

GENERAL STRUCTURAL NOTES:

- 1. THE GOVERNING BUILDING CODE IS THE INTERNATIONAL 2020 MINN STATE BUILDING CODE.
2. CONTRACT DOCUMENTS INCLUDE THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. BUT DO NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR OTHER SUBMITTALS BY THE CONTRACTOR.
3. CONTRACTOR SHALL CROSS VERIFY ALL CONTRACT DOCUMENTS, ELEVATIONS, DIMENSIONS, AND EXISTING CONDITIONS PRIOR TO STARTING WORK. DISCREPANCIES OR CONFLICTS SHALL BE NOTED TO THE EOR IMMEDIATELY FOR REMEDIATION. SPECIFIC NOTES AND DETAILS SHALL PRESEDE OVER GENERAL NOTES AND SPECIFICATIONS.
4. THE DIMENSIONS, LOCATIONS, AND DETAILS SHOWN ON THE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF THE DRAWINGS BEING ISSUED. DEVIATIONS WHICH ARE NECESSARY OR WHICH CONFLICT SHALL BE REPORTED TO THE EOR. CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR CORRECTIONS NOT APPROVED BY THE EOR.
5. COSTS OF ADDITIONAL DESIGN WORK DUE TO THE SELECTION OF AN OPTION OR DUE TO ERRORS OR OMISSION IN CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION. THE STRUCTURAL DRAWINGS REFLECT THE COMPLETED STRUCTURE BRACING, SHORING, AND PROTECTION DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR. THE STRUCTURE SHALL NOT BE LOADED WITH CONSTRUCTION MATERIALS AND EQUIPMENT THAT EXCEEDS THE DESIGN LOADS.
7. PENETRATIONS NOT SHOWN ON THE DRAWINGS MUST BE APPROVED BY THE EOR BEFORE PLACING THROUGH STRUCTURAL ELEMENTS. CONTRACTOR SHALL PROVIDE A CAST-IN SLEEVE FOR ALL HORIZONTAL ELEMENTS THAT EXTEND THROUGH FOOTINGS AND FOUNDATION WALL, SUCH AS DRAIN TILE, CONDUIT, PIPING, ETC. COORDINATE SLEEVES WITH EOR. SEE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS FOR ALL PENETRATIONS AND EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
8. CONTRACTOR TO VERIFY ALL HEIGHTS, LOCATIONS, LOCATIONS & DIMENSIONS OF MECH. EQUIPMENT SHOWN AND NOTIFY THE EOR OF ANY DISCREPANCIES. COORDINATE THIS INFORMATION WITH ALL NECESSARY INDIVIDUALS.
9. PERIODIC SITE OBSERVATION BY REPRESENTATIVES OF SANDMAN STRUCTURAL ENGINEERS IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DRAWINGS. A LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR. ALL MATERIALS AND WORKMANSHIP ARE SUBJECT TO THE REVIEW OF THE EOR.
10. SEE THE FOLLOWING DETAILS FOR STANDARD DETAILS:
CP CONCRETE & FOUNDATION, 1/3/201
WOOD FRAMING, 1/5/201

SHOP DRAWING & FINISHED DESIGN SUBMITTAL NOTES:

Table with 2 columns: Description and Notes. Includes items like SHOP DRAWING OR SUBMITTAL, CONCRETE MIX DESIGNS, PRECAST/PRESTRESSED CONCRETE, LUMBER MATERIAL, GRADE & DOWEL-TYPE FASTENERS, METAL PLATE CONNECTED WOOD TRUSSES, ALUMINUM BALCONY FRAMING, ELEVATOR, SIMPSON STRONG-TIE ANCHOR TIEDOWN SYSTEM.

- 1. CONTRACT DRAWINGS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS. ALL SHOP DRAWINGS MUST BEAR THE REVIEW STAMP OF THE CONTRACTOR BEFORE THEY ARE REVIEWED BY THE EOR.
2. SHOP DRAWINGS SHALL SHOW ALL FIELD DETAILS AND ADDITIONAL INFORMATION NEEDED FOR THE CONTRACTOR TO CONSTRUCT THE BUILDING PER THE CONTRACT DOCUMENTS.
3. STRUCTURAL COMPONENTS/SYSTEMS DESIGNATED AS "A DEFERRED SUBMITTAL" OR AS "DELEGATED DESIGN," AS DESIGNED BY OTHERS, OR "PRE-ENGINEERED" MUST INCLUDE A CALCULATION PACKAGE THAT IS STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE THE PROJECT WILL BE CONSTRUCTED, PRIOR TO SUBMITTAL FOR APPROVAL TO THE EOR.
4. SHOP DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE DURING TIMES OF INSPECTION AND SHALL BE CLEARLY INDICATED THAT THEY HAVE BEEN REVIEWED AND APPROVED BY THE EOR.
5. REVIEW OF SUBMITTALS AND SHOP DRAWINGS BY THE EOR DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK ALL SUBMITTALS AND SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR THE ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

ALUMINUM BALCONY/CANOPY NOTES:

- 1. THE DEFERRED ALUMINUM DESIGN SHALL CONFORM TO THE ALUMINUM DESIGN MANUAL (LATEST ADDITION). THIS DESIGN SHOULD BE DONE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT.
2. THE ALUMINUM ASSEMBLIES SHALL BE DESIGNED FOR THE LIVE LOAD AND DRIFT LOADING LISTED UNDER THE DESIGN CRITERIA.
3. ALL CONNECTIONS TO THE BASE STRUCTURE SHALL BE FULLY DETAILED IN THE ALUMINUM APPROVAL SUBMITTAL AND CALCULATIONS SHALL BE PROVIDED. THE REACTIONS FROM THESE CONNECTIONS SHALL BE PROVIDED TO THE EOR TO CONFIRM THE CAPACITY OF THE SUPPORTING STRUCTURE.
4. A SEPARATION MATERIAL SHALL BE USED BETWEEN THE ALUMINUM ASSEMBLIES AND ANY DISSIMILAR METAL TO PREVENT CORROSION. THIS MATERIAL SHALL BE SHOWN ON THE SHOP DRAWINGS.
5. ALL SUBMITTAL CALCULATIONS SHALL BE SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.

DESIGN CRITERIA/DESIGN LOADS:

Tables for SNOW LOAD DESIGN CRITERIA, FLOOR DESIGN LOADS, and WIND LOAD DESIGN CRITERIA. Includes columns for Ground Snow Load, Snow Importance Factor, Exposure Factor, Thermal Factor, etc.

FOUNDATION NOTES:

- 1. FOOTINGS ARE DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 2000 psf FOR STRIP FOOTINGS AND 2000 psf FOR PAD FOOTINGS. THESE VALUES ARE PER THE GEOTECHNICAL REPORT BY CHOSEN VALLEY TESTING ISSUED ON JANUARY 19, 2021 REPORT #17735.20.MR.
2. PROTECT FOOTING EXCAVATIONS FROM WATER, MOISTURE, OR FROST INFILTRATION. PRIOR TO PLACEMENT OF FOOTING CONCRETE, CLEAN FOOTING EXCAVATIONS OF SNOW, WATER, MUD, DIRT, AND DEBRIS. DO NOT PLACE FOOTINGS OR BACKFILL ON FROZEN SUB GRADE.
3. FROST COVER FOR FOOTINGS SHALL BE PER RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. SEE PLAN FOR TOP OF FOOTING ELEVATIONS AND DETAILS FOR FOOTING STEP REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE EOR IMMEDIATELY OF ANY SPECIAL SOIL OR WATER CONDITIONS THAT EXIST ON SITE.
5. BACKFILL & COMPACTION SHALL BE INSPECTED AND TESTED BY A LICENSED GEOTECHNICAL ENGINEER OR QUALIFIED FIELD TECH. THE SUBMITTAL OF TESTING REPORTS SHALL BE PER SPECIAL INSPECTION REQUIREMENTS.
6. BACKFILL SHALL BE COMPACTED BY MECHANICAL MEANS. WATER INFILTRATION SHALL NOT BE ALLOWED. BACKFILL SHALL BE PLACED IN ALTERNATING LIFTS ON EACH SIDE OF THE FORM WALLS FOR STABILITY.
7. UNLESS SPECIFICALLY PRESCRIBED IN A GEOTECHNICAL REPORT, BACKFILL SHALL BE PLACED AND COMPACTED IN LOOSE LIFTS WITH THICKNESS OF 8" OR LESS. MOISTURE CONTENT AT THE TIME OF COMPACTION SHOULD BE +/- 3% OF OPTIMUM MOISTURE AND IT IS RECOMMENDED ALL ENGINEERED FILL BELOW FOOTINGS BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR MAX DENSITY (ASTM D998-09a).
8. WALL FOOTINGS ARE TO BE CENTERED ON WALLS UNO PAD FOOTINGS ARE TO BE CENTERED ON COLUMNS.
9. CONTRACTOR TO COORDINATE INTERIOR & EXTERIOR TOP OF FOOTINGS WITH MEP CONTRACTORS. PRIOR TO START OF CONSTRUCTION, PLUMBING TO BE ROUTED ABOVE FOOTINGS UNLESS APPROVED BY EOR. FOOTINGS MAY NEED TO BE LOCALLY LOWERED TO ACCOUNT FOR ADJACENT PLUMBING LINES OR BASINS THAT COULD UNDERMINE SUPPORTING SOIL LONGSIDE OR BELOW FOOTINGS.
10. IF SHOWN ON FOUNDATION PLAN, DRAINAGE IS FOR GRAPHICAL REPRESENTATION ONLY. SIZE & LAYOUT TO BE CONFIRMED WITH MEP CONTRACTOR & CIVIL DRAWINGS.

CONCRETE AND STEEL REINFORCEMENT NOTES:

- 1. CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO AMERICAN CONCRETE INSTITUTION (ACI) CODES AND SPECIFICATIONS, LATEST EDITION.
2. CAST-IN-PLACE CONCRETE COMPRESSIVE STRENGTHS REQUIRED (28 DAY):
ACI 301 'SPECIFICATIONS FOR STRUCTURAL CONCRETE'
ACI 315 'DETAILS & DETAILING OF CONCRETE REINFORCEMENT'
ACI 318 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE'
ACI 308 'COLD WEATHER CONCRETE'
3. SUBMIT CONCRETE MIX DESIGN & STRENGTH DATA TO EOR FOR APPROVAL. ALL ADMIXTURES ARE THE RESPONSIBILITY OF THE CONCRETE SUPPLIER'S ENGINEER.
4. CAST-IN-PLACE CONCRETE SHALL BE SUBJECT TO TESTING BY AN INDEPENDENT TESTING LABORATORY. SEE SPECS AND SPECIAL INSPECTION REQUIREMENTS.
5. ALL CONCRETE SHALL BE PLACED PER A/C & THOROUGHLY CONSOLIDATED BY MEANS OF A VIBRATOR, PARTICULARLY AROUND REINFORCEMENT STEEL AND CORNERS OF FORM WORK.
6. REINFORCING STEEL SHALL BE GRADE 60 DEFORMED, BILLET-STEEL, ASTM A615, UNO.
7. WELDED REINFORCING STEEL SHALL BE GRADE 60, LOW CARBON, ASTM A706, WHICH IS SPECIALLY MANUFACTURED TO BE WELDABLE.
8. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A62 AND A16 STANDARDS AND SHALL BE PLACED IN THE CENTER OF THE SLAB, UNO. LAP JOINTS A MINIMUM OF 6" EXTEND FABRIC TO BE WITHIN 1" OF SLAB EDGES.
9. PROVIDE ADEQUATE BRISTERS, HIGH CHAIRS, SUPPORT BARS, ETC TO MAINTAIN THE SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING STEEL AND WELDED WIRE FABRIC.
10. PROVIDE EXTRA REINFORCEMENT AROUND ALL OPENINGS GREATER THAN 4" SQUARE OR ROUND. PROVIDE (2) #5 BARS @ 3" OC FOR EACH MAT OF BARS, AT EACH SIDE AND CORNER OF OPENING EXTENDING MINIMUM 1/4" PAST CORNER OF THE OPENING. PLACE 2" CLEAR FROM OPENING.
11. SEE DETAILS FOR REINFORCING LAP SPICE SCHEDULE, UNLESS OTHERWISE NOTED ON PLAN OR DETAILS.
12. CAST DOWELS, WITH STD 90 DEGREE HOOK, IN FOOTINGS FOR CONCRETE PIERS AND WALLS ABOVE. DOWELS SHALL BE THE SAME SIZE AND QTY AS THE VERTICAL REINFORCING UNO.
13. EXTERIOR SLABS SHALL DRAIN FREELY AWAY FROM THE BUILDING. SEE CIVIL AND ARCH. DRAWINGS FOR ELEVATIONS AND SLOPES.
14. CONTROL SAUCUT JOINTS ARE TO BE EXECUTED AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT AGGREGATE FROM DILLODGING BY SAW AND PRIOR TO SHRINKAGE STRESS CRACKING. SEE DETAIL 1/3/201 FOR SLAB CONNECTION JOINTS (CCJ) AND FOR SLAB CONTROL JOINTS (CJ). CONTRACTOR SHALL SUBMIT A PROPOSED JOINT LAYOUT TO ARCHITECTS FOR APPROVAL PRIOR TO SLAB PLACEMENT.
A. CONTROL JOINTS SHALL BE ON COLUMN LINES AND @ BE ENTRANT CORNERS TO THE GREATEST EXTENT POSSIBLE WITH SPACING LESS THAN 12" OC BETWEEN.
B. CONSTRUCTION JOINTS SHALL BE LOCATED SO AS NOT TO ALLOW A SINGLE SLAB POUR TO EXCEED 4000 SQUARE FEET UNLESS ALTERNATE MEASURES ARE TAKEN TO CONTROL SLAB CURLING & SHRINKAGE.
C. PRECAST CJ OR CCJ JOINTS SO AS NOT TO EXCEED A SLAB UNIT ASPECT RATIO OF 1.5:1.
15. SYNTHETIC FIBER REINFORCEMENT, WHERE SPECIFIED ON PLAN FOR SLABS ON GRADE, TOPPINGS, AND/OR SLABS ON DECK, SHOULD BE MACROSYNTHETIC AND SHALL CONFORM TO ASTM C 1116/C (TYPE II) AND ACI 544 DOCUMENTS. DOSAGE RATE TO BE SPECIFIED BY THE CONCRETE MIX DESIGNER TO COMPLY WITH THE FOLLOWING REQUIREMENTS: FIBER DOSAGE TO BE EQUIVALENT TO THE DISTRIBUTED STEEL REINFORCEMENT OF ACI 318 FOR MINIMUM SHRINKAGE AND TEMPERATURE REINFORCEMENT RATIO OF 0.0018 (UNO). RESIDUAL STRENGTH AFTER FIRST CRACK SHALL BE BETWEEN 20% AND 25%. DOSAGE OF FIBER FOR SLABS ON COMPOSITE STEEL DECKING SHALL NOT BE LESS THAN 4 LB/CY (BY VARD) AS RECOMMENDED IN ANDISO C-2011. MIX DESIGN SUBMITTAL TO INCLUDE DOSAGE RATES, ENGINEERING DATA, AND HISTORICAL PERFORMANCE DATA FROM THE FIBER MANUFACTURER'S SUPPLIER.
16. SEE ARCH DRAWINGS FOR DIMENSIONS OF STAIRS, FOUNDATION WALL HOLDOUTS, SLAB RECESSES, SLOPED SLABS & FOUNDATION WALL INSULATION.

- 17. PRECAST/PRESTRESSED CONCRETE NOTES:
1. PRECAST/PRESTRESSED CONCRETE UNITS SHALL BE DESIGNED TO SUPPORT THE LOADS AND SPAN CONDITIONS PROVIDED ON THE CONTRACT DOCUMENTS. MEMBER DESIGN SHALL BE PERFORMED ACCORDING TO THE ACI 318 AND PCI LATEST EDITIONS AND UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
2. PRECAST TO PRECAST CONNECTIONS ARE THE RESPONSIBILITY OF PRECAST SUPPLIER. SHOW FIELD WELDS AND CONNECTION MATERIAL REQUIREMENTS ON SHOP DRAWING SUBMITTALS.
3. PRECAST/PRESTRESSED MEMBERS HAVE BEEN INDICATED ON THE DRAWINGS BY GENERAL SIZE AND DEPTH. THE STRUCTURAL DESIGN OF THESE MEMBERS AND THEIR FITTING ACCESSORIES SHALL BE BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT DELEGATED BY THE PRECAST MANUFACTURER.
A. DESIGN DEVIATIONS MUST BE SUBMITTED TO THE ARCHITECT & EOR FOR REVIEW AND APPROVAL PRIOR TO THE SUBMISSION OF STAMPED APPROVAL DRAWINGS AND CALCULATIONS.
B. DESIGN DEVIATIONS MUST PRODUCE AN INSTALLATION EQUIVALENT TO THE BASIC INTENT WITHOUT INCURRING ADDED COSTS.
4. SUBMITTAL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
5. HEADERS AT OPENINGS THROUGH PRECAST MEMBERS SHALL BE SUPPLIED BY THE PRECAST SUPPLIER. ADJACENT PRECAST UNITS SHALL BE DESIGNED FOR THE LOADS AT EACH BEARING LOCATION.
6. PRECAST SUPPLIER SHALL BE RESPONSIBLE FOR OPENINGS 8" AND LARGER IN SIZE THROUGH PRECAST MEMBERS. HOLES LESS THAN 8" SHALL BE CUT BY THE TRADE WITH PRIOR APPROVAL OF THE PRECAST SUPPLIER.
7. PRECAST MEMBERS SHALL BE ERRECTED ALTERNATELY ON EACH SIDE OF SUPPORTING WALLS AND BEAMS TO MAINTAIN STABILITY.
8. PRECAST SUPPLIER SHALL PROVIDE AND SHOP INSTALL EMBEDDED ITEMS IN PRECAST UNITS TO THE GREATEST EXTENT POSSIBLE. COORDINATE WITH APPROPRIATE TRADES.
9. CONTRACTOR IS RESPONSIBLE TO CONTACT THE PRECAST SUPPLIER TO DEVELOP AN APPROPRIATE FIELD CORRECTION WHEN FABRICATION OR FIELD INSTALLATION ERRORS RESULT IN MISALIGNMENT OF MEMBERS OR OTHER DEVIATIONS FROM THE APPROVED SHOP DRAWINGS. PROPOSED CORRECTION DETAILS WITH SUPPORTING CALCULATIONS MUST BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO PERFORMING THE REPAIR.
10. PRECAST SUPPLIER SHALL VERIFY SIZE, QUANTITY, AND LOCATION OF OPENINGS WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL PLANS PRIOR TO FABRICATION OF THE PRECAST UNITS. THIS INCLUDES A FABRICATED CHASE FOR ELECTRICAL FEEDER LINES THROUGH PRECAST FLOORS.
11. PRECAST ASSEMBLIES TO SATISFY FRIE RATING REQUIREMENTS SPECIFIED BY ARCHITECTURAL DRAWINGS.
12. FOR PRECAST HORIZONTAL DIAPHRAGM APPLICATIONS, PRECAST SUPPLIER TO PROVIDE CONTINUITY ACROSS MEMBER JOINTS TO TRANSFER THE SPECIFIED DIAPHRAGM LOADS TO THE RESISTING VERTICAL SHEAR ELEMENT. IF FORCES EXCEED GROUTED KEYWAY CAPACITY, A MECHANICAL CONNECTION SHOULD BE DESIGNED AND SPECIFIED BY THE PRECAST ENGINEER. ALL GROUT SPECIFICATIONS SHOULD BE PROVIDED BY PRECAST SUPPLIER. HOT AND COLD WEATHER REQUIREMENTS TO BE SATISFIED FOR PREPARATION OF SUBSTRATE, PLACEMENT OF GROUT, AND CURING OF GROUT.

WOOD FRAMING NOTES:

- 1. WOOD AND TIMBER CONSTRUCTION SHALL COMPLY WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARD SPECIFICATIONS.
2. WOOD CONSTRUCTION SHALL CONFORM TO CHAPTER 23 (SECTIONS 2301, 2302, 2303, 2304, 2305 & 2306) OF THE 2018 IBC FOR MINIMUM REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS. FOR MINIMUM FASTENING REFER TO TABLE BC 2304.1, PER SECTION 2301.2. THE STRUCTURAL DESIGN OF THIS STRUCTURE HAS BEEN IN ACCORDANCE WITH THE "ALLOWABLE STRESS DESIGN" METHOD. PROVISIONS WITH SECTION 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION" DO NOT APPLY TO THIS STRUCTURE.
3. ALL FRAMING LUMBER SHALL BE INSTALLED WITH MOISTURE CONTENT OF 19% OR LESS INDICATING DRYSPY ON THE GRADE STAMP.
4. ALL LUMBER IN CONTACT WITH CONCRETE, MASONRY OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED WITH WATERPROOFING TREATMENT, 28% MAX. MOISTURE CONTENT.
5. ALL SIMPSON STRONG-TIE CONNECTORS USED WITH PRESERVATIVE TREATED LUMBER SHALL BE "ZMAK" COATED AS A MINIMUM OR REQUIRED COATING TO PROTECT CONNECTORS FROM SURFACE CHEMICALS. PROVIDE A PRESERVATIVE-TREATED BARRIER BETWEEN TREATED PLATES AND HOLD-DOWNS.
6. LUMBER SHALL COMPLY WITH NATIONAL DESIGN SPECIFICATION (NDS), LATEST EDITION SUPPLEMENT FOR MINIMUM ALLOWABLE DESIGN STRESS VALUES FOR LUMBER GRADES SHOWN BELOW. ALL LUMBER FRAMING SHALL BE MARKED WITH A GRADE STAMP.
MINIMUM LUMBER DESIGN VALUES, UNO ON PLAN OR DETAILS (PSI), DESIGN VALUES TAKEN FROM NDS SUPPLEMENT, TABLES 4A, 4B, & 4C

Table with columns: Species & Grade, Fb, Ft, Fv, Fp, E. Includes rows for SFF #1#2, HEM FIR #2, SOUTHERN PINE #1, SOUTHERN PINE #1 #2, SOUTHERN PINE #2, DOUG FIR #2, SFF #1#2.

- 7. ANCHOR TREATED SILL PLATES TO CONCRETE/MASONRY WITH 1/2" GALV A.R. S 4" OC MINIMUM. UNO ON PLAN. HOOKED ROD WITH CONCRETE/MASONRY EMBED 4" SEE STANDARD DETAILS. THERE SHALL BE A MINIMUM OF (2) ANCHORS PER PIECE OF SILL PLATE W/ (1) BOLT LOCATED NO MORE THAN 12" OR LESS THAN 4" FROM END OF EACH SILL PLATE PIECE.
A. 1/2"x5" SIMPSON TITEN HD (GALV) MAY BE DIRECTLY SUBSTITUTED FOR CP SILL PLATE ANCHORS.
8. DIMENSIONAL LUMBER USED FOR HEADERS SHALL HAVE NO SPLITS OR CHECKS.
9. PROVIDE STD CUT WASHERS PER STRUCTURAL DETAILS FOR ALL BOLTS IN WOOD MEMBERS. RE-TORQUE NUTS 48 HOURS AFTER FIRST TIGHTENING. SEE DRAWINGS FOR LOCATIONS OF SQ. PLATE WASHERS.
10. NOTCHING OR CUTTING OF STRUCTURAL WOOD MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL FROM ENGINEER. HOLES BORED IN WALL STUDS OR JOISTS SHOULD BE IN THE CENTER HALF OF THE MEMBER AND SHALL NOT BE LARGER THAN 1/4 OF THE DEPTH OF THE MEMBER. ALLOWABLE CUTTING, NOTCHING, AND BORED-HOLE PROVISIONS OF BC SECTION 2308 DO NOT APPLY TO THIS STRUCTURE.
11. LOAD BEARING STUD WALLS TO BE 2x6 @ 14" OC UNO. SEE TABLE ABOVE FOR SPECIES & GRADE.
12. EXTERIOR WALLS AND LOAD BEARING WALLS SHALL BE CAPED WITH DOUBLE TOP PLATES. THE PLATES SHALL OVERLAP AT CORNERS AND AT INTERSECTIONS WITH OTHER LOAD BEARING WALLS. SEE STANDARD DETAILS.
13. POSTS AND BEARING STUDS (JACKSKINS) FOR BEAMS AND HEADERS SHALL BE CONTINUOUS TO THE FOUNDATION LEVEL. PROVIDE BRACKETS BETWEEN FLOOR LEVELS TO MATCH THE WIDTH OF THE POST/STUD ASSEMBLY FROM ABOVE.
14. TOP FLANGE OF ALL RAFTERS, JOISTS AND BEAMS TO BE LATERALLY SUPPORTED @ 24" OC MIN. PROVIDE BRIDGING FOR TOP FLANGE AS REQUIRED TO NEAREST FRAMING MEMBER OR PROVIDE ADEQUATELY SUPPORTED RAYWOOD DECKING.
15. PROVIDE SOLID BLOCKING AT BEARING POINTS OF ALL 2x JOISTS.
16. METAL FRAMING ANCHORS AND HARDWARE SHOULD BE AS NOTED IN DETAILS. ALTERNATIVE HARDWARE THAT IS EQUAL OR GREATER IN CAPACITY MUST BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
17. FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL. THIS INCLUDES NAILS, TIMBER RIVETS, SILL ANCHORS, WOOD SCREWS, TRUSS BOLTS, AND LAG SCREWS.
18. STRUCTURAL LOAD BEARING OR LATERAL LOAD RESISTING WALLS ARE SHOWN ON THE PLAN. SEE ARCH DRAWINGS FOR DETAILING OF WALLS. PROVIDE NECESSARY CONNECTION WALLS AND PARTITION WALLS TO SUPPORT OF FLOOR AND ROOF FRAMING TO ACCOUNT FOR FRAMING DEFLECTION.
19. DRILL BOLT/TANCHOR HOLES IN WOOD 1/16" LARGER THAN THE NOMINAL DIAMETER OF THE BOLT. REPAIR OVERSIZED HOLES WITH BEARING PLATE WASHERS.
20. ALL JOISTS, TRUSSES, HEADERS, AND BEAMS SHALL HAVE FULL BEARING UNLESS NOTED OTHERWISE NOTED ON THE DETAILS.

Table: MINIMUM DESIGN VALUES FOR ENGINEERED WOOD MATERIALS, UNO ON PLAN OR DETAILS (PSI). Columns: Material and Function, Fb, Fc, Fd, E. Rows: LVL BEAMS, LSL BEAMS, PSL BEAMS, PSL COLUMNS.

Table: MINIMUM DIMENSIONS OF FASTENERS, UNO, INDS APPENDIX L(1) UNITS = INCHES. Columns: Fastener Type, L, D, H, Nail, L, D, H. Rows: Nail, 66, 82, 10d.

Table: WOOD STRUCTURAL PANEL SHEATHING (WOOD FRAMING). Columns: Material and Function, Fb, Fc, Fd, E. Rows: LVL BEAMS, LSL BEAMS, PSL BEAMS, PSL COLUMNS.

Table: MINIMUM DIMENSIONS OF FASTENERS, UNO, INDS APPENDIX L(1) UNITS = INCHES. Columns: Fastener Type, L, D, H, Nail, L, D, H. Rows: Nail, 66, 82, 10d.

WOOD STRUCTURAL PANEL SHEATHING (WOOD FRAMING):

- 1. ALL PANELS SHALL HAVE A GRADE STAMP BY AN AMERICAN PLYWOOD ASSOCIATION (APA) APPROVED AGENCY MEETING THE PROJECT REQUIREMENTS. ALL PANELS SHALL BE EXPOSURE 1, MINIMUM.
2. TYPICAL EXTERIOR WALL SHEATHING UNO: NOMINAL THICKNESS = 7/16", SPAN RATING 24/16.
3. PANEL JOINTS SHALL BE AT STUD CENTERLINE AND SHALL BE OFFSET FROM ADJACENT PANELS. EDGES TO BE BUTT TIGHT @ JOINTS. PANELS LESS THAN 12" WIDE SHALL NOT BE USED.
4. FASTENERS SHALL BE SPACED @ 8" OC ALONG ALL PANEL EDGES & @ 12" OC IN THE FIELD OF THE PANELS. FASTENERS TO BE LOCATED NOT LESS THAN 3/8" IN FROM THE EDGE OF THE PANEL.
5. MINIMUM FASTENERS SHALL BE: #4 COMMON NAILS, WITH A MINIMUM 1 3/8" PENETRATION, FLUSH DRIVEN, UNO.
6. IN SHEARWALL APPLICATIONS, IF PRE-FABRICATED PANELS ARE USED, WALL SHEATHING MUST BE BETWEEN STUD CENTERLINE AND NOT AT A JOINT BETWEEN WALL PANELS. IF SPICE DOES HAPPEN BETWEEN WALL PANELS, AN ALTERNATE CONNECTION OF PANELS IS TO FASTEN END STUDS OF PANELS TOGETHER W/ #6 NAILS @ 8" OC STAGGERED FROM BOTH SIDES. IN BOTH CASES, FIELD INSTALL UPPER TOP PLATE FOR WALL CONTINUITY PER STANDARD DETAILS.
7. IN SHEARWALL APPLICATIONS, PANEL EDGES TO BE UNBLOCKED, UNO. PANELS SHALL NOT BE LESS THAN 4x8, EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING. WALL OPENINGS, SUCH AS WINDOWS AND DOORS, DO NOT CONSTITUTE CHANGES IN FRAMING.
8. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.
9. MINIMUM SPACING OF NAILS TO BE 3" OC FOR 2X LUMBER.
10. PROPOSED PENETRATIONS THROUGH SHEARWALL SHEATHING NEEDS TO BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO CUTTING IN THE FIELD.

METAL PLATE CONNECTED WOOD TRUSS NOTES:

- 1. METAL PLATE CONNECTED WOOD TRUSSES SHALL BE ENGINEERED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT. A SEALED COVER SHEET SHALL BE SUBMITTED WITH THE SHOP DRAWINGS AT THE TIME OF SUBMITTAL. SHOP DRAWING DESIGN SUBMITTAL TO COMPLY WITH IBC SECTION 2304.1.
2. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, AFPA, AND NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION.
3. TRUSSES TO BE DESIGNED TO SATISFY THE FOLLOWING DEFLECTION REQUIREMENTS. TRUSS SUPPLIER TO PROVIDE CAMBER AS NECESSARY TO COUNTER DEFLECTIONS.
PER TP DEFLECTION TOTAL LOAD (TL) = Kx(L+L)
UNO (L) = TO BE EITHER SNOW, RAINWIND, OR LIVE.
PER TP (CREEP FACTOR (K)) TO BE 1.0 (NON-WOOD FRAMING), 1.5 (SOLID SAWN OR SCL WOOD, DRY USE), OR 2.0 (METAL PLATE CONNECTED WOOD TRUSSES, DRY USE). PARTITION WALLS BELOW TRUSSES TO BE FRAMED TO ALLOW FOR THIS EXPECTED DEFLECTION.
4. TRUSS SUPPLIER TO MAKE EVERY EFFORT TO FOLLOW FRAMING SCHEME AS THE LOADS HAVE BEEN DISTRIBUTED TO THE FOUNDATION ACCORDINGLY. IF REVISIONS FRAMING DIRECTIONS ARE DESIRED BY SUPPLIER, PLAN MUST BE SUBMITTED FOR APPROVAL PRIOR TO FOUNDATION CONSTRUCTION.
5. UNLESS OTHERWISE NOTED ON DRAWINGS, EOR HAS NOT PROVIDED STRUCTURAL SHEATHING BENEATH THE BOTTOM CHORD OF ROOF OR FLOOR TRUSSES FOR BRACING.
6. ALL HARDWARE (BOLTS, HANGERS, STRAPS, ETC) REQUIRED FOR CONNECTIONS BETWEEN TRUSSES SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS ENGINEER AND SUPPLIER.
7. UNLESS NOTED OTHERWISE, ROOF JOISTS SHALL BE ATTACHED TO THE TOP PLATE AT ALL BEARING CONDITIONS WITH SIMPSON-H8 CLIPS INSTALLED PER MANUFACTURER'S INSTRUCTIONS. GIRDERS AND ROOF BEAMS SHOULD BE ATTACHED TO BEARING SUPPORTS WITH (2) H2.5T CLIPS. TRUSS SUPPLIER TO PROVIDE BEARING BLOCKS AS REQUIRED BY DESIGN.
8. DO NOT CUT OR REMOVE TRUSS MEMBERS OR MAKE FIELD ALTERATIONS TO THE TRUSSES.
9. LAYOUT AND SPACING GUIDELINES ON PLAN ARE FOR REFERENCE ONLY UNLESS SPECIFICALLY DIMENSIONED OR DETAILED.
10. GIRDER TRUSSES SHALL BE SUPPORTED BY SAME NUMBER OF STUDS AS TRUSS PIES (MIN OF 2 STUDS) WITH CONTINUOUS SOLID BEARING TO THE FOUNDATION. ANCHOR BRACING GIRDERS TRUSSES OVER WALL OPENINGS, UNLESS OTHERWISE DIMENSIONED ON PLAN.
11. THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE (TPI) & SCSA PUBLICATION BSC1 'GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAPPING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES' SHALL BE FOLLOWED BY THE TRUSS INSTALLER.
12. THE METAL PLATE CONNECTED WOOD TRUSS SUPPLIER SHALL SUPPLY THE CURRENT BCSI B-SERIES SUMMARY SHEETS WITH THE TRUSS ERECTION DRAWINGS OUTLINING THE PROPER HANDLING, ERECTING, AND BRACING OF TRUSSES.
13. ERECTION BRACING OF WOOD TRUSSES IS THE RESPONSIBILITY OF THE TRUSS INSTALLER. THE TRUSS INSTALLER SHALL PROVIDE TEMPORARY DIAGONAL LAYS & CROSS BRACING PER BCSI GUIDES UNTIL ROOF SHEATHING, CEILING & PERMANENT BRACING CAN BE APPLIED AS SHEARWALLS COMPLETED.
14. PERMANENT BRACING OF WOOD TRUSSES SHALL BE INSTALLED BY THE TRUSS INSTALLER, WHERE INDICATED BY THE TRUSS ERECTION DRAWINGS. MINIMUM BRACING REQUIREMENTS FOR TOP CHORD, BOTTOM CHORD, & WEB MEMBER PLATES SHALL BE IN ACCORDANCE WITH BCSI GUIDE UNLESS REQUIREMENTS NOTED ON THE PLAN ARE MORE RESTRICTIVE.
15. SEE METAL PLATE CONNECTED WOOD TRUSS SHOP DRAWINGS FOR PERMANENT WEB AND CHORD BRACING LOCATIONS AND REQUIREMENTS.

- 16. 16"-24" 2" PLATE CLIPS OR 2x4 BLOCKING @ 16" 2x4 BLOCKING GA EDGE
17. EXPANSION ANCHORS: SIMPSON STRONG BOLT 2
SCREW ANCHORS: SIMPSON TITEN HD
POWDER ACTUATED FASTENERS (P.A.F.): 0.1570" STEEL-TO-STEEL, THRU BARE METAL, 1/2" MIN. EDGE DISTANCE, 0.1570"x14" STEEL TO CONCRETE & MASONRY, 3" MIN. CONCRETE EDGE DISTANCE (UNO)
18. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO USING POST INSTALLED ANCHORS FOR MISSING OR MISPLACED CP ANCHORS. CARE SHALL BE TAKEN TO AVOID CONFLICTS WITH EXISTING REINFORCING BARS. HOLES SHALL BE DRILLED AND CLEANED PER ANCHOR MANUFACTURER'S SPECIFICATIONS. ANCHORS AND ADHESIVE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
19. INJECTION ADHESIVE ANCHORS: SIMPSON SET-36 ADHESIVE. THREADED RODS TO BE A193 GRADE B WITH EMBEDDED END CUT @ 24" ANGLE.

- 1. SIF GYPSUM WALL BOARD SHALL BE USED. REFER TO ARCH. DRAWING FOR ADDITIONAL REQUIREMENTS OF GYPSUM WALLBOARD/SHEATHING.
2. PANEL JOINTS SHALL BE A STUD CENTERLINE AND SHALL BE OFFSET FROM ADJACENT PANEL. EDGES TO BE BUTT TIGHT @ JOINTS. PANELS LESS THAN 12" WIDE SHALL NOT BE USED.
3. FASTENERS SHALL BE SPACED @ 8" OC ALONG ALL PANEL EDGES & @ 12" OC IN THE FIELD OF THE PANELS. FASTENERS TO BE LOCATED NOT LESS THAN 3/8" IN FROM THE EDGE OF THE PANEL.
4. MINIMUM FASTENERS SHALL BE NO. 5 TYPE OR W DRYWALL SCREWS CONFORMING TO ASTM C 1002. SCREW LENGTH TO BE 1/8" FOR 5/8" GYP.
5. PANEL EDGES TO BE UNBLOCKED, UNO.
6. IN SHEARWALL APPLICATIONS, IF PR-FABRICATED PANELS ARE USED, WALL SHEATHING MUST SPICE @ STUD CENTERLINE AND NOT AT A JOINT BETWEEN WALL PANELS. IF SPICE DOES HAPPEN BETWEEN WALL PANELS, AN ALTERNATE CONNECTION OF PANELS IS TO FASTEN END STUDS OF PANELS TOGETHER W/ #6 NAILS @ 8" OC STAGGERED FROM BOTH SIDES. IN BOTH CASES, FIELD INSTALL UPPER TOP PLATE FOR WALL CONTINUITY PER STANDARD DETAILS.
7. PANEL SHEETS SHALL BE APPLIED LONG DIRECTION PERPENDICULAR TO STUDS WITH EDGES BLOCKED OR APPLIED VERTICALLY WITH ALL EDGES ATTACHED TO FRAMING MEMBERS. PANELS LESS THAN 4'-0" WIDE NEED TO BE APPLIED HORIZONTAL TO FRAMING MEMBERS.
8. MINIMUM SPACING OF NAILS TO BE 3" OC FOR 2X LUMBER.
9. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.

- 10. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.
11. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.
12. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.

Table: ABBREVIATIONS AND SYMBOLS. Columns: Abbreviation, Alternate, Mechanical, MEP, Mechanical/Plumbing, Manufacturer, Minimum, Miscellaneous, Masonry Opening, Nominal, Not to Scale, Non-shrink, On Center, Outside Diameter, Outside Face, Overhead Opposite, Powder Actuated Fastener, Precast, Pounds per Linear Foot, Pounds per Square Foot, Radius, Reference, Reinforcing/Reinforce, Return, Roof Top Unit, Reinforce with, Set Detail, Square Footage, Small, Square, Spacing/Spaces, Specification, Square, Standard Steel, Foot, Thick (Thickened), Tongue & Groove, Top of, Top of Beam, Top of Steel, Top of Wall, Transverse, Typical, Unless Noted Otherwise, Verify, Vertical, With, Without, Work Point, Welded Wire Fabric, Center Line, Plate, Square, Diameter, Plus or Minus, Footing Step, Elevation.

ROOF/FLOOR WOOD SHEATHING DIAPHRAGM NOTES (WOOD FRAMING):

- 1. ALL PANELS SHALL HAVE A GRADE STAMP BY AN AMERICAN PLYWOOD ASSOCIATION (APA) APPROVED AGENCY MEETING THE PROJECT REQUIREMENTS. ALL PANELS SHALL BE EXPOSURE 1, MINIMUM. IF PANELS ARE EXPOSED TO WEATHER FOR EXTENDED PERIOD OF TIME, EXTERIOR GRADE PANEL ARE RECOMMENDED. OSB PANELS TO BE PROTECTED FROM EXCESSIVE MOISTURE IF USED HORIZONTAL SURFACES SUCH AS ROOF AND FLOOR PANELS.
2. ROOF PANEL: NOMINAL THICKNESS = 1/2", SPAN RATING 32/16. FLOOR PANEL: NOMINAL THICKNESS = 3/4", SPAN RATING 48/24.
3. MINIMUM FASTENER REQUIREMENTS SHALL BE: #4 COMMON NAILS FOR 12" AND 10" COMMON NAILS FOR 3/4", LOCATED 3/8" FROM PANEL EDGE, WITH A MINIMUM 1 3/8" PENETRATION, FLUSH DRIVEN. FASTEN @ 8" OC @ SUPPORTED PANEL EDGES, AND 12" OC IN THE FIELD OF THE PANEL, UNLESS OTHERWISE NOTED ON THE DRAWINGS. IF #4 COLLER, DEFORMED, AND SMOOTH NAILS ARE USED AND INSTALLED WITH NAIL-GUN, MINIMUM FASTENING SPACING IS 4" OC AT SUPPORTED PANEL EDGES AND 8" OC IN THE FIELD OF THE PANEL.
4. AT ROOF OVERHANGS MINIMUM FASTENING TO BE #4 COMMON, 6" OC IN FIELD & @ PANEL EDGES. IF INSTALLED WITH NAIL GUN USE #4 COLLER, DEFORMED, SMOOTH @ 4" OC IN FIELD AND @ PANEL EDGES.
5. PANEL JOINTS SHALL BE AT FRAMING CENTERLINE AND SHALL BE OFFSET FROM ADJACENT PANELS. PANELS SHOULD SPAN 2 OR MORE SPANS, WITH STRONG AXIS OF PANEL PERPENDICULAR TO FRAMING MEMBERS.
6. UNSUPPORTED EDGES SHALL HAVE A MINIMUM ONE PANEL EDGE CLIP, TONGUE AND GROOVE, OR BLOCKING. APA RECOMMENDS TONGUE AND GROOVE DETAILS TO BE GLEUED TOGETHER.
7. PANELS SHALL BE CONTINUOUS OVER 2 SPANS MINIMUM, AND SHALL HAVE THE FACE OF GRAIN PERPENDICULAR TO THE FRAMING DIRECTION.
8. MINIMUM SPACING OF NAILS TO BE 3" OC FOR 2X LUMBER.
9. ALL FASTENING MUST BE DRIVEN FLUSH WITH SHEATHING. IF MORE THAN 20% OF FASTENERS ARE OVERDRIVEN BY 1/8", CONTACT ENGINEER FOR CORRECTIVE ACTION.
10. IF SHEATHING IS BEING USED WITH WOOD JOIST FRAMING, SHEATHING MUST BE GLEUED TO JOIST FRAMING IN ADDITION TO TYPICAL FASTENING. GLEUE SHOULD MEET AFS-01 OR ASTM D4998 SPECIFICATIONS.
11. ALL PANELS SHOULD BE LAID OUT TO ACCOUNT FOR THERMAL EXPANSION OF THE PANELS AFTER INSTALLED. APA RECOMMENDS PROVIDING A 1/8" GAP @ ALL EDGES TO PREVENT BUCKLING CAUSED BY THERMAL STRESSES. COORDINATE SPACING WITH LOCATION OF FRAMING MEMBERS BELOW.
12. ADDITIONAL PANEL CLIPS ARE REQUIRED @ UNSUPPORTED EDGES FOR PANEL WIDTHS LESS THAN OR EQUAL TO 24".

- 16"-24" 2" PLATE CLIPS OR 2x4 BLOCKING @ 16" 2x4 BLOCKING GA EDGE
17. EXPANSION ANCHORS: SIMPSON STRONG BOLT 2
SCREW ANCHORS: SIMPSON TITEN HD
POWDER ACTUATED FASTENERS (P.A.F.): 0.1570" STEEL-TO-STEEL, THRU BARE METAL, 1/2" MIN. EDGE DISTANCE, 0.1570"x14" STEEL TO CONCRETE & MASONRY, 3" MIN. CONCRETE EDGE DISTANCE (UNO)
18. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO USING POST INSTALLED ANCHORS FOR MISSING OR MISPLACED CP ANCHORS. CARE SHALL BE TAKEN TO AVOID CONFLICTS WITH EXISTING REINFORCING BARS. HOLES SHALL BE DRILLED AND CLEANED PER ANCHOR MANUFACTURER'S SPECIFICATIONS. ANCHORS AND ADHESIVE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
19. INJECTION ADHESIVE ANCHORS: SIMPSON SET-36 ADHESIVE. THREADED RODS TO BE A193 GRADE B WITH EMBEDDED END CUT @ 24" ANGLE.

- 1. SIF GYPSUM WALL BOARD SHALL BE USED. REFER TO ARCH. DRAWING FOR ADDITIONAL REQUIREMENTS OF GYPSUM WALLBOARD/SHEATHING.
2. PANEL JOINTS SHALL BE A STUD CENTERLINE AND SHALL BE OFFSET FROM ADJACENT PANEL. EDGES TO BE BUTT TIGHT @ JOINTS. PANELS LESS THAN 12" WIDE SHALL NOT BE USED.
3. FASTENERS SHALL BE SPACED @ 8" OC ALONG ALL PANEL EDGES & @ 12" OC IN THE FIELD OF THE PANELS. FASTENERS TO BE LOCATED NOT LESS THAN 3/8" IN FROM THE EDGE OF THE PANEL.
4. MINIMUM FASTENERS SHALL BE NO. 5 TYPE OR W DRYWALL SCREWS CONFORMING TO ASTM C 1002. SCREW LENGTH TO BE 1/8" FOR 5/8" GYP.
5. PANEL EDGES TO BE UNBLOCKED, UNO.
6. IN SHEARWALL APPLICATIONS, IF PR-FABRICATED PANELS ARE USED, WALL SHEATHING MUST SPICE @ STUD CENTERLINE AND NOT AT A JOINT BETWEEN WALL PANELS. IF SPICE DOES HAPPEN BETWEEN WALL PANELS, AN ALTERNATE CONNECTION OF PANELS IS TO FASTEN END STUDS OF PANELS TOGETHER W/ #6 NAILS @ 8" OC STAGGERED FROM BOTH SIDES. IN BOTH CASES, FIELD INSTALL UPPER TOP PLATE FOR WALL CONTINUITY PER STANDARD DETAILS.
7. PANEL SHEETS SHALL BE APPLIED LONG DIRECTION PERPENDICULAR TO STUDS WITH EDGES BLOCKED OR APPLIED VERTICALLY WITH ALL EDGES ATTACHED TO FRAMING MEMBERS. PANELS LESS THAN 4'-0" WIDE NEED TO BE APPLIED HORIZONTAL TO FRAMING MEMBERS.
8. MINIMUM SPACING OF NAILS TO BE 3" OC FOR 2X LUMBER.
9. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.

- 10. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.
11. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.
12. FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.

Table: SHEET LIST. Columns: Sheet Number, Sheet Name, Comments. Rows: S001, S002, S101, S201, S202, S203, S204, S205, S206, S207, S301, S401, S402, S403.



SANDMAN Structural Engineers

Project Name: Northrup Hoffman

Drawn By: MDL

Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4

Project Manager: ALK

Drawn By: MDL

Date: 02/18/2021 License #: 57492

Drawn By: MDL

Date: 02/18/2021 License #: 57492

Drawn By: MDL

Date: 02/18/2021 License #: 57492

Drawn By: MDL

Date: 02/18/2021 License #: 57492

Drawn By: MDL

Date: 02/18/2021 License #: 57492

Drawn

SPECIAL INSTRUCTIONS AND TESTING:

THIS PROJECT REQUIRES SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION. THESE NOTES AND THE STATEMENT OF SPECIAL INSPECTIONS PREPARED FOR THE PROJECT OWNER ARE INTENDED TO INFORM THE CONTRACTOR OF THE QUALITY ASSURANCE PROGRAM AND THE EXTENT OF THE CONTRACTOR'S RESPONSIBILITIES. CONTRACTOR SHALL REFERENCE PROJECT MANUAL FOR ADDITIONAL INFORMATION. THE TESTING AND INSPECTION SERVICES SECTION WILL CLARIFY WHO SHALL EMPLOY AND PAY FOR SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM ALL INSPECTIONS, SPECIAL INSPECTIONS, AND TESTING FOR PROJECT.

GENERAL NOTES:

1. THE SPECIAL INSPECTION AND TESTING PROGRAM IS A QUALITY ASSURANCE PROGRAM INTENDED TO ENSURE THAT THE WORK IS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY TO COMPLY WITH THE OFFICIAL CONTRACT DOCUMENTS. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE OFFICIAL CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR DOES NOT REPLACE THE DUTIES OF THE BUILDING OFFICIAL NOR THE QUALITY CONTROL RESPONSIBILITIES AND PERSONNEL OF THE CONTRACTOR. JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
3. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN THE IBC SECTION 110 AND SPECIAL STRUCTURAL OBSERVATION AS MAY BE REQUIRED BY THE CODE.
4. THOUGH NOT REQUIRED BY CODE, SPECIAL INSPECTORS AND/OR INSPECTION AGENCIES CAN DOCUMENT ACCEPTANCE OF THEIR RESPONSIBILITIES AND SCOPE OF WORK FOR A PROJECT BY SIGNING AN AGREEMENT THAT INCLUDES A DETAILED SCHEDULE OF SERVICES, COMMONLY KNOWN AS THE SPECIAL INSPECTION AND TESTING AGREEMENT AND THE SPECIAL INSPECTION AND TESTING SCHEDULE. THIS DOCUMENT MAY REFERENCE THIS SHEET AS THE STATEMENT OF SPECIAL INSPECTIONS (SSI).
5. THE STRUCTURAL DESIGN METHODS AND/OR ASSUMPTIONS UTILIZED ARE BASED UPON THE SPECIAL INSPECTIONS REQUIRED WITHIN THE CONTRACT DOCUMENTS.

CONTRACTOR RESPONSIBILITIES AND DUTIES:

1. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND PROVIDING ADEQUATE NOTICE TO THE SPECIAL INSPECTORS FOR ALL INSPECTIONS. THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE REQUIRED ITEMS PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF WORK.
2. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR ACCESS TO THE APPROVED CONTRACT DOCUMENTS. THESE DOCUMENTS INCLUDE SEALED DRAWINGS AND SPECIFICATIONS, ADDENDA, CHANGE ORDERS, APPROVED SHOP DRAWINGS, ISSUED SKETCHES AND REVISION DRAWINGS, AND ALL DIRECTIVES ISSUED BY THE ARCHITECT/ENGINEER. THIS CURRENT SET OF DOCUMENTS SHALL BE AVAILABLE AT THE JOB SITE.
3. THE CONTRACTOR IS TO CORRECT DISCREPANCIES AND DEVIATIONS AS DETERMINED BY SPECIAL INSPECTOR. ALL DISCREPANCIES AND DEVIATIONS OBSERVED SHALL BE RE-INSPECTED UNTIL THE SPECIAL INSPECTOR DEEMS CONSTRUCTION TO BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR IS TO RETAIN SPECIAL INSPECTION RECORDS COMPLETED BY THE SPECIAL INSPECTORS AT THE JOB SITE.

SPECIAL INSPECTOR QUALIFICATIONS AND RESPONSIBILITIES:

1. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
2. SPECIAL INSPECTORS SHALL NOTIFY CONTRACTOR PERSONNEL OF THEIR PRESENCE AND RESPONSIBILITIES AT THE JOBSITE.
3. THE SPECIAL INSPECTOR/TESTING AGENCY SHALL BE INDEPENDENT OF THE CONTRACTOR TO AVOID CONFLICT OF INTEREST.
4. THE SPECIAL INSPECTOR IS OBLIGATED TO BOTH THE OWNER AND THE BUILDING OFFICIAL FOR OBSERVING THAT THE WORK IS EXECUTED IN ACCORDANCE WITH THE OFFICIAL CONTRACT DOCUMENTS. THESE DOCUMENTS INCLUDE SEALED DRAWINGS AND SPECIFICATIONS, ADDENDA, CHANGE ORDERS, APPROVED SHOP DRAWINGS, ISSUED SKETCHES AND REVISION DRAWINGS, AND ALL DIRECTIVES ISSUED BY THE ARCHITECT/ENGINEER.
5. SPECIAL INSPECTORS SHALL KEEP ORGANIZED RECORDS OF INSPECTIONS AND SUBMIT INSPECTION REPORTS WITH A MINIMUM FREQUENCY TO THE CONTRACTOR, BUILDING OFFICIAL, ENGINEERS, AND ARCHITECTS INDIVIDUALLY. REPORTS SHOULD INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION TO THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THEY SHOULD BE REPORTED TO THE BUILDING OFFICIAL AND TO THE ENGINEER OF RECORD.
6. A FINAL SIGNED REPORT IS TO BE SUBMITTED AT THE END OF THE PROJECT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES. THIS REPORT SHOULD STATE THAT ALL ITEMS REQUIRING SPECIAL INSPECTION AND TESTING WERE FULFILLED AND REPORTED TO THE BEST OF THEIR KNOWLEDGE IN CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS, AND THE APPLICABLE PROVISIONS OF THE IBC. ITEMS NOT IN CONFORMANCE, UNRESOLVED ITEMS, OR ANY DISCREPANCIES IN INSPECTION COVERAGE SHOULD BE SPECIFICALLY ITEMIZED.
7. THE FOLLOWING ARE THE QUALIFICATIONS FOR INDIVIDUALS PERFORMING SPECIFIC INSPECTIONS OR TESTS INCLUDING IN THIS PROJECTS SSI:
 - A. AMERICAN CONCRETE INSTITUTE (ACI):
 - CONCRETE FIELD TESTING TECHNICIAN - GRADE 1 (ACI-CFTT)
 - CONCRETE CONSTRUCTION INSPECTOR (ACI-CCI)
 - LABORATORY TESTING TECHNICIAN - GRADE 1 OR 2 (ACI-LTT)
 - STRENGTH TESTING TECHNICIAN (ACI-STT)
 - B. AMERICAN WELDING SOCIETY (AWS):
 - CERTIFIED WELDING INSPECTOR (AWS-CWI)
 - CERTIFIED STRUCTURAL STEEL INSPECTION (AWS/ASIS-SSI)
 - C. AMERICAN SOCIETY OF NON-DESTRUCTIVE TESTING (ASNT)
 - NON-DESTRUCTIVE TESTING TECHNICIAN - LEVEL II OR III (ASNT)
 - D. INTERNATIONAL CODE COUNCIL (ICC):
 - STRUCTURAL MASONRY SPECIAL INSPECTOR (ICC-SMSI)
 - STRUCTURAL STEEL AND BOLTING SPECIAL INSPECTOR (ICC-SSSI)
 - STRUCTURAL WELDING SPECIAL INSPECTOR (ICC-SWI)
 - PRESTRESSED CONCRETE SPECIAL INSPECTOR (ICC-PCSI)
 - REINFORCED CONCRETE SPECIAL INSPECTOR (ICC-RCSI)
 - SOILS SPECIAL INSPECTOR (ICC-SSI)
 - E. PROFESSIONAL STATE LICENSING:
 - PROFESSIONAL ENGINEER (PE)

STATEMENT OF SPECIAL INSPECTIONS (SSI):

THE FOLLOWING TABLES INDICATED THE MINIMUM SPECIFIC SPECIAL INSPECTION AND TESTING TO BE PERFORMED ON THIS PROJECT AND THE QUALIFICATIONS OF THE INDIVIDUAL INSPECTORS AND TESTING TECHNICIANS.

DEFINITIONS:

1. **CONTINUOUS SPECIAL INSPECTION:** THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. 100% OF THE WORK MUST BE INSPECTED AND IT MUST BE INSPECTED AS THE WORK IS BEING PERFORMED.
2. **PERIODIC SPECIAL INSPECTION:** THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN, OR IS BEING, PERFORMED AND AT THE COMPLETION OF WORK.
3. **YES:** THIS INSPECTION AND/OR TESTING IS REQUIRED BY THE BUILDING CODE AND MUST BE PERFORMED.
4. **NO:** THIS INSPECTION AND/OR TESTING IS NOT APPLICABLE TO THE PROJECT, AND NEED NOT BE PERFORMED.
5. **SUGGESTED:** THIS INSPECTION AND/OR TESTING IS NOT REQUIRED BY THE BUILDING CODE. HOWEVER, THE ENGINEER OF RECORD RECOMMENDS IMPLEMENTING THEM FOR QUALITY ASSURANCE. A POTENTIAL EXISTS FOR THESE MEASURES TO BE A VALUE ADDED SERVICE FOR THE OWNER TO ENSURE PROPER PROJECT COMPLETION.

SPECIAL INSPECTION - CAST-IN-PLACE CONCRETE CONSTRUCTION					
VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Mix Design	ACI-CCI ICC-RCSI	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added on site does not exceed that allowed by the mix design.	ACI 318	Prior to start of concrete construction on project.	YES
2. Material Certification	STRUCTURAL ENGINEER OF RECORD	Verify that concrete supplier's concrete components meet requirements set forth by applicable ASTM standards.	Applicable ASTM & ACI Specs	Prior to start of concrete construction on project.	YES
3. Reinforcement Installation	ACI-CCI ICC-RCSI	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters.	Applicable ACI Specs	Prior to each casting	YES
4. Welding of Reinforcing	AWS-CWI	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.	Applicable ASTM & ACI Specs	Continuous	NO
5. Anchor Rods	ACI-CCI ICC-RCSI	Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.	Applicable ASTM & ACI Specs	Prior to each casting	YES
6. Concrete Placement	ACI-CCI ICC-RCSI	Inspect placement of concrete. Verify that concrete conveyed and deposited avoiding segregation or contamination. Verify that concrete is properly consolidated.	Applicable ACI Specs	Periodic	YES
7. Sampling and Testing of Concrete	ACI-CFTT ACI-LTT ACI-STT	Test Concrete compressive strength, slump, air content and temperature.	Applicable ACI and ASTM Specs	Not less than once a day, nor less than once for every 150 cubic yards, nor less than once for every 5000 SF of surface area for slabs or walls	YES
8. Curing and Protection	ACI-CCI ICC-RCSI	Inspect curing, cold weather protection and hot weather protection procedures.	Applicable ACI Specs	Monitor on site after each casting	YES
9. Post-Installed Anchors	ACI-CCI ICC-RCSI	Inspect installation for type of anchor, embedment, edge distance & adhesive required.	ACI & Supplier's Specs	Continuous	YES
Exceptions per BC 1704.4: Special Inspections are not required for the following unless otherwise required by the Building Official or Structural Engineer of the Record:					
1. Nonstructural concrete slabs supported directly on the ground.					
2. Concrete patios, driveways and sidewalks, on grade.					

SPECIAL INSPECTION - PRECAST CONCRETE CONSTRUCTION					
VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Supplier's Plant Certification/Quality Control Procedures	Per PCI requirements	Precast supplier to perform all work per PCI requirements. Maintain plant records and quality control program during production of precast components. All components of precast production to be tested per PCI requirements. Make records available upon request.	Applicable PCI & ACI Specs	Per PCI requirements	YES
2. Erection of Precast Elements	ICC-PCSI	Inspect erection of precast concrete including member configuration, connections, welding and grouting.	Applicable PCI & ACI Specs	Periodic	YES

SPECIAL INSPECTIONS - SOILS AND FOUNDATIONS					
VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Shallow Foundations	ICC-SSI PE-GEOTECH	Inspect Soils below footings for adequate bearing capacity and consistency with geotechnical report.	N/A	Periodic testing to verify compliance with project specifications & geotechnical report.	YES
2. Controlled Structural Fill	ICC-SSI PE-GEOTECH	Perform applicable sieve tests and modified Proctor tests of each source of fill. Inspect placement, lift thickness, and compaction. Test density of each lift. Verify extent and slope of fill placement.	Applicable ASTM Specs	Periodic testing to verify compliance with project specifications & geotechnical report.	YES
3. Deep Foundation: Driven Piles	PE-GEOTECH	Inspect and log pile driving operations. Record pile driving resistance and verify compliance with driving criteria. Inspect piles for damage from driving and plumbness. Verify pile size, length and accessories.	-	Continuous	NO
4. Deep Foundations: Drilled Pier Foundations	PE-GEOTECH	Inspect installation and maintain complete records for each pier. Verify pier diameter, bell diameter, lengths, embedment into bedrock and suitable of each bearing strata.	-	Continuous	NO

SPECIAL INSPECTION - WOOD CONSTRUCTION					
VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Fabricator Certification/ Quality Control Procedures	-	Fabricated to be enrolled in a nationally accepted inspection program acceptable to the Structural Engineer and Specifications. The approved fabricator to submit a certification of compliance to a the building official.	-	N/A	YES
2. Material Grading	-	Review sheathing, framing members, wall studs, joists for proper species and grade	Applicable APA & AITC Specs	Prior to Construction & Periodic during construction	YES
3. Connections	-	Inspect connection of framing members. Including nail and bolts for size and spacing. Verify metal hardware connectors for type and proper installation	ANSIAF&PA & Supplier's Specs	Periodic	YES
4. Framing and Details	-	Inspect framing for plumbness, spacing, bearing length, and size. Verify bracing is installed as required.	ANSIAF&PA	Periodic	YES
5. Diaphragms and Shearwalls	-	Inspect size, configuration, blocking and fastening of shearwalls and diaphragms. Verify panel grade and thickness. Verify size and installation of hold-downs and straps.	ANSIAF&PA & Supplier's Specs	Periodic	YES
6. Prefabricated Wood Trusses & Joists	-	See Item #1. Inspect installation for location, spacing, bearing length, connectors, and permanent bracing.	ANSIAF&PA & Supplier's Specs	Periodic	YES



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
 Signature: [Signature]
 Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
 Project Manager: ALK
 Drawn By: MDL
 Date: 02/18/21

Date	Description



700 W. St. Germain Street
 Suite 200
 St. Cloud, MN 56301
 www.hma-archs.com

T | 320.251.9155
 F | 320.251.4919
 hma@hma-archs.com

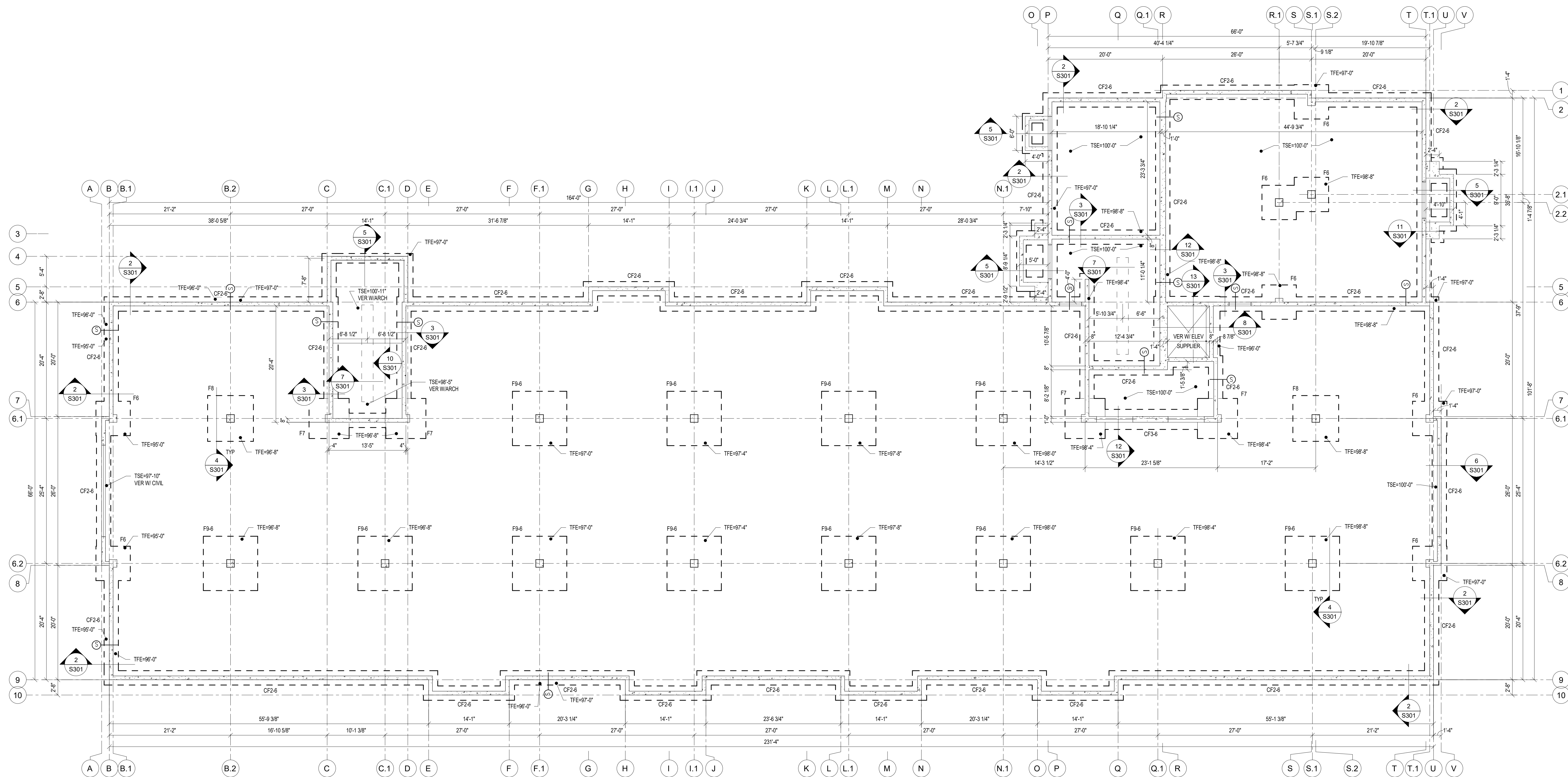
New Apartment Complex:

Zumbrota
 Apartment
 Complex

Zumbrota, MN

SPECIAL INSPECTIONS

S002



1 FIRST FLOOR FRAMING PLAN
S101
1/8" = 1'-0"

FOUNDATION PLAN NOTES:

- TYPICAL INTERIOR SLAB ON GRADE, UNO
THICKNESS = 4"
REINFORCEMENT = MICROFIBERS
BASE = MIN OF 6" COMPACTED GRANULAR FILL, UNO BY GEOTECHNICAL REPORT
VAPOR RETARDER/BARRIER = 10 MIL POLY
T.O. SLAB ELEVATION = 100'-0"
SEE ARCH FOR SLOPES AND RECESSES
- TOP OF EXTERIOR FOOTING ELEVATION, UNO = 97'-0"
- 8" CONCRETE PERIMETER FOUNDATION WALL TYPICAL UNO

FOUNDATION KEYNOTES:	
LABEL	NOTE
S301	

CONT FOOTING SCHEDULE					
MARK	SIZE	THICKNESS	LONGITUDINAL REINFORCEMENT	TRANSVERSE REINFORCEMENT	NOTES/COMMENTS
CF2-6	2'-6" CONT.	1'-0"	(3) #5 CONT	#4 @ 4'-0" O.C.	
CF3-6	3'-6" CONT.	1'-0"	(4) #5 CONT	#4 @ 4'-0" O.C.	

PAD FOOTING SCHEDULE					
MARK	SIZE	THICKNESS	BOTTOM REINFORCEMENT EACH WAY	TOP REINFORCEMENT EACH WAY	NOTES/COMMENTS
F6	6'-0" SQ	1'-0"	(6) #6	-	
F7	7'-0" SQ	1'-2"	(7) #6	-	
F8	8'-0" SQ	1'-4"	(8) #6	-	
F9-6	9'-6" SQ	1'-6"	(10) #6	-	

PIER SCHEDULE		
MARK	DETAIL	NOTES/COMMENTS
P1	SEE 9/S301	



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/19/21

Date	Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-archs.com

T | 320.251.9155
F | 320.251.4919
hma@hma-archs.com

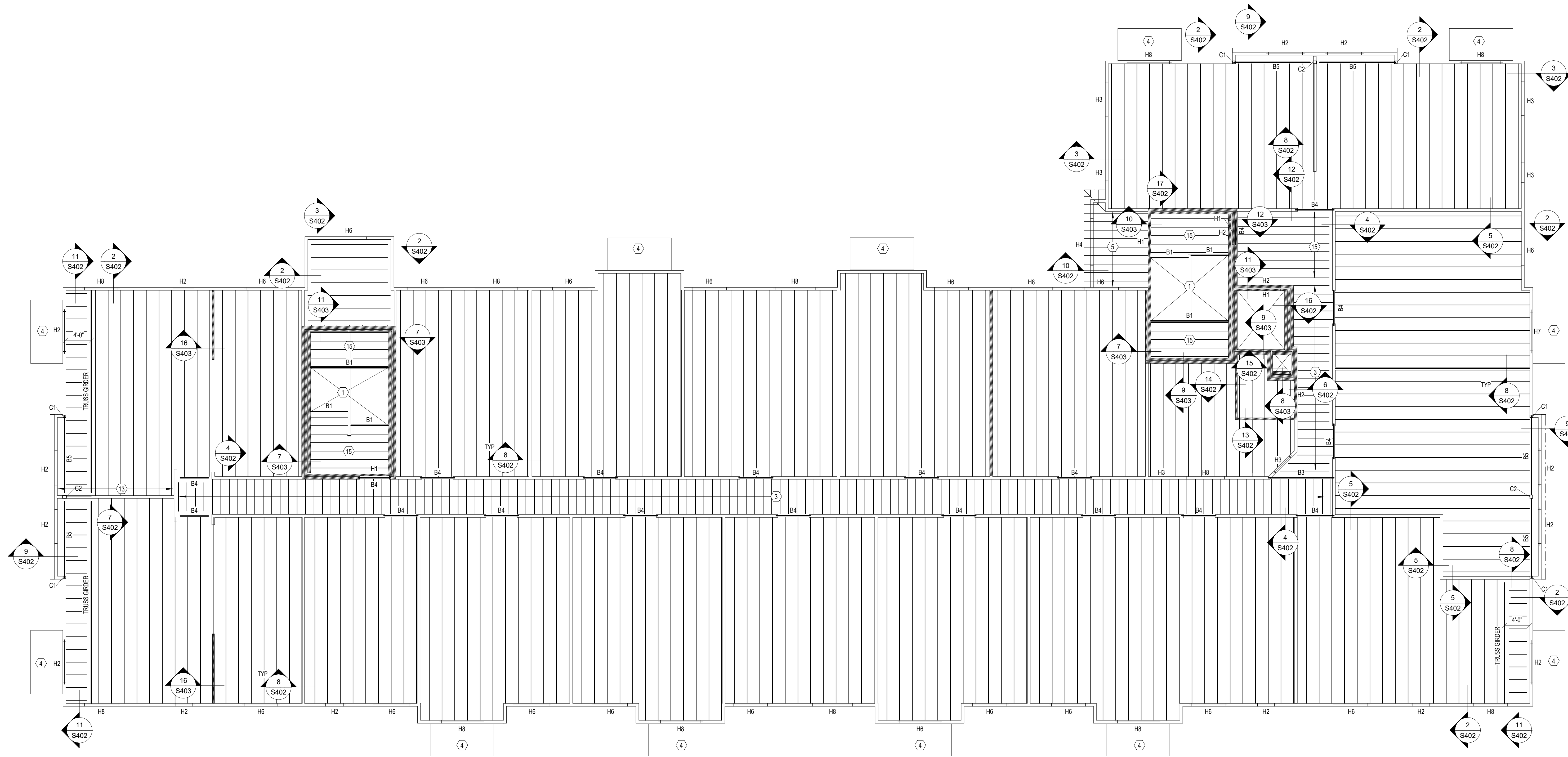
New Apartment Complex:

Zumbrota
Apartment
Complex

Zumbrota, MN

FOUNDATION PLAN

S101



1 THIRD FLOOR FRAMING PLAN
S202 1/8" = 1'-0"

- FRAMING PLAN NOTES:**
- TRUSS BEARING ELEVATION = 120'-1 1/8" UNO
 - FLOOR SYSTEM: 2" FLOOR TRUSSES AT 24" O.C., UNO

KEYNOTES	
LABEL	NOTE
1	S.D. 3/S403 FOR TYPICAL STAIR FRAMING.
3	2x10 FLOOR JOISTS AT 1'-4" O.C.
4	ALUMINUM BALCONY SYSTEM BY SUPPLIER. SEE S001 NOTES FOR DEFERRED SUBMITTAL REQUIREMENTS. SEE 4/S403.
5	2x8 ROOF JOISTS @ 1'-4" O.C.
13	DOUBLE 2x4'S EA. FACE AT 1'-6" O.C.
15	(2) 2x10 FLOOR JOISTS AT 1'-4" O.C.

HEADER SCHEDULE				
MARK	SIZE	JACK STUD	KING STUDS	COMMENTS
H1	(2) 2x8	(1) 2x4	(1) 2x4	-
H2	(2) 2x8	(1) 2x6	(1) 2x6	-
H3	(2) 2x8	(2) 2x6	(1) 2x6	-
H4	(3) 2x10	(1) 2x6	(1) 2x6	-
H5	(3) 2x10	(2) 2x6	(1) 2x6	-
H6	(3) 2x10	(3) 2x6	(1) 2x6	-
H7	(3) 2x12	(2) 2x6	(1) 2x6	-
H8	(3) 2x12	(3) 2x6	(1) 2x6	-

BEAM SCHEDULE		
MARK	SIZE	COMMENTS
B1	STAR BEAM	S.D. 3/S403
B2	(3) 2x10	(2) 2x6 EACH END
B3	(3) 2x10	(3) 2x6 EACH END
B4	(3) 2x10	(4) 2x6 EACH END
B5	(3) 1 3/4"x21" LVL	SEE PLAN

COLUMN SCHEDULE				
MARK	SIZE	BASE PLATE TYPE	ANCHOR ROD TYPE	COMMENTS
C1	5 1/4"x5 1/4" PSL	ABW SERIES (GROUT STANDOFF)	-	CCQ, ECCO SIMPSON STRONG TIE COLUMN CAP
C2	5 1/4"x7" PSL	ABW SERIES (GROUT STANDOFF)	-	CCQ, ECCO SIMPSON STRONG TIE COLUMN CAP



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/18/21

Date	Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-archs.com

T | 320.251.9155
F | 320.251.4919
hma@hma-archs.com

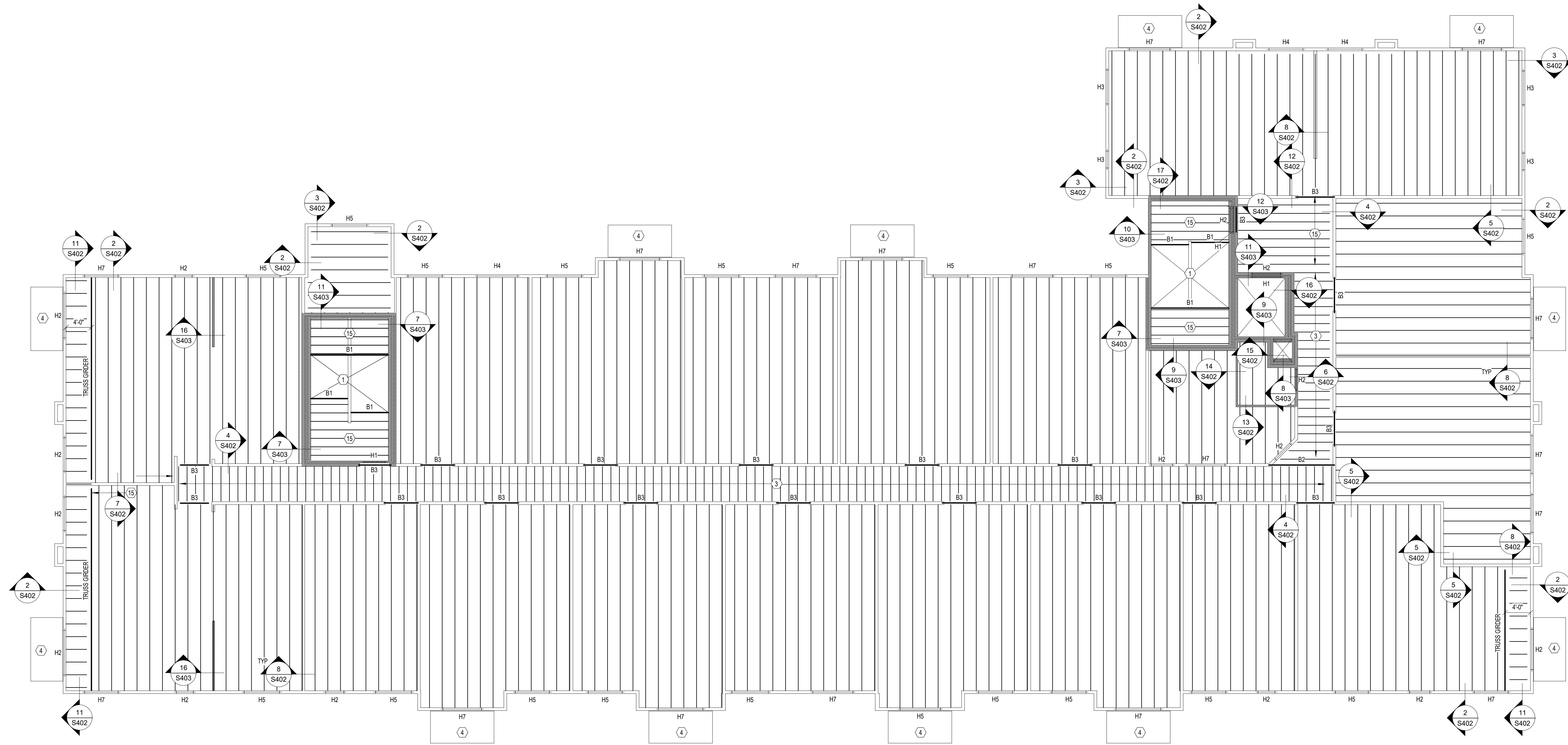
New Apartment Complex:

Zumbrota
Apartment
Complex

Zumbrota, MN

THIRD FLOOR FRAMING
PLAN

S202



1 FOURTH FLOOR FRAMING PLAN
1/8" = 1'-0"

- FRAMING PLAN NOTES:**
- TRUSS BEARING ELEVATION = 131'-3" UNO
 - FLOOR SYSTEM: 24" FLOOR TRUSSES AT 24" O.C., UNO

KEYNOTES	
MARK	NOTE
1	S.D. 3/8" S403 FOR TYPICAL STAIR FRAMING.
2	2x10 LANDING JOISTS AT 1'-4" O.C.
3	2x10 FLOOR JOISTS AT 1'-4" O.C.
4	ALUMINUM BALCONY SYSTEM BY SUPPLIER. SEE S001 NOTES FOR DEFERRED SUBMITTAL REQUIREMENTS. SEE 4/S403.
15	(2) 2x10 FLOOR JOISTS AT 1'-4" O.C.

HEADER SCHEDULE				
MARK	SIZE	JACK STUD	KING STUDS	COMMENTS
H1	(2) 2x8	(1) 2x4	(1) 2x4	-
H2	(2) 2x8	(1) 2x6	(1) 2x6	-
H3	(2) 2x8	(2) 2x6	(1) 2x6	-
H4	(3) 2x10	(1) 2x6	(1) 2x6	-
H5	(3) 2x10	(2) 2x6	(1) 2x6	-
H6	(3) 2x10	(3) 2x6	(1) 2x6	-
H7	(3) 2x12	(2) 2x6	(1) 2x6	-
H8	(3) 2x12	(3) 2x6	(1) 2x6	-

BEAM SCHEDULE		
MARK	SIZE	COMMENTS
B1	STAIR BEAM	S.D. 3/8" S403
B2	(3) 2x10	(2) 2x6 EACH END
B3	(3) 2x10	(3) 2x6 EACH END
B4	(3) 2x10	(4) 2x6 EACH END
B5	(3) 1 3/4"x21" LVL	SEE PLAN



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/18/21

Date	Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-archs.com

T | 320.251.9155
F | 320.251.4919
hma@hma-archs.com

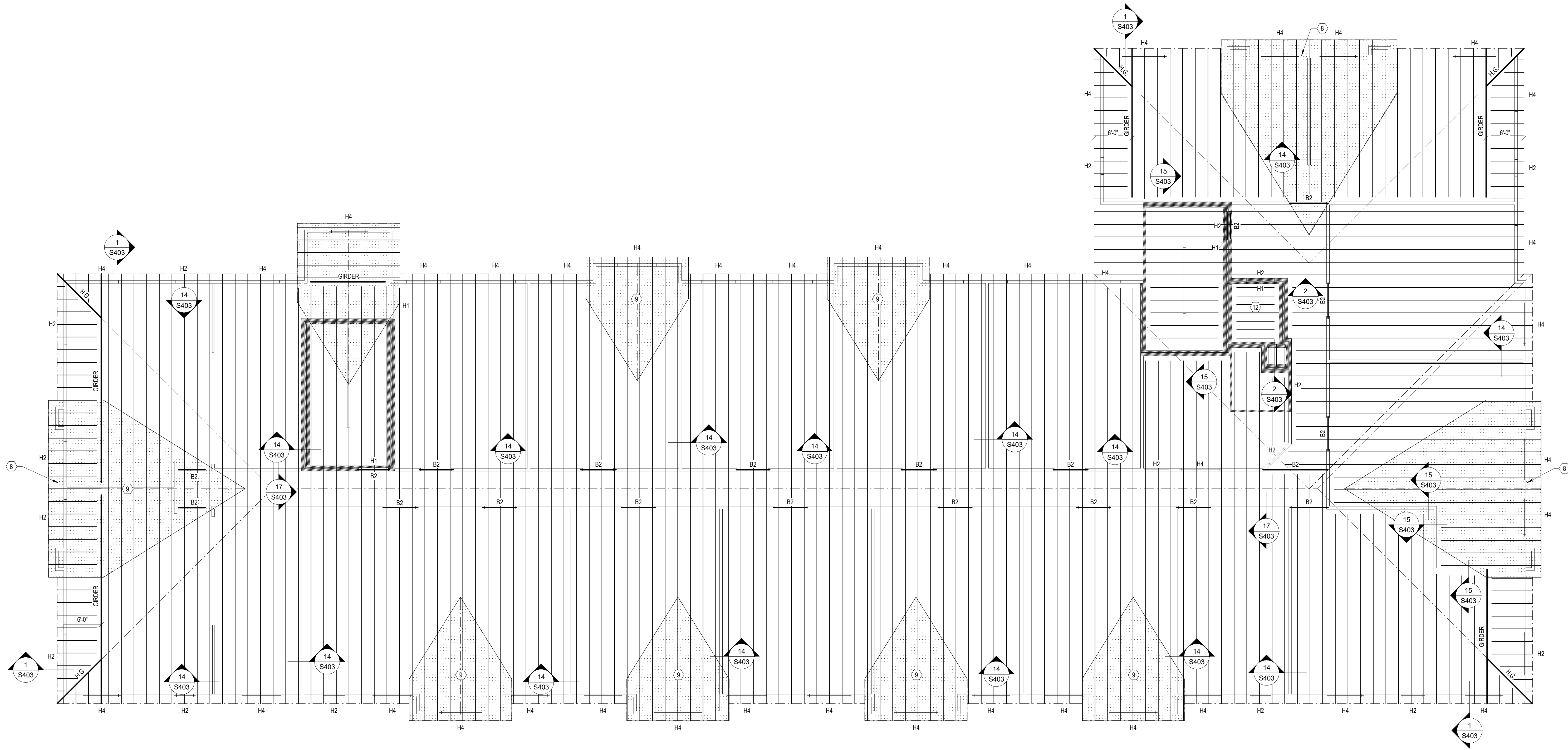
New Apartment Complex:

Zumbrota
Apartment
Complex

Zumbrota, MN

FOURTH FLOOR
FRAMING PLAN

S203



1 ROOF FRAMING PLAN
S204 1/8" = 1'-0"

- ROOF FRAMING PLAN NOTES:**
- TRUSS BEARING ELEVATION = 142'-4.78" UNO
 - ROOF FRAMING: SLOPED ROOF TRUSSES AT 2'-0" O.C., UNO

KEYNOTES	
LABEL	NOTE
8	GABLE TRUSSES
9	OVERBUILD ROOF TRUSSES AT 24" O.C. SEE DETAIL 1/S402
12	WB&31 HOIST BEAM RATED TO SUPPORT (2) 7500# CONCENTRATED POINT LOAD. S.D. 13/S403.

HEADER SCHEDULE				
MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2) 2x8	(1) 2x4	(1) 2x4	-
H2	(2) 2x8	(1) 2x6	(1) 2x6	-
H3	(2) 2x8	(2) 2x6	(1) 2x6	-
H4	(3) 2x10	(1) 2x6	(1) 2x6	-
H5	(3) 2x10	(2) 2x6	(1) 2x6	-
H6	(3) 2x10	(3) 2x6	(1) 2x6	-
H7	(3) 2x12	(2) 2x6	(1) 2x6	-
H8	(3) 2x12	(3) 2x6	(1) 2x6	-

BEAM SCHEDULE		
MARK	SIZE	COMMENTS
B1	STAIR BEAM	S.D. 3/S403
B2	(3) 2x10	(2) 2x6 EACH END
B3	(3) 2x10	(3) 2x6 EACH END
B4	(3) 2x10	(4) 2x6 EACH END
B5	(3) 1.3/4"x21" LVL	SEE PLAN

COLUMN SCHEDULE				
MARK	SIZE	BASE PLATE TYPE	ANCHOR ROD TYPE	COMMENTS
C1	5 1/4"x6 1/4" PSL	ABW SERIES (GROUT STANDOFF)	-	CCQ, ECCO SIMPSON STRONG TIE COLUMN CAP
C2	5 1/4"x7" PSL	ABW SERIES (GROUT STANDOFF)	-	CCQ, ECCO SIMPSON STRONG TIE COLUMN CAP



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: Nathan Hoffmann
 Signature: [Signature]
 Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
 Project Manager: ALK
 Drawn By: MDL
 Date: 02/18/21

Date	Description



700 W. St. Germain Street
 Suite 200
 St. Cloud, MN 56301
 www.hma-archs.com

T | 320.251.9155
 F | 320.251.4919
 hma@hma-archs.com

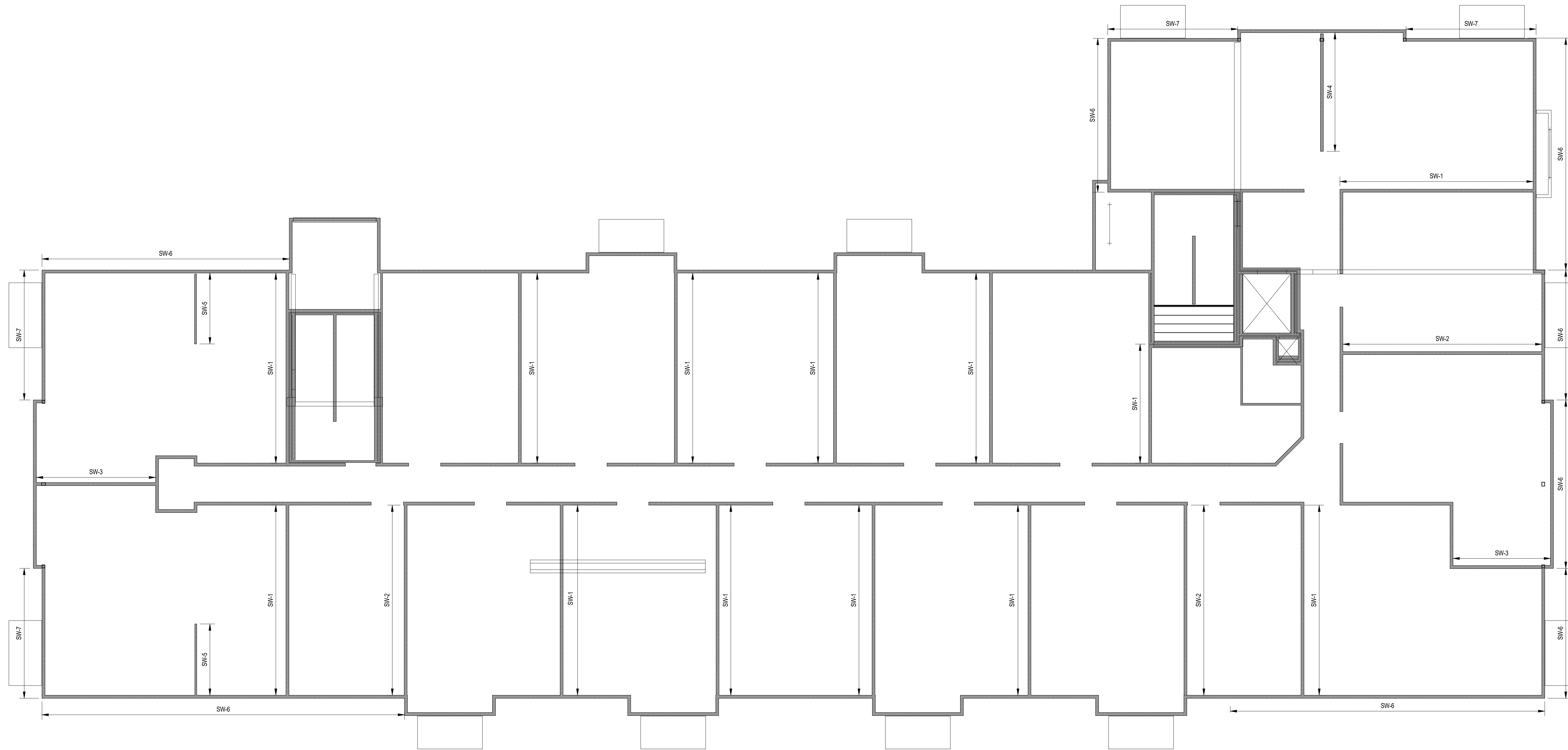
New Apartment Complex:

Zumbrota
 Apartment
 Complex

Zumbrota, MN

ROOF FRAMING PLAN

S204



1 SECOND FLOOR FRAMING PLAN
S205 1/8" = 1'-0"

KEYNOTES	
LABEL	NOTE
14	OMIT 1ST LEVEL SHEAR WALL REQUIREMENTS.

SHEARWALL PLAN NOTES:

- SEE GENERAL NOTES FOR TYPICAL SHEATHING REQUIREMENTS. NOT SHOWN ON WALL SECTIONS.
- SEE S301 GENERAL NOTES FOR ADHESIVE REQUIREMENTS AT HOLD-DOWNS AND SILL PLATE ANCHORS.
- INTERIOR CORRIDOR BEARING WALL SILL PLATE FASTENING TO BE 1/2"x5" SIMPSON TITEN HD ANCHORS @ 4'-0" OC UNO IN SHEARWALL SCHEDULE. SEE DETAIL S301 FOR ANCHOR DIMENSIONS.
- EXTERIOR BEARING WALL SILL PLATE FASTENING TO BE 1/2"x5" SIMPSON TITEN HD ANCHORS @ 4'-0" OC UNO IN SHEARWALL SCHEDULE. SEE DETAIL S301 FOR ANCHOR DIMENSIONS.
- PROVIDE SIMPSON BPS38-3HDG OR EQUAL SILL ANCHOR WASHERS AT ALL SHEARWALL.
- MAXIMUM WALL STUD SPACING TO BE 16" OC FOR ALL SHEAR WALLS UNO.
- TENSION RODS TO BE STANDARD STRENGTH MATERIAL, ASTM F1554 GRADE 36 OR A36 (F_y=58 KSI) UNO.
- TENSION RODS DENOTED WITH "H.S." TO BE HIGH STRENGTH MATERIAL, ASTM A449 OR F1554 GRADE 105 (F_y=120 KSI MIN.) UNO.
- POST INSTALLED THREADED RODS TO BE ASTM F1554 GRADE 55 (F_y=75 KSI MIN.) UNO WITH ASTM A563 HEAVY HEX NUT.
- OVERSIZE TENSION ROD HOLES IN WOOD PLATES TO COMPLY WITH MANUFACTURER'S SPECIFICATIONS.
- NOMINAL LOADS PROVIDED IN SHEARWALL SCHEDULE ARE TO BE USED IN IBC 2015 LOAD COMBINATIONS WITH APPROPRIATE LOAD FACTORS.
- AT FLOORS WHERE TENSION ROD IS NOT REQUIRED, COMPRESSION POSTS MAY BE OMITTED. SEE SCHEDULE FOR REQUIRED NUMBER OF END POSTS.

SHEARWALL SCHEDULE

LABEL	4TH LEVEL				3RD LEVEL				2ND LEVEL				SILL PLATE FASTENING @ BASE LEVEL	ULTIMATE WIND LOAD TO P.C.		RESISTING DL	
	TENSION ROD	T.O. WALL TAKE-UP DEVICE	T.O. WALL BEARING PLATE	END POST / COMP POST	TENSION ROD	T.O. WALL TAKE-UP DEVICE	T.O. WALL BEARING PLATE	END POST / COMP POST	TENSION ROD	T.O. WALL TAKE-UP DEVICE	T.O. WALL BEARING PLATE	END POST / COMP POST		BASE TENSION ROD ANCHOR	BASE LEVEL SHEAR TO P.C.		SW END VERTICAL FORCE
SW-1	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	NOT REQUIRED	1/2"x5" SIMPSON TITEN ANCHORS AT 4'-0" ON CENTER	+/- 8.7 KIP	+/- 6.1 KIP	6.1 KIP
SW-2	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	1/2" THRU-BOLT, S.D. 3/S206	1/2"x5" SIMPSON TITEN ANCHORS AT 4'-0" ON CENTER	+/- 12.1 KIP	+/- 8.6 KIP	6.5 KIP
SW-3	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	1/2" THRU-BOLT, S.D. 3/S206	1/2"x5" SIMPSON TITEN ANCHORS AT 3'-0" ON CENTER	+/- 14.5 KIP	+/- 18.5 KIP	11.4 KIP
SW-4	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x4 / (1) 2x4	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x4 / (1) 2x4	3/4" THREADED ROD (H.S.)	RTUD6	BPRTUD5-6B	(2) 2x4 / (1) 2x4	3/4" H.S. THRU-BOLT, S.D. 3/S206	1/2"x5" SIMPSON TITEN ANCHORS AT 2'-0" ON CENTER	+/- 13.7 KIP	+/- 15.5 KIP	4.1 KIP
SW-5	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	5/8" THREADED ROD	RTUD5	BPRTUD5-6A	(2) 2x6 / (1) 2x6	3/4" THREADED ROD (H.S.)	RTUD6	BPRTUD5-6B	(2) 2x6 / (1) 2x6	3/4" H.S. THRU-BOLT, S.D. 3/S206	1/2"x5" SIMPSON TITEN ANCHORS AT 1'-6" ON CENTER	+/- 10.4 KIP	+/- 21.1 KIP	2.9 KIP
SW-6	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	(2) 2x6	NOT REQUIRED	1/2"x5" SIMPSON TITEN ANCHORS AT 2'-0" ON CENTER	N/A	N/A	N/A
SW-7	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	1/2" THREADED ROD	RTUD4	BPRTUD3-4	(2) 2x6 / (1) 2x6	EMBED PL. S.D. 5/S206	1/2"x5" SIMPSON TITEN ANCHORS AT 2'-0" ON CENTER	N/A	N/A	N/A



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/18/21

Date Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-archs.com

T | 320.251.9155
F | 320.251.4919
hma@hma-archs.com

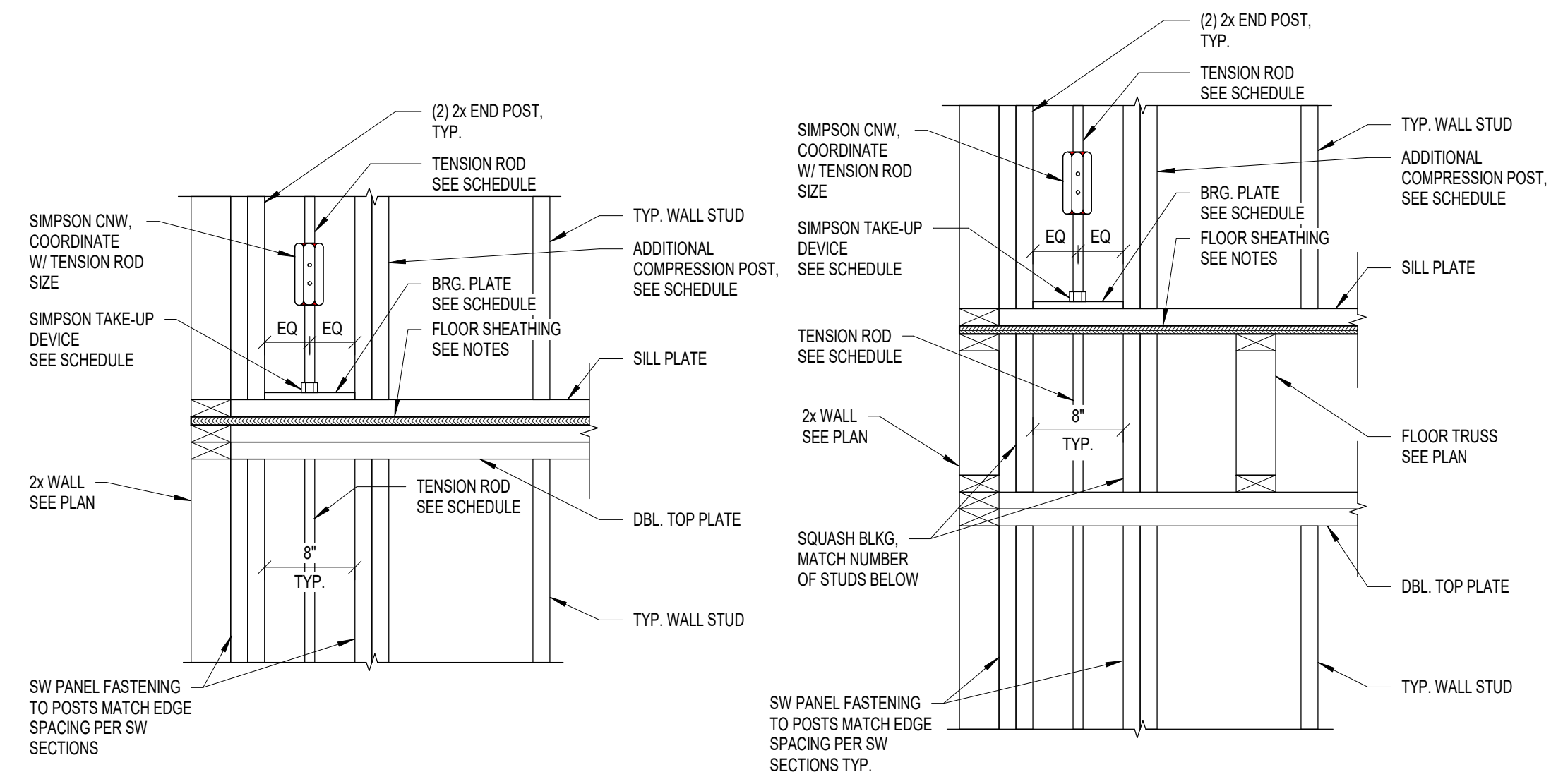
New Apartment Complex:

Zumbrota
Apartment
Complex

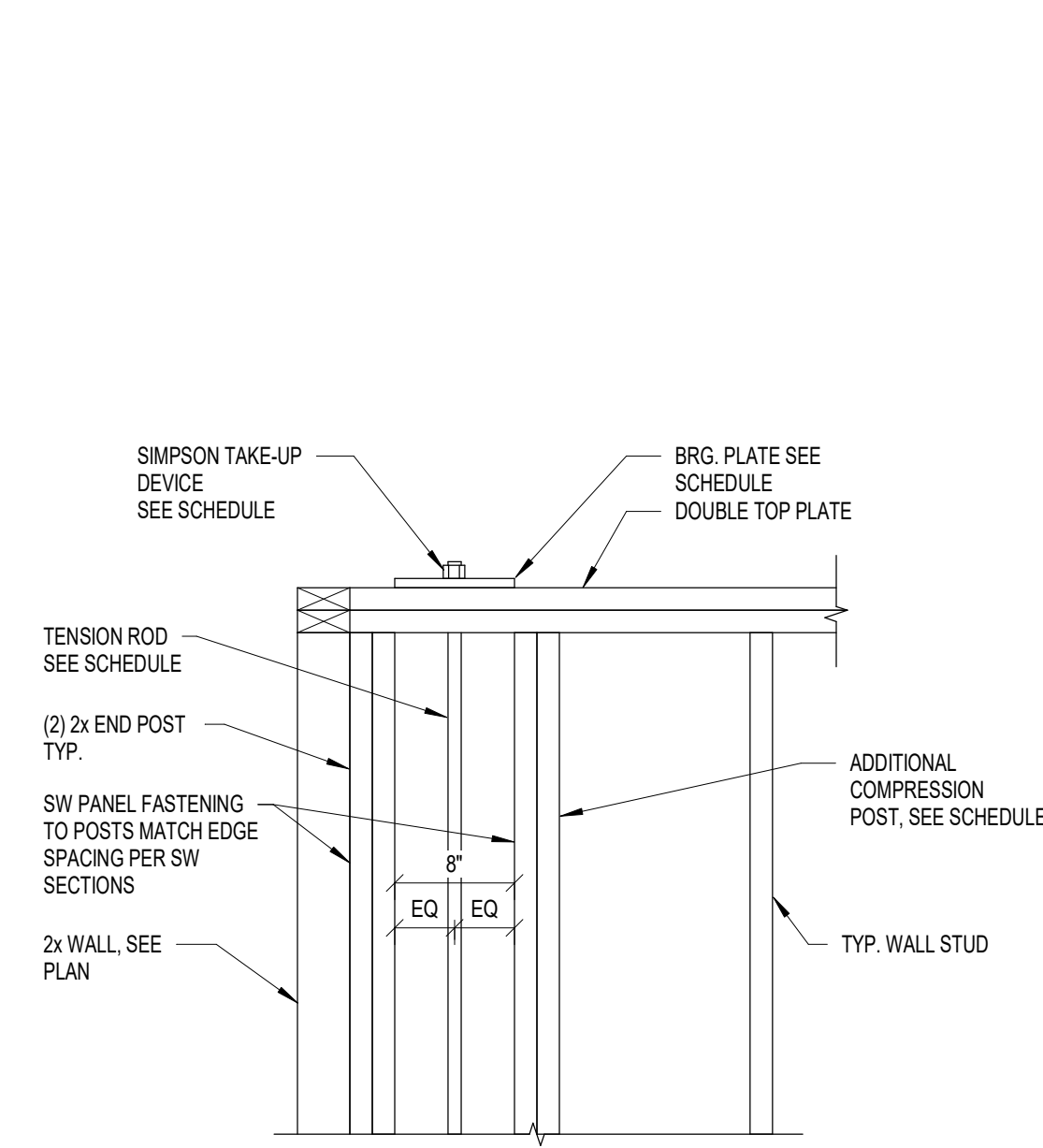
Zumbrota, MN

SHEARWALL PLAN AND SCHEDULE

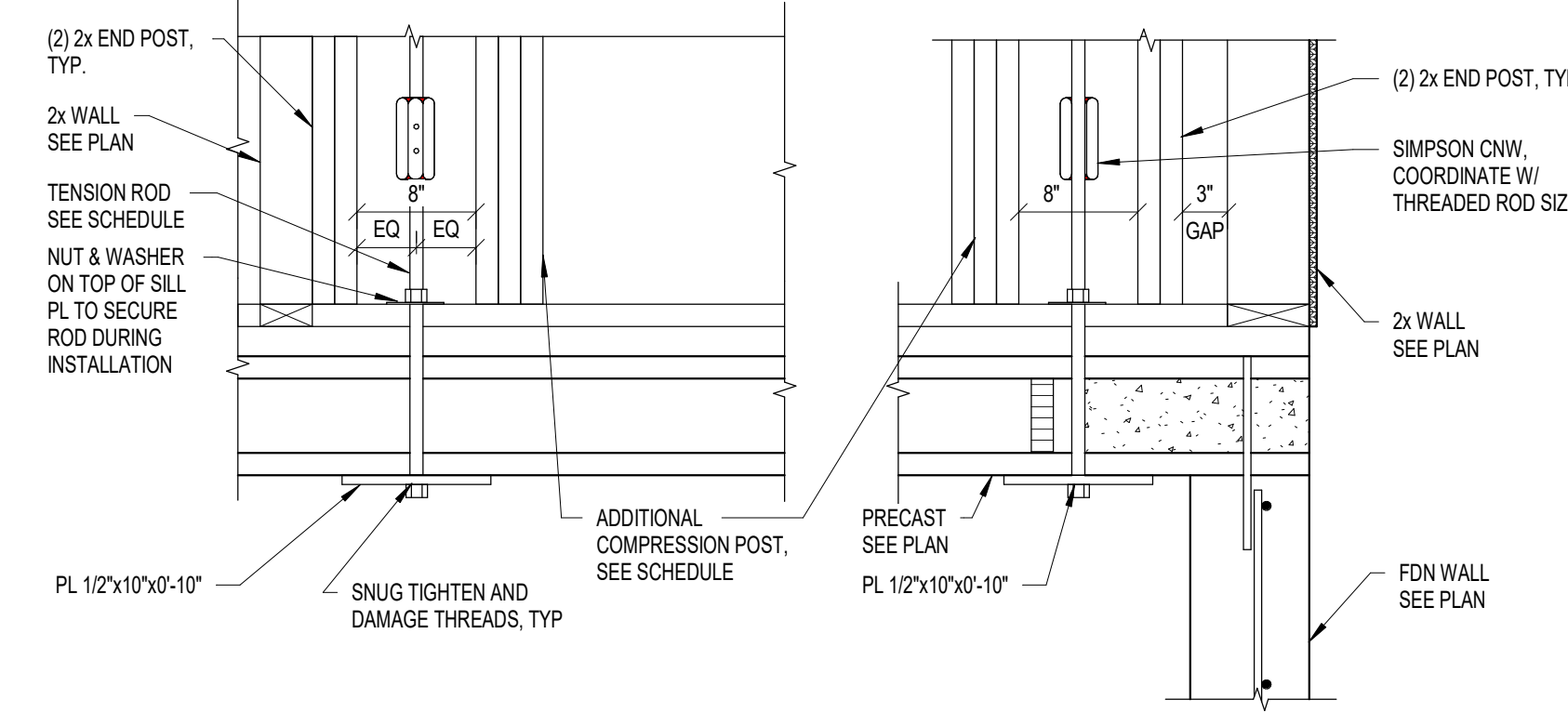
S205



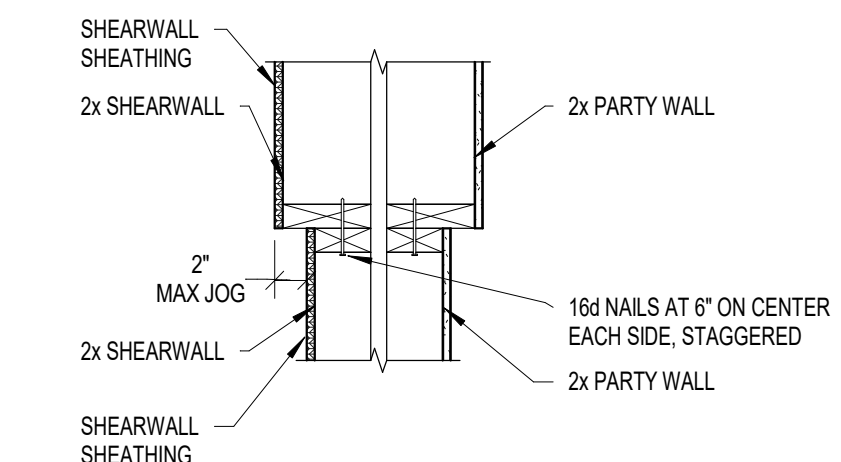
1 TENSION ROD @ FLOOR LEVEL
S206 1" = 1'-0"



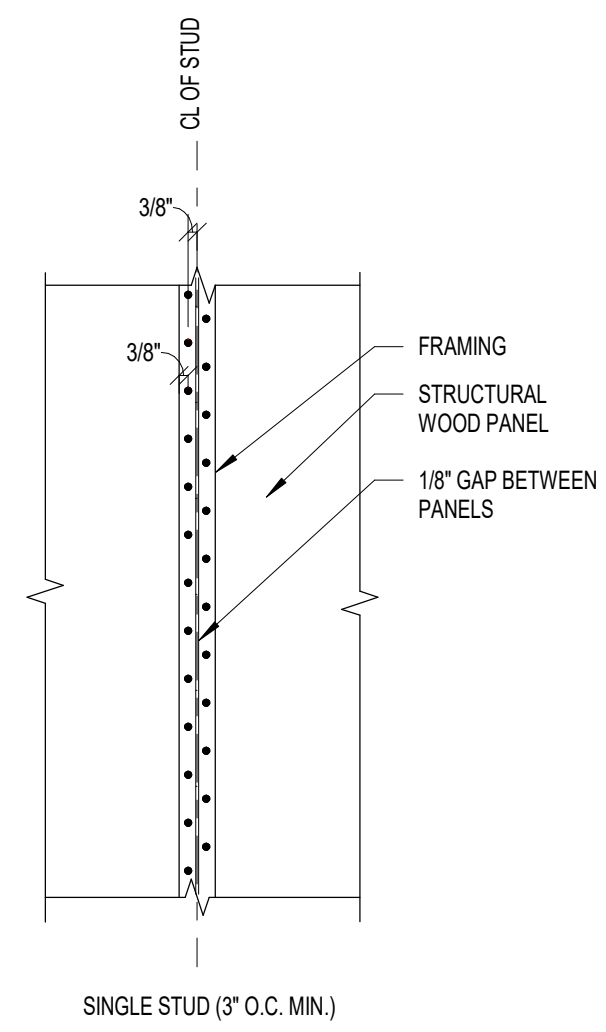
2 TENSION ROD @ ROOF LEVEL
S206 1" = 1'-0"



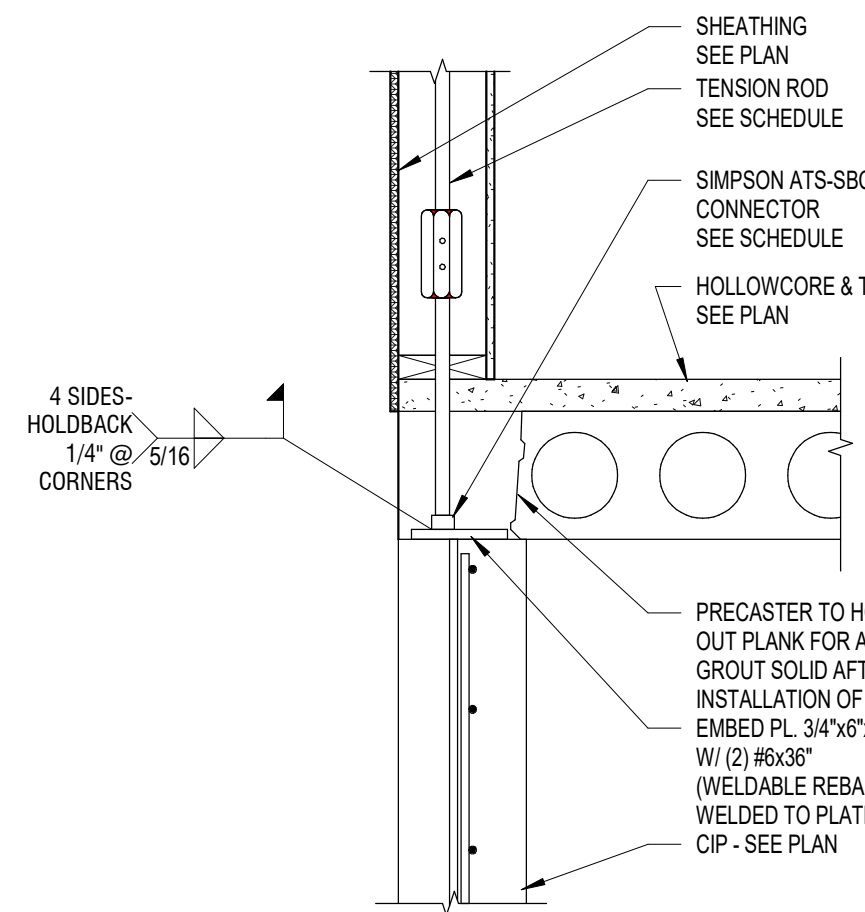
3 TENSION ROD ANCHORAGE
S206 1" = 1'-0"



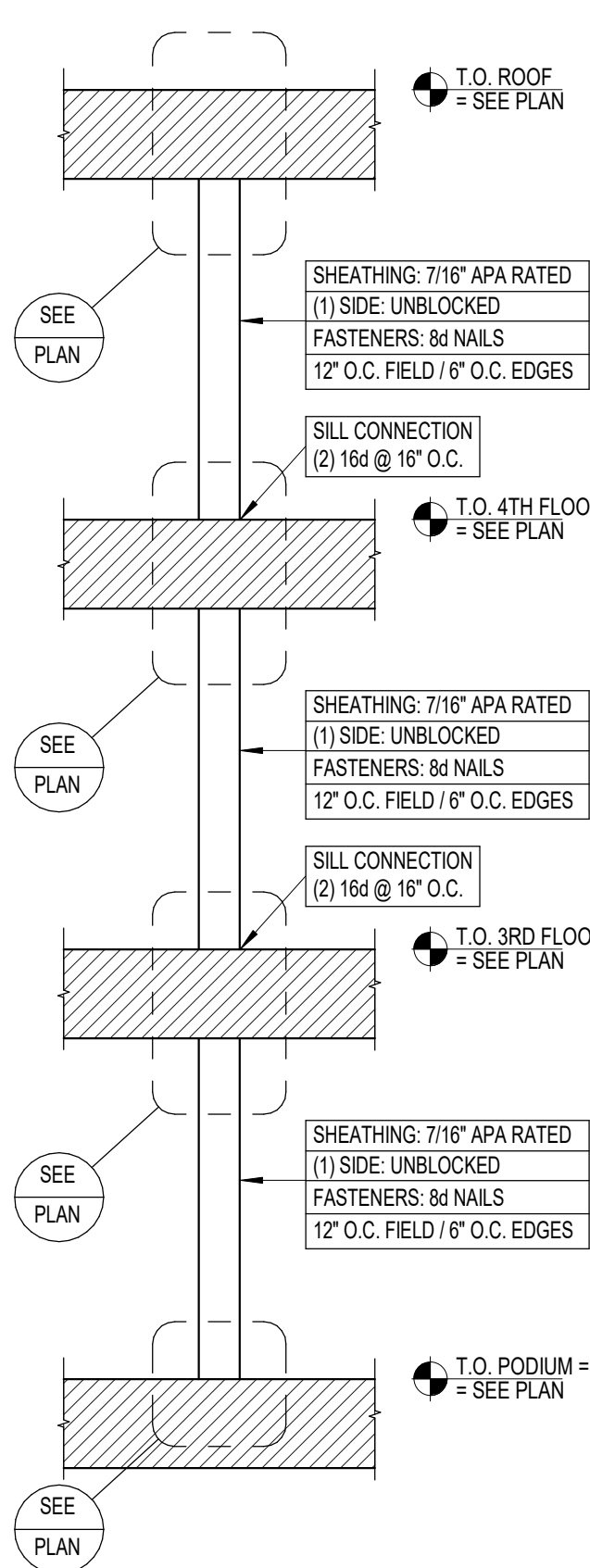
4 SHEARWALL BUTT JOINT CONN
S206 1" = 1'-0"



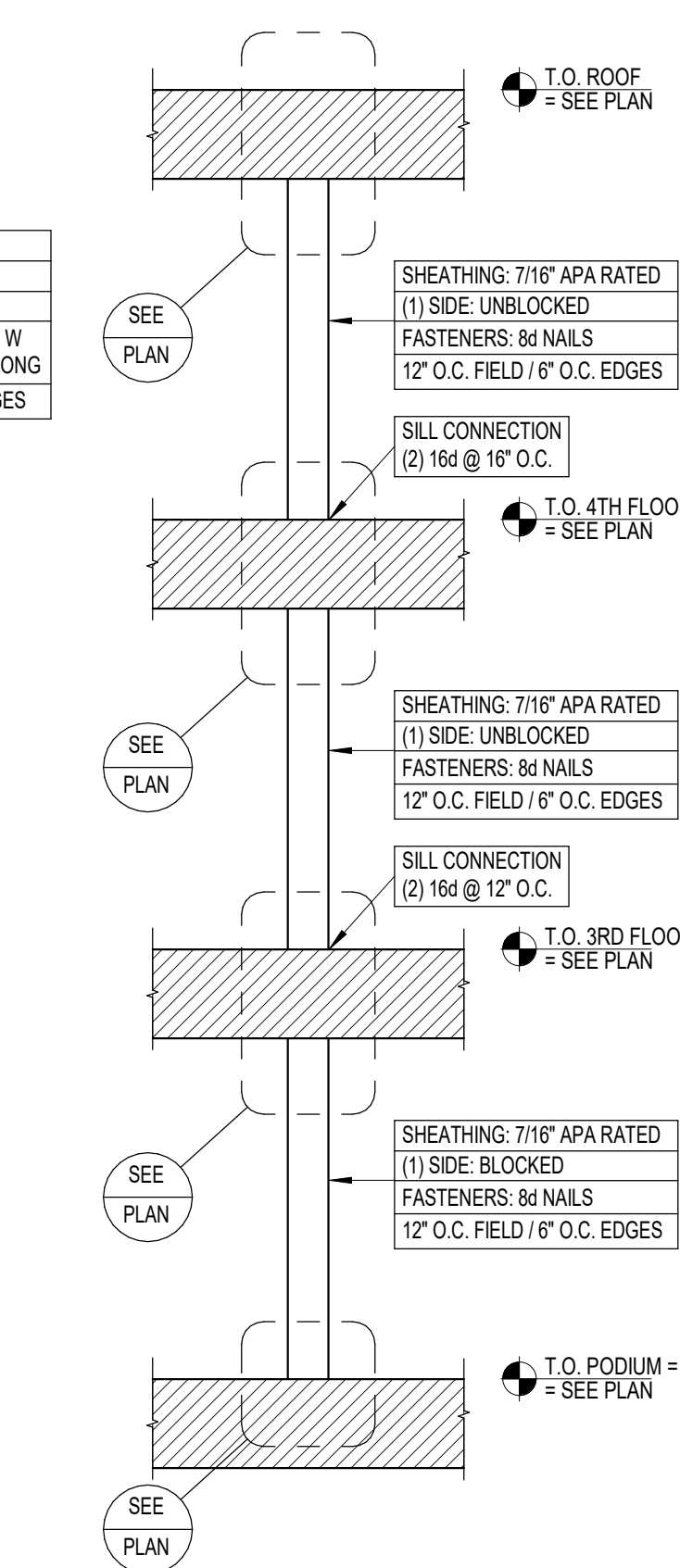
5 STAGGERED NAILS @ PANEL EDGES
S206 1 1/2\"/>



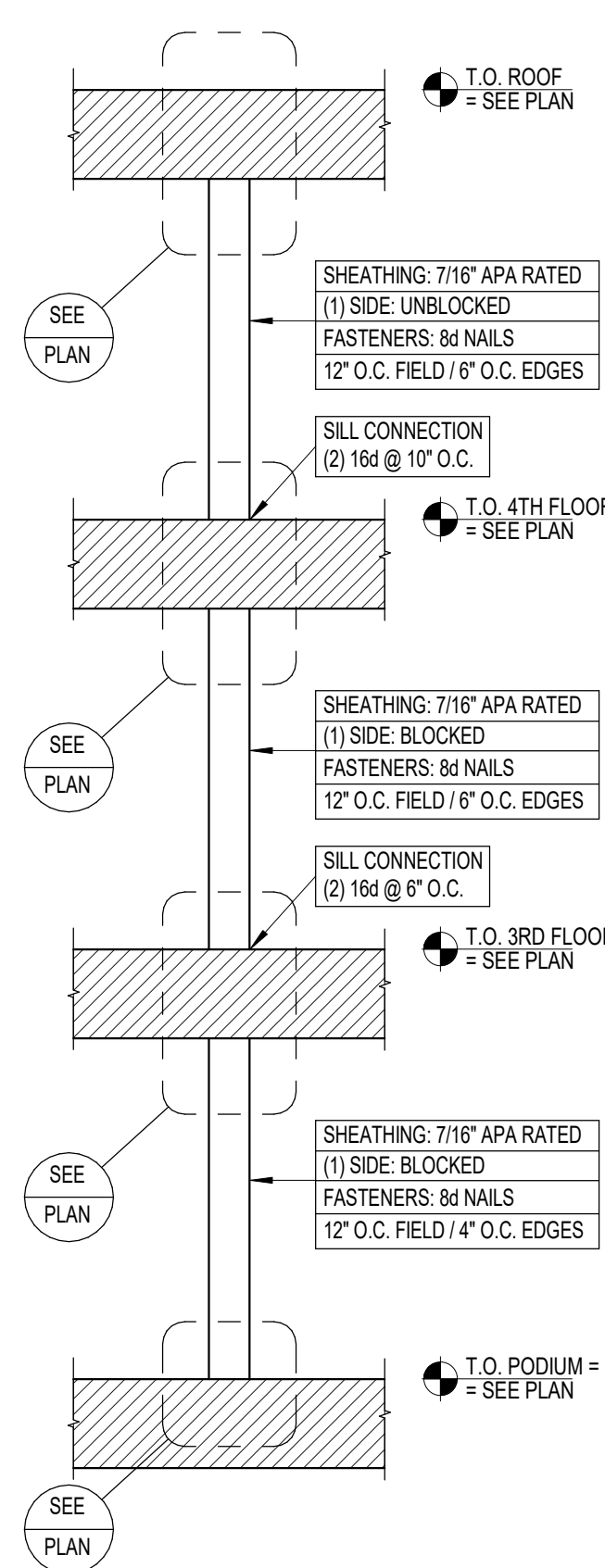
6 TENSION ROD ANCHORAGE
S206 1" = 1'-0"



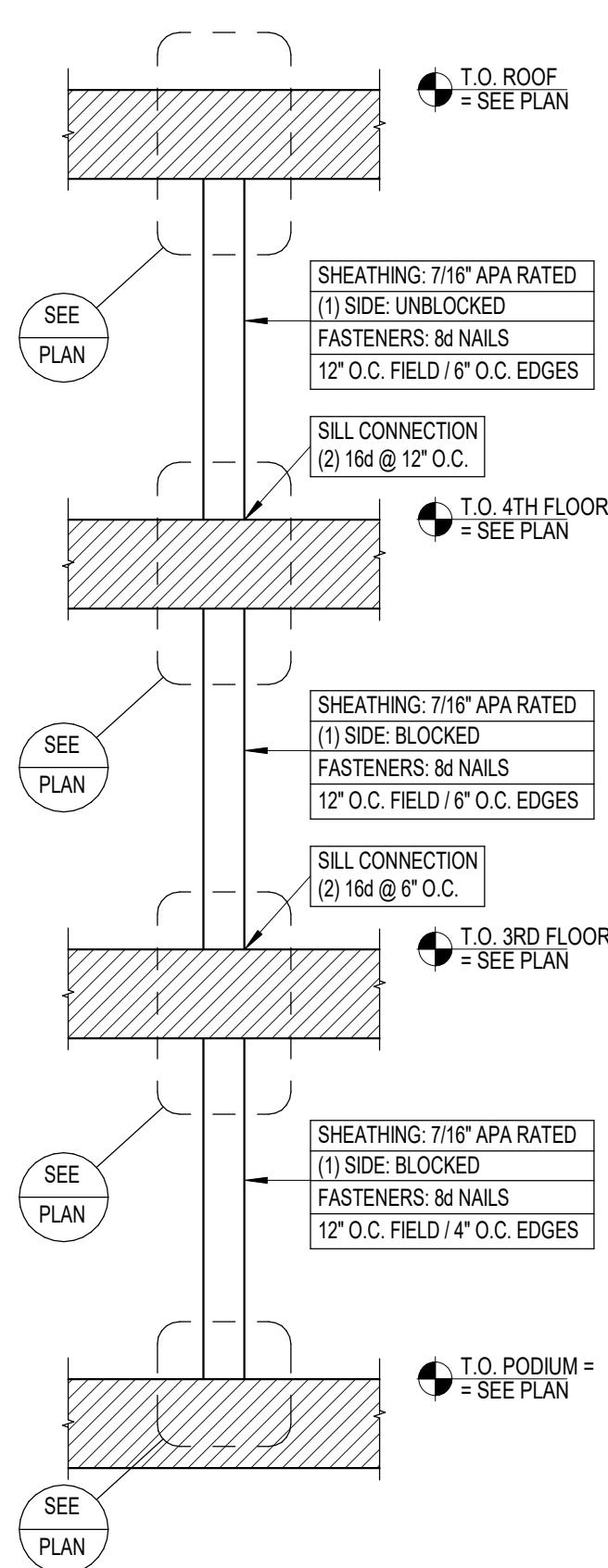
7 SW SECTION (SW-1)
S206 1/2\"/>



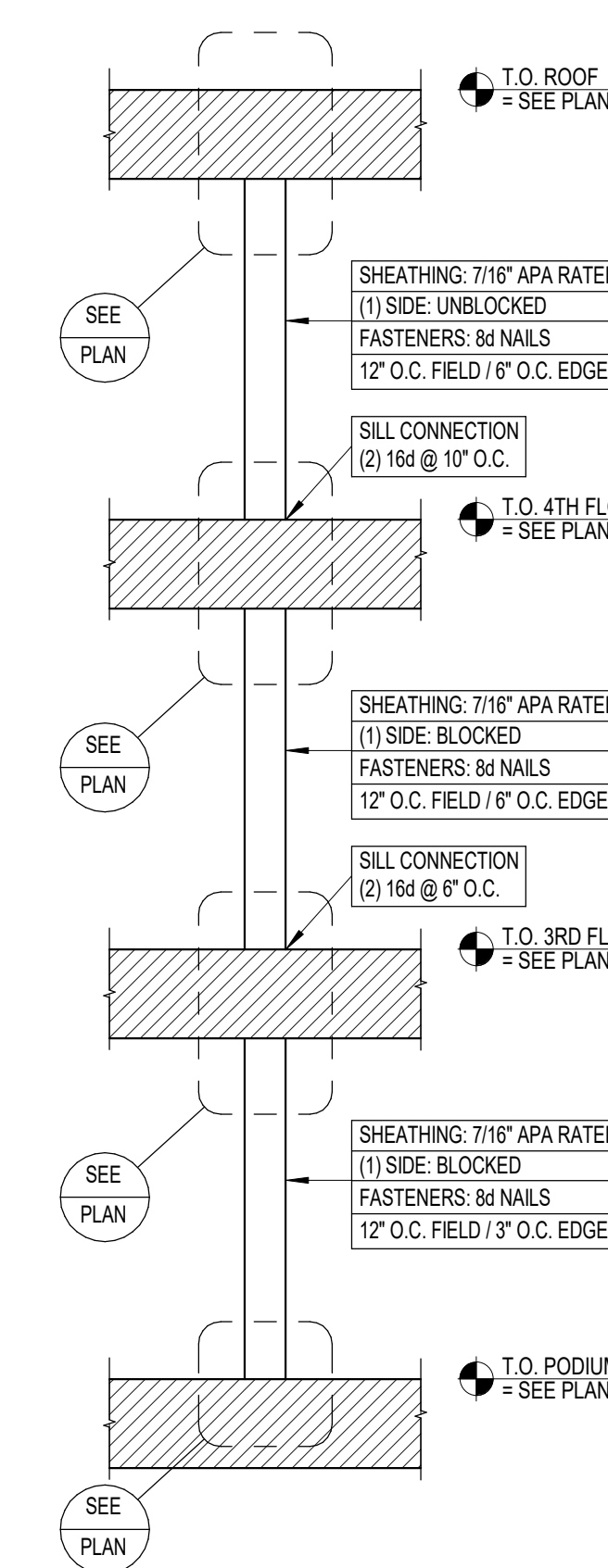
8 SW SECTION (SW-2)
S206 1/2\"/>



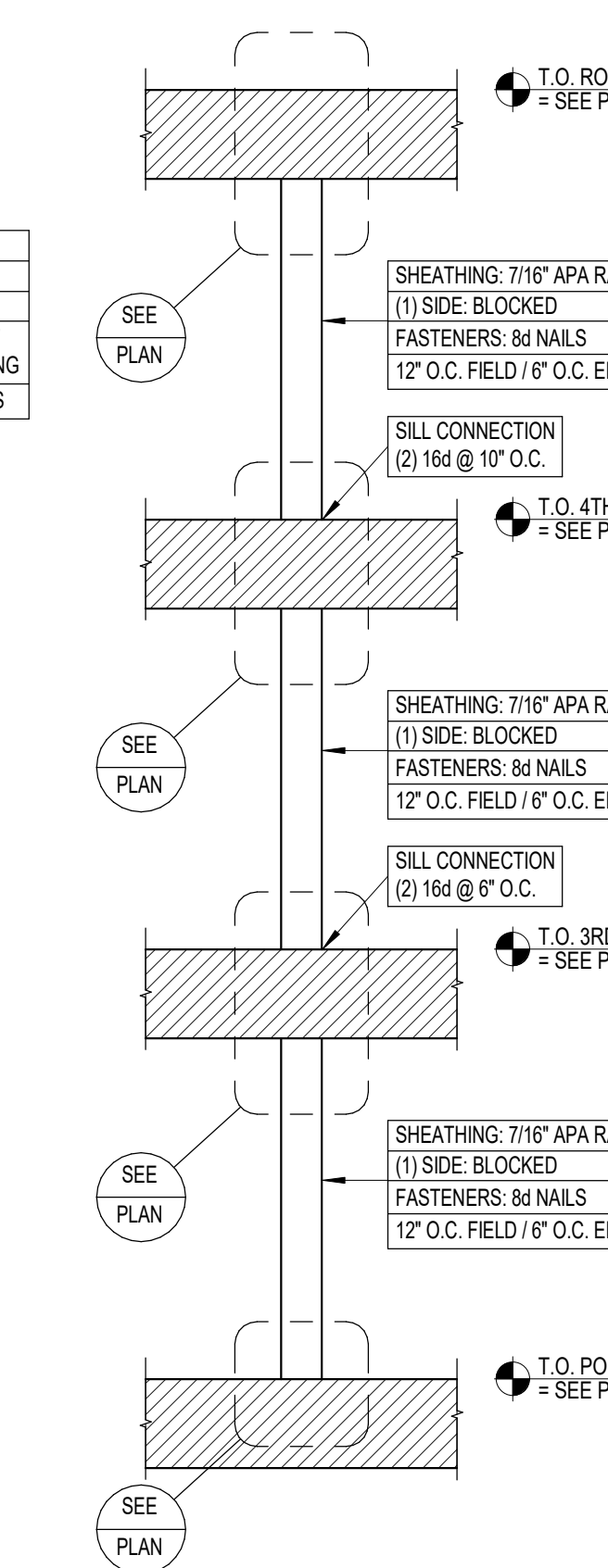
9 SW SECTION (SW-3)
S206 1/2\"/>



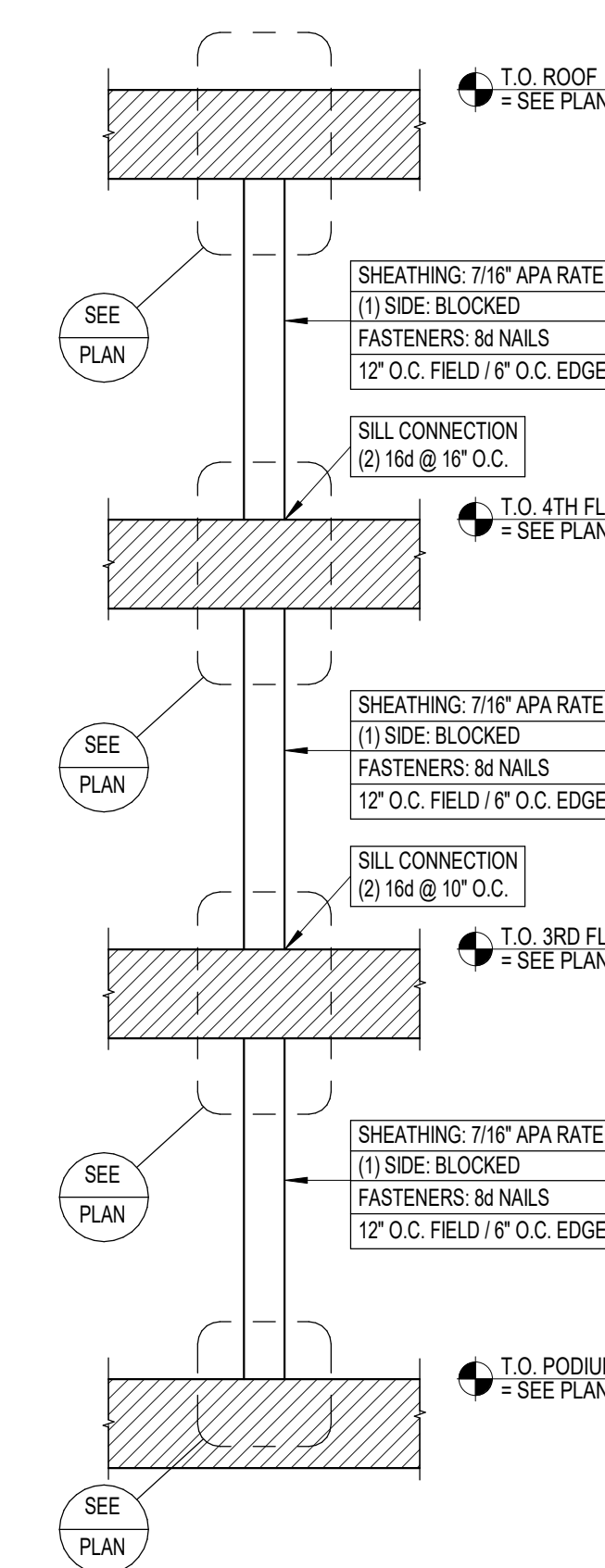
10 SW SECTION (SW-4)
S206 1/2\"/>



11 SW SECTION (SW-5)
S206 1/2\"/>



12 SW SECTION (SW-6)
S206 1/2\"/>



13 SW SECTION (SW-7)
S206 1/2\"/>



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/18/21

Date	Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-archs.com

T 320.251.9155
F 320.251.4919
hma@hma-archs.com

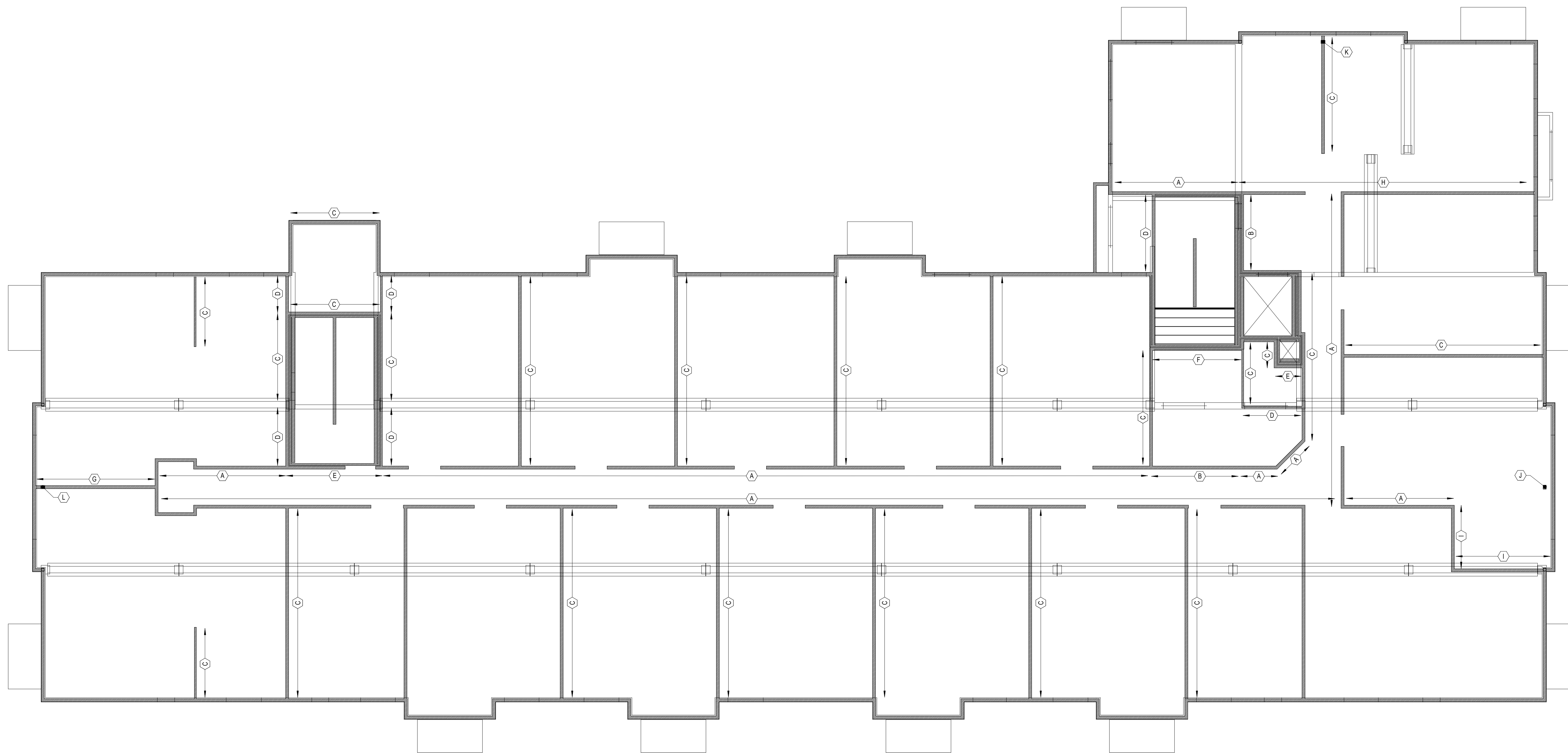
New Apartment Complex:

Zumbrota
Apartment
Complex

Zumbrota, MN

SHEARWALL DETAILS
AND SECTIONS

S206



1 SECOND FLOOR FRAMING PLAN
S207 1/8" = 1'-0"

SUPERIMPOSED PRECAST LOADING KEYNOTES (SERVICE)						
MARK	UNIFORM LINE LOAD (KLF)			CONCENTRATED LOAD (K)		
	DEAD LOAD	LIVE LOAD	SNOW LOAD	DEAD LOAD	LIVE LOAD	SNOW LOAD
A	1.6	1.5	1.0			
B	1.1	2.1	0.8			
C	0.5	0.4	0.2			
D	1.1	1.4	0.1			
E	1.0	0.4	1.0			
F	1.4	2.1	0.8			
G	2.8	2.6	1.3			
H	1.3	1.2	0.5			
I	1.1	1.0	0.4			
J				20.2	17.0	7.9
K				13.9	14.8	2.7
L				6.0	2.8	2.7



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: Nathan Hoffmann
 Signature: [Signature]
 Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
 Project Manager: ALK
 Drawn By: MDL
 Date: 02/18/21

Date	Description



700 W. St. Germain Street
 Suite 200
 St. Cloud, MN 56301
 www.hma-archs.com

T | 320.251.9155
 F | 320.251.4919
 hma@hma-archs.com

New Apartment Complex:

Zumbrota
 Apartment
 Complex

Zumbrota, MN

PRECAST LOADING
 PLAN

S207

CONCRETE STRENGTH F _c	TYPE #1 SPLICE CLASS B SPLICE		TYPE #2 SPLICE CLASS B SPLICE		TYPE #3 SPLICE CLASS B SPLICE		TYPE #4 SPLICE COMPRESSION SPLICE
	#6 AND SMALLER	#7 AND LARGER	#6 AND SMALLER	#7 AND LARGER	#6 AND SMALLER	#7 AND LARGER	#4 AND LARGER
3000 psi	44 Bd	55 Bd	57 Bd	71 Bd	85 Bd	107 Bd	30 Bd
4000 psi	38 Bd	47 Bd	49 Bd	62 Bd	74 Bd	92 Bd	30 Bd

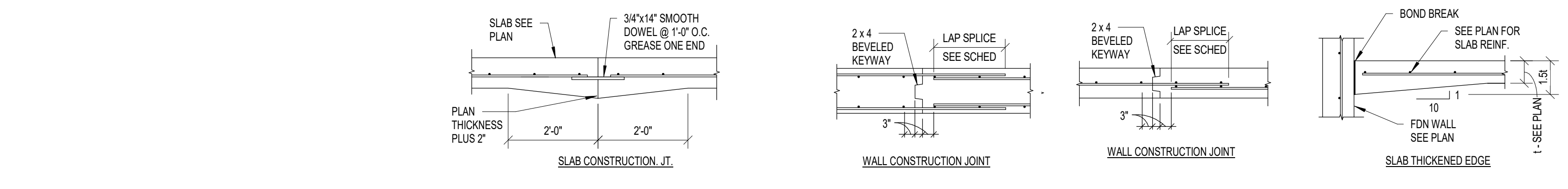
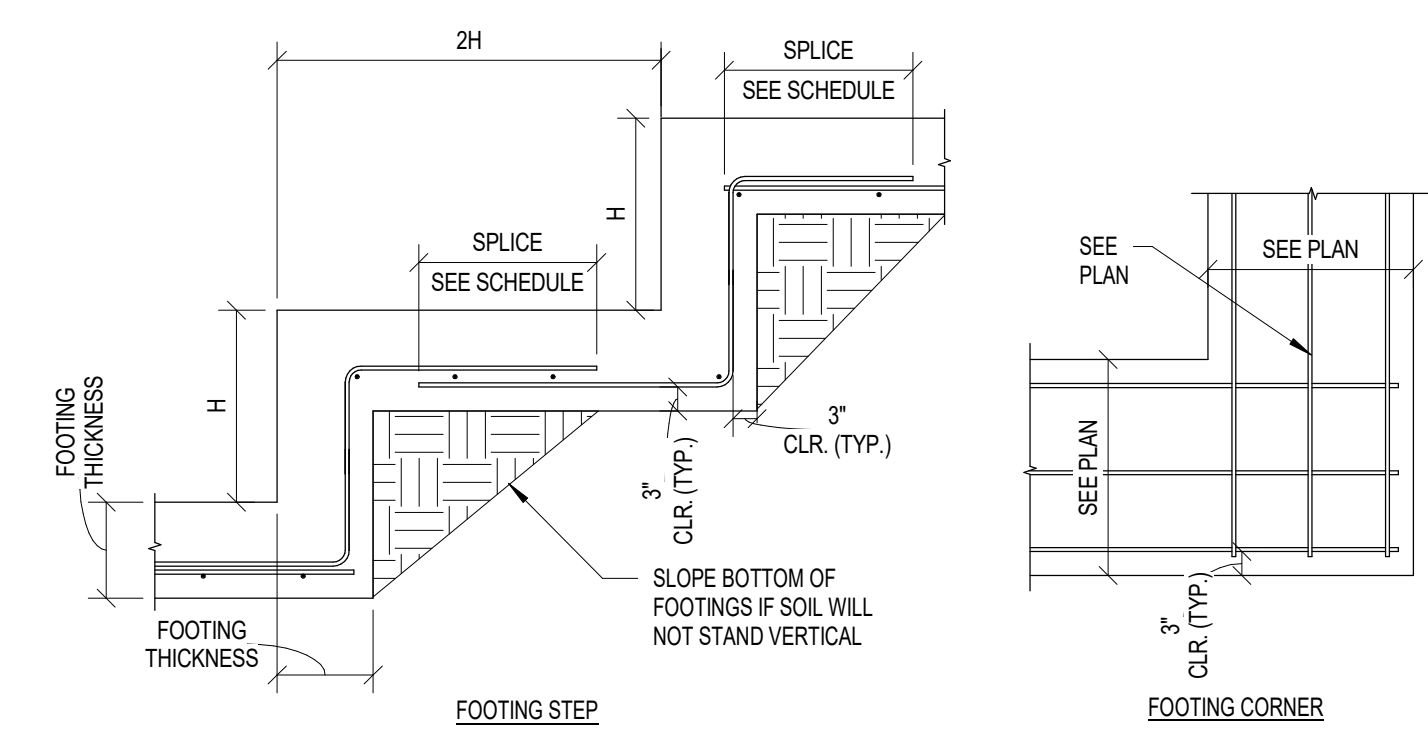
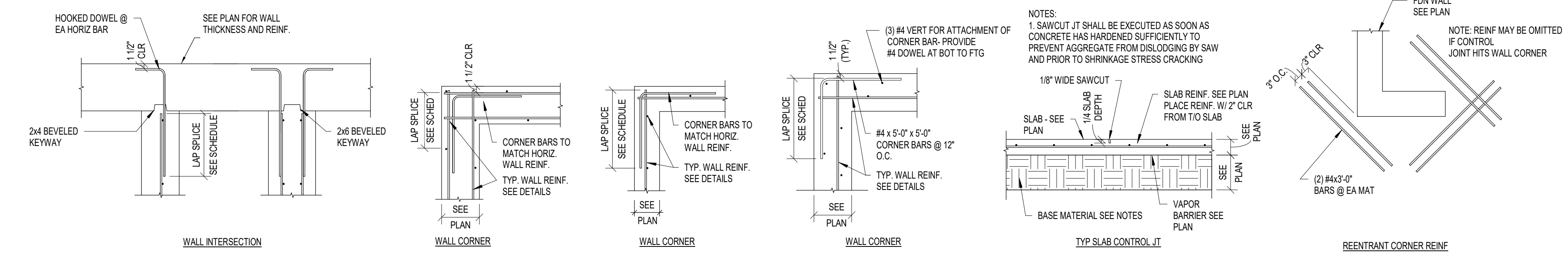
Bd = BAR DIAMETER

NOTES:

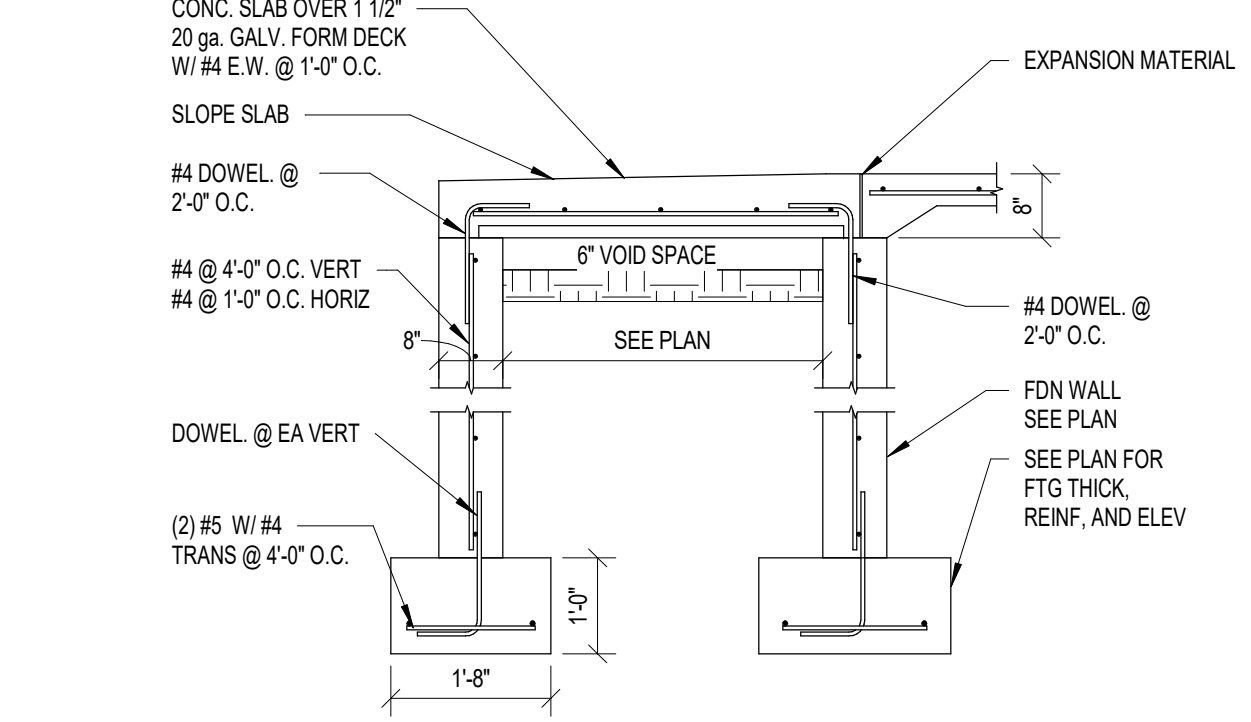
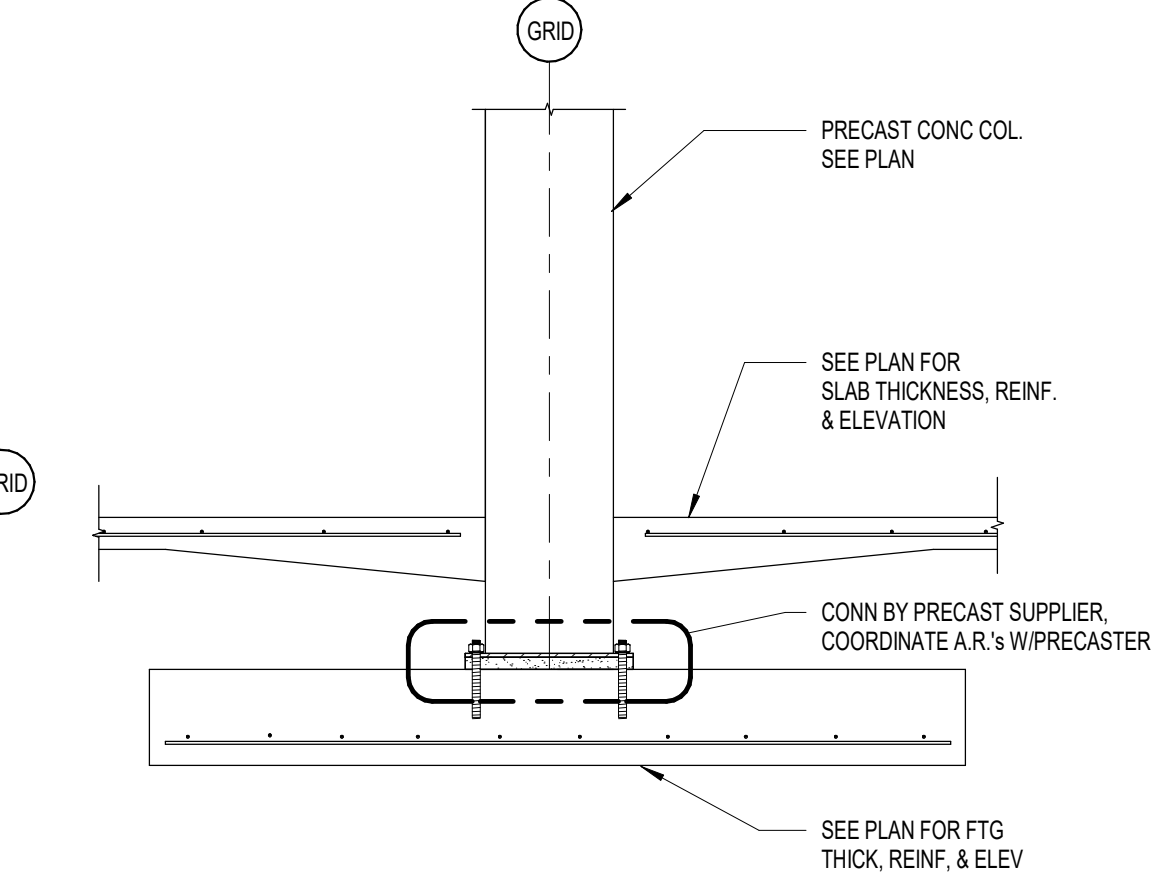
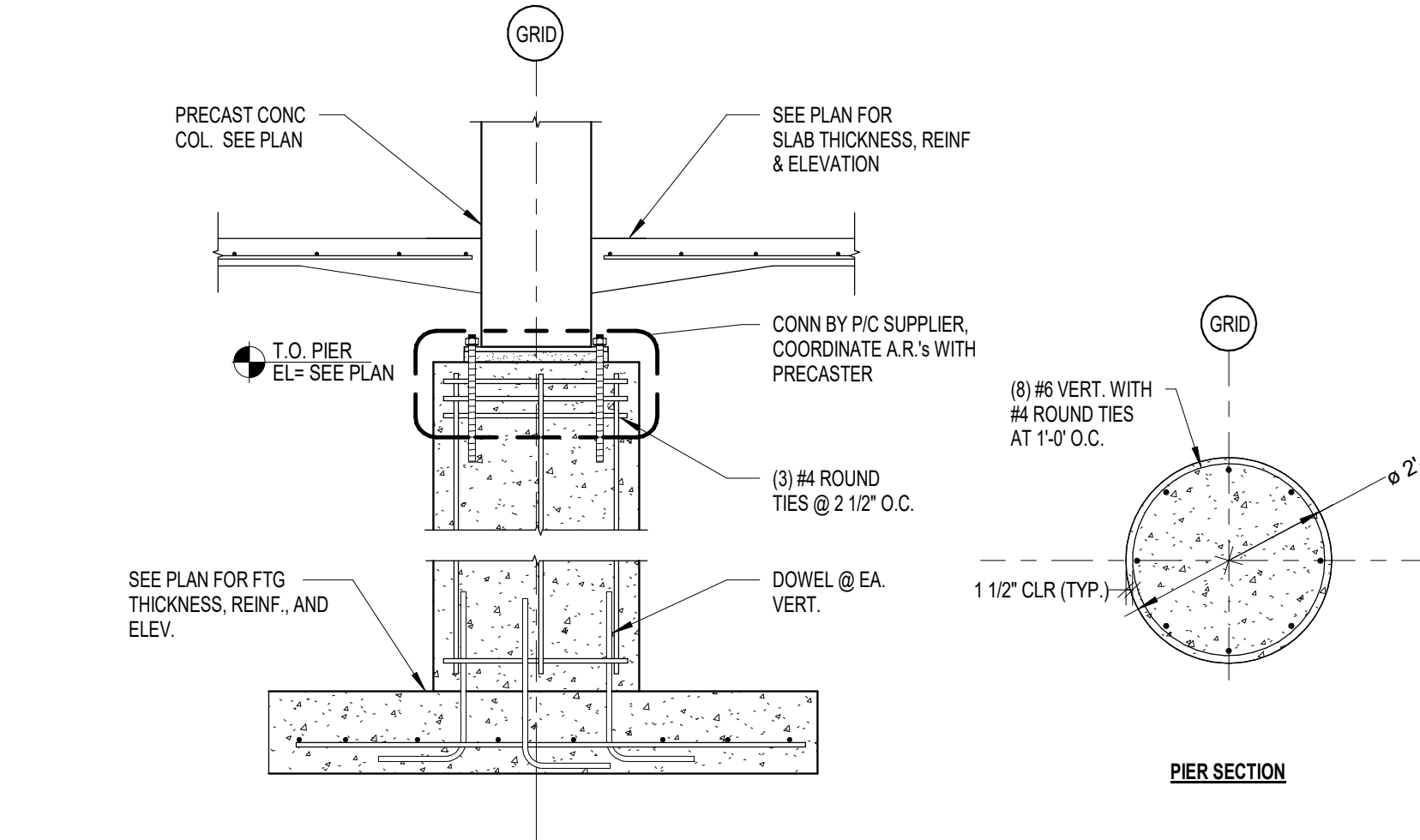
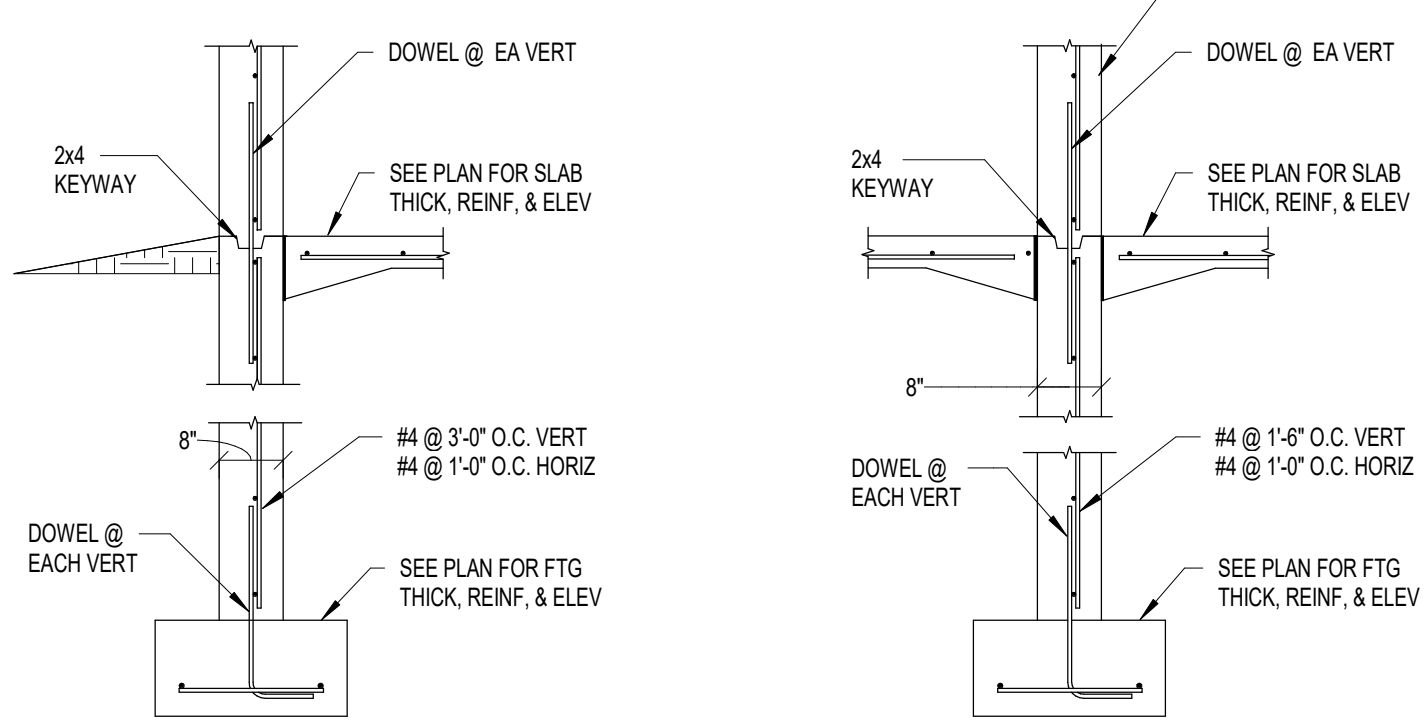
- MIN LAP: 18" FOR TYPE #1 THRU TYPE #3 & 12" FOR TYPE #4 SPLICES.
- REQUIRED SPLICE LENGTH = LISTED SPLICE LENGTH x ADJUSTMENT FACTORS. ADJUSTMENT FACTORS = 1.0 IF NONE BELOW APPLY.
- FOR HORIZ REINFORCING IN MAT SLABS, BEAMS, AND FOOTINGS W/ MORE THAN 1/2" OF FRESH CONCRETE PLACED BELOW BAR - ADJUSTMENT FACTOR = 1.3
- FOR F_y OTHER THAN 60 KSI - ADJUSTMENT FACTOR = F_y (USE) / 60
- FOR LIGHT WEIGHT CONCRETE - ADJUSTMENT FACTOR = 1.3
- TYPICAL EPOXY COATED REINFORCING W/ COVER LESS THAN Bd OR CLEAR SPACING LESS THAN 8 Bd - ADJUSTMENT FACTOR = 1.5

REBAR CLEAR COVER SCHEDULE	
CONCRETE REINFORCEMENT CLEAR COVER, U.N.O. (NON-PRESTRESSED)	CLEAR COVER
CONDITION & DESIGNATION	
CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER: #6 THRU #18	2"
CONCRETE EXPOSED TO EARTH OR WEATHER: #5 OR SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH	
SLABS, WALLS, JOISTS: #14 & #18	1 1/2"
SLABS, WALLS, JOISTS: #11 & SMALLER	3/4"
BEAMS, COLUMNS (PRIMARY REINF. TIES, STIRRUPS, SPIRALS)	1 1/2"

- ALL ADJUSTMENT FACTORS THAT APPLY SHALL BE USED TO CALCULATE REQUIRED SPLICE LENGTH.
- UNLESS OTHERWISE NOTED ON PLANS OR DETAILS, LAP THE FOLLOWING BARS AS DEFINED IN LAP SPLICE TABLE ABOVE.
- VERTICAL HOOKED OR STRAIGHT BARS EXTENDING FROM FOOTINGS: TYPE #4 SPLICE, U.N.O.
- HORIZONTAL BARS IN GRADE BEAMS, FOOTINGS & FOUNDATION WALLS: TYPE #2 SPLICE
- VERTICAL BARS IN COLUMNS & PIERS: TYPE #4 SPLICE
- VERTICAL BARS IN BASEMENT, RETAINING WALLS & GRADE BEAMS: TYPE #3 SPLICE
- U.N.O. ON PLAN OR DETAILS, LAP THE SLAB BARS W/ A LAP LENGTH OF 48 Bd



1 FOUNDATION STANDARD DETAILS
S301 1/2" = 1'-0"



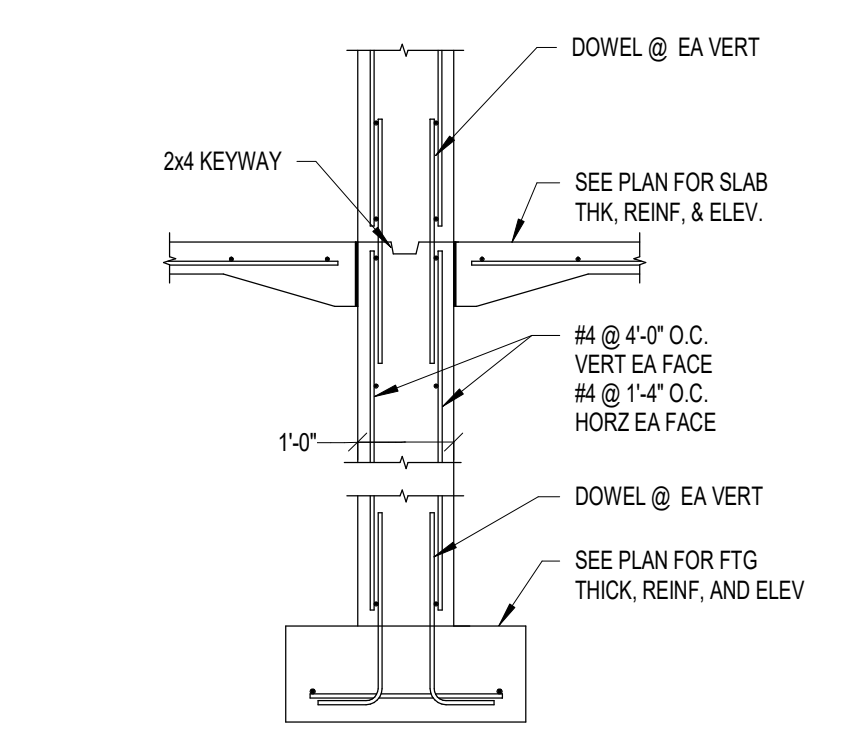
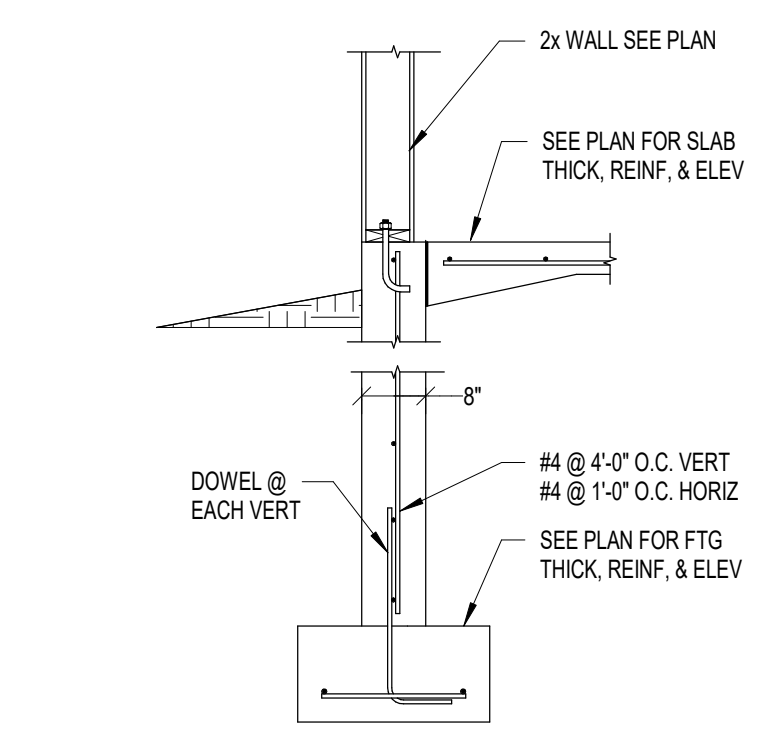
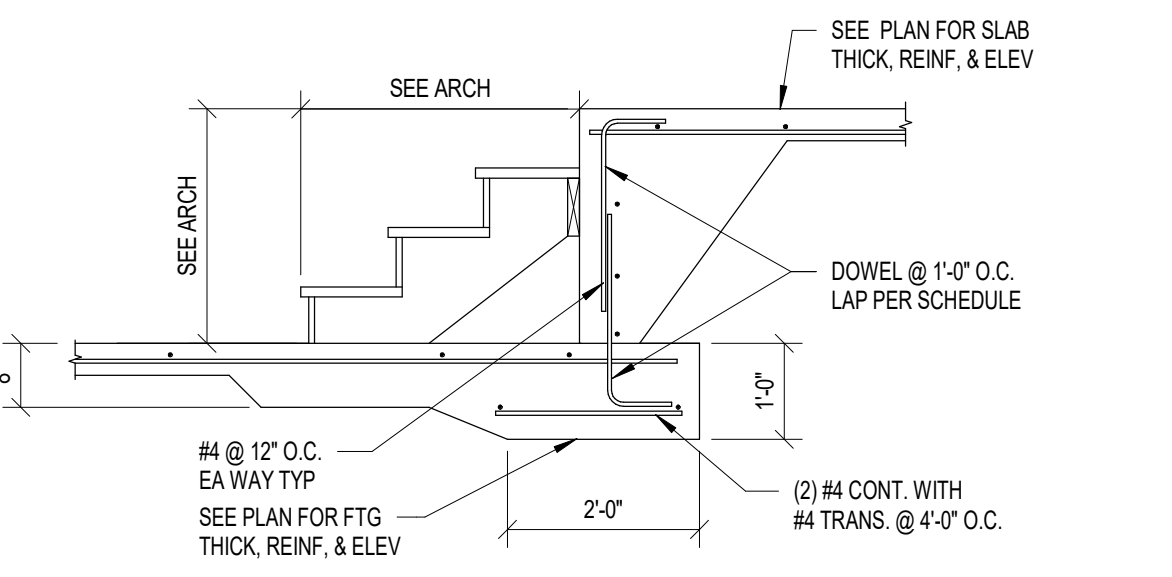
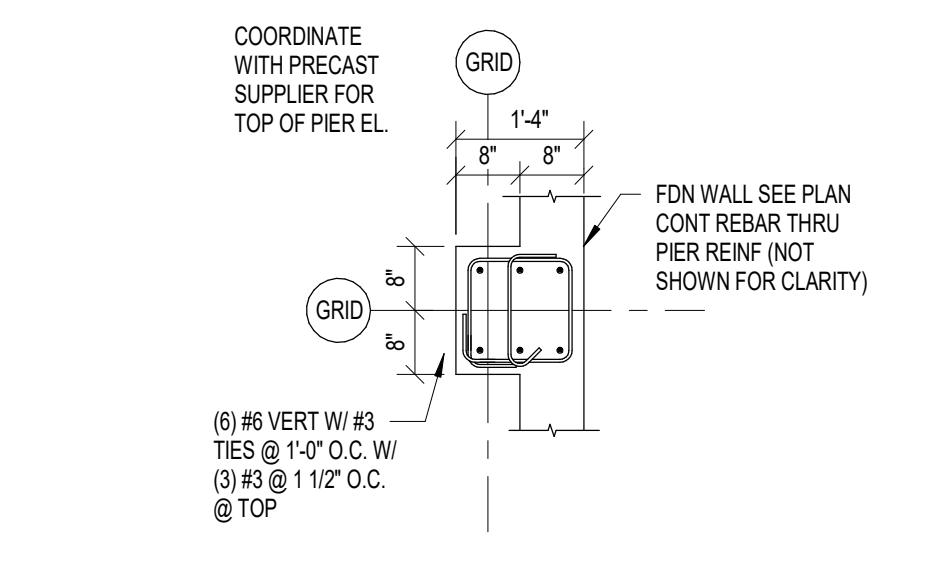
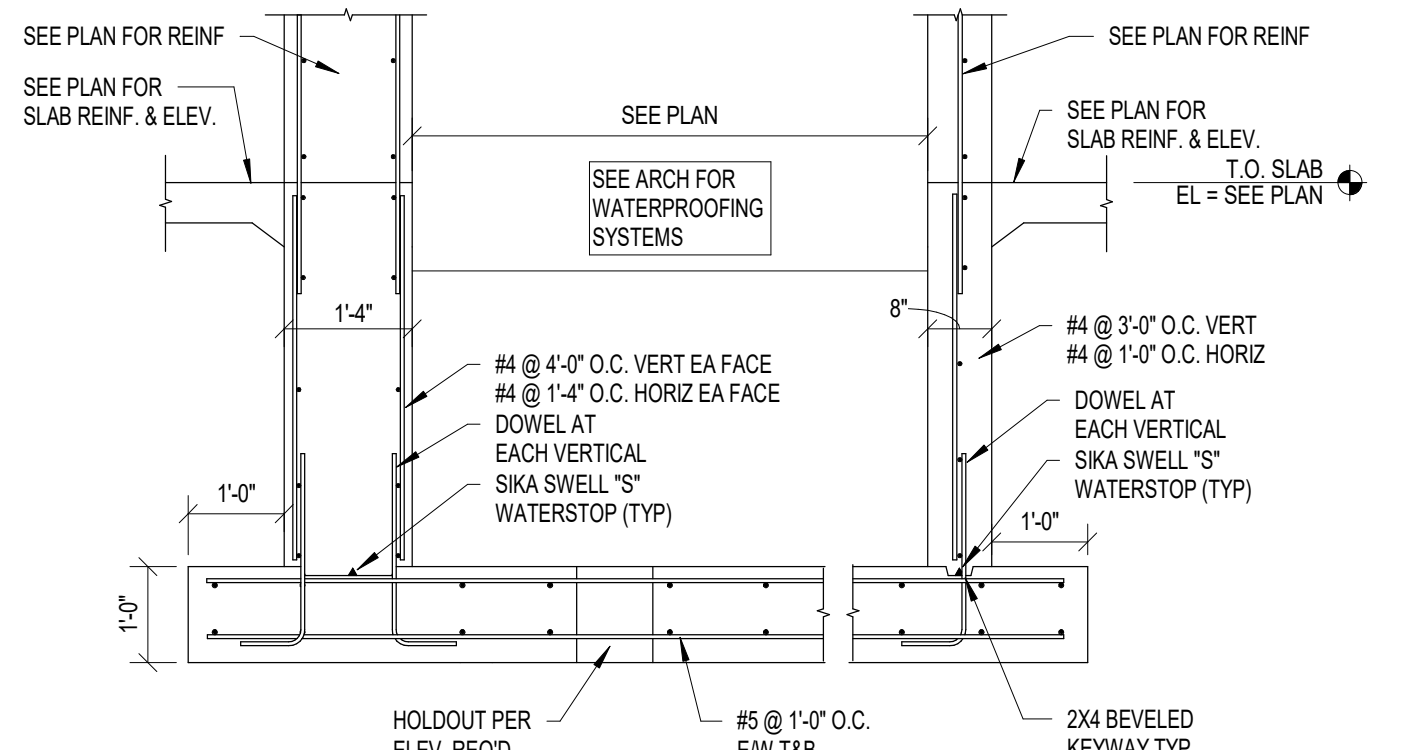
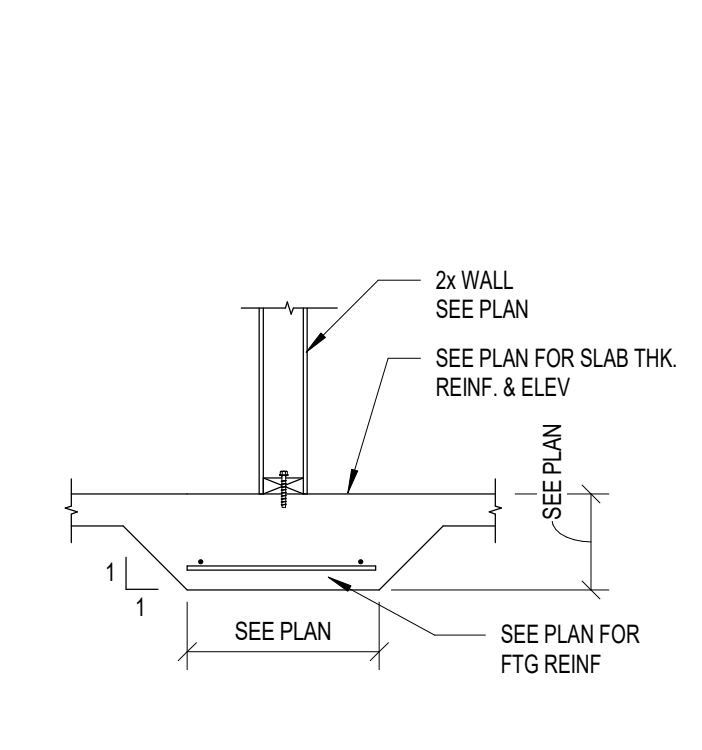
6 NOT USED
S301 1/2" = 1'-0"

2 FOUNDATION DETAIL
S301 1/2" = 1'-0"

3 FOUNDATION DETAIL
S301 1/2" = 1'-0"

4 FOUNDATION DETAIL
S301 1/2" = 1'-0"

5 STOOP SECTION
S301 1/2" = 1'-0"



7 THICKENED SLAB
S301 1/2" = 1'-0"

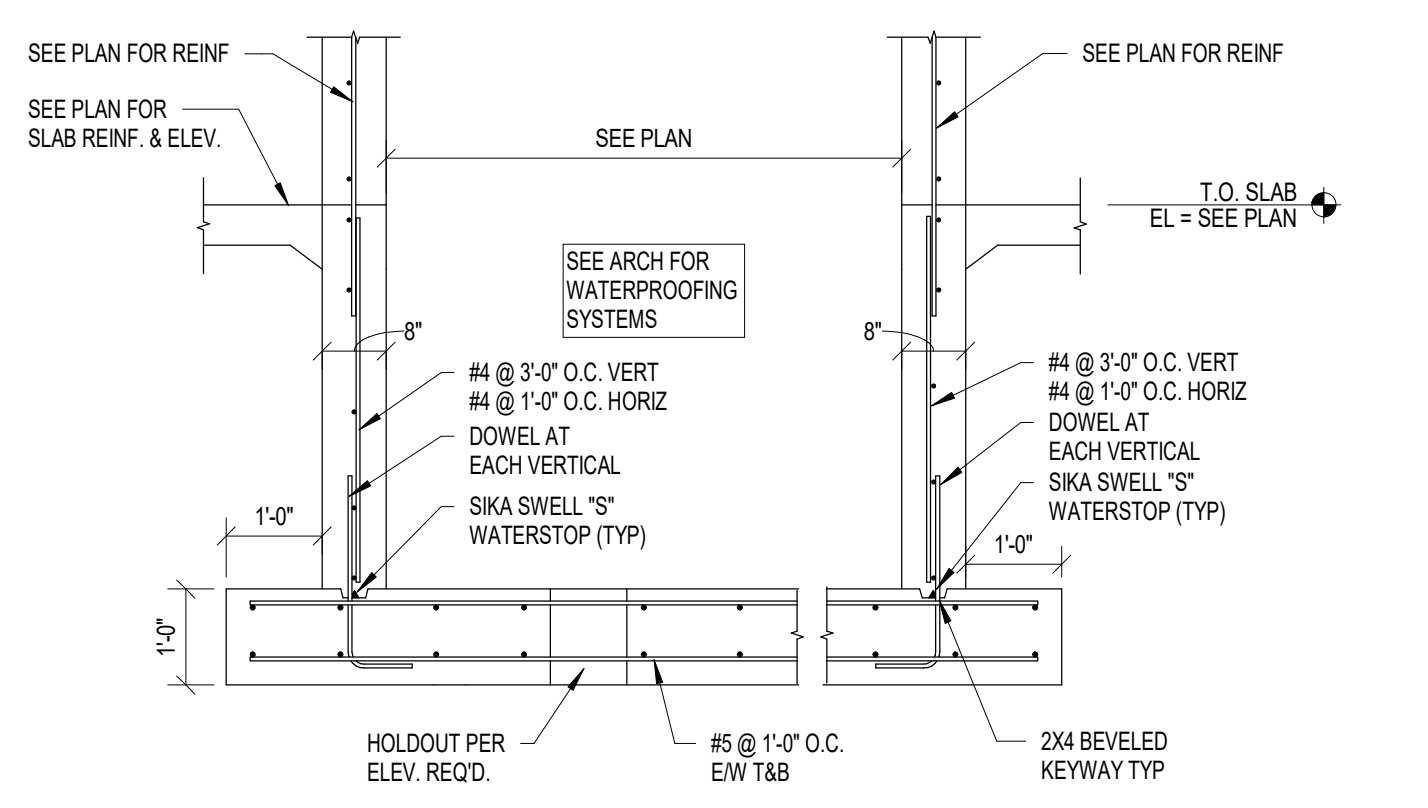
8 ELEVATOR PIT SECTION
S301 1/2" = 1'-0"

9 PIER DETAIL (P1)
S301 1/2" = 1'-0"

10 STAIR SECTION
S301 1/2" = 1'-0"

11 FOUNDATION DETAIL
S301 1/2" = 1'-0"

12 FOUNDATION DETAIL
S301 1/2" = 1'-0"



13 ELEVATOR PIT SECTION
S301 1/2" = 1'-0"



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/19/21

Date	Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-archs.com

T | 320.251.9155
F | 320.251.4919
hma@hma-archs.com

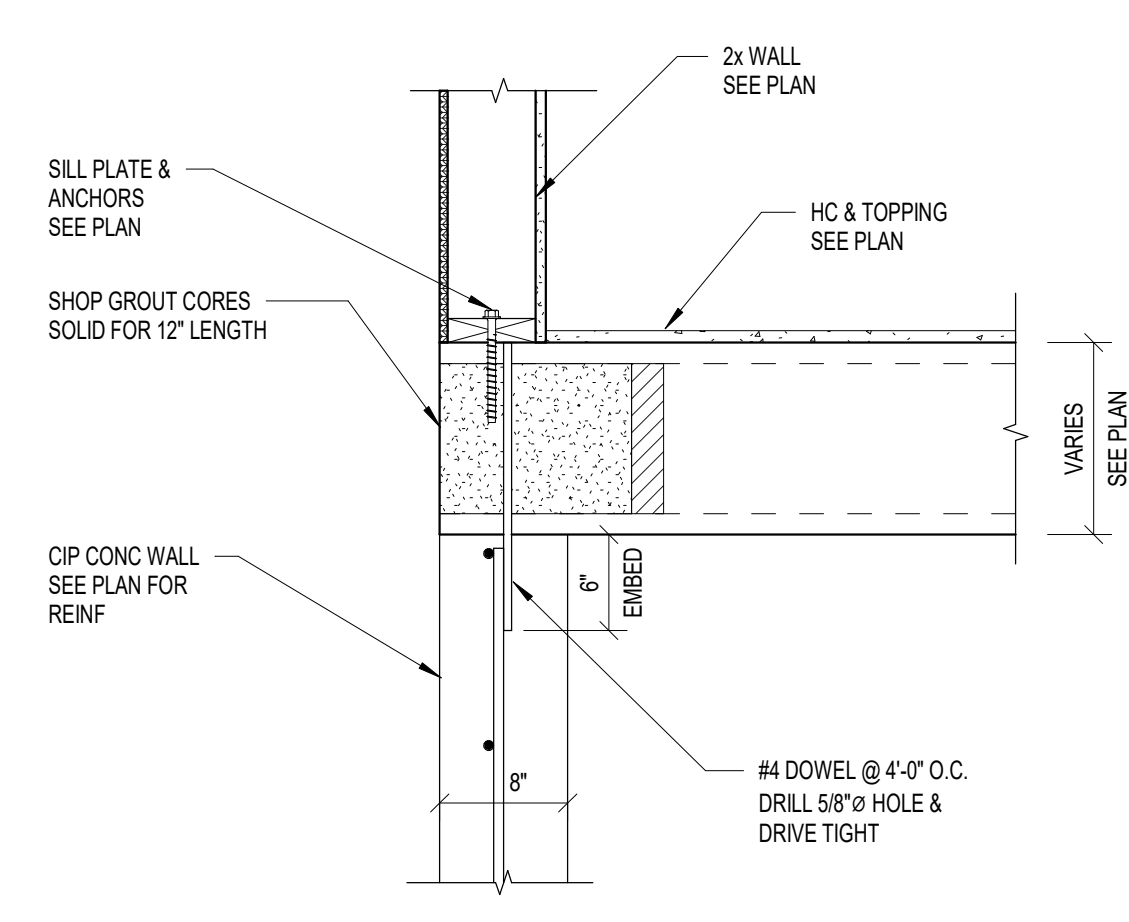
New Apartment Complex:

Zumbrota
Apartment
Complex

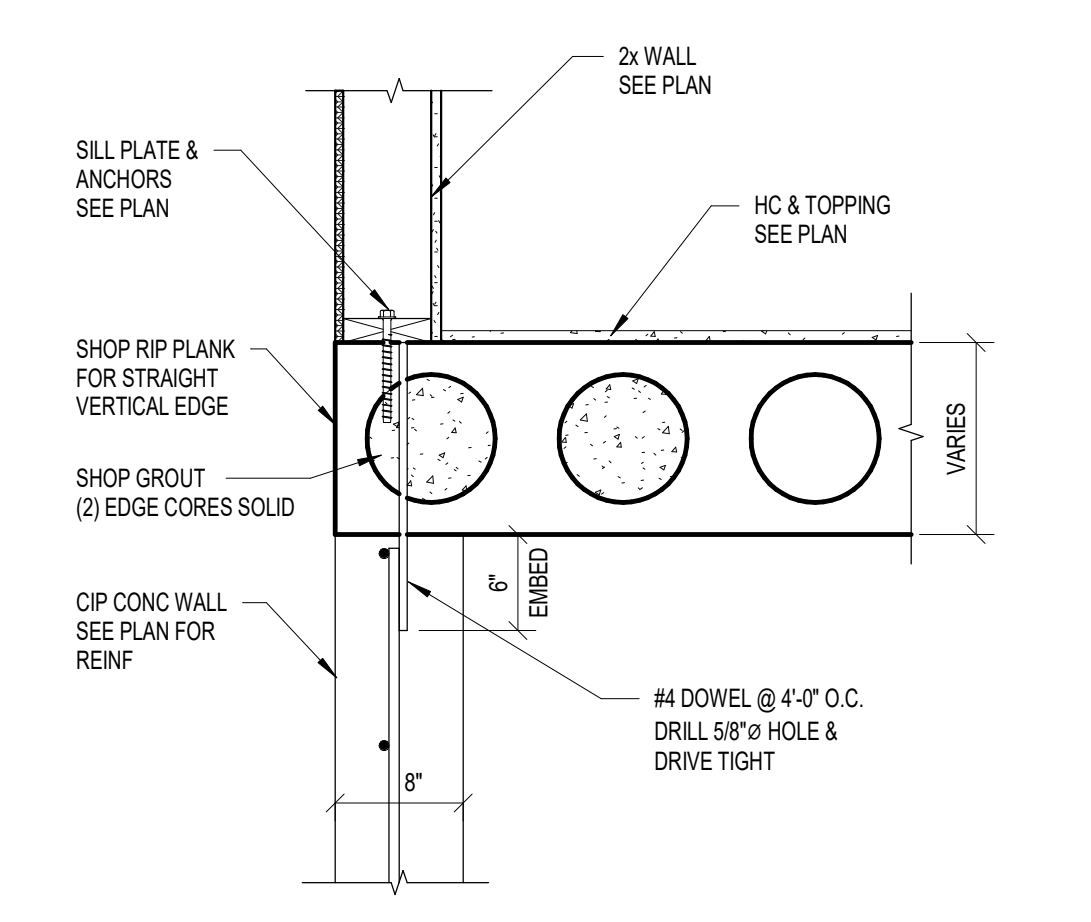
Zumbrota, MN

FOUNDATION DETAILS

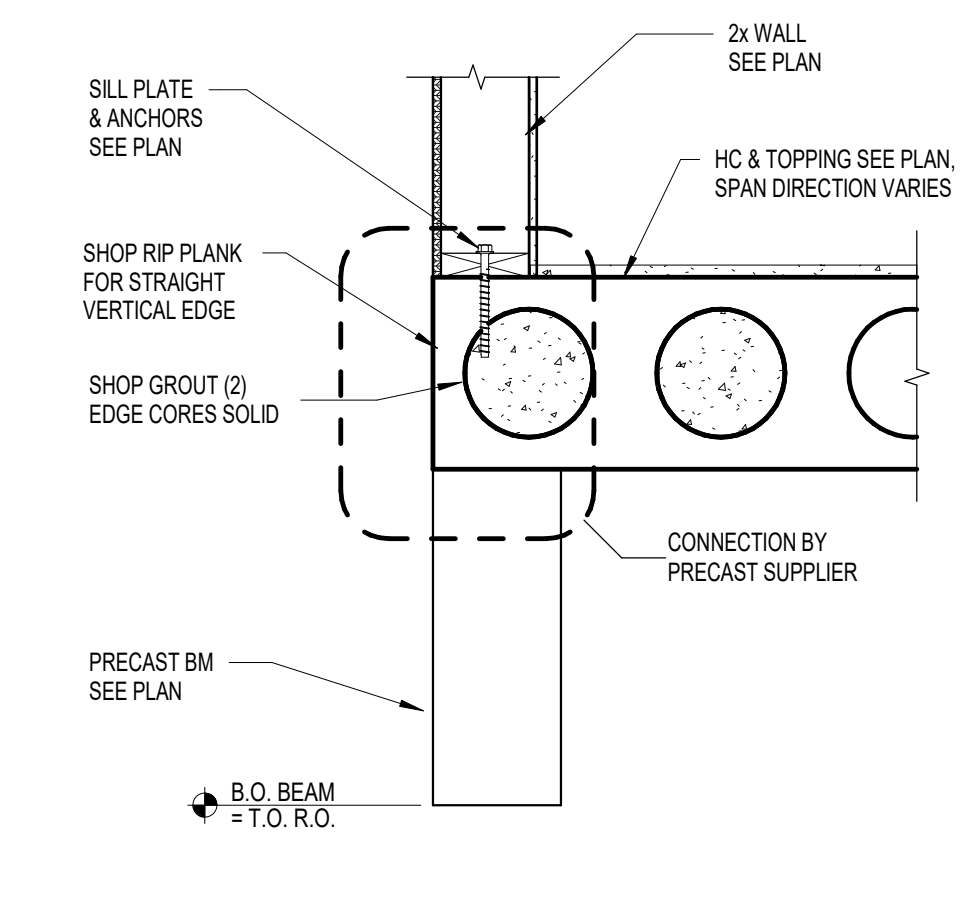
S301



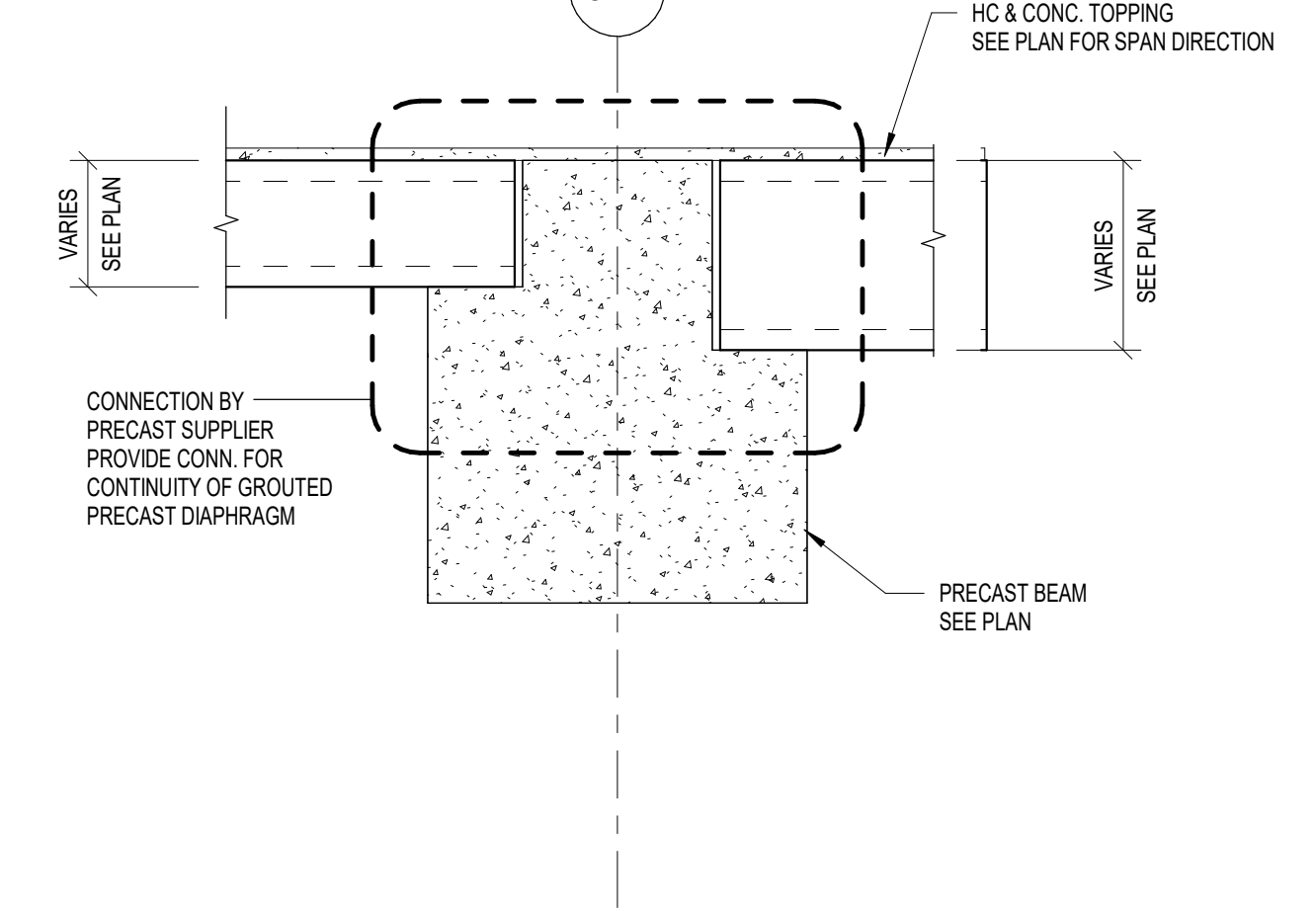
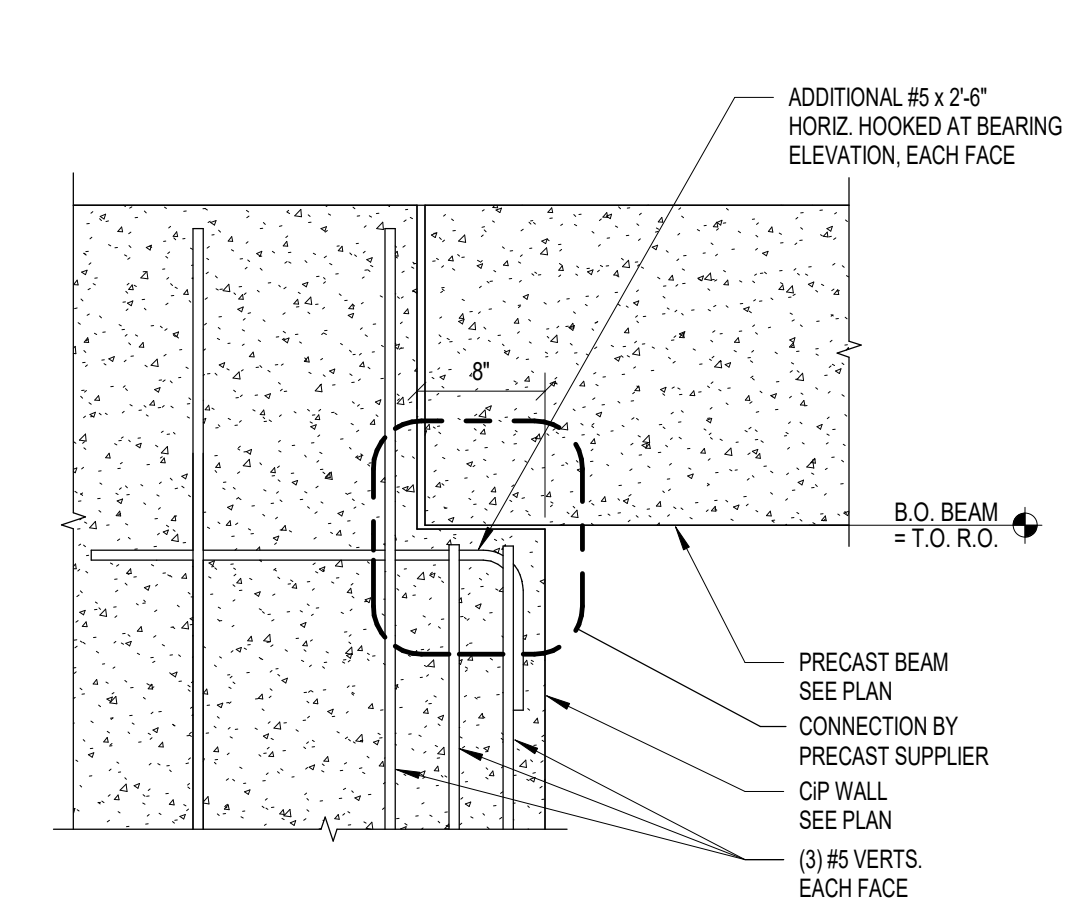
1 FRAMING DETAIL
S401 1" = 1'-0"



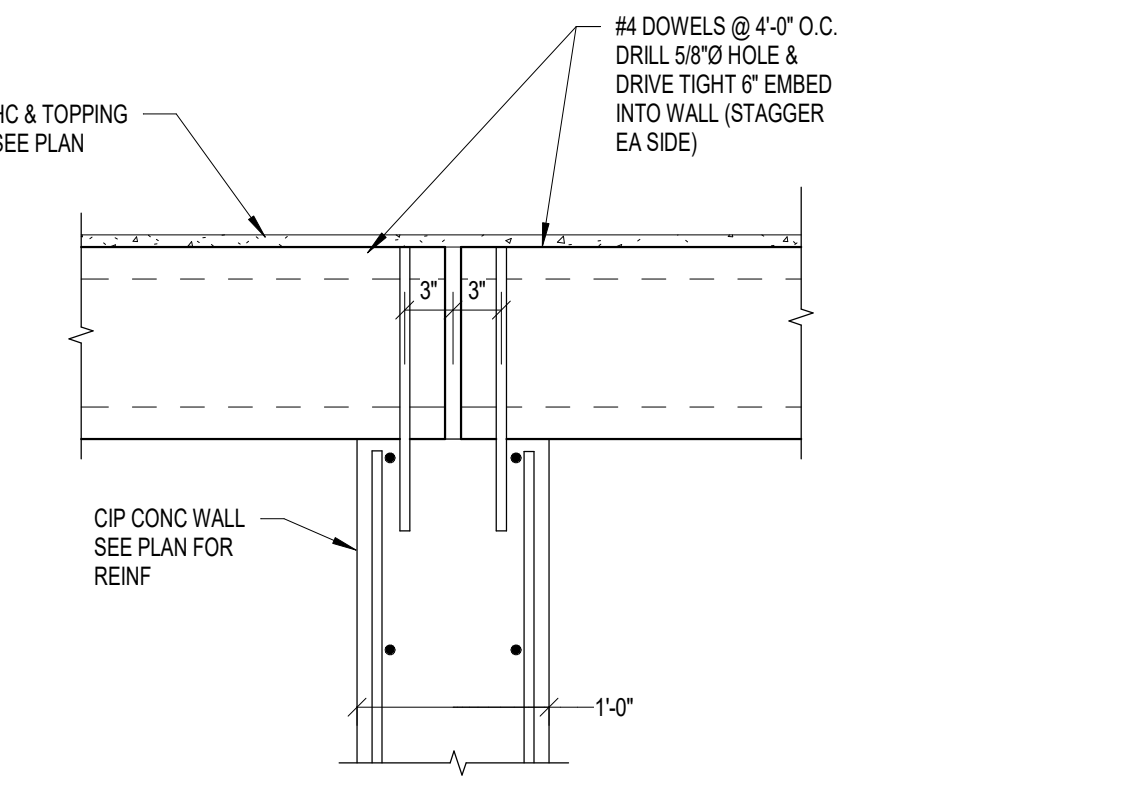
2 FRAMING DETAIL
S401 1" = 1'-0"



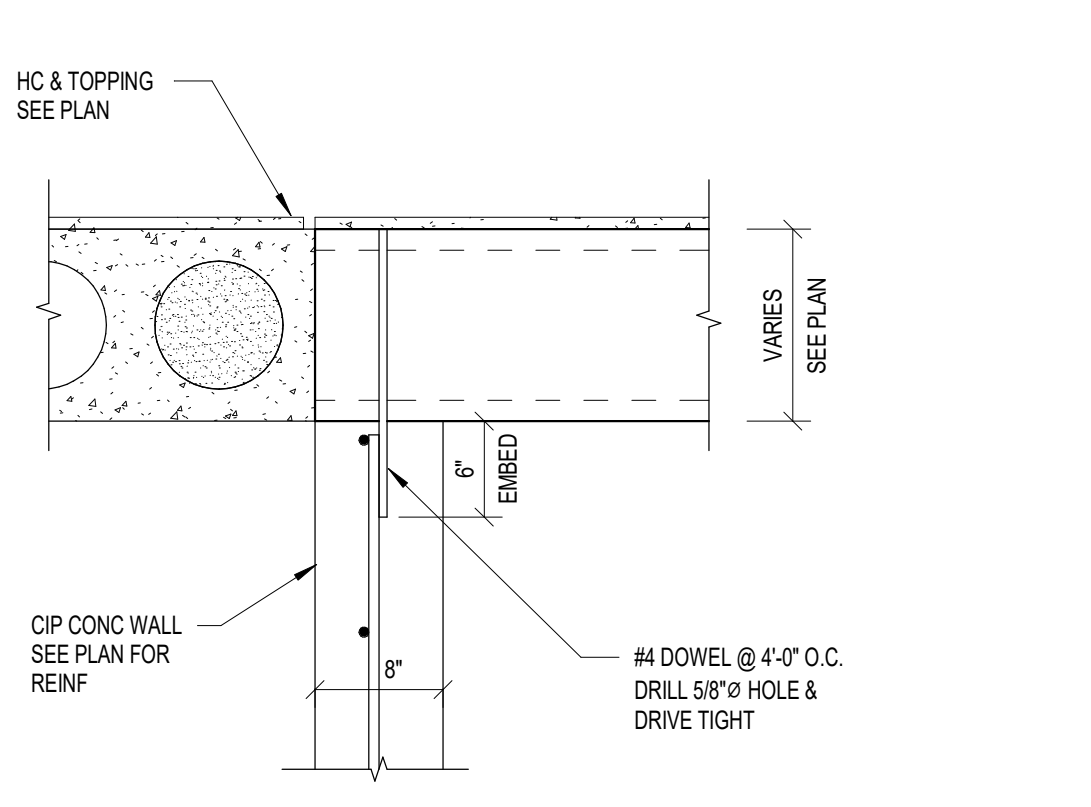
3 PRECAST BEAM BEARING
S401 1" = 1'-0"



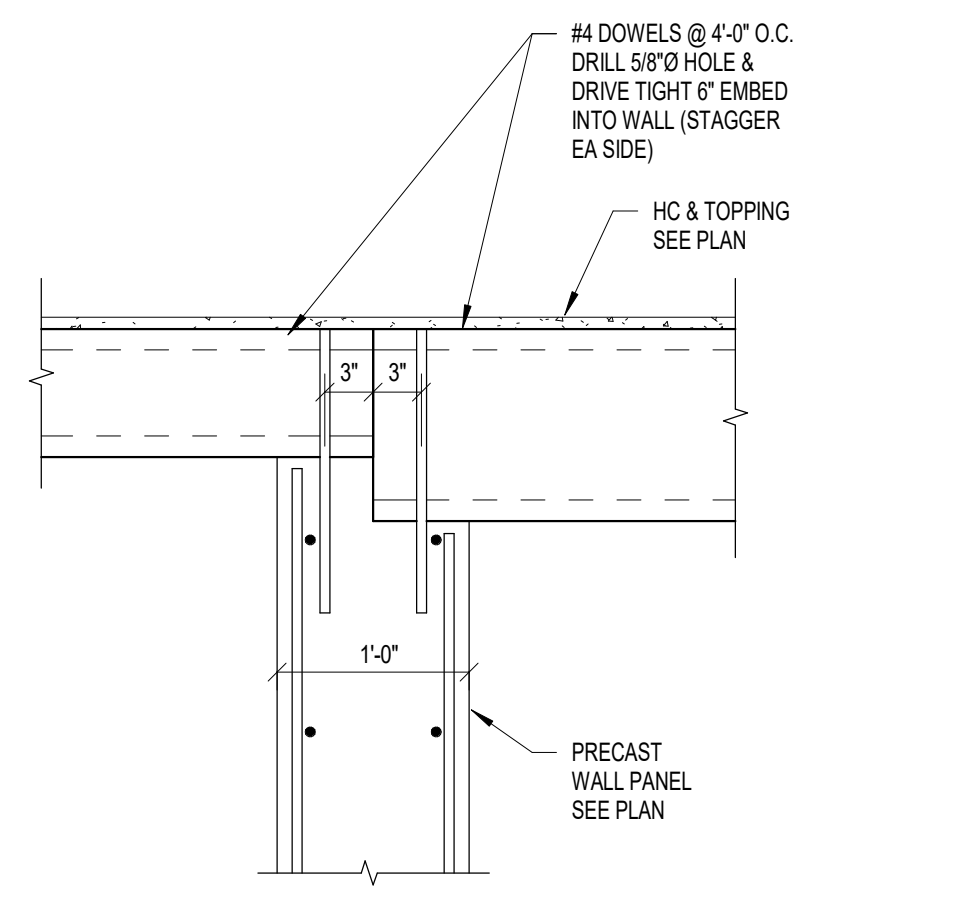
4 FRAMING DETAIL
S401 1" = 1'-0"



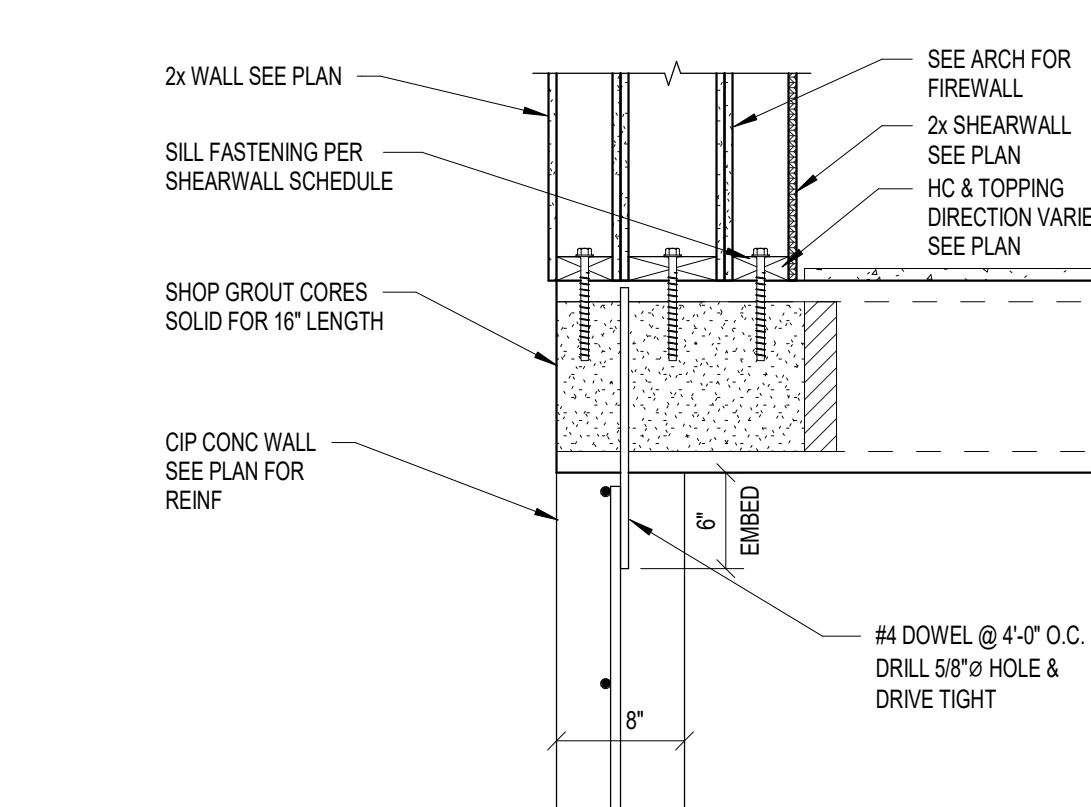
5 FRAMING DETAIL
S401 1" = 1'-0"



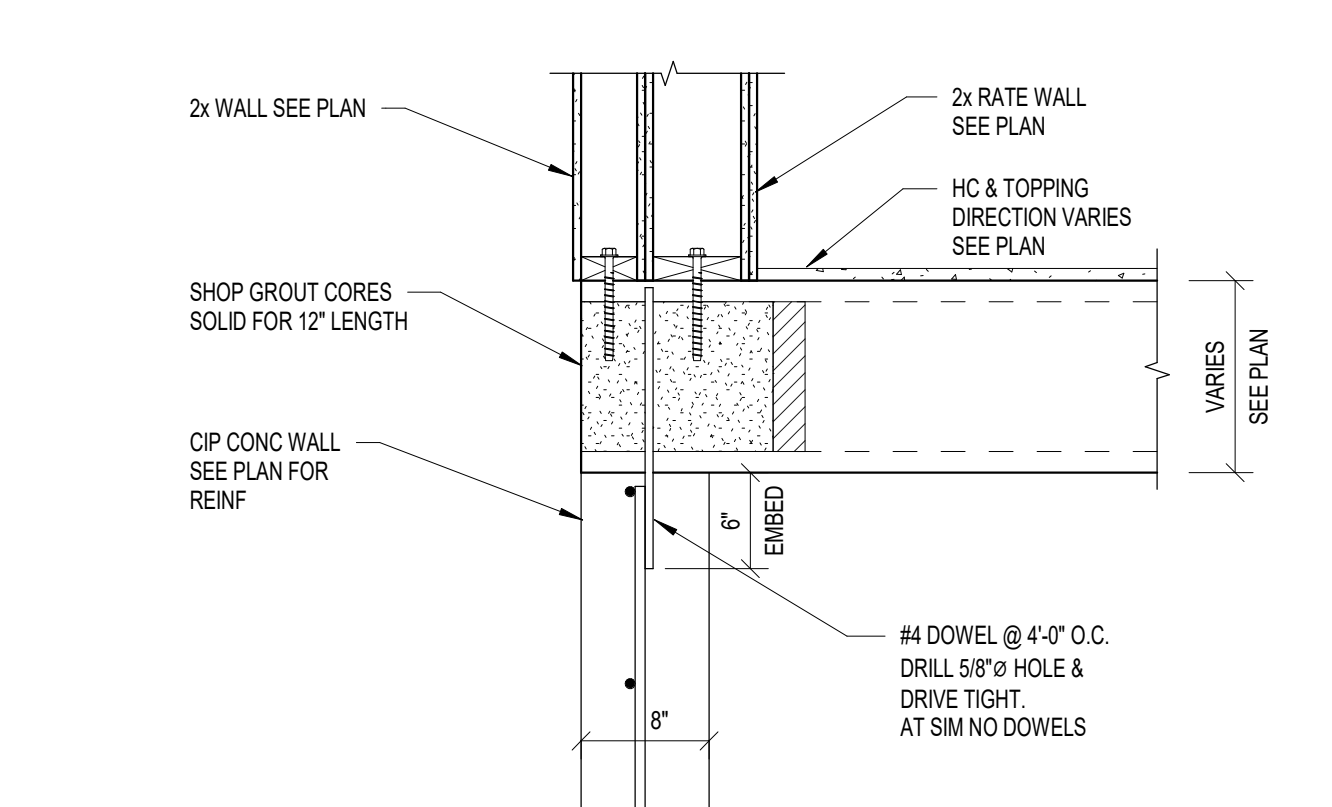
6 FRAMING DETAIL
S401 1" = 1'-0"



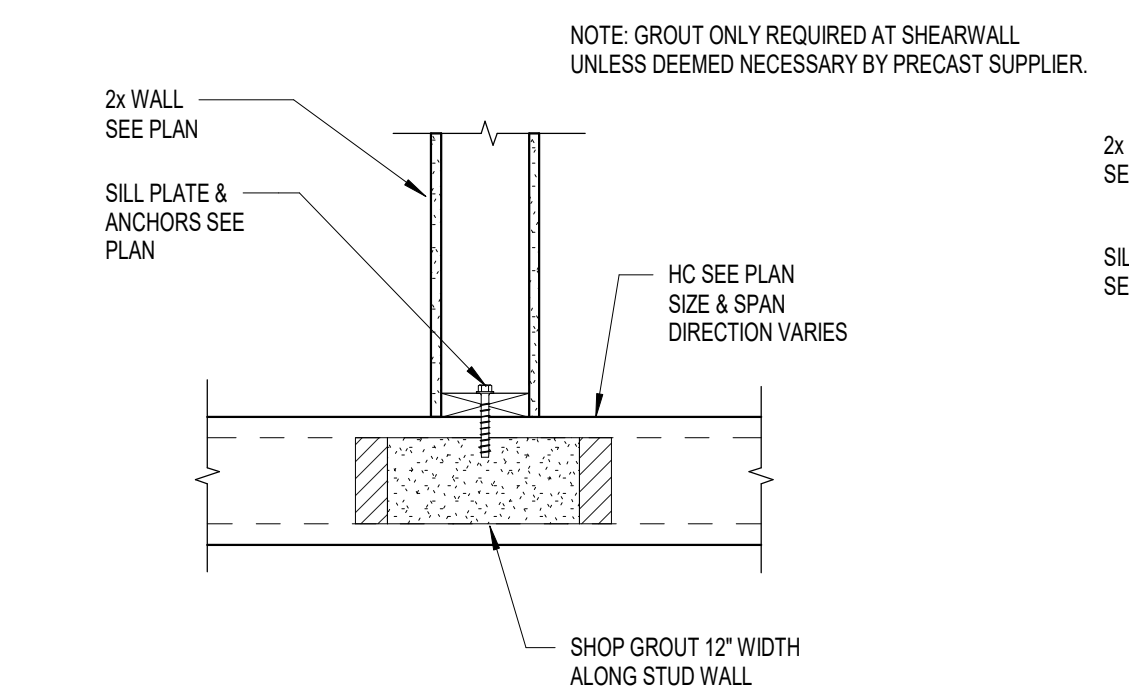
7 FRAMING DETAIL
S401 1" = 1'-0"



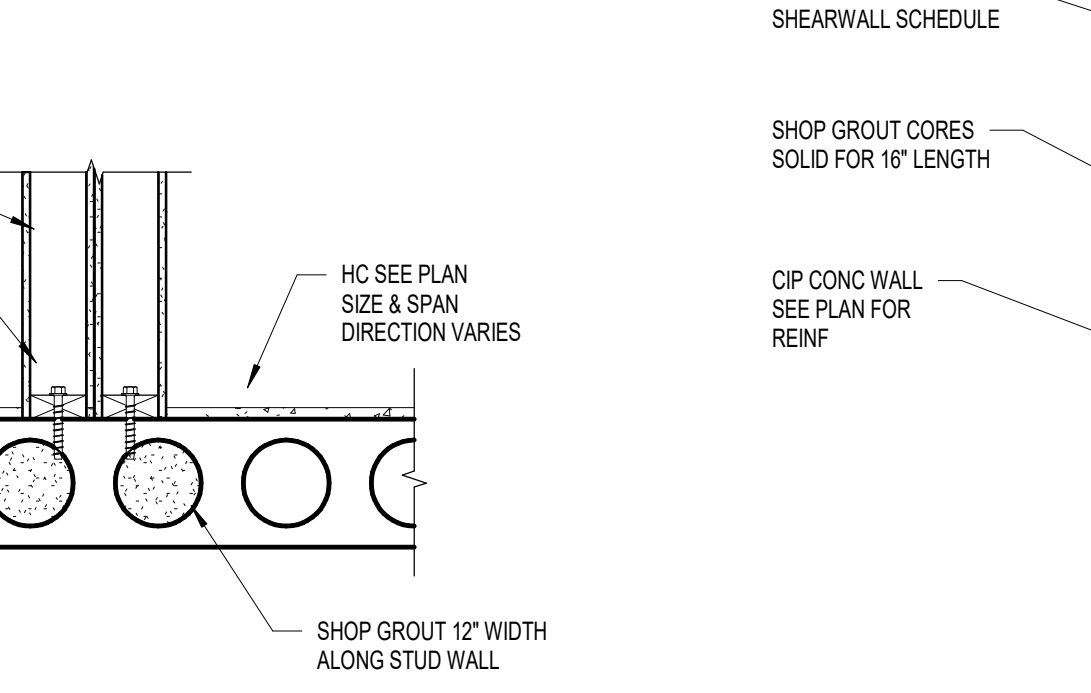
8 FRAMING DETAIL
S401 1" = 1'-0"



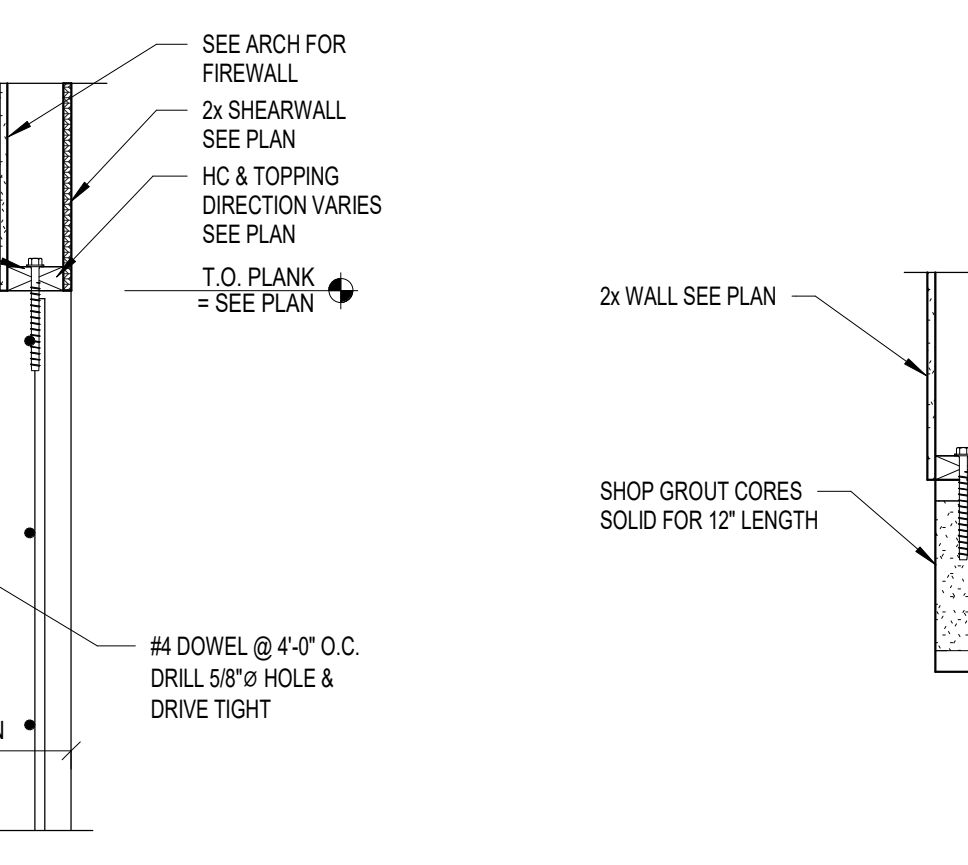
9 FRAMING DETAIL
S401 1" = 1'-0"



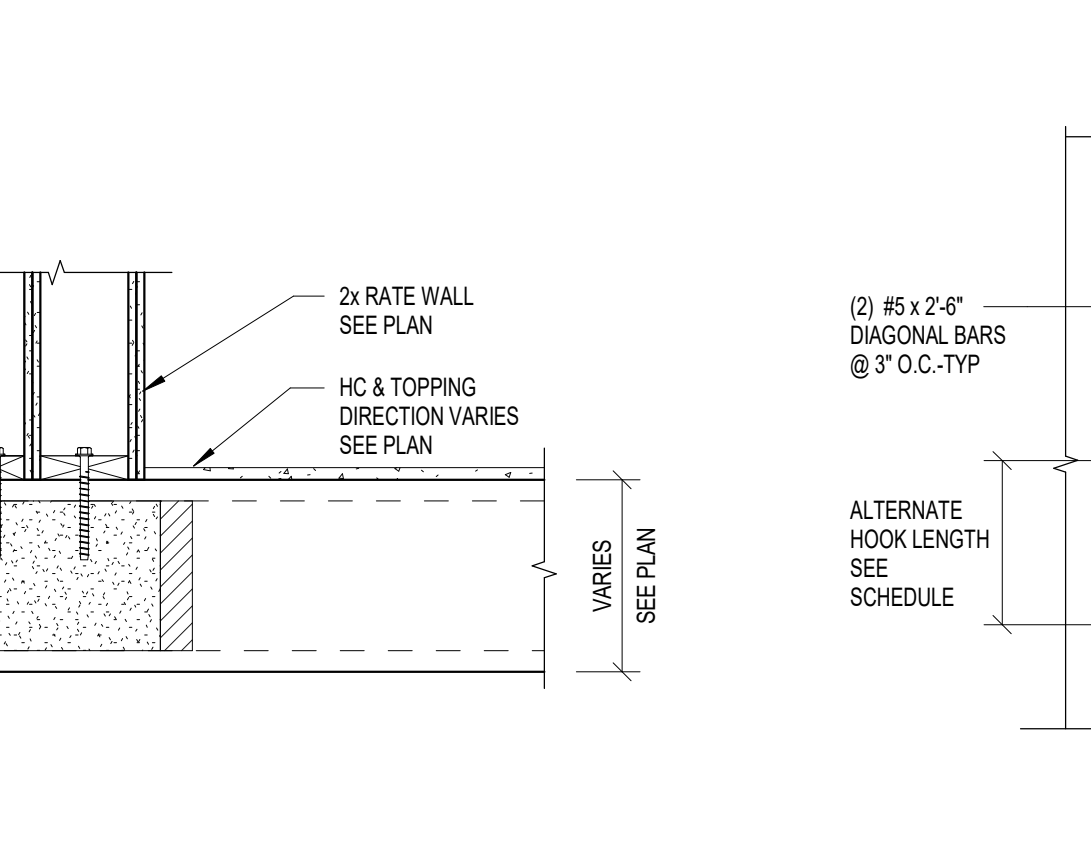
10 FRAMING DETAIL
S401 1" = 1'-0"



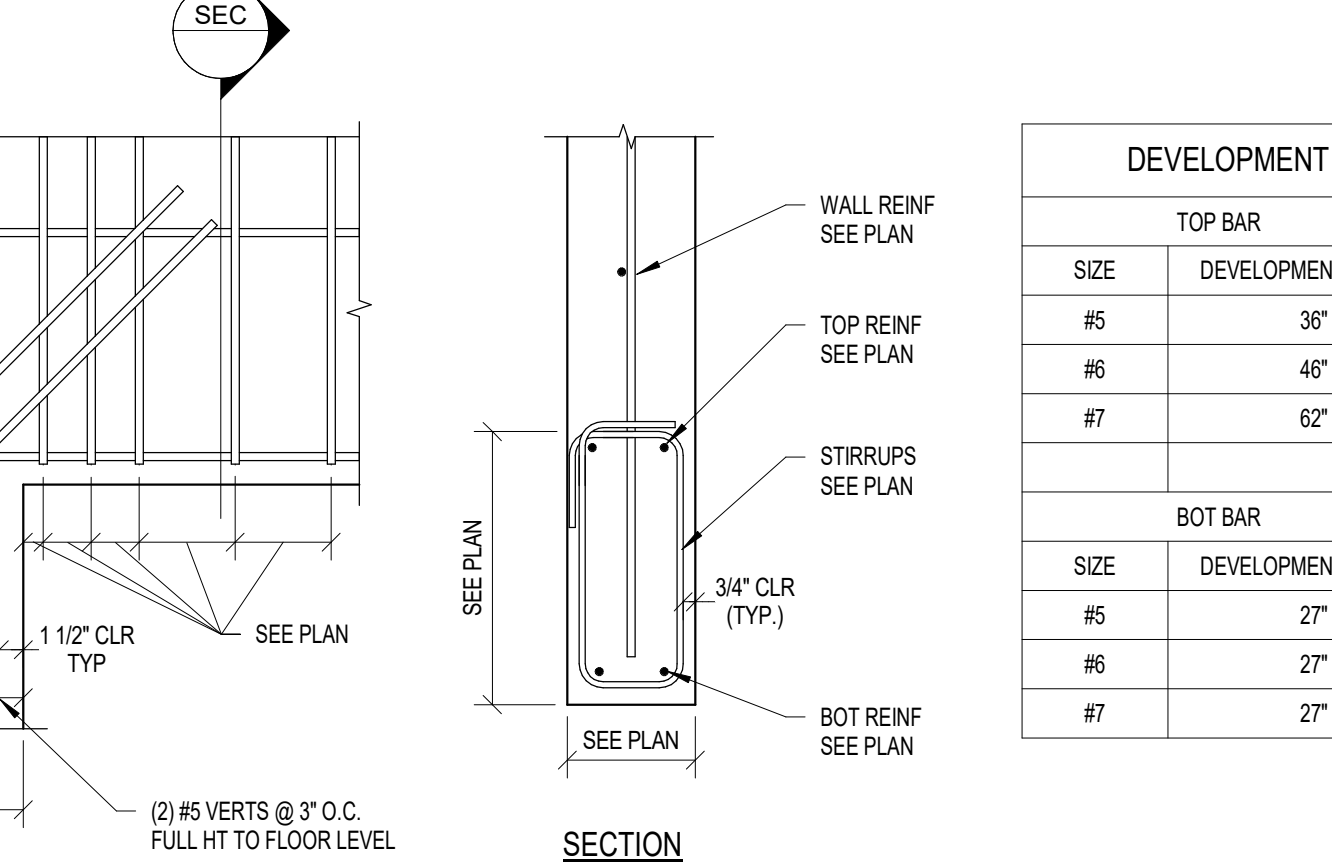
11 FRAMING DETAIL
S401 1" = 1'-0"



12 FRAMING DETAIL
S401 1" = 1'-0"



13 FRAMING DETAIL
S401 1" = 1'-0"



DEVELOPMENT LENGTH SCHEDULE		
TOP BAR		
SIZE	DEVELOPMENT LENGTH	ALT HOOK LENGTH
#5	36"	14"
#6	48"	17"
#7	62"	20"
BOT BAR		
SIZE	DEVELOPMENT LENGTH	ALT HOOK LENGTH
#5	27"	14"
#6	27"	14"
#7	27"	14"



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/18/21

Date	Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-arch.com

T | 320.251.9155
F | 320.251.4919
hma@hma-arch.com

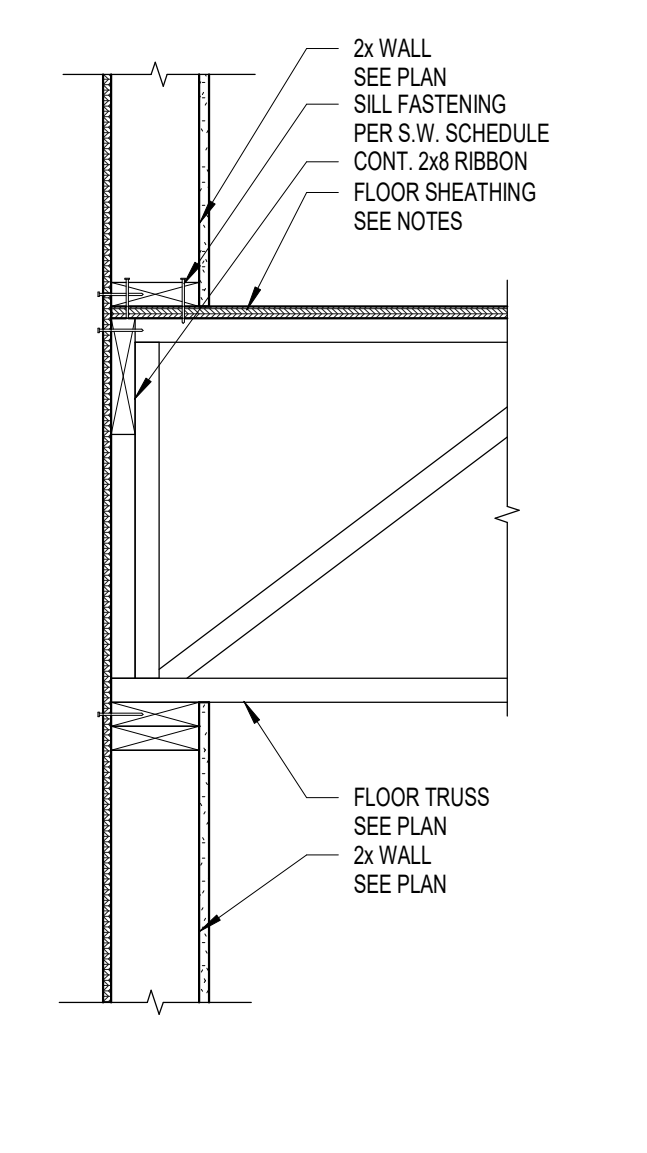
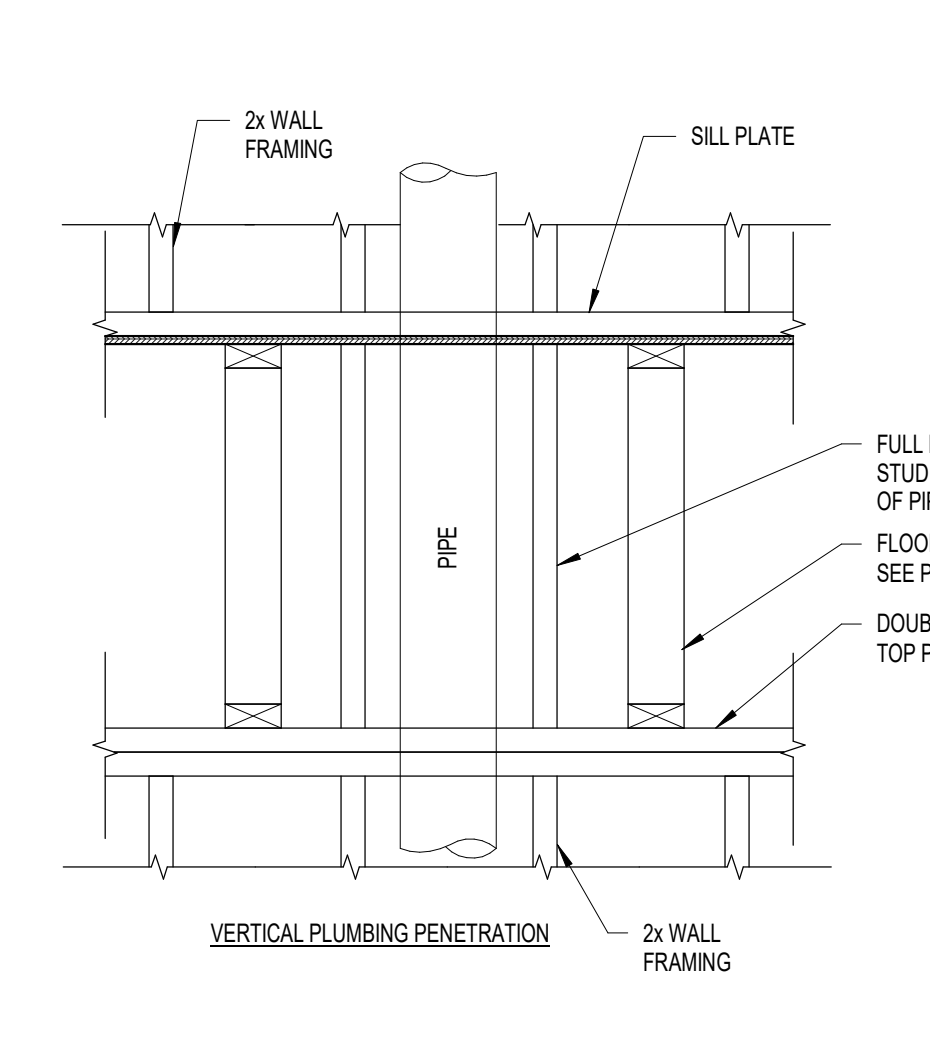
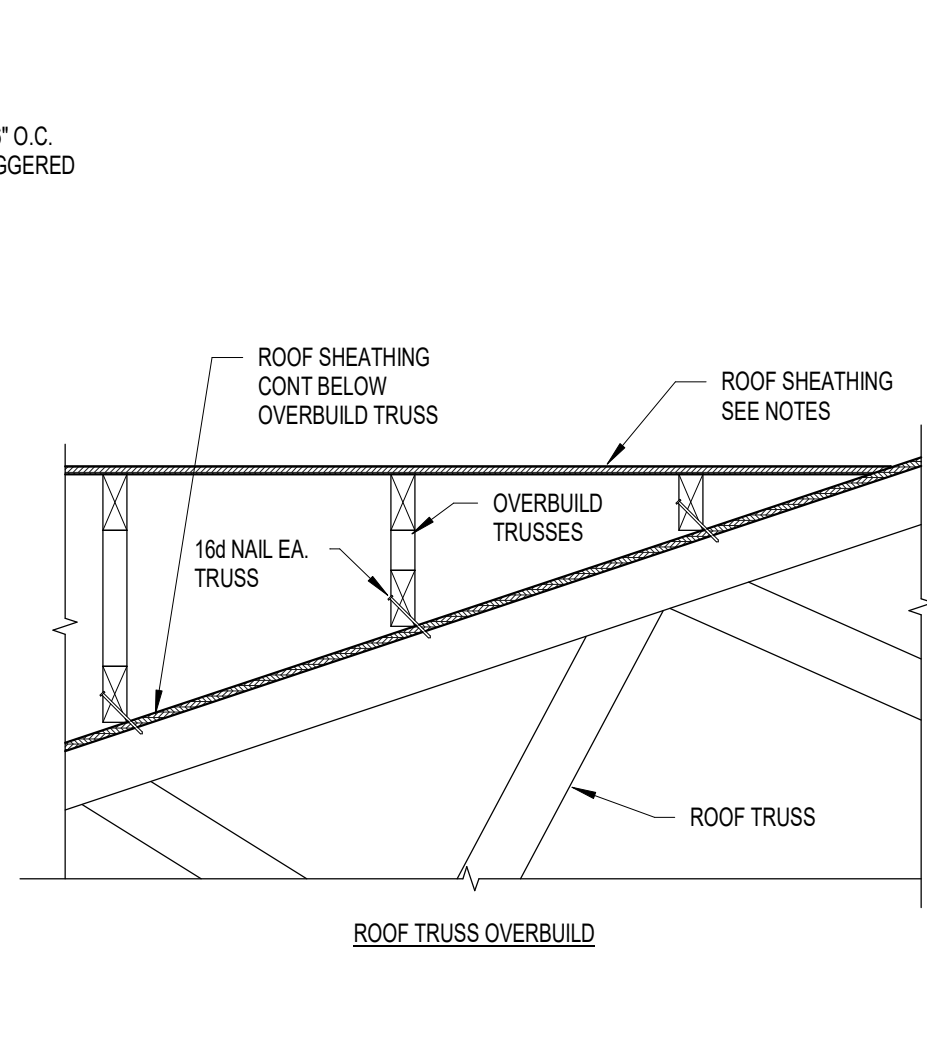
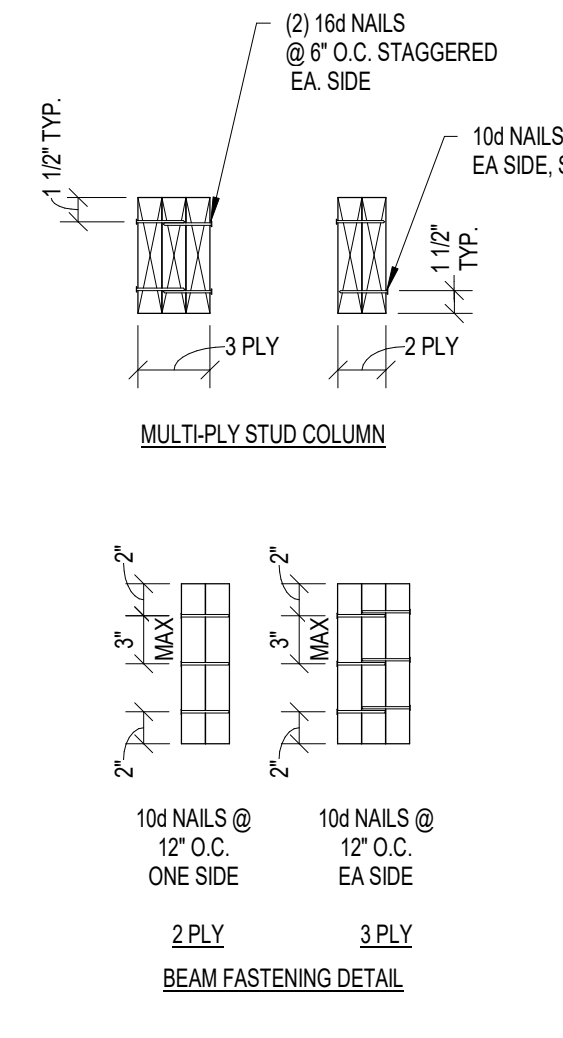
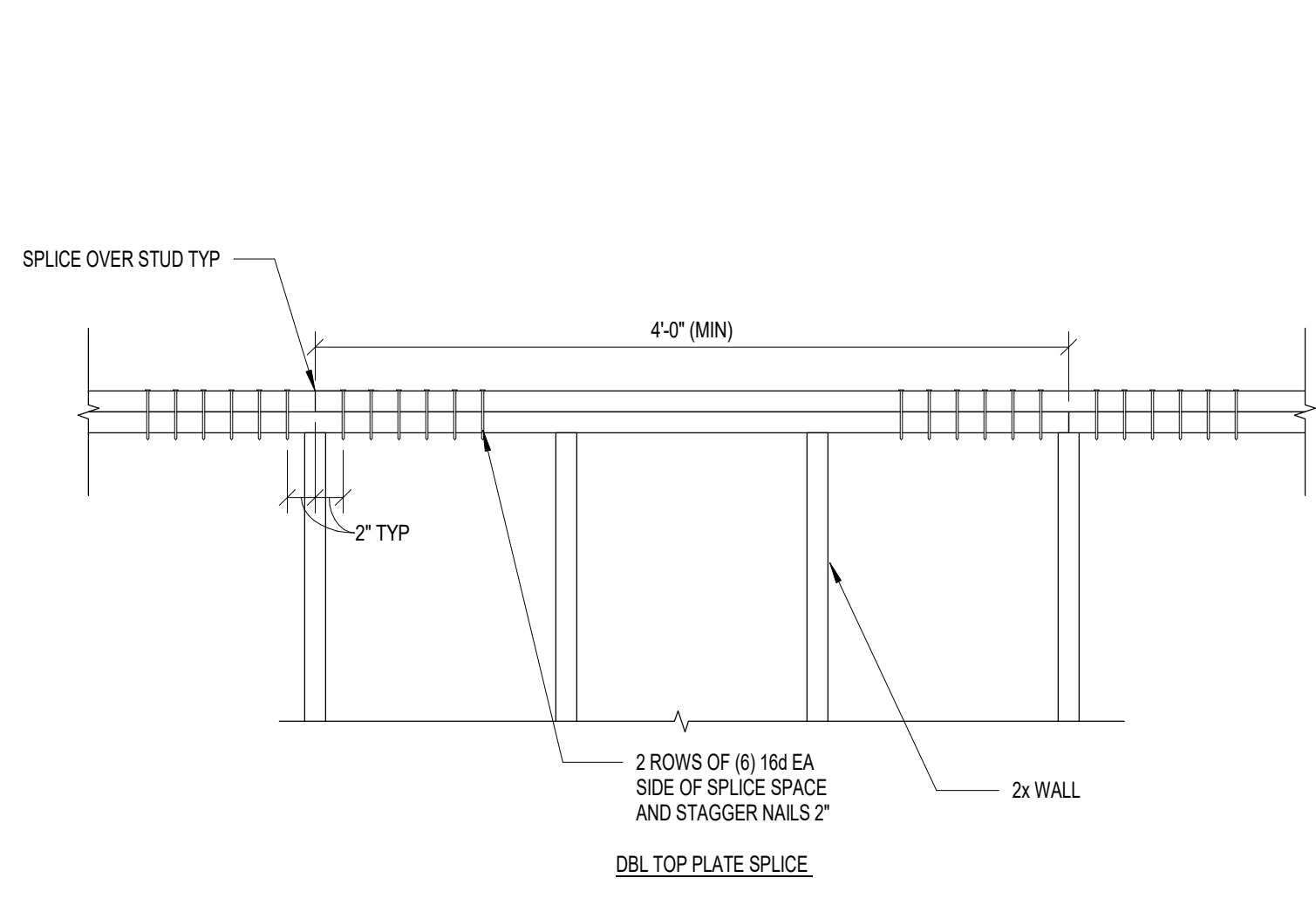
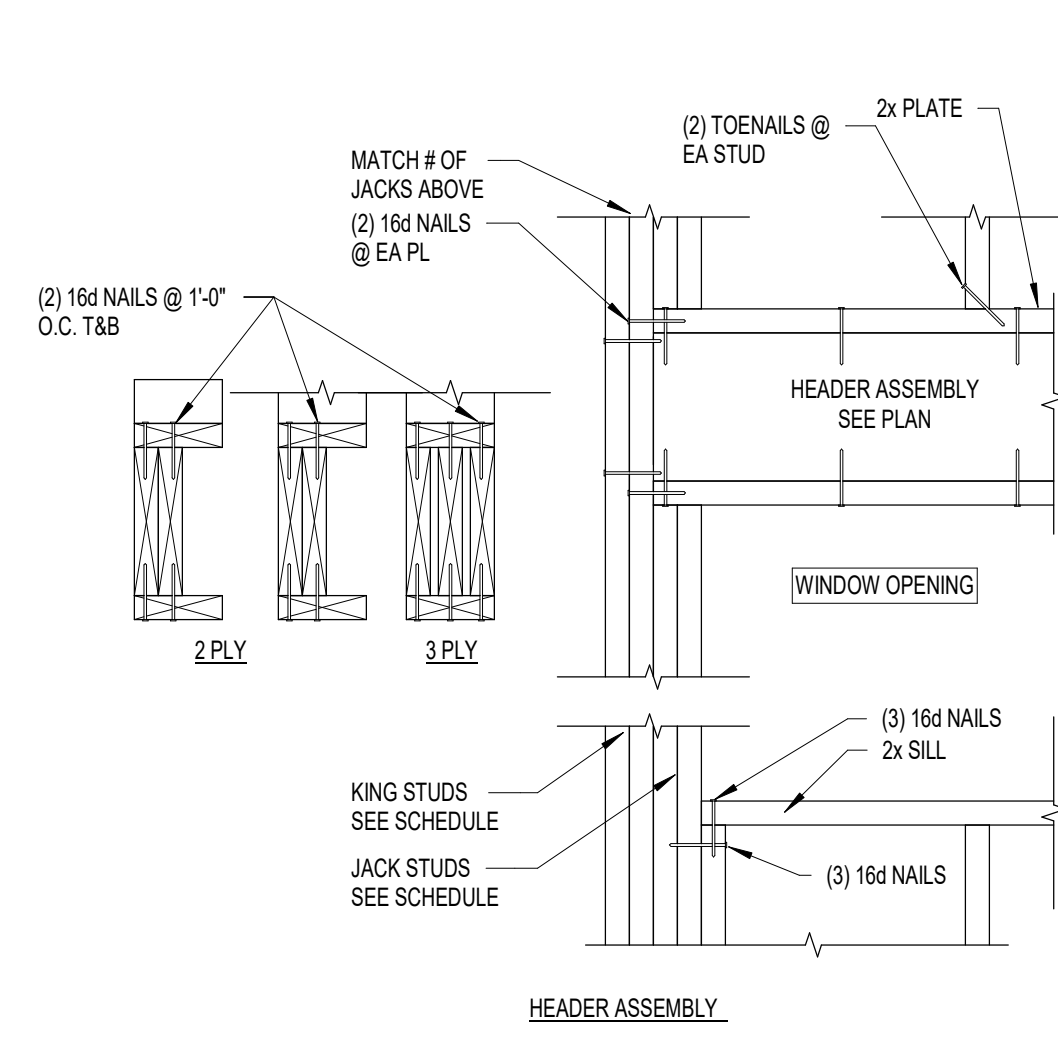
New Apartment Complex:

Zumbrota
Apartment
Complex

Zumbrota, MN

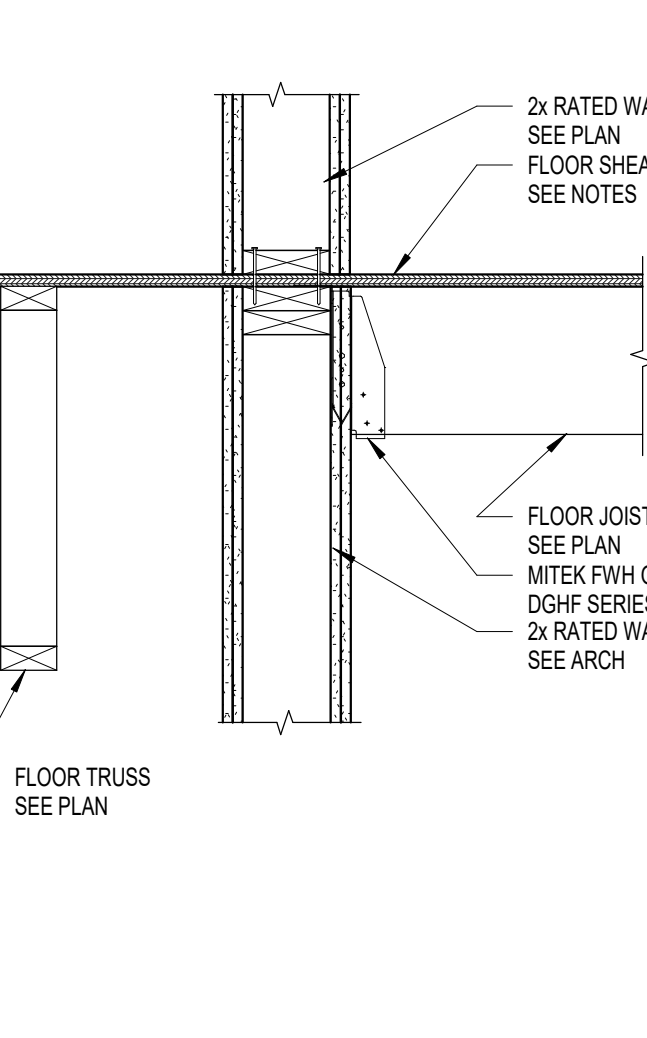
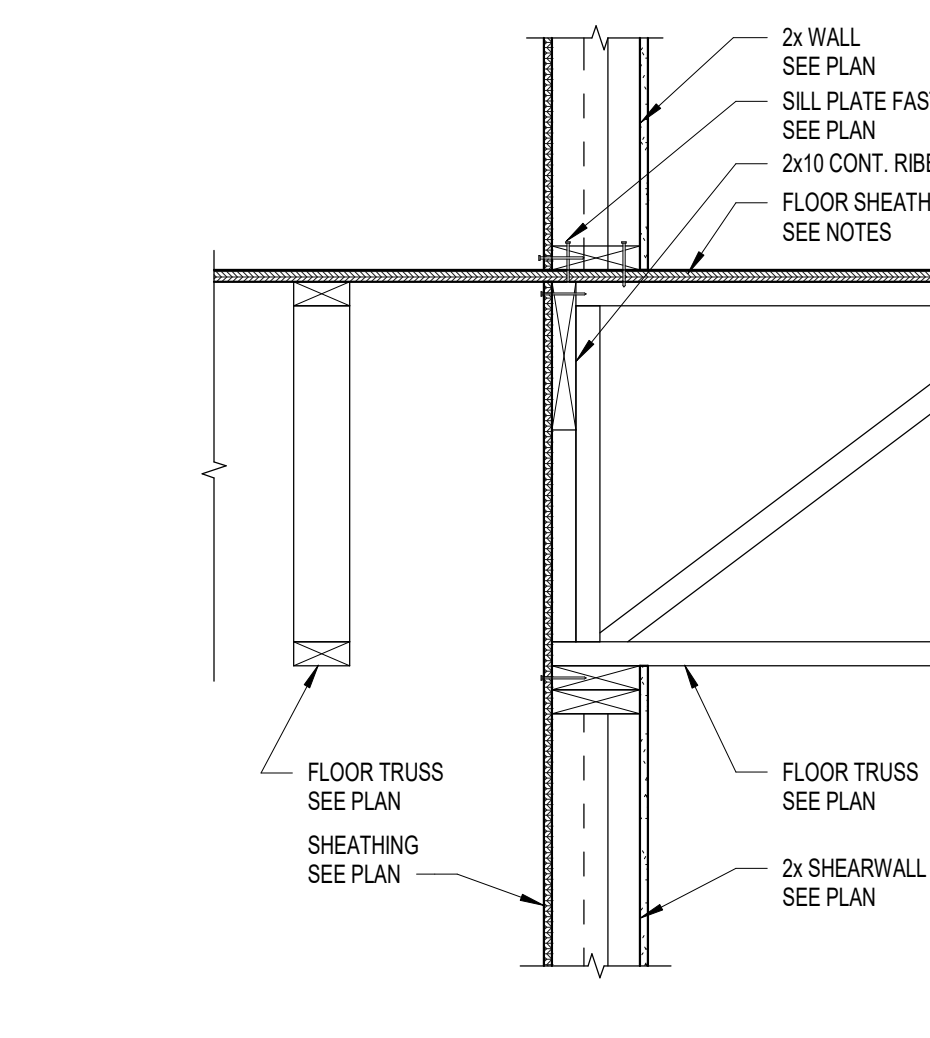
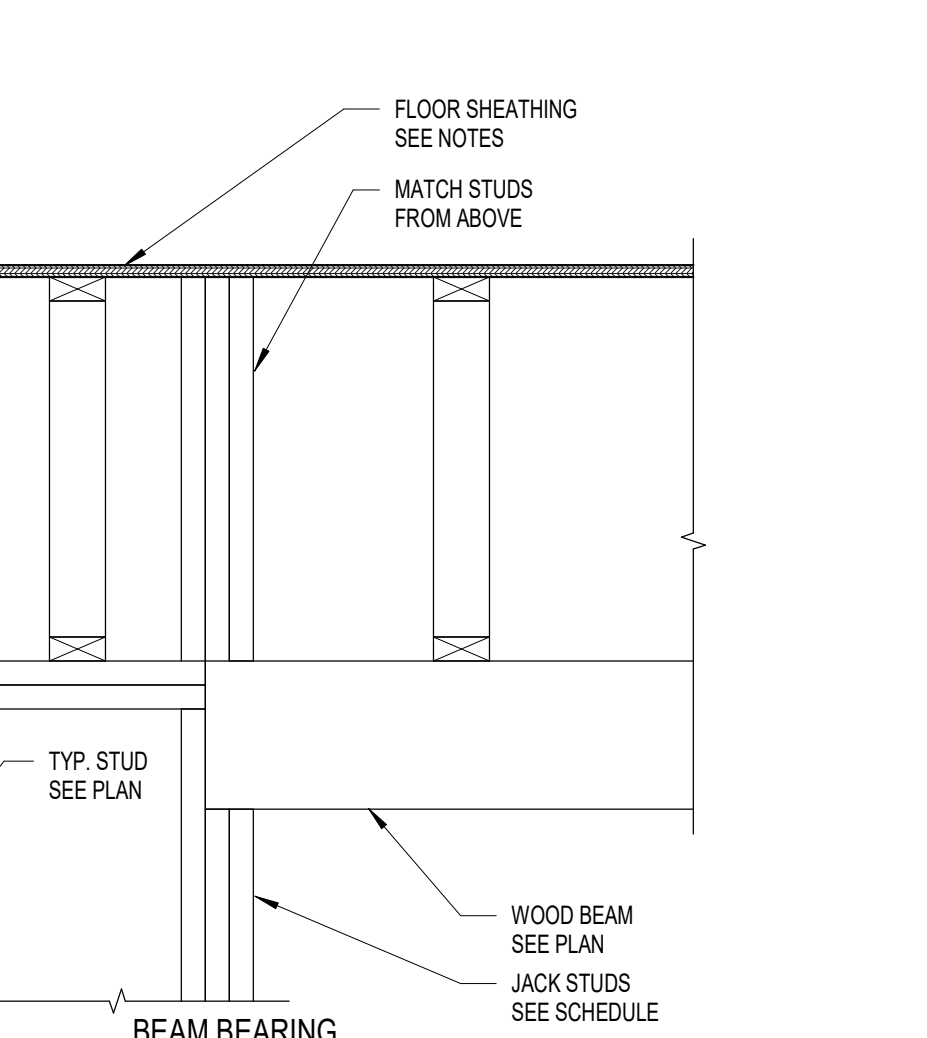
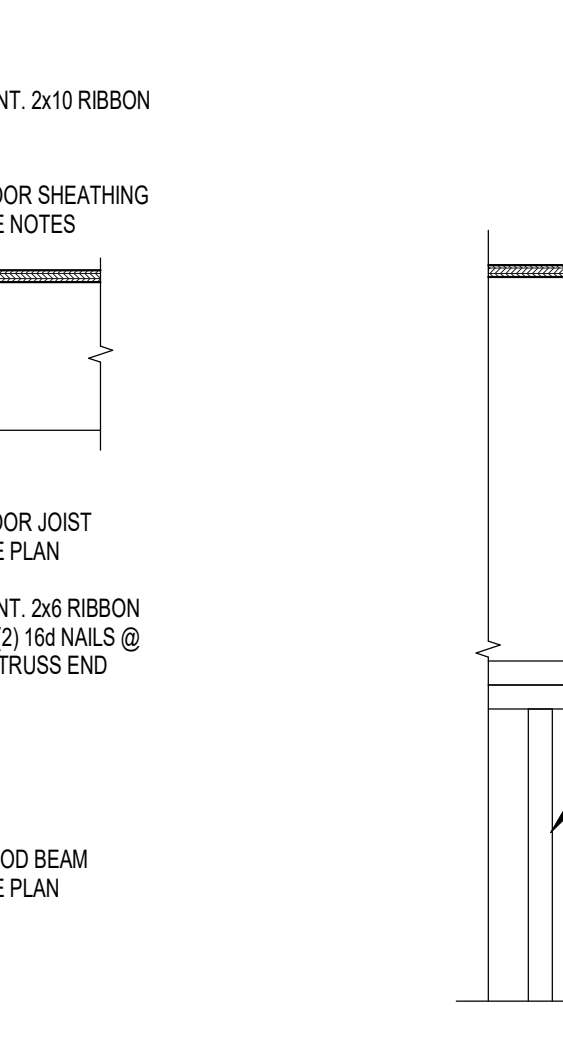
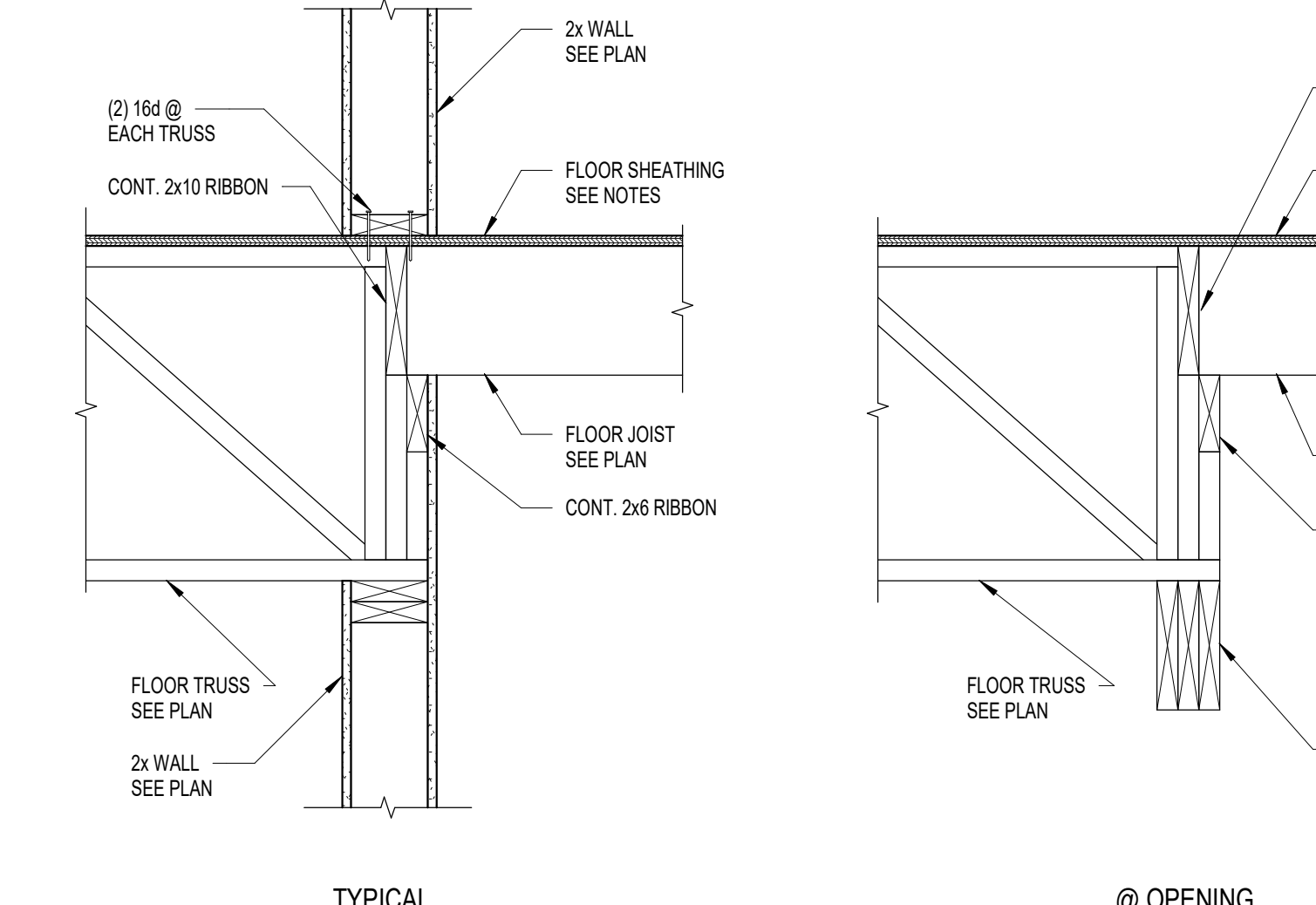
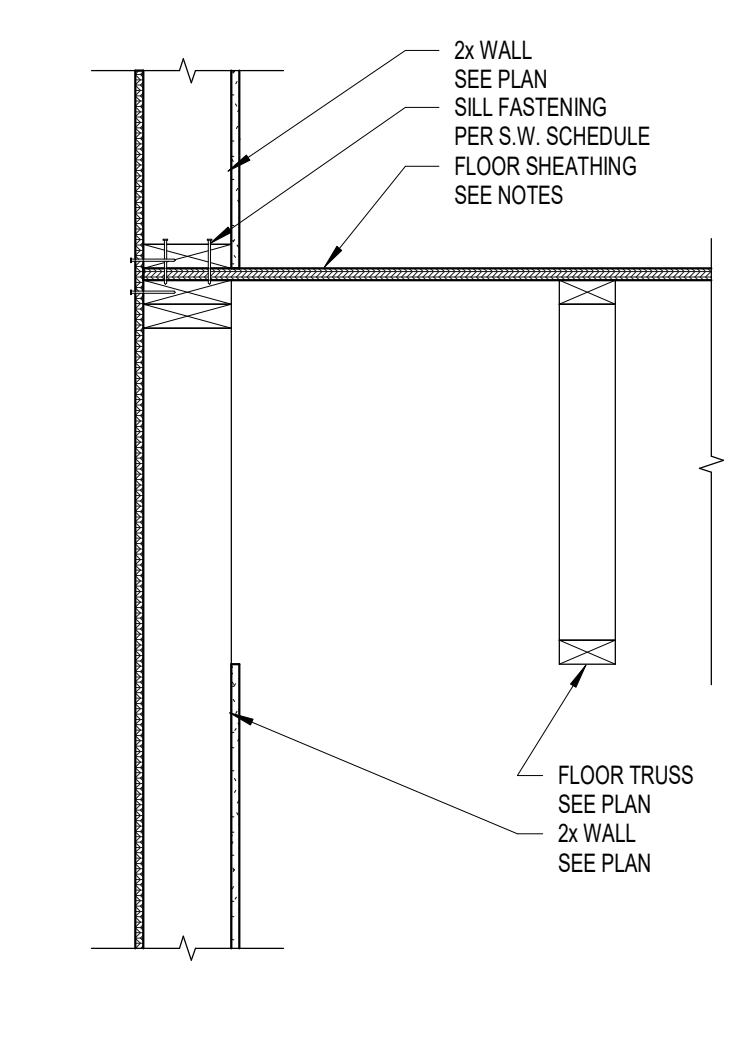
FRAMING DETAILS

S401



1 STANDARD WOOD FRAMING DETAILS
S402 1" = 1'-0"

2 FRAMING DETAIL
S402 1" = 1'-0"



3 FRAMING DETAIL
S402 1" = 1'-0"

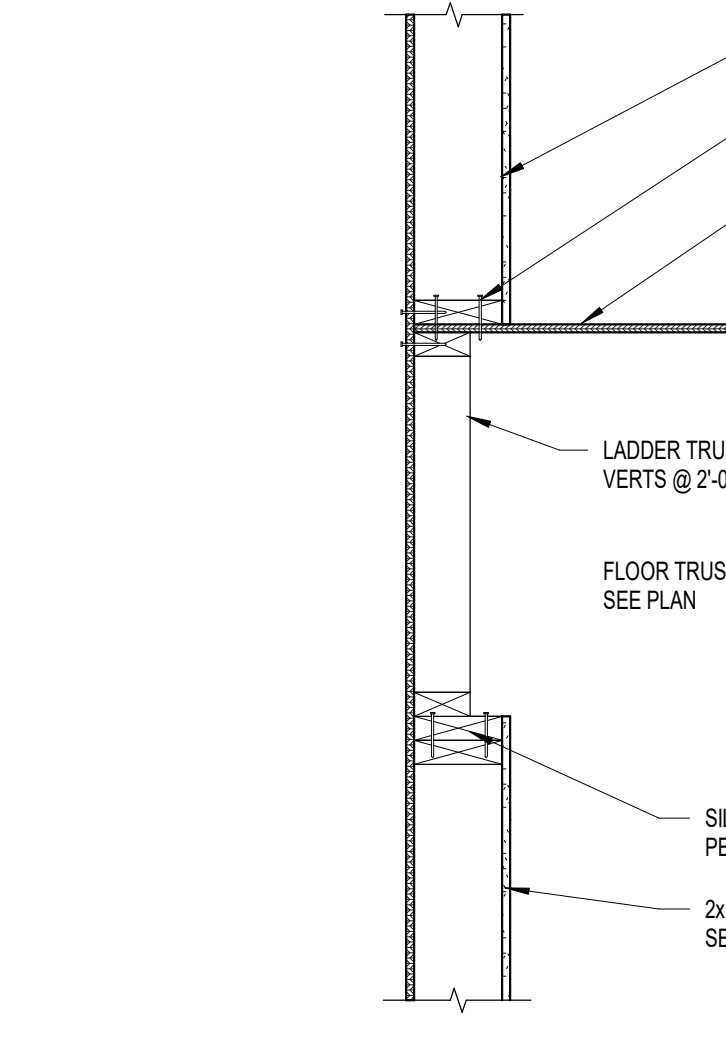
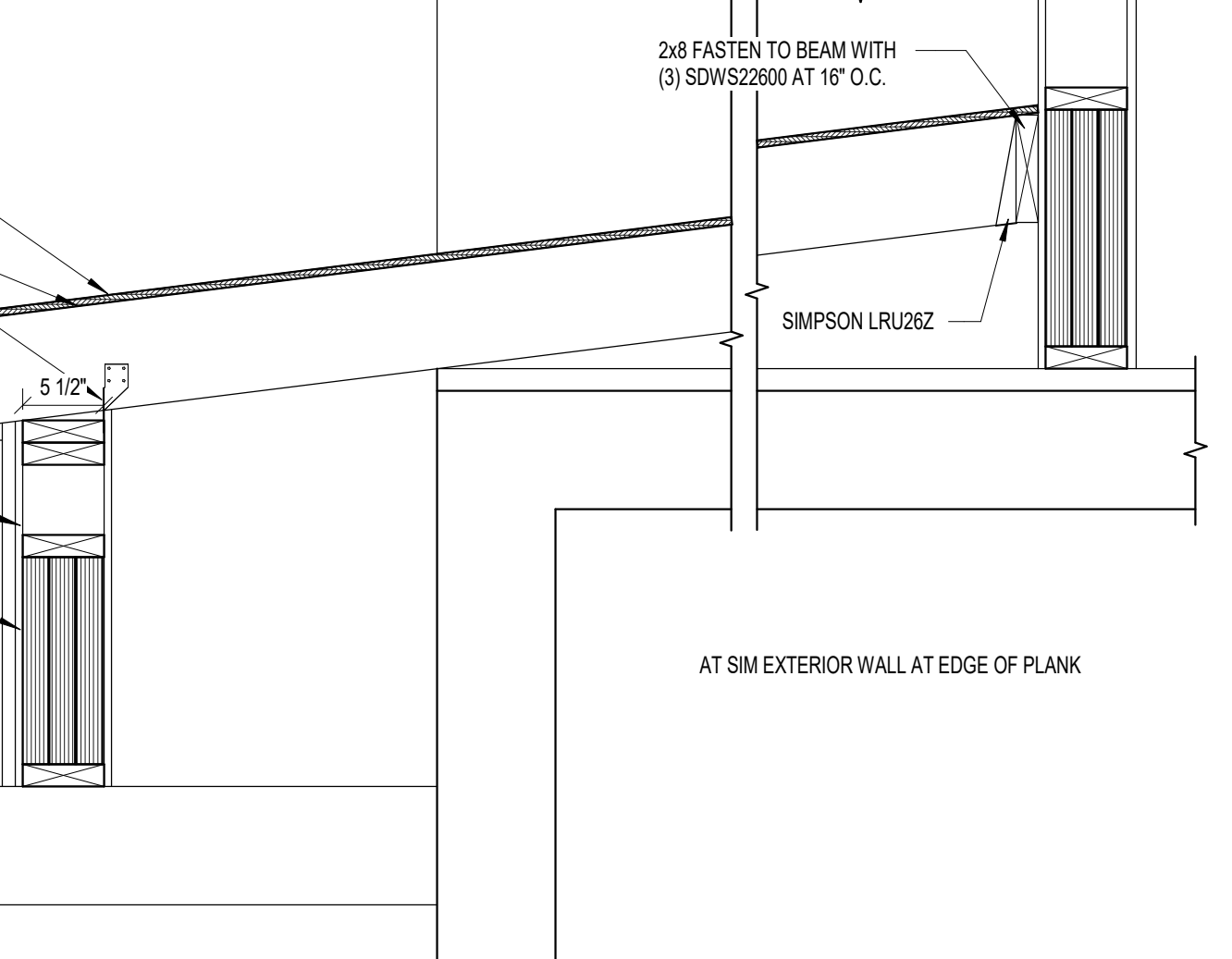
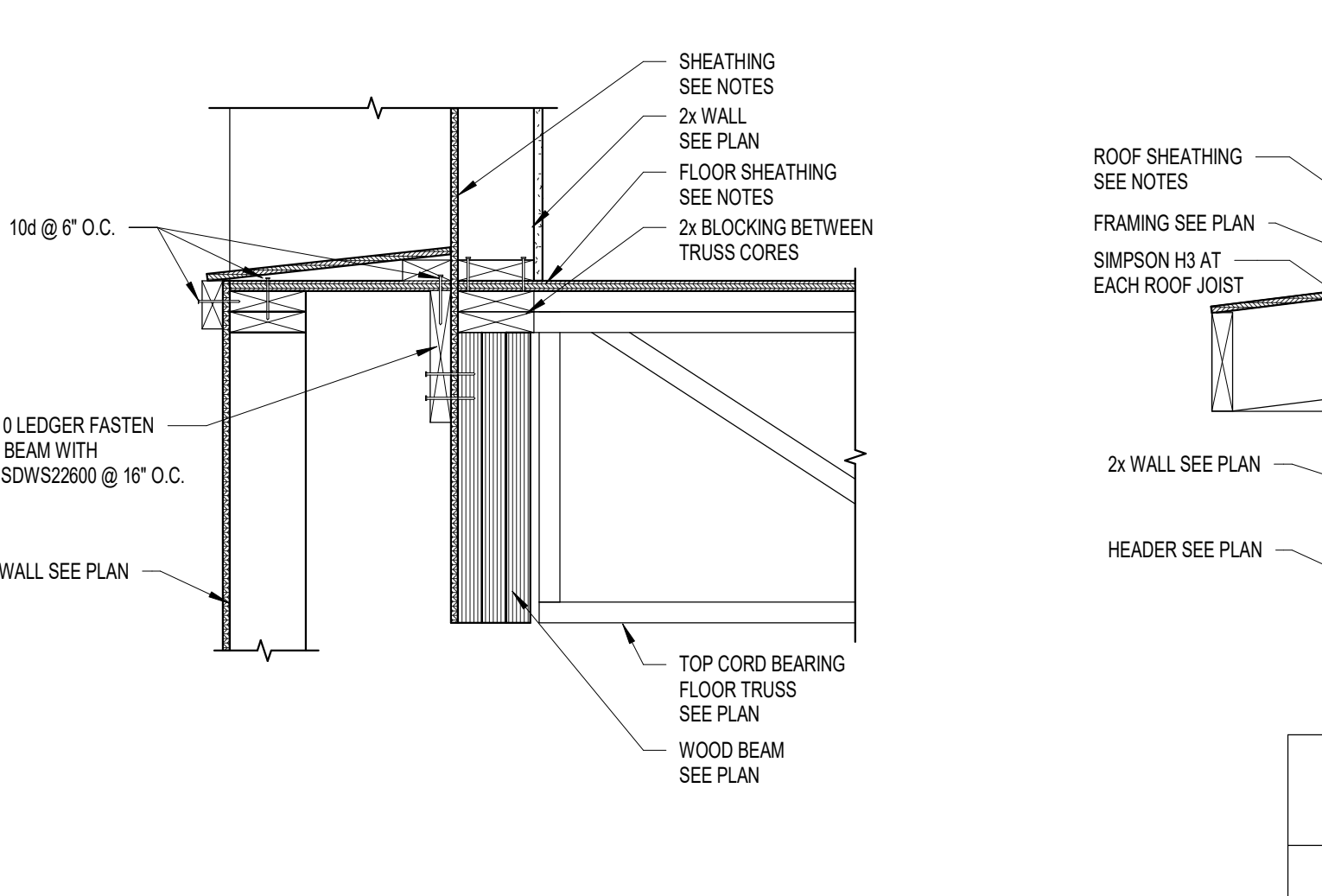
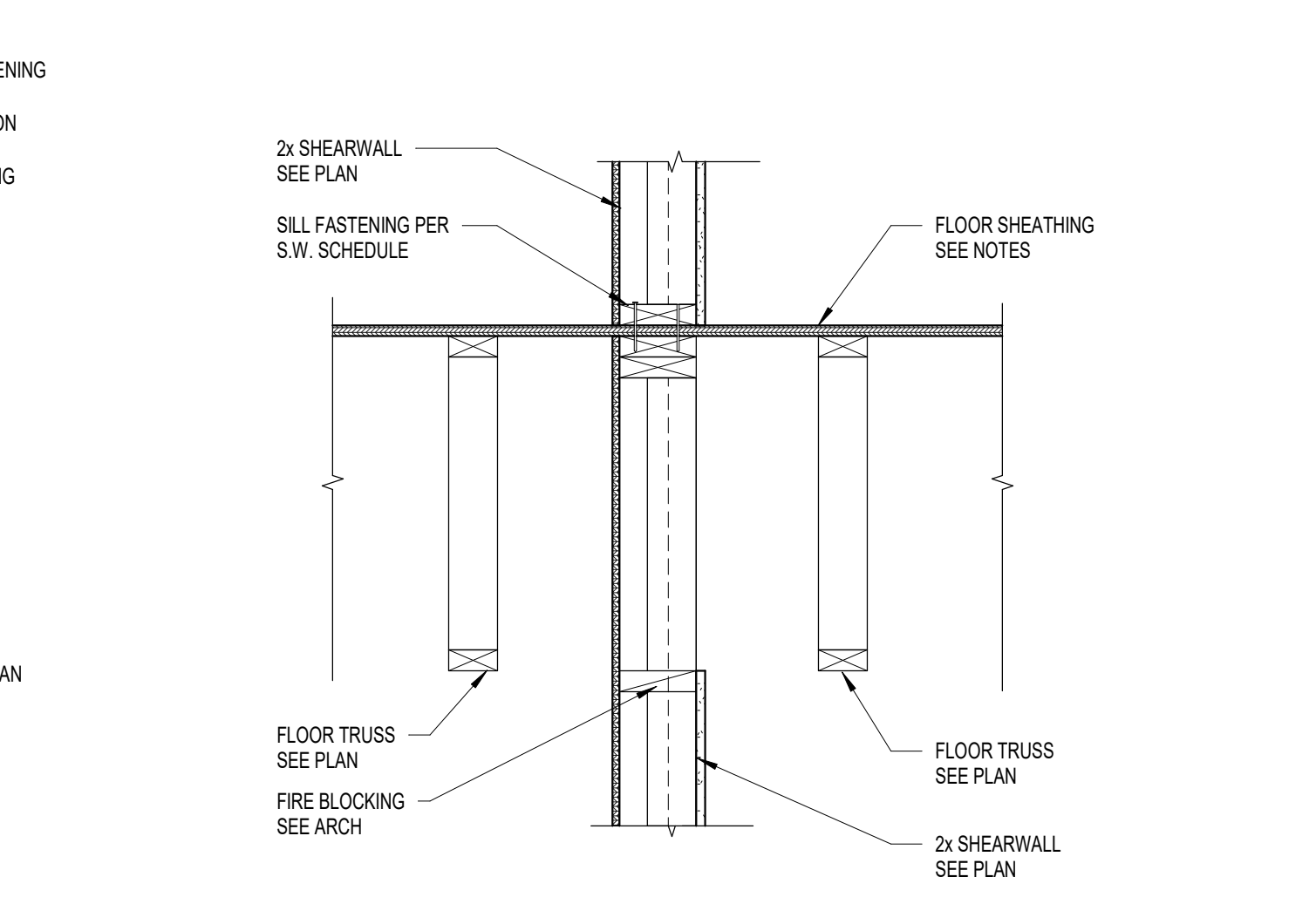
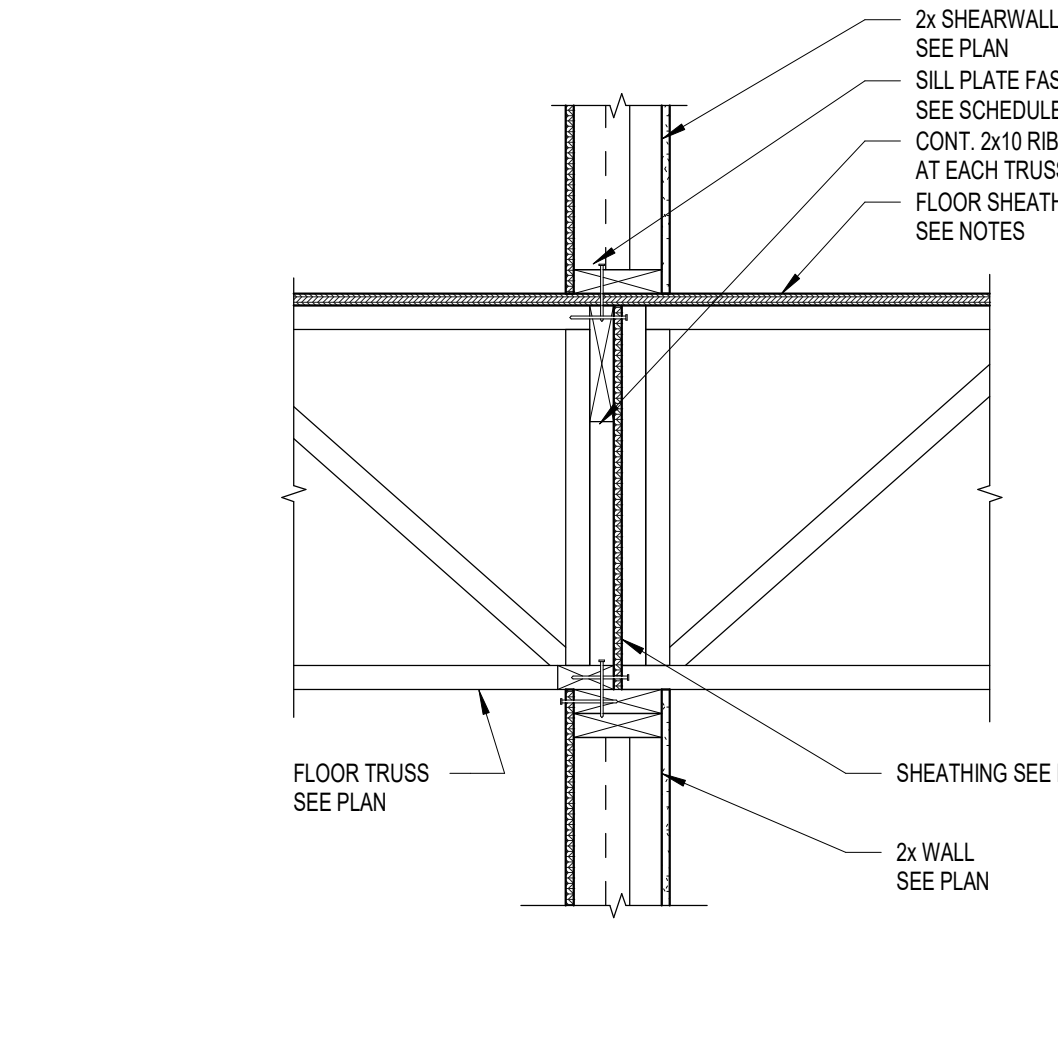
4 FRAMING DETAIL
S402 1" = 1'-0"

5 FRAMING DETAIL
S402 1" = 1'-0"

6 FRAMING DETAIL
S402 1" = 1'-0"

7 FRAMING DETAIL
S402 1" = 1'-0"

8 FRAMING DETAIL
S402 1" = 1'-0"



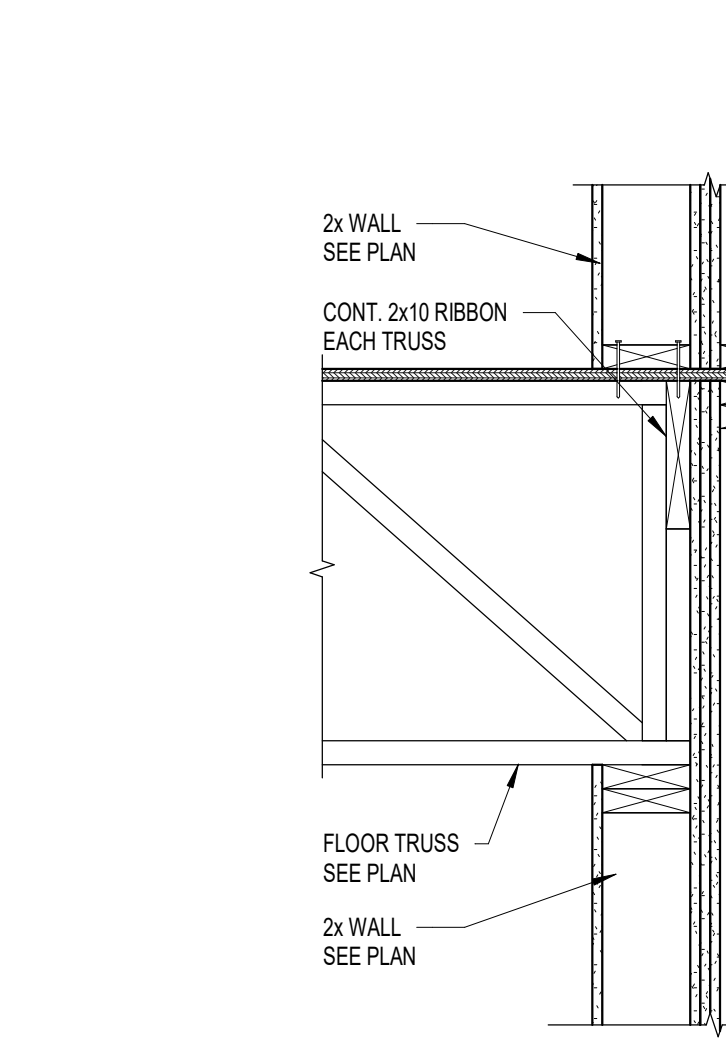
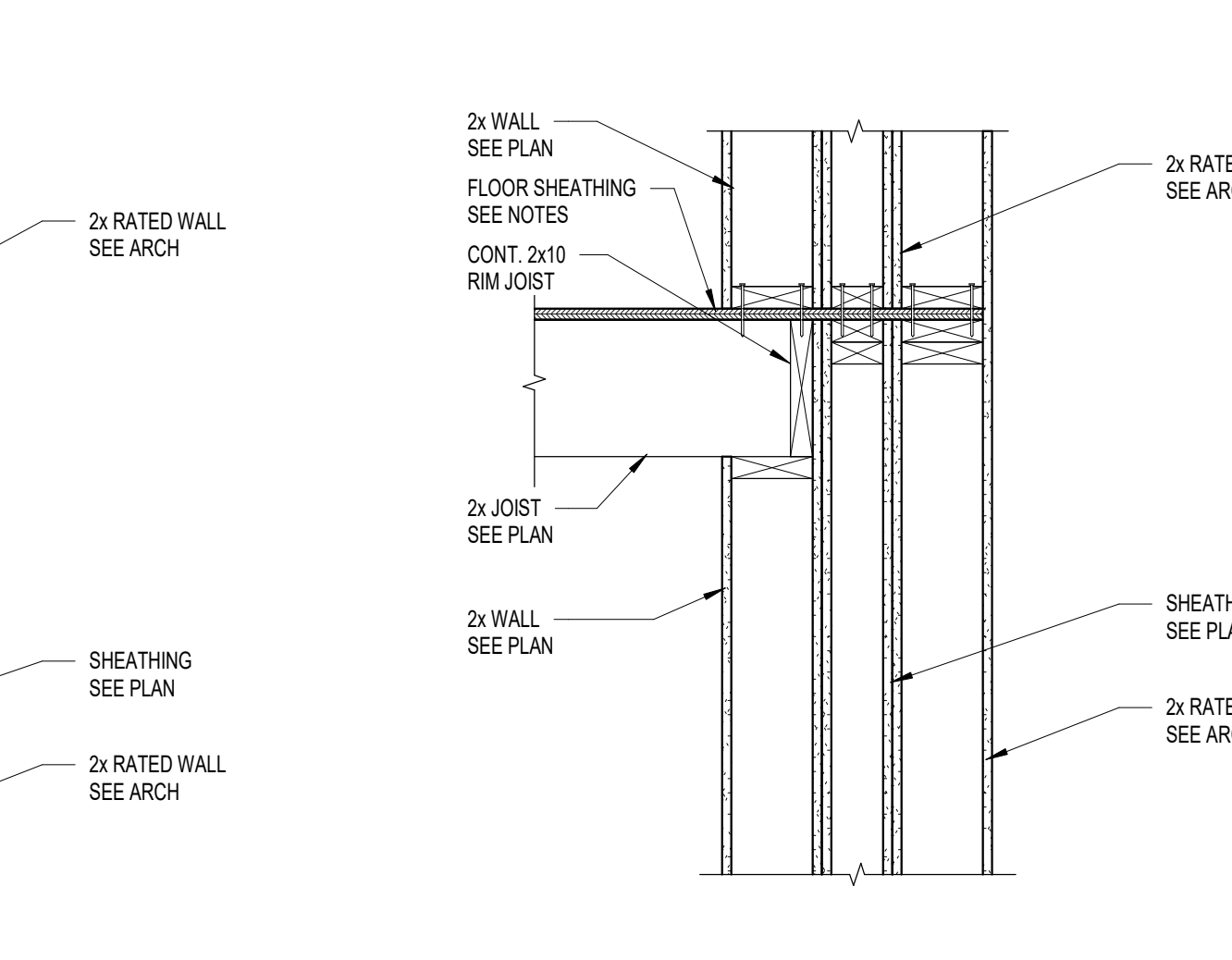
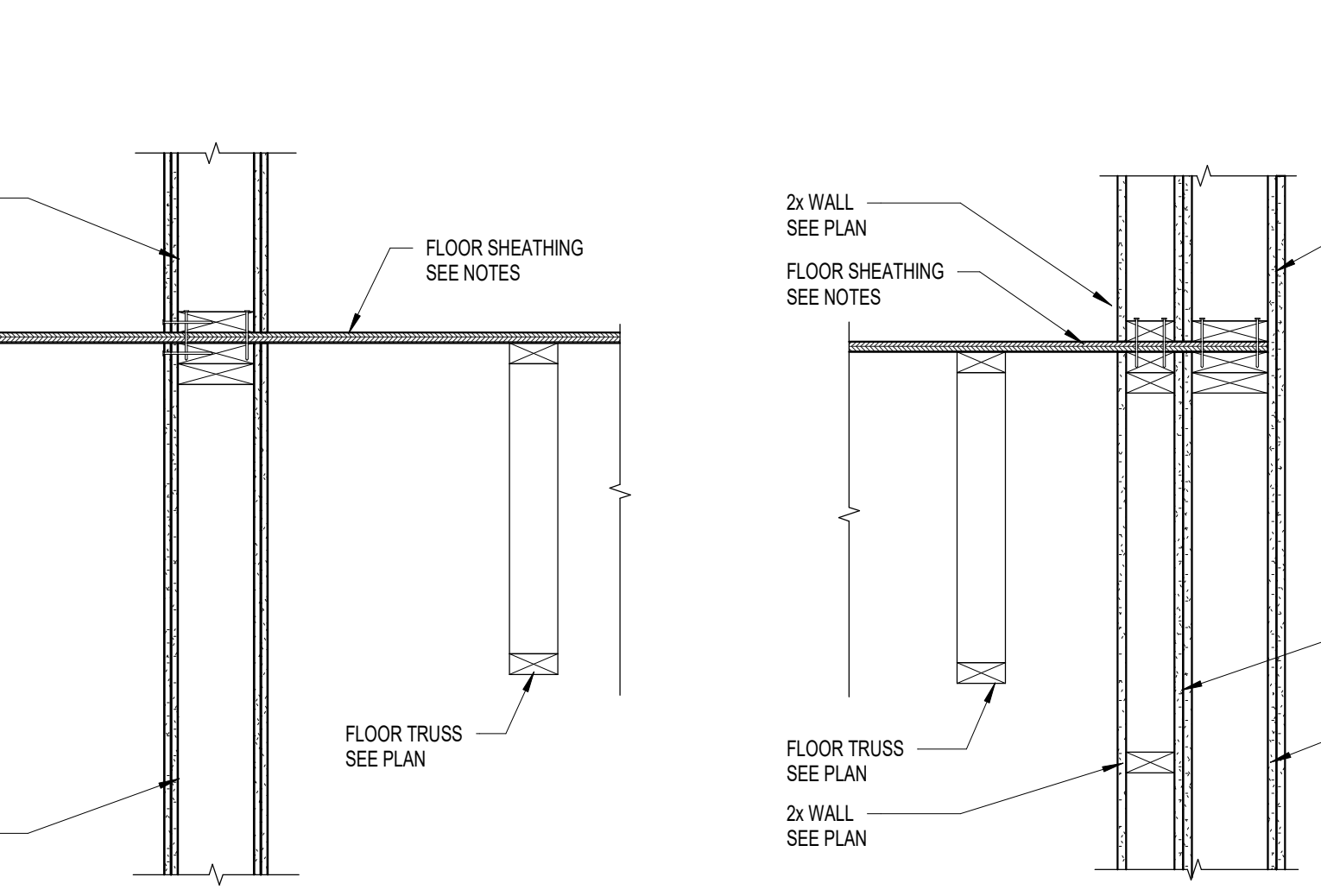
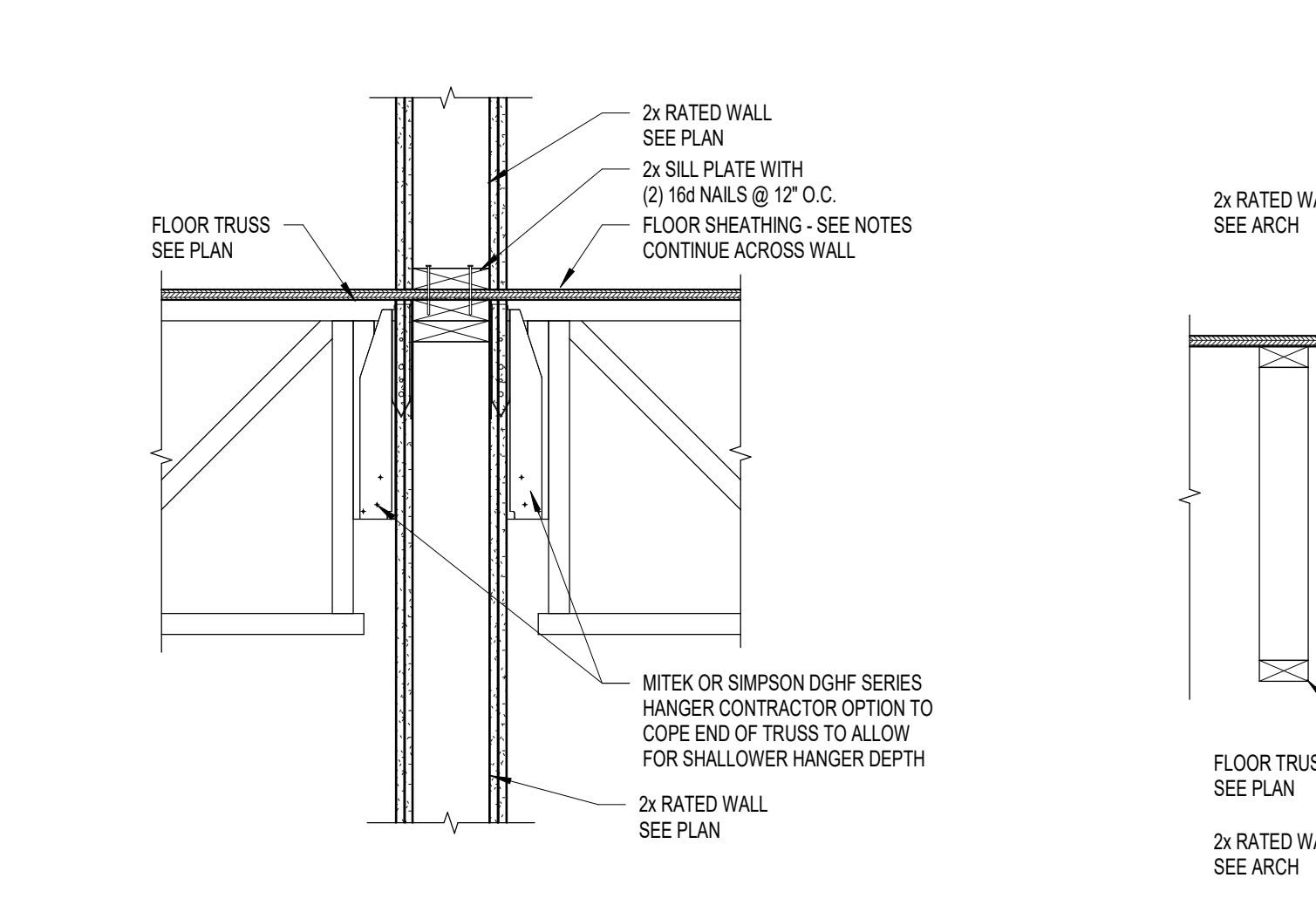
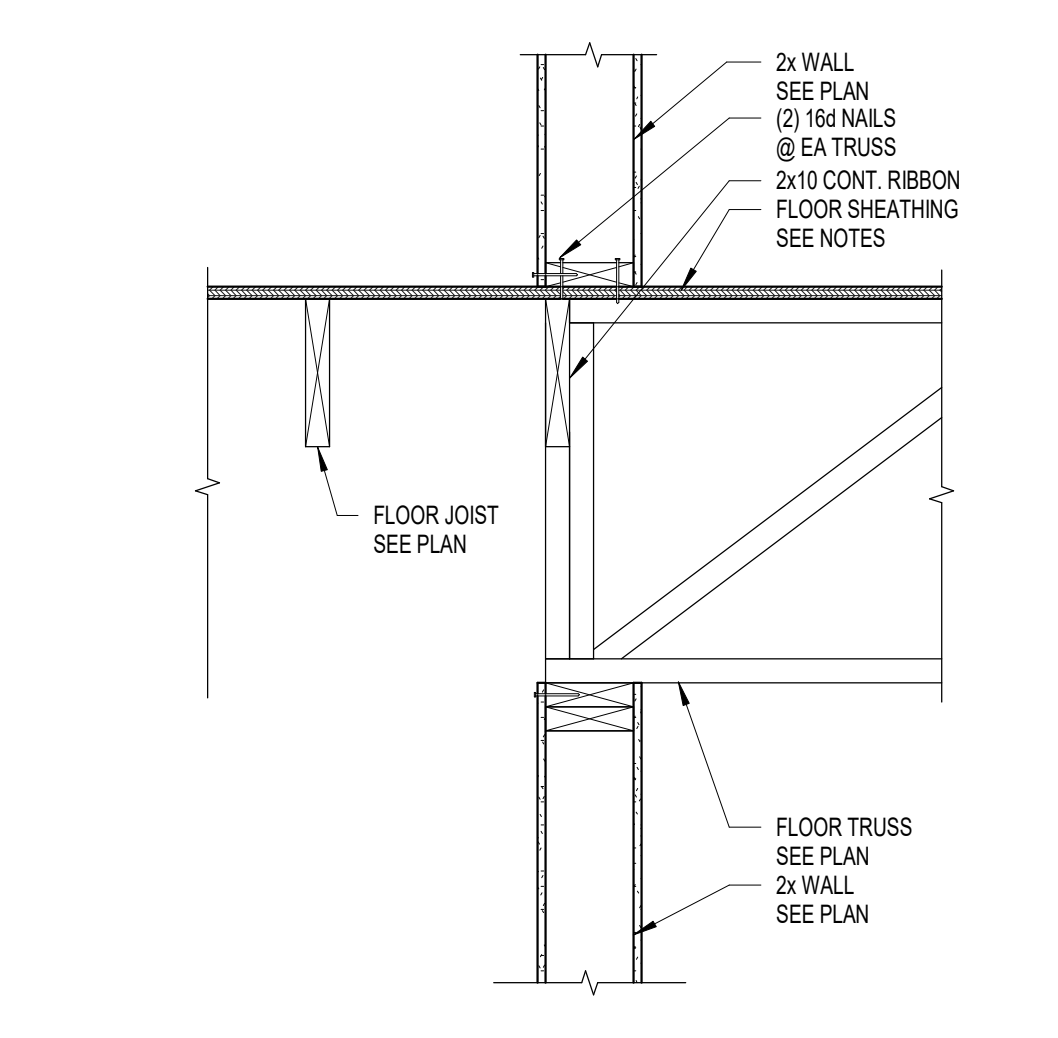
9 FRAMING DETAIL
S402 1" = 1'-0"

10 FRAMING DETAIL
S402 1" = 1'-0"

11 FRAMING DETAIL
S402 1" = 1'-0"

12 FRAMING DETAIL
S402 1" = 1'-0"

13 FRAMING DETAIL
S402 1" = 1'-0"



14 FRAMING DETAIL
S402 1" = 1'-0"

15 FRAMING DETAIL
S402 1" = 1'-0"

16 FRAMING DETAIL
S402 1" = 1'-0"

17 FRAMING DETAIL
S402 1" = 1'-0"

18 FRAMING DETAIL
S402 1" = 1'-0"



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: Nathan Hoffmann
Signature: [Signature]
Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
Project Manager: ALK
Drawn By: MDL
Date: 02/18/21

Date	Description



700 W. St. Germain Street
Suite 200
St. Cloud, MN 56301
www.hma-archs.com

T | 320.251.9155
F | 320.251.4919
hma@hma-archs.com

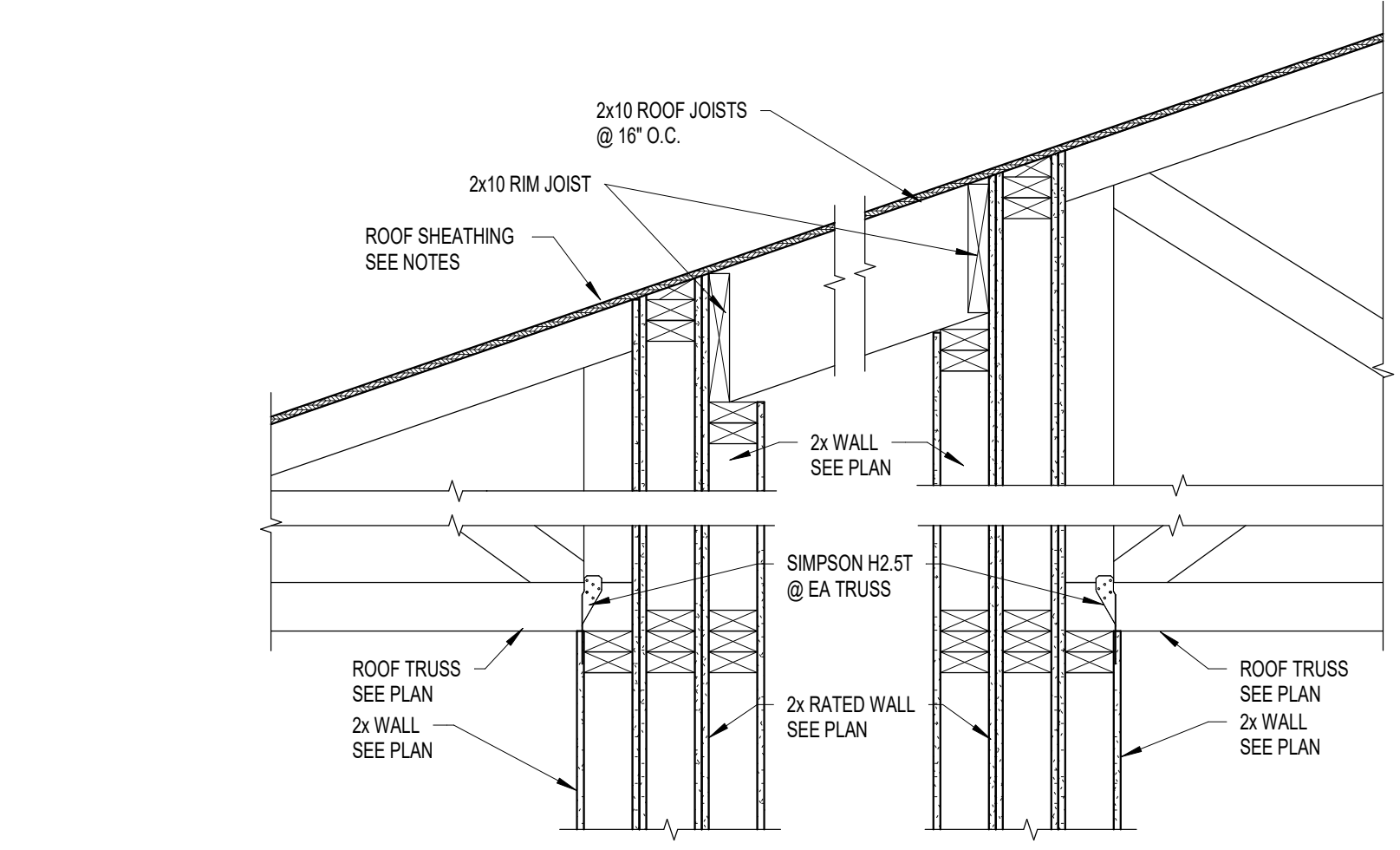
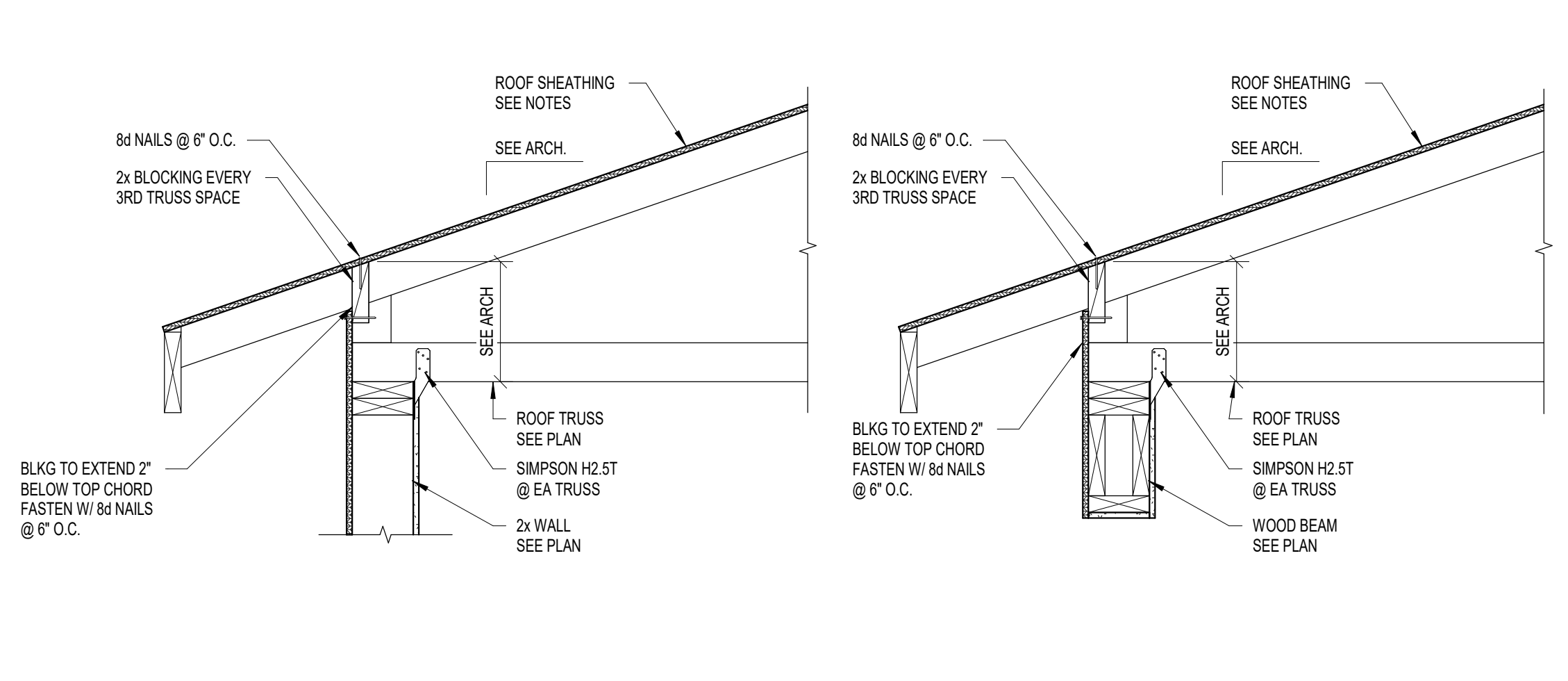
New Apartment Complex:

Zumbrot
Apartment
Complex

Zumbrot, MN

FRAMING DETAILS

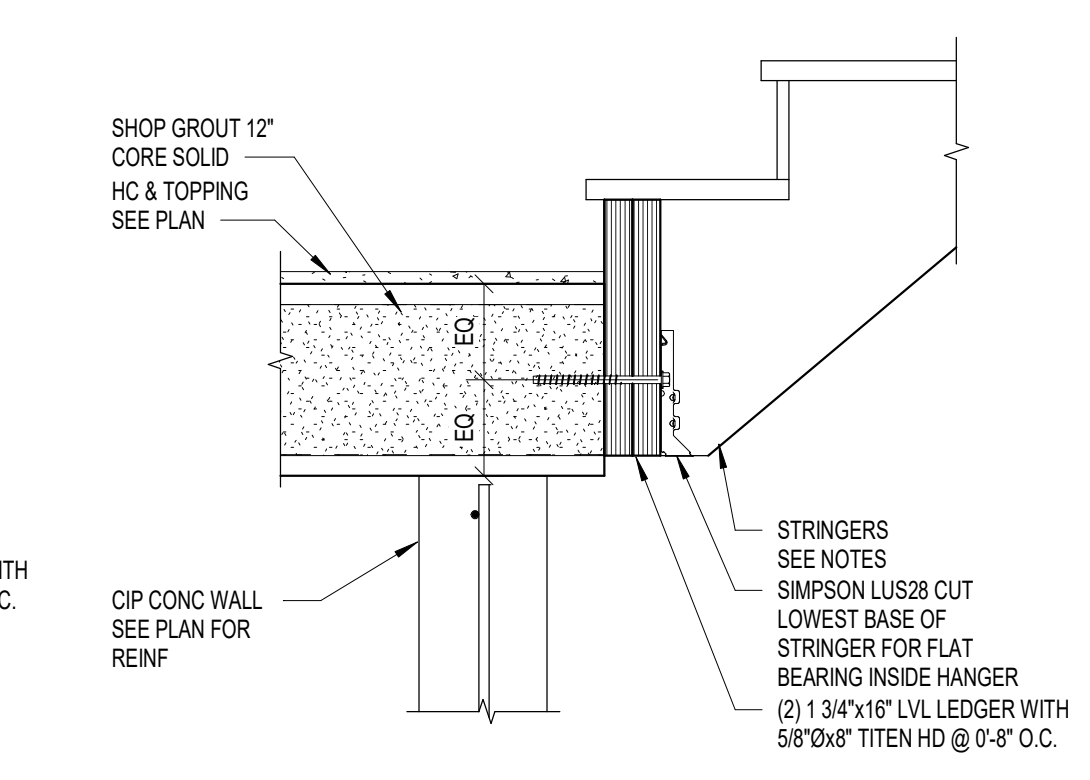
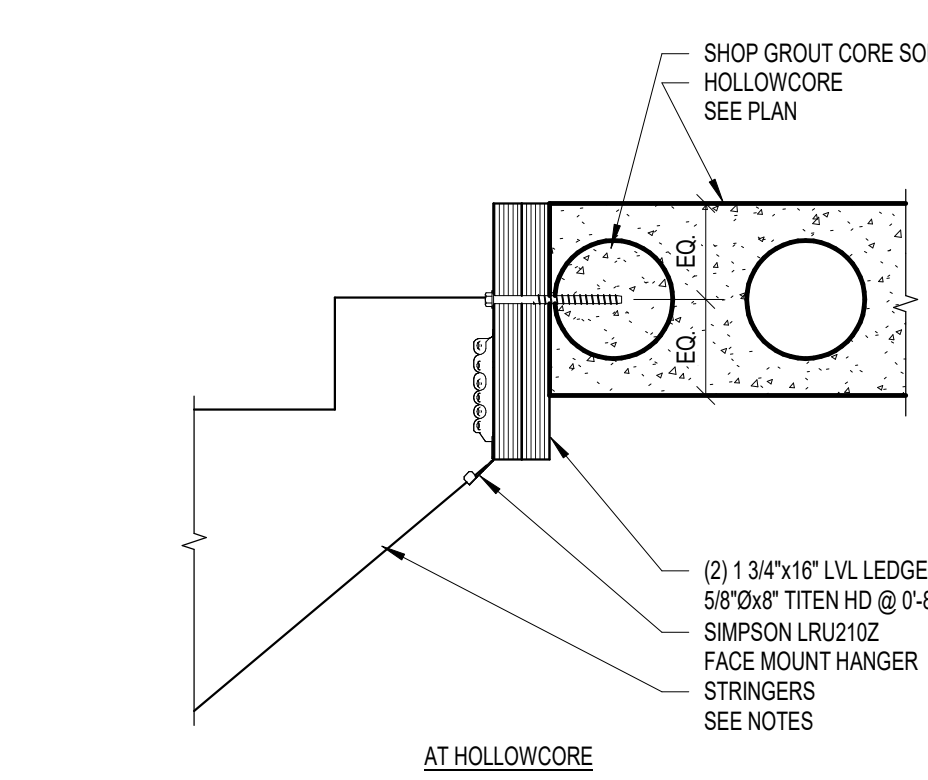
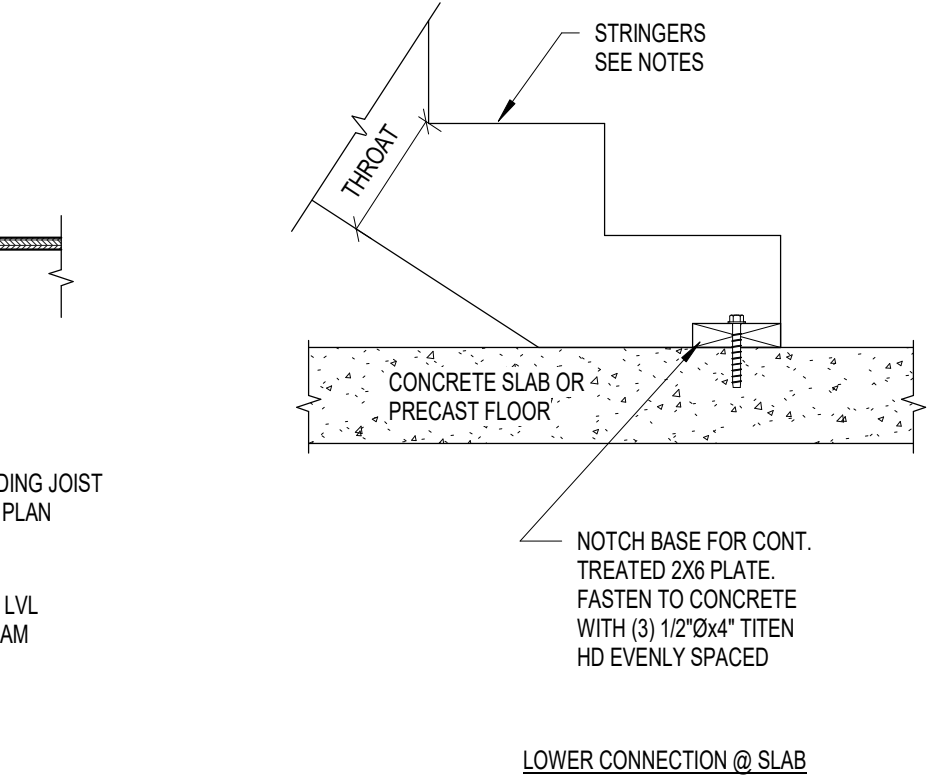
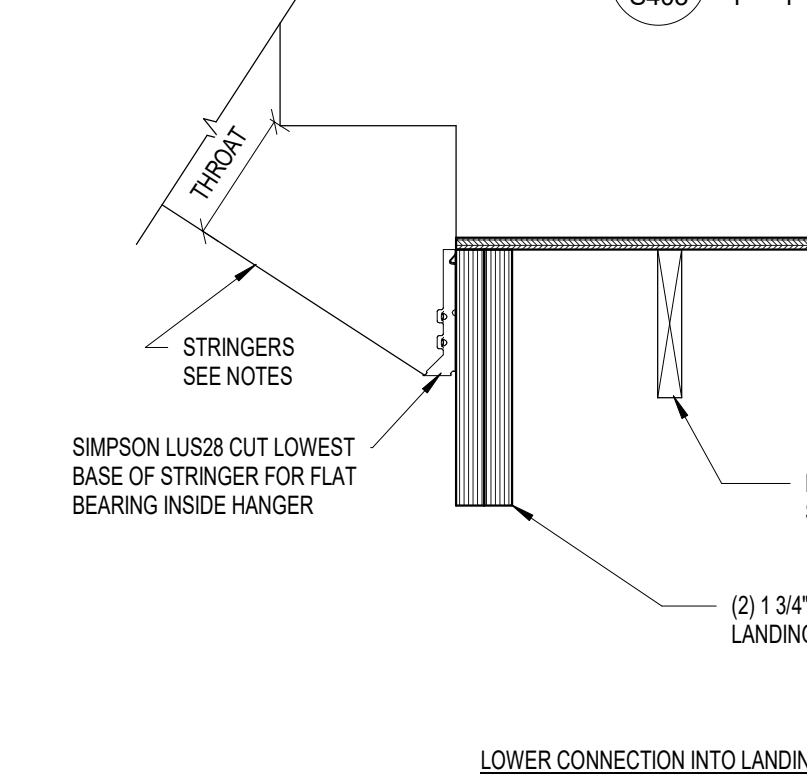
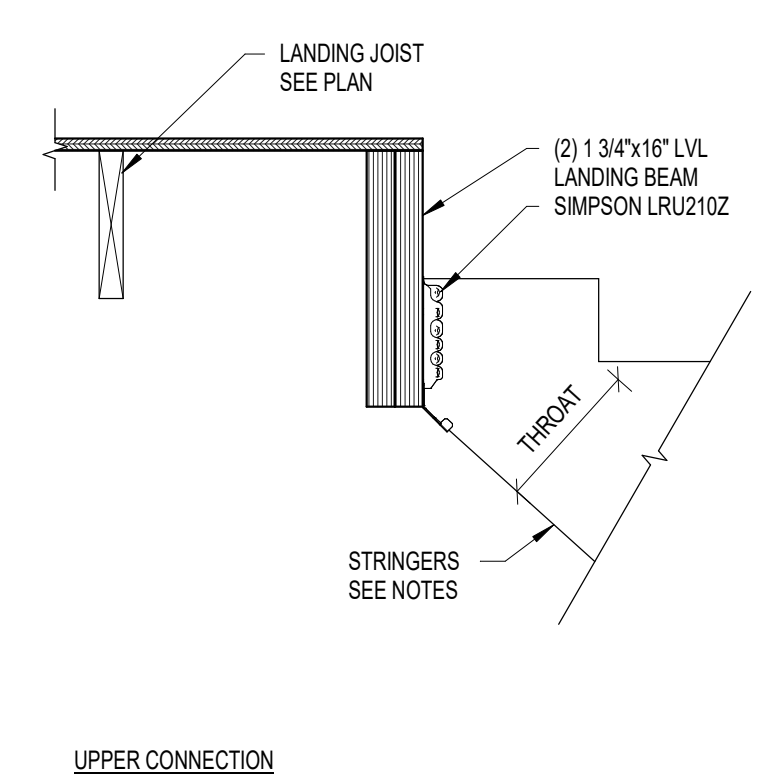
S402



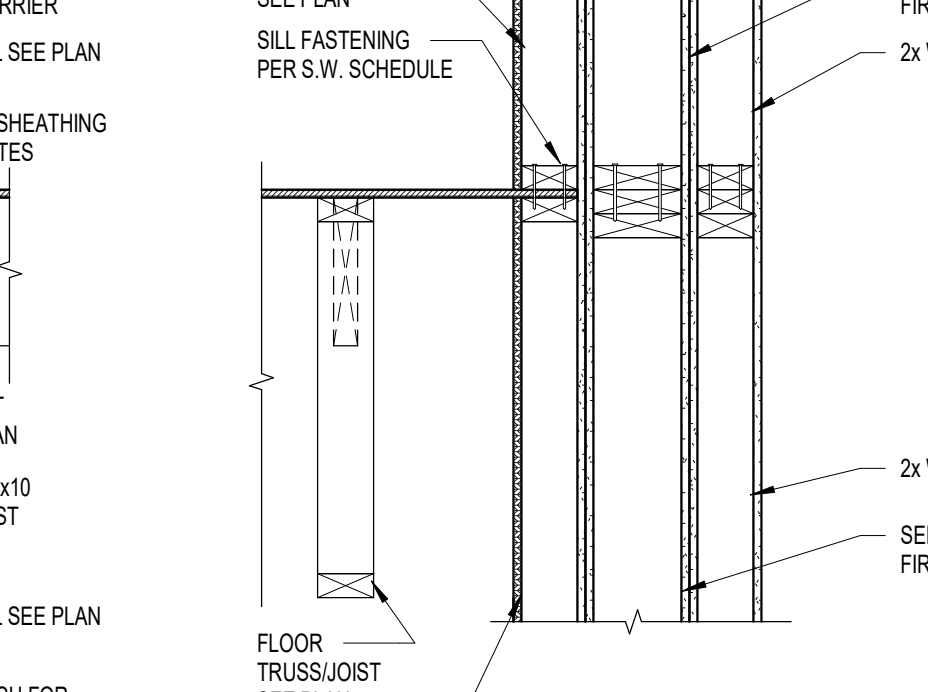
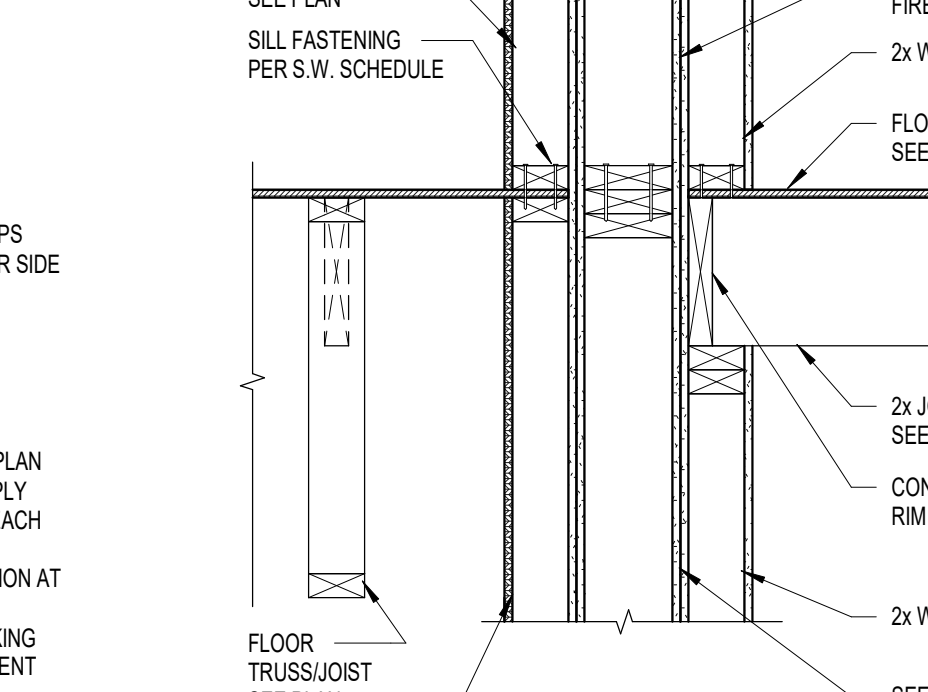
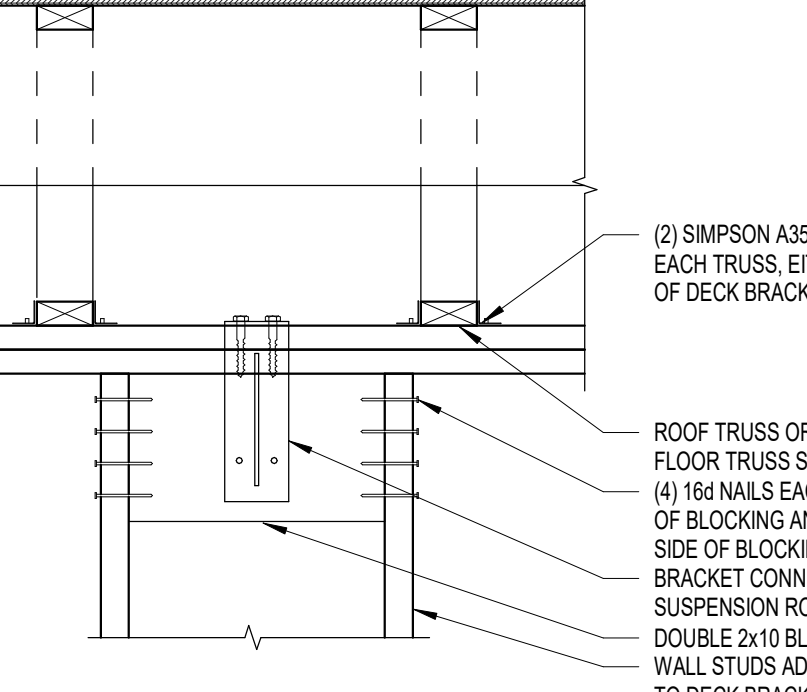
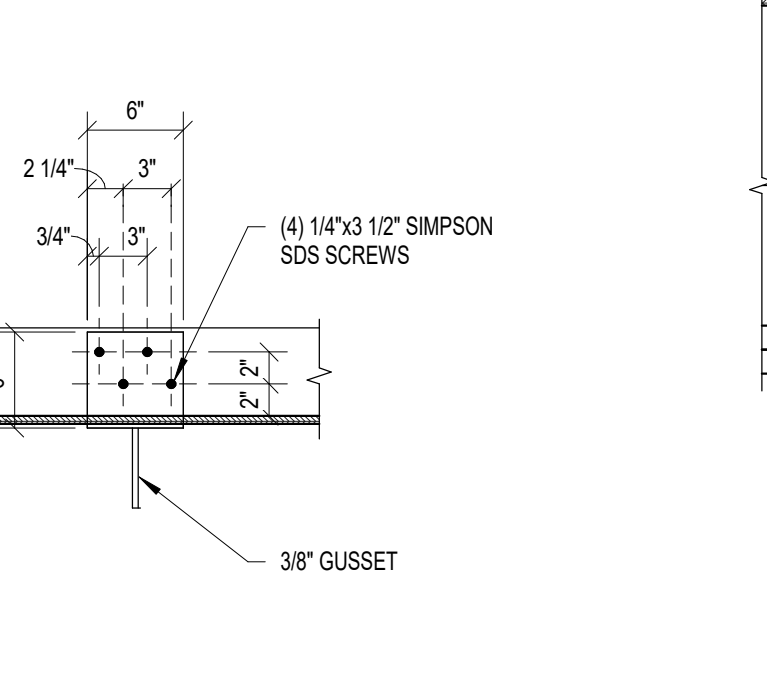
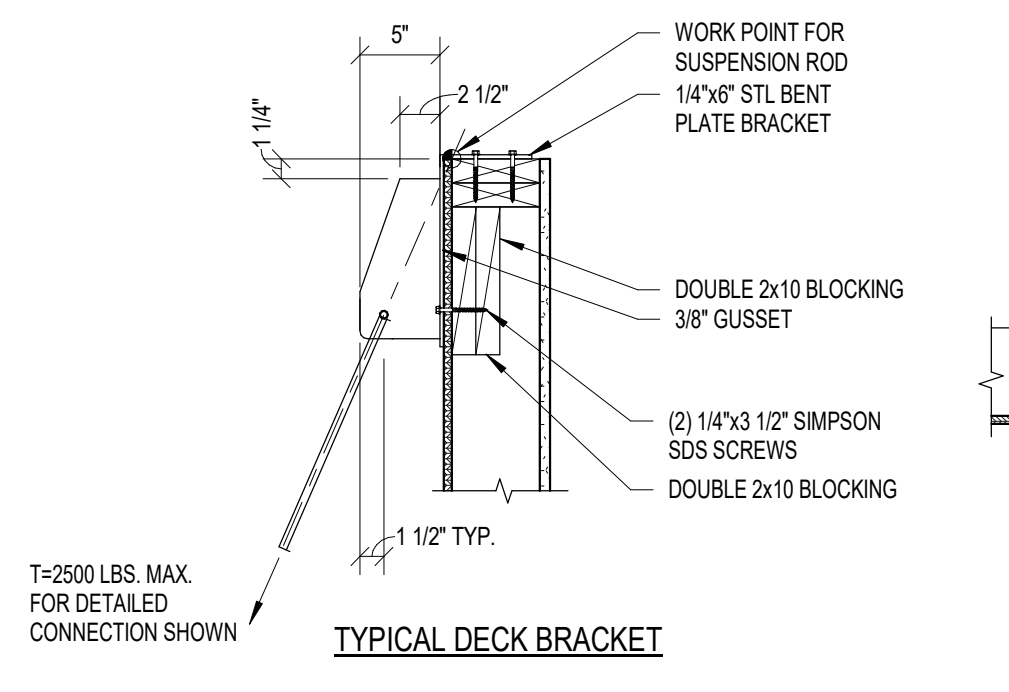
1 FRAMING DETAIL
S403 1" = 1'-0"

2 FRAMING DETAIL
S403 1" = 1'-0"

- STAIR FRAMING NOTES**
- SEE ARCH FOR STAIR RISE/RUN AND LANDING DIMENSIONS
 - FRAMING CONDITIONS ENCOUNTERED IN THE FIELD THAT DO NOT MATCH THE SHOWN STRUCTURAL DETAILS, MUST BE COORDINATED WITH STRUCTURAL ENGINEER PRIOR TO WORK.
 - DO NOT OVERCUT TREADS
 - STRINGERS: (4) 1 1/2" X 14" LSL EVENLY SPACED
 - MIN THROAT DIMENSIONS:
14" MEMBER = 8"
16" MEMBER = 10"
18" MEMBER = 12"
 - PROVIDE 2x4 BRG. WALL WITH BEVELED TOP PLATE @ MID-SPAN OF LOWEST STRAIGHT RUN STAIRS.
 - HEADER BEAM TO BEAR ON (3) 2x STUD PACK.
 - CONNECT HEADER TO CONCRETE WALLS WITH SIMPSON H4U2.



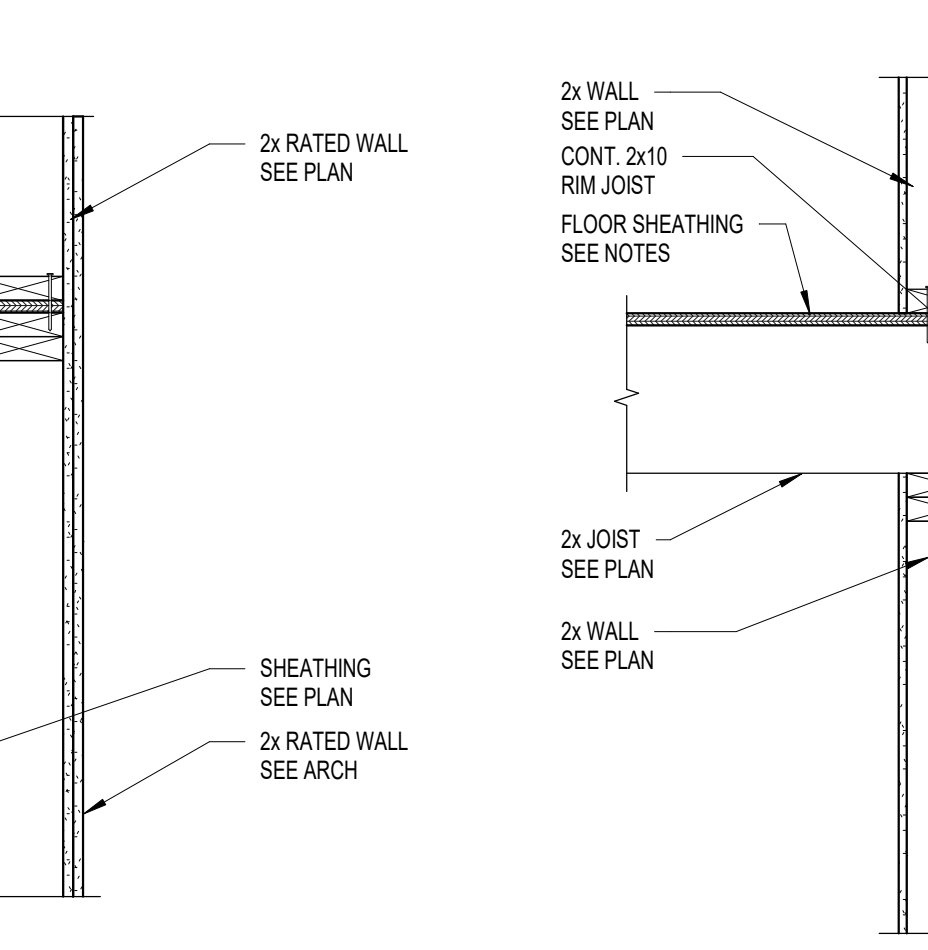
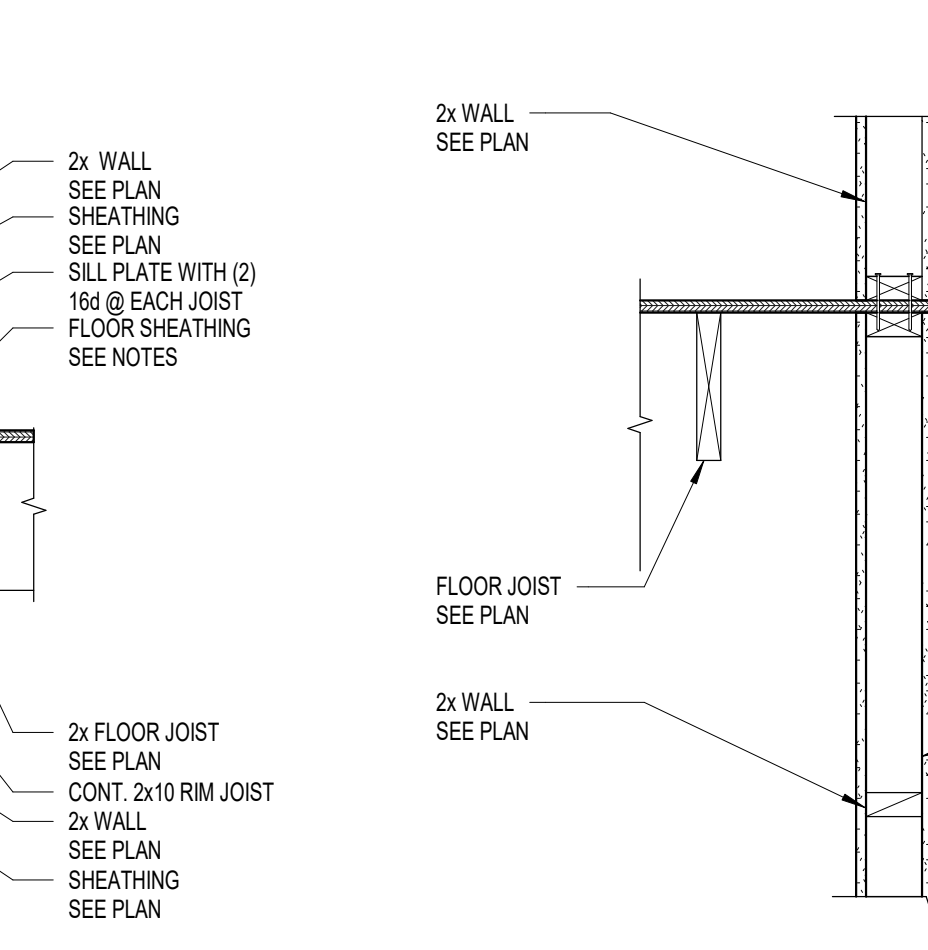
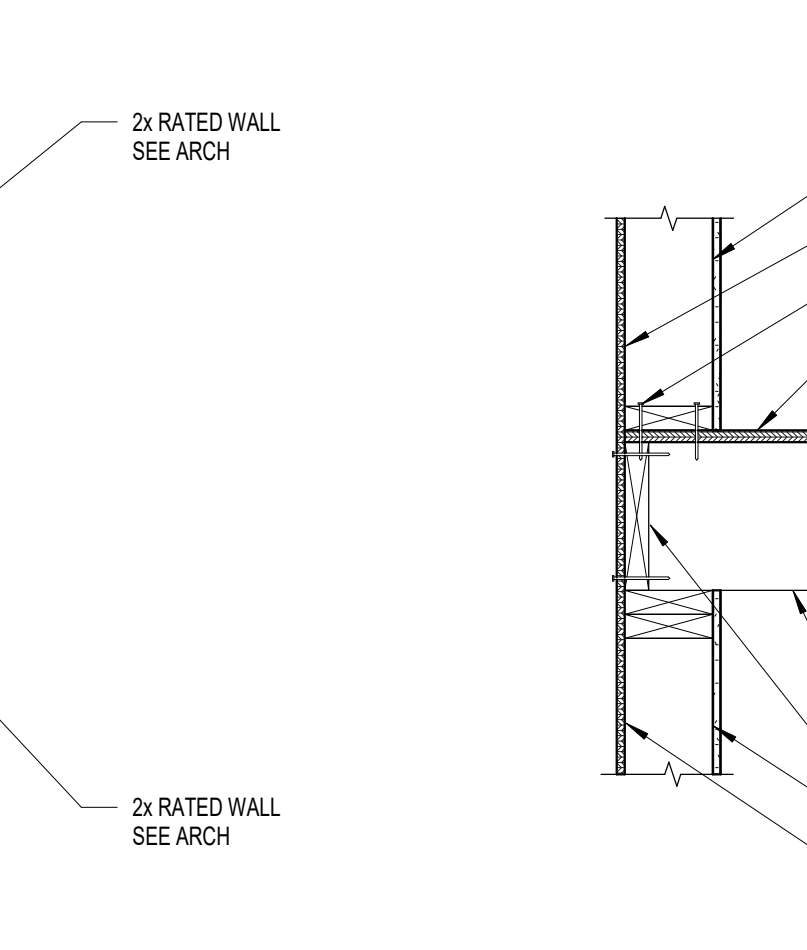
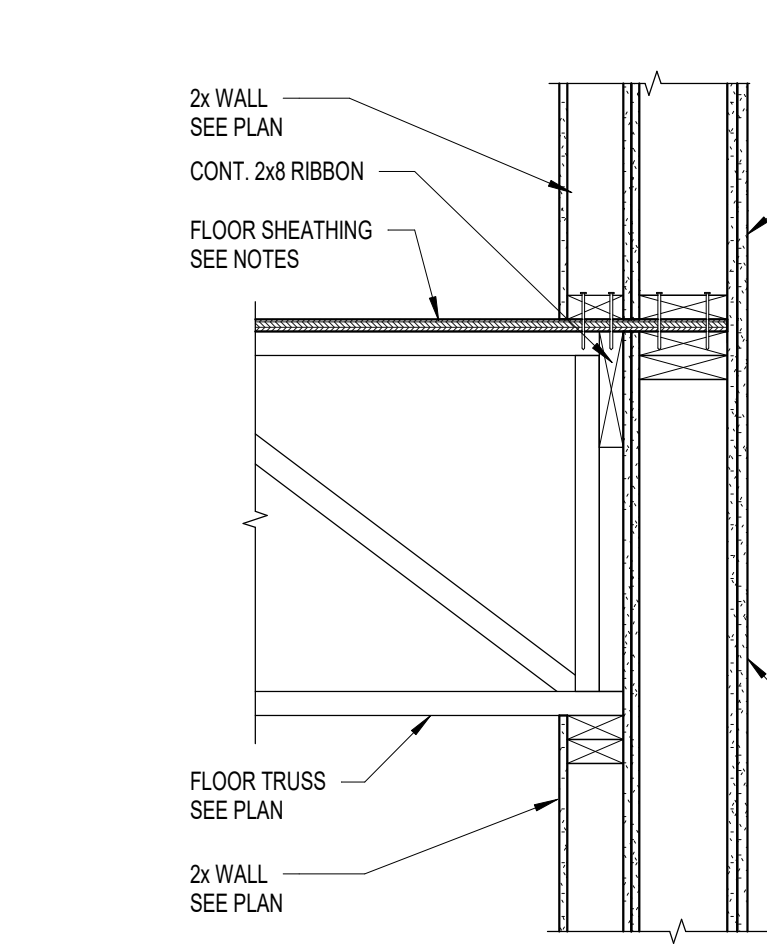
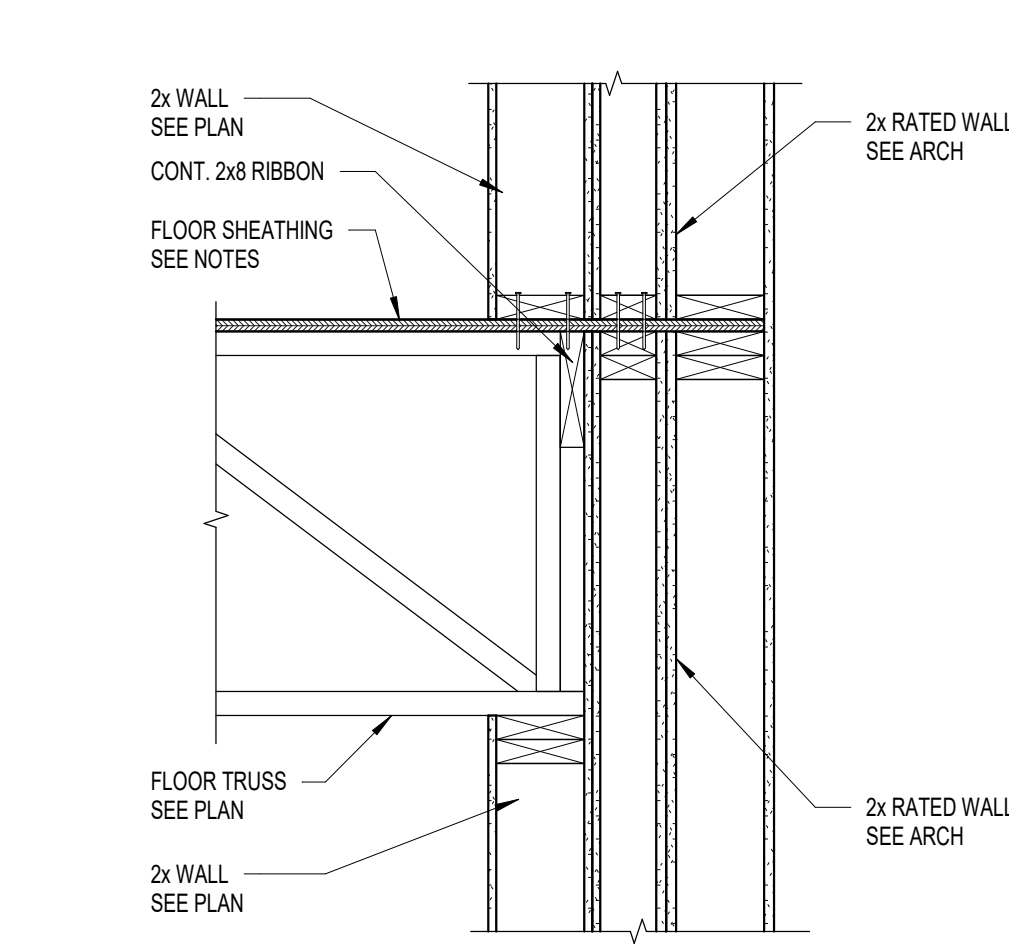
3 SWITCHBACK STAIR FRAMING DETAILS
S403 1" = 1'-0"



5 BRACKET DETAIL
S403 1" = 1'-0"

6 TOP CONNECTION
S403 1" = 1'-0"

7 FRAMING DETAIL
S403 1" = 1'-0"



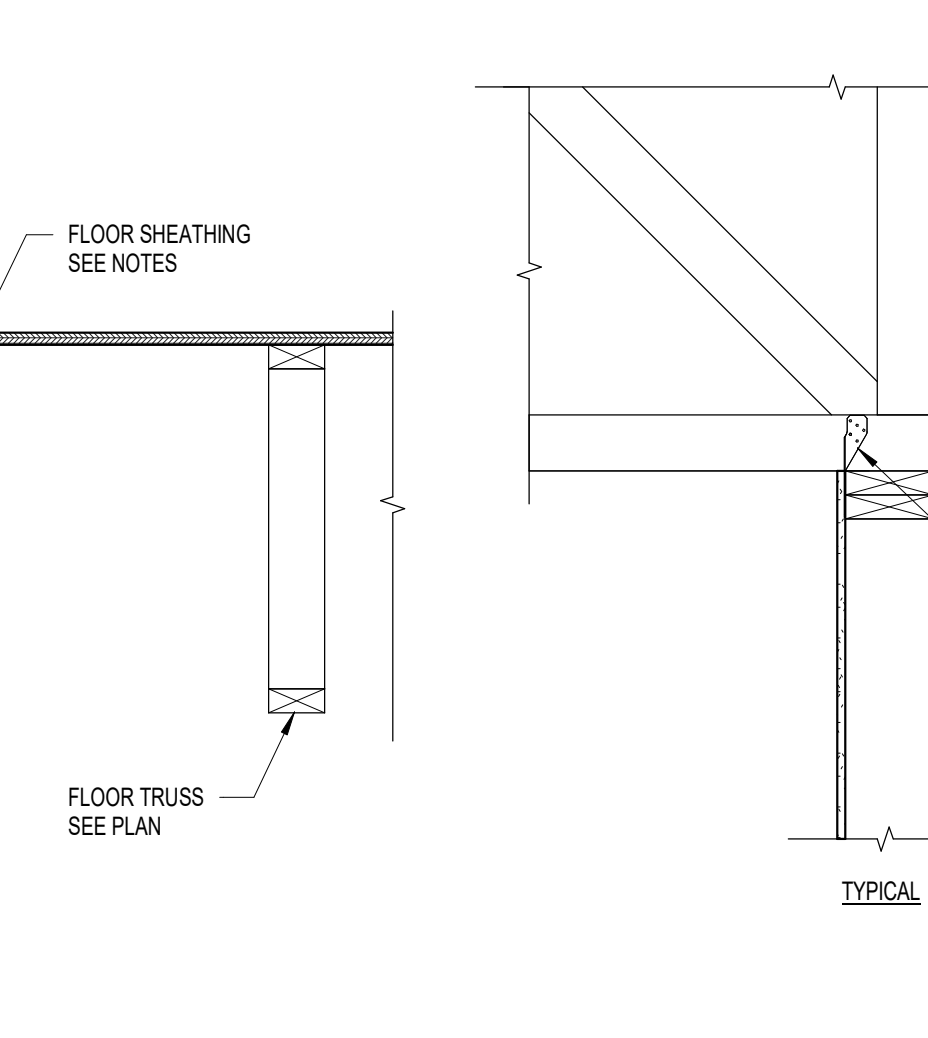
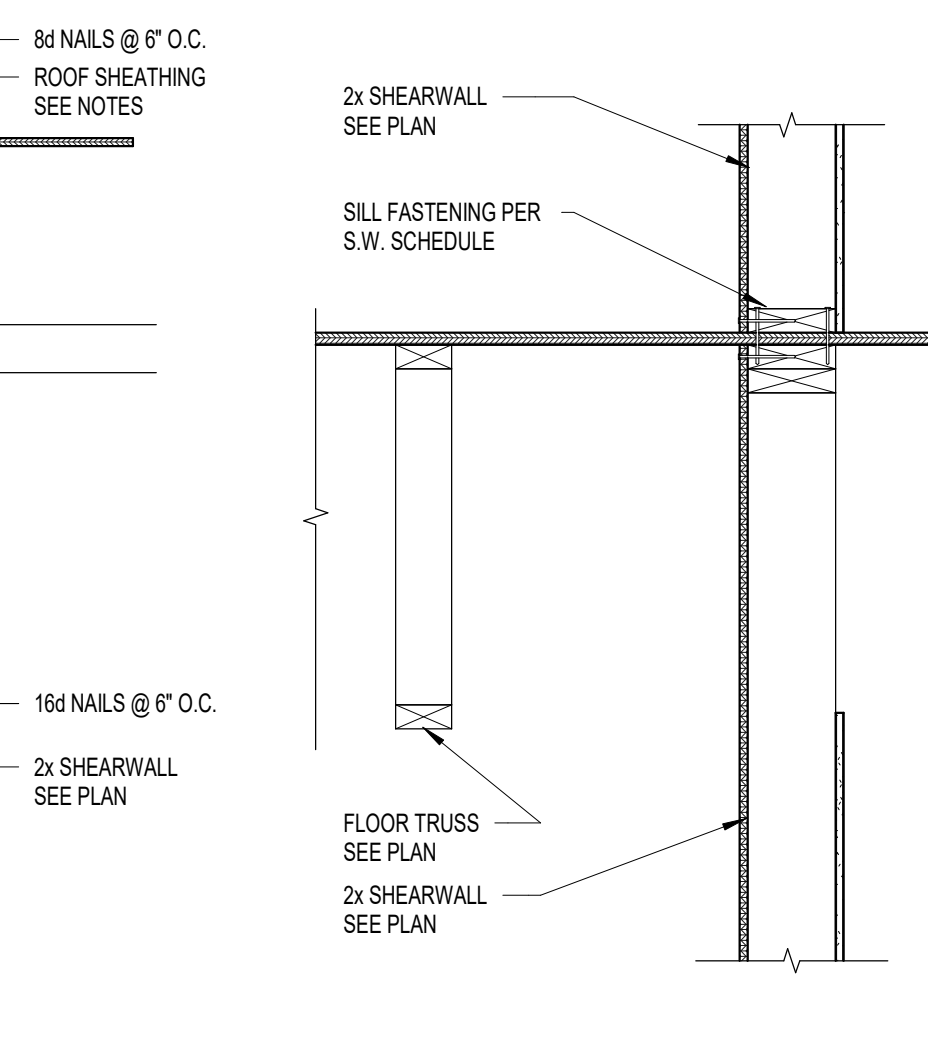
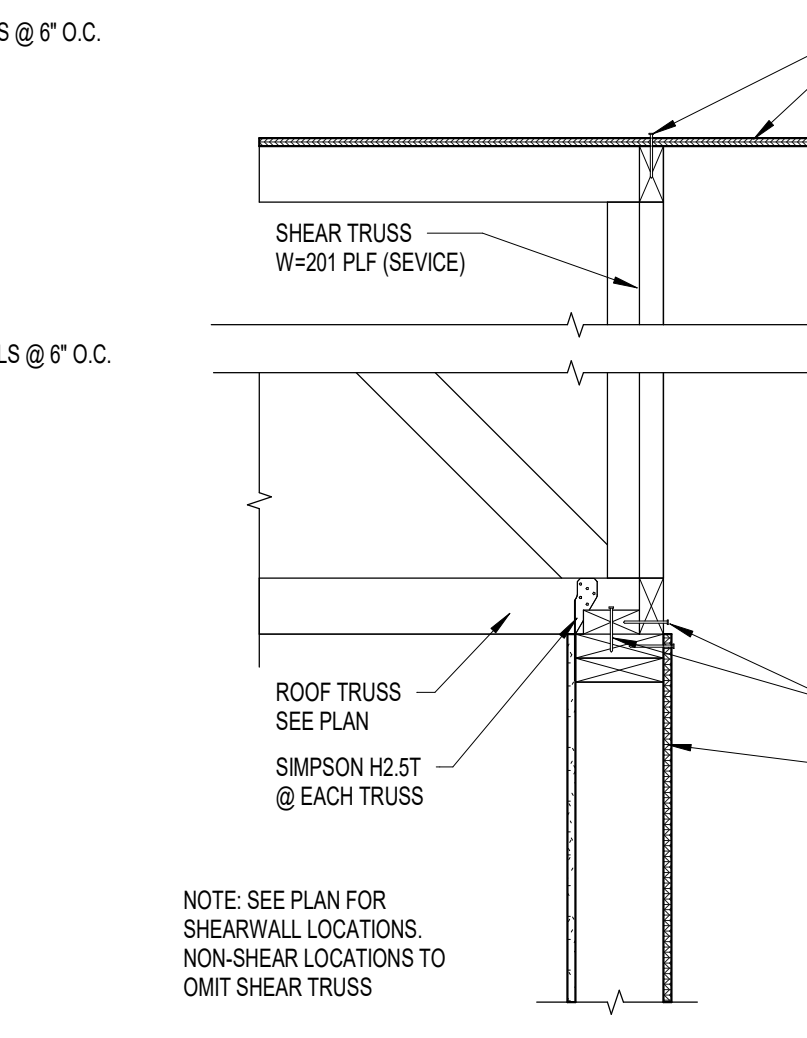
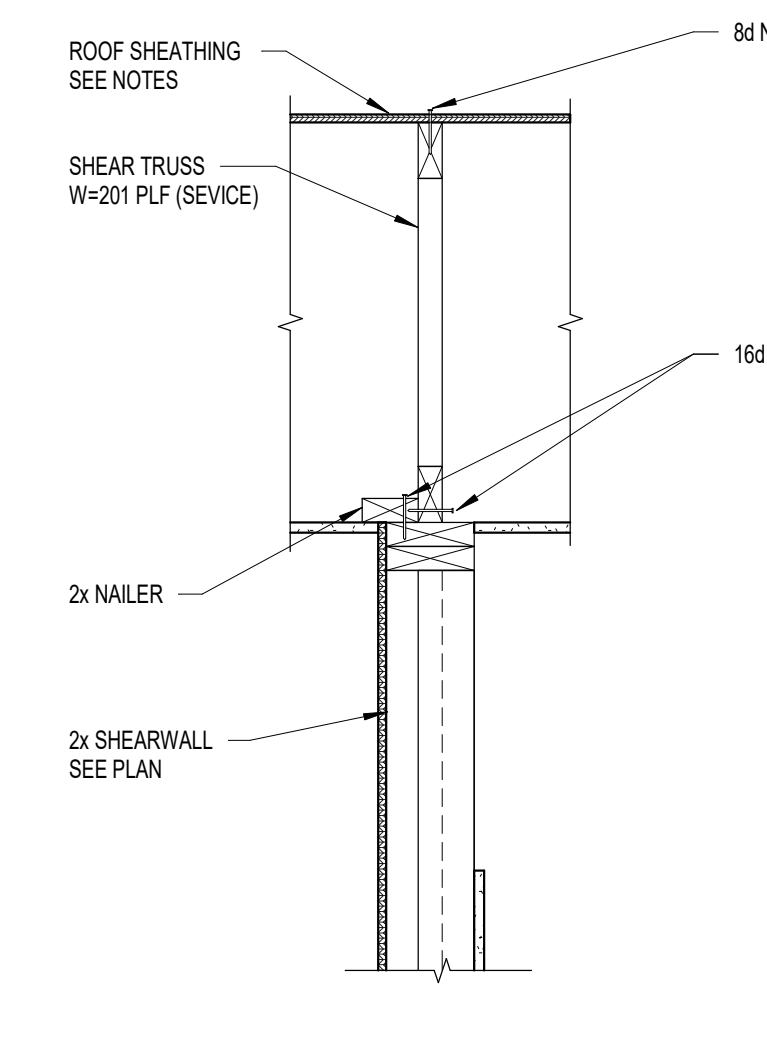
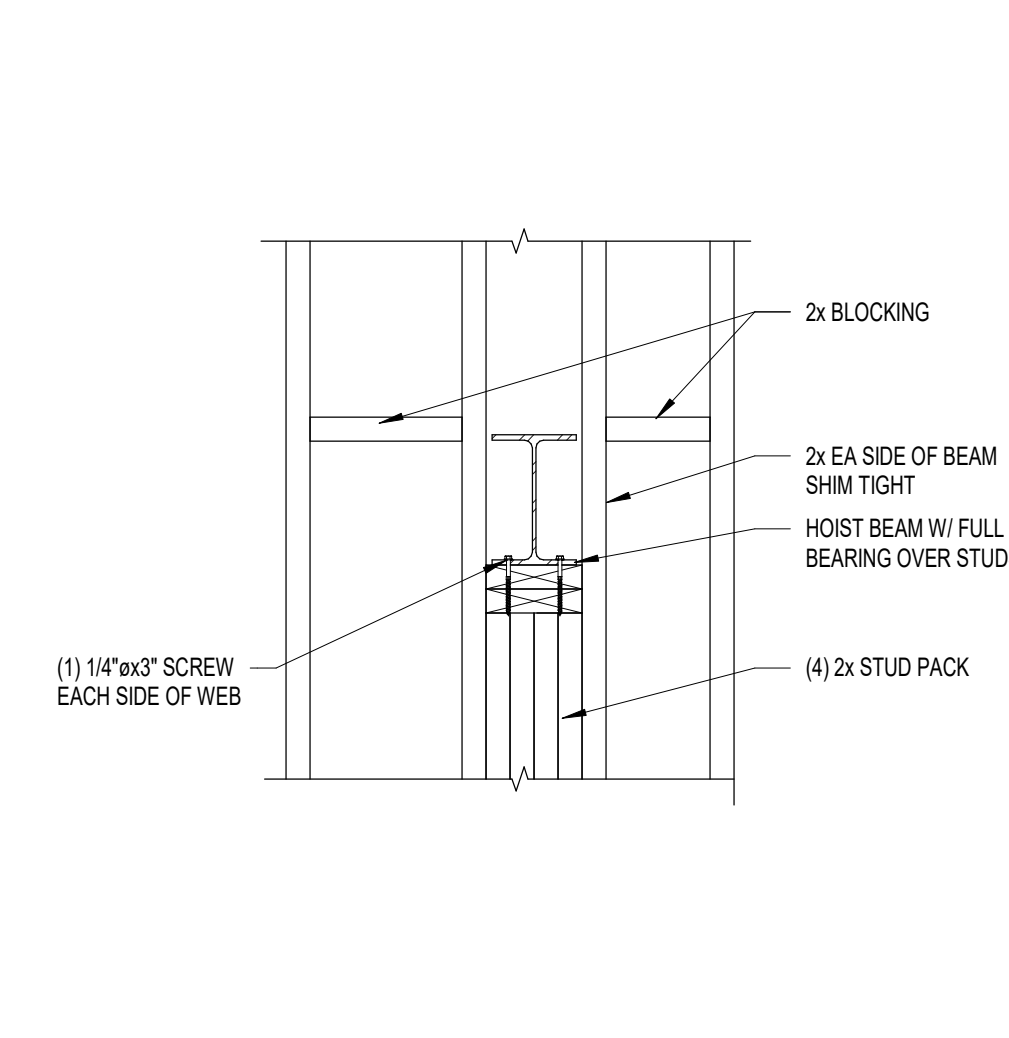
8 FRAMING DETAIL
S403 1" = 1'-0"

9 FRAMING DETAIL
S403 1" = 1'-0"

10 FRAMING DETAIL
S403 1" = 1'-0"

11 FRAMING DETAIL
S403 1" = 1'-0"

12 FRAMING DETAIL
S403 1" = 1'-0"



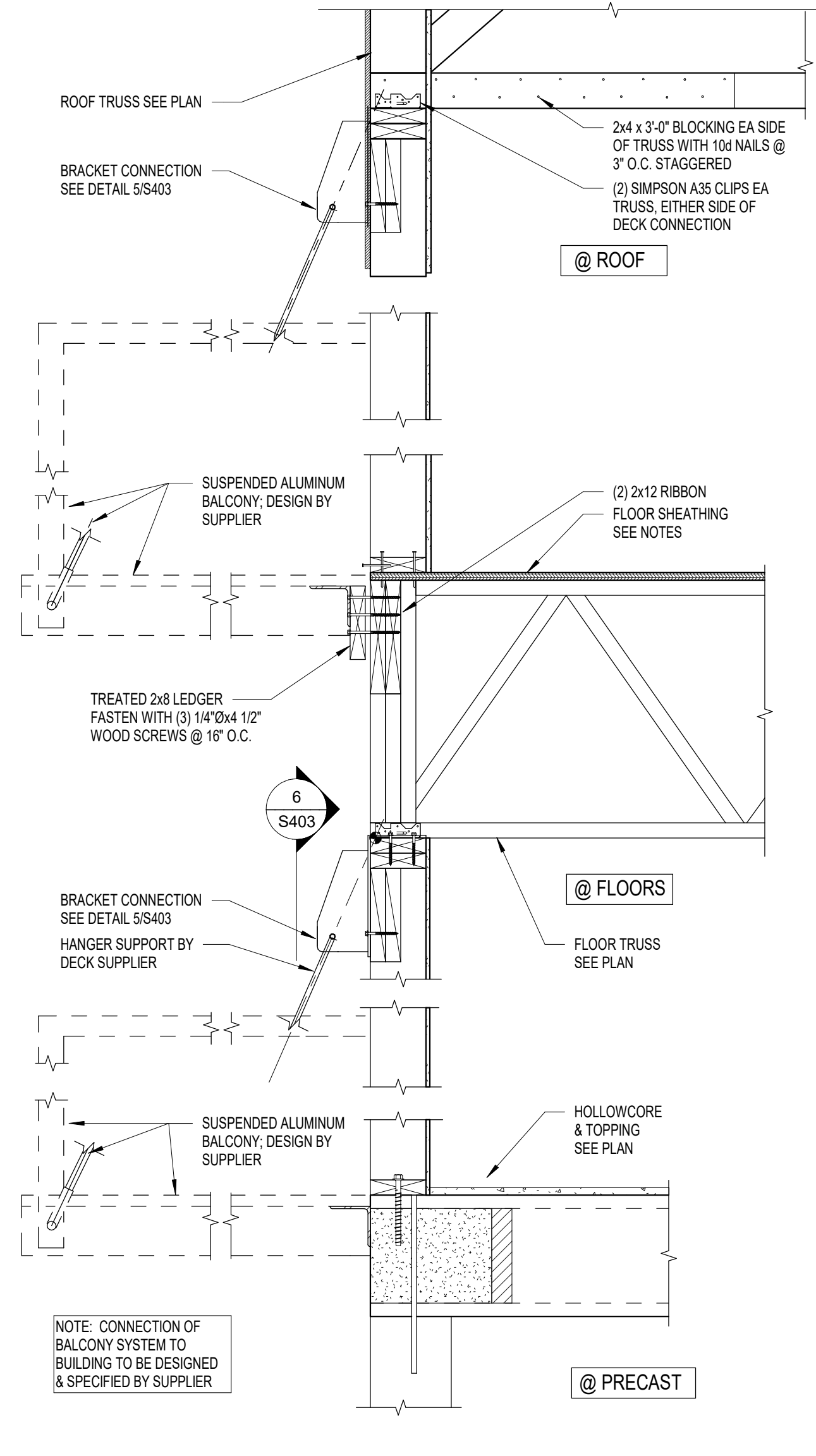
13 FRAMING DETAIL
S403 1" = 1'-0"

14 FRAMING DETAIL
S403 1" = 1'-0"

15 FRAMING DETAIL
S403 1" = 1'-0"

16 FRAMING DETAIL
S403 1" = 1'-0"

17 FRAMING DETAIL
S403 1" = 1'-0"



4 BALCONY CONNECTION
S403 1" = 1'-0"



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Nathan Hoffmann
 Signature: [Signature]
 Date: 02/18/2021 License #: 57492

SSE Project No: 20130-4
 Project Manager: ALK
 Drawn By: MDL
 Date: 02/18/21

Date	Description



700 W. St. Germain Street
 Suite 200
 St. Cloud, MN 56301
 www.hma-archs.com

T | 320.251.9155
 F | 320.251.4919
 hma@hma-archs.com

New Apartment Complex:

Zumbrota
 Apartment
 Complex

Zumbrota, MN

FRAMING DETAILS

S403