

### GENERAL:

- A. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ARCHITECT / ENGINEER OF DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH WORK.
- B. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETE DESIGN OF THE STRUCTURE. THEY DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED.
- C. OBSERVATION VISITS TO THE SITE BY EOR OR REPRESENTATIVES OF THE EOR MAY BE MADE DURING CONSTRUCTION. ANY SUPPORT SERVICES PERFORMED HEREIN SHALL BE DISTINGUISHED FROM INSPECTION AND/OR TESTING SERVICES PERFORMED BY OTHERS, AND ARE NOT TO BE CONSTRUED AS SUPERVISION AND/OR MANAGEMENT OF CONSTRUCTION.
- D. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING OF ALL STRUCTURAL MEMBERS AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY CONDITION WHICH, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS WITHIN THE STRUCTURE.
- E. CONSTRUCTION MATERIALS SHALL NOT BE STACKED ON FLOORS OR ROOFS IN EXCESS OF THE DESIGN LIVE LOADS. IMPACT SHALL BE AVOIDED WHEN PLACING MATERIALS ON FLOORS OR ROOFS.
- F. DRAWINGS ARE NOT TO BE SCALED.
- G. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO THE DETAILS PRESENTED, SIMILAR DETAILS SHALL BE USED SUBJECT TO THE REVIEW OF ENGINEER OF RECORD.
- H. SUBMIT WRITTEN INFORMATION TO THE ARCHITECT FOR APPROVAL OF ANY PROPOSED CHANGE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. SPlicing, CUTTING, NOTICING OR OTHER ALTERATIONS TO STRUCTURAL MEMBERS ARE NOT PERMITTED WITHOUT WRITTEN AUTHORIZATION OF THE ENGINEER. ANY UNAUTHORIZED DEVIATION FROM THE CONTRACT DOCUMENTS, AND CORRECTION THEREOF, IS THE RESPONSIBILITY OF THE CONTRACTOR. SUBSEQUENT DOCUMENTATION, REQUESTS TO BUILDING ENGINEERING OF RECORD FROM GC SHALL INCLUDE EVALUATION OF DEVIATIONS BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
- J. DESIGN DATA: REFER TO SPECIFICATION FOR FURTHER INFORMATION.
- K. THE MOST STRINGENT REQUIREMENTS APPLY IN CASE OF CONFLICT BETWEEN SPECIFICATIONS, STANDARDS, CODES AND DRAWINGS.

### DESIGN LOADING:

SLAB LIVE LOADS	125 PSF
ROOF DEAD LOADS	20 PSF
ROOF LIVE LOADS	20 PSF

SNOW DESIGN:	
GROUND SNOW LOAD	Pg 0 PSF
FLAT SNOW LOAD	Pf 0 PSF
SNOW EXPOSURE FACTOR	Ce 1.0
SNOW IMPORTANCE FACTOR	Is 1.0
SNOW THERMAL FACTOR	Ct 1.0

### WIND DESIGN, REFERENCE GENERAL NOTES TABLES

#### SEISMIC DESIGN:

RISK CATEGORY:	N/A
DESIGN CATEGORY:	N/A
SITE CLASS:	N/A
BASIC S-R SYSTEM:	N/A
R (RESPONSE MOD.):	N/A
Cs (RESPONSE COEF.):	N/A
Ss:	N/A
S1:	N/A
Sds:	N/A
Sd1:	N/A
ANALYSIS PROCEDURE:	N/A
DESIGN BASE SHEAR:	N/A

NOTE: ALL DESIGN LOADS PRESENTED ARE UNFACTORED UNLESS SPECIFIED OTHERWISE.

### DESIGN LOADING:

2020 FLORIDA BUILDING CODE, SEVENTH EDITION

ASCE 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

ACI 318-11, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

AISC MANUAL OF STEEL CONSTRUCTION, 13TH EDITION

SEE SPECIFICATIONS FOR FURTHER INFORMATION

### FOUNDATIONS / SITE WORK:

A. FOUNDATION DESIGN IS BASED UPON THE FOLLOWING SOILS REPORT:

COMPANY NAME: UNIVERSAL ENGINEERING SCIENCES  
DATE: MARCH 29, 2022  
PROJECT NUMBER: 0630 2100397.0000

B. ALLOWABLE SOIL PRESSURE IS TO BE 2,500 PSF.

C. ANY FILL REQUIRED TO BACKFILL EXCAVATED AREA OR ACHIEVE FINISHED GRADE IN STRUCTURAL AREAS SHALL BE AS INDICATED BY GEOTECHNICAL ENGINEER. THE FILL SHALL BE PLACED IN LEVEL LIFTS NOT EXCEED 12 INCHES LOOSE THICKNESS AND COMPACTED TO A MINIMUM OF 95% OF THE SOIL'S MODIFIED PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM SPECIFICATION D- 1557.

D. IN-PLACE DENSITY TESTS SHALL BE PERFORMED BY AN EXPERIENCED ENGINEERING TECHNICIAN. TESTS SHALL BE PERFORMED FOR EACH 2,000 SQUARE FEET, IN EVERY COLUMN FOOTING LOCATION AND EACH 50 FEET ALONG WALL FOOTINGS. COPIES OF THE TEST REPORTS SHALL BE FURNISHED TO THE STRUCTURAL ENGINEER.

E. REMOVE FREE WATER FROM EXCAVATIONS BEFORE PLACING CONCRETE.

F. CAUTION SHOULD BE USED WHEN OPERATING VIBRATORY COMPACTING EQUIPMENT NEAR THE EXISTING STRUCTURE TO AVOID THE RISK OF DAMAGE TO THE STRUCTURE.

G. REFER TO ARCHITECTURE DRAWINGS FOR ANY NECESSARY WATERPROOFING REQUIREMENTS.

### SUBMITTALS:

- A. SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT. CORRECTIONS OR COMMENTS MADE ON THIS REVIEW DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS, AND FROM COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. CORRECTIONS OR COMMENTS DO NOT AUTHORIZE AN INCREASE IN THE CONSTRUCTION BUDGET.
- B. APPROVAL OF SHOP DRAWINGS DOES NOT INDICATE ACCEPTANCE OF DEVIATIONS FROM CONTRACT DOCUMENTS OR PREVIOUS SHOP DRAWING REVIEW, UNLESS SPECIFICALLY NOTED THEREIN BY ENGINEER OF RECORD.
- C. ANY CHANGES TO THE DESIGN CONCEPT SHOWN IN CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING AND APPROVED BY THE ARCHITECT AND ENGINEER PRIOR TO SUBMITTING SHOP DRAWINGS. ALL SUCH CHANGES SHALL BE "BUBBLED" ON THE SHOP DRAWINGS AND REFERENCED TO THE PROPER R.F.I.
- D. SUBMITTALS SHALL CONFORM TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS (REFERENCE ITEM ABOVE FOR EXCEPTION), NON-CONFORMING OR NON-REVIEWED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.

- SHOP DRAWINGS SHALL BE "APPROVED", SIGNED AND DATED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO ENGINEER AND ARCHITECT OF RECORD.
- SHOP DRAWINGS SHALL NOT CONTAIN REPRODUCTIONS OF THE CONTRACT DRAWINGS.
- SUBMITTAL REQUIREMENTS:

INFORMATION SUBMITTALS  
-SEE SPECIFICATIONS

ACTION SUBMITTALS  
-SEE SPECIFICATIONS  
DELEGATED ENGINEERING SUBMITTALS  
JOISTS & JOIST GIRDERS  
-COLD-FORMED METAL FRAMING  
-TRUSSES & TRUSS SYSTEMS  
ALUMINUM STOREFRONT SYSTEMS  
-PRE-ENGINEERED CANOPIES, AWNINGS AND MARQUEES

DELEGATED ENGINEERING SUBMITTALS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

### REINFORCED CONCRETE:

A. CAST-IN-PLACE CONCRETE, UNLESS OTHERWISE NOTED (U.O.N.):

SLABS  
2500 PSI 28-DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.57 MAX. W/C

FOOTINGS / PIERS / FORMED WALLS  
2500 PSI 28-DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.57 MAX. W/C

COLUMNS/BEAMS  
4000 PSI 28-DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.45 MAX. W/C

CONCRETE EXPOSED TO FREEZE/THAW CONDITIONS SHALL BE AIR ENTRAINED

CONCRETE COVER OVER REINFORCEMENT:

B. ANY CONCRETE CAST AGAINST EARTH

3"  
FOOTINGS  
3" (BOTTOM & SIDES), 2" (TOP)  
FORMED PIERS & WALLS  
2" (#6 AND LARGER), 1 1/2" (#3 TO #5)  
SLABS, COLUMNS AND BEAMS EXPOSED TO EARTH OR WEATHER  
2" (#6 AND LARGER), 1 1/2" (#3 TO #5)  
SLABS NOT EXPOSED TO EARTH OR WEATHER  
3/4" (#3 TO #11)  
BEAMS AND COLUMNS NOT EXPOSED TO EARTH OR WEATHER  
1 1/2" (#3 TO #11)

C. REINFORCING, UNLESS OTHERWISE NOTED (U.O.N.):

1. WELDED WIRE FABRIC SHALL BE CONTINUOUS, LAPPED ONE CROSS WIRE SPACING PLUS 2" MINIMUM.

2. WHERE CONTINUOUS REINFORCING IS SPECIFIED, SUCH REINFORCING MAY BE SPLICED WHERE APPROVED IN WRITING BY THE ENGINEER OF RECORD.

3. AT CHANGES IN DIRECTION OF CONCRETE WALLS, BEAMS, AND FOOTINGS, PROVIDE CORNER BARS OF SAME SIZE, QUANTITY AND SPACING AS HORIZONTAL STEEL.

4. LAP SPLICES SHALL BE PER LAP SPLICE TABLE BELOW, WIRED TOGETHER.

D. THERE SHALL BE NO HORIZONTAL JOINTS IN ANY CONCRETE POURS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

E. POWDER ACTUATED FASTENERS (PAFS) NOT PERMITTED AT CONCRETE.

SPLICE LENGTHS* (Ld) FOR GRADE 60 BARS		
REINF. SIZE	f'c psi	
	3000	4000
#3	18"	18"
#4	24"	24"
#5	30"	30"
#6	36"	36"
#7	63"	54"
#8	72"	62"
#9	81"	70"
#10	89"	78"
#11	98"	85"

\* MINIMUM CLEAR COVER OF (1)-Db  
\* MINIMUM CLEAR SPACING OF (2)-Db

F. UNLESS OTHERWISE NOTED, INTERIOR SLAB ON GRADE TO BE 4" SLAB w/ 3000 PSI CONCRETE w/ 6#xW2.1xW2.1 W.W.F. OVER 10 MIL MIN. VAPOR RETARDER ON TERMITTE TREATED COMPACTED SOIL

### STRUCTURAL STEEL:

A. WELDING, UNLESS OTHERWISE NOTED (U.O.N.):

1. ALL WELDING IN THE SHOP AND IN THE FIELD SHALL BE PERFORMED BY CERTIFIED WELDERS ONLY.

2. WELDING ELECTRODES SHALL BE E70XX LOW HYDROGEN.

B. CONNECTIONS, UNLESS OTHERWISE NOTED (U.O.N.):

1. TIGHTEN BOLTS BY THE "SNUG-TIGHT" METHOD.

2. FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIA. MIN. HIGH-STRENGTH (EXTENDED PLATES NOT PERMITTED). SIMPLE SHEAR CONNECTIONS AT BEAMS SHALL BE SINGLE-PLATE OR DOUBLE-ANGLE.

3. SIMPLE SHEAR CONNECTIONS SHALL EMPLOY THE MAXIMUM NUMBER OF BOLTS IN A SINGLE ROW AS AFFORDED BY CONNECTION GEOMETRY w/ 1 1/2" MIN. EDGE SPACING ALL AROUND. SIMPLE SHEAR CONNECTIONS AT HSS COLUMNS SHALL BE SINGLE-PLATE

GROUT UNDER BEARING PLATES SHALL HAVE COMPRESSIVE STRENGTH OF AT LEAST 5000 PSI WHEN BEARING ON 2500 PSI CONCRETE AND 8000 PSI WHEN BEARING ON 4000 PSI CONCRETE.

D. UNLESS OTHERWISE NOTED, ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED OR OTHERWISE PROTECTED.

E. UNLESS OTHERWISE NOTED, ALL STEEL EXPOSED TO SOIL, SHALL BE ENCASED IN CONCRETE COATED WITH AN ASPHALTIC BASED CORROSION RESISTANCE COATING UPON INSTALLATION OR OTHERWISE PROTECTED.

### STEEL JOISTS AND STEEL GIRDERS:

A. ALL JOISTS AND GIRDERS SHOWN IN THE PLANS ARE MINIMUM SIZES. DEPTH CANNOT BE DECREASED OR INCREASED WITHOUT WRITTEN APPROVAL BY ARCHITECT/ENGINEER.

B. STEEL JOIST AND GIRDER SEAT DEPTHS TO BE:

- ALL K-SERIES JOISTS TO HAVE 2 1/2" SEATS
- ALL KCS-SERIES JOISTS TO HAVE 2 1/2" SEATS
- ALL H-SERIES JOISTS TO HAVE 5" SEATS
- ALL JOIST GIRDERS TO HAVE 7 1/2" SEATS

C. PROVIDE BRIDGING AND X-BRACING AS PER THE REQUIREMENTS OF SJI AND AS FOLLOWS. SHOULD PLANS OR NOTES INDICATE BRIDGING AND X-BRACING IN EXCESS OF THAT REQUIRED BY SJI, PLANS & NOTES WILL GOVERN.

1. PROVIDE X-BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT INTERVALS NOT TO EXCEED 100 FEET IN LENGTH.

2. PROVIDE Y-BRACING ON BOTH SIDES OF W-BEAMS (ETHER DIRECTLY ADJACENT TO W BEAMS OR NEXT BAY FROM W BEAMS), TOP ALL HORIZONTAL BRIDGING LINES EXCEPT UPLIFT.

3. PROVIDE X-BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT OUTSIDE (END) BEAMS WHERE OCCURS.

4. PROVIDE Y-BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT END BAYS WHERE BRIDGING TERMINATED AT EXPANSION JOINT LOCATIONS.

5. PROVIDE Y-BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT END BAYS WHERE BRIDGING TERMINATED.

6. PROVIDE Y-BRACING EACH SIDE AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING WHERE CONCENTRATED POINT LOAD GREATER THAN 500 POUNDS OCCURS.

7. PROVIDE Y-BRACING EACH SIDE AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING WHERE DISCONTINUOUS.

D. MINIMUM WELDS, U.O.N.:

- BAR JOIST ENDS 3/16" FILLET, 2" LONG, EACH SIDE OR 1/8" FILLET, 3" LONG, EACH SIDE
- JOIST GIRDER ENDS 1/4" FILLET, 4" LONG, EACH SIDE

### STEEL DECK NOTES:

A. REFER TO PLAN FOR THICKNESS AND ATTACHMENT REQUIREMENTS.

B. PROVIDE SUPPORTS FOR METAL DECK AS REQUIRED WHERE METAL DECK IS CUT OUT. WELD DECK TO SUPPORTS SAME AS EDGE CONDITION.

C. PROVIDE STL. SHIMS AND EMBEDS AS REQUIRED TO SUPPORT DECK ON "TYPICAL" BAY SPACING.

### COLD-FORMED STEEL FRAMING, TRUSSES AND TRUSS SYSTEM:

A. MATERIALS, U.O.N.:

54 MIL (18 GA) AND HEAVIER STUDS 33 KSI MIN.  
33 20 GA) AND 43 MIL (18 GA) STUDS 33 KSI MIN.

B. PROVIDE MANUFACTURERS STANDARD STEEL RUNNERS, BRIDGING, BLOCKS, BRACING, CLIPS, REINFORCEMENTS, ETC. TEMPORARY AND PERMANENT - AS REQUIRED TO PROVIDE A COMPLETE FRAMING SYSTEM, CAPABLE OF ACCOMMODATING THE LOADS PRESENTED IN THE CONSTRUCTION DOCUMENTS.

C. FIELD SPLICES IN MATERIALS SHALL NOT BE PERMITTED EXCEPT WHERE INDICATED IN SHOP AND/OR INSTALLATION DRAWINGS AND APPROVED BY STRUCTURAL ENGINEER.

D. DEFLECTION LIMITS, U.O.N. IN SPECIFICATIONS OR PLANS:

1/360, U.O.N.  
1/400, BRICK AND MASONRY VENEER

### STRUCTURAL INSPECTION:

A. THE CONTRACTOR OR OWNER SHALL EMPLOY A QUALIFIED INDEPENDENT INSPECTION AGENCY. THIS AGENCY (REFERRED TO AS INSPECTOR HEREIN) SHALL BE RESPONSIBLE FOR VERIFYING THAT PROJECT STRUCTURAL WORK IS ACCOMPLISHED IN CONFORMANCE WITH THE CONTACT DOCUMENTS.

B. DURATION AND FREQUENCY OF JOB VISITS SHALL BE SUFFICIENT FOR THE INSPECTOR TO STATE AT THE COMPLETION OF THE PROJECT THAT THE STRUCTURAL WORK IS ACCOMPLISHED, AND ITS RELATED ELEMENTS HAVE BEEN ERECTED IN ACCORDANCE WITH THE CONTACT DOCUMENTS. SPECIFIC SYSTEMS TO BE INSPECTED INCLUDE:

CONCRETE (FOUNDATION, PIERS, FORMED WALLS, COLUMNS/BEAMS)  
CONCRETE SLAB ON GRADE  
STRUCTURAL STEEL (INCLUDING JOISTS)  
METAL DECK (ROOF)  
LIGHT GAUGE FRAMING (INCLUDING TRUSSES AND TRUSS SYSTEMS)

C. THE FOREGOING LIST IS NOT INTENDED TO BE ALL INCLUSIVE. THE INSPECTOR SHALL USE HIS PROFESSIONAL JUDGEMENT AND HIS KNOWLEDGE OF THE JOB SITE CONDITIONS AND THE OFFICIAL CONTRACT DOCUMENTS. THE INSPECTOR WILL NOT REPLACE THE QUALITY CONTROL PERSONNEL OF THE CONTRACTOR.

D. THE INSPECTOR DOES NOT RELIEVE THE CONTRACTOR'S CONTRACTUAL OR STATUTORY OBLIGATIONS. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE OFFICIAL CONTRACT DOCUMENTS. THE INSPECTOR WILL NOT REPLACE THE QUALITY CONTROL PERSONNEL OF THE CONTRACTOR.

E. ALL INSPECTION REPORTS SHALL BE FORWARDED BY THE INSPECTOR TO THE ENGINEER AND ARCHITECT OF RECORD

### ROOF TOP EQUIPMENT:

A. THE CONTRACTOR OR OWNER SHALL EMPLOY A QUALIFIED INDEPENDENT INSPECTION AGENCY. THIS AGENCY UNLESS SPECIFICALLY INDICATED IN PLANS, THE LOCATIONS AND DIMENSIONS OF ROOF TOP EQUIPMENT SUPPORTS ARE APPROXIMATE. THE EXACT LOCATIONS AND DIMENSIONS MUST BE COORDINATED WITH FINAL EQUIPMENT AND POSITIONED TO AVOID CONTACT WITH STRUCTURAL MEMBERS INCLUDING BRIDGING AND BRACING.

B. ALL PRE-ENGINEERED ROOF TOP EQUIPMENT CURBS, BENCHES AND ASSOCIATED CONNECTIONS MUST SAFELY SUPPORT THE WEIGHT OF THE EQUIPMENT AND MEET THE APPLICABLE BUILDING CODE REQUIREMENTS FOR WIND AND SEISMIC.

### LIST OF STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLTS	LRFD	LOAD RESISTANCE FACTOR DESIGN
ADDL	ADDITIONAL	(ULTIMATE)	
ALT	ALTERNATE	MATL	MATERIAL
ANCH	ANCHOR	MAX	MAXIMUM
APPROX	APPROXIMATE	MB	MASONRY BEAM
ARCH	ARCHITECT/ARCHITECTURAL	MC	MOMENT CONNECTION
ASD	ALLOWABLE STRESS DESIGN (NOMINAL)	MC	MASONRY COLUMN
BB	BOND BEAM	MCJ	MASONRY CONTROL JOINT
BLDG	BUILDING	MECH	MECHANICAL
BM	BEAM	MEZZ	MEZZANINE
BO	BOTTOM OF	MFR	MANUFACTURE/MANUFACTURERS
BOT/BTM	BOTTOM	MIN	MINIMUM
BP	BASE PLATE/BEARING PLATE	MISC	MISCELLANEOUS
BRG	BEARING	MTL	METAL
BTW	BETWEEN	NIC	NOT IN CONTRACT
CANT	CANTILEVER	NOM	NOMINAL
CB	CONCRETE BEAM	NTS	NOT TO SCALE
CC	CONCRETE COLUMN	OC	ON CENTER
CIP	CAST IN PLACE	OPNG	OPENING
CJ	CONSTRUCTION JOINT	OPP	OPPOSITE
CL	CENTRALISE	PAFS	POWDER ACTUATED FASTENERS
CLR	CLEAR/CLEARANCE	PB	PARAPET BEAM (MASONRY)
COEF	COEFFICIENT	PEC	PRECAST CONCRETE
COL	COLUMN	PL	PLATE
CONC	CONCRETE	PLF	PONDS PER LINEAR FOOT
CONCR	CONCRECTION	PLY	PLYWOOD
CONSTR	CONSTRUCTION	PRE-ENG	PRE-ENGINEERED
CONT	CONTINUOUS	PEMB	PRE-ENGINEERED METAL BUILDING
CORR	CORRUGATED	PRE-FAB	PRE-FABRICATED
CNU	CONCRETE MASONRY UNIT	PRELIM	PRELIMINARY
DBA	DEFORMED BAR ANCHORS	PROJ	PROJECTION
DET	DETAIL	PSF	POUNDS PER SQUARE FOOT
DIAM	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIM	DIMENSION	PT	PRESSURE TREATED
DIST	DISTANCE	PT	POST TENSIONING (ED)
DN	DOWN	PANEL	PANEL
DR	DRAIN	RAD	RADIUS
DWG	DRAWING	RB	ROOF BEAM (MASONRY)
DWL	DOWEL	RCP	REINFORCED CONCRETE PIPE
EACH	EACH	RD	ROOF DRAIN
EE	EACH END	REF	REFERENCE
EF	EACH FACE	REF	REINFORCING
EJ	EXPANSION JOINT	REQ'D	REQUIRED
EL/ELEV	ELEVATION	REV	REVISION
ELECT	ELECTRICAL	RFI	REQUEST FOR INFORMATION
EMB	EMBEDMENT	RTU	ROOF TOP UNIT
ENGR	ENGINEER	RW	RETAINING WALL
EOR	ENGINEER OF RECORD	SECT	SECTION
EQ	EQUAL	SCH/SCHED	SCHEDULE
EQUIP	EQUIPMENT	SMILR	SIMILAR
EQUIV	EQUIVALENT	SII	STEEL JOIST INSTITUTE
ES	EACH SIDE	SP/SPC	SPACES
EXIST	EXISTING	SPECS	SPECIFICATIONS
EXP	EXPANSION	SO	SQUARE
EXT	EXTERIOR	SS	STAINLESS STEEL
EW	EACH WAY	STD	STANDARD
FAB	FABRICATE	ST/STL	STEEL
FD	FLOOR DRAIN	STRUC	STRUCTURAL
FDN	FOUNDATION	SYM	SYMMETRICAL
FF	FINISHED FLOOR	T & B	TOP AND BOTTOM
FIN	FINISHED	T & G	TONGUE AND GROOVE
FL/FLR	FLOOR	TE	THICKENED EDGE
FTG	FOOTING	THK	THICK
GA	GAGE/GAUGE	THRD	THREADED
GALV/GV	GALVANIZED	TB	THE BEAM
GC	GENERAL CONTRACTOR	TOC	TOP OF CONCRETE
HAS	HEADED ANCHOR STUD	TOM	TOP OF MASONRY
HB	HIGH BEAM (MASONRY)	TOS	TOP OF STEEL
HORIZ	HORIZONTAL	TYP	TYPICAL
HSP	HIGH STRENGTH BOLTS	TS	TUBE STEEL
HSS	HOLLOW STEEL SECTION	UNO	UNLESS NOTED OTHERWISE
HT	HEIGHT	UNON	UNLESS OTHERWISE NOTED
IBC	INTERNATIONAL BUILDING CODE	VERT	VERTICAL
INT	INTERIOR	VIF	VERIFY IN FIELD
JST	JOIST	W	WIDE FLANGED
JT	JOINT	W/	WITH
K	KIPS	W/C	WATER CONTENT
KO	KNOCK OUT	W/O	WITHOUT
KSF	KIPS PER SQUARE FOOT	WB	WALL BEAM (ILT)
KSI	KIPS PER SQUARE INCH	WC	WALL COLUMN (ILT)
L	ANGLE	WD	WOOD
LB	LOW BEAM (MASONRY)	WGT	WEIGHT
LBS	POUNDS	WH	WESPHOLE
LD	DEVELOPMENT LENGTH	WP	WORKING POINT
LDR	LONG DIMENSION HORIZONTAL	WT	STEEL TEE SECTION
LDV	LONG DIMENSION VERTICAL	WVF	WELDED WIRE FABRIC
LGTH	LENGTH	@	AT
LBBA	LONG LEG BACK TO BACK	&	AND
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		



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PHILADELPHIA, PA 19103

2023.03.30

PROJECT:

## STRUCTURAL DRAWINGS FOR SWEETWATER RETAIL I

US 41 & SWEETWATER RANCH BLVD, ESTERO, FLORIDA 33928

WIND DESIGN

ASCE 7 -16	II
Risk Category	0.85
Directionality (Kd)	1.0
Mean Roof Ht. (h)	16.5
Parapet ht above grd	24
Exposure Category	C
Enclosure Classif.	Enclosed Building
Internal pressure	0.18
a =	4.6 ft
Minimum parapet height at building perimeter =	3.50 ft
Roof Angle	1.2 deg

Type of roof MONOSLOPE

COMPONENTS & CLADDING

ULTIMATE LOADS:

Basic Wind speed		139.0 mph		(LRFD)	
Base pressure (qh) =		36.4 psf		(LRFD)	
Surface Pressure (psf) - LRFD Values					
Area	10 sf	20 sf	50 sf	100 sf	200 sf
Negative Zone 1	-43.0 psf	-41.9 psf	-40.4 psf	-39.3 psf	-39.3 psf
Negative Zone 2	-72.1 psf	-64.4 psf	-54.3 psf	-46.6 psf	-46.6 psf
Negative Zone 3	-72.1 psf	-64.4 psf	-54.3 psf	-46.6 psf	-46.6 psf
Positive All Zones	17.5 psf	16.4 psf	16.0 psf	16.0 psf	16.0 psf
Overhang Zone 2	-61.9 psf	-60.8 psf	-59.4 psf	-58.3 psf	-50.4 psf
Overhang Zone 3	-61.9 psf	-60.8 psf	-59.4 psf	-58.3 psf	-50.4 psf

Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - ASD Values					
Area	10 sf	20 sf	50 sf	100 sf	200 sf
Negative Zone 1	-25.8 psf	-25.1 psf	-24.3 psf	-23.6 psf	-23.6 psf
Negative Zone 2	-43.3 psf	-38.7 psf	-32.6 psf	-28.0 psf	-28.0 psf
Negative Zone 3	-43.3 psf	-38.7 psf	-32.6 psf	-28.0 psf	-28.0 psf
Positive All Zones	10.5 psf	9.8 psf	9.6 psf	9.6 psf	9.6 psf
Overhang Zone 2	-37.1 psf	-36.5 psf	-35.6 psf	-35.0 psf	-30.3 psf
Overhang Zone 3	-37.1 psf	-36.5 psf	-35.6 psf	-35.0 psf	-30.3 psf

NOTE: GcP REDUCED BY 10% DUE TO ROOF ANGLE <= 10 DEG.

Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - ASD Values					
Area	10 sf	20 sf	50 sf	100 sf	500 sf
Negative Zone 4	-42.6 psf	-40.9 psf	-38.6 psf	-36.8 psf	-32.8 psf
Negative Zone 5	-52.4 psf	-48.9 psf	-44.3 psf	-40.9 psf	-32.8 psf
Positive Zone 4 & 5	39.3 psf	37.6 psf	35.3 psf	33.5 psf	29.5 psf

SERVICE LOADS:

Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - ASD Values					
Area	10 sf	20 sf	50 sf	100 sf	200 sf
Negative Zone 1	-25.8 psf	-25.1 psf	-24.3 psf	-23.6 psf	-23.6 psf
Negative Zone 2	-43.3 psf	-38.7 psf	-32.6 psf	-28.0 psf	-28.0 psf
Negative Zone 3	-43.3 psf	-38.7 psf	-32.6 psf	-28.0 psf	-28.0 psf
Positive All Zones	10.5 psf	9.8 psf	9.6 psf	9.6 psf	9.6 psf
Overhang Zone 2	-37.1 psf	-36.5 psf	-35.6 psf	-35.0 psf	-30.3 psf
Overhang Zone 3	-37.1 psf	-36.5 psf	-35.6 psf	-35.0 psf	-30.3 psf

NOTE: GcP REDUCED BY 10% DUE TO ROOF ANGLE <= 10 DEG.

Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - ASD Values					
Area	10 sf	20 sf	50 sf	100 sf	500 sf
Negative Zone 4	-25.6 psf	-24.5 psf	-23.1 psf	-22.1 psf	-19.7 psf
Negative Zone 5	-31.5 psf	-29.4 psf	-26.6 psf	-24.5 psf	-19.7 psf
Positive Zone 4 & 5	23.6 psf	22.6 psf	21.2 psf	20.1 psf	17.7 psf

NOTE: GcP REDUCED BY 10% DUE TO ROOF ANGLE <= 10 DEG.

Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - ASD Values					
Area	10 sf	20 sf	50 sf	100 sf	500 sf
Negative Zone 4	-25.6 psf	-24.5 psf	-23.1 psf	-22.1 psf	-19.7 psf
Negative Zone 5	-31.5 psf	-29.4 psf	-26.6 psf	-24.5 psf	-19.7 psf
Positive Zone 4 & 5	23.6 psf	22.6 psf	21.2 psf	20.1 psf	17.7 psf

Note: Pressures listed above are in both values, Ultimate (LRFD) & Service or Nominal (ASD) which have been obtained by multiplying Ultimate values by 0.6. Use service values (ASD) for Wind Resistance Testing Compliance per FBC 1609.1.5

NET UPLIFT PRESSURES

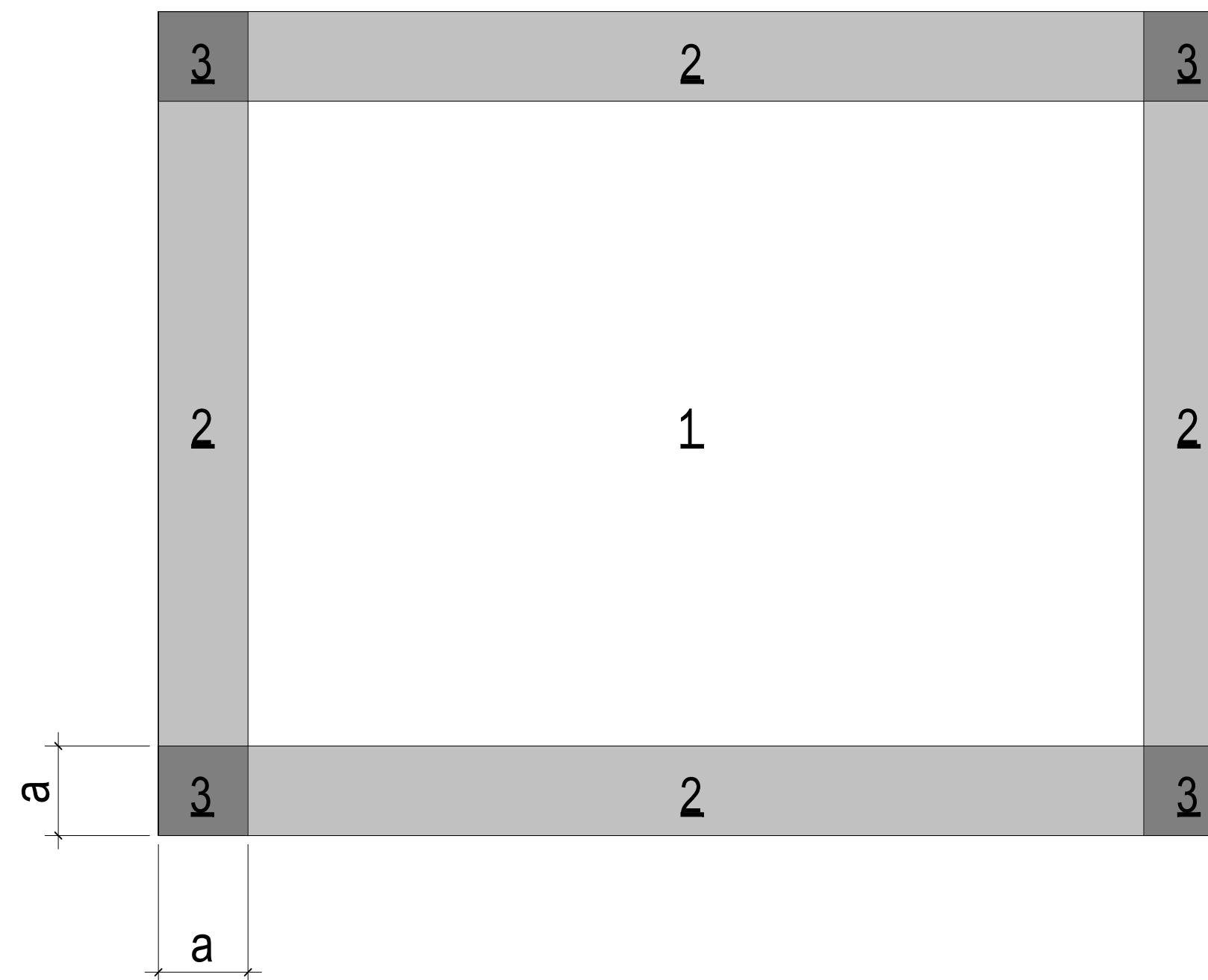
Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - LRFD Values					
Area	10 sf	20 sf	50 sf	100 sf	200 sf
Negative Zone 1	-40.0 psf	-38.9 psf	-37.4 psf	-36.3 psf	-36.3 psf
Negative Zone 2	-69.1 psf	-61.4 psf	-51.3 psf	-43.6 psf	-43.6 psf
Negative Zone 3	-69.1 psf	-61.4 psf	-51.3 psf	-43.6 psf	-43.6 psf

Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - LRFD Values					
Area	10 sf	20 sf	50 sf	100 sf	500 sf
Negative Zone 1	-38.0 psf	-36.9 psf	-35.4 psf	-34.3 psf	-34.3 psf
Negative Zone 2	-67.1 psf	-59.4 psf	-49.3 psf	-41.6 psf	-41.6 psf
Negative Zone 3	-67.1 psf	-59.4 psf	-49.3 psf	-41.6 psf	-41.6 psf

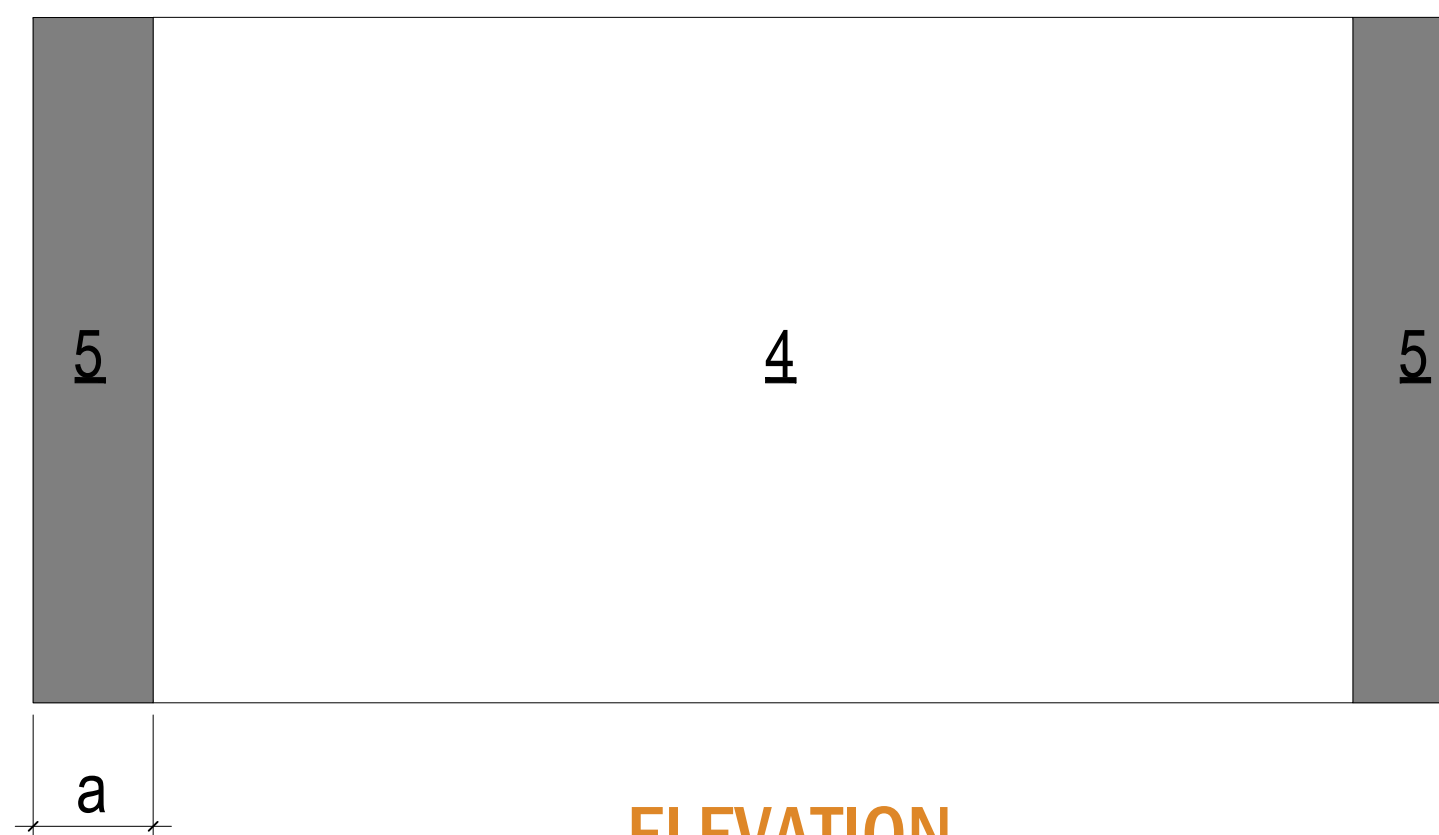
Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - ASD Values					
Area	10 sf	20 sf	50 sf	100 sf	500 sf
Negative Zone 1	-23.8 psf	-23.1 psf	-22.3 psf	-21.6 psf	-21.6 psf
Negative Zone 2	-41.3 psf	-36.7 psf	-30.6 psf	-26.0 psf	-26.0 psf
Negative Zone 3	-41.3 psf	-36.7 psf	-30.6 psf	-26.0 psf	-26.0 psf

Basic Wind speed		107.7 mph		(ASD)	
Base pressure (qh) =		21.8 psf		(ASD)	
Surface Pressure (psf) - ASD Values					
Area	10 sf	20 sf	50 sf	100 sf	500 sf
Negative Zone 1	-22.8 psf	-22.1 psf	-21.3 psf	-20.6 psf	-20.6 psf
Negative Zone 2	-40.3 psf	-35.7 psf	-29.6 psf	-25.0 psf	-25.0 psf
Negative Zone 3	-40.3 psf	-35.7 psf	-29.6 psf	-25.0 psf	-25.0 psf

COMPONENTS & CLADDING PRESSURES - MAIN BLDG.



PLAN



ELEVATION

COMPONENTS & CLADDING ZONES - PLAN VIEW & WALL ELEVATION



1900 MARKET STREET ©2023  
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2023.03.30

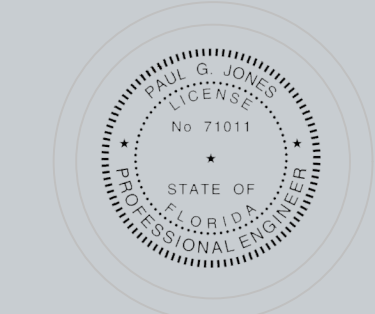
PROJECT:  
**STRUCTURAL  
DRAWINGS FOR  
SWEETWATER RETAIL I**

US 41 & SWEETWATER RANCH BLVD,  
ESTERO, FLORIDA 33928

DATE: 05/01/2023  
PROJECT NO.: 23-0010

REVISION DATE

NOTES:



PROFESSIONAL ENGINEER SEAL  
STATE OF FLORIDA

WIND DESIGN CRITERIA

SCALE: AS NOTED

**S-101**

DRAWN BY: JM  
CHECKED BY: PJ

## SPECIFICATIONS

### SECTION 013300 - SUBMITTAL PROCEDURES

#### 1.1 DEFINITIONS

- A. Action Submittals:** Written and graphic information and physical samples that require Engineer's and Construction Manager's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals:** Written and graphic information and physical samples that do not require Engineer's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

#### 1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Coordination:** Coordinate preparation and processing of submittals with performance of construction activities.
- Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  - Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  - Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

- a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.**
- B. Processing Time:** Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
- 1. Initial Review:** Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
- 2. Intermediate Review:** If intermediate submittal is necessary, process it in same manner as initial submittal.
- 3. Resubmittal Review:** Allow 15 days for review of each resubmittal.

- C. Distribution:** Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.
- D. Use for Construction:** Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer's and Construction Manager's action stamp.

## PART 2 - PRODUCTS

### 2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:** Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
- B. Product Data:** Collect information into a single submittal for each element of construction and type of product or equipment.
- C. Shop Drawings:** Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
- D. Welding Certificates:** Prepare written certification that welding procedure and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates:** Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- F. Manufacturer Certificates:** Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates:** Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates:** Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- I. Material Test Reports:** Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- J. Product Test Reports:** Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- K. Field Test Reports:** Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

### 2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria:** Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
- 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer.**
- B. Delegated-Design Services Certification:** In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and permit required paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

## SECTION 014000 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

- A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.**

#### 1.1 DEFINITIONS

- A. Quality Assurance Services:** Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality Control Services:** Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer or Construction Manager.
- C. Preconstruction Testing:** Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- D. Field Quality Control Testing:** Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- E. Testing Agency:** An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

#### 1.2 CONFLICTING REQUIREMENTS

- A. Referenced Standards:** If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
- B. Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.

- 1.3 REPORTS AND DOCUMENTS:** Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections.

#### 1.4 QUALITY ASSURANCE

- A. General:** Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Testing Agency Qualifications:** An independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 829; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- G. Manufacturer's Technical Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- H. Preconstruction Testing:** Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

- Contractor responsibilities include the following:
  - Provide test specimens representative of proposed products and construction.
  - Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
  - Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
  - Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
  - When testing is complete, remove test specimens, assemblies, and mockups; do not reuse products on Project.
- Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Engineer, through Construction Manager, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

#### 1.5 QUALITY CONTROL

- A. Owner Responsibilities:** Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
- B. Contractor Responsibilities:** Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
- Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  - Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
  - Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - Testing and inspecting required by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

## SECTION 033000 - CAST-IN-PLACE CONCRETE

### PART 1 - GENERAL

#### 1.1 ACTION SUBMITTALS

- A. Product Data:** For each type of product.
- B. Design Mixtures:** For each concrete mixture.
- C. Steel Reinforcement Shop Drawings:** Placing Drawings that detail fabrication, bending, and placement.

#### 1.2 INFORMATIONAL SUBMITTALS: Material certificates and test reports.

#### 1.3 QUALITY ASSURANCE: Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/ C 94M requirements for production facilities and equipment.

- 1.4 PRECONSTRUCTION TESTING:** Engage a qualified testing agency (according to ASTM C 1017 and ASTM E 829) to perform preconstruction testing on concrete specimens.
- 1.5 FIELD CONDITIONS:** Cold-Weather Placement: Comply with ACI 306.1. Hot-Weather placement: Comply with ACI 301 (ACI 301M).

### PART 2 - PRODUCTS

#### 2.1 CONCRETE, GENERAL: Comply with the following unless modified by requirements in the Contract Documents: ACI 301 (ACI 301M) and ACI 117 (ACI 117M).

#### 2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars:** ASTM A 615, Grade 60, deformed.
- B. Plain-Steel Welded-Wire Reinforcement:** ASTM A 1064/A 1064M, plain, fabricated from as-drawn steel wire into flat sheets.
- C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."**
- 2.3 CONCRETE MATERIALS**
- A. Cementitious Materials:**
- Portland Cement: ASTM C 150/ C 150M, Type I/II.
  - Fly Ash: ASTM C 618, Class F or C.
  - Slag Cement: ASTM C 989/ C 989M, Grade 100 or 120.
  - Blended Hydraulic Cement: ASTM C 595/ C 595M.
- B. Normal-Weight Aggregates:** ASTM C 33/ C 33M, graded.
- C. Air-Entraining Admixture:** ASTM C 260/ C 260M.
- D. Chemical Admixtures:** Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
- E. Water:** ASTM C 94/ C 94M.

#### 2.4 FIBER REINFORCEMENT: Synthetic Micro-Fiber: Micro-fibers engineered and designed for use in concrete, complying with ASTM C 1116/ C 1116M, Type III.

#### 2.5 VAPOR RETARDERS: Sheet Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils (0.25 mm) thick.

#### 2.6 Expansion- and Isolation-Joint Filler Strips: ASTM D 1751, asphalt-saturated cellulose fiber or ASTM D 1752, cork or self-expanding cork.

### 2.7 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301 (ACI 301M).**

- B. Admixtures:** Use admixtures according to manufacturer's written instructions.

### 2.8 CONCRETE MIXTURES FOR BUILDING ELEMENTS

- A. Normal-Weight Concrete:**
- Minimum Compressive Strength, (f'c): See General Notes.
- 2.9 FABRICATING REINFORCEMENT**
- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."**

#### 2.10 CONCRETE MIXING: Comply with the following unless modified by requirements in the Contract Documents: ACI 301 (ACI 301M) and ACI 117 (ACI 117M).

- #### 1. Contractor responsibilities include the following:
- 3.1 FORMWORK INSTALLATION**
- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301 (ACI 301M), to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.**
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117 (ACI 117M).**
- 3.2 EMBEDDED ITEM INSTALLATION:** Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
- 3.3 VAPOR-RETARDER INSTALLATION:** Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
- 3.4 STEEL REINFORCEMENT INSTALLATION:** Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

#### 3.5 JOINTS

- A. General:** Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints:** Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
- C. Contraction Joints in Slabs on-Grade:** Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness.
- D. Isolation Joints in Slabs on-Grade:** After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other footings, as indicated.
- 3.6 CONCRETE PLACEMENT:** Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.
- 3.7 FINISHING FLOORS AND SLABS:** Comply with ACI 302.1R recommendations for screeding, restriaghtening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- 3.8 CONCRETE PROTECTING AND CURING:** Cure concrete according to ACI 308. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 (ACI 301M) for hot-weather protection during curing.
- 3.9 FIELD QUALITY CONTROL:** Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

## SECTION 051200 - STRUCTURAL STEEL FRAMING

### PART 1 - GENERAL

#### 1.1 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.**
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.**

#### 1.2 ACTION SUBMITTALS

#### A. Product Data: For each type of product.

- B. Shop Drawings:** Show fabrication of structural-steel components.

- Include details of cuts, connections, splices, camber, holes, and other pertinent data.
  - Include embedment Drawings.
  - Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
  - Indicate type, size, and length of bolts, distinguishing between shop and field bolts, identify pretensioned and slip-critical, high-strength bolted connections.
- C. Delegated-Design Submittal:** For structural-steel connections indicated to comply with design loads, include analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

#### 1.3 QUALITY ASSURANCE

- A. Fabricator Qualifications:** A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD, or is accredited by the IAS Fabricator Inspection Program for Structural Steel (ACI 172).
- B. Installer Qualifications:** A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector.
- C. Welding Qualifications:** Qualify procedures and personnel according to AWS D1.1/D1.1M/D1.8 (Seismic) "Structural Welding Code - Steel."
- D. Comply with applicable provisions of the following specifications and documents:**
- AISC 303-05, "Code of Standard Practice for Steel Buildings & Bridges."
  - AISC 360-05, "Specification for Structural Steel Buildings."
  - AISC 341-05, "Seismic Provisions for Structural Steel Buildings."
  - RCSC's "Specification for Structural Joints Using High-Strength Bolts."

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Connections:** Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator.
- B. Moment Connections:** Type FR, fully restrained.
- 2.2 STRUCTURAL-STEEL MATERIALS**
- A. WT-Shapes, Channels, Angles, Plate, and Bar:** ASTM A 36/A 36M Sections: ASTM A992 (50ksi) Pipe Sections: ASTM A53 Grade B (35 ksi) Tube Sections: ASTM A500 Grade B (46 ksi) HSS Sections: ASTM A413
- B. Welding Electrodes:** Comply with AWS requirements.

### 2.3 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers:** ASTM A 325 (ASTM A 325M), Type 1, heavyhex steel structural bolts; ASTM A 563, Grade C (ASTM A 563M, Class 85) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M), Type 1, hardened carbon-steel washers; with plain finish.
- B. Anchor Rods:** ASTM F 1554, Grade 55, weldable.
- Configuration: Straight.
  - Nuts: ASTM A 563 (ASTM A 563M) hex carbon steel.
  - Plate Washers: ASTM A 36/A 36M carbon steel.
  - Washers: ASTM F 436 (ASTM F 436M), Type 1, hardened carbon steel.
  - Finish: Hot-dip zinc coating; ASTM A 153/A 153M, Class C.

#### 2.4 PRIMER: Fabricator's standard lead- and chromate-free, nonaphalitic, rust-inhibiting primer complying with MFH79 and compatible with topcoat.

#### 2.5 GROUT: Shrinkage-Resistant Grout: ASTM C 1107/ C 1107M

#### 2.6 FABRICATION: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," and to AISC 360.

#### 2.7 GALVANIZING: A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.

#### 2.8 SOURCE QUALITY CONTROL: Engage a qualified testing agency to perform shop tests and inspections. Bolted Connections: inspect shop-bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts." Welded Connections: Visually inspect shop-welded connections according to AWS D1.1/D1.1M.

### PART 3 - EXECUTION

- 3.1 EXAMINATION:** Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements. Proceed with installation only after unsatisfactory conditions have been corrected.
- 3.2 PREPARATION:** Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
- 3.3 ERECTION**
- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.**
- B. Baseplates, Bearing Plates, and Leveling Plates:** Place concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
- C. Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."**
- 3.4 REPAIRS AND PROTECTION**
- A. Galvanized Surfaces:** Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780/A 780M.
- B. Touchup Painting:** Immediately after erection, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touchuping up shop-painted surfaces.

## SECTION 052100 - STEEL JOIST FRAMING

### PART 1 - GENERAL

#### 1.1 DEFINITIONS

- A. SJI's "Specifications":** Steel Joist Institute's "Standard Specifications, Load Tables and Weight Tables for Steel Joists and Joist Girders."
- B. Special Joists:** Steel joists or joist girders requiring modification by manufacturer to support nonuniform, unequal, or special loading conditions that invalidate load tables in SJI's "Specifications."

#### 1.2 ACTION SUBMITTALS

#### A. Product Data:

 For each type of joist, accessory, and product.

- B. Shop Drawings:**
- Include layout, designation, number, type, location, and spacing of joists.
  - Include joining and anchorage details, bracing, bridging, and joint accessories; splice and connection locations and details; and attachments to other construction.
  - Indicate locations and details of bearing plates to be embedded in other construction.

#### 1.3 INFORMATIONAL SUBMITTALS: A. Comprehensive engineering analysis of special joists signed and sealed by the qualified professional engineer responsible for its preparation.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications:** A manufacturer certified by SII to manufacture joists complying with applicable standard specifications and load tables in SJI's "Specifications".
- 1. Manufacturer's responsibilities include providing professional engineering services for designing special joists to comply with performance requirements.**
- B. Welding Qualifications:** Qualify field-welding procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- 1.5 DELIVERY, STORAGE, AND HANDLING:** A. Deliver, store, and handle joists as recommended in SJI's "Specification"

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance:** Provide special joists and connections capable of withstanding design loads indicated.
- Use UFD.
  - Design special joists to withstand design loads with live-load deflections no greater than span/360.

### 2.2 K-SERIES STEEL JOISTS

- A. Manufacture steel joists of type indicated according to "Standard Specifications for Open-Web Steel Joists, K-Series" in SJI's "Specifications," with steel-angle top- and bottom-chord members, underslung ends, and parallel top chord.**
- B. Steel Joist Substitutes:** Manufacture according to "Standard Specifications for Open-Web Steel Joists, K-Series" in SJI's "Specifications," with steel-angle or -channel members.
- C. Top-Chord Extensions:** Extend top chords of joists with SJI's Type 3 top-chord extensions where indicated, complying with SJI's "Specifications."
- D. Extended Ends:** Extend bearing ends of joists with SJI's Type R extended ends where indicated, complying with SJI's "Specifications."
- E. Equip bearing ends of joists with manufacturer's standard beveled ends or sloped shoes if joist slope exceeds 1/4 inch per 12 inches.**

### 2.3 LONG-SPAN STEEL JOISTS

- A. Manufacture steel joists according to "Standard Specifications for Longspan Steel Joists, LH-Series and Deep Longspan Steel Joists, DLH-Series" in SJI's "Specifications." LH- and DLH-series joists are available parallel, pitched one way, or pitched two ways. SJI's load tables are based on a standard pitch of 1/8 inch per 12 inches (1/80). Coordinate with roof-slope requirements.**
- B. Camber long-span steel joists according to SJI's "Specifications" or as indicated on the framing plans.**
- C. Equip bearing ends of joists with manufacturer's standard beveled ends or sloped shoes if joist slope exceeds 1/4 inch per 12 inches.**

### 2.4 JOIST GIRDERS

- A. Manufacture joist girders according to "Standard Specifications for Joist Girders" in SJI's "Specifications."**
- B. Camber joist girders according to SJI's "Specifications" or as indicated on the framing plans.**
- C. Equip bearing ends of joists with manufacturer's standard beveled ends or sloped shoes if joist slope exceeds 1/4 inch per 12 inches.**

#### 2.5 PRIMERS: Primer: SSPC-Paint 15, or manufacturer's standard shop primer complying with performance requirements in SSPC-Paint 15.

### 2.6 JOIST ACCESSORIES

- A. Bridging:** Schematically indicated. Detail and fabricate according to SJI's "Specifications". Furnish additional erection bridging if required for stability.
- B. Fabricate steel bearing plates from ASTM A 36/A 36M steel with integral anchorages of sizes and thicknesses indicated. Shop prime paint.**
- C. High-Strength Bolts, Nuts, and Washers:** ASTM A 325, Type 1, heavy hex steel structural bolts; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.
- D. Welding Electrodes:** Comply with AWS standards.
- E. Furnish miscellaneous accessories including splice plates and bolts required by joist manufacturer to complete joist assembly.**

### PART 3 - EXECUTION

- A. EXAMINATION:** Examine supporting substrates, embedded bearing plates, and shoring structural framing for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.
- 3.2 INSTALLATION**
- A. Do not install joists until supporting construction is in place and secured.**
- B. Install joists and accessories plumb, square, and true to line; securely fasten to supporting construction according to SJI's "Specifications".**
- C. Bolt joists to supporting steel framework using high-strength structural bolts. Comply with Research Council on Structural Connection's "Specification for Structural Joints Using ASTM A 325 or ASTM A 490 Bolts" for high-strength structural bolt installation and tightening requirements.**
- D. Install and connect bridging concurrently with joist erection, before construction loads are applied. Anchor ends of bridging lines at top and bottom chords if terminating at walls or beams.**
- 3.3 FIELD QUALITY CONTROL:** Visually inspect field welds according to AWS D1.1/D1.1M, and visually inspect bolted connections.
- 3.4 PROTECTION**
- A. Touchup Painting:** After installation, promptly clean, prepare, and prime or repaint field connections, rust spots, and abraded surfaces of prime-painted joists, bearing plates, and accessories.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, that ensure that joists and accessories are without damage or deterioration at time of Substantial Completion.**



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PROJECT:

# STRUCTURAL DRAWINGS FOR SWEETWATER RETAIL I

US 41 & SWEETWATER RANCH BLVD,  
ESTERO, FLORIDA 33928

DATE: 05/01/2023

PROJECT NO.: 23-0010

REVISION DATE

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## SPECIFICATIONS [continued]

### SECTION 053100 - STEEL DECKING

#### PART 1 - GENERAL

##### 1.1 ACTION SUBMITTALS

- A. Product Data: For each type of deck, accessory, and product indicated.
- B. Shop Drawings: Include layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.

##### 1.2 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of steel deck.
- B. Product Test Reports: power-actuated mechanical fasteners.

##### 1.3 QUALITY ASSURANCE: A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel".

##### 1.4 DELIVERY, STORAGE, AND HANDLING: A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.

#### PART 2 - PRODUCTS

##### 2.1 PERFORMANCE REQUIREMENTS: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."

##### 2.2 ROOF DECK

- A. Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 31, and with the following:
  1. Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33
  2. Deck Profile: Type WR, wide rib.
  3. Profile Depth: 1-1/2 inches.
  4. Span Condition: Triple span or more.
  5. Side Laps: Overlapped.

#### PART 3 - EXECUTION

##### 3.1 EXAMINATION: Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

##### 3.2 INSTALLATION, GENERAL: Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 31, manufacturer's written instructions.

##### 3.3 ROOF DECK INSTALLATION

- A. Fasten roof-deck panels to steel supporting members by arc spot (puff) welds of the surface diameter indicated or arc seam welds with an equal perimeter that is not less than 1-1/2 inches (38 mm) long, and as follows:

1. Weld Diameter: 5/8 inch, nominal.
2. Weld Spacing: as indicated on framing plans.
3. Weld Washers: Install weld washers at each weld location.

- B. Side-Lap and Perimeter Edge Fastening: as indicated on framing plans.

- C. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches.

### SECTION 054000 - COLD-FORMED METAL FRAMING

#### PART 1 - GENERAL

##### 1.1 ACTION SUBMITTALS

- A. Product Data: For each type of cold-formed steel framing product and accessory.

##### 1.2 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each listed product, for tests performed by a qualified testing agency.
  1. Steel sheet.
  2. Expansion anchors.
  3. Powder-actuated anchors.
  4. Mechanical fasteners.
  5. Vertical deflection clips.
  6. Horizontal drift deflection clips
  7. Miscellaneous structural clips and accessories..
- B. Research Reports: For non-standard cold-formed steel framing, from ICC-ES.

##### 1.3 DELIVERY, STORAGE, AND HANDLING: A. Protect cold-formed steel framing from corrosion, moisture staining, deformation, and other damage during delivery, storage, and handling.

#### PART 2 - PRODUCTS

##### 2.1 PERFORMANCE REQUIREMENTS

- A. AISI Specifications and Standards: Unless more stringent requirements are indicated, comply with AISI S100 and AISI S200.

##### 2.2 COLD-FORMED STEEL FRAMING, GENERAL: ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of grade and coating weight G60.

- A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows:

1. Minimum Base-Metal Thickness: 18 GA, minimum or as indicated by Specialty Engineer.
2. Minimum Flange Width: 1.5/8 inches.

- B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with straight flanges, and as follows:

1. Minimum Base-Metal Thickness: Matching steel studs.
2. Minimum Flange Width: 1-1/4 inches.

##### 2.3 NON-LOAD-BEARING WALL FRAMING

- A. Vertical Deflection Clips: Manufacturer's standard clips, capable of accommodating upward and downward vertical displacement of primary structure through positive mechanical attachment to stud web.

- B. Single Deflection Track: Manufacturer's single, deep-leg, U-shaped steel track, with unstiffened flanges, of web depth to contain studs while allowing free vertical movement, with flanges designed to support horizontal loads and transfer them to the primary structure.

- C. Double Deflection Tracks: Manufacturer's double, deep-leg, U-shaped steel tracks, consisting of nested inner and outer tracks; unpunched, with unstiffened flanges.

- D. Drift Clips: Manufacturer's standard bypass or head clips, capable of isolating wall stud from upward and downward vertical displacement and lateral drift of primary structure through positive mechanical attachment to stud web and structure.

##### 2.4 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories from steel sheet, ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of same grade and coating weight used for framing members.

- B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated.

##### 2.5 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123/A 123M.

- B. Anchor Bolts: ASTM F 1554, Grade 36, threaded carbon-steel hex-headed bolts and carbon-steel nuts; and flat, hardened-steel washers; zinc coated by hot-dip process according to ASTM A 153/A 153M, Class C.

- C. Expansion Anchors: Fabricated from corrosion-resistant materials, with allowable load or strength design capacities calculated according to ICC-ES AC109 and ACI 318 greater than or equal to the design load, as determined by testing per ASTM E 488 conducted by a qualified testing agency.

- D. Powder-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with allowable load capacities calculated according to ICC-ES ACT70, greater than or equal to the design load, as determined by testing per ASTM E 1190 conducted by a qualified testing agency.

- E. Mechanical Fasteners: ASTM C 1513, corrosion-resistant-coated, self-drilling, self-tapping, steel drill screws.

- F. Welding Electrodes: Comply with AWS standards.

##### 2.6 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: SSPC-Paint 2, ASTM A 780.

- B. Shims: Load bearing, high-density multimonomer plastic, and nonleaching; or of coldformed steel of same grade and coating as framing members supported by shims.

- C. Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to match width of bottom track or rim track members.

##### 2.7 FABRICATION

- A. Fabricate cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, and manufacturer's written instructions.

- B. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

2. Squaresness: Fabricate each cold-formed steel framing assembly to a maximum out-of-square tolerance of 1/8 inch.

#### PART 3 - EXECUTION

##### 3.1 EXAMINATION: Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. Proceed with installation only after unsatisfactory conditions have been corrected.

##### 3.2 PREPARATION

- A. Install load bearing shims or grout between the underside of load-bearing wall bottom track and the top of foundation wall or slab at locations with a gap larger than 1/4 inch to ensure a uniform bearing surface on supporting concrete or masonry construction.

##### 3.3 INSTALLATION, GENERAL

- A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.

- B. Install cold-formed steel framing according to AISI S200 and to manufacturer's written instructions unless more stringent requirements are indicated.

- C. Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.

- D. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.

- E. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members.

- F. Install temporary bracing and supports to secure framing and support loads comparable in intensity to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.

- G. Do not bridge building expansion joints with cold-formed steel framing. Independently frame both sides of joints.

- H. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

#### PART 3 - EXECUTION - CONTINUED

##### 3.4 WALL INSTALLATION - NON-LOAD BEARING

- A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.

- B. Fasten both flanges of studs to top and bottom track unless otherwise indicated. Space studs as follows:

1. Stud Spacing: 16 inches or as indicated by Specialty Engineer.

- C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar requirements.

- D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral support.

- E. Install horizontal bridging in wall studs, spaced vertically in rows indicated on Drawings but not more than 48 inches apart. Fasten at each stud intersection..

1. Top Bridging for Single Deflection Track: Install row of horizontal bridging within 12 inches of single deflection track. Install a combination of bridging and stud or studtrack solid blocking of width and thickness matching studs, secured to stud webs or flanges.

2. Bridging: Combination of flat, bar, steel sheet straps of width and thickness indicated and stud-track solid blocking of width and thickness to match studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges.

3. Optional Bridging: Proprietary bridging bars installed according to manufacturer's written instructions.

- F. Install miscellaneous framing and connectors, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

##### 3.5 REPAIRS AND PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed steel framing is without damage or deterioration at time of Substantial Completion.

### SECTION 054400 - COLD-FORMED METAL TRUSSES

#### PART 1 - GENERAL

##### 1.1 ACTION SUBMITTALS

- A. Product Data: For each type of product.

##### 1.2 DELIVERY, STORAGE, AND HANDLING

- A. Protect cold-formed steel trusses from corrosion, deformation, and other damage during delivery, storage, and handling.

#### PART 2 - PRODUCTS

##### 2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer licensed in the project location to design cold-formed steel framing.

- B. Structural Performance: Provide cold-formed steel trusses capable of withstanding design loads within limits and under conditions indicated.

1. Design Loads: As indicated.

2. Deflection Limits: Design trusses to withstand design loads without deflections greater than the following:

- a. Roof Trusses: Vertical deflection of 1/360 of the span.

- b. Scissor Roof Trusses: Horizontal deflection of 1-1/4 inches at reactions.

3. Design framing systems to provide for movement of framing members located outside the insulated building envelope without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change of 120 deg F (67 deg C).

- C. Cold-Formed Steel Framing Design Standards:

1. Floor and Roof Systems: Design according to AISI S210.

2. Lateral Design: Design according to AISI S213.

3. Roof Trusses: Design according to AISI S214.

1. Floor and Roof Systems: Design according to AISI S210.

2. Lateral Design: Design according to AISI S213.

3. Roof Trusses: Design according to AISI S214.

- A. Fabricate steel-framing accessories from steel sheet, ASTM A 1003/A 1003M, structural grade, Type H, metallic coated, of same grade and coating weight used for truss members.

- B. Provide accessories of manufacturer's standard thickness and configuration unless otherwise indicated.

- A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123/A 123M.

- B. Mechanical Fasteners: ASTM C 1513, corrosion-resistant-coated, self-drilling, selftapping steel drill screws.

- C. Welding Electrodes: Comply with AWS standards.

- A. Galvanizing Repair Paint: SSPC-Paint 20, ASTM A 780.

- B. Shims: Load bearing, of high-density multimonomer plastic, nonleaching; or of coldformed steel of same grade and coating as framing members supported by shims.

#### PART 3 - EXECUTION

##### 3.1 EXAMINATION

A. Examine supporting substrates and abutting cold-formed steel trusses for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

##### 3.2 INSTALLATION

- A. Install, bridge, and brace cold-formed steel trusses according to AISI S200, AISI S214, AISI's "Code of Standard Practice for Cold-Formed Steel Structural Framing," and manufacturer's written instructions unless more stringent requirements are indicated.

- B. Install cold-formed steel trusses and accessories plumb, square, and true to line, and with connections securely fastened.

1. Fasten cold-formed steel trusses by welding or mechanical fasteners.

- a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

- b. Locate mechanical fasteners and install according to Shop Drawings; comply with requirements for spacing, edge distances, and screw penetration.

- C. Install temporary bracing and supports. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.

- D. Do not alter, cut, or remove framing members or connections of trusses.

- E. Erect trusses with plane of truss webs plumb and parallel to each other, align, and accurately position at spacings indicated.

- F. Erect trusses without damaging framing members or connections.

- G. Coordinate with wall framing to align webs of bottom chords and load-bearing studs or continuously reinforce track to transfer loads to structure. Anchor trusses securely at all bearing points.

- H. Install continuous bridging and permanently brace trusses as indicated on Shop Drawings and designed according to CFSEI's TechNote 551a, "Design Guide: Permanent Bracing of Cold-Formed Steel Trusses".

- I. Erection Tolerances: Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Space individual trusses no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

##### 3.3 REPAIRS AND PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed metal framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, that ensure that cold-formed metal trusses are without damage or deterioration at time of Substantial Completion.



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PROJECT:

## STRUCTURAL DRAWINGS FOR SWEETWATER RETAIL I

US 41 & SWEETWATER RANCH BLVD,  
ESTERO, FLORIDA 33928

DATE: 05/01/2023  
PROJECT NO.: 23-0010

REVISION DATE

NOTES:



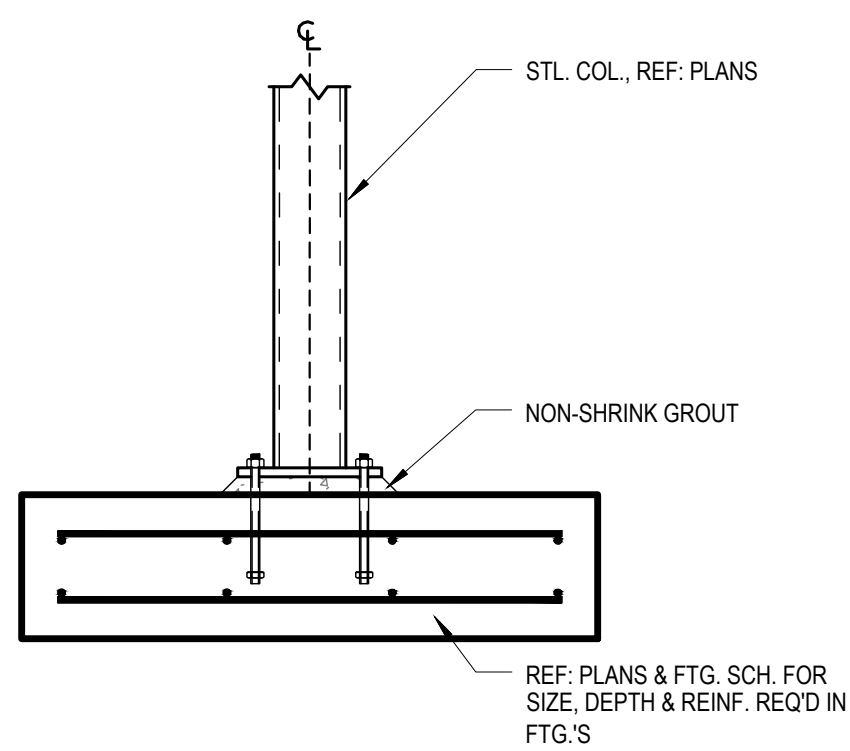
PROFESSIONAL ENGINEER SEAL  
STATE OF FLORIDA

## SPECIFICATIONS

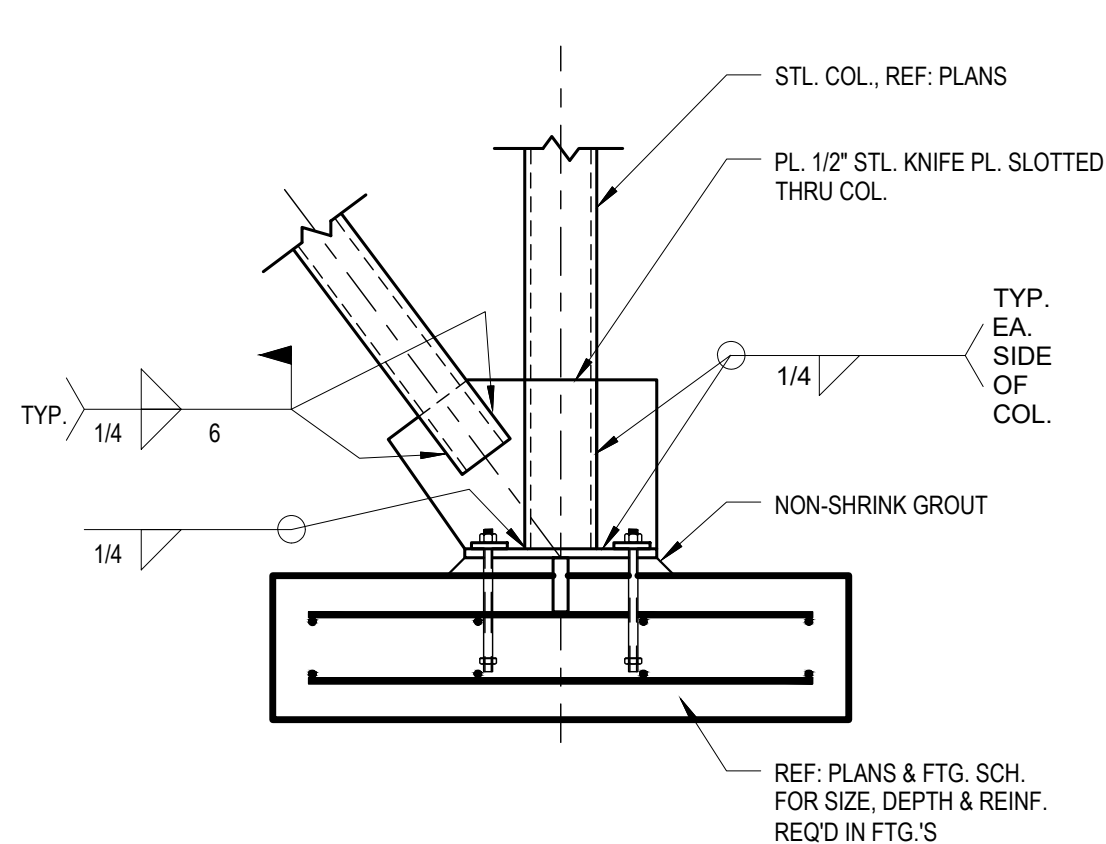
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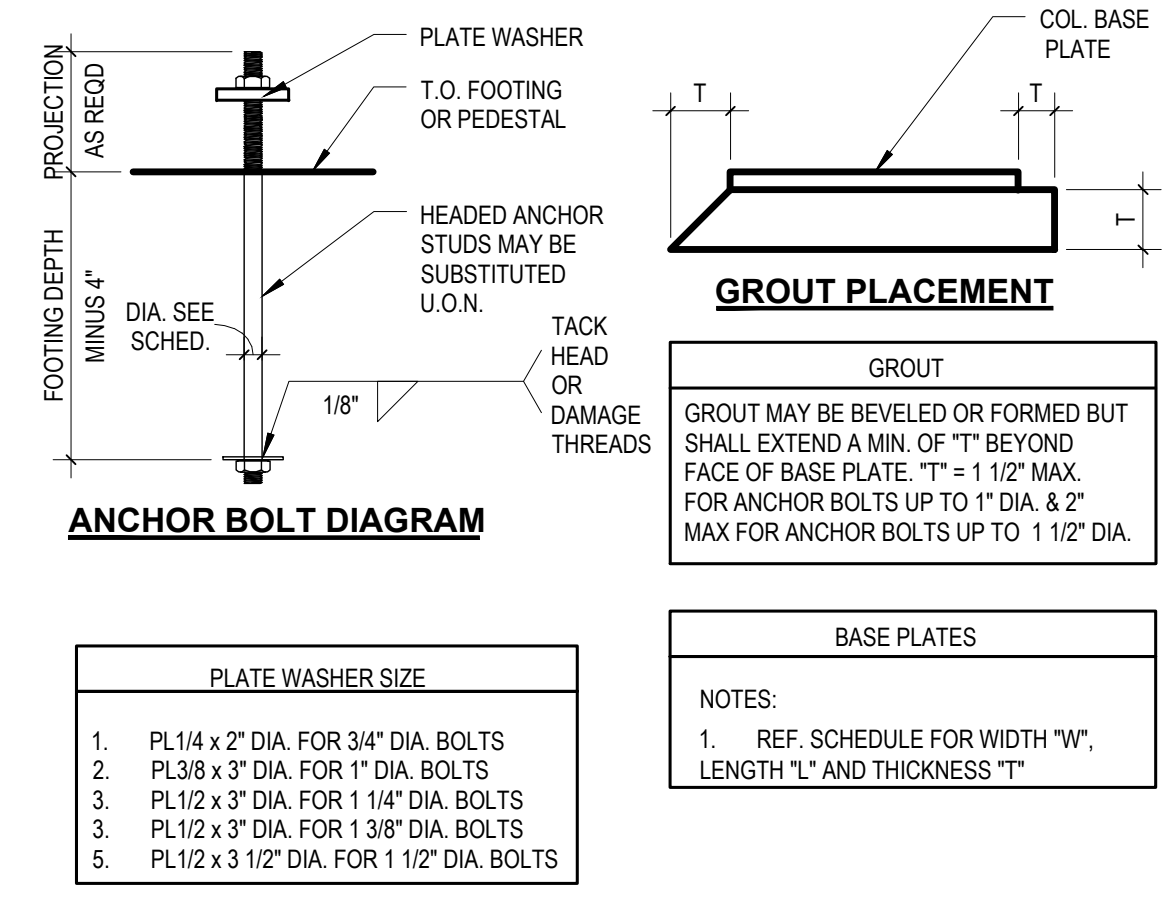
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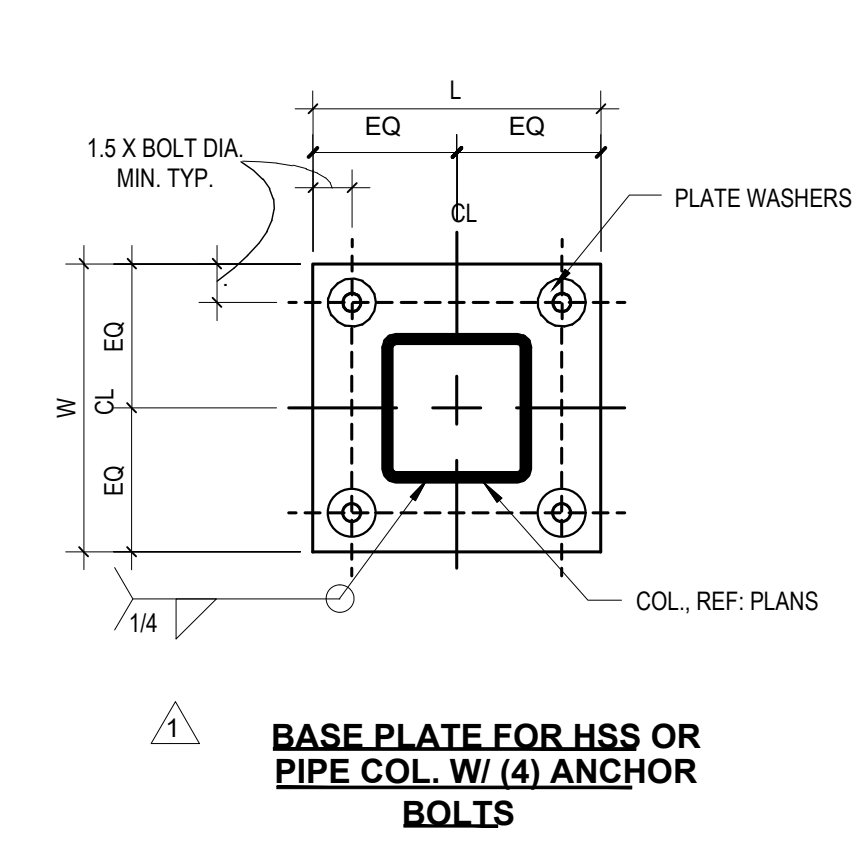
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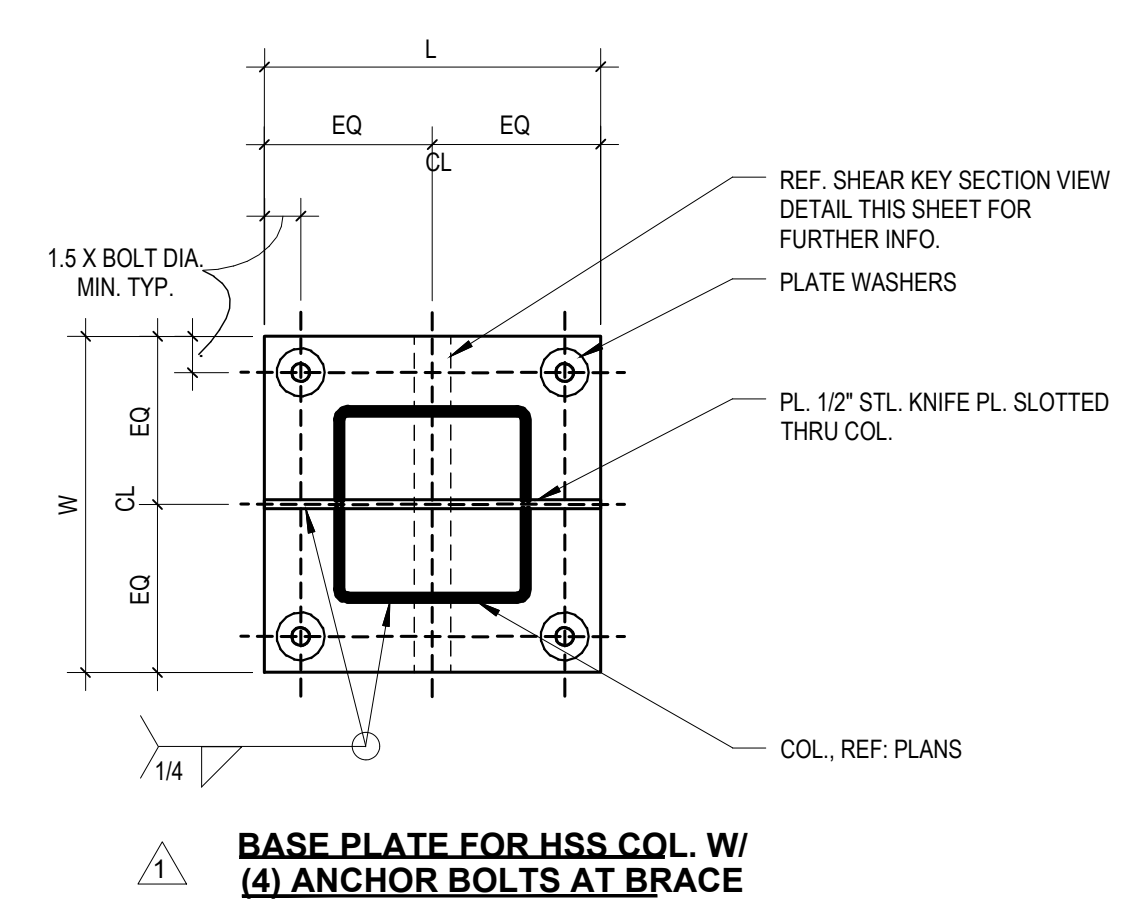
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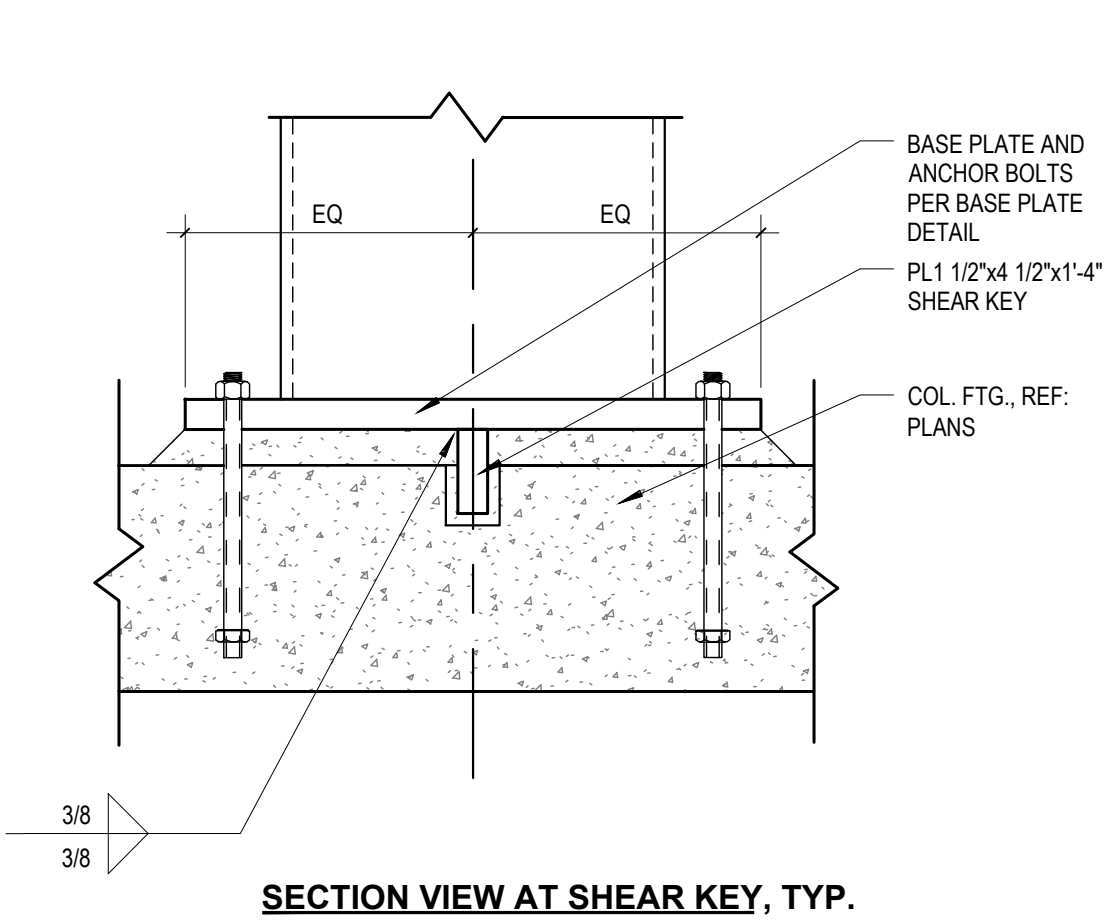
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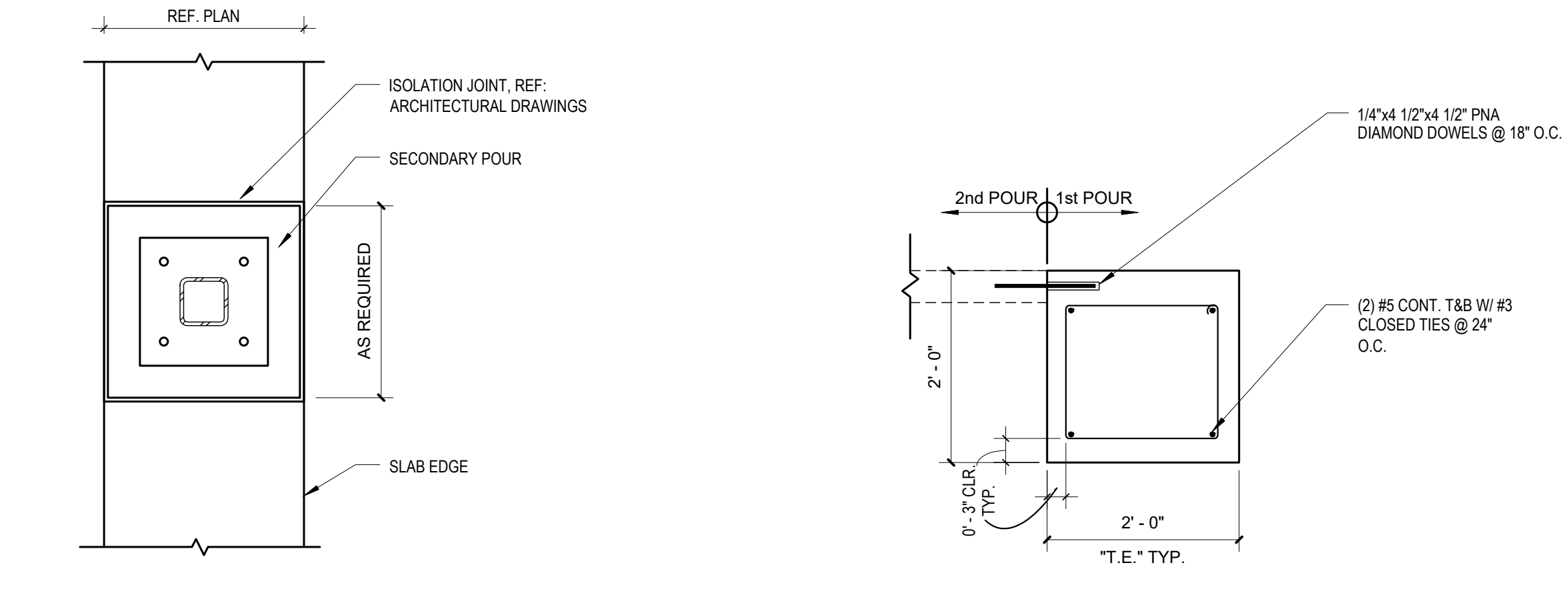
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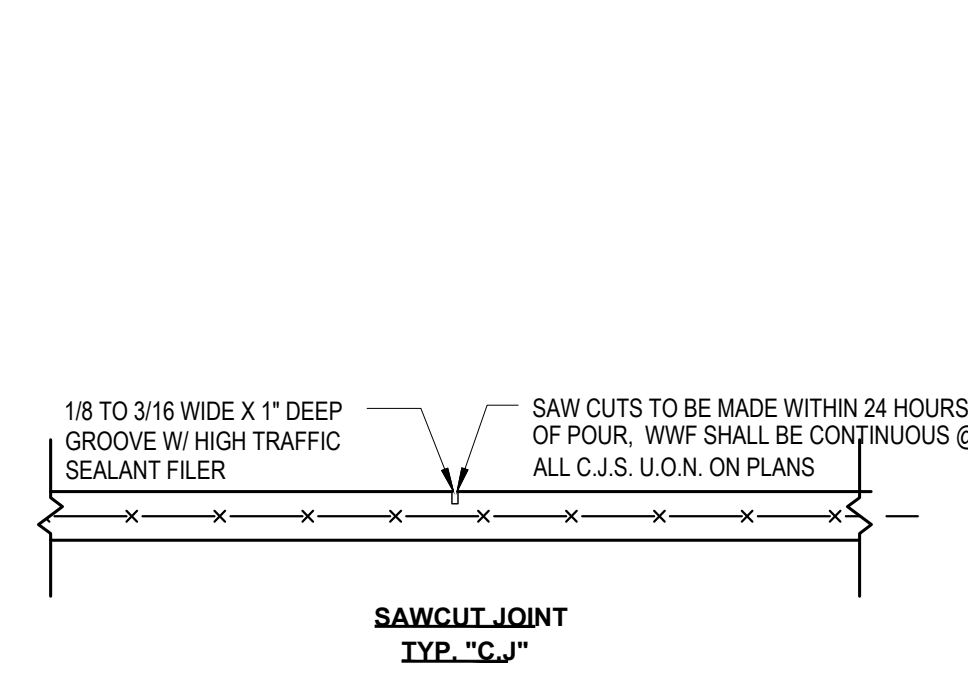
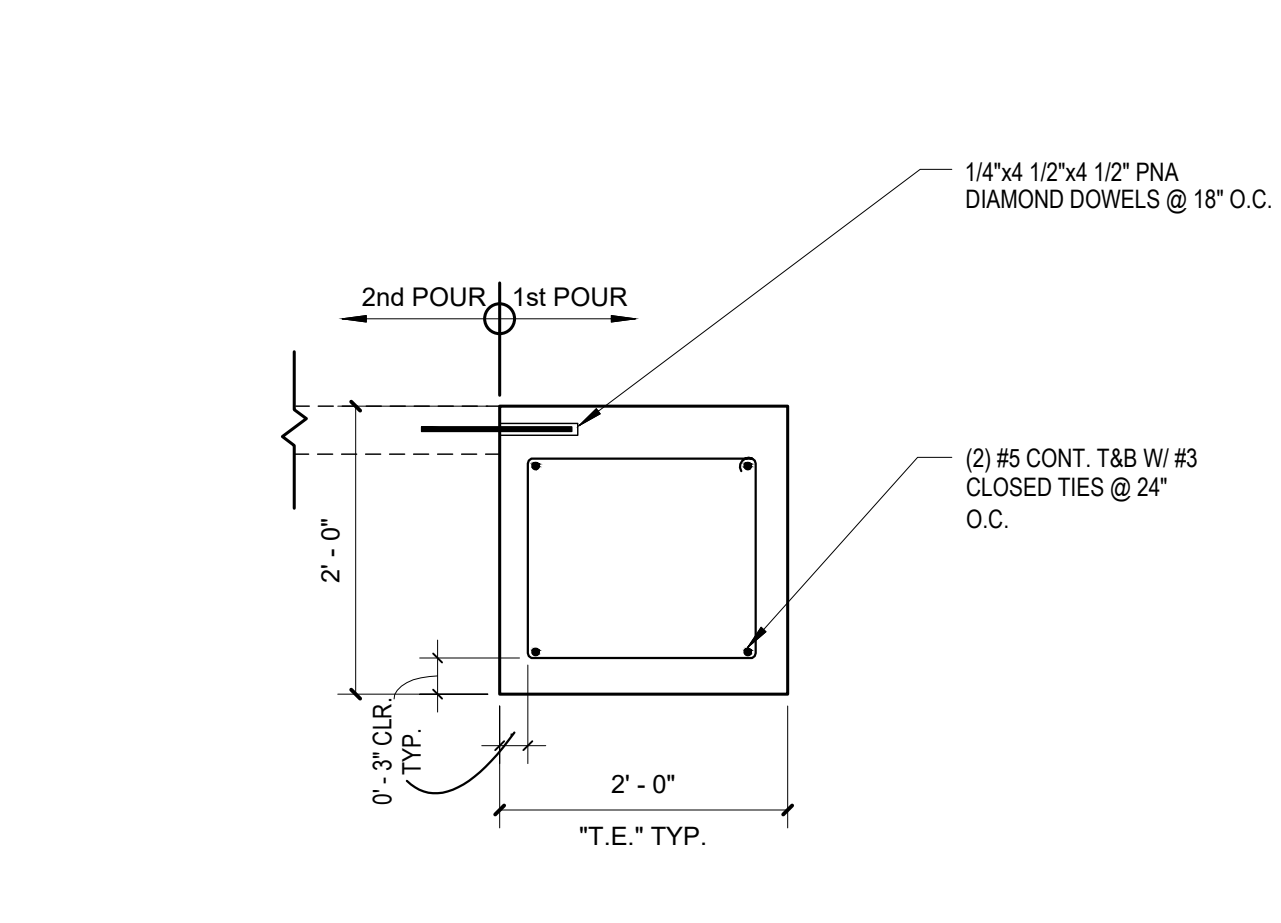
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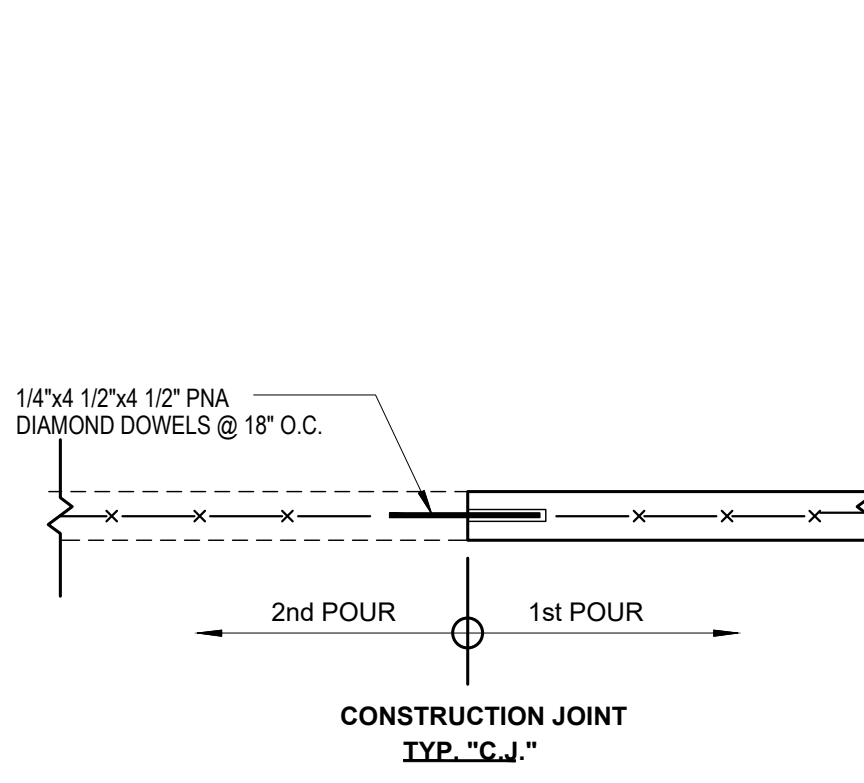
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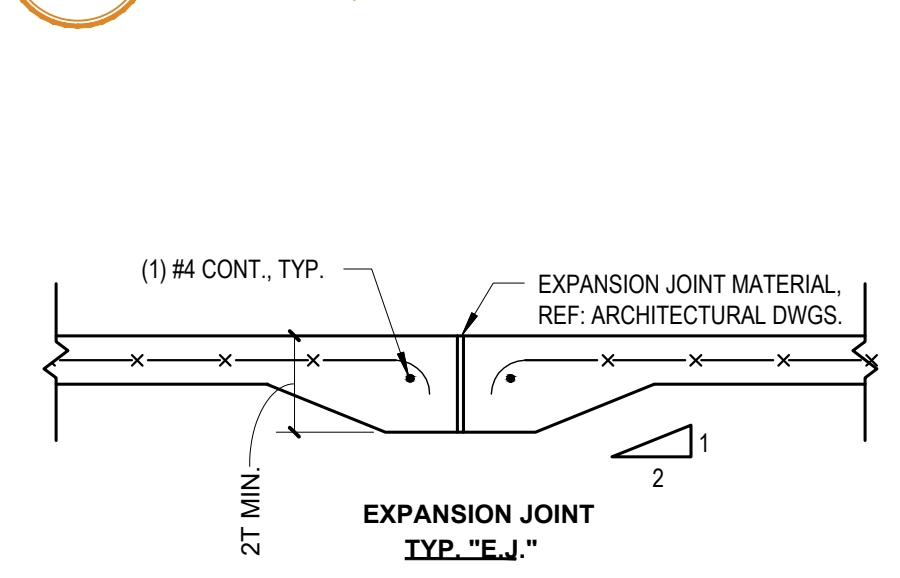
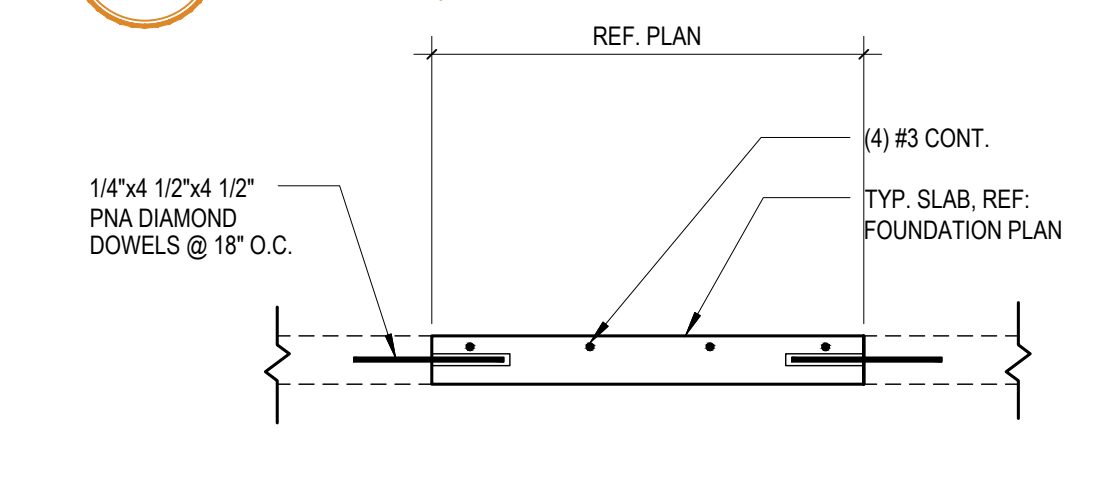
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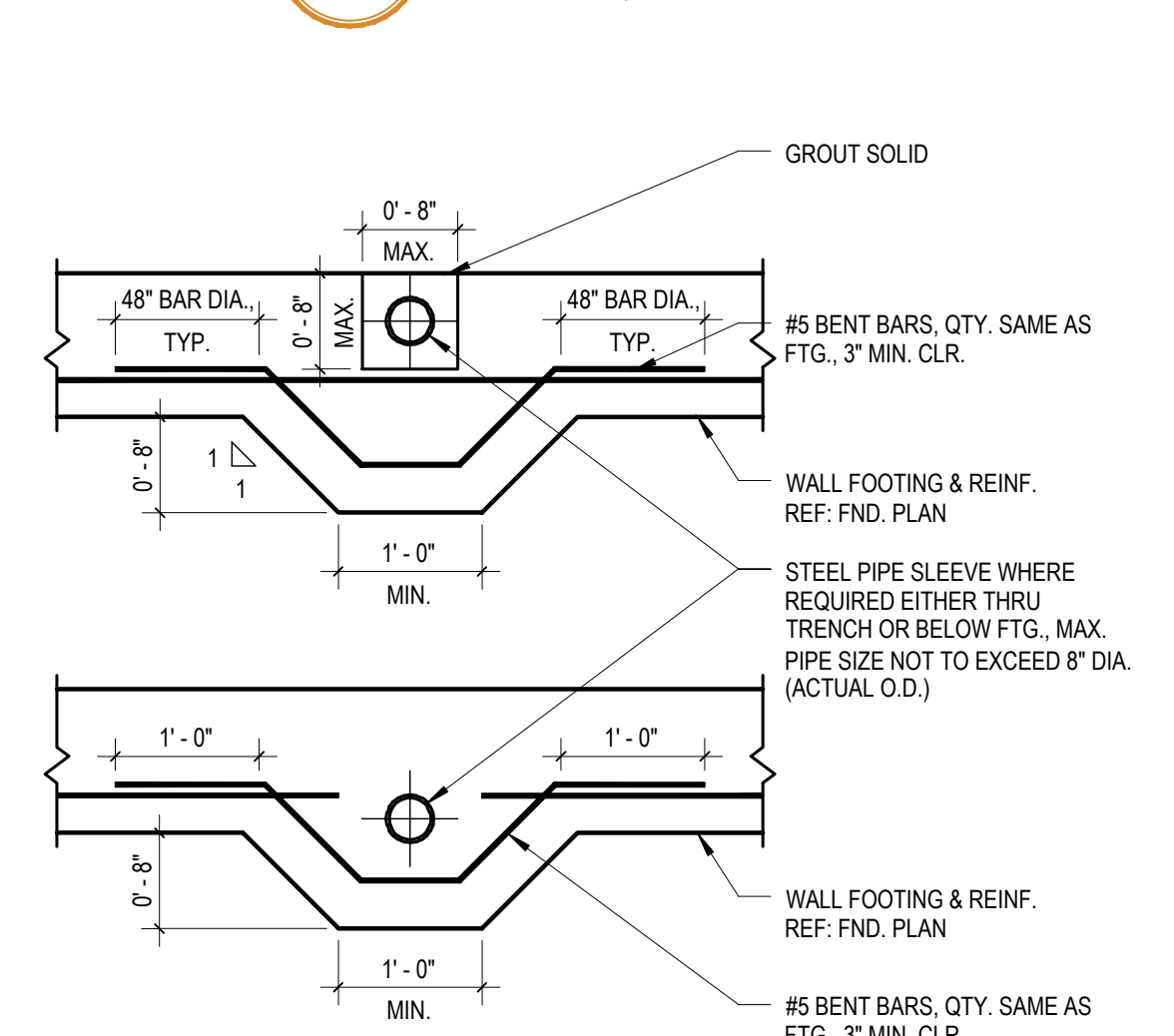
**9 SAWCUT JOINT**  
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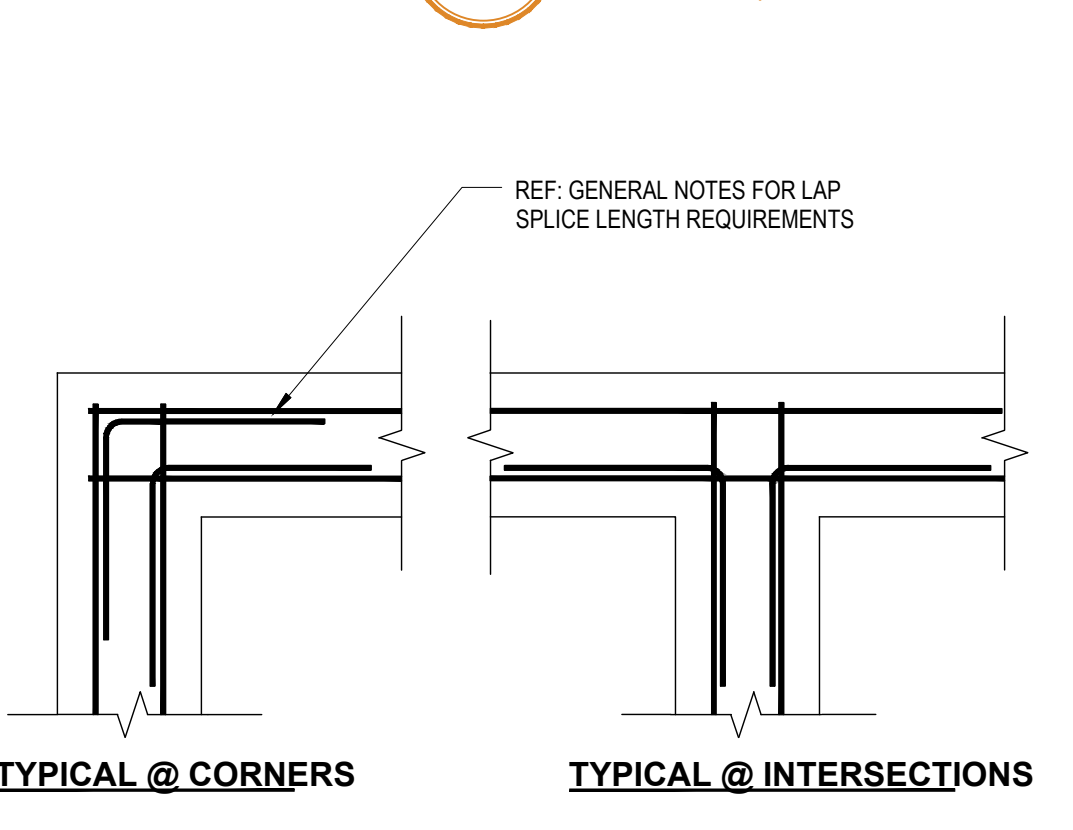
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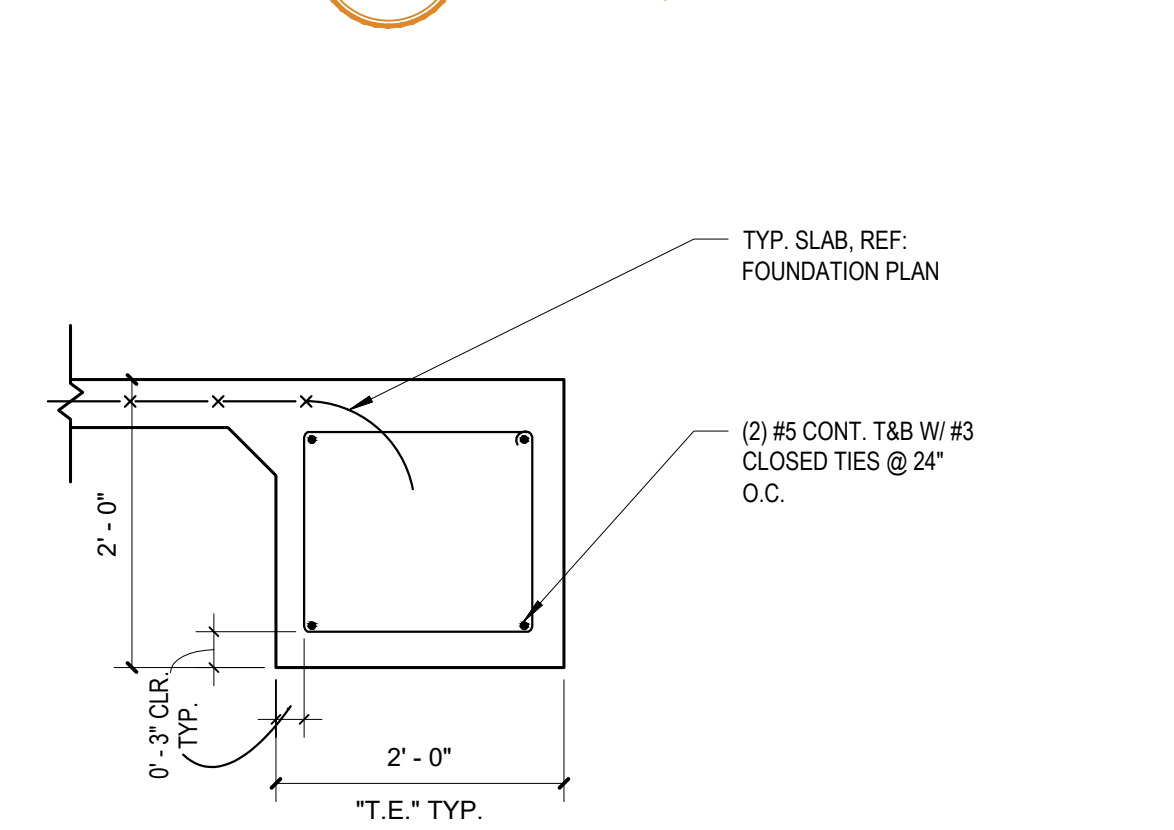
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**13 FOUNDATION DETAIL**  
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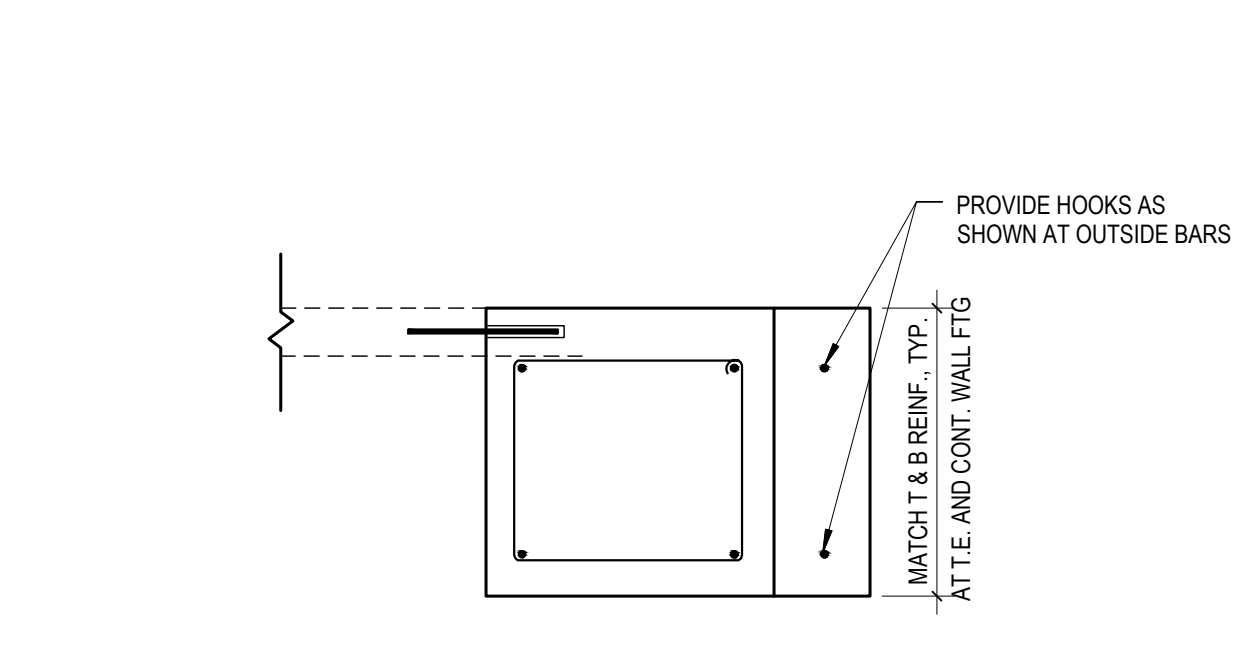


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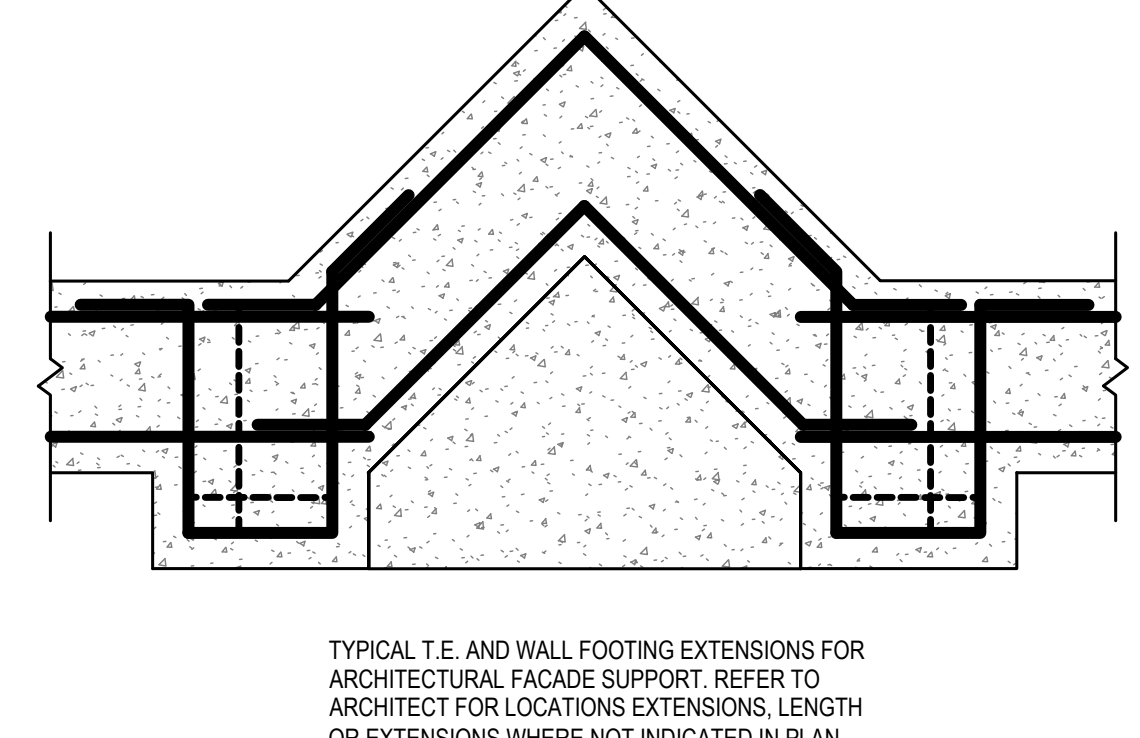
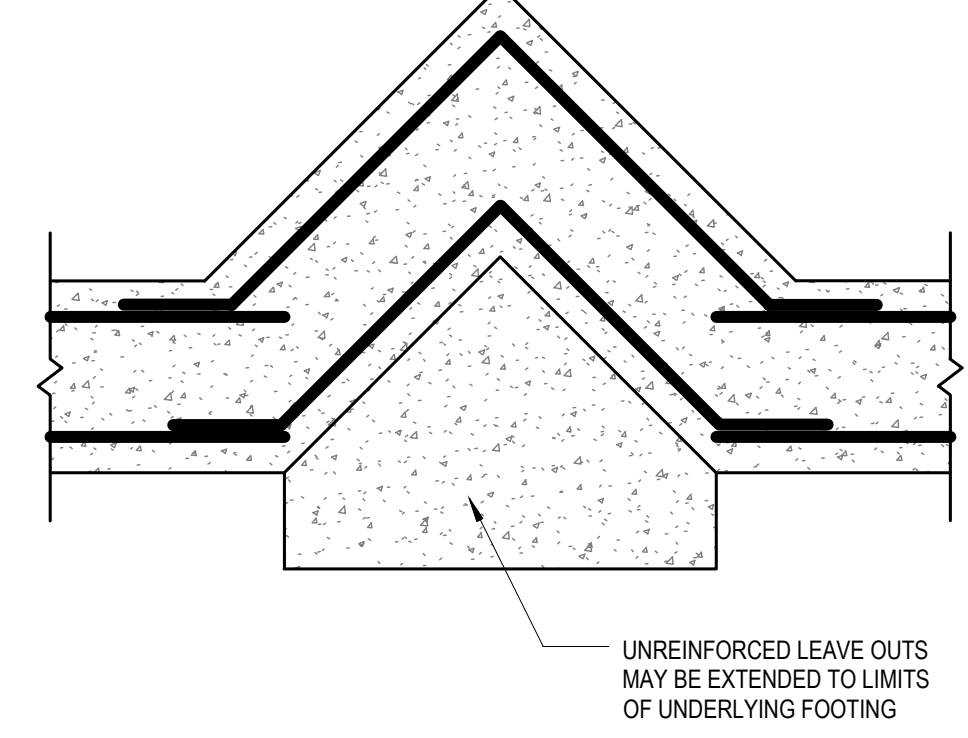
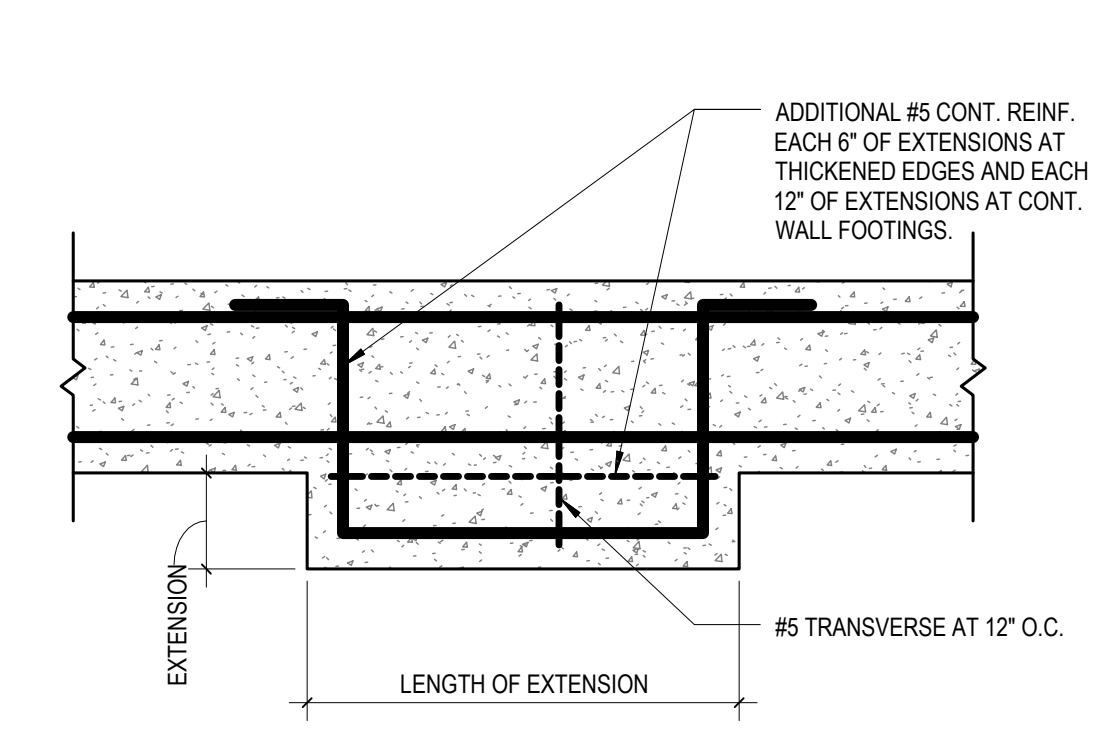


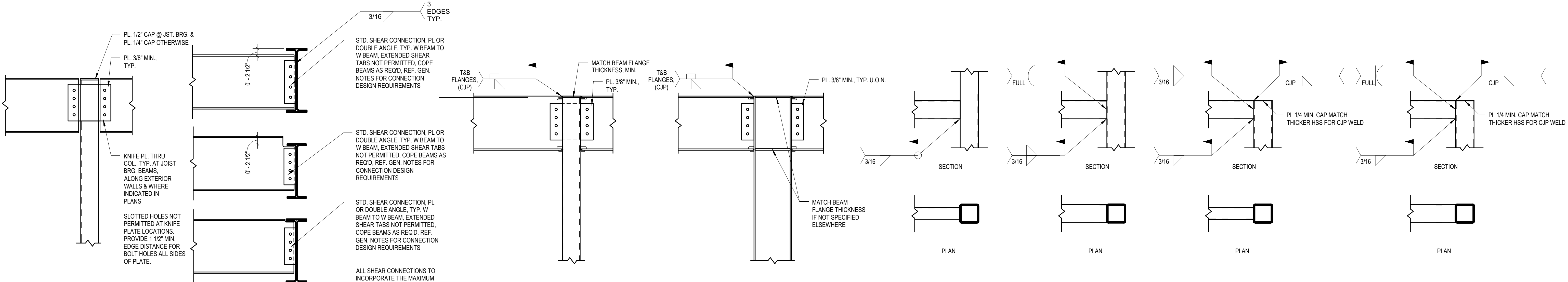
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**11 FOUNDATION DETAIL**  
SCALE: 3/4" = 1'-0"



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

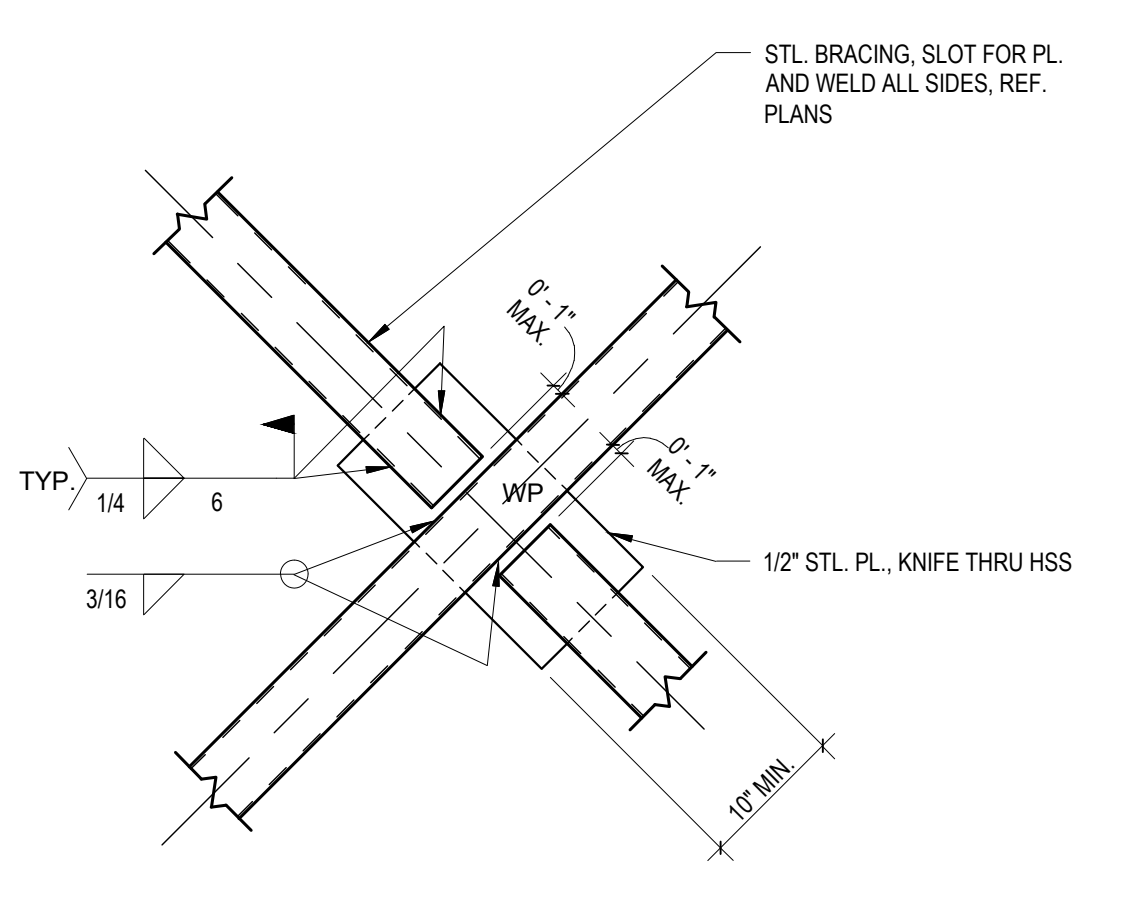
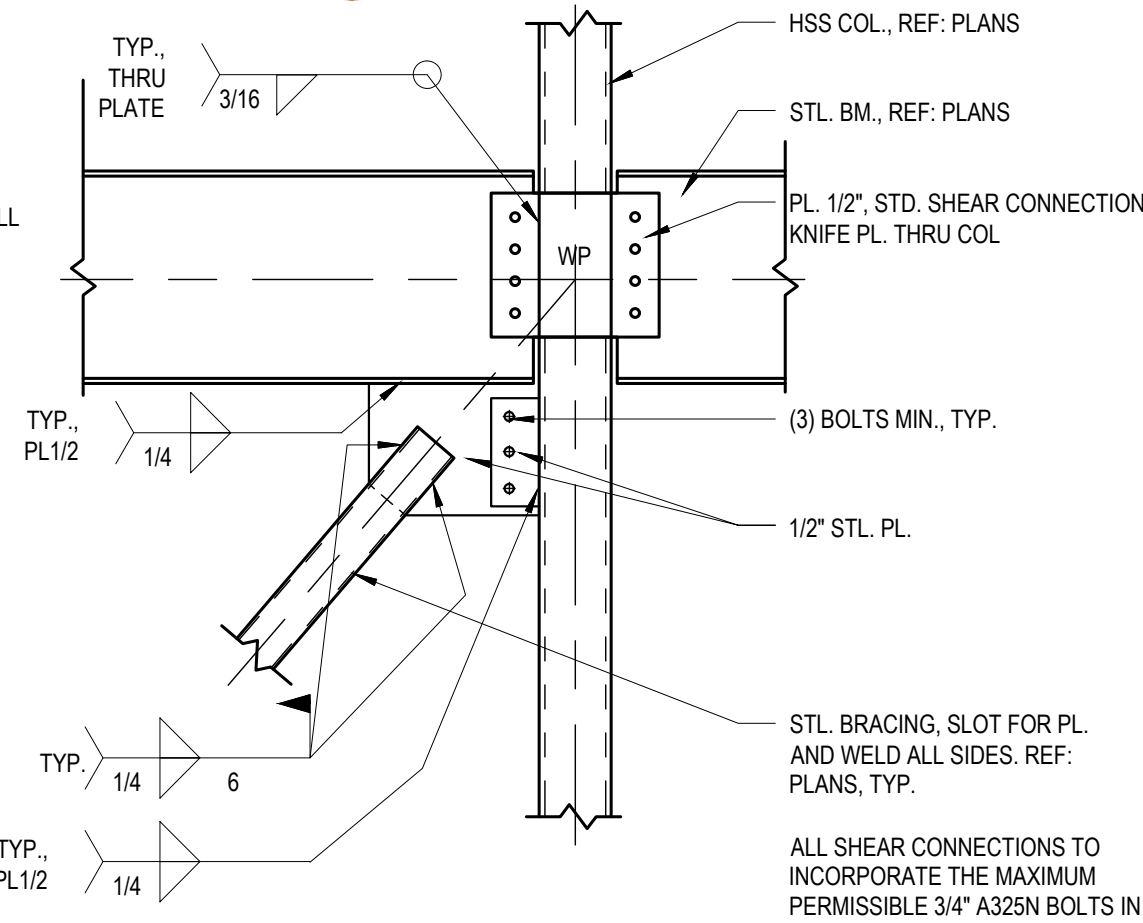
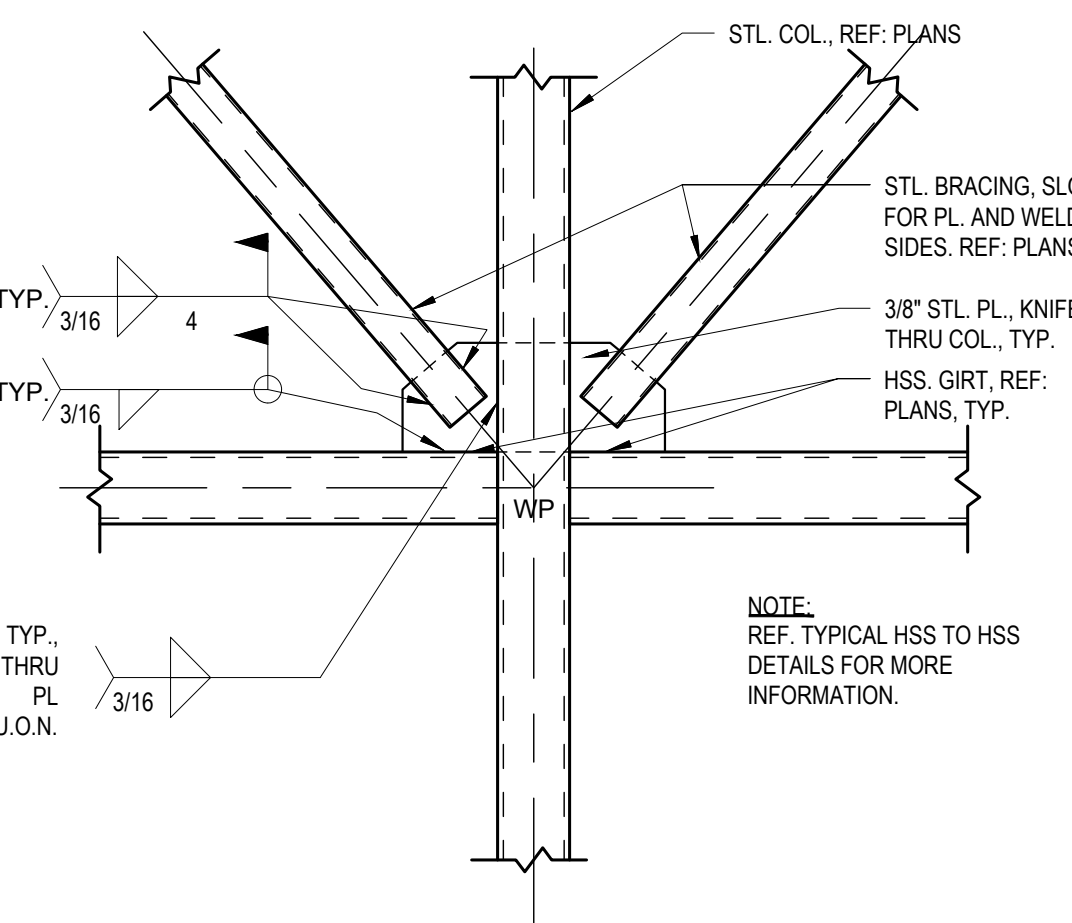
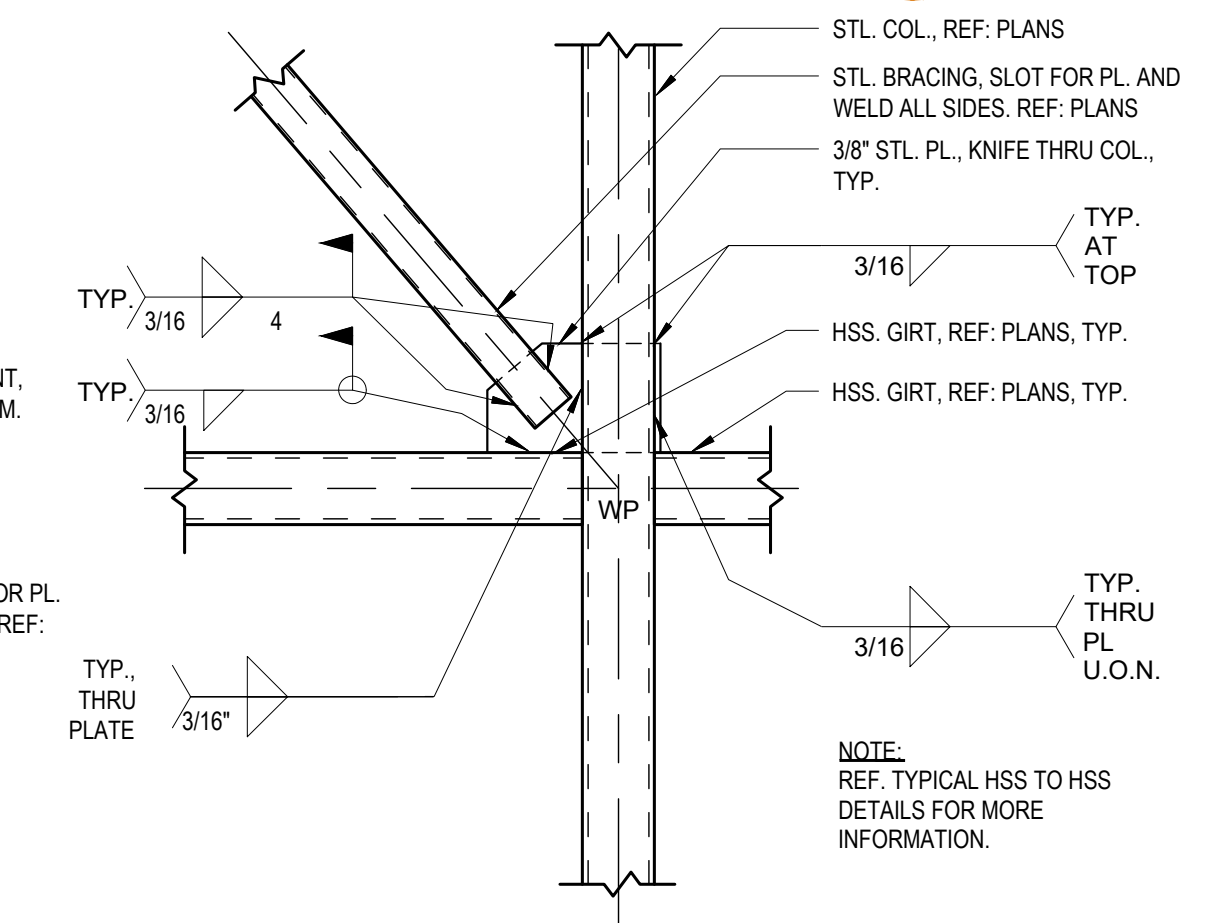
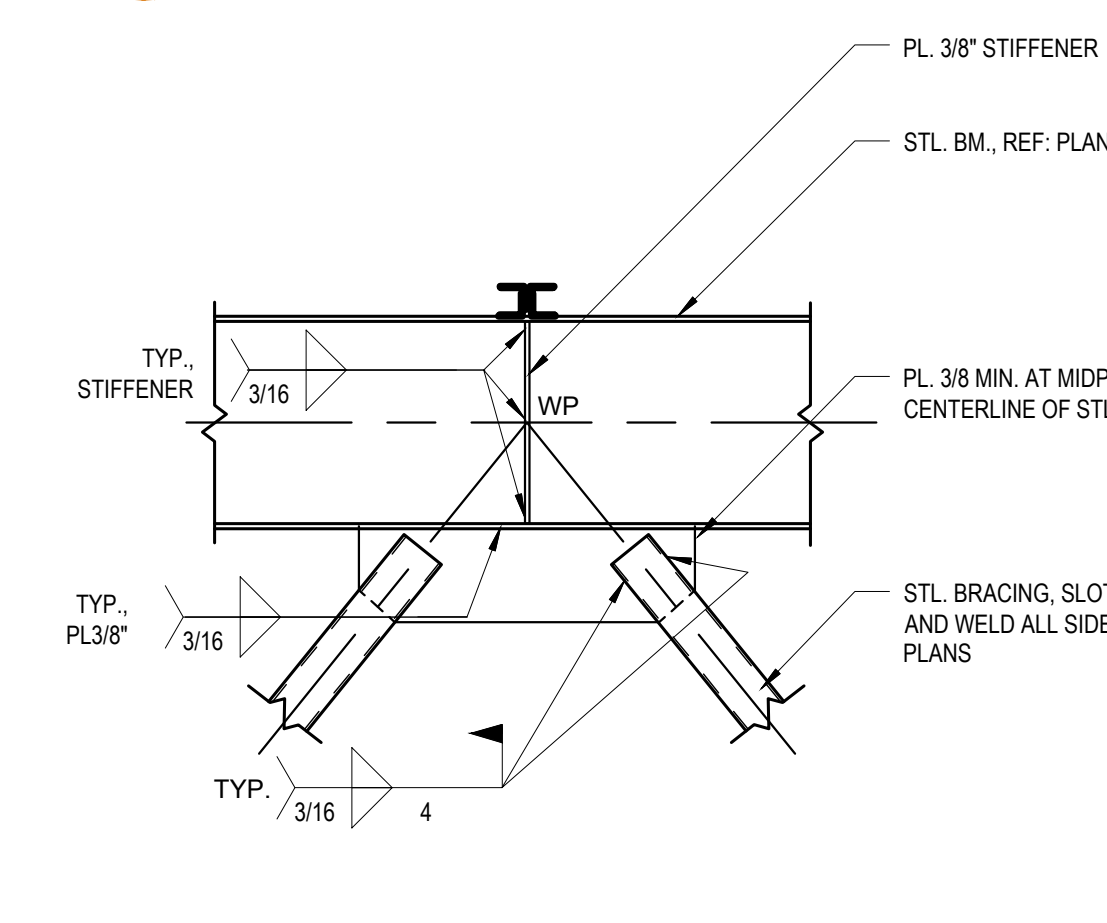




**1 SHEAR CONNECTIONS, TYP.**  
SCALE: 3/4" = 1'-0"

**2 MOMENT CONNECTIONS, TYP.**  
SCALE: 3/4" = 1'-0"

**3 HSS TO HSS WELD CONNECTIONS, TYP.**  
SCALE: 3/4" = 1'-0"



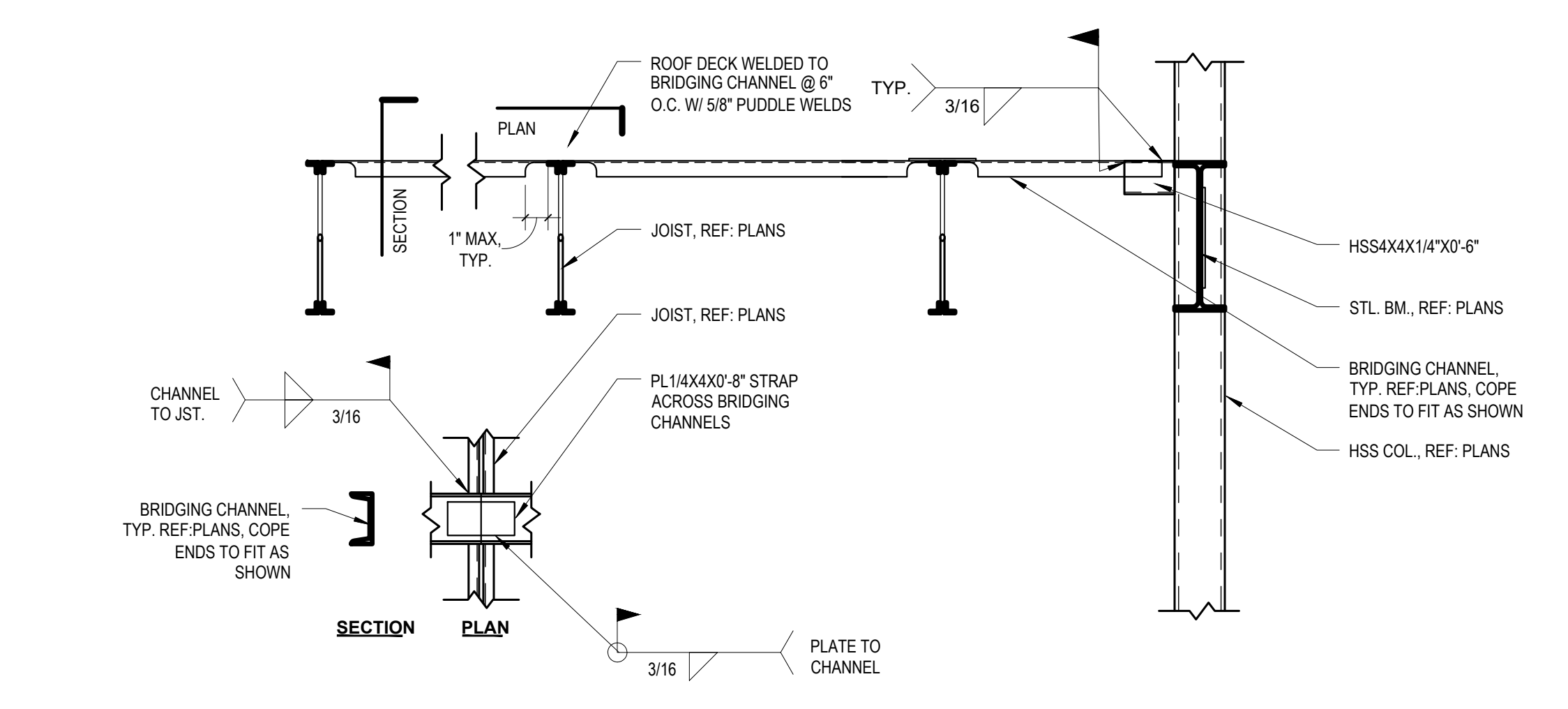
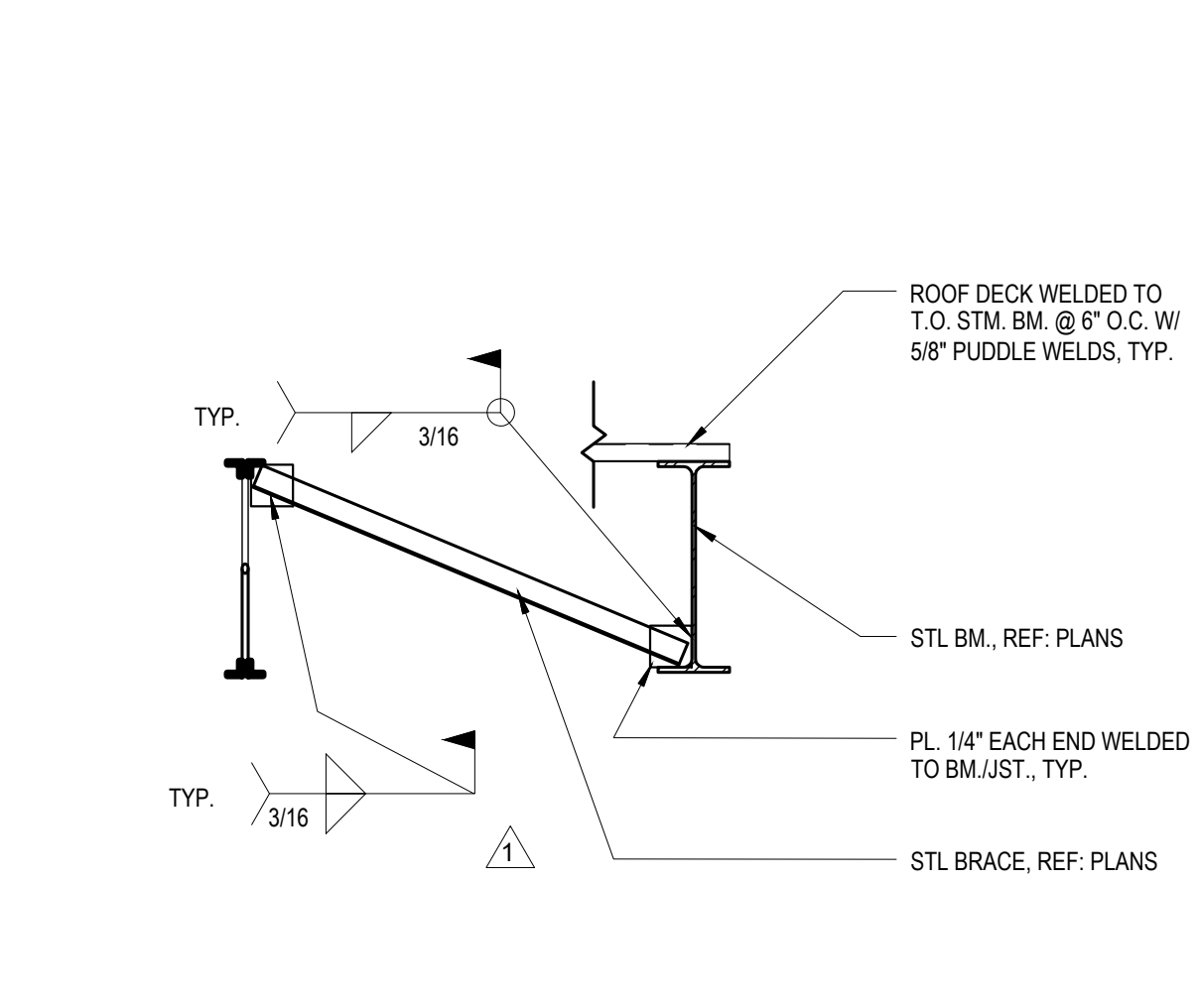
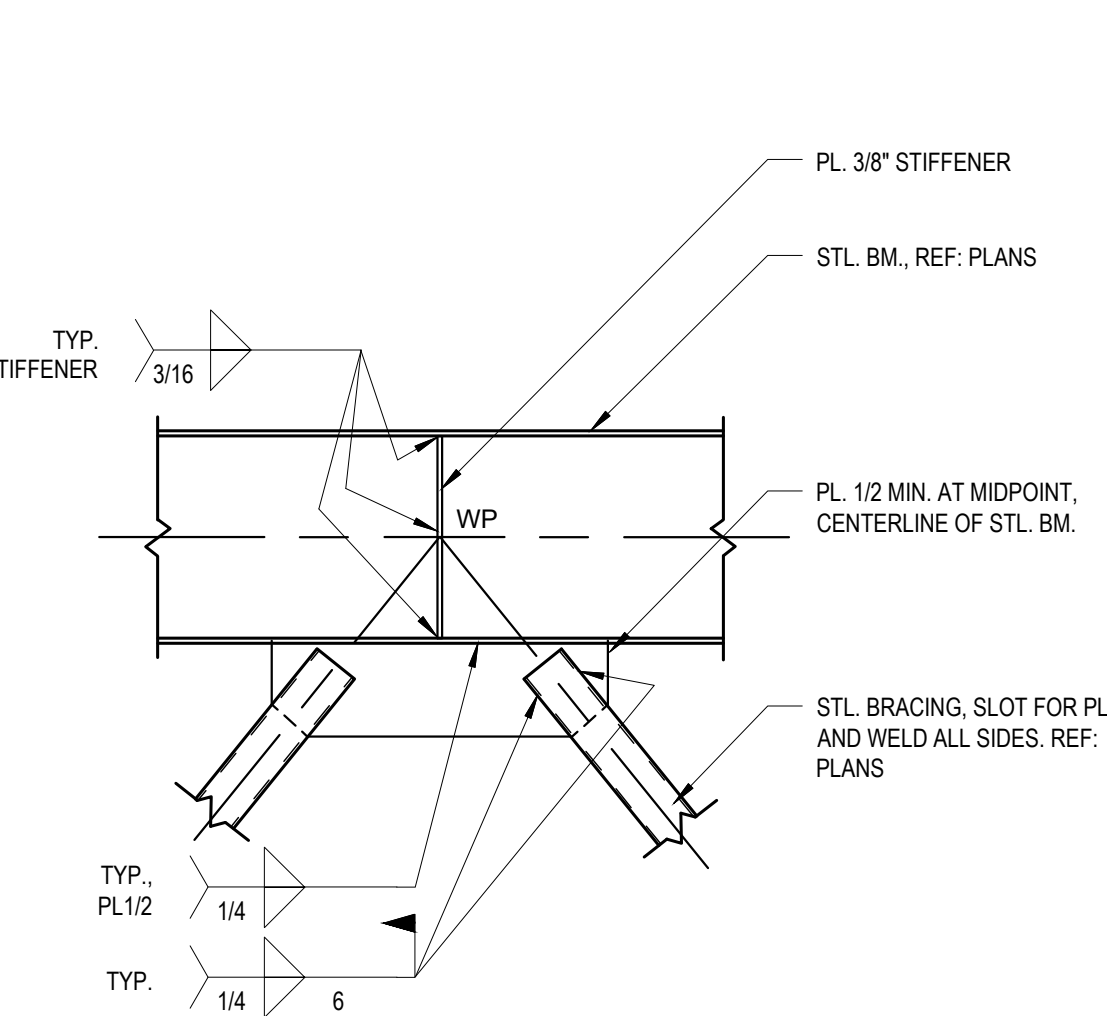
**4 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**5 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**6 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**7 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**8 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

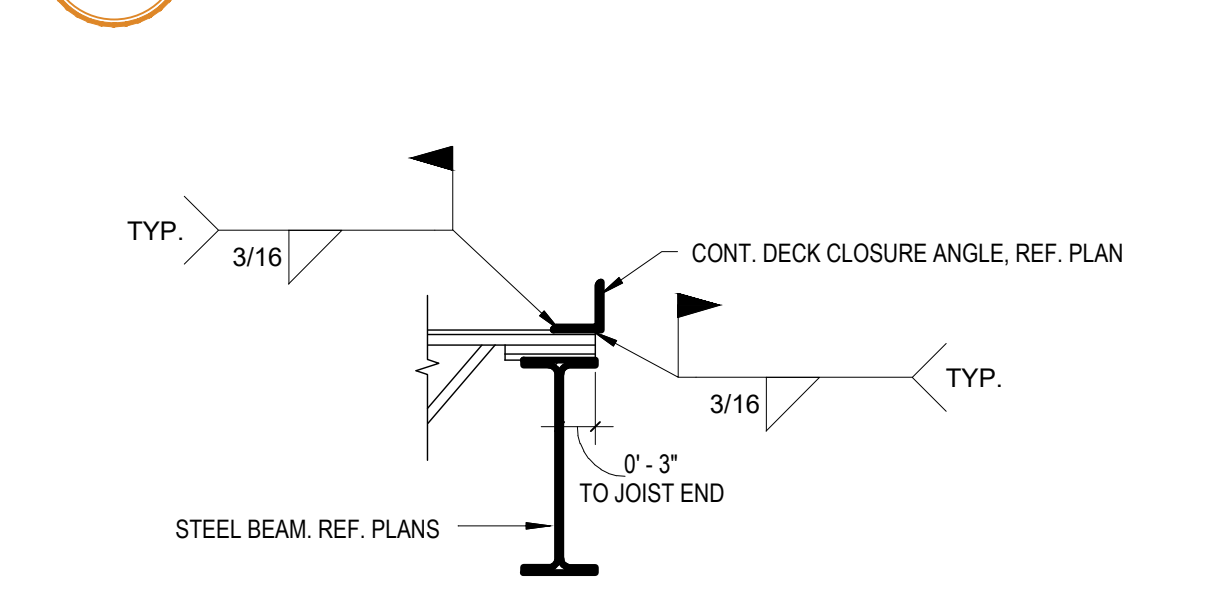
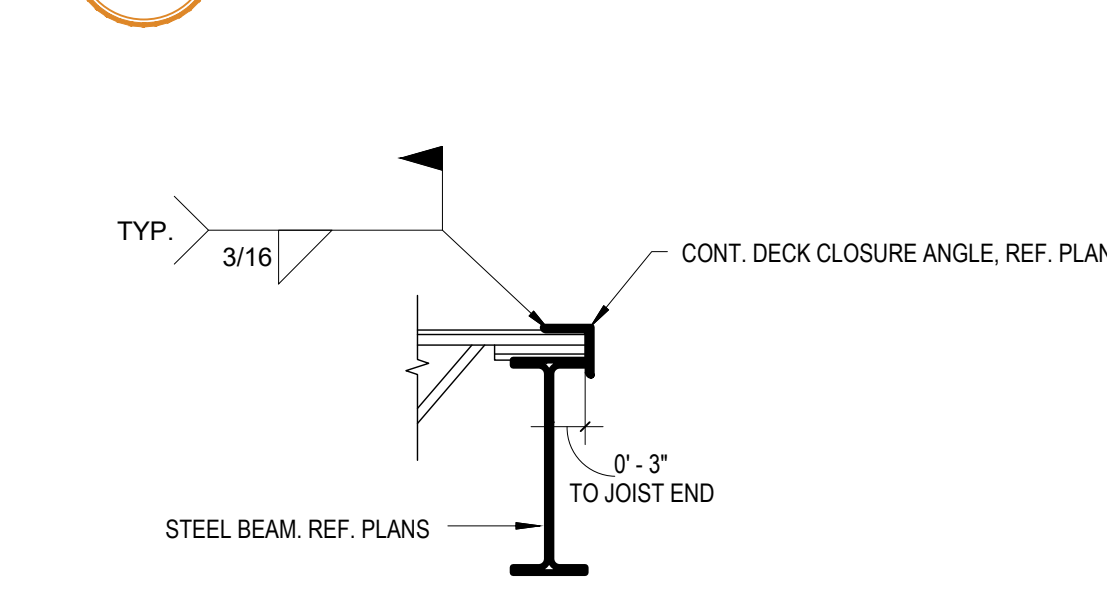


**9 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**10 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**11 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**12 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

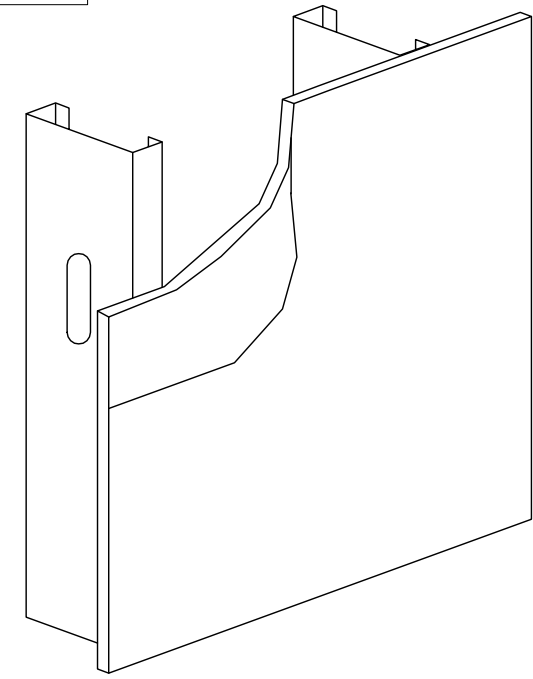


**12 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

**13 FRAMING DETAIL**  
SCALE: 3/4" = 1'-0"

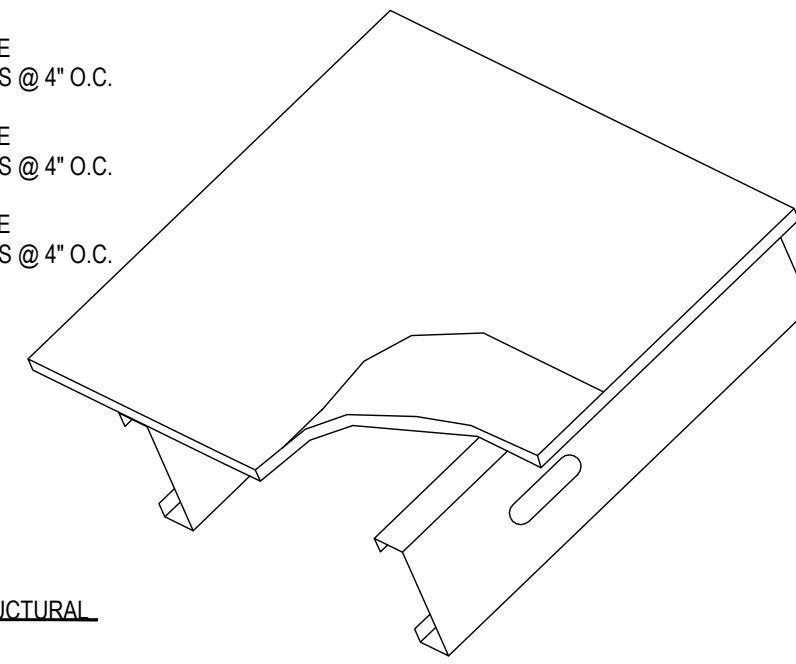
**WALLS**

**STRUCTURAL PLYWOOD / CDX**  
5/8" MIN. THICKNESS  
-ZONE 4 (REF. WIND PRESSURE ZONE DIAGRAMS) #10 BUGLEHEAD SCREWS @ 4" O.C. EDGES AND 6" FIELD  
-ZONE 5 (REF. WIND PRESSURE ZONE DIAGRAMS) #10 BUGLEHEAD SCREWS @ 6" O.C. EDGES AND 4" FIELD  
**DENSGLASS**  
-ZONE 4 (REF. WIND PRESSURE ZONE DIAGRAMS) #10 MIN. WAFERHEAD SCREWS @ 6" O.C. EDGES AND 6" FIELD  
-ZONE 5 (REF. WIND PRESSURE ZONE DIAGRAMS) #10 MIN. WAFERHEAD SCREWS @ 6" O.C. EDGES AND 4" FIELD



**ROOFS**

**STRUCTURAL PLYWOOD / CDX**  
5/8" MIN. THICKNESS  
-ZONE 1 (REF. WIND PRESSURE ZONE DIAGRAMS) #10 BUGLEHEAD SCREWS @ 4" O.C. EDGES AND 6" FIELD  
-ZONE 2 (REF. WIND PRESSURE ZONE DIAGRAMS) #10 BUGLEHEAD SCREWS @ 4" O.C. EDGES AND 4" FIELD  
-ZONE 3 (REF. WIND PRESSURE ZONE DIAGRAMS) #10 BUGLEHEAD SCREWS @ 4" O.C. EDGES AND 4" FIELD



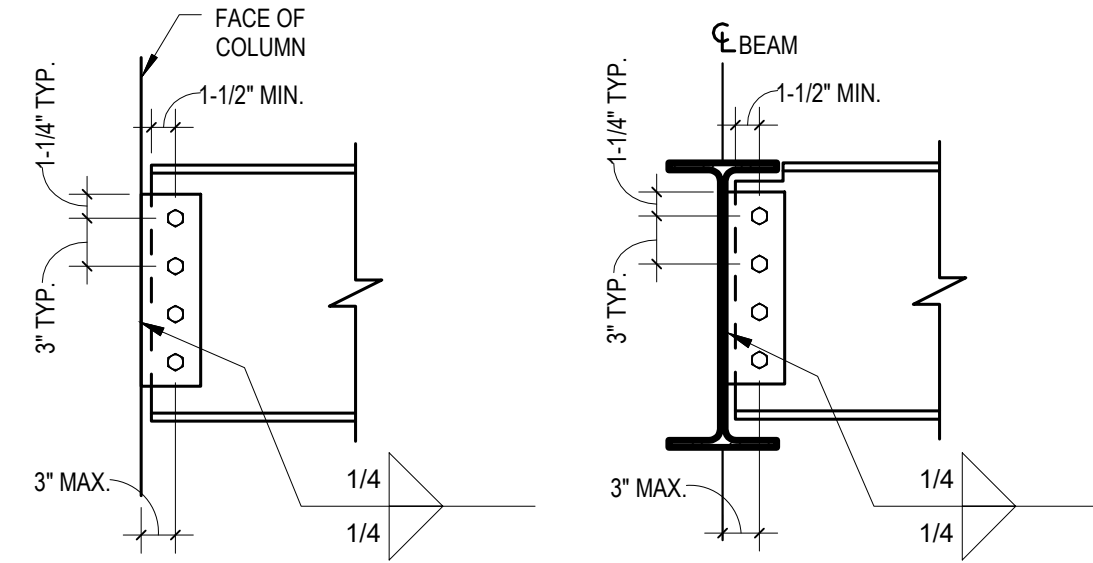
2x OR PLYWOOD BLOCKING TO STRUCTURAL STEEL AT PARAPET LOCATIONS OR STOREFRONT WINDOW HEADERS  
-HILTI X-U 52 PINS @ 12" O.C.

PLYWOOD OR DENSGLASS SHEATHING TO STRUCTURAL STEEL  
-ZONE 4 (REF. WIND PRESSURE ZONE DIAGRAMS) HILTI X-U 32 P8 S15 PINS @ 6" O.C. EDGES AND 6" FIELD  
-ZONE 5 (REF. WIND PRESSURE ZONE DIAGRAMS) HILTI X-U 32 P8 S15 PINS @ 6" O.C. EDGES AND 4" FIELD

**1 SHEATHING FASTENER REQUIREMENTS**

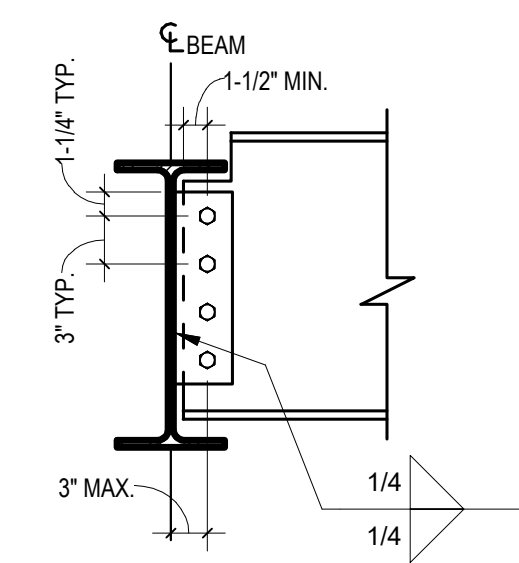
SCALE: 3/4" = 1'-0"

SINGLE PLATE SHEAR CONNECTION TO BEAM OR COLUMN				
BEAM SIZE	NUMBER OF 3/4" DIA. A325-N BOLTS	PLATE THICKNESS	PLATE LENGTH	WELD SIZE
W8, W10	2	3/8"	5-1/2"	3/16"
W12, W14	3	3/8"	8-1/2"	1/4"
W16	4	3/8"	11-1/2"	1/4"
W18	5	3/8"	14-1/2"	1/4"
W21	6	3/8"	17-1/2"	1/4"
W24, W27	7	3/8"	20-1/2"	1/4"



- NOTES:**
- MINIMUM THICKNESS OF SUPPORTING MEMBER TO BE 0.20". WHEN THE WELDS FROM A SECOND CONNECTION ON THE SUPPORTING MEMBER ARE DIRECTLY OPPOSITE, MINIMUM THICKNESS TO BE 0.39".
  - PROVIDE HORIZONTAL SHORT SLOTTED HOLES IN BEAM WEB ONLY.
  - ALL SHEAR CONNECTIONS TO INCORPORATE THE MAXIMUM PERMISSIBLE 3/4" A325N BOLTS IN A SINGLE ROW BASED ON AVAILABLE WEB DEPTH.

SINGLE PLATE SHEAR CONNECTION TO BEAM				
BEAM SIZE	NUMBER OF 3/4" DIA. A325-N BOLTS	PLATE THICKNESS	PLATE LENGTH	WELD SIZE
W18	4	3/8"	11-1/2"	1/4"
W21	5	3/8"	14-1/2"	1/4"
W24	6	3/8"	17-1/2"	1/4"



- NOTES:**
- MINIMUM THICKNESS OF SUPPORTING MEMBER TO BE 0.20". WHEN THE WELDS FROM A SECOND CONNECTION ON THE SUPPORTING MEMBER ARE DIRECTLY OPPOSITE, MINIMUM THICKNESS TO BE 0.39".
  - PROVIDE HORIZONTAL SHORT SLOTTED HOLES IN BEAM WEB ONLY.
  - ALL SHEAR CONNECTIONS TO INCORPORATE THE MAXIMUM PERMISSIBLE 3/4" A325N BOLTS IN A SINGLE ROW BASED ON AVAILABLE WEB DEPTH.

**2 SINGLE PLATE SHEAR CONNECTION**

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

**3 SINGLE PLATE SHEAR CONNECTION (WITH COPED BEAM FLANGE)**

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

2023.03.30

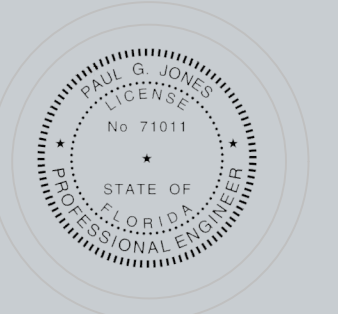
PROJECT:  
**STRUCTURAL DRAWINGS FOR SWEETWATER RETAIL I**

US 41 & SWEETWATER RANCH BLVD,  
ESTERO, FLORIDA 33928

DATE: 05/01/2023  
PROJECT NO.: 23-0010

REVISION DATE

NOTES:



PROFESSIONAL ENGINEER SEAL  
STATE OF FLORIDA

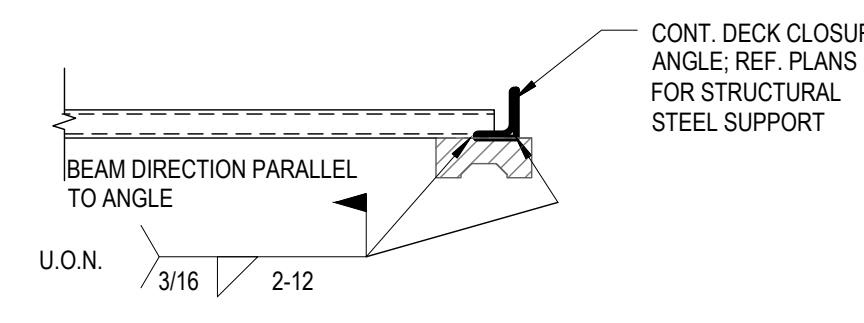
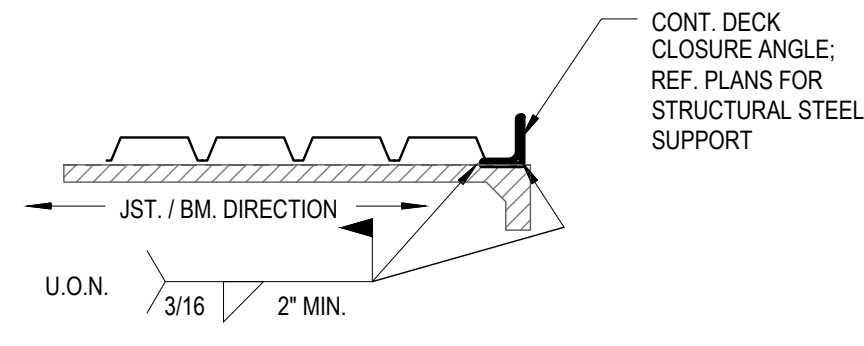
**STANDARD FRAMING DETAILS**

SCALE: AS NOTED

**S-106**

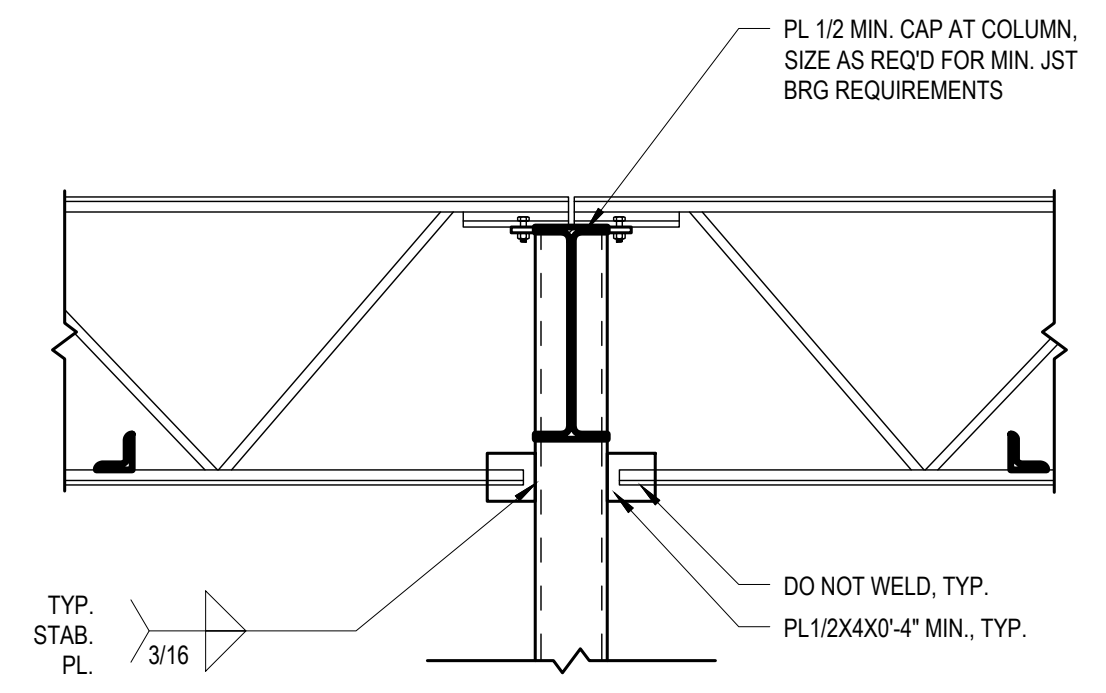
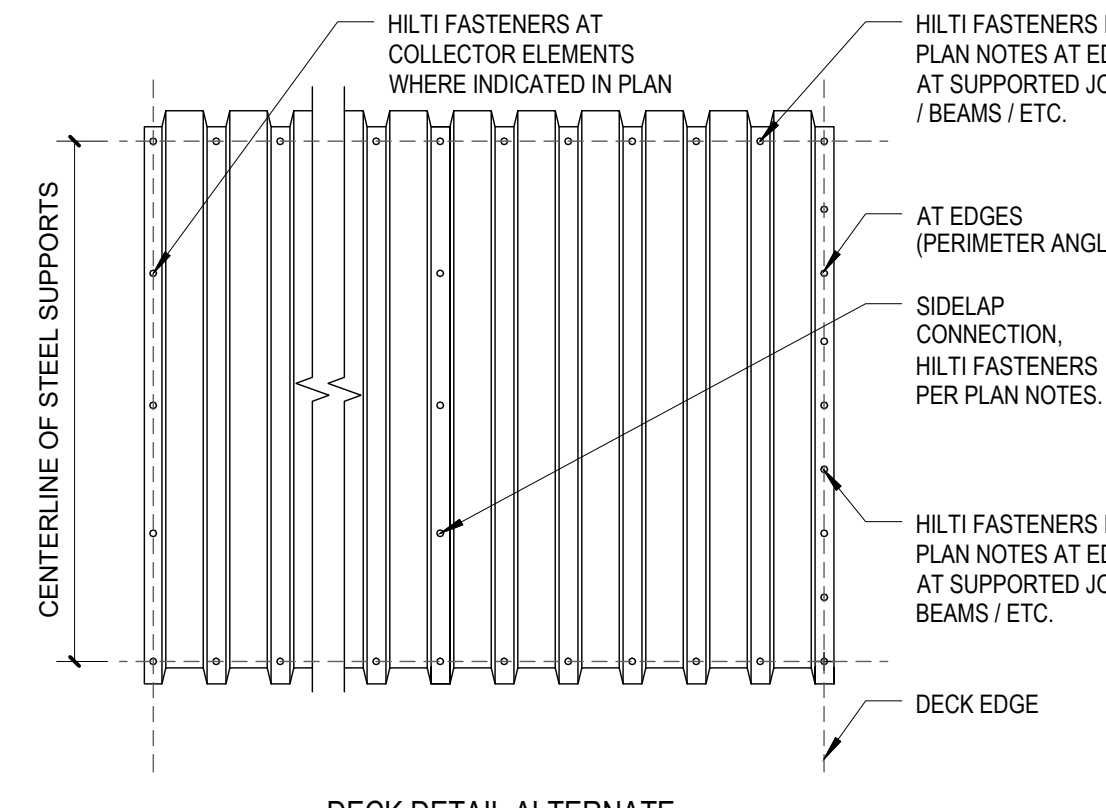
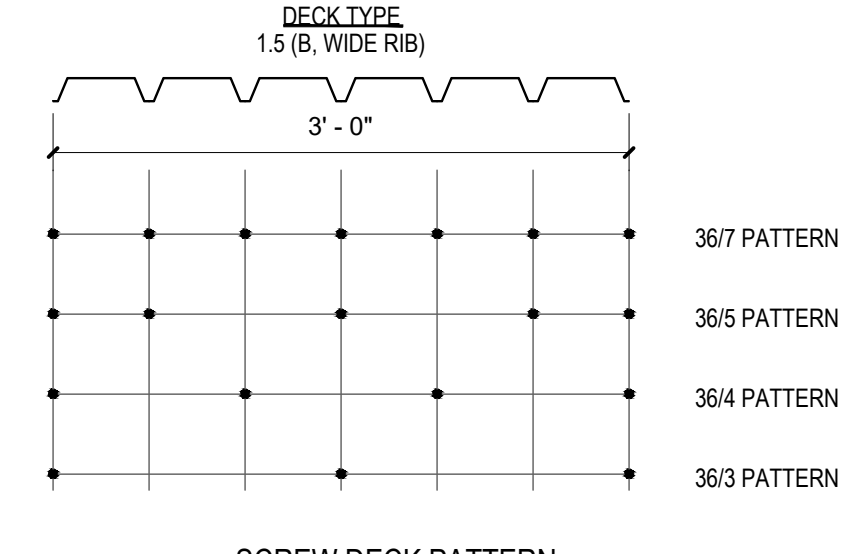
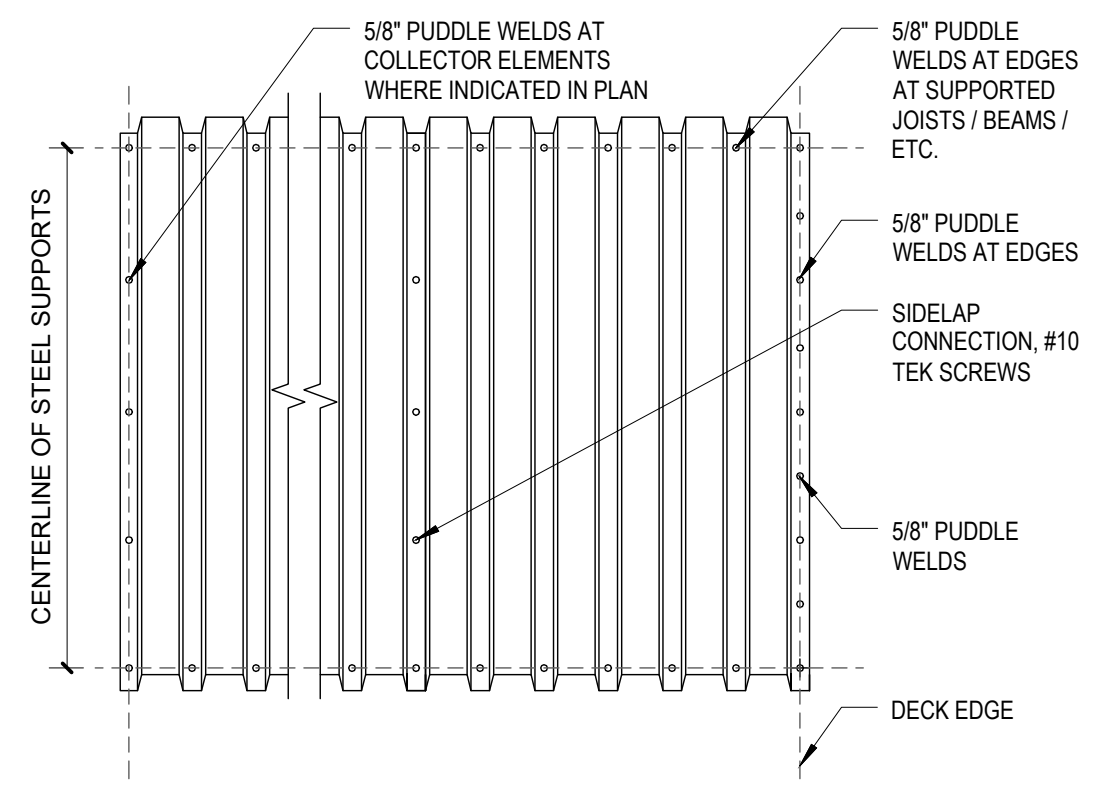
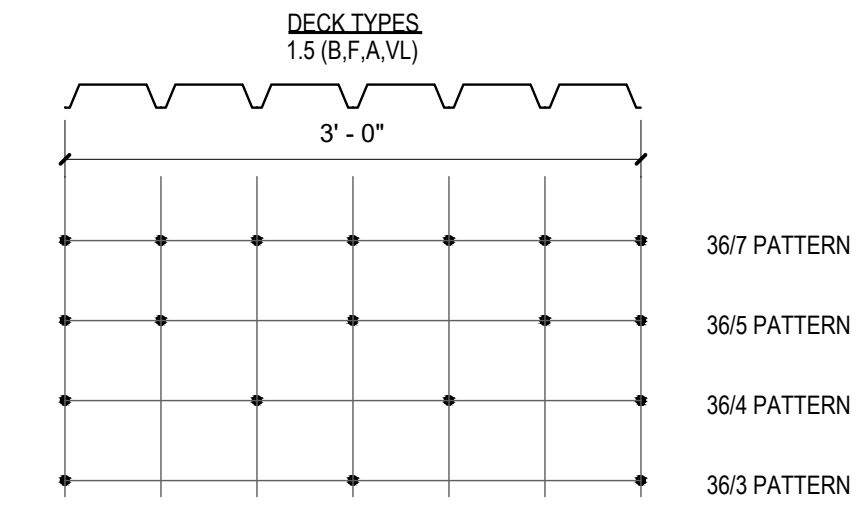
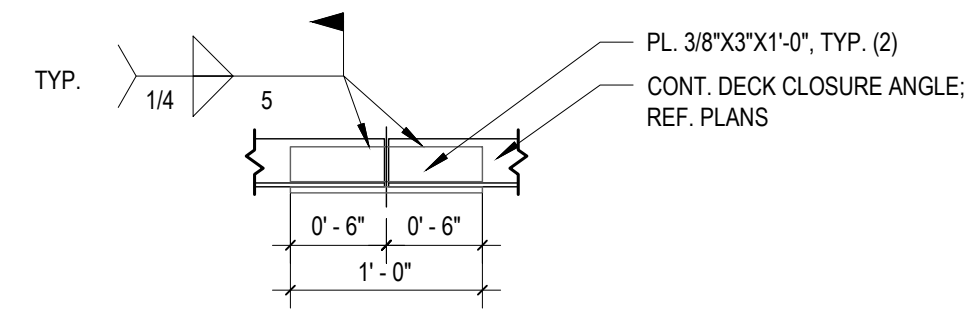
DRAWN BY: JM  
CHECKED BY: PJ

MINIMUM DECK PROPERTIES	1.5 B
NOMINAL DEPTH: 1 1/2"	
TYPE B (WIDE RIB) PAINTED METAL DECK	
Fy: 33 ksi	
22 GAUGE: I=0.169 IN <sup>4</sup> /FT. SP=0.186 IN <sup>3</sup> /FT. SN=0.192 IN <sup>3</sup> /FT	
20 GAUGE: I=0.212 IN <sup>4</sup> /FT. SP=0.234 IN <sup>3</sup> /FT. SN=0.247 IN <sup>3</sup> /FT	
18 GAUGE: I=0.292 IN <sup>4</sup> /FT. SP=0.318 IN <sup>3</sup> /FT. SN=0.327 IN <sup>3</sup> /FT	
NOTES:	
1. HILTI FASTENING SYSTEM MAY BE SUBSTITUTED AS ALTERNATE. EQUIVALENT UPLIFT & SHEAR CAPACITIES REQ'D. DOCUMENTATION TO BE PROVIDED BY GC FOR REVIEW PRIOR TO USE.	



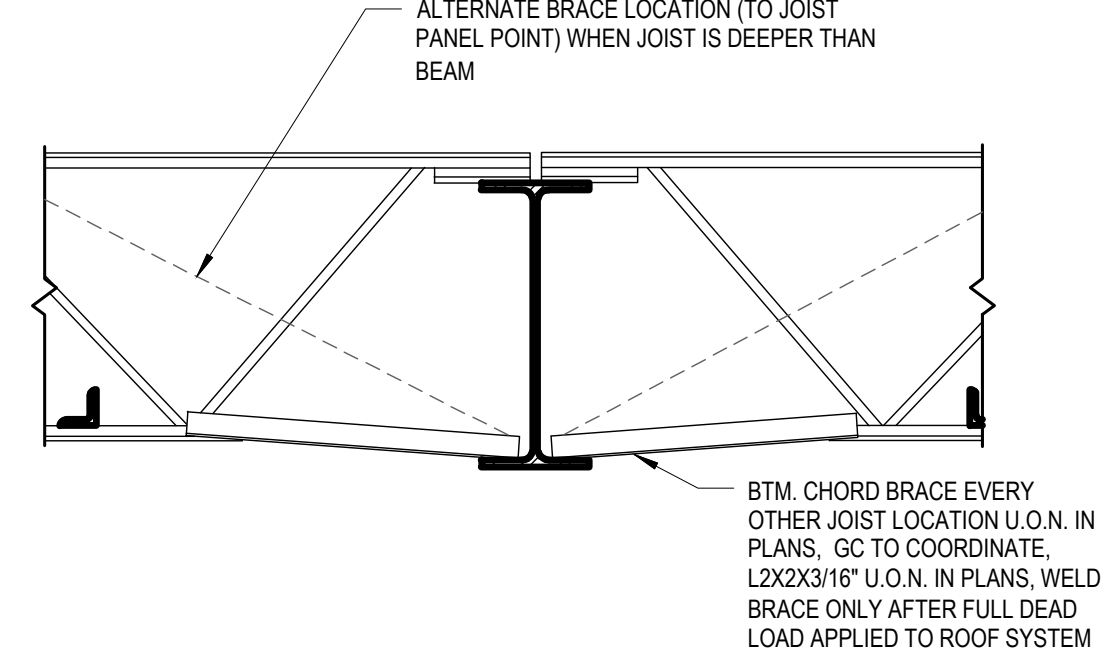
**CLOSURE ANGLE CONNECTIONS**

DECK DIRECTION MAY BE OPP. OF SHOWN, REF. PLANS.



**3 JST. BRG ON STEEL COL.**

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



**4 JST. BRG ON W-BM. (B.S.)**

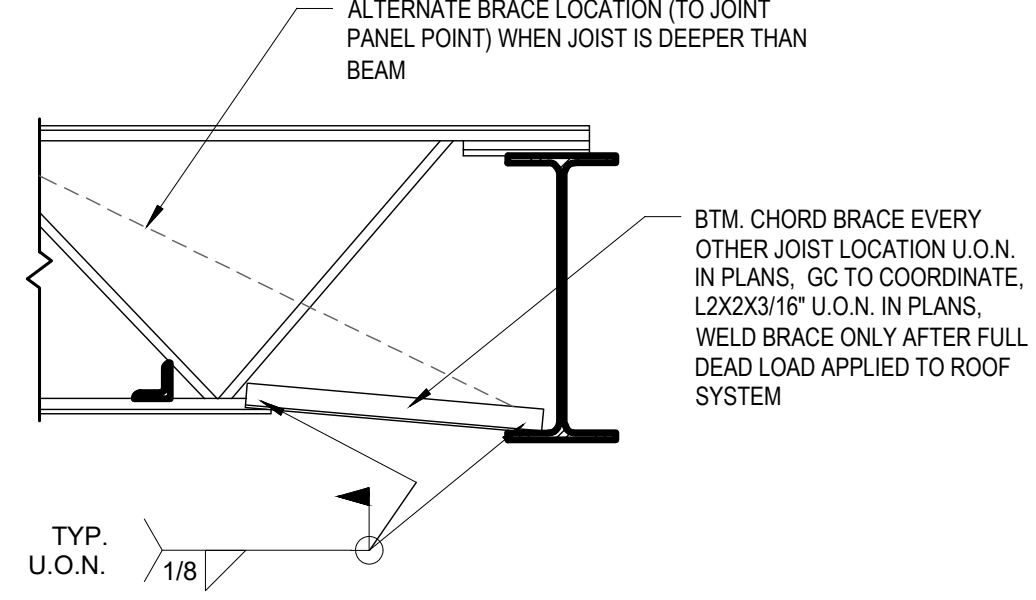
SCALE: 3/4" = 1'-0"

**1 GENERAL MTL. DECK & CLOSURE ANGLE INFO**

SCALE: 1" = 1'-0"

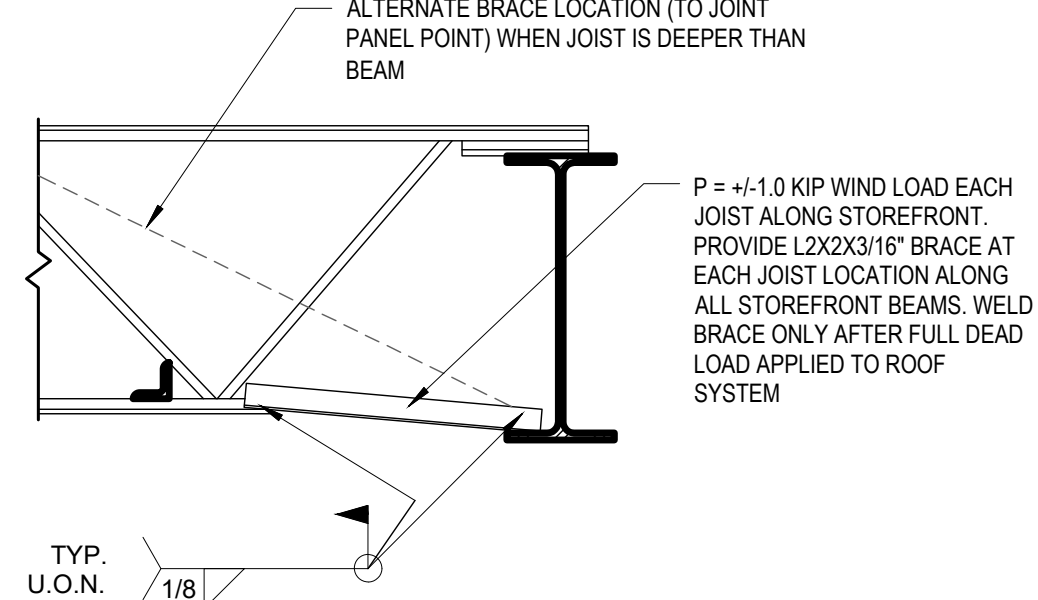
**2 GENERAL MTL. DECK & CLOSURE ANGLE INFO**

SCALE: 1" = 1'-0"



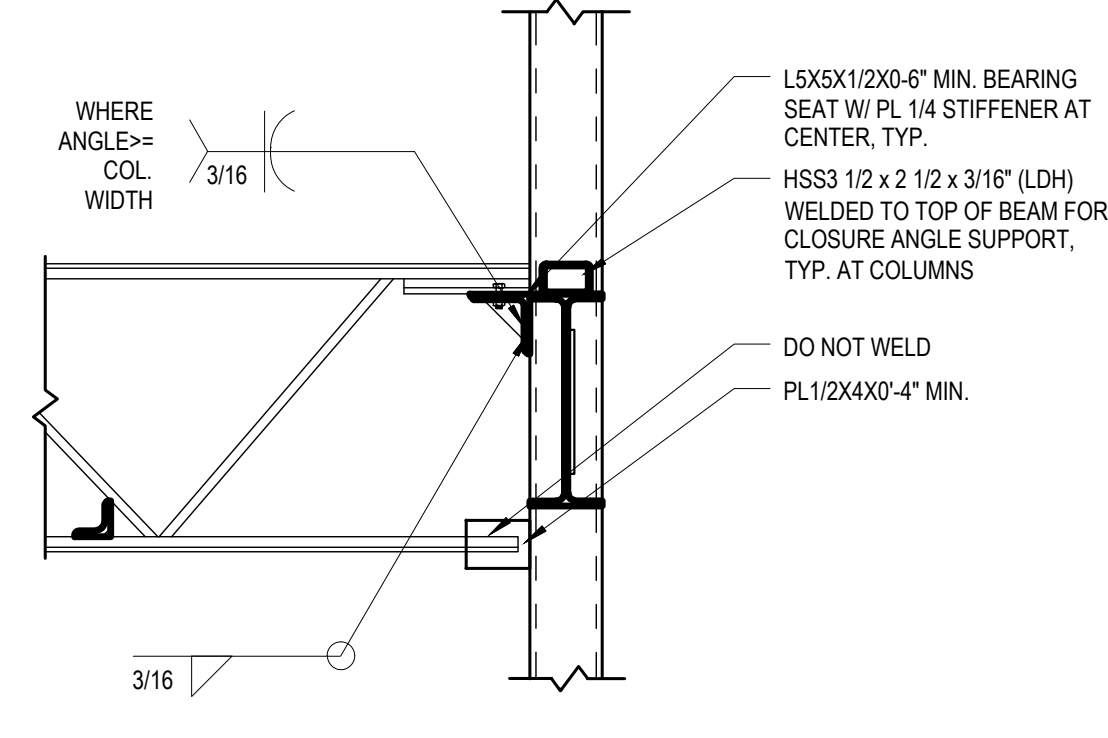
**5a JST. BRG. ON W-BM., SINGLE SIDE**

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



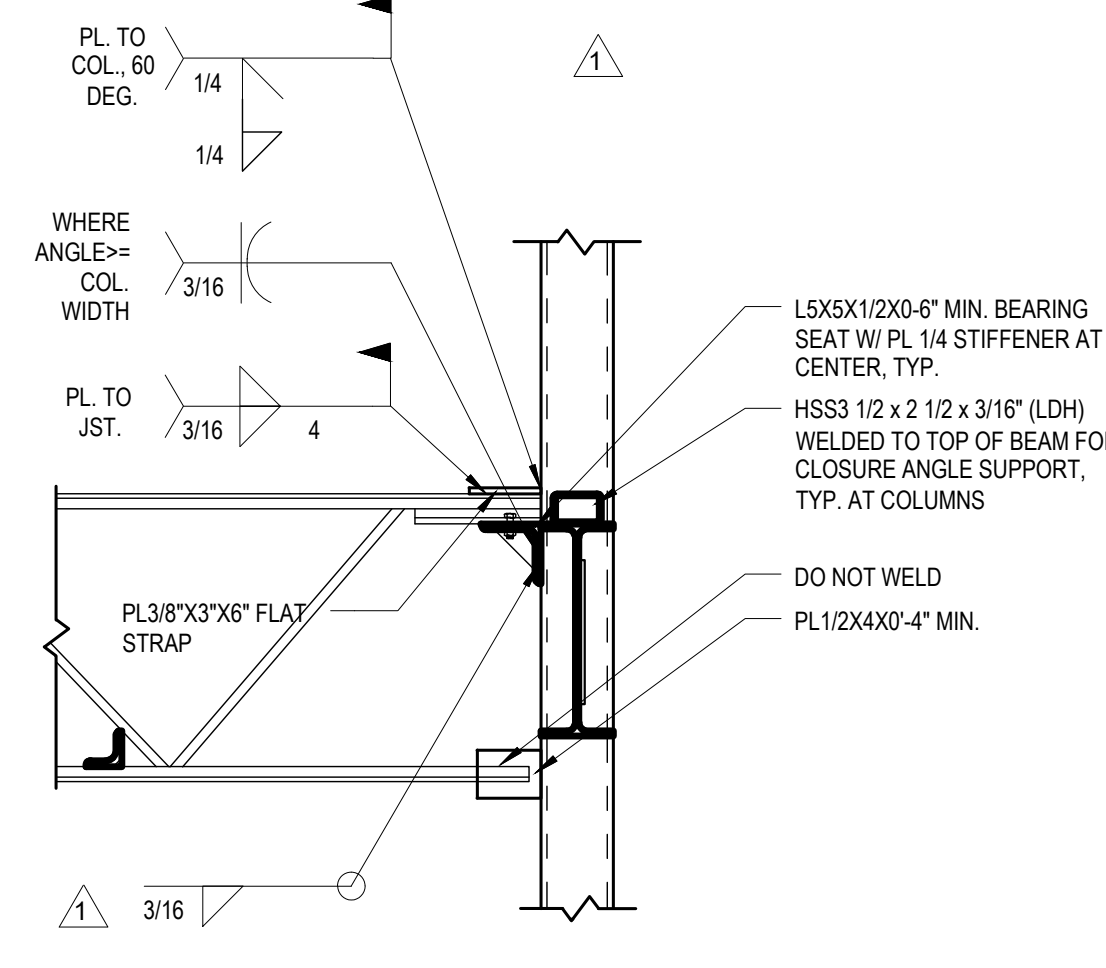
**5b JST. BRG. ON W-BM., SINGLE SIDE**

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



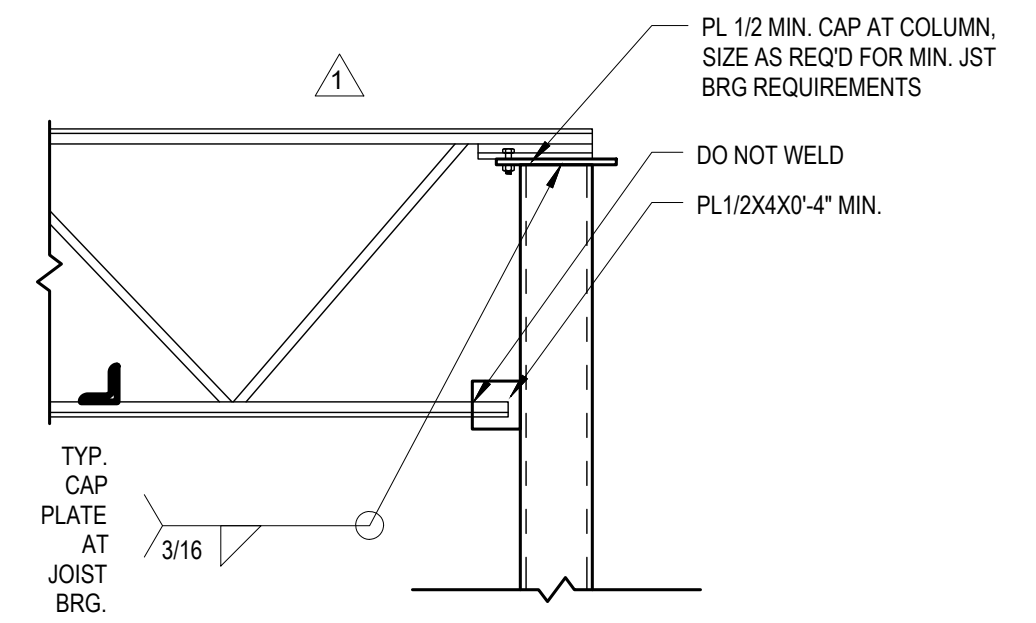
**6a JST. BRG. @ COL.**

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



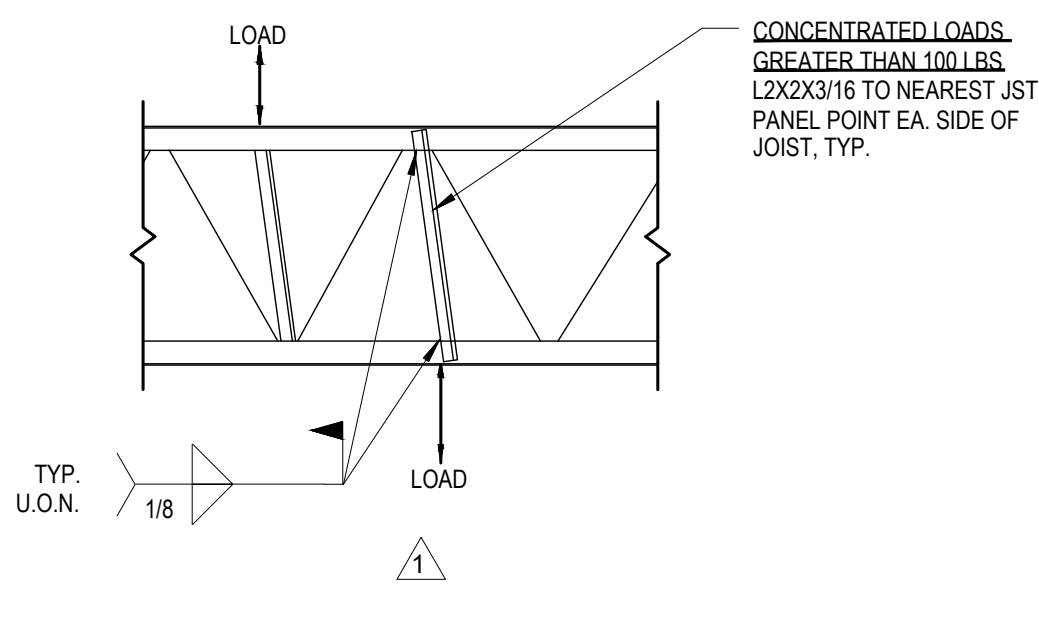
**6b JST. BRG. @ COL.**

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



**7 JST. BRG. ON COL.**

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



**8 CONCENTRATED LOADS ON JOISTS**

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

PROJECT: 2023.03.30  
**STRUCTURAL DRAWINGS FOR SWEETWATER RETAIL I**

US 41 & SWEETWATER RANCH BLVD, ESTERO, FLORIDA 33928  
DATE: 05/01/2023  
PROJECT NO.: 23-0010  
REVISION DATE

NOTES:



**STANDARD JOIST & DECK DETAILS**

SCALE: AS NOTED

**S-107**

DRAWN BY: JM  
CHECKED BY: PJ



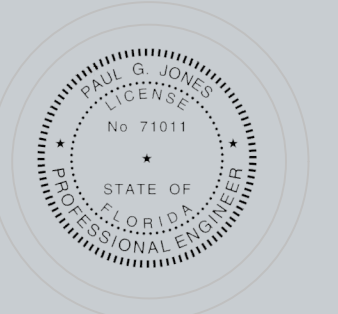
PROJECT:  
**STRUCTURAL  
DRAWINGS FOR  
SWEETWATER RETAIL I**

US 41 & SWEETWATER RANCH BLVD,  
ESTERO, FLORIDA 33928

DATE: 05/01/2023  
PROJECT NO.: 23-0010

REVISION DATE

NOTES:



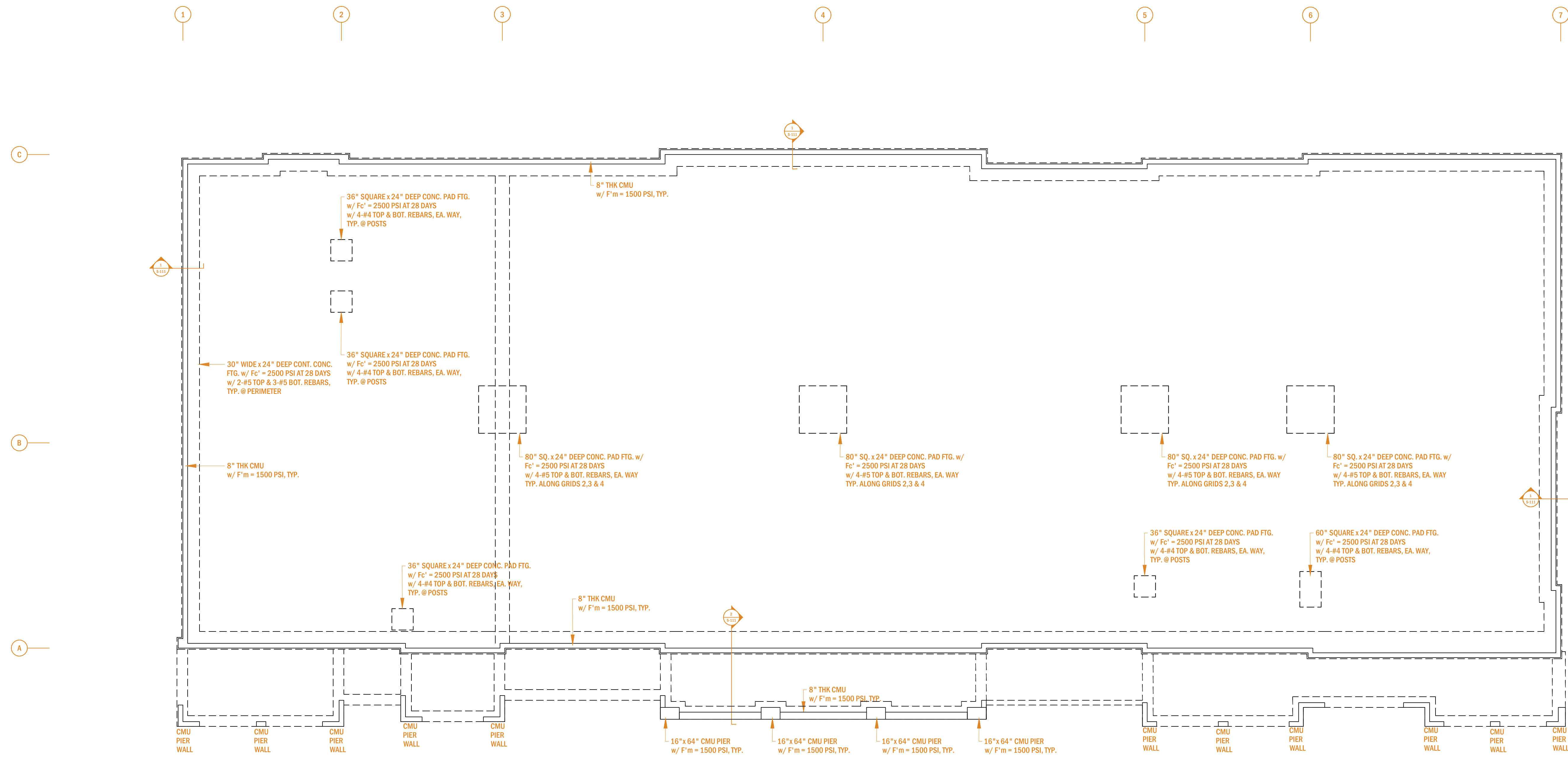
PROFESSIONAL ENGINEER SEAL  
STATE OF FLORIDA

**FOUNDATION PLAN**

SCALE: AS NOTED

**S-108**

DRAWN BY: JM  
CHECKED BY: PJ



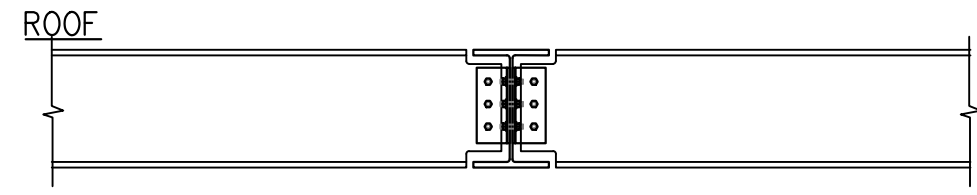
\* - INDICATES COLUMN AND BASE CONNECTION BY PRE-ENGINEERED PENQOLA SUPPLIER. G.C.T.O. COORDINATE TOP OF FTG. ELEVATION WITH SUPPLIER.

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

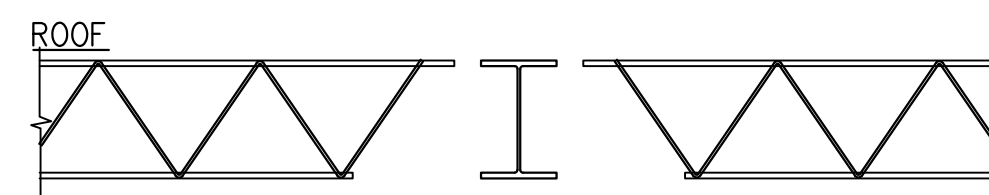
- GENERAL NOTES:**
- INTERIOR FOOTINGS HEREIN ARE RELATIVE TO FINISHED FLOOR ELEVATION OF 100'-0". THE TOP OF ALL INTERIOR FOOTINGS SHALL BE THUS: 97'-0", TYP. U.O.N.
  - EXTERIOR FOOTINGS HEREIN ARE RELATIVE TO FINISHED FLOOR ELEVATION OF 100'-0". THE TOP OF ALL EXTERIOR FOOTINGS SHALL BE THUS: 97'-0", TYP. U.O.N.
  - REFERENCE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND CONSTRUCTION OF NON-LOAD BEARING INTL. STUD WALLS, FIXTURES, AND OTHER ITEMS NOT PRESENTED HEREIN.
  - 4" CONCRETE SLAB W/ 3000 PSI CONC. W/ 6X6XW2.1XW2.1 W.W.F. OVER 10 MIL. MIN. VAPOR RETARDER ON TERMITED TREATED COMPACTED SOIL, TYP. U.O.N. (WWF NOT REQUIRED AT SLAB STRIPS WITH REBAR. ONLY REQUIRED AT RISER ROOM SLAB)
  - C.J. = CONTROL JOINT/ CONSTRUCTION JOINT. TO BE COORDINATED (REF. SUBMITTAL SECTION OF GENERAL NOTES). CONTROL JOINTS SHALL BE 1" DEEP SAW CUTS TO BE MADE WITHIN 24 HRS. OF POUR.
  - REF. ARCH./PLUMBING DRAWINGS FOR DRAIN SLOPES, ELEVATIONS AND SLAB RECESSES.
  - CONTROL JOINTS (C.J.) SHALL BE LOCATED AT 12'-0" O.C. MAX. U.O.N. WITH LENGTH TO WIDTH RATIO NOT TO EXCEED 1.5:1
  - OPENING/RE-ENTRANT CORNER, TYP. PROVIDE (2) #4 X 4'-0" LONG BARS @ MID-HEIGHT OF SLAB.
  - DIAGONAL OR K-BRACE MEMBER "UP"
  - DIAGONAL OR K-BRACE MEMBER "DOWN"



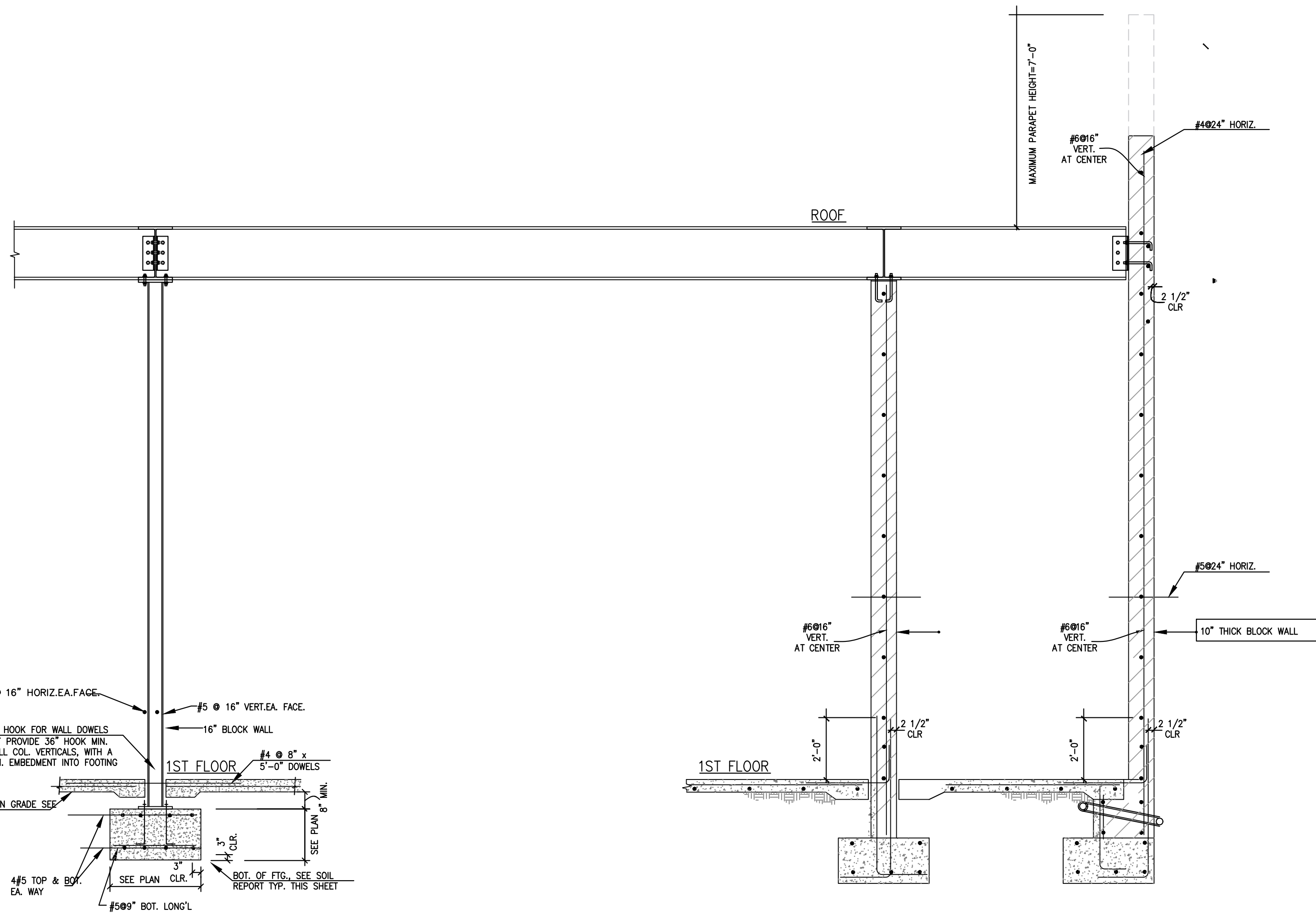




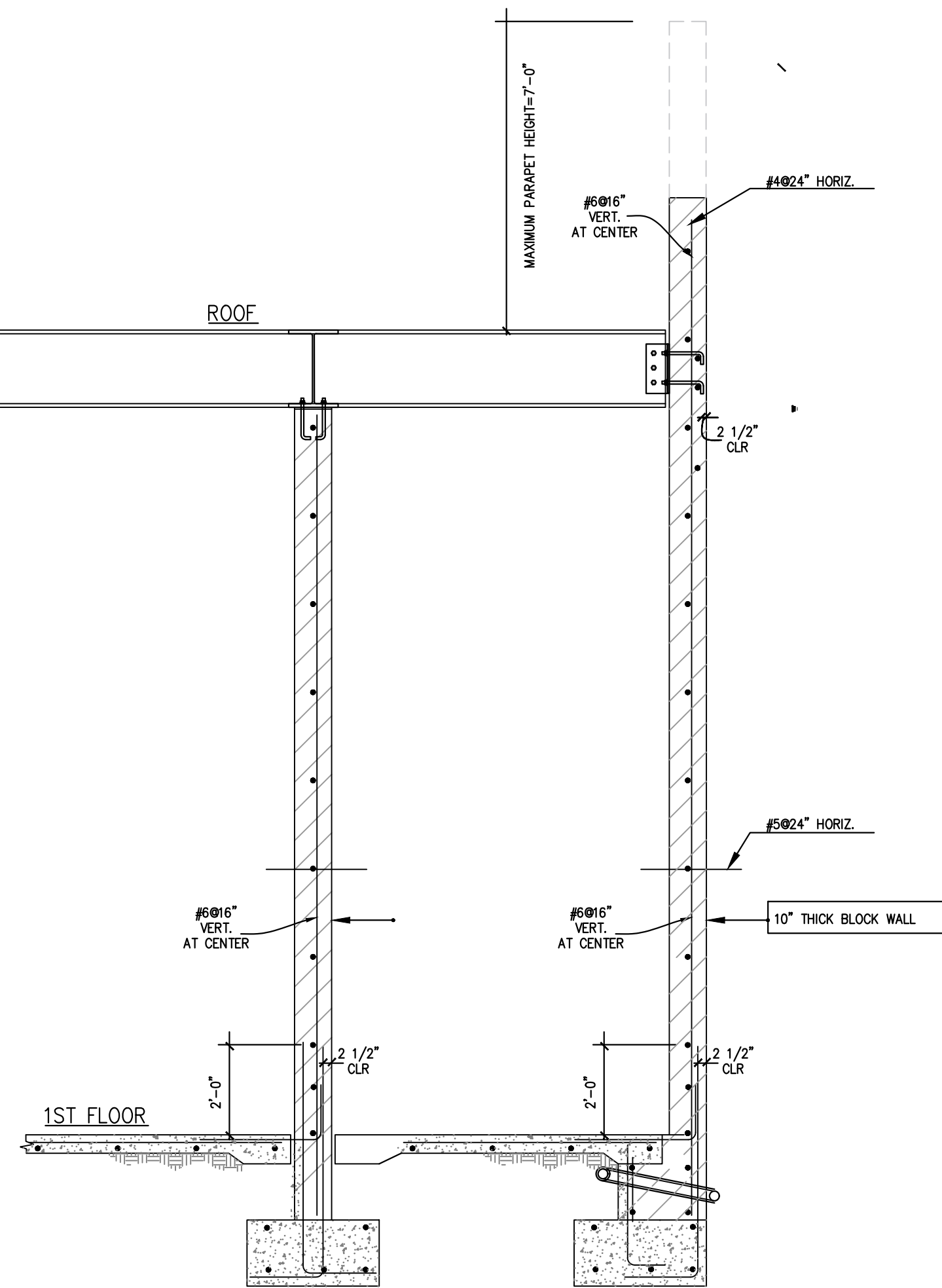
**6 SECTION**  
SCALE: N.T.S



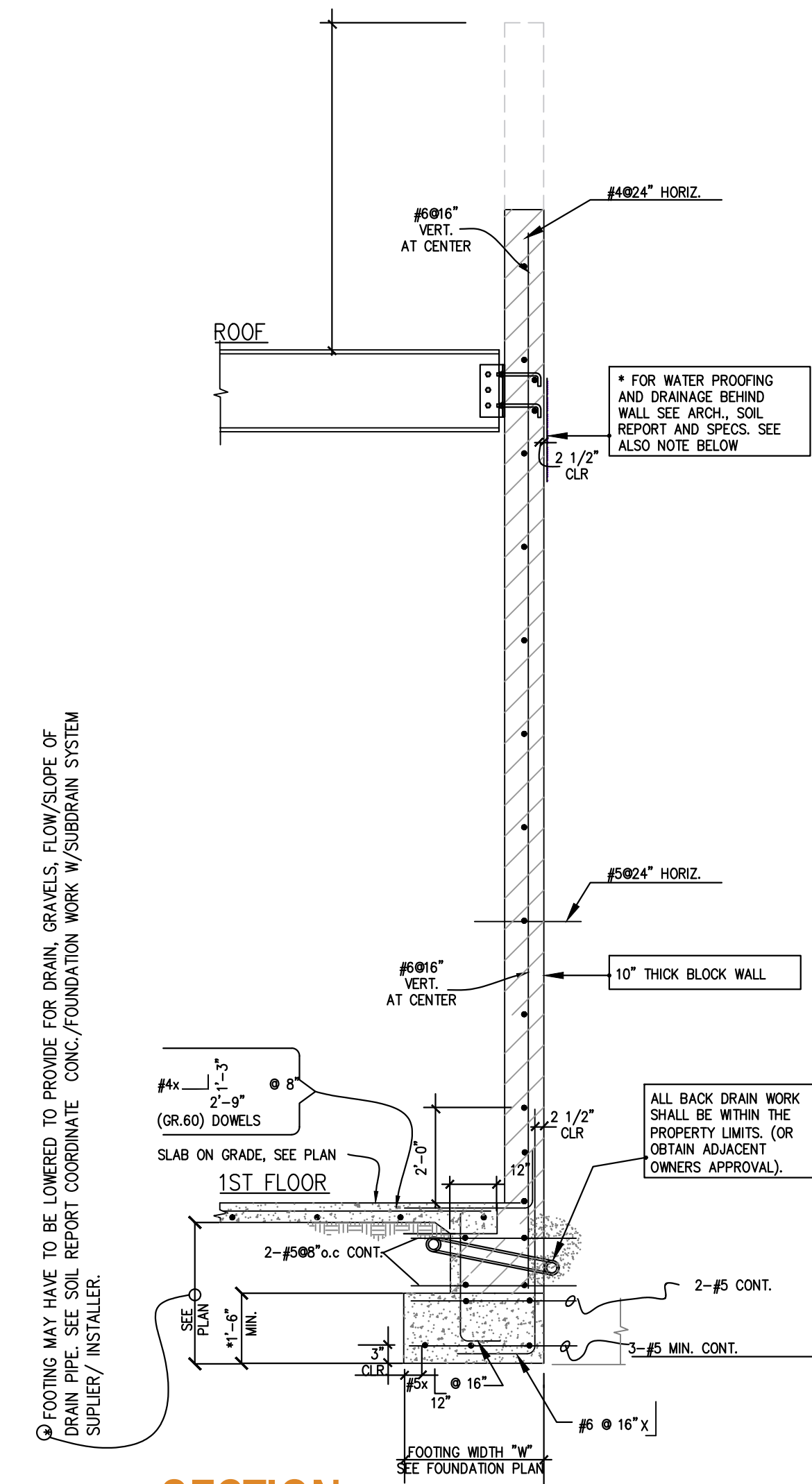
**5 SECTION**  
SCALE: N.T.S



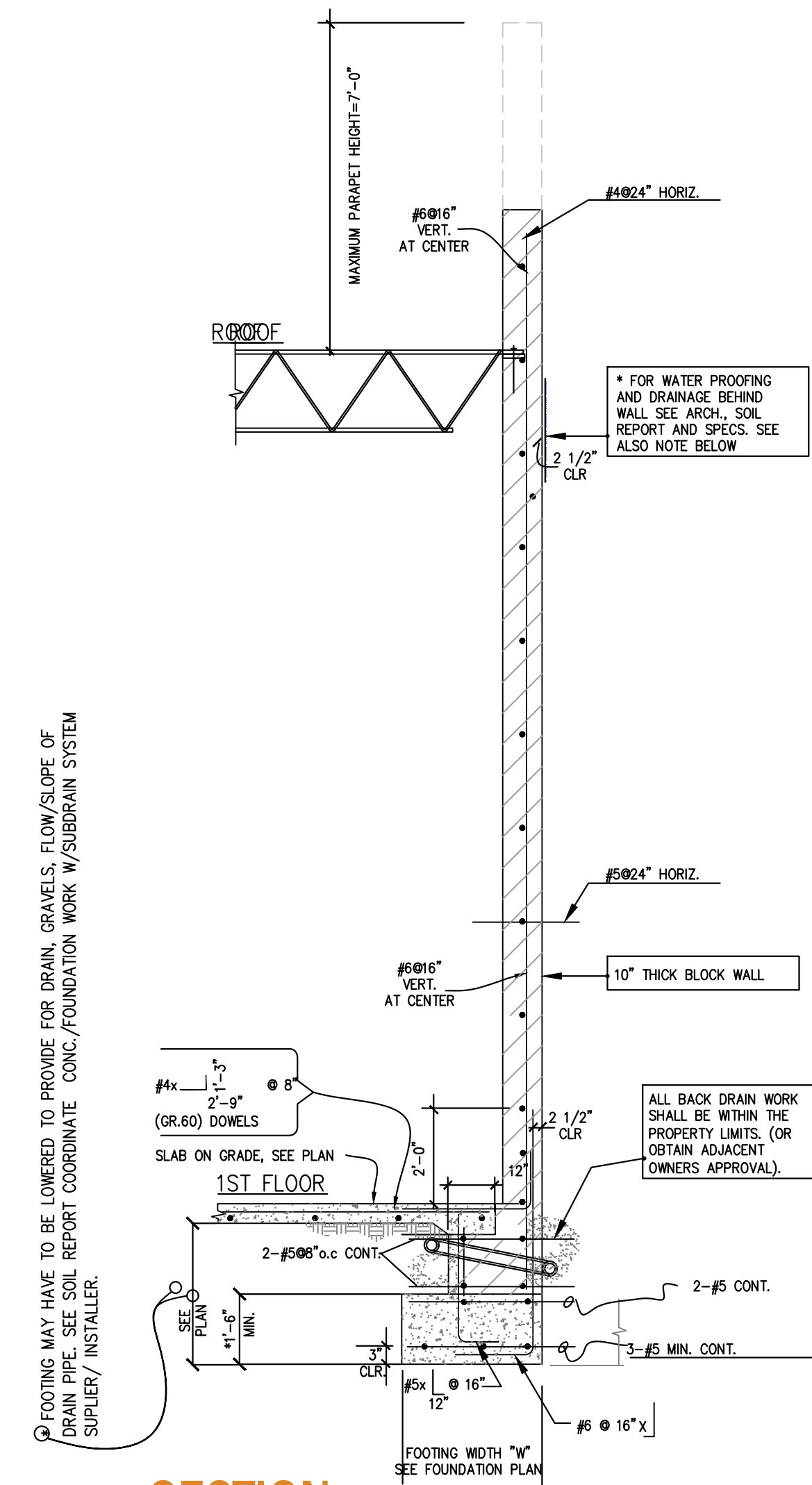
**3 SECTION**  
SCALE: N.T.S



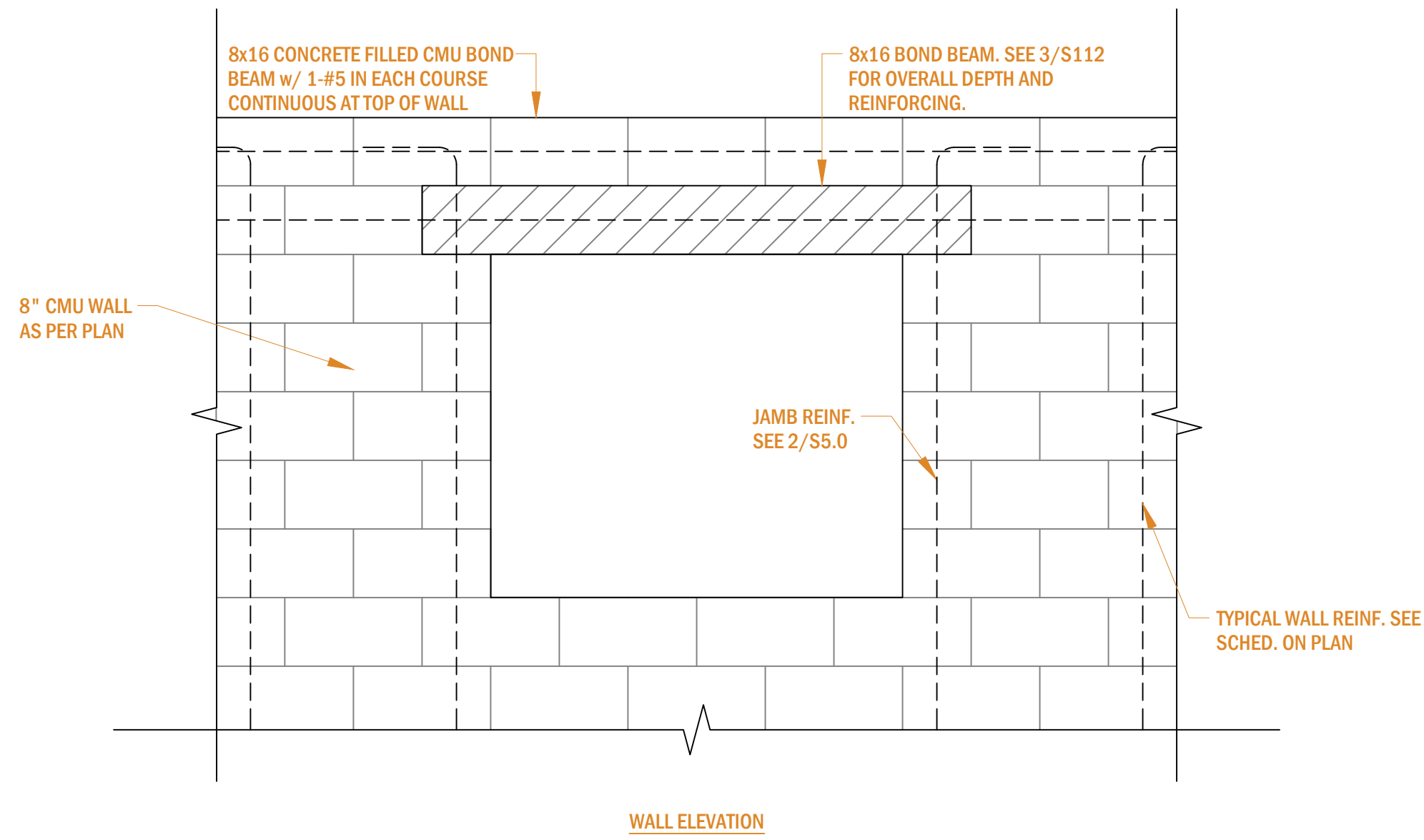
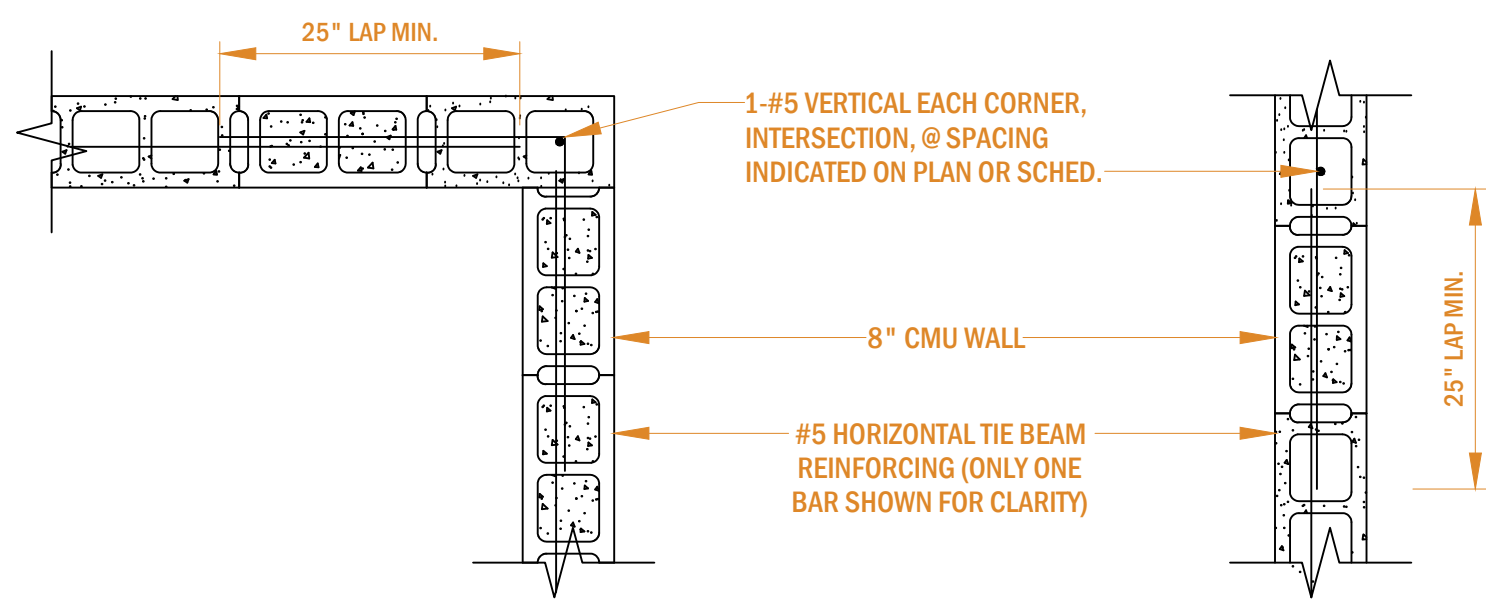
**2 SECTION**  
SCALE: N.T.S



**1 SECTION**  
SCALE: N.T.S

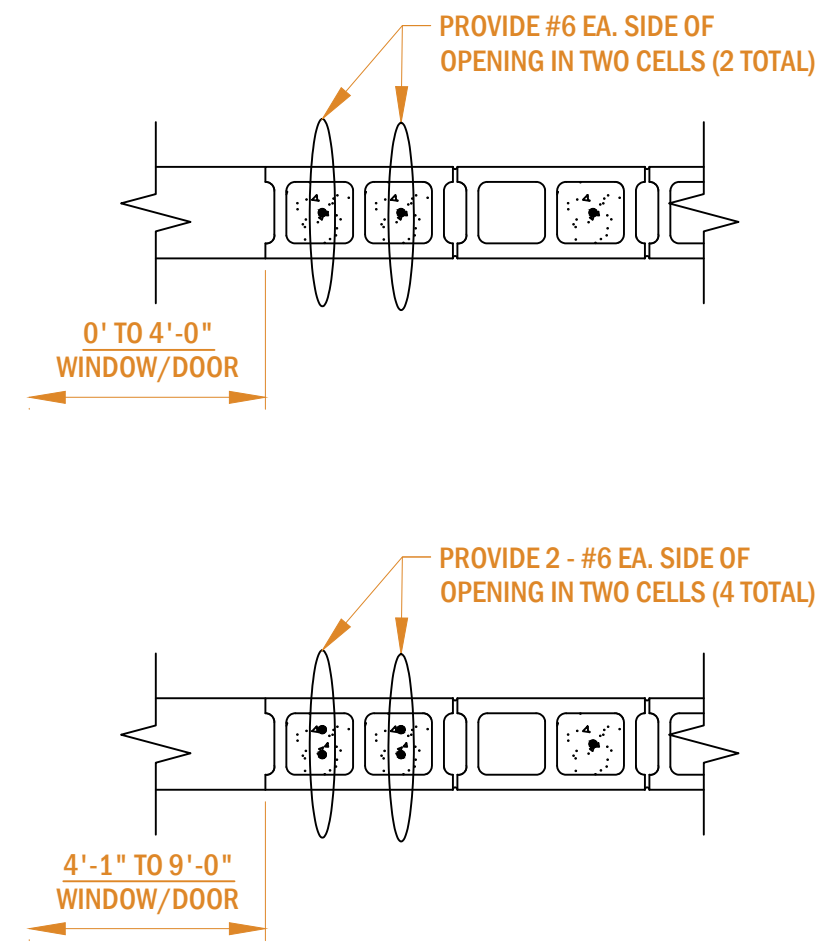


**4 SECTION**  
SCALE: N.T.S

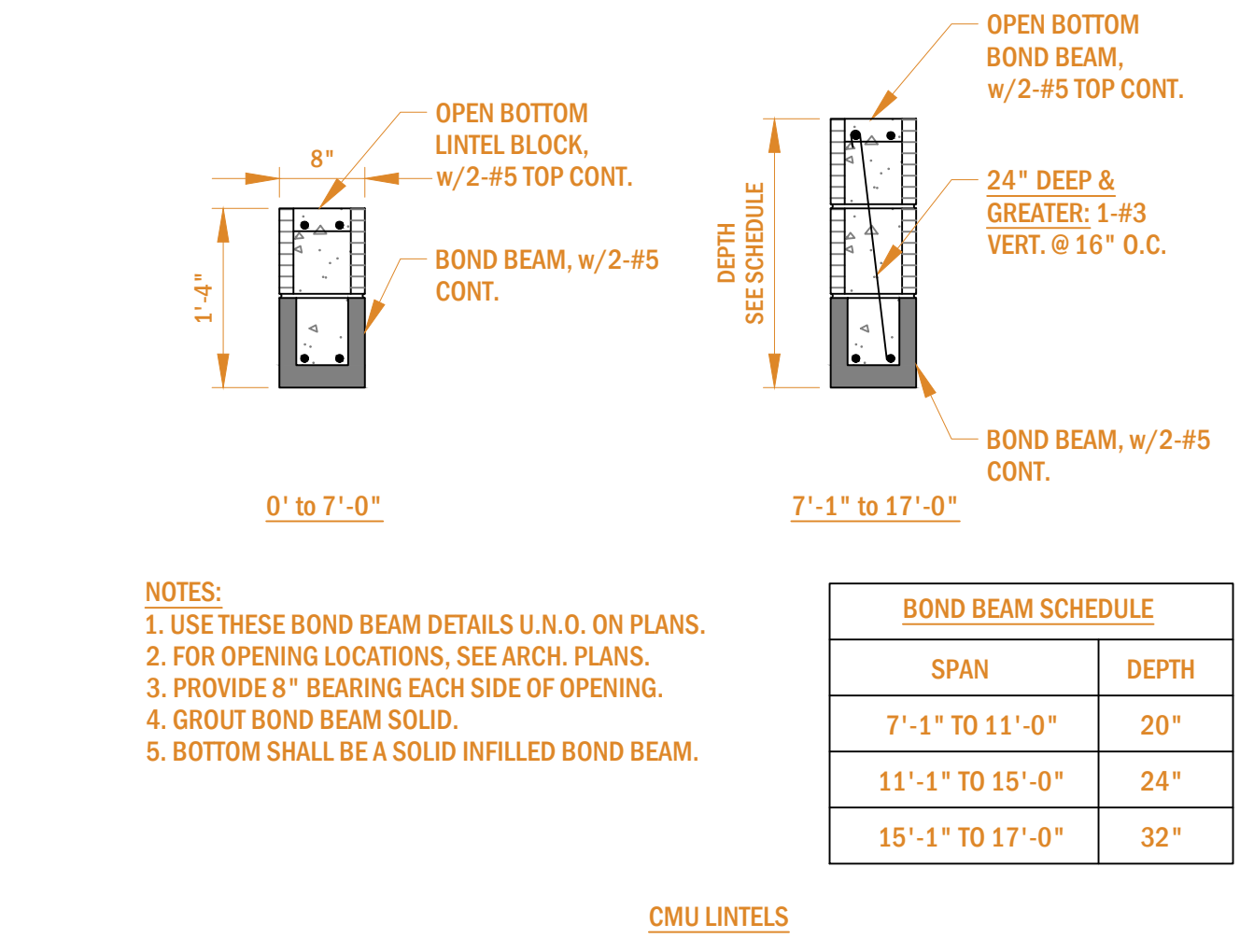
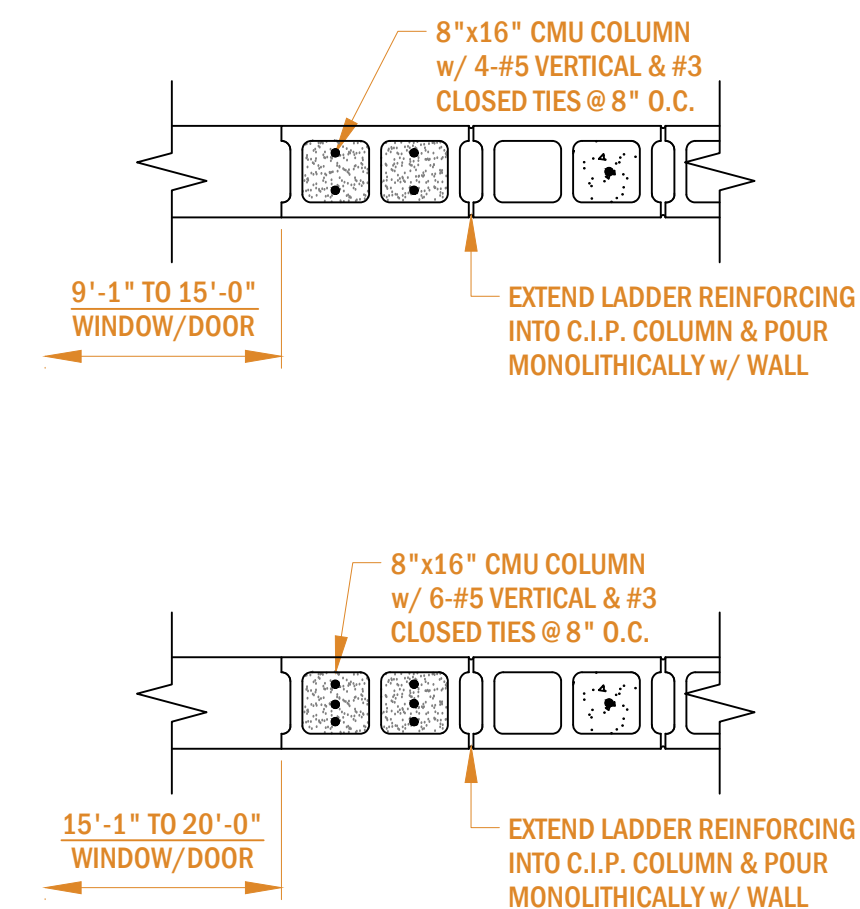


WALL ELEVATION

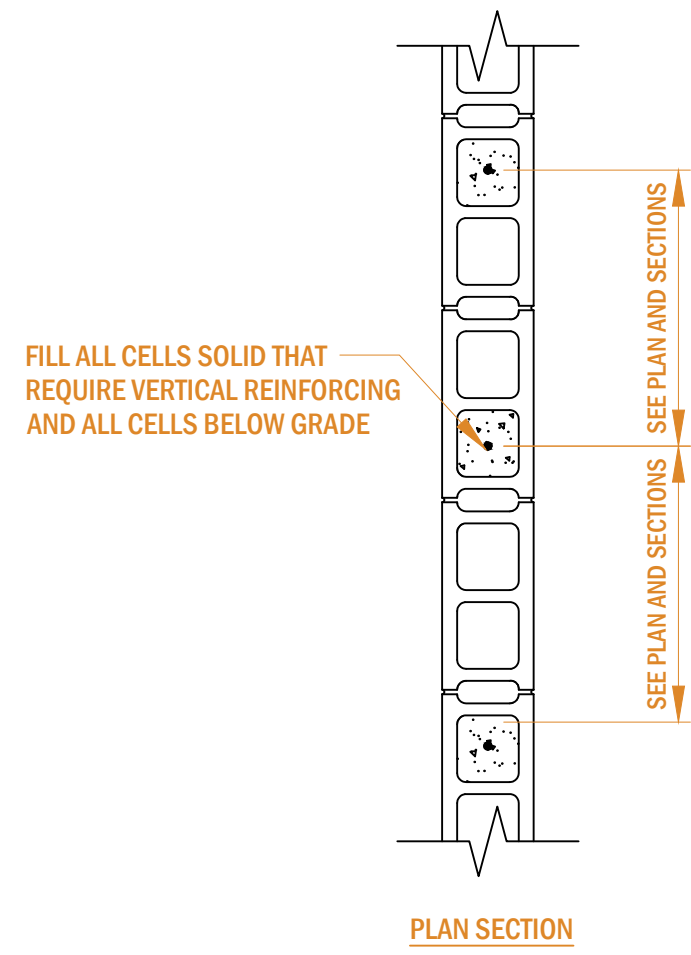
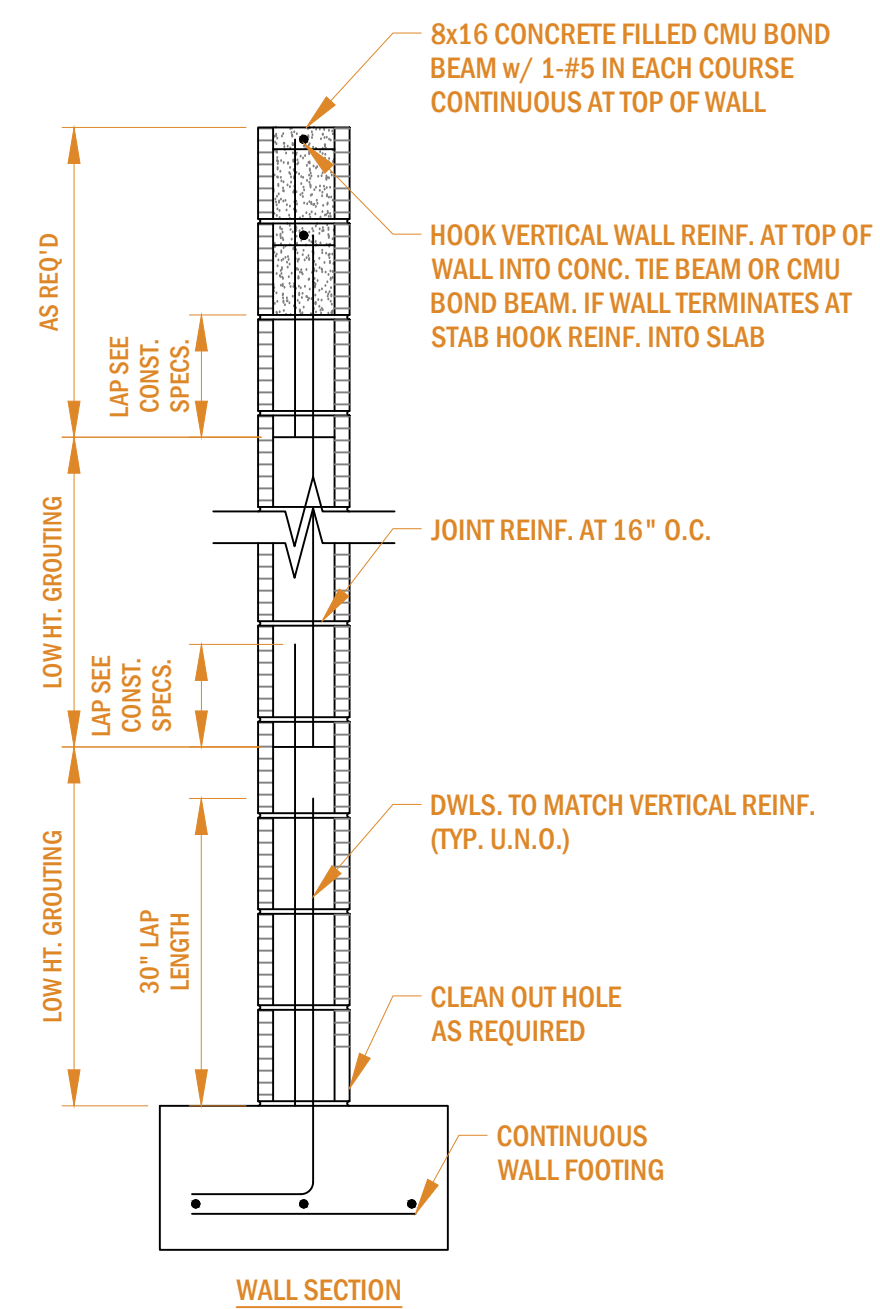
**1** DETAIL  
SCALE: 3/4" = 1'-0"



**2** JAMB REINFORCING DETAILS  
SCALE: 3/4" = 1'-0"



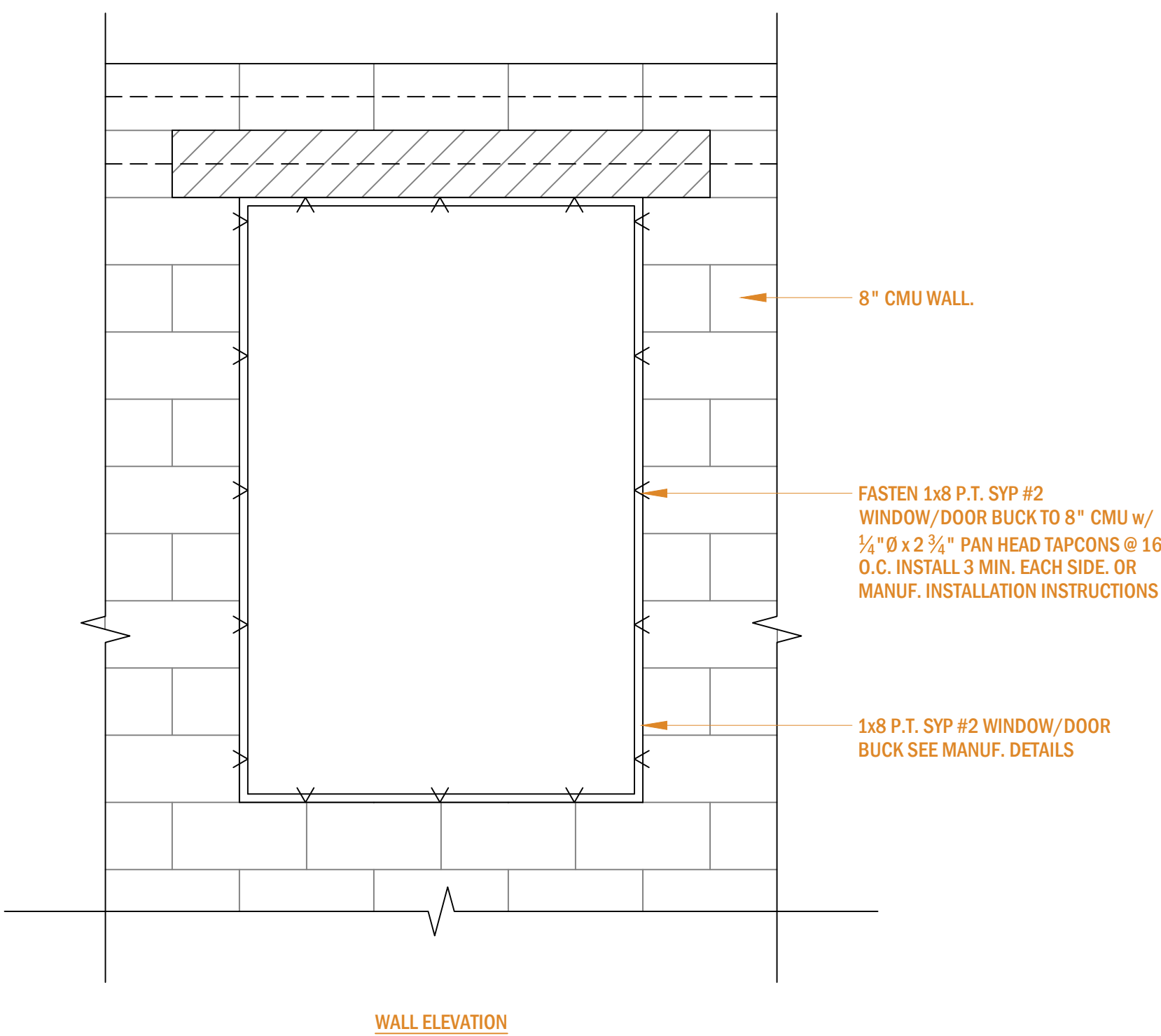
**3** CMU BOND BEAM  
SCALE: 3/4" = 1'-0"



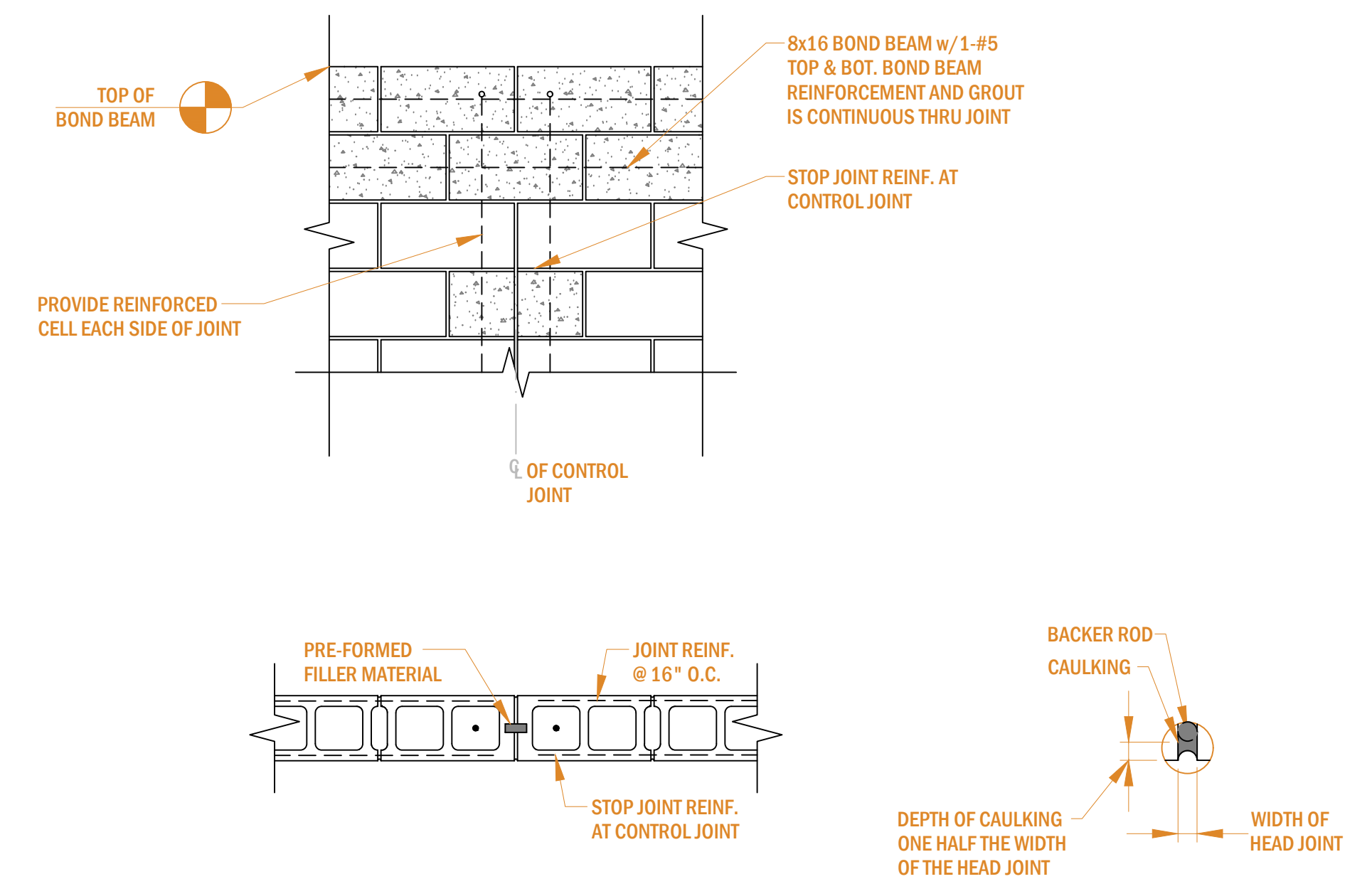
- HIGH HT. GROUTING NOTES:
1. MAXIMUM GROUT POUR HEIGHT SHALL BE 12'-0".
  2. IF HIGH LIFT GROUTING IS USED REINF. SHALL BE FULL HEIGHT AND A CLEANOUT HOLE IS REQ'D AT CELLS WITH REBAR.
  3. GROUT SHALL BE PLACED IN 5' LIFTS TO PREVENT BLOWOUTS.
  4. SEE STRUCTURAL NOTES FOR GROUT TYPE AND GROUTED CELL SIZE.

- LOW HT. GROUTING NOTES:
1. USE 5'-0" GROUT POUR HEIGHT FOR BAR SIZES #3 THRU #5
  2. USE 5'-0" GROUT POUR HEIGHT FOR BAR SIZES #7 AND ABOVE
  3. SEE STRUCTURAL NOTES FOR GROUT TYPE AND GROUTED CELL SIZE.

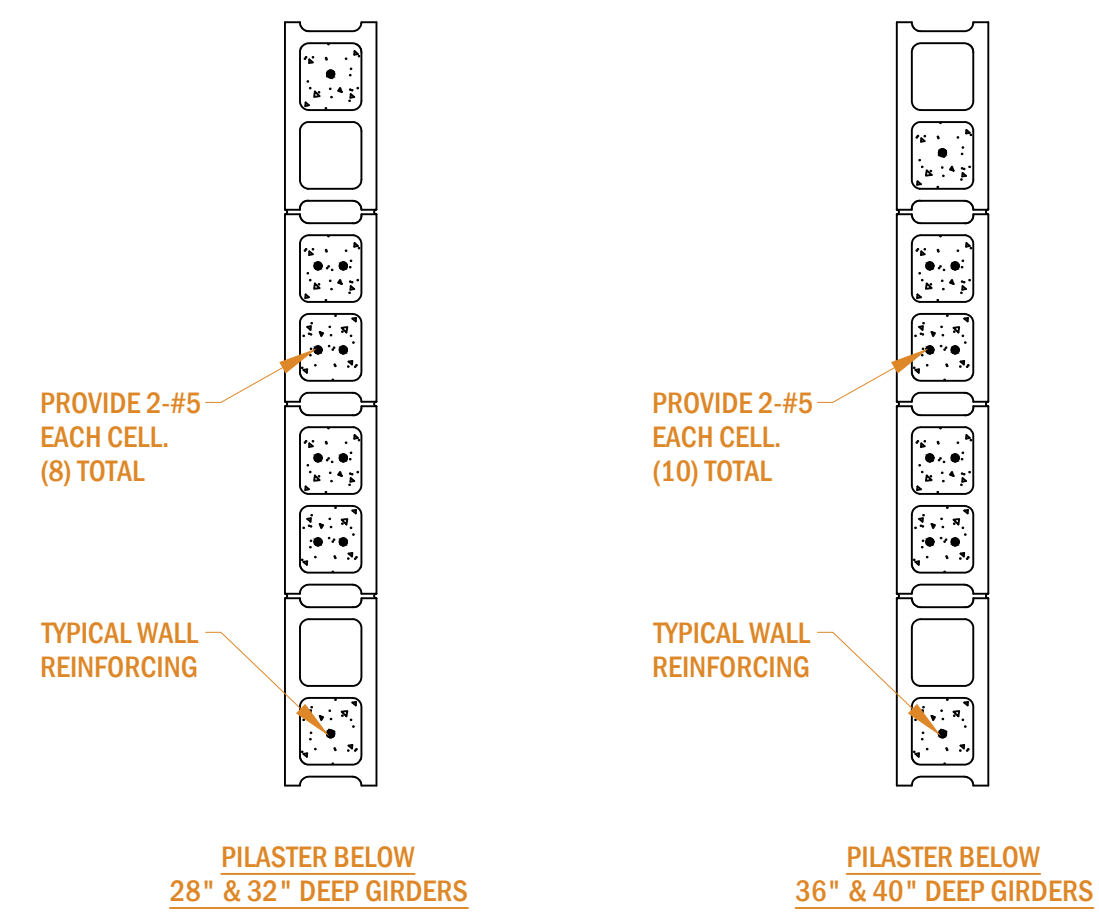
**4** DETAIL  
SCALE: 3/4" = 1'-0"



**5** STRUCTURAL WINDOW/DOOR BUCK  
SCALE: 3/4" = 1'-0"

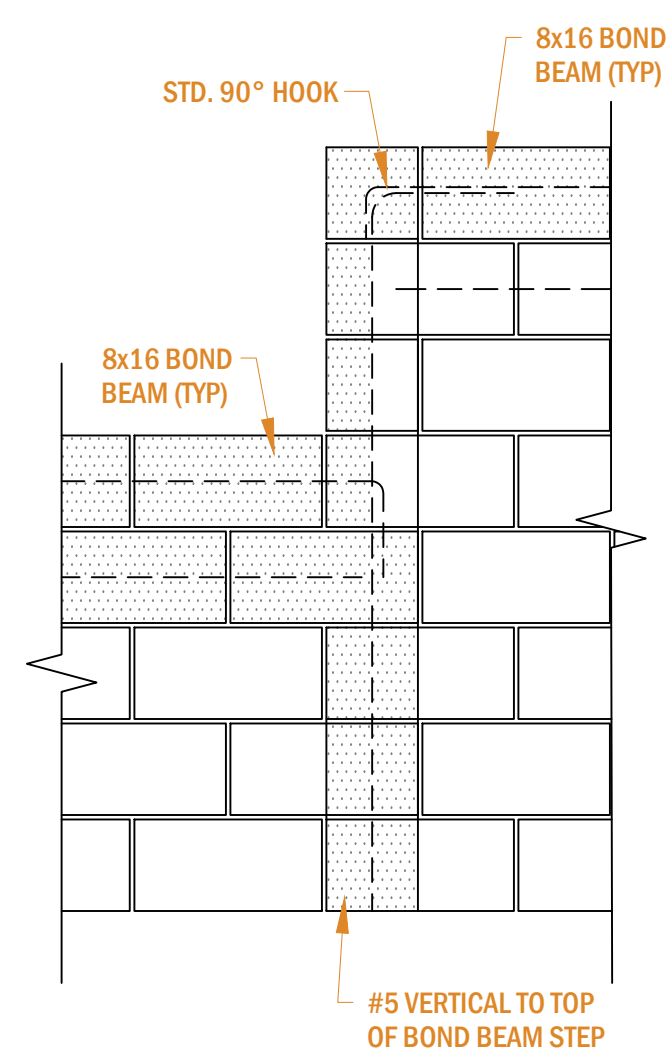


**6** CMU CONTROL JOINT  
SCALE: 3/4" = 1'-0"



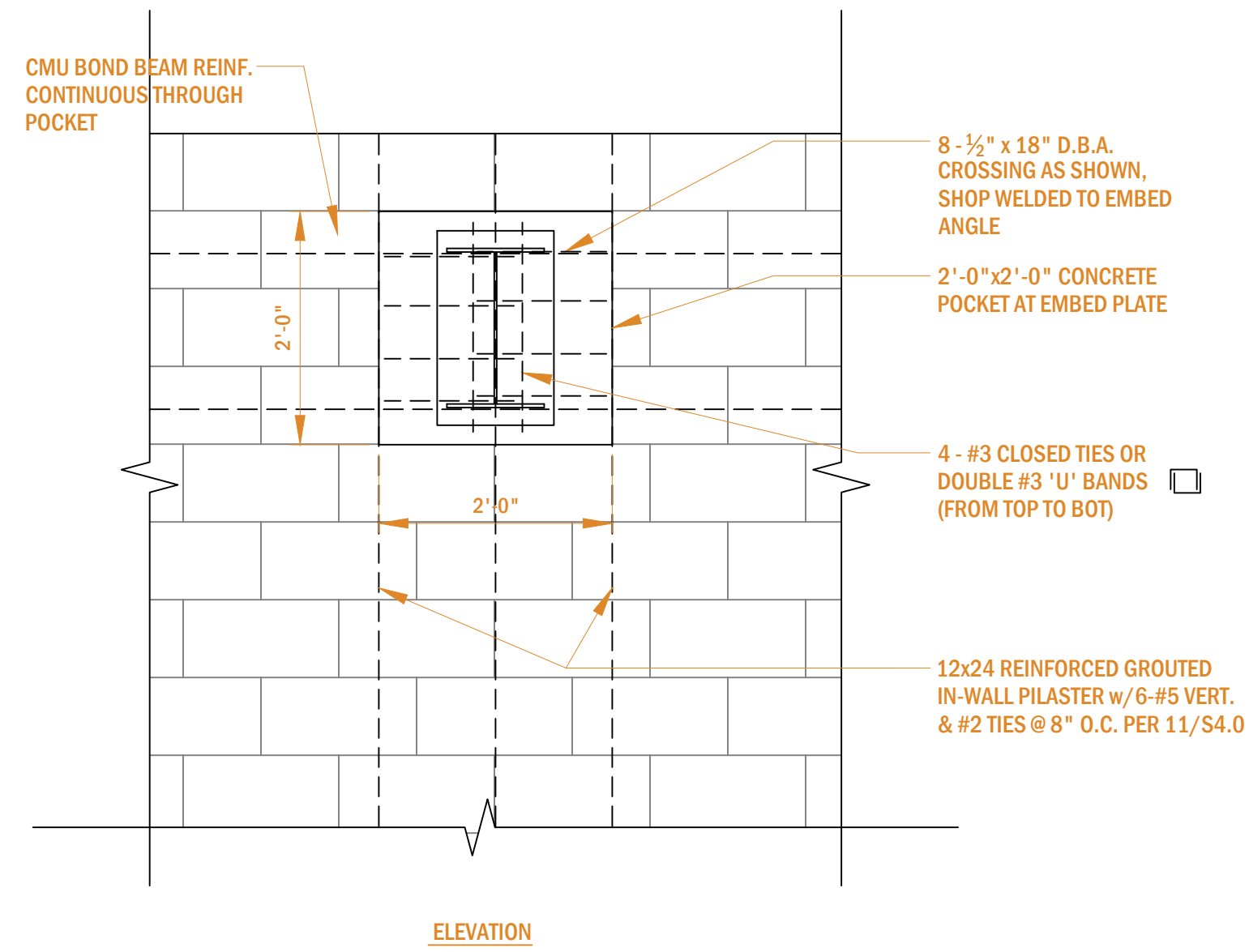
**1 CMU PILASTER AT ROOF GIRDERS**

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



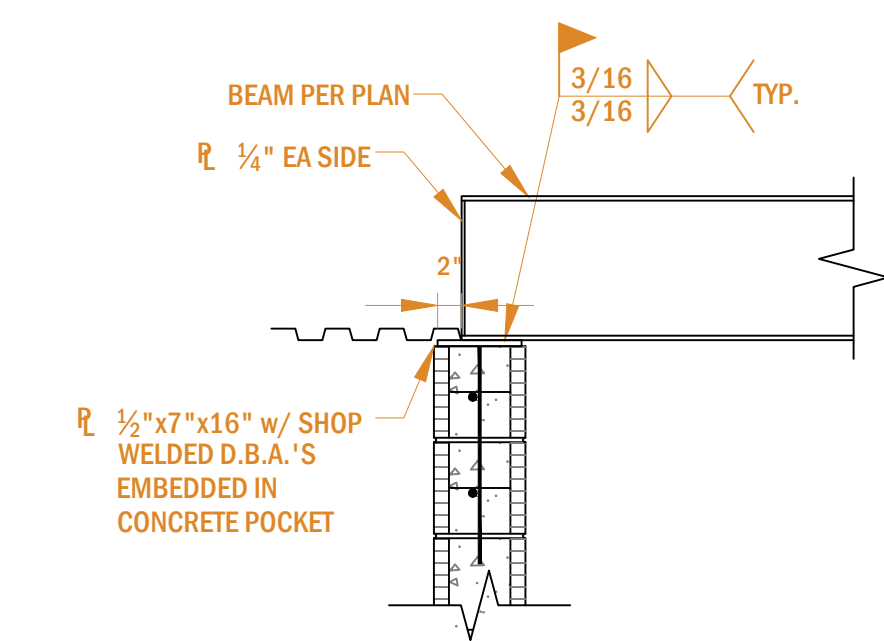
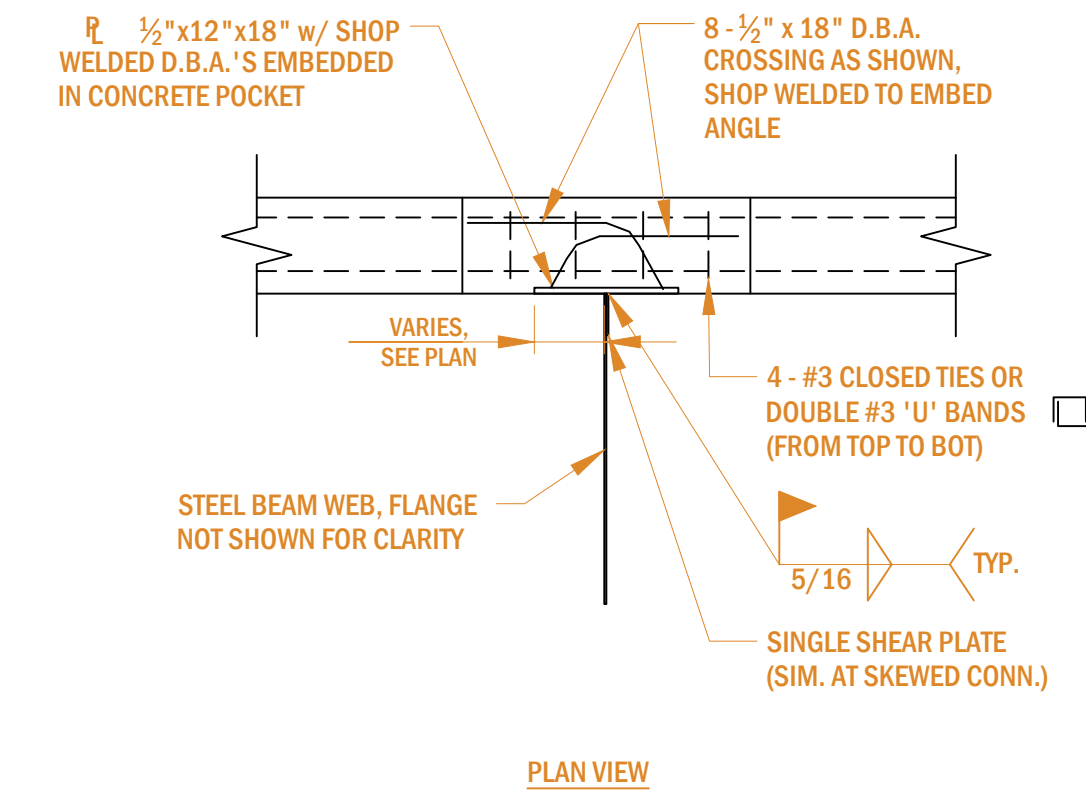
**2 CMU WALL STEP**

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



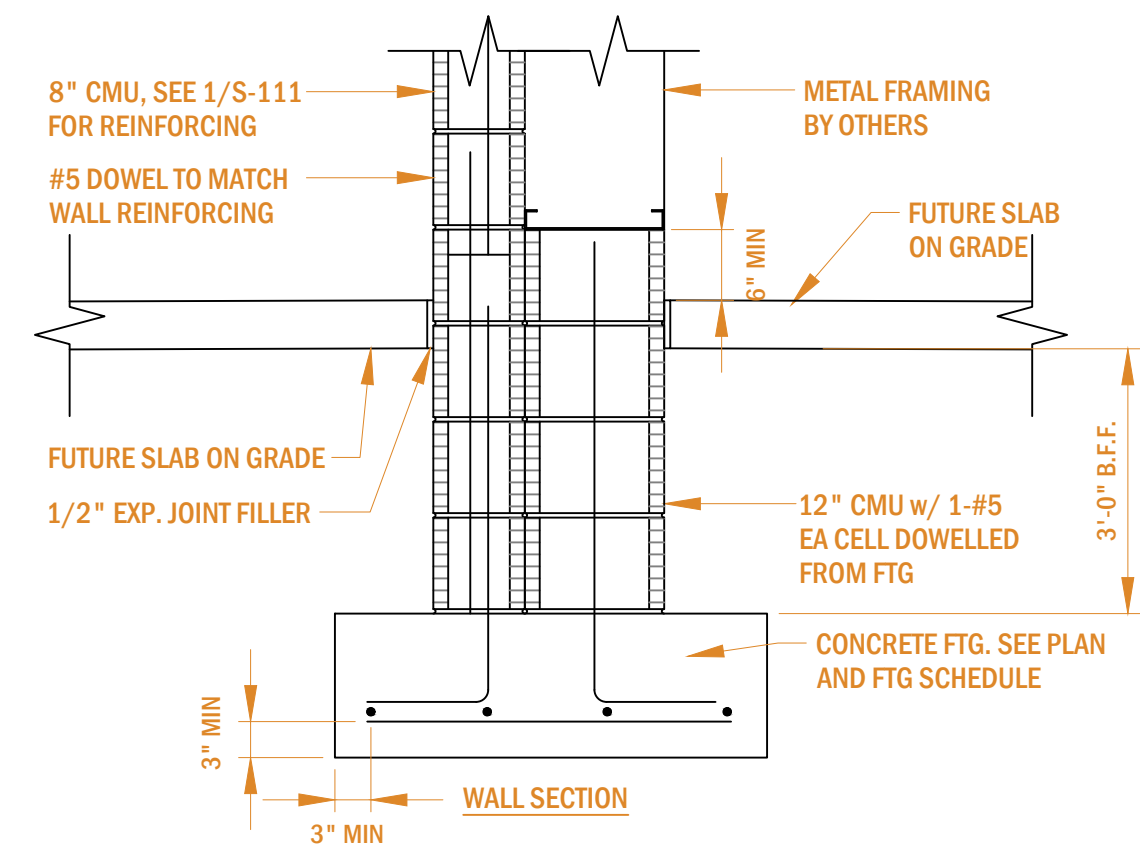
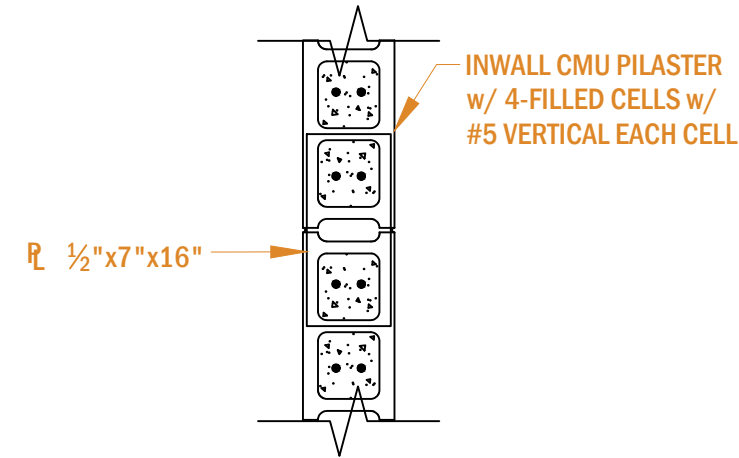
**3 STEEL BEAM TO FACE OF MASONRY WALL CONNECTION DETAIL**

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



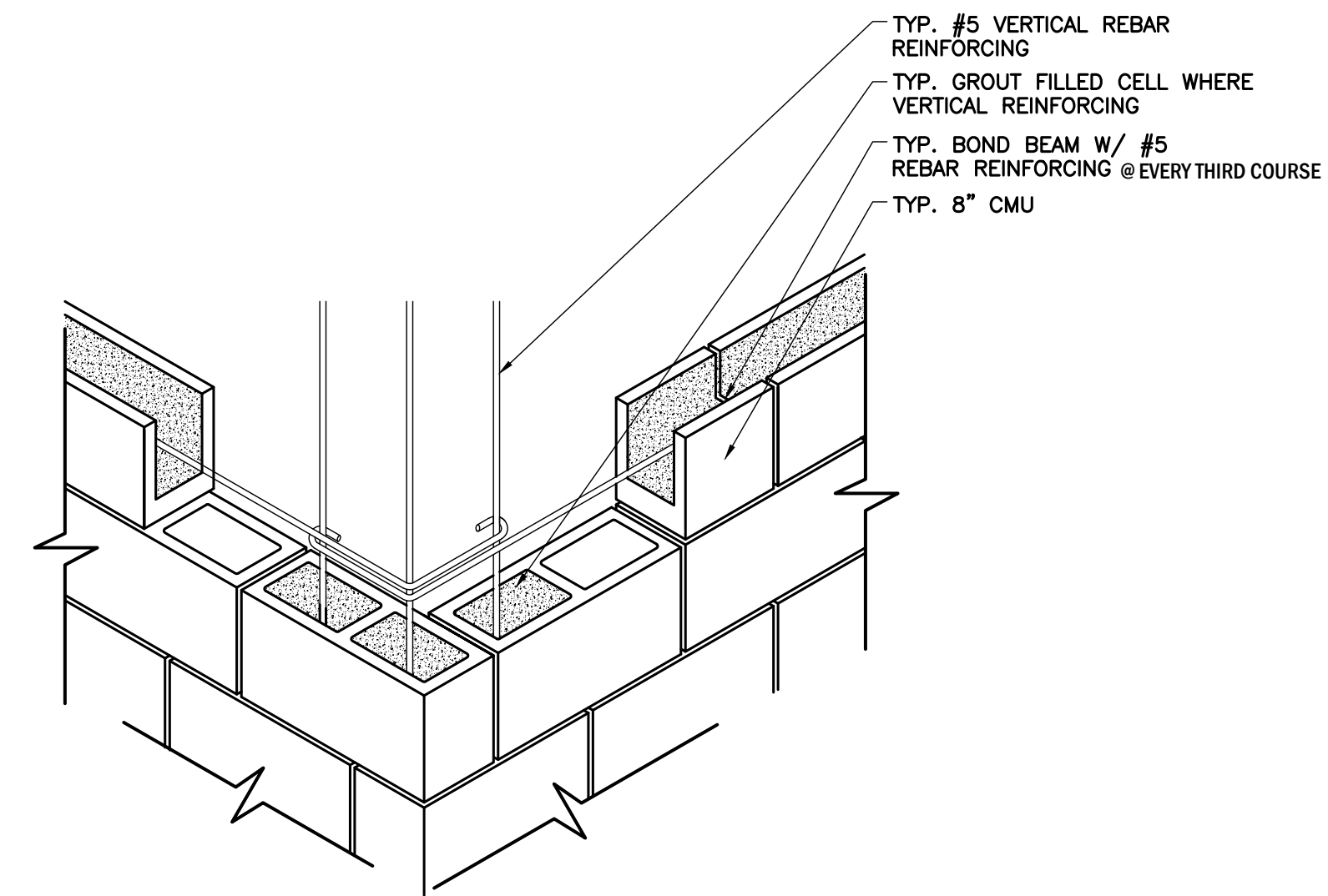
**4 STEEL BEAM ON TOP OF CMU WALL**

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



**4 WALL SECTION @ FOUNDATION**

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



**2 CMU CORNER DETAIL**

SCALE: N.T.S.