

GENERAL STRUCTURAL NOTES

GENERAL

1. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PROVISIONS OF THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC)
2. ELEVATIONS (XXX'-XX") SHOWN ON PLANS ARE TO TOP OF CONCRETE, STEEL, OR WOOD DECK U.N.O.. ELEVATIONS SHOWN ARE BASED ON FIRST FLOOR ELEVATION OF 100'-00" CONFIRM WITH ARCHITECTURAL.
3. ALL CONTRACTORS AND ANY SUB-CONTRACTORS SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS AS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS. WHERE DISCREPANCIES ARISE THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED.
4. ALL CONTRACTORS AND ANY SUB-CONTRACTORS SHALL CONSULT ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATION AND DIMENSIONS OF CURBS, PADS, INSERTS, SLEEVES, DRIPS, REGLETS, REVEALS, FINISHES, DEPRESSIONS, DOOR CLOSERS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
5. SIZE AND LOCATION OF ALL ROOF, FLOOR, AND WALL OPENINGS TO BE VERIFIED WITH MECHANICAL AND ELECTRICAL DRAWINGS AND CONTRACTORS. OPENINGS LESS THAN 12 INCHES ARE GENERALLY NOT SHOWN.
6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACTS, ERRORS, OR OMISSIONS OF THE CONTRACTOR OR ANY SUB-CONTRACTOR, OR ANY OF THE CONTRACTOR OR SUBCONTRACTORS AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS AND MANNER OF CONSTRUCTION AND FOR THE SAFETY OF PERSONS AND PROPERTY. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATION DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTION AND PROGRAMS.
7. THE ARCHITECT, CONTRACTOR, OWNER, AND END-USER OF THE STRUCTURE SHOULD EXPECT TO SEE SOME DEGREE OF RANDOM CRACKING IN THE SLAB-ON-GRADE. RANDOM CRACKING INCLUDES, BUT IS NOT LIMITED TO, SHRINKAGE CRACKS, CRACKS AT RE-ENTRANT CORNERS, AND CRACKS ADJACENT TO POINTS OF SLAB FIXITY. RANDOM CRACKING GENERALLY DOES NOT INCLUDE CRACKS WITH VERTICAL DISPLACEMENT. RANDOM CRACKS WITHIN THE SLAB-ON-GRADE DO NOT TYPICALLY IMPACT THE STRUCTURAL INTEGRITY OF THE SLAB AND ARE NOT NECESSARILY INDICATIVE OF STRUCTURAL ISSUES OR CONCERNS.
8. MECHANICAL UNITS AND EQUIPMENT SUPPORTED BY ROOF AND ELEVATED FLOOR STRUCTURE ARE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER, AND MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF UNIT SIZE, WEIGHT, AND LOCATION.
9. THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. DURING ERECTION OF THE BUILDING, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TEMPORARY GUYING, SHORING, BRACING, FORMING, ETC., TO HOLD THE STRUCTURE IN PROPER ALIGNMENT AND TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED; INCLUDING LATERAL LOADS, TEMPERATURE DIFFERENTIALS, AND STOCKPILES OF MATERIAL AND EQUIPMENT. SUCH MEASURES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY AND UNTIL ALL FRAMING AND CONNECTIONS ARE IN PLACE. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF SUCH TEMPORARY MEASURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONSTRUCTION DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.
11. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH THE SUPPLIERS INSTRUCTIONS AND REQUIREMENTS.
12. CONTRACTOR AND SUB-CONTRACTORS SHALL THOROUGHLY REVIEW ALL DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTING BIDS. MISCELLANEOUS FASTENERS, CLIPS, ETC., THAT ARE NOT DETAILED ON THE DRAWINGS BUT ARE PART OF THE REQUIREMENTS FOR FULL INSTALLATION OF ALL STRUCTURAL SYSTEMS ARE TO BE PART OF THE BID. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE BID TO ASCERTAIN CONDITIONS WHICH MY ADVERSELY AFFECT THE BID.
13. ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONSTRUCTION DRAWINGS AND/OR SPECIFICATION AND/OR EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
14. CONTRACTOR SHALL REVIEW, STAMP, SIGN, AND DATE ALL SHOP DRAWINGS PRIOR TO FORWARDING TO THE ARCHITECT/ENGINEER. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK, AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSION, ETC..
15. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES ALL DEPRESSIONS, DIMENSIONS, ELEVATIONS, SLEEVES, CHASES, HANGERS, OPENING, INSERTS, ANCHORS, EQUIPMENT SUPPORTS, AND DETAILS WITH THE ENTIRE CONTRACT DOCUMENT PACKAGE, INCLUDING SPECIFICATIONS AND ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. FOR CONCRETE CAST IN SITUATION, THE INSERTS, EMBEDDED PLATES, ETC., SHALL NOT INTERFERE WITH REINFORCEMENT LOCATIONS.
16. THESE DRAWINGS INCLUDE SPECIFIED COMPONENTS AND PRODUCTS, I.E. EPOXY, METAL DECK. IF A SUPPLIER/MANUFACTURER DIFFERENT THAN SPECIFIED ON THESE DRAWINGS IS DESIRED AS A SUBSTITUTE, A SUBMITTAL SHOWING THE SUBSTITUTE IS EQUIVALENT TO THE PRODUCT SPECIFIED MUST BE PROVIDED TO AND APPROVED BY THE ENGINEER OF RECORD. IT IS THE SUBMITTERS RESPONSIBILITY TO SHOW THE SUBSTITUTE IS EQUIVALENT, NOT THE ENGINEER OF RECORD.
17. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC. AS REQUIRED, INSPECTION REPORTS FOR THE ITEMS LISTED IN THE SPECIAL INSPECTION SCHEDULE SHALL BE FURNISHED TO THE STRUCTURAL ENGINEER OF RECORD IN A TIMELY MANNER AND SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES THAT ARE NOT CORRECTED SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING THE REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND STRUCTURAL ENGINEER OF RECORD.

DESIGN LOADS

1. ROOF LIVE LOAD	20 PSF
2. ROOF LIVE LOAD (PATIO)	100 PSF
3. FLOOR LIVE LOAD (TYPICAL)	40 PSF
4. FLOOR LIVE LOAD (CORRIDOR)	100 PSF
5. GROUND SNOW LOAD	5 PSF
6. ROOF SNOW LOAD	5 PSF
7. OCCUPANCY CATEGORY	II
8. BASIC WIND SPEED (ASCE/SEI 7)	105 M.P.H. EXPOSURE C
9. WIND COMPONENTS AND CLADDING	39 PSF (WALLS)
10. SEISMIC DESIGN CATEGORY (ASCE/SEI 7)	A
SDS	0.064
SD1	0.04
SITE CLASS	D
SEISMIC FORCE RESISTING SYSTEM	SHEAR WALLS

EXISTING CONSTRUCTION

1. FIELD VERIFY GRADES, SIZES, LOCATIONS AND CONDITIONS OF ALL ITEMS ON PLANS AND DETAILS BEFORE STARTING WORK. REPORT DISCREPANCIES THAT WILL PREVENT CONFORMANCE TO CONSTRUCTION DOCUMENTS TO THE ENGINEER OF RECORD.
2. EXISTING STRUCTURE TO REMAIN IS SHOWN SCREENED (LIGHT). EXISTING STRUCTURE TO BE REMOVED IS NOT SHOWN.
3. ALL EXISTING CONSTRUCTION AFFECTED BY DEMOLITION SHALL BE SHORED UNTIL NEW CONSTRUCTION SUPPORT MEMBERS ARE IN PLACE.

FOUNDATION

1. DESIGN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF HAS BEEN ASSUMED. ALL EXTERIOR FOOTINGS TO BE 3'-0" BELOW FINISH GRADE UNO.
2. UNLESS NOTED OTHERWISE; CENTER COLUMN FOOTINGS ON COLUMN CENTERLINES, CENTER WALL FOOTINGS ON FOUNDATION WALLS.
3. SLAB ON GRADE SHALL BE UNDERLAIN BY VAPOR BARRIER AND 6 INCHES MINIMUM OF CRUSHED ROCK OR CONCRETE. REINFORCE ALL SLABS ON GRADE WITH #3 AT 18 INCHES EACH WAY IN TOP 1/3 OF SLAB UNLESS NOTED OTHERWISE. AT DROPPED OR DEPRESSED SLABS ON GRADE MAINTAIN GRAVEL THICKNESS, SLAB DEPTH, REINFORCEMENT AND REINFORCEMENT POSITION.
4. BACK FILL AROUND THE EXTERIOR FOUNDATION WALLS WITH A FREE DRAINING GRANULAR MATERIAL TO THE ELEVATION OF THE ROUGH GRADE. PLACEMENT OF BACKFILL IS NOT ALLOWED UNTIL THE SLAB ON GRADE IS IN PLACE AND THE MAIN FLOOR DIAPHRAGM IS COMPLETED. TUNNEL CONCRETE WORK, FREE STANDING AND FOUNDATION WALLS SHALL BE COMPLETE AND AT DESIGN STRENGTH BEFORE BACKFILL IS PLACED.
5. CONTRACTOR TO KEEP EXCAVATIONS DRY AND PROTECTED FROM FROST AT ALL TIMES DURING THE FOUNDATION CONSTRUCTION. NOTIFY ENGINEER IF NATURE OF SOIL AT DEPTHS SHOWN IS NOT SUITABLE FOR FOUNDATIONS.
- CAST-IN-PLACE CONCRETE**
1. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
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| FOOTINGS | 3500 PSI MAX. W/C RATIO OF 0.50 |
| INTERIOR SLABS ON GRADE | 4000 PSI MAX. W/C RATIO OF 0.45 |
| SLABS OVER STEEL DECK | 3500 PSI MAX. W/C RATIO OF 0.45 |
| EXPOSED CONCRETE SLABS AND GARAGE SLABS | 4000 PSI MAX. W/C RATIO OF 0.45 |
| FOUNDATION WALLS, WALLS, COLUMNS AND BEAMS | 4000 PSI MAX. W/C RATIO OF 0.45 |
2. EXTERIOR EXPOSED CONCRETE SHALL HAVE 4 TO 6% ENTRAINED AIR. SLABS WITH HARD TROWELED FINISH TO HAVE NO AIR ENTRAINMENT ADDED. COORDINATE WITH ARCHITECTURAL FOR FINISHES.
3. AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33. MIX DESIGN SHALL CONTAIN A MINIMUM OF 50% COARSE AGGREGATES BY GRADATION REQUIREMENTS (NO.67 GRADING) SET FORTH IN ASTM C33.
4. NO ALUMINUM SHALL BE PLACED IN THE CONCRETE.
5. CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318-05 (R-05), "CHAPTER 3 FOR STANDARDS FOR TESTS & MATERIALS, CHAPTERS 4, 5, 6 & 7 FOR CONSTRUCTION REQUIREMENTS". REFER TO ACI 302.1R-04 FOR SLAB ON GRADE MIX DESIGN.
6. PIPE OR ELECTRICAL CONDUIT EMBEDDED IN CONCRETE SHALL NOT BE LARGER IN OUTSIDE DIAMETER AT ITS WIDEST (OR FITTING) THAN 1/3 THE THICKNESS OF THE SLAB OR WALL. SLEEVES, CONDUIT, OR PIPES THROUGH SLABS AND WALLS SHALL BE PLACED NO CLOSER THAN THREE DIAMETERS ON CENTER AND THEY DO NOT DISPLACE REINFORCING. DO NOT CUT HOLES IN CONCRETE SLABS, BEAMS, COLUMNS, OR WALLS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
7. LOCATION OF ALL CONSTRUCTION AND CONTROL JOINTS SHALL BE LOCATED AND DETAILED ON SHOP DRAWINGS AND ARE SUBJECT TO ENGINEERS APPROVAL. IF SLAB ON GRADE CONTROL JOINTS ARE NOT SPECIFICALLY LOCATED ON DRAWINGS, PROVIDE CONTROL JOINTS AT 10'-0" ON CENTER MAXIMUM WITH A LENGTH TO WIDTH RATIO OF 1.5. PROVIDE (2) #4x4'-0" AT ALL NON-CONTINUOUS CONTROL JOINTS. PROVIDE (2) #4x4'-0" AND (1) #4x24"x24" CORNER BAR AT ALL REENTRANT CORNERS OF SLAB ON GRADE.
8. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DIMENSION OF CONCRETE REVEALS, NOTCHES, REGLETS, DRIPS, PADS, CURBS, CHAMFERS BLOCKOUTS AT DOORWAYS, AND ALL OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS. CHAMFER ALL EXPOSED CORNERS OF BEAMS, COLUMNS, JOISTS AND WALLS, SUBJECT TO ARCHITECTS APPROVAL.

REINFORCING STEEL

1. TRUSS TYPE MASONRY JOINT REINFORCEMENT: W1.7 (9 GAGE), ASTM A1064, FY=70,000 PSI
2. WELDED WIRE REINFORCING (WWR): ASTM A82 AND A185
3. DEFORMED BARS (REBAR): ASTM A615, GRADE 40 FOR #3; GRADE 60 FOR #4 AND LARGER; ASTM A706 FOR WELDED CONDITIONS.
4. LAP SPLICES:
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| MASONRY: | 48-BAR DIAMETERS AT CELLS WITH SINGLE BAR (HORIZ. AND VERT.) |
| CONCRETE: | 64-BAR DIAMETERS AT CELLS WITH TWO BARS (HORIZ. AND VERT.) |
| WELDED WIRE FABRIC: | CLASS "B" LAP SPICE, TYPICAL UNLESS NOTED OTHERWISE. |
5. CONCRETE COVER FOR CAST-IN-PLACE AND NON-PRE-STRESSED CONCRETE SHALL BE AS SPECIFIED BELOW U.N.O. ON THESE DRAWINGS:
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| CONCRETE CAST AGAINST SOIL | 3" |
| FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#6 OR GREATER) | 2" |
| FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#5 OR LESS) | 1 1/2" |
| CONCRETE NOT EXPOSED TO EARTH OR WEATHER (SLAB, WALL, JOIST) | 3/4" |
| CONCRETE NOT EXPOSED TO EARTH OR WEATHER (BEAM, COLUMN) | 1 1/2" |
| SLAB ON GRADE | 1 1/2" |
6. SECURELY TIE ALL REINFORCING IN PLACE WITH DOUBLE ANNEALED 16-GAUGE IRON WIRE OR APPROVED CLIPS PRIOR TO CONCRETE OR GROUT PLACEMENT.
7. SUBMIT SHOP DRAWINGS OF REINFORCING STEEL FOR REVIEW BY THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION.
- TYPICAL CMU WALL REINFORCING**
1. UNLESS NOTED OTHERWISE ON THESE DRAWINGS, REINFORCE CMU WALLS AS FOLLOWS:
- 8" CMU WALLS - INTERIOR
- #5 VERT @ 48" O.C. CENTER OF WALL
- (2) #5 VERT AT EACH CORNER OF WALL
- TRUSS TYPE HORIZ JOINT REINFORCEMENT @ 16" O.C.
- SOLID GROUT AT REINFORCED CELLS ONLY UNO
- PROVIDE (2) TYPICAL VERT FULL HEIGHT JAMB STEEL EACH SIDE OF OPENINGS
- PROVIDE (2) #4 HORIZ BOND BEAM AT FLOOR AND ROOF LEVELS AND TOP OF WALL

MASONRY

1. LIGHT WEIGHT, RUNNING BOND, ASTM C90 CONCRETE MASONRY UNITS WITH NET AREA MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI. ASTM C270 MORTAR TYPE S. MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI AT 28 DAYS. ASTM C476 GROUT WITH MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS. NET AREA COMPRESSIVE STRENGTH OF MASONRY, FM = 1,500 PSI.
2. FILL ALL CELLS WITH REINFORCING WITH GROUT IN LIFTS NOT EXCEEDING 4'-0" IN HEIGHT. FILL OTHER CELLS WITH GROUT AS INDICATED ON DRAWINGS. ALL REINFORCEMENT SHALL BE IN PLACE PRIOR TO GROUTING WITH VERTICAL BARS HELD AT TOP, BOTTOM AND 120 BAR DIAMETERS MAXIMUM ON CENTER. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING.
3. CONTRACTOR SHALL PROVIDE BRACING FOR MASONRY WALLS, AS REQUIRED, UNTIL CONNECTION TO FLOOR AND/OR ROOF DIAPHRAGMS ARE COMPLETED.
4. STRENGTH OF MASONRY ASSEMBLY SHALL BE DETERMINED BY THE UNIT STRENGTH METHOD IN ACCORDANCE WITH SECTION 2105.2.2.1 OF THE 2006 IBC.
5. PROVIDE HORIZONTAL TRUSS-TYPE REINFORCING AT 16" ON CENTER MAXIMUM UNO.
6. NON-BEARING INTERIOR PARTITIONS SHALL STOP 1" BELOW STRUCTURAL SLABS OR STEEL FRAMING U.N.O.
7. WHERE BOND BEAMS INTERSECT AT CORNERS AT DIFFERENT ELEVATIONS, RUN EACH BOND BEAM AROUND CORNER FOR TWO BLOCK LENGTHS MINIMUM.
8. WHERE BOND BEAMS INTERSECT PARALLEL AT DIFFERENT ELEVATIONS, LAP BOND BEAMS FOUR BLOCK LENGTHS MINIMUM.
9. PROVIDE CORNER AND INTERSECTION BARS IN ALL BOND BEAMS.
10. CONTROL AND EXPANSION JOINTS SHALL BE PROVIDED IN MASONRY WALLS AT 30' MAXIMUM PER TYPICAL MASONRY DETAILS. SEE ARCHITECTURAL FOR LOCATIONS.
11. PROVIDE (2) #4 VERTICAL EACH SIDE OF ALL OPENINGS IN MASONRY WALLS UNO. COORDINATE WITH LINTEL SCHEDULE AND PROVIDE GREATER REINFORCING REQUIREMENTS.
12. PROVIDE (2) #4 VERTICAL AT ALL WALL CORNERS, ENDS AND INTERSECTIONS UNO. COORDINATE WITH LINTEL SCHEDULE AND PROVIDE GREATER REINFORCING REQUIREMENTS.
13. PROVIDE BOND BEAM WITH (2) #4 CONTINUOUS BENEATH ALL SLAB AND BEAM BEARINGS UNO.
14. PROVIDE 1/2" AIR GAP AROUND SIDES, TOP AND END OF WOOD STRUCTURAL MEMBERS BEARING ON MASONRY.

STEEL JOISTS

1. STEEL JOISTS BEARING CONNECTIONS SHALL BE BY WELDED UNO. PROVIDE ERECTION BOLTS AT LOCATION REQUIRED BY SJI SPECIFICATIONS. WHERE JOIST BEARING CONDITIONS REQUIRE NON-STANDARD BEARING ENDS, JOIST FABRICATOR SHALL PROVIDE SPECIAL BEARING ENDS AS REQUIRED TO ACCOMMODATE SUCH CONDITIONS.
2. SUSPENSION OF ANY MISCELLANEOUS ITEMS FROM THE JOISTS SHALL BE ONLY AT TOP AND BOTTOM CHORD PANEL POINTS UNLESS SPECIFICALLY DETAILED OTHERWISE.
3. JOIST FABRICATOR SHALL PROVIDE JOIST BRIDGING PER SJI RECOMMENDATIONS. ALL JOISTS AND JOIST BRIDGING SHALL BE DESIGNED TO RESIST THE UPLIFT PRESSURES SHOWN ON THE PLANS.
4. UNLESS NOTED OTHERWISE: ALL ROOF JOISTS TO BE DESIGNED FOR A 150 LB ADD-LOAD AND 150 LB BEND-CHECK ALL FLOOR JOISTS TO BE DESIGNED FOR A 300 LB ADD-LOAD AND 300 LB BEND-CHECK
5. JOIST MANUFACTURER MAY NOT DESIGN JOISTS FOR LESS THAN LOADS SPECIFIED IN THE SJI CAPACITY TABLES FOR JOIST DESIGNATIONS SHOWN ON PLANS.

STRUCTURAL AND MISCELLANEOUS STEEL

1. STEEL CONSTRUCTION MANUAL, 14TH EDITION MATERIAL SPECIFICATIONS U.N.O.
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| WIDE FLANGE AND S SHAPES | ASTM A992, FY=50KSI |
| CHANNELS, ANGLES, PLATES AND BARS | ASTM A36, FY=36KSI |
| HOLLOW STRUCTURAL SHAPES (HSS) | ASTM A500 GR. B, FY=46KSI |
| PIPE | ASTM A53, GR. B, FY=35KSI |
| STRUCTURAL BOLTS (U.N.O.) | ASTM A325 |
| MACHINE BOLTS (WHERE NOTED) | ASTM A307 |
| ANCHOR BOLTS AND RODS AND THREADED RODS | ASTM F1554 GRADE 36KSI |
| HIGH STRENGTH ANCHOR BOLTS AND RODS (AS NOTED) | ASTM F1554 GRADE 105KSI |
| HEADED OR THREADED STUD ANCHORS (H.S.A. OR T.S.A.) | ASTM A108-69T |
| DEFORMED BAR ANCHORS (D.B.A.) | ASTM A496 OR ASTM A706 |
| WELDING ELECTRODES | E70XX |
| NON-SHRINK GROUT (7,000 PSI) | ASTM C1107, GR. A |
| POWDER ACTUATED FASTENER (PAF OR PDF) | HILTI XUJ (0.157" DIA) |
| EXPANSION BOLTS (CONCRETE) | HILTI KWIK BOLT TZ |
| EXPANSION BOLTS (MASONRY) | HILTI KWIK BOLT T3 |
| EPOXY ADHESIVE - CONCRETE | HILTI HIT-HY 200 |
| EPOXY ADHESIVE - MASONRY | HILTI HIT-HY 70 W/ SCREEN TUBE |
2. ALL STRUCTURAL STEEL ERECTION AND FABRICATION SHALL BE ACCORDING TO THE CURRENT EDITION OF AISC "SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
3. ALL STRUCTURAL BOLTED CONNECTIONS SHALL BE ACCORDING TO THE CURRENT EDITION OF RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" FOR SNUG TIGHTENED, PRETENSIONED, OR SLIP-CRITICAL JOINTS. ALL STRUCTURAL BOLTED CONNECTIONS TO BE SNUG TIGHTENED UNO. FOR SLIP-CRITICAL JOINTS, AS NOTED, THE USE OF TENSION INDICATING WASHERS OR TWIST-OFF BOLT ASSEMBLIES SHALL BE PERMITTED ONLY ACCORDING TO THE ABOVE MENTIONED STANDARD.
4. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED IN THE SHOP WHENEVER PRACTICAL. AN EFFORT HAS BEEN MADE TO INDICATE WELDS THAT CAN BE OR SHOULD BE FIELD WELDED. IT IS, HOWEVER, THE FABRICATORS RESPONSIBILITY TO DECIDE WHERE AND HOW THE WELDING IS TO BE ACCOMPLISHED TO ACHIEVE THE INTENDED RESULT.
5. COMPLETE JOINT PENETRATION (CJP) WELDING: PROVIDE BACKER BARS, RUN OFF TABS, AND ACCESS HOLES PER AWS D1.1. BACKER BARS SHALL BE REMOVED AFTER WELDING, THE ROOT WELD BACK GOUGED AND REPAIRED IF NECESSARY AND REINFORCED WITH A FILLET. RUN OFF TABS SHALL BE REMOVED AFTER WELDING WITH THE FLANGE EDGE GROUND SMOOTH.
6. STEEL FABRICATOR SHALL BE AN AISC CERTIFIED SHOP FOR CATEGORY 1 STEEL STRUCTURES AND SHALL MAINTAIN DETAILED QUALITY CONTROL PROCEDURES.
7. BEAMS SHALL BE FABRICATED FOR PLACEMENT OF NATURAL CAMBER UP.
8. STRUCTURAL STEEL SUPPLIER SHALL FURNISH COLUMN ANCHOR RODS.
9. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING, HOT CUTTING AND TORCH CUTTING IS NOT PERMITTED. PROVIDE CONNECTIONS REQUIRED FOR ATTACHMENT OF WOOD AND STEEL MEMBERS.
10. USE CONNECTIONS AS DETAILED ON PLANS. WHEREVER CONNECTIONS ARE NOT DETAILED FABRICATOR SHALL REQUEST ENGINEER TO SUPPLY CONNECTION DETAIL.
11. ALL COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC., HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. CONFORMANCE TO OR DEVIATION FROM ALLOWABLE CAPACITIES DURING STEEL ERECTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR (SEE GENERAL SECTION OF G.S.N.)
12. PRIOR TO GROUTING, COLUMNS SHALL BE ERECTED AND ALIGNED AS TO PLUMBNESS AND ELEVATION BY MEANS OF STEEL SHIMS OR LEVELING NUTS UNDER THE BASE PLATES. SETTING PLATES SHALL ONLY BE USED AS TEMPLATES TO LOCATE ANCHOR BOLTS DURING CONCRETE PLACEMENT.
13. STRUCTURAL STEEL PERMANENTLY EXPOSED TO VIEW SHALL RECEIVE COMMERCIAL BLAST CLEANING. PRIME WITH 5 MILS EPOXY PRIMER, TOP COAT SHALL BE 3 DRY MILS ALIPHATIC URETHANE, THIN FILM. ARCHITECT TO APPROVE COATING AND COLOR. DAMAGE DURING TRANSPORT, ERECTION, AND FIELD WELDING PROCESSES SHALL BE REPAIRED TO MATCH THE SHOP APPLIED COATING.

WOOD

1. ALL WOOD BEARING ON CONCRETE OR MASONRY, IF LESS THAN 4'-0" ABOVE FINISH GRADE, SHALL BE PRESSURE TREATED. WHEREVER NECESSARY TO CUT OR DRILL TREATED LUMBER, TREAT THE CUT OR BORED SURFACES WITH TWO HEAVY COATS OF THE SAME PRESERVATIVE AS USED IN ORIGINAL TREATMENT.
- | LUMBER MINIMUM PROPERTIES SCHEDULE | | | | | | | |
|------------------------------------|-------|----------|----------|----------|----------|----------|-----------|
| SPECIES/PRODUCT | GRADE | Fb (PSI) | Ft (PSI) | Fv (PSI) | Fc (PSI) | Fc (PSI) | E (PSI) |
| SPRUCE-PIN-FIR (NORTH) | No. 2 | 875 | 450 | 135 | 425 | 1150 | 1,400,000 |
| MICROLAM LVL | 1.9E | 2,600 | 1,555 | 285 | 750 | 2,510 | 1,900,000 |
| PARALLAM PSL | 1.8E | 2,400 | 1,755 | 190 | 425 | 2,500 | 1,800,000 |
| PARALLAM PSL | 2.0E | 2,900 | 2,025 | 290 | 750 | 2,900 | 2,000,000 |
| TIMBERSTRAND LSL | 1.55E | 2,325 | 1,070 | 310 | 800 | 2,050 | 1,550,000 |
2. PLYWOOD SHEATHING SHALL CONFORM TO THE CURRENT EDITION OF THE U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD 1 OR 2 (DOC PS 1 OR 2) OR THE APA PANEL DESIGN SPECIFICATION (PDS) AND SHALL BE INSTALLED IN STAGGERED PATTERN.
3. BOLT HOLES IN WOOD SHALL BE DRILLED 1/16" MAXIMUM OVERSIZE. HOLES FOR SCREWS AND LAG SCREWS SHALL BE FIRST BORED FOR THE SAME DEPTH AND DIAMETER OF THE SHANK, THEN THE REMAINDER OCCUPIED BY THE THREAD PORTION SHALL BE BORED NOT LARGER IN DIAMETER THAN THE ROOT OF THE THREAD. ALL SCREWS SHALL BE SCREWED NOT DRIVEN INTO PLACE. PROVIDE WASHERS UNDER ALL NUTS AND HEADS OF BOLTS AND LAG SCREWS.
4. PROVIDE SOLID BLOCKING AT MID-HEIGHT OF ALL WALLS U.N.O.
5. PROVIDE SOLID BLOCKING BETWEEN JOISTS AT ALL SUPPORTS.
6. WOOD FRAMING AND CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
7. ALL COLUMNS SHOWN ON STRUCTURAL DRAWINGS SHALL BE CONTINUOUS U.N.O.
8. SET ALL JOISTS WITH CROWN UP.
9. TYPICAL FRAMING ANCHORS SHALL BE "SIMPSON STRONG TIE" OR APPROVED EQUIVALENT AS INDICATED ON DRAWINGS. INSTALL AND CONNECT PER MANUFACTURER RECOMMENDATIONS.
10. CONNECTORS, ANCHORS, AND FASTENERS ATTACHED TO PRESSURE TREATED WOOD TREATED WITH ACO-C OR ACO-D SHALL BE GALVANIZED AND SHALL MEET ONE OF THE FOLLOWING SPECIFICATIONS: ASTM-A653-G185 OR GREATER; ASTM-A123-2.0 OZ/FI2 MIN; ASTM-A153; ASTM-B895-CLASS 110.
11. IF WOOD TREATMENT IS OTHER THAN LISTED ABOVE, CONTACT THE TREATMENT SUPPLIER FOR CORROSION PROTECTION REQUIREMENTS AND SUBMIT TO ARCHITECT/ENGINEER FOR APPROVAL. CONNECTIONS SHOULD NOT INCORPORATE DISSIMILAR METALS OR METALLIC COATINGS IN CONTACT WITH EACH OTHER.

ABBREVIATIONS

@	AT
#	NUMBER
AB	ANCHOR BOLT
ADD'L	ADDITIONAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
ALT	ALTERNATE
ARCH	ARCHITECTURAL
ATTM	ATTACHMENT
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BSMT	BASEMENT
BTWN	BETWEEN
CFS	COLD FORMED STEEL
CJ	CONTROL OR CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION WELD
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
COORD	COORDINATE
DBA	DEFORMED BAR ANCHOR
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DIR-L	DIRECTION
DIF-L	DOUGLAS FIR-LARCH
EA	EACH
EACH	EACH FACE
EMBED	EMBEDDED
EN	EDGE NAILING
EOR	ENGINEER OF RECORD
EQ	EQUAL
GA	GAUGE
EXIST	EXISTING
EXP	EXPANSION
FDN	FOUNDATION
FIN	FINISH
FLR	FLOOR
FLN	FIELD NAILING
FRP	FIBER-REINFORCED POLYMER
FTG	FOOTING
FV	FIELD VERIFY
GA	GAUGE
GR	GRADE
HK	HOOK
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
HSA	HEADED STUD ANCHOR
HSS	HOLLOW STRUCTURAL SHAPE
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
INFO	INFORMATION
LBS	POUNDS
LG	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NIC	NOT IN CONTRACT
NS	NON-SHRINK
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
PAF	POWDER ACTUATED FASTENER
PEMB	PRE-ENGINEERED METAL BUILDING
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POINT
QTY	QUANTITY
REINF	REINFORCING
REM	REMAINDER
REQ'D	REQUIRED
RTU	ROOF TOP UNIT
SCHD	SCHEDULE
SLV	SIMILAR
SOG	SHORT LEG VERTICAL
SPF	SPRUCE-PINE-FIR
SQ	SQUARE
STD	STANDARD
T&B	TOP AND BOTTOM
THK	THICK
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	THREADED STUD ANCHOR
TYP	TYPICAL
VERT	VERTICAL
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WF	WIDE FLANGE
WWR	WELDED WIRE REINFORCING



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TEXAS

HISTORIC REHABILITATION - APARTMENTS
SAN ANGELO,



REVISION:

DATE:	1 – 16 – 2024
JOB:	22 – 3281
SHEET NO.:	

S0.0



REVISION:

DATE: 1-16-2024

JOB: 22-3281

SHEET NO.:

SCHEDULE OF SPECIAL INSPECTION SERVICES			
MATERIAL / ACTIVITY	SERVICE	INSPECTION	
		EXTENT	AGENT*
1705.2 Steel Construction			
1. Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents)	Submittal Review	Each submittal	S.I.
2. Material verification of structural steel	Shop (3) and field inspection	Periodic	S.I.
3. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)	Field inspection	Periodic	S.I.
4. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents	Field inspection	Periodic	S.I.
5. Structural steel welding:			S.I.
a. Inspection tasks Prior to Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1)	Shop (3) and field inspection	Observe or Perform as noted (4)	S.I.
b. Inspection tasks During Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-2)	Shop (3) and field inspection	Observe (4)	S.I.
c. Inspection tasks After Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3)	Shop (3) and field inspection	Observe or Perform as noted (4)	S.I.
6. Structural steel bolting:	Shop (3) and field inspection		S.I.
a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1)		Observe or Perform as noted (4)	S.I.
b.Inspection tasks During Bolting (Observe the QA tasks listed in AISC 360, Table N5.6-2)		Observe (4)	S.I.
2) Snug-tight joints		Periodic	S.I.
c. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3)		Perform (4)	S.I.
1705.2.2 Steel Construction Other Than Structural Steel			
1. Material verification of cold-formed steel deck:			S.I.
a. Identification markings	Field inspection	Periodic	S.I.
b. Manufacturer's certified test reports	Submittal Review	Each submittal	S.I.
2. Connection of cold-formed steel deck to supporting	Shop (3) and field inspection		S.I.
a. Welding		Periodic	S.I.
b. Other fasteners (in accordance with AISC 360,Section N6)			S.I.
1) Verify fasteners are in conformance with approved submittal		Periodic	S.I.
2) Verify fastener installation is in conformance with approved submittal and manufacturer's recommendations		Periodic	S.I.
1705.3 Concrete Construction			
1. Inspection of reinforcing steel installation (see 1705.2.2 for welding)	Shop (3) and field inspection	Periodic	S.I.
3. Inspection of anchors cast in concrete	Shop (3) and field inspection	Periodic	S.I.
4. Inspection of anchors and reinforcing steel post-installed in hardened concrete: Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Field inspection	Periodic or as required by the research report issued by an approved source	S.I.
5. Verify use of approved design mix	Shop (3) and field inspection	Periodic	S.I.
6. Fresh concrete sampling, perform slump and air content tests and determine temperature of concrete	Shop (3) and field inspection	Continuous	S.I.
7. Inspection of concrete placement for proper application techniques	Shop (3) and field inspection	Continuous	S.I.
8. Inspection for maintenance of specified curing temperature and techniques	Shop (3) and field inspection	Periodic	S.I.
12. Inspection of formwork for shape, lines, location and dimensions	Field inspection	Periodic	S.I.
13. Concrete strength testing and verification of compliance with construction documents	Field testing and review of laboratory reports	Periodic	S.I.
1705.4 Masonry Construction			
Level - B - Quality Assurance			
(A) Level A, B and C Quality Assurance:			
1. Verify compliance with approved submittals	Field Inspection	Periodic	S.I.
(B) Level B Quality Assurance:			
1. Verification of f _m and f _{rac} Prior to construction	Testing by unit strength method or prism test method	Periodic	S.I.
(D) Levels B and C Quality Assurance:			
1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project	Field testing	Continuous	S.I.
2. Verify compliance with approved submittals	Field inspection	Periodic	S.I.
3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons	Field Inspection	Periodic	S.I.
4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages	Field Inspection	Periodic	S.I.
5. Verify construction of mortar joints	Field Inspection	Periodic	S.I.
7. Verify grout space prior to grouting	Field Inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
9. Verify size and location of structural masonry elements	Field Inspection	Periodic	S.I.
10. Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.	Field inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
12. Verify preparation, construction, and protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F)	Field inspection	Periodic	S.I.
18. Prepare grout and mortar specimens	Field testing	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
		Level B - Periodic	S.I.
		Level C - Continuous	S.I.
19. Observe preparation of prisms	Field inspection		
20. Inspection of anchors and reinforcing steel post-installed (epoxy, expansion, etc.): Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, location to masonry joints, masonry minimum thickness, anchor embedment and tightening torque	Field inspection	Periodic or as required by the research report issued by an approved source	S.I.
* INSPECTION AGENTS			
FIRM		ADDRESS	
1. G.E. Geotechnical Engineer			
2. S.I. Special Inspector - Not Yet Selected			
3.			
4.			
Notes: 1. The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional.			
2. If the list of Inspection Agents is noted as "Not Yet Selected" the General Contractor shall coordinate submittal of special inspection agencies for approval by the Building Official and the Design Professional.			
3. Special Inspections as required by Section 1704.2.5 are not required where the fabricator is approved in accordance with IBC Section 1704.2.5.2			
4. Observe on a random basis, operations need not be delayed pending these inspections. Perform these tasks for each welded joint, bolted connection, or steel element.			
5. NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ. Refer to AISC 360, N7.			

STATEMENT OF SPECIAL INSPECTIONS

1.

THIS STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS IS INCLUDED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE BUILDING CODE. THE TABLE OF REQUIRED SPECIAL INSPECTIONS IDENTIFIES THE STRUCTURAL ITEMS TO BE INSPECTED APPLICABLE TO THIS PROJECT AS WELL AS IDENTIFYING THE APPROVED AGENCIES TO BE RETAINED FOR CONDUCTING THESE INSPECTIONS AND TESTS.
2.

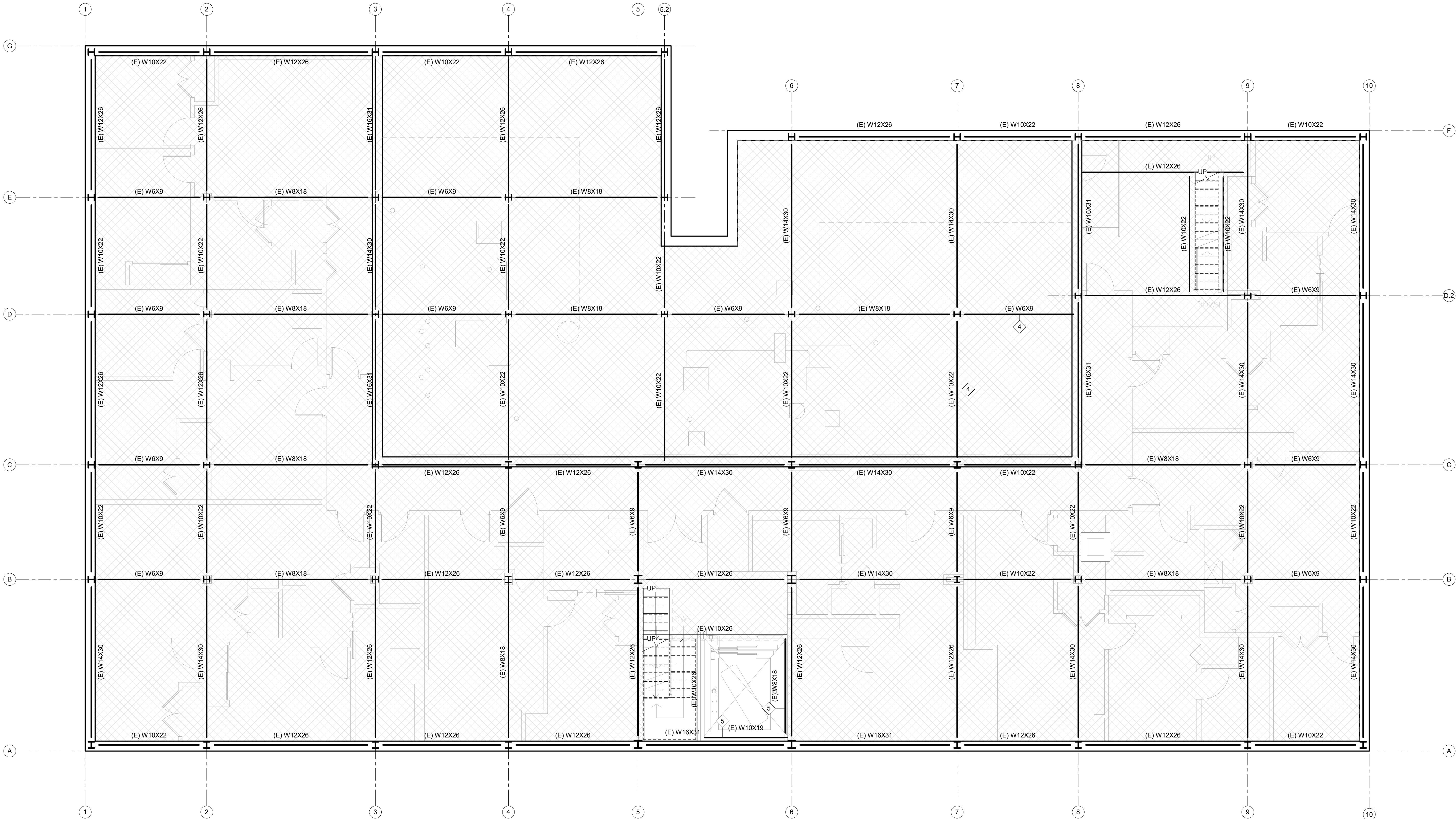
SPECIAL INSPECTIONS SHALL BE PERFORMED BY PERSONNEL AS INDICATED IN THE TABLE.

S.I. SPECIAL INSPECTOR
G.E. GEOTECHNICAL ENGINEER
3.

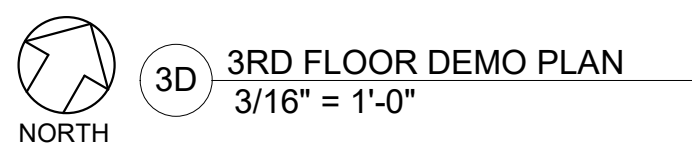
IF SPECIAL INSPECTION IS WAIVED BY THE GOVERNING AUTHORITIES, THE GENERAL CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD A COPY OF THE BUILDING OFFICIALS WRITTEN EXEMPTION FOR SPECIAL INSPECTION PRIOR TO STARTING WORK.

PLAN NOTES

1. DEMO ALL FLOOR AND ROOF SLAB/DECK AND METAL JOISTS IN HATCHED AREA.
2. EXISTING BEAMS MARKED (E) TO REMAIN U.N.O.
3. CONTRACTOR TO SHORE AND BRACE EXISTING ELEMENTS DURING DEMO. BRACING TO REMAIN IN PLACE UNTIL NEW METAL DECK IS IN PLACE AND ATTACHED.
4. DEMO EXISTING BEAM AND REPLACE WITH NEW BEAM PER S1.1
5. DEMO EXISTING BEAM TO ACCOMODATE NEW CMU ELEVATOR SHAFT



1. DEMO ALL FLOOR SLAB/DECK AND METAL JOISTS IN HATCHED AREA.
2. EXISTING BEAMS MARKED (E) TO REMAIN U.N.O.
3. CONTRACTOR TO SHORE AND BRACE EXISTING ELEMENTS DURING DEMO. BRACING TO REMAIN IN PLACE UNTIL NEW METAL DECK IS IN PLACE AND ATTACHED.
4. DEMO EXISTING BEAM TO ACCOMMODATE NEW CMU ELEVATOR SHAFT

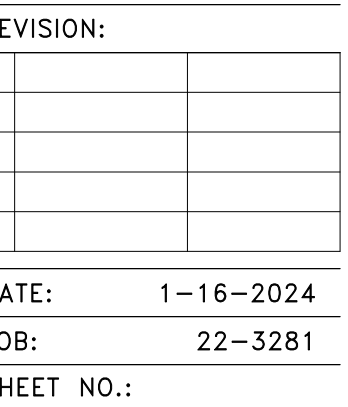


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ROOSEVELT LOFTS

HISTORIC REHABILITATION - APARTMENTS

SAN ANGELO, TEXAS



SD1.1

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1. FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET SO.0
2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
3. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
4. EXISTING ROOF JOISTS & DECK TO REMAIN.
5. DEMO AND REPLACE ROOFING, COVER BOARDS, INSULATION, AND MEMBRANE PER ARCHITECTURAL DRAWINGS. TAKE CARE TO PROTECT EXISTING CONCRETE ROOF DECK DURING RE-ROOF WORK.
6. DEMO EXISTING BEAM TO ACCOMMODATE NEW CMU ELEVATOR SHAFT
7. DEMO EXISTING CONCRETE FLOOR DECK IN HATCHED AREA.
8. DEMO EXISTING CONCRETE STUB COLUMN ABOVE ROOF TO ACCOMMODATE NEW RTU SUPPORT BEAM.

RD ROOF DEMO PLAN
3/16" = 1'-0"

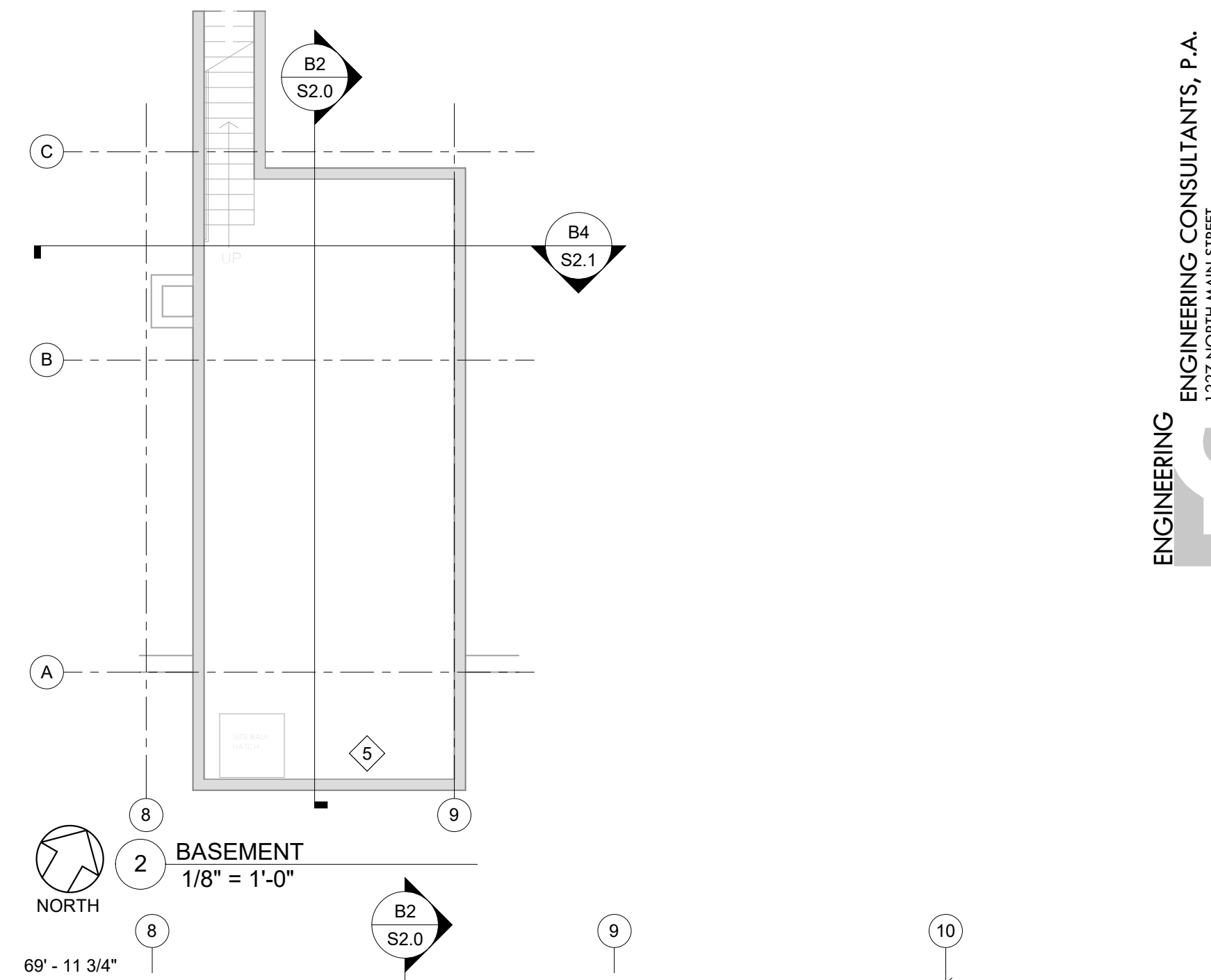


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SD1.2

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1. FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET S0.0
2. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
3. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
4. SAWCUT AND REMOVE DAMAGED AREAS OF FLOOR AND REPLACE WITH 4" CONCRETE SLAB W/ 6x6 W1.4xw1.4 W/WF ON COMPACTED BASE MATERIAL.
G.C. TO FIELD VERIFY EXTENT OF REQUIRED REPAIRS. HATCHED AREAS SHOWN ON PLAN ARE FOR REFERENCE ONLY.
5. REPAIR EXPOSED REBAR AND SPALLING CONCRETE ON SOUTH BASEMENT WALL PER 13 / S3.0



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ROOSEVELT LOFTS

HISTORIC REHABILITATION - APARTMENTS

SAN ANGELO, TEXAS



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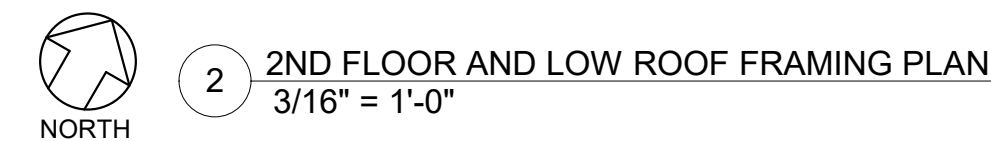
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2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
3. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
4. 2-1/2" TOTAL DEPTH CONCRETE SLAB OVER METAL DECK;
NORMAL WEIGHT CONCRETE W/ 6x6 W2.9xW2.9 W/WF AT MIDHEIGHT OF DECK SLAB W/ 1.0c24 METAL DECK;
ATTACH DECK TO PERPENDICULAR SUPPORTS W/ #12 TEK SCREWS IN 3/4" PATTERN. ATTACH DECK TO PARALLEL SUPPORTS W/ #12 TEK SCREWS @ 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.
5. METAL ROOF DECK;
NEW ROOF DECK TO BE 1.5c24 METAL DECK.
ATTACH DECK TO PERPENDICULAR SUPPORTS WITH #12 TEK SCREWS AT EVERY FLUTE. ATTACH DECK TO PARALLEL SUPPORTS WITH #12 TEK SCREWS AT 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.

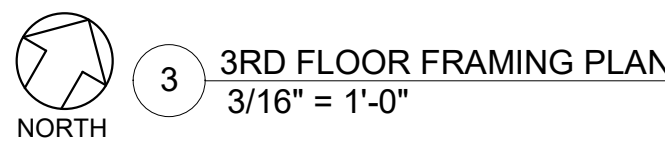
6. DELAMINATION ON BEAM
 - A. CLEAN AND REMOVE RUST AND SCALE.
 - B. CHECK REMAINING THICKNESS.
 - C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING, WELD 5/16" COVER PLATE W/AIN. 8" ON EACH SIDE OF DAMAGE.
 - D. PRIME AND PAINT REPAIRED AREA AFTER REPAIR IS COMPLETE.
7. CONTRACTOR TO FIELD VERIFY CONDITION OF ALL EXISTING BEAMS. ADDITIONAL REPAIRS MAY BE REQUIRED BEYOND THOSE NOTED.



1. FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET S0.0

2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
3. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
4. 2-1/2" DEEP THICK CONCRETE SLAB OVER METAL DECK:
NORMAL WEIGHT CONCRETE @6W/6 W2.9XW2.9 W/WF AT MIDHEIGHT OF CONCRETE W/ 1.0C24 METAL DECK.
ATTACH DECK TO PERPENDICULAR SUPPORTS W/ #12 TEK SCREWS IN 3/34 PATTERN. ATTACH DECK TO PARALLEL SUPPORTS W/ #12 TEK SCREWS @ 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.
5. METAL ROOF DECK:
NEW ROOF DECK TO BE 1.5C24 METAL DECK.
ATTACH DECK TO PERPENDICULAR SUPPORTS WITH #12 TEK SCREWS AT EVERY FLUT. ATTACH DECK TO PARALLEL SUPPORTS WITH #12 TEK SCREWS AT 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.

6. DELAMINATION ON BEAM
- A. CLEAN AND REMOVE RUST AND SCALE.
 - B. CHECK REMAINING THICKNESS.
 - C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING, WELD 5/16" COVER PLATE WITH ANGLE ON EACH SIDE OF DAMAGED AREA.
 - D. PRIME AND PAINT REPAIRED AREA AFTER REPAIR IS COMPLETE
7. CONTRACTOR TO FIELD VERIFY CONDITION OF ALL EXISTING BEAMS. ADDITIONAL REPAIRS MAY BE REQUIRED BEYOND THOSE NOTED.



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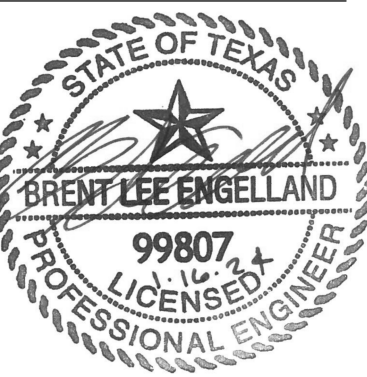
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ROOSEVELT LOFTS

HISTORIC REHABILITATION - APARTMENTS
SAN ANGELO, TEXAS



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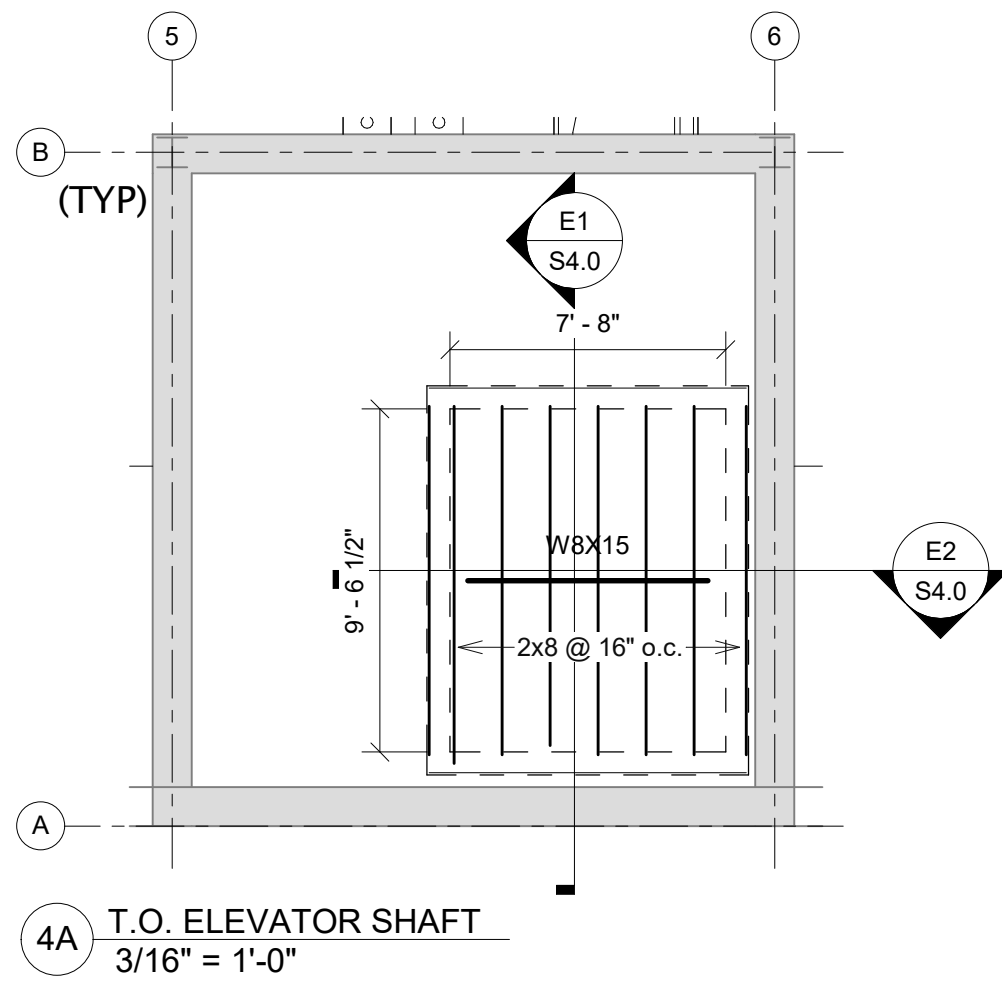
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S1.2

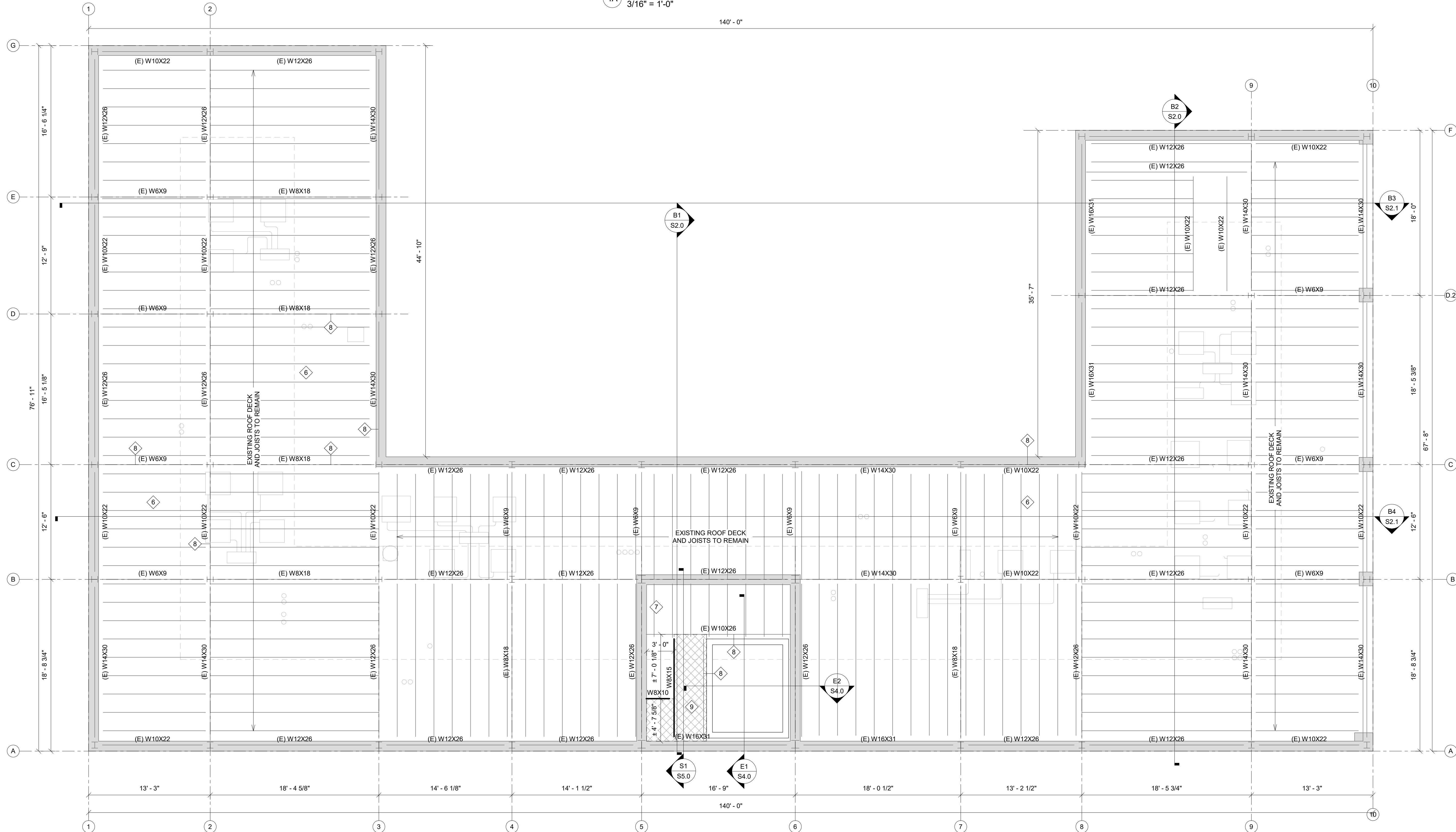
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- PLAN NOTES**
- FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET S0.0
 - DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
 - ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
 - EXISTING ROOF JOISTS & DECK TO REMAIN.
 - REPLACE EXISTING ROOFING, COVER BOARDS, INSULATION, AND MEMBRANE PER ARCHITECTURAL DRAWINGS. TAKE CARE TO PROTECT EXISTING CONCRETE ROOF DECK DURING RE-ROOF WORK.
 - REPAIR CORRODED JOISTS IN THIS BAY PER DETAIL 11 / S3.0. ANY JOIST ELEMENT THAT HAS LOST MORE THAN 25% OF ITS ORIGINAL CROSS-SECTION DUE TO CORROSION OR DAMAGE NEEDS TO BE REPAIRED. G.C. TO REVIEW ALL JOISTS IN ALL BAYS FOR DAMAGE OR CORRODED JOISTS.
 - REPAIR DAMAGED CONCRETE ROOF DECK THIS BAY BY CAREFULLY REMOVING EXISTING DECK TO THE NEXT ADJACENT JOIST BEYOND THE DAMAGED AREA. REPLACE WITH 2-1/2" TOTAL DEPTH N.W. CONCRETE SLAB OVER 10C20 METAL DECK W/ 6x6 W2.9xW2.9 WWF AT MIDHEIGHT OF CONCRETE. TACK WELD DECK TO EXISTING JOISTS ON BOTH SIDES AT EACH FLUTE.

- 8 DELAMINATION ON BEAM.
A. CLEAN AND REMOVE RUST AND SCALE.
B. CHECK REMAINING THICKNESS.
C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING, WELD 5/16" COVER PLATE W/ MIN. 6" ON EACH SIDE OF DAMAGE.
D. PRIME AND PAINT REPAIRED AREA AFTER REPAIR IS COMPLETE.
- 9 REPLACE EXISTING FLOOR IN HATCHED AREA W/ 2-1/2" TOTAL DEPTH CONCRETE SLAB OVER METAL DECK.
NORMAL WEIGHT CONCRETE W/ 6x6 W2.9xW2.9 WWF AT MIDHEIGHT OF CONCRETE W/ 10C24 METAL DECK.
ATTACH DECK TO PERPENDICULAR SUPPORTS W/ #12 TEK SCREWS IN 33/4 PATTERN. ATTACH DECK TO PARALLEL SUPPORTS W/ #12 TEK SCREWS @ 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.
10. CONTRACTOR TO FIELD VERIFY CONDITION OF ALL EXISTING BEAMS. ADDITIONAL REPAIRS MAY BE REQUIRED BEYOND THOSE NOTED.



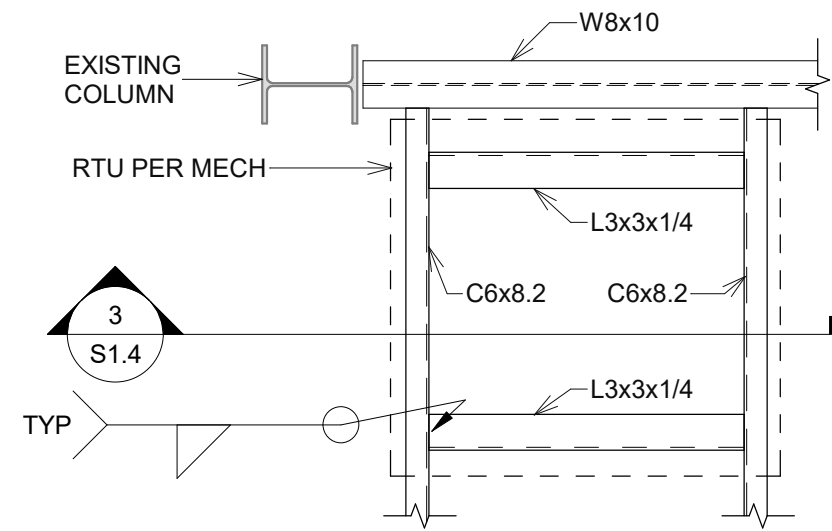
4A T.O. ELEVATOR SHAFT
3/16" = 1'-0"



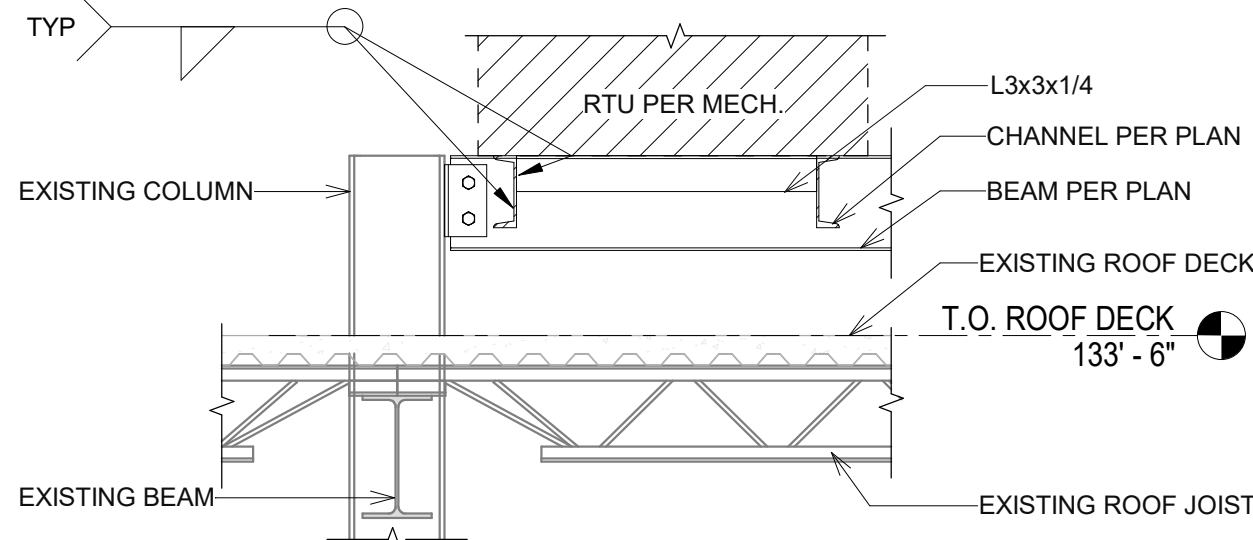
4 ROOF FRAMING PLAN
3/16" = 1'-0"

PLAN NOTES

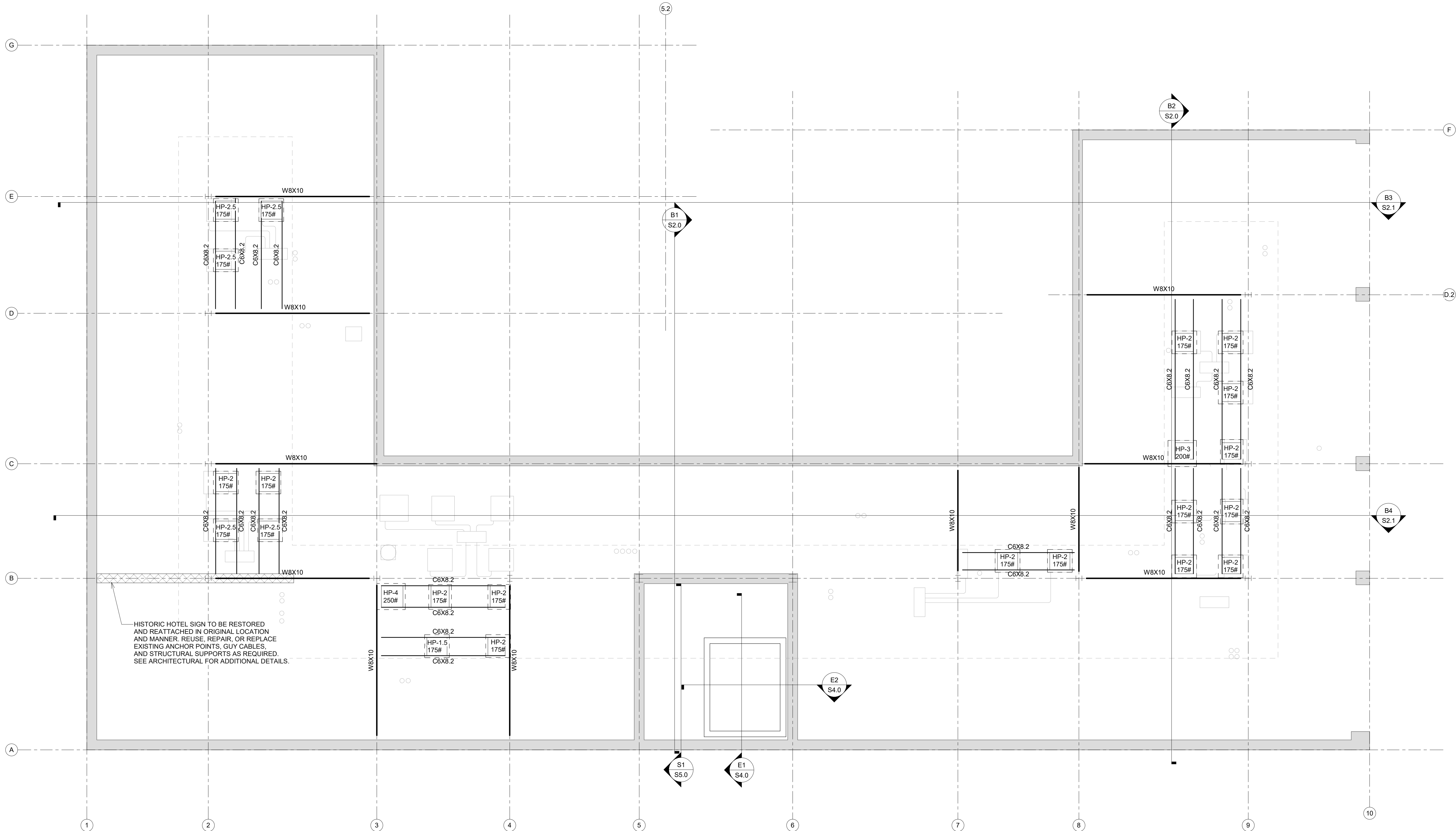
- FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET S0.0
- DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE MECHANICAL FOR ANY DIMENSIONS NOT NOTED HERE.
- ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
- COORDINATE LOCATION OF MECHANICAL ROOFTOP UNITS WITH MECHANICAL DRAWINGS.
- ALL STEEL EXPOSED TO WEATHER TO BE PRIMED AND PAINTED.



2 TYPICAL RTU SUPPORT PLAN
3/4" = 1'-0"



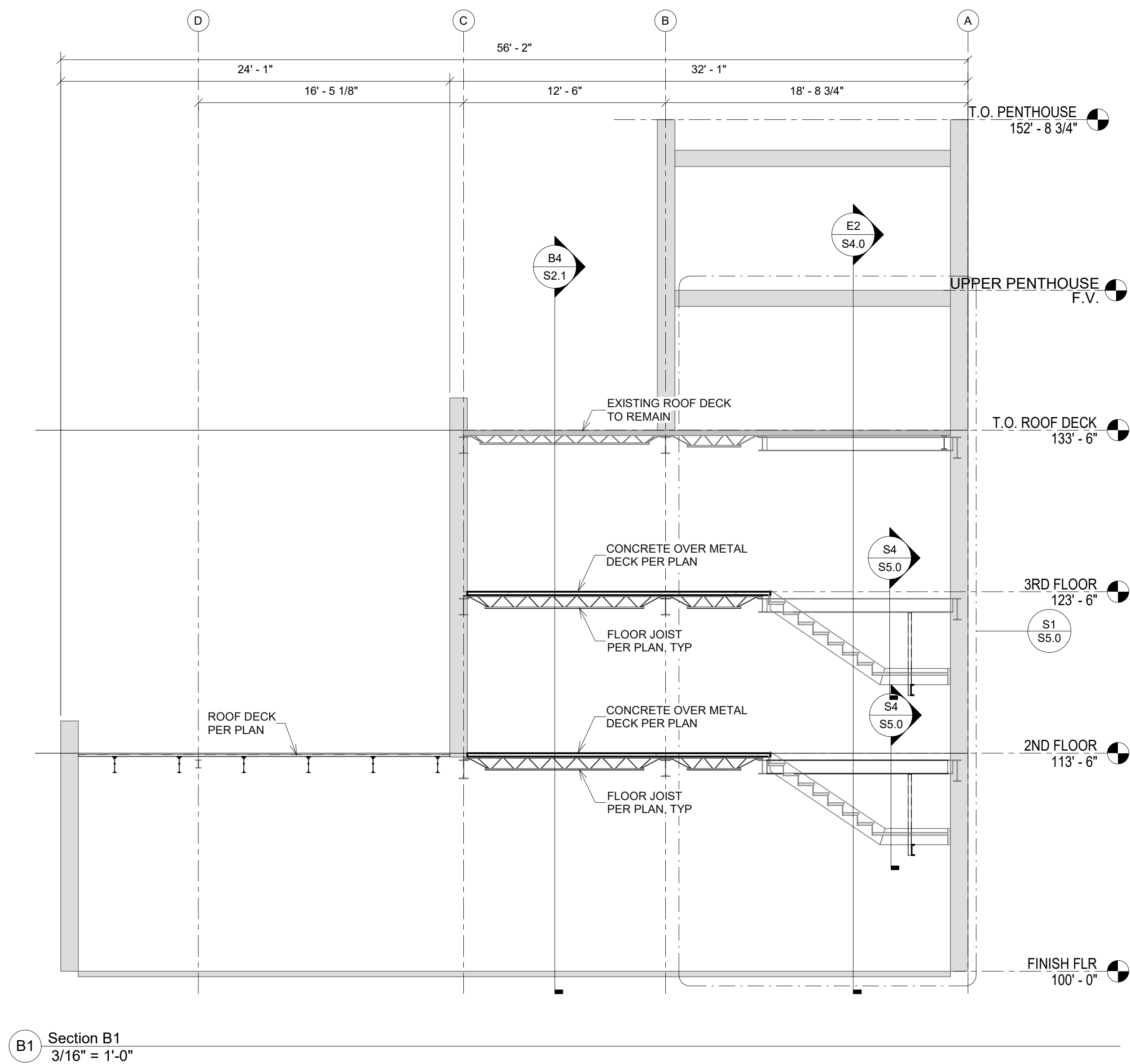
3 TYPICAL RTU SUPPORT SECTION
3/4" = 1'-0"



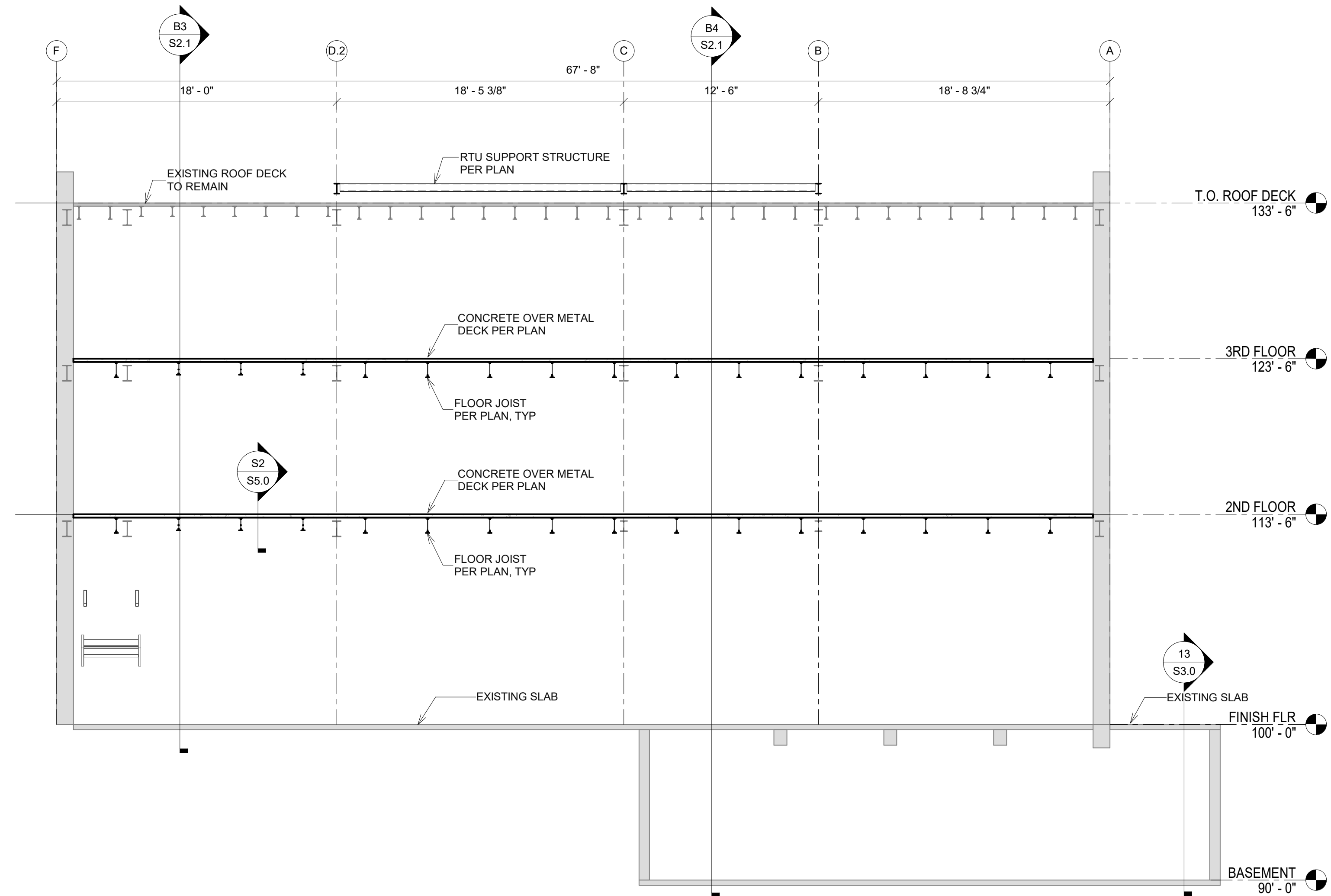
HISTORIC HOTEL SIGN TO BE RESTORED AND REATTACHED IN ORIGINAL LOCATION AND MANNER, REUSE, REPAIR, OR REPLACE EXISTING ANCHOR POINTS, GUY CABLES, AND STRUCTURAL SUPPORTS AS REQUIRED. SEE ARCHITECTURAL FOR ADDITIONAL DETAILS.



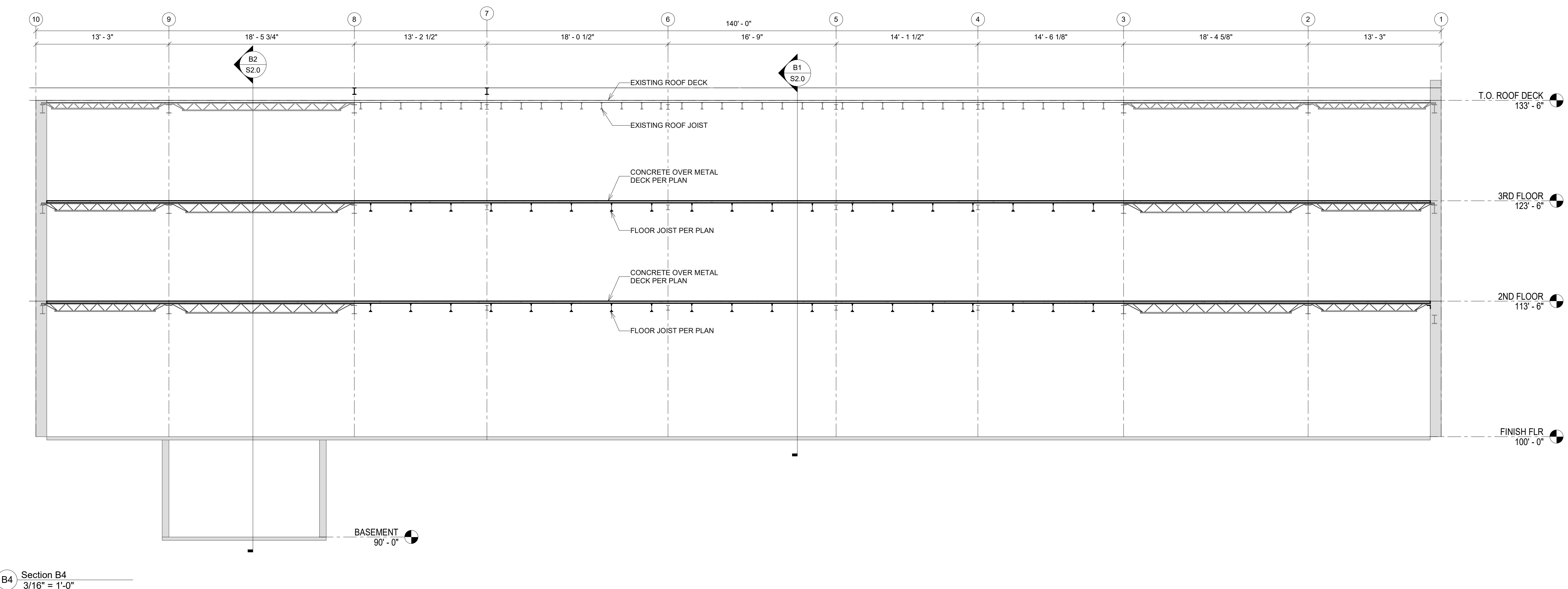
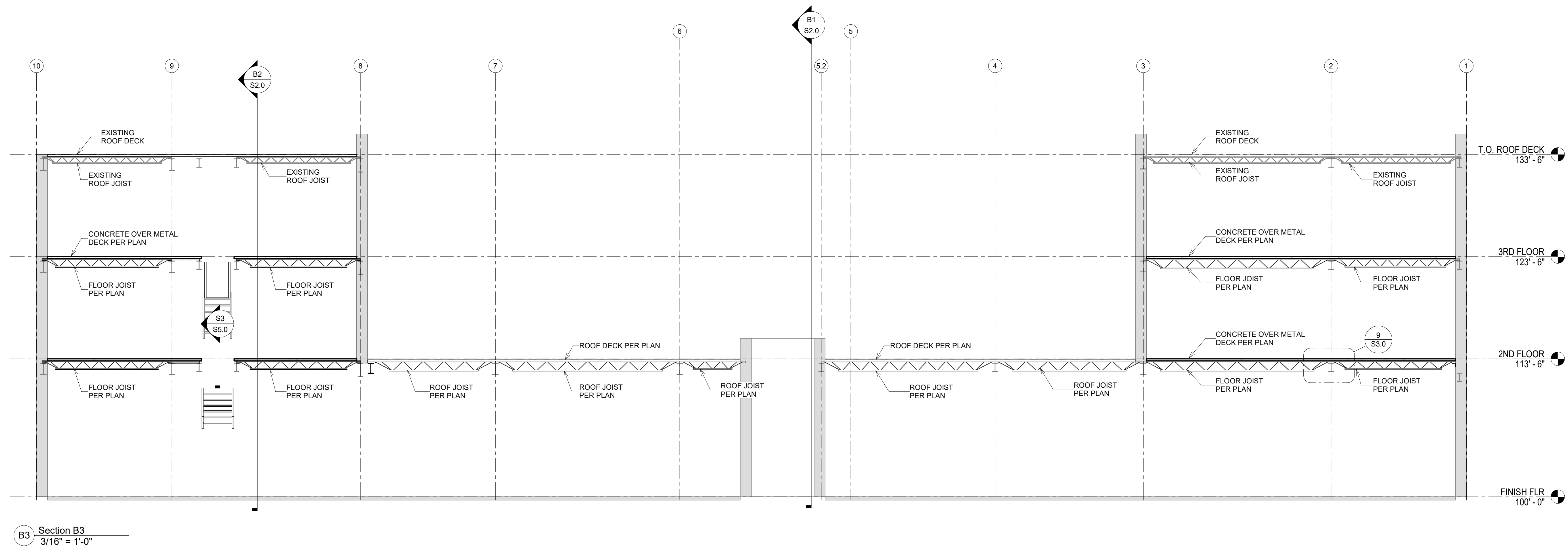
1 MECHANICAL FRAMING PLAN
3/16" = 1'-0"

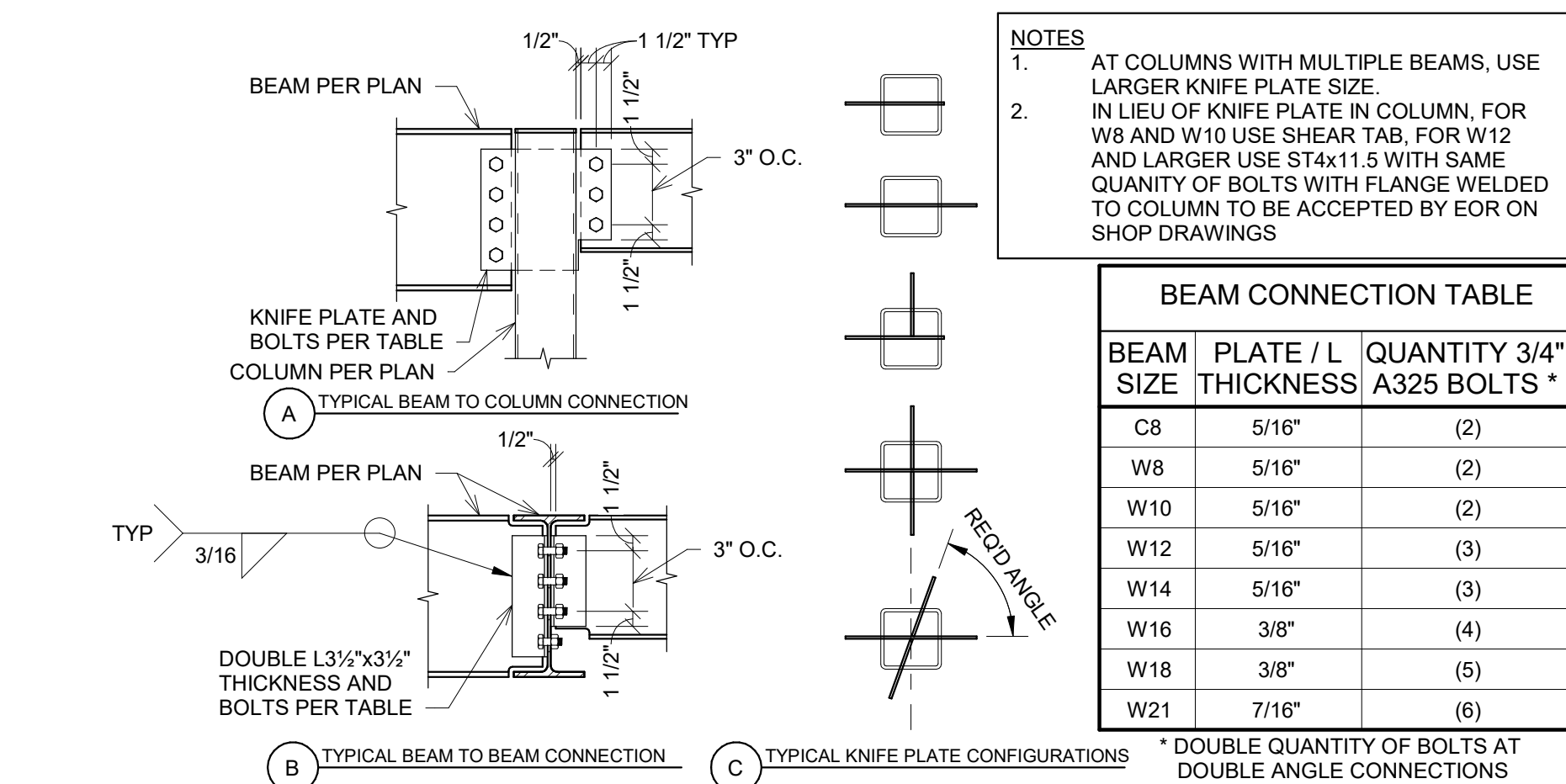
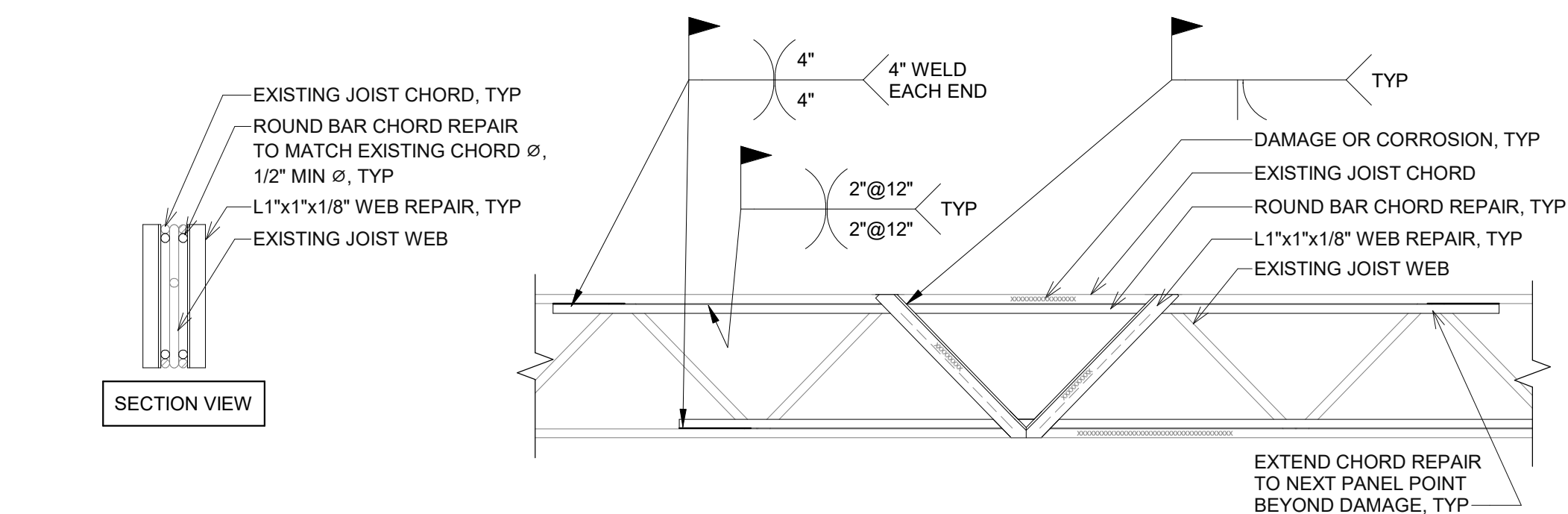
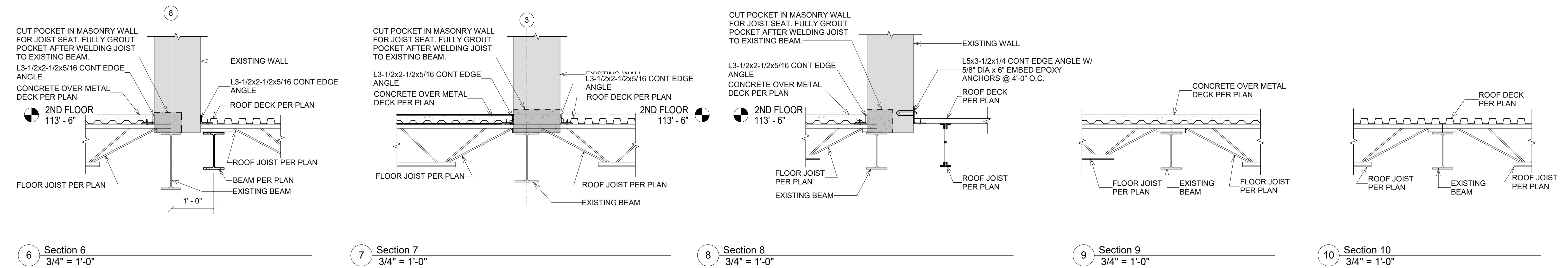
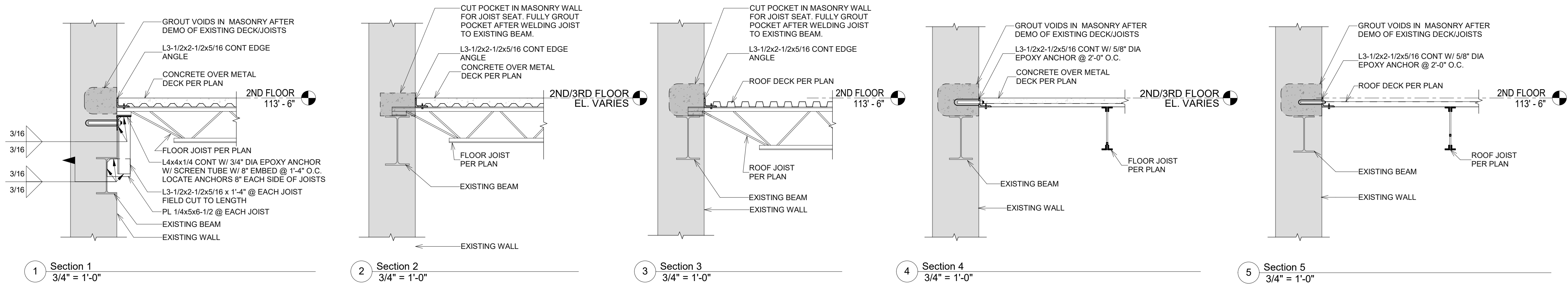


B1 Section B1
3/16" = 1'-0"



B2 Section B2
3/16" = 1'-0"

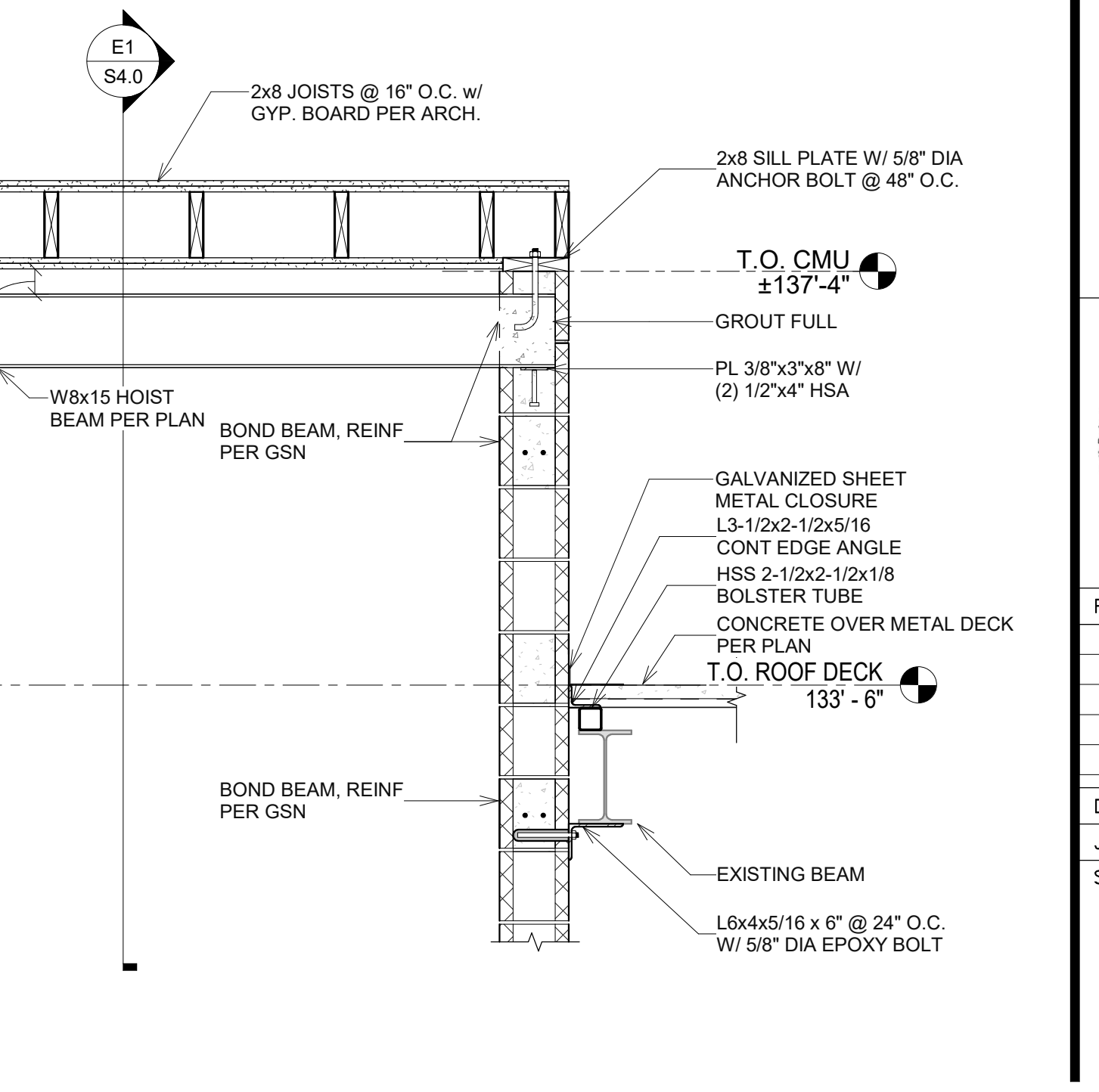
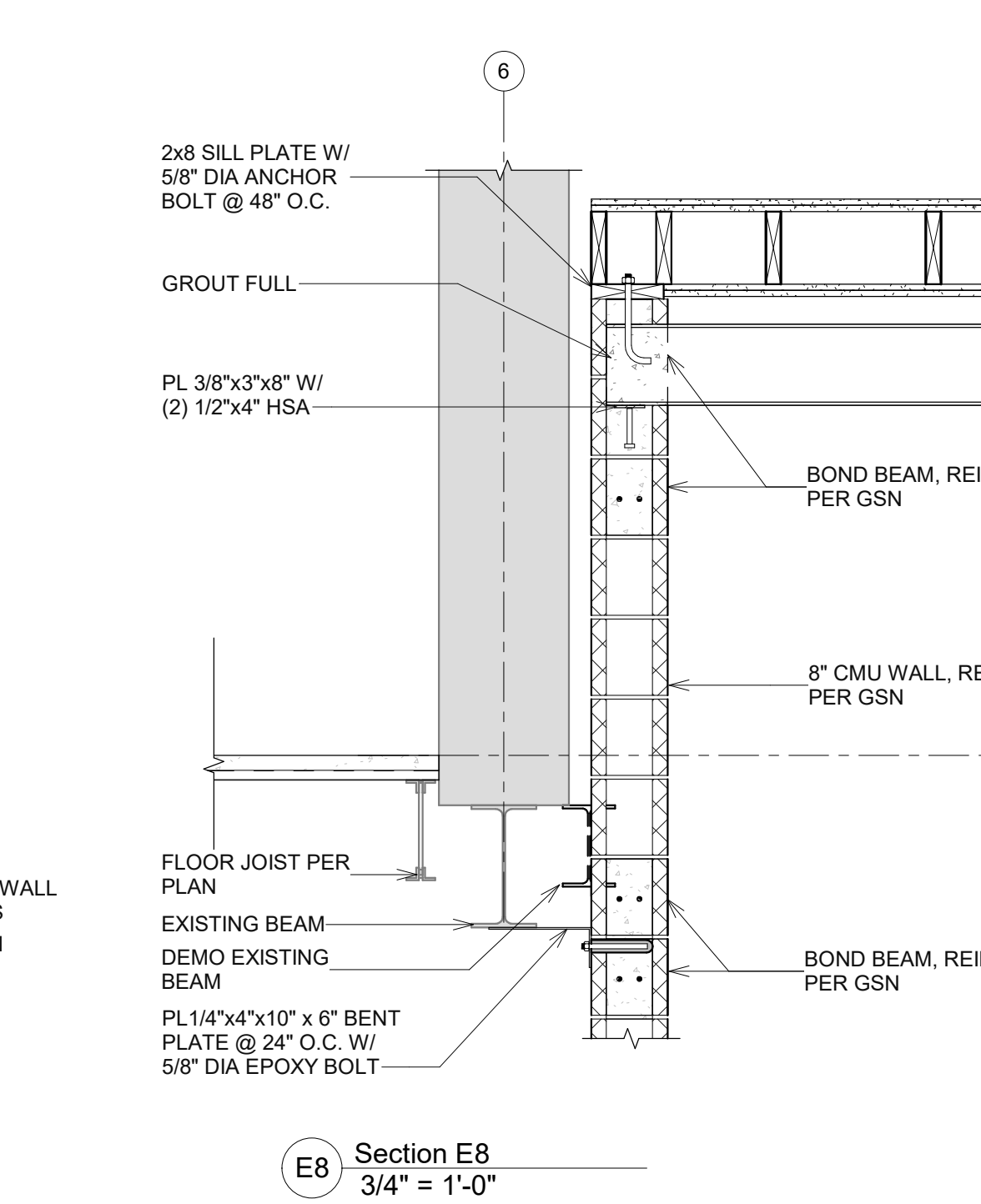
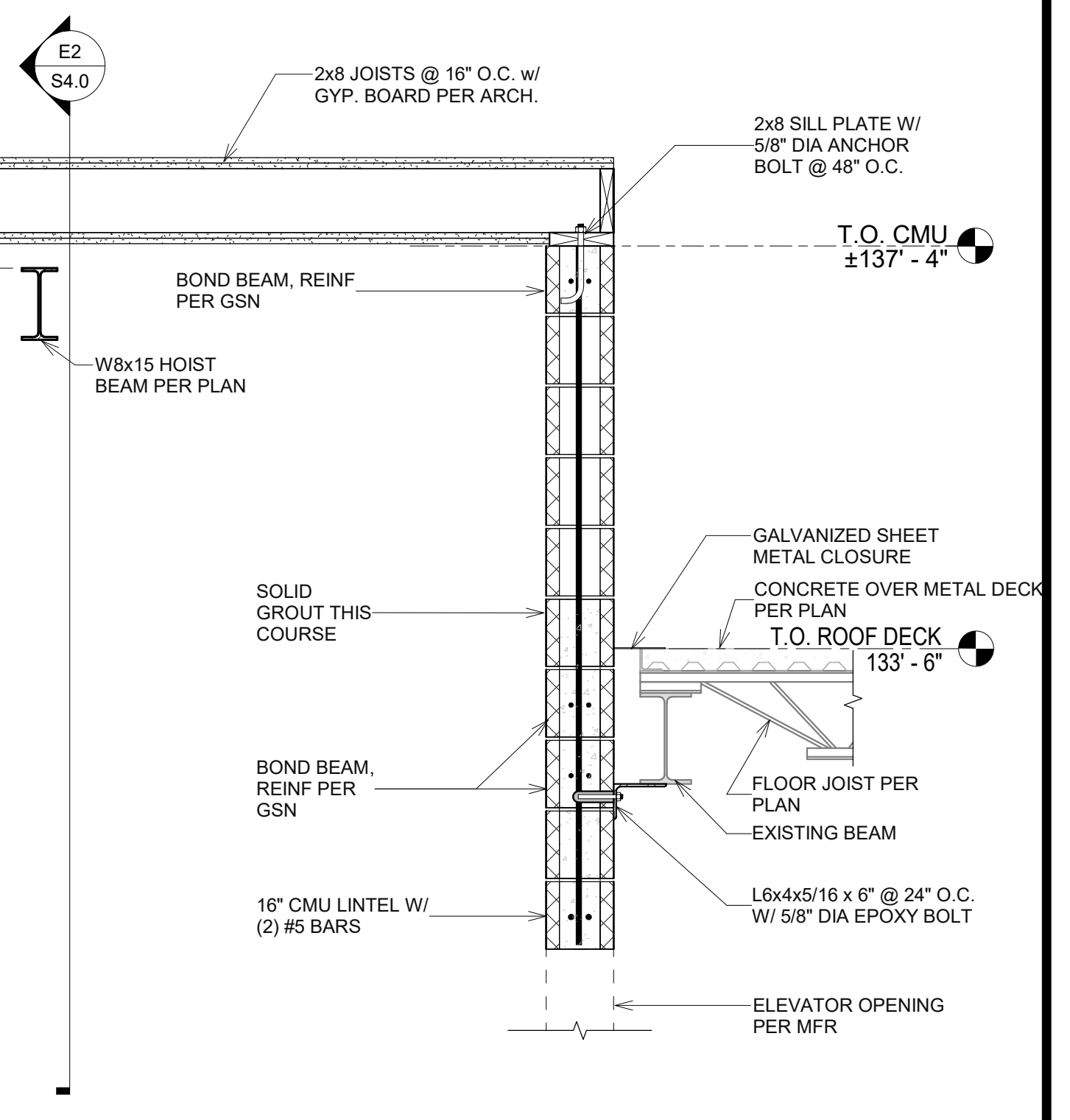
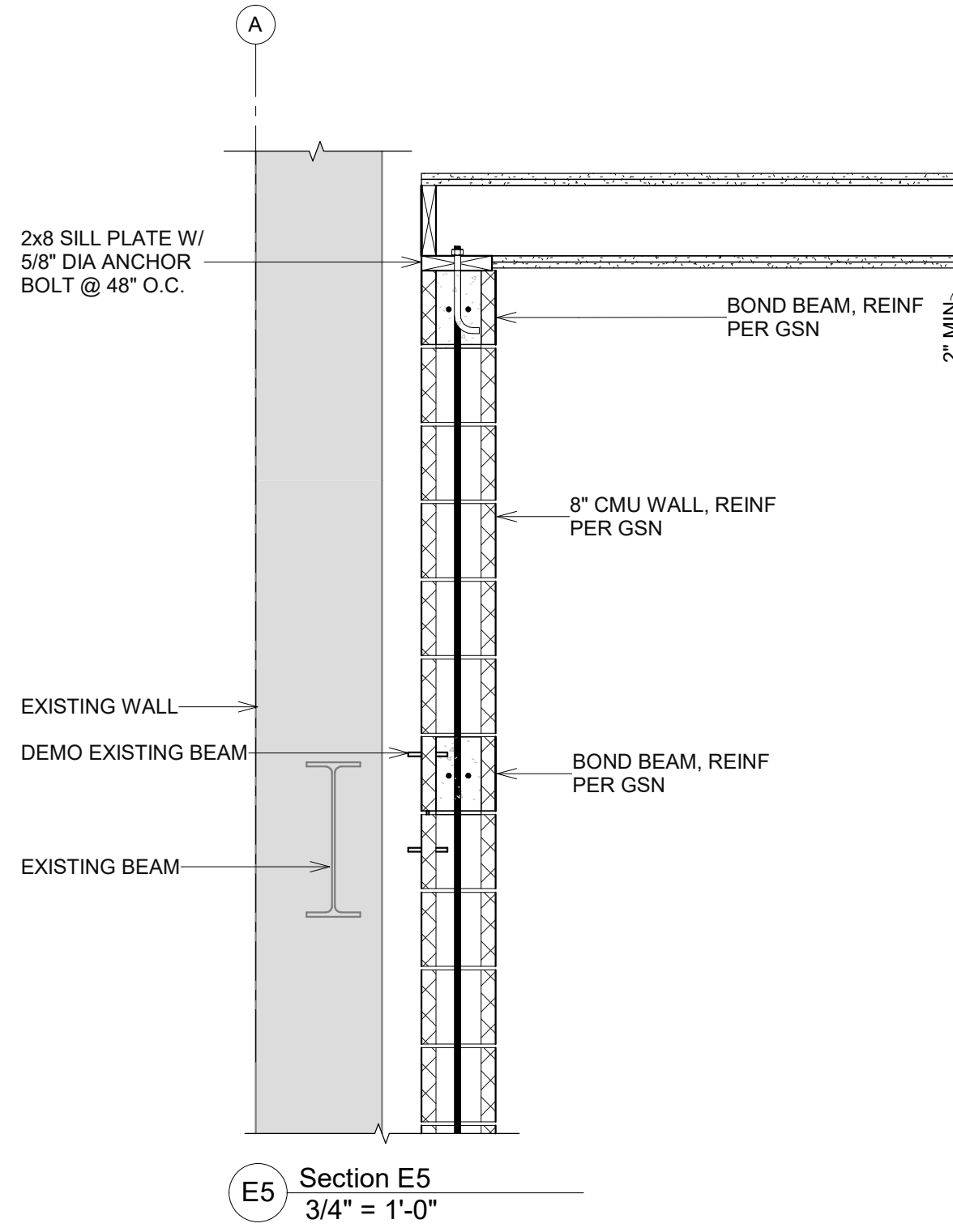
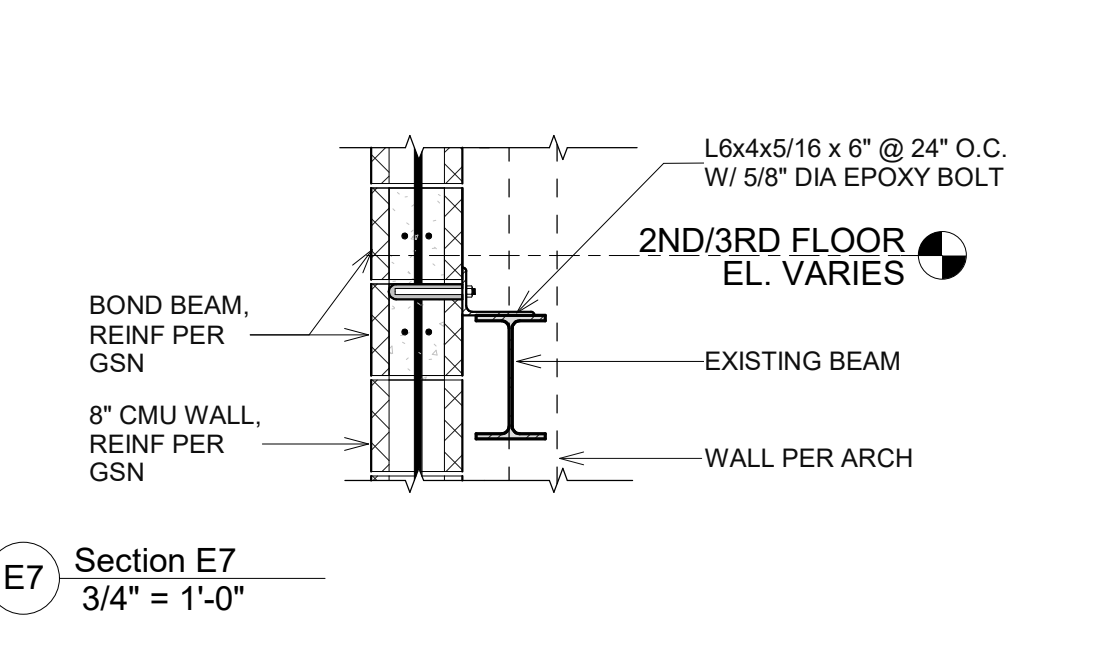
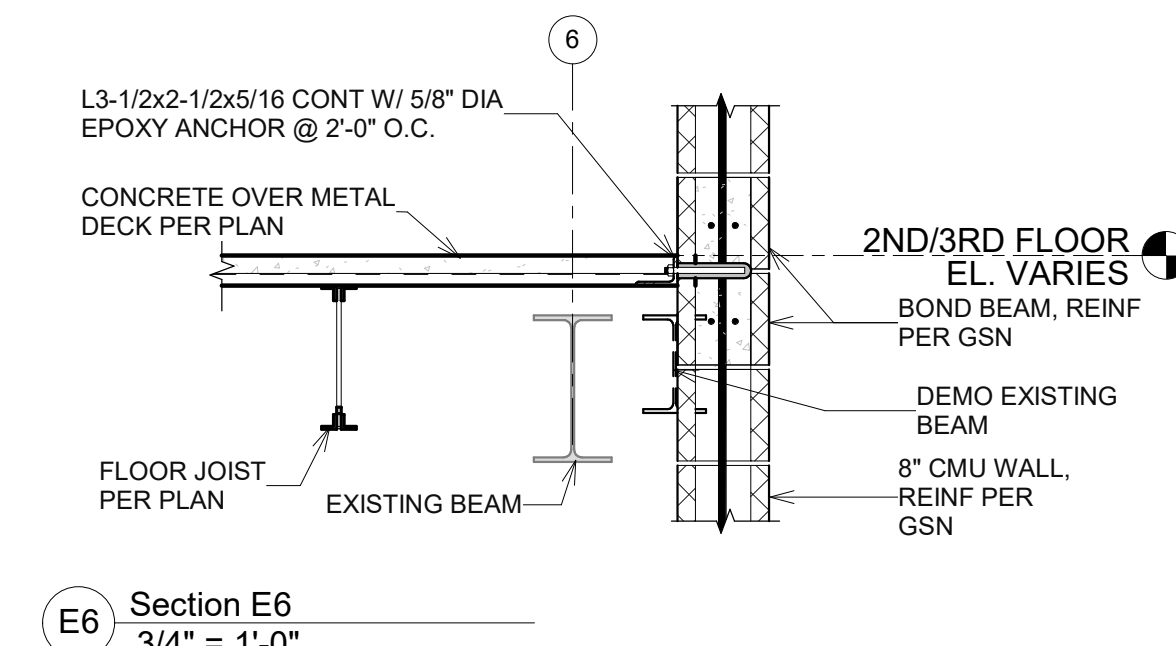
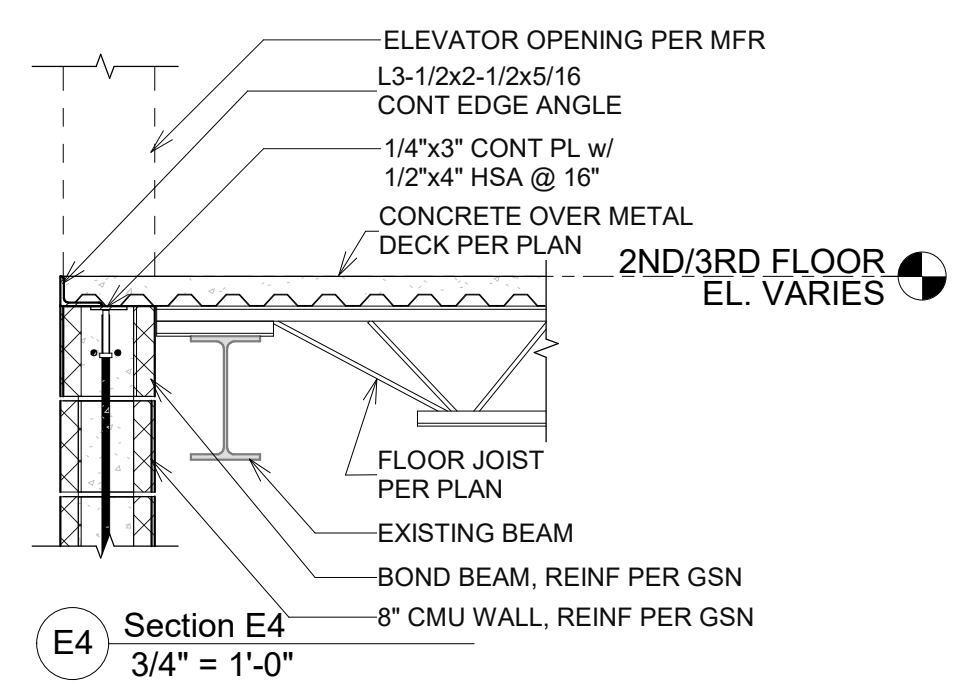
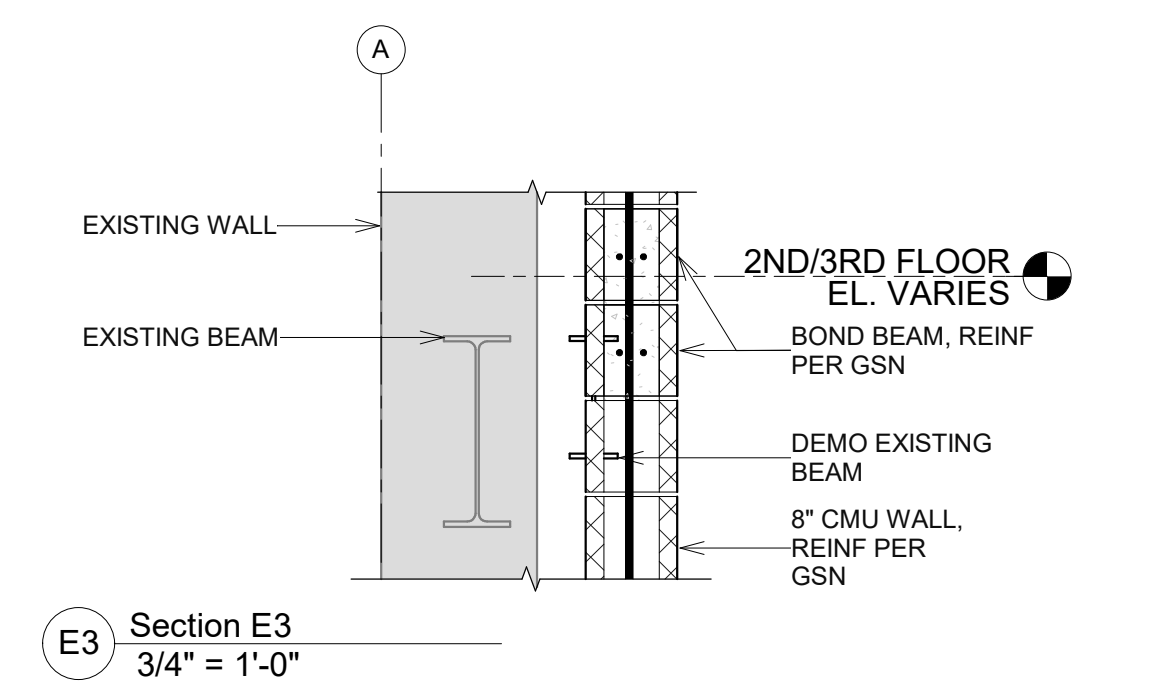
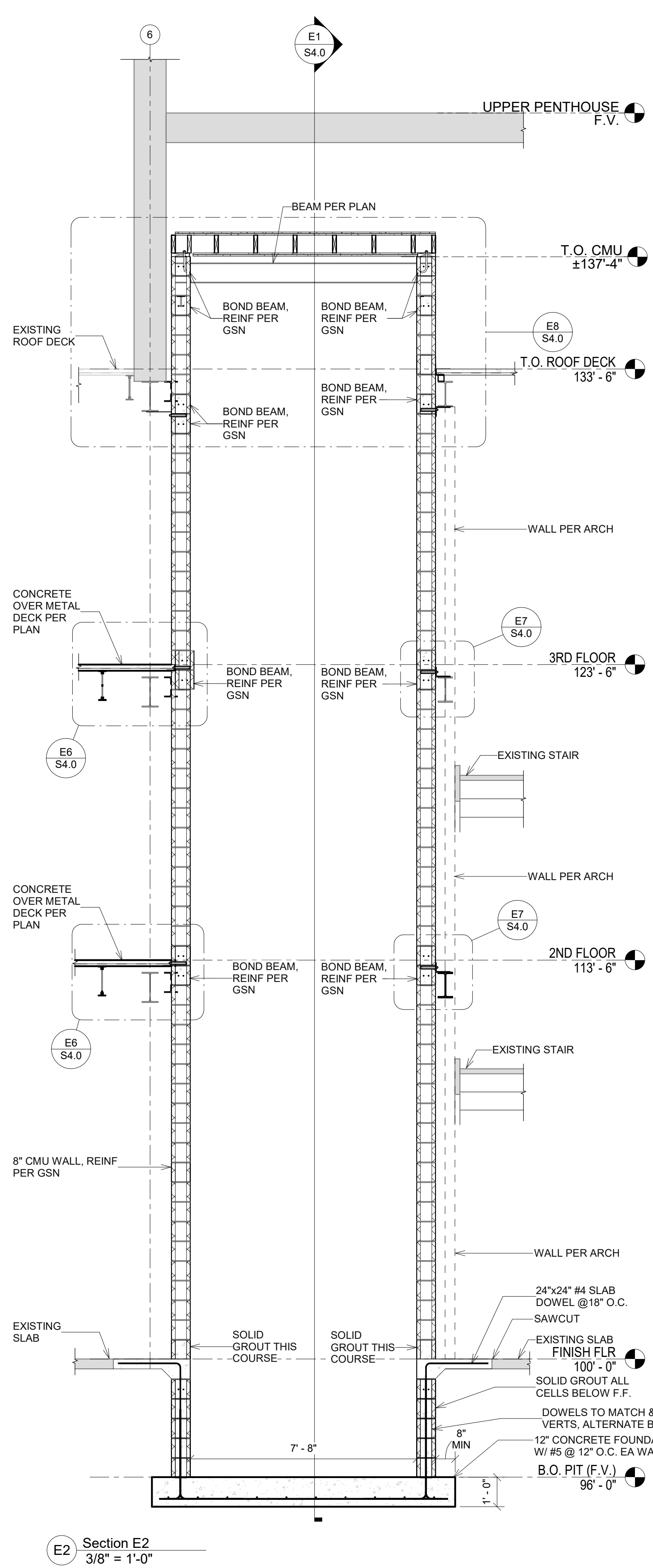
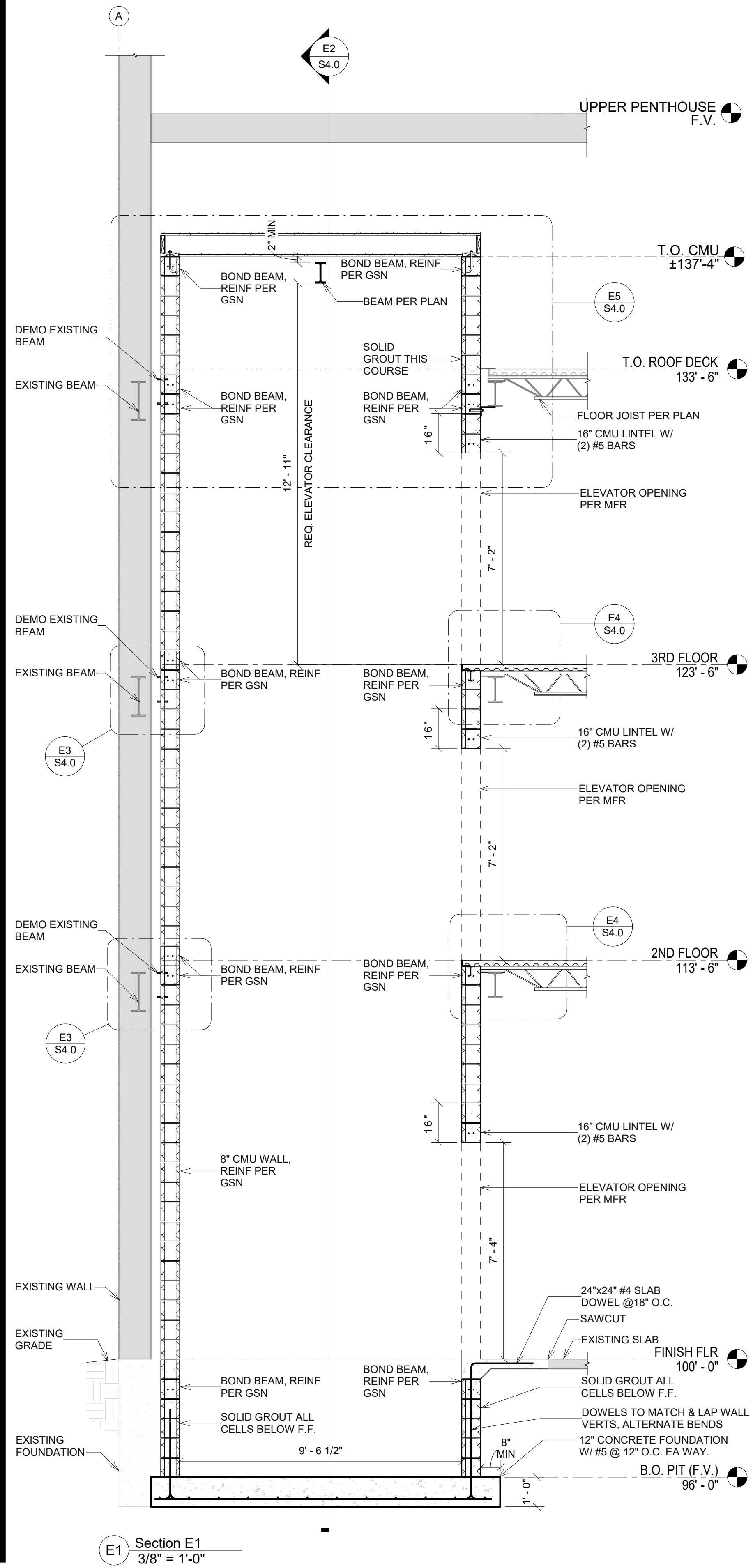




REBAR AND CONCRETE REPAIR:

- REMOVE LOOSE AND SPALLING CONCRETE. ROUGHEN SURFACE TO REPAIR, AND CLEAN THOROUGHLY.
- REMOVE RUST AND CORROSION FROM EXISTING REINFORCING.
- COAT REPAIR AREA AND ALL SIDES OF REINFORCING WITH SIKARMADEC-110 EPOCER BONDING PRIMER AND CORROSION PROTECTION.
- PATCH REPAIR AREA WITH SIKAKAREPAIR 223 PATCHING MATERIAL.

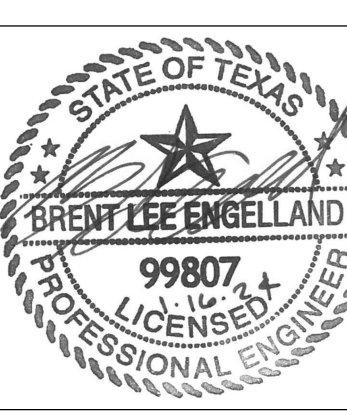
13 BASEMENT REPAIR DETAIL
NTS



ENGINEERING CONSULTANTS, P.A.
1227 N. MAIN STREET
P.O. BOX 932
HUTCHINSON, KS 67504-0932
620-665-6394
info@engineering-consultants.com
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E30100001# 25473

JonesGillamRenz
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgarchitects.com
785.827.0386

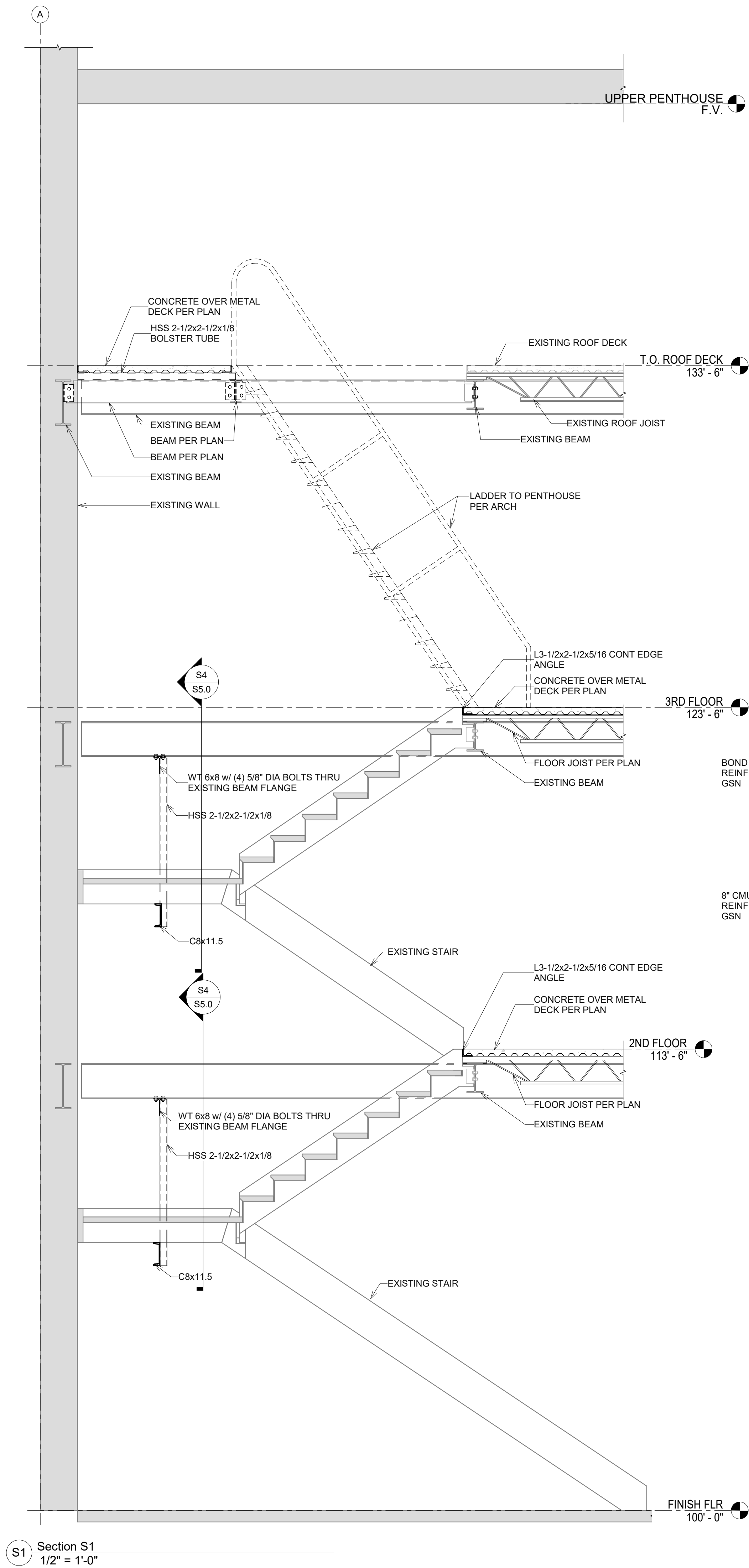
ROOSEVELT LOFTS
HISTORIC REHABILITATION - APARTMENTS
SAN ANGELO, TEXAS



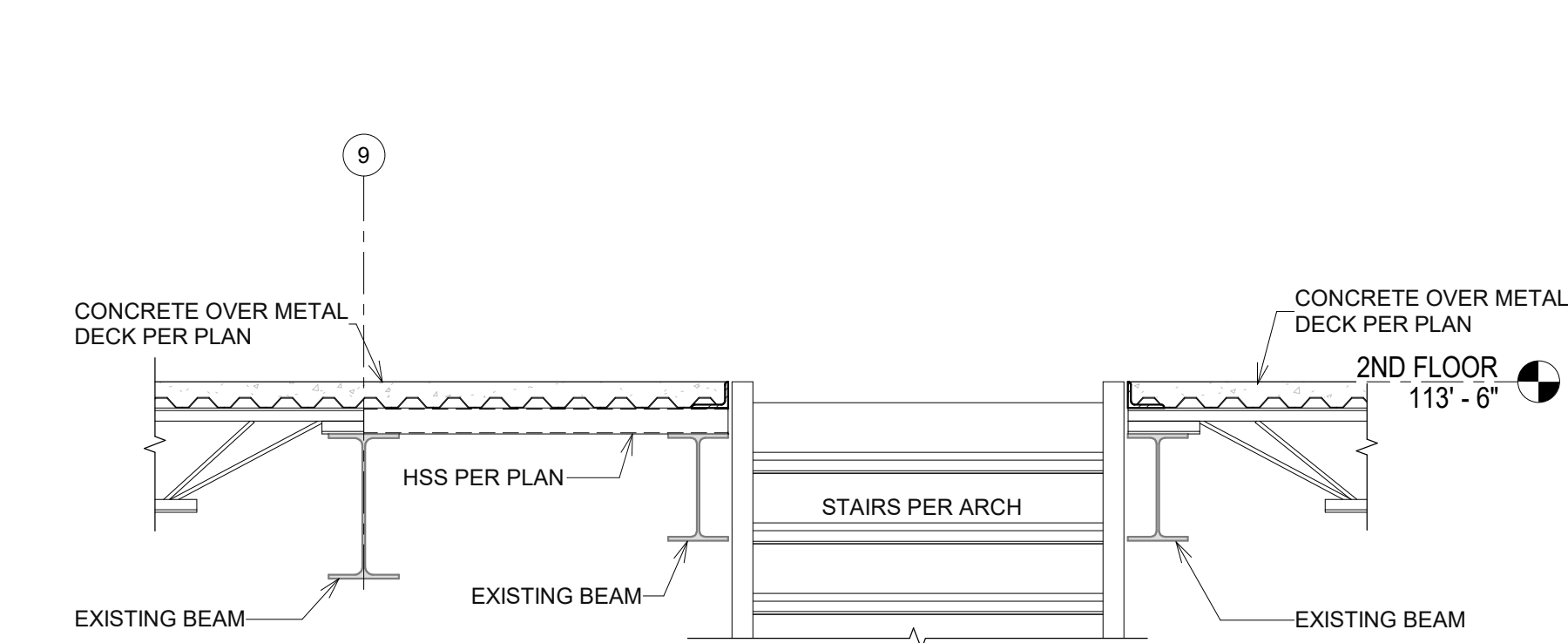
REVISION:	
DATE:	1-16-2024
JOB:	22-3281
SHEET NO.:	

S4.0

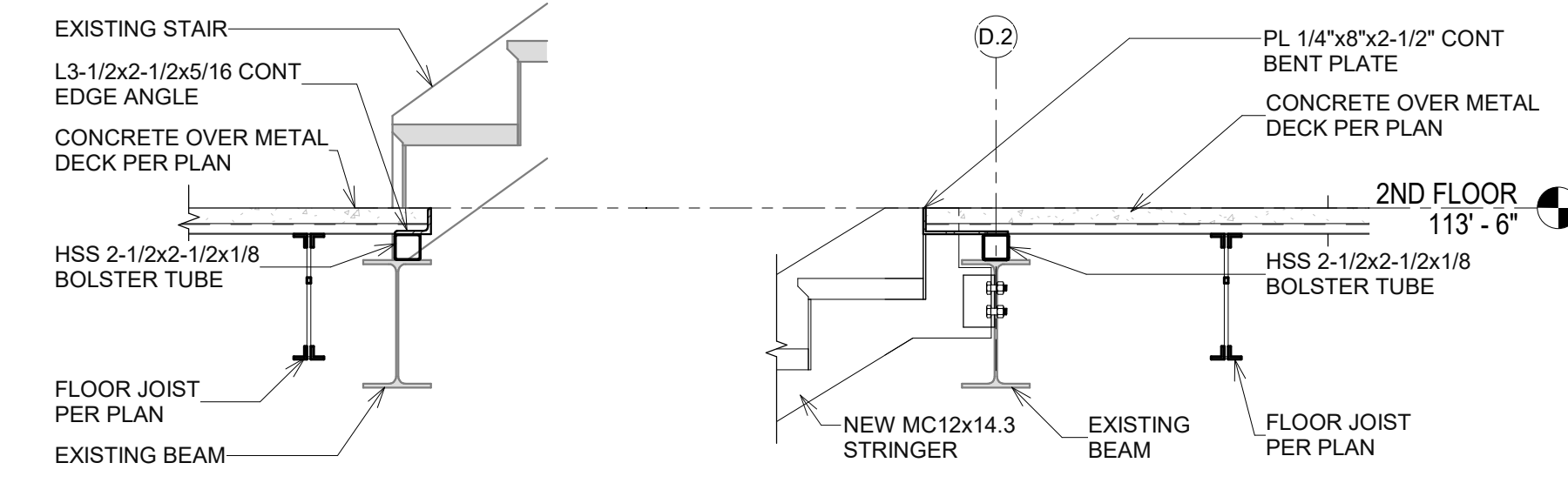
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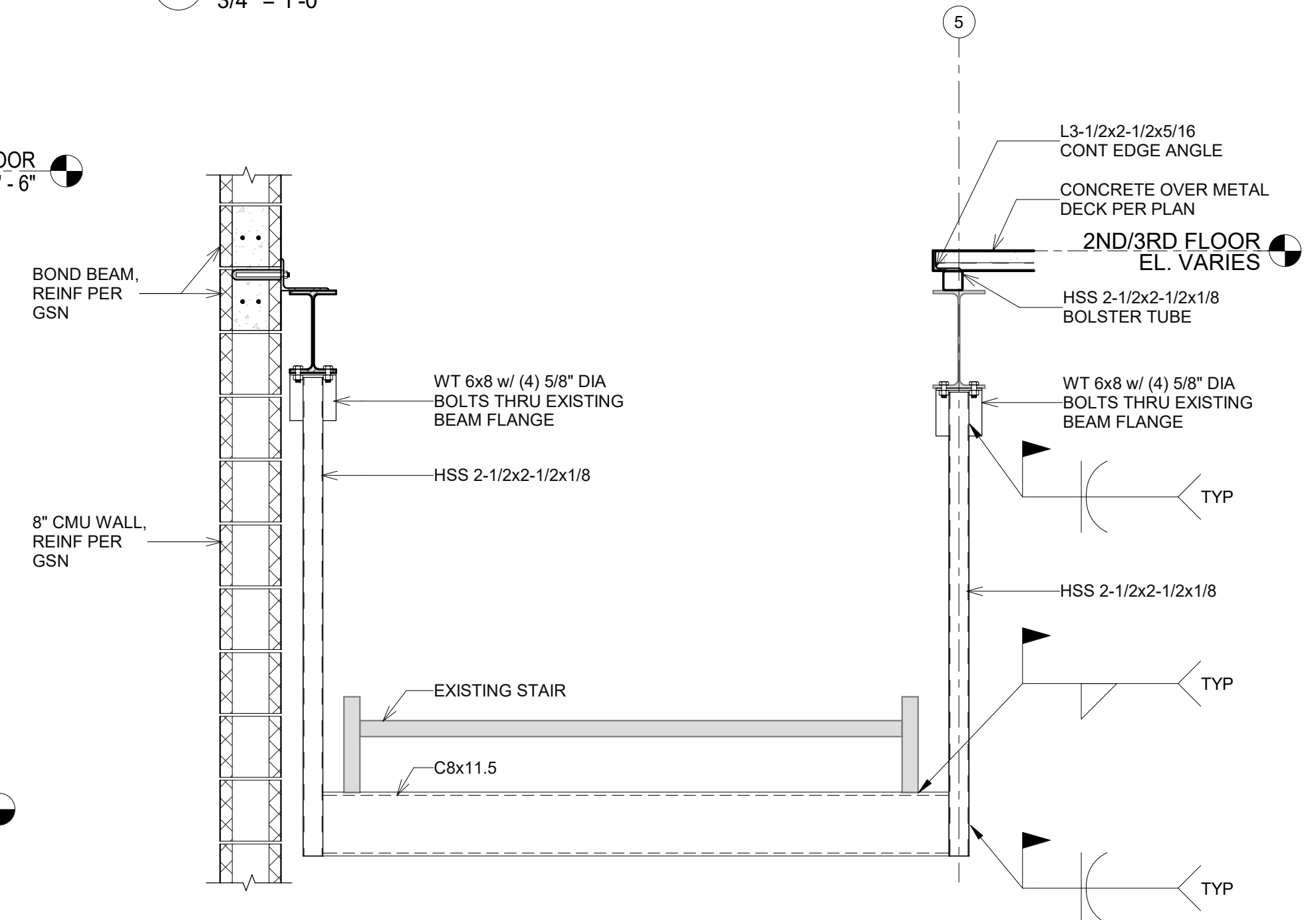
S1 Section S1
1/2" = 1'-0"



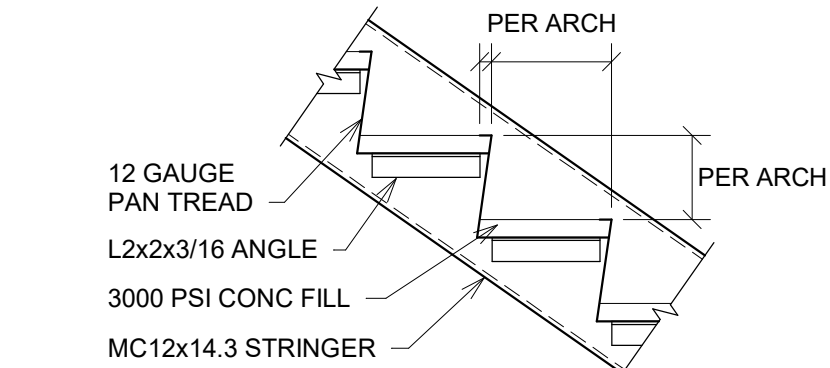
S2 Section S2
3/4" = 1'-0"



S3 Section S3
3/4" = 1'-0"



S4 Section S4
3/4" = 1'-0"



STAIR NOTES
1. FINAL STAIR DETAILING PER STEEL FABRICATOR
SUBJECT TO APPROVAL OF ARCHITECT AND ENGINEER OF
RECORD.
2. LANDING SUPPORT POSTS TO BE HSS3x3x1/4.

T1 TYPICAL STAIR DETAIL
3/4" = 1'-0"