

ABBREVIATIONS

&	AND
AB	ANCHOR BOLT
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BRGC	BRACING
BS	BOTH SIDES
CB	CEILING BEAM
CIP	CAST IN PLACE
CL	CENTERLINE
CLR	CLEAR
CJ	CONTROL JOINT
CP	COMPLETE PENETRATION
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COORD	COORDINATE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
DET	DETAIL
DIA	DIAMETER
DWG	DRAWING
DWLS	DOWELS
EA	EACH
EL	ELEVATION
ELEV	ELEVATION
EQ	EQUAL
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
EXT	EXTERNAL
FDN	FOUNDATION
FF	FAR FACE
FIN	FINISH
FLR	FLOOR
FRMG	FRAMING
FS	FAR SIDE
FTG	FOOTING
GA	GAUGE
HORIZ	HORIZONTAL
HP	HIGH POINT
HSB	HIGH STRENGTH BOLTS
IE	INVERT ELEVATION
INFO	INFORMATION
INTER...	INTERMEDIATE
JT	JOINT
LONGIT	LONGITUDINAL
LP	LOW POINT
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NF	NEAR FACE
NS	NEAR SIDE
OC	ON CENTER
OPNG	OPENING...
PJ	POUR JOINT
P	PLATE
PL	PLATE
PLCS	PLACES
PRCJ	PROJECTION
REINF	REINFORCING
RJ	ROOF JOIST
RR	ROOF RAFTER
SCHED	SCHEDULE
SECT	SECTION
SIM	SIMILAR
SPECS	SPECIFICATIONS
STA	STATION
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
SYMM	SYMMETRY, SYMETRICAL
THD	THREAD
T&B	TOP AND BOTTOM
TO	TOP OF
TO FTG	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD

STRUCTURAL NOTES

STRUCTURAL DESIGN CRITERIA

D-1 CODES: EPCOT BUILDING CODE, 2018 EDITION, WIND DESIGN BASED ON ASCE 7-16.

D-2 CODES: FLORIDA FIRE PREVENTION CODE, 7TH EDITION

D-3 DESIGN LIVE LOADS:

ROOF 20 PSF

D-4 WIND DESIGN VELOCITY 140 MPH ULTIMATE RISK CATEGORY II EXPOSURE C Gcpi = +/- 0.18

D-5 PRESUMED ALLOWABLE SOIL BEARING PRESSURES: 2000 PSF

GENERAL NOTES

G-1 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND START OF CONSTRUCTION. REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO PROCEEDING WITH WORK.

G-2 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN SIZE OR STRENGTH WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER OF RECORD.

G-3 ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT UNLESS A SEPARATE DETAIL IS SHOWN.

G-4 THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO PROVIDE ALL NECESSARY DETAILS TO CONSTRUCT A COMPLETE STRUCTURE. WHEN SPECIFIC INFORMATION IS MISSING OR IN CONFLICT, THE CONTRACTOR SHALL USE A SIMILAR DETAIL AND/OR THE MORE COSTLY ITEM OF CONFLICT. IF A DOUBT STILL EXISTS, CONTACT THE ARCHITECT/ENGINEER.

G-5 REPRODUCTIONS OF THE CONTRACT DOCUMENTS SHALL NOT BE USED IN THE PREPARATION OF SHOP OR ERECTION DRAWINGS.

STRUCTURAL STEEL

S-1 ALL STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL COMPLY WITH ASTM A-992 WITH A MINIMUM YIELD STRENGTH OF 50 KSI. ALL MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A-36 WITH A MINIMUM YIELD STRENGTH OF 36 KSI UNLESS NOTED OTHERWISE.

S-2 FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC "STEEL CONSTRUCTION MANUAL", FOURTEENTH EDITION, AND AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", 2010 EDITION.

S-3 ALL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A-325. ALL BOLTS SHALL BE 3/4" DIAMETER UNLESS NOTED OTHERWISE. ALL BOLTS ARE IN BEARING TYPE CONNECTIONS UNLESS OTHERWISE INDICATED. THREADS OF BOLTS SHALL BE EXCLUDED FROM THE SHEAR PLANES.

S-4 NUTS FOR STRUCTURAL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A563. WASHERS FOR STRUCTURAL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM F436.

S-5 BOLTS, NUTS AND WASHERS SHALL BE PLAIN FINISH UNLESS NOTED OTHERWISE.

S-6 BOLTS SHALL BE TIGHTENED TO A "TIGHT" CONDITION PER THE REQUIREMENTS OF AISC UNLESS NOTED OTHERWISE.

S-7 BOLTS SHALL BE FULLY PRETENSIONED (WHERE INDICATED) BY USE OF SPECIAL BOLTS WITH TWIST OFF TIP (LEJEUNE BOLTS), BY TURN OF THE NUT METHOD OR BY USE OF A LOAD INDICATING DEVICE / WASHER.

S-8 ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH THE AWS CODE "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1), LATEST EDITION.

S-9 USE E70XX ELECTRODES FOR ALL WELDING UNLESS NOTED OTHERWISE.

S-10 ALL SHOP AND FIELD WELDS SHALL BE INSPECTED BY AN INDEPENDENT THIRD PARTY ENGINEER AND A REPORT OF INSPECTION SHALL BE SUBMITTED FOR REVIEW. MAGNETIC PARTICLE OR DYE PENETRANT SHALL BE USED TO VERIFY WELDS.

S-11 ALL SHOP AND FIELD BOLTED CONNECTIONS SHALL BE INSPECTED BY AN INDEPENDENT THIRD PARTY ENGINEER AND A REPORT OF INSPECTION SHALL BE SUBMITTED FOR REVIEW. A MINIMUM OF 10% OF ALL BOLTS SHALL BE TESTED WITH TORQUE WRENCH.

S-12 ALL BOLTS CAST INTO CONCRETE SHALL BE ASTM A-36 OR ASTM A-307. ANCHOR BOLTS SHALL BE SET USING A TEMPLATE

S-13 PIPE SECTIONS SHALL CONFORM TO ASTM A-53, TYPE E OR S, GRADE B, WITH A MINIMUM YIELD STRENGTH OF 36 KSI.

S-14 TUBE SECTIONS SHALL CONFORM TO ASTM A-500, GRADE B, WITH A MINIMUM YIELD STRENGTH OF 46 KSI.

S-15 STEEL STUDS SHALL BE WELDED WITH A STUD WELDING GUN OR SIMILAR METHOD. MANUAL ARC WELDING OF STUDS IS NOT PERMITTED.

S-16 GROUT FOR BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK GROUT EQUAL TO FIVE STAR GROUT, AS MANUFACTURED BY U.S. GROUT, INC.

S-17 HOLES DRILLED INTO CONCRETE FOR SETTING ANCHOR BOLTS IN EPOXY SHALL BE BLOWN OUT WITH COMPRESSED AIR, THEN BRUSHED OUT WITH A WIRE BRUSH OF THE APPROPRIATE DIAMETER, AND THEN BLOWN OUT AGAIN WITH COMPRESSED AIR PRIOR TO PLACEMENT OF THE EPOXY.

S-18 STAINLESS STEEL FOR SHAPES, PLATES AND MISCELLANEOUS PARTS SHALL BE TYPE 304 OR 316 AS NOTED.

S-19 CONSUMABLES FOR WELDING OF STAINLESS STEEL TO STAINLESS STEEL SHALL BE TYPE ER308L FOR TYPE 304 TO TYPE 304, TYPE ER316L FOR TYPE 316 TO TYPE 316 AND TYPE ER316L FOR TYPE 304 TO TYPE 316.

S-20 CONSUMABLES FOR WELDING TYPE 304 OR 316 STAINLESS STEEL TO CARBON STEEL SHALL BE TYPE ER309L.

S-21 STAINLESS STEEL BOLTS, NUTS AND WASHERS SHALL BE TYPE 304 OR 316 STAINLESS STEEL, AS NOTED.

S-22 STAINLESS STEEL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM F593, FABRICATED FROM TYPE 304 OR 316 AS NOTED. BOLTS SHALL ANNEALED.

S-23 SUBMIT STRUCTURAL STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION OF STRUCTURAL STEEL. SHOP DRAWINGS TO SHOW ALL PIECE MARKS, CONNECTIONS AND ERECTION DRAWINGS. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.

REINFORCED CONCRETE

RC-1 ALL CONCRETE DESIGN AND PLACEMENT SHALL BE IN STRICT ACCORDANCE WITH ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-08) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301-00).

RC-2 STRUCTURAL CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS AND SHALL DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI FOR ALL ELEMENTS EXCEPT SLAB ON GRADE AND FOUNDATIONS WHICH SHALL BE 3000 PSI. MAXIMUM WATER CEMENT RATIO SHALL BE 0.50.

RC-3 CEMENT SHALL BE ASTM C150, TYPE I UNLESS NOTED OTHERWISE. MINIMUM CEMENT CONTENT SHALL BE 470 POUNDS. UP TO 25% OF CEMENTITIOUS MATERIAL MAY BE FLYASH.

RC-4 USE REGULAR WEIGHT CONCRETE FOR ALL STRUCTURAL MEMBERS, MINIMUM 140 PCF.

RC-5 AGGREGATES SHALL BE CLEAN, WELL GRADED AND SIZED AS FOLLOWS AND CONCRETE MIXES USING THEM SHALL HAVE THE FOLLOWING SLUMPS:

LOCATION	SLUMP	LARGE AGGREGATE SIZE
FOUNDATIONS	3"+/- 1"	#57 OR #67
COLUMNS/BEAMS/WALLS UP TO 10" MIN. DIM.	8" MAX.*	#89 OR 3/8"
COLUMNS/BEAMS/WALLS OVER 10" MIN DIM.	8" MAX.*	#57 OR #67
SLABS ON GRADE STRUCTURAL SLABS	8" MAX.*	#57 OR #67
WORKING SLABS	4"+/- 1"	#57 OR #67
TOPPING SLABS	8" MAX.*	#89 OR 3/8"
STAIRS/SLOPING SURFACES	3"+/- 1"	#57 OR #67
MISCELLANEOUS (EQUIPMENT PADS ETC.)	AS REQ'D	AS REQ'D
*INDICATES SUPERPLASTICIZED CONCRETE		

RC-6 USE OF "JITTERBUGS" TO CONSOLIDATE CONCRETE WILL NOT BE PERMITTED.

RC-7 CONCRETE SHALL BE PLACED IN FORMS AS NEAR AS POSSIBLE TO ITS FINAL LOCATION. CONCRETE SHALL BE CONSOLIDATED BY MECHANICAL VIBRATORS. VIBRATORS SHALL NOT BE USED TO MOVE CONCRETE.

RC-8 SCREED CONCRETE SLABS TO REQUIRED PLANE, FLOAT WITH BULL FLOAT AND FINISH WITH STEEL TROWEL TO SMOOTH CONCRETE FINISH UNLESS NOTED OTHERWISE. WALKWAYS AND SIMILAR SURFACES SHALL HAVE BROOM FINISH.

RC-9 APPLY LIQUID MEMBRANE FORMING CURING COMPOUND EQUAL TO ASTM C309 COMPATIBLE WITH SUBSEQUENT FINISHES TO BE APPLIED TO CONCRETE.

RC-10 IF CONCRETE IS TO BE PUMPED, THE MINIMUM PUMP SIZE SHALL BE 4" FOR #57 AND #67 AGGREGATES, AND SHALL BE 2" FOR #89 AND 3/8" AGGREGATES. SLUMP IS TO BE MEASURED AT THE DISCHARGE POINT OF THE CONCRETE.

RC-11 ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED IN ACCORDANCE WITH ACI-318 AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE ACI-315, LATEST EDITION.

RC-12 REINFORCING STEEL SHALL BE NEW BILLET DEFORMED BARS, FREE OF SCALE, RUST, OIL OR OTHER SUBSTANCES INHIBITING BOND CONFORMING TO ASTM A-615, GRADE 60, WITH MINIMUM YIELD STRENGTH OF 60,000 PSI.

RC-13 LAP BOTTOM STEEL 12" OVER SUPPORTS FOR BEAMS AND SIMILAR FRAMING MEMBERS UNLESS OTHERWISE NOTED. FOR ALL OTHER REINFORCING (HORIZONTAL OR VERTICAL) USE FOLLOWING LAP SPLICE LENGTHS:

LAP SPLICE REQUIREMENTS:			
BAR SIZE AND LAP LENGTH			
f <sub>c</sub> =3000 PSI	TOP BAR*	NON-TOP BAR OR VERTICAL	
	#3	28"	22"
	#4	37"	29"
	#5	47"	36"
	#6	56"	43"
	#7	81"	63"
	#8	93"	72"
	#9	105"	81"
	#10	118"	91"
	#11	131"	101"
f <sub>c</sub> =4000 PSI	TOP BAR*	NON-TOP BAR OR VERTICAL	
	#3	24"	19"
	#4	32"	25"
	#5	40"	31"
	#6	48"	37"
	#7	70"	54"
	#8	80"	62"
	#9	91"	70"
	#10	102"	79"
	#11	113"	87"
f <sub>c</sub> =5000 PSI	TOP BAR*	NON-TOP BAR OR VERTICAL	
	#3	22"	17"
	#4	29"	22"
	#5	36"	28"
	#6	43"	33"
	#7	63"	49"
	#8	72"	55"
	#9	81"	63"
	#10	91"	70"
	#11	101"	78"

STEEL JOISTS

SJ-1 ALL DESIGN, FABRICATION, AND ERECTION OF STEEL JOISTS AND BRIDGING SHALL BE IN STRICT ACCORDANCE WITH THE CURRENT SPECIFICATIONS OF THE STEEL JOIST INSTITUTE. SUBMIT SIGNED AND SEALED CALCULATIONS FOR JOISTS PREPARED BY AN ENGINEER LICENSED IN THE STATE OF FLORIDA.

SJ-2 DESIGN STEEL ROOF JOISTS FOR UPLIFT FORCES PER WIND UPLIFT DIAGRAMS OF THE ROOF AS SHOWN ON THE DRAWINGS UNLESS NOTED OTHERWISE. DEAD LOAD OF ROOF SHALL BE CONSIDERED AS 7.5 POUNDS PER SQUARE FOOT AND MAY BE SUBTRACTED FROM THE WIND UPLIFT VALUES FOR DESIGN PURPOSES.

SJ-3 BOTTOM CHORD OF ALL JOISTS SHALL BE CONSTRUCTED OF DOUBLE ANGLES.

SJ-4 STEEL JOISTS SHALL BE WELDED TO SUPPORTING STRUCTURAL STEEL WITH 2 – 3/16" FILLET WELDS, EACH 2 INCHES LONG ALONG EDGES OF JOIST SEAT OR CONNECTED WITH 2 – 1/2" ASTM A 307 BOLTS.

SJ-5 REFER TO SPECIFIC DETAILS FOR THE LENGTH OF BEARING ENDS AND BOTTOM CHORD EXTENSIONS. COORDINATE BOTTOM CHORD EXTENSION REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.

SJ-6 PROVIDE HORIZONTAL TOP AND BOTTOM CHORD BRIDGING, AND "X" BRIDGING PER STEEL JOIST INSTITUTE SPECIFICATIONS AND AS SHOWN ON PLANS.

SJ-7 PROVIDE UPLIFT BRIDGING AS REQUIRED TO MEET STEEL JOIST INSTITUTE SPECIFICATIONS AND AS SHOWN ON PLANS.

SJ-8 ANCHOR ENDS OF ALL BRIDGING. WHERE BRIDGING TERMINATES AT CONCRETE OR MASONRY, PROVIDE A 3x3x1/4 ANGLE x 8" LONG WITH 2 - 1/2" DIAMETER x 6" WEDGE ANCHORS. WHERE BRIDGING TERMINATES AT STEEL FRAMING, WELD BRIDGING TO MEMBER.

SJ-9 TOP CHORD MEMBERS SHALL BE DESIGNED FOR A SUPERIMPOSED POINT LOAD OF 200 POUNDS LOCATED AT ANY POINT BETWEEN ANY TWO TOP CHORD PANEL POINTS.

SJ-10 BOTTOM CHORD MEMBERS SHALL BE DESIGNED FOR A SUPERIMPOSED POINT LOAD OF 200 POUNDS LOCATED AT ANY POINT BETWEEN ANY TWO BOTTOM CHORD PANEL POINTS.

SJ-11 IF A POINT LOAD GREATER THAN 200 POUNDS IS LOCATED BETWEEN ANY TWO TOP CHORD PANEL POINTS PROVIDE A PAIR OF BACK TO BACK L2-1/2 x 2-1/2 x 1/4" ANGLES FROM THE LOCATION OF THE LOAD TO THE NEAREST BOTTOM CHORD PANEL POINT. WELD WITH 3/16 INCH FILLET WELDS AT ALL POINTS OF CONTACT.

SJ-12 IF A POINT LOAD GREATER THAN 200 POUNDS IS LOCATED BETWEEN ANY TWO BOTTOM CHORD PANEL POINTS PROVIDE A PAIR OF BACK TO BACK L2-1/2 x 2-1/2 x 1/4" ANGLES FROM THE LOCATION OF THE LOAD TO THE NEAREST TOP CHORD PANEL POINT. WELD WITH 3/16 INCH FILLET WELDS AT ALL POINTS OF CONTACT.

SJ-13. STEEL JOISTS AND UNDERSIDE OF METAL DECK TO BE PAINTED PER OWNER COLOR SELECTION AT KENNEL WINGS ONLY.

METAL DECK

MD-1 ROOF DECK SUPPORTING INSULATION AND ROOFING MEMBRANE SHALL BE AS FOLLOWS:

1 1/2", 22 GAGE, WIDE RIB, TYPE 1.5B22 GALVANIZED METAL ROOF DECK AS MANUFACTURED BY VULCRAFT OR EQUAL (SEE PLAN FOR LOCATION). ERECT DECK AS THREE SPAN CONTINUOUS. USE 36/7 WELDING PATTERN WITH 5/8" PLUG WELDS AT SUPPORTS. AT SUPPORTS PARALLEL TO DECK PROVIDE 5/8" PLUG WELDS AT 6" O.C. PROVIDE #10 TEK SCREWS AT 18" O.C. AT SIDE LAPS.

ALUMINUM

A-1 ALUMINUM CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE SPECIFICATIONS AND GUIDELINES FOR ALUMINUM STRUCTURES OF THE ALUMINUM ASSOCIATION.

A-2 STRUCTURAL ALUMINUM SHALL BE FABRICATED FROM ALUMINUM ALLOY 6061-T6 UNLESS OTHERWISE NOTED.

A-3 CUTTING OF MATERIALS SHALL BE PERFORMED ONLY WITH SAWS OR SHEARS. TORCH OR FLAME CUTTING OF MATERIALS IS PROHIBITED.

A-4 FILLER METAL FOR WELDED CONNECTIONS SHALL BE ALLOY 5356 UNLESS NOTED OTHERWISE.

A-5 ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL BE MIG (GMAW) OR TIG (GTAW) WELDS.

A-6 ALL BOLTS, NUTS AND WASHERS USED TO JOIN ALUMINUM SHALL BE TYPE 304 OR 316 STAINLESS STEEL, AS NOTED.

A-7 STAINLESS STEEL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM F593, FABRICATED FROM TYPE 304 OR 316 AS NOTED. BOLTS SHALL BE ANNEALED.

A-8 RIVETS, WHERE SHOWN, SHALL BE FABRICATED FROM TYPE 304 OR 316 STAINLESS STEEL.

A-9 BOLT AND RIVET HOLES SHALL BE DRILLED OR PUNCHED. USE OF TORCHES OR FLAME CUTTING OF HOLES IS PROHIBITED.

A-10 ALUMINUM CANOPIES SHALL BE DESIGNED FOR WIND LOADS AS NOTED IN STRUCTURAL DESIGN CRITERIA.

A-11 SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR CANOPY PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA.

A-12 CONNECTIONS TO MASONRY WALLS AND FOUNDATIONS SHALL BE THE RESPONSIBILITY OF THE ENGINEER OF RECORD FOR THE ALUMINUM CANOPIES.

A-13 ALL ALUMINUM IN CONTACT WITH CONCRETE MUST BE COATED WITH BITUMINOUS PAINT, ZINC CHROMATE PAINT, OR AKAL-RESISTANT LACQUER SUCH AS METHACRYLATE. TUBES/PIPES MUST BE COATED ON INSIDE AND OUTSIDE OF MEMBER.



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Revisions

#	Description	Date
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Seal



Project No: 23-089  
Drawn By: H.P.  
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Sheet Title

STRUCTURAL NOTES

2S-100

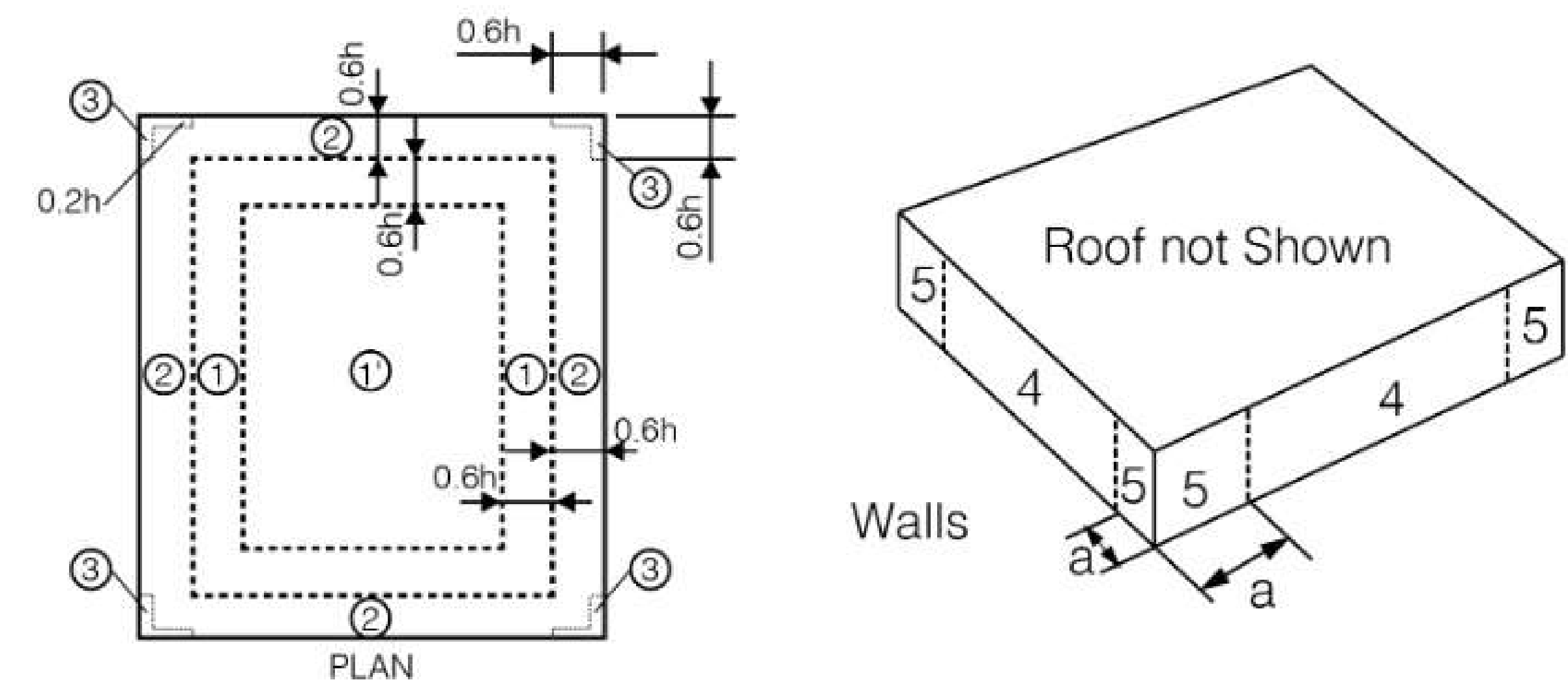


MASONRY

- M-1 MASONRY CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-05) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1-05).
- M-2 THE CONTRACTOR SHALL OBTAIN COPIES OF THE MASONRY CODE AND SPECIFICATIONS FOR REFERENCE AT THE JOB SITE.
- M-3 THE STRUCTURES HAVE BEEN DESIGNED AS BEARING WALL STRUCTURES. ALL 8" AND 12" MASONRY UNITS SHALL BE LAID PRIOR TO PLACEMENT OF COLUMNS, BEAMS AND SLABS IN THE SAME STORY. (THIS DOES NOT INCLUDE NON-BEARING MASONRY PARTITIONS THAT TERMINATE BELOW AND DO NOT CONTACT THE FLOOR OR ROOF ABOVE.)
- M-4 USE CONCRETE MASONRY UNITS COMPLYING WITH THE REQUIREMENTS OF ASTM C 90, TYPE II AND MEETING THE REQUIREMENTS OF U.L. D-2 (2 HOUR RATED). USE TYPE "S" MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI.
- M-5 MASONRY PRISM STRENGTH ( $f_m$ ) SHALL BE 1500 PSI MINIMUM.
- M-6 REINFORCING STEEL SHALL BE NEW BILLET DEFORMED BARS, FREE OF SCALE, RUST, OIL OR OTHER SUBSTANCES INHIBITING BOND CONFORMING TO ASTM A-615, GRADE 60, WITH MINIMUM YIELD STRENGTH OF 60,000 PSI.
- M-7 PROVIDE FULL MORTAR BEDDING AROUND ALL FILLED CELLS WITH VERTICAL REINFORCING.
- M-8 REINFORCE ALL WALLS WITH LADDER TYPE HORIZONTAL JOINT REINFORCING IN BE JOINTS AT 16" O.C. MEASURED VERTICALLY. LAP SPLICE ALL HORIZONTAL JOINT REINFORCING 6" MINIMUM. PROVIDE PREFABRICATED "TEE" AND "ELL" SECTIONS AT INTERSECTING WALLS.
- M-9 DISCONTINUE HORIZONTAL JOINT REINFORCING AT MASONRY CONTROL JOINTS.
- M-10 MAXIMUM HEIGHT OF GROUT LIFT FOR FILLING CELLS SHALL NOT EXCEED 8 FEET. PROVIDE CLEAN OUT HOLES AT BASE OF FILLED CELLS FOR REMOVAL OF MORTAR DROPPINGS AND OTHER DEBRIS.
- M-11 GROUT FOR FILLED CELLS SHALL BE VIBRATED DURING PLACEMENT USING A "PENCIL" TYPE VIBRATOR. VIBRATOR SHALL EXTEND FULL HEIGHT OF GROUT LIFT.
- M-12 UNLESS NOTED OTHERWISE, PROVIDE 8" DEEP PRECAST "U" LINTEL OVER ALL MASONRY WALL OPENINGS GREATER THAN 16". REINFORCE LINTEL WITH 2-#5 BARS AND FILL SOLID WITH GROUT. CUT OUT BOTTOM OF LINTEL AT ENDS TO ALLOW CONTINUATION OF FILLED CELL REINFORCING AND GROUT.
- M-13 PROVIDE 2-#4 HORIZONTAL BARS IN GROUT FILLED KNOCK OUT BLOCK AT SILL OF ALL OPENINGS.
- M-14 PROVIDE 1-#5 IN GROUT FILLED CELL EACH SIDE OF DOOR AND WINDOW OPENINGS FULL HEIGHT OF WALL.
- M-15 PROVIDE 2-#5 HORIZONTAL BARS IN GROUT FILLED KNOCK OUT COURSE AT TOP OF INTERIOR PARTITIONS AND OTHER NON-LOAD-BEARING WALLS. PROVIDE L4x4x1/4 x 0'-8" EACH SIDE OF WALL WITH L3x3x1/4 DIAGONAL BRACE PERPENDICULAR TO WALL AT 1 TO 1 SLOPE TO STRUCTURE ABOVE. SPACE BRACES AT 6'-0" O.C. MAX.
- M-16 FILL ADDITIONAL MASONRY CELLS WITH GROUT AT LOCATIONS SHOWN ON SECTIONS TO ACCOMMODATE ANCHORAGE OF DRILLED ANCHORS. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- M-17 GROUT FOR FILLED CELLS AND LINTELS SHALL MEET THE REQUIREMENTS OF ASTM C-476, FINE OR COARSE GROUT.
- M-18 HOLES DRILLED INTO GROUT FILLED MASONRY FOR SETTING ANCHOR BOLTS OR REINFORCING BARS IN EPOXY SHALL BE BLOWN OUT WITH COMPRESSED AIR, THEN BRUSHED OUT WITH A NYLON BRISTLE BRUSH OF THE APPROPRIATE DIAMETER, AND THEN BLOWN OUT AGAIN WITH COMPRESSED AIR PRIOR TO PLACEMENT OF THE EPOXY.
- M-19 PROVIDE ONE VERTICAL BAR OF THE SAME SIZE AS THE TYPICAL WALL REINFORCING AT FIRST CELL ON EACH SIDE OF OPENING FOR OPENINGS LESS THAN 48 INCHES. PROVIDE TWO VERTICAL BARS OF THE SAME SIZE AS THE TYPICAL WALL REINFORCING AT FIRST TWO CELLS ON EACH SIDE OF OPENING FOR OPENINGS GREATER THAN 48 INCHES.
- M-20 AT LOCATIONS WHERE MASONRY OPENINGS INTERRUPT VERTICAL FILLED CELL REINFORCING, START SAME NUMBER AND SIZE OF BARS AT LINTEL AND CONTINUE UP FULL HEIGHT.
- M-21 LAP VERTICAL MASONRY REINFORCING BARS A MINIMUM OF 48 BAR DIAMETERS OR 1'-6" MINIMUM
- M-22 AT CHANGES IN DIRECTION OF MASONRY BEAMS PROVIDE CORNER BARS OF THE SAME SIZE AND QUANTITY AS ALL LONGITUDINAL BARS.

LIGHT GAGE STEEL TRUSSES

- LT-1 PRE-ENGINEERED PRE-FABRICATED LIGHT GAGE STEEL TRUSSES, TRUSS BRACING AND CONNECTIONS WITHIN THE TRUSS SYSTEM SHALL BE DESIGNED FOR THE LOADS INDICATED ON THE DRAWINGS AND BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA WHO SHALL BE THE TRUSS SYSTEM ENGINEER.
- LT-2 SIGNED AND SEALED SHOP DRAWINGS SHOWING TRUSS CONFIGURATIONS WITH MEMBER SIZES AND CONNECTIONS, TRUSS LAYOUT WITH PIECE MARKS, REQUIRED TRUSS TO TRUSS CONNECTIONS, DESIGN CRITERIA, DURATION FACTORS, ERECTION DETAILS AND ALL BRACING FOR WIND AND ERECTION LOADS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION OF THE TRUSSES.
- LT-3 PRE-FABRICATED LIGHT GAGE STEEL TRUSSES SHALL BE FABRICATED FROM STEEL MEETING THE REQUIREMENTS OF ASTM A-446 WITH MINIMUM YIELD STRENGTH OF 40 KSI.
- LT-4 TRUSSES SHALL BE DESIGNED SUCH THAT THE CENTERLINES OF THE MEMBERS SHALL BE COINCIDENT AT JOINTS.
- LT-5 THE NUMBER OF PANELS AND DIRECTION OF THE WEB MEMBERS SHALL BE SELECTED TO SUIT THE DESIGN REQUIREMENTS. SEE DRAWINGS FOR TRUSS PROFILES AND ANY SPECIAL CONDITIONS/REQUIREMENTS FOR PANEL POINTS.
- LT-6 DESIGN OF METAL CONNECTED ROOF TRUSSES TO COMPLY WITH:
- FLORIDA BUILDING CODE, 2014 EDITION  
EPCOT BUILDING CODE 2015 EDITION WITH 2016 AND 2017 SUPPLEMENTS  
ANSI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS"
- LT-7 TRUSS DESIGN LOADS AS FOLLOWS:
- SLOPED TOP CHORD ROOF TRUSSES, 6:12 PITCH:
- TOP CHORD
- DEAD LOAD 10 PSF  
LIVE LOAD 30 PSF
- BOTTOM CHORD
- DEAD LOAD 20 PSF  
LIVE LOAD 10 PSF
- NET WIND UPLIFT ON TRUSS SHALL BE BASED ON WIND PRESSURES AS SHOWN IN THE COMPONENT AND CLADDING PRESSURE TABLE. WIND FORCES SHALL BE CONSIDERED ACTING BOTH INWARD AND OUTWARD. FULL WIND DESIGN PRESSURES SHALL BE USED IN CALCULATION OF DEFLECTIONS. REDUCED WIND PRESSURES AS PERMITTED IN THE BUILDING CODE ARE NOT PERMITTED FOR DEFLECTION CALCULATIONS. DEAD LOAD EQUAL TO THE ACTUAL WEIGHT OF THE TRUSSES AND ROOF STRUCTURE MAY BE DEDUCTED FROM THE WIND UPLIFT PRESSURES.
- LT-8 PROVIDE PERMANENT HORIZONTAL BRIDGING AND BRACING AS DESIGNED BY THE TRUSS FABRICATOR.
- LT-9 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN SIZE OR STRENGTH WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER OF RECORD



Wind Pressure Summary for C&C Zones based Upon Areas Ch 30 Pt 1 (Table 1 of 2)  
All wind pressures include a Load Factor (LF) of 0.6

Zone	Figure	A ≤ 10.00 ft <sup>2</sup> psf	A = 20.00 ft <sup>2</sup> psf	A = 50.00 ft <sup>2</sup> psf	A = 100.00 ft <sup>2</sup> psf
1	30.3-2A	10.72 -41.98	10.05 -39.21	9.60 -35.55	9.60 -32.78
1'	30.3-2A	10.72 -24.11	10.05 -24.11	9.60 -24.11	9.60 -24.11
2	30.3-2A/30.3-1	24.11 -55.38	23.05 -51.81	21.63 -47.11	20.57 -43.55
3	30.3-2A/30.3-1	24.11 -55.38	23.05 -51.81	21.63 -47.11	20.57 -43.55
4	30.3-1	24.11 -26.12	23.05 -25.06	21.63 -23.64	20.57 -22.58
4_P (P1/P4)	30.3-1/30.3-2A	20.67 -22.74	19.57 -21.64	18.12 -20.18	17.02 -19.09
4_P (P3/P2)	30.3-1/30.3-2A	20.67 -52.82	19.57 -49.16	18.12 -44.32	17.02 -40.65
4_P (P1-P2) / (P3-P4)	30.3-1/30.3-2A	73.49 43.40	68.73 41.21	62.43 38.30	57.67 36.11
5	30.3-1	24.11 -32.15	23.05 -30.02	21.63 -27.19	20.57 -25.06
5_P (P1/P4)	30.3-1/30.3-2A	20.67 -28.94	19.57 -26.74	18.12 -23.83	17.02 -21.64
5_P (P3/P2)	30.3-1/30.3-2A	20.67 -52.82	19.57 -49.16	18.12 -44.32	17.02 -40.65
5_P (P1-P2) / (P3-P4)	30.3-1/30.3-2A	73.49 49.61	68.73 46.31	62.43 41.95	57.67 38.66

Wind Pressure Summary for C&C Zones based Upon Areas Ch 30 Pt 1 (Table 2 of 2)  
All wind pressures include a Load Factor (LF) of 0.6

Zone	Figure	A = 200.00 ft <sup>2</sup> psf	A = 500.00 ft <sup>2</sup> psf	A > 1000.00 ft <sup>2</sup> psf
1	30.3-2A	9.60 -30.01	9.60 -26.35	9.60 -26.35
1'	30.3-2A	9.60 -20.75	9.60 -16.31	9.60 -12.95
2	30.3-2A/30.3-1	19.50 -39.99	18.09 -35.28	18.09 -35.28
3	30.3-2A/30.3-1	19.50 -39.99	18.09 -35.28	18.09 -35.28
4	30.3-1	19.50 -21.51	18.09 -20.10	18.09 -20.10
4_P (P1/P4)	30.3-1/30.3-2A	15.92 -17.99	14.47 -16.54	14.47 -16.54
4_P (P3/P2)	30.3-1/30.3-2A	15.92 -36.99	14.47 -32.15	14.47 -32.15
4_P (P1-P2) / (P3-P4)	30.3-1/30.3-2A	52.91 33.91	46.62 31.00	46.62 31.00
5	30.3-1	19.50 -22.92	18.09 -20.10	18.09 -20.10
5_P (P1/P4)	30.3-1/30.3-2A	15.92 -19.44	14.47 -16.54	14.47 -16.54
5_P (P3/P2)	30.3-1/30.3-2A	15.92 -36.99	14.47 -32.15	14.47 -32.15
5_P (P1-P2) / (P3-P4)	30.3-1/30.3-2A	52.91 35.36	46.62 31.00	46.62 31.00

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#23-089  
SEIDEL COMMERCIAL  
BUILDING 2

CONSULTANT:  
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INTERNATIONAL ENGINEERING SERVICES DESIGN GROUP, INC.  
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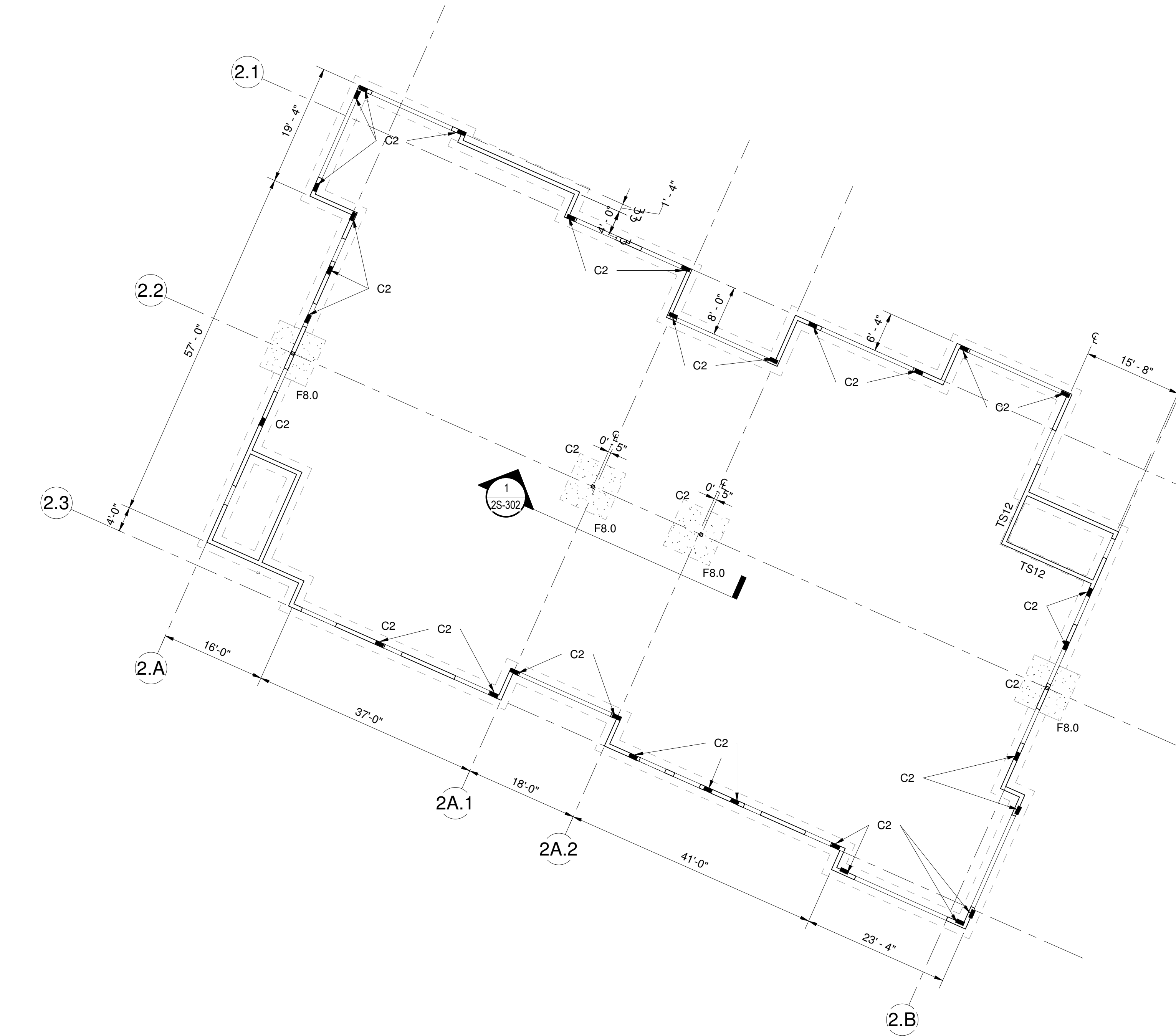
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STRUCTURAL NOTES &  
WIND PRESSURES

2S-101





COLUMN SCHEDULE		
TYPE	SIZE	REINFORCEMENT
C1	HSS 6X6X1/4"	NONE
C2	HSS 6X6X3/8"	NONE
C2	RC-7-5/8"X15-5/8"	RC-COLUMN - 7-5/8 X15-5/8 W/ 4 - #5 VERTICAL & #3 TIES AT 8" O.C
C3	RC-7-5/8X12"	RC-COLUMN - 7-5/8 X12-5/8 W/ 4 - #5 VERTICAL & #3 TIES AT 8" O.C

FOUNDATION SCHEDULE		
TYPE	SIZE	REINFORCEMENT
WF36	3'X1'XCONT.	(4) - #5 CONT. & #5 TRANSVERSE @32" O.C
TS12	1'X1'XCONT.	(2) - #5 CONT.
F7.0	7'X7'X18"	(9) - #5 EACH WAY, TOP & BOTTOM.
F8.0	8'X8'X18"	(11) - #5 EACH WAY, TOP & BOTTOM.

**NOTES:**  
1. TOP OF FOUNDATION IS AT -2'-0" (2' BELOW TOP OF SLAB).  
2. #5 VERTICAL BARS @24 O.C IN FULLY GROUTED CELLS.

**NOTES:**  
1. CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR ITEMS RECESSED OR EMBEDDED IN MASONRY WALLS. DO NOT PLACE EMBEDDED ITEMS IN GROUT FILLED CELLS OR SOLID CAST CONCRETE BEAMS AND COLUMNS.  
2. CONDUIT MAY BE PLACED ON FOUNDATIONS OR INSTALLED TO PENETRATE VERTICALLY THROUGH FOUNDATIONS. CONDUITS SHALL BE SEPARATED BY A MINIMUM OF THREE CONDUIT DIAMETERS.  
3. VERTICAL PENETRATIONS THROUGH A CONCRETE BEAM OR REINFORCED MASONRY ARE PERMITTED. CONDUITS SHALL BE SEPARATED BY A MINIMUM OF THREE CONDUITS DIAMETERS. REINFORCING MAY NOT BE DISPLACED BY CONDUITS.  
4. CONTRACTOR SHALL COORDINATE WITH LIGHTNING PROTECTION CONTRACTOR FOR LOCATION AND PLACEMENT OF LIGHTNING PROTECTION CABLES IN CONDUIT. DESIGN INTENT IS FOR LIGHTNING PROTECTION CABLING FEED THROUGH CONCRETE MASONRY UNITS. DO NOT PLACE LIGHTNING PROTECTION CONDUIT IN GROUT FILLED CELLS EXCEPT AS NOTED ABOVE.  
5. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR FOR PLACEMENT OF RECESSED JUNCTION BOXES, RECESSED SWITCH BOXES, OTHER RECESSED ITEMS, AND CONDUIT INSTALLED IN MASONRY WALLS. DO NOT PLACE RECESSED BOXES OR OTHER RECESSED ITEMS IN GROUT FILLED OR SOLID CONCRETE BEAMS OR COLUMNS.

1 FOUNDATION RETAIL2  
1S-301 2S-201 SCALE: 3/32" = 1'-0"



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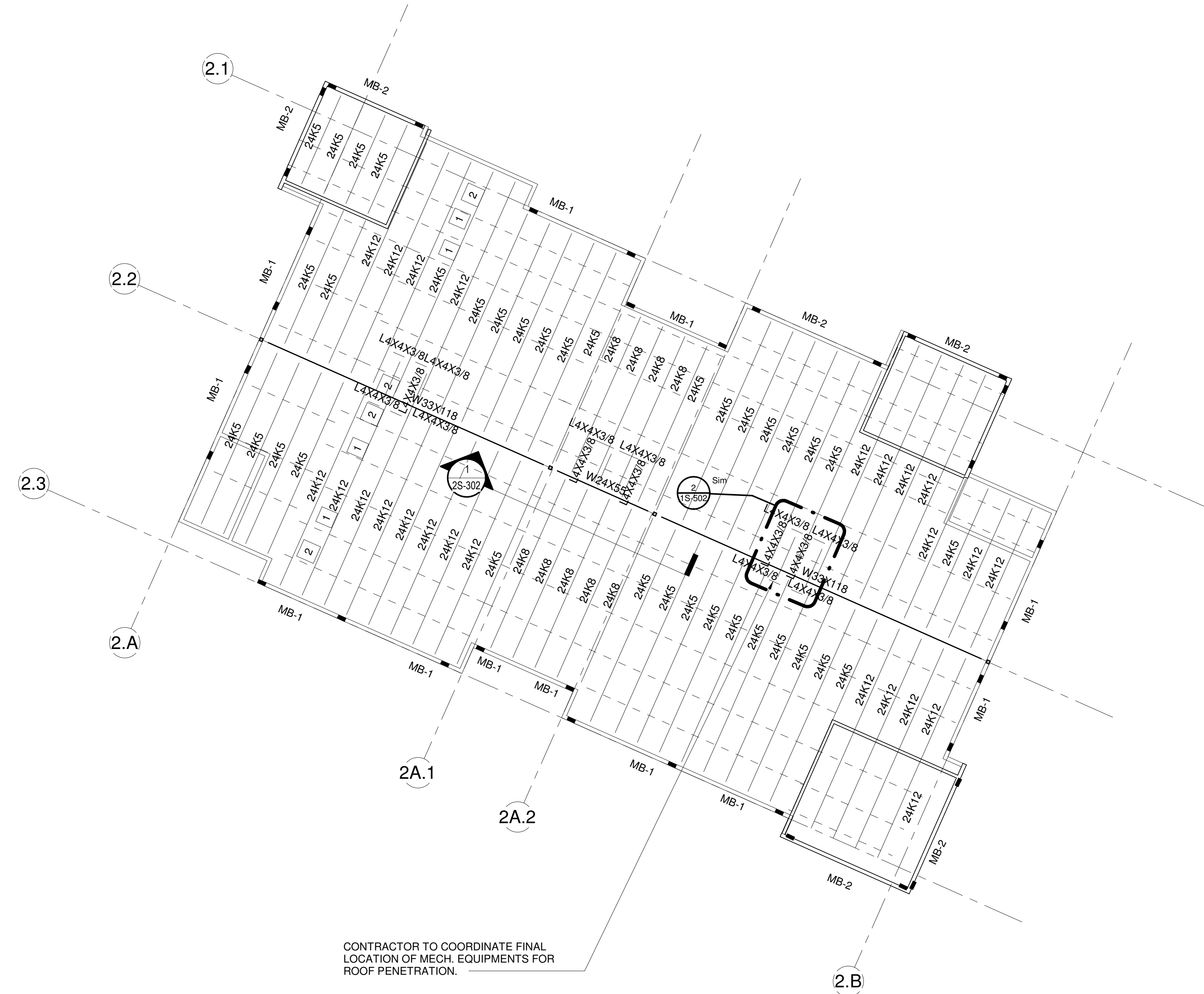
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FOUNDATION PLAN

**2S-201**



**PLAN NOTES:**

1. JOIST BRIDGING - TYP - 3 ROWS OF TOP CHORD BRIDGING.
2. UPLIFT BRIDGING AT FIRST BOTTOM CHORD PANEL POINTS @ END OF JOISTS.
3. JOIST SPACING SHALL BE 5' O.C. UNLESS NOTED OTHERWISE.

**ROOF CONSTRUCTION:** 1-1/2" DEEP, 20 GAGE WIDE RIB "B" DECK EQUAL TO 1.5B20 ROOF DECK AS PER MFG BY VULCRAFT. 5/8" PUDDLE WELDS ON 36/7 PATTERN W/#10 SIDELAP FASTENERS AT 12" O.C. TOP OF JOIST BEARING SHALL BE 18'-0".

**LINTEL SCHEDULE: REFER TO SHEET-2S-502**  
MB-1-REFER TO SCHEDULE FOR LINTEL SIZES & TYPE.  
MB-2-REFER TO SCHEDULE FOR LINTEL SIZES & TYPE.

**1** ROOF PLAN\_RETAIL2  
1S-301 2S-202 SCALE: 3/32" = 1'-0"

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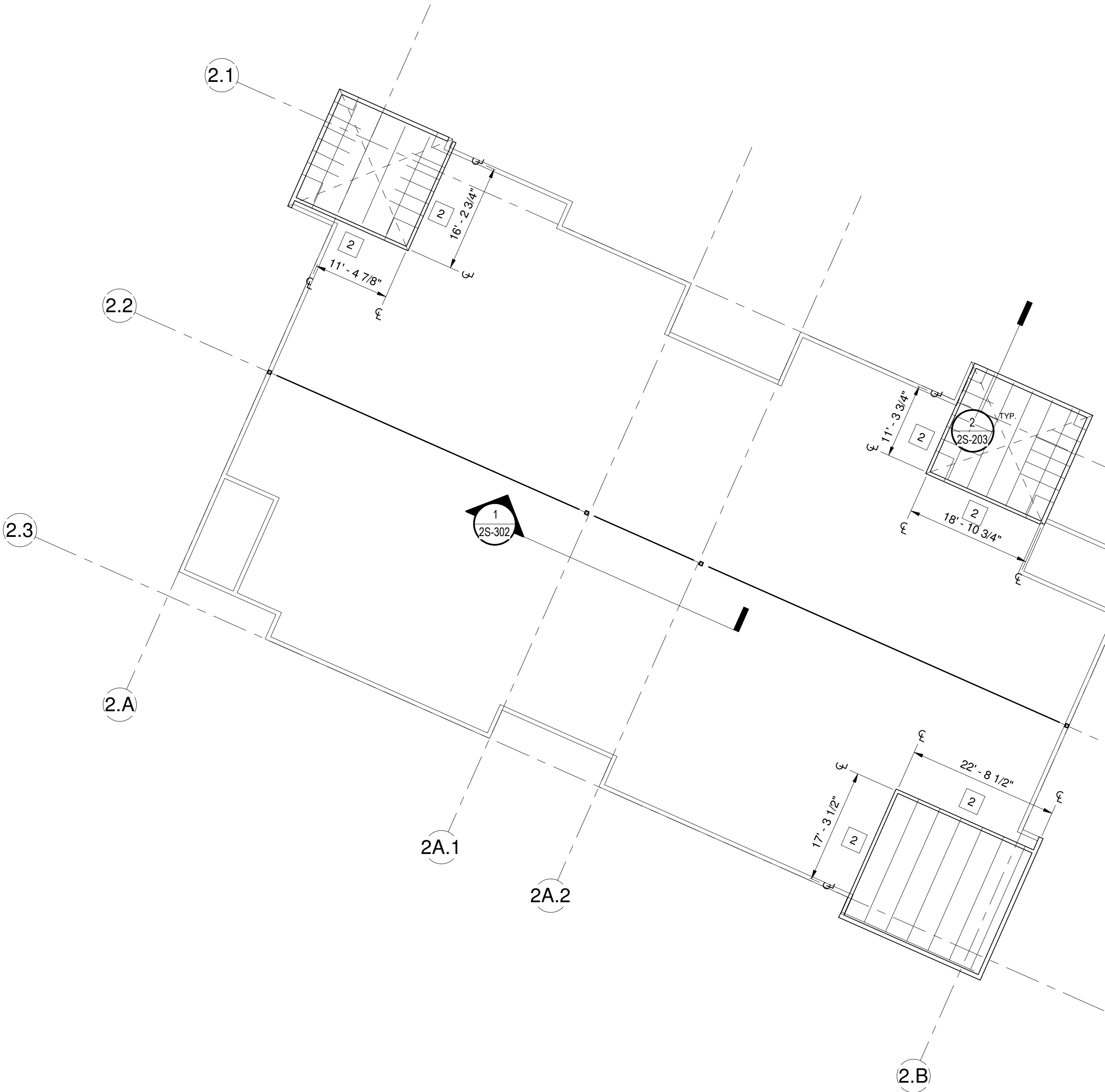
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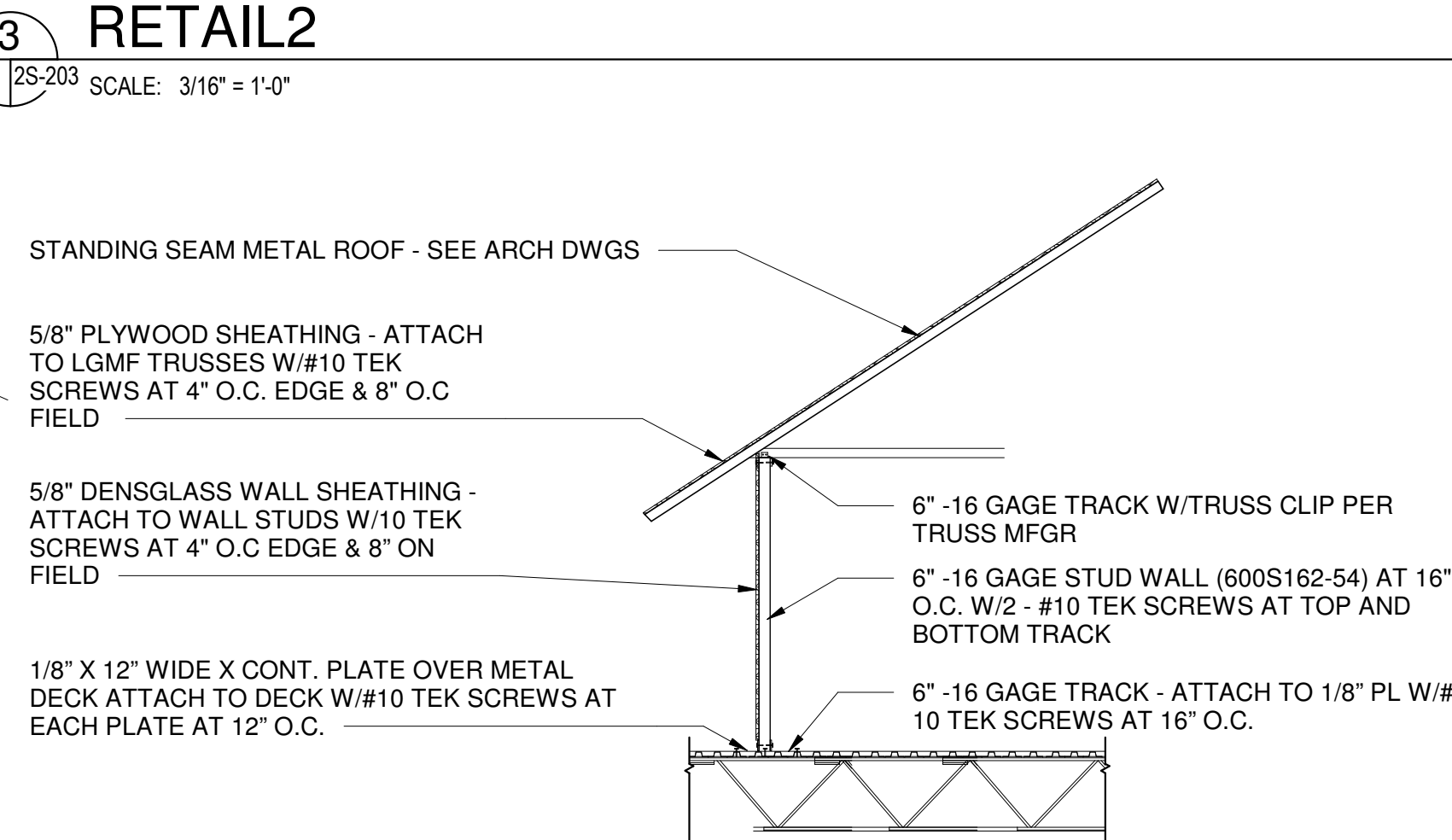
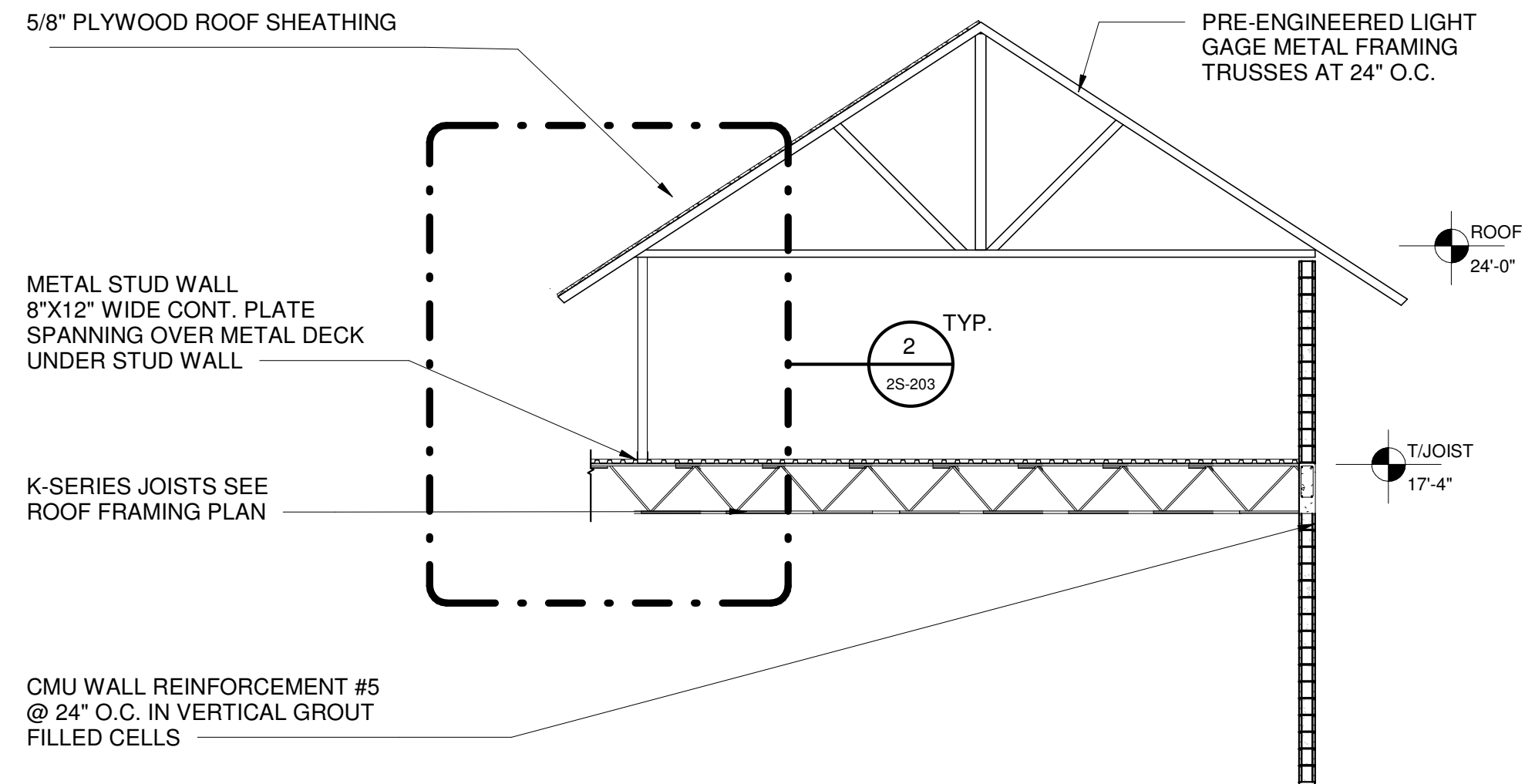
ROOFING PLAN

**2S-202**





- PLAN NOTES:**
1. ALL THE ROOF TRUSSES ARE PRE-ENGINEERED.
  2. PROVIDE 6"X1 5/8" 16 GAGE STUD WALL AT TOP OF FLAT ROOF TO SUPPORT PRE-ENGINEERED TRUSSES.



1/2S-203 SCALE: 3/32" = 1'-0"

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HIGH ROOF FRAMING  
PLAN

2S-203

#23-089  
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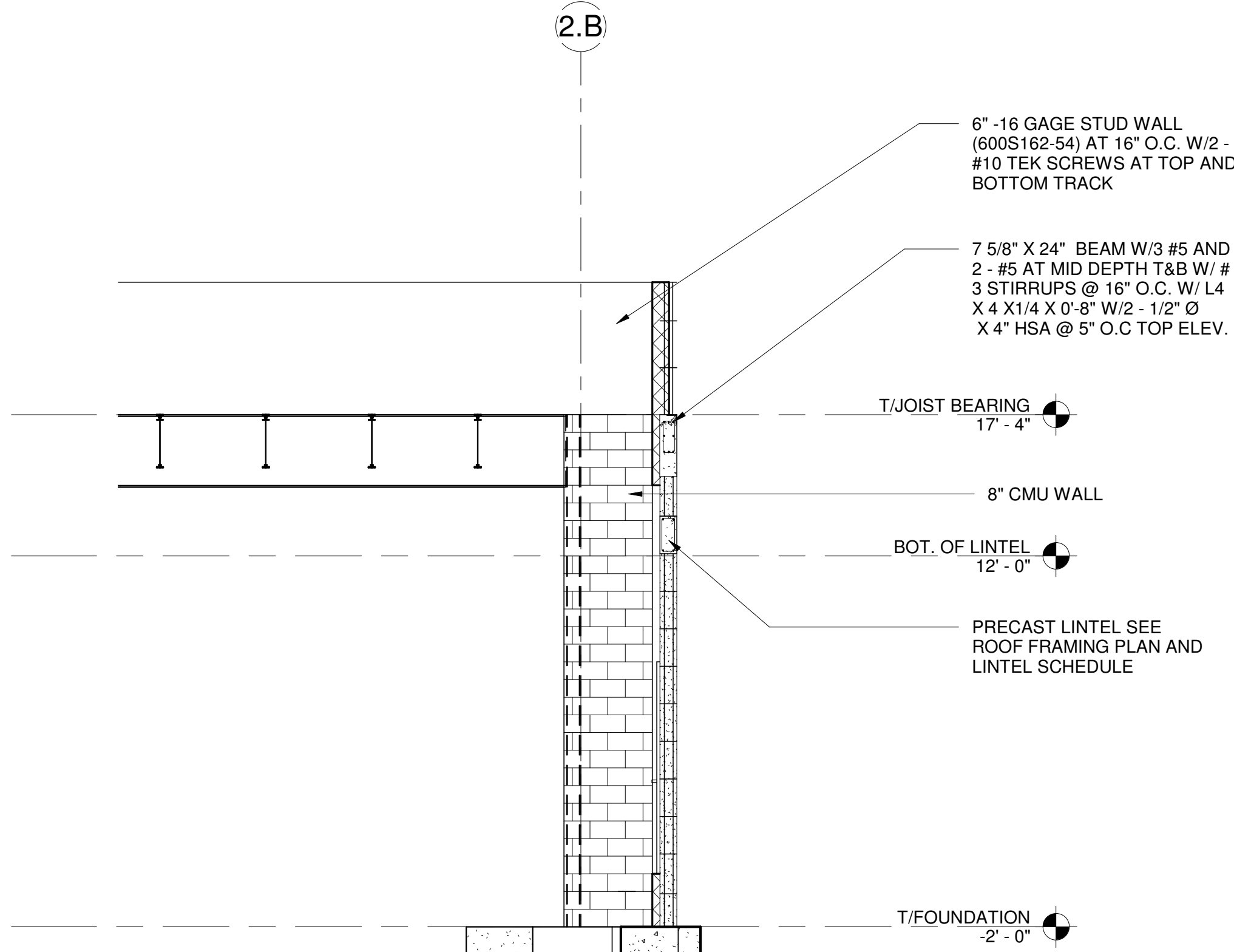
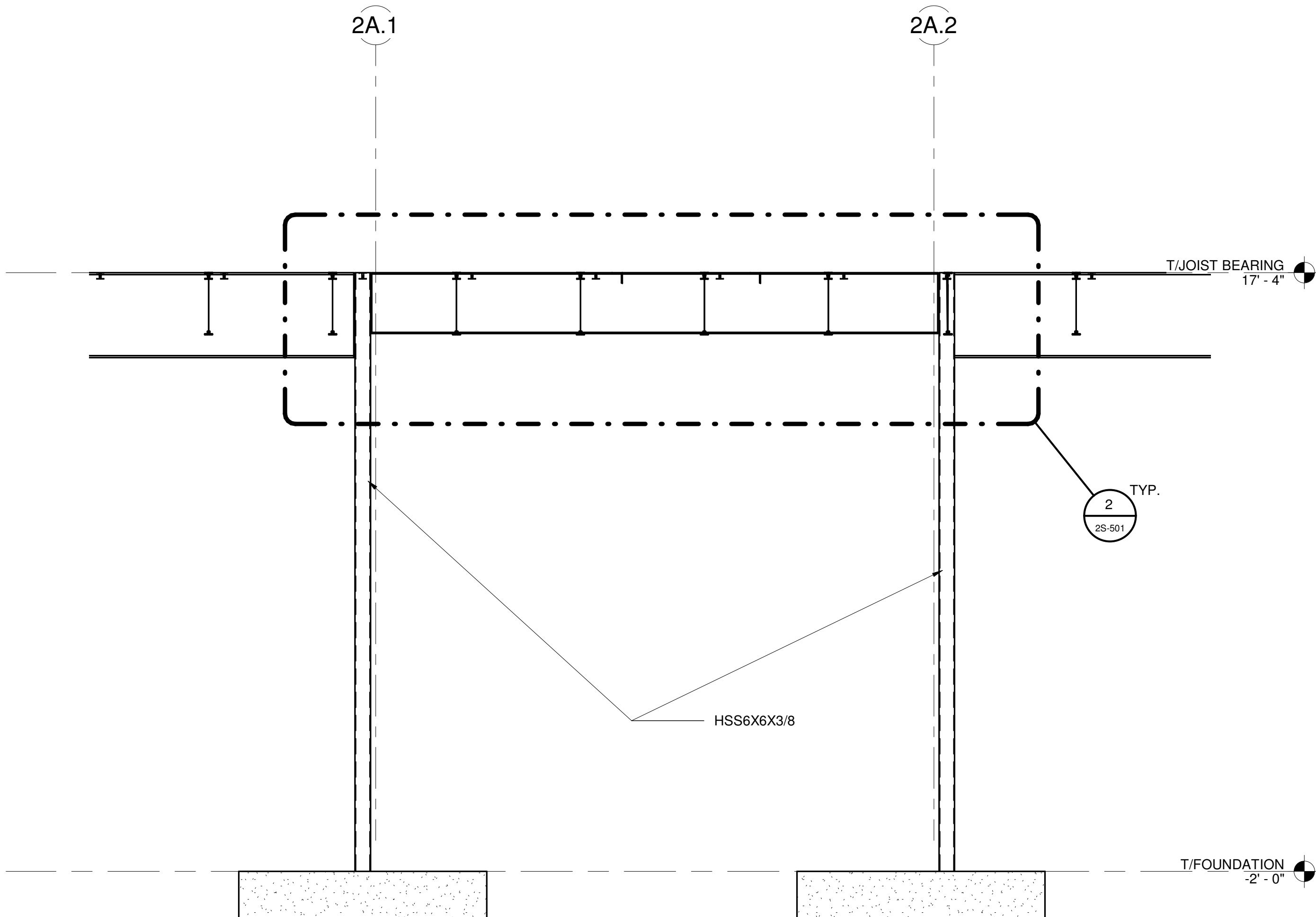
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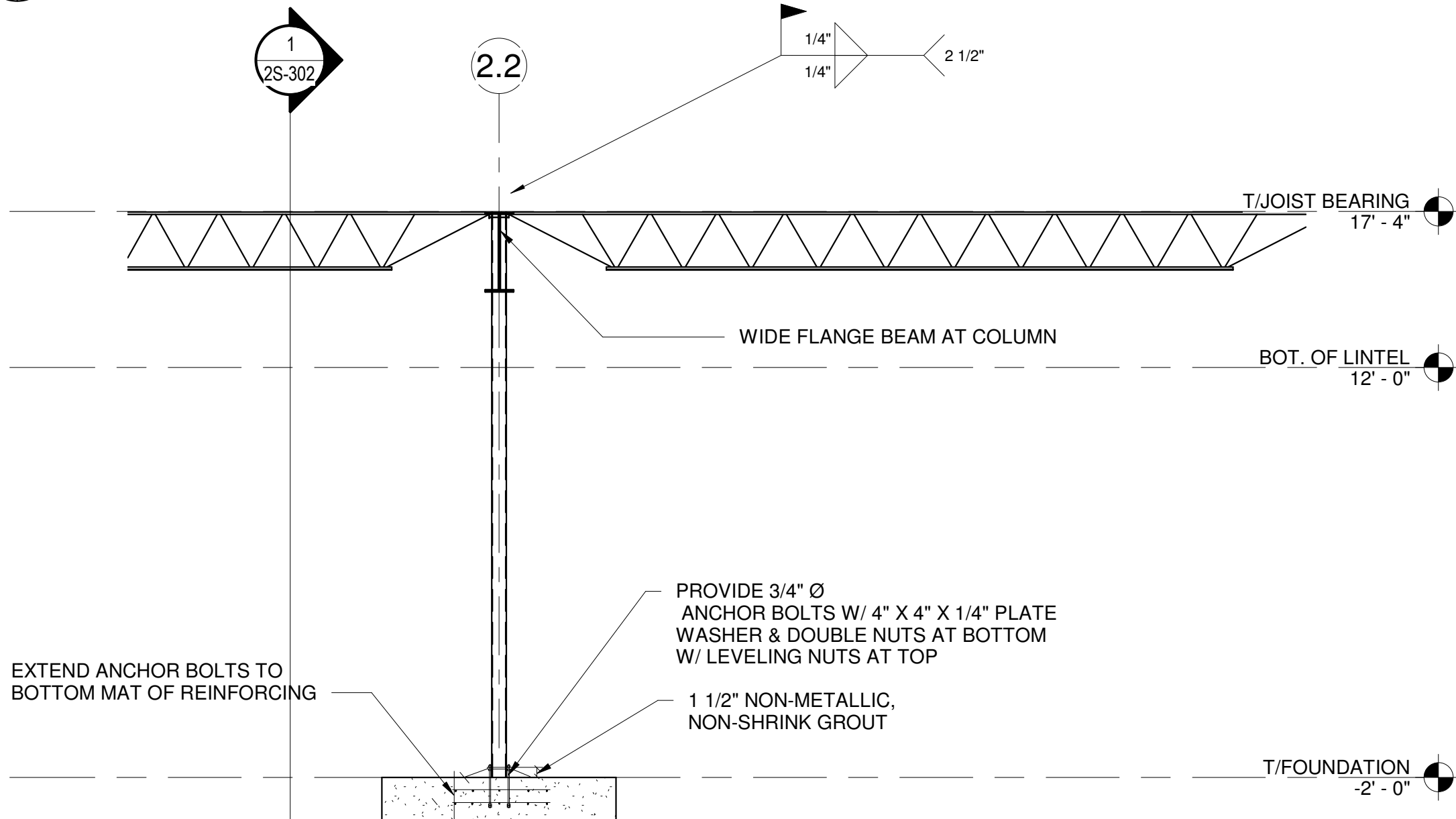
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BUILDING SECTIONS

**2S-302**



**SECTION 4**  
2S-302 SCALE: 3/8" = 1'-0"



**SECTION 5**  
2S-301 SCALE: 1/4" = 1'-0"

**SECTION 6**  
2S-301 SCALE: 1/4" = 1'-0"



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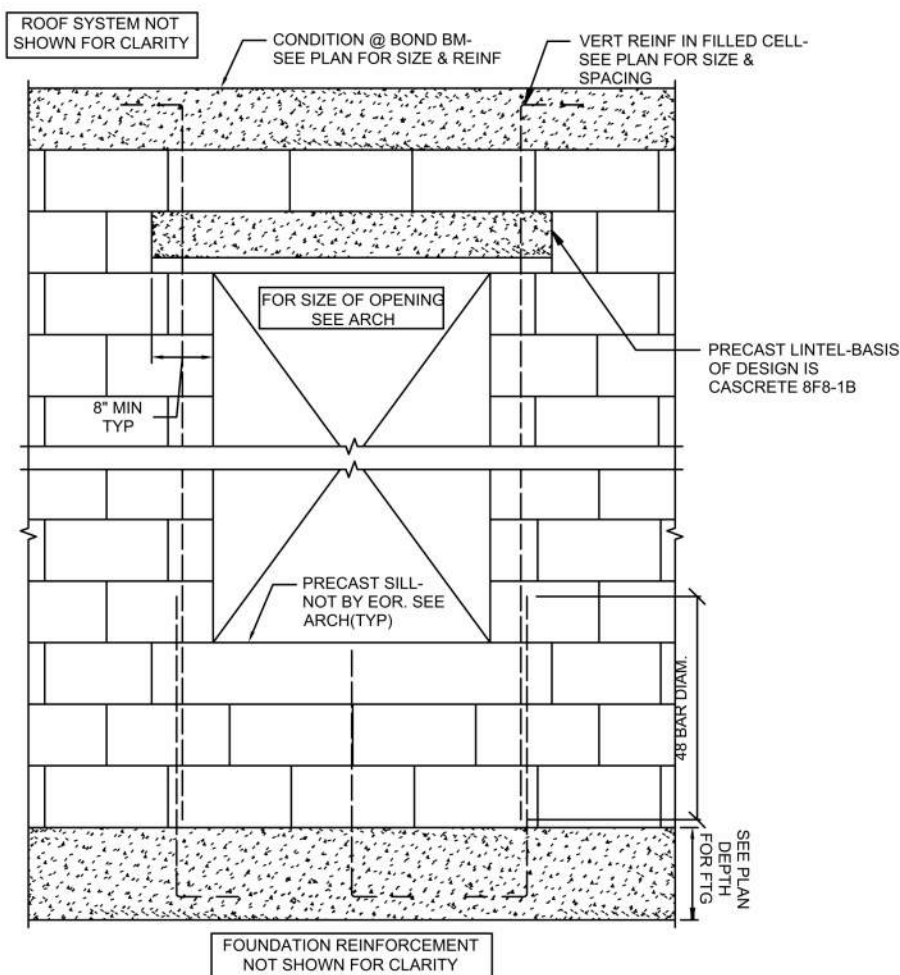
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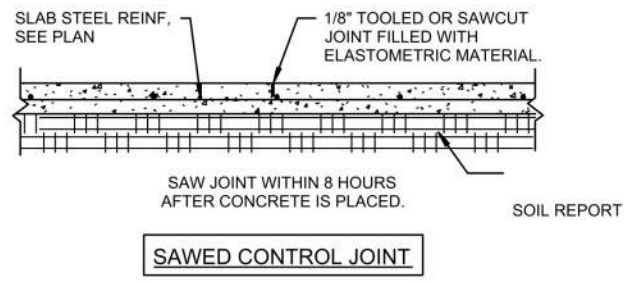
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**STRUCTURAL DETAILS**

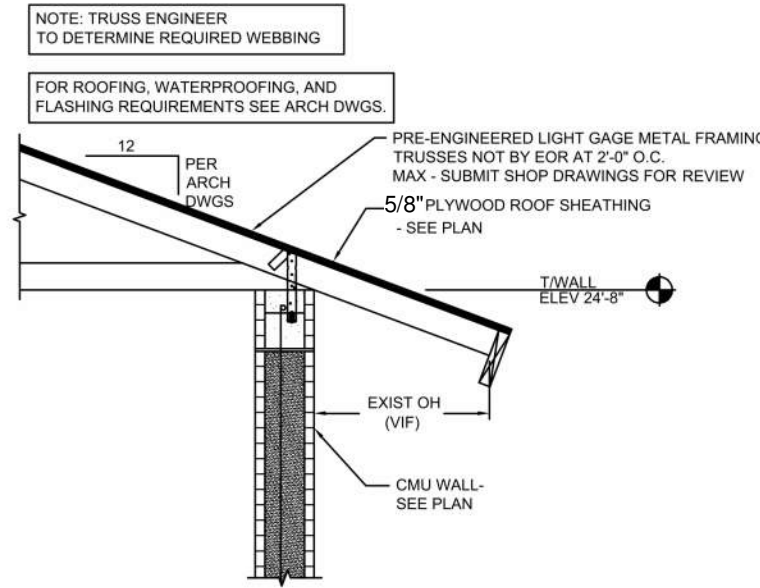
**2S-501**



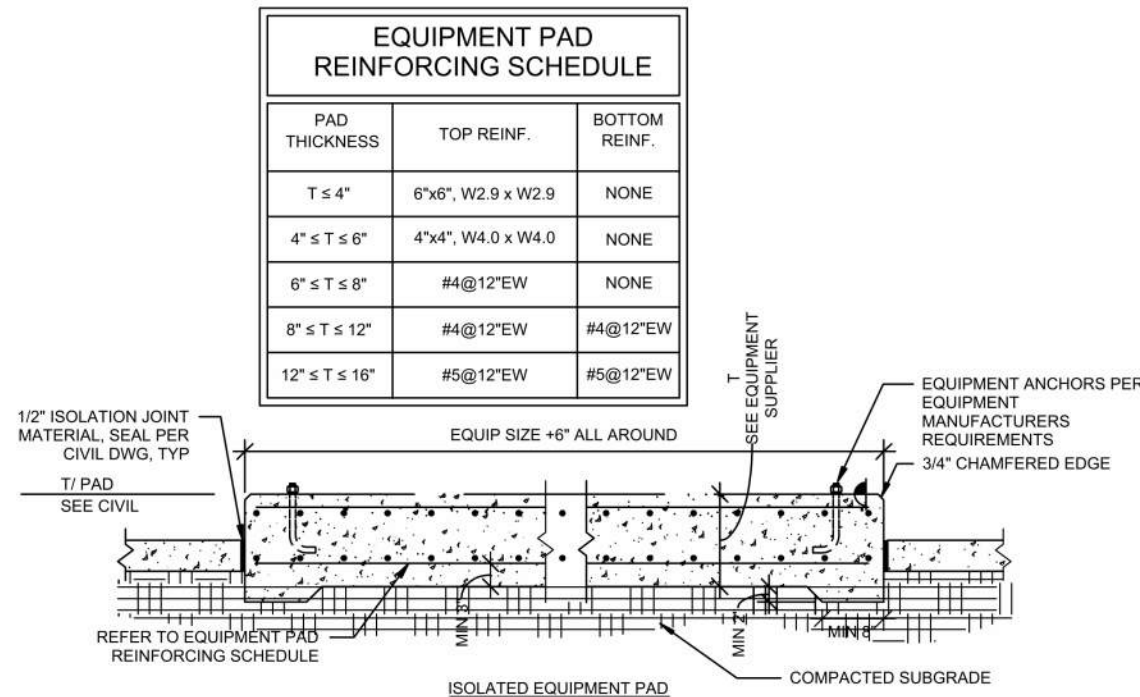
**BOND BEAM MASONRY OPENING CONDITION 1**  
3/4" = 1'-0" S-501



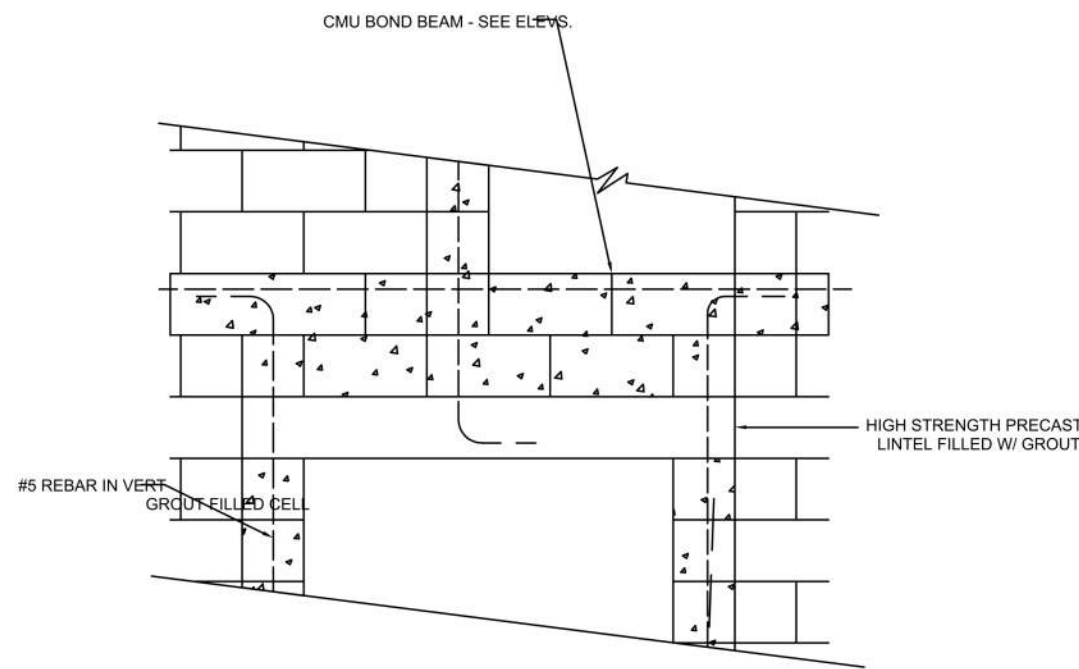
**MASONRY REINFORCEMENT SCHEMATIC ISOMETRIC 2**  
1/2" = 1'-0" S-501



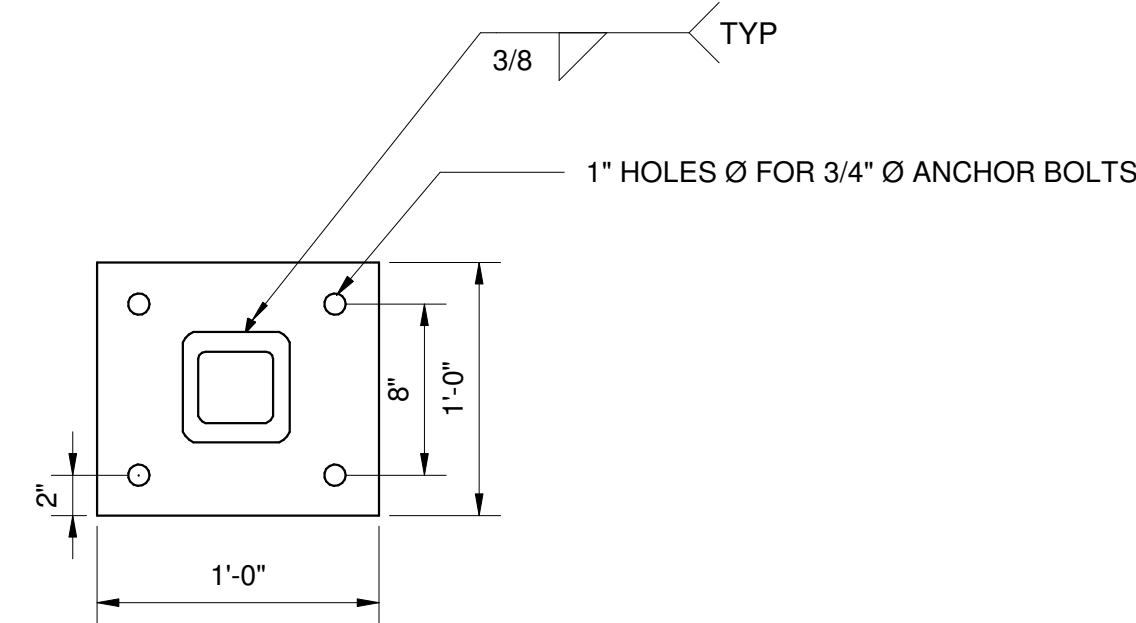
**WOOD FRAME DETAIL AT TYPICAL TRUSS CONNECTION 3**  
3/4" = 1'-0" S-501



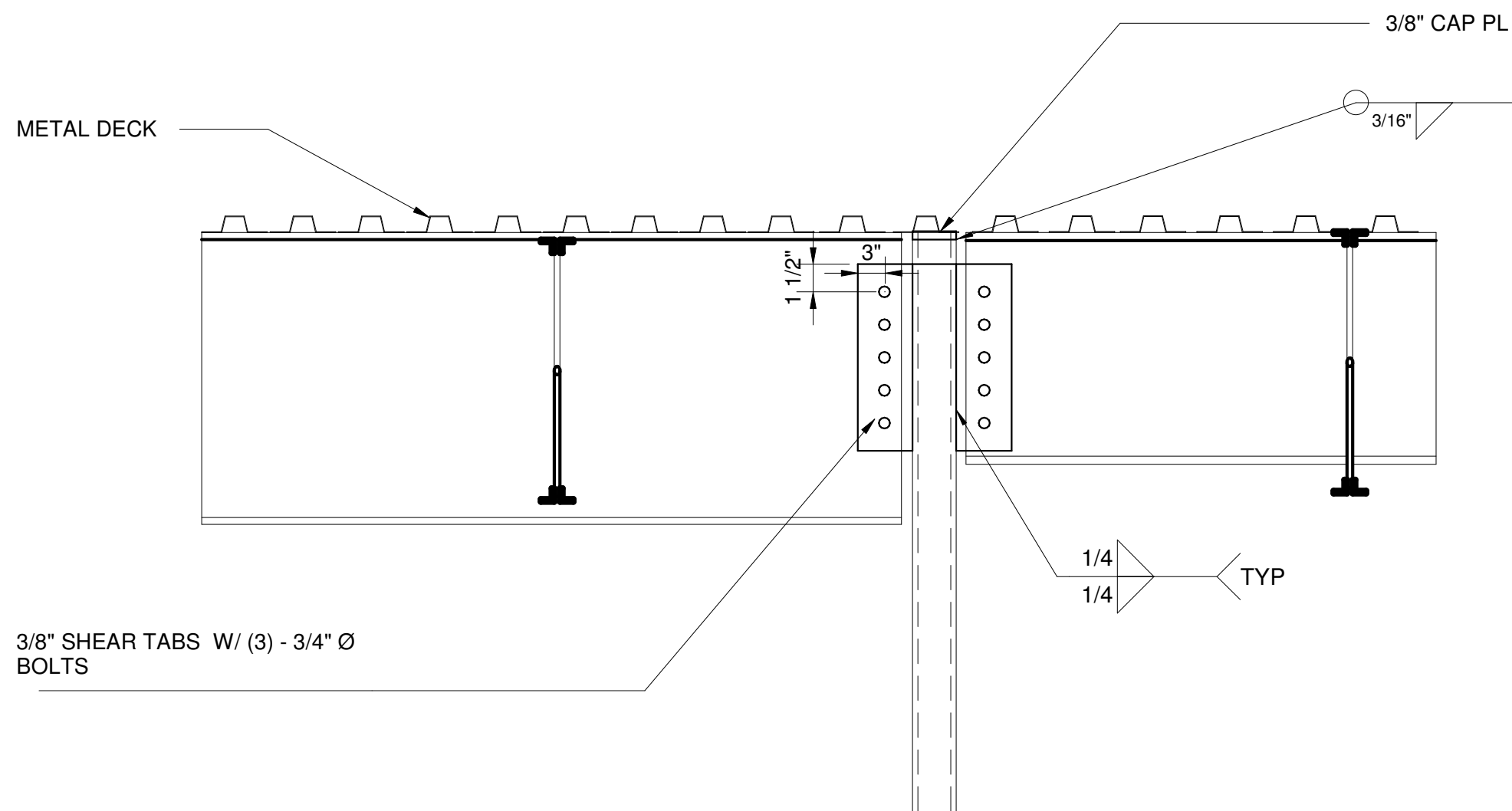
**TYP. HOUSEKEEPING PAD - EXTERIOR 4**  
3/4" = 1'-0" S-501



**OFFSET VERTICAL FILLED CELL DETAIL 5**  
3/4" = 1'-0" S-501

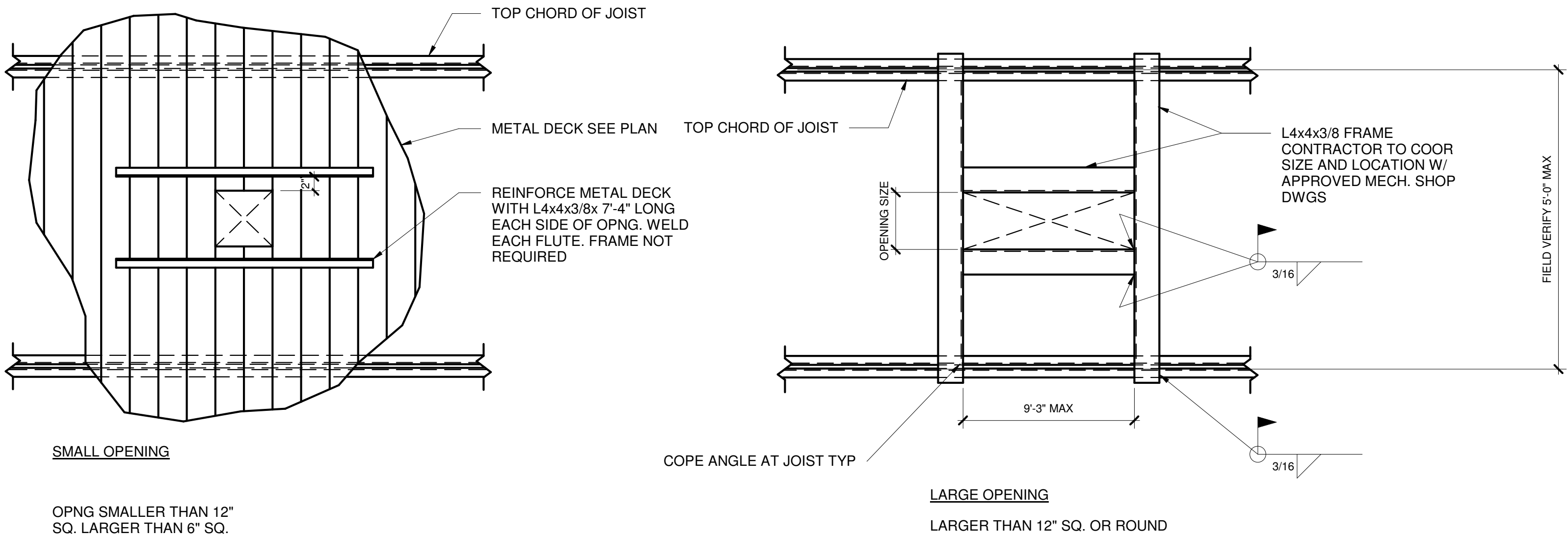


**COLUMN BASE PLATE DETAIL BLDG2**



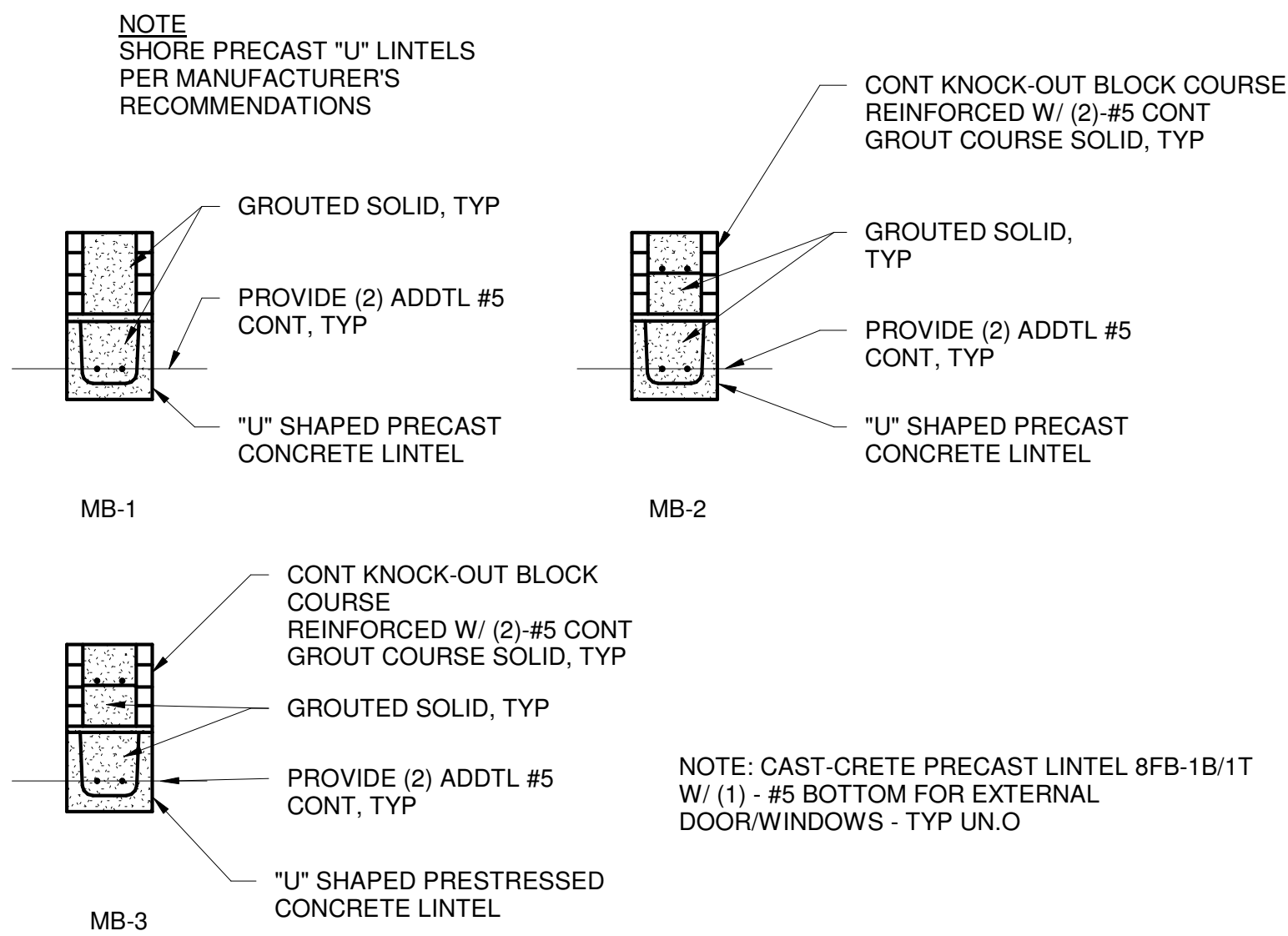
**BEAM CONNECTION SHEAR TAB DETAIL BLDG2**





**TYP ROOF OPENING  
DETAIL RETAIL2**

2  
1S-202 2S-502  
SCALE: 1" = 1'-0"

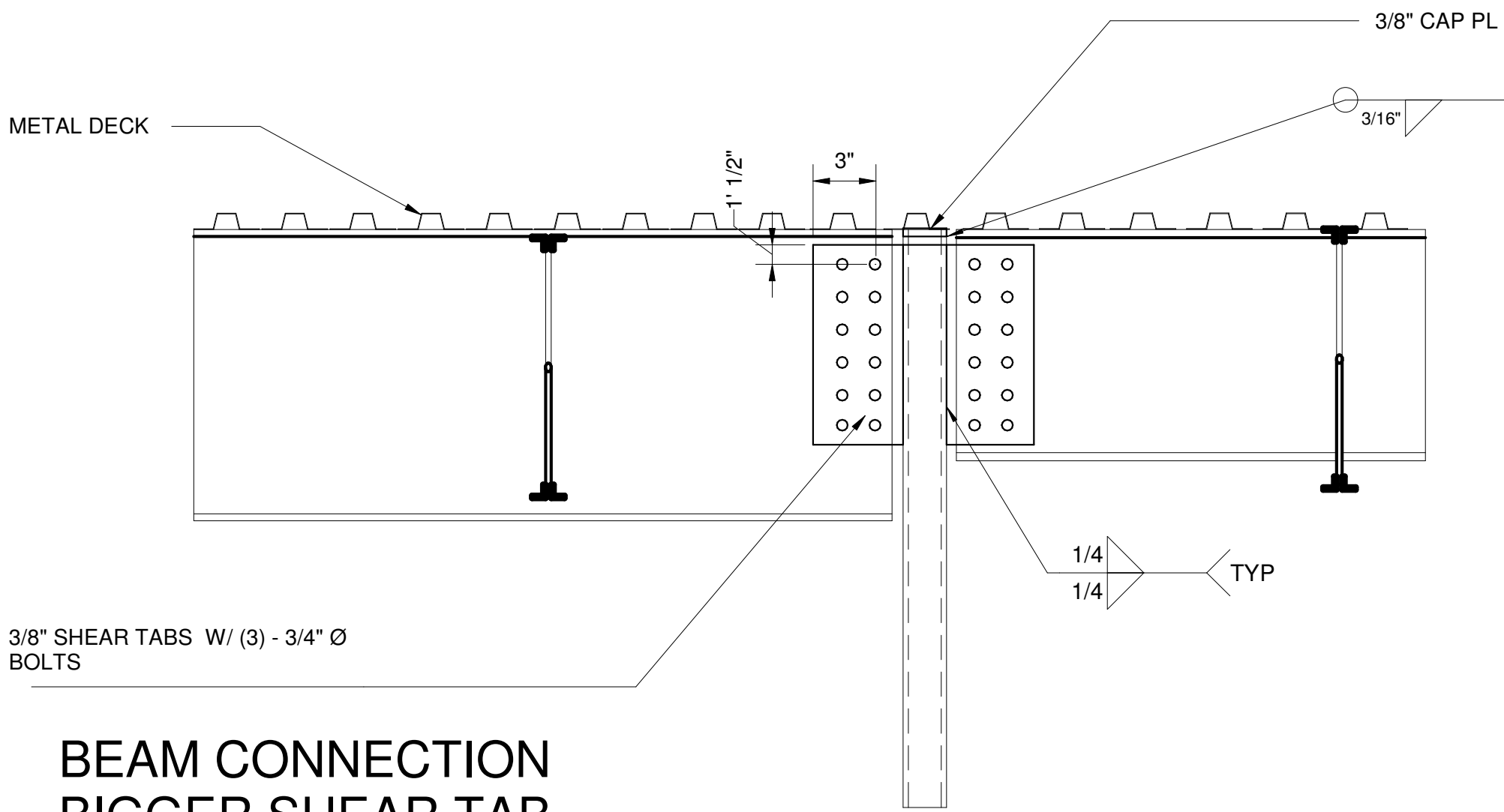


MASONRY LINTEL SCHEDULE (CAST-CRETE LINTEL)			
MARK	LENGTH (L)	CAST-CRETE MARK	REMARK
MB-1	2' -10" < L < 5' -10"	8FB-1B PRECAST	
MB-2	5' -10" < L < 14'-0"	8F16-1B PRECAST	
MB-3	14' -0" < L < 21'-4"	8F16-2B/2T PRESTRESSED	

**NOTES:**  
1. PROVIDE MASONRY LINTEL OVER ALL OPNGS. IF NO LINTEL IS SPECIFIED, PROVIDE MB-X  
2. PROVIDE MINIMUM END BEARING OF 8". CUT OUT BOTTOM OF LINTEL AT END TO ALLOW CONTINUATION OF FILLED CELL REINF.  
3. MASONRY LINTEL SUBSTITUTIONS MUST BE APPROVED BY THE STRUCT ENGINEER OF RECORD PRIOR TO INSTALLATION.

**MASONRY LINTEL  
SCHEDULE RETAIL2**

3  
2S-502  
SCALE: 3/4" = 1'-0"



**BEAM CONNECTION  
BIGGER SHEAR TAB  
DETAIL BLDG2**

1  
2S-502  
SCALE: 1" = 1'-0"