

DESIGN CRITERIA

- STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH 2023 FLORIDA BUILDING CODE AND SUBSEQUENT REFERENCE STANDARDS.
- RISK CATEGORY: II
- SUPERIMPOSED DEAD LOADS:

ROOF	TYPICAL	20 PSF
SUPERIMPOSED LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE		
ROOF	TYPICAL	20 PSF (REDUCIBLE)
	MECHANICAL	SEE ROOF PLAN NOTES

- MECHANICAL UNITS: THE CONTRACTOR SHALL CONFIRM THE ACTUAL MECHANICAL UNITS PURCHASED ARE OF WEIGHT AND SIZE SUCH THAT:
 - THE UNIT WEIGHT IS LESS THAN OR EQUAL TO WEIGHT LISTED ON PLAN.

TOTAL SUPERIMPOSED LOAD UNDER UNIT =	TOTAL EQUIPMENT WEIGHT / UNIT FOOTPRINT AREA =	INDICATED SERVICE LEVEL DESIGN LIVE LOAD
TOTAL EQUIPMENT WEIGHT = OPERATING WEIGHT OF UNIT + CONCRETE HOUSEKEEPING PAD + INERTIA BLOCK + OTHER ANCILLARY ITEMS ASSOCIATED WITH THE EQUIPMENT		

UNIT FOOTPRINT AREA =	EFFECTIVE AREA OF UNIT OR HOUSEKEEPING PAD, WHICHEVER IS LARGER
EFFECTIVE AREA =	(LENGTH + 6 FEET) x (WIDTH + 6 FEET)

- CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION ON THE LOCATION OF ANY MECHANICAL UNITS WHERE THE SUPERIMPOSED LOAD UNDER THE UNIT EXCEEDS THE INDICATED DESIGN SIZE AND LOAD FOR THE ROOF AND/OR LIVE LOAD FOR THE FLOOR AS INDICATED ON THE PLAN.
- WIND:

BASIC WIND SPEED	VULT = 120 MPH VAD = 93 MPH
EXPOSURE CLASS	C
INTERNAL PRESSURE COEFFICIENT, GcP1	±0.18
SEE S0.2 FOR COMPONENTS & CLADDING WIND PRESSURE AND ZONE DIAGRAM.	
7. RAIN:	
RAIN LOADING, R	50 PSF
RAIN INTENSITY, I (15-MIN INTENSITY)	8.29 IN/HR

GENERAL

- DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. TEMPORARY BRACING, SHORING, GUYS, ETC. SHALL AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK THAT DEVIATES FROM OR IS PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR THE DESIGN PROFESSIONALS.
- THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR DETERMINING SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: FALSEWORK, FORMWORK, STAGING, BRACING, AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
- STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SIGNED AND SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS. ALL PRODUCT SUBSTITUTIONS SHALL INCLUDE A CODE EVALUATION REPORT SPECIFIC TO THE BUILDING CODE LISTED IN THE DESIGN CRITERIA.
- STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW DETAIL DIMENSIONS TO FIT INTEGRATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL CONSIDER THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DETAILS.
- ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS. UNLESS OTHERWISE SPECIFIED, OPENINGS OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
- TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
- SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR DETAILS. CONDITIONS, FITS, TRENCHES, PADS, DEPRESSIONS, ROOF FLOOR OPENINGS, TOP OF WALL ELEVATIONS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS. FOR THESE NON-STRUCTURAL ELEMENTS SHOWN ON STRUCTURAL DRAWINGS, THEY ARE FOR GENERAL INFORMATION ONLY.
- ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS, AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
- THE EXACT WEIGHTS, DIMENSIONS, AND LOCATIONS OF ALL MECHANICAL UNITS AND ELECTRICAL GEAR SUPPORTED ON STRUCTURAL FRAMING SHALL BE DETERMINED AND COORDINATED BY THE CONTRACTOR PRIOR TO DETAILING THE STRUCTURAL FRAMING SUPPORTING THOSE UNITS. IF THE UNIT WEIGHTS ARE GREATER THAN THE WEIGHTS SHOWN ON THE STRUCTURAL DRAWINGS, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO DETAILING THE STRUCTURE. UNIT WEIGHTS, DIMENSIONS, AND LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE APPROXIMATE ONLY AND SHALL NOT BE USED FOR DETAILING THE STRUCTURE.
- PROVIDE TEMPORARY BLOCKOUTS AND TEMPORARY OPENINGS IN THE STRUCTURE AS REQUIRED TO PERMIT INSTALLATION OF ALL WORK, BLOCKOUTS AND TEMPORARY OPENINGS SHALL BE LOCATED, CONFIGURED, DETAILED, AND INFILLED IN A MANNER THAT ALTERS NEITHER THE STRENGTH OF THE STRUCTURAL FRAMING NOR THE STRENGTH OF CONNECTIONS. INFILL ALL BLOCKOUTS AND TEMPORARY OPENINGS USING THE MATERIALS SPECIFIED FOR THE FRAMING AT THE LOCATIONS WHERE THE BLOCKOUTS AND OPENINGS OCCUR. SUBMIT DRAWINGS INDICATING THE LOCATIONS, DIMENSIONS, AND DETAILS OF ALL PROPOSED BLOCKOUTS AND OPENINGS AND DETAILS INDICATING THE MANNER IN WHICH THE BLOCKOUTS AND OPENINGS SHALL BE INFILLED.
- PENETRATIONS IN CONCRETE SHALL BE CAST-IN-PLACE AND SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN THE STRUCTURAL DRAWINGS.
- BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, CONTRACTOR SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH FIELD CONDITIONS. TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.
- ELEMENTS SUCH AS NON-BEARING PARTITIONS, ETC., ARE ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS. THE STRUCTURAL FRAMING WAS DESIGNED TO LIMIT DRIFT AND DEFLECTION OF THE STRUCTURAL SYSTEM TO LESS THAN THE MAXIMUM PERMITTED DEFLECTIONS LISTED IN THE BUILDING CODE. THE CONTRACTOR SHALL COORDINATE THE WORK OF OTHER TRADES TO ACCOMMODATE THESE DEFLECTIONS AND TO ACCOMMODATE CONSTRUCTION TOLERANCES.
- TOPS OF ALL MASONRY WALLS SHALL BE CONNECTED TO THE UNDERSIDE OF THE STRUCTURAL FRAMING PER DETAILS PROVIDED ON THE STRUCTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF SUCH WALLS.
- FIRE PROTECTION FOR ALL STRUCTURAL PARTS SHALL BE PROVIDED AS SPECIFIED BY THE ARCHITECTURAL DRAWINGS. UL FIRE RESISTANCE RATINGS RESTRAINT CLASSIFICATION AS FOLLOWS:
 - "PRIMARY STRUCTURAL FRAME," AS DEFINED BY IBC SECTION 202 IS "RESTRAINED" EXCEPT AS INDICATED IN FOLLOWING NOTE.
 - THE FOLLOWING FRAMING IS "UNRESTRAINED":
 - FRAMING SUPPORTED BY BEARING WALLS, OTHER THAN CAST-IN-PLACE CONCRETE WALLS, IN END BAYS AND OTHER LOCATIONS WHERE THE END OF THE FRAMING IS NOT ABUTTING FRAMING IN AN ADJACENT BAY.
 - STEEL JOISTS IN END BAYS ON ROOFS SUPPORTING STEEL DECK.

SUBMITTALS

- SUBMITTALS ARE:
 - MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
 - CONCRETE MIX DESIGNS
 - CONCRETE AND MASONRY REINFORCING
 - CONCRETE CONSTRUCTION JOINT LAYOUT
 - STEEL FABRICATION AND MISCELLANEOUS METALS
 - STRUCTURAL STEEL
 - STEEL JOISTS AND JOIST GIRDERS
 - STEEL JOIST CALCULATIONS
 - STEEL DECK
 - STEEL CONNECTIONS
 - MASONRY REINFORCEMENT LAYOUT
 - TILT PANEL LAYOUT AND PANEL SIZES AND DIMENSIONS
 - TILT PANEL REINFORCING
 - TILT PANEL LIFT DESIGN
 - TILT PANEL EMBED LAYOUT
 - PRE-MANUFACTURED CANOPY
- SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
- SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
- FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DEFERRED SUBMITTALS

- DEFERRED SUBMITTALS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
- DEFERRED SUBMITTALS ARE:
 - SITE-CAST TILT-UP CONCRETE ERECTION DRAWINGS
 - STEEL JOISTS AND JOIST GIRDERS
 - STRUCTURAL STEEL CONNECTIONS
 - EXTERIOR WALL SYSTEMS
 - CURTAIN WALL AND STOREFRONT SYSTEMS
 - COLD FORMED STEEL FRAMING AND CONNECTIONS
 - ROOFTOP EQUIPMENT ANCHORAGE AND CURBS
 - GRAVITY SUPPORT AND ANCHORAGE FOR MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT AND SYSTEMS
 - STEEL STORAGE RACKING SYSTEMS
- ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE QUALIFIED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED, RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.
- FACADE:
 - DESIGN AND DETAILING OF THE FACADE SYSTEM AND CONNECTIONS TO THE STRUCTURE SHALL TAKE INTO CONSIDERATION THE FOLLOWING MOVEMENTS:
 - ±1/2" VERTICAL DIFFERENTIAL DEFLECTION OF SLAB EDGES ON ADJACENT FLOORS
 - ±1/2" HORIZONTAL DIFFERENTIAL DEFLECTION BETWEEN ADJACENT FLOORS
 - DIFFERENTIAL THERMAL EXPANSION / CONTRACTION BETWEEN FACADE SYSTEM AND SUPPORTING PRIMARY STRUCTURAL SYSTEM
 - THE FACADE SHALL NOT BE INSTALLED UNTIL AFTER THE SUPERSTRUCTURE HAS BEEN PLUMBED, ALL FRAMING CONNECTIONS HAVE BEEN INSTALLED, AND ALL SHORES AND RESHOES HAVE BEEN REMOVED.
 - WHERE STRUCTURAL STEEL HORIZONTAL GIRTS ARE PROVIDED, THOSE GIRTS MAY BE USED ONLY TO RESIST LATERAL LOADS FROM THE FACADE. VERTICAL LOADS MAY NOT BE IMPOSED BY THE FACADE UPON THE GIRT FRAMING UNLESS THE SECTIONS AND DETAILS ON THE STRUCTURAL DRAWINGS SPECIFICALLY INDICATE THAT FACADE GRAVITY LOAD CONNECTIONS MAY BE MADE TO THE GIRTS.

DELEGATED DESIGN

- DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
- DELEGATED DESIGNS ARE:
 - EXCAVATION, SHORING, AND UNDERPINNING
 - SITE-CAST TILT-UP CONCRETE ERECTION DRAWINGS
 - TILT-UP PANEL LIFT DESIGN
 - PRECAST CONCRETE ELEMENTS AND CONNECTIONS
 - STEEL JOISTS AND JOIST GIRDERS
 - STRUCTURAL STEEL CONNECTIONS
 - CURTAIN WALL AND STOREFRONT SYSTEMS
 - COLD FORMED STEEL FRAMING AND CONNECTIONS
 - ROOFTOP EQUIPMENT ANCHORAGE AND CURBS
 - LOADING MAINTENANCE DAVIT PEDESTALS, TIE-BACKS, AND FALL ARREST SYSTEMS
 - GRAVITY SUPPORT AND ANCHORAGE FOR MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT AND SYSTEMS
 - STEEL STORAGE RACKING SYSTEMS
 - PRE-MANUF CANOPY
- ALL DELEGATED DESIGNS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.
- FACADE:
 - DESIGN AND DETAILING OF THE FACADE SYSTEM AND CONNECTIONS TO THE STRUCTURE SHALL TAKE INTO CONSIDERATION THE FOLLOWING MOVEMENTS:
 - ±1/2" VERTICAL DIFFERENTIAL DEFLECTION OF SLAB EDGES ON ADJACENT FLOORS
 - ±1/2" HORIZONTAL DIFFERENTIAL DEFLECTION BETWEEN ADJACENT FLOORS
 - DIFFERENTIAL THERMAL EXPANSION / CONTRACTION BETWEEN FACADE SYSTEM AND SUPPORTING PRIMARY STRUCTURAL SYSTEM
 - THE FACADE SHALL NOT BE INSTALLED UNTIL AFTER THE SUPERSTRUCTURE HAS BEEN PLUMBED, ALL FRAMING CONNECTIONS HAVE BEEN INSTALLED, AND ALL SHORES AND RESHOES HAVE BEEN REMOVED.
 - WHERE STRUCTURAL STEEL HORIZONTAL GIRTS ARE PROVIDED, THOSE GIRTS MAY BE USED ONLY TO RESIST LATERAL LOADS FROM THE FACADE. VERTICAL LOADS MAY NOT BE IMPOSED BY THE FACADE UPON THE GIRT FRAMING UNLESS THE SECTIONS AND DETAILS ON THE STRUCTURAL DRAWINGS SPECIFICALLY INDICATE THAT FACADE GRAVITY LOAD CONNECTIONS MAY BE MADE TO THE GIRTS.

EARTHWORK

- FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT DATED MAY 12TH, 2023 BY JACKSON GEOTECHNICAL ENGINEERING, LLC. FOLLOW RECOMMENDATIONS IN REPORT FOR ALL FOUNDATION WORK. REPORT IS ON FILE WITH THE ARCHITECT.
- ALLOWABLE NET SOIL BEARING PRESSURE: 3000 PSF
- SUBGRADE PREPARATION FOR FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE GOVERNING AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
- ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE GEOTECHNICAL ENGINEER SHALL BE PERFORMED PRIOR TO THE START OF CONCRETE ALTERATIONS TO SITE PREPARATION OR GRADING SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
- ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING / BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM ARE IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS.
- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, THE CONTRACTOR SHALL BE NOTIFIED IMMEDIATELY.
- ANY REQUIRED IMPORT FILL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.
- UTILITY LINES SUCH AS NON-BEARING PARTITIONS, ETC., ARE ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS. WHERE SHOWN, ARE INDICATED FOR REFERENCE ONLY. REQUIRED ELEVATIONS SHALL BE DETERMINED BY OTHERS AND COORDINATED WITH THE CENTER OF THE WALL. UNLESS OTHERWISE SPECIFIED, SHALL BE INSTALLED IN THE CENTER OF THE WALL. UNLESS OTHERWISE SPECIFIED, SHALL BE INSTALLED IN THE CENTER OF THE WALL. UNLESS OTHERWISE SPECIFIED, SHALL BE INSTALLED IN THE CENTER OF THE WALL.
- WHERE GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF WALLS, BACKFILL SHALL BE PLACED SO THAT IT IS NOT UNBALANCED BY MORE THAN 2 FEET ON EITHER SIDE.
- ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

SHALLOW FOUNDATIONS

- SEE THE GEOTECHNICAL REPORT FOR SHALLOW FOUNDATION REQUIREMENTS.
- FOUNDATION ELEVATIONS SHOWN INDICATE LOCATIONS WHERE ADEQUATE SOIL BEARING PRESSURE IS ANTICIPATED. IF INADEQUATE BEARING CAPACITY IS ENCOUNTERED, CONTACT STRUCTURAL ENGINEER FOR RESOLUTION. BEARING ELEVATIONS ARE ESTIMATED FROM SOIL BORING DATA INDICATED IN THE GEOTECHNICAL REPORT. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS.
- FOUNDATIONS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL, AND CLEAN AND FREE OF LOOSE DEBRIS AND STANDING WATER AT TIME OF CONCRETE PLACEMENT.
- THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOOTINGS SHALL NOT EXCEED 45 DEGREES WITH THE HORIZONTAL. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL CONSULT WITH THE STRUCTURAL ENGINEER WHERE ADEQUATE SLOPE IS NOT ACHIEVED.

REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE", UNLESS NOTED.
- REINFORCING STEEL UON
- WELDED REINFORCING STEEL
- WELDED WIRE REINFORCING
- EPOXY-COATED REINFORCING STEEL
- GALVANIZED-COATED REINFORCING STEEL
- STEEL WIRE
- DEFORMED BAR ANCHORS
- HEADED DEFORMED BARS
- MECHANICAL COUPLERS
- HEADED STEEL STUD SHEAR REINFORCING

REINFORCING STEEL UON	ASTM A615, GR 60	Fy=60 KSI
WELDED REINFORCING STEEL	ASTM A706, GR 60	Fy=60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy=65 KSI
EPOXY-COATED REINFORCING STEEL	ASTM A775	Fy=60 KSI
GALVANIZED-COATED REINFORCING STEEL	ASTM A767	Fy=60 KSI
STEEL WIRE	ASTM A1064	Fy=60 KSI
DEFORMED BAR ANCHORS	ASTM A1064	Fy=70 KSI
HEADED DEFORMED BARS	ASTM A970	Fy=DEFORMED BAR TENSILE STRENGTH
MECHANICAL COUPLERS	TYPE 2	Fy=1.25XDEFORMED BAR TENSILE STRENGTH
HEADED STEEL STUD SHEAR REINFORCING	ASTM A1044	Fy=51 KSI
CONCRETE EXPOSURE	MEMBER	REINFORCEMENT
COVER (IN)		
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18
SLABS, JOISTS, AND WALLS	#14 & #18	1 1/2
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	#11 AND SMALLER	3/4
BEAMS, COLUMNS, WALLS, AND TENSION TIES	PRIMARY REINF. STIRRUPS, TIES, SPIRALS, AND HOOPS	1 1/2
BOUNDARY ELEMENTS	ALL	1 1/2
OTHER		

- MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:
 - ALL TILT-UP CONCRETE WALL PANELS SHALL BE CONSTRUCTED SUCH THAT THE CONTROL OF FORM DIMENSIONS, PLACING OF REINFORCEMENT, QUALITY CONTROL OF CONCRETE, AND CURING PROCEDURES ARE EQUAL TO THOSE NORMALLY EXPECTED IN A PRECAST PLANT. MINIMUM CONCRETE COVER FOR ALL REINFORCING BARS #11 AND SMALLER SHALL BE 3/4".
- REINFORCING STEEL SHALL BE INSTALLED TO WITHIN THE FOLLOWING TOLERANCES. INDICATED TOLERANCES ARE PER ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS".

ITEM FOR WHICH TOLERANCE IS BEING MEASURED	PERMITTED TOLERANCE
CONCRETE COVER FOR SLAB TOP AND BOTTOM BARS	±1/4"
COVER FOR OTHER REINFORCING STEEL	±3/8"
SPECIFIED SPACING BETWEEN PARALLEL BARS IN SLAB	± (SPECIFIED SPACING/4) BUT NOT TO EXCEED 1"
HORIZONTAL DEVIATION FROM SPECIFIED LOCATION UON	±3"
SPACING AND LOCATION OF BEAM STIRRUPS	± (BEAM DEPTH IN INCHES/12) x 1"
SPACING AND LOCATION OF COLUMN TIES	± (MINIMUM COLUMN DIMENSION IN INCHES/12) x 1"
LOCATION OF ENDS OF BARS PERPENDICULAR TO SLAB EDGES	±1"

- THE ABOVE LIST OF PERMITTED TOLERANCES SHALL BE PROVIDED ON ALL REINFORCING STEEL PLACING DRAWINGS AND ON ALL POST-TENSIONED TENDON PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT PROVIDE THIS LIST OF TOLERANCES WILL BE REJECTED.
- FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED UON.
- WELDING OF REINFORCING STEEL OTHER THAN A706 IS PROHIBITED. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH AWS D1.1 OR D1.8.
- HEADED STUDS AND DEFORMED BAR ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- SUPPORTS AND THE WIRE FOR COATED REINFORCING SHALL BE PLASTIC PROTECTED. SUPPORTS AND THE WIRE FOR STAINLESS OR GALVANIZED REINFORCING SHALL BE STAINLESS OR GALVANIZED STEEL PROTECTED RESPECTIVELY. SUPPORTS AND THE WIRE FOR UNCOATED REINFORCING SHALL BE PLAIN WIRE, NO PROTECTION.
- ALL WELDED WIRE REINFORCING SHALL BE LAP SPliced 2 PANELS (1'-0" MIN).
- SPLICING:
 - SPICES IN REINFORCING STEEL SHALL BE MADE ONLY AT THOSE LOCATIONS WHERE SPICES ARE SHOWN ON THE STRUCTURAL DRAWINGS AND AT THOSE LOCATIONS WHERE SPICES HAVE BEEN DETAILED ON THE REINFORCING STEEL PLACING DRAWINGS THAT HAVE BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. ALL SPICES SHALL BE CLASS B TENSION LAP SPICES UON.
 - MECHANICAL SPICE COUPLERS MAY BE USED INSTEAD OF TENSION LAP SPICES AT THE CONTRACTOR'S OPTION AT ANY LOCATION. MECHANICAL SPICE COUPLERS MUST BE USED WHEN PLACING #11 AND LARGER BARS, INCLUDING WHERE SPACING #14 AND LARGER BARS TO #11 AND SMALLER BARS. STAGGER MECHANICAL SPICES IN ADJACENT BARS 30" MINIMUM.
 - MECHANICAL SPICES SHALL BE USED ONLY AT THOSE LOCATIONS WHERE SUCH SPICES ARE SPECIFICALLY INDICATED. STAGGER SPICES WHERE REQUIRED TO PROVIDE 1 1/2" MINIMUM CLEAR SPACING BETWEEN REINFORCING STEEL UON.
- ALL HOOKS SHALL BE STANDARD HOOKS OR STANDARD STIRRUP HOOKS UON. STANDARD STIRRUP HOOKS SHALL HAVE CONTINUOUS BAR AT INSIDE CORNER OF HOOK.
- VERTICAL REINFORCING STEEL IN CONCRETE AND MASONRY WALLS WITH ONE LAYER OF REINFORCING BARS SHALL BE INSTALLED IN THE CENTER OF THE WALL UON.
- STANDARD STIRRUP HOOKS FOR #3, #4, AND #5 BARS SHALL BE PROVIDED IN SLABS LESS THAN 9" THICK.
- DOWELS SHALL MATCH GRADE, SIZE, SPACING, AND QUANTITY OF LAPPED REINFORCING STEEL UON. EXTEND ALL DOWELS FOR FULL DEPTH OF SUPPORTING ELEMENT AND PROVIDE HOOKS UON. DOWELS SHALL NOT BE POST-INSTALLED INTO FRESH CONCRETE.
- HEADED DEFORMED BARS MAY ONLY BE USED ON #11 AND SMALLER BARS. THREADED OR FORGED HEADS SHALL BE USED AT THE FABRICATOR'S DISCRETION.
- REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 315, THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.

- FIBER REINFORCING:

- STRUCTURAL, MACRO SYNTHETIC FIBER REINFORCING SHALL COMPLY WITH ASTM C1116, TYPE II AND ASTM D7598.
 - MACRO SYNTHETIC FIBERS SHALL BE "TUF-STRAND SF" FIBERS MANUFACTURED BY THE EULCO CHEMICAL COMPANY OR "STRUX 9040" FIBERS MANUFACTURED BY C.
 - PROVIDE 4 LBS OF MACRO FIBER REINFORCING PER CUBIC YARD OF CONCRETE WHERE FIBER REINFORCING IS INDICATED UON.
- SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
 - A LIST OF ALL APPLICABLE REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE INDICATED ON ALL REINFORCING STEEL PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT SHOW SUFFICIENT INFORMATION NEEDED TO PLACE THE REINFORCING STEEL WILL BE REJECTED.

CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE UON.
- CONCRETE MATERIALS SHALL CONFORM TO:

CEMENT	ASTM C150, TYPE I OR II
FLY ASH	ASTM C618, TYPE C OR F
SLAG CEMENT	ASTM C989
FINE AND COARSE AGGREGATE	ASTM C33
LIGHTWEIGHT AGGREGATE	ASTM C330
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

LOCATION	f _c AT 28 DAYS (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
ALL FOUNDATION CONCRETE UON	3000	0.55	F0
TILT PANEL	7000	0.55	F1
SLAB-ON-GRADE UON	3000	0.55	F0
UNLESS OTHERWISE NOTED	3000	0.55	F0
ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS UON.			
PROVIDE TEMPLATES TO SET EMBEDDED ITEMS.			
INSTALLATION OF ELECTRICAL CABLE, CONDUIT, AND PIPING IN OR THROUGH CONCRETE COLUMNS AND WALLS IS PROHIBITED UNLESS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF PIPING IN CAST-IN-PLACE CONCRETE IS PROHIBITED UNLESS APPROVED BY STRUCTURAL ENGINEER PRIOR TO INSTALLATION. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING PROPOSED PLACEMENT OF ELECTRICAL CABLE AND CONDUIT IN SLABS. THOSE DRAWINGS SHALL SHOW SIZES AND DIMENSIONED LOCATIONS OF ALL CABLE AND CONDUIT.			
PROVIDE CONTINUOUS BENTONITE WATERSTOPS IN ALL CONSTRUCTION JOINTS IN BELOW GRADE CONCRETE CONSTRUCTION. COORDINATE WATERSTOPS WITH ARCHITECTURAL DRAWINGS.			
PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UON ON ARCHITECTURAL DRAWINGS.			
SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUM.			
CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.			
ALL FORMWORK, SHORING, AND RESHOREING SHALL BE DESIGNED BY THE CONTRACTORS ENGINEER LICENSED IN THE PROJECT'S JURISDICTION. ALL SUBMISSIONS SHALL BE SIGNED AND SEALED.			
REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING CONCRETE.			
ADHERE TO ACI 308R AND ACI 308R FOR HOT AND COLD WEATHER CONCRETE CONSTRUCTION.			
PROPOSED CONCRETE MIX DESIGNS SHALL BE PREPARED IN ACCORDANCE WITH ACI 318-19.			
THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AND INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX AND MIX DESIGN TO THE ARCHITECT FOR REVIEW. THE ARCHITECT'S DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.			
SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND DETAILS OF ALL ARCHITECTURAL FEATURES IN THE CONCRETE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR ALL CONCRETE FINISHES.			

TILT-UP CONCRETE

- ALL TILT-UP CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 551, TILT-UP CONCRETE STRUCTURES UON.
- GROUT SHALL CONFORM WITH ASTM C1107, GRADE A AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
- TILT-UP CONCRETE PANELS SHALL ATTAIN THE FOLLOWING MINIMUM STRENGTHS:

PRIOR TO ERECTION OF PANELS	2500 PSI
COMPRESSIVE STRENGTH AT 28 DAYS	7000 PSI
MODULUS OF RUPTURE	375 PSI
- THE CONTRACTOR SHALL OBTAIN AN ANALYSIS OF THE ERECTION STRESSES OF ALL TILT-UP PANELS FROM AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION WHO IS FULLY RESPONSIBLE FOR THE SAFETY OF TEMPORARY BRACING.
- BRACES, STRONGBACKS, PICKUP INSERTS, AND THEIR LOCATIONS, ETC. SHALL BE DESIGNED, MANUFACTURED, AND DETAILED BY THE LIFTING CONTRACTOR AND ARE SUBJECT TO REVIEW BY THE GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- PROVIDE BRACES AND CONNECTIONS TO SAFELY SUPPORT THE PANELS UNTIL THE STRUCTURE, INCLUDING THE POUR BACK STRIP AND ROOF DIAPHRAGM, IS FULLY INSTALLED, DETAILED, AND INSPECTED.
- THE CONTRACTOR SHALL REVIEW, CHECK, AND COORDINATE ALL PANEL DIMENSIONS WITH ARCHITECTURAL PLANS AND ELEVATIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL DOOR AND WINDOW OPENING DIMENSIONS WITH MANUFACTURER PRIOR TO PLACING ANY CONCRETE.
- IN NO CASE SHALL THE BOND BREAKER RESTRICT THE PLACEMENT OF FINISH MATERIALS OR PAINT UPON TREATED SURFACE. BOND BREAKER SHALL BE APPLIED ON FORMED SURFACES ONLY.
- FILL ALL FITS, HOLES, AND POCKETS WITH GROUT AND RUB SMOOTH WITH BURLAP TO REMOVE ALL FINIS AND RIDGES. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- THE CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS ONE WEEK PRIOR TO POURING ANY CONCRETE TO ENABLE OBSERVATION OF PANEL REINFORCING AND STRUCTURAL EMBED PLACEMENT.
- DECK ANGLE SPICES AND PANEL-TO-PANEL CONNECTIONS SHALL NOT BE WELDED PRIOR TO 28 DAYS AFTER THE PANELS HAVE BEEN CAST.
- ALL REINFORCEMENT AND EMBEDS SHALL BE PLACED ON CHAIRS AND SECURED IN PLACE.
- PANEL LIFTING AND BRACING DESIGNS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO PLACING CONCRETE AS REQUIRED BY THE BUILDING OFFICIAL OR AUTHORITY HAVING JURISDICTION.
- SUBMIT SHOP DRAWINGS FOR FABRICATION AND PLACEMENT OF REINFORCING STEEL. INCLUDE SCHEDULES AND DIAGRAMS OF BENT BARS AND SHOW ARRANGEMENT OF REINFORCEMENT. STRUCTURAL ENGINEER REVIEW WILL BE FOR COMPLIANCE WITH DESIGN REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND QUANTITIES.
- SUBMIT SIGNED AND SEALED ENGINEERING ANALYSIS CALCULATIONS FOR HOISTING AND ERECTION.
- THE CONCRETE CONTRACTOR SHALL FURNISH CONCRETE MIX DESIGN SUBMITTAL FOR REVIEW.

MASONRY

- CMU CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH TMS 402/602 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES".
- MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f _m	2800 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	2800 PSI
GROUT	2000 PSI
- CMU MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS	ASTM C90, NORMAL-WEIGHT UON
MORTAR	ASTM C270, TYPE S UON ASTM C270, TYPE N (NON-STRUCTURAL MASONRY) ASTM C270, TYPE M (WHERE IN CONTACT WITH SOIL)
GROUT	ASTM C476
JOINT REINFORCING	ASTM A82
- PROVIDE MINIMUM 1" GROUT BETWEEN MAIN REINFORCING AND/OR BOLTS AND CMU UNIT FACE. VERTICAL REINFORCEMENT SHALL BE CENTERED IN WALL UON. VERTICAL REINFORCING BARS SHALL BE SECURELY HELD IN POSITION BY WIRE TIES OR OTHER APPROVED MEANS TO ENSURE DESIGN LOCATION AND LAP. PLACE BARS AND LAP PRIOR TO GROUTING.
- HORIZONTAL BOND BEAM AND VERTICAL REINFORCING SHALL BE CONTINUOUS UON.
- CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWEL SIZE AND LOCATION IN FOOTINGS SHALL BE SET TO ALIGN WITH VERTICAL REINFORCING STEEL WITHIN 6" TOLERANCE. VERTICAL REINFORCEMENT TO RUN FULL HEIGHT OF WALL UON.
- ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.
- GROUT SOLID ALL COURSES BELOW GRADE.
- LIFTS OF GROUT SHALL BE MINIMUM 1 1/2" UNTIL THE PREVIOUS COURSE BELOW.
- HORIZONTAL BAR REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR.
- ALL BOND BEAMS TO HAVE A MINIMUM 8" DEPTH. PROVIDE TALLER BOND BEAMS AS NEEDED FOR COURSING OR TO AVOID INTERFERENCE BETWEEN REINFORCING STEEL AND POST-INSTALLED ANCHORS. CUT AND STEP BOND BEAM AS REQUIRED.
- PROVIDE HORIZONTAL TIES WHERE CMU ABUTS CONCRETE.
- COORDINATE ANY UNIDENTIFIED PIPE OR DUCT PASSING THROUGH STRUCTURAL CMU WALLS WITH THE ARCHITECT. ADDITIONAL UNITS MAY BE REQUIRED TO COORDINATE WITH STRUCTURAL ENGINEER FOR REQUIRED UNITS. SIZE BEFORE CONSTRUCTION OF CMU WALL.
- PIPE AND CONDUIT SHALL NOT BE PERMITTED IN CELLS WITH VERTICAL REINFORCEMENT. CONDUIT TO BE LOCATED TO AVOID ALL HORIZONTAL REINFORCEMENT. NO ALUMINUM CONDUITS PERMITTED.
- SEE ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN, AND JOINT TYPE. ALL BLOCK SHALL BE LAD IN RUNNING BOND UON.
- SEE ARCHITECTURAL DRAWINGS FOR OTHER WALL ASSEMBLY COMPONENTS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF ALL NON-LOAD BEARING CMU WALLS.
- MINIMUM WALL VERTICAL REINFORCING SHALL BE #5 BAR FULL HEIGHT IN CENTER OF GROUTED CELL AT WALL INTERSECTIONS, CORNERS, WALL ENDS, JAMBS AT WALL OPENINGS, EACH SIDE OF CONTROL JOINTS, AND AT INTERVALS NOT TO EXCEED 48" UON.
- MINIMUM HORIZONTAL REINFORCING SHALL BE #5 BAR IN CENTER OF MINIMUM 18" DEEP CONTINUOUS GROUTED BOND BEAM AT ELEVATED FLOOR, INTERMEDIATE STAIR LANDINGS, AND ROOF LEVELS AND #5 BAR IN CENTER OF 8" DEEP CONTINUOUS GROUTED BOND BEAM AT TOP OF WALL AND AT INTERVALS NOT TO EXCEED 48". UON. PLACE BARS AT ELEVATED FLOOR AND ROOF LINES CONTINUOUS THROUGH CONTROL JOINTS.

STEEL

6. DELEGATED STRUCTURAL STEEL CONNECTIONS:

- a. ALL STRUCTURAL STEEL CONNECTIONS (OTHER THAN THOSE CONNECTIONS IDENTIFIED AS "FULLY DESIGNED") AND MEMBER REINFORCEMENT AT THE CONNECTIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER WORKING FOR THE FABRICATOR IN ACCORDANCE WITH AISI S305, OPTION 3. THAT ENGINEER SHALL BE LICENSED IN THE JURISDICTION IN WHICH THE PROJECT IS LOCATED.
- b. CONNECTIONS AND MEMBER REINFORCEMENT AT THE CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE REACTIONS SPECIFIED OR INDICATED ON THE DRAWINGS.
- c. WHERE SPECIFIC CONNECTION TYPES, DETAILS, CONFIGURATIONS, OR CONNECTION DESIGN LIMITATIONS ARE INDICATED, THE CONNECTIONS SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THOSE REQUIREMENTS. WHERE SPECIFIC SIZES, QUANTITIES AND DIMENSIONS OF BOLTS, WELDS, AND PLATES ARE INDICATED, THOSE ARE MINIMUM PERMITTED SIZES, QUANTITIES, AND DIMENSIONS. THE CONNECTION STRENGTH OF ALL CONNECTIONS SHALL BE DETERMINED BY THE FABRICATOR'S CONNECTION DESIGN ENGINEER, AND THE CONNECTION DETAIL SHALL BE MODIFIED IF REQUIRED TO PROVIDE THE REQUIRED STRENGTH.
- d. CONNECTION DESIGN RESPONSIBILITY SHALL INCLUDE CALCULATION OF MEMBER STRENGTH AT CONNECTIONS CONSIDERING THE EFFECTS OF COPES, BOLT HOLES, CONNECTION ECCENTRICITY, AND CONNECTION GEOMETRY AND SHALL CONSIDER ALL LIMIT STATES INCLUDING BUT NOT LIMITED TO REVIEW OF GROSS SHEAR, NET SHEAR, BLOCK SHEAR, WEB TEAR-OUT, BEARING, FLEXURAL STRENGTH, LOCAL BUCKLING, TENSILE STRENGTH THROUGH BOTH THE NET AND GROSS SECTIONS, COMPRESSIVE STRENGTH, AND DUCTILITY. DESIGN OF CONNECTIONS SHALL BE IN ACCORDANCE WITH RECOGNIZED PUBLISHED METHODS SUCH AS THOSE PUBLISHED IN THE AISI "ENGINEERING JOURNAL", THE AISI 15TH EDITION STEEL CONSTRUCTION MANUAL, AND THE AISI STEEL CONSTRUCTION MANUAL DESIGN EXAMPLES. CONNECTION DESIGN SHALL CONSIDER TRANSFER OF STRESSES THROUGH CONNECTED AND CONNECTING MEMBERS. CONNECTION DESIGN RESPONSIBILITY SHALL INCLUDE ANALYSIS AND DESIGN OF PLATES, BRACKETS, STRUTS, STIFFENER PLATES, GUSSET PLATES, AND OTHER ELEMENTS TO TRANSFER FORCES INTO AND BETWEEN MEMBERS. CALCULATIONS SHALL SHOW FULL DETAILED CODE EQUATIONS AND METHODOLOGY FOR A REPRESENTATIVE SAMPLE OF EACH CONNECTION TYPE.
- e. AT ENGINEER OR RECORDS REQUEST, MANUAL CALCULATIONS SHALL BE SUBMITTED FOR EACH CONNECTION TYPE TO VERIFY THAT CONNECTIONS DESIGNED USING COMPUTER SOFTWARE CONSIDER ALL LIMIT STATES AND PRODUCE RESULTS IDENTICAL TO THE MANUAL CALCULATIONS.
- f. ALL BOLTED BEAM SHEAR CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS. ALL BEAM SHEAR CONNECTIONS SHALL BE DETAILED SO THAT THE LENGTH OF THE CONNECTION IS GREATER THAN OR EQUAL TO 50% OF THE "T" DIMENSION OF THE SUPPORTED MEMBER.
- g. BEAM SHEAR CONNECTIONS SHALL BE DESIGNED AS SIMPLE SHEAR CONNECTIONS PER AISI 360 PART 10 TO SUPPORT LIFT REACTIONS, EXCEPT WHERE INDICATED AS FULLY DESIGNED ON THE CONTRACT DOCUMENTS. CONNECTIONS SHALL BE DESIGNED TO SUPPORT A MINIMUM OF 15 KIPS, WHERE LOADS ARE NOT PROVIDED ON CONTRACT DOCUMENTS. CONNECTIONS SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR NON-COMPOSITE BEAMS; FOR COMPOSITE BEAMS, CONNECTIONS SHALL SUPPORT 80% OF THE TOTAL UNIFORM LOAD CAPACITY.
- h. MOMENT CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE LRFD MOMENTS INDICATED ON THE DRAWINGS. WHERE NO MOMENT REACTION IS INDICATED, THE CONNECTION SHALL BE DESIGNED FOR 15% OF THE FULLY PLASTIC MOMENT STRENGTH OF THE MEMBER. MOMENT CONNECTIONS SHALL BE DESIGNED AS FULLY RESTRAINED MOMENT CONNECTIONS.
7. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISI 360, TABLE J2.4.
8. SHOP CONNECTIONS SHALL BE WELDED UN. WELDS INDICATED WITH A SHOP WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS.
9. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
10. HEADED STUD ANCHORS (HSA) SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING. APPROXIMATELY 1/8" FOR 5/8"Ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"Ø.
11. MINIMUM HORIZONTAL CONCRETE COVER FOR HSA TO BE 2".
12. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
13. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.
14. PROVIDE ONE SHOP COAT OF PAINT ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY, OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
15. ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G60. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A790.
16. ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
17. CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
18. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT DETAILED SPECIFICALLY ON THE STRUCTURAL DRAWINGS.
19. GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 7000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
20. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR REVIEW AND APPROVAL BEFORE FABRICATION.
21. ALL WELDING ELECTRODES SHALL BE E70XX UN. WELDING ELECTRODES FOR ASTM A913, GR65 MEMBERS AND THEIR CONNECTIONS SHALL BE E80XX.

STEEL JOISTS

1. DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE (SJI) SPECIFICATION BY A MEMBER OF THE SJI, APPROVED FOR THE TYPE OF JOIST BEING USED.
2. ATTACH STEEL JOIST TO SUPPORT AS FOLLOWS:

JOIST TYPE/SERIES	DETAILS WITH WELD INFORMATION		DETAILS WITH BOLT INFORMATION		MINIMUM END BEARING (IN)	
	FILLET WELD SIZE	WELD LENGTH (IN)	BOLT DIAMETER (IN)	BOLT MATERIAL	STEEL	MASONRY
K	1/8	2 1/2	1/2	A307	2 1/2	4
LH/DLH 02-06	3/16	2 1/2	3/4	A307	2 1/2	6
LH/DLH 07-17	1/4	2 1/2	3/4	A307	4	6
LH/DLH 18-25	1/4	4	3/4	A325	6	6
JOIST GIRDER	1/4	4	3/4	A325	6	6

WHERE WELDS OR BOLTS ARE INDICATED, WELD/BOLT TO BE INSTALLED ON BOTH SIDES OF JOIST SEAT UN.

3. DESIGN JOIST SEAT FOR 1500 LBS ROLLOVER LOAD FOR K-SERIES JOISTS ONLY.
4. ALL ROOF JOISTS SHALL BE DESIGNED FOR A 65 PSF NET WIND UPLIFT (LRFD).
5. SPECIAL JOIST AND JOIST GIRDER DEFLECTION REQUIREMENTS:
- a. ROOF JOISTS: LIVE LOAD = U360 & TOTAL LOAD = U240
- b. FLOOR JOISTS: LIVE LOAD = U480 & TOTAL LOAD = U360
6. PROVIDE SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR SPECIAL JOIST AND JOIST GIRDER DESIGNS. JOIST DESIGNER SHALL UPLIFT LOADINGS INDICATED ON THE STRUCTURAL DRAWINGS.
7. PROVIDE BRIDGING PER SJI SPECIFICATIONS. DESIGN AND PROVIDE UPLIFT BRIDGING TO WITHSTAND A NET UPLIFT PRESSURE AS INDICATED ABOVE. WHERE BRIDGING INTERFERES WITH MECHANICAL OR OTHER TRADE INSTALLATIONS, THE JOIST MANUFACTURER SHALL PROVIDE DIRECTION FOR REMOVAL AND REPLACEMENT OF ANY BRIDGING.
8. HANGING OF MISCELLANEOUS ITEMS IS NOT PERMITTED FROM BRIDGING / BRACING.
9. PROVIDE ANCHORS AT EACH END OF EACH ROW OF BRIDGING TOP AND BOTTOM CHORDS EXCEPT AT EXPANSION JOINTS.
10. ALL JOIST HEADERS AND ACCESSORIES SHALL BE DESIGNED AND FURNISHED BY THE JOIST FABRICATOR.
11. STEEL JOISTS SHALL BE TOP CHORD BEARING UN.
12. THE JOIST FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL BAR JOIST MATERIAL AND ACCESSORIES FOR REVIEW AND APPROVAL BEFORE FABRICATION.
13. PROVIDE SLOPED JOIST SEATS AS REQUIRED TO MEET ROOF SLOPE REQUIREMENTS. COORDINATE WITH ARCHITECTURAL DRAWINGS.

STEEL DECK

1. MATERIAL, DETAILING, DESIGN, MANUFACTURE, AND ERECTION OF STEEL DECKS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) SPECIFICATION.
2. DECK SIZE AND GAUGE INDICATED ON THE DRAWINGS ARE BASED ON THE FOLLOWING:
- a. CURRENT VERSION OF VULCRAFT VERCOR CATALOG FOR GRAVITY DESIGN LOADS
- b. SDI DIAPHRAGM DESIGN MANUAL 4 FOR DIAPHRAGM LOADS
3. PROVIDE MINIMUM DECK BEARING AND LAP LENGTHS PER MANUFACTURER'S RECOMMENDATIONS.
4. FOR PENETRATIONS LESS THAN OR EQUAL TO 12"Ø OR 12"x12", FRAMING OF OPENINGS FOR OTHER TRADES SHALL BE THE RESPONSIBILITY OF THE TRADES INSTALLING. HOLES LOCATED AND DIMENSIONED ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE DECK ERECTOR. SEE STRUCTURAL FRAMING DETAILS FOR ANY OPENING EXCEEDING LIMITS NOTED.
5. SUBMIT SHOP DRAWINGS SHOWING DECKING LAYOUT, DECK GAUGE, DECK DIRECTION, FURNISHER, AND FASTENING PATTERN FOR REVIEW AND APPROVAL.
6. FURNISH DECKING IN MINIMUM LENGTHS TO ACHIEVE 3-SPAN CONDITION UN.
7. ROOF DECK:
- a. ALL ROOF DECK SHALL BE GALVANIZED TO CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60.
- b. ALL ROOF DECK SHALL BE PRIME PAINTED GRAY TO CONFORM TO ASTM A1008, GRADE C.
- c. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO ROOF DECK. THIS 25 LBS LOAD AND 2'-0" SPACING INCLUDE ADJACENT MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS HANGING FROM THE DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING SUPPORTED OFF STEEL FRAMING WILL NEED TO BE ADDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATION AND WEIGHT OF ALL THE ELEMENTS BEING HUNG WITH STRUCTURAL ENGINEER UN.
- d. DECK MANUFACTURER SHALL FURNISH ALL RIDGE AND VALLEY PLATES, SUMP PANS, DRAIN PLATES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.

COLD-FORMED STEEL (CFS) DELEGATED

1. ALL COLD-FORMED STEEL FRAMING AND CONNECTIONS SHALL CONFORM TO THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURAL METALS, AISI S100.
2. THE STRUCTURAL DRAWINGS DO NOT REFLECT THE ENTIRE SCOPE OF WORK REQUIRED FOR COLD-FORMED STEEL FRAMING AND CONNECTIONS. COLD-FORMED STEEL FRAMING SHALL BE PROVIDED FOR AND COORDINATED WITH ARCHITECTURAL, MEP, AND OTHER DRAWINGS.
3. COLD-FORMED STEEL FRAMING AND CONNECTIONS INDICATED OR REFERENCED IN THE CONTRACT DOCUMENTS ARE FOR PURPOSES OF CONVEYING DESIGN INTENT ONLY. THE COMPLETE DESIGN OF COLD-FORMED STEEL SYSTEMS THAT SUPPORT GRAVITY OR LATERAL LOADS SHALL BE THE RESPONSIBILITY OF THE COLD-FORMED STEEL SUBCONTRACTOR AND THEIR STRUCTURAL ENGINEER. THE DESIGN OF COLD-FORMED STEEL SYSTEMS SHALL CONFORM TO THE GOVERNING BUILDING CODE AND REGULATIONS, AS WELL AS ANY SPECIAL CONDITIONS AND REQUIREMENTS AS INDICATED IN THE CONTRACT DOCUMENTS.
4. STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) MEMBER DESIGNATIONS ARE SPECIFIED ON THE CONTRACT DOCUMENTS UN. WHERE SPECIFIC MANUFACTURERS ARE SPECIFIED AND PROPRIETARY FRAMING DESIGNATIONS INDICATED, FRAMING BY OTHER MANUFACTURERS MAY BE USED PROVIDED THOSE FRAMING MEMBERS HAVE DIMENSIONS EQUIVALENT TO THE SPECIFIED FRAMING AND ENGINEERING PRIORITIES EQUIVALENT TO OR GREATER THAN THE SPECIFIED FRAMING. SUCH PROPOSED SUBSTITUTIONS ARE PERMITTED ONLY IF APPROVED IN WRITING BY THE DESIGN PROFESSIONALS.
5. STRUCTURAL COLD-FORMED STEEL IS DEFINED AS THE FOLLOWING:
- a. ANY COLD-FORMED STEEL THICKER THAN 20GA (33 MIL)
- b. ANY EXTERIOR COLD-FORMED FRAMING AND CONNECTIONS
- c. ANY LOAD BEARING MEMBER
- d. ANY MEMBER CALLED OUT AND SPECIFIED IN THE STRUCTURAL DRAWINGS
- e. ALL OTHER COLD-FORMED STEEL IS NON-STRUCTURAL AND NOT A PART OF THE STRUCTURAL PACKAGE
6. STRUCTURAL COLD-FORMED STEEL (ROLLED SECTIONS, CONNECTION MATERIAL, AND STIFFENER PLATES) SHALL CONFORM TO THE FOLLOWING STANDARDS:
- | | | |
|-----------------------------|------------------|-----------|
| 16GA (43 MIL) AND THINNER | ASTM A653, GR 33 | Fy=33 KSI |
| 16GA (54 MIL) AND THICKER | ASTM A653, GR 50 | Fy=50 KSI |
| CONNECTION MATERIAL > 3/16" | ASTM A36 | Fy=36 KSI |
| HOT-DIP COATING | ASTM A924, G60 | |
| ELECTRO-PLATE COATING | ASTM A591 | |
| ALUMINUM-ZINC COATING | ASTM A792, GR 40 | |
| ELECTRODES FOR ARC WELDING | AWS 5.1 E60XX | |
7. WIND LOADS PERPENDICULAR TO THE PLANE OF EXTERIOR WALLS SHALL BE COMPUTED BASED UPON THE COMPONENT AND CLADDING WIND PRESSURES INDICATED IN THE GENERAL NOTES.
8. DESIGN SHALL INCLUDE DESIGN AND DETAILING OF FRAMING, BRIDGING, TEMPORARY AND PERMANENT BRACING, AND ALL FRAMING CONNECTIONS.
9. COLD-FORMED STEEL COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR A FULL ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE SECURED IN PLACE UNTIL PROPERLY ATTACHED.
10. SPLICING OF COLD-FORMED MEMBERS IS NOT PERMITTED.
11. CUTOFFS, HOLES, OR NOTCHES ARE NOT PERMITTED IN COLD-FORMED STEEL, ROOF AND FLOOR JOISTS, HEADERS, OR BEAMS WITHOUT PRIOR WRITTEN APPROVAL OF EITHER THE STRUCTURAL ENGINEER OR THE COLD-FORMED STEEL ENGINEER.
12. CUTTING OF COLD-FORMED STEEL MEMBERS SHALL BE ACCOMPLISHED WITH A SAW OR SHEARS. TORCH CUTTING OF SUCH MEMBERS IS NOT PERMITTED. THE CUTTING OF ANY LOAD BEARING MEMBER IS PROHIBITED.
13. HOLES FIELD CUT THROUGH COLD-FORMED STUD FRAMING SHALL BE MADE WITHIN THE LIMITATIONS OF THE PRODUCT AND THE PRODUCT DESIGN. HOLES SHALL BE REINFORCED AS RECOMMENDED BY THE MANUFACTURER.
14. ALL WELDS SHALL COMPLY WITH THE REQUIREMENTS OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AISI S100, AND THE STRUCTURAL WELDING CODE - SHEET STEEL, AWS D1.3.
15. CONNECTIONS SHALL BE MADE BY WELDS, SCREWS, BOLTS, OR OTHER APPROVED FASTENING DEVICES OR METHODS PROVIDING POSITIVE ATTACHMENT AND RESISTANCE TO LOOSENING. FASTENERS SHALL BE MATERIAL COMPATIBLE WITH THE COLD-FORMED STEEL.
16. LIMIT HORIZONTAL COLD-FORMED STUD OUT-OF-PLANE DEFLECTIONS DUE TO WIND LOADS TO THE FOLLOWING:
- a. STUDS BACKING UP BRICK, MASONRY, AND STONE: U/600 OR 0.3" MAX
- b. STUDS BACKING UP ALL OTHER FACADE MATERIALS: U/360 UN
17. TEMPORARY BRACING SHALL BE PROVIDED WHERE REQUIRED TO ENSURE ALIGNMENT UNTIL WALL PANELS ARE INSTALLED AND CONSTRUCTION IS COMPLETED.
18. CONSTRUCTION SHALL NOT BEGIN UNTIL SHOP DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED BY THE DESIGN PROFESSIONALS. ALL COLD-FORMED STEEL FRAMING AND CONNECTIONS INCLUDING CONNECTIONS TO THE SUPPORTING STRUCTURE SHALL BE DESIGNED BY THE COLD-FORMED STEEL FRAMING CONTRACTORS ENGINEER LICENSED IN THE PROJECT'S JURISDICTION. ALL SUBMITTALS, INCLUDING DESIGN CALCULATIONS AND SHOP DRAWINGS, SHALL BE SIGNED AND SEALED BY THAT ENGINEER.

POST-INSTALLED ANCHORS

1. BASIS OF DESIGN ANCHORS:
- | INSTALLATION CONDITION | ANCHOR TYPE |
|--|---|
| EXPANSION ANCHORS INTO CONCRETE | SIMPSON STRONG-BOLT 2 (ESR-3037) |
| SCREW ANCHORS > 1/4"Ø INTO CONCRETE | SIMPSON TITEN HD (ESR-2713) |
| | SIMPSON SET-3G w/ GR55 THREADED ROD (ESR-4057) |
| ADHESIVE ANCHORS INTO CONCRETE, NEW AND EXISTING | FOR ALL ADHESIVE ANCHORS, HOLES SHALL BE HAMMER DRILLED AND HOLES MAY BE DRY OR WATER SATURATED |
| | SIMPSON STRONG-BOLT 2 (IAPMO UES ESR-240) |
| SCREW ANCHORS > 1/4"Ø INTO GROUTED CMU | SIMPSON TITEN HD (ESR-1056) |
| SCREW ANCHORS > 1/4"Ø INTO CONCRETE OR GROUTED CMU | SIMPSON TITEN TURBO (CONCRETE: IAPMO UES ESR-172) (MASONRY: IAPMO UES ER-716) |
| ADHESIVE ANCHORS IN GROUTED CMU OR SOLID BRICK | SIMPSON SET-3G w/ GR55 THREADED ROD (ESR-4844) |
| ADHESIVE ANCHORS INTO HOLLOW CMU, BRICK OR MULTI-WYTHE BRICK WALLS | SIMPSON SET-3G w/ GR55 THREADED ROD (ESR-4844) |
| POWDER-ACTUATED FASTENERS (PAFs) IN CONCRETE | SIMPSON POPA (ESR-2138) |

2. ALTERNATIVE ANCHORS MAY BE USED IF APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION VERIFYING PROPOSED ALTERNATIVE ANCHORS WILL PROVIDE THE SAME OR GREATER LOAD-CARRYING CAPACITY AS THE SPECIFIED ANCHORS. THE CONTRACTOR SHALL SUBMIT EVALUATION REPORTS, EACH ANCHOR CONFIGURATION SHALL BE EVALUATED AND COMPARED TO THE SPECIFIED ANCHOR.
3. CRACKED CONCRETE IS ASSUMED FOR ALL ANCHORAGE DESIGN CONDITIONS UNLESS IT CAN BE DEMONSTRATED THROUGH ENGINEERING ANALYSIS THAT THE CONCRETE REMAINS UNCRACKED DURING THE GOVERNING ULTIMATE LOAD STATE.
4. CONCRETE SHALL HAVE ACHIEVED DESIGN STRENGTH PRIOR TO INSTALLING POST-INSTALLED ANCHORS. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE THAT HAS CURED FOR A MINIMUM OF 21 DAYS.
5. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGES OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
6. POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN A MANNER THAT DOES NOT DAMAGE REINFORCING STEEL, CONDUIT OR OTHER EMBEDDED ITEMS. REINFORCING STEEL SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO DRILLING HOLES. PLATES AND BRACKETS THROUGH WHICH ANCHORS WILL BE INSTALLED SHALL NOT BE FABRICATED UNTIL AFTER REINFORCING STEEL IS LOCATED AND ANCHOR LOCATIONS ARE ADJUSTED. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER TO OBTAIN ALTERNATIVE ANCHOR LAYOUT WHERE ANCHORS MUST BE RELOCATED TO AVOID INTERFERENCE WITH REINFORCING STEEL.
7. ADHESIVE ANCHORING SYSTEMS ARE PERMITTED TO BE USED FOR INSTALLATION OF REINFORCING STEEL INTO EXISTING CONCRETE ONLY WHERE SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS OR WITH APPROVAL FROM THE STRUCTURAL ENGINEER. LOCATIONS WHERE REINFORCING STEEL WAS INCORRECTLY PLACED OR MISSED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
8. WHERE POST-INSTALLED MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE SPECIFIED, THOSE DEPTHS ARE THE REQUIRED MINIMUM NOMINAL EMBEDMENT DEPTHS. WHERE MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE NOT INDICATED, THE ANCHORS SHALL BE INSTALLED TO THE MAXIMUM EMBEDMENT DEPTH NOTED IN THE MANUFACTURER'S PRODUCT TECHNICAL GUIDE.
9. ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UN.

BAR SIZE	CONCRETE COMPRESSIVE STRENGTH				
	3000 PSI	4000 PSI	5000 PSI	6000 PSI	7000 PSI
#3	22"	19"	17"	15"	14"
#4	29"	25"	22"	20"	19"
#5	36"	31"	28"	26"	24"
#6	43"	38"	34"	31"	28"
#7	62"	54"	49"	44"	41"
#8	70"	62"	56"	51"	47"
#9	76"	70"	62"	57"	53"
#10	84"	78"	70"	63"	59"
#11	96"	87"	76"	70"	64"

NOTES:

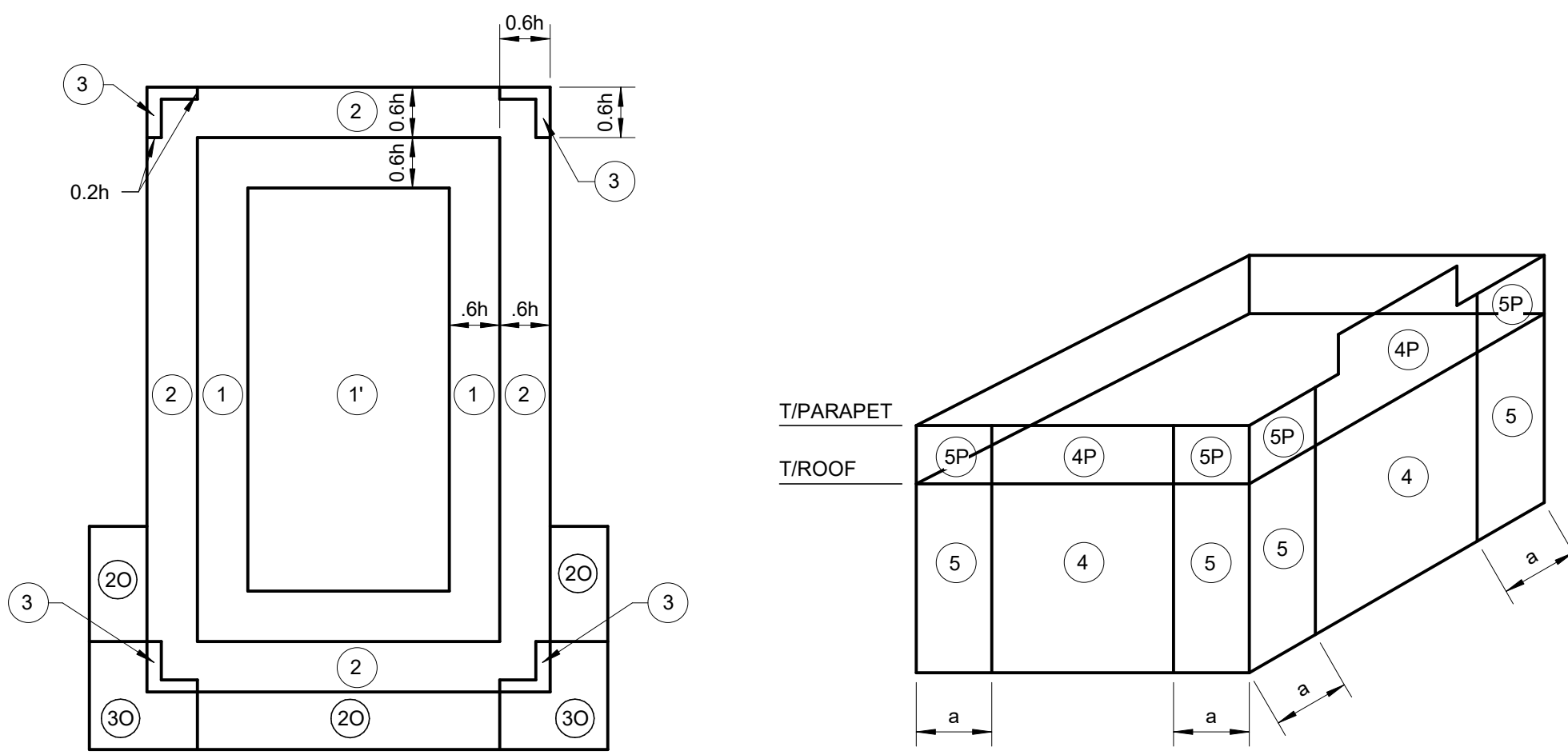
1. THE SPICE LENGTH BY THE FOLLOWING (INCREASED LENGTHS ARE CUMULATIVE):

1. HORIZONTAL TOP BARS WITH GREATER THAN 12" OF CONCRETE BELOW +30%

2. BAR SPACING LESS THAN 2 BAR DIAMETERS +50%

3. EPOXY COATED BARS WHEN CLEAR COVER IS LESS THAN 3 BAR DIAMETERS OR CLEAR SPACING IS LESS THAN 6 BAR DIAMETERS +50%

OTHER EPOXY COATED BARS +20%



ROOF PLAN (GENERIC BUILDING SHOWN)

WALLS (GENERIC BUILDING SHOWN)

COMPONENT & CLADDING DESIGN WIND PRESSURES (PSF)							
ROOF							
ZONE	10 SF	20 SF	50 SF	100 SF	200 SF	350 SF	500 SF
NEGATIVE 1	-55.2	-51.6	-46.8	-43.1	-39.5	-36.5	-34.7
NEGATIVE 1'	-31.7	-31.7	-31.7	-31.7	-27.3	-23.7	-21.5
NEGATIVE 2	-72.8	-68.1	-62.0	-57.3	-52.6	-48.8	-46.4
NEGATIVE 3	-99.3	-89.9	-77.5	-68.1	-58.8	-51.2	-46.4
POSITIVE ALL ZONES	+16.0	+16.0	+16.0	+16.0	+16.0	+16.0	+16.0
OVERHANG 1 & 1'	-49.9	-49.0	-47.9	-39.4	-33.3	-29.4	
OVERHANG 2	-67.5	-61.3	-53.0	-46.8	-40.6	-35.5	-32.3
OVERHANG 3	-94.0	-83.0	-68.6	-57.7	-46.7	-37.9	-32.3
PARAPET							
ZONE	10 SF	20 SF	50 SF	100 SF	200 SF	500 SF	
CASE A:	ZONE 2	+100.2	+93.7	+85.1	+78.6	+72.1	+63.5
	ZONE 3	+128.3	+116.9	+101.7	+90.2	+78.7	+63.5
CASE B:	INTERIOR	-59.2	-56.2	-52.2	-49.2	-46.2	-42.3
	CORNER	-67.6	-63.1	-57.2	-52.7	-48.2	-42.3
WALL							
ZONE	10 SF	100 SF	200 SF	500 SF			
POSITIVE ZONES 4 & 5	+31.7	+27.0	+25.6	+23.8			
NEGATIVE 4	-34.4	-29.7	-28.3	-26.4			
NEGATIVE 5	-42.3	-33.0	-30.1	-26.4			

NOTES:

1) PRESSURES ARE FOR THE SQUARE FOOT (SF) TRIBUTARY AREA SHOWN. FOR OTHER TRIBUTARY AREAS, LINEARLY INTERPOLATE BETWEEN VALUES SHOWN ABOVE.

2) POSITIVE PRESSURES ACT TOWARD THE BUILDING. NEGATIVE PRESSURES ACT AWAY FROM THE BUILDING.

3) SEE DIAGRAMS FOR LOCATION OF ZONES.

4) PRESSURES SHOWN ARE ULTIMATE PRESSURES. MULTIPLY VALUES BY 0.6 FOR NOMINAL PRESSURES.

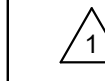
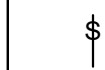
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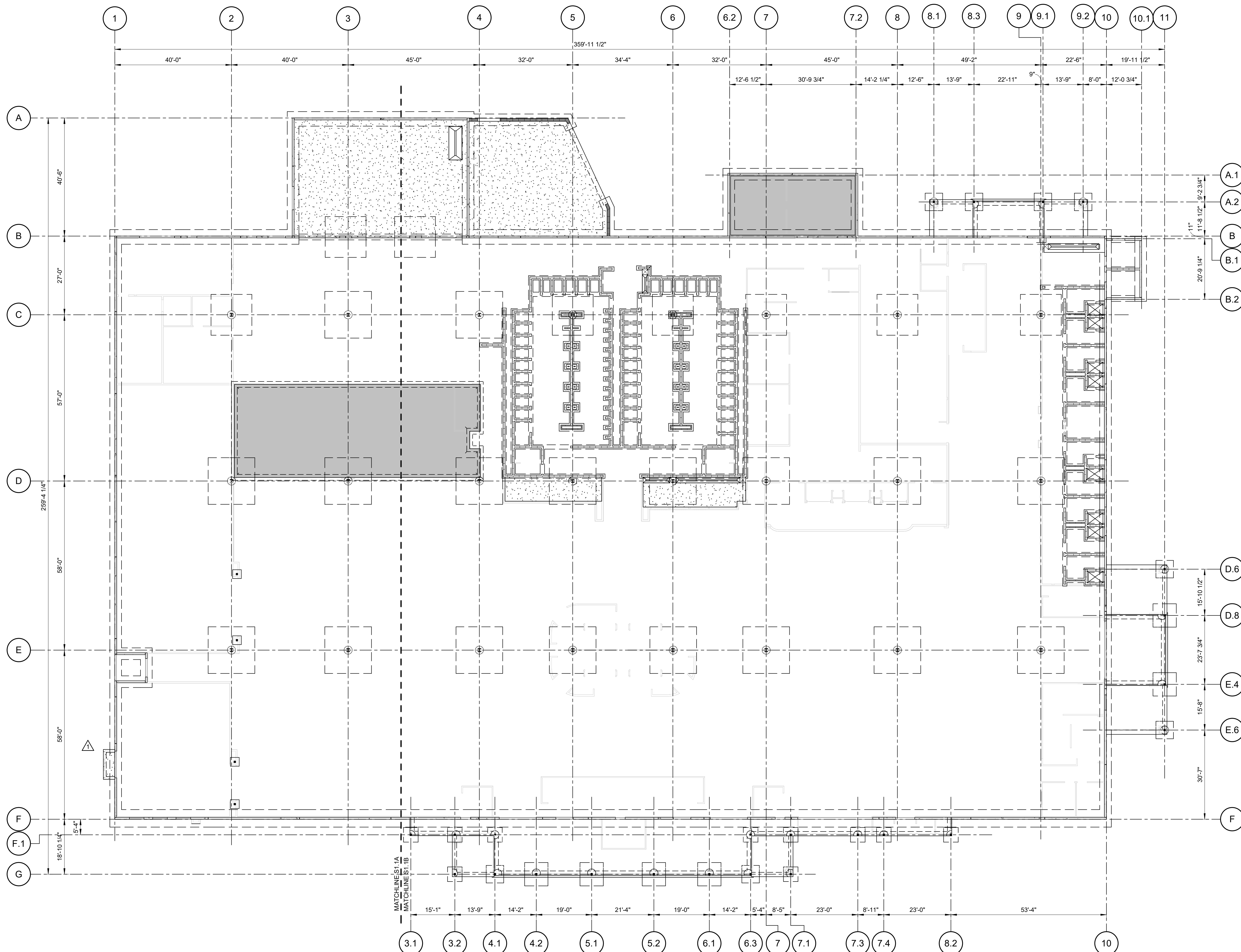
WIND PRESSURE DIAGRAMS

SCALE: NTS

STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUND	GA	GAGE	SECT	SECTION
Ø	ROUND OR DIAMETER	GALV	GALVANIZED	SCHED	SCHEDULE
□	SQUARE	GB	GRADE BEAM	SIM	SIMILAR
Δ	AND	GC	GENERAL CONTRACTOR	SOG	SLAB ON GRADE
@	AT	GT	GIRDER TRUSS	SP	SUPRICE PINE
ALUM	ALUMINUM	HGT	HEIGHT	SPA	SPACE
AR	ANCHOR ROD	HORIZ	HORIZONTAL	SPEC	SPECIFICATION
ARCH	ARCHITECTURE	HSA	HEADED STUD ANCHOR	STD	STANDARD
ASSY	ASSEMBLY	HT	HIP TRUSS	STIFF	STIFFENER
B/	BOTTOM OF	IF	INSIDE FACE	STL	STEEL
BETWN	BETWEEN	INFO	INFORMATION	STR	STRAIGHT
BULDG	BUILDING	INT	INTERIOR	STRUCT	STRUCTURAL
BM	BEAM			SYM	SYMMETRICAL
BOT	BOTTOM	JNT	JOINT		SOUTHERN YELLOW PINE
BPL	BASE PLATE	JST	JOIST	T&B	TOP & BOTTOM
BRG	BEARING	LB	POUND	T/	TOP OF
C TO C	CENTER TO CENTER	LG	LONG	T/U PANEL	THICKENED EDGE
CANT	CANTILEVER	LH	LONG	TE	THICK
CFS	COLD FORMED STEEL	LLV	LONG LEG HORIZONTAL	THK	THICK
CJ	CONSTRUCTION JOINT	LLV	LONG LEG VERTICAL	THRD	THREADED
CL	CENTER LINE	LSH	LONG SIDE HORIZONTAL	TRANSV	TRANSVERSE
CLR	CLEAR	LSV	LONG SIDE VERTICAL	TS	THICKENED SLAB
CMU	CONCRETE MASONRY UNIT			TYP	TYPICAL
COL	COLUMN	MANUF	MANUFACTURER	UN	UNLESS OTHERWISE NOTED
CONC	CONCRETE	MATL	MATERIAL	VER	VERIFY
CONN	CONNECTION	MAX	MAXIMUM	VERT	VERTICAL
CONST	CONSTRUCTION	MECH	MECHANICAL		
CONTR	CONTRACTOR	MIN	MINIMUM		
CTR	CENTER	MISC	MISCELLANEOUS		
CTRD	CENTERED	NIC	NOT IN CONTRACT	WA	WHERE APPLICABLE
		NO or No	NUMBER	w/ or w/	WITH
		NS	NEAR SIDE	WO	WITHOUT
		NTS	NOT TO SCALE	WP	WORK POINT
DBA	DEFORMED BAR ANCHOR			WST	WATERSTOP
DEFL	DEFLECTION			WWF	WELED WIRE FACIEMET
DET	DETAIL	OC	ON CENTER		
DIA	DIAMETER	OD	OUTSIDE DIAMETER		
DIAG	DIAGONAL	OF	OUTSIDE FACE		
DIFF	DIFFERENT	O/O	OUT TO OUT		
DIM	DIMENSION	OPNG	OPENING		
DWG	DITTO	OPP	OPPOSITE		
EA	EACH	PEMB	PRE-ENGINEERED METAL BUILDING		
EF	EACH FACE	PERP	PERPENDICULAR		
EJ	EXPANSION JOINT	PL	PLATE		
ELEV	ELEVATION	PNL	PANEL		
ELEC	ELECTRICAL	PREFAB	PREFABRICATED		
ELEV	ELEVATOR	PSF	POUNDS PER SQUARE FOOT		
ENGR	ENGINEER	PSI	POUNDS PER SQUARE INCH		
ENR	ENGINEER OF RECORD	PT	POST TENSIONED		
EQ	EQUAL	QTY	QUANTITY		
EQUIP	EQUIPMENT				
EXIST	EXISTING				
EXP	EXPANSION				
EXT	EXTERIOR	R or RAD	RADIUS		
EW	EACH WAY	RD	ROUND		
FB	FLAT BAR	REF	REFERENCE		
FD	FLAT DRAIN	REINF	REINFORCEMENT		
FDN	FOUNDATION	REQ	REQUIRED		
FF	FINISH FLOOR	REQD	REQUIRED		
FLR	FLOOR	RET	REVISION		
FS	FAR SIDE				
FTG	FOOTING				

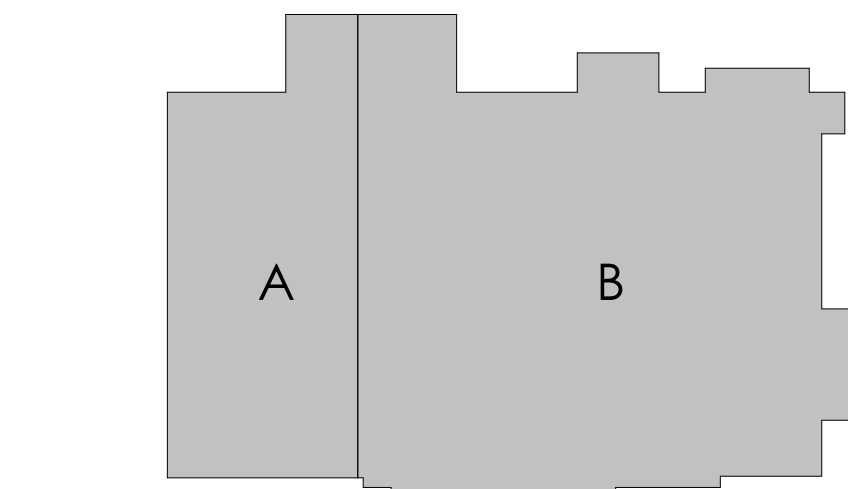
GENERAL SYMBOLS	
	PLAN, SECTION OR DETAIL NO SHEET NUMBER
	NORTH ARROW
	KEYED NOTE TO PLAN
	REVISION NUMBER
	FOOTING STEP



1 OVERALL FOUNDATION PLAN
SCALE: 1/16" = 1'-0"

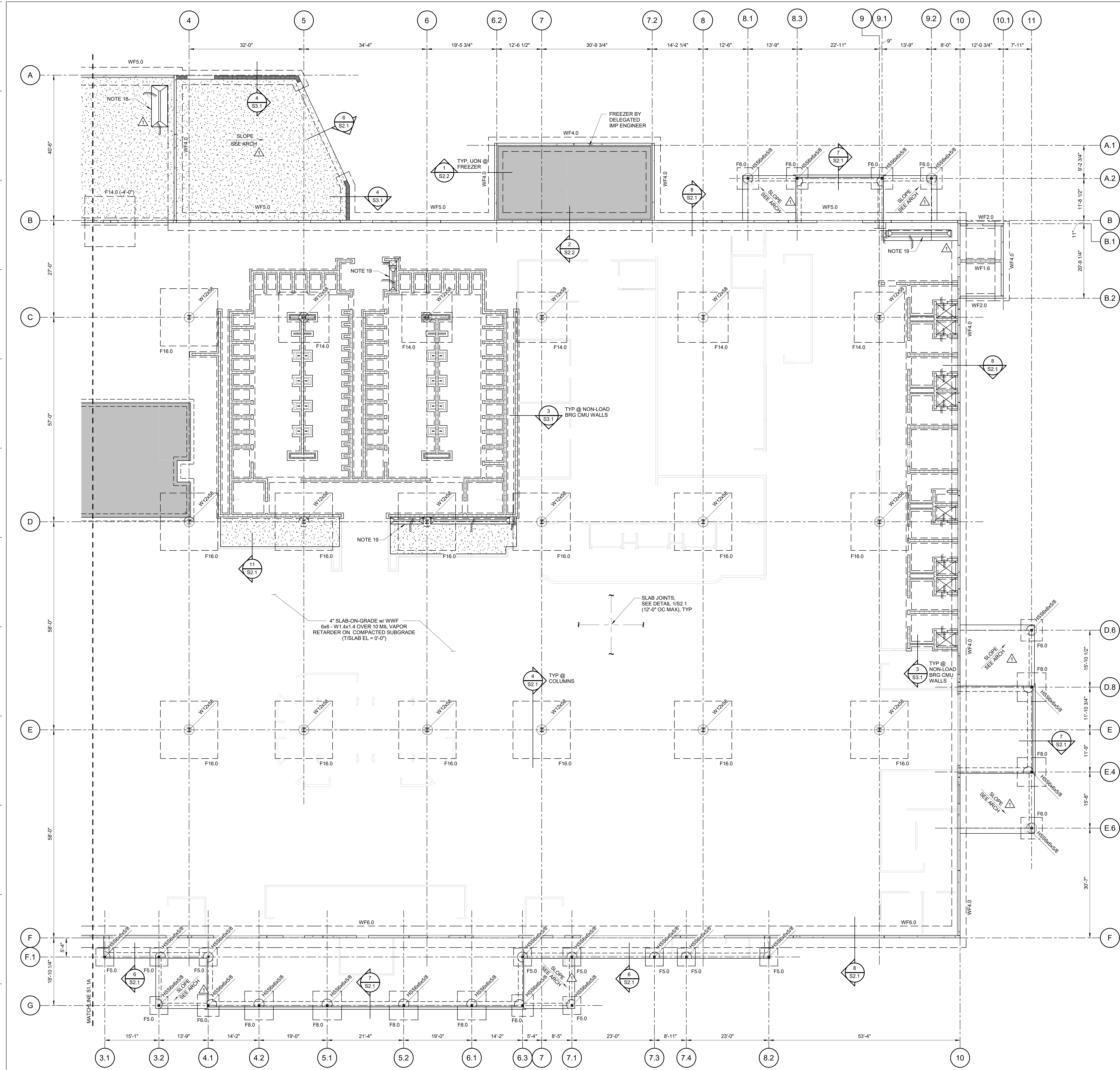
- FOUNDATION PLAN NOTES:**
- 1) FOR DESIGN CRITERIA AND GENERAL NOTES, SEE SHEET S0.2
 - 2) FOR DIMENSIONS, SECTIONS & ELEVATIONS NOT SHOWN, SEE ARCH.
 - 3) ELEVATIONS ARE BASED ON T/SLAB DATUM EL 0'-0". SEE CIVIL DWGS FOR ACTUAL ELEVATION.
 - 4) TOP OF SPREAD FOOTINGS EL = -2'-0", TYP UON.
 - 5) TOP OF TILT PANEL FOOTINGS EL = -4'-0", TYP UON.
 - 6) F# & W## DENOTES FOOTING TYPES, SEE SCHEDULE THIS SHEET.
 - 7) SEE 2/S2.1 FOR PIPE PENETRATIONS THROUGH BUILDING PERIMETER.
 - 8) SEE DETAIL 3/S2.1 FOR REINF @ WALL FOOTING CORNER.
 - 9) PROVIDE 2#x3'-0" MID SLAB @ ALL RE-ENTRANT CORNERS.
 - 10) FOR TYPICAL COLUMN BASE PLATES, SEE DETAIL 5/S2.1.
 - 11) DENOTES NON-LOAD BEARING 8" CMU WALL. FOR TYP CMU WALL DETAILS AND REINFORCEMENT, SEE GENERAL NOTES & SHEET S3.1. AT LOCATIONS WHERE ARCH SPECIFIES 4" CMU, CMU TO BE UNREINFORCED & FULLY GROUTED.
 - 12) DENOTES TILT UP CONCRETE PANEL. 7 1/4" TOTAL THICKNESS (6 1/2" STRUCTURAL + 3/4" REVEAL). SEE SHEETS S7.1-S7.4 FOR INFO.
 - 13) DENOTES 8" NW CONCRETE SLAB ON GRADE w/ #5 @ 12" EA WAY CTRD IN SLAB.
 - 14) DENOTES 8" NW CONCRETE SLAB ON GRADE w/ #5 @ 12" OC EA WAY CTRD IN SLAB.
 - 15) DENOTES 8" NW CONCRETE SLAB ON GRADE w/ #5 @ 12" OC EA WAY CTRD IN SLAB. ON 6" OF RIGID INSULATION w/ 4" MID SLAB.
 - 16) DENOTES RECESS IN SLAB, COORD DEPTH w/ ARCH, SEE DETAIL 10/S2.1 FOR INFO.
 - 17) DENOTES SLOPE IN SLAB, COORD SLOPE w/ ARCH SEE DETAIL 9/S2.1 FOR INFO.
 - 18) PROVIDE 3'-0" SQ x 1'-6" DEEP THICKENED SLAB w/ (4)#5 BOT EA WAY. CONNECT HSB TO SLAB w/ EMBED PL 1/2"x14"x14" w/ (4) 1/2"x8" LG HAS.
 - 19) AT DRAIN, SEE DETAILS 6/S2.2.

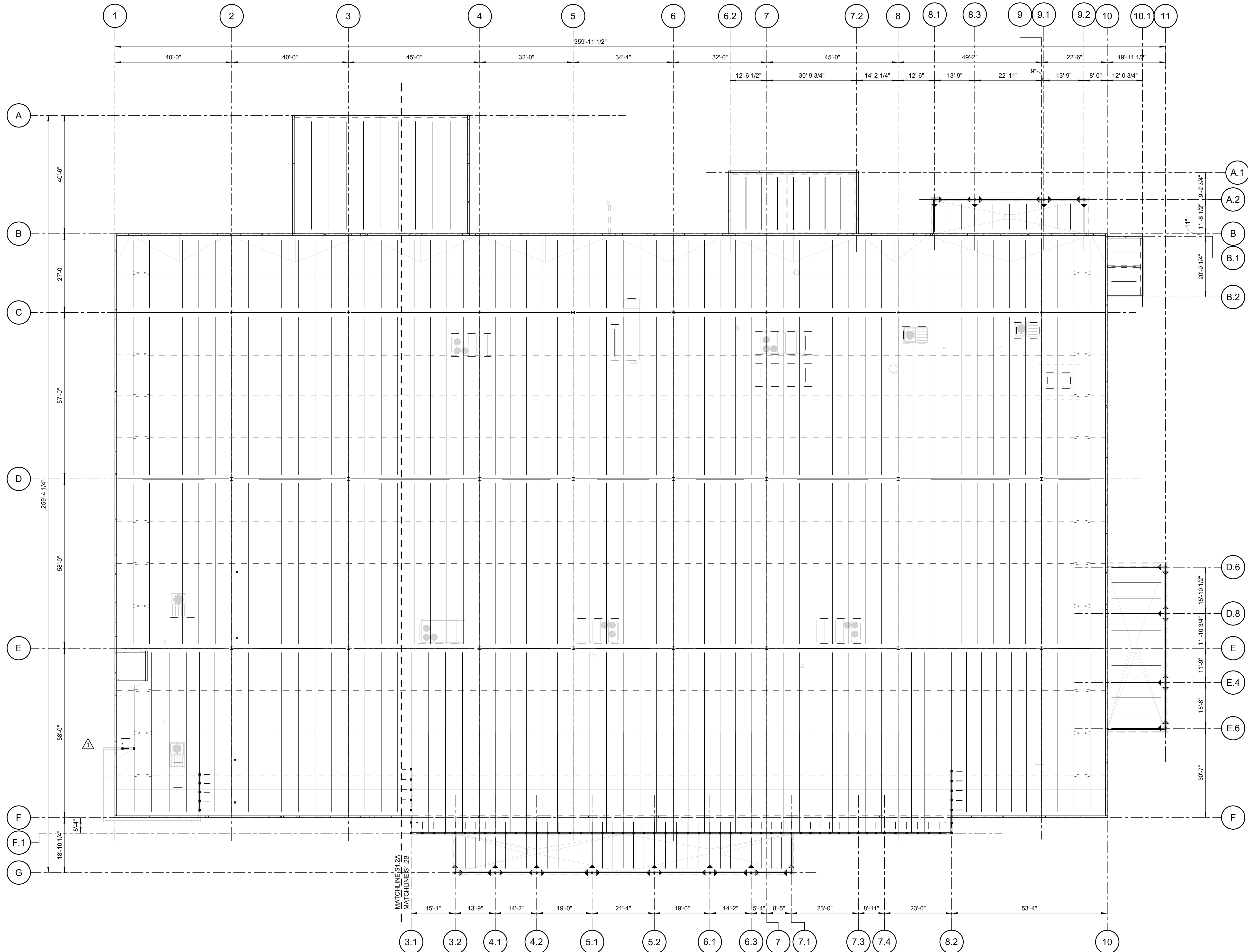
FOOTING SCHEDULE							
TYPE	LENGTH	WIDTH	THICKNESS	BOTTOM REINF (LONG WAY)	BOTTOM REINF (SHORT WAY)	TOP REINF (LONG WAY)	TOP REINF (SHORT WAY)
F4.0	4'-0"	4'-0"	1'-0"	5-#5	5-#5		
F5.0	5'-0"	5'-0"	1'-10"	7-#5	7-#5	7-#5	7-#5
F6.0	6'-0"	6'-0"	2'-0"	11-#5	11-#5	11-#5	11-#5
F8.0	8'-0"	8'-0"	2'-0"	12-#8	12-#8	12-#8	12-#8
F14.0	14'-0"	14'-0"	2'-0"	18-#8	18-#8	18-#8	18-#8
F16.0	16'-0"	16'-0"	2'-0"	22-#8	22-#8	22-#8	22-#8
WF2.0	CONT	2'-0"	1'-6"	3-#5	#5 @ 18" OC		
WF4.0	CONT	4'-0"	2'-0"	5-#5	#5 @ 12" OC		
WF5.0	CONT	5'-0"	2'-0"	6-#5	#5 @ 12" OC		
WF6.0	CONT	6'-0"	2'-0"	7-#5	#5 @ 12" OC		



KEY PLAN

TO THE BEST OF THE ENGINEERS
KNOWLEDGE, THE PLANS AND
SPECIFICATIONS COMPLY WITH THE
APPLICABLE MINIMUM BUILDING
CODES FOR THIS PART OF THE WORK
IN ACCORDANCE WITH THE
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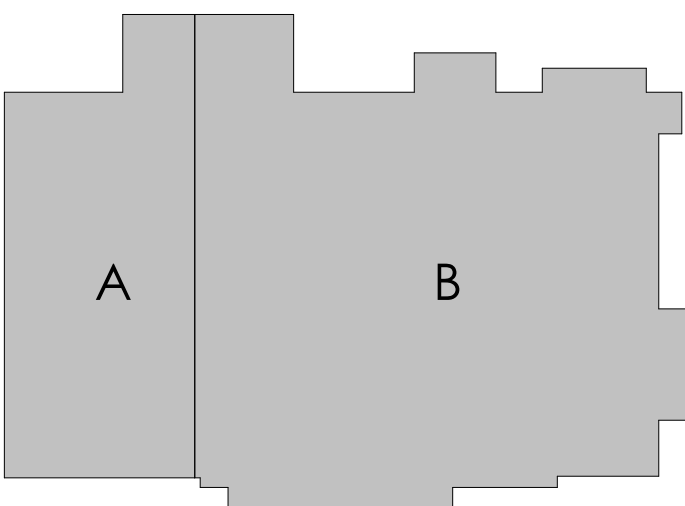
OVERALL ROOF FRAMING PLAN
SCALE: 1/16" = 1'-0"

- ROOF FRAMING PLAN NOTES:**
- 1) FOR DESIGN CRITERIA AND GENERAL NOTES, SEE SHEET S0.2.
 - 2) SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SECTIONS, AND ELEVATIONS NOT SHOWN.
 - 3) 1/8" ELEVATIONS VARY. SEE PLAN AND ARCH.
 - 4) ELEVATIONS ARE BASED ON T&B DATUM EL. 0'-0". SEE CIVIL DWGS FOR ACTUAL ELEVATION.
 - 5) ———> INDICATES SPAN DIRECTION OF METAL DECK. SEE PLAN FOR SIZE AND GAUGE.
 - 6) ROOF DECK ATTACHMENT SHALL BE PER DETAIL 1/S5.1.
 - 7) FOR BEAM TO BEAM & BEAM TO COLUMN CONNECTION, SEE DETAILS 1/S4.1 2/S4.1 7/S4.1.
 - 8) —> INDICATES MOMENT CONNECTION. SEE 3/S4.1.
 - 9) VERIFY ALL DIMENSIONS AFFECTED BY MECHANICAL WITH ACTUAL EQUIPMENT PURCHASED PRIOR TO FABRICATION OF STEEL FRAMING.
 - 10) BEAMS & OTHER FRAMING MEMBERS WERE DESIGNED TO ACCOMMODATE A MISCELLANEOUS HANGING LOAD (INCLUDING DUCTWORK, SPRINKLER SYSTEM, PLUMBING, CEILING & OTHER MISCELLANEOUS HANGING COMPONENTS) OF 8 PSF. HANGING LOADS SHALL BE DISTRIBUTED AS TO NOT EXCEED THIS VALUE.
 - 11) FOR ROOF SLOPE, SEE ARCH.
 - 12) FOR ADDITIONAL FRAMING AT MECHANICAL UNITS AND ROOF PENETRATIONS, SEE DETAILS 2/S5.1, 3/S5.1 & 4/S5.1. SOME PENETRATIONS MAY NOT BE SHOWN. COORDINATE AND VERIFY OPENINGS WITH ARCH & MECH DWGS.
 - 13) FOR FRAMING FUTURE HOODS OVER RESTAURANT, SEE DETAIL 2/S5.1.
 - 14) FOR EDGE ANGLE SPLICE, SEE DETAIL 9/S4.1.
 - 15) ALL EXTERIOR STEEL TO BE GALVANIZED.
 - 16) ALL EXPOSED STEEL TO BE FINISHED IN ACCORDANCE W/ AESS SPECS.
 - 17) ALL STEEL BEAMS TO HAVE L2x2x1/4 T&B BRACING LOCATED AT THIRD POINTS ALONG THE LENGTH OF THE BEAM.
 - 18) JOISTS & BEAMS TO BE SPACED EVENLY BETWEEN COLUMNS AND NOT TO EXCEED 6'-0".
 - 19) FOR FIRE SPRINKLER SUPPORT SEE DETAIL 10/S6.1.
 - 20) JOIST SEATS SHALL BE DESIGNED TO RESIST A LATERAL LOAD APPLIED TO THE TOP CHORD, PERPENDICULAR TO THE SPAN (ROLLOVER), PROVIDE A MINIMUM ULTIMATE ROLLOVER FORCE OF 1500 LB.
 - 21) JOIST MANUF TO DESIGN JOISTS AT RTU'S FOR RTU LOADING AS SHOWN ON PLAN. THE WEIGHTS AS SHOWN INCLUDE A 40# CURB.

- 22) JOISTS DENOTED 'SP' ARE SPECIAL DESIGNED JOISTS BY JOIST MANUFACTURER SPECIAL LOADING REQUIREMENTS (IN ADDITION TO TYPICAL LOADING) ARE NOTED ON PLAN AND IN DETAILS.
- 23) JOIST MANUF TO COORD BRIDGING REQUIREMENTS W/ DUCTWORK BETWEEN JOIST. SEE MECH FOR DUCT LAYOUT.
- 24) THE JOIST SIZING BENEATH THE RTU'S ARE BASED ON THE RTU WEIGHTS SHOWN. NOTIFY ENGINEER IF ACTUAL EQUIPMENT EXCEEDS THIS WEIGHT.
- 25) AT LOCATIONS WHERE LH JOISTS AND K-SERIES JOISTS BEAR ON THE SAME ELEMENT, THE K-SERIES JOISTS SHALL BE DESIGNED FOR A 5' JOIST SEAT (BY JOIST ENGINEER).
- 26) SCREENWALL LOCATED OVER STARBUCKS CONSISTS OF HSS6x6x5/8 SPACED AT 4'-0" MAX, SEE ARCH FOR LOCATION. SEE 4/S6.2, 11/C FOR SCREENWALL BASE CONNECTION.
- 27) FOR CONCENTRATED LOADS AT JOIST, SEE 11/S5.1.
- 28) FOR HSS WIND GIRT CONNECTION, SEE DETAIL 6/S4.1.
- 29) // DENOTES RAIN LOADING, SEE GENERAL NOTES.

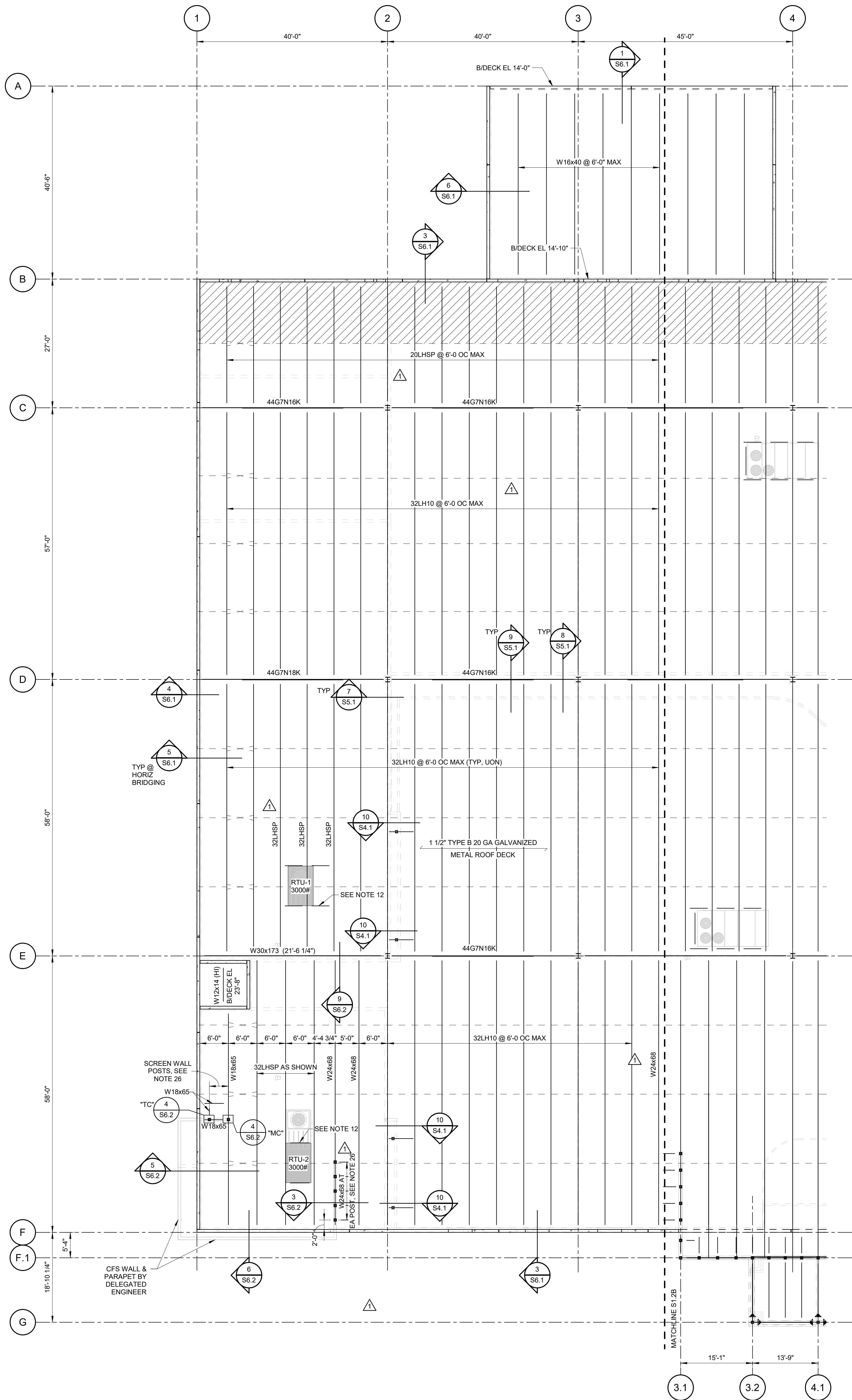


KEY PLAN



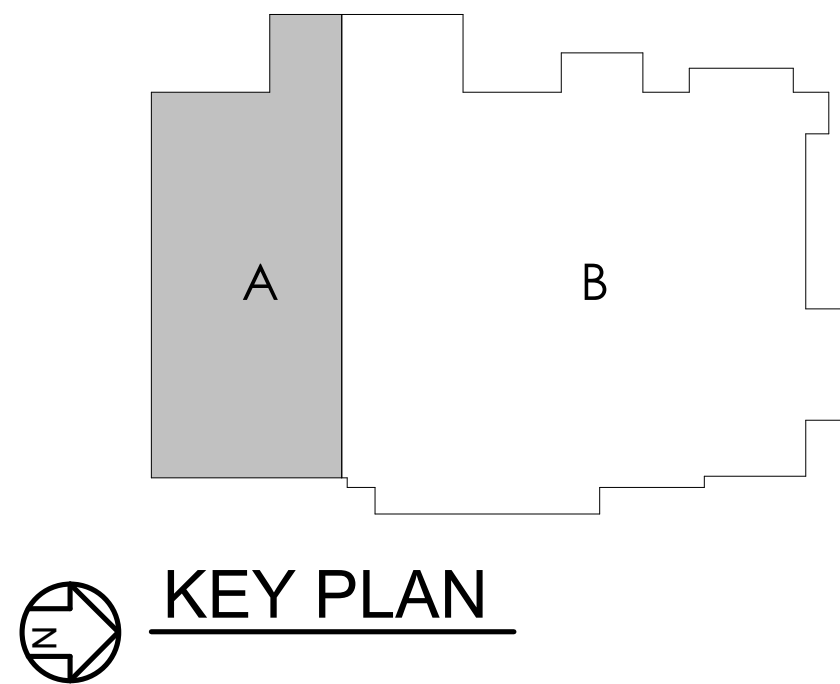
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APPLICABLE FLORIDA STATUTES.

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PARTIAL ROOF FRAMING PLAN - 'A'
SCALE: 3/32" = 1'-0"

ROOF FRAMING PLAN NOTES:
1) SEE S1.2 FOR PLAN NOTES.



TO THE BEST OF THE ENGINEERS' KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES FOR THIS PART OF THE WORK IN ACCORDANCE WITH THE APPLICABLE FLORIDA STATUTES.



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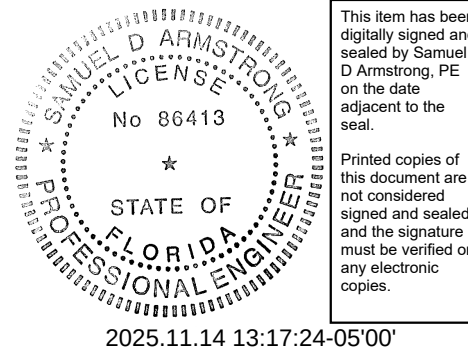
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ERIK C. KASPER AR#0017162

BUSY BEE ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES: 10/26/2025 KAS1

PARTIAL ROOF FRAMING PLAN - 'A'

S1.2A

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ERIK C. KASPER AR#0017162

BUSY BEE ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES:

10/26/2025 KAS1

PARTIAL ROOF FRAMING PLAN - 'B'

S1.2B

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DOCUMENTS

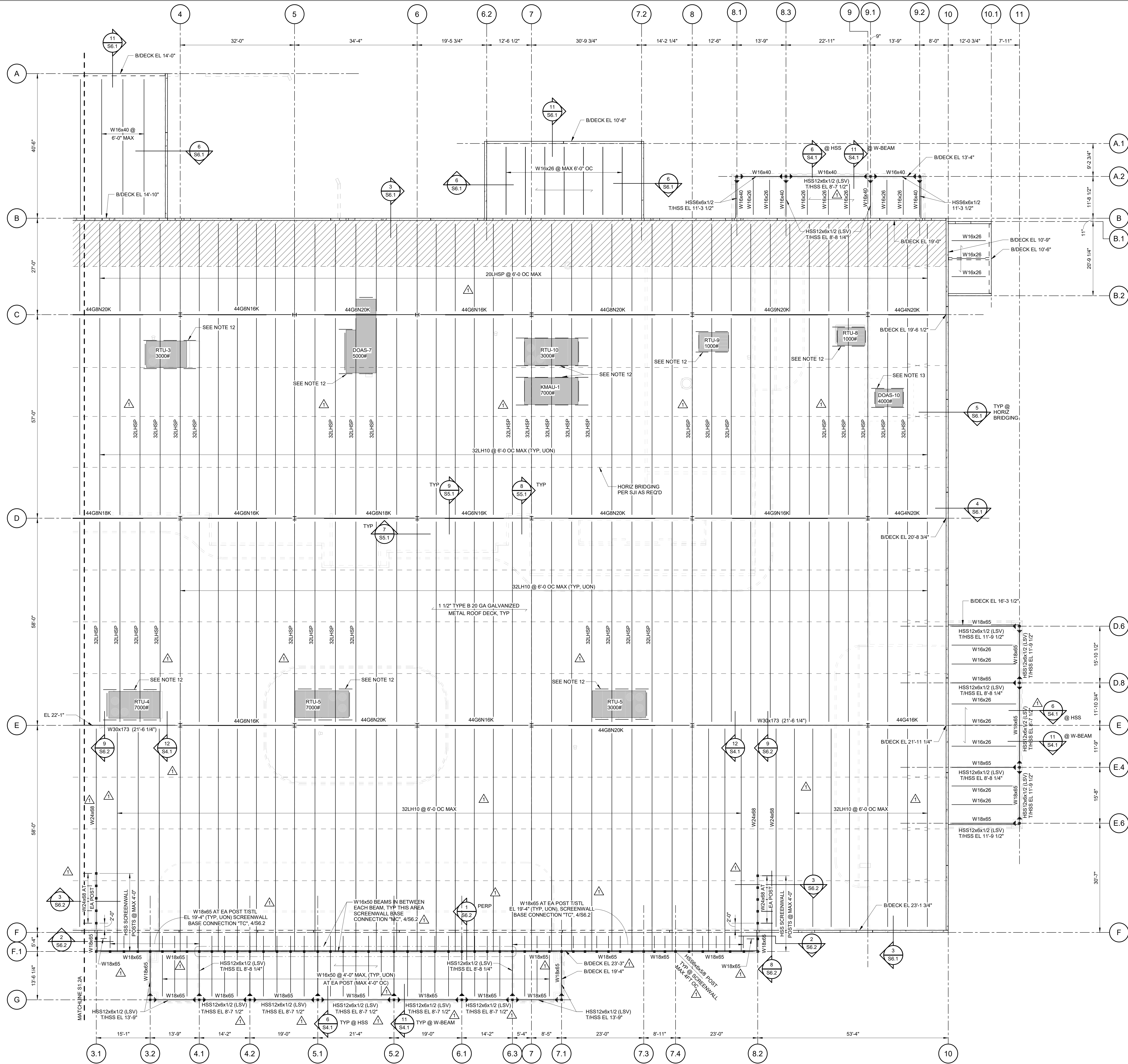
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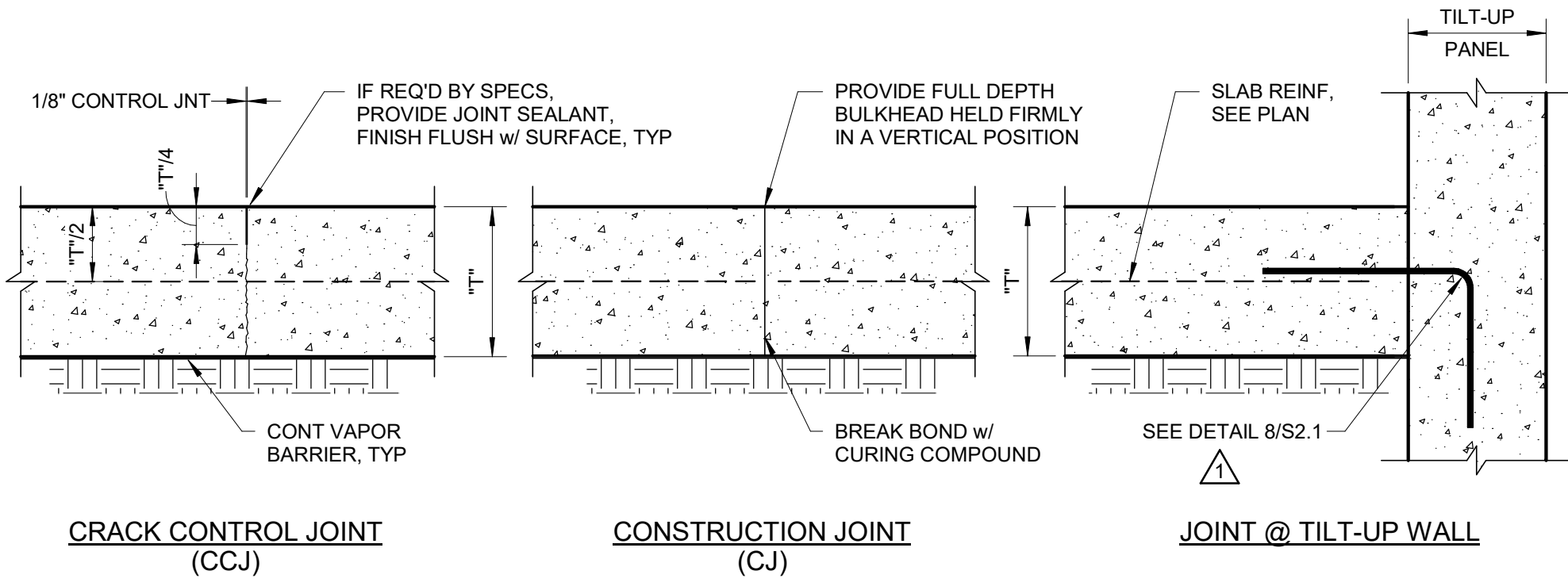
PARTIAL ROOF FRAMING PLAN - 'B'

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

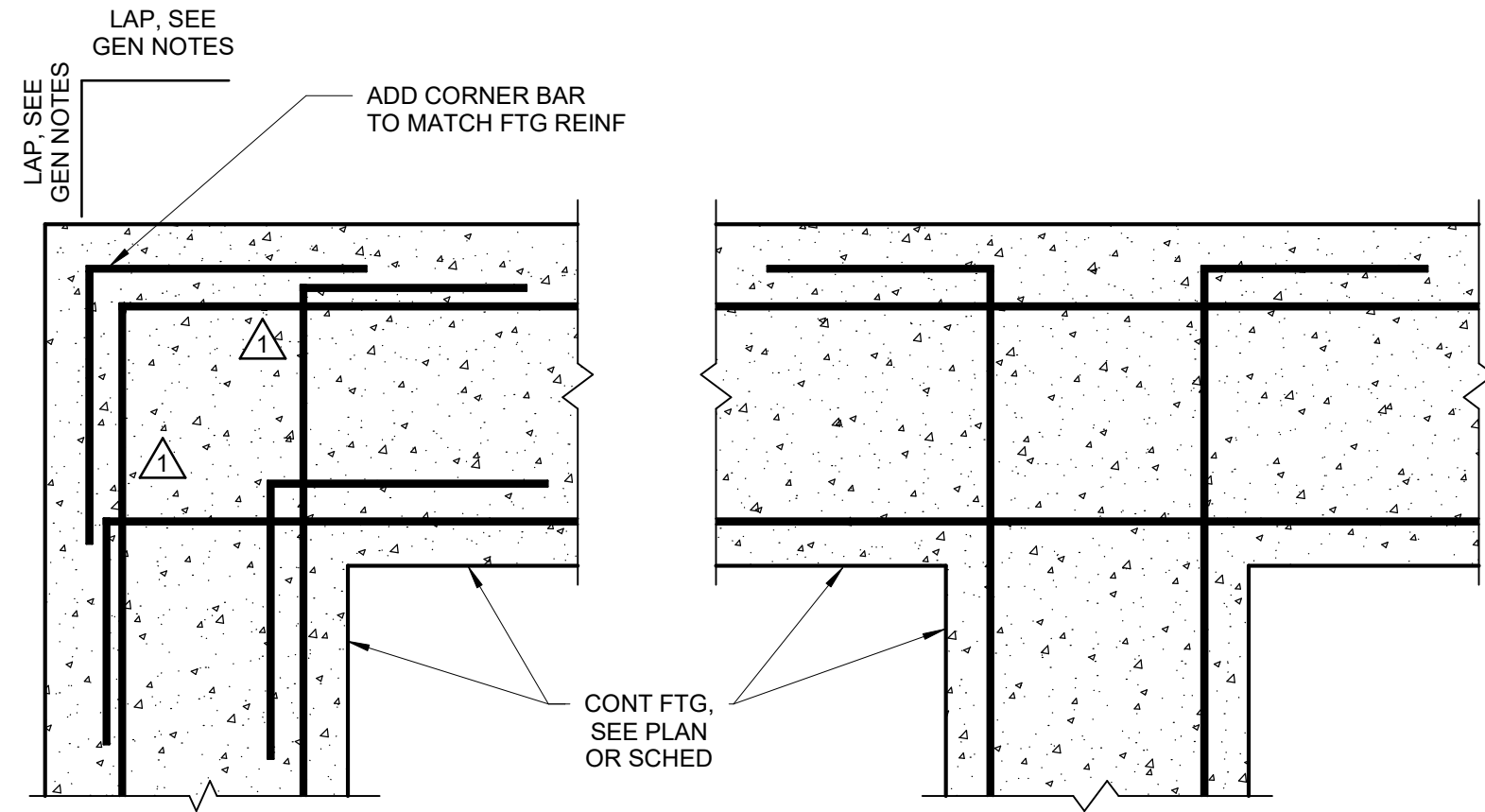
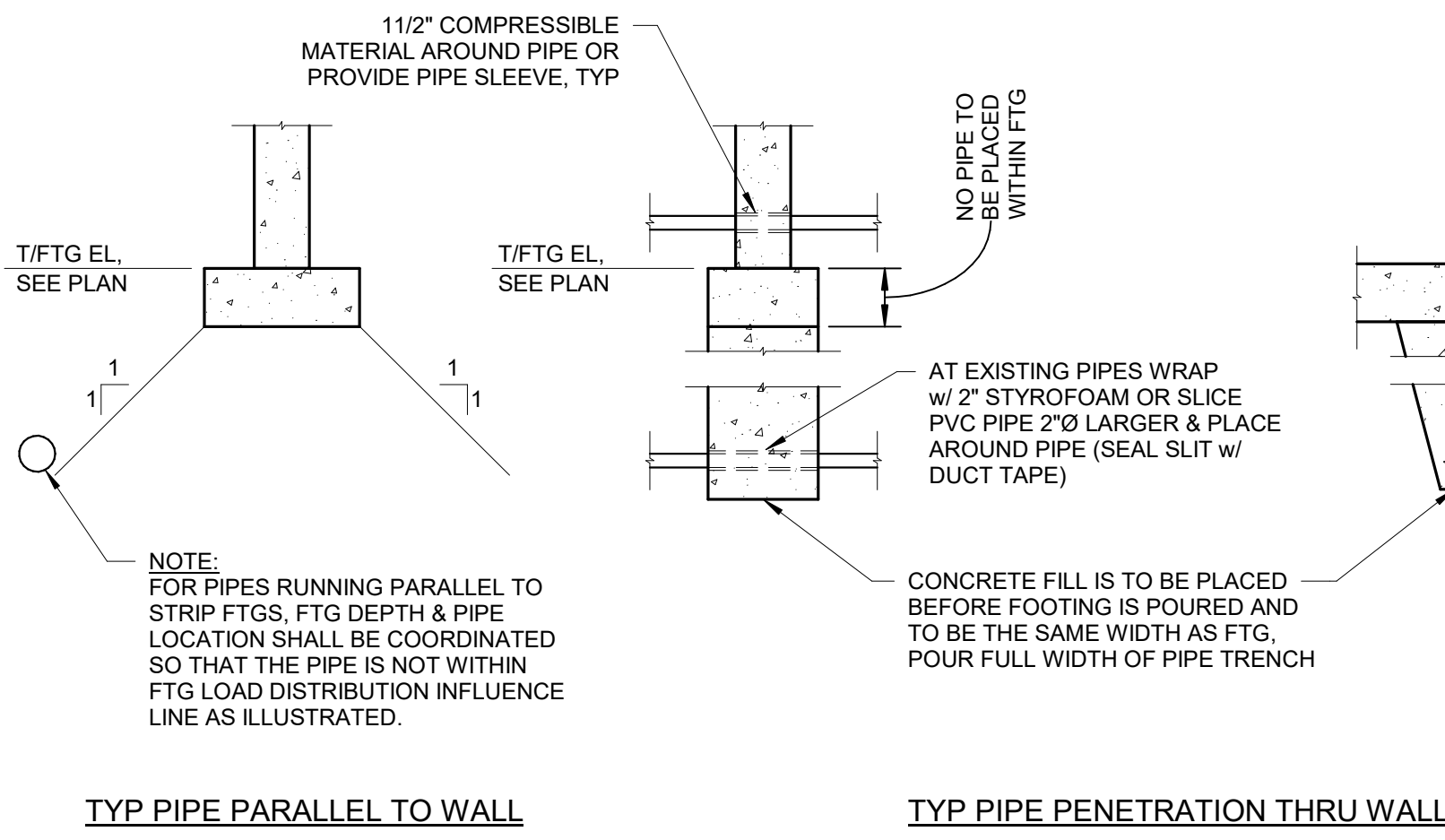
ROOF FRAMING PLAN NOTES:
1) SEE S1.2 FOR PLAN NOTES.



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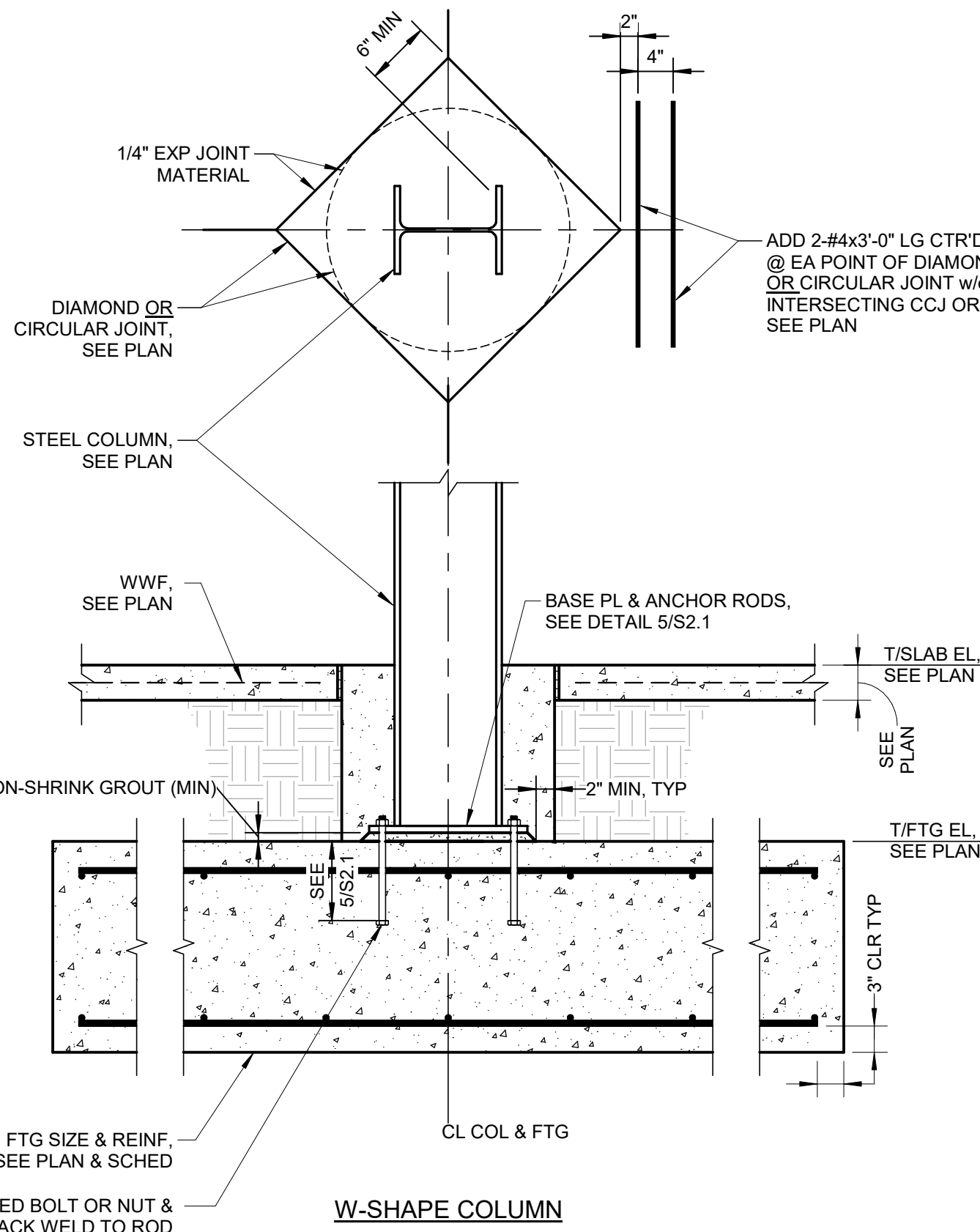
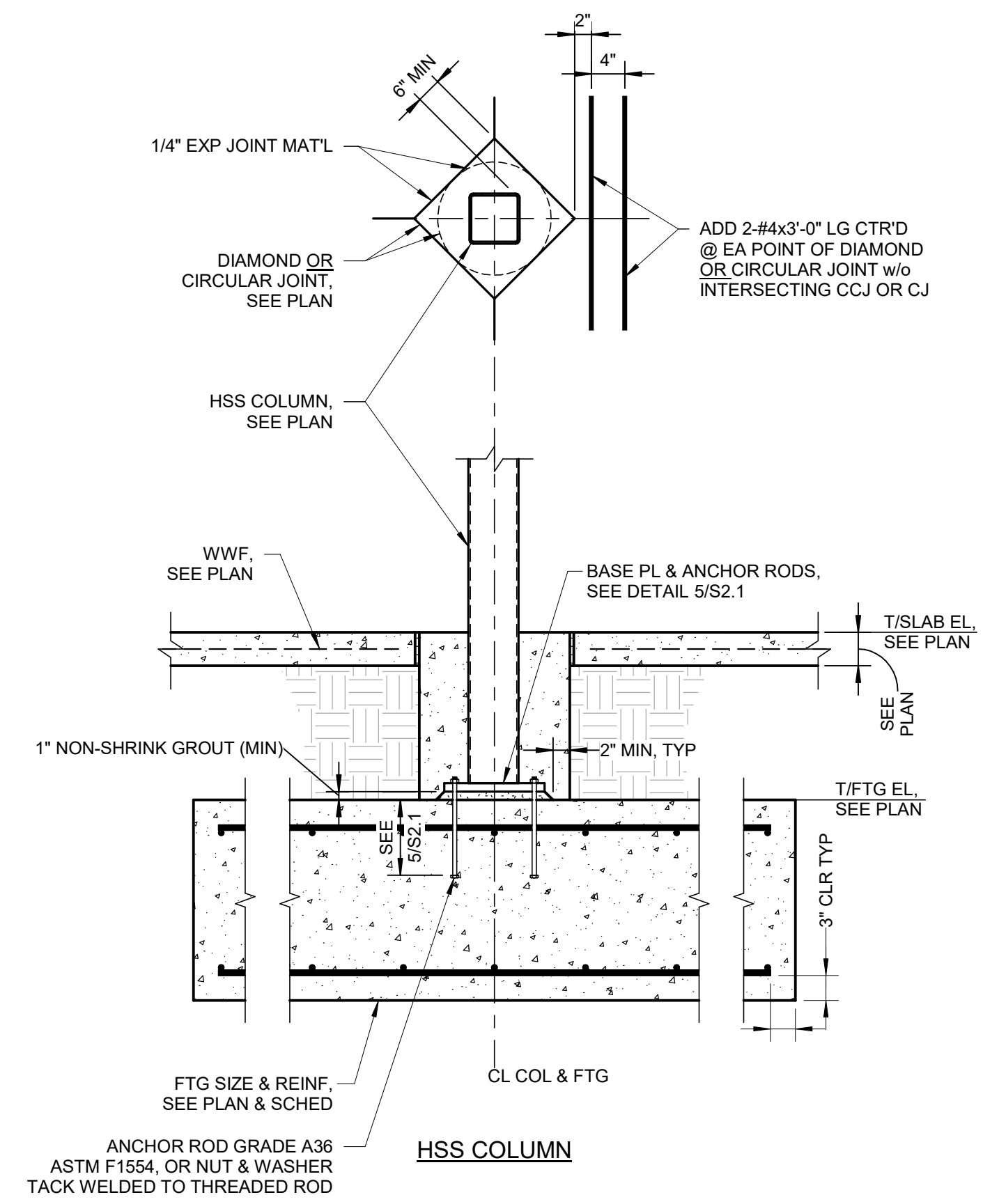


NOTE:
USE CONSTRUCTION JOINT INSTEAD OF CRACK CONTROL JOINT WHEREVER
CONSTRUCTION IS STOPPED OR WHERE CALLED FOR ON PLAN.



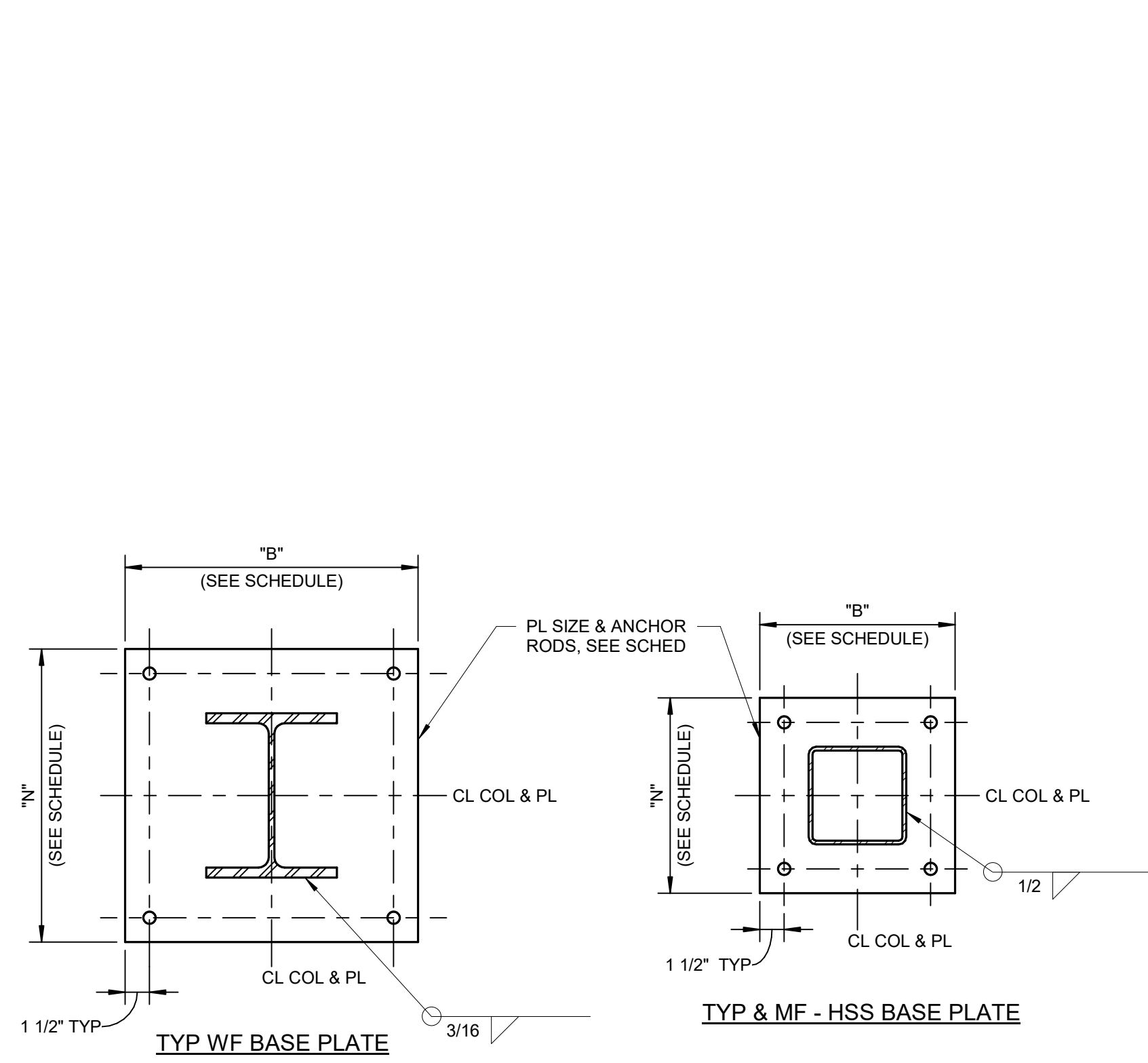
1 TYP SLAB ON GRADE JOINTS

SCALE: NTS



2 TYP PIPE PENETRATION THRU FOOTING

SCALE: NTS

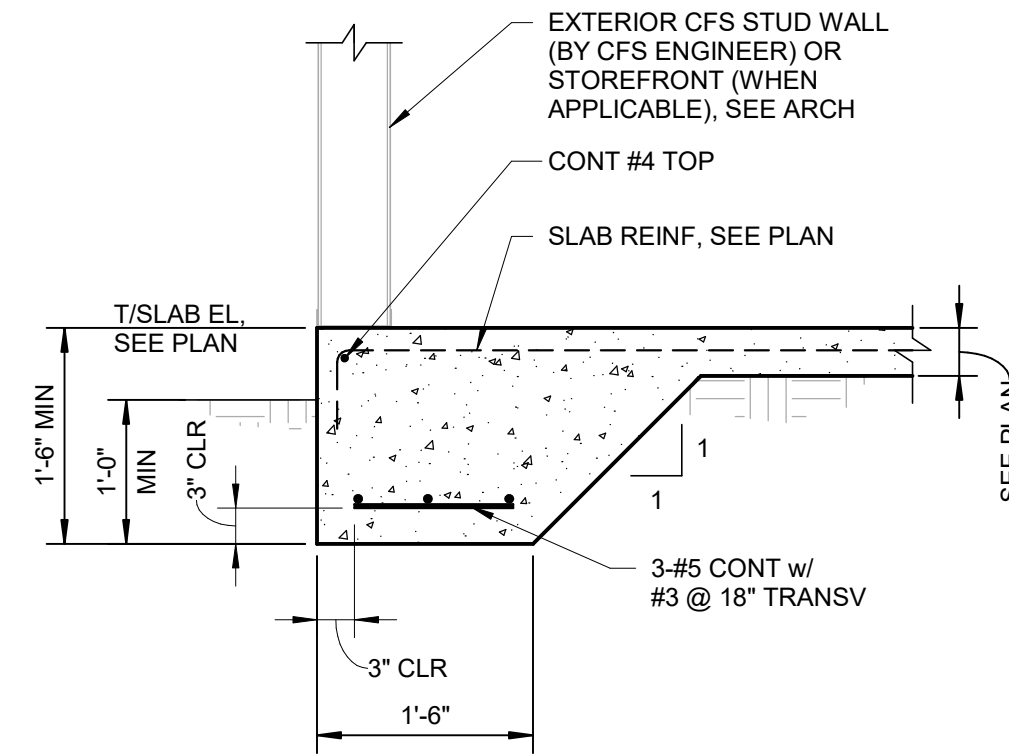


NOTE:
ANCHOR RODS SHALL BE GRADE A36
ASTM F1554 ANCHOR RODS w/
HEADED NUT & WASHER.

BASE PLATE SCHEDULE			
COLUMN	PLATE (bXh)	ANCHOR RODS	EMBED (MIN)
WF	1"x18"x1'-6"	(4) 3/4"	9"
HSS	3/4"x12"x1'-0"	(4) 3/4"	9"

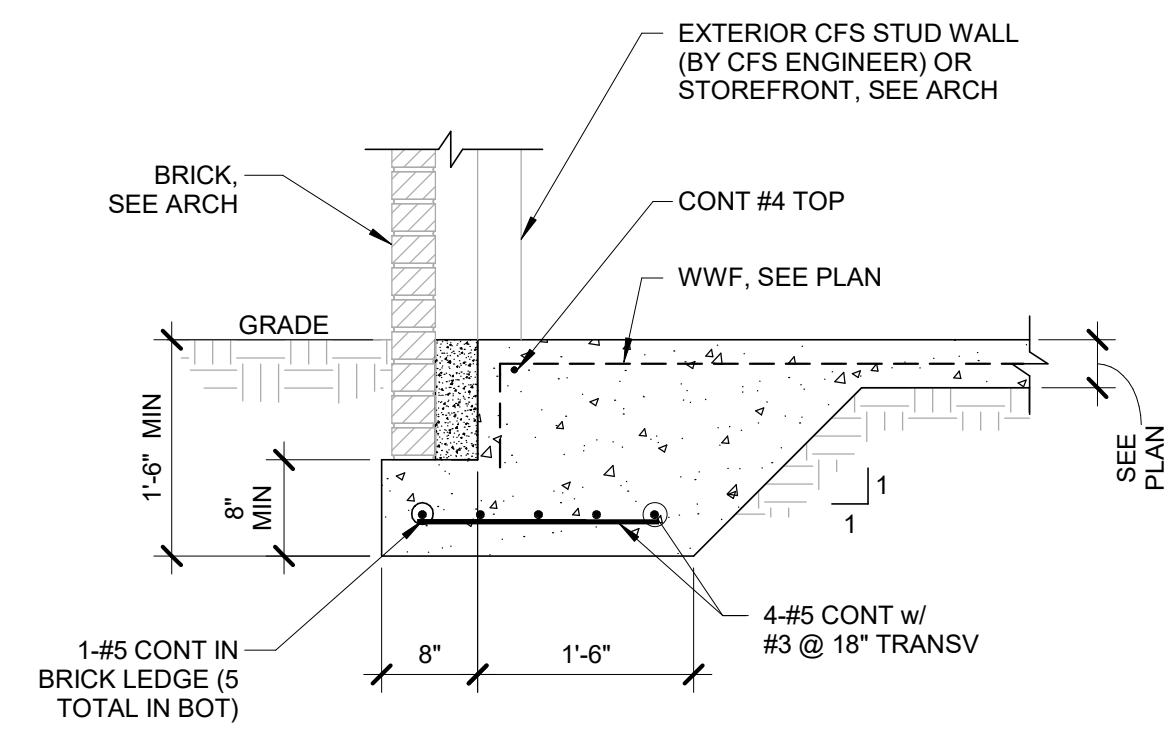
3 TYP CORNER FTG REINF

SCALE: NTS



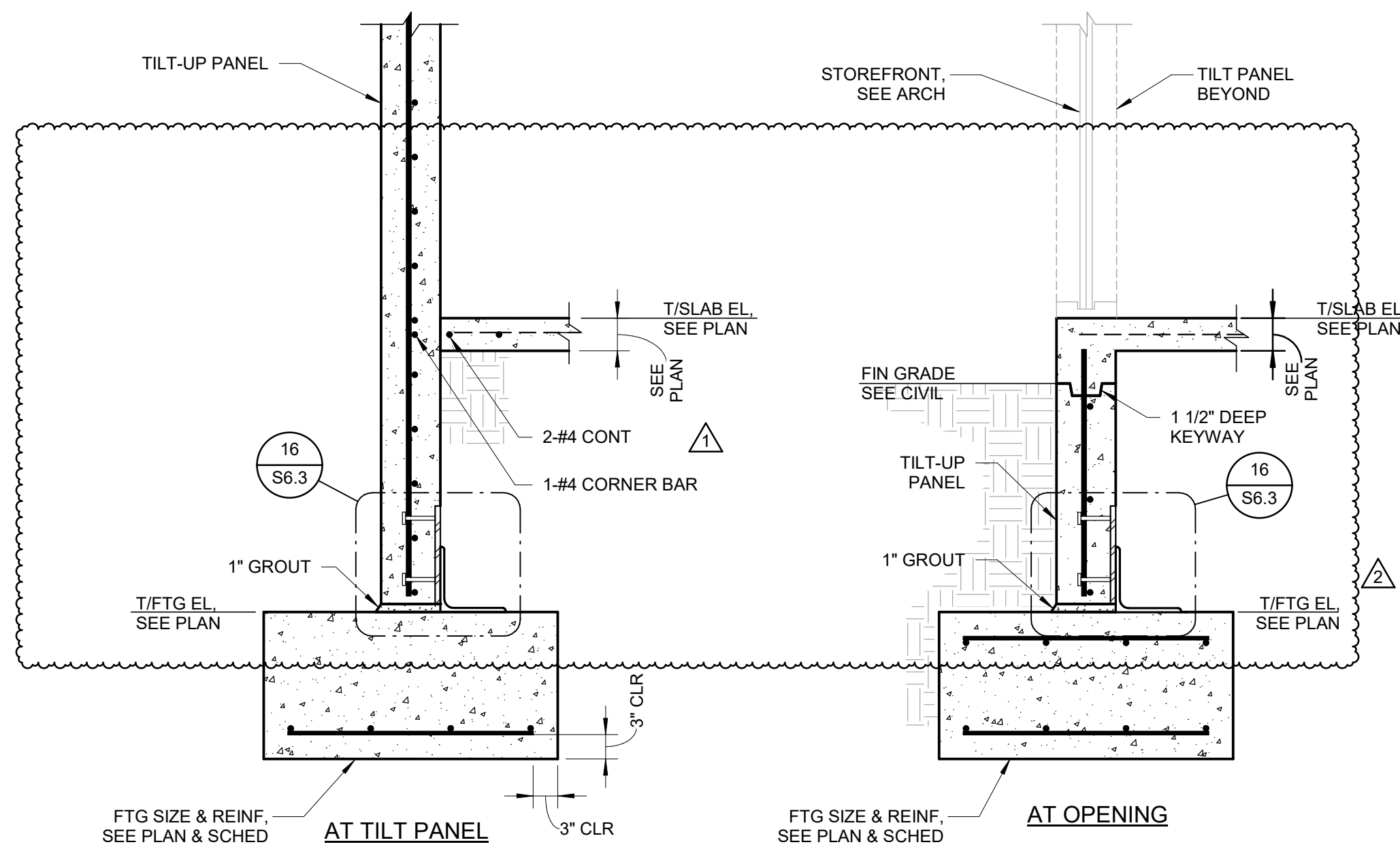
6 TYP TURNDOWN @ METAL STUD WALL

SCALE: NTS



4 TYPICAL COLUMN FOOTINGS

SCALE: NTS



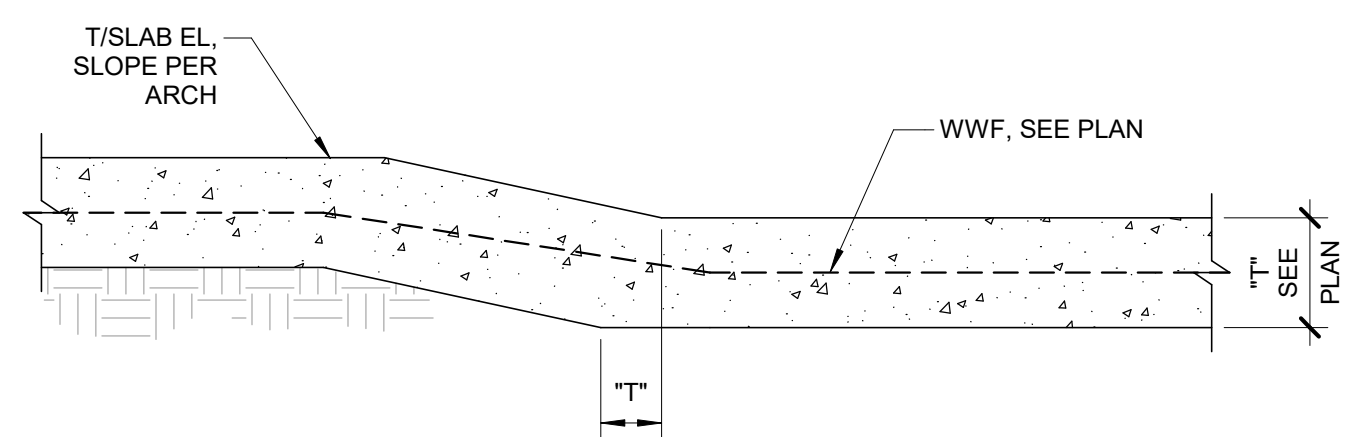
NOTE:
1) PLACE CONCRETE @ PERIMETER POUR AFTER ERECTION OF TILT-UP PANEL.
2) TURN DOWN SLAB OF PERIMETER POUR ONTO FOOTING WHERE FOOTING DEPTH $\leq$ 2'-0"

8 PERIMETER TILT WALL FOUNDATION

SCALE: NTS

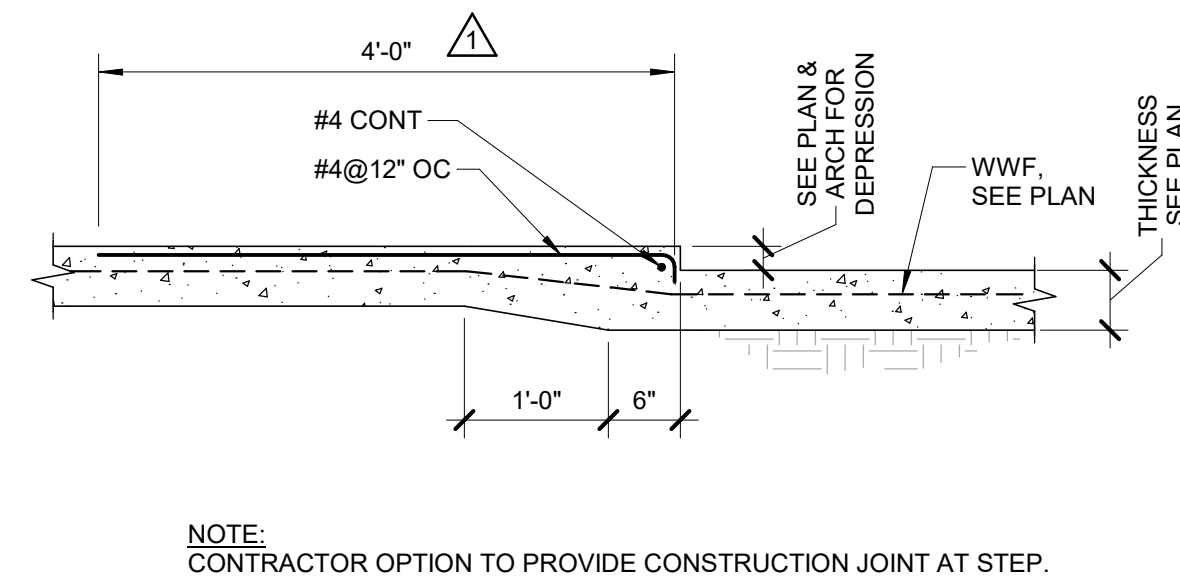
9 TYP SLOPED SLAB

SCALE: NTS



10 TYPICAL SLAB DEPRESSION

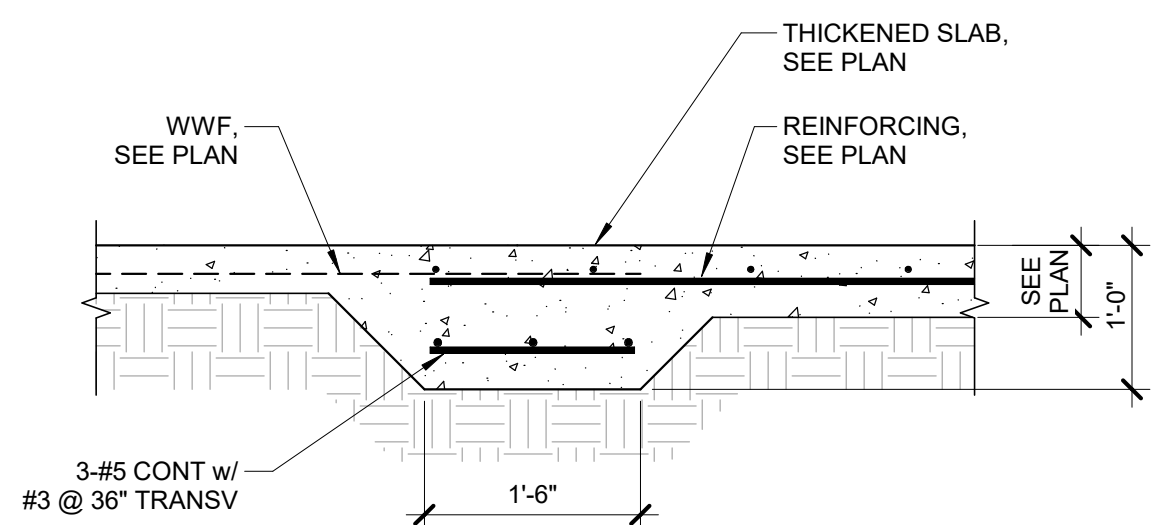
SCALE: NTS



NOTE:
CONTRACTOR OPTION TO PROVIDE CONSTRUCTION JOINT AT STEP.

11 TRANSITION IN SLAB THICKNESS

SCALE: NTS



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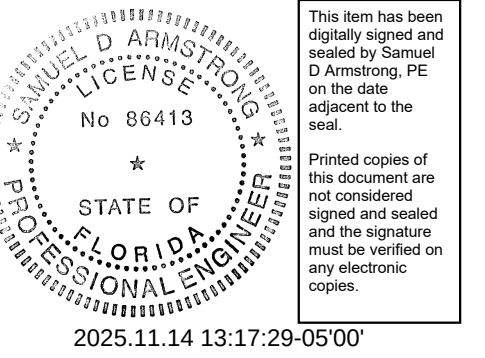


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ERIK C. KASPER AR#0017162

BUSY BEE
ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES:

10/29/2025	ASB1
11/14/2025	ASB2

FOUNDATION
SECTIONS &
DETAILS

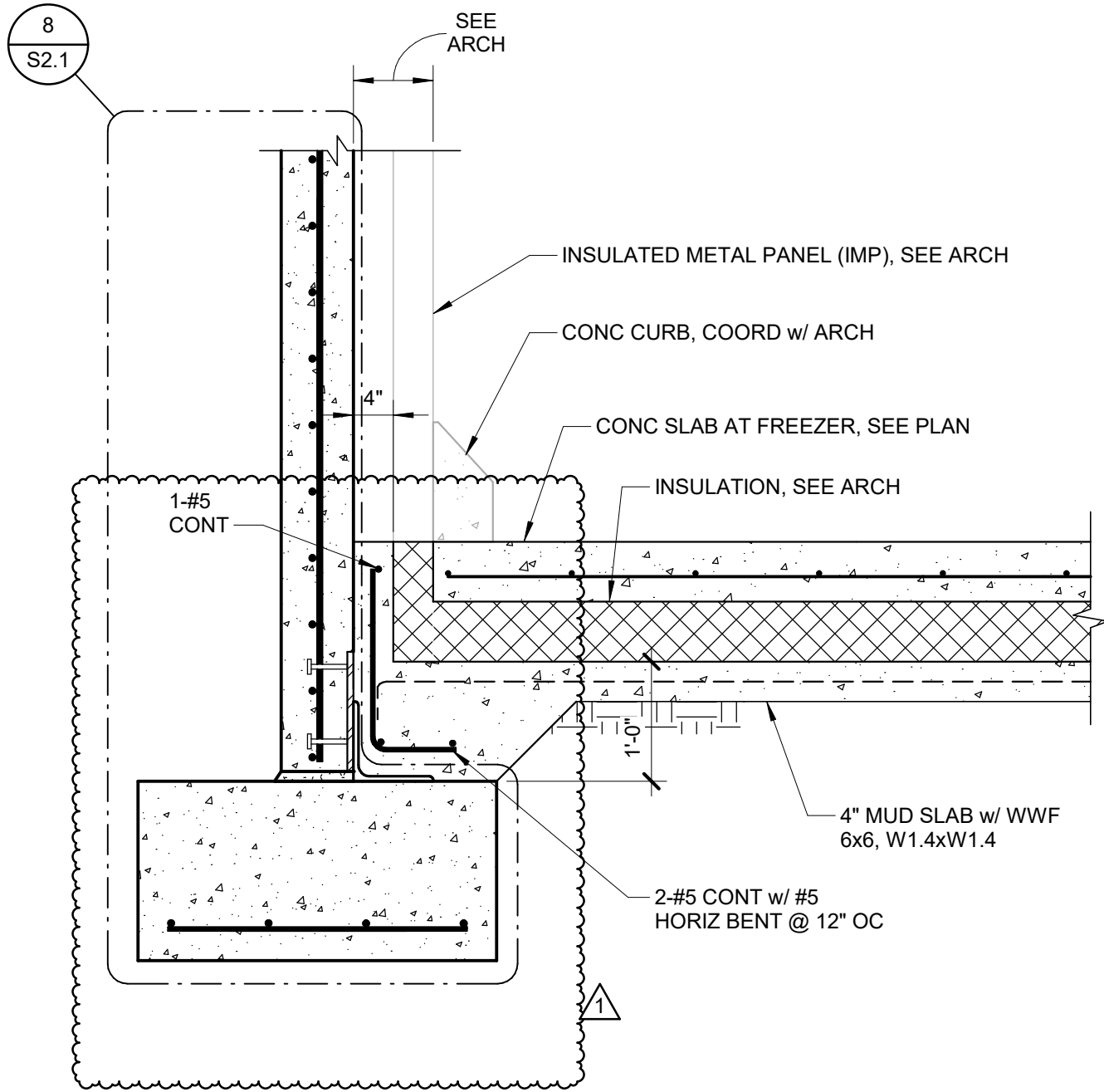
S2.1

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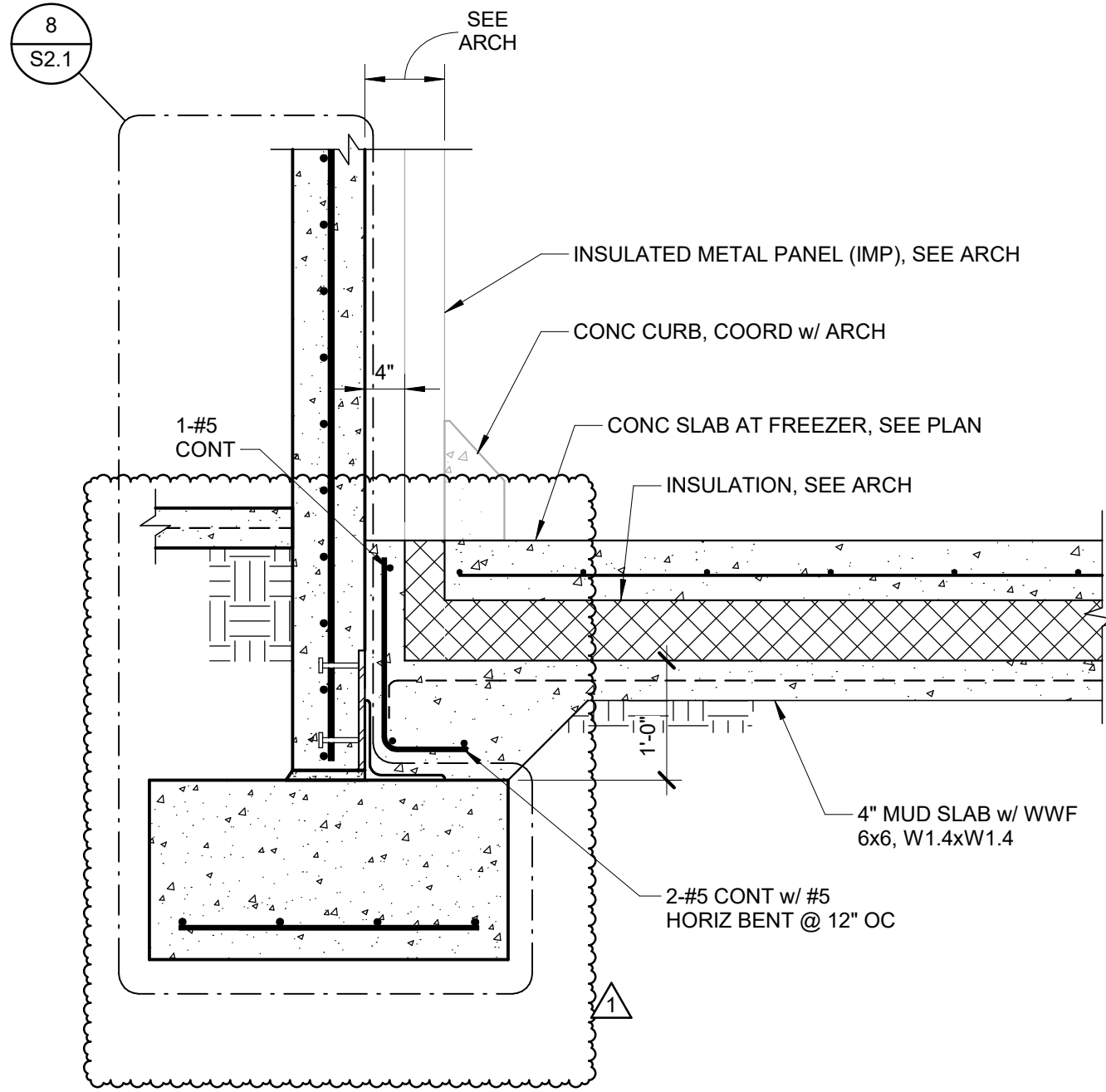
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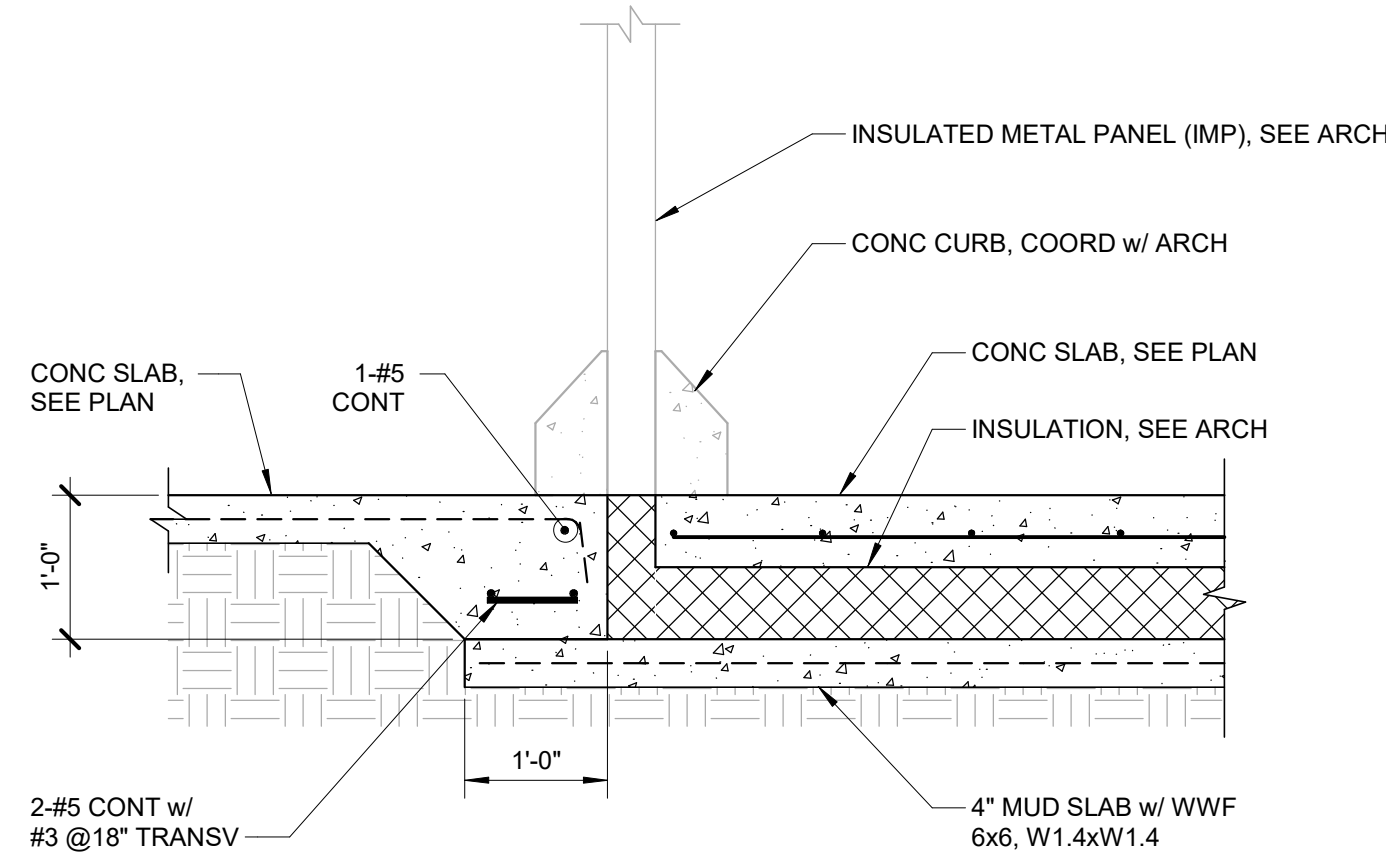
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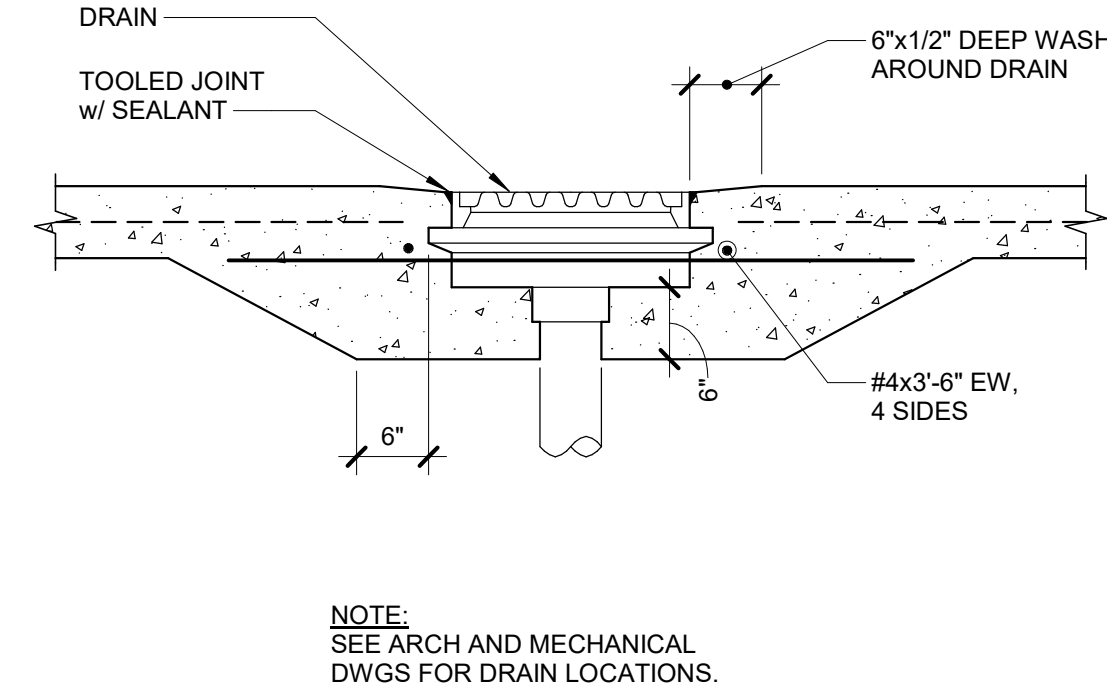
1 SECTION AT FREEZER WALL
S2.2 SCALE: NTS



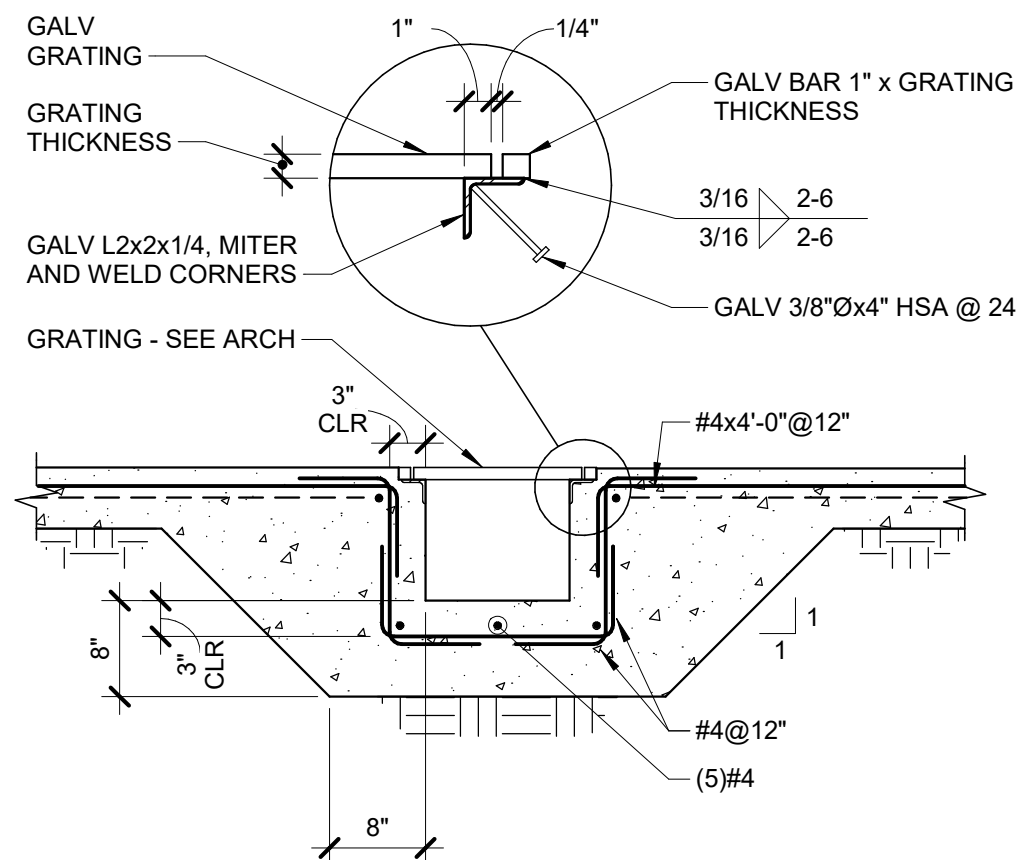
2 SECTION AT FREEZER EXPANSION JOINT
S2.2 SCALE: NTS



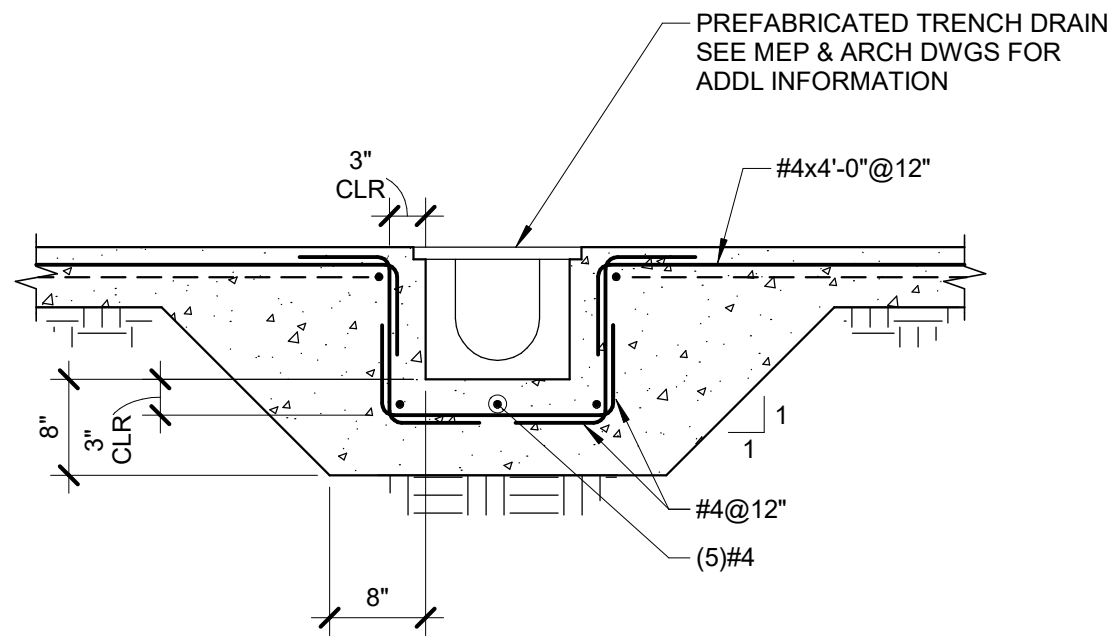
3 SECTION AT FREEZER EXPANSION JOINT
S2.2 SCALE: NTS



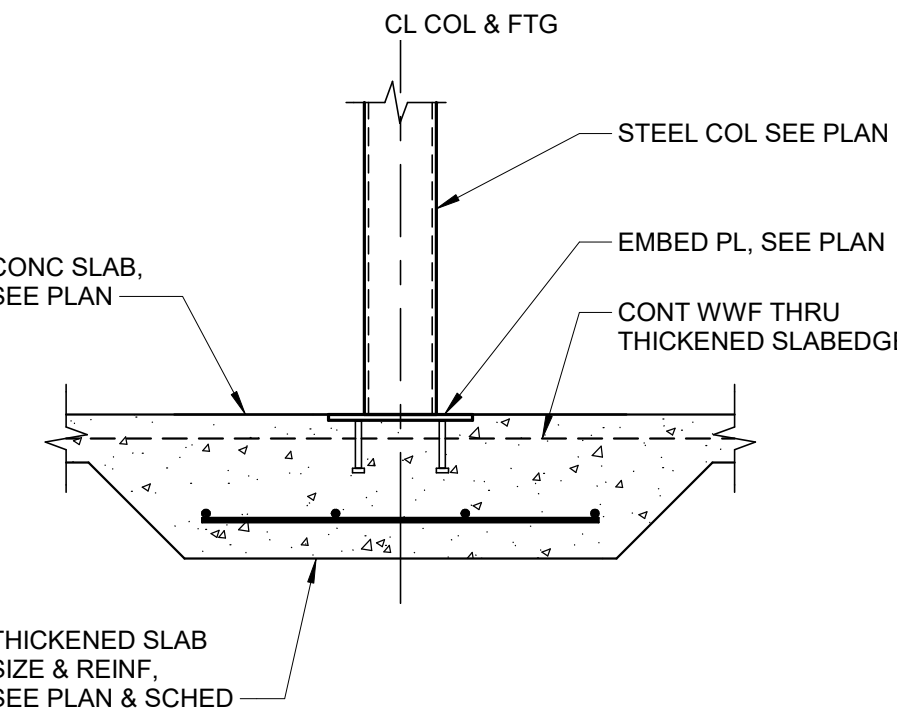
4 FLOOR DRAIN IN SLAB-ON-GRADE
S2.2 SCALE: NTS



5 CIP TRENCH DRAIN
S2.2 SCALE: NTS



6 PREFAB TRENCH DRAIN
S2.2 SCALE: NTS



7 THICKENED SLAB FTG AT COLUMN
S2.2 SCALE: NTS

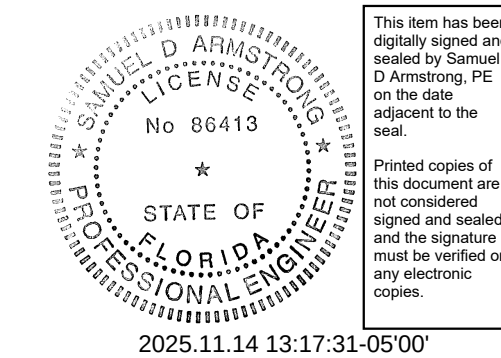


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BUSY BEE
ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES: 11/14/2025 ASB 2

FOUNDATION
SECTIONS &
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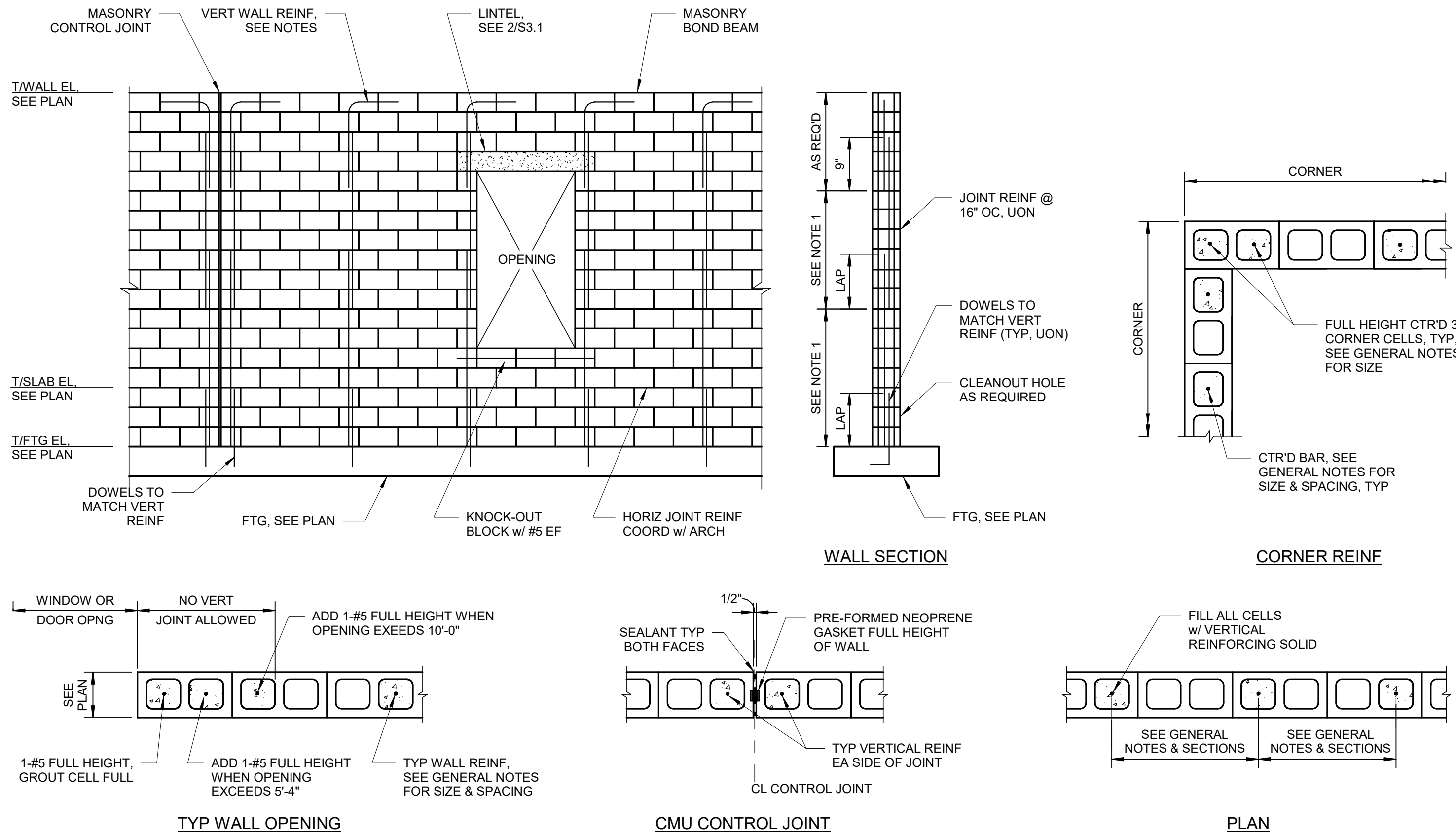
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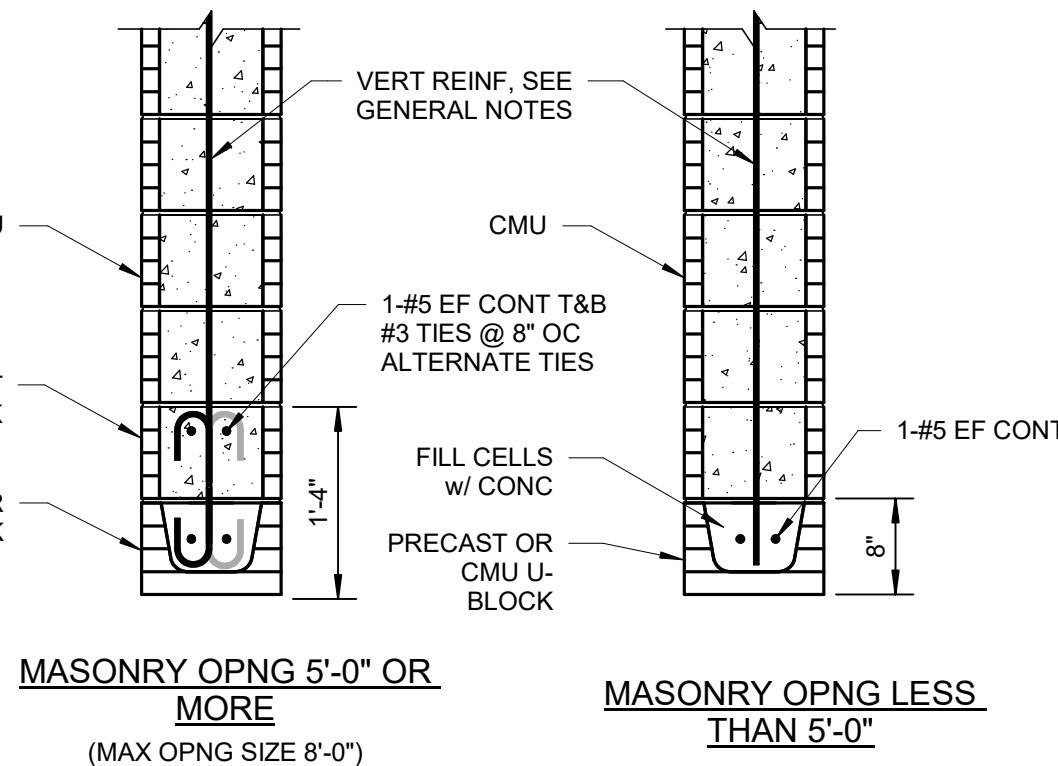
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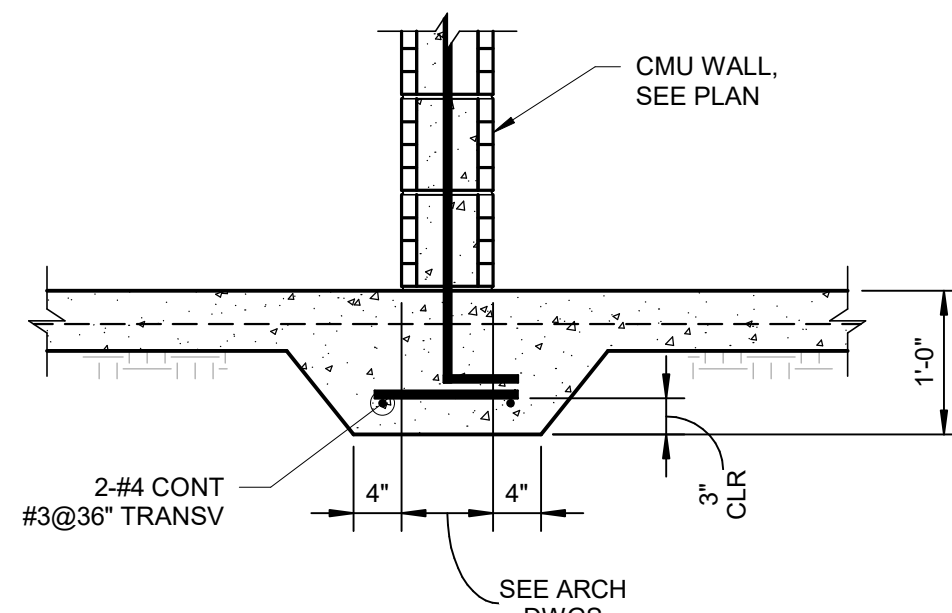


NOTE:
JOINT REINFORCEMENT SHALL BE STOPPED EACH SIDE OF JOINT. BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTROL JOINT.

- NOTES:
- 1) 5" MAX IF LOW LIFT GROUTING IS USED.
 - 2) IF HIGH LIFT GROUTING IS USED, REINFORCING SHALL BE FULL HEIGHT & A CLEANOUT HOLE IS REQ'D @ CELLS w/ REBAR. GROUT SHALL BE PLACED IN LIFTS TO PREVENT BLOWOUTS.
 - 3) SEE GENERAL NOTES FOR BAR LAPS.
 - 4) SEE GENERAL NOTES FOR HORIZONTAL JOINT REINFORCING AND LAP LENGTH.



- NOTES:
- 1) FOR OPNG LOCATIONS SEE ARCH DWGS.
 - 2) PROVIDE 8" BEARING EA SIDE OF OPNG.



NOTE:
TYPICAL FOR ALL WALLS 8" OR MORE NOT SUPPORTED ON WALL FOOTINGS.

1 TYP REINF MASONRY WALL

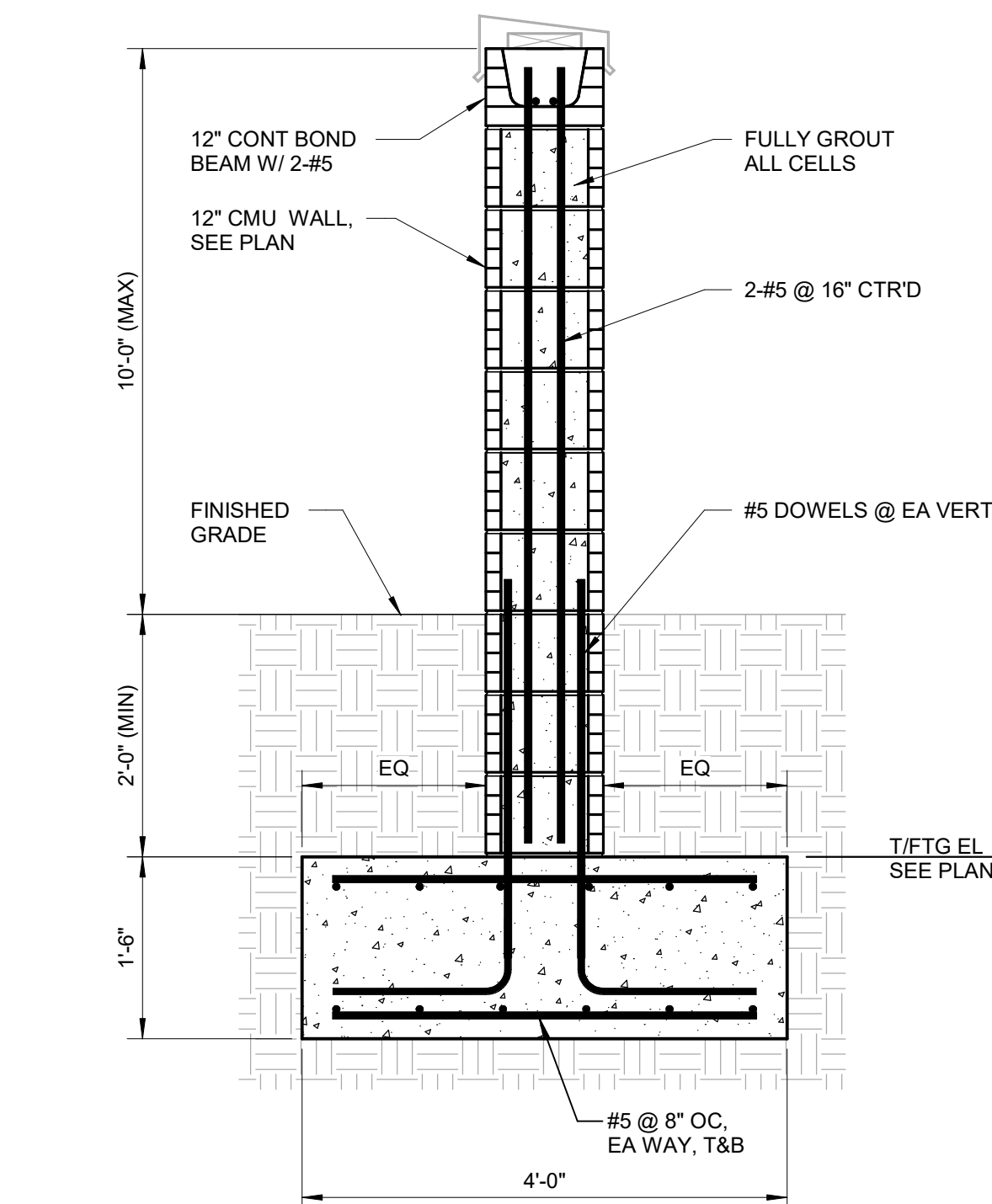
SCALE: NTS

2 TYP MASONRY LINTEL DETAIL

SCALE: NTS

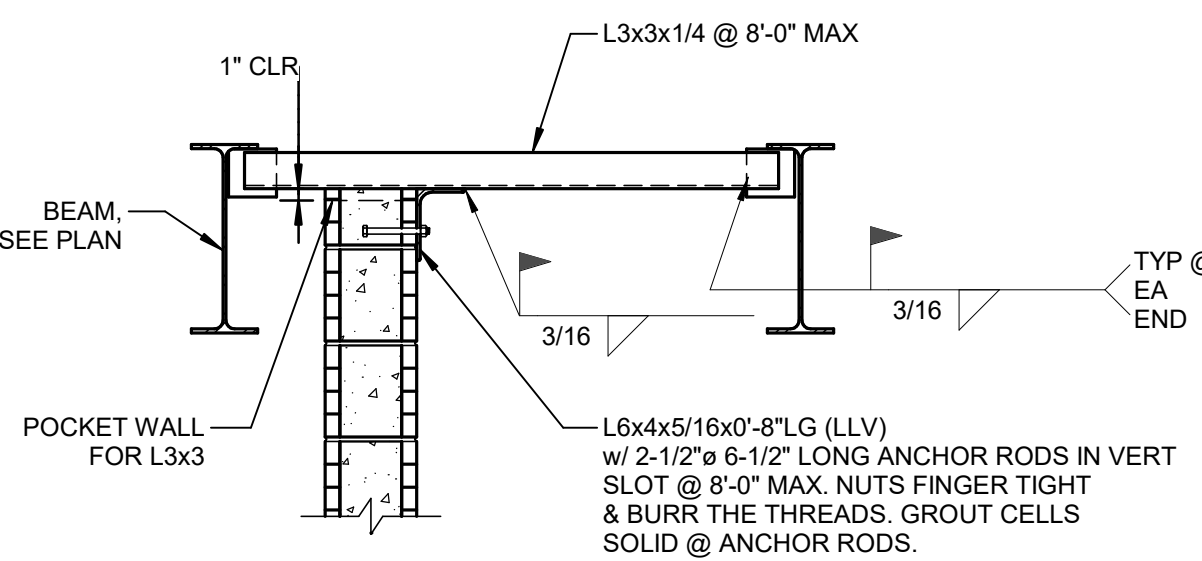
3 TYP NON-LOAD BEARING WALL THICKENED SLAB

SCALE: NTS



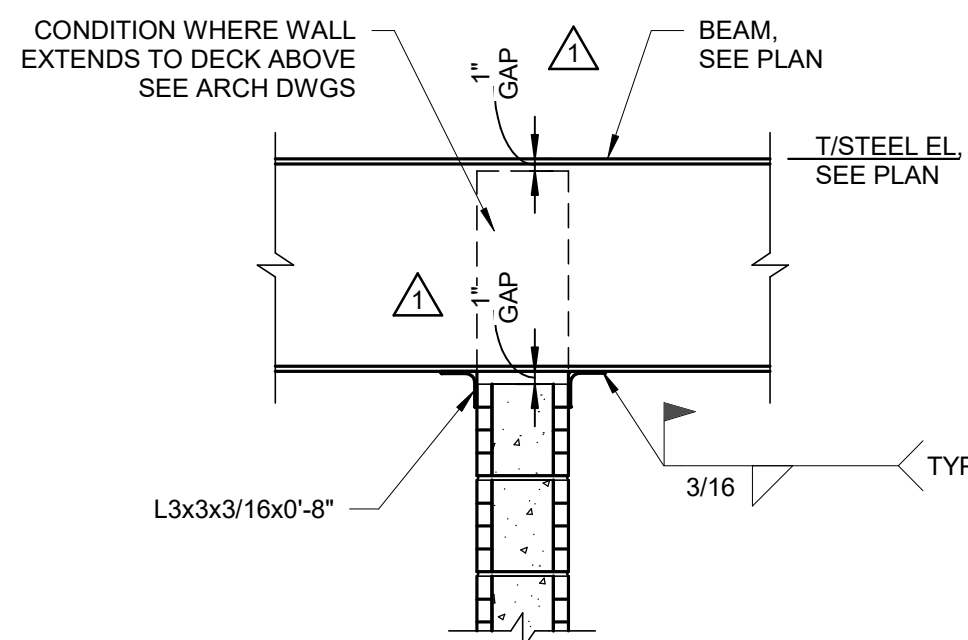
4 CMU ENCLOSURE WALL

SCALE: NTS



5 NON-LOAD BEARING CMU WALL AT BEAM (PARALLEL)

SCALE: NTS



6 NON-LOAD BEARING CMU WALL AT BEAM (PERPENDICULAR)

SCALE: NTS

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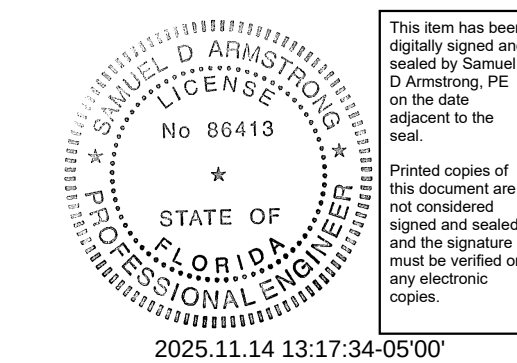


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ERIK C. KASPER AR#0017162

BUSY BEE ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES: 10/26/2025 KAS1

MASONRY SECTIONS & DETAILS

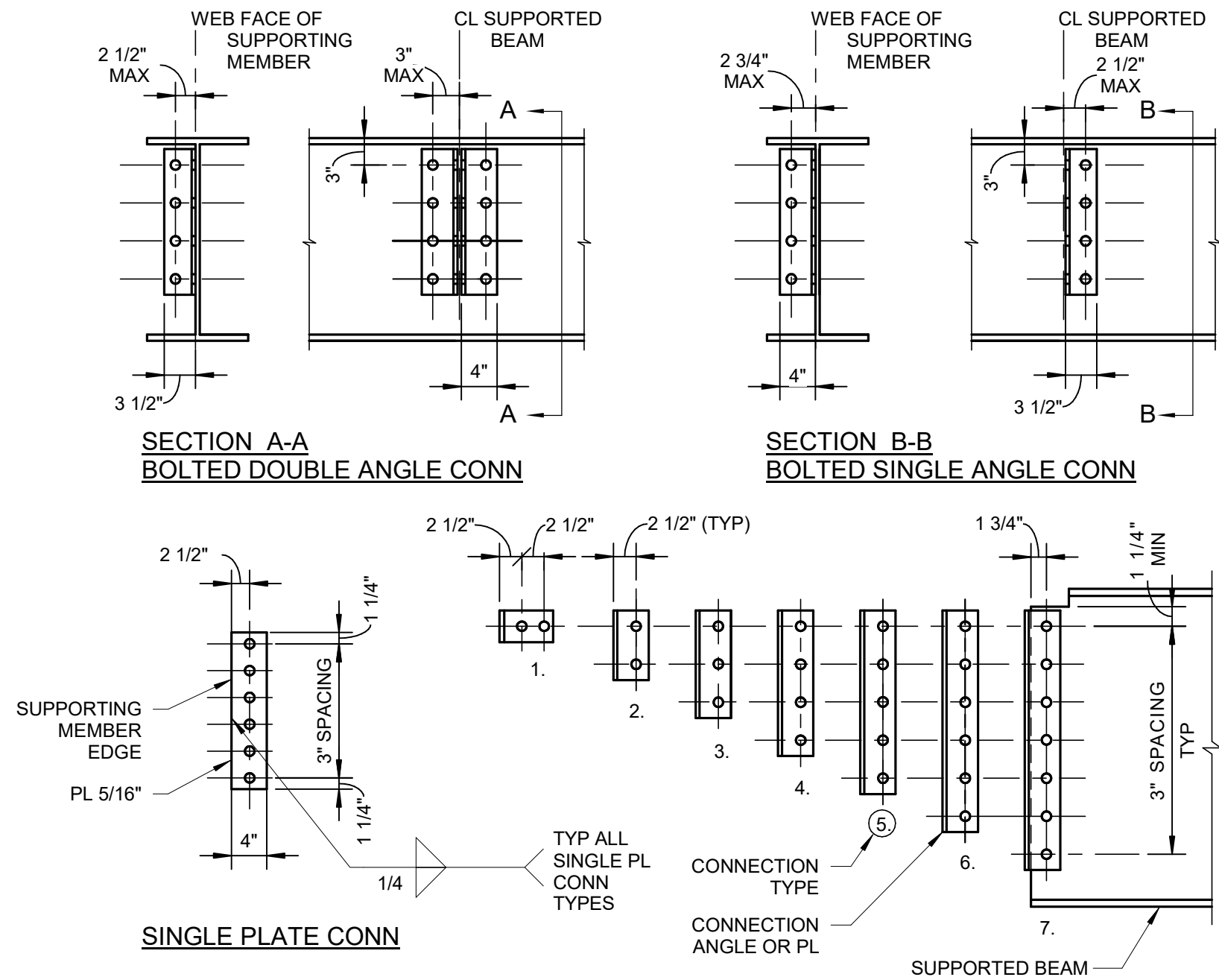
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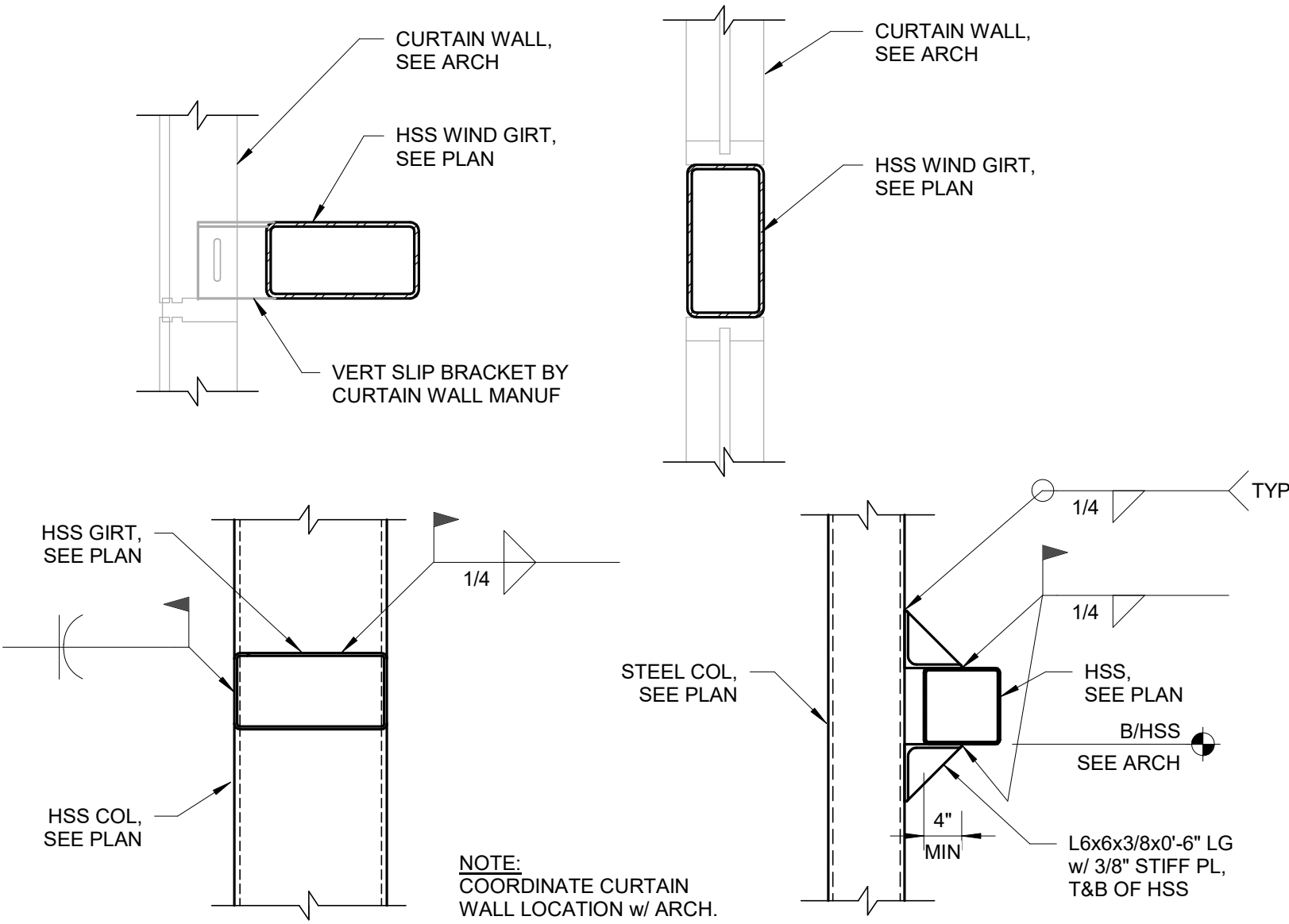


CONNECTION TABLE							
CONN TYPE	DOUBLE & SINGLE ANGLE CONNECTION		SINGLE PLATE CONNECTION		FACTORED LOAD CAPACITY		MINIMUM SUPPORTED MEMBER SIZE
	SIZE	LENGTH	SIZE	LENGTH	DOUBLE ANGLE	SINGLE ANGLE / SINGLE PLATE	
7	L4x3 1/2	1' - 8 1/2"	PL 5/16"x4"	1' - 8 1/2"	217k	112k / 108k	W36, W33
6	L4x3 1/2	1' - 5 1/2"	PL 5/16"x4"	1' - 5 1/2"	176k	93k / 89k	W30, W27
5	L4x3 1/2	1' - 2 1/2"	PL 5/16"x4"	1' - 2 1/2"	112k	74k / 81k	W24, W21
4	L4x3 1/2	11 1/2"	PL 5/16"x4"	11 1/2"	64k	55k / 62k	W18, W16
3	L4x3 1/2	8 1/2"	PL 5/16"x4"	8 1/2"	39k	35k / 39k	W14, C15, W12, C12
2	L4x3 1/2	5 1/2"	PL 5/16"x4"	5 1/2"	23k	18k / 23k	W10, C10, W8, C8
1	L6x4x3/8	2 1/2"	-	-	16k	- / -	C6, WT

- NOTES:
- CONNECTION BOLTS SHALL BE 3/4"Ø A325-N BEARING TYPE. BOLT LIMIT STATE IN SINGLE SHEAR = 17.9 KIPS.
 - CONNECTION ANGLE THICKNESS: 5/16" FOR DOUBLE ANGLE CONNECTIONS TYPE 2 THRU 7, 3/8" FOR SINGLE ANGLE CONNECTIONS TYPE 2 THRU 7.
 - SINGLE PLATE CONNECTIONS ARE BASED ON FLEXIBLE CONNECTIONS WITH STANDARD HOLES.
 - ANY CONNECTION THAT IS OUTSIDE THE LIMITS OF THE CONNECTION TABLE SHALL BE DESIGNED BY THE SPECIALTY ENGINEER LICENSED IN THE STATE OF PROJECT AND SHALL BE SUBMITTED AS SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR APPROVAL.
 - ALL CONNECTIONS WITH AXIAL LOADS SHOWN ON PLAN SHALL BE DESIGNED BY THE SPECIALTY ENGINEER LICENSED IN THE STATE OF THE PROJECT AND SHALL BE SUBMITTED AS SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR APPROVAL.
 - BOLTED/WELDED SINGLE AND DOUBLE ANGLE CONNECTIONS MAY BE USED PROVIDED THAT THE WELDS ARE SIZED TO RESIST THE LOADS SHOWN IN ACCORDANCE WITH AISC STANDARDS.

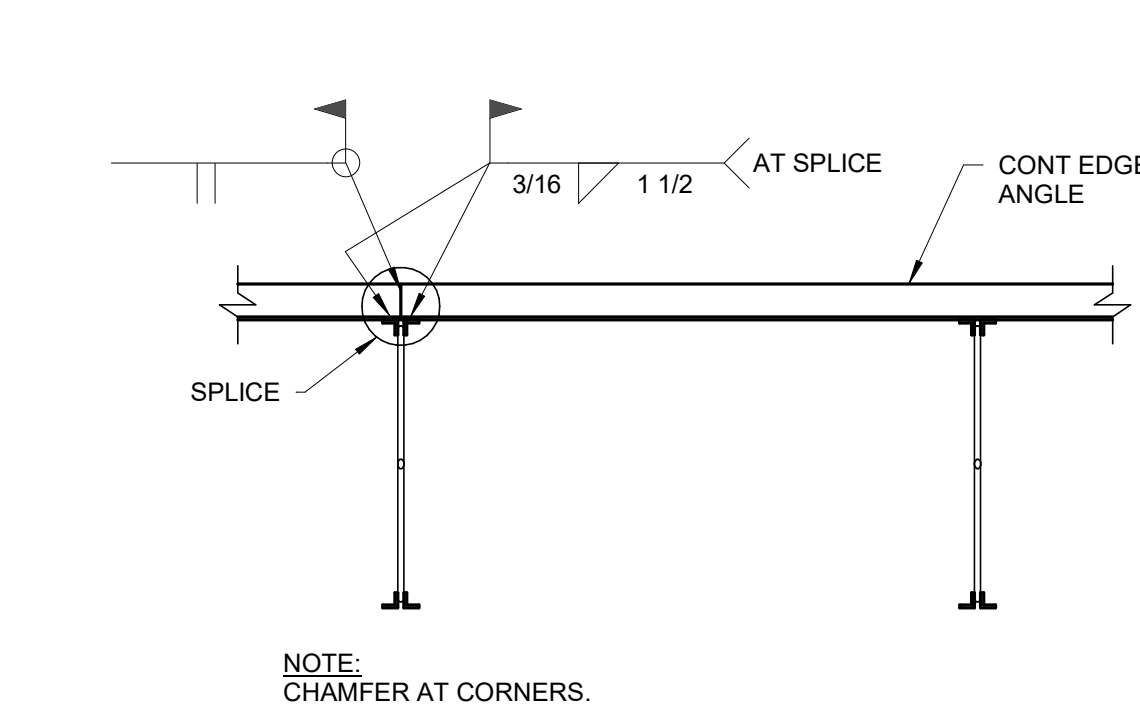
1 BEAM TO GIRDER/WF COL CONNECTIONS

S4.1 SCALE: NTS



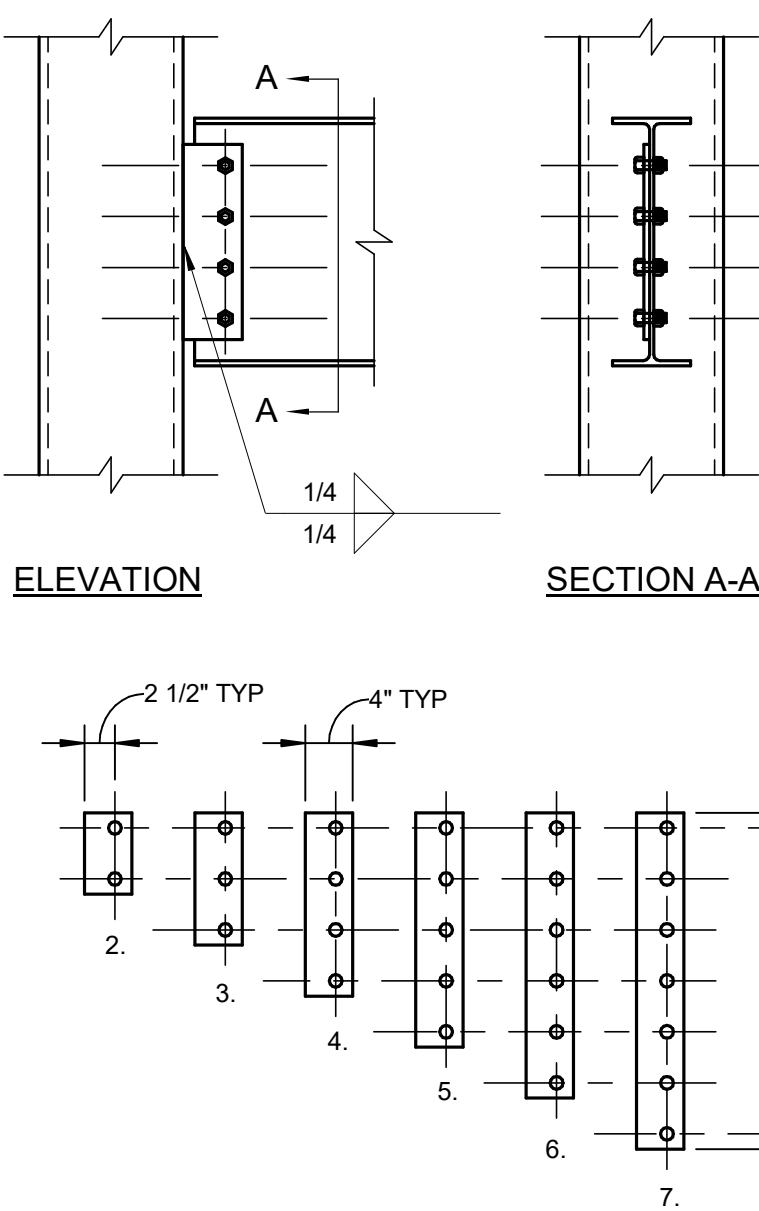
6 CURTAIN WALL ATTACHMENT TO HSS WIND GIRT

S4.1 SCALE: NTS



9 EDGE ANGLE SPLICE

S4.1 SCALE: NTS

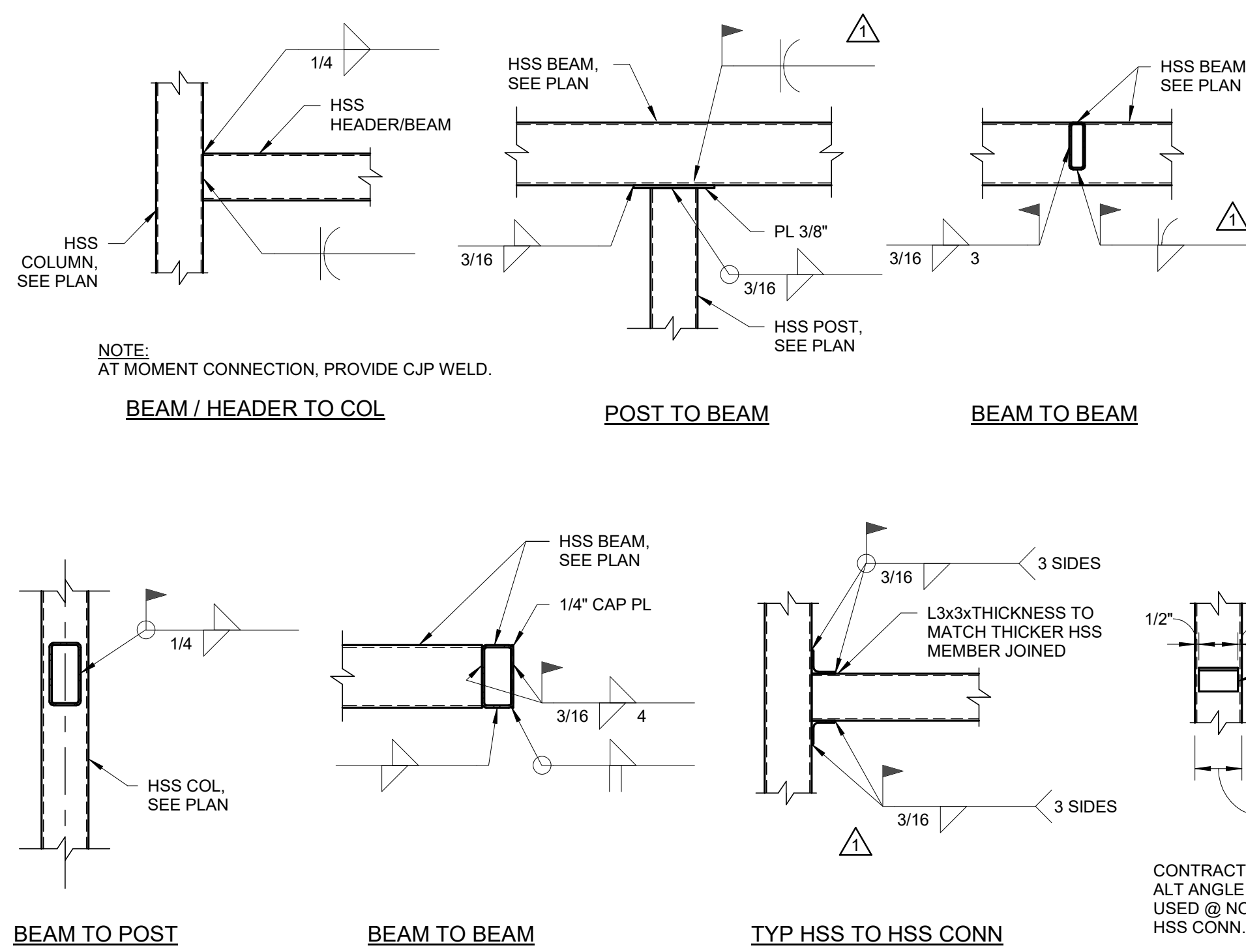


CONNECTION SCHEDULE			
CONN TYPE	FACTORED LOAD CAPACITY	SINGLE PLATE SIZE	MINIMUM BEAM SIZE
7	108K	PL 5/16"x4"x20 1/2"	W36, W33
6	89K	PL 5/16"x4"x17 1/2"	W30, W27
5	81K	PL 5/16"x4"x14 1/2"	W24, W21
4	62K	PL 5/16"x4"x11 1/2"	W18, W16
3	43K	PL 5/16"x4"x8 1/2"	W14, C15, W12, C12
2	24K	PL 5/16"x4"x5 1/2"	W10, C10, W8, C8

- NOTES:
- BOLTS SHALL BE 3/4"Ø A325-N BEARING TYPE. BOLT LIMIT STATE IN SINGLE SHEAR = 17.9 KIPS.
 - WELDING MAY BE USED IN LIEU OF BOLTING. WELDS SHALL BE CAPABLE OF RESISTING LOADS SHOWN.
 - COLUMN THICKNESS SHALL BE THE MINIMUM TABULATED ABOVE FOR THIS SCHEDULE TO BE VALID.
 - TABLE VALUES ARE FOR UNCOUPED BEAMS.

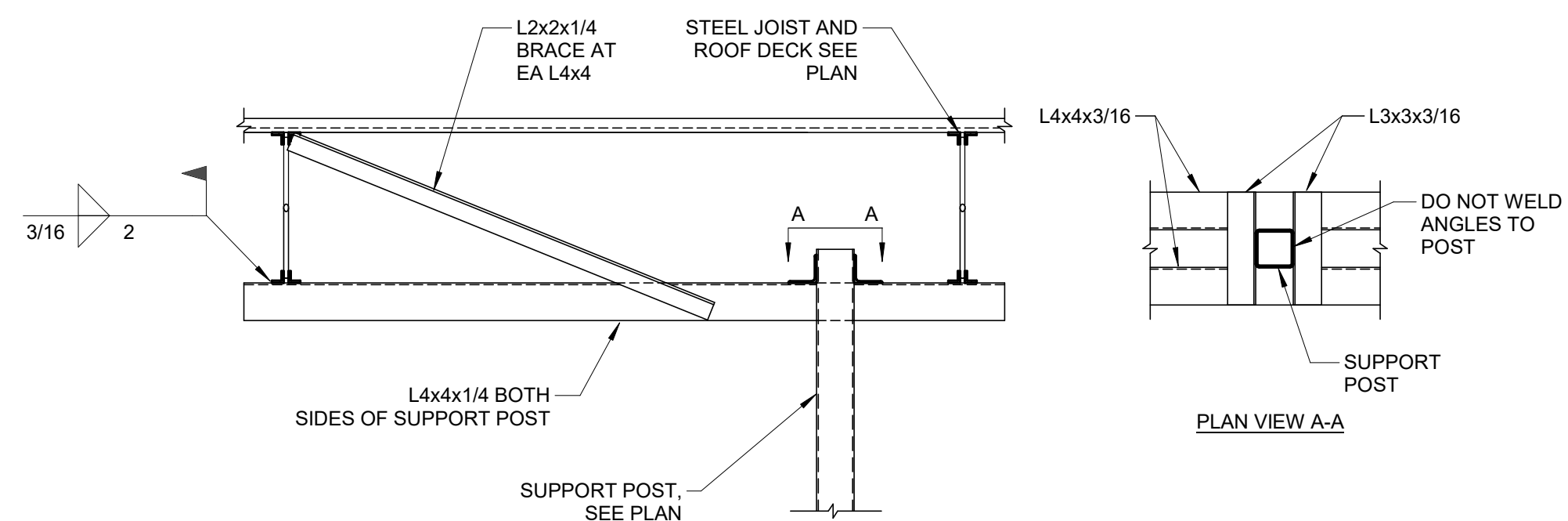
2 BEAM TO SQUARE HSS COL CONN

S4.1 SCALE: NTS



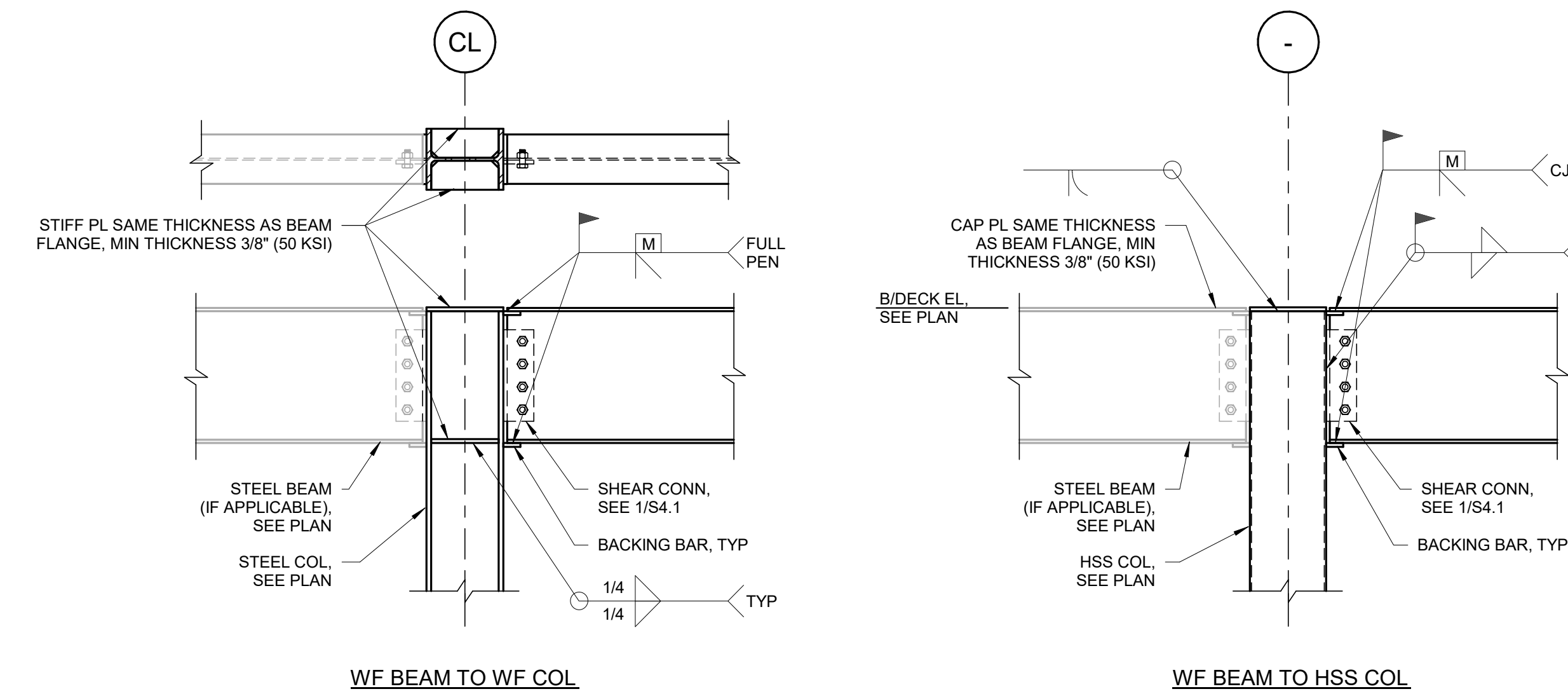
7 TYP HSS TO HSS CONNECTION

S4.1 SCALE: NTS



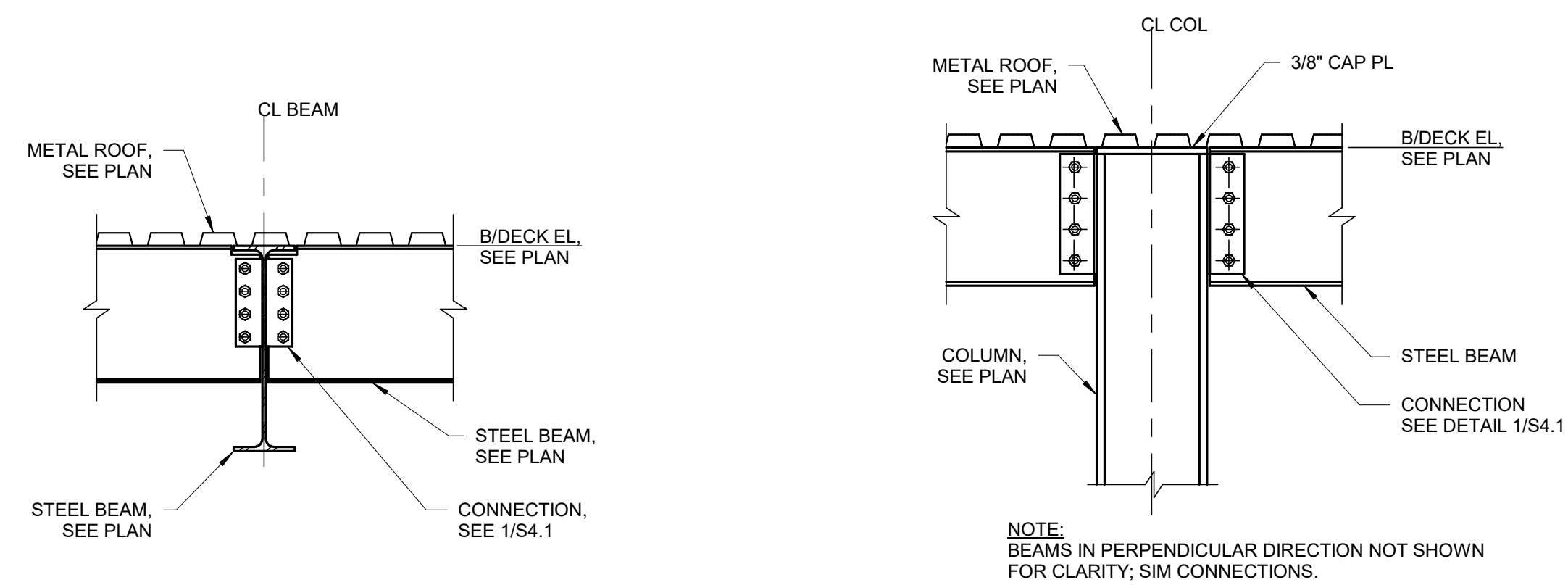
10 SECTION AT COILING DOOR

S4.1 SCALE: NTS



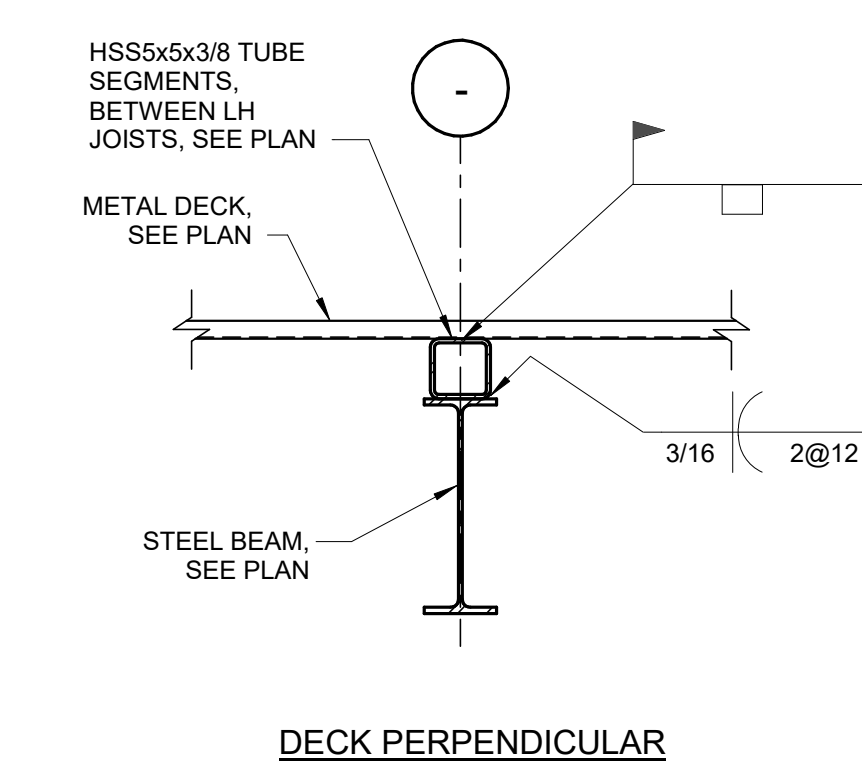
3 TYP BEAM/COLUMN MOMENT CONN

S4.1 SCALE: NTS



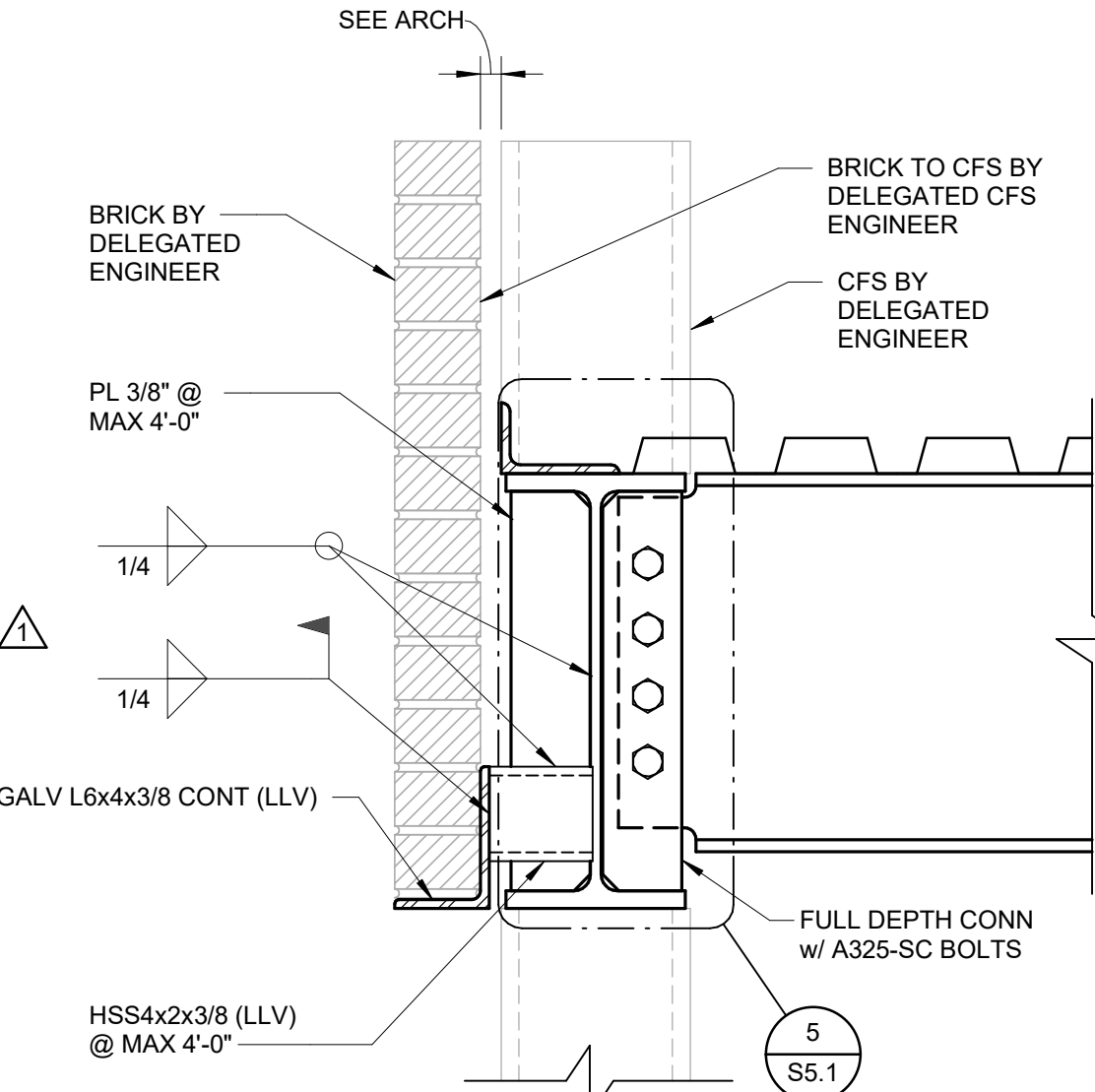
4 TYP ROOF BEAM CONN

S4.1 SCALE: NTS



8 DECK ATTACHMENT @ MOMENT FRAME

S4.1 SCALE: NTS

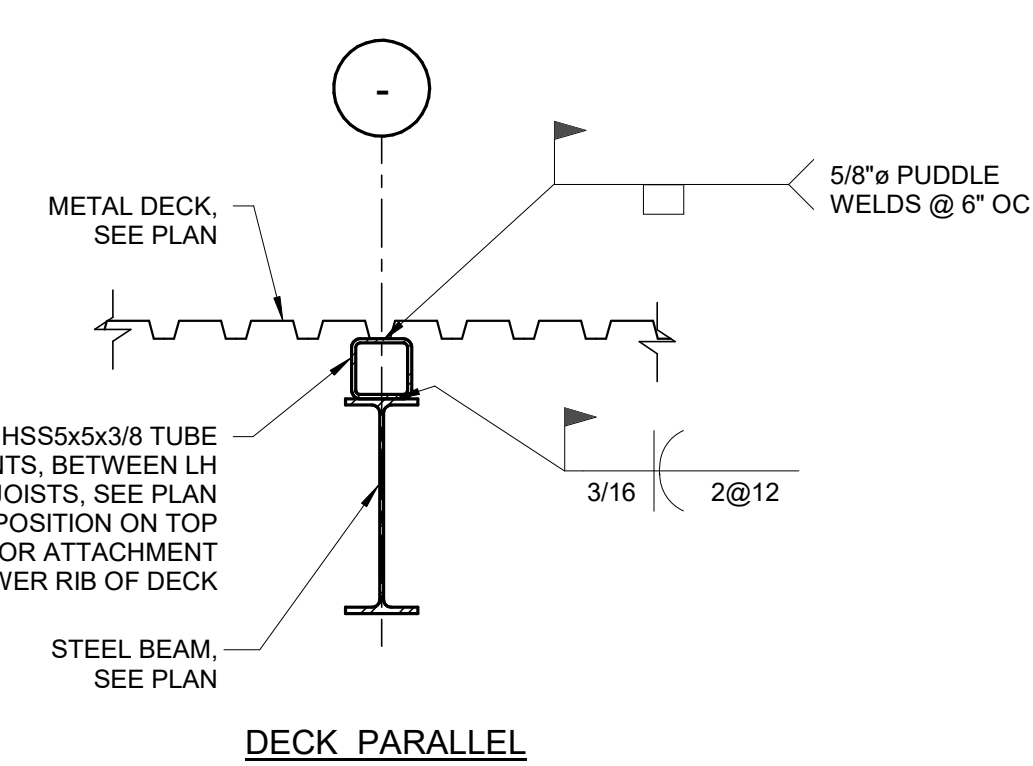


11 ENTRY PARAPET DETAIL

S4.1 SCALE: NTS

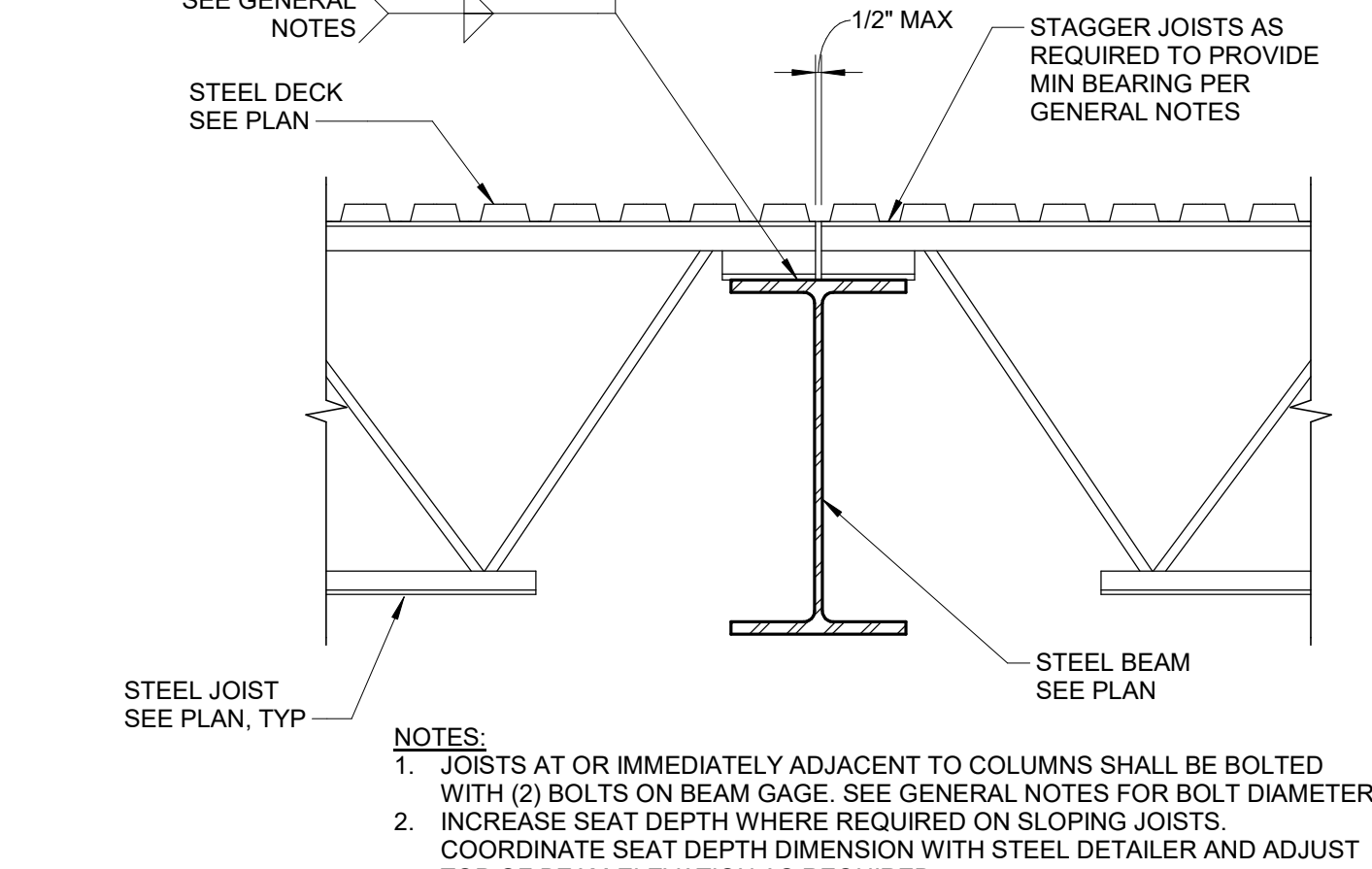
5 STEEL BEAM TO COLUMN

S4.1 SCALE: NTS



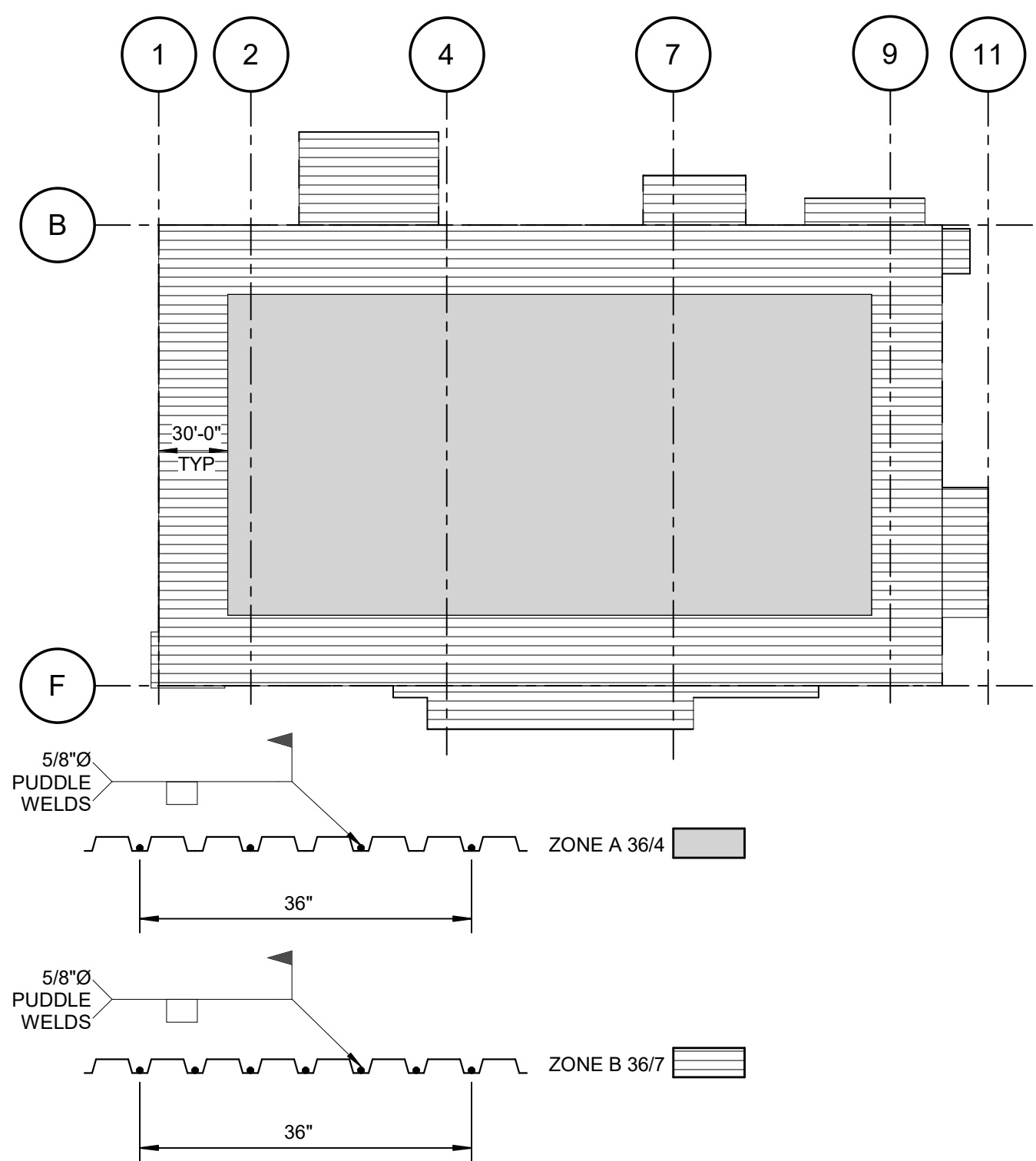
12 ROOF JOIST BEARING AT BEAM

S4.1 SCALE: NTS

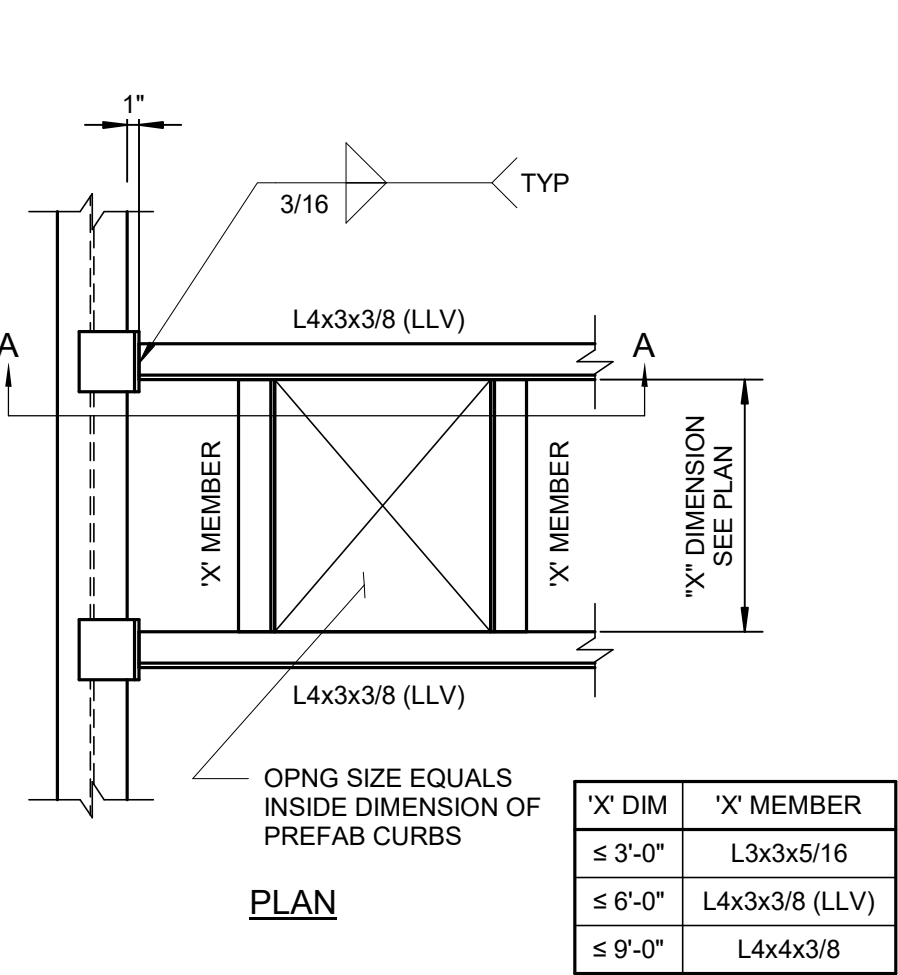


- NOTES:
- JOISTS AT OR IMMEDIATELY ADJACENT TO COLUMNS SHALL BE BOLTED WITH (2) BOLTS ON BEAM GAGE. SEE GENERAL NOTES FOR BOLT DIAMETER.
 - INCREASE SEAT DEPTH WHERE REQUIRED ON SLOPING JOISTS. COORDINATE SEAT DEPTH DIMENSION WITH STEEL DETAILER AND ADJUST TOP OF BEAM ELEVATION AS REQUIRED.

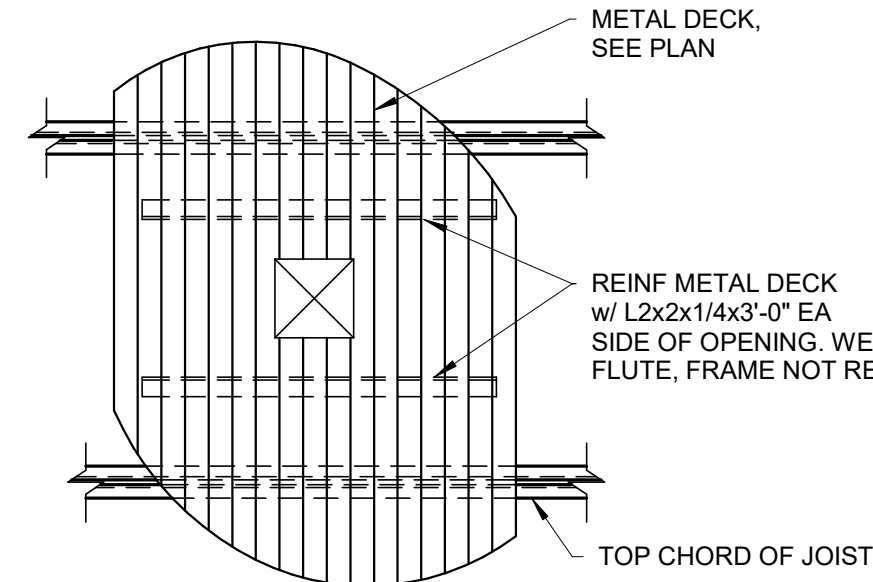
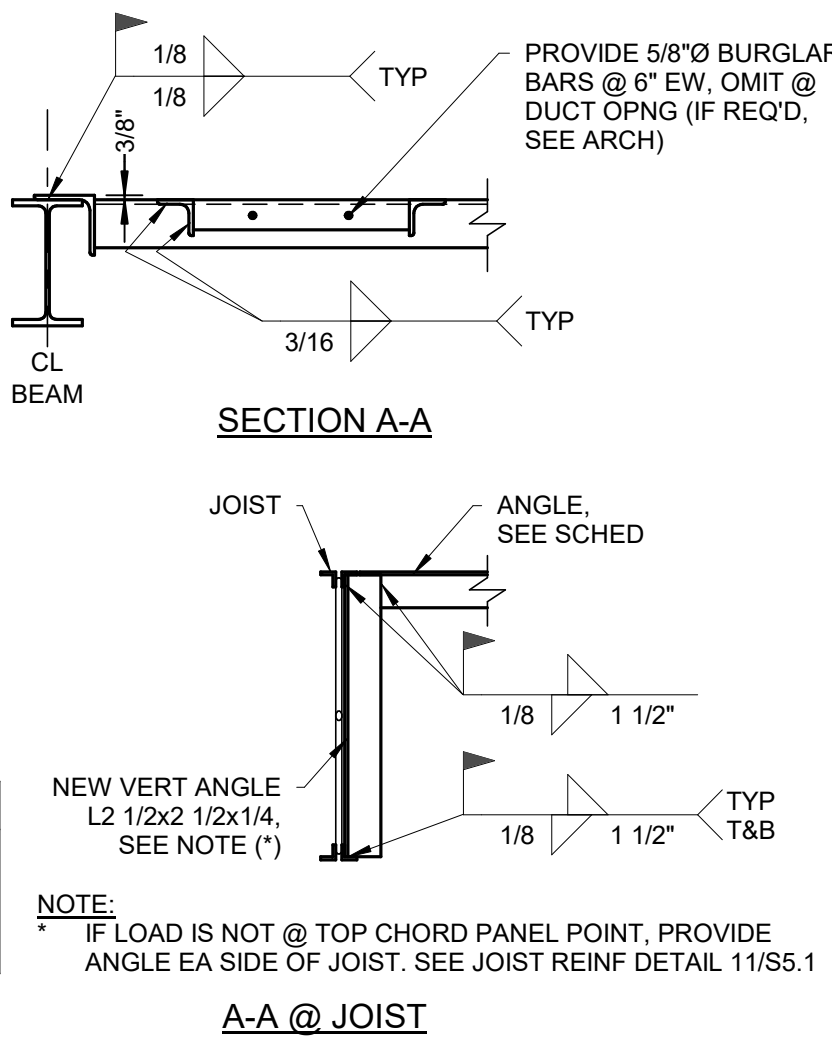
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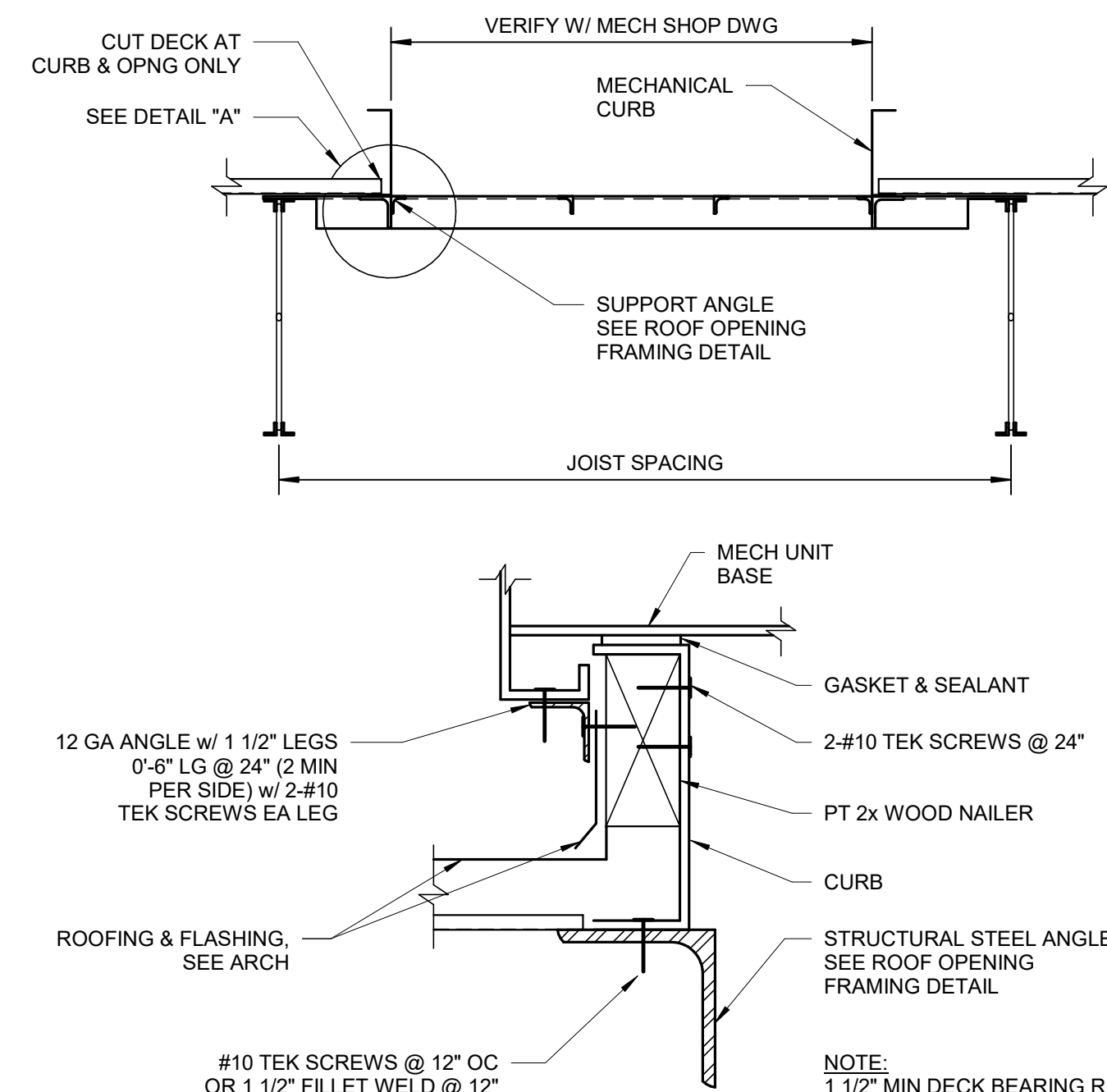
- NOTES:
- 1) ATTACHMENT AT SUPPORTS SHALL BE WELDS.
 - 2) ATTACHMENT AT SIDE LAPS SHALL BE #10 TEK SCREWS.
 - 3) ATTACHMENT AROUND OPENINGS SHALL BE WELDS @ 6" OC.
 - 4) ATTACHMENT AT SIDE SUPPORTS ALONG PERIMETER SHALL BE WELDS @ 6" OC.
 - 5) MINIMUM ENDLAP 3", TYP.
 - 6) SIDELAPS
- ZONE A - 6 SIDELAPS PER SPAN
ZONE B - 8 SIDELAPS PER SPAN



- NOTES:
- 1) VERIFY ALL DIM w/ SUPPLIER BEFORE FABRICATION.
 - 2) INSTALL PREFAB CURBS DIRECTLY ON STEEL SUPPORT ANGLES.
 - 3) ROOF DECK IS NOT REQUIRED INSIDE MECH UNIT CURBS.
 - 4) AT OPENINGS 6" TO 12" PROVIDE L2x2x1/4x3'-0" LG PERPENDICULAR TO DECK SPAN. 5/8" WELD TO EA FLUTE.



- NOTES:
- 1) SMALLER THAN 12" SQ & LARGER THAN 6" SQ.
 - 2) WELD TO BE 5/8" PUDDLE TYPE.

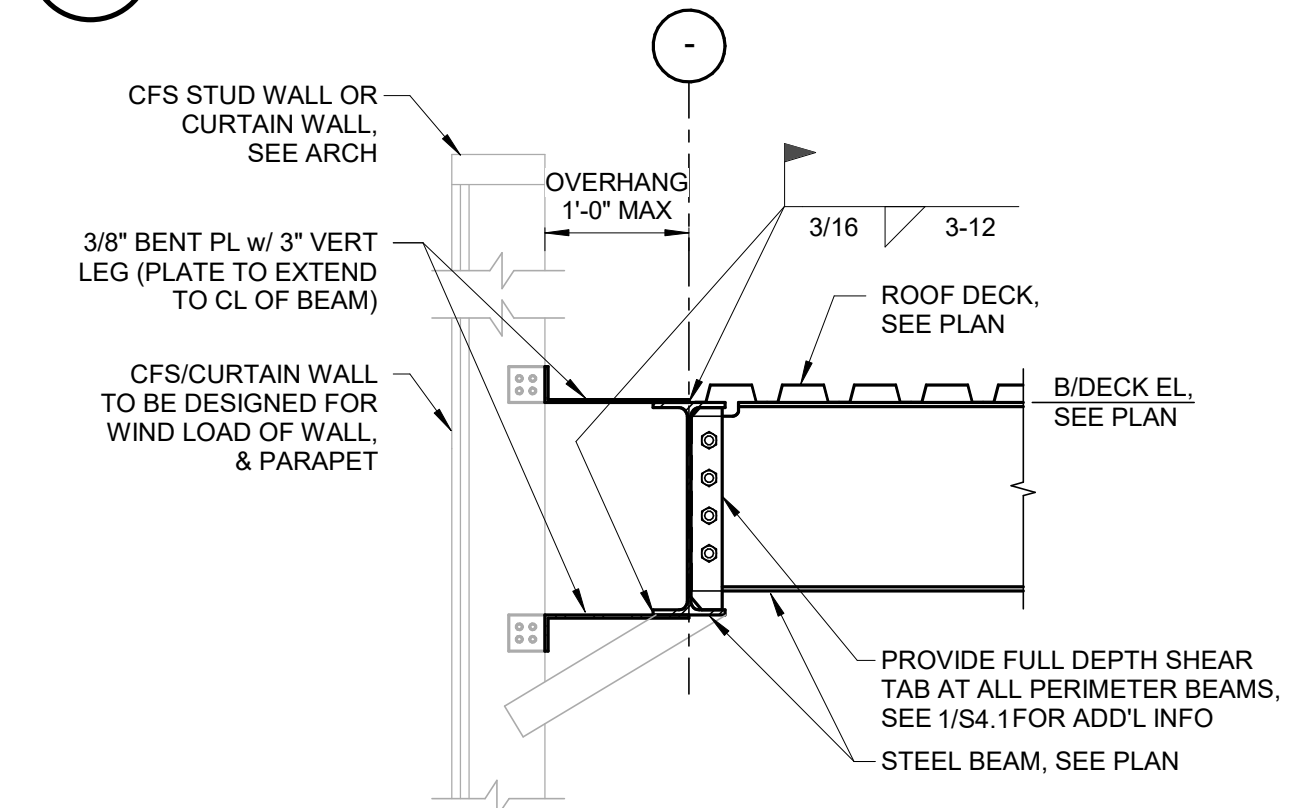


- NOTE:
- 1) 1/2" MIN DECK BEARING REQ'D.

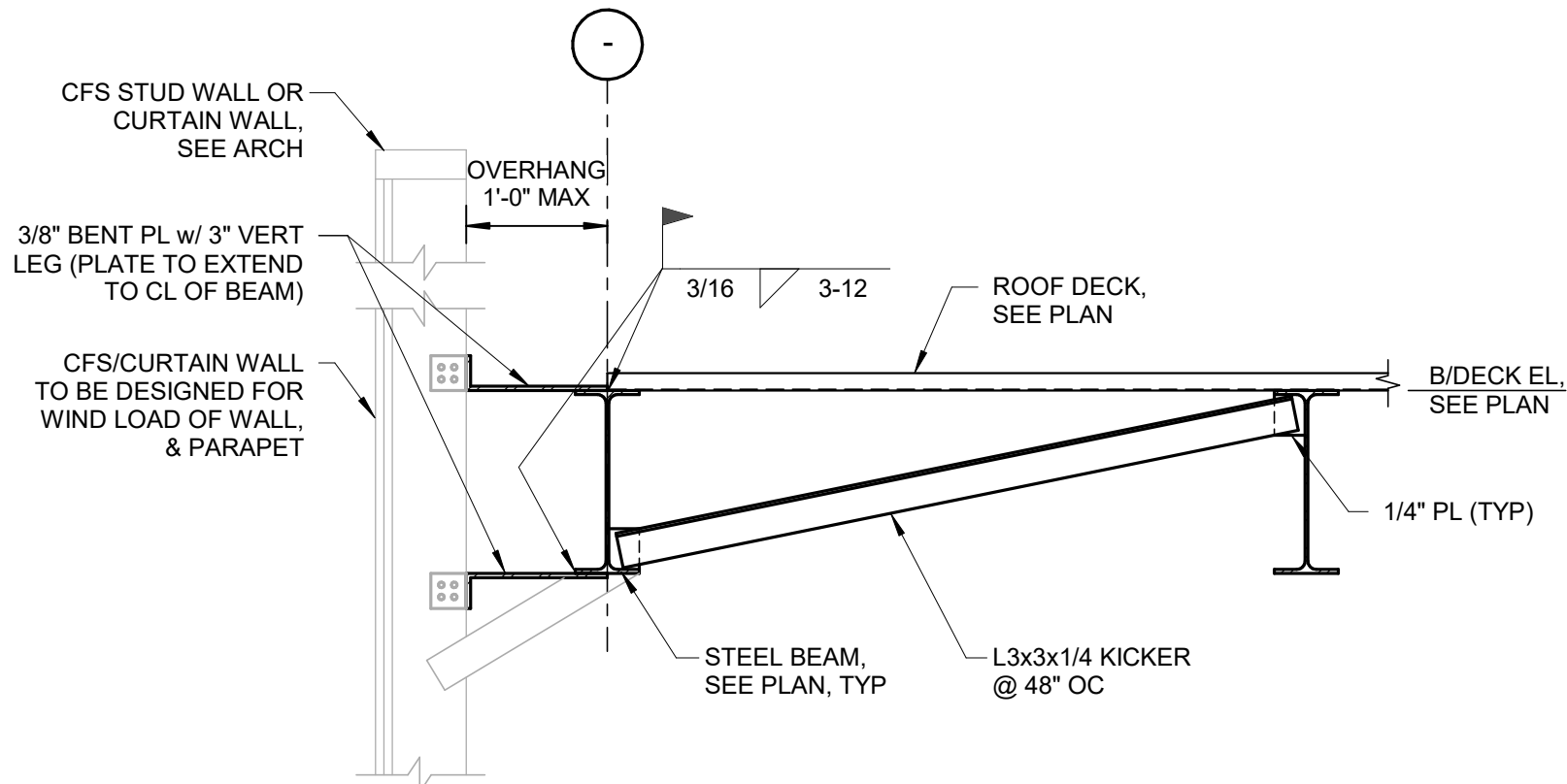
DETAIL "A"

1 TYP WELD PATTERN FOR ROOF DECK

SCALE: NTS



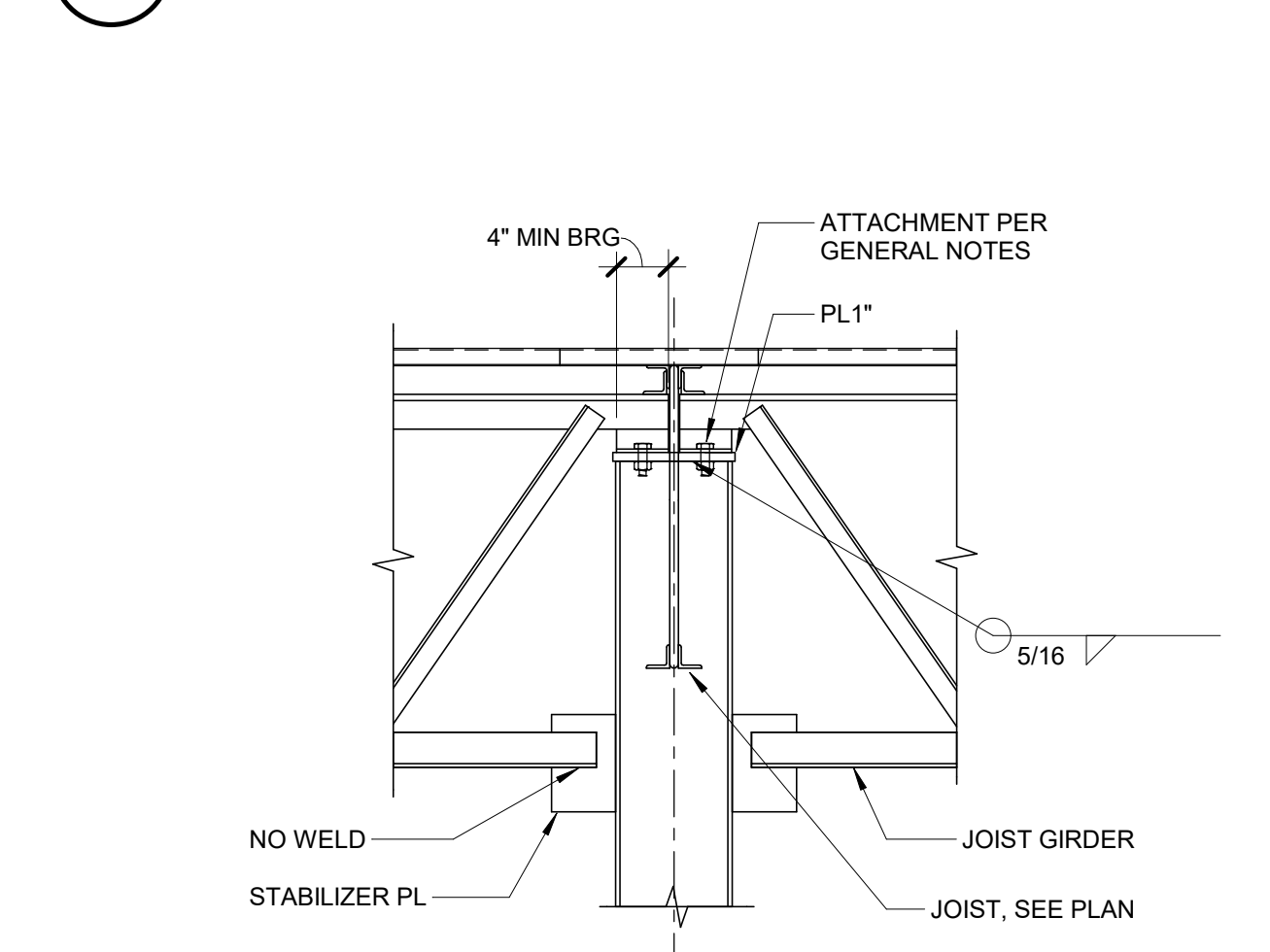
OVERHANG ≤ 1'-0" @ STEEL BEAMS



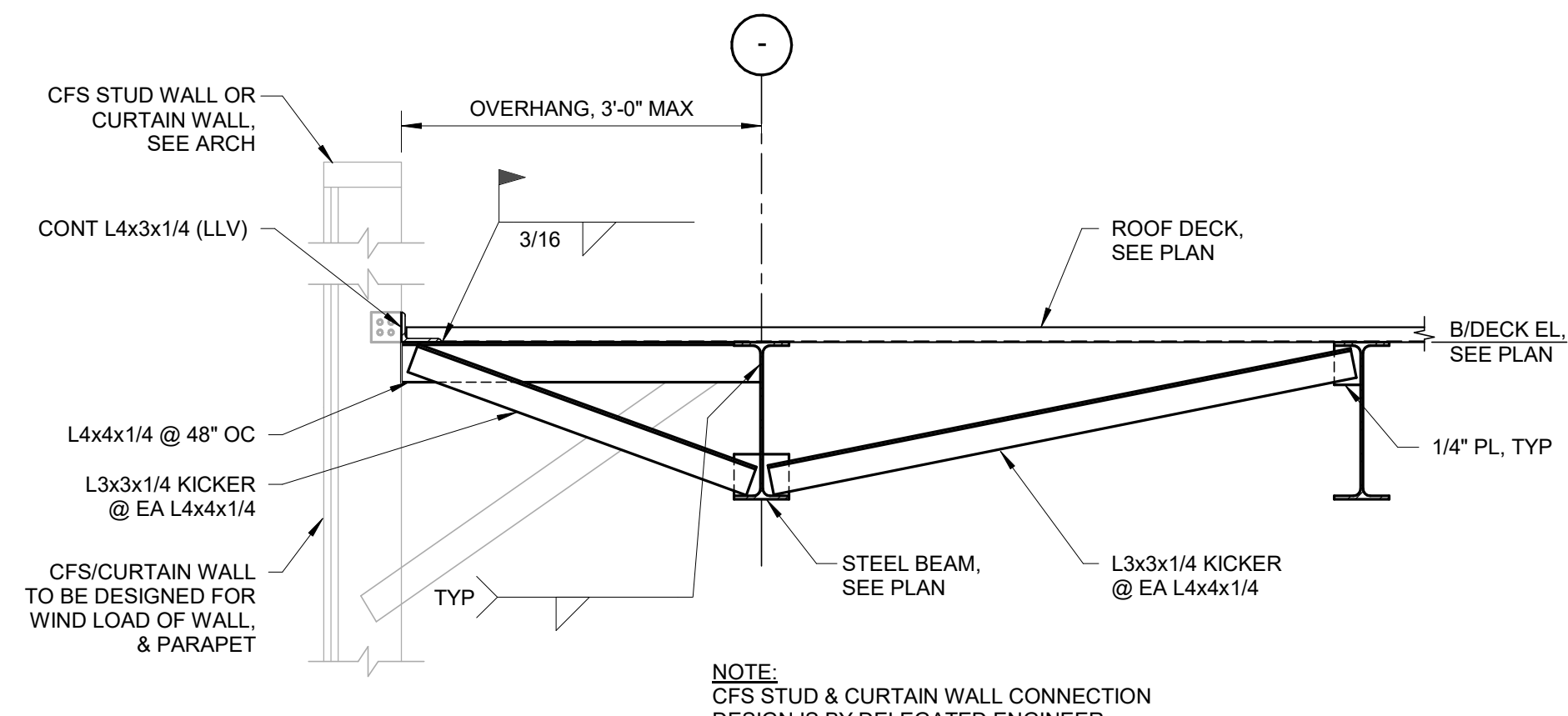
OVERHANG ≤ 3'-0" @ STEEL BEAMS

5 CANTILEVER ROOF DECK EDGE DETAIL

SCALE: NTS



OVERHANG ≤ 3'-0" @ STEEL BEAMS



- NOTE:
- 1) CFS STUD & CURTAIN WALL CONNECTION DESIGN IS BY DELEGATED ENGINEER.

7 INT JOIST TO GIRDER W/ BRACE

SCALE: NTS



8 INT JOIST TO COLUMN W/ BRACE

SCALE: NTS



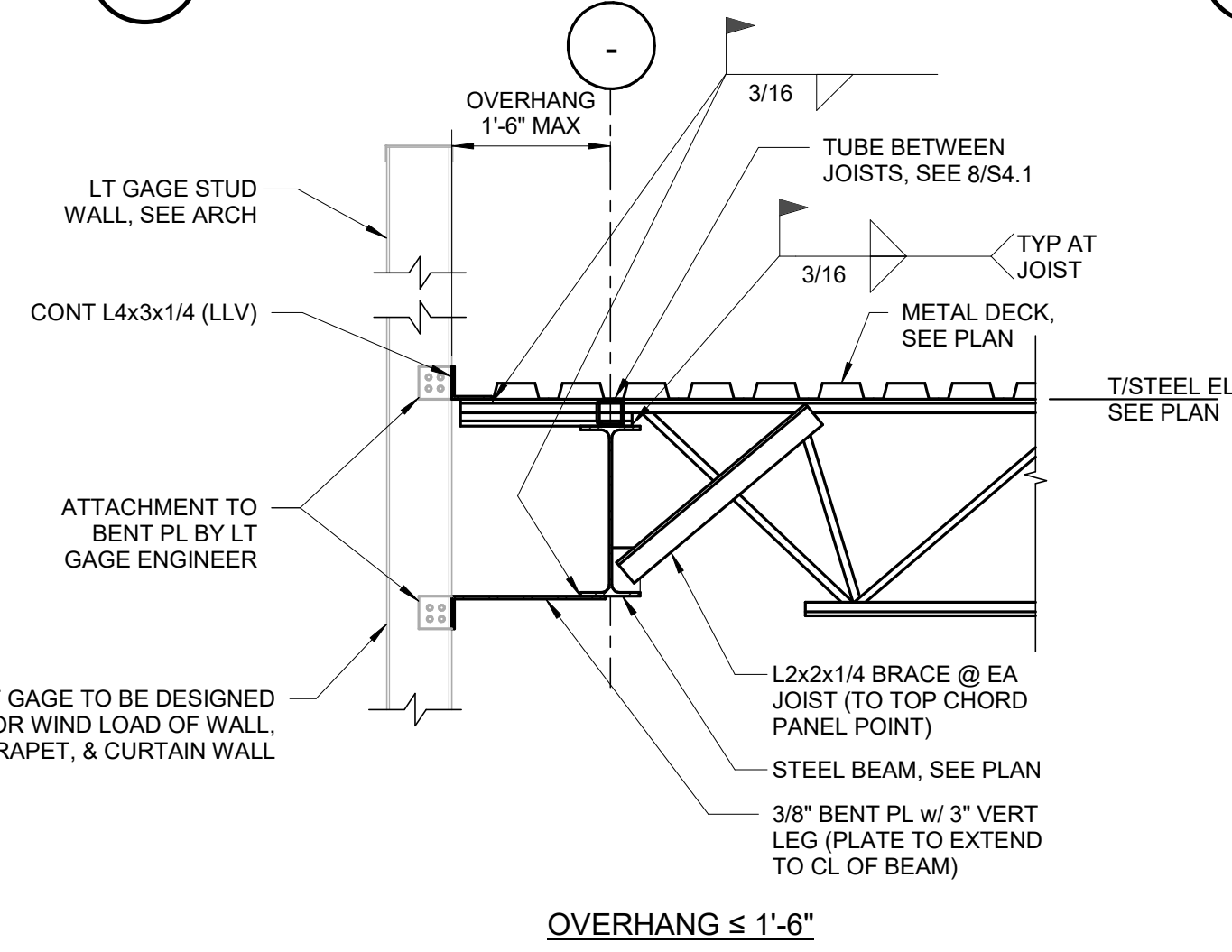
9 INT JOIST TO GRIDER W/ BRACE

SCALE: NTS

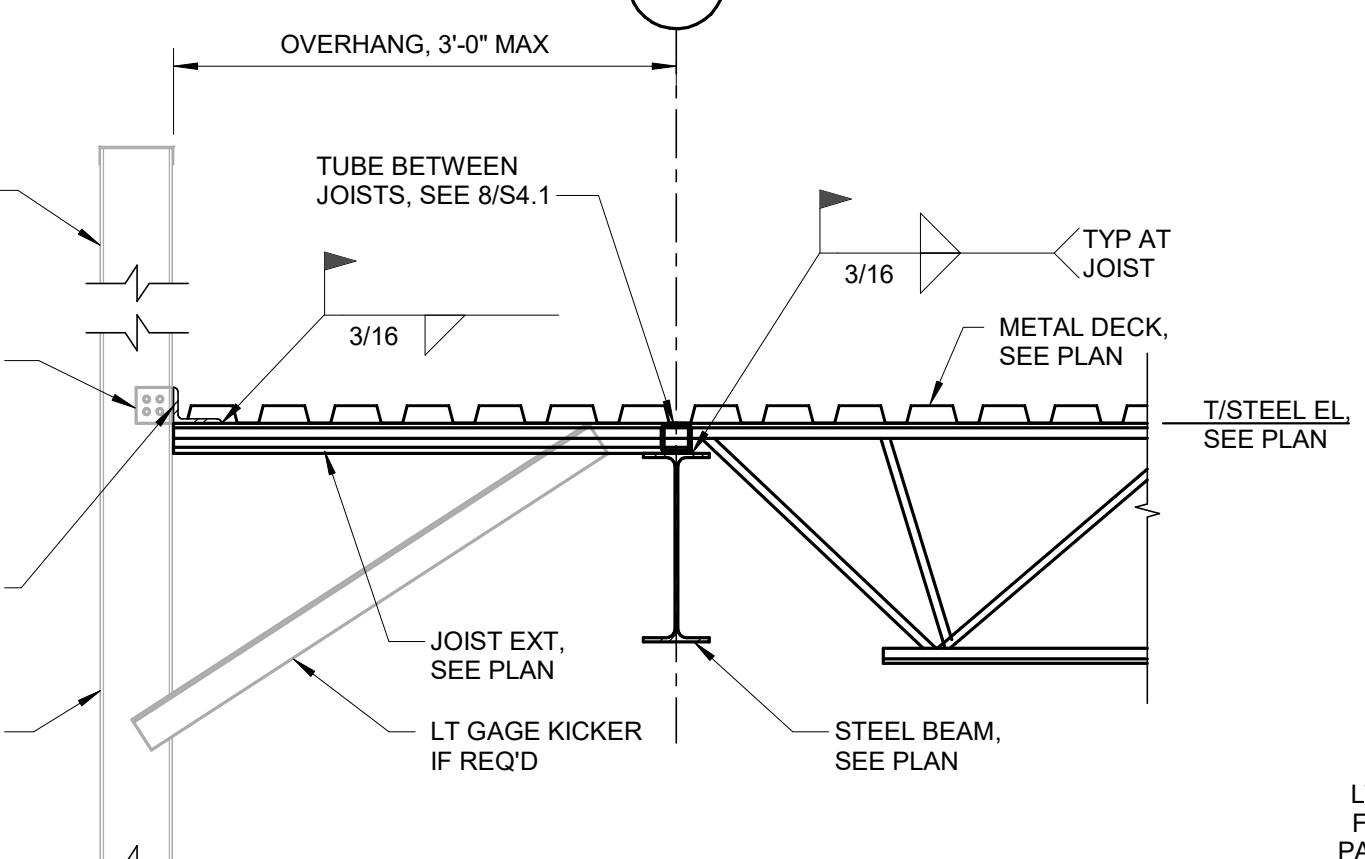


3 SMALL OPENING DETAIL

SCALE: NTS



OVERHANG ≤ 1'-6"

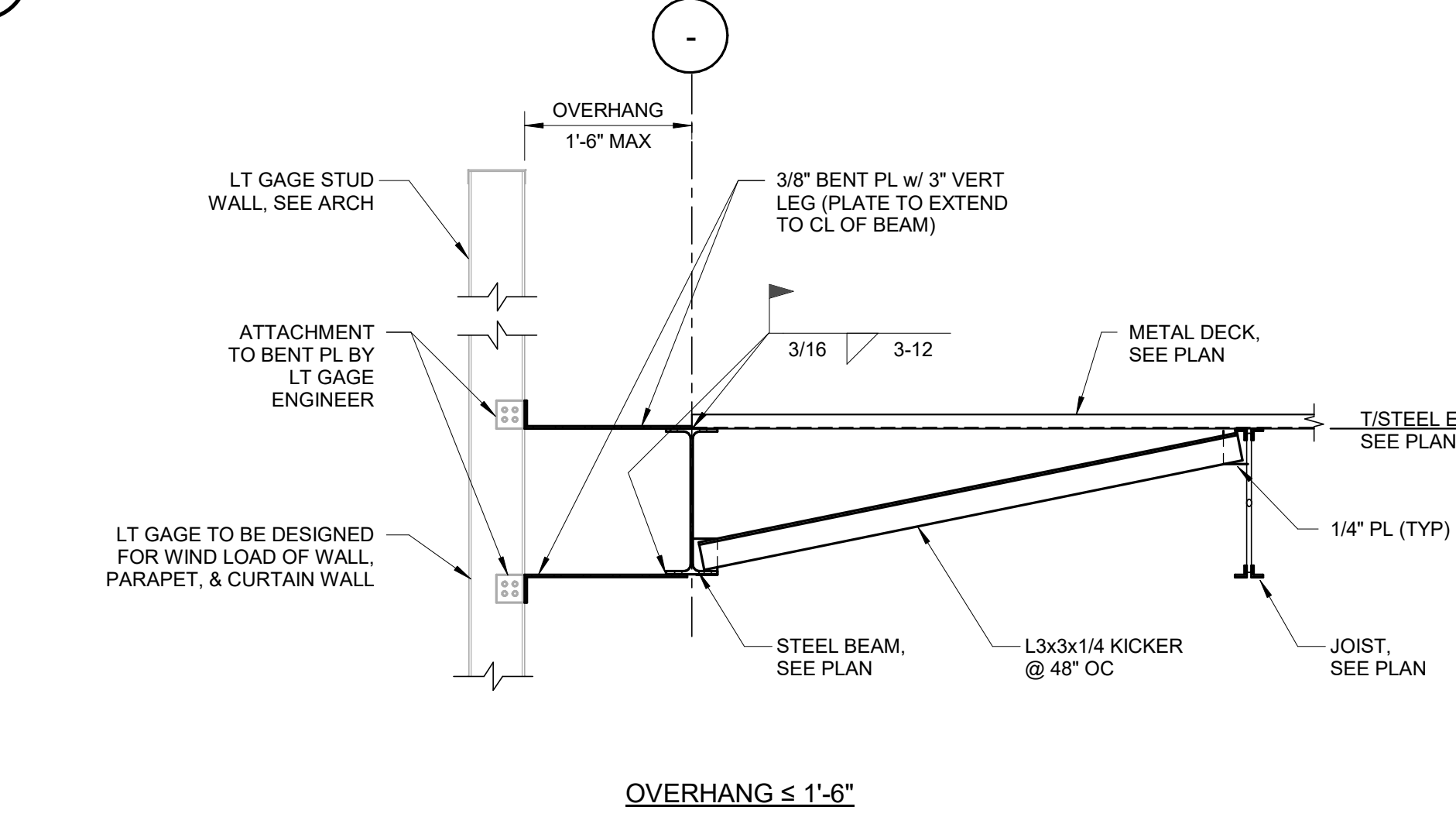


OVERHANG ≤ 3'-0"

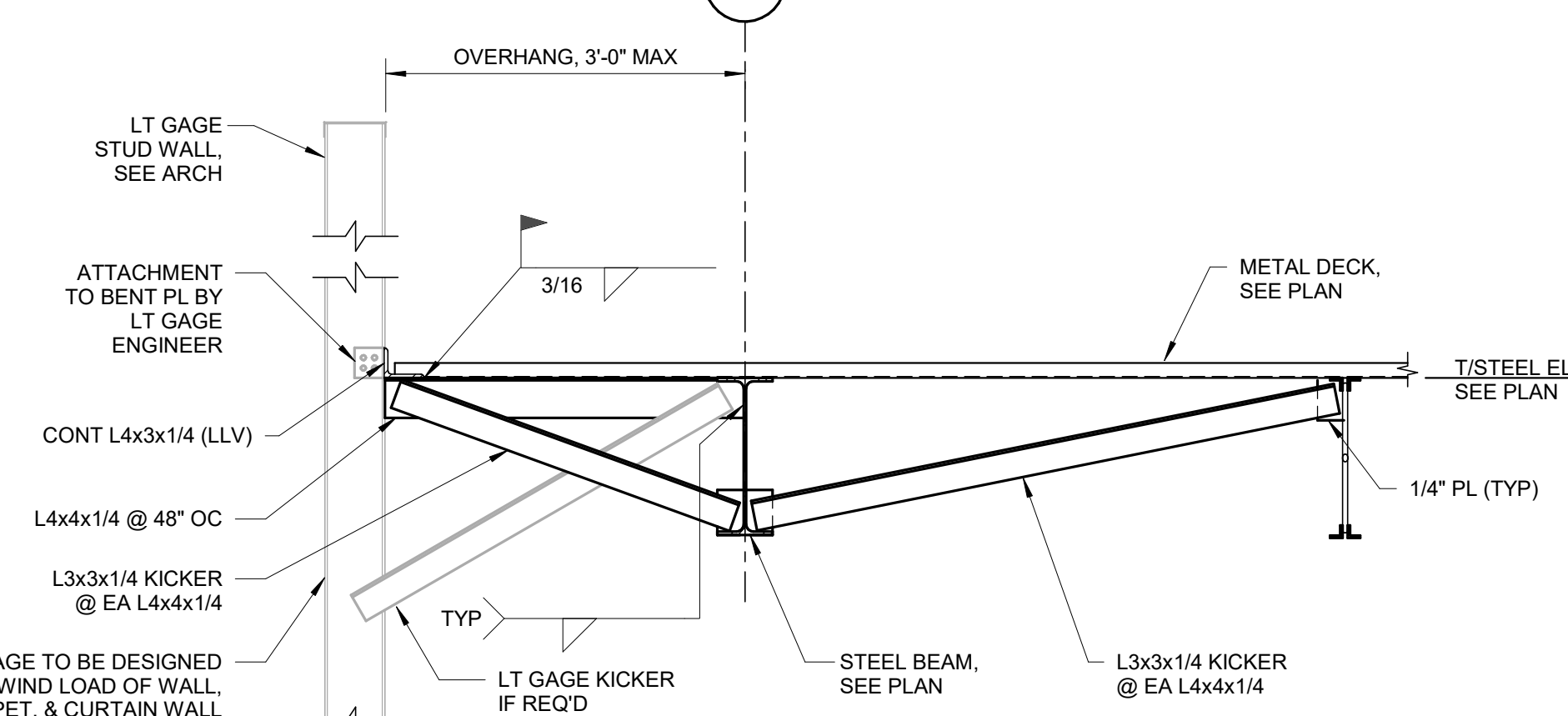
- NOTE:
- 1) AT SIM, JOISTS ARE STEEL BEAMS PER PLAN.

4 ROOF TOP UNIT ATTACHMENT

SCALE: NTS



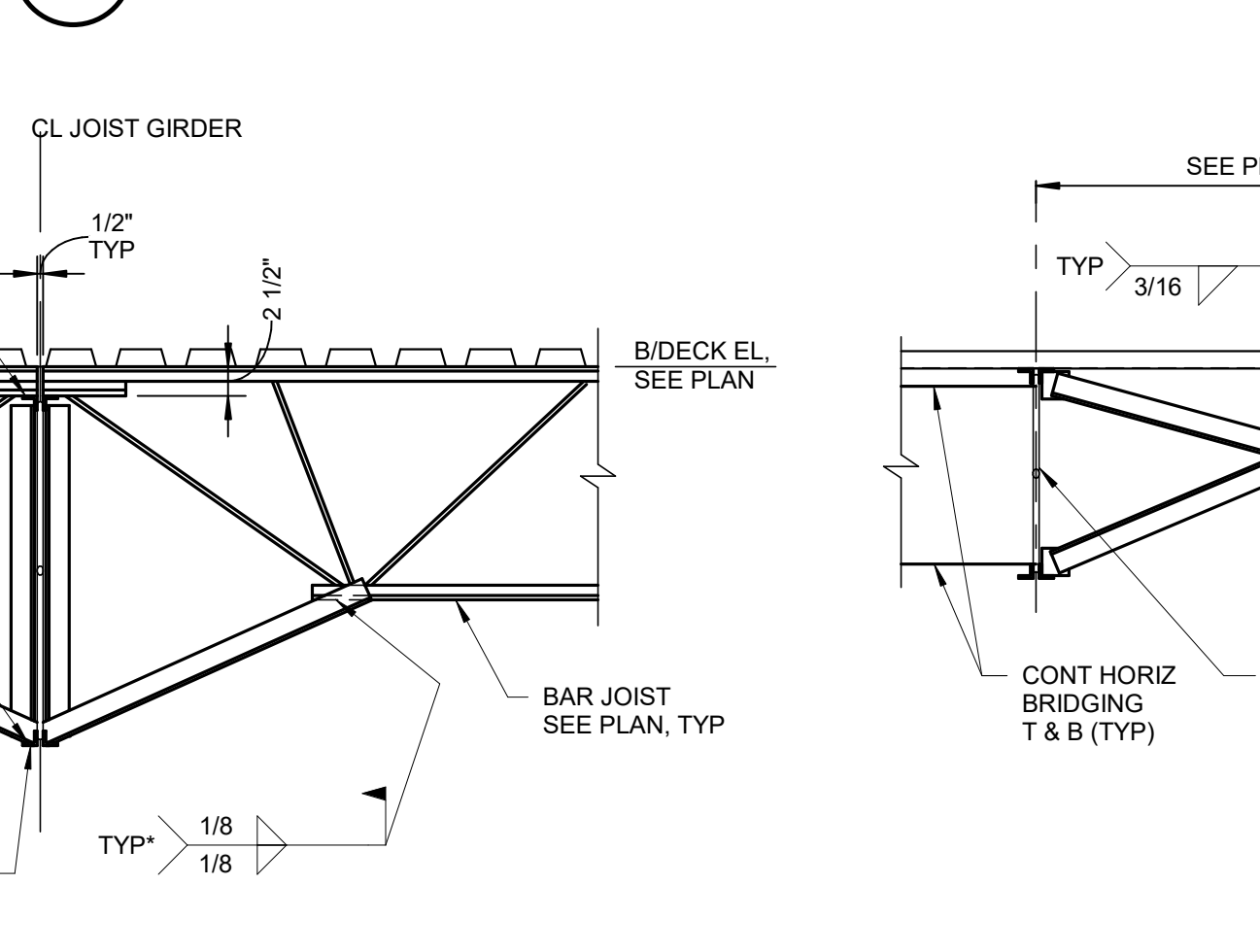
OVERHANG ≤ 1'-6"



OVERHANG ≤ 3'-0"

6 TYP ROOF BEAM EDGE CONN

SCALE: NTS



- NOTES:
- 1) PROVIDE 1/2" ERECTION BOLTS AS REQ'D BY OSHA.
 - 2) MAKE CONNECTION AFTER DEAD LOAD IS APPLIED.

10 JOIST BRIDGING TO BEAM

SCALE: NTS

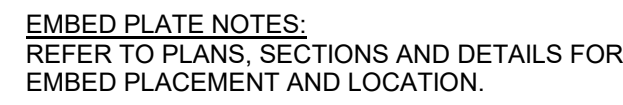
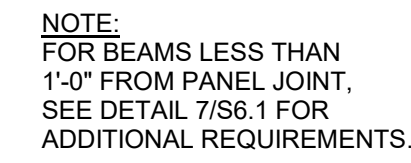
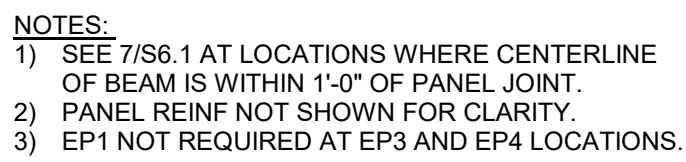


11 JOIST REINF FOR CONCENTRATED LOADS

SCALE: NTS



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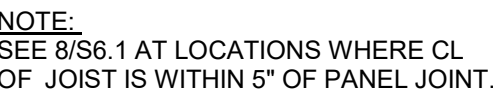
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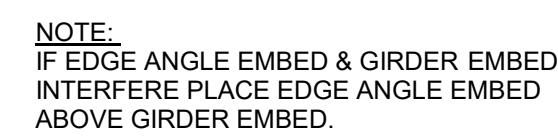
SCALE: NTS

S6.1

SCALE: NTS



NOTE:
MIN REINF REQUIREMENTS
SHOWN, SEE SHEET S7.1-S7.4
FOR ADDITIONAL INFO.



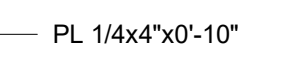
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SCALE: NTS



SCALE: NTS

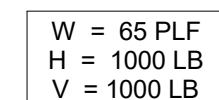
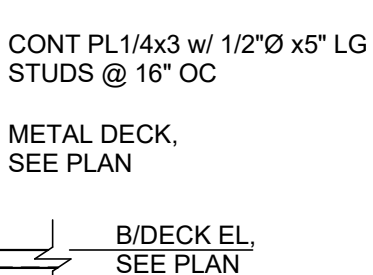
SCALE: NTS



PL 3/8"x4"x0'-10" w/
2-1/2"Ø x0'-6" STUDS

S6.1

SCALE: NT



S6.1

SCALE: NTS

S6.1

SCALE: NTS

S6.1

SCALE: NTS

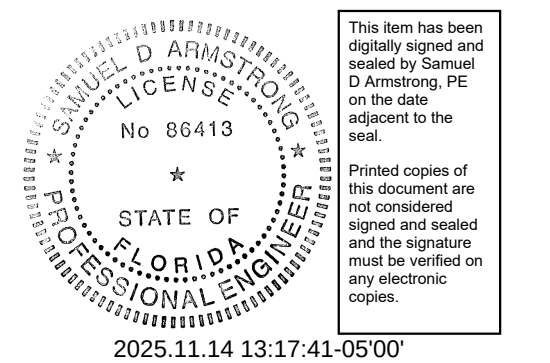
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ERIK C. KASPER AR#0017162

BUSY BEE
ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES:

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TILT PANEL SECTIONS & DETAILS

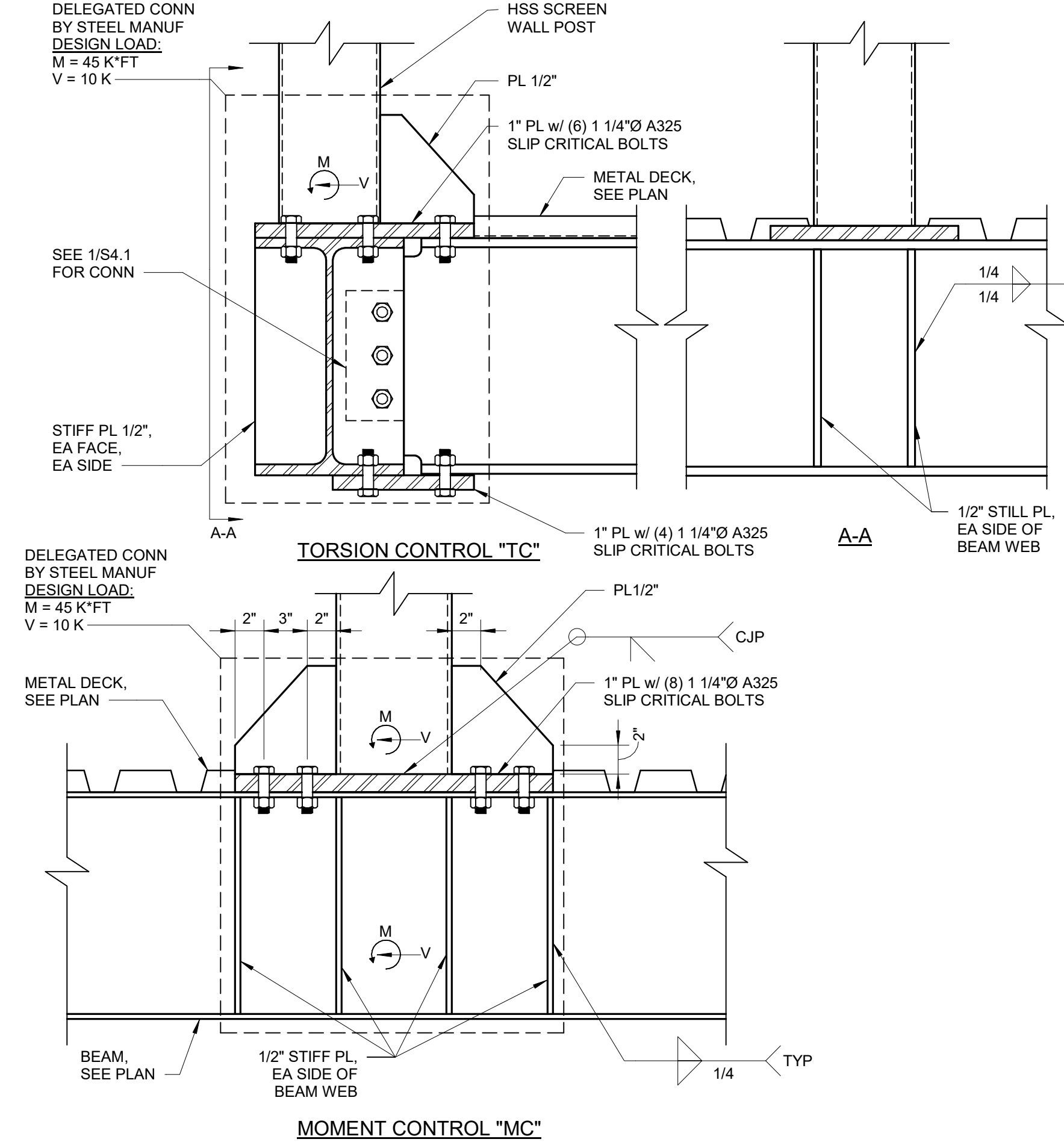
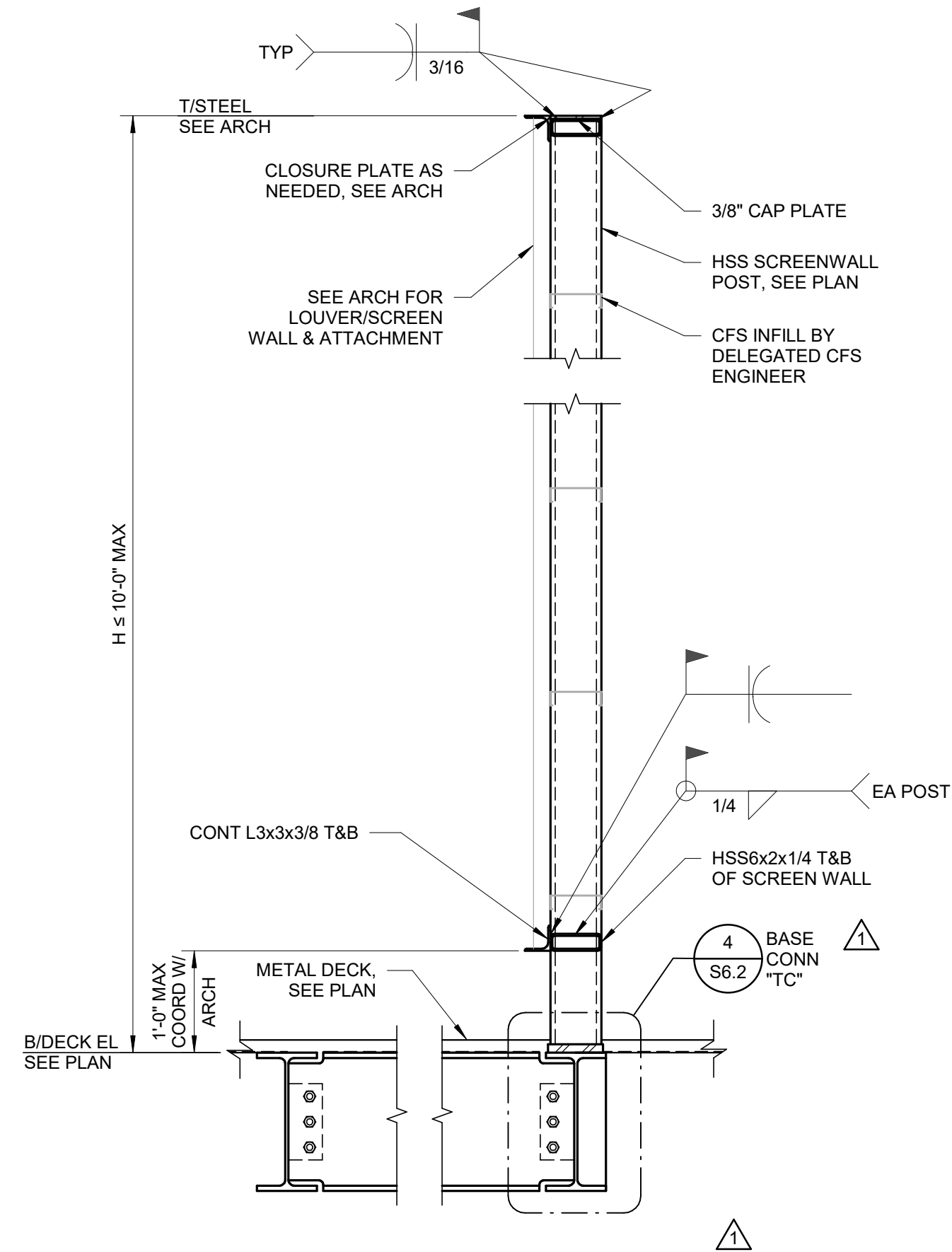
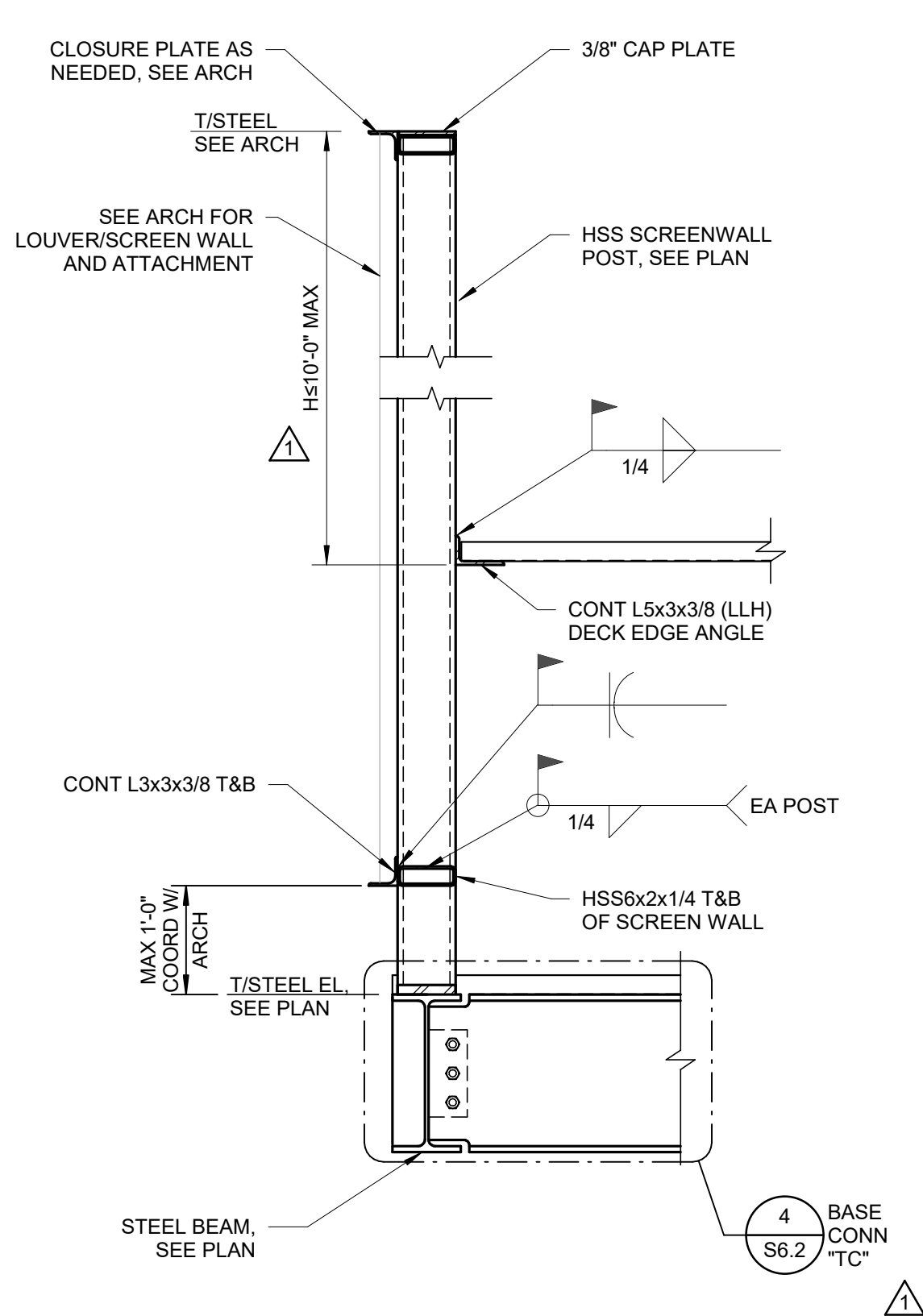
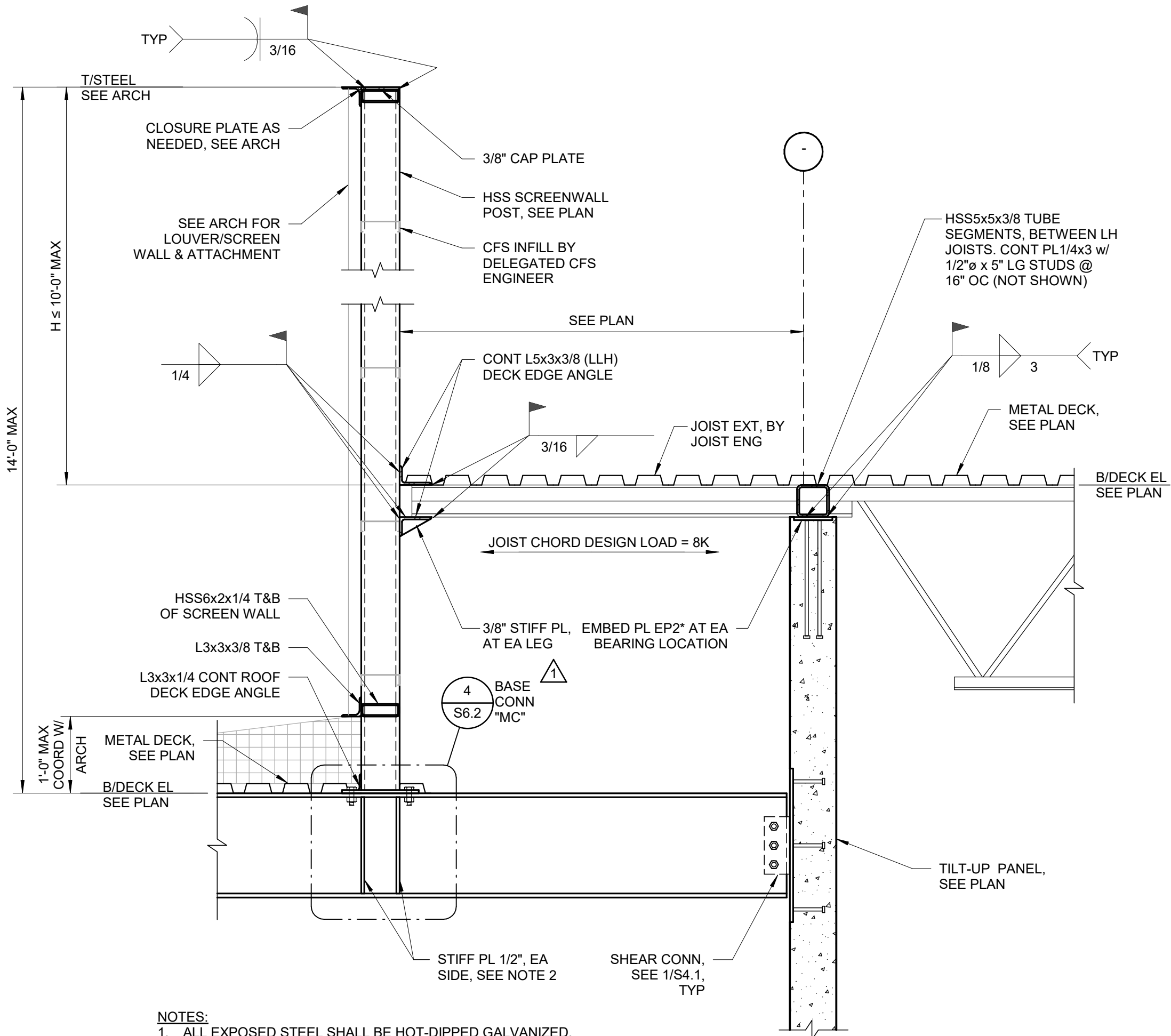
S6.1

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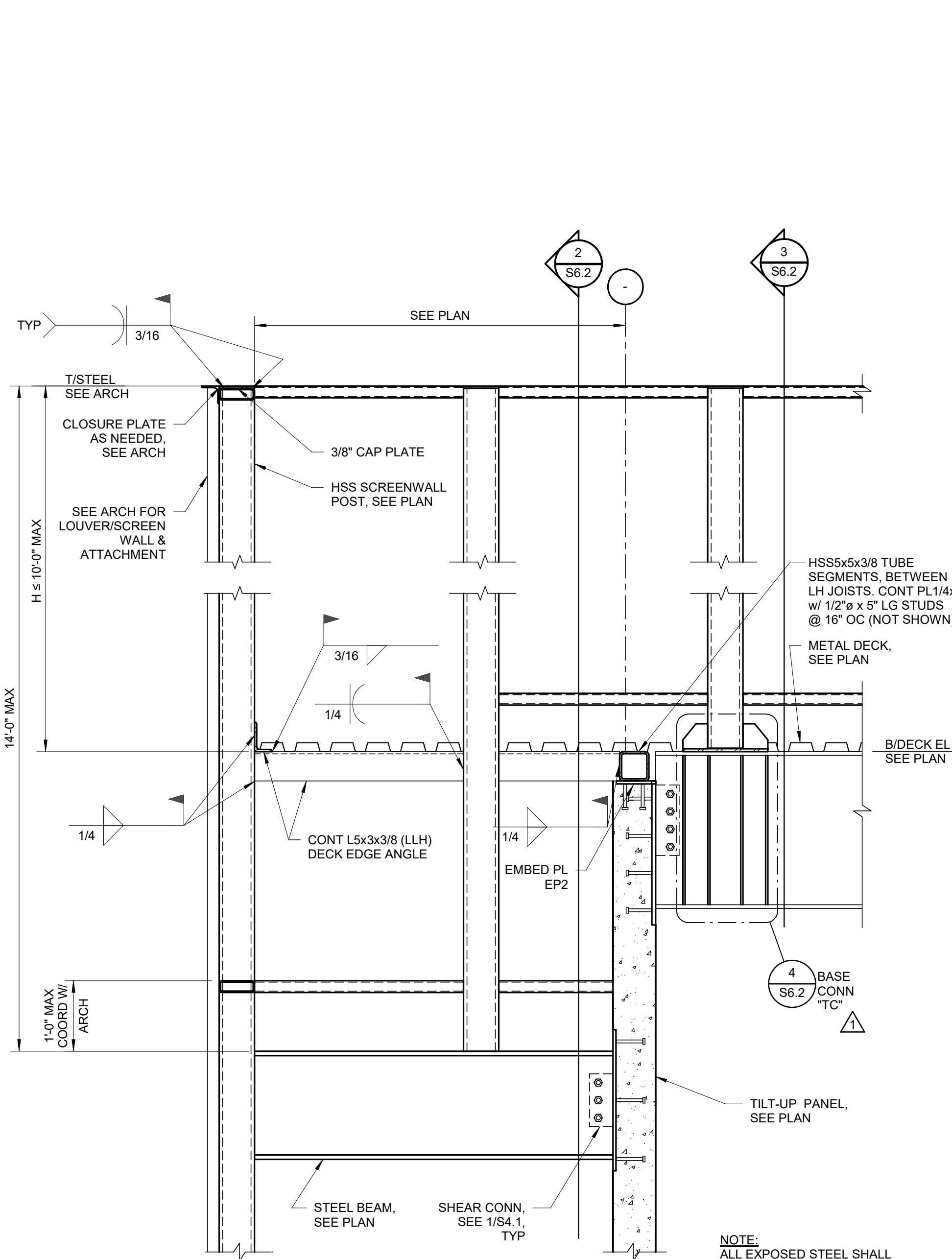


1 ROOF SCREENWALL DETAIL
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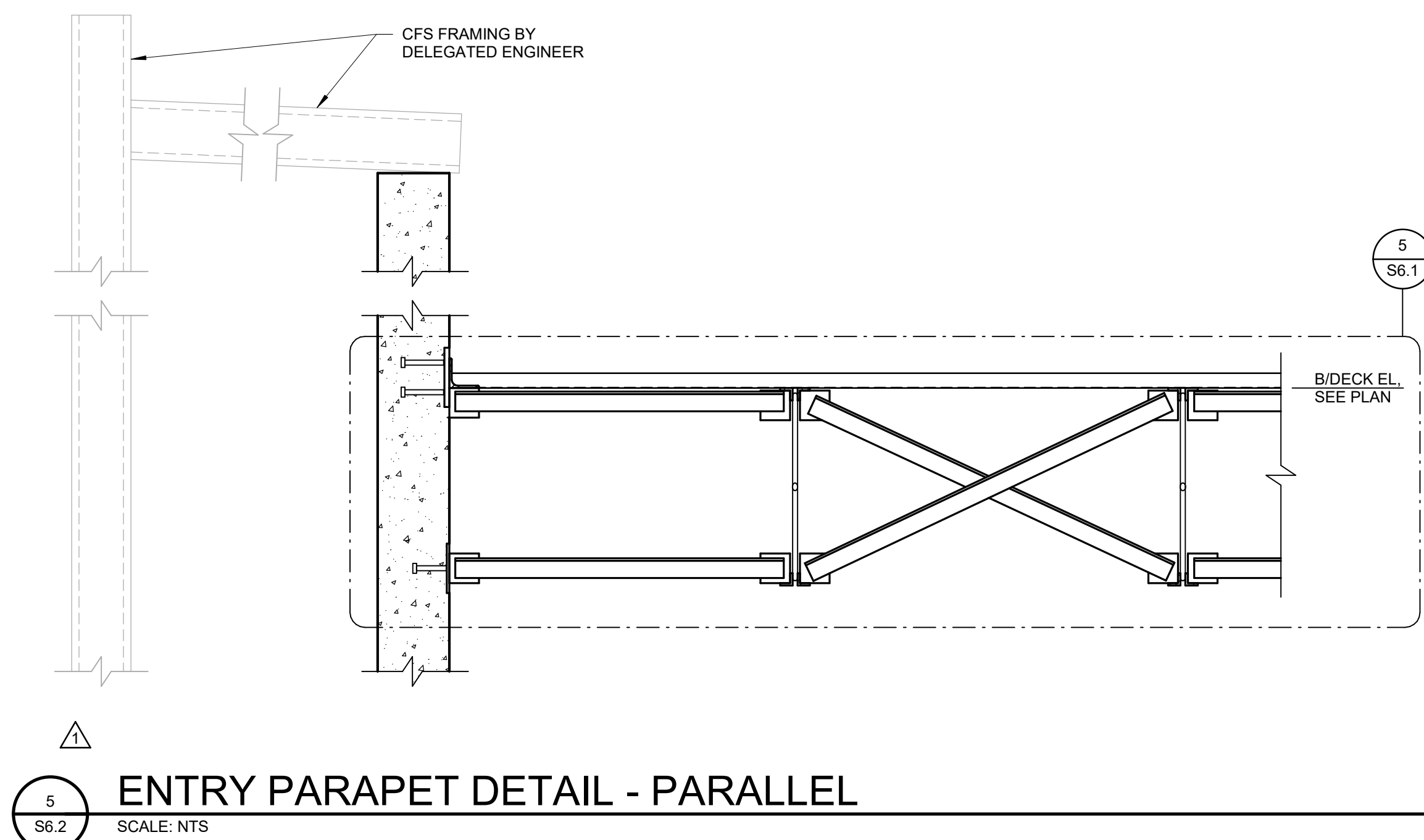
2 SCREENWALL PARALLEL TO BEAM
SCALE: NTS

3 ROOF SCREENWALL DETAIL - CANTILEVER
SCALE: NTS

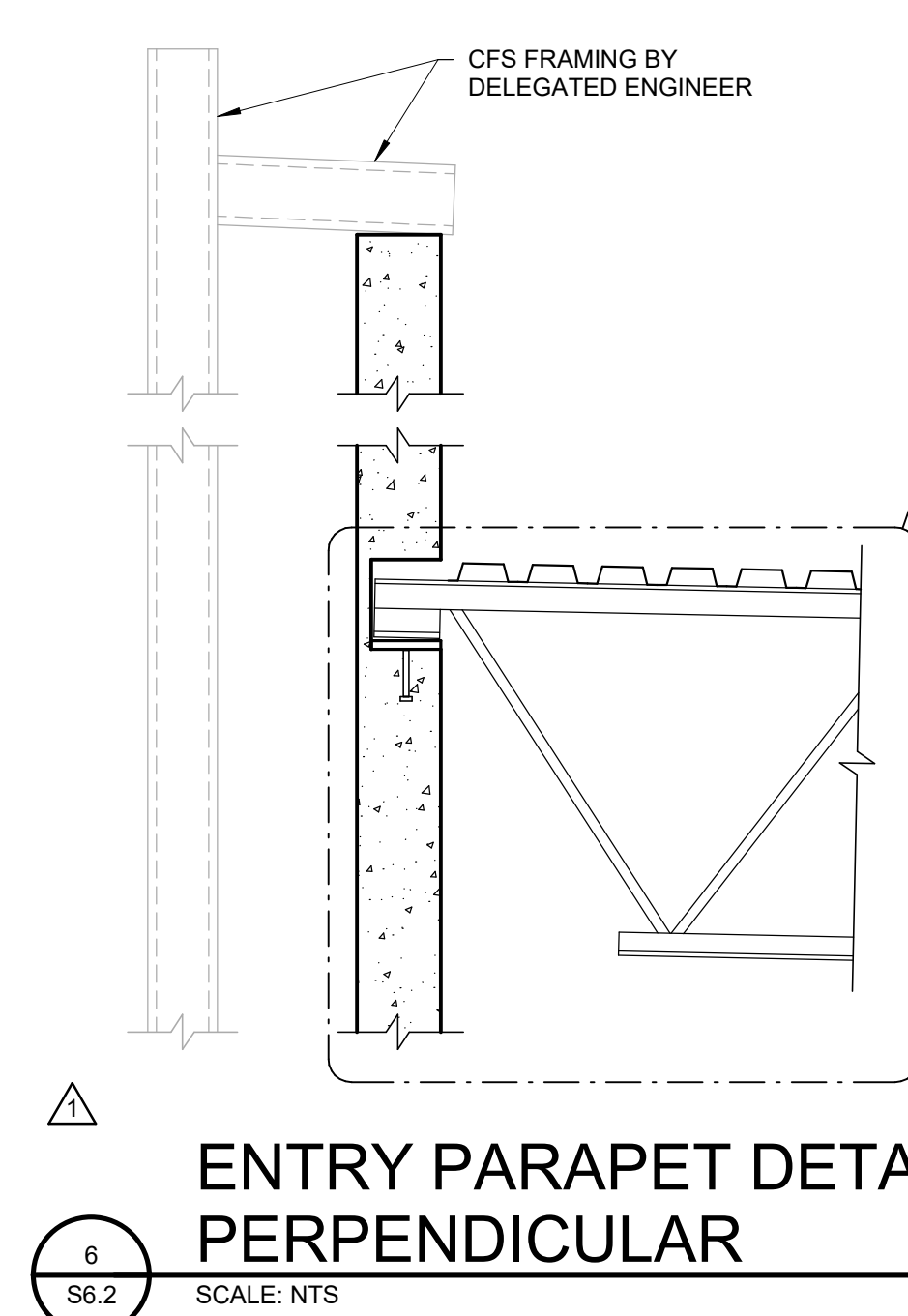
4 SCREENWALL BASE PL CONNECTION
SCALE: NTS



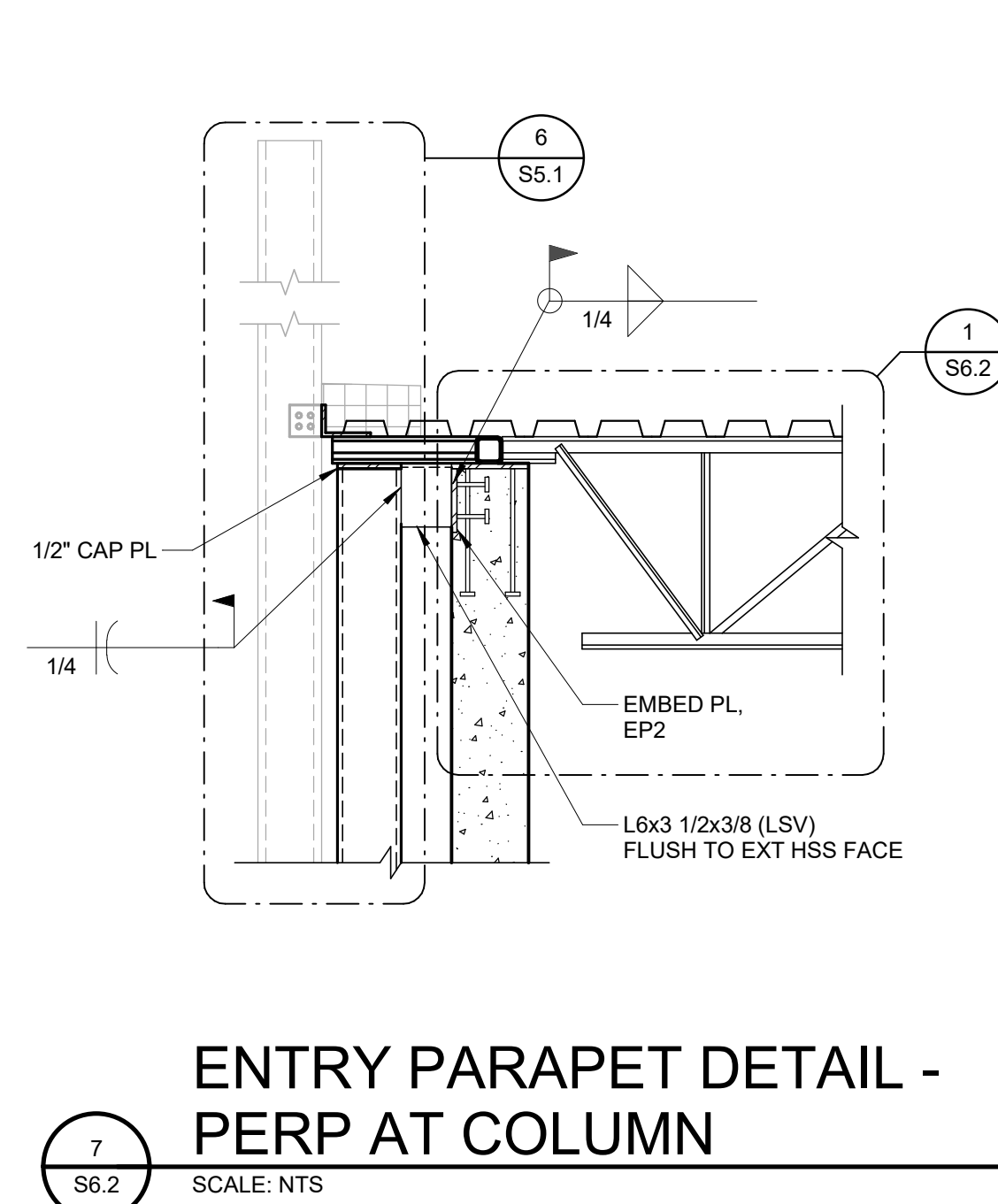
8 END OF ROOF SCREENWALL DETAIL
SCALE: NTS



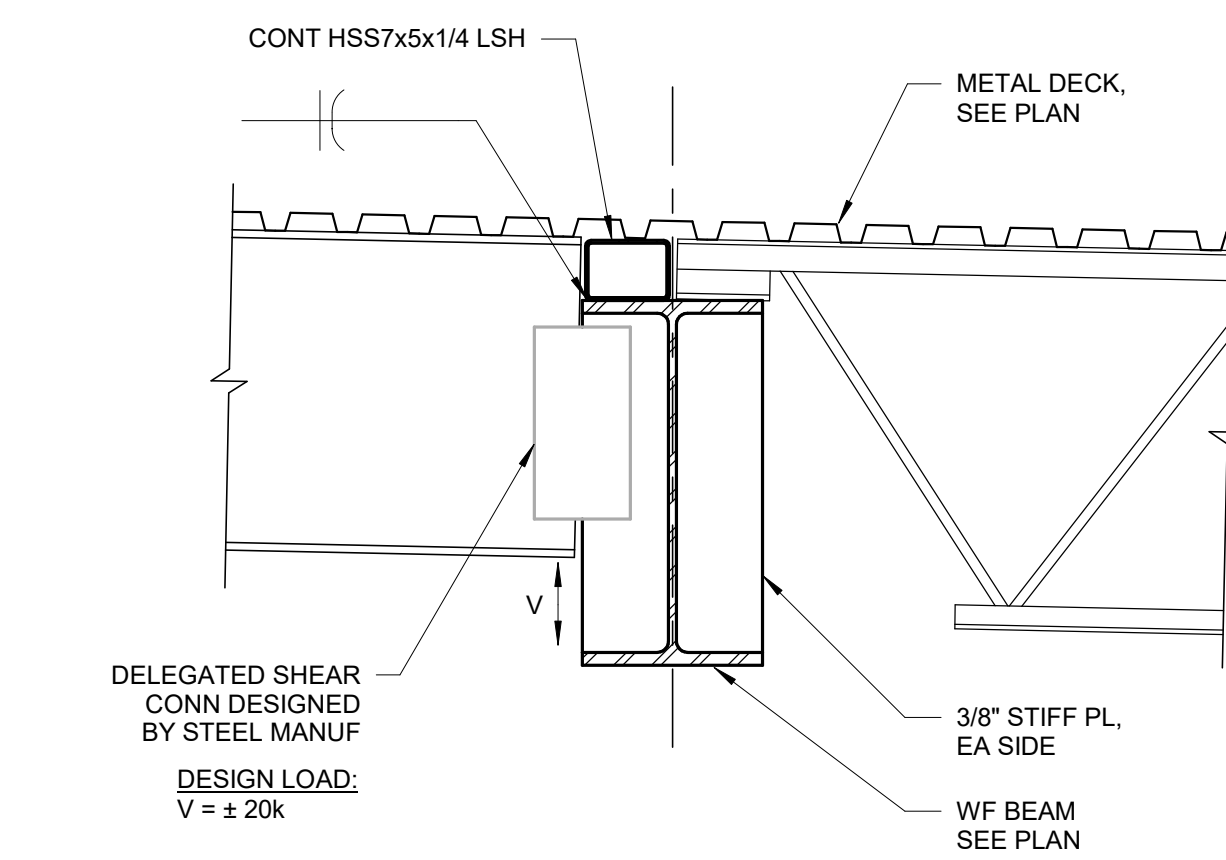
5 ENTRY PARAPET DETAIL - PARALLEL
SCALE: NTS



6 ENTRY PARAPET DETAIL - PERPENDICULAR
SCALE: NTS

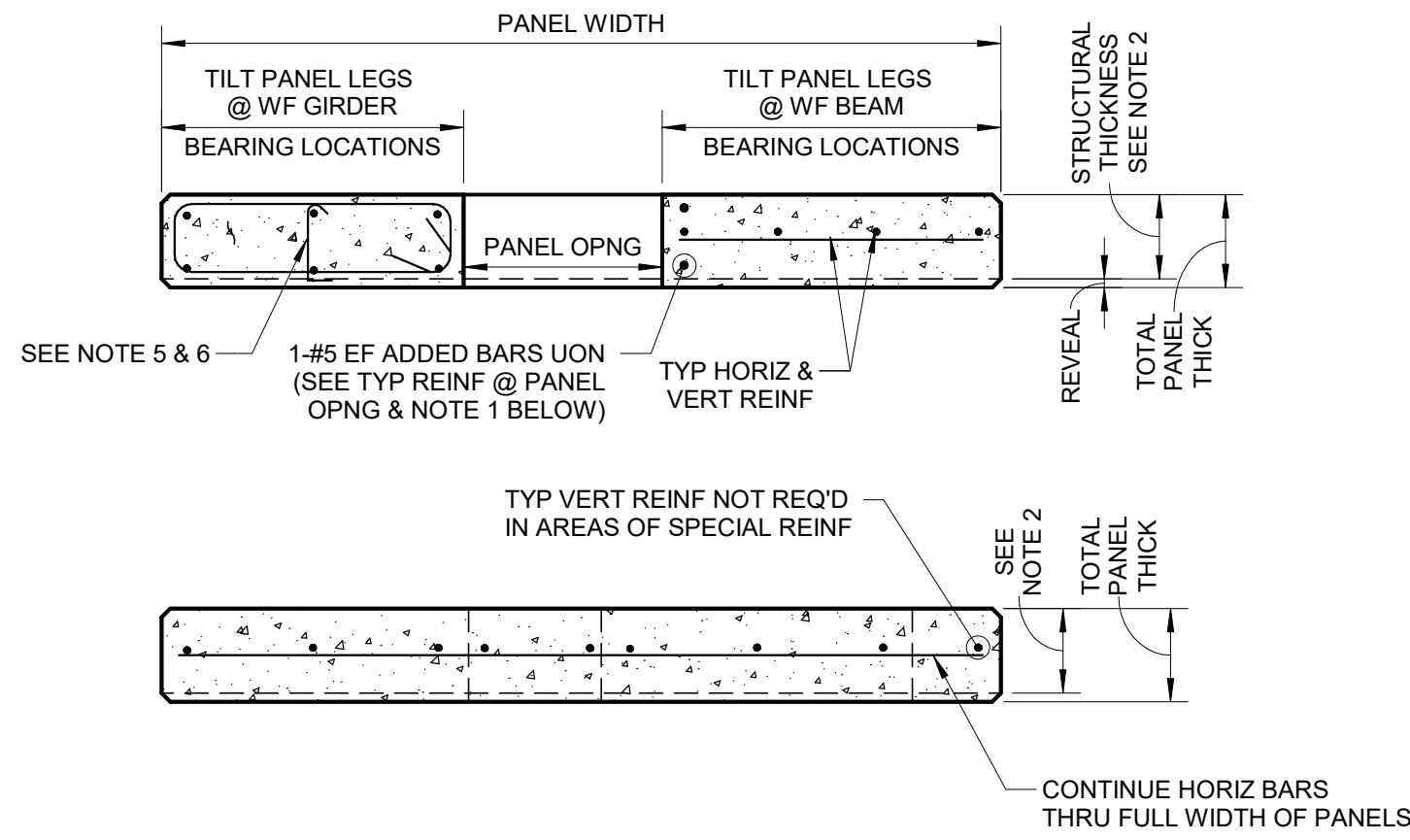


7 ENTRY PARAPET DETAIL - PERP AT COLUMN
SCALE: NTS



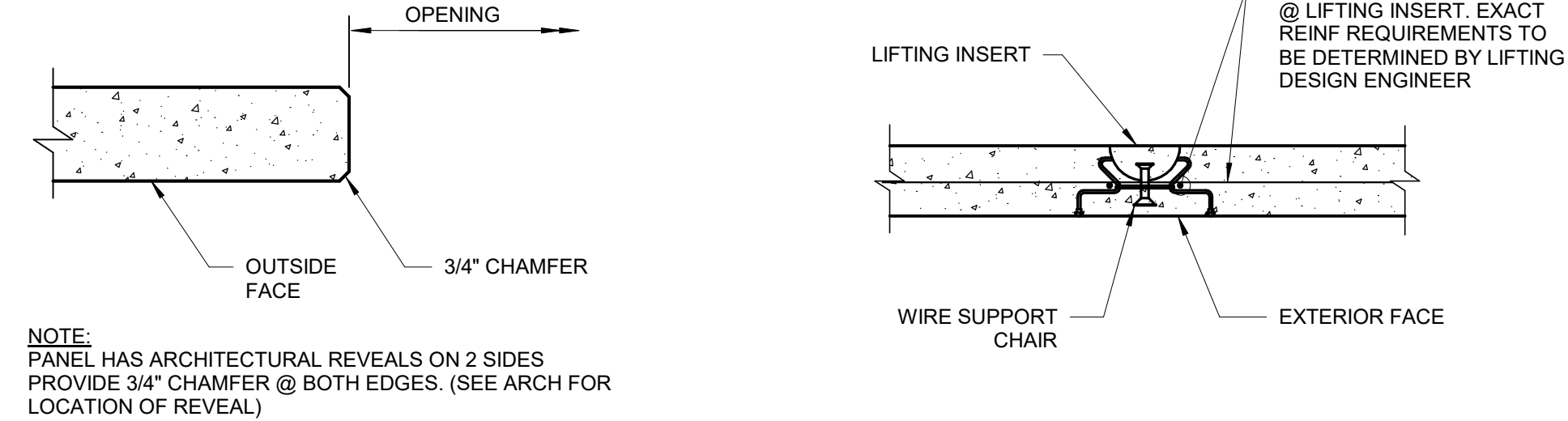
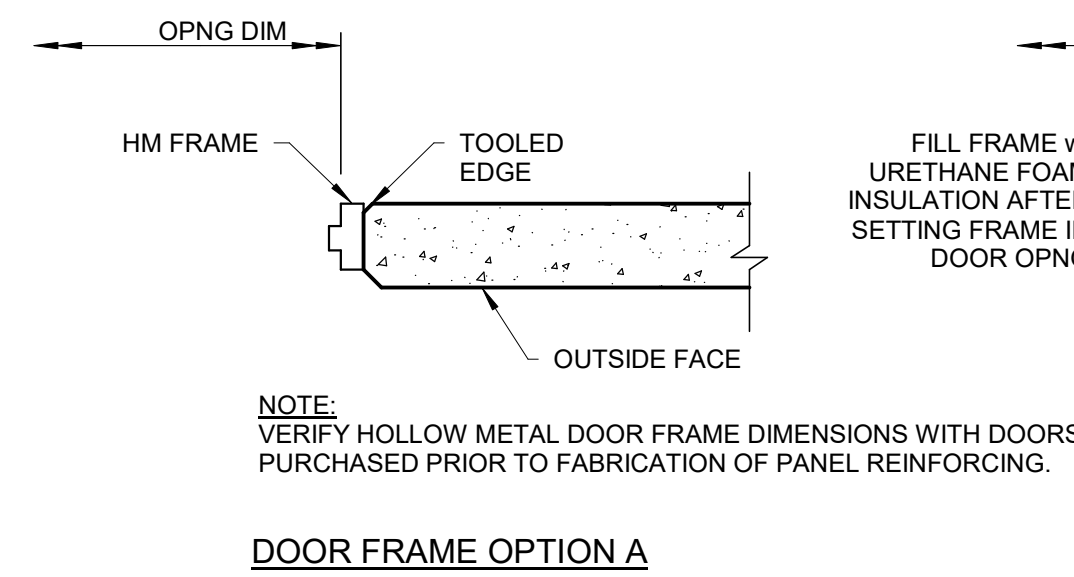
9 WF BEAM SPECIALTY CONN
SCALE: NTS

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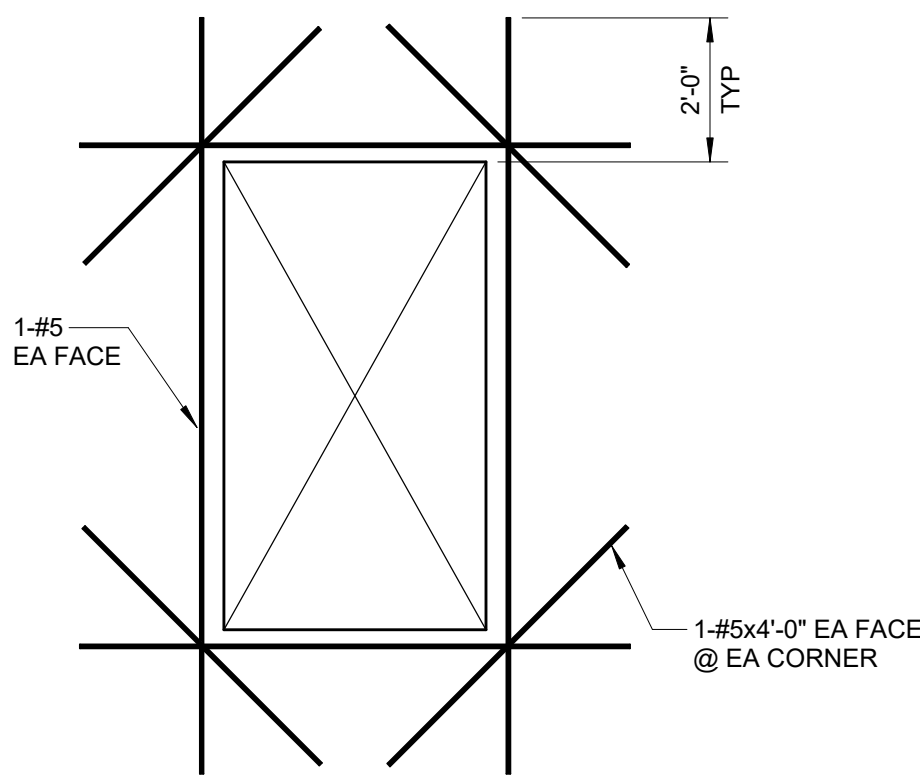
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 - 2) TYPICAL CENTERED BARS NOT REQ'D WHERE PANELS ARE REINFORCED ON BOTH FACES. TYPICAL HORIZ CENTERED BARS ARE REQ'D IF NO TIES ARE SPECIFIED.
 - 3) CENTER LINE VERT BARS = CENTER OF STRUCTURAL THICKNESS.
 - 4) STRUCTURAL PANEL THICKNESS IS NET THICKNESS EXCLUSIVE OF ARCH REVEALS, AGGREGATE, ETC. TOTAL THICKNESS = STRUCTURAL THICKNESS PLUS REVEAL.
 - 5) WHERE PANEL REINFORCEMENT IS SHOWN ON EA FACE OF THE PANEL, THE COVER TO THE FACE OF THE HORIZONTAL REINF SHALL BE 3/4" AND THE VERTICAL REINFORCEMENT SHALL BE LOCATED ON THE INSIDE OF THE HORIZONTAL REINFORCEMENT. SEE 2/S6.3.
 - 6) TIES SHALL BE FABRICATED ACCURATELY & BASED ON THE FOLLOWING CLEAR CONC COVER: FACE-3/4", ENDS-1 1/2".
 - 7) 1 CROSS TIES WHERE SPECIFIED, SHALL BE PROVIDED AS REQUIRED TO MEET THE REQUIREMENTS OF PARAGRAPH 25.7.2.3 OF LATEST ACI 318.

- NOTES:
- 1) KEEP ALL REINF (INCLUDING TIES) A MIN OF 3/4" CLR FROM ARCH REVEAL AT ALL FACES (*1 1/2" CLR COVER AT EXTERIOR EXPOSED PANEL).
 - 2) WHEN VERTICAL REINFORCING IS PRESENT EACH FACE (EF), VERTICAL REINFORCING SHALL BE PLACED OUTSIDE ANY HORIZONTAL REINFORCING TYP UON.



1 PANEL REINFORCING DETAIL

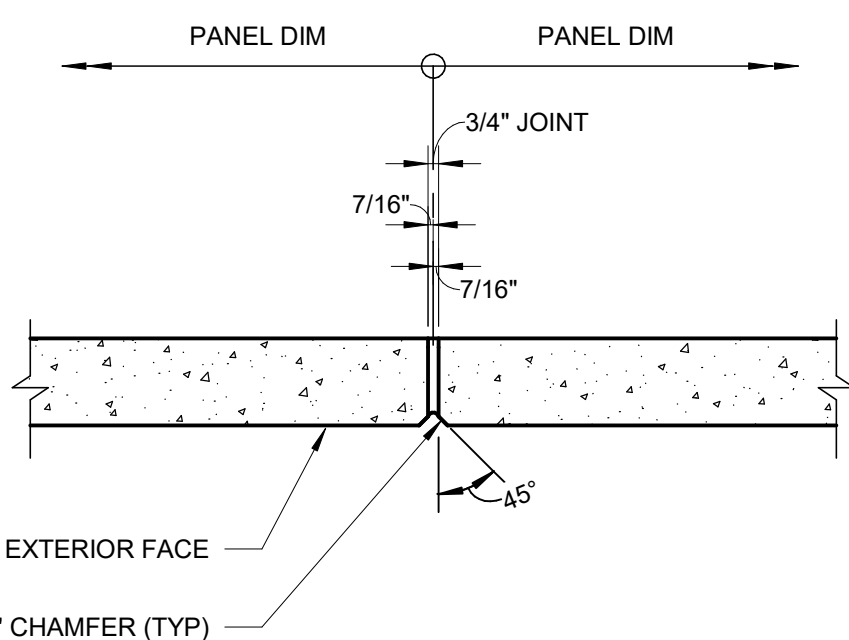
SCALE: NTS



- NOTES:
- 1) PROVIDE STANDARD 90 DEGREE HOOKS WHERE DEVELOPMENT SHOWN IS NOT ACHIEVABLE.
 - 2) THIS DETAIL APPLIES TO ALL OPENINGS OF ALL SIZES UNLESS OTHERWISE NOTED IN ELEVATION.

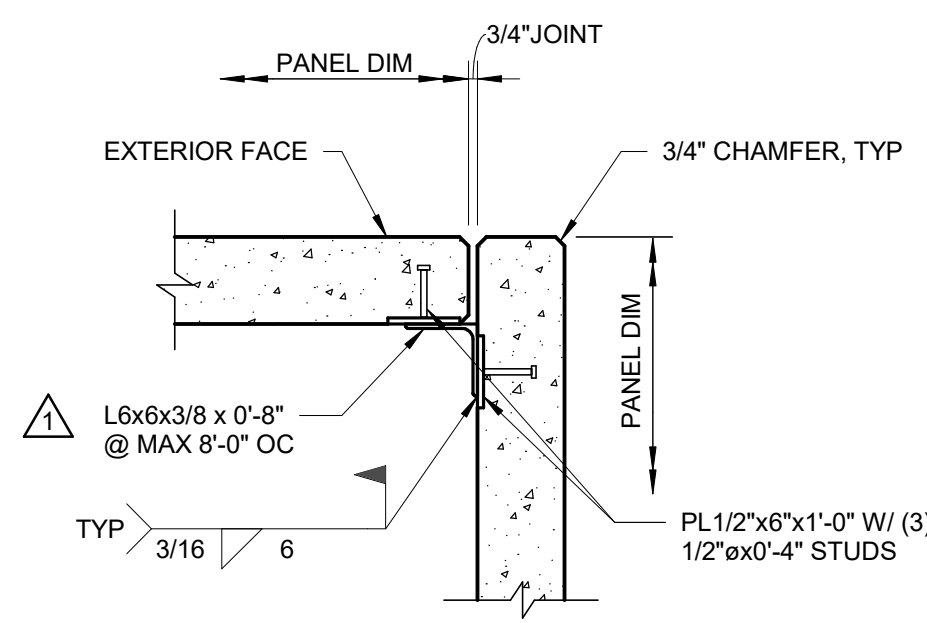
2 PANEL ARCH REVEAL

SCALE: NTS



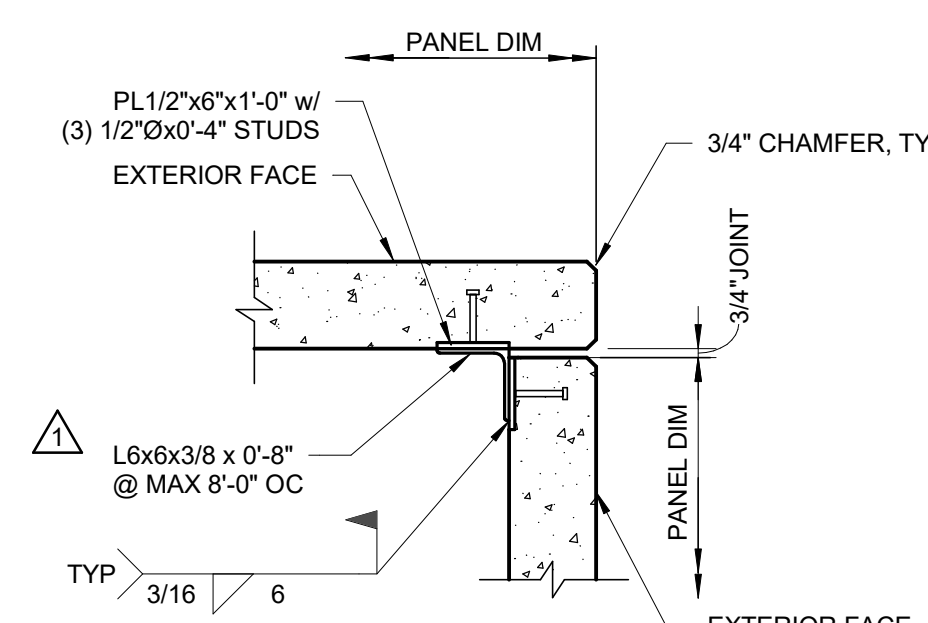
3 PANEL DOOR OPNG

SCALE: NTS



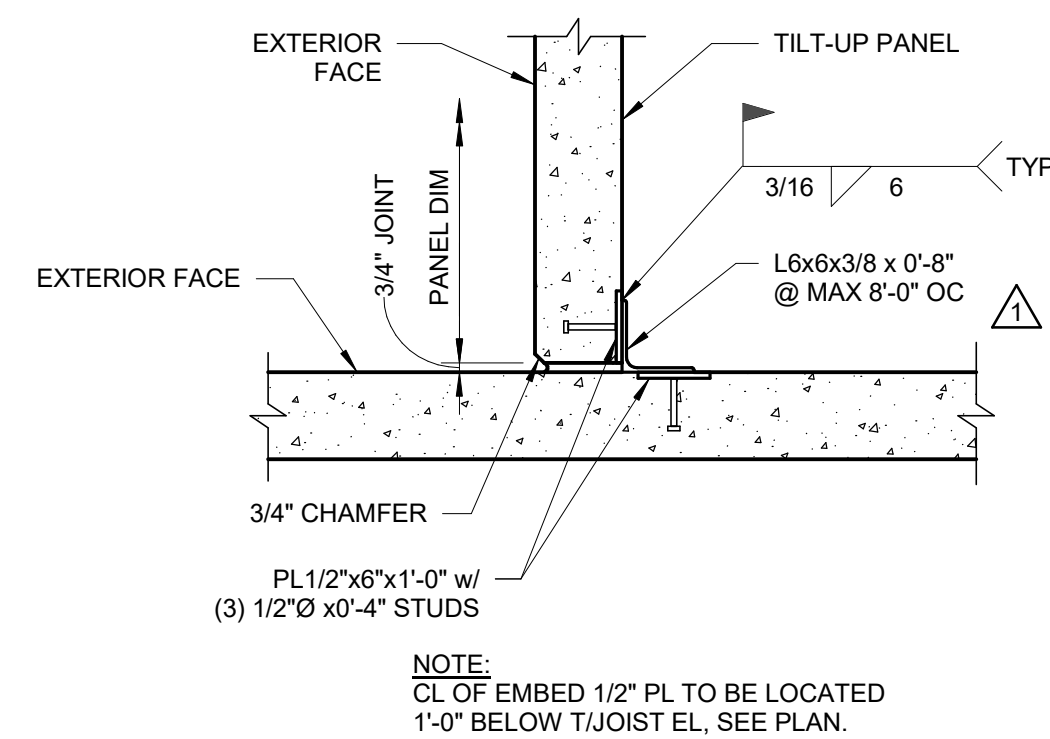
4 PANEL OPENING

SCALE: NTS



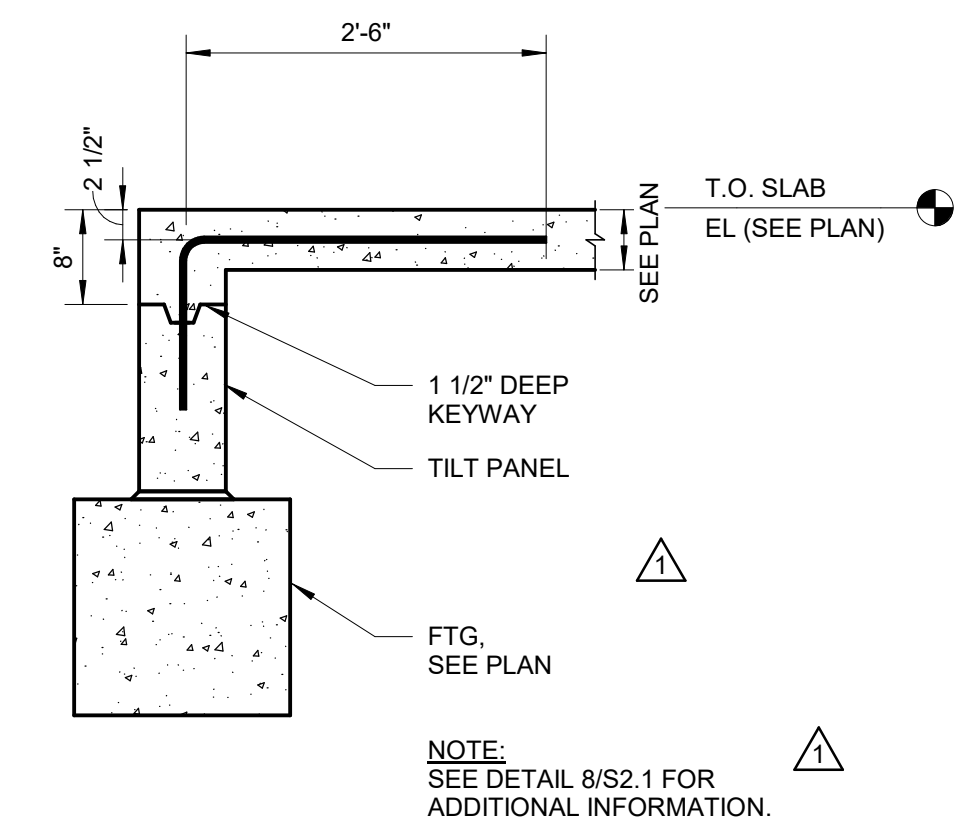
5 LIFTING INSERT DETAIL

SCALE: NTS



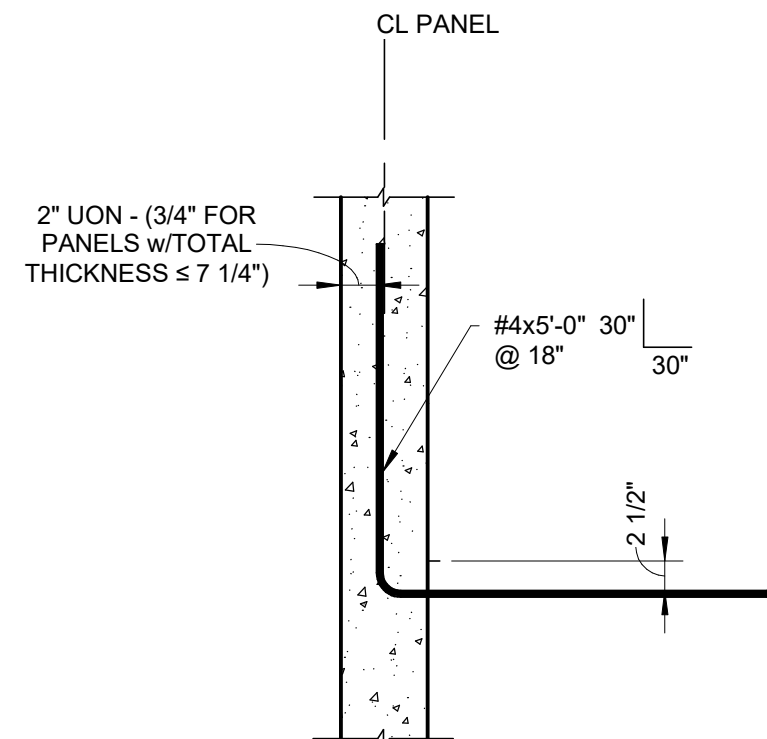
6 TYP REINF @ PANEL OPNG

SCALE: NTS



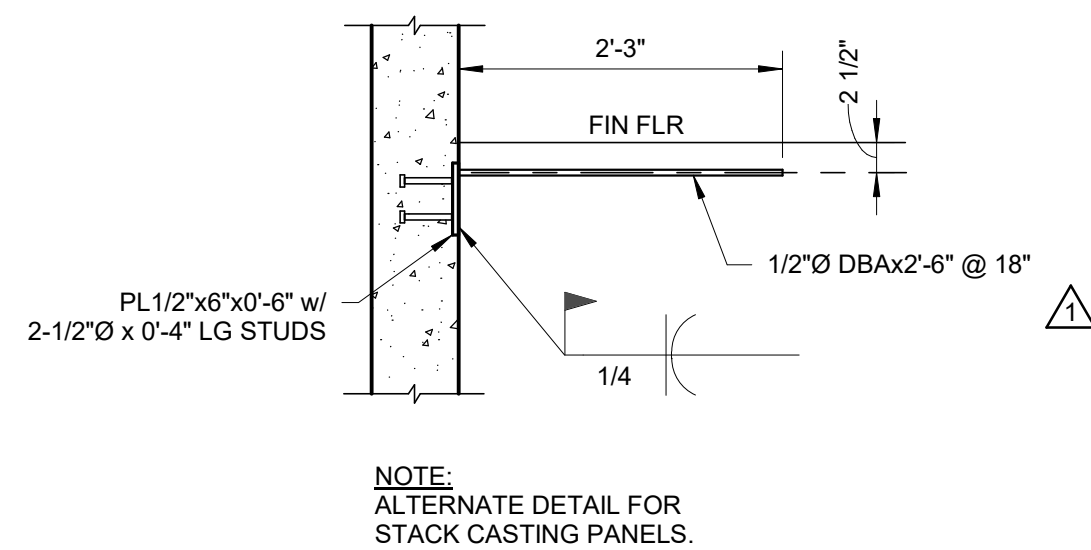
7 PANEL JOINT

SCALE: NTS



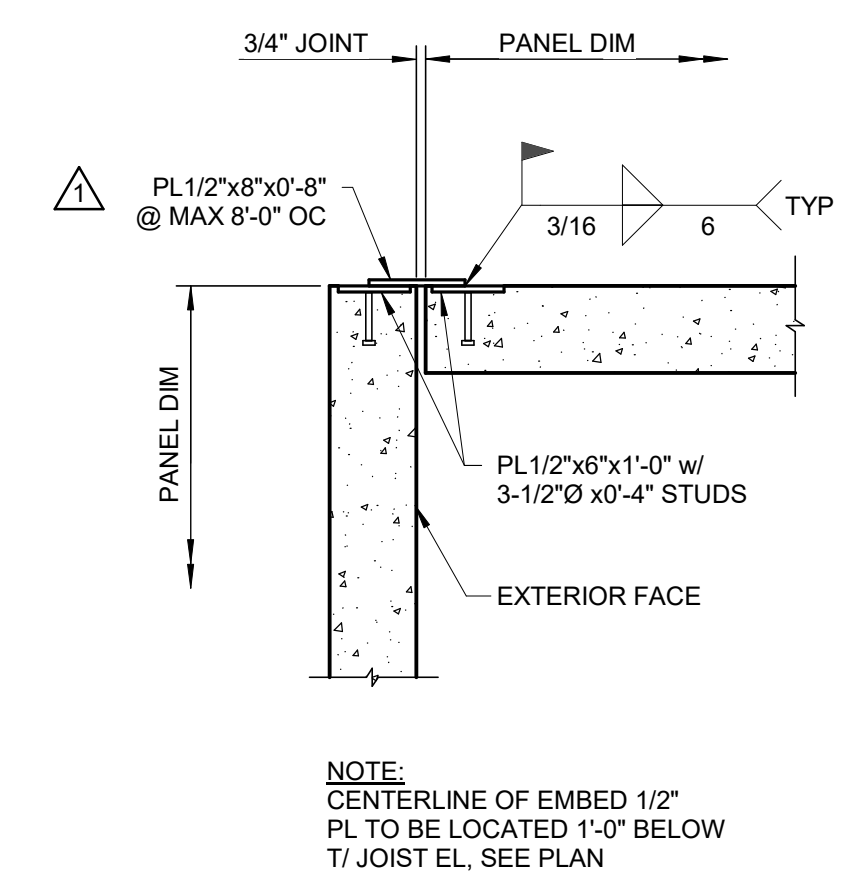
8 PANEL BUTT JOINT

SCALE: NTS



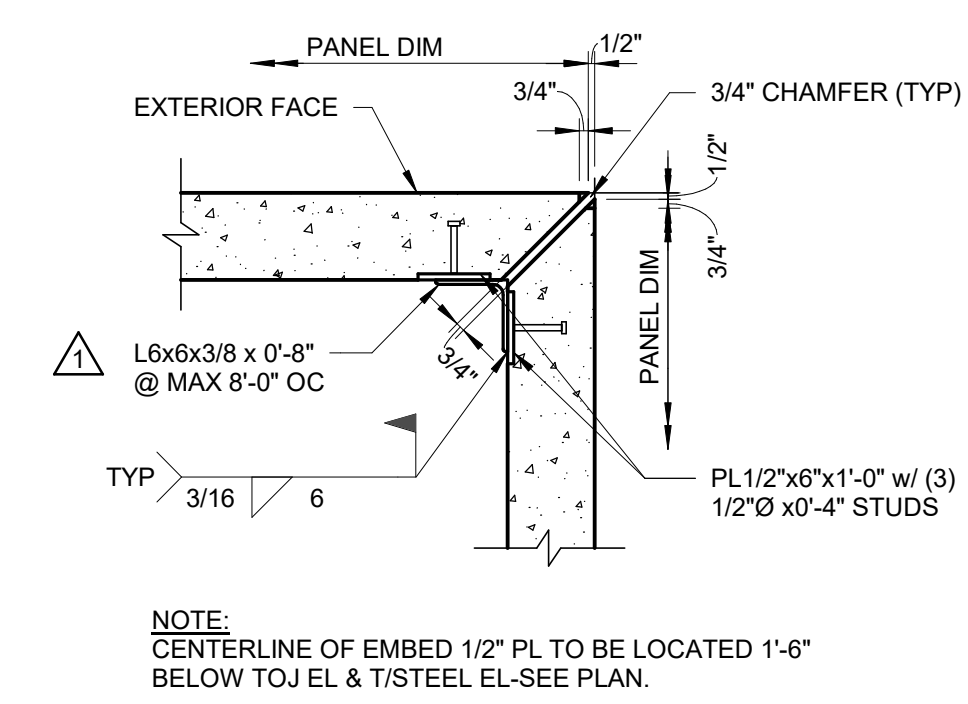
9 PANEL BUTT JOINT

SCALE: NTS



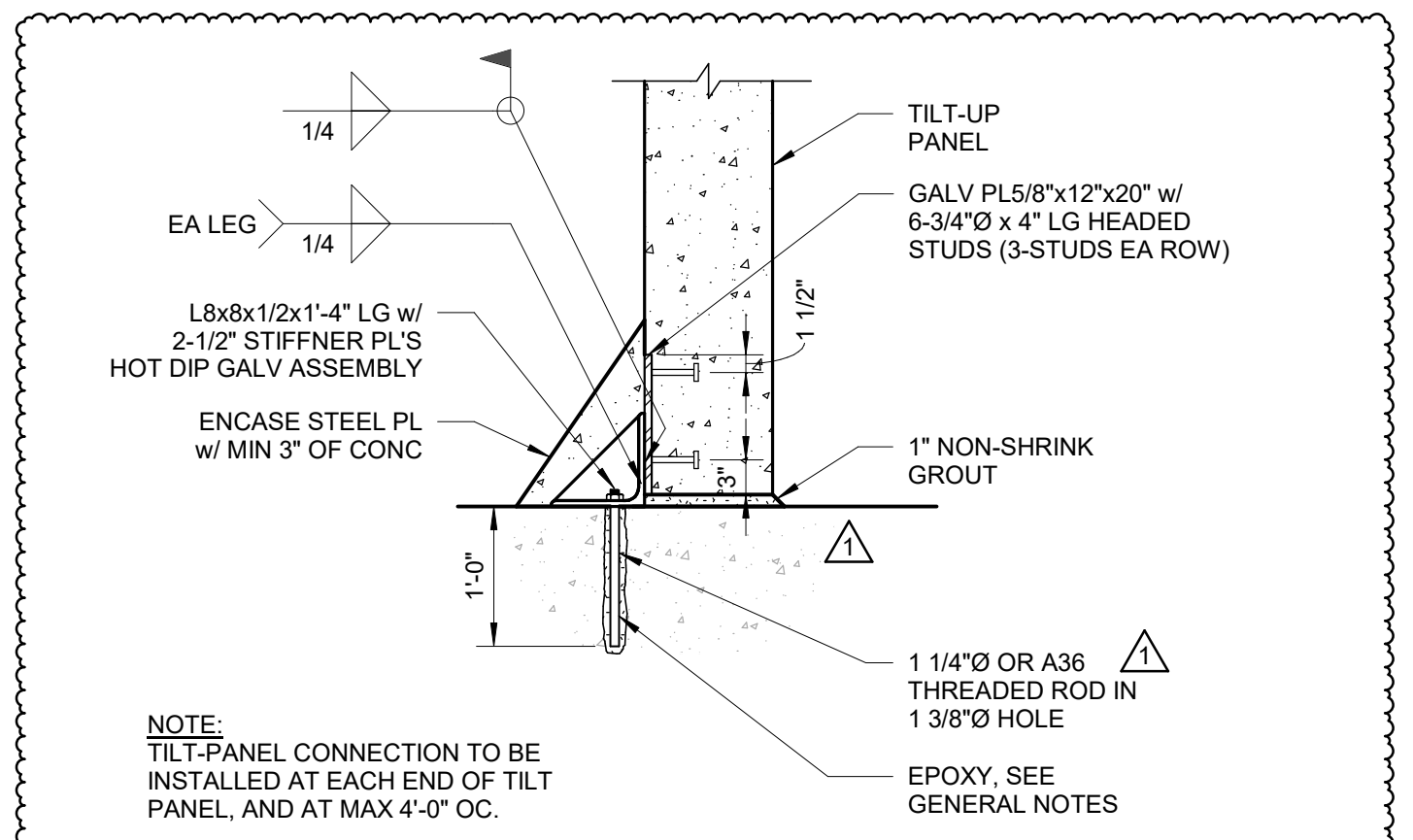
10 PANEL INTERSECTION JOINT

SCALE: NTS



11 OPENING AT SLAB DETAIL

SCALE: NTS



12 WALL TO SLAB DOWEL DETAIL

SCALE: NTS



13 WALL TO SLAB DOWEL DETAIL

SCALE: NTS



14 CORNER PANEL TO PANEL JOINT

SCALE: NTS



15 SECTION

SCALE: NTS



16 TILT PANEL CONNECTION AT T/FTG

SCALE: NTS



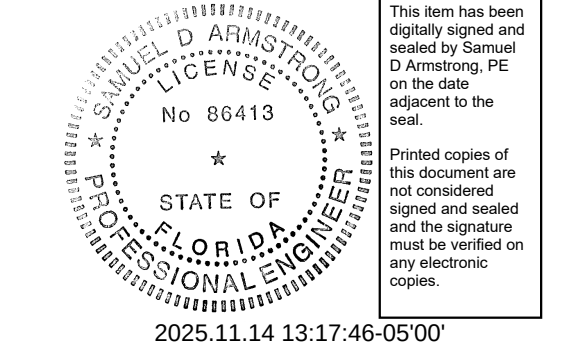
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BUSY BEE
ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES:

06/02/2025	ASB.1
11/14/2025	ASB.2

TILT PANEL
SECTIONS &
DETAILS

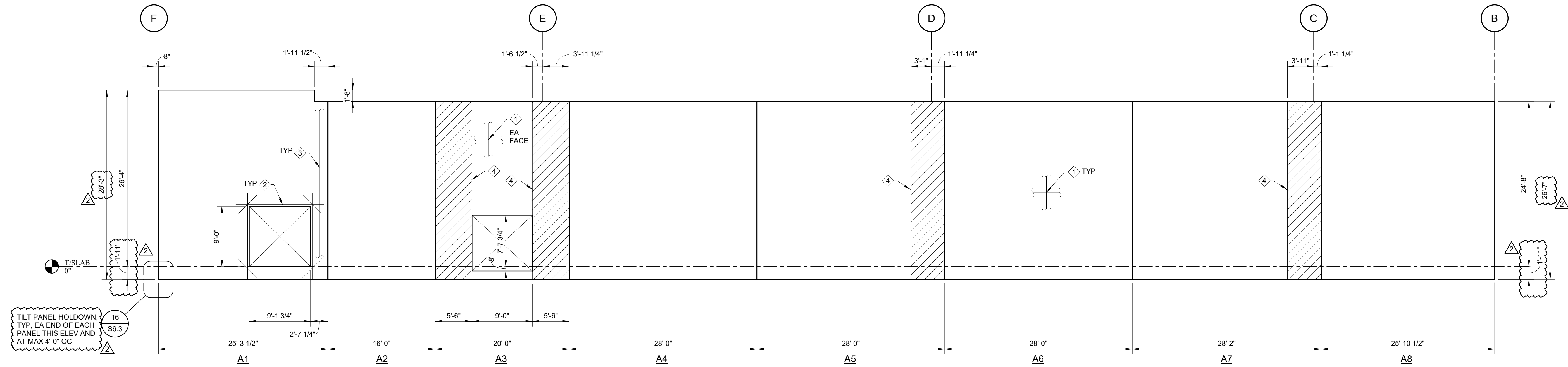
S6.3

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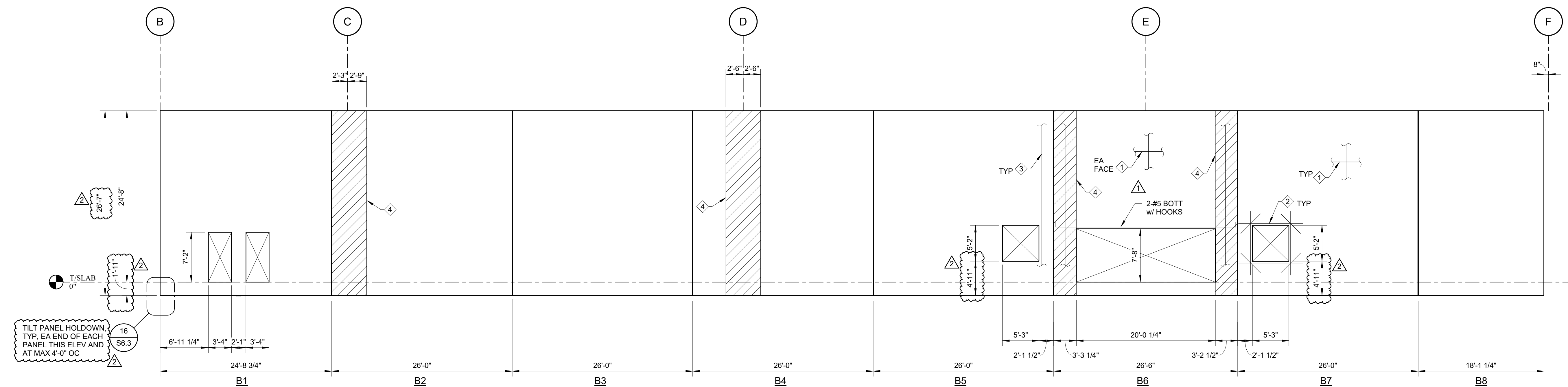
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ELEVATION A
SCALE: 1/8" = 1'-0"

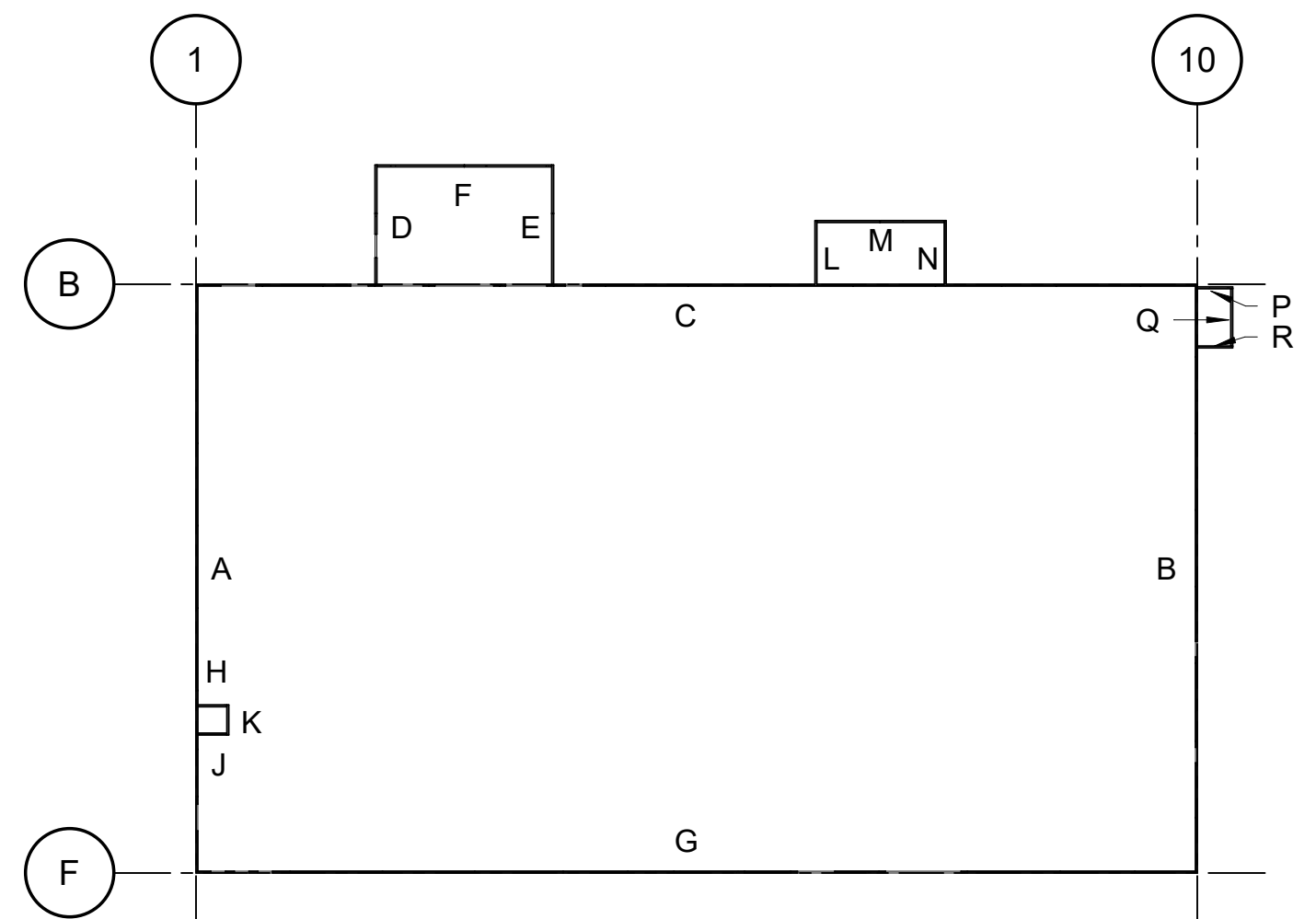


ELEVATION B
SCALE: 1/8" = 1'-0"

- TILT-UP ELEVATION NOTES:**
- PANEL SHALL BE CONSTRUCTED WITH EXTERIOR PANEL FACE DOWN UON.
 - SEE DETAIL 1/S6.3 FOR REINFORCING PLACING DETAILS.
 - FOR REINFORCING AROUND PANEL OPENINGS SEE DETAIL 6/S6.3 (VERTICAL REINFORCING SHOWN IN DETAIL NOT REQUIRED WHERE COLUMN CAGE REINFORCING IS SPECIFIED ON PANEL ELEVATIONS-COLUMN CAGE TO EXTEND FULL HEIGHT OF PANEL).
 - SEE SHEET S6.3 FOR STANDARD PANEL DIMENSIONING METHODOLOGY, SECTIONS & DETAILS.
 - PANELS COMPOSED OF NORMAL WEIGHT CONCRETE. SEE GENERAL NOTES FOR STRENGTH REQUIREMENTS.
 - SEE ARCH ELEVATIONS FOR PANEL REVEALS AND DEPRESSIONS. SEE SECTION 2/S6.3 FOR REVEAL DETAIL.
 - SEE DETAIL 12/S6.3 FOR SLAB DOWELS TO BE CAST INTO PANEL.
 - SEE PANEL LIFTING INSERT SHOP DRAWINGS FOR ADDITIONAL REINFORCING REQUIREMENTS TO ACCOMMODATE LIFTING STRESSES, WHICH MAY EXCEED THE REINFORCING SPECIFIED ON ELEVATIONS ABOVE.
 - WHERE PANEL REINFORCING IS SPECIFIED EA FACE (EF), EXCEPT @ REINFORCING CAGES w/ TIES, THE VERTICAL REINFORCING OF EA LAYER SHALL PLACED CLOSEST TO THE FACE OF THE PANEL.
 - SEE 7/S6.3 FOR INFO AT PANEL JOINTS.
 - SEE 5/S6.3 FOR ADDITIONAL REINFORCEMENT @ TILT PANEL LIFTING INSERT.
 - CONTRACTOR TO COORDINATE CONDUIT LOCATIONS w/ELECTRICAL SUBCONTRACTOR. CONDUITS SHALL BE PLACED PRIOR TO TILT WALL PLACEMENT. NO CUTTING OF REINFORCEMENT.
 - CONTRACTOR TO COORDINATE FINAL SCUPPER LOCATIONS WITH ARCH.

- TILT-UP KEYNOTE LEGEND**
- PANEL FIELD REINF. #5 @ 8" CTR'D VERT AND #5 @ 8" CTR'D HORIZ, TYP.
 - PANEL OPENING REINF. SEE DETAIL 6/S6.3. THE WALL PANELS HAVE BEEN DESIGNED FOR THE MAX OPENING DIMENSIONS SHOWN. COORDINATE FINAL ROUGH OPENING DIMENSIONS AND LOCATIONS WITH ARCH AND MEP. PANEL DESIGN REINFORCING MAY NEED TO BE REVISED IF OPENING SIZES AND LOCATIONS VARY FROM WHAT IS SHOWN.
 - PANEL LEG REINF (FULL HT WALL SEGMENT ≤ 6'-0" WIDE); #5 VERT @ 4" OC W/ #5 HORIZ @ 8" OC, TYP.
 - PANEL LEG REINF (FULL HT WALL SEGMENT AS SHOWN ON ELEV); #5 VERT @ 4" OC EA FACE W/ #4 TIES @ 12" OC.

TILT PANEL DIMENSIONS HAVE BEEN ADDED TO THE ELEVATIONS.



KEY PLAN

TO THE BEST OF THE ENGINEERS KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES FOR THIS PART OF THE WORK IN ACCORDANCE WITH THE APPLICABLE FLORIDA STATUTES.

ERIK C. KASPER AR#0017162

**BUSY BEE
ELLISVILLE**

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

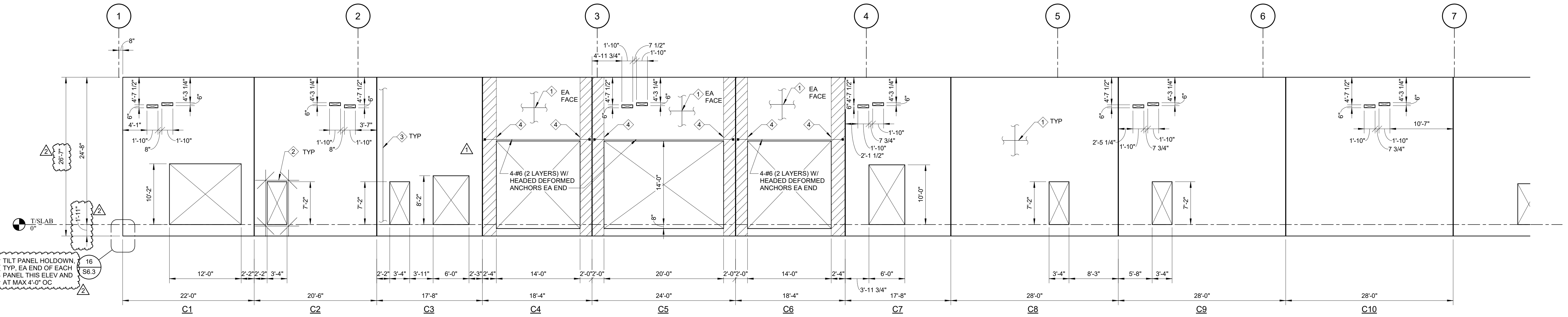
PRIOR ISSUES:
10/29/2025 ASB.1
11/14/2025 ASB.2

**TILT-UP
ELEVATIONS**

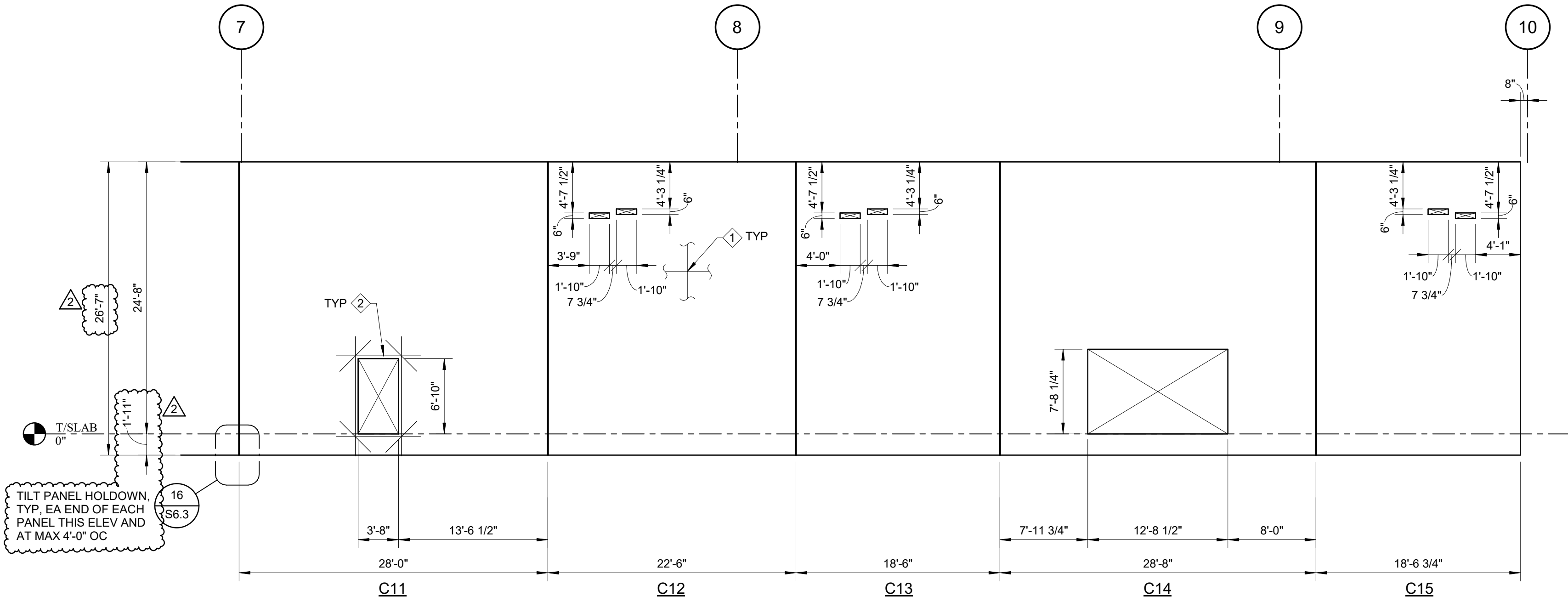
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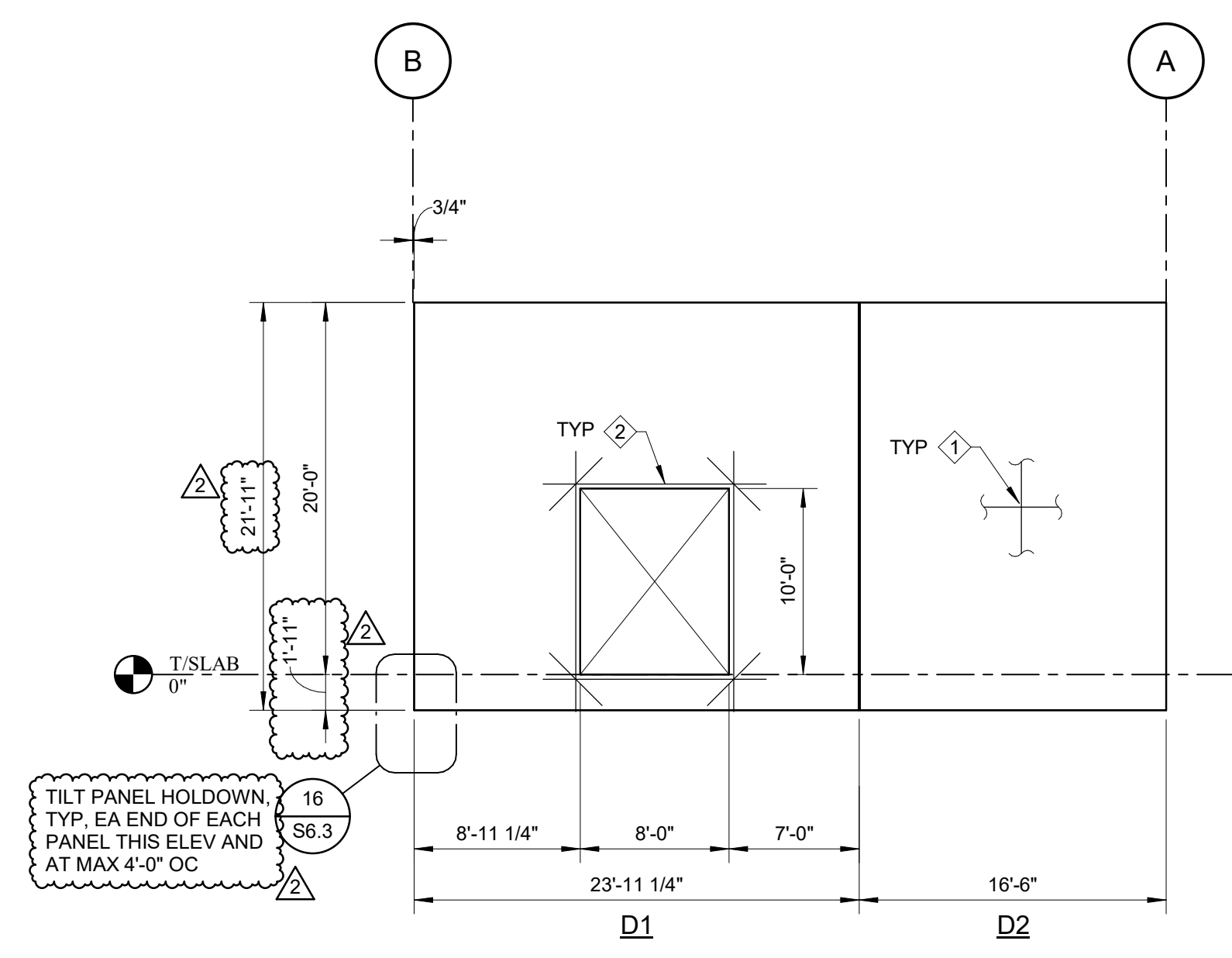
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CONSTRUCTION
DOCUMENTS**



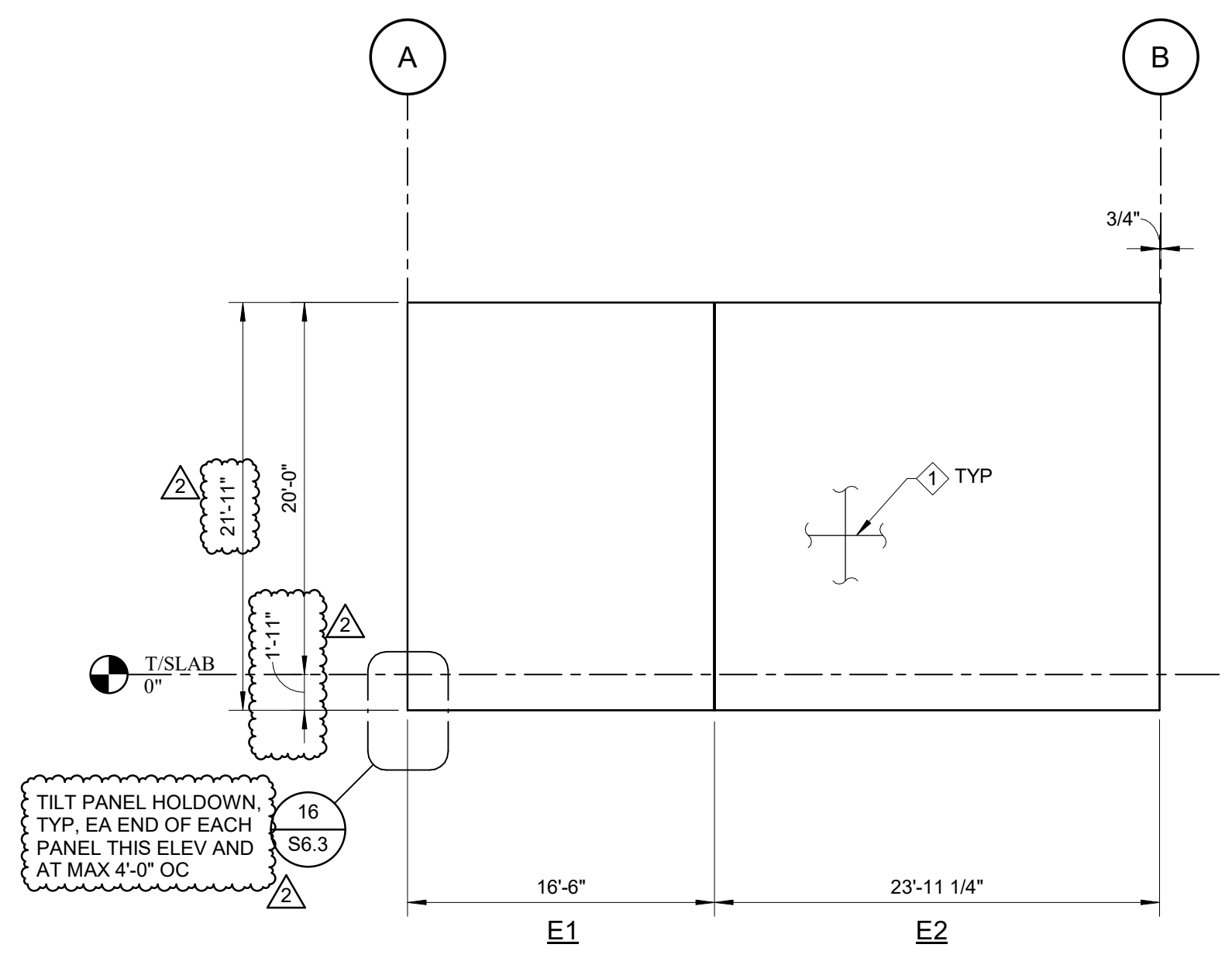
ELEVATION C
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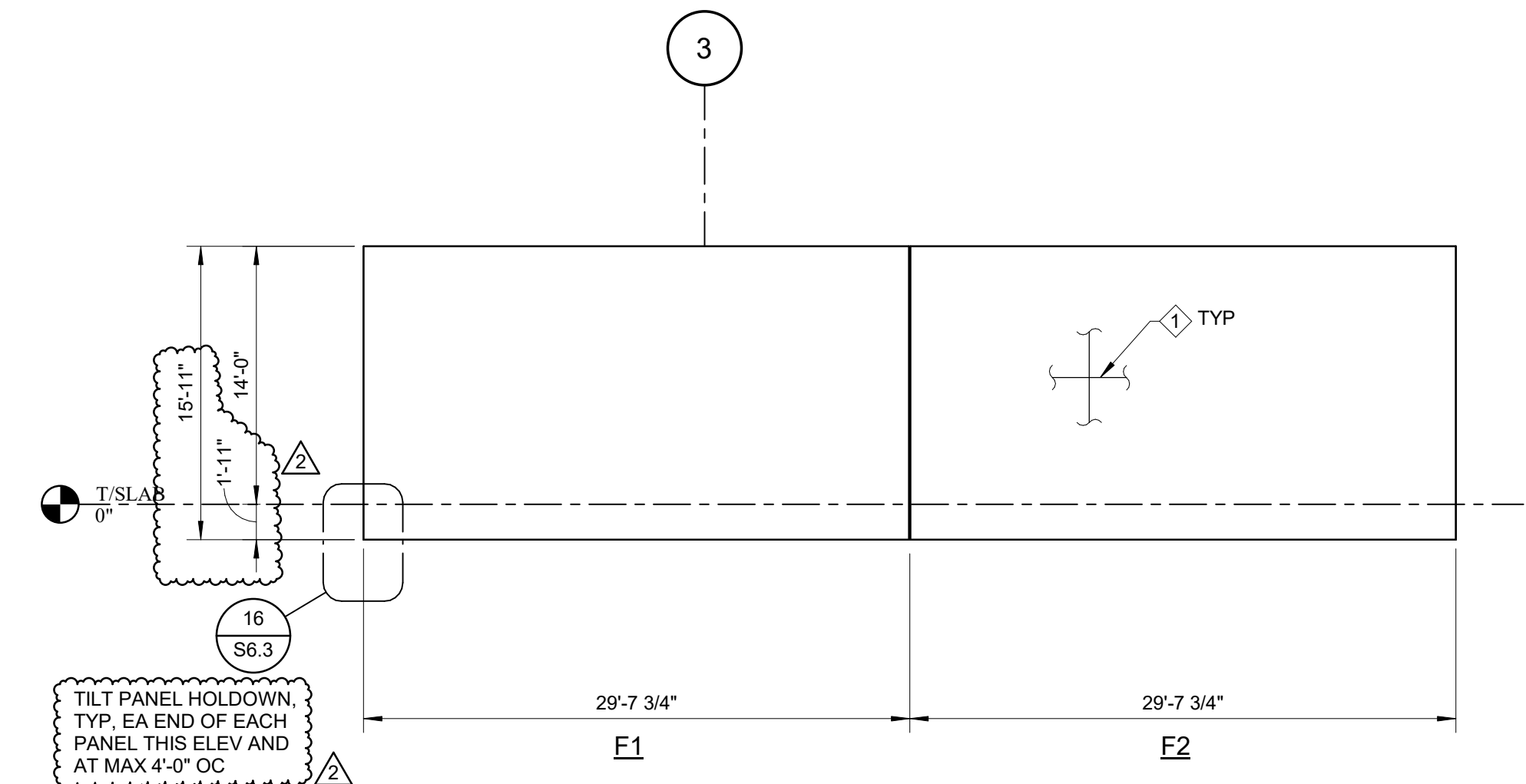
ELEVATION C
SCALE: 1/8" = 1'-0"



ELEVATION D
SCALE: 1/8" = 1'-0"



ELEVATION E
SCALE: 1/8" = 1'-0"

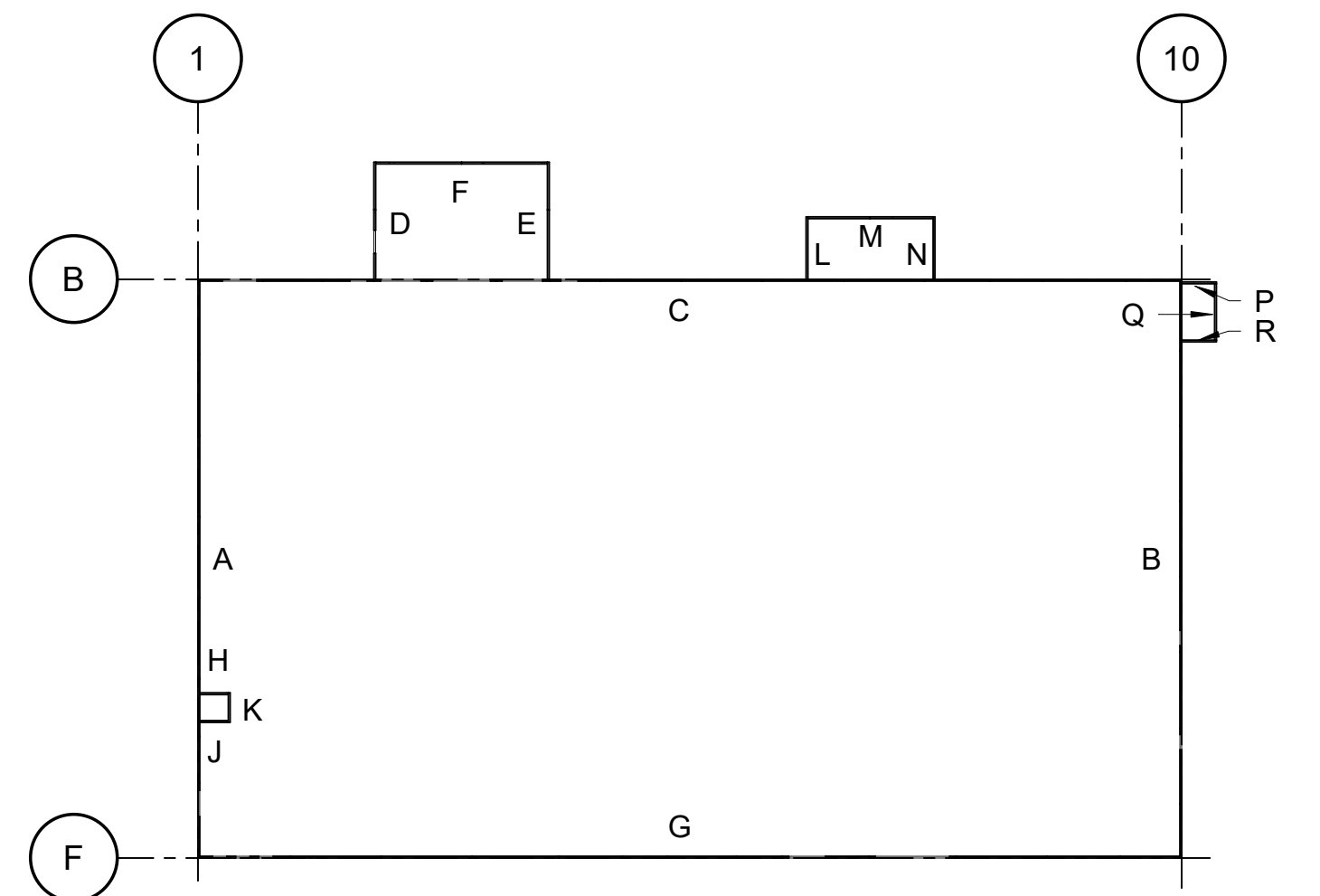


ELEVATION F
SCALE: 1/8" = 1'-0"

- TILT-UP ELEVATION NOTES:**
- 1) PANEL SHALL BE CONSTRUCTED WITH EXTERIOR PANEL FACE DOWN UON.
 - 2) SEE DETAIL 1/S6.3 FOR REINFORCING PLACING DETAILS.
 - 3) FOR REINFORCING AROUND PANEL OPENINGS SEE DETAIL 6/S6.3 (VERTICAL REINFORCING SHOWN IN DETAIL NOT REQUIRED WHERE COLUMN CAGE REINFORCING IS SPECIFIED ON PANEL ELEVATIONS-COLUMN CAGE TO EXTEND FULL HEIGHT OF PANEL).
 - 4) SEE SHEET S6.3 FOR STANDARD PANEL DIMENSIONING METHODOLOGY, SECTIONS & DETAILS.
 - 5) PANELS COMPOSED OF NORMAL WEIGHT CONCRETE. SEE GENERAL NOTES FOR STRENGTH REQUIREMENTS.
 - 6) SEE ARCH ELEVATIONS FOR PANEL REVEALS AND DEPRESSIONS. SEE SECTION 2/S6.3 FOR REVEAL DETAIL.
 - 7) SEE DETAIL 12/S6.3 FOR SLAB DOWELS TO BE CAST INTO PANEL.
 - 8) SEE PANEL LIFTING INSERT SHOP DRAWINGS FOR ADDITIONAL REINFORCING REQUIREMENTS TO ACCOMMODATE LIFTING STRESSES, WHICH MAY EXCEED THE REINFORCING SPECIFIED ON ELEVATIONS ABOVE.
 - 9) WHERE PANEL REINFORCING IS SPECIFIED EA FACE (EF), EXCEPT @ REINFORCING CAGES W/ TIES, THE VERTICAL REINFORCING OF EA LAYER SHALL PLACED CLOSEST TO THE FACE OF THE PANEL.
 - 10) SEE 7/S6.3 FOR INFO AT PANEL JOINTS.
 - 11) SEE 5/S6.3 FOR ADDITIONAL REINFORCEMENT @ TILT PANEL LIFTING INSERT.
 - 12) CONTRACTOR TO COORDINATE CONDUIT LOCATIONS w/ELECTRICAL SUBCONTRACTOR. CONDUITS SHALL BE PLACED PRIOR TO TILT WALL PLACEMENT. NO CUTTING OF REINFORCEMENT.
 - 13) CONTRACTOR TO COORDINATE FINAL SCUPPER LOCATIONS WITH ARCH.

- TILT-UP KEYNOTE LEGEND**
- ① PANEL FIELD REINF: #5 @ 8" CT RD VERT AND #5 @ 8" CT RD HORIZ, TYP.
 - ② PANEL OPENING REINF: SEE DETAIL 6/S6.3. THE WALL PANELS HAVE BEEN DESIGNED FOR THE MAX OPENING DIMENSIONS SHOWN. COORDINATE FINAL ROUGH OPENING DIMENSIONS AND LOCATIONS WITH ARCH AND MEP. PANEL DESIGN REINFORCING MAY NEED TO BE REVISED IF OPENING SIZES AND LOCATIONS VARY FROM WHAT IS SHOWN.
 - ③ PANEL LEG REINF (FULL HT WALL SEGMENT ≤ 6'-0" WIDE): #5 VERT @ 4" OC W/ #5 HORIZ @ 8" OC, TYP.
 - ④ PANEL LEG REINF (FULL HT WALL SEGMENT AS SHOWN ON ELEV): #5 VERT @ 4" OC EA FACE W/ #4 TIES @ 12" OC.

TILT PANEL DIMENSIONS HAVE BEEN ADDED TO THE ELEVATIONS.



KEY PLAN

TO THE BEST OF THE ENGINEERS KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES FOR THIS PART OF THE WORK IN ACCORDANCE WITH THE APPLICABLE FLORIDA STATUTES.

ERIK C. KASPER AR#0017162

**BUSY BEE
ELLISVILLE**

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES:

06/29/2025	ASB.1
11/14/2025	ASB.2

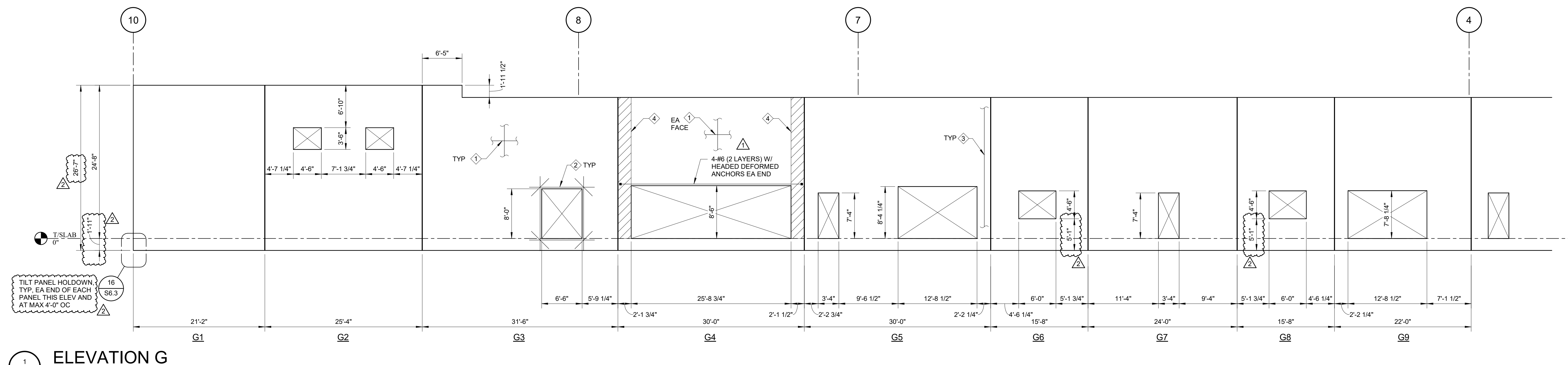
**TILT-UP
ELEVATIONS**

S7.2

DRAWN BY: ES

CHECKED BY: CF

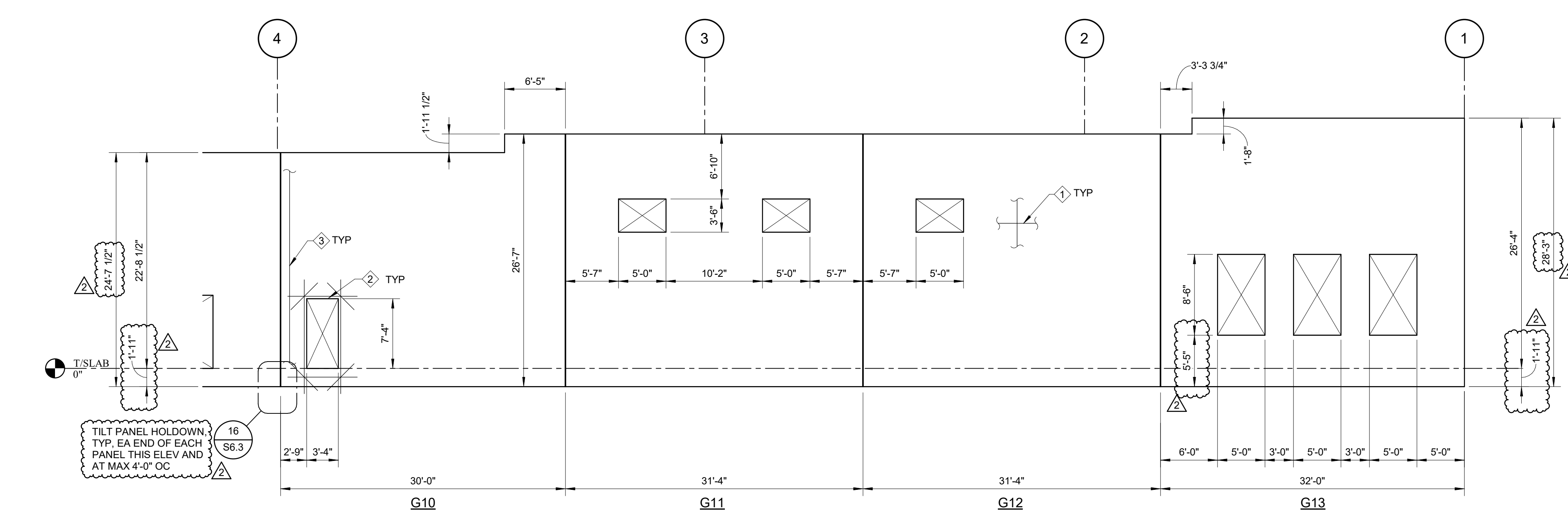
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CONSTRUCTION
DOCUMENTS**



1
S7.3

ELEVATION G

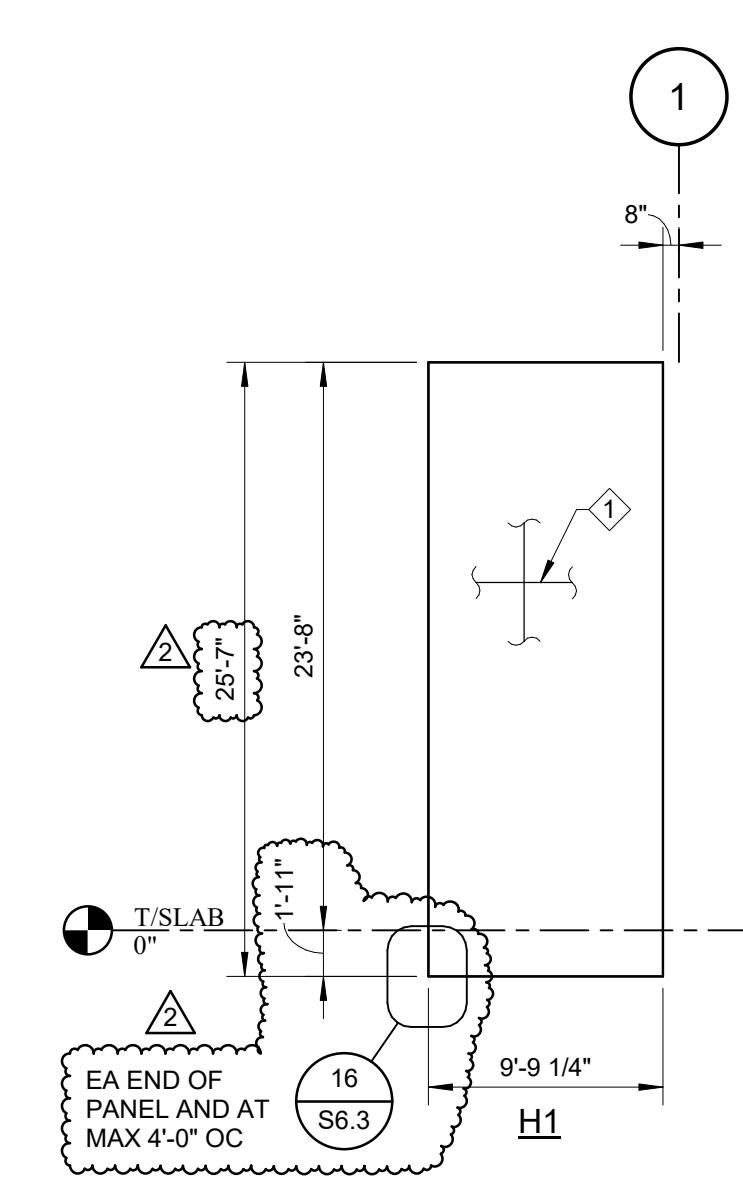
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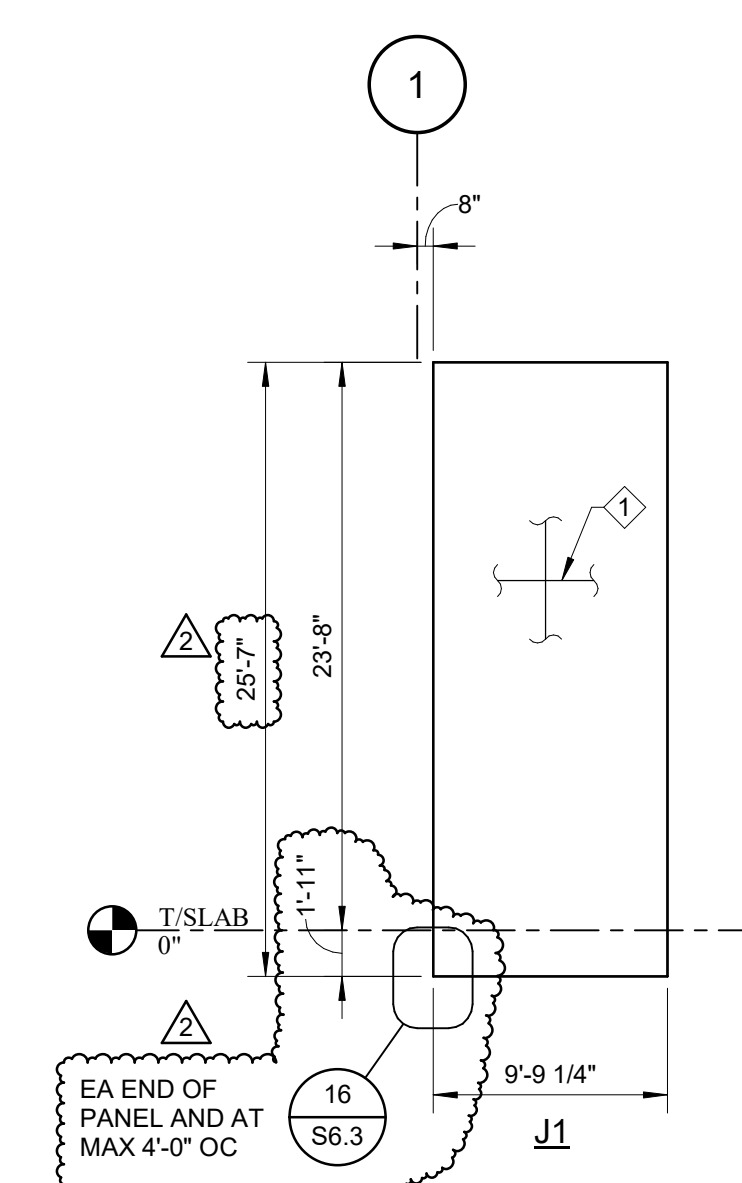
2
S7.3

ELEVATION G

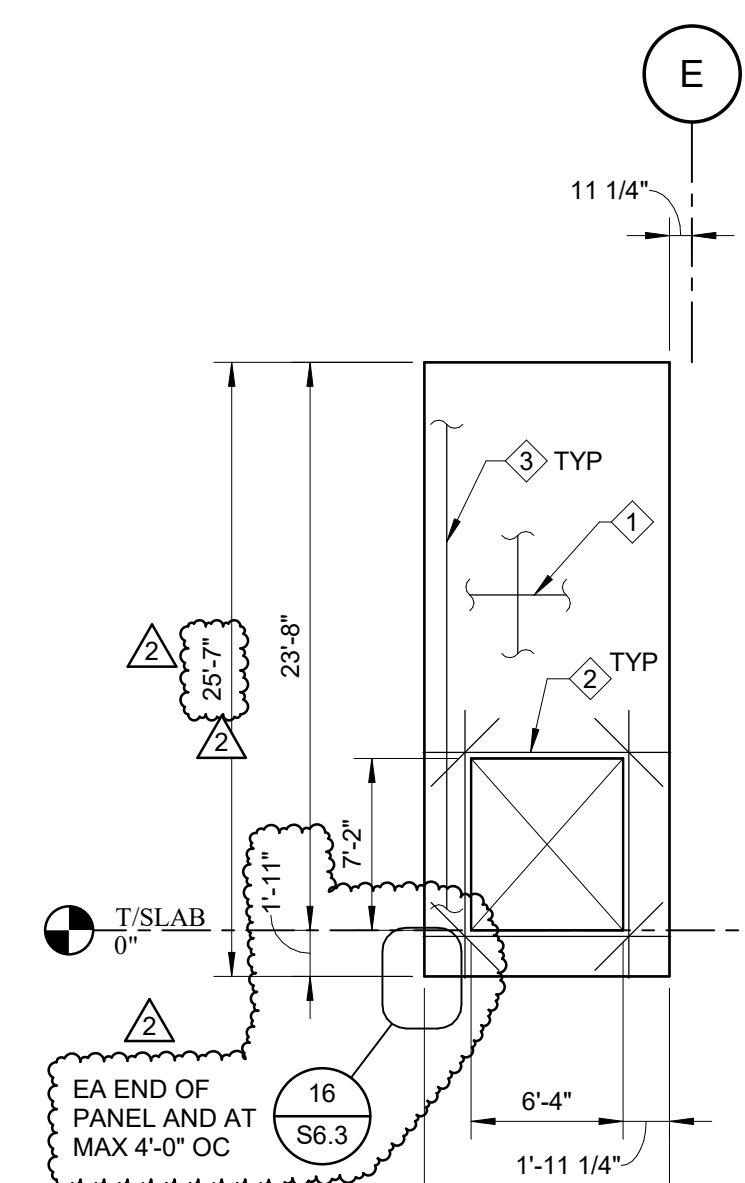
SCALE: 1/8" = 1'-0"



 **ELEVATION H**
SCALE: 1/8" = 1'-0"



4
S7.3 ELEVATION J
SCALE: 1/8" = 1'-0"

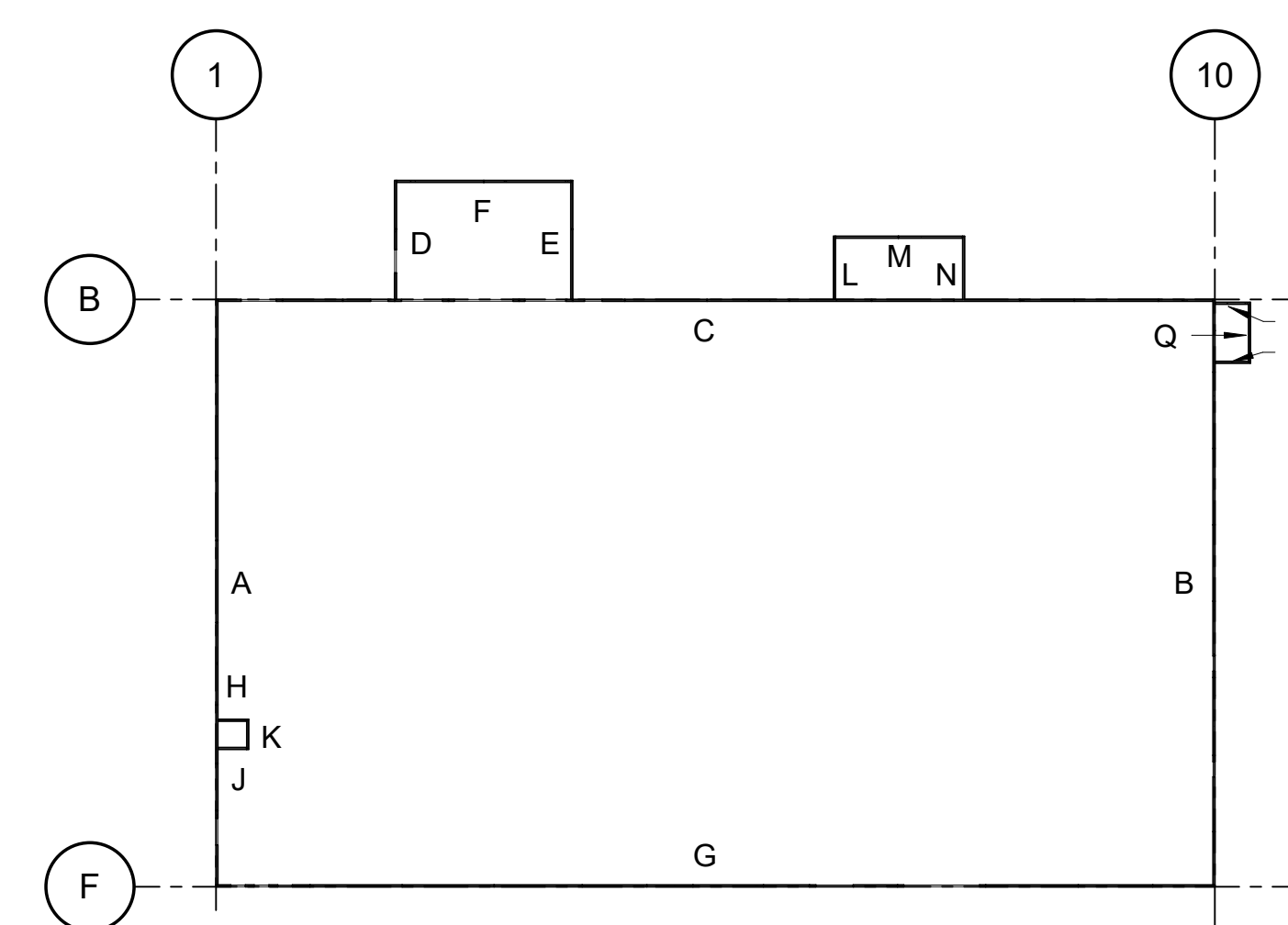


5
S7.3 ELEVATION K
SCALE: 1/8" = 1'-0"

- TILT-UP ELEVATION NOTES:**
- 1) PANEL SHALL BE CONSTRUCTED WITH EXTERIOR PANEL FACE DOWN.
 - 2) SEE DETAIL 1/58.6 FOR REINFORCING PLACEMENT DETAILS.
 - 3) FOR REINFORCING AROUND PANEL OPENINGS SEE DETAIL 6/56.3 (VERTICAL REINFORCING SHOWN IN DETAIL NOT REQUIRED WHERE COLUMN GAGE REINFORCING IS SPECIFIED ON PANEL ELEVATIONS).
 - 4) SEE SHEET S6.3 FOR STANDARD PANEL DIMENSIONING METHODOLOGY. SECTIONS & DETAILS.
 - 5) PANELS COMPOSED OF NORMAL WEIGHT CONCRETE. SEE GENERAL NOTES FOR STRENGTH TESTS.
 - 6) SEE ARCH ELEVATIONS FOR PANEL REVEALS AND DEPRESSIONS. SEE SECTION 2/56.3 FOR REVEAL DETAIL.
 - 7) SEE DETAIL 1/58.6.3 FOR SLAB DOWELS TO BE CAST INTO PANEL.
 - 8) SEE PANEL LIFTING INSTRUMENT SHW DRAWINGS FOR ADDITIONAL REINFORCING REQUIREMENTS TO ACCOMMODATE LIFTING STRESSES, WHICH MAY EXCEED THE REINFORCING SPECIFIED ON PANEL ELEVATIONS ARCH.
 - 9) WHERE PANEL REINFORCING IS SPECIFIED EA FACE (EF), EXCEPT AT REINFORCING CAGES W/TIES, THE VERTICAL REINFORCING OF EA LAYER SHALL PLACED CLOSEST TO THE FACE OF THE PANEL.
 - 10) SEE 7/56.3 FOR INFO AT PANEL JOINTS.
 - 11) SEE 5/56.3 FOR ADDITIONAL REINFORCING @ TILT PANEL LIFTING INSTRUMENT.
 - 12) CONTRACTOR TO COORDINATE WITH ARCH LOCATIONS W/ELECTRICAL SUBCONTRACTOR. CONDUITS SHALL BE PLACED PRIOR TO TILT WALL PLACEMENT. NO CUTTING OF REINFORCEMENT.
 - 13) CONTRACTOR TO COORDINATE FINAL SCUPPER LOCATIONS WITH ARCH.

- TILT-UP KEYNOTE LEGEND**
- 1 PANEL FIELD REIN: #5 @ 8" CT RD VERT AND #5 @ 8" CT RD HORIZ. TYP.
 - 2 PANEL OPENING REIN: SEE DETAIL 6/56.3. THE PANEL WALLS HAVE BEEN DESIGNED FOR THE MAX OPENING DIMENSIONS SHOWN. COORDINATE FINAL ROUGH OPENING DIMENSIONS AND LOCATIONS WITH ARCH AND MEP. PANEL DESIGN REINFORCING MAY NEED TO BE REVISED IF OPENING SIZES AND LOCATIONS VARY FROM WHAT IS SHOWN.
 - 3 PANEL LEG BEND (FULL HT WALL SEGMENT S 6'-0" WIDE): #5 VERT @ 4" OC W #5 HORIZ @ 8" OC.
 - 4 PANEL LEG REIN (FULL HT WALL SEGMENT AS SHOWN ON ELEV): #5 VERT @ 4" OC EA FACE W #5 TIES @ 12" OC.

 TILT PANEL DIMENSIONS HAVE BEEN ADDED TO THE ELEVATIONS



KEY PLAN

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ERIK C. KASPER AR#0017162

BUSY BEE
ELLISVILLE

136 SW WEBBS GLN
LAKE CITY, FL 32024

PROJECT NO.: 22024

DATE: 06/02/2025

PRIOR ISSUES:		
1	08/28/2025	ASI 1
2	11/14/2026	ASI 2

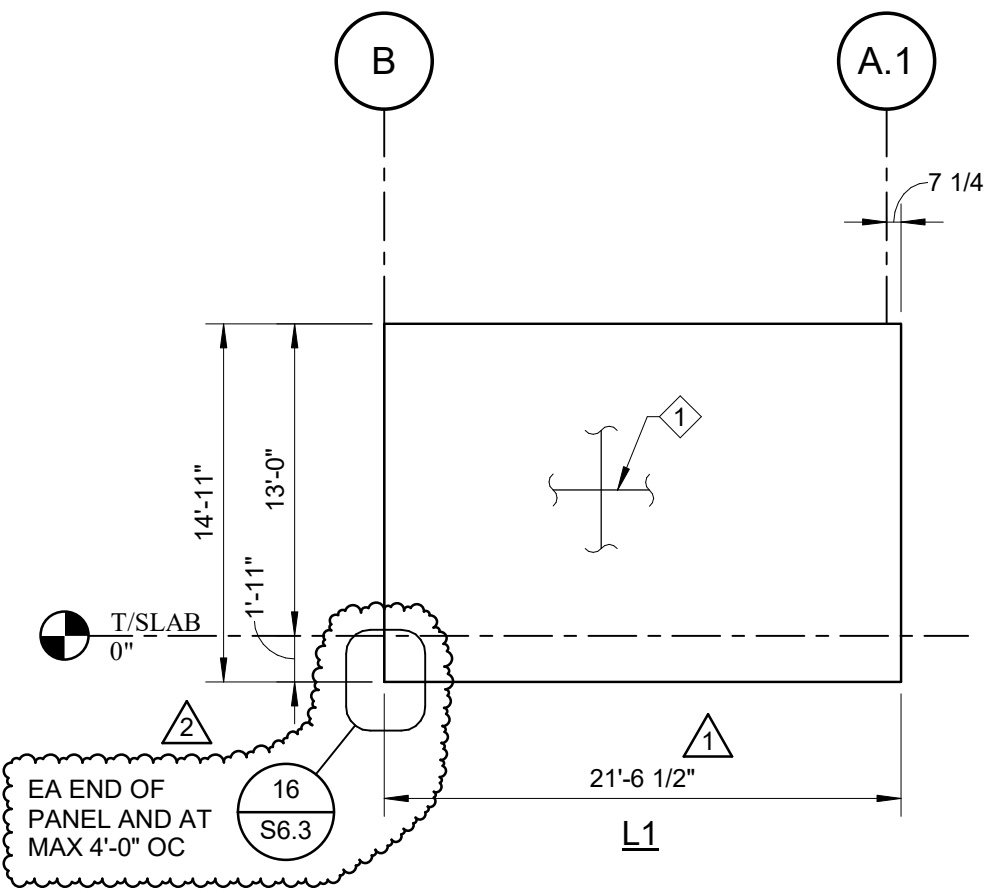
TILT-UP ELEVATIONS

S7.3

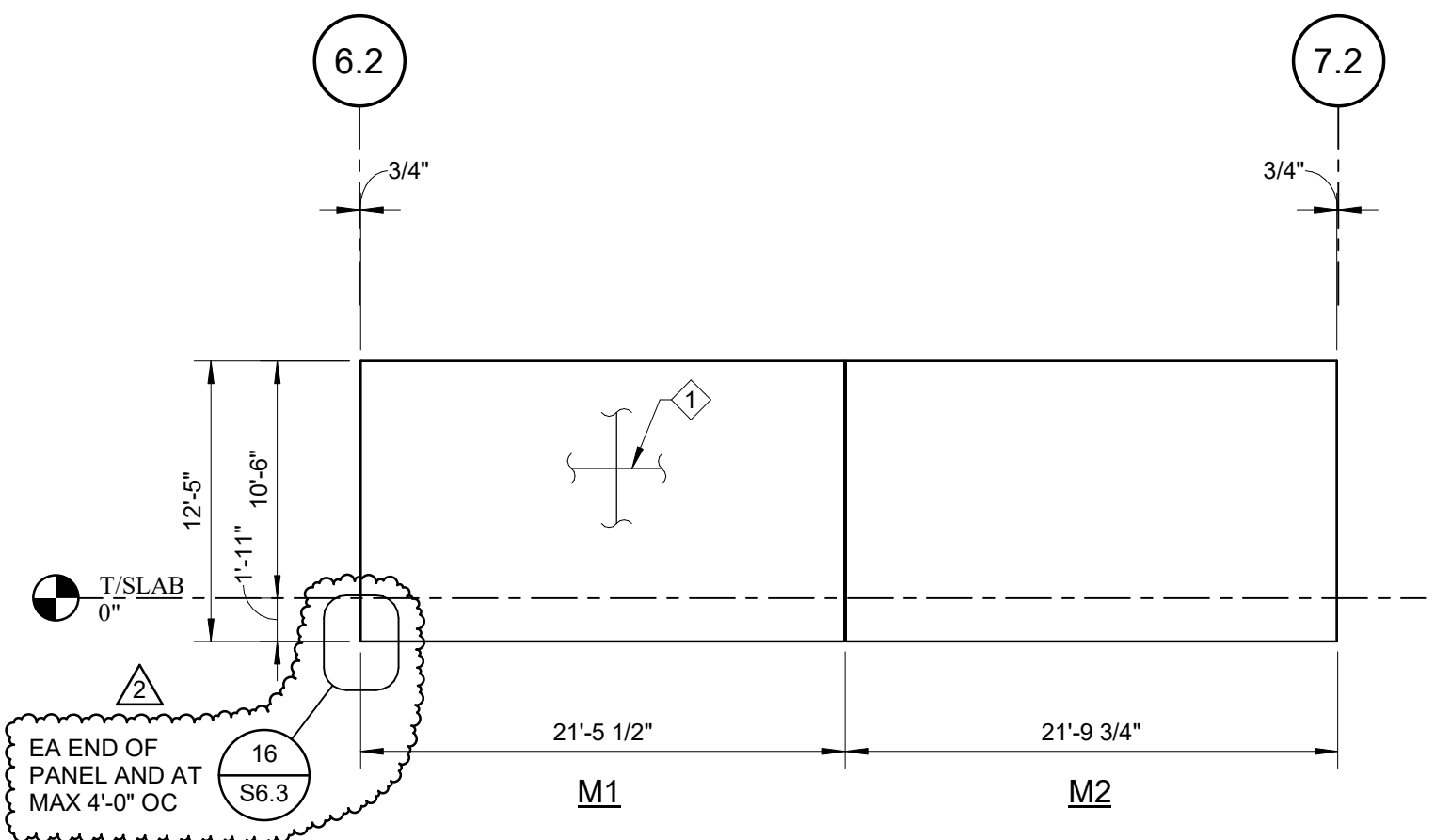
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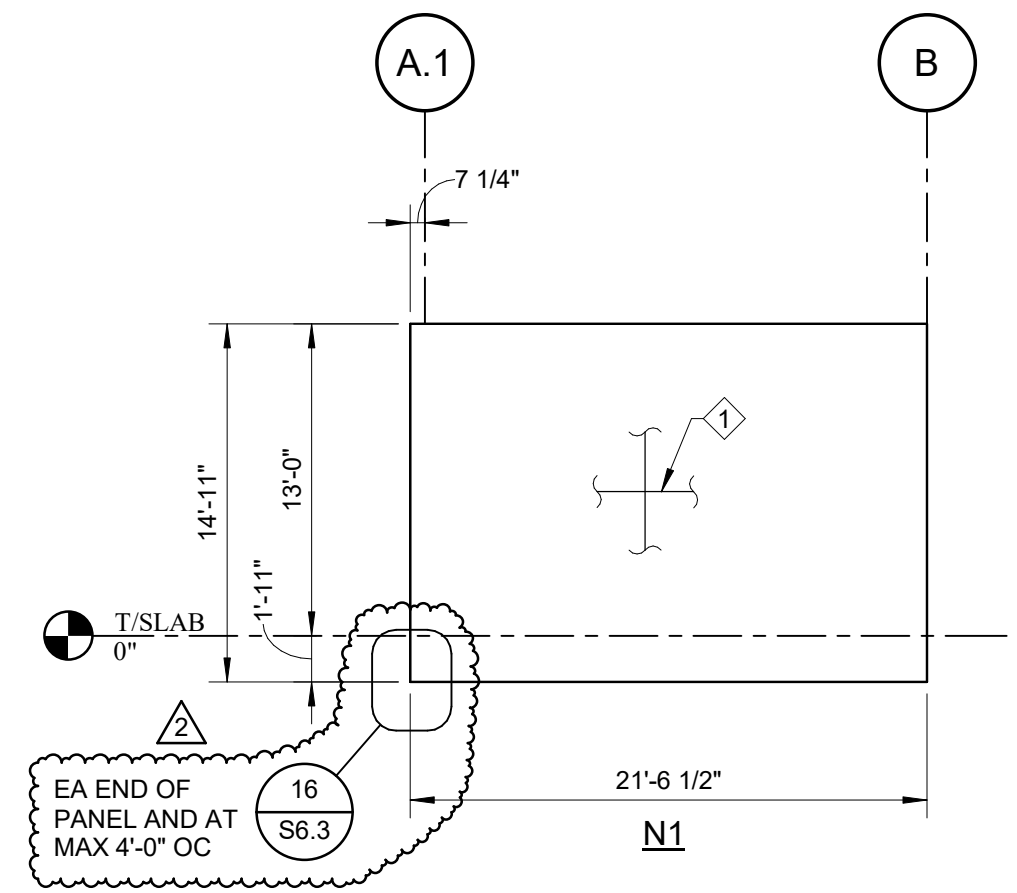
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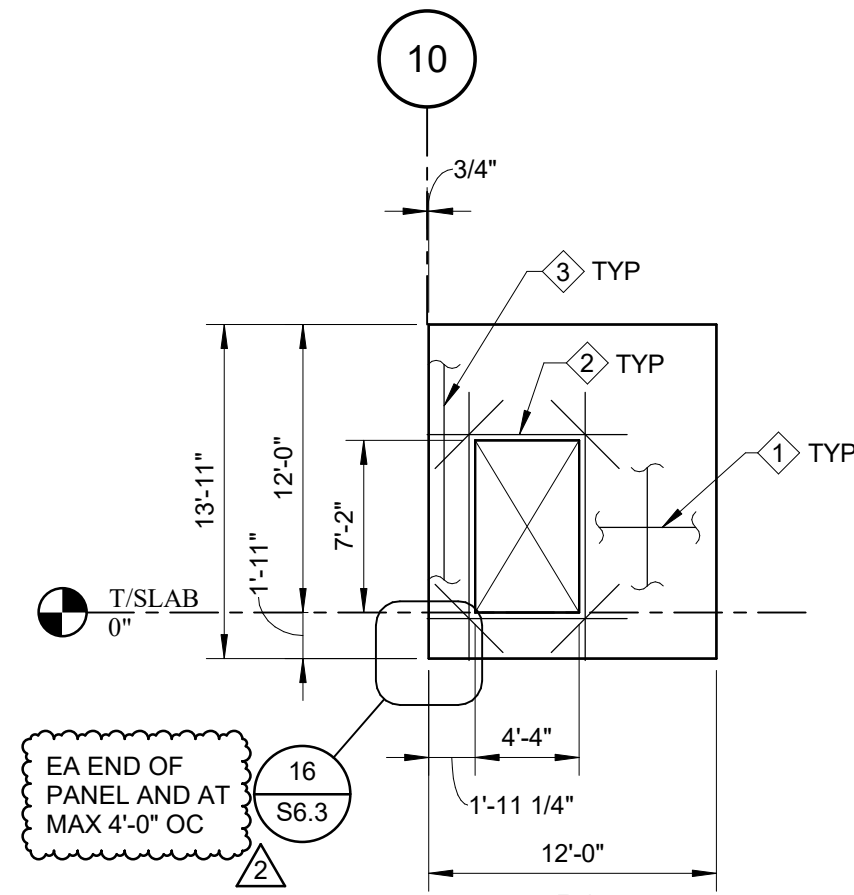
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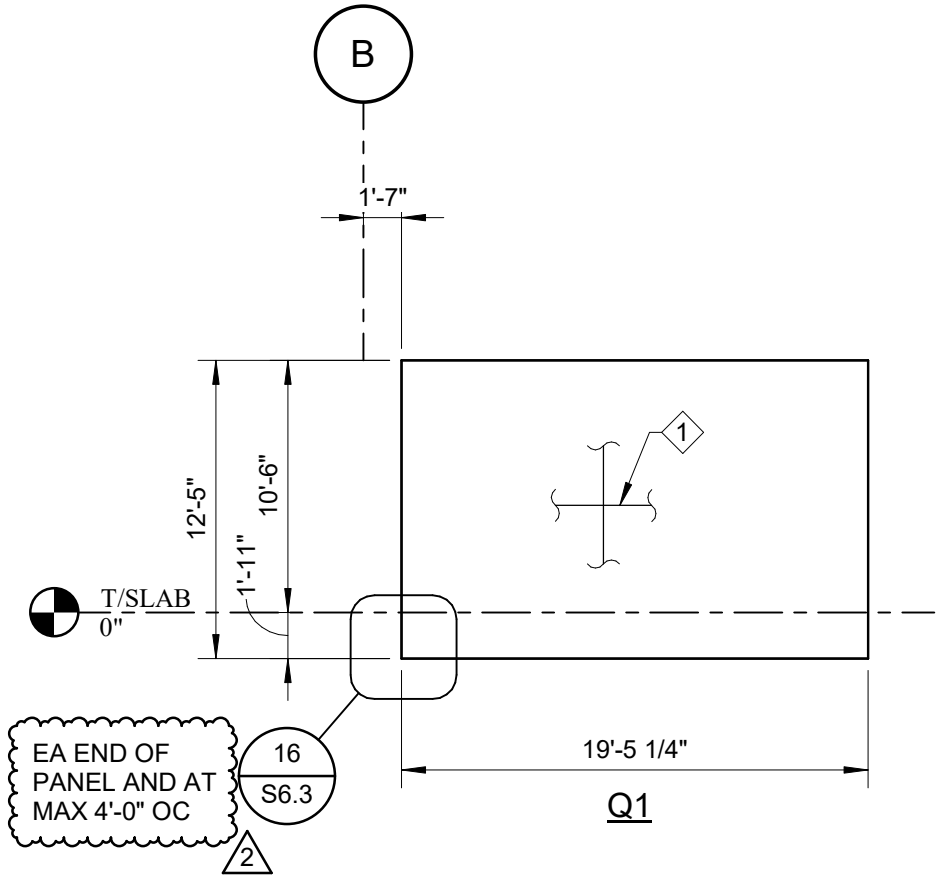
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SCALE: 1/8" = 1'-0"



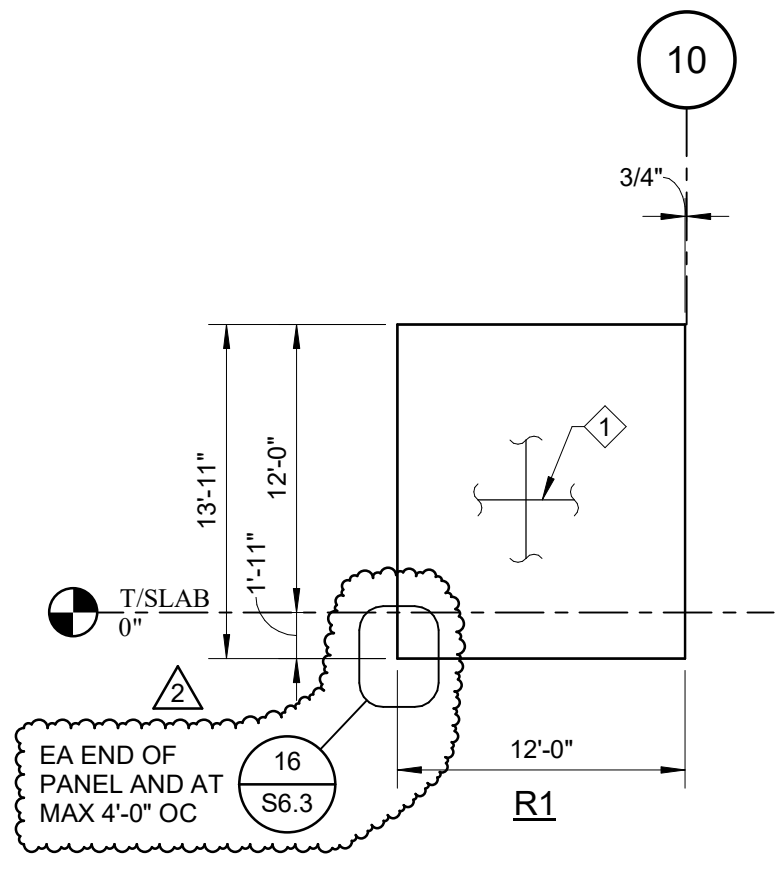
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SCALE: 1/8" = 1'-0"



4 ELEVATION P
SCALE: 1/8" = 1'-0"



5 ELEVATION Q
SCALE: 1/8" = 1'-0"

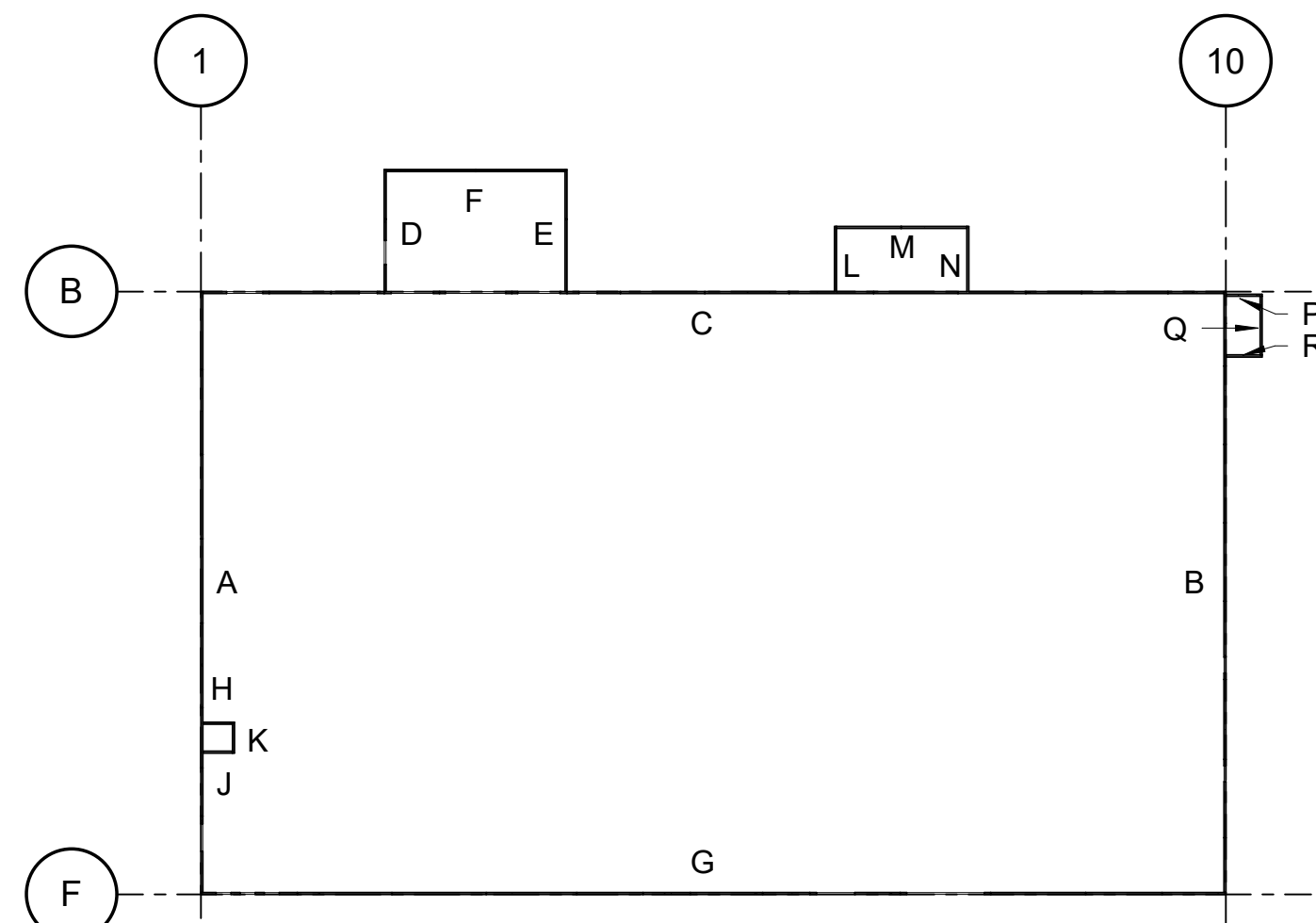


6 ELEVATION R
SCALE: 1/8" = 1'-0"

- TILT-UP ELEVATION NOTES:**
- 1) PANEL SHALL BE CONSTRUCTED WITH EXTERIOR PANEL FACE DOWN UON.
 - 2) SEE DETAIL 1/S6.3 FOR REINFORCING PLACING DETAILS.
 - 3) FOR REINFORCING AROUND PANEL OPENINGS SEE DETAIL 6/S6.3 (VERTICAL REINFORCING SHOWN IN DETAIL NOT REQUIRED WHERE COLUMN CAGE REINFORCING IS SPECIFIED ON PANEL ELEVATIONS-COLUMN CAGE TO EXTEND FULL HEIGHT OF PANEL).
 - 4) SEE SHEET S6.3 FOR STANDARD PANEL DIMENSIONING METHODOLOGY, SECTIONS & DETAILS.
 - 5) PANELS COMPOSED OF NORMAL WEIGHT CONCRETE. SEE GENERAL NOTES FOR STRENGTH REQUIREMENTS.
 - 6) SEE ARCH ELEVATIONS FOR PANEL REVEALS AND DEPRESSIONS. SEE SECTION 2/S6.3 FOR REVEAL DETAIL.
 - 7) SEE DETAIL 12/S6.3 FOR SLAB DOWELS TO BE CAST INTO PANEL.
 - 8) SEE PANEL LIFTING INSERT SHOP DRAWINGS FOR ADDITIONAL REINFORCING REQUIREMENTS TO ACCOMMODATE LIFTING STRESSES, WHICH MAY EXCEED THE REINFORCING SPECIFIED ON ELEVATIONS ABOVE.
 - 9) WHERE PANEL REINFORCING IS SPECIFIED EA FACE (EF), EXCEPT @ REINFORCING CAGES w/ TIES, THE VERTICAL REINFORCING OF EA LAYER SHALL PLACED CLOSEST TO THE FACE OF THE PANEL.
 - 10) SEE 7/S6.3 FOR INFO AT PANEL JOINTS.
 - 11) SEE 5/S6.3 FOR ADDITIONAL REINFORCEMENT @ TILT PANEL LIFTING INSERT.
 - 12) CONTRACTOR TO COORDINATE CONDUIT LOCATIONS w/ELECTRICAL SUBCONTRACTOR. CONDUITS SHALL BE PLACED PRIOR TO TILT WALL PLACEMENT. NO CUTTING OF REINFORCEMENT.
 - 13) CONTRACTOR TO COORDINATE FINAL SCUPPER LOCATIONS WITH ARCH.

- TILT-UP KEYNOTE LEGEND**
- 1) PANEL FIELD REINF. #5 @ 8" CT RD VERT AND #5 @ 8" CT RD HORIZ, TYP.
 - 2) PANEL OPENING REINF. SEE DETAIL 6/S6.3. THE WALL PANELS HAVE BEEN DESIGNED FOR THE MAX OPENING DIMENSIONS SHOWN. COORDINATE FINAL ROUGH OPENING DIMENSIONS AND LOCATIONS WITH ARCH AND MEP. PANEL DESIGN REINFORCING MAY NEED TO BE REVISED IF OPENING SIZES AND LOCATIONS VARY FROM WHAT IS SHOWN.
 - 3) PANEL LEG REINF (FULL HT WALL SEGMENT ≤ 6'-0" WIDE); #5 VERT @ 4" OC W/ #5 HORIZ @ 8" CT RD TYP.
 - 4) PANEL LEG REINF (FULL HT WALL SEGMENT AS SHOWN ON ELEV); #5 VERT @ 4" OC EA FACE W/ #4 TIES @ 12" OC.

TILT PANEL DIMENSIONS HAVE BEEN ADDED TO THE ELEVATIONS.



KEY PLAN

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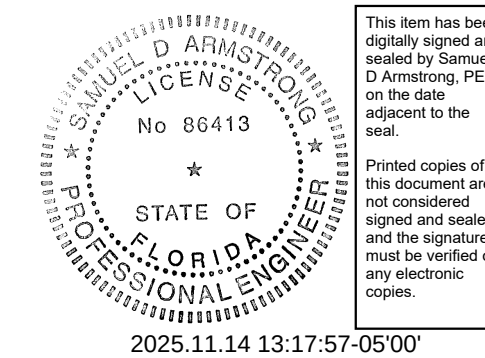


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ERIK C. KASPER AR#0017162

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LAKE CITY, FL 32024

PROJECT NO.: 22024

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PRIOR ISSUES:
10/29/2025 ASB.1
11/14/2025 ASB.2

TILT-UP
ELEVATIONS

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