

GENERAL REQUIREMENTS	
A.	THE GENERAL STRUCTURAL NOTES EMPLOY THE FOLLOWING DEFINITIONS AND ABBREVIATIONS: 1. CONTRACT DOCUMENTS – THE LATEST SET OF DRAWINGS, SPECIFICATIONS, AND RECORDED ADDENDA AND AMENDMENTS ISSUED FOR BID OR CONSTRUCTION. 2. LICENSED PROFESSIONAL (STRUCTURAL) ENGINEER – AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED TO PERFORM THE WORK REQUIRED. 3. STRUCTURAL ENGINEER OF RECORD – LICENSED PROFESSIONAL ENGINEER WHO IS IN RESPONSIBLE CHARGE FOR THE PREPARATION, SIGNING, DATING, SEALING, AND ISSUING OF STRUCTURAL ENGINEERING DOCUMENTS FOR ENGINEERING SERVICE OR CREATIVE WORK. 4. DELEGATED ENGINEER – A LICENSED PROFESSIONAL ENGINEER WHO PROVIDES SERVICES OR CREATIVE WORK REGARDING A PORTION OF THE ENGINEERING PROJECT. THE DELEGATED ENGINEER IS THE ENGINEER OF RECORD FOR THAT PORTION OF THE ENGINEERING PROJECT. TYPICALLY, DELEGATED ENGINEERS FALL INTO ONE OF THE FOLLOWING CATEGORIES: a. AN INDEPENDENT CONSULTANT b. AN EMPLOYEE OR OFFICIAL OF AN ENTITY SUPPLYING COMPONENTS TO A FABRICATOR OR CONTRACTOR c. AN EMPLOYEE OR OFFICER OF A FABRICATOR OR CONTRACTOR 5. DELEGATED ENGINEERING DOCUMENTS – ENGINEERING DOCUMENTS THAT ARE PREPARED BY A DELEGATED ENGINEER 6. DESIGN TEAM – DESIGN PROFESSIONALS INCLUDING THE ARCHITECT, STRUCTURAL ENGINEER, CIVIL ENGINEER, MEP ENGINEER, AND ANY OTHER CONSULTANT THAT ISSUES CONTRACT DOCUMENTS 7. CONTRACTOR – GENERAL CONTRACTOR, CONSTRUCTION MANAGER, DESIGN-BUILDER, OR ANY OTHER ENTITY CONTRACTED BY THE OWNER TO PERFORM THE WORK. 8. SHOP DRAWINGS – DRAWINGS DEPICTING INSTALLATION MEANS AND METHODS AND CATALOG INFORMATION ON STANDARD PRODUCTS. SHOP DRAWINGS SHALL BE PREPARED BASED ON ENGINEERING DIRECTION CONTAINED IN CONTRACT DOCUMENTS BY A CONTRACTOR, FABRICATOR, MANUFACTURER, OR LICENSED PROFESSIONAL ENGINEER, FOR INCORPORATION INTO THE PROJECT. 9. ESTABLISHED CHANNELS – AT THE ONSET OF THE PROJECT, ARCHITECT, OWNER, AND CONTRACTOR SHALL ESTABLISH DESIRED LINES OF COMMUNICATION BETWEEN ALL PROJECT PARTIES. THESE AGREED UPON LINES OF COMMUNICATION ARE THE ESTABLISHED CHANNELS. B. GENERAL STRUCTURAL NOTES ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND CONSTRUCTION OF THE ENTIRE PROJECT AND THUS ARE APPLICABLE TO EVERY SHEET WITHIN THIS SET. C. WHERE A DETAIL, TYPICAL, DETAIL, SECTION, TYPICAL SECTION, OR PLAN NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ADDITIONAL CONDITIONS UNLESS NOTED OTHERWISE. D. ISOMETRIC VIEWS ARE FOR VISUALIZATION PURPOSES ONLY AND DO NOT CONVEY ALL OF THE OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS. E. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE DRAWINGS AND ANY OTHER CONTRACT DOCUMENT OR APPLICABLE CODE, OR STANDARD OF PRACTICE DURING BIDDING, THE PROVISION RESULTING IN THE GREATER COST APPLIES. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT DURING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR CLARIFICATION TO THE DESIGN TEAM, WHO WILL PROVIDE A WRITTEN RESPONSE IN RETURN. F. SPECIFICATIONS HAVE BEEN ISSUED ON THIS PROJECT BY THE STRUCTURAL ENGINEER OF RECORD AND ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. G. SEE SPECIFICATIONS FOR MATERIALS TESTING REQUIREMENTS. H. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE QUALITY AND CORRECTNESS OF THE WORK. I. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH OTHER TRADES INCLUDING, BUT NOT LIMITED TO, ARCHITECTURAL, CIVIL, AND MEP FOR FLOOR SLAB STEPS, SLOPES AND CURBS, FLOOR SLAB FINISH, OPENINGS IN STRUCTURAL FLOORS, ROOFS AND WALLS, ETC. J. THE BUILDING HAS BEEN DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD TO RESIST THE CODE REQUIRED VERTICAL AND LATERAL FORCES IN ITS FULLY COMPLETED CONDITION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED BRACING, SHORING, AND OTHER CONSTRUCTION SUPPORTS NECESSARY TO ENSURE THE BUILDING'S STABILITY AND SAFETY THROUGHOUT THE DURATION OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER OF RECORD TO REVIEW AND APPROVE ANY ADDITIONAL BRACING OR SHORING. OVERLOADED, UNSTABLE, OR HAZARDOUS CONDITIONS THAT MAY OCCUR AT ANY STAGE DURING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE STRUCTURAL ENGINEER OF RECORD. K. THE CONTRACTOR SHALL NOT ALLOW CONSTRUCTION MEANS OR METHODS THAT MAY DAMAGE UTILITIES, ADJACENT BUILDINGS, OR PROPERTY. DOCUMENTATION OF ADJACENT CONDITIONS PRIOR TO CONSTRUCTION IS RECOMMENDED. FURTHER, THE CONTRACTOR SHALL EITHER ADEQUATELY CONFINE THE SITE OR PROTECT ADJACENT PROPERTY FROM DAMAGE. L. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROJECT SAFETY AND OSHA REQUIREMENTS. SHOULD THE STRUCTURAL ENGINEER OF RECORD NOTIFY THE CONTRACTOR OF A POTENTIALLY UNSAFE CONDITION, IT IS THE CONTRACTOR'S DUTY TO CORRECT THE CONDITION. IF THE CONTRACTOR FAILS TO CORRECT THE CONDITION, IT IS THE CONTRACTOR AS A COURTESY FROM ONE PROFESSIONAL TO ANOTHER, IT SHOULD NOT BE INTERPRETED AS THE STRUCTURAL ENGINEER OF RECORD ASSUMING ANY RESPONSIBILITY FOR PROJECT SAFETY. M. ALL STRUCTURES INTENDED TO EXTEND LIFE SPAN AND ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT, A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE BUILDING OWNER. THIS PROGRAM SHALL INCLUDE, BUT NOT BE LIMITED TO: PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATINGS FOR CONCRETE, SEALANTS, GALVANIZING, PAINTING, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO A SALINE OR OTHER HARSH CHEMICAL ENVIRONMENT. N. THE USE OF DE-ICING CHEMICALS ON ANY EXPOSED STRUCTURAL ELEMENT IS DISCOURAGED AND WILL ACCELERATE DEGRADATION OF STRUCTURAL ELEMENTS. O. THE BUILDING OWNER SHALL NOT ALTER OR MODIFY ANY STRUCTURAL ELEMENT WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER. FURTHER, BUILDING OWNER SHALL NOT RENOVATE, REPAIR, ADD-ON TO, OR OTHERWISE MODIFY THE EXISTING STRUCTURAL SYSTEMS WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER. P. CONTRACT DRAWINGS SHOW MAJOR OPENINGS IN FLOORS AND WALLS AND DO NOT NECESSARILY SHOW ALL OPENINGS REQUIRED. THE CONTRACTOR SHALL COORDINATE ALL OPENING SIZES AND LOCATIONS BETWEEN ALL DISCIPLINES AND TRADES. ADDITIONAL OPENINGS, BLOCKOUTS, AND SLEEVES MAY BE REQUIRED AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR REQUIREMENTS WITHIN THE CONTRACT DOCUMENTS. OPENINGS REQUIRED, BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. Q. THE CONTRACTOR SHALL COORDINATE PIPING AND CONDUIT EMBEDDED IN OR ATTACHED TO SLABS, SLABS-ON-DECK, BEAMS, AND WALLS. ANY REQUIRED REINFORCEMENTS TO THE STRUCTURAL SYSTEMS SHALL BE PROVIDED AND REINFORCEMENT AS A RESULT OF EMBEDMENT OR ATTACHMENT SHALL BE SUBMITTED TO THE DESIGN TEAM FOR THEIR REVIEW. SEE GENERAL STRUCTURAL NOTES SECTION 'DESIGN CRITERIA' FOR LIMITATIONS OF MEP LOADING ON STRUCTURAL SYSTEMS. R. THE STRUCTURAL ENGINEER OF RECORD'S ROLE DURING CONSTRUCTION 1. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT ASSUME CONTROL OF, OR RESPONSIBILITY FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES, PROJECT SAFETY, THE ACTS AND OMISSIONS OF THE CONTRACTOR, OR THEIR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. 2. STRUCTURAL ENGINEER OF RECORD SHALL NOT HAVE AUTHORITY TO STOP THE WORK OR AUTHORIZE CHANGES TO ANY CONTRACT SUM. 3. PERIODIC SITE VISITS BY REPRESENTATIVES OF THE STRUCTURAL ENGINEER OF RECORD ARE SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK AND NOT DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS LIMITED OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS AND THAT OBSERVATIONS ARE QUALITATIVE, NOT QUANTITATIVE. THIS LIMITED INFORMATION WILL BE USED TO ADVISE THE OWNER/CONTRACTOR/ARCHITECT OF POTENTIAL DEFICIENCIES. C. S. CLARIFICATION OF POSITION OF STRUCTURALLY FRAMING ELEMENTS 1. USE ONLY 10 DIMENSIONS INDICATED ON THE DRAWINGS, DO NOT SCALE ANY DIMENSIONS. 2. IF NOT INDICATED ON DRAWINGS, ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS. 3. CENTER LINES OF COLUMNS AND FOUNDATIONS SHALL COINCIDE WITH GRID LINE INTERSECTION, UNLESS NOTED OTHERWISE. 4. CENTER LINES OF FOOTINGS, GRADE BEAMS, AND WALLS SHALL COINCIDE WITH CENTER LINES OF FOUNDATIONS, UNLESS NOTED OTHERWISE. 5. CENTER LINES OF FRAMING MEMBERS SHALL COINCIDE WITH COLUMN CENTER LINES, UNLESS NOTED OTHERWISE. 6. ELEVATIONS SHOWN ARE TO TOP OF FOUNDATIONS, SLABS, OR BEAMS, UNLESS NOTED OTHERWISE. 7. SEE ARCHITECTURAL, CIVIL, MEP, AND VERTICAL TRANSPORTATION CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATIVE TO THE COORDINATION OF STRUCTURAL COMPONENTS INCLUDING, BUT NOT LIMITED TO: 1. CIVIL a. SITTING OF BUILDING GRID LINES WITH RESPECT TO CITY BENCHMARKS b. SITE PREPARATION c. BACKFILLING MATERIALS AND REQUIREMENTS INCLUDING DRAINAGE ADJACENT TO RETAINING WALLS d. SITE ELEMENTS OUTSIDE OF BUILDING ENVELOPE e. NEW AND EXISTING SITE UTILITIES 2. ARCHITECTURAL a. PLAN DIMENSIONS AND PROJECT DATUM b. SLAB EDGE DIMENSIONS AND FINISH ELEVATIONS c. WATERPROOFING AND DAMP PROOFING DETAILS d. SLAB SLOPES, STEPS AND DEPRESSIONS, RAMPS, TRENCHES e. EMBEDMENTS, INSERTS, BLOCKOUTS, ETC f. CONCRETE FINISHES AND TOPPING SLABS g. CONCRETE CURBS AND HOUSEKEEPING PADS h. INTERIOR NON-STRUCTURAL MASONRY PARTITIONS i. LIFE SAFETY, FIRE RATING j. OPERABLE PARTITIONS 3. MEP a. PIPE AND DUCT SIZES FOR OPENING AND SLEEVE COORDINATION b. FLOOR DRAINS c. UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS d. EQUIPMENT CURBS e. CONDUITS AND EMBEDMENTS IN WALLS AND SLABS U. THIS BUILDING QUALIFIES AS A THRESHOLD BUILDING PER CHAPTER 553.71 OF THE FLORIDA STATUTES. AS SUCH, SPECIAL INSPECTIONS SHALL BE REQUIRED PER CHAPTER 553.73 OF THE FLORIDA STATUTES BY PERSONS DULY AUTHORIZED TO PERFORM THEM BY CHAPTER 61G15-35.003 OF THE FLORIDA ADMINISTRATIVE CODE. SEE SPECIAL INSPECTION PLAN FOR SPECIFIC INSPECTION REQUIREMENTS.

STRUCTURAL THRESHOLD INSPECTIONS

- A. PER CHAPTER 553.71 OF THE FLORIDA STATUTES, THIS BUILDING QUALIFIES AS A THRESHOLD BUILDING.
- B. SPECIAL INSPECTORS OF THRESHOLD BUILDINGS (THRESHOLD INSPECTORS) SHALL MEET THE REQUIREMENTS OF RULE 61G15-35.003 OF THE FLORIDA ADMINISTRATIVE CODE.
- C. PER CHAPTER 553.79 OF THE FLORIDA STATUTES, THE ENFORCING AGENCY SHALL REQUIRE A THRESHOLD INSPECTOR TO PERFORM STRUCTURAL INSPECTIONS ON A THRESHOLD BUILDING PURSUANT TO A STRUCTURAL INSPECTION PLAN PREPARED BY THE STRUCTURAL ENGINEER OF RECORD.
- D. THRESHOLD INSPECTOR SHALL BE A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA WHO IS CERTIFIED UNDER CHAPTER 471.015 OF THE FLORIDA STATUTES, TO CONDUCT INSPECTIONS OF A THRESHOLD BUILDING. FURTHER, THE THRESHOLD INSPECTOR MUST BE ON THE FLORIDA BOARD OF PROFESSIONAL ENGINEERS LIST OF PERSONS QUALIFIED TO BE THRESHOLD INSPECTORS.
- E. THE STRUCTURAL INSPECTION PLAN MUST BE SUBMITTED TO AND APPROVED BY THE ENFORCING AGENCY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE CONSTRUCTION OF A THRESHOLD BUILDING.
- F. THE FEE OWNER OF A THRESHOLD BUILDING SHALL SELECT AND PAY ALL COSTS OF EMPLOYING A THRESHOLD INSPECTOR, BUT THE THRESHOLD INSPECTOR SHALL BE RESPONSIBLE TO THE ENFORCING AGENCY.
- G. THRESHOLD INSPECTIONS RELATED TO TEMPORARY CONDITIONS SUCH AS SHORING, BRACING, AND TEMPORARY BRACING ARE REQUIRED TO BE PERFORMED BY THE CONTRACTOR'S DELEGATED ENGINEER. DELEGATED ENGINEER (NOT SPECIAL INSPECTOR) IS RESPONSIBLE FOR THE SUPERVISION, INSPECTION AND CERTIFICATION OF SUCH TEMPORARY SYSTEMS.
- A. SEE STRUCTURAL INSPECTION PLAN FOR FURTHER INFORMATION.
- A. ALL INFORMATION CONTAINED IN THE ELECTRONIC FILES OF THE CONTRACT DOCUMENTS ARE INSTRUMENTS OF SERVICE OF THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD AND SHALL NOT BE USED FOR OTHER PROJECTS. ADDITIONS TO THE PROJECT, OR THE COMPLETION OF THE PROJECT BY OTHERS, ELECTRONIC FILES OF THE STRUCTURAL DOCUMENTS REMAIN THE PROPERTY OF JEZERINAC GROUP AND IN NO CASE SHALL THE TRANSFER BE CONSIDERED A SALE.
- B. THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT AND DELEGATES THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS OR OMISSIONS THAT MAY OCCUR HEREIN. THE USE OF ELECTRONIC FILES DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROPER CHECKING AND COORDINATION OF DIMENSIONS, DETAILS, SIZE, AND QUANTITIES.
- C. DIMENSIONS AND ELEMENT SIZES AND LOCATIONS IN THE ELECTRONIC FILES MAY NOT BE PRECISE AND, IN SOME CASES, HAVE BEEN INTENTIONALLY ALTERED FOR PRESENTATION PURPOSES. DO NOT SCALE DIMENSIONS ELECTRONICALLY OR OTHERWISE.
- D. WHEN USED FOR THE PREPARATION OF SHOP DRAWINGS, ALL INFORMATION NOT APPLICABLE TO THE SUBCONTRACT SHALL BE REMOVED FROM THE DRAWINGS, INCLUDING, BUT NOT LIMITED TO: SHEET NUMBERS, SECTION MARKS, TITLE BLOCKS, AND REFERENCES TO THE CONTRACT DOCUMENTS.
- SUBMITTALS**
- A. REFER TO DIVISION 01 OF SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND REQUIREMENTS. REFER TO THE APPLICABLE SPECIFICATION SECTIONS FOR TECHNICAL CONTENT.
- B. SUBMIT SPECIFIC COMPONENTS SUCH AS COLUMNS, FOUNDATIONS, ETC. IN A SINGLE PACKAGE. SUBMIT SIMILAR FLOORS TOGETHER.
- C. [ITEM] WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT, FOR REVIEW AND COMMENT BY THE STRUCTURAL ENGINEER OF RECORD, A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER OF RECORD. THE STRUCTURAL ENGINEER OF RECORD SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD, IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE. THE STRUCTURAL ENGINEER OF RECORD WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.
- D. THE CONTRACTOR SHALL REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
1. THE SUBMITTAL IS REQUESTED.
 2. THE SUBMITTAL IS BASED ON THE LATEST DESIGN.
 3. THE SUBMITTAL IS CLEARLY CLOUDED FOR ALL CHANGES AND ADDITION FROM PREVIOUS SUBMITTAL.
 4. THE ARCHITECT'S AND STRUCTURAL ENGINEER OF RECORD'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
 5. THE WORK IS COORDINATED AMONGST ALL CONSTRUCTION TRADES.
 6. THE SUBMITTAL IS COMPLETE.
 7. THE SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, AND SPECIFICATION SECTION NUMBER.
- E. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT.
- F. THE STRUCTURAL ENGINEER OF RECORD SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS.
- G. FOR THE COMPONENTS DESIGNED BY A DELEGATED ENGINEER, PROVIDE SHOP DRAWINGS, DESIGN CALCULATIONS, AND A COVER LETTER SIGNED AND SEALED BY THE DELEGATED ENGINEER. LETTER SHALL INDICATE THAT THE SHOP DRAWINGS ARE IN CONFORMANCE WITH THE DELEGATED ENGINEER'S CALCULATIONS.
- H. THE CONTRACTOR SHALL SUBMIT THE SUBMITTAL TO THE DESIGN TEAM FOR REVIEW AND APPROVAL. DEFERRED SUBMITTALS ARE MANUFACTURER OR CONTRACTOR DESIGNED COMPONENTS PER THE CONTRACT DOCUMENTS. THESE ELEMENTS OF THE DESIGN ARE DEFERRED SUBMITTAL COMPONENTS AND HAVE NOT BEEN PERMITTED UNDER THE BASE BRACING APPLICATION DOCUMENTS FOR DEFERRED SUBMITTAL. ITEMS SHALL BE SUBMITTED TO THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD, WHO SHALL REVIEW THEM FOR GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE CONTRACTOR SHALL SUBMIT THESE REVIEWED DEFERRED SUBMITTAL DOCUMENTS TO THE DESIGN TEAM FOR APPROVAL. THESE DEFERRED SUBMITTALS SHALL NOT BE INSTALLED UNTIL THE DESIGN TEAM HAS REVIEWED AND THE BUILDING OFFICIAL HAS APPROVED. SEE BELOW FOR THE LIST OF DEFERRED SUBMITTALS.
- I. THE FOLLOWING SUBMITTALS ARE REQUIRED TO BE SUBMITTED FOR STRUCTURAL ENGINEER OF RECORD REVIEW AS OUTLINED IN THE SPECIFICATIONS:
- | | | |
|--------|---|-----------------------|
| 031000 | CONCRETE FORMWORK | (SS, CALC) |
| 032000 | CONCRETE REINFORCEMENT LAYOUT | (S) |
| 033000 | CONCRETE MIX DESIGNS | (CALC, TA) |
| 034000 | CONCRETE CONSTRUCTION JOINT LAYOUT | (S) |
| 034713 | TILT-UP CONCRETE PANEL | (DF, SS, CALC) |
| 034713 | TILT-UP CONCRETE PANEL LIFTING | (DF, SS, CALC) |
| 051200 | STRUCTURAL STEEL | (S) |
| 051200 | STRUCTURAL STEEL CONNECTIONS | (DF, S, CALC) |
| 052100 | STEEL JOISTS, BRIDGING, AND CONNECTIONS | (DF, SS, CALC) |
| 053100 | STEEL COMPOSITE DECK | (S) |
| 054000 | COLD-FORMED METAL FRAMING USED FOR EXTERIOR | (SS, CALC) (SEE ARCH) |
- S = SHOP DRAWINGS REQUIRED
DF = DEFERRED SUBMITTAL
SS = SIGNED AND SEALED SHOP DRAWINGS PREPARED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
CALC = SUPPORTING CALCULATIONS REQUIRED, SIGNED AND SEALED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
REC = ITEMS SUBMITTED FOR RECORD ONLY AND WILL NOT HAVE STRUCTURAL ENGINEER OF RECORD SHOP DRAWING STAMP AFFIXED.
GEN = ITEMS SUBMITTED TO CONSTRUCTION GEOTECHNICAL ENGINEER FOR THEIR REVIEW.
TA = ITEMS SUBMITTED TO OWNER'S TESTING AGENCY FOR THEIR REVIEW.
- GOVERNING CODES & STANDARDS**
- | | | |
|----------------|----------------|--|
| BUILDING CODE: | FBC 2023 | FLORIDA BUILDING CODE, BUILDING |
| STANDARDS: | ASCE 7 | AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES |
| | ACI 318 | AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE |
| | AISC 360 | AMERICAN INSTITUTE OF STEEL CONSTRUCTION, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS |
| | AWS D1.1 | AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE - STEEL |
| | AWS D1.3 | STEEL |
| | AWS D1.4 | AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE - REINFORCING STEEL |
| | ASTM A518 S100 | AMERICAN IRON AND STEEL INSTITUTE, NORTH AMERICAN SPECIFICATION FOR STEEL DECK SHEET PILING |
| | ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS |
- DESIGN CRITERIA**
- A. STRUCTURE LOCATION:
LONGITUDE: -82.6577
LATITUDE: 30.2304
- B. LOADINGS:
1. SUPERIMPOSED DEAD & LIVE LOADS:
ALL DEAD LOADS LISTED BELOW ARE IN ADDITION TO THE STRUCTURE'S SELF-WEIGHT.
ROOF:
TYPICAL 10 PSF 20 PSF REDUCIBLE
FLOOR:
OFFICE 20 PSF 80 PSF REDUCIBLE
CORRIDORS 10 PSF 100 PSF NON-REDUCIBLE
STAIRS 10 PSF 100 PSF NON-REDUCIBLE
STAIRWAY 20 PSF 125 PSF NON-REDUCIBLE
MECHANICAL ROOM 150 PSF 125 PSF NON-REDUCIBLE
2. RAIN LOAD:
DESIGN RAINFALL: 4.44/HOUR (100-YEAR, 1-HOUR RAINFALL)
RAINWATER AT LOWEST POINT OF ROOF SHALL NOT POND DURING DESIGN RAINFALL AND SHALL NOT EXCEED 3/16" DURING DESIGN RAINFALL.
CONSISTENT RAIN LOAD, R: 20 PSF
3. SNOW LOAD:
GROUND SNOW LOAD: 0 PSF
4. WIND LOAD:
ULTIMATE DESIGN WIND SPEED, V_{ult}: 226 MPH
NOMINAL DESIGN WIND SPEED, V_{nom}: 175 MPH
RISK CATEGORY: IV
WIND EXPOSURE CATEGORY: C
ENCLOSURE CLASSIFICATION: ENCLOSED
INTERNAL PRESSURE COEFFICIENT: 0.18
COMPONENTS & CLADDING DESIGN PRESSURES: SEE WIND PRESSURE DIAGRAMS
5. TORNADO LOAD:
WIND EXPOSURE CATEGORY: IV
EFFECTIVE PLAN AREA: 4,000.00 SF
ULTIMATE TORNADO WIND SPEED, V_{ult}: 110 MPH
PER ASCE 24.2 OF ASCE 7, DESIGN FOR TORNADO LOADS SHALL NOT BE REQUIRED FOR STRUCTURES IN EXPOSURE C WITH A V_{ult} ≤ 160 V_{ult}.
6. SEISMIC LOAD:
RISK CATEGORY: IV
SEISMIC IMPORTANCE FACTOR, I_e: 1.5
SITE CLASS: D
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S_s: 0.087 g
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S₁: 0.051 g
SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{max}: 0.082 g
SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{max}: 0.082 g
SEISMIC DESIGN CATEGORY: A
SEISMIC FORCE RESISTING SYSTEM: NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
- C. HANDRAIL AND GUARDRAIL LOADS:
CONCENTRATED AND DISTRIBUTED LOADS ARE TO BE APPLIED AT THE HANDRAIL OR TOP RAIL IN ANY DIRECTION. CONCENTRATED AND DISTRIBUTED LOADS ARE NOT TO BE APPLIED CONCURRENTLY.
CONCENTRATED LOAD: 200 LB
DISTRIBUTED LOAD: 50 PLF
- D. FUTURE EXPANSION:
PROVIDE WHERE NECESSARY FOR FUTURE VERTICAL OR HORIZONTAL EXPANSION OF THE STRUCTURE.
- E. SERVICEABILITY:
1. DEFLECTION LIMITS: TOTAL LOAD DEFLECTION ONLY APPLIES TO THE DEFLECTION DUE TO THE CREEP COMPONENT OF LONG-TERM DEAD LOAD DEFLECTION PLUS THE SHORT-TERM DEAD LOAD DEFLECTION. DEFLECTION OF WOOD STRUCTURAL MEMBERS SHALL BE CALCULATED IN ACCORDANCE WITH THE AWC NDS. IT IS PERMITTED TO ESTIMATE THE CREEP COMPONENT OF THE LONG-TERM DEFLECTION AS THE IMMEDIATE DEAD LOAD DEFLECTION.
a. ROOF MEMBERS
i. TOTAL LOAD DEFLECTION: L/240
ii. CREEP COMPONENT OF LONG-TERM DEFLECTION: L/360
b. FLOOR MEMBERS
i. TOTAL LOAD DEFLECTION: L/240
ii. CREEP COMPONENT OF LONG-TERM DEFLECTION: L/360
2. DRIFT LIMITS:
a. INTERSTORY DRIFT: L/600
b. TOTAL STRUCTURE DRIFT: L/600
- EARTHWORK & FOUNDATIONS**
- A. GEOTECHNICAL INVESTIGATION REPORT
1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL INVESTIGATION REPORT AS FOLLOWS:
a. REPORT TITLE: "GEOTECHNICAL INVESTIGATION REPORT-PROJECT 441/CONTRACT PROJECT NO. EQ215160"
b. PREPARED BY: "TERRACON CONSULTANTS, INC."
c. DATED: APRIL 21, 2022
2. GEOTECHNICAL INVESTIGATION REPORT IS AVAILABLE TO THE CONTRACTOR UPON REQUEST TO THE OWNER. THE INFORMATION HEREIN MAY BE USED BY THE CONTRACTOR FOR HIS GENERAL REFERENCE ONLY. THE GEOTECHNICAL INVESTIGATION REPORT RECOMMENDATIONS SHALL SUPERSEDE THE MINIMUM CRITERIA OUTLINED IN THE SPECIFICATIONS AND GENERAL NOTES.
- B. SHALLOW FOUNDATIONS
1. FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
2. FOUNDATIONS TO BE CONSTRUCTED SHALL BE BASED ON AN ALLOWABLE BEARING PRESSURE OF 2500 PSF FOR COLUMNS AND 2,000 PSF FOR WALLS.
3. FOUNDATIONS SHALL BEAR A MINIMUM OF 2'-0" BELOW ADJACENT EXTERIOR GRADE.
4. FOUNDATIONS SHALL BEAR ON COMPACTED STRUCTURAL FILL, NATURAL SOILS, OR ROCK PREPARED PER THE GEOTECHNICAL INVESTIGATION REPORT.
5. PRIOR TO PLACEMENT OF CONCRETE, A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY SOILS CONFORMANCE TO THE RECOMMENDATIONS AND ASSUMPTIONS IN THE GEOTECHNICAL INVESTIGATION REPORT. ALL ADEQUATE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD.
6. FOUNDATIONS NOT MEETING DESIGN BEARING PRESSURE SHALL BE REMEDIATED PER THE GEOTECHNICAL INVESTIGATION REPORT AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF THE FOUNDATIONS.
7. CENTER ALL FOUNDATIONS UNDER THEIR RESPECTIVE COLUMNS OR WALLS, UNLESS NOTED OTHERWISE.
8. TOP OF FOUNDATION ELEVATIONS PROVIDED ON THE CONTRACT DRAWINGS ARE FOR PURPOSE OF THE CONTRACT AND SHALL BE ADJUSTED, AS REQUIRED, AT THE TIME OF EXCAVATION TO BEAR ON PROPERLY PREPARED SUPPORT SUBGRADE (PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS).
- C. EARTHWORK AND EXCAVATION
1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING, BUT NOT LIMITED TO: LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS.
2. EXCAVATION SHALL NOT OCCUR WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING CAPACITY.
3. THE EXTENT OF SUBGRADE PREPARATION SHALL EXTEND A MINIMUM OF 5'-0" BEYOND THE BUILDING PERIMETER.
4. THE CONTRACTOR SHALL PROVIDE A SUBGRADE BENEATH THE SLAB ON GROUND PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
5. UNLESS NOTED IN THE GEOTECHNICAL INVESTIGATION REPORT, COMPACT FILL TO 95% OF MAXIMUM DRY DENSITY.
6. IF THE CONTRACTOR DETERMINES THAT THE SUBGRADE IS NOT ADEQUATE, THE CONTRACTOR SHALL PROVIDE A SUBGRADE BENEATH THE SLAB ON GROUND PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF THE SUBGRADE PREPARATION REQUIRED FOR THE EXCAVATION. AT A MINIMUM, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING SITE.
8. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION DRAINAGE PLAN TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO BEGINNING EXCAVATION.
9. THE CONTRACTOR SHALL INSTALL ALL NECESSARY DRAINAGE SYSTEMS.
- D. RETAINING WALL
1. RETAINING WALLS SHALL BE DESIGNED FOR THE FOLLOWING:
a. LATERAL EARTH PRESSURE AT REST: 55 PSF/FT DEPTH
b. ACTIVE EARTH PRESSURE: 36.3 PSF/FT DEPTH
c. PASSIVE EARTH PRESSURE RESISTANCE: 330 PSF/FT DEPTH
d. SOIL FRICTION FACTOR: 0.35
2. RETAINING WALL DESIGN IS BASED ON GRADED BACKFILL WITH NO BUILDUP OF WATER. THE CONTRACTOR SHALL PROVIDE A DRAINAGE SYSTEM IN ALL BACKFILL CONDITIONS (SEE CIVIL ARCHITECTURAL DRAWINGS FOR DRAINAGE SPECIFICATIONS).
3. DO NOT BACKFILL AGAINST CANTILEVERED RETAINING WALLS UNTIL CONCRETE COMPRESSIVE STRENGTH, f_c, REACHES ITS 28 DAY DESIGN STRENGTH. DO NOT BACKFILL PRIOR TO WATERPROOFING AND INSULATION.
- SLAB ON-GROUND**
- A. THE SLAB-ON-GROUND HAS BEEN DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- B. SLAB THICKNESSES AND REINFORCEMENT ARE BASED ON A MODULUS OF SUBGRADE REACTION OF 150 PCI.
- C. SUBGRADE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- D. FOR INTERIOR SLABS, PLACE A 10-MIL MINIMUM VAPOR RETARDER BETWEEN THE SOIL AND BOTTOM OF SLAB. SEE CAST-IN-PLACE CONCRETE VAPOR RETARDER VAPOR RETARDER PRODUCTS/MANUFACTURERS. DO NOT USE VAPOR RETARDERS AT EXTERIOR SLABS. SEE ARCHITECTURAL CONTRACT DOCUMENTS FOR PROJECT SPECIFIC REQUIREMENTS.
- E. IF THE CONTRACTOR DETERMINES THAT THE SUBGRADE IS NOT ADEQUATE, THE CONTRACTOR SHALL PROVIDE A SUBGRADE BENEATH THE SLAB ON GROUND PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. NO SAW CUTTING OF THE SLAB IS PERMITTED.
- F. CONTROL JOINTS SHALL BE CUT INTO THE SURFACE OF THE SLAB, IN EACH DIRECTION. SEE THE TYPICAL SAW CUT JOINT DETAIL FOR TIME, DEPTH, AND SPACING OF JOINT REQUIREMENTS UNLESS NOTED OTHERWISE. CONTROL JOINTS SHALL BE CONSTRUCTED SUCH THAT THE AREA CONTAINED BY THE CONTROL JOINTS HAS A MAXIMUM RATIO OF LONG SIDE TO SHORT SIDE OF 1.5 TO 1 UNLESS NOTED OTHERWISE. DO NOT CONSTRUCT CONTROL JOINTS SUCH THAT SHAPED SLAB PANELS ARE CREATED.
- G. COLUMN ISOLATION JOINTS SHALL BE CONSTRUCTED PER THE TYPICAL COLUMN ISOLATION JOINT DETAIL IN ORDER TO PROVIDE ADEQUATE SPACE FOR COLUMN INSTALLATION.
- H. CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. SLAB CONSTRUCTION JOINTS SHALL BE DOWEL.
- I. WHERE SPECIFIED ON PLAN, WELDED WIRE REINFORCEMENT SHALL BE INSTALLED. WELDED WIRE REINFORCEMENT SHALL BE PROPERLY CHAIRED SUCH THAT IT IS LOCATED AT A DEPTH OF 1/12 FROM THE TOP OF SLAB.
- J. REFERENCE ARCHITECTURAL AND MEP DOCUMENTS FOR SLAB FINISHES AND SLOPES NOT REFERENCED ON THE STRUCTURAL DOCUMENTS. THE MINIMUM SLAB THICKNESS SPECIFIED IN THE CONTRACT DOCUMENTS MUST BE MAINTAINED.
- K. REFERENCE ARCHITECTURAL DOCUMENTS FOR VAPOR RETARDER AND SLAB AND CONTROL JOINT SEALANT REQUIREMENTS.
- L. CONDUITS SHALL NOT BE PLACED WITHIN THE SLAB. CONDUITS SHALL BE PLACED BENEATH THE SLAB.

CONCRETE	
A.	ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
B.	FOR CONCRETE MIXTURE REQUIREMENTS SEE SCHEDULE ON SHEET A-3003.
C.	THE USE OF RECYCLED CONCRETE IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
D.	NORMAL WETTED CONCRETE SHALL BE USED FOR ALL CONCRETE MEMBERS UNLESS NOTED OTHERWISE. NORMAL WETTED CONCRETE SHALL HAVE A CURED DENSITY OF 145 PCF ± 5 PCF. WHERE LIGHT WEIGHT CONCRETE IS SPECIFIED THE CURED DENSITY SHALL BE 112 PCF ± 3 PCF.
E.	EACH MIX SHALL BE UNQUELTY IDENTIFIED BY MIX NUMBER AND THE INTENDED LOCATION OF PLACEMENT ON THE SPECIFIC PROJECT SHALL BE CLEARLY STATED.
F.	ALL PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS, WALLS, AND SLABS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS OR BY WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD. FOR MILI REINFORCED MEMBERS, CONSTRUCTION JOINTS SHALL OCCUR WITHIN THE MIDDLE THIRD OF A MEMBER'S SPAN. ALL APPROVED CONSTRUCTION JOINTS SHALL BE INDICATED, DIMENSIONED, AND DETAILED ON THE CONCRETE REINFORCEMENT SHOP DRAWINGS.
G.	GIRDERS, BEAMS, HAUNCHES, DROP PANELS, DROP CABS, AND CAPITALS SHALL BE POURED MONOLITHICALLY AS PART OF THE SLAB SYSTEM UNLESS NOTED OTHERWISE.
H.	PROVIDE A 1/4 INCH CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC UNLESS NOTED OTHERWISE.
I.	CONCRETE CORNER DRILLED AND ANCHORS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
J.	REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL CONCRETE DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL COORDINATE BETWEEN THE ARCHITECTURAL, STRUCTURAL, AND MEP DRAWINGS TO FURNISH DIMENSIONED DRAWINGS THAT LOCATE AND SIZE ALL SLAB EDGES, OPENINGS, AND PENETRATIONS. THESE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
K.	EMBEDDED CONDUITS, PIPES, AND SLEEVES 1. THE OUTSIDE DIAMETER OF CONDUITS, PIPES, AND SLEEVES SHALL NOT EXCEED ONE-THIRD THE THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED. SLEEVES SHALL NOT SIGNIFICANTLY REDUCE THE CAPACITY OF THE MEMBERS THEY PENETRATE. 2. THE MINIMUM CLEAR COVER FOR CONDUITS, PIPES, AND SLEEVES SHALL BE 1 1/2" FOR CONCRETE EXPOSED TO EARTH OR WEATHER AND 1/2" FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER. 3. ALUMINUM EMBEDMENTS AND EMBEDMENTS MADE OF ANY OTHER MATERIAL HARMFUL TO THE CONCRETE OR REINFORCEMENT ARE PROHIBITED. 4. CURRENTS NOT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED TO RESIST THE EFFECTS OF MATERIAL, PRESSURE, AND TEMPERATURE THAT THEY WILL BE SUBJECTED TO. THE WORK SHALL BE COORDINATED AMONGST ALL CONSTRUCTION TRADES. 5. THE CONTENTS OF EMBEDDED PIPES SHALL NOT FLOW UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED DESIGN STRENGTH.
L.	CONDUITS, PIPES, AND SLEEVES SHALL BE PLACED BETWEEN TOP AND BOTTOM LAYERS OF REINFORCEMENT IN SLABS AND BETWEEN INNER AND OUTER LAYERS OF REINFORCEMENT IN WALLS. 1. EMBEDMENTS NOT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED TO RESIST THE EFFECTS OF REINFORCEMENT FROM ITS SPECIFIED LOCATION IS NOT REQUIRED.

CONCRETE REINFORCEMENT

A.	ALL CONCRETE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
B.	ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
C.	WHERE WEAPS ARE INDICATED FOR REINFORCING STEEL ON THE DRAWINGS, REINFORCING STEEL SHALL BE A706, GRADE 60 UNLESS OTHERWISE NOTED.
D.	WELDED WIRE REINFORCEMENT SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF ASTM A1064.
E.	ALL 90°, 135°, AND 180° HOOKED REINFORCEMENT SPECIFIED AND GRAPHICALLY DEPICTED IN THE CONTRACT DOCUMENTS SHALL BE DETAILED IN ACCORDANCE WITH A 3/16 STANDARD HOOK GEOMETRY FOR DEFORMED BARS IN TENSION AND FOR STIRRUPS, TIES, AND HOOPS.
F.	FOR EVERY VERTICAL OR HORIZONTAL BAR DISCONTINUED BY AN OPENING, ONE BAR (MINIMUM OF 2 BARS) SHALL BE ADJUSTED AT SIDE OF OPENING (HALF TO EACH SIDE, TYPICAL).
G.	FOR CONCRETE CLEAR COVER TO REINFORCEMENT SEE SCHEDULE ON SHEET A-3003 UNLESS NOTED OTHERWISE. CLEAR COVER IN PARENTHESSES () DENOTES CLEAR COVER WHEN THE AS-BUILT APPLICATION IS EXPOSED TO WEATHER. OTHERWISE, IT DENOTES CLEAR COVER WHEN THE AS-BUILT APPLICATION IS EXPOSED TO WEATHER.
H.	ALL LAP SPICES SHALL BE CLASS B TENSION LAP SPICES IN ACCORDANCE WITH ACI 318 UNLESS NOTED OTHERWISE. SEE LAP SPICE SCHEDULE ON SHEET A-3003 FOR LAP SPICE LENGTHS, UNLESS NOTED AS CONTINUOUS. REINFORCEMENT SHALL ONLY BE SPICED AT LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS. CONTRACTOR SHALL SUBMIT THE MECHANICAL SPICES TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
I.	A MINIMUM LAP SPICE OF 8" SHALL BE PROVIDED AT ALL END AND SIDE LAP CONDITIONS FOR WELDED WIRE REINFORCEMENT UNLESS NOTED OTHERWISE.
J.	MECHANICAL SPICES ARE REQUIRED WHERE SPECIFIED ON THE CONTRACT DOCUMENTS. MECHANICAL SPICES ARE ALSO REQUIRED TO SPICE #4 AND #10 BARS. MECHANICAL SPICES MAY ALSO BE USED AT THE CONTRACTOR'S OPTION, PROVIDED THE MECHANICAL SPICES HAVE A CURRENT LOGS REPORT DEMONSTRATING THEY CAN DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION OR COMPRESSION. MECHANICAL SPICES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
K.	THE USE OF WELDED SPICES IS PROHIBITED UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL SUBMIT THE LOCATIONS OF WELDED SPICES TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. IF APPROVED, WELDED SPICES SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.
L.	DOWELS SHALL MATCH SIZE AND SPACING OF PRIMARY REINFORCEMENT UNLESS NOTED OTHERWISE.
M.	SEE TYPICAL DETAILS FOR REINFORCEMENT REQUIRED AT OPENINGS AND PENETRATIONS.
N.	SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCEMENT BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.

TILT-UP CONCRETE PANELS

- A. DESIGN, CONSTRUCTION, AND ERECTION OF TILT-UP CONCRETE PANELS AND THEIR CONNECTIONS TO ONE ANOTHER SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, ACI 318 AND ACI 561.
- B. CONTRACTOR SHALL RETAIN A DELEGATED ENGINEER FOR THE DESIGN OF ALL TILT-UP CONCRETE PANELS, COLUMNS, AND ROOFS AS DETAILED IN THE CONTRACT DOCUMENTS.
- C. DELEGATED ENGINEER SHALL REFER TO ARCHITECTURAL DRAWINGS FOR PANEL SIZES AND LAYOUT. PROVIDE WALL JOINTS TO ALLOW FOR THE PROPER EXPANSION AND CONTRACTION OF WALLS. ALL PANEL EDGES SHALL BE CHAMFERED, UNLESS NOTED OTHERWISE.
- D. TILT-UP CONCRETE PANELS SHALL BE DESIGNED TO RESIST APPLICABLE GRAVITY AND WIND LOADS. TILT-UP CONCRETE PANELS SHALL BE DESIGNED WITH ADEQUATE CAPACITY TO SPAN BETWEEN BRACING LOCATIONS.
- E. BRACING FOR TILT-UP CONCRETE PANELS SHALL NOT BE REMOVED UNTIL ALL PERMANENT CONNECTIONS ARE COMPLETED AND HAVE BEEN INSPECTED BY THE TESTING AGENCY.
- F. DELEGATED ENGINEER SHALL PROVIDE ALL ENGINEERING AND DETAILING OF THE TILT-UP CONCRETE PANELS, PANEL-TO-PANEL CONNECTIONS, PANEL-TO-STRUCTURAL STEEL, COLUMN CONNECTIONS, AND PANEL-TO-STRUCTURAL CONNECTIONS. PROVIDE THE LOADS SPECIFIED IN THE GENERAL NOTES, WIND LOADING DIAGRAMS, FRAMING PLANS, AND DETAILS.
- G. DELEGATED ENGINEER TO DESIGN ALL HARDWARE FOR LIFTING AND BRACING AS REQUIRED. ADD ADDITIONAL LIMITS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS.
- H. TILT-UP CONCRETE PANELS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT THE TIME OF ERECTION.
- I. DELEGATED ENGINEER SHALL PROVIDE COMPLETE FABRICATION AND ERECTION DRAWINGS, DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW.
- J. CONTRACTOR SHALL REMOVE AND REPAIR ALL INSERTS AFTER BRACING HAS BEEN REMOVED. REPAIR SHALL MEET ALL ARCHITECTURAL REQUIREMENTS FOR FINISHES.

ABBREVIATIONS

ADDL	ADDITIONAL	KSI	KIPS PER SQUARE INCH
ADJ	ADJACENT		
AF	ABOVE FINISHED FLOOR	L	LENGTH
ALT	ALTERNATE	LB(S)	POUNDS(S)
APPROX	APPROXIMATE	LL	LIVE LOAD
ARCH	ARCHITECT OR ARCHITECTURAL	LLH	LONG LEG HORIZONTAL
ASD	ALLOWABLE STRESS DESIGN	LLV	LONG LEG VERTICAL
		LONG	LONGITUDINAL
		LRFD	LOAD RESISTANCE FACTORED DESIGN
B/B	BOTTOM OF	LSH	LONG SIDE HORIZONTAL
BB	BACK-TO-BACK	LSV	LONG SIDE VERTICAL
BLDG	BUILDING	LTS	LAP TENSION SPLICE
BLKG	BLOCKING	LW	LIGHT WEIGHT
BP	BASE PLATE	LWC	LIGHT WEIGHT CONCRETE
BRT	BEARING	M	MOMENT
BTM	BOTTOM	MAX	MAXIMUM
BTWN	BETWEEN	MC	MOMENT CONNECTION(S)
		MECH	MECHANICAL
		MEP	MECHANICAL, ELECTR

COMPOSITE STEEL FLOOR DECK SHALL BE A MINIMUM YIELD STRENGTH OF 50 KSI AND SHALL CONFORM TO ASTM A36 WITH G30 HOT-DIPPED GALVANIZATION, UNLESS NOTED OTHERWISE.

ALL SHEAR CONNECTORS SHALL BE DESIGNED AND PLACED IN ACCORDANCE WITH THE CALLING OUT OF A NUMBER OF REQUIRED STEEL HEADED STUD ANCHORS, FLOOR AND BEAM ARE DESIGNED TO ACT COMPOSITELY BY USE OF SHEAR STUDS ON THE BEAM TOP FLANGE.

ALL SHEAR CONNECTED BEAMS SHALL BE USED IN ACCORDANCE WITH ANCHOR PLACEMENT DETAIL FOR PLACEMENT REQUIREMENTS.

IF LONGITUDINAL STEEL HEADED STUD ANCHOR SPACING EXCEEDS 12 INCHES, PLAGUED WELD DECK TO BEAM BETWEEN STUDS.

COMPOSITE STEEL FLOOR DECK SHALL BE ATTACHED TO SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS. WHEN DECK THICKNESS IS LESS THAN 0.28 INCHES, WELDS MUST BE MADE THROUGH MINIMUM 16 GAUGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS FOLLOWS:

A. AT BUTT ENDS AT 12 INCHES ON CENTER

B. AT INTERMEDIATE SUPPORTS AT 12 INCHES ON CENTER

C. AT BEAMS MID-SPAN AND 3/4 OF EACH END, IF THE SHEAR IS SMALLER. HEX HEAD SCREWS, SIZE #10, OR CRIMPING (BUTT PUNCHING) MAY BE USED AT SIDE LAP CONNECTIONS.

CONCRETE BONDING-TYPE UNITS SHALL BE FORMED WITH DEFORMATIONS TO PROVIDE AN INTERLOCK BETWEEN CONCRETE.

E. DESIGN AND PROVIDE FLASHING AND CLOSURE PLATES AT WALL ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CLOSURE. COORDINATE ALL CLOSURES WITH ELEVATOR, STAIR, AND MECHANICAL ROOMS.

F. SHEAR CONNECTORS / SHEAR STUDS SHALL BE TYPE B AND CONFORM TO AWS D1.1, ASTM A108, AND ASTM A242 SPECIFICATIONS FOR 1010 THROUGH 1020 MILD STEELS. MINIMUM YIELD STRENGTH IS 51 KSI AND MINIMUM TENSILE STRENGTH IS 68 KSI.

G. ALL STEEL HEADED STUD ANCHORS SHALL BE 3/4 INCH DIAMETER X (FLUTE HEIGHT + 1 1/2 INCH) LONG AFTER WELDING UNLESS NOTED OTHERWISE. MINIMUM CLEARANCE FROM TOP OF STUD TO TOP OF SLAB IS 1 INCH.

H. THE MINIMUM SPACING OF STEEL HEADED STUD ANCHORS SHALL NOT EXCEED 12 INCHES ON CENTER (ONE STUD PER MAXIMUM SPACING OF 3/4 INCH HEADED STUD ANCHORS SHALL NOT EXCEED 12 INCHES ON CENTER (ONE STUD PER FOOT)) UNLESS NOTED OTHERWISE ON PLAN.

I. THE MINIMUM SPACING OF STEEL HEADED STUD ANCHORS SHALL BE 12 INCHES ON CENTER WHEN COMPLETE, SHOULD BE READY TO RECEIVE CONCRETE. THE COMPOSITE STEEL FLOOR DECK HAS BEEN DESIGNED TO SUPPORT CONSTRUCTION LOADS.

J. THE MINIMUM SPACING OF STEEL HEADED STUD ANCHORS SHALL BE 12 INCHES ON CENTER WHEN COMPLETED BY THE CONTRACTOR AND SHALL BE SHOWN ON THE SHOP DRAWINGS. THE SHOP DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE.

K. THE MINIMUM SPACING OF STEEL HEADED STUD ANCHORS SHALL BE 12 INCHES ON CENTER AS INDICATED ON THE DRAWINGS. MAINTAINING MINIMUM SLAB THICKNESS OVER BEAMS THROUGHOUT SPAN. ELEVATED SLAB SHALL BE PLACED WITH MINIMUM THICKNESS THROUGHOUT WITH NO MORE THAN 1/4" OF ADDITIONAL THICKNESS IN ANY DIRECTION.

L. COMPOSITE STEEL FLOOR DECK HANGER TAB LOADS SHALL NOT EXCEED 60 POUNDS PER HANGER TAB.

M. IN ADDITION, LOADS ON HANGER TABS SHALL BE DISTRIBUTED IN SUCH A MANNER THAT THE TRIBUTARY LOADS EXCEED 5 POUNDS PER SQUARE FOOT AND SHALL NOT EXCEED 5 POUNDS PER SQUARE FOOT. DO NOT HANG MEV EQUIPMENT AND PIPING DIRECTLY FROM STEEL DECK.

COMPOSITE STEEL FLOOR DECK SHALL BE A MINIMUM YIELD STRENGTH OF 50 KSI AND SHALL CONFORM TO ASTM A36 WITH G30 HOT-DIPPED GALVANIZATION, UNLESS NOTED OTHERWISE.

ALL STEEL FLOOR DECK SHALL BE PROTECTED FROM CORROSION BY THE FOLLOWING CALLING OUT A NUMBER OF REQUIRED STEEL HEADED STUD ANCHORS, FLOOR BEAM AND BEAM ARE DESIGNED TO ACT COMPOSITELY BY THE STUD STEELS ON THE BEAM TOP FLANGE.

ALL STUDS ARE TO BE SPACED AND ANCHOR PLACEMENT DETAIL FOR PLACEMENT REQUIREMENTS.

IF LONGITUDINAL STEEL HEADED STUD ANCHOR SPACING EXCEEDS 12 INCHES, PLUG WELD DECK TO BEAM BETWEEN STUDS.

COMPOSITE STEEL FLOOR DECK SHALL BE ATTACHED TO SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS. WHEN DECK THICKNESS IS LESS THAN 0.28 INCHES, WELDS MUST BE MADE THROUGH MINIMUM 16 GAUGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS FOLLOWS:

A. AT BUTT ENDS AT 12 INCHES ON CENTER

B. AT INTERMEDIATE SUPPORTS AT 12 INCHES ON CENTER

C. AT STEEL MID-SPAN AND QUARTER POINTS, IF THE OVERHANG IS SMALLER. HEX HEAD SCREWS, SIZE #10, OR CRIMPING (BUTT PUNCHING) MAY BE USED AT SIDE LAP CONNECTIONS.

CONCRETE BONDING-TYPE UNITS SHALL BE FORMED WITH DEFORMATIONS TO PROVIDE AN INTERLOCK BETWEEN CONCRETE AND STEEL.

E. DESIGN AND PROVIDE FLASHING AND CLOSURE PLATES AT WALL ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CLOSURE. COORDINATE ALL CLOSURES WITH ELEVATOR, STAIR, AND MECHANICAL ROOMS.

F. SHEAR CONNECTORS / STEEL SHEAR STUDS SHALL BE TYPE B AND CONFORM TO AWS D1.1, ASTM A108, AND ASTM A242 SPECIFICATIONS FOR 11010 THROUGH 1020 MID STEELS. MINIMUM YIELD STRENGTH IS 51 KSI AND MINIMUM TENSILE STRENGTH IS 68 KSI.

G. ALL STEEL HEADED STUD ANCHORS SHALL BE 3/4 INCH DIAMETER X (FLUTE HEIGHT + 1 1/2 INCH) LONG AFTER WELDING UNLESS NOTED OTHERWISE. MINIMUM CLEARANCE FROM TOP OF STUD TO TOP OF SLAB IS 1 INCH.

H. THE MINIMUM SPACING OF STEEL HEADED STUDS SHALL BE 12 INCHES ON CENTER UNLESS OTHERWISE NOTED ON PLAN. MAXIMUM SPACING OF 3/4 INCH HEADED STUD ANCHORS SHALL NOT EXCEED 12 INCHES ON CENTER (ONE STUD PER FOOT) UNLESS NOTED OTHERWISE ON PLAN.

I. ALL STEEL FLOOR DECK SHALL BE 1/2 INCH DECK THICK WHEN COMPLETE, SHOULD BE READY TO RECEIVE CONCRETE. THE COMPOSITE STEEL FLOOR DECK HAS BEEN DESIGNED TO SUPPORT CONSTRUCTION LOADS.

J. THE COMPOSITE STEEL FLOOR DECK SHALL BE PROTECTED FROM CORROSION BY THE FOLLOWING CALLING OUT BY THE CONTRACTOR AND SHALL BE SHOWN ON THE SHOP DRAWINGS. THE CORROSION SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE.

K. THE STEEL FLOOR DECK SHALL BE PROTECTED FROM CORROSION BY THE FOLLOWING CALLING OUTS AS INDICATED ON THE DRAWINGS. MAINTAINED MINIMUM SLAB THICKNESS OVER BEAMS THROUGHOUT SPAN. ELEVATED SLAB SHALL BE PLACED WITH MINIMUM THICKNESS THROUGHOUT WITH NO MORE THAN 1/4" OF ADDITIONAL THICKNESS IN ANY LOCATION.

L. COMPOSITE STEEL FLOOR DECK HANGER TAB LOADS SHALL NOT EXCEED 60 POUNDS PER HANGER TAB.

M. IN ADDITION, LOADS ON HANGER TABS SHALL BE DISTRIBUTED IN SUCH A MANNER THAT THE TRIBUTARY LOADS EXCEED 5 POUNDS PER SQUARE FOOT AND SHALL NOT EXCEED 5 POUNDS PER SQUARE FOOT.

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F. SHEAR CONNECTORS / SHEAR STUDS SHALL BE TYPE B AND CONFORM TO AWS D1.1, ASTM A108, AND ASTM A242 SPECIFICATIONS FOR 11010 THROUGH 1020 MILS STEELS. MINIMUM YIELD STRENGTH IS 51 KSI AND MINIMUM TENSILE STRENGTH IS 68 KSI.

G. ALL STEEL HEADED STUD ANCHORS SHALL BE 3/4 INCH DIAMETER X (FLUTE HEIGHT + 1 1/2 INCH) LONG AFTER WELDING UNLESS NOTED OTHERWISE. MINIMUM CLEARANCE FROM TOP OF STUD TO TOP OF SLAB IS 1 INCH.

H. THE MINIMUM SPACING OF STEEL HEADED STUD ANCHORS SHALL BE 12 INCHES ON CENTER UNLESS NOTED ON PLAN. MAXIMUM SPACING OF 3/4 INCH HEADED STUD ANCHORS SHALL NOT EXCEED 12 INCHES ON CENTER (ONE STUD PER FOOT) UNLESS NOTED OTHERWISE ON PLAN.

I. ALL STEEL FLOOR DECK SHALL BE 1/2 INCH DECK THICK WHEN COMPLETE, SHOULD BE READY TO RECEIVE CONCRETE. THE COMPOSITE STEEL FLOOR DECK HAS BEEN DESIGNED TO SUPPORT CONSTRUCTION LOADS.

J. THE COMPOSITE STEEL FLOOR DECK SHALL BE DESIGNED TO SUPPORT CONSTRUCTION LOADS AS DETERMINED BY THE CONTRACTOR AND SHALL BE SHOWN ON THE SHOP DRAWINGS. THE LIFTING SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE.

K. THE STEEL FLOOR DECK SHALL BE DESIGNED TO SUPPORT CONSTRUCTION LOADS AS INDICATED ON THE DRAWINGS. MAINTAINED MINIMUM SLAB THICKNESS OVER BEAMS THROUGHOUT SPAN. ELEVATED SLAB SHALL BE PLACED WITH MINIMUM THICKNESS THROUGHOUT WITH NO MORE THAN 1/4" OF ADDITIONAL THICKNESS IN ANY LOCATION.

L. COMPOSITE STEEL FLOOR DECK HANGER TAB LOADS SHALL NOT EXCEED 60 POUNDS PER HANGER TAB.

M. IN ADDITION, LOADS ON HANGER TABS SHALL BE DISTRIBUTED IN SUCH A MANNER THAT THE TRIBUTARY LOADS EXCEED 5 POUNDS PER SQUARE FOOT. DO NOT HANG MEQ EQUIPMENT AND PIPING DIRECTLY FROM STEEL DECK.

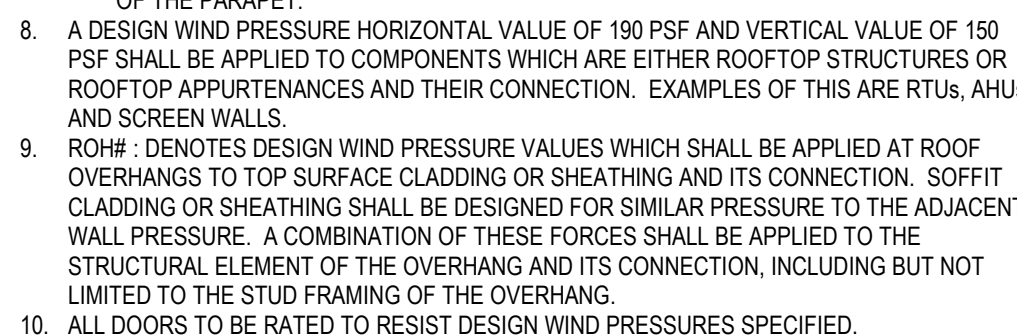
BAR SIZE	MIN BAR SPACING (INCHES)	TENSION (LTS)			
		f _c = 4,000 PSI		f _c = 5,000 PSI	
		TOP BARS	OTHER	TOP BARS	OTHER
#4	1.500	33	25	29	23
#5	1.875	41	31	36	28
#6	2.250	49	37	44	34
#7	2.625	71	54	63	49
#8	3.000	81	62	72	56
#9	3.500	91	70	81	63
#10	3.875	102	79	92	71
#11	4.250	114	87	102	78

WALL REINFORCEMENT - HORIZONTAL BAR LAP SPlice LENGTH SCHEDULE (INCHES)				
BAR SIZE	MIN BAR SPACING (INCHES)	TENSION (LTS)		COMPRESSION (LCS)
		F _c = 4,000 PSI	F _c = 6,000 PSI	
#4	1,500	33	27	15
#5	1,875	40	34	19
#6	2,250	48	44	23
#7	2,625	105	87	27
#8	3,000	121	98	30
#9	3,300	137	122	34
#10	3,875	153	138	39
#11	4,250	170	152	43

WALL REINFORCEMENT - VERTICAL BAR LAP SPLICE LENGTH SCHEDULE (INCHES)					
BAR SIZE	MIN BAR SPACING (INCHES)	TENSION (LTS)			COMPRESSION (LCS)
		$f_c = 4000$ PSI	$f_c = 5000$ PSI	$f_c = 6000$ PSI	
#4	2'00"	25	23	21	15
#5	2'125"	31	28	26	19
#6	2'250"	37	34	31	23
#7	2'375"	54	49	45	27
#8	2'500"	62	56	51	30
#9	2'675"	70	63	57	34
#10	3'250"	118	106	96	39
#11	3'625"	131	117	107	43

NOTES:

1. FOR COMPONENTS HAVING EFFECTIVE AREAS IN BETWEEN TABULATED VALUES, DESIGN LOADS MAY BE INTERPOLATED. OTHERWISE DESIGN LOAD SHALL BE TAKEN FROM THE NEXT LOWEST TABULATED EFFECTIVE AREA.
2. FOR DESIGN WIND SPEED, THE DESIGN WIND SPEED SHALL BE TAKEN FROM THE DESIGN WIND SPEED VALUES MAY BE MULTIPLIED BY 0.6 FOR USE WITH SERVICE LEVEL OR ASD DESIGN, AND TO THE BUILDING CODE FOR APPLICABLE LOAD COMBINATIONS.
3. $a = 0.0$; SEE ROOF PLAN BELOW FOR LOCATION OF a -ZONES. WALL a -ZONE LOCATIONS $a = 0$ MATCH a -ZONE LOCATIONS OF ROOF.
4. $0.8h \geq 12'$; SEE ROOF PLAN BELOW FOR LOCATION OF WALL a -ZONES.
5. POSITIVE PRESSURE VALUES REFER TO FORCES ACTING TOWARDS BUILDING OR COMPONENT FOR COMPONENT.
6. POSITIVE PRESSURE VALUES REFER TO FORCES ACTING AWAY FROM BUILDING OR COMPONENT.
7. EACH COMPONENT AND ITS CONNECTION SHALL BE DESIGNED FOR MAXIMUM POSITIVE AND NEGATIVE PRESSURES.
8. PARAPET COMPONENTS AND CLADDING ARE THOSE ELEMENTS WHICH EXIST ABOVE THE HORIZONTAL PLANE OF THE ROOF AND SHALL BE DESIGNED FOR POSITIVE AND NEGATIVE PRESSURES (OR a) APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON OUTSIDE FACE.
 - a. POSITIVE PRESSURES 4 OR 5 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
 - b. POSITIVE PRESSURES 2 OR 3 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
9. THIS SHALL BE THE APPLIED DESIGN OF THE STRUCTURAL ELEMENT OF THE PARAPET AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE PARAPET.
10. A DESIGN WIND PRESSURE HORIZONTAL VALUE OF 120 PSF AND VERTICAL VALUE OF 150 PSF SHALL BE APPLIED TO COMPONENTS WHICH ARE EITHER ROOF/ROOF STRUCTURES OR ROOF APPEARANCES AND THEIR CONNECTION. EXAMPLES OF THIS ARE RTUS, ARJUS, AND RAILS.
11. **RDHF** : DENOTES DESIGN WIND PRESSURE VALUES WHICH SHALL BE APPLIED AT ROOF OVERHANGS TO TOP SURFACE CLADDING OR SHEATHING AND ITS CONNECTION. SOFFIT TO BOTTOM SURFACE CLADDING OR SHEATHING AND ITS CONNECTION SHALL BE APPLIED TO WALL PRESSURE. A COMBINATION OF THESE FORCES SHALL BE APPLIED TO THE STRUCTURAL ELEMENT OF THE OVERHANG AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE OVERHANG.
12. ALL DOORS TO BE RATED TO WITHSTAND PRESSURES SPECIFIED.



A

GENERAL

- A. THIS STRUCTURAL INSPECTION PLAN IS PREPARED IN ACCORDANCE WITH SECTION 553.79(5) OF THE FLORIDA STATUTES WHICH DESCRIBES THE REQUIREMENT THAT A STRUCTURAL INSPECTION PLAN BE PREPARED BY THE ENGINEER OF RECORD FOR A TRESHOLD BUILDING.
- B. THE PURPOSE OF THIS STRUCTURAL INSPECTION PLAN IS TO PROVIDE SPECIFIC INSPECTION PROCEDURES AND SCHEDULES SO THAT THE BUILDING CAN BE ADEQUATELY INSPECTED FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- C. STRUCTURAL INSPECTIONS SHALL BE PERFORMED BY THE SPECIAL INSPECTOR REGISTERED UNDER SECTION 471 OF THE FLORIDA STATUTES AS AN ENGINEER.
- D. THE OWNER SHALL EMPLOY THE SERVICES OF A SPECIAL INSPECTOR IN COMPLIANCE WITH THE PROVISIONS OF CHAPTER 553.79 OF THE FLORIDA STATUTES.
- E. THE SPECIAL INSPECTOR SHALL INSPECT THE FRAMING SHOWN ON THE STRUCTURAL DRAWINGS IN ACCORDANCE WITH THIS PLAN TO VERIFY THAT THE WORK IS CONSTRUCTED IN GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS, EXCEPT FOR ACCEPTED VARIATIONS.
1. THE CONTRACT DOCUMENTS ARE DEFINED AS THE PERMITTED DRAWINGS, PROJECT SPECIFICATIONS, AND RECORDED AGENDA AND AMENDMENTS.
 2. UNLESS NOTED OTHERWISE, WORK OF THIS PLAN EXCLUDES THE INSPECTION OF ELEMENTS THAT DO NOT CONTRIBUTE TO THE CAPACITY OF THE PRIMARY STRUCTURAL FRAME. THIS INCLUDES, BUT IS NOT LIMITED TO, RAILINGS, FIRE PROTECTION, ROOFING, GLAZED WINDOW SYSTEMS, MECHANICAL/ELECTRICAL SYSTEMS, ARCHITECTURAL COMPONENTS, SITE WORK, AND OSHA SAFETY PROVISIONS OR OTHER SAFETY STANDARDS THAT APPLY DURING THE CONSTRUCTION PERIOD. PRECAST CLADDING, EXTERIOR MASONRY WALLS, AND SLAB ON-GROUND ARE SPECIFICALLY INCLUDED.
- F. AT A MINIMUM, THE SPECIAL INSPECTOR SHALL PERFORM THE MANDATORY STRUCTURAL INSPECTIONS AS REQUIRED UNDER THE PROVISIONS OF THE FLORIDA BUILDING CODE, IN ACCORDANCE WITH THE SCOPE AND SCHEDULE OUTLINED HEREIN.
- G. THE SPECIAL INSPECTOR SHALL LOG EACH SITE VISIT DOCUMENTING THE PROGRESS OF THE WORK, THE RELEVANT TESTING CONDUCTED, THE AREAS INSPECTED, AND ANY OTHER ELEMENTS PERTINENT TO THE WORK PROGRESS AT THE TIME OF THE INSPECTION. THE LOG RECORD SHALL REMAIN ON SITE AND ACCESSIBLE AT ANY TIME.
- H. DAILY SIGNED AND SEALED FIELD REPORTS SHALL BE SUBMITTED ON A WEEKLY BASIS TO THE ENFORCING AGENCY, ARCHITECT OR STRUCTURAL ENGINEER OF RECORD, AND OWNER.
- I. THE SPECIAL INSPECTOR SHALL NOT MAKE DESIGN DECISIONS, DIRECT THE CONTRACTOR'S WORK, NOR BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS.
- J. THE SPECIAL INSPECTOR MAY SEND A FULL-TIME COLLEAGUE AS HIS AUTHORIZED REPRESENTATIVE TO THE PROJECT, BUT THAT PERSON SHALL BE KNOWLEDGEABLE AND HAVE A COLLEGE DEGREE IN CIVIL OR STRUCTURAL ENGINEERING.

E

CONTRACTOR RESPONSIBILITIES

- A. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR WITH AN OFFICE AT THE CONSTRUCTION SITE THAT INCLUDES, AT MINIMUM, A DESK, CHAIR, PLAN TABLE, INTERNET ACCESS, AND JANITORIAL SERVICES IN AIR-CONDITIONED SPACE.
- B. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR WITH AN UPDATED COPY OF ALL PERMIT DOCUMENTS, REVIEWED AND APPROVED SHOP DRAWING SUBMITTALS, TEST REPORTS, AND OTHER ITEMS WITH THE LATEST INFORMATION IN A TIMELY MANNER.
- C. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS NOTICE TO THE SPECIAL INSPECTOR PRIOR TO THE NEED FOR ANY INSPECTION ON SITE.
- D. THE CONTRACTOR SHALL COOPERATE AND ASSIST THE SPECIAL INSPECTOR IN PERFORMING HIS INSPECTION DUTIES AND SHALL PROVIDE HIM FREE ACCESS TO THE WORK AT ALL TIMES.
- E. THE PRESENCE OF THE SPECIAL INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO COMPLY WITH CONTRACT DOCUMENTS. THE CONTRACTOR HAS THE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS AND THE COSTS OF RECTIFYING THOSE DEVIATIONS.
- F. THE CONTRACTOR MAY CORRECT WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS OR MAY ISSUE A REQUEST TO THE DESIGN PROFESSIONAL OF ACCEPTANCE OF THE DEVIATION.
- G. CONSTRUCTION PERFORMED WITHOUT INSPECTION MAY REQUIRE TESTING OR MAY NEED TO BE REMOVED AS DETERMINED BY THE STRUCTURAL ENGINEER OR ARCHITECT OF RECORD.
- H. THE CONTRACTOR'S SHORING ENGINEER SHALL SUPERVISE, INSPECT, AND CERTIFY THE INSTALLATION OF ALL SHORING AND RE-SHORING PER APPROVED SHOP DRAWINGS. THE SHORING ENGINEER SHALL PROVIDE A SIGNED AND SEALED INSPECTION CERTIFICATION TO THE SPECIAL INSPECTOR PRIOR TO ALL CONCRETE POURS.

FREE OWNER RESPONSIBILITIES

- A. THE FEE OWNER SHALL RETAIN A GEOTECHNICAL ENGINEER TO PROVIDE INSPECTION SERVICES FOR MONITORING THE PREPARATION OF THE FOUNDATION BEARING SURFACE AND PILE FOUNDATION ELEMENTS.
- B. THE FEE OWNER SHALL RETAIN AN INDEPENDENT TESTING LABORATORY FOR MATERIAL SAMPLING AND TESTING SERVICES REQUIRED IN THE FLORIDA BUILDING CODE.
- C. THE FEE OWNER SHALL ARRANGE AND ENSURE THAT ALL NECESSARY UPDATED CONSTRUCTION DOCUMENTS WITH THE LATEST INFORMATION, APPROVED SHOP DRAWINGS, LATEST SKETCHES, AND ANY OTHER TYPE OF CORRESPONDENCE WHICH MAY AFFECT THE INSPECTIONS BE FURNISHED TO THE SPECIAL INSPECTOR IN A TIMELY MANNER.
- D. THE FEE OWNER SHALL ENSURE THAT THE CONTRACTOR PROVIDES SHOP DRAWINGS FOR ALL PRECAST STRUCTURAL COMPONENTS. THESE SHOP DRAWINGS MUST BE DESIGNED, SIGNED AND SEALED BY A REGISTERED FLORIDA PROFESSIONAL ENGINEER AND HAVE BEEN REVIEWED AND STAMPED BY THE ENGINEER OF RECORD.

D

SPECIAL INSPECTOR RESPONSIBILITIES

- A. PRIOR TO STARTING WITH THEIR WORK, THE SPECIAL INSPECTOR, AND THEIR AUTHORIZED REPRESENTATIVE, IF APPLICABLE, SHALL ATTEND A PRE-CONSTRUCTION MEETING FOR THE PURPOSE OF BECOMING FAMILIAR WITH THE SPECIFIC STRUCTURAL COMPONENTS AND SYSTEM WHICH THEY WILL BE RESPONSIBLE FOR INSPECTING.
- B. THE SPECIAL INSPECTOR SHALL INSPECT ALL STRUCTURAL SYSTEMS NOTED BELOW AND IN COMPLIANCE WITH THOSE LISTED UNDER THE "GENERAL" HEADING.
- C. THE SPECIAL INSPECTOR SHALL VISIT THE SITE AT SUCH FREQUENCY TO SATISFY THEMSELVES THAT THEIR REPRESENTATIVE'S INSPECTIONS COMPLY WITH THIS PLAN.
- D. THE SPECIAL INSPECTOR SHALL DEDICATE THEIR ENTIRE TIME ON-SITE TO THE REQUIREMENTS OF THIS PLAN AND SHALL NOT PERFORM OTHER WORK, SUCH AS MATERIAL TESTING.

REPORTING

- A. THE SPECIAL INSPECTOR SHALL RECORD PROGRESS, WORKING CONDITIONS, OBSERVATIONS, TESTING, DEVIATIONS FROM THE CONTRACT DOCUMENTS, AND ANY REQUIRED CORRECTIVE ACTION. THEY SHALL RETAIN THE RECORDS FOR A MINIMUM OF 7 YEARS AFTER COMPLETION OF THE PROJECT.
- B. THE SPECIAL INSPECTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTOR IN PERSON, AND THE ARCHITECT AND STRUCTURAL ENGINEER BY TELEPHONE, OF MATERIALS, TESTS, EQUIPMENT, WORKMANSHIP, OR CONSTRUCTION THAT:
1. DOES NOT CONFORM TO THE CONTRACT DOCUMENTS, OR
 2. IS NOT INSPECTED OR TESTED AND CANNOT BE INSPECTED OR TESTED IN PLACE
- C. THE SPECIAL INSPECTOR SHALL THEN IMMEDIATELY ISSUE THOSE EXCEPTIONS IN WRITING TO THOSE LISTED ABOVE AND ATTACH A COPY TO THE DAILY INSPECTION REPORT.
- D. THE SPECIAL INSPECTOR SHALL KEEP AN EXCEPTIONS FILE AND REVIEW IT ON A DAILY BASIS, UPDATING AS EXCEPTIONS ARE RECTIFIED. IF ANY EXCEPTIONS ARE NOT RESOLVED IN A TIMELY MANNER, THE SPECIAL INSPECTOR SHALL ISSUE A NONCOMPLIANCE NOTICE TO THE CONTRACTOR AND SHALL COPY THE ENFORCING AGENCY, OWNER'S REPRESENTATIVE, ARCHITECT, AND STRUCTURAL ENGINEER.
- E. AFTER EACH INSPECTION, THE INSPECTOR SHALL WRITE AND SIGN AN INSPECTION REPORT. THE REPORT SHALL INCLUDE THE FOLLOWING:
1. THE NAME AND LOCATION OF PROJECT; NAME OF INSPECTOR; PERMIT NUMBER; DATE; WORKING CONDITIONS, INCLUDING WEATHER AND TEMPERATURE; AND TYPE AND LOCATION OF WORK BEING PERFORMED.
 2. DETAILS OF EACH INSPECTION, INCLUDING THE PRESENCE AND ACTIVITIES OF THE TESTING AGENCY.
 3. NOTE DEFICIENCIES IN THE WORK AND ANY UNUSUAL CIRCUMSTANCES AFFECTING THE PERFORMANCE OF WORK, INCLUDING CHANGES IN MATERIALS OR WORK SEQUENCE. PLACING EMPHASIS ON RECURRING DEFICIENCIES.
 4. IDENTIFY CORRECTIONS TO DEFICIENCIES LISTED IN PREVIOUS REPORTS.
- F. SINCE THE SPECIAL INSPECTOR DOES NOT CERTIFY THAT THE CONTRACT DOCUMENTS ARE IN COMPLIANCE WITH THE GOVERNMENT CODES, ALL STATEMENTS ISSUED SHALL REFER TO WHETHER OR NOT COMPLETED WORK IS IN SUBSTANTIAL ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- G. THE REPORT SHALL ALSO COMMENT ON THE FOLLOWING, WHEN APPLICABLE:
1. TEST REPORTS THAT DO NOT COMPLY WITH THE CONTRACT DOCUMENTS.
 2. THE GEOTECHNICAL ENGINEER'S INSPECTION REPORTS.
 3. SHORING AND RESHORING ENGINEER'S INSPECTION REPORTS.
 4. CHANGES MADE IN THE FIELD.
- H. THE REPORT SHALL ALSO INCLUDE PHOTOGRAPHS, WHEN APPROPRIATE.
- I. THE SPECIAL INSPECTOR SHALL SUBMIT THE REPORTS TO THE ENFORCING AGENCY, OWNER'S REPRESENTATIVE, ARCHITECT, AND STRUCTURAL ENGINEER UNDER A SIGNED AND SEALED COVER LETTER ON A WEEKLY BASIS OR AS DIRECTED BY THE ENFORCING AGENCY.
- J. THE SPECIAL INSPECTOR SHALL POST AT THE JOBSITE A LOG SUMMARIZING ALL INSPECTIONS. THE HEADER SHALL CONTAIN, AT A MINIMUM, THE PROJECT NAME AND LOCATION; PERMIT NUMBER; AND THE NAME OF THE SPECIAL INSPECTOR, OWNER, AND CONTRACTOR. THE INSPECTOR SHALL WRITE AN ENTRY AFTER EACH INSPECTION THAT INCLUDES THE DATE, CONSTRUCTION PHASE, WORK DESCRIPTION, COMMENTS, HIS SIGNATURE, AND WHETHER THE WORK INSPECTED IS APPROVED OR REJECTED.
- K. UPON COMPLETION OF THE BUILDING AND PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, THE SPECIAL INSPECTOR SHALL ISSUE A SIGNED AND SEALED STATEMENT ATTESTING THAT THE PART OF THE PROJECT UNDER THEIR INSPECTION RESPONSIBILITIES HAS BEEN CONSTRUCTED IN SUBSTANTIAL ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 553.79(1) OF THE FLORIDA STATUTES AND SHALL BE SUBMITTED TO THE ENFORCING AGENCY, OWNER, ARCHITECT, AND STRUCTURAL ENGINEER.

B

SOIL OR FOUNDATION PREPARATION

- A. THE GEOTECHNICAL ENGINEER OF RECORD FOR THE PROJECT SHALL BE RETAINED BY THE FEE OWNER TO MONITOR THE SITE PREPARATION ACTIVITIES, FOUNDATION BEARING SURFACES, AND PILE FOUNDATION ELEMENTS.
- B. THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE SPECIAL INSPECTOR WITH DAILY REPORTS AND A SUMMARY REPORT INDICATING THAT THE FOUNDATION BEARING SURFACE IS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT, SUCH THAT THE FOUNDATION FOR THE PROJECT WILL FUNCTION AS INTENDED.
- C. THE INDEPENDENT TESTING AGENCY RETAINED BY THE FEE OWNER SHALL MONITOR THE BACKFILL AND COMPACTION OPERATIONS AND PROVIDE THE SPECIAL INSPECTOR WITH REPORTS DOCUMENTING THAT THE OPERATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND THE CONTRACT DOCUMENTS.
- D. ALL INSPECTION AND TESTING REPORTS PROVIDED TO THE SPECIAL INSPECTOR SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN FLORIDA.

SHALLOW FOUNDATIONS

- A. THE SPECIAL INSPECTOR SHALL REVIEW THE SIZE AND CONFIGURATION OF FOUNDATIONS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- B. THE SPECIAL INSPECTOR SHALL REVIEW THE SIZE, PLACEMENT, AND CLEARANCES OF REINFORCEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- C. THE SPECIAL INSPECTOR SHALL REVIEW DOWEL REINFORCEMENT AND DOWEL LENGTHS SUCH THAT LAP SPLICES WILL BE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- D. THE SPECIAL INSPECTOR SHALL VERIFY THAT REINFORCEMENT IS SUPPORTED AND TIED SUCH THAT IT WILL NOT BE DISPLACED DURING THE CONCRETE POUR.

STRUCTURAL CAST-IN-PLACE CONCRETE

- A. THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR A MINIMUM OF 24 HOURS PRIOR TO THE PLACEMENT OF ANY STRUCTURAL CONCRETE.
- B. THE SPECIAL INSPECTOR SHALL:
1. INSPECT SHORING, RESHORING, AND FORMWORK AS FOLLOWS:
 - a. VERIFY THAT THE DELEGATED SHORING AND RESHORING ENGINEER HAS CONFIRMED THAT THE SHORING AND RESHORING ARE IN COMPLIANCE WITH THEIR SHOP DRAWINGS (REFER TO SECTION 1.5F IN THE SPECIAL INSPECTION PLAN). ADDITIONALLY, THE SPECIAL INSPECTOR SHALL SPOT CHECK THE TIE, SHORING AND RESHORING FOR CONFORMANCE WITH THE SHORING AND RESHORING PLANS SUBMITTED TO THE ENFORCING AGENCY.
 - b. SPOT CHECK SHORING AND RESHORING LAYOUT, ALIGNMENT, AND MATERIALS.
 - c. CONFIRM THAT THE TIMING OF SHORING, RESHORING, AND FORMWORK PROCEDURES AND REMOVAL COMPLY WITH THE CONTRACT DOCUMENTS AND THE SHORING AND RESHORING DRAWINGS. WHERE APPROPRIATE, VERIFY THAT CONCRETE TEST CYLINDER STRENGTH IS ADEQUATE PRIOR TO FORM REMOVAL.
 2. VERIFY THAT SLAB THICKNESS IS MAINTAINED AT SLAB DEPRESSIONS AND STEPS.
 3. INSPECT STEEL REINFORCEMENT PER THE STRUCTURAL DRAWINGS, SUPPLEMENTED BY THE APPROVED SHOP DRAWINGS, TO VERIFY:
 1. STEEL REINFORCEMENT GRADE, SIZE, QUANTITY, CONFIGURATION, AND SPACING.
 2. MINIMUM CLEARANCE REQUIREMENTS FROM CONCRETE SURFACES.
 3. STEEL REINFORCEMENT IS ADEQUATELY SUPPORTED AND TIED TO RESIST SHIFTING DURING CONCRETE POUR AND THAT CONCRETE COVER IS PROPER.
 4. HOOKED REINFORCEMENT IS PLACED PROPERLY.
 5. EMBEDMENT LENGTHS, SPICE LOCATIONS, AND LAP SPICE LENGTHS ARE ACCEPTABLE.
 6. MECHANICAL COUPLERS ARE APPROVED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 7. PROPER TIE SPACING, PARTICULARLY AT BEAM/COLUMN INTERSECTIONS.
 8. STEEL REINFORCEMENT LAYERS IN SLABS AND WALLS ARE PROPER.
 9. ALL OPENINGS LARGER THAN 12" AND NOT SHOWN ON THE CONTRACT DOCUMENTS HAVE BEEN REPORTED TO THE STRUCTURAL ENGINEER OF RECORD. CHECK PLACEMENT OF ADDITIONAL REINFORCEMENT AROUND OPENINGS. OPENINGS THROUGH BEAMS ARE PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
 10. IN ONE-WAY SLABS, THAT TEMPERATURE STEEL IS CORRECT, INCLUDING PROPER LAYERING.
 11. IN TWO-WAY SLABS, THAT:
 - a. THE COLUMN STRIP TOP BARS HAVE A UNIFORM SPACING AND ARE NOT BUNDLED TOGETHER.
 - b. THE ADDED TOP BARS ARE PLACED IN THE VICINITY OF THE COLUMN.
 - c. THE TOP AND BOTTOM HOOKED BARS HAVE BEEN PLACED AS REQUIRED, ESPECIALLY AT SLAB EDGES.
 12. THE POSITION OF BARS AT SLAB OFFSETS AND DEPRESSIONS.
 13. ALL STEEL REINFORCEMENT SURFACES ARE FREE OF EXCESS RUST OR OTHER COATING THAT MAY AFFECT THE BONDING CAPACITY.
4. VERIFY THAT EXPANSION JOINT MATERIAL, DOVETAIL SLOTS, ANCHORS, EMBEDDED CONDUITS, AND LOAD CARRYING EMBEDDED ITEMS ARE PROPERLY POSITIONED AND SECURED TO RESIST DISPLACEMENT DURING CONCRETE PLACEMENT. RELOCATION OF, OR MODIFICATION TO, STRUCTURAL ITEMS DUE TO CONFLICTS WITH REINFORCEMENT IS PROHIBITED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

TILT-UP CONCRETE PANELS

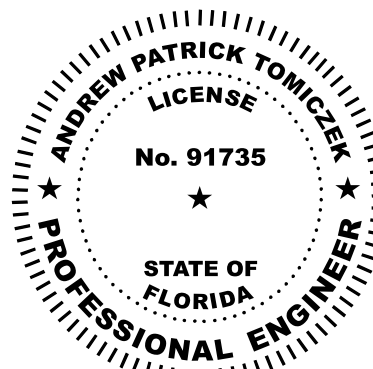
- A. THE SPECIAL INSPECTOR SHALL:
1. INSPECT TILT-UP CONCRETE PANELS AS PER STRUCTURAL CAST-IN-PLACE CONCRETE ABOVE. ALSO CHECK THAT PANEL NUMBERS, CONFIGURATION, OPENINGS, BLOCKOUTS, EMBEDS, AND OTHER INCORPORATED MATERIALS COMPLY WITH THE CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS.
 2. PRIOR TO CASTING PANELS, VERIFY THAT PANEL LOCATIONS AND TEMPORARY BRACING AND SUPPORTS COMPLY WITH THE SHOP DRAWINGS. SPOT CHECK THAT TEMPORARY BRACING IS NOT REMOVED PREMATURELY.
 3. REVIEW ALL CONNECTION DETAILS TO VERIFY THAT CONNECTIONS ARE COMPLETED PROPERLY. VERIFY THAT ALL WELDERS ARE AWS CERTIFIED. VERIFY THE WELD SIZES, CONFIGURATIONS, AND QUALITY ARE PROPER AND THAT WELDS ARE CLEANED AND PROTECTED. CHECK THAT PANELS ARE SOLID GROUTED TO THEIR BASE.
 4. DOCUMENT EACH PANEL WITH VIDEO OR PHOTOGRAPHY PRIOR TO FILLING WITH CONCRETE.

STRUCTURAL STEEL FRAMING

- A. THE SPECIAL INSPECTOR SHALL:
1. INSPECT ALL STRUCTURAL STEEL FRAMING AS REQUIRED BY THE CONTRACT DOCUMENTS. USE BOTH THE CONTRACT DOCUMENTS AND THE SHOP DRAWINGS FOR ALL INSPECTIONS. VERIFY THAT ALL FIELD WELDERS ARE AWS CERTIFIED FOR THE TYPE OF WELDS BEING MADE.
 2. PROVIDE ALL INSPECTIONS REQUIRED BY THE CONTRACT DOCUMENTS. COMPLETE ALL INSPECTIONS AND VERIFY COMPLIANCE PRIOR TO CONCRETE PLACEMENT OR CONCEALMENT.
 - a. CHECK STRUCTURAL STEEL FRAMING FOR POSSIBLE DAMAGE DURING SHIPPING.
 - b. CHECK STRUCTURAL STEEL FRAMING SIZES AND GRADES.
 - c. SPOT CHECK MEMBER STRAIGHTNESS, FINISH, AND CAMBER. CONFIRMING THAT PAINT IS ONLY APPLIED ON APPROPRIATE SURFACES.
 - d. INSPECT SETTING OF ANCHOR BOLTS, EMBEDS, AND OTHER MISCELLANEOUS STRUCTURAL ITEMS FOR SIZE, QUANTITY AND FINISH. CHECK THE INSTALLATION OF COLUMN BASE PLATES FOR PROPER LEVELING, GROUT TYPE, AND GROUT APPLICATION.
 - e. INSPECT ALL FIELD CONNECTIONS AND SPOT CHECK SHOP CONNECTIONS. VERIFY CONNECTION MATERIAL, SIZES, CONFIGURATIONS, AND FIT-UP.
 1. VISUALLY EXAMINE ALL FIELD WELDS AND SPOT CHECK ALL SHOP WELDS FOR TYPE, SIZE, LENGTH, AND QUALITY. VERIFY THAT SPECIFIED TESTING IS PERFORMED BY THE TESTING AGENCY. VERIFY THAT WELDS ARE CLEAN AND FREE FROM SLAG AND THAT RUST PROTECTION HAS BEEN APPLIED PER THE SPECIFICATIONS.
 2. VERIFY THE TYPE, SIZE, AND QUANTITY OF BOLTS IN ALL BOLTED CONNECTIONS. CHECK THAT BOLTS ARE CLEAN AND LUBRICATED, HAVE PROPER WASHERS, AND CONFORM TO THE SPECIFICATIONS. ENSURE BOLT HOLES ARE THE SPECIFIED TYPE AND SIZE. SPOT CHECK THE BOLT TIGHTENING SEQUENCE. VISUALLY VERIFY PROPER DEGREE OF BOLT TIGHTENING, PARTICULARLY OF ALL SLIP CRITICAL BOLTS. CHECK 10% OF LOAD INDICATOR WASHERS WITH A FEELER GAUGE.
 3. CHECK ALL STEEL DECKS PER SDI SPECIFICATIONS AND AS FOLLOWS:
 - a. DECK TYPE, SIZE, GAGE, FINISH, ACCESSORIES, AND WELDING AS REQUIRED BY THE CONTRACT DOCUMENTS. VERIFY THAT SHEAR CONNECTORS ARE TESTED BY TESTING LABORATORY.
 - b. SPACING AND TYPE OF ALL CONNECTIONS.
 - c. WELDING PROCEDURES.
 - d. WELD SIZE, SHAPE, QUALITY, RUST PROTECTION, AND WELD WASHERS WHERE APPLICABLE.
 - e. SCREW SIZE, TYPE, AND FINISH AND OTHER CONNECTION TO SUPPORTS.

POST-INSTALLED ANCHORS

- A. THE STRUCTURAL INSPECTOR SHALL:
1. BE FAMILIAR WITH WITH PROOF TESTING REQUIREMENT AND PLAN; SEE GENERAL NOTES UNDER "POST-INSTALLED ANCHORS."
 2. VERIFY THAT FEE OWNER'S TESTING AGENCY HAS TESTED ALL REQUIRED ANCHORS PER THE APPROVED POST-INSTALLED ANCHOR TEST PLAN.
 3. VERIFY THAT ANY FAILED ANCHORS HAVE BEEN REPLACED.
 4. VERIFY THAT THE TESTING AGENCY HAS SUBMITTED SIGNED AND SEALED TEST REPORTS TO THE STRUCTURAL ENGINEER OF RECORD.
- E. VERIFY THAT EXPANSION JOINT MATERIAL, DOVETAIL SLOTS, ANCHORS, EMBEDDED CONDUITS, AND LOAD CARRYING EMBEDDED ITEMS ARE PROPERLY POSITIONED AND SECURED TO RESIST DISPLACEMENT DURING CONCRETE PLACEMENT. RELOCATION OF, OR MODIFICATION TO, STRUCTURAL ITEMS DUE TO CONFLICTS WITH REINFORCEMENT IS PROHIBITED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
- F. INSPECT CONSTRUCTION JOINTS AS FOLLOWS:
1. VERIFY THAT DOWELS, KEYWAYS, AND BULKHEADS COMPLY WITH THE CONTRACT DOCUMENTS.
 2. CONFIRM THAT BEAM AND SLAB CONSTRUCTION JOINT LOCATIONS COMPLY WITH THE CONTRACTOR'S CONSTRUCTION JOINT PLAN SUBMITTED TO THE ARCHITECT.
- G. VERIFY THAT SAWCUT JOINTS ARE:
1. PROVIDED ONLY WHERE INDICATED.
 2. THE PROPER DEPTH, SPACING, AND LOCATION.
 3. PROVIDED IN THE TIME FRAME INDICATED IN THE CONTRACT DOCUMENTS.
- H. CHECK THAT ALL FOREIGN MATERIAL IS REMOVED FROM FORMS OR EXCAVATIONS PRIOR TO CONCRETE PLACEMENT.
- I. BE ON SITE AT THE START OF EACH CONCRETE POUR REQUIRING INSPECTION BY THIS PLAN, AND SHALL REMAIN ON SITE FOR A SUFFICIENT TIME TO CONFIRM THAT CONCRETING PRACTICES ARE PROPER AND COMPLY WITH ACI 301, ASTM C94, AND OTHER RECOGNIZED INDUSTRY STANDARDS INCLUDING THE FOLLOWING:
1. ALL STEEL REINFORCEMENT CORRECTIONS ARE COMPLETED PRIOR TO CONCRETE PLACEMENT.
 2. THE FIRST CONCRETE TRUCK OF EACH TYPE OF CONCRETE POUR HAS THE PROPER CONCRETE MIX NUMBER AND STRENGTH AND THAT THE BATCH TIME LEAVES SUFFICIENT TIME TO POUR ALL CONCRETE FROM THE TRUCK. SPOT CHECK FUTURE TRUCKS.
 3. THE TESTING AGENCY IS ON SITE FOR EACH TYPE OF CONCRETE POUR TO TEST CONCRETE AS REQUIRED BY THE CONTRACT DOCUMENTS. THIS SHALL INCLUDE MIXING TIME, TEMPERATURE, SLUMP, AND AIR CONTENT, REPORTING ANY CONCRETE DELIVERED THAT IS NOT AS SPECIFIED. ENSURE THAT ADDITION OF WATER TO THE CONCRETE MIX IN THE FIELD COMPLIES WITH THE GUIDELINES IN THE CONTRACT DOCUMENTS.
 4. CONCRETE IS BEING CONVEYED FROM MIXER TO PLACE OF FINAL DEPOSIT BY RECOGNIZED INDUSTRY STANDARDS. CONCRETE IS BEING PLACED CONTINUOUSLY, OR IN A MANNER TO AVOID PLACING CONCRETE AGAINST HARDENED CONCRETE WHICH WOULD RESULT IN THE FORMATION OF SEAMS OR PLANES OF WEAKNESS.
 5. CONCRETE IS BEING CONSOLIDATED AND THOROUGHLY WORKED AROUND REINFORCEMENT, EMBEDDED ITEMS, AND INTO CORNERS OF FORMS ELIMINATING AIR OR STONE POCKETS THAT MAY CAUSE HONEYCOMBING, PITTING, OR PLANES OF WEAKNESS.
 6. SPOT CHECK THAT CURING PROCEDURES COMPLY WITH THE CONTRACT DOCUMENTS, ACI 308, STANDARD PRACTICE FOR CURING CONCRETE, AND OTHER RECOGNIZED INDUSTRY STANDARDS.
 7. FOLLOWING FORMWORK REMOVAL, SPOT CHECK CONCRETE SURFACES FOR HONEYCOMBING AND VOIDS.
- J. INSPECT EXPANSION ANCHORS AND CHEMICAL ADHESIVE FOR ANCHORING STEEL REINFORCEMENT AND THREADED RODS USED TO SUPPORT WORK DESCRIBED IN THIS PLAN AS FOLLOWS:
1. VERIFY HOLE DIAMETER, DEPTH, LOCATION, SPACING, EDGE DISTANCE, AND CONFIRM THAT THE HOLE HAS BEEN THOROUGHLY CLEANED AS REQUIRED BY MANUFACTURER.
 2. VERIFY THAT EXPANSION ANCHORS ARE PROPERLY TIGHTENED.
 3. VERIFY THAT THE EPOXY TYPE IS PROPER FOR THE APPLICATION, SUCH AS PASTE FOR HORIZONTAL HOLES. VERIFY THAT EPOXY MIXING AND INSTALLATION COMPLIES WITH MANUFACTURER'S REQUIREMENTS.



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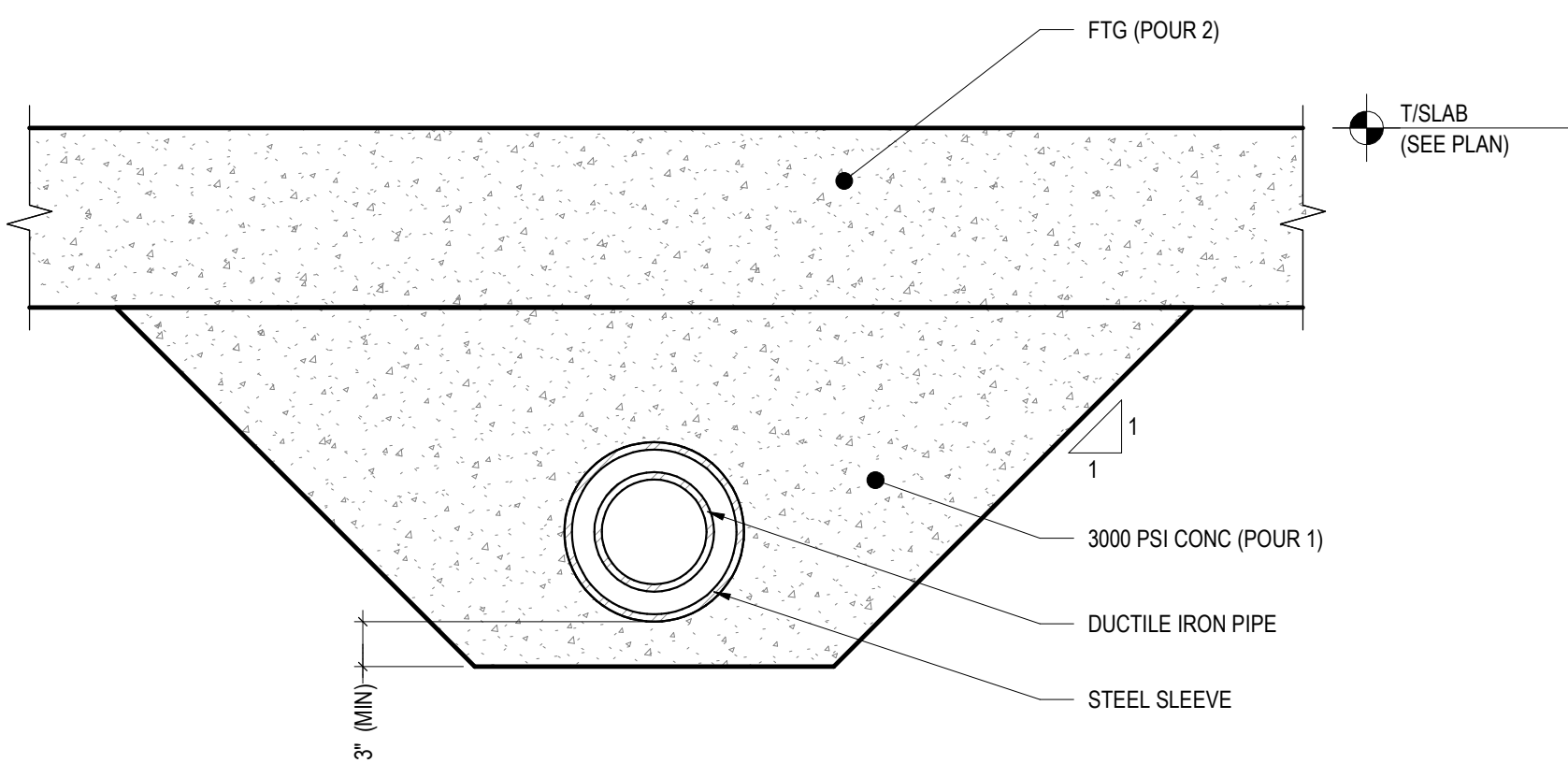
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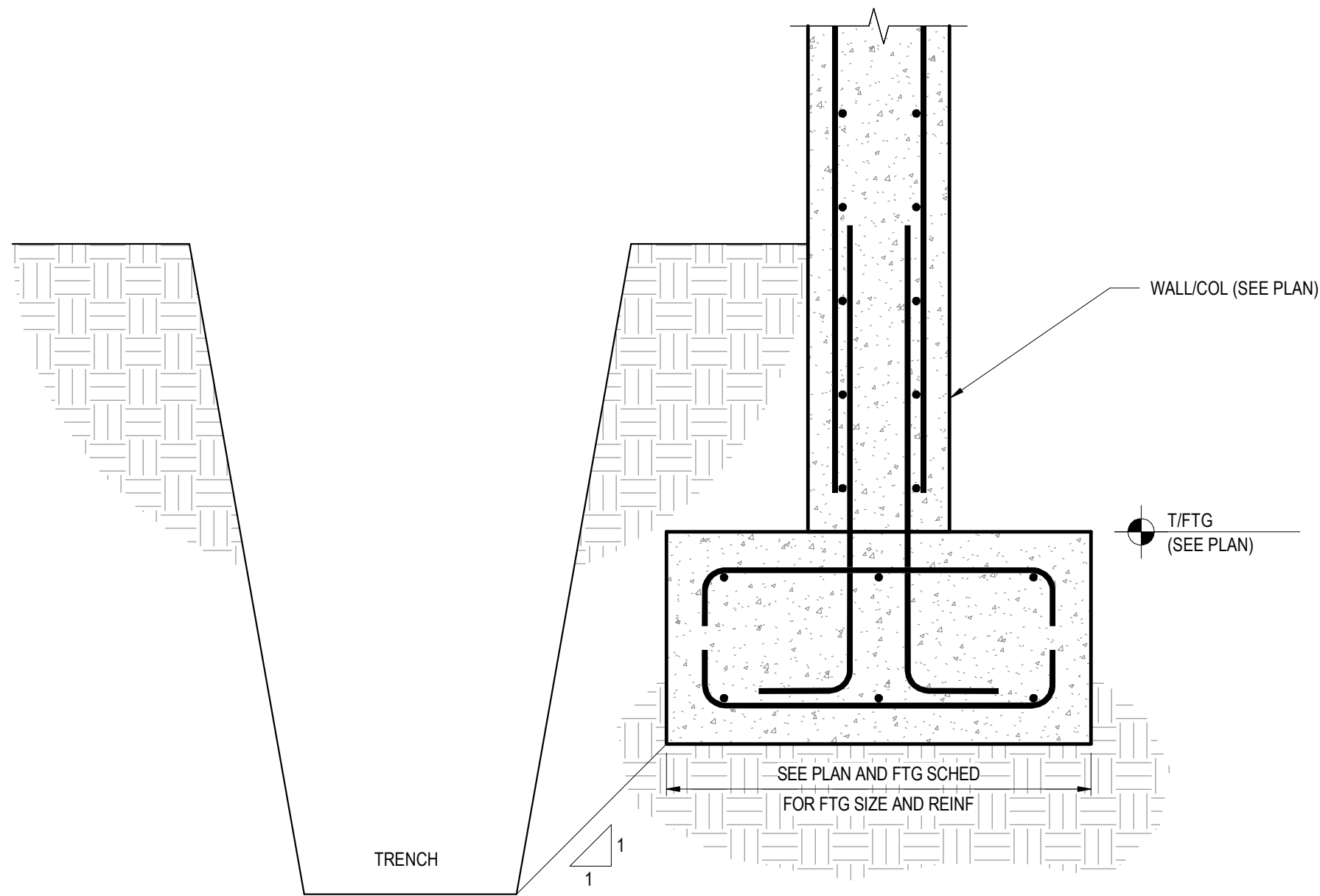
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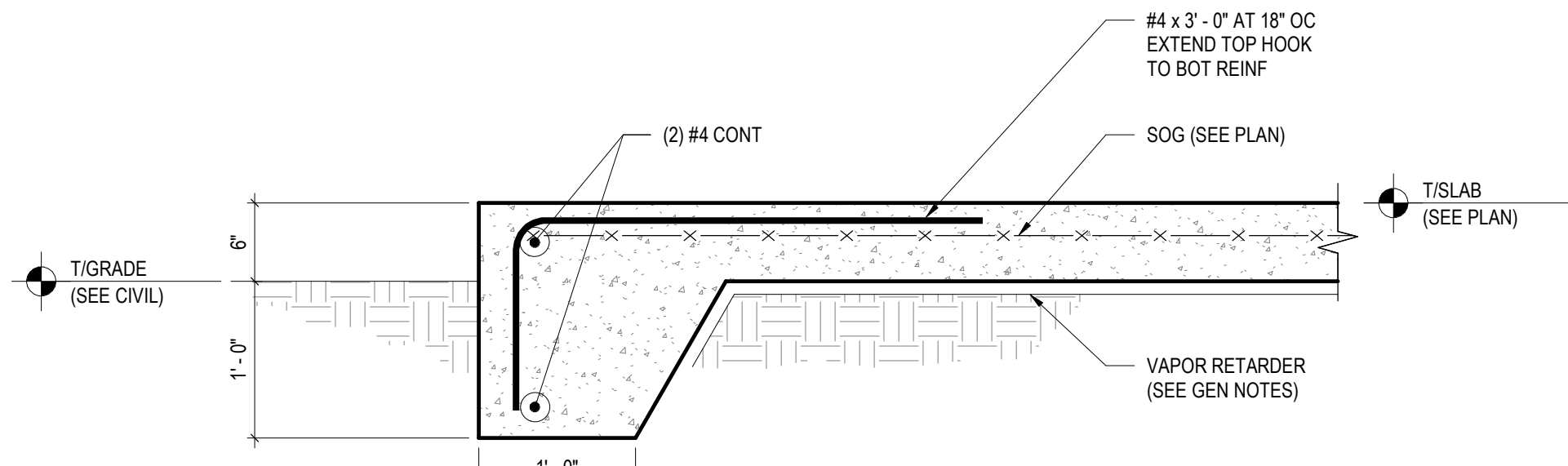
TYPICAL PIPE UNDER FOOTING

1
1" = 1'-0"



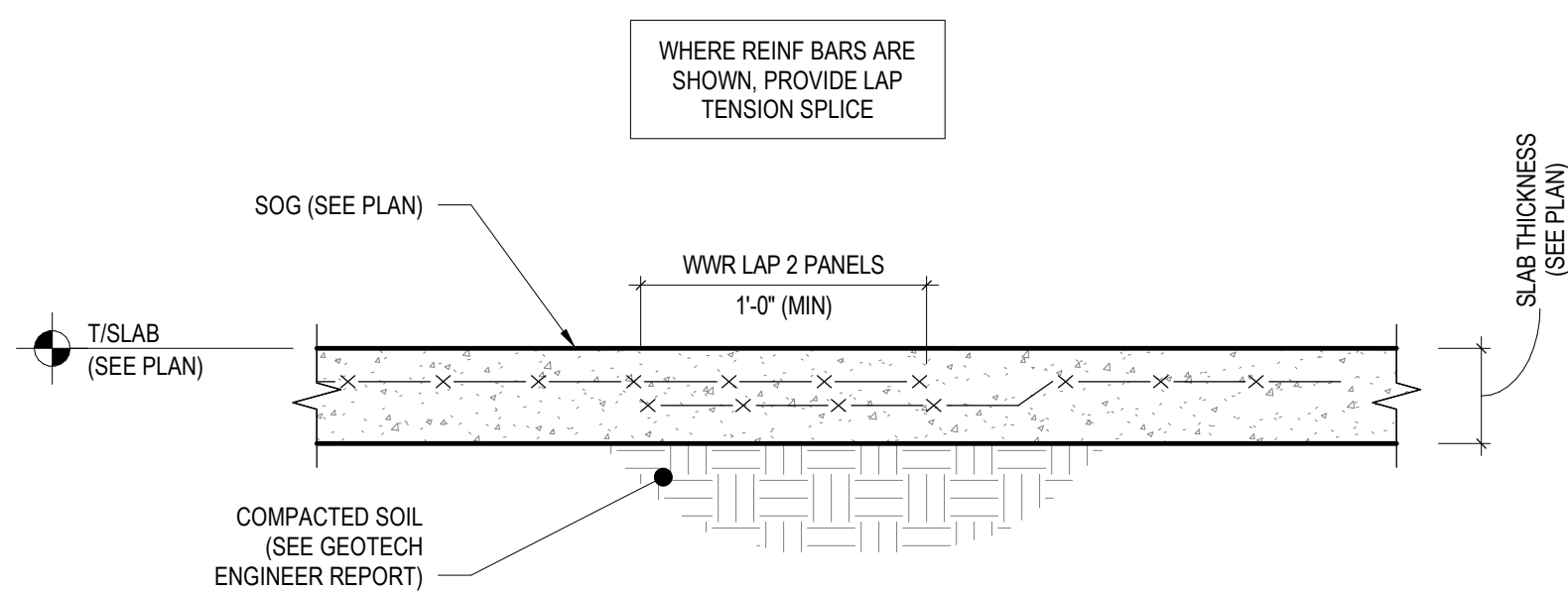
TYPICAL FOOTING ADJACENT TO TRENCH

2
1" = 1'-0"



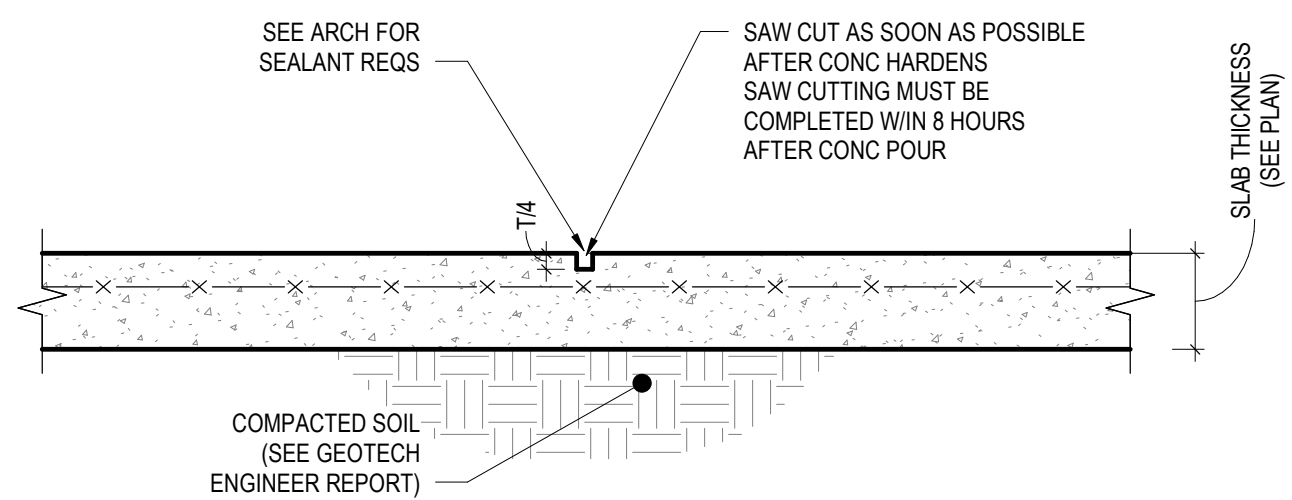
TYPICAL SLAB EDGE

3
1" = 1'-0"

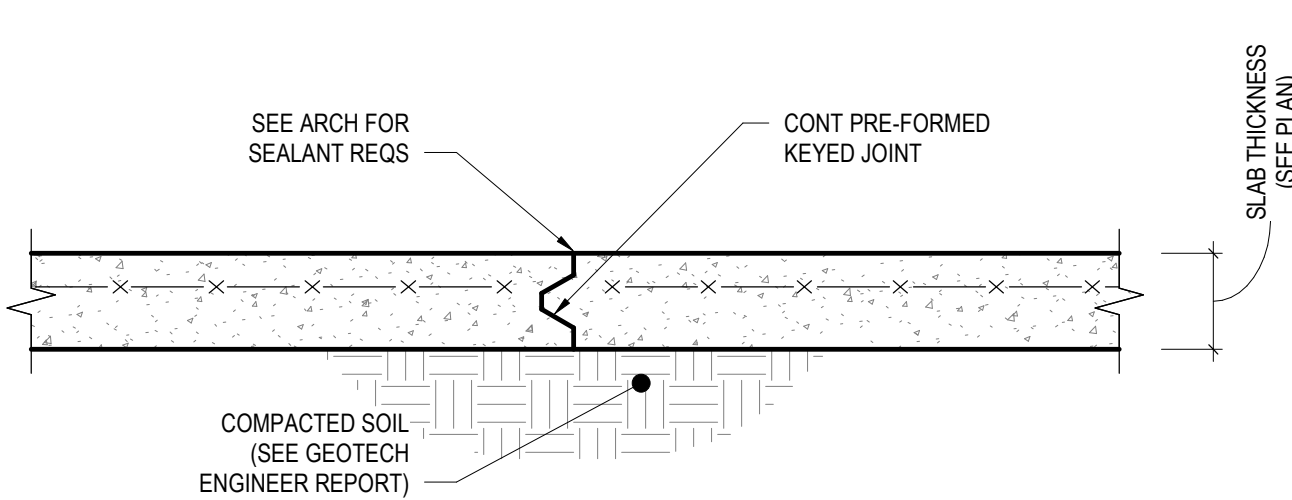


SLAB-ON-GROUND

4
1" = 1'-0"



SAW CUT JOINT

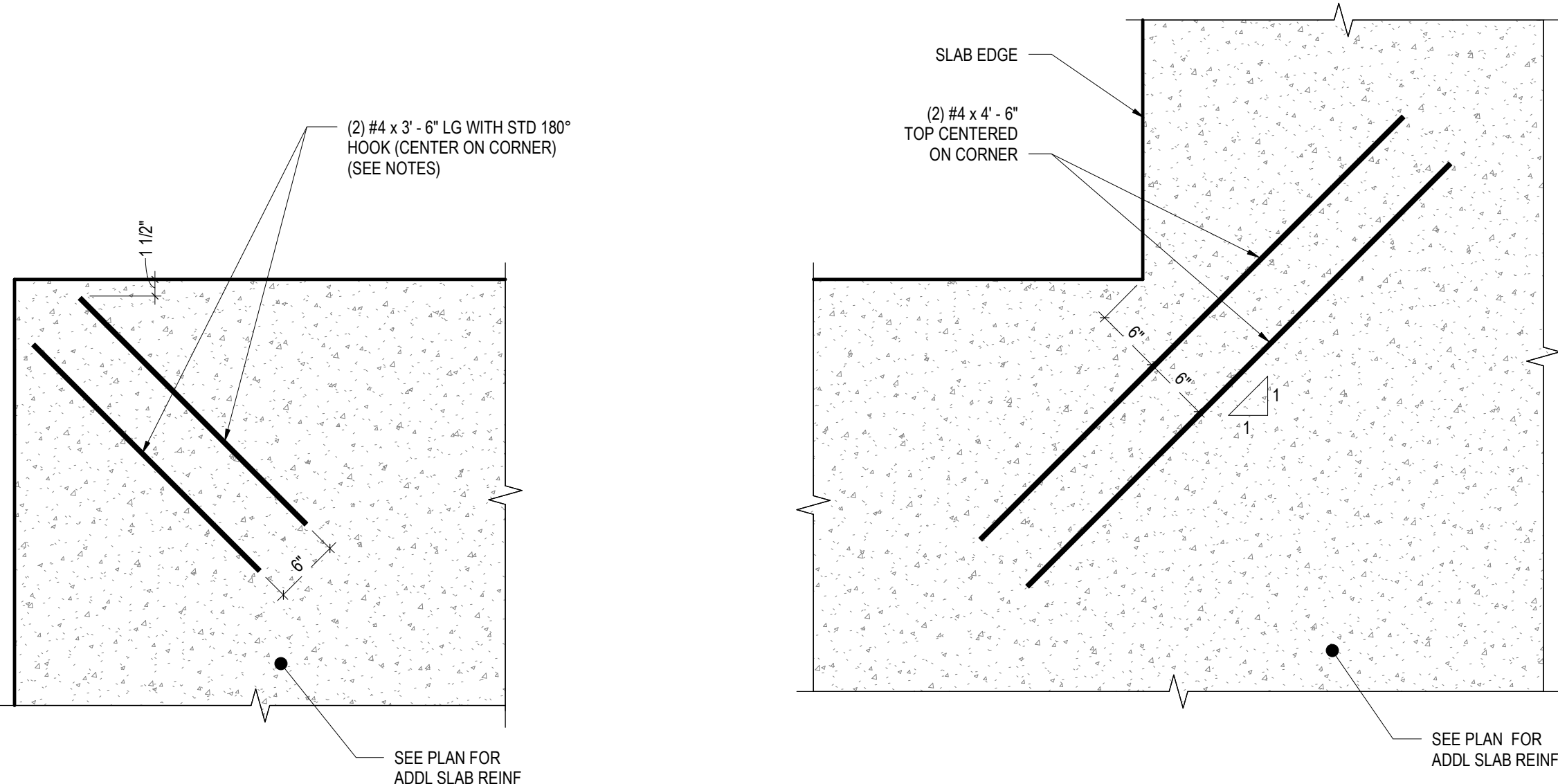


CONSTRUCTION JOINT

NOTES:

1. WHERE NOT INDICATED ON PLAN PROVIDE JOINTS AT COLUMN CENTER LINES AND BETWEEN COLUMN CENTER LINES WITH SPACING OF JOINTS NOT TO EXCEED 36 TIMES THE SLAB THICKNESS

TYPICAL SLAB-ON-GROUND DETAILS

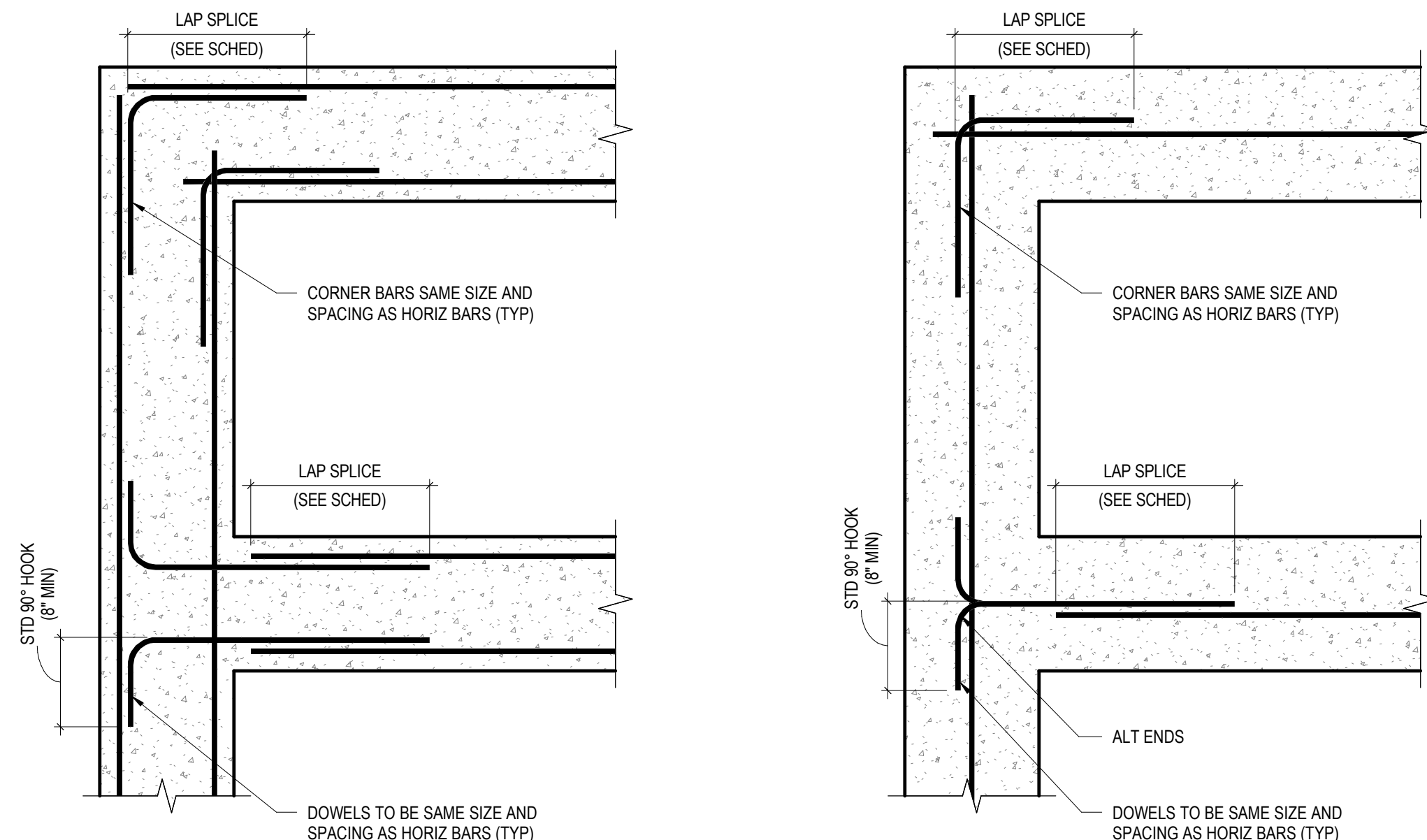


TYPICAL ADDITIONAL SLAB CORNER REINFORCEMENT

NOTES:

1. INSTALL BELOW TOP LAYER OF SLAB REINFORCING.

5
1" = 1'-0"



TYPICAL CORNER BARS FOR CONCRETE WALL AND FOOTING CONSTRUCTION

6
1" = 1'-0"



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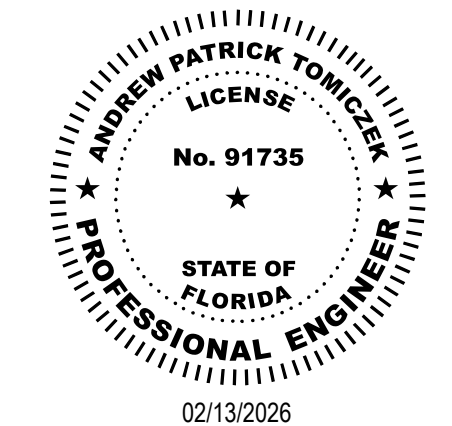
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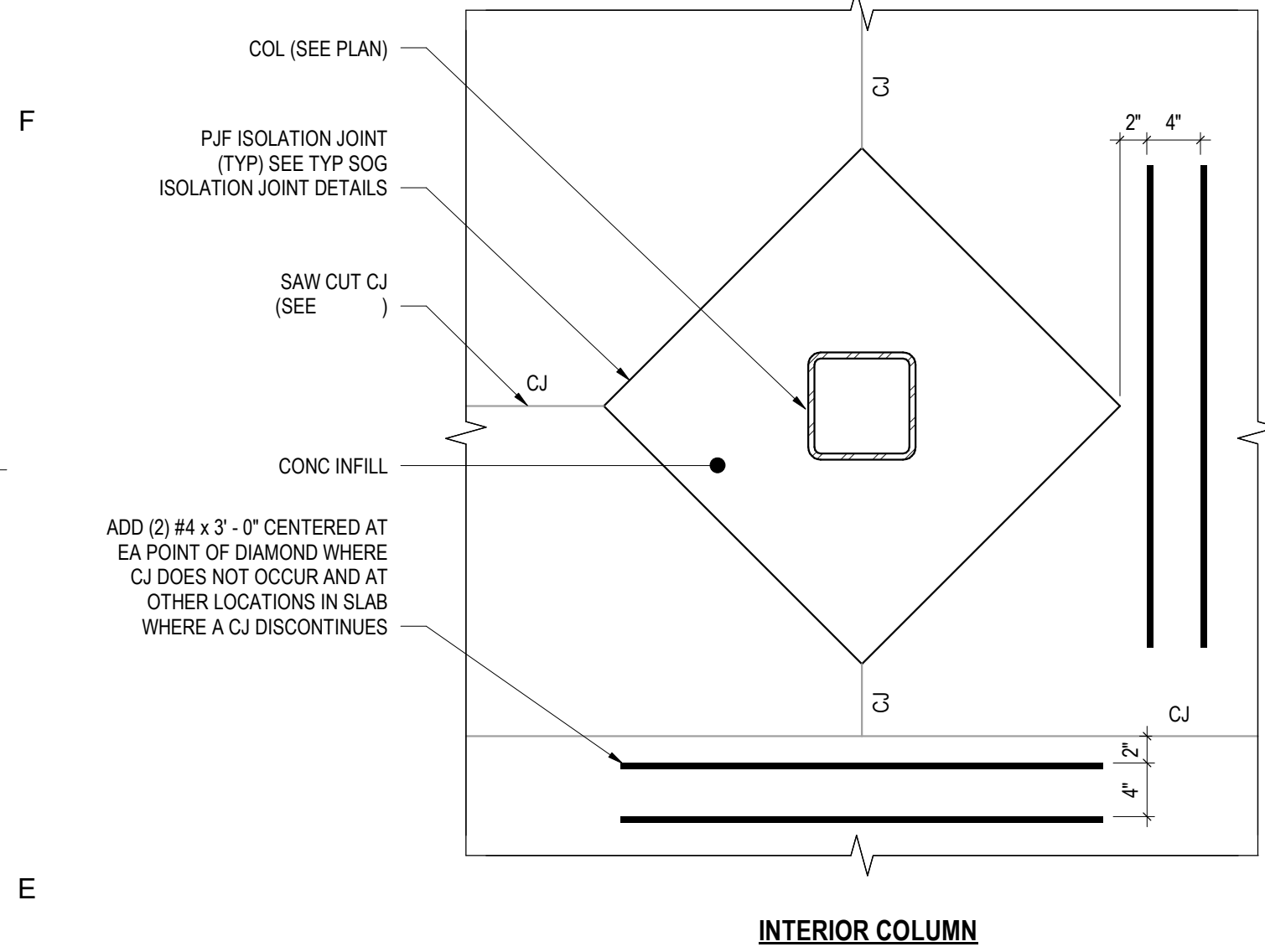
PROJECT TEAM
PRINCIPAL IN CHARGE
ANDREW TOMICZEK
PROJECT MANAGER
ANDREW TOMICZEK
DESIGN TEAM
JEZERINAC GROUP

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
COUNTY ROAD 25A, LAKE
CITY, FL

PROJECT NO.
814C632800

SHEET TITLE
FOUNDATION SECTIONS &
DETAILS

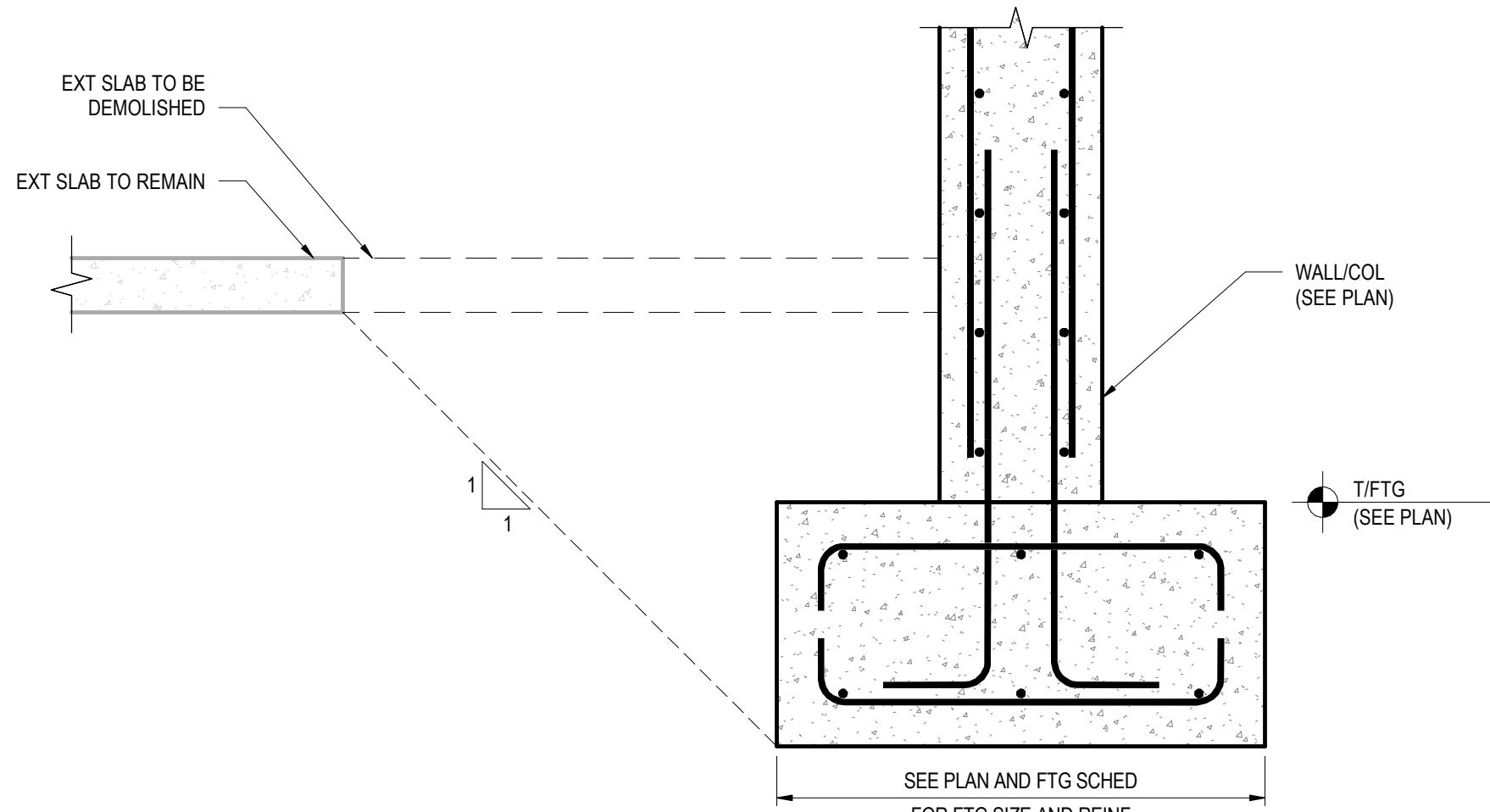
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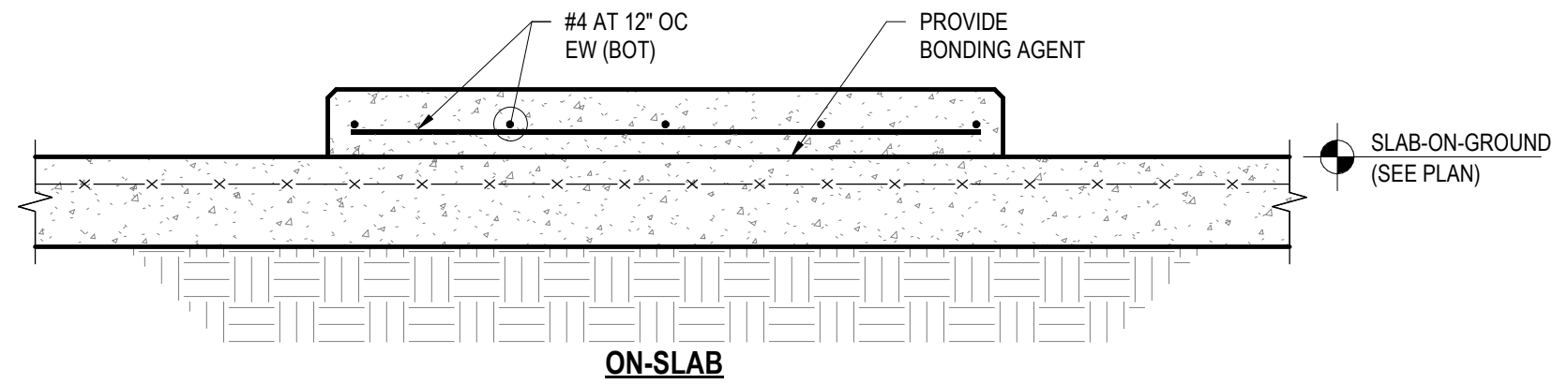
NOTES:

1. SEE TYPICAL SLAB-ON-GROUND DETAILS FOR JOINT SPACING REQUIREMENT.
2. CONCRETE INFILL BETWEEN COLUMN AND ISOLATION JOINT TO BE POURED AFTER ALL THE SLABS SUPPORTED BY THE COLUMN HAVE BEEN POURED.

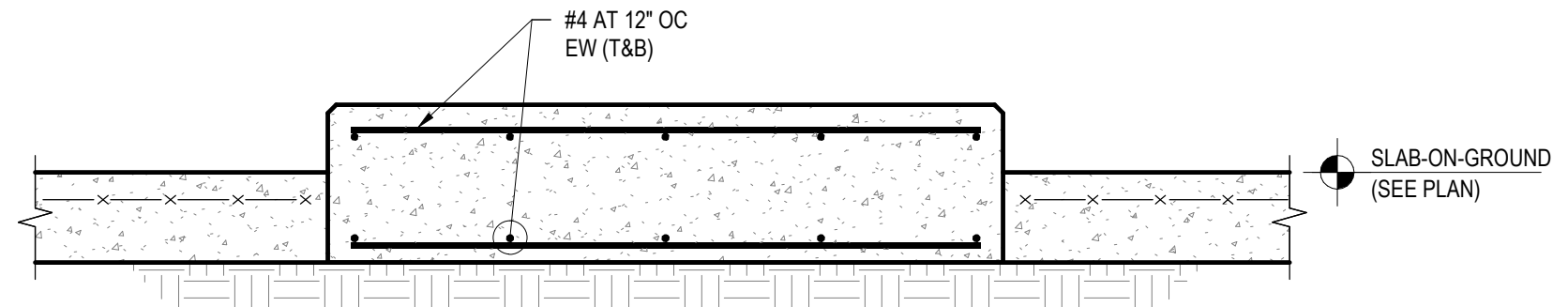
TYPICAL SLAB-ON-GROUND ISOLATION/CONTROL JOINT



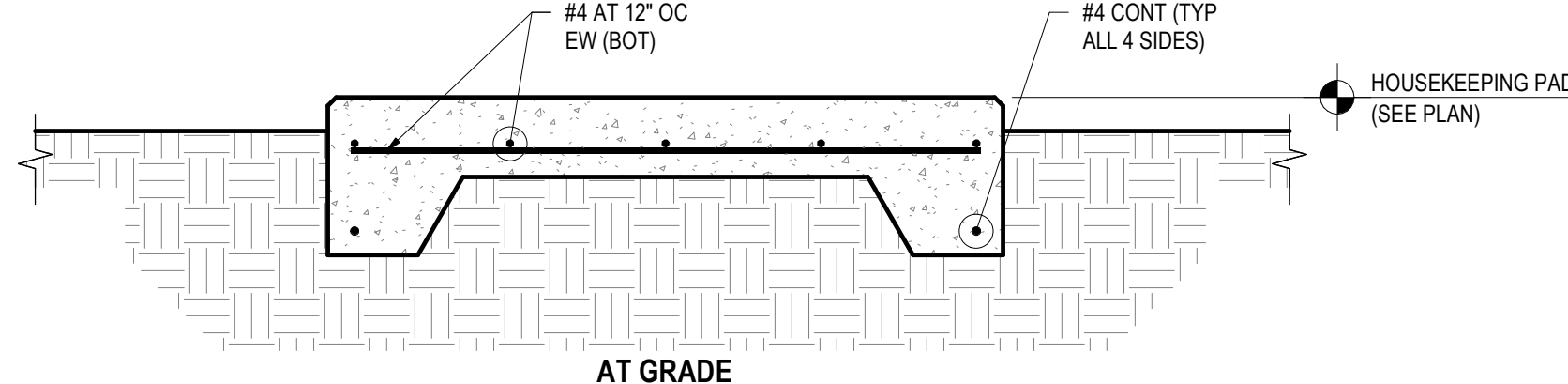
TYPICAL FOOTING ADJACENT TO EXTERIOR SLAB



ON-SLAB



ISOLATED PAD



AT GRADE

NOTES:

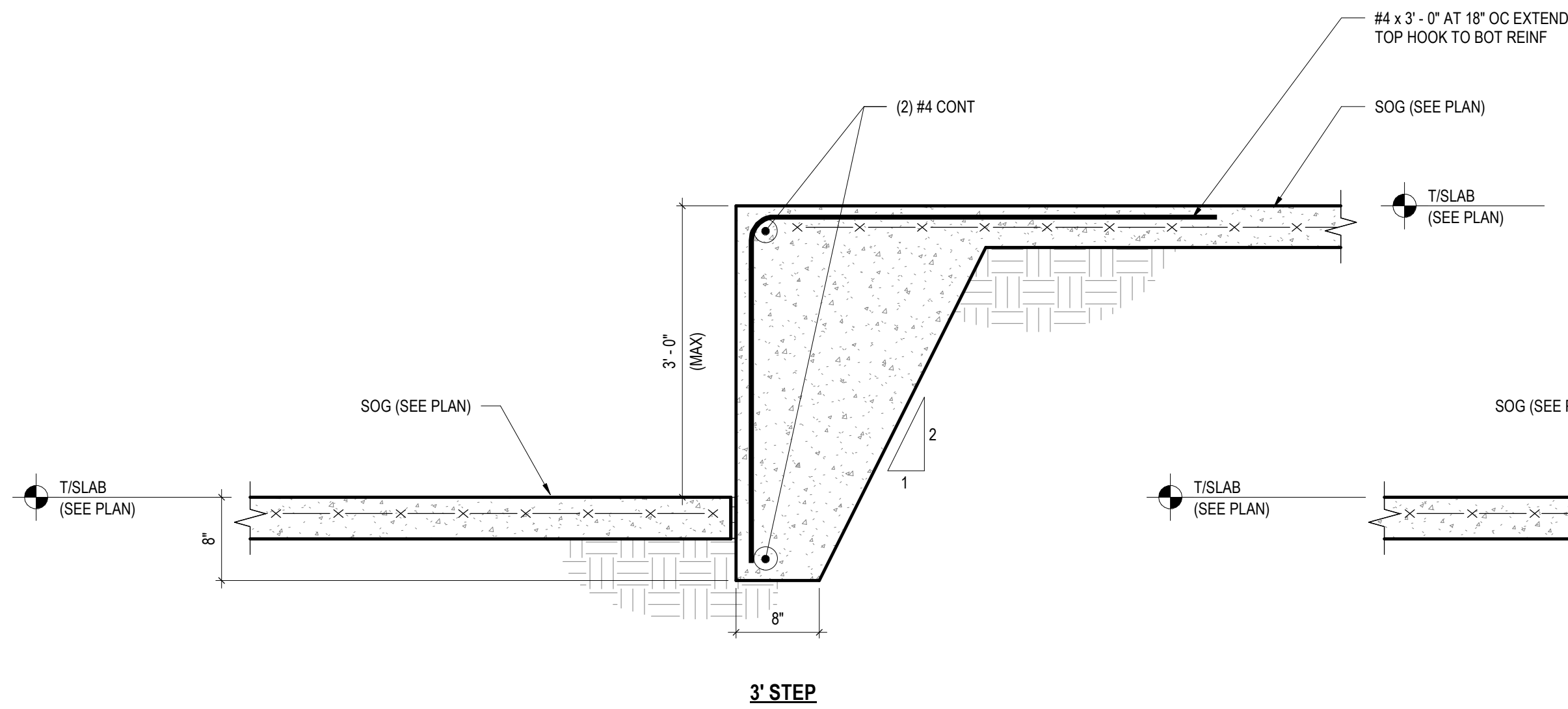
1. SEE ARCHITECTURAL AND MEP DRAWINGS FOR SIZE AND LOCATION OF HOUSEKEEPING PADS.

HOUSEKEEPING PAD DETAILS

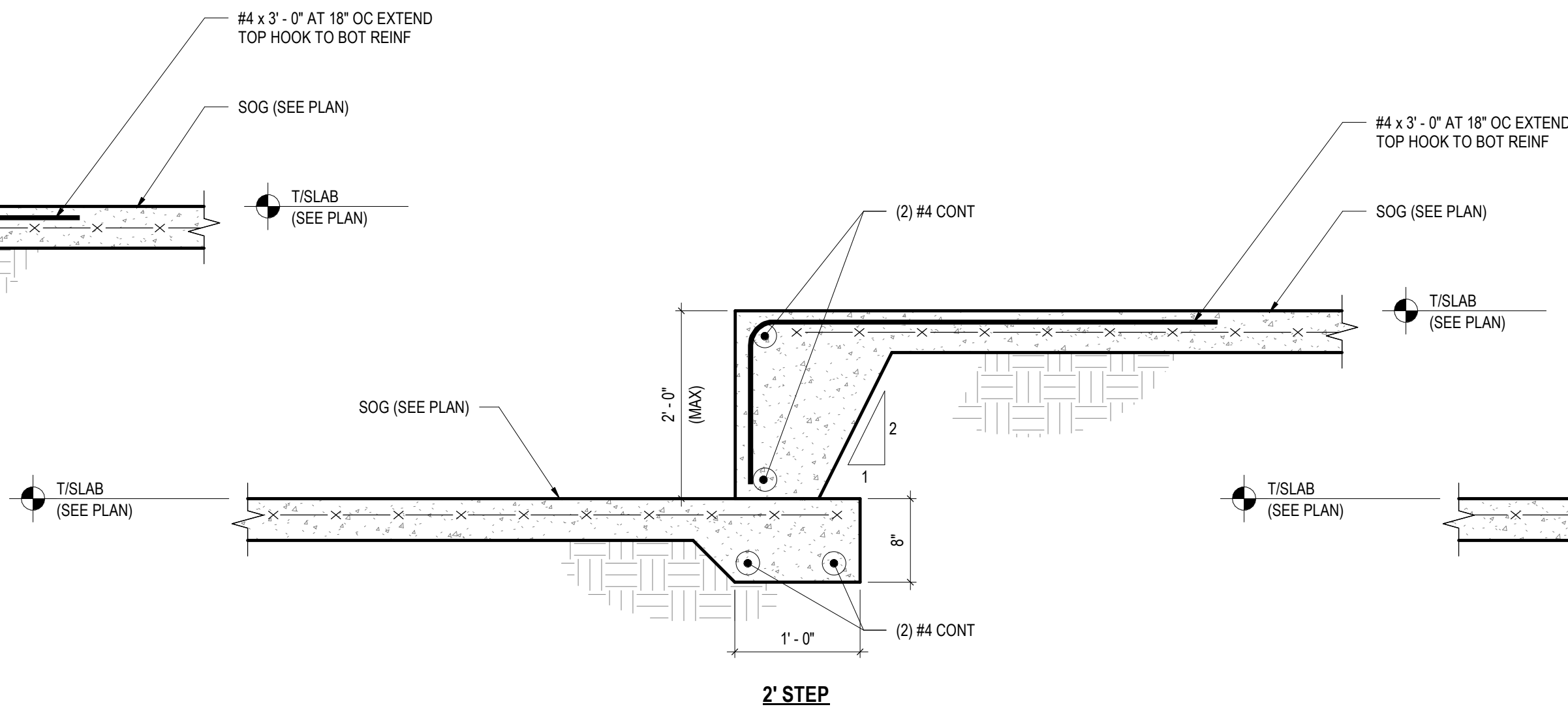
1
1" = 1'-0"

2
1" = 1'-0"

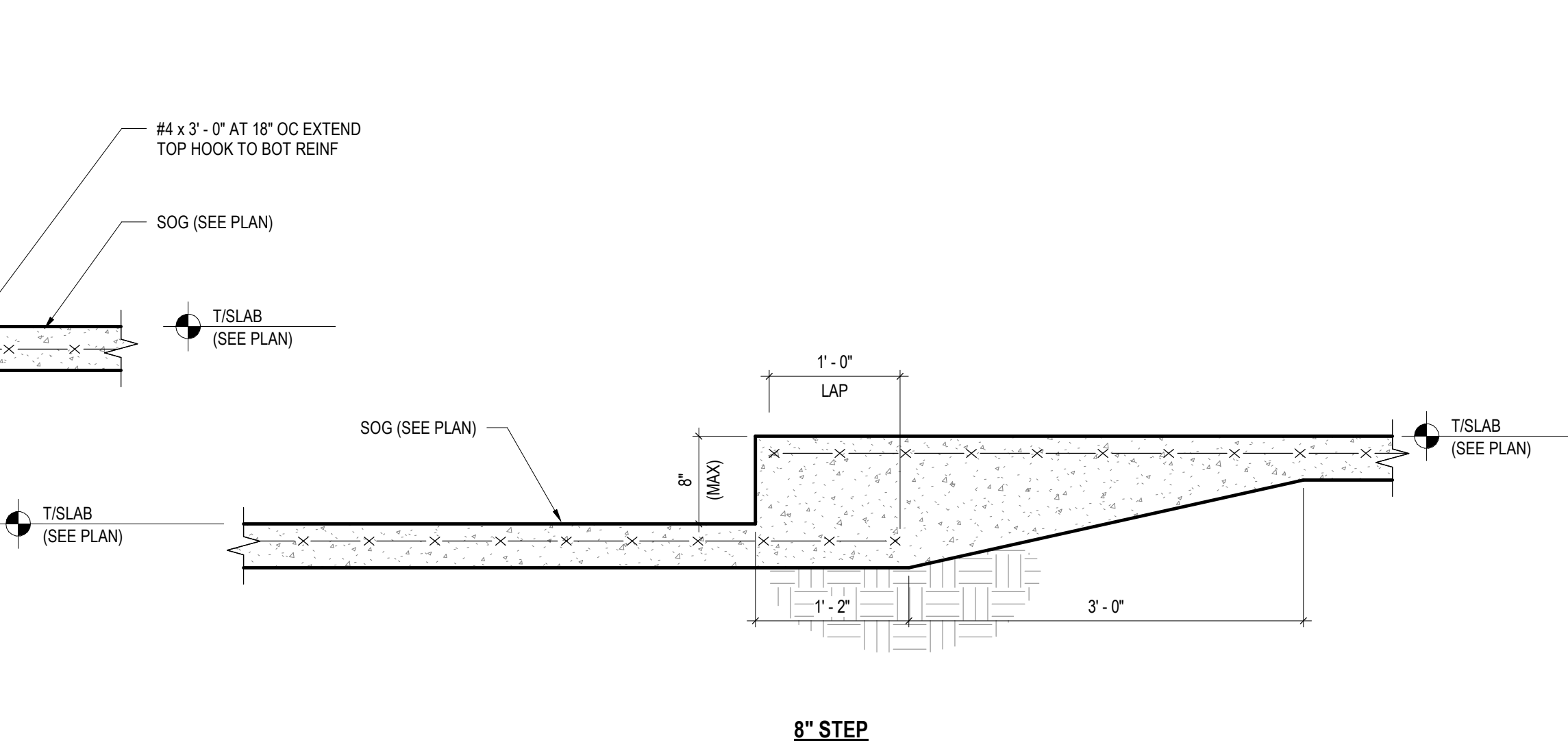
3
3/4" = 1'-0"



3' STEP



2' STEP



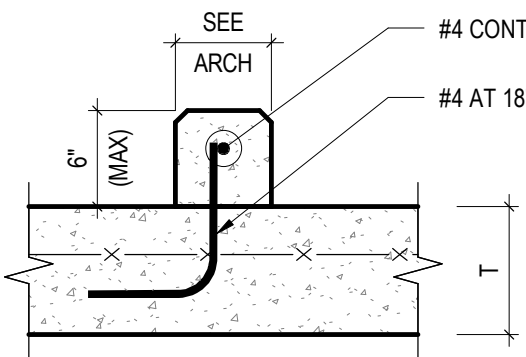
8' STEP

NOTES:

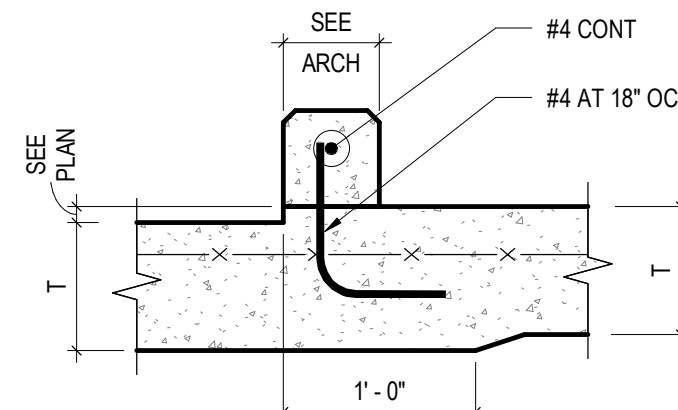
1. COORDINATE ALL SLAB STEPS WITH ARCHITECT

TYPICAL SLAB STEP DETAILS

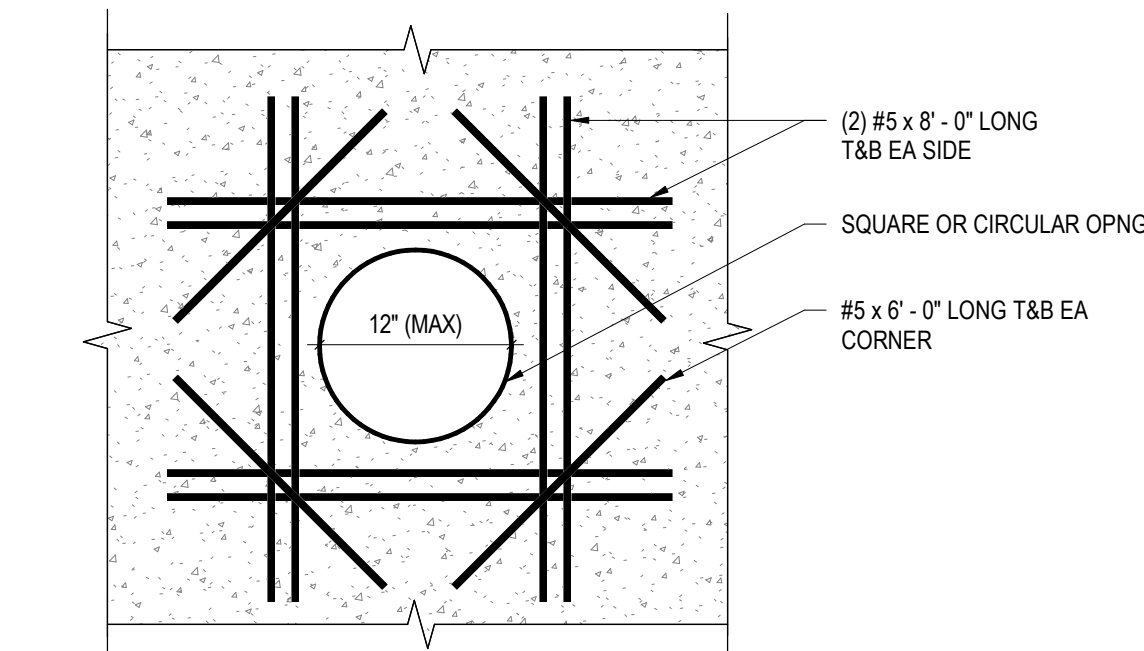
4
1" = 1'-0"



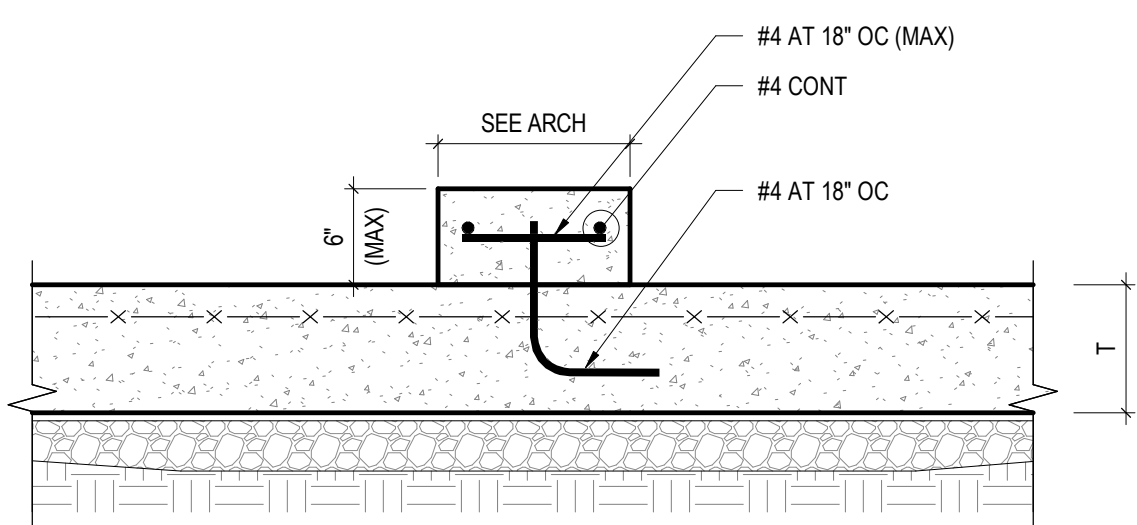
CURB DETAIL



CURB DETAIL AT RECESSED SLAB



TYPICAL REINFORCEMENT AT WALL PIPE PENETRATIONS



HOUSEKEEPING PAD DETAIL

AFTER SET CONCRETE DETAILS

5
1" = 1'-0"

6
1" = 1'-0"



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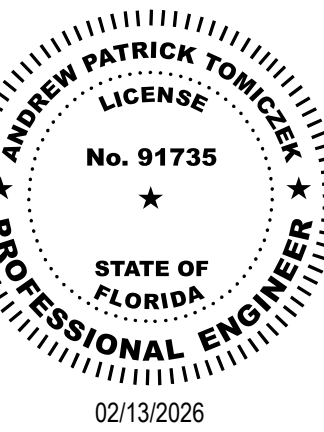
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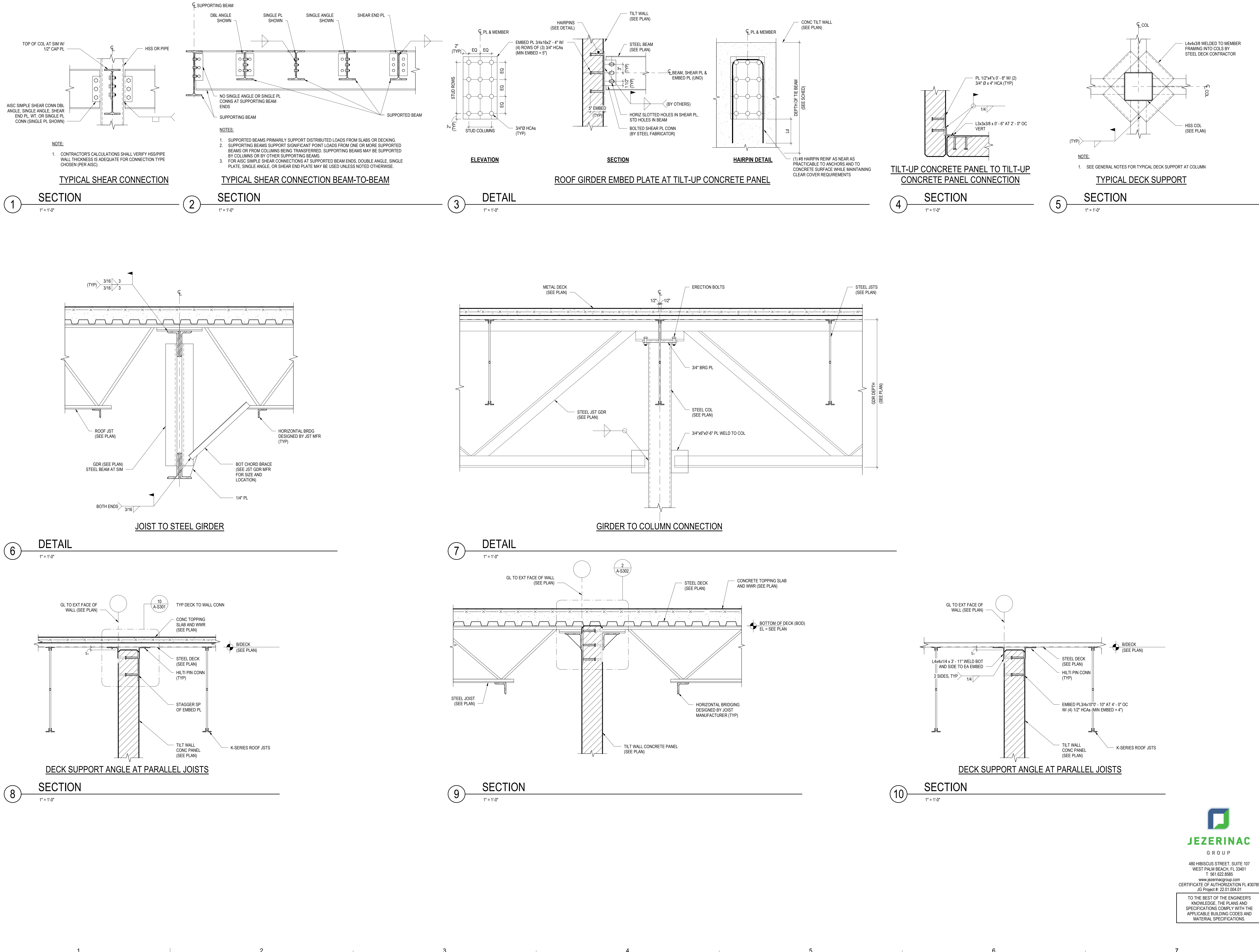
PROJECT TEAM
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ANDREW TOMICZEK
PROJECT MANAGER
ANDREW TOMICZEK
DESIGN TEAM
JEZERINAC GROUP

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
COUNTY ROAD 25A, LAKE
CITY, FL

PROJECT NO.
814C632800

SHEET TITLE
FOUNDATION SECTIONS &
DETAILS

SHEET NUMBER
A-S202



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PROJECT MANAGER
ANDREW TOMICZEK

DESIGN TEAM
JEZERINAC GROUP

PROJECT NO.

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FRAMING SECTIONS & DETAILS

SHEET NUMBER

A-S301

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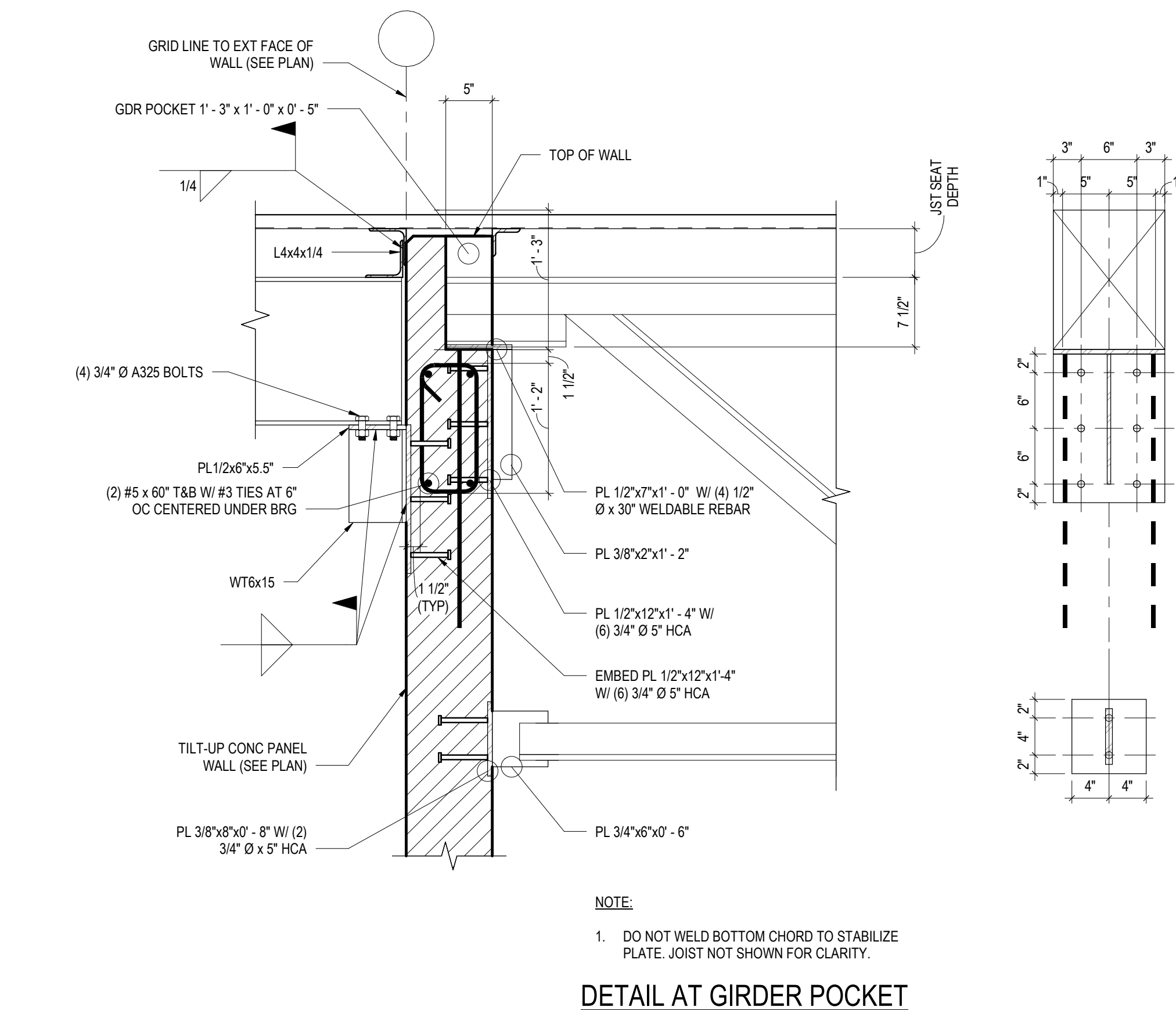
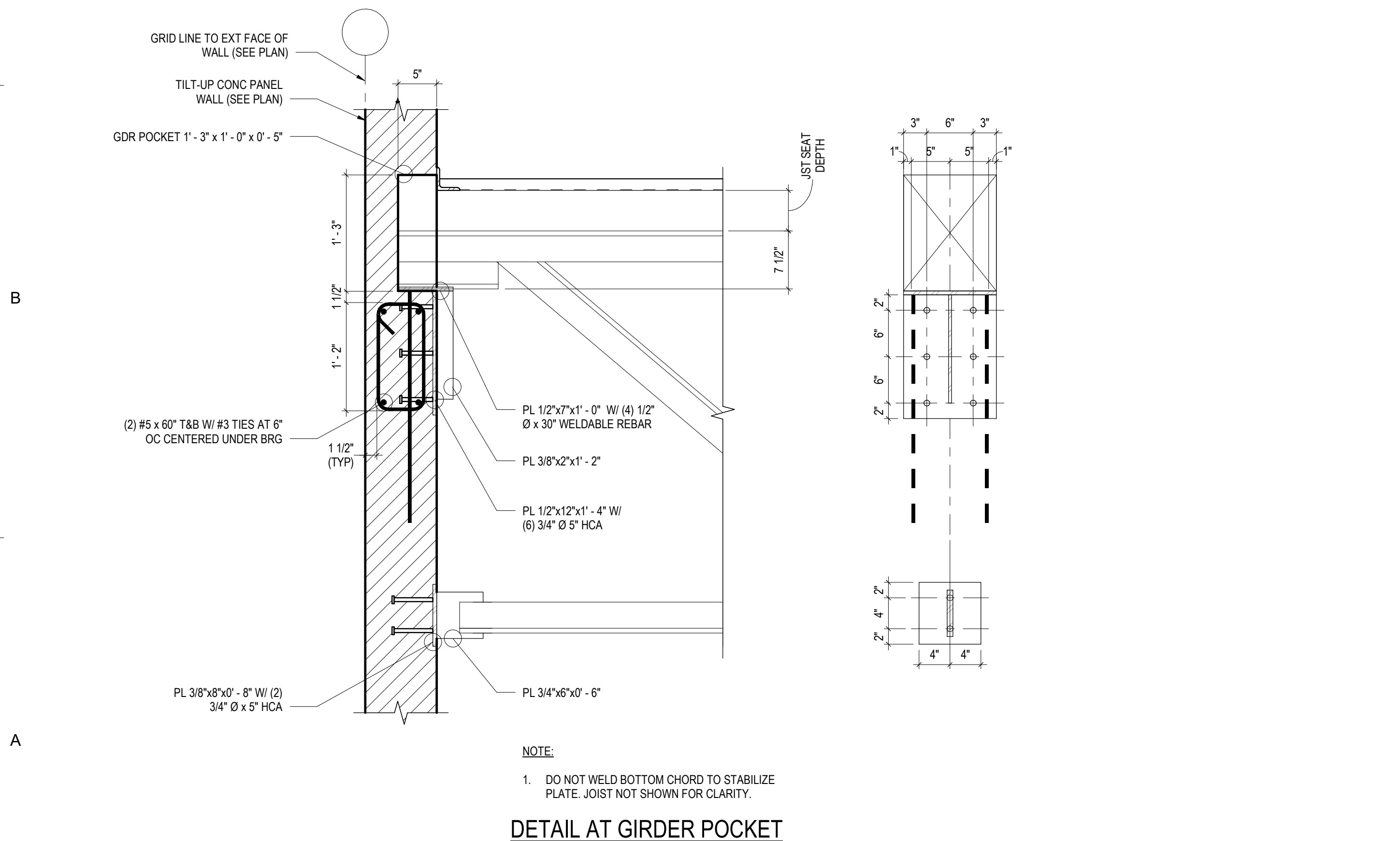
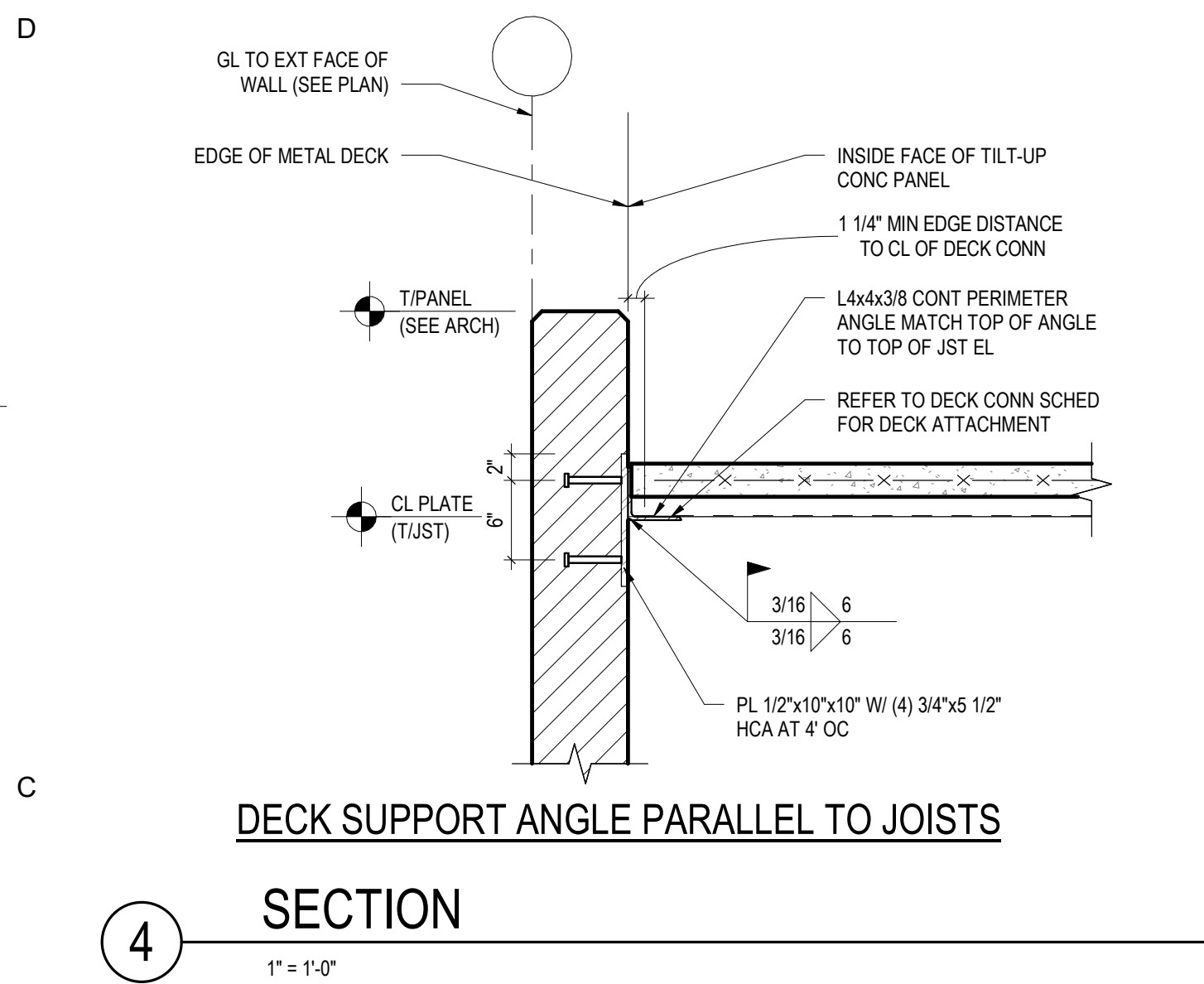
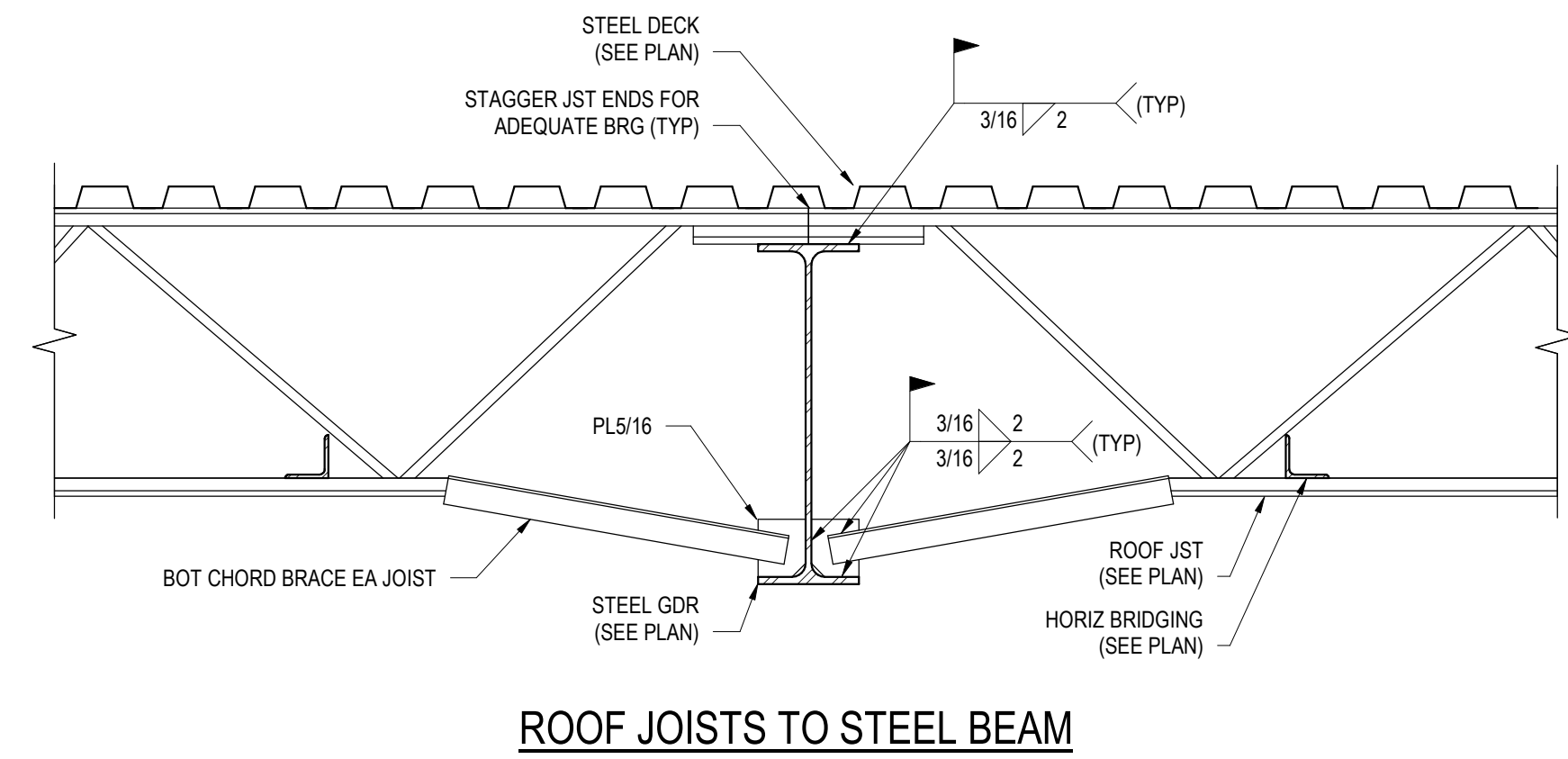
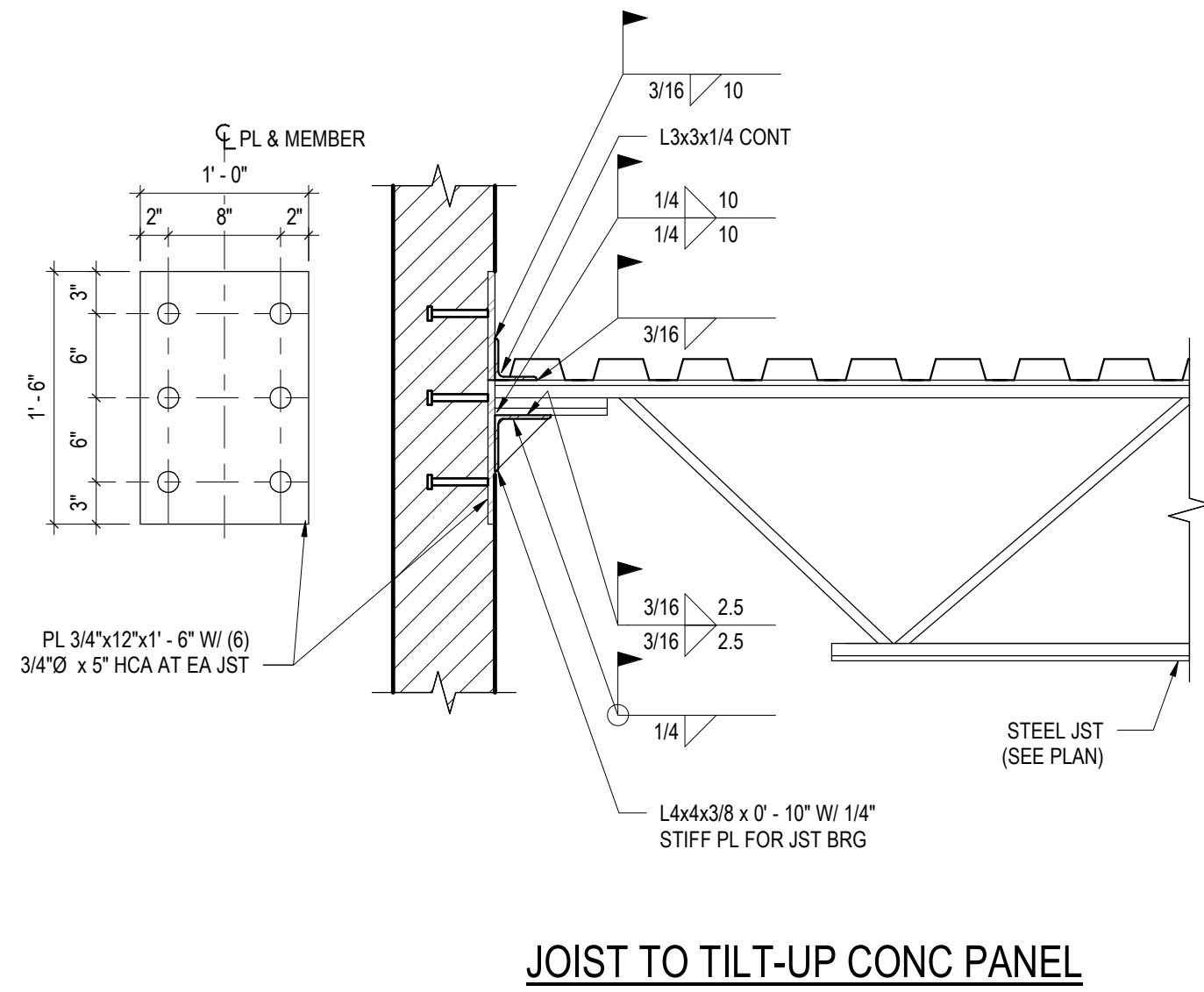
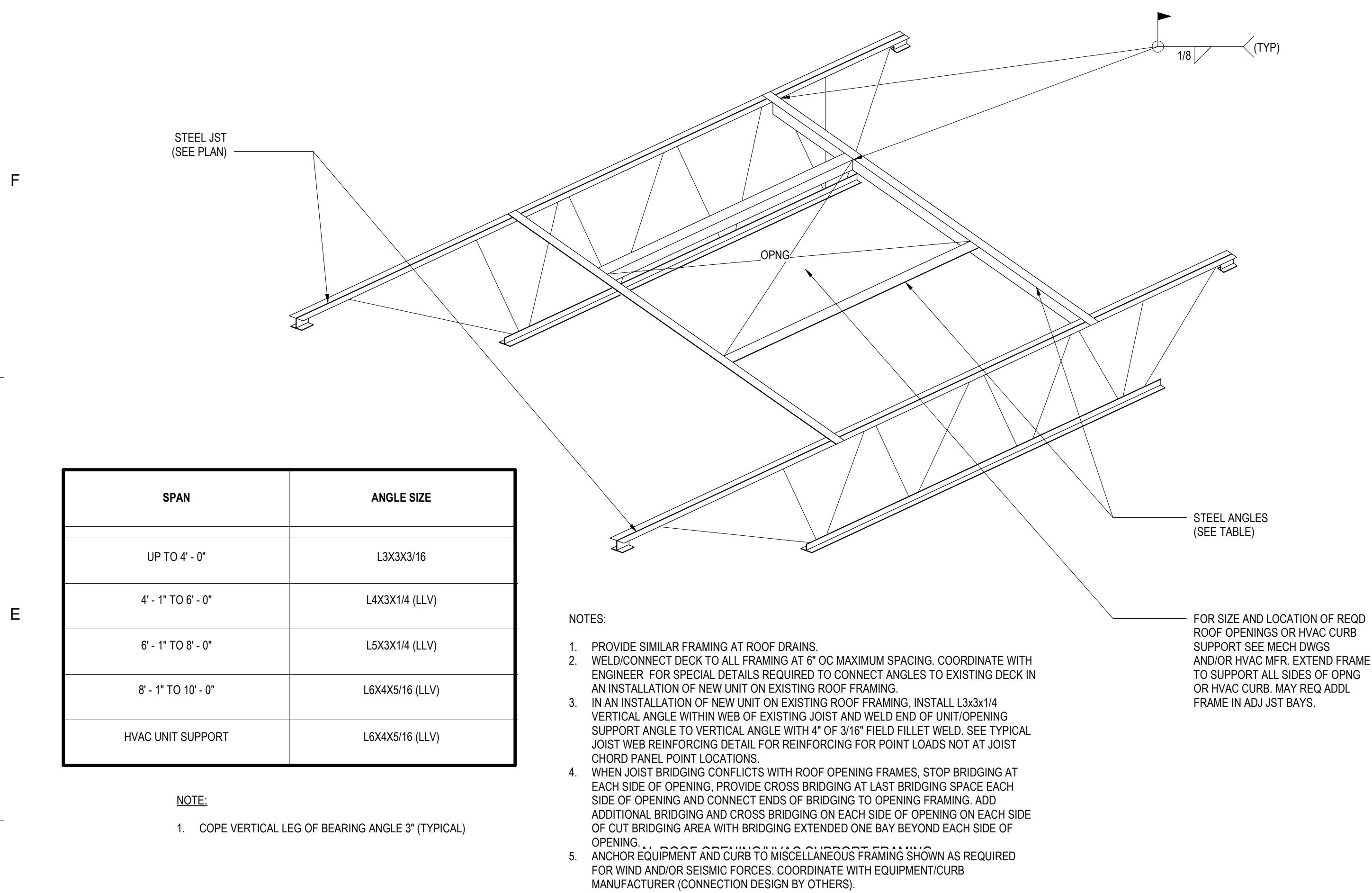
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ANDREW TOMICZEK
PROJECT MANAGER
ANDREW TOMICZEK
DESIGN TEAM
JEZERINAC GROUP

COLUMBIA STORM PROCESSING & SERVICE CENTER - BUILDING A - SERVICE CENTER
COUNTY ROAD 25A, LAKE CITY, FL

PROJECT NO.
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FRAMING SECTIONS & DETAILS

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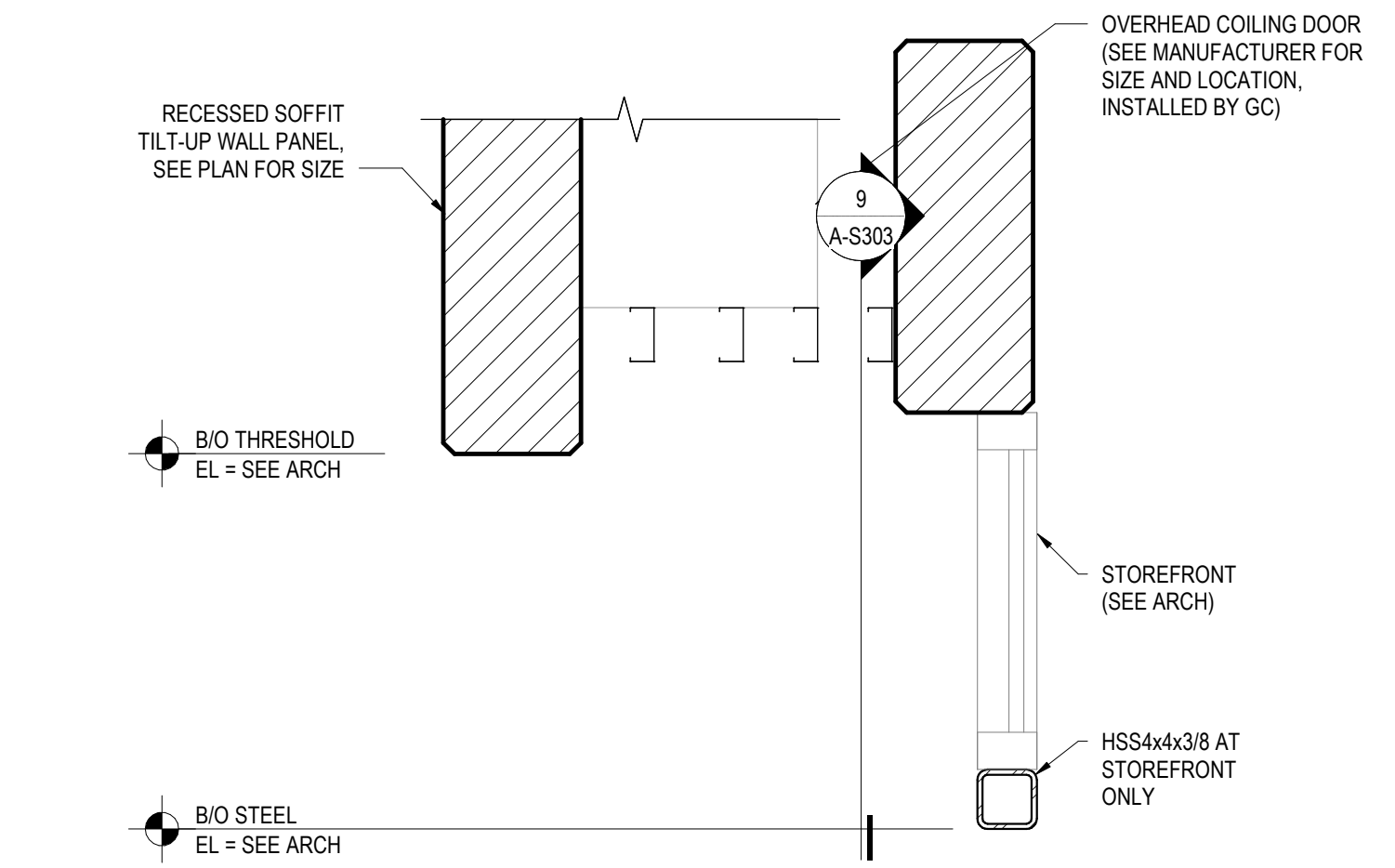
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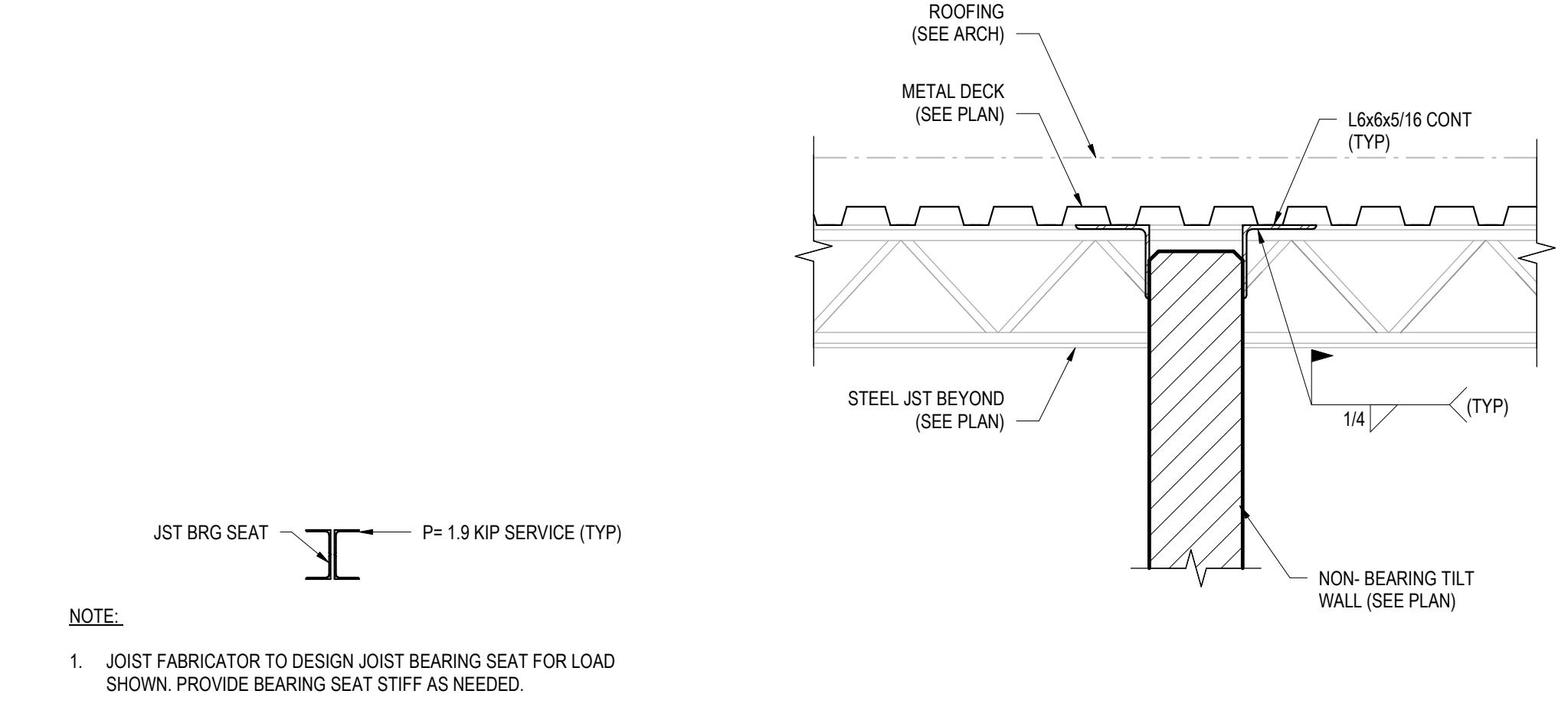
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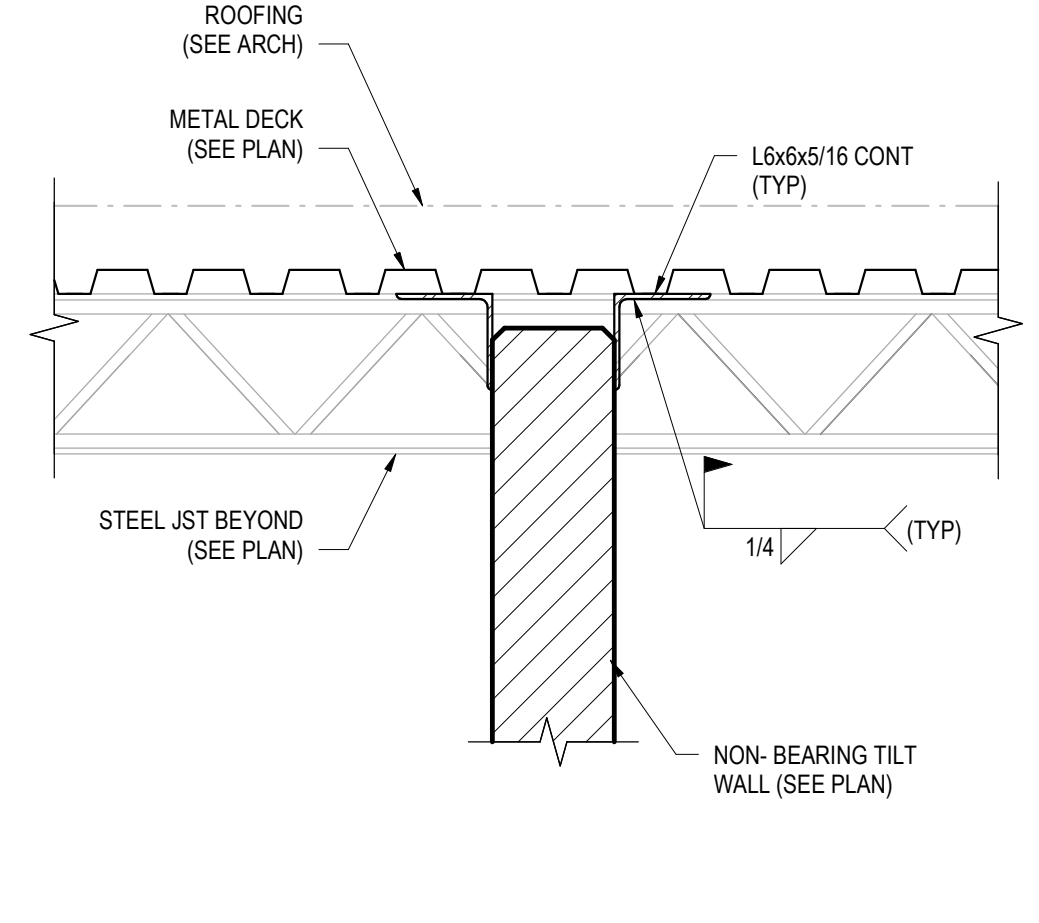
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TYPICAL JOIST ROLLOVER DESIGN FORCE

SECTION

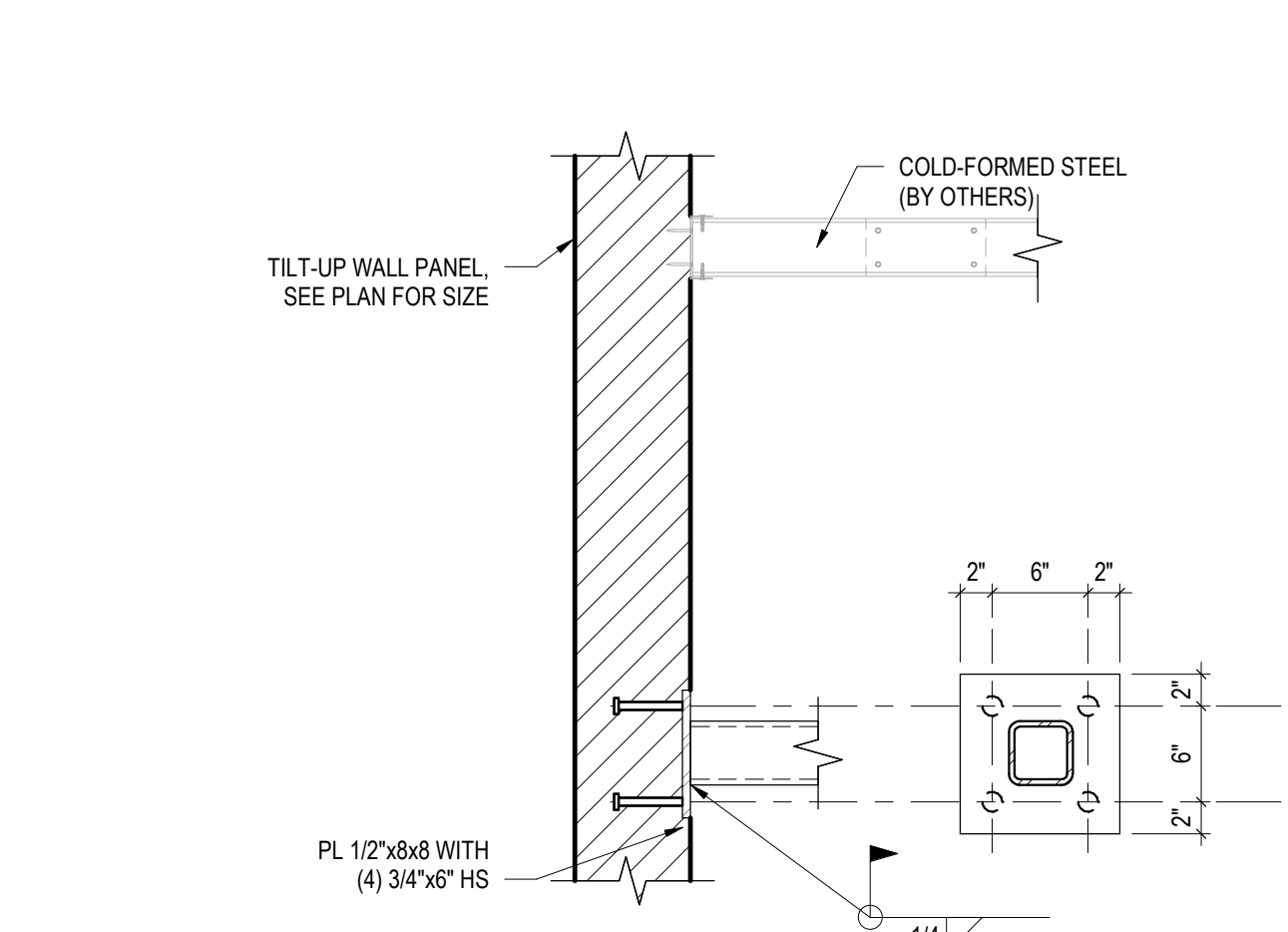
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NON-LOAD BEARING TILT WALL TO JOIST ROOF

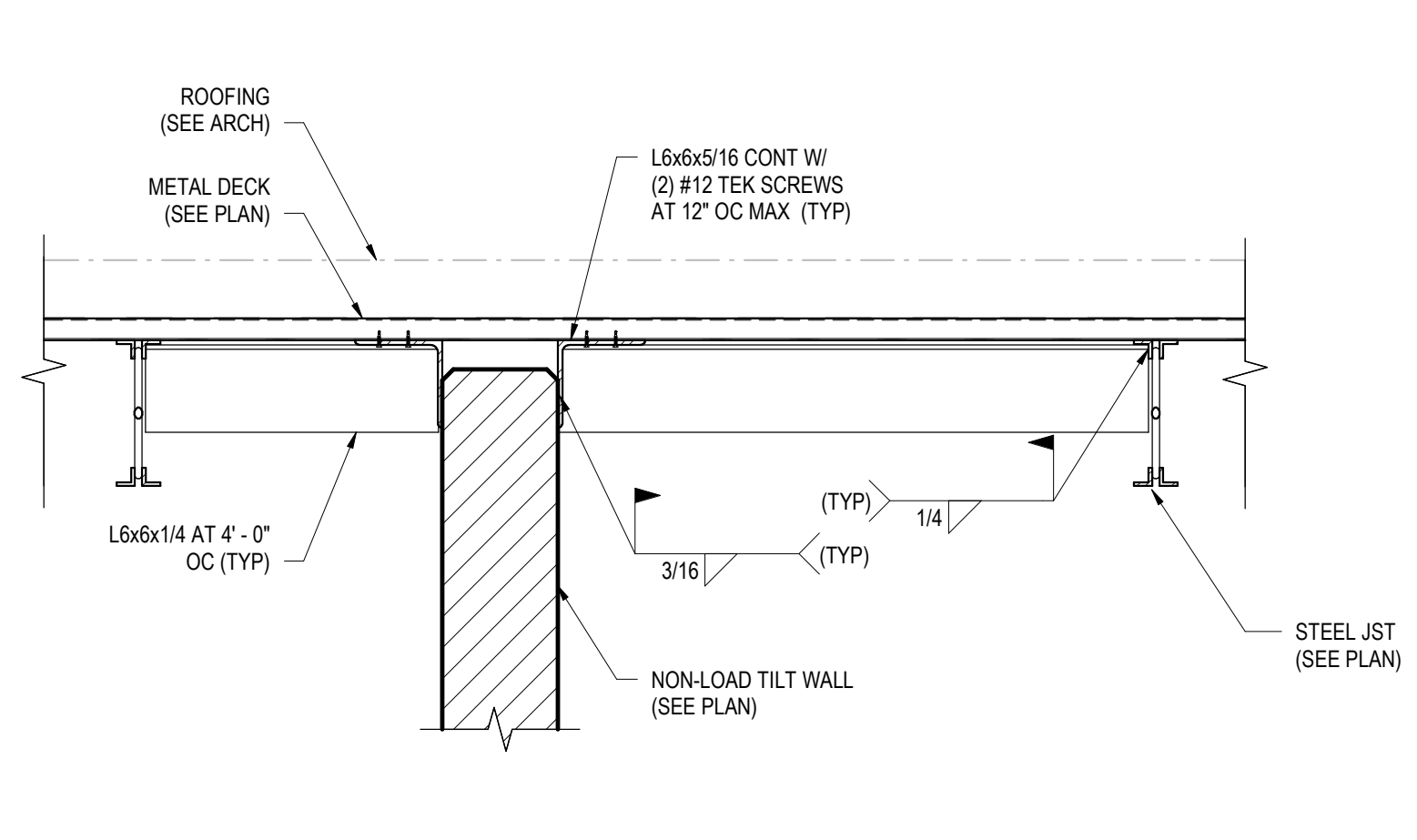
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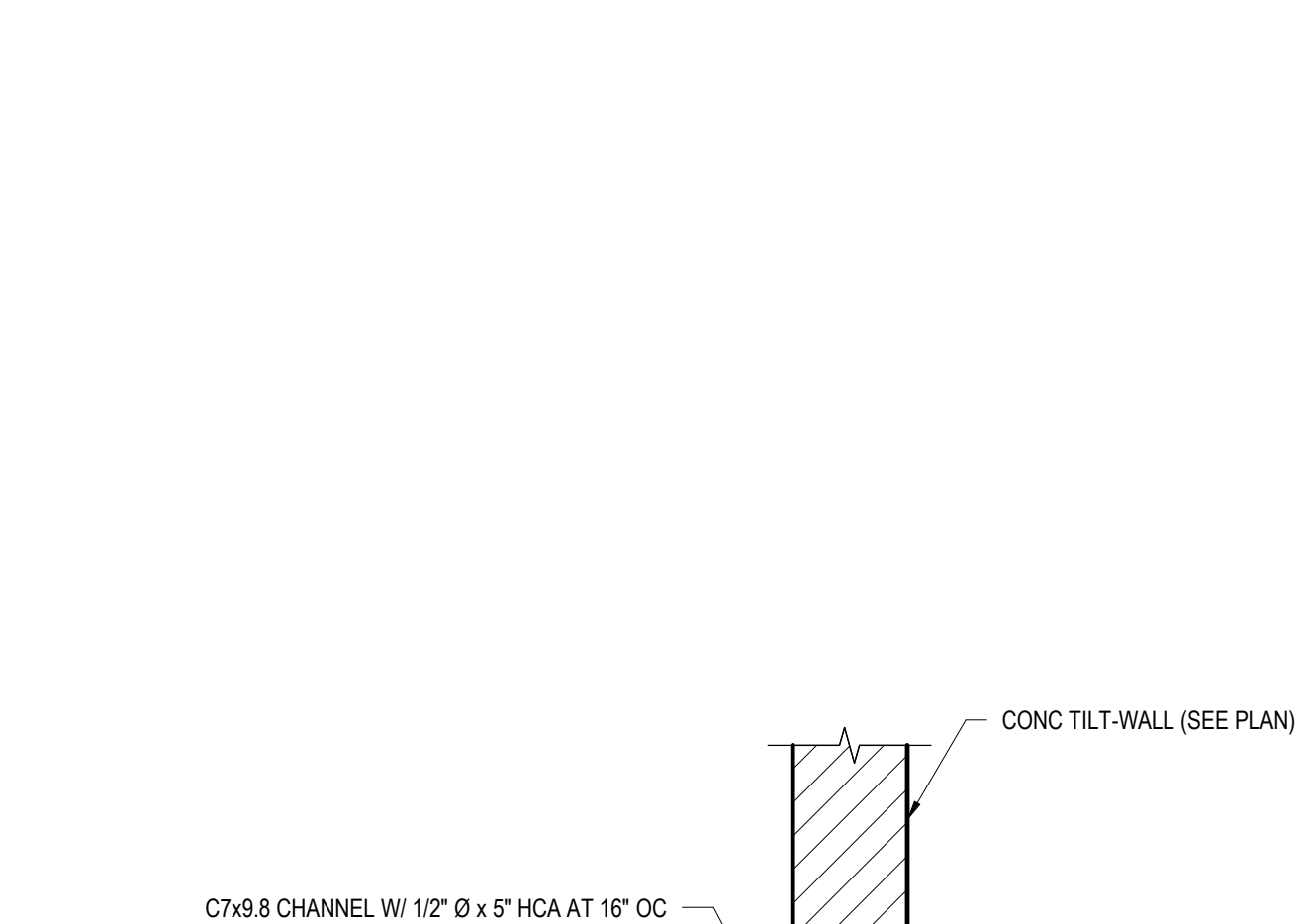
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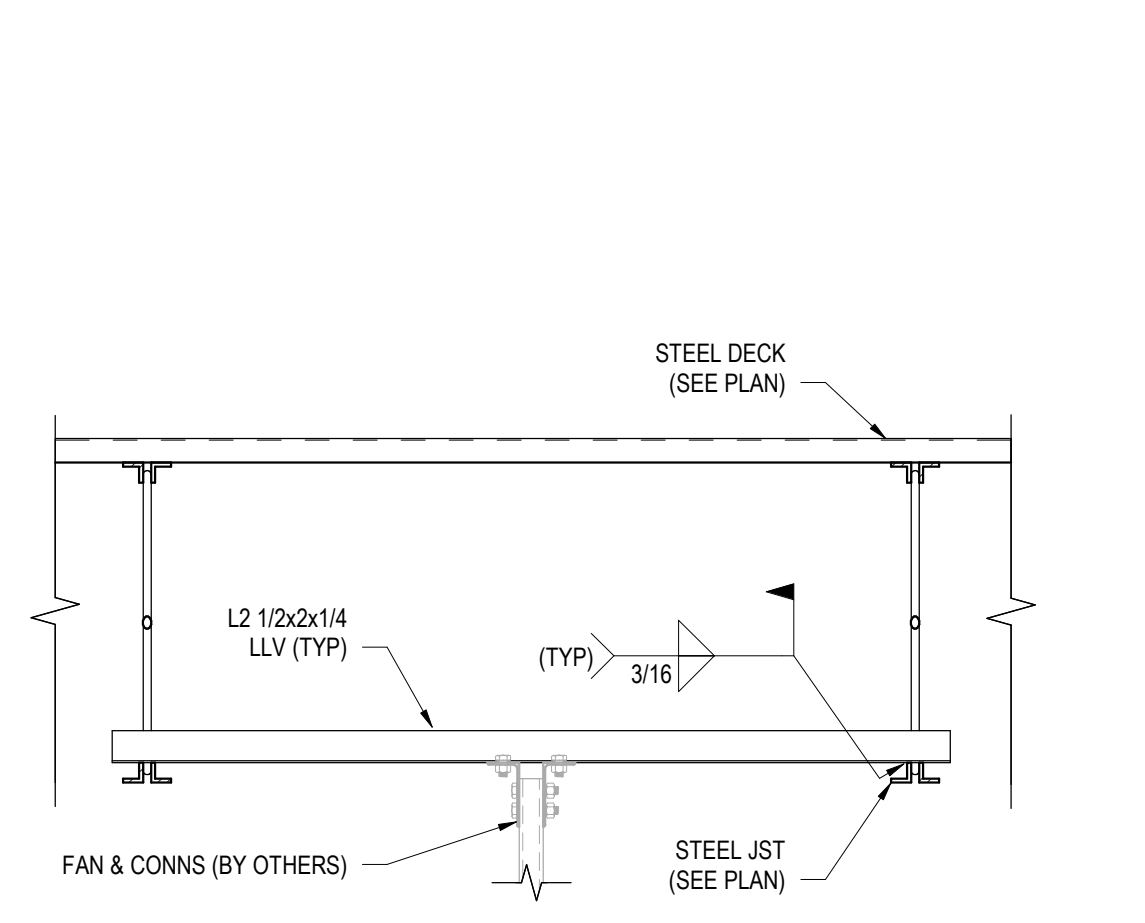
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1" = 1'-0"



SECTION

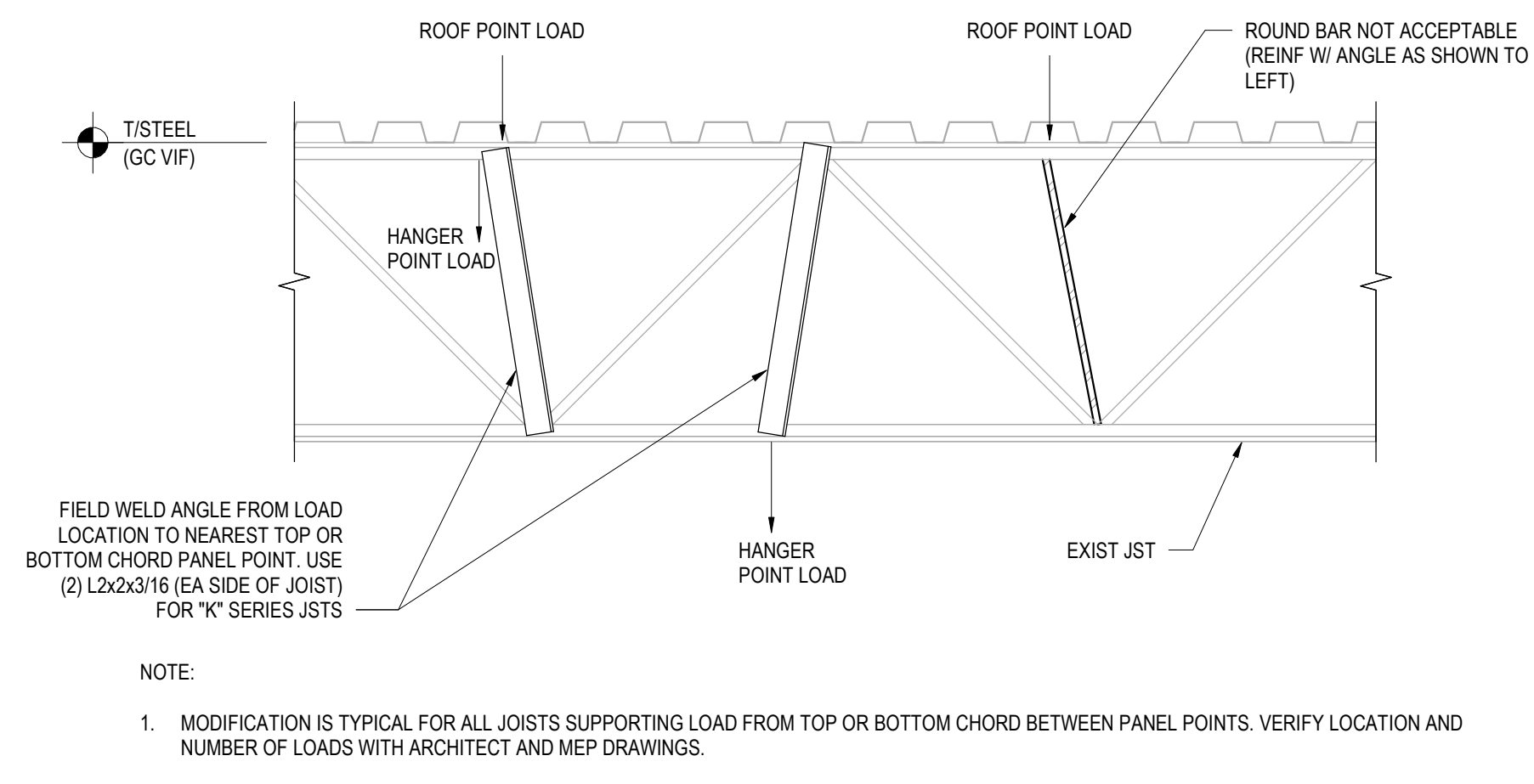
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FAN SUPPORT DETAIL

DETAIL

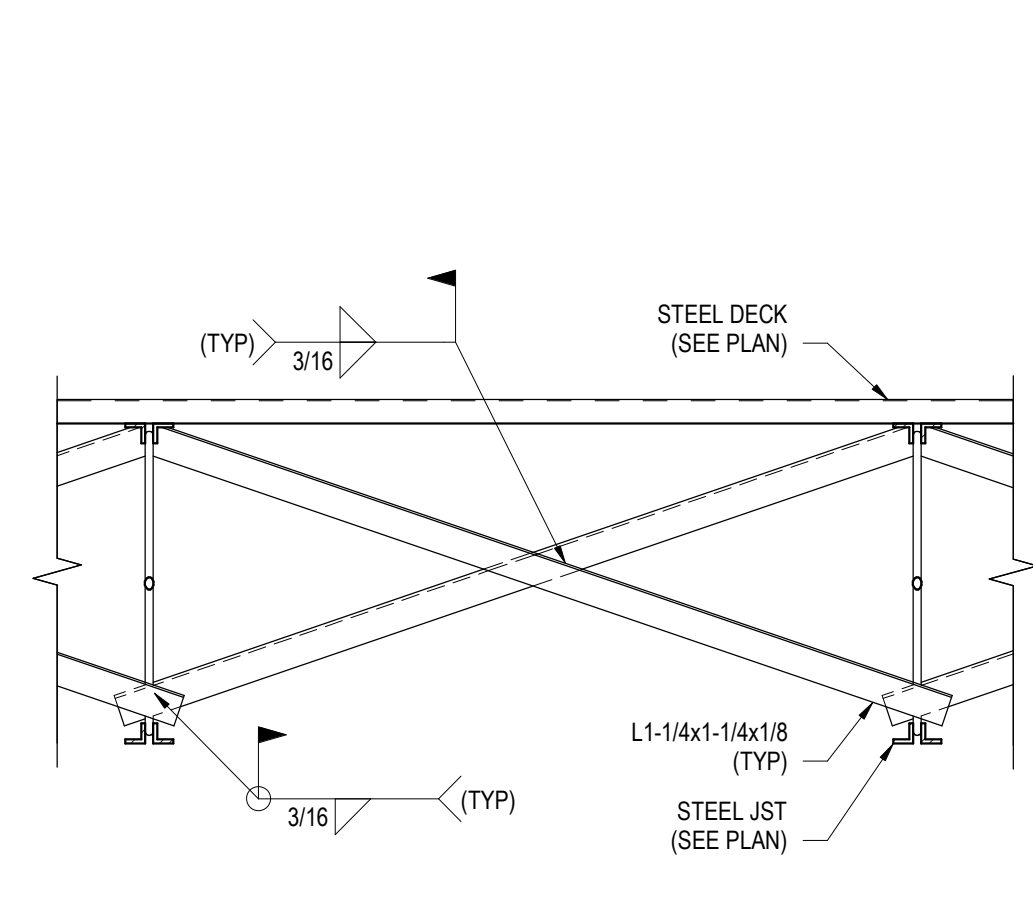
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TYPICAL JOIST POINT LOAD REINFORCEMENT

SECTION

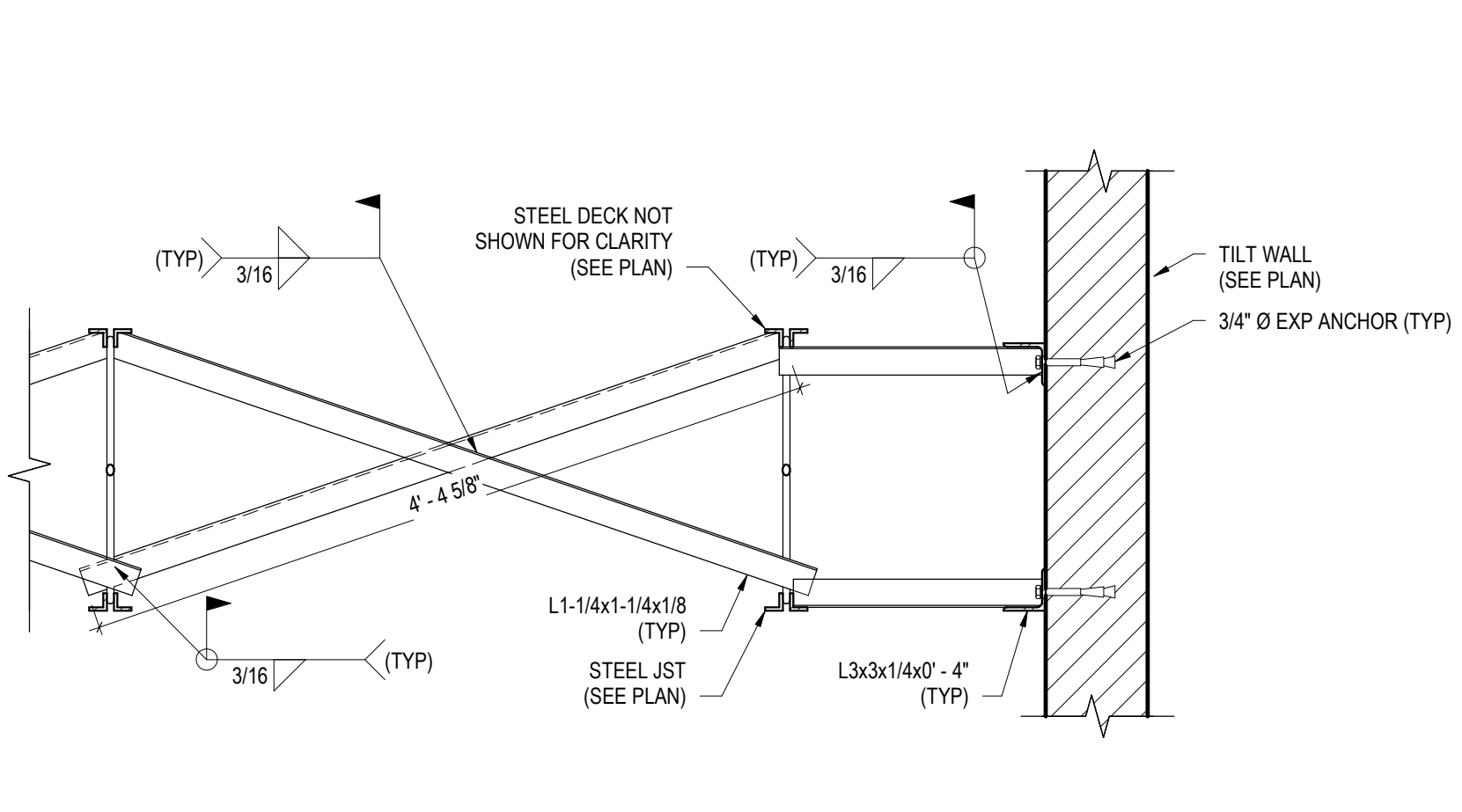
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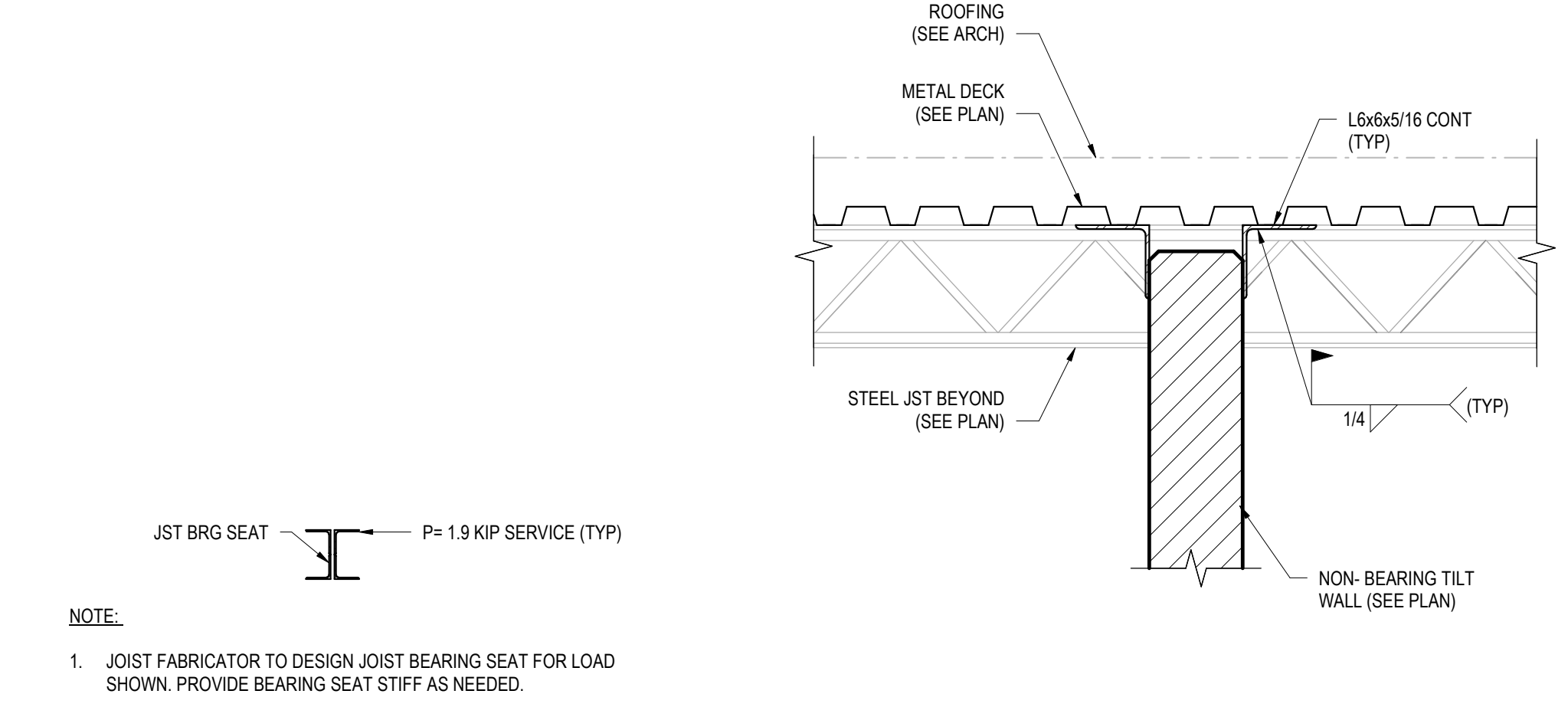
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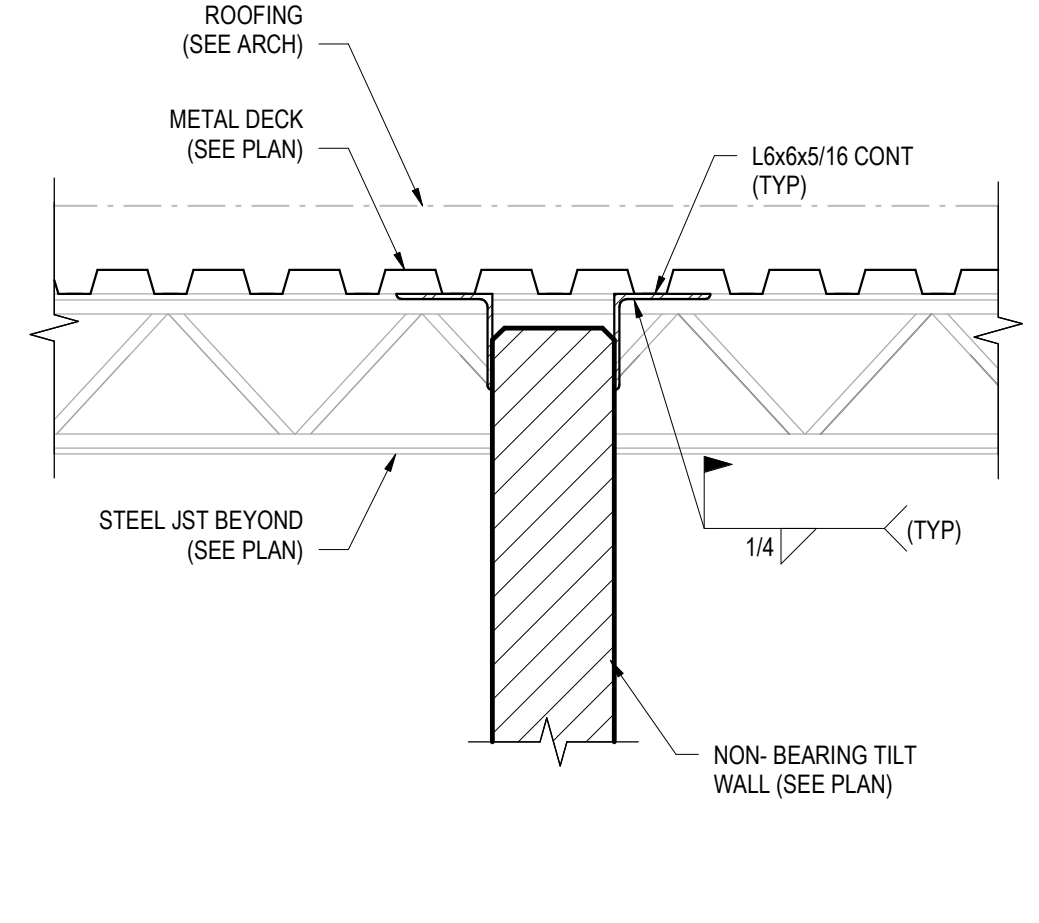
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TYPICAL JOIST ROLLOVER DESIGN FORCE

SECTION

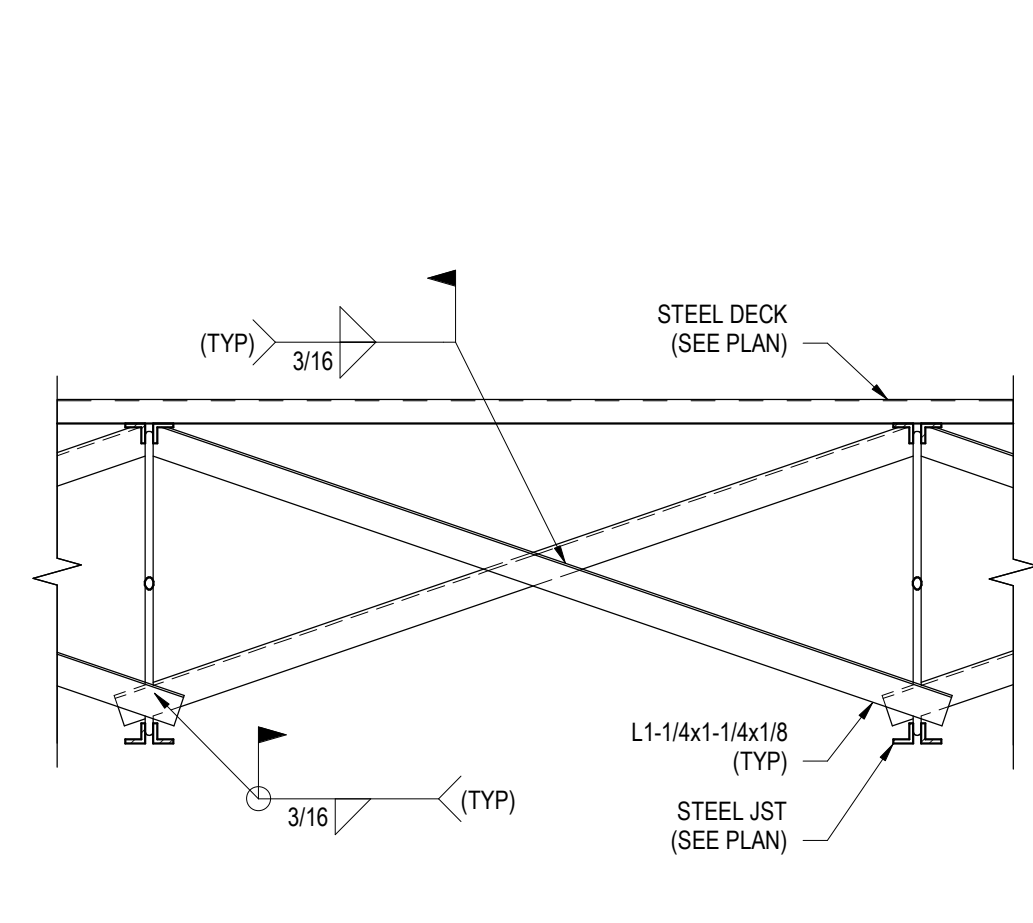
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NON-LOAD BEARING TILT WALL TO JOIST ROOF

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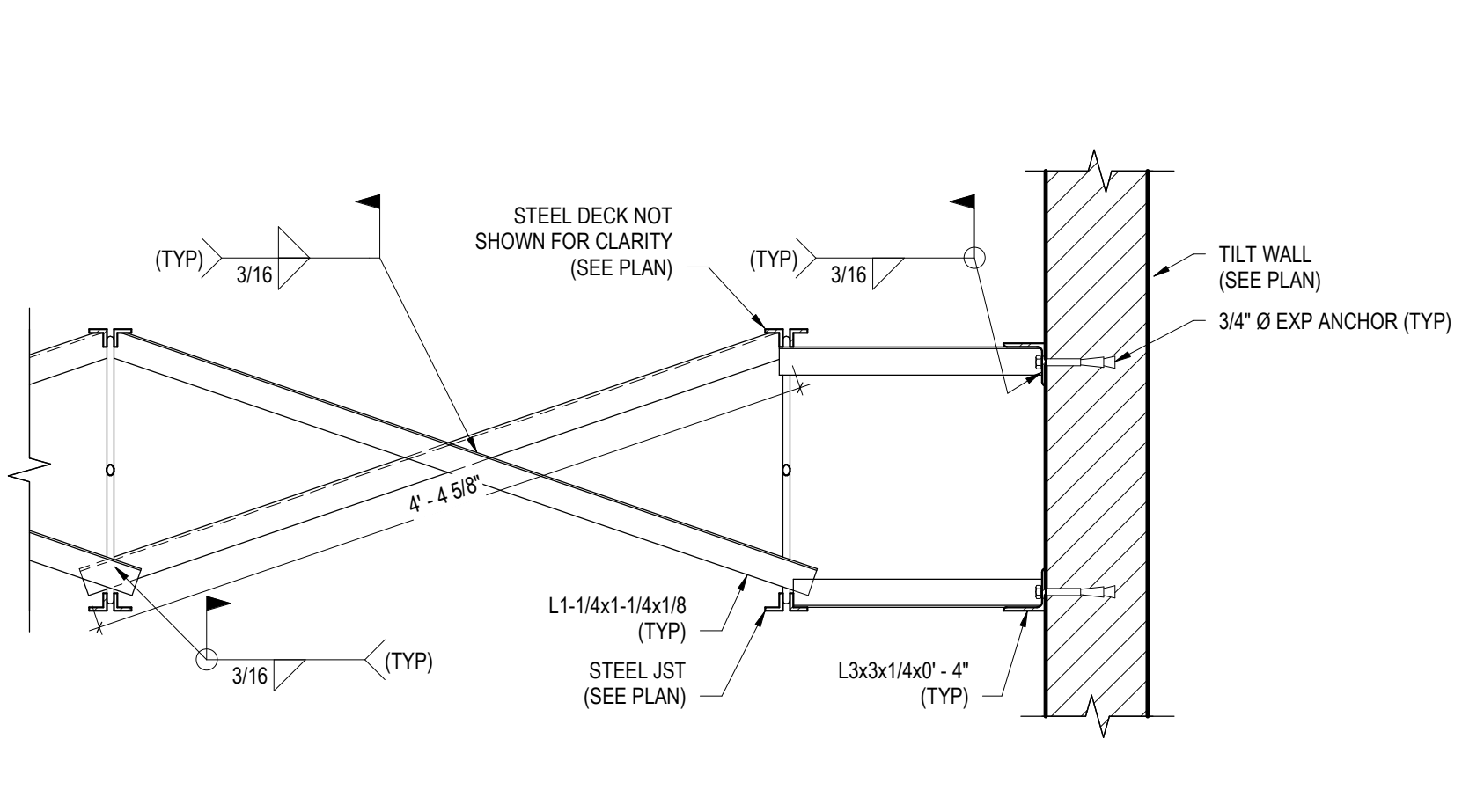
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NON-LOAD BEARING TILT WALL TO ROOF JOIST

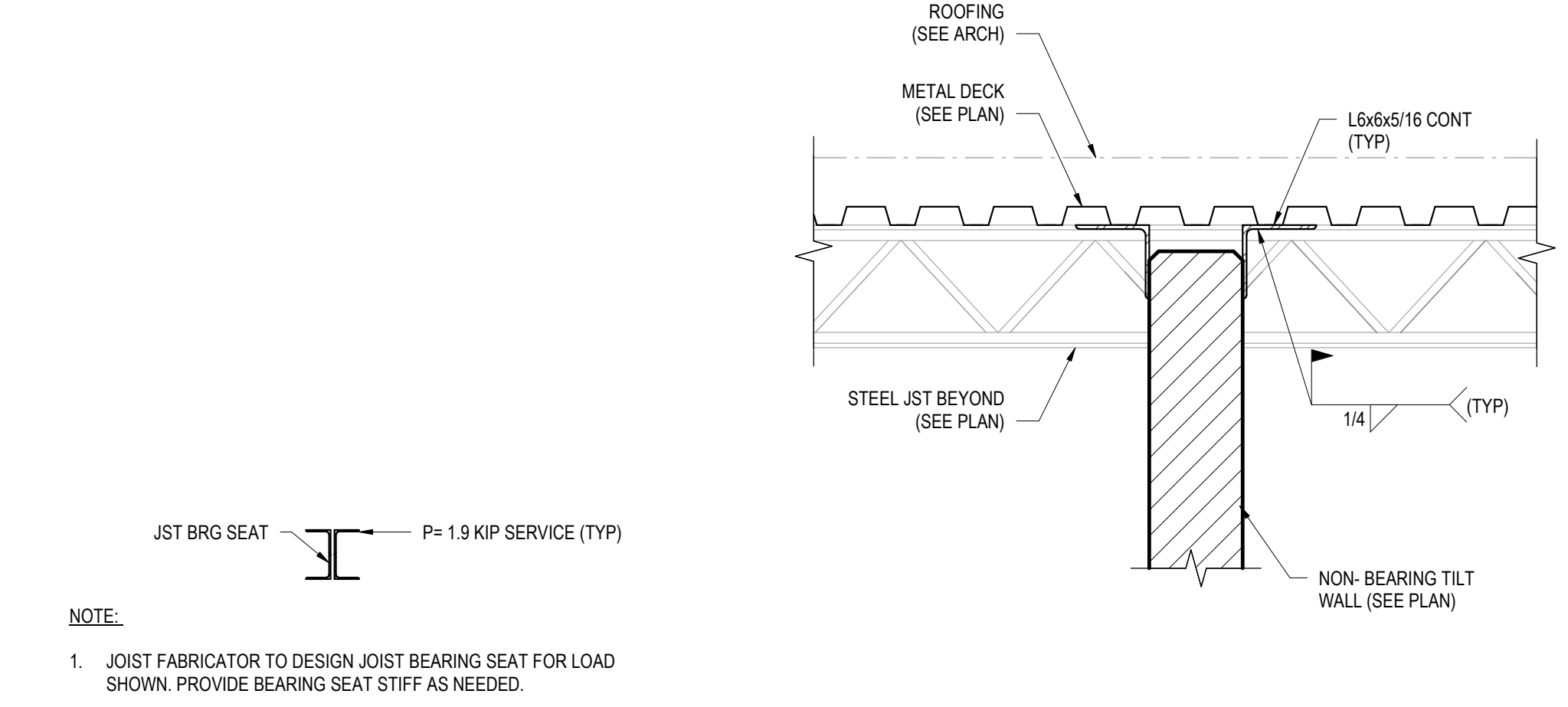
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DETAIL

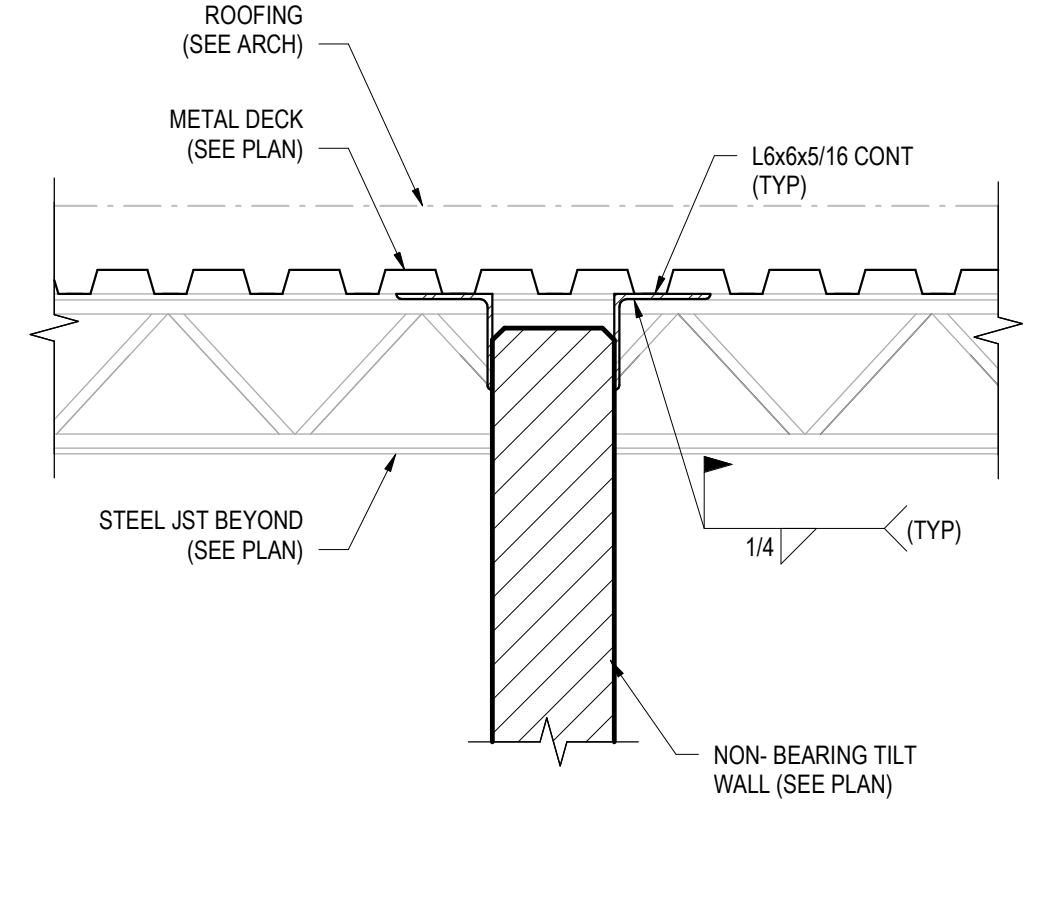
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TYPICAL JOIST ROLLOVER DESIGN FORCE

SECTION

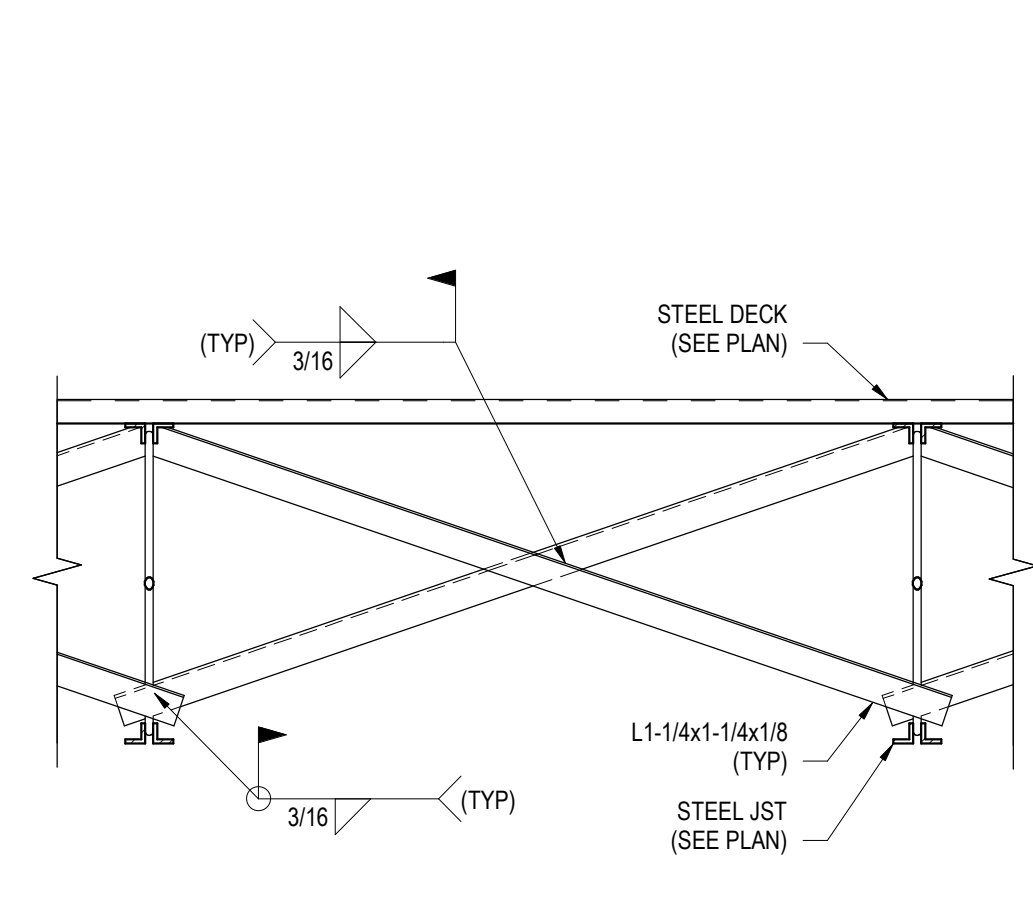
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NON-LOAD BEARING TILT WALL TO JOIST ROOF

SECTION

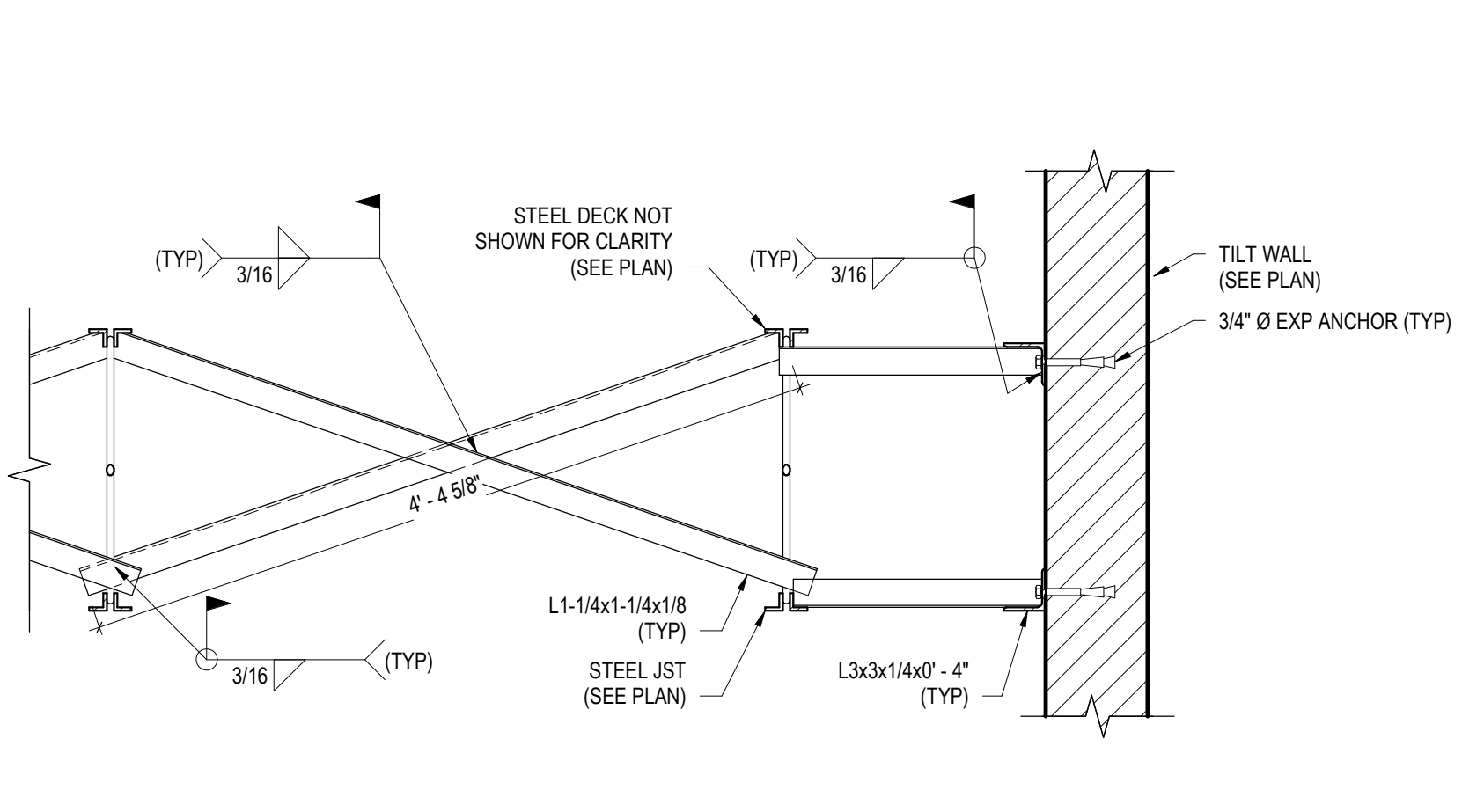
1" = 1'-0"



NON-LOAD BEARING TILT WALL TO ROOF JOIST

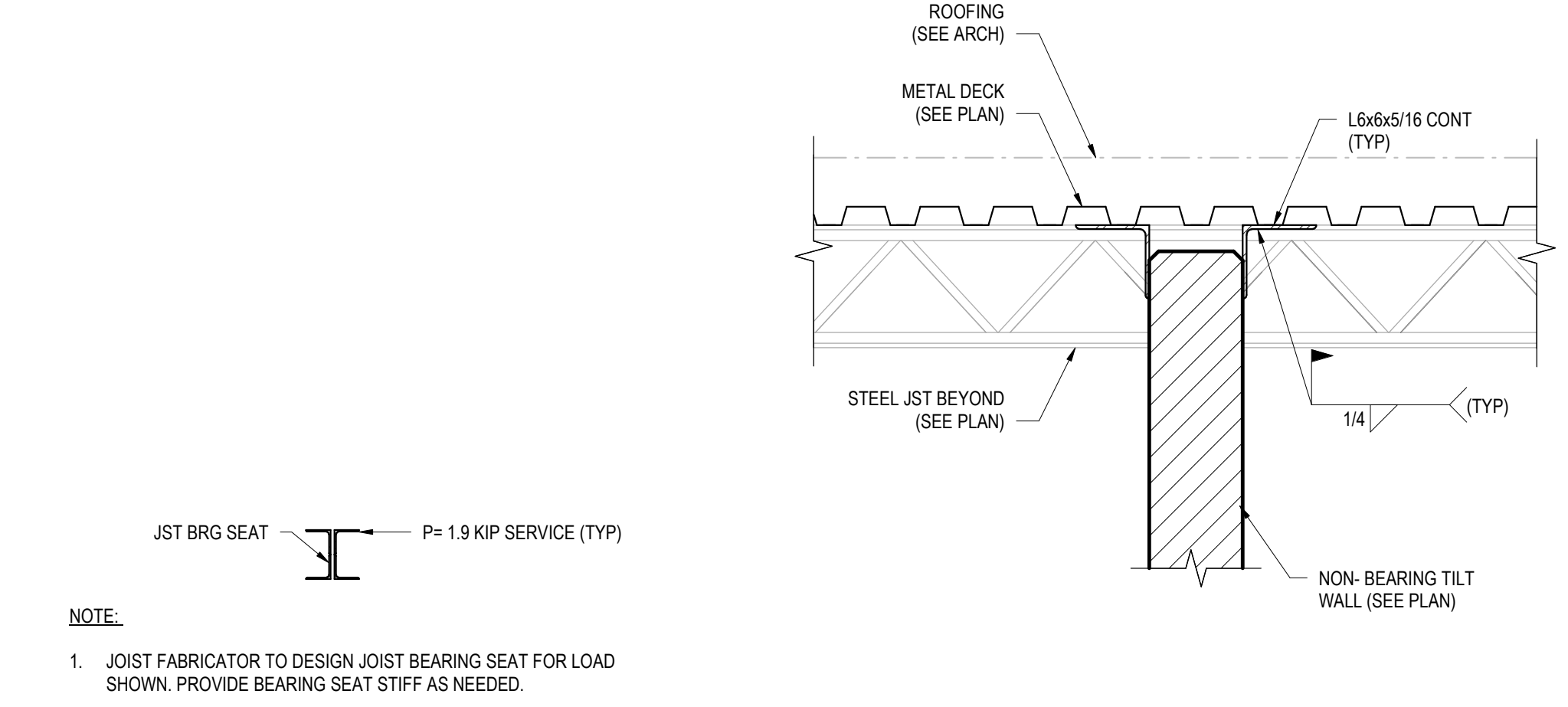
SECTION

1" = 1'-0"



DETAIL

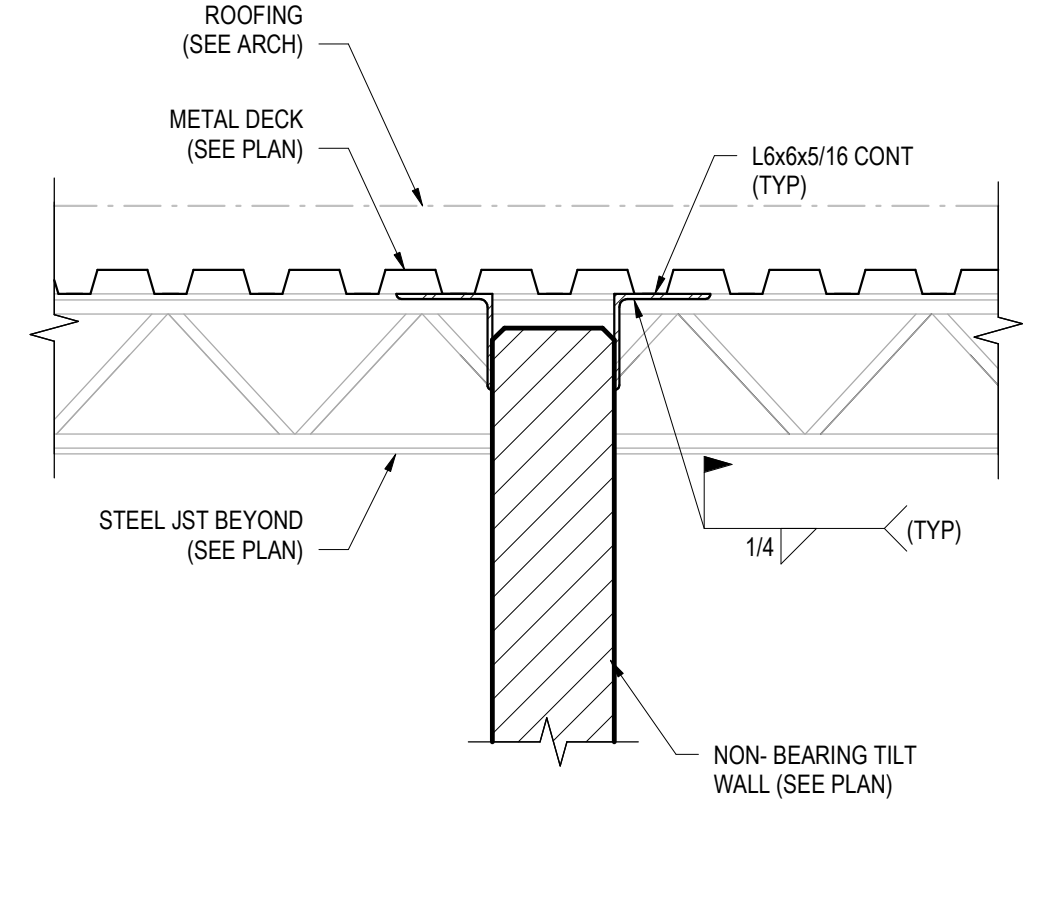
1" = 1'-0"



TYPICAL JOIST ROLLOVER DESIGN FORCE

SECTION

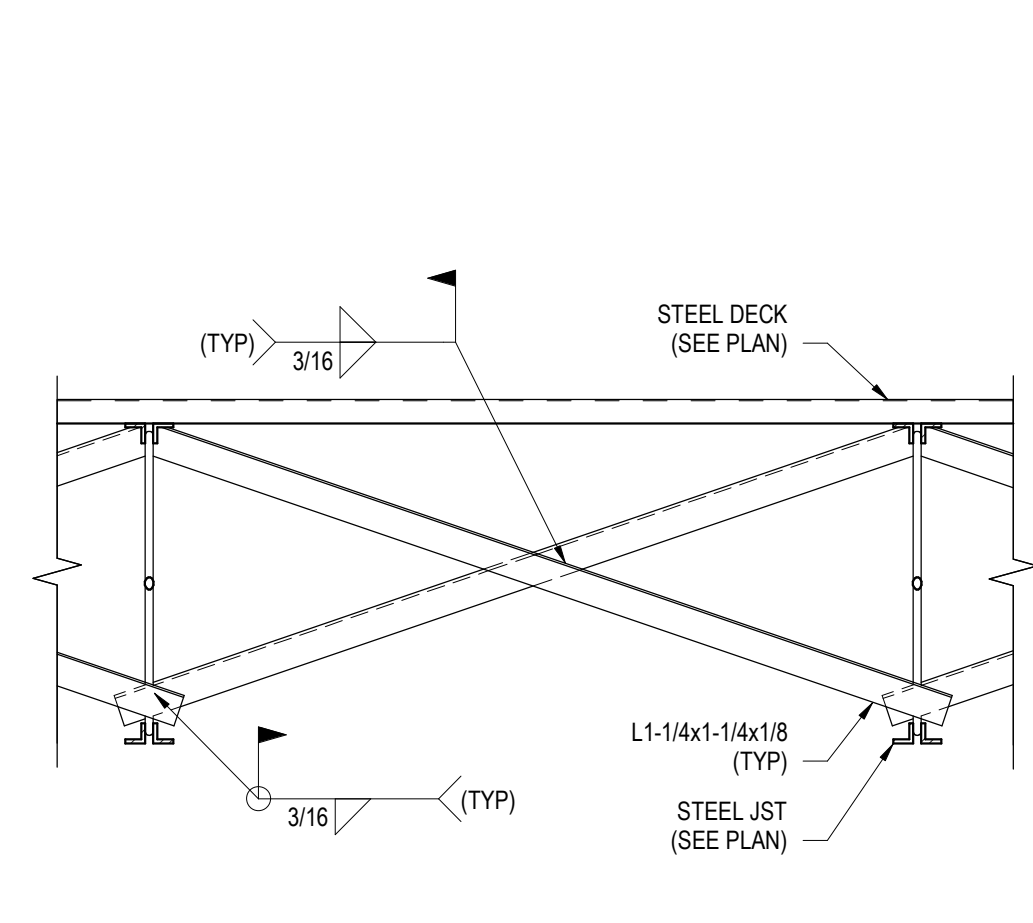
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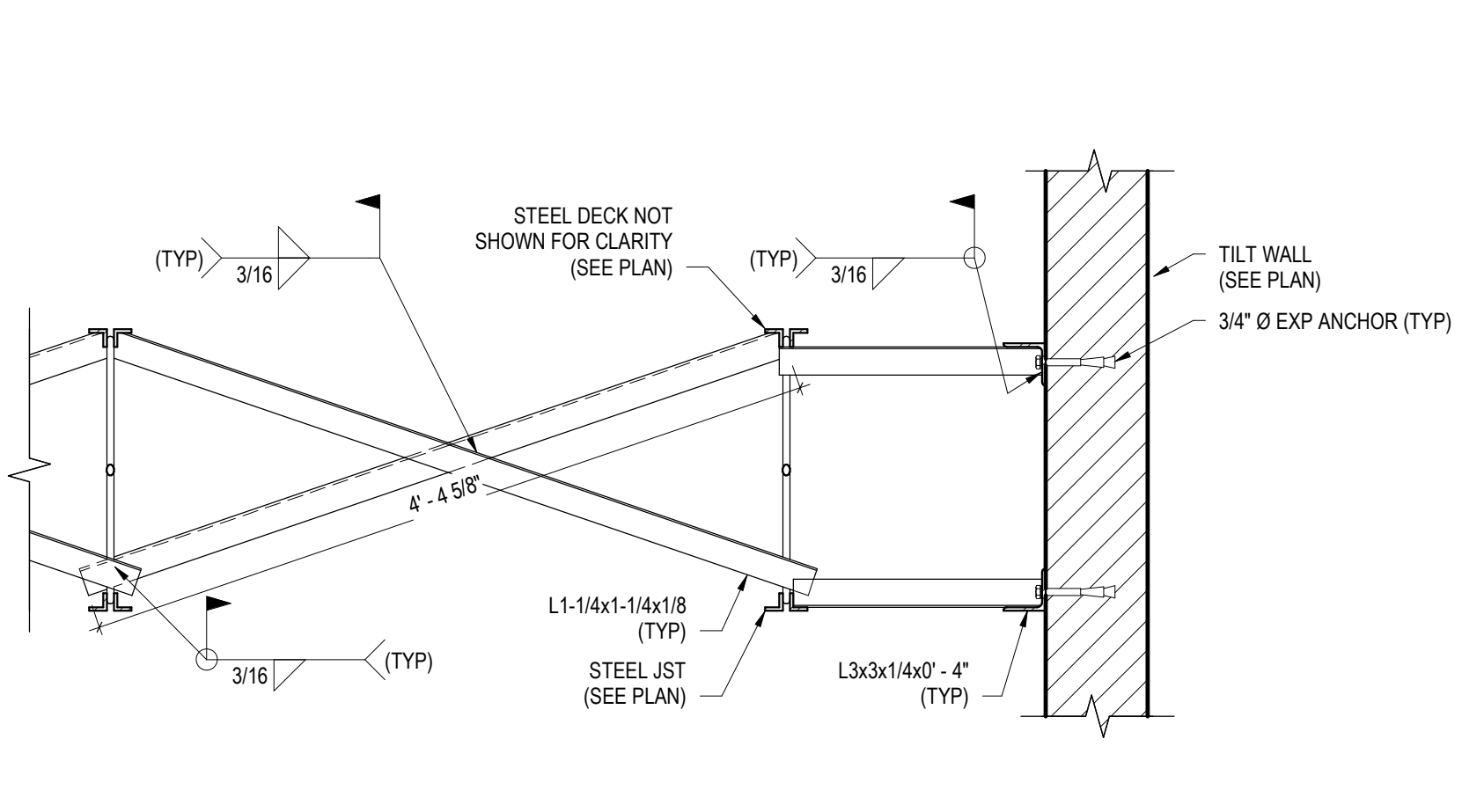
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NON-LOAD BEARING TILT WALL TO ROOF JOIST

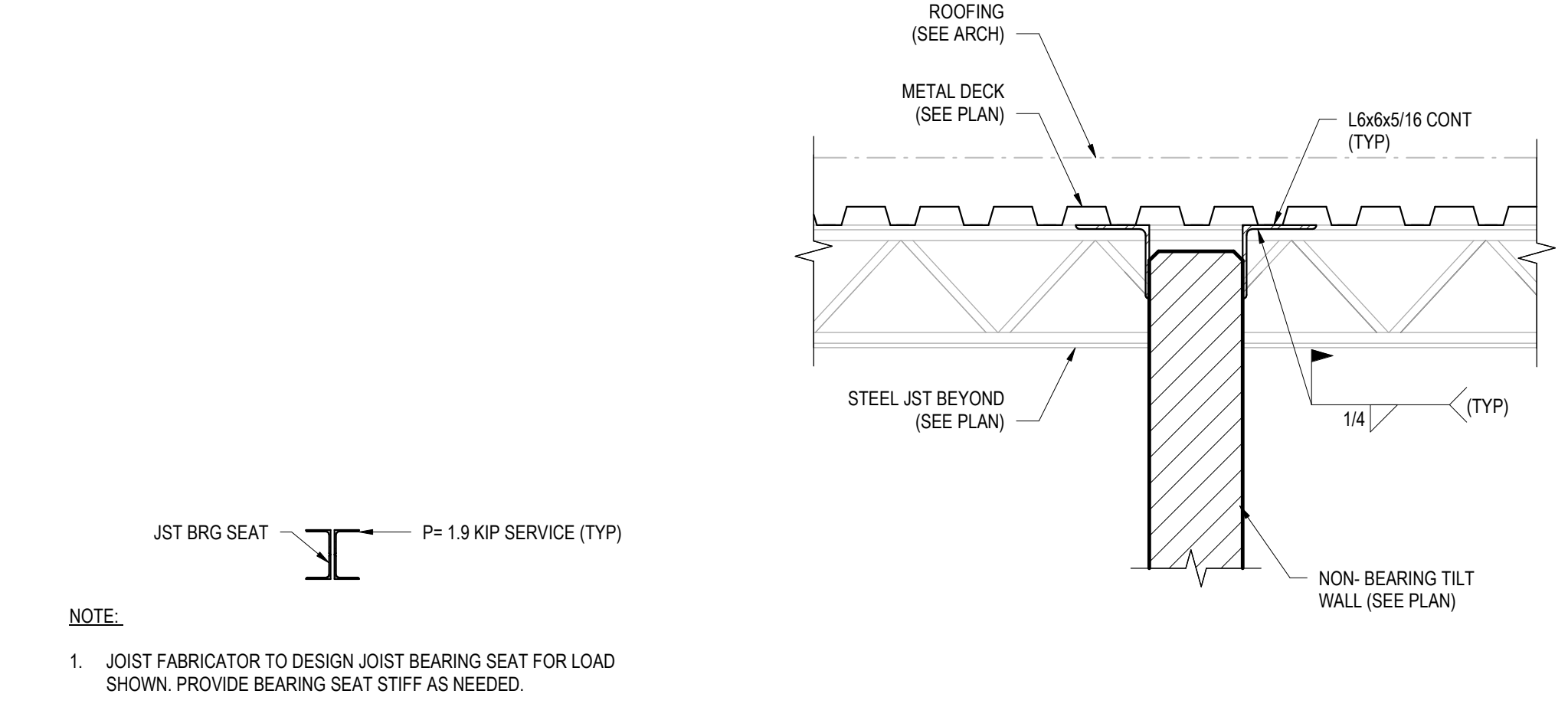
SECTION

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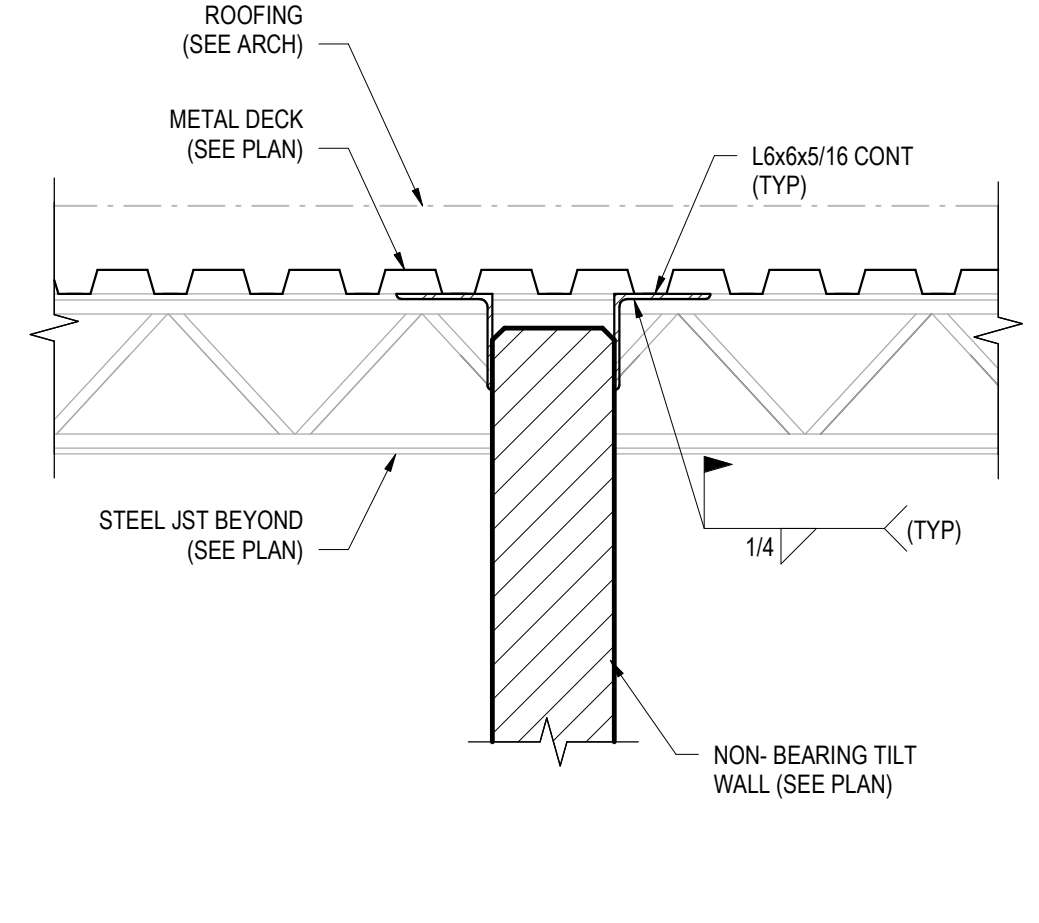
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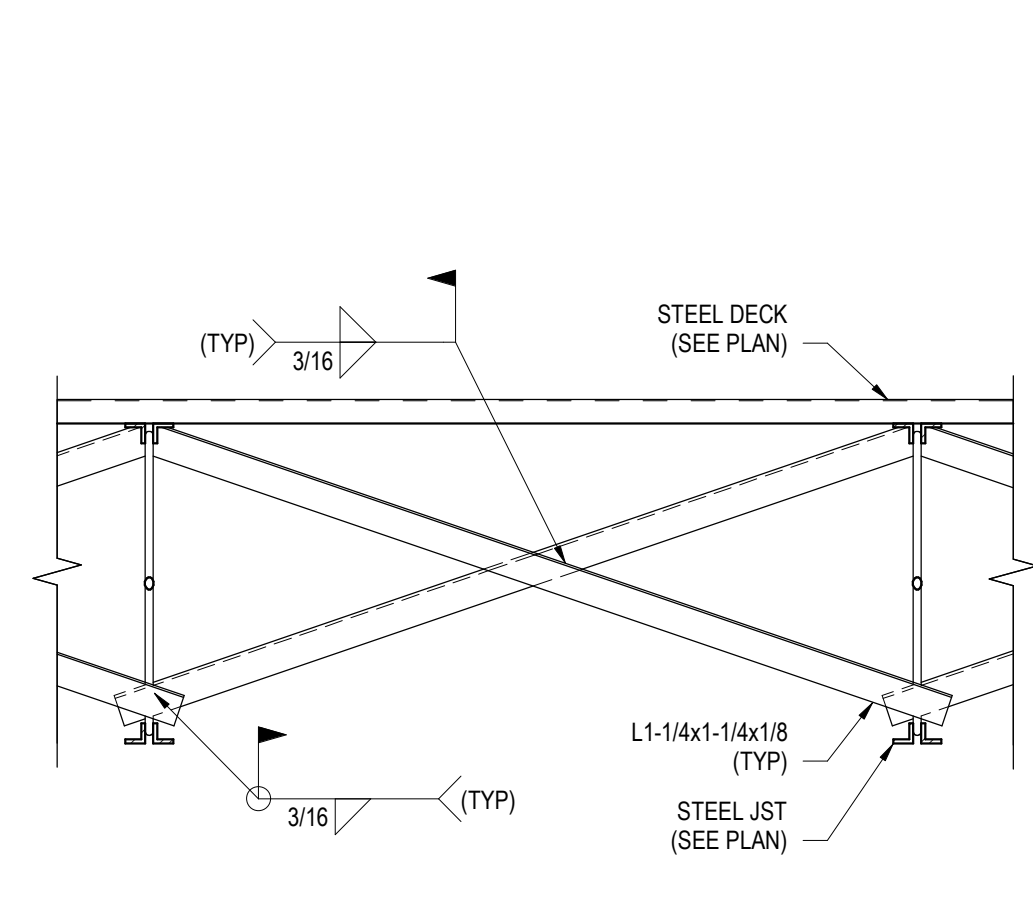
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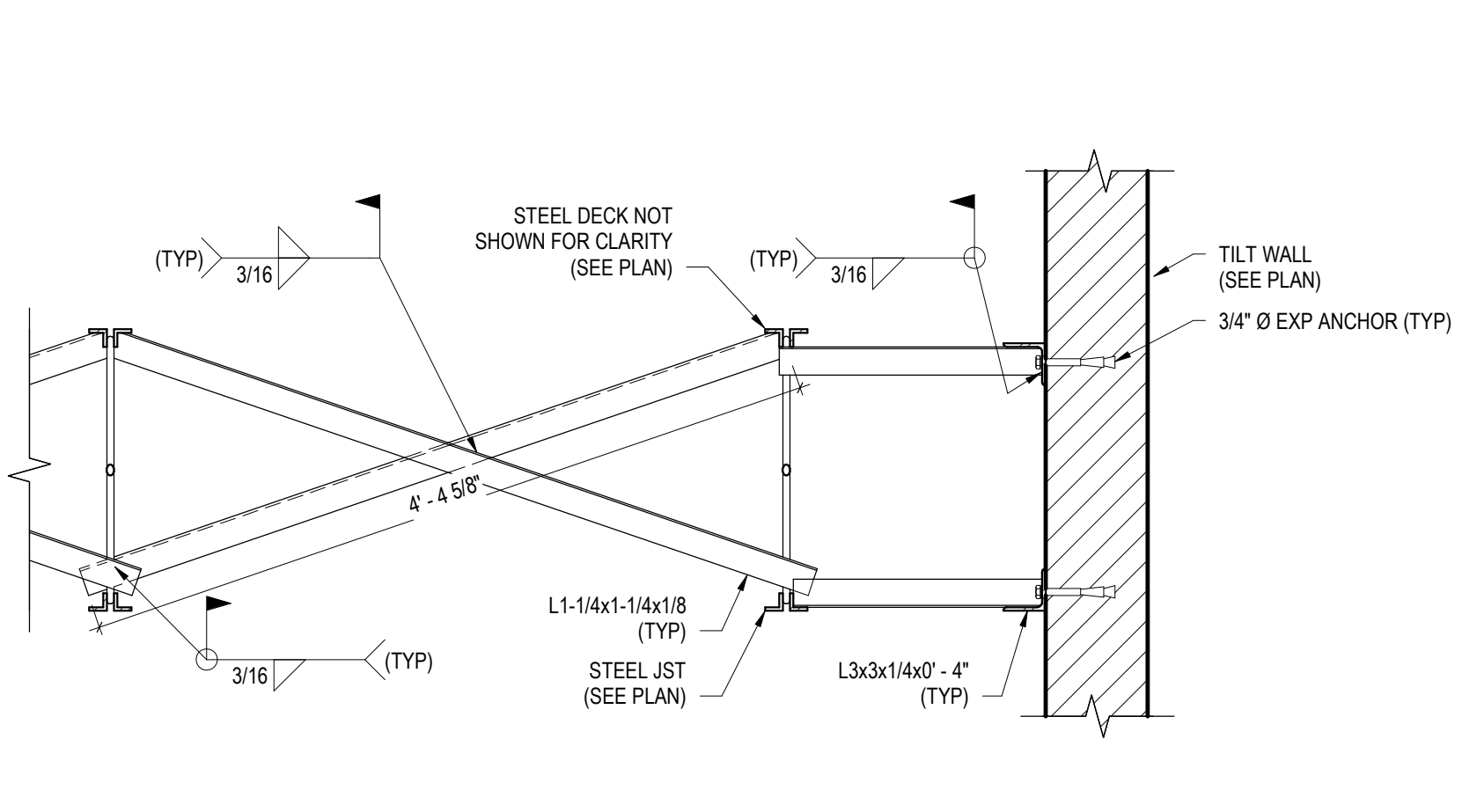
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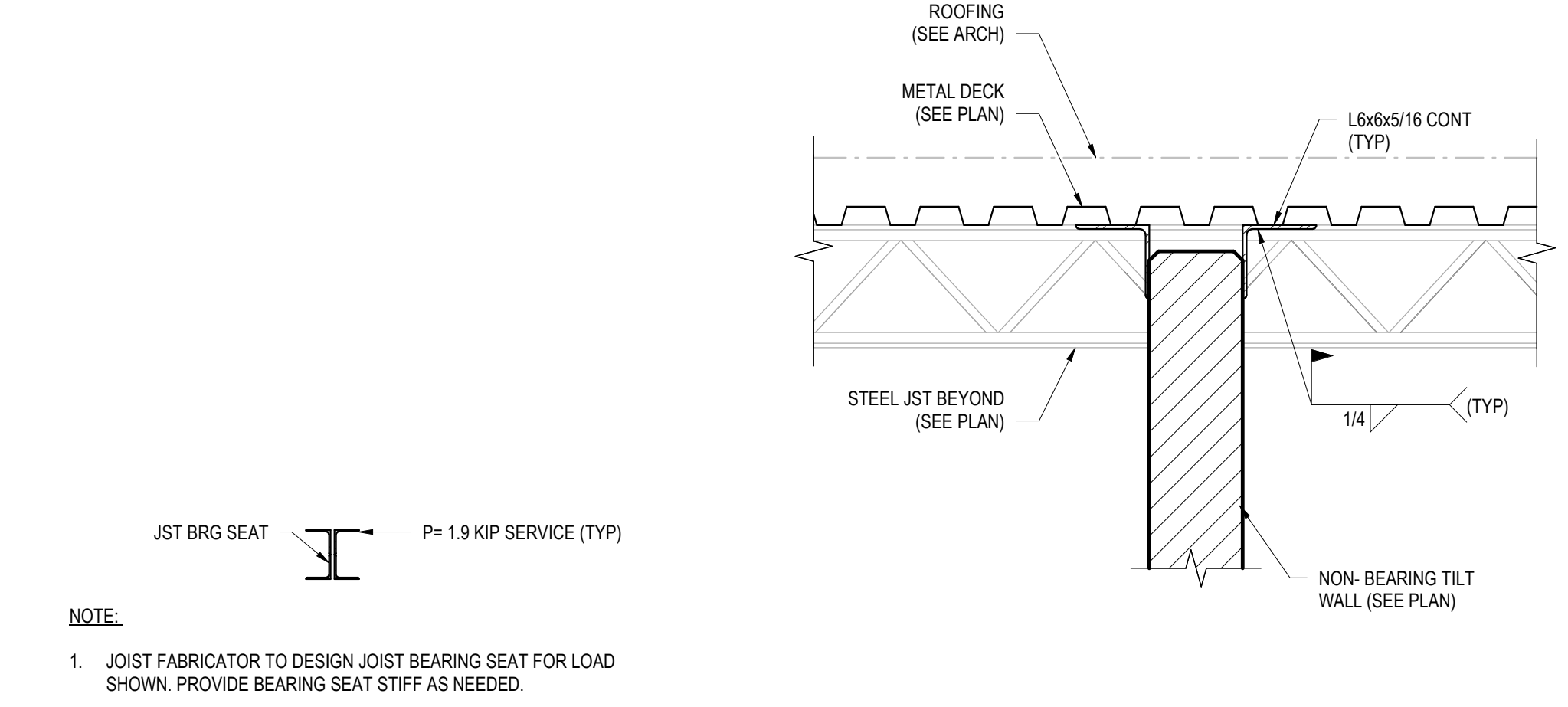
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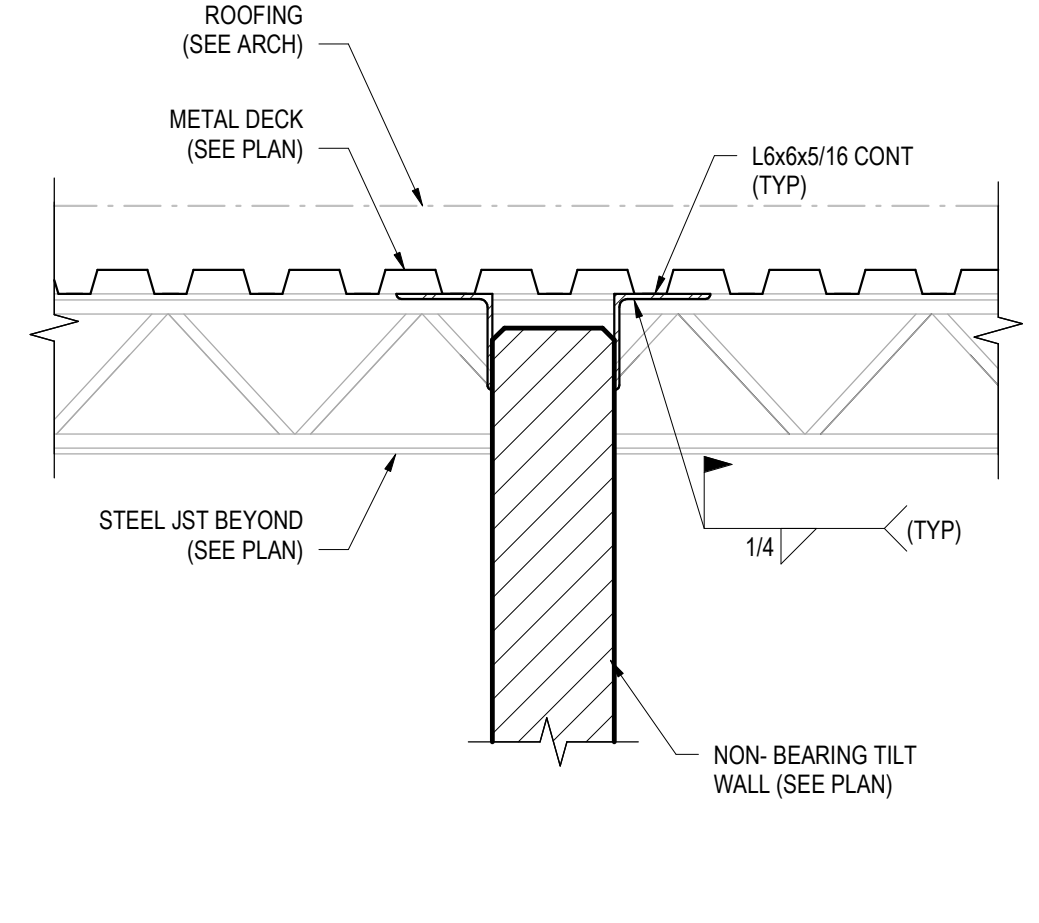
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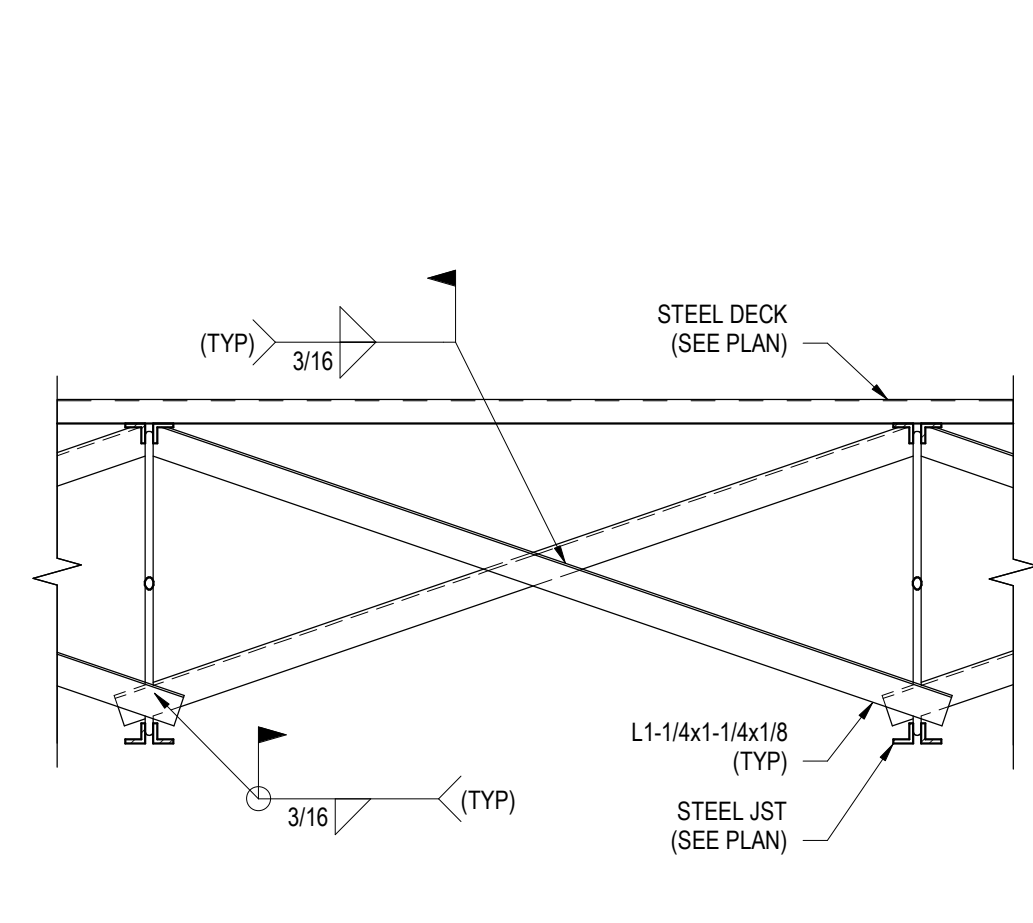
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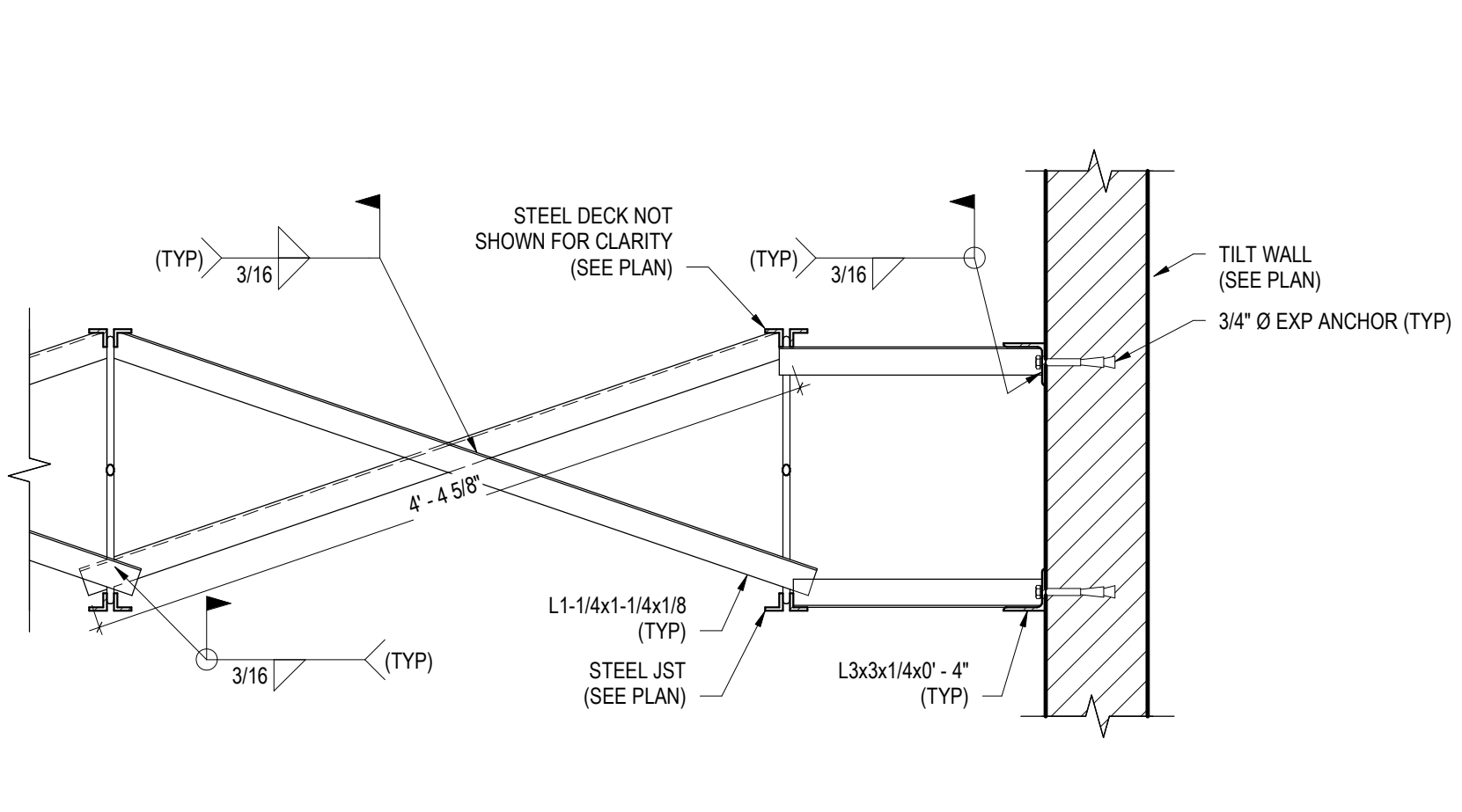
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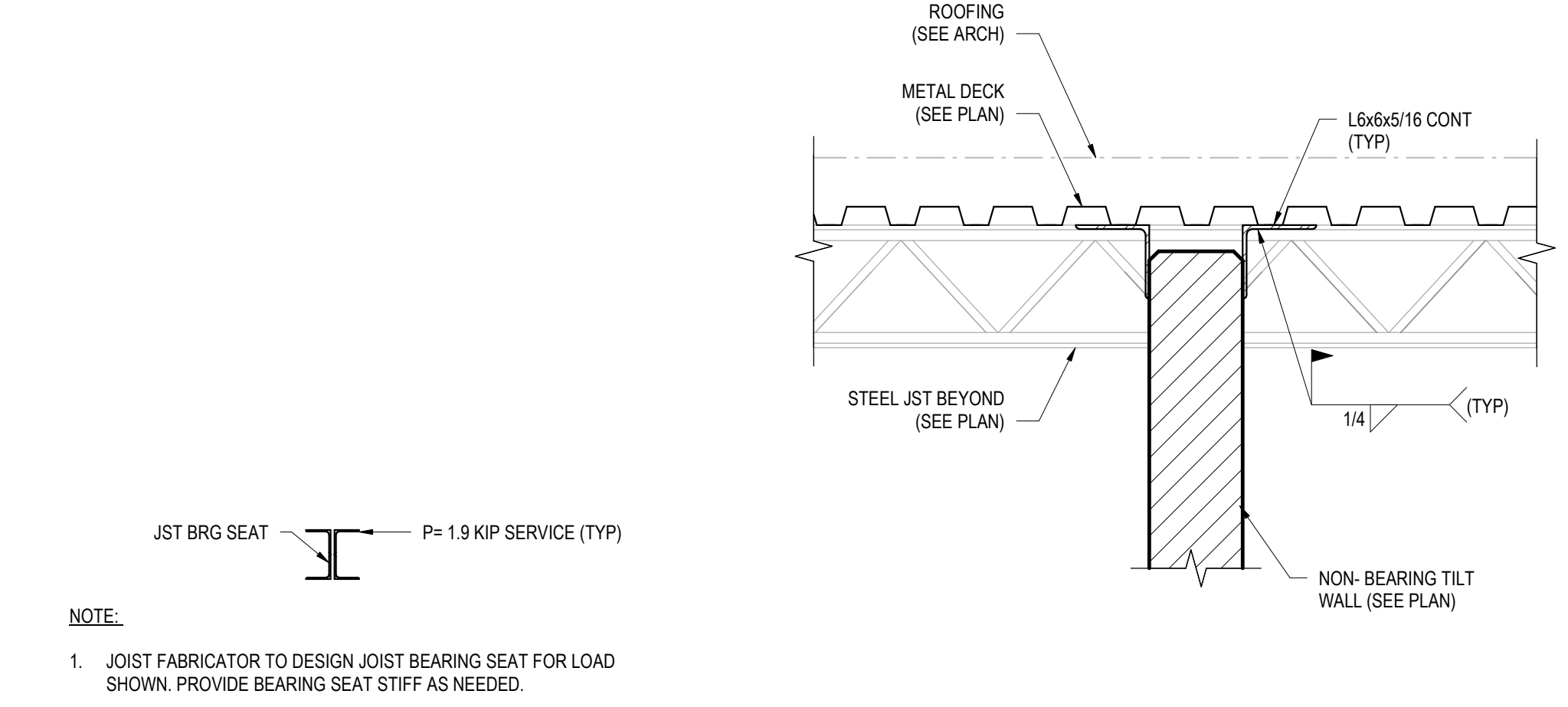
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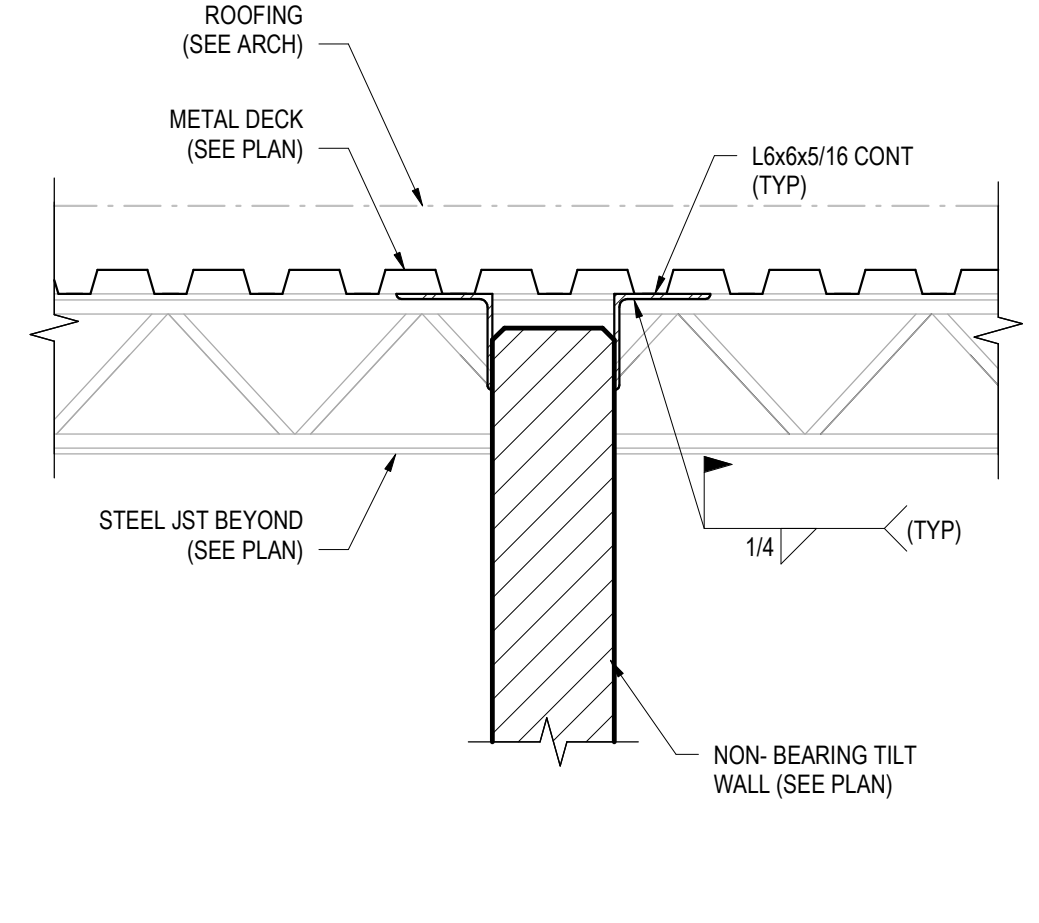
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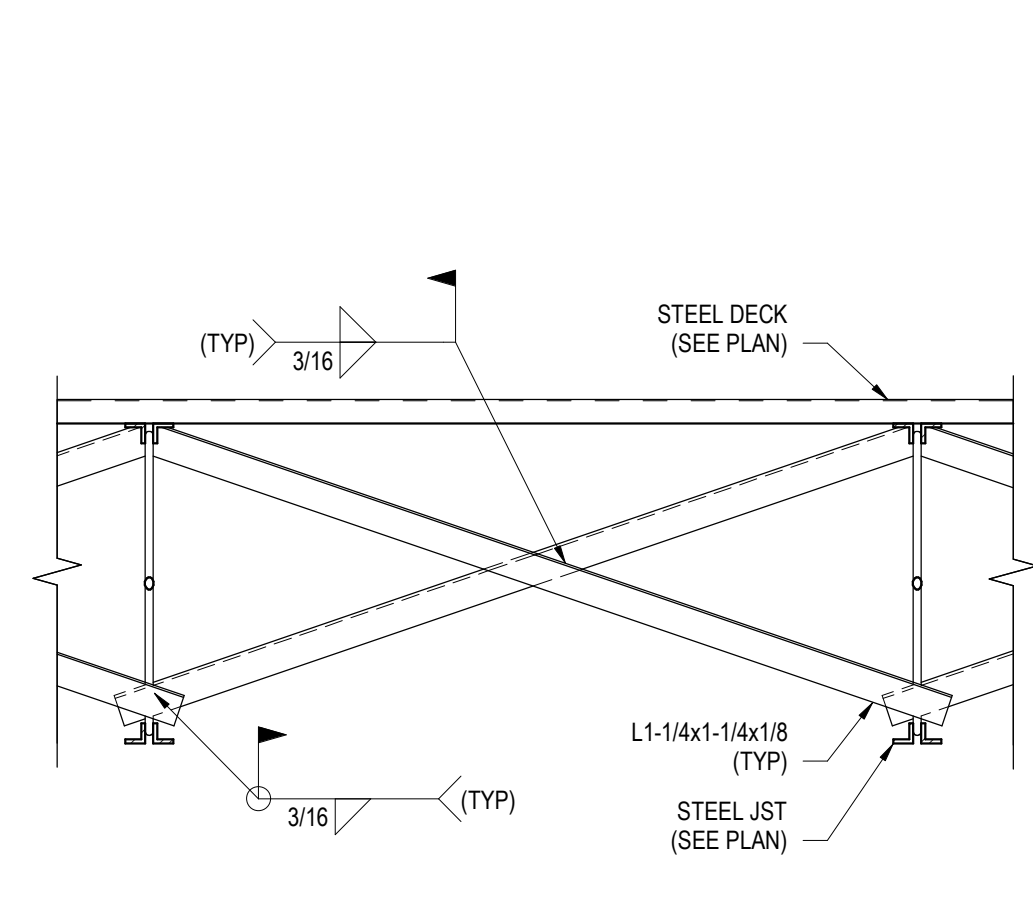
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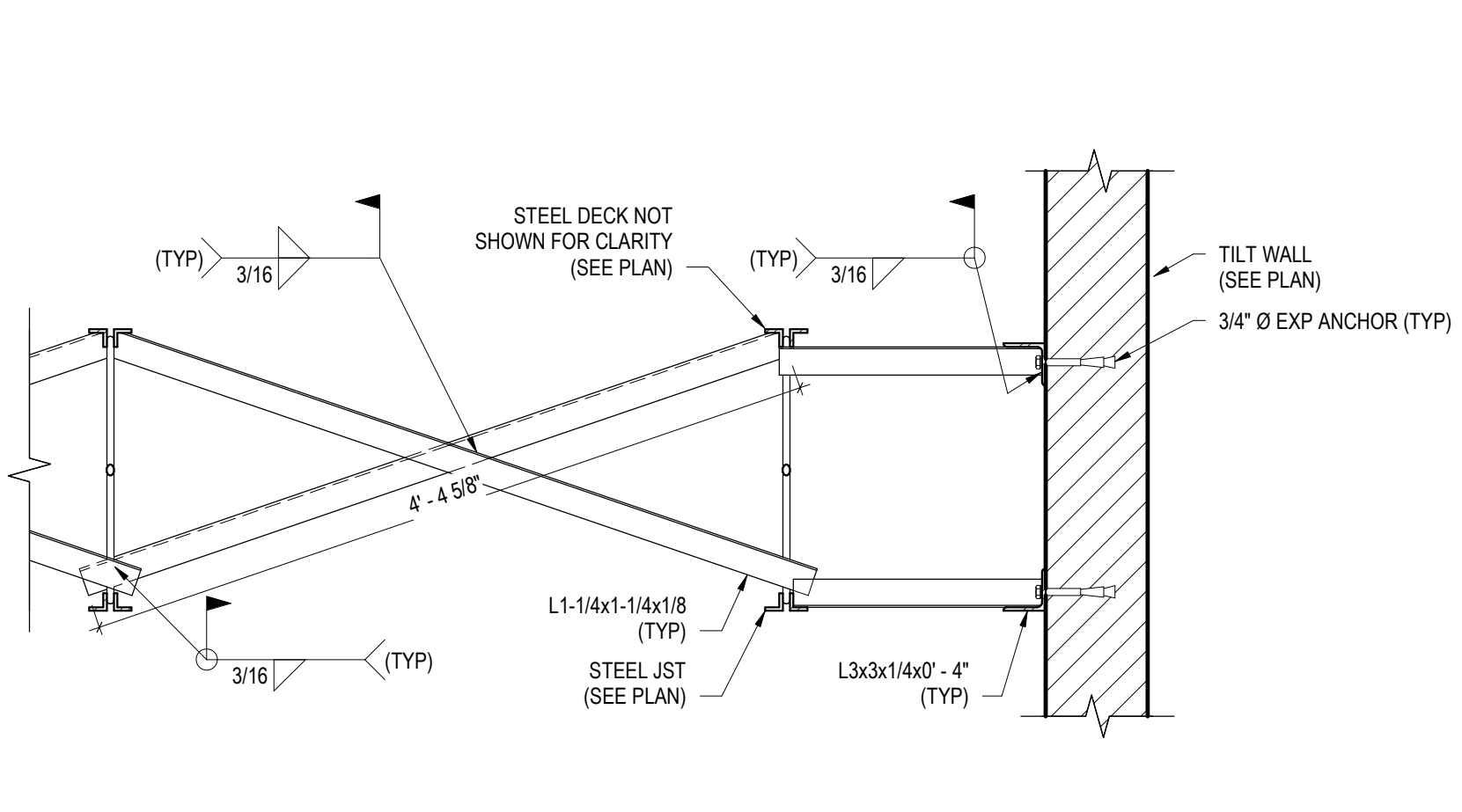
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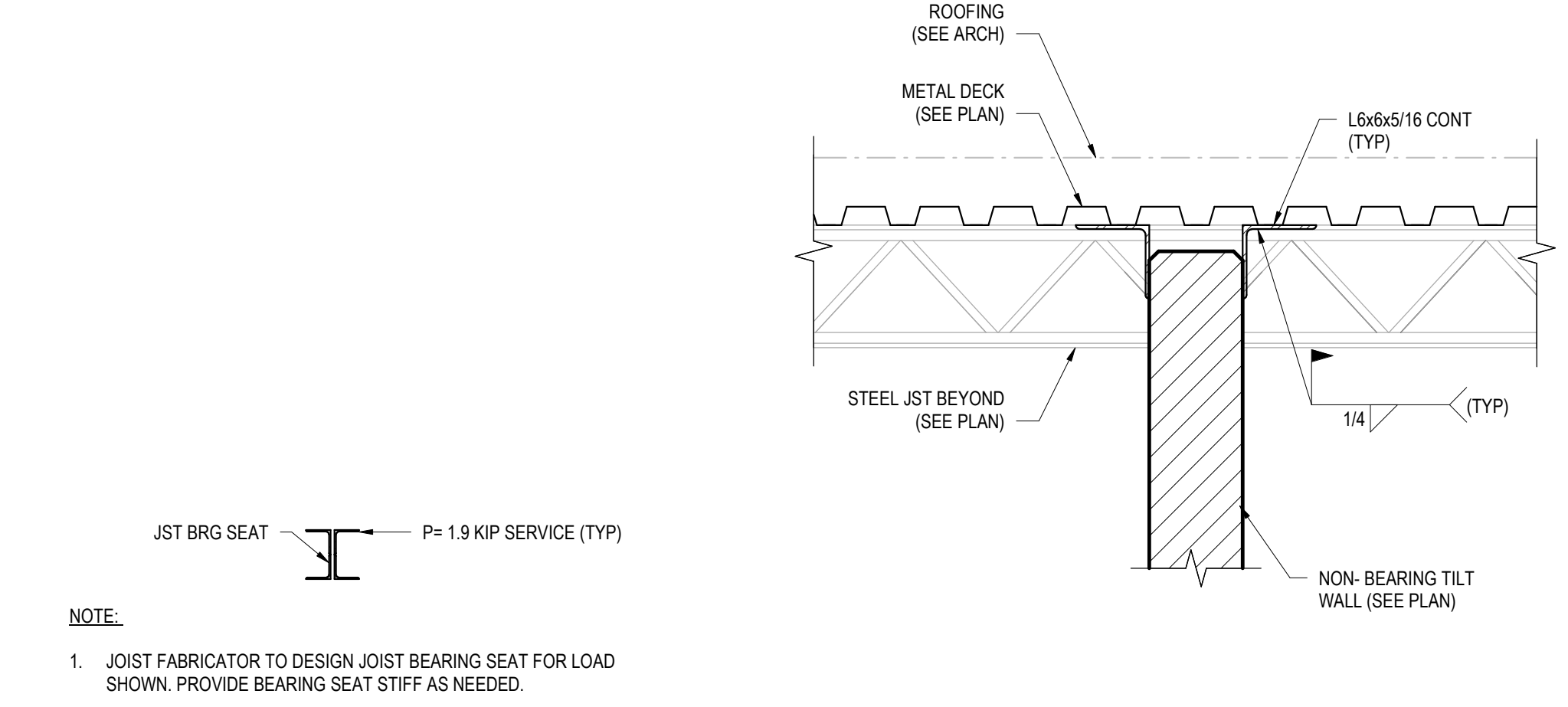
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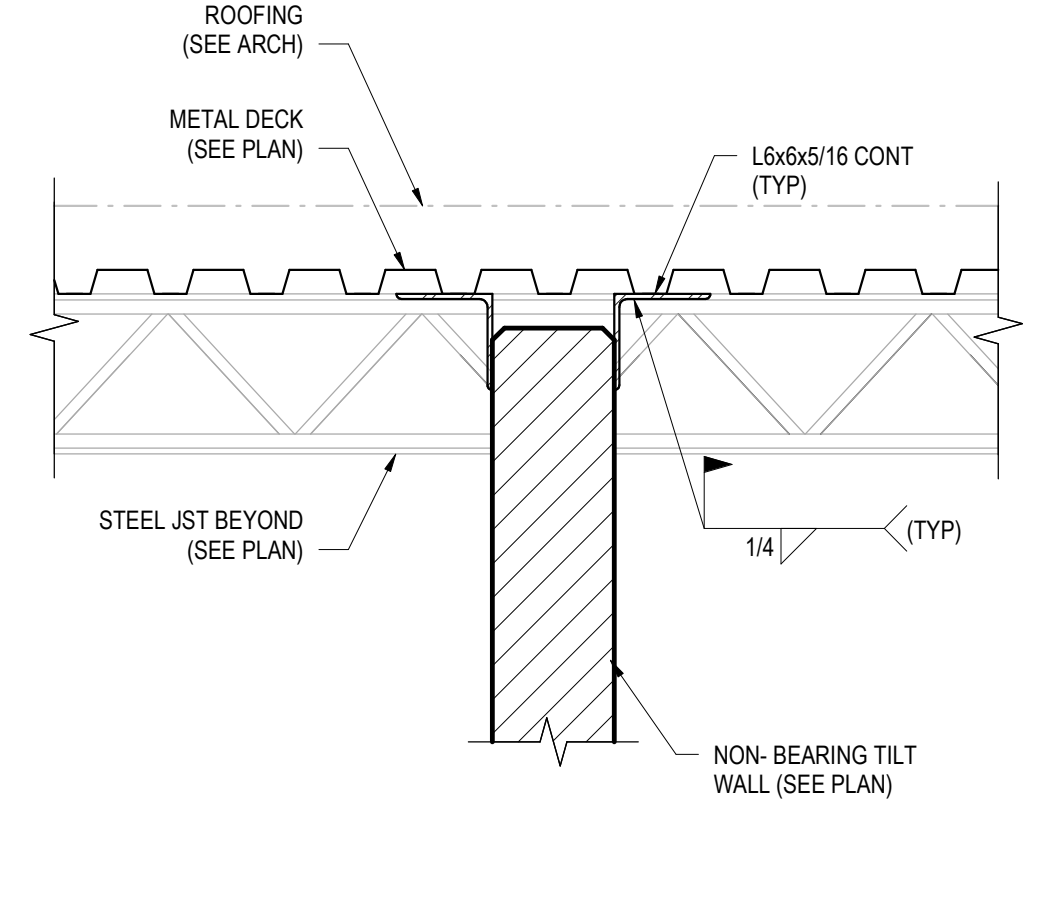
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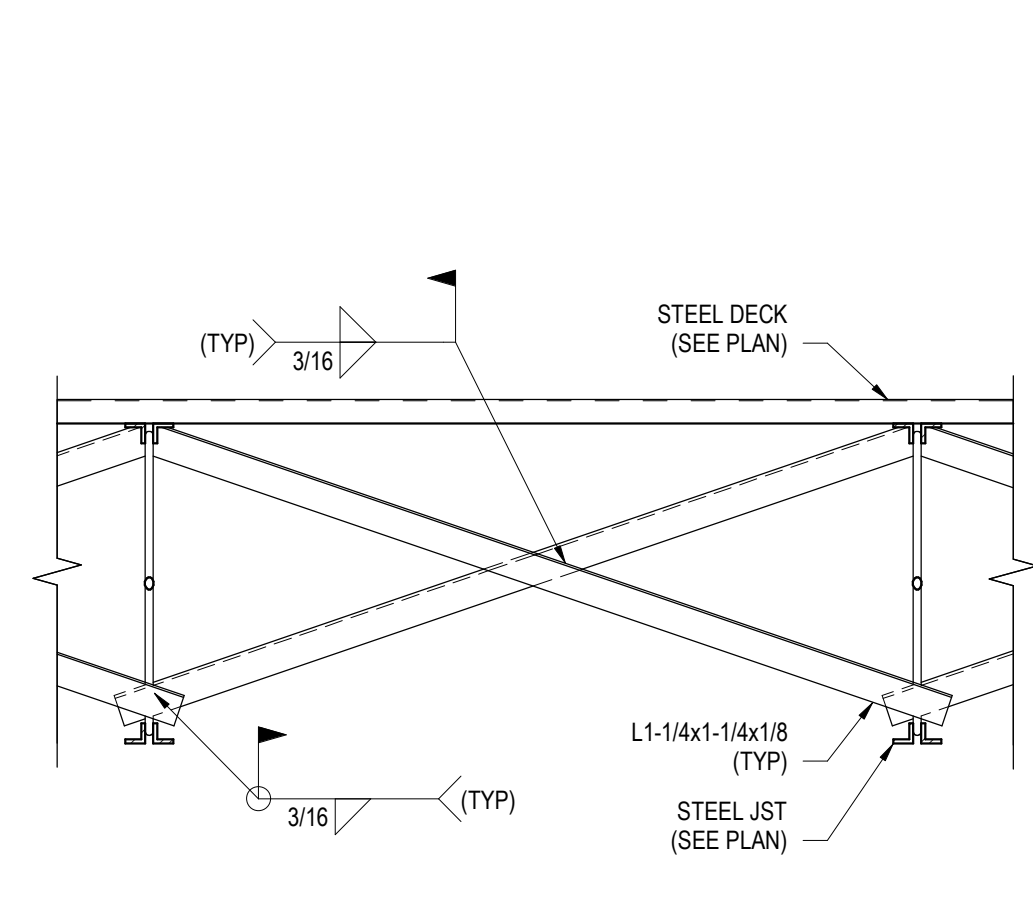
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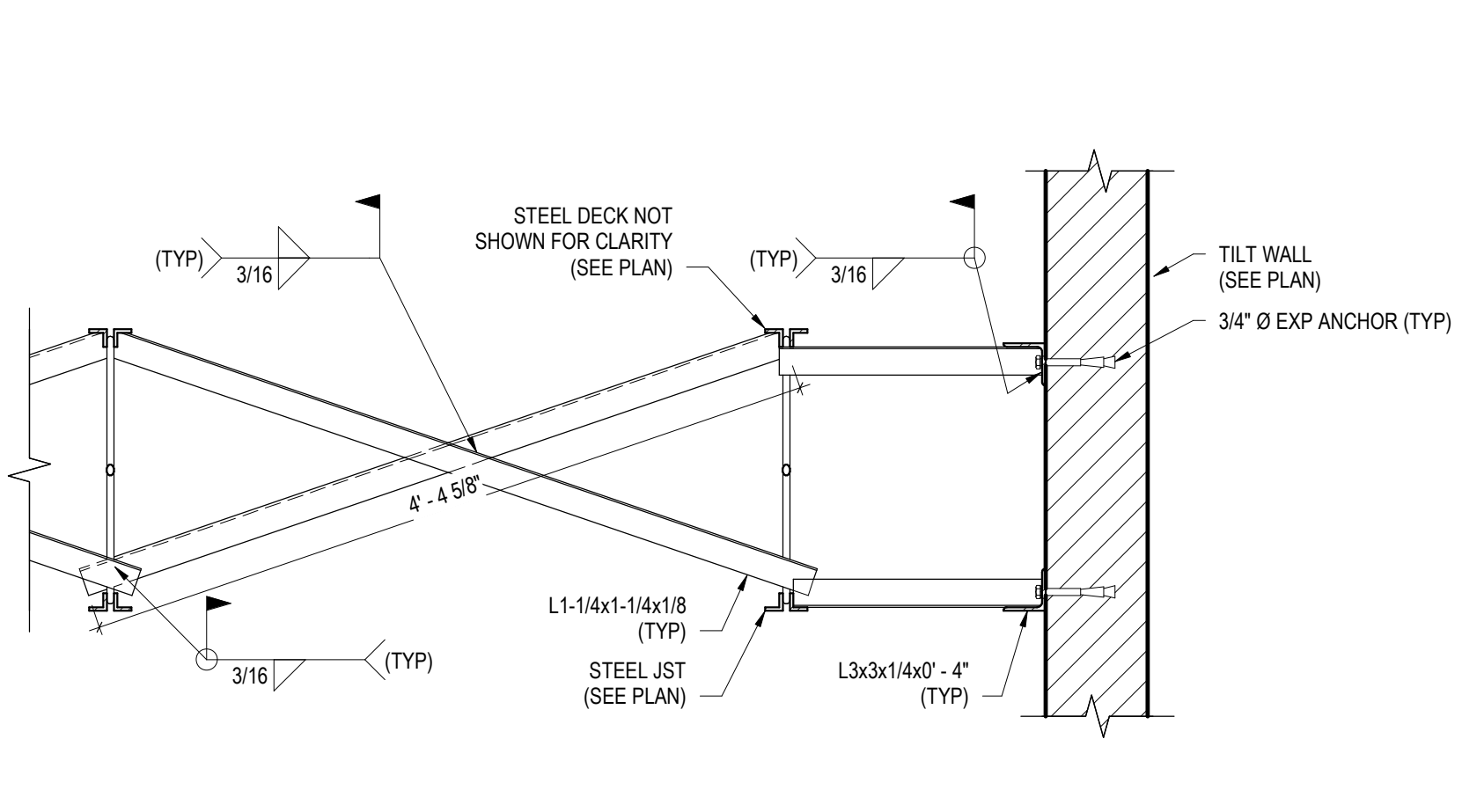
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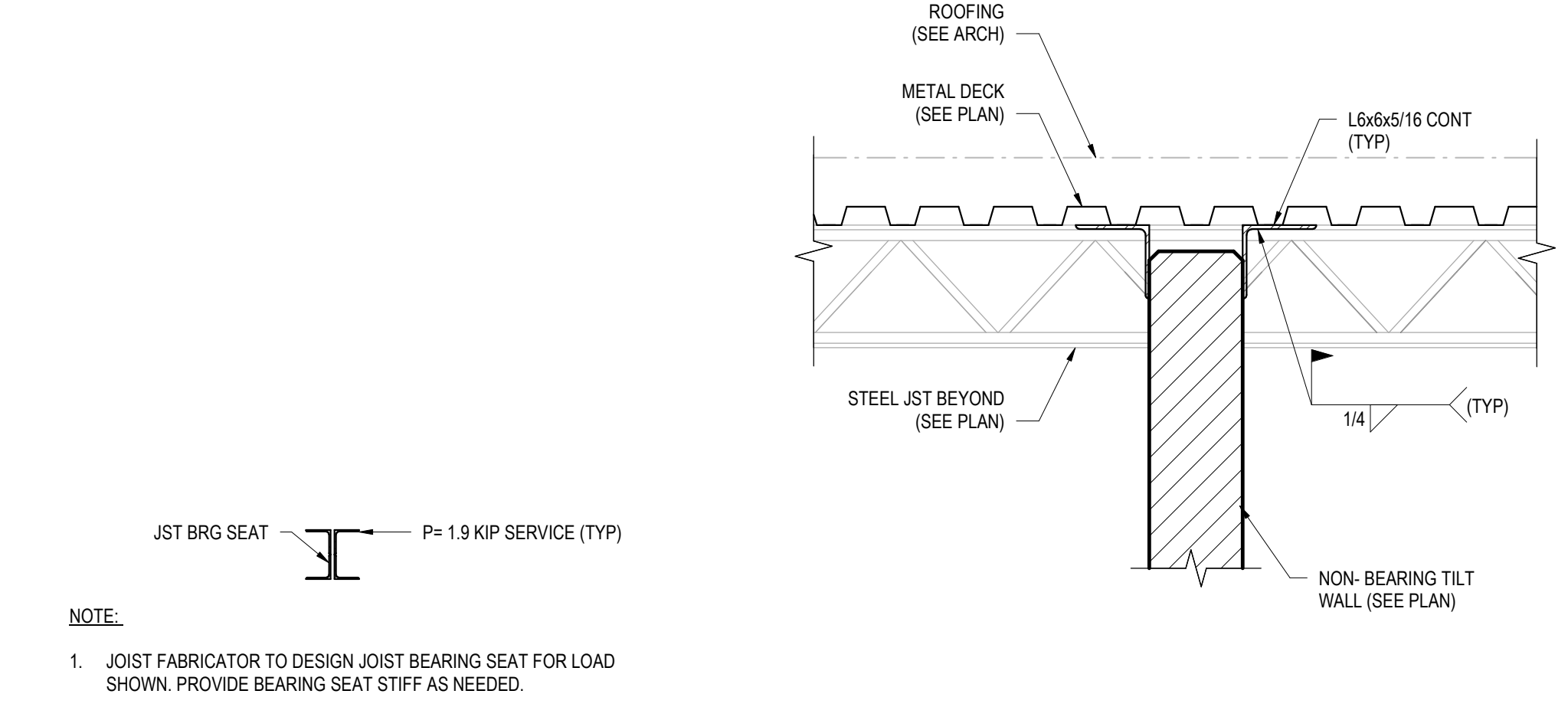
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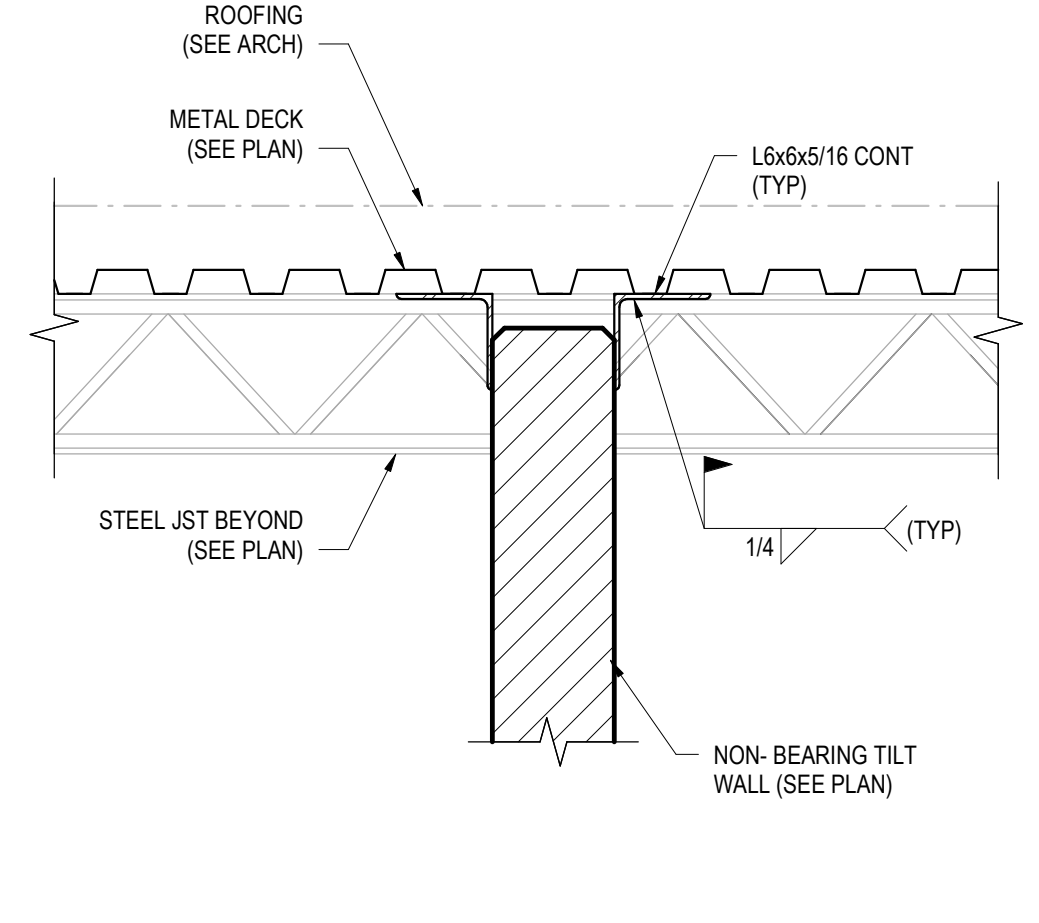
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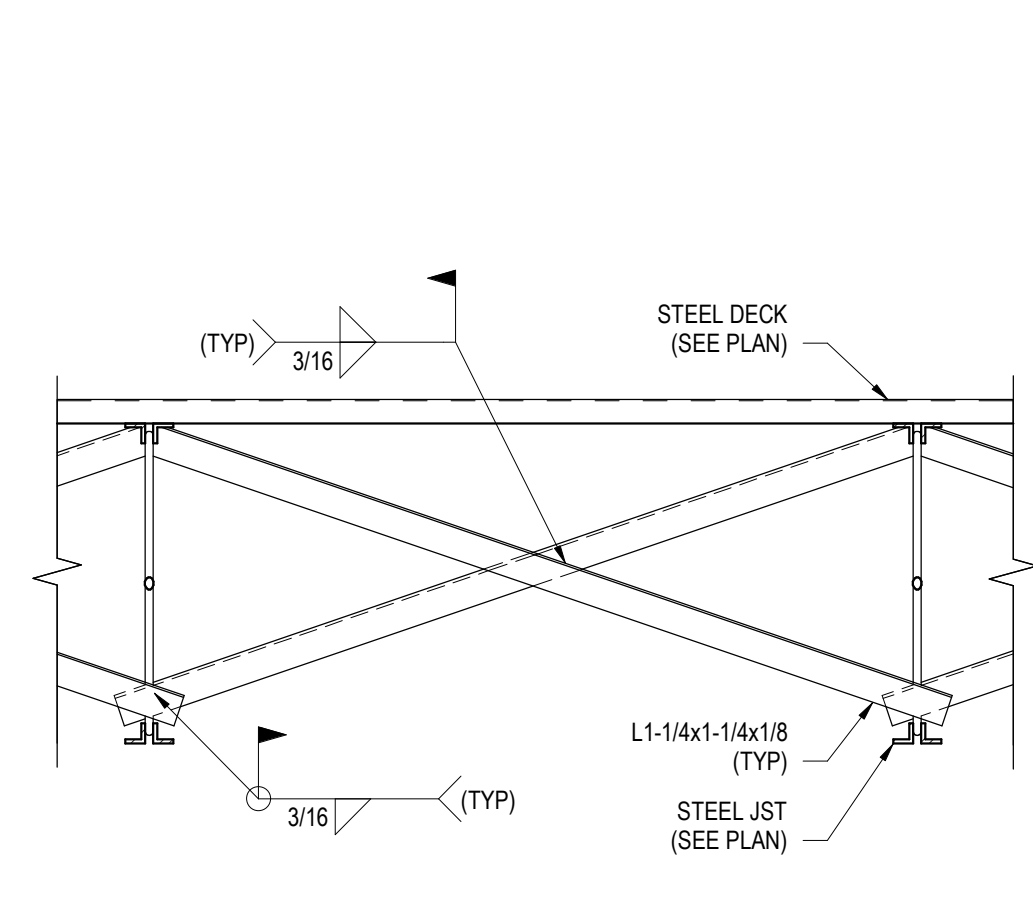
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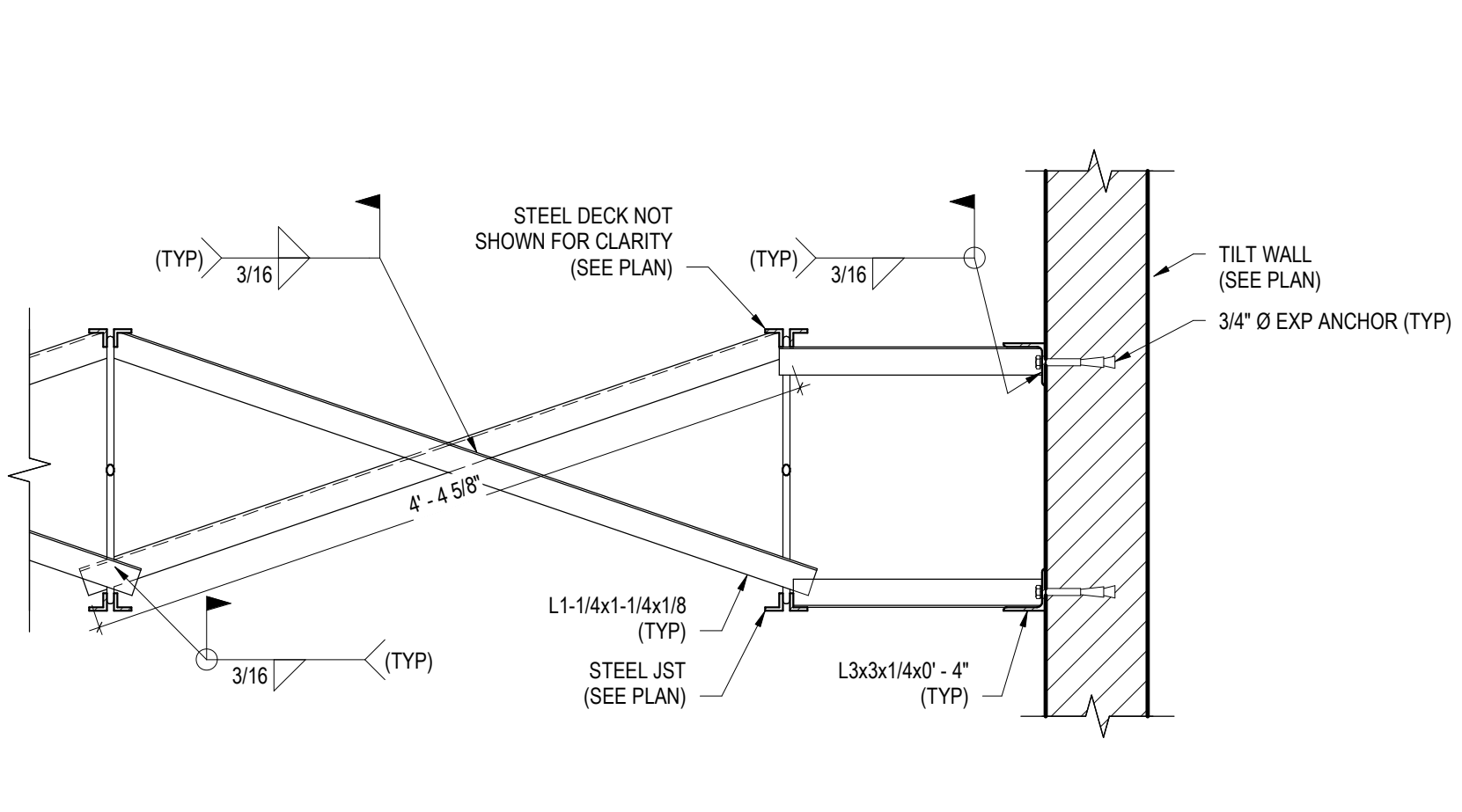
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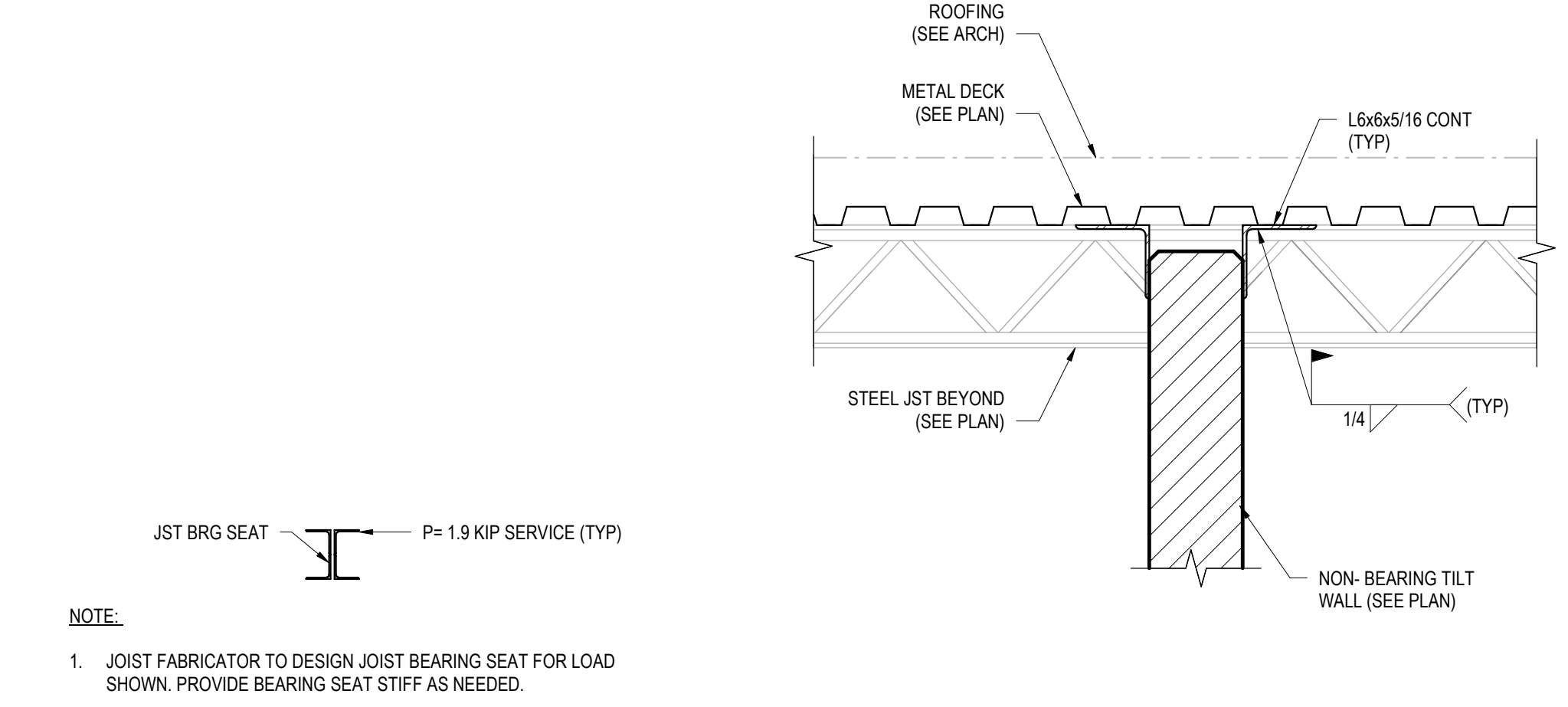
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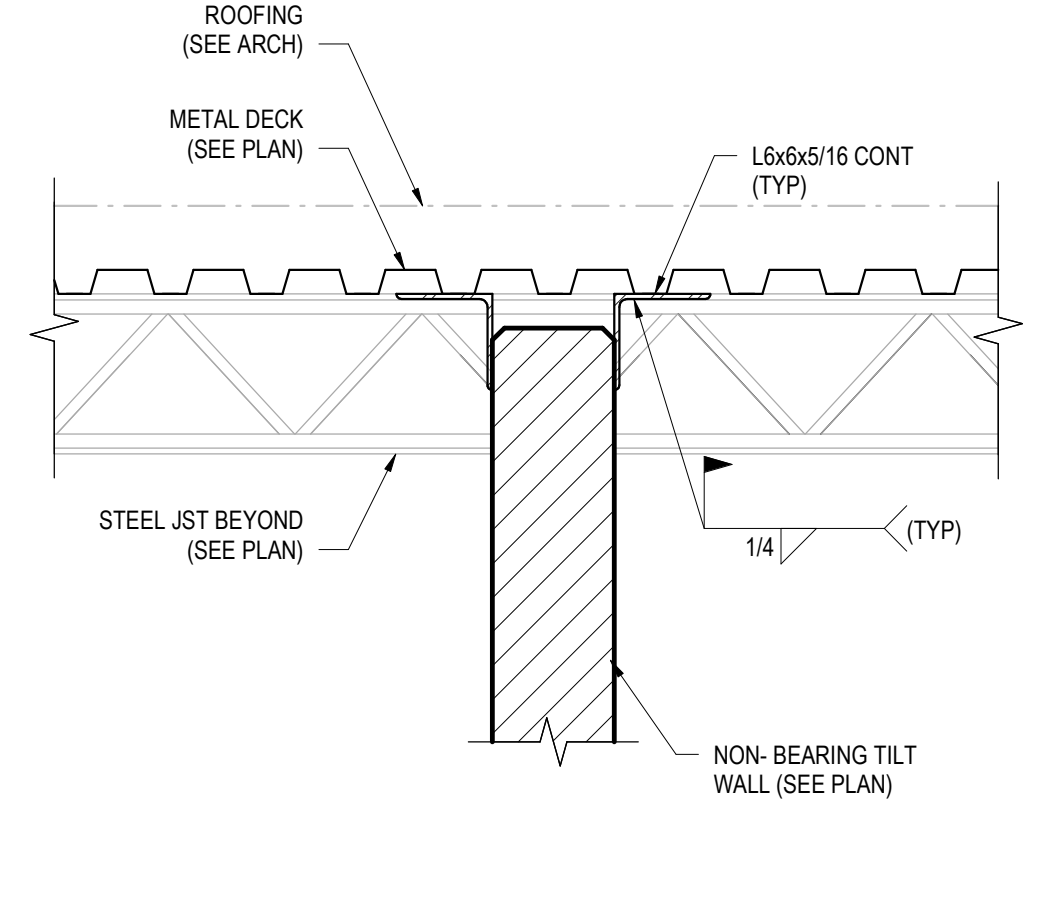
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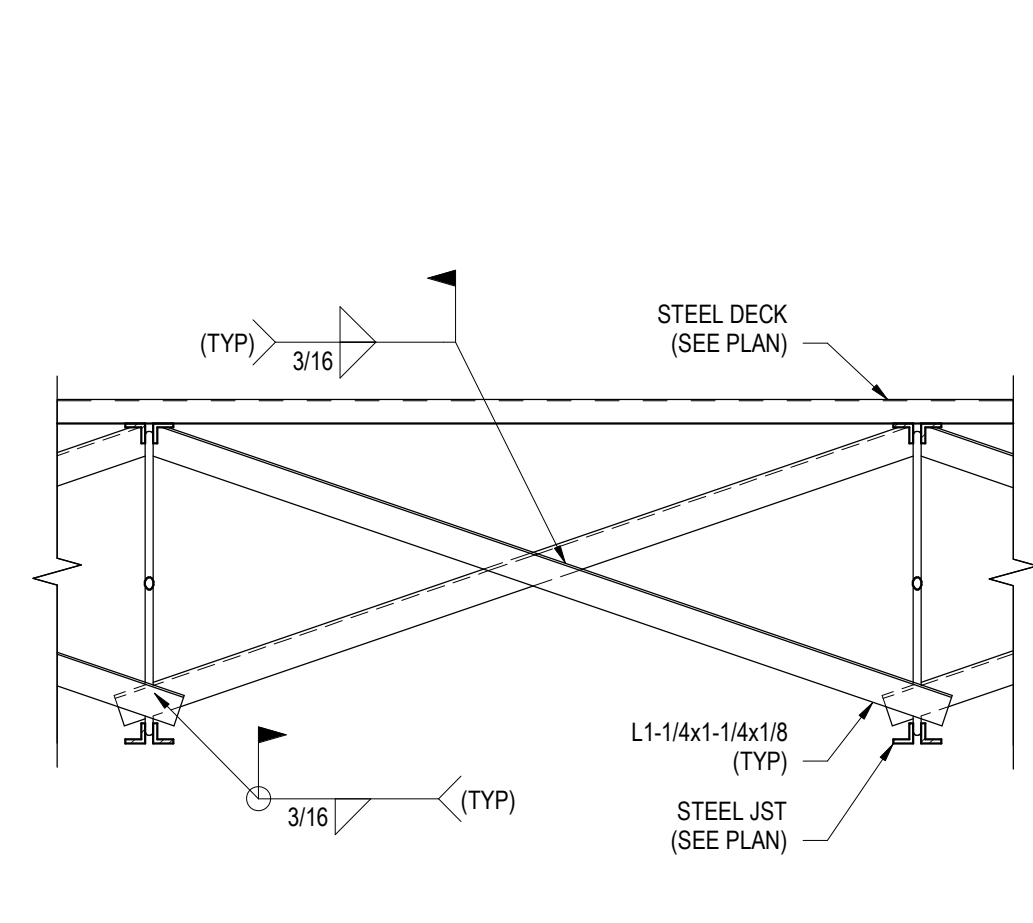
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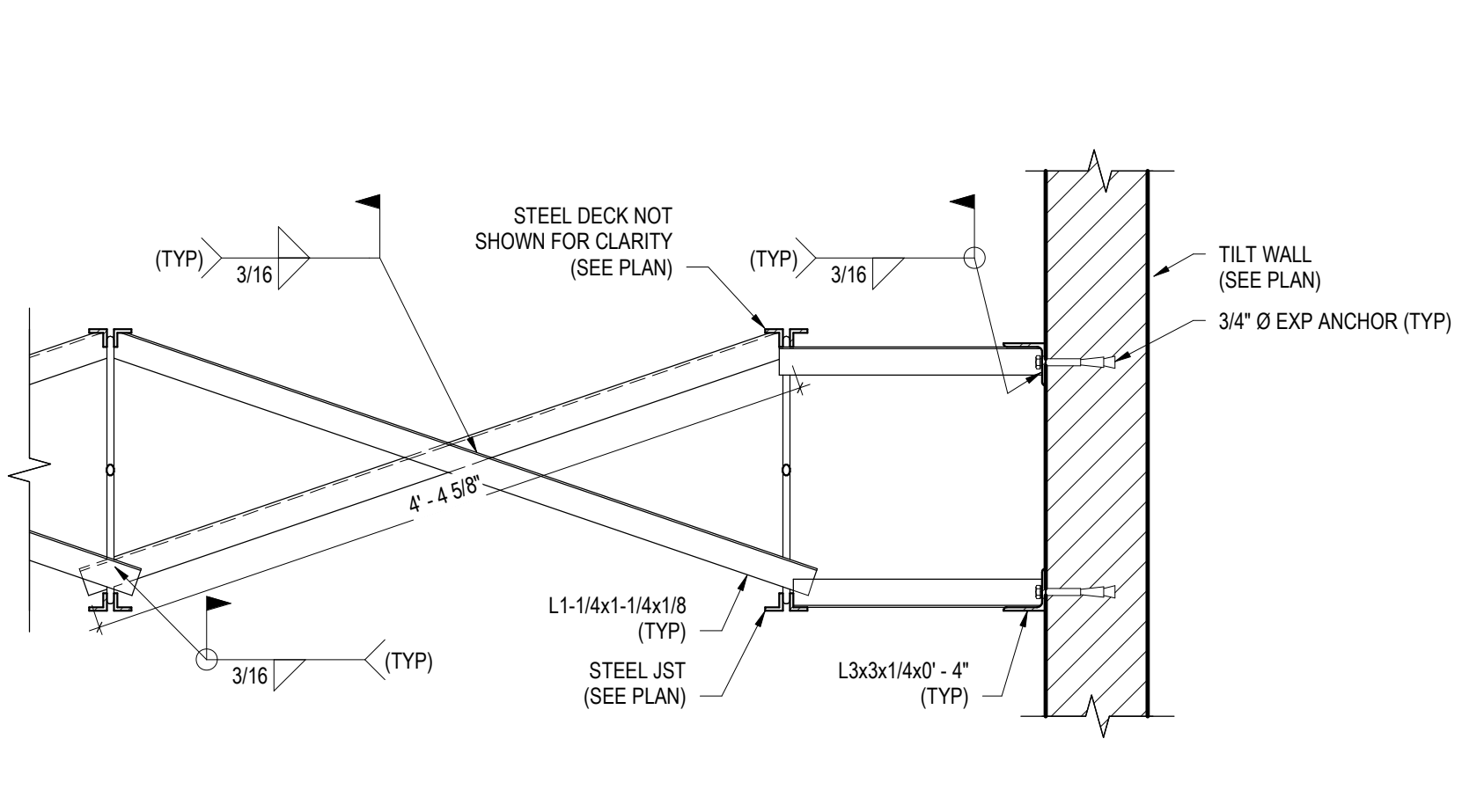
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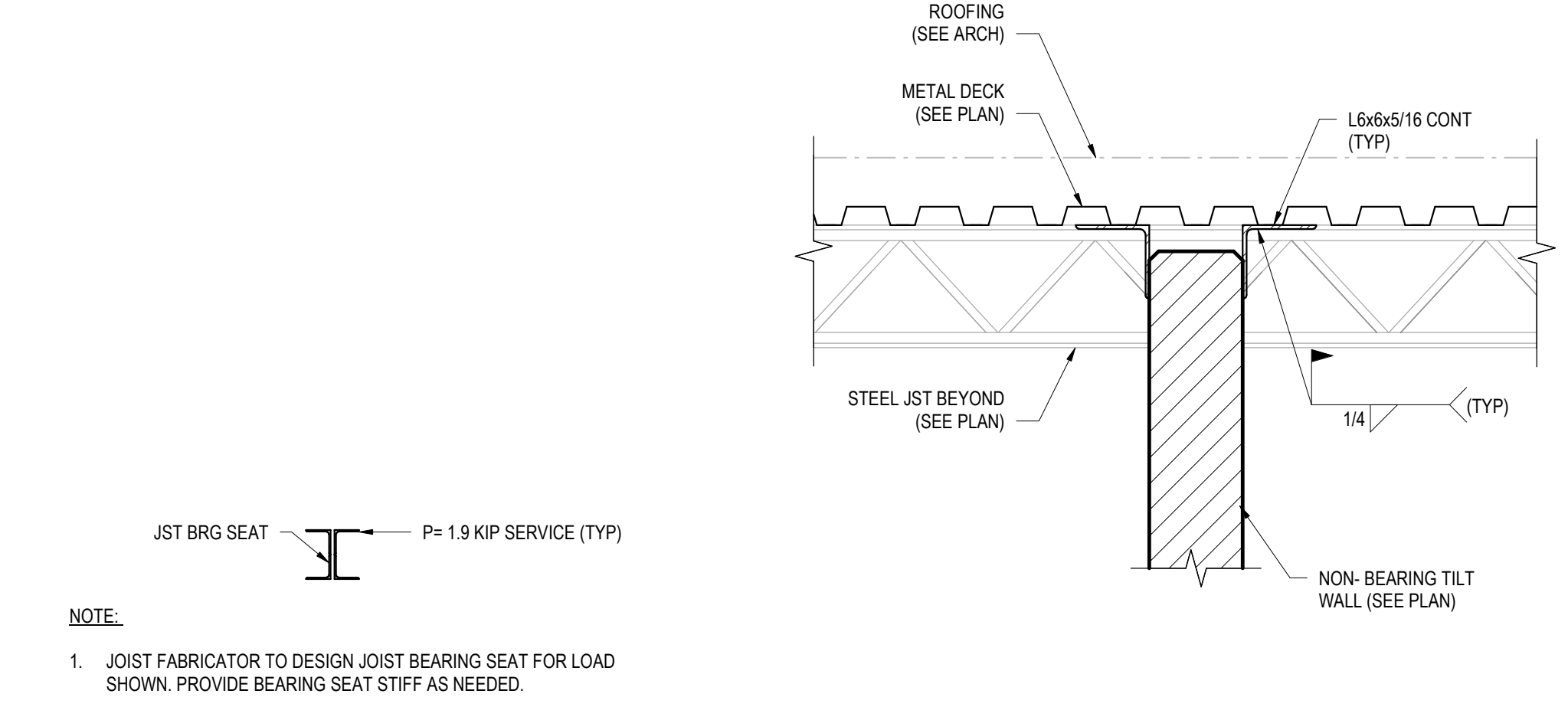
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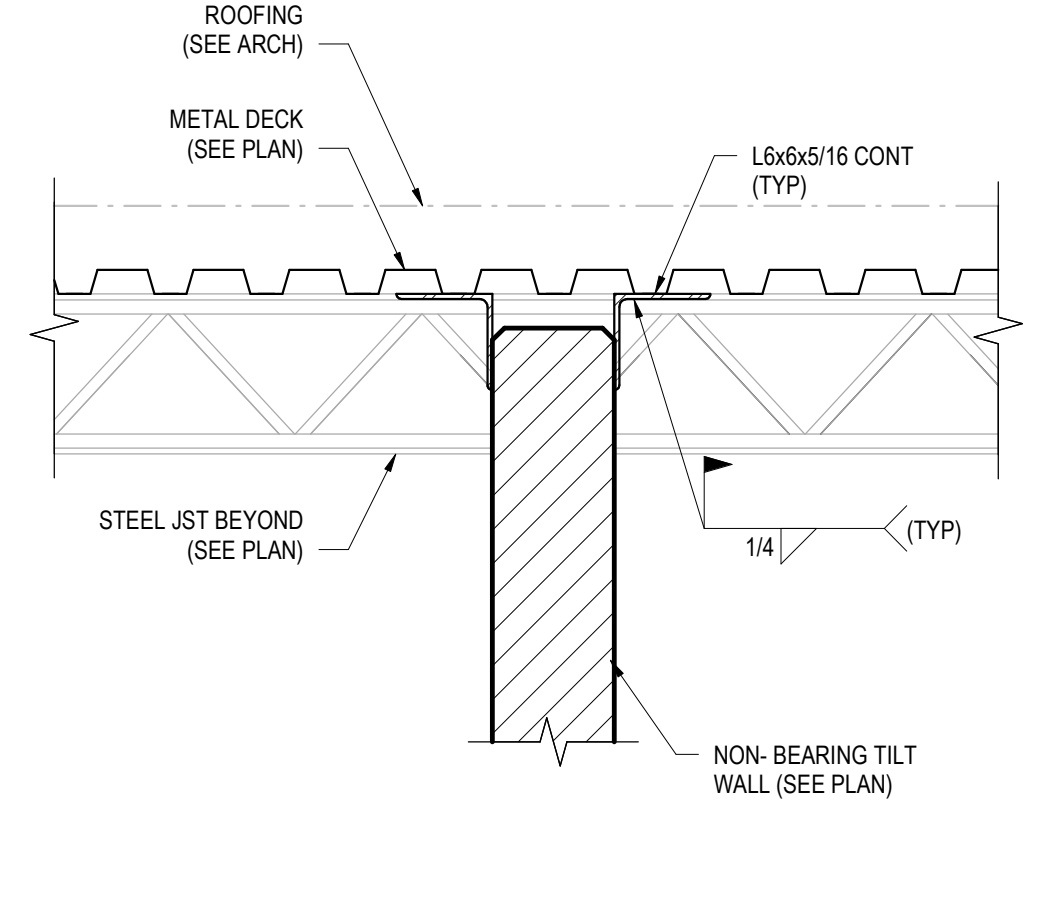
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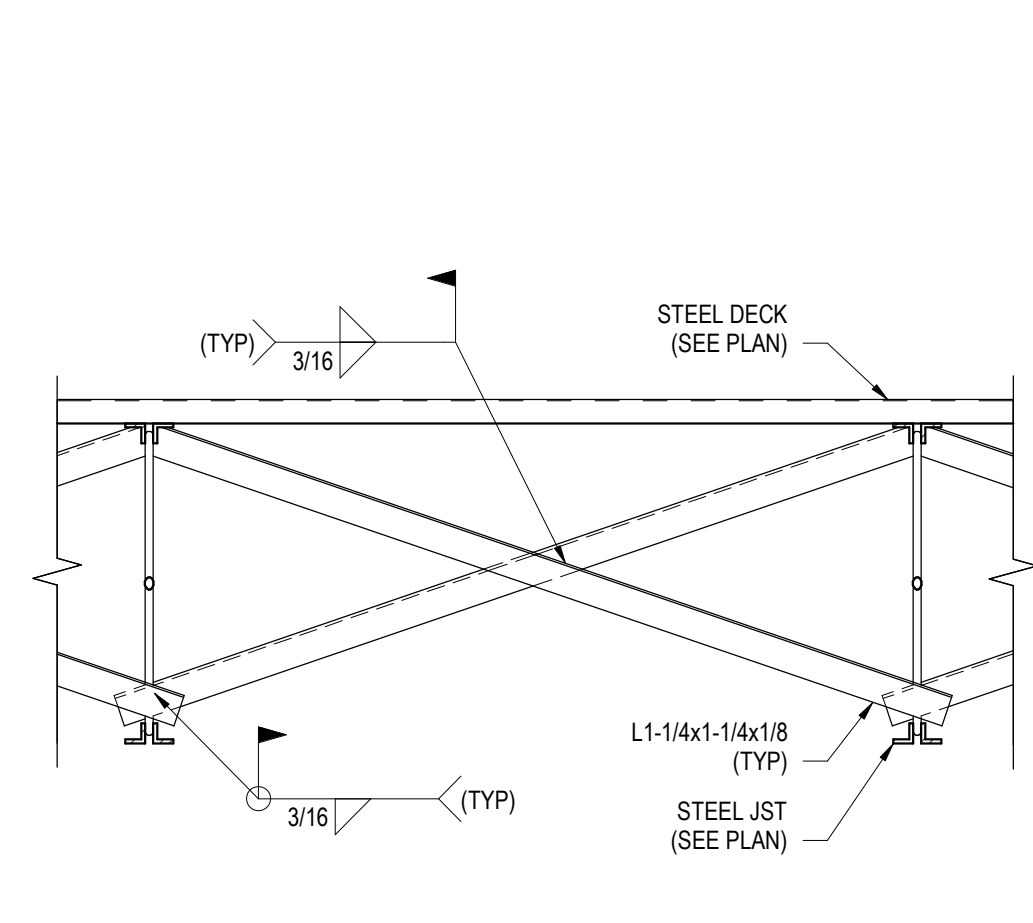
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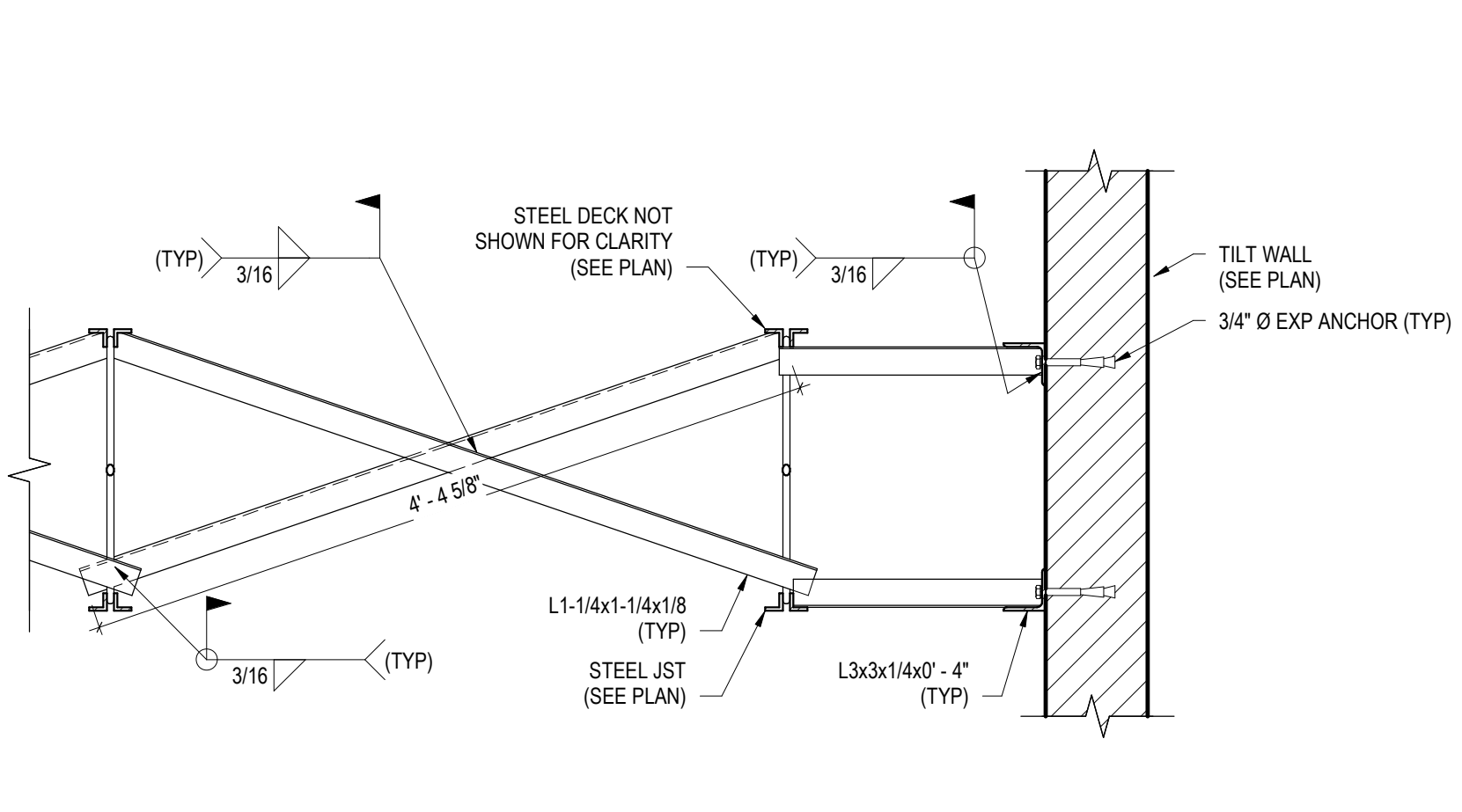
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