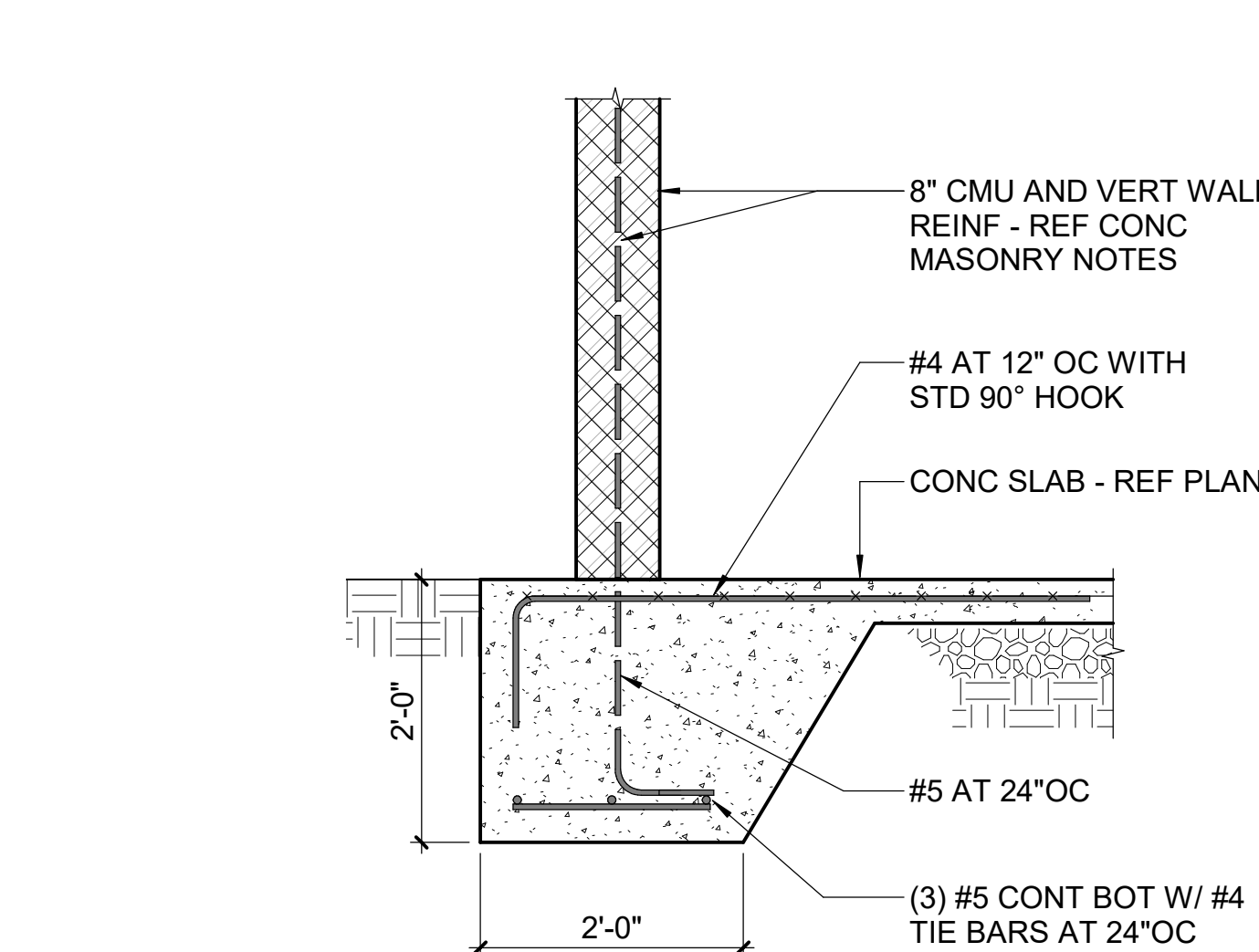
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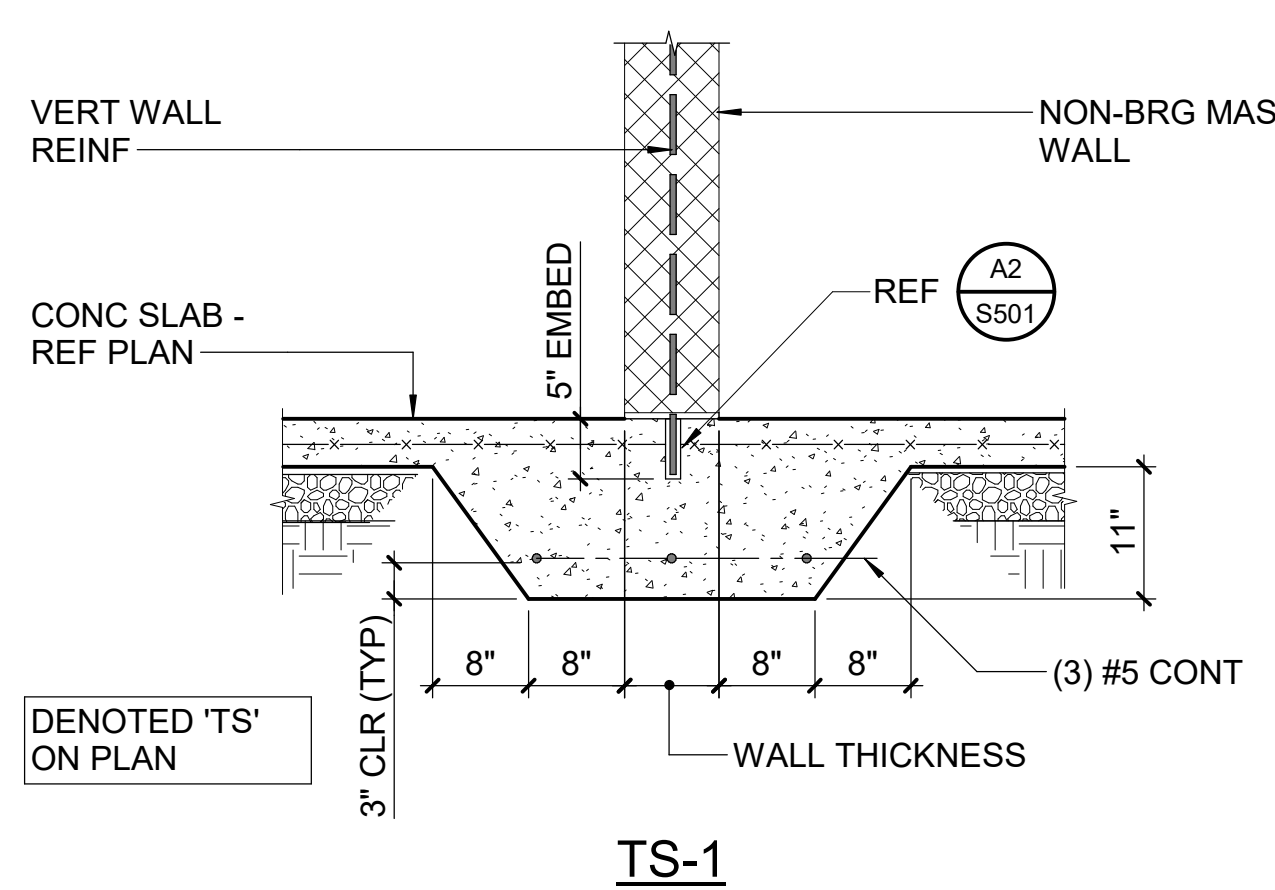
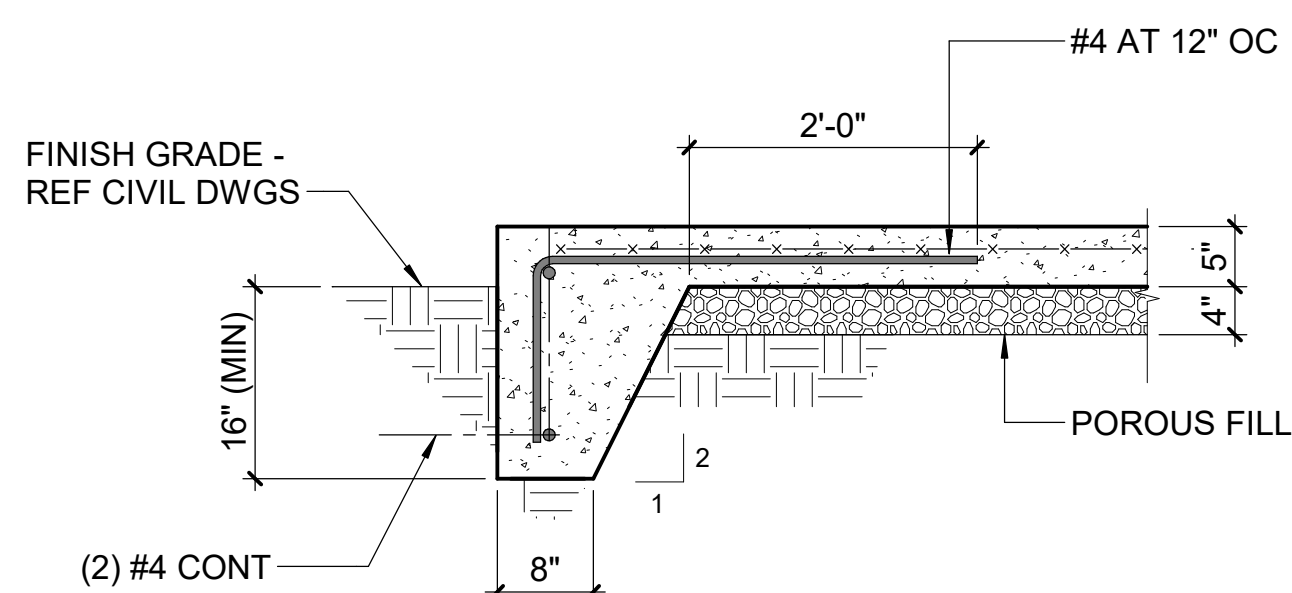
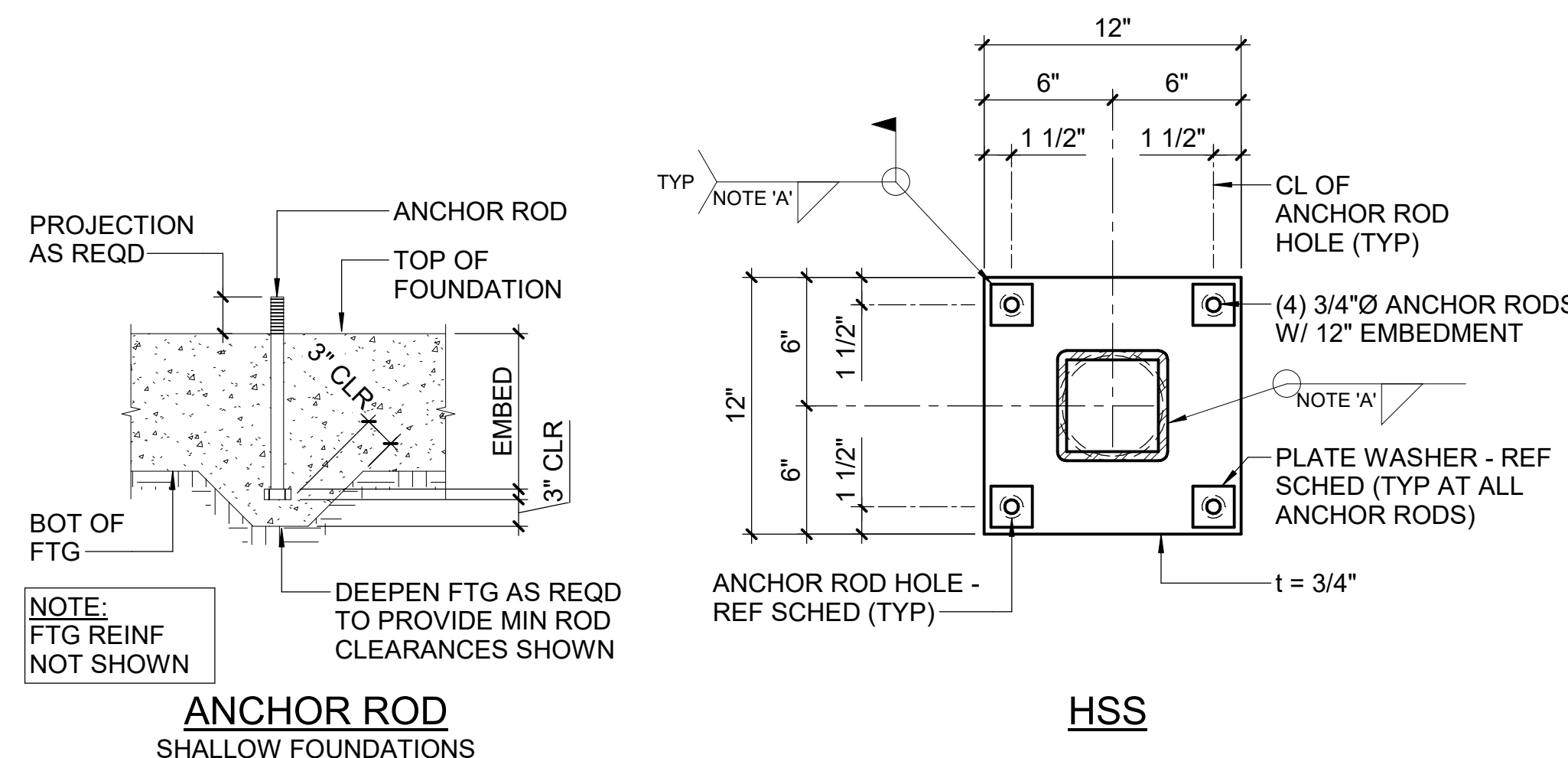
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SHEET  
**SECTIONS**Structural Engineers  
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Raleigh, NC 27603  
919.782.1833 - lynchmykins.com  
LM Project Number: LM23.030.1  
Corporation No. C-4360

S301

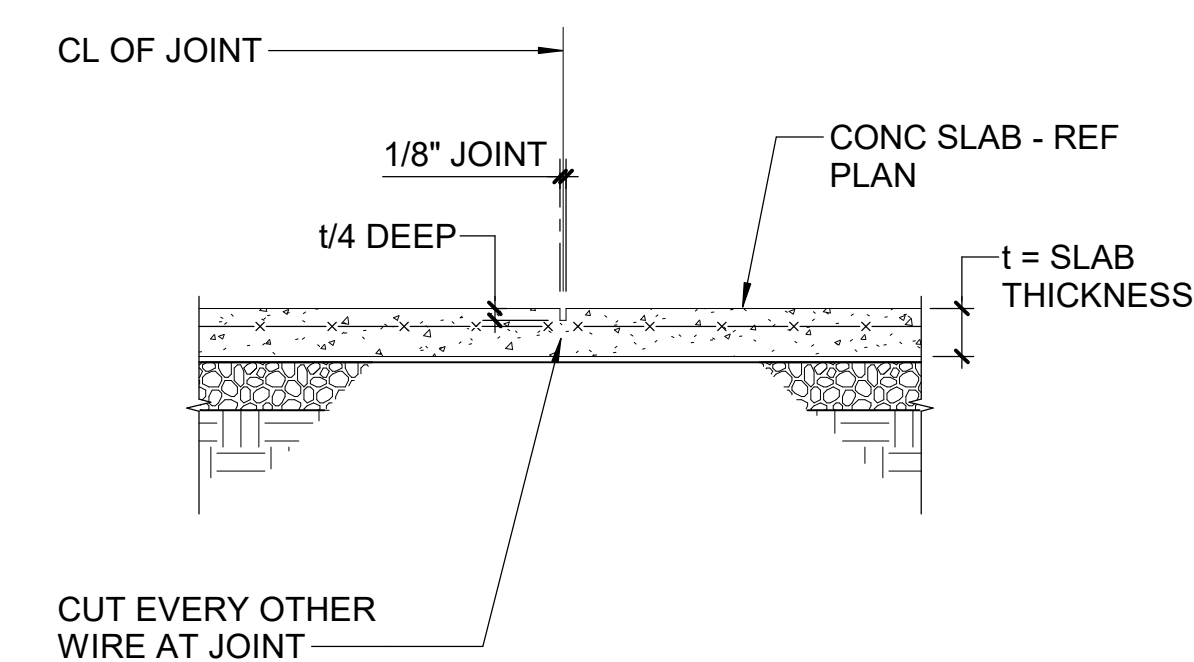
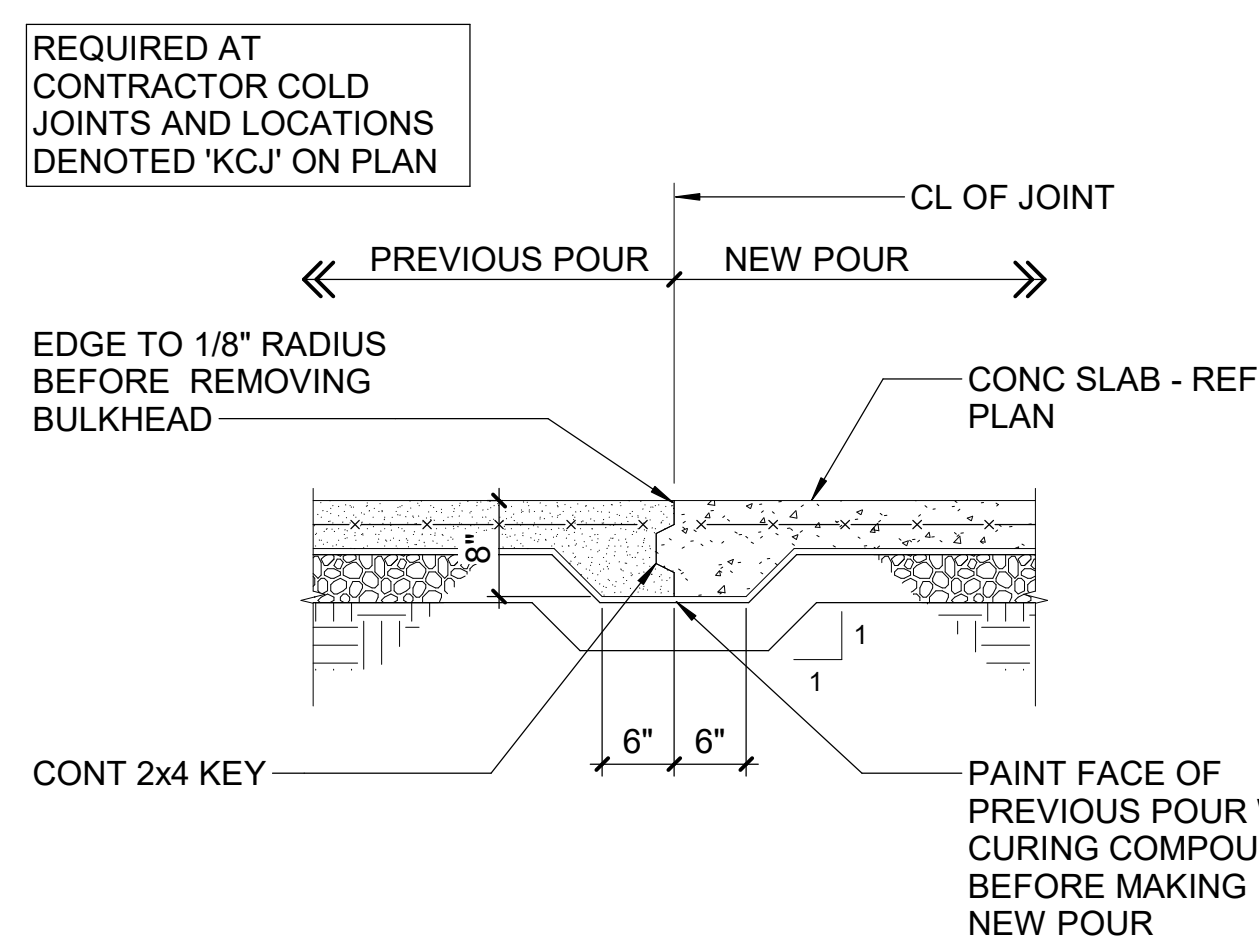
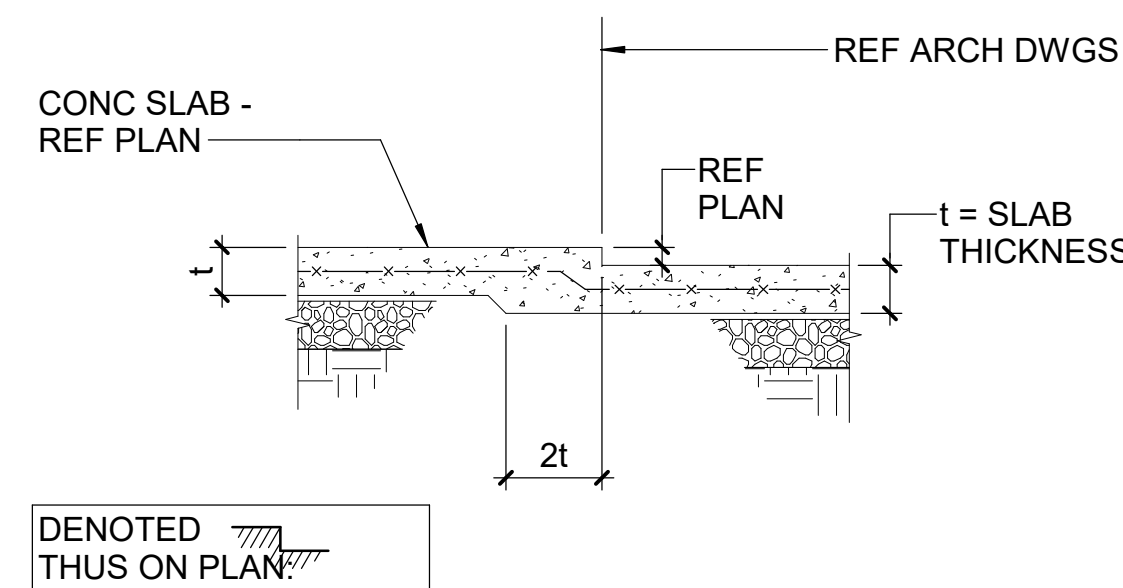
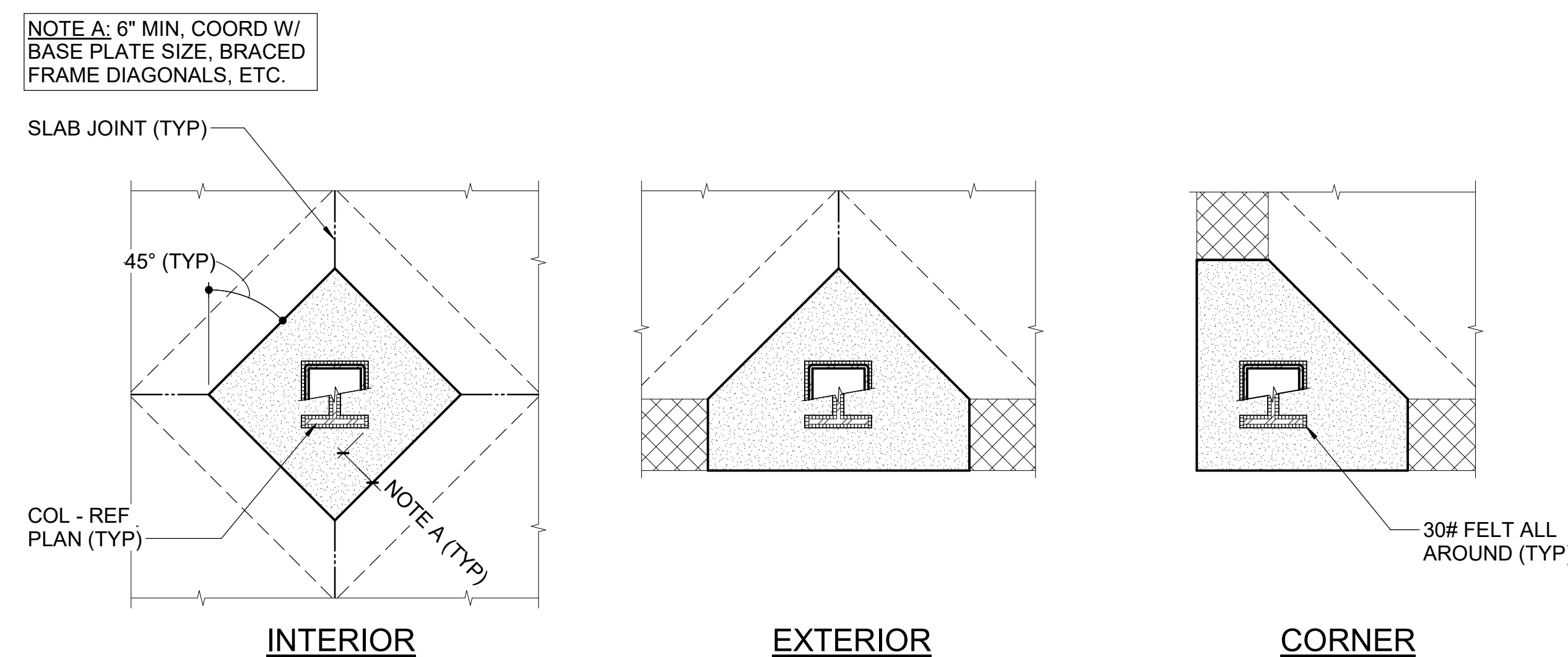
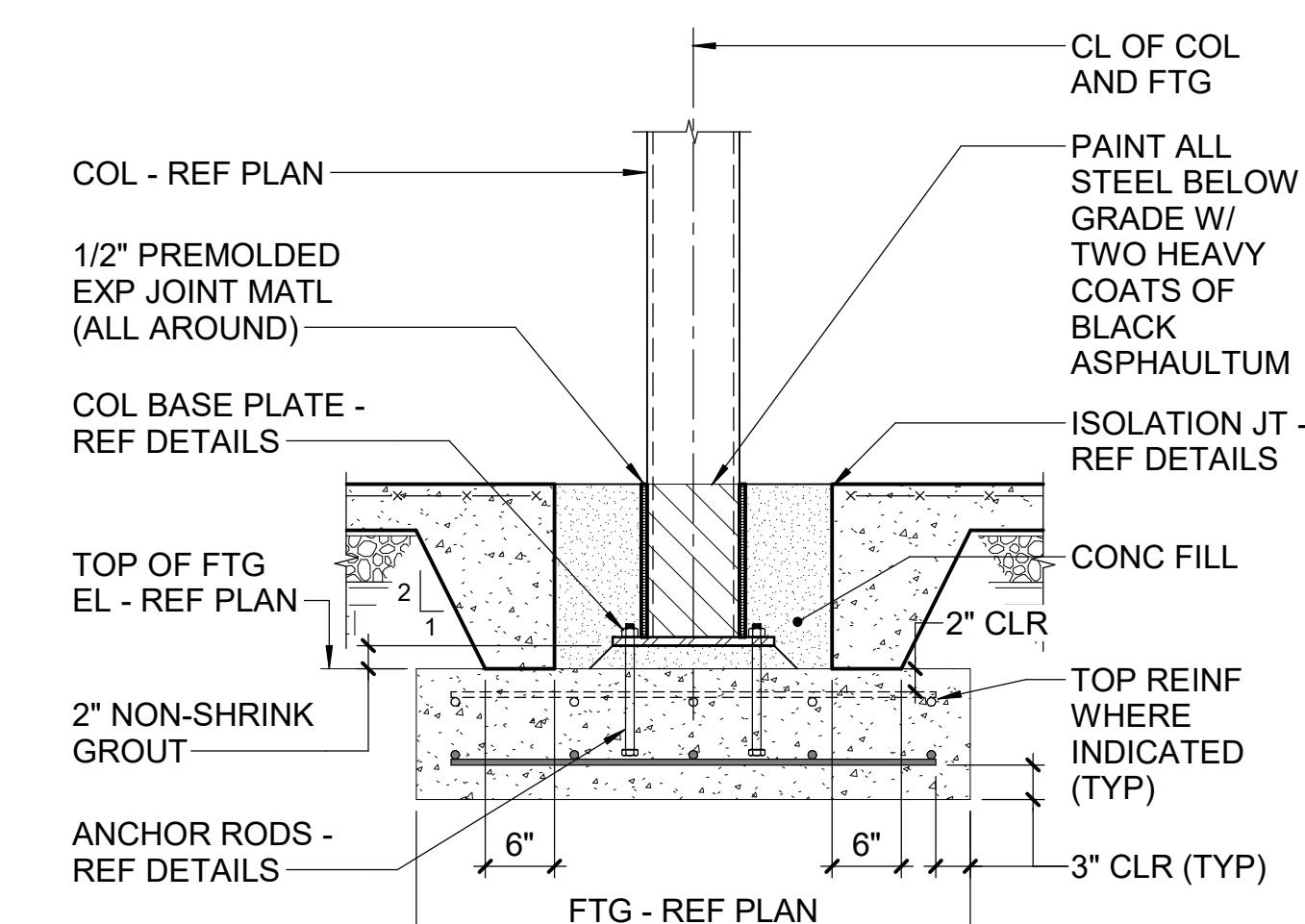
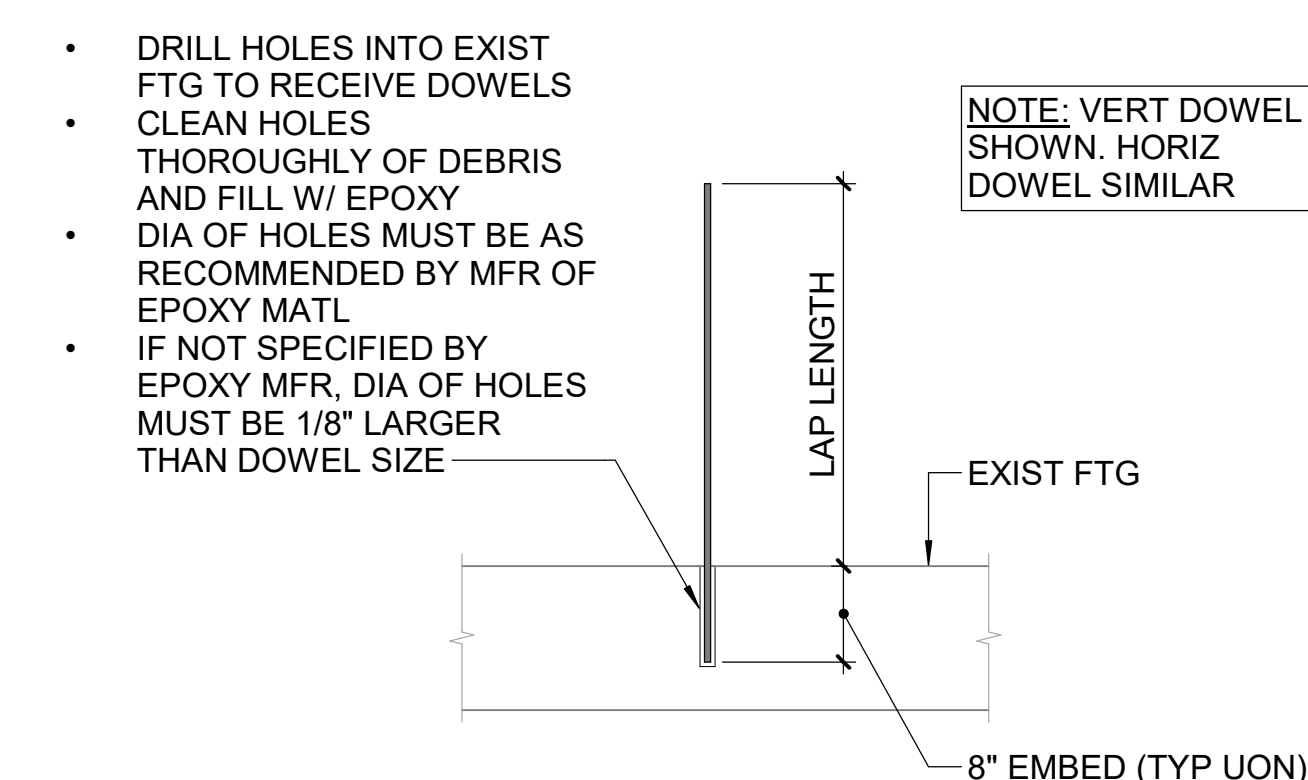
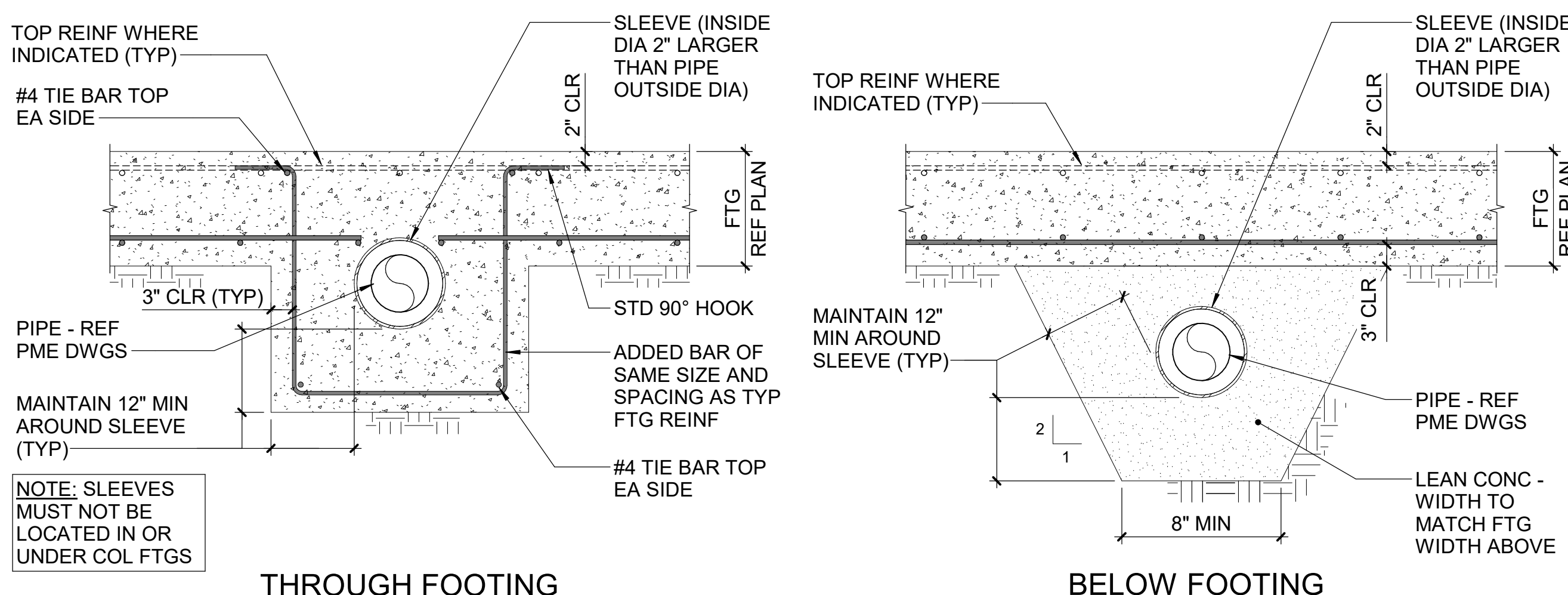
C1 SECTION  
3/4" = 1'-0"C2 SECTION  
3/4" = 1'-0"C3 SECTION  
3/4" = 1'-0"C4 SECTION  
3/4" = 1'-0"C5 SECTION  
3/4" = 1'-0"B1 SECTION  
3/4" = 1'-0"B2 SECTION  
3/4" = 1'-0"B3 SECTION  
3/4" = 1'-0"B4 SECTION  
3/4" = 1'-0"A1 SECTION  
3/4" = 1'-0"A2 SECTION  
3/4" = 1'-0"A3 SECTION  
3/4" = 1'-0"FOR DETAILS  
NOT NOTED REF  
A1 / S301



C1 TYPICAL THICKENED SLAB DETAIL  
NTSC2 TYPICAL EXTERIOR SLAB TURNDOWN DETAIL  
NTSC3 TYPICAL COLUMN BASE PLATE AND ANCHOR ROD DETAILS  
NTS

ANCHOR ROD HOLES AND WASHER SCHEDULE						
ANCHOR ROD	OVERSIZED HOLE WITH PLATE WASHER				STANDARD HOLE	
	BASE PLATE HOLE	WASHER SIZE	WASHER HOLE	WASHER THICKNESS	BASE PLATE HOLE	WASHER
3/4"Ø	1 5/16"Ø	2" SQ	13/16"Ø	1/4"	1 1/16"Ø	ASTM F844

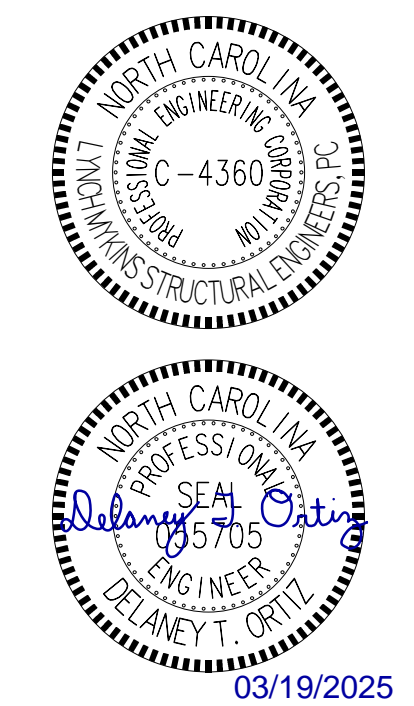
NOTE:  
A. PROVIDE MINIMUM SIZE WELD PER AISC TABLE J2.4.  
B. GENERAL CONTRACTOR'S OPTION TO USE STANDARD OR OVERSIZED HOLES IN GRAVITY COLUMN BASE PLATES. NO WELDING REQUIRED AT PLATE WASHERS USED WITH OVERSIZED HOLES.

B1 TYPICAL SAWED JOINT DETAIL  
NTSB2 TYPICAL KEYED CONSTRUCTION JOINT DETAIL  
NTSB3 TYPICAL DEPRESSED SLAB DETAIL  
NTSB4 TYPICAL COLUMN ISOLATION JOINT DETAIL  
NTSA1 TYPICAL COLUMN & FOOTING DETAIL  
NTSA2 TYPICAL EPOXY DOWEL DETAIL  
NTSA3 TYPICAL PIPE SLEEVE AT TURN DOWN SLAB DETAILS  
NTS



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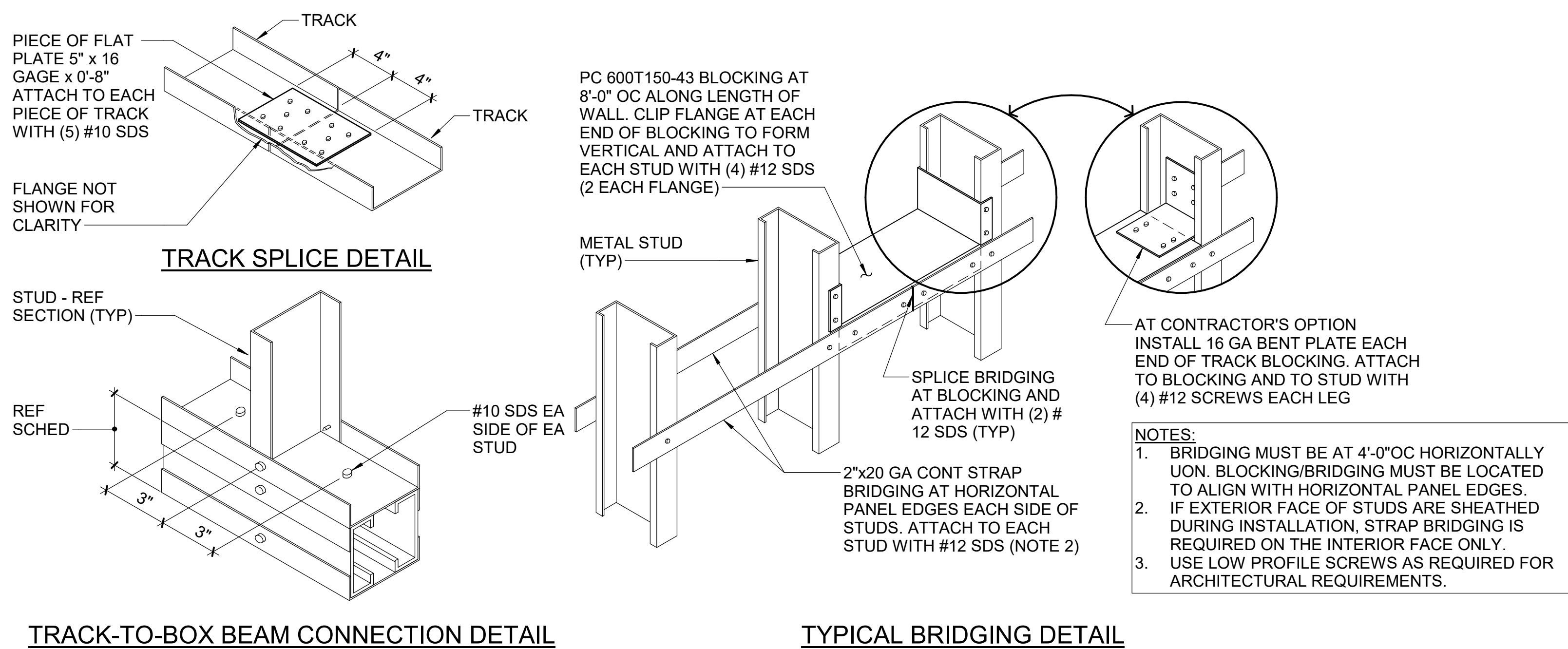


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S502

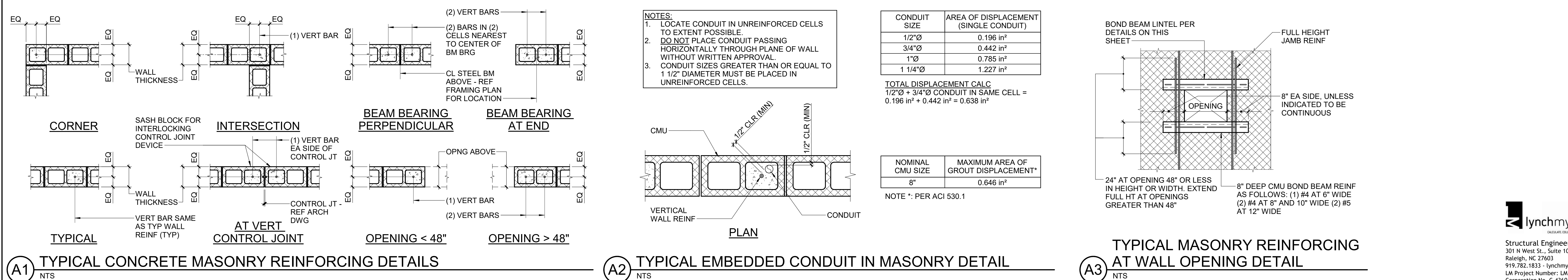


METAL STUD FRAMING NOTES:

- PROVIDE INSULATION INDICATED ON THE ARCH DWGS IN AREAS BETWEEN BUILT-UP MEMBERS INCLUDING HEADERS, SILL, JAMB, ETC.
- SCREWS ARE SELF DRILLING SCREWS (SDS). MINIMUM SCREW SPACING AND EDGE DISTANCE MUST BE 3/4" IN ANY DIRECTION, TYPICAL.
- POWDER ACTUATED FASTENERS (PAF) MUST HAVE A MINIMUM ALLOWABLE CAPACITY INTO THE BASE MATERIAL AS FOLLOWS, UNLESS OTHERWISE NOTED:  
A. STEEL: SHEAR = 600 LBS; TENSION = 250 LBS  
B. CONCRETE: SHEAR = 260 LBS; TENSION = 255 LBS
- USE LOW PROFILE SCREWS AS REQUIRED FOR ARCHITECTURAL REQUIREMENTS.

A1 TYPICAL COLD-FORMED METAL FRAMING DETAILS  
NTS







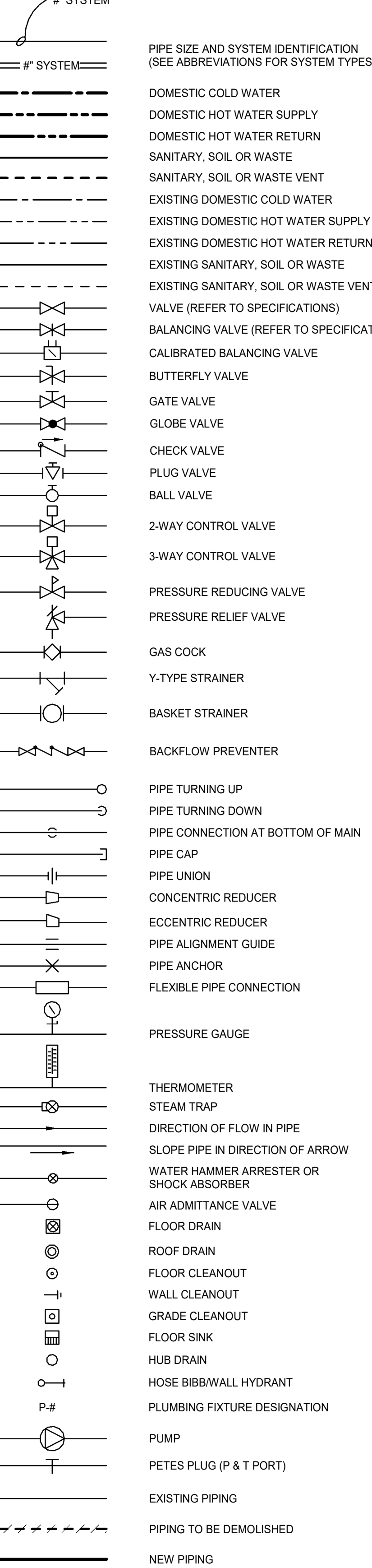
PLUMBING ABBREVIATIONS

# POUNDS, NUMBER  
A COMPRESSED AIR  
AAV AIR ADMITTANCE VALVE  
ACFM ACTUAL CUBIC FEET PER MINUTE  
AFC ABOVE FINISHED CEILING  
AFF ABOVE FINISHED FLOOR  
AFG ABOVE FINISHED GRADE  
AFH ANTI-FREEZE HYDRANT  
ALT ALTERNATE  
ARCH ARCHITECTURAL ARCHITECT  
AUTO AUTOMATIC  
AV ACID VENT  
AW ACID WASTE  
BAS BUILDING AUTOMATION SYSTEM  
BFF BELOW FINISHED FLOOR  
BHP BRAKE HORSEPOWER  
BOP BOTTOM OF PIPE  
BOS BOTTOM OF STEEL  
BP BACKFLOW PREVENTER  
BTU BRITISH THERMAL UNIT  
BTUH BRITISH THERMAL UNIT PER HOUR  
C CELSIUS  
CD CONDENSATE DRAIN  
CFH CUBIC FEET PER HOUR  
CI CAST IRON  
CLG CEILING  
CO CLEAN OUT  
CO2 CARBON DIOXIDE  
CONC CONCRETE  
CPVC CHLORINATED POLYVINYL CHLORIDE  
CTR CENTER  
CU COPPER  
CUFT CUBIC FOOT, CUBIC FEET  
CYD CUBIC YARD  
CW COLD WATER  
DDC DIRECT DIGITAL CONTROLS  
DI DUCTILE IRON  
DIA DIAMETER  
DIV DIVISION  
DW DEIONIZED WATER  
DN DOWN  
DWG DRAWING  
EA EACH  
EFF EFFICIENCY  
ELEC ELECTRICAL  
ELEV ELEVATION  
EQUIP EQUIPMENT  
EWC ELECTRIC WATER COOLER  
EWH ELECTRIC WATER HEATER  
EXIST EXISTING  
EXP EXPANSION  
F FAHRENHEIT  
FCO FLOOR CLEANOUT  
FD FLOOR DRAIN  
FFE FINISHED FLOOR ELEVATION  
FLFLR FLOOR  
FLA FULL LOAD AMPS  
FLEX FLEXIBLE  
FS FLOOR SINK  
FT FOOT, FEET  
G NATURAL GAS  
GA GAGE  
GAL GALLONS  
GC GENERAL CONTRACTOR  
GCO GRADE CLEANOUT  
GPH GALLONS PER HOUR  
GPM GALLONS PER MINUTE  
GWH GAS WATER HEATER  
HB HOSE BIBB  
HD HUB DRAIN, HEAT DETECTOR  
HORIZ HORIZONTAL  
HP HIGH PRESSURE OR HORSEPOWER  
HT HEIGHT  
HTG HEATING  
HW HOT WATER  
HWR HOT WATER RETURN  
HX HEAT EXCHANGER  
ID INDIRECT DRAIN OR INSIDE DIAMETER  
IN INCH  
INV INVERT  
KW KILOWATT  
LP LOW PRESSURE  
LPG LIQUID PETROLEUM GAS  
MA MEDICAL AIR  
MAX MAXIMUM

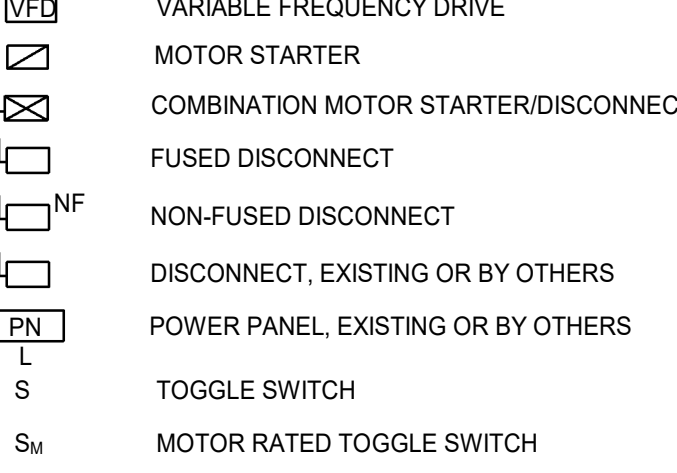
PLUMBING ABBREVIATIONS

MBH 1000 BRITISH THERMAL UNITS PER HOUR  
MCA MINIMUM CIRCUIT AMPS  
MECH MECHANICAL  
MFR MANUFACTURER  
MH MANHOLE  
MIN MINIMUM  
MOC MAXIMUM OVER CURRENT PROTECTION  
MPP MEDIUM PRESSURE  
MRT MOTOR RATED TOGGLE SWITCH  
MS MOTOR STARTER  
MSD COMBINATION MOTOR STARTER & DISCONNECT  
MTD MOUNTED  
N NITROGEN  
N.C. NORMALLY CLOSED  
N.O. NORMALLY OPEN  
NIC NOT IN CONTRACT  
NIO NITROUS OXIDE  
NTS NOT TO SCALE  
O OXYGEN  
OC ON CENTER  
OD OUTSIDE DIAMETER, OVERFLOW (EMERGENCY) DRAIN  
ODL OVERFLOW (EMERGENCY) DRAIN LEADER  
OSD OPEN SIGHT DRAIN  
P PUMP  
PD PRESSURE DROP, PUMPED DISCHARGE  
PRV PRESSURE REDUCING VALVE, PRESSURE RELIEF VALVE  
PSI POUNDS PER SQUARE INCH  
PSIA POUNDS PER SQUARE INCH ABSOLUTE  
PSIG POUNDS PER SQUARE INCH GAUGE  
PVC POLYVINYL CHLORIDE  
QTY QUANTITY  
RD ROUND ROOF DRAIN  
ROL ROOF DRAIN LEADER  
RECIRC RECIRCULATING  
REINF REINFORCING  
REV REVISION  
RL ROOF LEADER  
RM ROOM  
RO REVERSE OSMOSIS  
RPM REVOLUTIONS PER MINUTE  
RPZ REDUCED PRESSURE ZONE  
SCFM STANDARD CUBIC FEET PER MINUTE  
SCH SCHEDULE  
SD STORM DRAIN  
SECT SECTION  
SF SQUARE FEET  
SM SMOKE PIPE  
SPEC SPECIFICATION  
SRV SAFETY RELIEF VALVE  
SS SERVICE SINK; STAINLESS STEEL; SANITARY SEWER  
ST STORM  
TD TRENCH DRAIN  
TMV THERMOSTATIC MIXING VALVE  
TOP TOP OF PIPE  
TOS TOP OF STEEL  
TWH TANKLESS WATER HEATER  
TYP TYPICAL  
UL UNDERWRITERS LABORATORIES  
V VENT  
VAC VACUUM (SUCTION)  
VERT VERTICAL  
VFD VARIABLE FREQUENCY DRIVE  
VTR VENT THRU ROOF  
W WASTE  
W/ WITH  
WO WITHOUT  
WC WATER CLOSET/WATER COLUMN  
WCO WALL CLEANOUT  
WH WATER HEATER  
WPD WORKING PRESSURE DROP  
XT THERMAL EXPANSION TANK  
Ø ROUND, DIAMETER, PHASE

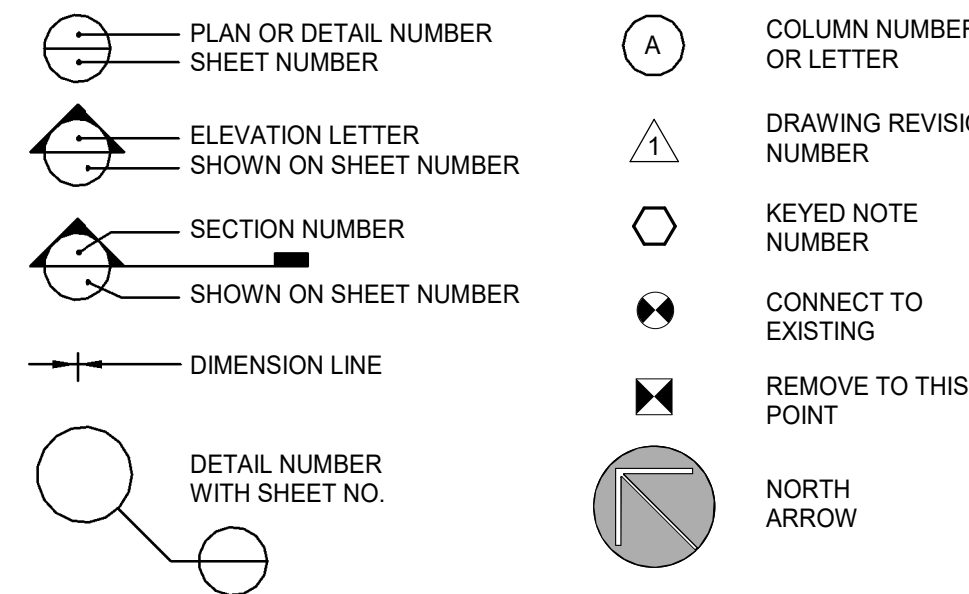
PLUMBING PIPING SYMBOLS



ELECTRICAL SYMBOLS



GENERAL SYMBOLS



PLUMBING GENERAL NOTES

- COORDINATE WORK WITH OTHER TRADES PRIOR TO PURCHASE AND INSTALLATION OF ANY PIPING, OR EQUIPMENT. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
- REFER TO THE ARCHITECTURAL PLANS FOR DIMENSIONS. DO NOT SCALE THESE DRAWINGS.
- ALL PIPING LAYOUTS AND LOCATIONS SHOWN ARE DIAGRAMMATIC AND DO NOT INDICATE ALL FITTINGS REQUIRED TO COMPLETE WORK. COORDINATE THE PIPING LAYOUT WITH ALL CONTRACTORS PRIOR TO INSTALLATION, INCLUDING CONDUITS AND CABLE TRAYS. PROVIDE ALL PIPING OFFSETS REQUIRED FOR THE COMPLETE INSTALLATION OF THE SYSTEM WHETHER OR NOT THE OFFSETS ARE INDICATED ON THE PLANS. INSTALL PIPING HIGH ENOUGH TO AVOID LIGHTS, CONDUIT AND MISCELLANEOUS PIPING, BUT LOW ENOUGH TO ALLOW FOR EASY ACCESS TO SYSTEM BALANCING DEVICES. DO NOT BLOCK ACCESS TO DEVICES.
- LOCATE PIPING AND EQUIPMENT SUCH THAT ACCESS PANELS MAY BE FULLY OPENED (VIA TILE CEILING) FOR SERVICING VALVES. COORDINATE LOCATION WITH LIGHTING FIXTURES OR ANY OTHER EQUIPMENT.
- COORDINATE WORK WITH OTHER TRADES PRIOR TO PURCHASE AND INSTALLATION OF EQUIPMENT AND MATERIALS. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
- INSTALL ALL EQUIPMENT WITH THE MANUFACTURER'S RECOMMENDATION AND CODE REQUIRED CLEARANCES. INSURE ALL ITEMS FURNISHED WILL FIT IN THE SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS AND FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO PURCHASE AND INSTALLATION.
- COORDINATE EXACT SIZE AND LOCATION OF ALL PENETRATIONS THROUGH THE ROOF WITH ALL TRADES.
- COORDINATE LOCATIONS AND ELEVATIONS OF ALL EXPOSED ITEMS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND DETAILS. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: SENSORS, WALL DEVICES, CONTROL PANELS, AND ALARMS.
- FURNISH 24"x24" ACCESS DOORS (UNLESS OTHERWISE INDICATED) AT ALL MAINTENANCE ITEMS THAT ARE CONCEALED, SUCH AS EQUIPMENT, VALVES, SENSORS, ETC. COORDINATE EXACT LOCATIONS WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
- THE SIZE OF COLD AND HOT WATER PIPE RUNOUTS TO FIXTURES SHALL BE THE SAME AS THE POTABLE WATER CONNECTIONS LISTED IN THE PLUMBING FIXTURE SCHEDULE, UNLESS NOTED OTHERWISE.
- THE SIZE OF SANITARY WASTE AND VENT PIPING TO FIXTURE SHALL BE THE SAME AS WASTE AND VENT CONNECTIONS LISTED IN THE PLUMBING FIXTURE SCHEDULE, UNLESS NOTED OTHERWISE.

WATER & SANITARY LOAD SUMMARY

SANITARY (FIXTURE UNITS)	WATER (FIXTURE UNITS)	WATER DEMAND (GPM)
22	47.5	49.0

PLUMBING DRAWING LIST

NO.	TITLE
P001	STANDARDS, SYMBOLS & ABBREVIATIONS
P111	PLANS - RESTROOM BUILDING
P112	PLANS - TRAINING TOWER
P113	PLANS - TRAINING TOWER
P301	DETAILS
P401	SCHEDULES



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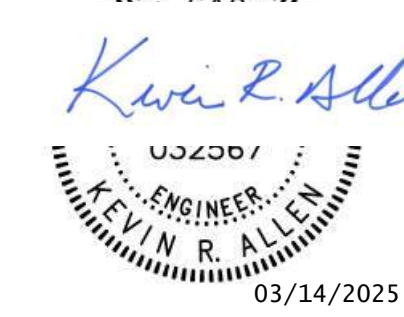
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WAKE TECHNICAL COMMUNITY COLLEGE

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NCCCS NO. 2303



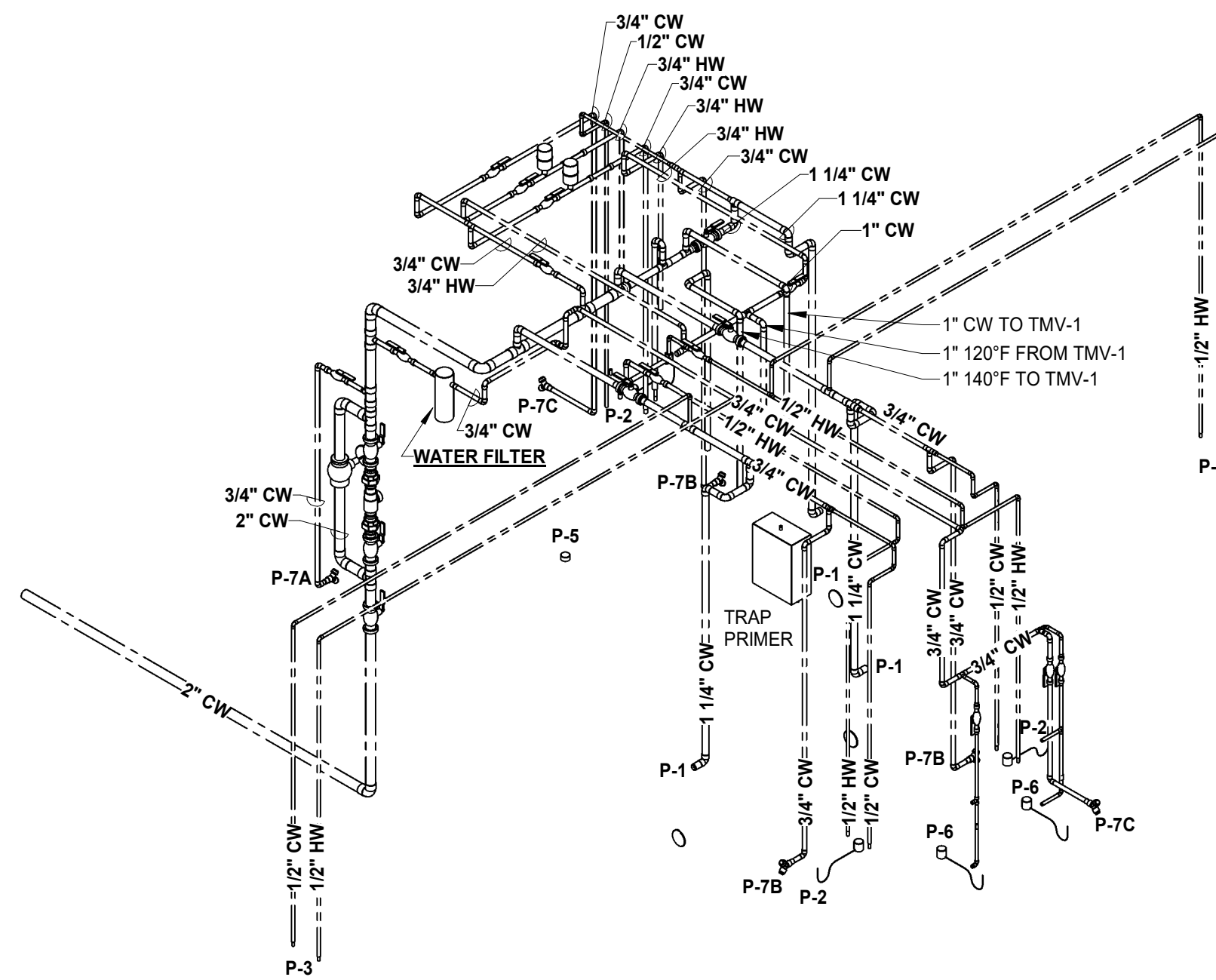
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NO.	REVISION	DATE

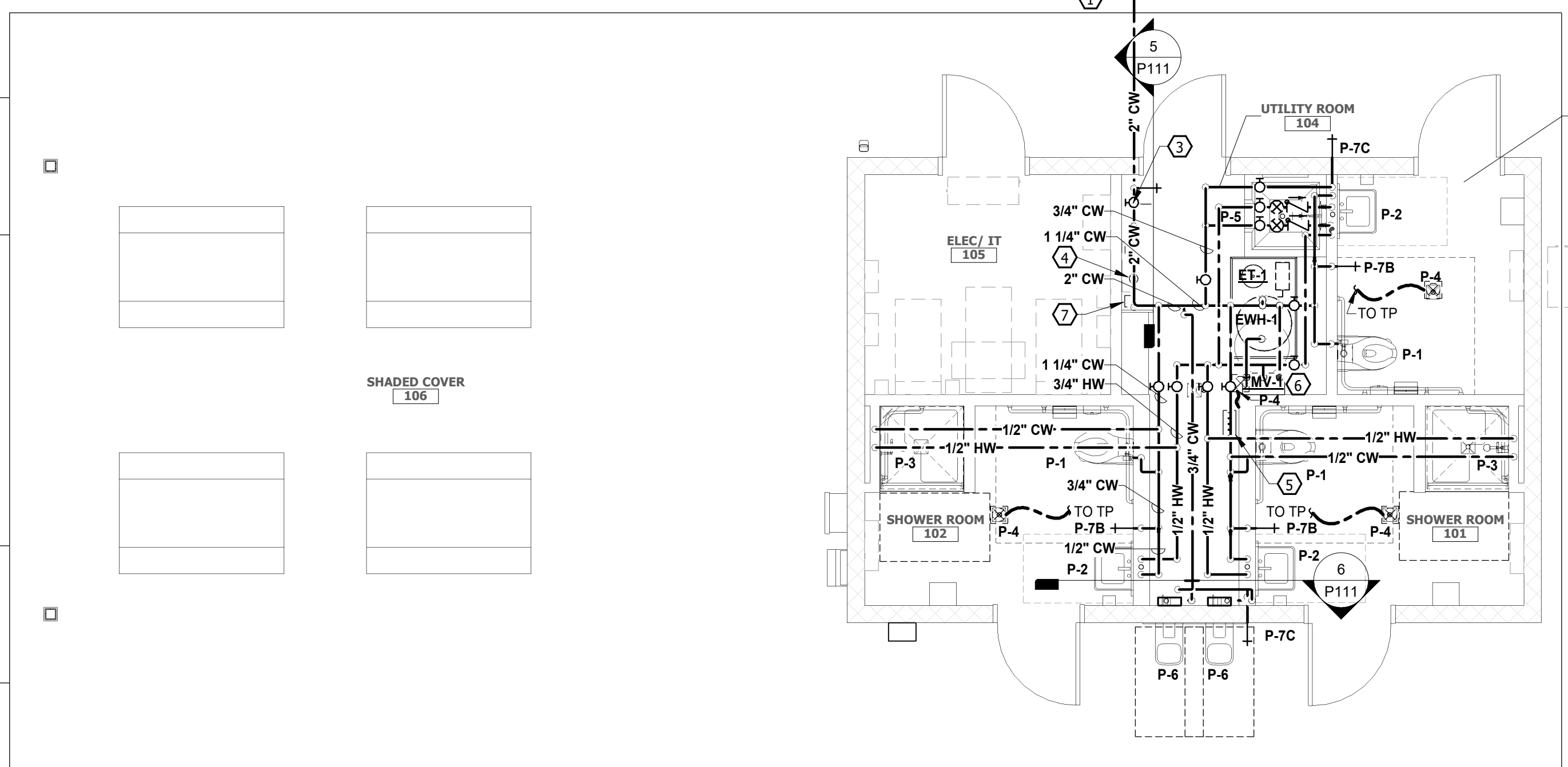
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**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**STANDARDS, SYMBOLS & ABBREVIATIONS**

P001

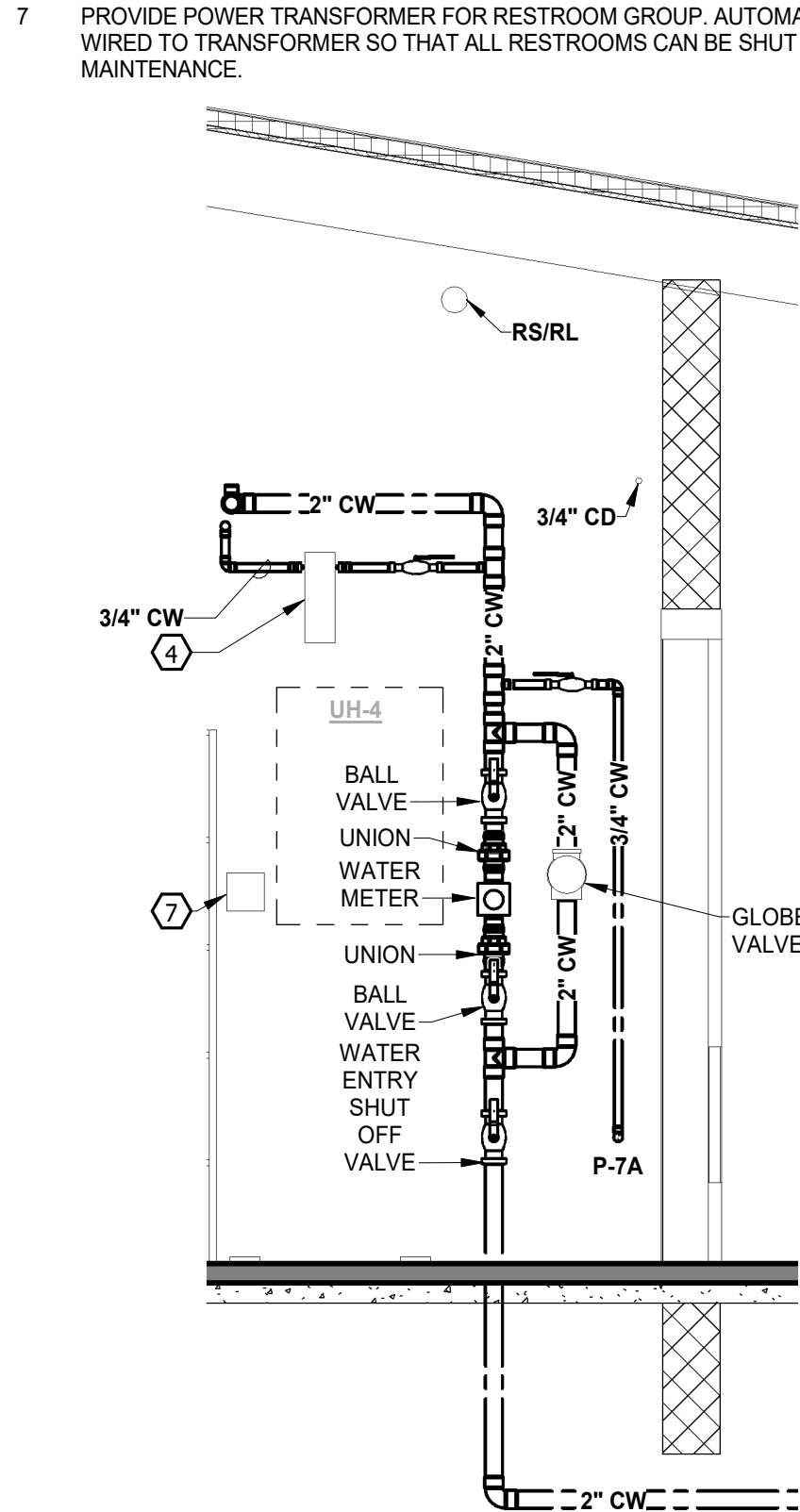




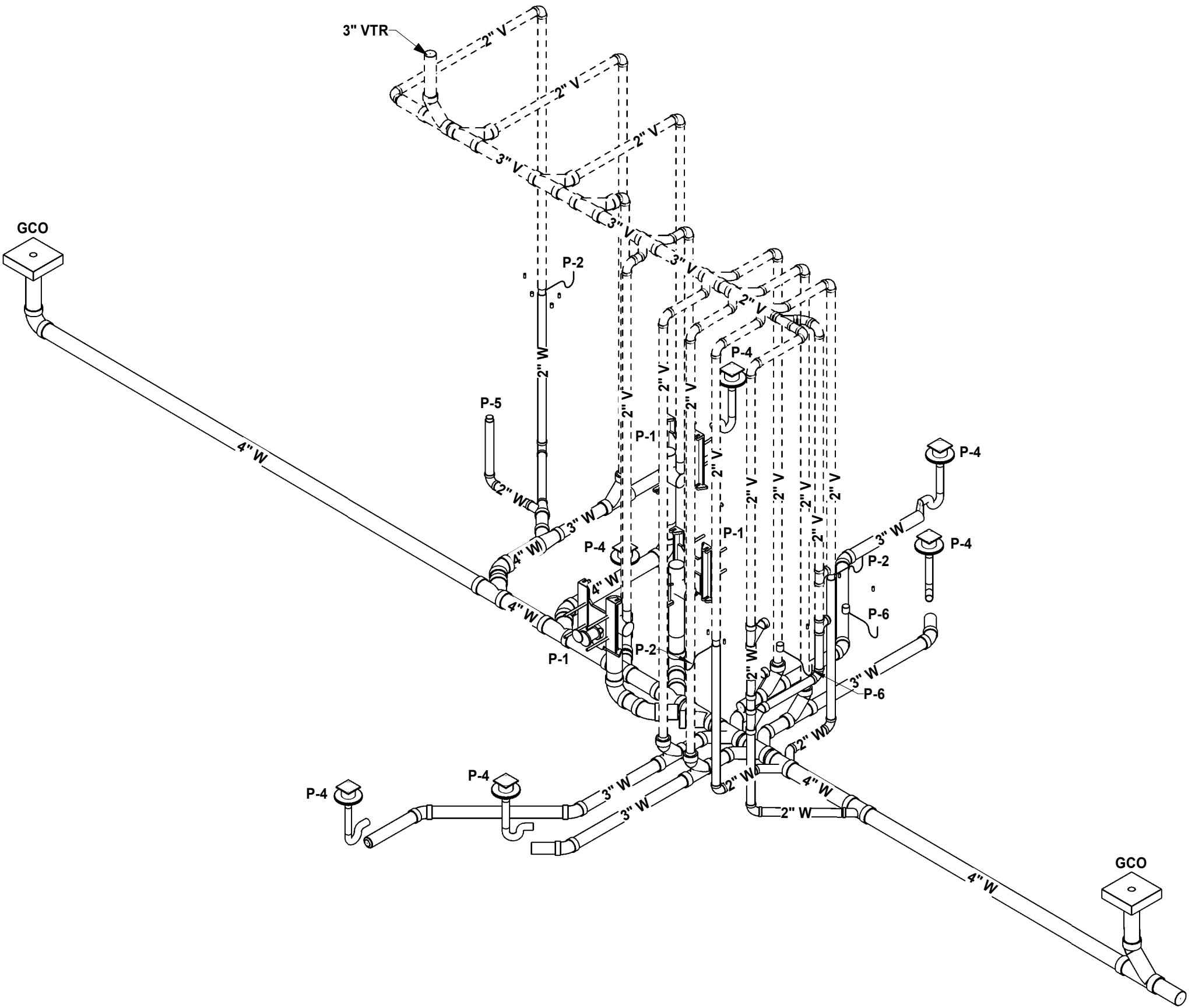
3 DOMESTIC WATER RISER  
P111 SCALE: NTS



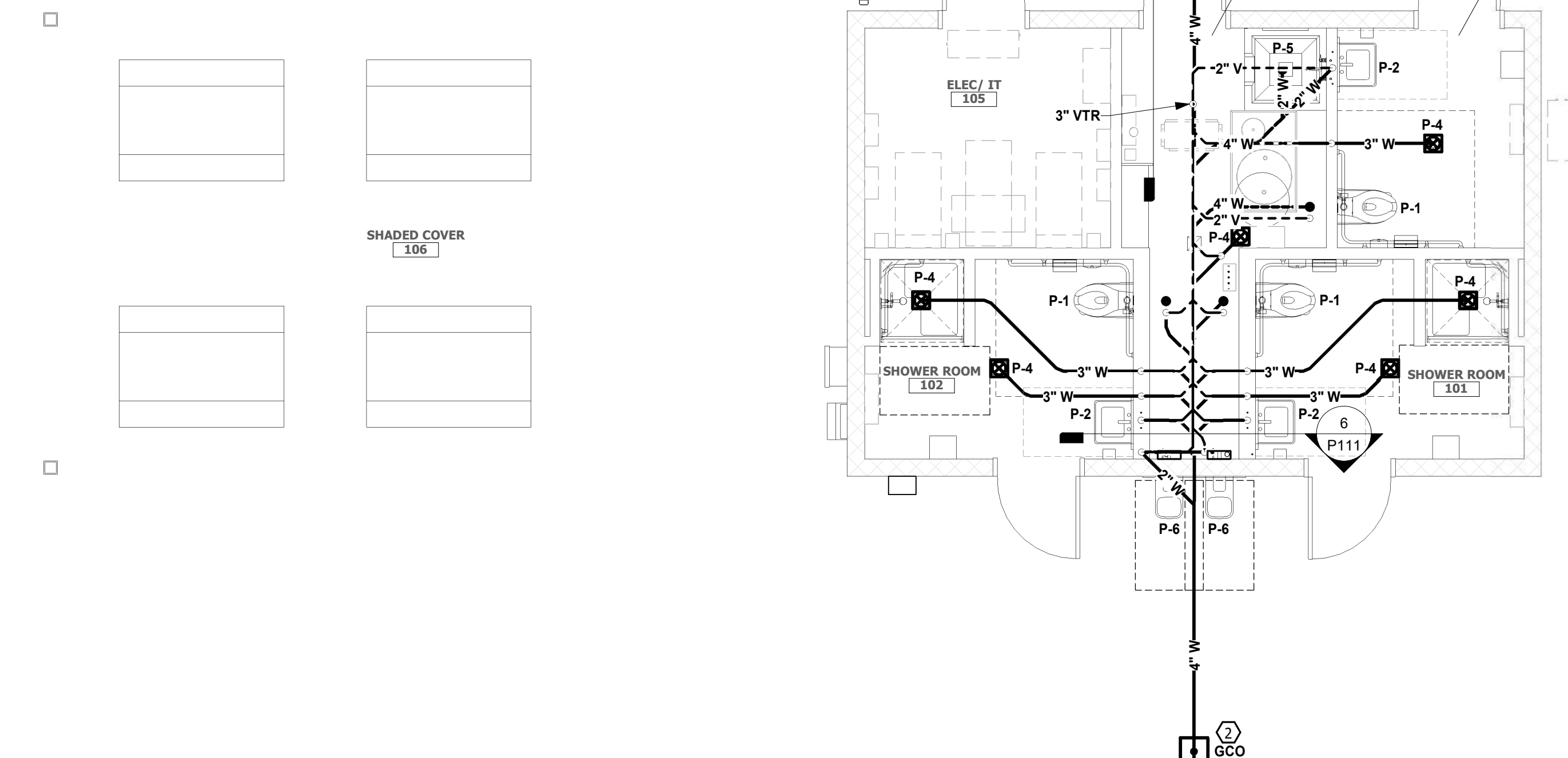
1 FLOOR PLAN - RESTROOM/SHADE STRUCTURE - DOMESTIC WATER  
P111 SCALE: 1/4\"/>



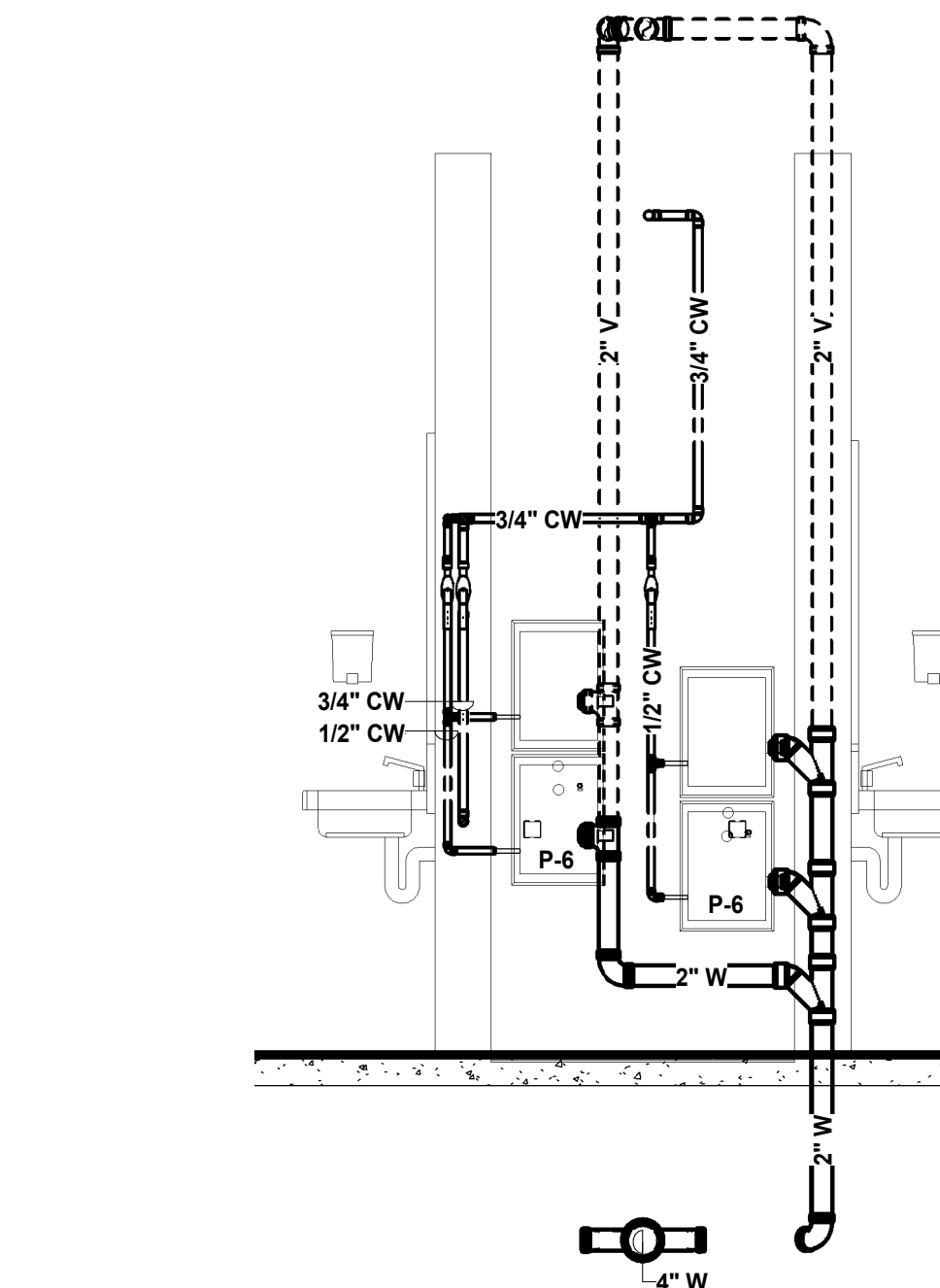
5 WATER ENTRY - SECTION VIEW  
P111 SCALE: 1/2\"/>



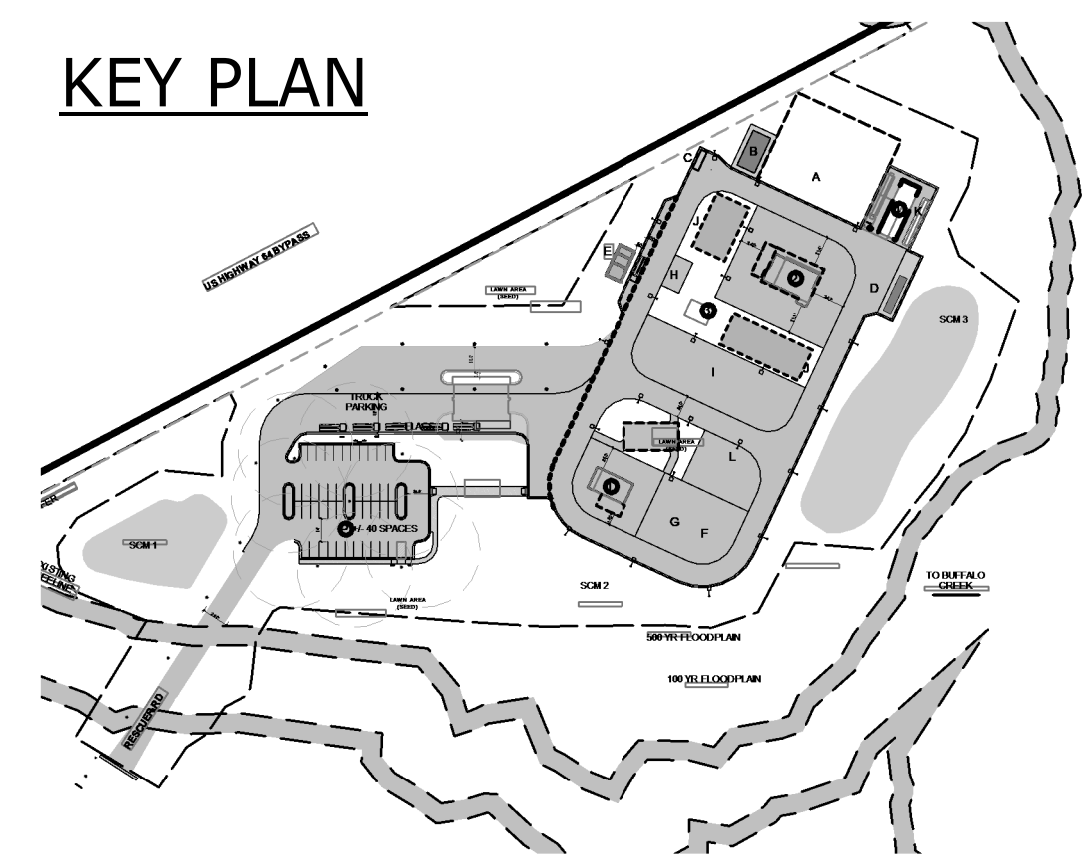
4 SANITARY WASTE RISER  
P111 SCALE: NTS



2 FLOOR PLAN - RESTROOM/SHADE STRUCTURE - SANITARY WASTE & VENT  
P111 SCALE: 1/4\"/>



6 UTILITY ROOM - SECTION VIEW  
P111 SCALE: 1/2\"/>



KEY PLAN

- KEY NOTES TO P111
- CONNECT TO DOMESTIC WATER SERVICE AT BUILDING 10' LINE. COORDINATE WITH UTILITY CONTRACTOR.
  - CONNECT TO SANITARY WASTE SERVICE AT BUILDING 10' LINE. COORDINATE WITH UTILITY CONTRACTOR.
  - PROVIDE MAIN SHUTOFF VALVE 18" AFF.
  - WATTS MODEL PW0WHCUC1 WATER FILTER OR EQUIVALENT. PROVIDE UNIONS ON EACH SIDE OF WATER FILTER.
  - ELECTRONIC TRAP PRIMER (TP), MOUNT AT 60" AFF.
  - THERMOSTATIC MIXING VALVE.
  - PROVIDE POWER TRANSFORMER FOR RESTROOM GROUP. AUTOMATIC LAVATORIES TO BE WIRED TO TRANSFORMER SO THAT ALL RESTROOMS CAN BE SHUT OFF AT ONCE FOR MAINTENANCE.

Kevin R. Allen  
ENGINEER  
03/14/2025

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PLANS - RESTROOM BUILDING

P111

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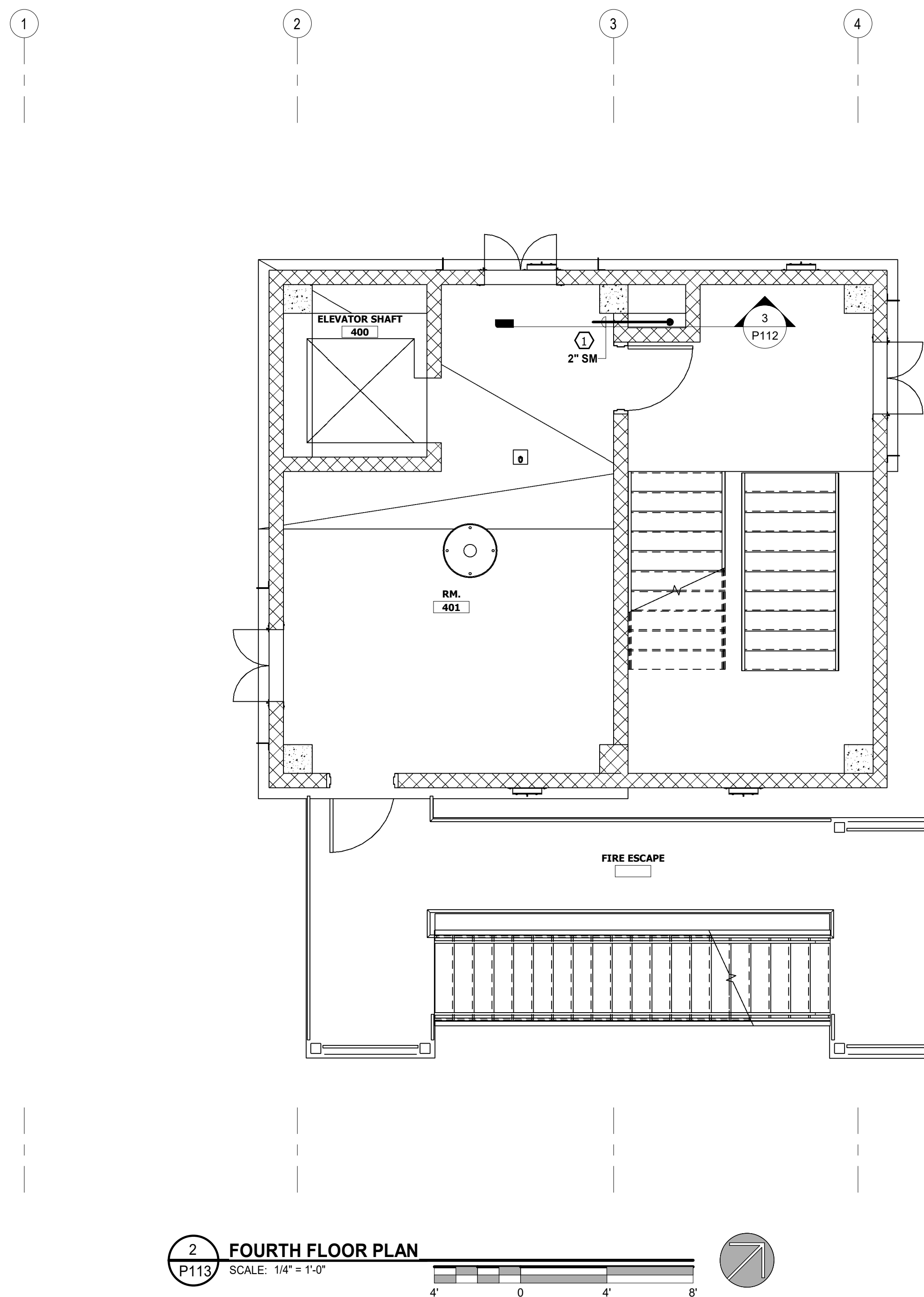
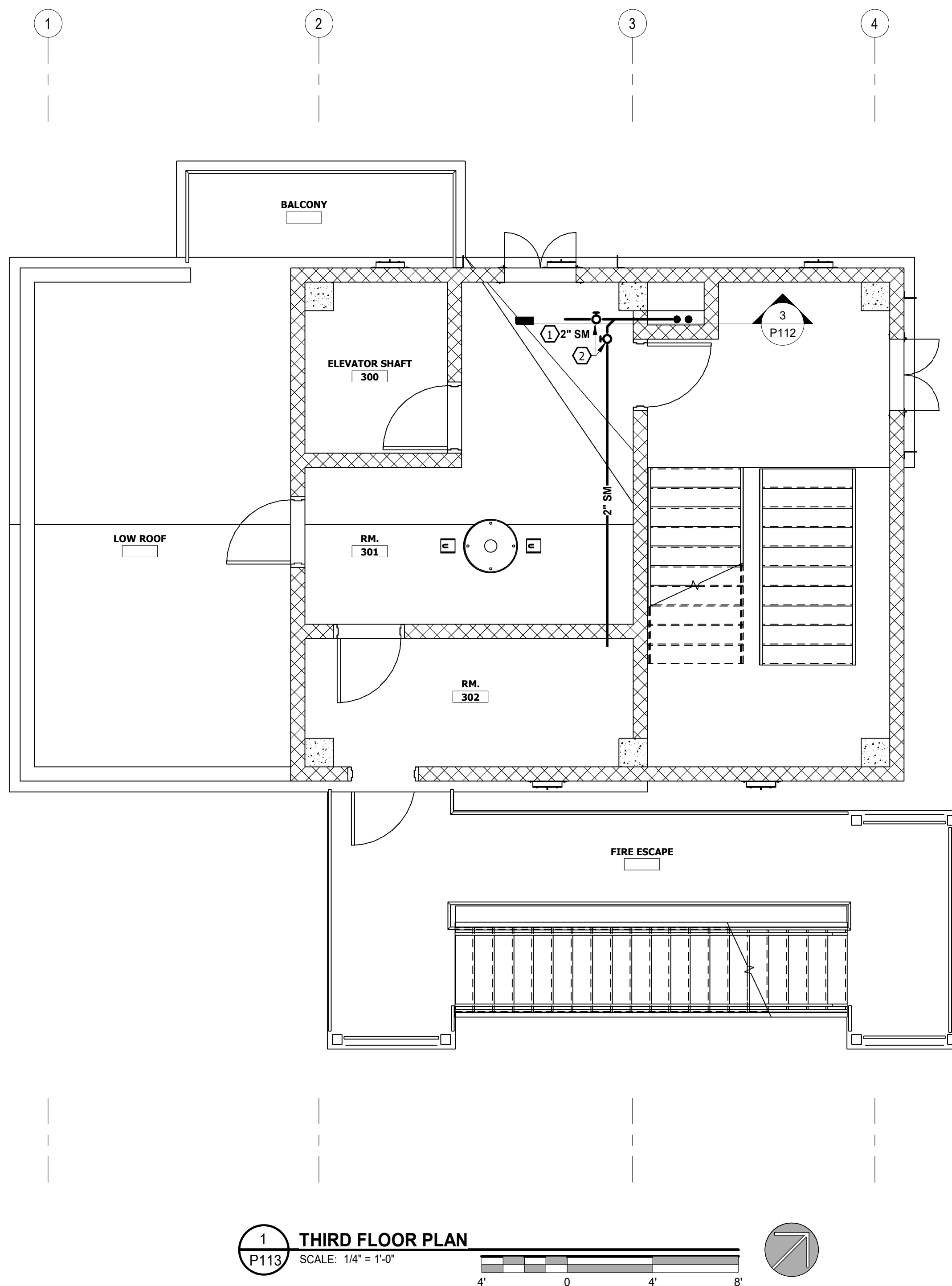






KEY NOTES TO P113

- 1 PVC SMOKE MACHINE PIPING TO EACH FLOOR.
- 2 PROVIDE BALL VALVE TO ISOLATE EACH ROOM ON FLOOR.



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KEVIN R. ALLEN

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22-086

DATE ISSUED

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PROJECT STATUS

ISSUE FOR

CONSTRUCTION

SHEET

PLANS - TRAINING

TOWER

P113



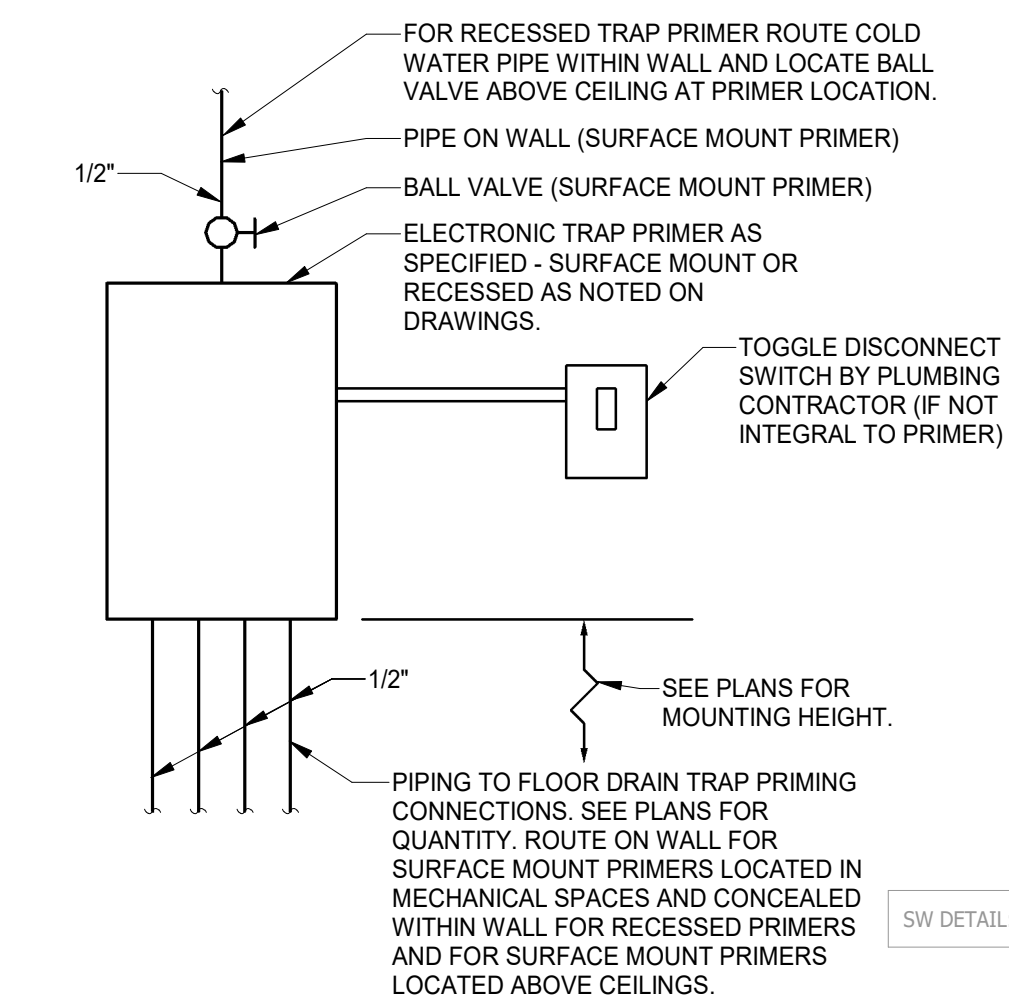
HAMMER ARRESTOR SCHEDULE			
SIZE	FIXTURE UNIT	REF. PDI STANDARD	MANUFACTURER
1/2"	1-11	A	JOSAM OR EQUIVALENT ZURN, SMITH, WATTS
3/4"	12-32	B	JOSAM OR EQUIVALENT ZURN, SMITH, WATTS
1"	33-60	C	JOSAM OR EQUIVALENT ZURN, SMITH, WATTS
1-1/4"	61-113	D	JOSAM OR EQUIVALENT ZURN, SMITH, WATTS
1-1/2"	114-154	E	JOSAM OR EQUIVALENT ZURN, SMITH, WATTS
2"	155-330	F	JOSAM OR EQUIVALENT ZURN, SMITH, WATTS

NOTES:

- ARRESTOR SHALL BE APPROVED BY THE MANUFACTURER TO BE INSTALLED WITH NO ACCESS PANEL REQUIRED.
- ARRESTORS SHALL BE OF COPPER OR STAINLESS STEEL WITH MANUFACTURERS LIMITED LIFETIME WARRANTY. WARRANTY SHALL COVER THE LIFE OF THE INSTALLED PLUMBING SYSTEM.
- PROVIDE A NORMALLY OPEN BALL VALVE AT CONNECTION TO THE DOMESTIC SUPPLY LINE.
- THE ARRESTOR DOES NOT REQUIRE MAINTENANCE AND THE WARRANTY ELIMINATES THE NEED FOR ACCESS TO THE UNIT.

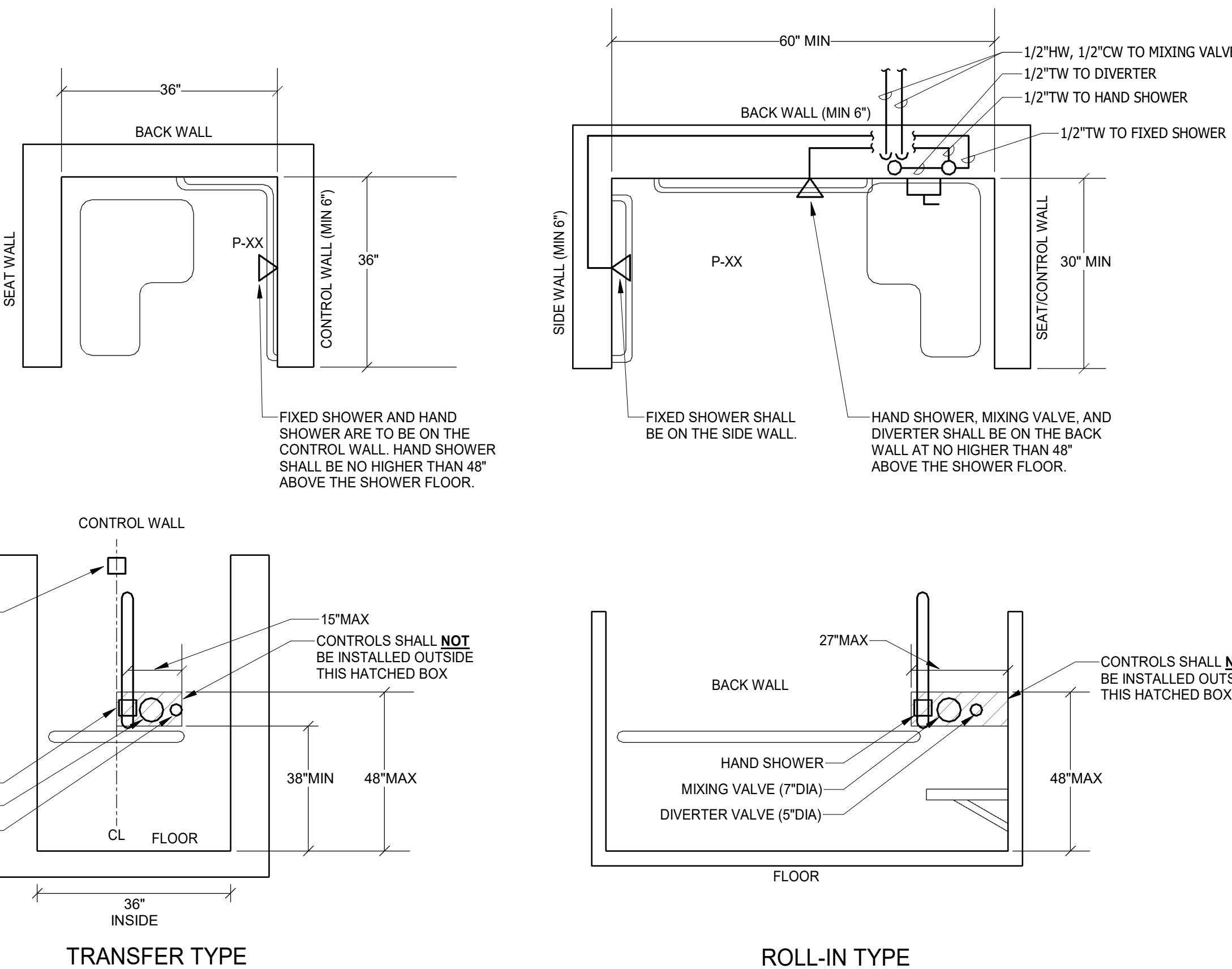
SO DETAIL: PB14

7 DOMESTIC WATER HAMMER ARRESTOR SCHEDULE  
P301 SCALE: NTS



SW DETAIL: PB13

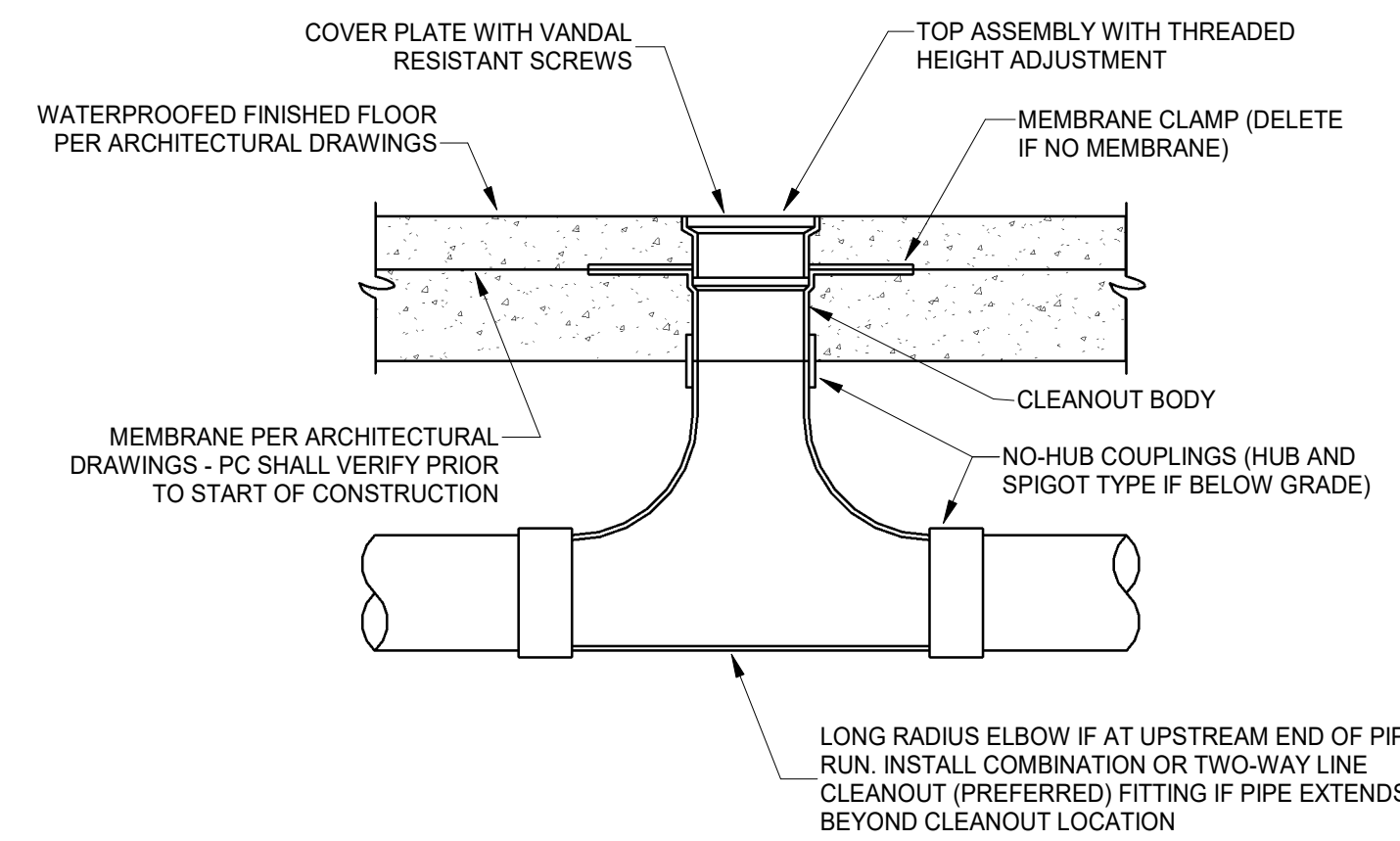
8 ELECTRONIC TRAP PRIMER  
P301 SCALE: NTS



NOTES:

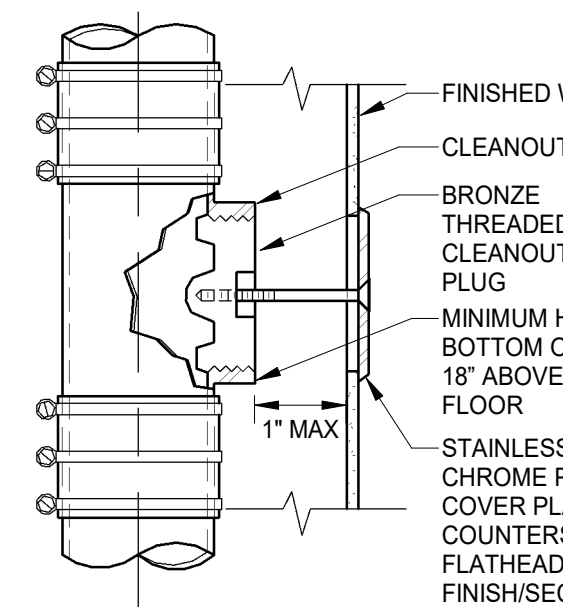
- DIAGRAMS ABOVE ARE FROM THE ADA STANDARDS, CHAPTER 6, PLUMBING ELEMENTS AND FACILITIES. DIAGRAMS ARE DIAGRAMATIC AND THE CONTRACTOR SHALL FIELD VERIFY ALL ROUGH-INS.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHTS FOR CONTROLS AND GRAB BARS.
- THE HAND SHOWER SHALL BE SET AT A MAXIMUM OF 48" ABOVE THE SHOWER FLOOR.
- IF THERE IS NO SEAT FOR THE ROLL-IN SHOWER, THE CONTROLS AND HAND SHOWER CAN BE SET ON EITHER THE BACK WALL OR SIDE WALLS, NOT EXCEEDING 48" FROM THE SHOWER FLOOR.

9 ADA SHOWER DETAIL  
P301 SCALE: NTS



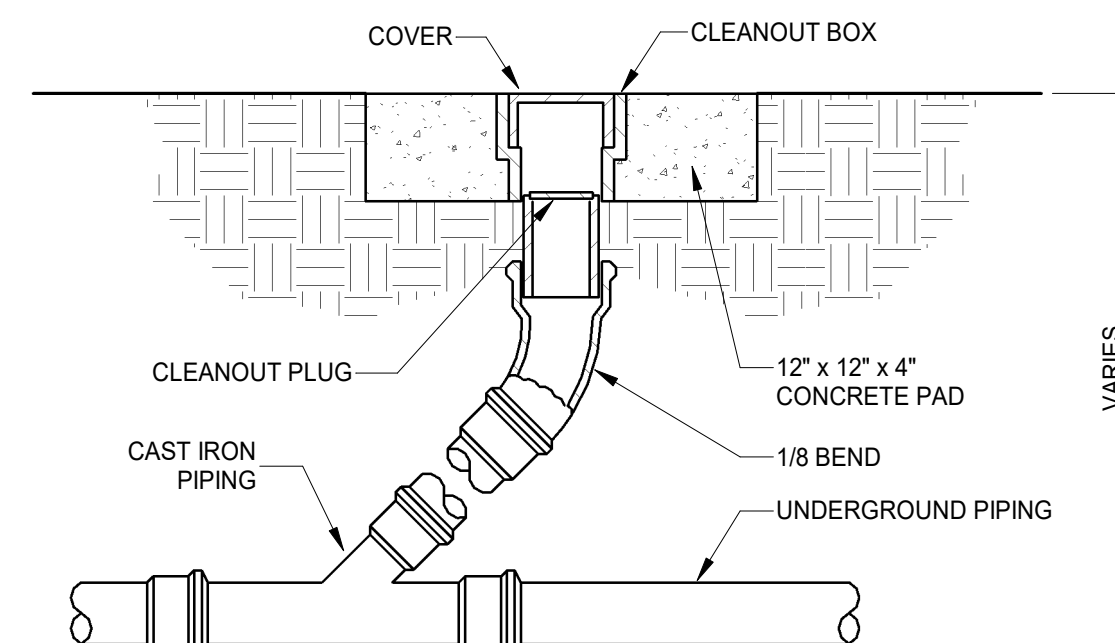
SO DETAIL: PB07

3 FLOOR CLEANOUT DETAIL  
P301 SCALE: NTS



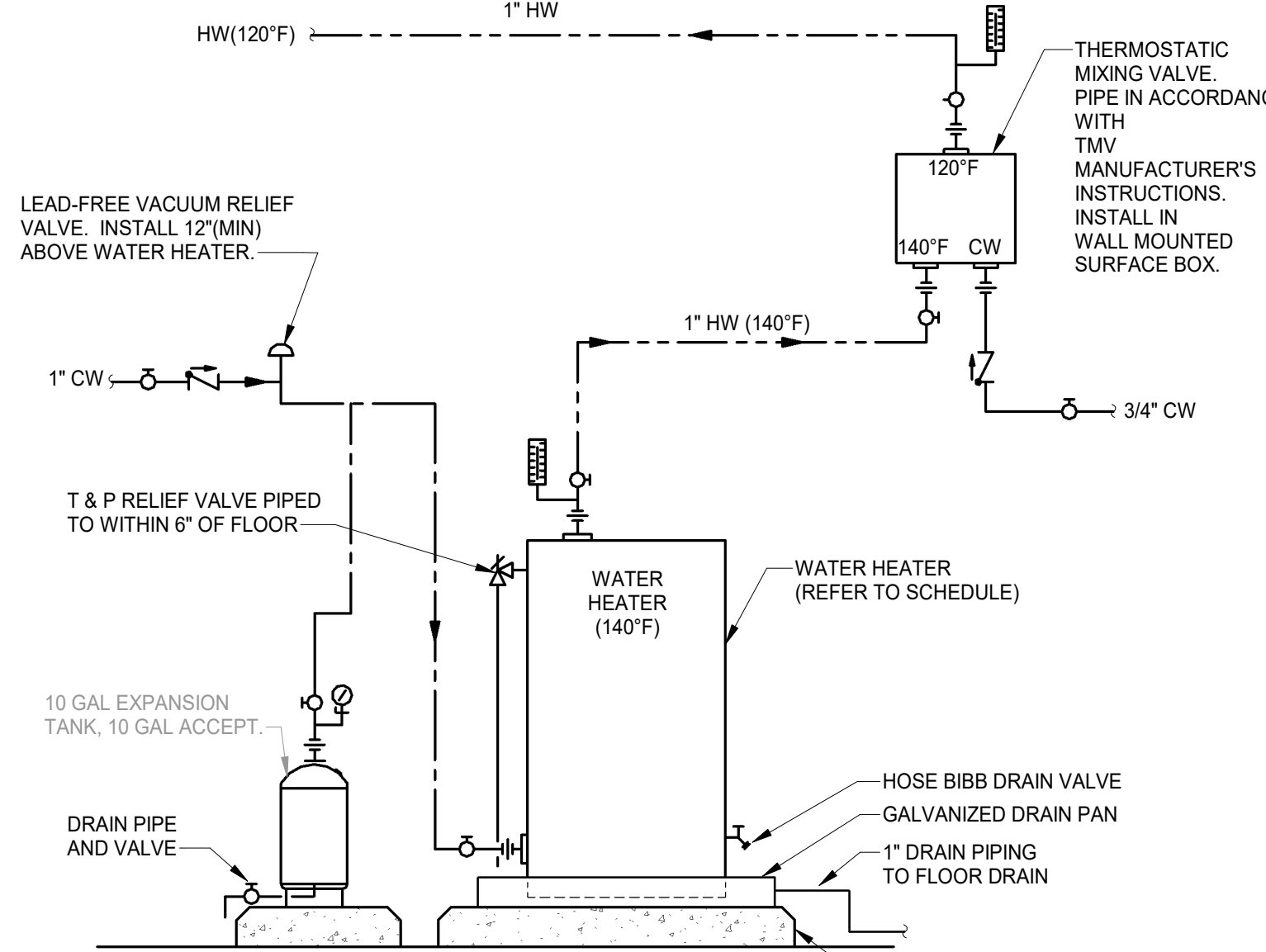
SO DETAIL: PB10

4 WALL CLEANOUT DETAIL  
P301 SCALE: NTS



SO DETAIL: PB04

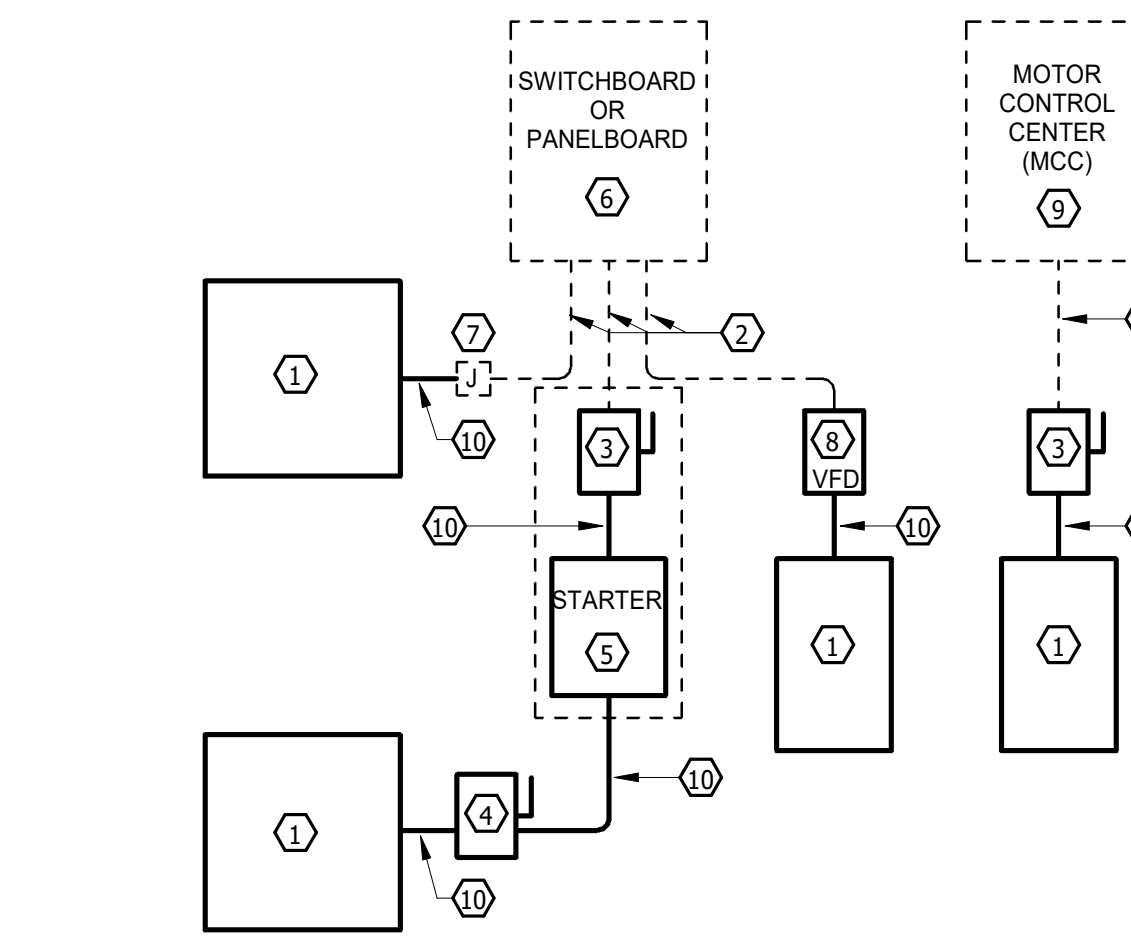
5 YARD CLEANOUT  
P301 SCALE: NTS



NOTES:

- REFER TO PLANS FOR LOCATION AND ROUTING.
- INSTALL THERMOSTATIC MIXING VALVE AND WATER HEATERS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

6 SINGLE 140° WATER HEATER PIPING DETAIL  
P301 SCALE: NTS



KEYED NOTES:

- EQUIPMENT FURNISHED AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS.
- CONDUIT & WIRING BY DIVISION 26 CONTRACTOR.
- PROVIDE DISCONNECT AND FUSING.
- PROVIDE ADDITIONAL DISCONNECT IF REQUIRED BY NEC.
- A COMBINATION STARTER MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER.
- POWER DISTRIBUTION EQUIPMENT BY DIVISION 26 CONTRACTOR.
- JUNCTION BOX REQUIRED BY THE DIVISION 26 CONTRACTOR FOR EQUIPMENT IF NO STARTER IS REQUIRED. PROVIDE MOTOR-RATED DISCONNECT SWITCH WHERE REQUIRED BY CODE. THE DIVISION 26 CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE DISCONNECT. PROVIDE LOAD SIDE WIRING.
- PROVIDE VARIABLE FREQUENCY DRIVE (VFD) WHERE NECESSARY.
- FOR PROJECTS UTILIZING A MOTOR CONTROL CENTER (MCC), THE STARTER, CIRCUIT BREAKER OR VFD IN THE MCC SHALL BE PROVIDED BY THE DIVISION 26 CONTRACTOR.
- PROVIDE RACEWAY & WIRING IN ACCORDANCE WITH REQUIREMENTS FOR RACEWAYS AND WIRING METHODS IN DIVISION 26 SPECIFICATIONS.

SO DETAIL: PB01

1 ELECTRICAL CONNECTIONS TO EQUIPMENT  
P301 SCALE: NTS

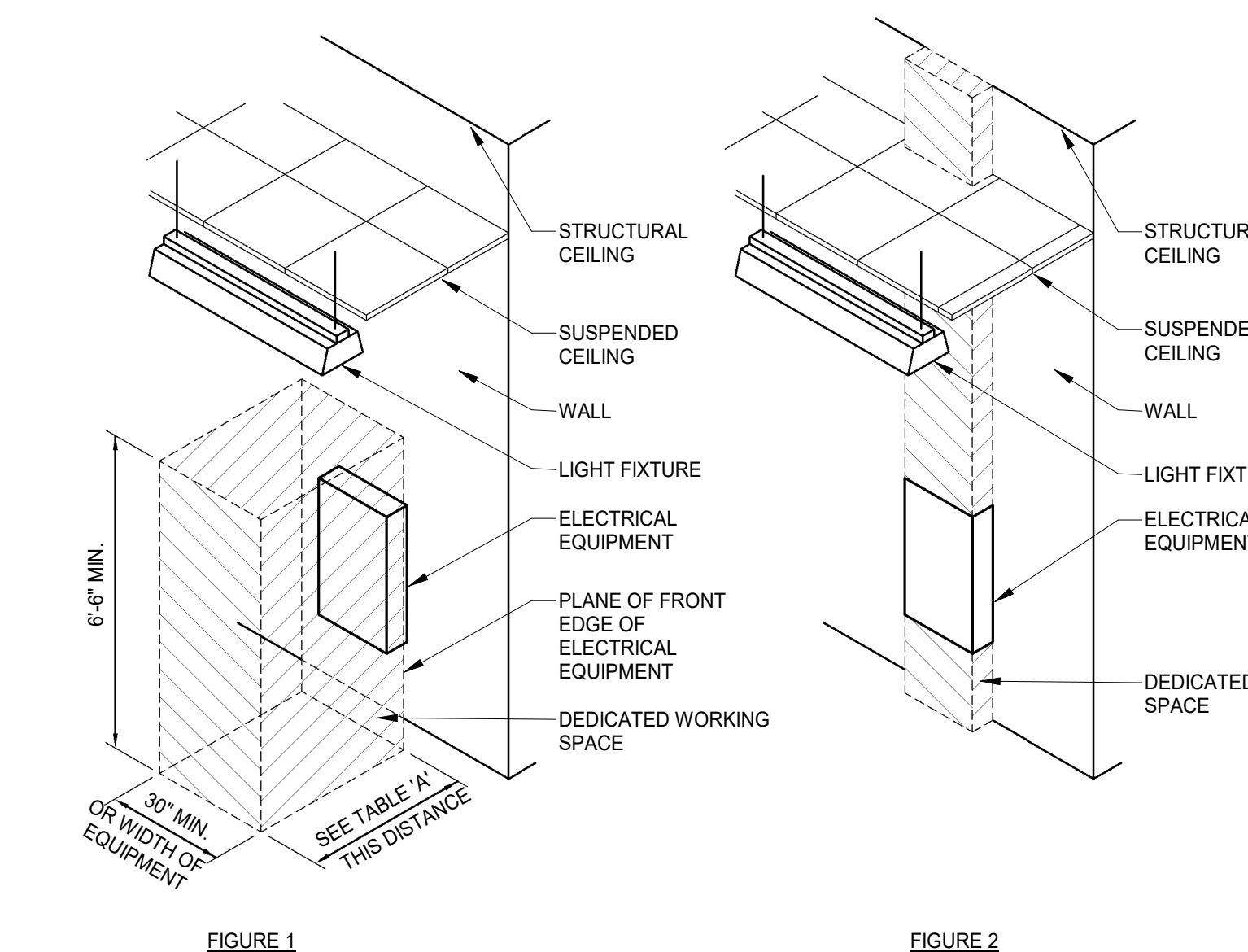


TABLE A - WORKING CLEARANCES				
VOLTAGE TO GROUND NOMINAL	CONDITION	MINIMUM CLEAR DISTANCE (FEET)		
		1	2	3
0-150		3	3	3
151-600		3	3 1/2	4

WHERE THE CONDITIONS ARE AS FOLLOWS:

- EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR UNGROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS.
- EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
- EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1), WITH THE OPERATOR BETWEEN.

NOTES:

- THESE FIGURES ILLUSTRATE THE WORKING CLEARANCE AND DEDICATED SPACE AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY NEC SECTION 110-26.
- DEDICATED SPACE RUNS TO A HEIGHT OF 6'-0" ABOVE EQUIPMENT. DEDICATED SPACE CONTINUES THROUGH SUSPENDED CEILING OR UP TO STRUCTURAL CEILING. ANY FOREIGN SYSTEMS TO THE ELECTRICAL EQUIPMENT SHALL NOT RUN WITHIN THIS SPACE. (FIGURE 2)

SO DETAIL: PB03

2 CLEARANCES FOR ELECTRICAL EQUIPMENT  
P301 SCALE: NTS



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DETAILS

P301



PLUMBING-FIXTURE SCHEDULE											
TAG	ADA	FIXTURE DESCRIPTION	BASIS OF DESIGN	CW	HW	WASTE	VENT	MOUNTING HEIGHT	REMARKS	IMAGE #1	IMAGE #2
P-1	Yes	WATER CLOSET	BOWL: KOHLER KINGSTON K-8432S, ELONGATED BOWL, WALL MOUNTED, VITREOUS CHINA, WHITE. FLUSH VALVE: SLOAN WES 111, MANUAL DUAL FLUSH, POLISHED CHROME FINISH, 1.6/1.1 GPF. CARRIER: ZURN SIPHON JET CARRIER SYSTEM. SEAT: KOHLER K-4670-SC, ELONGATED, OPEN-FRONT, SELF-SUSTAINING CHECK HINGES.	1-1/4"	-	4"	2"	RIM 17" AFF			
P-2	Yes	LAVATORY	SINK: KOHLER HUDSON K-2867, WALL MOUNTED, 4" CENTERED FAUCET HOLES, 20" WIDE x 18" FRONT TO BACK. FAUCET: AMERICAN STANDARD SELECTRONIC 805B 105, SENSOR OPERATED, HARD WIRED, DECK MOUNTED, 5-7/16" SPOUT LENGTH, CHROME FINISH, 0.5 GPM, 605XTMV1070 ASSE 1070 THERMOSTATIC MIXING VALVE, 605P 400 4" BRASS DECK PLATE, PK00.MAC MULTI-AC ADAPTER AND 10" EXTENSION CABLE. DRAINTAILPIECE: MCGUIRE 155A, OPEN GRID CHROME PLATED PO PLUG, 1-1/4" x 6" TAILPIECE. P-TRAP: MCGUIRE 8902DF, 1-1/4" x 1-1/2", ADJUSTABLE, CLEANOUT PLUG, 11-1/2" CENTER TO END LENGTH. SUPPLIES: MCGUIRE LFH2165, WHEEL HANDLE SUPPLY KIT, 1/2" IPS x 3/8" OD ANGLE STOP VALVE, 1/2" FLEXIBLE COPPER RISERS. PIPING COVERS: TRUEBRO LAV GUARD 2 102-EZ, P-TRAP COVER AND TWO ANGLE VALVE COVERS, PAINTABLE WHITE FINISH, REUSABLE FASTENERS.	1/2"	1/2"	2"	2"	34" AFF			
P-3	Yes	SHOWER	SHOWER TRIM: SYMMONS IDENTITY S6798TRM, FIXED SHOWER HEAD, HAND SHOWER, CONTROL VALVE WITH INTEGRAL DIVERTER, WALL HOOK FOR HAND SHOWER, 60" METAL HOSE, 2.0 GPM FLOW. SHOWER VALVE: SYMMONS TEMPTROL, PRESSURE BALANCING SHOWER VALVE.	1/2"	1/2"	2"	2"				
P-4		FLOOR DRAIN	ZURN MODEL ZN415B, 6" DIAMETER FLOOR/SHOWER DRAIN, DURA-COATED CAST IRON BODY, MEMBRANE CLAMP WITH ADJUSTABLE COLLAR "TYPE B" POLISHED NICKEL BRONZE, LIGHT-DUTY STRAINER WITH TRAP PRIMER CONNECTION.	-	-	2/3/4"	2"				
P-5		MOP RECEPTOR	SINK: FIAT MODEL TSB-3001, 32" x 32" x 12" WITH 6" DROP FRONT, STAINLESS STEEL CAPS ON ALL CURBS, 3" INTEGRAL STAINLESS STEEL DRAIN BODY FOR CAULKED CONNECTION, STAINLESS STEEL STRAINER, POLISHED TERRAZZO OF BLACK AND WHITE CHIPS CAST IN GRAY PORTLAND CEMENT. FAUCET: FIAT MODEL 830AA FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD SPOUT. ACCESSORIES: FIAT MODEL 832-AA HOSE AND STAINLESS STEEL BRACKET; FIAT MODEL 889-CC STAINLESS STEEL MOP HANGER; FIAT MSG323Z STAINLESS STEEL WALL GUARDS. SUPPLIES: INSTALL CHECK AND BALL VALVES IN WATER SUPPLY PIPES IN ACCESSIBLE LOCATIONS.	3/4"	3/4"	3"	2"	FAUCET 36" AFF			
P-6	Yes	OUTDOOR DRINKING FOUNTAIN / BOTTLE FILLER	DRINKING FOUNTAIN AND BOTTLE FILLER: HAWS 1109FRP, WALL MOUNTED DRINKING FOUNTAIN, NON-REFRIGERATED, NON-FILTERED, STAINLESS STEEL, FREEZE RESISTANT, BOTTLE FILLER, FREEZE-RESISTANT STAINLESS STEEL, FREEZE-RESISTANT VALVES, MOUNTED IN CABINET, INSTALLED ON INSIDE OF ROOM, PNEUMATIC OPERATED, SURFACE MOUNTED, POLISHED CHROME-PLATED BRASS BUBBLER HEAD, VADAL RESISTANT.	1/2"	-	2"	2"	AS RECOMMENDED BY MANUFACTURER FOR ADA COMPLIANCE			
P-7A		HOSE BIBB - MECHANICAL	WOODFORD MODEL 24, ANTI-SIPHON, VACUUM BREAKER PROTECTED, METAL WHEEL HANDLE, 3/4" MALE HOSE THREAD OUTLET.	3/4"	-	-	-	18" AFF			
P-7B		HOSE BIBB - RESTROOM	CHICAGO FAUCETS MODEL 387-E27CP, POLISHED CHROME PLATED, SOLID BRASS BODY CONSTRUCTION, 2-1/4" TEE HANDLE, IN-LINE VACUUM BREAKER, 3/4" MALE HOSE THREAD OUTLET.	1/2"	-	-	-	WALL MOUNT, 18" AFF			
P-7C		NON-FREEZE WALL HYDRANT	ZURN MODEL Z1300, "ANTI-SIPHON" AUTOMATIC DRAINING, NON-FREEZE WALL HYDRANT FOR FLUSH INSTALLATION; INTEGRAL BACKFLOW PREVENTER, BRONZE CASING, NICKEL BRONZE BOX AND HINGED COVER WITH OPERATING KEY LOCK AND "WATER" CAST ON COVER.	3/4"	-	-	-	24" AFG	PROVIDE ADEQUATE LENGTH SO THAT VALVE IS ON HEATED SIDE OF WALL.		

ELECTRIC WATER HEATER SCHEDULE								
DESIGNATION	SERVICE	TYPE	TEMPERATURE SETTING (F)	STORAGE CAPACITY (GAL)	RECOVERY (GPH)	No. OF ELEMENTS	SIMULTANEOUS OPERATION	CAPACITY PER ELEMENT (W)
EWH-1	RESTROOM BUILDING	ELECTRIC TANK	140	65	55 @ 90°F	3	YES	4050
NOTES:			1 PROVIDE EXTERNAL DISCONNECT SWITCH FOR SINGLE POINT OF CONNECTION. 2 BASIS OF DESIGN: RHEEM E85-12-G					

EXPANSION TANK SCHEDULE					
DESIGNATION	SERVICE	TYPE	TOTAL VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	DIMENSIONS (DIA X HT)
ET-1	RESTROOM BUILDING	PARTIAL ACCEPTANCE BLADDER	10	10.00	10" X 37"
NOTES:			1 BASIS OF DESIGN: AMTROL ST-35CL		

THERMOSTATIC MIXING VALVE SCHEDULE									
DESIGNATION	SERVICE	TYPE	CAPACITY (GPM)	MIN FLOW (GPM)	WPD (PSI)	CW EWT (F)	HW EWT (F)	HW LWT (F)	VOLTAGE/PHASE
TMV-1	RESTROOM BUILDING	ASSE 1017	25	0.5	10	50	140	120	120V/1
NOTES:			1 WPD IS BASED ON DESIGN FLOW CAPACITY. 2 BASIS OF DESIGN: LEONARD P/VN-100-LF						

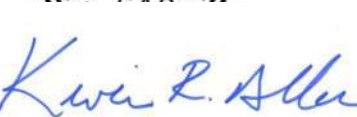


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ENGINEER  
KEVIN R. ALLEN  
03/14/2025

NO.	REVISION	DATE

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**SCHEDULES**



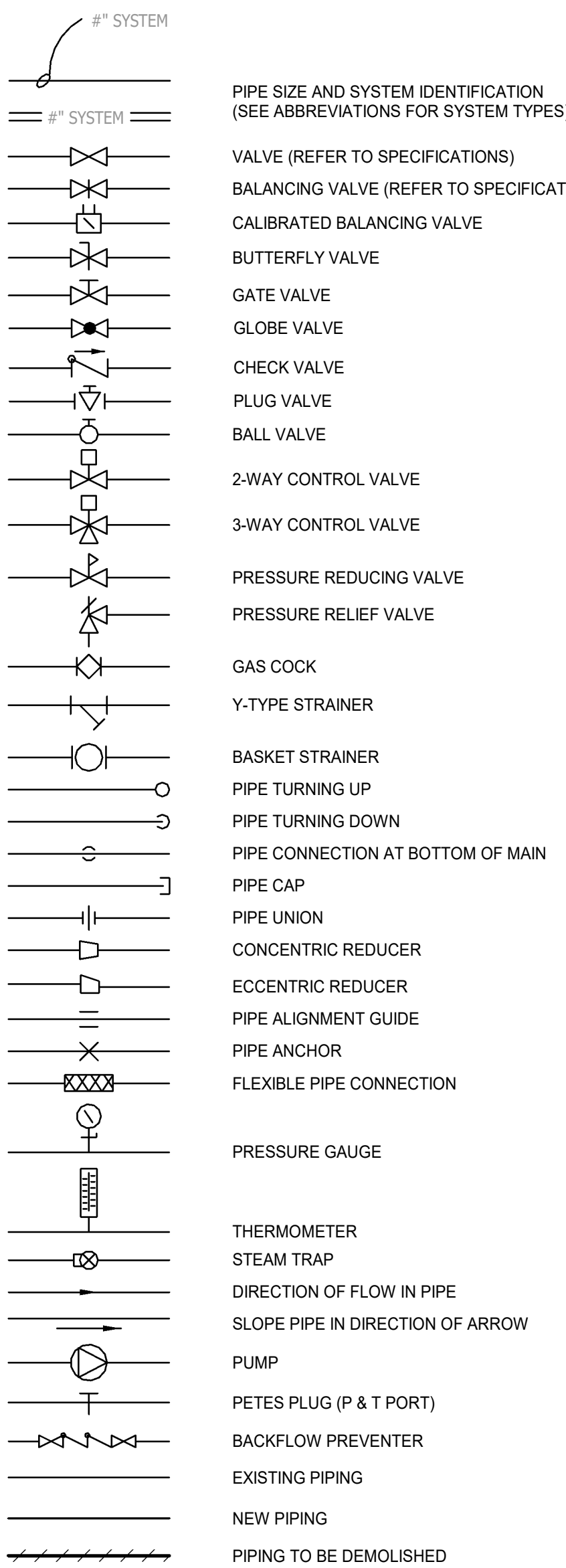
### HVAC ABBREVIATIONS

# POUNDS, NUMBER  
A COMPRESSED AIR  
ACFM ACTUAL CUBIC FEET PER MINUTE  
ACH AIR CHANGES PER HOUR  
AD ACCESS DOOR  
AFF ABOVE FINISHED FLOOR  
AFG ABOVE FINISHED GRADE  
AHU AIR HANDLING UNIT  
ALT ALTERNATE  
ARCH ARCHITECTURAL; ARCHITECT  
AS AIR SEPARATOR  
AUTO AUTOMATIC  
AV ACID VENT  
AW ACID WASTE  
BAS BUILDING AUTOMATION SYSTEM  
BBD BOILER BLOWDOWN  
BFF BELOW FINISHED FLOOR  
BFW BOILER FEED WATER  
BHP BRAKE HORSEPOWER  
BOD BOTTOM OF DUCT  
BOP BOTTOM OF PIPE  
BOT BOTTOM  
BP BACKFLOW PREVENTER  
BTU BRITISH THERMAL UNIT  
BTUH BRITISH THERMAL UNIT PER HOUR  
C CELSIUS; COMMON PORT  
CD CONDENSATE DRAIN  
CDWP CONDENSER WATER PUMP  
CDWR CONDENSER WATER RETURN  
CDWS CONDENSER WATER SUPPLY  
CF CHEMICAL FEED  
CFH CUBIC FEET PER HOUR  
CFM CUBIC FEET PER MINUTE  
CHWP CHILLED WATER PUMP  
CHWR CHILLED WATER RETURN  
CHWS CHILLED WATER SUPPLY  
CI CAST IRON  
CLG CEILING  
CO CLEAN OUT; CARBON MONOXIDE  
CO2 CARBON DIOXIDE  
CONC CONCRETE  
COP COEFFICIENT OF PERFORMANCE  
CPVC CHLORINATED POLYVINYL CHLORIDE  
CT COOLING TOWER  
CTR CENTER  
CU COPPER; CONDENSING UNIT  
CUFT CUBIC FOOT; CUBIC FEET  
CUH CABINET UNIT HEATER  
CUDY CUBIC YARD  
CW COLD WATER  
DB DRY BULB  
DO DUCT MOUNTED SMOKE DETECTOR  
DDC DIRECT DIGITAL CONTROLS  
DI DUCTILE IRON  
DIA DIAMETER  
DN DOWN  
DP DIFFERENTIAL PRESSURE  
DTWR DUAL TEMPERATURE WATER RETURN  
DTWS DUAL TEMPERATURE WATER SUPPLY  
DWG DRAWING  
DX DIRECT EXPANSION  
EA EACH  
EAT ENTERING AIR TEMPERATURE  
EFF EFFICIENCY  
EL ELEVATION  
ELEC ELECTRICAL  
EQUIP EQUIPMENT  
ESP EXTERNAL STATIC PRESSURE  
ESS EMERGENCY STOP SWITCH  
EWT ENTERING WATER TEMPERATURE  
EXH EXHAUST; EXHAUST AIR; EXHAUST FAN  
EXIST EXISTING  
EXP EXPANSION  
F FAHRENHEIT  
FCU FAN COIL UNIT  
FD FIRE DAMPER  
FFE FINISHED FLOOR ELEVATION  
FL FLOOR  
FLEX FLEXIBLE  
FOB FLAT ON BOTTOM  
FOR FUEL OIL RETURN  
FOS FUEL OIL SUPPLY  
FOT FLAT ON TOP  
FOV FUEL OIL VENT  
FPM FEET PER MINUTE  
FPS FEET PER SECOND  
FSD FIRE/SMOKE DAMPER  
FT FEET; FOOT  
G NATURAL GAS  
GA GAUGE  
GAL GALLON  
GC GENERAL CONTRACTOR  
GEX GREASE EXHAUST AIR  
GPH GALLON PER HOUR  
GPM GALLON PER MINUTE  
HD HUB DRAIN; HEAT DETECTOR  
HEX HAZARDOUS EXHAUST  
HOA HANDS-OFF-AUTOMATIC  
HORIZ HORIZONTAL  
HP HIGH PRESSURE  
HPR HIGH PRESSURE CONDENSATE RETURN  
HPS HIGH PRESSURE STEAM  
HSTAT HUMIDISTAT  
HTG HEATING  
HVAC HEATING, VENTILATION AND AIR CONDITIONING  
HWR HEATING WATER RETURN

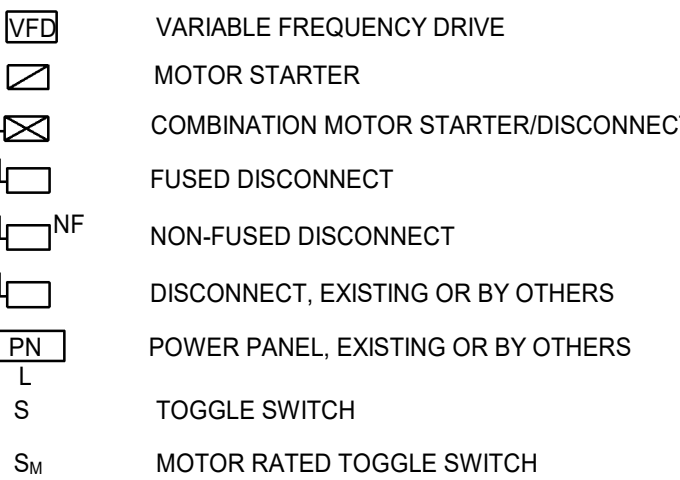
### HVAC ABBREVIATIONS

HWS HEATING WATER SUPPLY  
HX HEAT EXCHANGER  
ID INDIRECT DRAIN; INSIDE DIAMETER  
IN INCH  
INVERT INVERT  
ISP INTERNAL STATIC PRESSURE  
KW KILOWATT  
KWH KILOWATT HOUR  
LAT LEAVING AIR TEMPERATURE  
LBSH POUNDS PER HOUR  
LP LOW PRESSURE  
LPG LIQUID PETROLEUM GAS  
LPR LOW PRESSURE CONDENSATE RETURN  
LPS LOW PRESSURE CONDENSATE SUPPLY  
LWT LEAVING WATER TEMPERATURE  
MAX MAXIMUM  
MBH 1000 BRITISH THERMAL UNITS PER HOUR  
MFR MANUFACTURER  
MH MANHOLE  
MIN MINIMUM  
MP MEDIUM PRESSURE  
MRT MOTOR RATED TOGGLE SWITCH  
MS MOTOR STARTER  
MSD COMBINATION MOTOR STARTER AND DISCONNECT  
MTO MOUNTED  
MUA MAKE UP AIR  
MVD MANUAL VOLUME DAMPER  
N NITROGEN  
NCL NORMALLY CLOSED  
N.O. NORMALLY OPEN  
NIC NOT IN CONTRACT  
NO NITROUS OXIDE; NUMBER  
NPSH NET POSITIVE SUCTION HEAD  
NTS NOT TO SCALE  
O OXYGEN  
OA OUTSIDE AIR  
OBD OPPOSED BLADE DAMPER  
OC ON CENTER  
OD OUTSIDE DIAMETER  
P PUMP  
PC PLUMBING CONTRACTOR  
PCHWP PRIMARY CHILLED WATER PUMP  
PCV POLYVINYL CHLORIDE  
PD PRESSURE DROP  
PHWP PRIMARY HOT WATER PUMP  
PI PRESSURE INDEPENDENT  
PICV PRESSURE INDEPENDENT CONTROL VALVE  
PIL PANEL  
PPH POUNDS PER HOUR  
PR PUMPED CONDENSATE RETURN  
PRV PRESSURE REDUCING VALVE  
PSI POUNDS PER SQUARE INCH  
PSIA POUNDS PER SQUARE INCH ABSOLUTE  
PSIG POUNDS PER SQUARE INCH GAUGE  
PT POINT  
QTY QUANTITY  
RA RETURN AIR  
RD ROUND  
RECIR RECIRCULATING  
C REINFORCING  
REL RELIEF; RELIEF AIR  
REV REVISION  
RF RETURN FAN  
RH RELATIVE HUMIDITY  
RL REFRIGERANT LIQUID  
RM ROOM  
RPM REVOLUTIONS PER MINUTE  
RPZ REDUCED PRESSURE ZONE  
RS REFRIGERANT SUCTION  
SA SUPPLY AIR  
SCFM STANDARD CUBIC FEET PER MINUTE  
SCHWP SECONDARY CHILLED WATER PUMP  
SD SMOKE DAMPER  
SECT SECTION  
SF SUPPLY FAN; SQUARE FEET  
SHWP SECONDARY HOT WATER PUMP  
SP STATIC PRESSURE  
SPEC SPECIFICATION  
SPL STATIC PRESSURE LOSS  
SS STAINLESS STEEL  
STM STEAM  
TA TRANSFER AIR  
TAB TEST AND BALANCE  
TOD TOP OF DUCT  
TOP TOP OF PIPE  
TOS TOP OF STEEL  
TSP TOTAL STATIC PRESSURE  
TSTAT THERMOSTAT  
TU TERMINAL UNIT  
TYP TYPICAL  
UH UNIT HEATER  
UL UNDERWRITERS LABORATORIES INC.  
V VENT  
VA VENTILATION AIR  
VAC VACUUM (SUCTION)  
VERT VERTICAL  
VFD VARIABLE FREQUENCY DRIVE  
W WITH  
WO WITHOUT  
WB WET BULB  
WG WATER GAUGE  
XT EXPANSION TANK  
Ø ROUND; DIAMETER; PHASE

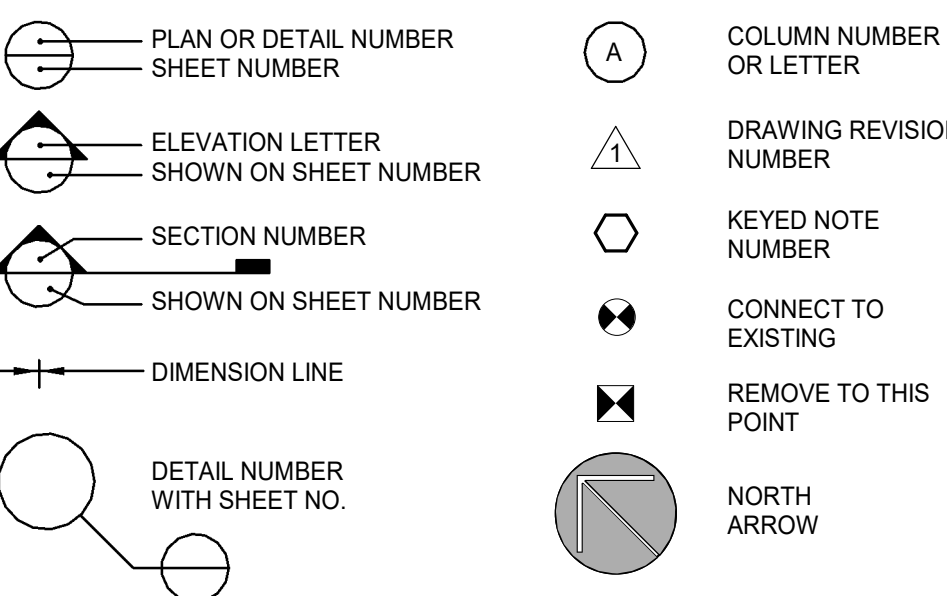
### PIPING SYMBOLS



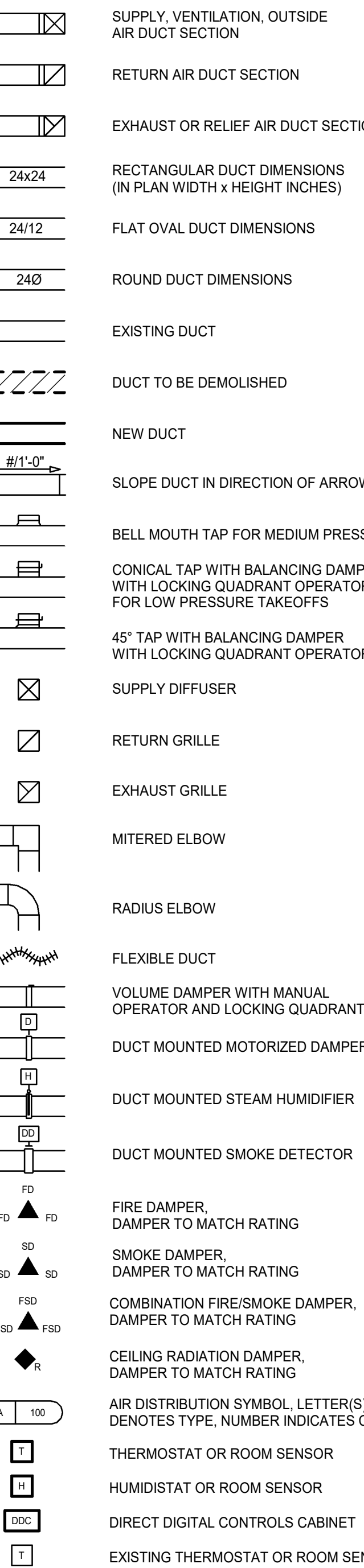
### ELECTRICAL SYMBOLS



### GENERAL SYMBOLS



### DUCTWORK SYMBOLS



### APPENDIX B 2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

#### MECHANICAL DESIGN MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone: 2021 ASHRAE FUNDAMENTALS, RALEIGH-DURHAM, NC, 3A

winter dry bulb: 20°F

summer dry bulb: 95°F

Interior design conditions

winter dry bulb: 70°F

summer dry bulb: N/A

relative humidity: N/A

Building heating load: N/A

Building cooling load: N/A

Mechanical Spacing Conditioning System

Unitary

description of unit: -

heating efficiency: -

cooling efficiency: -

size category of unit: -

Boiler

Size category, if oversized, state reason: N/A

Chiller

Size category, if oversized, state reason: N/A

List equipment efficiencies: SEE PLANS AND SPECIFICATIONS

### HVAC GENERAL NOTES

- COORDINATE WORK WITH OTHER TRADES PRIOR TO PURCHASE AND INSTALLATION OF ANY PIPING, DUCTWORK OR EQUIPMENT. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
- REFER TO THE ARCHITECTURAL PLANS FOR DIMENSIONS. DO NOT SCALE THESE DRAWINGS.
- ALL DUCT AND PIPING LAYOUTS AND LOCATIONS SHOWN ARE DIAGRAMMATIC AND DO NOT INDICATE ALL FITTINGS REQUIRED TO COMPLETE WORK. COORDINATE THE DUCT AND PIPING LAYOUT WITH ALL CONTRACTORS PRIOR TO INSTALLATION, INCLUDING CONDUITS AND CABLE TRAYS. PROVIDE ALL DUCT AND/OR PIPING OFFSETS REQUIRED FOR THE COMPLETE INSTALLATION OF THE SYSTEM WHETHER OR NOT THE OFFSETS ARE INDICATED ON THE PLANS. INSTALL DUCTWORK AND PIPING HIGH ENOUGH TO AVOID LIGHTS, CONDUIT AND MISCELLANEOUS PIPING, BUT LOW ENOUGH TO ALLOW FOR EASY ACCESS TO SYSTEM BALANCING DEVICES. DO NOT BLOCK ACCESS TO DEVICES.
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS AND ARCHITECTURAL DETAILS FOR EXACT LOCATION OF ALL CEILING AND SIDEWALL AIR DISTRIBUTION AND DEVICES.
- LOCATE UNITS SUCH THAT ACCESS PANELS MAY BE FULLY OPENED (VIA TILE CEILING) FOR SERVICING UNIT. COORDINATE LOCATION WITH LIGHTING FIXTURES OR ANY OTHER EQUIPMENT. DUCT RUNOUTS TO DIFFUSERS SHALL BE SAME SIZE AS INLET SIZE SCHEDULED, UNLESS NOTED OTHERWISE.
- ALL DUCT DIMENSIONS ARE INSIDE CLEAR. SEE DETAILS AND SPECIFICATIONS FOR INSULATION REQUIREMENTS.
- PROVIDE BALANCING DAMPERS WHERE INDICATED ON THE PLANS AND WHERE REQUIRED FOR SYSTEM BALANCING.
- INSTALL ALL EQUIPMENT WITH THE MANUFACTURER'S RECOMMENDATION AND CODE REQUIRED CLEARANCES. INSURE ALL ITEMS FURNISHED WILL FIT IN THE SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS AND FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO PURCHASE AND INSTALLATION.
- COORDINATE LOCATIONS AND ELEVATIONS OF ALL EXPOSED MECHANICAL ITEMS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND DETAILS. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: SENSORS, WALL DEVICES, SIDEWALL GRILLES, CONTROL PANELS, AND ALARMS.
- FURNISH 24"X24" ACCESS DOORS (UNLESS OTHERWISE INDICATED) AT ALL MAINTENANCE ITEMS THAT ARE CONCEALED, SUCH AS EQUIPMENT, VALVES, DAMPERS, SENSORS, ETC. COORDINATE EXACT LOCATIONS WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.



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NCCCS NO. 2303

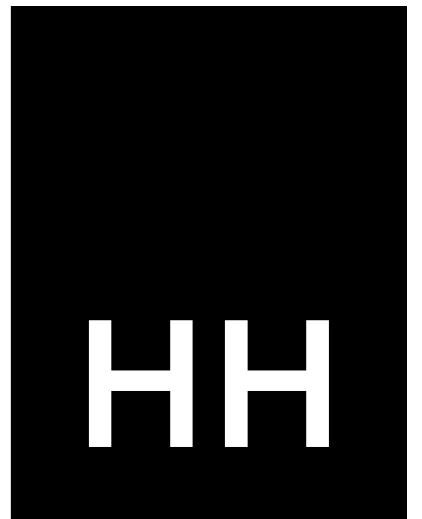


NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**STANDARDS, SYMBOLS & ABBREVIATIONS**

H001





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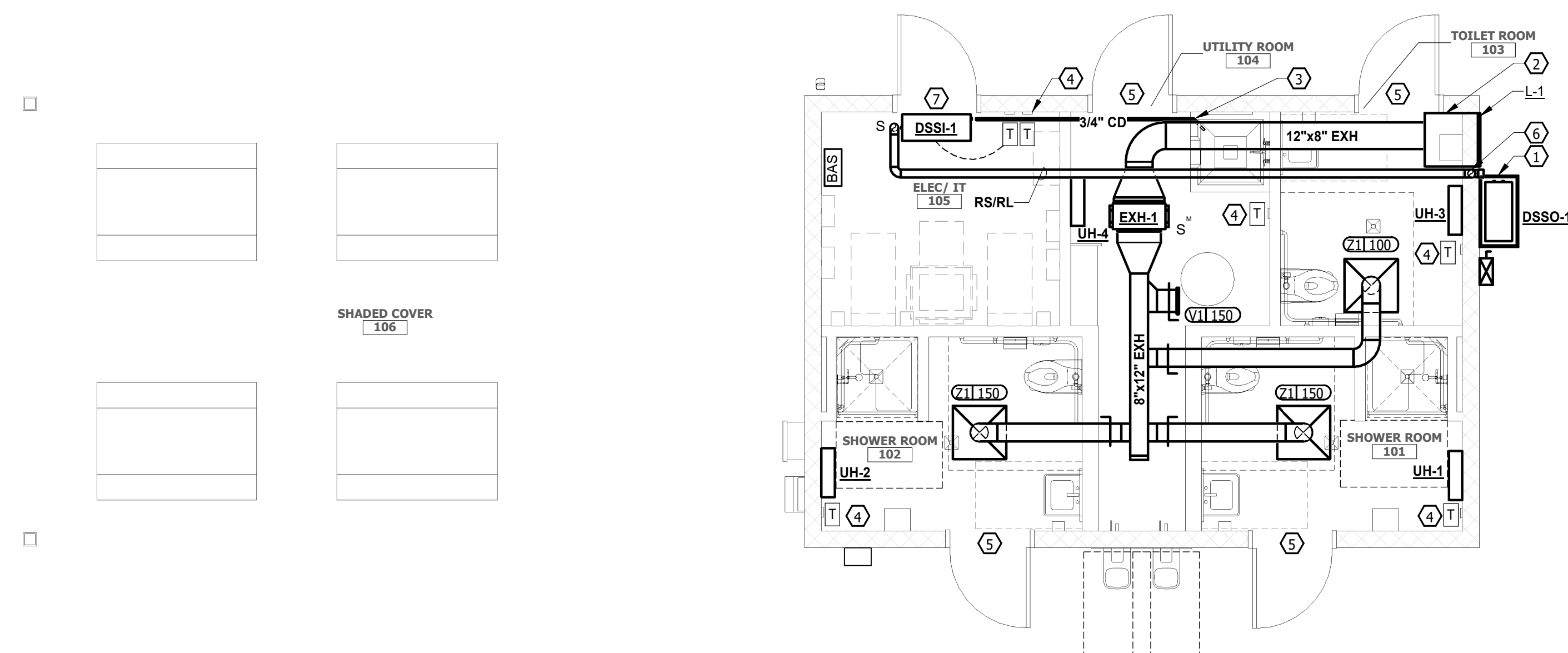
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NCCCS NO. 2303

*Karin R. Allen*  
KARIN R. ALLEN  
ENGINEER  
03/14/2025

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**PLANS - RESTROOM BUILDING**

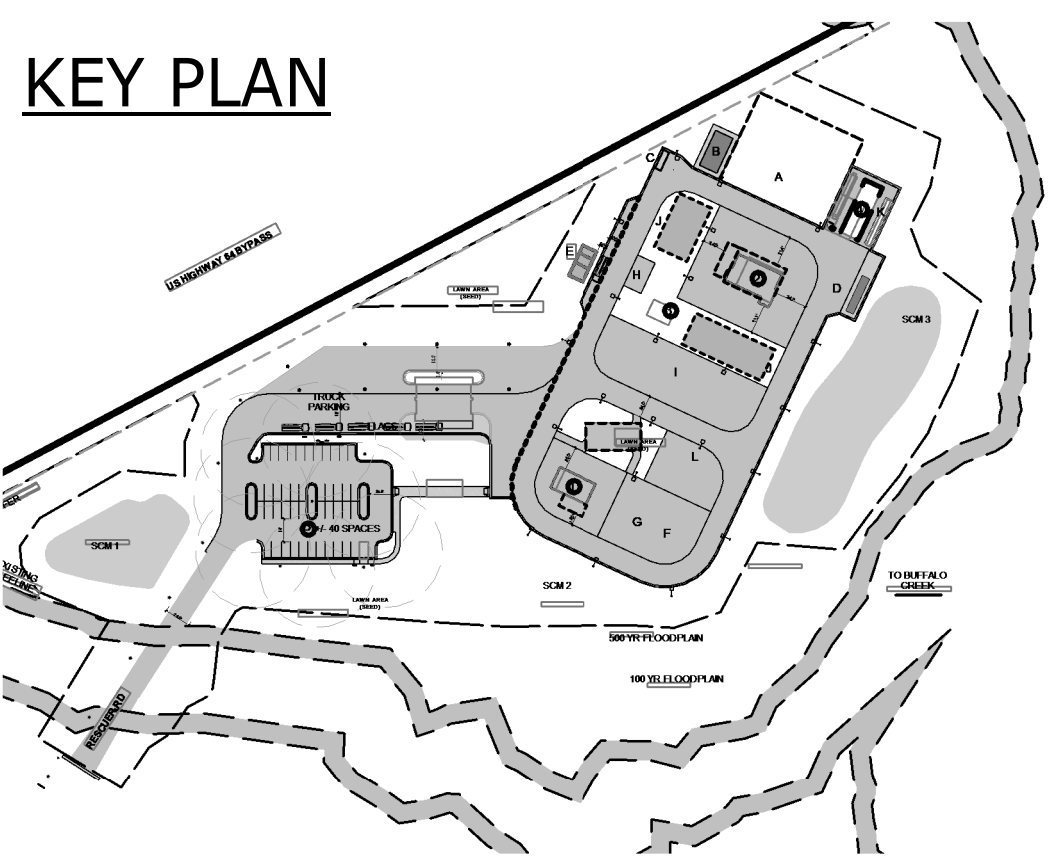
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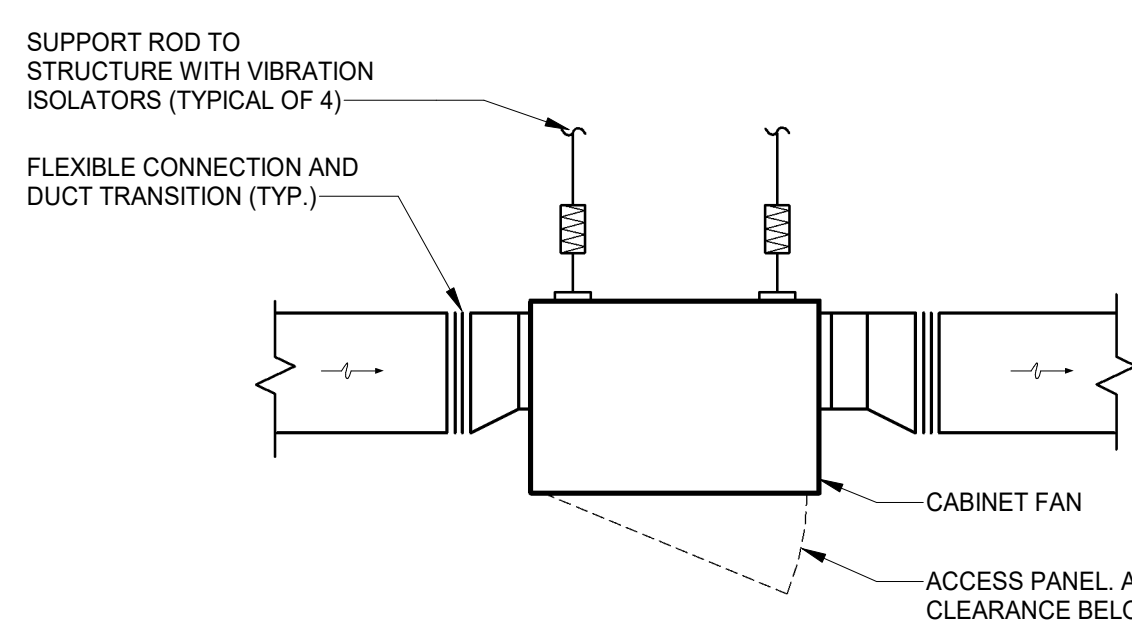
- KEY NOTES TO H111
- 1 PROVIDE 4" HOUSE KEEPING PAD FOR MECHANICAL EQUIPMENT.
  - 2 PROVIDE 2'-0" PLENUM BOX BEHIND LOUVER AND SEAL WEATHERTIGHT.
  - 3 ROUTE CONDENSATE TO MOP SINK. TERMINATE 6" ABOVE SINK LIP.
  - 4 PROVIDE THERMOSTAT FOR BAS MONITORING.
  - 5 LOUVER BY ARCHITECT.
  - 6 ROUTE REFRIGERANT SUPPLY & RETURN PIPING DOWN WALL CAVITY TO DSSO-1.
  - 7 DSSO SHALL BE MOUNED NO LOWER THAN 8'-6" AFF.

**FLOOR PLAN - RESTROOM/SHADE STRUCTURE**  
SCALE: 1/4" = 1'-0"  
4' 0 4' 8'

**KEY PLAN**



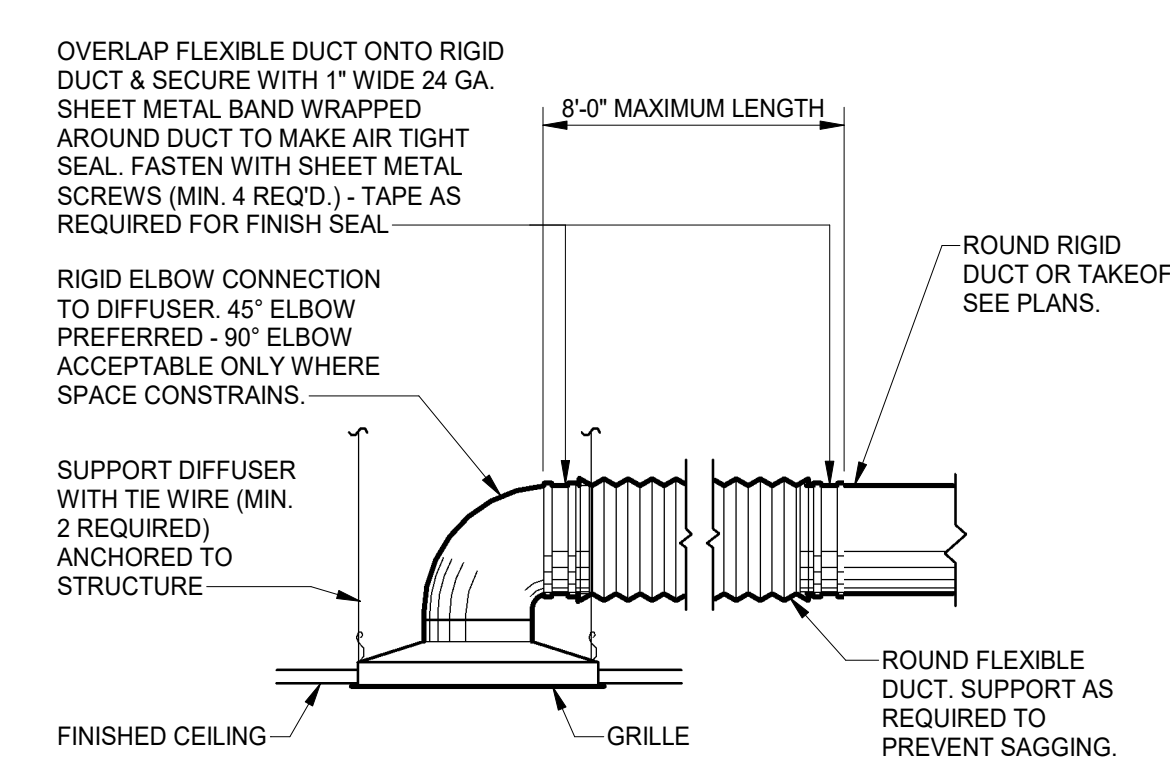




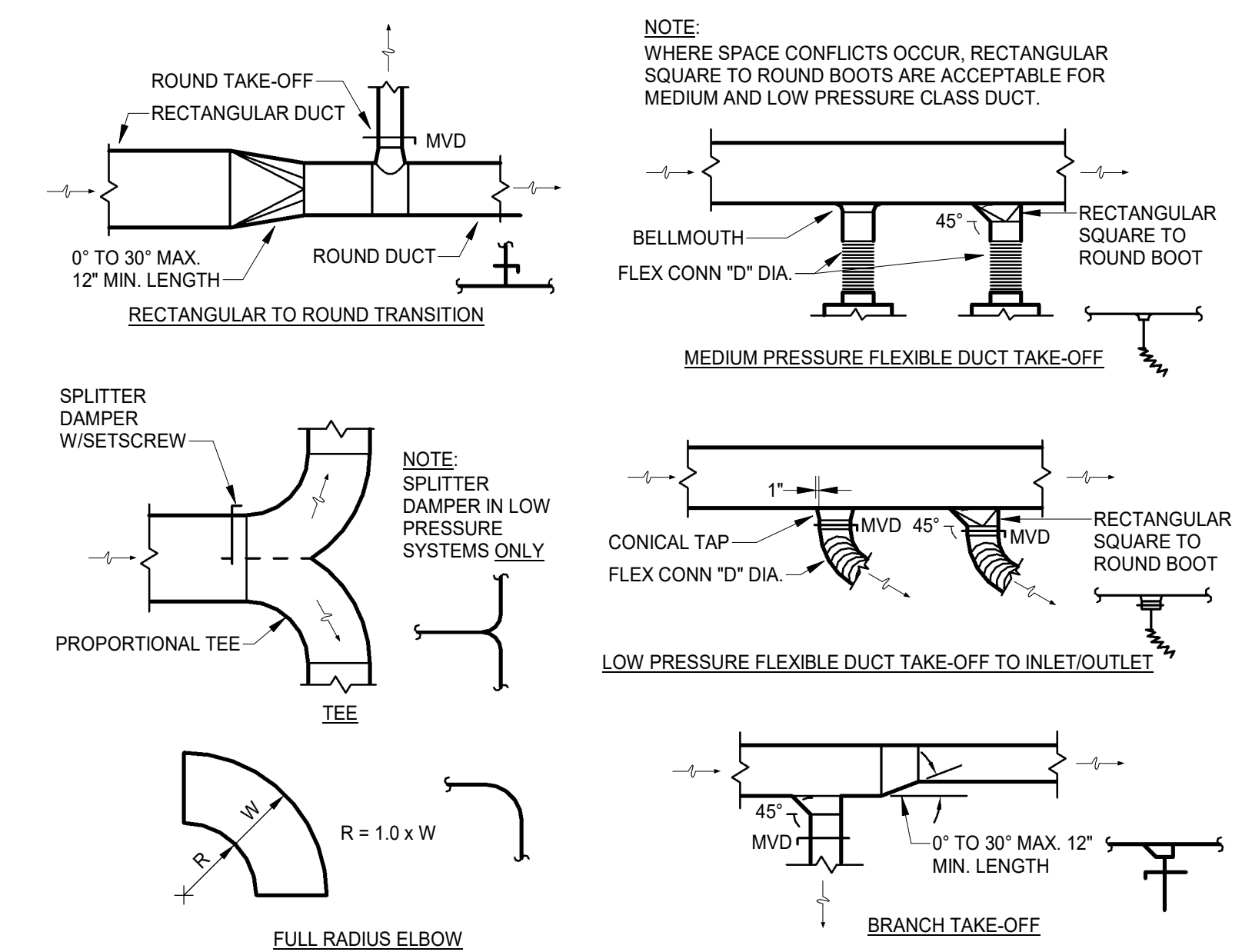
NOTE:  
1. REFER TO PLANS FOR EXACT DUCT ARRANGEMENT.

SO DETAIL: F06A

**6 IN-LINE CABINET FAN DETAIL**  
H301 SCALE: NTS



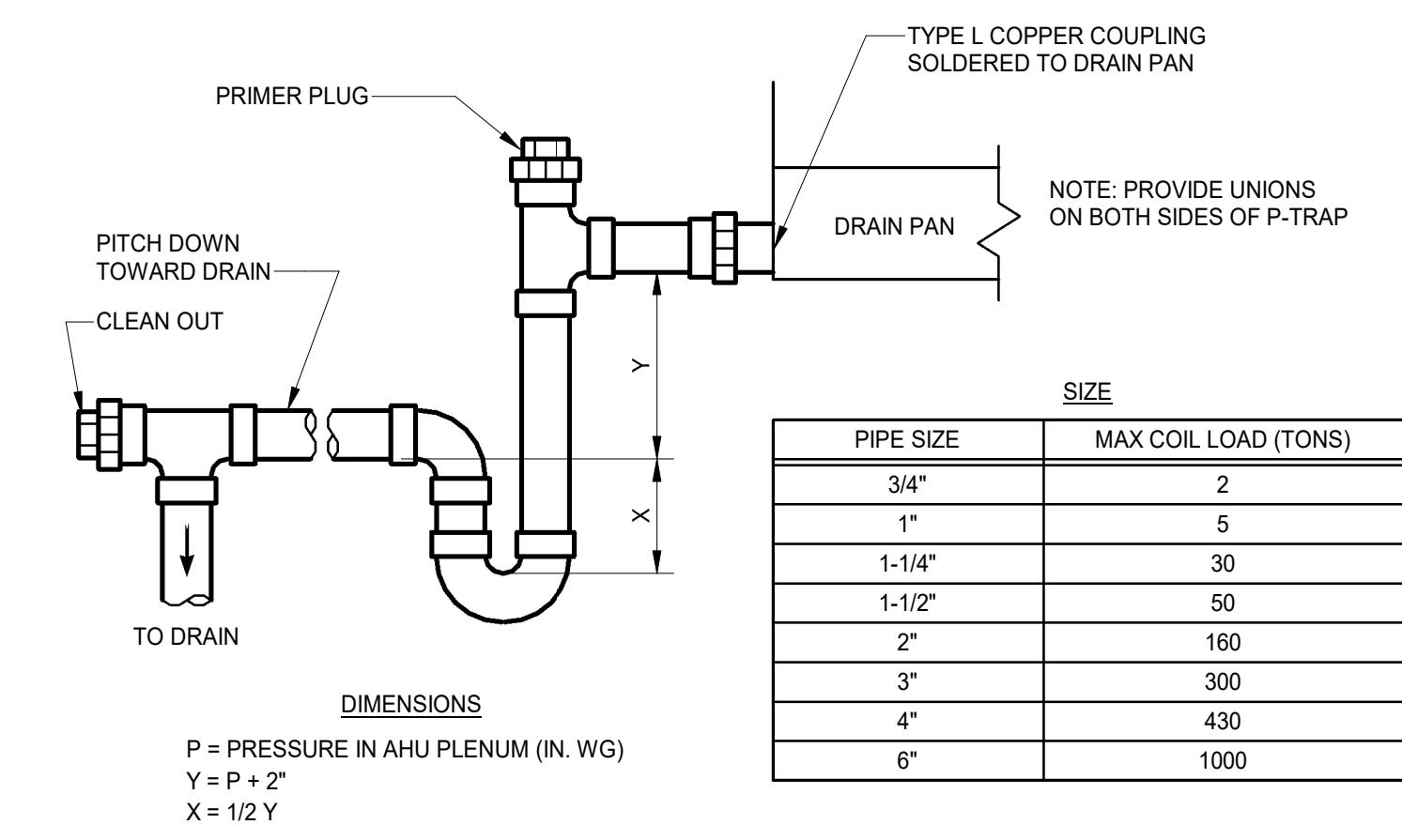
**7 CEILING EXHAUST GRILLE INSTALLATION**  
H301 SCALE: NTS



NOTE:  
UNLESS NOTED OTHERWISE ALL MITERED 90 DEGREE ELBOWS SHALL HAVE TURNING VANES. 45 DEGREE ELBOWS SHALL NOT HAVE TURNING VANES.

SO DETAIL: D01

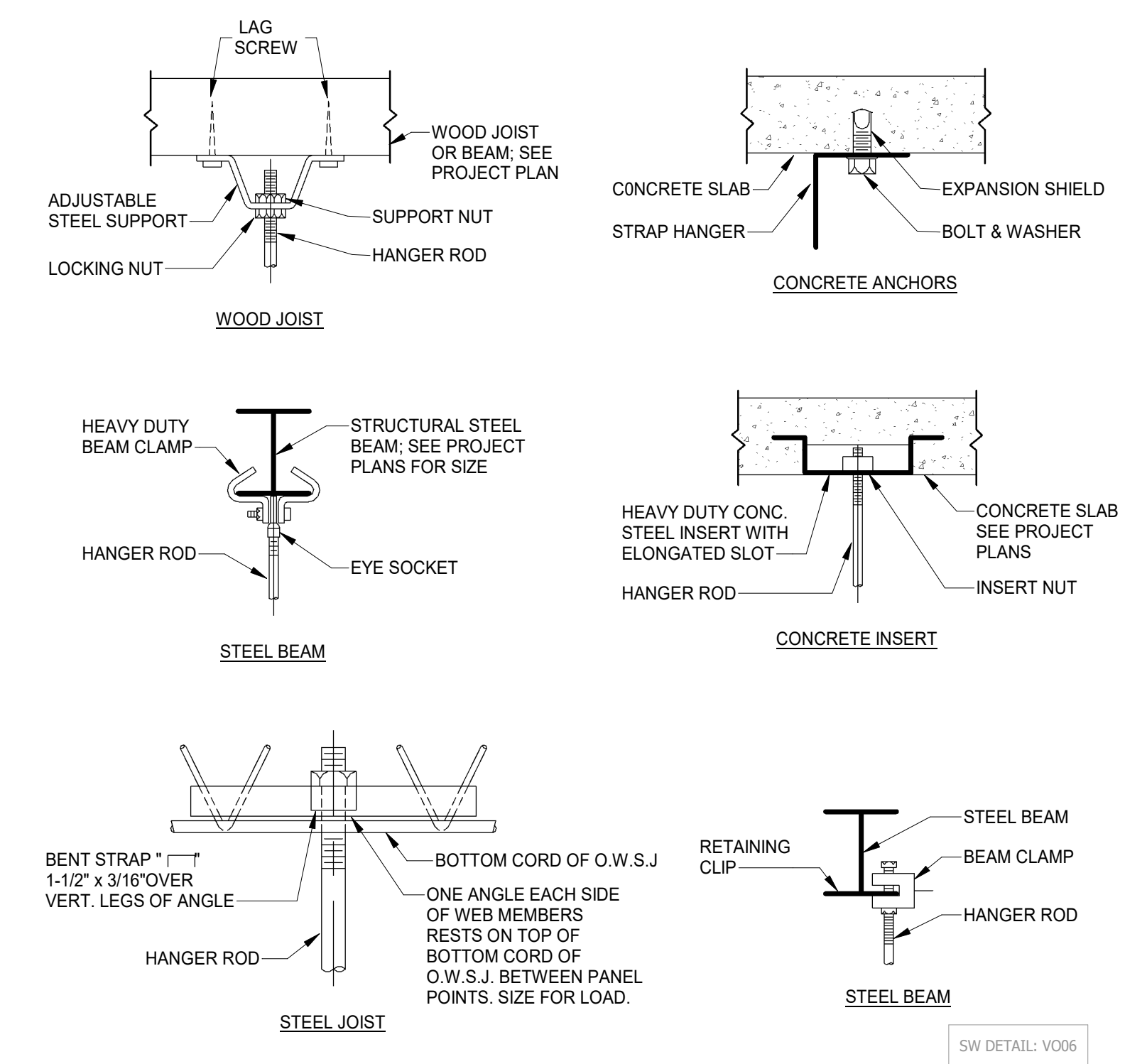
**3 STANDARD DUCT CONSTRUCTION**  
H301 SCALE: NTS



SIZE	
PIPE SIZE	MAX COIL LOAD (TONS)
3/4"	2
1"	5
1-1/4"	30
1-1/2"	50
2"	160
3"	300
4"	430
6"	1000

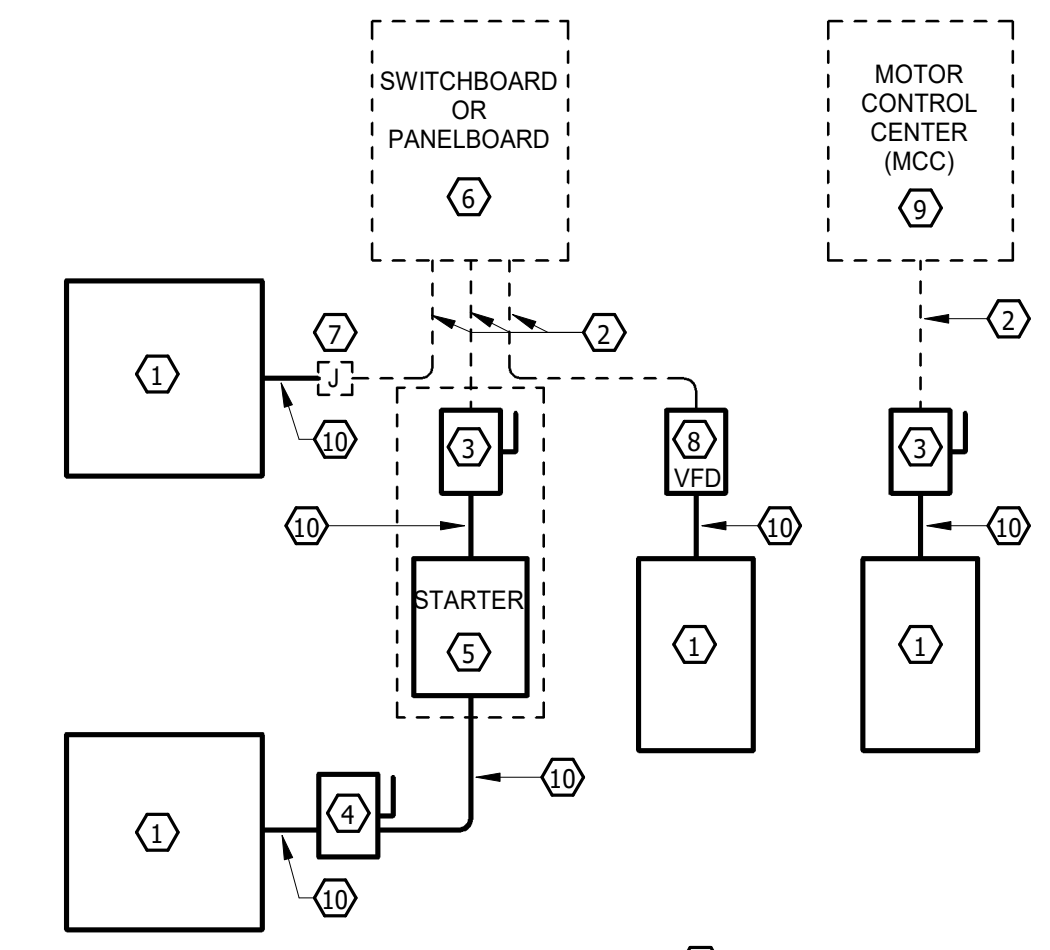
SO DETAIL: C02

**4 COOLING COIL DRAIN PIPING**  
H301 SCALE: NTS



SW DETAIL: V006

**5 HANGER SUPPORT DETAILS**  
H301 SCALE: NTS



- KEYED NOTES:
- EQUIPMENT FURNISHED AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS.
  - CONDUIT & WIRING BY DIVISION 26 CONTRACTOR.
  - PROVIDE DISCONNECT AND FUSING.
  - PROVIDE ADDITIONAL DISCONNECT IF REQUIRED BY NEC.
  - A COMBINATION STARTER MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER.
  - POWER DISTRIBUTION EQUIPMENT BY DIVISION 26 CONTRACTOR.
  - JUNCTION BOX REQUIRED BY THE DIVISION 26 CONTRACTOR FOR EQUIPMENT IF NO STARTER IS REQUIRED. PROVIDE MOTOR-RATED DISCONNECT SWITCH WHERE REQUIRED BY CODE. THE DIVISION 26 CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE DISCONNECT. PROVIDE LOAD SIDE WIRING.
  - PROVIDE VARIABLE FREQUENCY DRIVE (VFD) WHERE NECESSARY.
  - FOR PROJECTS UTILIZING A MOTOR CONTROL CENTER (MCC), THE STARTER, CIRCUIT BREAKER OR VFD IN THE MCC SHALL BE PROVIDED BY THE DIVISION 26 CONTRACTOR.
  - PROVIDE RACEWAY & WIRING IN ACCORDANCE WITH REQUIREMENTS FOR RACEWAYS AND WIRING METHODS IN DIVISION 26 SPECIFICATIONS.
- SO DETAIL: MR01

**1 ELECTRICAL CONNECTIONS TO EQUIPMENT**  
H301 SCALE: NTS

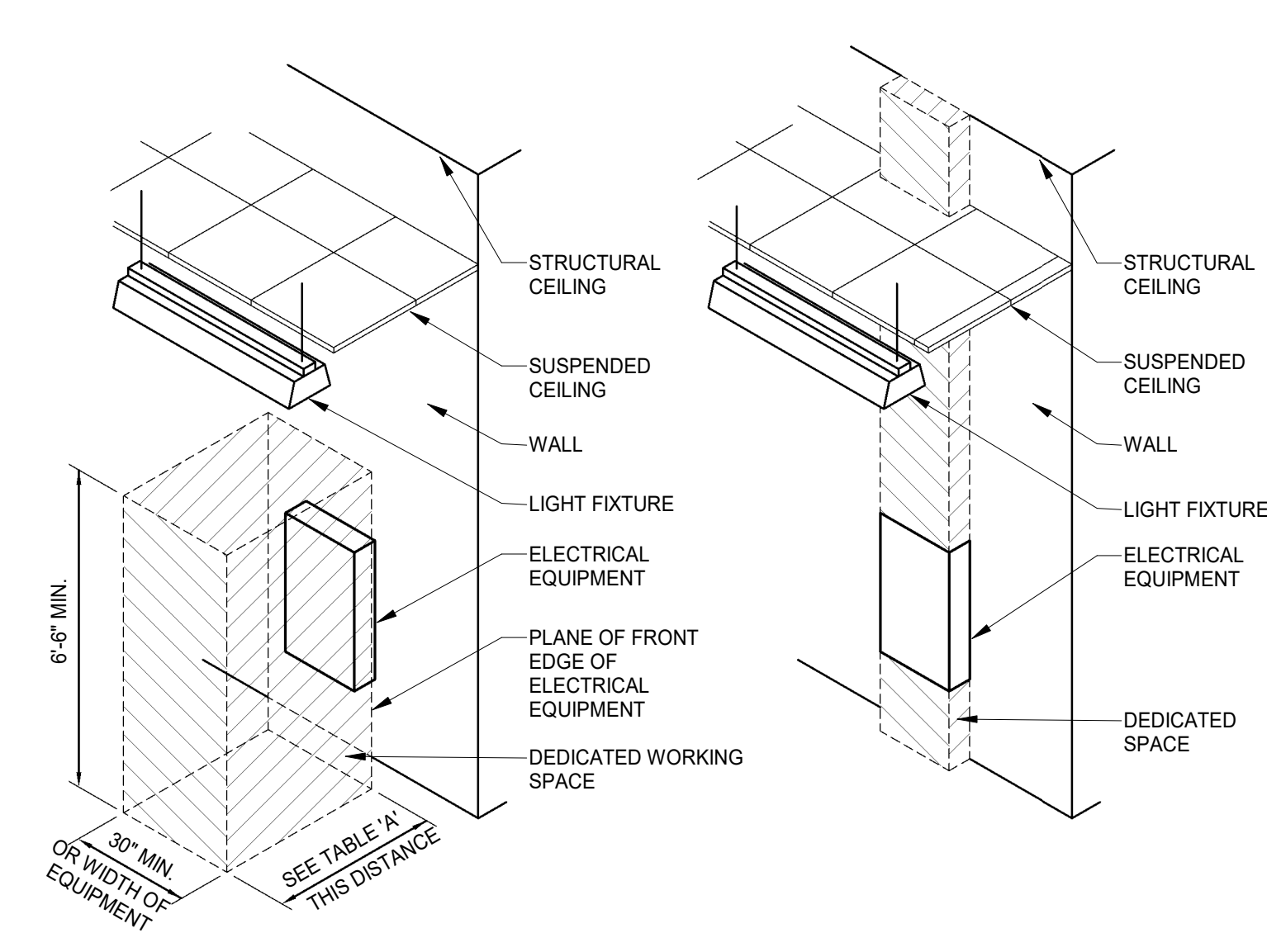


FIGURE 1

FIGURE 2

TABLE A - WORKING CLEARANCES				
VOLTAGE TO GROUND NOMINAL	CONDITION	1	2	3
0-150		3	3	3
151-600		3	3 1/2	4

- WHERE THE CONDITIONS ARE AS FOLLOWS:
- EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR UNGROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS.
  - EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
  - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1), WITH THE OPERATOR BETWEEN.

- NOTES:
- THESE FIGURES ILLUSTRATE THE WORKING CLEARANCE AND DEDICATED SPACE AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY NEC SECTION 110-26.
  - DEDICATED SPACE RUNS TO A HEIGHT OF 6'-0" ABOVE EQUIPMENT. DEDICATED SPACE CONTINUES THROUGH SUSPENDED CEILING OR UP TO STRUCTURAL CEILING. ANY FOREIGN SYSTEMS TO THE ELECTRICAL EQUIPMENT SHALL NOT RUN WITHIN THIS SPACE. (FIGURE 2)

**2 CLEARANCES FOR ELECTRICAL EQUIPMENT**  
H301 SCALE: NTS

NO.	REVISION	DATE

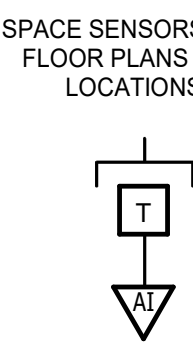


## STANDARD CONTROL SYMBOLS

CONTROLLERS / SENSORS	DDC I/O SYMBOLS	FINAL CONTROL ELEMENTS
SPACE THERMOSTAT OR TEMPERATURE SENSOR	DIGITAL (BINARY) INPUT POINT	TWO-WAY CONTROL VALVE, HYDRONIC OR STEAM
THERMOSTAT OR TEMPERATURE SENSOR WITH AIRFLOW AVERAGING ELEMENT	ANALOG INPUT POINT	THREE-WAY CONTROL VALVE, HYDRONIC
THERMOSTAT OR TEMPERATURE SENSOR WITH SENSING BULB IN HYDRONIC PIPE WELL	DIGITAL (BINARY) OUTPUT POINT	ELECTRIC MOTOR
THERMOSTAT OR TEMPERATURE SENSOR WITH SENSING BULB AND PROTECTIVE SHIELD	ANALOG OUTPUT POINT	FAN AND MOTOR
SPACE HUMIDISTAT OR HUMIDITY SENSOR		PUMP AND MOTOR
DUCT-MOUNTED HUMIDISTAT OR HUMIDITY SENSOR		ELECTRIC / ELECTRONIC DAMPER ACTUATOR
PRESSURE SENSOR		ELECTRIC / ELECTRONIC VALVE ACTUATOR
DIFFERENTIAL PRESSURE SENSOR		VARIABLE FREQUENCY DRIVE
AIR STATIC PRESSURE SENSOR		AIR FLOW MONITORING STATION
AIR VELOCITY PRESSURE SENSOR		
SPACE OCCUPANCY/VACANCY SENSOR		
CARBON DIOXIDE CONCENTRATION SENSOR		
DRAIN PAN CONDENSATE LEVEL SENSOR		
DUCT SMOKE DETECTOR		
REFRIGERANT CONCENTRATION SENSOR		
FLOW METER		
DEW POINT		
SWITCH		

SWITCHES	PNEUMATIC COMPONENTS
DAMPER END SWITCH	MAIN AIR SUPPLY, 20 PSIG
EMERGENCY START OR STOP SWITCH	MAIN AIR SUPPLY, 80 PSIG
MOTOR STARTER HOLDING COIL	DAMPER VALVE ACTUATOR WITH PILOT POSITIONER
CONTACTOR HOLDING COIL	CONTROL VALVE OPERATOR WITH PILOT POSITIONER
CONTROL RELAY HOLDING COIL	ELECTRONIC-TO-PNEUMATIC TRANSDUCER
CURRENT SWITCH	

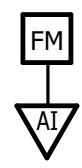
**DESCRIPTION**  
TEMPERATURE SENSOR FOR MONITORING IT ROOM SPACE TEMPERATURE



SEQUENCE OF OPERATIONS:  
IF SPACE TEMPERATURE EXCEEDS 85°F (ADJ.) AN ALARM SHALL BE INITIATED. ALARM SHALL BE SET UP AS A CRITICAL IT ALARM (BACNET PRIORITY LEVEL 15).

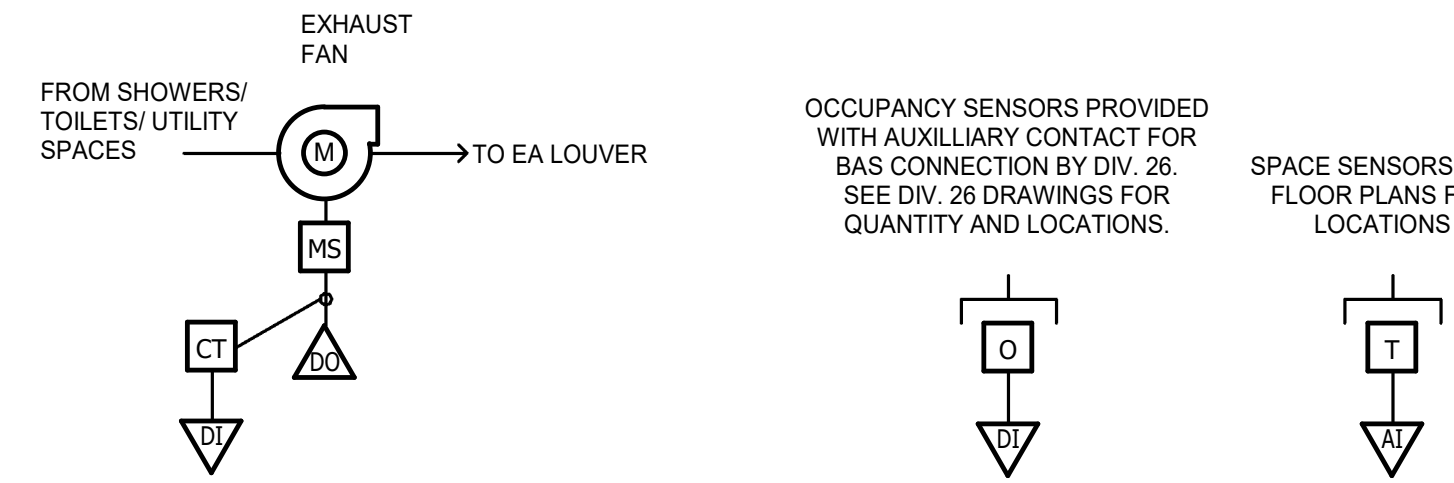
3/H401 IT ROOM MONITORING

**DESCRIPTION**  
DOMESTIC WATER FLOW METERING PROVIDED BY DIV 23. REFER TO DIV 22 DOCUMENTS FOR LOCATION.



4/H401 DOMESTIC WATER METERING

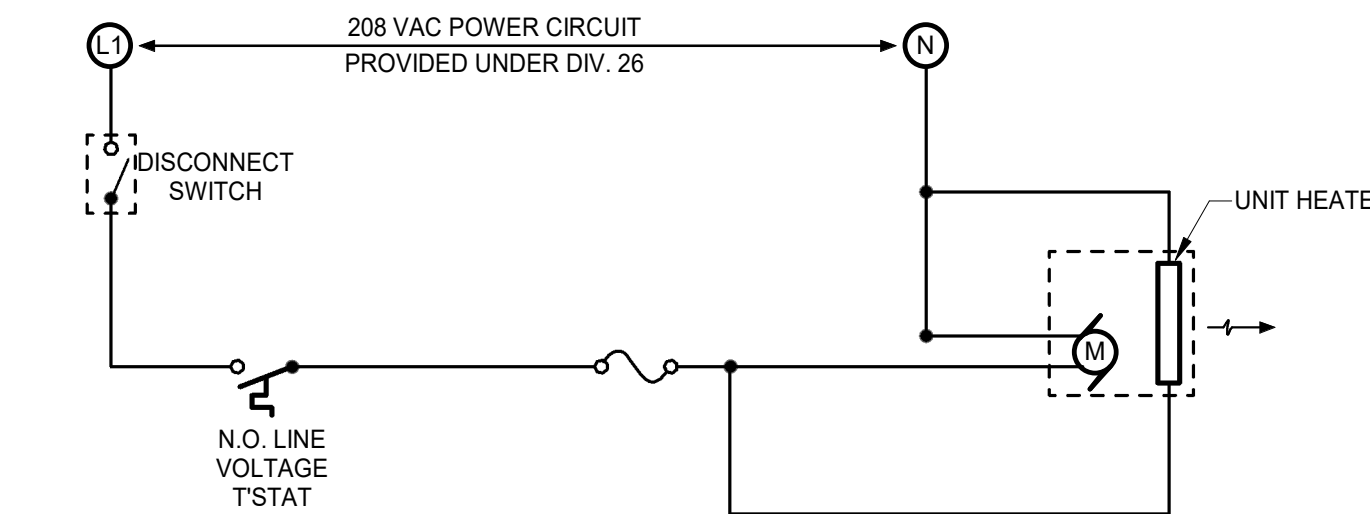
**DESCRIPTION**  
BAS CONTROLLED EXHAUST FAN



SEQUENCE OF OPERATIONS:  
UPON ANY OF THE ASSOCIATED TEMPERATURE SENSORS RISING ABOVE 80°F (ADJ.) OR AN ASSOCIATED OCCUPANCY SENSOR BECOMING OCCUPIED THE EXHAUST FAN SHALL BE ENABLED. THE FAN SHALL HAVE A MINIMUM ENABLE TIME OF 20 MIN (ADJ.). UPON EXHAUST FAN BEING COMMANDED ON AND STATUS FAILING TO MAKE FOR 30 SECONDS AN ALARM SHALL BE GENERATED.

1/H401 RESTROOM/UTILITY EXHAUST SYSTEM

**DESCRIPTION**  
STAND-ALONE CONTROL PROVIDED BY LINE-VOLTAGE ELECTRIC THERMOSTAT.



SEQUENCE OF OPERATIONS:  
UPON TEMPERATURE RISING ABOVE 50 DEG F (ADJ.) UNIT HEATER SHALL BE ENABLED.

2/H401 UNIT HEATER

INPUT / OUTPUT SUMMARY TABLE																
POINT DESCRIPTION	HARDWARE POINTS				SOFTWARE POINTS				ALARMS (BY DIV 25)					TREND (BY DIV 25)	SHOW ON GRAPHIC (BY DIV 25)	
	INPUTS		OUTPUTS		ANALOG VALUE	BINARY VALUE	SCHED.	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAILURE				
	DIGITAL	ANALOG	DIGITAL	ANALOG												
ID POINT TOTAL	4	5	1	0	1	0	0	1	0	0	1	0	0	0	11	
POINT DESCRIPTION	DI	AI	DO	AO	AV	BV	SCHED	H.LIMIT	L.LIMIT	BINARY	LATCH	SENSOR FAIL	TREND	GRAPHIC		
105 - ELEC/IT SPACE TEMPERATURE		X						X							X	
101 - SHOWER ROOM SPACE TEMPERATURE		X													X	
102 - SHOWER ROOM SPACE TEMPERATURE		X													X	
103 - TOILET ROOM SPACE TEMPERATURE		X													X	
104 - UTILITY ROOM SPACE TEMPERATURE		X													X	
101 - SHOWER ROOM OCCUPANCY CONTACT	X														X	
102 - SHOWER ROOM SPACE OCCUPANCY CONTACT	X														X	
103 - TOILET ROOM SPACE OCCUPANCY CONTACT	X														X	
EXH-1 COMMAND			X												X	
EXH-1 STATUS	X										X				X	
DOMESTIC WATER METER FLOW					X										X	

5/H401 RESTROOM BUILDING POINTS LIST

DUCTLESS SPLIT SYSTEM INDOOR UNIT SCHEDULE								DUCTLESS SPLIT SYSTEM OUTDOOR UNIT SCHEDULE									
DESIGNATION	SERVICE	TYPE	SOURCE	MOUNTING	AIRFLOW (CFM)	CAPACITY		DESIGNATION	COOLING			HEATING			ELEC		
						COOLING (MBH)	HEATING (MBH)		TOTAL CAPACITY (MBH)	EFFICIENCY (SEER2)	AMBIENT TEMPERATURE (F)	TOTAL CAPACITY (MBH)	EFFICIENCY (COP)	AMBIENT TEMPERATURE (F)	MCA	MOCP	VOLTAGE/PHASE
DSS1-	ELEC/IT	SINGLE ZONE	DSSO-1	WALL	300	12	13.5	DSSO-1	12	21	95	13.5	3.8	5	9	15	208/1

NOTES:  
1 SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.  
2 PROVIDE EXTERNAL DISCONNECT SWITCH AT OUTDOOR UNIT.  
3 PROVIDE EXTERNAL MOTOR RATED TOGGLE SWITCH AT INDOOR UNIT.  
4 INDOOR UNIT SHALL BE POWERED BY THE OUTDOOR UNIT.

LOUVER SCHEDULE					
DESIGNATION	SERVICE	TYPE	AIRFLOW (CFM)	APD (IN)	SIZE (INxIN)
L-1	EXH-1	SIDEWALL	550	0.1	24X16

NOTES:  
1 MINIMUM FREE AREA SHALL BE 0.7 SQFT.

FAN SCHEDULE										
DESIGNATION	SERVICE	TYPE	AIRFLOW (CFM)	ESP (IN)	DRIVE TYPE	FAN SPEED (RPM)	BRAKE MOTOR SIZE (HP)	FAN MOTOR SIZE (HP)	VOLTAGE/PHASE	EXT START/DISCONNECT MEANS
EXH-1	RESTROOM BLD	INLINE CABINET	550	1.00	DIRECT	1035	0.14	1/2	120/1	MRT

NOTES:  
1 PROVIDE EXTERNAL STARTER/DISCONNECTING MEANS AS SCHEDULED. (C/P, MRT/MSD, VFD)

UNIT HEATER SCHEDULE				
DESIGNATION	SERVICE	TYPE	ELEC CAPACITY (KW)	VOLTAGE/PHASE
UH-1	SHOWER ROOM	CABINET	5.0	208/1
UH-2	SHOWER ROOM	CABINET	5.0	208/1
UH-3	TOILET ROOM	CABINET	4.0	208/1
UH-4	UTILITY ROOM	CABINET	5.0	208/1

NOTES:  
1 PROVIDE ELECTRICAL UNIT HEATER WITH INTEGRAL THERMOSTAT.

AIR DISTRIBUTION SCHEDULE								
DESIGNATION	SERVICE	TYPE	MAX. AIRFLOW (CFM)	FACE SIZE (INxIN, ø IN)	NECK SIZE (INxIN, ø IN)	APD (IN)	MAX. NC	VOL. CONTROL DAMPER (Y/N)
V1	EXHAUST	STD BLADE SIDEWALL	150	12x8	10x6	0.1	20	No
Z1	EXHAUST	PERFORATED	200	24x24	8	0.1	20	No

NOTES:  
1 VERIFY MOUNTING FRAME STYLE WITH ARCHITECTURAL FINISH SCHEDULE.



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ENGINEER  
03/14/2025

NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**CONTROLS & SCHEDULES**

**H401**



ELECTRICAL ABBREVIATIONS

A	AMPERES OR AMP METER
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFB	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECTURAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAGE
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
C	CELSIUS; COIL
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION SYSTEM
CD/CD4	CANDELA
CLG	CEILING
COAX	COAXIAL CABLE
CONTR	CONTRACTOR
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EGC	EQUIPMENT GROUNDING CONDUCTOR
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
ETR	EXISTING TO REMAIN
EWG	ELECTRIC WATER COOLER
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINATION CABINET
FFE	FINISHED FLOOR ELEVATION
FL	FLOOR
FLA	FULL LOAD AMPS
FLC	FLEXIBLE LIQUIDTIGHT CONDUIT
FLEX	FLEXIBLE
FMC	FLEXIBLE METAL CONDUIT
FT	FEET; FOOT
FU	FUSE
GA	GAUGE; GAGE
GB	GROUND BUS
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI	GROUND FAULT (CIRCUIT) INTERRUPTER
GFCI	
GND	GROUND
HD	HEAVY DUTY
HQA	HANDS-OFF-AUTOMATIC
HP	HORSEPOWER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LRA	LOCKED ROTOR AMPS
LS	LIFE SAFETY
LTS	LIGHTING
M	MOTOR; METERING
MC	METAL CLAD
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PROTECTOR
MCS	MOLDED CASE SWITCH
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUG ONLY
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN; NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OL	OVERLOAD
P	POLE
PB	PULL BOX
PC	PHOTOCELL
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POINT; POTENTIAL TRANSFORMER
PUN	PER UNIT NAMEPLATE
PVC	POLYVINYL CHLORIDE (CONDUIT)
RD	ROUND

ELECTRICAL ABBREVIATIONS

REV	REVISION
RLA	RATED LOAD AMPS
RMC	RIGID METAL CONDUIT
SN	SOLID NEUTRAL
SNAC	SIGNAL NOTIFICATION APPLIANCE CIRCUIT
SP	SURGE PROTECTED
SPD	SURGE PROTECTED DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE SINGLE THROW
SO	SQUARE
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TBB	TELEPHONE BACK BOARD
TELEC	TELECOMMUNICATIONS
OM	
TEMP	TEMPERATURE
THD	TOTAL HARMONIC DISTORTION
TV	TELEVISION
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES INC.
UNO	UNLESS NOTED OTHERWISE
V	VOLTAGE; VOLT
VAC	VOLTS ALTERNATING CURRENT
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WIRE
W	WITH
WG	WIREGUARD
WP	WEATHERPROOF
EM	EMERGENCY
XP	EXPLOSION PROOF
Z	IMPEDANCE
ø	ROUND; DIAMETER; PHASE

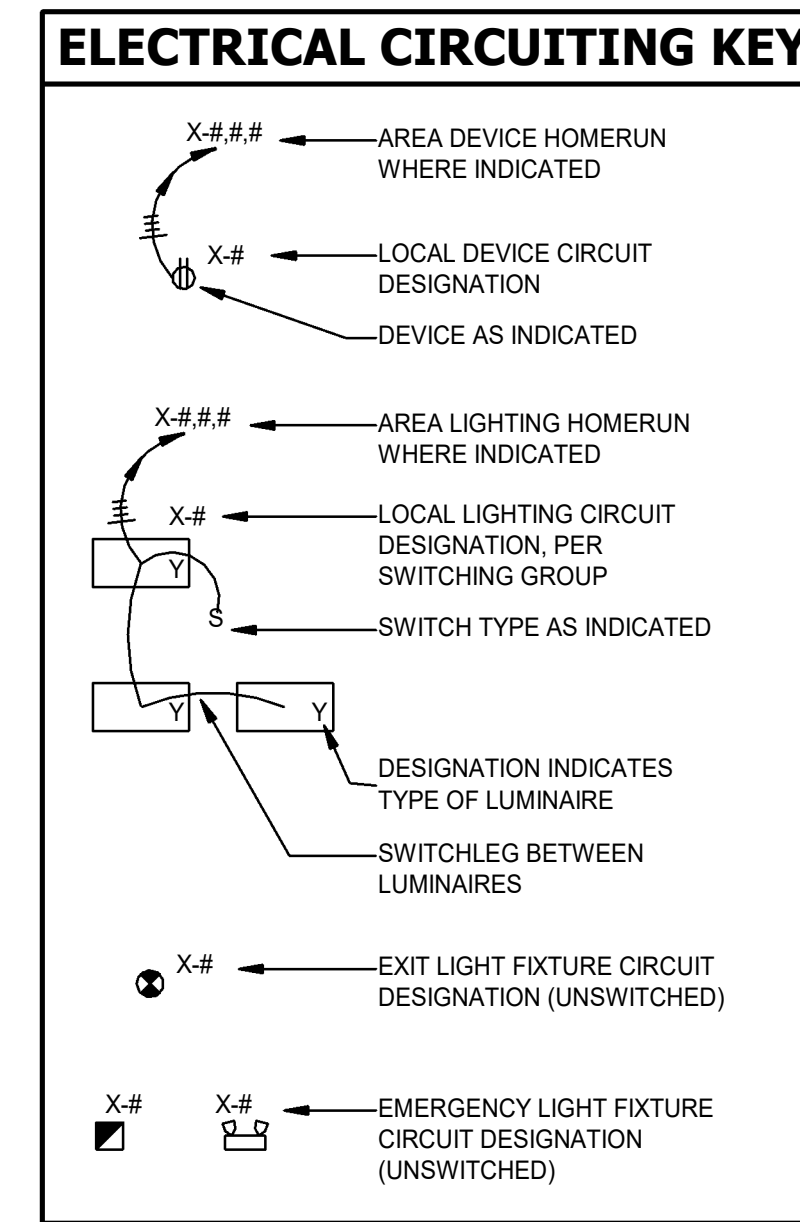
WALL MTD LIGHTING FIXTURE AND OUTLET
PENDANT LIGHTING FIXTURE AND OUTLET
DOWNLIGHT LIGHTING FIXTURE AND OUTLET
WALL MTD LIGHTING FIXTURE AND OUTLET
PENDENT MOUNTED STRIP FIXTURE
CEILING MTD LIGHTING FIXTURE AND OUTLET
WALL MTD EXIT SIGN AND OUTLET, SINGLE FACE. ARROW INDICATES DIRECTION.
CEILING MTD EXIT SIGN AND OUTLET, DUAL FACE. ARROWS INDICATE DIRECTION.
EMERGENCY LIGHT BATTERY PACK - TWO HEAD UNIT.
CEILING MOUNTED EMERGENCY BATTERY LIGHT
EMERGENCY LIGHT REMOTE HEAD
GROUND MOUNTED FLOODLIGHT AND OUTLET
AREA LUMINAIR AND STANDARD
FLUSH MTD TOGGLE SWITCH, SPST, 20A, 120/277V
FLUSH MTD TOGGLE SWITCH, DPST, 20A, 120/277V
FLUSH MTD 3-WAY TOGGLE SWITCH, 20A, 120/277V
FLUSH MTD 4-WAY TOGGLE SWITCH, 20A, 120/277V
FLUSH MTD DIMMER SWITCH, 20A, 120/277V
FLUSH MTD KEY SWITCH, 20A, 120/277V
FLUSH MTD OCCUPANCY SENSOR SWITCH, 20A, 120/277V
FLUSH MTD LIGHTED HANDLE TOGGLE SWITCH, SPST, 20A, 120V. LIGHT ON WITH OPEN SWITCH
FLUSH MTD TOGGLE SWITCH WITH PILOT LIGHT. LIGHT ON WITH CLOSED SWITCH.
TIMED SWITCH
CEILING MTD INFRA-RED OCCUPANCY SENSOR SWITCH
CEILING MTD ULTRASONIC OCCUPANCY SENSOR SWITCH
CEILING MTD DUAL TECHNOLOGY (IR, U) OCCUPANCY SENSOR SWITCH
PHOTOCELL
FLUSH MTD DUPLEX RECEPTACLE, 20A, 125V, 3W
FLUSH MTD DUPLEX GFCI RECEPTACLE, 20A, 125V, 3W
FLUSH MTD DUPLEX RECEPTACLE WITH DUPLEX USB OUTLETS, 20A, 125V, 3W
FLUSH MTD SINGLE RECEPTACLE, 20A, 125V, 3W
FLUSH MTD QUADRUPLX RECEPTACLE, 20A, 125V, 3W
FLUSH MTD DUPLEX RECEPTACLE, 20A, 125V, 3W, SPLIT WIRED WITH TOP OUTLET SWITCHED.
FLUSH MTD DUPLEX RECEPTACLE, 20A, 125V, 3W, INSTALLED VERTICALLY 4" ABOVE BACKSPASH OR COUNTERTOP IF NO BACKSPASH EXISTS.
FLUSH MTD QUADRUPLX RECEPTACLE, 20A, 125V, 3W, INSTALLED VERTICALLY 4" ABOVE BACKSPASH OR COUNTERTOP IF NO BACKSPASH EXISTS.
WALL MOUNTED POWER DEVICE
FLOOR BOX WITH DEVICE(S). REFER TO SCHEDULES FOR MARK
WALL MTD TELECOM OUTLET. REFER TO SCHEDULES FOR MARK
CEILING MTD RECEPTACLE AND OUTLET, 20A, 125V
CEILING MTD TELECOM OUTLET. REFER TO SCHEDULES FOR MARK
CEILING MTD DUPLEX RECEPTACLE & TELECOM OUTLET. REFER TO SCHEDULES FOR MARK
CEILING MTD PUBLIC ADDRESS SPEAKER
FLUSH MTD VOLUME CONTROL FOR SPEAKER
WALL MTD TELEVISION ANTENNA/ELECTRICAL OUTLET. REFER TO SCHEDULES FOR MARK
(WIFI) WIRELESS ACCESS POINT.
PANELBOARD, 250V LEVEL
PANELBOARD, 600V LEVEL
HOMERUN: ARROW HEADS INDICATE NUMBER OF CIRCUITS, LETTERS AND NUMBERS DESIGNATE PANEL. AND CIRCUITS. SHORT TICK MARKS INDICATE NUMBER OF CURRENT CARRYING PHASE CONDUCTORS. LONG TICK MARK(S) INDICATE NEUTRAL(S). GROUNDING CONDUCTORS REQUIRED BY SPECIFICATIONS ARE NOT SHOWN. CONDUCTOR SIZES SPECIFIED ON THE PANEL SCHEDULES ARE MANDATORY FOR THE ENTIRE CIRCUIT EXCEPT WHERE SPECIFICATIONS REQUIRE A SIZE INCREASE FOR VOLTAGE DROP.
SURFACE METAL RACEWAY WITH DEVICES. LETTER DESIGNATES TYPE
PENDANT MTD, PLUG-IN BUS DUCT WITH PLUG-IN CIRCUIT BREAKER OR FUSIBLE SWITCH AND TAP BOX. DUCT AND SWITCH RATING AS NOTED
TOP # - DEVICE MAXIMUM RATING OR FRAME SIZE
BOTTOM # - FUSE SIZE OR DEVICE SETTING
DISCONNECT SWITCH
COMBINATION DISCONNECT SWITCH AND MAGNETIC MOTOR STARTER. SEE SCHEDULE OR NOTE
FLUSH MTD MANUAL MOTOR STARTER SWITCH WITHOUT OVERLOAD HEATERS
MAGNETIC MOTOR STARTER
3 POLE CIRCUIT BREAKER IN ENCLOSURE. # INDICATES CB RATING.
VARIABLE FREQUENCY DRIVE CONTROLLER, 40" AFF. PROVIDED BY HVAC OR PLUMBING CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR
MAGNETIC CONTACTOR, SIZE PER SCHEDULE
JUNCTION, PULL, TAP OR OUTLET BOX (CODE SIZE)
TIME CLOCK
MAGNETIC RELAY, SIZE PER SCHEDULE

ELECTRICAL SYMBOLS

FLUSH MOUNTED MUSHROOM HEAD PUSH BUTTON
FLUSH MOUNTED PUSH BUTTON
SUPPLEMENTAL GROUND BAR
GROUND PER NEC
ELECTRICAL DEMAND METER
SURGE PROTECTION DEVICE
WALL MTD FIRE ALARM PULL STATION
SMOKE DETECTOR, CEILING MTD
SMOKE DETECTOR FOR ELEVATOR RECALL, CEILING MTD
SMOKE DETECTOR WITH SOUNDER BASE, CEILING MTD
SMOKE DETECTOR, CEILING MTD, MULTI SENSOR
CEILING MTD REMOTE ALARM INDICATOR LAMP
CARBON MONOXIDE DETECTOR
SMOKE DETECTOR, DUCT MTD (WITH RAIL)
HEAT DETECTOR, CEILING MTD
SMOKE DETECTOR, WALL MTD
SMOKE DETECTOR WITH SOUNDER BASE, WALL MTD
WALL MTD HEAT DETECTOR
WALL MTD REMOTE ALARM INDICATOR LAMP (RAIL)
WALL MTD HORN TYPE AUDIO/VISUAL APPLIANCE
WALL MTD SPEAKER TYPE AUDIO/VISUAL APPLIANCE
WALL MTD CHIME TYPE AUDIO/VISUAL APPLIANCE
WALL MTD VISUAL ALARM APPLIANCE
CEILING MTD HORN TYPE AUDIO/VISUAL ALARM APPLIANCE
CEILING MTD SPEAKER TYPE AUDIO/VISUAL ALARM APPLIANCE
CEILING MTD CHIME TYPE AUDIO/VISUAL ALARM APPLIANCE
CEILING MTD FIRE ALARM VISUAL DEVICE
DOOR HOLDER
FIRE ALARM MONITOR MODULE
FLOW SWITCH FIRE ALARM CONNECTION, SWITCH PROVIDED BY OTHERS
TAMPER SWITCH FIRE ALARM CONNECTION, SWITCH PROVIDED BY OTHERS
POST INDICATOR VALVE FIRE ALARM CONNECTION, VALVE PROVIDED BY OTHERS
FIRE ALARM TEMPERATURE SENSOR
FIRE ALARM CONTROL MODULE OR RELAY
CEILING MTD FIRE ALARM SPEAKER
CLOCK
FIRE ALARM BELL; # INDICATED DIAMETER IN INCHES
LINEAR BEAM TRANSMITTER
LINEAR BEAM RECEIVER
FIRE ALARM WALL MTD SPEAKER
FIREMAN'S 2-WAY TELEPHONE
FIRE ALARM ISOLATION MODULE
FIRE ALARM ASPIRATION SMOKE DETECTOR
DIGITAL ALARM COMMUNICATIONS TRANSMITTER
FIRE ALARM ANNUNCIATOR PANEL
FIRE ALARM CONTROL PANEL
FIRE ALARM TERMINAL CABINET
SUPPLEMENTAL NOTIFICATION APPLIANCE CABINET
DOOR CONTROL ID TAG
SECURITY SYSTEM KEYPAD, 42" AFF
ACCESS CONTROL CARD READER
SECURITY PANIC BUTTON
CCTV SECURITY CAMERA WITH FIXED MOUNT
CCTV SECURITY CAMERA WITH PTZ FEATURES
CCTV DOME SECURITY CAMERA WITH 360 FEATURES
EMERGENCY TELEPHONE
MASTER RESCUE ASSISTANCE STATION
RESCUE ASSISTANCE STATION
RESCUE ASSISTANCE LIGHT
CORD REEL
NEW WORK
EXISTING TO REMAIN
EXISTING TO BE DEMOLISHED

ELECTRICAL GENERAL NOTES

- ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE UTILIZED FOR THIS PROJECT.
- SYMBOLS NOT SHOWN ON THIS ELECTRICAL SYMBOL LEGEND ARE IDENTIFIED ON THE DRAWINGS WHERE THEY OCCUR.
- UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS OR ON THE DRAWINGS, MOUNTING HEIGHT OF DEVICES IS TO BE THE CENTERLINE OF THE DEVICE.
- UNLESS OTHERWISE INDICATED, SWITCHES AND SIMILAR DEVICES ARE TO BE LOCATED 42" AFF. RECEPTACLES ARE TO BE VERTICALLY MOUNTED AT 18" AFF WITH THE GROUNDING TERMINAL ON THE BOTTOM.
- TELEPHONE & DATA OUTLETS ARE TO BE MOUNTED AT 18" AFF UNLESS OTHERWISE INDICATED. "W" INDICATES MOUNTING AT 42" AFF. "C" INDICATES MOUNTING ABOVE/COUNTERTOP WITH ALIGNMENT AND HEIGHT AS INDICATED FOR RECEPTACLES SIMILARLY MOUNTED.
- FIRE ALARM PULL STATIONS ARE TO BE VERTICALLY MOUNTED AT 42" AFF.
- FIRE ALARM INDICATING APPLIANCES SHALL BE 15 Cg RATING, UNLESS NOTED OTHERWISE ON THE PLANS.
- FIRE ALARM INDICATING APPLIANCES ARE TO BE MOUNTED WITH THE LOWER EDGE OF THE VISUAL ELEMENT AT 6'-8" AFF OR 6" BFC, WHICHEVER IS LOWER. WHERE DUCTWORK, CONDUIT, OR OTHER OBSTRUCTIONS BLOCK DIRECT VIEW OF APPLIANCE, MOUNT 6" BELOW SUCH OBSTRUCTIONS.
- CEILING MOUNTED SMOKE DETECTORS ARE SHOWN IN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH CEILING FEATURES. WALL MOUNTED SMOKE DETECTORS ARE TO BE MOUNTED 10" BELOW FINISHED CEILING TO THE CENTER OF DEVICE AND A MINIMUM OF 12" FROM ADJACENT WALLS OR OTHER OBSTRUCTIONS.
- COORDINATE SMOKE DETECTOR AND HEAT DETECTOR LOCATIONS WITH HVAC SUPPLY AND RETURN GRILLES. MAINTAIN 5'-0" CLEARANCE BETWEEN EDGE OF SUPPLY GRILL AND EDGE OF SMOKE DETECTOR.
- UPPER CASE LETTER (OR LETTER/NUMBER COMBINATION) ADJACENT TO FIXTURE OR SWITCH DESIGNATES TYPE. SEE FIXTURE SCHEDULE FOR DETAILS.
- LOWER CASE LETTER ADJACENT TO FIXTURE OR SWITCH DESIGNATES CONTROL RELATIONSHIP.
- NUMBER ADJACENT TO FIXTURE, SWITCH, OR RECEPTACLE DESIGNATES CIRCUIT CONNECTION. SINGLE DIAGONAL LINE ACROSS A FIXTURE INDICATES FIXTURE IS UNSWITCHED FOR 24 HOUR OPERATION.



ELECTRICAL DRAWING LIST

NO.	TITLE
E001	STANDARDS, SYMBOLS & ABBREVIATIONS
E002	SITE PLAN
E111	PLANS - RESTROOM BUILDING
E112	PLANS - TRAINING TOWER
E113	PLANS - TRAINING TOWER
E114	PLANS - TRAINING TOWER
E301	ELECTRICAL DETAILS
E401	PANEL SCHEDULES
E501	LIGHTING FIXTURE SCHEDULE
E511	TELECOMMUNICATIONS SYSTEMS
E601	ELECTRICAL DISTRIBUTION SYSTEM

GENERAL SYMBOLS

PLAN OR DETAIL NUMBER SHEET NUMBER	COLUMN NUMBER OR LETTER
ELEVATION LETTER SHOWN ON SHEET NUMBER	DRAWING REVISION NUMBER
SECTION NUMBER SHOWN ON SHEET NUMBER	KEYED NOTE NUMBER
DIMENSION LINE	CONNECT TO EXISTING
DETAIL NUMBER WITH SHEET NO.	REMOVE TO THIS POINT
	NORTH ARROW

APPENDIX B  
2018 BUILDING CODE SUMMARY  
FOR ALL COMMERCIAL PROJECTS

ELECTRICAL DESIGN

ELECTRICAL SUMMARY

<b>Method of Compliance:</b>	
Energy Code:	<input checked="" type="checkbox"/> Prescriptive <input type="checkbox"/> Performance
ASHRAE 90.1:	<input type="checkbox"/> Prescriptive <input type="checkbox"/> Performance
<b>Lighting schedule</b> (each fixture type)	
lamp type required in fixture	See fixture Schedule on Drawing Sheet
number of lamps in fixture	
ballast type used in the fixture	
number of ballasts in fixture	
total wattage per fixture	
total interior wattage specified vs. allowed: (whole building or space by space)	1,237 VA vs. 3,523 VA
total exterior wattage specified vs. allowed:	5,487 VA vs. 6,408 VA
<b>Additional Efficiency Package Options</b> (When using the 2018 NCECC; not required for ASHRAE 90.1)	
<input type="checkbox"/> C406.2 More Efficient Mechanical Equipment	
<input type="checkbox"/> C406.3 Reduced Lighting Power Density	
<input type="checkbox"/> C406.4 Enhanced Digital Lighting Controls	
<input type="checkbox"/> C406.5 On-Site Renewable Energy	
<input type="checkbox"/> C406.6 Dedicated Outdoor Air System	
<input type="checkbox"/> C406.7 Reduced Energy Use in Service Water Heating	

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WAKE TECHNICAL COMMUNITY COLLEGE  
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NCCCS NO. 2303



03/14/2025

NO.	REVISION	DATE

JOB NUMBER <b>22-086</b>
DATE ISSUED <b>03/14/2025</b>
PROJECT STATUS <b>ISSUE FOR CONSTRUCTION</b>
SHEET <b>STANDARDS, SYMBOLS &amp; ABBREVIATIONS</b>

E001





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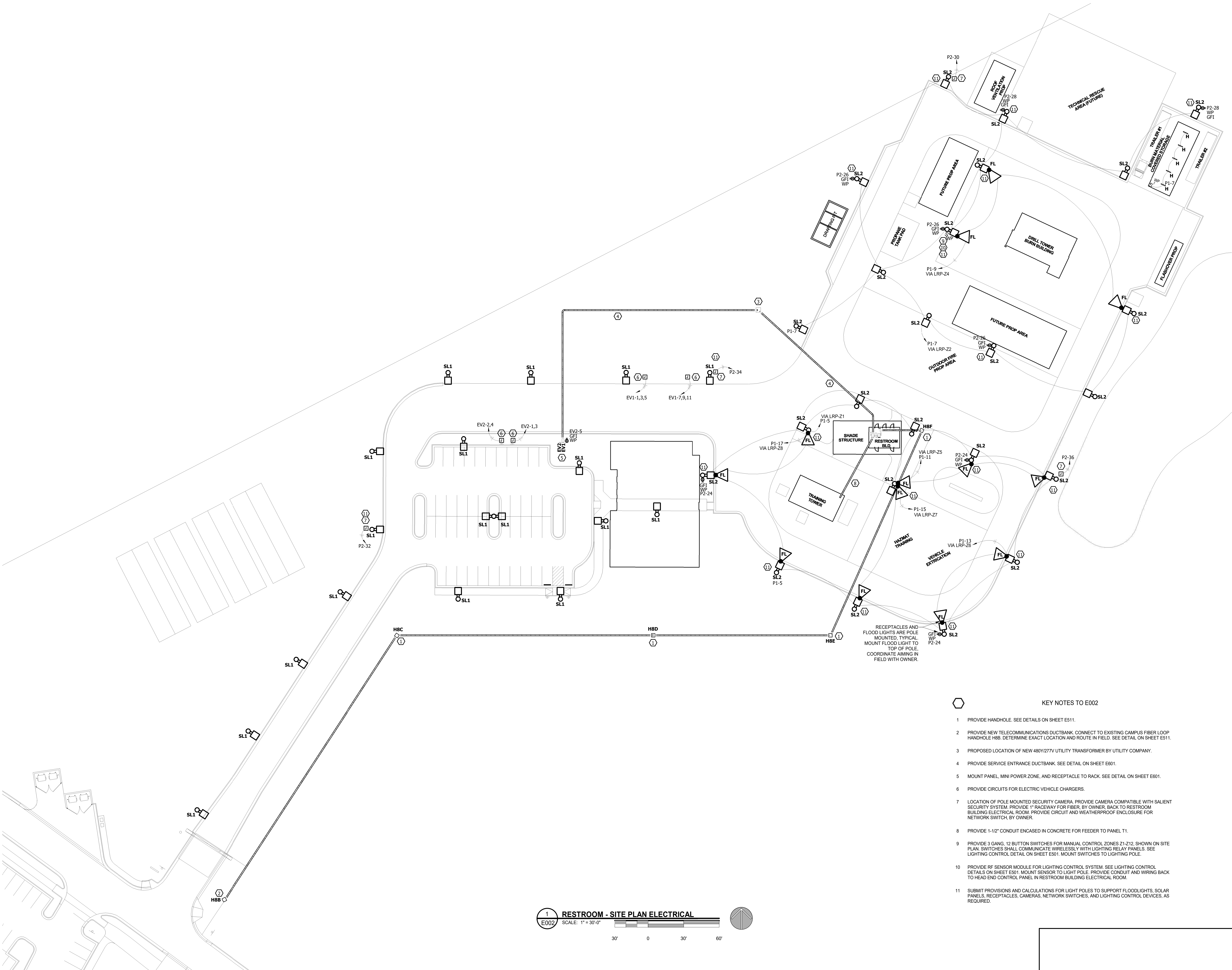
03/14/2025

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**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**SITE PLAN**

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50 Project No: 2025-00520  
PLOT Date: 3/14/2025 1:15:18 PM  
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E002



KEY NOTES TO E002

- 1 PROVIDE HANDHOLE. SEE DETAILS ON SHEET E511.
- 2 PROVIDE NEW TELECOMMUNICATIONS DUCTBANK. CONNECT TO EXISTING CAMPUS FIBER LOOP HANDHOLE HBB. DETERMINE EXACT LOCATION AND ROUTE IN FIELD. SEE DETAIL ON SHEET E511.
- 3 PROPOSED LOCATION OF NEW 480Y/277V UTILITY TRANSFORMER BY UTILITY COMPANY.
- 4 PROVIDE SERVICE ENTRANCE DUCTBANK. SEE DETAIL ON SHEET E501.
- 5 MOUNT PANEL, MINI POWER ZONE, AND RECEPTACLE TO RACK. SEE DETAIL ON SHEET E501.
- 6 PROVIDE CIRCUITS FOR ELECTRIC VEHICLE CHARGERS.
- 7 LOCATION OF POLE MOUNTED SECURITY CAMERA. PROVIDE CAMERA COMPATIBLE WITH SALIENT SECURITY SYSTEM. PROVIDE 1" RACEWAY FOR FIBER, BY OWNER, BACK TO RESTROOM BUILDING ELECTRICAL ROOM. PROVIDE CIRCUIT AND WEATHERPROOF ENCLOSURE FOR NETWORK SWITCH, BY OWNER.
- 8 PROVIDE 1-1/2" CONDUIT ENCASED IN CONCRETE FOR FEEDER TO PANEL T1.
- 9 PROVIDE 3 GANG, 12 BUTTON SWITCHES FOR MANUAL CONTROL ZONES Z1-Z12. SHOWN ON SITE PLAN. SWITCHES SHALL COMMUNICATE WIRELESSLY WITH LIGHTING RELAY PANELS. SEE LIGHTING CONTROL DETAIL ON SHEET E501. MOUNT SWITCHES TO LIGHTING POLE.
- 10 PROVIDE RF SENSOR MODULE FOR LIGHTING CONTROL SYSTEM. SEE LIGHTING CONTROL DETAILS ON SHEET E501. MOUNT SENSOR TO LIGHT POLE. PROVIDE CONDUIT AND WIRING BACK TO HEAD END CONTROL PANEL IN RESTROOM BUILDING ELECTRICAL ROOM.
- 11 SUBMIT PROVISIONS AND CALCULATIONS FOR LIGHT POLES TO SUPPORT FLOODLIGHTS, SOLAR PANELS, RECEPTACLES, CAMERAS, NETWORK SWITCHES, AND LIGHTING CONTROL DEVICES, AS REQUIRED.

**1 RESTROOM - SITE PLAN ELECTRICAL**  
E002 SCALE: 1" = 30'-0"  
30' 0 30' 60'



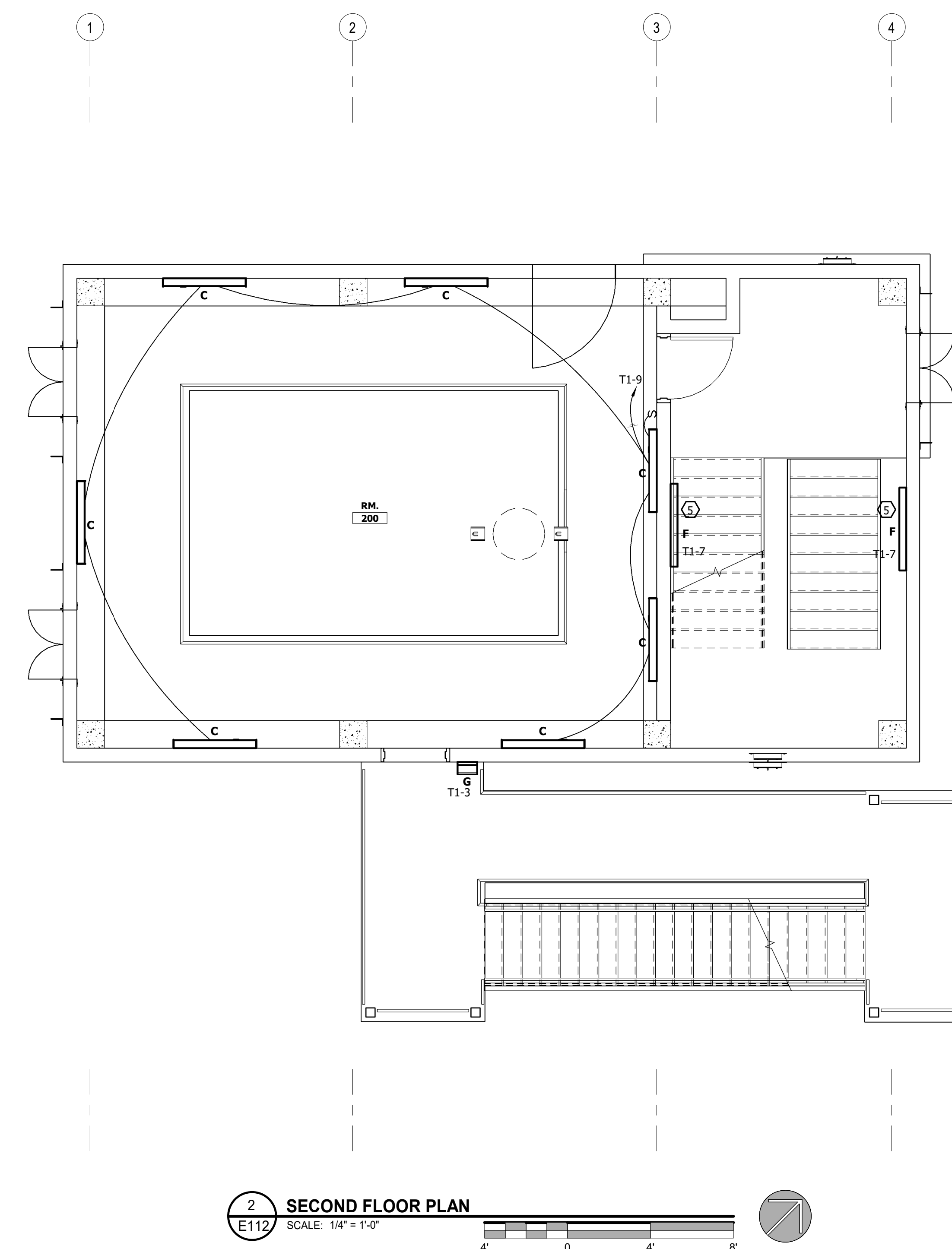
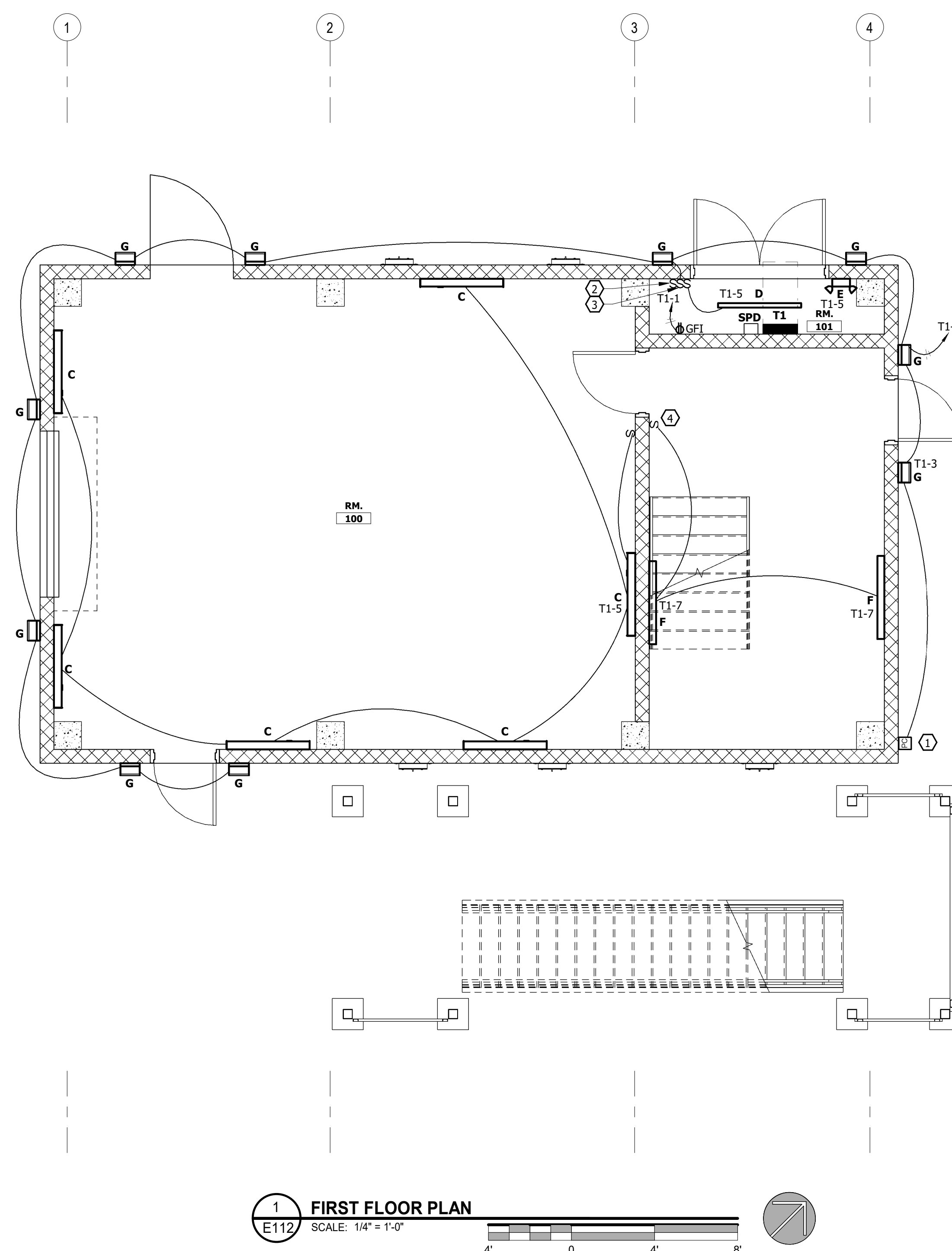




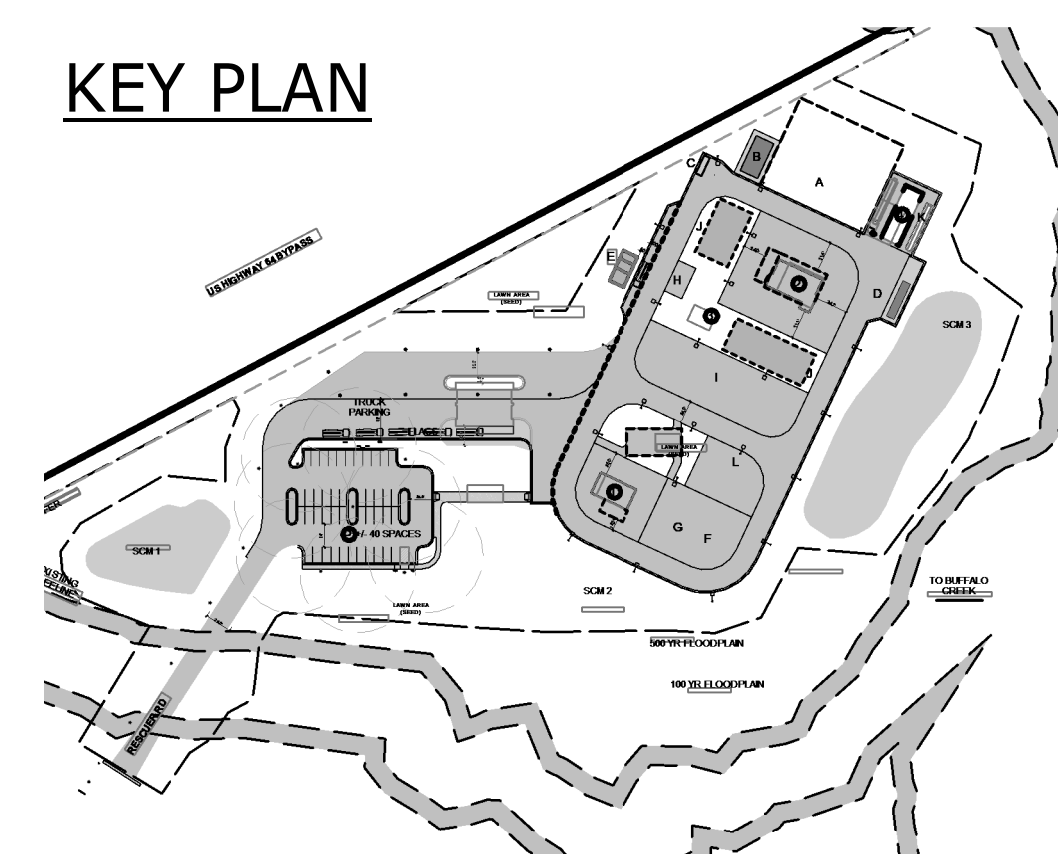


## KEY NOTES TO E112

- 1 PROVIDE 2000 WATT, WEATHERPROOF PHOTOCELL FOR OUTDOOR LIGHTING CONTROL. MOUNT AT 10' AEG AWAY FROM ARTIFICIAL LIGHT SOURCES.
- 2 PROVIDE 3 GANG, 12 BUTTON WALL SWITCHES FOR MANUAL CONTROL ZONES Z1-Z12. SHOWN ON SITE PLAN. SWITCHES SHALL COMMUNICATE WIRELESSLY WITH LIGHTING RELAY PANELS. SEE LIGHTING CONTROL DETAIL ON SHEET E501.
- 3 PROVIDE MANUAL SWITCH FOR CONTROL OF EXTERIOR LIGHTING IN SERIES WITH PHOTOCELL.
- 4 SWITCH SHALL CONTROL ALL STAIR LIGHTINGS.
- 5 STAIR LIGHTS SHALL BE CONTROLLED BY SWITCH SHOWN ON FIRST FLOOR PLAN.



### KEY PLAN





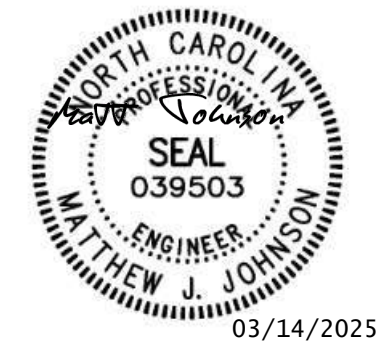


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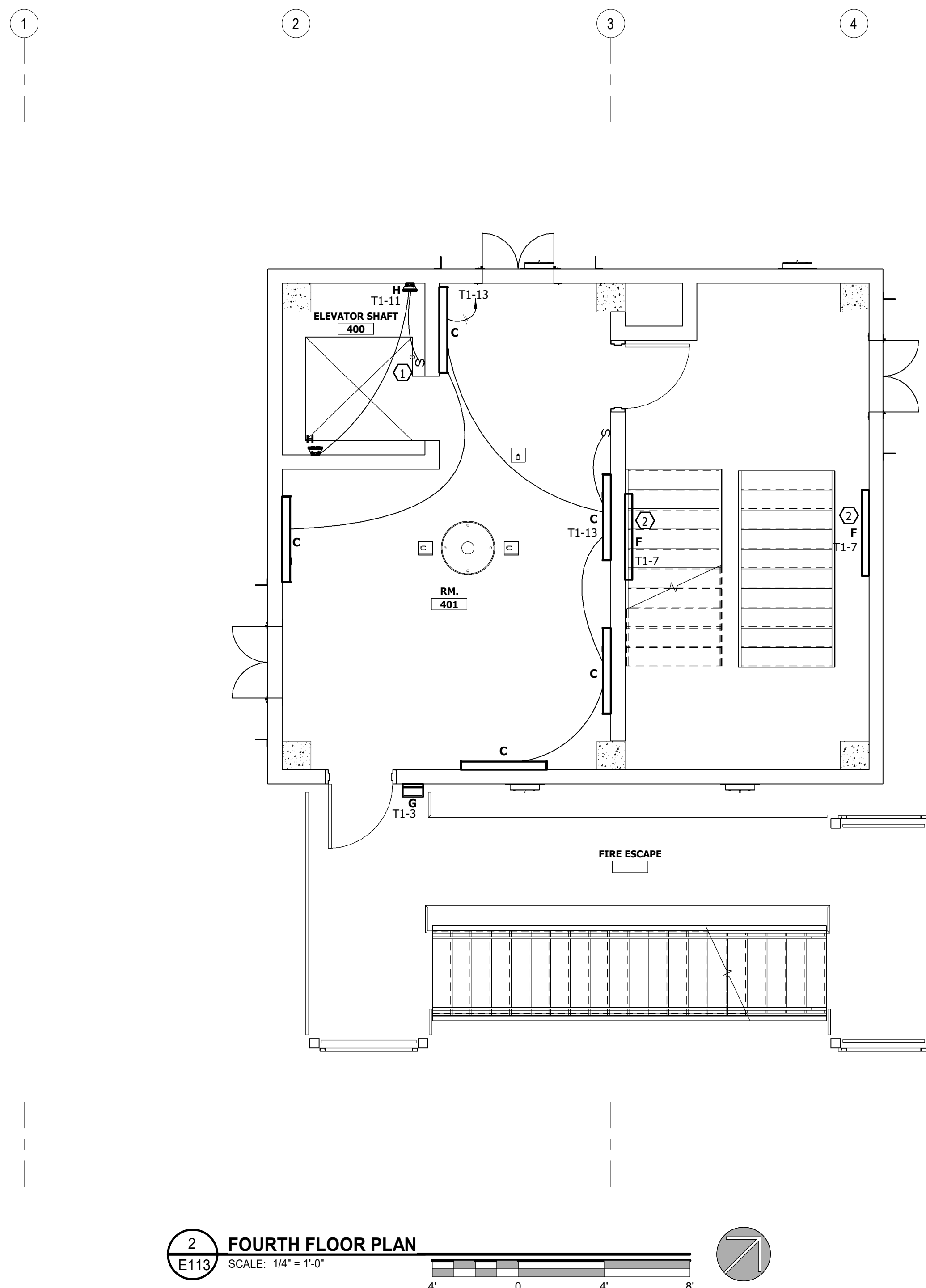
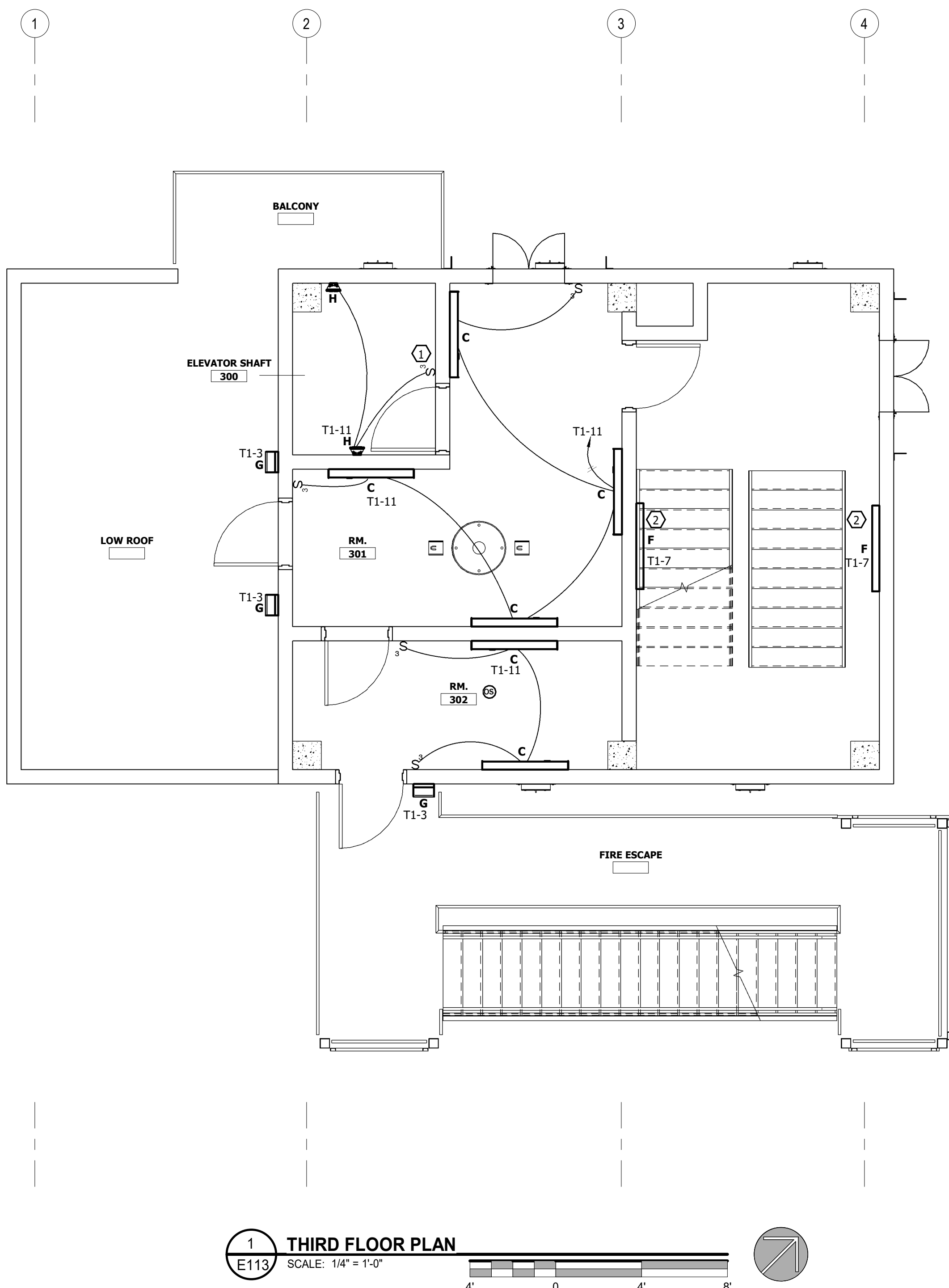
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SHEET  
**PLANS - TRAINING TOWER**

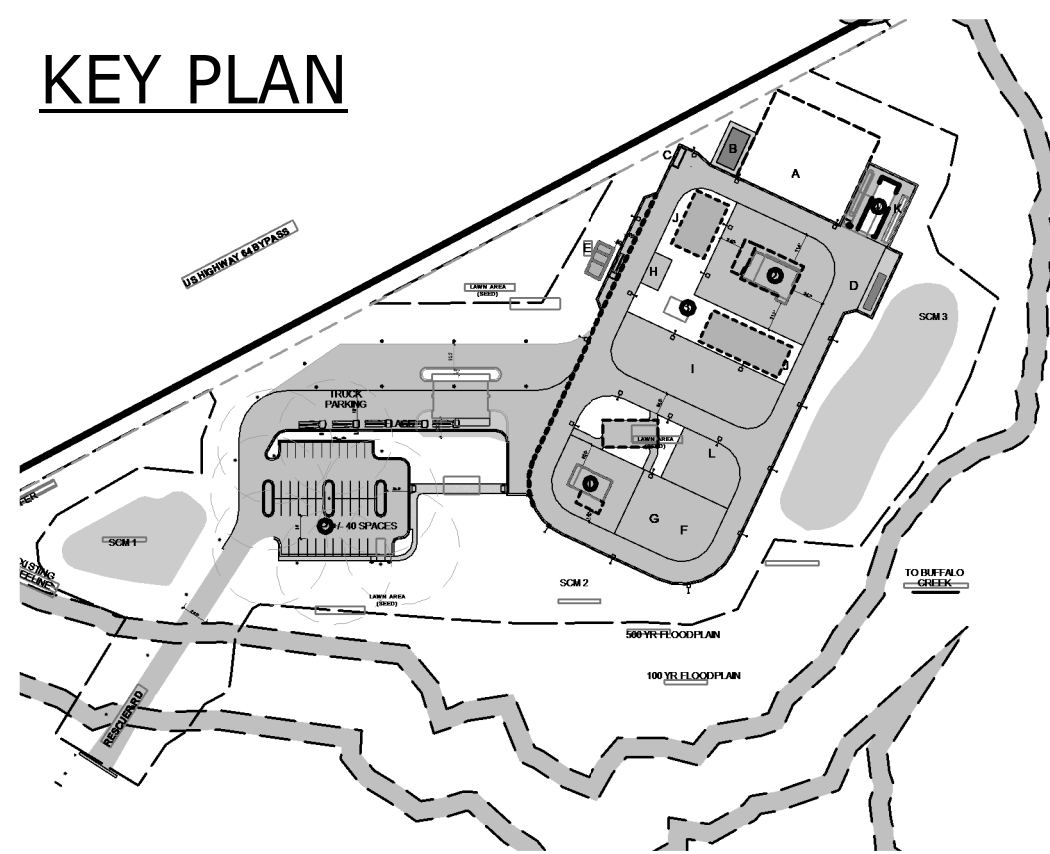
E113

KEY NOTES TO E113

- 1 SHAFT LIGHT FIXTURES SHALL BE CONTROLLED TOGETHER BY THREE WAY SWITCHES ON EITHER LEVEL.
- 2 STAIR LIGHTS SHALL BE CONTROLLED BY SWITCH SHOWN ON FIRST FLOOR PLAN.



KEY PLAN





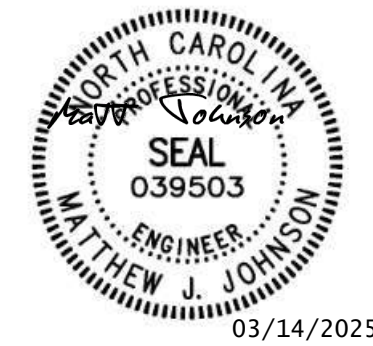


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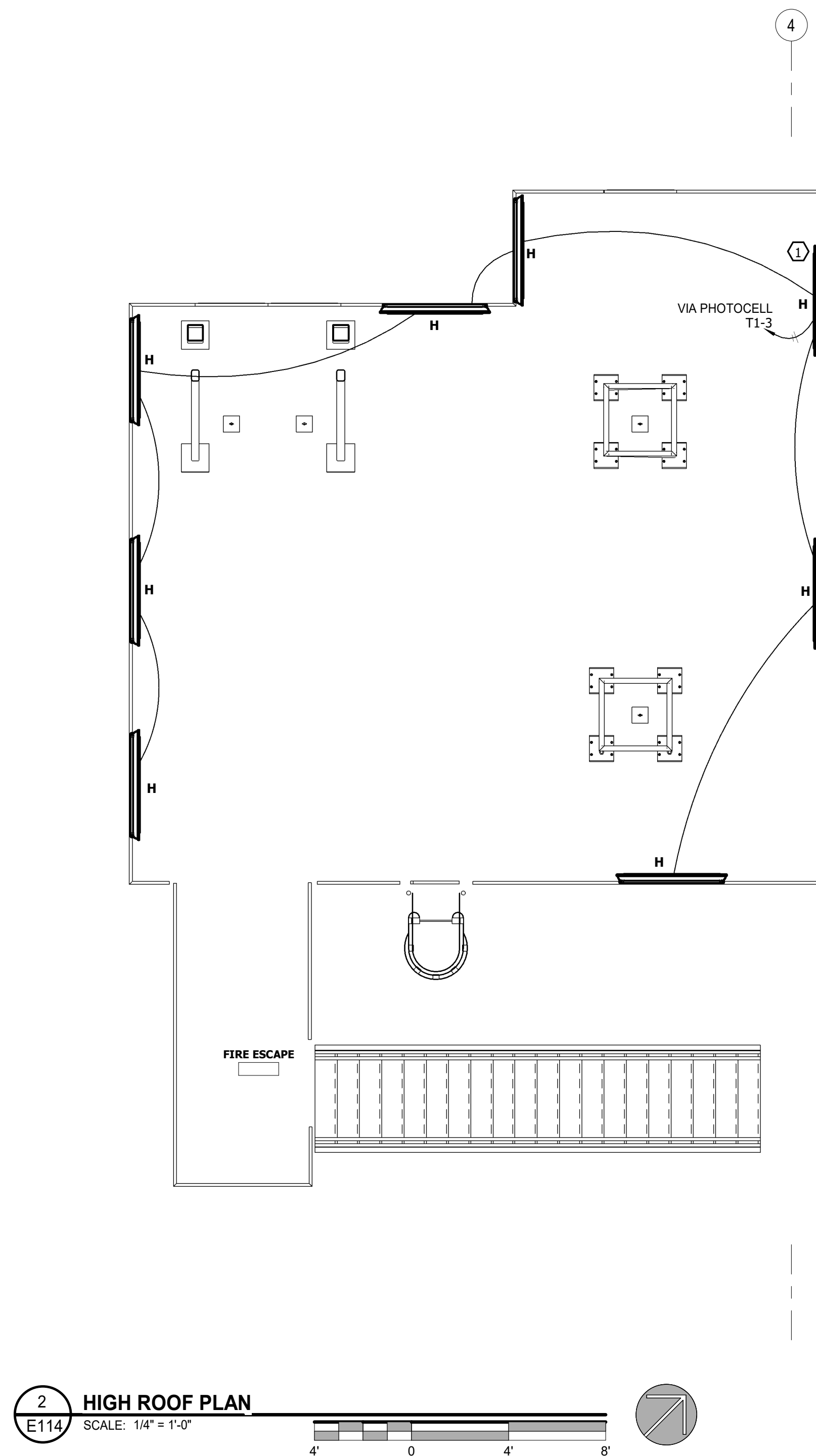
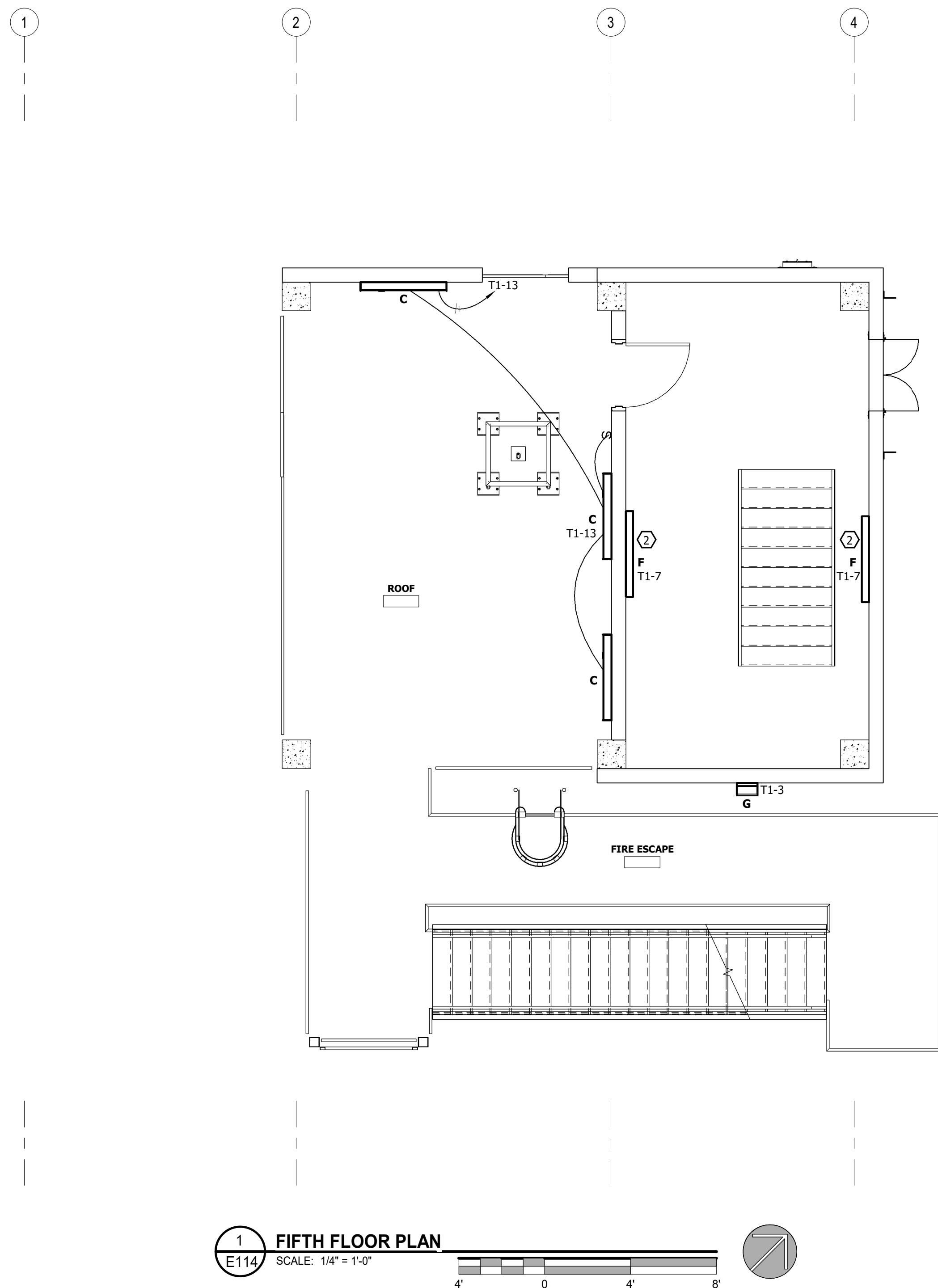
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**PLANS - TRAINING TOWER**

**E114**

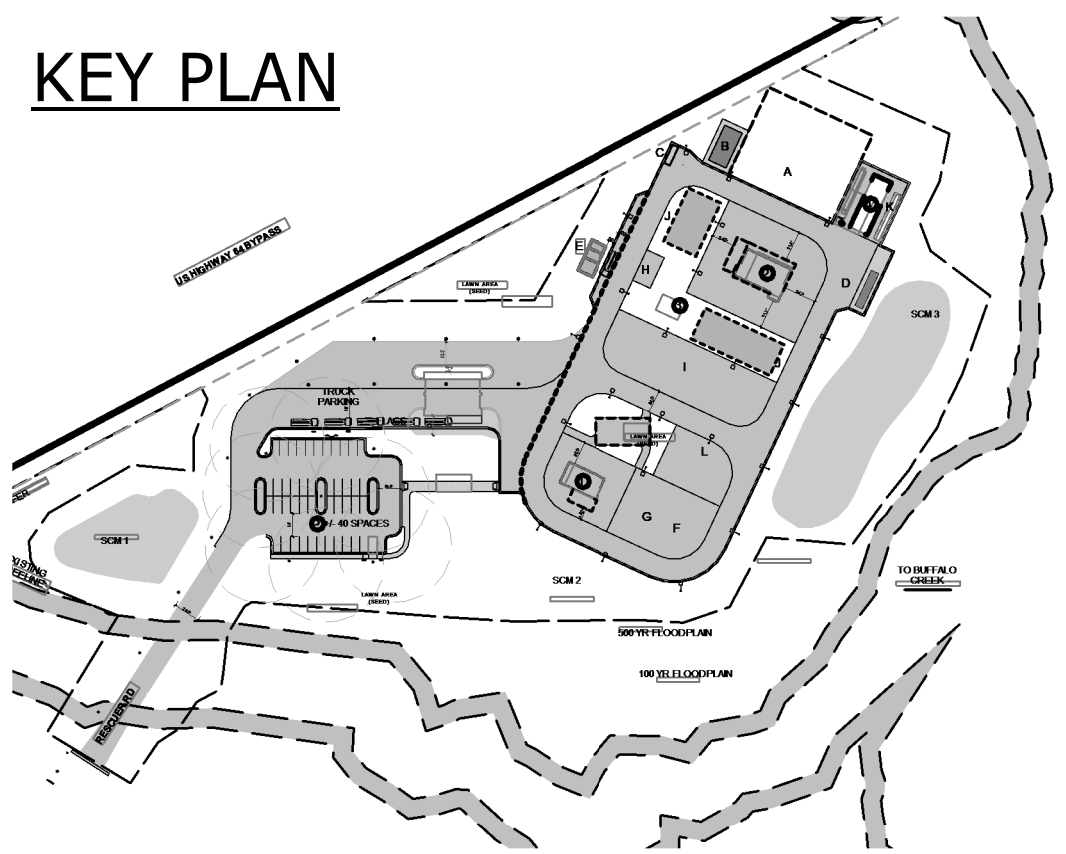


KEY NOTES TO E114

- 1 MOUNT LIGHT FIXTURES HORIZONTALLY TO TOP OF GUARD RAIL. PROVIDE MOUNTING HARDWARE AS REQUIRED. LIGHT FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL ON FIRST FLOOR AND SWITCH IN ELECTRICAL ROOM TYPICAL FOR ALL.
- 2 STAIR LIGHTS SHALL BE CONTROLLED BY SWITCH SHOWN ON FIRST FLOOR PLAN.



KEY PLAN





GENERAL NOTES:

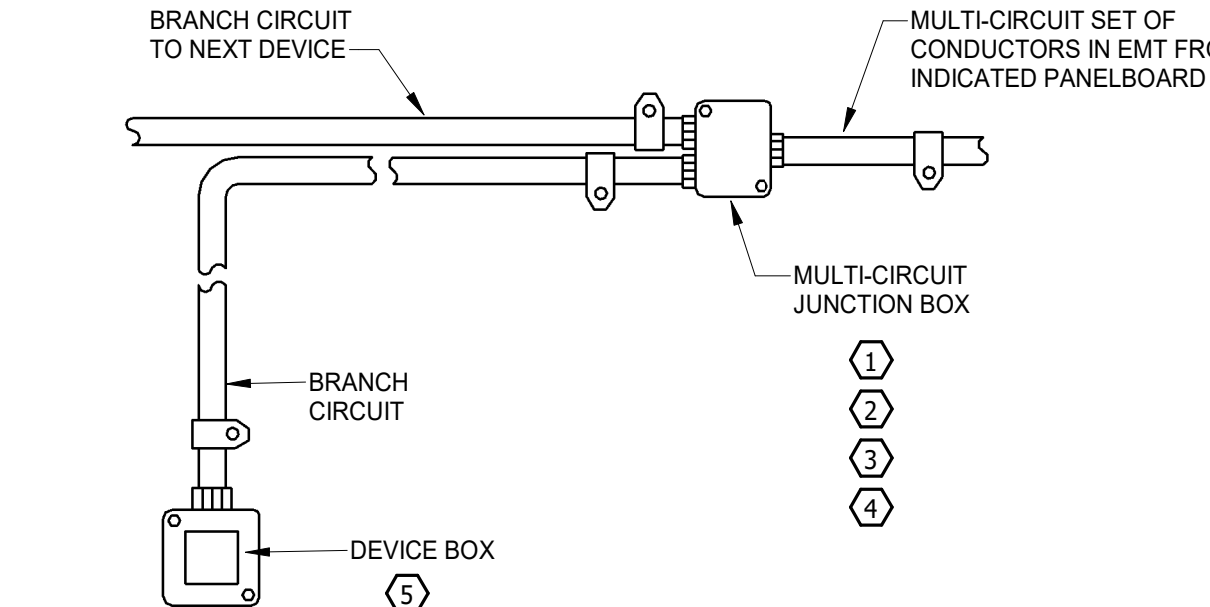
1. INSTALL NEW LABELS ON ALL PROJECT EQUIPMENT (PANELBOARDS, ENCLOSED BREAKERS, DISCONNECTS, TRANSFORMERS).
2. CONSTRUCT LABELS FROM 2 COLOR PLASTIC LAMINATE. DIMENSIONS ARE 5" WIDE X 1 1/2" HIGH. TEXT HEIGHT IS 3/16". EXCEPT AS NOTED OTHERWISE.
3. LABEL COLORS ARE TO BE SELECTED FROM THE FOLLOWING CHOICES:  
NORMAL SYSTEM 208Y/120V OR 240/120V: BLUE BACKGROUND/WHITE LETTER  
NORMAL SYSTEM 480Y/277V: BLACK BACKGROUND/WHITE LETTERS
4. SECURE TO TOP CENTER OF EQUIPMENT COVER WITH #4-40 STAINLESS STEEL SCREWS WITH MATCHING NUTS AND LOCKWASHERS. USE OF ADHESIVES TO SECURE LABEL TO EQUIPMENT IS NOT ACCEPTABLE.

KEYED NOTES:

1. INSERT EQUIPMENT DESIGNATION WHERE X'S ARE INDICATED.
2. INSERT VOLTAGE WHERE X'S ARE INDICATED. POSSIBLE VOLTAGES ARE:  
"480Y/277"  
"208Y/120"  
"240/120"  
"480: 208Y/120"  
"480: 240/120"
3. INSERT SUPPLY SOURCE DESIGNATION HERE.
4. INSERT SUPPLY SYSTEM WHERE X'S ARE INDICATED. POSSIBLE CHOICES ARE:  
"NORMAL POWER"
5. ADD THIS LABEL AT SERVICE EQUIPMENT, PANELBOARDS, MECHANICAL SYSTEM MOTOR CONTROLLERS (VARIABLE DRIVE UNITS).
6. INSERT VALUE INDICATED ON PROJECT ELECTRICAL DRAWINGS.
7. INSERT DATE OF PROJECT DRAWING BID SET.

8 EQUIPMENT LABEL

SCALE: NTS

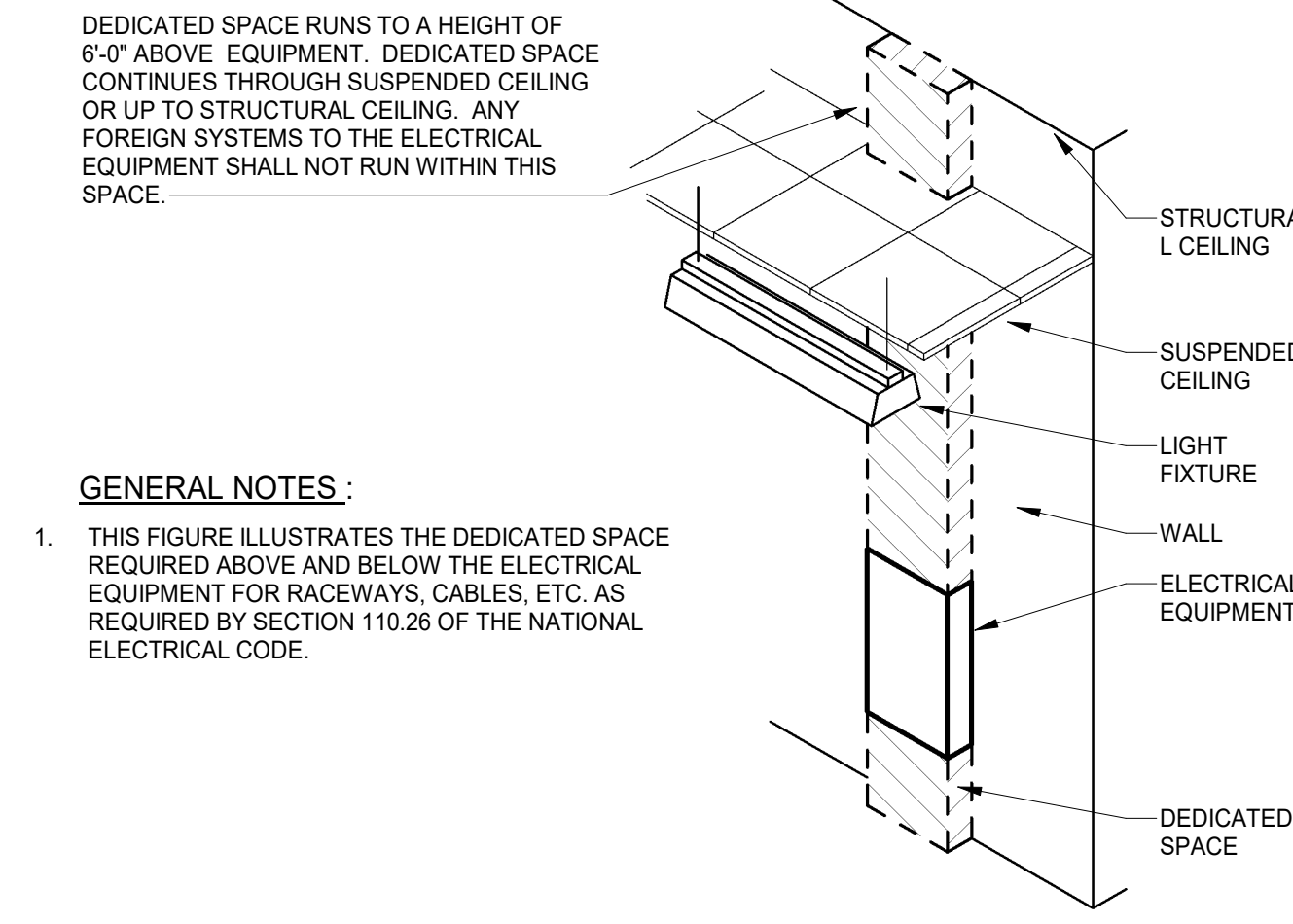


KEYED NOTES:

1. PROVIDE DEDICATED NEUTRAL CONDUCTOR WITH EACH PHASE CONDUCTOR.
2. LABEL EACH PHASE CONDUCTOR AND MATING NEUTRAL CONDUCTOR AT ALL BOX LOCATIONS FOR IDENTIFICATION.
3. BOND GROUND CONDUCTOR TO ALL BOXES.
4. MULTI-CIRCUIT JUNCTION BOXES SHALL NOT BE USED FOR DEVICE LOCATIONS.
5. DEVICE BOX SHALL NOT BE USED FOR MULTI-CIRCUIT DISTRIBUTION.

9 MULTI-CIRCUIT HOMERUN WIRING DETAIL

SCALE: NTS



GENERAL NOTES:

1. THIS FIGURE ILLUSTRATES THE DEDICATED SPACE REQUIRED ABOVE AND BELOW THE ELECTRICAL EQUIPMENT FOR RACEWAYS, CABLES, ETC. AS REQUIRED BY SECTION 110.26 OF THE NATIONAL ELECTRICAL CODE.

5 DEDICATED SPACE FOR ELECTRICAL EQUIPMENT

SCALE: NTS

NOMINAL VOLTAGE TO GROUND	CONDITION 1	CONDITION 2	CONDITION 3
0-150	3	3	3
151-600	3	3 1/2	4

WHERE THE CONDITIONS ARE AS FOLLOWS:

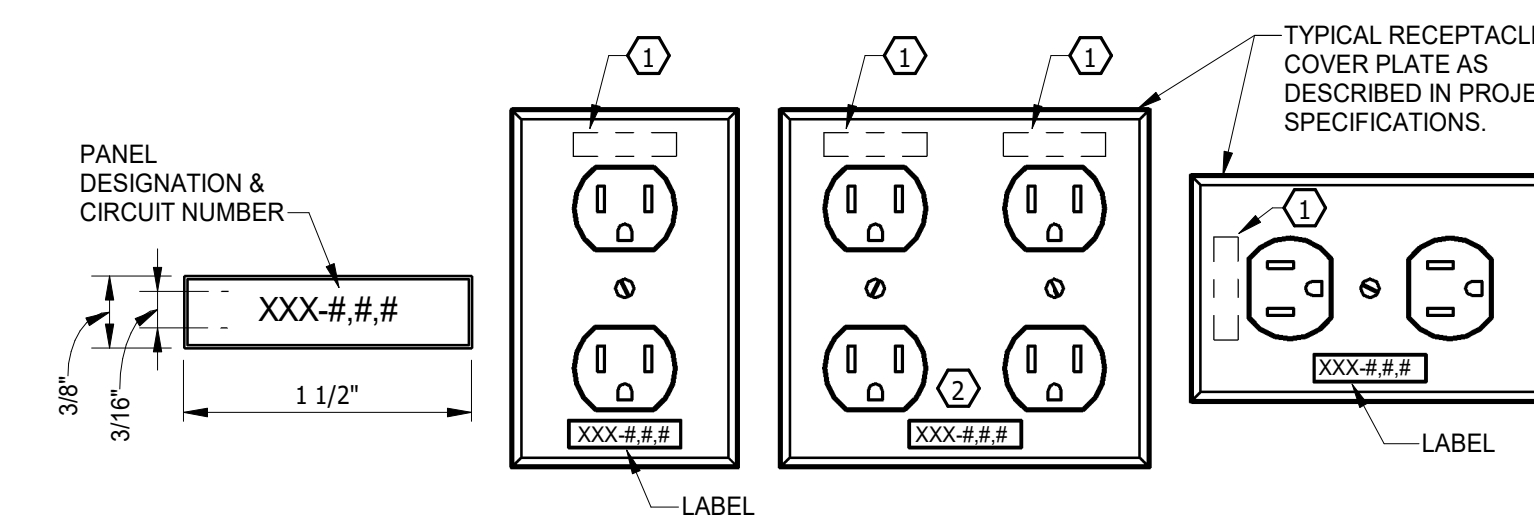
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR UNGROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

GENERAL NOTES:

1. THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT AS REQUIRED BY SECTION 110.26 OF THE NATIONAL ELECTRICAL CODE.

6 WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT

SCALE: NTS



KEYED NOTES:

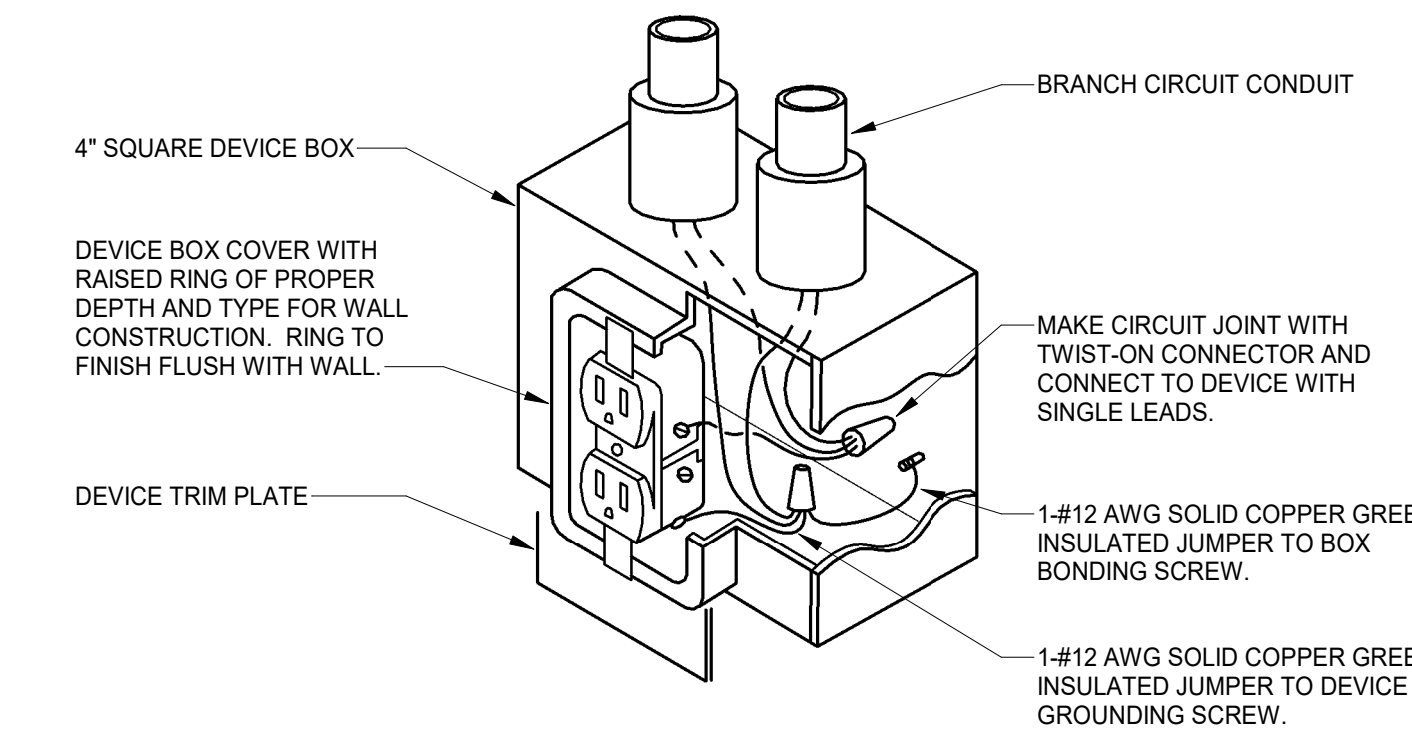
1. WRITE PANEL DESIGNATION NUMBER ON DEVICE YOKE WITH A FINE TIP, PERMANENT MARKER AS AN AID TO PROPER FACEPLATE LOCATION. ALL MARKING ON DEVICES MUST BE COVERED BY FACEPLATE.
2. FOR DUPLEX RECEPTACLES CENTER LABEL IF BOTH DEVICES ARE SUPPLIED BY THE SAME CIRCUIT. IF DEVICES ARE SUPPLIED BY DIFFERENT CIRCUITS PROVIDE A LABEL BELOW EACH RECEPTACLE.

GENERAL NOTES:

1. LABELS ARE TO BE MACHINE PRODUCED USING A THERMAL TRANSFER PROCESS WITH DIMENSIONS AS SHOWN ABOVE. LABELS ARE TO BE SUITABLE FOR EITHER INDOOR OR OUTDOOR USE.
2. LABEL COLOR TO BE CLEAR WITH BLACK LETTERING.
3. LABELS ARE TO BE ATTACHED AS INDICATED ABOVE TO ALL PROJECT RECEPTACLE COVER PLATES.

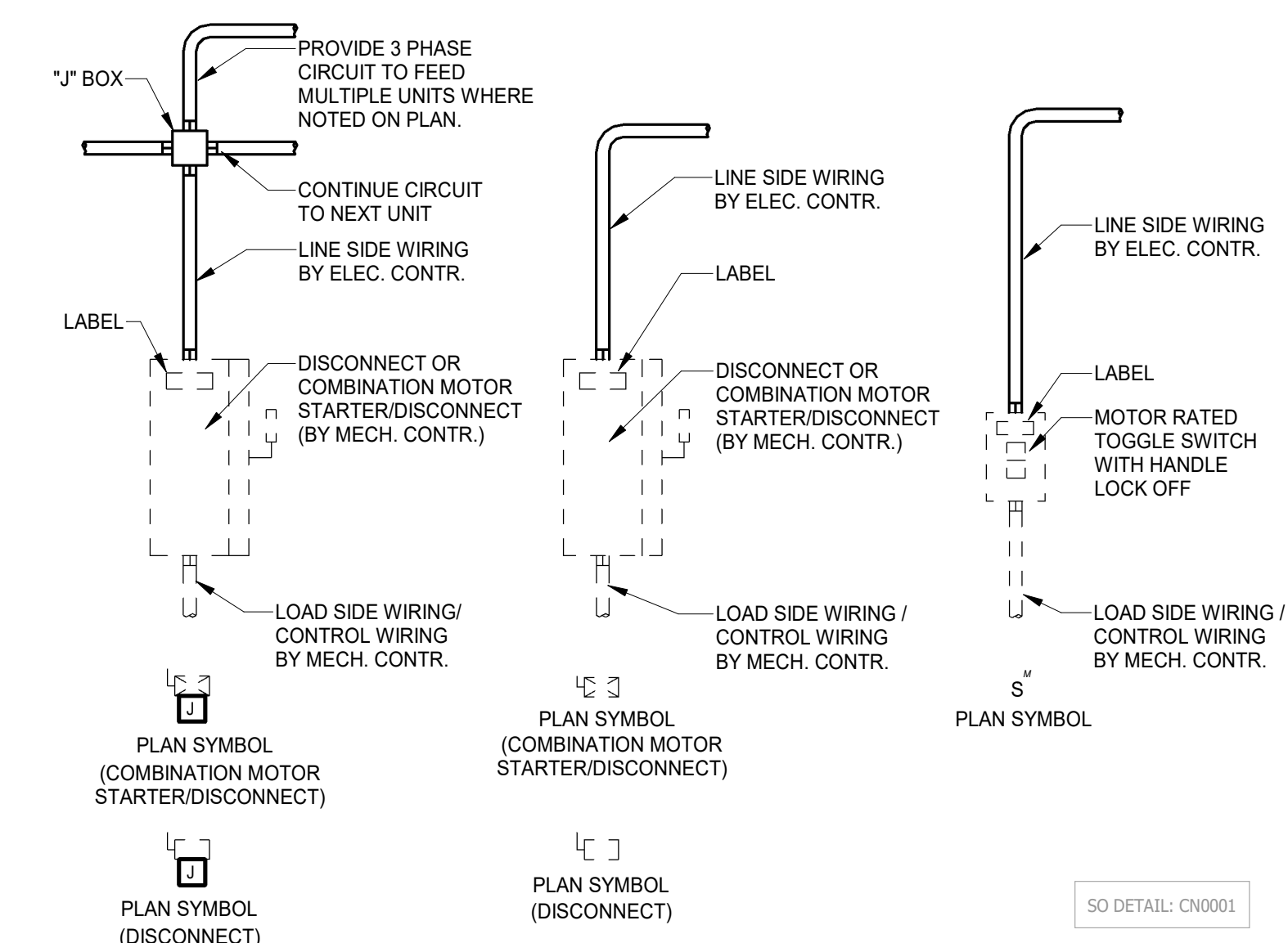
7 DEVICE LABELS

SCALE: NTS



4 RECEPTACLE GROUNDING DETAIL

SCALE: NTS

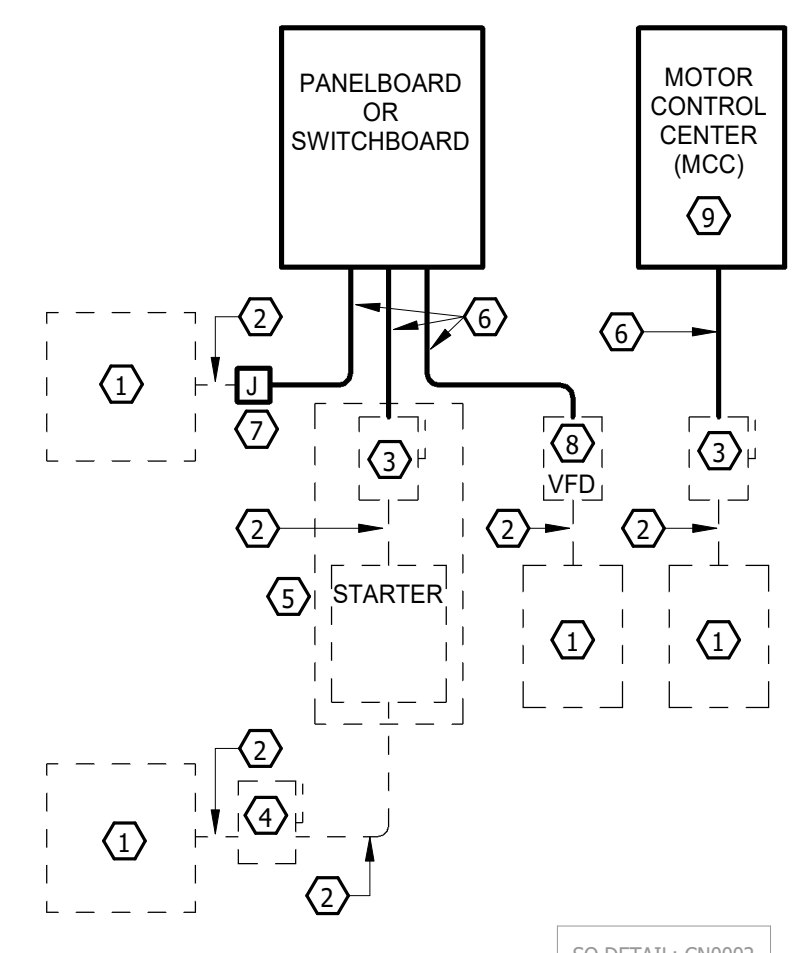


1 MECHANICAL UNIT WIRING DETAILS

SCALE: NTS

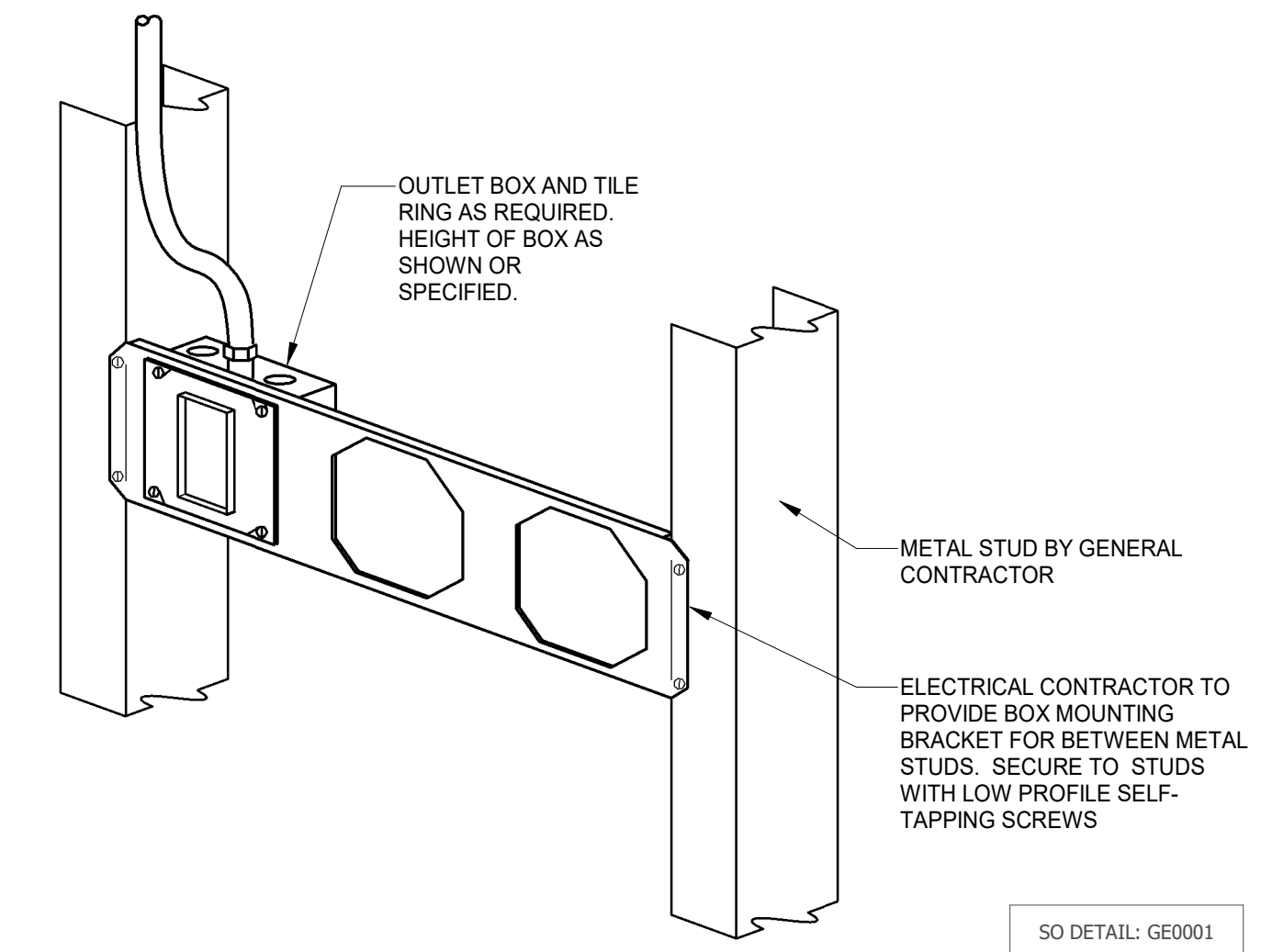
KEYED NOTES:

1. EQUIPMENT PROVIDED AND INSTALLED BY OTHER CONTRACTOR. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS, START UP AND TEST EQUIPMENT.
2. CONDUIT & WIRING BY OTHER CONTRACTOR PROVIDING EQUIPMENT.
3. DISCONNECT PROVIDED AND INSTALLED BY CONTRACTOR PROVIDING EQUIPMENT.
4. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PROVIDING EQUIPMENT.
5. A COMBINATION STARTER MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. A COMBINATION STARTER SHALL BE PROVIDED AND INSTALLED BY THE OTHER CONTRACTOR PROVIDING THE EQUIPMENT.
6. FEEDER AND CONDUIT BY ELECTRICAL CONTRACTOR. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES TO OTHER EQUIPMENT. TERMINATE FEEDER AT LINE SIDE OF DISCONNECTING MEANS.
7. JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT IF NO STARTER IS REQUIRED. INSTALL JUNCTION BOX ADJACENT TO THE EQUIPMENT AND PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. MOTOR RATED DISCONNECT SHALL BE PROVIDED BY CONTRACTOR PROVIDING EQUIPMENT WHERE REQUIRED BY CODE.
8. VARIABLE FREQUENCY DRIVE (VFD) PROVIDED AND INSTALLED BY OTHER CONTRACTOR PROVIDING EQUIPMENT. VFD IS SUPPLIED WITH INTEGRAL DISCONNECTING MEANS.
9. FOR PROJECTS UTILIZING A MOTOR CONTROL CENTER (MCC), THE STARTER, CIRCUIT BREAKER OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.



2 MECHANICAL UNIT WIRING DETAILS

SCALE: NTS



3 OUTLET BOX SUPPORT

SCALE: NTS



ARCHITECTURE

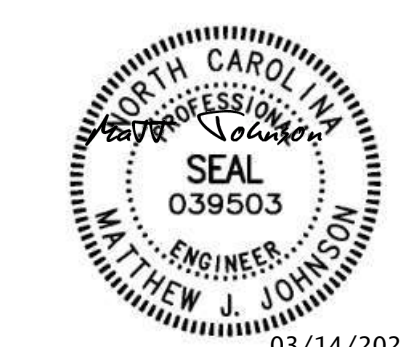
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**ELECTRICAL DETAILS**

E301



PANEL ID: EV1		VOLTAGE: 480Y/277		SERVICE EQUIP: Yes		MOUNTING: RACK MOUNTED										
SOURCE: UTILITY		AMPS: 600		PANEL AIC: 10,000		TYPE: BOLT ON - NEMA 3R										
LOCATION: SITE		MAIN: MCB		CALC SCC: 5,379		APPROX. DIM: 20"W X 5.75"D X 50"H										
LOAD	NO T E	COND	Phase, Neu, Grd Size	P O L E	BKR CKT	A	B	C	CKT BKR	Phase, Neu, Grd Size	COND	P O L E	LOAD			
EV APPARATUS CHARGER		3	3-#250, 1-#250, 1-#4	3	250	5	55400	--	55400	--		2	--	1	--	SPACE
					5				55400	--		4	--	1	--	SPACE
					7	55400	--					6	--	1	--	SPACE
EV APPARATUS CHARGER		3	3-#250, 1-#250, 1-#4	3	250	9	55400	--	55400	--		8	--	1	--	SPACE
					11				55400	--		10	--	1	--	SPACE
					13	4220	--					12	--	1	--	SPACE
					15				4220	--		14	--	1	--	SPACE
EV2		3/4	3-#10, 1-#10, 1-#10	3	30	15	4220	--	4220	--		16	--	1	--	SPACE
					17				4220	--		18	--	1	--	SPACE
SPACE	--	--	--	1	19	--	--	--	--	--		20	--	1	--	SPACE
SPACE	--	--	--	1	21	--	--	--	--	--		22	--	1	--	SPACE
SPACE	--	--	--	1	23	--	--	--	--	--		24	--	1	--	SPACE
SPACE	--	--	--	1	25	--	--	--	--	--		26	--	1	--	SPACE
SPACE	--	--	--	1	27	--	--	--	--	--		28	--	1	--	SPACE
SPACE	--	--	--	1	29	--	--	--	--	--		30	--	1	--	SPACE
SPACE	--	--	--	1	31	--	--	--	--	--		32	--	1	--	SPACE
SPACE	--	--	--	1	33	--	--	--	--	--		34	--	1	--	SPACE
SPACE	--	--	--	1	35	--	--	--	--	--		36	--	1	--	SPACE
SPACE	--	--	--	1	37	--	0	--	0	--		38	--			
SPACE	--	--	--	1	39	--	--	--	--	--		40	3	3-#10, 1-#10, 1-#10	3/4	SPD
SPACE	--	--	--	1	41	--	--	--	0	--		42	3	3-#10, 1-#10, 1-#10	3/4	SPD
						115020 VA 415 A						115020 VA 415 A				
Load Classification				Connected Load		Demand Factor		Estimated Demand				Panel Totals				
Power				345060 VA		100.00%		345000 VA				CONNECTED LOAD 345060 VA				
												DEMAND LOAD 345060 VA				
												AVG. CONNECTED CURRENT 415 A				
												AVG. DEMAND CURRENT 415 A				
NOTES:																





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**WTCC EWS - FIRE & RESCUE TRAINING CENTER**  
WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



03/14/2025

NO.	REVISION	DATE

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**LIGHTING FIXTURE SCHEDULE**

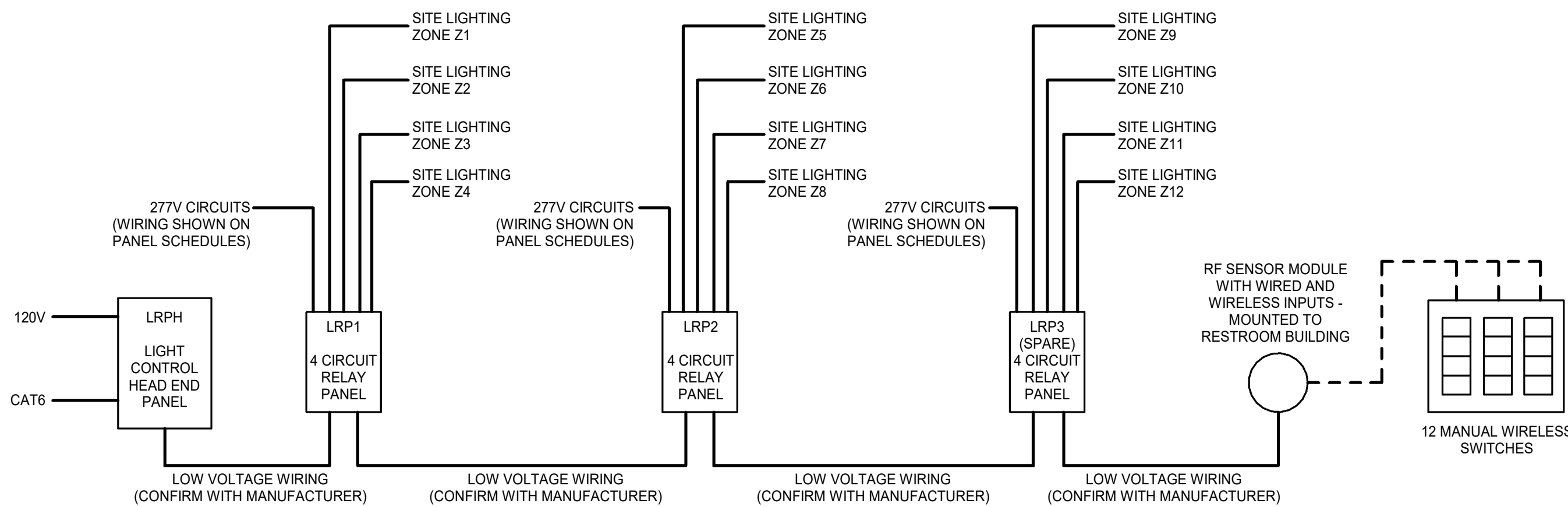
E501

LIGHTING FIXTURE SCHEDULE									
TYPE MARK	DESCRIPTION	MOUNTING	LUMENS	VOLTAGE	WATTAGE	CONTROL	FIXTURE MEETING SPECIFICATION	COMMENTS	IMAGE
A	LINEAR NARROW APERTURE PENDANT	PENDANT	500 LM/FT	120/277	9 VA/FOOT	0-10V	FINELITE HP4 CORONET L33 PMG ES4	COLOR AS SELECTED BY ARCHITECT	
A2	SURFACE MOUNTED LINEAR LED	SURFACE	500 LM/FT	120/277	9 VA/FOOT	0-10V	FINELITE HP4 CORONET L33 PMG ES4		
B	6" RECESSED DOWNLIGHT	RECESSED	2000	120/277	23 VA	0-10 V	HE WILLIAMS RDR ELITE HH6 RAYON RB06-FN	CLEAR DIFFUSE. PROVIDE WET LOCATION RATED FIXTURE	
C	4" LONG CORNER MOUNTED LED	SURFACE, CORNER MOUNT	8000	120/277	80 VA	0-10V	ADVANTAGE LIGHTING LCF-4-40-8L-SH16-TG-J1 LEVITON CRC-3519	PROVIDE IP65 RATED FIXTURE WITH STAINLESS STEEL HOUSING AND TWO TEMPERED GLASS LENSES	
D	LED LINEAR STRIP	PENDANT	5000	120/277	40 VA	0-10V	JADEMAR JSTRE ELITE OC4-LED LITHONIA CLX	COLOR AS SELECTED BY ARCHITECT	
E	WALL MOUNT EMERGENCY LIGHTING UNIT	WALL	1100	120/277	5 VA	N/A	MAXILUME ELM-LED-803 CARPENTER CEM MULE SO-40 COMPASS CU2		
F	WALL MOUNTED STAIR LIGHT	SURFACE, WALL	5000	120/277	40 VA	0-10V	JADEMAR JSTRE ELITE OC4-LED LITHONIA CLX	PROVIDE INTEGRAL OCCUPANCY SENSOR	
FL	EXTERIOR POLE MOUNT WIDE FLOOD LIGHT	POLE	8000	120/277	60 VA	ON/OFF	NLS NV-F2 JADEMAR JFL-PS RAYON T348LED	PROVIDE WIDE DISTRIBUTION. MOUNT TO POLE WITH SL1 FIXTURES	
G	EXTERIOR ARCHITECTURAL WALL SCONCE	SURFACE, WALL	3000	120/277	23 VA	PHOTOCELL	JADEMAR JWP NLS NV-W LITHONIA WST	COLOR AS SELECTED BY ARCHITECT.	
H	ROUGH SERVICE VAPOR PROOF LED	SURFACE, WALL	4000	120/277	33 VA	0-10V	JADEMAR JSD-VP ELITE OWS-LED LITHONIA VAP		
SL1	HIGH OUTPUT SOLAR ASSEMBLY SITE LIGHT POLE	POLE	11,135	SOLAR	N/A	INTEGRAL PHOTOCELL	PREFERRED BRAND ALTERNATE: SONARAY SR-3080-D	25' ALUMINUM POLE. 4000K COLOR FIXTURE SHALL BE UL LISTED AND LABELED. CONFIGURE FOR 4 HOURS @ 100%. SUBMIT CALCULATIONS AND PROVISIONS FOR MOUNTING FLOODLIGHTS, RECEPTACLES, CAMERAS, NETWORK SWITCHES, SOLAR PANELS, OR LIGHTING CONTROL DEVICES TO POLES.	
SL2	ARCHITECTURAL OUTDOOR AREA LIGHT	POLE	11,336	277	104 VA	ON/OFF	NLS NV-1 RAYON T348LED LITHONIA DSX1	25' ALUMINUM POLE. 4000K COLOR FIXTURE SHALL BE UL LISTED AND LABELED. SUBMIT CALCULATIONS AND PROVISIONS FOR MOUNTING FLOODLIGHTS, RECEPTACLES, CAMERAS, NETWORK SWITCHES, OR LIGHTING CONTROL DEVICES TO POLES.	

FIXTURE SCHEDULE NOTES:

- THIS FIXTURE SCHEDULE IDENTIFIES A FIXTURE THAT MEETS THE SPECIFIED PERFORMANCE REQUIREMENTS AND A LEVEL OF QUALITY REQUIRED FOR THE PROJECT. **MANUFACTURER'S NAMES AND FIXTURE SERIES/MODELS IN SCHEDULE ARE NOT A BRAND NAME SPECIFICATION.** EQUIVALENT FIXTURES BY MANUFACTURERS OTHER THAN THOSE LISTED MAY BE SUBMITTED FOR THIS PROJECT.
- PROVIDE LED DRIVERS SUITABLE FOR FULL RANGE DIMMING, INTEGRAL SURGE PROTECTION, CURRENT TOTAL HARMONIC DISTORTION (THD) OF <20% AND A POWER FACTOR >0.90. IN ADDITION, DRIVERS MUST BE RF SUPPRESSED FOR MINIMUM INJECTION OF FEEDBACK INTO SUPPLY LINES. MAXIMUM CURRENT THD AND MINIMUM POWER FACTOR MUST BE SUBMITTED AS A PART OF THE FIXTURE SUBMITTAL DATA.
- UNLESS OTHERWISE INDICATED, PROVIDE SINGLE DRIVER PER FIXTURE.
- PROVIDE MOUNTING FRAME AND RELATED ACCESSORIES FOR ALL FIXTURES AS REQUIRED TO MATCH CEILING CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT CEILING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MODIFICATION OF FIXTURE SCHEDULE MANUFACTURER'S PART NUMBERS FOR PURPOSES OF MATCHING CEILING CONSTRUCTION.
- PROVIDE DIMMING DRIVERS WHERE DIMMING CONTROLS ARE INDICATED ON THE PLANS.
- ALL FIXTURES TO HAVE A COLOR TEMPERATURE OF 4000K UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, ALL FIXTURES SHALL INCLUDE INTEGRAL DRIVER.
- ALL FIXTURES SHALL BE UL OR THIRD PARTY LISTED AS COMPLETE ASSEMBLY.
- FOR LIGHT FIXTURES HAVING LINEAR VISUAL FEATURES (IE: CENTER BASKET, LOUVERS, ETC), COORDINATE AND ALIGN COMPONENTS IN A SIMILAR DIRECTION CONSISTENTLY ACROSS THE BUILDING SPACES.

SO DETAIL: IN0011 LED



PROVIDE A LIGHTING CONTROL RELAY SYSTEM, LUTRON ATHENA OR APPROVED EQUAL.

PROVIDE ALL WIRING AS REQUIRED BY MANUFACTURER. SEE RESTROOM BUILDING FLOOR PLAN FOR EQUIPMENT LOCATIONS. SEE SITE PLAN FOR LIGHTING FIXTURE LOCATIONS AND CONTROL ZONES. SEE PANEL SCHEDULES FOR CIRCUIT WIRING AND CONDUIT SIZES.

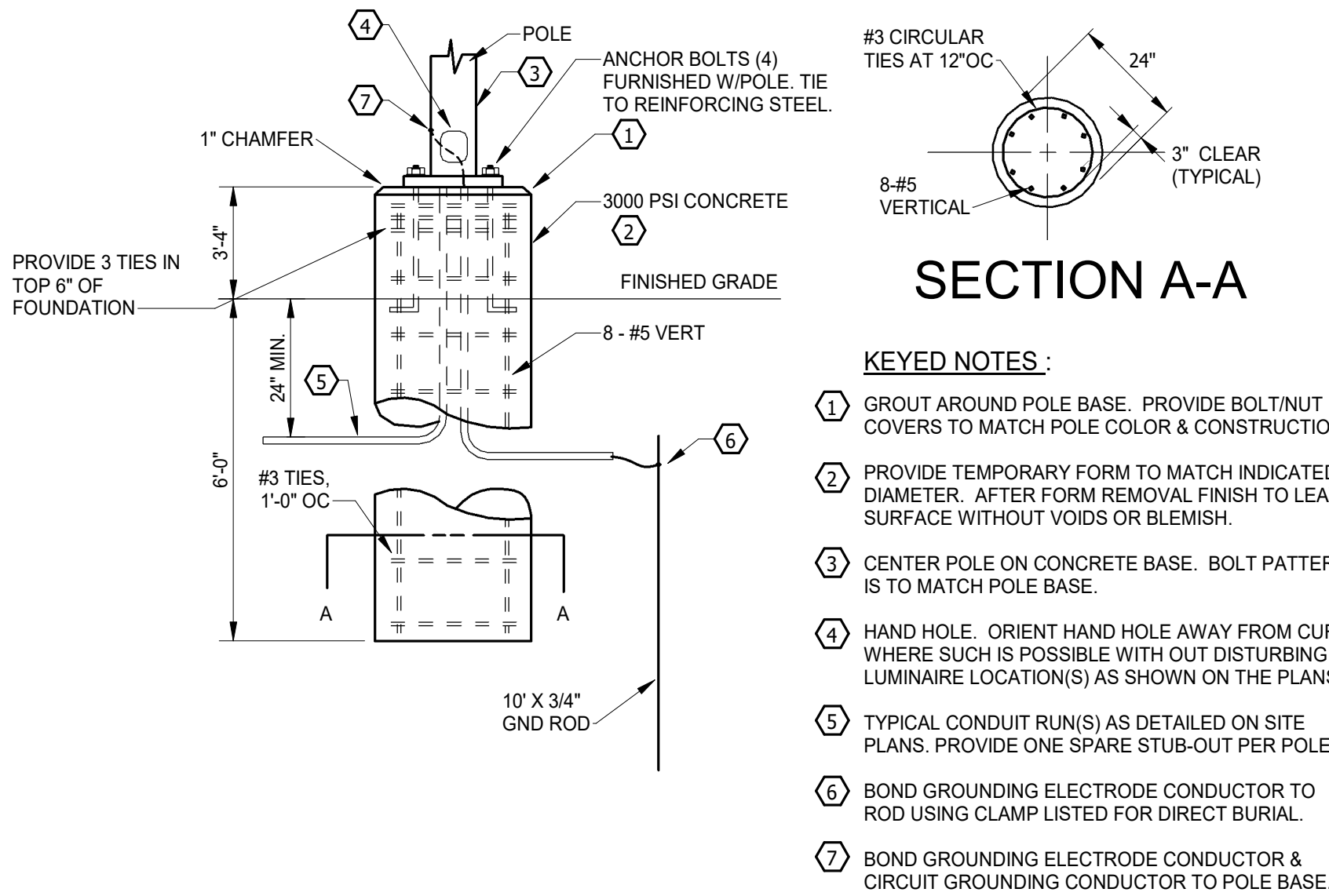
SYSTEM SHALL BE CAPABLE OF CONTROLLING UP TO 12 LIGHTING CIRCUITS. HEAD END PANEL SHALL BE PROGRAMMABLE FOR TIME OF DAY SETTINGS, OWNER SELECTED SCENE CONTROLS, AND AUTOMATIC SHUTOFF.

SYSTEM SHALL HAVE WIRELESS SWITCHES FOR MANUAL CONTROL OF EACH ZONE. SWITCHES WILL BE LOCATED IN RESTROOM BUILDING ELECTRICAL ROOM, TRAINING TOWER ELECTRICAL ROOM, AND LIGHT POLE ON SITE.

SYSTEM SHALL HAVE PHONE APP CAPABILITY FOR OWNER TO MANUALLY CONTROL THE LIGHTING REMOTELY.

1 LIGHTING CONTROL RELAY PANEL

E501 SCALE: NTS

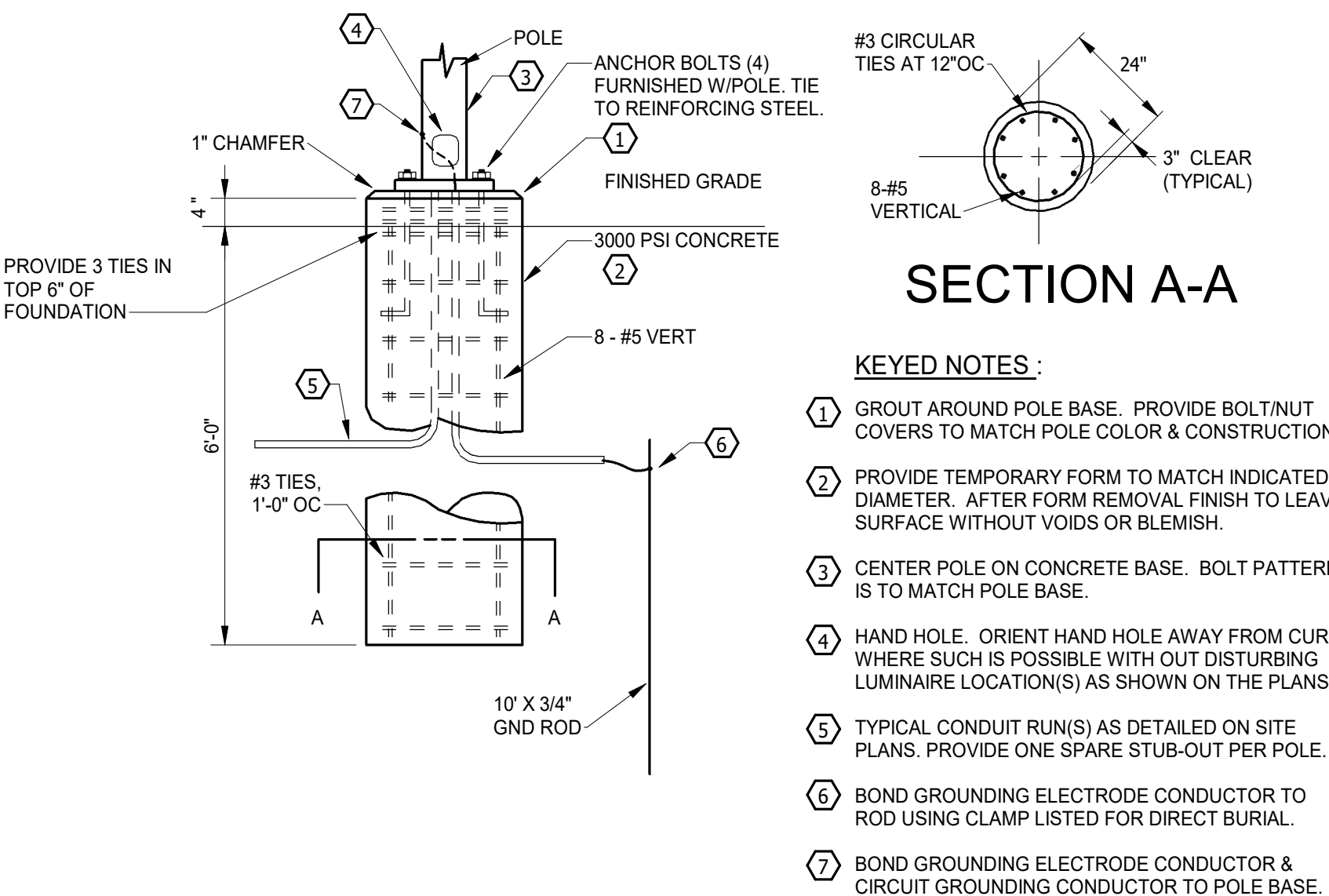


KEYED NOTES:

- GROUT AROUND POLE BASE. PROVIDE BOLT/NUT COVERS TO MATCH POLE COLOR & CONSTRUCTION.
- PROVIDE TEMPORARY FORM TO MATCH INDICATED DIAMETER. AFTER FORM REMOVAL FINISH TO LEAVE SURFACE WITHOUT VOIDS OR BLEMISH.
- CENTER POLE ON CONCRETE BASE. BOLT PATTERN IS TO MATCH POLE BASE.
- HAND HOLE. ORIENT HAND HOLE AWAY FROM CURB WHERE SUCH IS POSSIBLE WITH OUT DISTURBING LUMINAIRE LOCATION(S) AS SHOWN ON THE PLANS.
- TYPICAL CONDUIT RUN(S) AS DETAILED ON SITE PLANS. PROVIDE ONE SPARE STUB-OUT PER POLE.
- BOND GROUNDING ELECTRODE CONDUCTOR TO ROD USING CLAMP LISTED FOR DIRECT BURIAL.
- BOND GROUNDING ELECTRODE CONDUCTOR & CIRCUIT GROUNDING CONDUCTOR TO POLE BASE.

2 LIGHT POLE BASE DETAIL (ON PAVEMENT)

E501 SCALE: NTS

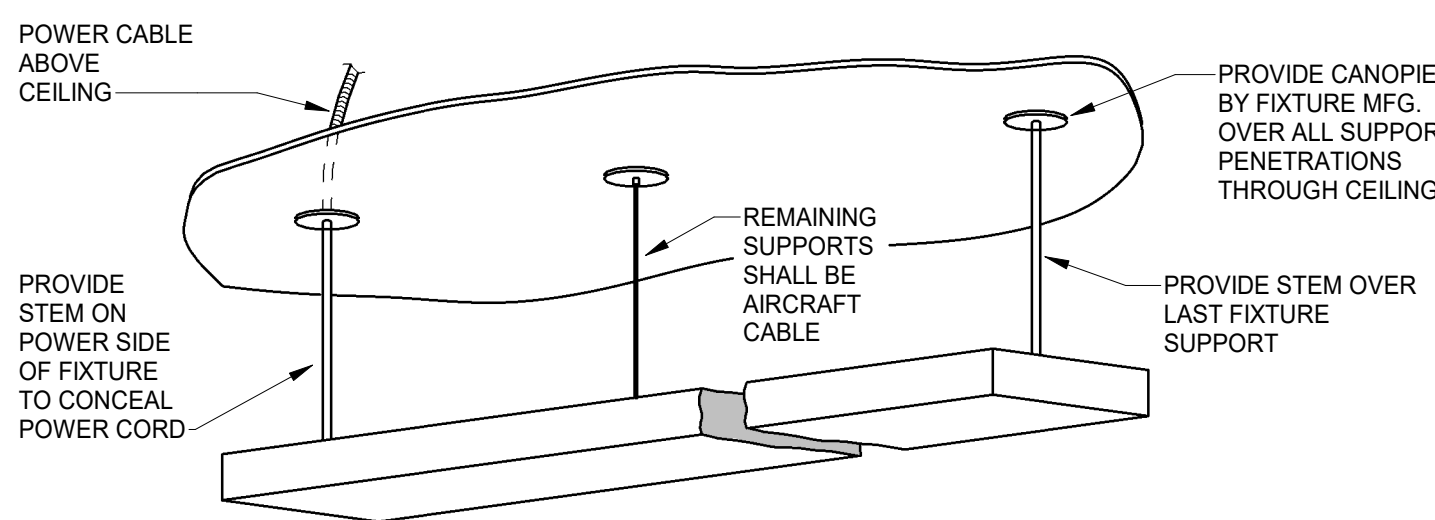


KEYED NOTES:

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- TYPICAL CONDUIT RUN(S) AS DETAILED ON SITE PLANS. PROVIDE ONE SPARE STUB-OUT PER POLE.
- BOND GROUNDING ELECTRODE CONDUCTOR TO ROD USING CLAMP LISTED FOR DIRECT BURIAL.
- BOND GROUNDING ELECTRODE CONDUCTOR & CIRCUIT GROUNDING CONDUCTOR TO POLE BASE.

3 LIGHT POLE BASE DETAIL (ON RAISED LANDSCAPE AREA)

E501 SCALE: NTS



GENERAL NOTES:

- FIXTURE STYLE AND NUMBER OF REQUIRED SUPPORTS WILL VARY BY FIXTURE TYPE.
- REFER TO MANUFACTURER'S SUPPLIED MOUNTING INSTRUCTIONS FOR EXACT REQUIREMENTS.

SO DETAIL: GE0022

4 TYPICAL LINEAR FIXTURE INSTALLATION

E501 SCALE: NTS



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TELECOMMUNICATION  
SYSTEMS

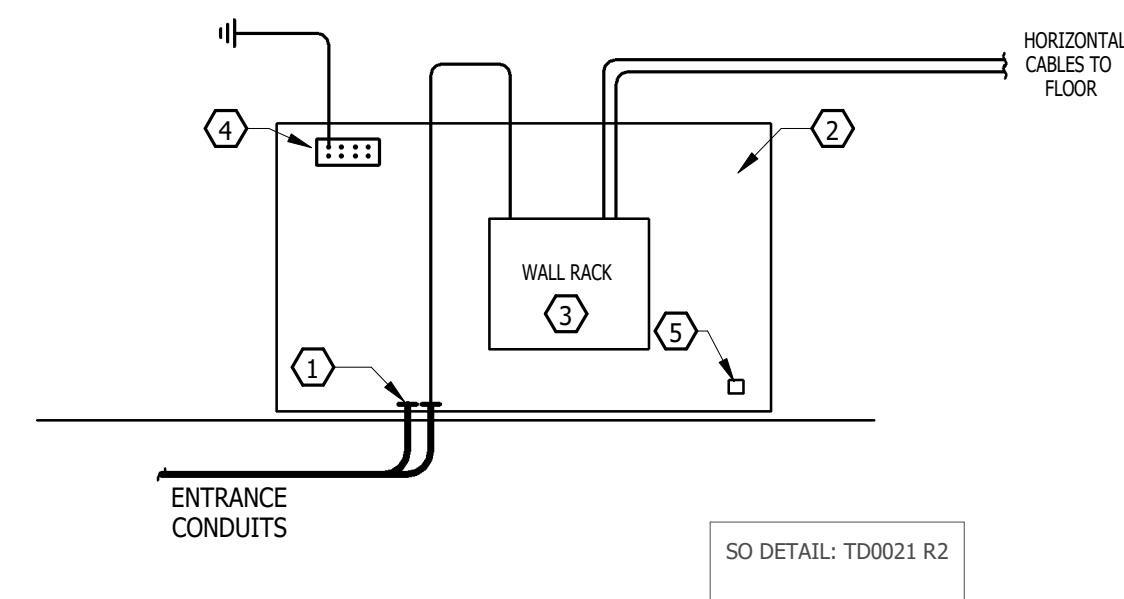
E511

GENERAL NOTES:

- ACTIVE ELECTRONICS AND PATCH CORDS ARE PROVIDED AND INSTALLED BY OWNER.
- FIRE SEAL ALL FLOOR PENETRATIONS.

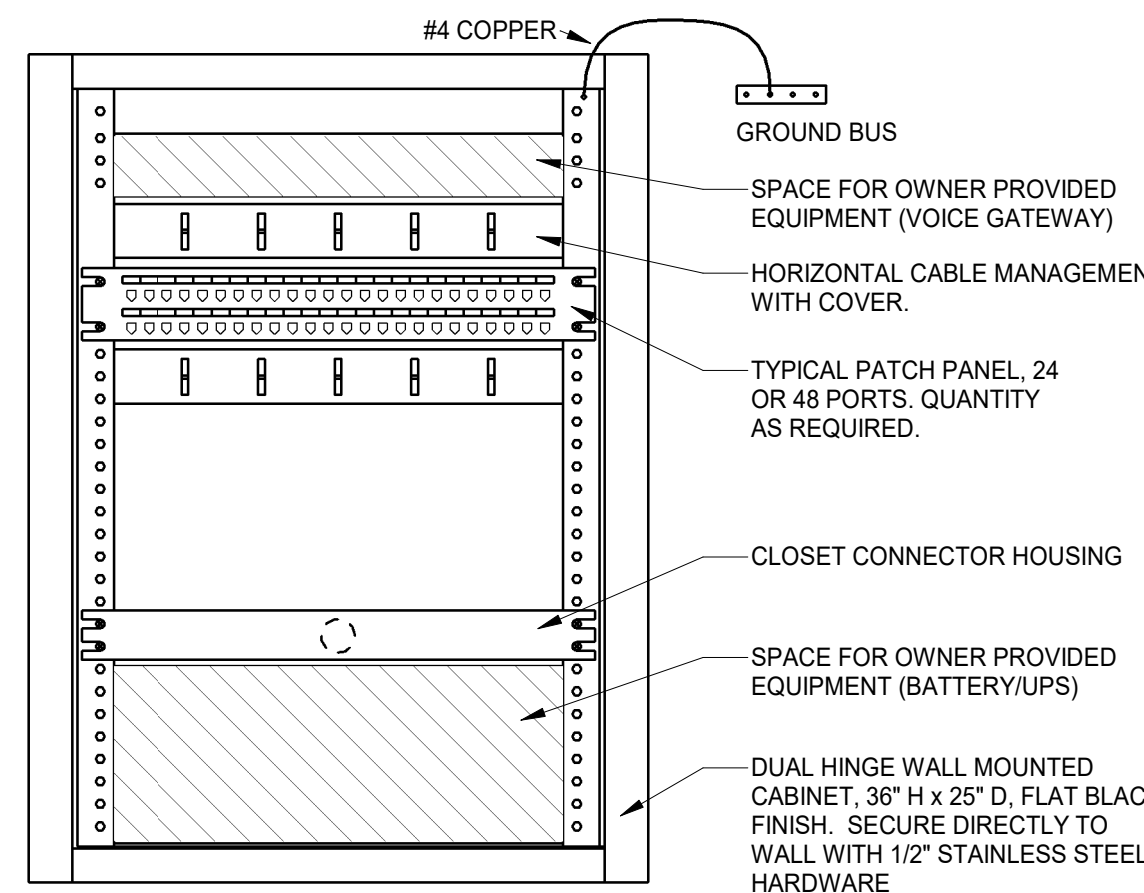
KEYED NOTES:

- TELECOM SERVICE ENTRANCE CONDUITS, STUB CONDUITS UP 4" AFF AND BUSH. PROVIDE CAP DURING CONSTRUCTION. SEAL ENDS OF ALL CONDUITS AFTER INSTALLATION OF CABLES.
- PROVIDE 3/4" THICK FIRE RETARDANT PLYWOOD BACKBOARD FROM FLOOR TO 8'-0" AFF ON WALL. PAINT PLYWOOD WHITE, LEAVING RATING LABELS VISIBLE FOR INSPECTIONS.
- WALL MOUNTED TELECOMMUNICATIONS EQUIPMENT RACK. FIBER HOUSING AND CABLE MANAGEMENT BY ELECTRICAL CONTRACTOR, ELECTRONIC COMPONENTS BY OWNER.
- WALL MOUNTED GROUND BUS PER PROJECT DETAIL WITH #3 GROUND TO EFFECTIVELY GROUNDED STRUCTURAL STEEL.
- PROVIDE QUADRUPLX RECEPTACLES AT 24" AFF. REFER TO FLOOR PLANS FOR CIRCUITRY.



SO DETAIL: TD0021 R2

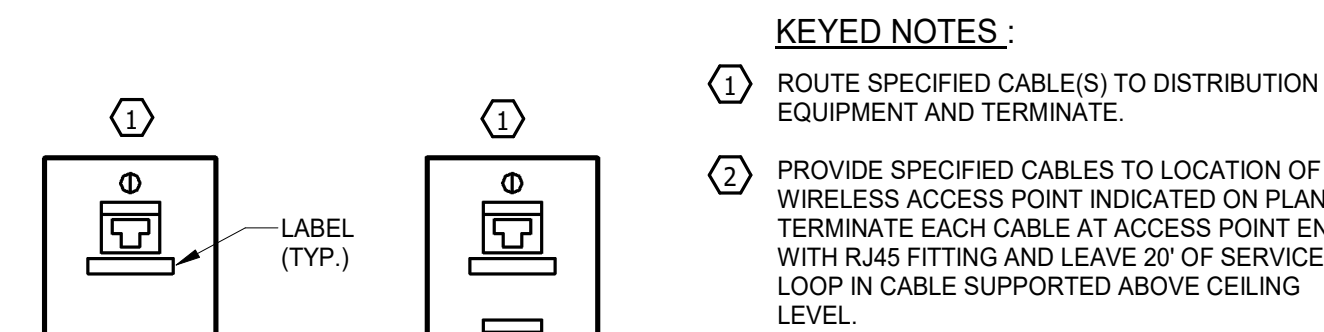
1 TELECOMMUNICATIONS RISER  
SCALE: NTS



GENERAL NOTES:

- INDICATED ARRANGEMENT IS TYPICAL FOR NEW WALL MOUNTED RACK.
- ALL CONNECTIONS BY CONTRACTOR TO 110 BLOCKS AT BACK OF PATCH PANELS. PATCH CORDS AND ACTIVE COMPONENTS PROVIDED AND INSTALLED BY THE OWNER.

5 WALL MOUNTED DISTIBUTION RACK ELEVATION  
SCALE: NTS



KEYED NOTES:

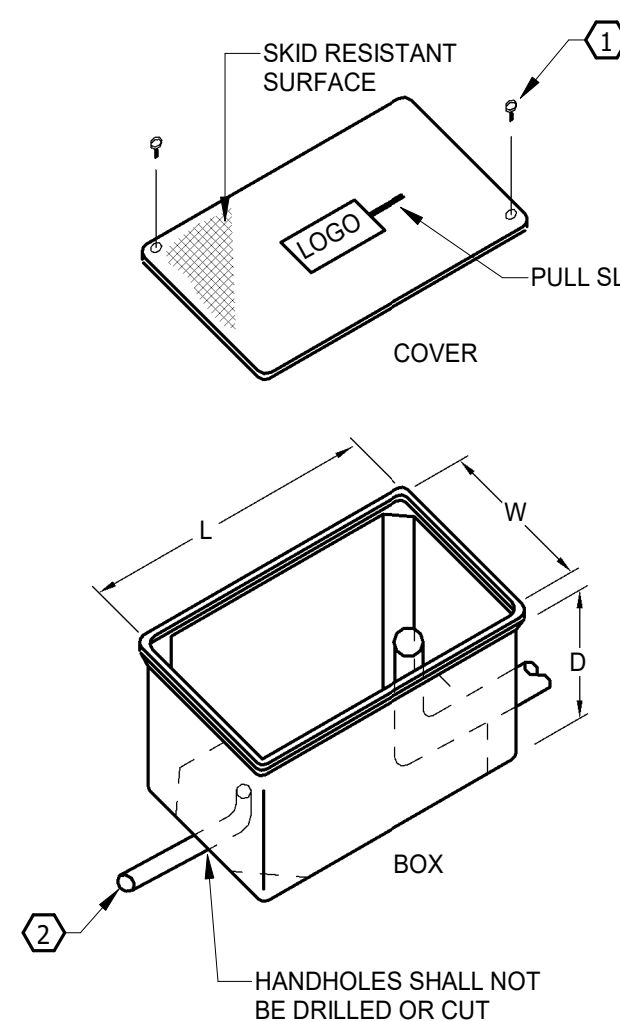
- ROUTE SPECIFIED CABLE(S) TO DISTRIBUTION EQUIPMENT AND TERMINATE.
- PROVIDE SPECIFIED CABLES TO LOCATION OF WIRELESS ACCESS POINT INDICATED ON PLANS. TERMINATE EACH CABLE AT ACCESS POINT END WITH RJ45 FITTING AND LEAVE 20" OF SERVICE LOOP-IN CABLE SUPPORTED ABOVE CEILING LEVEL.

GENERAL NOTES:

- ALL CAT. 6 CABLES TO BE TERMINATED ON DEDICATED CAT. 6A MODULAR PATCH PANEL.

TELECOMMUNICATIONS OUTLET SCHEDULE			
SYMBOL	PORTS	FUNCTION	CABLE
A	1	DATA	(1) CAT. 6 1
B	2	DATA/DATA	(2) CAT. 6 1
C	2	DATA/DATA	(2) CAT. 6A 2

2 TYPICAL TELECOM OUTLET SCHEDULE  
SCALE: NTS



GENERAL NOTES:

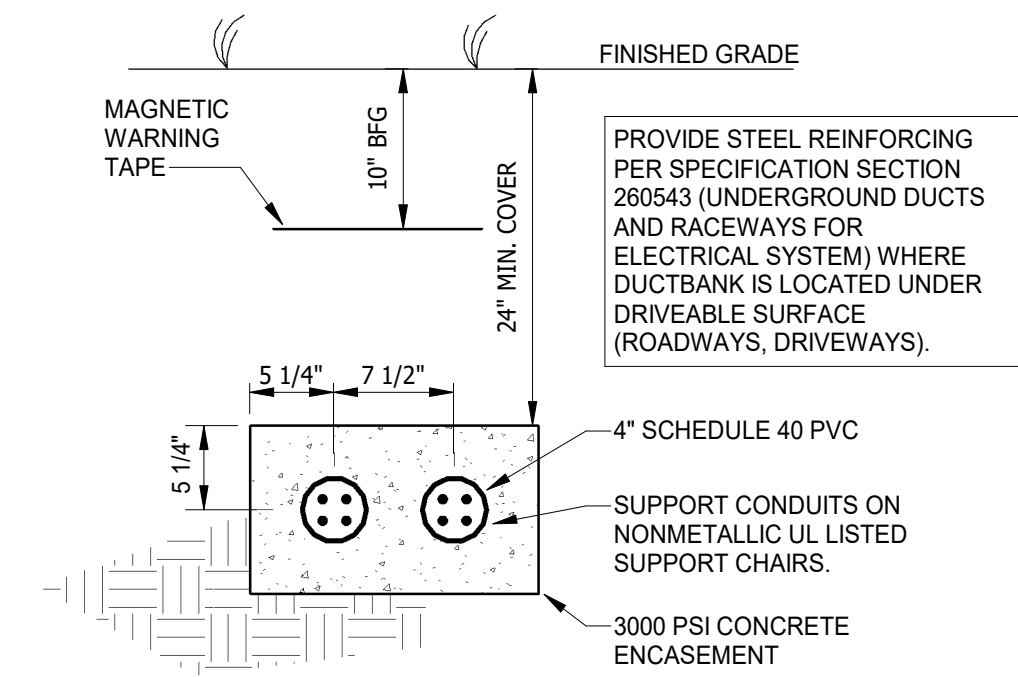
- HEAVY WEAWE FIBERGLASS; BOX HAS OPEN BASE. PROVIDE GRAVEL FILL 12" DEEP BELOW BOX.
- BOX DIMENSION IS 24" LONG x 24" WIDE x 11-11/4" DEEP.
- PROVIDE BOX COVER LOGO, AS APPLICABLE.
- BOX COVERS SHALL BE A HEAVY DUTY DESIGN, CAPABLE OF WITHSTANDING A LOAD OF 15,000 LBS. OVER A 10" SQUARE AREA.
- SEE UNDERGROUND ENCLOSURE INSTALLATION DETAIL.

KEYED NOTES:

- PROVIDE TAMPER RESISTANT STAINLESS STEEL COVER HOLD-DOWN BOLTS.
- TYPICAL CONDUIT ENTRY. CONDUIT SHALL ENTER BOX FROM THE BOTTOM AND EXTEND UP 6" INTO BOX.

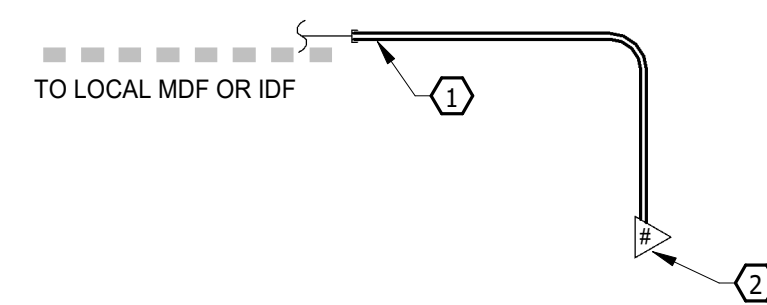
6 TYPICAL UNDERGROUND ENCLOSURE  
SCALE: NTS

SO DETAIL: OC0012



SO DETAIL: OC0001 R1

3 TELECOM DUCT BANK SECTION  
SCALE: NTS

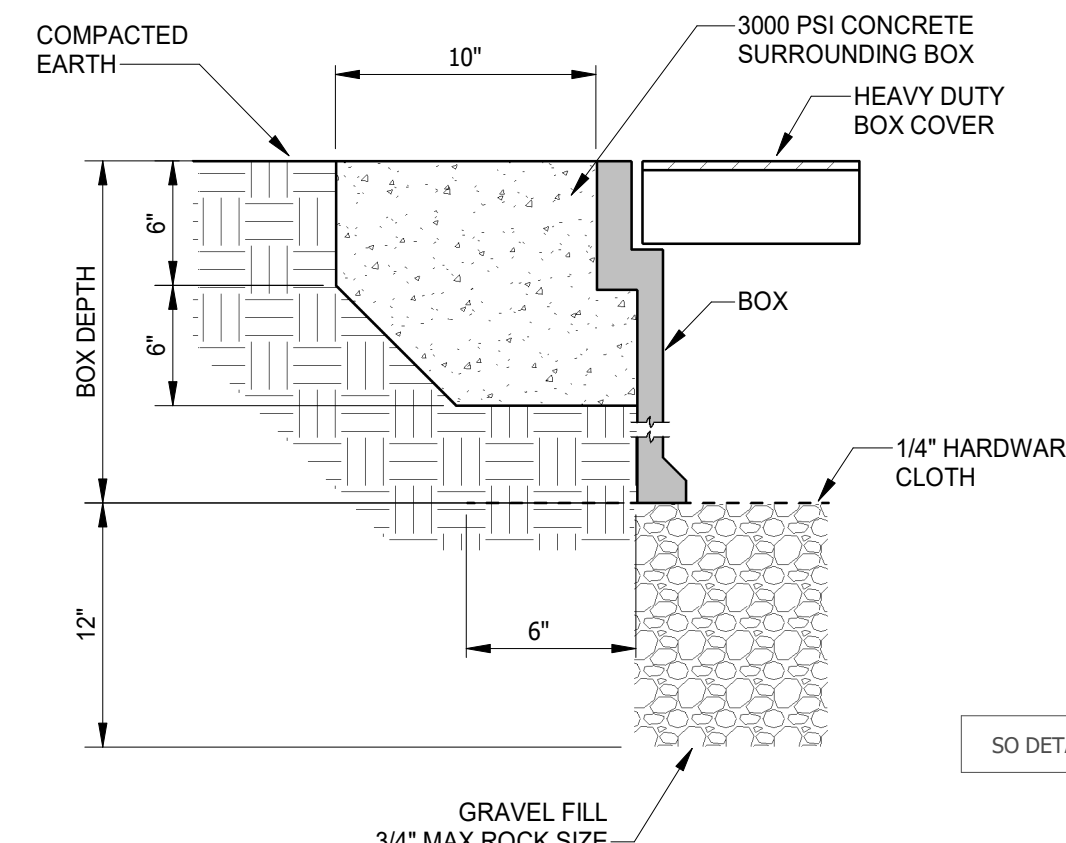


KEYED NOTES:

- 1" CONDUIT TO ELECTRICAL ROOM ABOVE WALL MOUNTED DISTRIBUTION RACK. BUSH ENDS OF PIPE.
- REFER TO TELECOMMUNICATIONS OUTLET SCHEDULE.

SW DETAIL: TD0003 R1

4 TYPICAL TELECOM OUTLET  
SCALE: NTS



SO DETAIL: OC0011

7 UNDERGROUND ENCLOSURE INSTALLATION  
SCALE: NTS

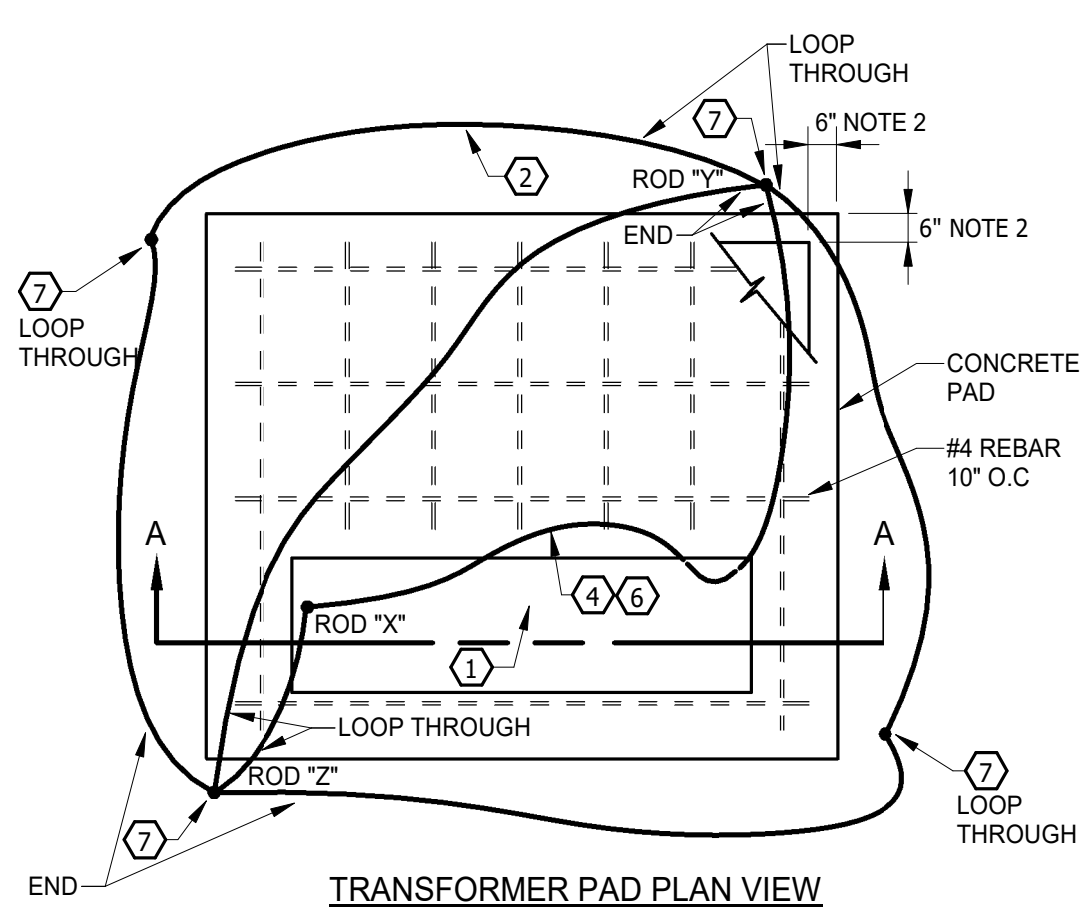


GENERAL NOTES:

- CONSTRUCT MOUNTING PAD FROM 3,000 PSI CONCRETE, FORMED IN PLACE.
- PAD DIMENSIONS ARE 6" LARGER IN EACH DIRECTION THAN EQUIPMENT TO BE SUPPORTED. COORDINATE EQUIPMENT AND PAD DIMENSIONS WITH THE UTILITY CO. PADS ARE TO BE 8" THICK UNLESS OTHERWISE SPECIFIED.
- SECURE EQUIPMENT TO PAD USING DRILLED IN PLACE 5/8" DIA. ANCHOR BOLTS. PROVIDE MOUNTING AS RECOMMENDED BY THE UTILITY CO. A MINIMUM OF 4 ANCHORS ARE REQUIRED FOR PAD MOUNTED EQUIPMENT.
- GROUND ROD CLAMP DETAIL IS TYPICAL FOR ALL GROUND RODS.

KEY NOTES:

- TYPICAL OPENING IN PAD FOR CONDUIT ENTRY. COORDINATE EXACT SIZE AND LOCATION WITH EQUIPMENT TO BE SUPPORTED AND UNDERGROUND CONDUIT REQUIRED.
- #4 SOLID BARE COPPER CONTINUOUS GROUNDING LOOP.
- GROUND ROD CLAMP LISTED FOR DIRECT BURIAL.
- TYPICAL EXPOSED LOOP FOR CABLE & EQUIPMENT CONNECTIONS.
- CONDUIT ENTRY. TOP END OF CONDUIT SHOULD EXTEND 2" ABOVE EQUIPMENT PAD.
- #3/0 BARE COPPER GROUND CONDUCTOR. THIS CONDUCTOR IS CONTINUOUS FROM ROD "Y" THROUGH ROD "X", THEN ROD "Z" THEN BACK TO ROD "Y".
- TOP OF ROD IS TO BE A MINIMUM OF 24" BELOW FINISHED GRADE. LOOP TO BE BURIED WITH 30" COVER.



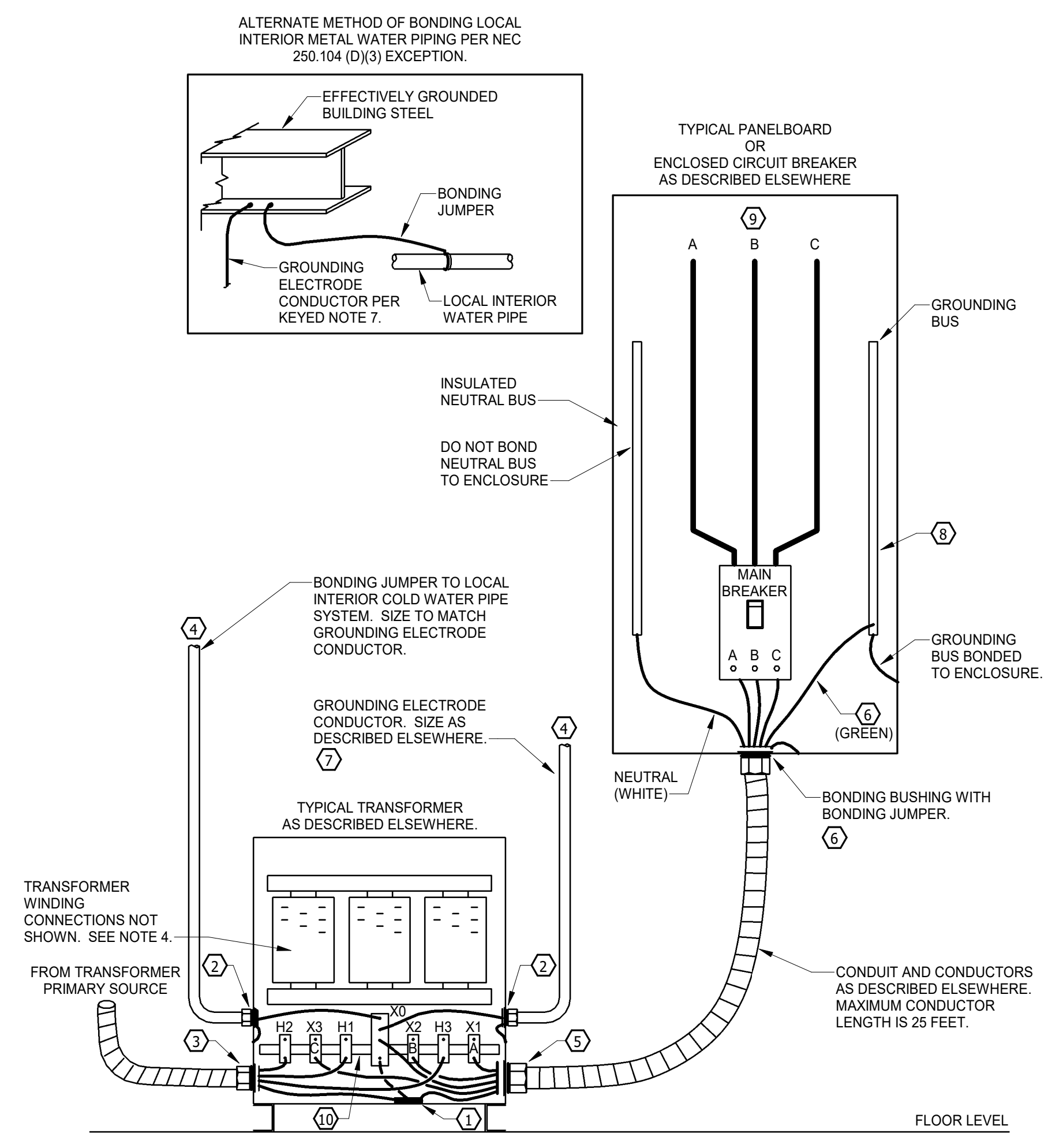
9 TRANSFORMER PAD AND GROUNDING SYSTEM  
SCALE: NTS

GENERAL NOTES:

- ADJUST TRANSFORMER TAPS TO PROVIDE NOMINAL SECONDARY VOLTAGE UNDER NORMAL TRANSFORMER LOAD CONDITIONS.
- CONNECT TRANSFORMER SECONDARY TERMINALS TO OBTAIN A-B-C CLOCKWISE ROTATION AT THE PANELBOARD BUS. TRANSFORMER TERMINAL CONNECTIONS ARE TYPICAL. EXACT TERMINAL LOCATION MAY VARY WITH TRANSFORMER STYLE OR MANUFACTURER.
- ALL CONNECTIONS TO TRANSFORMER OR PANELBOARD ENCLOSURES SHALL BE MADE WITH LISTED 75° C. TERMINALS. ALL TERMINALS SHALL BE BOLTED TO THE ENCLOSURE WITH SCREWS, LOCK WASHERS, AND NUTS. REMOVE ALL PAINT FROM ENCLOSURE SURFACES PRIOR TO MAKING TERMINATIONS. FURNISHED TERMINALS MAY BE USED IN LIEU OF CONTRACTOR INSTALLED LUGS.
- THREE PHASE TRANSFORMER IS SHOWN. GROUNDING FOR SINGLE PHASE TRANSFORMERS IS IDENTICAL.
- HOUSEKEEPING PAD BELOW TRANSFORMER NOT SHOWN.

KEYED NOTES:

- PROVIDE BONDING JUMPER TO PANELBOARD BY PASSING JUMPER THROUGH GROUND BAR SECURED TO TRANSFORMER ENCLOSURE. BAR SHALL NOT CONCEAL VENTILATION PROVISIONS IN ENCLOSURE.
- USE A BONDING BUSHING AND JUMPER AT THIS CONDUIT TERMINATION. JUMPER SHOULD BE THE SAME SIZE AS THE GROUNDING CONDUCTOR CONTAINED IN THE CONDUIT.
- CONDUCTORS TO TRANSFORMER PRIMARY ARE PHASE CONDUCTORS AND A GROUNDING CONDUCTOR. THESE CONDUCTORS ARE DESCRIBED ELSEWHERE. NO BONDING BUSHING IS REQUIRED AT THIS CONDUIT TERMINATION.
- USE A BONDING HUB AT THE TERMINATION OF THIS GROUNDING CONDUCTOR CONDUIT RUN TO PHYSICALLY AND ELECTRICALLY CONNECT THE RACEWAY AND GROUND TO THE ELECTRODE. ELECTRICAL CONNECTION ALONE IS NOT ACCEPTABLE.
- NO BONDING BUSHING IS REQUIRED AT THIS END OF PANELBOARD FEEDER.
- DETERMINE THE SIZE OF THIS BONDING JUMPER FROM NEC TABLE 250.66 WITH TABLE ENTRY BASED ON THE SIZE OF THE CONDUCTORS SUPPLYING THE PANELBOARD.
- EXTEND GROUNDING ELECTRODE CONDUCTOR TO EFFECTIVELY GROUND BUILDING STEEL OR METAL WATER PIPE WITHIN 5 FEET FROM POINT OF ENTRANCE INTO BUILDING.
- GROUNDING BUS IS GENERALLY ATTACHED DIRECTLY TO PANELBOARD ENCLOSURE. IN THE ABSENCE OF SUCH A LISTED ATTACHMENT SIZE BONDING JUMPER AS DESCRIBED IN KEYED NOTE 6 ABOVE.
- PANELBOARD OR ENCLOSED CIRCUIT BREAKER.
- PROVIDE OVERSIZED NEUTRAL TERMINAL AS REQUIRED TO ACCOMMODATE BONDING CONNECTIONS.



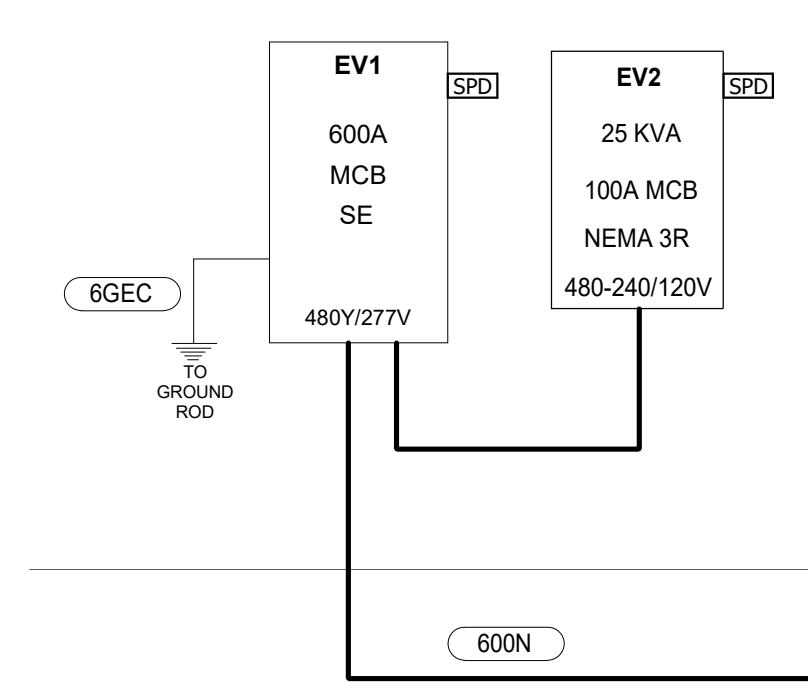
10 TYPICAL TRANSFORMER BONDING  
SCALE: NTS

ELECTRICAL TRANSFORMER SCHEDULE

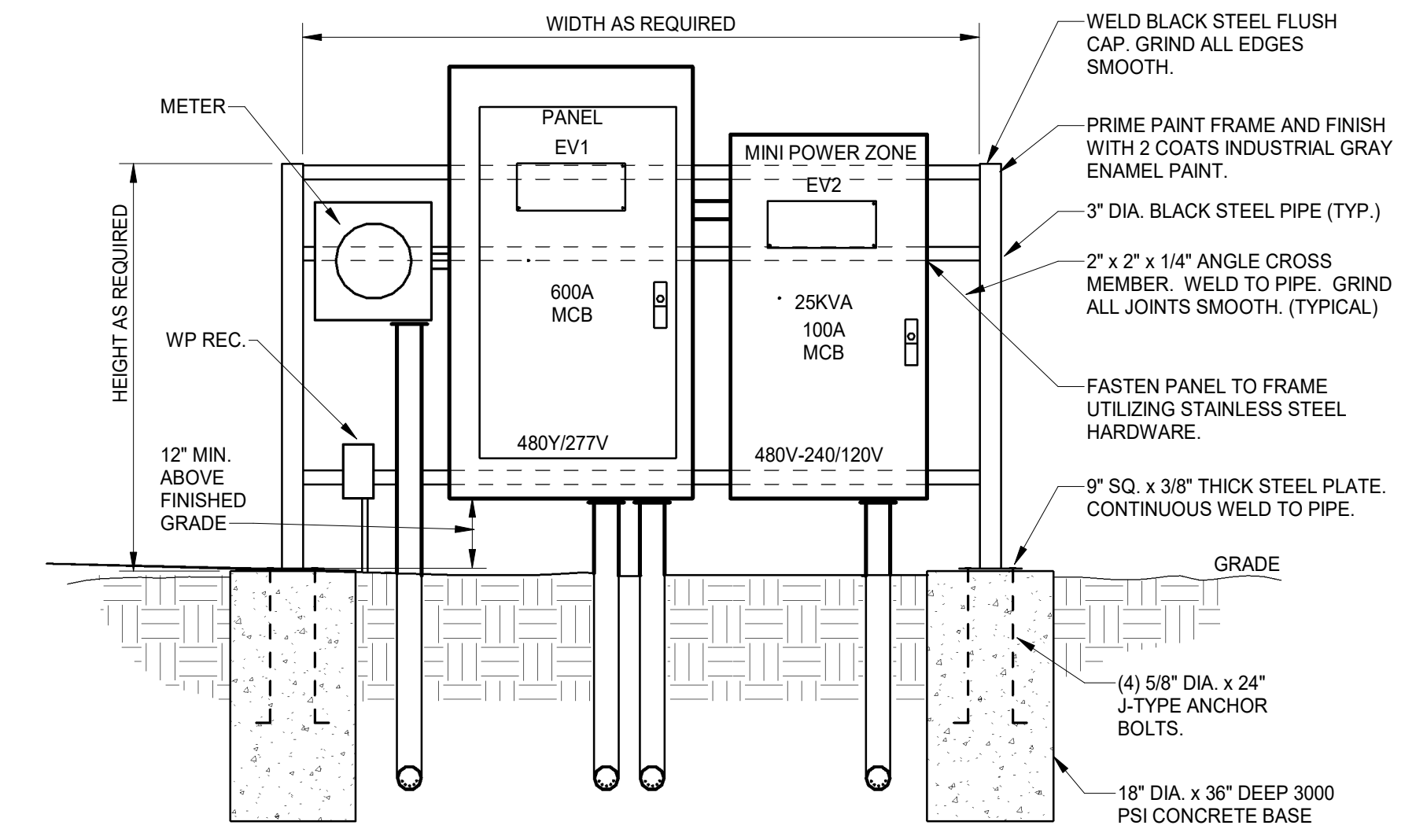
NAME	SIZE	SUPPLY FROM	VOLTAGE	Primary Feeder Size	SECONDARY FEEDER	Grounding Electrode	IMPEDANCE	ROOM NAME	ROOM NUMBER
X-P2	30 KVA	P1	480/208Y/120	3-#6 PHASE & 1-#10 GND IN 1" C.	3-#3 PHASE, 1-#3 NEU. & 1-#8 BONDING JUMPER IN 1 1/4" C.	1-#6 IN 1/2" RMC 3.5%-5.8%		ELEC/IT	105

GENERAL NOTES TO POWER RISERS:

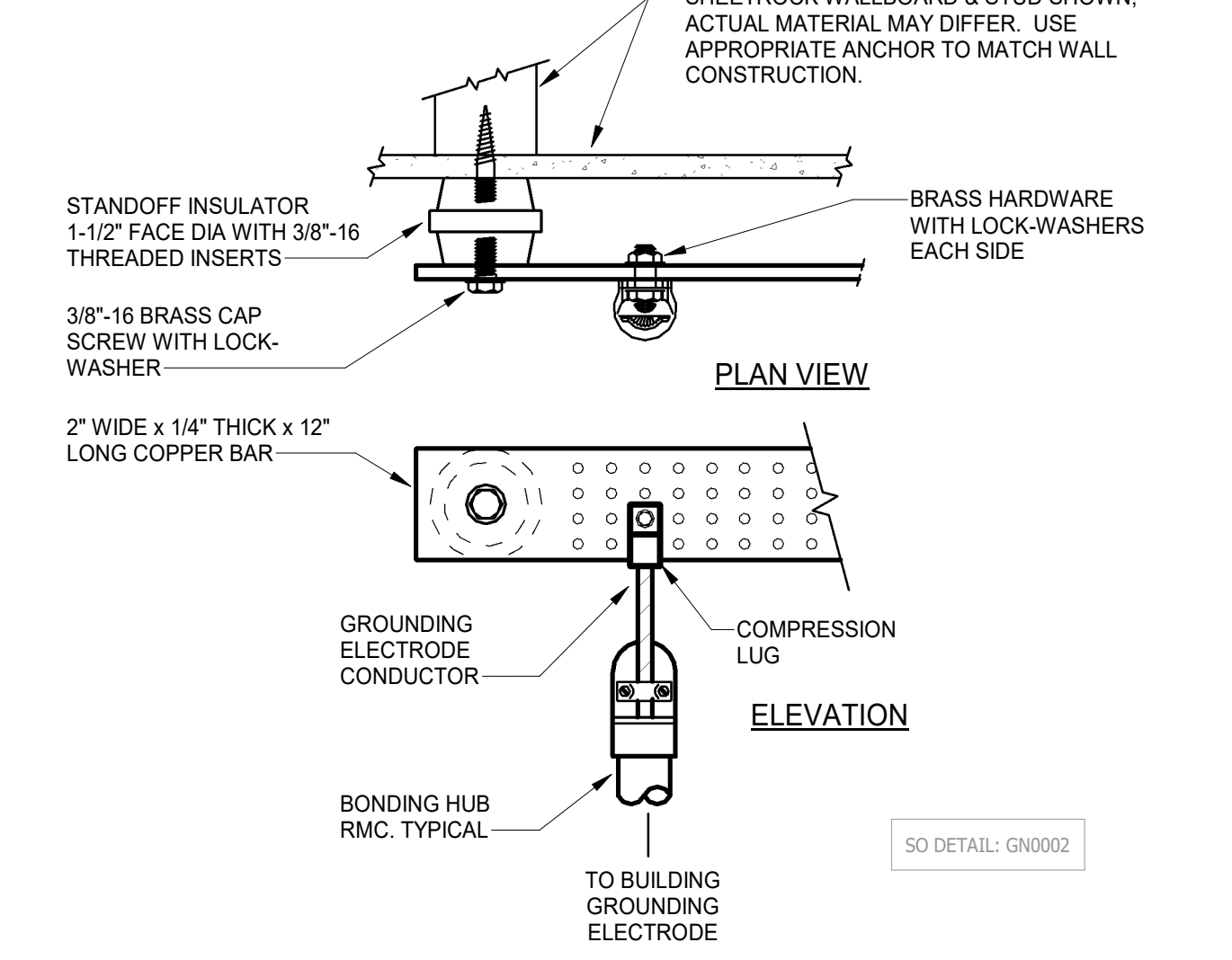
- PROVIDE 4" (NOMINAL) THICK, 3000 PSI CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED GEAR AND TRANSFORMERS. FINISH SMOOTH AND CHAMFER EDGES.
- COORDINATE LOCATIONS FOR ALL DRY TYPE TRANSFORMERS TO PROVIDE NEC MANDATED WORKING CLEARANCES AND PROVIDE CLEARANCES FROM WALLS AS RECOMMENDED BY PRODUCT MANUFACTURER TO PROMOTE AIR CIRCULATION (6" MIN.).



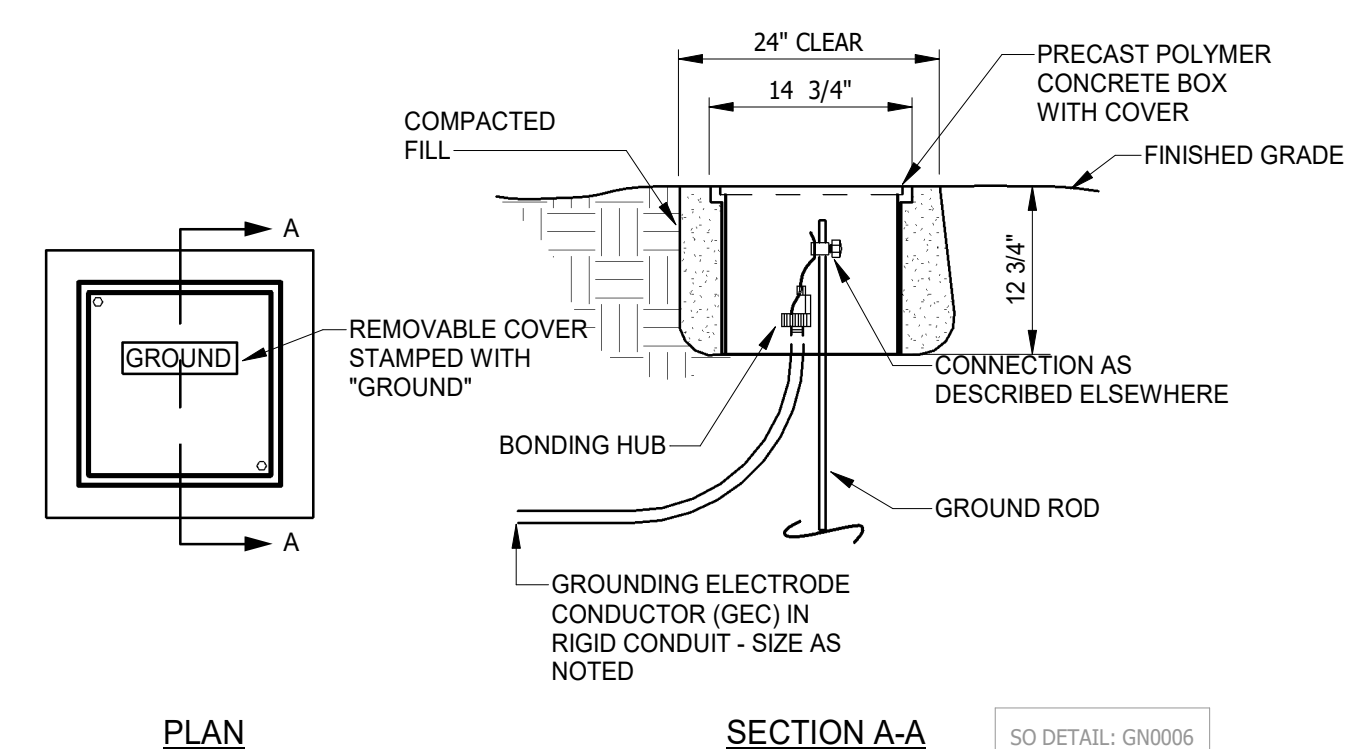
11 ELECTRICAL DISTRIBUTION RISER  
SCALE: NTS



5 PANEL RACK DETAIL  
SCALE: NTS

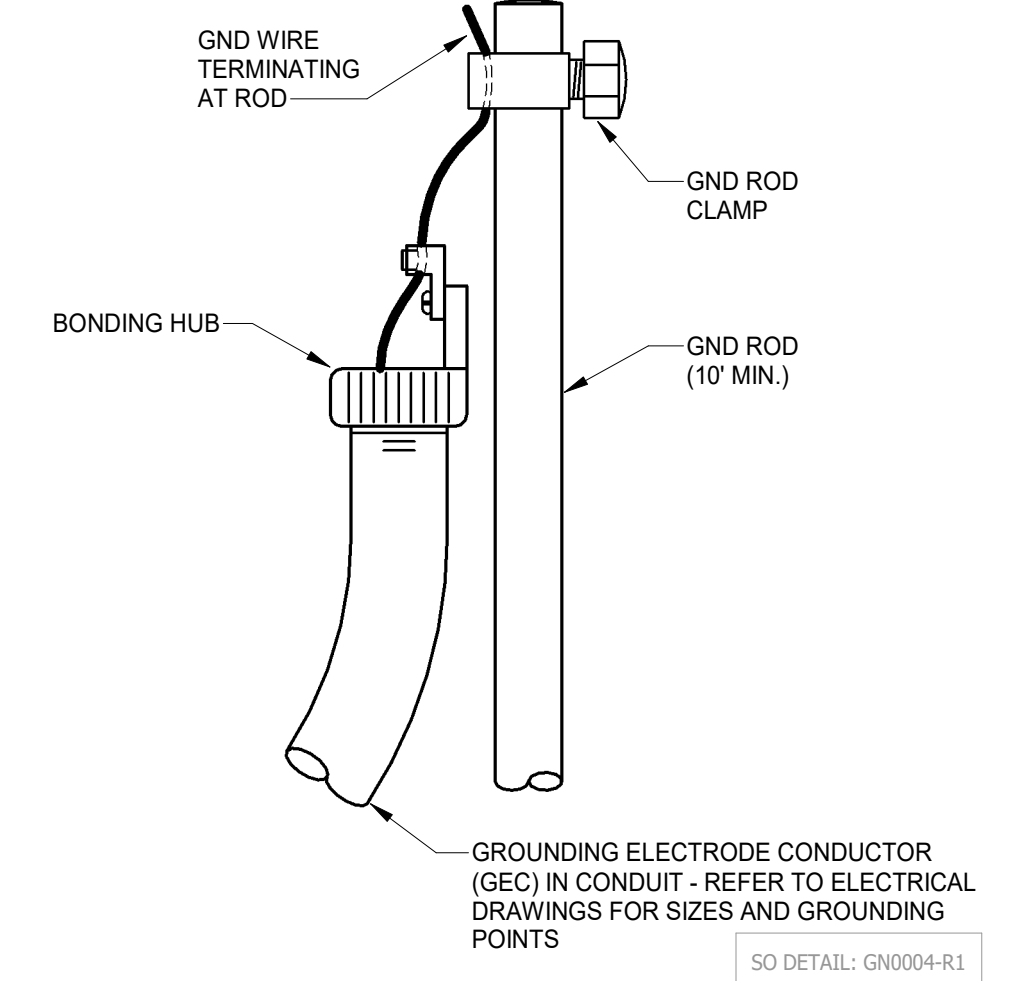


1 GROUNDING BUS DETAIL  
SCALE: NTS

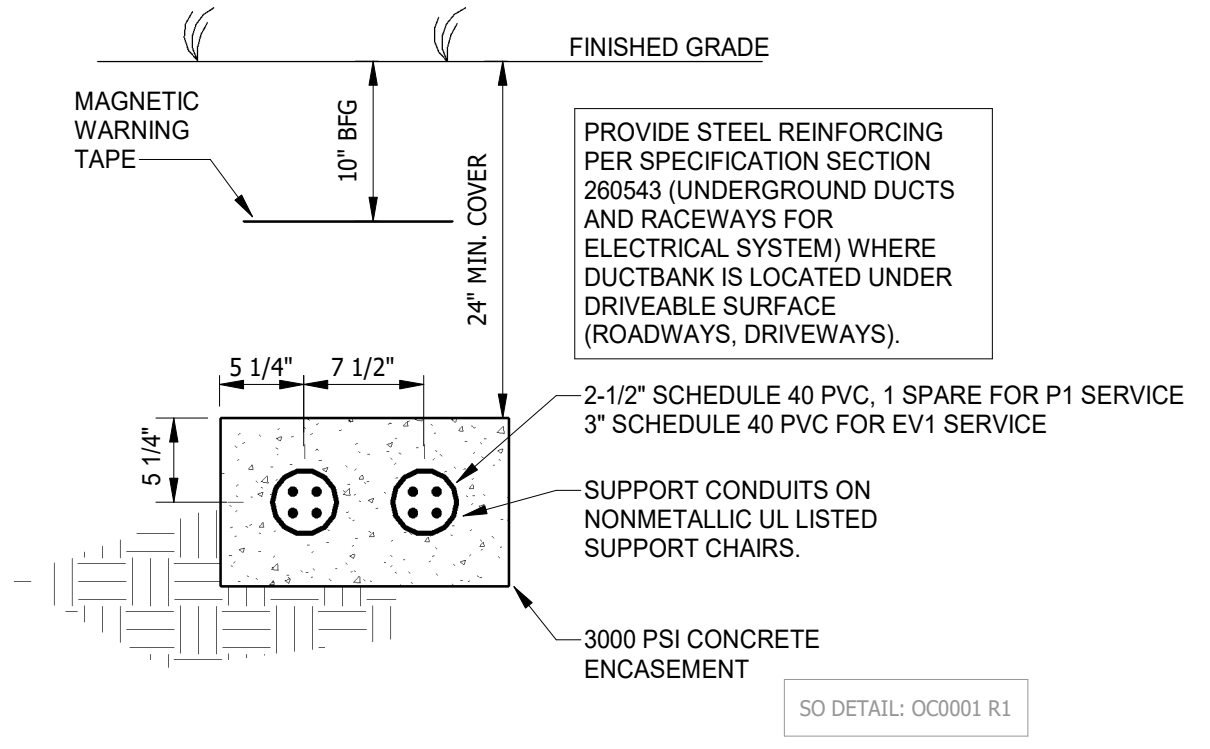


2 GROUND ROD ENCLOSURE  
SCALE: NTS

WARNING  
1. FIELD VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE DRIVING GROUND RODS.  
2. DO NOT USE POWER ASSISTED TOOLS TO DRIVE GROUND RODS.



3 GROUND ROD CONNECTIONS  
SCALE: NTS



4 FEEDER DUCT BANK SECTION  
SCALE: NTS

NOTES TO FEEDER SCHEDULE:

- ALL AMPACITIES ARE BASED ON 75° C. RATING. CONTRACTOR IS RESPONSIBLE FOR THE MODIFICATION OF CONDUCTOR SIZES AS NECESSARY TO MEET THE REQUIREMENTS OF NEC 110-14(C) WHERE TERMINATIONS ARE NOT LISTED AND LABELED FOR USE AT 75° C. THIS REQUIREMENT APPLIES TO TERMINATIONS IN BOTH NEW EQUIPMENT AND IN EXISTING EQUIPMENT TO WHICH TERMINATIONS ARE MADE AS A PART OF THIS PROJECT.
- DESIGNATION "C" IN THE ABOVE TABLE REFERS TO "CONDUIT". SEE SPECIFICATIONS FOR EXACT TYPE OF RACEWAY REQUIRED. TYPE OF RACEWAY, UNLESS INDICATED IN TABLE OR ELSEWHERE IN THE DRAWINGS, IS TO BE DETERMINED BY USE CONDITIONS.
- PROVIDE A BONDING BUSHING AT THE EQUIPMENT END OF THIS CONDUIT RUN AND A BONDING HUB AT THE CONNECTION TO THE GROUNDING ELECTRODE.

Mark	Ampacity	Description
225N	230A	3-#4/0 PHASE & 1-#4/0 NEU IN 2 1/2" C.
600N	620A	2 PARALLEL RUNS, EACH OF 3-350 kcmil PHASE & 1-350 kcmil NEU IN 3" C.
6GEC	N/A	GROUNDING ELECTRODE CONDUCTOR. 1-#6 IN 1/2" RMC. SEE NOTE 3.
2GEC	N/A	GROUNDING ELECTRODE CONDUCTOR. 1-#2 IN 1/2" RMC. SEE NOTE 3.



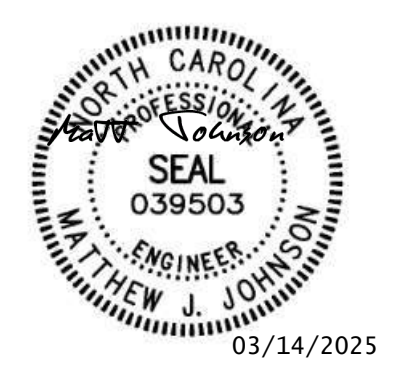
1100 Dresser Court  
Raleigh, NC 27609  
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WTCC EWS - FIRE & RESCUE TRAINING CENTER  
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ELECTRICAL DISTRIBUTION SYSTEM

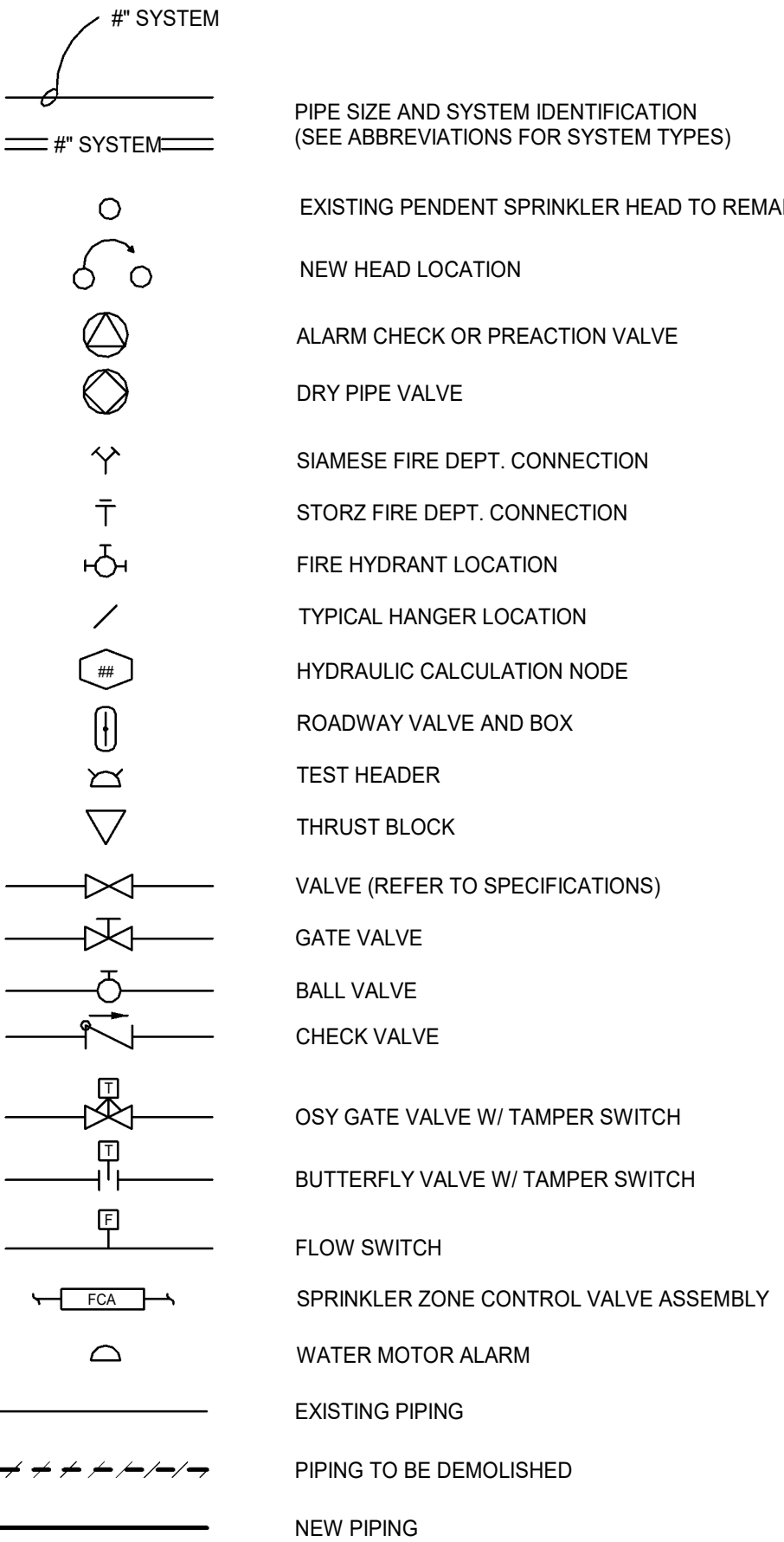
E601



FIRE PROTECTION ABBREVIATIONS

# POUNDS, NUMBER  
ACV ALARM CHECK VALVE  
AFC ABOVE FINISHED CEILING  
AFF ABOVE FINISHED FLOOR  
AFG ABOVE FINISHED GRADE  
AHJ AUTHORITY HAVING JURISDICTION  
ALT ALTERNATE  
ANSI AMERICAN NATIONAL STANDARDS INSTITUTE  
ARCH ARCHITECTURAL; ARCHITECT  
AUTO AUTOMATIC  
BAS BUILDING AUTOMATION SYSTEM  
BOP BOTTOM OF PIPE  
CAP CAPACITY  
CLG CEILING  
COL COLUMN  
CONC CONCRETE  
CTR CENTER  
CUFT CUBIC FOOT; CUBIC FEET  
CUYD CUBIC YARD  
CV CHECK VALVE  
DCDA DOUBLE CHECK DETECTOR ASSEMBLY  
DI DUCTILE IRON  
DIA DIAMETER  
DIV DIVISION  
DN DOWN  
DPV DRY PIPE VALVE  
DWG DRAWING  
EA EACH  
ELEC ELECTRICAL  
ELEV ELEVATION  
EQUIP EQUIPMENT  
EXIST EXISTING  
FCV FLOOR CONTROL VALVE  
FDC FIRE DEPARTMENT CONNECTION  
FDV FIRE DEPARTMENT VALVE  
FFE FINISHED FLOOR ELEVATION  
FH FIRE HYDRANT  
FHC FIRE HOSE CABINET  
FHC FIRE HOSE VALVE CABINET  
FL FLOOR  
FLA FULL LOAD AMPS  
FLEX FLEXIBLE  
FM FACTORY MUTUAL  
FP FIRE PROTECTION OR FIRE PUMP  
FPC FIRE PUMP CONTROLLER  
FS FLOW SWITCH  
FT FOOT, FEET  
FTS FOOTING  
GAL GALLONS  
GC GENERAL CONTRACTOR  
GPM GALLONS PER MINUTE  
HORIZ HORIZONTAL  
HP HORSE POWER  
HT HEIGHT  
ID INSIDE DIAMETER  
IN INCH  
JP JOCKEY PUMP  
JPC JOCKEY PUMP CONTROLLER  
MAX MAXIMUM  
MCA MINIMUM CIRCUIT AMPS  
MFG MANUFACTURING  
MFR MANUFACTURER  
MIN MINIMUM  
MOCP MAXIMUM OVER CURRENT PROTECTION  
MTD MOUNTED  
NFPA NATIONAL FIRE PROTECTION ASSOCIATION  
NIC NOT IN CONTRACT  
NTS NOT TO SCALE  
OC ON CENTER  
OD OUTSIDE DIAMETER  
OPNG OPENING  
OSY OUTSIDE SCREW AND YOKE  
PIV POST INDICATOR VALVE  
PSI POUNDS PER SQUARE INCH  
PSIG POUNDS PER SQUARE INCH GAUGE  
QTY QUANTITY  
RCV RISER CHECK VALVE  
REINF REINFORCING  
REV REVISION  
RM ROOM  
RPDA REDUCED PRESSURE DETECTOR ASSEMBLY  
RPM REVOLUTIONS PER MINUTE  
SCH SCHEDULE  
SECT SECTION  
SF SQUARE FEET  
SP STANDPIPE  
SPCV SUCTION PRESSURE CONTROL VALVE  
SPEC SPECIFICATION  
SPRK SPRINKLER  
SYM SYMBOL OR SYMMETRICAL  
TOP TOP OF PIPE  
TOS TOP OF STEEL  
TS TAMPER SWITCH  
TYP TYPICAL  
UF UNDER FLOOR  
UL UNDERWRITERS LABORATORIES  
UNO UNLESS NOTED OTHERWISE  
UTIL UTILITY  
VERT VERTICAL  
W WITH  
W/O WITHOUT  
WMA WATER MOTOR ALARM  
Ø ROUND; DIAMETER; PHASE

FIRE PROTECTION PIPING SYMBOLS



SPRINKLER DESIGN DATA

Project Name:	WTCC EWS - FIRE & RESCUE TRAINING CENTER	System:	
Project Street Address:	WTCC, 5345 ROLESVILLE RD, WENDELL, NC 27591	Sys. Sq. Ft.:	
Suite:	NA	Floors:	TRAINING TOWER 5 BURN BUILDING 6
Designed By:	SALAS O'BRIEN	Phone:	919-832-8118
Occupancy:	NA	Hazard:	NA
Total Bldg. Hgt.:			

DESIGN SUMMARY

	Zone #	Zone #	Zone #	Zone #	Zone #
Design Method	-	-	-	-	-
Design Area #	-	-	-	-	-
Location	-	-	-	-	-
Type of System	-	-	-	-	-
Hazard Class	-	-	-	-	-
Criteria From	-	-	-	-	-
Design Area	-	-	-	-	-
Protection Area	-	-	-	-	-
Sprinkler Spacing	-	-	-	-	-
Density	-	-	-	-	-
K-factor	-	-	-	-	-
Hose Allowance	-	-	-	-	-
G.P.M. Req'd	-	-	-	-	-
Pos. Req'd	-	-	-	-	-

FIRE PROTECTION GENERAL NOTES

- COORDINATE WORK WITH OTHER TRADES PRIOR TO PURCHASE AND INSTALLATION OF ANY PIPING, DUCTWORK OR EQUIPMENT. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
- REFER TO THE ARCHITECTURAL PLANS FOR DIMENSIONS. DO NOT SCALE THESE DRAWINGS.
- ALL PIPING LAYOUTS AND LOCATIONS SHOWN ARE DIAGRAMMATIC AND DO NOT INDICATE ALL FITTINGS REQUIRED TO COMPLETE WORK. COORDINATE THE PIPING LAYOUT WITH ALL CONTRACTORS PRIOR TO INSTALLATION, INCLUDING CONDUITS AND CABLE TRAYS. PROVIDE ALL PIPING OFFSETS REQUIRED FOR THE COMPLETE INSTALLATION OF THE SYSTEM WHETHER OR NOT THE OFFSETS ARE INDICATED ON THE PLANS. INSTALL PIPING HIGH ENOUGH TO AVOID LIGHTS, CONDUIT AND MISCELLANEOUS PIPING. DO NOT BLOCK ACCESS TO DEVICES.
- INSTALL ALL EQUIPMENT WITH THE MANUFACTURER'S RECOMMENDATION AND CODE REQUIRED CLEARANCES. INSURE ALL ITEMS FURNISHED WILL FIT IN THE SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS AND FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO PURCHASE AND INSTALLATION.
- COORDINATE LOCATIONS AND ELEVATIONS OF ALL EXPOSED ITEMS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND DETAILS.
- THE ENTIRE FIRE PROTECTION SYSTEM SHALL BE INSTALLED IN A MANNER THAT IS COMPLIANT WITH ALL APPLICABLE CITY, COUNTY, AND NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS, LOCAL BUILDING INSPECTOR REQUIREMENTS, ALL APPLICABLE NFPA STANDARDS, AS WELL AS THE STANDARDS OF THE UNDERWRITER WHERE REQUIRED. THE HAZARD CLASSIFICATION SHALL BE PER PLANS AND SPECIFICATIONS.
- VERIFY LATEST ARCHITECTURAL ROOM, WALL, AND CEILING LAYOUTS PRIOR TO DESIGN OF SYSTEM.
- IDENTIFYING SIGNAGE, TAGS, AND LABELS CONFORMING TO THE FIRE PROTECTION INDUSTRY STANDARDS SHALL BE SECURELY AFFIXED TO THE SYSTEM.
- CONTACT THE LOCAL FIRE DEPARTMENT AND VERIFY HOSE THREAD SIZE TO BE USED PRIOR TO START OF CONSTRUCTION.
- SPRINKLERS INSTALLED IN AREAS WITHOUT CEILINGS, OR CEILING TILES, SHALL BE OF THE UPRIGHT TYPE. INSTALL A DRAIN AT ALL RISER LOCATIONS AS WELL AS ALL LOW POINTS IN THE SYSTEM. AN INSPECTOR'S TEST DRAIN SHALL BE INSTALLED ON THE SYSTEM. SPRINKLER PIPING SHALL SLOPE DOWN TO DRAIN LOCATIONS.
- PROVIDE SIGNAGE FOR RISER ROOM, FDC, AND PIV IN ADDITION TO SIGNAGE AS REQUIRED BY NFPA 13. SEE SECTION 6.10 FOR SUMMARY OF SIGNAGE REQUIRED. ALL SIGNAGE SHALL BE SUBMITTED FOR REVIEW.
- SUBMIT DESIGN AND INSTALLATION DRAWINGS PRIOR TO THE START OF CONSTRUCTION, TO THE OWNER'S UNDERWRITER WHERE APPLICABLE, THE LOCAL FIRE MARSHAL, AND ANY OTHER AUTHORITIES HAVING JURISDICTION FOR REVIEW AND APPROVAL. DESIGN, AND INSTALLATION DRAWINGS SHALL BE STAMPED OR SEALED BY A NICET III DESIGNER OR A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA.
- SPRINKLER SYSTEMS INSTALLED IN THE TRAINING TOWER AND BURN BUILDING ARE FOR FIRE FIGHTING TRAINING PURPOSES ONLY.

FIRE PROTECTION DRAWING LIST

NO.	TITLE
FP001	STANDARDS, SYMBOLS & ABBREVIATIONS
FP112	PLANS - TRAINING TOWER
FP113	PLANS - TRAINING TOWER
FP114	PLANS - TRAINING TOWER
FP115	PLANS - BURN BUILDING
FP116	PLANS - BURN BUILDING
FP117	PLANS - BURN BUILDING
FP118	PLANS - BURN BUILDING
FP200	DETAILS



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**WTCC EWS - FIRE & RESCUE TRAINING CENTER**  
WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303

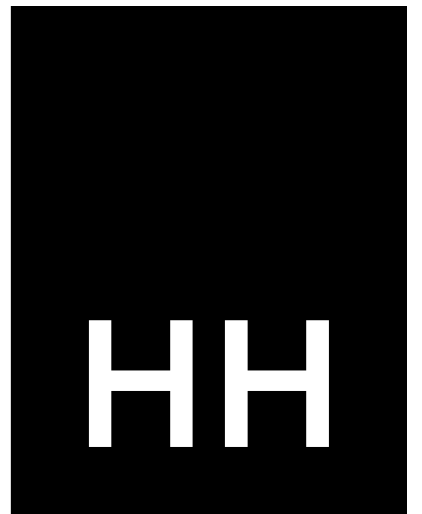


NO.	REVISION	DATE

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**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**STANDARDS, SYMBOLS & ABBREVIATIONS**

FP001





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ENGINEER  
KEVIN R. ALLEN  
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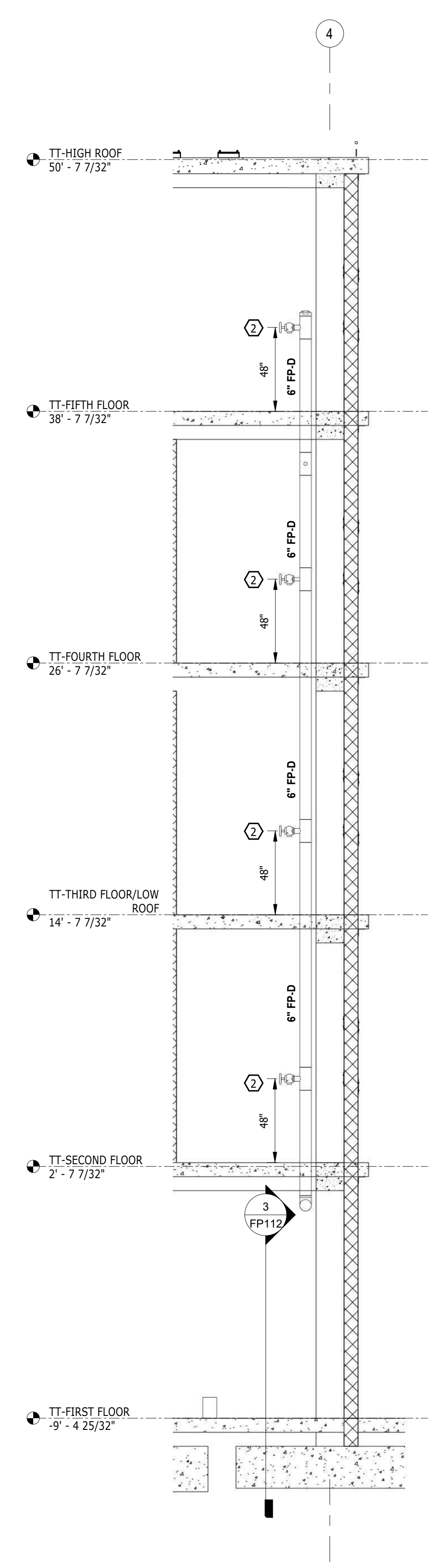
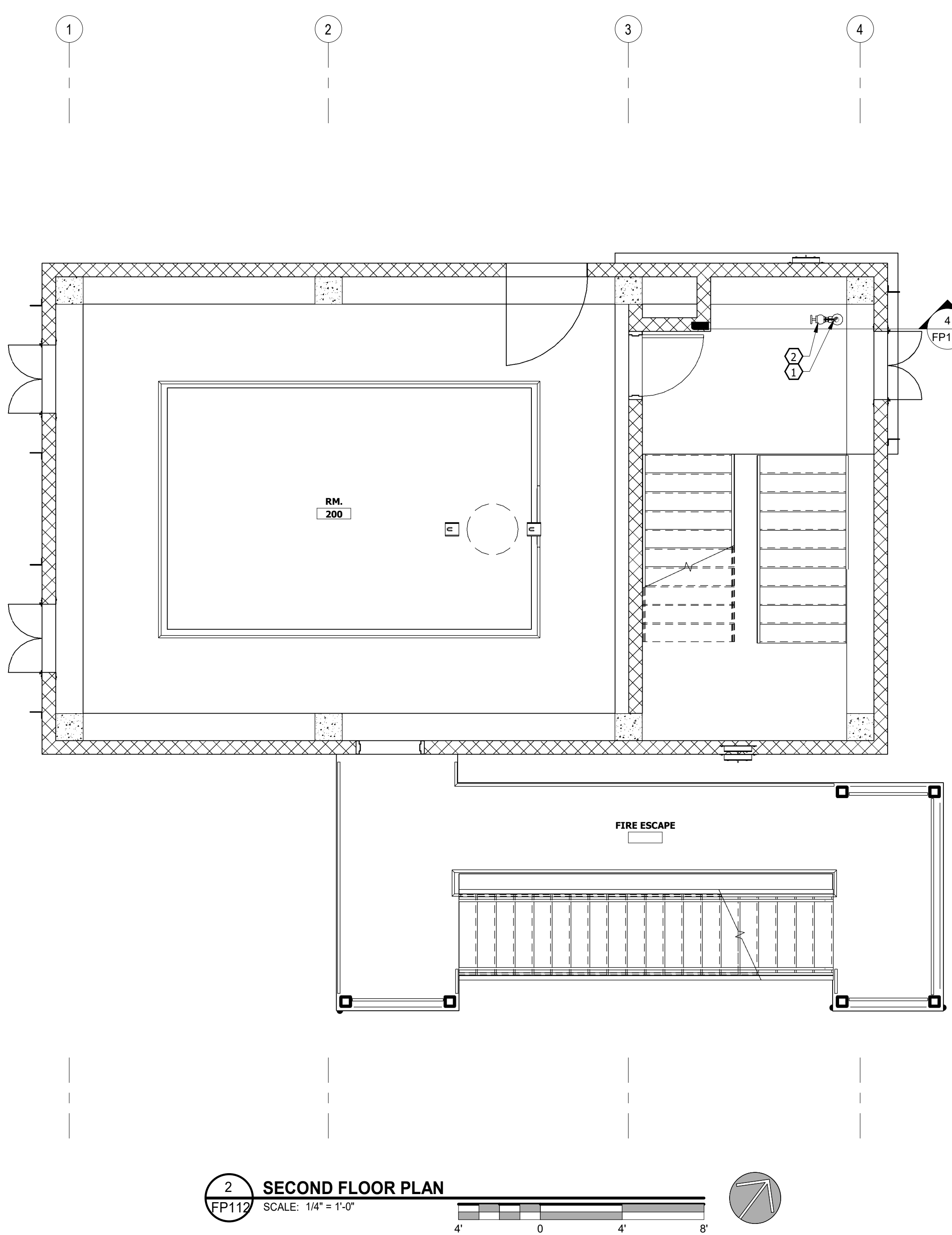
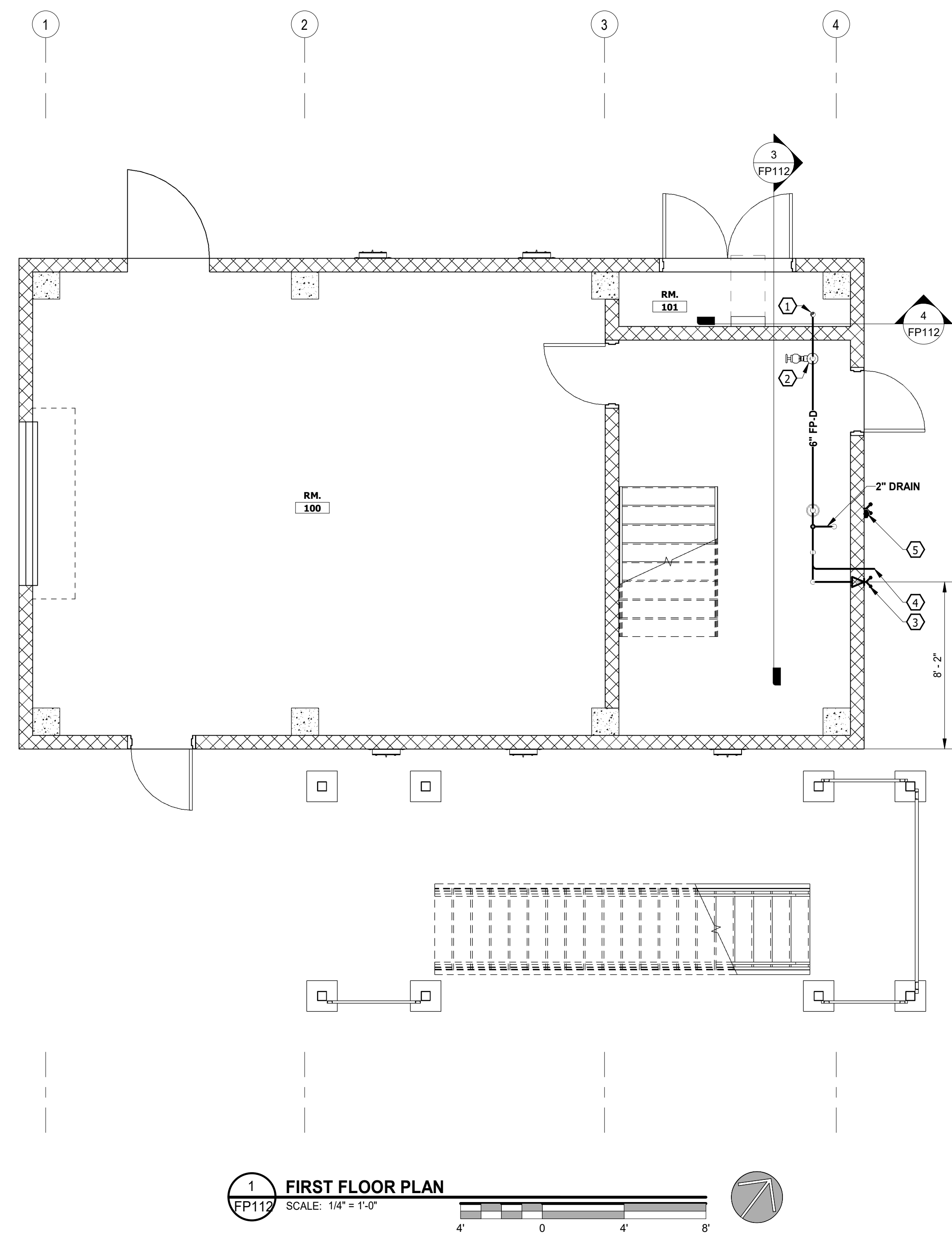
FP112

# GENERAL NOTES TO FP112

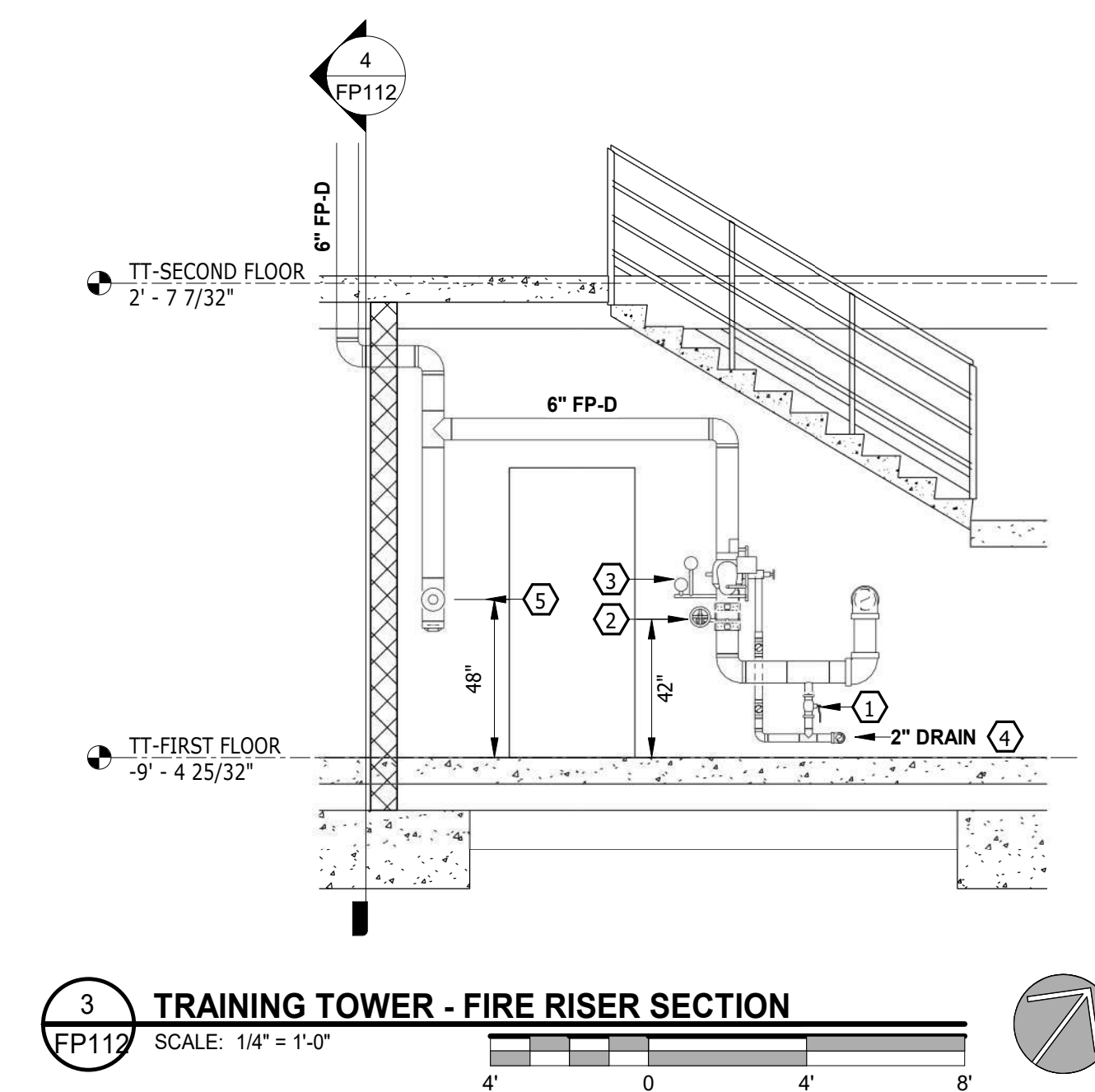
- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 4. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDC PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
- 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.

KEY NOTES TO 1,2,&4/FP112

- 1 6" DRY TRAINING STANDPIPE.
- 2 2-1/2" HOSE VALVE 48" AFF.
- 3 SIAMSE FIRE DEPARTMENT CONNECTION.
- 4 2" MAIN DRAIN TO EXTERIOR.
- 5 WATER MOTOR ALARM.



- KEY NOTES TO 3/FP112
- 1 BALL VALVE FOR LOW POINT DRAIN.
  - 2 CONTROL VALVE.
  - 3 6" ALARM CHECK VALVE.
  - 4 2" MAIN DRAIN TO EXTERIOR.
  - 5 2-1/2" HOSE VALVE 48" AFF.



ALL FIRE PROTECTION SYSTEMS FOR THE TRAINING TOWER ARE PROVIDED FOR TRAINING PURPOSES ONLY.





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KEVIN R. ALLEN  
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FP113

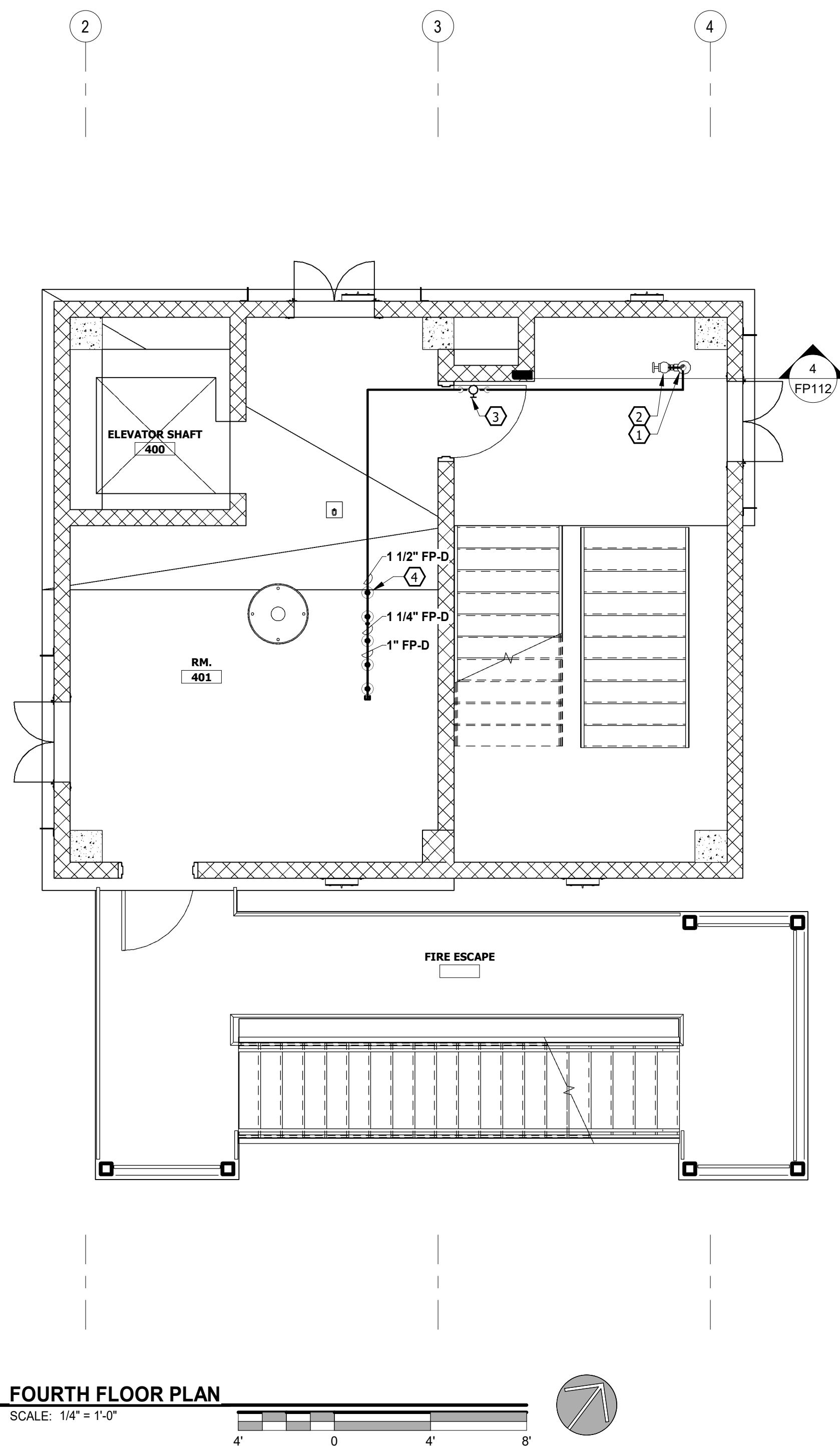
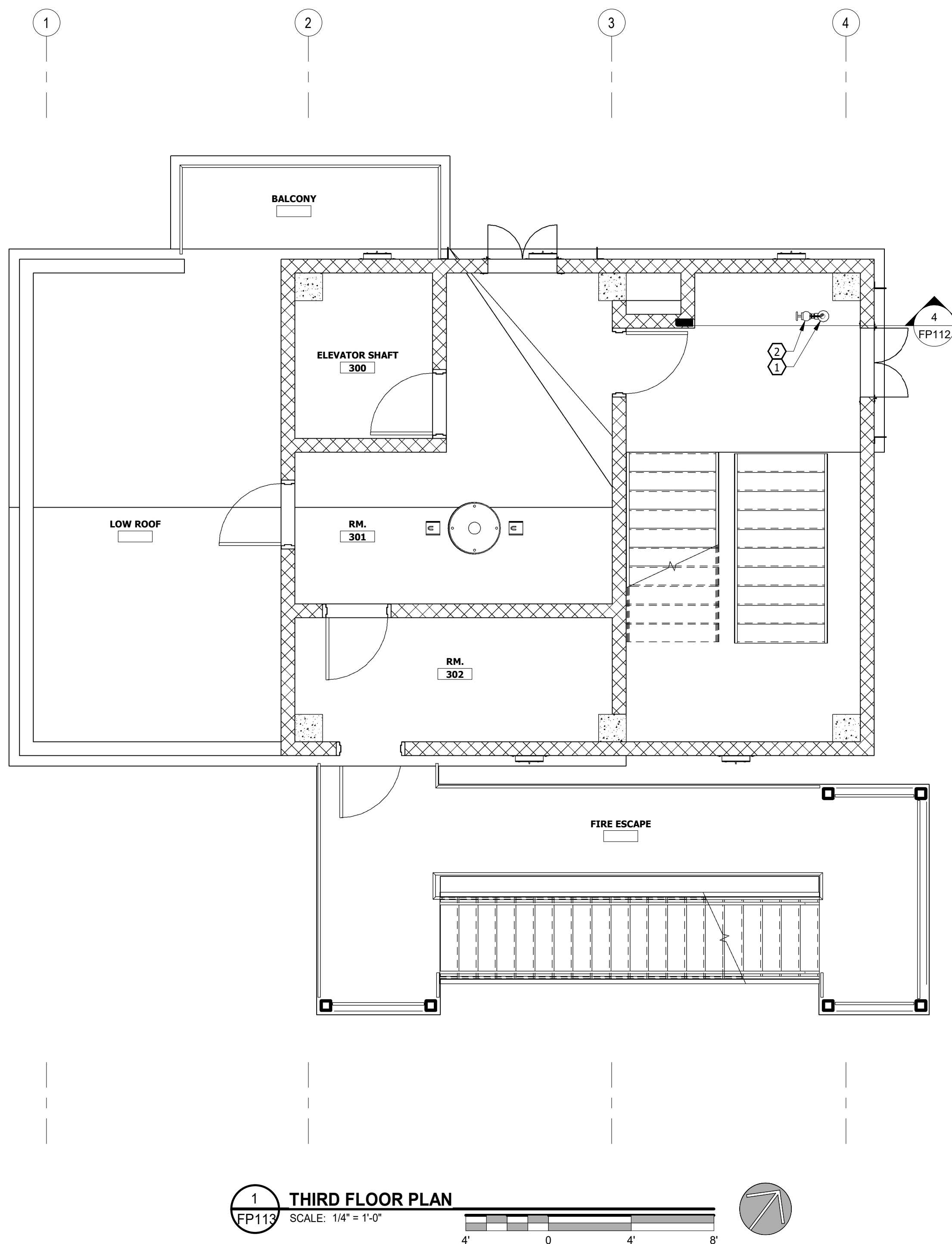
# GENERAL NOTES TO FP113

- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 4. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDC PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
- 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.



KEY NOTES TO FP113

- 1 6" DRY TRAINING STANDPIPE.
- 2 2-1/2" HOSE VALVE 48" AFF.
- 3 BALL VALVE FOR CONTROL OF SPRINKLERS. VALVE TO BE IN ACCESSIBLE LOCATION AT 66" AFF.
- 4 PENDENT SPRINKLER HEAD. TYPICAL OF 5. REMOVE ELEMENT.



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**PLANS - TRAINING TOWER**

**FP114**

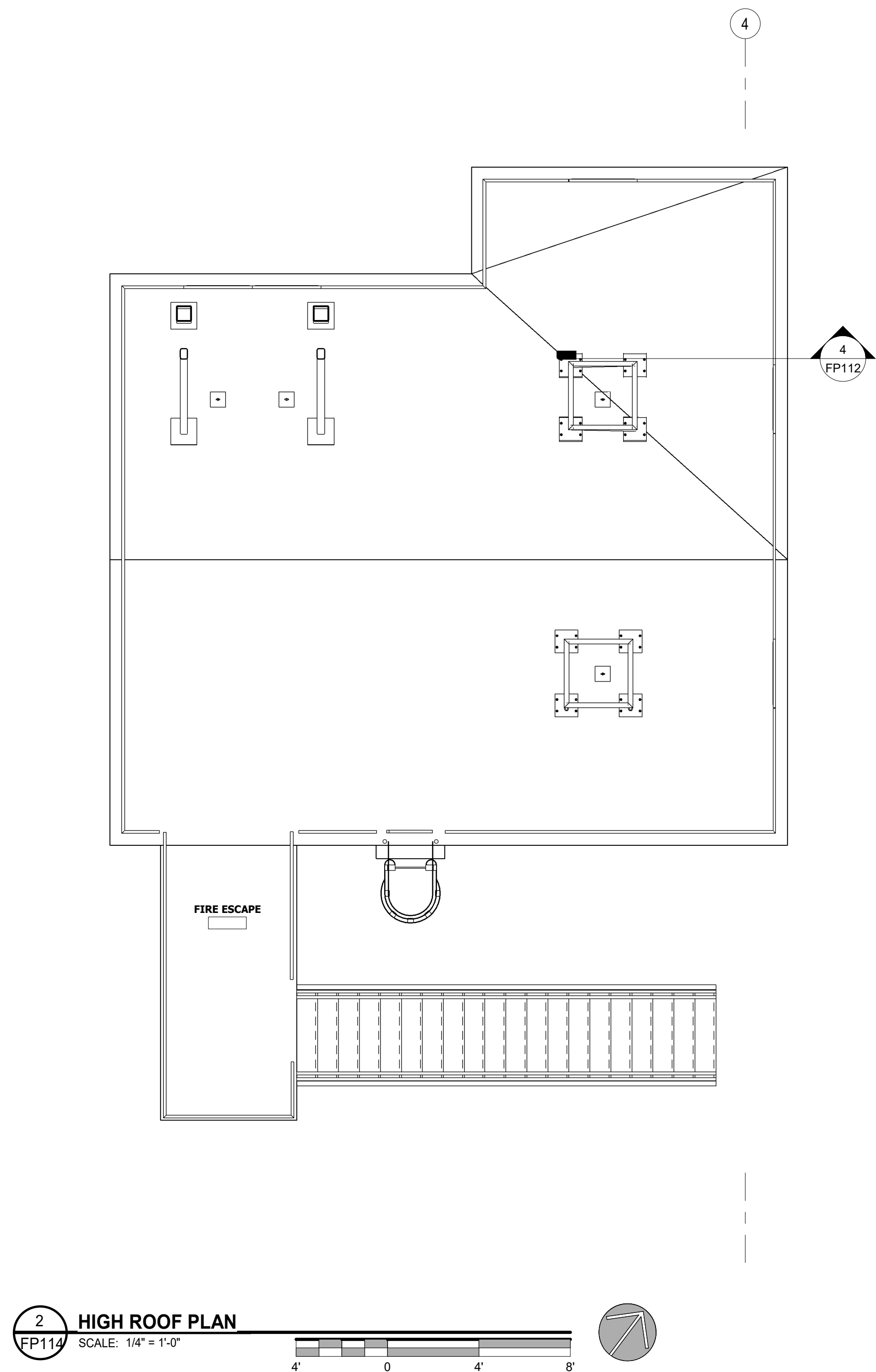
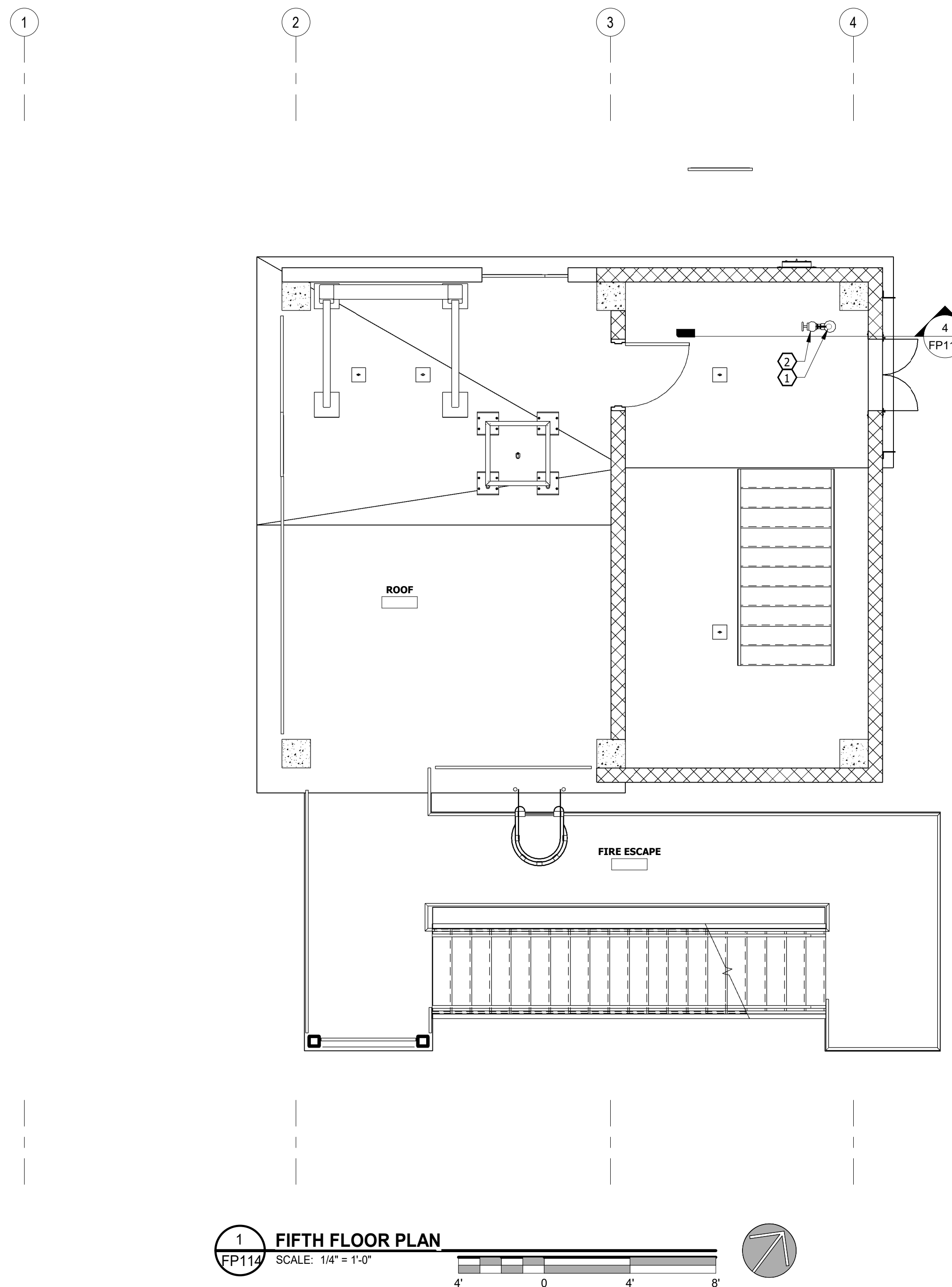
# GENERAL NOTES TO FP114

- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 4. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDC PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
- 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.



KEY NOTES TO FP114

- 1 6" DRY TRAINING STANDPIPE.
- 2 2-1/2" HOSE VALVE 48" AFF.



ALL FIRE PROTECTION SYSTEMS FOR THE TRAINING TOWER  
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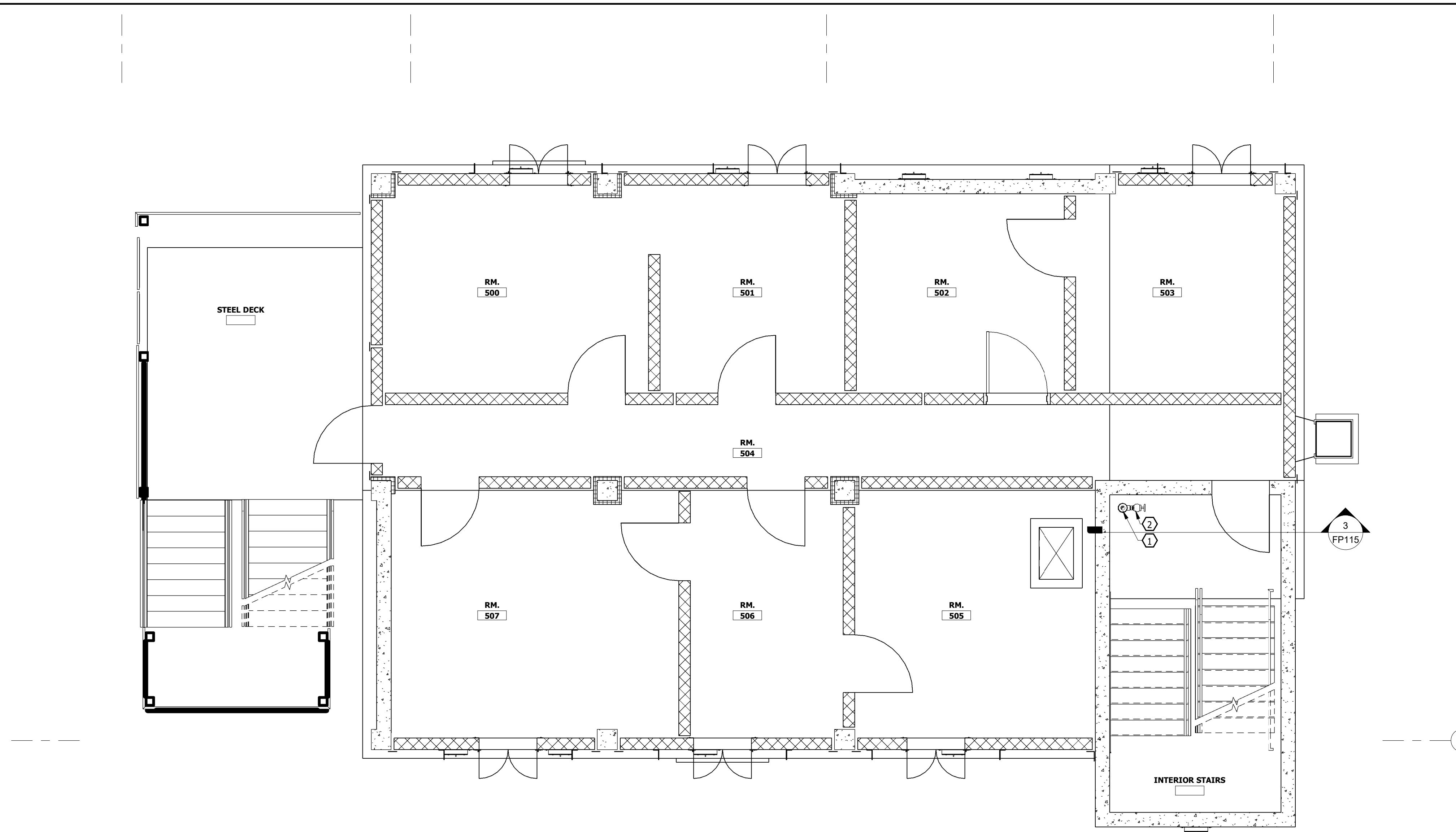




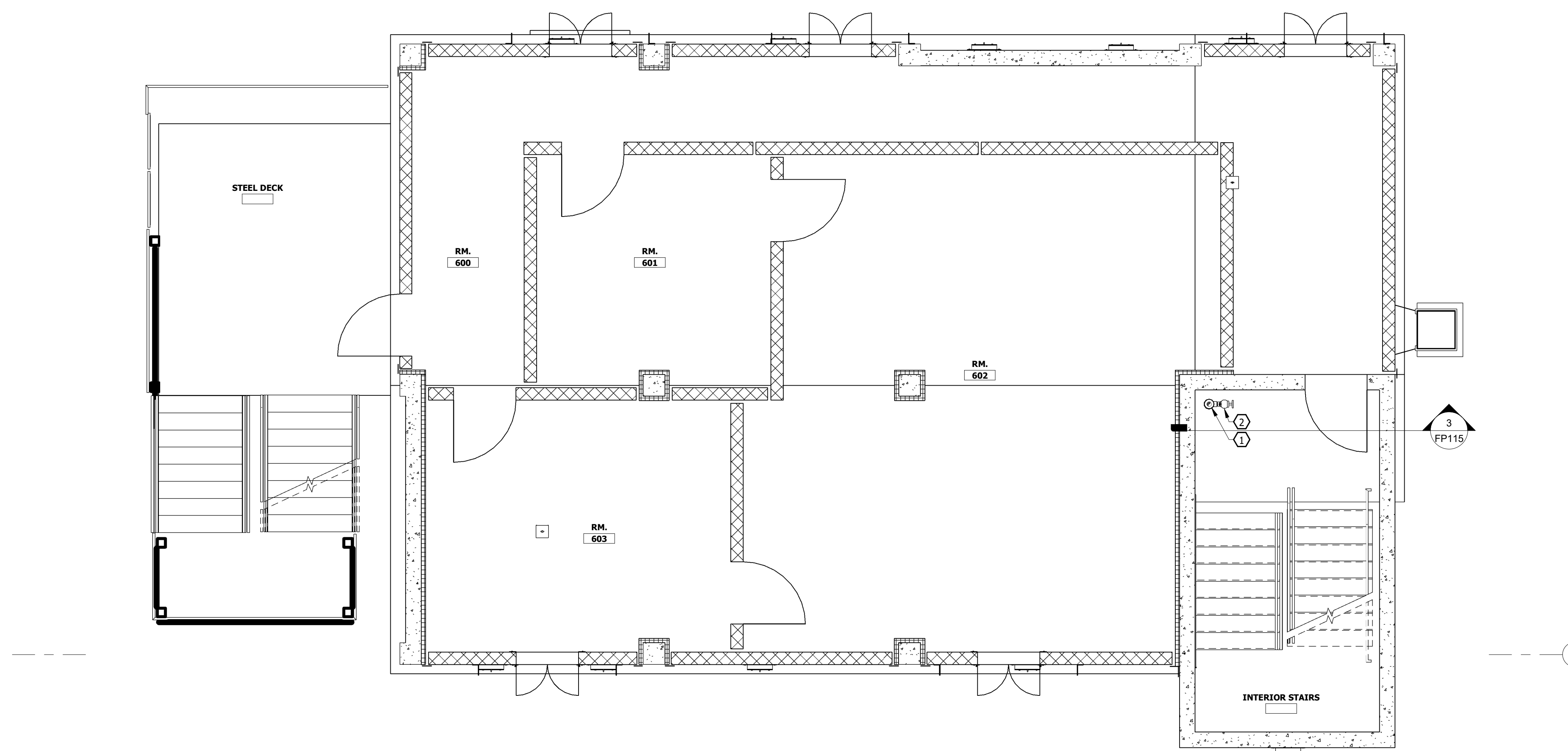








1 FIFTH FLOOR PLAN  
SCALE: 1/4" = 1'-0"



2 SIXTH FLOOR PLAN  
SCALE: 1/4" = 1'-0"

# GENERAL NOTES TO FP117

- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 3. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDC PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
- 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.

KEY NOTES TO FP117

- 1 6" DRY TRAINING STANDPIPE.
- 2 2-1/2" HOSE VALVE 48" AFF.

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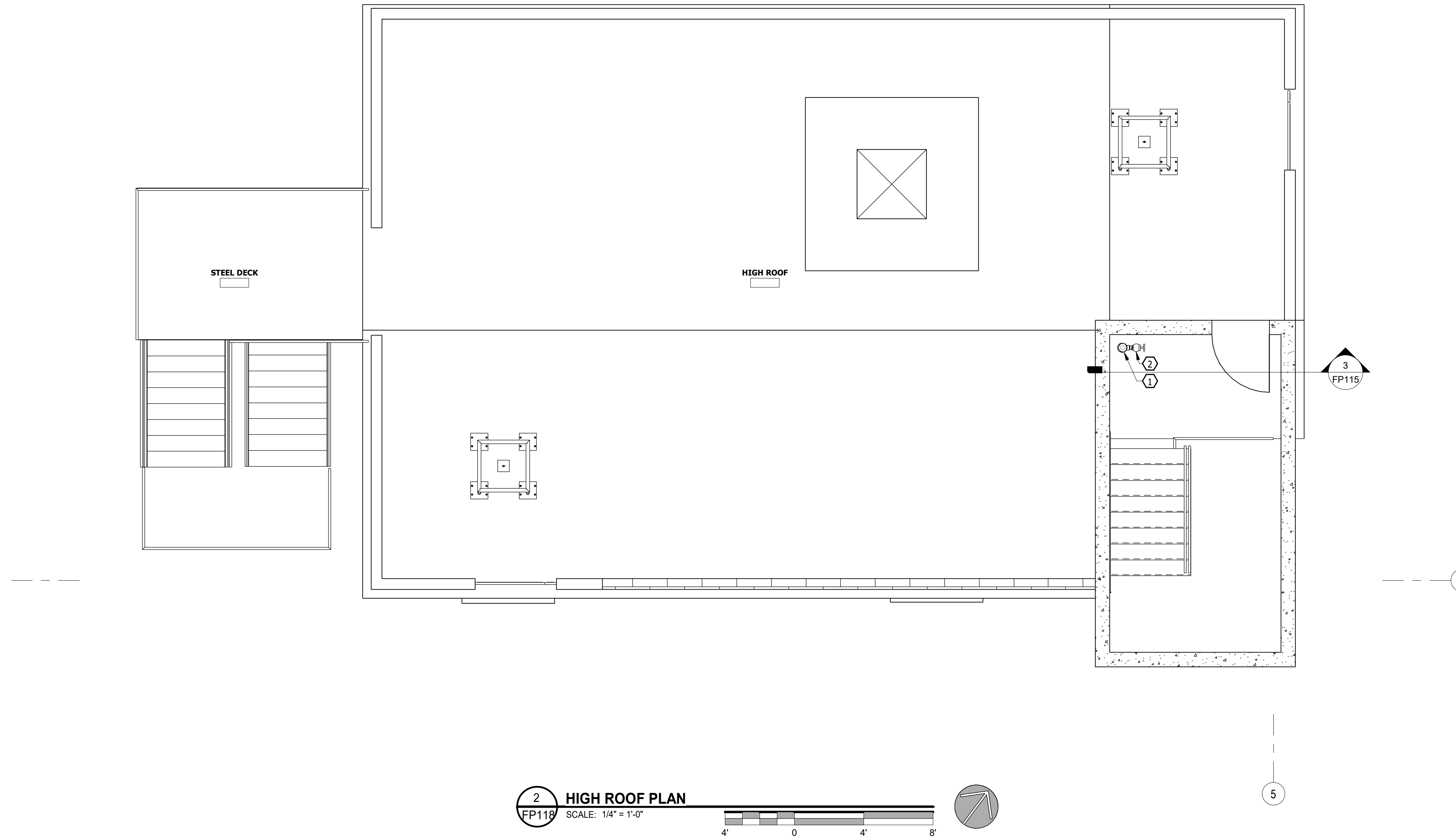
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**PLANS - BURN BUILDING**

FP117





- # GENERAL NOTES TO FP118
- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6\"/>
  - 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.

- KEY NOTES TO FP118
- 1 6\"/>
  - 2 2-1/2\"/>

2 HIGH ROOF PLAN  
SCALE: 1/4\"/>

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BUILDING

FP118







CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CRITERIA UNLESS OTHERWISE NOTED ON THE DRAWINGS. DO NOT USE THESE DRAWINGS WITHOUT THE ACCOMPANYING SPECIFICATIONS AND RELATED CIVIL AND MIEP DRAWINGS. FOR ALL ITEMS, SEE THE SPECIFICATIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS. THE MOST STRINGENT REQUIREMENTS GOVERN CONDITIONS COVERED BY BOTH THE DRAWINGS AND THE PROJECT SPECIFICATIONS.

A. STRUCTURE CLASSIFICATION

1. THE DRAFTING PIT IS CLASSIFIED AS MISCELLANEOUS USE GROUP (USE GROUP U).

B. CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS GOVERN THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF STRUCTURAL WORK PERFORMED ON THIS PROJECT:

- 2018 NORTH CAROLINA STATE BUILDING CODE (BASED ON INTERNATIONAL BUILDING CODE (IBC-2015), INTERNATIONAL CODE COUNCIL (ICC)).
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-10), AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE).
- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - AISC 360-10, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, EXCEPT AS MODIFIED BY IBC.
- STRUCTURAL WELDING CODE - STEEL (AWS D1.4-2011), AMERICAN WELDING SOCIETY (AWS), EXCEPT AS MODIFIED BY IBC.
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI-318-14), AMERICAN CONCRETE INSTITUTE (ACI), EXCEPT AS MODIFIED BY IBC.
- SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-16), AMERICAN CONCRETE INSTITUTE (ACI).
- MANUAL OF STANDARD PRACTICE (CRSI), CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES, THE MASONRY SOCIETY (TMS) TMS 402-13/TMS 602-13, AND BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, AMERICAN CONCRETE INSTITUTE (ACI) ACI 530-13, EXCEPT AS MODIFIED BY IBC.
- STANDARD ON FACILITIES FOR FIRE TRAINING AND ASSOCIATED PROPS (NFPA 1402-2019), NATIONAL FIRE PROTECTION ASSOCIATION.

C. DESIGN LIVE LOADS

1. DRAFTING PIT TOP SLAB = 100 PSF

D. DESIGN SNOW LOADS

- GROUND SNOW LOAD (Pg) = 15 PSF
- FLAT ROOF SNOW LOAD (Pf) = 12.6 PSF
- SNOW EXPOSURE FACTOR (Ce) = 1.0
- THERMAL FACTOR (Ct) = 1.2
- SNOW LOAD IMPORTANCE FACTOR (Is) = 1.0

E. SOILS INFORMATION

- THE FOLLOWING INFORMATION IS BASED ON THE GEOTECHNICAL REPORT ("SOILS REPORT") PREPARED BY NV5 ENGINEERS AND CONSULTANTS, INC. DATED JANUARY 11, 2024.
- ACCORDING TO BORING B-10 IN THE SOILS REPORT, SOFT/LOOSE NEAR SURFACE SOILS (APPROXIMATELY 8 FEET DEEP) OVERLAY PARTIALLY WEATHERED ROCK AND ROCK (8 TO 16.5 FEET). PARTIALLY WEATHERED ROCK WAS ENCOUNTERED IN NEARBY BORINGS AS SHALLOW AS 3 FEET.
- ALLOWABLE SOIL BEARING VALUE FOR THE DRAFTING PIT IS 2,500 PSF FOR FOUNDATIONS PLACED ON APPROVED NATURAL SOILS OR STRUCTURAL FILL.
- ACCORDING TO THE SOILS REPORT, GROUND WATER WAS NOT OBSERVED WITHIN THE BORING AT THE DRAFTING PIT (B-10). SEE SOILS REPORT FOR DRAINAGE CONSIDERATIONS.
- THE DRAFTING PIT WALLS HAVE BEEN DESIGNED USING THE FOLLOWING ASSUMED VALUES. THESE VALUES SHALL BE CONFIRMED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTING THE DRAFTING PIT.  
WALL BACKFILL FRICTION ANGLE:  $\phi$  = 30 DEGREES  
AT-REST PRESSURE COEFFICIENT:  $K_0$  = 0.5  
PASSIVE PRESSURE COEFFICIENT:  $K_p$  = 3.0  
FOUNDATION SOIL FRICTION ANGLE:  $\phi$  = 28 DEGREES  
MOIST UNIT WEIGHT OF SOIL: 120 PCF
- SEE SPECIFICATIONS FOR EARTHWORK REQUIREMENTS, INCLUDING REPLACEMENT OF UNSUITABLE SOILS, BACKFILLING AGAINST WALLS, MEASURES TO PREVENT INFILTRATION OF RUNOFF AND PRECIPITATION INTO UNDERLYING SOILS, AND DEWATERING REQUIREMENTS IF GROUNDWATER IS ENCOUNTERED.

F. BACKFILL COMPACTION

- EXCAVATE, PROOFROLL, BACKFILL, AND COMPACT FOUNDATION AND SLAB-ON-GRADE SUBGRADES PER THE EARTHWORK SPECIFICATION SECTIONS 312000.
- ALL PROOFROLLING AND ENGINEERED OR IMPORTED FILL MATERIALS AND PLACEMENT SHALL BE OBSERVED AND APPROVED BY THE TESTING AGENCY GEOTECHNICAL ENGINEER.
- PROVIDE FILL MATERIALS THAT ARE FREE OF DEBRIS, ORGANIC, AND DELETERIOUS MATERIALS AND THAT MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
- PLACE ENGINEERED FILL MATERIAL IN MAXIMUM LEVEL LOOSE LIFTS OF 6 INCHES AND COMPACT TO 95% OF THE MODIFIED PROCTOR TEST MAXIMUM DRY DENSITY (ASTM D-698).

G. CAST-IN-PLACE CONCRETE CONSTRUCTION

- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318, ACI 301, AND THE ACI DETAILING MANUAL.
- PROVIDE CONCRETE WITH PROPERTIES THAT CONFORM TO THE CRITERIA SPECIFIED IN TABLE 1 ON SHEET DP002.
- PROVIDE NORMAL WEIGHT CONCRETE.
- TESTING AGENCY SHALL TAKE CONCRETE TEST CYLINDERS IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318, CHAPTER 26 AND THE CONTRACT SPECIFICATIONS.
- SEE THE CONTRACT SPECIFICATIONS FOR ADDITIONAL CONCRETE TESTING REQUIREMENTS (AIR CONTENT, SLUMP, ETC.).
- TESTING AGENCY SHALL PERFORM REBAR INSPECTIONS OF ALL REINFORCING STEEL BEFORE ALL CONCRETE POURS.

H. CONCRETE REINFORCEMENT

- PROVIDE HIGH STRENGTH, NEW BILLET DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 FOR STEEL REINFORCEMENT IN CONCRETE.
- PROVIDE STEEL REINFORCEMENT DETAILS IN ACCORDANCE WITH ACI 318 AND CRSI STANDARDS.
- PROVIDE CONCRETE PROTECTION FOR STEEL REINFORCEMENT OF CAST-IN-PLACE CONCRETE AS SPECIFIED IN TABLE 2 ON SHEET DP002. PLACE THE OUTERMOST LAYERS OF REINFORCING, AS CLOSE TO THE CONCRETE SURFACES AS POSSIBLE WITHOUT VIOLATING THE REQUIREMENTS SHOWN IN THE TABLE.

I. STEEL SHAPES AND PLATES

- PROVIDE STEEL WITH PROPERTIES LISTED IN TABLE 3 ON DP002.
- SEE SPECIFICATIONS FOR REQUIREMENTS OF STAINLESS STEEL ANGLES AND PLATES.
- PROVIDE WELDED SHOP CONNECTIONS UNLESS OTHERWISE NOTED.
- PERFORM ALL WELDING WITH WELDERS QUALIFIED IN ACCORDANCE WITH AWS PROCEDURES FOR WELDER QUALIFICATION.
- PROVIDE GALVANIZED STEEL MEMBERS, UNLESS OTHERWISE NOTED ON THE DRAWINGS AS "PAINTED" OR "STAINLESS STEEL".
- AT GALVANIZING VENT HOLES IN PIPES AND TUBES, AND OTHER NOTED ITEMS, LOCATE VENT HOLES AT BOTTOM OF PIPE OR TUBE. PLUG ALL VENT HOLES AFTER GALVANIZING IN ONE OF THE FOLLOWING WAYS: HAMMER IN A ZINC GALVANIZING VENT HOLE PLUG, GRIND IT SMOOTH, AND TOUCH UP WITH GALVANIZING REPAIR PAINT. A SECOND OPTION IS TO PLUG WELD THE GALVANIZING VENT HOLES, GRIND THE WELDS SMOOTH, AND TOUCH UP WITH GALVANIZING REPAIR PAINT PER THE SPECIFICATIONS.
- WHERE INDICATED IN THE DRAWINGS, PROVIDE STAINLESS STEEL OF TYPE INDICATED IN SPECIFICATIONS.
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR GALVANIZED AND STAINLESS STEEL.
- SEE THE CONTRACT SPECIFICATIONS FOR STEEL TESTING AND INSPECTIONS REQUIRED.

J. FIXED ACCESS LADDER

- PROVIDE HEAVY-DUTY, FIXED, WALL-MOUNTED, VERTICAL, GALV. STEEL ACCESS LADDER. NOMINAL HEIGHT OF LADDER IS 9'-0".
- PROVIDE CONTINUOUS CHANNEL OR RECTANGULAR TUBING SIDE RAILS, SPACED 18 INCHES APART. PROVIDE ROUND BAR LADDER RUNGS, WITH CORRUGATED SURFACES, SPACED AT 12 INCHES O.C. EACH LADDER RUNG SHALL BE CAPABLE OF CARRYING 1,000 POUNDS LOAD AND SHALL BE ATTACHED AT CENTERLINE OF SIDE RAILS BY WELDING.
- PROVIDE ACCESS LADDER, CERTIFIED TO MEET OSHA/ANSI A14.3 STANDARDS.
- SUBMIT SHOP DRAWINGS SHOWING ALL COMPONENTS, SIZES, LENGTHS, AND ATTACHMENTS TO THE STRUCTURE FOR APPROVAL BY THE ENGINEER.

K. POLYMER-MODIFIED CEMENT WATERPROOFING

- AT INTERIOR CONCRETE SURFACES OF DRAFTING PIT. PROVIDE MANUFACTURER'S PROPRIETARY BLEND OF DRY CEMENTITIOUS AND OTHER INGREDIENTS FOR MIXING WITH POTABLE WATER OR POLYMER ADMIXTURE TO PRODUCE A WATERPROOF COATING THAT IS SUITABLE FOR VERTICAL AND HORIZONTAL APPLICATIONS BELOW GRADE. IS BREATHABLE, RESISTS HYDROSTATIC PRESSURE, AND MEETS OR EXCEEDS THE BELOW CRITERIA:  
WATER PERMEABILITY: 0 (MAX. @ 30 FEET) CE CRD-C 48  
COMPRESSIVE STRENGTH: 4,000 PSI (MIN. @ 28 DAYS) ASTM C 109  
FLEXURAL STRENGTH: 710 PSI (MIN. @ 28 DAYS) ASTM C 348  
BOND STRENGTH: 220 PSI (MIN. @ 28 DAYS) ASTM C 321  
NSF 61 APPROVED FOR POTABLE WATER  
COLOR: GRAY  
VOC CONTENT: NOT EXCEEDING 400 g/L 40 CFR 59, SUBPART D
- AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED IN THE WORK INCLUDE: SIKA THOROSEAL-581, BY SIKA CORPORATION, HEY'DI K-11, EUCLID CHEMICAL COMPANY, OR AN APPROVED EQUIVALENT.
- PREP SURFACE AND APPLY WATERPROOFING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- PROVIDE A SMOOTH TROWEL FINISH FOR FINAL COAT.

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WTCC EWS - FIRE & RESCUE TRAINING CENTER

WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLSVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**DRAFTING PIT - GENERAL NOTES**

DP001



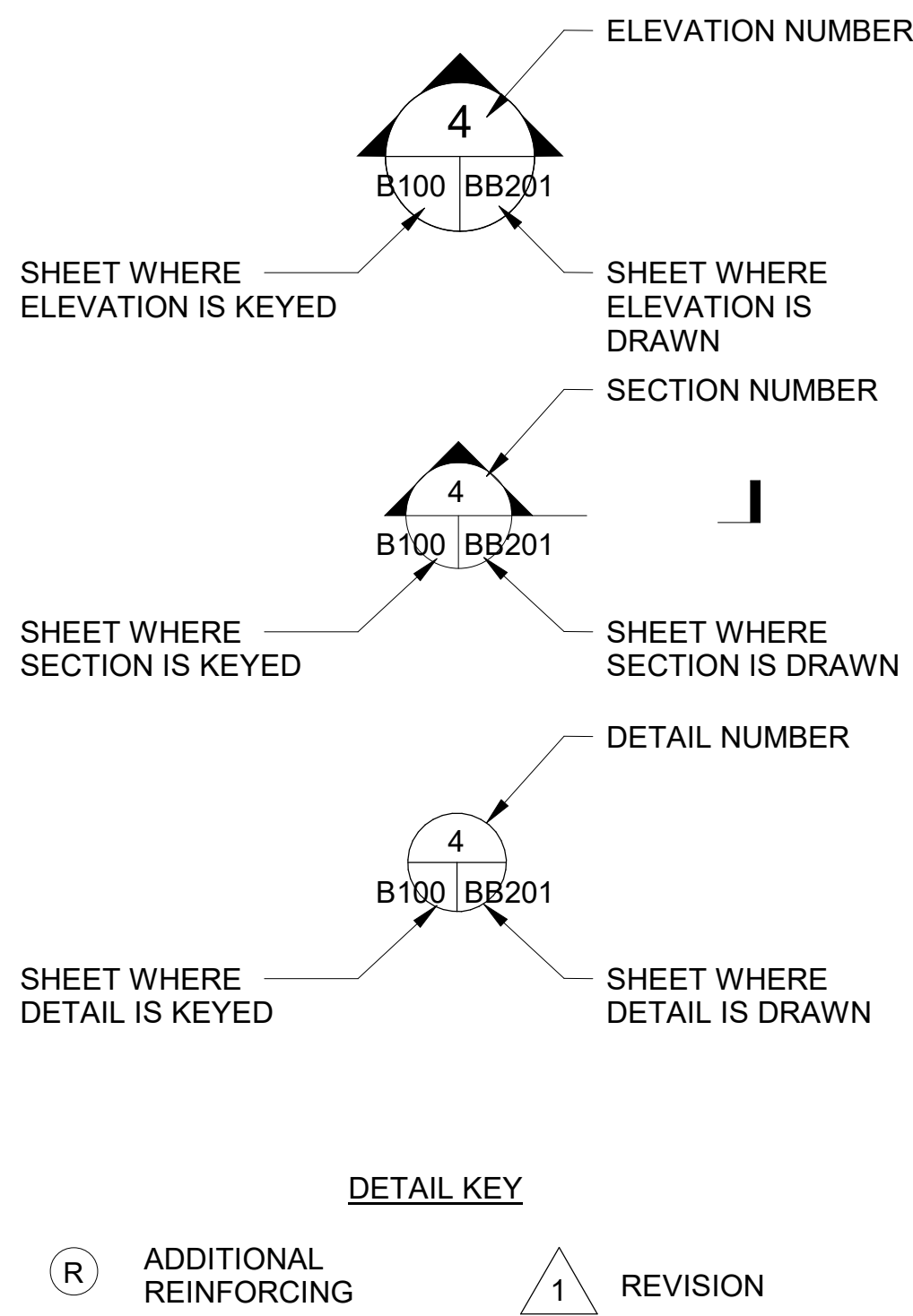
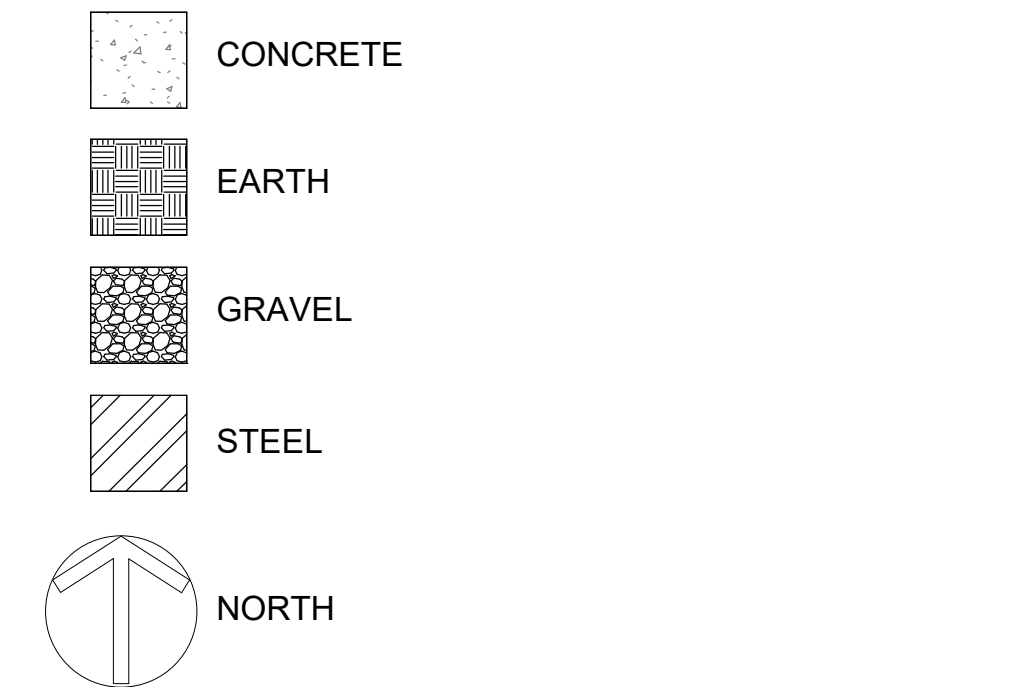
TABLE 1 - CONCRETE PROPERTIES			
STRUCTURE TYPE	f <sub>c</sub> (MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS) (psi)	MAXIMUM WATER/CEMENT RATIO	AIR RANGE (%)
SLABS & WALLS	5,000	0.40	6% ± 1 1/2% (ENTRAINED)

TABLE 2 - CONCRETE PROTECTION FOR STEEL REINFORCEMENT	
STRUCTURE TYPE	MINIMUM CLEAR COVER (UNLESS OTHERWISE NOTED ON DRAWINGS)
SLABS	2" TO BOTTOM BARS, 2" SIDE COVER FOR ALL BARS 2" TO TOP BARS.
WALLS	FOR SINGLE LAYER, CENTER BARS IN WALLS. FOR DOUBLE LAYER, 2" TO OUTERMOST BARS.
EARTH FORMED CONCRETE	3"

TABLE 3 - STRUCTURAL STEEL PROPERTIES			
SHAPE	ASTM DESIGNATION	GRADE	MIN. YIELD STRENGTH (F <sub>y</sub> )
PLATES & ANGLES	A-36	---	36 KSI
WIDE FLANGES	A-992	---	50 KSI
CHANNELS	A-572	---	50 KSI
HSS RECT.	A-500	C	50 KSI
HSS ROUND	A-53*	B	35 KSI

\* A-500, GRADE C, 46 KSI IS AN ACCEPTABLE ALTERNATE FOR A-53 AS LONG AS PIPE SIZES MEET REQUIREMENTS SHOWN ON DRAWINGS.

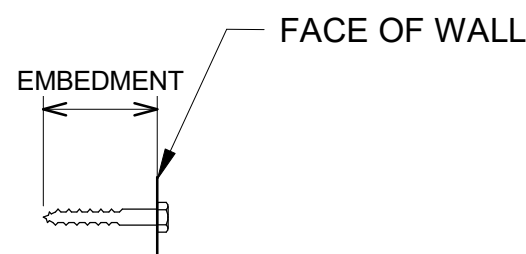
## LEGEND



## ABBREVIATIONS

& L @ # ø (E)	AND ANGLE AT NUMBER DIAMETER EXISTING	D.E. DBL. DEMO. DIA. DIM. DN. D.P. DTL. DWG.	DISCONTINUOUS END DOUBLE DEMOLISH, DEMOLITION DIAMETER DIMENSION DOWN DRILLED PIER DETAIL DRAWING(S)	H.A.S. HDR. HORIZ. HI.	HEADED ANCHOR STUD HEADER HORIZONTAL HIGH	O.C. O.D. O.F. OPNG. OPP.	ON CENTER OUTSIDE DIAMETER OUTSIDE FACE OPENING OPPOSITE	T.O.F. T.O.P. T.O.S. T.O.W. TRANS. TYP.	TOP OF FOOTING TOP OF PARAPET TOP OF STEEL TOP OF WALL TRANSVERSE TYPICAL
A.F.F. A.F.G. ALT. APPROX. ARCH.	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE ALTERNATE APPROXIMATE ARCHITECTURAL	EA. E.E. E.F. E.F.P. E.J. EL. ELEC. ELEV. ENGR. EQ. EQUIP. EQUIV. E.W. EXIST. EXP.	EACH EACH END EACH FACE EQUIVALENT FLUID PRESSURE EXPANSION JOINT ELEVATION ELECTRICAL ELEVATOR ENGINEER EQUAL EQUIPMENT EQUIV. EACH WAY EXISTING EXPANSION	K.S.F. K.S.I.	KIPS PER SQUARE FOOT KIPS PER SQUARE INCH	P.C. PL. PREFAB. P.S.F. P.S.I. P.T. PVC. PVMT.	PRE-CAST PLATE PREFABRICATED POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POST-TENSIONED POLYVINYL CHLORIDE PAVEMENT	U.O.N.	UNLESS OTHERWISE NOTED
B BLDG. BM. BOT. BRG. BSMT. BTWN.	BOTTOM BAR(S) BOTTOMMOST BAR(S) BUILDING BEAM(S) BOTTOM BEARING BASEMENT BETWEEN	F.F. FDN. FLR. F.O. FT. FTG. FUT.	FINISH FLOOR FOUNDATION(S) FLOOR FACE OF FOOT OR FEET FOOTING(S) FUTURE	L.E. LLH LLV LSH LSV LONG. LW LO.	LEFT END LONG LEG HORIZONTAL LONG LEG VERTICAL LONG SIDE HORIZONTAL LONG SIDE VERTICAL LONGITUDINAL LIGHTWEIGHT LOW	RAD. R.E. REINF. REV.	RADIUS RIGHT END REINFORCING / REINFORCEMENT REVISION	W/ W.P. WT. W.W.R.	WITH WORK POINT WEIGHT WELDED WIRE REINFORCEMENT
CS C. C.C. C.E. C.I.P. C.J. CL CLG. CLR. CMU C.O. COMP. COL. CONC. CONSTR. CONT. CTR. C.Y.	COLUMN STRIP COURSE(S) CENTER TO CENTER CONTINUOUS END CAST IN PLACE CONTROL JOINT CENTERLINE CEILING CLEAR CONCRETE MASONRY UNIT CLEAR OPENING COMPOSITE COLUMN CONCRETE CONSTRUCTION CONTINUOUS CENTER CUBIC YARD	G.B. GA. GALV. GEN.	GRADE BEAM GAUGE GALVANIZED GENERAL	MS M.O. MAS. MAX. MECH. MTL. MFR. MIN. MISC.	MIDDLE STRIP MASONRY OPENING MASONRY MAXIMUM MECHANICAL METAL MANUFACTURER MINIMUM MISCELLANEOUS	T TM T.&B. T.&G. T.L. T.O. T.O.C.	TOP BAR(S) TOPMOST BAR(S) TOP AND BOTTOM TONGUE AND GROOVE THERMAL LINING TOP OF TOP OF CONCRETE		
		N. N.I.C. NO. OR # NOM. N.T.S.	NORTH NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE						

CONCRETE ANCHOR SCREW SCHEDULE			
ANCHOR DIAMETER	EMBEDMENT DEPTH	MIN. ALLOWABLE LOADS IN 4,000 PSI CONCRETE	
		TENSIO N (lbs)	SHEAR (lbs)
1/4"	1 3/4"	255	540

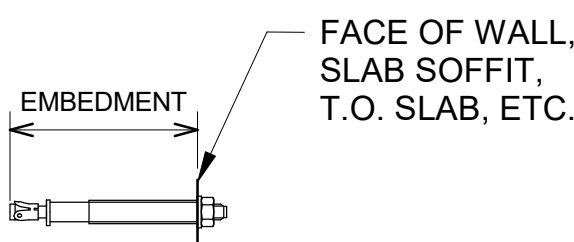


CONCRETE SCREW ANCHOR

### NOTES:

- UNLESS SHOWN AS STAINLESS STEEL, PROVIDE CONCRETE ANCHOR SCREWS THAT ARE MANUFACTURED FROM AISI 1022 STEEL WITH AN EXTENDED CORROSION RESISTANT COATING THAT IS COMPATIBLE WITH GALVANIZED STEEL.
- PROVIDE CONCRETE ANCHOR SCREWS MANUFACTURED BY ITW RAMSET/REDHEAD, OR AN APPROVED EQUIVALENT BY HILTI FASTENING SYSTEMS OR POWERS FASTENERS, INC. (FORMERLY RAWL).

EXPANSION ANCHOR SCHEDULE					
ANCHOR DIAMETER	NOMINAL EMBEDMENT DEPTH	MIN. DESIGN STRENGTHS IN 4,000 PSI CRACKED CONCRETE BEFORE REDUCTIONS			
		TENSION (lbs) NON-SEISMIC LOADING	TENSION (lbs) SEISMIC LOADING	SHEAR (lbs) CONCRETE	SHEAR (lbs) STEEL STRENGTH ONLY, NON-SEISMIC LOADING
3/8"	3"	2,765	2,075	5,950	3,175
1/2"	3 3/4"	4,095	3,070	8,820	5,425
5/8"	4 1/2"	5,590	4,190	12,040	8,030
3/4"	5 1/2"	7,230	5,420	19,250	10,765



EXPANSION ANCHOR

### NOTES:

- PROVIDE STUD TYPE EXPANSION ANCHORS TESTED AND RATED FOR USE IN CRACKED CONCRETE AND LISTED IN ICC-ES EVALUATION REPORTS.
- PROVIDE HILTI KWIK BOLT T22, MANUFACTURED BY HILTI FASTENING SYSTEMS, SIMPSON STRONG-BOLT 2, MANUFACTURED BY SIMPSON STRONG-TIE, OR POWER-STUD® SD4, MANUFACTURED BY DEWALT.
- PROVIDE ZINC-PLATED ANCHORS, U.O.N.
- FOR ALLOWABLE LOADS, MULTIPLY LISTED VALUES BY A FACTOR OF 0.65.

TYPICAL REINFORCING LAP SPlice SCHEDULE										
BAR SIZE	NORMAL WEIGHT CONCRETE								MASONRY	
	FOUNDATION		BEAM		SLAB		WALL		COL.	WALL
	BOT.	TOP	BOT.	TOP	INT.	EXT.	VERT.	HORIZ.	VERT	(1) BAR PER CELL
#3	1'-10"	2'-4"	1'-7"	2'-1"	1'-7"	1'-7"	1'-7"	1'-7"	1'-3"	1'-7"
#4	2'-5"	3'-2"	2'-1"	2'-8"	2'-1"	2'-1"	2'-1"	1'-7"	2'-1"	2'-1"
#5	3'-0"	3-11"	2'-7"	3'-5"	2'-7"	2'-7"	2'-7"	2'-0"	2'-7"	2'-7"
#6	3'-7"	4'-8"	3'-1"	4'-1"	3'-1"	3'-1"	3'-1"	2'-5"	4'-9"	4'-9"
#7	5'-3"	6'-9"	4'-6"	5'-11"	---	---	4'-6"	4'-6"	3'-6"	6'-7"
#8	6'-0"	7'-9"	5'-2"	6'-9"	---	---	5'-2"	5'-2"	4'-0"	---
#9	6'-9"	8'-9"	5'-10"	7'-7"	---	---	5'-9"	5'-9"	4'-6"	---
#10	7'-7"	9'-10"	6'-9"	8'-6"	---	---	---	---	---	---
#11	---	---	7'-3"	9'-5"	---	---	---	---	---	---

### NOTES:

- VALUES SHOWN ARE MIN. LAP SPlice LENGTHS IN NORMAL WEIGHT CONC. OR GROUT FILLED MAS.
- TOP BARS ARE DEFINED AS BARS WITH MORE THAN 12" OF FRESH CONC. BELOW.
- FOR MIN. BAR DEVELOPMENT LENGTH, DIVIDE VALUES SHOWN IN LAP SPlice SCHED. BY 1.3.
- WHEN LAPPING TWO DIFFERENT SIZE BARS, USE THE LAP SPlice DIMENSION OF THE SMALLER BAR OR THE DEVELOPMENT LENGTH OF THE LARGER BAR, WHICHEVER IS LARGER.
- FOR BEAMS AND COLUMNS, VALUES SHOWN APPLY WHERE ALL PROVISIONS OF EITHER ONE OF THE FOLLOWING TWO CASES APPLY:

#### CASE 1

- MIN. CLR. SPACING OF BARS BEING DEVELOPED OR SPliced NOT LESS THAN ONE BAR DIAMETER, AND
- CLR. COVER NOT LESS THAN ONE BAR DIAMETER, AND
- STIRRUPS OR TIES ARE PROVIDED THROUGHOUT REQUIRED LENGTH OF LAP SPlice OR DEVELOPMENT LENGTH.

OR

#### CASE 2

- MIN. CLR. SPACING OF BARS BEING DEVELOPED OR SPliced NOT LESS THAN TWO BAR DIAMETERS.
- CLR. COVER NOT LESS THAN ONE BAR DIAMETER.
- STIRRUPS OR TIES ARE NOT PROVIDED THROUGHOUT REQUIRED LENGTH OF LAP SPlice OR DEVELOPMENT LENGTH.

WHERE ANY OF THESE PROVISIONS WITHIN THE APPLICABLE CASE ARE NOT MET, MULTIPLY VALUES SHOWN IN LAP SPlice SCHEDULE BY 1.5.

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WTCC EWS - FIRE & RESCUE TRAINING CENTER

WAKE TECHNICAL COMMUNITY COLLEGE

5345 ROLESVILLE RD, WENDELL, NC 27591

NCCCS NO. 2303



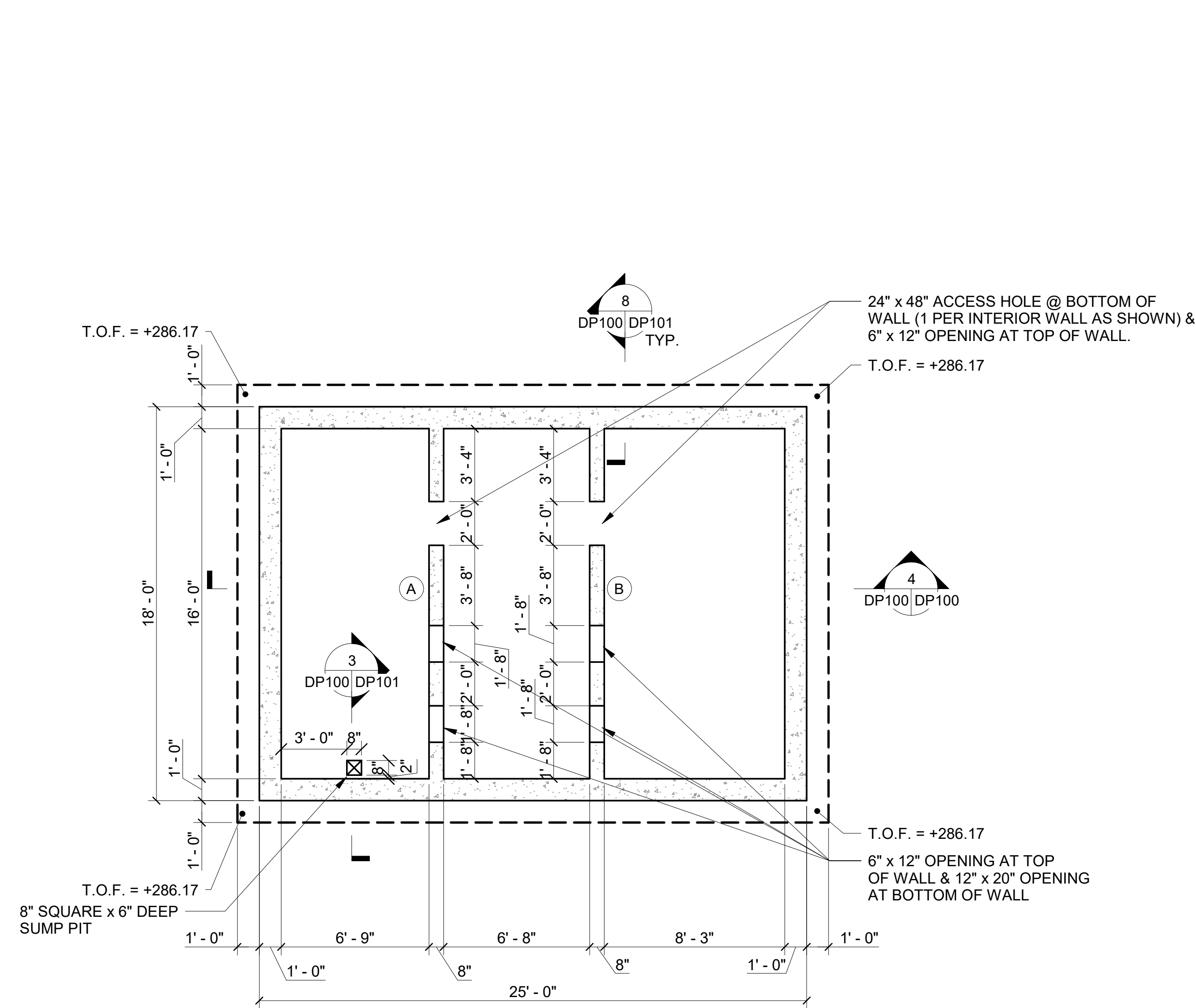
NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**DRAFTING PIT - TABLES, LEGEND & ABBREVIATIONS**

DP002

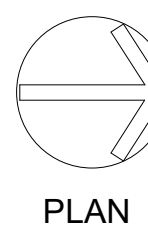
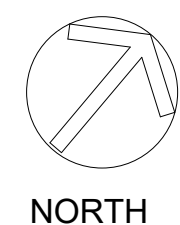


NO.	REVISION	DATE



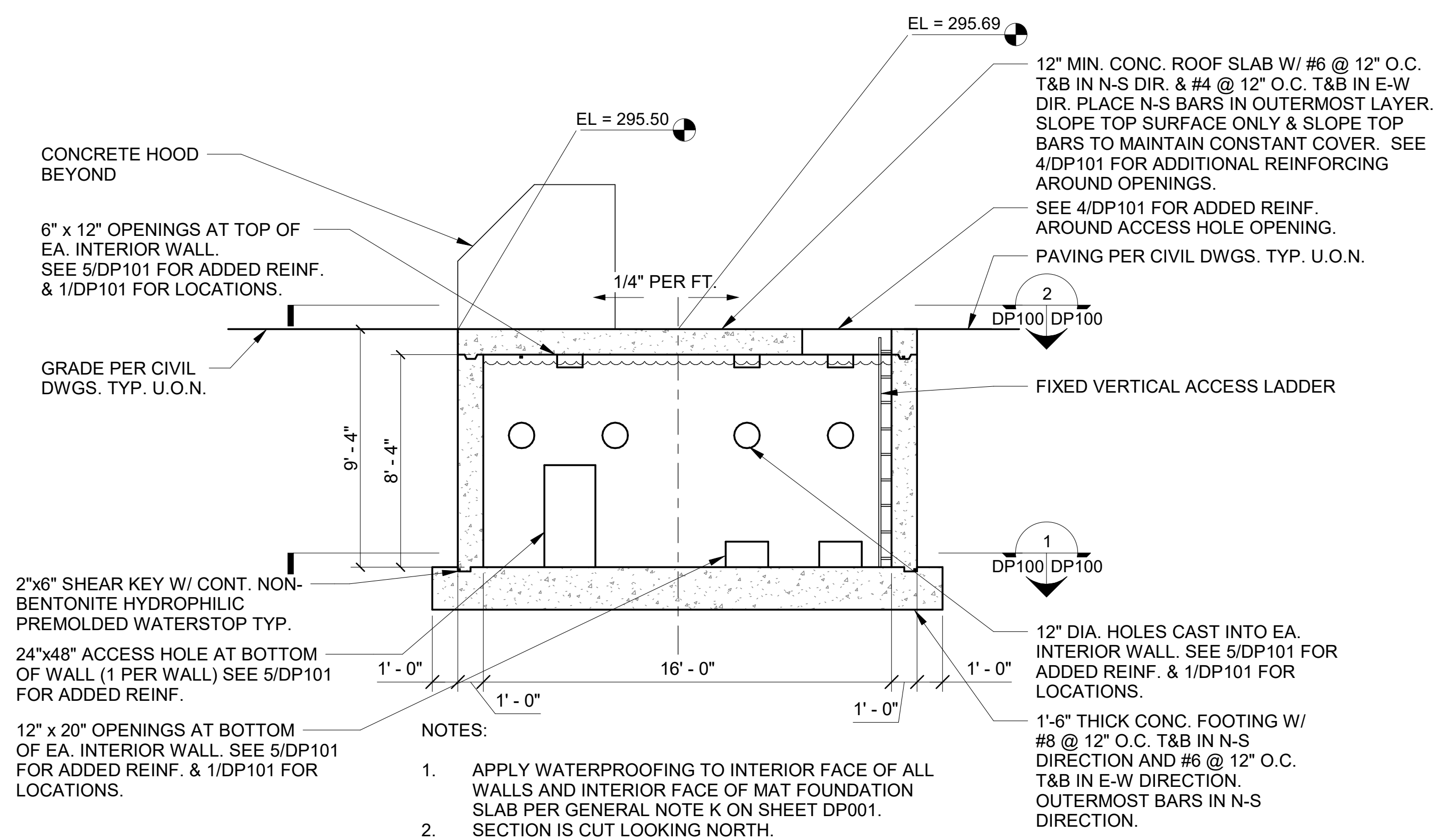
NOTES:

- SEE 1/DP101 FOR ELEVATIONS OF WALLS MARKED THUS ON PLAN (X).



DRAFTING PIT - FOUNDATION PLAN

DP100 DP100 SCALE 1/4" = 1'-0"



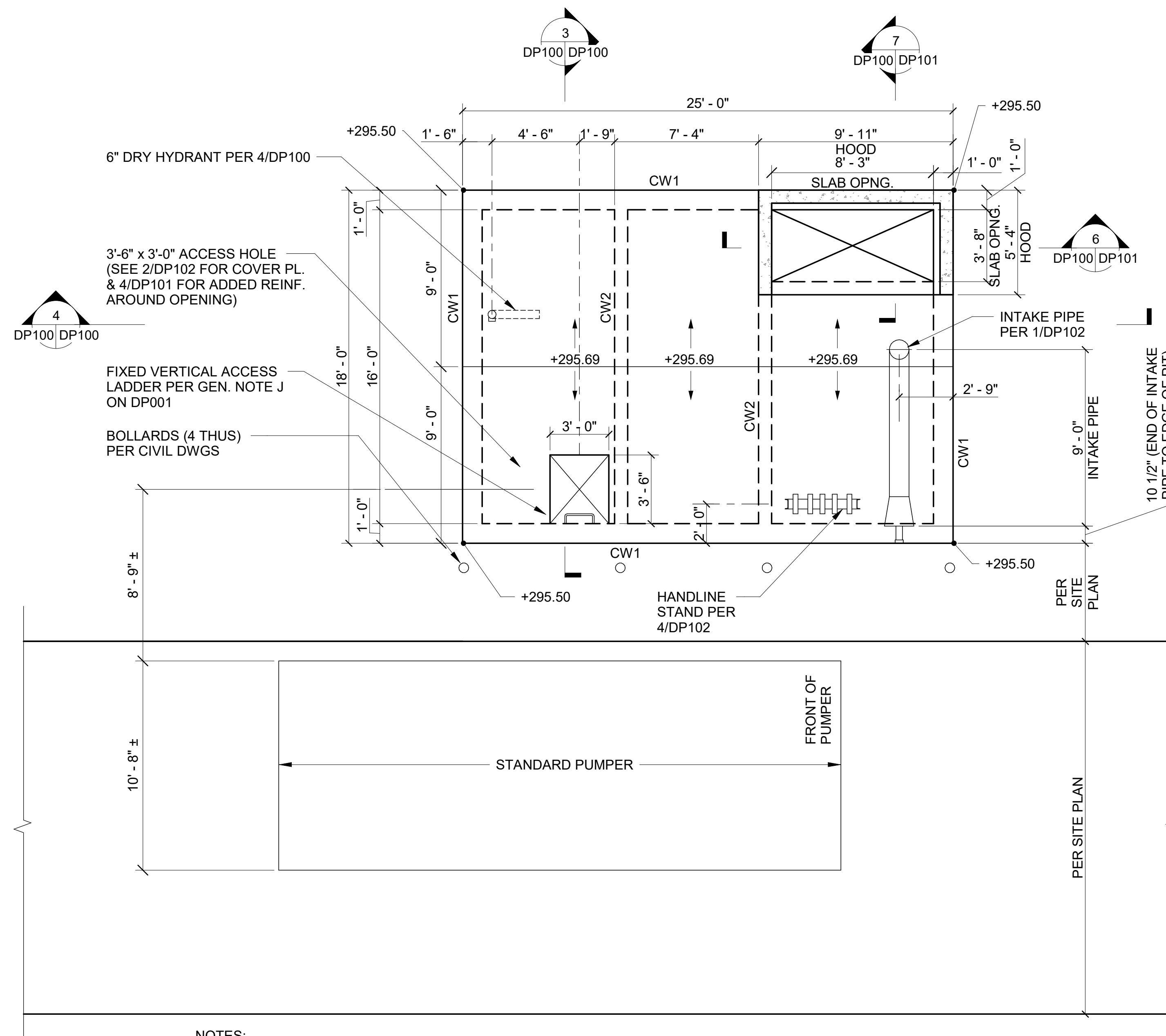
NOTES:

- APPLY WATERPROOFING TO INTERIOR FACE OF ALL WALLS AND INTERIOR FACE OF MAT FOUNDATION SLAB PER GENERAL NOTE K ON SHEET DP001.
- SECTION IS CUT LOOKING NORTH.



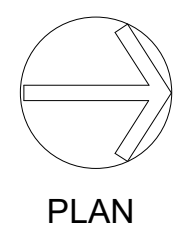
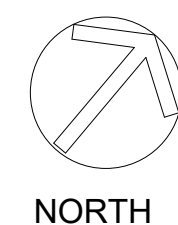
DRAFTING PIT - SECTION

DP100 DP100 SCALE 1/4" = 1'-0"



NOTES:

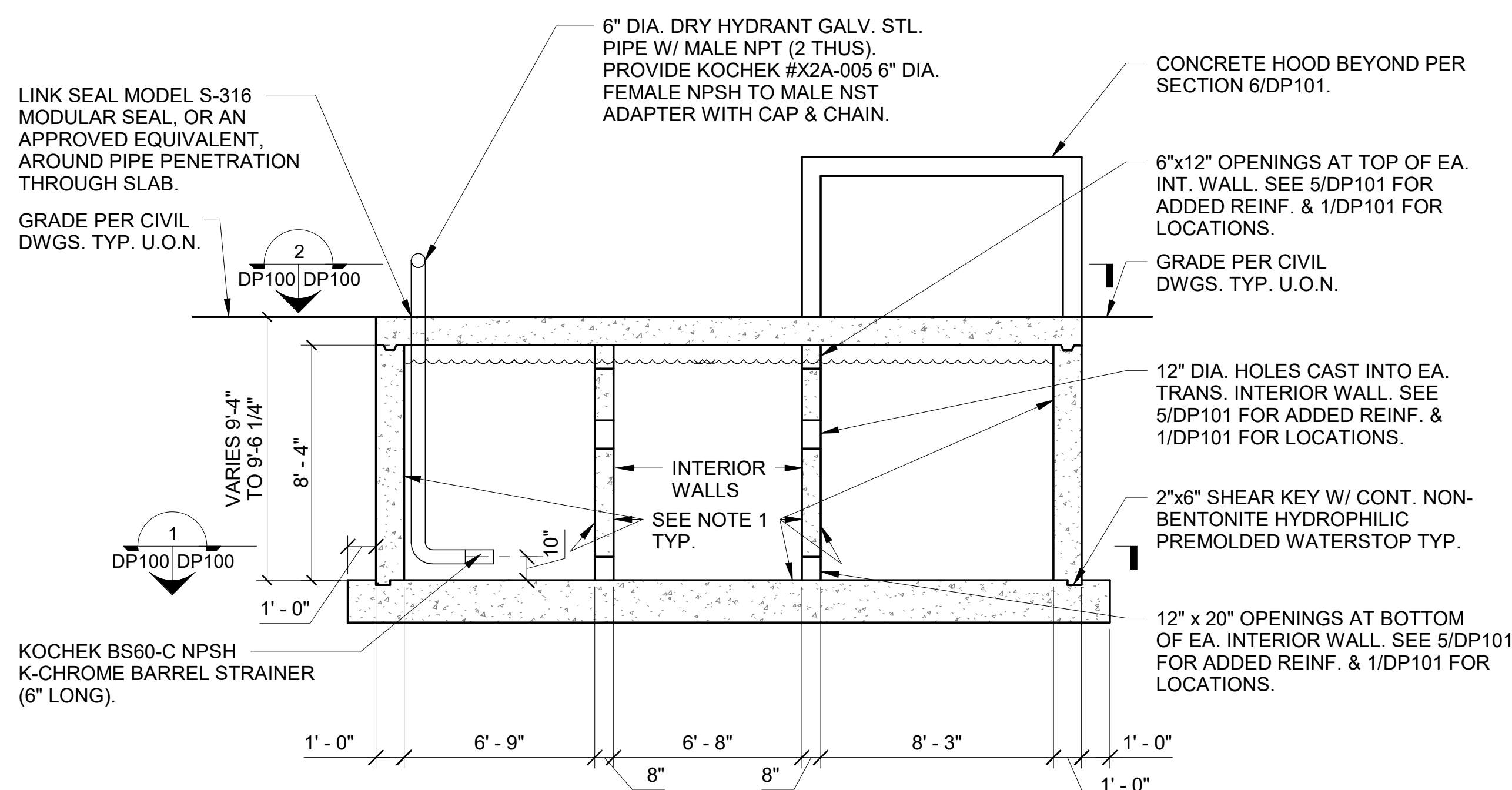
- DISPOSE OF ANY EXCESS, EXCAVATED SOILS THAT ARE NOT USED AS STRUCTURAL FILL ON SITE U.O.N. IN SITE DRAWINGS AND SPECIFICATIONS.
- T.O. PIT ELEVATION = +295.50' AT EAST & WEST EDGES OF PIT COORD. W/CIVIL DWGS.



DRAFTING PIT - PLAN

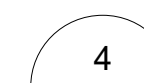
DP100 DP100 SCALE 1/4" = 1'-0"

TANK VOLUME
~ 2,770 CU. FT.
~ 20,750 GALLONS



NOTES:

- APPLY WATERPROOFING TO INTERIOR FACE OF ALL WALLS AND INTERIOR FACE OF MAT FOUNDATION SLAB PER GENERAL NOTE K ON SHEET BB001.
- SECTION IS CUT LOOKING WEST.

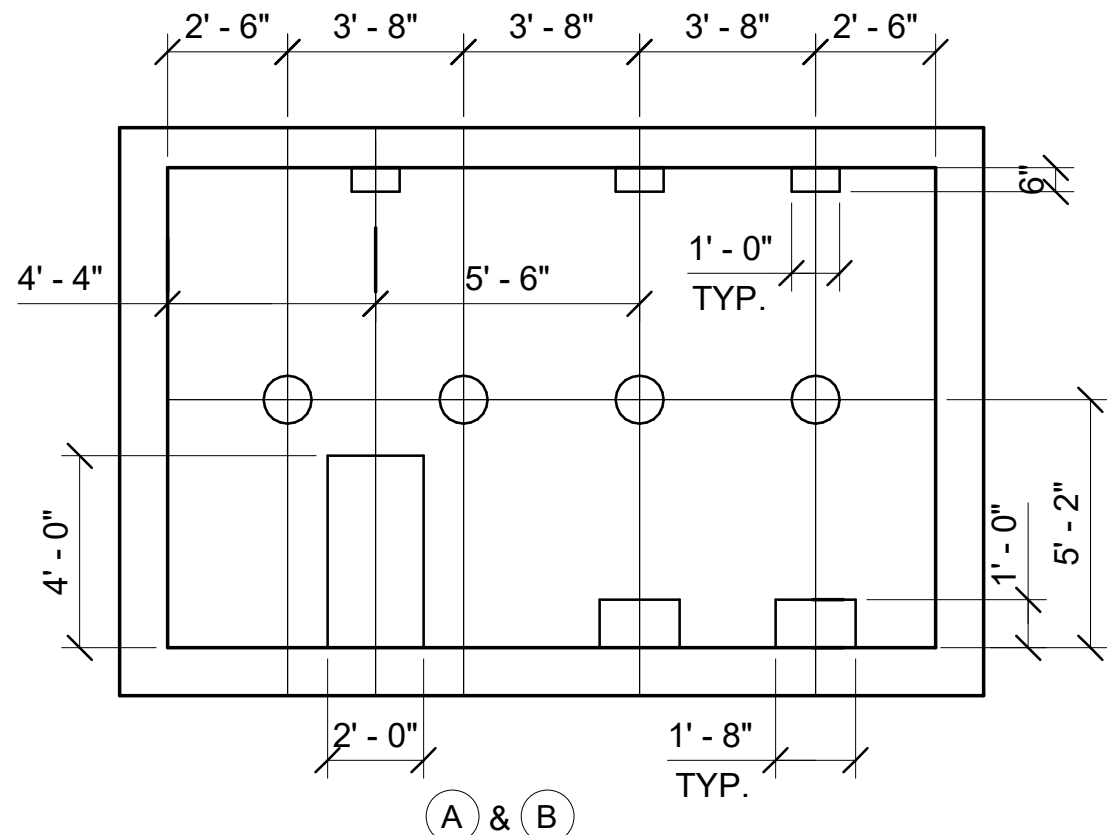


DRAFTING PIT - SECTION

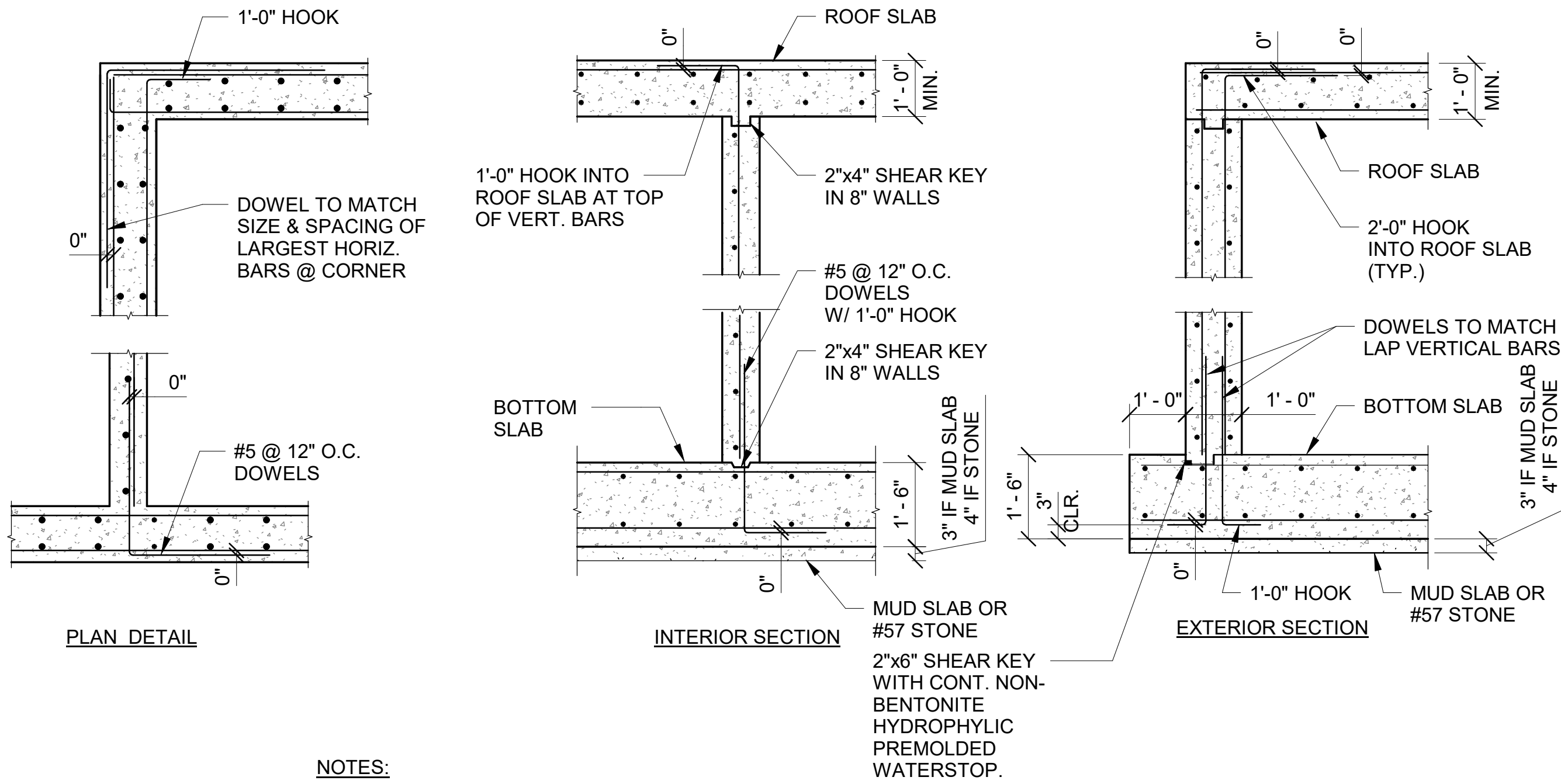
DP100 DP100 SCALE 1/4" = 1'-0"

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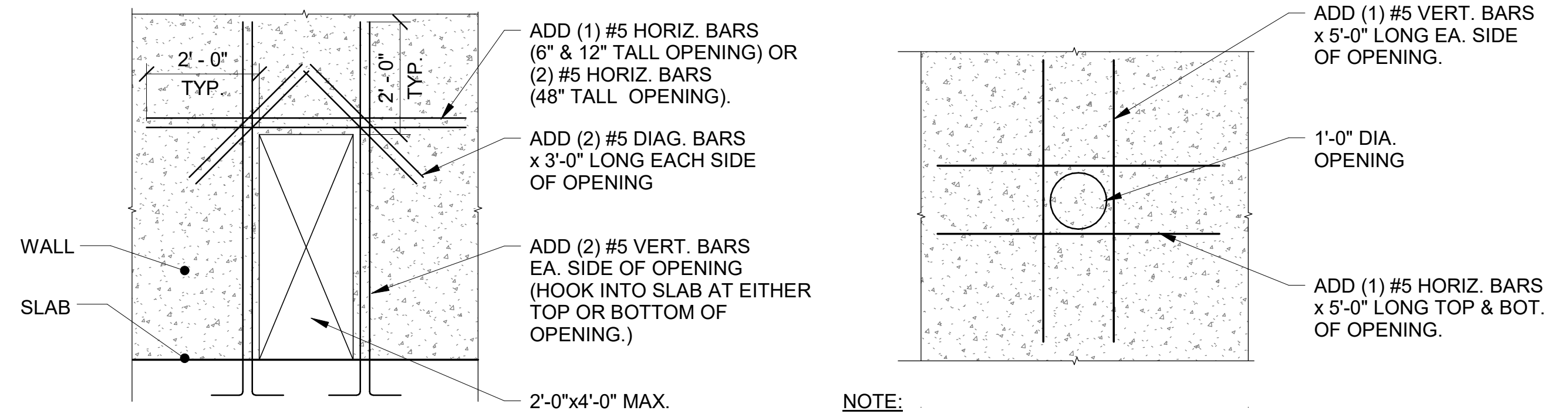
1 WALL ELEVATIONS  
DP100 DP101 SCALE 1/4" = 1'-0"



NOTES:

- SEE PLANS AND SECTIONS ON DP100 AND DP101 FOR WALL, SLAB, AND FOOTING REINFORCEMENT.
- PROVIDE LAP LENGTHS PER LAP SPLICE SCHEDULE ON DP002.

2 WALL DOWEL REINF. DETAILS  
DP100 DP101 SCALE 1/2" = 1'-0"

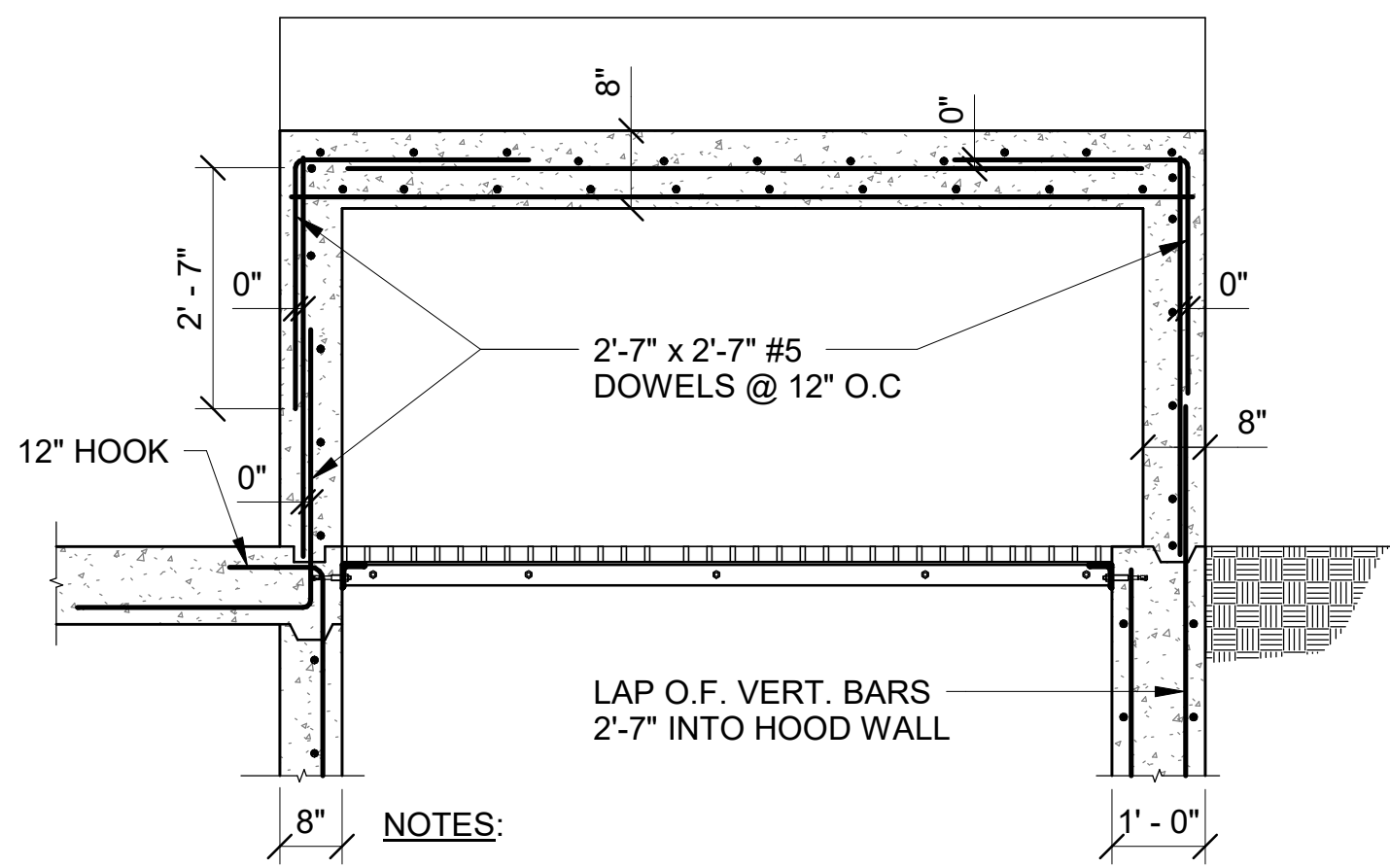


- NOTE:  
ONLY ADDED REINF. IS SHOWN FOR CLARITY.  
SEE WALL SCHEDULE FOR WALL REINF.
- NOTE:  
FOR OPENINGS AT TOPS OF WALLS, TURN DETAIL 180°.

RECTANGULAR OPENINGS @ WALLS

ROUND OPENINGS @ WALLS

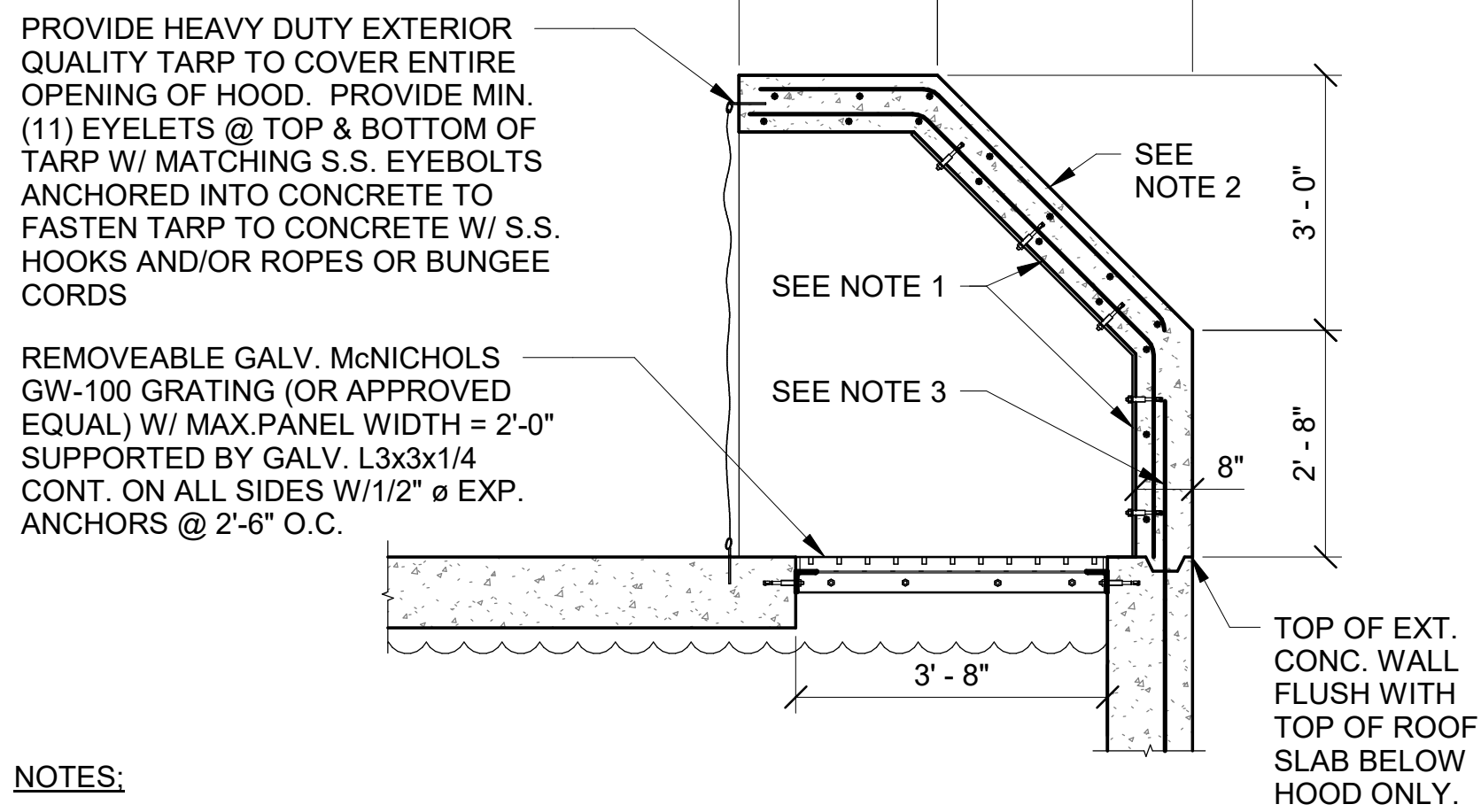
5 ADDED REINF @ WALL OPENING DETAILS  
DP100 DP101 SCALE 1/2" = 1'-0"



NOTES:

- SEE 3/DP100 FOR SLAB REINFORCING.
- SEE 7/DP101 FOR ADDITIONAL INFORMATION.

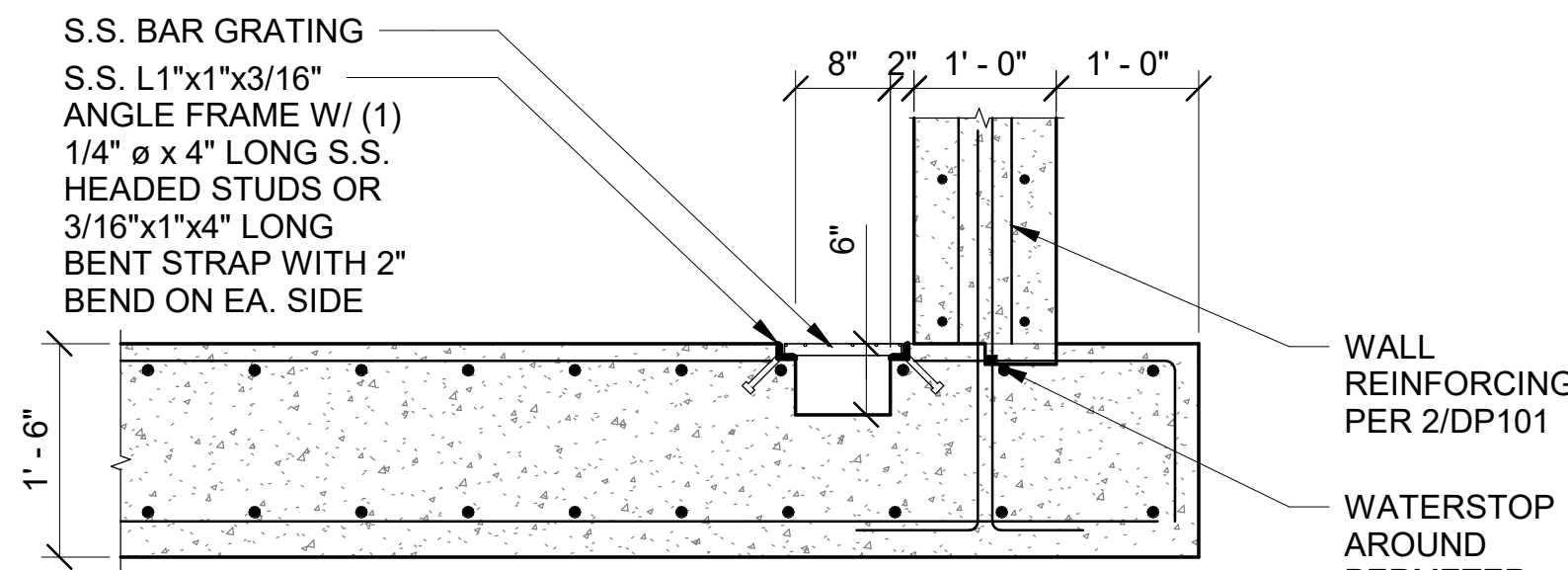
6 SECTION  
DP100 DP101 SCALE 1/2" = 1'-0"



NOTES:

- 3/16" GALV. PL. FASTENED TO CONC. HOOD W/ 1/2" Ø EXP. ANCHORS @ 2'-6" O.C. EACH WAY.
- 8" CONC. HOOD SLAB W/ #5 @ 12" O.C. E.W. BOT. (BOTTOM MOST BARS SPAN N-S.) AND #3 @ 12" O.C. E.W. TOP
- LAP VERT. BARS OF EXT. WALL INTO HOOD WALL 2'-7".

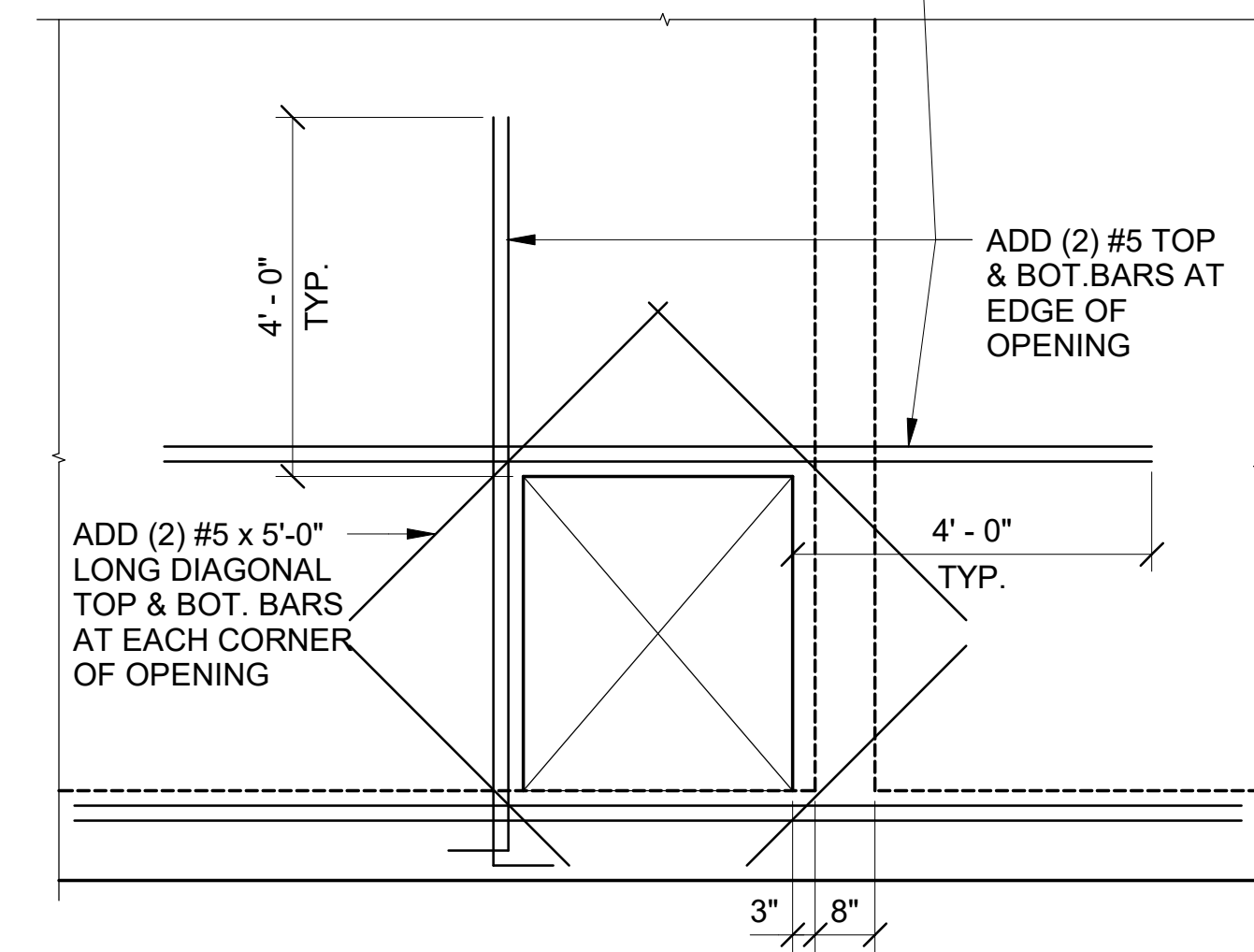
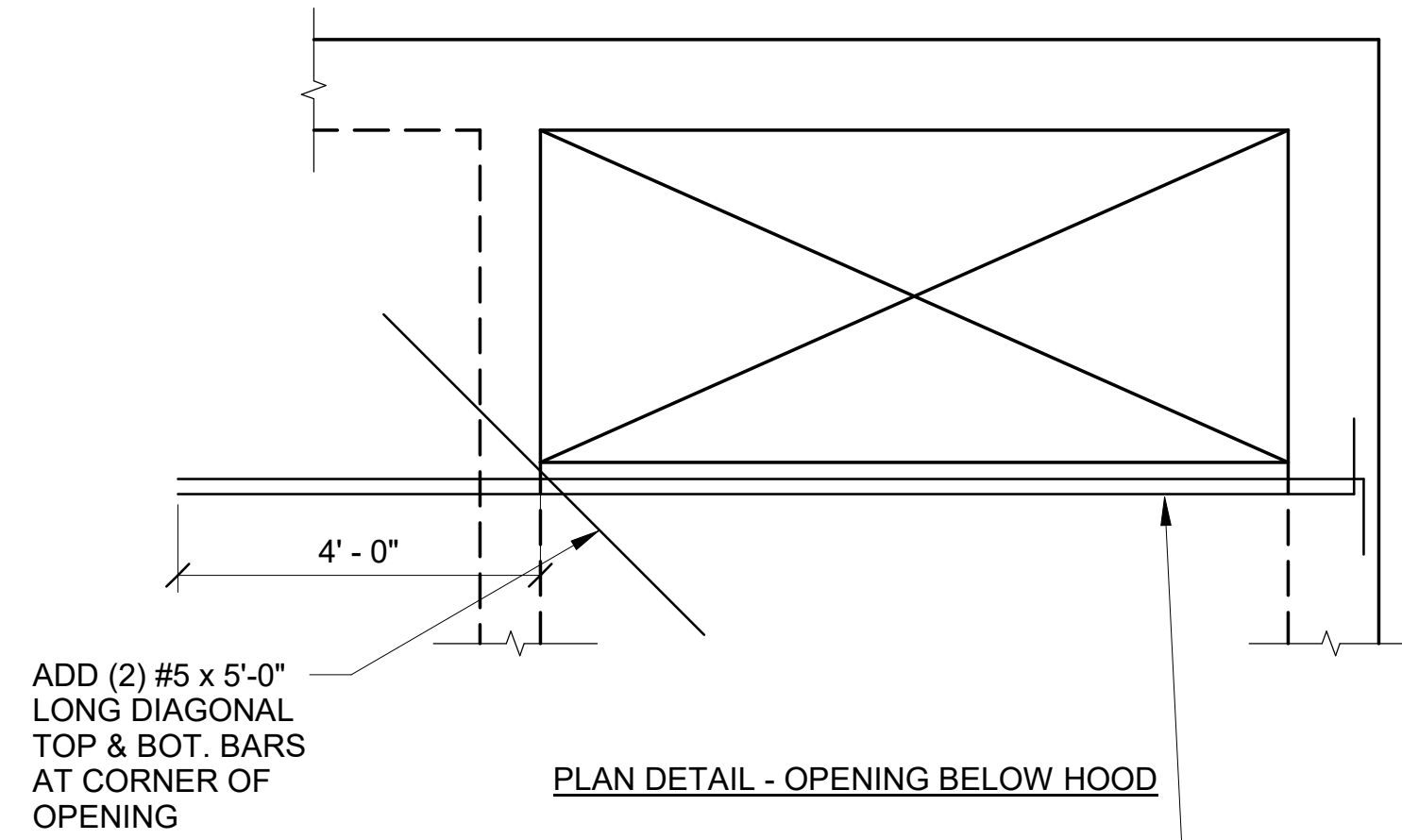
7 SECTION  
DP100 DP101 SCALE 1/2" = 1'-0"



NOTES:

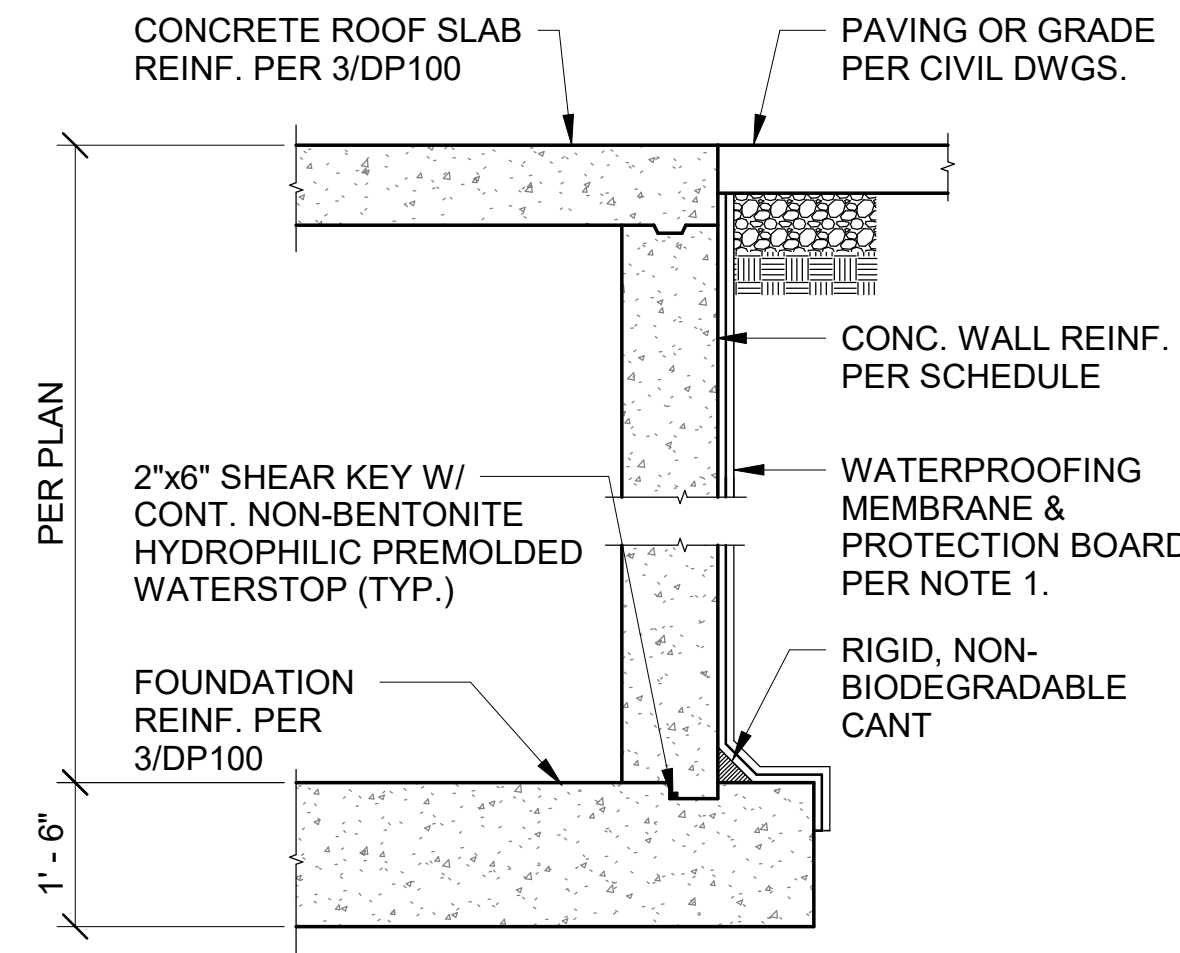
- LOCATE SUMP PIT AT LOCATION SHOWN IN 1/DP100.
- CENTER SUMP PIT BETWEEN TOP BARS IN FOUNDATION SLAB, SO THAT NO BARS ARE INTERRUPTED & ALL BARS HAVE MIN. 1 1/2" CLEAR COVER TO EDGES OF SUMP PIT.

3 SUMP PIT SECTION DETAILS  
DP100 DP101 SCALE 3/4" = 1'-0"



PLAN DETAIL - ACCESS OPENING

4 ADDED REINF. TO ROOF SLAB OPNG. DETAILS  
DP100 DP101 SCALE 1/2" = 1'-0"



NOTES:

- PROVIDE BITUTHENE 3000 WATERPROOFING SYSTEM, BY GCP APPLIED TECHNOLOGIES, OR AN EQUIVALENT APPROVED BY THE ENGINEER.

TYPICAL FOUNDATION SECTION AT DRAFTING PIT WALL

8 SECTION  
DP100 DP101 SCALE 1/2" = 1'-0"



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WTCC EWS - FIRE & RESCUE TRAINING CENTER  
WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



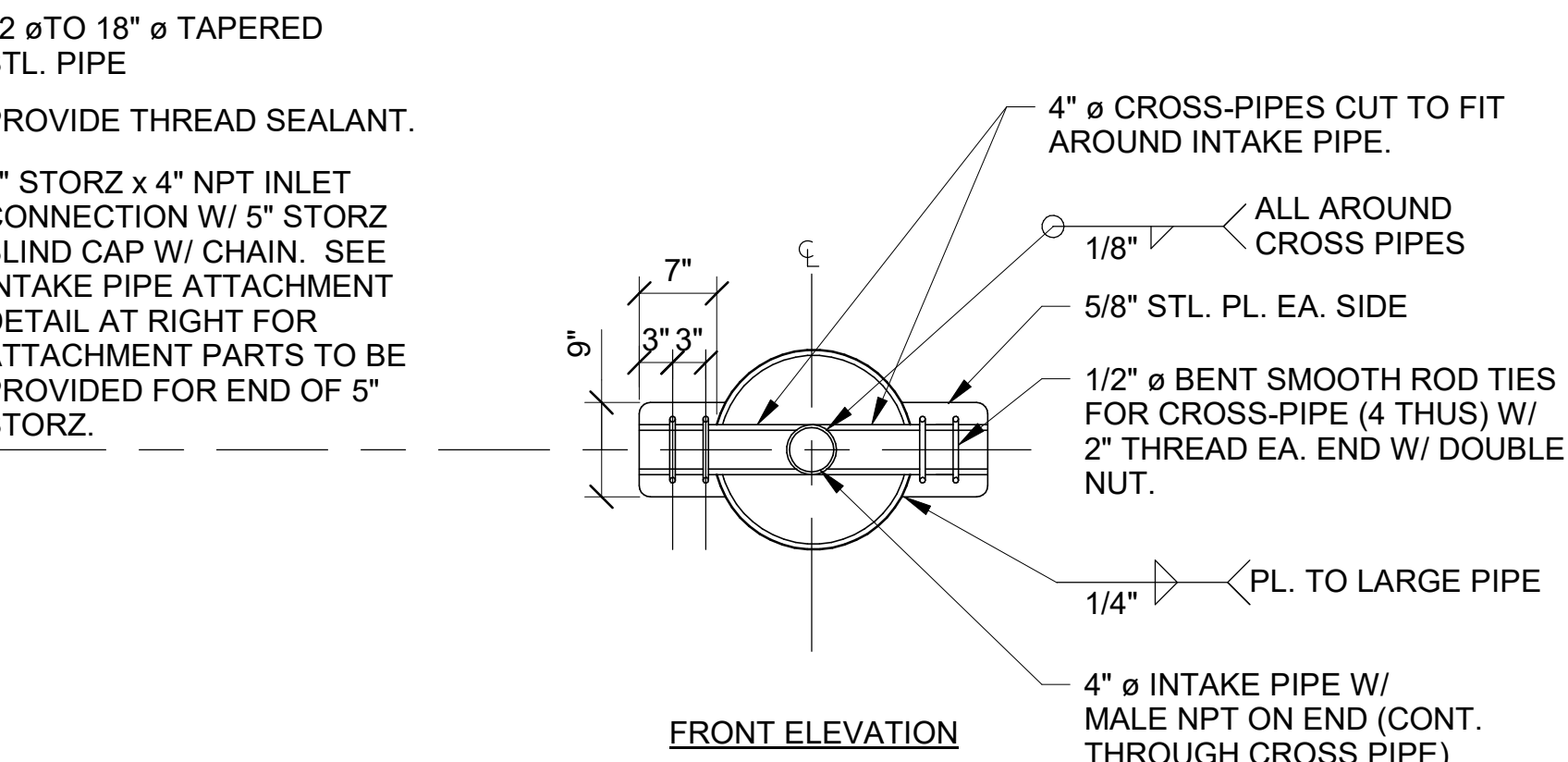
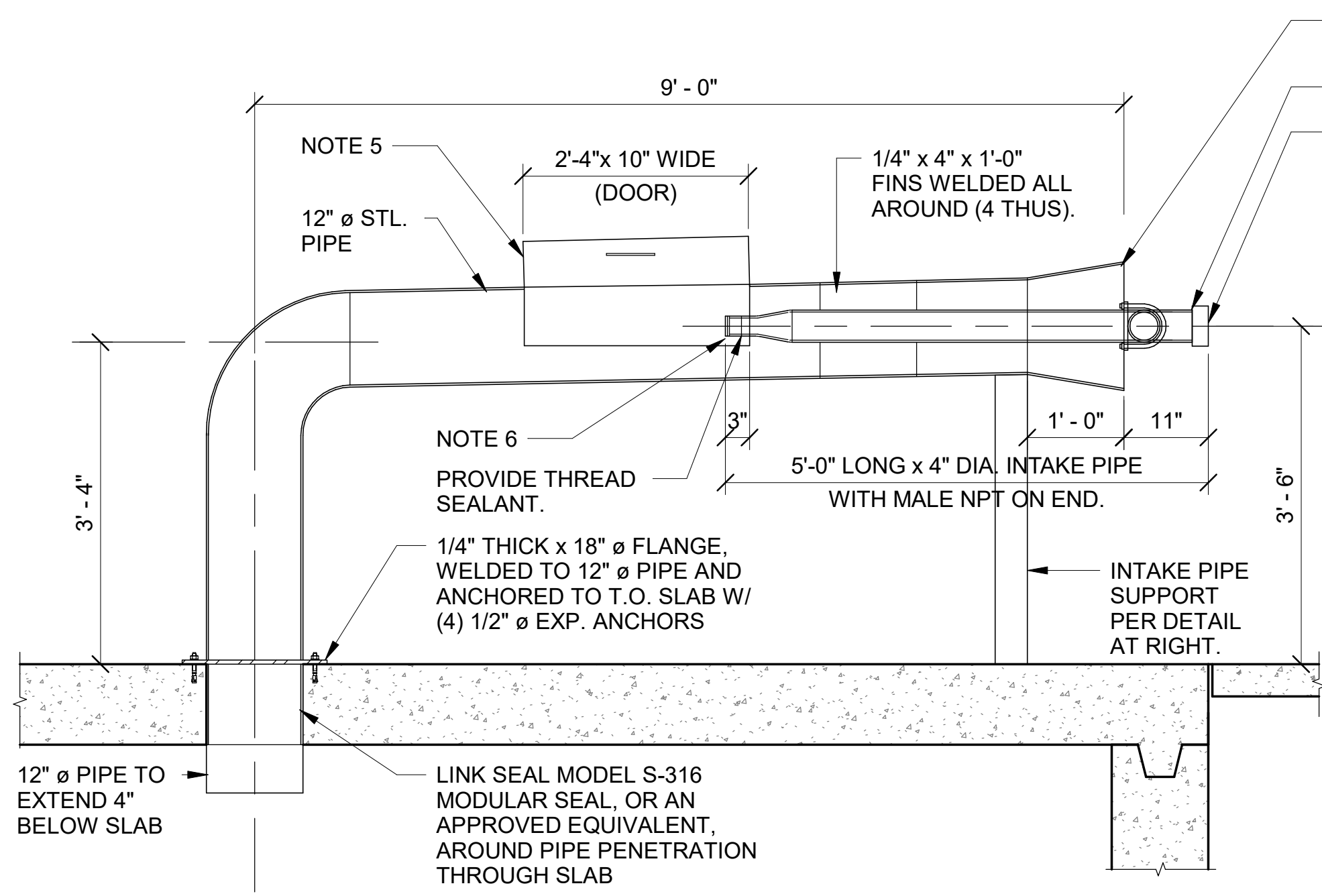
NO.	REVISION	DATE

JOB NUMBER  
22056  
DATE ISSUED  
03/14/25  
PROJECT STATUS  
ISSUE FOR CONSTRUCTION  
SHEET  
DRAFTING PIT - DETAILS

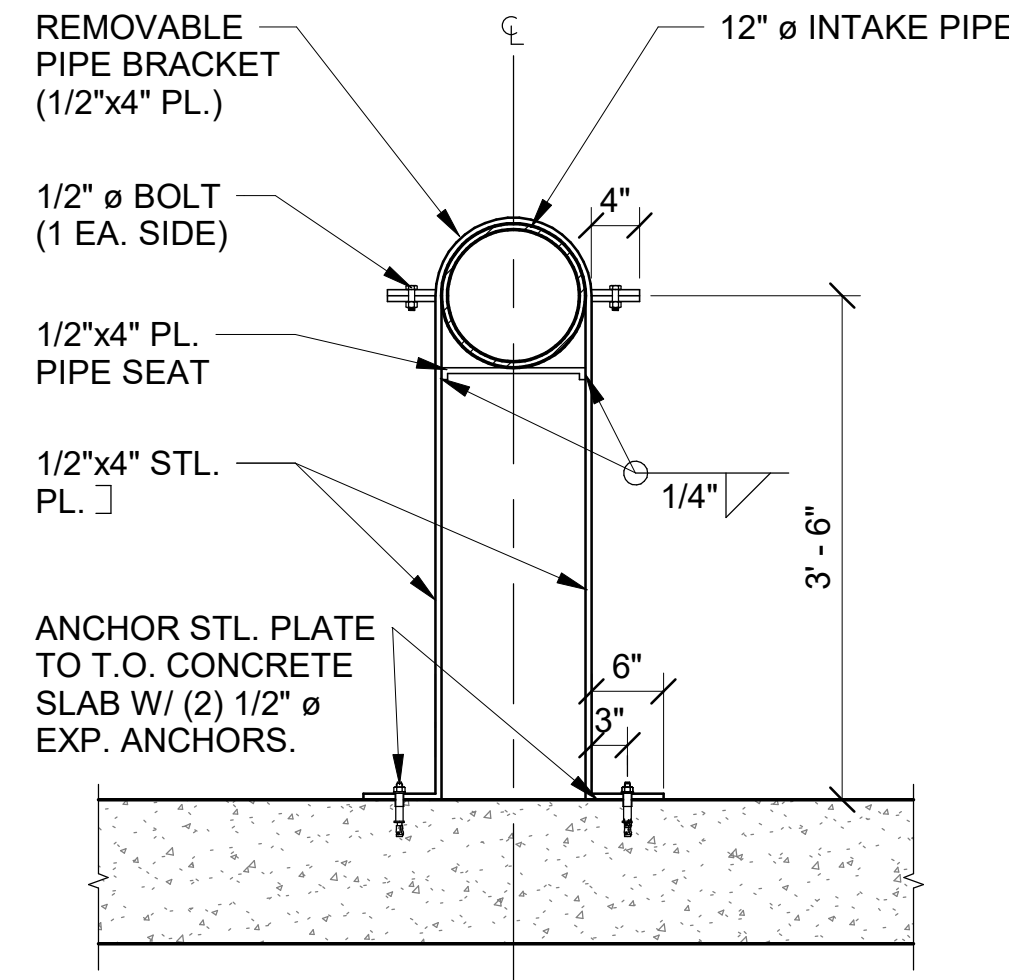
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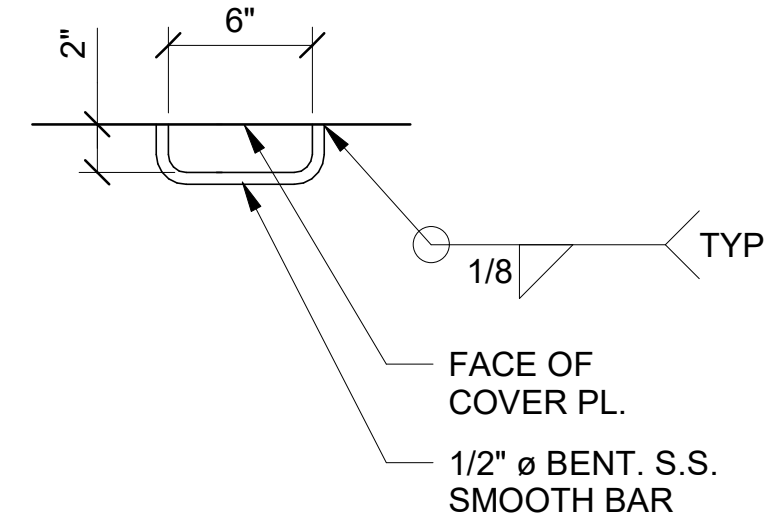
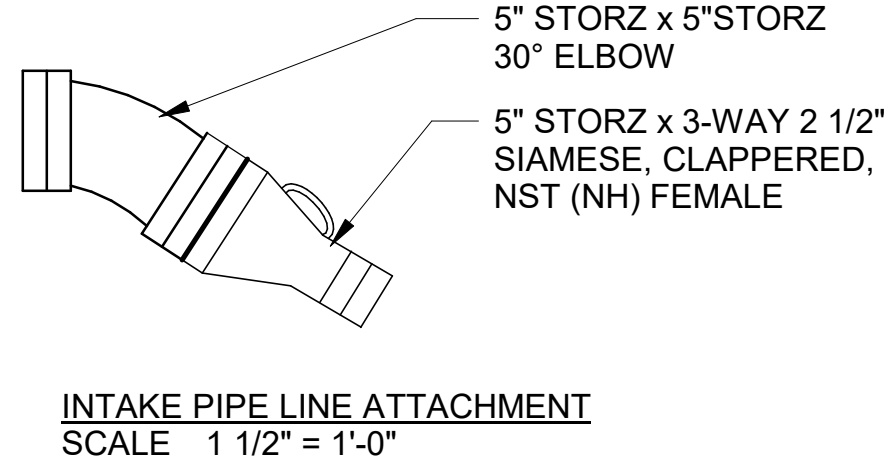




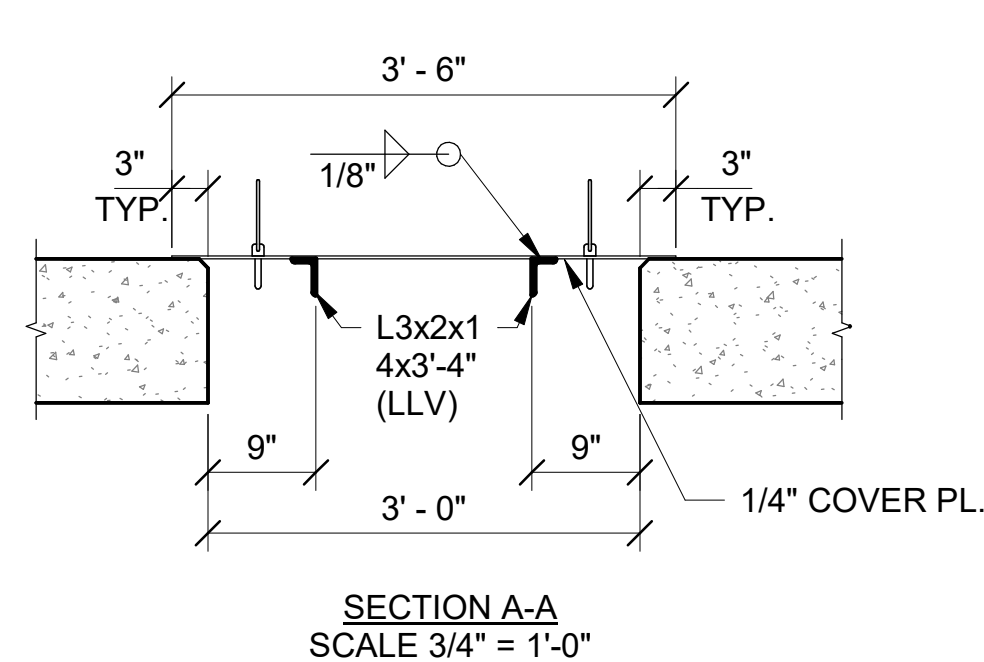
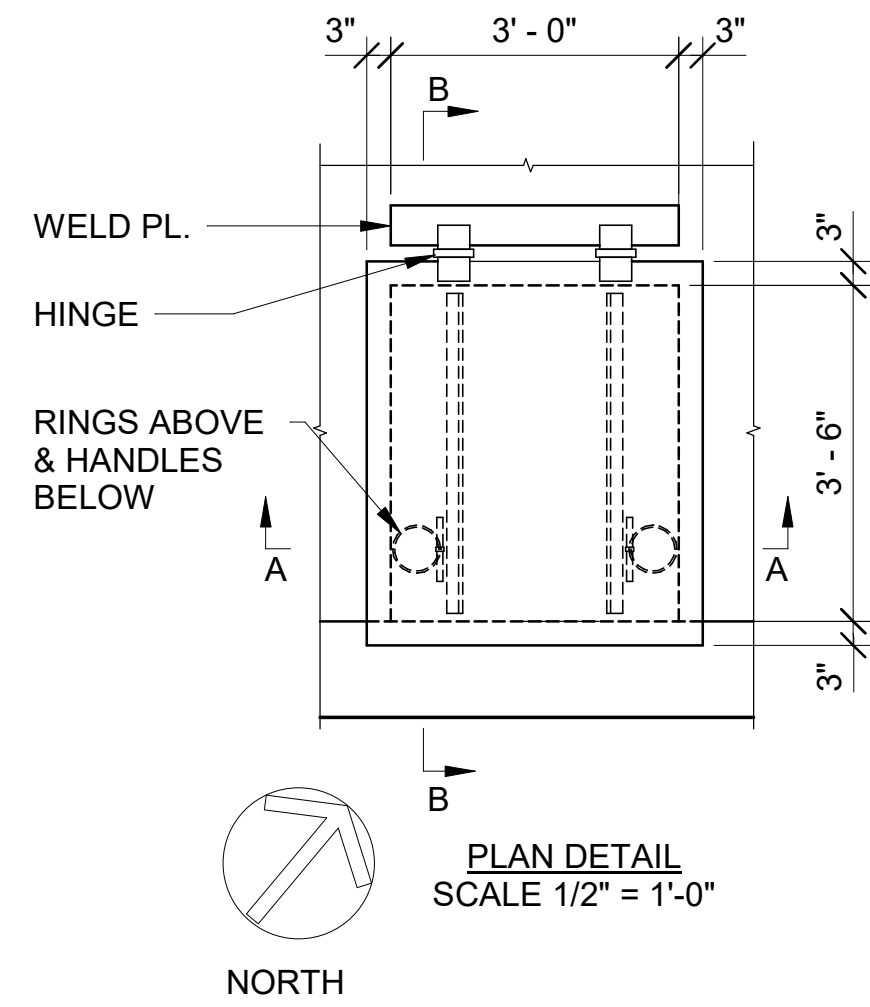
- NOTES:**
1. ALL STEEL SHALL BE GALVANIZED, U.O.N.
  2. ALL CONNECTIONS SHALL BE WELDED.
  3. ALL PIPES SHALL BE SCH. 40, U.O.N.
  4. ALL ADAPTER PARTS SHALL BE KOECHE CO., INC., HARRINGTON, INC., FYRELANE USA, OR AN APPROVED EQUIVALENT.
  5. DOOR CUT OUT OF TUBE. RE-ATTACH W/ (2) ZINC-COATED HINGES. PROVIDE GALV. HANDLE PER DETAIL AT RIGHT. LOCATE HINGES SO THAT DOOR SWINGS TOWARD THE SOUTH.
  6. REDUCE PIPE TO 2 1/2" FOR FLOW TESTING DEVICE W/ MALE NPT ON END. PROVIDE 2 1/2" FEMALE NPSH TO 2 1/2" MALE NST (NH) ADAPTER.



- NOTES:**
1. GALVANIZE ALL ITEMS, U.O.N.
- INTAKE PIPE SUPPORT DETAIL**

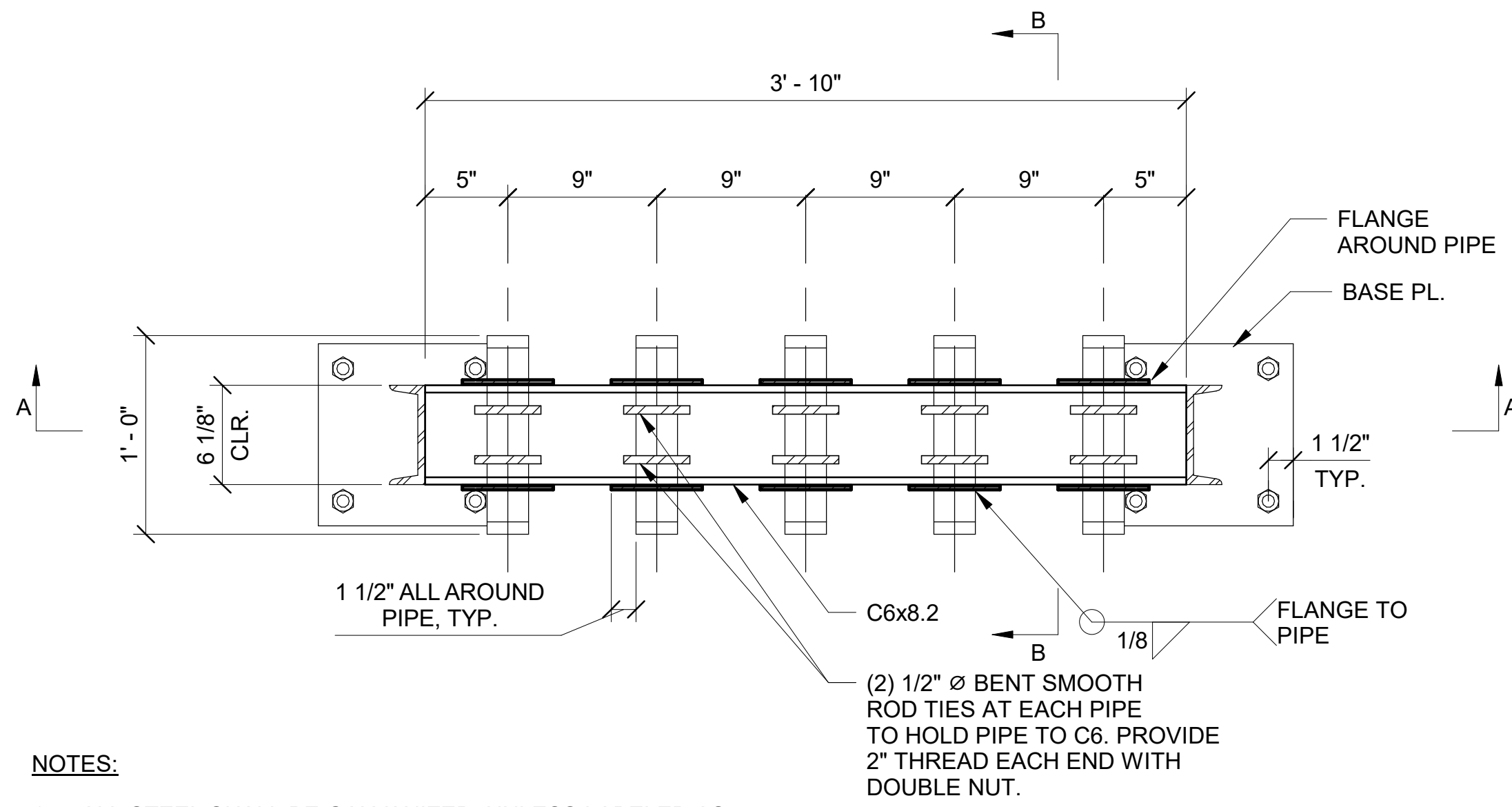
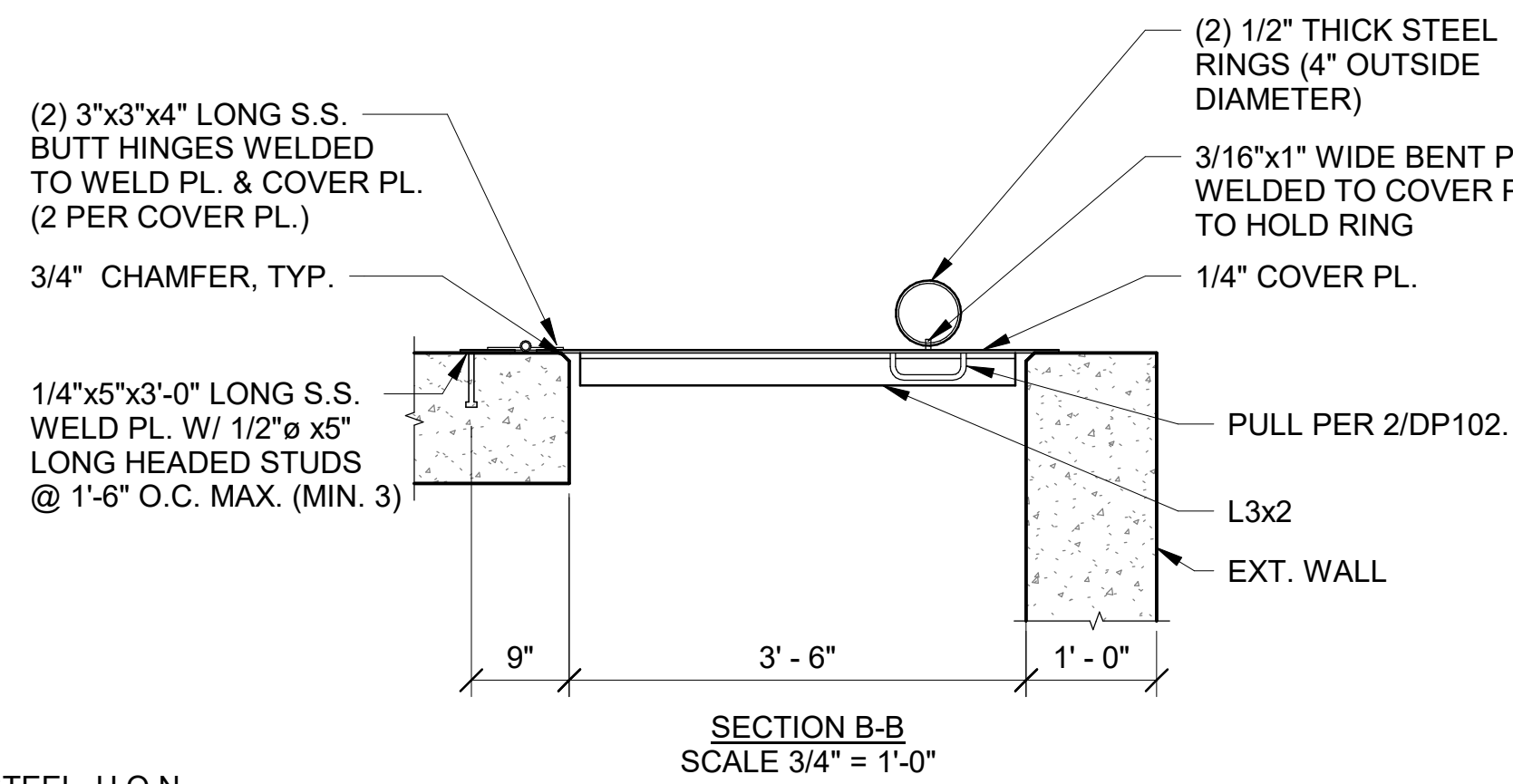


**COVER PULL DETAIL**  
DP102 DP102 SCALE 1 1/2" = 1'-0"



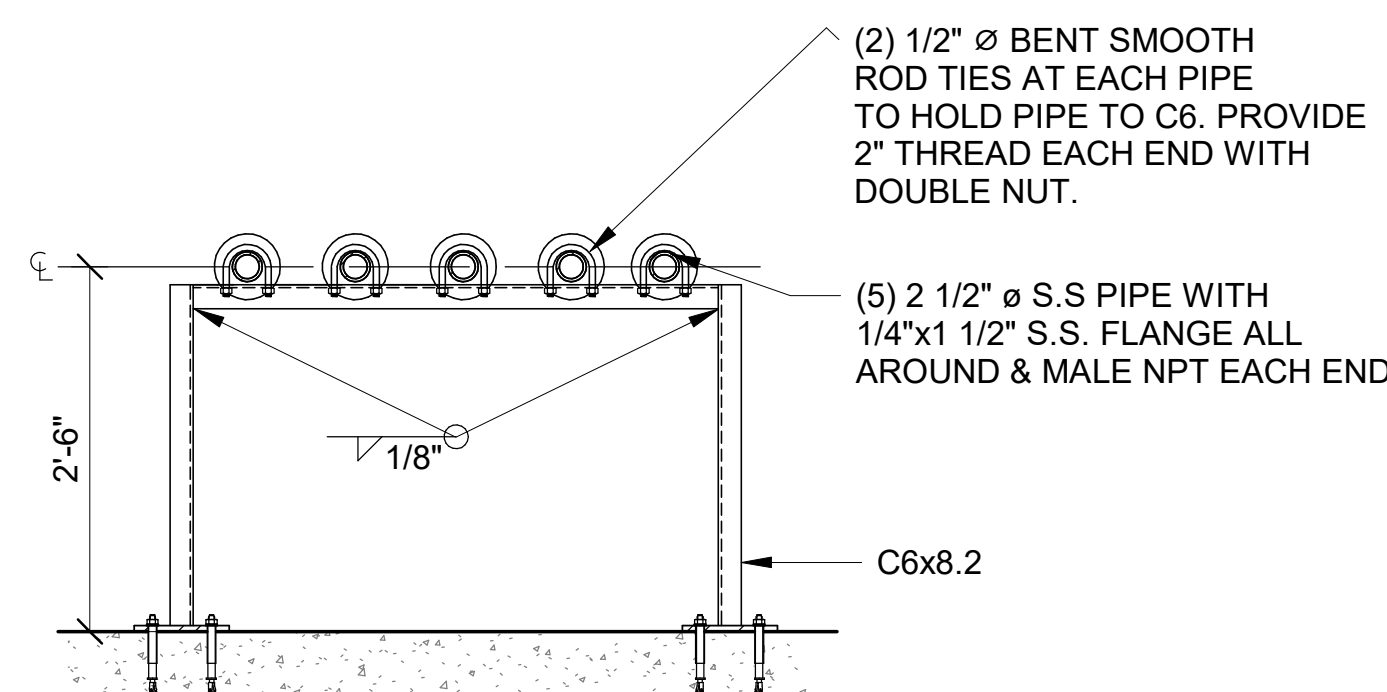
- NOTES:**
1. ALL STEEL TO BE STAINLESS STEEL, U.O.N.

**ACCESS HOLE COVER DETAILS**  
DP100 DP102 SCALE 3/4" = 1'-0"

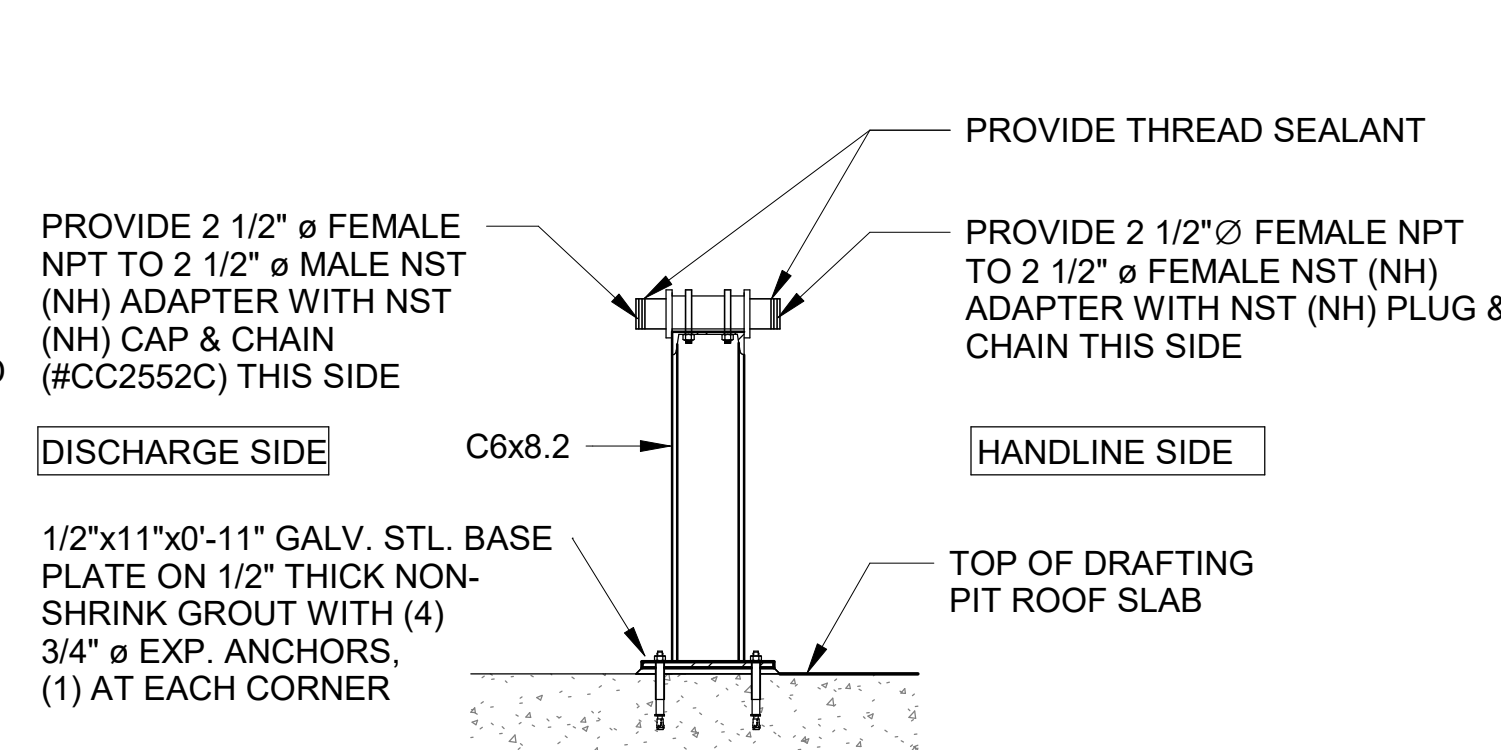


- NOTES:**
1. ALL STEEL SHALL BE GALVANIZED, UNLESS LABELED AS STAINLESS STEEL.

**PLAN DETAIL**  
SCALE 1 1/2" = 1'-0"



**SECTION A-A**

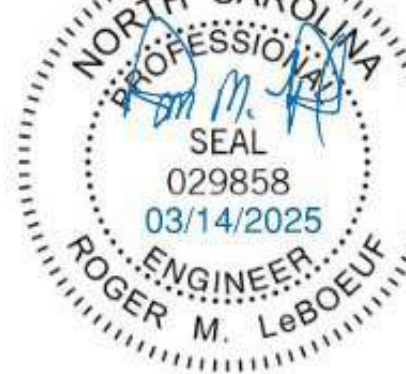


**SECTION B-B**

**HANDLINE STAND DETAILS**  
DP100 DP102 SCALE 3/4" = 1'-0"



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SHEET  
**DRAFTING PIT - DETAILS**

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CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CRITERIA UNLESS OTHERWISE NOTED ON THE DRAWINGS. DO NOT USE THESE DRAWINGS WITHOUT THE ACCOMPANYING SPECIFICATIONS AND RELATED CIVIL AND M/E/P DRAWINGS. FOR ALL ITEMS, SEE THE SPECIFICATIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS. THE MOST STRINGENT REQUIREMENTS GOVERN CONDITIONS COVERED BY BOTH THE DRAWINGS AND THE PROJECT SPECIFICATIONS OR BY CONFLICTING ITEMS.

A. STRUCTURE CLASSIFICATION

- THE BURN BUILDING WILL BE A TRAINING PROP USED BY THE OWNER TO TRAIN ABLE-BODIED FIREFIGHTERS UNDER LIVE FIRE AND OTHER TRAINING SCENARIOS.
- THE BURN BUILDING WILL NOT BE AN OCCUPIED STRUCTURE, EXCEPT DURING TRAINING EXERCISES.
- THE BURN BUILDING IS CLASSIFIED AS MISCELLANEOUS USE GROUP (USE GROUP U).

B. LIVE FIRE TRAINING DESIGN CRITERIA

THE BURN BUILDING HAS BEEN DESIGNED FOR THE FOLLOWING CRITERIA. THE OWNER/USER SHALL IMPLEMENT ADDITIONAL RESTRICTIONS TO ENSURE PERSONNEL SAFETY.

- MAXIMUM SUSTAINED TEMPERATURE DURING LIVE FIRE TRAINING IN BURN ROOMS = 1,000 DEGREES F AT CEILING.
- MAXIMUM TEMPERATURE SPIKE DURING LIVE FIRE TRAINING IN BURN ROOMS = 1,200 DEGREES F AT CEILING.
- ONLY "CLEAN "CLASS A" FUEL MATERIALS SHALL BE USED FOR LIVE FIRE TRAINING IN THE BURN BUILDING.
- LIVE FIRE TRAINING SHALL OCCUR IN BURN ROOMS ONLY. NO FIRES ARE ALLOWED ON THE INTERIOR OR EXTERIOR STAIRS AND LANDINGS, ON THE ROOFS, OR IN OTHER AREAS DESIGNATED AS "NO BURN" IN THE DRAWINGS.
- LIVE FIRE TRAINING SHALL BE IN ACCORDANCE WITH NFPA 1403.
- TRAINING THAT INCLUDES EXPLOSIVES, FIREARMS, OR TEAR GAS SHALL NOT BE PERMITTED WITHIN OR NEAR THE BURN BUILDING.
- ONCE ALL CONCRETE AND MASONRY WORK HAVE BEEN COMPLETED, THE BURN BUILDING SHALL STAND FOR A 2 MONTH MINIMUM CURING PERIOD BEFORE CONDUCTING THE FIRST LIVE FIRE TRAINING EVOLUTION. INSTALLATION OF OTHER TRADES MAY OCCUR DURING THE 2 MONTH CONCRETE AND MASONRY CURING PERIOD.
- THE STRUCTURAL ELEMENTS HAVE BEEN PROTECTED FROM HEAT AND THERMAL SHOCK WITH THERMAL LININGS WHERE SHOWN ON DRAWINGS. NON-BEARING MASONRY WALLS, OTHER NON-STRUCTURAL ITEMS, AND STRUCTURAL ELEMENTS AT SOME LOCATIONS ARE NOT PROTECTED WITH THERMAL LININGS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- ITEMS NOT PROTECTED WITH THERMAL LININGS, BUT EXPOSED TO TEMPERATURES GREATER THAN 150 DEGREES F, ARE EXPECTED TO GRADUALLY DETERIORATE WITH EVERY EVOLUTION. MAINTENANCE WILL BE REQUIRED ON ALL COMPONENTS AND SHOULD BE INCLUDED IN ANNUAL BUDGETS.
- FIRES SHOULD BE PLACED AWAY FROM DOORS, SHUTTERS, AND ROOF OPENINGS TO REDUCE DETERIORATION OF THOSE ITEMS.
- FIRES SHOULD BE PLACED ON BURN RACKS, AS SHOWN IN DETAIL 3/BB610. THE INTENT IS TO MINIMIZE THE HEAT AT THE FLOOR LEVEL AND TO MINIMIZE THE AMOUNT OF FIRE AND COALS THAT SIT DIRECTLY ON THE FLOOR.
- THE TEMPERATURES AND HEAT ENERGY WITHIN THE BURN BUILDING DURING LIVE FIRE TRAINING EVOLUTIONS ARE EXPECTED TO BE HIGHER THAN THOSE FROM OTHER BUILDING FIRES. THE OWNER/USER SHALL ESTABLISH AND ENFORCE STANDARD OPERATING PROCEDURES THAT ADDRESS FUEL LOADS AND HEAT ENERGY, MAINTAIN A SAFE TRAINING ENVIRONMENT FOR PERSONNEL, MINIMIZE HEAT EXPOSURE AT STRUCTURAL ELEMENTS THAT ARE NOT PROTECTED WITH THERMAL LININGS, AND PROMOTE DURABILITY OF THE BURN BUILDING AND ITS COMPONENTS.
- IT IS ASSUMED THAT OWNER WILL TEST ROPE TIE-OFF POINTS PER OSHA REQUIREMENTS AND WILL VISUALLY CONFIRM THAT NUTS AND BOLTS ARE TIGHT AT ALL ROPE TIE-OFF ASSEMBLIES ON EACH TRAINING DAY THAT USES THOSE TIE-OFF POINTS.

C. CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS GOVERN THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF STRUCTURAL WORK PERFORMED ON THIS PROJECT:

- 2018 NORTH CAROLINA STATE BUILDING CODE (BASED ON INTERNATIONAL BUILDING CODE (IBC-2015), INTERNATIONAL CODE COUNCIL (ICC).
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-10), AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - AISC 360-10, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, EXCEPT AS MODIFIED BY NCSBC.
- STRUCTURAL WELDING CODE - STEEL (AWS D1.4-2011), AMERICAN WELDING SOCIETY (AWS), EXCEPT AS MODIFIED BY NCSBC.
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI-318-14), AMERICAN CONCRETE INSTITUTE (ACI), EXCEPT AS MODIFIED BY NCSBC.
- SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-16), AMERICAN CONCRETE INSTITUTE (ACI).
- MANUAL OF STANDARD PRACTICE FOR CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES, THE MASONRY SOCIETY (TMS) TMS 402-13/TMS 602-13, AND BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, AMERICAN CONCRETE INSTITUTE (ACI) ACI 530-13, EXCEPT AS MODIFIED BY NCSBC.
- STANDARD ON FACILITIES FOR FIRE TRAINING AND ASSOCIATED PROPS (NFPA 1402-2019), NATIONAL FIRE PROTECTION ASSOCIATION.

D. DESIGN GRAVITY LOADS

LIVE LOADS:

- FLOORS: 50 PSF
- STAIRS: 100 PSF
- ROOFS: 50 PSF
- SLAB EDGES AND EAVES: NON-CONCURRENT POINT LOADS OF 750 POUNDS.
- NO LIVE LOAD REDUCTIONS TAKEN.

DEAD LOADS:

- CMU PARTITIONS: 80 PSF
- FIRE BRICK ON TOPS OF FLOORS: 25 PSF
- THERMAL LININGS ON CEILINGS, WALLS, AND COLUMNS: 30 PSF

E. DESIGN SNOW LOADS

- GROUND SNOW LOAD (Pg) = 15 PSF
- FLAT ROOF SNOW LOAD (Pf) = 15 PSF
- SNOW DRIFT LOAD (Ps) = 34.2 PSF
- SNOW EXPOSURE FACTOR (Ce) = 1.0
- THERMAL FACTOR (Ci) = 1.2
- SNOW LOAD IMPORTANCE FACTOR (Is) = 1.0

F. DESIGN WIND LOADS

- RISK CATEGORY II
- BASIC WIND SPEED = 115 MPH
- WIND LOAD IMPORTANCE FACTOR (Iw) = 1.0
- INTERNAL PRESSURE COEFFICIENT = +0.55 / -0.55
- WIND EXPOSURE CATEGORY = C
- WIND DESIGN PRESSURE (P) FOR THE MAIN WIND RESISTING SYSTEM = 41.4 PSF (WINDWARD & LEEWARDED COMBINED) AT HIGHEST POINT.
- WIND DESIGN PRESSURE (P) FOR BUILDING COMPONENTS AND CLADDING = +49.5 PSF/-71.5 PSF ON CMU INFILL WALLS (50 PSF).

G. SEISMIC DESIGN DATA

- RISK CATEGORY II
- SEISMIC IMPORTANCE FACTOR (Ie) = 1.0
- SITE CLASS = D
- SPECTRAL RESPONSE ACCELERATIONS: Ss 0.147, S1 = 0.074
- SPECTRAL RESPONSE COEFFICIENTS: Sds 0.157, S1 = 0.118
- SEISMIC DESIGN CATEGORY = B
- BASIC SEISMIC FORCE-RESISTING SYSTEM: BEARING WALL SYSTEM - ORDINARY REINFORCED CONCRETE SHEAR WALLS (A.2)
- RESPONSE MODIFICATION COEFFICIENT (R) = 4.0
- DEFLECTION AMPLIFICATION FACTOR (Cd) = 4.0
- OVERSTRENGTH FACTOR (Qs) = 2.5
- DESIGN BASE SHEAR (V) =0.0392 x W

H. DATUM AND BUILDING ELEVATIONS

- THE DATUM FOR THE BURN BUILDING IS THE TOP OF THE FIRST FLOOR CONCRETE SLAB AT THE EXTERIOR FACE OF THE EXTERIOR WALLS AT THE LOWEST POINT AND IS DESIGNATED ON THE DRAWINGS AS 0.00 FEET.
- THE DATUM ELEVATION IS 294.00 FEET.
- ALL TOP OF SLAB ELEVATIONS ARE SHOWN IN THE PLANS AS +XX.XX OR -XX.XX IN FEET RELATIVE TO THE DATUM.

I. SOILS INFORMATION

- THE FOLLOWING INFORMATION IS BASED ON THE GEOTECHNICAL REPORT ("SOILS REPORT") PREPARED BY NV5 ENGINEERS AND CONSULTANTS, INC. DATED JANUARY 11, 2024.
- ACCORDING TO THE SOILS REPORT, SOFT/LOOSE NEAR SURFACE SOILS (APPROXIMATELY 3 FEET DEEP) OVERLAY CLAYS, SILTS, AND SANDS (VARYING FROM 3 FEET TO 25 FEET) AND PARTIALLY WEATHERED ROCK AND ROCK (IN ONE BORING AT 8 FEET).
- ALLOWABLE SOIL BEARING VALUE FOR THE BURN BUILDING IS 2,500 PSF
- ACCORDING TO THE SOILS REPORT, GROUND WATER WAS NOT OBSERVED WITHIN THE BORINGS AT THE BURN BUILDING (B-8 & B-9). SEE SOILS REPORT FOR DRAINAGE CONSIDERATIONS.
- SEE SPECIFICATIONS FOR EARTHWORK REQUIREMENTS, INCLUDING REPLACEMENT OF UNSUITABLE SOILS, MEASURES TO PREVENT INFILTRATION OF RUNOFF AND PRECIPITATION INTO UNDERLYING SOILS AND DEWATERING REQUIREMENTS IF GROUNDWATER IS ENCOUNTERED.

J. FOOTINGS

- EXTEND TOPS OF ALL FOOTINGS TO A MINIMUM OF 1'-6" BELOW EXTERIOR FINISHED GRADE, U.O.N.
- FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED, NATURAL, ACCEPTABLE SOILS OR ON COMPACTED ENGINEERED FILL PLACED OVER THE NATURAL, ACCEPTABLE SOILS.
- ACCORDING TO THE SOILS REPORT, AS MUCH AS 3'-0" OF COMPACTED ENGINEERED FILL OR ABC STONE COULD BE REQUIRED BELOW FOUNDATIONS TO REPLACE SOFT/LOOSE NEAR SURFACE SOILS.
- EXTEND ANY OVER-EXCAVATION AND ENGINEERED FILL AREA LATERALLY BEYOND THE FOUNDATION FOOTPRINT TO A DISTANCE EQUAL TO THE DEPTH OF THE ENGINEERED FILL BENEATH THE FOOTING.
- FOOTING SUBGRADES AND ENGINEERED FILL SHALL BE APPROVED BY THE TESTING AGENCY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE FOOTINGS AND ENGINEERED FILL.

K. BACKFILL COMPACTION

- EXCAVATE, PROOFROLL, BACKFILL, AND COMPACT FOUNDATION AND SLAB-ON-GRADE SUBGRADES PER THE EARTHWORK SPECIFICATION SECTIONS 312000.
- ALL PROOFROLLING AND ENGINEERED OR IMPORTED FILL MATERIALS AND PLACEMENT SHALL BE OBSERVED AND APPROVED BY THE TESTING AGENCY GEOTECHNICAL ENGINEER.
- PROVIDE FILL MATERIALS THAT ARE FREE OF DEBRIS, ORGANIC, AND DELETERIOUS MATERIALS AND THAT MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
- PLACE ENGINEERED FILL MATERIAL IN MAXIMUM LEVEL LOOSE LIFTS OF 8 INCHES AND COMPACT TO 95% OF THE STANDARD PROCTOR TEST MAXIMUM DRY DENSITY (ASTM D-698).

L. CAST-IN-PLACE CONCRETE CONSTRUCTION

- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318, ACI 301, AND THE ACI DETAILING MANUAL.
- PROVIDE CONCRETE WITH PROPERTIES THAT CONFORM TO THE CRITERIA SPECIFIED IN TABLE 1 ON SHEET BB002.
- PROVIDE NORMAL WEIGHT CONCRETE
- TESTING AGENCY SHALL TAKE CONCRETE TEST CYLINDERS IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318, CHAPTER 26 AND THE CONTRACT SPECIFICATIONS.
- SEE THE CONTRACT SPECIFICATIONS FOR ADDITIONAL CONCRETE TESTING REQUIREMENTS (AIR CONTENT, SLUMP, ETC.).
- TESTING AGENCY SHALL PERFORM REBAR INSPECTIONS OF ALL REINFORCING STEEL BEFORE ALL CONCRETE POURS.
- WHEN PLACING CONCRETE ON SLOPING FORMS AT CONCRETE STAIRS, PLACE CONCRETE AT LOWEST ELEVATION OF FORMS FIRST AND WORK UP TOWARD THE HIGHEST ELEVATION.
- APPLY (1) COAT OF BASF MASTERPROTECT H1000, BY BASF, OR APPROVED EQUAL BY EUCLID CHEMICAL COMPANY OR SIKA USA, TO TOP SURFACE OF INTERIOR ELEVATED FLOOR SLABS AFTER SLABS HAVE CURED FOR A MINIMUM OF 28 DAYS. PREPARE SURFACE AND APPLY COATING IN ACCORDANCE WITH REQUIREMENTS OF THE MANUFACTURER.
- PROVIDE CONTINUOUS DRIP ALONG EDGES OF ELEVATED CONCRETE SLABS AS SHOWN IN THE DRAWINGS.
- CHAMFER ALL EXPOSED CORNERS OF COLUMNS AND WALLS WITH 3/4" CHAMFER UNLESS OTHERWISE NOTED.
- AT LOCATIONS SHOWN ON THE DRAWINGS, CAST DOVETAIL ANCHOR SLOTS INTO CONCRETE. SEE GENERAL NOTE 0.15 FOR ADDITIONAL INFORMATION.
- FOR CAST-IN-PLACE CAPS ON MASONRY PARAPETS, AND CUBICLE WALLS, PROVIDE EITHER:
  - 5,000 PSI, AIR-ENTRAINED, READY-MIX CONCRETE FROM THE CONCRETE SPECIFICATION, FOR WHICH PUMPING WOULD BE ALLOWED AS WELL AS OTHER MEANS & METHODS, AS LONG AS THE CONCRETE AND FINISH MEET THE REQUIREMENTS OF THE SPECIFICATIONS, OR
  - AIR-ENTRAINED QUICKRETE (QUICKRETE Q-MAX PRO), MIXED IN A MIXER ON SITE (NOT IN A WHEELBARROW), WITH THE FIBERS THAT PROJECT FROM THE SURFACE RUBBED OFF AFTER THE FINAL CURE AND WITH FINISH THAT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS.

M. CONCRETE REINFORCEMENT

- PROVIDE HIGH STRENGTH, NEW BILLET DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 FOR STEEL REINFORCEMENT IN CONCRETE.
- PROVIDE STEEL REINFORCEMENT DETAILS IN ACCORDANCE WITH ACI 318 AND CRSI STANDARDS.
- PROVIDE CONCRETE PROTECTION FOR STEEL REINFORCEMENT OF CAST-IN-PLACE CONCRETE AS SPECIFIED IN TABLE 2 ON SHEET BB002. IF REINFORCING AS CLOSE TO THE CONCRETE SURFACES AS POSSIBLE WITHOUT VIOLATING THE REQUIREMENTS SHOWN IN THE TABLE.
- COORDINATE REINFORCING PLACEMENT WITH ALL POST-INSTALLED ANCHORS AT GUARDRAILS, DOORS, SHUTTERS, SCUPPERS, ROPE TIE-OFF ANCHORS, ETC.

N. SLABS-ON-GRADE

- FOR ALL SLABS-ON-GRADE, PROVIDE A 6" MIN. THICK POURED CONCRETE SLAB-ON-GRADE, REINFORCED WITH WWR6x6-W2.9xW2.9 LOCATED IN THE UPPER THIRD PORTION OF SLAB THICKNESS. FOLLOW WRI STANDARDS FOR WELDED WIRE REINFORCEMENT PLACING, LAP, ETC.
- PROVIDE A MINIMUM OF 4" OF AGGREGATE BASE COURSE (ABC STONE) AS A BASE BELOW THE SLABS-ON-GRADE.
- PROVIDE A 15 MIL VAPOR BARRIER BELOW THE SLABS-ON-GRADE PER THE SPECIFICATIONS.
- PROVIDE A CONTINUOUS MANUFACTURED CRACK CONTROL JOINT (PREMOLDED PLASTIC STRIP) OR EARLY ENTRY SAW-CUT CONTROL JOINT IN THE TOP OF SLAB AT LOCATIONS SHOWN ON THE FOUNDATION PLANS. SEE SPECS. FOR REQUIREMENTS OF SAW-CUTTING.

O. MASONRY

- PROVIDE 2-CELL NORMAL WEIGHT CONCRETE BLOCK CONFORMING TO ASTM C-90.
- PROVIDE UNIT MASONRY THAT DEVELOPS INSTALLED COMPRESSIVE STRENGTHS (Fm) AT 28 DAYS, BASED ON NET AREA, OF 2,000 PSI.
- PROVIDE MORTAR THAT CONFORMS TO ASTM C-270, TYPE S.
- ADD INTEGRAL WATER REPELLENT ADMIXTURE TO BLOCK AND MORTAR IN ALL MASONRY WALLS IN ACCORDANCE WITH THE SPECIFICATIONS.
- UNLESS OTHERWISE NOTED, PROVIDE HORIZONTAL JOINT REINFORCING AT 16" ON CENTER VERTICALLY IN ALL MASONRY WALLS.
- UNLESS OTHERWISE NOTED ON DRAWINGS, PROVIDE (1) #5 VERTICAL BAR AT ENDS OF WALLS, AT WALL CORNERS AND INTERSECTIONS, AT JAMBS OF OPENINGS, AND AT 24" O.C. MAXIMUM IN ALL MASONRY WALLS. SEE DRAWINGS FOR ADDITIONAL REINFORCING DETAILS, INCLUDING AT JOINTS.
- PROVIDE VERTICAL REINFORCING BARS FOR FULL HEIGHT OF WALL. DO NOT DOWEL BARS INTO CONCRETE SLABS AT TOPS OR BOTTOMS OF WALLS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- SEE DRAWINGS FOR ADDITIONAL DETAILS RELATING TO VERTICAL REINFORCING BARS, INCLUDING BARS AT DOOR, WINDOW, AND SCUPPER OPENINGS, AT OPEN VERTICAL JOINTS IN WALLS, AND AT OTHER LOCATIONS.
- KEEP CELLS TO RECEIVE BARS CLEAN OF MORTAR DROPPINGS.
- SECURE VERTICAL BARS WITH WIRE TIES AND SPACERS AT TOP AND BOTTOM TO ASSURE THAT BARS REMAIN IN POSITION DURING GROUTING.
- FILL ALL CELLS FULL HEIGHT WITH 3,000 PSI MASONRY GROUT PER ASTM C-476 AND THE SPECS.
- CLOSE CLEANOUTS AFTER GROUT FLOWS FULLY TO BOTTOM OF WALL. VIBRATE GROUT DURING PLACEMENT TO ELIMINATE AIR POCKETS.
- PROVIDE LOOSE-LAID FIRE BRICK ON FLOORS, WHERE INDICATED, THAT CONFORMS TO ASTM C-27, CLASSIFICATION: MEDIUM-DUTY.
- SEE THE CONTRACT SPECIFICATIONS FOR MASONRY TESTING AND INSPECTIONS REQUIRED, INCLUDING REINFORCING AND GROUTING INSPECTIONS.
- AT LOCATIONS INDICATED ON DRAWINGS, ANCHOR MASONRY TO CONCRETE WITH DOVETAIL ANCHORS AT 16" ON CENTER, UNLESS OTHERWISE NOTED. AND MORTAR MASONRY TIGHT TO FACE OF CONCRETE. PROVIDE S.S. 4" LONG NO. 103-C DOVETAIL TRIANGLE ANCHOR, EACH WITH 12 GA. DOVETAIL ANCHOR AND 3/16" DIA. WIRE TRIANGLE TIE, AND S.S. 22 GA. NO. 100 STANDARD DOVETAIL SLOTS BY HECKMAN BUILDING PRODUCTS, INC., OR AN EQUIVALENT BY HOHMANN & BARNARD OR DUR-O-WAL, APPROVED BY THE ENGINEER. SPACE ANCHORS AT 16" O.C. VERTICALLY AND, IF APPLICABLE, 24" O.C. HORIZONTALLY U.O.N. DO NOT ANCHOR MASONRY TO CONCRETE WHERE OPEN JOINTS ARE SHOWN NOR WHERE THERMAL LININGS SEPARATE CONCRETE FROM MASONRY.
- ALL MASONRY WALLS SHALL BE STANDARD GRAY COLOR WITH 8"(THICK) x 16"(LONG) x 8"(TALL) NOMINAL BLOCKS. ALL BLOCKS SHALL BE STANDARD SMOOTH FACE BLOCK.
- PROVIDE (2) COATS OF WATER REPELLENT SEALER, AS INDICATED IN SPECIFICATION SECTION 04 20 00, TO THE EXTERIOR FACE OF CMU WALLS WHERE INDICATED IN PLAN.
- SEE GENERAL NOTE L.12 FOR PARAPET & CUBICLE WALL CAPS.

P. ANCHORS

- INSTALL ADHESIVE ANCHORS, EXPANSION ANCHORS, SLEEVE ANCHORS, AND CONCRETE ANCHOR SCREWS PER THE TYPICAL ANCHOR SCHEDULES ON SHEET BB002.
- PROVIDE ANCHORS WITH MINIMUM EMBEDMENT AND ALLOWABLE CAPACITIES SHOWN IN THE SCHEDULES, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- IF MINIMUM REQUIREMENTS FOR ANCHORS CAN NOT BE ACHIEVED DUE TO FIELD CONDITIONS, NOTIFY THE ENGINEER.
- INSTALL ALL ANCHORS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.
- DRILL HOLES FOR ANCHORS TO BE INSTALLED IN MASONRY WITH A ROTARY DRILL ONLY. NOT A ROTARY-HAMMER DRILL. DO NOT DAMAGE FACES OF WALLS, CEILINGS, SLABS, OR OTHER SUBSTRATES WHILE DRILLING.
- SUBMIT PROPOSED ANCHORS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK.
- DO NOT DAMAGE REINFORCING STEEL WHILE INSTALLING ANCHORS. COORDINATE REINFORCING PLACEMENT WITH ALL POST-INSTALLED ANCHORS AT GUARDRAILS, DOORS, SHUTTERS, SCUPPERS, ROPE TIE-OFF ANCHORS, ETC.
- ANCHORS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR RESPONSIBLE FOR THE SCOPE OF WORK BEING ANCHORED.

Q. STEEL SHAPES AND PLATES

- PROVIDE STEEL WITH PROPERTIES LISTED IN TABLE 3 ON SHEET BB002.
- SEE SPECIFICATIONS FOR REQUIREMENTS OF STAINLESS STEEL ANGLES AND PLATES.
- PROVIDE WELDED SHOP CONNECTIONS UNLESS OTHERWISE NOTED.
- MAKE FIELD CONNECTIONS WITH ASTM A-325N HIGH STRENGTH BOLTS TIGHTENED TO A SNUG TIGHT CONDITION, UNLESS OTHERWISE NOTED.
- PERFORM ALL WELDING WITH WELDERS QUALIFIED IN ACCORDANCE WITH AWS PROCEDURES FOR WELDER QUALIFICATION.
- PROVIDE GALVANIZING OR STEEL MEMBERS, UNLESS OTHERWISE NOTED ON THE DRAWINGS AS "PAINTED" OR "STAINLESS STEEL".
- AT GALVANIZING VENT HOLES IN PIPES AND TUBES IN RAILINGS, EXTERIOR STAIRS, ROPE FRAMES AND OTHER NOTED ITEMS, LOCATE VENT HOLES AT BOTTOM OF PIPE OR TUBE. PLUG ALL VENT HOLES AFTER GALVANIZING IN ONE OF THE FOLLOWING WAYS: HAMMER IN A ZINC GALVANIZING VENT HOLE PLUG, GRIND IT SMOOTH, AND TOUCH UP WITH GALVANIZING REPAIR PAINT. A SECOND OPTION IS TO PLUG WELD THE GALVANIZING VENT HOLES, GRIND THE WELDS SMOOTH, AND TOUCH UP WITH GALVANIZING REPAIR PAINT PER THE SPECIFICATIONS.
- WHERE INDICATED IN THE DRAWINGS AS "PAINTED", PROVIDE STEEL WITH ONE SHOP COAT OF RUST-INHIBITING PRIMER AND TWO FIELD COATS AS INDICATED IN THE SPECIFICATIONS.
- WHERE INDICATED IN THE DRAWINGS AS "STAINLESS STEEL", PROVIDE STAINLESS STEEL OF TYPE INDICATED IN THE SPECIFICATIONS.
- SEE THE CONTRACT SPECIFICATIONS FOR STEEL TESTING AND INSPECTIONS REQUIRED.

R. STEEL GRATING AND TREADS

- PROVIDE 2" DEEP, 13 GAUGE, GALVANIZED 'PERF-O GRIP' STEEL GRATING BY COOPER B-LINE, OR AN EQUIVALENT BY NUCOR GRATING OR METALEX, APPROVED BY THE ENGINEER. MAXIMUM PLANK WIDTH IS 12 INCHES. INSTALL GRATING IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS TO CREATE A TWO-SPAN CONDITION BY WELDING (SCREWS AND CLIPS NOT ALLOWED). PROVIDE GRATING PLANK LENGTHS THAT ARE AS LONG AS POSSIBLE TO MINIMIZE CUT PLANKS AND JOINTS WHERE CUT ENDS OF PLANKS ABUT ONE ANOTHER.
- PROVIDE 2" DEEP, 13 GAUGE, GALVANIZED 'PERF-O GRIP' STAIR TREADS BY COOPER B-LINE, OR AN EQUIVALENT BY NUCOR GRATING OR METALEX, APPROVED BY THE ENGINEER. INSTALL TREADS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS USING STANDARD ZINC COATED BOLTS.
- PROVIDE A GALVANIZED 2" TALL VERTICAL END PLATE TO CLOSE OFF THE ENDS OF ALL GRATING PLANKS TO ELIMINATE JAGGED EDGES AND TO STRENGTHEN THE ENDS OF THE PLANKS. THIS INCLUDES ENDS OF PLANKS THAT ABUT ENDS OF ADJACENT PLANKS AND THAT ABUT FACE OF THE BUILDING.
- TOUCH UP ALL ABRASIONS AND WELDS WITH GALVANIZING REPAIR PAINT PER THE SPECIFICATIONS.

S. THERMAL LINING SYSTEM

- THE BASIS OF DESIGN FOR THE THERMAL LINING SYSTEM IS HTL SYSTEM 203, MANUFACTURED BY HIGH TEMPERATURE LININGS, INC. OF WHITESTONE, VIRGINIA AT (800) 411-6313. SEE SPECIFICATION SECTION 070001 FOR SYSTEM COMPONENT REQUIREMENTS, PERFORMANCE REQUIREMENTS, QUALIFICATION PROCEDURE, AND SUBMITTAL REQUIREMENTS.
- INSTALL THERMAL LININGS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER. INSTALLATION SHALL BE PERFORMED BY A MANUFACTURER-APPROVED INSTALLER.
- THE THERMAL LINING INSTALLER REQUIRES THE FOLLOWING SEQUENCE OF CONSTRUCTION TO COORDINATE INSTALLATION OF THERMAL LININGS AND MASONRY WALLS:
  - CONSTRUCT THE CONCRETE FRAME AND STRUCTURE.
  - CONSTRUCT EXTERIOR MASONRY WALLS.
  - INSTALL THERMAL LININGS ON CEILINGS AND CONSTRUCT INTERIOR MASONRY WALS IN THE SEQUENCES REQUIRED TO ACHIEVE THE TOP-OF-WALL BRACING DETAILS SHOWN ON THE DRAWINGS.
  - INSTALL BRACING ANGLES & BRACING ASSEMBLIES AT TOPS OF INTERIOR AND EXTERIOR WALLS.
- PER THE REQUIREMENTS OF THE LINING MANUFACTURER, THE OWNER/USER WILL PERFORM A "PRE-BURN" AT LEAST ONE DAY BEFORE TRAINING BEGINS TO PROPERLY DRY OUT AND CURE THE THERMAL LININGS. THE THERMAL LINING MANUFACTURER'S RECOMMENDATIONS ARE AS FOLLOWS:
  - BURN 2 WOOD PALLETS AND A BAIL OF STRAW IN EACH ROOM THAT CONTAINS THERMAL LINING TILES.
  - ALLOW THE FIRE TO BURN UNTIL NEARLY EXHAUSTED.
  - AT THIS POINT, ADD 2 MORE PALLETS AND BURN AGAIN UNTIL NEARLY EXHAUSTED.
  - REPEAT FOR A TOTAL OF 4 TIMES (8 PALLETS).
  - LET THE FIRE BURN OUT COMPLETELY WITHOUT THE USE OF WATER TO EXTINGUISH THE FIRE.
  - DO NOT BURN ALL 8 PALLETS AT THE SAME TIME.
- SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION ABOUT THERMAL LININGS. SEE DRAWINGS FOR DETAILS AND HOW LINING INSTALLATION MUST BE COORDINATED WITH CONCRETE, MASONRY, AND METALS INSTALLATION.

T. TESTING AND INSPECTIONS OF ROPE TIE-OFF POINTS

- OWNER'S TESTING AGENCY SHALL TEST EACH ROPE ANCHOR ASSEMBLY AND ROPE FRAME ASSEMBLY WITH A 5,000-POUND PULL TEST, AS FOLLOWS:
  - SURFACE-MOUNTED ROPE ANCHOR ASSEMBLY: PULL TEST ON HOIST RING PERPENDICULAR TO THE SLAB OR WALL SURFACE ON WHICH ASSEMBLY IS ATTACHED.
  - ROPE FRAME ASSEMBLY: PULL TEST AT TOP OF FRAME AT EACH CORNER OF FRAME PERPENDICULAR TO SLAB SURFACE, TESTING ONE CORNER AT A TIME.



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NCCCS NO. 2303



NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - GENERAL NOTES**

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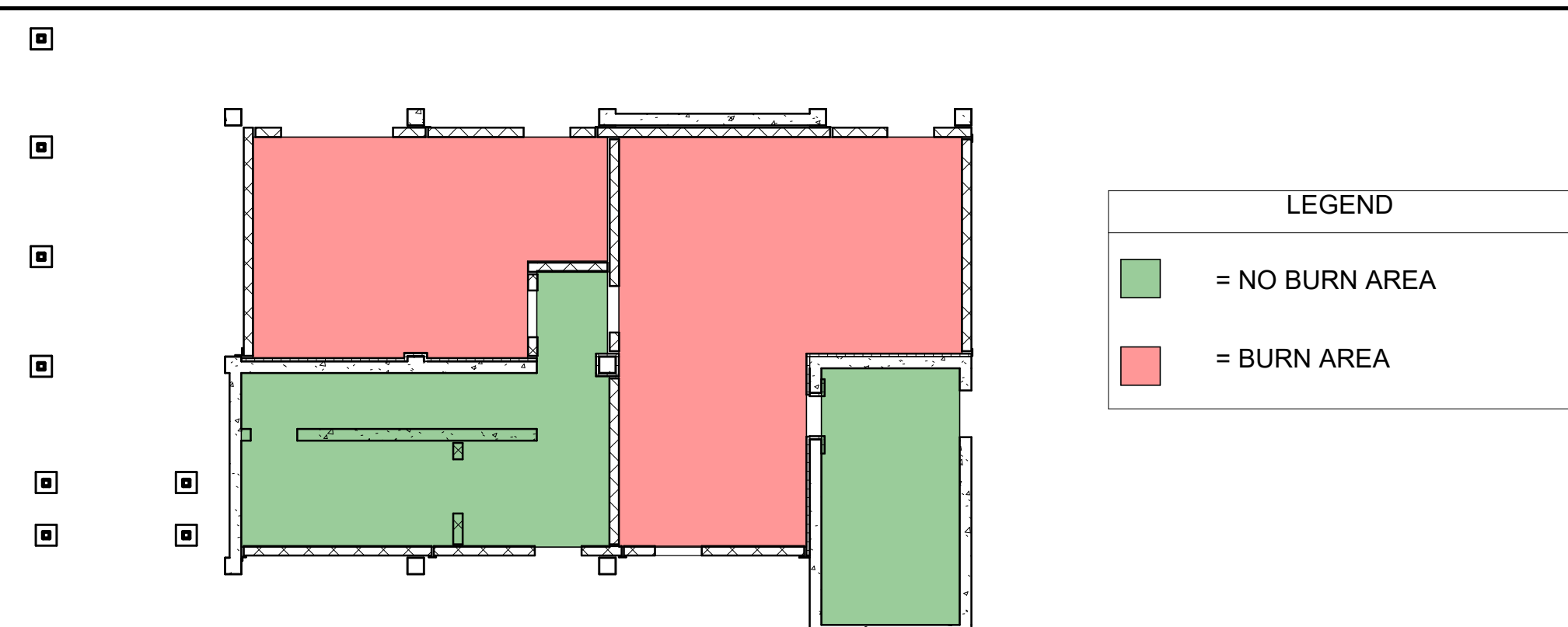
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BB001










BB201 BB201 SCALE 3/32" = 1'-0"


FINISH SCHEDULE				
ROOM NOS.	CEILING FINISH	FLOOR FINISH	WALL FINISH	NOTES
100, 101	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1 & 2.
102	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTE 1.
103	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTE 1.
200, 205	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
201, 202, 202A, 203, 204	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
206	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTE 1 & 3.
2ND FLOOR BALCONY	CONCRETE & THERMAL LINING ROLLOVER TILES	CONCRETE	CMU & CONC.	SEE NOTES 1 & 2.
300	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
301, 302, 304	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
303	THERMAL LINING SYSTEM	FIRE BRICK	CMU, CONC. & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
INSET BALCONY	CONCRETE	CONCRETE	CMU & CONC.	SEE NOTE 1.
3RD FLOOR BALCONY	----	CONCRETE	CMU	SEE NOTE 1.
400, 406	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
401, 407	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
402, 403, 405	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
404	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
500, 501	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
502, 503, 505, 507	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
504	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
506	CONCRETE	FIRE BRICK	CMU	SEE NOTES 1 & 3.
600	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
601	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
602, 603	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
604	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
INTERIOR STAIRS	CONCRETE & THERMAL LINING SYSTEM	CONCRETE	CONCRETE, EXCEPT CMU ABOVE 2ND FLOOR AT STRAIGHT RUN INTERIOR STAIR	SEE NOTES 1 & 4.

**FINISH SCHEDULE NOTES:**

1. ALL EXPOSED CONCRETE AND CMU SURFACES ARE UNPAINTED.
2. SEE PLANS FOR LOCATIONS AND EXTENTS OF THERMAL LINING SYSTEM ON CEILINGS AND WALLS.
3. SEE SPECIFICATIONS FOR CONCRETE CASTING SEALER ON TOP OF CONCRETE SLAB (BELOW LOOSE LAID FIRE BRICK AT SECOND THRU SIXTH FLOORS ONLY, NOT AT FIRST FLOOR).
4. PROVIDE THERMAL LINING SYSTEM AT CEILING AREA ABOVE MAIN LANDING IN STAIRWELL. AT FIRST FLOOR ONLY AND AT ENTIRE CEILING OF STRAIGHT RUN STAIR.

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- A. DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH —  .
- B. TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB IS INDICATED AS "X.XX" IN FEET ABOVE DATUM. DATUM IS AT ELEVATION 294.00'. FLOOR ELEVATIONS ARE NOTED AS +X.XX OR -X.XX IN FEET ABOVE OR BELOW DATUM.
- C. SEE SITE DRAWINGS FOR TOP OF EXTERIOR FINISHED GRADE AND OTHER SITE ELEVATIONS.
- D. ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- E. AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- F. SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS.  
xxx DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- G. AT 20 LOCATIONS IN 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- H. SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.

- J. 8T @ 11" = 7'-4", 9R @ 6 11/16"± = 5'-0"± FROM GROUND TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- K. 8T @ 11" = 7'-4", 9R @ 6 7/8"± = 5'-1 3/4"± FROM GROUND TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- L. 17T @ 11" = 15' - 7", 1R @ 9 5/32"±, 17R @ 6 21/32"± = 10' - 0"±. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- M. PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADE, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS:  MAXIMUM SLOPE OF CRICKETS  
SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- N. LIVE FIRE TRAINING IS ALLOWED ONLY IN ROOMS 100 AND 101. NO BURNING IS ALLOWED IN ROOMS 102, 103, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- O. SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.

- ① SCUPPERS PER SHEET BB603 (7 THUS).
- ② HANDRAIL PER DETAIL 1/BB607.
- ③ FIXED GUARDRAIL W/ HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- ④ F.D.C. & DRY STANDPIPE PER P DRAWINGS.
- ⑤ EDGE OF SECOND FLOOR SLAB ABOVE.
- ⑥ PROVIDE (3) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- ⑦ PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- ⑧ DEBRIS CHUTE ABOVE. ANGLE DEBRIS CHUTE AWAY FROM DOOR EXT-ST-1.
- ⑨ DUMPSTER BY OWNER (N.I.C.).
- ⑩ STEEL TUBE COLUMN ON CONCRETE PIER PER FOUNDATION PLAN (8 THUS). TOPS OF ALL PIERS SHALL BE AT THE SAME ELEVATION, 3" MIN A.F.G.
- ⑪ PROVIDE HORIZ. SLOT IN TOP OF EXTERIOR PAVING AT DOORWAY PER DETAIL 4/BB610.
- ⑫ THERMAL LINING ROLLOVER TILES AT UNDERSIDE OF SLAB ABOVE FOR EXTENTS SHOWN ON PLAN.
- ⑬ THERMAL LINING ROLLOVER TILES AT DOOR JAMBS, & HEAD, INCLUDING WALL FACE ABOVE DOOR.
- ⑭ BOLLARD PER CIVIL DWGS.
- ⑮ THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- ⑯ CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).





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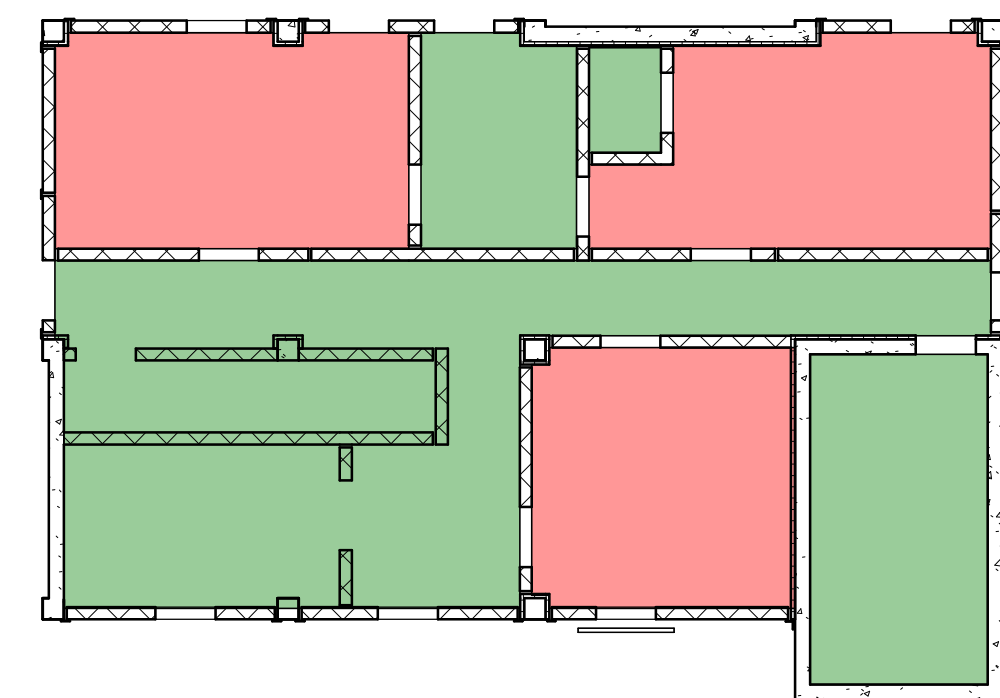
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NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - SECOND FLOOR PLAN**

BB202

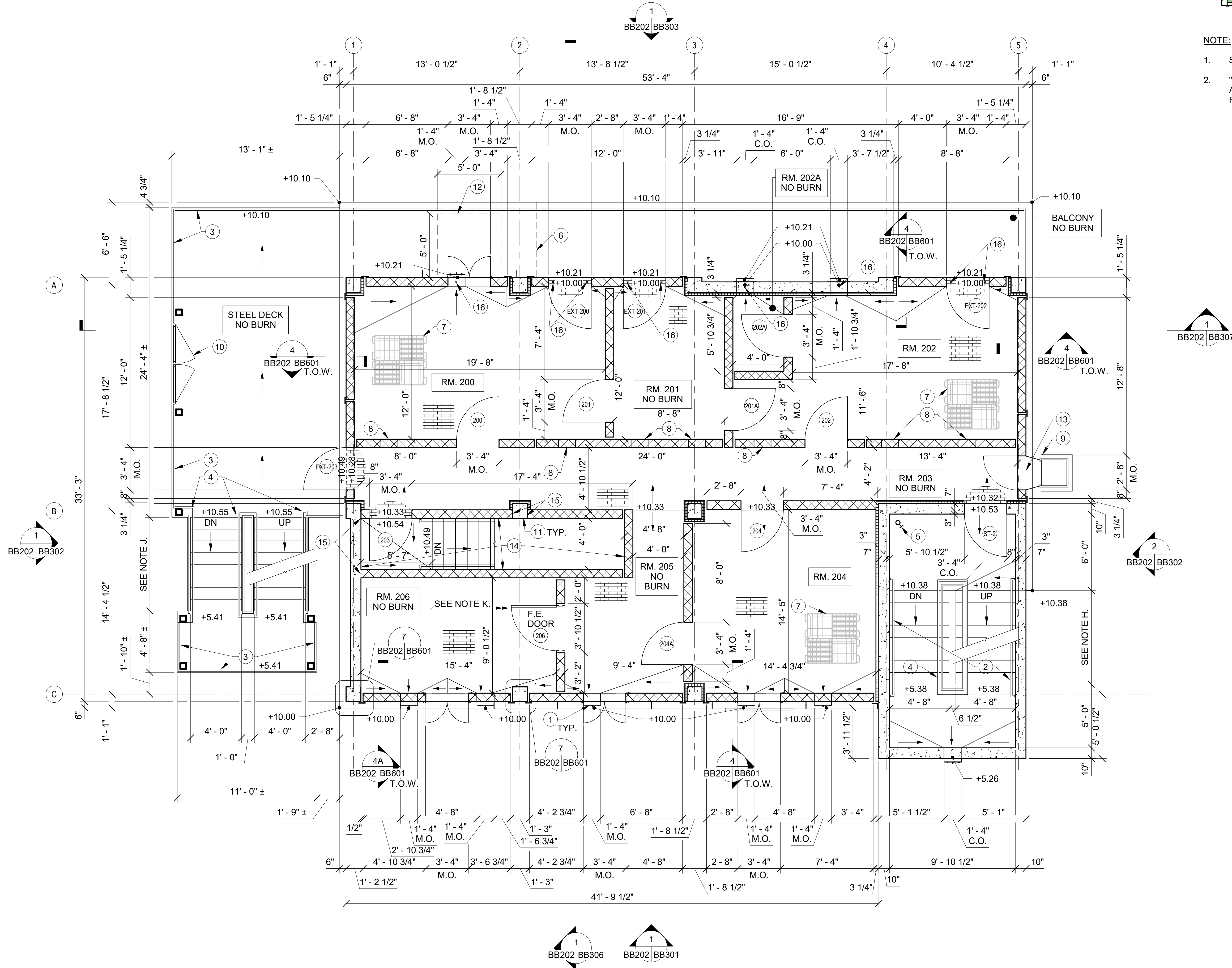


LEGEND  
= NO BURN AREA  
= BURN AREA

NOTE:

- SEE 1/BB202 FOR MORE INFORMATION.
- "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

2 SECOND FLOOR KEY PLAN  
BB202 BB202 SCALE 3/32" = 1'-0"



NOTES:

- DIRECTION OF DOWNSLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. xxx DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 37 LOCATIONS IN 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SECOND FLOOR DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SECOND FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 7/8" ± = 5'-1 3/4" ± FROM SECOND FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SECOND FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 17T @ 11" = 15' - 7", 18R @ 6 13/16" ± = 10' - 2 5/8" ± PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ALLOWED ONLY IN ROOMS 200, 202 AND 204. NO BURNING IS ALLOWED IN ROOMS 201, 202A, 203, 205, 206, ON THE BALCONY, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.

KEYED NOTES:

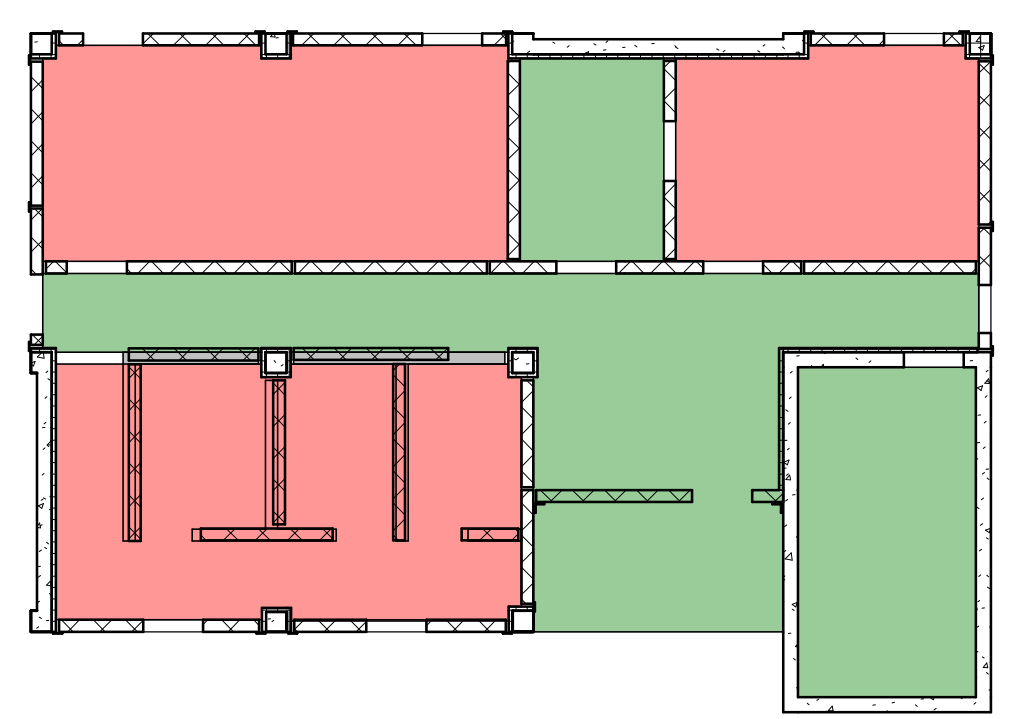
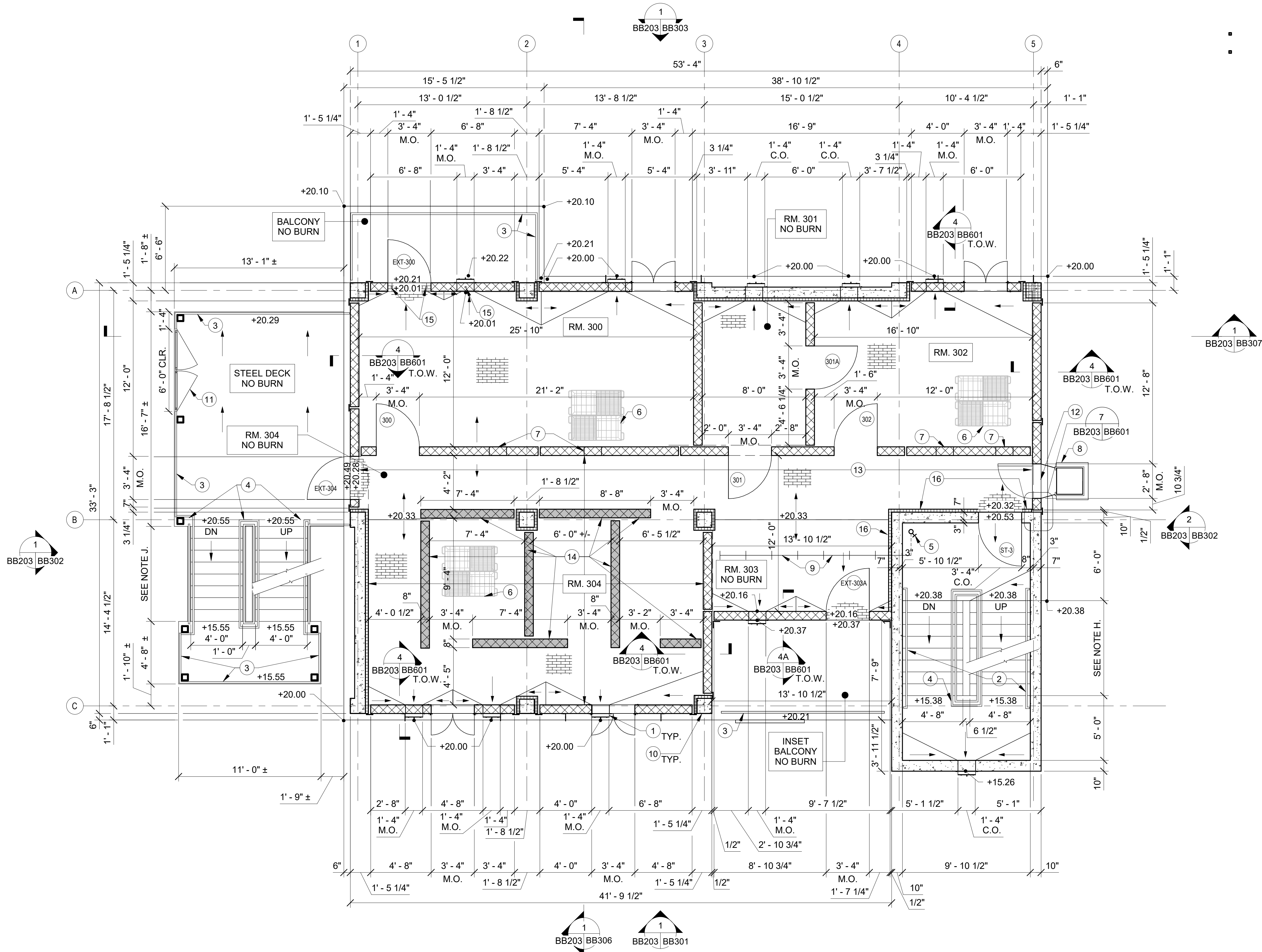
- SCUPPERS PER SHEET BB603 (9 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- EDGE OF THIRD FLOOR SLAB ABOVE.
- PROVIDE (3) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- THERMAL LINING ROLLOVER TILES AT UNDERSIDE OF SLAB ABOVE FOR EXTENTS SHOWN ON PLAN.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- CONNECT END OF CMU WALL TO CONC. COLUMN W/ DOVETAIL ANCHORS PER GEN. NOTE O.15 AND MORTAR TIGHT.

KEYED NOTES:

- PROVIDE WEEP PIPES BELOW FIRE BRICK AT NOTED DOOR AND SCUPPER OPENINGS PER DETAIL 8/BB603. PROVIDE (2) WEEP PIPES AT DOORWAYS WITH CENTER AT 6 3/4" INSIDE EACH DOOR JAMB AND PROVIDE (1) WEEP PIPE AT CENTER OF EACH SCUPPER OPENING. ALL WEEPS SHALL BE LOCATED AT EDGE OF SLAB STEP.

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LEGEND	
<span style="color: green;">■</span>	= NO BURN AREA
<span style="color: red;">■</span>	= BURN AREA

- NOTE:**
- SEE 1/BB203 FOR MORE INFORMATION.
  - "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

**2 THIRD FLOOR KEY PLAN**  
BB203 BB203 SCALE 3/32" = 1'-0"

- NOTES:**
- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
  - TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
  - ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
  - AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
  - SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
  - AT 37 LOCATIONS IN 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
  - SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.

- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ALLOWED ONLY IN ROOMS 300, 302, AND 304. NO BURNING IS ALLOWED IN ROOMS 301, 303, ON THE BALCONY, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.

**1 THIRD FLOOR PLAN**  
BB203 BB203 SCALE 1/4" = 1'-0"

- KEYED NOTES:**
- SCUPPERS PER SHEET BB603 (10 THUS).
  - HANDRAIL PER DETAIL 1/BB607.
  - FIXED GUARDRAIL PER DETAIL 2/BB607.
  - FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
  - DRY STANDPIPE PER P DRAWINGS.
  - PROVIDE (3) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
  - PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
  - DEBRIS CHUTE PER SHEET BB609.
  - SPRINKLER LAB PER P DRAWINGS.
  - CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
  - DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
  - SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
  - THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
  - PARTIAL HEIGHT WALLS PER DETAIL 6/BB601.
  - PROVIDE WEEP PIPES BELOW FIRE BRICK AT NOTED DOOR AND SCUPPER OPENINGS PER DETAIL 8/BB603. PROVIDE (2) WEEP PIPES AT DOORWAYS WITH CENTER AT 6 3/4" INSIDE EACH DOOR JAMB AND PROVIDE (1) WEEP PIPE AT CENTER OF EACH SCUPPER OPENING. ALL WEEPS SHALL BE LOCATED AT EDGE OF SLAB STEP.

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SHEET  
**BURN BUILDING - THIRD FLOOR PLAN**

**BB203**





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**WTCC EWS - FIRE & RESCUE TRAINING CENTER**

WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303

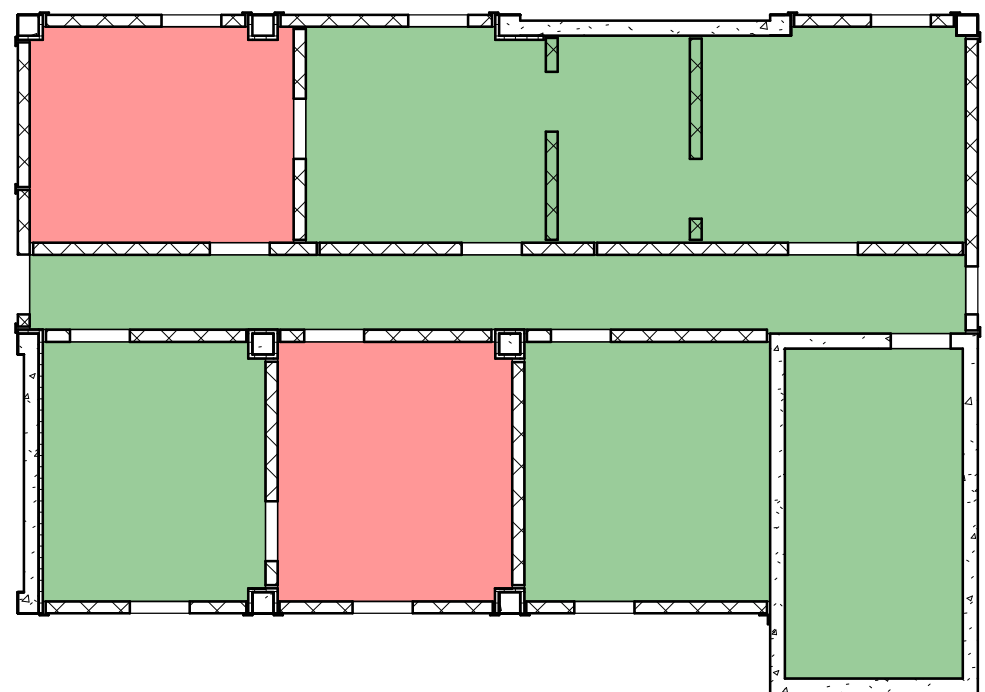


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JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - FOURTH FLOOR PLAN**

BB204

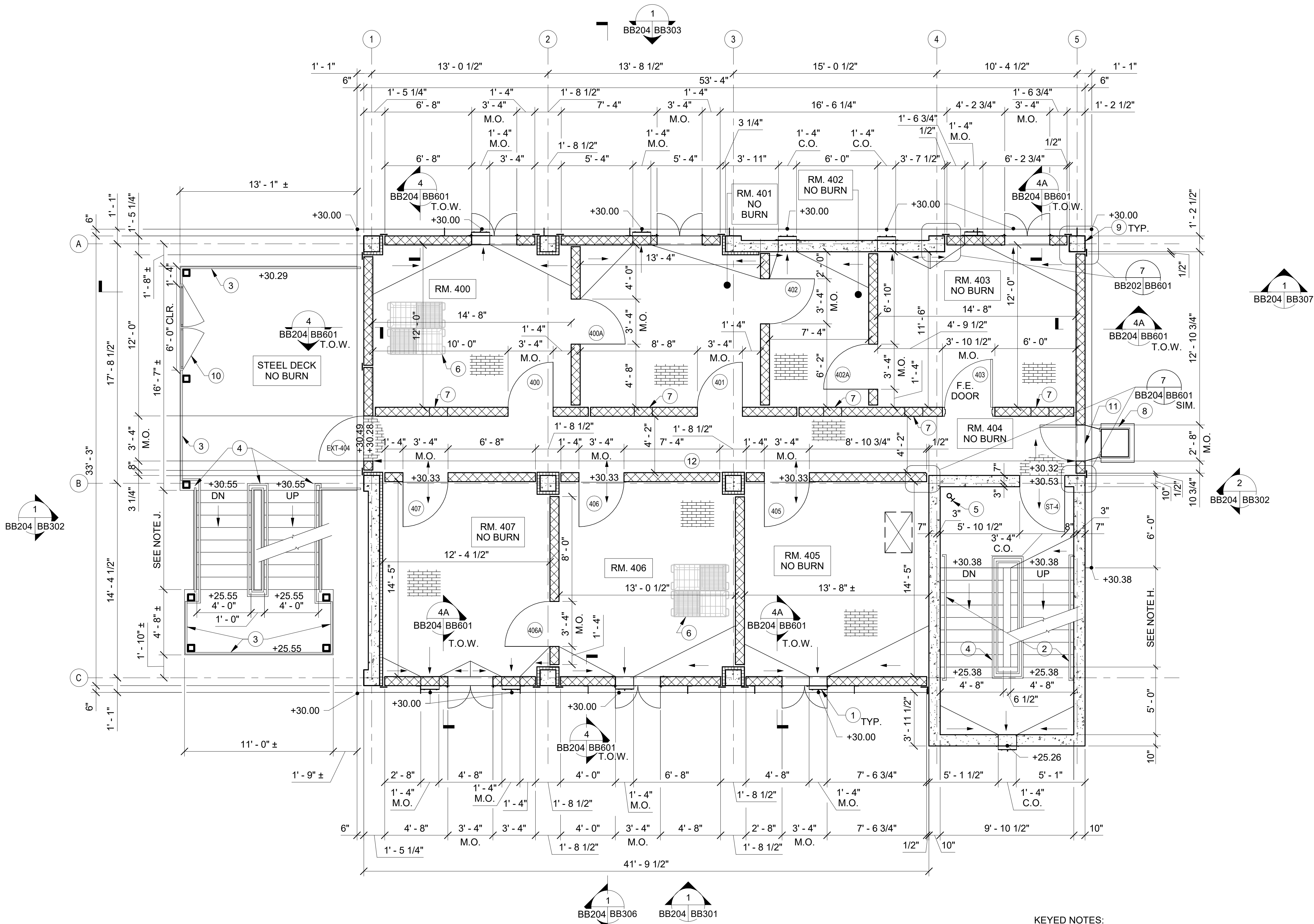
LEGEND	
<span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span>	= NO BURN AREA
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**NOTE:**

- SEE 1/BB204 FOR MORE INFORMATION.
- "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

**FOURTH FLOOR KEY PLAN**  
BB204 BB204 SCALE 3/32" = 1'-0"



**NOTES:**

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 37 LOCATIONS IN INTERIOR 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.

- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR DOWN TO INTERMEDIATE LANDING BELOW, 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW, 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ALLOWED ONLY IN ROOMS 400 AND 406. NO BURNING IS ALLOWED IN ROOMS 401, 402, 403, 404, 405, 407, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.

**FOURTH FLOOR PLAN**  
BB204 BB204 SCALE 1/4" = 1'-0"

**KEYED NOTES:**

- SCUPPERS PER SHEET BB603 (10 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- PROVIDE (2) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.

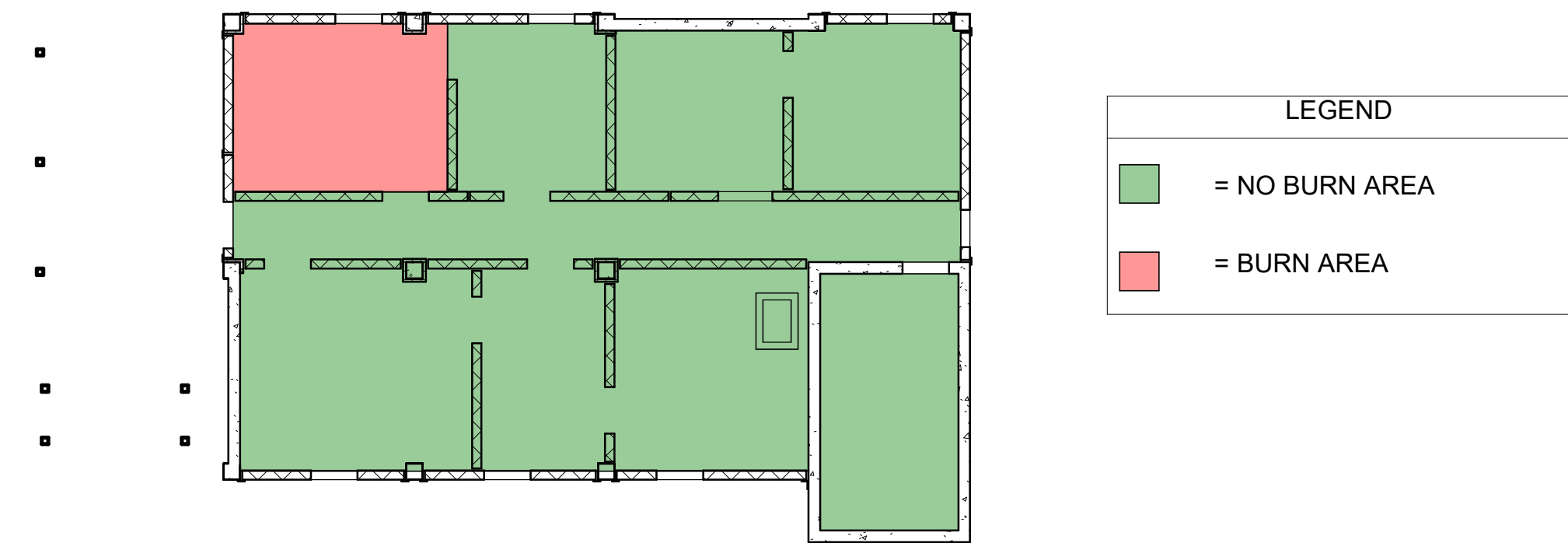
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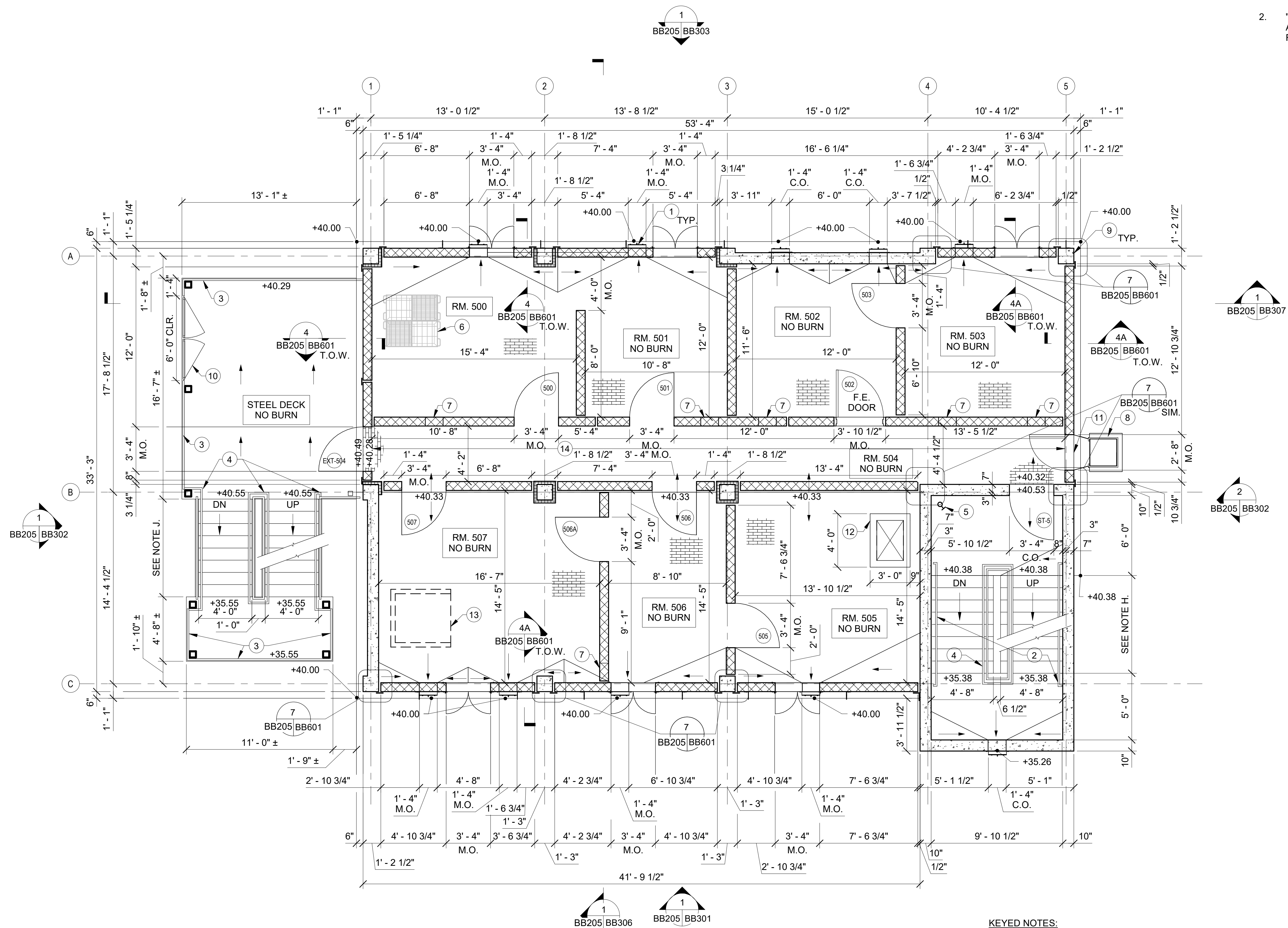
JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - FIFTH FLOOR PLAN**

BB205



- NOTE:**
- SEE 1/BB205 FOR MORE INFORMATION.
  - "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

**2 FIFTH FLOOR KEY PLAN**  
BB205 BB205 SCALE 3/32" = 1'-0"



**NOTES:**

- DIRECTION OF DOWNSLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS. AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 36 LOCATIONS IN INTERIOR 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ONLY ALLOWED IN ROOM 500. NO BURNING IS ALLOWED IN ROOMS 501, 502, 503, 504, 505, 506, 507, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.

**1 FIFTH FLOOR PLAN**  
BB205 BB205 SCALE 1/4" = 1'-0"

**KEYED NOTES:**

- SCUPPERS PER SHEET BB603 (10 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- PROVIDE (1) TOTAL BURN RACK IN BURN ROOM PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- ATTIC ACCESS HATCH PER DETAIL 7/BB501.
- SHEET ROCK PULLDOWN PROP PER DETAIL 5/BB610.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.

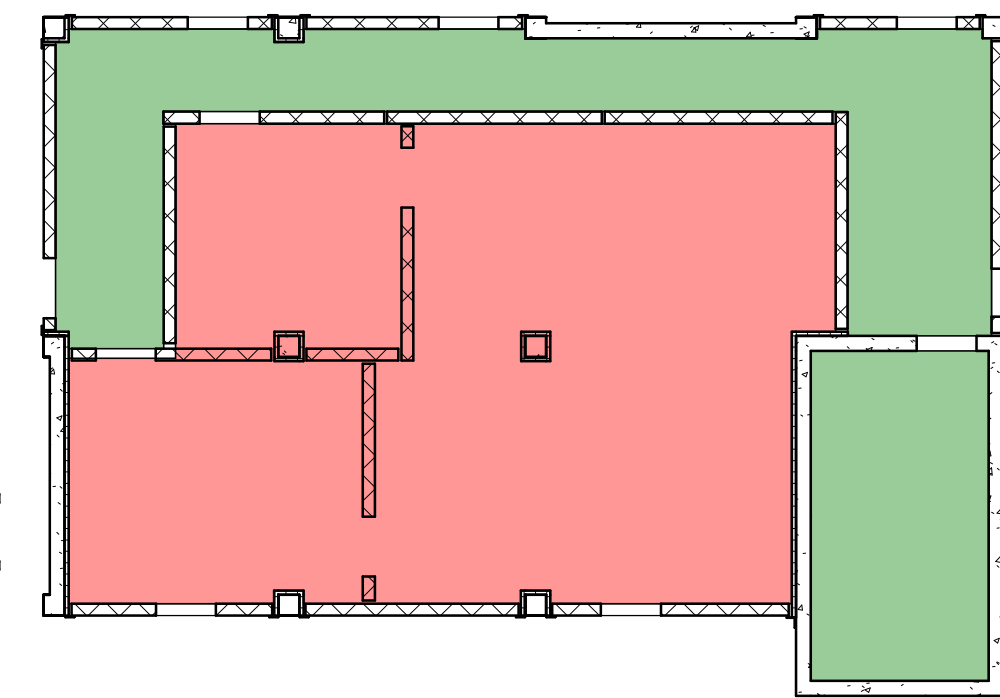
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**BURN BUILDING - SIXTH FLOOR PLAN**

BB206

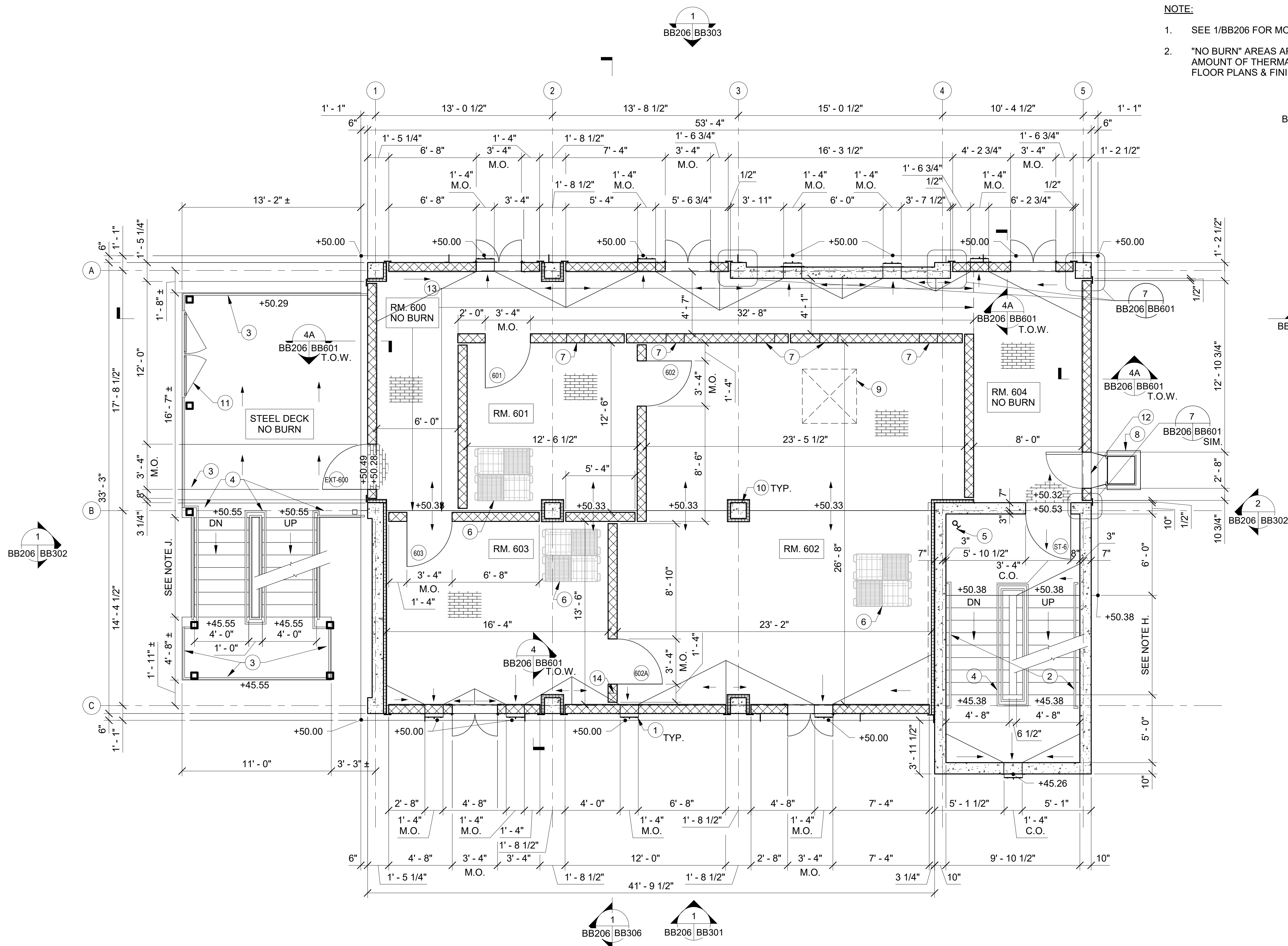


LEGEND  
= NO BURN AREA  
= BURN AREA

**NOTE:**

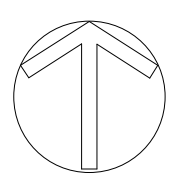
- SEE 1/BB206 FOR MORE INFORMATION.
- "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

**SIXTH FLOOR KEY PLAN**  
BB206 BB206 SCALE 3/32" = 1'-0"



**NOTES:**

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS. AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 29 LOCATIONS IN INTERIOR 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SIXTH FLOOR DOWN TO INTERMEDIATE LANDING BELOW, 8T @ 11" = 7'-4", 9R @ 6 9/16" ± = 4'-10 13/16" ± FROM SIXTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SIXTH FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW, 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SIXTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ONLY ALLOWED IN ROOMS 601, 602, AND 603. NO BURNING IS ALLOWED IN ROOM 600, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.



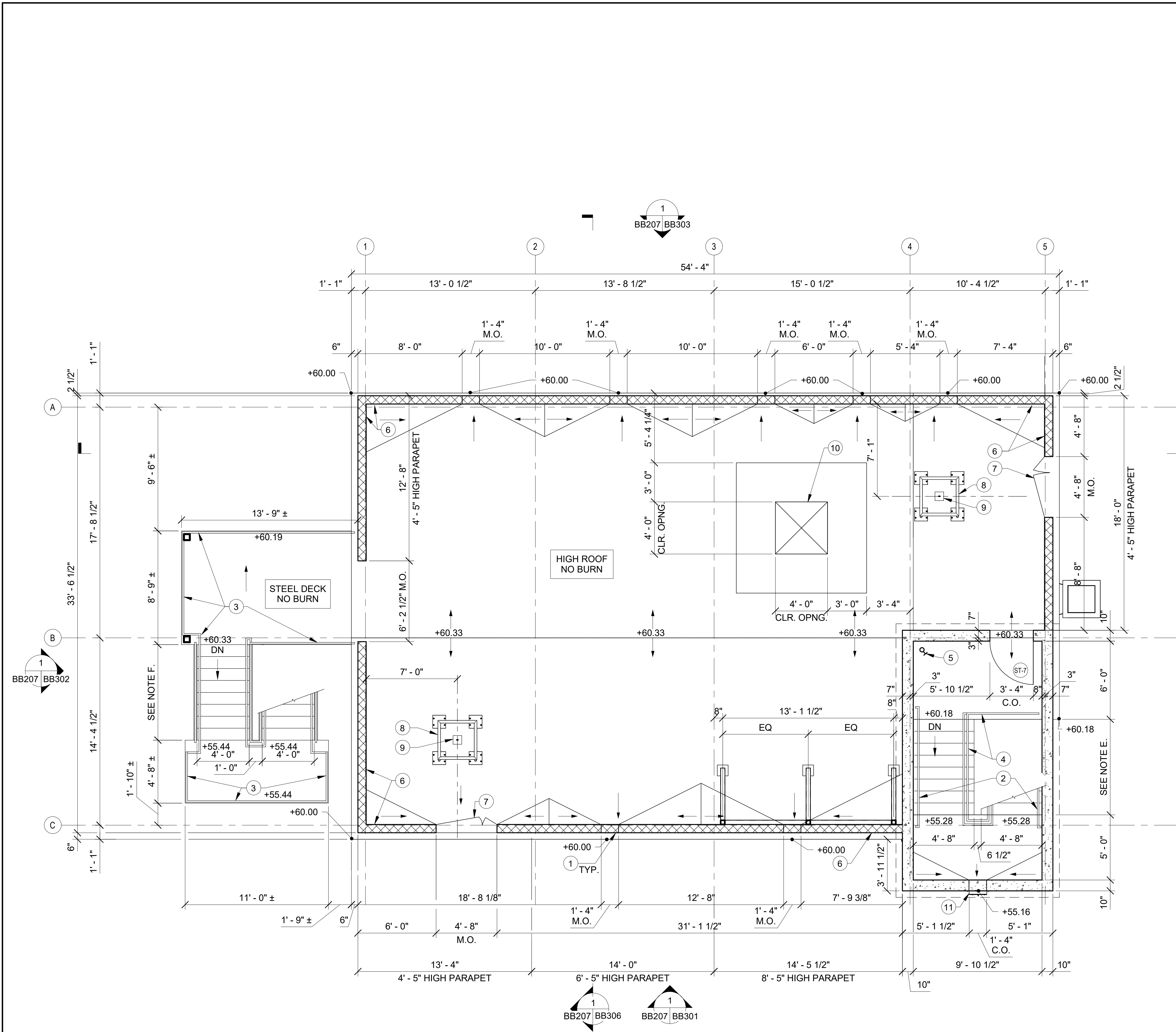
**SIXTH FLOOR PLAN**  
BB206 BB206 SCALE 1/4" = 1'-0"

**KEYED NOTES:**

- SCUPPERS PER SHEET BB603 (10 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- PROVIDE (3) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- VENTILATION OPENING ABOVE.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- PROVIDE 8"x8" OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE SIM. TO DETAIL 6/BB603 BUT WITHOUT LINTEL PLATE

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- NOTES:
- A. DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- B. TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- C. ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- D. SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- E. 8T @ 11" = 7'-4", 9R @ 6 17/32" ± = 4'-10 3/4" ± FROM HIGH ROOF DOWN TO INTERMEDIATE LANDING BELOW. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- F. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM HIGH ROOF LANDING DOWN TO INTERMEDIATE LANDING BELOW. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- G. PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL. SCUPPER OR DOOR = 1/4 INCH PER
- H. NO BURNING IS ALLOWED ON THE HIGH ROOF.

- KEYED NOTES:
- 1 PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF PARAPET FOR DRAINAGE PER DETAIL 6/BB603 (7 THUS).
- 2 HANDRAIL PER DETAIL 1/BB607.
- 3 FIXED GUARDRAIL PER DETAIL 2/BB607.
- 4 FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- 5 DRY STANDPIPE PER P DRAWINGS.
- 6 CMU PARAPET PER 3/BB601 OR 3/BB602 (8' - 5" HIGH PARAPET ONLY).
- 7 DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 1/BB608.
- 8 ROPE FRAME PER DETAIL 1/BB610 (2 THUS).
- 9 ROPE ANCHOR PER DETAIL 2/BB610 (2 THUS).
- 10 VENTILATION OPENING WITH 3' - 0" CURB PER DETAIL 6/BB610.
- 11 SCUPPER PER SHEET BB603 (1 THUS).

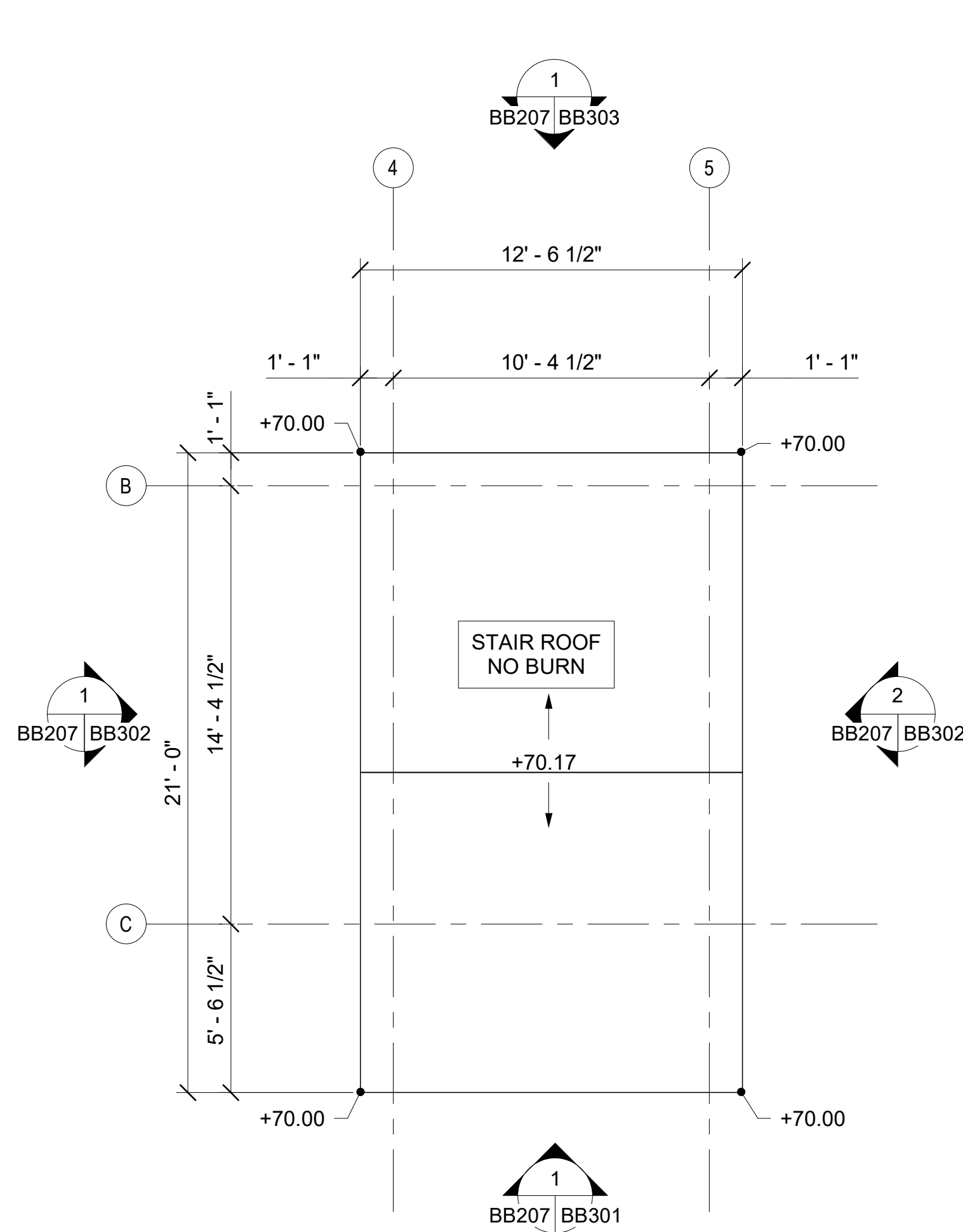
1 HIGH ROOF PLAN  
BB207/BB207 SCALE 1/4" = 1'-0"

- NOTE:
1. SEE 1/BB207 FOR MORE INFORMATION.

3 HIGH ROOF KEY PLAN  
BB207/BB207 SCALE 3/32" = 1'-0"

- NOTE:
1. SEE 2/BB207 FOR MORE INFORMATION.

4 STAIR ROOF KEY PLAN  
BB207/BB207 SCALE 3/32" = 1'-0"



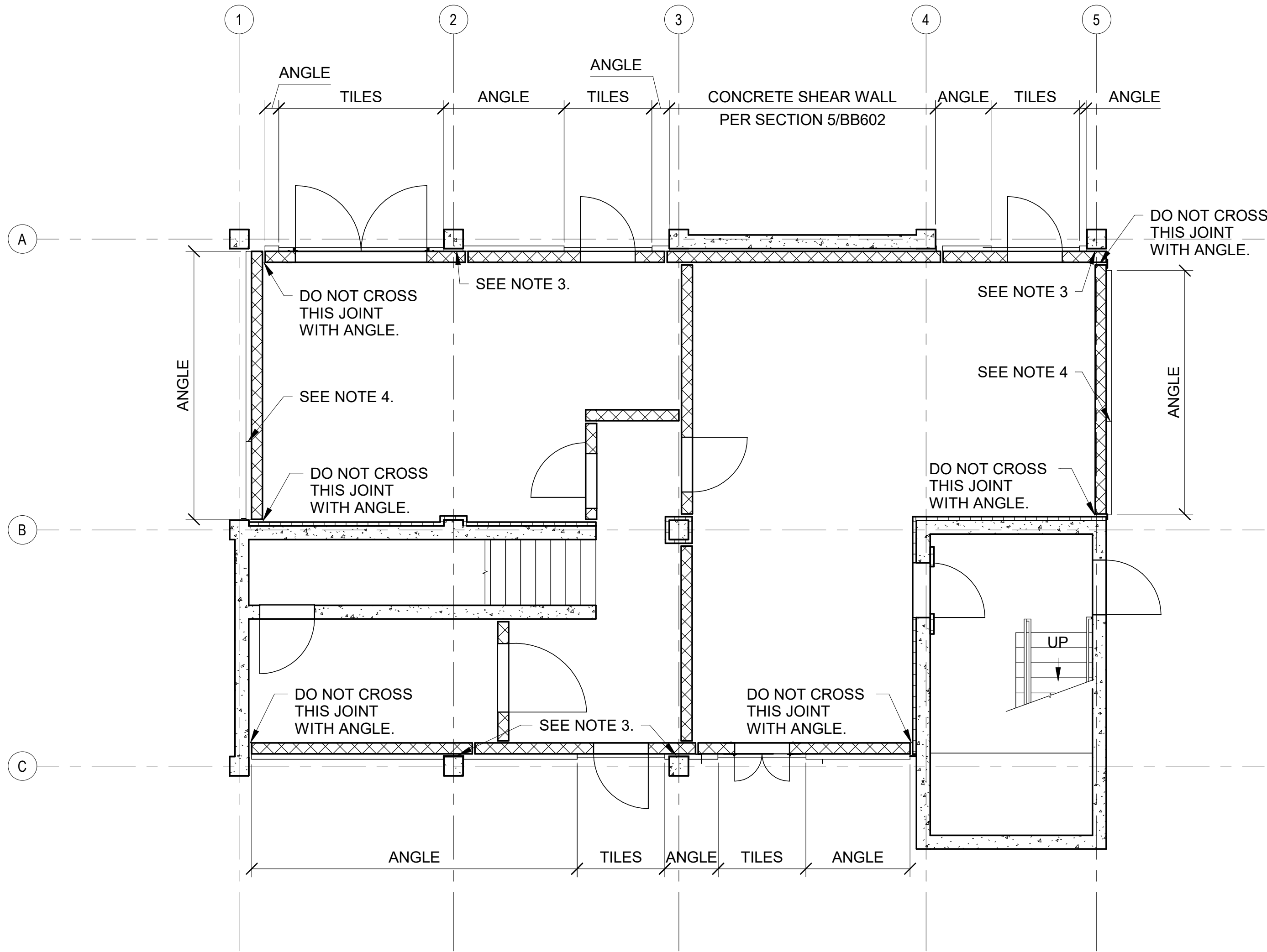
- NOTES:
- A. DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH
- B. TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB IS INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- C. NO BURNING ALLOWED ON THE STAIR ROOF.

2 STAIR ROOF PLAN  
BB205/BB207 SCALE 1/4" = 1'-0"

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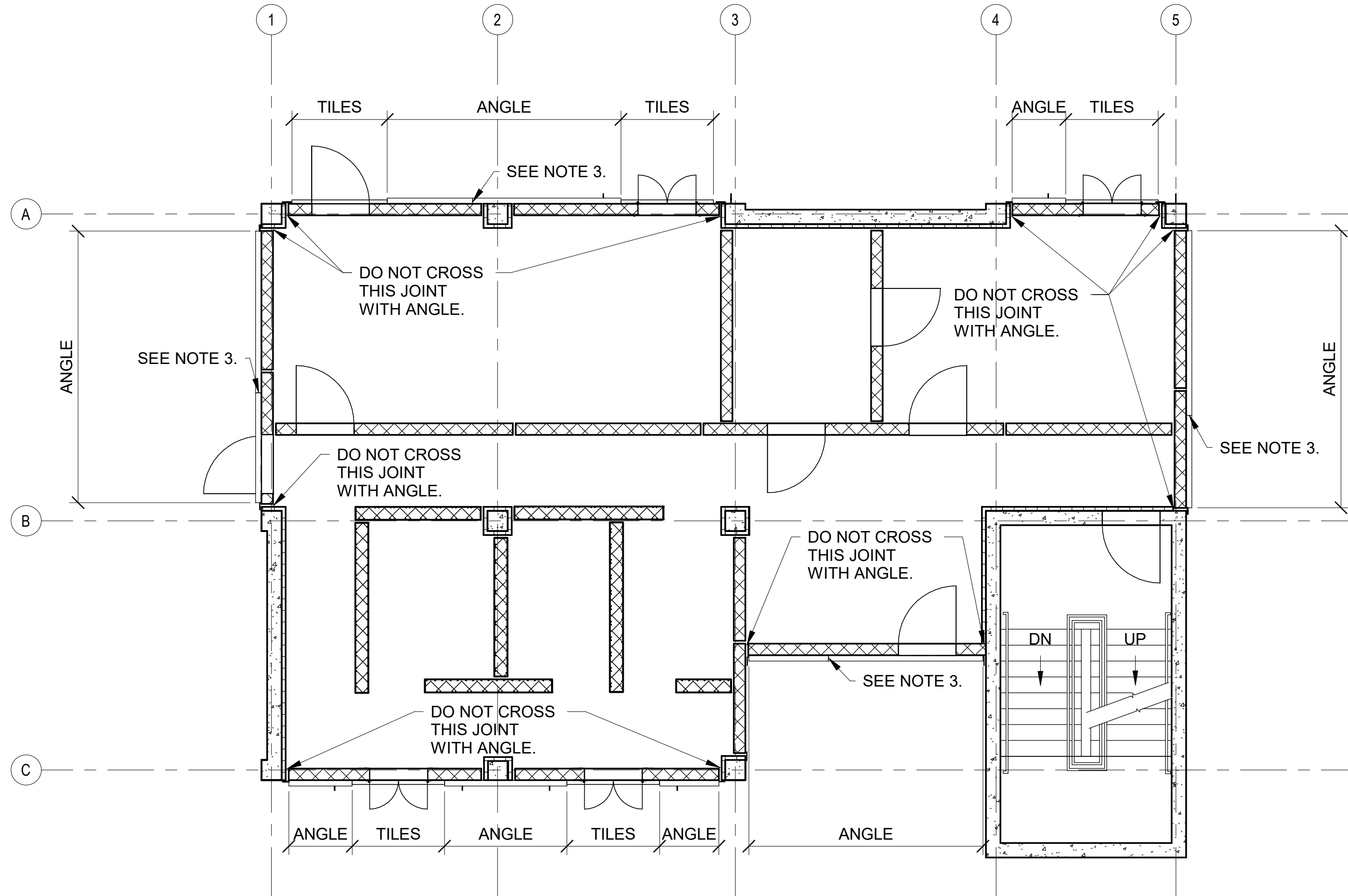




- NOTES:
- THIS PLAN SHOWS ONLY THE MEANS OF BRACING EXTERIOR FACES OF EXTERIOR MASONRY WALLS. SEE PLANS AND SECTIONS FOR ALL OTHER INFORMATION, INCLUDING SPECIFIC REQUIREMENTS FOR BRACING SHOWN ON THIS PLAN.
  - PROVIDE 1" GAP BETWEEN END OF TILE AND END OF ANGLE AT ALL ROLLOVER TILE LOCATIONS ABOVE EXTERIOR DOORS AND WINDOWS.
  - AT FOUR EXTERIOR COLUMNS (A2, A5, C2, AND C3), BRACING ANGLE IS CONTINUOUS BETWEEN COLUMN AND WALL PER DETAIL 4/BB601.
  - PROVIDE 1" GAP IN ANGLE AT NOTED LOCATIONS.

1  
BB208 BB208 SCALE 3/16" = 1'-0"

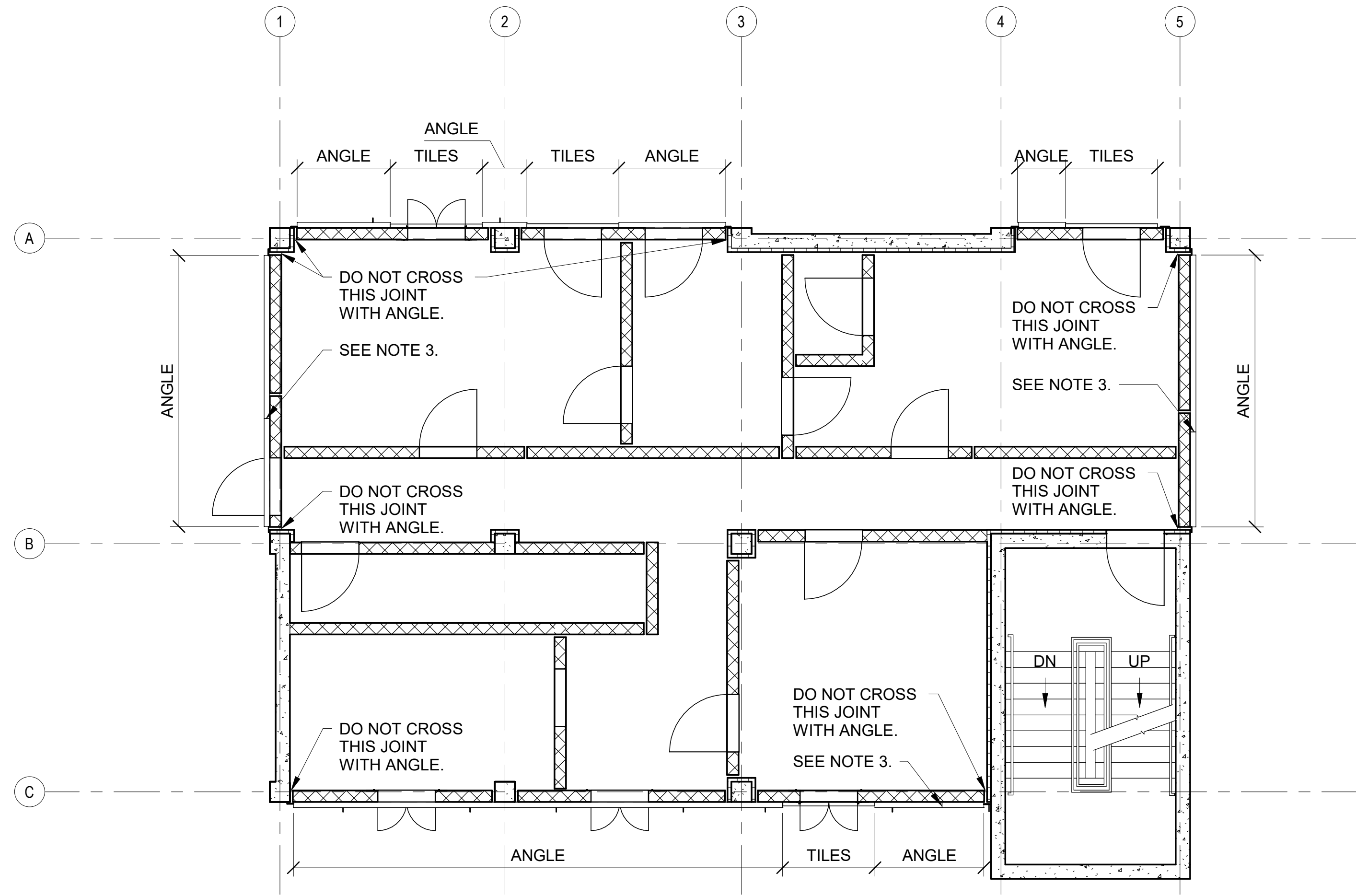
FIRST FLOOR EXTERIOR WALL BRACING PLAN



- NOTES:
- THIS PLAN SHOWS ONLY THE MEANS OF BRACING EXTERIOR FACES OF EXTERIOR MASONRY WALLS. SEE PLANS AND SECTIONS FOR ALL OTHER INFORMATION, INCLUDING SPECIFIC REQUIREMENTS FOR BRACING SHOWN ON THIS PLAN.
  - PROVIDE 1" GAP BETWEEN END OF TILE AND END OF ANGLE AT ALL ROLLOVER TILE LOCATIONS ABOVE EXTERIOR DOORS AND WINDOWS.
  - PROVIDE 1" GAP IN ANGLE AT NOTED LOCATIONS.

3  
BB208 BB208 SCALE 3/16" = 1'-0"

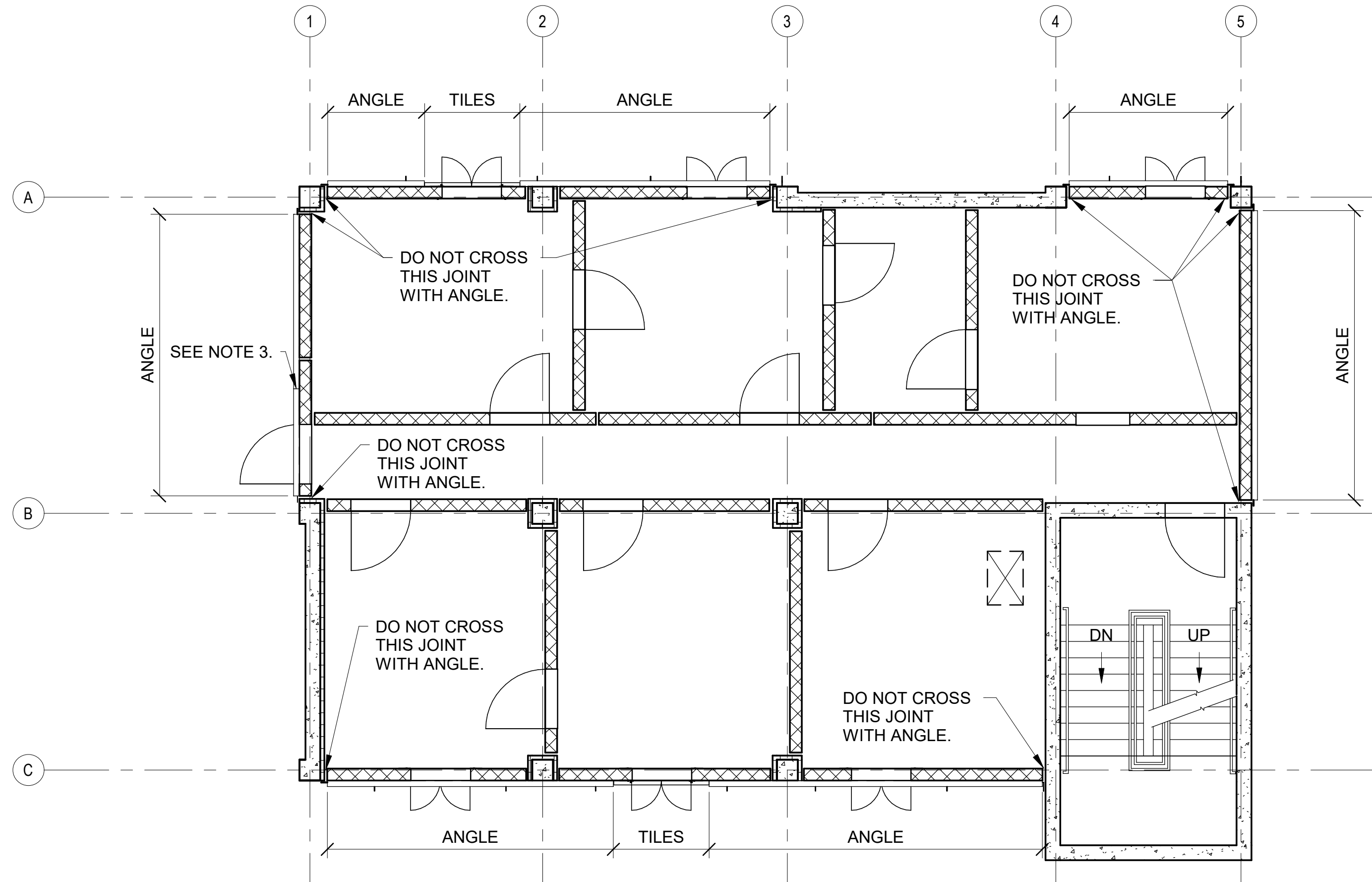
THIRD FLOOR EXTERIOR WALL BRACING PLAN



- NOTES:
- THIS PLAN SHOWS ONLY THE MEANS OF BRACING EXTERIOR FACES OF EXTERIOR MASONRY WALLS. SEE PLANS AND SECTIONS FOR ALL OTHER INFORMATION, INCLUDING SPECIFIC REQUIREMENTS FOR BRACING SHOWN ON THIS PLAN.
  - PROVIDE 1" GAP BETWEEN END OF TILE AND END OF ANGLE AT ALL ROLLOVER TILE LOCATIONS ABOVE EXTERIOR DOORS AND WINDOWS.
  - PROVIDE 1" GAP IN ANGLE AT NOTED LOCATIONS.

2  
BB208 BB208 SCALE 3/16" = 1'-0"

SECOND FLOOR EXTERIOR WALL BRACING PLAN



- NOTES:
- THIS PLAN SHOWS ONLY THE MEANS OF BRACING EXTERIOR FACES OF EXTERIOR MASONRY WALLS. SEE PLANS AND SECTIONS FOR ALL OTHER INFORMATION, INCLUDING SPECIFIC REQUIREMENTS FOR BRACING SHOWN ON THIS PLAN.
  - PROVIDE 1" GAP BETWEEN END OF TILE AND END OF ANGLE AT ALL ROLLOVER TILE LOCATIONS ABOVE EXTERIOR DOORS AND WINDOWS.
  - PROVIDE 1" GAP IN ANGLE AT NOTED LOCATIONS.

4  
BB208 BB208 SCALE 3/16" = 1'-0"

FOURTH FLOOR EXTERIOR WALL BRACING PLAN



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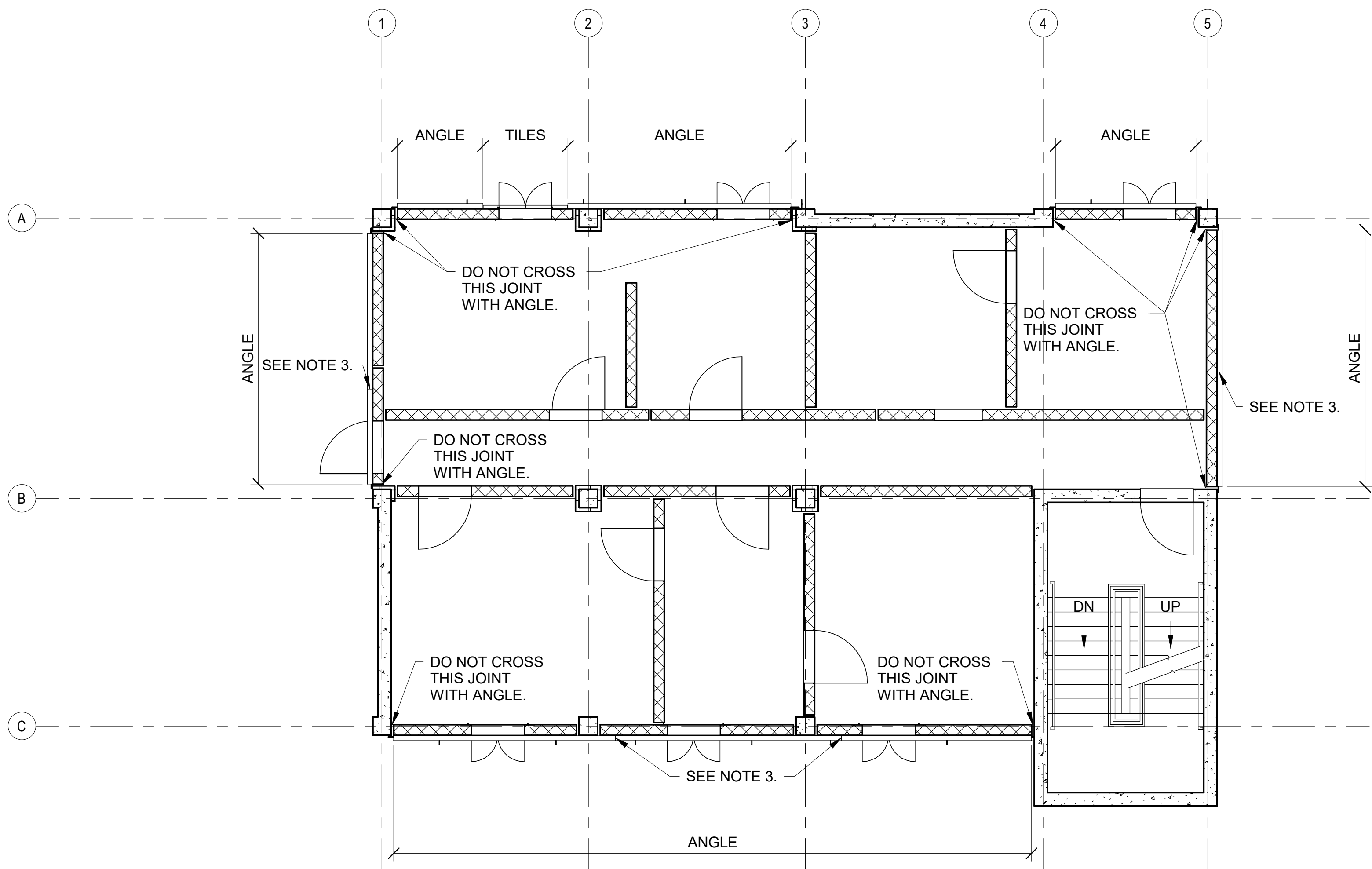
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**BURN BUILDING - EXTERIOR WALL BRACING PLANS**

BB208

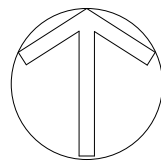
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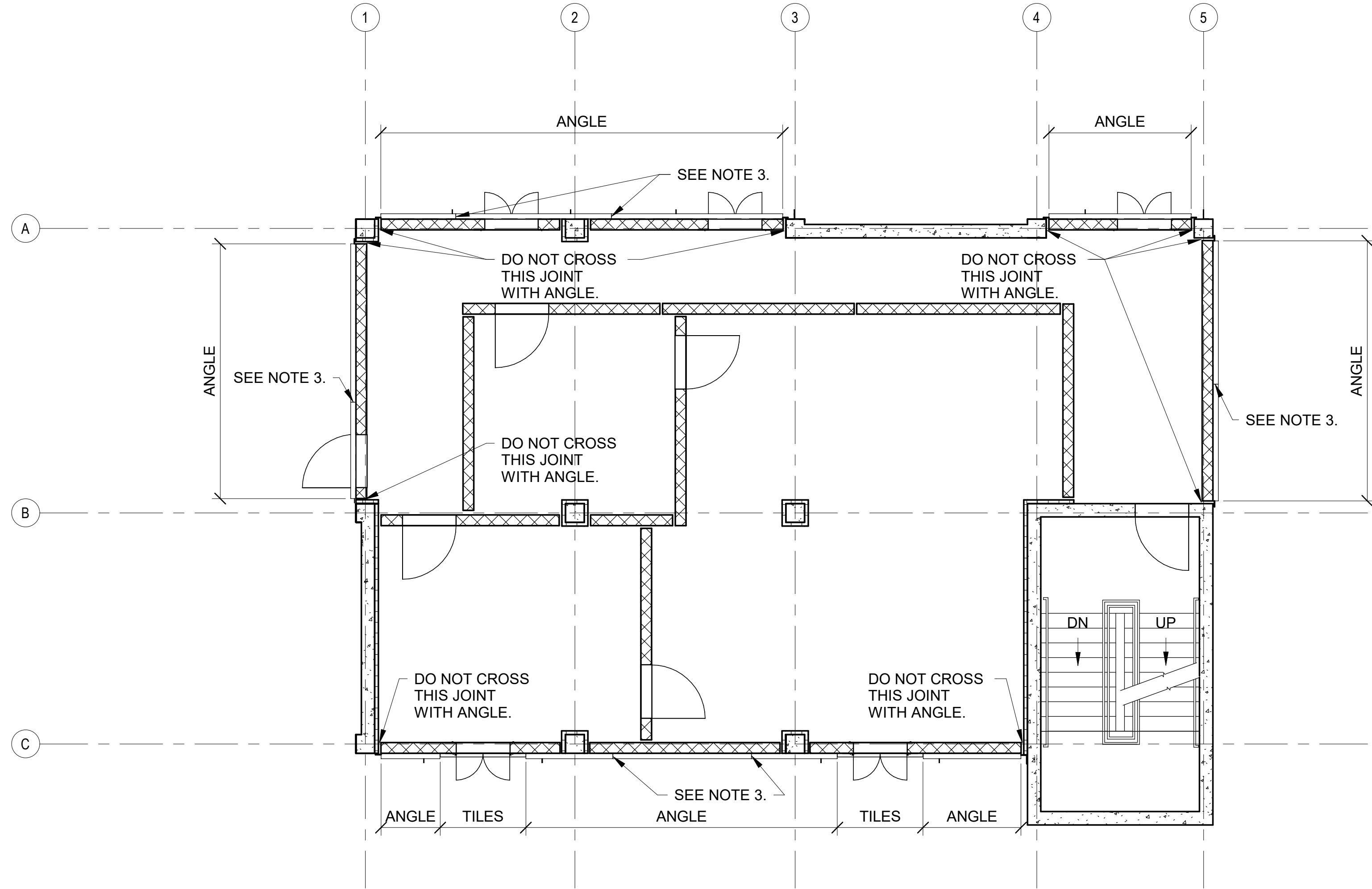
NOTES:

1. THIS PLAN SHOWS ONLY THE MEANS OF BRACING EXTERIOR FACES OF EXTERIOR MASONRY WALLS. SEE PLANS AND SECTIONS FOR ALL OTHER INFORMATION, INCLUDING SPECIFIC REQUIREMENTS FOR BRACING SHOWN ON THIS PLAN.
2. PROVIDE 1" GAP BETWEEN END OF TILE AND END OF ANGLE AT ALL ROLLOVER TILE LOCATIONS ABOVE EXTERIOR DOORS AND WINDOWS.
3. PROVIDE 1" GAP IN ANGLE AT NOTED LOCATIONS.



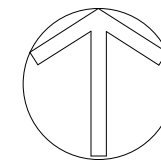
1  
BB209 BB209 SCALE 3/16" = 1'-0"

FIFTH FLOOR EXTERIOR WALL BRACING  
PLAN



NOTES:

1. THIS PLAN SHOWS ONLY THE MEANS OF BRACING EXTERIOR FACES OF EXTERIOR MASONRY WALLS. SEE PLANS AND SECTIONS FOR ALL OTHER INFORMATION, INCLUDING SPECIFIC REQUIREMENTS FOR BRACING SHOWN ON THIS PLAN.
2. PROVIDE 1" GAP BETWEEN END OF TILE AND END OF ANGLE AT ALL ROLLOVER TILE LOCATIONS ABOVE EXTERIOR DOORS AND WINDOWS.
3. PROVIDE 1" GAP IN ANGLE AT NOTED LOCATIONS.



2  
BB209 BB209 SCALE 3/16" = 1'-0"

SIXTH FLOOR EXTERIOR WALL BRACING  
PLAN

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**BURN BUILDING - EXTERIOR WALL BRACING PLANS**

BB209

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**BURN BUILDING - SOUTH ELEVATION**

**BB301**

NOTE: MASONRY LINES SHOWN ON ELEVATIONS ARE DIAGRAMMATIC. THEY DO NOT REFLECT ACTUAL COURSING.



**1 SOUTH ELEVATION**  
BB201 - BB301 SCALE 1/4" = 1'-0"  
BB207

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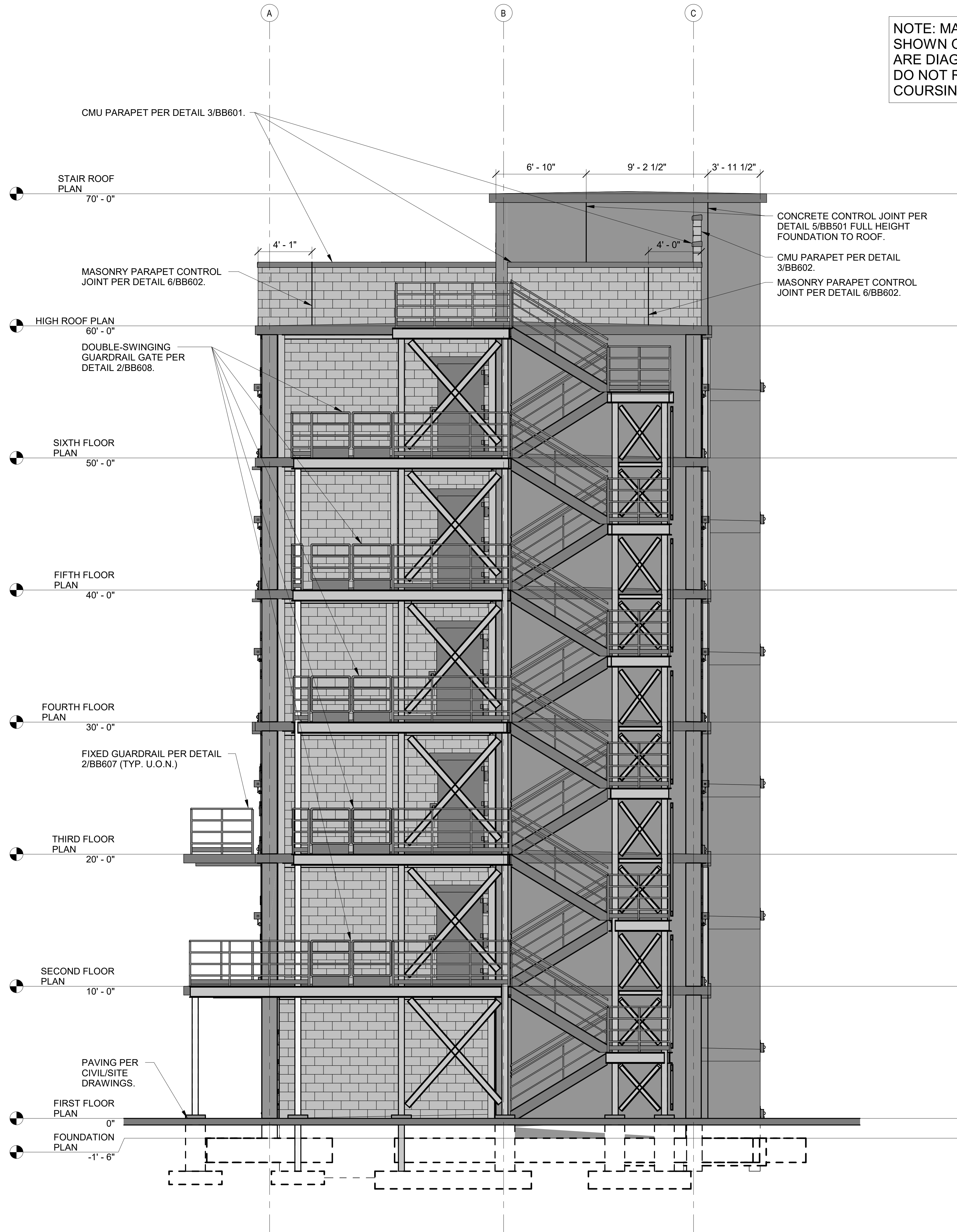


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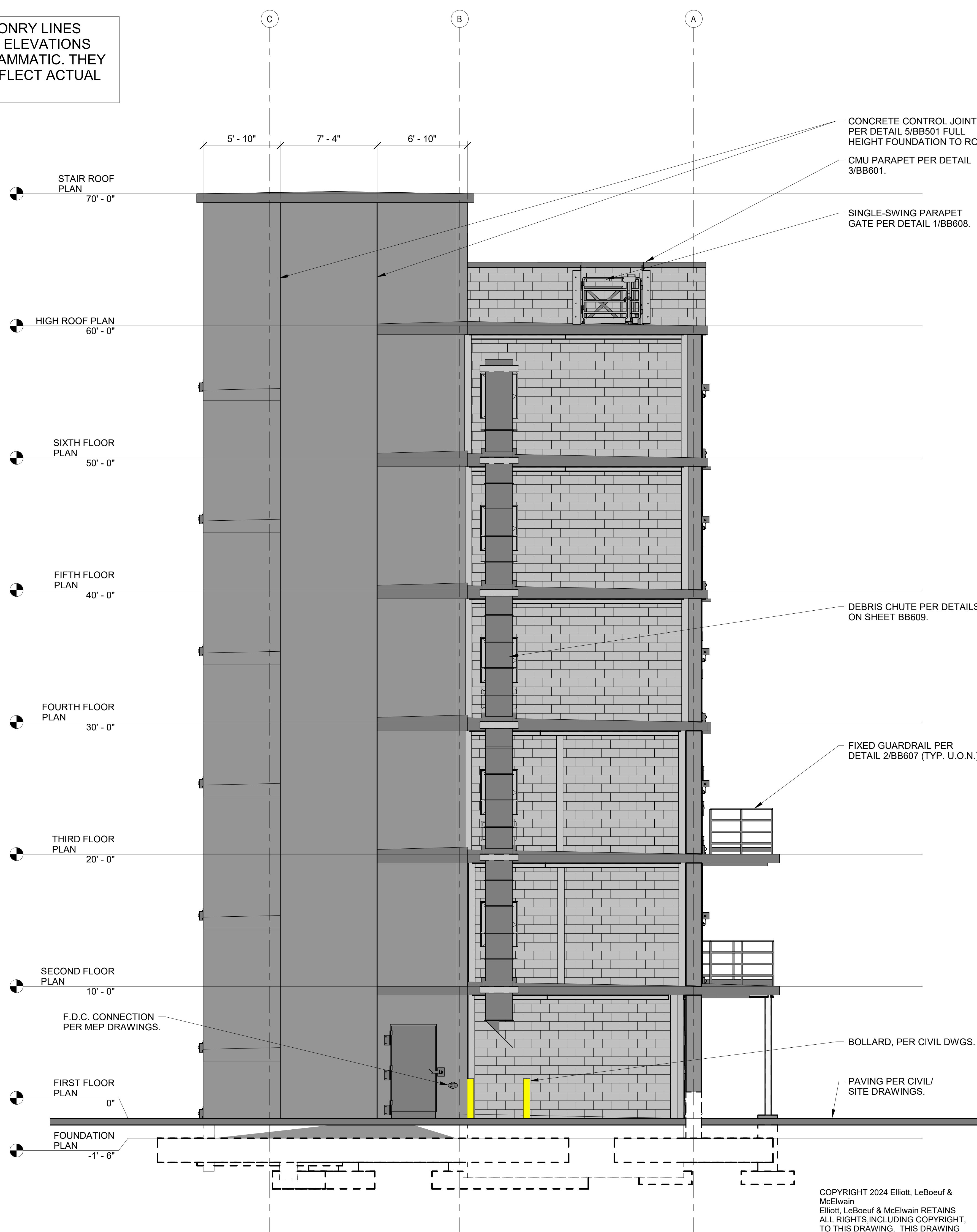
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**BURN BUILDING - WEST & EAST ELEVATIONS**

BB302

NOTE: MASONRY LINES SHOWN ON ELEVATIONS ARE DIAGRAMMATIC. THEY DO NOT REFLECT ACTUAL COURSING.



1 WEST ELEVATION  
BB201 - BB302 SCALE 1/4" = 1'-0"  
BB207

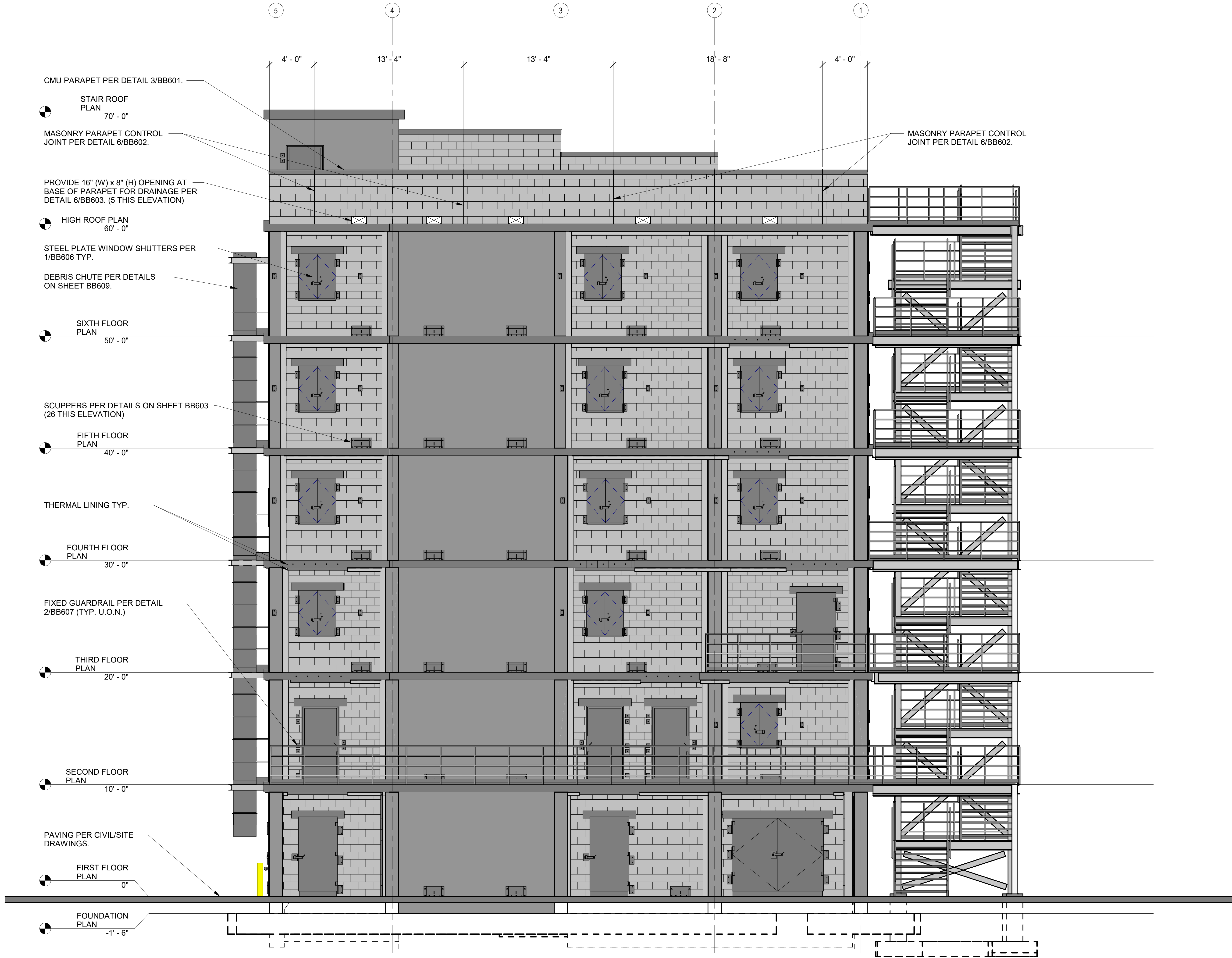


2 EAST ELEVATION  
BB201 - BB302 SCALE 1/4" = 1'-0"  
BB207

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NOTE: MASONRY LINES SHOWN ON ELEVATIONS ARE DIAGRAMMATIC. THEY DO NOT REFLECT ACTUAL COURSING.



1 NORTH ELEVATION  
BB201 - BB303 SCALE 1/4" = 1'-0"  
BB207

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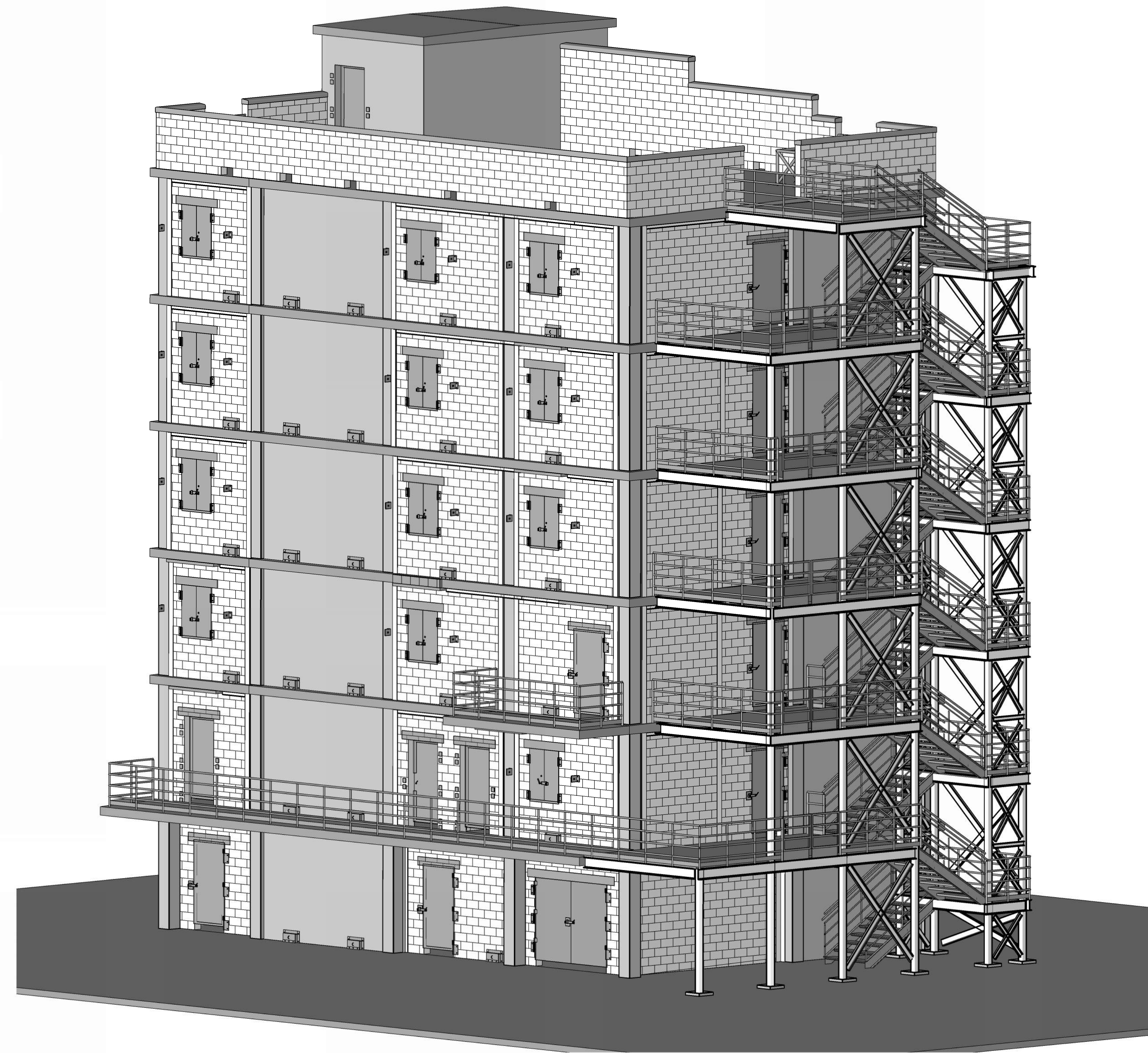


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**BURN BUILDING - NORTH ELEVATION**

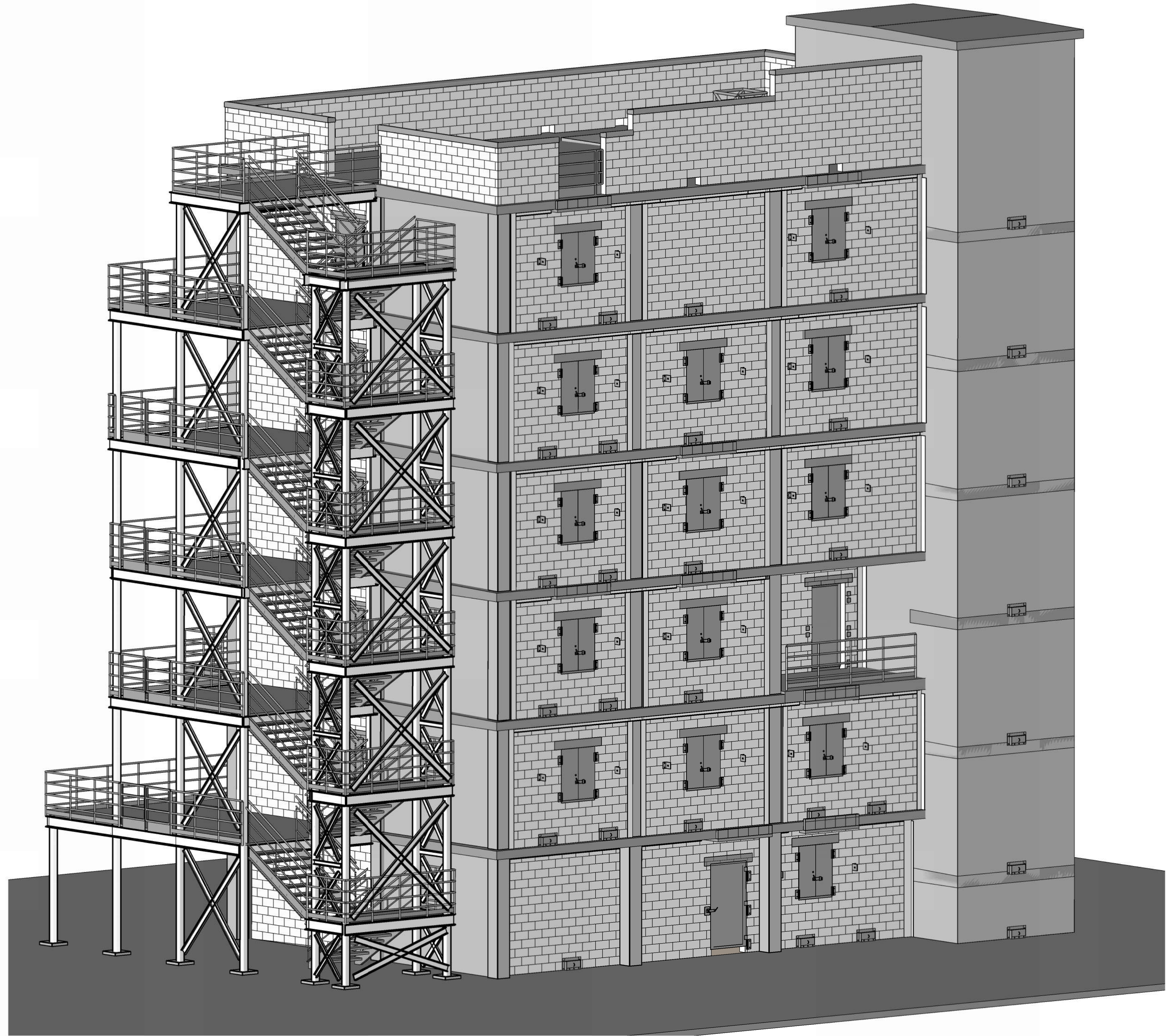
BB303





1 NORTHWEST PERSPECTIVE  
BB304 BB304 SCALE

NOTE: PERSPECTIVE  
DRAWINGS SHALL NOT BE  
USED FOR SCALE OR  
DIMENSIONAL TAKEOFFS. SEE  
ELEVATIONS FOR MATERIAL  
CALLOUTS.



2 SOUTHWEST PERSPECTIVE  
BB304 BB304 SCALE

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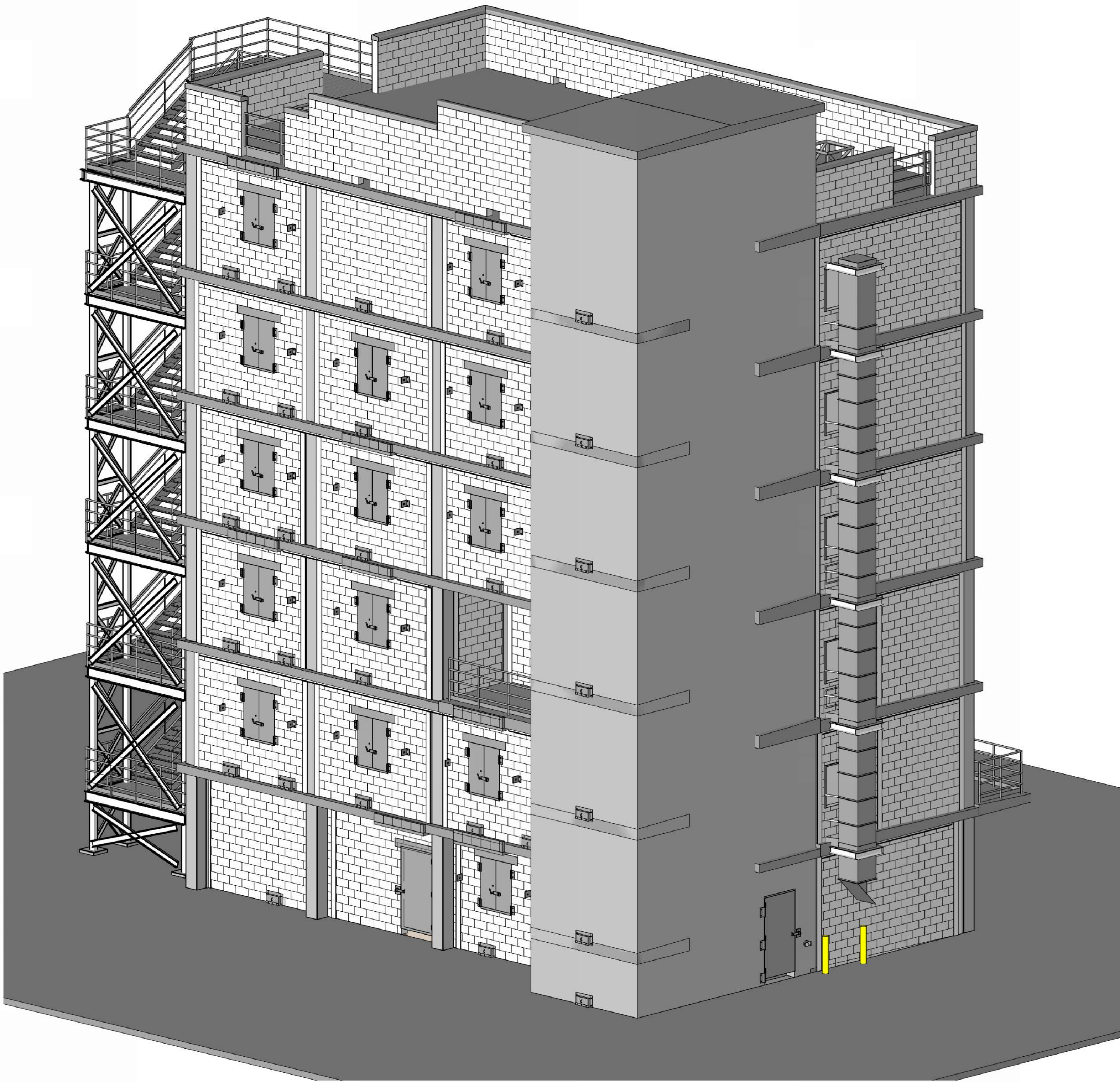
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**BURN BUILDING - NE & SE PERSPECTIVES**

BB305

NOTE: PERSPECTIVE DRAWINGS SHALL NOT BE USED FOR SCALE OR DIMENSIONAL TAKEOFFS. SEE ELEVATIONS FOR MATERIAL CALLOUTS.



1 NORTHEAST PERSPECTIVE  
BB305/BB305 SCALE



2 SOUTHEAST PERSPECTIVE  
BB305/BB305 SCALE

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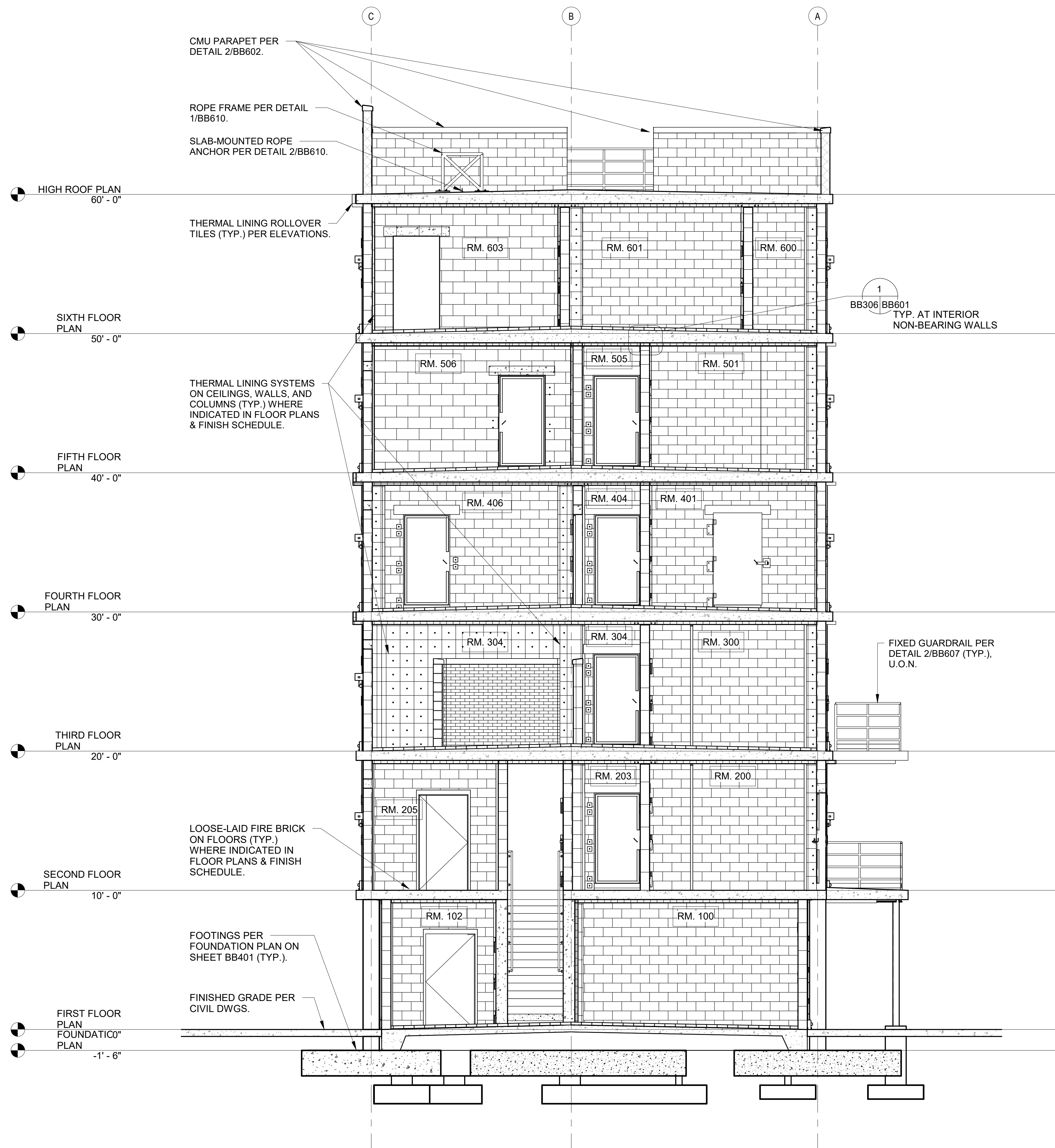
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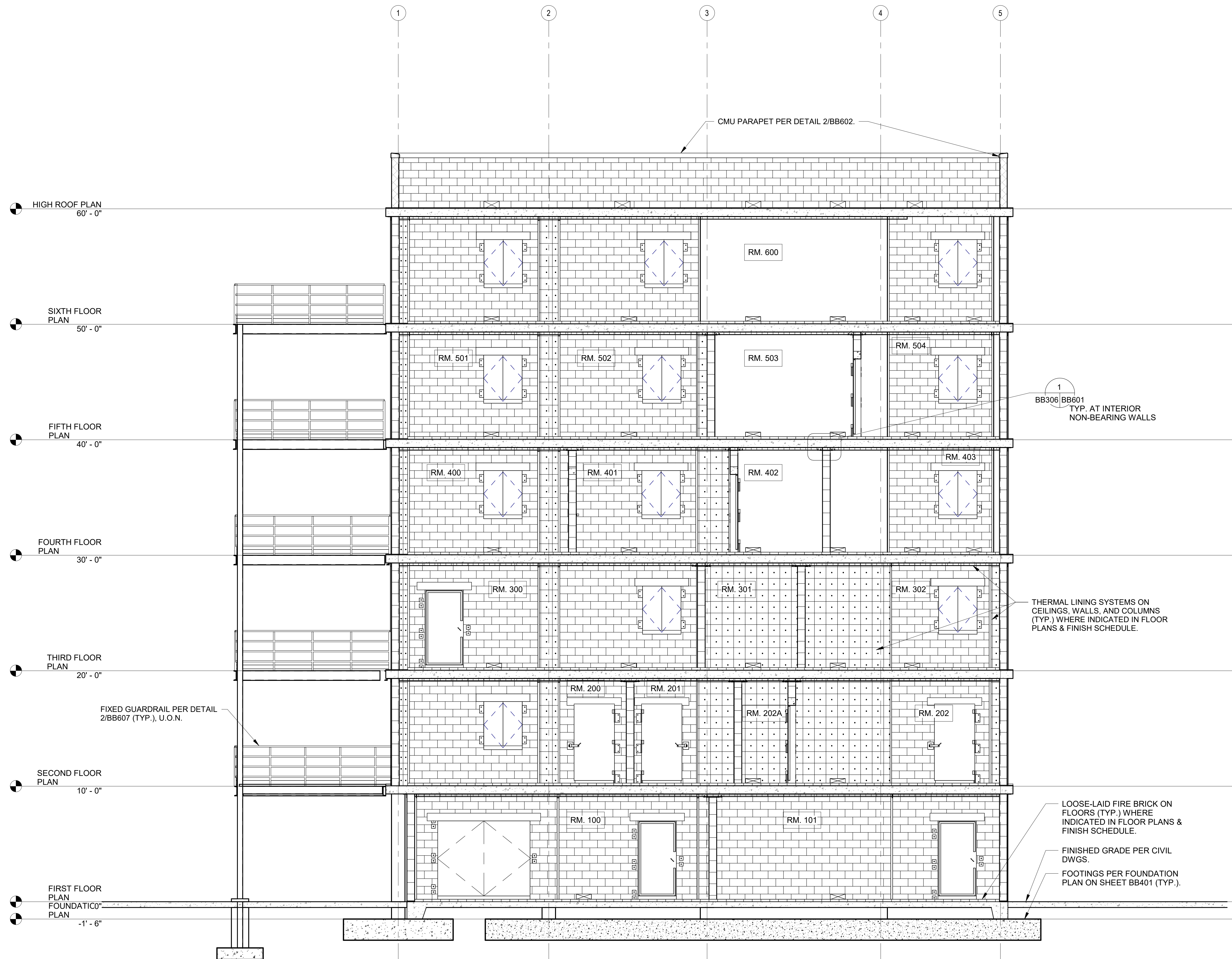
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**BURN BUILDING - BUILDING SECTIONS**

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**BUILDING SECTION 1**  
BB201- BB306 SCALE 1/4" = 1'-0"  
BB207





1 BUILDING SECTION 2  
BB201 | BB307 SCALE 1/4" = 1'-0"  
BB207

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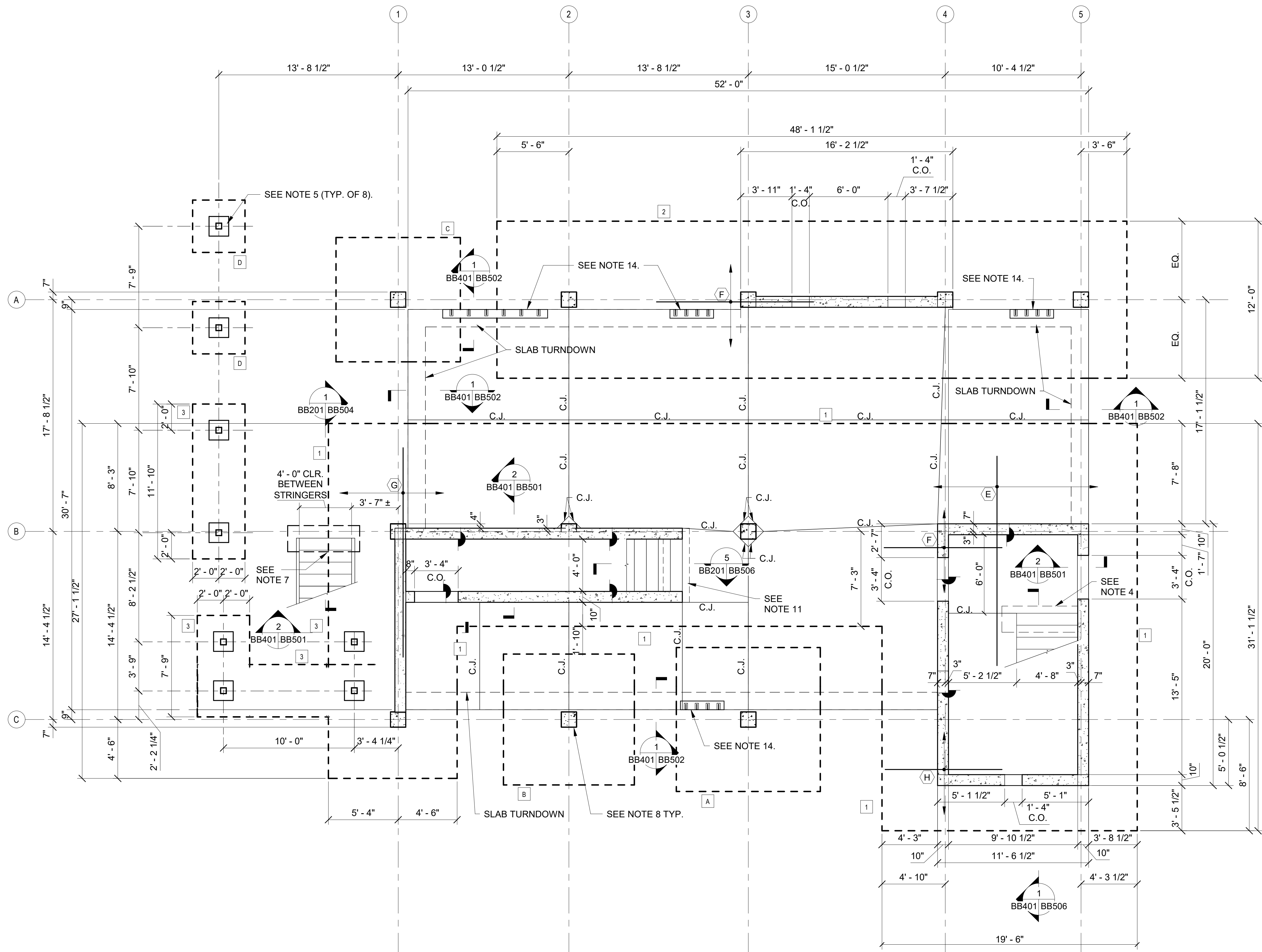
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**BURN BUILDING - FOUNDATION PLAN**

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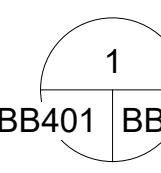
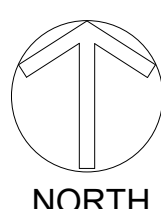
COLUMN FOOTING SCHEDULE				
MARK	WIDTH	LENGTH	THICKNESS	BOTTOM REINF.
A	11' - 0"	11' - 0"	2' - 1"	(11) #7 E.W.
B	10' - 0"	10' - 0"	1' - 10"	(10) #7 E.W.
C	9' - 6"	9' - 6"	1' - 10"	(9) #7 E.W.
D	4' - 0"	4' - 0"	1' - 0"	(5) #5 E.W.

WALL FOOTING SCHEDULE							
MARK	WIDTH	LENGTH	THICKNESS	BOTTOM REINF.		TOP REINF.	
				CONT. (B)	SHORT DIR. (BM)	CONT. (T)	SHORT DIR. (TM)
1	11' - 0"	11' - 0"	1' - 10"	#9@10" O.C. E.W.	-----	#9@10" O.C. E.W.	-----
2	12' - 0"	48' - 1 1/2"	1' - 10"	#8@12" O.C. E.W.	-----	#7@12" O.C. E.W.	-----
3	4' - 0"	CONT.	1' - 4"	(5) #6	#6@12" O.C.	(5) #6	#6@18" O.C.

\* MAT FOUNDATION IN UPSIDE-DOWN U SHAPE IN PLAN TO DIMENSIONS SHOWN. ALL FOOTING AREAS SHOWN AS 1 SHALL BE ONE LARGE MAT FOUNDATION.

#### NOTES:

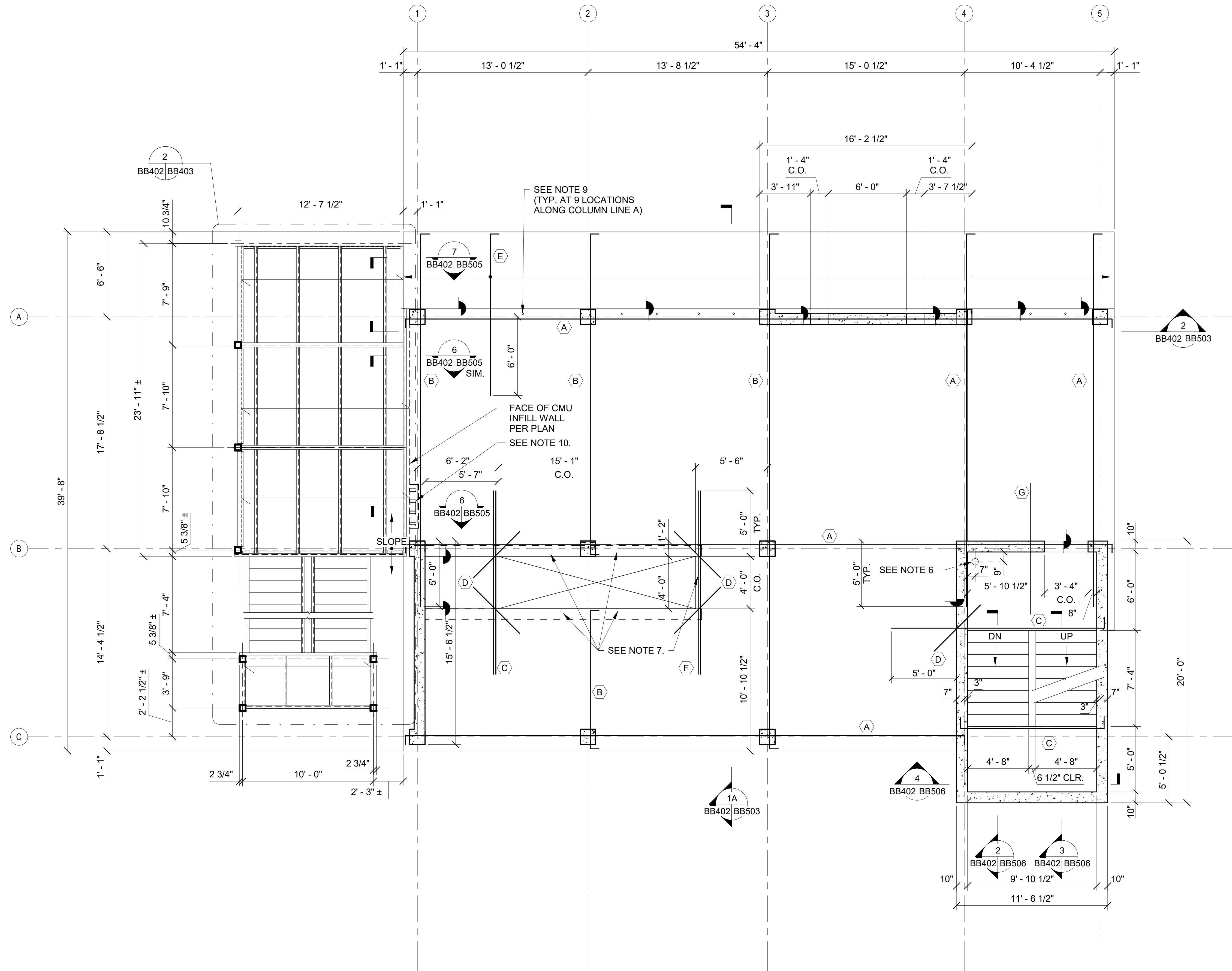
- LOCATE TOPS OF FOOTINGS AT -1'-6" BELOW DATUM AND EXTERIOR FINISHED GRADE, U.O.N. SEE FIRST FLOOR PLAN BB201 FOR DATUM.
- SEE FOOTING SCHEDULE FOR FOOTINGS NOTED THUS [X]. WHERE WALL OR PEDESTAL FOOTINGS INTERSECT COLUMN OR MAT FOOTINGS, EXTEND WALL/PEDESTAL FOOTING BARS 4'-0" MIN. INTO COLUMN FOOTING.
- SEE FIRST FLOOR PLAN 1/BB201 FOR ALL SLAB ELEVATIONS AND SLOPES. SEE SECTION N OF THE GENERAL NOTES ON SHEET BB001 FOR SLAB THICKNESS AND REINFORCING.
- PROVIDE A 2'-0" WIDE X 5'-6" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 1/BB505.
- HSS 5 1/2x5 1/2x1/4 COLUMN ON 1'-6" SQ. CONCRETE PIER PER 2/BB504.
- CJ = CONTROL JOINT PER SPECIFICATIONS & GENERAL NOTES.
- PROVIDE A 2'-0" WIDE X 6'-0" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 1/BB504.
- 14" SQ. CONCRETE COLUMN PER 1/BB501.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH [H].
- SEE PLAN FOR ADDITIONAL REINFORCING:  
[E] = (16) #9 x 16' - 0" ADDITIONAL BOTTOM BARS AT 10" O.C.  
[F] = (6) #8 x 12' - 0" ADDITIONAL BOTTOM BARS AT 12" O.C.  
[G] = (7) #9 x 16' - 0" ADDITIONAL BOTTOM BARS AT 10" O.C.  
[H] = (6) #9 x 9' - 0" ADDITIONAL BOTTOM BARS AT 10" O.C.
- PROVIDE 2'-0" WIDE X 4'-0" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 5/BB506.
- SLAB-ON-GRADE SHALL BE CONTINUOUS THROUGH DOORWAY, AND SCUPPER OPENINGS IN CONCRETE WALLS. SEE DETAIL 5/BB502 FOR ADDITIONAL SLAB REINFORCING AT DOOR & SCUPPER OPENINGS.
- ELEVATIONS TO DOOR HEADS VARY WITH FLOOR SLOPES AND SPOT ELEVATIONS. FORM CONCRETE WALL OPENINGS PER DETAILS RELATIVE TO FLOOR SPOT ELEVATION AT EACH LOCATION.
- CAST DOORWAY WELD PLATES INTO SLAB PER FIRST FLOOR PLAN AND DETAIL 4/BB610.



#### FOUNDATION PLAN

BB401 BB401 SCALE 1/4" = 1'-0"





**NOTES:**

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE SECOND FLOOR PLAN 1/BB202 FOR CONCRETE SLAB ELEVATIONS AND SLOPES. BOTTOM OF MAIN SLAB AT +9.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\rightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (5) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (B) = (8) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = #5 @ 12" O.C. ADDITIONAL TOP BARS CENTERED BETWEEN MAIN TOP BARS. (E) BARS DO NOT HAVE TO BE ADDED WHERE A OR B BARS HAVE ALREADY BEEN ADDED.
  - (F) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
  - (G) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- PROVIDE WALL DOWELS PER DETAIL 1/BB601 ONLY FOR CMU WALLS ABOVE SECOND FLOOR SLAB AROUND INTERIOR STRAIGHT RUN STAIRS.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH  $\nabla$ .
- PROVIDE WEEPS THROUGH SLAB PER KEYED NOTE 16 ON 1/BB202.
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



1  
BB402 BB402 SCALE 1/4" = 1'-0"

**SECOND FLOOR FRAMING PLAN**

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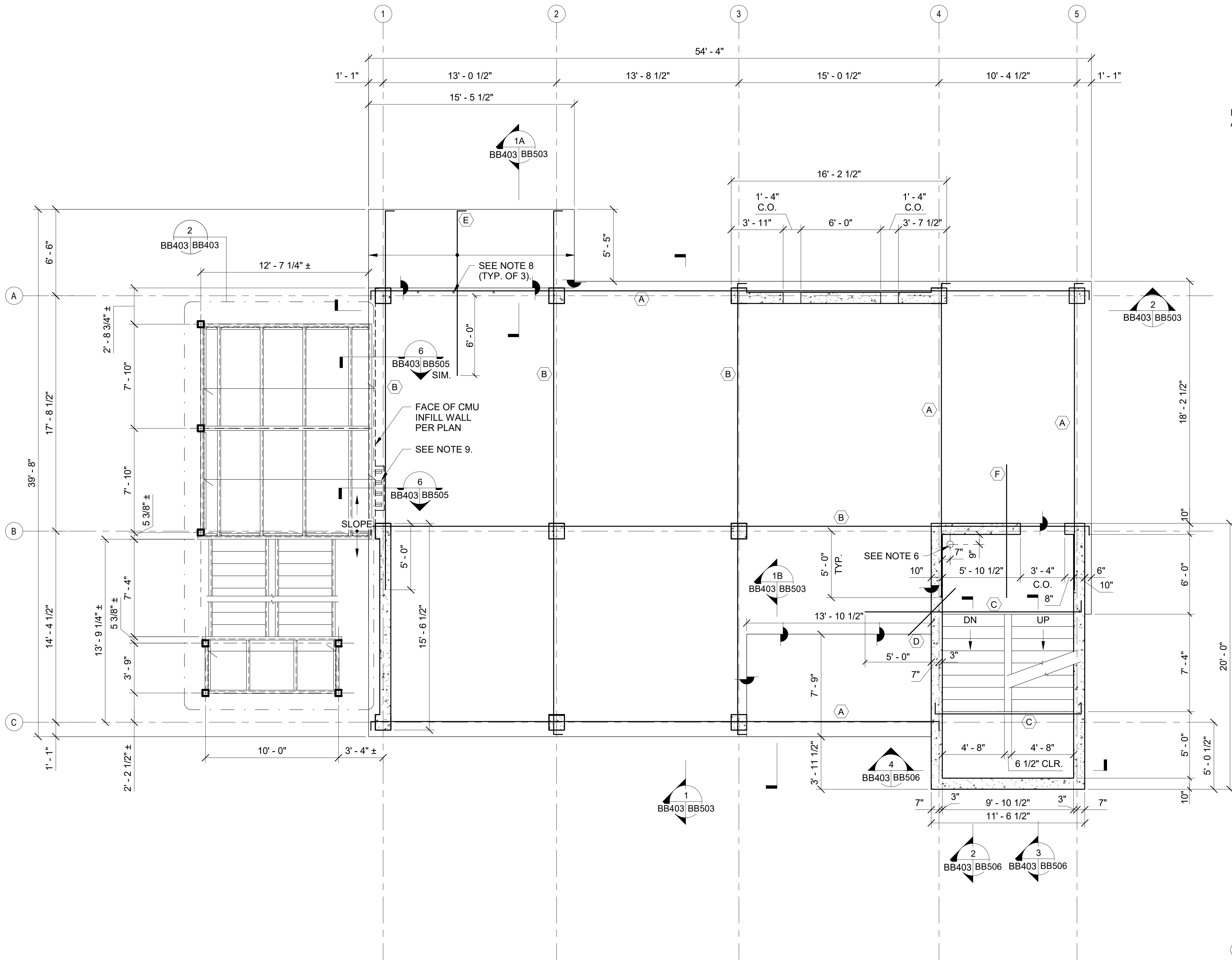


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**BURN BUILDING - SECOND FLOOR FRAMING PLAN**

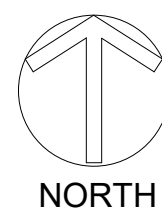
**BB402**





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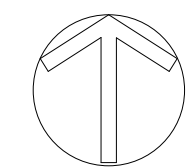
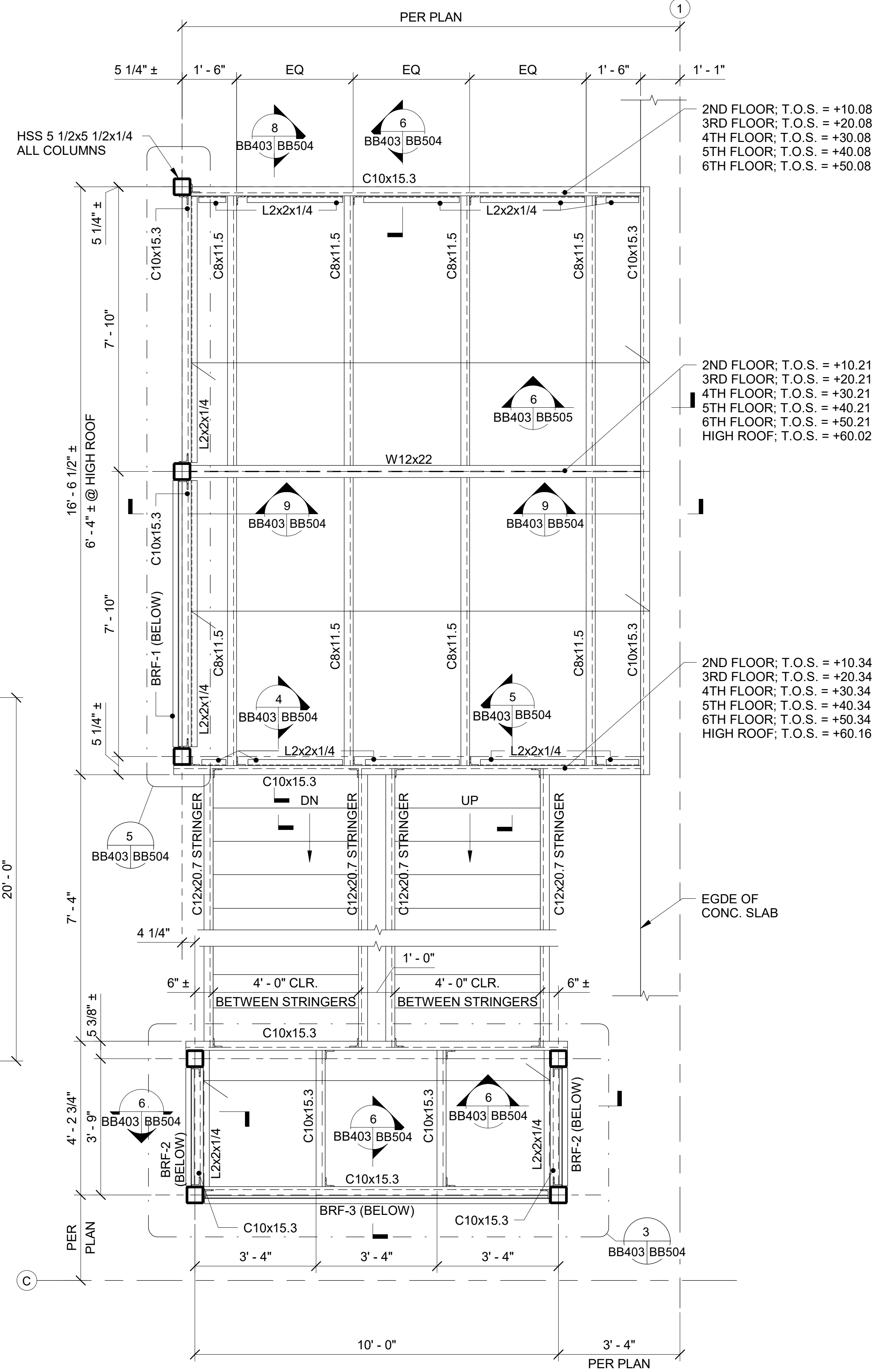
- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE THIRD FLOOR PLAN 1/BB203 FOR CONCRETE SLAB ELEVATIONS AND SLOPES. BOTTOM OF MAIN SLAB AT +19.33' U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\rightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (5) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (B) = (8) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = #5 @ 12" O.C. ADDITIONAL TOP BARS CENTERED BETWEEN MAIN TOP BARS. (E) BARS DO NOT HAVE TO BE ADDED WHERE (B) BARS HAVE ALREADY BEEN ADDED.
  - (F) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH  $\nabla$ .
- PROVIDE WEEPS THROUGH SLABS PER KEYED NOTE 15 ON 1/BB203.
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



1

THIRD FLOOR FRAMING PLAN

BB403 BB403 SCALE 1/4" = 1'-0"



2

EXTERIOR STAIRS

BB403-BB403 SCALE 1/2" = 1'-0"



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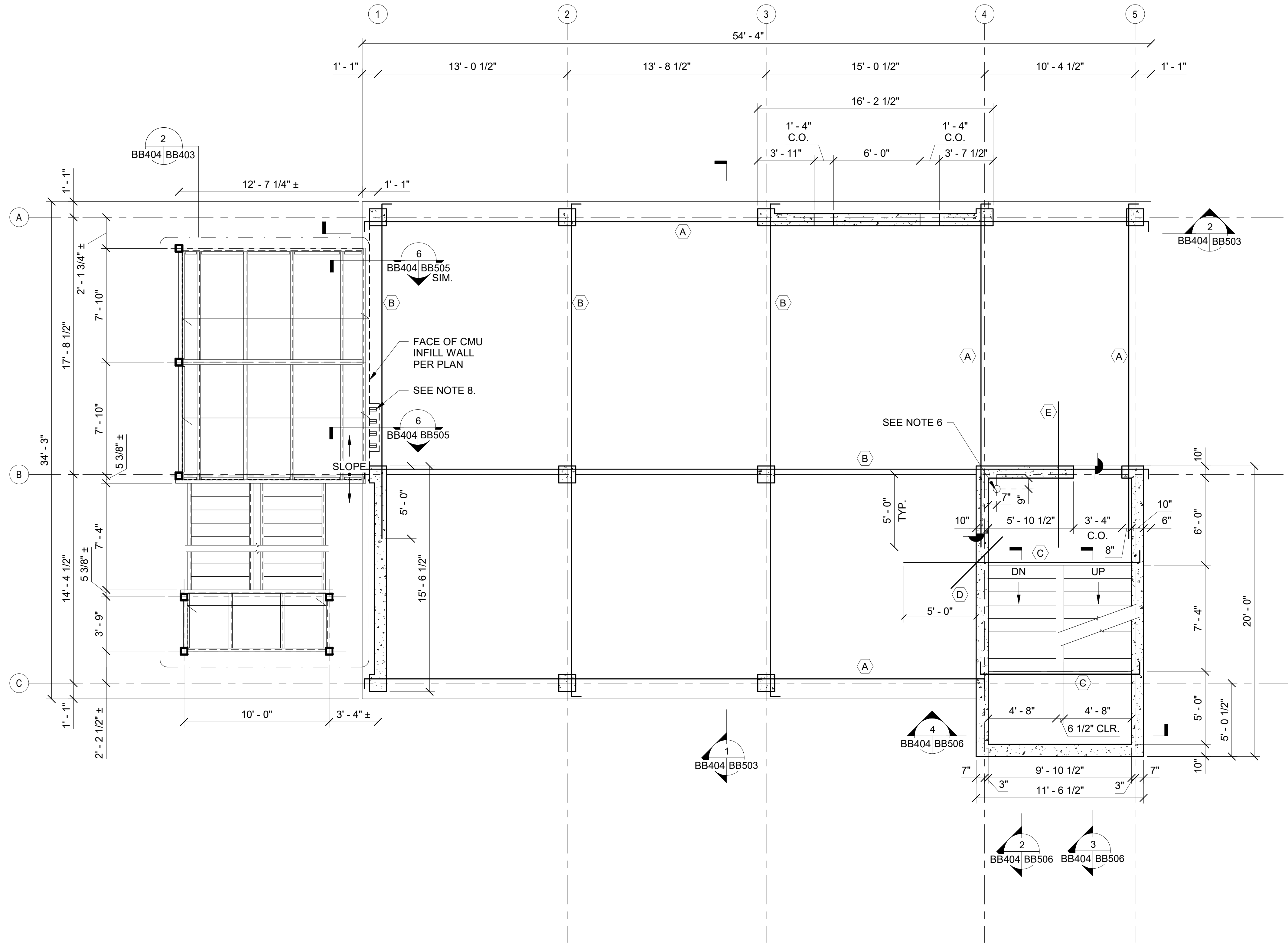
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**BURN BUILDING - THIRD FLOOR FRAMING PLAN**

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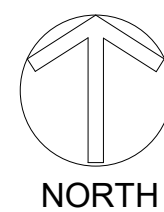
BB403





NOTES:

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE FOURTH FLOOR/LOW ROOF PLAN 1/BB204 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +29.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\longleftrightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (5) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (B) = (8) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH  $\nabla$ .
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



1  
BB404 BB404 SCALE 1/4" = 1'-0"

FOURTH FLOOR FRAMING PLAN

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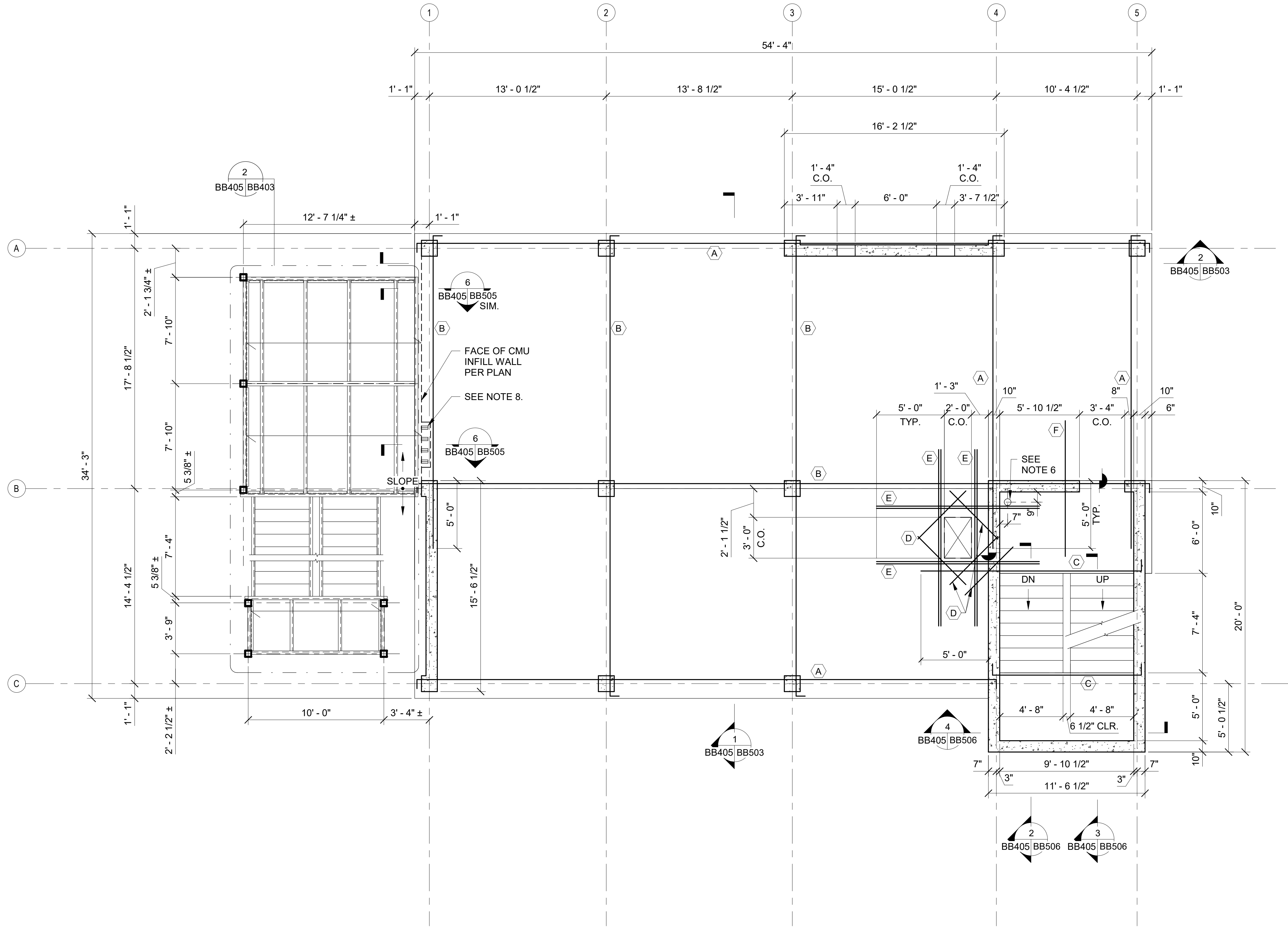
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**BURN BUILDING -  
FOURTH FLOOR  
FRAMING PLAN**

BB404





NOTES:

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE FIFTH FLOOR PLAN 1/BB205 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +39.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\rightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (5) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (B) = (8) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
  - (F) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH  $\nabla$ .
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



1  
BB405 BB405

FIFTH FLOOR FRAMING PLAN

SCALE 1/4" = 1'-0"

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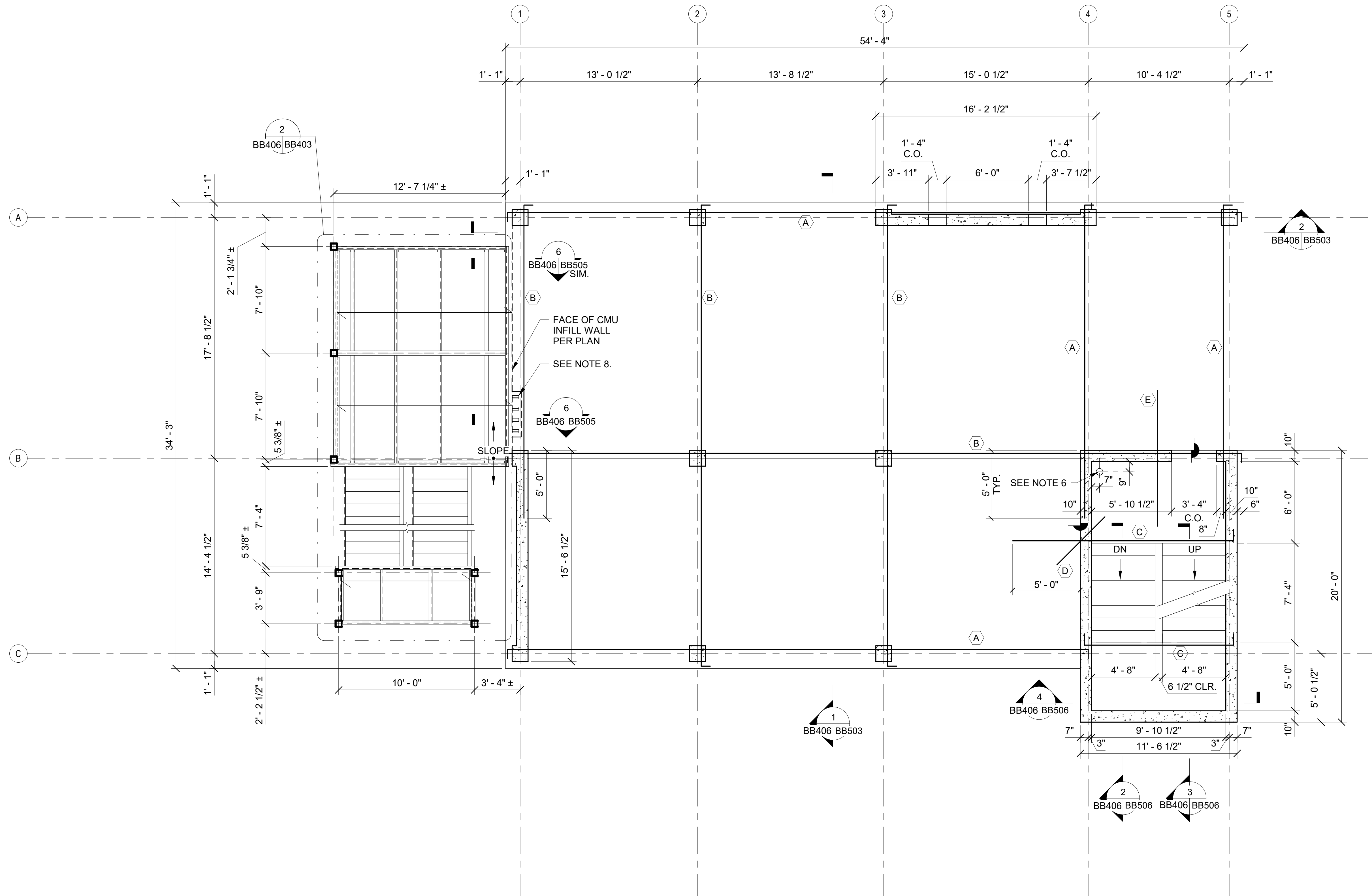
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**BURN BUILDING - FIFTH FLOOR FRAMING PLAN**

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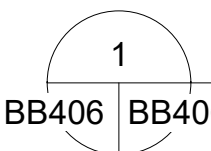
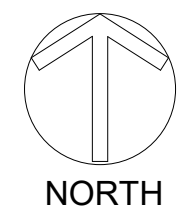
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NOTES:

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE SIXTH FLOOR PLAN 1/BB206 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +49.33' U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\longleftrightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (5) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (B) = (8) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH  $\nabla$ .
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



SIXTH FLOOR FRAMING PLAN

BB406 BB406 SCALE 1/4" = 1'-0"

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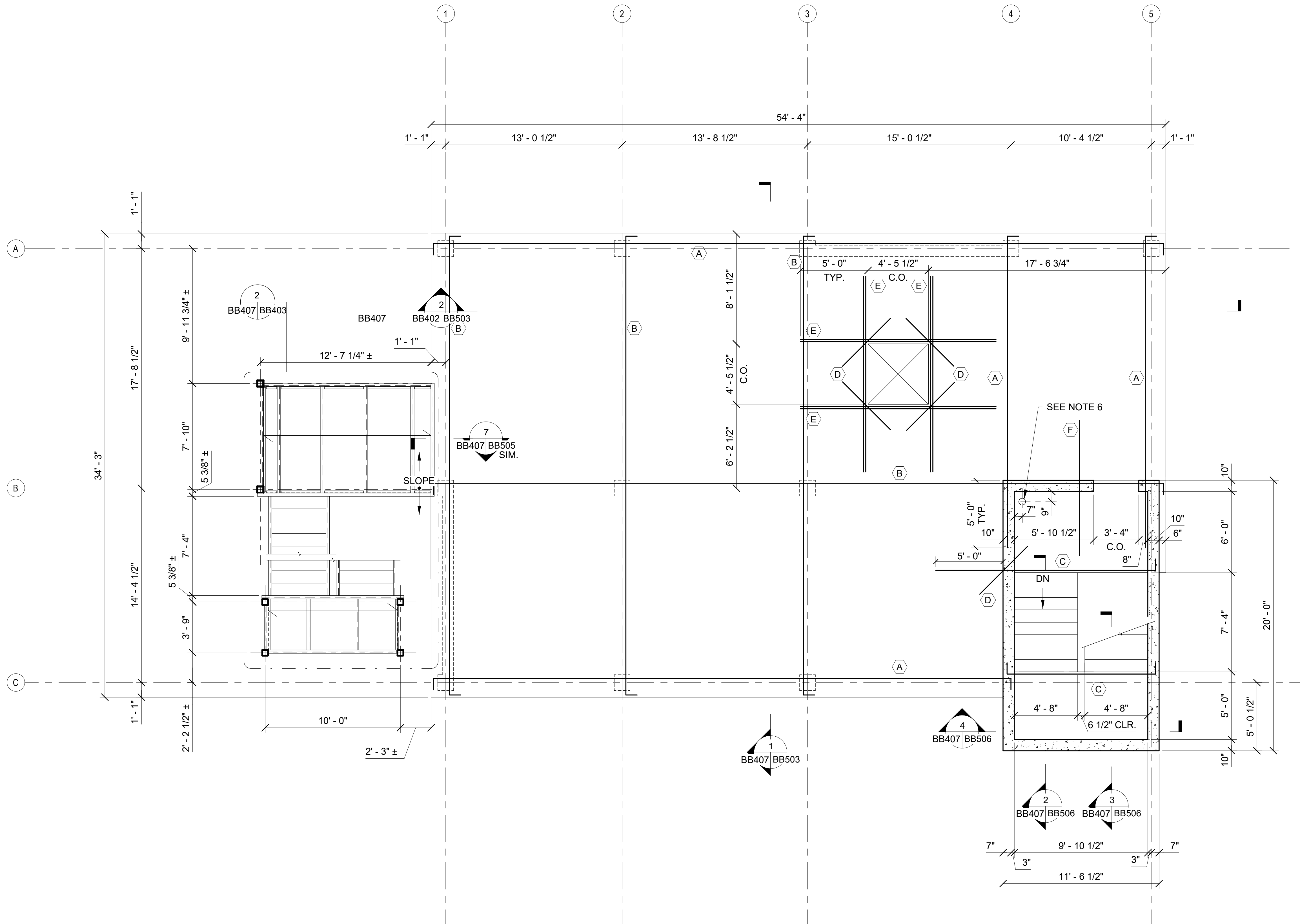


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**BURN BUILDING - HIGH ROOF & STAIR ROOF FRAMING PLANS**

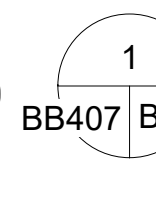
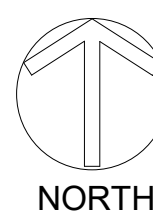
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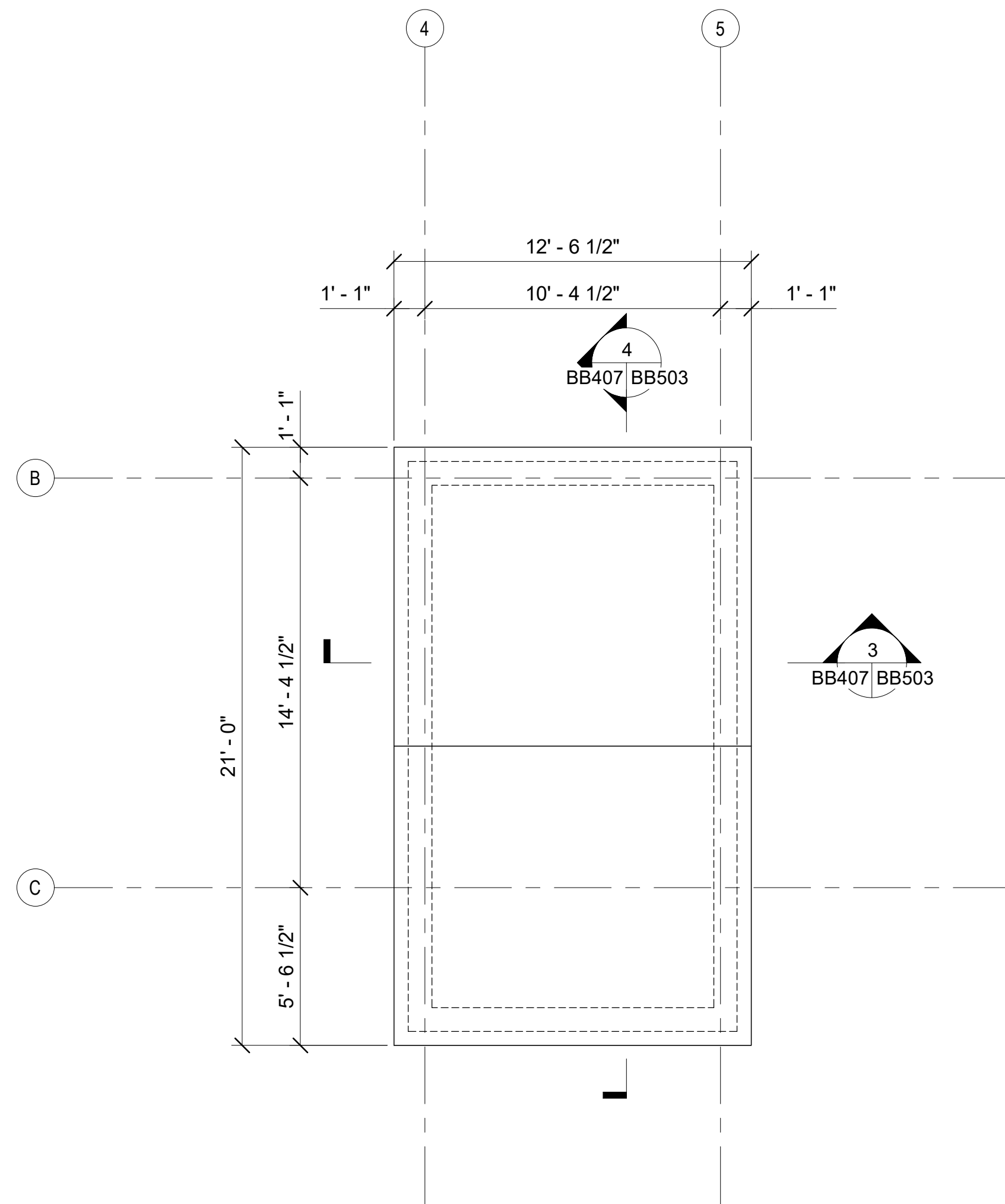
**NOTES:**

- SLAB THICKNESS OVER STAIRS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE HIGH ROOF PLAN 1/BB207 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +59.33'. U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (5) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (B) = (8) #5 ADDITIONAL TOP BARS AT 12" O.C. AND (4) #5 ADDITIONAL BOTTOM BARS AT 12" O.C., CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS, RESPECTIVELY, AND CENTERED ON COLUMN LINE.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
  - (F) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.



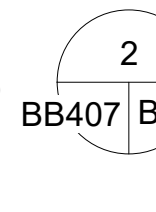
**HIGH ROOF FRAMING PLAN**

BB407/BB407 SCALE 1/4" = 1'-0"



**NOTES:**

- SLAB THICKNESS OVER STAIRS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE STAIR ROOF PLAN 2/BB207 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +69.33'. U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.



**STAIR ROOF FRAMING PLAN**

BB407/BB407 SCALE 1/4" = 1'-0"





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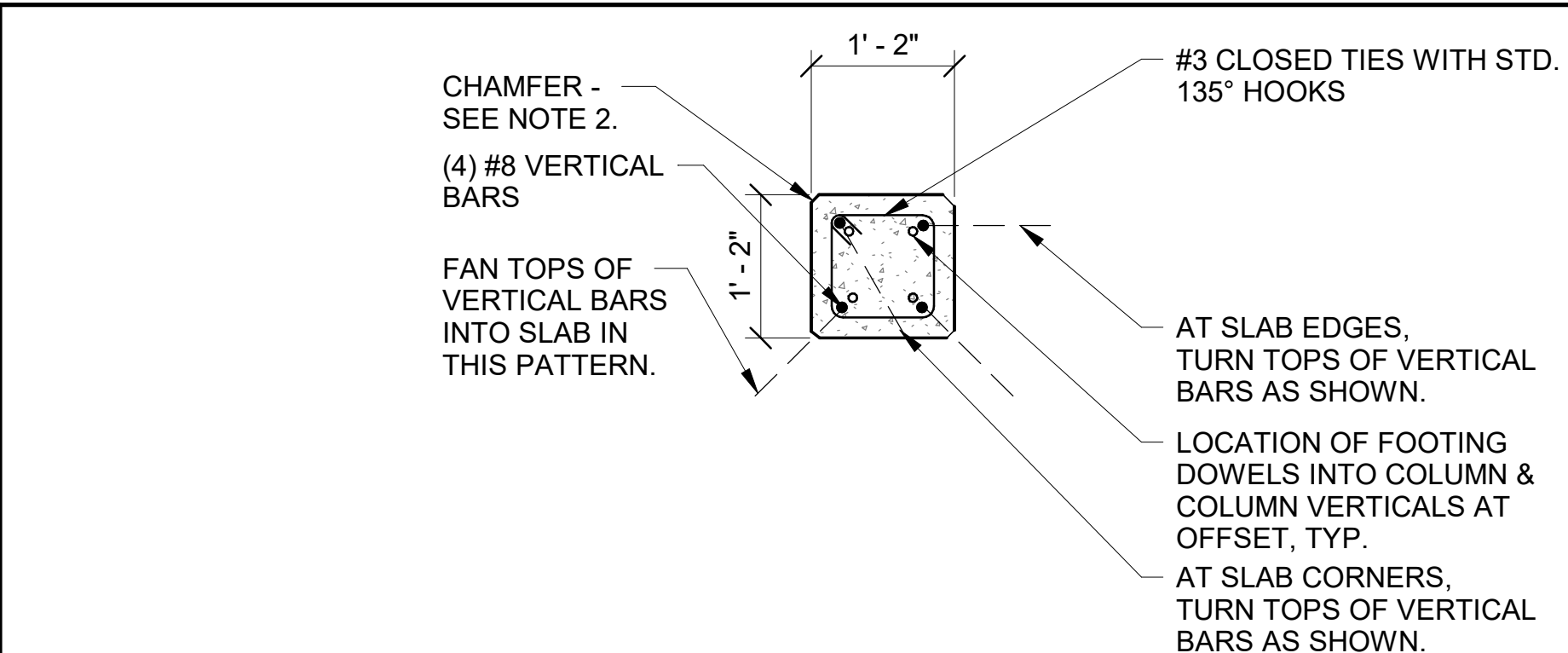
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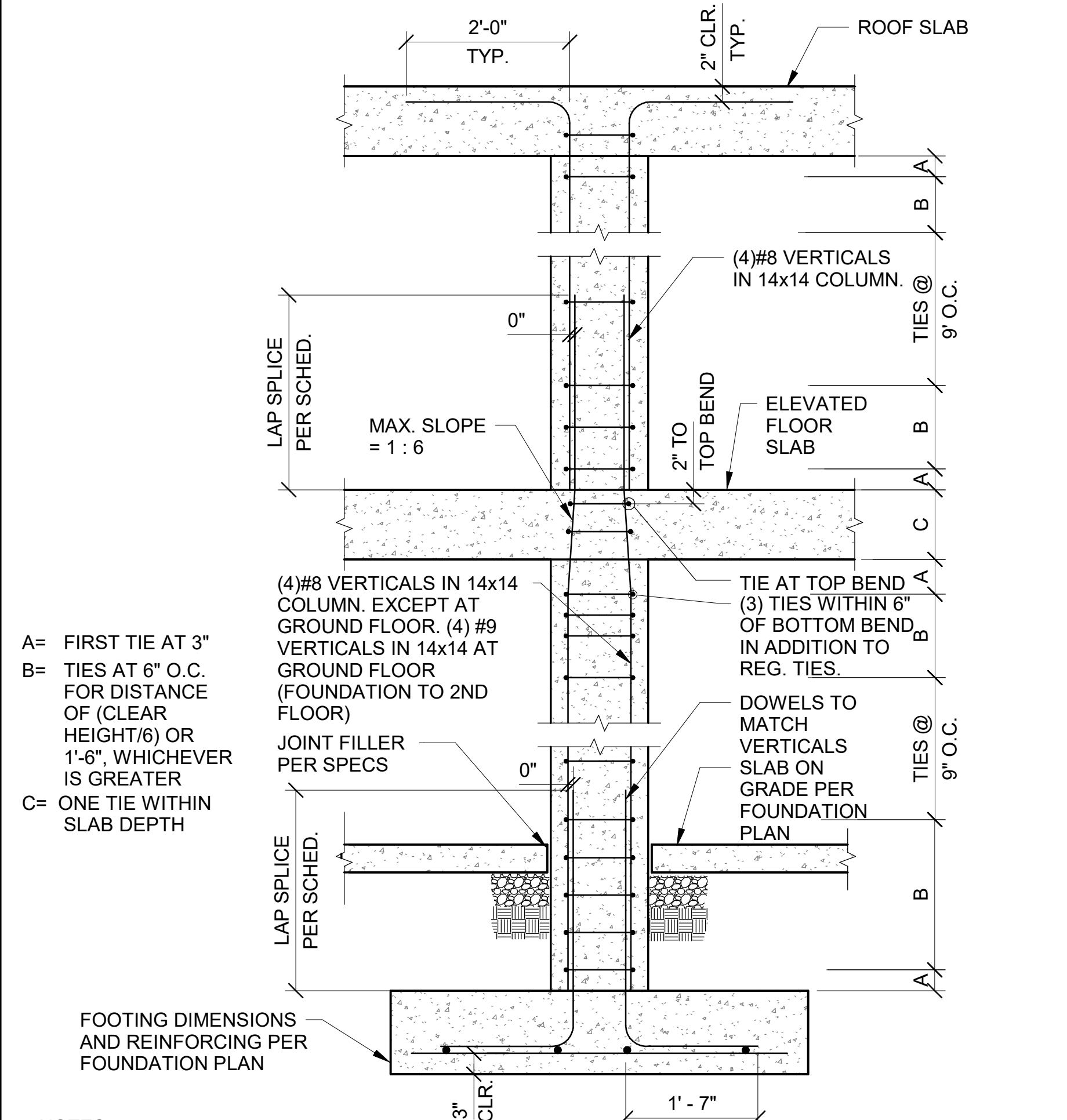
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SHEET  
**BURN BUILDING - TYPICAL CONCRETE DETAILS**

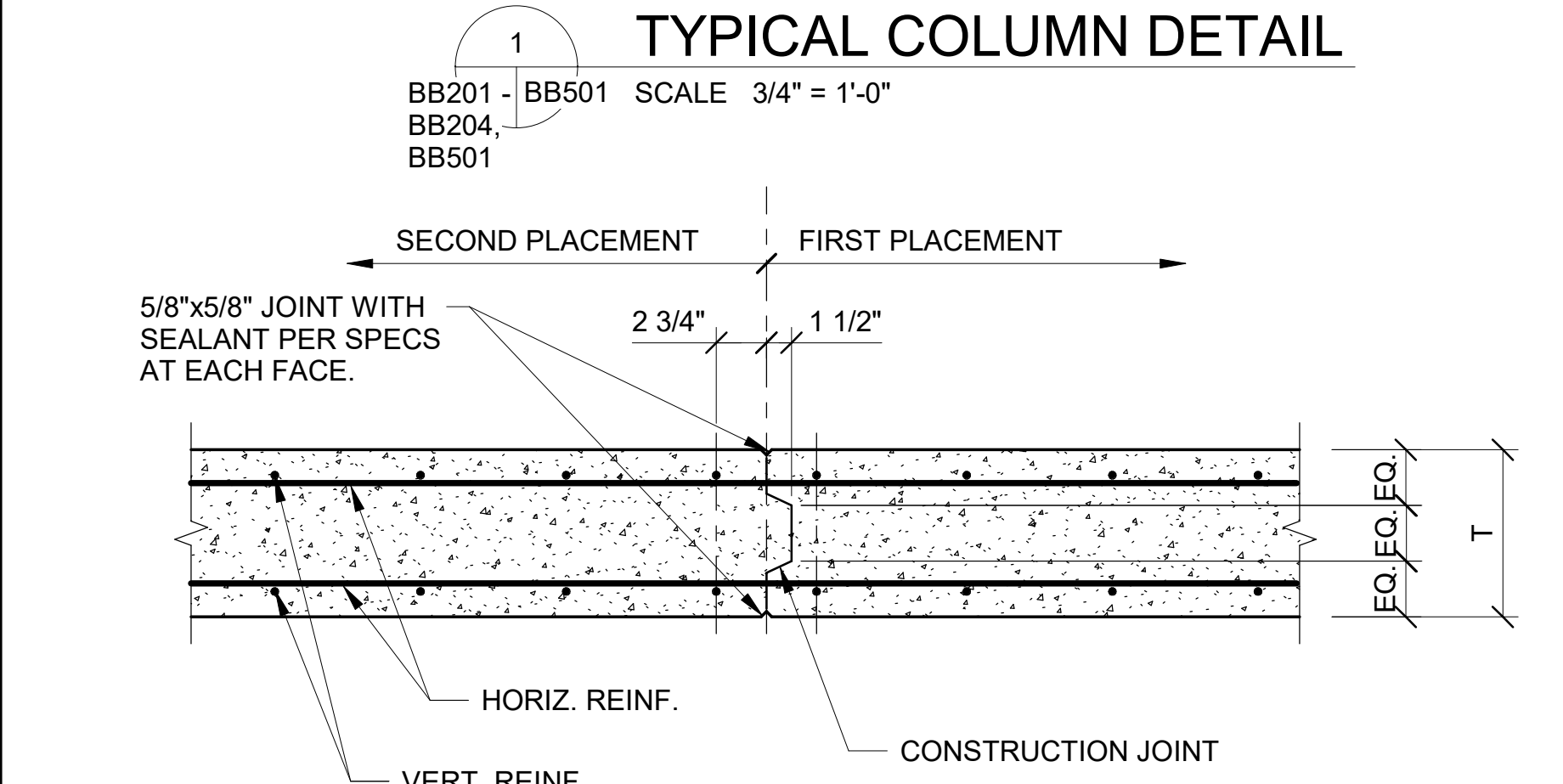
BB501



14X14 COLUMN PLAN

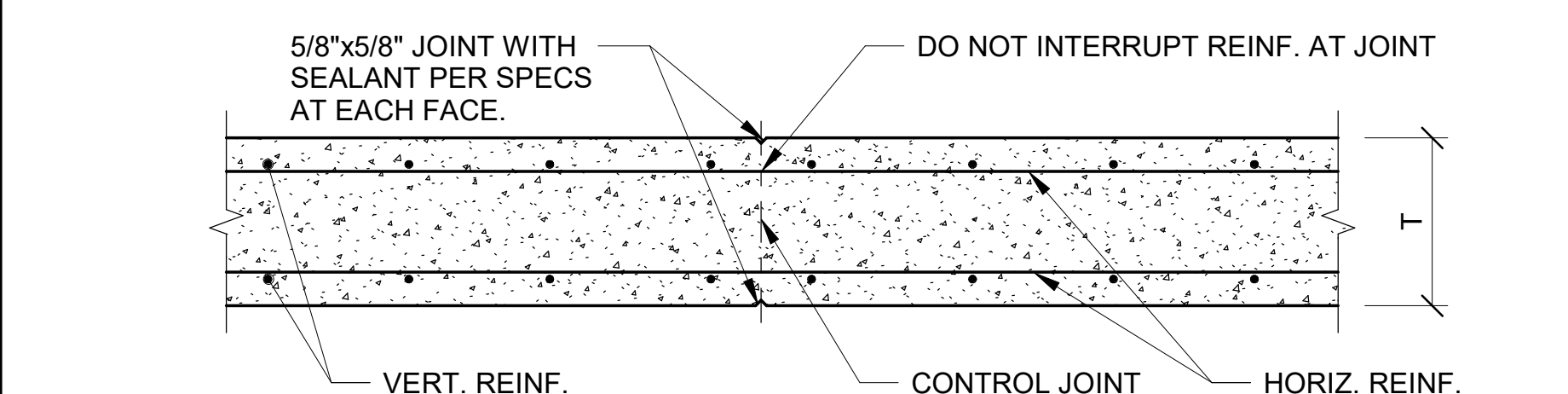


- NOTES:
- THIS DETAIL APPLIES TO ALL COLUMNS. NO TOLERANCES ARE ALLOWED IN DIMENSIONS FOR COLUMNS THAT WILL BE COVERED BY THERMAL LININGS. DIMENSIONS OF THERMAL LININGS ARE EXACT AND VARIATIONS IN COLUMN SIZES MAY RESULT IN ADDITIONAL COST DUE TO THE NEED FOR ADDITIONAL THERMAL LININGS AND CUSTOM CUTTING.
  - NO CHAMFER AT COLUMNS WITH THERMAL LINING.



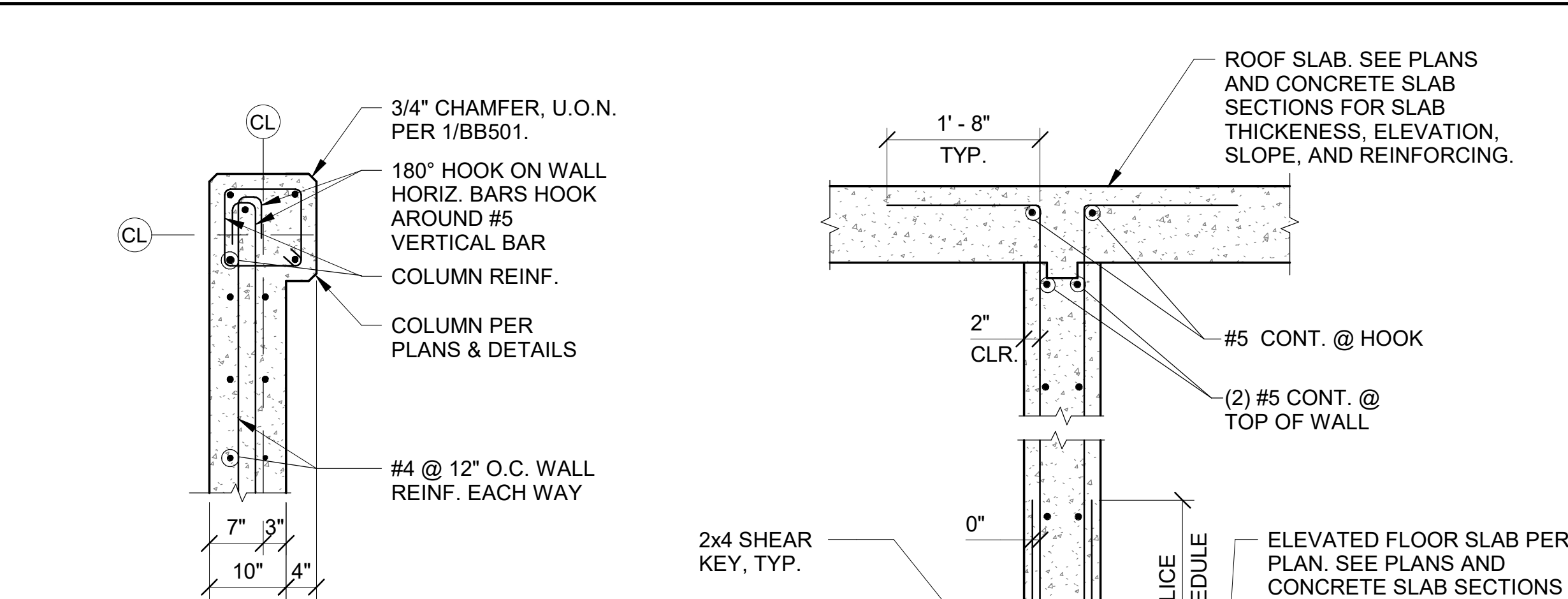
- NOTES:
- LOCATE CONSTRUCTION AND CONTROL JOINTS PER BUILDING ELEVATIONS, OR IF NOT SHOWN ON ELEVATIONS, PROVIDE CONSTRUCTION JOINT OR CONTROL JOINT AT 30'-0" O.C. MAX. SPACING AND LOCATE FIRST JOINT NO FARTHER THAN 15'-0" O.C. FROM CORNER.
  - AT CONSTRUCTION JOINTS, PREPARE JOINT FACE OF FIRST SECTION OF WALL PRIOR TO PLACEMENT OF SECOND SECTION OF WALL.

TYPICAL CONCRETE WALL CONSTRUCTION JOINT PLAN DETAIL

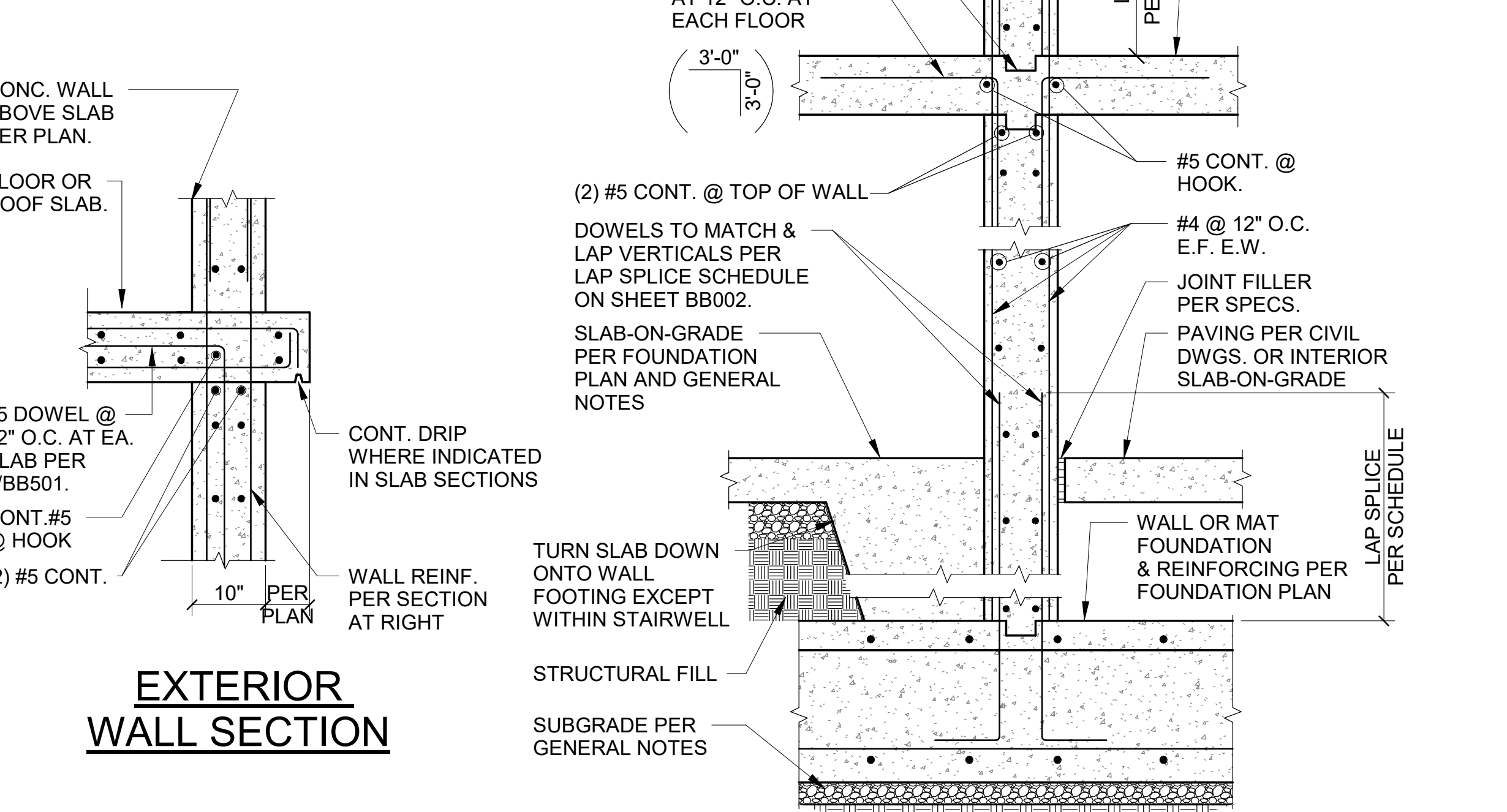


- NOTES:
- LOCATE CONSTRUCTION AND CONTROL JOINTS PER BUILDING ELEVATIONS, OR IF NOT SHOWN ON ELEVATIONS, PROVIDE CONSTRUCTION JOINT OR CONTROL JOINT AT 30'-0" O.C. MAX. SPACING AND LOCATE FIRST JOINT NO FARTHER THAN 15'-0" O.C. FROM CORNER.

TYPICAL CONCRETE WALL CONTROL JOINT PLAN DETAIL



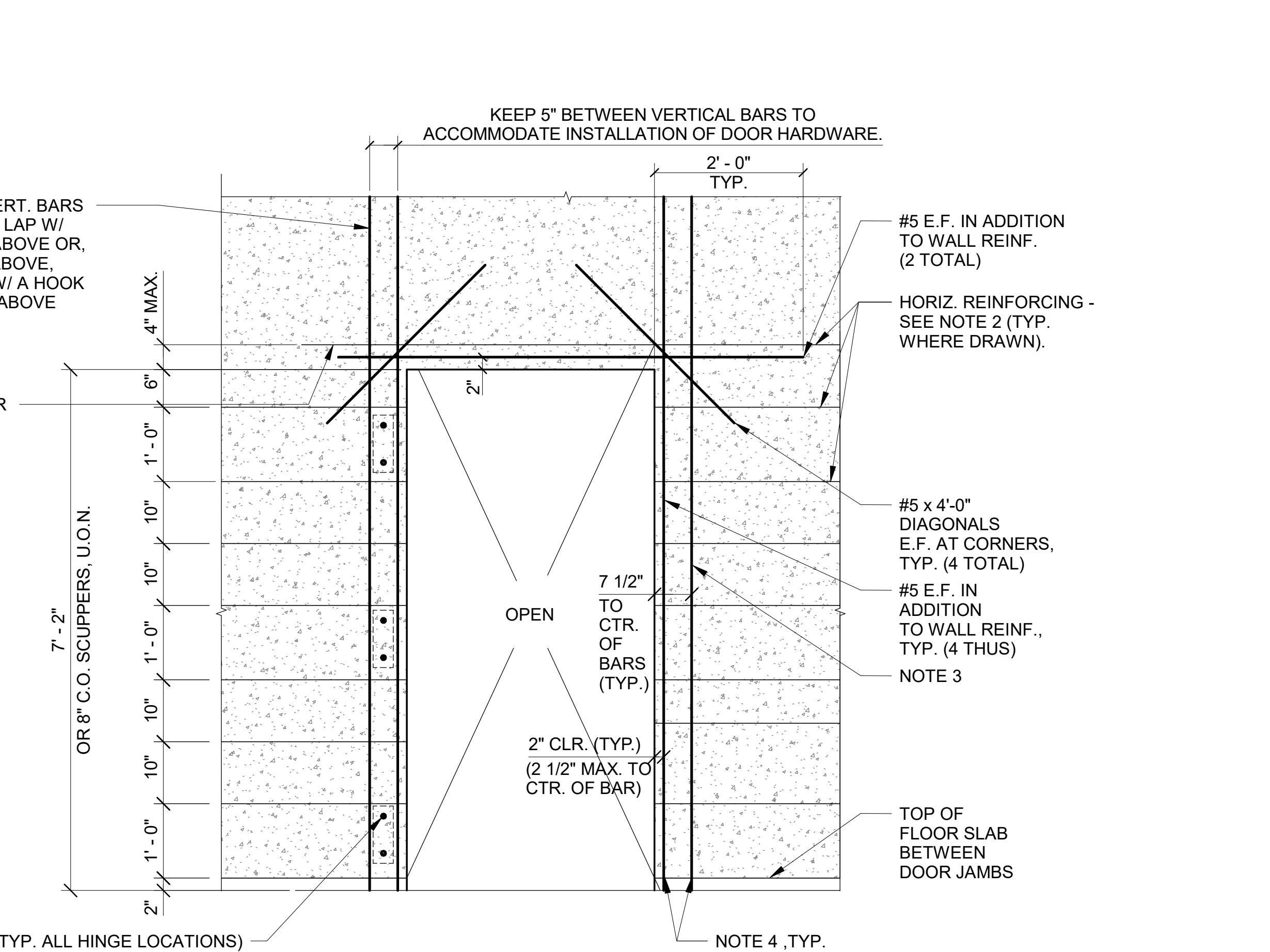
PLAN DETAIL @ COLUMN



EXTERIOR WALL SECTION

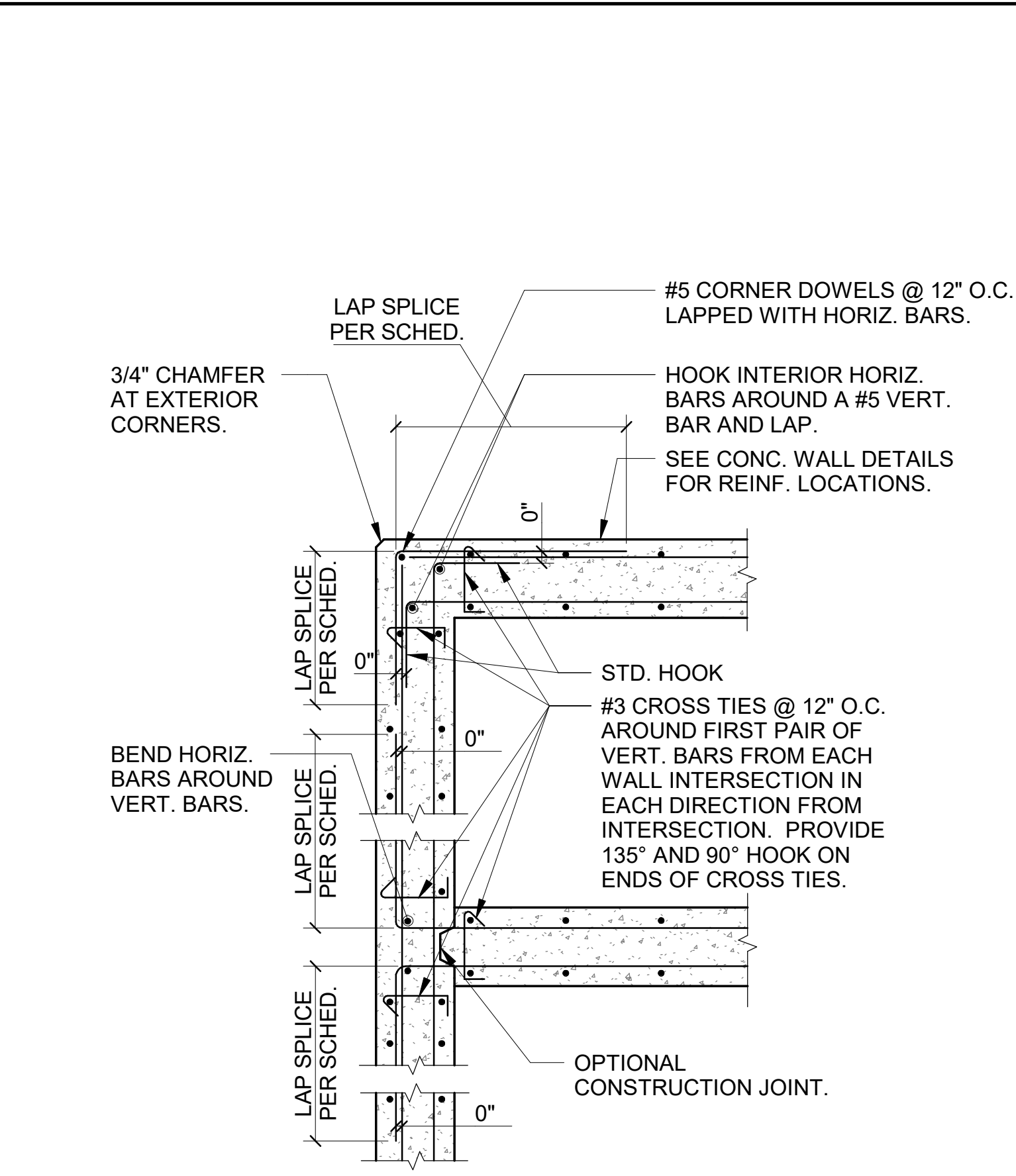
- NOTES:
- SEE PLANS FOR THERMAL LINING LOCATIONS AND X/BB601 FOR LINING DETAILS.

TYPICAL CONCRETE WALL DETAIL



- NOTES:
- THIS DETAIL APPLIES TO ALL OPENINGS IN CONCRETE WALLS THAT EXTEND DOWN TO FLOOR LEVEL.
  - ADDED BARS SHOWN AS HEAVY LINES. TYPICAL WALL REINFORCING NOT SHOWN EXCEPT FOR HORIZ. BARS INTERRUPTED BY OPENINGS FOR STEEL PLATE DOORS SHOWN AS LIGHT LINES. TO CLARIFY PLACEMENT, TO AVOID CONFLICT WITH DOOR HINGE BOLT INSTALLATION.
  - ADD 1/2 OF INTERRUPTED VERTICAL WALL REINFORCING AT EACH SIDE OF OPENING.
  - PROVIDE FOUNDATION DOWELS TO MATCH & LAP ADDITIONAL REINFORCING.
  - DO NOT PROVIDE CHAMFER AT EDGES LINED WITH THERMAL LINING SYSTEM OR WHERE THERMAL LINING TERMINATES AT EDGE OF DOOR OPENING.
  - PLACE THRU-BOLTS FOR DOOR HINGES IN WALL FORMS BEFORE CASTING CONCRETE. DO NOT DRILL BOLT HOLES AFTER CASTING CONCRETE.
  - USE TOP OF CONCRETE FLOOR AT CENTER OF DOORWAY/SCUPPER AS POINT OF REFERENCE FOR OPENING HEIGHT. IF THERE IS A CONCRETE STEP IN FLOOR SLAB AT ONE FACE OF THE WALL, USE TOP OF CONCRETE SLAB BETWEEN JAMBS AS POINT OF REFERENCE.

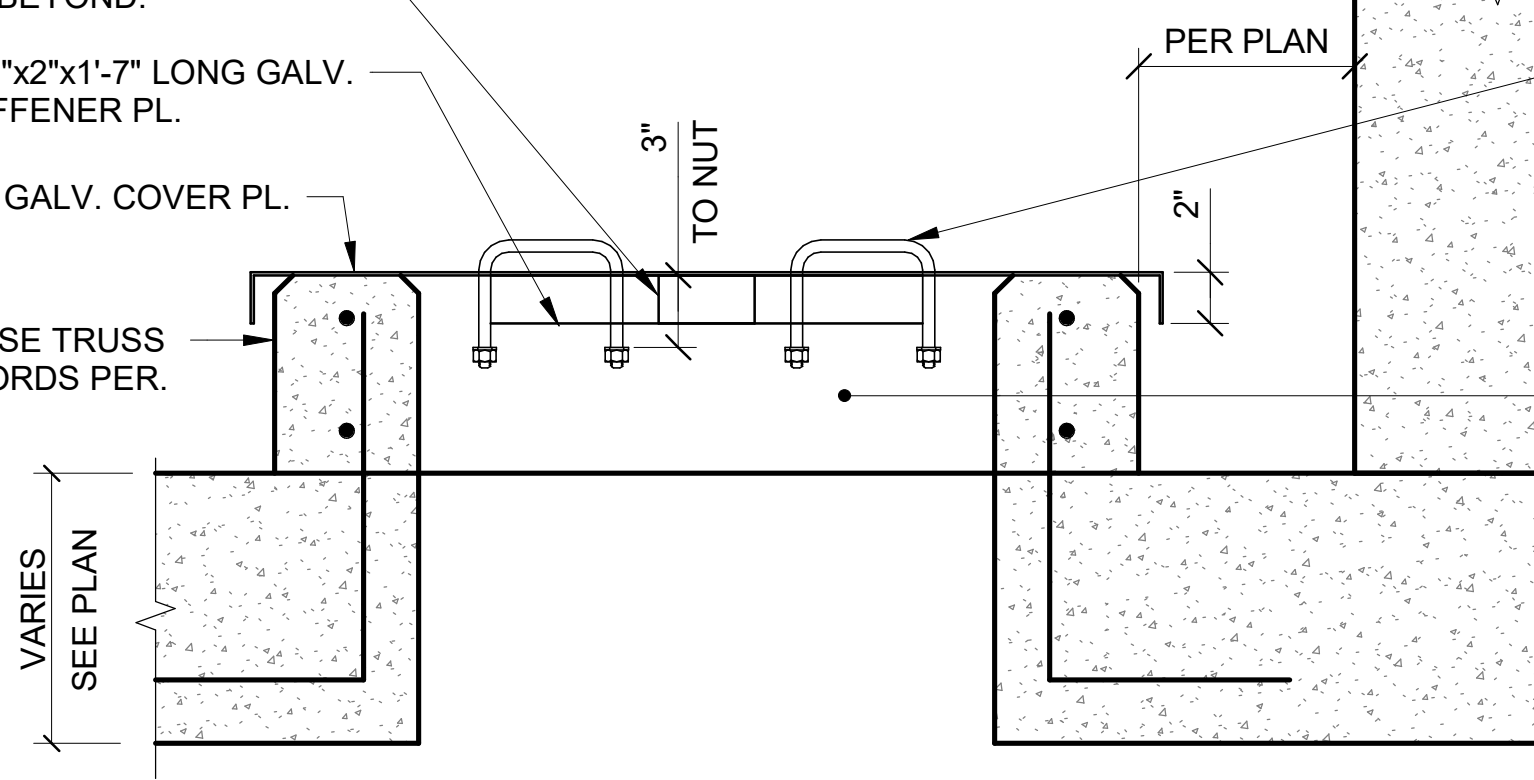
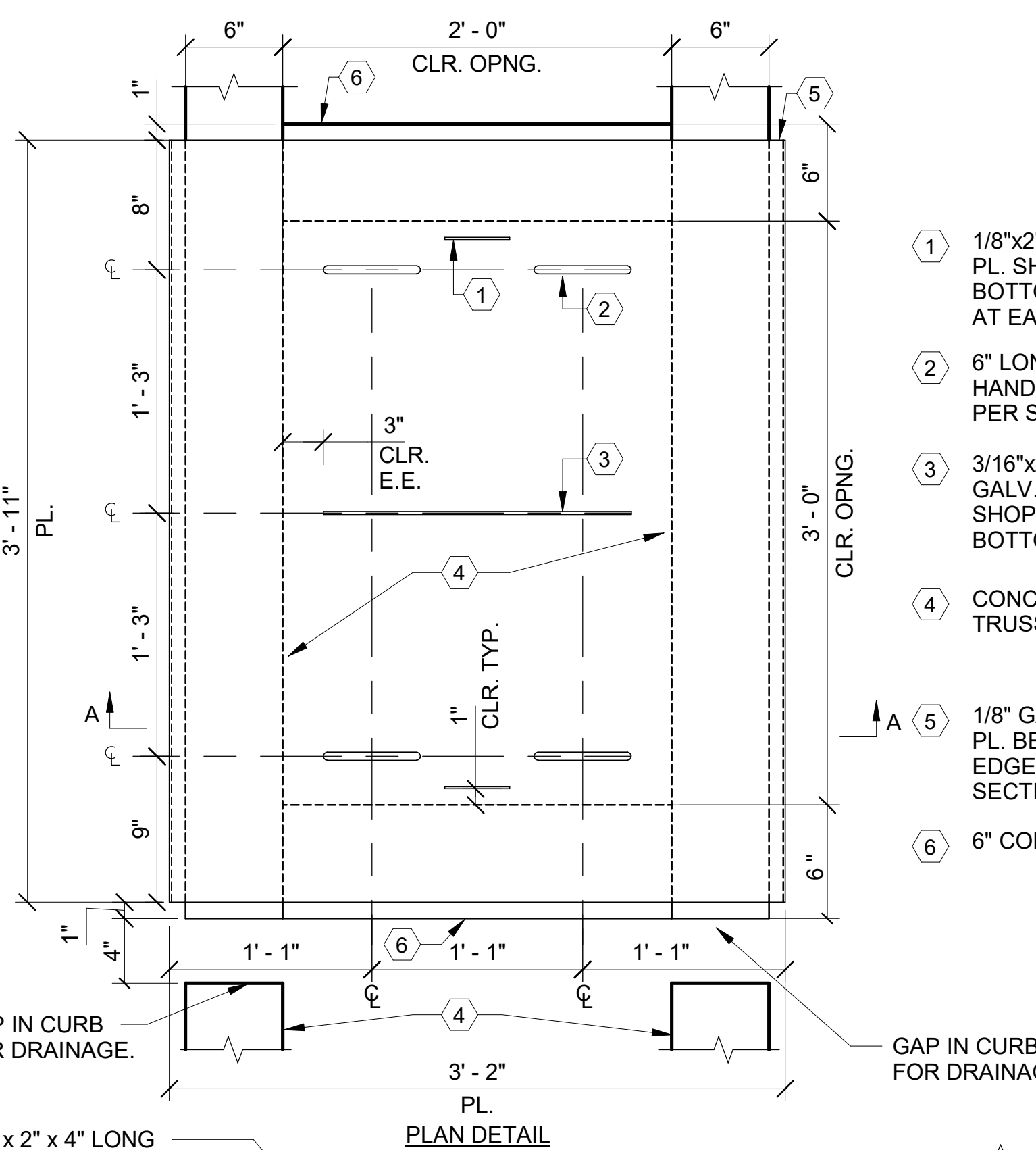
TYPICAL DOOR OR SCUPPER OPENING IN CONCRETE WALL DETAIL



- NOTES:
- LAP REINFORCING IN ACCORDANCE WITH TYPICAL REINFORCING LAP SPLICE SCHEDULE ON SHEET BB002.

TYPICAL CONCRETE REINFORCEMENT PLAN DETAIL

BB501 BB501 SCALE 3/4" = 1'-0"



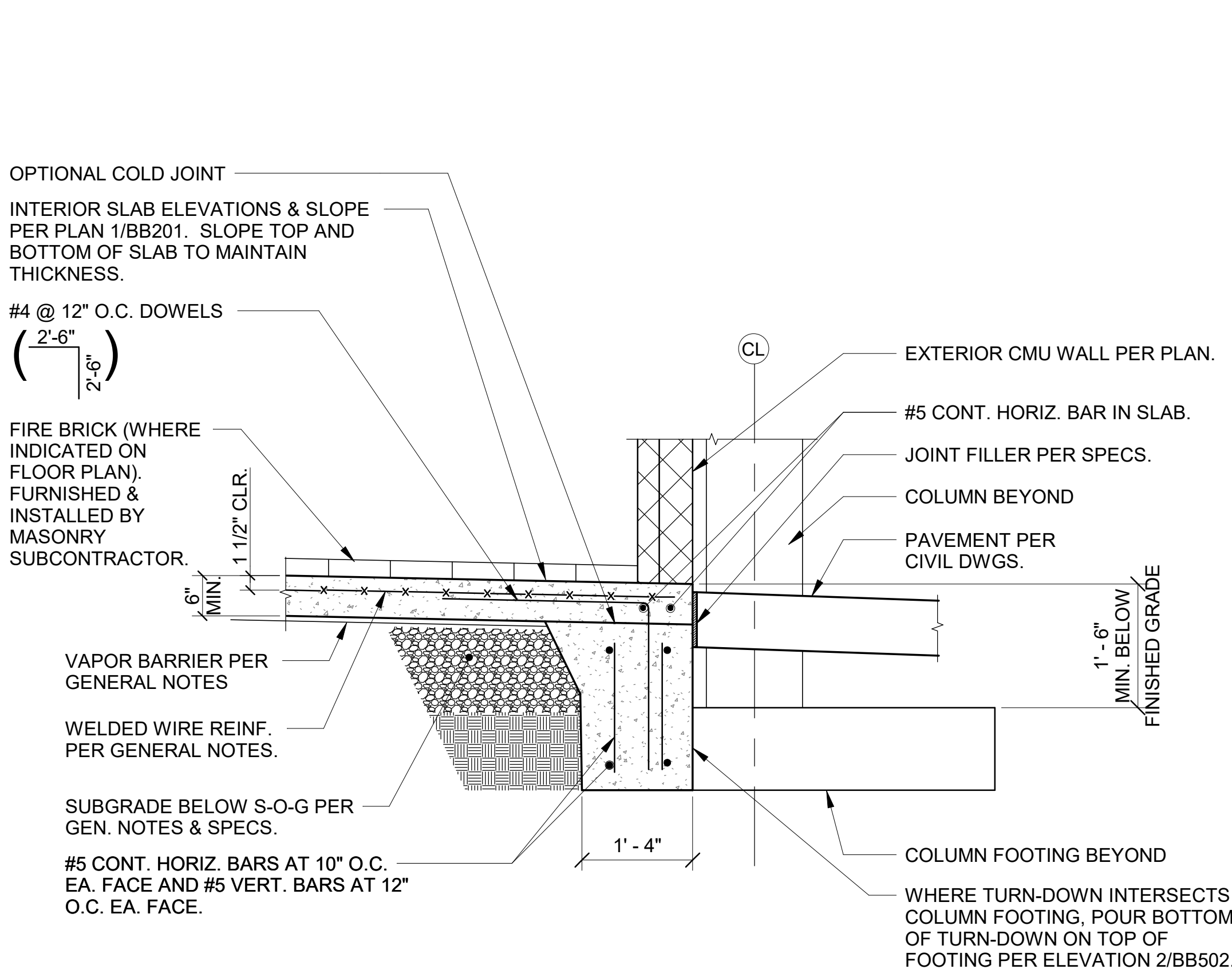
- NOTES:
- ALL METAL PIECES IN THIS DETAIL SHALL BE GALVANIZED, U.O.N.
  - SEE FRAMING PLAN & SLAB SECTIONS FOR SLAB REINFORCING.

ATTIC ACCESS OPENING @ CONCRETE FALSE TRUSS CHORDS

BB205 BB501 SCALE 1 1/2" = 1'-0"

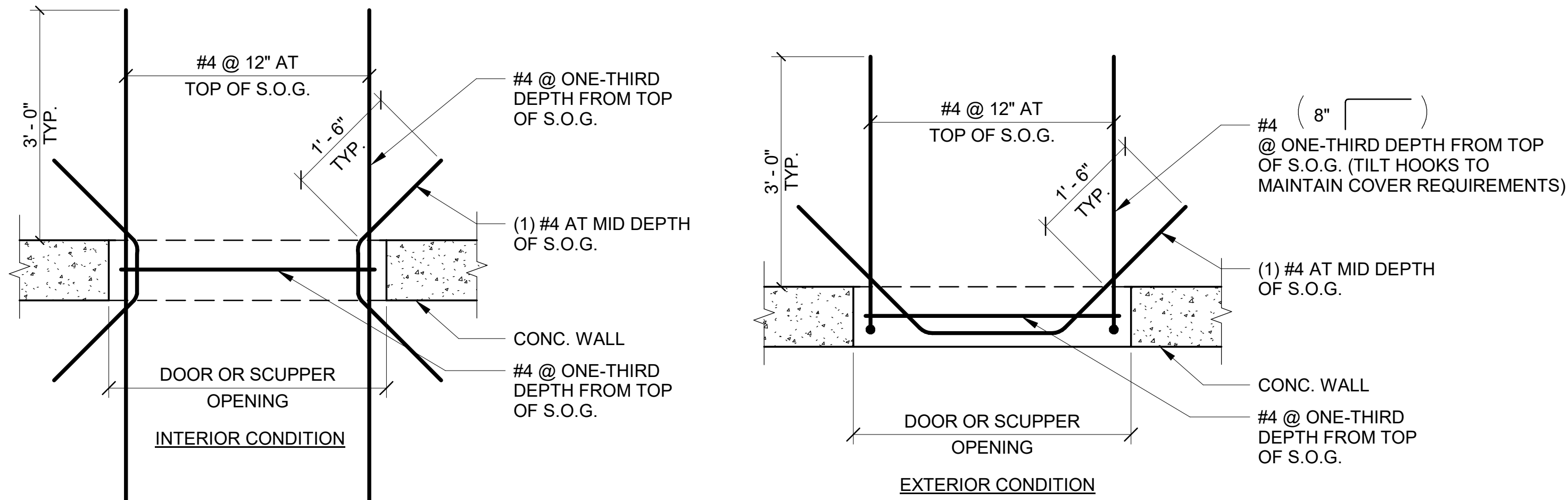
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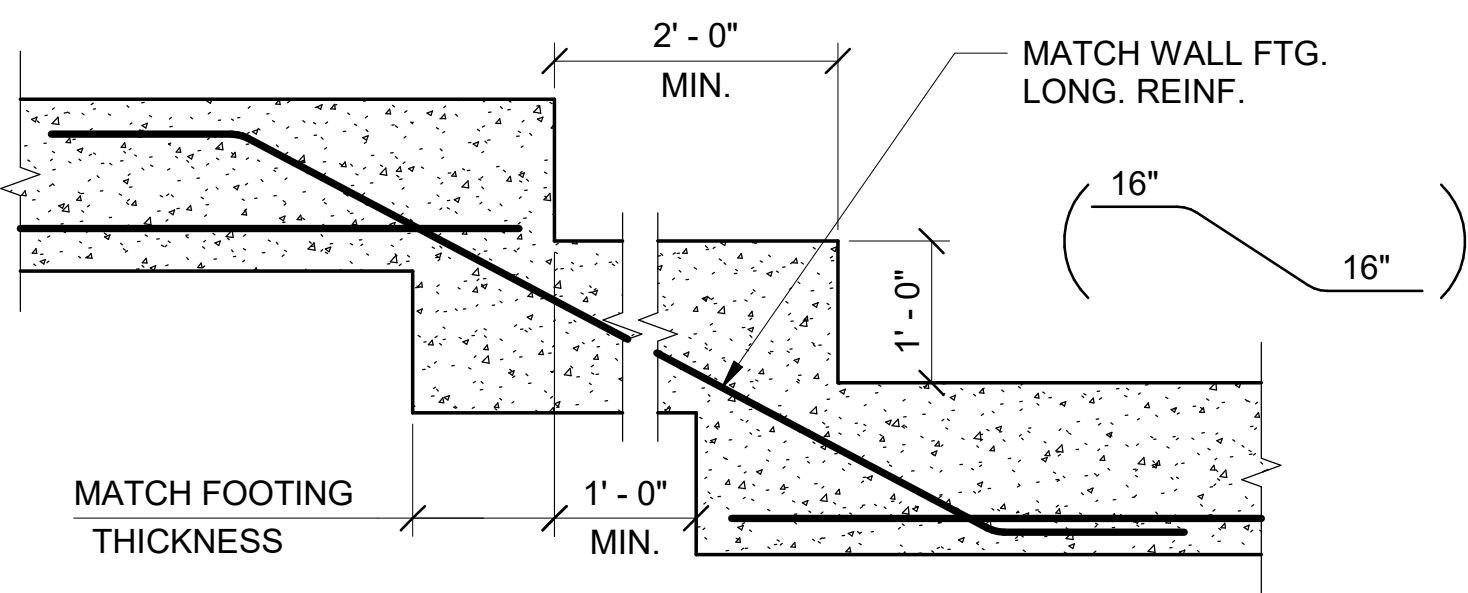
TYPICAL SLAB TURNDOWN SECTION AT BUILDING EXTERIOR1

BB401 BB502 SCALE 3/4" = 1'-0"



TYPICAL PLAN-REINF. IN S.O.G. AT WALL OPENING DETAIL

BB401 BB502 SCALE 3/4" = 1'-0"

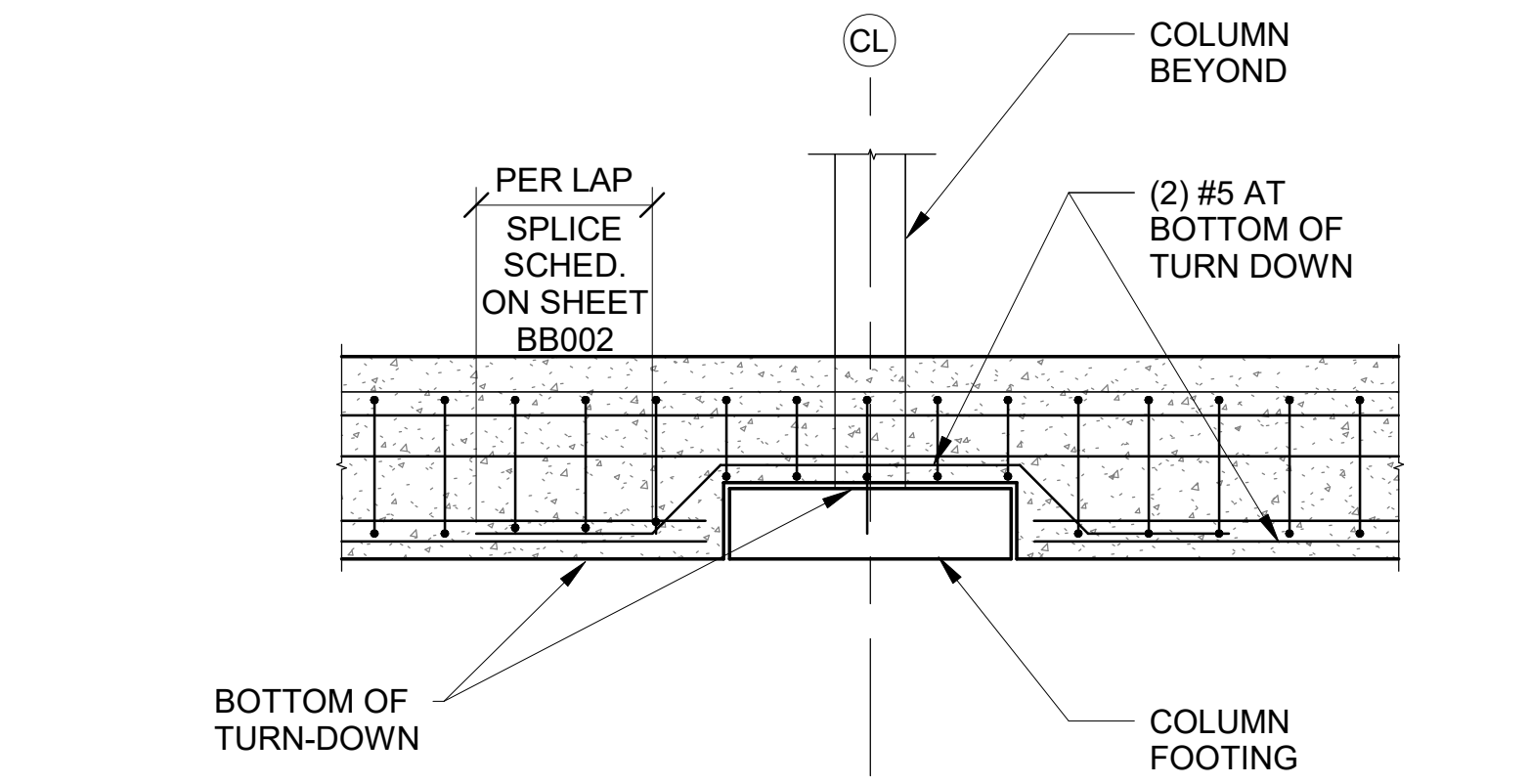


NOTES:

- DETAIL SHOWS BOTTOM LONGITUDINAL BARS ONLY. WHERE TOP LONGITUDINAL BARS ARE REQUIRED, PROVIDE DIAGONAL BARS AT TOP (THRU STEP).
- CONTINUE TRANSVERSE BARS (NOT SHOWN) THRU STEP.

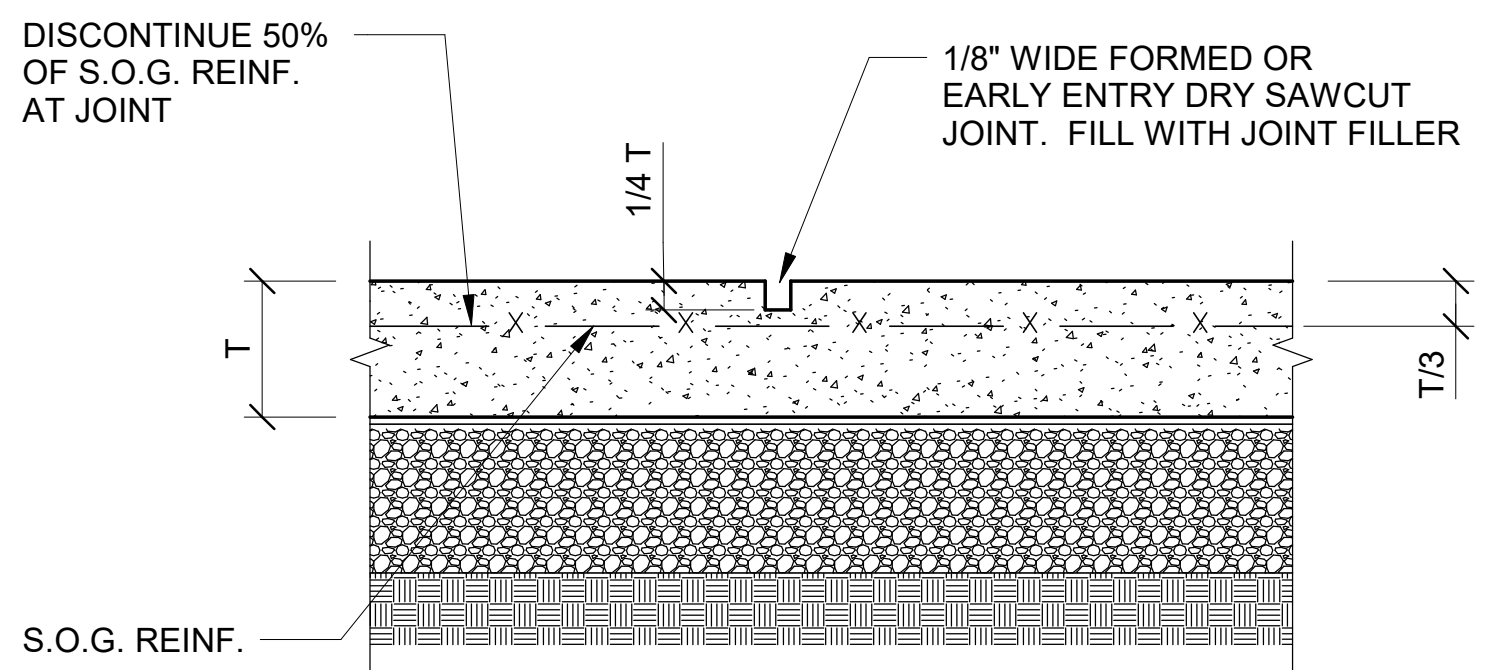
TYPICAL CONCRETE WALL FOOTING STEP DETAIL

BB502 BB502 SCALE 3/4" = 1'-0"



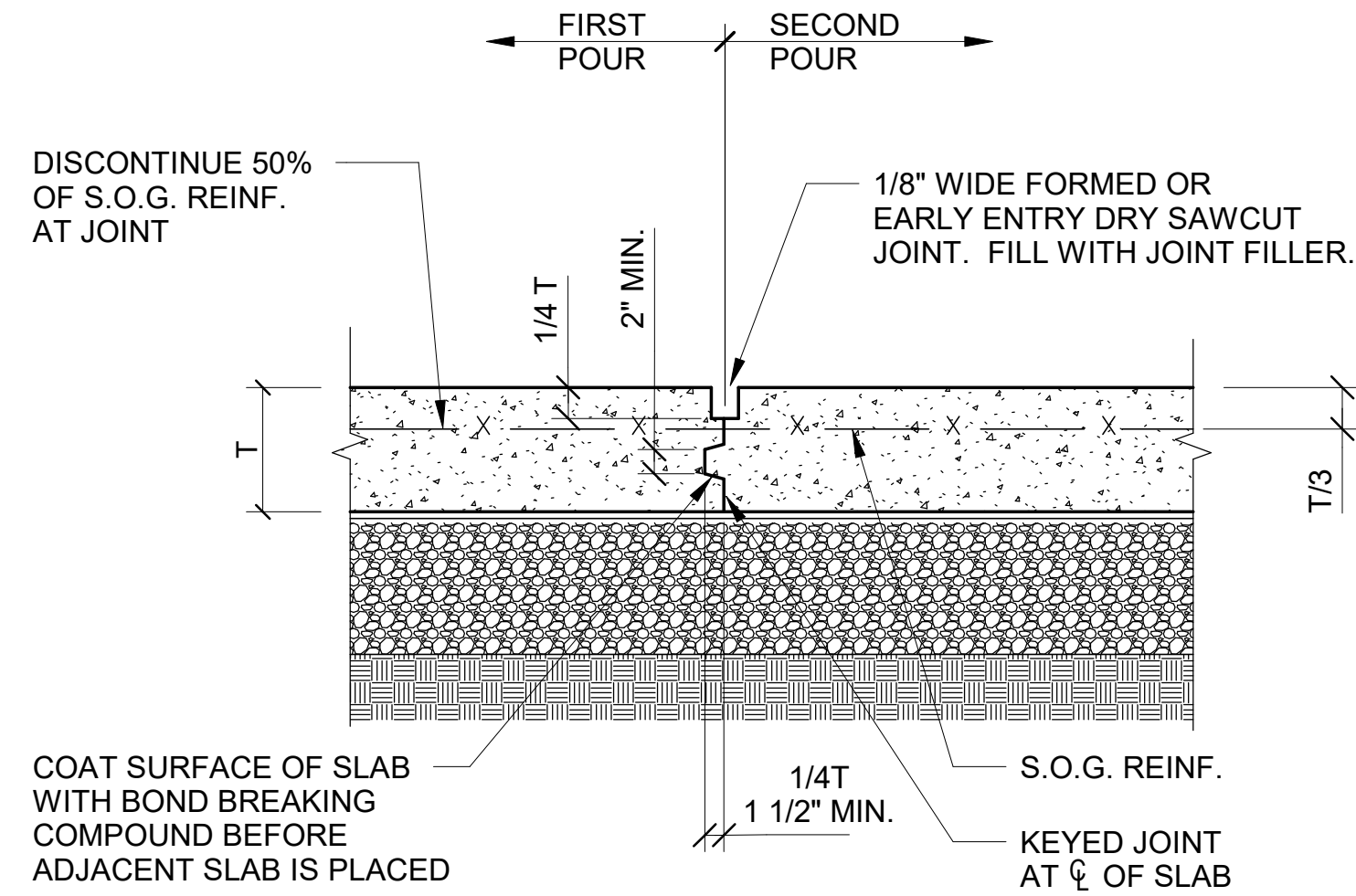
TYPICAL ELEVATION TURN-DOWN SLAB STEP

BB401 BB502 SCALE 3/8" = 1'-0"



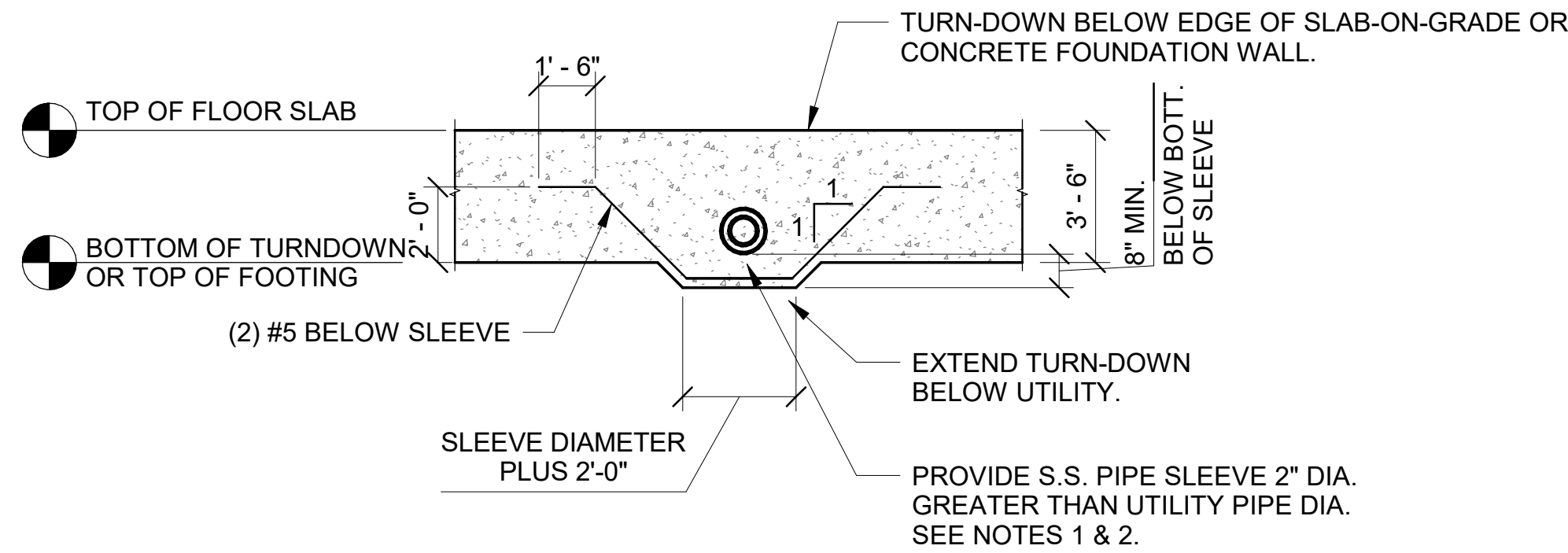
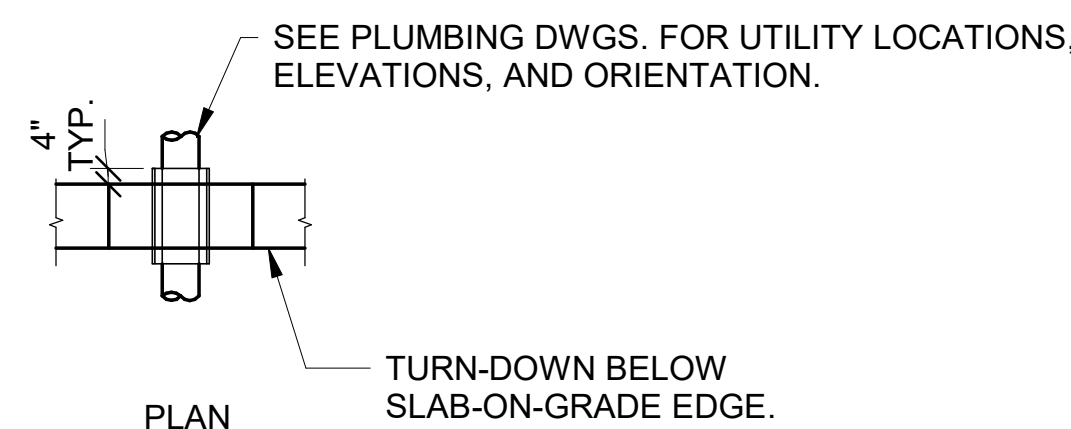
TYPICAL S.O.G. CONTROL JOINT DETAIL

BB502 BB502 SCALE 3/4" = 1'-0"



TYPICAL S.O.G. CONSTRUCTION JOINT DETAIL

BB502 BB502 SCALE 3/4" = 1'-0"



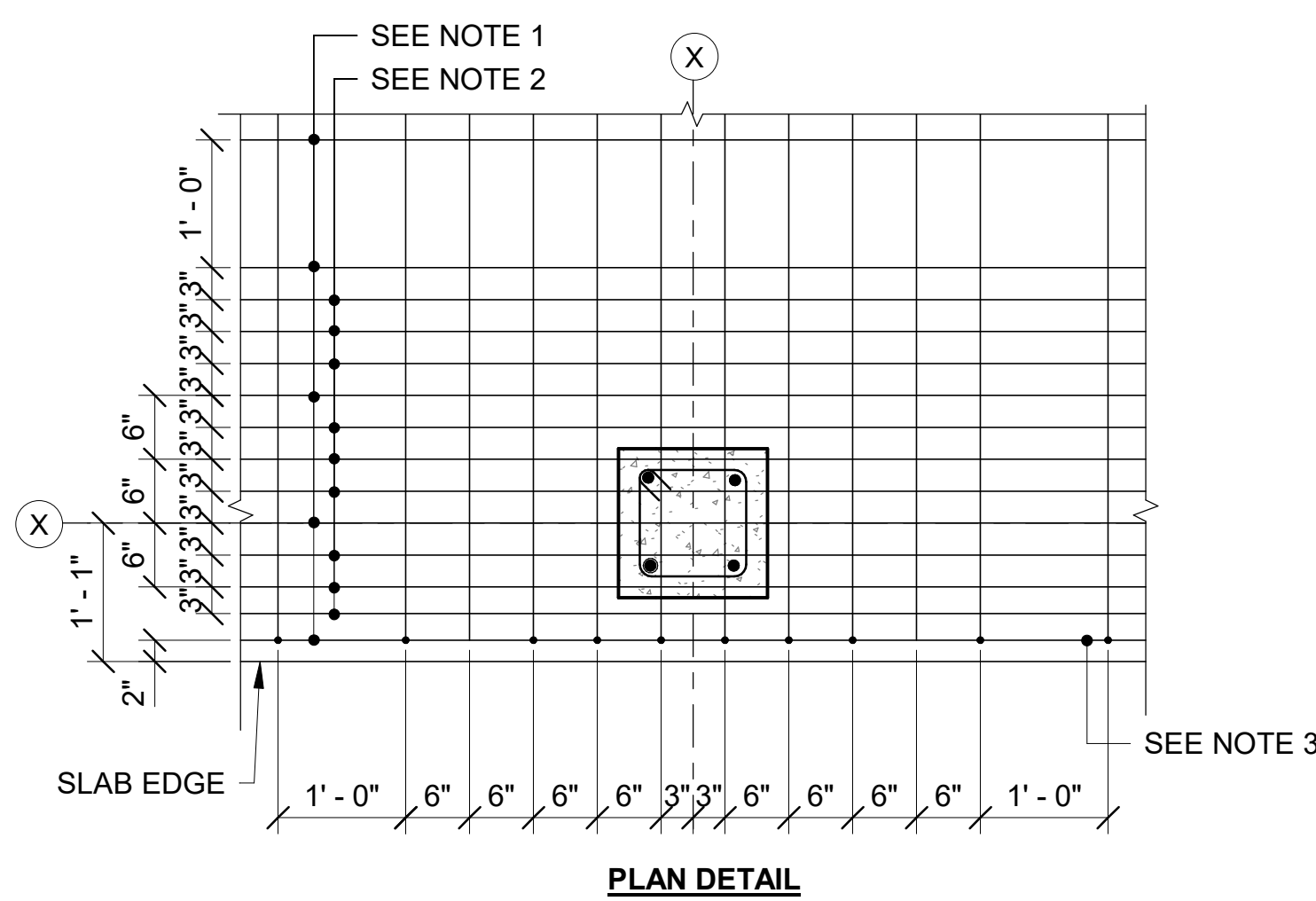
ELEVATION AT SHALLOW UTILITY (LESS THAN 4'-0" BELOW SLAB)

NOTES:

- FILL SPACE BETWEEN PIPE AND PIPE SLEEVE WITH EXPANDED POLYSTYRENE INSULATION.
- SLEEVE FOUNDATION ABOVE BOTTOM OF TURNDOWN OR TOP OF WALL FOOTING.
- IF UTILITY IS BELOW BOTTOM OF TURNDOWN, NOTIFY ENGINEER FOR DIRECTION.
- IF UTILITY PASSES THROUGH A CONG. WALL, SLEEVE WALL SIM. TO THIS DETAIL. IF UTILITY IS WITHIN OR BELOW WALL FOOTING, STEP FOOTING DOWN (BELOW UTILITY PER DETAIL 7/BB502) OR LOWER ENTIRE LENGTH OF FOOTING TO PASS BELOW UTILITY AND SLEEVE WALL. NOTIFY ENGINEER IF THIS CONDITION EXISTS.

TURNDOWN FOOTING AT UTILITY CROSSING DETAIL

BB401 BB502 SCALE 1/4" = 1'-0"

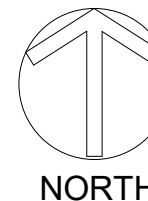


PLAN DETAIL

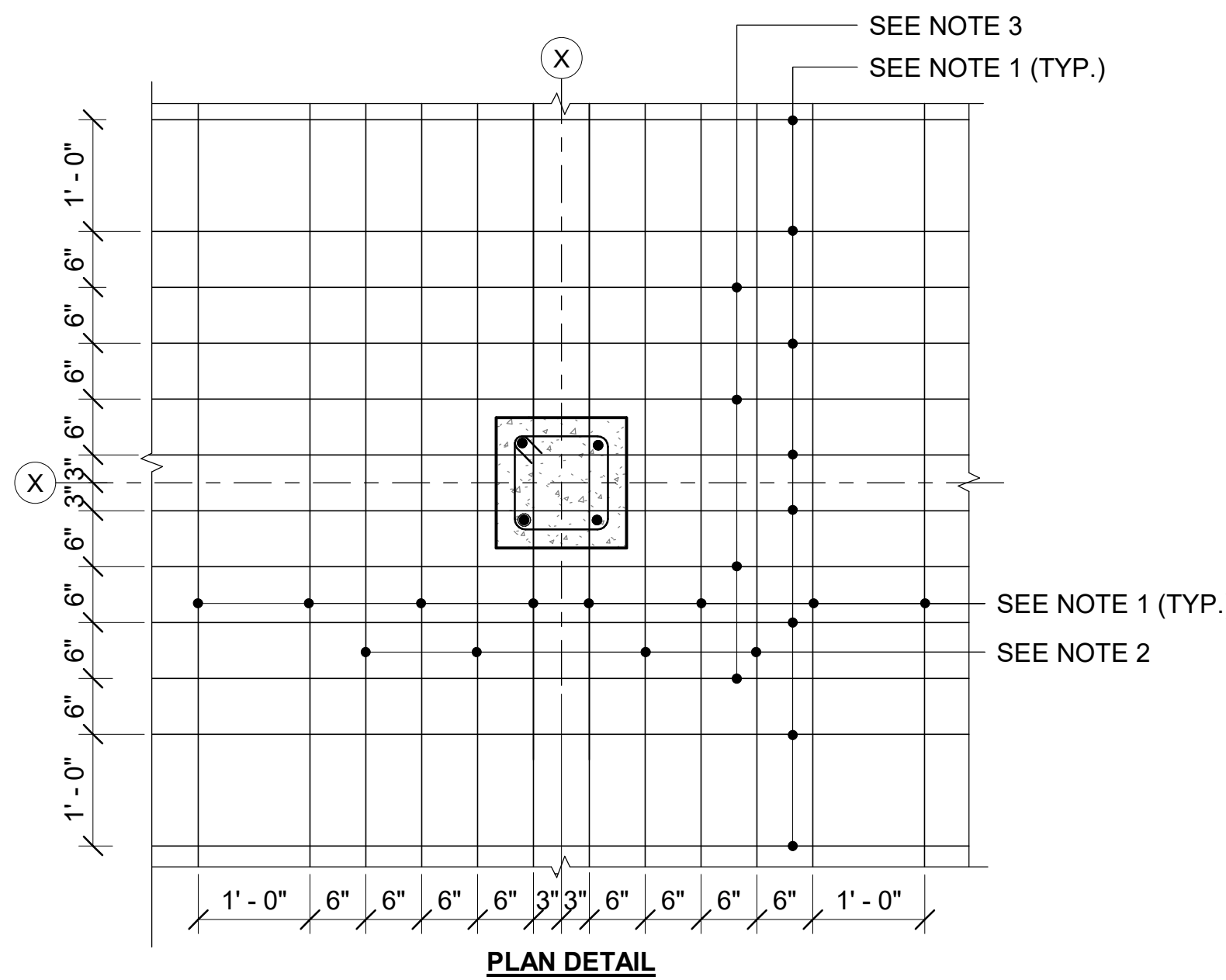
NOTES:

- (5) #5 TYPICAL T&B REINFORCING PER FRAMING PLAN.
- (9) #5 ADDITIONAL T&B BARS IN THE E-W DIRECTION PER FRAMING PLAN.
- SEE DETAIL 9/BB502 FOR ADDITIONAL REINFORCING IN N-S DIRECTION.
- ALONG COLUMN LINE 1, ROTATE DETAIL 90 DEGREES.

PLAN DETAIL - TYPICAL SLAB REINFORCING THROUGH EXTERIOR COLUMN



BB502 BB502 SCALE 3/4" = 1'-0"

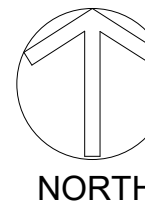


PLAN DETAIL

NOTES:

- (6) #5 TYPICAL T&B REINFORCING BOTH WAYS PER FRAMING PLAN.
- (4) #5 ADDITIONAL TOP AND BOTTOM BARS IN THE N-S DIRECTION PER FRAMING PLAN.
- (4) #5 ADDITIONAL TOP AND BOTTOM BARS IN THE E-W DIRECTION PER FRAMING PLAN.

PLAN DETAIL - TYPICAL SLAB REINFORCING THROUGH INTERIOR COLUMN



BB502 BB502 SCALE 3/4" = 1'-0"



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Corporate P.E. #C-2542

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NCCCS NO. 2303

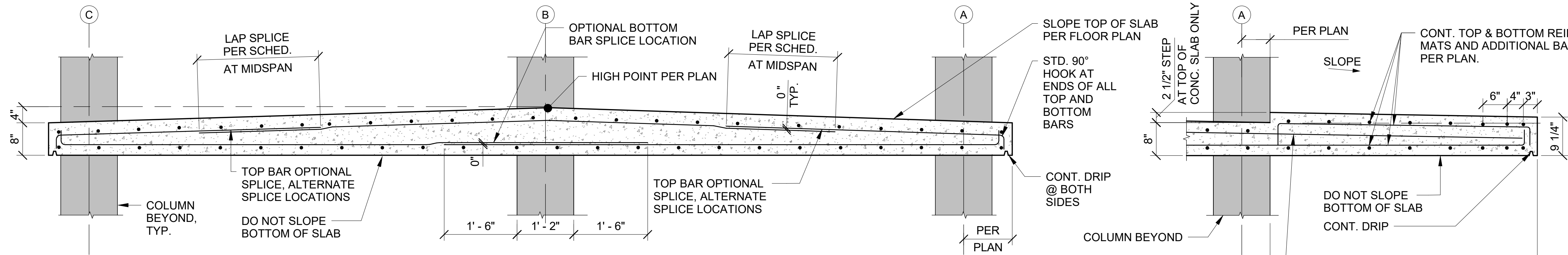


NO.	REVISION	DATE

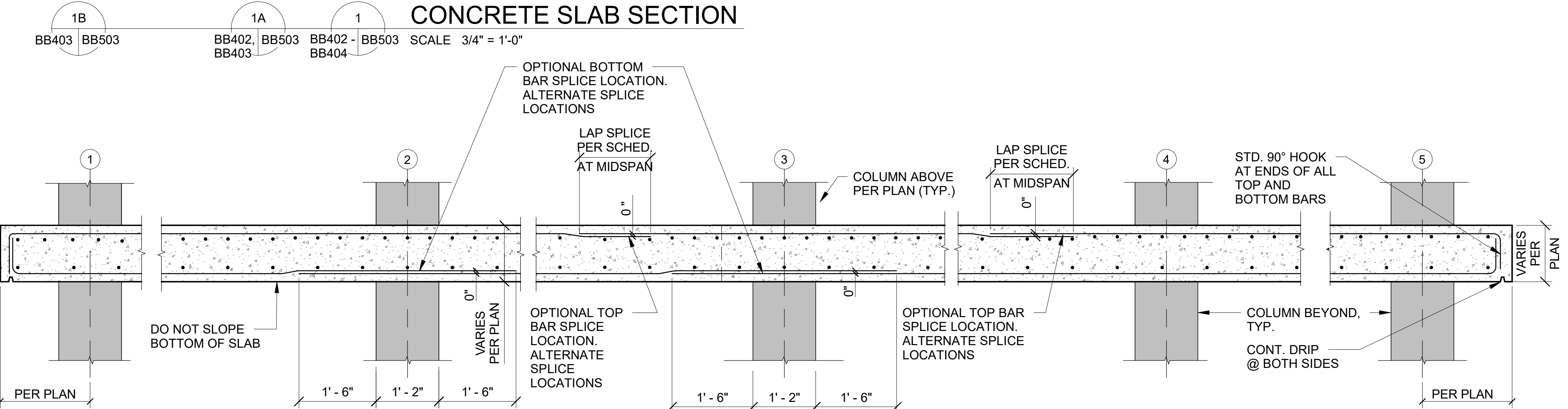
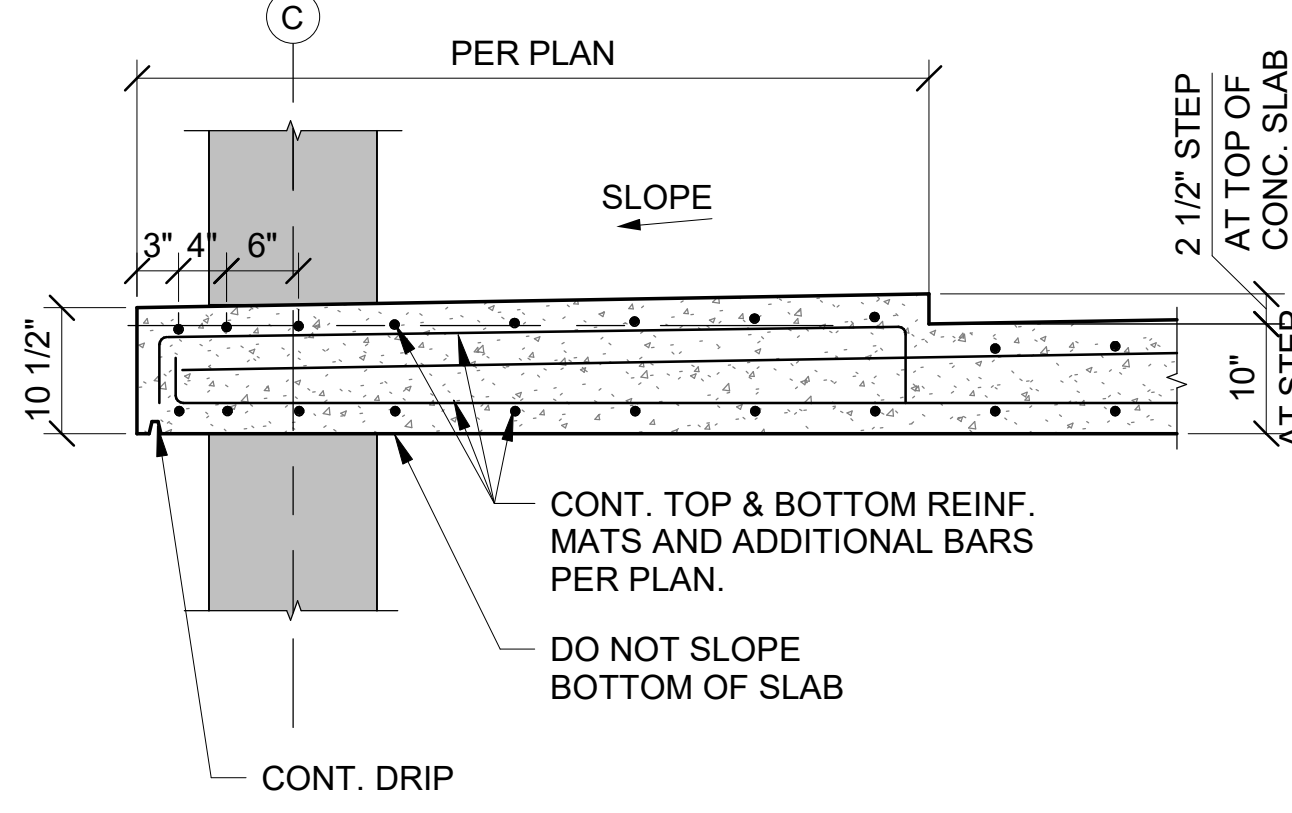
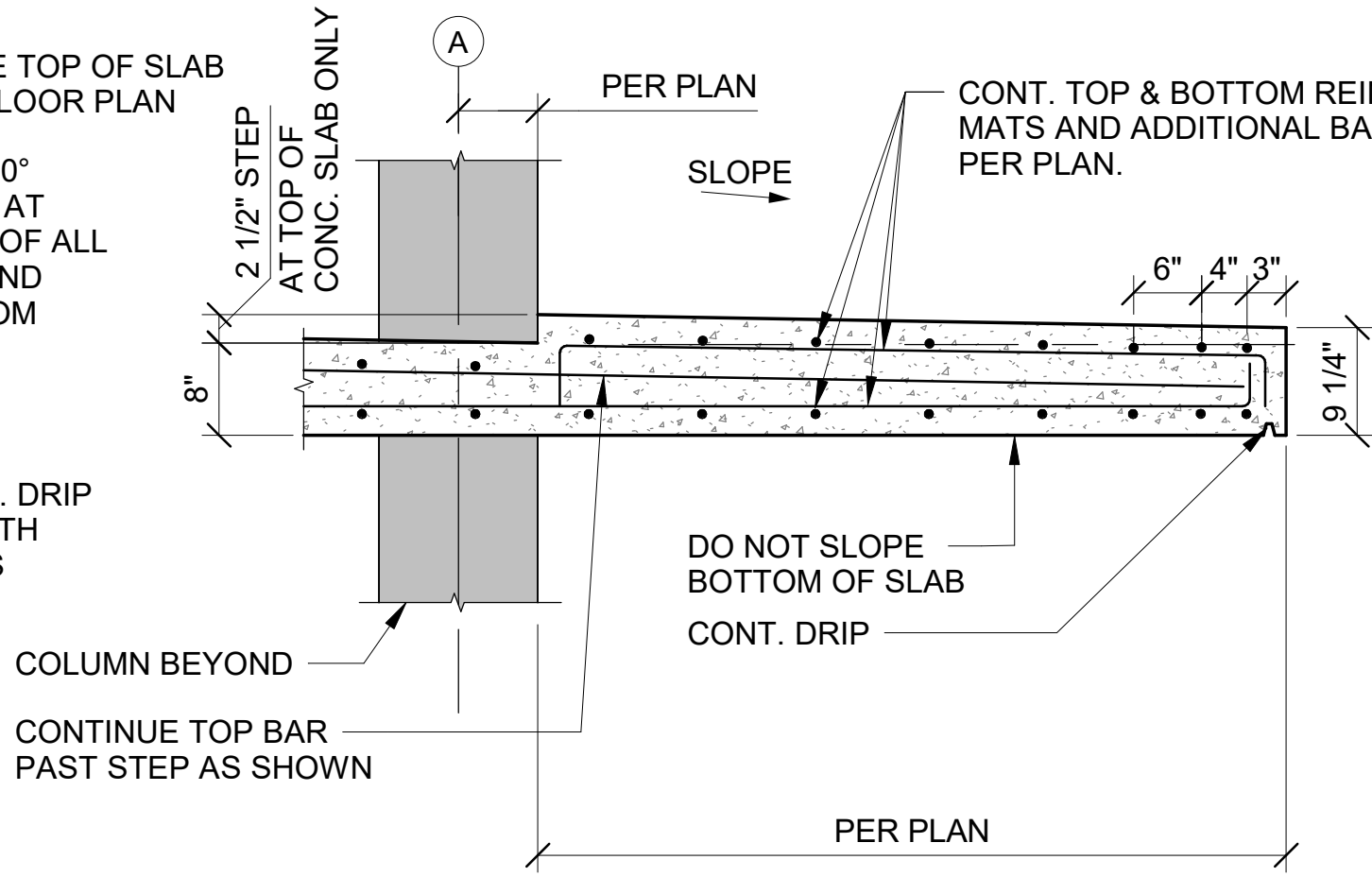
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**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - FOUNDATION DETAILS**

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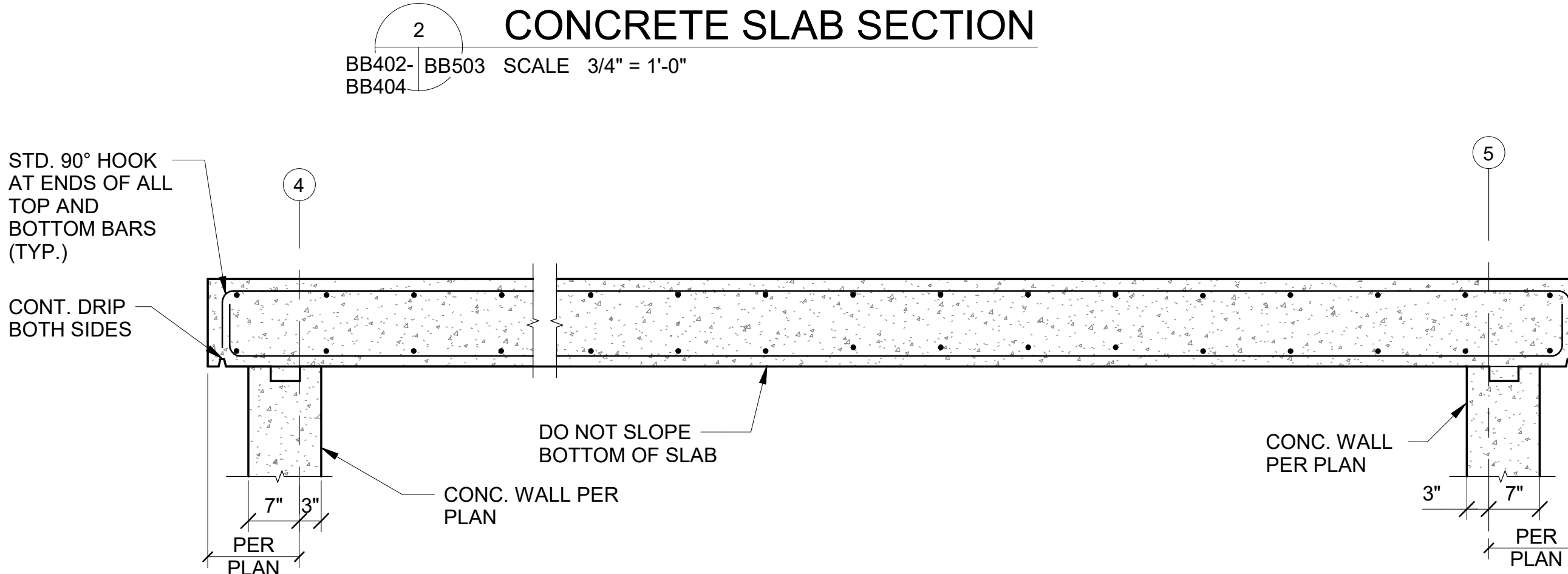




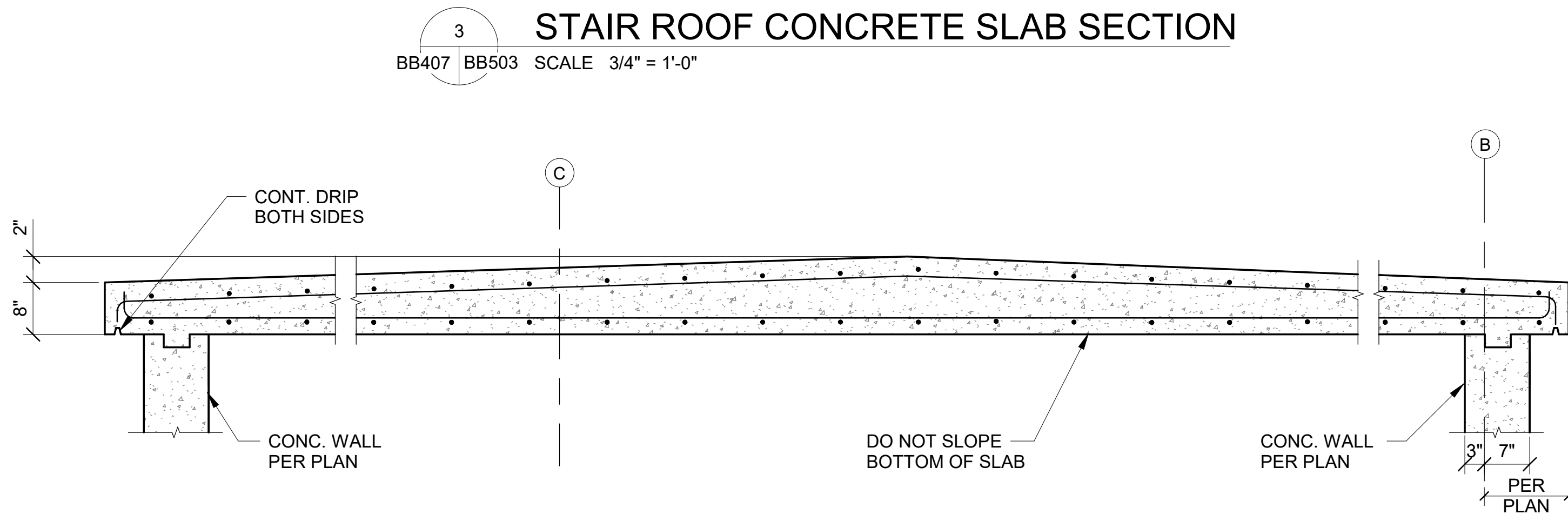
- NOTES:
1. SLOPE TOP BARS IN THIS  $\longleftrightarrow$  DIRECTION WITH TOP OF SLAB SO THAT PROPER COVER IS MAINTAINED OVER THE ENTIRE LENGTH OF THE BAR.
  2. STD. 90° END HOOKS MAY BE TURNED IN ANY DIRECTION SO THAT BARS FIT WITHIN SLAB DEPTHS AND MAINTAIN PROPER COVER. HOOKS ARE NOT REQUIRED TO BE VERTICAL.
  3. SEE SECTION 1/BB501 FOR TYPICAL CONCRETE COLUMN REINFORCING.
  4. SEE SECTION 2/BB501 FOR TYPICAL CONCRETE WALL REINFORCING.



- NOTES:
1. IN SLAB, SLOPE TOP BARS IN ORTHOGONAL DIRECTION PARALLEL WITH TOP OF SLAB SO THAT PROPER COVER IS MAINTAINED OVER THE ENTIRE LENGTH OF THE BAR.
  2. STD. 90° END HOOKS MAY BE TURNED IN ANY DIRECTION SO THAT BARS FIT WITHIN SLAB DEPTHS AND MAINTAIN PROPER COVER. HOOKS ARE NOT REQUIRED TO BE VERTICAL.
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  3. SEE SECTION 2/BB501 FOR TYPICAL CONCRETE WALL REINFORCING.



- NOTES:
1. SLOPE TOP BARS IN THIS  $\longleftrightarrow$  DIRECTION WITH TOP OF SLAB SO THAT PROPER COVER IS MAINTAINED OVER THE ENTIRE LENGTH OF THE BAR.
  2. STD. 90° END HOOKS MAY BE TURNED IN ANY DIRECTION SO THAT BARS FIT WITHIN SLAB DEPTHS AND MAINTAIN PROPER COVER. HOOKS ARE NOT REQUIRED TO BE VERTICAL.
  3. SEE SECTION 2/BB501 FOR TYPICAL CONCRETE WALL REINFORCING.



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**22056**  
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**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - CONCRETE SLAB SECTIONS**

BB503



[illegible]

JOB NUMBER  
**22056**

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DATE ISSUED  
**03/14/25**

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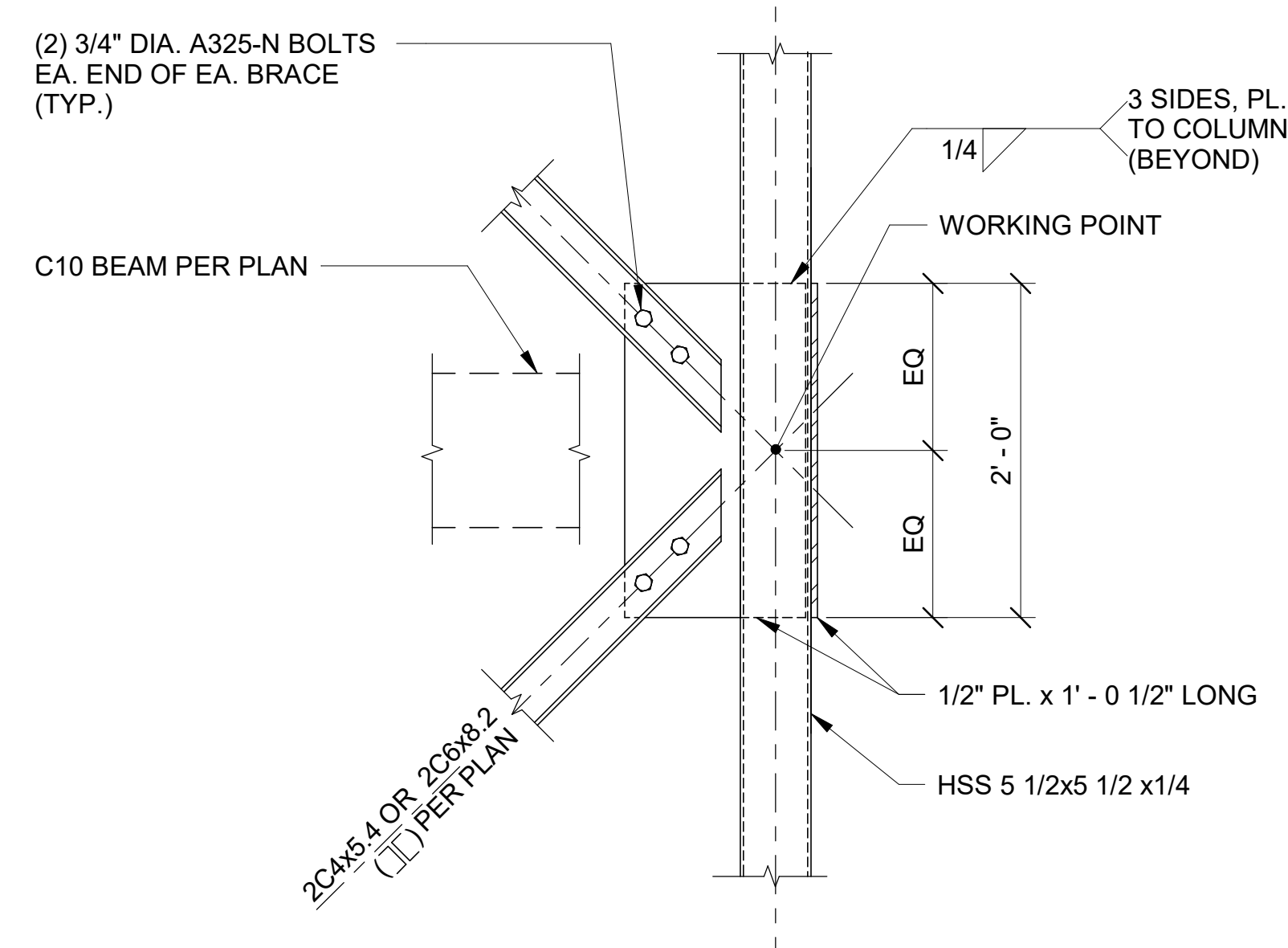
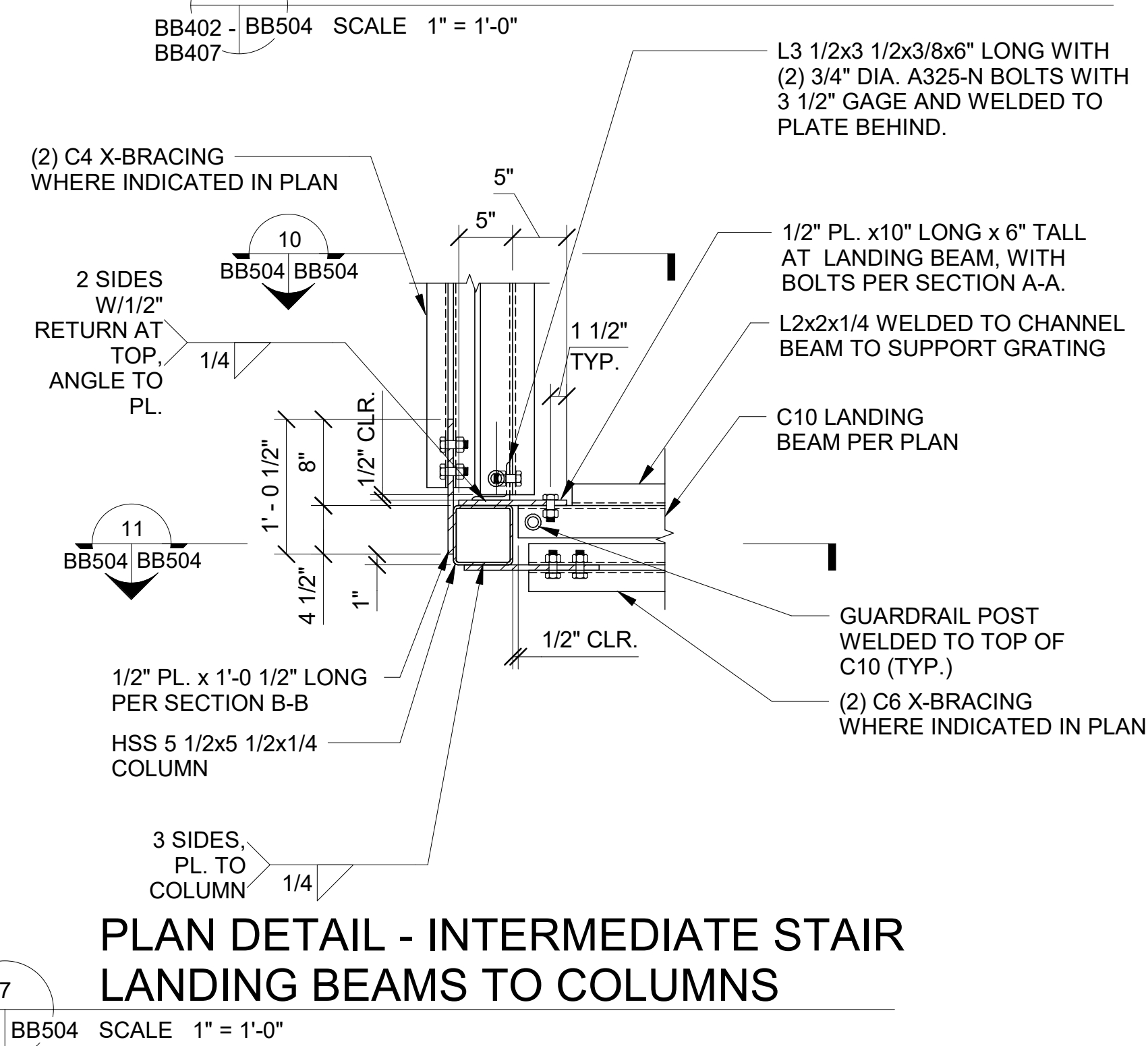
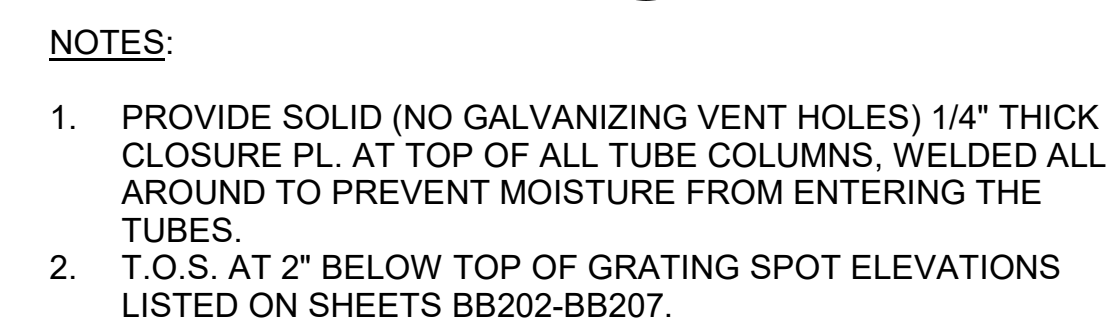
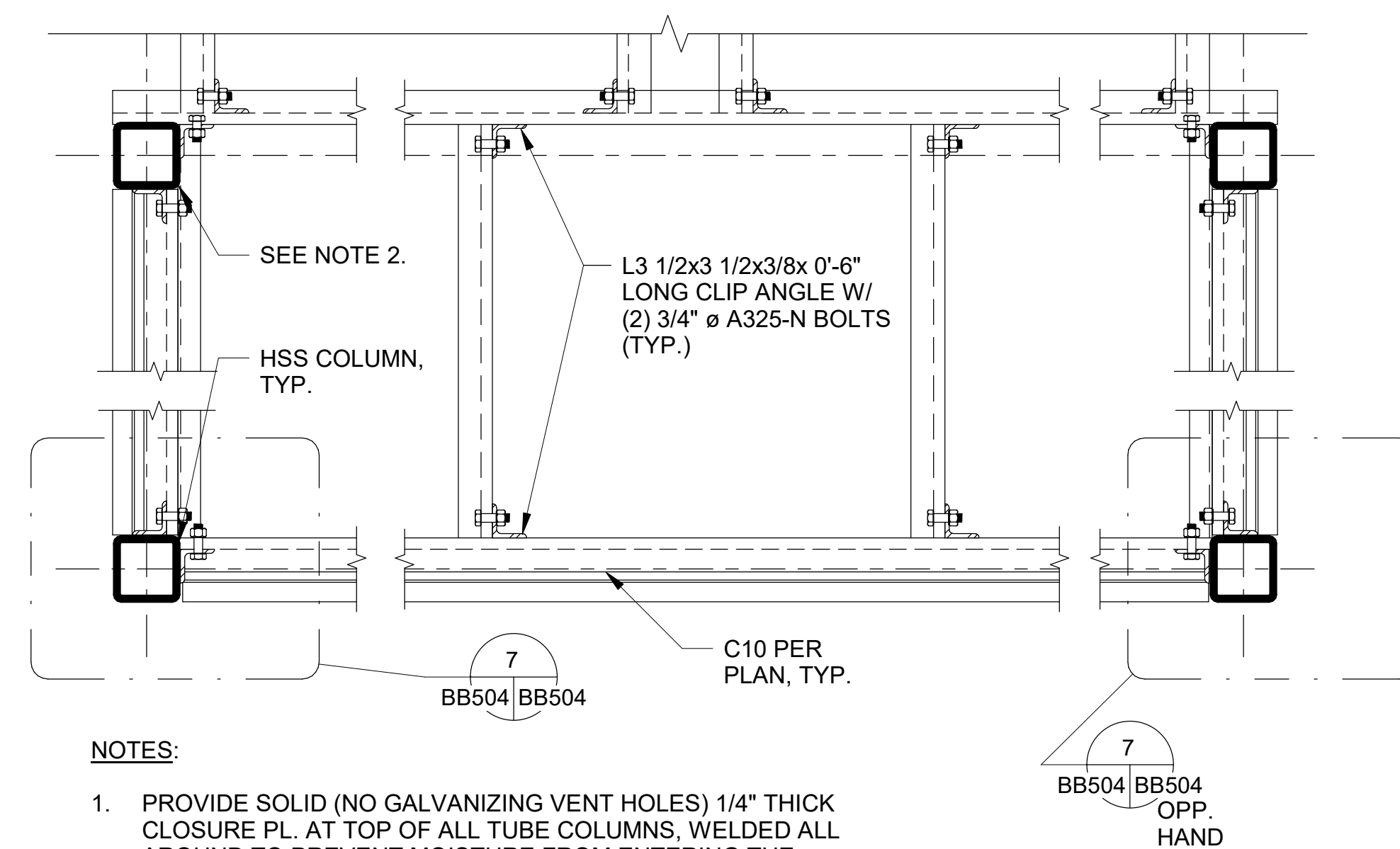
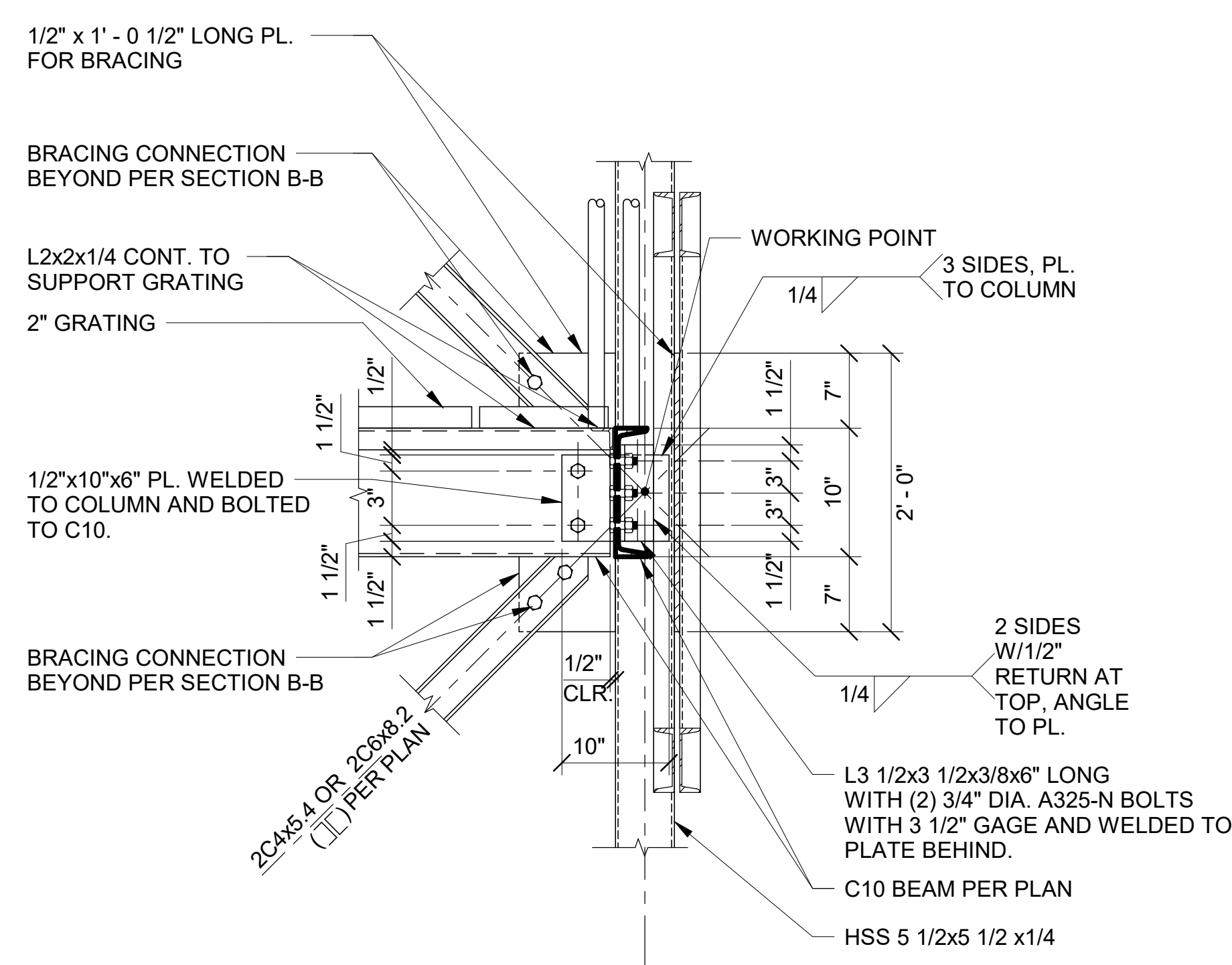
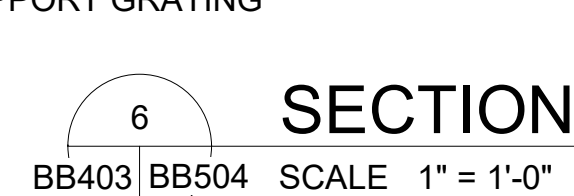
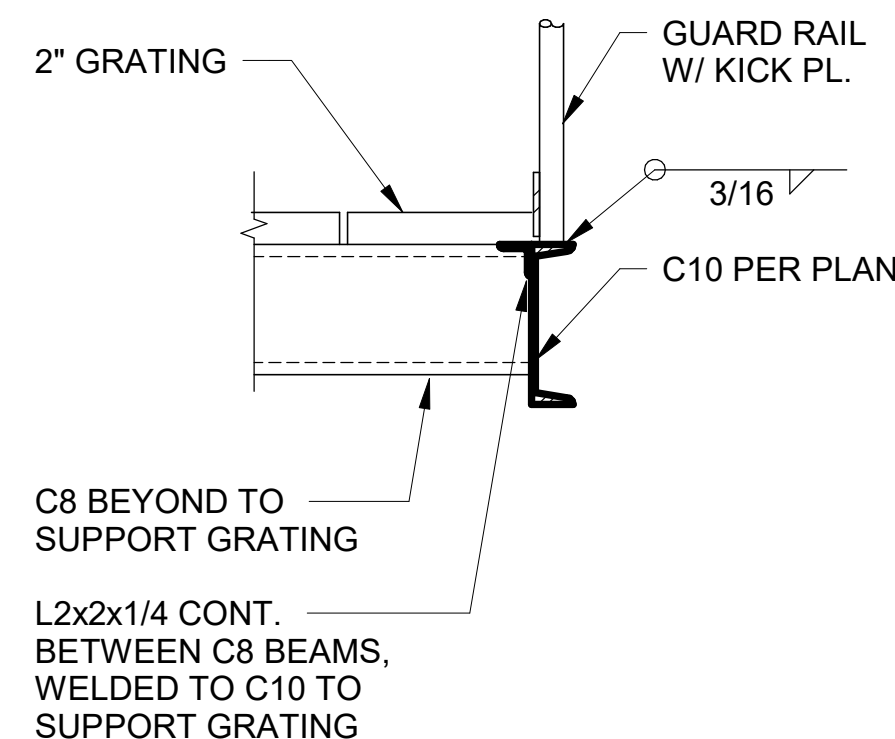
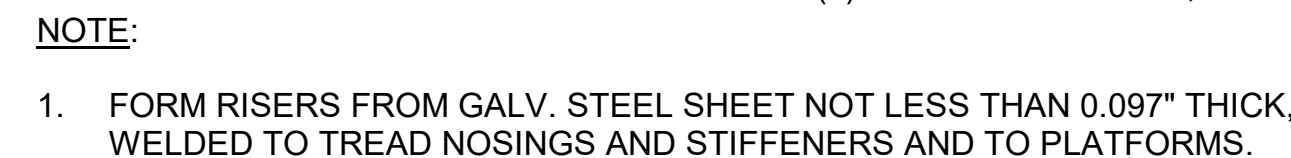
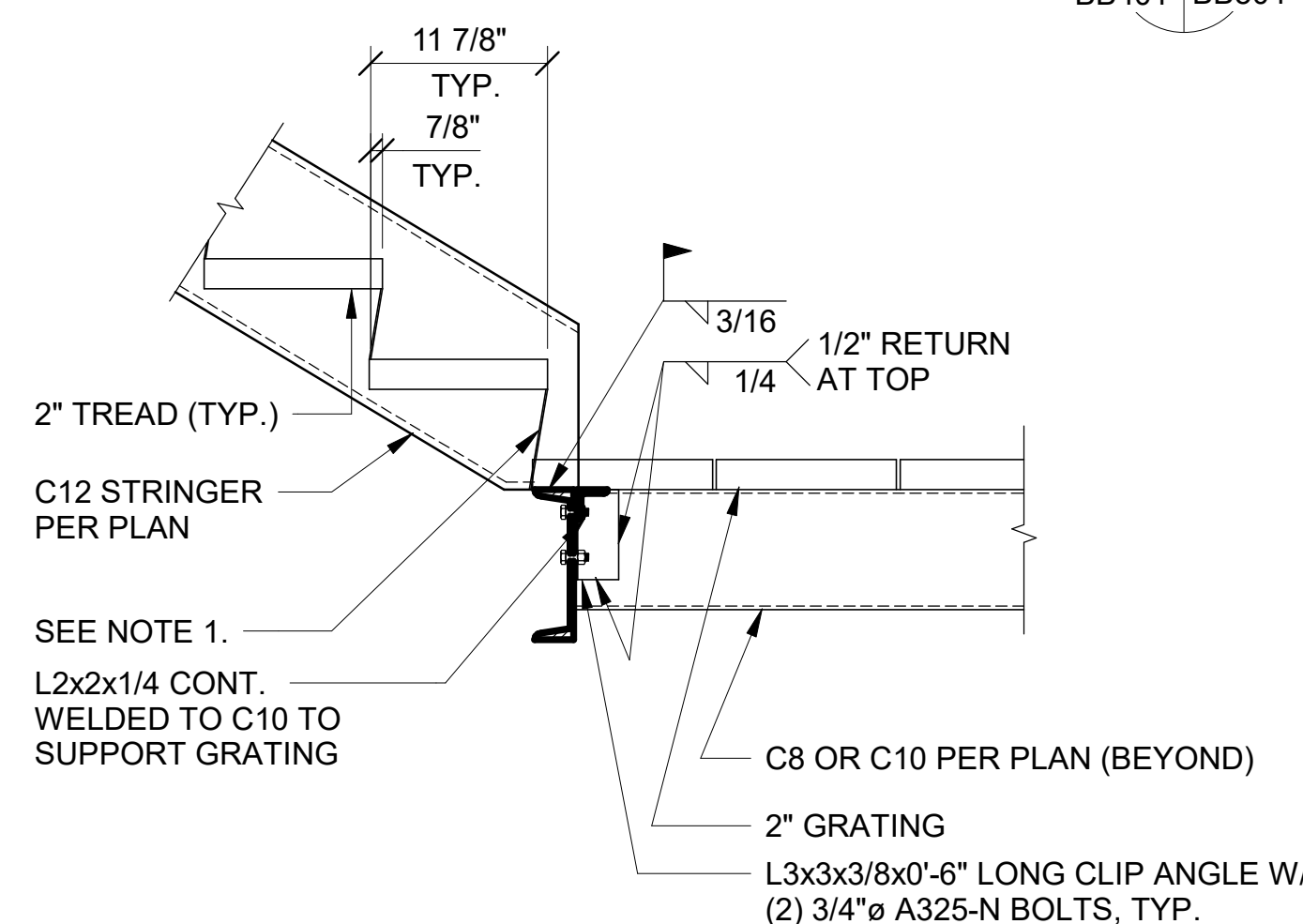
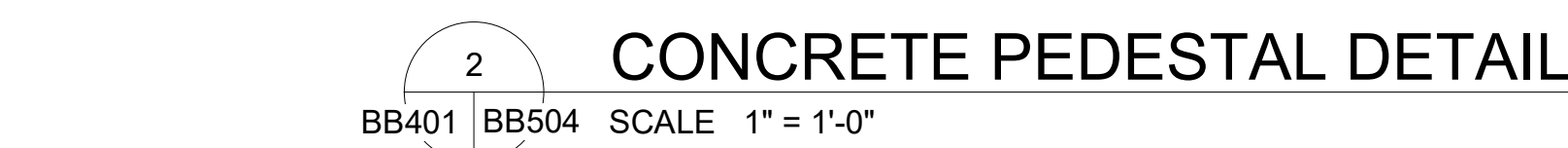
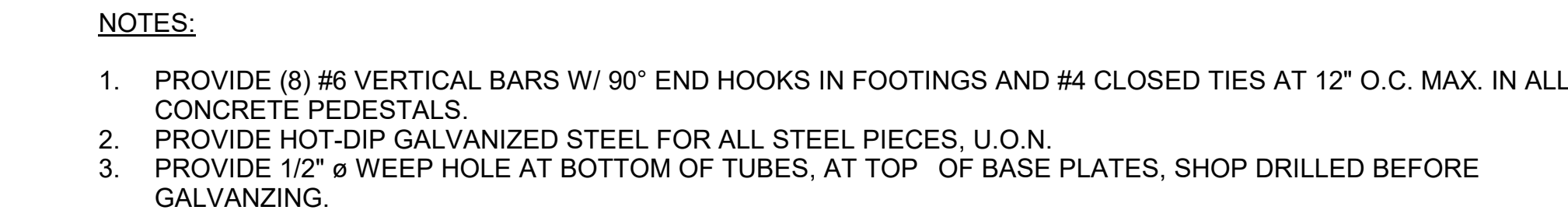
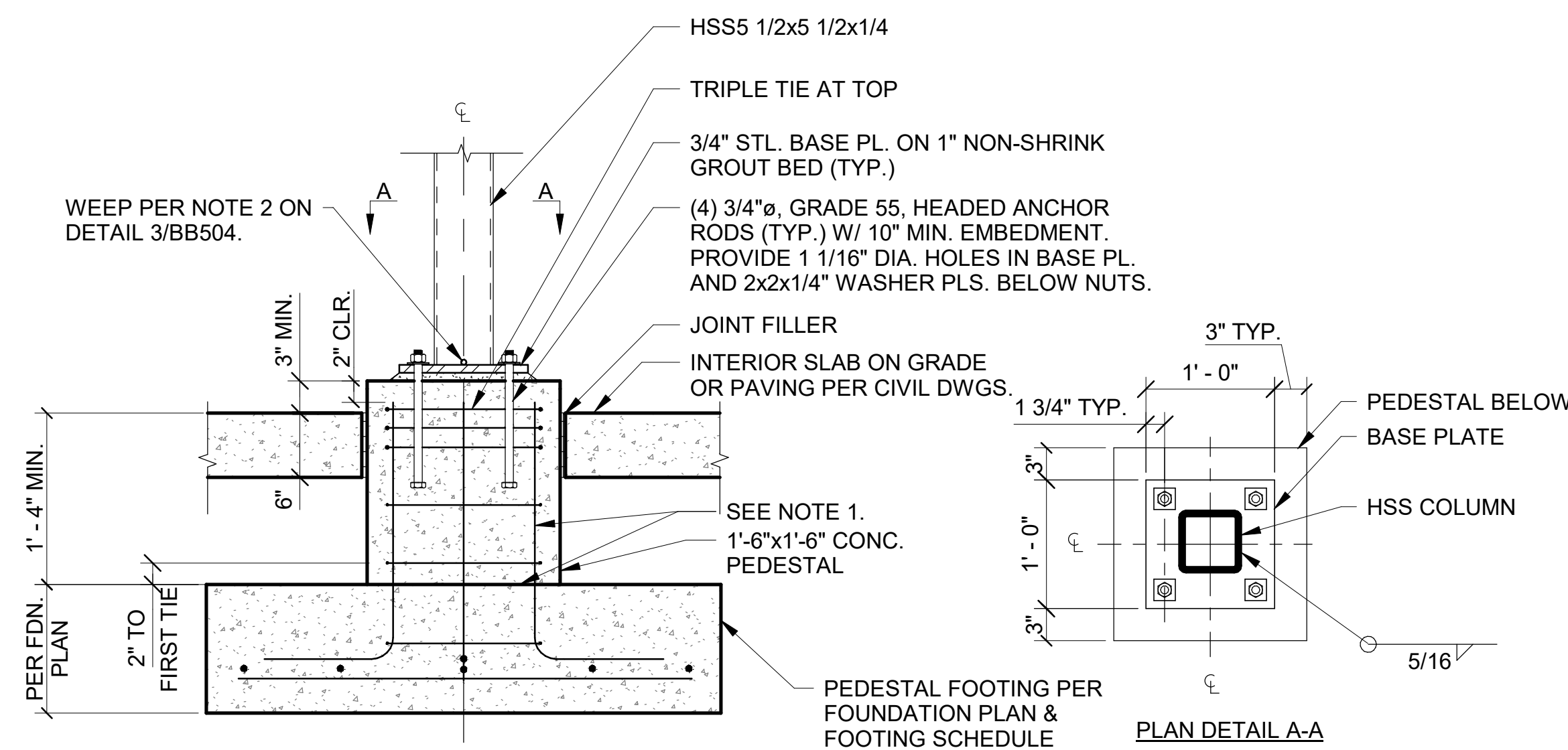
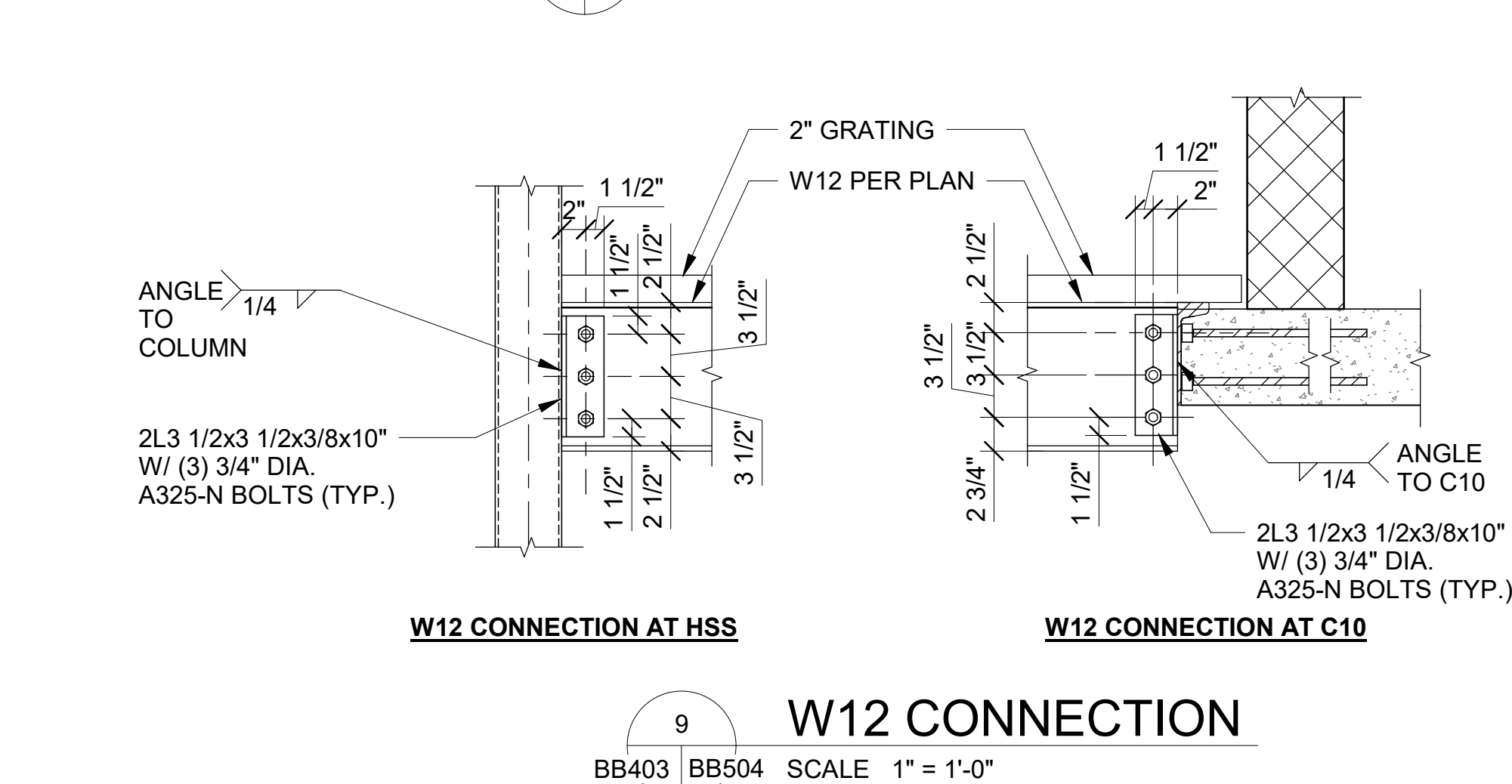
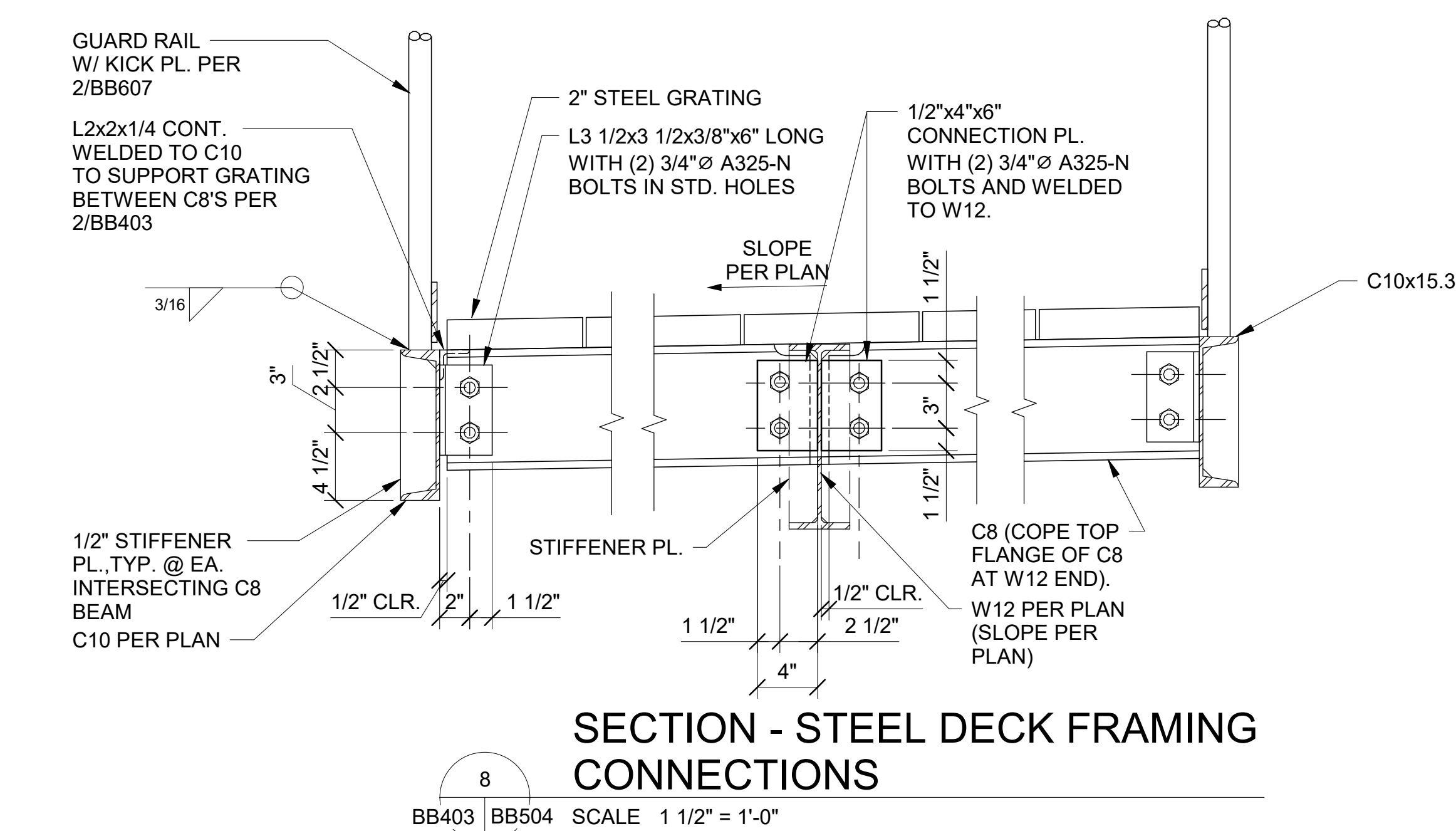
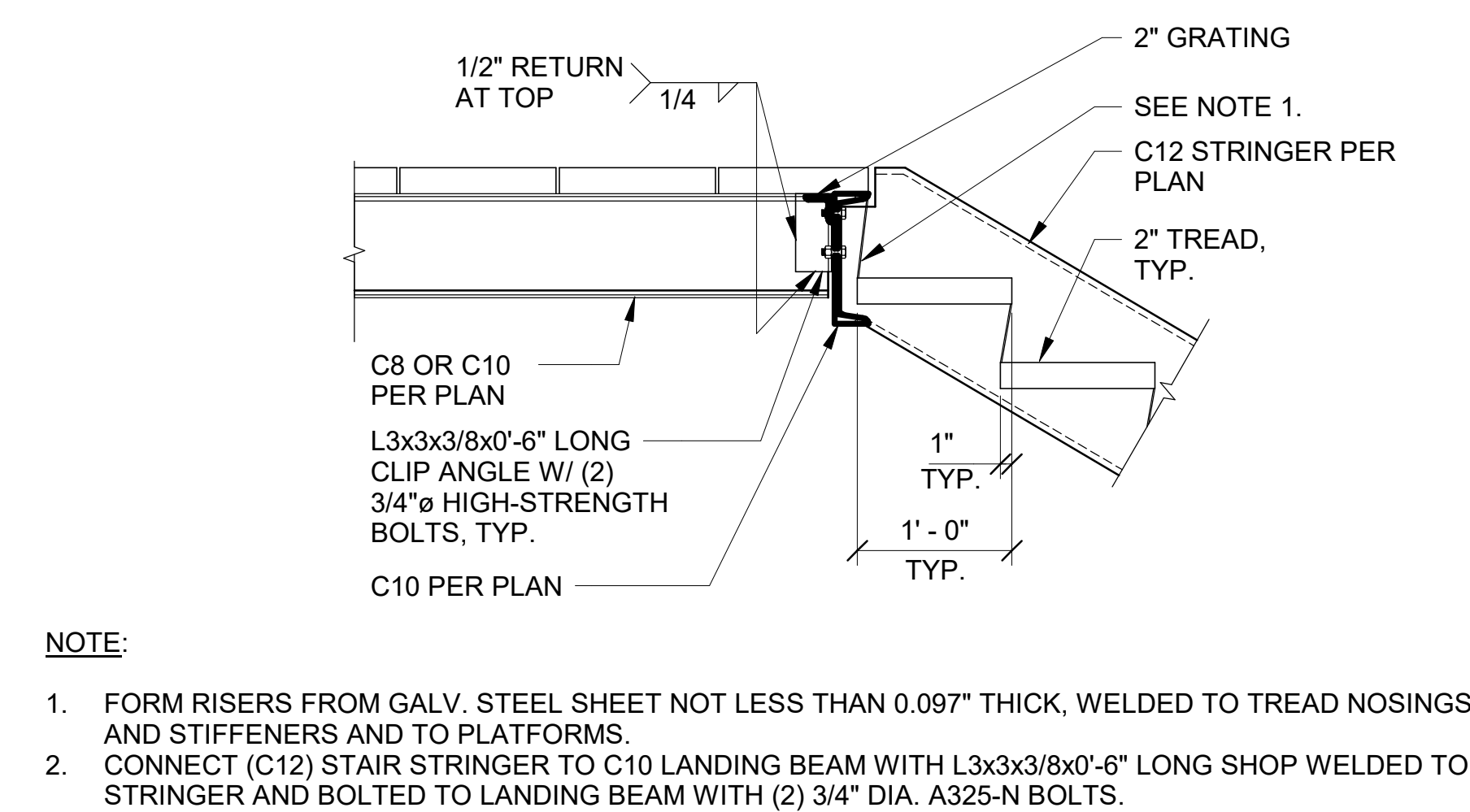
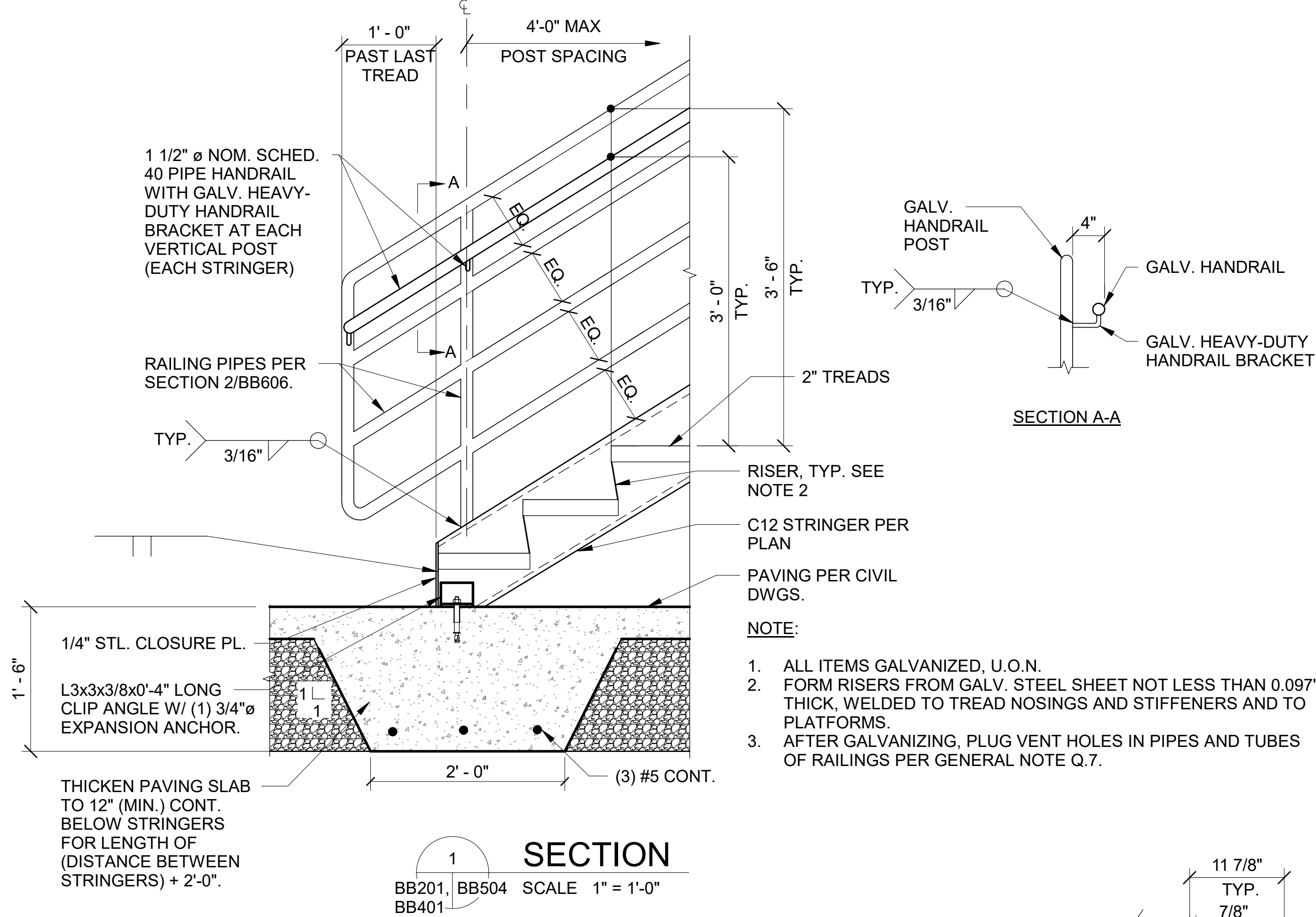
PROJECT STATUS  
**ISSUE FOR  
CONSTRUCTION**

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SHEET

**BURN BUILDING  
EXTERIOR STEEL  
STAIR DETAILS**

BB504

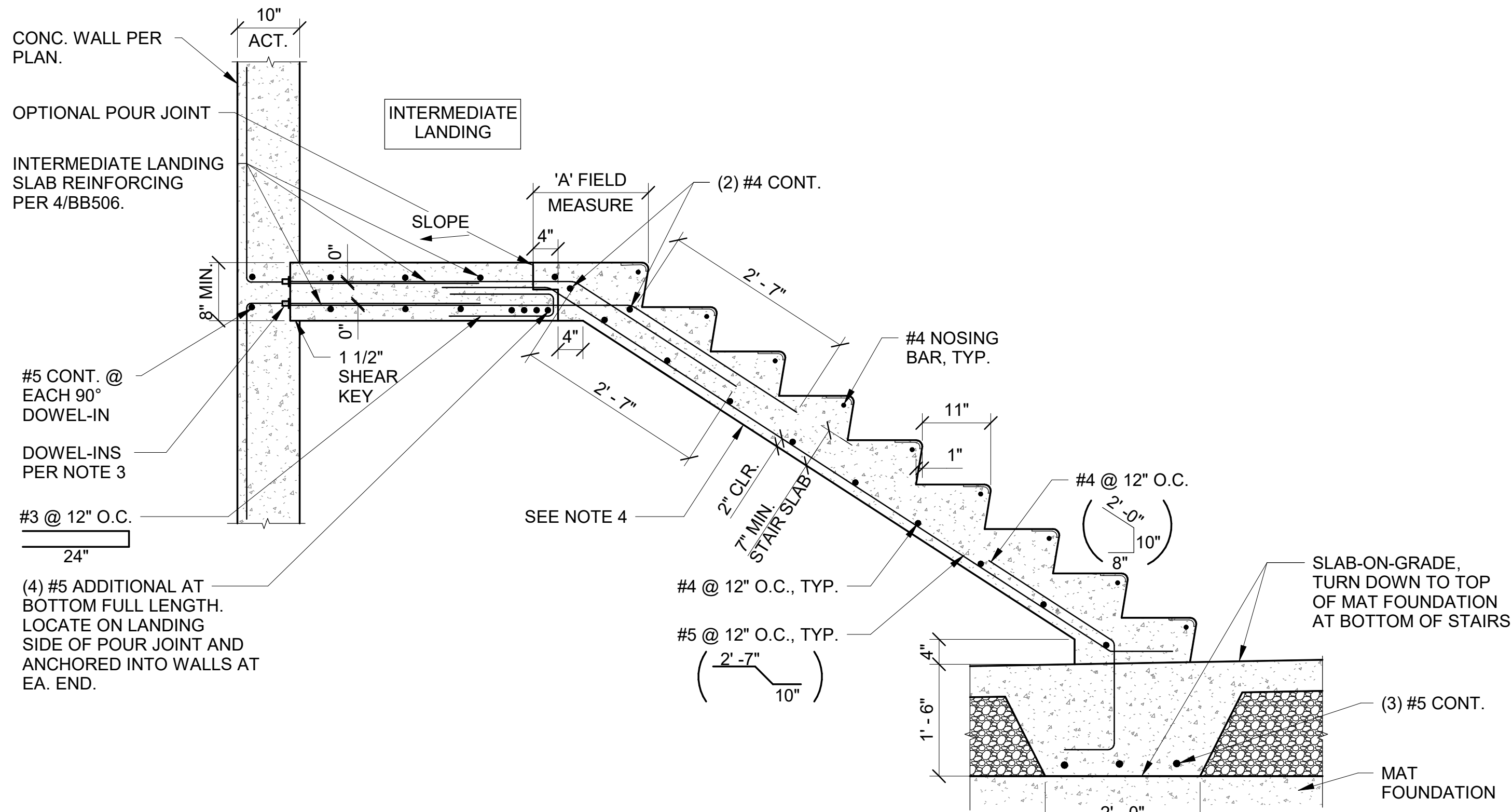


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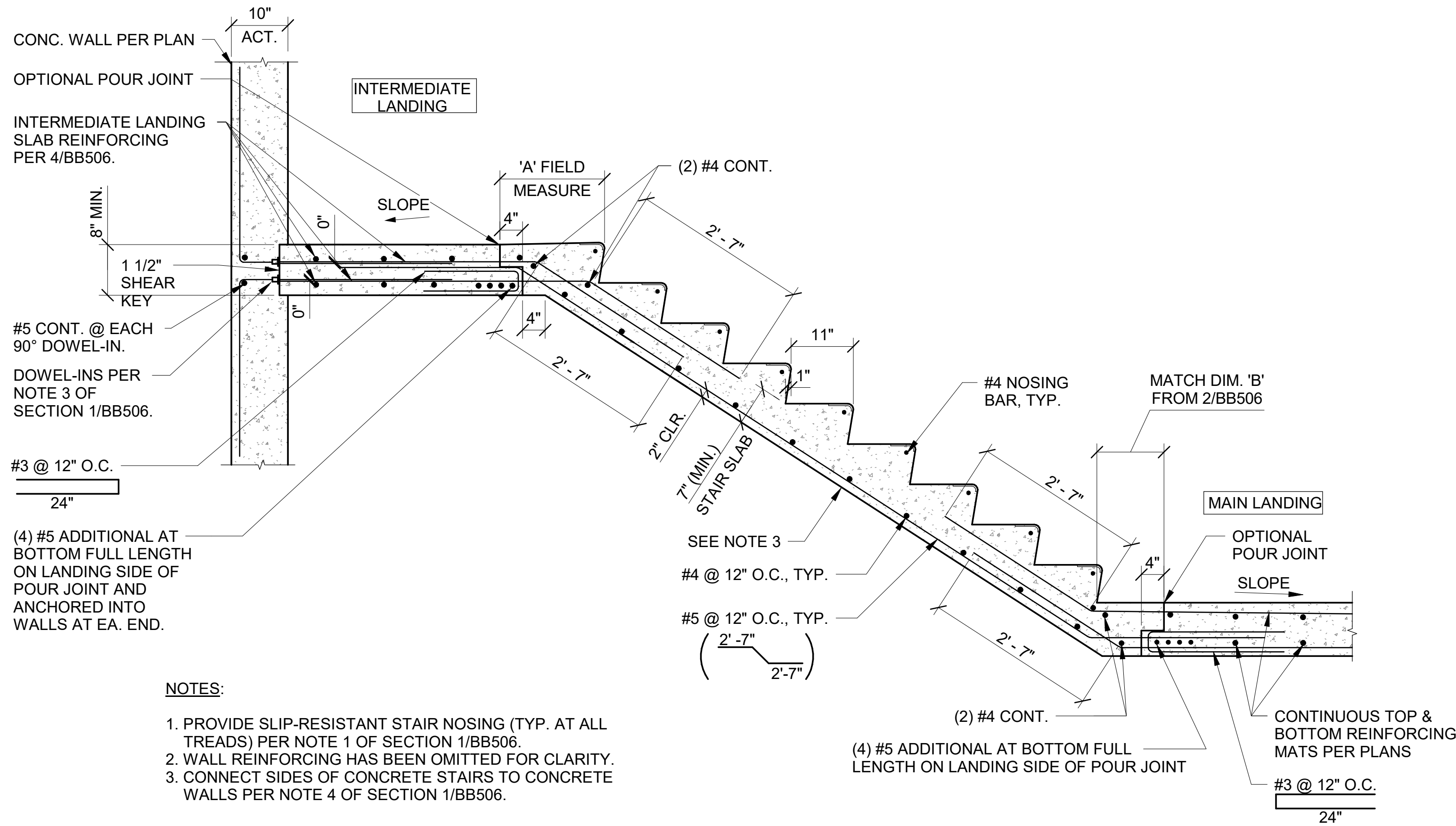




**NOTES:**

1. PROVIDE GALVANIZED, SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS). PROVIDE 1/4" MIN. THICK, GRADE 2, ROUNDED-EDGE STAIR NOSING, 1 1/2" DEEP x 3" WIDE x 3'-4" LONG, TIGHT TO CONCRETE WALL TO AVOID GUARDRAIL BASE PLATE AT OPPOSITE END OF TREAD. PROVIDE SLIPNOT STAIR NOSING WITH J-HOOKS, AS MANUFACTURED BY SLIPNOT METAL SAFETY FLOORING AT (800) 754-7668 OR WWW.SLIPNOT.COM, OR AN EQUIVALENT APPROVED BY THE ENGINEER. INSTALL STAIR NOSINGS IN ACCORDANCE WITH REQUIREMENTS OF THE MANUFACTURER.
2. WALL REINFORCING HAS BEEN OMITTED FOR CLARITY.
3. CONNECT INTERMEDIATE LANDING SLAB TO CONCRETE WALLS USING DOWEL-IN SYSTEM BY DAYTON SUPERIOR, OR AN APPROVED EQUIVALENT BY ERICO OR BARSPICE PRODUCTS, INC. FOR EACH REINFORCING BAR THAT PASSES FROM THE LANDING SLAB INTO WALL. PROVIDE A #5 D102A 90° HOOKED DOWEL BAR SPLICER CAST INTO WALL, WITH DIMENSIONS A=5" & B=2'-7", PLUS A #5 D-101 2' - 10" LONG DOWEL-IN DOWEL SCREWED INTO THE SPLICER AND LAPPING THE SLAB REINFORCING WITH A 2'-7" MIN. LAP LENGTH.
4. WHERE CONCRETE STAIR SIDES INTERSECT CONCRETE WALLS, CONNECT STAIR SLABS TO CONCRETE WALLS USING DOWEL-IN SYSTEM DESCRIBED IN NOTE 3.

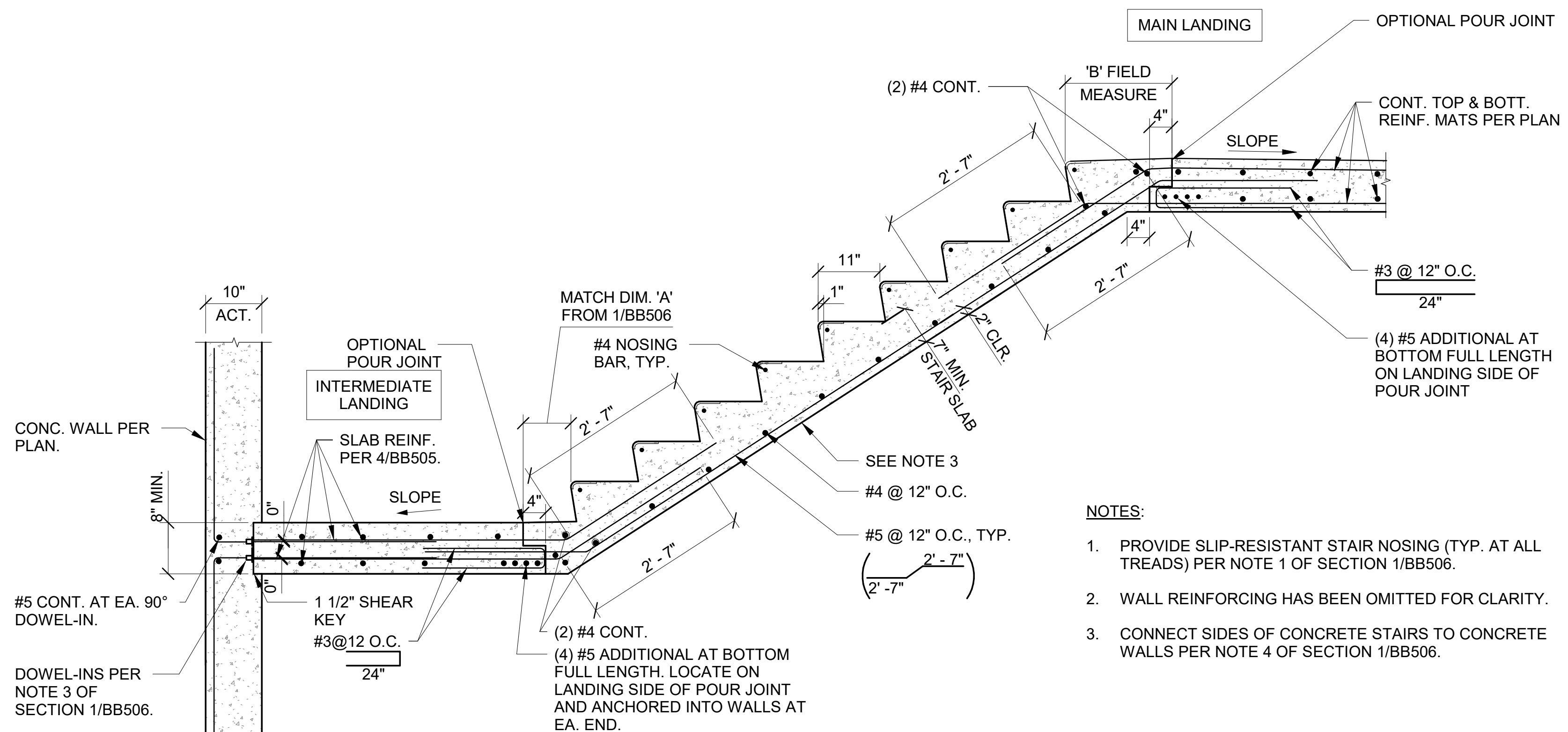
**1 CONCRETE STAIR SECTION**  
BB201, BB506 SCALE 3/4" = 1'-0"  
BB401



**NOTES:**

1. PROVIDE GALVANIZED, SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS) PER NOTE 1 OF SECTION 1/BB506.
2. WALL REINFORCING HAS BEEN OMITTED FOR CLARITY.
3. CONNECT SIDES OF CONCRETE STAIRS TO CONCRETE WALLS PER NOTE 4 OF SECTION 1/BB506.

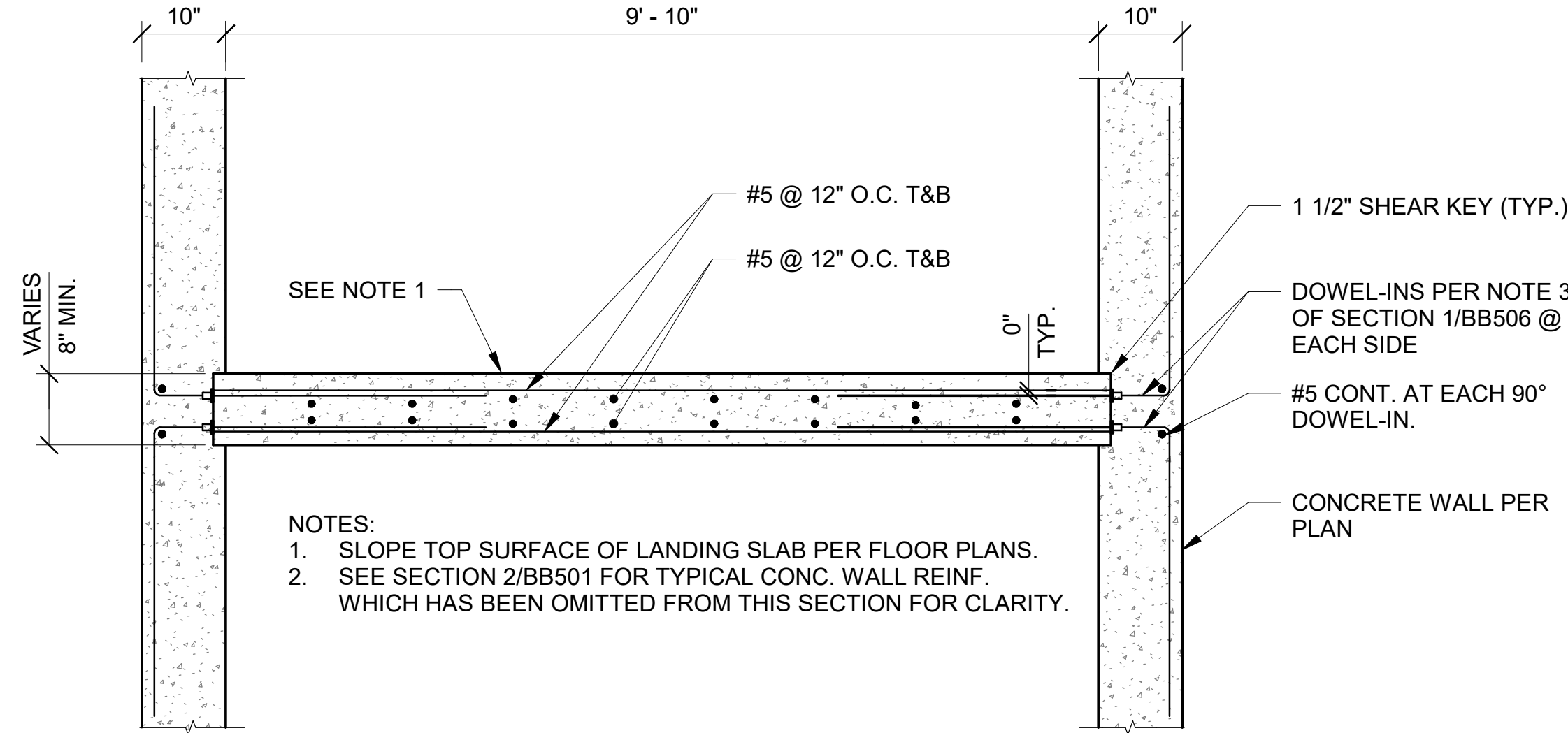
**3 CONCRETE STAIR SECTION**  
BB402 - BB506 SCALE 3/4" = 1'-0"  
BB407



**NOTES:**

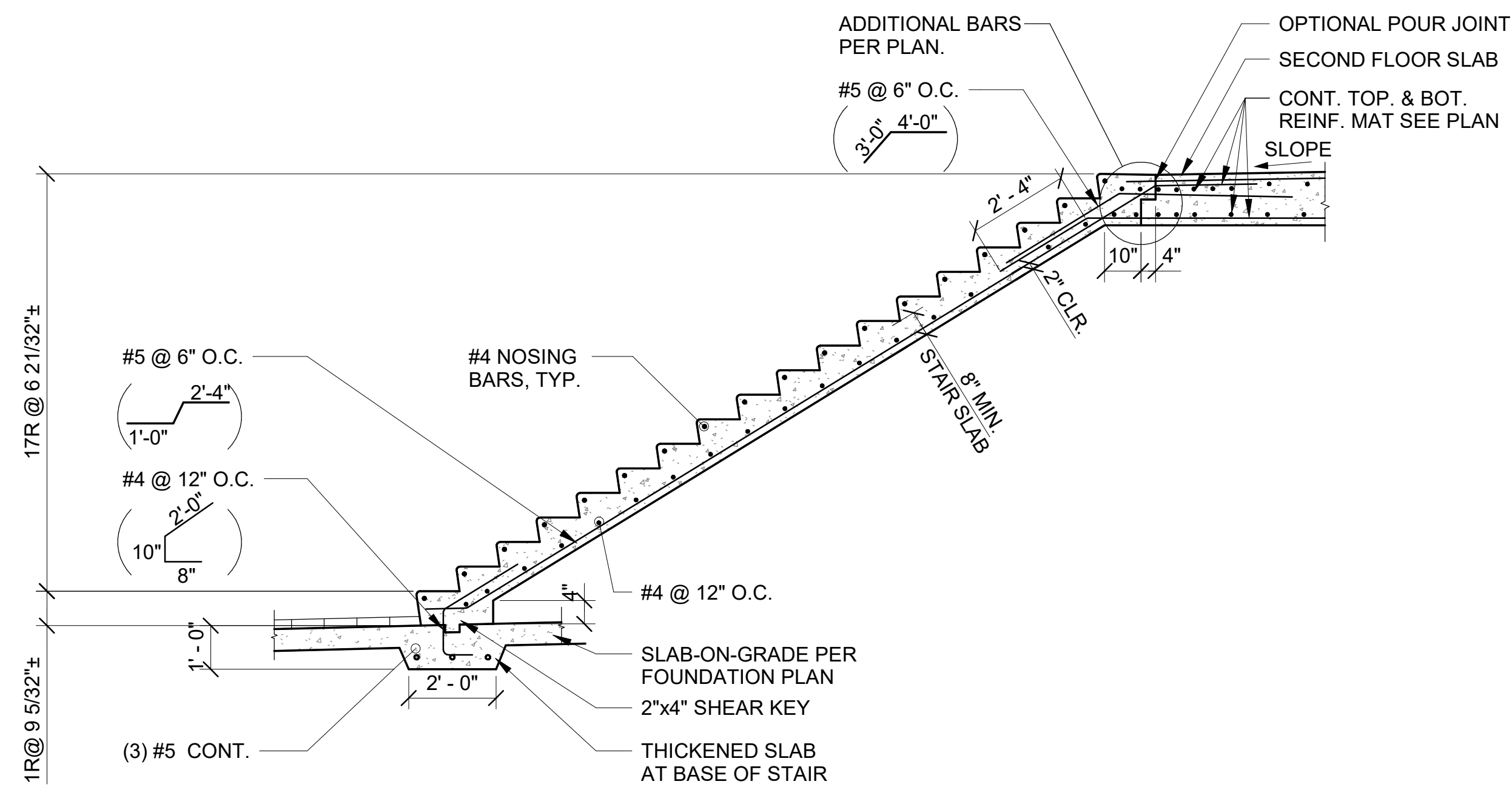
1. PROVIDE SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS) PER NOTE 1 OF SECTION 1/BB506.
2. WALL REINFORCING HAS BEEN OMITTED FOR CLARITY.
3. CONNECT SIDES OF CONCRETE STAIRS TO CONCRETE WALLS PER NOTE 4 OF SECTION 1/BB506.

**2 CONCRETE STAIR SECTION**  
BB402 - BB506 SCALE 3/4" = 1'-0"  
BB407



- NOTES:**
1. SLOPE TOP SURFACE OF LANDING SLAB PER FLOOR PLANS.
  2. SEE SECTION 2/BB501 FOR TYPICAL CONC. WALL REINF. WHICH HAS BEEN OMITTED FROM THIS SECTION FOR CLARITY.

**4 INTERMEDIATE STAIR LANDING SECTION**  
BB402 - BB506 SCALE 3/4" = 1'-0"  
BB407



**NOTES:**

1. PROVIDE GALVANIZED, SLIP-RESISTANT STAIR NOSING CAST IN SLAB (TYP. AT ALL TREADS). PROVIDE 1/4" MIN. THICK, GRADE 2, ROUNDED-EDGE STAIR NOSINGS, 4" WIDE x 3'-8" LONG. PROVIDE SLIPNOT STAIR NOSING WITH J-HOOKS, AS MANUFACTURED BY SLIPNOT METAL SAFETY FLOORING, OR AN EQUIVALENT APPROVED BY THE ENGINEER. INSTALL STAIR NOSING IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER.
2. WHERE CONCRETE STAIR SIDES INTERSECT CONCRETE WALLS, CONNECT STAIR SLABS TO CONCRETE WALLS USING DOWEL-IN SYSTEM DESCRIBED IN NOTE 3 OF 1/BB506.

**5 CONCRETE STAIR SECTION**  
BB201, BB506 SCALE 3/8" = 1'-0"  
BB401

**FIRST FLOOR STAIR**

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**WTCC EWS - FIRE & RESCUE TRAINING CENTER**

WAKE TECHNICAL COMMUNITY COLLEGE

5345 ROLESVILLE RD, WENDELL, NC 27591

NCCCS NO. 2303



NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET

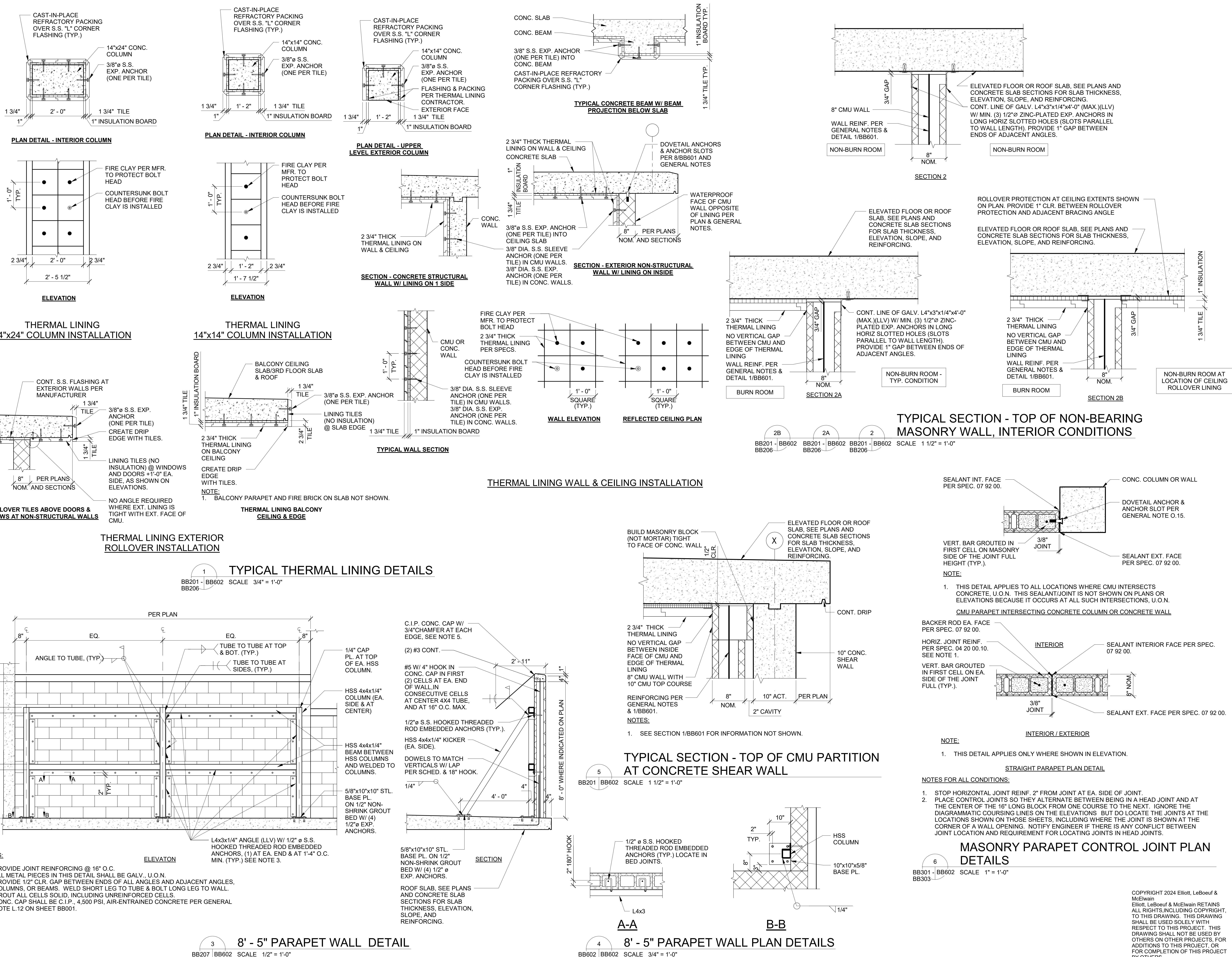
**BURN BUILDING - CONCRETE STAIR SECTIONS**

**BB506**

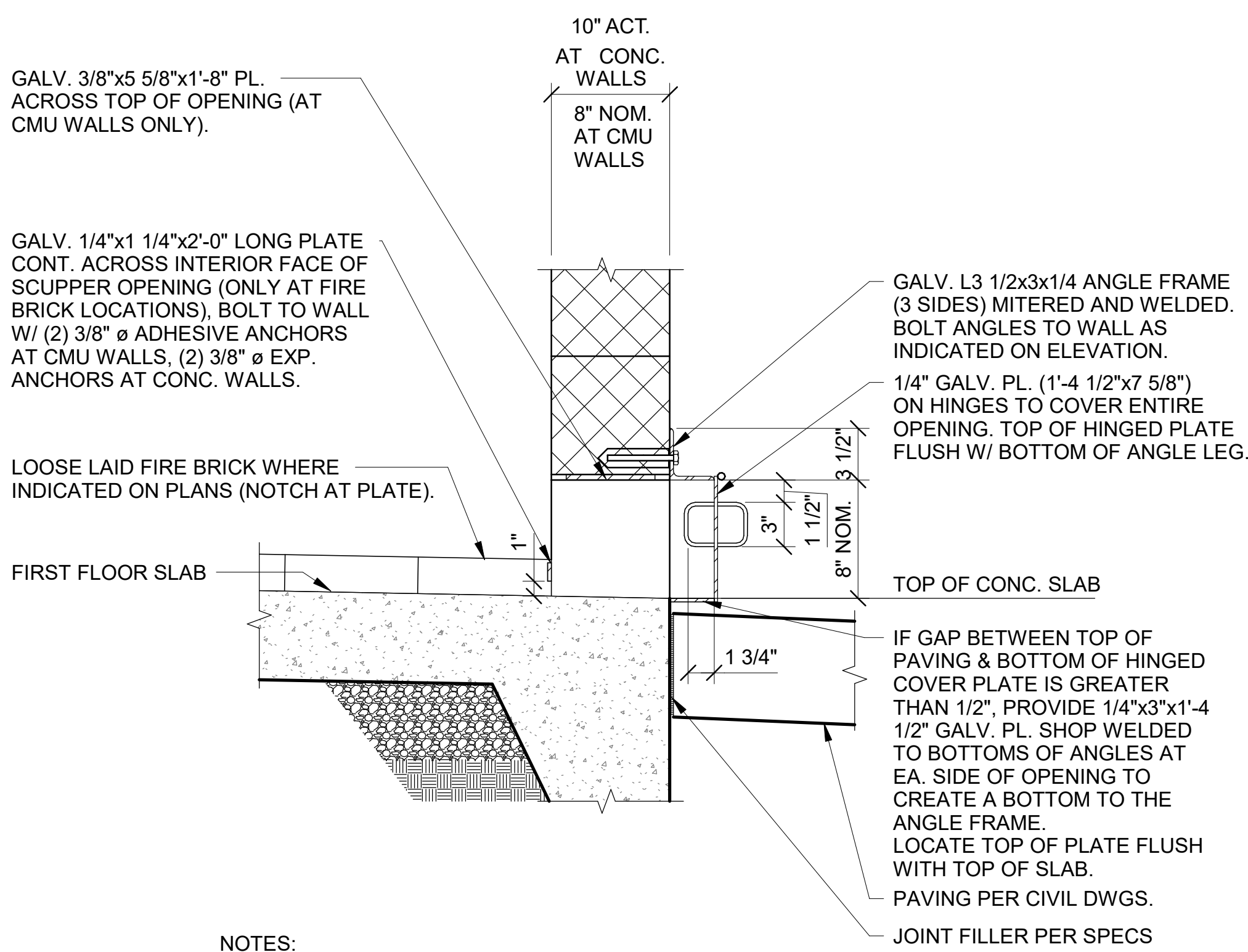






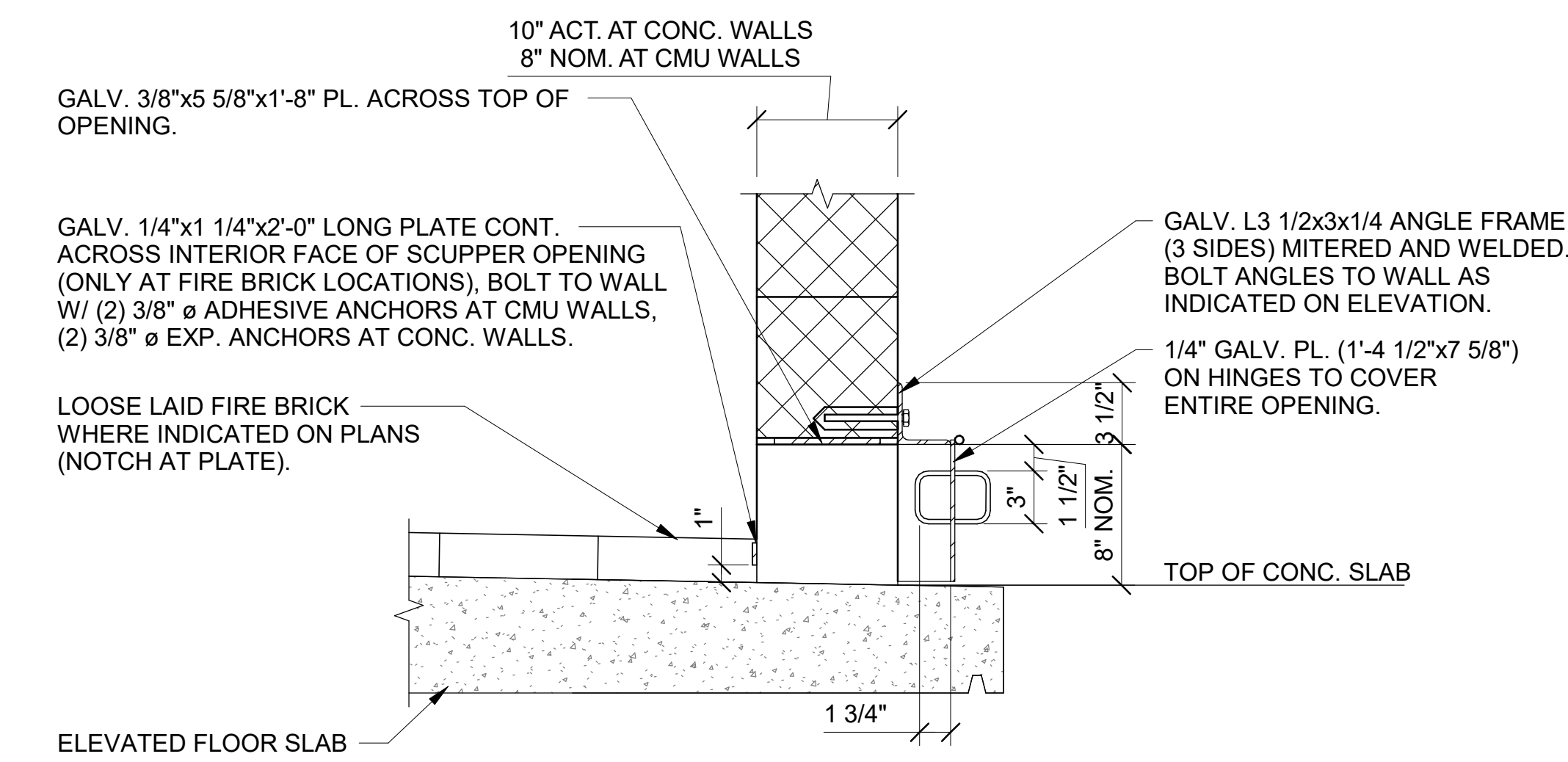






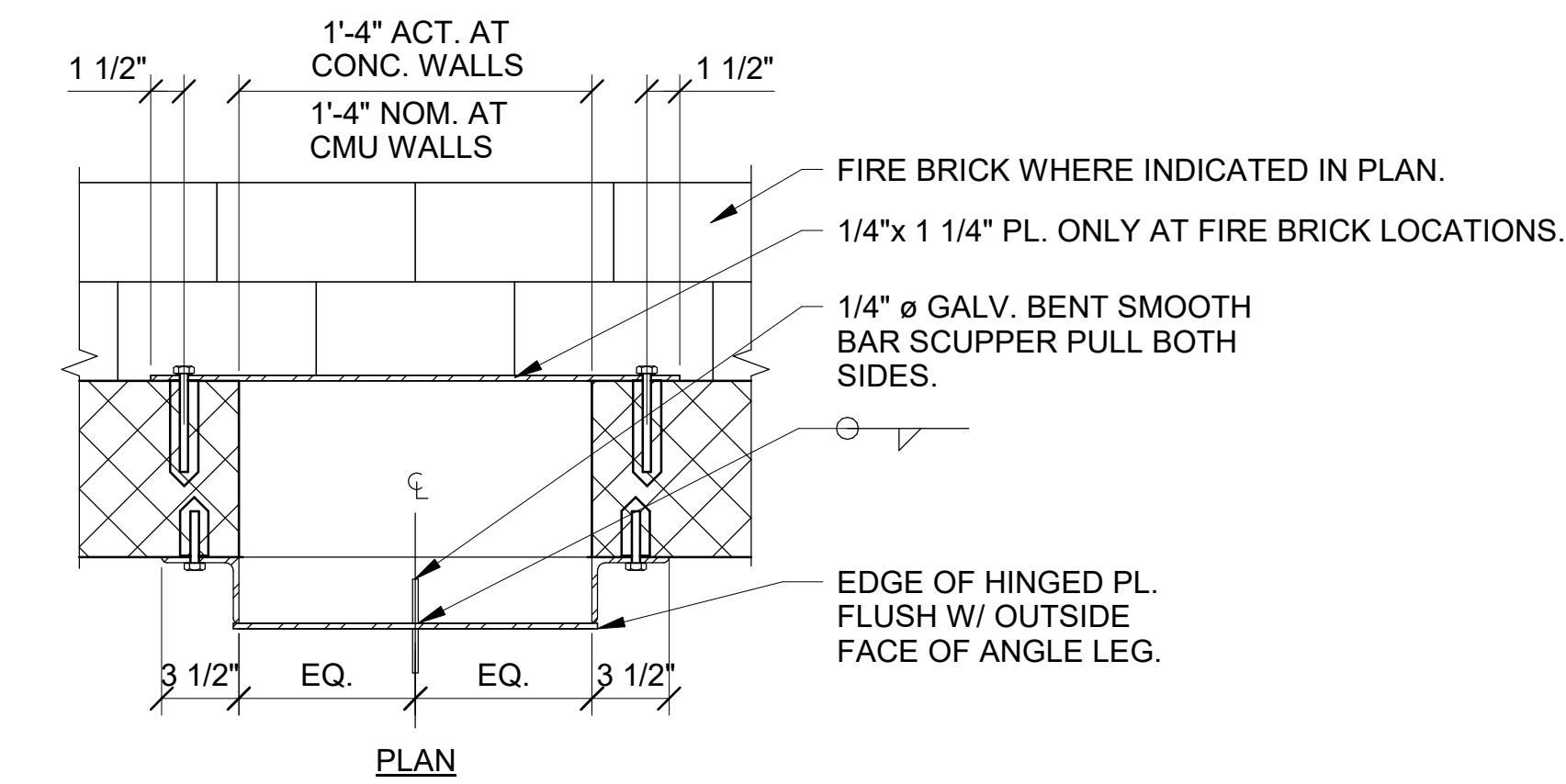
- NOTES:
- SEE DETAILS 2, 3, & 4 ON THIS SHEET FOR HINGES.

1  
SCUPPER DETAILS - TYPE 1  
BB201 BB603 SCALE 1 1/2" = 1'-0"



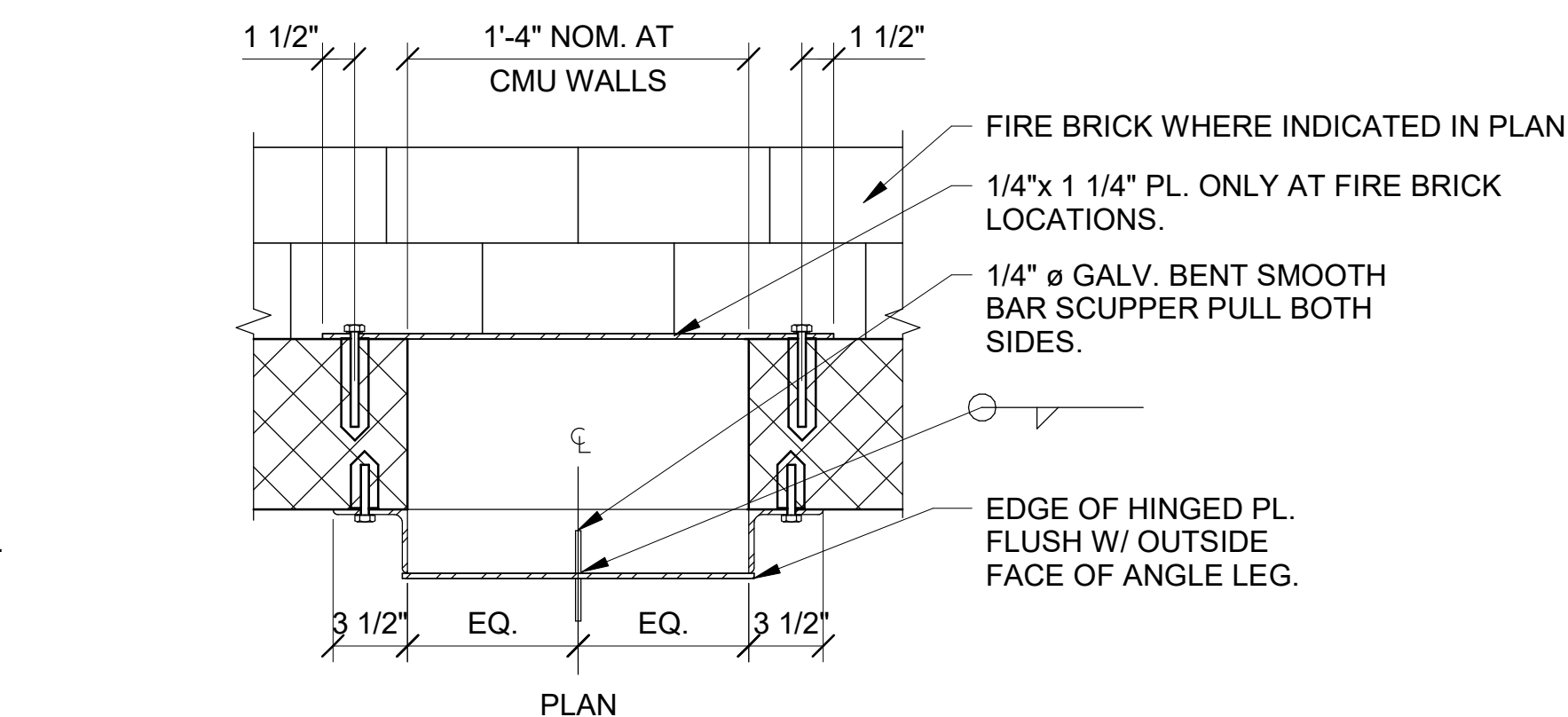
- NOTES:
- SEE DETAILS 2, 3, & 4 ON THIS SHEET FOR HINGES.

4  
SCUPPER DETAILS - TYPE 2 (ELEVATED FLOORS)  
BB202 - BB603 SCALE 1 1/2" = 1'-0"



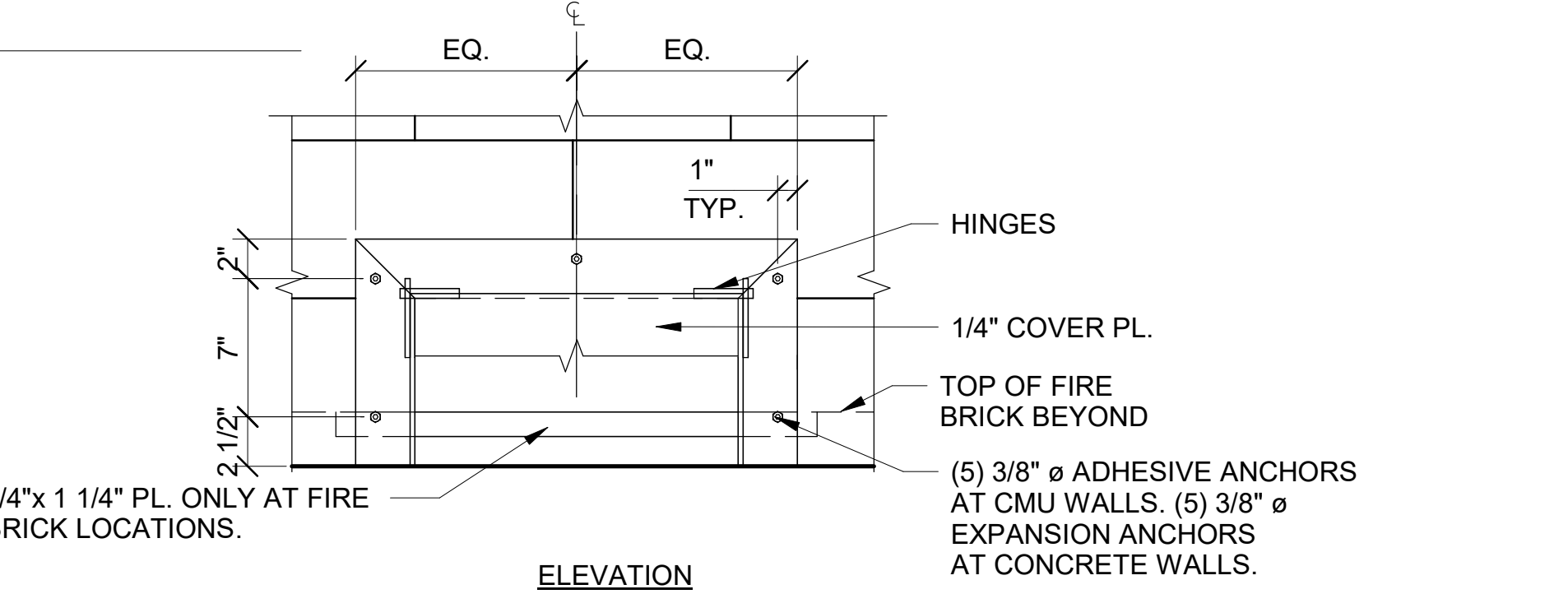
- 1/4"x 1 1/4" PL. ONLY AT FIRE BRICK LOCATIONS, FURNISHED & INSTALLED BY MISC. METALS SUBCONTRACTOR
- (5) 3/8" ø ADHESIVE ANCHORS AT CMU WALLS, (5) 3/8" ø EXPANSION ANCHORS AT CONCRETE WALLS.
- T.O. PLATE FLUSH WITH T.O. FLOOR SLAB

ELEVATION



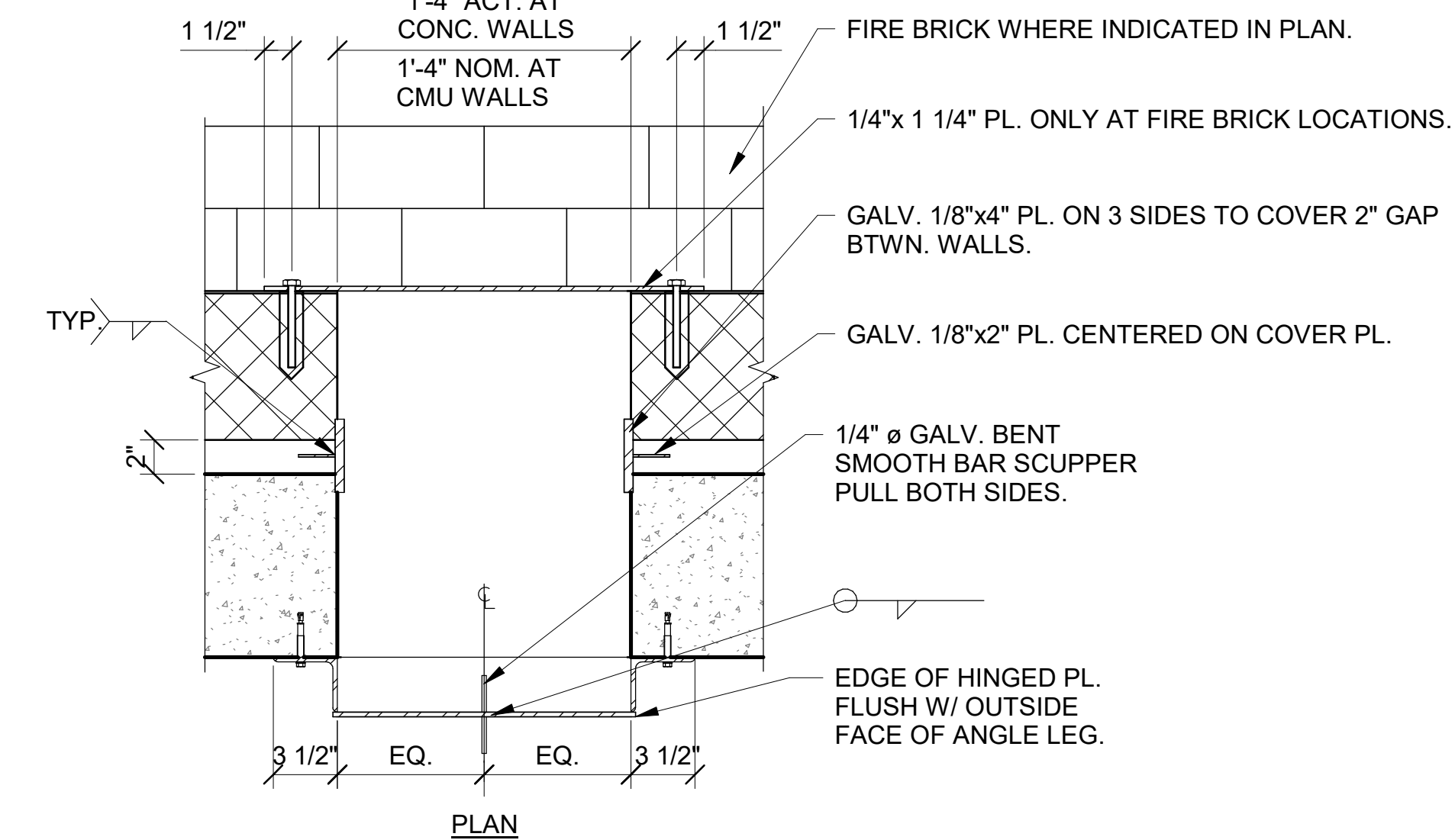
- 1/4"x 1 1/4" PL. ONLY AT FIRE BRICK LOCATIONS.
- (5) 3/8" ø ADHESIVE ANCHORS AT CMU WALLS, (5) 3/8" ø EXPANSION ANCHORS AT CONC. WALLS.

ELEVATION

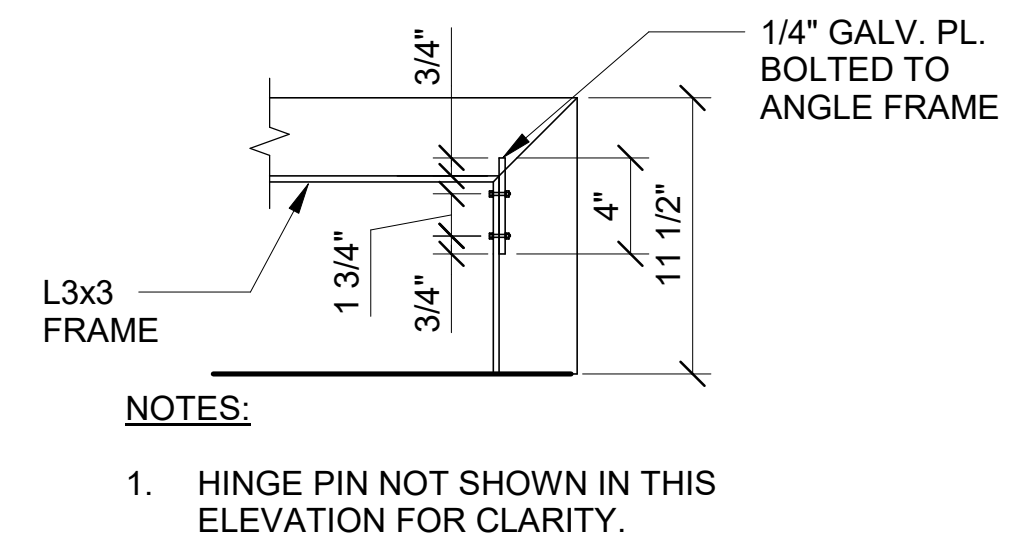


- 1/4"x 1 1/4" PL. ONLY AT FIRE BRICK LOCATIONS.
- (5) 3/8" ø ADHESIVE ANCHORS AT CMU WALLS, (5) 3/8" ø EXPANSION ANCHORS AT CONCRETE WALLS.

ELEVATION

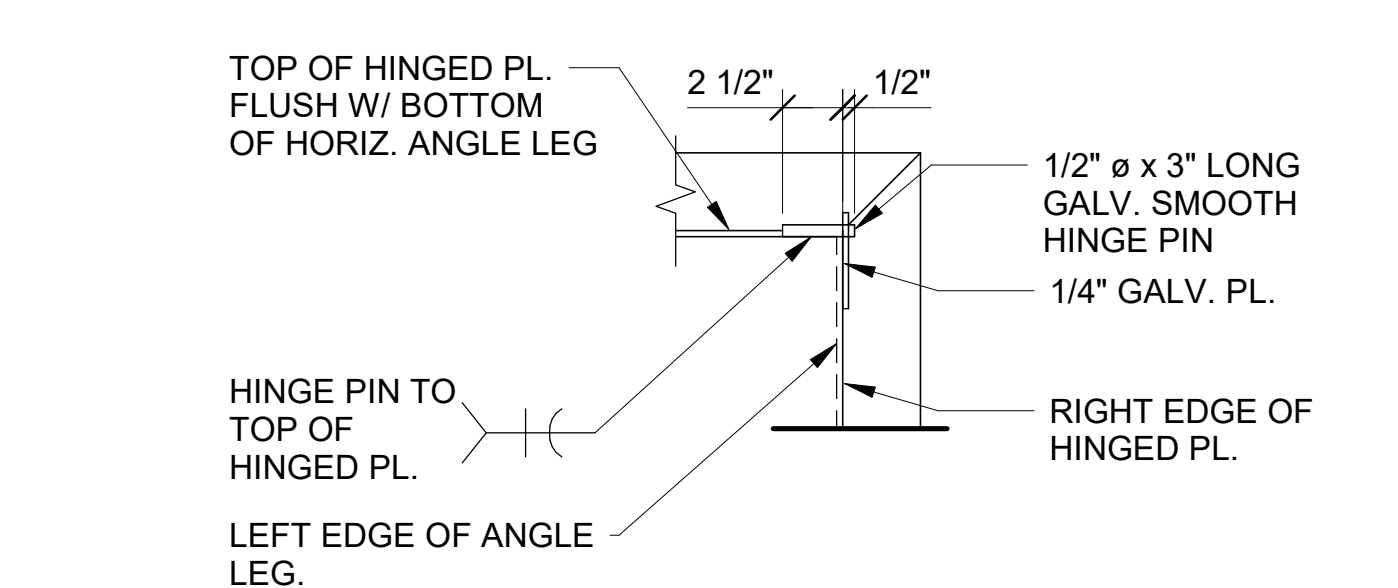


PLAN

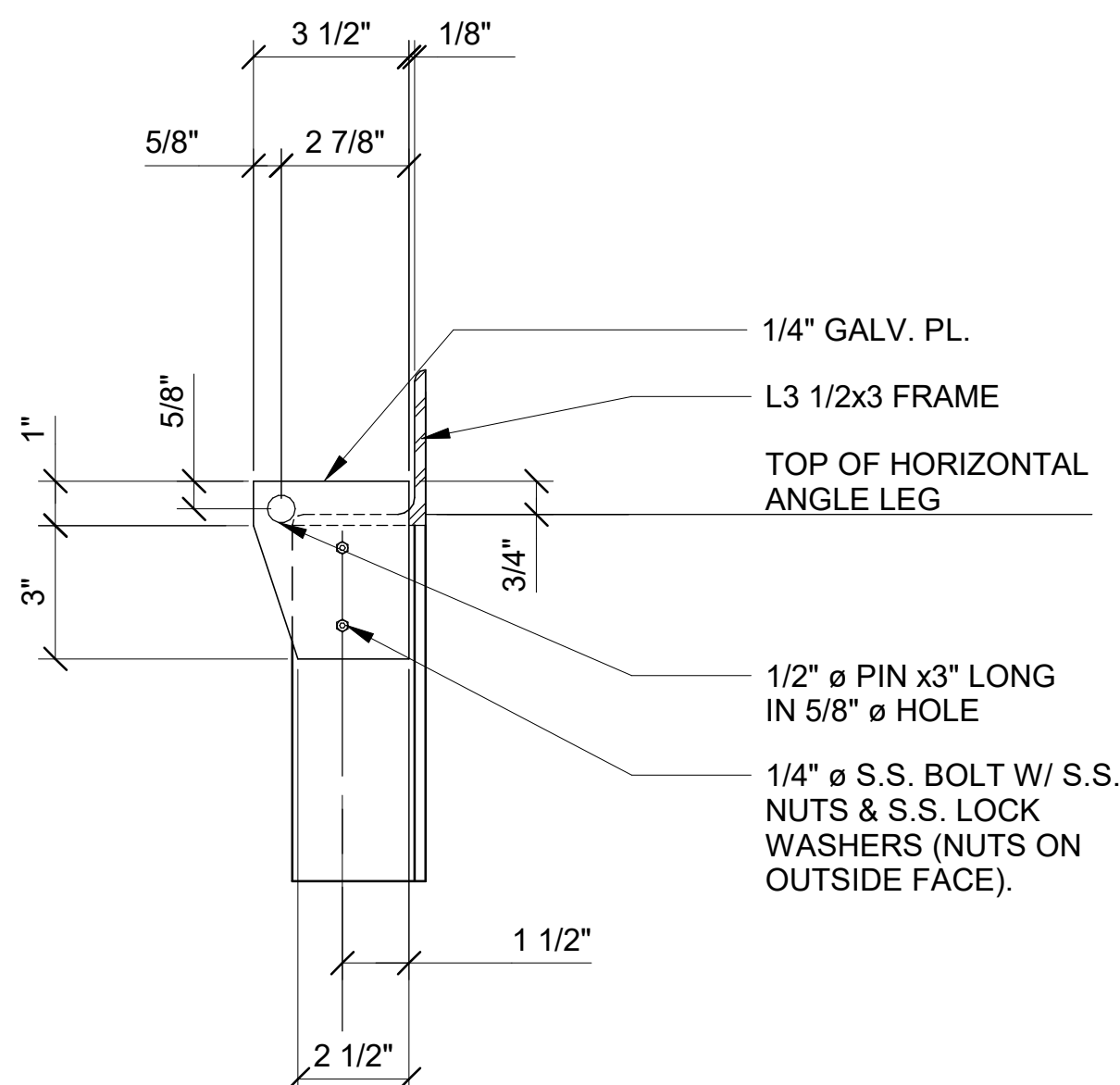


- NOTES:
- HINGE PIN NOT SHOWN IN THIS ELEVATION FOR CLARITY.

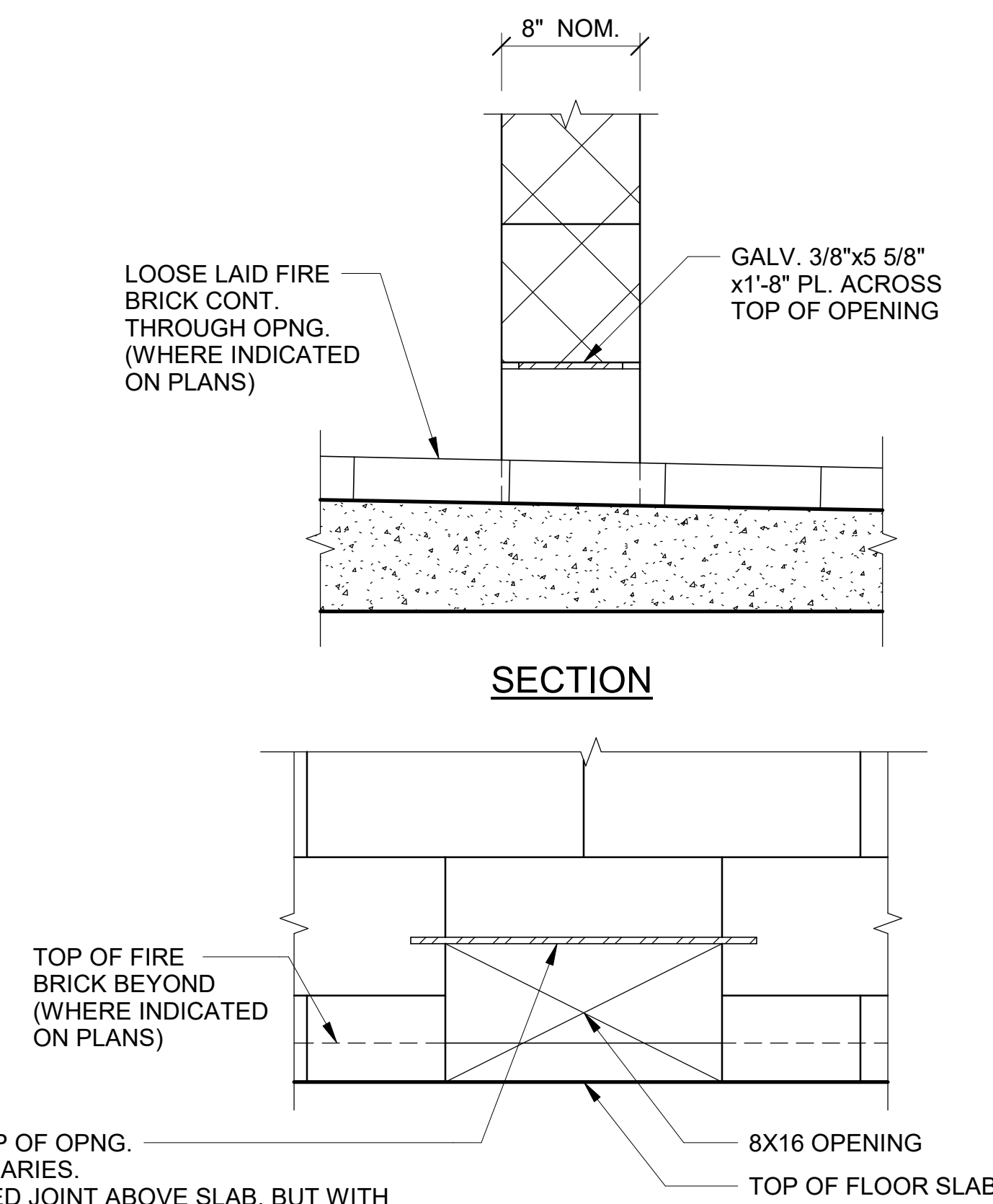
2  
ELEVATION - SCUPPER HINGE PLATE  
BB603 BB603 SCALE 1 1/2" = 1'-0"



3  
ELEVATION - SCUPPER HINGE PIN  
BB603 BB603 SCALE 1 1/2" = 1'-0"

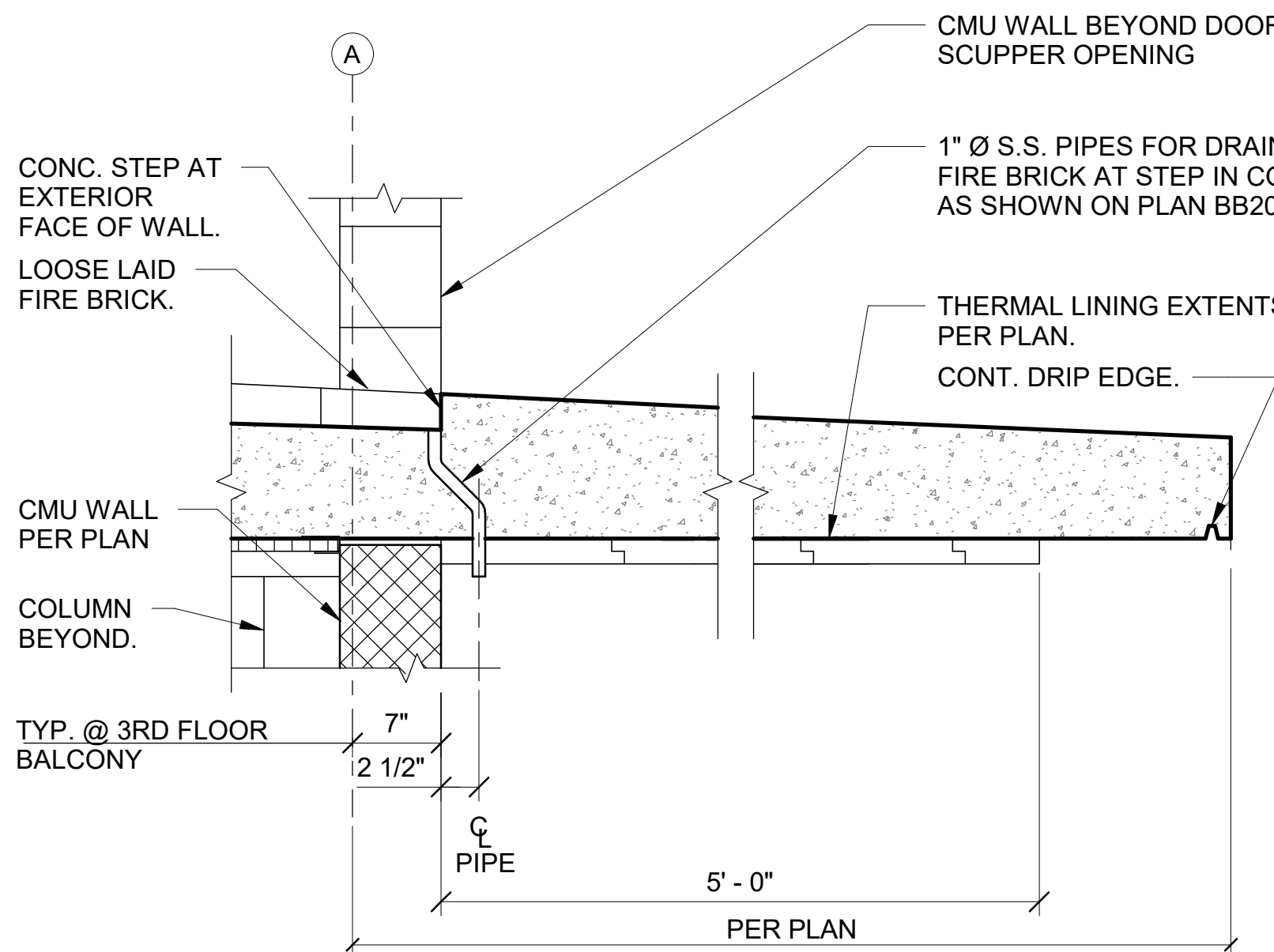


5  
SECTION - SCUPPER HINGE  
BB603 BB603 SCALE 3" = 1'-0"

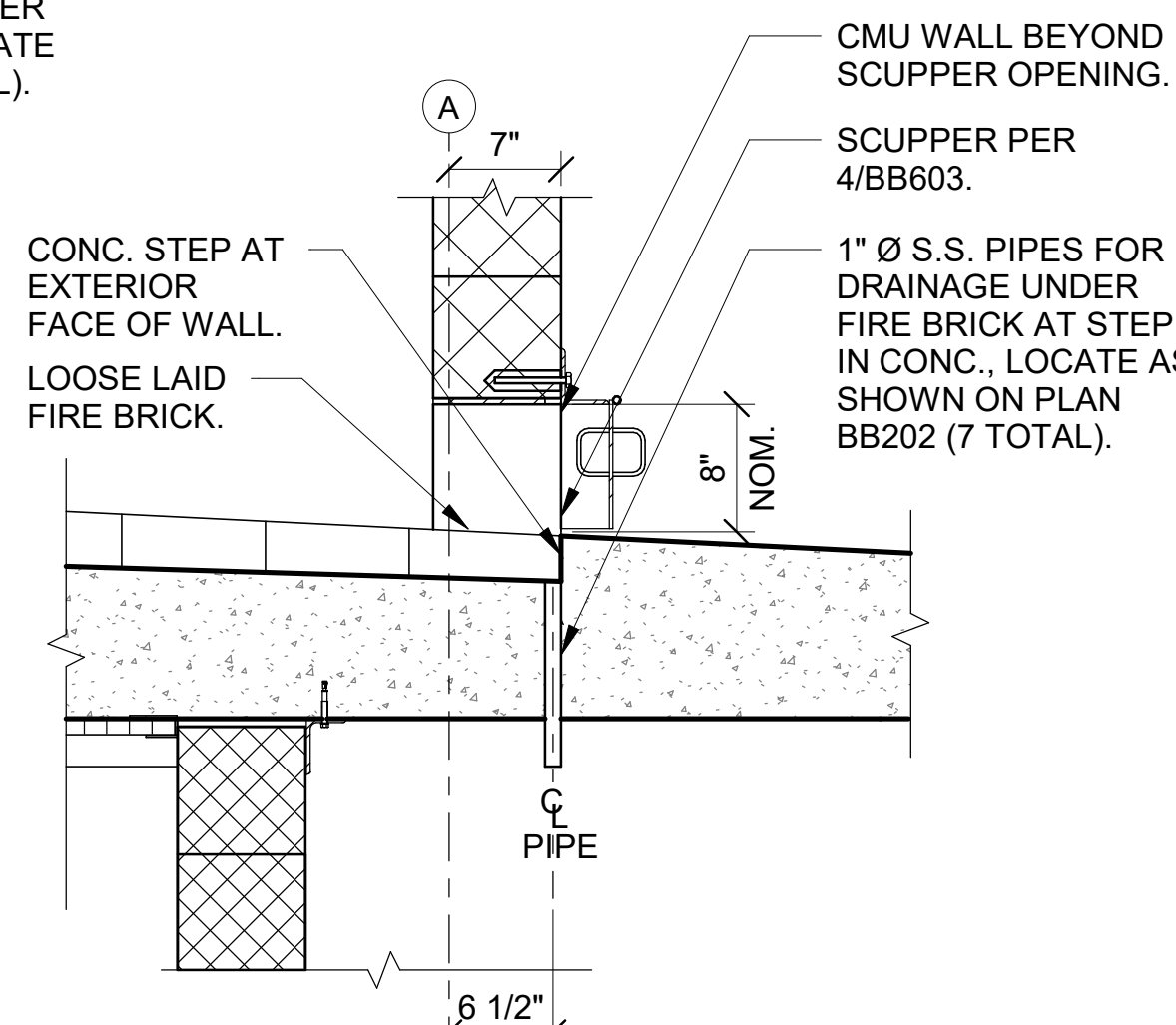


- 1/4" GALV. PL. ACROSS TOP OF OPNG. HEIGHT OF OPENING VARIES. PLACE PL. AT FIRST BED JOINT ABOVE SLAB, BUT WITH MIN. HEIGHT OF OPENING = 5 1/2" ABOVE TOP OF CONCRETE. IF FIRST BED JOINT IS LESS THAN 5 1/2" ABOVE TOP OF CONCRETE, THEN PLACE PLATE AT 8" ABOVE TOP OF CONCRETE AND SAW CUT SLOT INTO ADJACENT BLOCKS TO RECEIVE PLATE.

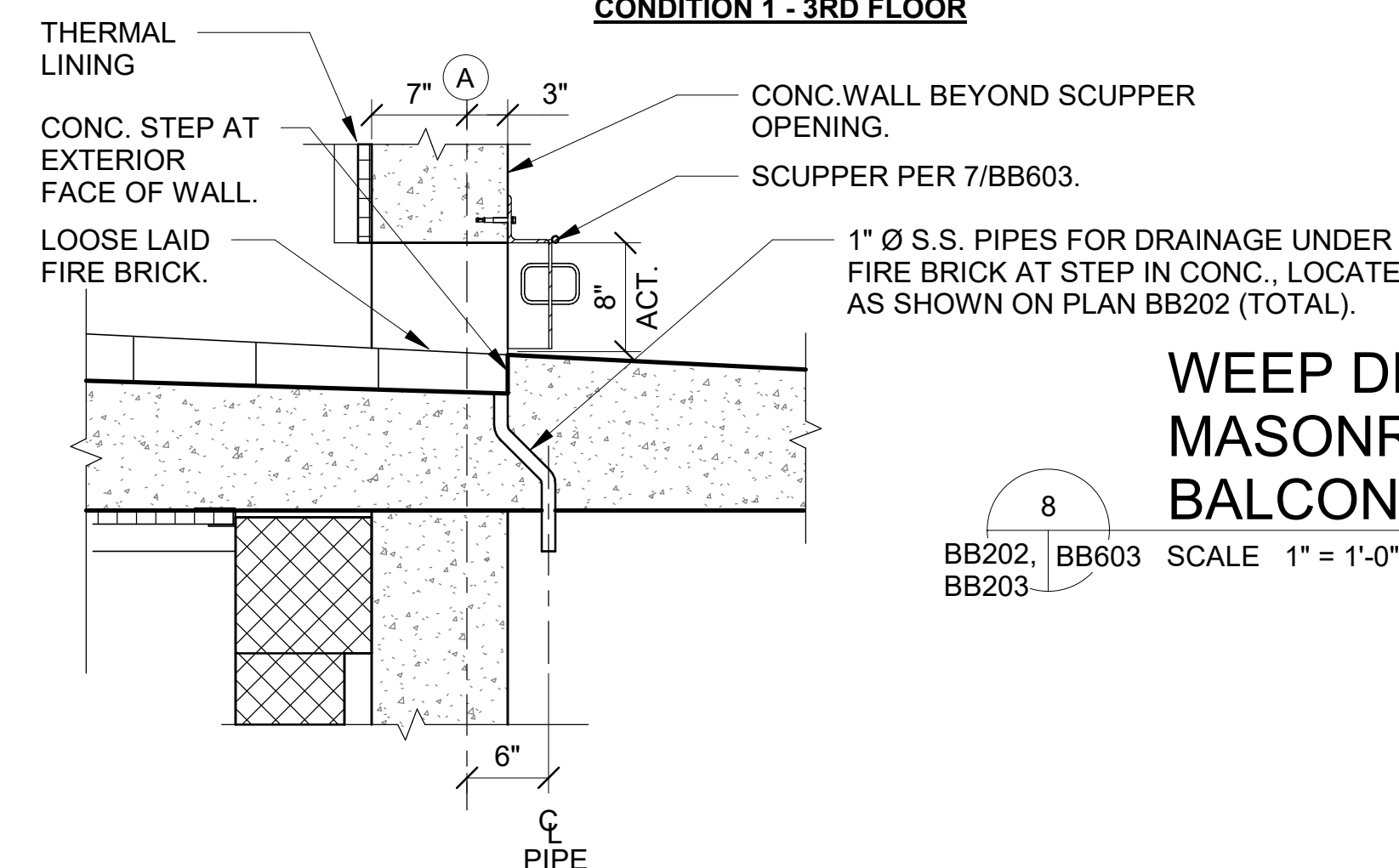
6  
OPENING AT BASE OF INTERIOR & PARAPET WALLS  
BB201 - BB603 SCALE 1 1/2" = 1'-0"



CONDITION 1 - 3RD FLOOR



CONDITION 2 - 2ND FLOOR AT CMU WALL



8  
WEEP DETAIL AND SCUPPER TYPE 4 - MASONRY OR CONCRETE WALL AT BALCONY  
BB202, BB603 SCALE 1" = 1'-0"

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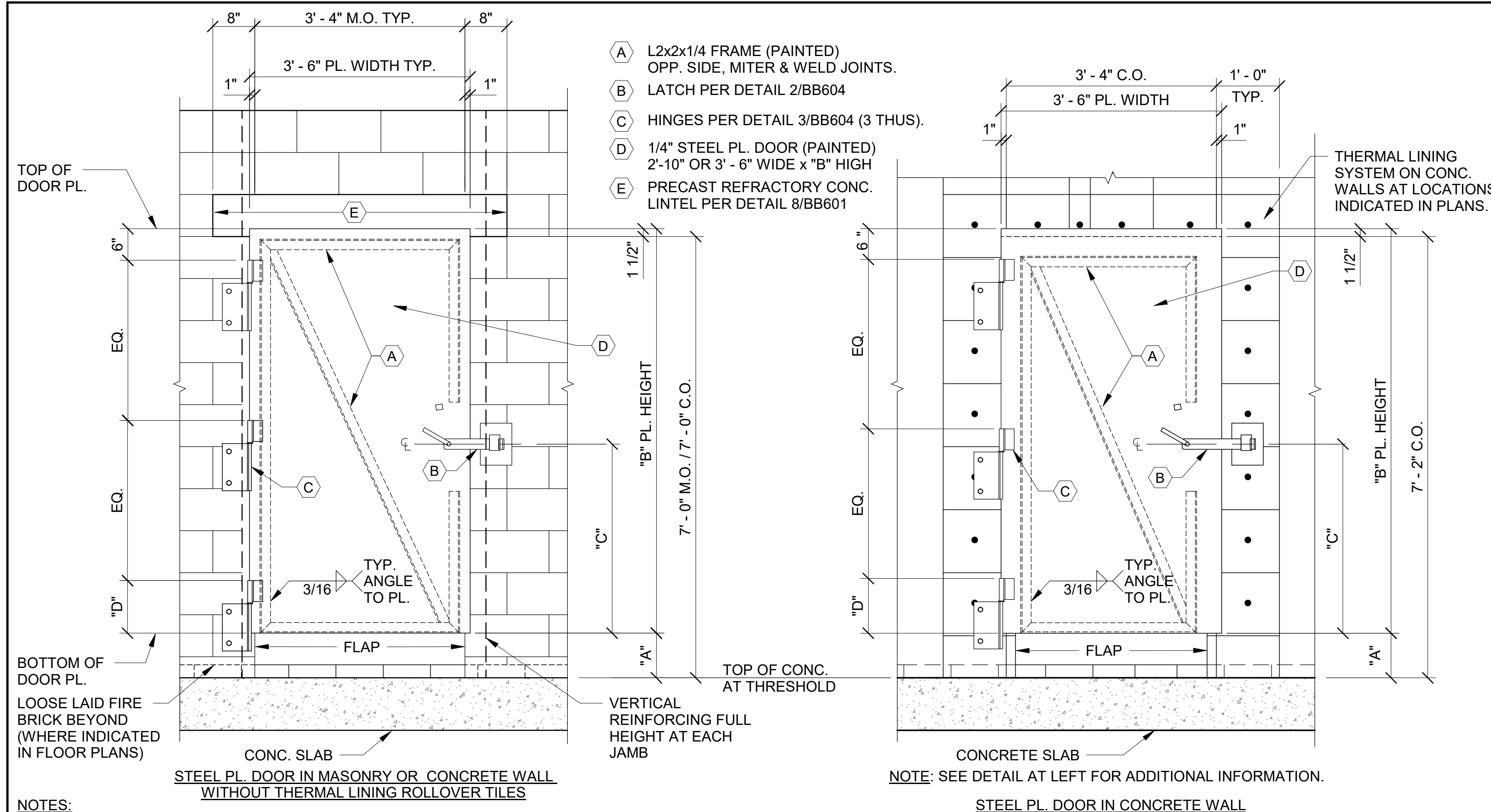


NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET

**BURN BUILDING -  
TYPICAL STEEL  
PLATE DOOR  
DETAILS**

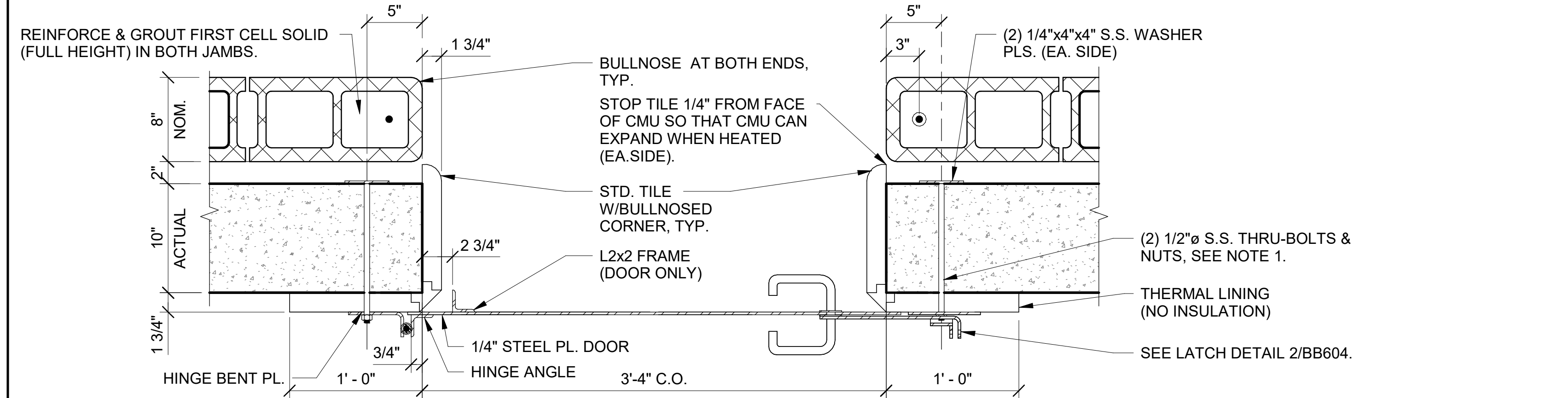
BB604



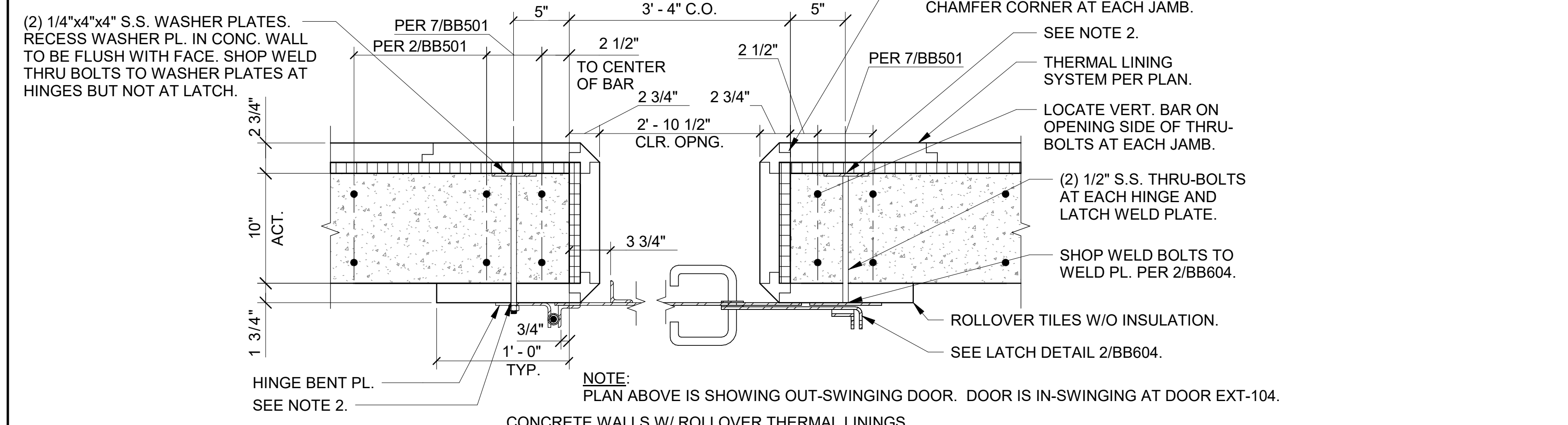
1. SEE FLOOR PLANS FOR DOOR SWING DIRECTION.  
2. SEE DETAILS 4 & 5 ON THIS SHEET AND 3/BB606 FOR JAMB, SILL & HEAD DETAILS.  
3. SEE DOOR SCHEDULE ON SHEET BB605 FOR DIMENSIONS "A", "B", "C" AND "D".  
4. USE TOP OF CONCRETE FLOOR ELEVATION AT CENTER OF DOORWAY AS POINT OF REFERENCE FOR DOOR DIMENSIONS, INCLUDING OPENING HEIGHT, IF THERE IS A CONCRETE STEP IN THE FLOOR SLAB AT ONE FACE OF THE WALL AT DOORWAY, USE TOP OF CONCRETE BETWEEN JAMBS AS POINT OF REFERENCE.  
5. ALL DETAILS ON THIS SHEET SHOW THE CONDITIONS AT MASONRY WALLS. ALL DETAILS ARE THE SAME (RELATIONSHIPS OF DOOR COMPONENTS TO WALL) AT CONCRETE WALLS. NO PRECAST LINTEL REQUIRED AT CONCRETE WALLS. SEE DETAIL 6/BB601 FOR ADDED REINFORCING AT DOOR HEAD, AND JAMBS.

## ELEVATION - STANDARD STEEL PLATE DOOR

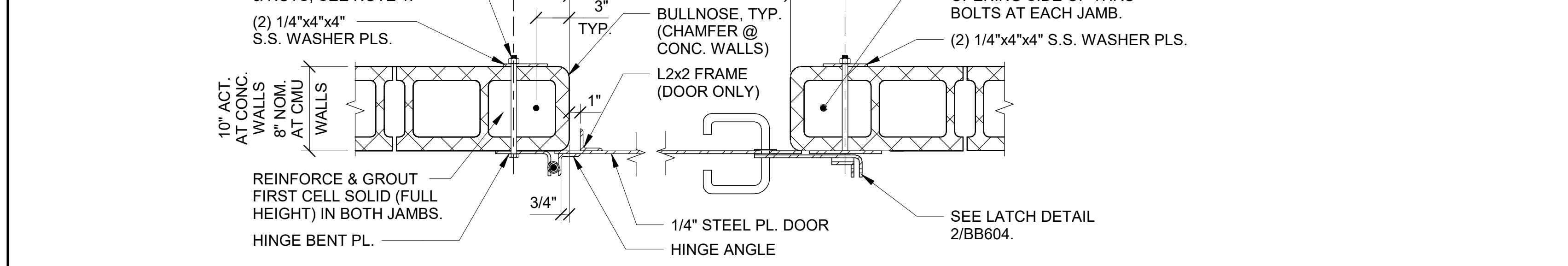
BB604 BB604 SCALE 3/4" = 1'-0"



CONCRETE WALL W/ ROLLOVER THERMAL LINING AND SACRIFICIAL CMU



CONCRETE WALLS W/ ROLLOVER THERMAL LININGS

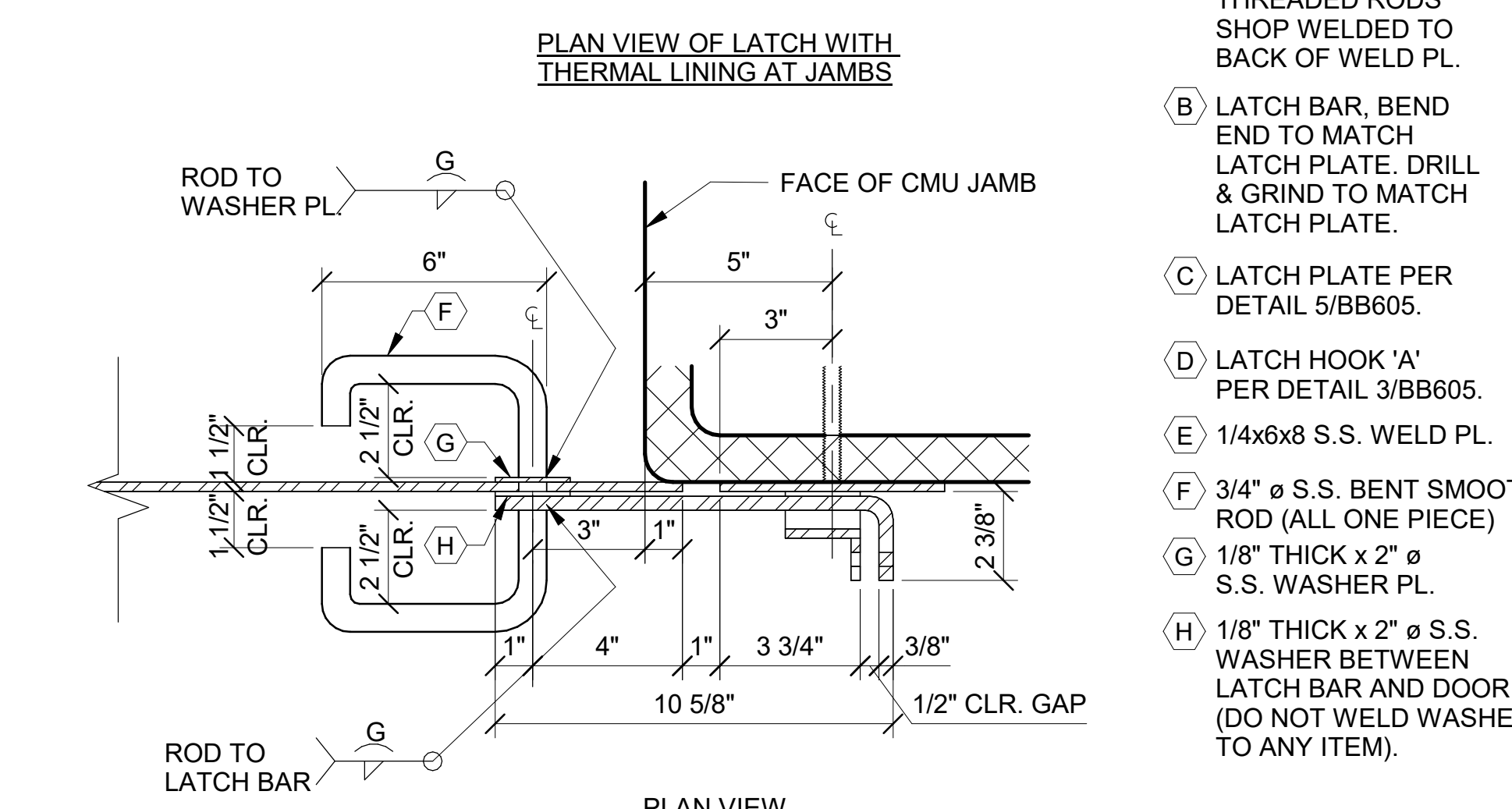
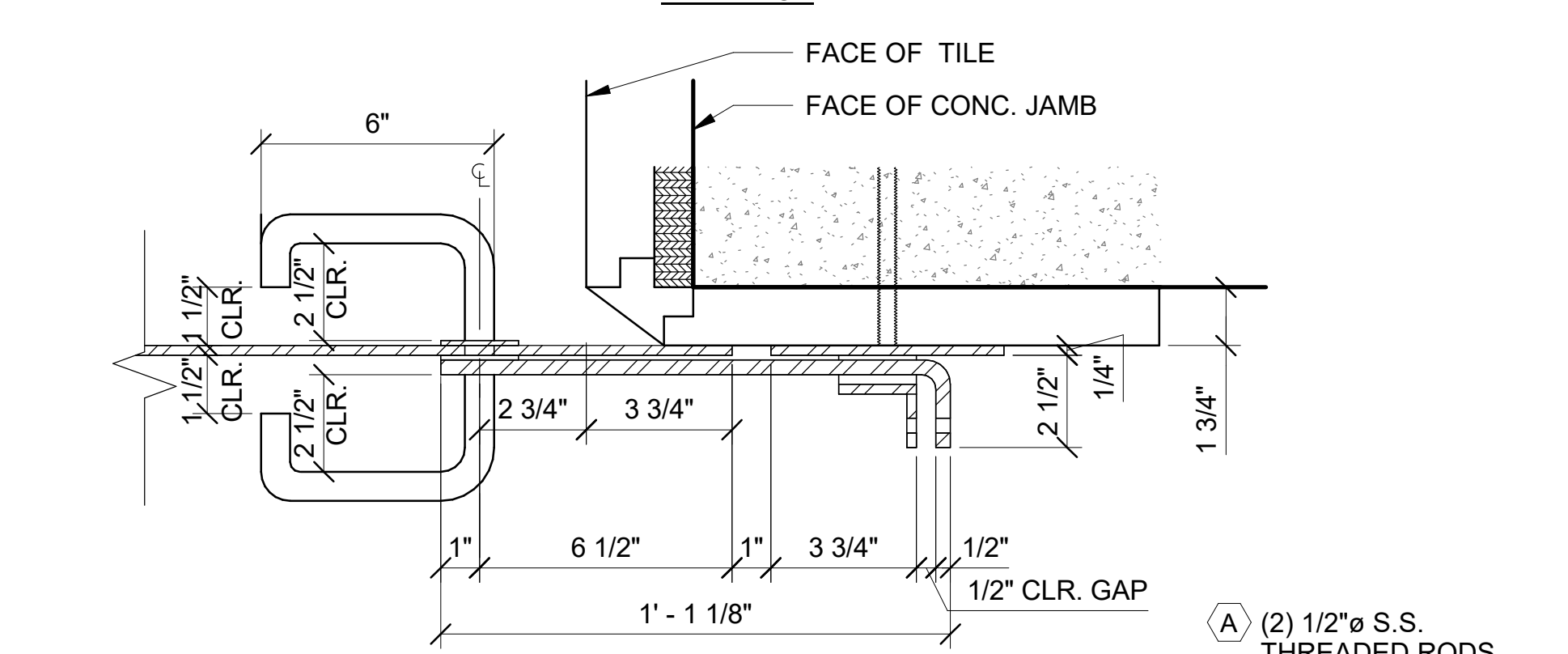
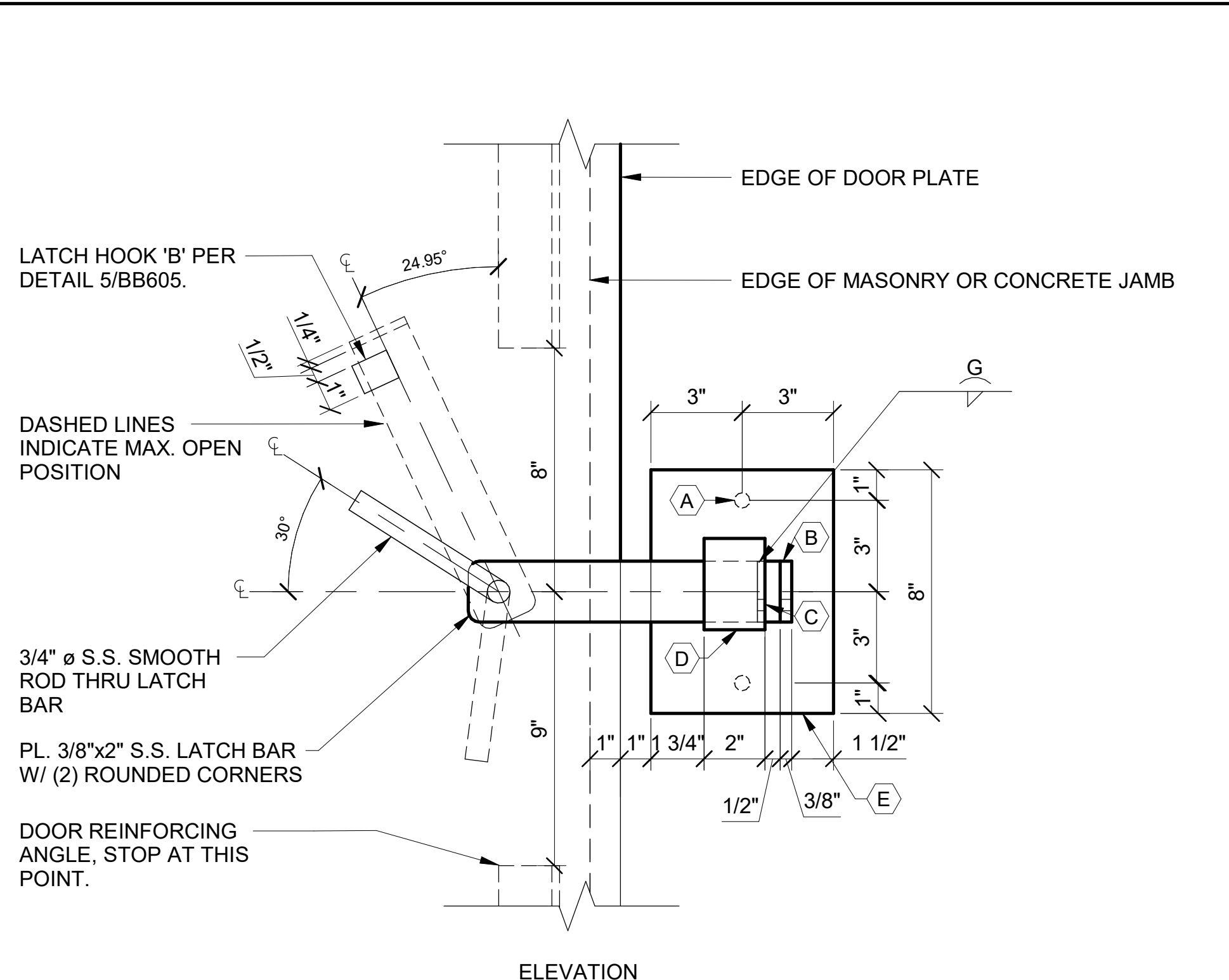


CMU WALLS WITHOUT LININGS - SEE NOTE 3

- NOTES:
- INSTALL THRU-BOLTS BEFORE PLACING VERTICAL REINFORCING BAR AND GROUT IN JAMB CELLS (IF CMU WALL). TRIM EXCESS THREAD LENGTH TO WITHIN 1/4" OF END OF NUT AND GRIND END OF BOLT SMOOTH (CONC. & CMU WALLS).
  - AT NOTED LOCATIONS, FIELD DRILL PLATE TO ACCEPT BOLT. PASS BOLT THRU PLATE, CUT FLUSH W/ EXPOSED FACE OF PLATE, PLUG WELD, AND GRIND SMOOTH. AS AN ALTERNATE METHOD AT HINGES BUT NOT AT LATCH, IT IS ACCEPTABLE TO ALLOW THRU-BOLTS TO PASS THRU HINGE BENT PLATE AND PROVIDE S.S. NUTS AND LOCK WASHERS AT HINGE BENT PL. IF THIS METHOD IS CHOSEN, THEN TRIM EXCESS THREAD LENGTH TO WITHIN 1/4" OF ENDS OF NUTS AND GRIND SMOOTH.
  - FOR CONDITION AT CONCRETE WALLS, PROVIDE DOOR OVERLAP PER THIS DETAIL AND JAMB REINFORCING PER DETAIL 7/BB501.
  - SEE PLANS FOR DOOR SWING.

## STANDARD STEEL PLATE DOOR JAMB PLAN DETAILS

BB202-BB206, BB604 SCALE 1 1/2" = 1'-0"

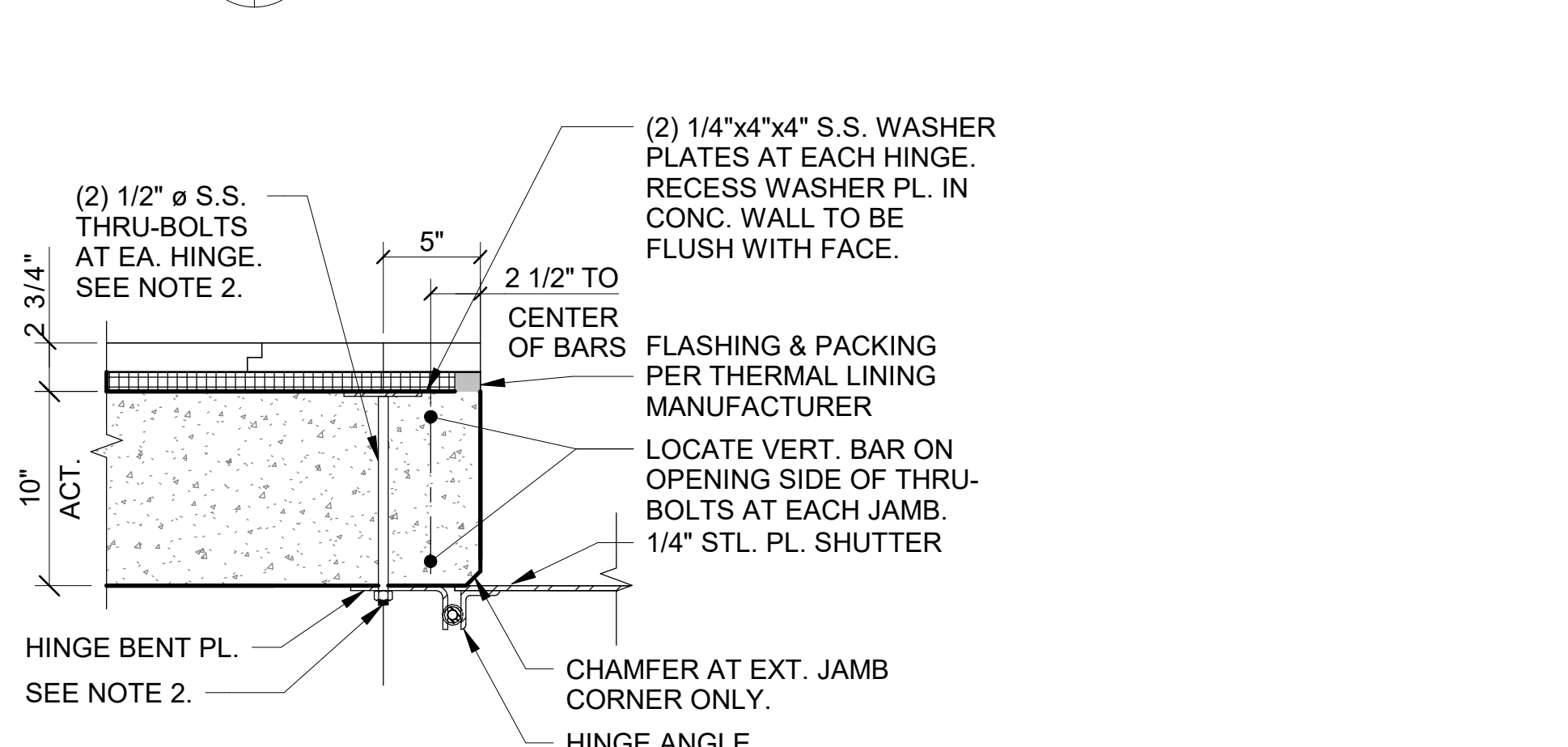


SEQUENCE NOTES:

- PASS ROD THROUGH 7/8" Ø HOLE IN LATCH BAR.
- PASS ROD THROUGH 7/8" Ø HOLE IN DOOR PLATE WITH WASHER BETWEEN LATCH BAR AND DOOR PLATE
- WELD ROD TO LATCH BAR.
- HOLD ASSEMBLY FIRMLY IN PLACE AND WELD ROD TO WASHER AT INTERIOR FACE OF DOOR. FINISHED ASSEMBLY SHALL NOT WOBBLE AND SHALL ROTATE EASILY WITHOUT SIGNIFICANT EFFORT.

## STANDARD STEEL PLATE DOOR LATCH DETAILS

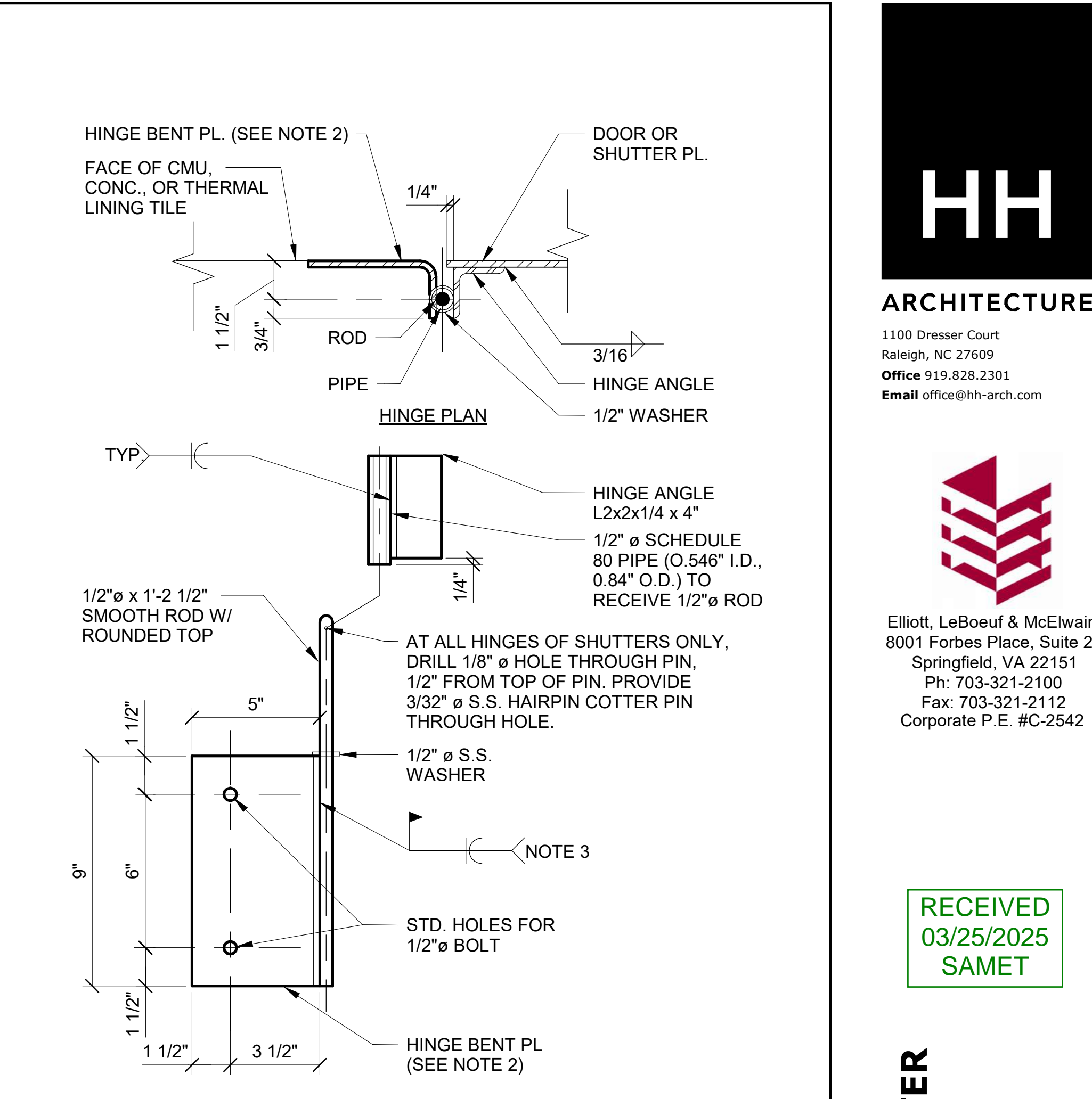
BB604 BB604 SCALE 3" = 1'-0"



CONC. WITH THERMAL LINING AT JAMB

NOTES:

- SEE TYPICAL CONDITION FOR ADDITIONAL INFORMATION.
- AT NOTED LOCATIONS, SHOP WELD THRU BOLTS TO BACK OF WASHER PLATES AND PROVIDE S.S. NUTS AND LOCK WASHERS AT HINGE BENT PLATES. TRIM EXCESS THREAD LENGTH TO WITHIN 1/4" OF END OF NUT AND GRIND END OF BOLT SMOOTH.

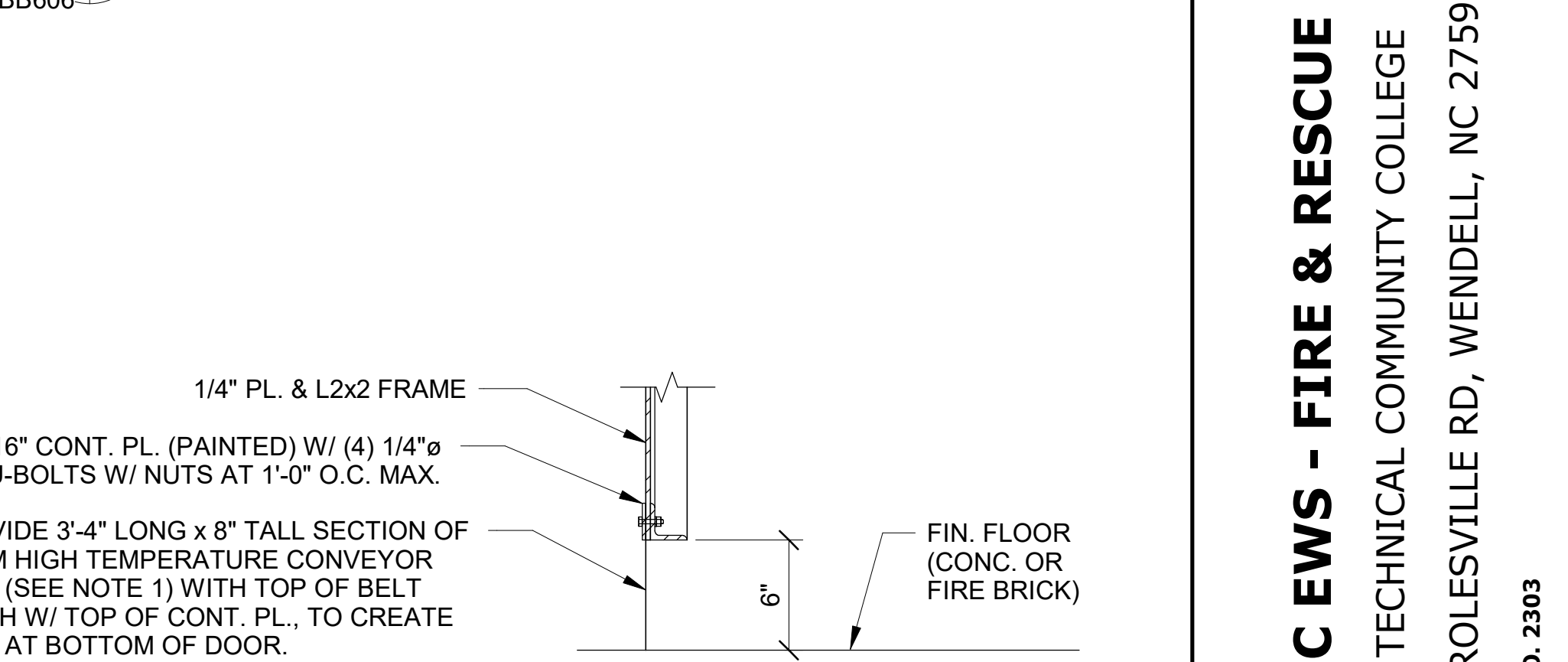


NOTES:

- ALL PIECES SHALL BE S.S.
- BENT PL. 1/4x5x2 1/4x9 @ ALL STEEL PL. DOORS AND WINDOWS.
- HOLD SHUTTER OR DOOR IN PLACE WHILE FIELD WELDING ROD TO ASSURE PROPER FIT AND OPERATION OF HINGE SHUTTER OR DOOR.
- DRILL HOLES THROUGH WALLS FOR HINGE BOLTS W/ NON-IMPACT ROTARY DRILL. DO NOT DAMAGE FACES OF MASONRY WALLS WHILE DRILLING HOLES.

## TYPICAL STEEL PL. DOOR & SHUTTER HINGE DETAILS

BB604 BB604 SCALE 3" = 1'-0"



NOTE:

- PROVIDE EPDM HIGH TEMPERATURE CONVEYOR BELT, 3/8" GAUGE WITH POLYNYLON FABRIC TYPE AND A WORKING TEMPERATURE OF 0°-600°. WITH A PEAK TEMPERATURE OF 750° (2220 3/16x1/16 EPDM HIGH TEMP BELT BY CONVEYORBELT.COM OR AN APPROVED EQUIVALENT). INSTALL SO TOP COVER OF BELT FACES INSIDE FACE OF DOOR.

## STEEL PLATE DOOR SILL DETAIL

BB604, BB604 SCALE 1 1/2" = 1'-0"

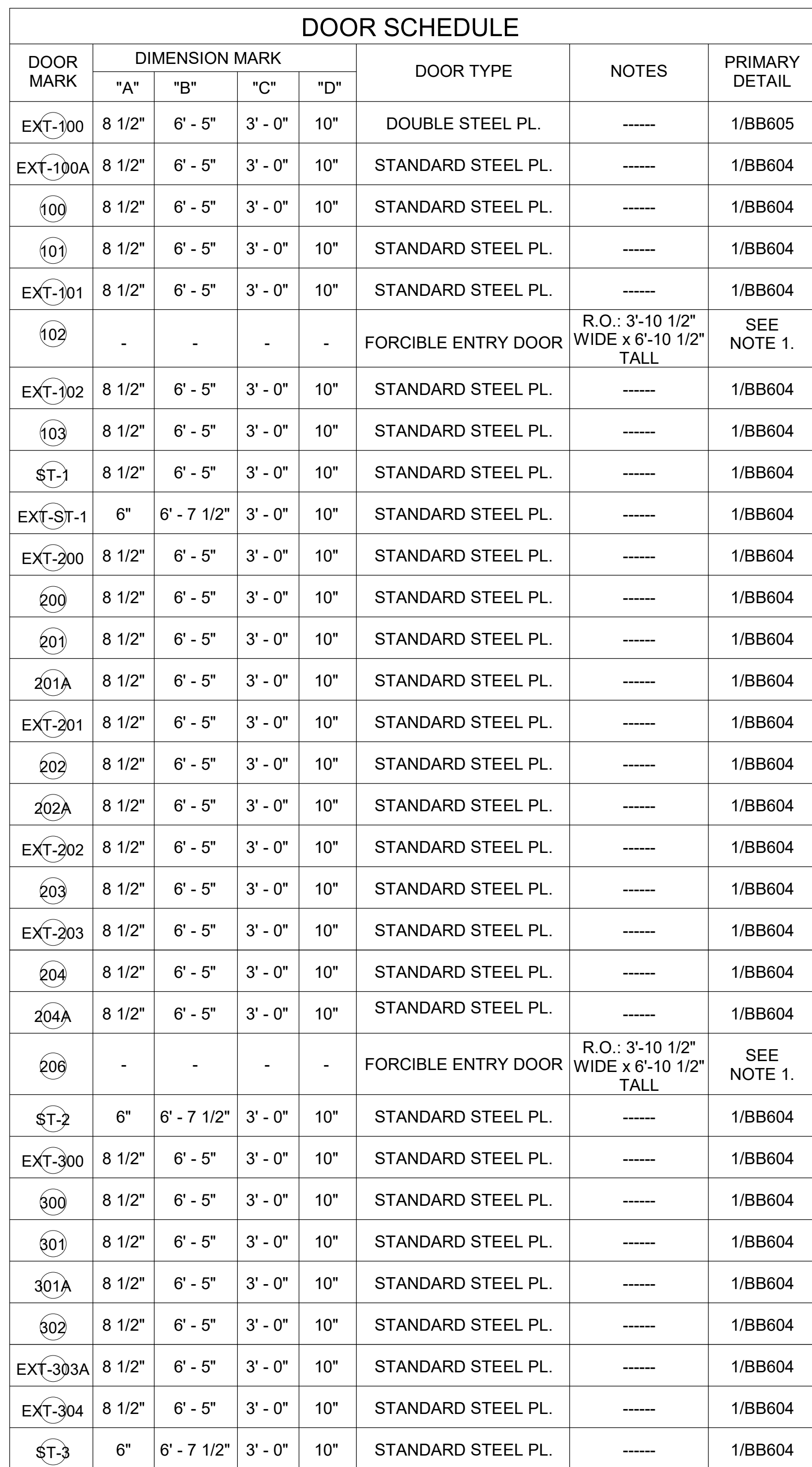
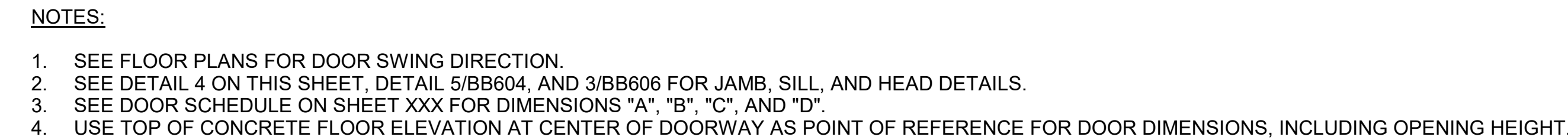


NOTE:

- PROVIDE EPDM HIGH TEMPERATURE CONVEYOR BELT, 3/8" GAUGE WITH POLYNYLON FABRIC TYPE AND A WORKING TEMPERATURE OF 0°-600°. WITH A PEAK TEMPERATURE OF 750° (2220 3/16x1/16 EPDM HIGH TEMP BELT BY CONVEYORBELT.COM OR AN APPROVED EQUIVALENT). INSTALL SO TOP COVER OF BELT FACES INSIDE FACE OF DOOR.

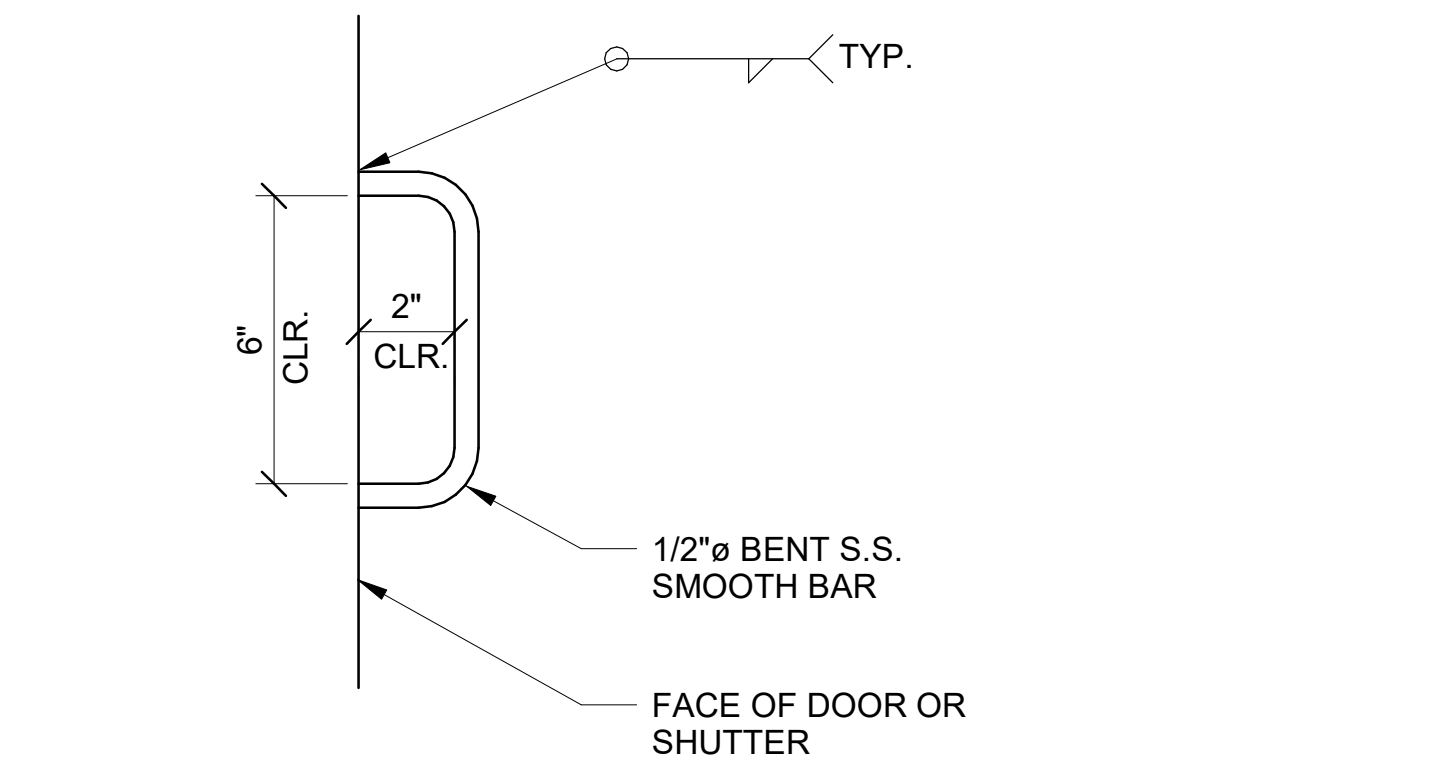
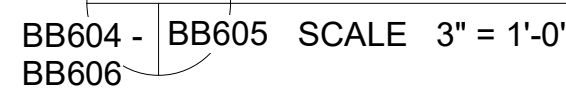
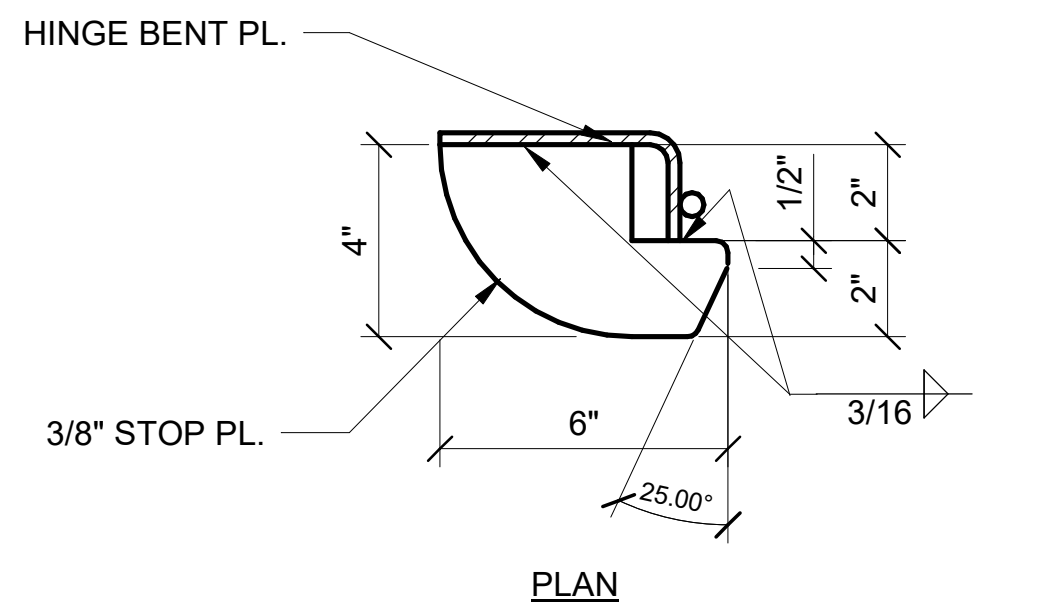
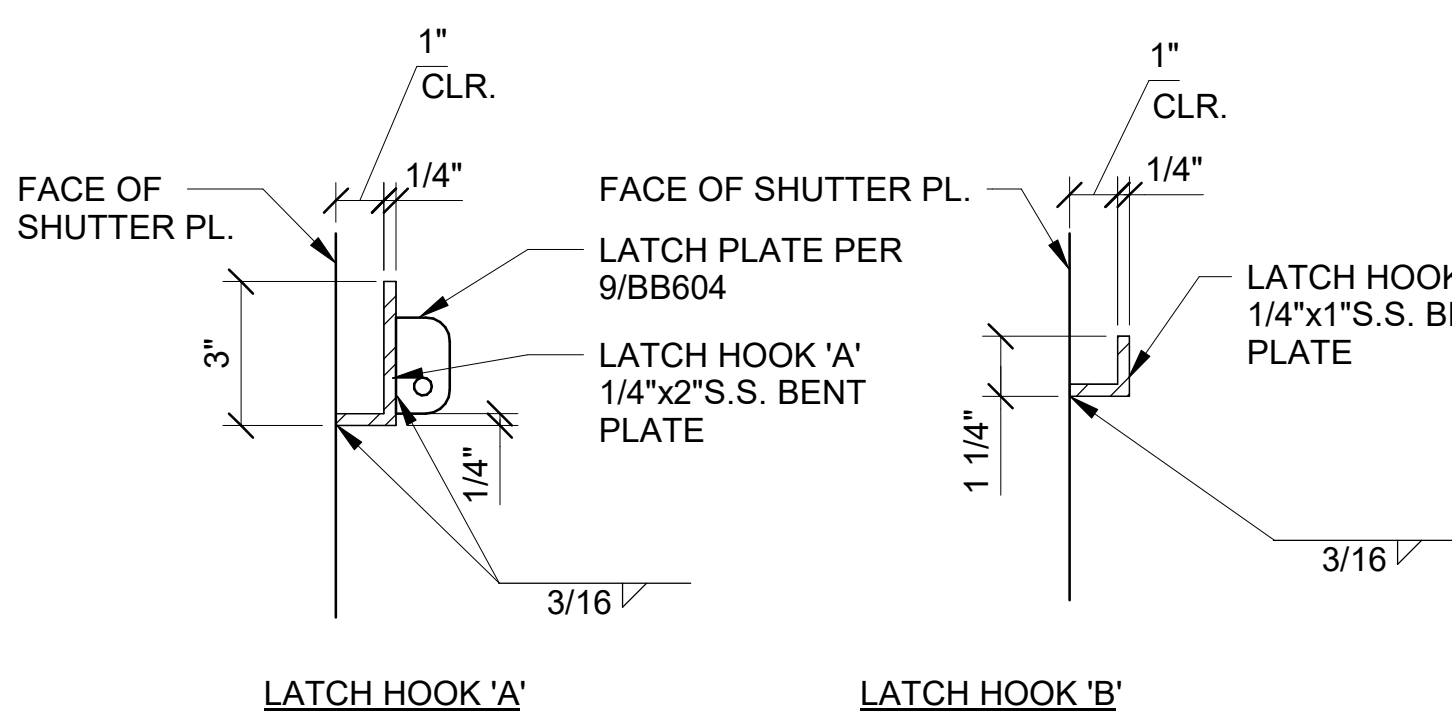
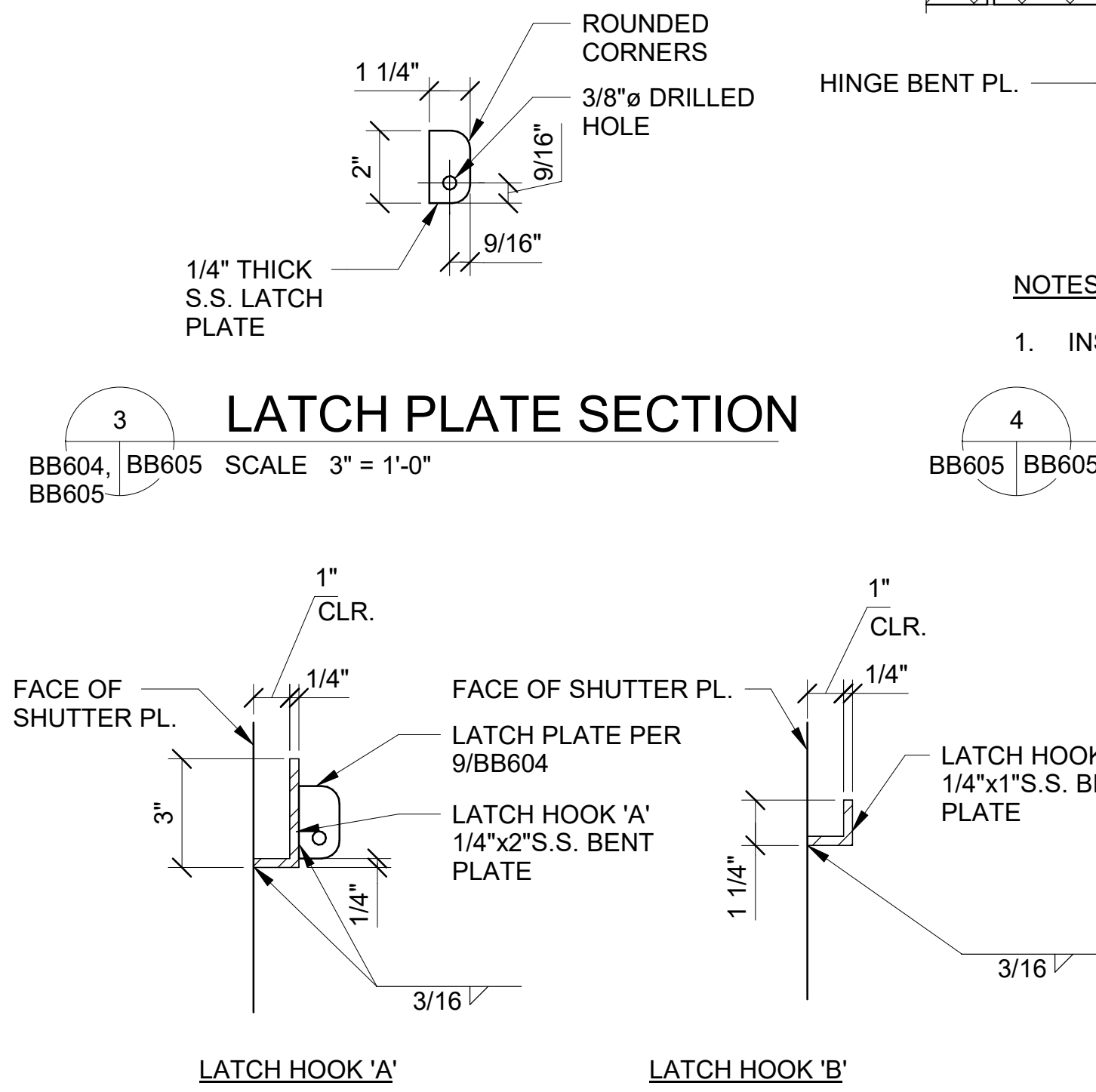
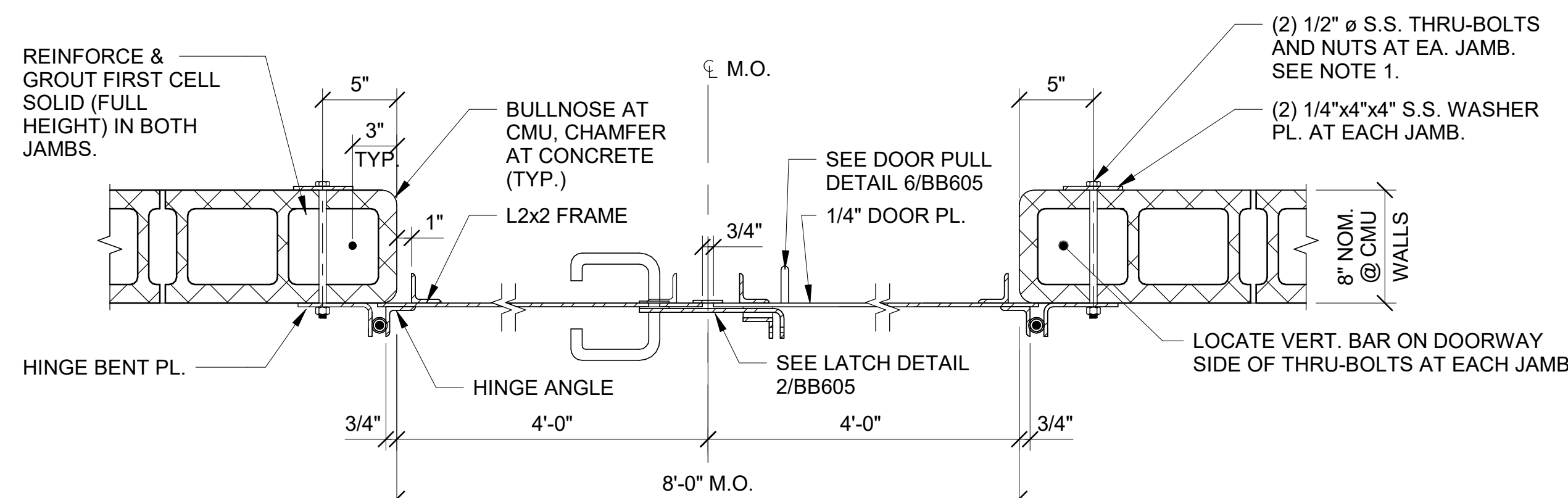
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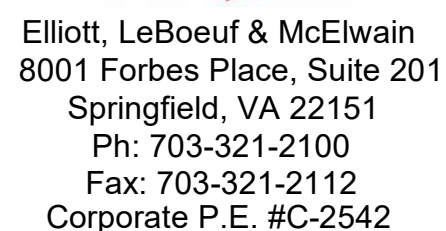


DOOR MARK	DIMENSION MARK				DOOR TYPE	NOTES	PRIMARY DETAIL
	"A"	"B"	"C"	"D"			
400	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
400A	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
401	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
402	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
402A	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
403	-	-	-	-	FORCIBLE ENTRY DOOR	R.O.: 3'-10 1/2" WIDE x 6'-10 1/2" TALL	SEE NOTE 1.
EXT-404	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
405	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
406	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
406A	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
407	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
ST-4	6"	6' - 7 1/2"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
500	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
501	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
502	-	-	-	-	FORCIBLE ENTRY DOOR	R.O.: 3'-10 1/2" WIDE x 6'-10 1/2" TALL	SEE NOTE 1.
503	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
EXT-504	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
505	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
506	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
506A	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
507	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
ST-5	6"	6' - 7 1/2"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
EXT-600	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
601	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
602	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
602A	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
603	8 1/2"	6' - 5"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
ST-6	6"	6' - 7 1/2"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604
ST-7	6"	6' - 7 1/2"	3' - 0"	10"	STANDARD STEEL PL.	-----	1/BB604

- NOTES:
1. THE FORCIBLE ENTRY DOOR: BASIS OF DESIGN: CATALYST FORCE ENTRY DOOR (DIRECT MOUNT) BY FORCIBLE ENTRY, INC., RANCHO CORDOVA, CA, (916) 337-5705

[illegible]





**WTCC EWS - FIRE & RESCUE TRAINING CENTER**

WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27580  
NCCCS NO. 2303

[illegible]

JOB NUMBER  
**22056**

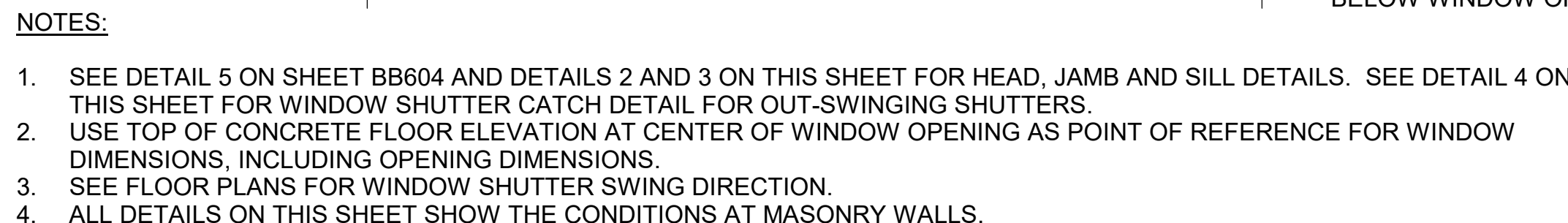
DATE ISSUED  
**03/14/25**

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**ISSUE FOR  
CONSTRUCTION**

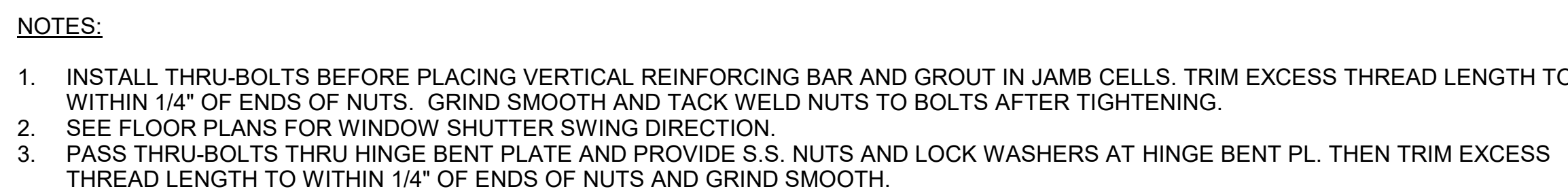
SHEET

## BURN BUILDING - TYPICAL STEEL PLATE SHUTTER DETAILS

BB606



1  
BB606 BB606 SCALE 3/4" = 1'-0"



2 WINDOW J  
BB606 BB606 SCALE 1 1/2" = 1'-0"



3 DOOR & W  
BB604 - BB606 SCALE 1 1/2" = 1'-0"  
BB606



3' - 8" @ SINGLE SWING SHUTTER

3' - 4" @ SINGLE SWING SHUTTER

2' - 8" @ SINGLE SWING SHUTTER

1/4" PL. SHUTTER

(1) #4 x 18" LONG + 4" HOOK AT EACH END BULLNOSE EA. SIDE

(2) #4 x (WINDOW OPNG. - 4")

4"x8" (7 5/8" ACTUAL WIDTH) CAST-IN-PLACE CONCRETE SILL (4,500 PSI. NON-REFRACTORY) WITH FULL BED JOINT. SEE GENERAL NOTE P. 16.

FIRE BRICK WHERE INDICATED IN PLAN.

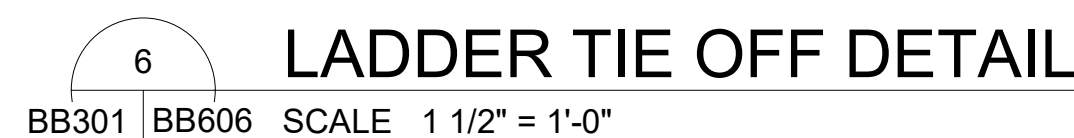
8" NOM

BB606 BB606 SCALE 1 1/2" = 1'-0"



ELEVATION VIEW

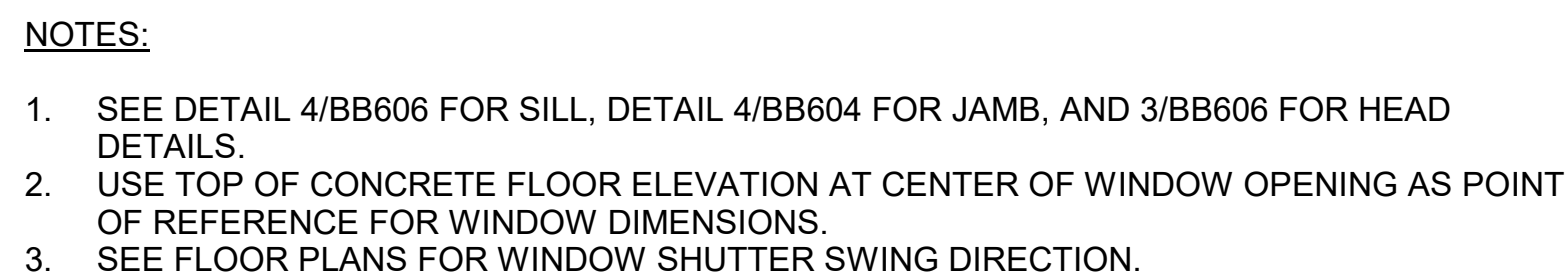
5 DETAILS -  
BB606 BB606 SCALE 1 1/2" = 1'-0"



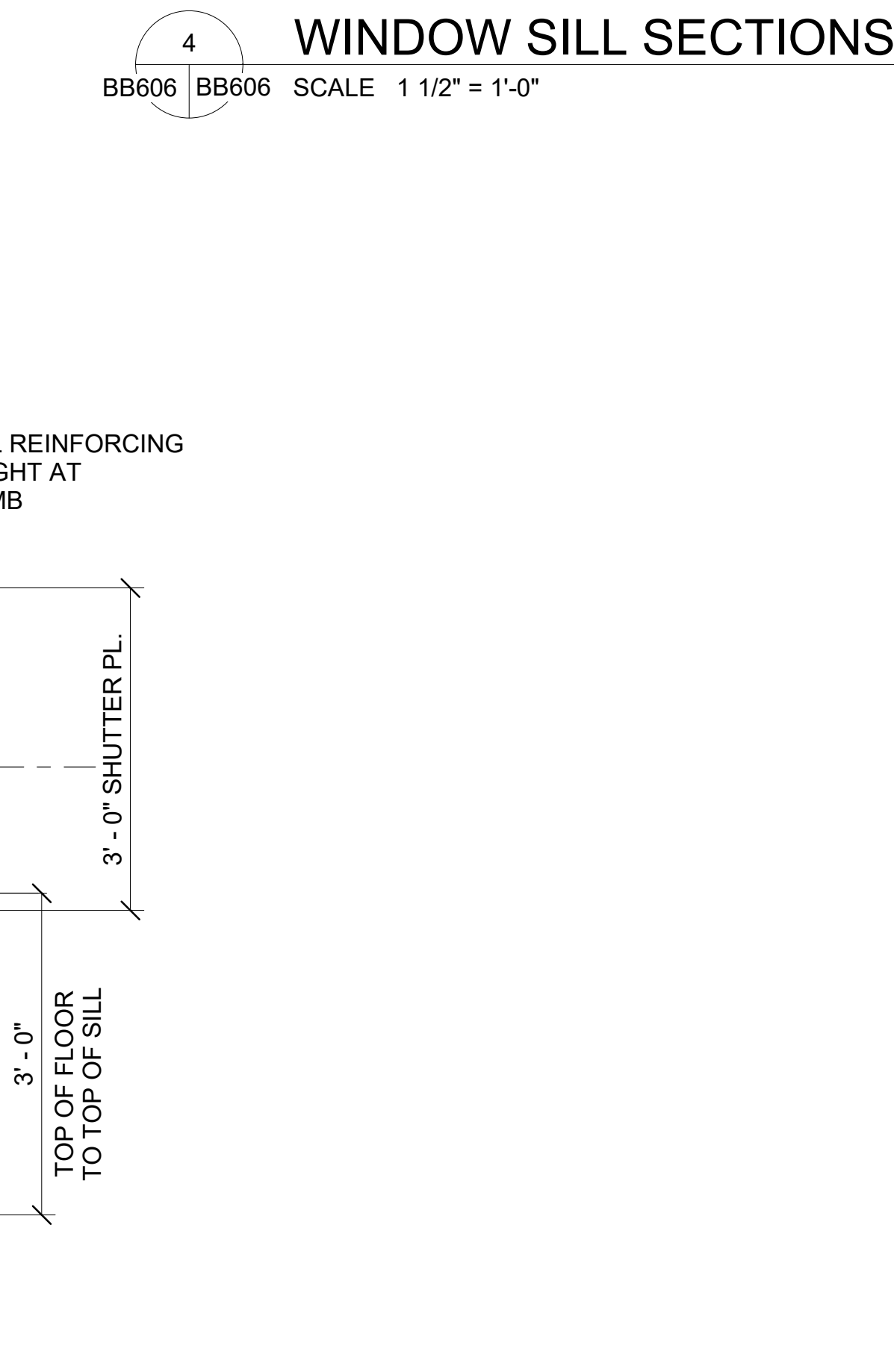
BB301 BB606 SCALE 1 1/2" = 1'-0"



7  
BB303 BB606 SCALE 1 1/2" = 1'-0"



BB202- BB606 SCALE 3/4" = 1'-0"







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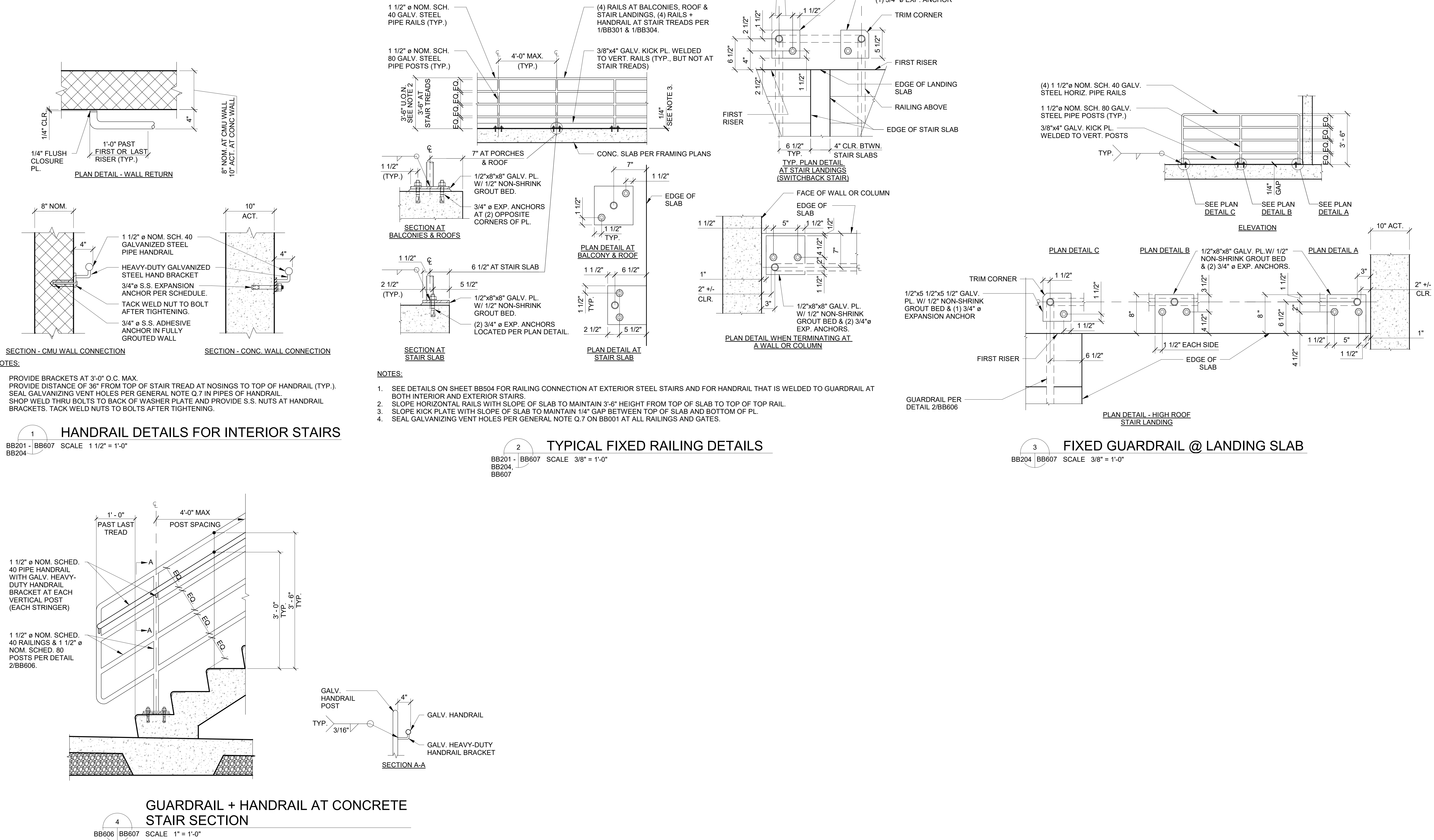


REVISION	DATE

JOB NUMBER  
**2056**  
 DATE ISSUED  
**3/14/25**  
 PROJECT STATUS  
**ISSUE FOR**  
**CONSTRUCTION**  
 SHEET

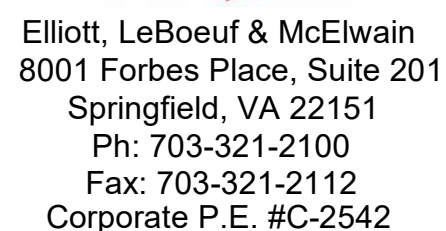
## BURN BUILDING - RAILING DETAILS

BB607



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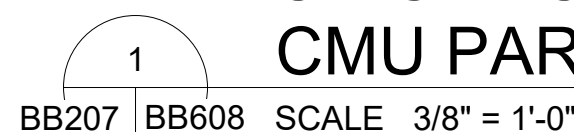
PROJECT STATUS  
**ISSUE FOR  
CONSTRUCTION**

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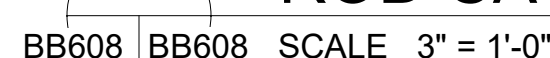
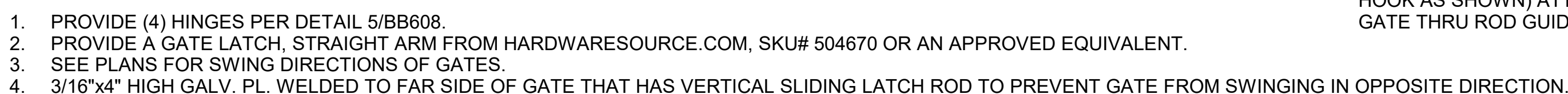
SHEET

**BURN BUILDING -  
GUARDRAIL GATE  
AT PARAPET**

BB608



1. PROVIDE (4) HINGES PER DETAIL 4/BBD608.
2. PROVIDE A GATE LATCH, STRAIGHT ARM FROM HARDWARESOURCE.COM, SKU# 504670 OR AN APPROVED EQUIVALENT.
3. SEE PLANS FOR SWING DIRECTIONS OF GATES.
4. 3/16"x4" HIGH GALV. PL. WELDED TO FAR SIDE OF GATE THAT HAS VERTICAL SLIDING LATCH ROD TO PREVENT OTHER GATE FROM SWINGING IN OPPOSITE DIRECTION.
5. AT EACH GATE LEAF, ATTACH RUBBER FOOT BOTTOM CORNER TO PIPE WITH (4) 1/4" DIA. ZINC-PLATED THRU-BOLTS WITH NUTS & WASHERS AT 1'-0" O.C. MAX.



BB608 BB608 SCALE 3" = 1'-0"







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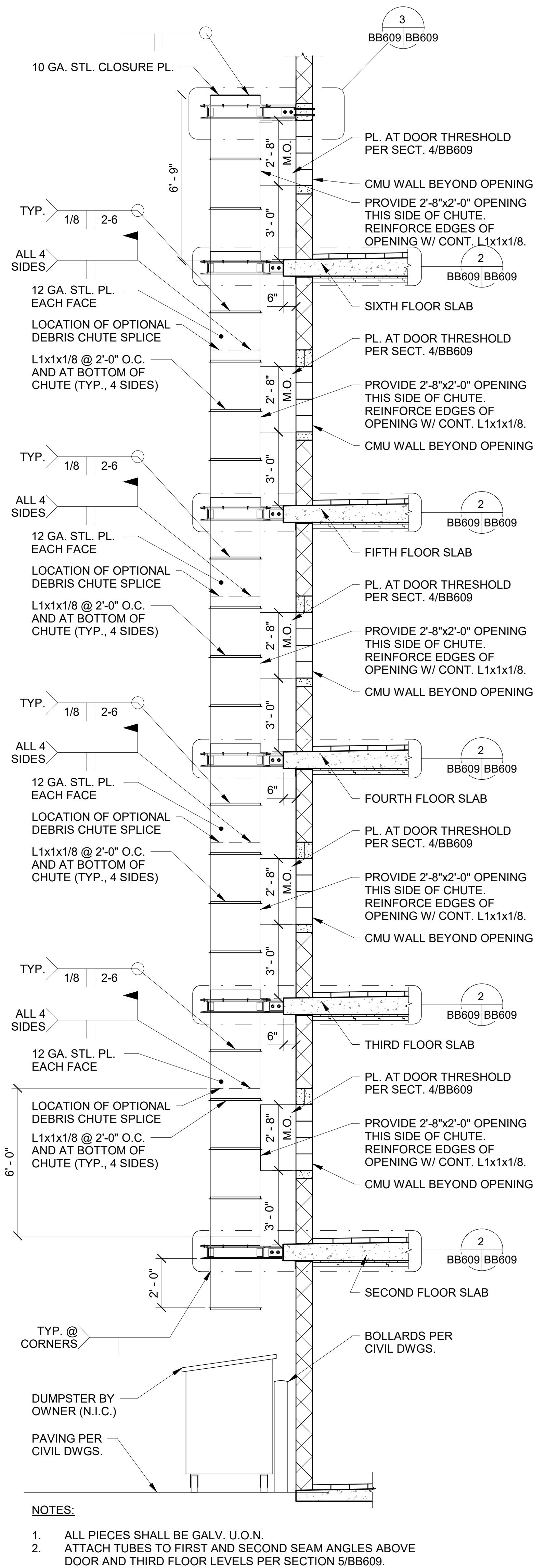


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**22056**  
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PROJECT STATUS  
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SHEET  
**BURN BUILDING - DEBRIS CHUTE DETAILS**

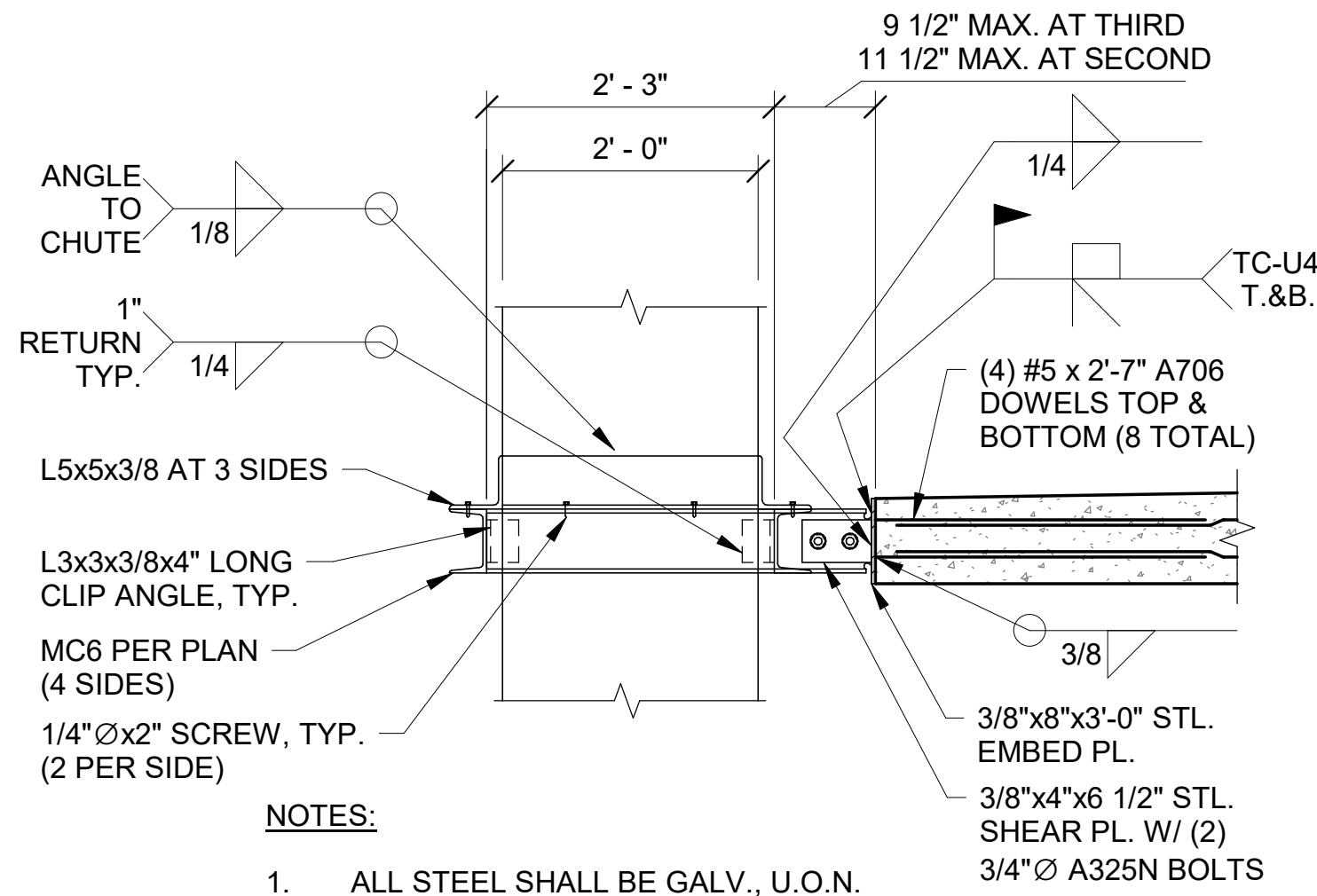
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BB609



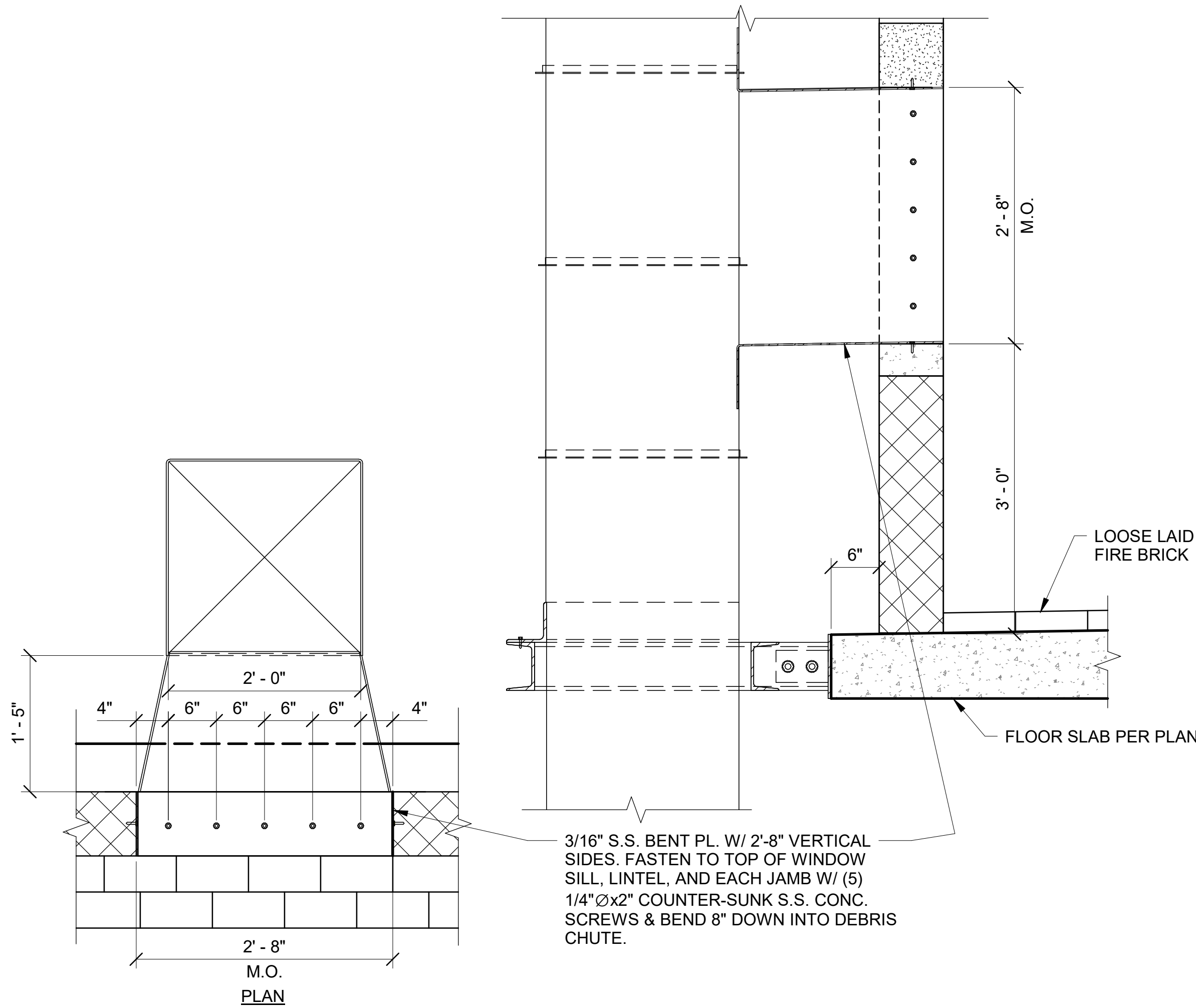
### DEBRIS CHUTE SECTION

BB202 - BB609 SCALE 3/8" = 1'-0"  
BB206,  
BB609



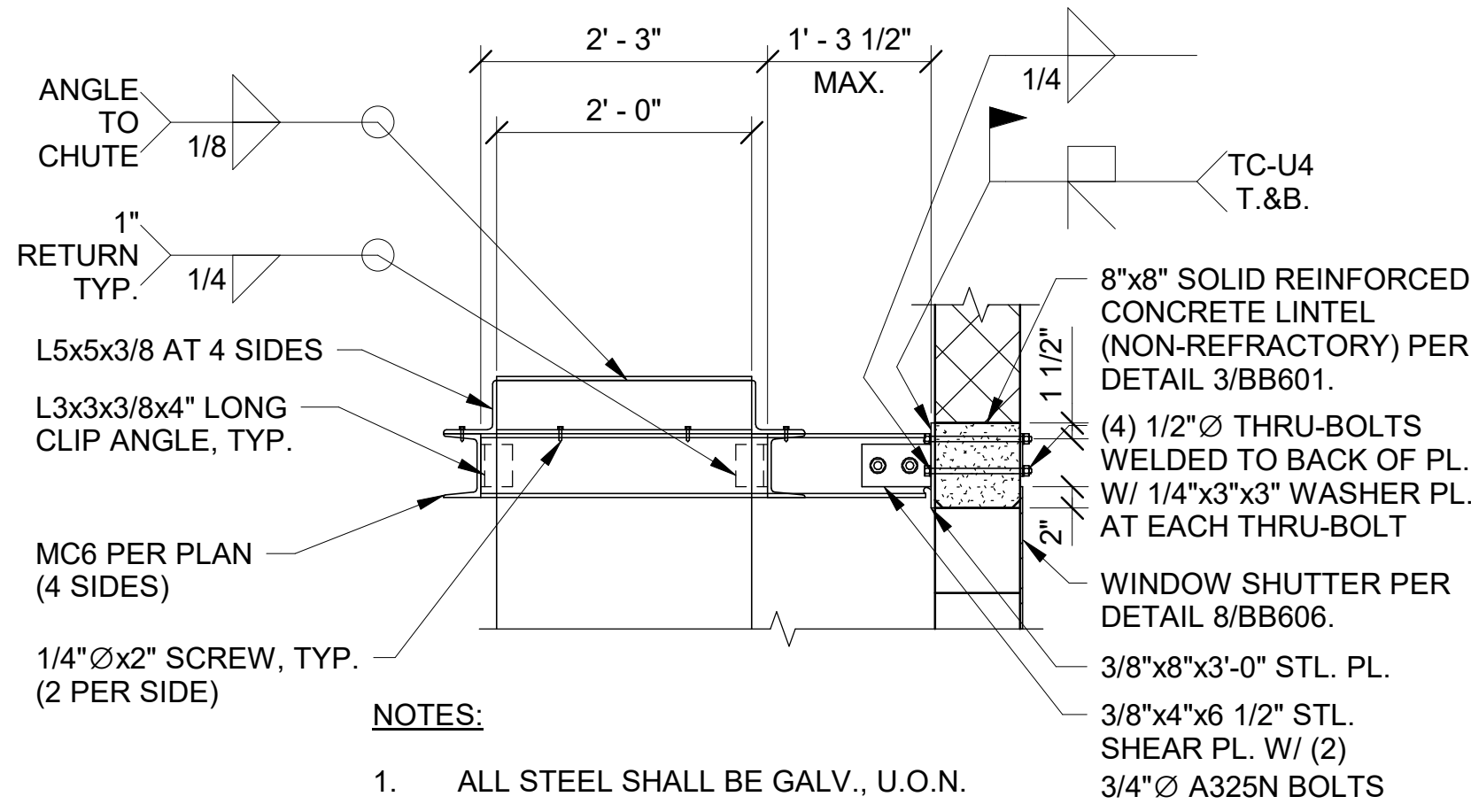
### DEBRIS CHUTE DETAIL

BB202 - BB609 SCALE 3/4" = 1'-0"  
BB206,  
BB609



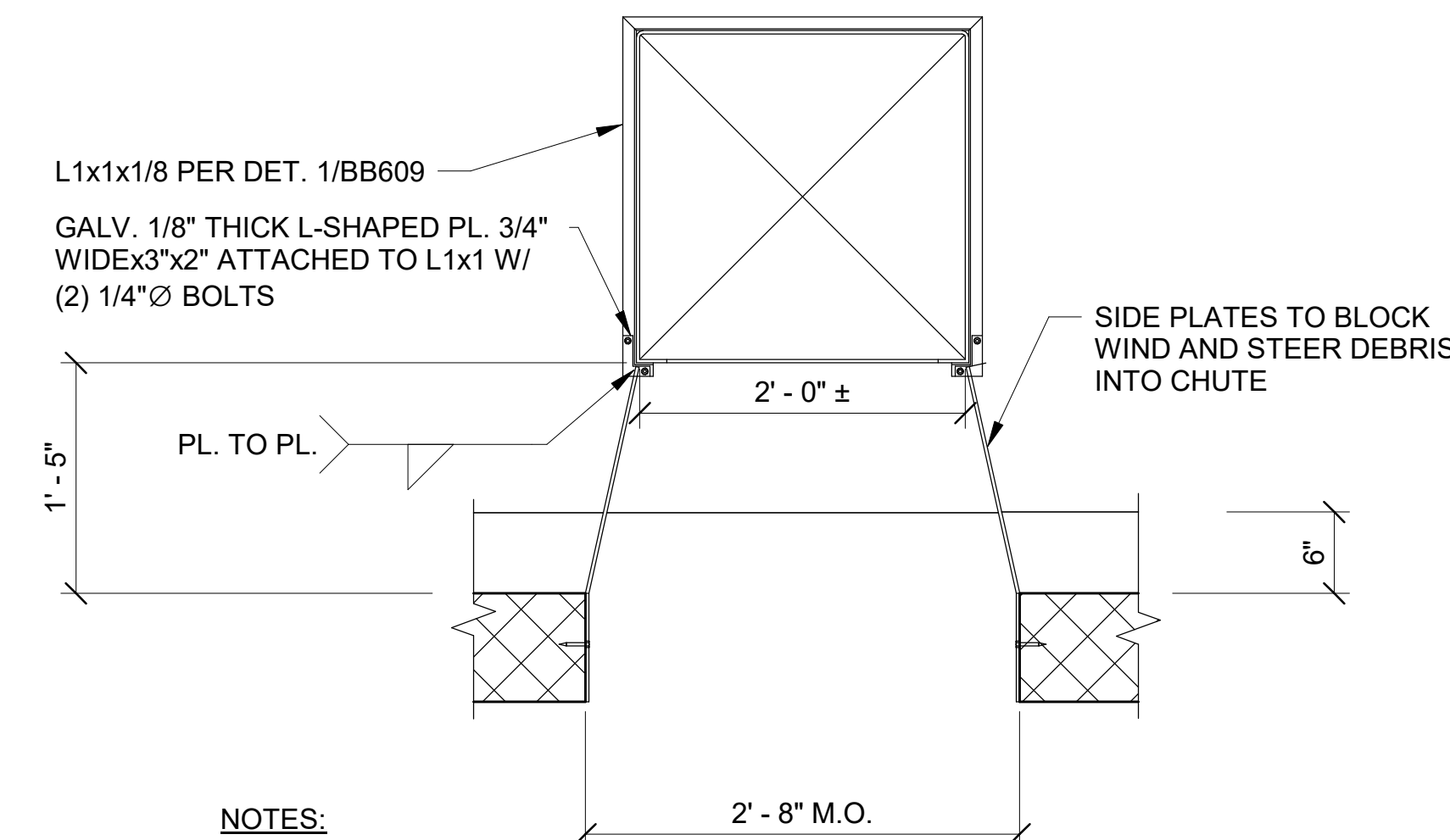
### DEBRIS CHUTE CONNECTION TO CONC.

BB202 - BB609 SCALE 1" = 1'-0"  
BB206,  
BB609



### TOP OF DEBRIS CHUTE DETAIL

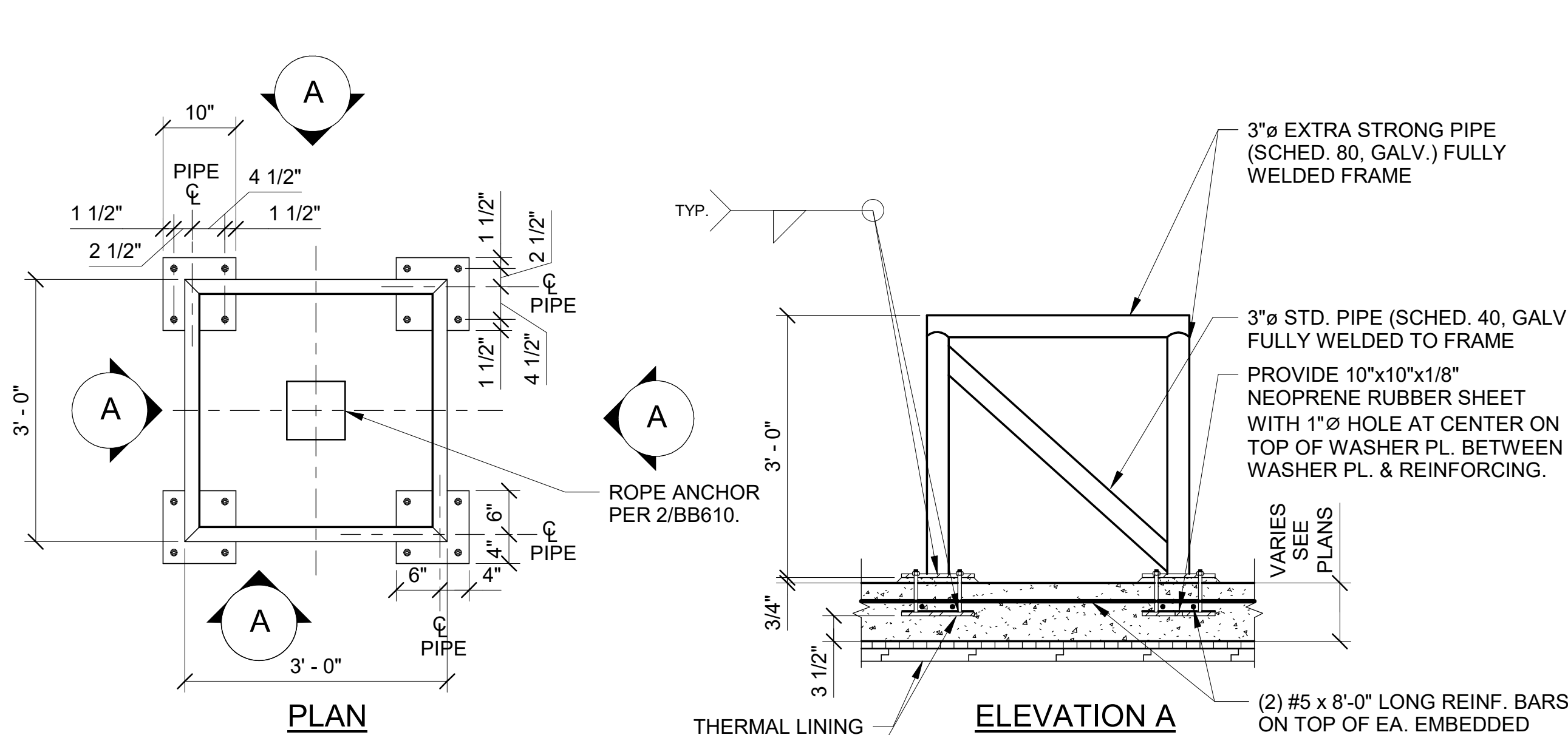
BB202 - BB609 SCALE 3/4" = 1'-0"  
BB206,  
BB609



### DEBRIS CHUTE PLAN DETAIL

BB202 - BB609 SCALE 1" = 1'-0"  
BB206,  
BB609





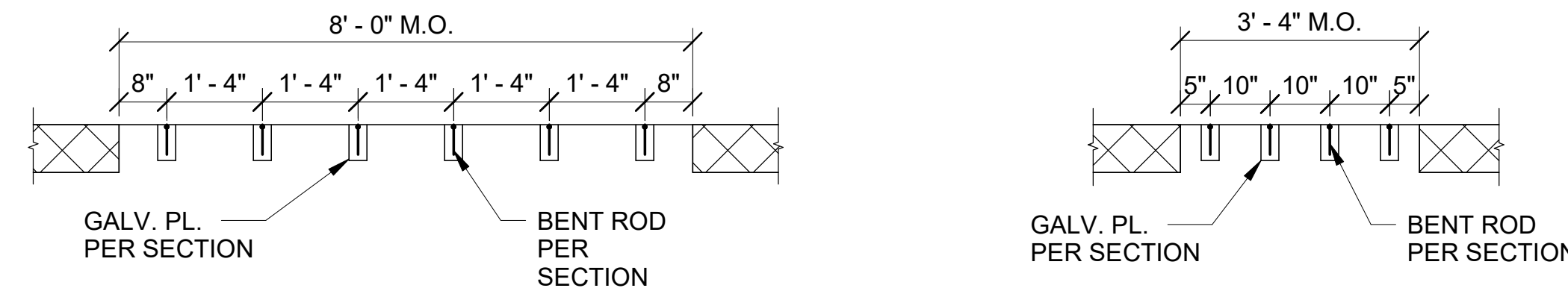
1/2"x10"x10" GALV. BASE PL. ON 3/4" NON-SHRINK GROUT BED W/ (4) 1/2" S.S. THREADED ROD THRU-BOLTS SHOP WELDED TO S.S. WASHER PL. WITH S.S. NUTS AND SMOOTH WASHERS AT TOP. PROVIDE NEOPRENE WASHER BTWN. EACH S.S. WASHER & TOP OF GALV. BASE PLATE. CAST 1/2"x10"x10" S.S. WASHER PLATE IN SLAB AT DEPTH SHOWN WITH SUFFICIENT ROD LENGTH FOR INSTALLATION TOLERANCE. AFTER INSTALLING AND TIGHTENING NUTS, TRIM EXCESS BOLT LENGTHS TO WITHIN 1/2" OF NUTS AND GRIND SMOOTH. WRAP THREADED RODS IN HEAVY DUTY ELECTRICAL TAPE AT ALL LOCATIONS WHERE A REINFORCING BAR GETS WITHIN 1/2" OF THE ROD. PROVIDE 1" Ø HOLE AT CENTER OF EMBEDDED PLATE TO HELP WITH AIR BUBBLE MOVEMENT & CONSOLIDATION DURING CONCRETE PLACEMENT.

#### NOTES:

- ALL PIECES SHALL BE GALVANIZED, U.O.N. STAINLESS STEEL ITEMS SHALL BE 316.
- FRAME CONSISTS OF (4) HORIZONTALS, (4) VERTICALS AND (4) DIAGONALS TOTAL.
- DO NOT USE POST-INSTALLED ANCHORS.
- AFTER PLACING THE BASE PLATES OVER THE TOPS OF THE THREADED RODS, FILL ALL HOLES IN EACH GALV. BASE PLATE WITH EPOXY BEFORE INSTALLING WASHERS AND NUTS ON THREADED RODS AT TOP OF BASE PLATES.
- SEAL GALVANIZING VENT HOLES PER GENERAL NOTE Q.7 ON SHEET BB001.

### 1 SLAB-MOUNTED ROPE FRAME DETAIL

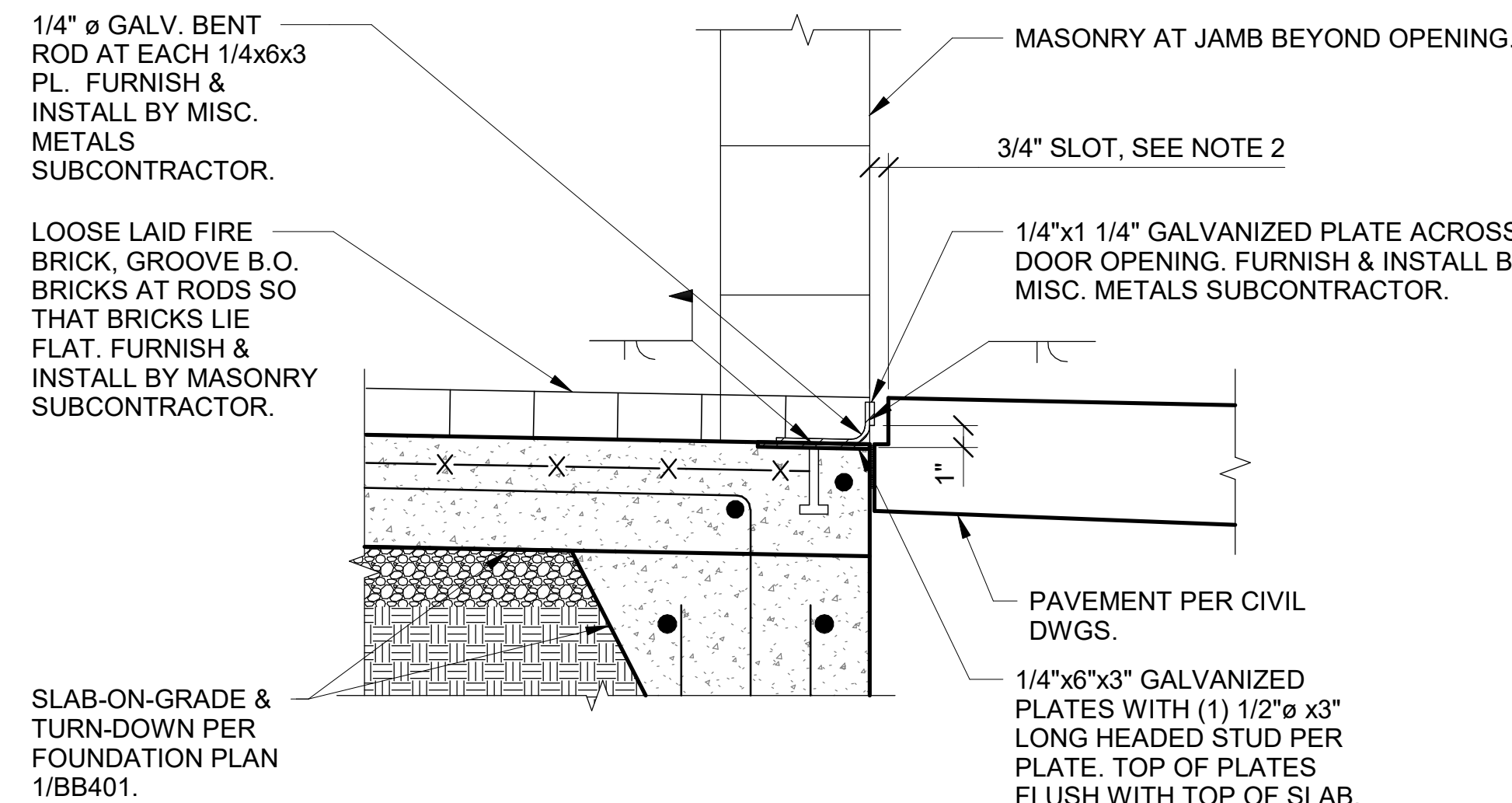
BB207, BB610 SCALE 3/4" = 1'-0"  
BB306



#### NOTE:

- THIS PLAN APPLIES TO EXTERIOR DOUBLE DOORS IN ROOM 100.

#### PLAN VIEW

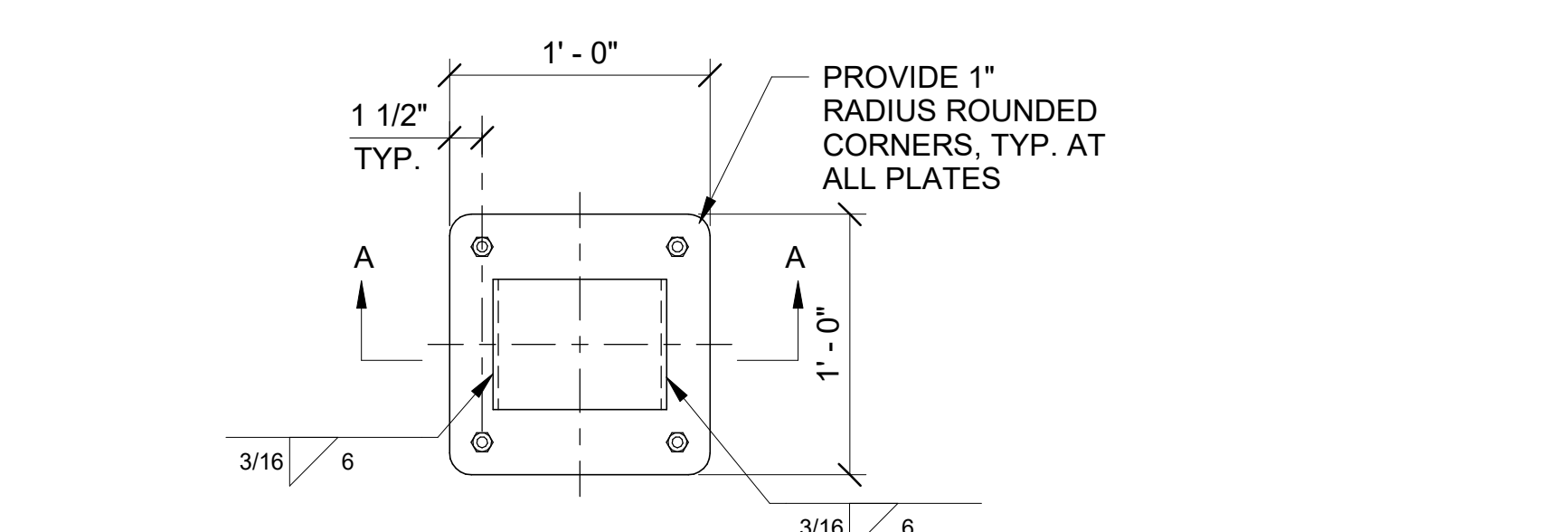


#### NOTES:

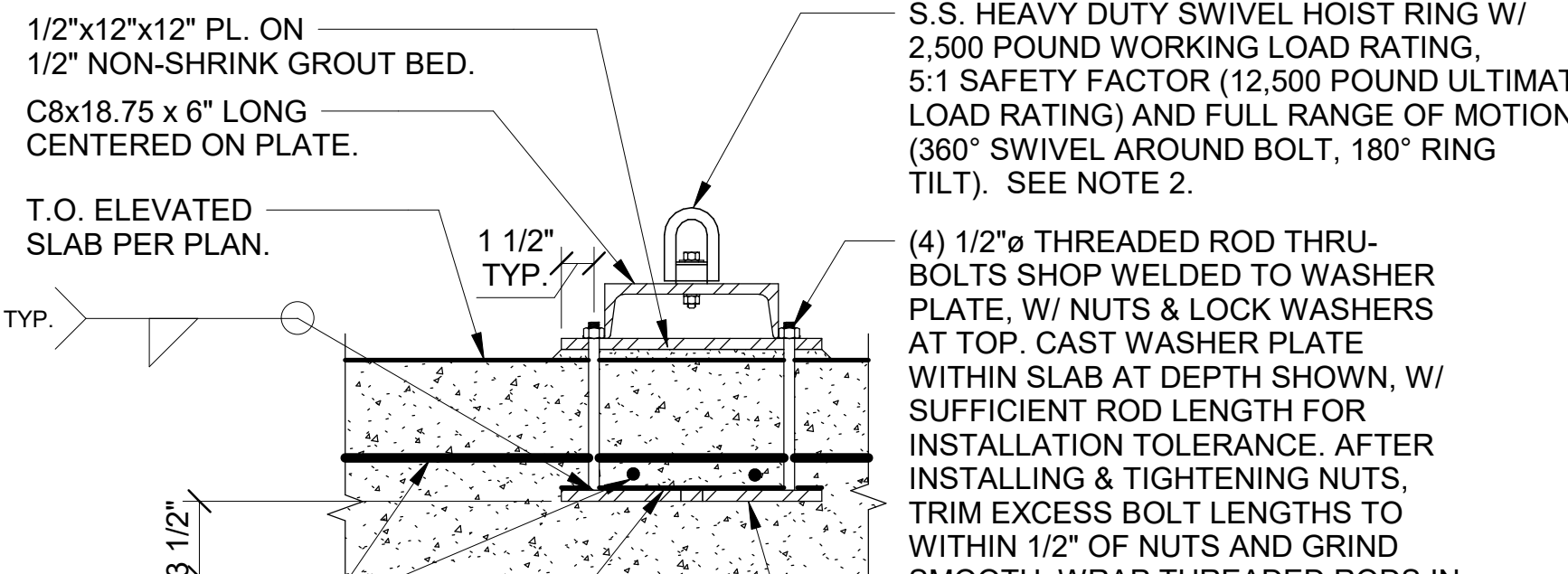
- SLOT AT TOP OF PAVEMENT ALONG FACE OF BUILDING AT DOOR ONLY. BOTTOM OF SLOT SHALL BE HORIZONTAL SO THAT SLOT DEPTH VARIES WITH PAVEMENT SLOPE ALONG WALL, FROM 2 1/2" AT DOOR TO 0" WHERE BOTTOM OF SLOT INTERSECTS TOP OF PAVEMENT.

### 4 EXTERIOR DOOR THRESHOLD DETAILS

BB201 BB610 SCALE 1 1/2" = 1'-0"



#### PLAN VIEW



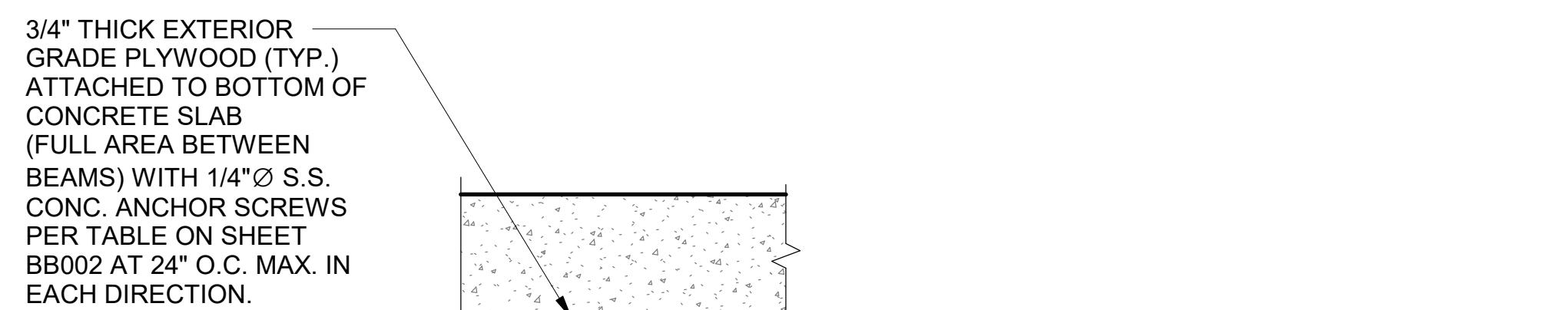
#### SECTION A-A

#### NOTES:

- ALL PIECES SHALL BE 316 STAINLESS STEEL, U.O.N.
- PROVIDE PART #29009 BY AMERICAN DRILL BUSHING CO., OR AN EQUIVALENT APPROVED BY THE ENGINEER.
- SLAB REINFORCING NOT SHOWN FOR CLARITY.
- DO NOT USE POST-INSTALLED ANCHORS.
- GRIND ALL CHANNEL AND PLATE EDGES AND CORNERS SMOOTH.

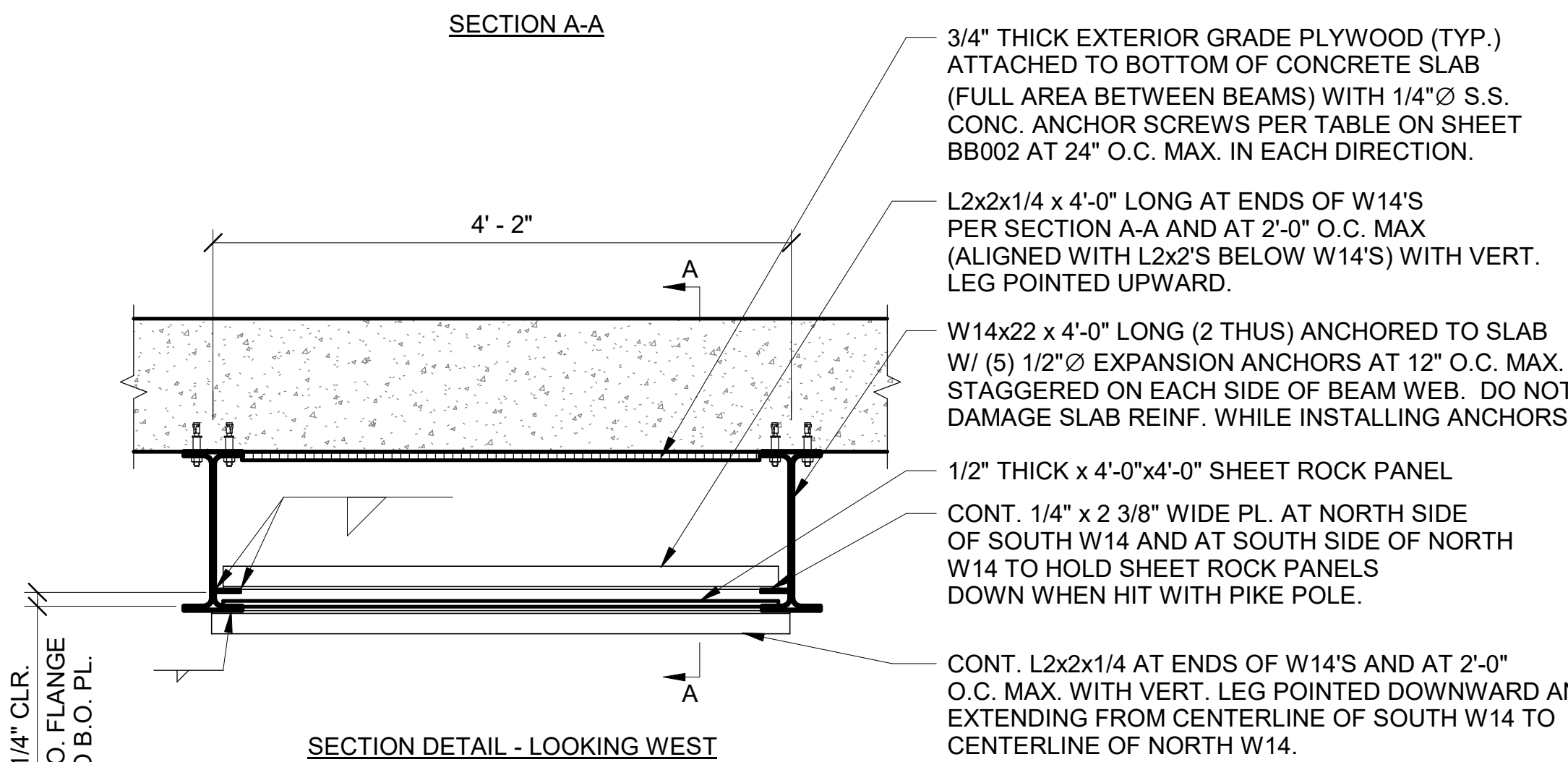
### 2 SLAB-MOUNTED ROPE ANCHOR DETAIL

BB207, BB610 SCALE 1 1/2" = 1'-0"  
BB306



NOTE: THIS SECTION IS LOOKING SOUTH.

#### SECTION A-A

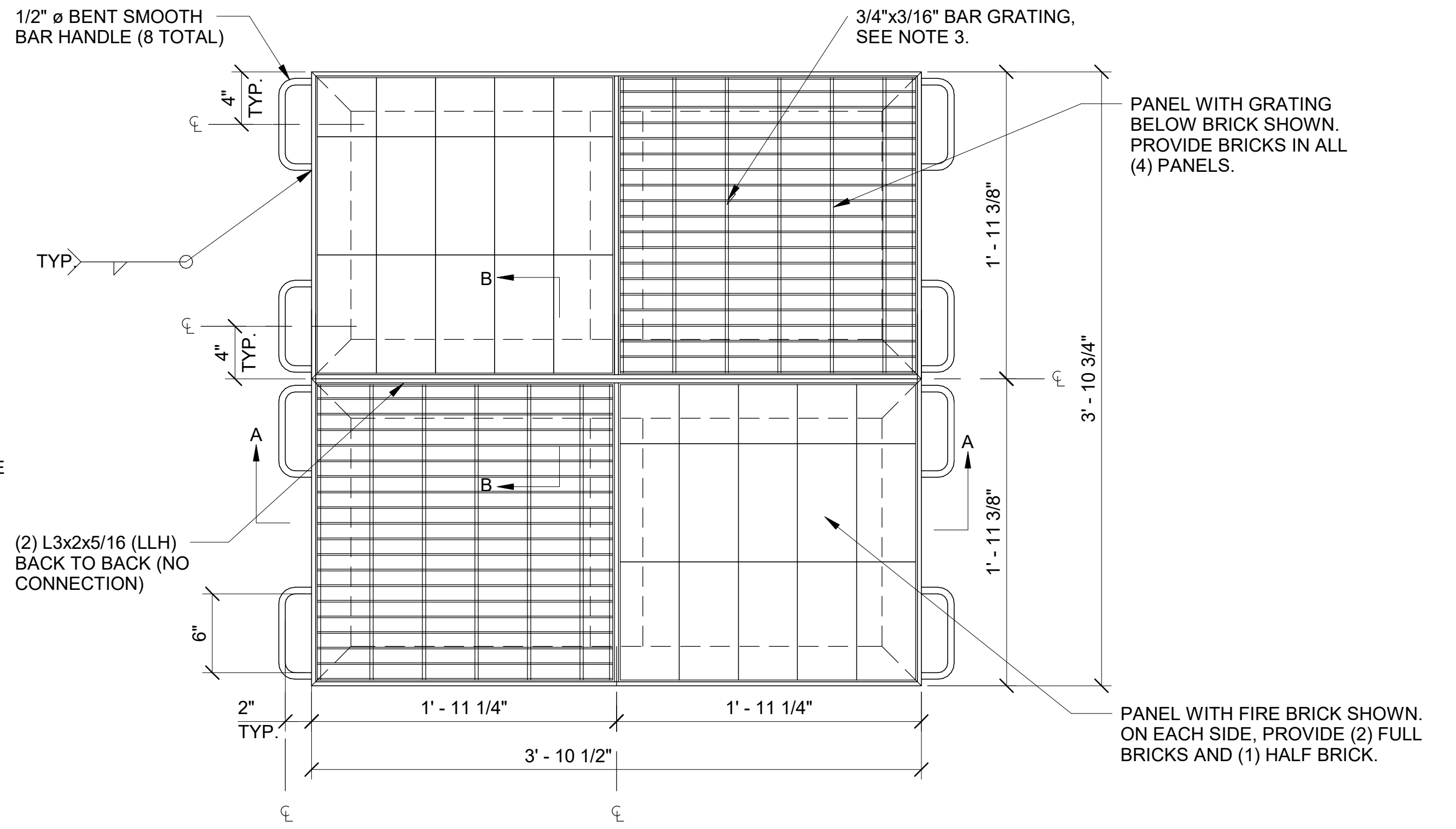


#### NOTES:

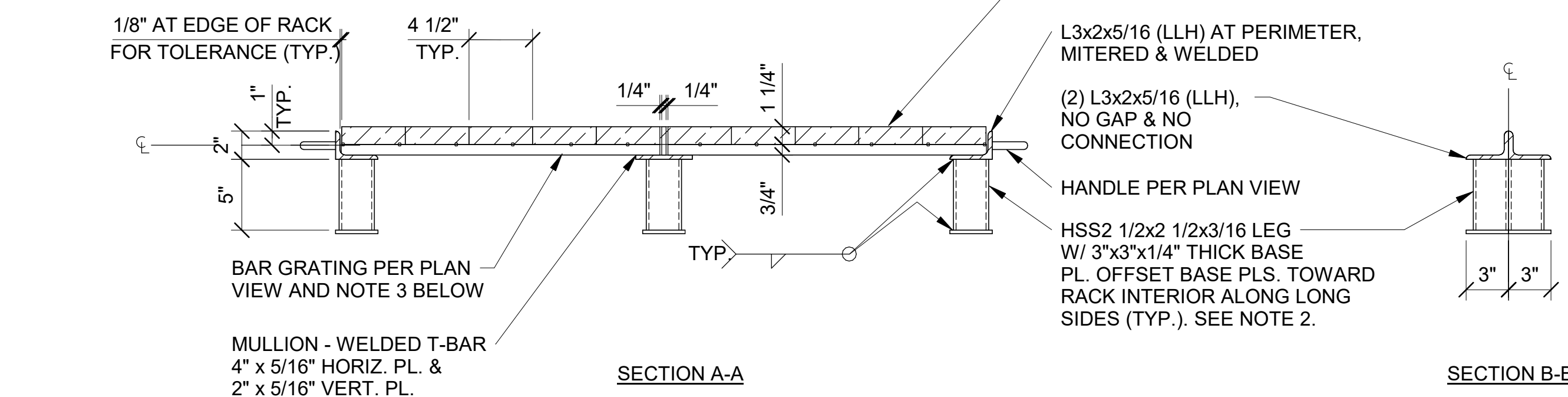
- ENTIRE ASSEMBLY (W14'S, L2x2'S AND 1/4" PLATES) SHALL BE SHOP WELDED AND HOT-DIP GALVANIZED AS A COMPLETE ASSEMBLY, WITHOUT WARPING.

### SHEETROCK PULLDOWN PROP SECTION DETAILS

BB205 BB610 SCALE 1" = 1'-0"



#### PLAN VIEW



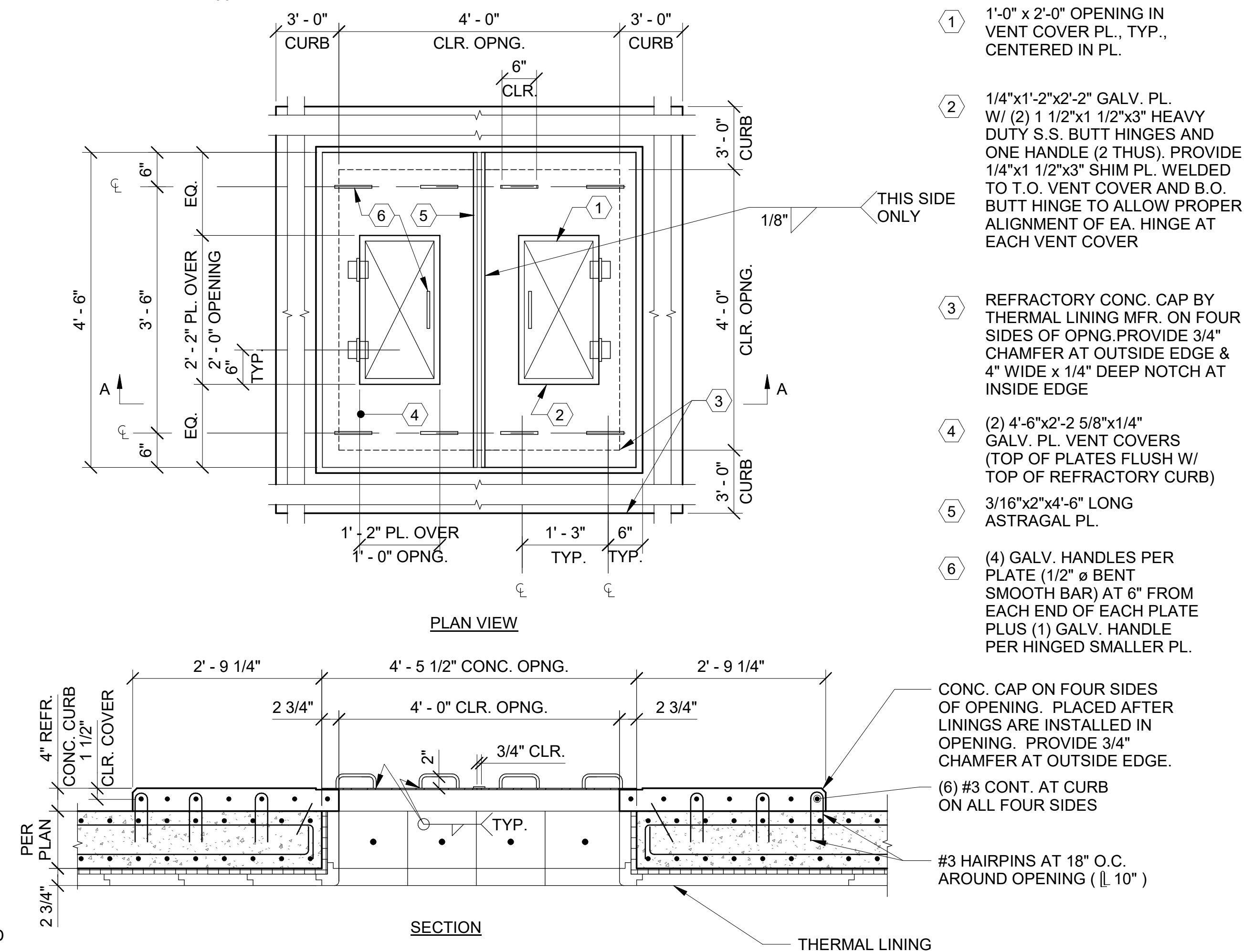
#### SECTION B-B

#### NOTES:

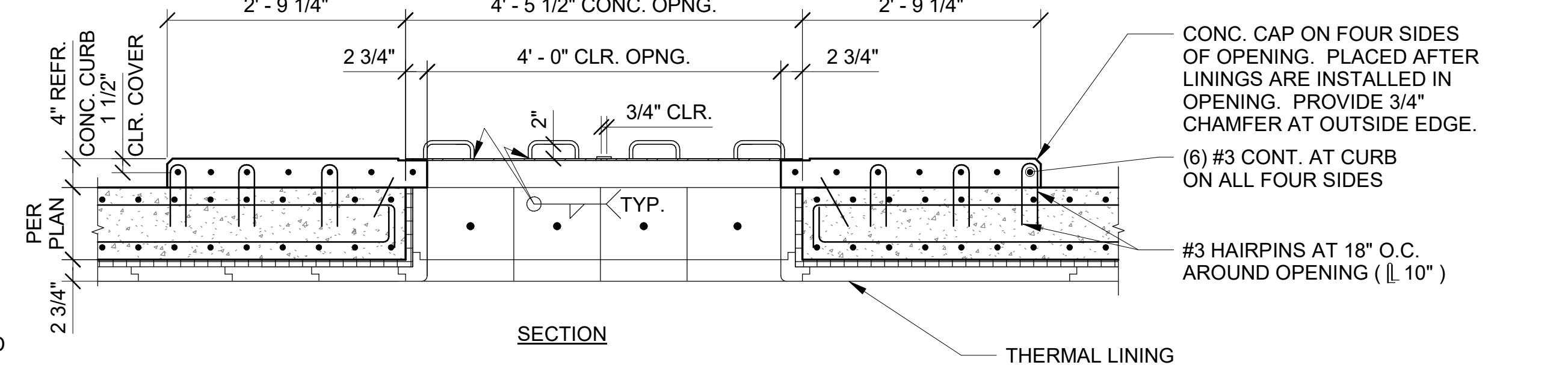
- PROVIDE GALV. STEEL FOR ALL BURN RACK PIECES AND COMPONENTS.
- PROVIDE VERTICAL LEG AT EACH CORNER AND AT CENTER OF EACH LONG SIDE (12 TOTAL LOCATIONS).
- PROVIDE A 1/2" Ø HOLE IN ONE SIDE OF EACH TUBE LEG, JUST ABOVE THE BASE PL.
- PROVIDE ITEM NO. GW-75A (SMOOTH, GALV. FINISH), BY McNICHOLS CO. OR APPROVED EQUAL (1'-10 1/4" x 1'-10 1/4"). SUPPORTED LOOSE ON PERIMETER ANGLES AND MULLIONS (NO CONNECTION) TYP. AT ALL FOUR PANELS.
- PLACE FIRE BRICK SPLITS (ASTM C-27, CLASSIFICATION: MEDIUM-DUTY) LOOSE LAID OVER BAR GRATING, TYP. AT ALL FOUR PANELS. TYPICAL BRICK SIZE IS 9" x 4 1/2" x 1 1/4".
- PROVIDE (X) TOTAL BURN RACKS.

### 3 BURN RACK PLAN & SECTION DETAILS

BB201 - BB610 SCALE 1 1/2" = 1'-0"  
BB206



#### PLAN VIEW



### 6 VENTILATION OPENING DETAILS

BB207 BB610 SCALE 3/4" = 1'-0"

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DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
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SHEET  
**BURN BUILDING - MISCELLANEOUS DETAILS**

BB610



CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CRITERIA UNLESS OTHERWISE NOTED ON THE DRAWINGS. DO NOT USE THESE DRAWINGS WITHOUT THE ACCOMPANYING SPECIFICATIONS AND RELATED CIVIL DRAWINGS. FOR ALL ITEMS, SEE THE SPECIFICATIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS. THE MOST STRINGENT REQUIREMENTS GOVERN CONDITIONS COVERED BY BOTH THE DRAWINGS AND THE PROJECT SPECIFICATIONS OR BY CONFLICTING ITEMS.

A. STRUCTURE CLASSIFICATION

- THE TRAINING TOWER WILL BE A TRAINING PROP USED BY THE OWNER TO TRAIN ABLE-BODIED FIREFIGHTERS IN A VARIETY OF TRAINING SCENARIOS.
- THE TRAINING TOWER WILL NOT BE AN OCCUPIED STRUCTURE, EXCEPT DURING TRAINING EXERCISES.
- THE TRAINING TOWER IS CLASSIFIED AS MISCELLANEOUS USE GROUP (USE GROUP U).

B. TRAINING TOWER DESIGN CRITERIA

- LIVE FIRE TRAINING IS NOT ALLOWED ANYWHERE WITHIN, ON, OR NEAR THE TRAINING TOWER.
- ALL COLD TRAINING SHALL BE IN ACCORDANCE WITH NFPA REQUIREMENTS.
- TRAINING THAT INCLUDES TEAR GAS, EXPLOSIVES, FLASH BANGS OR FIREARMS SHALL NOT BE PERMITTED WITHIN OR NEAR THE TRAINING TOWER.
- IT IS ASSUMED THAT OWNER WILL TEST ROPE TIE-OFF POINTS PER OSHA REQUIREMENTS AND WILL VISUALLY CONFIRM THAT NUTS AND BOLTS ARE TIGHT AT ALL ROPE TIE-OFF ASSEMBLIES ON EACH TRAINING DAY THAT USES THOSE TIE-OFF POINTS.

C. CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS GOVERN THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF STRUCTURAL WORK PERFORMED ON THIS PROJECT:

- 2018 NORTH CAROLINA STATE BUILDING CODE (BASED ON INTERNATIONAL BUILDING CODE (IBC-2015), INTERNATIONAL CODE COUNCIL (ICC)).
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-10), AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE).
- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - AISC 360-10, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, EXCEPT AS MODIFIED BY NCSBC.
- STRUCTURAL WELDING CODE - STEEL (AWS D1.4-2011), AMERICAN WELDING SOCIETY (AWS), EXCEPT AS MODIFIED BY NCSBC.
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI-318-14), AMERICAN CONCRETE INSTITUTE (ACI), EXCEPT AS MODIFIED BY NCSBC.
- SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-16), AMERICAN CONCRETE INSTITUTE (ACI).
- MANUAL OF STANDARD PRACTICE (CRSI), CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES, THE MASONRY SOCIETY (TMS) TMS 402-13/TMS 602-13, AND BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, AMERICAN CONCRETE INSTITUTE (ACI) ACI 530-13, EXCEPT AS MODIFIED BY NCSBC.
- STANDARD ON FACILITIES FOR FIRE TRAINING AND ASSOCIATED PROPS (NFPA 1402-2019), NATIONAL FIRE PROTECTION ASSOCIATION.

D. DESIGN GRAVITY LOADS

LIVE LOADS:

- FLOORS: 50 PSF
- STAIRS: 100 PSF
- ROOFS: 50 PSF

SUPERIMPOSED DEAD LOADS:

- CMU PARTITIONS: 80 PSF

E. DESIGN SNOW LOADS

- GROUND SNOW LOAD (Pg) = 15 PSF
- FLAT ROOF SNOW LOAD (Pf) = 15 PSF
- SNOW DRIFT LOAD (Ps) = 30.2 PSF
- SNOW EXPOSURE FACTOR (Ce) = 1.0
- THERMAL FACTOR (Ct) = 1.2
- SNOW LOAD IMPORTANCE FACTOR (Is) = 1.0

F. DESIGN WIND LOADS

- RISK CATEGORY II.
- BASIC WIND SPEED = 115 MPH
- WIND LOAD IMPORTANCE FACTOR (Iw) = 1.0
- INTERNAL PRESSURE COEFFICIENT = +0.55 / -0.55
- WIND EXPOSURE CATEGORY = C
- WIND DESIGN PRESSURE (P) FOR THE MAIN WIND RESISTING SYSTEM = 40.0 PSF (WINDWARD & LEeward COMBINED) AT HIGHEST POINT.
- WIND DESIGN PRESSURE (P) FOR BUILDING COMPONENTS AND CLADDING = +48 PSF/-59 PSF ON CMU INFILL WALLS (≤10 SF).

G. SEISMIC DESIGN DATA

- RISK CATEGORY II.
- SEISMIC IMPORTANCE FACTOR (Ie) = 1.0
- SITE CLASS = D
- SPECTRAL RESPONSE ACCELERATIONS: Ss 0.147, S1 = 0.074
- SPECTRAL RESPONSE COEFFICIENTS: Sds 0.157, S1 = 0.118
- SEISMIC DESIGN CATEGORY = B
- BASIC SEISMIC FORCE-RESISTING SYSTEM: ORDINARY REINFORCED CONCRETE MOMENT FRAMES (C.7)
- RESPONSE MODIFICATION COEFFICIENT (R) = 3.0
- DEFLECTION AMPLIFICATION FACTOR (Cd) = 2.5
- OVERSTRENGTH FACTOR (Ω) = 3.0
- DESIGN BASE SHEAR (V) = 0.0523 x W

H. DATUM AND BUILDING ELEVATIONS

- THE DATUM IS THE TOP OF THE FIRST FLOOR CONCRETE SLAB AT THE EXTERIOR FACE OF THE EXTERIOR WALLS AT THE LOWEST POINT, AND IS DESIGNATED ON THE DRAWINGS AS 0.00 FEET.
- THE DATUM ELEVATION OF THE TRAINING TOWER IS 296.00 FEET.
- ALL TOP OF SLAB ELEVATIONS ARE SHOWN IN THE PLANS AS +XX.XX OR -XX.XX INFEET RELATIVE TO THE DATUM.

I. SOILS INFORMATION

- THE FOLLOWING INFORMATION IS BASED ON THE GEOTECHNICAL REPORT ("SOILS REPORT") PREPARED BY NV5 ENGINEERS AND CONSULTANTS, INC. LETTER DATED JANUARY 11, 2024.
- ACCORDING TO THE SOILS REPORT, SOFT/LOOSE NEAR SURFACE SOILS (APPROXIMATELY 3 FEET DEEP) OVERLAY DENSE SILTY SAND AND PARTIALLY WEATHERED ROCK (AT 5 FEET TO 8 FEET, WHERE AUGER REFUSAL OCCURRED).
- ALLOWABLE SOIL BEARING VALUE FOR THE TRAINING TOWER IS 2,500 PSF.
- ACCORDING TO THE SOILS REPORT, GROUND WATER WAS NOT OBSERVED WITHIN THE BORINGS AT THE TRAINING TOWER (B-6 & B-7). SEE SOILS REPORT FOR DRAINAGE CONSIDERATIONS.
- SEE SPECIFICATIONS FOR EARTHWORK REQUIREMENTS, INCLUDING REPLACEMENT OF UNSUITABLE SOILS, MEASURES TO PREVENT INFILTRATION OF RUNOFF AND PRECIPITATION INTO UNDERLYING SOILS AND DEWATERING REQUIREMENTS IF GROUNDWATER IS ENCOUNTERED.

J. FOOTINGS

- EXTEND TOPS OF ALL FOOTINGS TO A MINIMUM OF 1'-6" BELOW EXTERIOR FINISHED GRADE, U.O.N.
- FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED, NATURAL, ACCEPTABLE SOILS OR ON COMPACTED ENGINEERED FILL PLACED OVER THE NATURAL, ACCEPTABLE SOILS.
- ACCORDING TO THE SOILS REPORT, AS MUCH AS 3'-0" OF COMPACTED ENGINEERED FILL OR ABC STONE COULD BE REQUIRED BELOW FOUNDATIONS TO REPLACE SOFT/LOOSE NEAR SURFACE SOILS.
- EXTEND ANY OVER-EXCAVATION AND ENGINEERED FILL AREA LATERALLY BEYOND THE FOUNDATION FOOTPRINT TO A DISTANCE EQUAL TO THE DEPTH OF THE ENGINEERED FILL BENEATH THE FOOTING.
- FOOTING SUBGRADES AND ENGINEERED FILL SHALL BE APPROVED BY THE TESTING AGENCY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE FOOTINGS AND ENGINEERED FILL.

K. BACKFILL COMPACTION

- EXCAVATE, PROOFROLL, BACKFILL, AND COMPACT FOUNDATION AND SLAB-ON-GRADE SUBGRADES PER THE EARTHWORK SPECIFICATION SECTIONS 312000.
- ALL PROOFROLLING AND ENGINEERED OR IMPORTED FILL MATERIALS AND PLACEMENT SHALL BE OBSERVED AND APPROVED BY THE TESTING AGENCY GEOTECHNICAL ENGINEER.
- PROVIDE FILL MATERIALS THAT ARE FREE OF DEBRIS, ORGANIC, AND DELETERIOUS MATERIALS AND THAT MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
- PLACE ENGINEERED FILL MATERIAL IN MAXIMUM LEVEL LOOSE LIFTS OF 8 INCHES AND COMPACT TO 95% OF THE STANDARD PROCTOR TEST MAXIMUM DRY DENSITY (ASTM D-698).

L. CAST-IN-PLACE CONCRETE CONSTRUCTION

- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318, ACI 301, AND THE ACI DETAILING MANUAL.
- PROVIDE CONCRETE WITH PROPERTIES THAT CONFORM TO THE CRITERIA SPECIFIED IN TABLE 1 ON SHEET TT002.
- PROVIDE NORMAL WEIGHT CONCRETE.
- TESTING AGENCY SHALL TAKE CONCRETE TEST CYLINDERS IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318, CHAPTER 26 AND THE CONTRACT SPECIFICATIONS.
- SEE THE CONTRACT SPECIFICATIONS FOR ADDITIONAL CONCRETE TESTING REQUIREMENTS (AIR CONTENT, SLUMP, ETC.).
- TESTING AGENCY SHALL PERFORM REBAR INSPECTIONS OF ALL REINFORCING STEEL BEFORE ALL CONCRETE POURS.
- WHEN PLACING CONCRETE ON SLOPING FORMS AT CONCRETE STAIRS, PLACE CONCRETE AT LOWEST ELEVATION OF FORMS FIRST AND WORK UP TOWARD THE HIGHEST ELEVATION.
- PROVIDE CONTINUOUS DRIP ALONG EDGES OF ELEVATED CONCRETE SLABS AS SHOWN IN THE DRAWINGS.
- CHAMFER ALL EXPOSED CORNERS OF COLUMNS AND WALLS WITH 3/4" CHAMFER UNLESS OTHERWISE NOTED.
- AT LOCATIONS SHOWN ON THE DRAWINGS, CAST DOVETAIL ANCHOR SLOTS INTO CONCRETE. SEE GENERAL NOTE 0.14 FOR ADDITIONAL INFORMATION.
- FOR CAST-IN-PLACE CAPS ON MASONRY PARAPETS, PROVIDE EITHER:
  - 5,000 PSI, AIR-ENTRAINED, READY-MIX CONCRETE FROM THE CONCRETE SPECIFICATION, FOR WHICH PUMPING WOULD BE ALLOWED AS WELL AS OTHER MEANS & METHODS, AS LONG AS THE CONCRETE AND FINISH MEET THE REQUIREMENTS OF THE SPECIFICATIONS, OR
  - AIR-ENTRAINED QUICKRETE (QUIKRETE Q-MAX PRO), MIXED IN A MIXER ON SITE (NOT IN A WHEELBARROW), WITH THE FIBERS THAT PROJECT FROM THE SURFACE RUBBED OFF AFTER THE FINAL CURE AND WITH FINISH THAT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS.

M. CONCRETE REINFORCEMENT

- PROVIDE HIGH STRENGTH, NEW BILLET DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 FOR STEEL REINFORCEMENT IN CONCRETE.
- PROVIDE STEEL REINFORCEMENT DETAILS IN ACCORDANCE WITH ACI 318 AND CRSI STANDARDS.
- PROVIDE CONCRETE PROTECTION FOR STEEL REINFORCEMENT OF CAST-IN-PLACE CONCRETE AS SPECIFIED IN TABLE 2 ON SHEET TT002. PLACE THE OUTERMOST LAYERS OF REINFORCING AS CLOSE TO THE CONCRETE SURFACES AS POSSIBLE WITHOUT VIOLATING THE REQUIREMENTS SHOWN IN THE TABLE.
- COORDINATE REINFORCING PLACEMENT WITH ALL POST-INSTALLED ANCHORS AT GUARDRAILS, DOORS, SHUTTERS, SCUPPERS, ROPE TIE-OFF ANCHORS, ETC.

N. SLABS-ON-GRADE

- FOR ALL SLABS-ON-GRADE, PROVIDE A 6" MIN. THICK POURED CONCRETE SLAB-ON-GRADE, REINFORCED WITH WWRx6-W2.9xW2.9 LOCATED IN THE UPPER THIRD PORTION OF SLAB THICKNESS.
- FOLLOW WRI STANDARDS FOR WELDED WIRE REINFORCEMENT PLACING, LAP, ETC.
- PROVIDE A MINIMUM OF 4" OF AGGREGATE BASE COURSE (ABC STONE) AS A BASE BELOW THE SLABS-ON-GRADE.
- PROVIDE A 15 MIL VAPOR BARRIER BELOW THE SLABS-ON-GRADE PER THE SPECIFICATIONS.
- PROVIDE A CONTINUOUS MANUFACTURED CRACK CONTROL JOINT (PREMOLDED PLASTIC STRIP) OR EARLY ENTRY SAW-CUT CONTROL JOINT IN THE TOP OF SLAB AT LOCATIONS SHOWN ON THE FOUNDATION PLANS. SEE SPECS. FOR REQUIREMENTS OF SAW-CUTTING.

O. MASONRY

- PROVIDE 2-CELL NORMAL WEIGHT CONCRETE BLOCK CONFORMING TO ASTM C-90.
- PROVIDE UNIT MASONRY THAT DEVELOPS INSTALLED COMPRESSIVE STRENGTHS (fm) AT 28 DAYS, BASED ON NET AREA, OF 2,000 PSI.
- PROVIDE MORTAR THAT CONFORMS TO ASTM C-270, TYPE S.
- ADD INTEGRAL WATER REPELLENT ADMIXTURE TO BLOCK AND MORTAR IN ALL MASONRY WALLS IN ACCORDANCE WITH THE SPECIFICATIONS.
- UNLESS OTHERWISE NOTED, PROVIDE HORIZONTAL JOINT REINFORCING AT 16" ON CENTER VERTICALLY IN ALL MASONRY WALLS.
- UNLESS OTHERWISE NOTED ON DRAWINGS, PROVIDE (1) #5 VERTICAL BAR AT ENDS OF WALLS, AT WALL CORNERS AND INTERSECTIONS, AT JAMBS OF OPENINGS, AND AT 24" O.C. MAXIMUM IN ALL MASONRY WALLS. SEE DRAWINGS FOR ADDITIONAL REINFORCING DETAILS, INCLUDING AT JOINTS.
- PROVIDE VERTICAL REINFORCING BARS FOR FULL HEIGHT OF WALL. DO NOT PROVIDE DOWELS INTO CONCRETE SLABS EXCEPT WHERE SHOWN ON DRAWINGS.
- SEE DRAWINGS FOR ADDITIONAL DETAILS RELATING TO VERTICAL REINFORCING BARS, INCLUDING BARS AT DOOR, WINDOW, AND SCUPPER OPENINGS, AT CONTROL JOINTS IN WALLS, AND AT OTHER LOCATIONS.
- KEEP CELLS TO RECEIVE BARS CLEAN OF MORTAR DROPPINGS.
- SECURE VERTICAL BARS WITH WIRE TIES AND SPACERS AT TOP AND BOTTOM TO ASSURE THAT BARS REMAIN IN POSITION DURING GROUTING.
- FILL ALL CELLS FULL HEIGHT WITH 3,000 PSI MASONRY GROUT PER ASTM C-476 AND THE SPECS.
- CLOSE CLEANOUTS AFTER GROUT FLOWS FULLY TO BOTTOM OF WALL. VIBRATE GROUT DURING PLACEMENT TO ELIMINATE AIR POCKETS.
- SEE THE CONTRACT SPECIFICATIONS FOR MASONRY TESTING AND INSPECTIONS REQUIRED, INCLUDING REINFORCING AND GROUTING INSPECTIONS.
- AT LOCATIONS INDICATED ON DRAWINGS, ANCHOR MASONRY TO CONCRETE WITH DOVETAIL ANCHORS AT 16" ON CENTER, UNLESS OTHERWISE NOTED, AND MORTAR MASONRY TIGHT TO FACE OF CONCRETE. PROVIDE S.S. 4" LONG NO.103-C DOVETAIL TRIANGLE ANCHORS, EACH WITH 12 GA. DOVETAIL ANCHOR AND 3/16" DIA. WIRE TRIANGLE TIE, AND S.S. 22 GA. NO. 100 STANDARD DOVETAIL SLOTS BY HECKMAN BUILDING PRODUCTS, INC., OR AN EQUIVALENT BY HOHMANN & BARNARD OR DUR-O-WAL, APPROVED BY THE ENGINEER. SPACE ANCHORS AT 16" O.C. VERTICALLY AND, IF APPLICABLE, 24" O.C. HORIZONTALLY U.O.N.
- ALL MASONRY WALLS SHALL BE STANDARD GRAY COLOR WITH 8"(THICK) x 16"(LONG) x 8"(TALL) NOMINAL BLOCKS. ALL BLOCKS SHALL BE STANDARD SMOOTH FACE BLOCK.
- PROVIDE (2) COATS OF WATER REPELLENT SEALER, AS INDICATED IN SPECIFICATION SECTION 04 20 00, TO THE EXTERIOR FACES OF EXTERIOR CMU WALLS.
- SEE GEN. NOTE L.11 FOR PARAPET CAPS.

P. ANCHORS

- INSTALL ADHESIVE ANCHORS, EXPANSION ANCHORS, SLEEVE ANCHORS, AND CONCRETE ANCHOR SCREWS PER THE TYPICAL ANCHOR SCHEDULES ON SHEET TT002.
- PROVIDE ANCHORS WITH MINIMUM EMBEDMENT AND ALLOWABLE CAPACITIES SHOWN IN THE SCHEDULES, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- IF MINIMUM REQUIREMENTS FOR ANCHORS CAN NOT BE ACHIEVED DUE TO FIELD CONDITIONS, NOTIFY THE ENGINEER.
- INSTALL ALL ANCHORS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.
- DRILL HOLES FOR ANCHORS TO BE INSTALLED IN MASONRY WITH A ROTARY DRILL ONLY. NOT A ROTARY-HAMMER DRILL. DO NOT DAMAGE FACES OF WALLS, CEILINGS, SLABS, OR OTHER SUBSTRATES WHILE DRILLING.
- SUBMIT PROPOSED ANCHORS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK.
- DO NOT DAMAGE REINFORCING STEEL WHILE INSTALLING ANCHORS. COORDINATE REINFORCING PLACEMENT WITH ALL POST-INSTALLED ANCHORS AT GUARDRAILS, DOORS, SHUTTERS, SCUPPERS, ROPE TIE-OFF ANCHORS, ETC.
- ANCHORS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR RESPONSIBLE FOR THE SCOPE OF WORK BEING ANCHORED.

Q. STEEL SHAPES AND PLATES

- PROVIDE STEEL WITH PROPERTIES LISTED IN TABLE 3 ON SHEET BB002.
- SEE SPECIFICATIONS FOR REQUIREMENTS OF STAINLESS STEEL ANGLES AND PLATES.
- PROVIDE WELDED SHOP CONNECTIONS UNLESS OTHERWISE NOTED.
- MAKE FIELD CONNECTIONS WITH ASTM A-325H HIGH STRENGTH BOLTS TIGHTENED TO A SNUG TIGHT CONDITION, UNLESS OTHERWISE NOTED.
- PERFORM ALL WELDING WITH WELDERS QUALIFIED IN ACCORDANCE WITH AWS PROCEDURES FOR WELDER QUALIFICATION.
- PROVIDE GALVANIZED STEEL MEMBERS, UNLESS OTHERWISE NOTED ON THE DRAWINGS AS "PAINTED" OR "STAINLESS STEEL".
- AT GALVANIZING VENT HOLES IN PIPES AND TUBES IN RAILINGS, EXTERIOR STAIRS, ROPE FRAMES AND OTHER NOTED ITEMS, LOCATE VENT HOLES AT BOTTOM OF PIPE OR TUBE. PLUG ALL VENT HOLES AFTER GALVANIZING IN ONE OF THE FOLLOWING WAYS: HAMMER IN A ZINC GALVANIZING VENT HOLE PLUG, GRIND IT SMOOTH, AND TOUCH UP WITH GALVANIZING REPAIR PAINT. A SECOND OPTION IS TO PLUG WELD THE GALVANIZING VENT HOLES, GRIND THE WELDS SMOOTH, AND TOUCH UP WITH GALVANIZING REPAIR PAINT PER THE SPECIFICATIONS.
- WHERE INDICATED IN THE DRAWINGS AS "PAINTED", PROVIDE STEEL WITH ONE SHOP COAT OF RUST-INHIBITING PRIMER AND TWO FIELD COATS AS INDICATED IN THE SPECIFICATIONS.
- WHERE INDICATED IN THE DRAWINGS, PROVIDE STAINLESS STEEL OF TYPE INDICATED IN THE SPECIFICATIONS.
- SEE THE CONTRACT SPECIFICATIONS FOR STEEL TESTING AND INSPECTIONS REQUIRED.

R. STEEL GRATING AND TREADS

- AT EXTERIOR STAIRS AND LANDINGS, PROVIDE 2" DEEP, 13 GAUGE, GALVANIZED 'PERF-O GRIP' STEEL GRATING BY COOPER B-LINE, OR AN EQUIVALENT BY NUCOR GRATING OR METALEX, APPROVED BY THE ENGINEER. MAXIMUM PLANK WIDTH IS 12 INCHES. INSTALL GRATING IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS TO CREATE A TWO-SPAN CONDITION BY WELDING (SCREWS AND CLIPS NOT ALLOWED). PROVIDE GRATING PLANK LENGTHS THAT ARE AS LONG AS POSSIBLE TO MINIMIZE CUT PLANKS AND JOINTS WHERE CUT ENDS OF PLANKS ABUT ONE ANOTHER.
- AT EXTERIOR STAIRS, PROVIDE 2" DEEP, 13 GAUGE, GALVANIZED PERF-O GRIP STAIR TREADS BY COOPER B-LINE, OR AN EQUIVALENT BY NUCOR GRATING OR METALEX, APPROVED BY THE ENGINEER. INSTALL TREADS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS USING STANDARD ZINC COATED BOLTS.
- AT 2ND FLOOR MEZZANINE, PROVIDE HOT DIP GALVANIZED 2" WELDED BAR GRATING W/ SMOOTH SURFACE, GW-200, 19-W-4, 2"x3/16" RECTANGULAR BARS AT 1 3/16" O.C. 77% OPEN AREA.
- PROVIDE A GALVANIZED 2" TALL VERTICAL END PLATE TO CLOSE OFF THE ENDS OF ALL GRATING PLANKS TO ELIMINATE JAGGED EDGES AND TO STRENGTHEN THE ENDS OF THE PLANKS. THIS INCLUDES ENDS OF PLANKS THAT ABUT ENDS OF ADJACENT PLANKS AND THAT ABUT FACE OF THE BUILDING.
- TOUCH UP ALL ABRASIONS AND WELDS WITH GALVANIZING REPAIR PAINT PER THE SPECIFICATIONS.

S. FIXED ACCESS LADDER

- PROVIDE A HEAVY-DUTY, FIXED, WALL-MOUNTED, GALVANIZED STEEL CAGED VERTICAL ACCESS LADDER. NOMINAL HEIGHT OF LADDER IS 15'-6"± FROM FIFTH FLOOR FIRE ESCAPE TO TOP OF THE SIDE RAILS EXTENDING 3'-6" ABOVE THE ROOF FOR FALL PROTECTION.
- PROVIDE CONTINUOUS CHANNEL OR RECTANGULAR TUBING SIDE RAILS, SPACED 20 INCHES APART AND SIZED TO SUPPORT LOADS WITHIN CODE REQUIRED LIMITS FOR DEFLECTION. PROVIDE ROUND BAR LADDER RUNGS, WITH CORRUGATED SURFACES, EVENLY SPACED AT 12" O.C. MAX. EACH LADDER RUNG SHALL BE CAPABLE OF CARRYING 1,000 POUNDS LOAD AND SHALL BE ATTACHED AT CENTERLINE OF SIDE RAILS BY WELDING. TOP OF TOP RUNG SHALL BE FLUSH WITH TOP OF ROOF SLAB (FIELD MEASURE BEFORE FABRICATING LADDER).
- FOR CAGED LADDER, CLEARANCE BETWEEN TOP OF FIRE ESCAPE GRATING AND BOTTOM OF CAGE SHALL BE 7'-4". PROVIDE CAGE THAT IS 2'-6" FROM CENTERLINE OF LADDER RUNG, WITH FLARED BOTTOM.
- PROVIDE ACCESS LADDER CERTIFIED TO MEET OSHA/ANSI A14.3 STANDARDS.
- SUBMIT SHOP DRAWINGS SHOWING ALL COMPONENTS, SIZES, LENGTHS, AND ATTACHMENTS TO THE STRUCTURE FOR APPROVAL BY THE ENGINEER.

T. TESTING AND INSPECTIONS OF ROPE TIE-OFF POINTS

- TEST EACH ROPE ANCHOR ASSEMBLY AND ROPE FRAME ASSEMBLY WITH A 5,000-POUND PULL TEST, AS FOLLOWS:
  - SURFACE-MOUNTED ROPE ANCHOR ASSEMBLY: PULL TEST ON HOIST RING PERPENDICULAR TO THE SLAB OR WALL SURFACE ON WHICH ASSEMBLY IS ATTACHED.
  - ROPE FRAME ASSEMBLY: PULL TEST AT TOP OF FRAME AT EACH CORNER OF FRAME PERPENDICULAR TO SLAB SURFACE, TESTING ONE CORNER AT A TIME.
  - EMBEDDED (THROUGH-SLAB) ROPE ANCHOR ASSEMBLY: PULL TEST ON ROUND BAR PERPENDICULAR TO THE SLAB SURFACE.
- INSPECT GANTRY ASSEMBLY AS FOLLOWS:
  - VISUALLY INSPECT ALL BOLTED CONNECTIONS, INCLUDING BOLTS INTO/THROUGH SLAB.
  - VISUALLY INSPECT ALL WELDS.
  - VISUALLY INSPECT ALL HOIST RING CONNECTIONS TO STEEL FRAMING.

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RECEIVED  
03/25/2025  
SAMET

WTCC EWS - FIRE & RESCUE TRAINING CENTER  
WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**TRAINING TOWER - GENERAL NOTES**

TT001







2018 APPENDIX B  
BUILDING CODE SUMMARY FOR ALL  
COMMERCIAL PROJECTS

NAME OF PROJECT: WTCC EWS - FIRE & RESCUE TRAINING CENTER

ADDRESS: 5345 ROLESVILLE RD, WENDELL, NC 27591

OWNER/AUTHORIZED AGENT: WAKE TECHNICAL COMMUNITY COLLEGE

OWNED BY: HH ARCHITECTURE

CODE ENFORCEMENT JURISDICTION: WAKE

ZIP CODE: 27603

PHONE: 919.866.6139

EMAIL: khess@hh-arch.com

STATE: NC

CITY: WAKE

CONTACT: KRISTEN M. HESS, AIA

DESIGNER: HH ARCHITECTURE

ARCHITECTURAL: STEWART

CIVIL: -

ELECTRICAL: -

FIRE ALARM: -

PLUMBING: -

MECHANICAL: -

SPRINKLER/STANDPIPE: -

STRUCTURAL: EL&M

RETAINING WALLS > 4' HIGH: -

PRE-CAST: -

TRUSS: -

LANDSCAPE: -

HAZMAT: -

LICENSE #

TELEPHONE #

E-MAIL

9290

919.828.2301

khess@hh-arch.com

15834

919.866.4813

rstewart@stewartinc.com

2018 NC BUILDING CODE:

NEW BUILDING

ADDITION

RENOVATION

1st TIME INTERIOR COMPLETION

SHELL/CORE - CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

PHASED CONSTRUCTION - SHELL/CORE - CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

2018 NC EXISTING BUILDING CODE: EXISTING:

PRESCRIPTIVE

REPAIR

CHAPTER 14

ALTERATION:

LEVEL I

LEVEL II

LEVEL III

HISTORIC PROPERTY

CHANGE OF USE

CONSTRUCTED (date):

RENOVATED (date):

CURRENT OCCUPANCY(S) (Ch. 3):

PROPOSED OCCUPANCY(S) (Ch. 3):

CONSTRUCTED (date):

RENOVATED (date):

ORIGINAL USE(S) (Ch. 3):

CURRENT USE(S) (Ch. 3):

PROPOSED USE(S) (Ch. 3):

BASIC BUILDING DATA

CONSTRUCTION TYPE (Check all that apply)

SPRINKLERS:

STANDPIPES:

FIRE DISTRICT:

FLOOD HAZARD AREA:

SPECIAL INSPECTIONS REQUIRED:

GROSS BUILDING AREA TABLE

FLOOR

SQ. FT.

SUB-TOTAL

5th FLOOR

257

877

4th FLOOR

620

1,497

3rd FLOOR

907

2,404

1st FLOOR

907

3,311

TOTAL

3,311

3,311

- SF

ALLOWABLE AREA

PRIMARY OCCUPANCY CLASSIFICATION(S):

ASSEMBLY

BUSINESS

EDUCATIONAL

FACTORY

HAZARDOUS

INSTITUTIONAL

MERCANTILE

RESIDENTIAL

STORAGE

UTILITY AND MISCELLANEOUS

ACCESSORY OCCUPANCY CLASSIFICATION(S):

INCIDENTAL USES (Table 509):

SPECIAL USES (Chapter 4 - List Code Sections):

SPECIAL PROVISIONS (Chapter 5 - List Code Sections):

MIXED OCCUPANCY:

NON-SEPARATED USE (508.3) -

SEPARATED USE (508.4) -

Actual Area of Occupancy A

Actual Area of Occupancy B

Allowable Area of Occupancy A

Allowable Area of Occupancy B

AREA

X

STORY NO.

DESCRIPTION AND USE

BLDG AREA PER STORY (ACTUAL)

TABLE 506.2.1 AREA

AREA FOR FRONTAGE INCREASE <sup>1,2</sup>

ALLOWABLE AREA PER STORY OR UNLIMITED <sup>3,4</sup>

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RECEIVED  
03/25/2025  
SAMET

WTCC EWS - FIRE & RESCUE TRAINING CENTER

WAKE TECHNICAL COMMUNITY COLLEGE

5345 ROLESVILLE RD, WENDELL, NC 27591

NCCCS NO. 2303

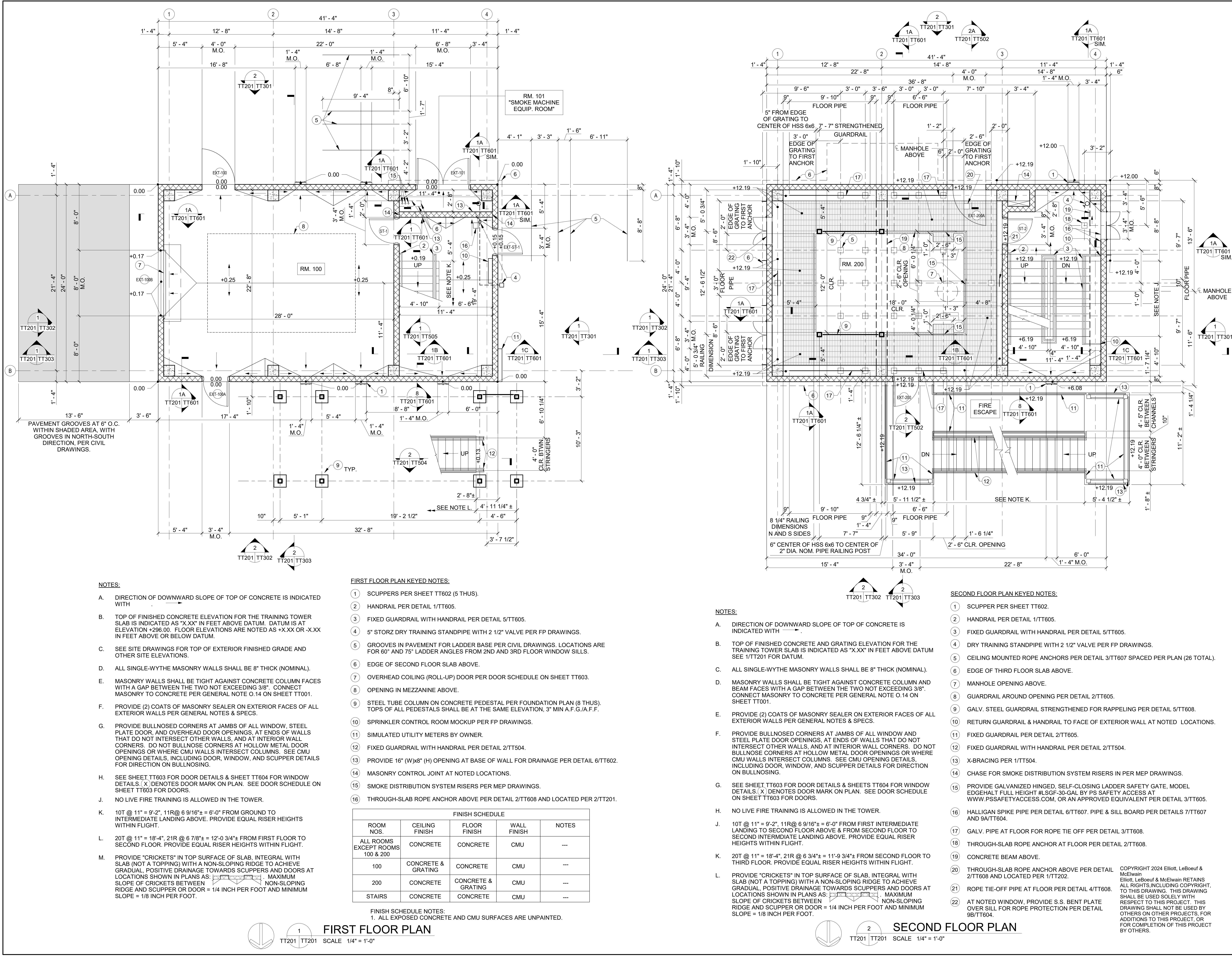


NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET

**TRAINING TOWER  
- FIRST & SECOND  
FLOOR PLANS**

TT201



NOTES:

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE TRAINING TOWER SLAB IS INDICATED AS "X.XX" IN FEET ABOVE DATUM. DATUM IS AT ELEVATION +296.00. FLOOR ELEVATIONS ARE NOTED AS +X.XX OR -X.XX IN FEET ABOVE OR BELOW DATUM.
- SEE SITE DRAWINGS FOR TOP OF EXTERIOR FINISHED GRADE AND OTHER SITE ELEVATIONS.
- ALL SINGLE-WYTHE MASONRY WALLS SHALL BE 8" THICK (NOMINAL).
- MASONRY WALLS SHALL BE TIGHT AGAINST CONCRETE COLUMN FACES WITH A GAP BETWEEN THE TWO NOT EXCEEDING 3/8". CONNECT MASONRY TO CONCRETE PER GENERAL NOTE 0.14 ON SHEET TT001.
- PROVIDE (2) COATS OF MASONRY SEALER ON EXTERIOR FACES OF ALL EXTERIOR WALLS PER GENERAL NOTES & SPECS.
- PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL WINDOW, STEEL PLATE DOOR, AND OVERHEAD DOOR OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT INTERIOR WALL CORNERS. DO NOT BULLNOSE CORNERS AT HOLLOW METAL DOOR OPENINGS OR WHERE CMU WALLS INTERSECT COLUMNS. SEE CMU OPENING DETAILS, INCLUDING DOOR, WINDOW, AND SCUPPER DETAILS FOR DIRECTION ON BULLNOSING.
- SEE SHEET TT603 FOR DOOR DETAILS & SHEET TT604 FOR WINDOW DETAILS. (X) DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET TT603 FOR DOORS.
- NO LIVE FIRE TRAINING IS ALLOWED IN THE TOWER.
- 10T @ 11" = 9'-2", 11R @ 6 9/16" ± = 6'-0" FROM GROUND TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- 20T @ 11" = 18'-4", 21R @ 6 7/8" ± = 12'-0 3/4" ± FROM FIRST FLOOR TO SECOND FLOOR. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: . MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT AND MINIMUM SLOPE = 1/8 INCH PER FOOT.

FIRST FLOOR PLAN KEYED NOTES:

- SCUPPERS PER SHEET TT602 (5 THUS).
- HANDRAIL PER DETAIL 1/TT605.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 5/TT605.
- 5" STORZ DRY TRAINING STANDPIPE WITH 2 1/2" VALVE PER FP DRAWINGS.
- GROOVES IN PAVEMENT FOR LADDER BASE PER CIVIL DRAWINGS. LOCATIONS ARE FOR 60" AND 75" LADDER ANGLES FROM 2ND AND 3RD FLOOR WINDOW SILLS.
- EDGE OF SECOND FLOOR SLAB ABOVE.
- OVERHEAD COILING (ROLL-UP) DOOR PER DOOR SCHEDULE ON SHEET TT603.
- OPENING IN MEZZANINE ABOVE.
- STEEL TUBE COLUMN ON CONCRETE PEDESTAL PER FOUNDATION PLAN (8 THUS). TOPS OF ALL PEDESTALS SHALL BE AT THE SAME ELEVATION, 3" MIN A.F.G./A.F.F.
- SPRINKLER CONTROL ROOM MOCKUP PER FP DRAWINGS.
- SIMULATED UTILITY METERS BY OWNER.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 2/TT504.
- PROVIDE 16" (W)x8" (H) OPENING AT BASE OF WALL FOR DRAINAGE PER DETAIL 6/TT602.
- MASONRY CONTROL JOINT AT NOTED LOCATIONS.
- SMOKE DISTRIBUTION SYSTEM RISERS PER MEP DRAWINGS.
- THROUGH-SLAB ROPE ANCHOR ABOVE PER DETAIL 2/TT608 AND LOCATED PER 2/TT201.

FINISH SCHEDULE				
ROOM NOS.	CEILING FINISH	FLOOR FINISH	WALL FINISH	NOTES
ALL ROOMS EXCEPT ROOMS 100 & 200	CONCRETE	CONCRETE	CMU	---
100	CONCRETE & GRATING	CONCRETE	CMU	---
200	CONCRETE	CONCRETE & GRATING	CMU	---
STAIRS	CONCRETE	CONCRETE	CMU	---

FINISH SCHEDULE NOTES:  
1. ALL EXPOSED CONCRETE AND CMU SURFACES ARE UNPAINTED.

FIRST FLOOR PLAN

TT201 TT201 SCALE 1/4" = 1'-0"

NOTES:

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH
- TOP OF FINISHED CONCRETE AND GRATING ELEVATION FOR THE TRAINING TOWER SLAB IS INDICATED AS "X.XX" IN FEET ABOVE DATUM SEE 1/TT201 FOR DATUM.
- ALL SINGLE-WYTHE MASONRY WALLS SHALL BE 8" THICK (NOMINAL).
- MASONRY WALLS SHALL BE TIGHT AGAINST CONCRETE COLUMN AND BEAM FACES WITH A GAP BETWEEN THE TWO NOT EXCEEDING 3/8". CONNECT MASONRY TO CONCRETE PER GENERAL NOTE 0.14 ON SHEET TT001.
- PROVIDE (2) COATS OF MASONRY SEALER ON EXTERIOR FACES OF ALL EXTERIOR WALLS PER GENERAL NOTES & SPECS.
- PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL WINDOW AND STEEL PLATE DOOR OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT INTERIOR WALL CORNERS. DO NOT BULLNOSE CORNERS AT HOLLOW METAL DOOR OPENINGS OR WHERE CMU WALLS INTERSECT COLUMNS. SEE CMU OPENING DETAILS, INCLUDING DOOR, WINDOW, AND SCUPPER DETAILS FOR DIRECTION ON BULLNOSING.
- SEE SHEET TT603 FOR DOOR DETAILS & SHEETS TT604 FOR WINDOW DETAILS. (X) DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET TT603 FOR DOORS.
- NO LIVE FIRE TRAINING IS ALLOWED IN THE TOWER.
- 10T @ 11" = 9'-2", 11R @ 6 9/16" ± = 6'-0" FROM FIRST INTERMEDIATE LANDING TO SECOND FLOOR ABOVE & FROM SECOND FLOOR TO SECOND INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- 20T @ 11" = 18'-4", 21R @ 6 3/4" ± = 11'-9 3/4" ± FROM SECOND FLOOR TO THIRD FLOOR. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: . MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT AND MINIMUM SLOPE = 1/8 INCH PER FOOT.

SECOND FLOOR PLAN KEYED NOTES:

- SCUPPER PER SHEET TT602.
- HANDRAIL PER DETAIL 1/TT605.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 5/TT605.
- DRY TRAINING STANDPIPE WITH 2 1/2" VALVE PER FP DRAWINGS.
- CEILING MOUNTED ROPE ANCHORS PER DETAIL 3/TT607 SPACED PER PLAN (26 TOTAL).
- EDGE OF THIRD FLOOR SLAB ABOVE.
- MANHOLE OPENING ABOVE.
- GUARDRAIL AROUND OPENING PER DETAIL 2/TT605.
- GALV. STEEL GUARDRAIL STRENGTHENED FOR RAPPILING PER DETAIL 5/TT608.
- RETURN GUARDRAIL & HANDRAIL TO FACE OF EXTERIOR WALL AT NOTED LOCATIONS.
- FIXED GUARDRAIL PER DETAIL 2/TT605.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 2/TT504.
- X-BRACING PER 1/TT504.
- CHASE FOR SMOKE DISTRIBUTION SYSTEM RISERS IN PER MEP DRAWINGS.
- PROVIDE GALVANIZED HINGED, SELF-CLOSING LADDER SAFETY GATE, MODEL EDGEHALT FULL HEIGHT #LSGF-30-GAL BY PS SAFETY ACCESS AT WWW.PSSAFETYACCESS.COM, OR AN APPROVED EQUIVALENT PER DETAIL 3/TT605.
- HALLIGAN SPIKE PIPE PER DETAIL 6/TT607. PIPE & SILL BOARD PER DETAILS 7/TT607 AND 9A/TT604.
- GALV. PIPE AT FLOOR FOR ROPE TIE OFF PER DETAIL 3/TT608.
- THROUGH-SLAB ROPE ANCHOR AT FLOOR PER DETAIL 2/TT608.
- CONCRETE BEAM ABOVE.
- THROUGH-SLAB ROPE ANCHOR ABOVE PER DETAIL 2/TT608 AND LOCATED PER 1/TT202.
- ROPE TIE-OFF PIPE AT FLOOR PER DETAIL 4/TT608.
- AT NOTED WINDOW, PROVIDE S.S. BENT PLATE OVER SILL FOR ROPE PROTECTION PER DETAIL 9B/TT604.

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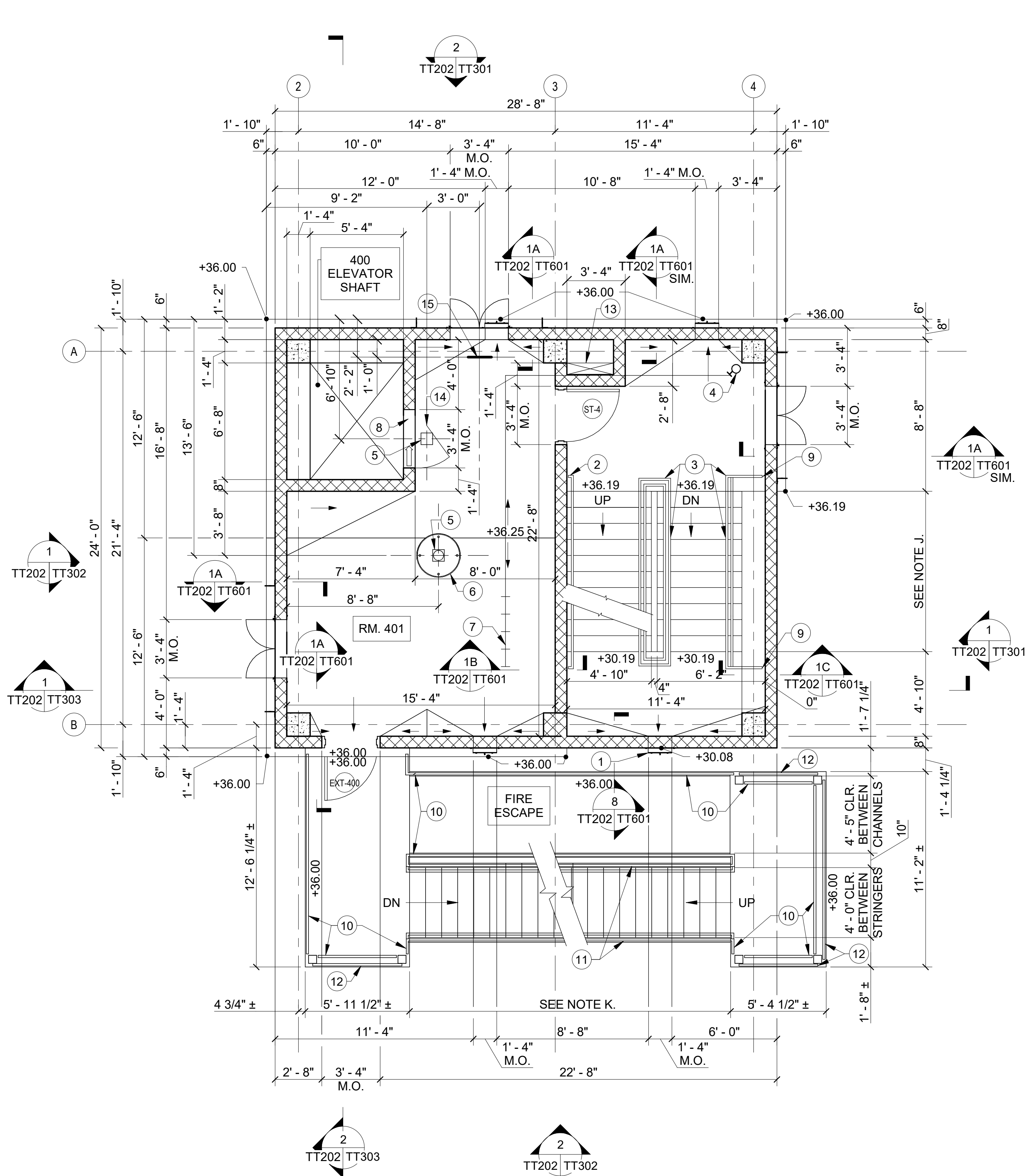
SECOND FLOOR PLAN

TT201 TT201 SCALE 1/4" = 1'-0"



NO.	REVISION	DATE

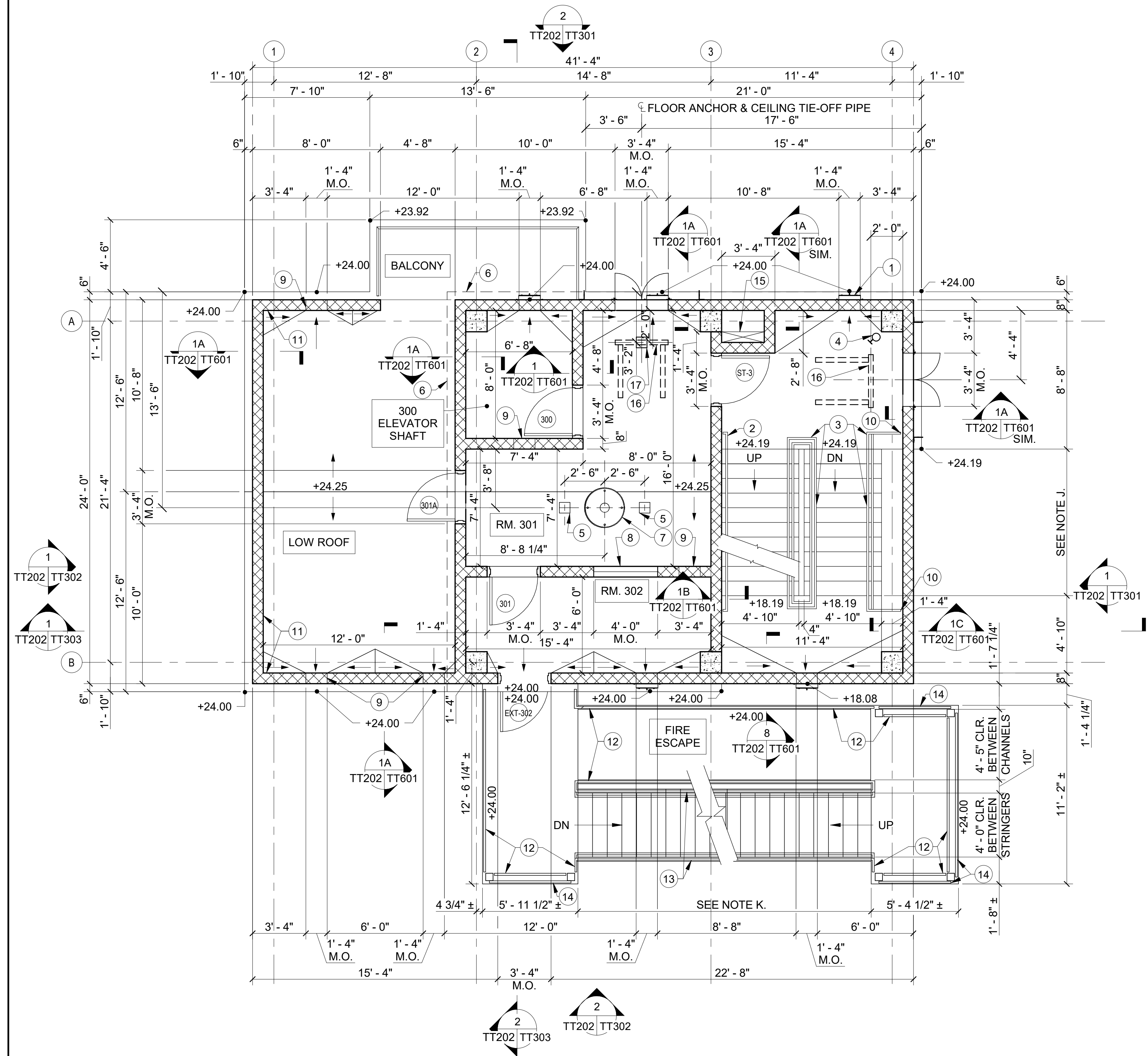
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FOURTH FLOOR PLAN KEYED NOTES:

- SCUPPERS PER TT602 (4 THUS).
- HANDRAIL PER DETAIL 1/TT605.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 5/TT605.
- DRY TRAINING STANDPIPE WITH 2 1/2\" VALVE PER FP DRAWINGS.
- CEILING MOUNTED ROPE ANCHORS PER DETAIL 3/TT607.
- MANHOLE PER DETAIL 4/TT607.
- SPRINKLER LAB PER P DRAWINGS.
- ELEVATOR DOOR PER DETAIL 5/TT608.
- RETURN GUARDRAIL & HANDRAIL TO FACE OF EXTERIOR WALL AT NOTED LOCATIONS.
- FIXED GUARDRAIL PER DETAIL 2/TT605.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 2/TT504.
- X-BRACING PER 1/TT504.
- CHASE FOR SMOKE DISTRIBUTION SYSTEM RISERS PER MEP DRAWINGS.
- GALV. SWINGING FALL PROTECTION GATE PER DETAIL 6/TT606.
- ROPE TIE-OFF PIPE AT FLOOR BELOW WINDOW PER DETAIL 4/TT608.

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TT202 TT202 SCALE 1/4\" = 1'-0\"  
FOURTH FLOOR PLAN



THIRD FLOOR PLAN KEYED NOTES:

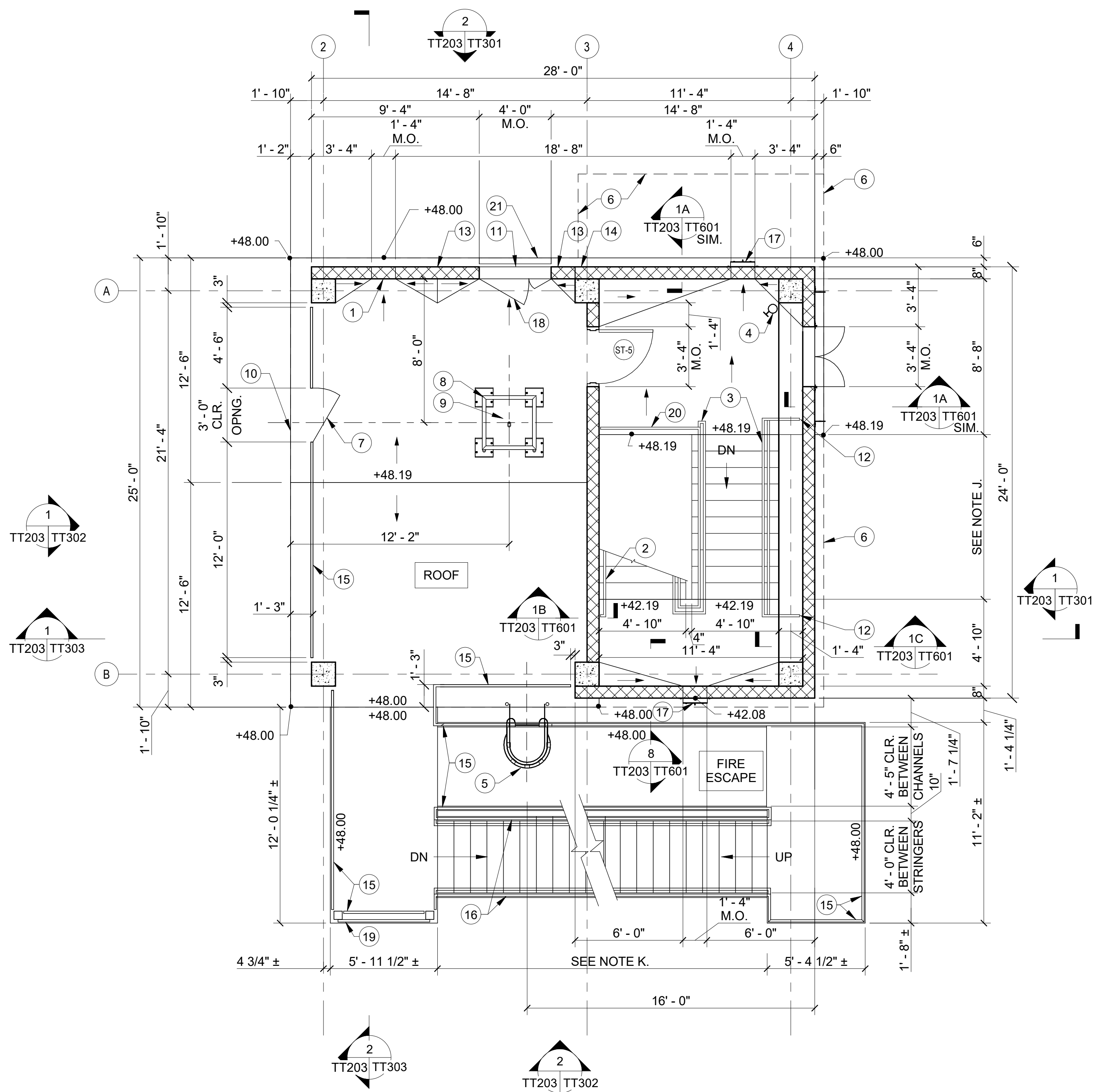
- SCUPPERS PER SHEET TT602 (5 THUS).
- HANDRAIL PER DETAIL 1/TT605.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 5/TT605.
- DRY TRAINING STANDPIPE WITH 2 1/2\" VALVE PER FP DRAWINGS.
- CEILING MOUNTED ROPE ANCHORS PER DETAIL 3/TT607.
- EDGE OF FOURTH FLOOR SLAB ABOVE.
- MANHOLE PER DETAIL 4/TT607.
- BREACH WALL PROP PER DETAIL 7/TT601.
- PROVIDE 16\" (W) x 8\" (H) OPENING AT BASE OF PARAPET FOR DRAINAGE PER DETAIL 6/TT602.
- RETURN GUARDRAIL & HANDRAIL TO FACE OF EXTERIOR WALL AT NOTED LOCATIONS.
- PARAPET PER DETAIL 3/TT601.
- FIXED GUARDRAIL PER DETAIL 2/TT605.
- FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 2/TT504.
- X-BRACING PER 1/TT504.
- CHASE FOR SMOKE DISTRIBUTION SYSTEM RISERS PER MEP DRAWINGS.
- ABOVE-WINDOW ROPE TIE-OFF PIPE FRAME ABOVE PER DETAIL 1/TT608. HEIGHT ABOVE FLOOR TO BOTTOM OF HORIZONTAL PIPE 8'-0\"± IN ROOM 301 AND 6'-8\"± IN STAIRWELL.
- THROUGH-SLAB ROPE ANCHOR AT FLOOR PER DETAIL 2/TT608.

1  
TT202 TT202 SCALE 1/4\" = 1'-0\"  
THIRD FLOOR/LOW ROOF PLAN

NOTES:

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH arrows.
- TOP OF FINISHED CONCRETE ELEVATION FOR THE TRAINING TOWER SLAB IS INDICATED AS 'X.XX' IN FEET ABOVE DATUM SEE 1/TT201 FOR DATUM.
- ALL SINGLE-WYTHE MASONRY WALLS SHALL BE 8\" THICK (NOMINAL).
- MASONRY WALLS SHALL BE TIGHT AGAINST CONCRETE COLUMN AND BEAM FACES WITH A GAP BETWEEN THE TWO NOT EXCEEDING 3/8\". CONNECT MASONRY TO CONCRETE PER GENERAL NOTE 0.14 ON SHEET TT001.
- PROVIDE (2) COATS OF MASONRY SEALER ON EXTERIOR FACES OF ALL EXTERIOR WALLS PER GENERAL NOTES & SPECS.
- PROVIDE BULLNOSED AT JAMBS OF ALL WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT INTERIOR WALL CORNERS. DO NOT BULLNOSE CORNERS AT HOLLOW METAL DOOR OPENINGS OR WHERE CMU WALLS INTERSECT COLUMNS. SEE CMU OPENING DETAILS, INCLUDING DOOR, WINDOW, AND SCUPPER DETAILS FOR DIRECTION ON BULLNOSING.
- SEE SHEET TT603 FOR DOOR DETAILS & SHEETS TT604 FOR WINDOW DETAILS. (X) DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET TT603 FOR DOORS.
- NO LIVE FIRE TRAINING IS ALLOWED IN THE TOWER.
- 10T @ 11\" = 9'-2\", 11R @ 6 9/16\"± = 6'-0\" FROM SECOND INTERMEDIATE LANDING TO THIRD FLOOR ABOVE & FROM THIRD FLOOR TO THIRD INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- 20T @ 11\" = 18'-4\", 21R @ 6 7/8\"± = 12'-0\" FROM THIRD FLOOR TO FOURTH FLOOR. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- PROVIDE \"CRICKETS\" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT AND MINIMUM SLOPE = 1/8 INCH PER FOOT.



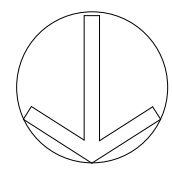


NOTES:

- A. DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH
- B. TOP OF FINISHED CONCRETE ELEVATION FOR THE TRAINING TOWER SLAB IS INDICATED AS "X.XX" IN FEET ABOVE DATUM SEE 1/TT201 FOR DATUM.
- C. ALL SINGLE-WYTHE MASONRY WALLS SHALL BE 8" THICK (NOMINAL).
- D. MASONRY WALLS SHALL BE TIGHT AGAINST CONCRETE COLUMN AND BEAM FACES WITH A GAP BETWEEN THE TWO NOT EXCEEDING 3/8". CONNECT MASONRY TO CONCRETE PER GENERAL NOTE 0.14 ON SHEET TT001.
- E. PROVIDE (2) COATS OF MASONRY SEALER ON EXTERIOR FACES OF ALL EXTERIOR WALLS PER GENERAL NOTES & SPECS.
- F. PROVIDE BULLNOSED AT JAMBS OF ALL WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT INTERIOR WALL CORNERS. DO NOT BULLNOSE CORNERS AT HOLLOW METAL DOOR OPENINGS OR WHERE CMU WALLS INTERSECT COLUMNS. SEE CMU OPENING DETAILS, INCLUDING DOOR, WINDOW, AND SCUPPER DETAILS FOR DIRECTION ON BULLNOSING.
- G. SEE SHEET TT603 FOR DOOR DETAILS & SHEETS TT604 FOR WINDOW DETAILS. (X) DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET TT603 FOR DOORS.
- H. NO LIVE FIRE TRAINING IS ALLOWED IN THE TOWER.
- J. 10T @ 11" = 9'-2", 11R @ 6 9/16"± = 6'-0" FROM FOURTH INTERMEDIATE LANDING TO FIFTH FLOOR ABOVE & FROM FIFTH FLOOR TO FIFTH INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- K. 20T @ 11" = 18'-4", 21R @ 6 7/8"± = 12'-0" FROM FIFTH FLOOR TO HIGH ROOF. PROVIDE EQUAL RISER HEIGHTS WITHIN FLIGHT.
- L. PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT AND MINIMUM SLOPE = 1/8 INCH PER FOOT.

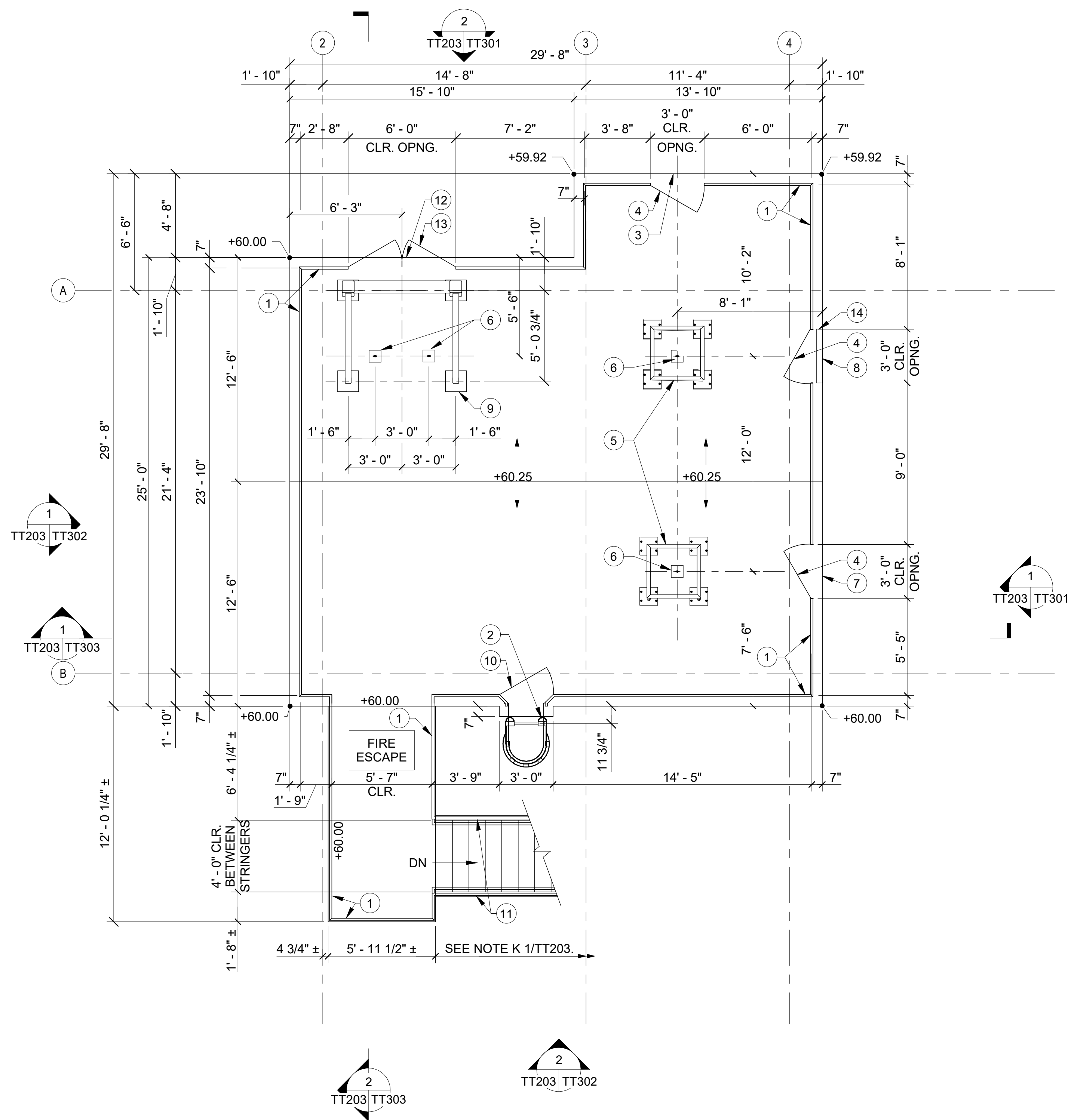
FIFTH FLOOR PLAN KEYED NOTES:

- 1 PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF PARAPET FOR DRAINAGE PER DETAIL 6/TT602.
- 2 HANDRAIL PER DETAIL 1/TT605.
- 3 FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 5/TT605.
- 4 DRY TRAINING STANDPIPE WITH 2 1/2" VALVE PER FP DRAWINGS.
- 5 FIXED VERTICAL ACCESS LADDER PER GENERAL NOTE S ON TT001 UP FROM FIFTH FLOOR FIRE ESCAPE TO HIGH ROOF. SUPPORT BOTTOM OF LADDER ON STEEL BEAM OF FIRE ESCAPE
- 6 EDGE OF HIGH ROOF SLAB ABOVE.
- 7 SINGLE-SWINGING GATE PER DETAIL 3/TT605.
- 8 ROPE FRAME PER DETAIL 5/TT607.
- 9 ROPE ANCHOR PER DETAIL 3/TT607.
- 10 RAPPEL OVER BLANK WALL TO LOW ROOF.
- 11 RAPPEL DOWN A LINE OF WINDOWS.
- 12 RETURN GUARDRAIL & HANDRAIL TO FACE OF EXTERIOR WALL AT NOTED LOCATIONS.
- 13 PARAPET PER DETAIL 3/TT601.
- 14 FULL HEIGHT CMU WALL PER WALL SECTIONS.
- 15 FIXED GUARDRAIL PER DETAIL 2/TT605.
- 16 FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 2/TT504.
- 17 SCUPPER PER SHEET TT602.
- 18 SINGLE-SWINGING GATE PER DETAIL 4/TT606.
- 19 X-BRACING PER 1/TT504.
- 20 FIXED GUARDRAIL PER DETAIL 11/TT605.
- 21 ROPE PROTECTION BENT PLATE AT SLAB EDGE PER DETAIL 3/TT403.



TT203 TT203 SCALE 1/4" = 1'-0"

FIFTH FLOOR/MAIN ROOF PLAN

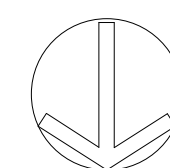


NOTES:

- A. DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH
- B. TOP OF FINISHED CONCRETE ELEVATION FOR THE TRAINING TOWER SLAB IS INDICATED AS "X.XX" IN FEET ABOVE DATUM SEE 1/TT201 FOR DATUM.

HIGH ROOF PLAN KEYED NOTES:

- 1 FIXED GUARDRAIL PER DETAIL 2/TT605.
- 2 FIXED VERTICAL ACCESS LADDER PER GENERAL NOTES UP FROM FIFTH FLOOR FIRE ESCAPE. TURN ROOF GUARDRAIL OUT TO EDGE OF SLAB BY CANTILEVERING ALL HORIZONTAL RAILS FROM VERTICAL POSTS LOCATED ON EITHER SIDE OF THE SAFTEY GATE. CONNECT ENDS OF CANTILEVERED HORIZONTAL RAILS WITH A VERTICAL PIPE TO CREATE A FINISHED END TO THE CANTILEVER. CONNECT TOP OF EACH LADDER SIDE RAIL TO TOP RAIL OF GUARDRAIL. SEE GENERAL NOTE S ON TT001.
- 3 CANTILEVERED ROOF SLAB FOR FREE RAPPELL
- 4 SINGLE-SWINGING GATE PER DETAIL 4/TT605.
- 5 ROPE FRAME PER DETAIL 5/TT607.
- 6 ROPE ANCHOR PER DETAIL 3/TT607.
- 7 RAPPEL OVER BLANK WALL.
- 8 RAPPEL DOWN A LINE OF WINDOWS.
- 9 ROPE GENTRY FRAME PER DETAIL 1/TT607.
- 10 PROVIDE GALVANIZED, HINGED, SELF-CLOSING LADDER SAFETY GATE, MODEL EDGEHALT FULL HEIGHT # LSGF-36-GAL. BY PS SAFETY ACCESS AT WWW.PSSAFETYACCESS.COM, OR AN APPROVED EQUIVALENT PER DETAIL 3/TT605.
- 11 FIXED GUARDRAIL WITH HANDRAIL PER DETAIL 2/TT504.
- 12 RAPPEL DOWN OVER HANGING BALCONY AND HIGH ANGLE RESCUE OPENING.
- 13 DOUBLE SWINGING GATE PER DETAIL 1/TT606.
- 14 ROPE PROTECTION BENT PLATE AT SLAB EDGE PER DETAIL 3/TT403.



TT203 TT203 SCALE 1/4" = 1'-0"

HIGH ROOF PLAN

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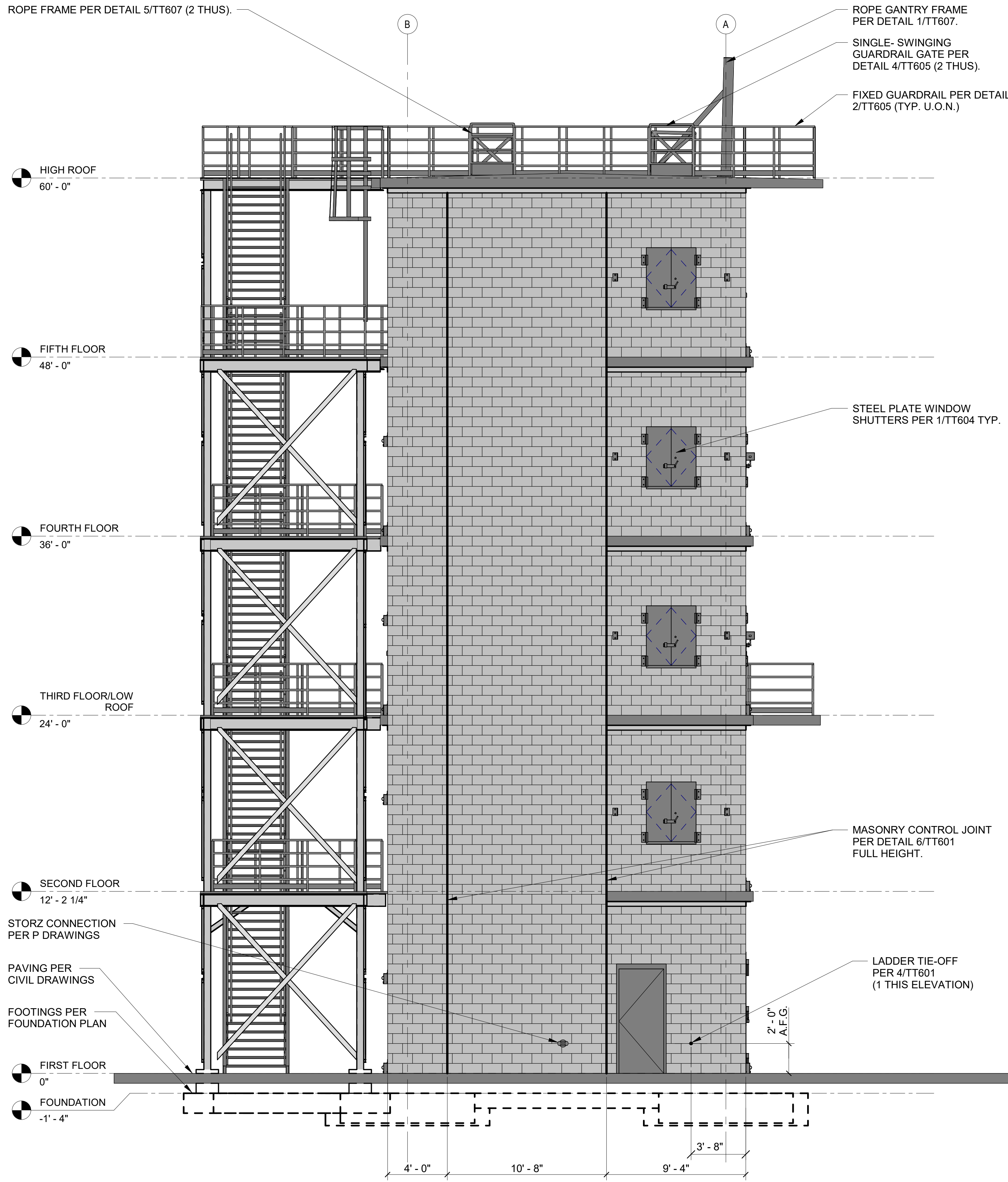
**TRAINING TOWER  
- FIFTH FLOOR &  
HIGH ROOF PLANS**

TT203

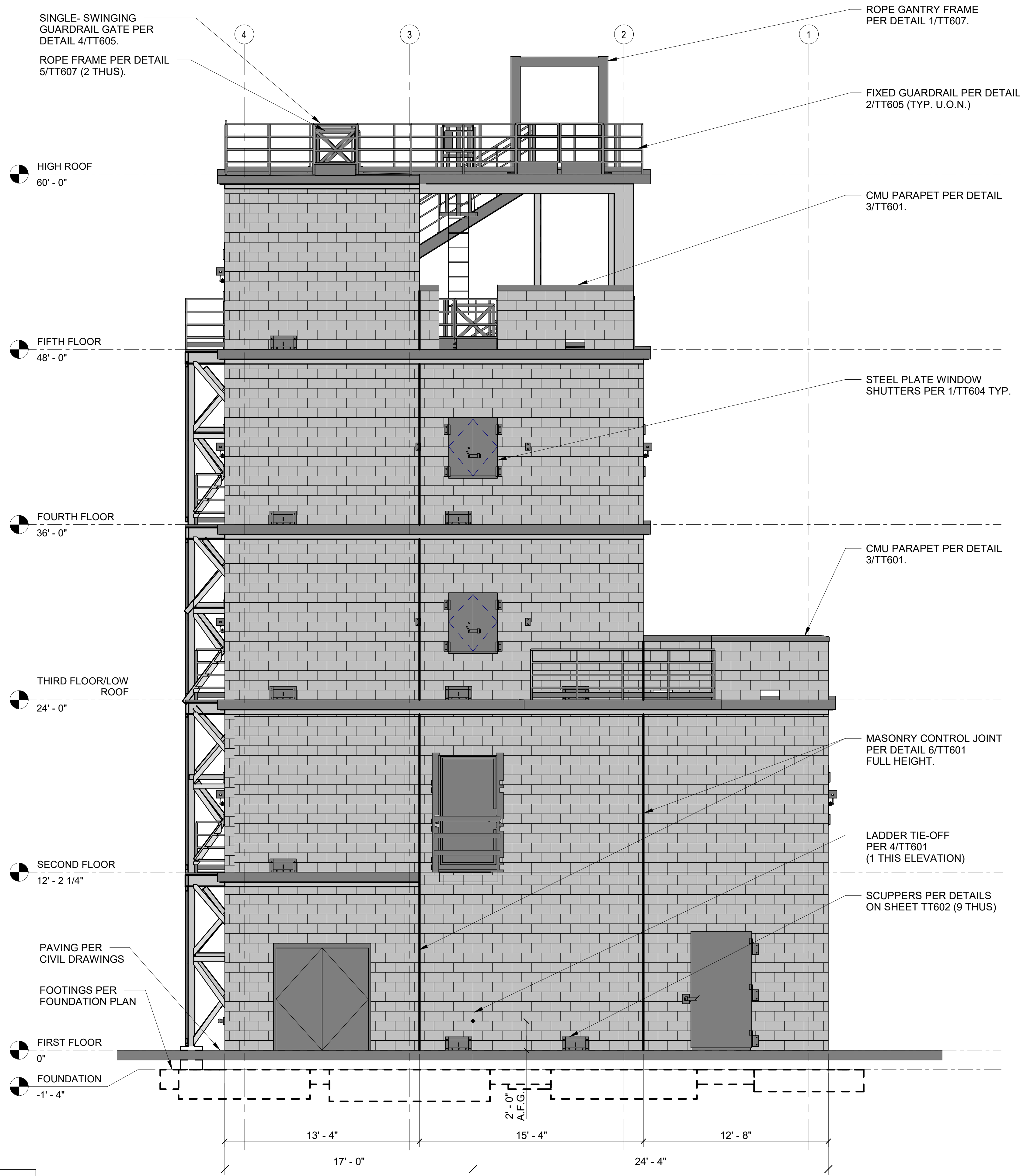
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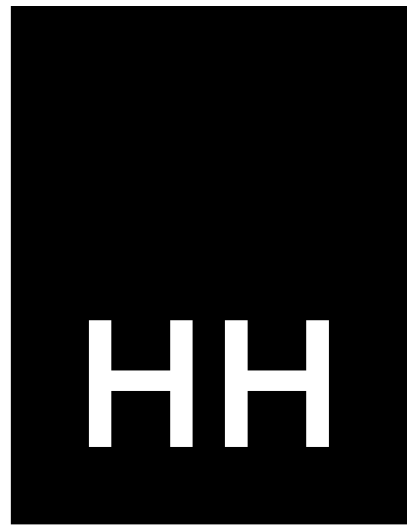




NOTE:  
MASONRY LINES SHOWN  
ON ELEVATIONS ARE  
DIAGRAMMATIC. THEY  
DO NOT REFLECT  
ACTUAL COURSING.



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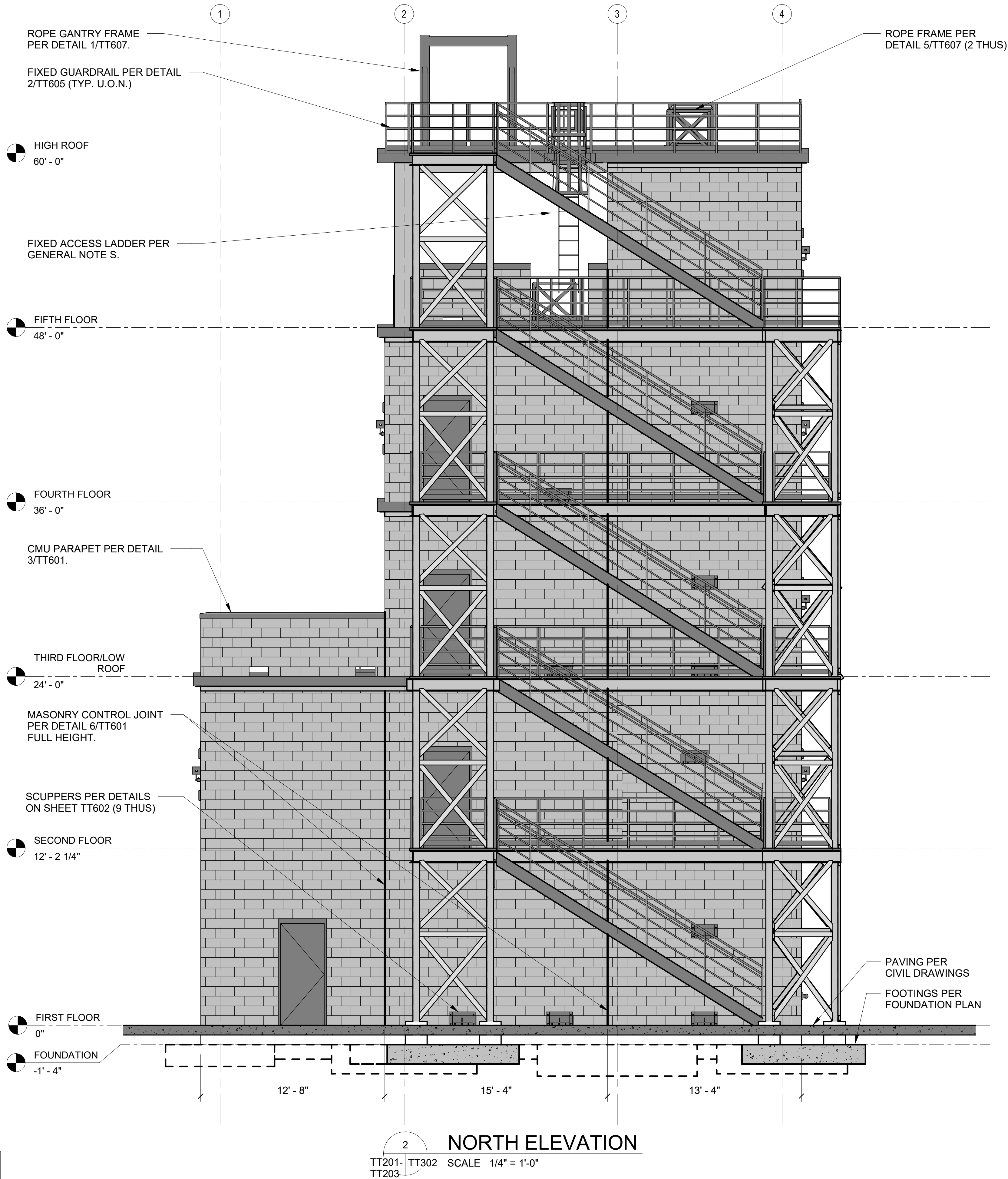
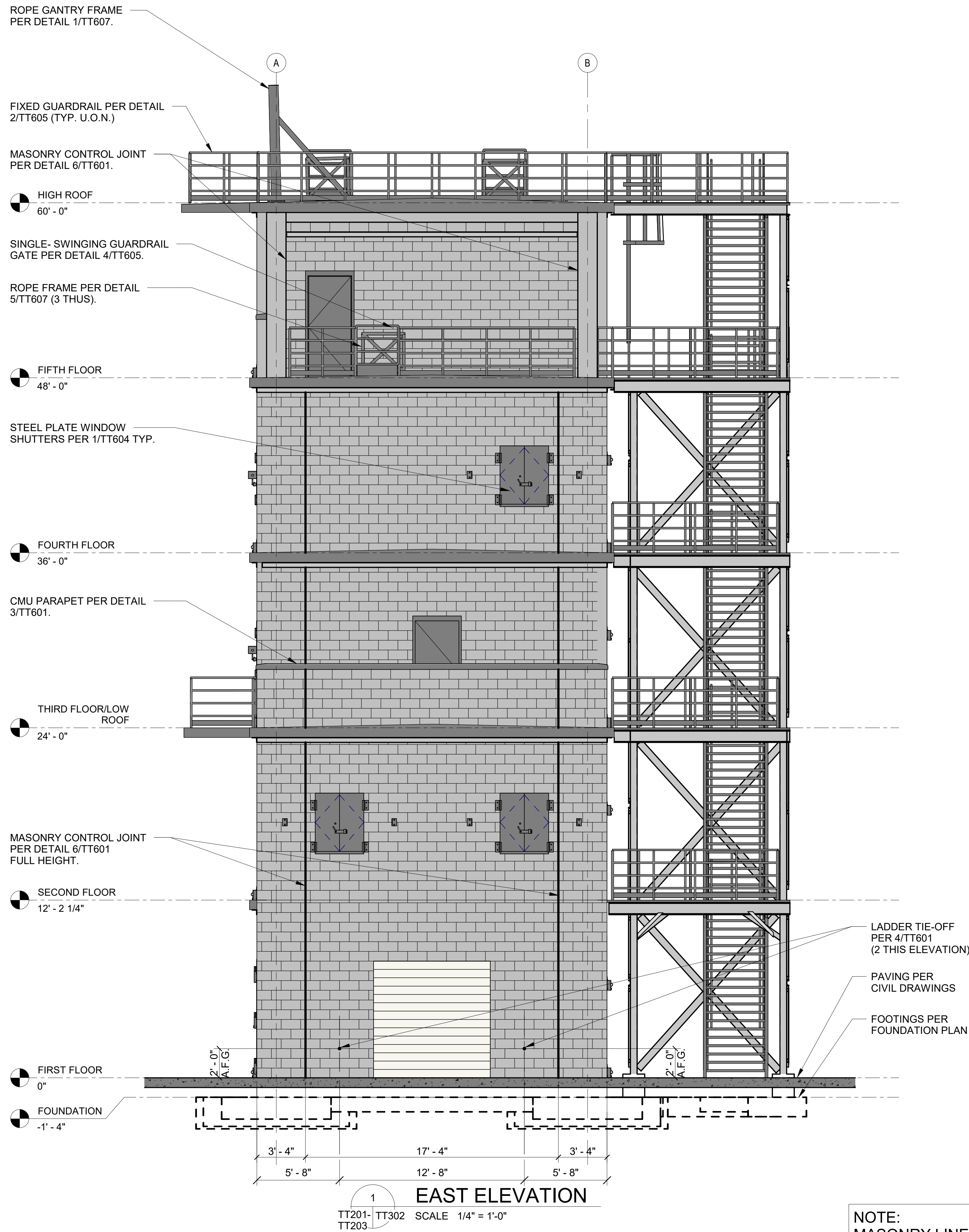
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**TRAINING TOWER  
- WEST & SOUTH  
ELEVATIONS**

TT301





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**ISSUE FOR CONSTRUCTION**  
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**TRAINING TOWER  
- EAST & NORTH  
ELEVATIONS**

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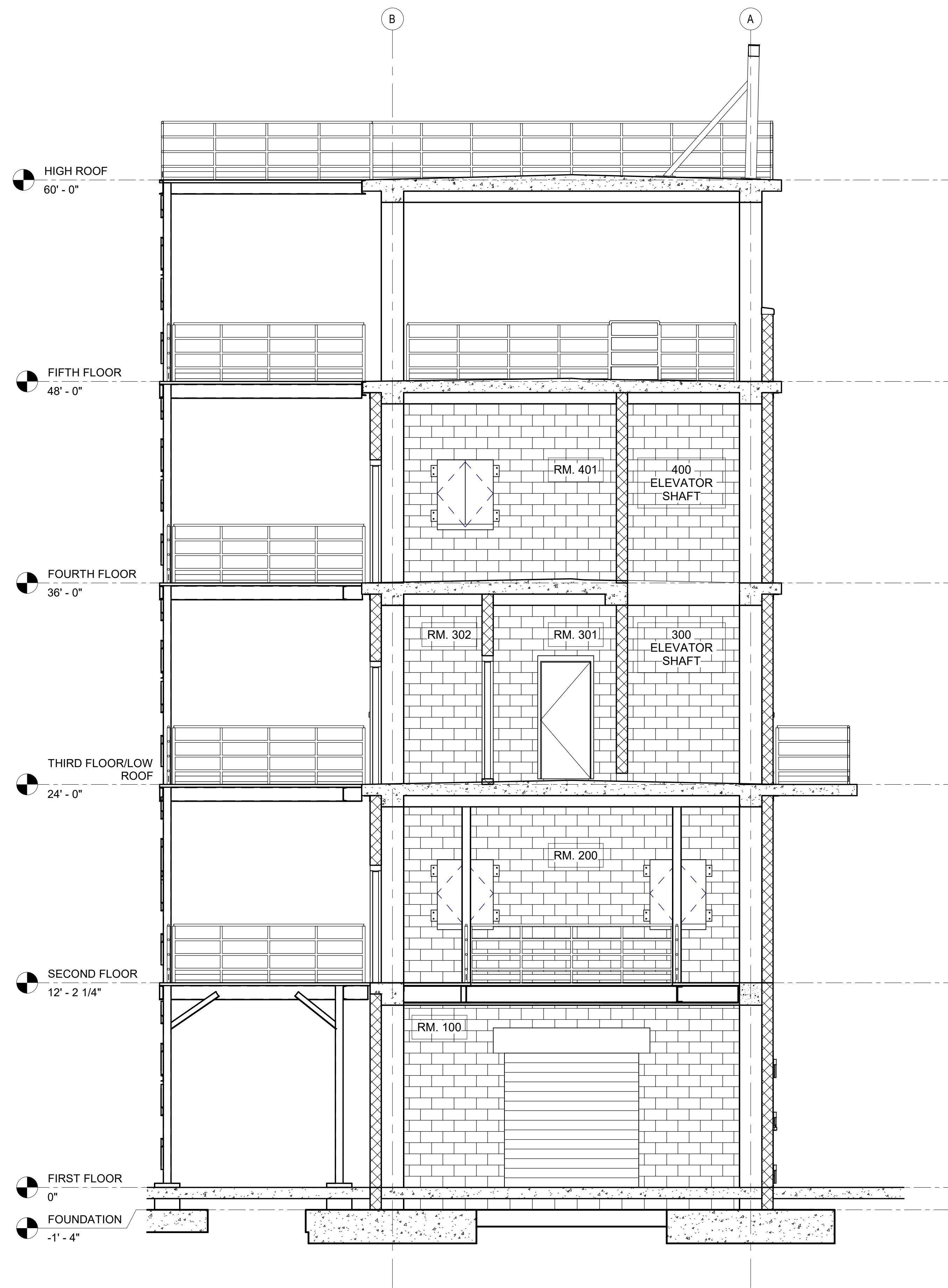
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**ISSUE FOR CONSTRUCTION**  
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**TRAINING TOWER - BUILDING SECTIONS**

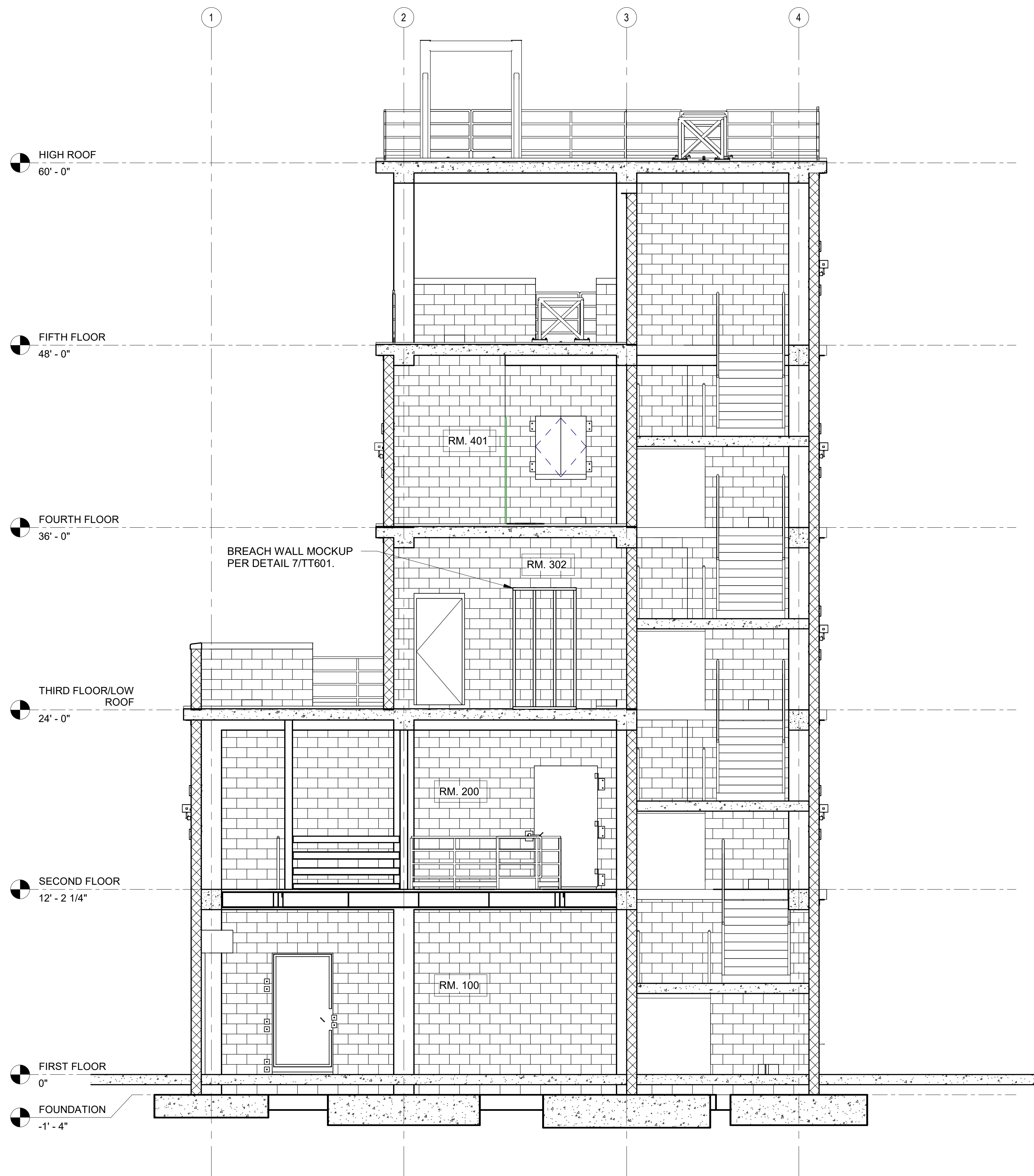
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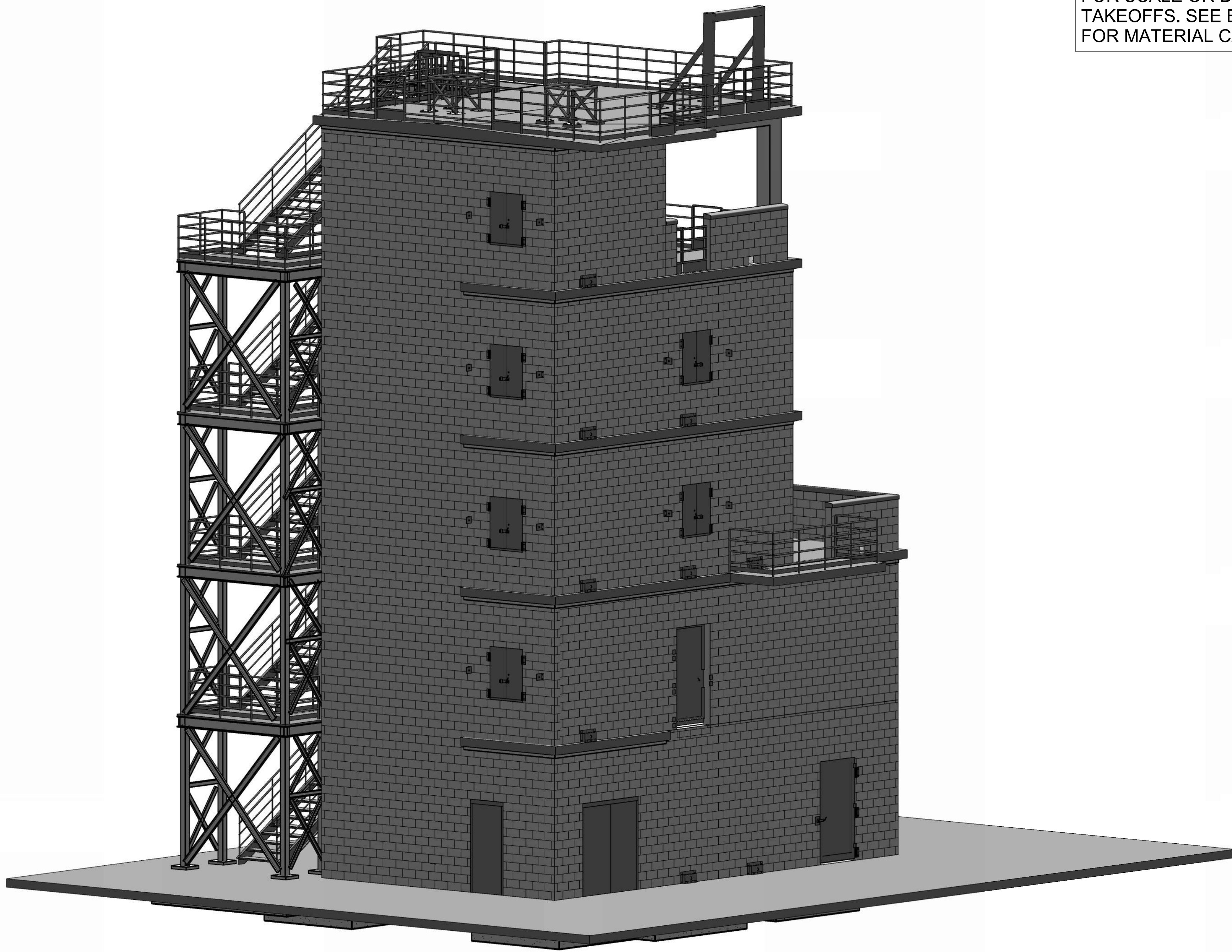


**2 BUILDING SECTION 2**  
TT201- TT303 SCALE 1/4" = 1'-0"  
TT203



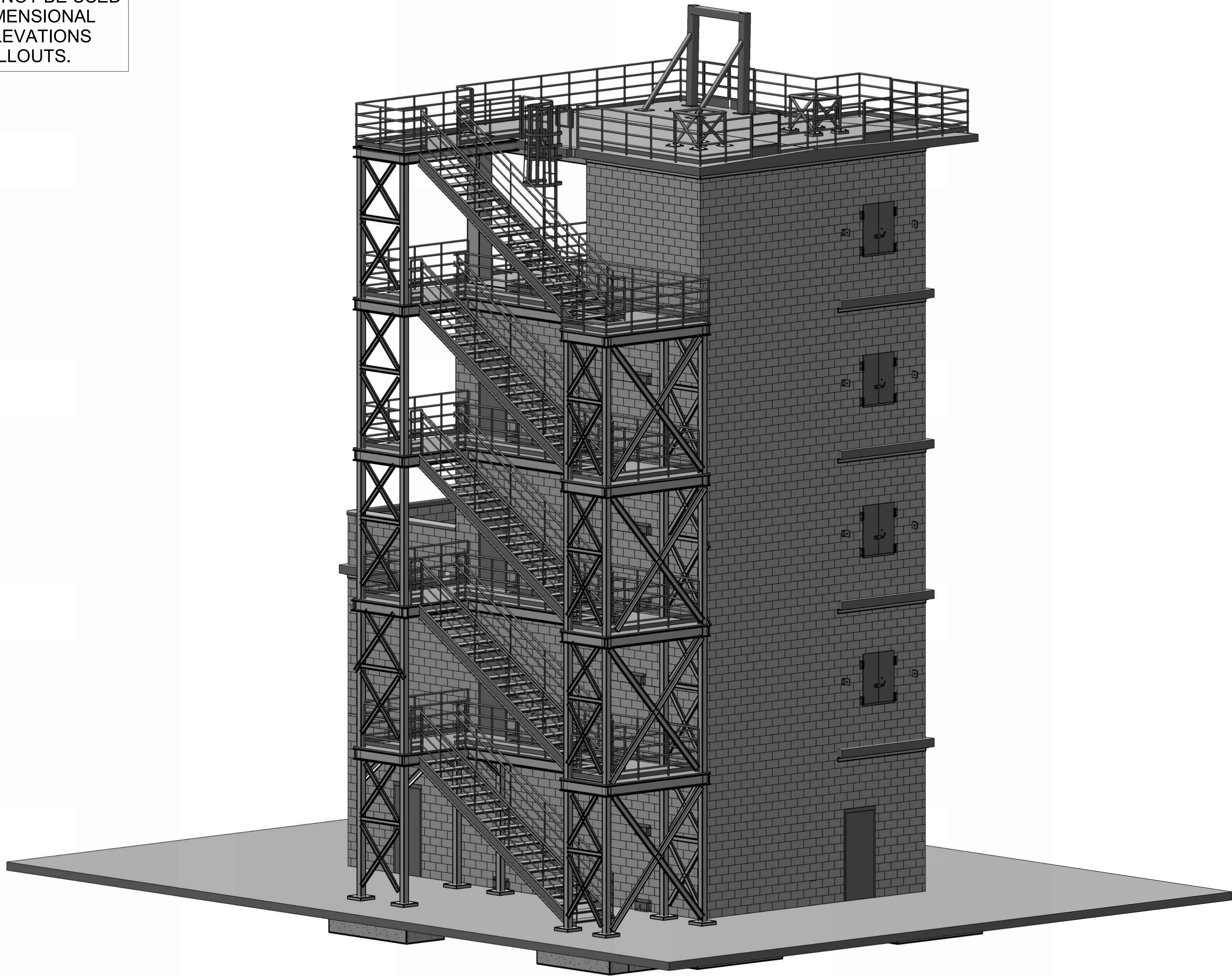
**1 BUILDING SECTION 1**  
TT201- TT303 SCALE 1/4" = 1'-0"  
TT203





1  
TT304 TT304 SCALE  
SOUTHWEST PERSPECTIVE

NOTE: PERSPECTIVE  
DRAWINGS SHALL NOT BE USED  
FOR SCALE OR DIMENSIONAL  
TAKEOFFS. SEE ELEVATIONS  
FOR MATERIAL CALLOUTS.



2  
TT304 TT304 SCALE  
NORTHWEST PERSPECTIVE

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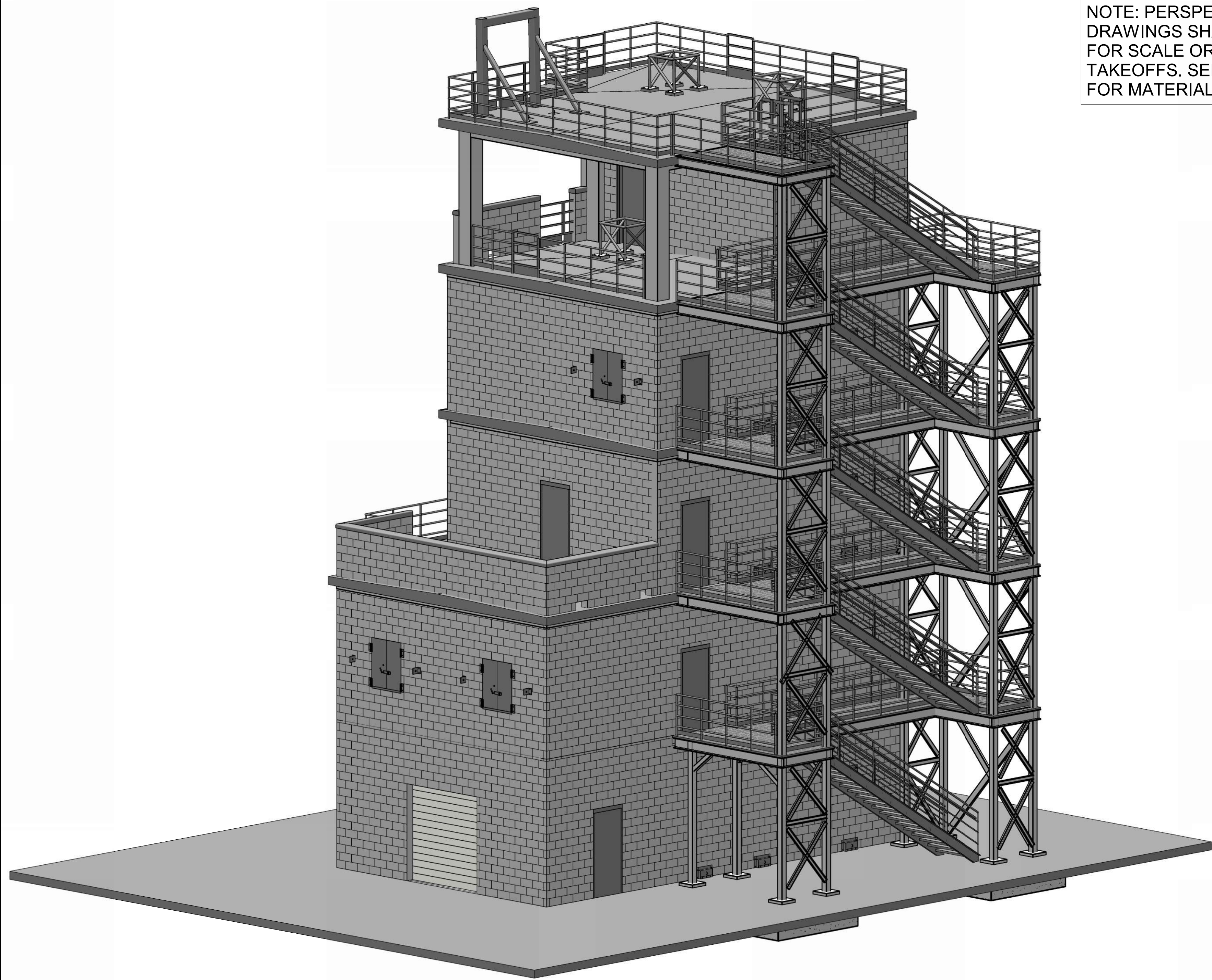
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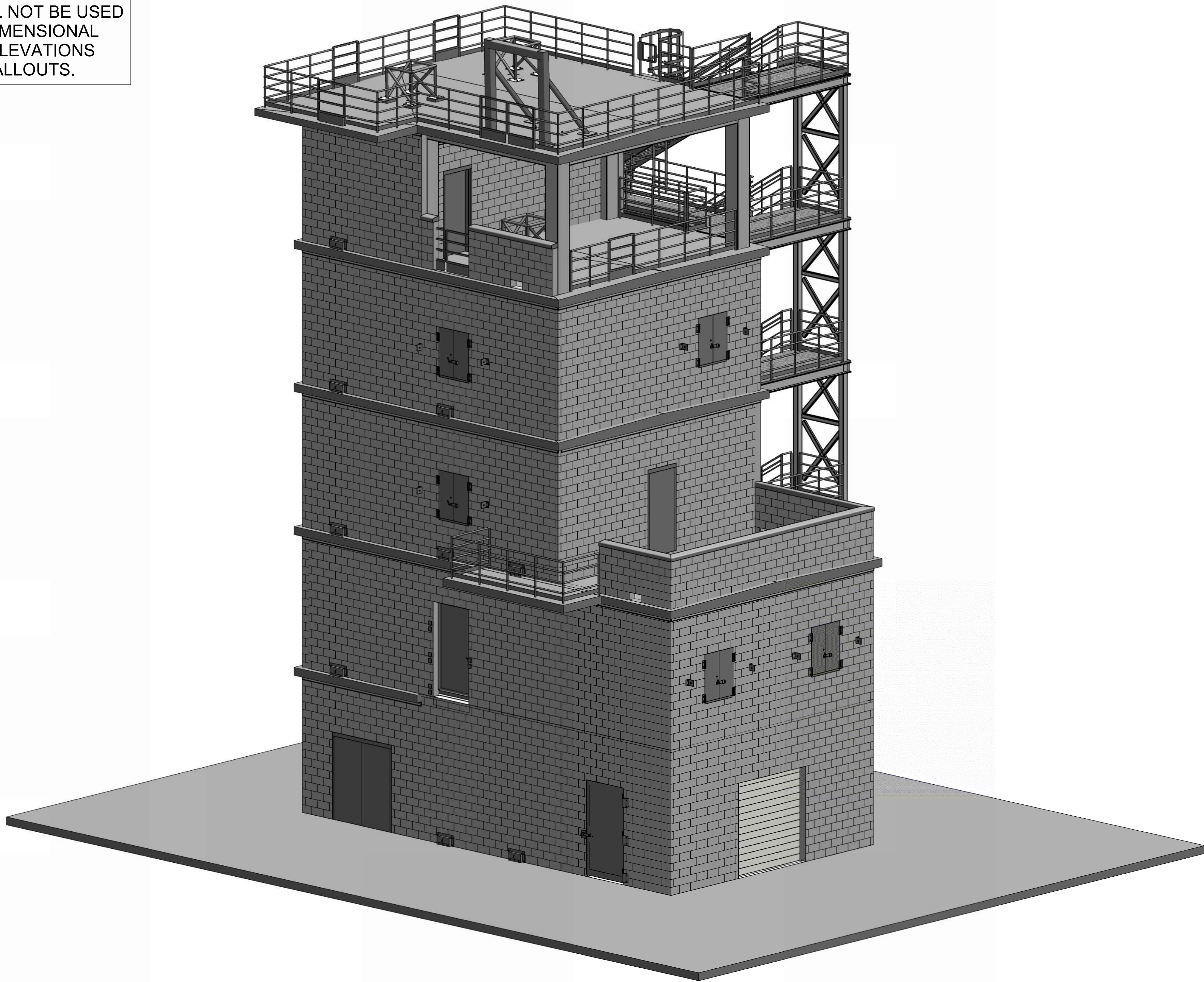
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**TRAINING TOWER - PERSPECTIVES**





1  
TT305 TT305 SCALE  
NORTHEAST PERSPECTIVE

NOTE: PERSPECTIVE  
DRAWINGS SHALL NOT BE USED  
FOR SCALE OR DIMENSIONAL  
TAKEOFFS. SEE ELEVATIONS  
FOR MATERIAL CALLOUTS.



2  
TT305 TT305 SCALE  
SOUTHEAST PERSPECTIVE

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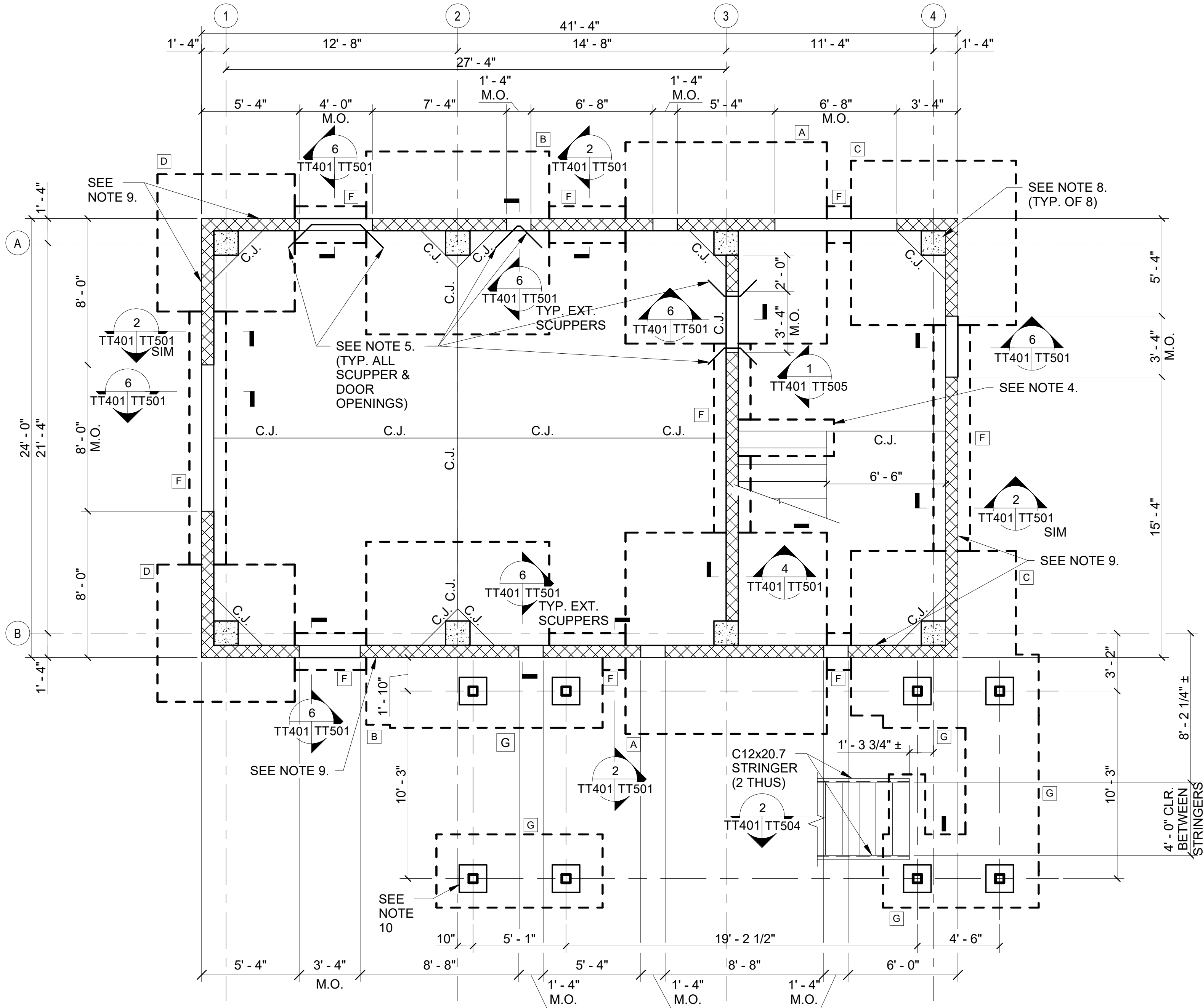
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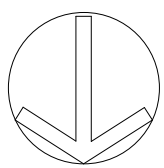


NOTES:

- LOCATE TOPS OF FOOTINGS AT 1'-4" BELOW DATUM, U.O.N.. SEE FIRST FLOOR PLAN TT201 FOR DATUM.
- SEE FOOTING SCHEDULE FOR FOOTINGS NOTED THUS [X]. WHERE WALL FOOTINGS INTERSECT COLUMN FOOTINGS, EXTEND CONTINUOUS WALL FOOTING BARS 4'-0" MIN. INTO COLUMN FOOTING.
- SEE FIRST FLOOR PLAN 1/TT100 FOR ALL SLAB ELEVATIONS AND SLOPES. SEE SECTION N OF THE GENERAL NOTES ON SHEET TT001 FOR SLAB THICKNESS AND REINFORCING.
- PROVIDE A 2'-0" WIDE x 5'-6" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 1/TT505.
- AT ALL DOOR & SCUPPER OPENINGS, PROVIDE ADDED REINFORCING IN S.O.G. PER DETAIL 7/TT501.
- CJ = CONTROL JOINT PER SPECIFICATIONS.
- PROVIDE A 2'-0" WIDE x 6'-0" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 2/TT504.
- 16" SQ. CONCRETE COLUMN PER 1/TT501.
- SUPPORT NON-STRUCTURAL CMU WALLS ON WALL FOOTINGS AND COLUMN FOOTINGS WHERE SHOWN ON PLAN. SUPPORT ALL OTHER NON-STRUCTURAL CMU WALLS ON SLAB-ON-GRADE.
- HSS 5 1/2x5 1/2x1/4 COLUMN ON 18" SQ. CONCRETE PEDESTAL PER 3/TT504 AT 8 EXTERIOR STAIR COLUMNS.

COLUMN FOOTING SCHEDULE					
MARK	WIDTH	LENGTH	THICKNESS	BOTTOM REINF.	TOP REINF.
A	11' - 0"	11' - 0"	2' - 2"	(11) #7 E.W.	(11) #7 E.W.
B	10' - 0"	10' - 0"	2' - 0"	(10) #7 E.W.	(10) #7 E.W.
C	9' - 0"	9' - 0"	2' - 0"	(10) #6 E.W.	(10) #6 E.W.
D	7' - 6"	7' - 6"	1' - 6"	(7) #6 E.W.	(7) #6 E.W.

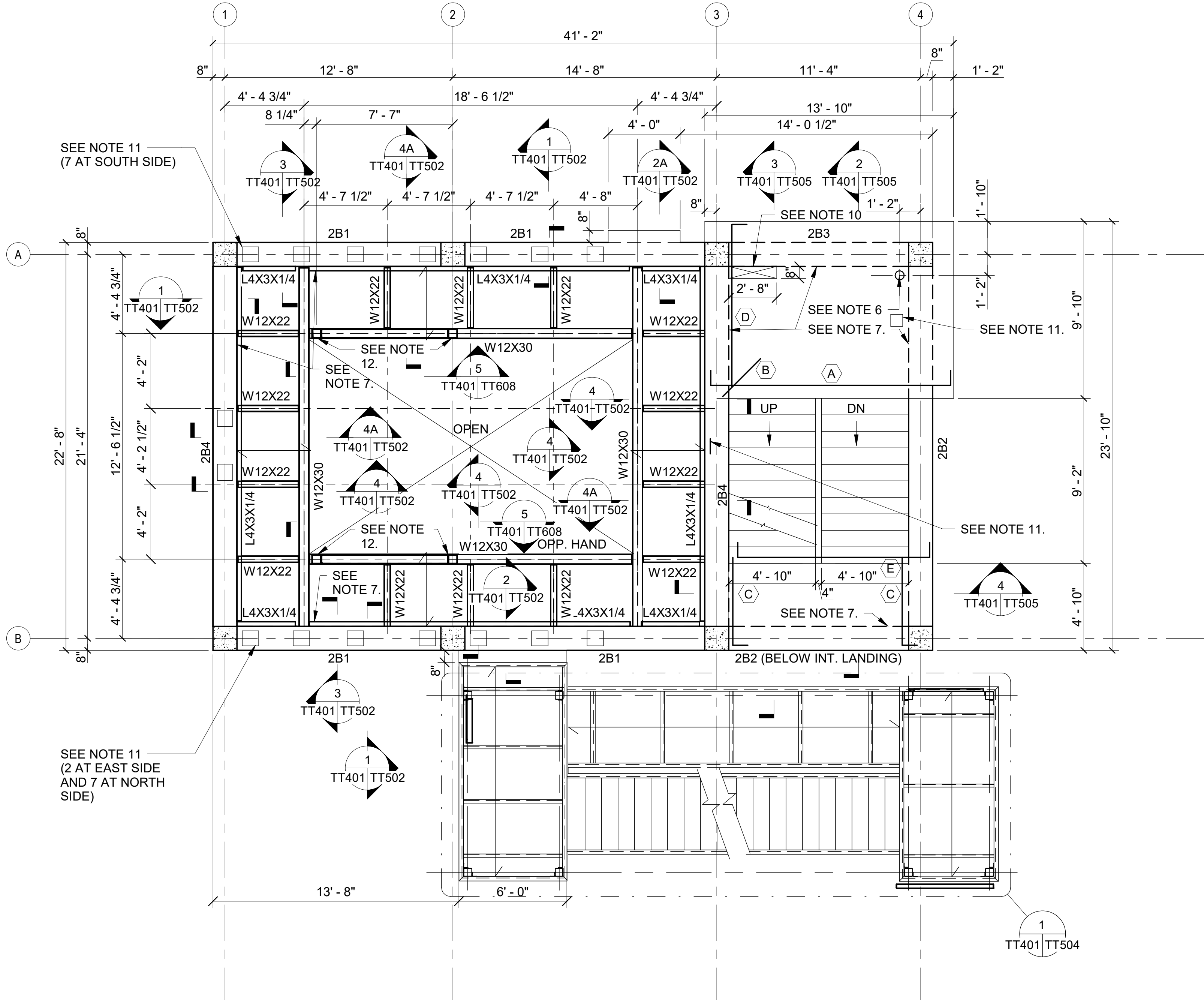
WALL FOOTING SCHEDULE							
MARK	WIDTH	LENGTH	THICKNESS	BOTTOM REINF.		TOP REINF.	
				CONT. (B)	SHORT DIR. (BM)	CONT. (T)	SHORT DIR. (TOP)
F	2' - 0"	CONT.	1' - 0"	(3) #6	#6 @ 18" O.C.	(3) #6	---
G	4' - 0"	CONT.	1' - 4"	(5) #6	#6 @ 12" O.C.	(5) #6	#6 @ 18" O.C.



1  
TT401 TT401

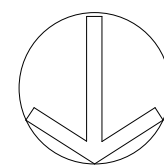
FOUNDATION PLAN

SCALE 1/4" = 1'-0"



NOTES:

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE SECOND FLOOR PLAN 2/TT201 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB SHALL BE AT +11.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN N-S DIRECTION  $\longleftrightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (6) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (B) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (C) = (4) #5 ADDITIONAL TOP BARS @ 6" O.C. & (2) #5 BOTTOM BARS AT EDGE OF SLAB.
  - (D) = (2) #5 ADDITIONAL TOP BARS @ 12" O.C. AT EDGE OF SLAB.
  - (E) = (3) ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. PVC SCH. 40 PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB. NOTIFY ENGINEER IF SLEEVE MUST BE LARGER TO ACCOMMODATE STANDPIPE.
- CONCRETE BEAMS PER SCHEDULE ON SHEET TT503.
- ALL STEEL SHALL BE GALVANIZED U.O.N.
- $\longleftrightarrow$  DENOTES DIRECTION OF GRATING PLANK SPAN.
- AT NOTED LOCATION, PROVIDE SLAB OPENING (DIMENSIONS PER PLAN) FOR SMOKE DISTRIBUTION SYSTEM RISERS.
- CAST EMBEDDED ROPE ANCHOR ITEM INTO SLAB/ BEAM PER FLOOR PLAN 2/TT201 AND REFERENCED DETAILS (FLOOR ITEM AT TOP OF SLAB).
- HSS 6x6 VERTICALS OF GUARDRAIL STRENGTHENED FOR RAPPELLING PER DETAIL 5/TT608.



2  
TT401 TT401

SECOND FLOOR FRAMING PLAN

SCALE 1/4" = 1'-0"

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**TRAINING TOWER  
- FOUNDATION &  
SECOND FLOOR  
FRAMING PLANS**

TT401

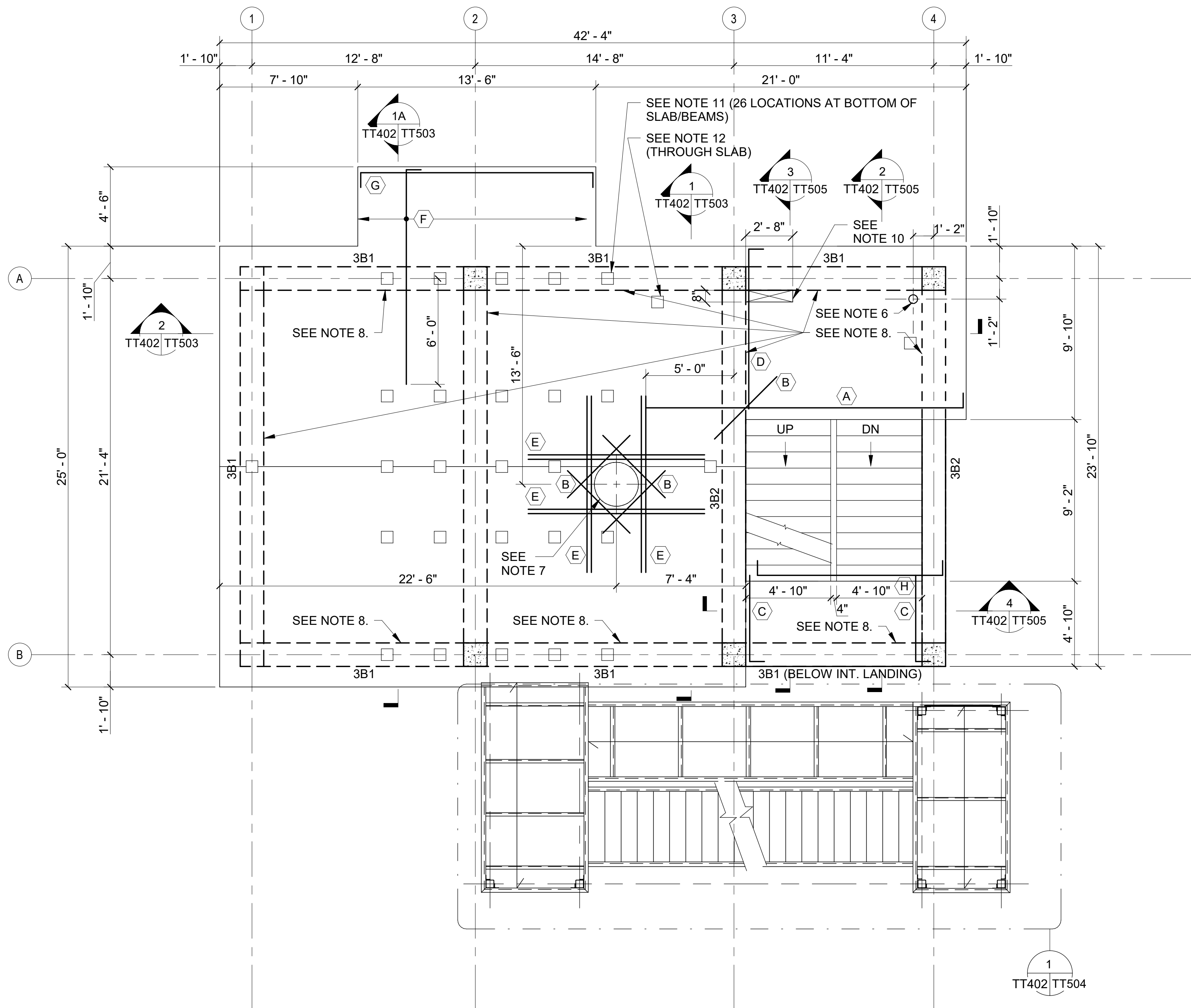




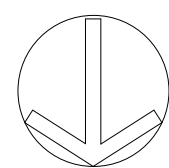
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SHEET**TRAINING TOWER  
- THIRD & FOURTH  
FLOOR FRAMING  
PLANS**

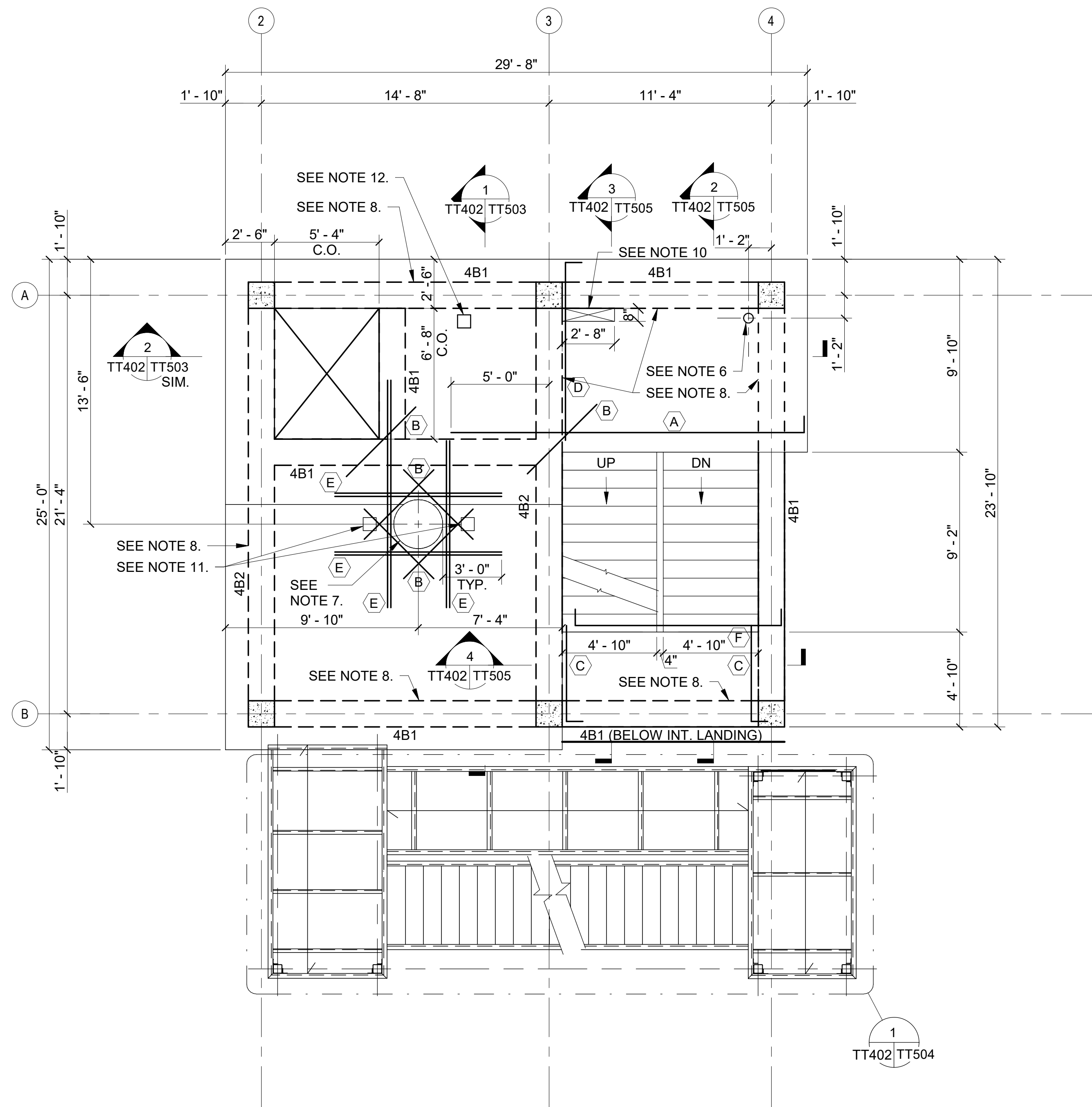
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**NOTES:**

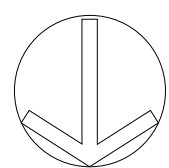
- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE THIRD FLOOR PLAN 1/TT202 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +23.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION → IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (6) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (B) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING OR MANHOLE.
  - (C) = (4) #5 ADDITIONAL TOP BARS @ 6" O.C. & (2) #5 BOTTOM BARS AT EDGE OF SLAB.
  - (D) = (2) #5 ADDITIONAL TOP BARS @ 12" O.C. AT EDGE OF SLAB.
  - (E) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
  - (F) = #5 @ 12" O.C. ADDITIONAL TOP BARS CENTERED BETWEEN MAIN TOP BARS.
  - (G) = (2) #5 TOP & BOTTOM BARS WITHIN 6" OF BALCONY SLAB EDGE.
  - (H) = (3) ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. PVC SCH. 40 PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB. NOTIFY ENGINEER IF SLEEVE MUST BE LARGER TO ACCOMMODATE STANDPIPE.
- 2' - 6" DIA. MANHOLE OPENING PER 4/TT607, CAST INTO SLAB.
- CONCRETE BEAMS PER SCHEDULE ON SHEET TT503.
- DENOTES DIRECTION OF GRATING PLANK SPAN.
- AT NOTED LOCATION, PROVIDE SLAB OPENING (DIMENSIONS PER PLAN) FOR SMOKE DISTRIBUTION SYSTEM RISERS.
- CAST EMBEDDED ROPE ANCHOR ITEM INTO SLAB/BAM PER FLOOR PLAN 2/TT201 AND REFERENCED DETAILS (CEILING ITEM BELOW).
- CAST EMBEDDED ROPE ANCHOR ITEM INTO SLAB/BAM PER FLOOR PLAN 1/TT202 AND REFERENCED DETAILS (FLOOR ITEM AT TOP OF SLAB/BAM).

1  
TT402 TT402**THIRD FLOOR/LOW ROOF FRAMING PLAN**

SCALE 1/4" = 1'-0"

**NOTES:**

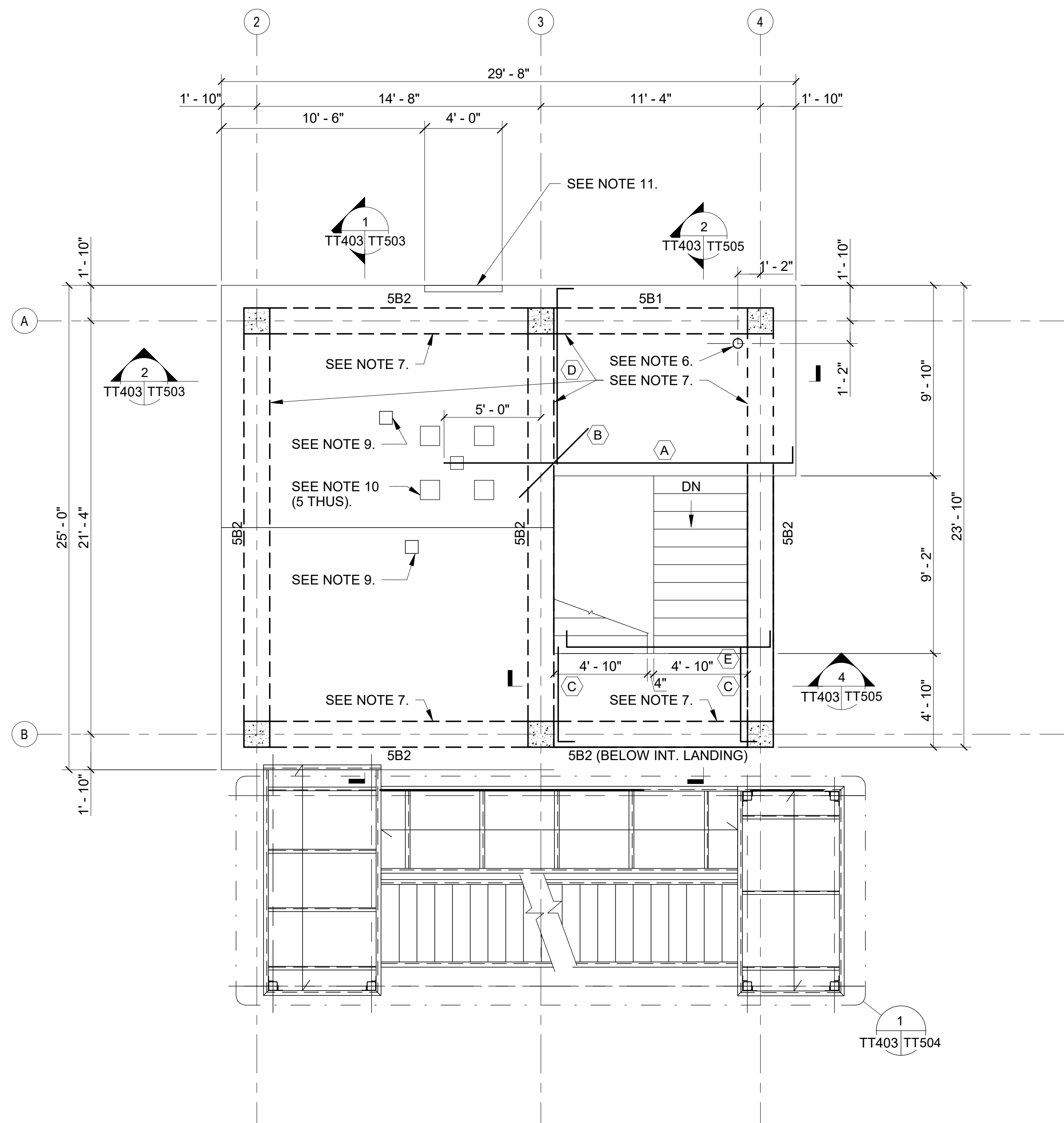
- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE FOURTH FLOOR PLAN 2/TT202 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +35.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION → IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (6) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (B) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING OR MANHOLE.
  - (C) = (4) #5 ADDITIONAL TOP BARS @ 6" O.C. & (2) #5 BOTTOM BARS AT EDGE OF SLAB.
  - (D) = (2) #5 ADDITIONAL TOP BARS @ 12" O.C. AT EDGE OF SLAB.
  - (E) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
  - (F) = (3) ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. PVC SCH. 40 PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB. NOTIFY ENGINEER IF SLEEVE MUST BE LARGER TO ACCOMMODATE STANDPIPE.
- 2' - 6" DIA. MANHOLE OPENING PER 4/TT607, CAST INTO SLAB.
- CONCRETE BEAMS PER SCHEDULE ON SHEET TT503.
- DENOTES DIRECTION OF GRATING PLANK SPAN.
- AT NOTED LOCATION, PROVIDE SLAB OPENING (DIMENSIONS PER PLAN) FOR SMOKE DISTRIBUTION SYSTEM RISERS.
- CAST EMBEDDED ROPE ANCHOR ITEM INTO SLAB/BAM PER FLOOR PLAN 1/TT202 AND REFERENCED DETAILS (CEILING ITEM BELOW).
- CAST EMBEDDED ROPE ANCHOR ITEM INTO SLAB/BAM PER FLOOR PLAN 2/TT202 AND REFERENCED DETAILS (FLOOR ITEM AT TOP OF SLAB/BAM).

2  
TT402 TT402**FOURTH FLOOR FRAMING PLAN**

SCALE 1/4" = 1'-0"

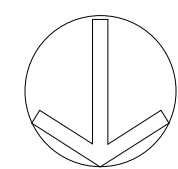
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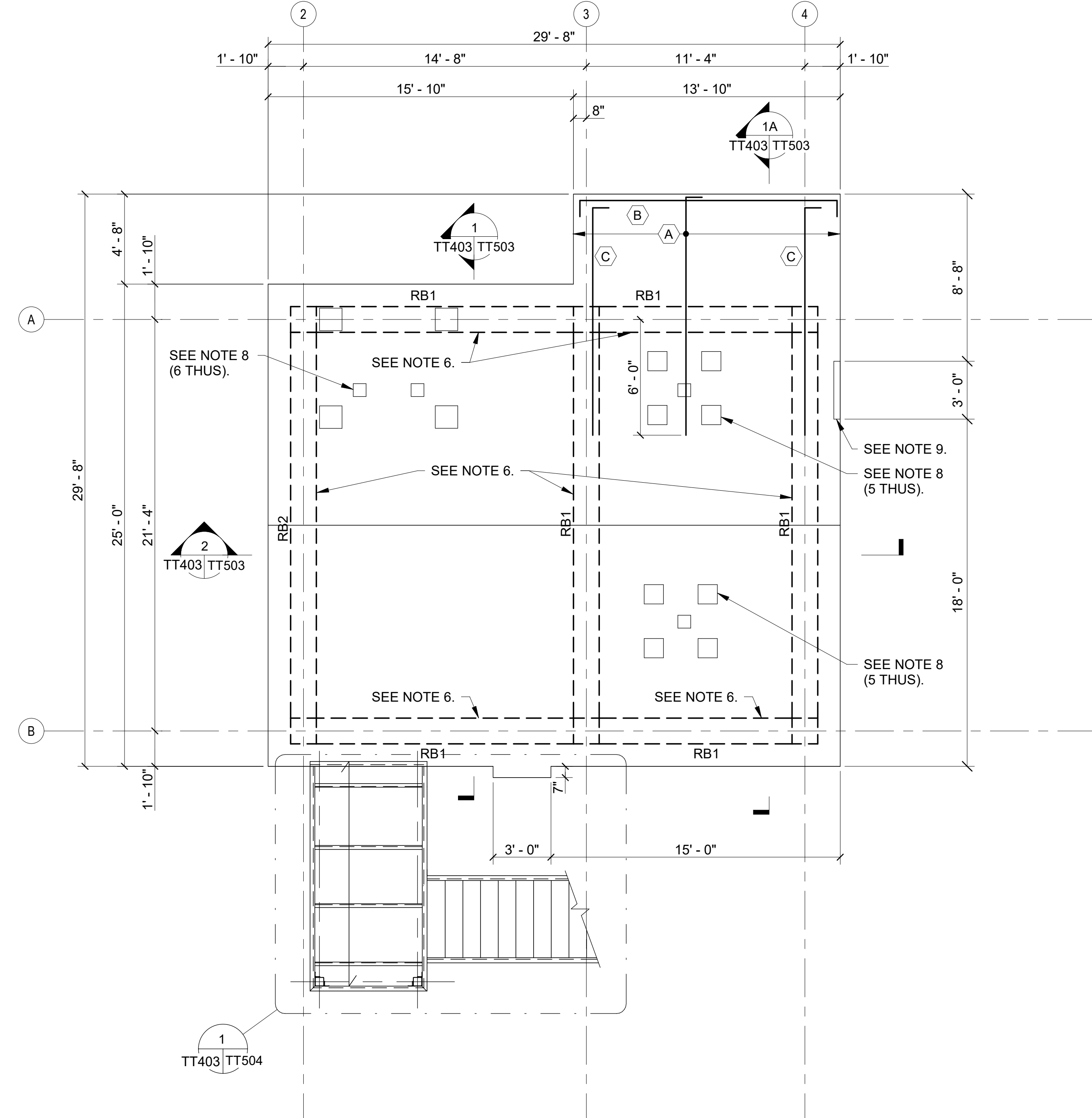
NOTES:

1. SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE FIFTH FLOOR PLAN 1/TT203 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +47.33', U.O.N.,
2. SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
3. OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\longleftrightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
4. SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (6) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (B) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (C) = (4) #5 ADDITIONAL TOP BARS @ 6" O.C. & (2) #5 BOTTOM BARS AT EDGE OF SLAB.
  - (D) = (2) #5 ADDITIONAL TOP BARS @ 12" O.C. AT EDGE OF SLAB.
  - (E) = (3) ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
5. PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
6. PROVIDE PERMANENT 8" DIA. PVC SCH. 40 PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB. NOTIFY ENGINEER IF SLEEVE MUST BE LARGER TO ACCOMMODATE STANDPIPE.
7. CONCRETE BEAMS PER SCHEDULE ON SHEET TT503.
8.  $\longleftrightarrow$  DENOTES DIRECTION OF GRATING PLANK SPAN.
9. CAST EMBEDDED ROPE ANCHOR ITEM INTO SLAB/BEAM PER FLOOR PLAN 2/TT202 AND REFERENCED DETAILS (CEILING ITEM BELOW).
10. CAST EMBEDDED ROPE ANCHOR ITEM INTO SLAB/BEAM PER ROOF PLAN 1/TT203 AND REFERENCED DETAILS (ROOF ITEM AT TOP OF SLAB).
11. AT NOTED LOCATION, CAST SLAB EDGE ROPE PROTECTION INTO SLAB PER DETAIL 3/TT403.



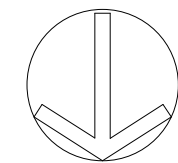
1  
TT403 TT403 SCALE 1/4" = 1'-0"

FIFTH FLOOR/MAIN ROOF FRAMING PLAN



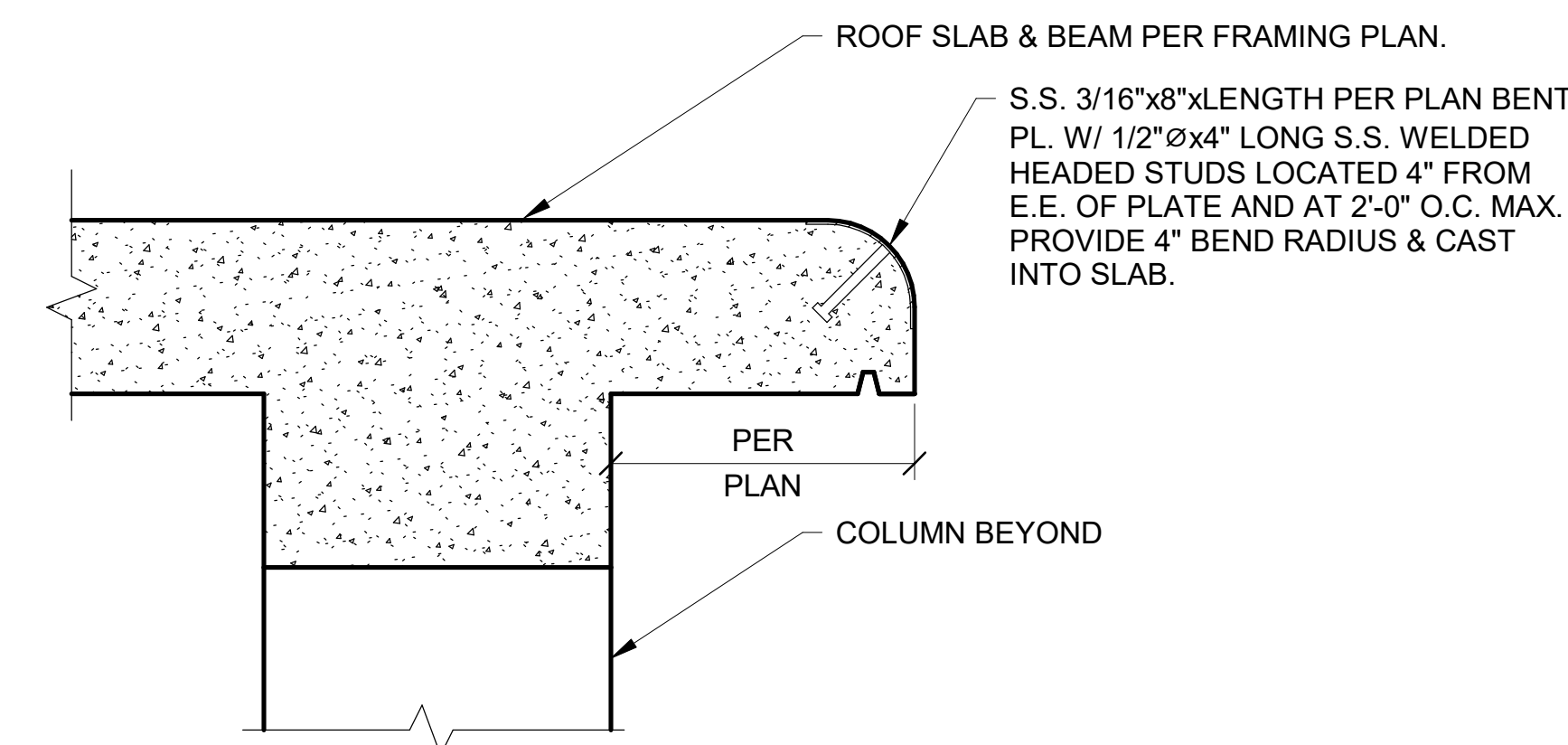
NOTES:

1. SLAB THICKNESS OVER STAIRS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE HIGH ROOF PLAN 2/TT203 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +59.33', U.O.N.
2. SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
3. OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\longleftrightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
4. SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = #5 @ 12" O.C. ADDITIONAL TOP BARS CENTERED BETWEEN MAIN TOP BARS.
  - (B) = (2) #5 TOP & BOTTOM BARS WITHIN 6" OF BALCONY SLAB EDGE.
  - (C) = EXTEND RB1 TOP BARS TOP BARS TO EDGE OF CANTILEVERED SLAB.
5. PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
6. CONCRETE BEAMS PER SCHEDULE ON SHEET TT503.
7.  $\longleftrightarrow$  DENOTES DIRECTION OF GRATING PLANK SPAN.
8. CAST EMBEDDED ROPE ANCHOR INTO SLAB PER ROOF PLAN 2/TT203 AND REFERENCED DETAILS (ROOF ITEM AT TOP OF SLAB).
9. AT NOTED LOCATION, CAST SLAB EDGE ROPE PROTECTION INTO SLAB PER DETAIL 3/TT403.

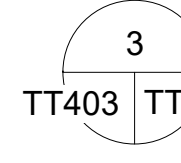


2  
TT403 TT403 SCALE 1/4" = 1'-0"

HIGH ROOF FRAMING PLAN



NOTE: SLAB REINFORCING NOT SHOWN FOR CLARITY.



3  
TT403 TT403 SCALE 1 1/2" = 1'-0"

SLAB EDGE ROPE PROTECTION DETAIL

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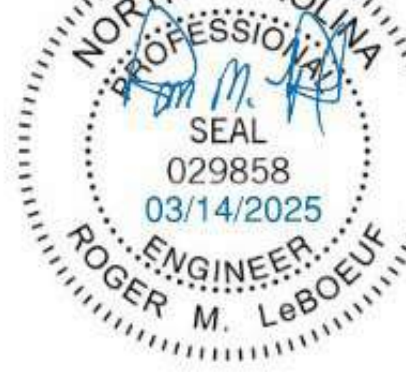
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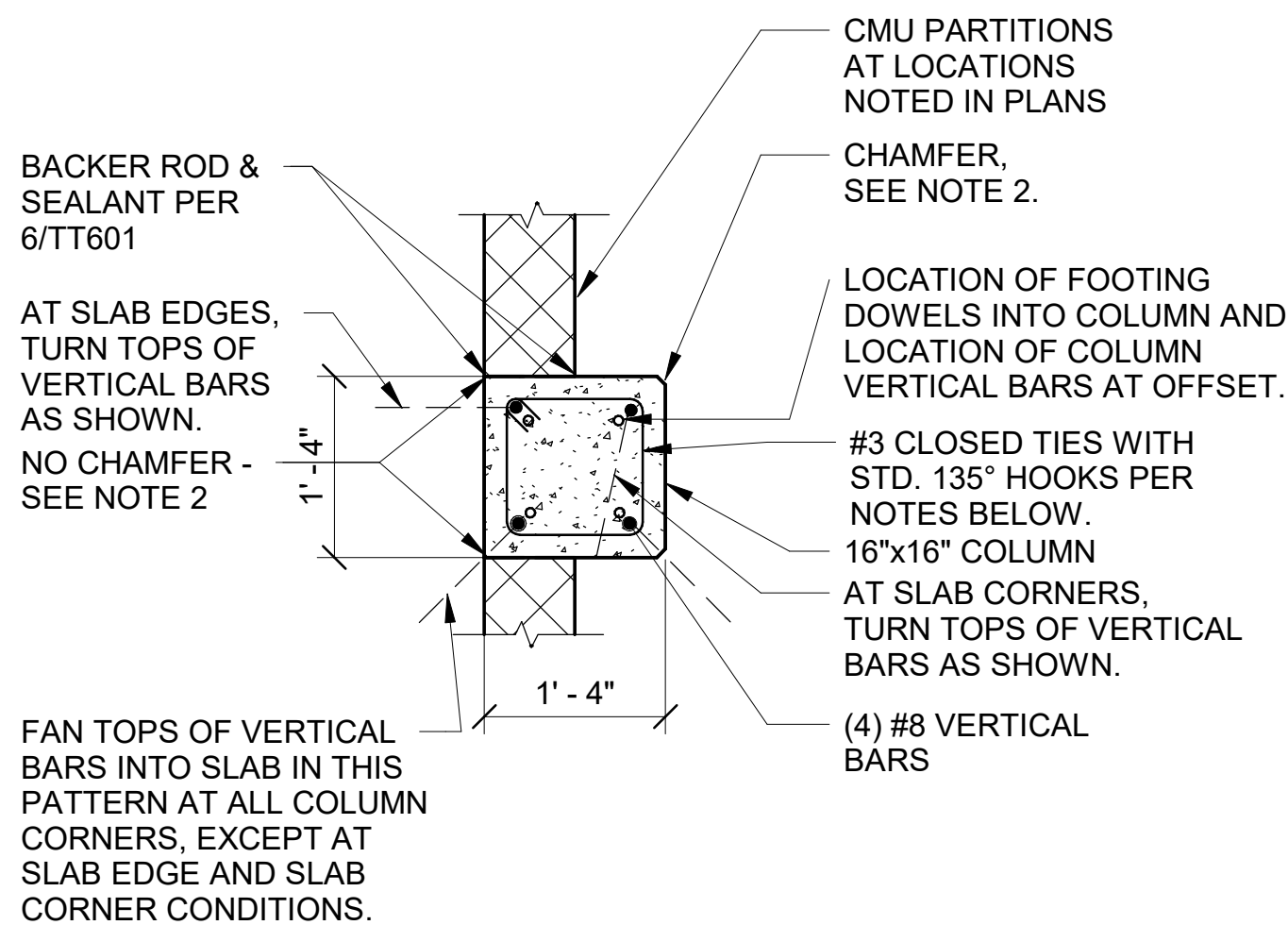
NO.	REVISION	DATE

JOB NUMBER  
22056  
DATE ISSUED  
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PROJECT STATUS  
ISSUE FOR CONSTRUCTION  
SHEET

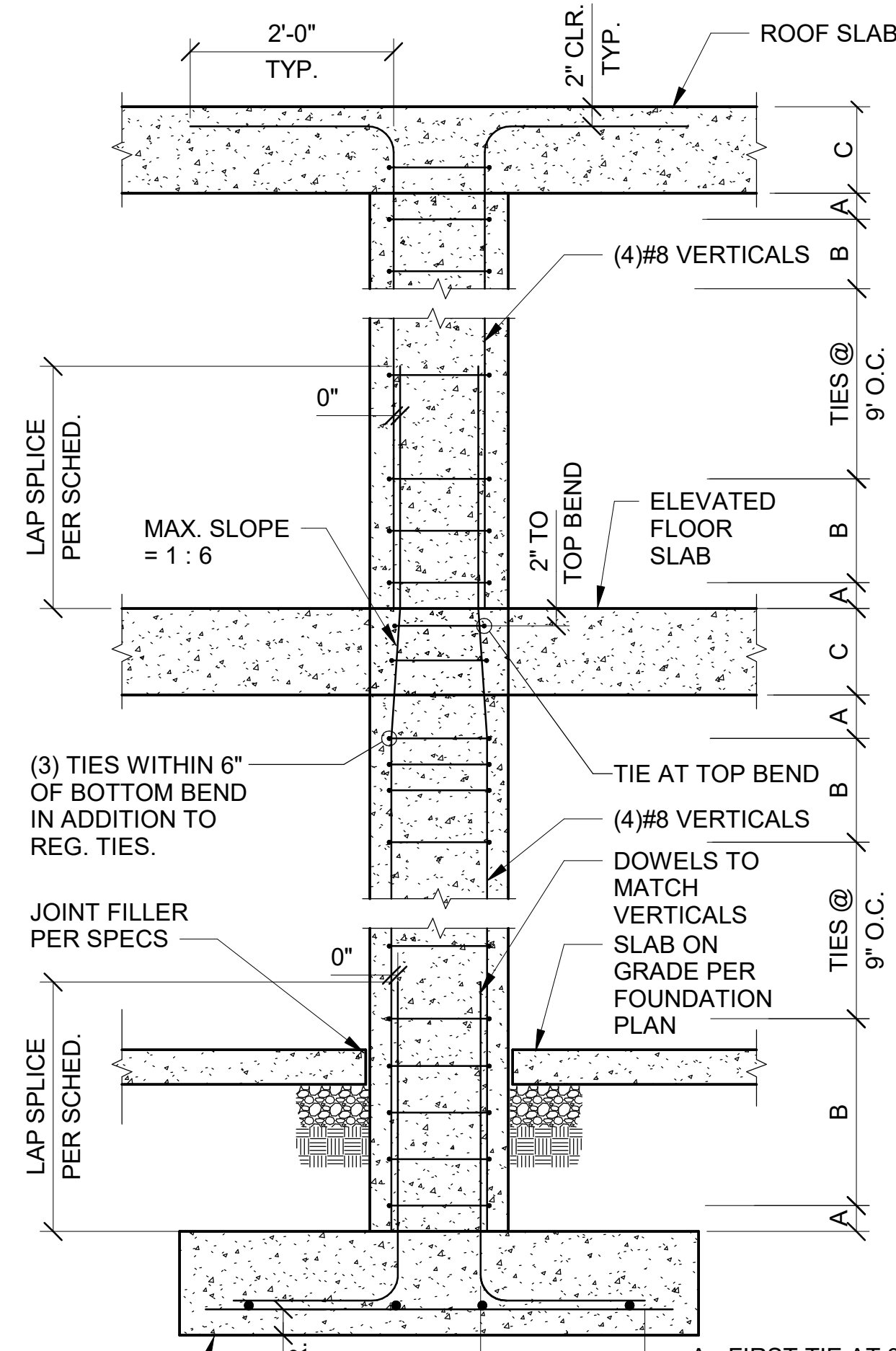
TRAINING TOWER  
- FIFTH FLOOR &  
HIGH ROOF  
FRAMING PLANS

TT403



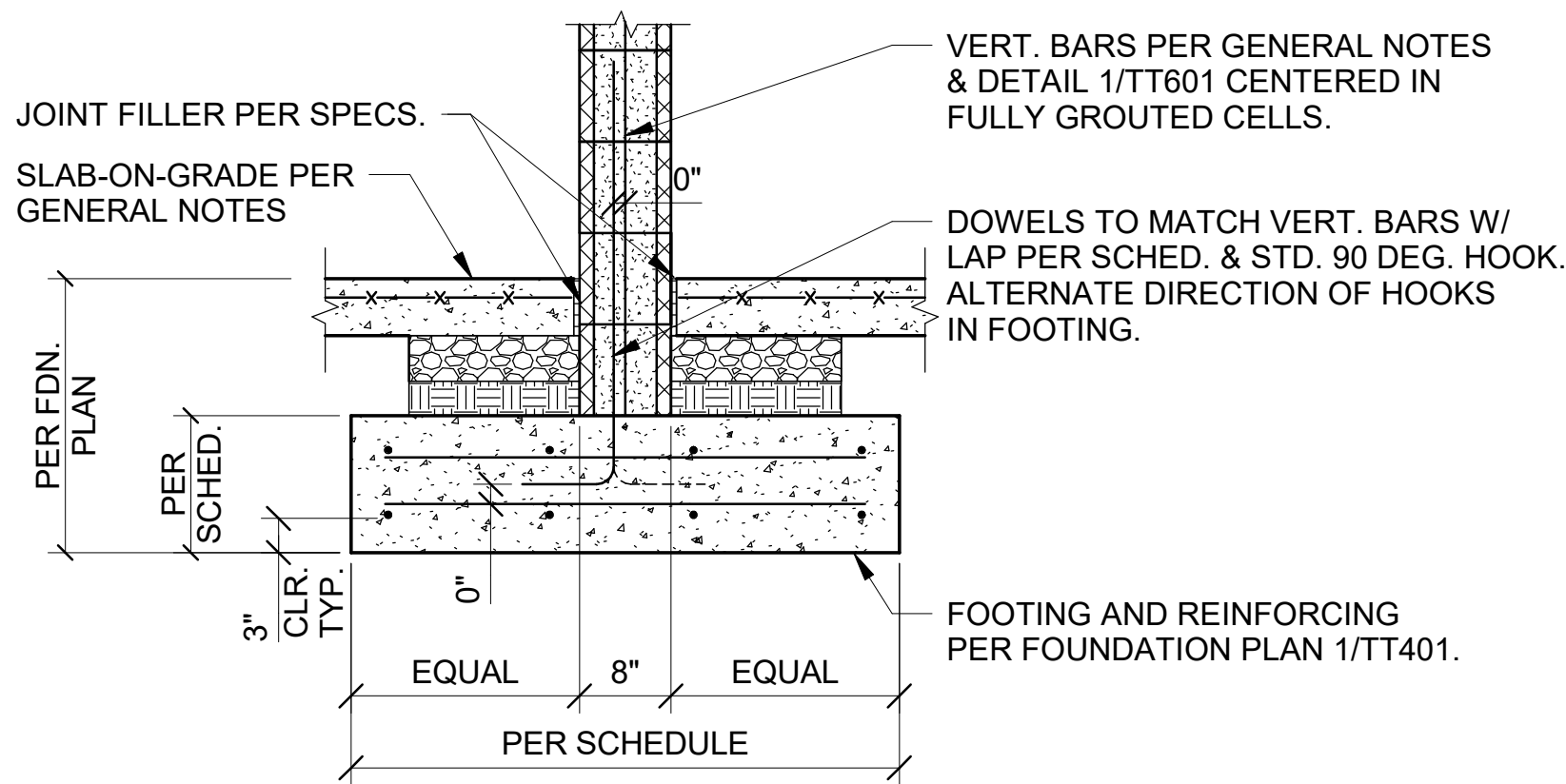


16X16 COLUMN PLAN DETAIL



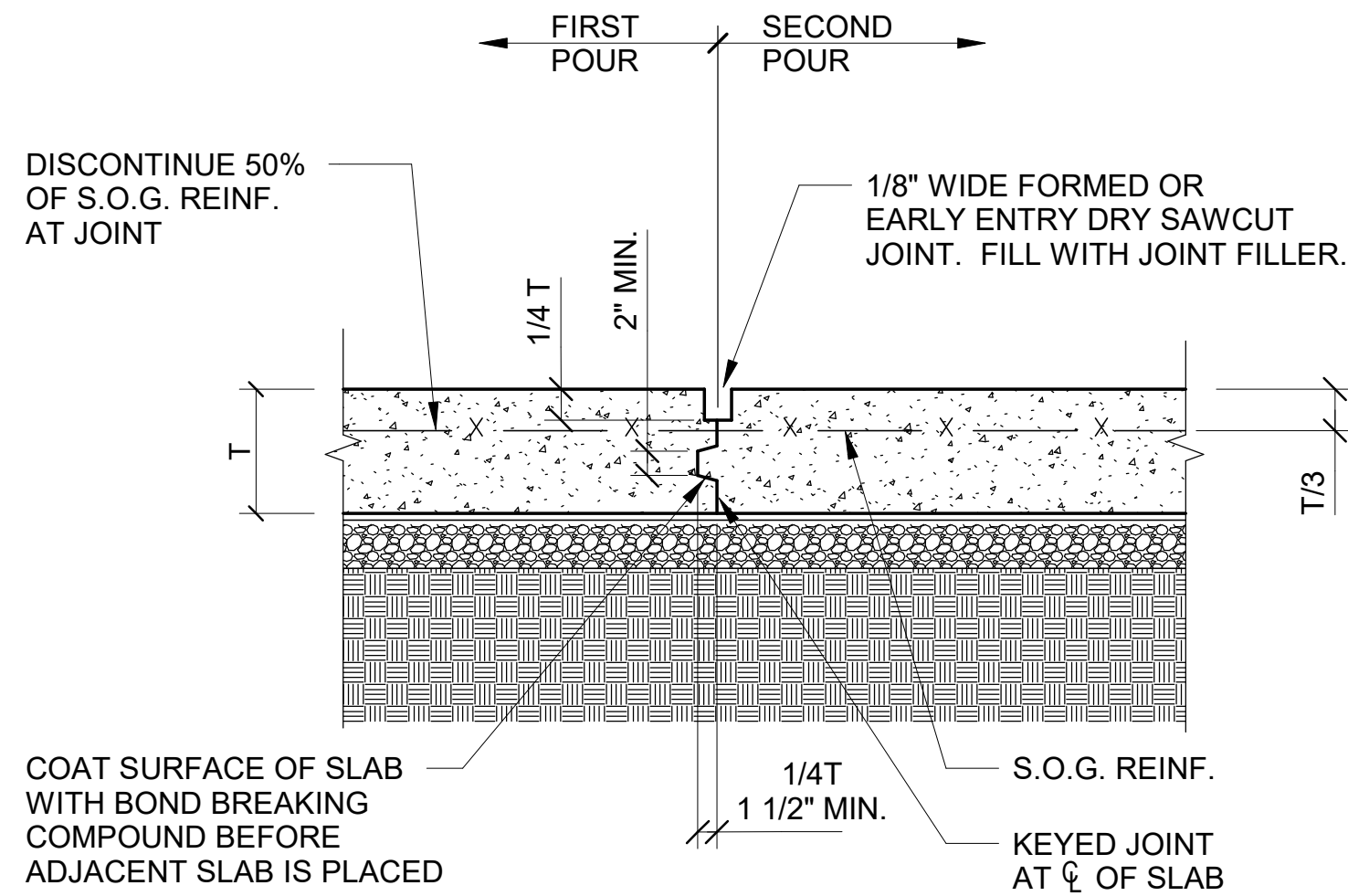
TYPICAL EXTERIOR WALL FOOTING

TT401 TT501 SCALE 3/4" = 1'-0"



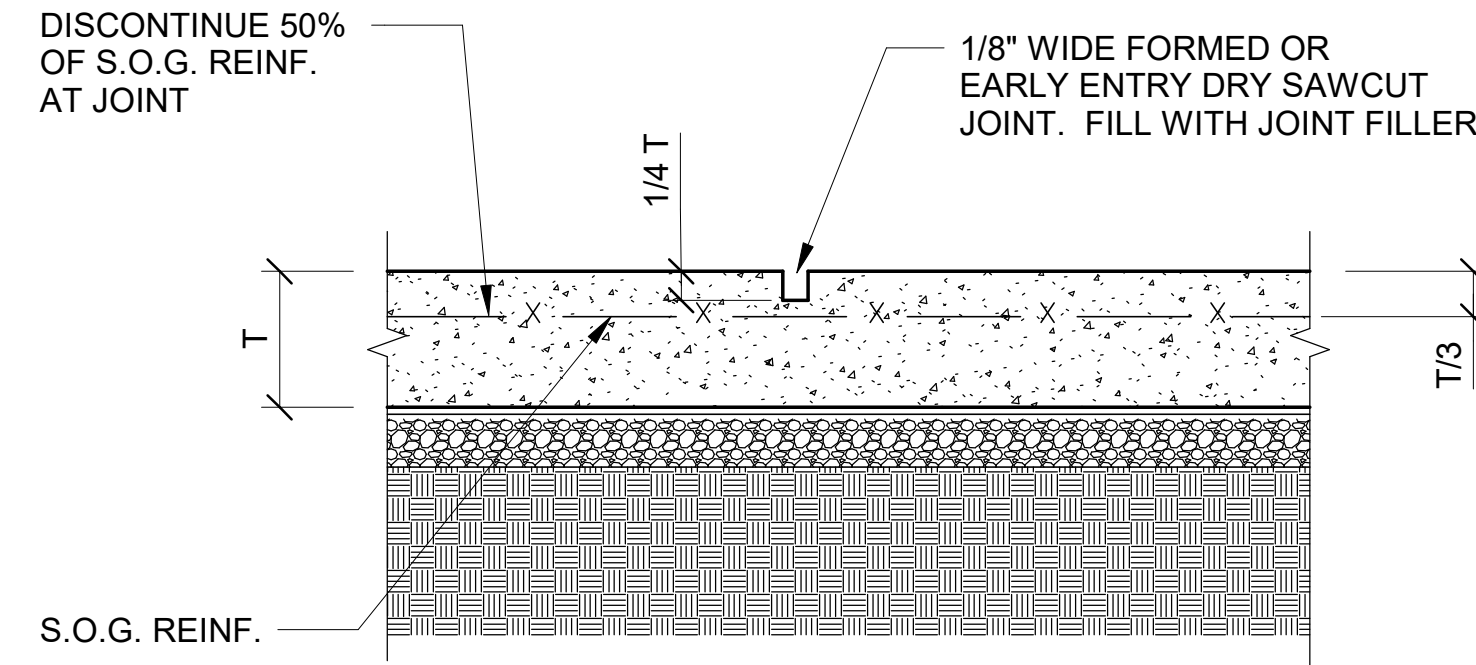
TYPICAL INTERIOR WALL FOOTING SECTION

TT401 TT501 SCALE 3/4" = 1'-0"



TYPICAL S.O.G. CONSTRUCTION JOINT DETAIL

TT401 TT501 SCALE 3/4" = 1'-0"

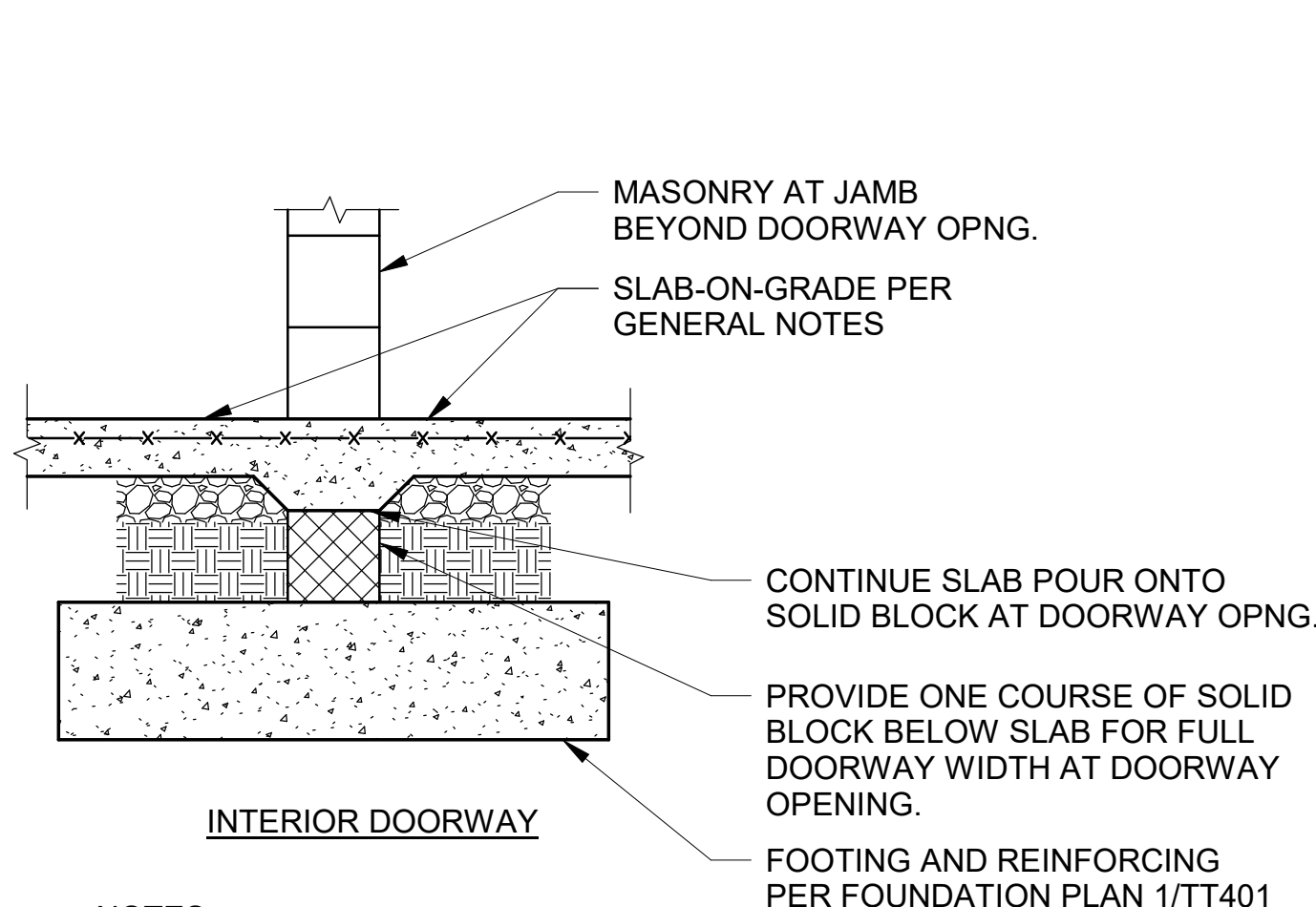


TYPICAL S.O.G. CONTROL JOINT DETAIL

TT401 TT501 SCALE 3/4" = 1'-0"

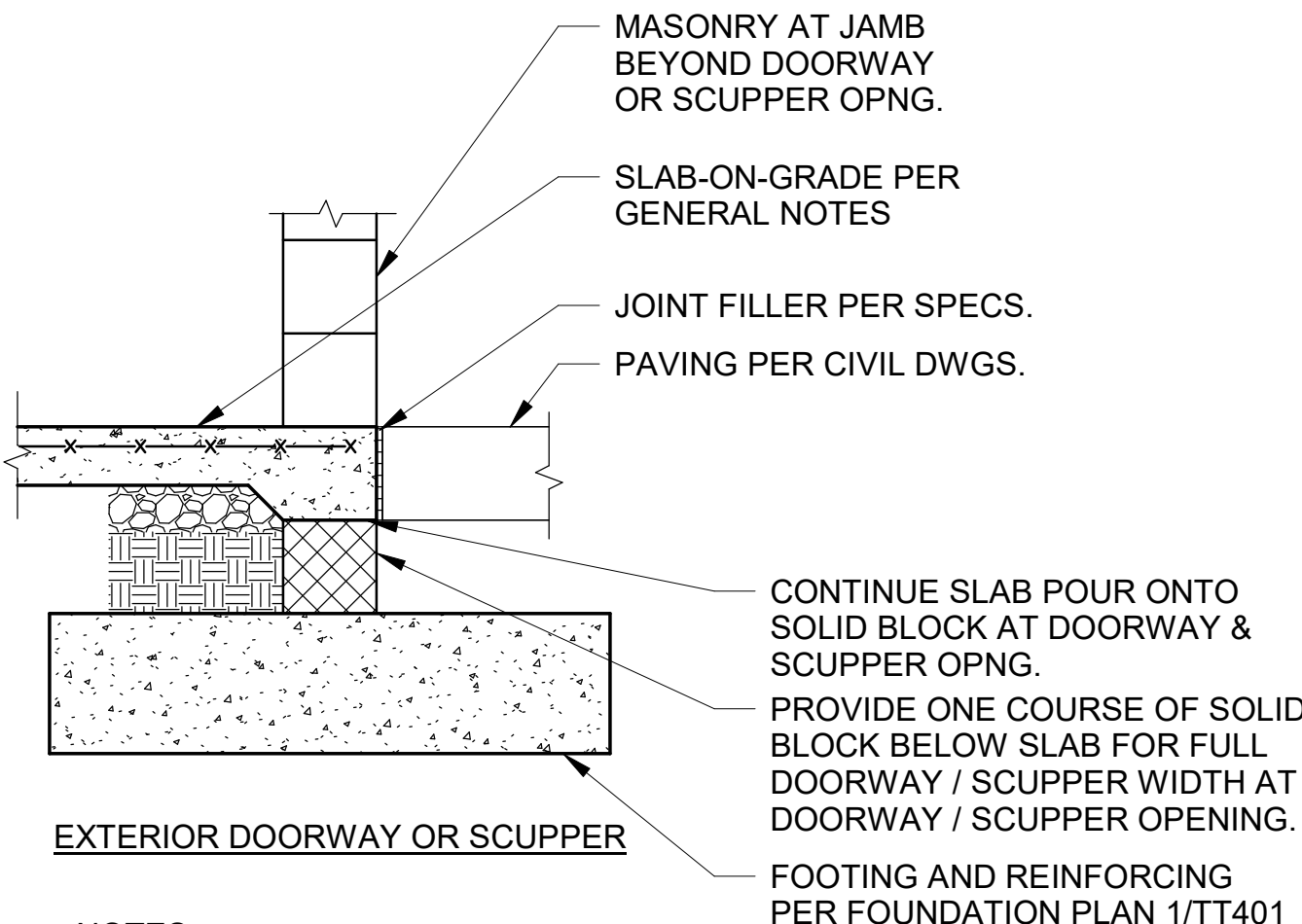
TYPICAL COLUMN DETAIL

TT401 TT501 SCALE 3/4" = 1'-0"



SECTION - DOOR & SCUPPER THRESHOLDS AT SLAB-ON-GRADE

TT401 TT501 SCALE 3/4" = 1'-0"



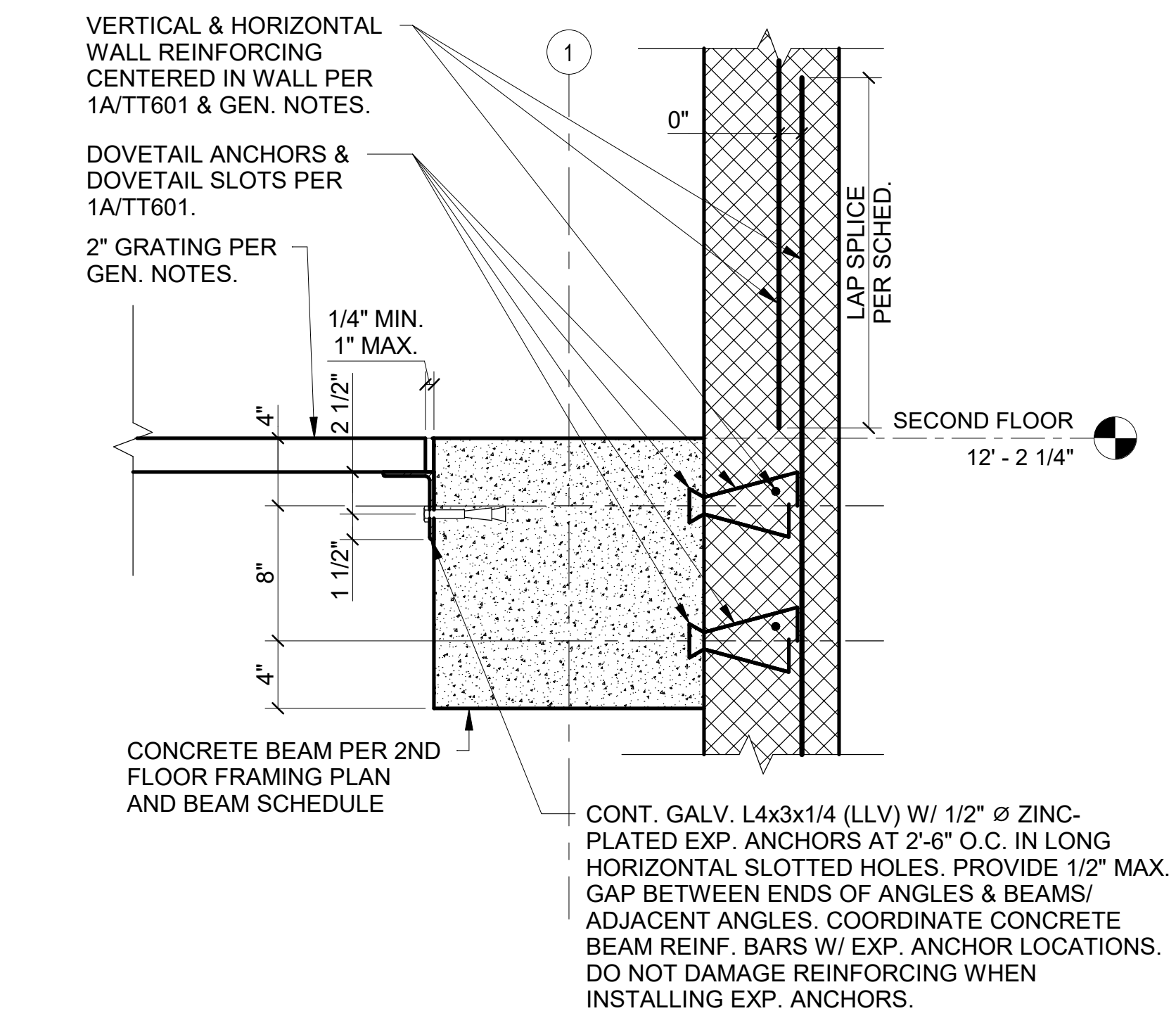
TYPICAL PLAN-REINF. IN S.O.G AT WALL OPENING DETAIL

TT401 TT501 SCALE 3/4" = 1'-0"

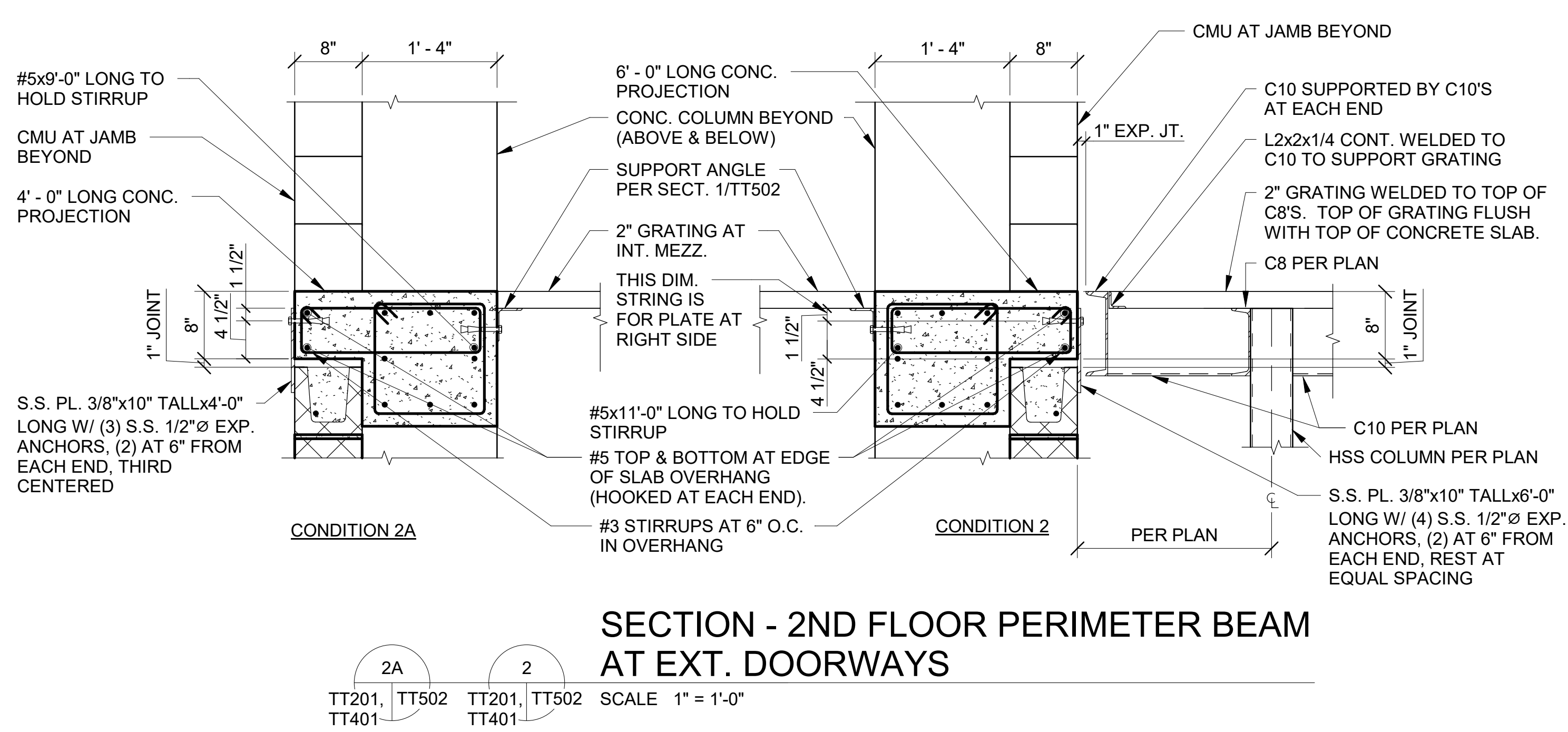
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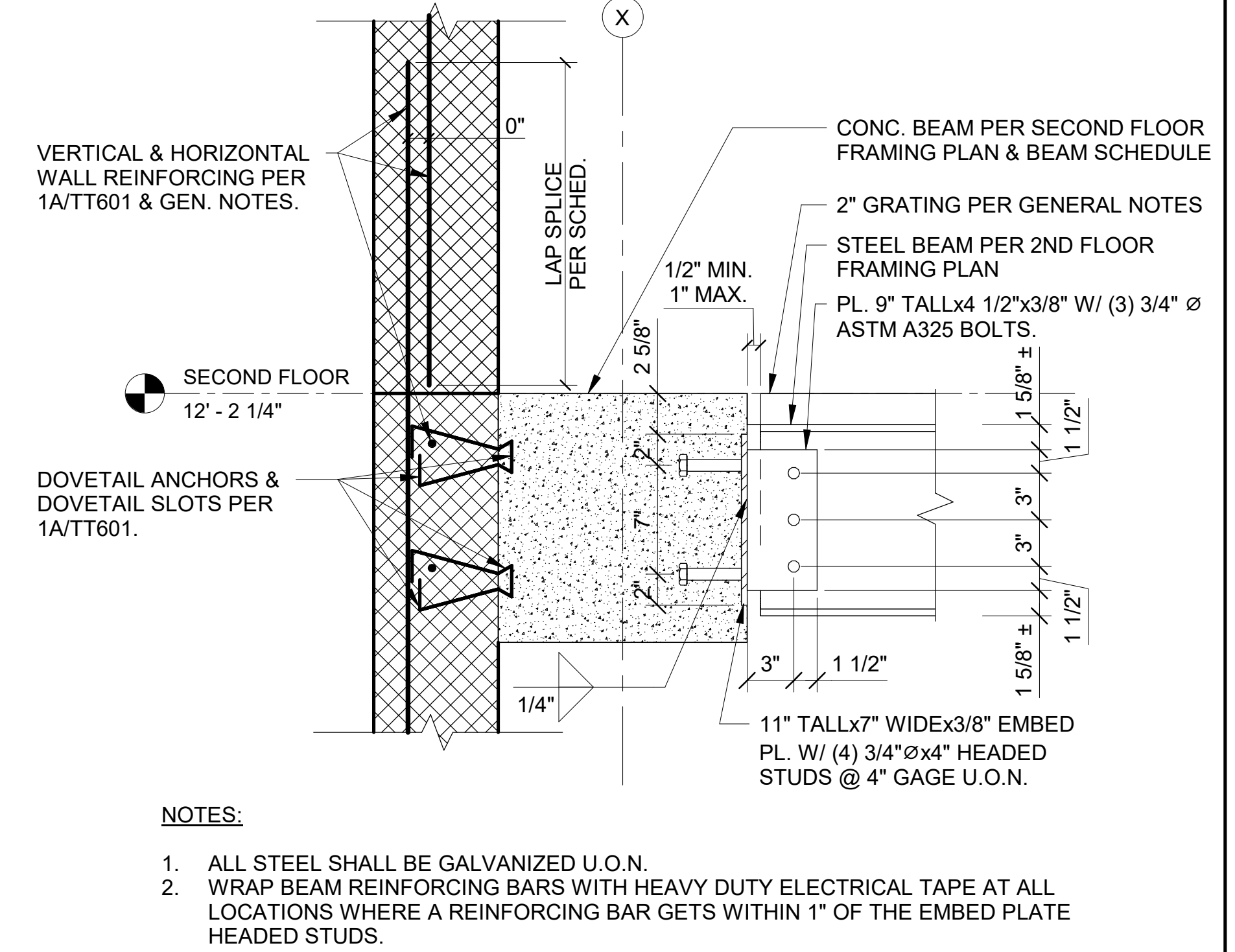




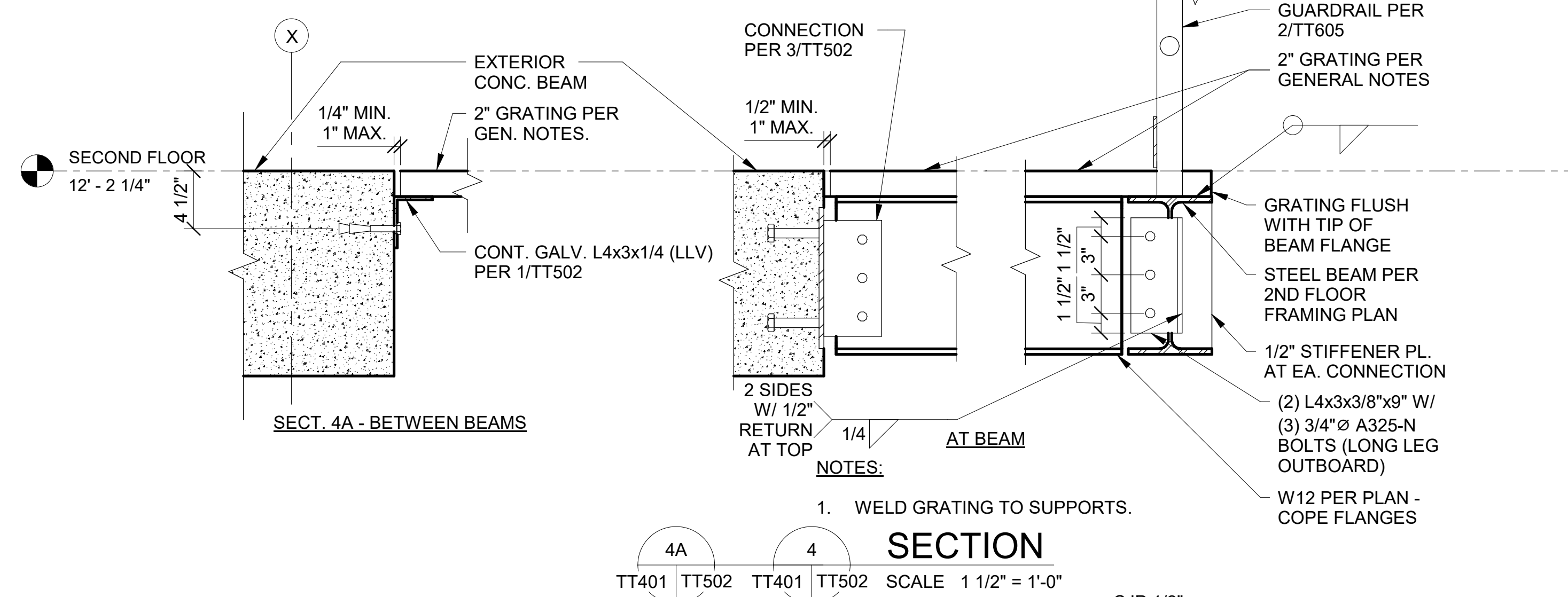
SECTION - 2ND FLOOR PERIMETER BEAM  
TT401 TT502 SCALE 1 1/2" = 1'-0"



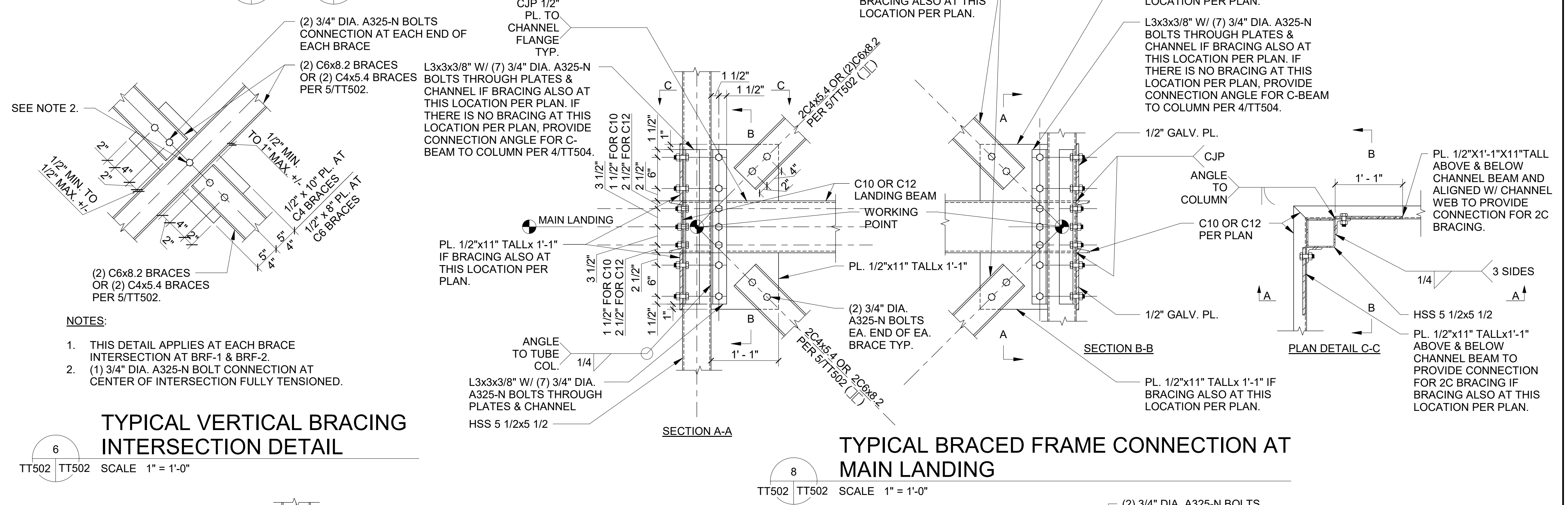
SECTION - 2ND FLOOR PERIMETER BEAM  
AT EXT. DOORWAYS



SECTION - 2ND FLOOR STEEL BEAM TO  
CONCRETE BEAM CONNECTION



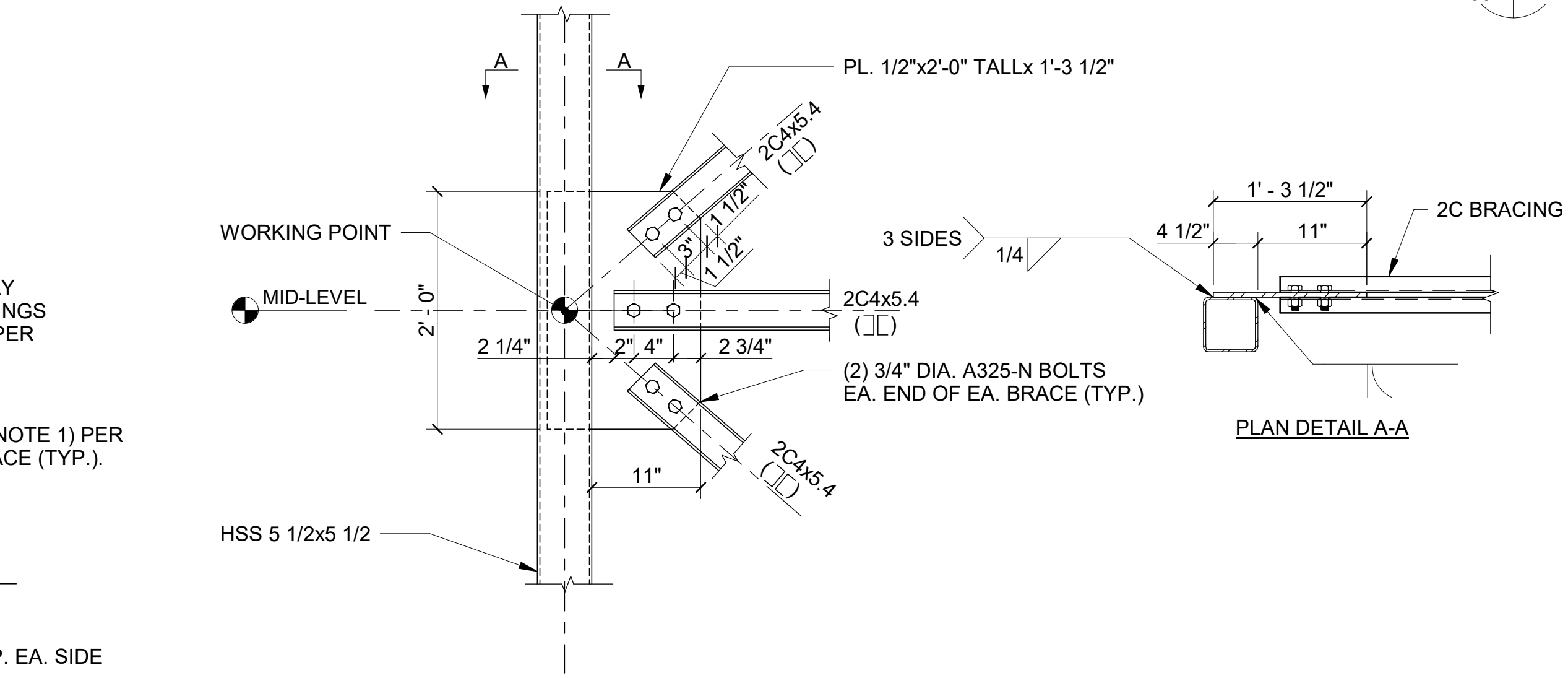
SECTION  
TT401 TT502 SCALE 1 1/2" = 1'-0"



TYPICAL BRACED FRAME CONNECTION AT  
MAIN LANDING

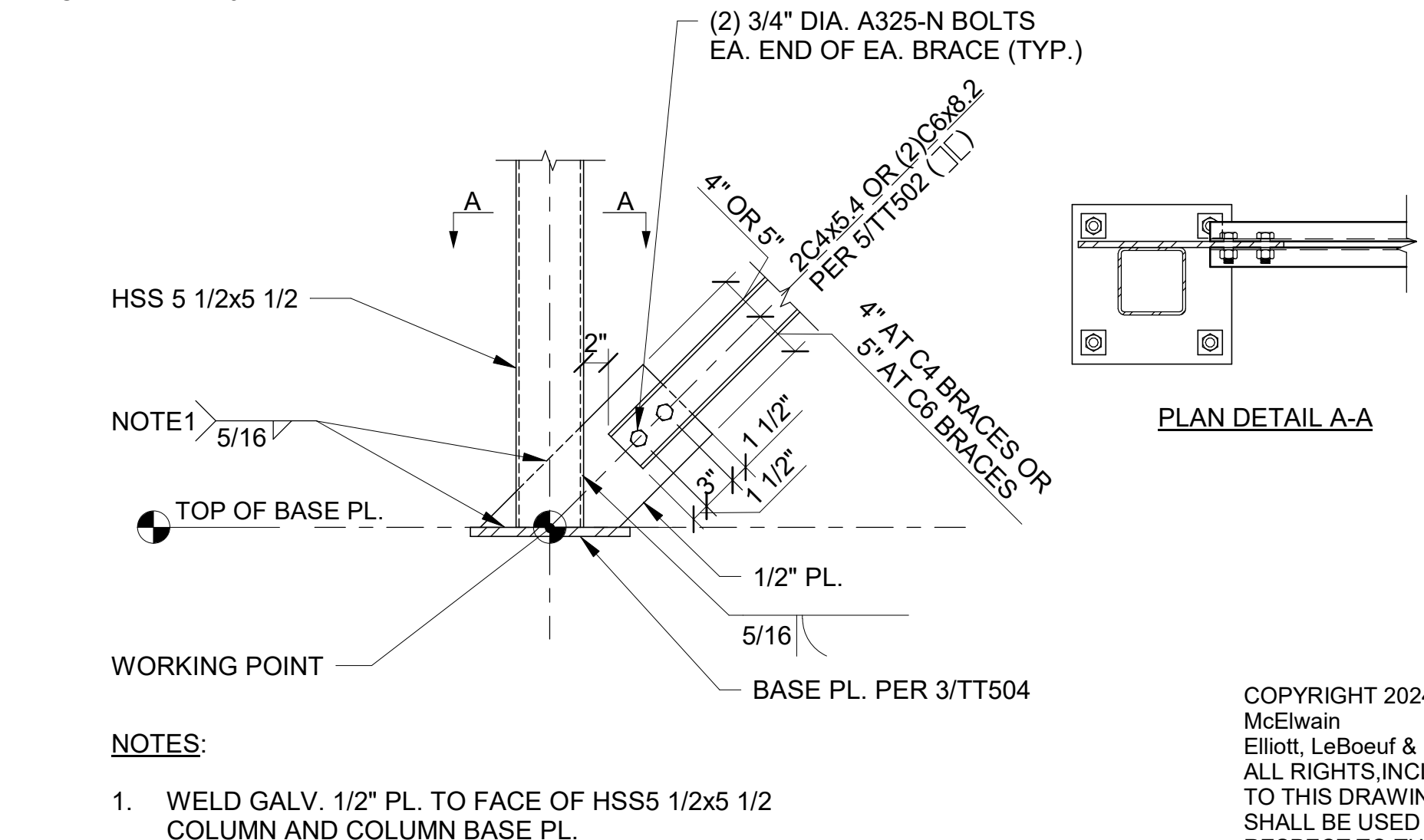
TYPICAL VERTICAL BRACING  
INTERSECTION DETAIL

TT502 TT502 SCALE 1" = 1'-0"



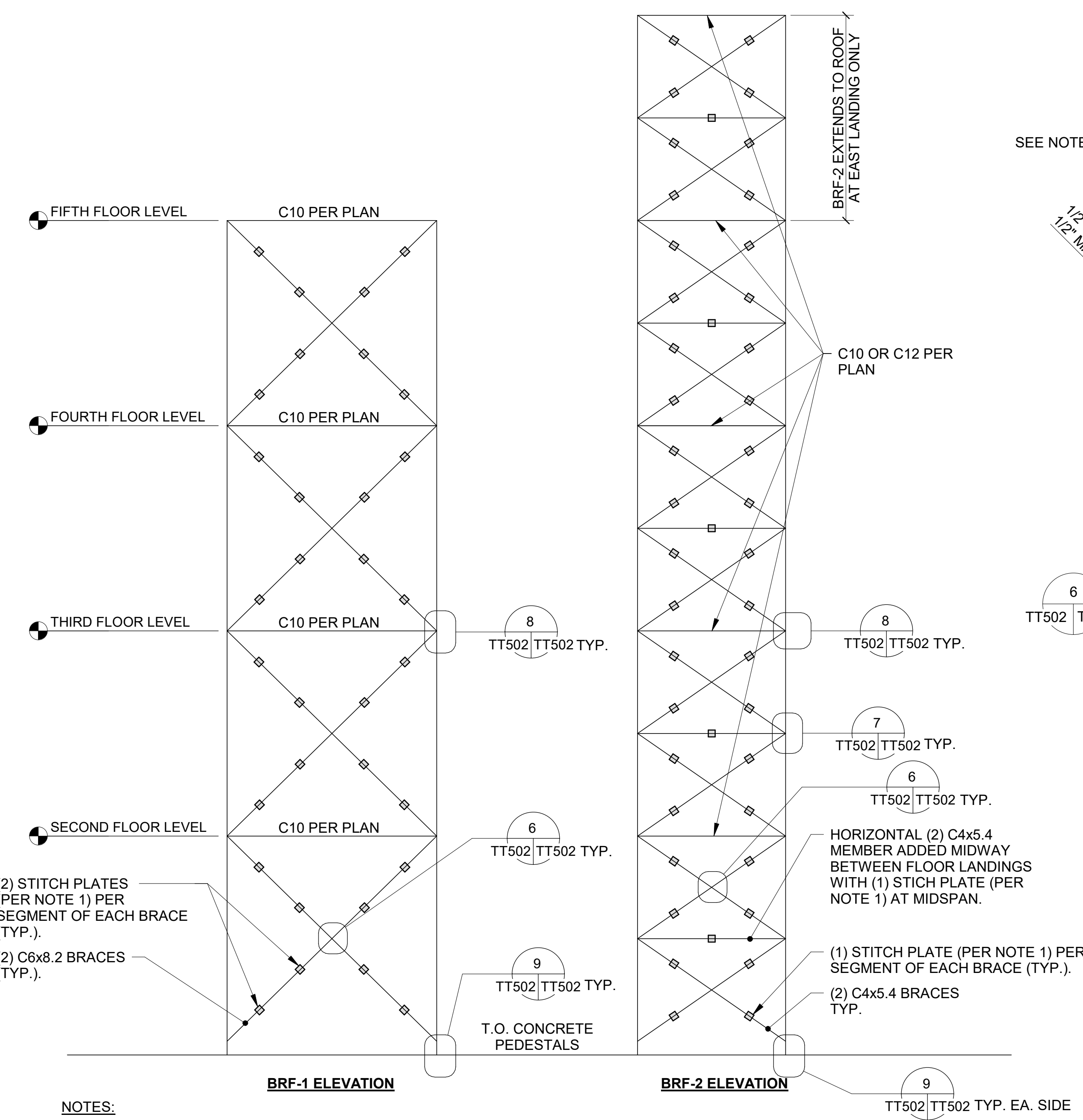
TYPICAL BRF-2 CONNECTION AT  
MID-STORY LEVEL OF FRAME

TT502 TT502 SCALE 1" = 1'-0"



TYPICAL BRACED FRAME CONNECTION AT  
COLUMN BASE PL.

TT502 TT502 SCALE 1" = 1'-0"



BRF-1 ELEVATION

BRF-2 ELEVATION

TT502 TT502 TYP. EA. SIDE

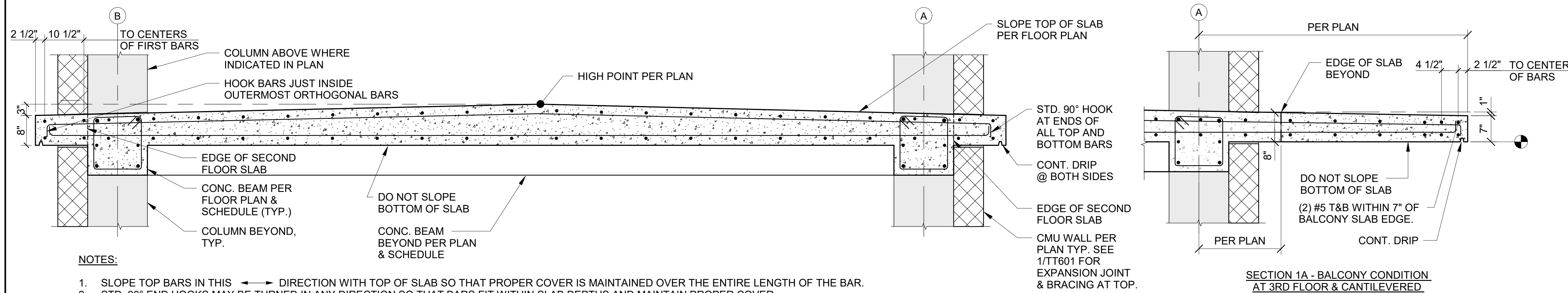
- NOTES:
1. STITCH PLATE (SPACER PLATE) SHALL BE 1/2" x 4"x4" SQUARE GALV. PLATE WITH (1) 3/4" DIA. A325-N BOLT FULLY TENSIONED.
  2. ALL STEEL SHALL BE HOT DIP GALVANIZED U.O.N.

EXTERIOR STEEL STAIR BRACED FRAMES

TT502 TT502 SCALE 1/2" = 1'-0"

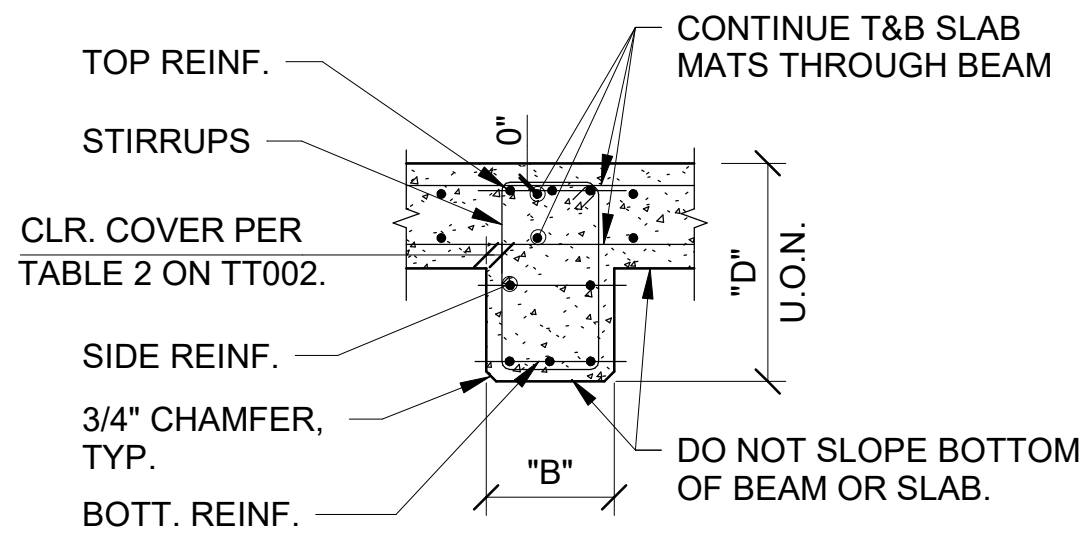
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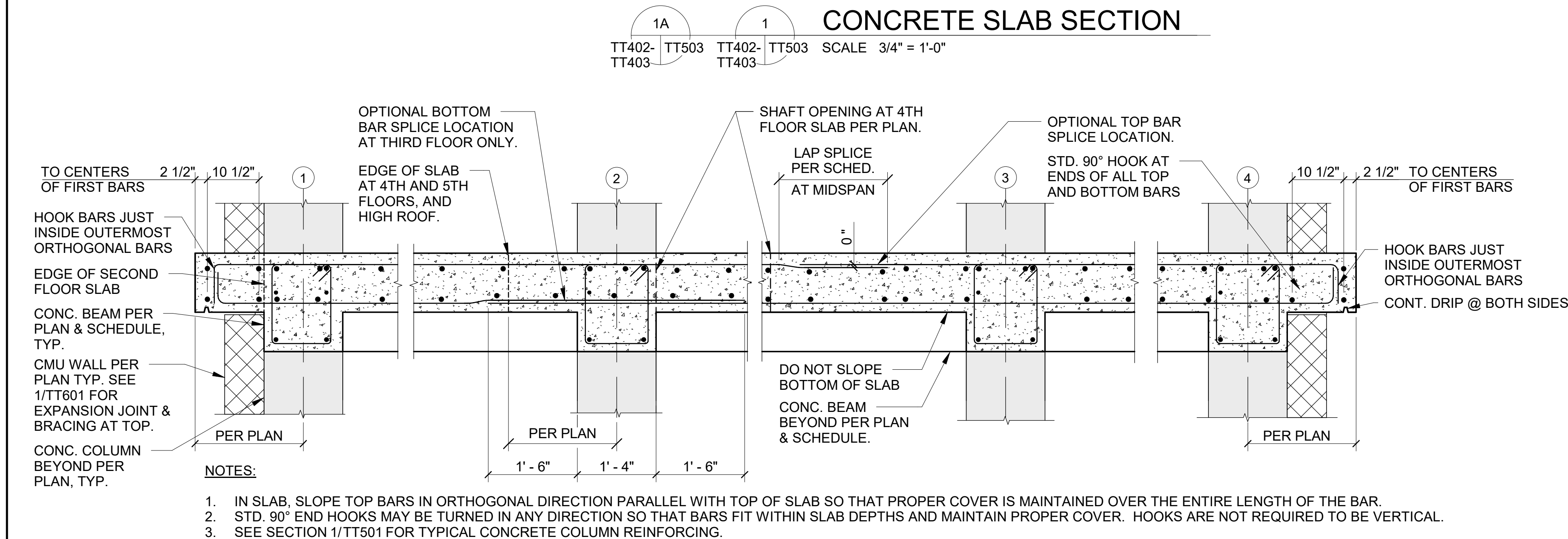


CONCRETE BEAM SCHEDULE											
MARK	SIZE		REINFORCEMENT			STIRRUPS			REMARKS		
	WIDTH (B)	DEPTH (D)	BOTTOM	TOP CONT.	ADDED	SIDE E.F.	SIZE	TYPE			
2B1	1' - 4"	1' - 6 1/4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
2B2	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
2B3	1' - 4"	VARIES FROM 1' - 4" TO 1' - 6 1/4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.	SEE NOTE 2.	
2B4	1' - 4"	1' - 6 1/4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
3B1	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
3B2	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
4B1	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
4B2	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
5B1	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
RB1	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		
RB2	1' - 4"	1' - 4"	(3) #8	(3) #8	---	(2) #6	#3		1@2", R@3" O.C.		

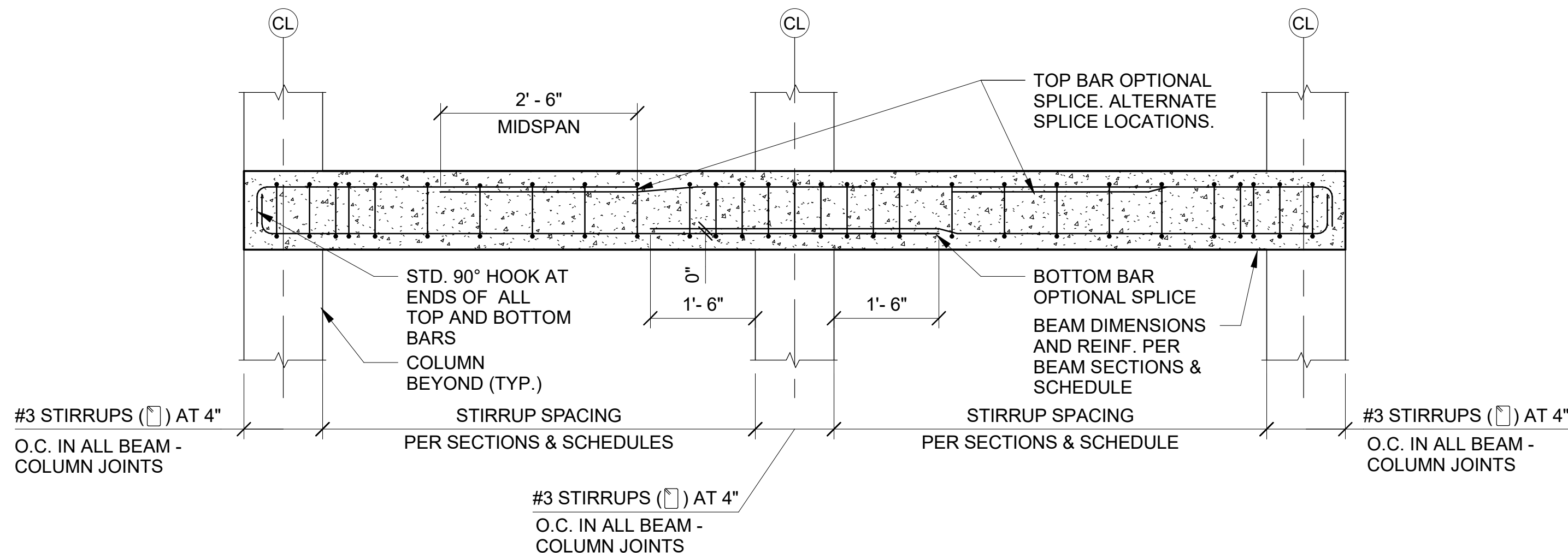
- NOTE:
- AT BEAM/COLUMN JOINTS, KEEP BEAM LONGITUDINAL BARS INSIDE COLUMNS VERTICALS.
  - TOP OF BEAM SLOPES PER 2/TT201 FROM COL. LINE 3 (1' - 6 1/4" DEEP) TO SCUPPER (1' - 4" DEEP), & REMAINS FLAT (1' - 4" DEEP) TO COLUMN LINE 4.



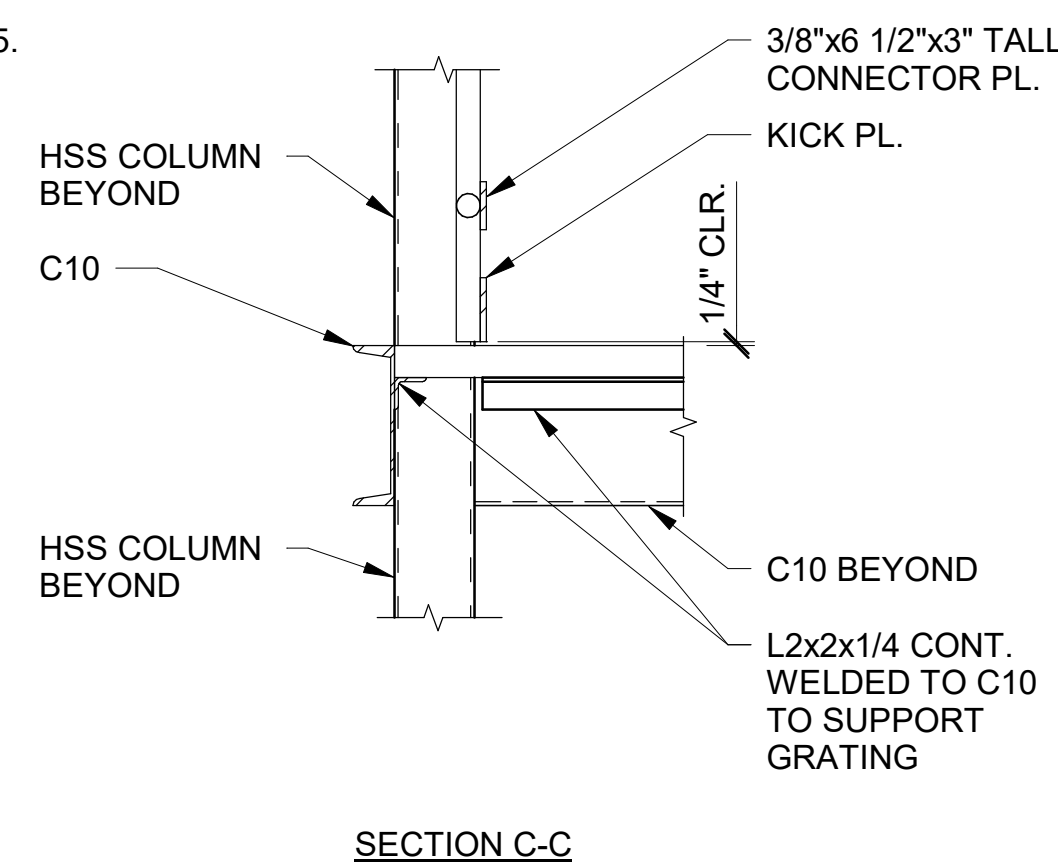
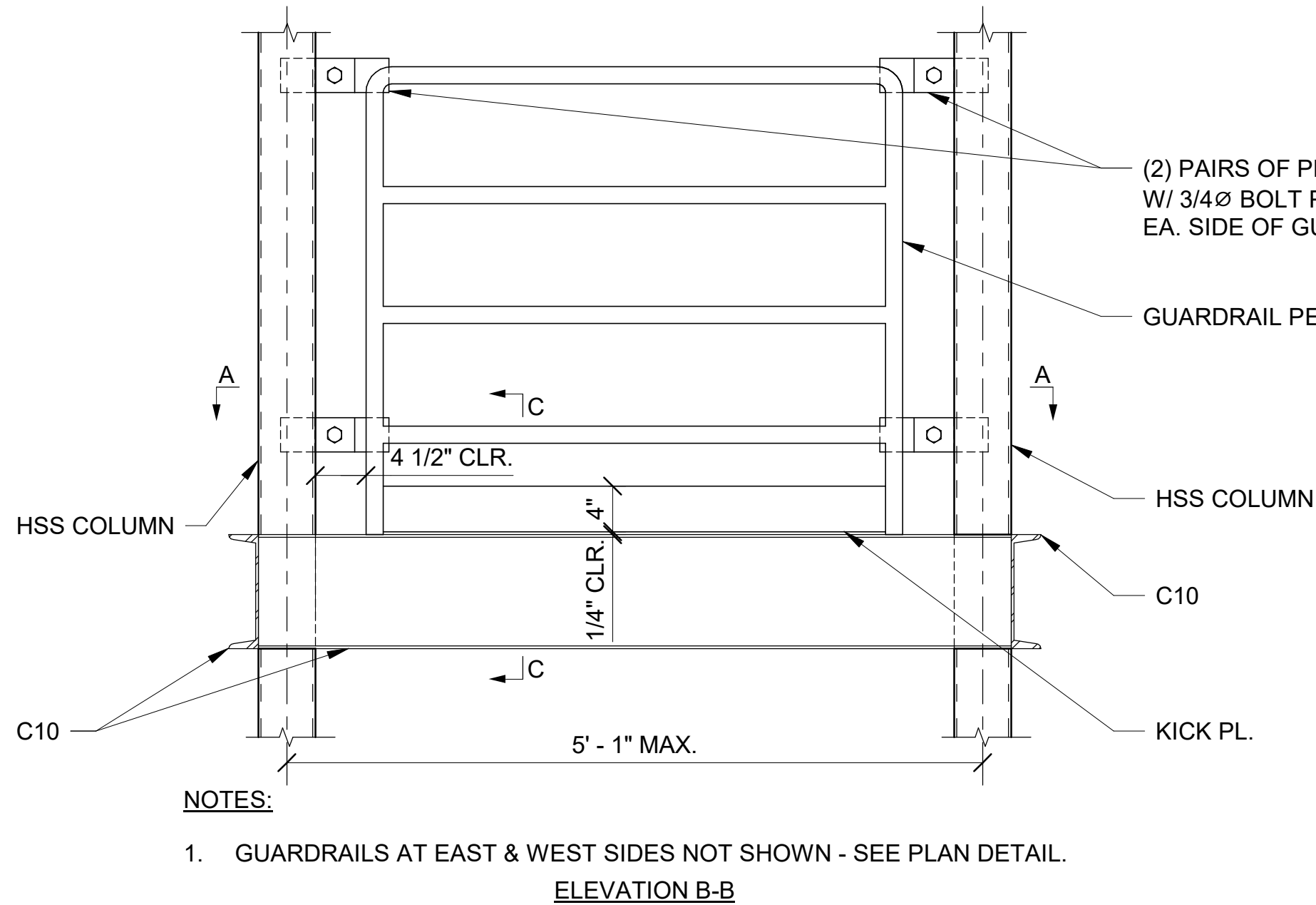
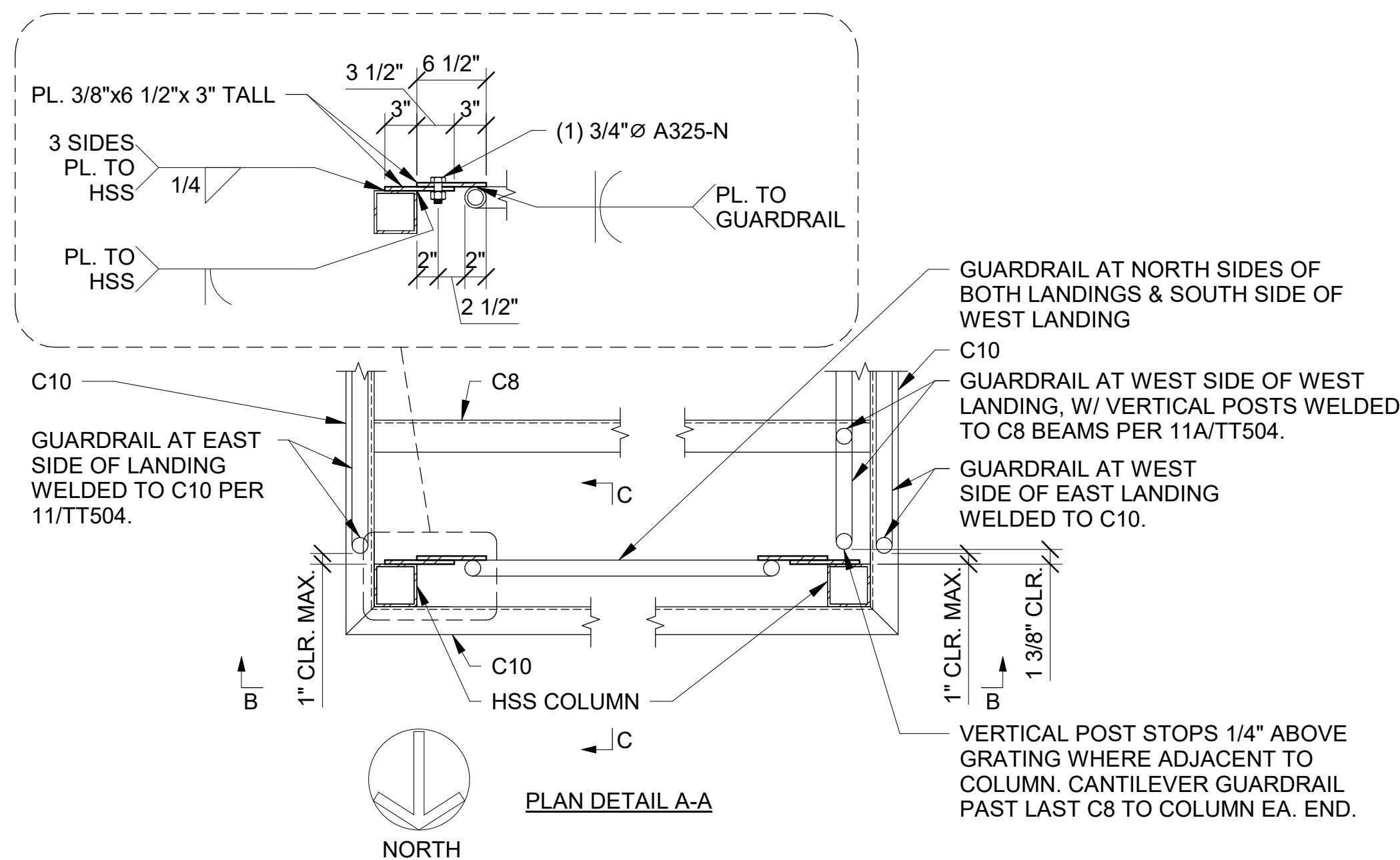
SECTION



2 CONCRETE SLAB SECTION  
TT401- TT503 SCALE 3/4" = 1'-0"



3 BEAM BENDING & CUTOFF DETAIL  
TT401- TT503 SCALE 3/4" = 1'-0"



5 DETAIL - GUARDRAIL WHERE THERE IS X-BRACING IN SHORT COLUMN BAYS  
TT504 TT503 SCALE 1" = 1'-0"

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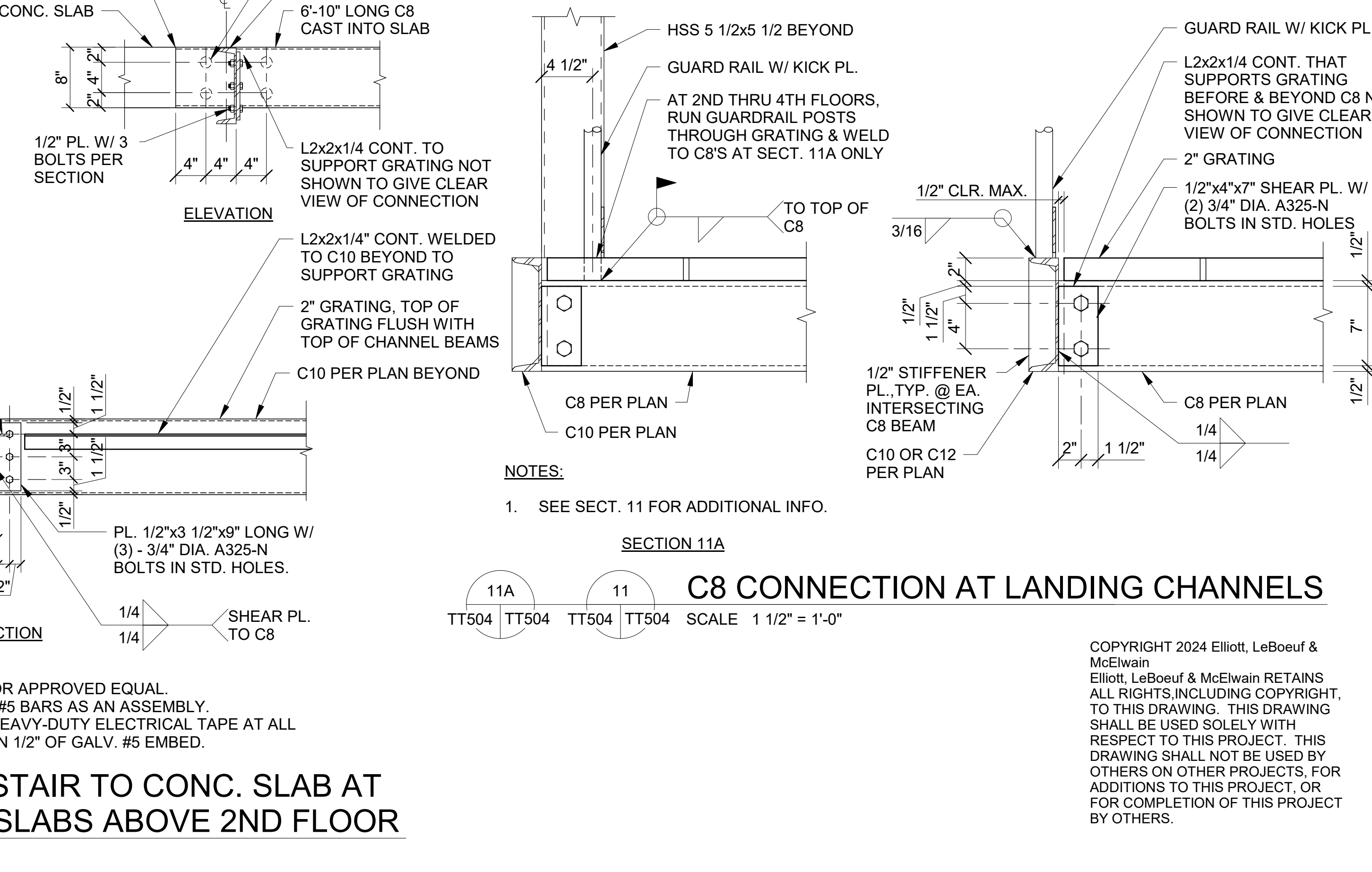


NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**TRAINING TOWER - CONCRETE SLAB SECTIONS**

TT503

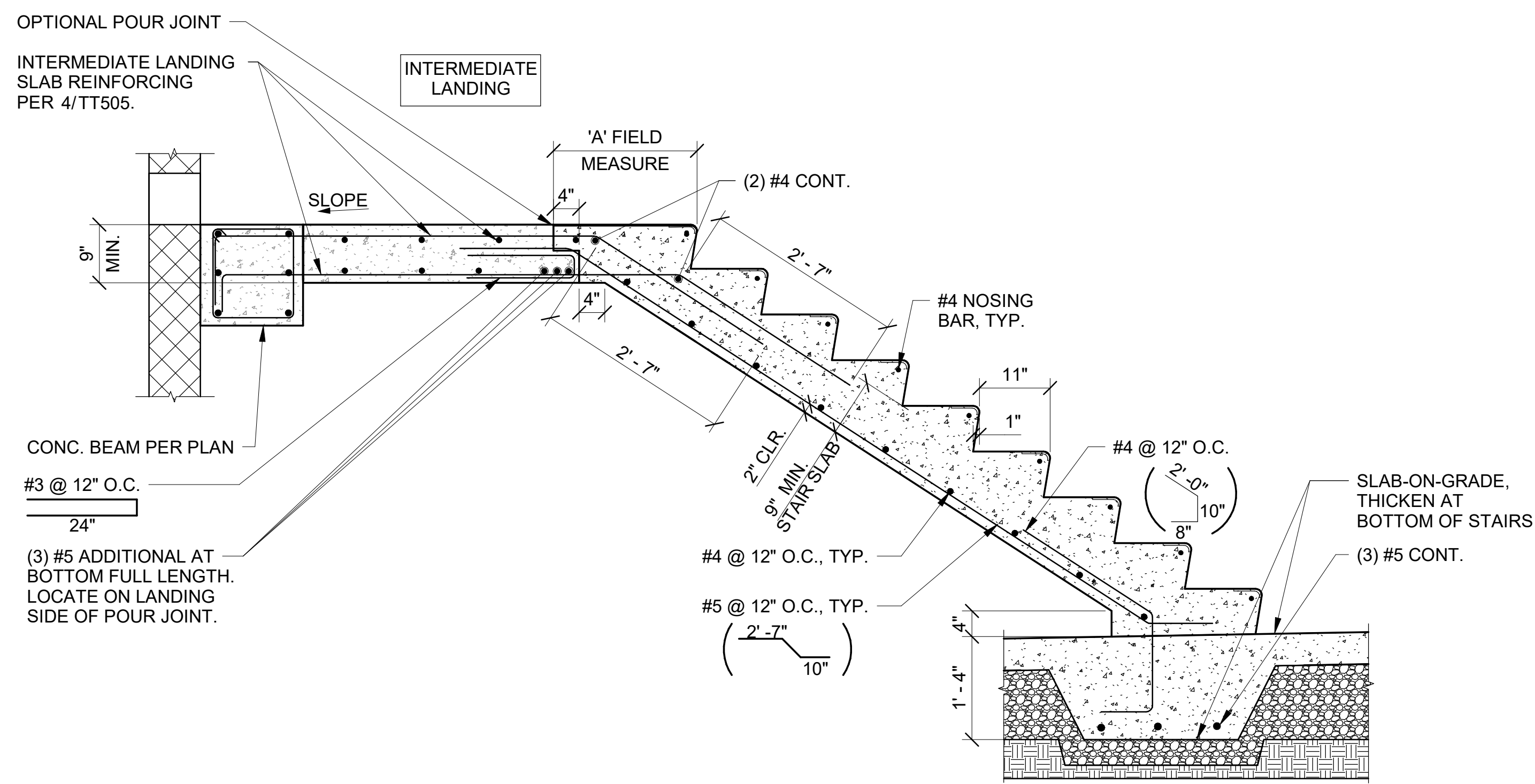






NO.	REVISION	DATE

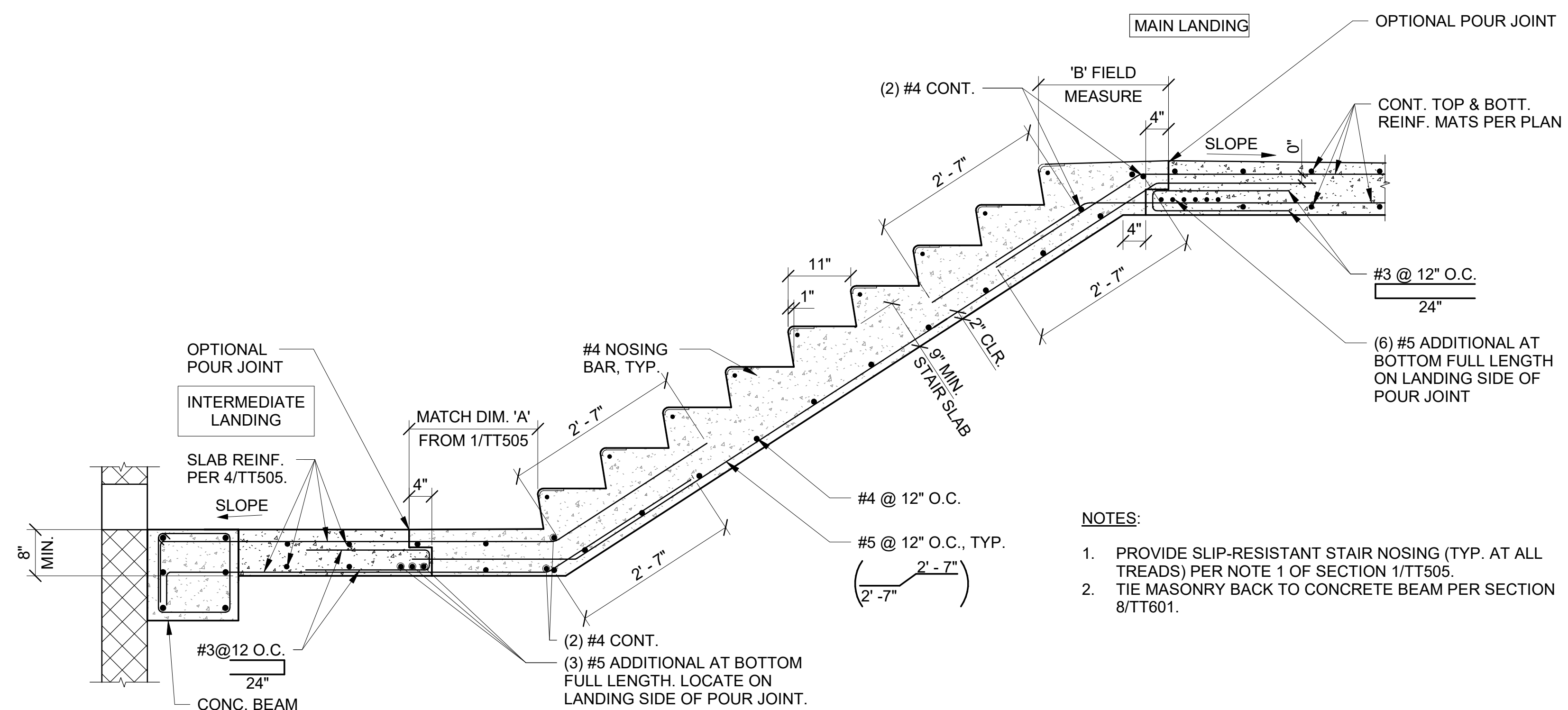
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**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**TRAINING TOWER  
- CONCRETE STAIR  
SECTIONS**



- NOTES:
- PROVIDE GALVANIZED, SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS). PROVIDE 1/4" MIN. THICK, GRADE 2, ROUNDED-EDGE STAIR NOSING. 1 1/2" DEEP x 3" WIDE x 3'-4" LONG. TIGHT TO CONCRETE WALL TO AVOID GUARDRAIL BASE PLATE AT OPPOSITE END OF TREAD. PROVIDE SLIPNOT STAIR NOSING WITH J-HOOKS, AS MANUFACTURED BY SLIPNOT METAL SAFETY FLOORING AT (800) 754-7668 OR WWW.SLIPNOT.COM, OR AN EQUIVALENT APPROVED BY THE ENGINEER. NSTALL STAIR NOSINGS IN ACCORDANCE WITH REQUIREMENTS OF THE MANUFACTURER.
  - TIE MASONRY BACK TO CONCRETE BEAM PER SECTION 8/TT601.

1  
TT201- TT505 SCALE 3/4" = 1'-0"  
TT401

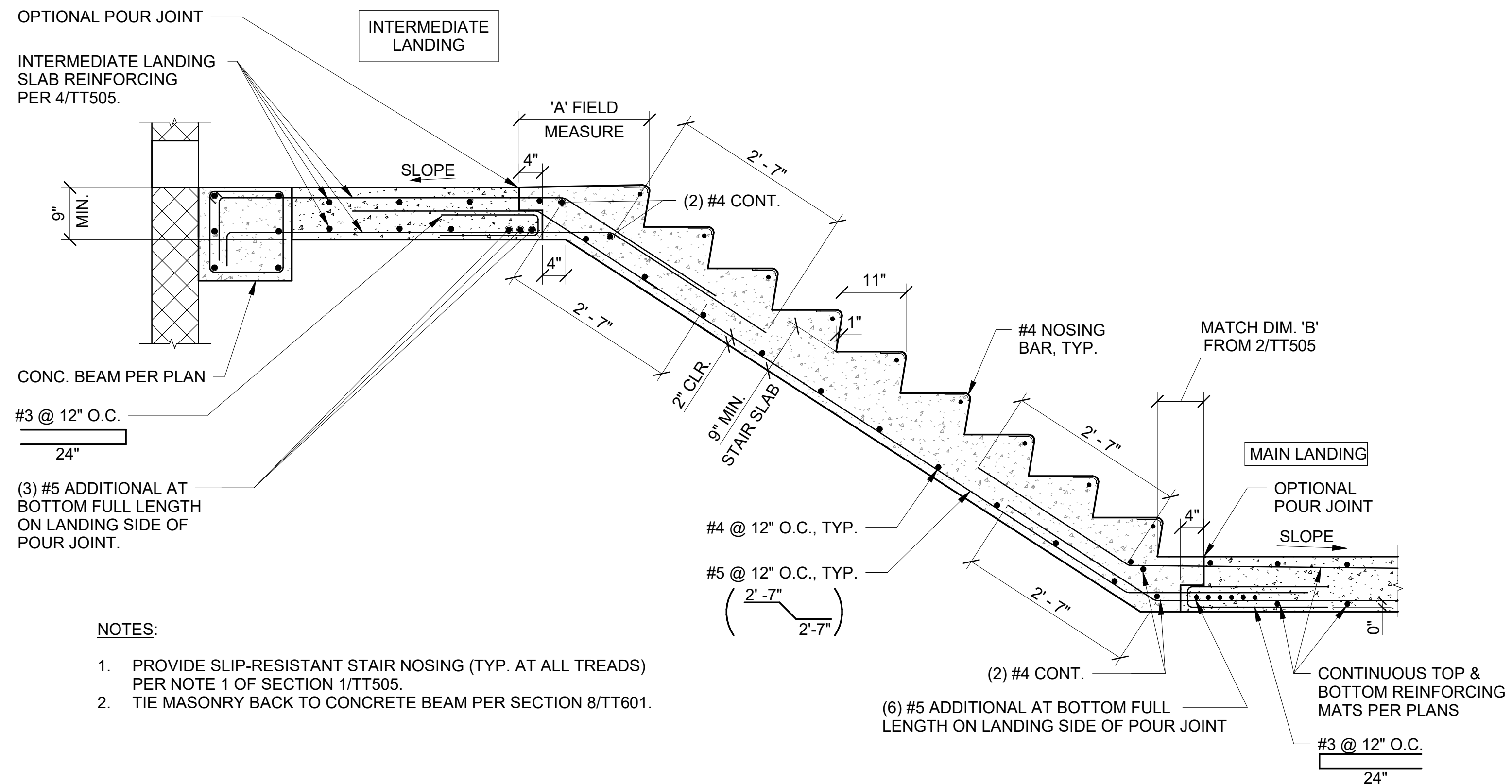
CONCRETE STAIR SECTION



- NOTES:
- PROVIDE SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS) PER NOTE 1 OF SECTION 1/TT505.
  - TIE MASONRY BACK TO CONCRETE BEAM PER SECTION 8/TT601.

2  
TT401- TT505 SCALE 3/4" = 1'-0"  
TT403

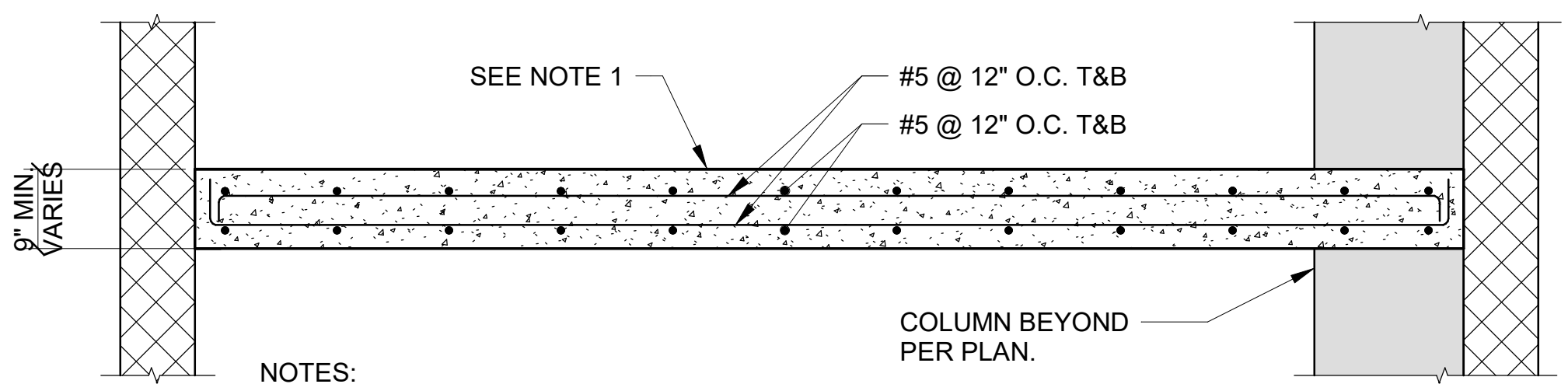
CONCRETE STAIR SECTION



- NOTES:
- PROVIDE SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS) PER NOTE 1 OF SECTION 1/TT505.
  - TIE MASONRY BACK TO CONCRETE BEAM PER SECTION 8/TT601.

3  
TT401- TT505 SCALE 3/4" = 1'-0"  
TT403

CONCRETE STAIR SECTION



- NOTES:
- SLOPE TOP SURFACE OF LANDING SLAB PER FLOOR PLANS.
  - TIE MASONRY BACK TO CONCRETE SLABS PER SECTIONS 1B & 1C/TT601.

4  
TT401- TT505 SCALE 3/4" = 1'-0"  
TT403

INTERMEDIATE STAIR LANDING SECTION

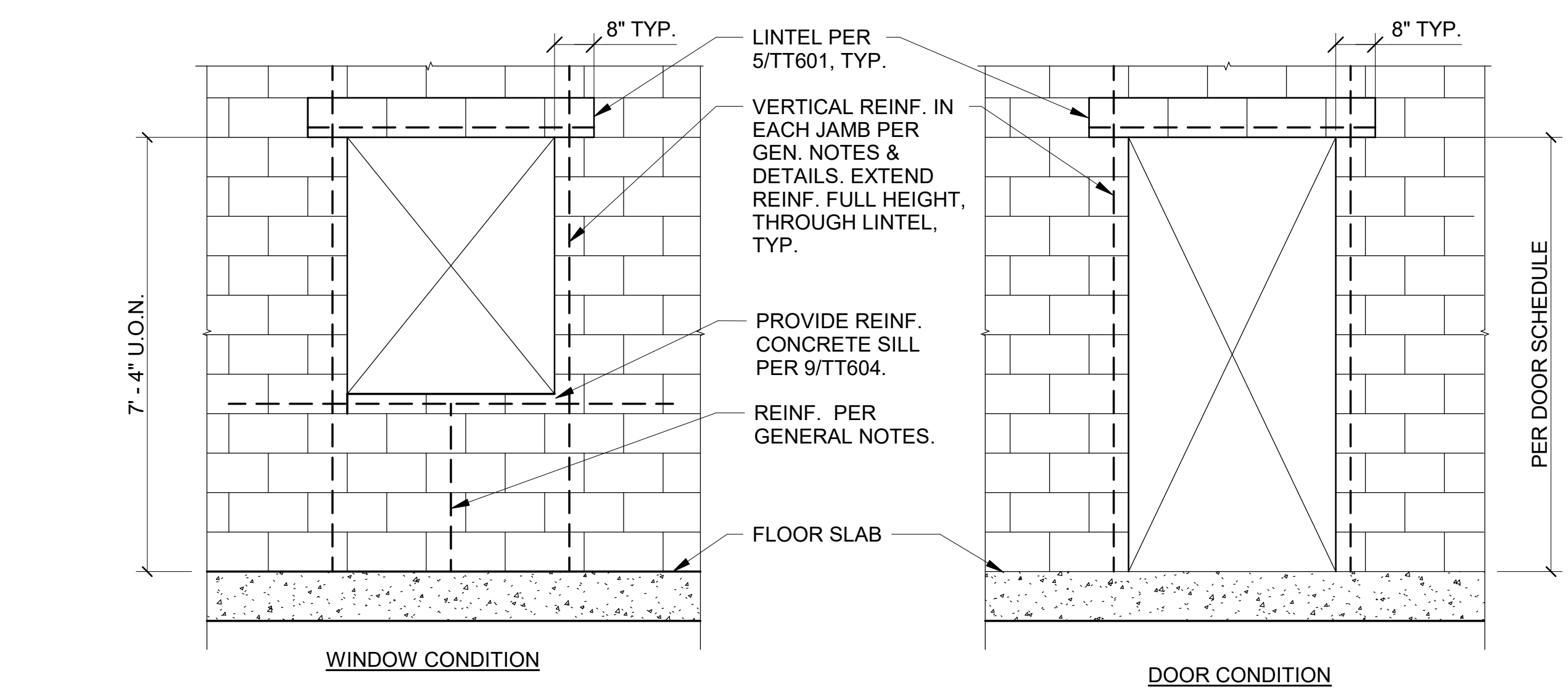
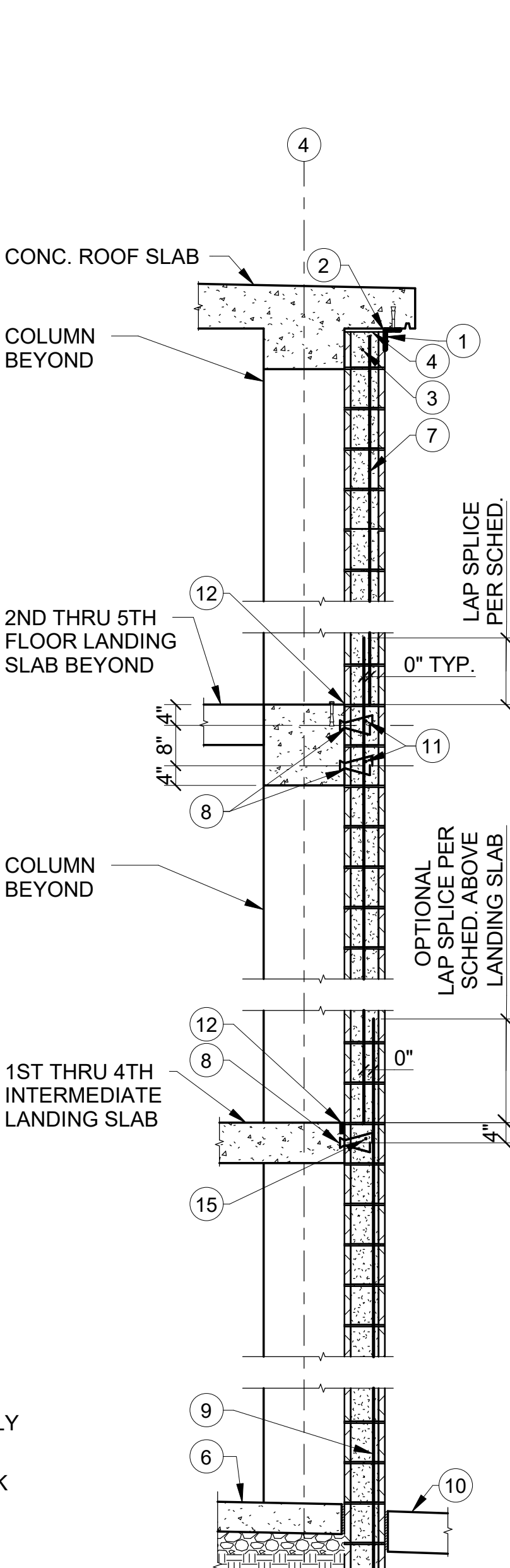
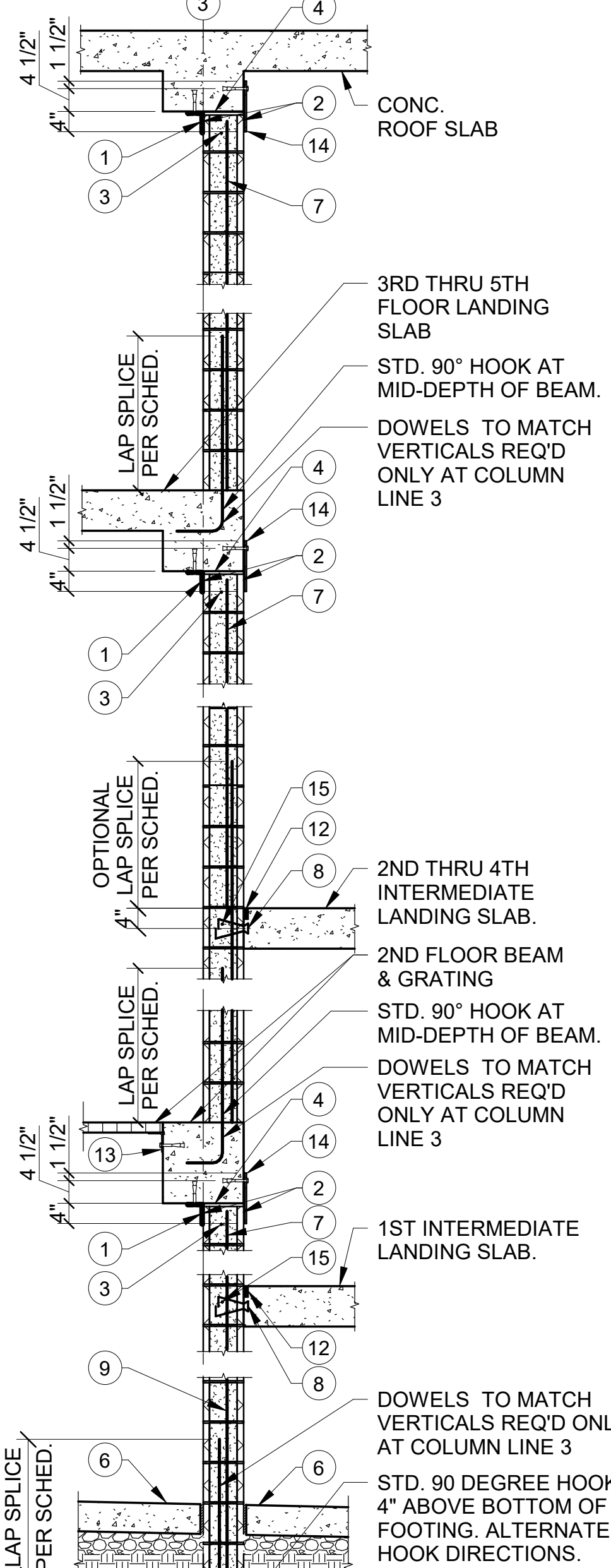
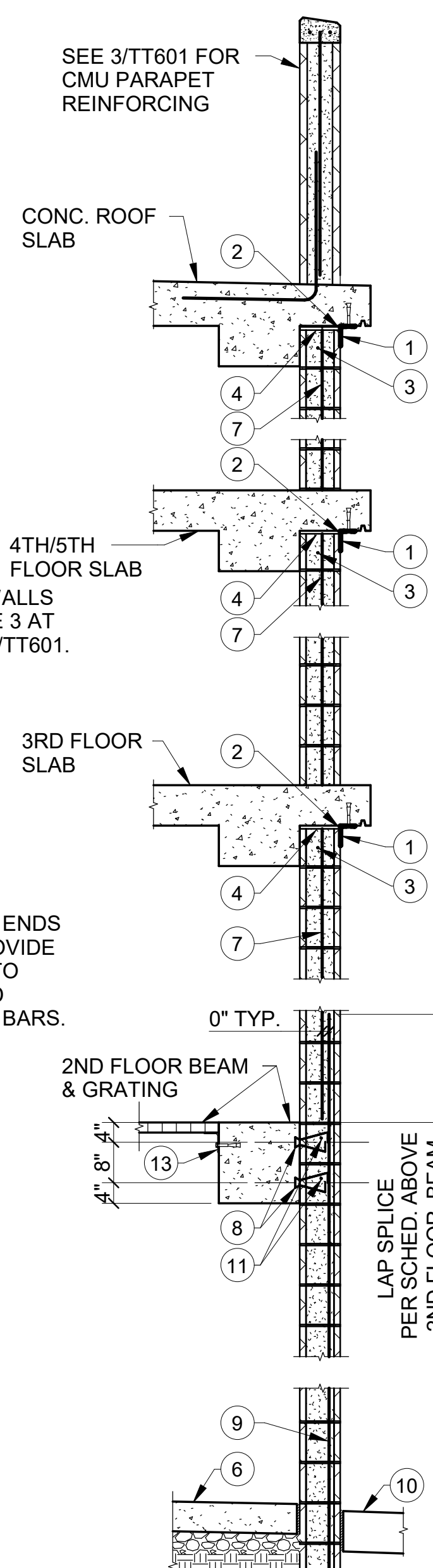
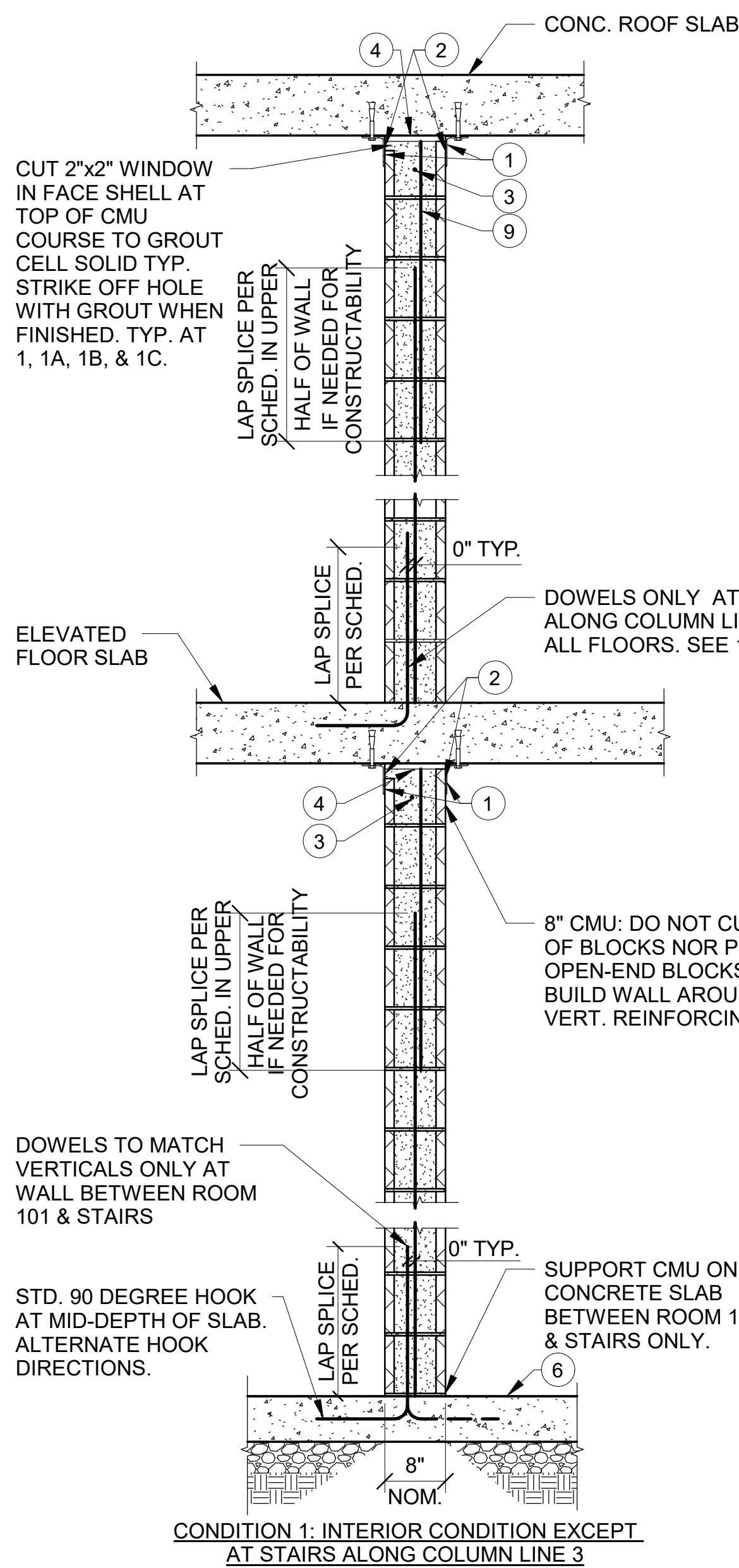
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- CONT. S.S. L4x3x3/16" (LLV) W/ 1/2" DIA. S.S. EXP. ANCHORS @ 3'-0" O.C. INTO SLAB OR BEAM THROUGH LONG-SLOTTED HOLES. SLOTS PARALLEL TO FACE OF WALL. PROVIDE 1/2" GAP BETWEEN ENDS OF ADJACENT ANGLE LENGTHS.
- SEALANT AT FACE ON BOTH SIDES OF WALL WITH BACKER ROD PER SPEC. 07 92 00. WHERE WALL RUNS PAST A CONC. BEAM, AT ITS INSIDE FACE, PROVIDE SEALANT AT EXT. FACE OF WALL ONLY
- (1) #4 CONT. BAR FULLY GROUTED INTO TOP COURSE.
- 1" EXPANSION JOINT AT TOP OF WALL
- (1) #4 CONT. BAR FULLY GROUTED INTO COURSE ADJACENT TO CONCRETE SLAB.
- INTERIOR SLAB-ON-GRADE PER GEN. NOTES
- LAP BARS PER CONDITION 1 IF NEEDED
- CONTINUOUS S.S. DOVETAIL ANCHOR SLOTS IN FACE OF CONCRETE BEAM OR SLAB WITH S.S. DOVETAIL ANCHORS IN HEAD JOINTS AT 16" O.C. SEE GEN. NOTES FOR MORE INFO ON DOVETAIL ANCHORS & SLOTS
- VERTICAL REINFORCING PER GENERAL NOTES FOR FULL HEIGHT OF WALL AND CENTERED IN CELLS (NOT ALWAYS DRAWN AT CENTER TO SHOW LAPS, HORIZONTAL BARS, AND DOVETAIL ANCHORS). EXTEND BARS TO TOP OF WALL IN EACH REINFORCED CELL.
- PAVEMENT PER CIVIL DWGS.
- (1) #4 CONT. BAR FULLY GROUTED INTO TWO COURSES ADJACENT TO CONCRETE BEAM.
- SEALANT AND BACKER ROD PER SPEC. 07 92 00 INCLUDING ALONG SLOPING STAIR SLAB.
- L4x3 PER 1/TT502
- S.S. PL. 3/8"x1'-6" LONGx10" TALL AT 4'-0" O.C. W/ (2) S.S. 1/2" DIA. EXP. ANCHORS 12" APART

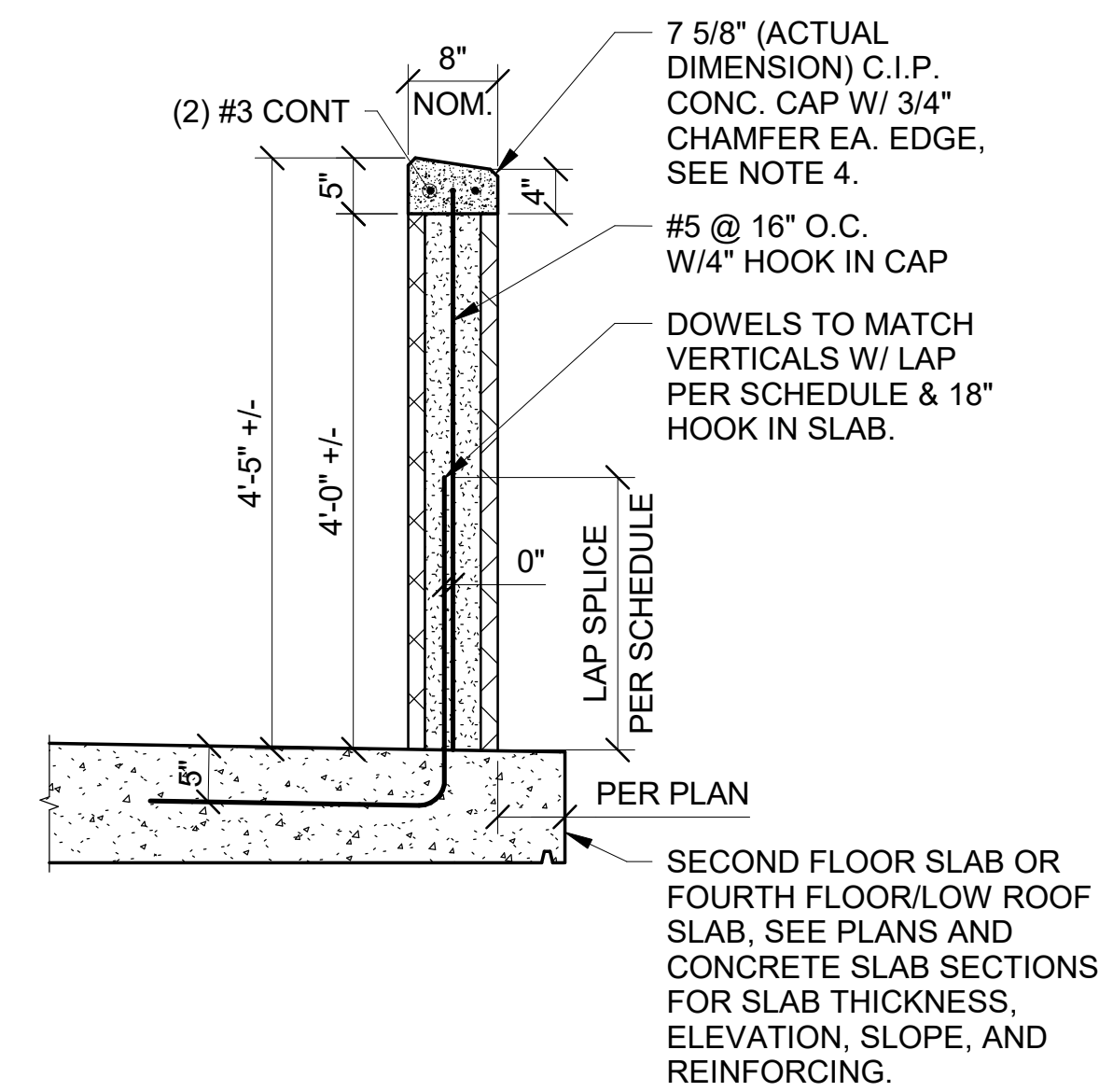
#### NOTES:

- CONCRETE SLAB REINFORCING NOT SHOWN FOR CLARITY.
- PROVIDE FULL 8" TALL COURSE AT TOPS OF ALL WALLS. IF WALL DOES NOT COURSE HORIZONTALLY, PROVIDE SHORT COURSE WITHIN WALL LENGTH AT ANY LOCATION OTHER THAN AT ENDS OF WALL OR AT JAMBS OF OPENINGS.
- PROVIDE HORIZONTAL JOINT REINFORCING AT 16" O.C. MAX.
- GROUT ALL CELLS SOLID, FULL-HEIGHT.
- PROVIDE ADDITIONAL REINFORCING AT OPENINGS PER DETAIL 2/TT601.
- BUILD WALL AFTER SLAB ABOVE HAS REACHED 28-DAY STRENGTH AND SHORING HAS BEEN REMOVED.
- FOR EXTERIOR CMU WALLS THAT ARE NOT SUPPORTED ON FLOOR SLABS, LAP VERTICAL BARS ABOVE FLOOR LEVEL PER LAP SCHEDULE AT EACH LEVEL AS WALL EXTENDS TO UNDERSIDE OF ROOF SLAB.



### TYPICAL MASONRY WALL OPENING DETAILS

TT601 TT601 SCALE 1/2" = 1'-0"

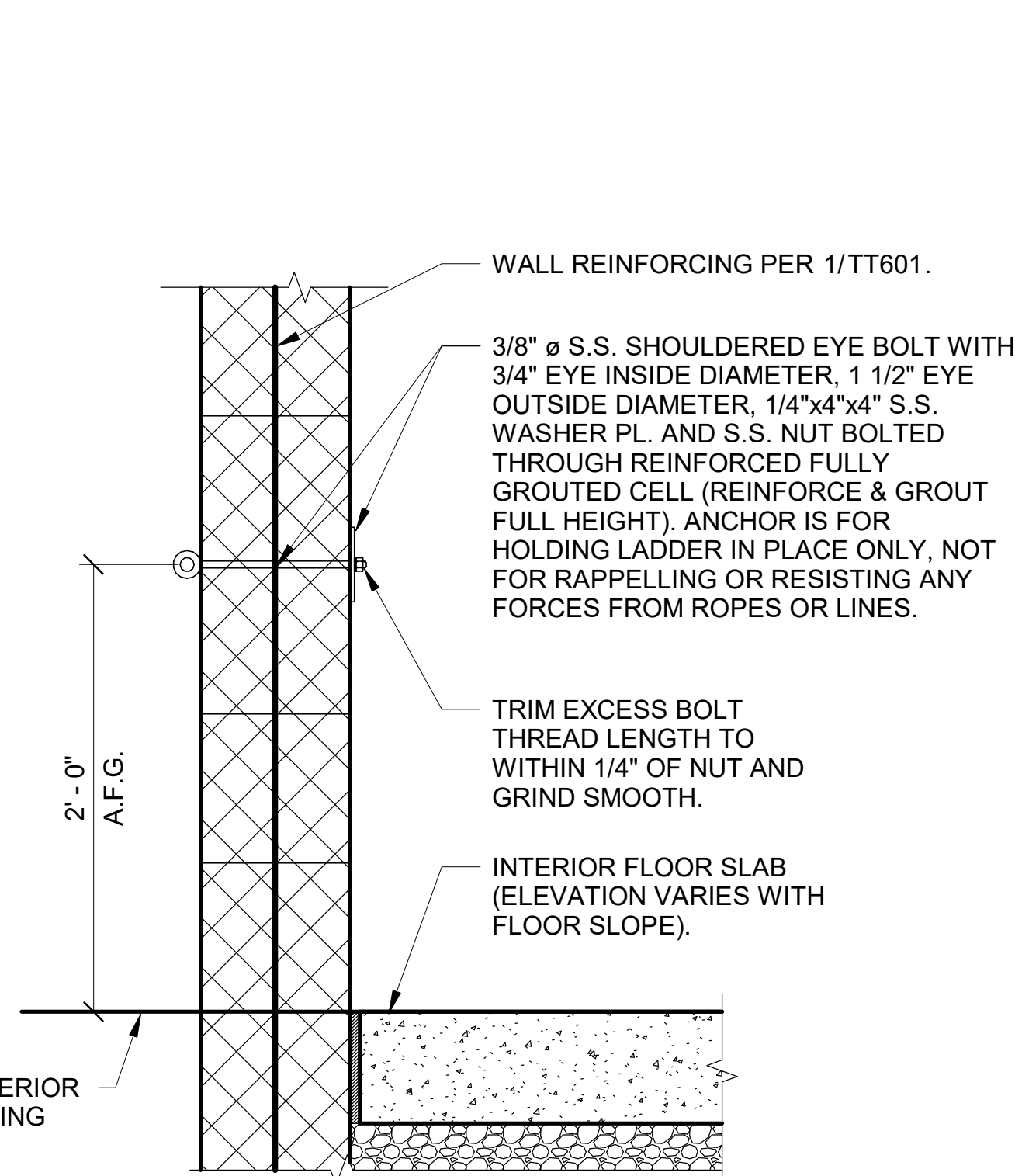


#### NOTES:

- PROVIDE HORIZ. JOINT REINFORCING @ 16" O.C. MAX. PER GENERAL NOTES & SPECIFICATIONS.
- TOPS OF ALL PARAPET WALLS SHALL BE THE SAME HEIGHT. CUT BOTTOM COURSE AS NECESSARY ALONG SLAB SLOPE.
- GROUT ALL CELLS SOLID.
- CONC. CAP SHALL BE C.I.P., 5,000 PSI, AIR-ENTRAINED CONCRETE PER GENERAL NOTE L.11 ON SHEET TT001.

### CMU PARAPET SECTION

TT202 TT601 SCALE 3/4" = 1'-0"

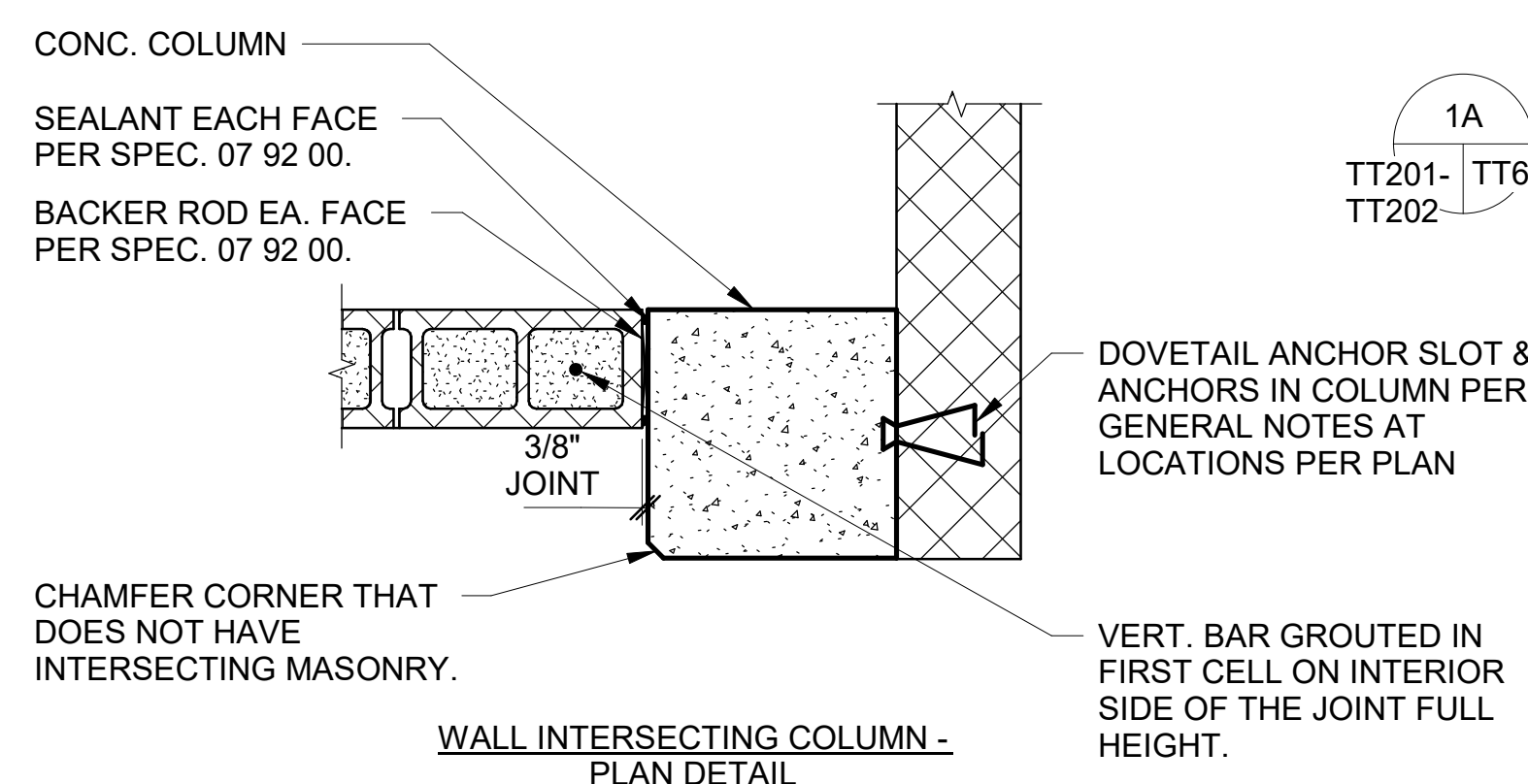


### LADDER TIE OFF DETAIL

TT301 TT601 SCALE 1 1/2" = 1'-0"

### TYPICAL NON-BEARING MASONRY INFILL WALL

TT201- TT601 TT201- TT601 TT201- TT601 TT201- TT601 SCALE 3/4" = 1'-0"



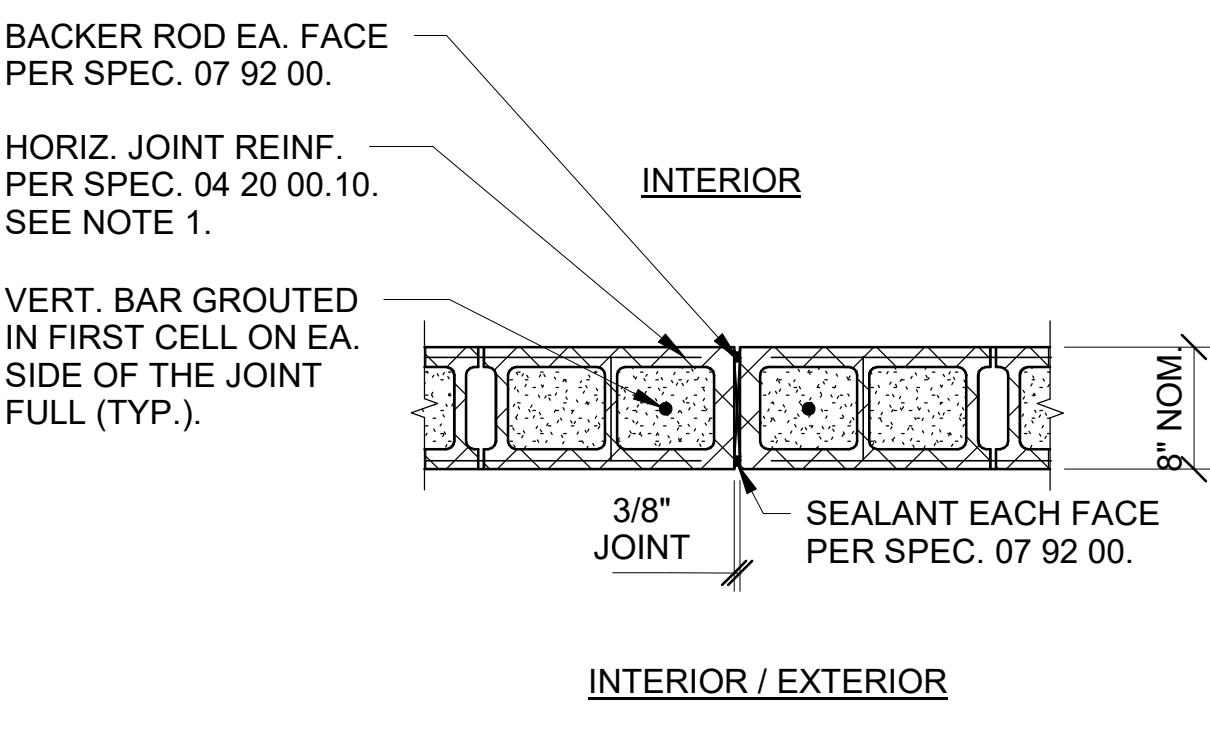
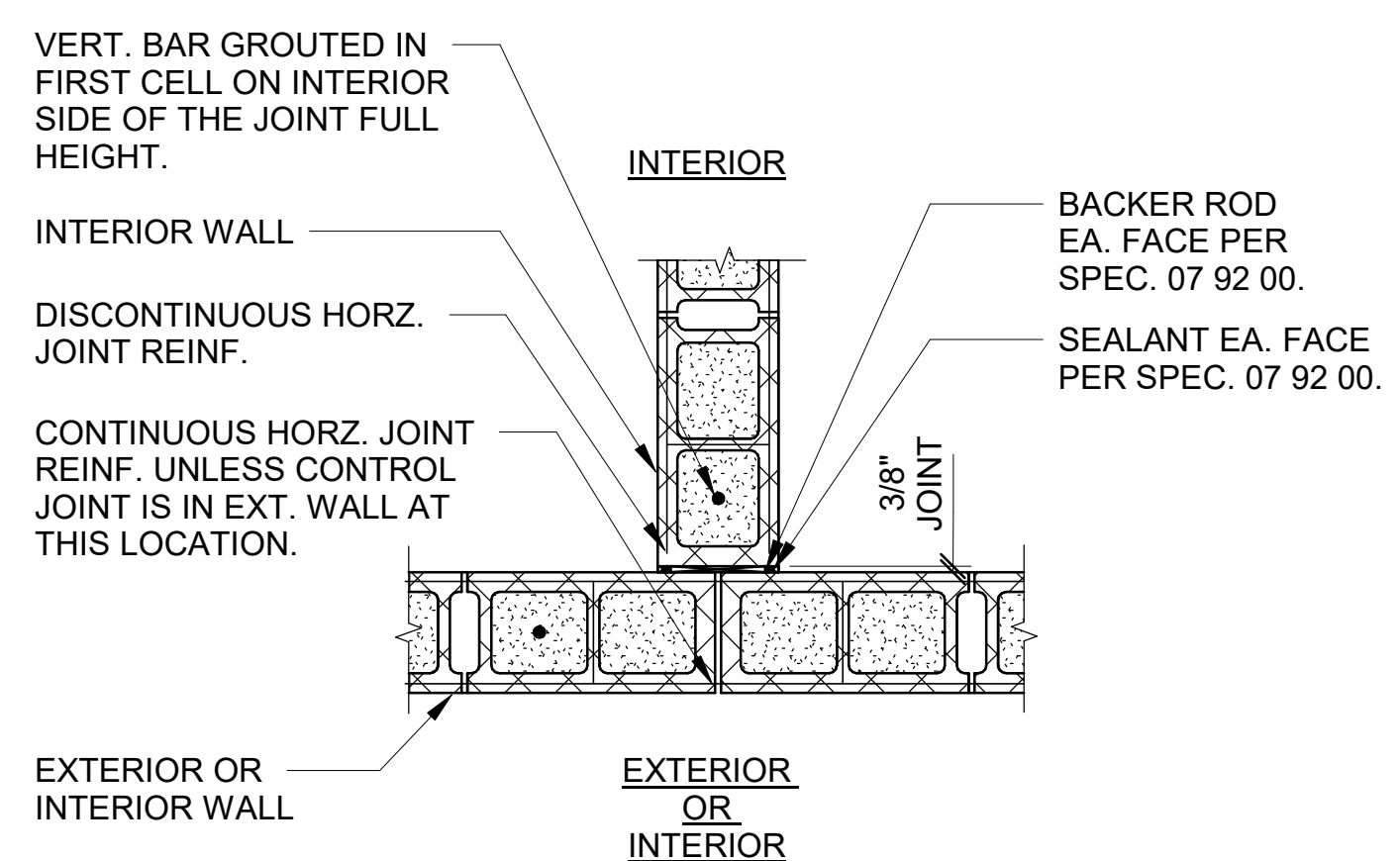
BULLNOSE CORNERS AT STEEL PL. WINDOW SHUTTER OPENINGS. NO BULLNOSE AT DOOR FRAMES.

#### NOTES:

- THIS DETAIL APPLIES TO ALL CMU DOOR AND WINDOW OPENINGS, U.O.N.
- BEAR LINTEL ON WALL FOR 8" AT EACH END.

### SECTION - LINTELS

TT201- TT601 TT203 SCALE 1 1/2" = 1'-0"



#### NOTE:

- THIS DETAIL APPLIES ONLY WHERE SHOWN IN PLAN ON SHEETS TT201 THROUGH TT203.

#### NOTE:

- THIS DETAIL APPLIES ONLY WHERE SHOWN IN ELEVATION.

#### T-INTERSECTION WALL PLAN DETAIL

#### NOTES FOR ALL CONDITIONS:

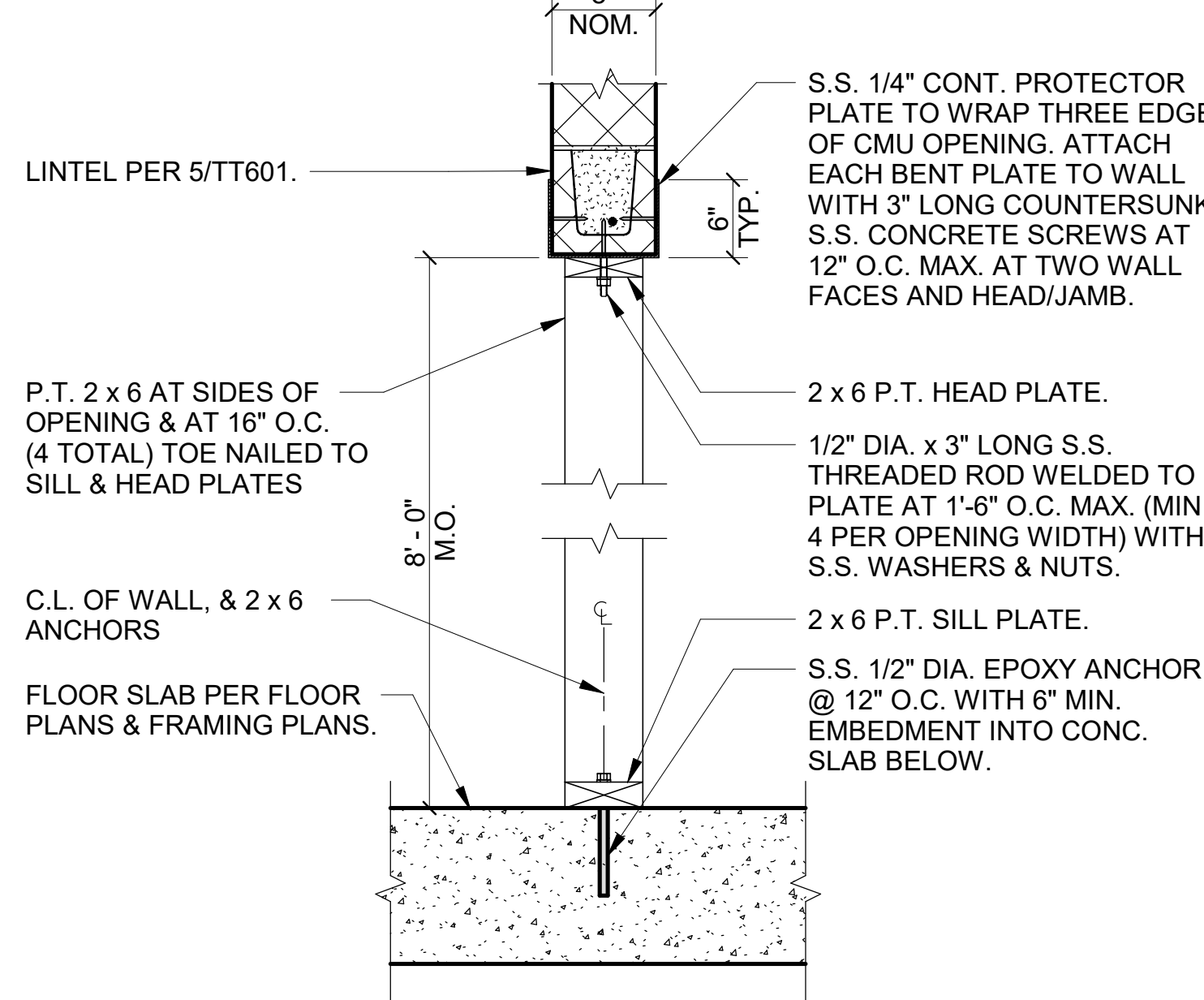
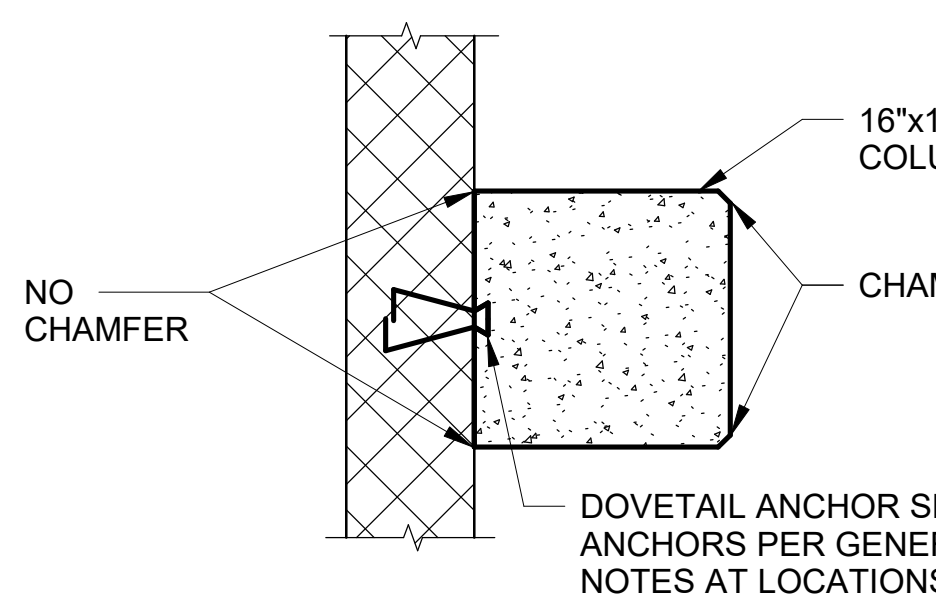
- STOP HORIZONTAL JOINT REINF. 2" FROM JOINT AT EA. SIDE OF JOINT.
- AT BOND BEAMS AND LINTELS, PROVIDE CONTROL JOINTS AT FACES OF BLOCK, AS SHOWN. MAINTAIN CONTINUOUS BOND BEAM/LINTEL REINFORCING THROUGH THE JOINT (CUT HORIZ. JOINT REINFORCING, DO NOT CUT HORIZ. BOND BEAM/LINTEL REINFORCING).
- PLACE CONTROL JOINTS SO THEY ALTERNATE BETWEEN BEING IN A HEAD JOINT AND AT THE CENTER OF THE 16" LONG BLOCK FROM ONE COURSE TO THE NEXT. IGNORE THE DIAGRAMMATIC COURSLING LINES ON THE ELEVATIONS BUT DO LOCATE THE JOINTS AT THE LOCATIONS SHOWN ON THOSE SHEETS, INCLUDING WHERE THE JOINT IS SHOWN AT THE CORNER OF A WALL OPENING. NOTIFY ENGINEER IF THERE IS ANY CONFLICT BETWEEN JOINT LOCATION AND REQUIREMENT FOR LOCATING JOINTS IN HEAD JOINTS.

### MASONRY CONTROL JOINT PLAN DETAILS

TT301 TT601 SCALE 1" = 1'-0"

#### STRAIGHT WALL PLAN DETAIL

#### CONC. COLUMN TIGHT TO CMU WALL - PLAN DETAIL



#### NOTES:

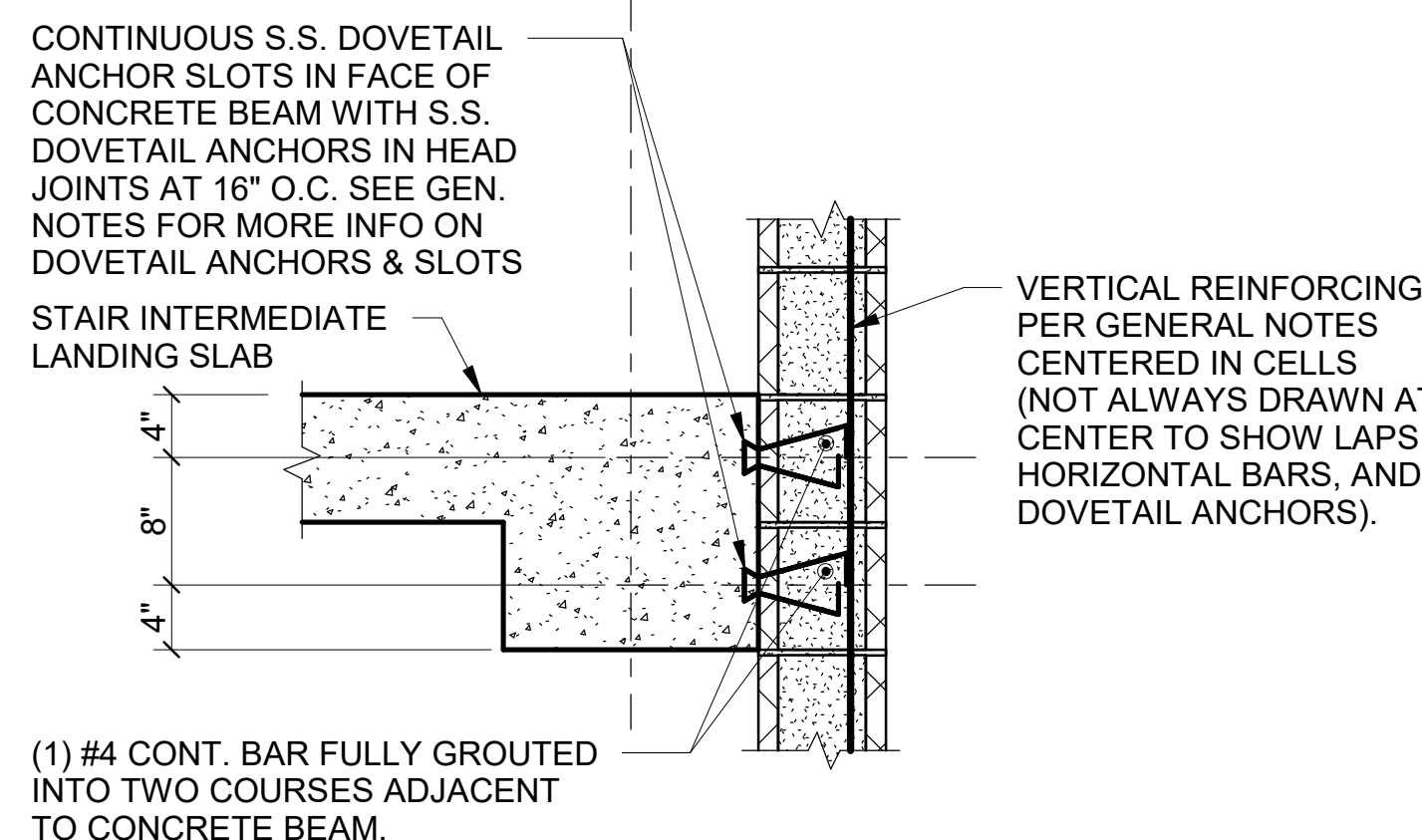
- REINFORCE AROUND OPENING PER 2/TT601.

### BREACH WALL MOCKUP DETAIL

TT202 TT601 SCALE 1" = 1'-0"

### NORTH NON-BEARING EXTERIOR WALL AT STAIR INTERMEDIATE LANDING

TT201- TT601 TT203 SCALE 1" = 1'-0"



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NCCCS NO. 2303



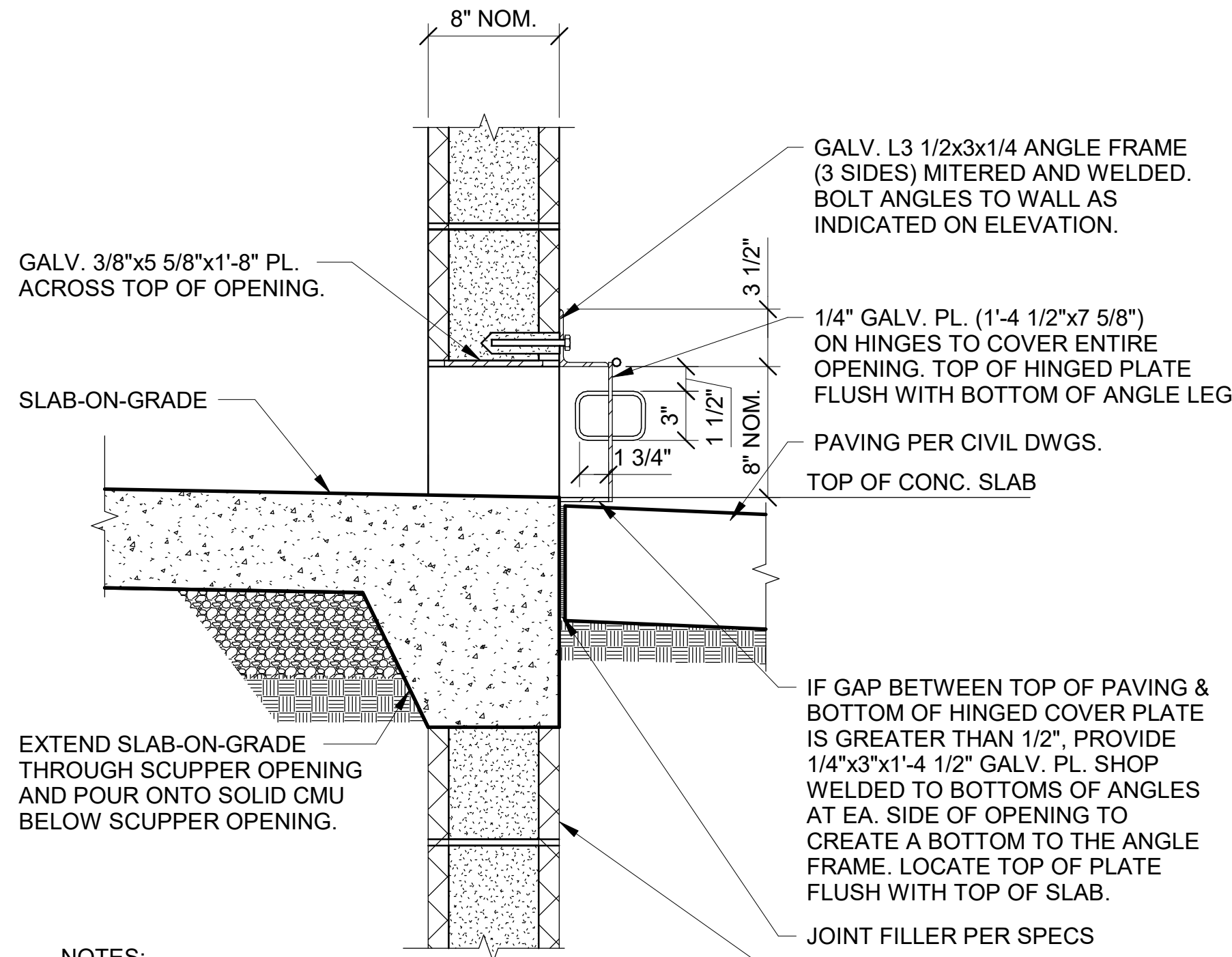
NO.	REVISION	DATE

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET

**TRAINING TOWER - TYPICAL MASONRY DETAILS**

TT601

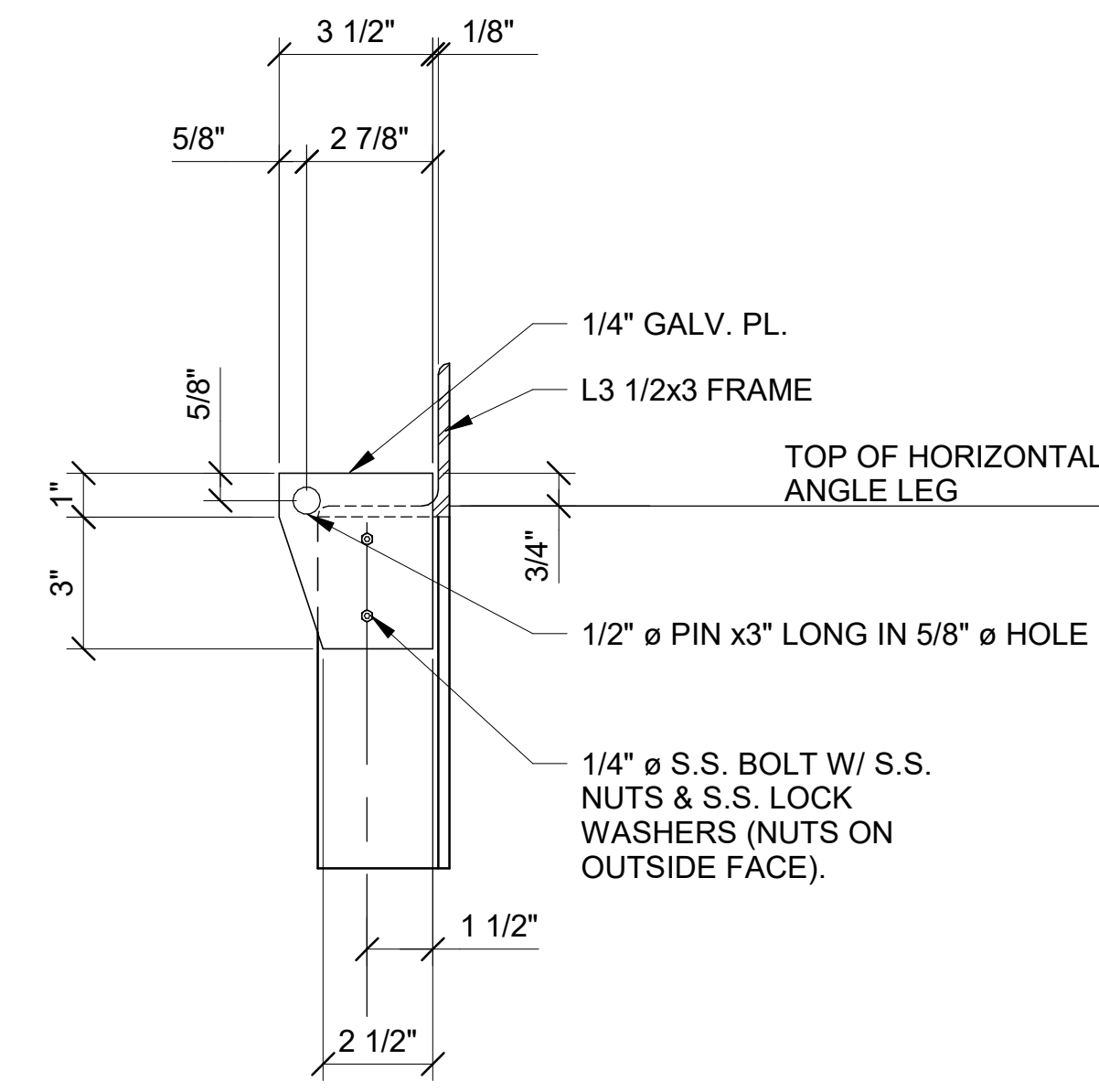
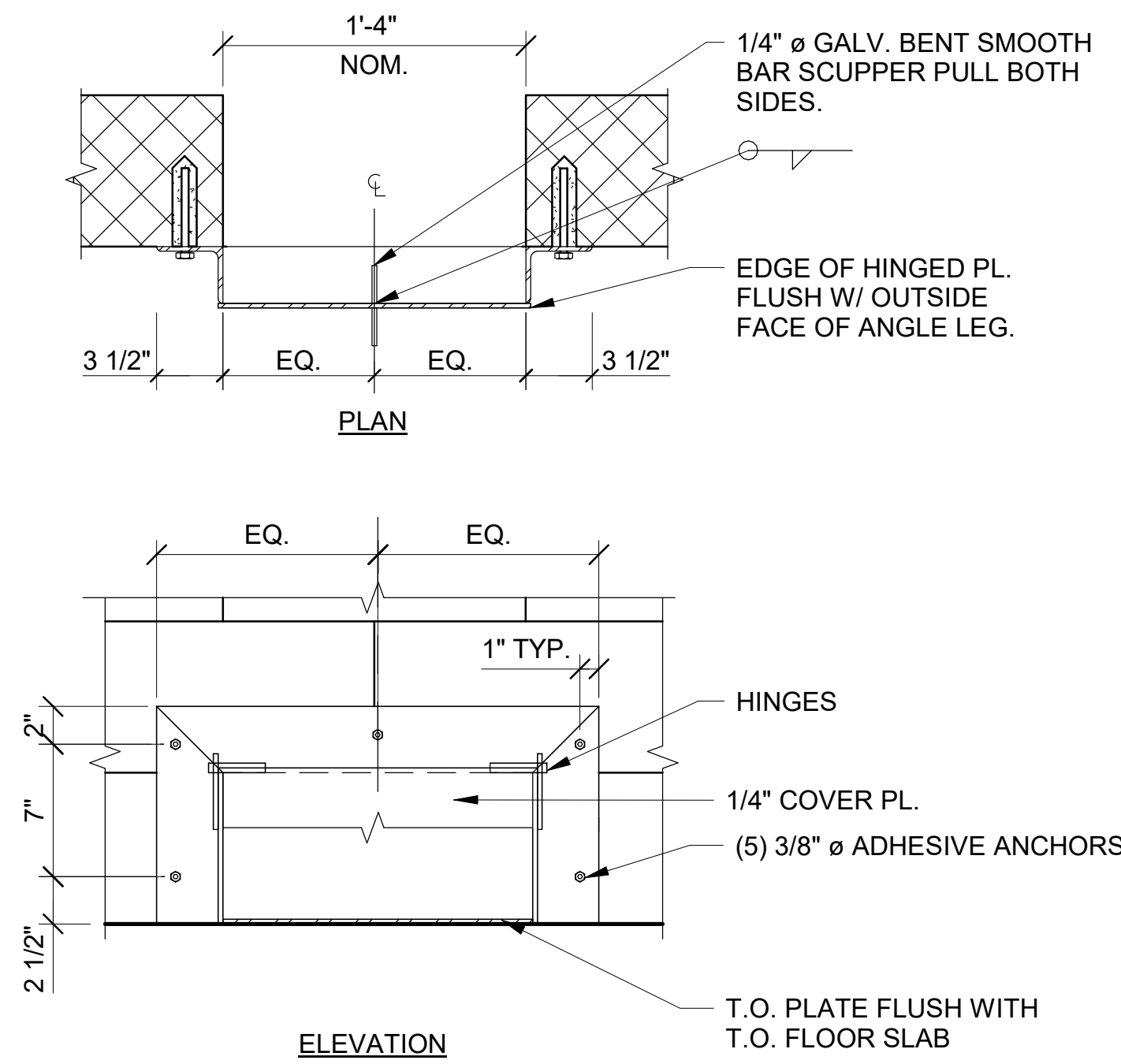




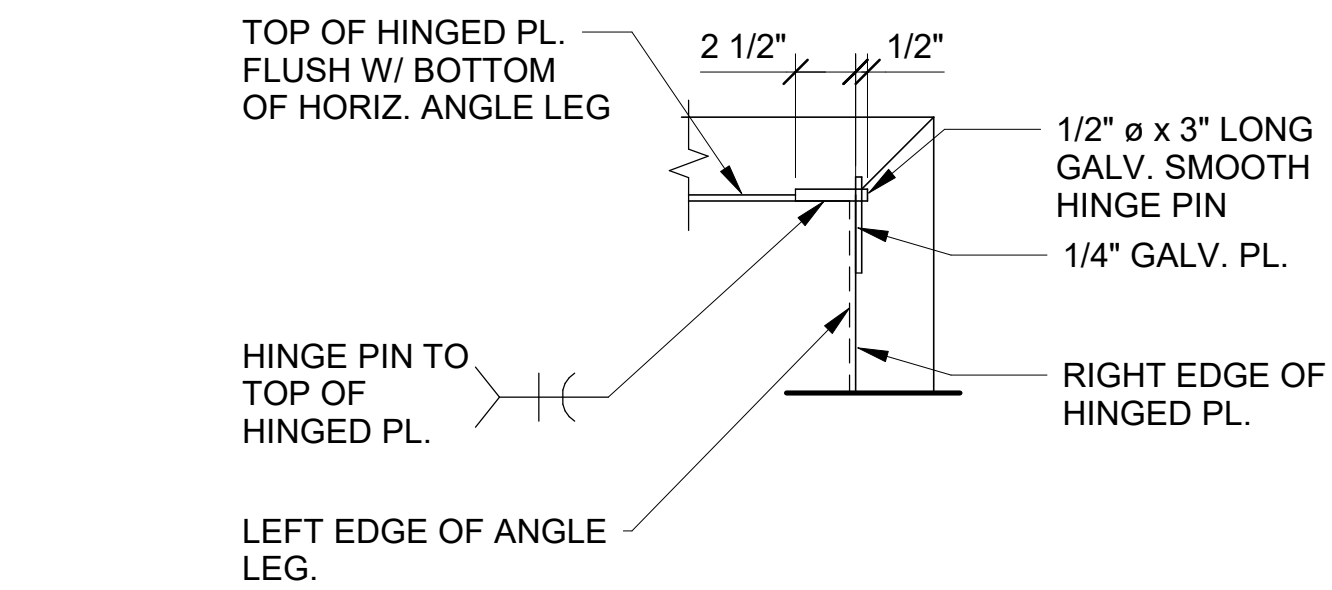
NOTES:

1. SEE DETAILS 2, 3 & 4 FOR HINGES DETAILING.

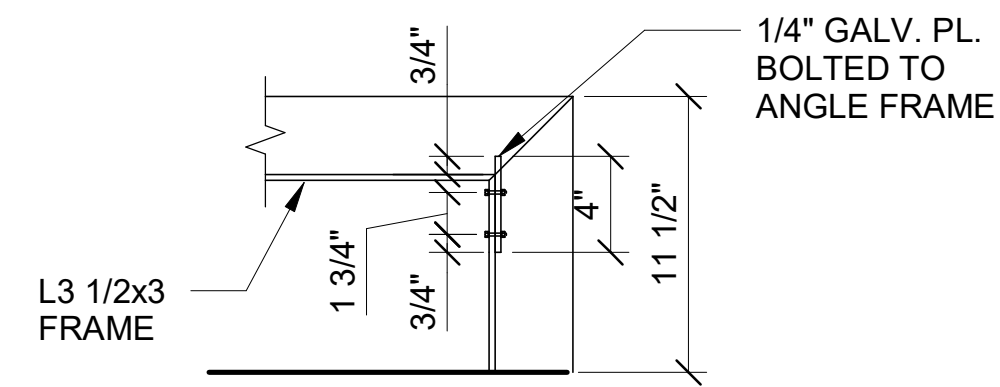
1 SCUPPER DETAILS - TYPE 1  
TT201- TT602 SCALE 1 1/2" = 1'-0"  
TT203



2 SECTION - SCUPPER HINGE  
TT602 TT602 SCALE 3" = 1'-0"



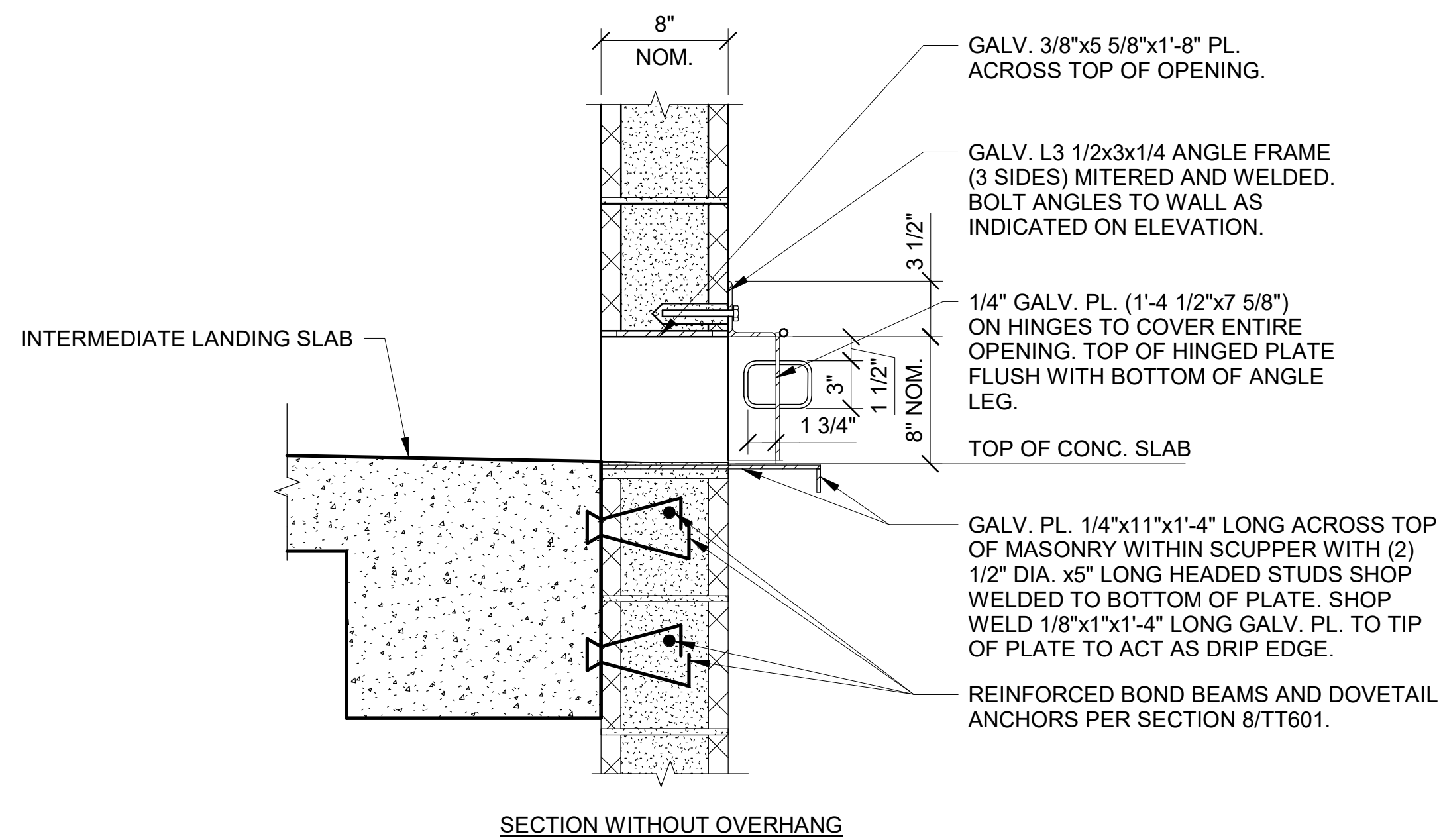
3 ELEVATION - SCUPPER HINGE PIN  
TT602 TT602 SCALE 1 1/2" = 1'-0"



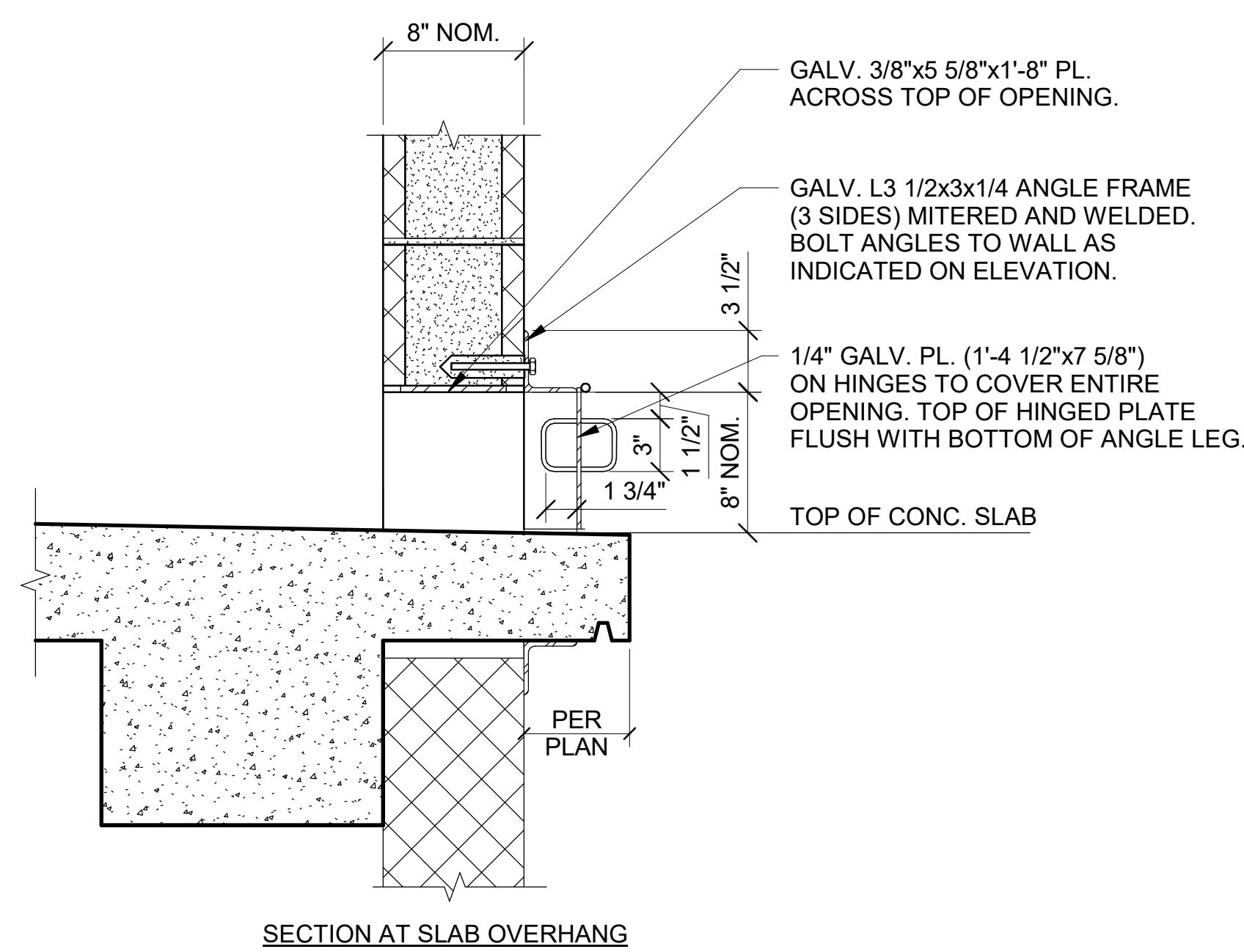
NOTES:

1. HINGE PIN NOT SHOWN IN THIS ELEVATION FOR CLARITY.

4 ELEVATION - SCUPPER HINGE PLATE  
TT602 TT602 SCALE 1 1/2" = 1'-0"



SECTION WITHOUT OVERHANG

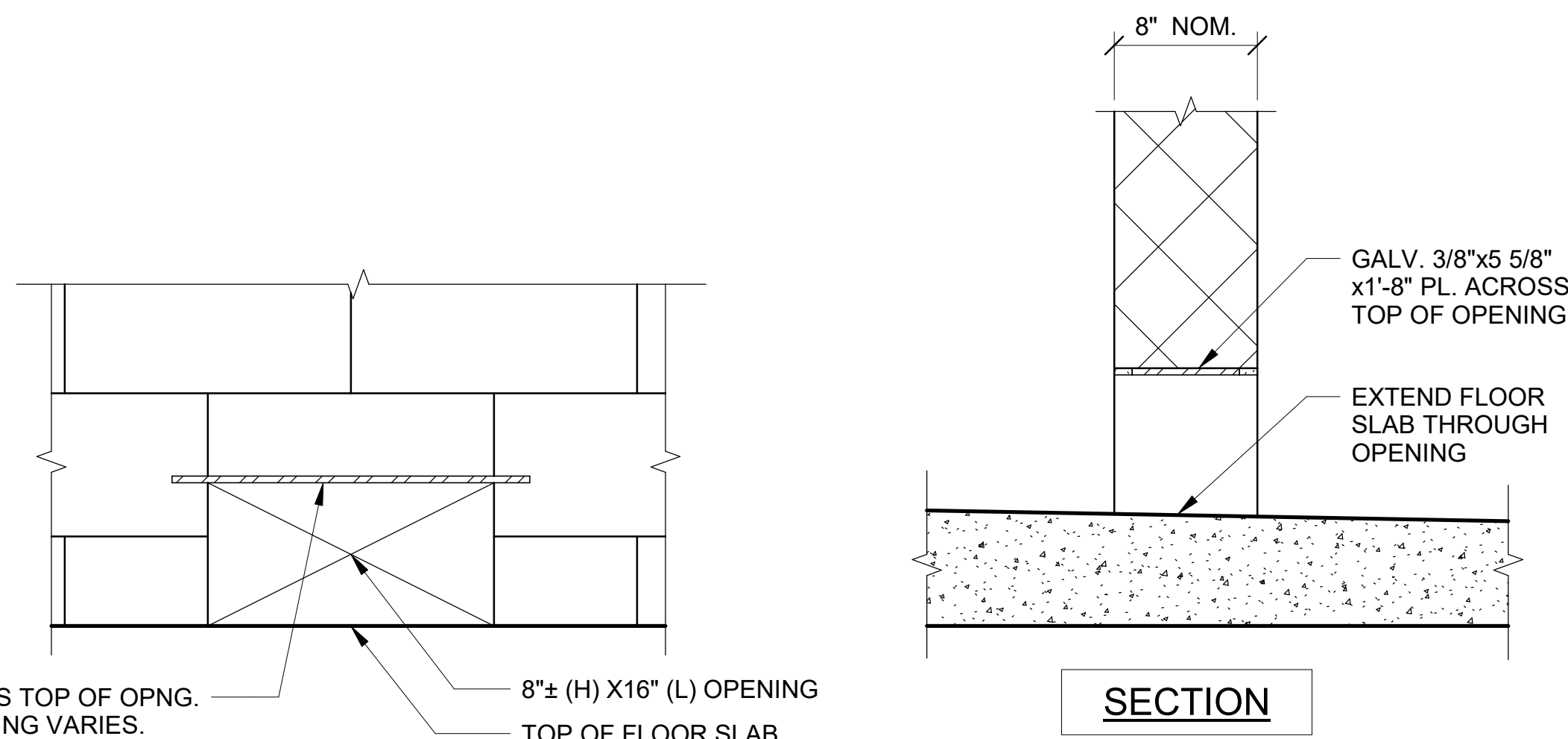


SECTION AT SLAB OVERHANG

NOTES:

1. SEE DETAILS 2, 3 & 4 FOR HINGES DETAILING.

5 SCUPPER TYPE 2 ELEVATED FLOOR  
TT201- TT602 SCALE 1 1/2" = 1'-0"  
TT203

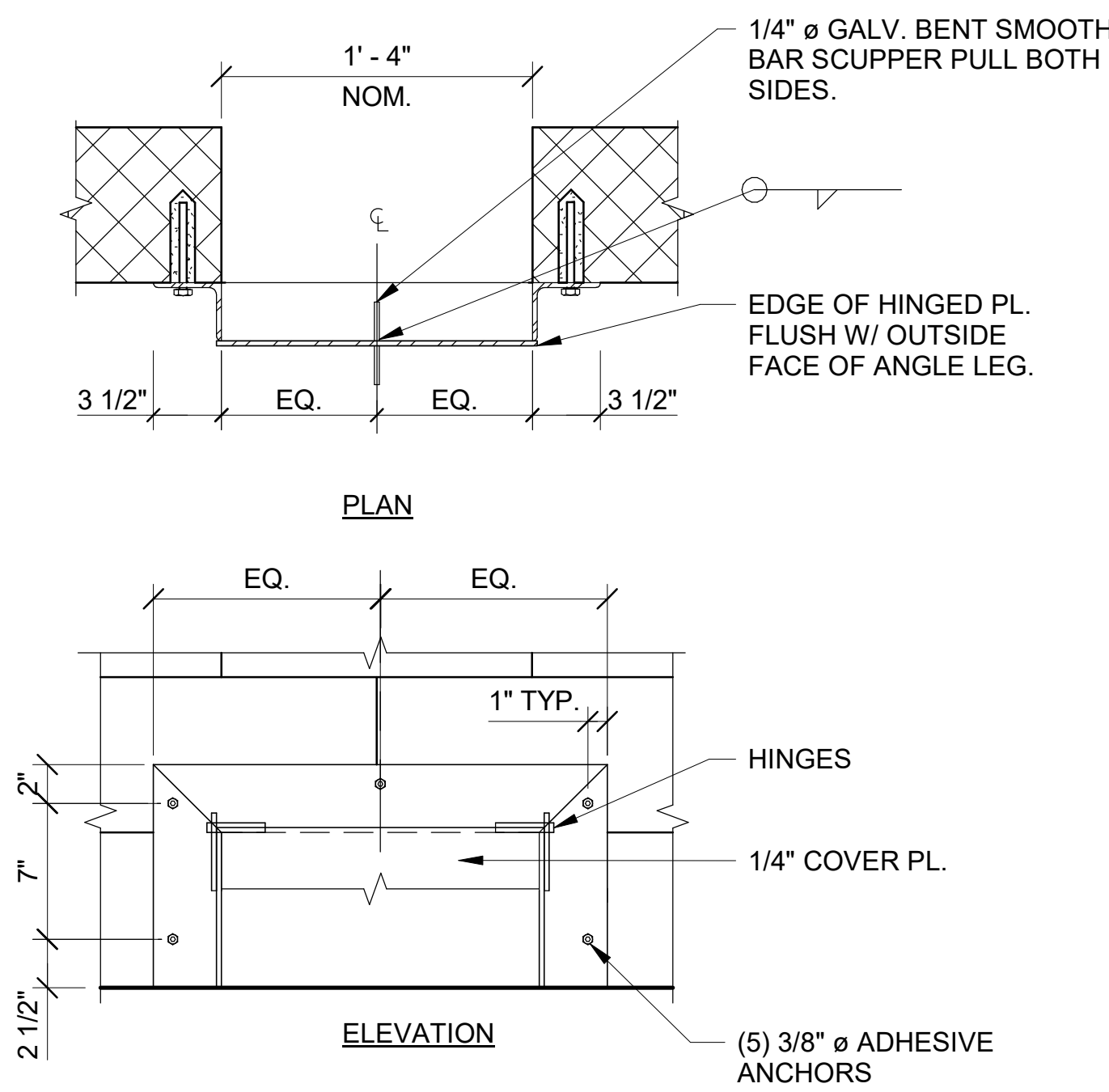


GALV. PL. ACROSS TOP OF OPNG.  
HEIGHT OF OPENING VARIES.  
PLACE PL. AT FIRST BED JOINT  
ABOVE SLAB, BUT WITH MIN. HEIGHT  
OF OPENING = 5 1/2" ABOVE TOP OF  
CONCRETE. IF FIRST BED JOINT IS  
LESS THAN 5 1/2" ABOVE TOP OF  
CONCRETE, THEN PLACE PLATE AT  
8" ABOVE TOP OF CONCRETE AND  
SAW CUT SLOT INTO ADJACENT  
BLOCKS TO RECEIVE PLATE.

ELEVATION

OPENING AT BASE OF INTERIOR &  
PARAPET WALLS

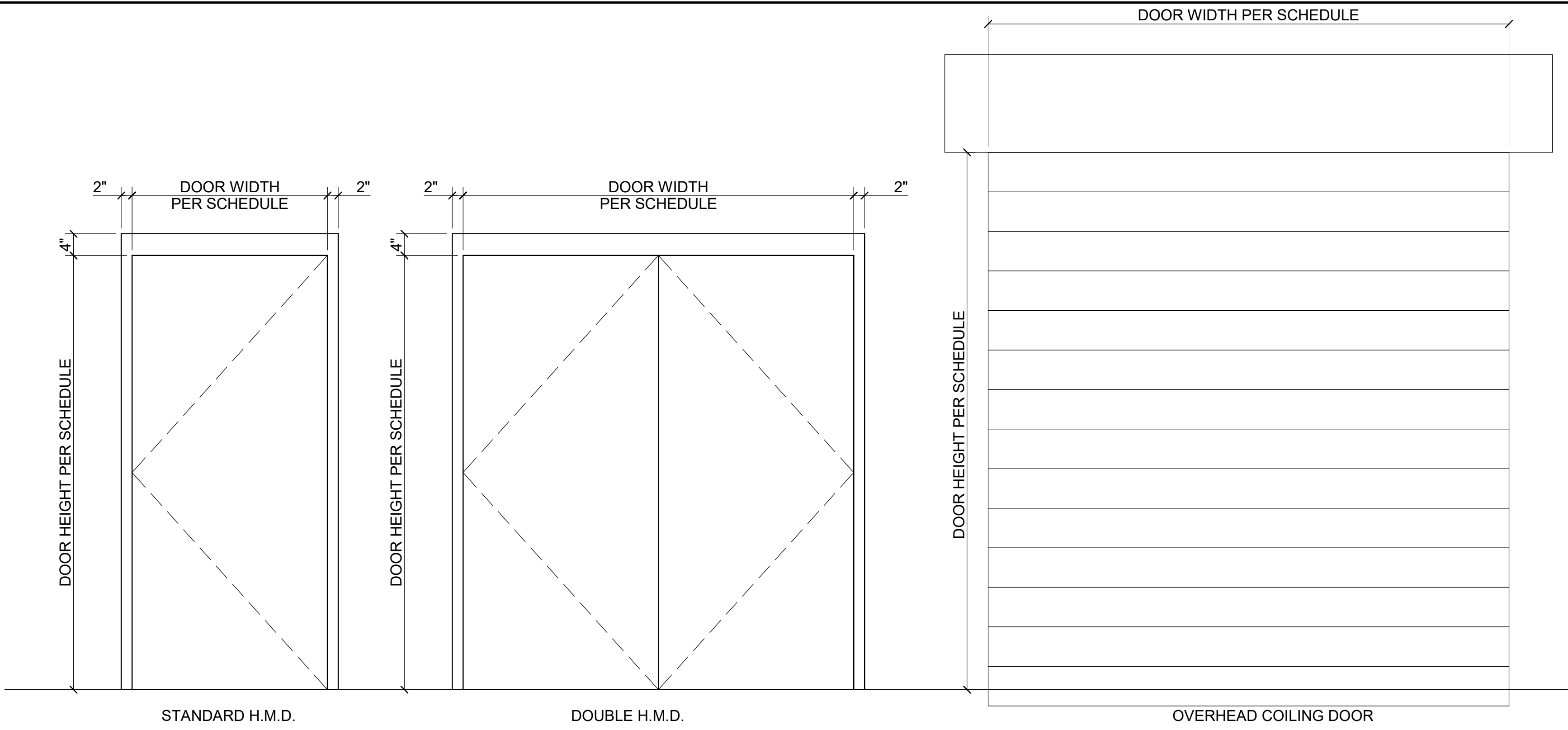
6  
TT201- TT602 SCALE 1 1/2" = 1'-0"  
TT203



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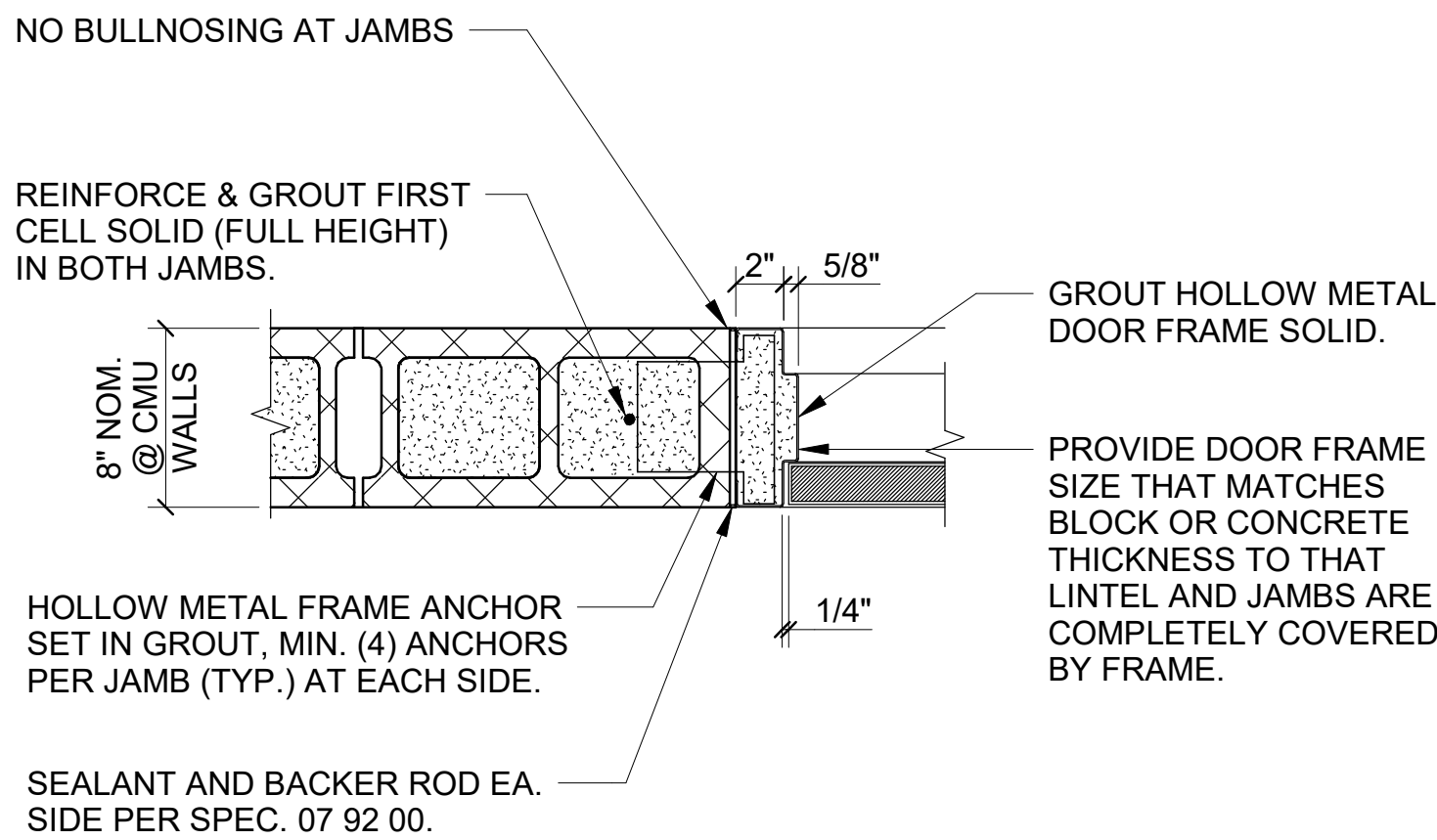


HOLLOW METAL DOOR SCHEDULE																	
DOOR NO.		INT/EXT	R.O. WIDTH	R.O. HEIGHT	DOOR			FRAME		DETAILS			HDW	THRESHOLD	SWEEP	REMARKS	
					DOOR WIDTH	DOOR HEIGHT	SS TYPE MARK	DOOR TYPE	DOOR FINISH	FRAME TYPE	FRAME FINISH	HEAD					JAMB
300		INT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	002	N	N
301		INT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	002	N	N
301A		EXT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	002	N	Y
EXT-100A		EXT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	001	N	Y
EXT-100B		EXT	8' - 0"	8' - 0"	8' - 0"	8' - 0"	OCD		PNT		PNT					N	N
EXT-101		EXT	6' - 8"	7' - 4"	6' - 4"	7' - 0"	DHMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	003	N	Y
EXT-200		EXT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	001	N	Y
EXT-302		EXT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	001	N	Y
EXT-400		EXT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	001	N	Y
EXT-ST-1		EXT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	001	N	Y
ST-1		INT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	002	N	N
ST-2		INT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	002	N	N
ST-3		INT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	002	N	N
ST-4		INT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	002	N	N
ST-5		EXT	3' - 4"	7' - 4"	3' - 0"	7' - 0"	HMD	G-90	PNT	G-90	PNT	3/TT603	2/TT603	4/TT603	001	N	Y

- DOOR SCHEDULE NOTES:**
- REFERENCE SPEC. SECTION 08 11 13 FOR HOLLOW METAL DOORS AND FRAMES, INCLUDING MATERIALS AND FINISHES.
  - REFERENCE SPEC. SECTION 08 71 00 FOR DOOR HARDWARE INFORMATION.
  - PAINT ALL INTERIOR AND EXTERIOR HOLLOW METAL DOORS AND FRAMES PER DIVISION 09 SPECIFICATION SECTION "PAINTING".
  - ALL HOLLOW METAL DOOR FRAMES SHALL BE GROUT FILLED.
  - DOOR HEIGHT SHALL BE MEASURED FROM LOW SIDE ("TALL JAMB").
  - TRIM THE DOOR FRAME AT THE HIGH SIDE ("SHORT JAMB") SO IT WILL FIT IN OPENING SIZE. IF THE WALL IS PERPENDICULAR TO THE DIRECTION OF THE FLOOR SLOPE, BOTH JAMBS SHOULD BE THE SAME HEIGHT, AND THE DOOR FRAME SHOULD NOT REQUIRE TRIMMING TO FIT IN THE OPENING.
  - GRIND THE BOTTOM OF THE DOOR FRAME SMOOTH AT ANY CUT LOCATIONS.
  - PROVIDE 4" GAP AT BOTTOM OF DOORS PER DETAIL 5/TT603. NO GAP AT DOOR HEAD.
  - BASIS OF DESIGN FOR OVERHEAD COILING DOOR SHALL BE A MANUALLY-OPERATED GALVANIZED ROLLING SERVICE DOOR, SERIES 610, BY OVERHEAD DOOR CORPORATION. MOUNT DOOR TO EXTERIOR FACE OF CMU WALL. SIZE OF ROUGH OPENING IS APPROXIMATELY 8'-0" WIDE x 8'-0" HIGH. PROVIDE ALL COMPONENTS TO MAKE DOOR LOCKABLE WHEN IN CLOSED POSITION. SUBMIT SHOP DRAWINGS AND PRODUCT LITERATURE SHOWING COMPONENTS, SIZES AND ATTACHMENTS TO THE STRUCTURE TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
  - SEE DETAIL 5/TT603 FOR ELEVATOR DOOR DETAILS.

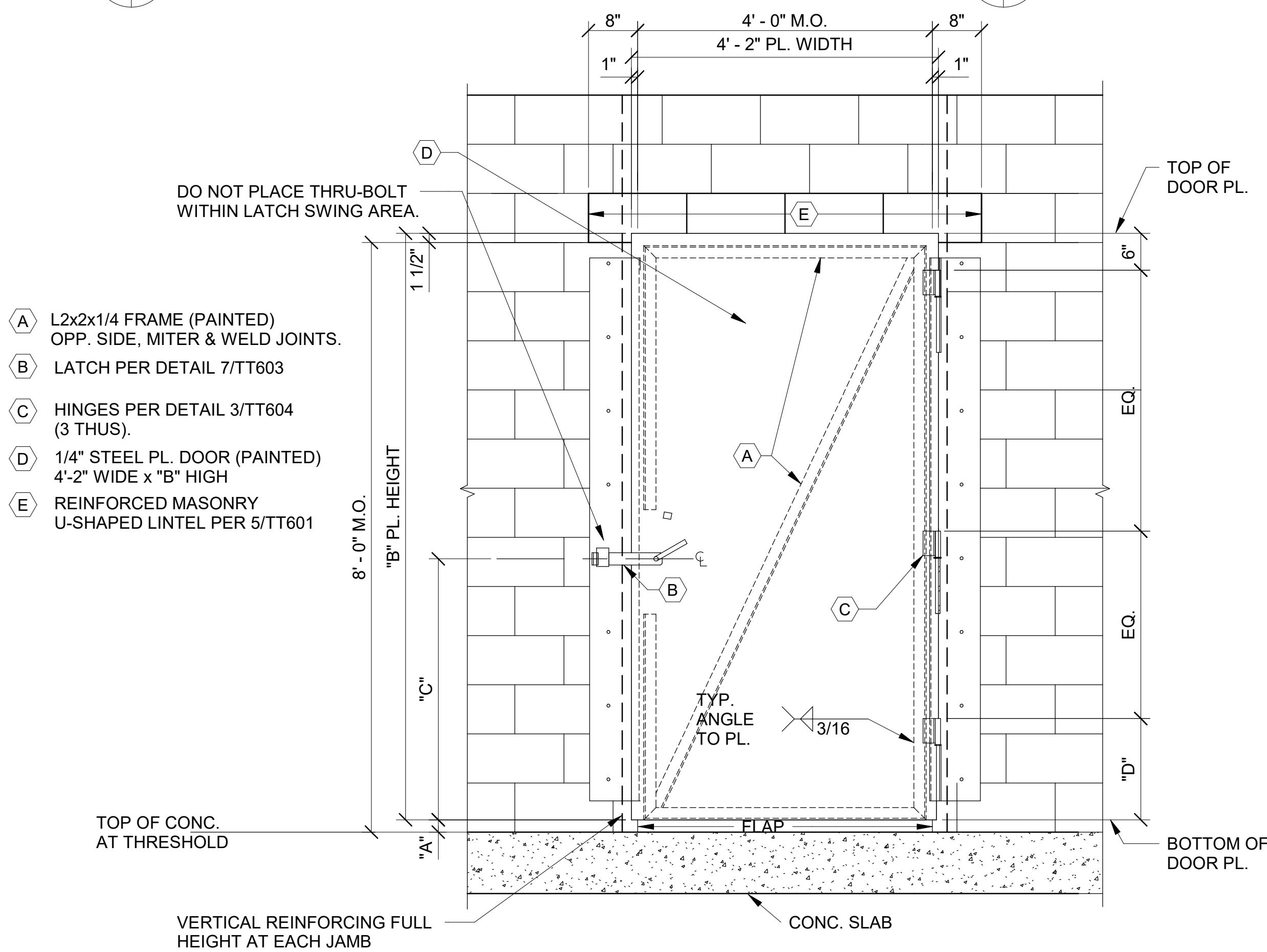
## HOLLOW METAL DOOR ELEVATIONS

TT201- TT603 SCALE 3/4" = 1'-0"  
TT203



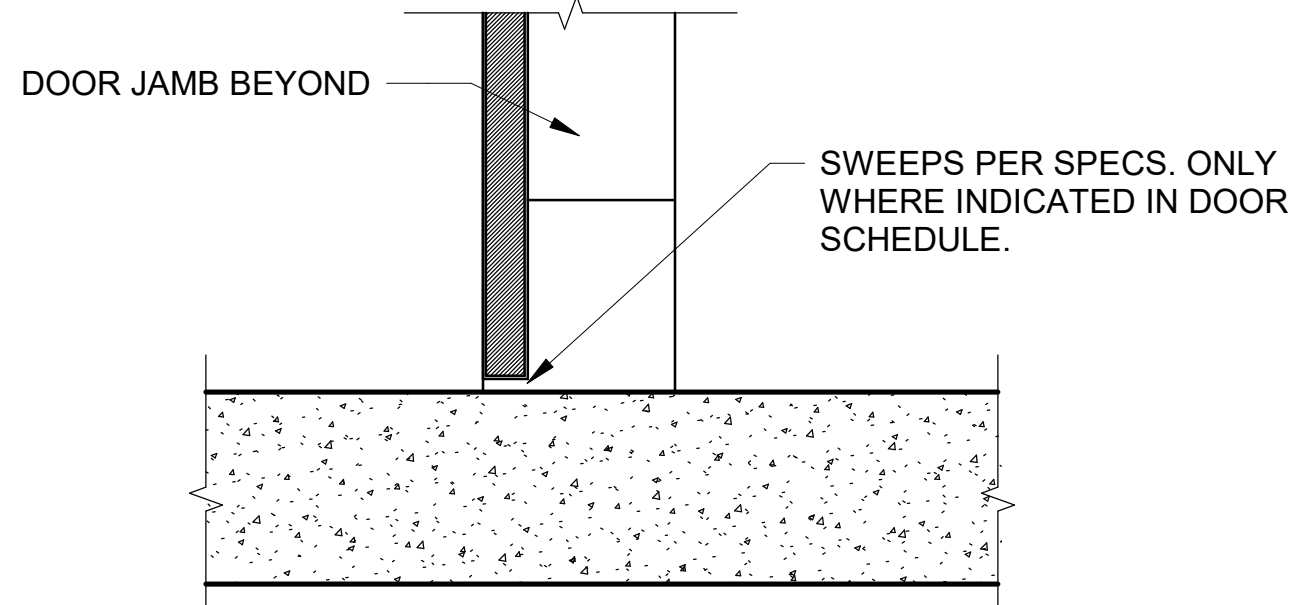
## HOLLOW METAL DOOR JAMB DETAIL

TT603 TT603 SCALE 1 1/2" = 1'-0"



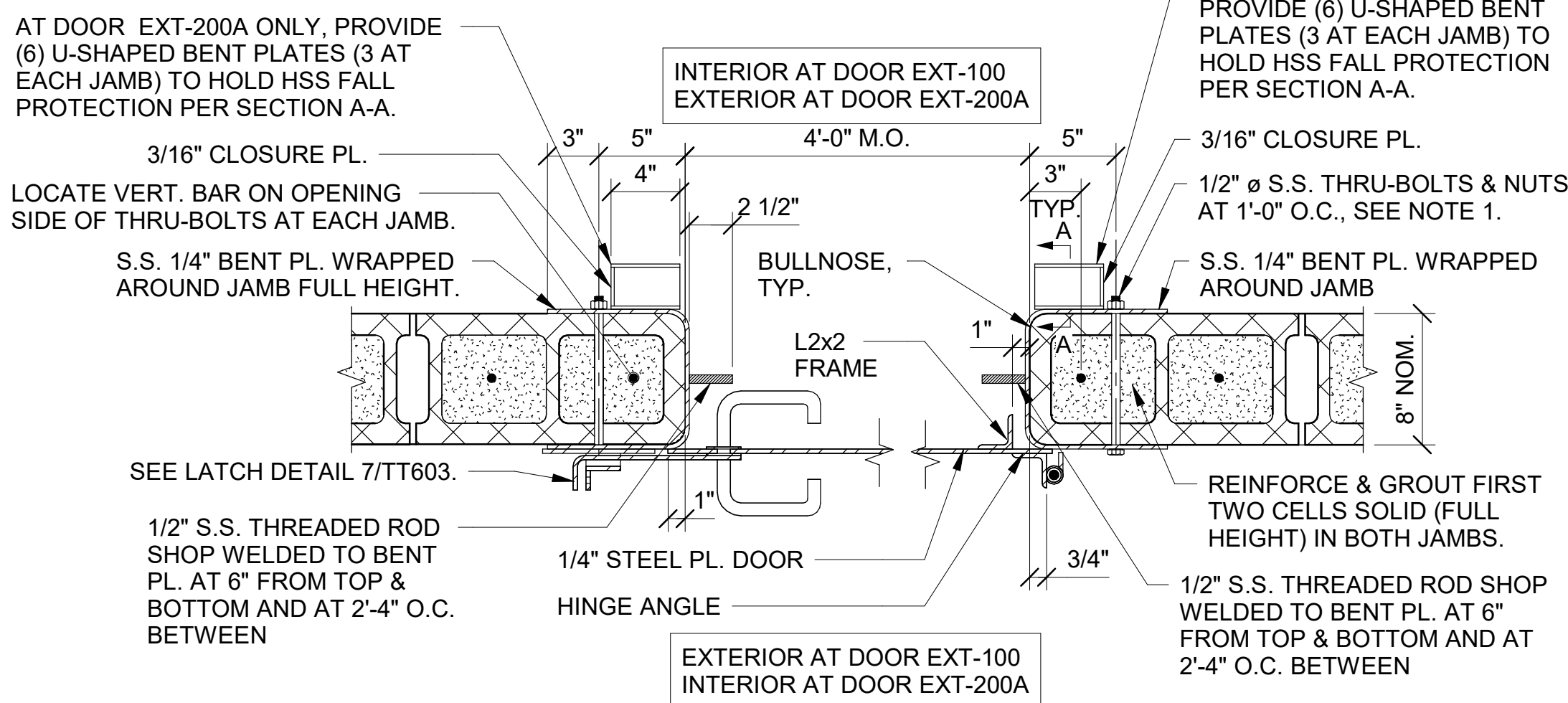
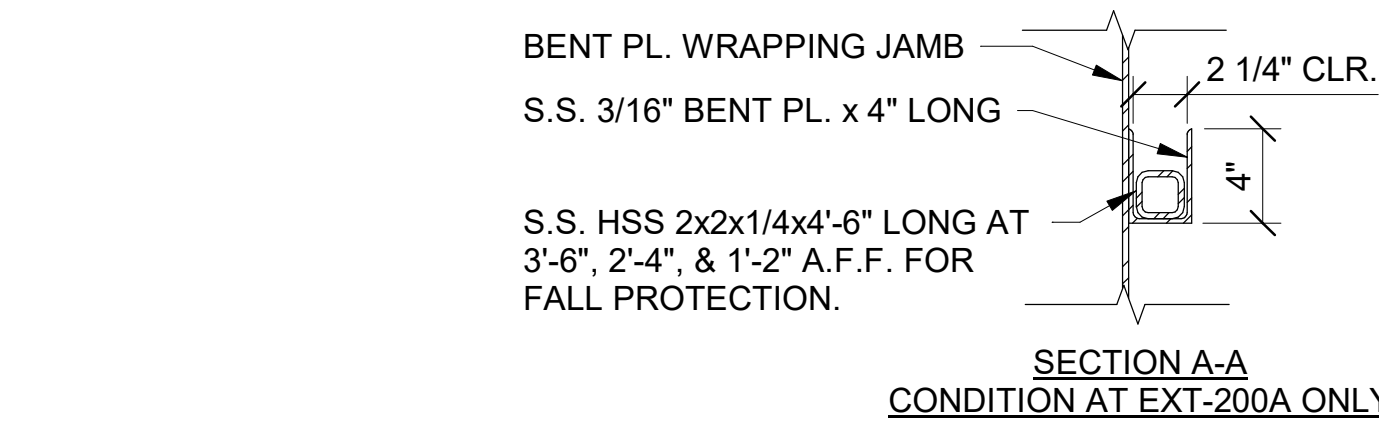
## HOLLOW METAL DOOR HEAD DETAIL

TT603 TT603 SCALE 1 1/2" = 1'-0"



## H.M.D. THRESHOLD DETAIL

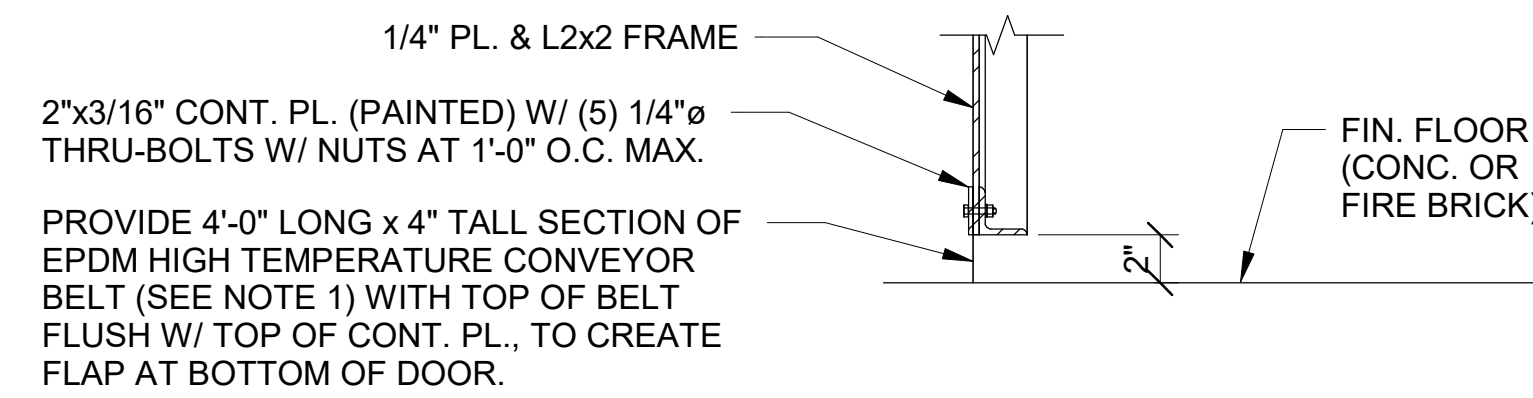
TT603 TT603 SCALE 1 1/2" = 1'-0"



- NOTES:**
- INSTALL BEFORE PLACING VERTICAL REINFORCING BAR AND GROUT IN JAMB CELLS. TRIM EXCESS THREAD LENGTH TO WITHIN 1/4" OF END OF NUTS AND GRIND END OF BOLT SMOOTH.

## STANDARD STEEL PLATE DOOR JAMB DETAIL

TT603 TT603 SCALE 1 1/2" = 1'-0"



- NOTE:**
- PROVIDE EPDM HIGH TEMPERATURE CONVEYOR BELT, 3/8" GAUGE WITH POLYNYLON FABRIC TYPE AND A WORKING TEMPERATURE OF 0°-600°, WITH A PEAK TEMPERATURE OF 750° (2/220 3/16x1/16 EPDM HIGH TEMP BELT BY CONVEYORBELT.COM OR AN APPROVED EQUIVALENT). INSTALL SO TOP COVER OF BELT FACES INSIDE FACE OF DOOR.

## STEEL PLATE DOOR SILL DETAIL

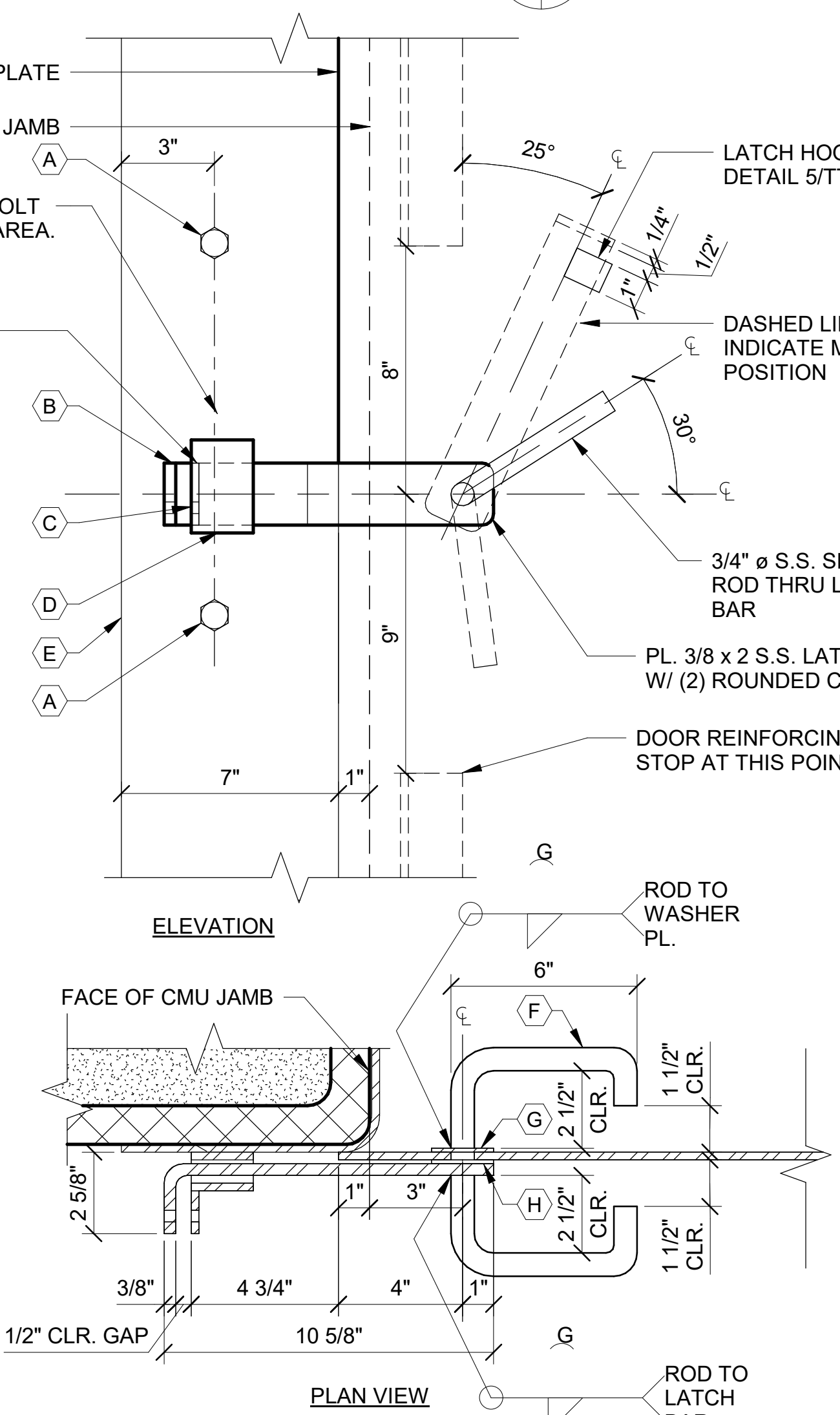
TT603 TT603 SCALE 1 1/2" = 1'-0"

- NOTES:**
- SEE FLOOR PLANS FOR DOOR SWING DIRECTION.
  - SEE DETAILS 5 & 8 ON THIS SHEET AND DETAIL 6/TT604 FOR JAMB, SILL & HEAD DETAILS.
  - SEE DOOR DETAIL SCHEDULE ON THIS SHEET FOR DIMENSIONS "A", "B", "C" AND "D".
  - USE TOP OF CONCRETE FLOOR ELEVATION AT CENTER OF DOORWAY AS POINT OF REFERENCE FOR DOOR DIMENSIONS.

DOOR DETAIL SCHEDULE						
DOOR MARK	DIMENSION MARK				DOOR TYPE	PRIMARY DETAIL
	"A"	"B"	"C"	"D"		
EXT-100	2"	7'- 11 1/2"	3' - 0"	1' - 0"	STANDARD STEEL PL.	6/TT603
EXT-200A	2"	7'- 11 1/2"	3' - 0"	1' - 0"	STANDARD STEEL PL.	6/TT603

## ELEVATION - STANDARD STEEL PLATE DOOR

TT201 TT603 SCALE 3/4" = 1'-0"



## STANDARD STEEL PLATE DOOR LATCH DETAILS

TT603 TT603 SCALE 3" = 1'-0"

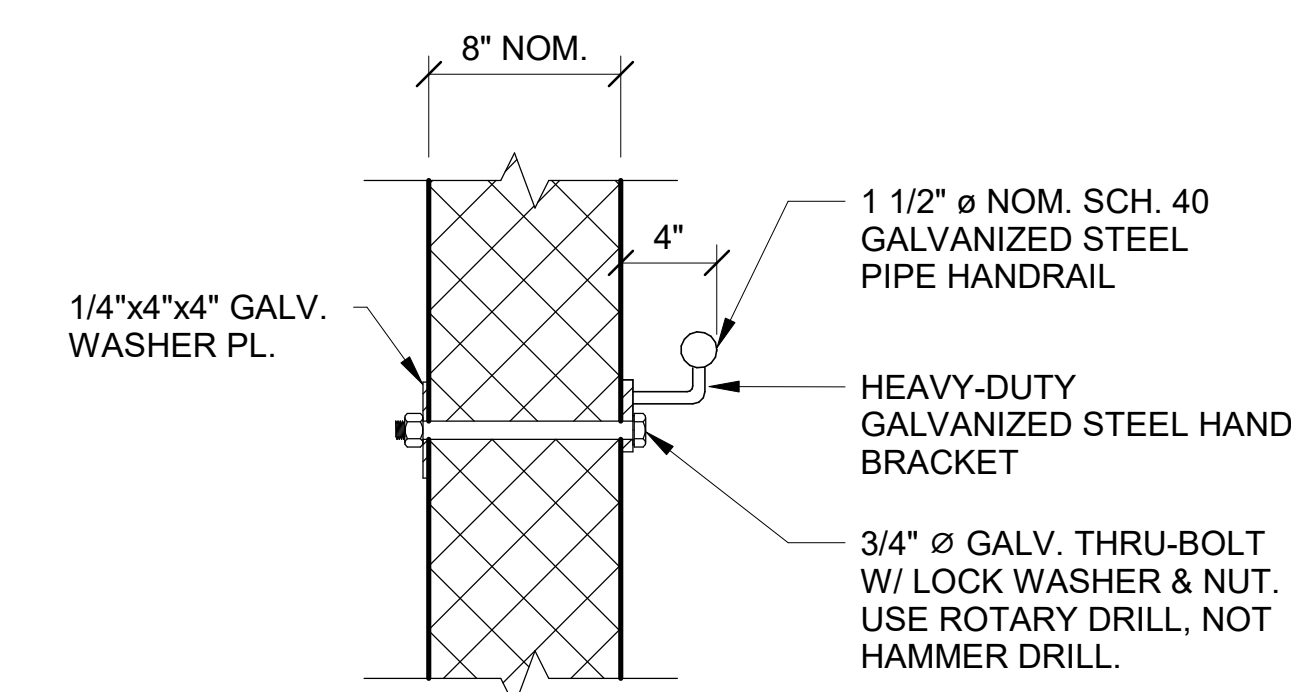
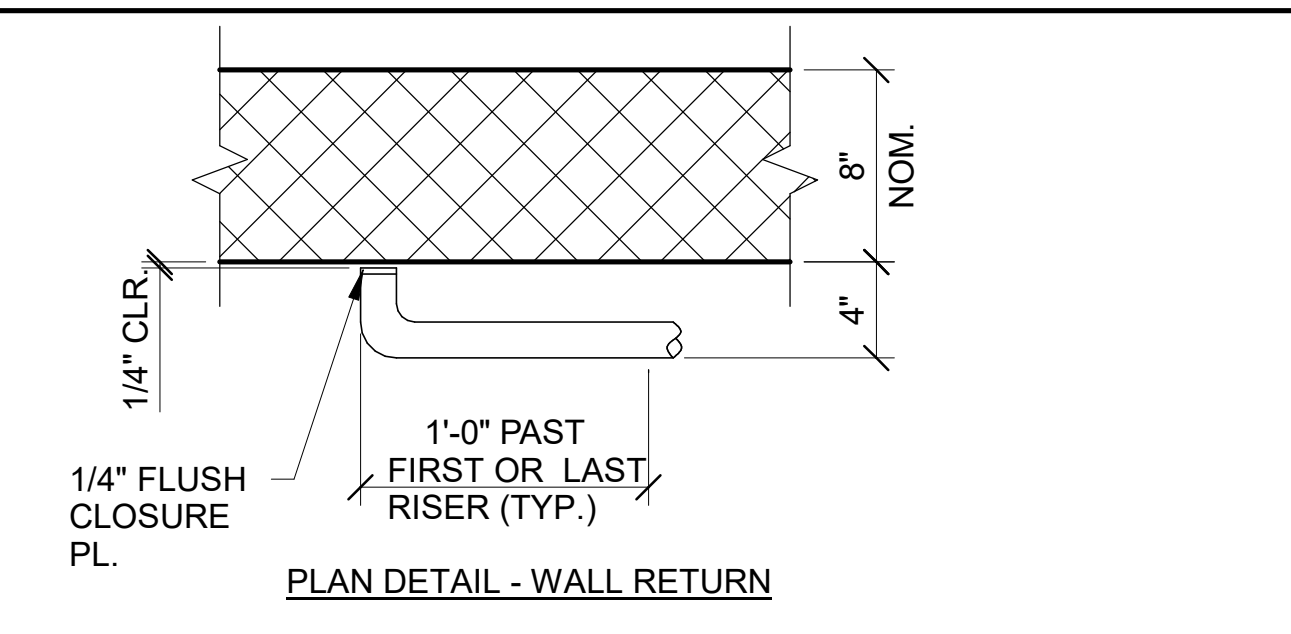
- SEQUENCE NOTES:**
- PASS ROD THROUGH 7/8"Ø HOLE IN LATCH BAR.
  - PASS ROD THROUGH 7/8"Ø HOLE IN DOOR PLATE WITH WASHER BETWEEN LATCH BAR AND DOOR PLATE.
  - WELD ROD TO LATCH BAR.
  - HOLD ASSEMBLY FIRMLY IN PLACE AND WELD ROD TO WASHER AT INTERIOR FACE OF DOOR. FINISHED ASSEMBLY SHALL NOT WOBBLE AND SHALL ROTATE EASILY WITHOUT SIGNIFICANT EFFORT.

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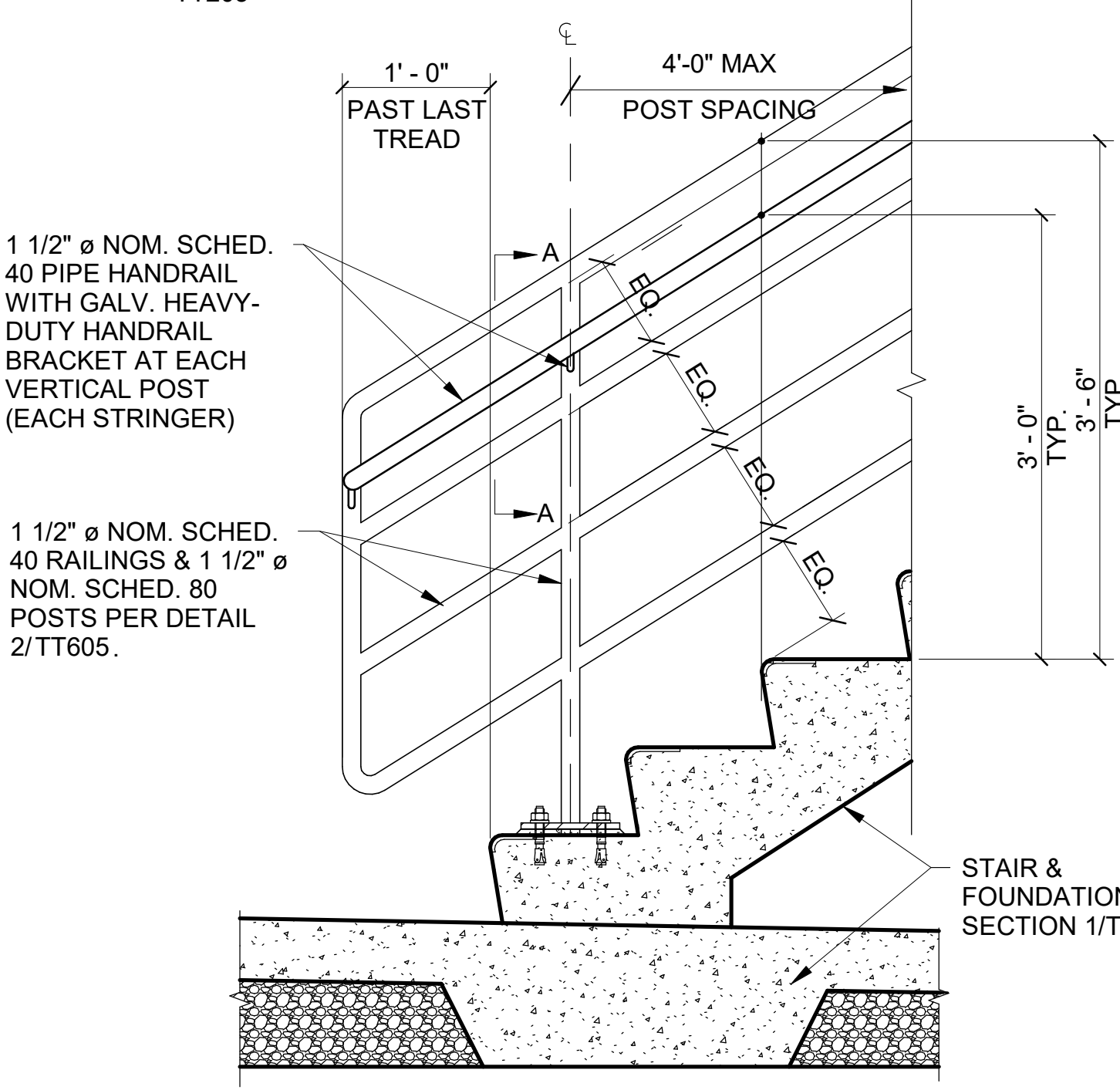




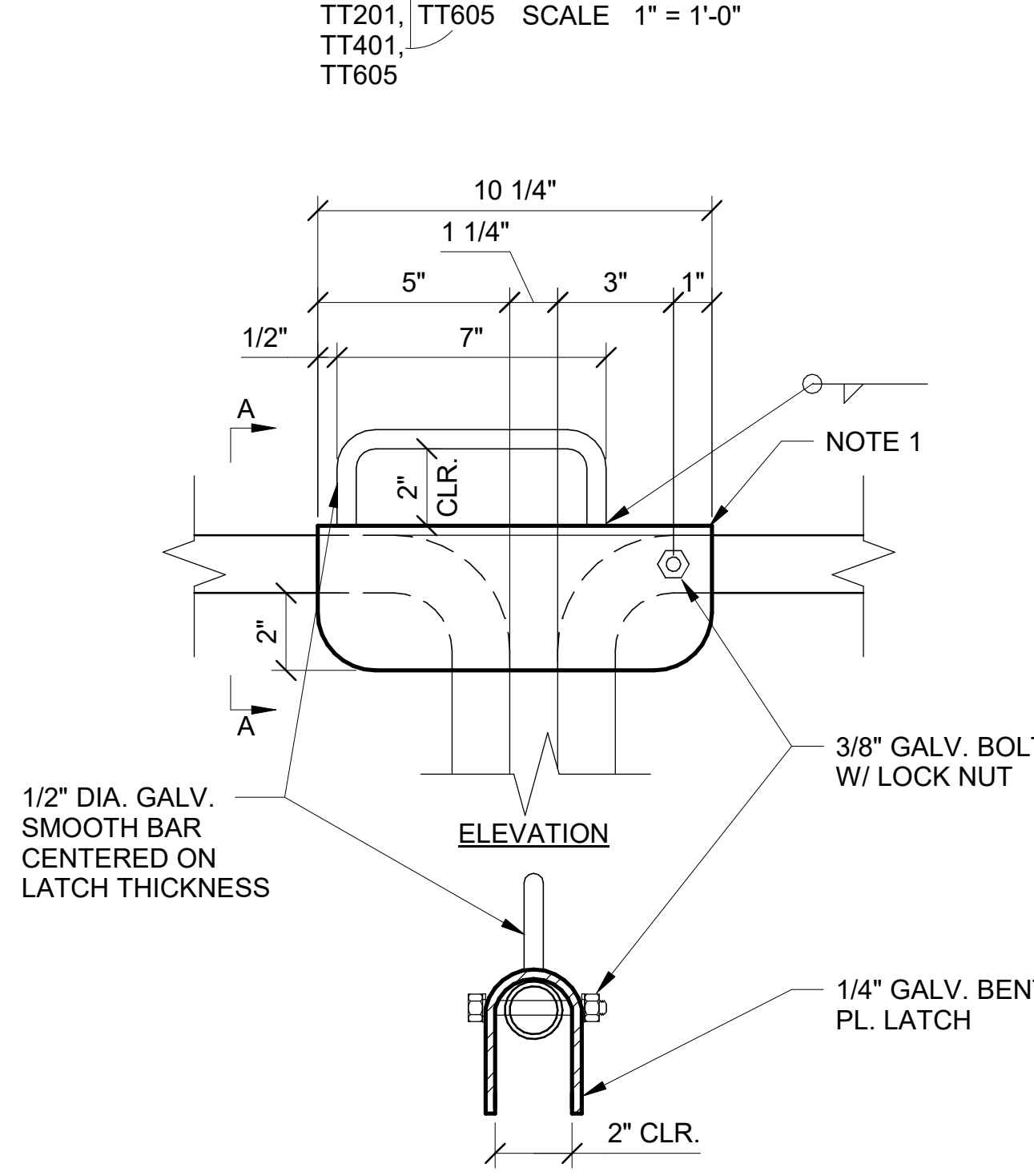


- NOTES:
1. PROVIDE BRACKETS AT 3'-0" O.C. MAX.
  2. PROVIDE DISTANCE OF 3/8" FROM TOP OF STAIR TREAD AT NOSINGS TO TOP OF HANDRAIL (TYP.).
  3. SEAL GALVANIZING VENT HOLES PER GENERAL NOTE Q.7 IN PIPES OF HANDRAIL.

### HANDRAIL DETAILS FOR INTERIOR STAIRS

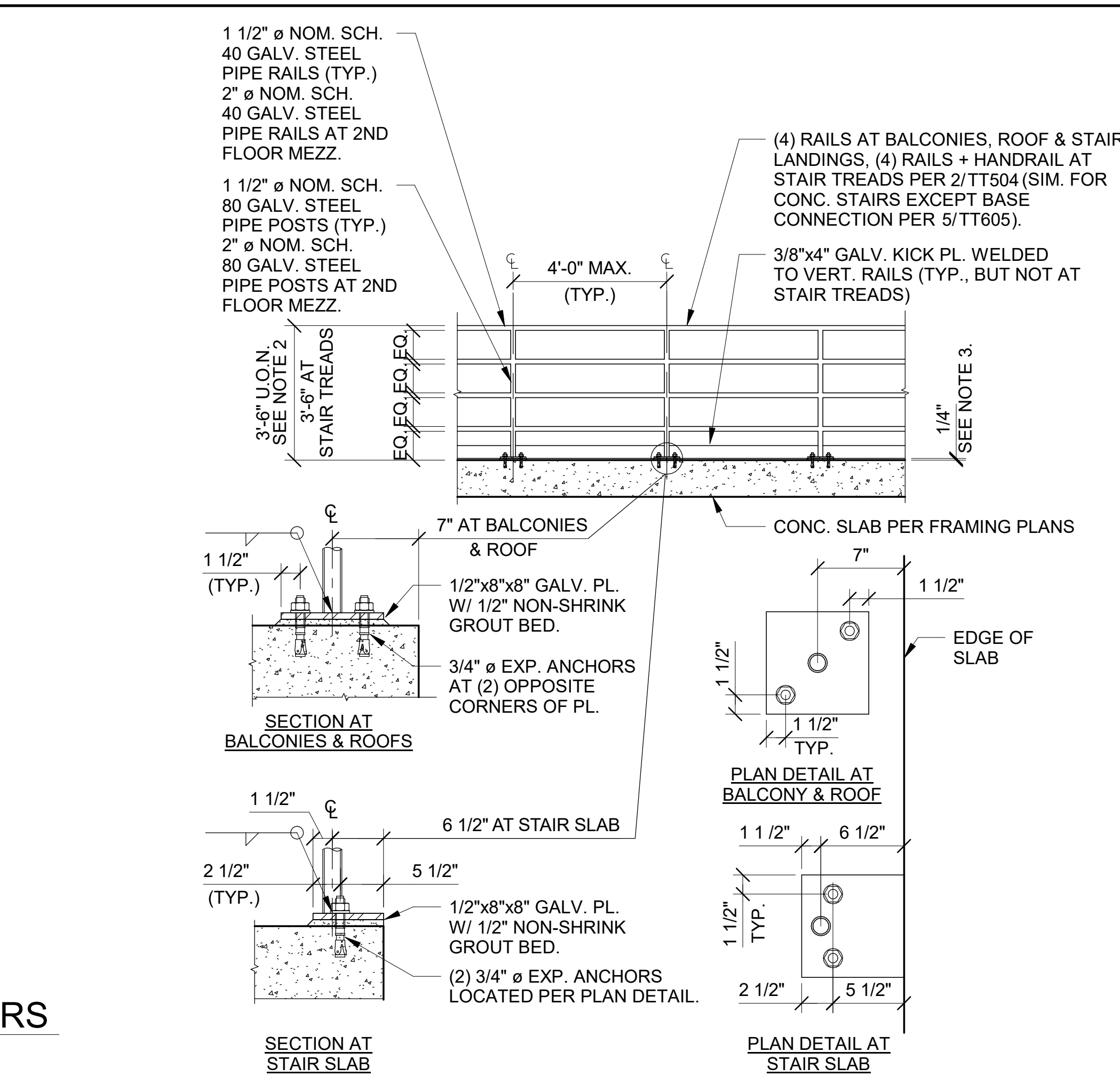


### GUARDRAIL + HANDRAIL AT CONCRETE STAIR SECTION



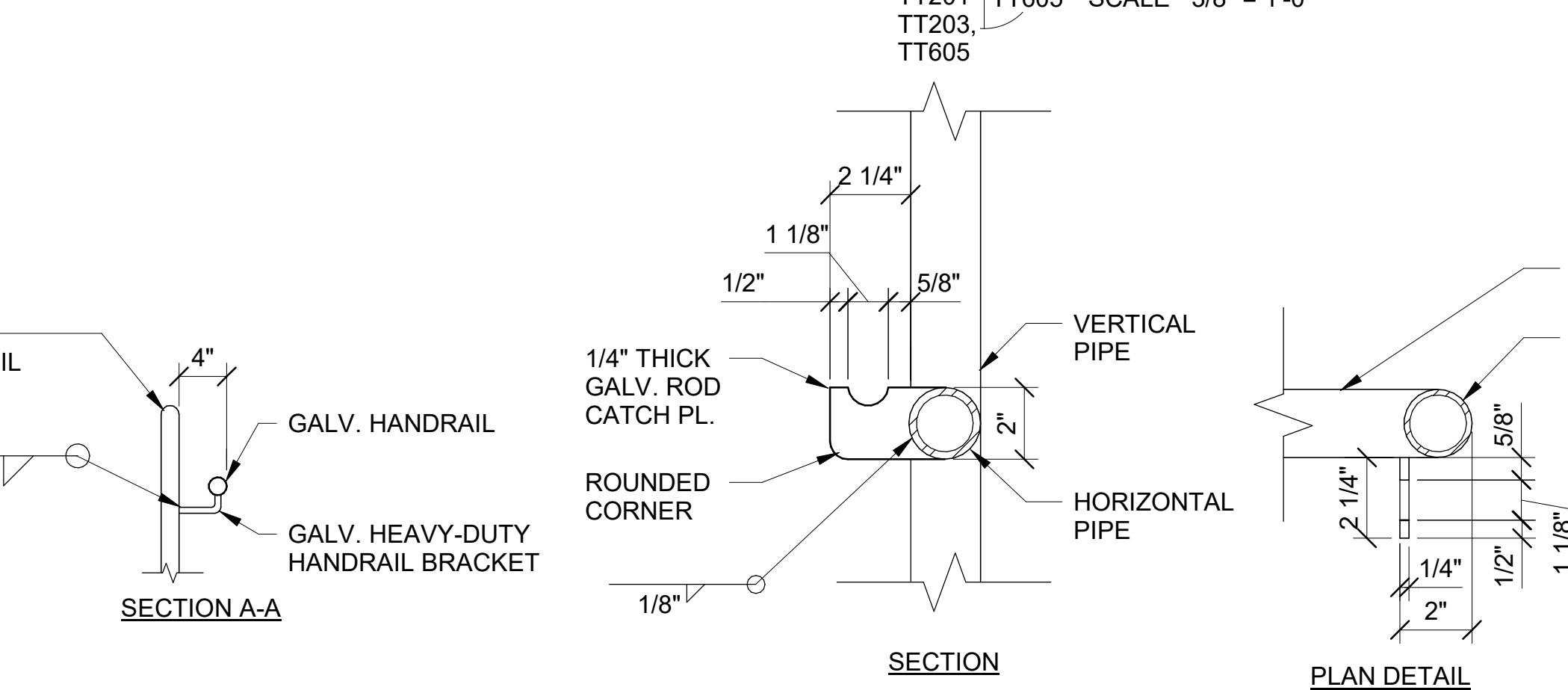
- NOTES:
1. PROVIDE CURVED NOTCH IN TOP OF BENT PL. LATCH AT THIS END TO ALLOW PLATE TO PIVOT (KEEP NOTCH AS SMALL AS POSSIBLE).

### DETAIL - GATE LATCH 'A'

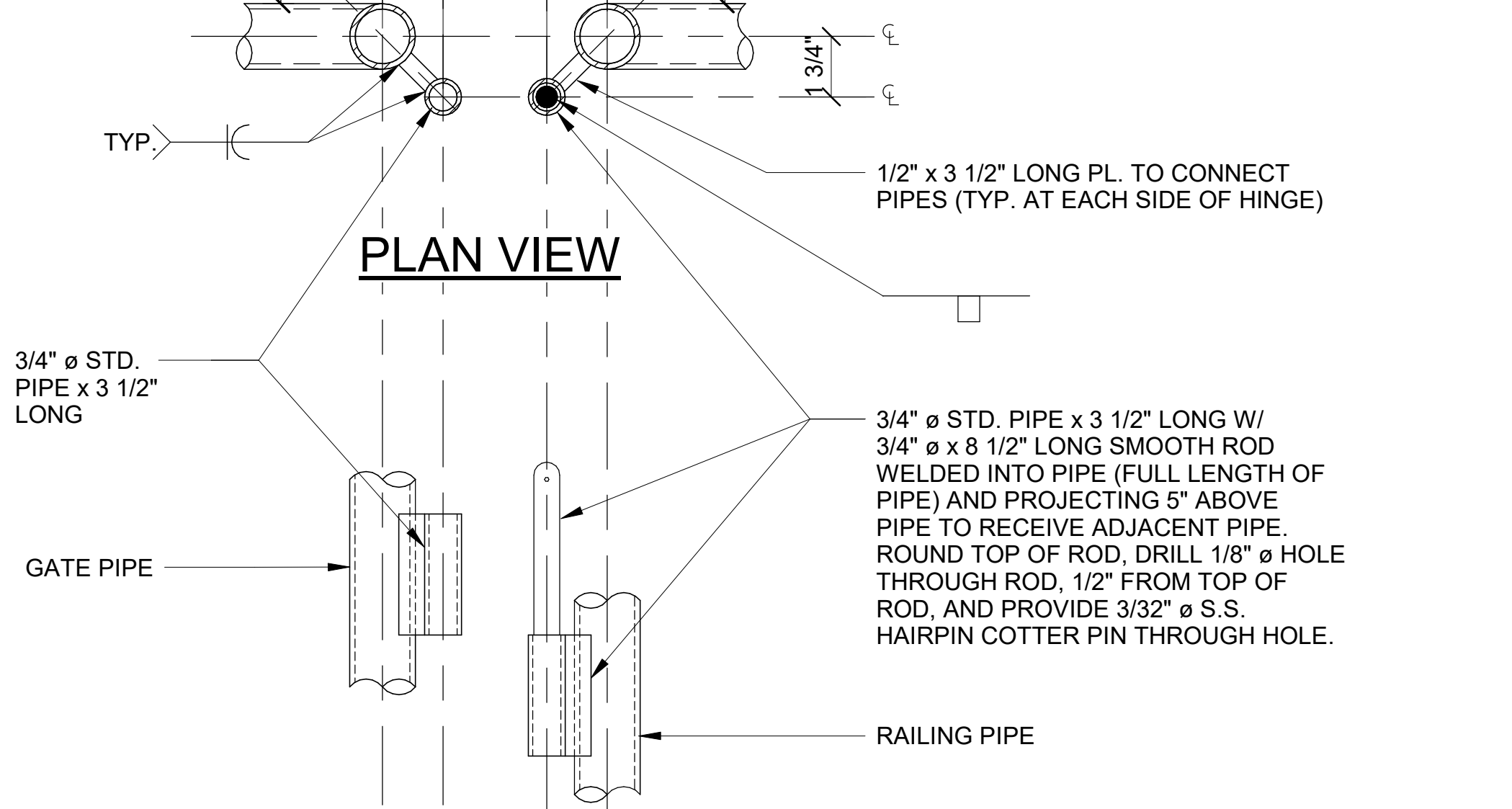
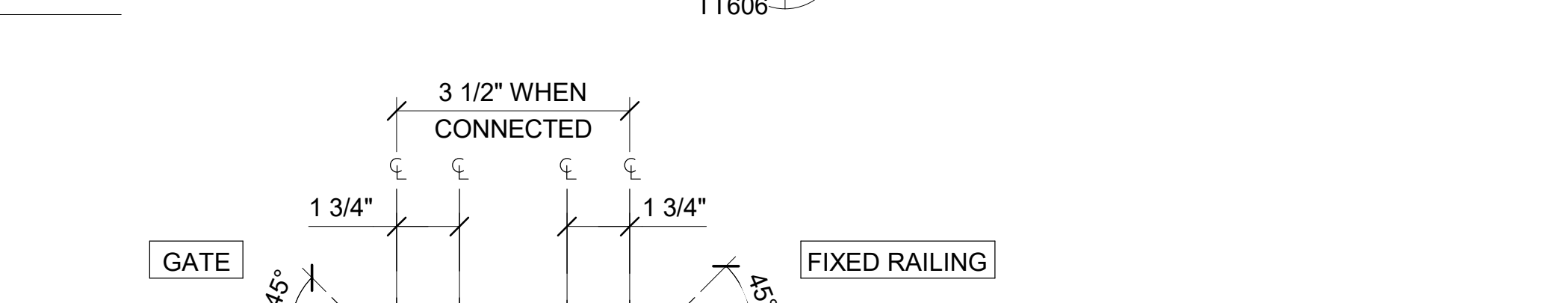


- NOTES:
1. SEE DETAILS ON SHEETS TT503 & TT504 FOR RAILING CONNECTION AT EXTERIOR STEEL STAIRS. TT502 FOR RAILING CONNECTION AT MEZZANINE. AND TT504 FOR HANDRAIL THAT IS WELDED TO GUARDRAIL AT EXTERIOR STAIRS.
  2. SLOPE HORIZONTAL RAILS WITH SLOPE OF SLAB TO MAINTAIN 3'-6" HEIGHT FROM TOP OF SLAB TO TOP OF TOP RAIL.
  3. SLOPE KICK PLATE WITH SLOPE OF SLAB TO MAINTAIN 1/4" GAP BETWEEN TOP OF SLAB AND BOTTOM OF PL.
  4. SEAL GALVANIZING VENT HOLES PER GENERAL NOTE Q.7 ON TT001 AT ALL RAILINGS AND GATES.
  5. SEE DETAIL 5/TT605 FOR GUARDRAIL AND HANDRAIL AT INTERIOR CONCRETE STAIRS.

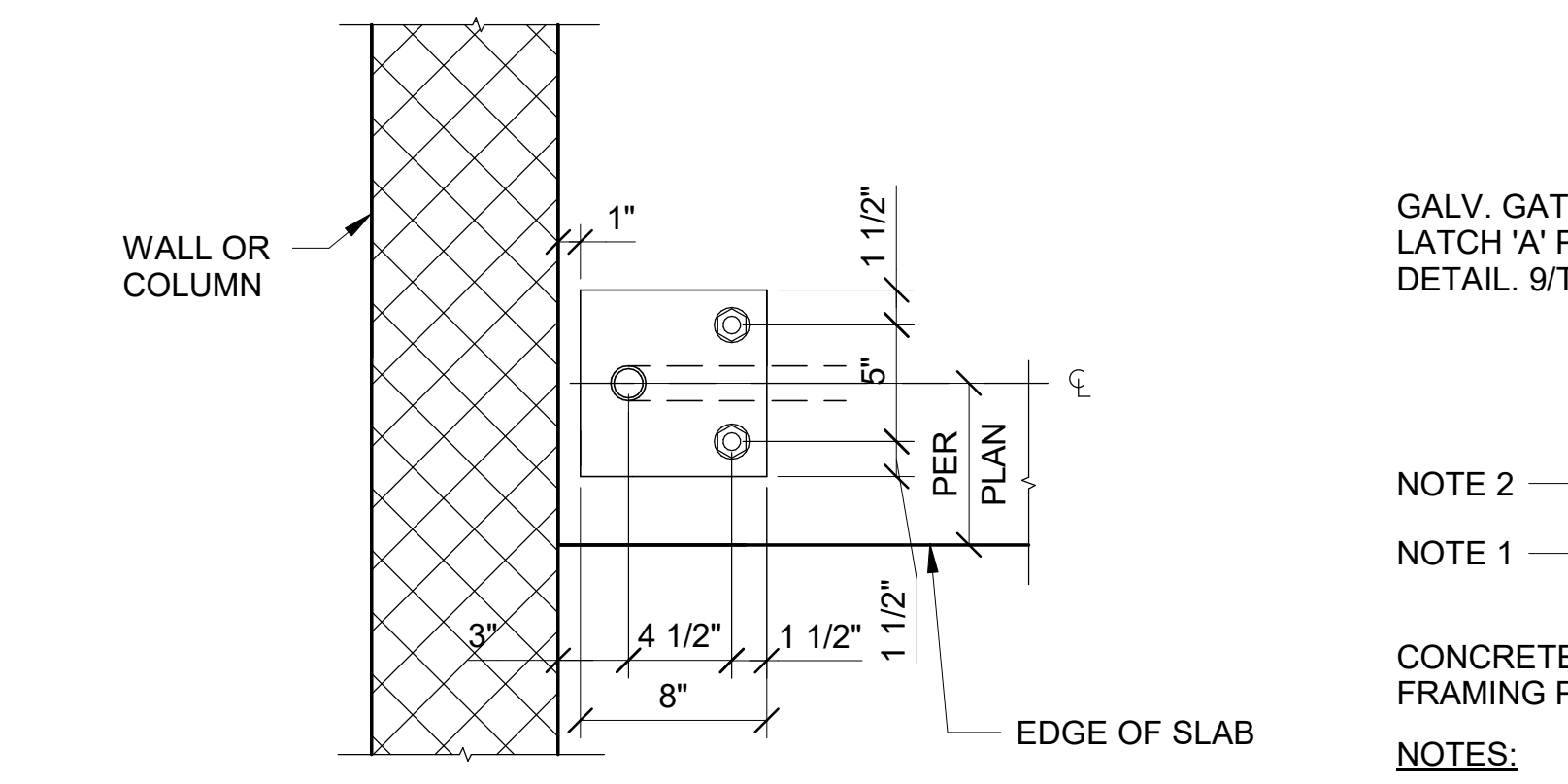
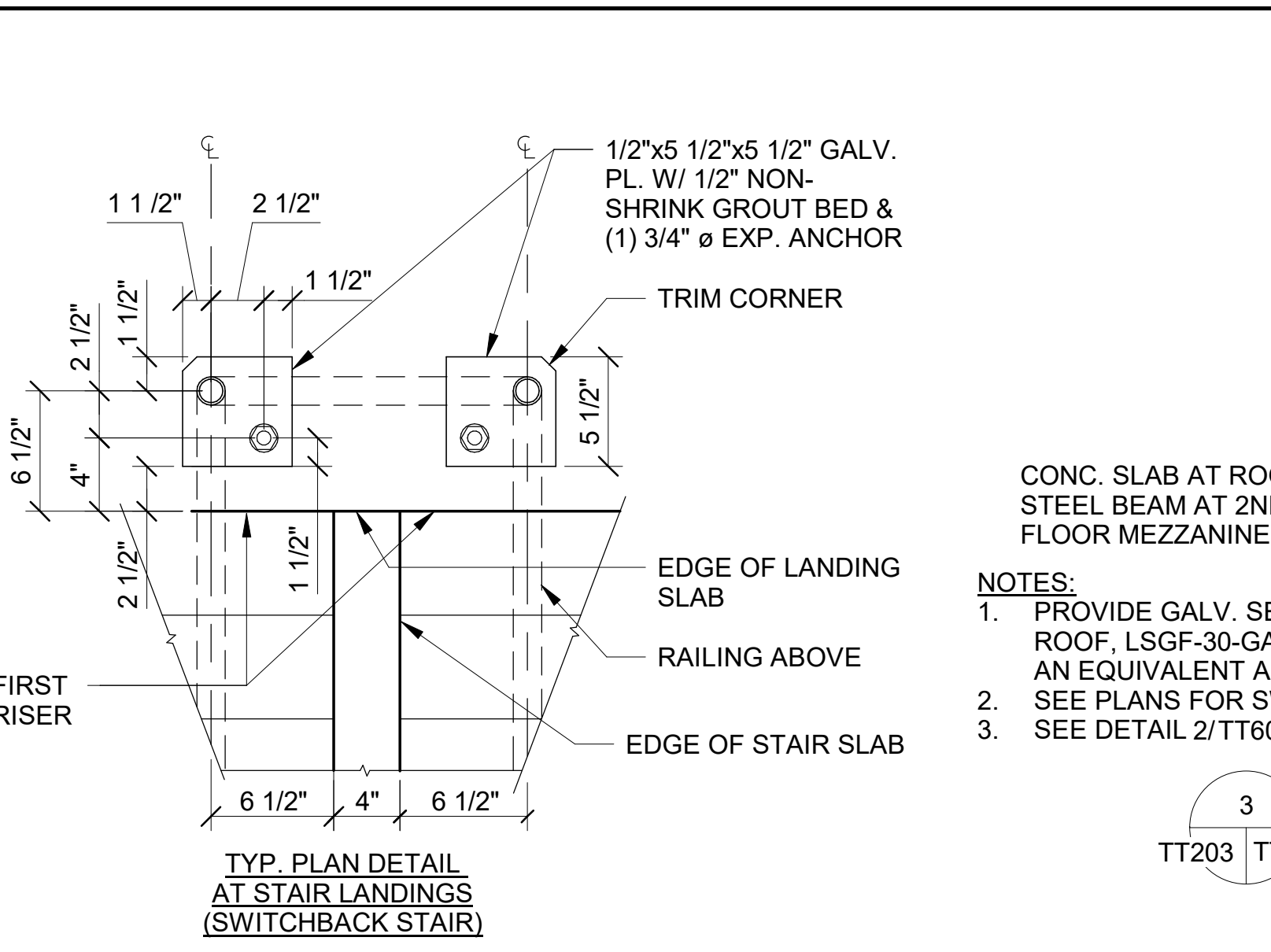
### TYPICAL FIXED RAILING DETAILS



### ROD CATCH PLATE DETAILS



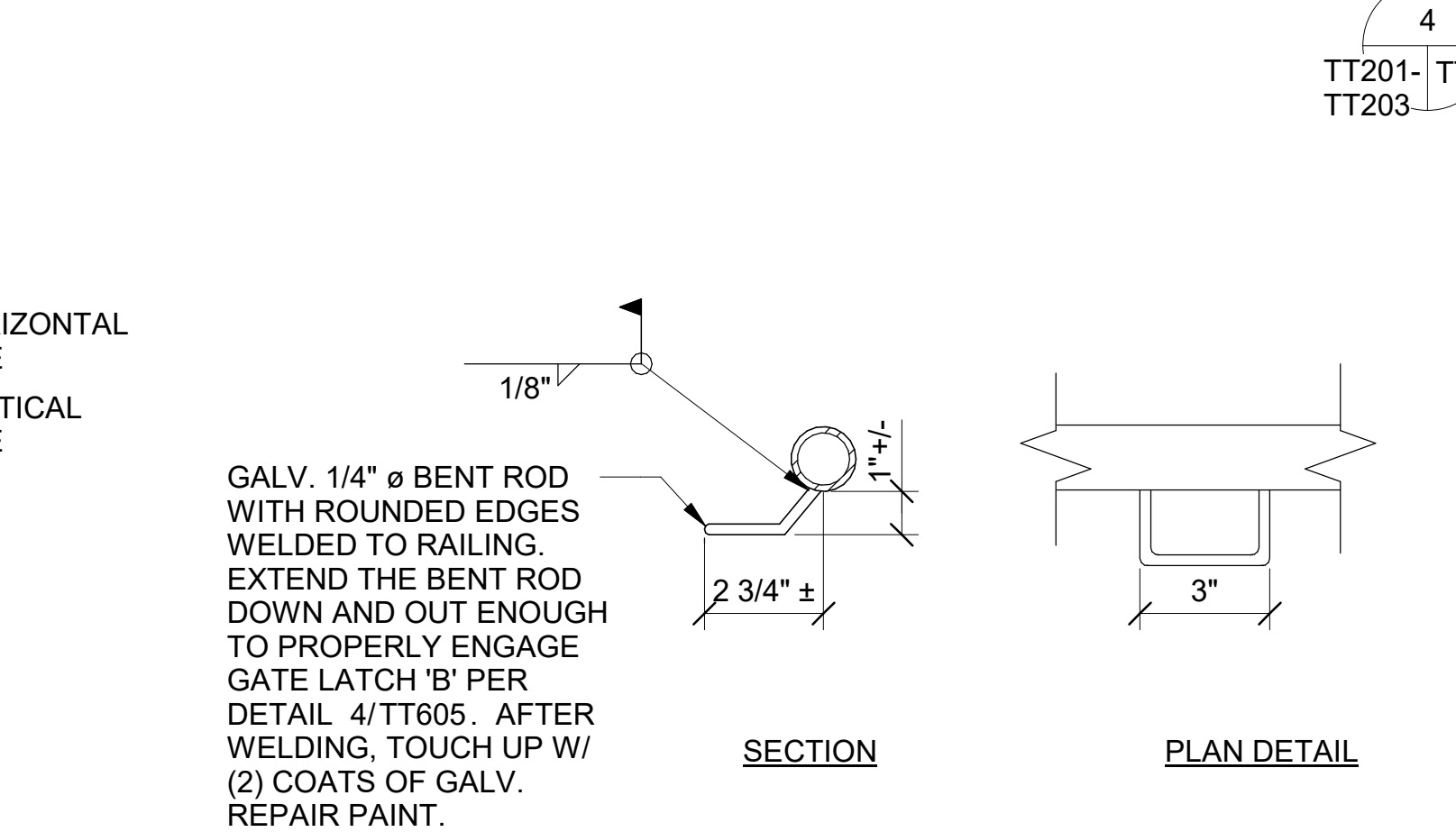
### GUARDRAIL HINGE DETAIL



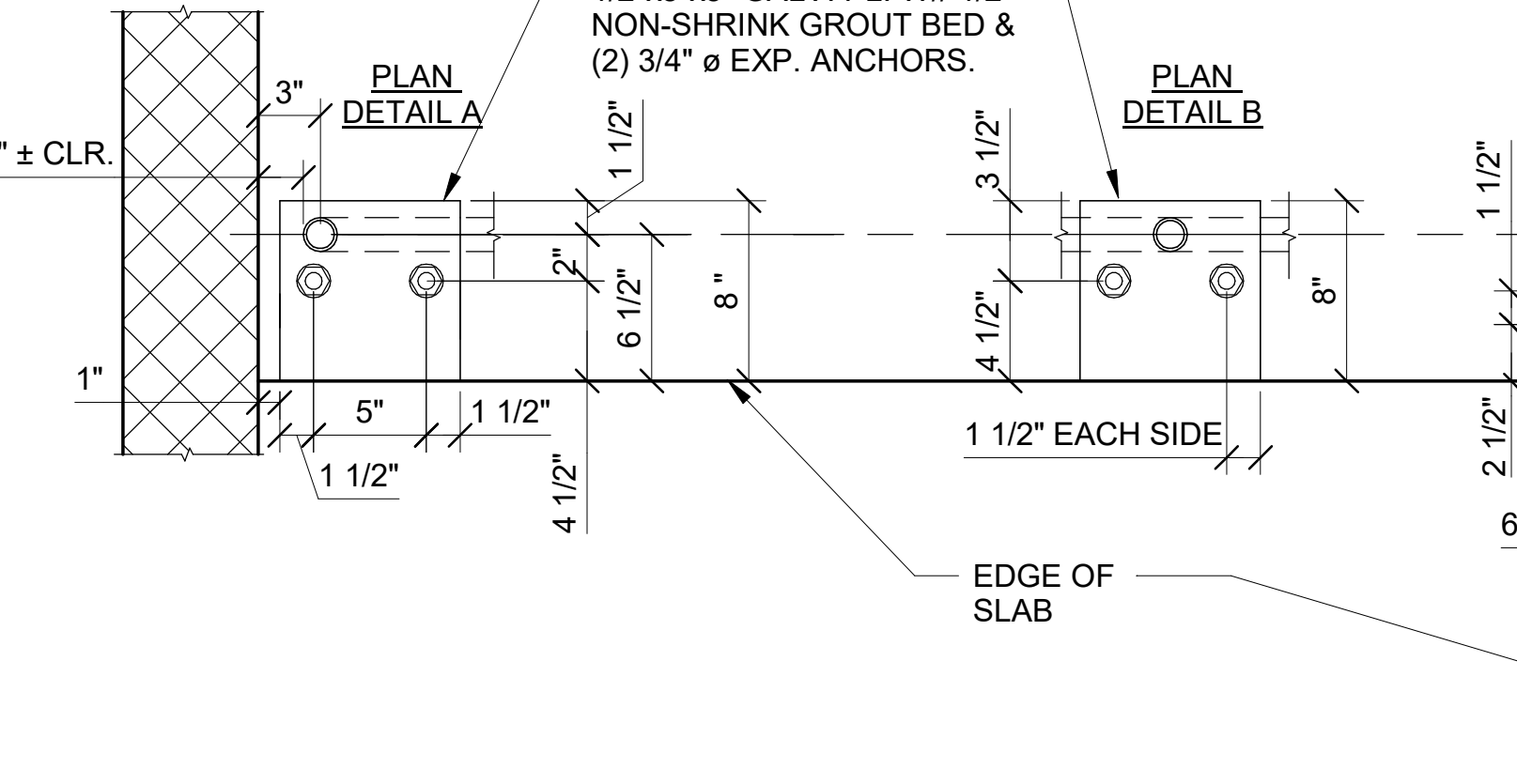
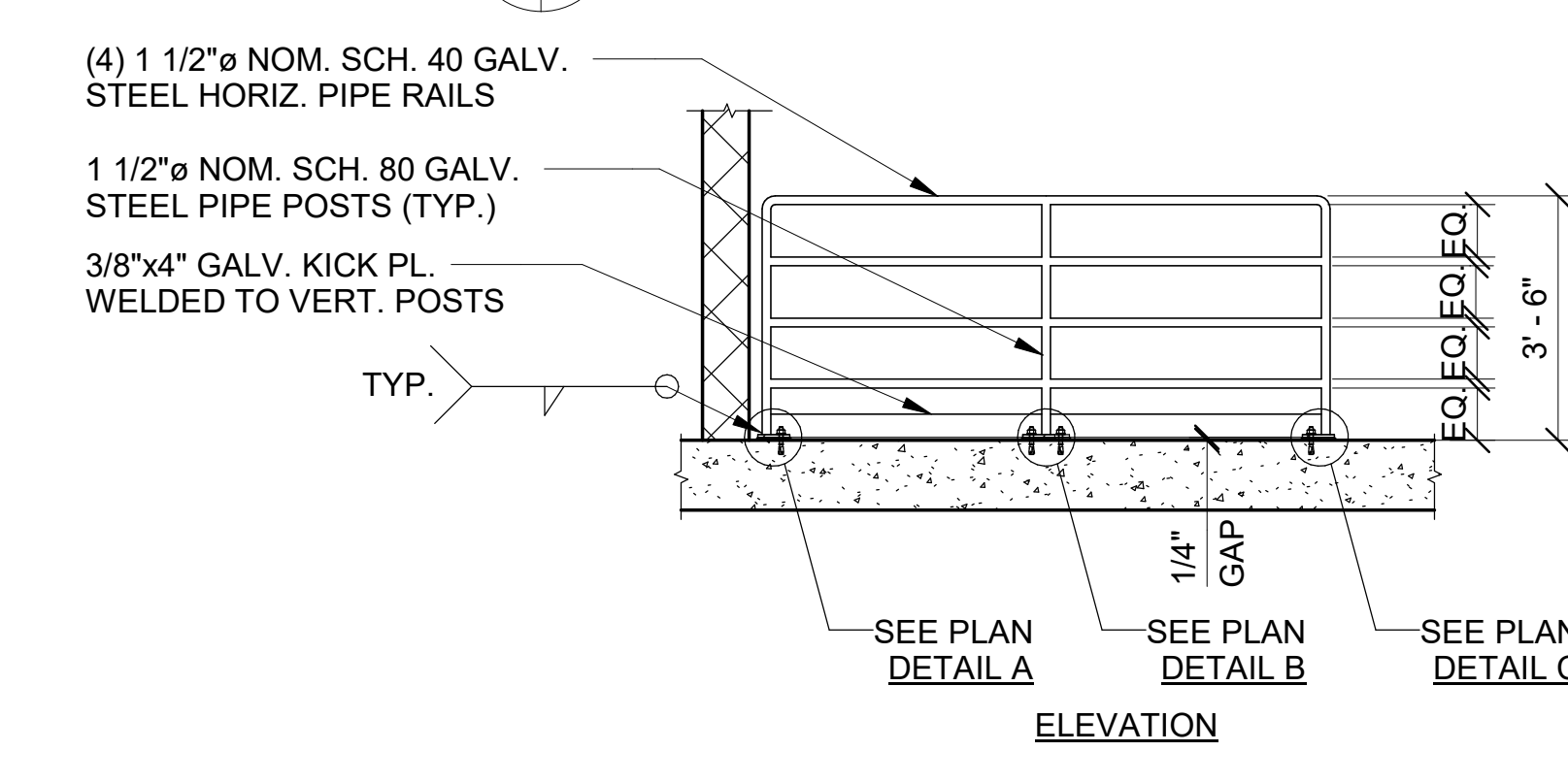
### SELF-CLOSING GUARDRAIL GATE DETAIL

- NOTES:
1. PROVIDE GALV. SELF-CLOSING LADDER SAFETY GATE, MODEL EDGEHALT FULL HEIGHT # LSGF-36-GAL AT ROOF, LSGF-30-GAL AT 2ND FLOOR MEZZANINE. BY PS SAFETY ACCESS AT WWW.PSSAFETYACCESS.COM,OR AN EQUIVALENT APPROVED BY THE ENGINEER.
  2. SEE PLANS FOR SWING DIRECTION OF GATE.
  3. SEE DETAIL 2/TT605 FOR ADDITIONAL INFORMATION NOT SHOWN.

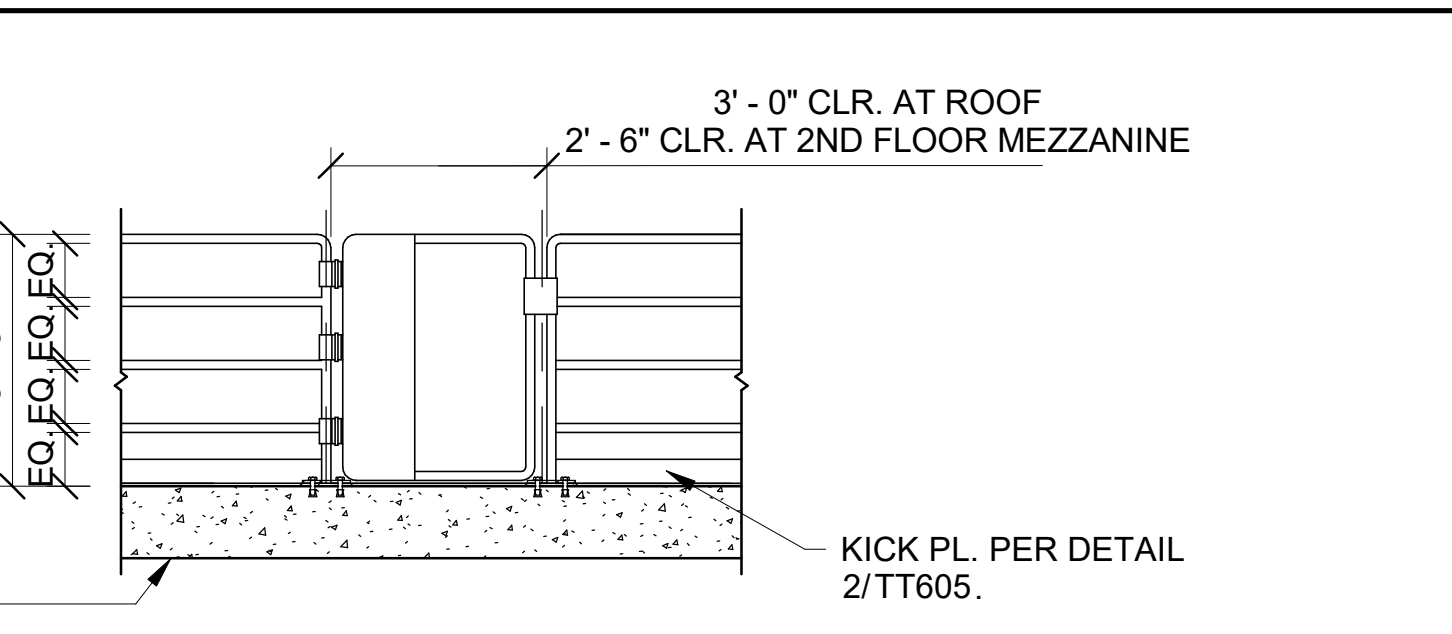
### SINGLE-SWINGING GATE GUARDRAIL DETAIL



### BENT ROD DETAILS

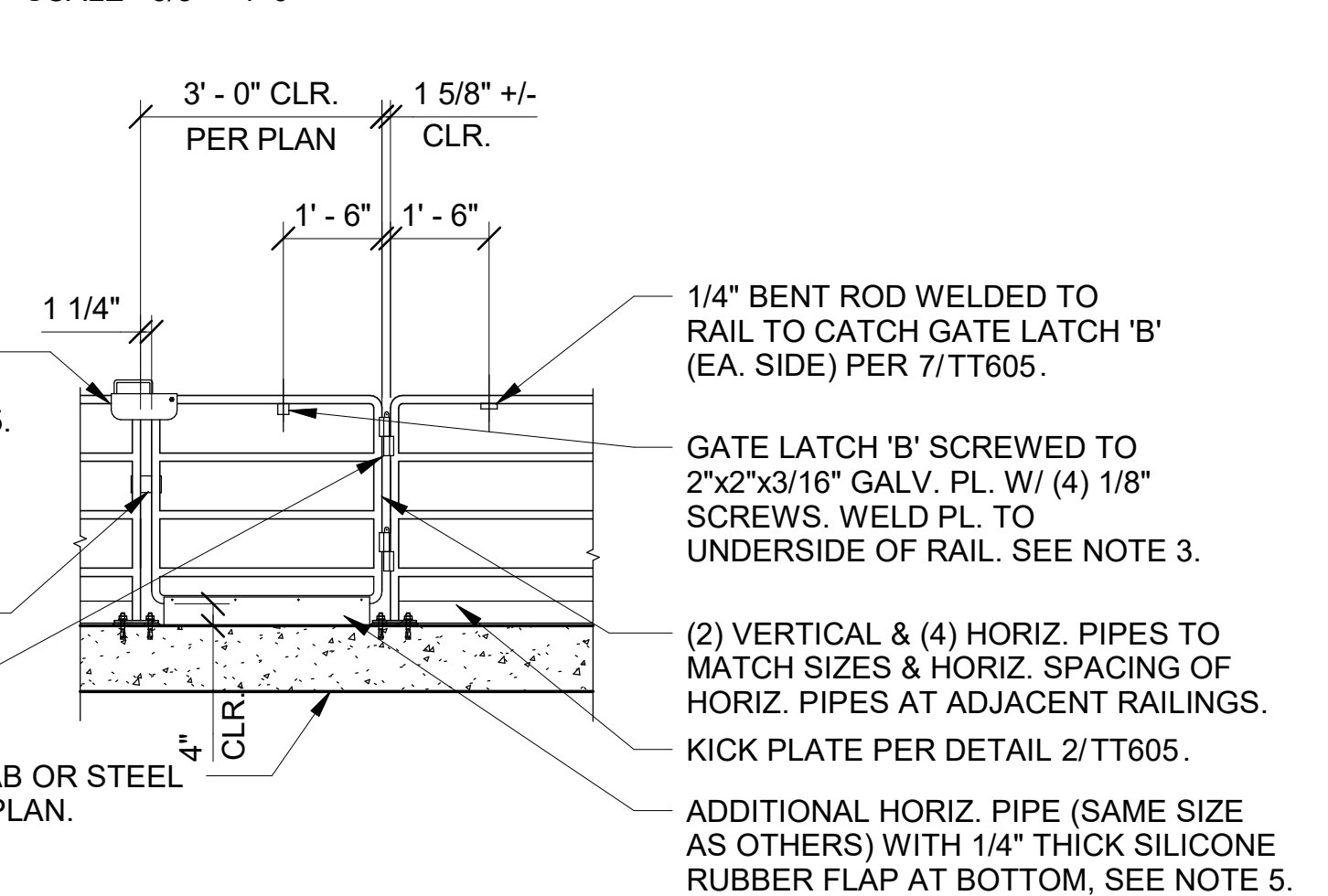


### PLAN DETAIL - FIXED GUARDRAIL @ 5TH FLOOR LANDING SLAB



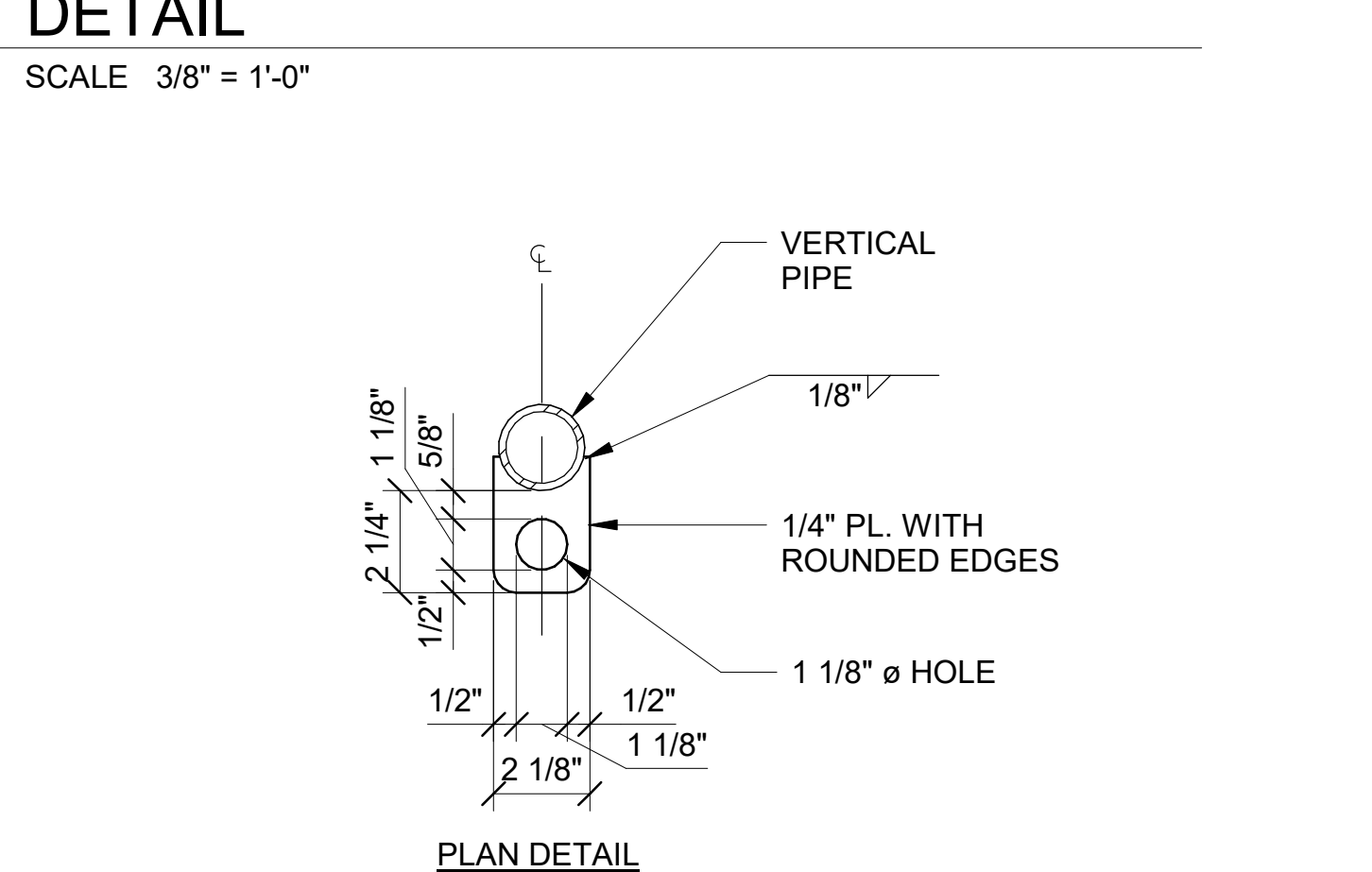
- NOTES:
1. PROVIDE GALV. SELF-CLOSING LADDER SAFETY GATE, MODEL EDGEHALT FULL HEIGHT # LSGF-36-GAL AT ROOF, LSGF-30-GAL AT 2ND FLOOR MEZZANINE. BY PS SAFETY ACCESS AT WWW.PSSAFETYACCESS.COM,OR AN EQUIVALENT APPROVED BY THE ENGINEER.
  2. SEE PLANS FOR SWING DIRECTION OF GATE.
  3. SEE DETAIL 2/TT605 FOR ADDITIONAL INFORMATION NOT SHOWN.

### SELF-CLOSING GUARDRAIL GATE DETAIL

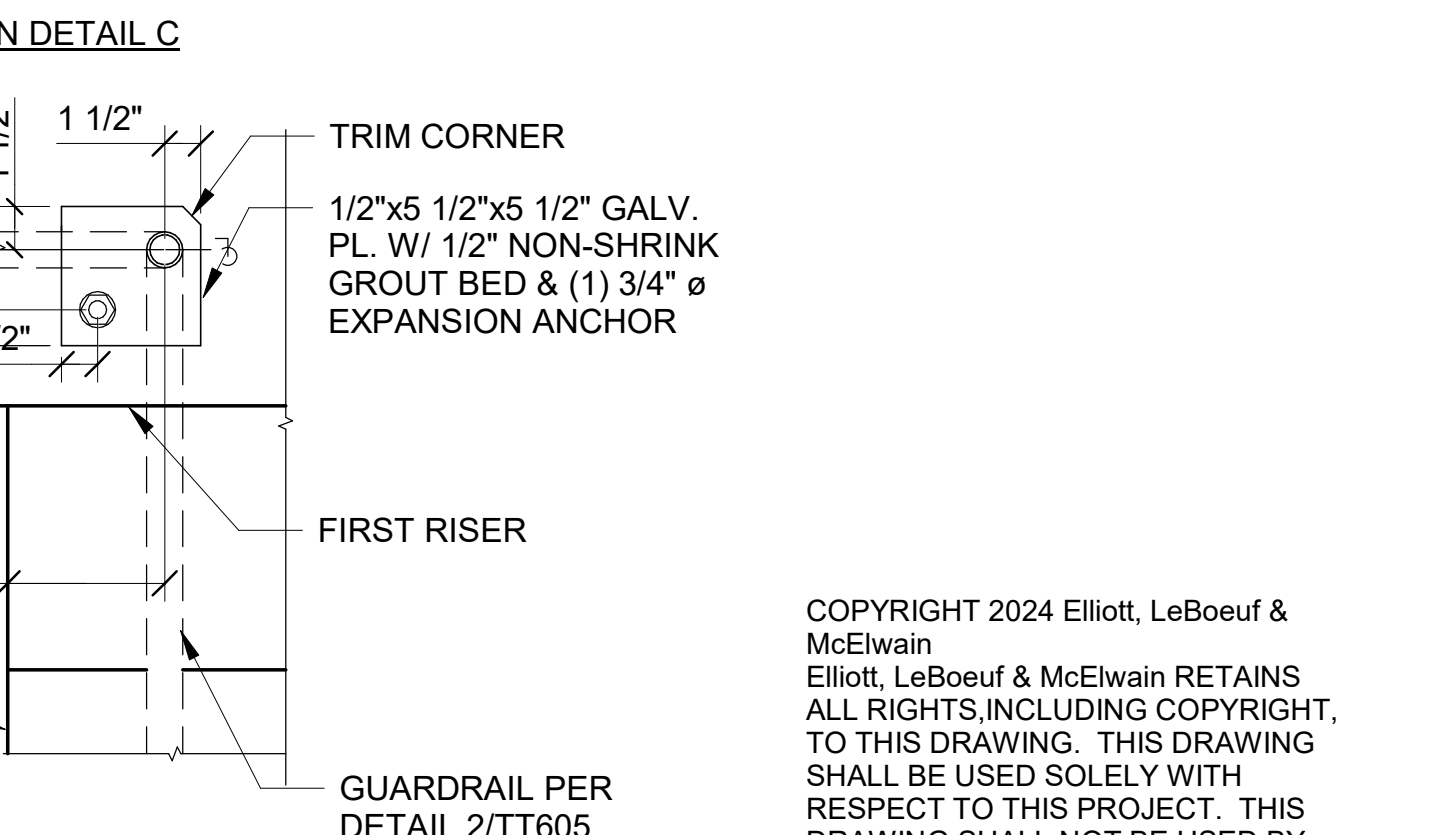


- NOTES:
1. PROVIDE (2) HINGES PER DETAIL 10/TT605.
  2. 3/16"x4" HIGH GALV. PL. WELDED TO FAR SIDE OF FIXED RAIL TO PREVENT GATE FROM SWINGING IN OPPOSITE DIRECTION.
  3. PROVIDE A GATE LATCH, STRAIGHT ARM FROM HARDWARESOURCE.COM, SKU# 504670, OR AN APPROVED EQUIVALENT.
  4. SEE PLANS FOR SWING DIRECTION OF GATE.
  5. ATTACH RUBBER FLAP TO BOTTOM HORIZONTAL PIPE WITH (4) 1/4" DIA. ZINC-PLATED THRU-BOLTS WITH NUTS AND WASHERS AT 1'-0" O.C. MAX.

### SINGLE-SWINGING GATE GUARDRAIL DETAIL



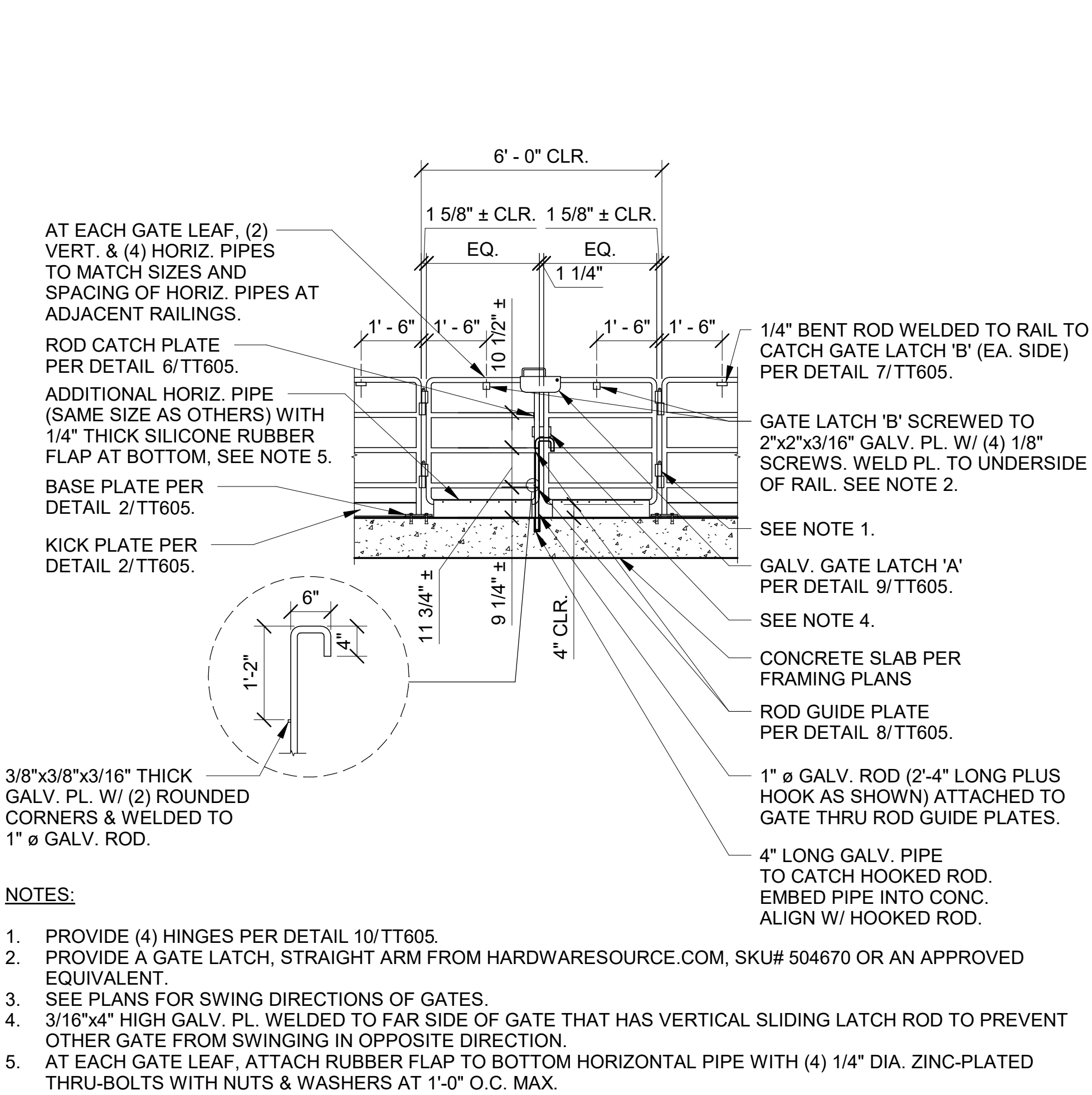
### PLAN DETAIL - ROD GUIDE PLATE



### PLAN DETAIL - FIXED GUARDRAIL @ 5TH FLOOR LANDING SLAB

NO.	REVISION	DATE



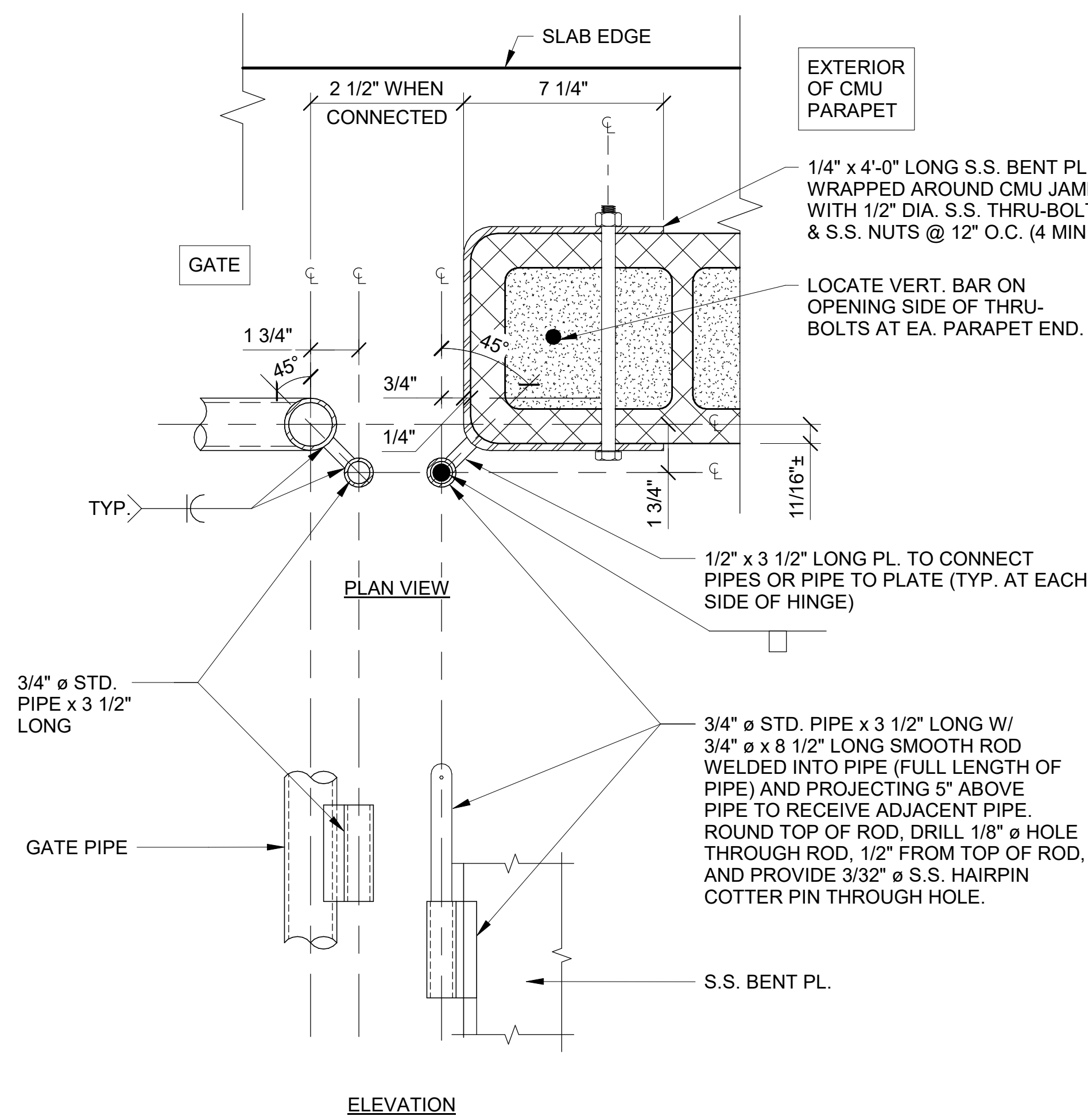


#### NOTES:

1. PROVIDE (4) HINGES PER DETAIL 10/TT605.
2. PROVIDE A GATE LATCH, STRAIGHT ARM FROM HARDWARESOURCE.COM, SKU# 504670 OR AN APPROVED EQUIVALENT.
3. SEE PLANS FOR SWING DIRECTIONS OF GATES.
4. 3/16"x4" HIGH GALV. PL. WELDED TO FAR SIDE OF GATE THAT HAS VERTICAL SLIDING LATCH ROD TO PREVENT OTHER GATE FROM SWINGING IN OPPOSITE DIRECTION.
5. AT EACH GATE LEAF, ATTACH RUBBER FLAP TO BOTTOM HORIZONTAL PIPE WITH (4) 1/4" DIA. ZINC-PLATED THRU-BOLTS WITH NUTS & WASHERS AT 1'-0" O.C. MAX.

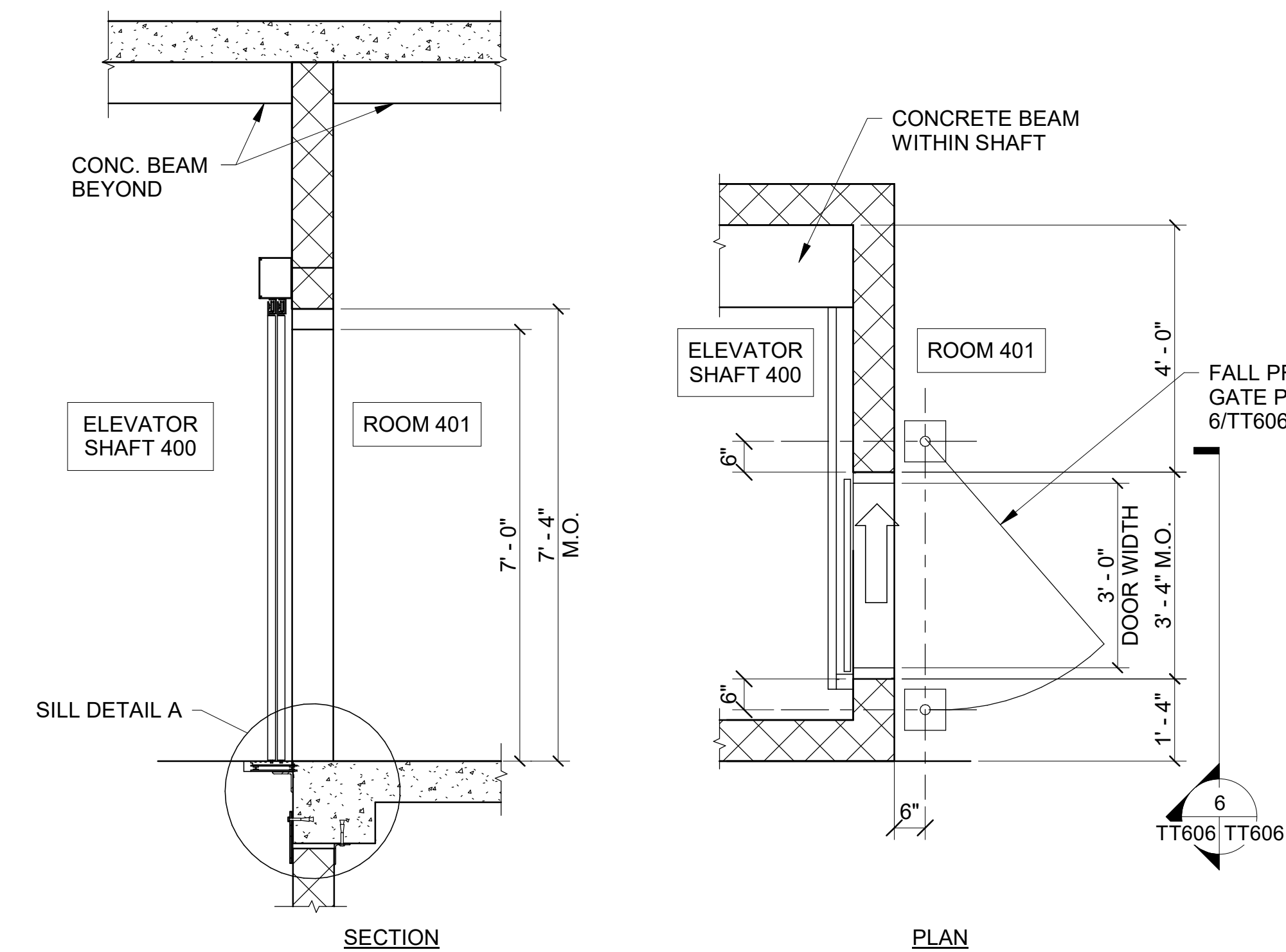
### DOUBLE-SWINGING GATE GUARDRAIL DETAILS

TT203 TT606 SCALE 3/8" = 1'-0"



### GUARDRAIL GATE HINGE AT PARAPET DETAIL

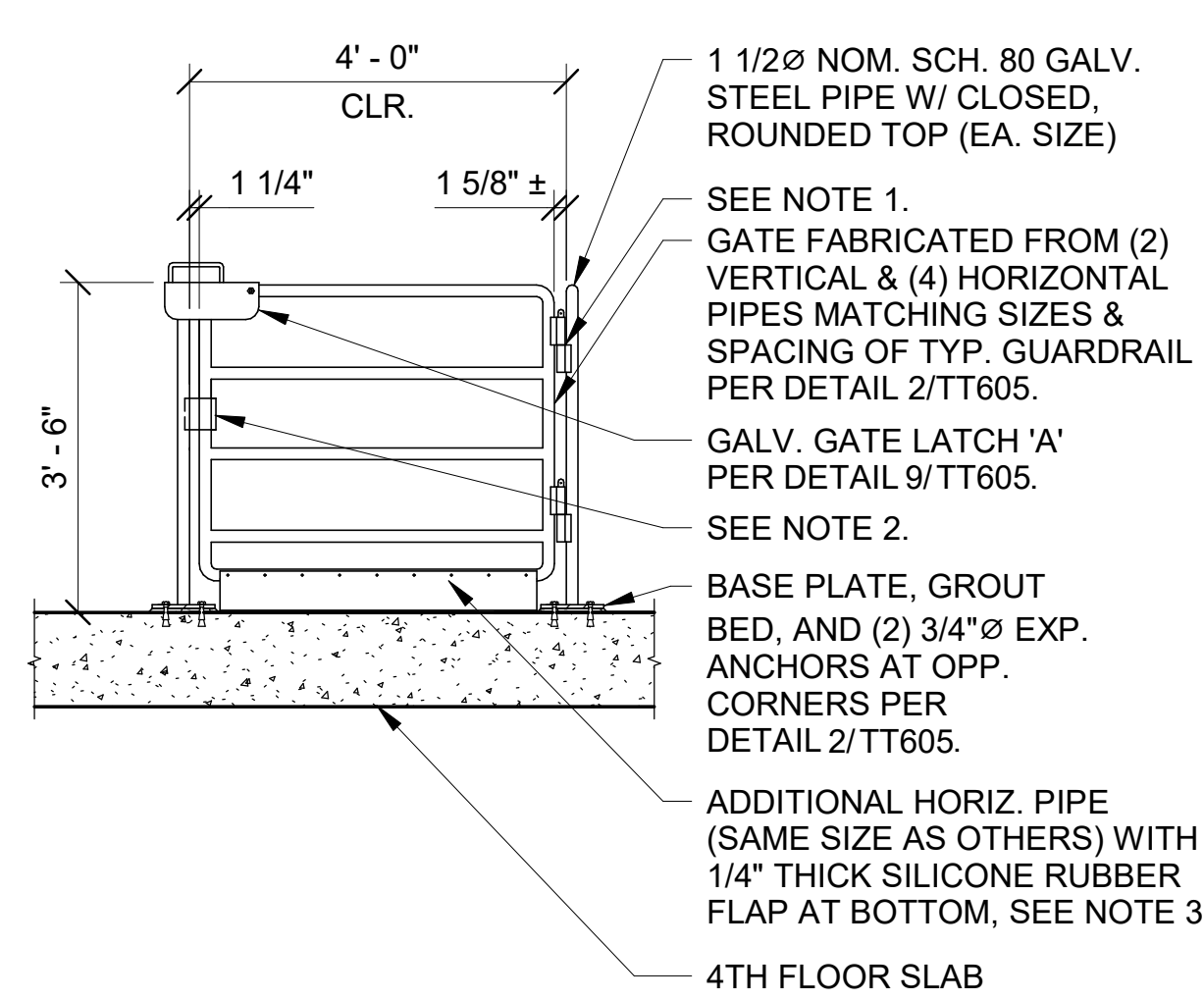
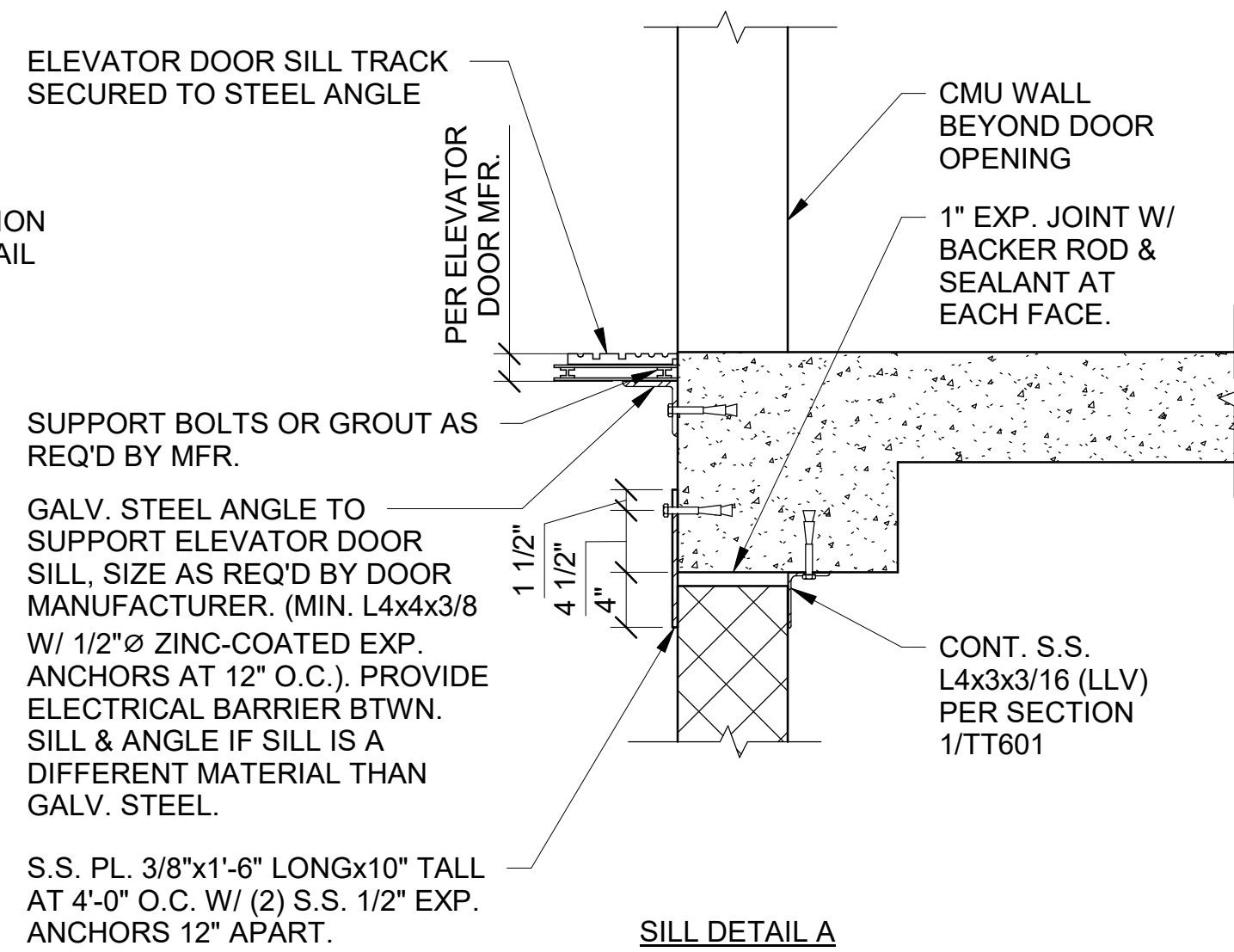
TT606 TT606 SCALE 3" = 1'-0"



COORDINATE ROUGH MASONRY OPENING DIMESNIONS WITH APPROVED ELEVATOR DOOR SHOP DRAWINGS.



TT603 TT606 SCALE 1/2" = 1'-0"



#### NOTES:

1. PROVIDE (2) HINGES PER DETAIL 10/TT605.
2. AT NOTED LOCATION, PROVIDE 3/16"x4" TALL GALV. PLATE WELDED TO FAR SIDE OF FIXED VERTICAL PIPE TO PREVENT GATE FROM SWINGING INTO THE SHAFT.
3. ATTACH RUBBER FLAP TO BOTTOM HORIZONTAL PIPE WITH (4) 1/4" DIA. ZINC-PLATED THRU-BOLTS WITH NUTS AND WASHERS AT 1'-0" O.C. MAX.
4. THIS ELEVATION LOOKS EAST

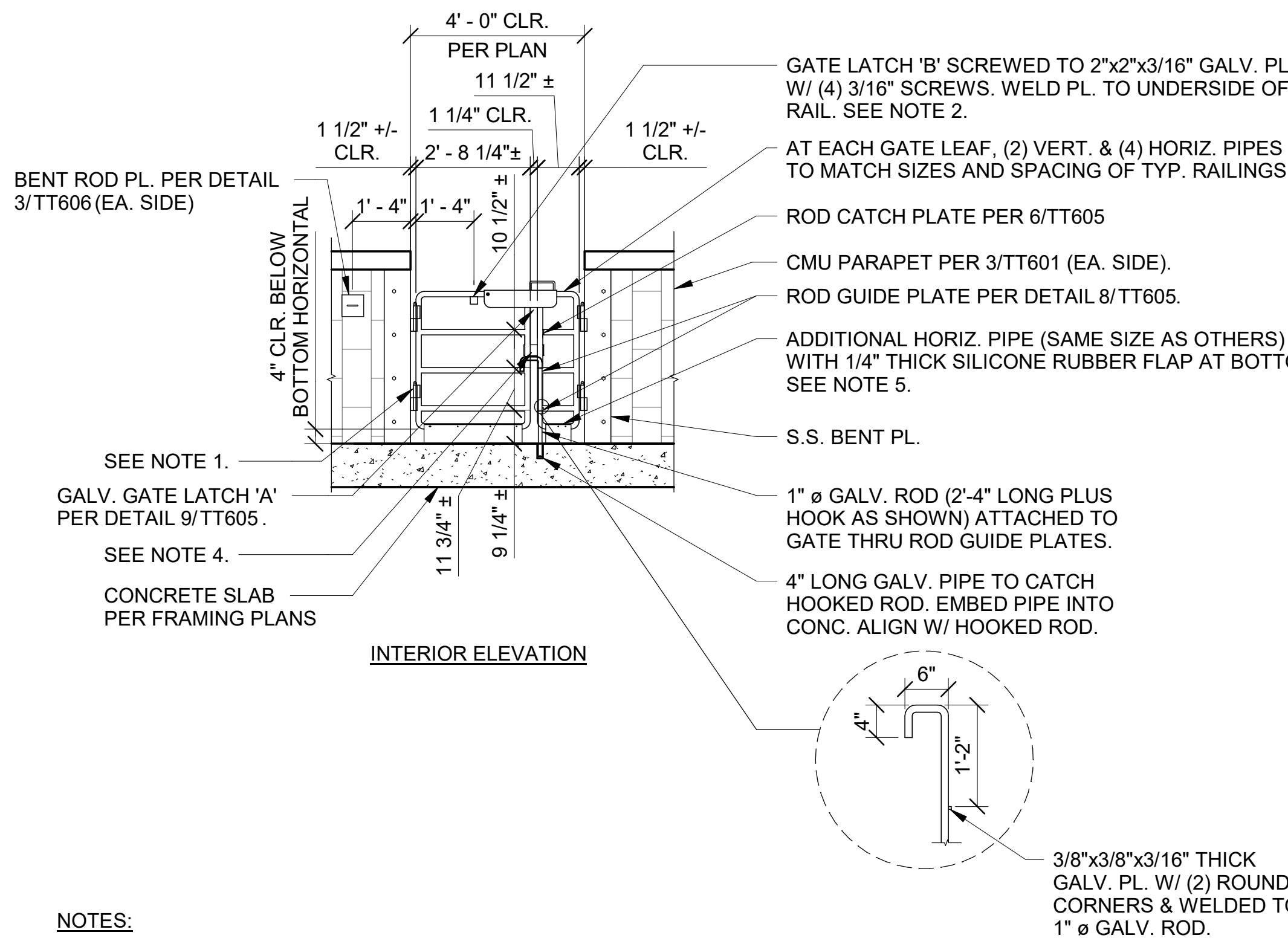
### ELEVATION - FALL PROTECTION GATE AT ELEVATOR SHAFT

TT202, TT606 SCALE 1/2" = 1'-0"

NOTE: SHOP WELD ALL COMPONENTS AND THEN HOT DIP GALVANIZE ENTIRE ASSEMBLY.

### BENT ROD AT PARAPET DETAILS

TT606 TT606 SCALE 3" = 1'-0"



#### NOTES:

1. PROVIDE (4) HINGES PER DETAIL 2/TT606.
2. PROVIDE A GATE LATCH, STRAIGHT ARM FROM HARDWARESOURCE.COM, SKU# 504670 OR AN APPROVED EQUIVALENT.
3. SEE PLANS FOR SWING DIRECTIONS OF GATES.
4. 3/16"x4" HIGH GALV. PL. WELDED TO FAR SIDE OF GATE THAT HAS VERTICAL SLIDING LATCH ROD TO PREVENT OTHER GATE FROM SWINGING IN OPPOSITE DIRECTION.
5. AT EACH GATE LEAF, ATTACH RUBBER FLAP TO BOTTOM HORIZONTAL PIPE WITH (MIN. 3 AT LEFT & MIN. 2 AT RIGHT) 1/4" DIA. ZINC-PLATED THRU-BOLTS WITH NUTS & WASHERS AT 1'-0" O.C. MAX.

### SINGLE-SWINGING GATE GUARDRAIL AT CMU PARAPET DETAILS

BB203 TT606 SCALE 3/8" = 1'-0"

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WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



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**TRAINING TOWER - GUARDRAIL GATE AT PARAPET**

TT606

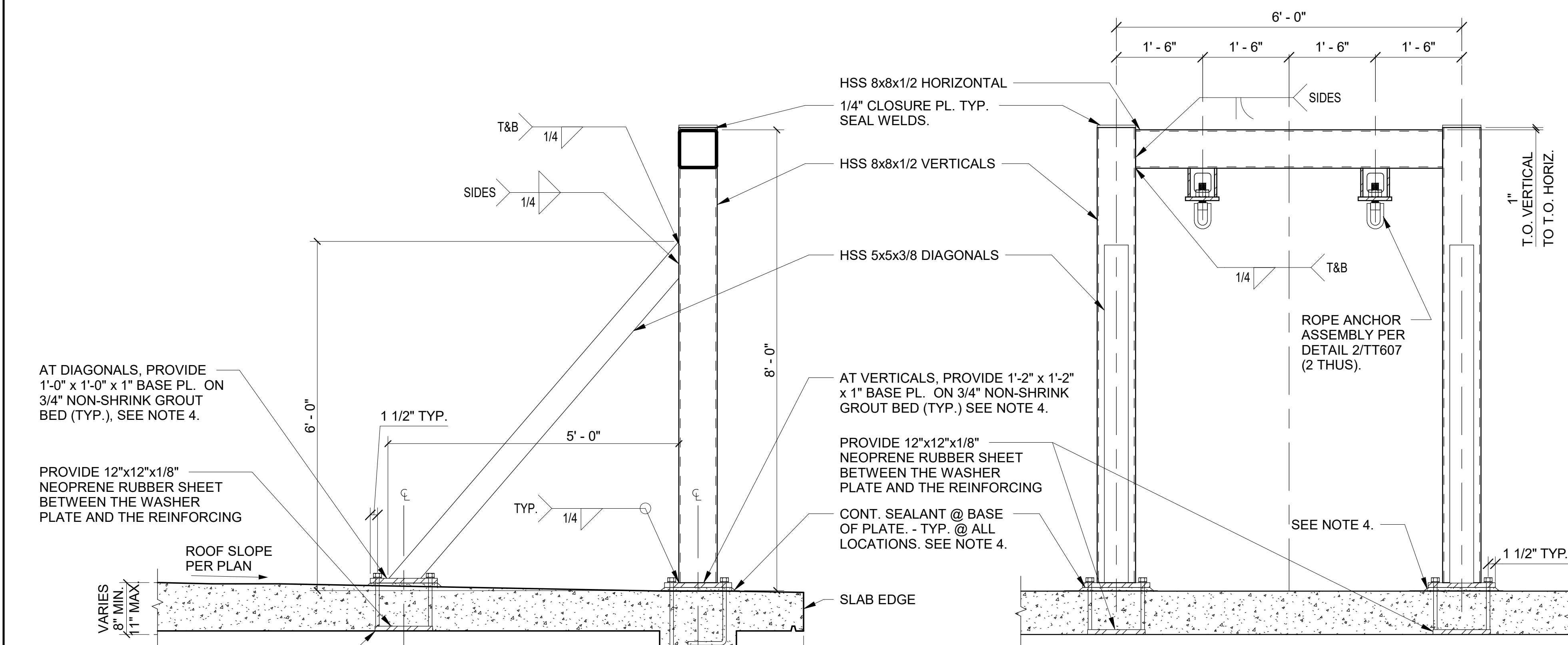




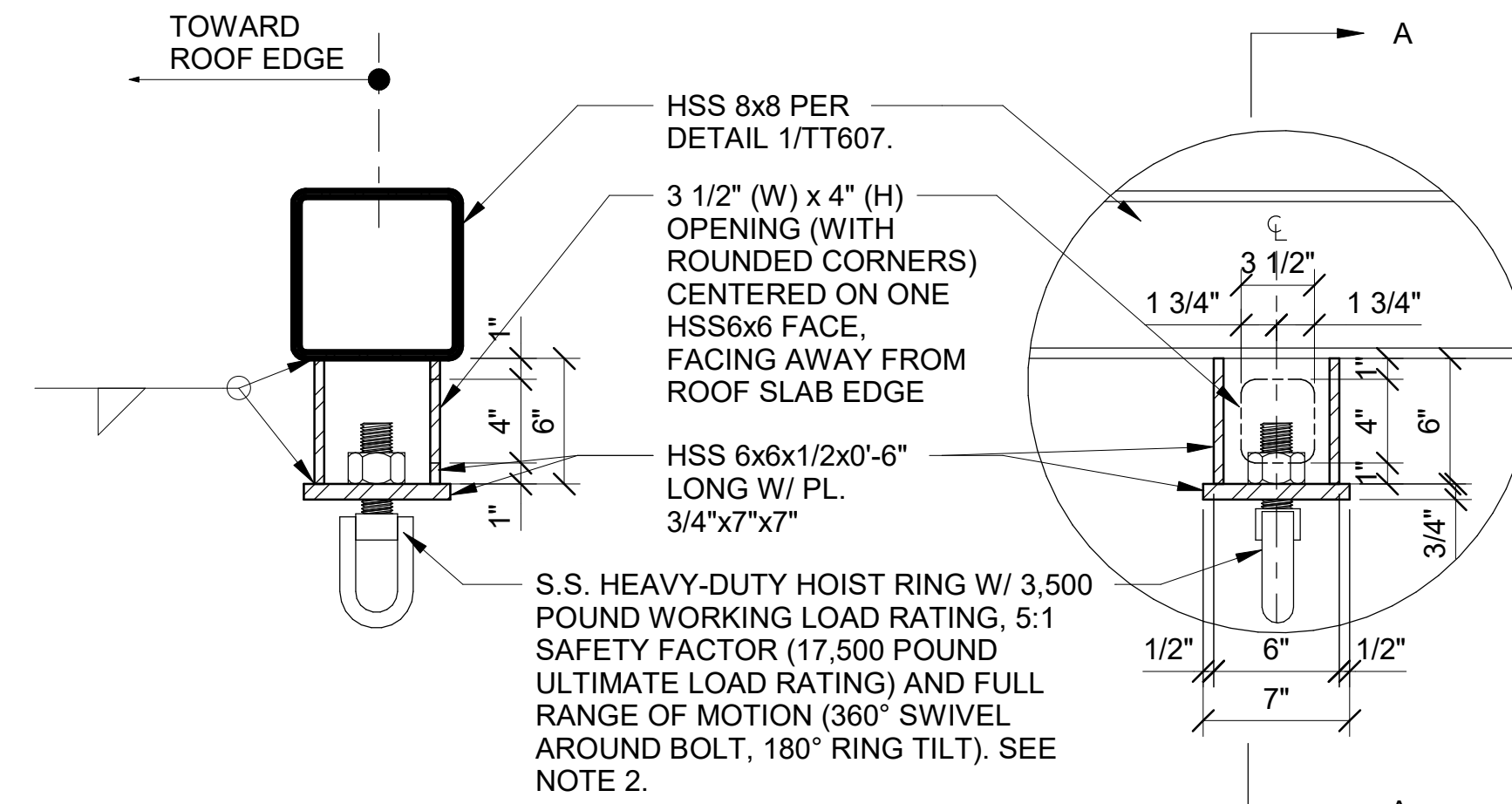
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**TRAINING TOWER - MISCELLANEOUS DETAILS**



REAR ELEVATION



SECTION A-A

ELEVATION

NOTES:

- ALL PIECES SHALL BE GALVANIZED, U.O.N.
- PROVIDE PART #29103 BY AMERICAN DRILL BUSHING CO. OR AN EQUIVALENT APPROVED BY THE ENGINEER BY ALL AMERICAN PRODUCTS GROUP OR BAIRSTOW LIFTING PRODUCTS CO.

GANTRY ROPE ANCHOR ASSEMBLY DETAILS

TT607 TT607 SCALE 1 1/2" = 1'-0"

MANHOLE SECTION DETAILS

TT202 TT607 SCALE 3/4" = 1'-0"

SIDE ELEVATION

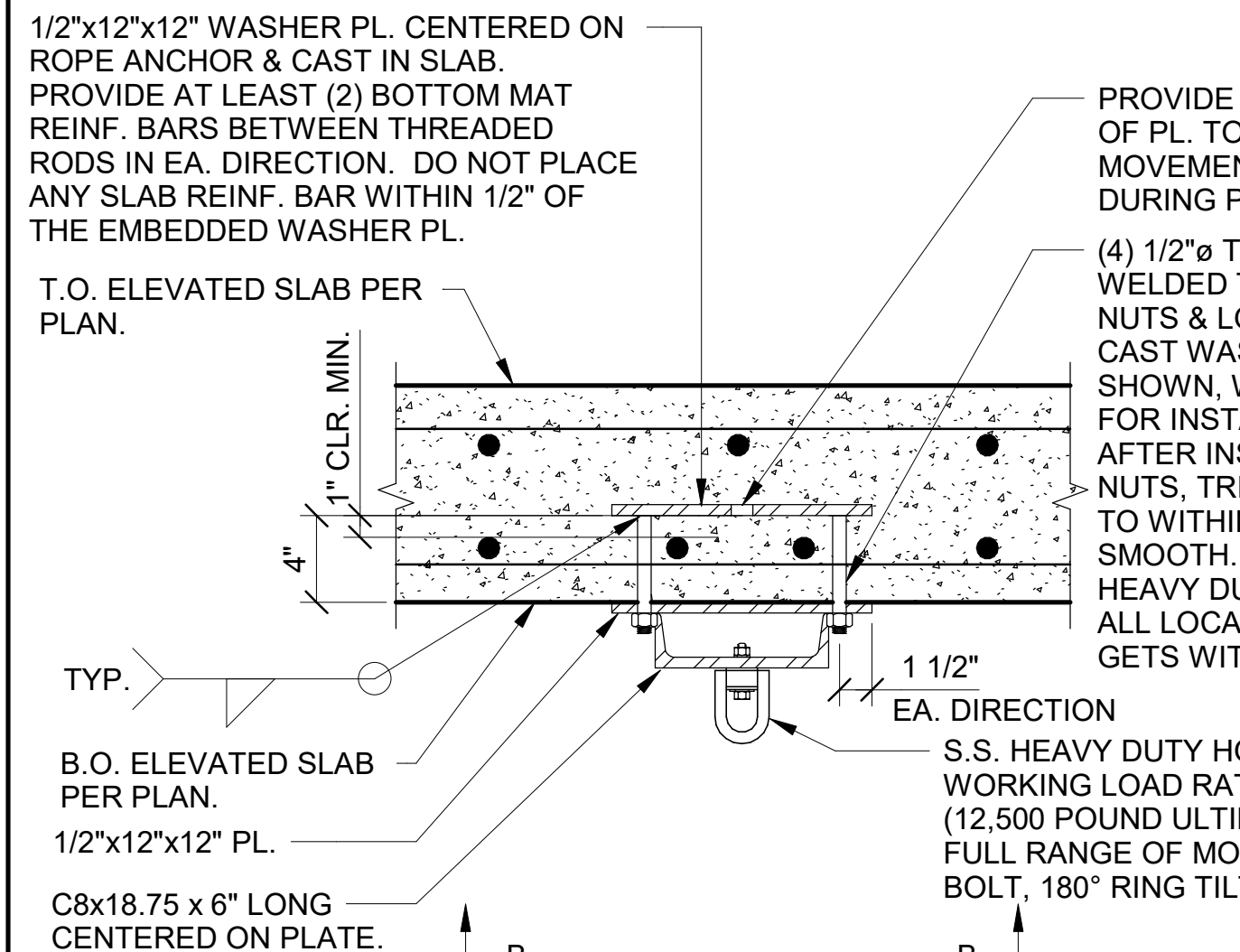
AT DIAGONALS, PROVIDE 1'-0" x 1'-0" x 1" S.S. WASHER PL. W/ (4) 3/4" S.S. THREADED ROD THRU-BOLTS SHOP WELDED TO S.S. WASHER PL. WITH S.S. NUTS AND SMOOTH WASHERS AT TOP (TYP.). PROVIDE NEOPRENE WASHER BTWN. EACH S.S. WASHER AND TOP OF GALV. BASE PL. CAST WASHER PLATE FLUSH WITH BOTTOM OF SLAB, WITH SUFFICIENT ROD LENGTH FOR INSTALLATION TOLERANCE. AFTER INSTALLING & TIGHTENING NUTS, TRIM EXCESS BOLT LENGTHS TO WITHIN 1/2" OF NUTS AND GRIND SMOOTH. WRAP THREADED RODS IN HEAVY DUTY ELECTRICAL TAPE AT ALL LOCATIONS WHERE A REINFORCING BAR GETS WITHIN 1/2" OF THE ROD. FILL HOLES OF GALV. BASE PLATE W/ EPOXY BEFORE INSTALLING NUTS & WASHERS, SO VOIDS BTWN. THRU-BOLTS AND BASE PLATE ARE FILLED.

NOTES:

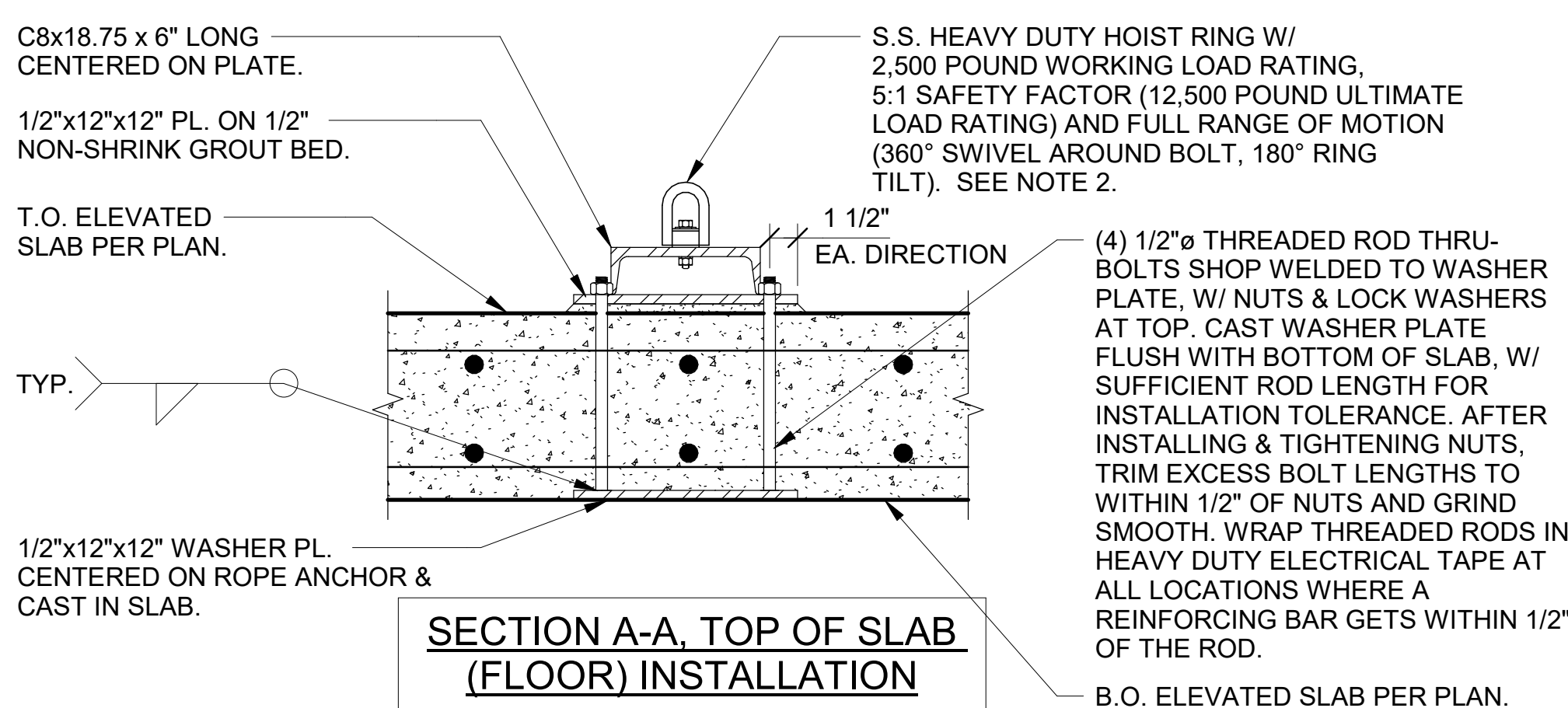
- ALL PIECES SHALL BE GALVANIZED AFTER ASSEMBLY IS SHOP WELDED, U.O.N. DO NOT GALVANIZE S.S. ITEMS.
- PLUG ANY GALVANIZING VENT HOLES IN TUBES AND CLOSURE PLATES AFTER GALVANIZING TO PREVENT MOISTURE FROM ENTERING TUBES.
- PROVIDE (1) 1/2" DIA. WEEP HOLE AT BOTTOM OF EA. VERTICAL & DIAGONAL TUBE ON DOWNHILL FACE OF TUBE. DRILL HOLES PRIOR TO GALVANIZING. HOLE IN FACE OF HSS, NOT IN BASE PL.
- SEAL AROUND THE BOLT HEADS/ NUTS ABOVE THE BASE PLATES AND AROUND THE BASE PLATES WITH CLEAR EPOXY AFTER TIGHTENING.
- DUE TO SLOPE OF ROOF SLAB, BASE PLATES AT DIAGONALS WILL BE APPROXIMATELY 1" HIGHER THAN BASE PLATES AT VERTICALS.

ROPE GANTRY FRAME DETAILS

TT203, TT607 SCALE 3/4" = 1'-0"

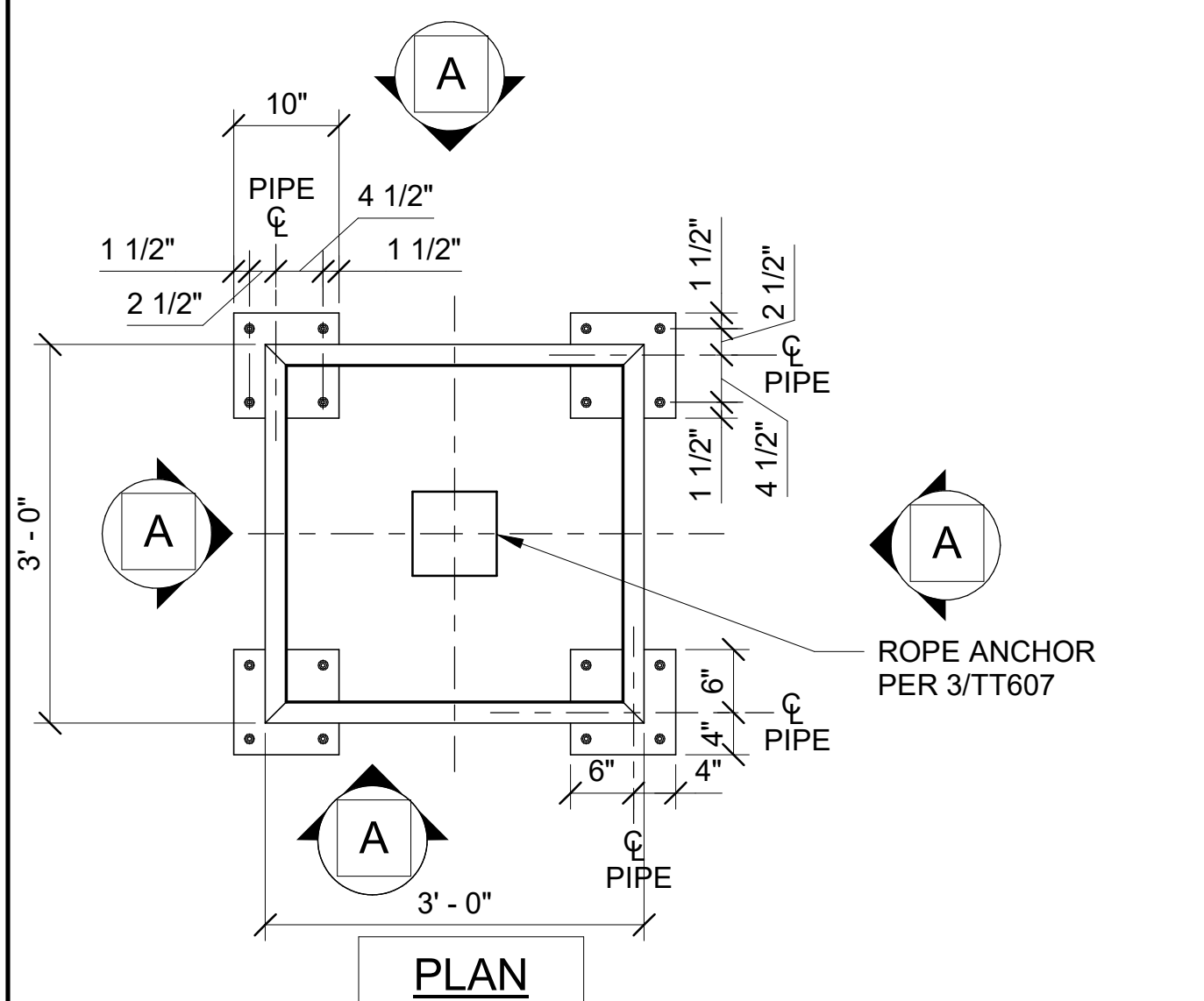


SECTION A-A, TOP OF SLAB (FLOOR) INSTALLATION



SECTION A-A, BOTTOM OF SLAB (CEILING) INSTALLATION

- SEE SECTION A-A FOR ADDITIONAL INFORMATION.

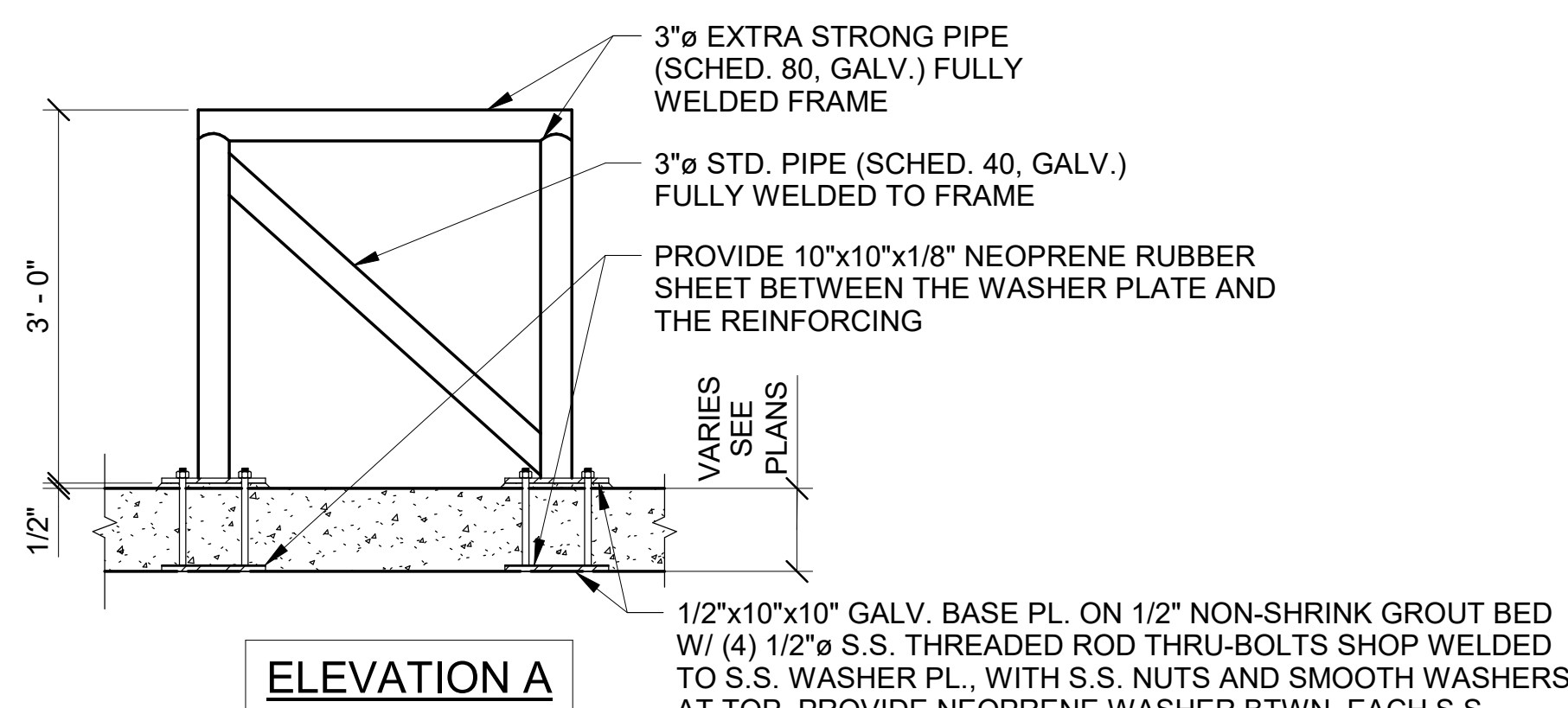


NOTES:

- ALL PIECES SHALL BE GALVANIZED, U.O.N. S.S. ITEMS SHALL BE 316.
- SEAL GALVANIZING VENT HOLES PER GENERAL NOTE Q.7 ON TT001.

SLAB-MOUNTED ROPE FRAME DETAIL

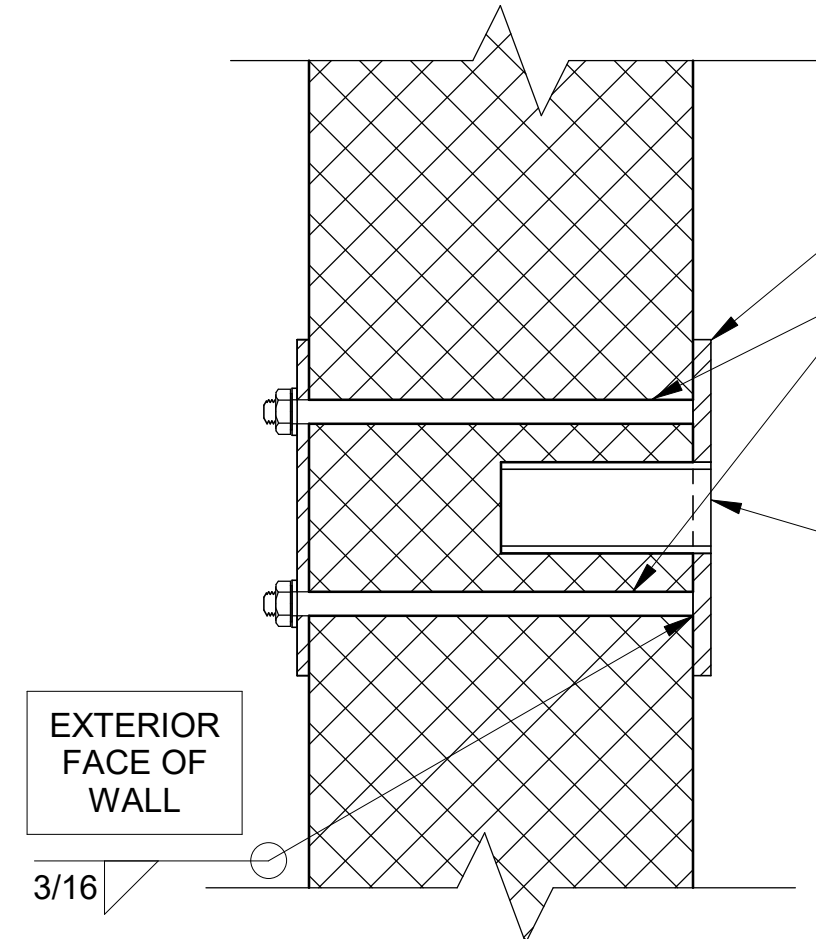
TT203, TT607 SCALE 3/4" = 1'-0"



ELEVATION A

SLAB-MOUNTED AND BEAM-MOUNTED ROPE ANCHOR DETAIL

TT202, TT607 SCALE 1 1/2" = 1'-0"



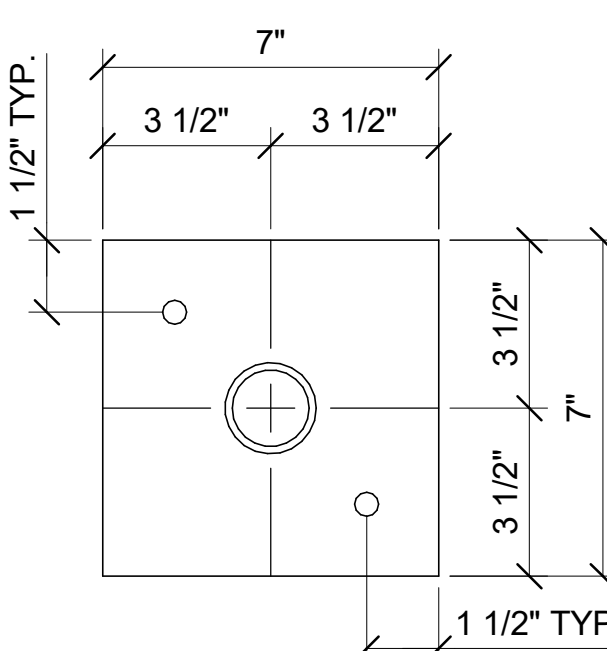
SECTION VIEW

HALLIGAN SPIKE PIPE DETAILS

TT201 TT607 SCALE 3" = 1'-0"

NOTES:

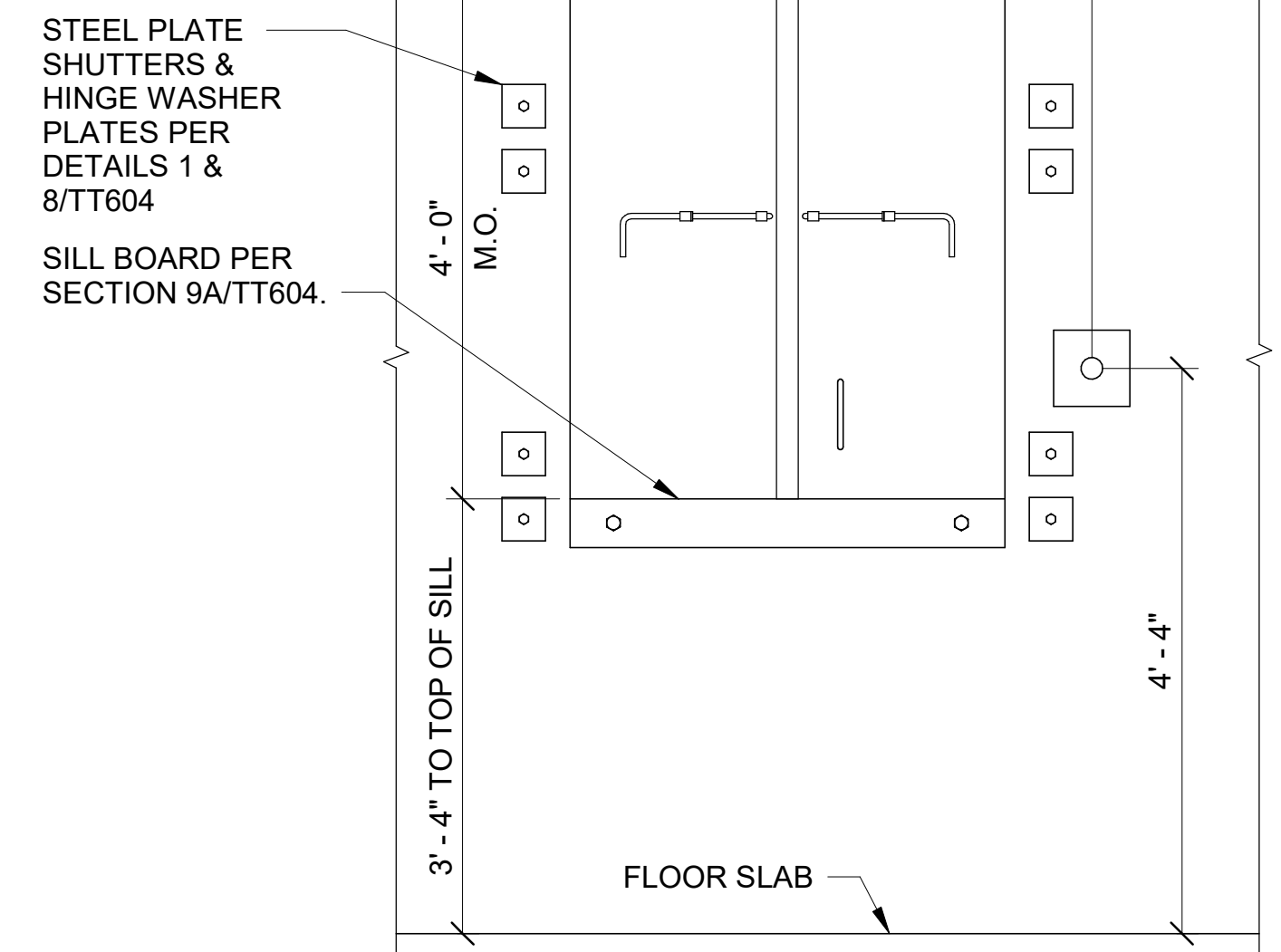
- THIS DETAIL APPLIES ONLY AT THE BAILOUT WINDOW AT THE 2ND FLOOR STAIR LANDING.
- LOCATE CENTER OF PIPE PER ELEVATION VIEW OF 7/TT607.



INTERIOR ELEVATION VIEW

BAILOUT WINDOW INTERIOR ELEVATION

TT201 TT607 SCALE 3/4" = 1'-0"



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