

**GENERAL STRUCTURAL NOTES:**

- THE GOVERNING BUILDING CODE IS THE MINNESOTA BUILDING CODE, 2015 EDITION AS APPROVED AND AMENDED BY THE CITY OF MAPLE GROVE, MN.
- CONTRACT DOCUMENTS INCLUDE THE STRUCTURAL DRAWINGS AND SPECIFICATIONS, BUT DO NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR OTHER SUBMITTALS BY THE CONTRACTOR.
- 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 PRESEIDE OVER GENERAL NOTES AND SPECIFICATIONS.
- 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 DEVIATIONS NOT APPROVED BY THE EOR.
- 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.
- 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.
- 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 FOOTING 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.
- CONTRACTOR TO VERIFY ALL WEIGHTS, LOCATIONS & DIMENSIONS OF MECH. EQUIPMENT SHOWN AND NOTIFY THE EOR OF ANY DISCREPANCIES. COORDINATE THIS INFORMATION W/ ALL NECESSARY INDIVIDUALS.
- 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 CONSIDERED 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.

**DESIGN CRITERIA:**

ROOF LOADS			
GROUND SNOW LOAD	Pg	50 PSF	
FLAT ROOF SNOW LOAD	Pf	38.5 PSF	TYPICAL
FLAT ROOF SNOW LOAD	Pf	42 PSF	CANOPY
SNOW IMPORTANCE FACTOR	Is	1.0	--
EXPOSURE FACTOR	Ce	1.0	--
SLOPE FACTOR	Cs	1.0	--
THERMAL FACTOR	Ct	1.1	TYPICAL
THERMAL FACTOR	Ct	1.2	CANOPY

NOTES: SEE PLAN FOR SNOW DRIFT LOADS

ROOF DEAD LOAD	DL	20 PSF	DL TC = 12 / DL BC = 8
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FLOOR LOADS				
FLOOR	DESCRIPTION	DEAD LOAD	LIVE LOAD	NOTES
1ST	TYP RESIDENTIAL	95 / 131 PSF*	40 PSF	--
1ST	CORRIDORS	95 / 131 PSF*	100 PSF	--
1ST	STAIRS/LANDINGS	23 PSF	100 PSF	DL TC = 15 PSF / DL BC = 8 PSF
1ST	CLUB RM/LOBBY	95 / 131 PSF*	100 PSF	--
1ST	TENANT STORAGE	95 / 131 PSF*	80 PSF	--
1ST	EXT. PATIO	195 PSF**	100 PSF	--
2ND	EXERCISE ROOM	23 PSF	60 PSF	DL TC = 15 PSF / DL BC = 8 PSF
2ND/3RD	TYP RESIDENTIAL	23 PSF	40 PSF	DL TC = 15 PSF / DL BC = 8 PSF
2ND/3RD	CORRIDORS/LOBBY	23 PSF	40 PSF	DL TC = 15 PSF / DL BC = 8 PSF
2ND/3RD	STAIRS/LANDINGS	23 PSF	100 PSF	DL TC = 15 PSF / DL BC = 8 PSF
2ND/3RD	DECKS	10 PSF	60 PSF	3RD DECKS: DESIGN FOR SL = 100 PSF
2ND/3RD	TENANT STORAGE	23 PSF	80 PSF	DL TC = 15 PSF / DL BC = 8 PSF

\* DL BREAKDOWN (8" H.C.) = 60 PSF H.C. + 25 PSF TOPPING + 10 PSF S.I.

\*\* DL BREAKDOWN (12" H.C.) = 96 PSF H.C. + 25 PSF TOPPING + 10 PSF S.I.

NOTE: DL OF COUNTERTOPS TO BE ADDED FOR TRUSS DESIGNS

WIND LOADS			
ULT. DESIGN WIND SPEED	V-ult	115 MPH	--
NOMINAL DESIGN WIND SPEED	V-std	90 MPH	--
RISK CATEGORY	--	II	--
EXPOSURE CATEGORY	--	C	--
INTERNAL PRESSURE COEFFICIENT	CpCi	+/- 0.18	--
C&C BASE PRESSURE	qh	31.5PSF(ULT)	--

EQUIVALENT LATERAL EARTH PRESSURES USED:			
SOIL	TYPE	PRESSURE	NOTES
ON-SITE CLAY (SM,SC)	AT REST	64 PCF	USED FOR BASEMENT WALL DESIGN
ON-SITE CLAY (SM,SC)	ACTIVE	43 PCF	USED FOR CANTILEVER STEM RETAINING WALL DESIGN
ON-SITE CLAY (SM,SC)	PASSIVE	332 PCF	USED FOR CANTILEVER STEM RETAINING WALL DESIGN

REFER TO GEOTECHNICAL REPORT FOR BACKFILLING REQUIREMENTS. SOIL RETAINING/BASEMENT WALLS ON PROJECT HAVE NOT BEEN DESIGNED TO WITHSTAND HYDROSTATIC PRESSURE.

**FOUNDATION NOTES:**

- FOOTINGS ARE DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 3000 psf FOR STRIP FOOTINGS AND 3000 psf FOR PAD FOOTINGS. THESE VALUES ARE PER THE GEOTECHNICAL REPORT BY BRAUN INTEREC ISSUED ON 12/16/16, REPORT #B611164.
- 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.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE EOR IMMEDIATELY OF ANY SPECIAL SOIL OR WATER CONDITIONS THAT EXIST ON SITE.
- 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.
- BACKFILL SHALL BE COMPACTED BY MECHANICAL MEANS. WATER INFILTRATION SHALL NOT BE ALLOWED. BACKFILL SHALL BE PLACED IN ALTERNATE LIFTS ON EA SIDE OF THE FDN WALLS FOR STABILITY.
- UNLESS SPECIFICALLY PRESCRIBED IN A GEOTECHNICAL REPORT, BACKFILL SHALL BE PLACED AND COMPACTED IN LOOSE LIFT THICKNESSES OF 6" 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 D698-00a).
- ALL WALL FOOTINGS ARE TO BE CENTERED ON WALLS U.O.N. ALL PAD FOOTINGS ARE TO BE CENTERED ON COLUMNS U.O.N.

**CONCRETE AND STEEL REINFORCEMENT NOTES:**

- CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO AMERICAN CONCRETE INSTITUTION (ACI) CODES AND SPECIFICATIONS, LATEST EDITION.
 

ACI 301	"SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI 315	"DETAILS & DETAILING OF CONCRETE REINFORCEMENT"
ACI 318	"BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
ACI 308R	"COLD WEATHER CONCRETING"
- CAST-IN-PLACE CONCRETE STRENGTHS (f'c) REQUIRED (28 DAY):
 

FOOTINGS	3000 PSI	PIERS	3000 PSI
EXTERIOR WALLS	3000 PSI	INTERIOR SLABS	3000 PSI
INTERIOR WALLS	3000 PSI	EXTERIOR SLABS	4500 PSI
PRECAST TOPPING	3000 PSI	(AIR ENTRAINED)	
- SUBMIT CONCRETE MIX DESIGN & STRENGTH DATA TO E.O.R. FOR APPROVAL. ALL ADMIXTURES ARE THE RESPONSIBILITY OF THE CONTRACTOR SUPPLIER'S ENGINEER.
- CAST-IN-PLACE CONCRETE SHALL BE SUBJECT TO TESTING BY AN INDEPENDENT TESTING LABORATORY, SEE SPECS AND SPECIAL INSPECTION REQUIREMENTS..
- ALL CONCRETE SHALL BE PLACED PER ACI & THOROUGHLY CONSOLIDATED BY MEANS OF A VIBRATOR, ESPECIALLY AROUND REINFORCEMENT STEEL AND CORNERS OF FORM WORK.
- REINFORCING STEEL SHALL BE GRADE 60 DEFORMED, BILLET-STEEL, ASTM A615, U.O.N. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A82 AND A185.
- WELDED REINFORCING STEEL SHALL BE GRADE 60, LOW CARBON, ASTM A706, WHICH IS SPECIALLY MANUFACTURED TO BE WELDABLE.
- WELDED WIRE FABRIC SHALL BE PLACED IN THE CENTER OF THE SLAB, U.O.N. LAP JOINTS A MINIMUM OF 6". EXTEND FABRIC TO BE WITHIN 1" OF SLAB EDGES.
- PROVIDE ADEQUATE BOLSTERS, HIGH CHAIRS, SUPPORT BARS, ETC TO MAINTAIN THE SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING STEEL AND WELDED WIRE FABRIC.
- PROVIDE EXTRA REINFORCEMENT AROUND ALL OPENINGS GREATER THAN 8" SQUARE OR ROUND. PROVIDE (2) #5 BARS @ 3" O.C. FOR EACH MAT OF BARS, AT EACH SIDE AND CORNER OF OPENING EXTENDING MINIMUM 18" PAST CORNER OF THE OPENING. PLACE 2" CLEAR FROM OPENING.
- SEE DETAILS FOR REINFORCING LAP SPICE SCHEDULE, UNLESS OTHERWISE NOTED ON PLAN OR DETAILS.
- CAST DOWELS, WITH STD 90 DEG HOOK, IN FOOTINGS FOR CONCRETE PIERS AND WALLS ABOVE. DOWELS SHALL BE THE SAME SIZE AND QTY AS THE VERTICAL REINFORCING (U.O.N.).
- SUPPLY 100 FEET EXTRA OF #5 REBAR FOR MISC. PLACEMENT AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL INCLUDE LABOR ALLOWANCE FOR PLACEMENT.
- EXTERIOR SLABS SHALL DRAIN FREELY AWAY FROM THE BUILDING. SEE CIVIL AND ARCH. DRAWINGS FOR ELEVATIONS.
- CONTROL SAWCUT JOINTS ARE TO BE EXECUTED AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT AND PROTECT FROM DISJUNCTION BY SAW AND PRIOR TO SHRINKAGE STRESS CRACKING. CONTROL JOINTS TO BE SPACED A MAXIMUM OF 18 FOOT SQUARES U.O.N. ON PLAN. A JOINT SHALL BE CUT TO EVERY CORNER OF COLUMN ISOLATION JOINTS.
- CONCRETE FIBER REINFORCEMENT SPECIFIED ON THE DRAWINGS IS TO BE PROPEX FIBERESH 300. APPLICATION RATE TO BE A MINIMUM OF 1.5 LBS/CUBIC YARD UNLESS HIGHER DOSAGE IS RECOMMENDED BY MANUFACTURER. FOLLOW MANUFACTURERS SPECS FOR MIXING & FINISHING CONCRETE W/ FIBER REINFORCEMENT.
- SEE ARCH DRAWINGS FOR DIMENSIONS OF STOOPS, FOUNDATION WALL HOLDOUTS, SLAB RECESSES, SLOPED SLABS & FOUNDATION WALL INSULATION.

**PRECAST / PRESTRESSED CONCRETE NOTES:**

- PRECAST CONCRETE UNITS SHALL BE DESIGNED TO SUPPORT THE LOADS DESCRIBED ON THE CONTRACT DOCUMENTS. MEMBER DESIGN SHALL BE PERFORMED ACCORDING TO THE ACI 318 AND PCI LATEST EDITIONS AND UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT.
- ALL PRECAST TO PRECAST CONNECTIONS ARE THE RESPONSIBILITY OF PRECAST SUPPLIER. SHOW FIELD WELDS AND CONNECTION MATERIAL REQUIREMENTS ON SHOP DRAWINGS SUBMITTALS.
- PRECAST MEMBERS HAVE BEEN INDICATED ON THE DRAWINGS BY GENERAL SIZE AND DEPTH. THE STRUCTURAL DESIGN OF THE MEMBERS AND THEIR LIFTING ACCESSORIES SHALL BE BY A REGISTERED ENGINEER IN THE STATE OF THE PROJECT BY THE PRECAST MANUFACTURER.
  - DESIGN DEVIATIONS WILL BE PERMITTED AFTER THE ENGINEERS APPROVAL OF THE MANUFACTURER'S PROPOSED DESIGN SUPPORTED BY CALCULATIONS AND DRAWINGS.
  - DESIGN DEVIATIONS MUST PRODUCE AN INSTALLATION EQUIVALENT TO THE BASIC INENT WITHOUT INCURRING ADDED COSTS.
- ALL SUBMITTAL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
- HEADERS AT OPENINGS THROUGH PRECAST PLANK SHALL BE SUPPLIED BY THE PRECAST SUPPLIER. ADJACENT PRECAST UNITS SHALL BE DESIGNED FOR THE LOADS AT THE HANGER BEARING LOCATION.
- 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.
- PRECAST MEMBERS SHALL BE ERECTED SIMULTANEOUSLY ON EACH SIDE OF THE SUPPORTING WALLS AND BEAMS TO MAINTAIN STABILITY.
- VERIFY WITH ALL TRADES IF ADDITIONAL EMBEDS ARE REQUIRED FOR TRADE COORDINATION AND INSTALLATION.
- CONTRACTOR RESPONSIBLE TO CONTACT PRECAST SUPPLIER IF COMPONENTS ARE ATTACHED TO PRECAST EMBEDS INCORRECTLY OR MISALIGNED. CONTRACTOR TO WORK WITH PRECAST ENGINEER TO DEVELOP APPROPRIATE FIELD FIX, IF NECESSARY. ALL CORRESPONDENCES TO BE COPIED TO STRUCTURAL ENGINEER OF RECORD.

**WOOD FRAMING NOTES:**

- WOOD AND TIMBER CONSTRUCTION SHALL COMPLY WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARD SPECIFICATIONS.
- WOOD CONSTRUCTION SHALL CONFORM TO CHAPTER 23 (SECTIONS 2301, 2302, 2303, 2304, 2305, & 2306) OF THE 2012 IBC FOR MINIMUM REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS. FOR MINIMUM FASTENING REFER TO TABLE IBC 2304.9.1. PER SECTION 2301.2, THE STRUCTURAL DESIGN OF THIS STRUCTURE HAS BEEN IN ACCORDANCE WITH THE "ALLOWABLE STRESS DESIGN" METHOD. PROVISIONS WITHIN SECTION 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION" DO NOT APPLY TO THIS STRUCTURE.
- ALL FRAMING LUMBER SHALL BE INSTALLED WITH MOISTURE CONTENT OF 19% OR LESS INDICATING "S-DRY" ON THE GRADE STAMP.
- ALL LUMBER IN CONTACT WITH CONCRETE, MASONRY OR EXPOSED TO WEATHER SHALL BE PRESURE TREATED WITH WATERPROOFING TREATMENT, 28% MAX. MOISTURE CONTENT.
- ALL SIMPSON STRONG-TIE CONNECTORS USED WITH PRESURE TREATED LUMBER SHALL BE "Z-MAX" COATED AS A MINIMUM OR REQUIRED COATING TO PROTECT CONNECTORS FROM SURFACE CHEMICALS. PROVIDE A PRESERVATIVE-TREATED BARRIER BETWEEN TREATED PLATES AND HOLD-DOWNS.
- 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, U.O.N. ON PLAN OR DETAILS (PSI). DESIGN VALUES TAKEN FROM NDS SUPPLEMENT: TABLES 4A, 4B, & 4D						
SPECIES & GRADE	Fb	Ft	Fv	FcP	Fc	E
LOAD BEARING WALL STUDS						
SPF #1/#2	875	450	135	425	1150	1,400,000
HEADER/BEAMS/JOISTS						
HEM FIR #2	850	525	150	405	1300	1,300,000
TREATED BEAMS/JOISTS						
SOUTHERN PINE #2	1500	825	175	565	1650	1,600,000
TOP R/HEADER R/ABOVE GROUND SILL R						
SPF #1/#2	875	450	135	425	1150	1,400,000
TREATED SILL R						
SOUTHERN PINE #2	1500	825	175	565	1650	1,600,000
TREATED POSTS						
DOUG FIR #2	750	475	170	625	700	1,300,000
FLOOR TRUSS END RIBBONS						
SPF MSR 2400-2.0E	2400	1925	135	425	1975	2,000,000

- IF ALTERNATIVE GRADE OR SPECIES OF LUMBER IS DESIRED THAT IS EQUAL OR GREATER THAN THE ABOVE REQUIREMENTS; CONTRACTOR TO SUBMIT REQUEST TO ENGINEER FOR APPROVAL PRIOR TO ORDERING OF MATERIAL. SPF-S #2 IS SPRUCE-PINE-FIR SOUTH & IS NOT EQUIVALENT TO SPF #1/#2
- ANCHOR TREATED SILL PLATES TO CONCRETE/MASONRY WITH 1/2" GALV A.R.'S 4'-0" O.C. MINIMUM, U.O.N. ON PLAN. HOOKED ROD W/ MINIMUM EMBED = 7"; 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.
  - DIMENSIONAL LUMBER USED FOR HEADERS SHALL HAVE NO SPLITS OR CHECKS.
  - PROVIDE WASHERS PER STRUCTURAL DETAILS FOR ALL BOLTS IN WOOD MEMBERS. RE-TORQUE NUTS 48 HOURS AFTER FIRST TIGHTENING.
  - 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 IBC SECTION 2308 DO NOT APPLY TO THIS STRUCTURE.
  - LOAD BEARING STUD WALLS TO BE 2x6 @ 1'-4" O.C. U.O.N. SEE TABLE ABOVE FOR SPECIES & GRADE.
  - EXTERIOR WALLS AND LOAD BEARING WALLS SHALL BE CAPPED WITH DOUBLE TOP PLATES. THE PLATES SHALL OVERLAP AT CORNERS AND AT INTERSECTIONS WITH OTHER LOAD BEARING WALLS. SEE STANDARD DETAILS.
  - POSTS AND BEARING STUDS (JACKS/KINGS) FOR BEAMS AND HEADERS SHALL BE CONTINUOUS TO THE FOUNDATION LEVEL. PROVIDE SQUASH BLOCKING BETWEEN FLOOR LEVELS TO MATCH THE WIDTH OF THE POST/STUD ASSEMBLY FROM ABOVE.
  - TOP FLANGE OF ALL RAFTERS, JOISTS AND BEAMS TO BE Laterally SUPPORTED @ 24" O.C. MIN. PROVIDE BRIDGING FOR TOP FLANGE AS REQUIRED TO NEAREST FRAMING MEMBER OR PROVIDE ADEQUATELY SUPPORTED PLYWOOD DECKING.
  - PROVIDE SOLID BLOCKING AT BEARING POINTS OF ALL 2x JOISTS.
  - 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.
  - FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL. THIS INCLUDES NAILS, TIMBER RIVETS, WOOD SCREWS, THRU BOLTS, AND LAG SCREWS.
  - STRUCTURAL LOAD BEARING OR LATERAL LOAD RESISTING WALLS ARE SHOWN ON THE PLAN. SEE ARCH DRAWINGS FOR PARTITION WALLS, PROVIDE NECESSARY CONNECTION/ALLOWANCE OF PARTITION WALLS TO UNDERSIDE OF FLOOR AND ROOF FRAMING TO ACCOUNT FOR FRAMING DEFLECTION.
  - DRILL BOLT/ANCHOR HOLES IN WOOD 1/16" LARGER THAN THE NOMINAL DIAMETER OF THE BOLT. REPAIR OVERSIZED HOLES WITH BEARING PLATE WASHERS.
  - ALL JOISTS, TRUSSES, HEADERS, AND BEAMS SHALL HAVE FULL BEARING UNLESS NOTED OTHERWISE NOTED ON THE DETAILS.
- | MINIMUM DESIGN VALUES FOR ENGINEERED WOOD MATERIALS, U.O.N. ON PLAN OR DETAILS (PSI) |      |      |           |  |  |
|--|------|------|-----------|--|--|
| MATERIAL & FUNCTION  | Fb   | FcII | E         |  |  |
| LVL BEAMS  | 3100 | N/A  | 2,000,000 |  |  |
| LSL BEAMS  | 2325 | N/A  | 1,550,000 |  |  |
| PSL BEAMS  | 2900 | N/A  | 1,200,000 |  |  |
| PSL COLUMNS  | N/A  | 2500 | 1,800,000 |  |  |
- | MINIMUM DIMENSIONS OF FASTENERS, U.O.N. [NDS APPENDIX L] UNITS = INCHES |       |       |       |                              |        |       |       |
|---|-------|-------|-------|------------------------------|--------|-------|-------|
| FASTENER TYPE   | L     | D     | H     | FASTENER TYPE                | L      | D     | H     |
| NAIL: 6d  | 2     | 0.113 | 0.266 | NAIL: 16d                    | 3 1/2  | 0.162 | 0.344 |
| NAIL: 8d  | 2 1/2 | 0.131 | 0.281 | NAIL: 30d                    | 4 1/2  | 0.207 | 0.438 |
| NAIL: 10d   | 3     | 0.148 | 0.312 | #6 TYPE S OR W DRYWALL SCREW | 1 1/2" | N/A   | N/A   |
- L = LENGTH, D = DIAMETER, H = HEAD

**WOOD STRUCTURAL PANEL WALL SHEATHING (WOOD FRAMING):**

- 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.
- TYPICAL EXTERIOR WALL SHEATHING, U.O.N. : NOMINAL THICKNESS = 7/16", SPAN RATING 24/16.
- 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.
- FASTENERS SHALL BE SPACED @ 6" O.C. ALONG ALL PANEL EDGES & @ 12" O.C. IN THE FIELD OF THE PANELS. FASTENERS TO BE LOCATED NOT LESS THAN 3/8" IN FROM THE EDGE OF THE PANEL.
- MINIMUM FASTENERS SHALL BE: 8d COMMON NAILS, WITH A MINIMUM 1 1/2" PENETRATION, FLUSH DRIVEN, U.O.N.
- IN SHEARWALL APPLICATIONS, IF PRE-FABRICATED PANELS ARE USED, WALL SHEATHING MUST SPlice @ STUD CENTERLINE AND NOT AT A JOINT BETWEEN WALL PANELS. IF SPlice DOES HAPPEN BETWEEN WALL PANELS, AN ALTERNATE CONNECTION OF PANELS IS TO FASTEN END STUDS OF PANELS TOGETHER W/ 16d NAILS @ 6" O.C. STAGGERED FROM BOTH SIDES. IN BOTH CASES, FIELD INSTALL UPPER TOP PLATE FOR WALL CONTINUITY PER STANDARD DETAILS.
- IN SHEARWALL APPLICATIONS: PANEL EDGES TO BE UNBLOCKED, U.O.N. PANELS SHALL NOT BE LESS THAN 4'x8', EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING. WALL OPENINGS, SUCH AS WINDOWS AND DOORS, DO NOT CONSTITUTE CHANGES IN FRAMING.
- FASTENING REQUIREMENTS SHALL APPLY TO ALL STUDS, TOP & BOTTOM PLATES, & BLOCKING.
- MINIMUM SPACING OF NAILS TO BE 3" O.C. FOR 2X LUMBER.
- PROPOSED PENETRATIONS THROUGH SHEARWALL SHEATHING NEEDS TO BE SUBMITTED TO E.O.R. FOR APPROVAL PRIOR TO CUTTING IN THE FIELD.

**ROOF / FLOOR WOOD SHEATHING DIAPHRAGM NOTES:**

- 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.
- ROOF PANEL: NOMINAL THICKNESS = 3/4", SPAN RATING 32/16. FLOOR PANEL: NOMINAL THICKNESS = 3/4", SPAN RATING 48/24.
- MINIMUM FASTENER REQUIREMENTS SHALL BE: 8d COMMON NAILS FOR 3/2" AND 10d COMMON NAILS FOR 3/4" LOCATED 3/8" FROM PANEL EDGE, WITH A MINIMUM 1 1/2" PENETRATION, FLUSH DRIVEN, FASTEN @ 6" O.C. @ SUPPORTED PANEL EDGES, AND 12" O.C. IN THE FIELD OF THE PANEL, UNLESS OTHERWISE NOTED ON THE DRAWINGS. IF 8d COOLER, DEFORMED, AND SMOOTH NAILS ARE USED AND INSTALLED WITH NAIL-GUN; MINIMUM FASTENING SPACING IS 4" O.C. AT SUPPORTED PANEL EDGES AND 8" O.C. IN THE FIELD OF THE PANEL.
- AT ROOF OVERHANGS MINIMUM FASTENING TO BE: 8d COMMON, 6" O.C. IN FIELD & @ PANEL EDGES. IF INSTALLED WITH NAIL GUN USE 8d COOLER, DEFORMED, SMOOTH @ 4" O.C. IN FIELD AND @ PANEL EDGES.
- 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.
- UNSUPPORTED EDGES SHALL HAVE A MINIMUM ONE PANEL EDGE CLIP, TONGUE AND GROOVE, OR BLOCKING. APA RECOMMENDS TONGUE AND GROOVE EDGES TO BE GLUED TOGETHER.
- PANELS SHALL BE CONTINUOUS OVER 2 SPANS MINIMUM, AND SHALL HAVE THE FACE OF GRAIN PERPENDICULAR TO THE FRAMING DIRECTION.
- MINIMUM SPACING OF NAILS TO BE 3" O.C. FOR 2X LUMBER.
- ALL FASTENING MUST BE DRIVEN FLUSH WITH SHEATHING. IF MORE THAN 20% OF FASTENERS ARE OVERDRIVEN BY 1/8" - CONTACT ENGINEER FOR CORRECTIVE ACTION.
- IF SHEATHING IS BEING USED WITH WOOD I-JOIST FRAMING; SHEATHING MUST BE GLUED TO I-JOIST FRAMING IN ADDITION TO TYPICAL FASTENING. GLUE SHOULD MEET AFG-01 OR ASTM D3498 SPECIFICATIONS.
- ALL PANELS SHOULD BE LAYED 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 WITH LOCATION OF FRAMING MEMBERS BELOW.
- ADDITIONAL PANEL CLIPS ARE REQUIRED @ UNSUPPORTED EDGES FOR PANEL WIDTHS LESS THAN OR EQUAL TO 24".
 

16"-24"	2 PANEL CLIPS OR 2x4 BLOCKING
<16"	2x4 BLOCKING EA EDGE

**METAL PLATE CONNECTED WOOD TRUSS NOTES:**

- 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 2303.4.
- 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."
- TRUSSES TO BE DESIGNED TO SATISFY THE FOLLOWING DEFLECTION REQUIREMENTS. TRUSS SUPPLIER TO PROVIDE CAMBER AS NECESSARY TO COUNTER DL DEFLECTIONS.
 

ROOF TL = L/240 *	FLOOR TL = L/240 *
ROOF SL = L/360	FLOOR LL = L/480

 \* NET TL DEFLECTION MINUS CAMBER, NOT TO EXCEED 3/4". PARTITION WALLS BELOW TRUSSES TO BE FRAMED TO ALLOW FOR THIS EXPECTED DEFLECTION.
- TRUSS SUPPLIER TO MAKE EVERY EFFORT TO FOLLOW FRAMING SCHEME AS THE LOADS HAVE BEEN DISTRIBUTED TO THE FOUNDATION ACCORDINGLY. IF REVERSED FRAMING DIRECTIONS ARE DESIRED BY SUPPLIER, PLAN MUST BE SUBMITTED FOR APPROVAL PRIOR TO FOUNDATION CONSTRUCTION.
- UNLESS OTHERWISE NOTED ON DRAWINGS, EOR HAS NOT PROVIDED STRUCTURAL SHEATHING BENEATH THE BOTTOM CHORD OF ROOF OR FLOOR TRUSSES FOR BRACING.
- ALL HARDWARE (BOLTS, HANGERS, STRAPS, ETC) REQUIRED FOR CONNECTIONS BETWEEN TRUSSES SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS ENGINEER AND SUPPLIER.
- UNLESS NOTED OTHERWISE, ROOF TRUSSES SHALL BE ATTACHED TO THE TOP PLATE AT ALL BEARING CONDITIONS W/ SIMPSON H2.5T CLIPS INSTALLED PER MANUFACTURER'S INSTRUCTIONS. GIRDERS AND ROOF BEAMS SHOULD BE ATTACHED TO BEARING SUPPORTS WITH (2) H2.5T CLIPS.
- DO NOT CUT OR REMOVE TRUSS MEMBERS OR MAKE FIELD ALTERATIONS TO THE TRUSSES.
- LAYOUT AND SPACING GUIDELINES ON PLAN ARE FOR REFERENCE ONLY UNLESS SPECIFICALLY DIMENSIONED OR DETAILED.
- THE METAL PLATE CONNECTED WOOD TRUSS SUPPLIER SHALL SUPPLY AN Hib-91 PUBLICATION OUTLINING THE PROPER HANDLING, ERECTING, AND BRACING OF TRUSSES.
- SEE METAL PLATE CONNECTED WOOD TRUSS SHOP DRAWINGS FOR PERMANENT WEB AND CHORD BRACING LOCATIONS AND REQUIREMENTS.
- GIRDER TRUSSES SHALL BE SUPPORTED BY SAME NUMBER OF STUDS AS TRUSS PLIES (MIN OF 2 STUDS) WITH CONTINUOUS SOLID BEARING TO THE FOUNDATION. AVOID BEARING GIRDER TRUSSES OVER WALL OPENINGS, UNLESS OTHERWISE DIMENSIONED ON PLAN.

**MASONRY NOTES:**

- MASONRY CONSTRUCTION SHALL CONFORM TO AMERICAN CONCRETE INSTITUTION (ACI) CODES AND SPECIFICATIONS, LATEST EDITION.
 

ACI 530: "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"  
ACI 530.1: "SPECIFICATION FOR MASONRY STRUCTURES"
- PROVIDE CONCRETE MASONRY UNITS (CMU) OF NORMAL WEIGHT, GRADE N, TYPE I OR II, CONFORMING TO ASTM C90 AND TESTED IN ACCORDANCE WITH ASTM C140. MASONRY ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF, f'm=1500 PSI. TESTED IN ACCORDANCE WITH THE PRISM METHOD (ASTM C1314) OR UNIT STRENGTH METHOD PER ACI 530.
- MORTAR SHALL CONFORM TO ASTM C270 AND TESTED IN ACCORDANCE WITH ASTM C780. USE TYPE "M" BELOW GRADE AND TYPE "S" ABOVE GRADE.
- MASONRY GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS, TESTED IN ACCORDANCE WITH ASTM C1019.
- ALL BOND BEAMS SHALL HAVE (2) #5 BARS CONT. W/ CORNER BARS. PLACE BOND BEAMS WHERE SHOWN ON DETAILS AND AT TOP OF WALL. CONTINUE BOND BEAMS THROUGH CONTROL JOINTS.
- PROVIDE FULL MORTAR BED AT FACE SHELLS AND CROSS WEBS ADJACENT TO GROUTED CORE LOCATIONS. PROVIDE FULL MORTAR BED AT BASE OR BOTTOM WALL COURSE AND UNDER ALL SOLID UNITS.
- ALIGN VERTICAL CELLS TO BE FILLED WITH GROUT TO PROVIDE CONT. UNOBSTRUCTED VERTICAL CELLS. REMOVE OVERHANGING MORTAR OR OTHER OBSTRUCTION AND DEBRIS.
- ALL CMU SHALL BE LAID IN A RUNNING BOND, U.O.N.
- PROVIDE VERTICAL CONTROL JOINTS MEETING THE FOLLOWING CRITERIA (SEE ARCH DRAWINGS FOR CONTROL LOCATIONS). DEVIATION REQUIRES APPROVAL FROM ENGINEER AND ARCHITECT.
 

MAX SPACING NOT TO EXCEED 25'-0"  
MAX OF 8'-0" FROM BUILDING CORNERS  
NO CLOSER THAN 2'-0" TO OPENING EDGES  
NO CLOSER THAN 1'-4" TO BEAM OR JOIST BEARING LOCATION
- VERTICAL REBAR SHALL BE Laterally SUPPORTED IN PROPER POSITION AT TOP AND BOTTOM OF BAR DURING GROUTING OF CELLS WITH REB POSTIONERS PRIOR TO GROUT PLACEMENT. "WET STICKING" OF REINFORCEMENT AND EMBEDS IS NOT ACCEPTABLE. SEE ACI SPECIFICATIONS FOR PLACEMENT TOLERANCES.
- ALL VERTICAL REINFORCEMENT, INCLUDING JAMB REINFORCEMENT, SHALL BE DOWELED INTO FOUNDATION WALLS OR FOOTINGS.
- IT IS THE CONTRACTORS RESPONSIBILITY TO BRACE WALLS UNTIL FLOOR OR ROOF CONNECTIONS ARE COMPLETED.
- HORIZONTAL JOINT REINFORCING SHALL BE GALVANIZED 9 GA. WITH MAX SPACING OF 16" O.C. VERTICALLY; LAP 8" MIN. ALL CORNERS AND WALL INTERSECTIONS TO BE PREFABRICATED PIECES. JOINT REINFORCEMENT SHALL BE FULLY EMBEDDED IN MORTAR. TERMINATE JOINT REINFORCEMENT AT CONTROL JOINTS, U.O.N.
- UNLESS NOTED OTHERWISE, TYPICAL CMU WALLS SHALL HAVE VERTICAL REINFORCING CONSISTING OF #5 BARS @ 4'-0" O.C. IN MASONRY GROUT.
- PROVIDE (1) #5 EA SIDE OF CONTROL JOINT, AT END OF WALL SEGMENTS, AND AT WALL CORNERS.
- SHOP DRAWING SUBMITTAL FOR WALL REINF. SHALL SHOW ALL WALL ELEVATIONS W/ REINF, CONTROL JOINTS, AND

SPECIAL INSPECTIONS AND TESTING:

THIS PROJECT REQUIRES SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE, 2012 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 DRAWINGS. THE SPECIAL INSPECTION 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 SPECIFIC 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 WEEKLY 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 FOR INDIVIDUALS PERFORMING SPECIFIC INSPECTIONS OR TESTS INCLUDING IN THIS PROJECT'S SSI.

- A. AMERICAN CONCRETE INSTITUTE (ACI):
• CONCRETE FIELD TESTING TECHNICIAN - GRADE 1 (ACI-CFTT)
• CONCRETE CONSTRUCTION INSPECTOR (ACI-CO)
• 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/AISC-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):

- 1. THE FOLLOWING TABLES INDICATE 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.

Table with 6 columns: VERIFICATION AND INSPECTION, AGENCY QUALIFICATION, SCOPE, REFERENCED STANDARD, FREQUENCY OF INSPECTION, REQUIRED ON PROJECT. Rows include: 1. Shallow Foundations, 2. Controlled Structural Fill, 3. Deep Foundation: Driven Piles, 4. Deep Foundation: Drilled Pier Foundations.

Table with 6 columns: VERIFICATION AND INSPECTION, AGENCY QUALIFICATION, SCOPE, REFERENCED STANDARD, FREQUENCY OF INSPECTION, REQUIRED ON PROJECT. Rows include: 1. Mix Design, 2. Material Certification, 3. Reinforcement Installation, 4. Welding of Reinforcing, 5. Anchor Rods, 6. Concrete Placement, 7. Sampling and Testing of Concrete, 8. Curing and Protection, 9. Post-Installed Anchors. Includes exceptions per IBC 1705.3.

Table with 6 columns: VERIFICATION AND INSPECTION, AGENCY QUALIFICATION, SCOPE, REFERENCED STANDARD, FREQUENCY OF INSPECTION, REQUIRED ON PROJECT. Rows include: 1. Supplier's Plant Certification/Quality Control Procedures, 2. Erection of Precast Elements.

Table with 6 columns: VERIFICATION AND INSPECTION, AGENCY QUALIFICATION, SCOPE/NOTES, REFERENCED STANDARD, FREQUENCY OF INSPECTION, REQUIRED ON PROJECT. Rows include: 1. Material Certification, 2. As masonry construction begins, these items to be verified to ensure compliance: 2a. Proportions of site-prepared mortar, 2b. Construction of mortar joints, 2c. Location of reinforcement, connectors and anchorages, 3. The inspection program shall verify: 3a. Size and location of structural elements, 3b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction, 3c. Specified size, grade and type of reinforcement, 3d. Welding of reinforcement bars, 3e. Protection of masonry during cold weather and hot weather conditions, 4. Prior to grouting, the following shall be verified to ensure compliance: 4a. Grout space is clean, 4b. Placement of reinforcement, connectors and anchorages, 4c. Proportions of site-prepared grout, 4d. Construction of mortar joints, 5. Grout placement shall be verified to ensure compliance with code and construction documents, 6. Preparation of any required grout specimens and/or prisms shall be observed, 7. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified, 8. Evaluation of Masonry Strength.

Table with 6 columns: VERIFICATION AND INSPECTION, AGENCY QUALIFICATION, SCOPE, REFERENCED STANDARD, FREQUENCY OF INSPECTION, REQUIRED ON PROJECT. Rows include: 1. Fabricator Certification/Quality Control Procedures, 2. Material Grading, 3. Connections, 4. Framing and Details, 5. Diaphragms and Shearwalls, 6. Prefabricated Wood Trusses & I-Joists.



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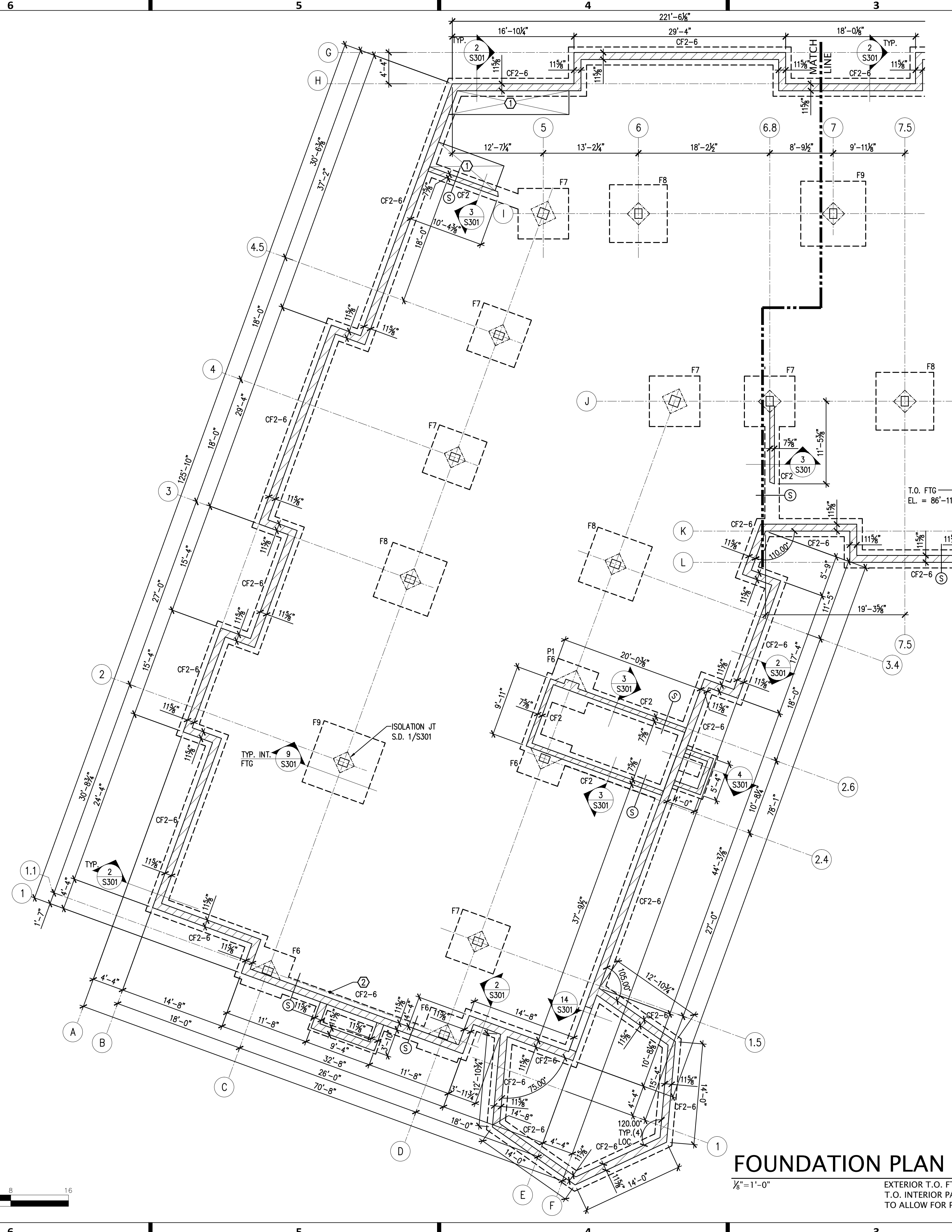
REVISION SCHEDULE table with columns: NO., DESCRIPTION, DATE.

JLG ARCHITECTS BOTTINEAU RIDGE II APARTMENTS MAPLE GROVE, MN

DATE 12/04/17 PHASE 100% CDs PROJECT 16098 SHEET S002 SPECIAL INSPECTIONS

PROFESSIONAL ENGINEER 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: Kurt Sandman Signature: [Signature] Date: 12/04/2017 License #: 43486





**FOUNDATION PLAN NOTES:**

- SEE SHEET S301 FOR GENERAL FOUNDATION DETAILS & 10/S301 FOR STANDARD CMU DETAILS. SEE SHEET S001 FOR GENERAL CONCRETE AND FOUNDATION NOTES.
- TYPICAL INTERIOR GARAGE SLAB ON GRADE, U.N.O. THICKNESS = 4" REINFORCEMENT = FIBERMESH. BASE = MIN OF 6" COMPACTED GRANULAR FILL VAPOR RETARDER/BARRIER = 10 MIL POLY T.O. SLAB ELEVATION = 89'-3", TYP - SEE ARCH FOR SLOPE LINES.
- SEE ARCH FOR LOCATIONS OF CMU PARTITIONS. SEE DETAIL 5/S301 FOR SLAB AT CMU PARTITIONS.
- (S) - DENOTES FOOTING STEP - S.D. 1/S301.
- SEE S201 A/B FOR CMU WALL REINFORCING.

**KEYNOTES**

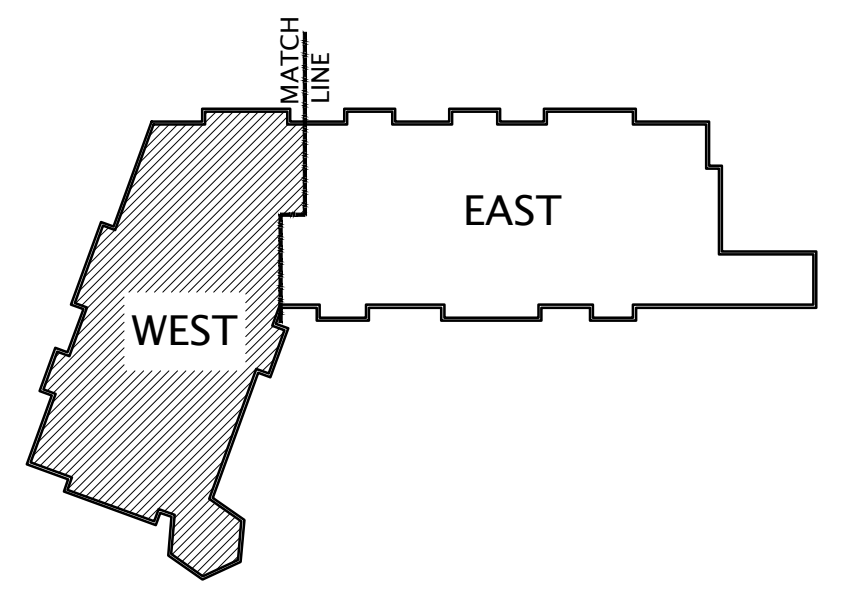
- 4" ELEVATED HOUSEKEEPING PADS. REINFORCE W/#4 REBAR @ 1'-6" O.C. EACH WAY. SEE ARCH/MECH FOR SIZE & LOCATION.
- PROVIDE FOOTING STEP AS REQUIRED TO MAINTAIN 3'-8" (MIN) FROM WELL FINISHED GRADE TO BOTTOM OF FOOTING.
- CONCRETE APRON - SEE ARCH FOR DIMENSIONS.
- PROVIDE FOOTING STEPS AT OIL/FLAMMABLE LIQUID SEPARATOR. BOTTOM OF FOOTING MUST BE AT OR BELOW TO BOTTOM OF THE SEPARATOR. G.C. COORDINATE.

**FOOTING SCHEDULE**

MARK	SIZE	THICKNESS	LONGITUDINAL REINFORCEMENT	TRANSVERSE REINFORCEMENT	NOTES/COMMENTS
CF2	2'-0" CONT.	1'-0"	(2) #5 CONT.	#4 @ 4'-0" O.C.	-
CF2-6	2'-6" CONT.	1'-0"	(2) #5 CONT.	#4 @ 4'-0" O.C.	-
F6	6'-0" SQ.	1'-0"	(6) #6	(6) #6	-
F7	7'-0" SQ.	1'-2"	(7) #6	(7) #6	-
F8	8'-0" SQ.	1'-4"	(8) #6	(8) #6	-
F9	9'-0" SQ.	1'-6"	(9) #6	(9) #6	-

**CONCRETE PIER SCHEDULE**

MARK	DETAIL	NOTES/COMMENTS
P1	1/S302	-
P2	2/S302	-
P3	3/S302	-
P4	4/S302	-



**KEYPLAN**  
NO SCALE

**FOUNDATION PLAN - WEST**

1/8" = 1'-0"  
EXTERIOR T.O. FTG. ELEV. = 88'-11" U.N.O.  
T.O. INTERIOR PAD FTG = G.C. COORD. EL.  
TO ALLOW FOR PLUMBING TO PASS ABOVE FTG

**REVISION SCHEDULE**

NO.	DESCRIPTION	DATE

**JLG ARCHITECTS**  
**BOTTINEAU RIDGE II APARTMENTS**  
 MAPLE GROVE, MN

DATE  
**12/04/17**  
 PHASE  
**100% CDs**  
 PROJECT  
**16098**  
 SHEET  
**S101A**  
**FOUNDATION PLAN**  
**"WEST"**

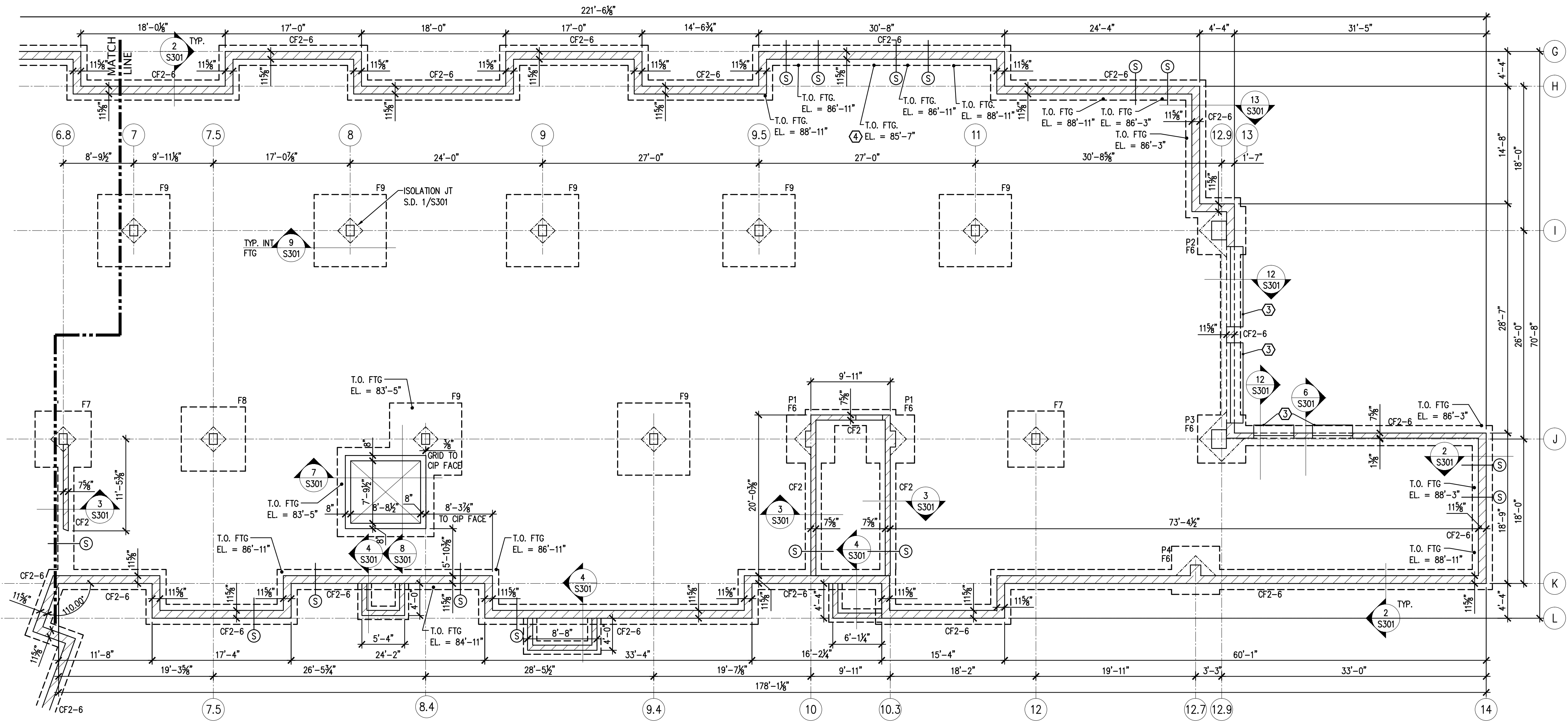
**PROFESSIONAL ENGINEER**  
 I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Print Name: Kurt Sandman  
 Signature: *[Signature]*  
 Date: 12/04/2017 License #: 43486  
**SANDMAN**  
**Structural Engineers**



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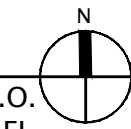
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE



**FOUNDATION PLAN - EAST**

1/8" = 1'-0"

EXTERIOR T.O. FTG. ELEV. = 88'-11" U.N.O.  
T.O. INTERIOR PAD FTG. = G.C. COORD. EL.  
TO ALLOW FOR PLUMBING TO PASS ABOVE FTG



**FOUNDATION PLAN NOTES:**

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**KEYNOTES**

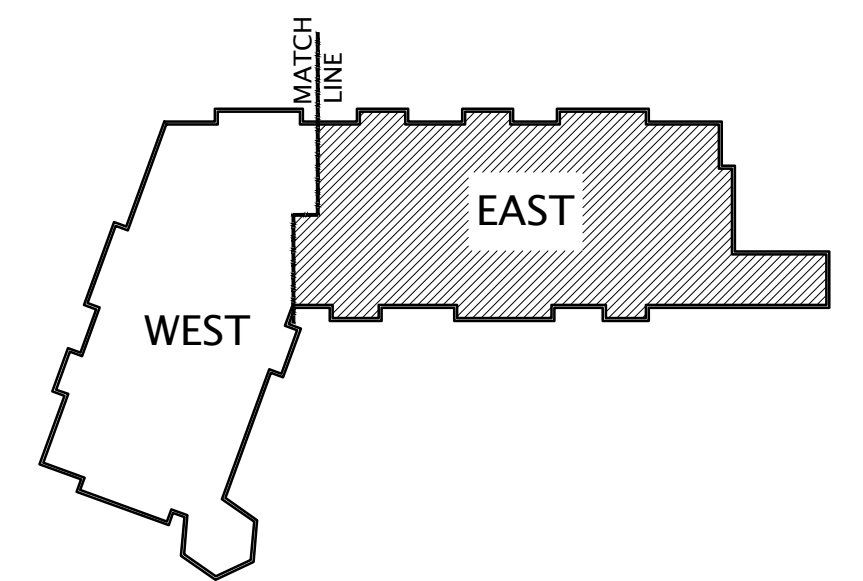
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**FOOTING SCHEDULE**

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CF2-6	2'-6" CONT.	1'-0"	(2) #5 CONT.	#4 @ 4'-0" O.C.	-
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F9	9'-0" SQ.	1'-6"	(9) #6	(9) #6	-

**CONCRETE PIER SCHEDULE**

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P1	1/S302	-
P2	2/S302	-
P3	3/S302	-
P4	4/S302	-

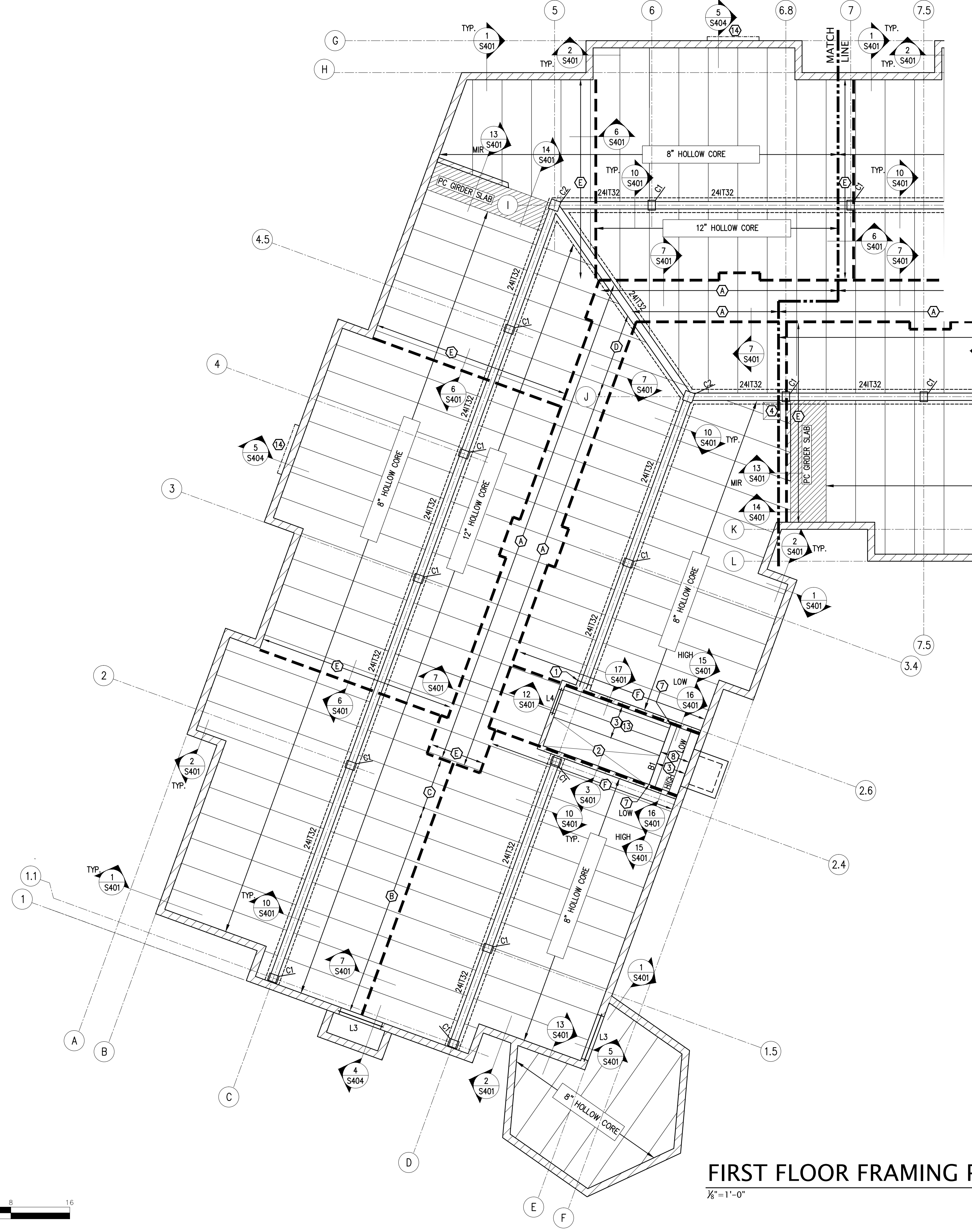
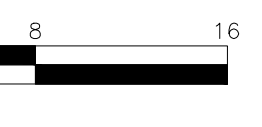


**KEYPLAN**

NO SCALE

**PROFESSIONAL ENGINEER**  
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: Kurt Sandman  
Signature: [Signature]  
Date: 12/04/2017 License #: 43486





**PRECAST & CMU PLAN NOTES:**

- TYPICAL REINFORCEMENT OF LOWER LEVEL TO BE:  
 12" CMU - EXTERIOR WALLS, U.N.O.:  
 #6 VERTS @ 1'-4" O.C. (INSIDE FACE)  
 12" CMU - INTERIOR WALLS:  
 #5 VERTS @ 2'-8" O.C. (CENTERED)  
 ALTERNATE:  
 12" CAST-IN-PLACE CONCRETE WALLS IN LIEU OF  
 12" CMU WALLS. REINFORCING AND DETAILS TO BE  
 PROVIDED IF ALTERNATE IS SELECTED.  
 8" CMU INTERIOR/EXT. BRG. WALLS:  
 #5 VERTS @ 2'-8" O.C. (CENTERED)  
 SEE GENERAL NOTES ON S001, 10/S301, AND PLAN FOR  
 ADDITIONAL REINFORCEMENT REQUIRED.
- PRECAST SUPPLIER TO PROVIDE FRAMED FLOOR OPENING  
 FOR ELECTRICAL FEED LINES. G.C. TO COORDINATE WITH  
 ELECTRICAL.
- PRECAST TOPPING TO BE 1" GYPCRETE. TOPPING TO BE  
 NON-COMPOSITE FOR PRECAST DESIGN.
- SEE SHEET S206/S207 FOR SHEAR WALL COMPONENTS  
 EMBEDDED INTO CMU FOUNDATION WALLS.

**KEYNOTES**

- SEE DETAIL 9/S401 FOR PRECAST  
 BEAM DETAIL.
- SEE DETAIL 1/S202A FOR STAIR FRAMING.
- 24" LANDING TRUSSES @ 2'-0" O.C. UNO
- PRECAST SUPPLIER TO PROVIDE FRAMED OPENING  
 FOR TRASH CHUTE. SEE MECH. FOR DIMENSION AND LOCATION.
- SEE DETAIL 8/S401 FOR PRECAST BEAM BEARING.
- INFILL W/CONC. TOPPING TO 100'-0" ELEV.
- ATTACH STAIR HEADER TO GROUTED CMU W/ SIMPSON  
 HU410 WITH TITEN SCREWS PER SIMPSON SPECS.
- 2x12 LANDING JOISTS @ 16" O.C.
- CONC. SLAB W/ #5 E.W. @ 1'-0" O.C. OVER RIGID  
 INSULATION. SEE ARCH FOR SLOPE & FINISH.
- T.O.PLANK = 99'-3"
- T.O.PLANK = 98'-11"
- SEE DETAIL 9A/S401 FOR PRECAST BEAM BEARING.
- SIMPSON LBV3.56/24 TOP FLANGE HANGER @ WOOD BEAM.
- ALUMINUM FRAMED DECK.
- 12" CMU WALL W/ #6 VERTS @ 2'-8" O.C. (CENTERED)

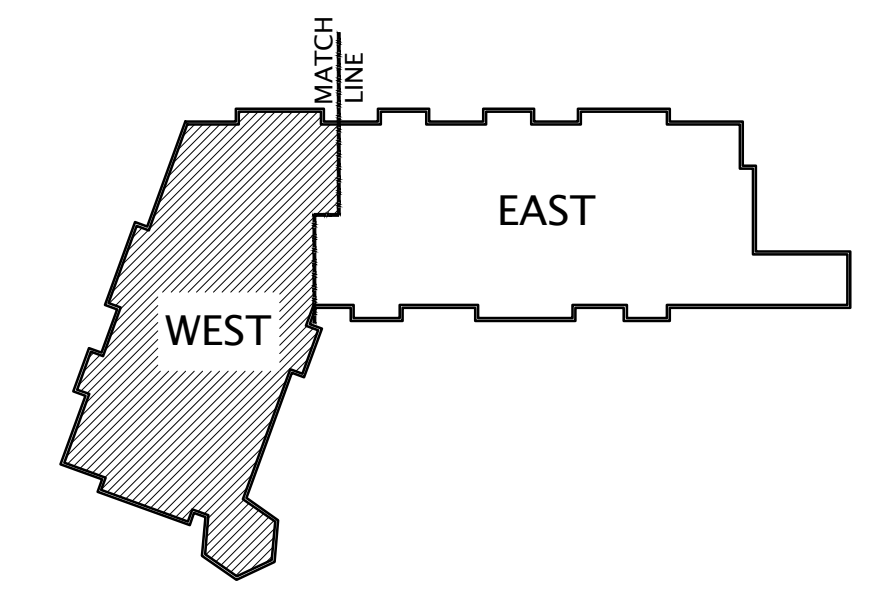
**PRECAST LOADING KEYNOTES**

SUPERIMPOSED LOADS PROVIDED ARE NOMINAL LOADS TO BE USED  
 IN 2012 IBC COMBINATIONS WITH APPROPRIATE LOAD FACTORS.  
 LIVE LOADS HAVE NOT BEEN REDUCED AS PER ASCE 7-10.

- (A) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=2.1 KLF, LL=2.3 KLF, SL=0.8 KLF
- (B) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=3.1 KLF, LL=3.7 KLF, SL=1.2 KLF
- (C) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=3.5 KLF, LL=4.2 KLF, SL=1.4 KLF
- (D) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=2.1 KLF, LL=3.7 KLF, SL=0.8 KLF
- (E) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=0.6 KLF, LL=0.3 KLF, SL=0.1 KLF
- (F) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=1.1 KLF, LL=1.6 KLF, SL=0.1 KLF
- (G) SUPERIMPOSED CONCENTRATED LOAD  
 DL=4.5 K, LL=5.6 K, SL=4.8 K
- (H) SUPERIMPOSED CONCENTRATED LOAD  
 DL=10.4 K, LL=11.8 K, SL=8.8 K
- (I) SUPERIMPOSED CONCENTRATED LOAD  
 DL=12.0 K, LL=13.4 K, SL=8.2K
- (J) SUPERIMPOSED CONCENTRATED LOAD  
 DL=11.4 K, LL=13.6 K, SL=8.3 K
- (K) SUPERIMPOSED CONCENTRATED LOAD  
 DL=13.3 K, LL=17.8 K, SL=8.4 K
- (L) SUPERIMPOSED CONCENTRATED LOAD  
 DL=8.1 K, LL=10.1 K, SL=4.2 K
- (M) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=1.5 KLF, LL=0.3 KLF, SL=0.1 KLF
- (N) SUPERIMPOSED UNIFORM LINE LOAD  
 DL=1.5 KLF, LL=1.8 KLF, SL=0.6 KLF

COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	COMMENTS
C1	12"x16" PRECAST	BY SUPPLIER	-
C2	16"x16" PRECAST	BY SUPPLIER	-
C3	6x6 WOOD POST	SIMPSON ABW66Z (GROUT STANDOFF)	SIMPSON CCO/ECCQ COL. CAP
C4	5/8"x7 PSL	-	SIMPSON CCO/ECCQ COL. CAP
C5	5/8"x7 PSL	SIMPSON ABW (GROUT STANDOFF)	SIMPSON CCO/ECCQ COL. CAP

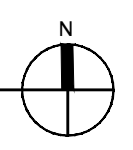
LINTEL SCHEDULE		
MARK	SIZE	COMMENTS
L1	L4x3 3/8"x3/8"	S.D. 11/S401
L2	L6x3 3/8"x3/8" W/MC12x10.6	S.D. 2/S403
L3	W10x49	S.D. 11/S401
L4	W8x18	S.D. 11/S401



**KEYPLAN**  
NO SCALE

**FIRST FLOOR FRAMING PLAN - WEST**

1/8" = 1'-0" T.O. H.C. PLANK = 99'-11" U.N.O.



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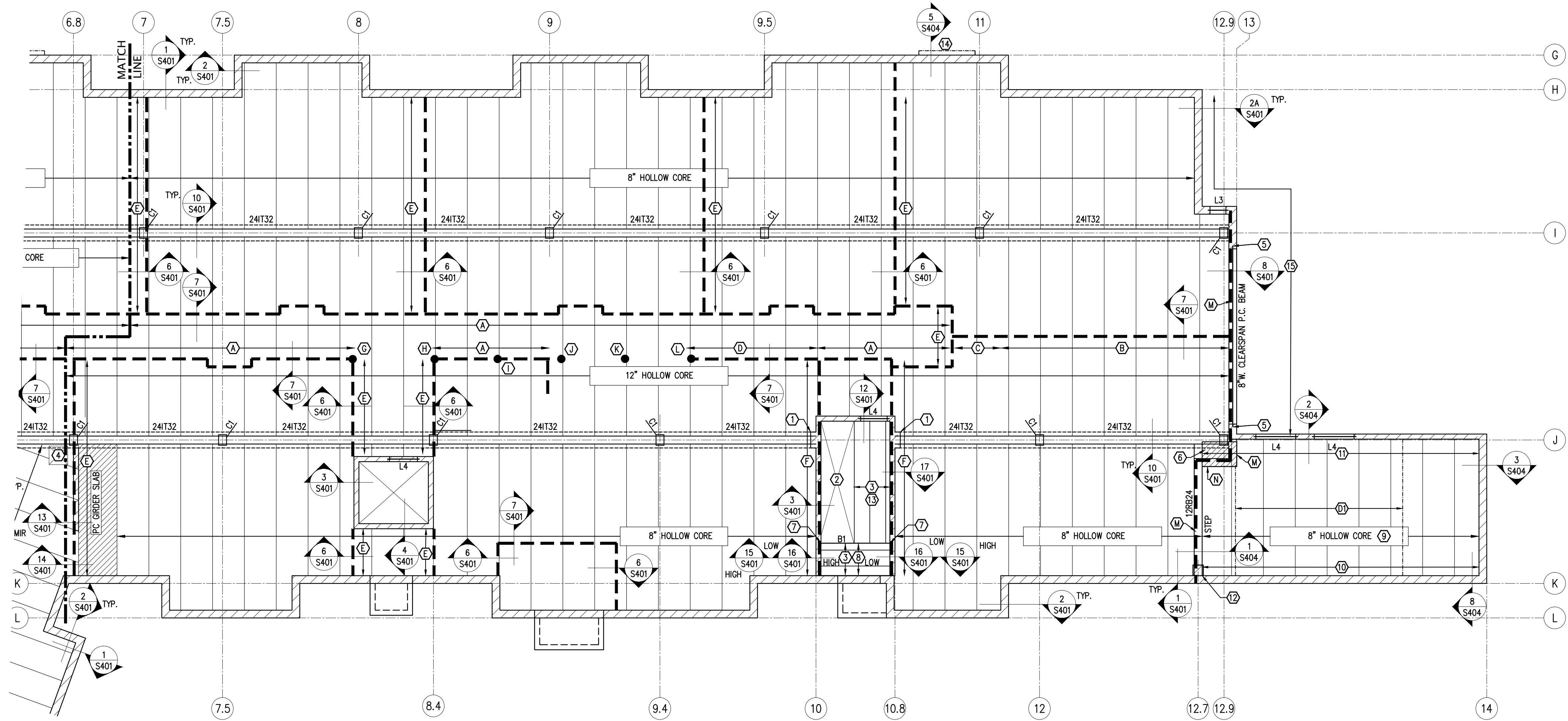
JLG ARCHITECTS  
**BOTTINEAU RIDGE II APARTMENTS**  
 MAPLE GROVE, MN

DATE  
**12/04/17**  
 PHASE  
**100% CDs**  
 PROJECT  
**16098**

SHEET  
**S201A**  
 FIRST FLOOR FRAMING  
 PLAN "WEST"

**PROFESSIONAL ENGINEER**  
 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: Kurt Sandman  
 Signature: *[Signature]*  
 Date: 12/04/2017 License #: 43486

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE



**FIRST FLOOR FRAMING PLAN - EAST**

1/8" = 1'-0" T.O. H.C. PLANK = 99'-11" U.N.O.

COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	COMMENTS
C1	12"x16" PRECAST	BY SUPPLIER	-
C2	16"x16" PRECAST	BY SUPPLIER	-
C3	6x6 WOOD POST	SIMPSON ABW6BZ (GROUT STANDOFF)	SIMPSON CQ/ECCQ COL. CAP
C4	5/8"x7 PSL	-	SIMPSON CQ/ECCQ COL. CAP
C5	5/8"x7 PSL	SIMPSON ABW (GROUT STANDOFF)	SIMPSON CQ/ECCQ COL. CAP

LINTEL SCHEDULE		
MARK	SIZE	COMMENTS
L1	L4x3 3/8"x 3/16"	S.D. 11/S401
L2	L6x3 3/8"x 3/16" W/MC12x10.6	S.D. 2/S403
L3	W10x49	S.D. 11/S401
L4	WBx18	S.D. 11/S401

**PRECAST & CMU PLAN NOTES:**

- TYPICAL REINFORCEMENT OF LOWER LEVEL TO BE:  
12" CMU - EXTERIOR WALLS, U.N.O.; #6 VERTS @ 1'-4" O.C. (INSIDE FACE)  
12" CMU - INTERIOR WALLS; #5 VERTS @ 2'-8" O.C. (CENTERED)  
ALTERNATE:  
12" CAST-IN-PLACE CONCRETE WALLS IN LIEU OF 12" CMU WALLS. REINFORCING AND DETAILS TO BE PROVIDED IF ALTERNATE IS SELECTED.  
8" CMU INTERIOR/EXT. BRG. WALLS; #5 VERTS @ 2'-8" O.C. (CENTERED)  
SEE GENERAL NOTES ON S001, 10/S301, AND PLAN FOR ADDITIONAL REINFORCEMENT REQUIRED.
- PRECAST SUPPLIER TO PROVIDE FRAMED FLOOR OPENING FOR ELECTRICAL FEED LINES. G.C. TO COORDINATE WITH ELECTRICAL.
- PRECAST TOPPING TO BE 1" GYPCRETE. TOPPING TO BE NON-COMPOSITE FOR PRECAST DESIGN.
- SEE SHEET S206/S207 FOR SHEAR WALL COMPONENTS EMBEDDED INTO CMU FOUNDATION WALLS.

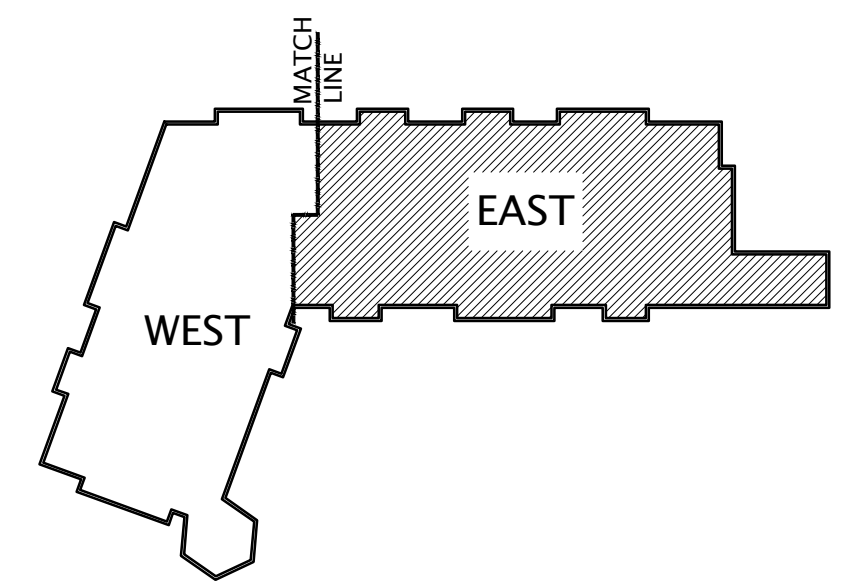
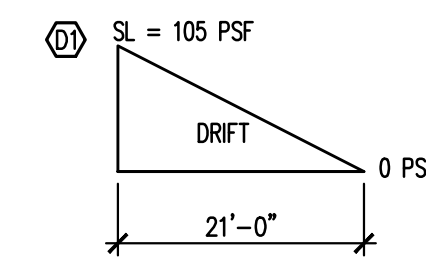
**KEYNOTES**

- SEE DETAIL 9/S401 FOR PRECAST BEAM DETAIL.
- SEE DETAIL 1/S202A FOR STAIR FRAMING.
- 24" LANDING TRUSSES @ 2'-0" O.C. UNO
- PRECAST SUPPLIER TO PROVIDE FRAMED OPENING FOR TRASH CHUTE. SEE MECH. FOR DIMENSION AND LOCATION.
- SEE DETAIL 8/S401 FOR PRECAST BEAM BEARING.
- INFILL W/CONC. TOPPING TO 100'-0" ELEV.
- ATTACH STAIR HEADER TO GROUTED CMU W/ SIMPSON HU410 WITH TITEN SCREWS PER SIMPSON SPECS.
- 2x12 LANDING JOISTS @ 16" O.C.
- CONC. SLAB W/ #5 E.W. @ 1'-0" O.C. OVER RIGID INSULATION. SEE ARCH FOR SLOPE & FINISH.
- T.O. PLANK = 99'-3"
- T.O. PLANK = 98'-11"
- SEE DETAIL 9A/S401 FOR PRECAST BEAM BEARING.
- SIMPSON LBV3.56/24 TOP FLANGE HANGER @ WOOD BEAM.
- ALUMINUM FRAMED DECK.
- 12" CMU WALL W/ #6 VERTS @ 2'-8" O.C. (CENTERED)

**PRECAST LOADING KEYNOTES**

- SUPERIMPOSED LOADS PROVIDED ARE NOMINAL LOADS TO BE USED IN 2012 IBC COMBINATIONS WITH APPROPRIATE LOAD FACTORS. LIVE LOADS HAVE NOT BEEN REDUCED AS PER ASCE 7-10.
- SUPERIMPOSED UNIFORM LINE LOAD DL=2.1 KLF, LL=2.3 KLF, SL=0.8 KLF
  - SUPERIMPOSED UNIFORM LINE LOAD DL=3.1 KLF, LL=3.7 KLF, SL=1.2 KLF
  - SUPERIMPOSED UNIFORM LINE LOAD DL=3.5 KLF, LL=4.2 KLF, SL=1.4 KLF
  - SUPERIMPOSED UNIFORM LINE LOAD DL=2.1 KLF, LL=3.7 KLF, SL=0.8 KLF
  - SUPERIMPOSED UNIFORM LINE LOAD DL=0.6 KLF, LL=0.3 KLF, SL=0.1 KLF
  - SUPERIMPOSED UNIFORM LINE LOAD DL=1.1 KLF, LL=1.6 KLF, SL=0.1 KLF
  - SUPERIMPOSED CONCENTRATED LOAD DL=4.5 K, LL=5.6 K, SL=4.8 K
  - SUPERIMPOSED CONCENTRATED LOAD DL=10.4 K, LL=11.8 K, SL=8.8 K
  - SUPERIMPOSED CONCENTRATED LOAD DL=12.0 K, LL=13.4 K, SL=8.2K
  - SUPERIMPOSED CONCENTRATED LOAD DL=11.4 K, LL=13.6 K, SL=8.3 K
  - SUPERIMPOSED CONCENTRATED LOAD DL=13.3 K, LL=17.8 K, SL=8.4 K
  - SUPERIMPOSED CONCENTRATED LOAD DL=8.1 K, LL=10.1 K, SL=4.2 K
  - SUPERIMPOSED UNIFORM LINE LOAD DL=1.5 KLF, LL=0.3 KLF, SL=0.1 KLF
  - SUPERIMPOSED UNIFORM LINE LOAD DL=1.5 KLF, LL=1.8 KLF, SL=0.6 KLF

**SNOW DRIFT:**



**KEYPLAN**

NO SCALE

PROFESSIONAL ENGINEER  
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: Kurt Sandman  
Signature: [Signature]  
Date: 12/04/2017 License #: 43486



12/4/2017 9:38 AM



WOOD HEADER SCHEDULE

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H4	(2)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H5	(3)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H6	(3)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1 3/4 x 9 1/2 LVL	(3)2x6	(1)2x6	-
H11	(3)1 3/4 x 11 1/4 LVL	(3)2x6	(1)2x6	-
H12	(3)1 3/4 x 14 LVL	(4)2x6	(2)2x6	-
H13	(3)1 3/4 x 7 1/4 LVL	(4)2x6	(2)2x6	-

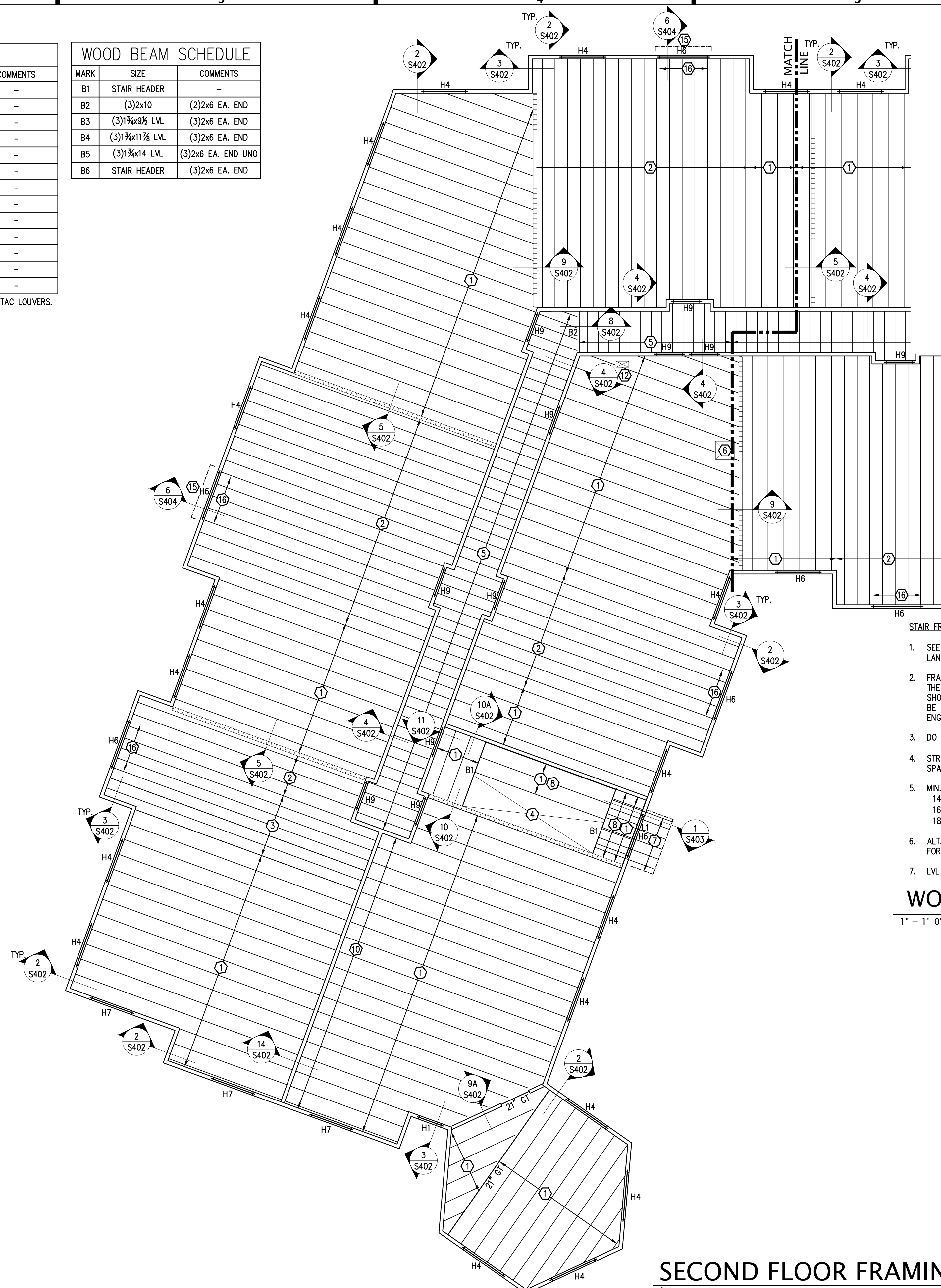
WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1 3/4 x 9 1/2 LVL	(3)2x6 EA. END
B4	(3)1 3/4 x 11 1/4 LVL	(3)2x6 EA. END
B5	(3)1 3/4 x 14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

LINTEL SCHEDULE

MARK	SIZE	COMMENTS
L1	L4x3 3/8 x 5/8	S.D. 11/S401
L2	L6x3 3/8 x 3/8 W/MC12x10.6	S.D. 2/S403
L3	W10x49	S.D. 11/S401
L4	WB18	S.D. 11/S401

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.



SECOND FLOOR FRAMING PLAN NOTES:

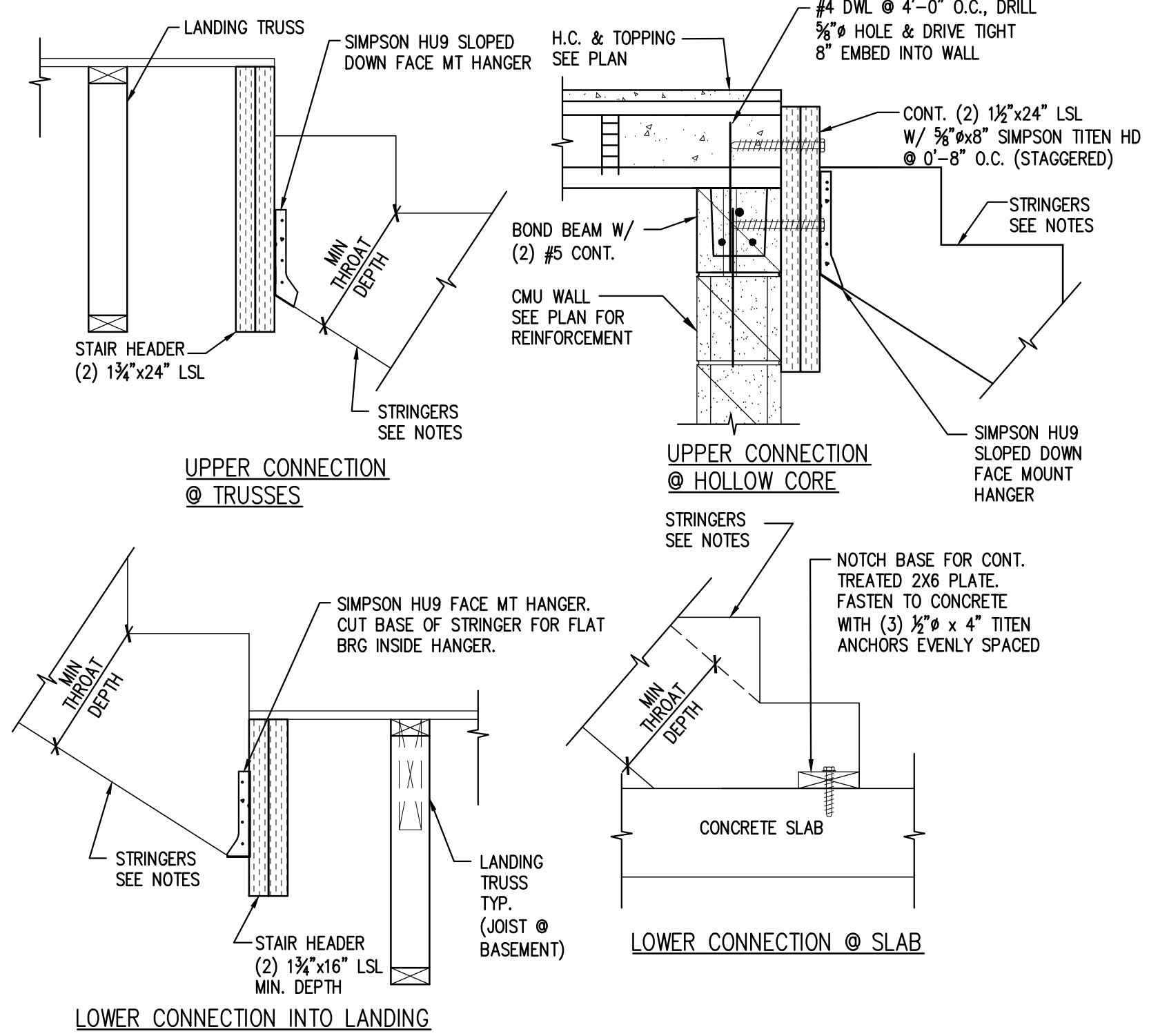
- SEE S001 FOR GENERAL STRUCTURAL NOTES.
- S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.
- SEE SHEETS S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
- DOUBLE TOP PLATE MATERIAL TO BE DF/SP @ CORRIDOR BEARING WALLS.
- SEE MASONRY NOTES ON S001 FOR BRICK LINTEL SIZES NOT INDICATED ON PLANS.

KEYNOTES:

- 24" FLOOR TRUSSES @ 24" O.C. UNO
- 24" FLOOR TRUSSES @ 19.2" O.C. UNO
- 24" FLOOR TRUSSES @ 16" O.C. UNO
- SEE DETAIL 1/S202A FOR STAIR FRAMING
- 2x10 FLOOR JOIST @ 16" O.C. UNO
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR TRASH CHUTE.
- 2x10 CANOPY JOIST @ 16" O.C.(MAX) UNO. COORDINATE W/ TRUSS LAYOUT. SL=110 PSF(INCLUDE DRIFT)
- SIMPSON LBV3.56/24 TOP FLANGE HANGER @ WOOD BEAM
- DESIGN GIRDER TRUSS FOR UNIFORM WALL LOAD  $W_{DL} = 80\text{psf}$ .
- BEARING WALL STUDS TO BE (2)2x4 MSR2400-2.0E STAGGERED @ 8" O.C.
- SEE DETAIL 1/S202B FOR STAIR FRAMING.
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR MECH.
- PROVIDE SIMPSON HU316 FACE MT. HANGER
- S.D. 15/S402 FOR JOIST BEARING @ STUD WALL.
- ALUMINUM FRAMED DECKS.
- HEADER BOT. P. TO BE SP#2.

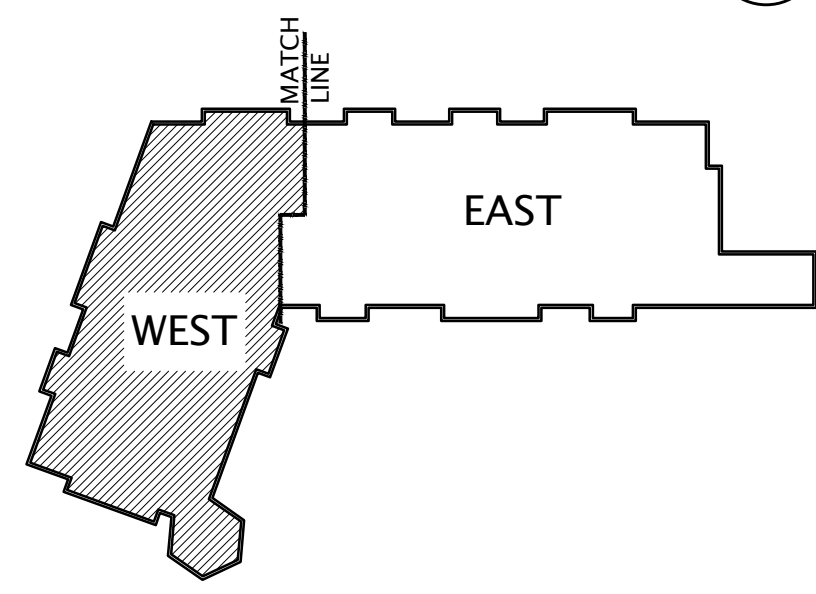
STAIR FRAMING NOTES

- 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 3/4 x 18" LVL EVENLY SPACED
- MIN. THROAT DIMENSIONS:  
14" MEMBER = 8"  
16" MEMBER = 10"  
18" MEMBER = 12"
- ALT. HANGERS MUST BE SUBMITTED FOR APPROVAL PRIOR TO WORK.
- LVL MATERIAL TO BE 2.0E.



WOOD STAIR (@ FULL RUN STAIRS ONLY)

1" = 1'-0"



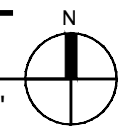
KEYPLAN

NO SCALE

SECOND FLOOR FRAMING PLAN - WEST

1/8" = 1'-0"

FLOOR TRUSS BRG. ELEV. = 109'-0 1/2"



PROFESSIONAL ENGINEER  
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: Kurt Sandman  
Signature: [Signature]  
Date: 12/04/2017 License #: 43486



S202A

SECOND FLOOR FRAMING PLAN "WEST"

NO.	DESCRIPTION	DATE
1	S202A	



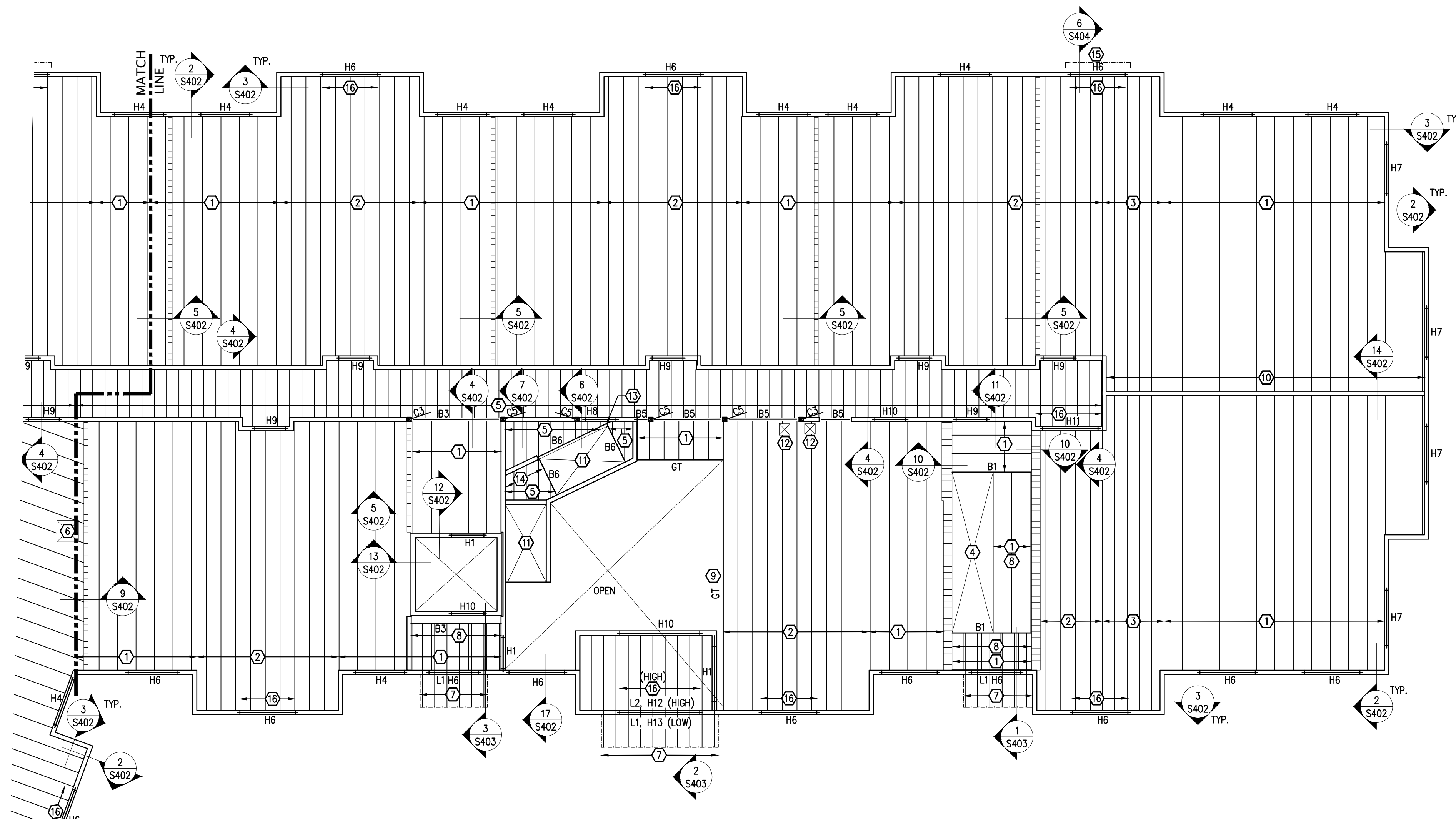
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**12/04/17**  
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PROJECT  
**16098**

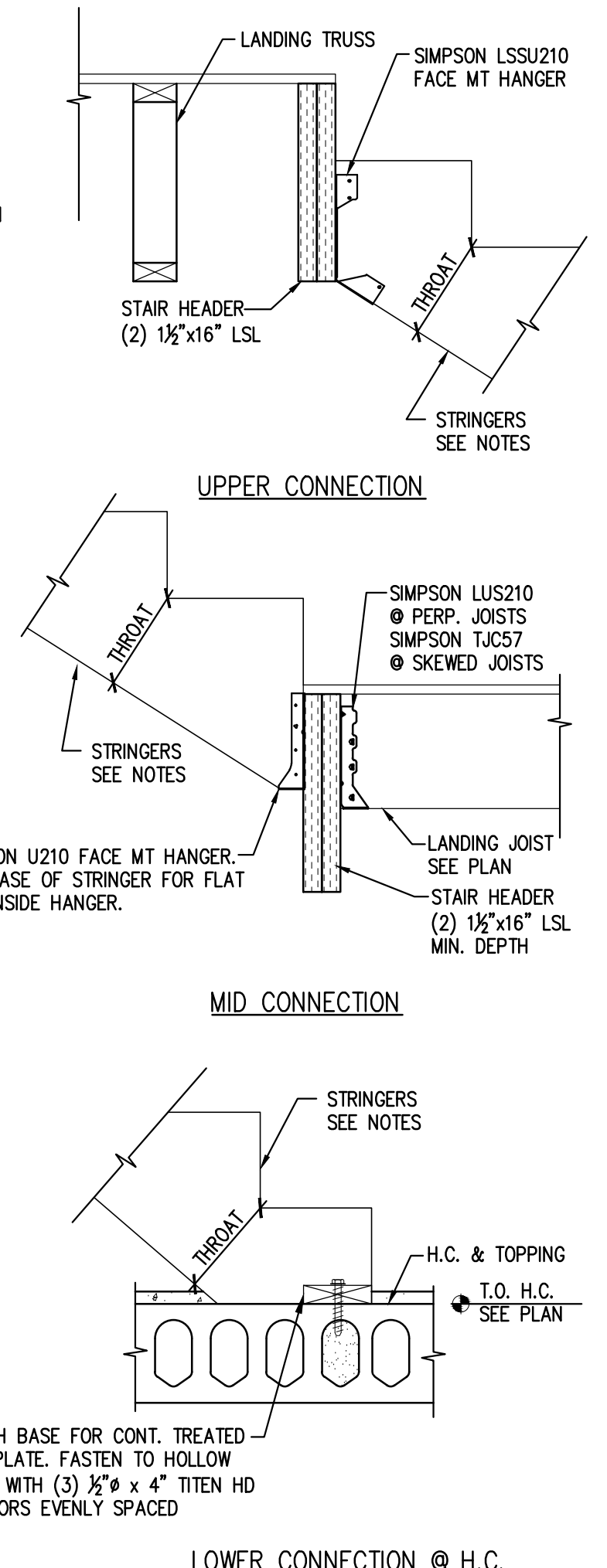
SHEET  
**S202A**  
SECOND FLOOR  
FRAMING PLAN "WEST"

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE



**SECOND FLOOR FRAMING PLAN - EAST**  
1/8" = 1'-0" FLOOR TRUSS BRG ELEV. = 109'-0 1/8"

- 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 FRAMING.
  - DO NOT OVERCUT TREADS
  - STRINGERS: (4) 1 1/2"x14" LSL EVENLY SPACED
  - MIN. THROAT DIMENSIONS:  
14" MEMBER = 8"  
16" MEMBER = 10"  
18" MEMBER = 12"
  - SEE S001 NOTES FOR DESIGN VALUES OF STRINGER MEMBERS.
  - ALT. HANGERS MUST BE SUBMITTED FOR APPROVAL PRIOR TO WORK.
  - PROVIDE 2x4 BRG. WALL W/ BEVELED TOP PLATE @ MID-SPAN OF UPPER RUN STAIRS.



**WOOD STAIR FRAMING DETAILS**  
1" = 1'-0" S202B

WOOD HEADER SCHEDULE				
MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1 3/4"x7 1/4" LVL	(2)2x6	(1)2x6	-
H4	(2)1 3/4"x7 1/4" LVL	(3)2x6	(1)2x6	-
H5	(3)1 3/4"x7 1/4" LVL	(2)2x6	(1)2x6	-
H6	(3)1 3/4"x7 1/4" LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1 3/4"x9 1/2" LVL	(3)2x6	(1)2x6	-
H11	(3)1 3/4"x11 1/8" LVL	(3)2x6	(1)2x6	-
H12	(3)1 3/4"x14 LVL	(4)2x6	(2)2x6	-
H13	(3)1 3/4"x7 1/4" LVL	(4)2x6	(2)2x6	-

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.

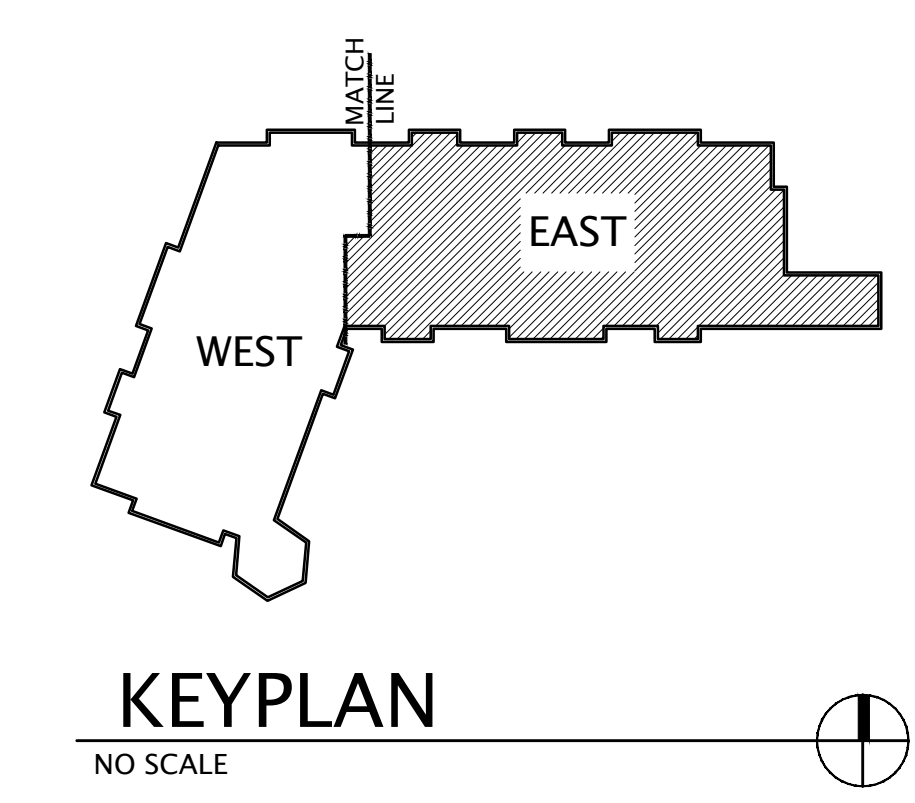
WOOD BEAM SCHEDULE		
MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1 3/4"x9 1/2" LVL	(3)2x6 EA. END
B4	(3)1 3/4"x11 1/8" LVL	(3)2x6 EA. END
B5	(3)1 3/4"x14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

- SECOND FLOOR FRAMING PLAN NOTES:**
- SEE S001 FOR GENERAL STRUCTURAL NOTES.
  - S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.
  - SEE SHEETS S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
  - DOUBLE TOP PLATE MATERIAL TO BE DF/SP @ CORRIDOR BEARING WALLS.
  - SEE MASONRY NOTES ON S001 FOR BRICK LINTEL SIZES NOT INDICATED ON PLANS.

- KEYNOTES:**
- 24" FLOOR TRUSSES @ 24" O.C. UNO
  - 24" FLOOR TRUSSES @ 19.2" O.C. UNO
  - 24" FLOOR TRUSSES @ 16" O.C. UNO
  - SEE DETAIL 1/S202A FOR STAIR FRAMING
  - 2x10 FLOOR JOIST @ 16" O.C. UNO
  - FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR TRASH CHUTE.
  - 2x10 CANOPY JOIST @ 16" O.C.(MAX) UNO. COORDINATE W/ TRUSS LAYOUT. SL=110 PSF(INCLUDE DRIFT)
  - SIMPSON LVB3.56/24 TOP FLANGE HANGER @ WOOD BEAM
  - DESIGN GIRDER TRUSS FOR UNIFORM WALL LOAD  $W_{DL} = 80$ psf.
  - BEARING WALL STUDS TO BE (2)2x4 MSR2400-2.0E STAGGERED @ 8" O.C.
  - SEE DETAIL 1/S202B FOR STAIR FRAMING.
  - FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR MECH.
  - PROVIDE SIMPSON HU316 FACE MT. HANGER
  - S.D. 15/S402 FOR JOIST BEARING @ STUD WALL.
  - ALUMINUM FRAMED DECKS.
  - HEADER BOT. P. TO BE SP#2.

COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	COMMENTS
C1	12"x16" PRECAST	BY SUPPLIER	-
C2	16"x16" PRECAST	BY SUPPLIER	-
C3	6x6 WOOD POST	SIMPSON ABW6Z (GROUT STANDOFF)	SIMPSON CQ/ECQ COL. CAP
C4	5 1/2"x7 PSL	-	SIMPSON CQ/ECQ COL. CAP
C5	5 1/2"x7 PSL	SIMPSON ABW (GROUT STANDOFF)	SIMPSON CQ/ECQ COL. CAP

LINTEL SCHEDULE		
MARK	SIZE	COMMENTS
L1	4x3 3/8"x9 1/8"	S.D. 11/S401
L2	6x3 3/8"x9 1/8" W/MCI2x10.6	S.D. 2/S403
L3	W10x49	S.D. 11/S401
L4	W8x18	S.D. 11/S401



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Print Name: Kurt Sandman  
Signature: [Signature]  
Date: 12/04/2017 License #: 43486

**SANDMAN**  
Structural Engineers  
1387 30th Avenue South • Moorhead, MN 56502  
218.227.9022 • www.sandmaneng.com • Project 1602 P

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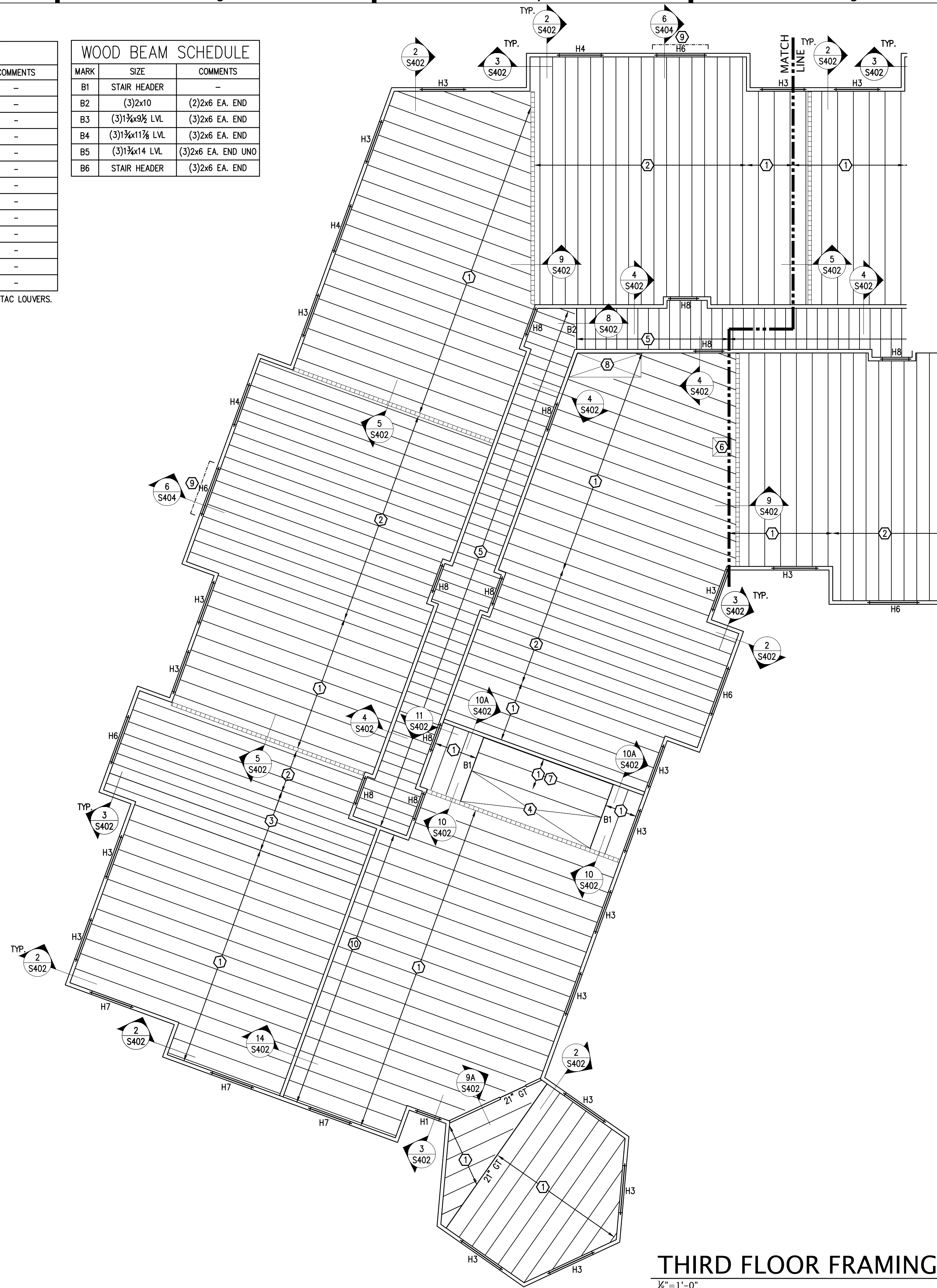
### WOOD HEADER SCHEDULE

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1½x7½ LVL	(2)2x6	(1)2x6	-
H4	(2)1½x7½ LVL	(3)2x6	(1)2x6	-
H5	(3)1½x7½ LVL	(2)2x6	(1)2x6	-
H6	(3)1½x7½ LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1½x9½ LVL	(3)2x6	(1)2x6	-
H11	(3)1½x11½ LVL	(3)2x6	(1)2x6	-
H12	(3)1½x14 LVL	(4)2x6	(2)2x6	-
H13	(3)1½x7½ LVL	(4)2x6	(2)2x6	-

### WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1½x9½ LVL	(3)2x6 EA. END
B4	(3)1½x11½ LVL	(3)2x6 EA. END
B5	(3)1½x14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.



### THIRD FLOOR FRAMING PLAN NOTES:

- SEE S001 FOR GENERAL STRUCTURAL NOTES.
- S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.
- SEE SHEETS S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
- SILL PLATE & DOUBLE TOP PLATE MATERIAL TO BE DF/SP @ CORRIDOR BEARING WALLS.
- SEE MASONRY NOTES ON S001 FOR BRICK LINTEL SIZES NOT INDICATED ON PLANS.

### KEYNOTES:

- 24" FLOOR TRUSSES @ 24" O.C. UNO
- 24" FLOOR TRUSSES @ 19.2" O.C. UNO
- 24" FLOOR TRUSSES @ 16" O.C. UNO
- SEE DETAIL 1/S202A FOR STAIR FRAMING
- 2x10 FLOOR JOIST @ 16" O.C. UNO
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR TRASH CHUTE.
- SIMPSON LBV3.56/24 TOP FLANGE HANGER @ WOOD BEAM
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR MECH.
- ALUMINUM FRAMED DECKS.
- BEARING WALL STUDS TO BE (2)2x4 SPF#2 STAGGERED @ 8" O.C.

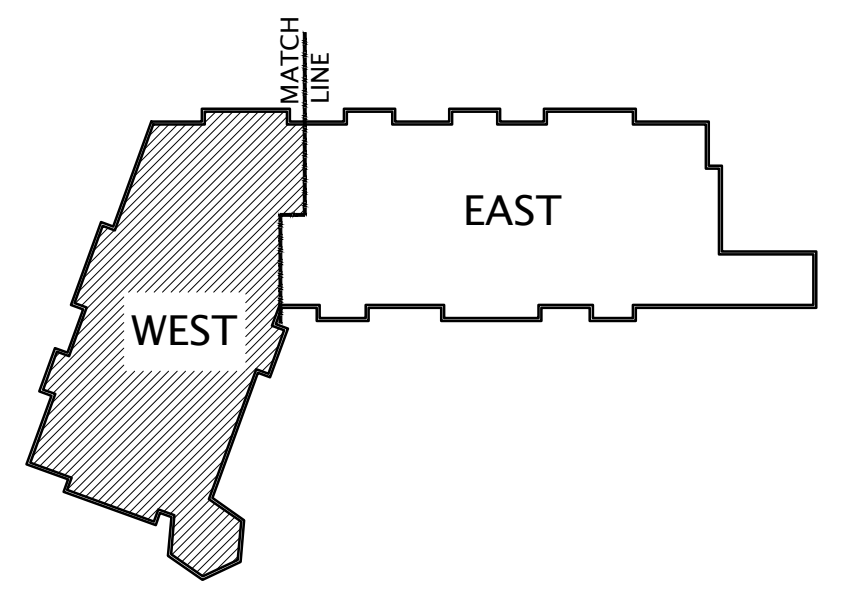


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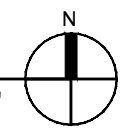
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## THIRD FLOOR FRAMING PLAN - WEST

1/8" = 1'-0" FLOOR TRUSS BRG ELEV. = 120'-2"



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Print Name: Kurt Sandman  
 Signature: *[Signature]*  
 Date: 12/04/2017 License #: 43486



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**100% CDs**

PROJECT  
**16098**

SHEET  
**S203A**

THIRD FLOOR  
 FRAMING PLAN "WEST"

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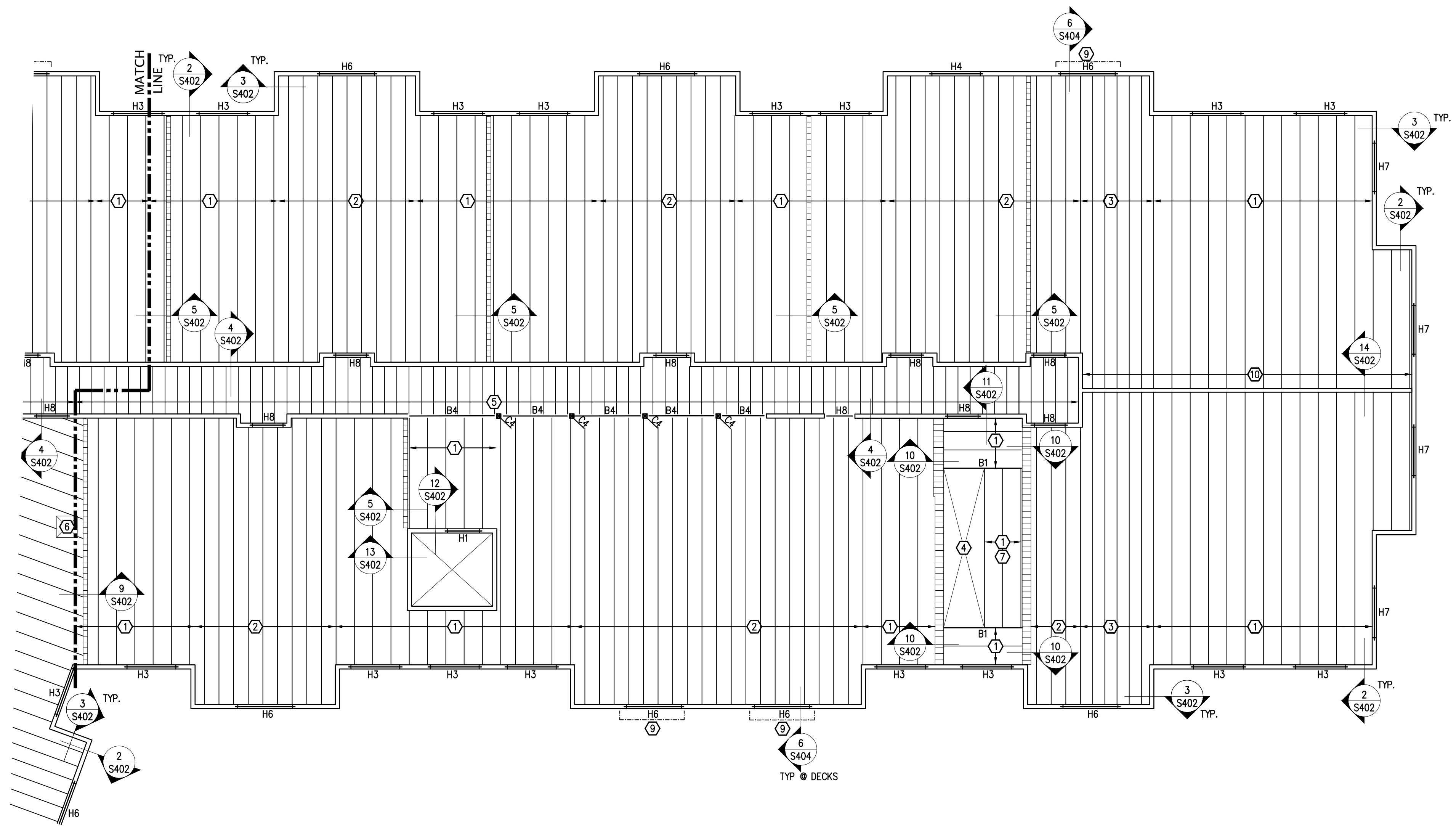
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REVISION SCHEDULE		
NO.	DESCRIPTION	DATE



**THIRD FLOOR FRAMING PLAN - EAST**  
FLOOR TRUSS BRG ELEV. = 120'-2"  
1/8"=1'-0"

**WOOD HEADER SCHEDULE**

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H4	(2)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H5	(3)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H6	(3)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1 3/4 x 9 1/2 LVL	(3)2x6	(1)2x6	-
H11	(3)1 3/4 x 11 1/8 LVL	(3)2x6	(1)2x6	-
H12	(3)1 3/4 x 14 LVL	(4)2x6	(2)2x6	-
H13	(3)1 3/4 x 7 1/4 LVL	(4)2x6	(2)2x6	-

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.

**WOOD BEAM SCHEDULE**

MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1 3/4 x 9 1/2 LVL	(3)2x6 EA. END
B4	(3)1 3/4 x 11 1/8 LVL	(3)2x6 EA. END
B5	(3)1 3/4 x 14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

**THIRD FLOOR FRAMING PLAN NOTES:**

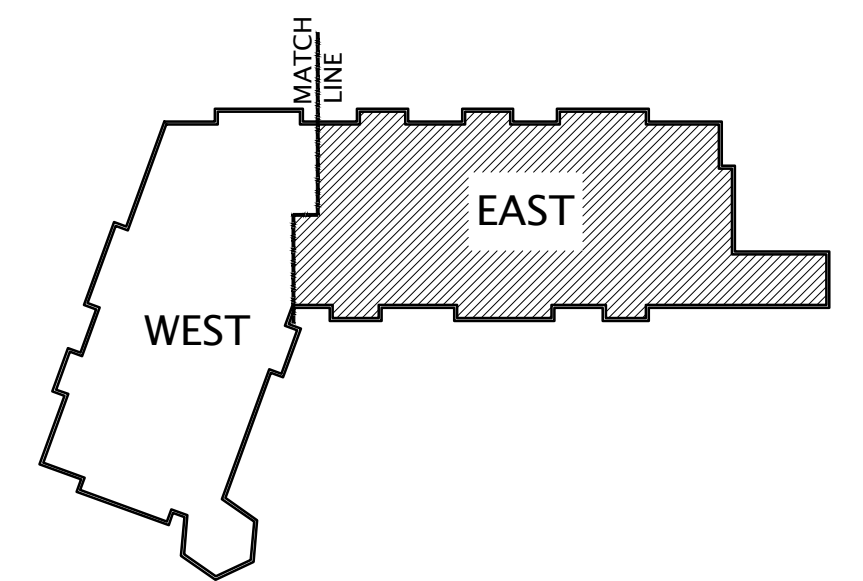
- SEE S001 FOR GENERAL STRUCTURAL NOTES.
- S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.
- SEE SHEETS S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
- SILL PLATE & DOUBLE TOP PLATE MATERIAL TO BE DF/SP @ CORRIDOR BEARING WALLS.
- SEE MASONRY NOTES ON S001 FOR BRICK LINTEL SIZES NOT INDICATED ON PLANS.

**KEYNOTES:**

- 24" FLOOR TRUSSES @ 24" O.C. UNO
- 24" FLOOR TRUSSES @ 19.2" O.C. UNO
- 24" FLOOR TRUSSES @ 16" O.C. UNO
- SEE DETAIL 1/S202A FOR STAIR FRAMING
- 2x10 FLOOR JOIST @ 16" O.C. UNO
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR TRASH CHUTE.
- SIMPSON LBV3.56/24 TOP FLANGE HANGER @ WOOD BEAM
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR MECH.
- ALUMINUM FRAMED DECKS.
- BEARING WALL STUDS TO BE (2)2x4 SPF#2 STAGGERED @ 8" O.C.

**COLUMN SCHEDULE**

MARK	SIZE	BASE PLATE	COMMENTS
C1	12"x16" PRECAST	BY SUPPLIER	-
C2	16"x16" PRECAST	BY SUPPLIER	-
C3	6x6 WOOD POST	SIMPSON ABW66Z (GROUT STANDOFF)	SIMPSON CQ/ECCQ COL. CAP
C4	5 1/2 x 7 PSL	-	SIMPSON CQ/ECCQ COL. CAP
C5	5 1/2 x 7 PSL	SIMPSON ABW (GROUT STANDOFF)	SIMPSON CQ/ECCQ COL. CAP



**KEYPLAN**  
NO SCALE

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Signature: [Signature]  
Date: 12/04/2017 License #: 43486



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**16098**  
SHEET  
**S203B**  
THIRD FLOOR  
FRAMING PLAN "EAST"



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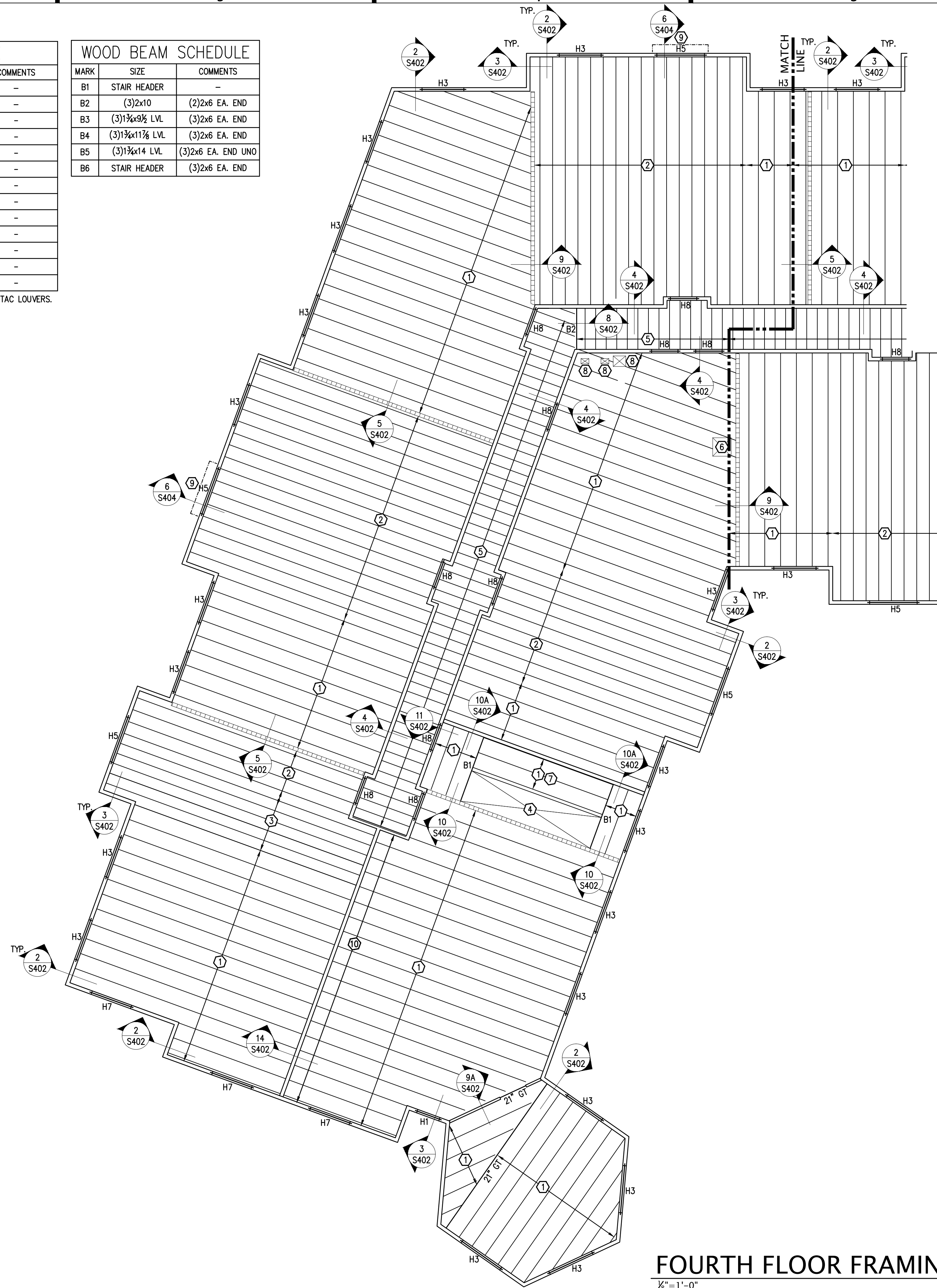
### WOOD HEADER SCHEDULE

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1½x7½ LVL	(2)2x6	(1)2x6	-
H4	(2)1½x7½ LVL	(3)2x6	(1)2x6	-
H5	(3)1½x7½ LVL	(2)2x6	(1)2x6	-
H6	(3)1½x7½ LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1½x9½ LVL	(3)2x6	(1)2x6	-
H11	(3)1½x11½ LVL	(3)2x6	(1)2x6	-
H12	(3)1½x14 LVL	(4)2x6	(2)2x6	-
H13	(3)1½x7½ LVL	(4)2x6	(2)2x6	-

### WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1½x9½ LVL	(3)2x6 EA. END
B4	(3)1½x11½ LVL	(3)2x6 EA. END
B5	(3)1½x14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.



### FOURTH FLOOR FRAMING PLAN NOTES:

- SEE S001 FOR GENERAL STRUCTURAL NOTES.
- S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.
- SEE SHEETS S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.

### KEYNOTES:

- 24" FLOOR TRUSSES @ 24" O.C. UNO
- 24" FLOOR TRUSSES @ 19.2" O.C. UNO
- 24" FLOOR TRUSSES @ 16" O.C. UNO
- SEE DETAIL 1/S202A FOR STAIR FRAMING
- 2x10 FLOOR JOIST @ 16" O.C. UNO
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR TRASH CHUTE.
- SIMPSON LBV3.56/24 TOP FLANGE HANGER @ WOOD BEAM
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR MECH.
- ALUMINUM FRAMED DECKS.
- BEARING WALL STUDS TO BE (2)2x4 SPF#2 STAGGERED @ 8" O.C.



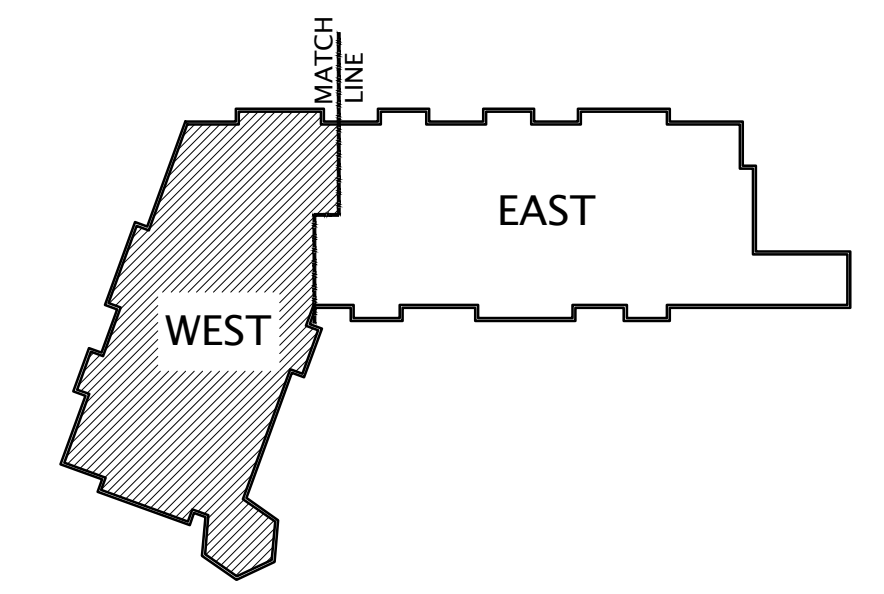
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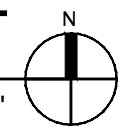
### KEYPLAN

NO SCALE

## FOURTH FLOOR FRAMING PLAN - WEST

1/8" = 1'-0"

FLOOR TRUSS BRG ELEV. = 131'-3 3/8"



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 Signature: *[Signature]*  
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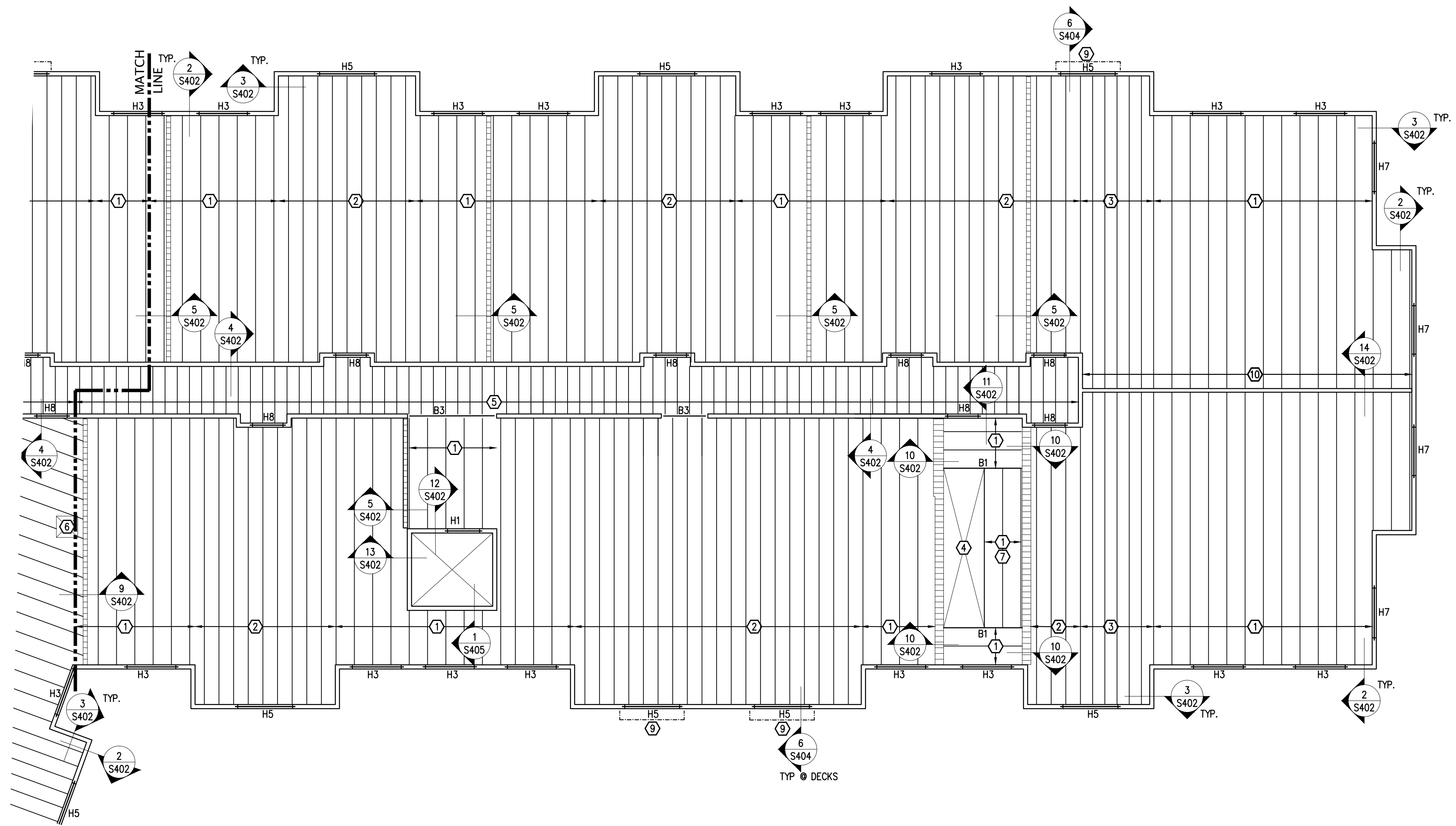
PROJECT  
**16098**

SHEET  
**S204A**

FOURTH FLOOR  
 FRAMING PLAN "WEST"

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**FOURTH FLOOR FRAMING PLAN - EAST**  
1/8" = 1'-0" FLOOR TRUSS BRG ELEV. = 131'-3 3/8"

**WOOD HEADER SCHEDULE**

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H4	(2)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H5	(3)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H6	(3)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1 3/4 x 9 1/2 LVL	(3)2x6	(1)2x6	-
H11	(3)1 3/4 x 11 1/8 LVL	(3)2x6	(1)2x6	-
H12	(3)1 3/4 x 14 LVL	(4)2x6	(2)2x6	-
H13	(3)1 3/4 x 7 1/4 LVL	(4)2x6	(2)2x6	-

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.

**WOOD BEAM SCHEDULE**

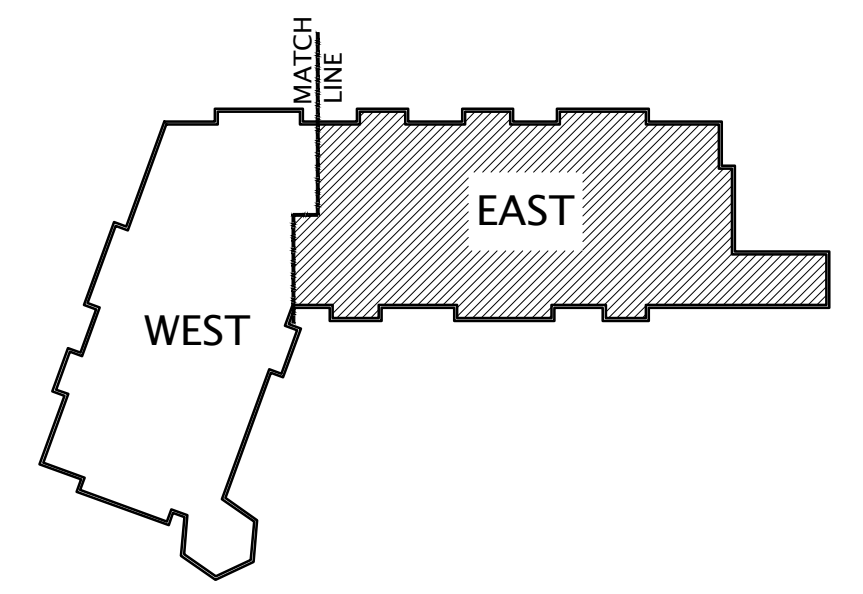
MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1 3/4 x 9 1/2 LVL	(3)2x6 EA. END
B4	(3)1 3/4 x 11 1/8 LVL	(3)2x6 EA. END
B5	(3)1 3/4 x 14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

**FOURTH FLOOR FRAMING PLAN NOTES:**

- SEE S001 FOR GENERAL STRUCTURAL NOTES.
- S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.
- SEE SHEETS S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.

**KEYNOTES:**

- 24" FLOOR TRUSSES @ 24" O.C. UNO
- 24" FLOOR TRUSSES @ 19.2" O.C. UNO
- 24" FLOOR TRUSSES @ 16" O.C. UNO
- SEE DETAIL 1/S202A FOR STAIR FRAMING
- 2x10 FLOOR JOIST @ 16" O.C. UNO
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR TRASH CHUTE.
- SIMPSON LBV3.56/24 TOP FLANGE HANGER @ WOOD BEAM
- FRAMED FLOOR OPENING BY TRUSS SUPPLIER FOR MECH.
- ALUMINUM FRAMED DECKS.
- BEARING WALL STUDS TO BE (2)2x4 SPF#2 STAGGERED @ 8" O.C.



**KEYPLAN**  
NO SCALE

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Signature: [Signature]  
Date: 12/04/2017 License #: 43486



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PROJECT: 16098  
SHEET: S204B  
FOURTH FLOOR FRAMING PLAN "EAST"

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MAPLE GROVE, MN



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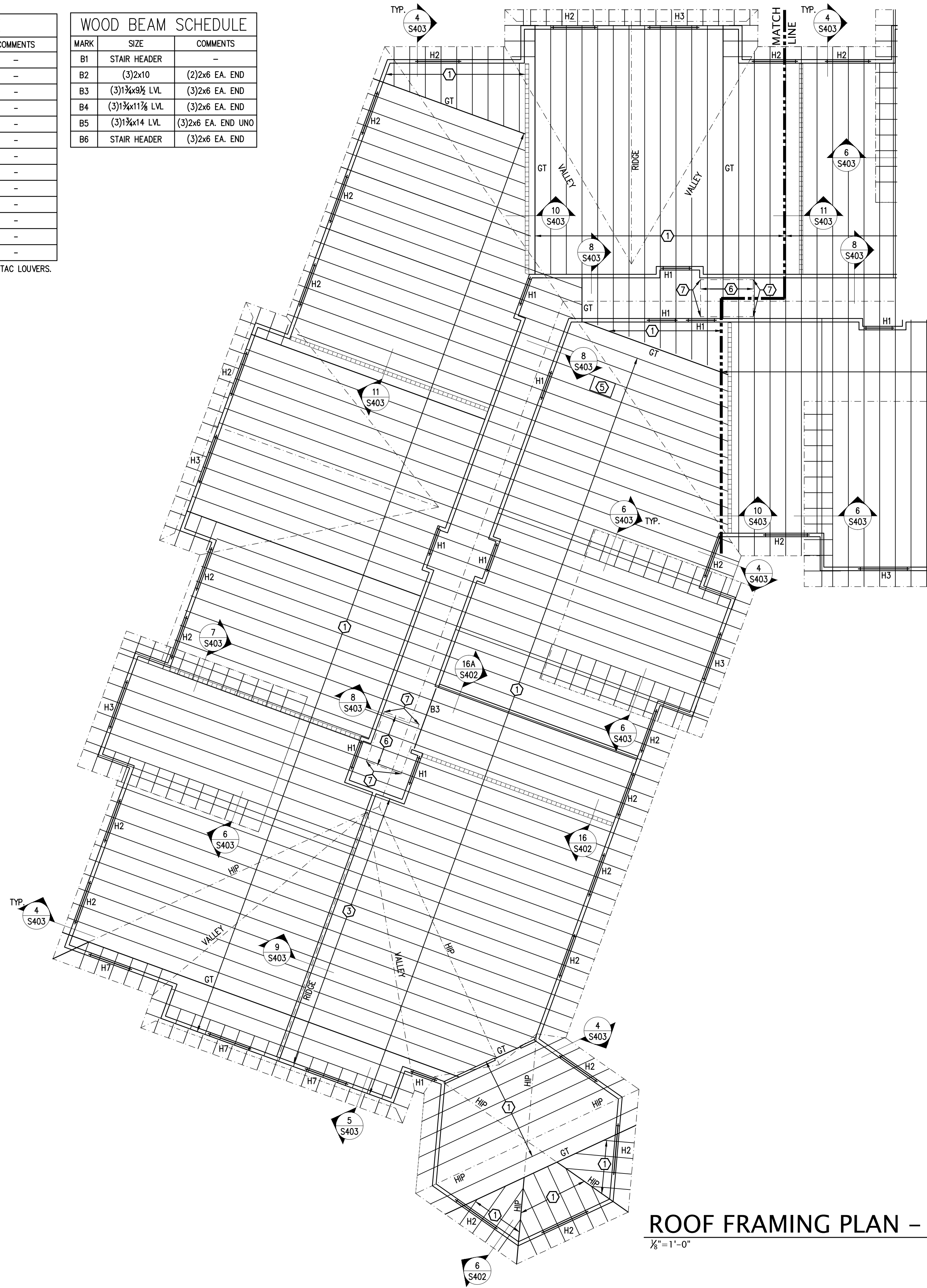
### WOOD HEADER SCHEDULE

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1½x7½ LVL	(2)2x6	(1)2x6	-
H4	(2)1½x7½ LVL	(3)2x6	(1)2x6	-
H5	(3)1½x7½ LVL	(2)2x6	(1)2x6	-
H6	(3)1½x7½ LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1½x9½ LVL	(3)2x6	(1)2x6	-
H11	(3)1½x11½ LVL	(3)2x6	(1)2x6	-
H12	(3)1½x14 LVL	(4)2x6	(2)2x6	-
H13	(3)1½x7½ LVL	(4)2x6	(2)2x6	-

### WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1½x9½ LVL	(3)2x6 EA. END
B4	(3)1½x11½ LVL	(3)2x6 EA. END
B5	(3)1½x14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.



### ROOF FRAMING PLAN NOTES:

- SEE S001 FOR GENERAL STRUCTURAL NOTES.
- SEE SHEET S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
- S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.

### KEYNOTES:

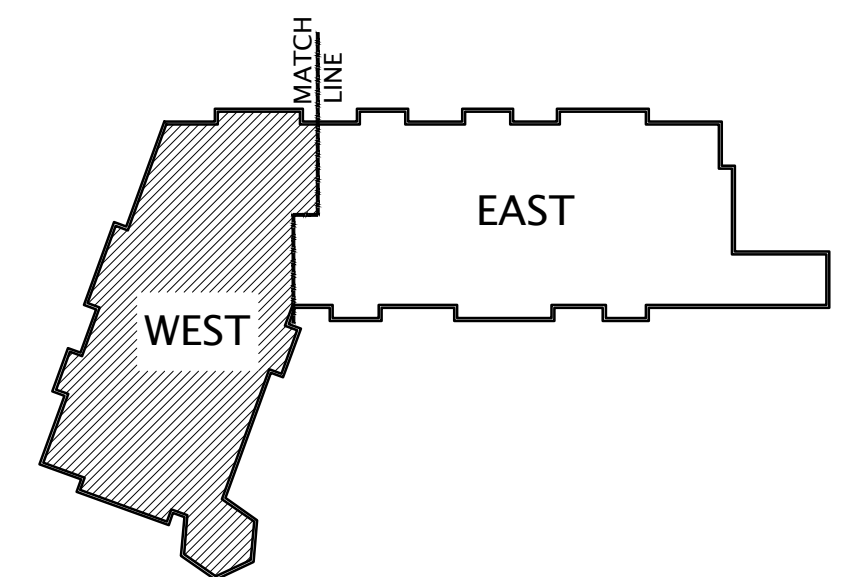
- ROOF TRUSSES @ 2'-0" O.C. UNO
- (3) 1½x9½ LVL. ELEVATOR HOIST BEAM RATED FOR 7500# CONCENTRATED LOAD. S.D. 12/S403 FOR BEAM BEARING.
- BEARING WALL STUDS TO BE (1)2x4 SPF#2 STAGGERED @ 8" O.C.
- 2x12 JOISTS @ 16" O.C.
- ATTIC ACCESS HATCH. TRUSS SUPPLIER COORDINATE OPENING REQUIRED WITH ARCH.
- FRAME CHIMNEY STRUCTURE AS OVER-BUILD ON ROOF TRUSSES.
- SIMPSON CS20 METAL STRAP W/ (7) 8D NAILS T&B. PROVIDE WOOD TRUSS ALIGNED WITH STRAP WITH 2X6 VERTICAL FOR ATTACHMENT



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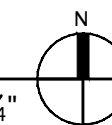
### KEYPLAN

NO SCALE

## ROOF FRAMING PLAN - WEST

1/8" = 1'-0"

ROOF TRUSS BRG ELEV. = 142'-5 3/4"



PROFESSIONAL ENGINEER  
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Print Name: Kurt Sandman  
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**BOTTINEAU RIDGE II APARTMENTS**  
 MAPLE GROVE, MN

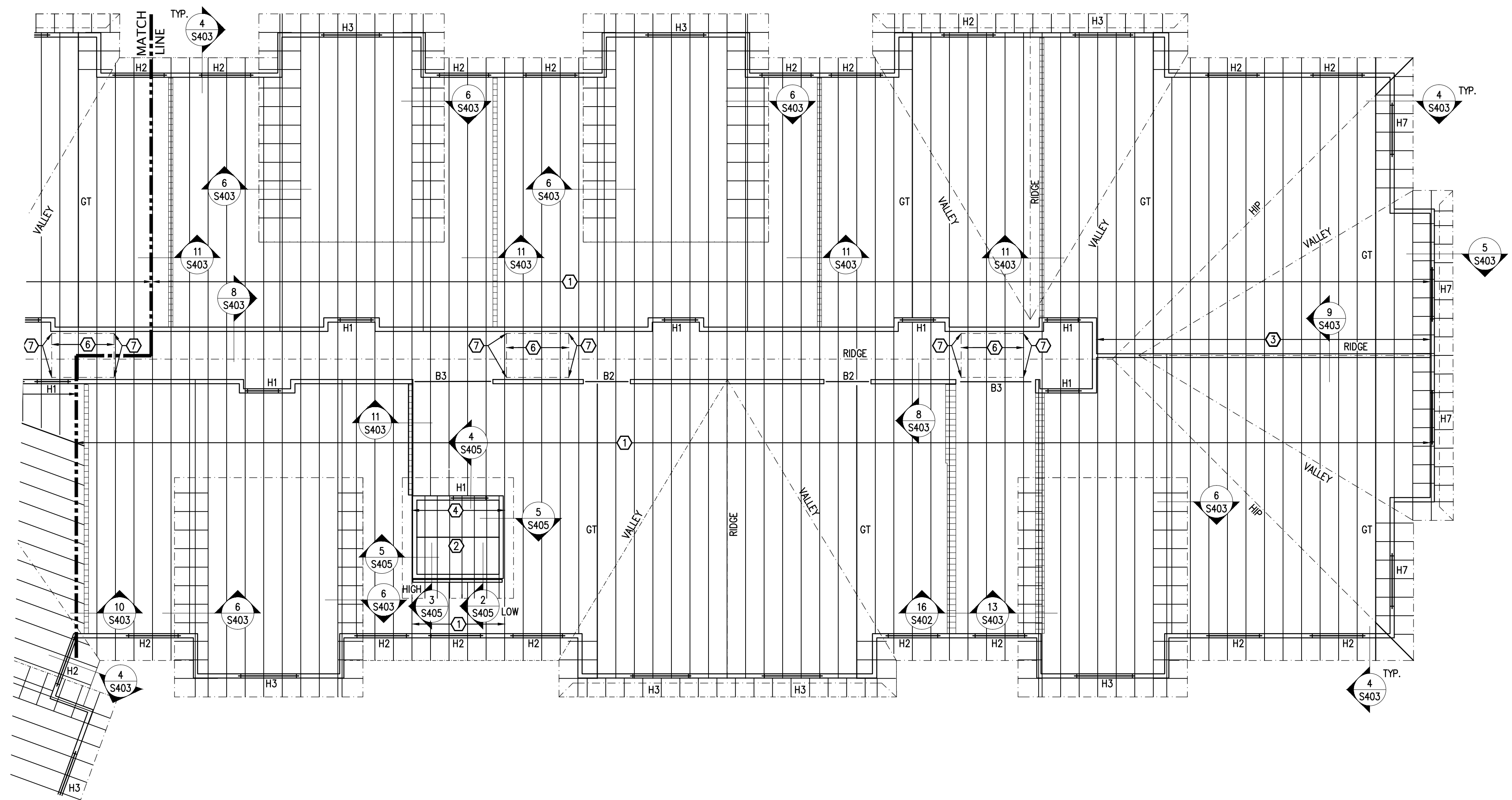
DATE  
**12/04/17**  
 PHASE  
**100% CDs**

PROJECT  
**16098**

SHEET  
**S205A**  
 ROOF FRAMING  
 PLAN "WEST"

12/4/2017 9:39 AM

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE



**ROOF FRAMING PLAN – EAST**  
1/8" = 1'-0" ROOF TRUSS BRG ELEV. = 142'-5 3/4"

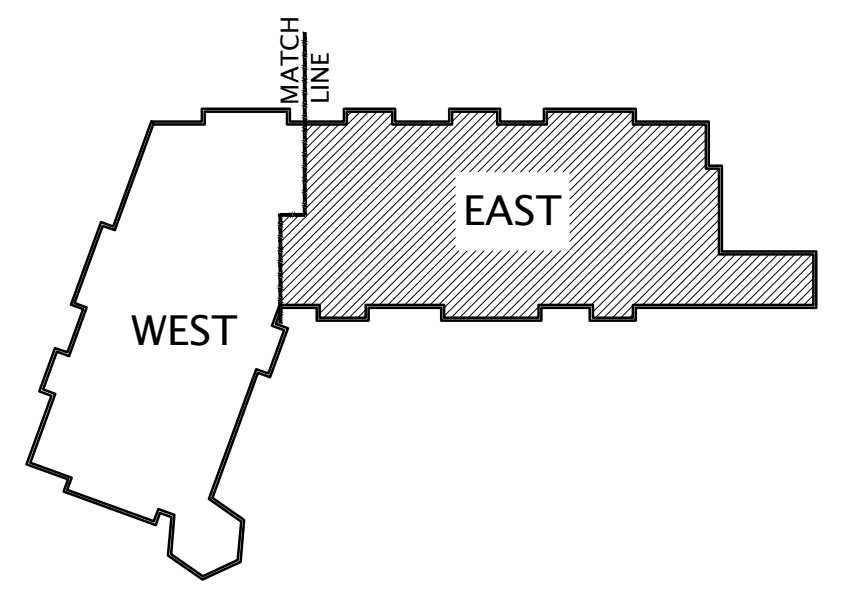
WOOD HEADER SCHEDULE				
MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	-
H2	(3)2x8	(1)2x6	(1)2x6	-
H3	(2)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H4	(2)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H5	(3)1 3/4 x 7 1/4 LVL	(2)2x6	(1)2x6	-
H6	(3)1 3/4 x 7 1/4 LVL	(3)2x6	(1)2x6	-
H7	(2)2x8	(1)2x6	(2)2x6	-
H8	(2)2x8	(2)2x6	(1)2x6	-
H9	(2)2x8	(3)2x6	(1)2x6	-
H10	(2)1 3/4 x 9 1/2 LVL	(3)2x6	(1)2x6	-
H11	(3)1 3/4 x 11 1/8 LVL	(3)2x6	(1)2x6	-
H12	(3)1 3/4 x 14 LVL	(4)2x6	(2)2x6	-
H13	(3)1 3/4 x 7 1/4 LVL	(4)2x6	(2)2x6	-

WOOD BEAM SCHEDULE		
MARK	SIZE	COMMENTS
B1	STAIR HEADER	-
B2	(3)2x10	(2)2x6 EA. END
B3	(3)1 3/4 x 9 1/2 LVL	(3)2x6 EA. END
B4	(3)1 3/4 x 11 1/8 LVL	(3)2x6 EA. END
B5	(3)1 3/4 x 14 LVL	(3)2x6 EA. END UNO
B6	STAIR HEADER	(3)2x6 EA. END

- ROOF FRAMING PLAN NOTES:**
- SEE S001 FOR GENERAL STRUCTURAL NOTES.
  - SEE SHEET S206/S207 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
  - S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.

- KEYNOTES:**
- ROOF TRUSSES @ 2'-0" O.C. UNO
  - (3) 1 3/4 x 9 1/2 LVL ELEVATOR HOIST BEAM RATED FOR 7500# CONCENTRATED LOAD. S.D. 12/S403 FOR BEAM BEARING.
  - BEARING WALL STUDS TO BE (1)2x4 SPF#2 STAGGERED @ 8" O.C.
  - 2x12 JOISTS @ 16" O.C.
  - ATTIC ACCESS HATCH. TRUSS SUPPLIER COORDINATE OPENING REQUIRED WITH ARCH.
  - FRAME CHIMNEY STRUCTURE AS OVER-BUILD ON ROOF TRUSSES.
  - SIMPSON CS20 METAL STRAP W/ (7) 8D NAILS T&B. PROVIDE WOOD TRUSS ALIGNED WITH STRAP WITH 2X6 VERTICAL FOR ATTACHMENT

HEADER NOTES: 1. PROVIDE "H1" HEADERS AT EXTERIOR WALL PTAC LOUVERS.

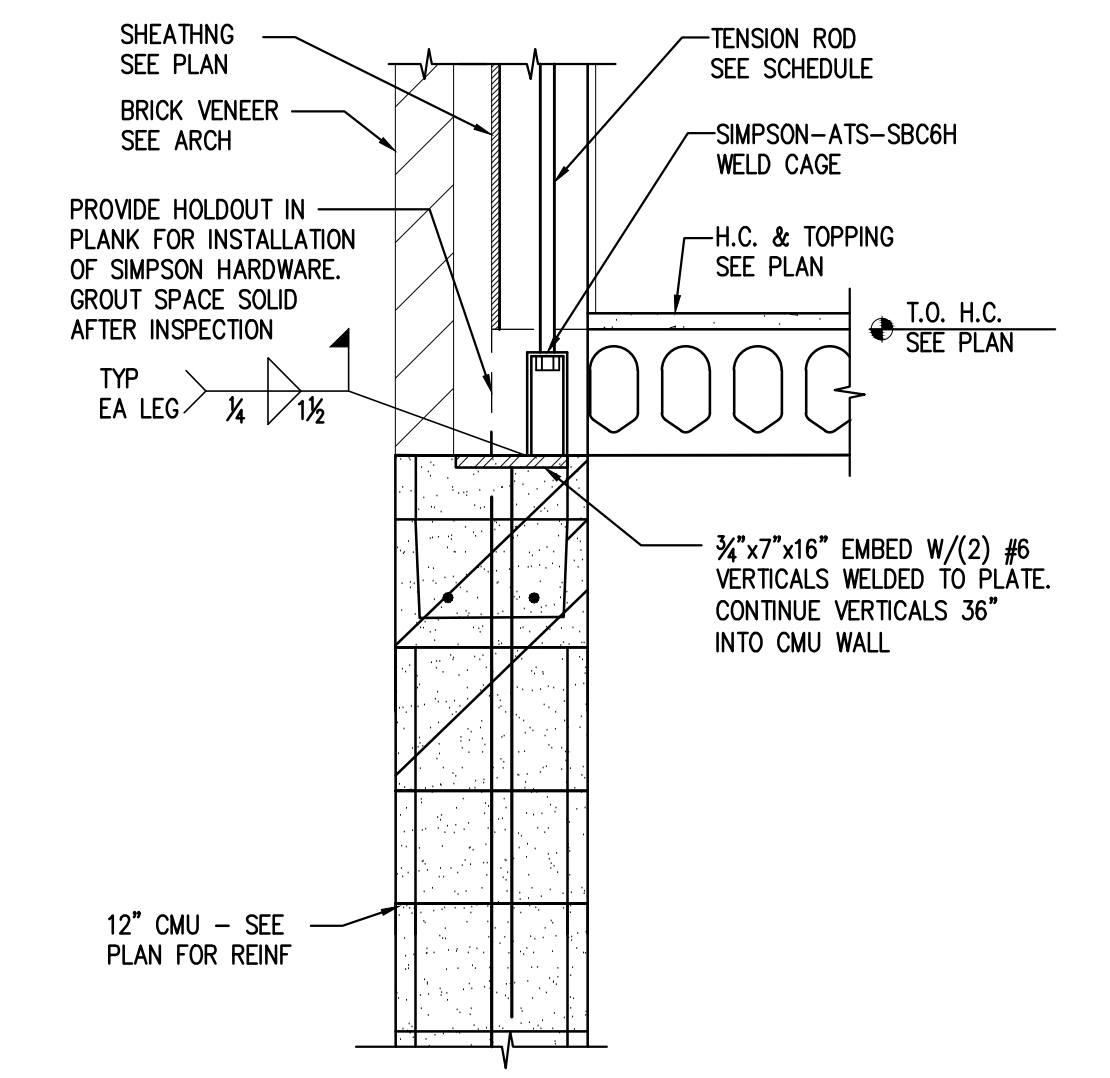
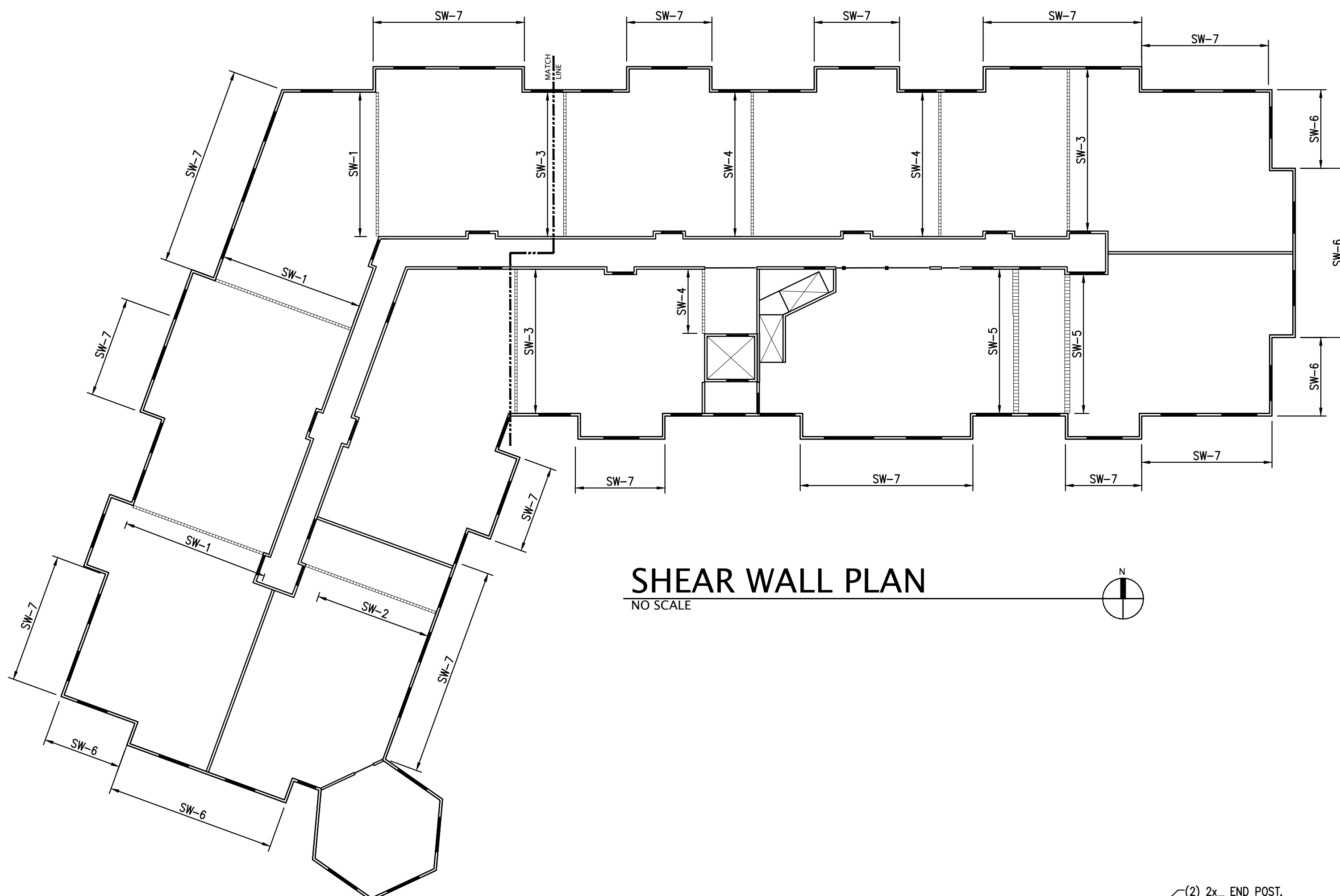


**KEYPLAN**  
NO SCALE

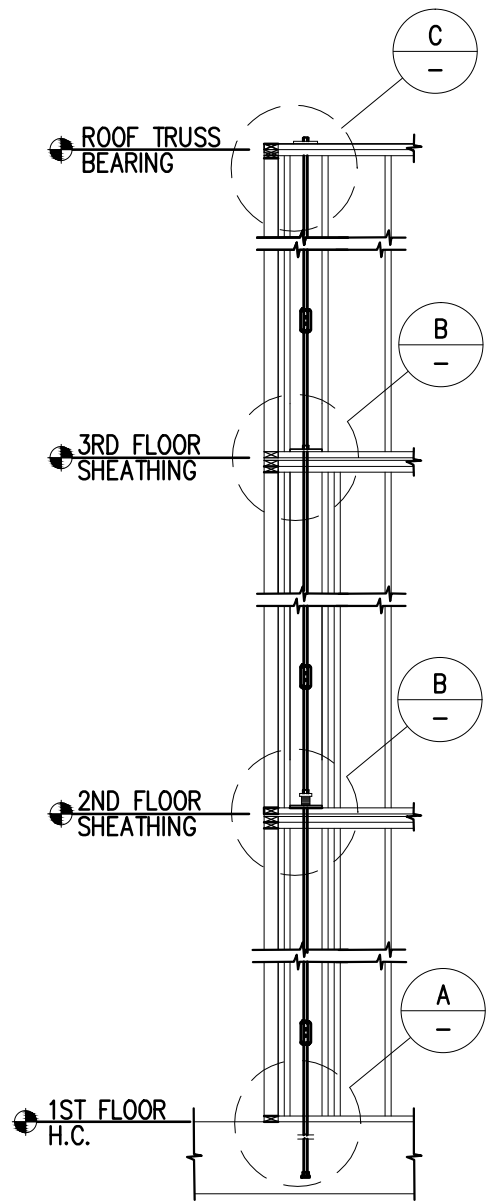
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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
Print Name: Kurt Sandman  
Signature: [Signature]  
Date: 12/04/2017 License #: 43486



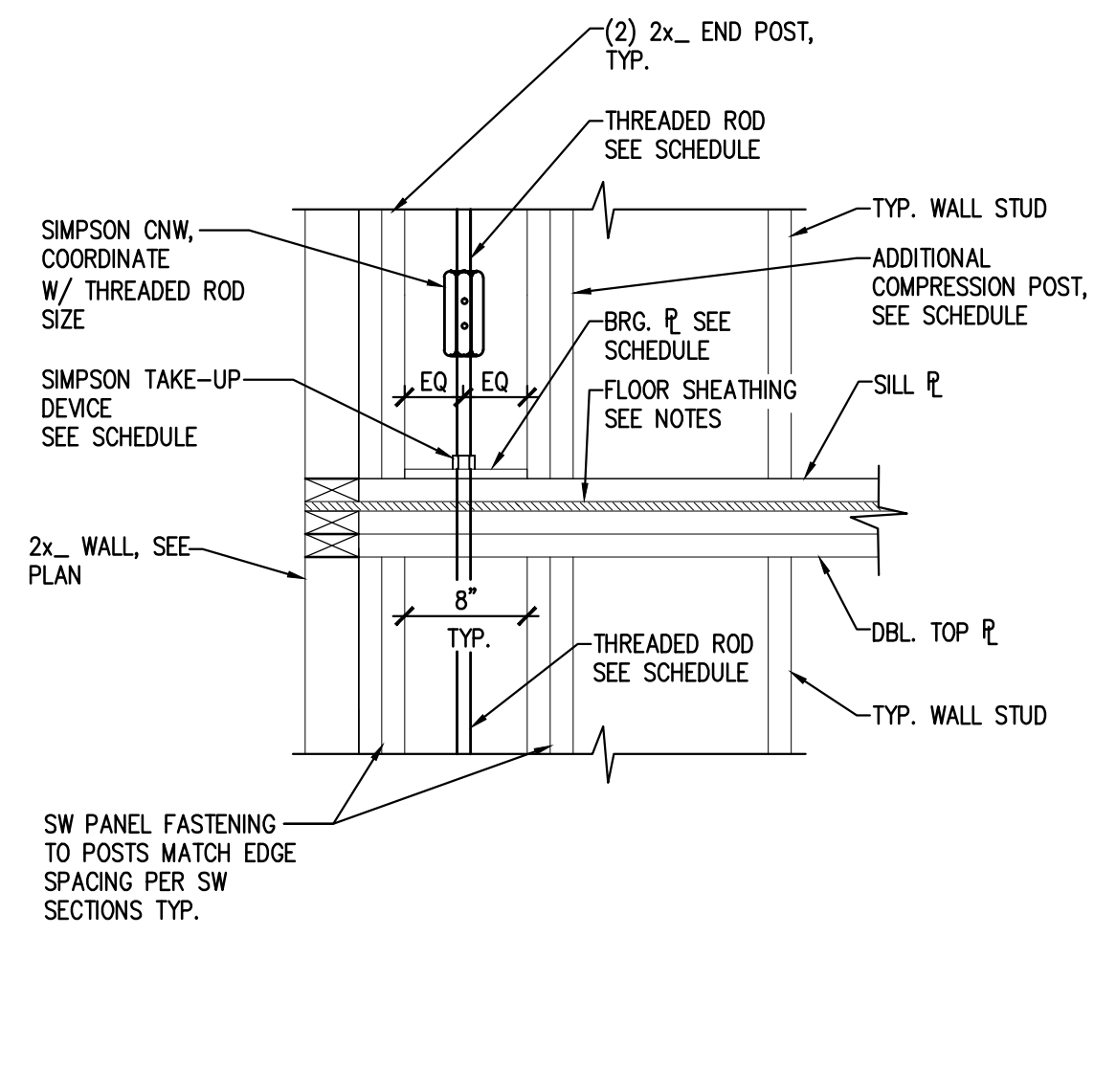
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
2		



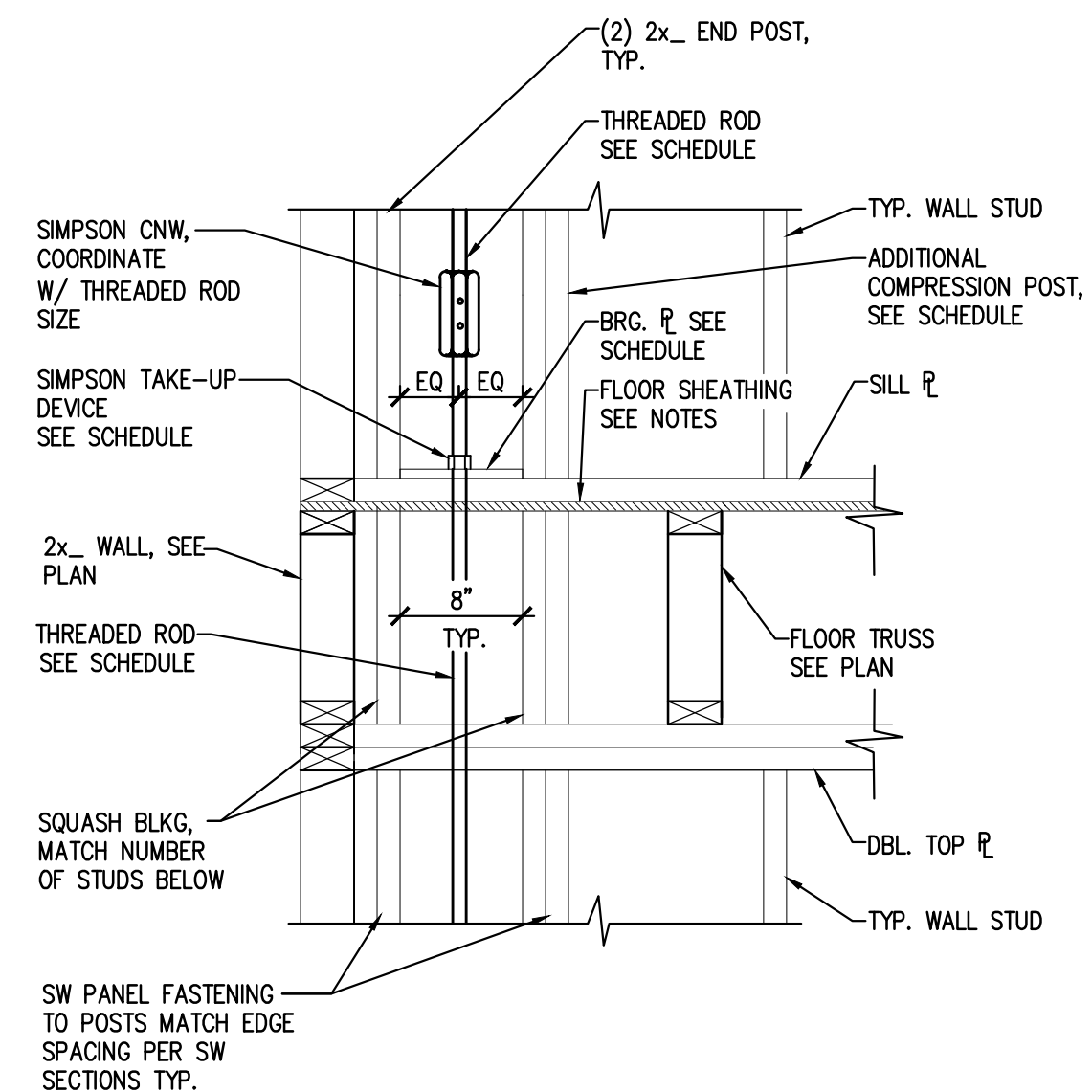
**HOLD DOWN DETAIL**  
1" = 1'-0" (2) S206



**HOLDDOWN ANCHOR**  
1" = 1'-0" (A)



**TIE DOWN @ FLOOR LEVEL**  
1" = 1'-0" (B)



**TIE DOWN @ ROOF LEVEL**  
1" = 1'-0" (C)

**STRONG- ROD ATS**  
NO SCALE

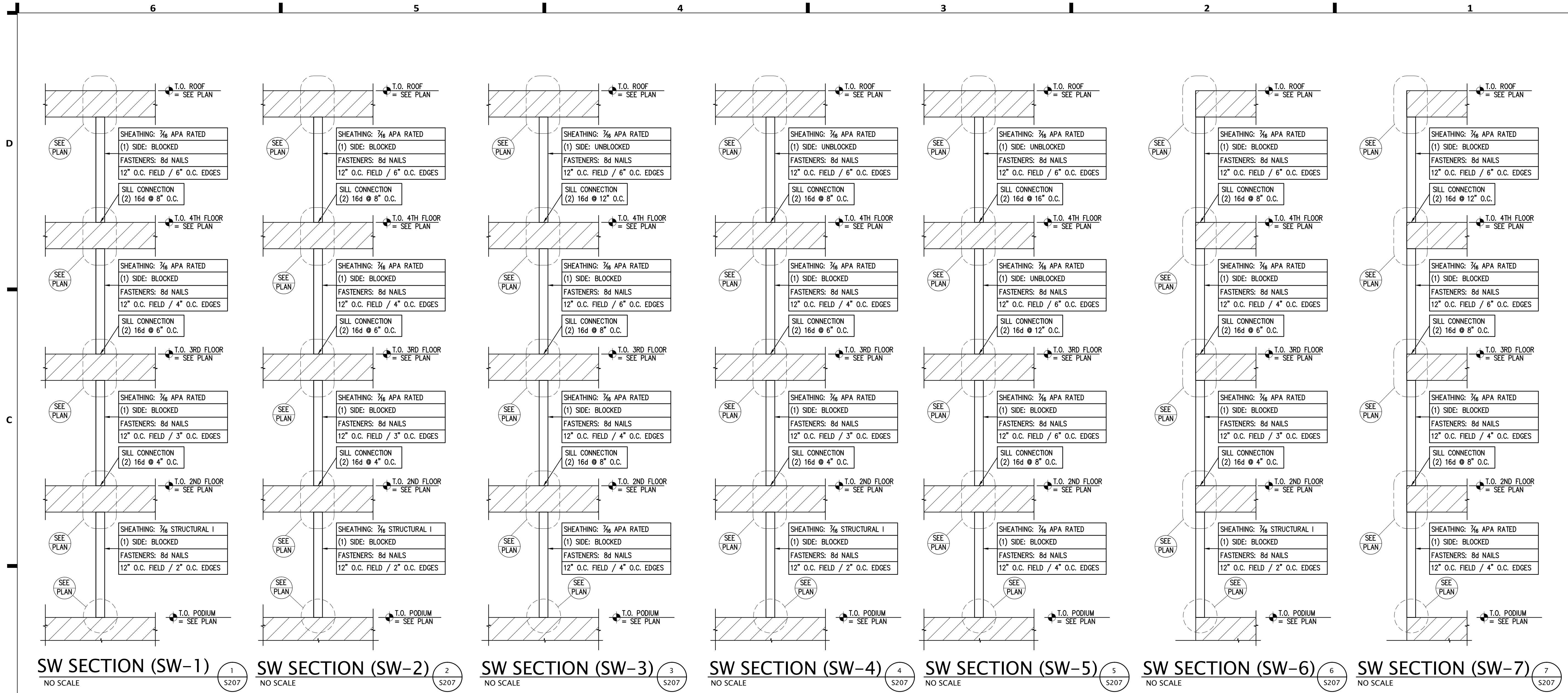


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**SANDMAN**  
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JLG ARCHITECTS  
**BOTTINEAU RIDGE II APARTMENTS**  
MAPLE GROVE, MN

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**12/04/17**  
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PROJECT  
**16098**  
SHEET  
**S206**  
**SHEAR WALL PLAN, & DETAILS**

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE



LABEL	4th LEVEL				3rd LEVEL				2nd LEVEL				1st LEVEL				BASE TENSION ROD ANCHOR	SILL PL. FASTENING @ BASE LEVEL	ULTIMATE WIND LOAD TO PODIUM		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	TENSION ROD	T.O. WALL TAKE-UP DEVICE	T.O. WALL BEARING PLATE	END POST/COMP POST			BASE LEVEL SHEAR TO P.C.	SW END FORCES TO P.C.	
SW-1	1/2" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6A	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6B	(2) 2x6 / (2) 2x6	3/4" THREADED ROD	SIMPSON RTUD6	SIMPSON BPRUD5-6C	(2) 2x6 / (4) 2x6	3/4" THREADED ROD S.D. 1/S206	1/2"x5" SIMPSON TITEN HD ANCHORS @ 1'-6" O.C.	±23.8 KIP	±34.4 KIP	4.6 KIP
SW-2	1/2" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x4 / (1) 2x4	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6A	(2) 2x4 / (2) 2x4	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6B	(2) 2x4 / (7) 2x4	3/4" THREADED ROD	SIMPSON RTUD6	SIMPSON BPRUD5-6C	(2) 2x4 / (12) 2x4	3/4" THREADED ROD S.D. 1/S206	1/2"x5" SIMPSON TITEN HD ANCHORS @ 1'-6" O.C.	±26.1 KIP	±34.9 KIP	3.3 KIP
SW-3	1/2" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6A	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6B	(2) 2x6 / (2) 2x6	3/8" THREADED ROD S.D. 1/S206	1/2"x5" SIMPSON TITEN HD ANCHORS @ 2'-0" O.C.	±21.9 KIP	±23.7 KIP	4.6 KIP
SW-4	1/2" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6A	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6B	(2) 2x6 / (2) 2x6	3/8" THREADED ROD	SIMPSON RTUD9	SIMPSON PL9-3X12	(2) 2x6 / (5) 2x6	3/8" THREADED ROD S.D. 1/S206	1/2"x5" SIMPSON TITEN HD ANCHORS @ 1'-4" O.C.	±34.8 KIP	±38.2 KIP	2.1 KIP
SW-5	1/2" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x4 / (1) 2x4	3/8" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x4 / (1) 2x4	3/8" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x4 / (3) 2x4	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6A	(2) 2x4 / (6) 2x4	3/8" THREADED ROD S.D. 1/S206	1/2"x5" SIMPSON TITEN HD ANCHORS @ 2'-0" O.C.	±16.8 KIP	±18.8 KIP	3.9 KIP
SW-6	1/2" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6A	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6B	(2) 2x6 / (2) 2x6	3/8" THREADED ROD	SIMPSON RTUD9	SIMPSON PL9-3X12	(2) 2x6 / (5) 2x6	3/8" THREADED ROD S.D. 2/S206	1/2"x5" SIMPSON TITEN HD ANCHORS @ 1'-4" O.C.	±21.7 KIP	-	-
SW-7	1/2" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD4	SIMPSON BPRUD3-4	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6A	(2) 2x6 / (1) 2x6	3/8" THREADED ROD	SIMPSON RTUD5	SIMPSON BPRUD5-6B	(2) 2x6 / (2) 2x6	3/8" THREADED ROD S.D. 2/S206	1/2"x5" SIMPSON TITEN HD ANCHORS @ 2'-0" O.C.	±12.0 KIP	-	-

**SHEARWALL NOTES:**

- SEE GENERAL NOTES FOR TYPICAL SHEATHING REQUIREMENTS. NOT SHOWN ON WALL SECTIONS.
- SEE S001 GENERAL NOTES FOR ADHESIVE REQUIREMENTS.
- INTERIOR CORRIDOR BEARING WALL SILL PLATE FASTENING TO BE 1/2"x5" SIMPSON TITEN HD ANCHORS @ 4'-0" O.C. U.N.O. IN SHEAR WALL SCHEDULE.
- EXTERIOR BEARING WALL SILL PLATE FASTENING TO BE 1/2"x5" SIMPSON TITEN HD ANCHORS @ 4'-0" O.C. U.N.O. IN SHEAR WALL SCHEDULE.
- PROVIDE SIMPSON BPS-3HDG SILL ANCHOR WASHERS AT ALL SHEAR WALLS.
- MAXIMUM WALL STUD SPACING TO BE 16" O.C FOR ALL SHEAR WALLS, U.N.O.
- SHEAR WALL TENSION RODS TO BE HIGH STRENGTH STEEL (Fu=120 KSI. MIN.)
- NOMINAL FORCES IN SHEAR WALL SCHEDULE TO BE USED IN IBC 2012 LOAD COMBINATIONS WITH APPROPRIATE LOAD FACTORS.
- THE COMMON FRAMING MEMBER AT ADJOINING PANEL EDGES WHERE EDGE NAIL SPACING OF LESS THAN 3" IS SPECIFIED SHALL BE (2) 2X MEMBERS, AND NAILING SHALL BE STAGGERED AT ALL PANEL EDGES. FASTEN PILES PER DETAIL 1/S402

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Date: 12/04/2017 License #: 43486





6

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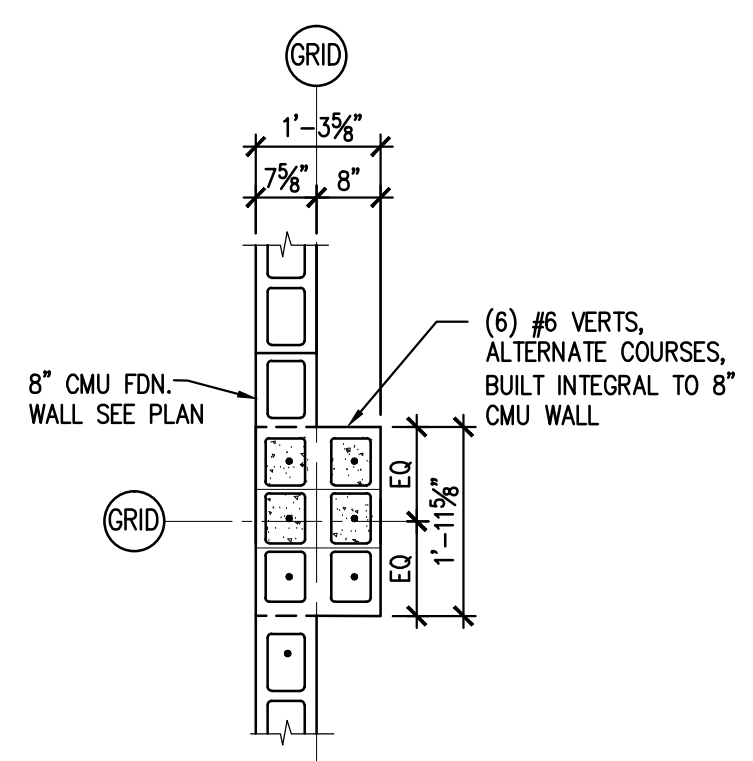
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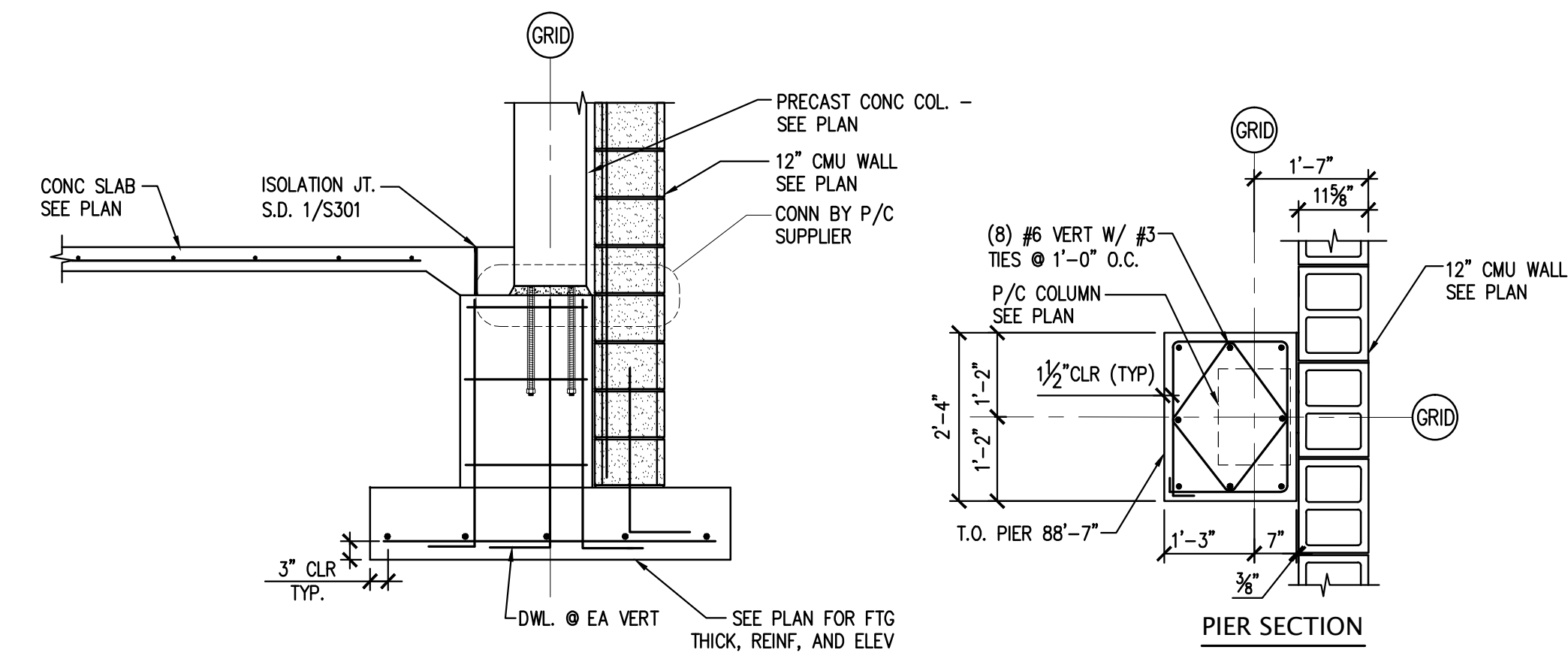
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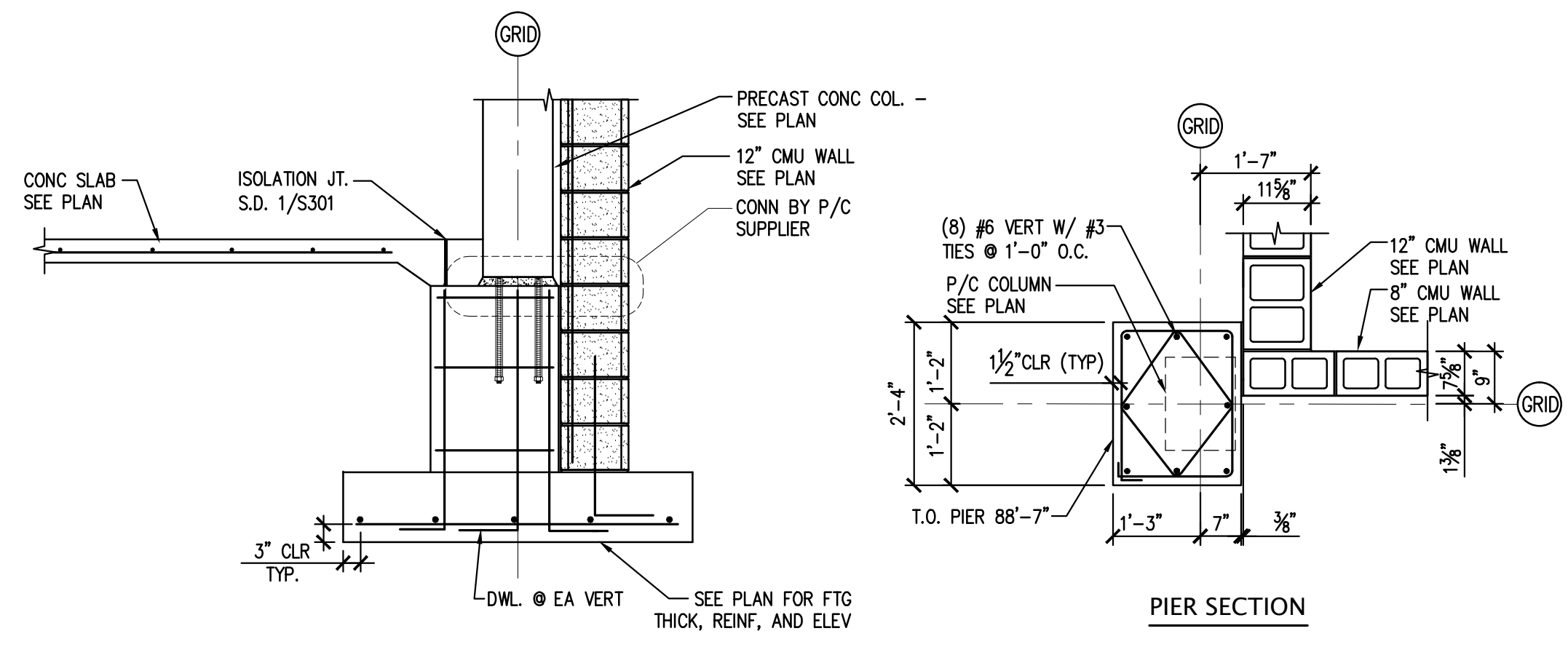
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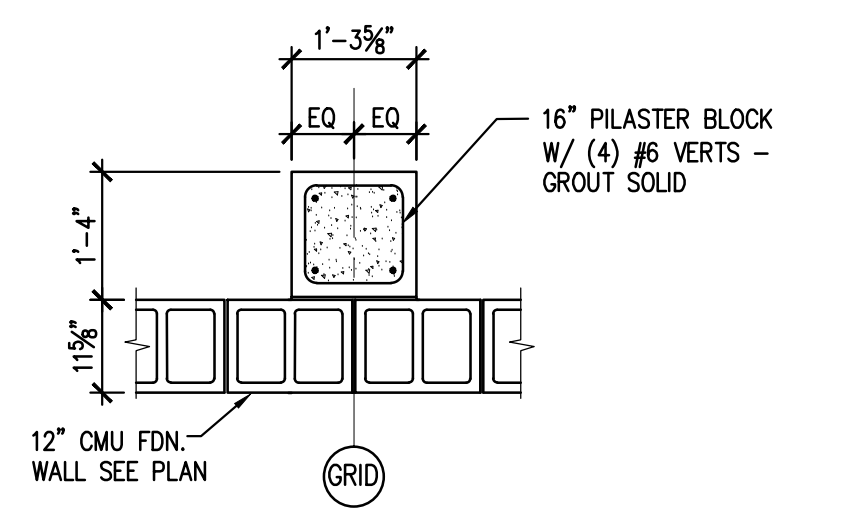
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1/2" = 1'-0"  
1 S302



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2 S302



**PIER DETAIL (P3)**  
1/2" = 1'-0"  
3 S302



**PIER DETAIL (P4)**  
1/2" = 1'-0"  
4 S302



6

5

4

3

2

1



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JLG ARCHITECTS  
**BOTTINEAU RIDGE II APARTMENTS**  
MAPLE GROVE, MN

DATE  
**12/04/17**  
PHASE  
**100% CDs**

PROJECT  
**16098**

SHEET  
**S302**  
FOUNDATION DETAILS

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Date: 12/04/2017 License #: 43486



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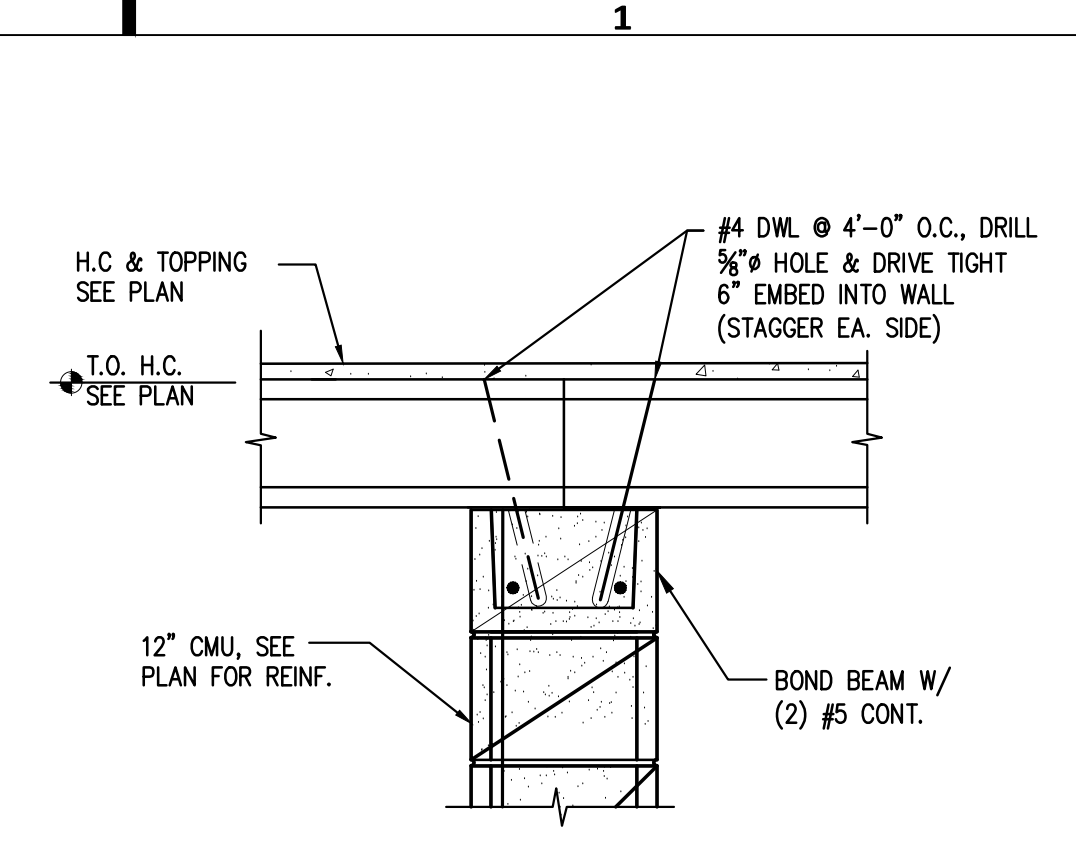
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PHASE  
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PROJECT  
**16098**

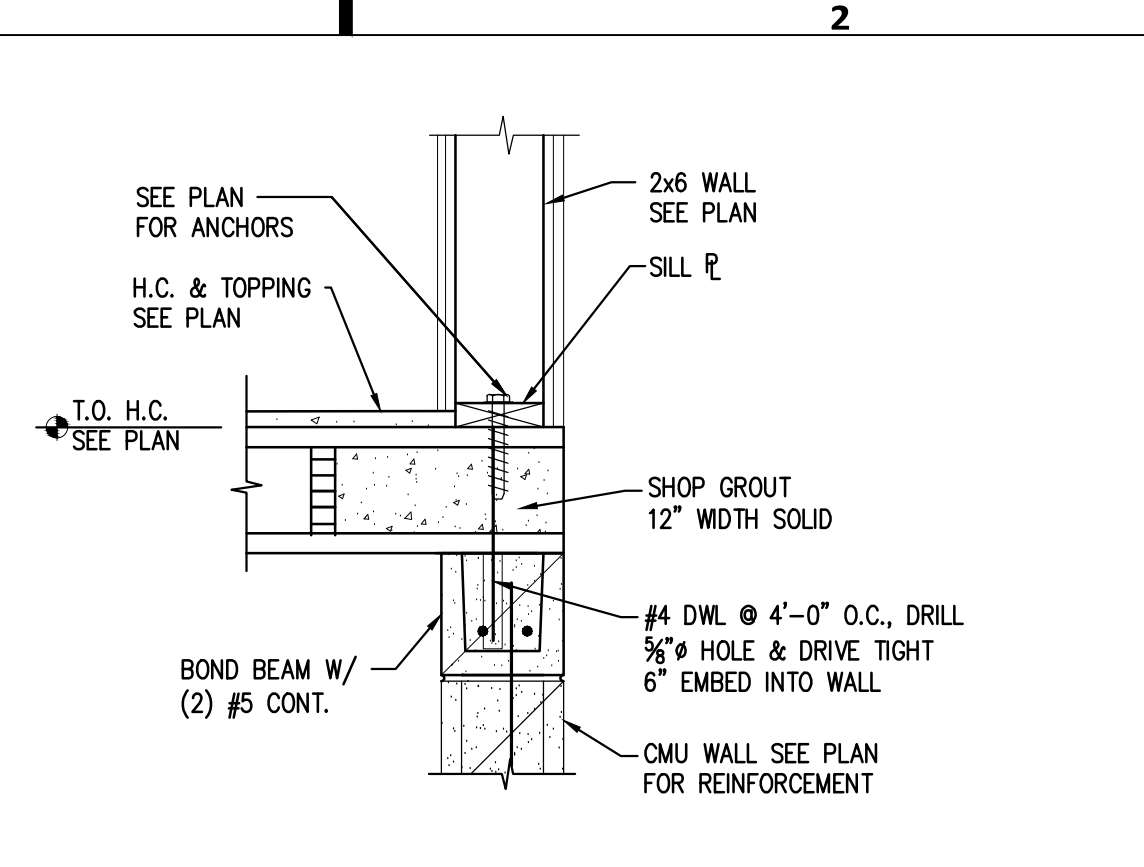
SHEET  
**S401**  
FRAMING DETAILS

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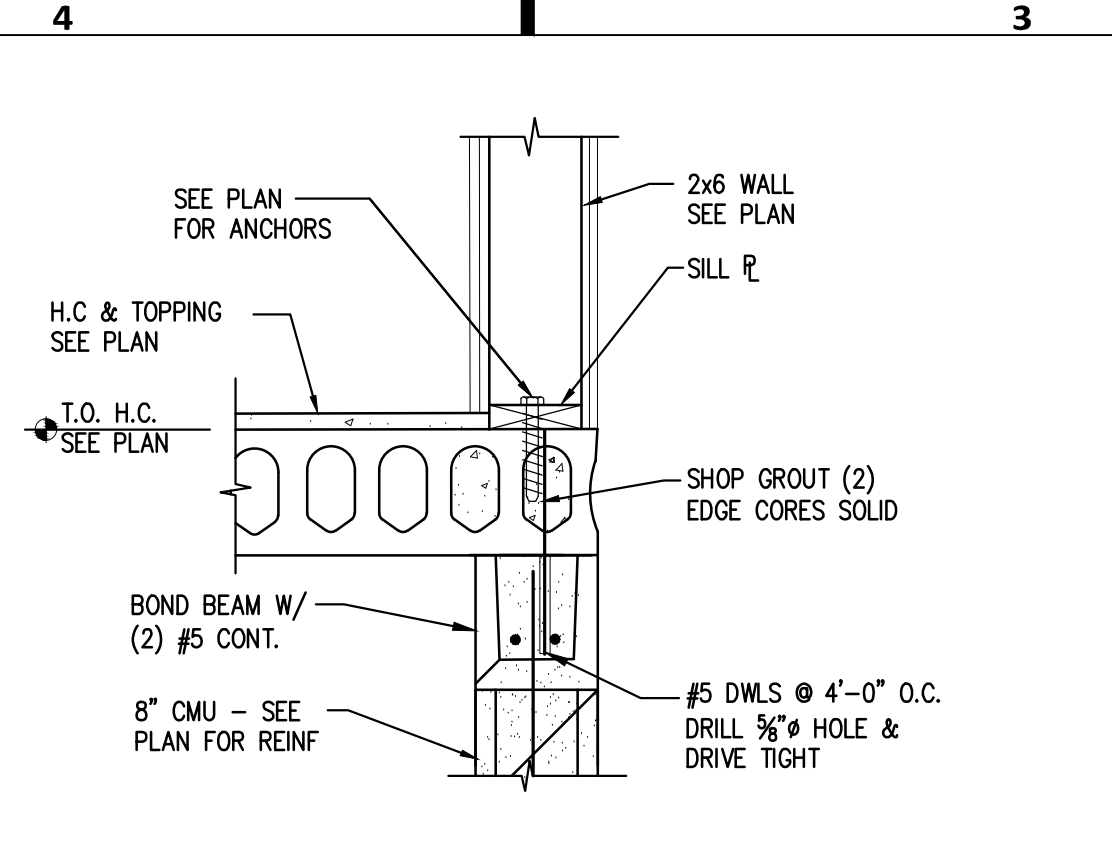
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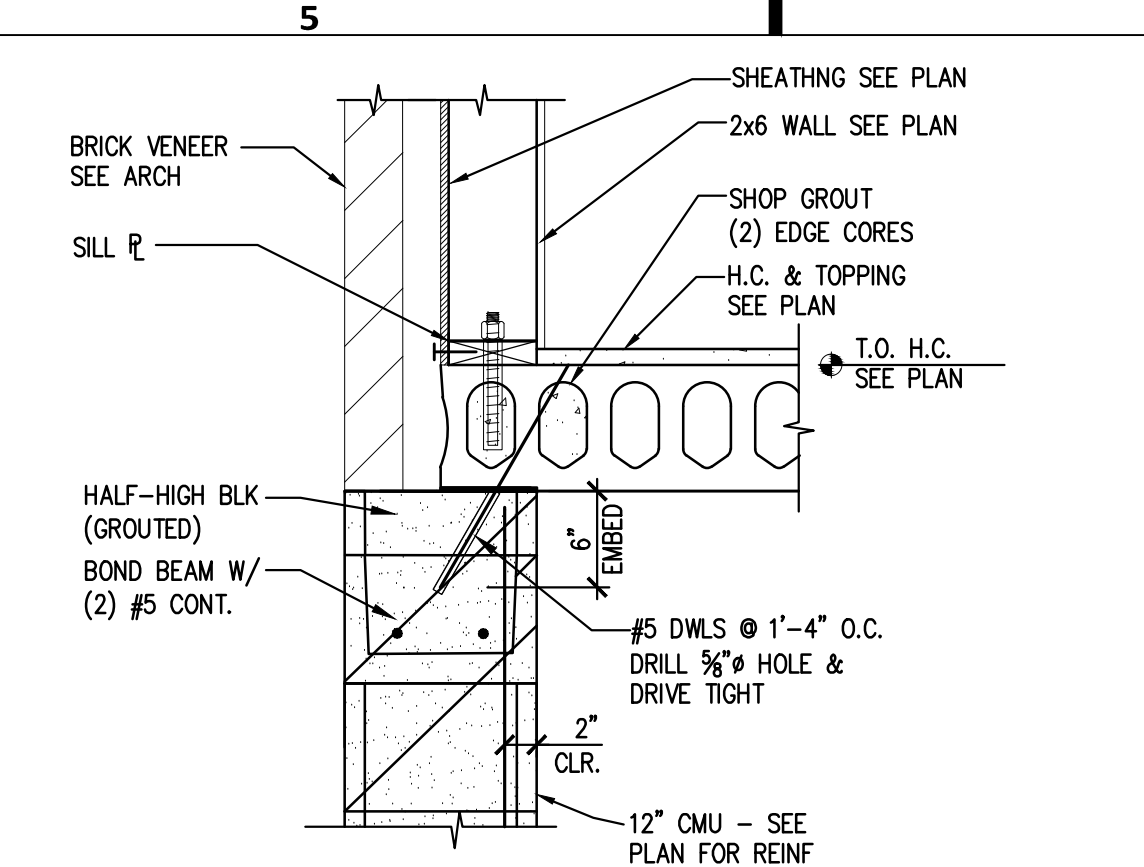
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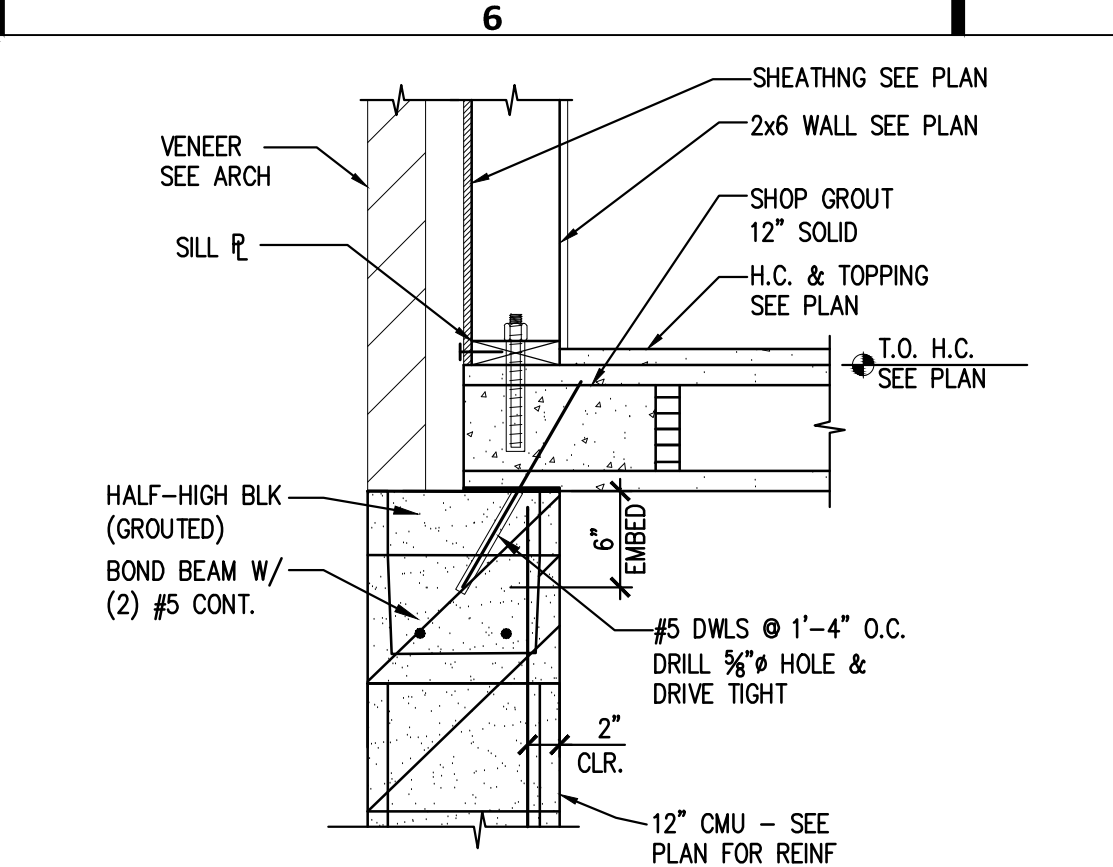
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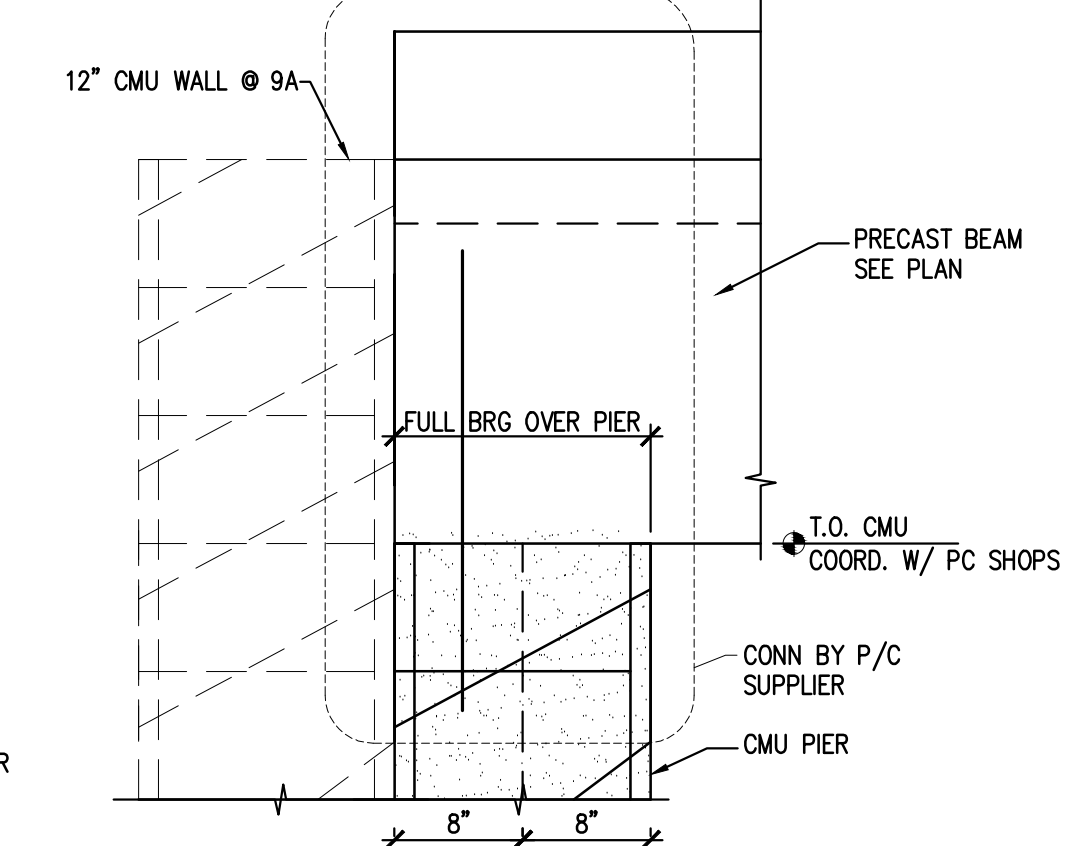
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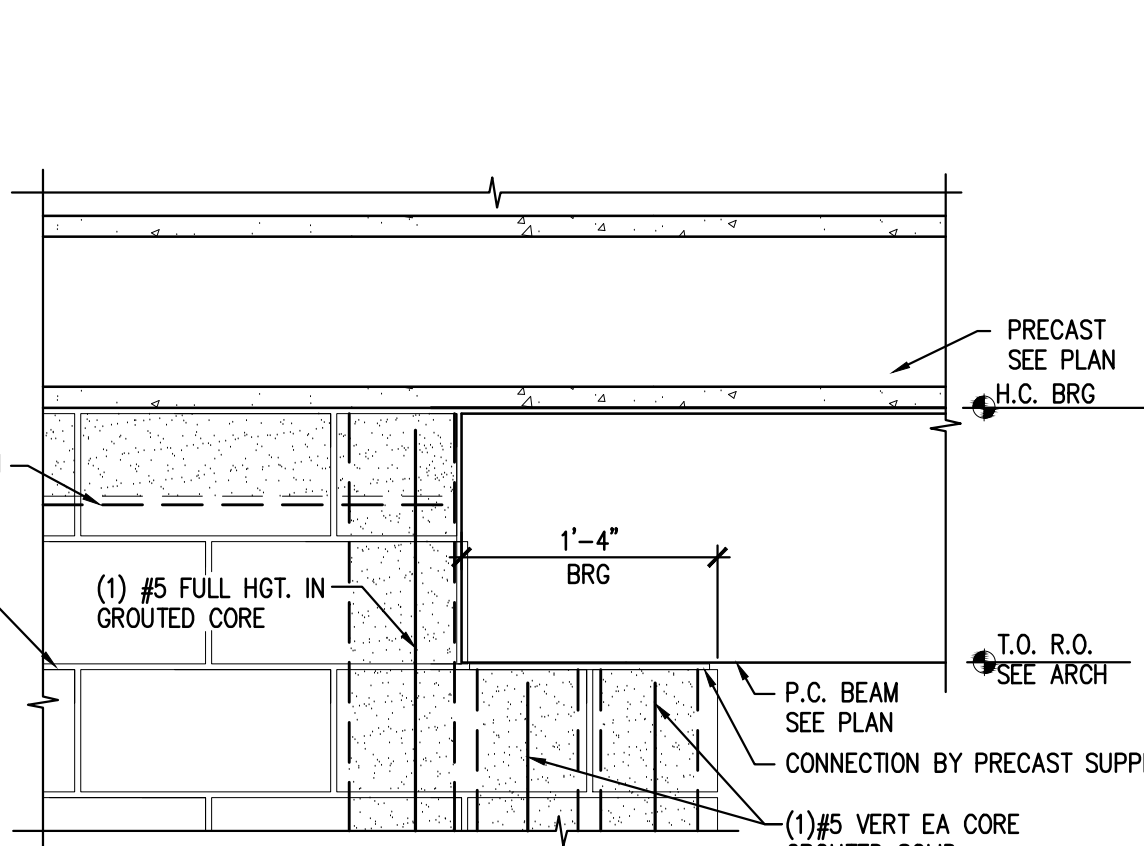
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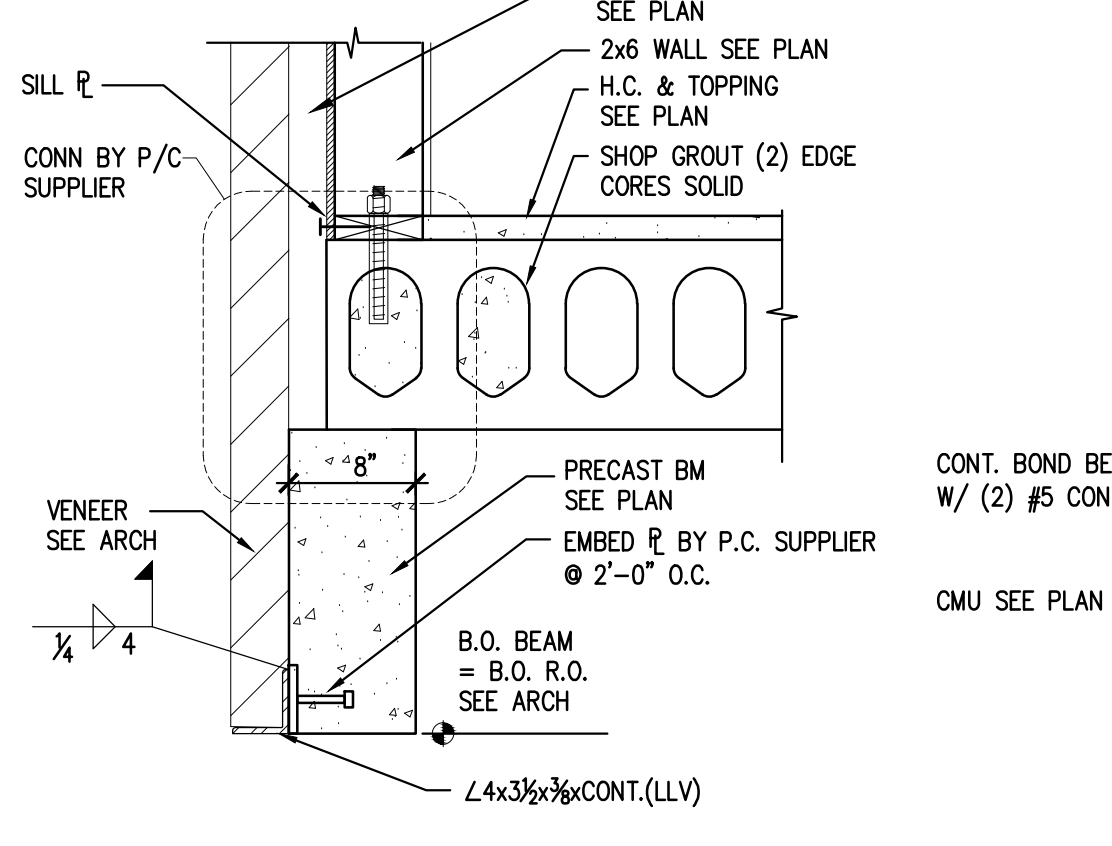
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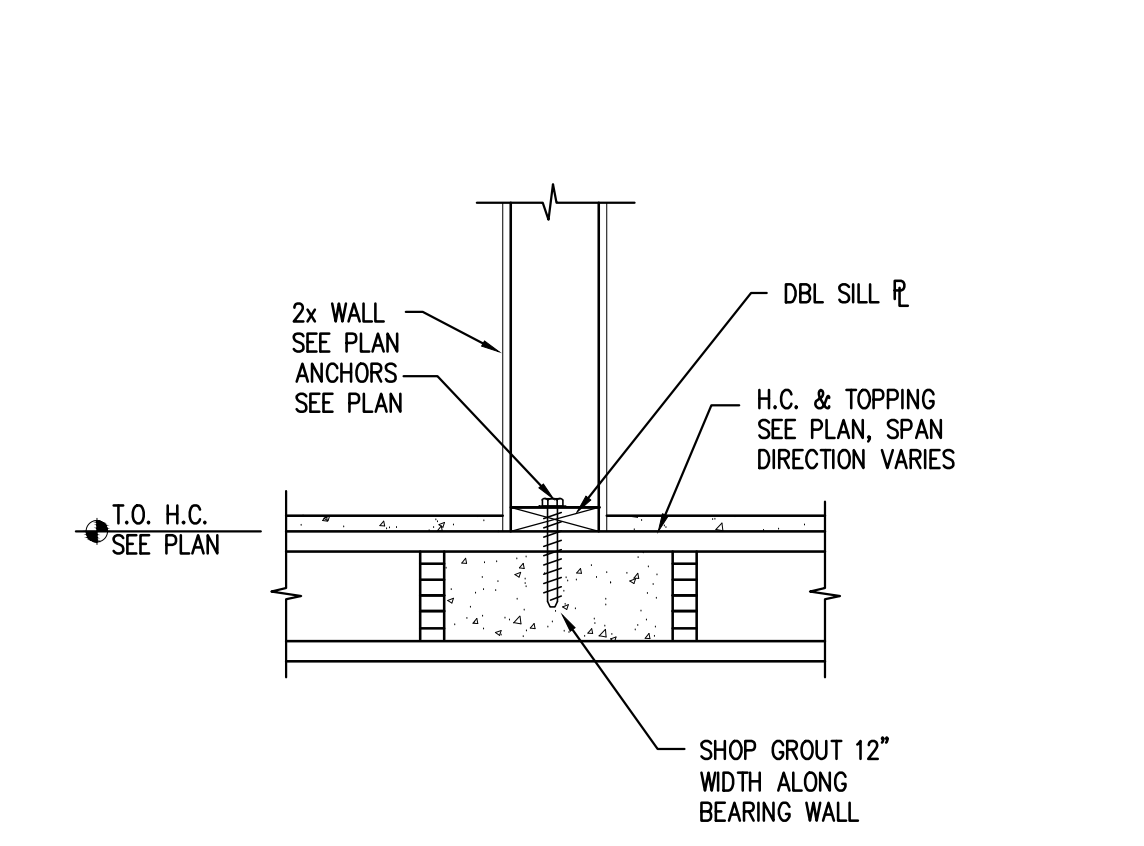
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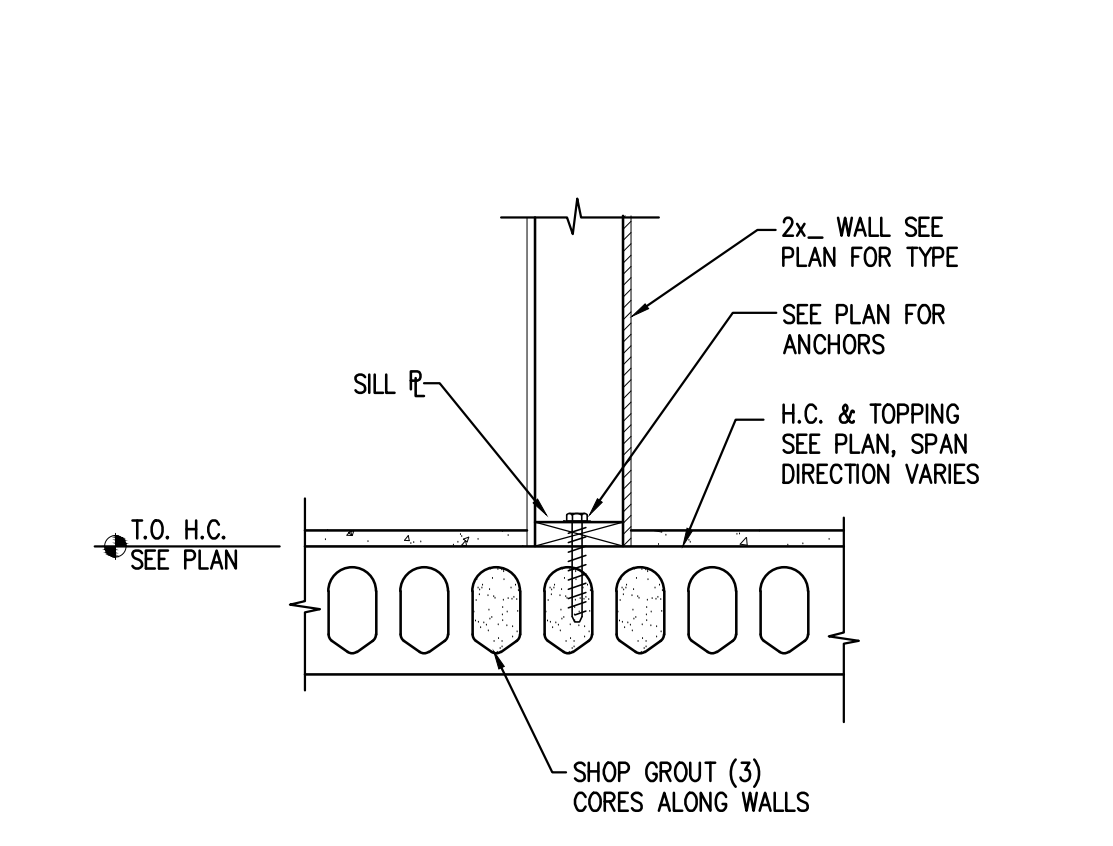
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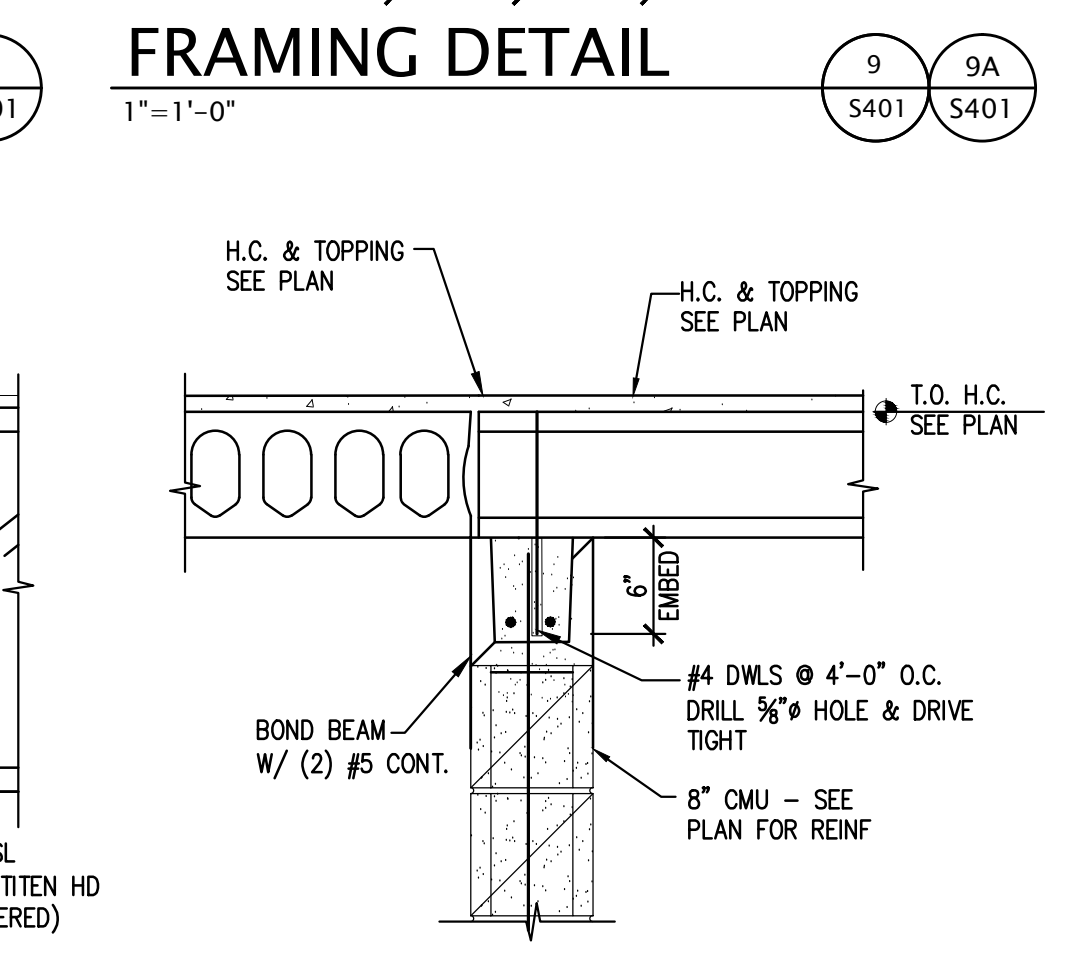
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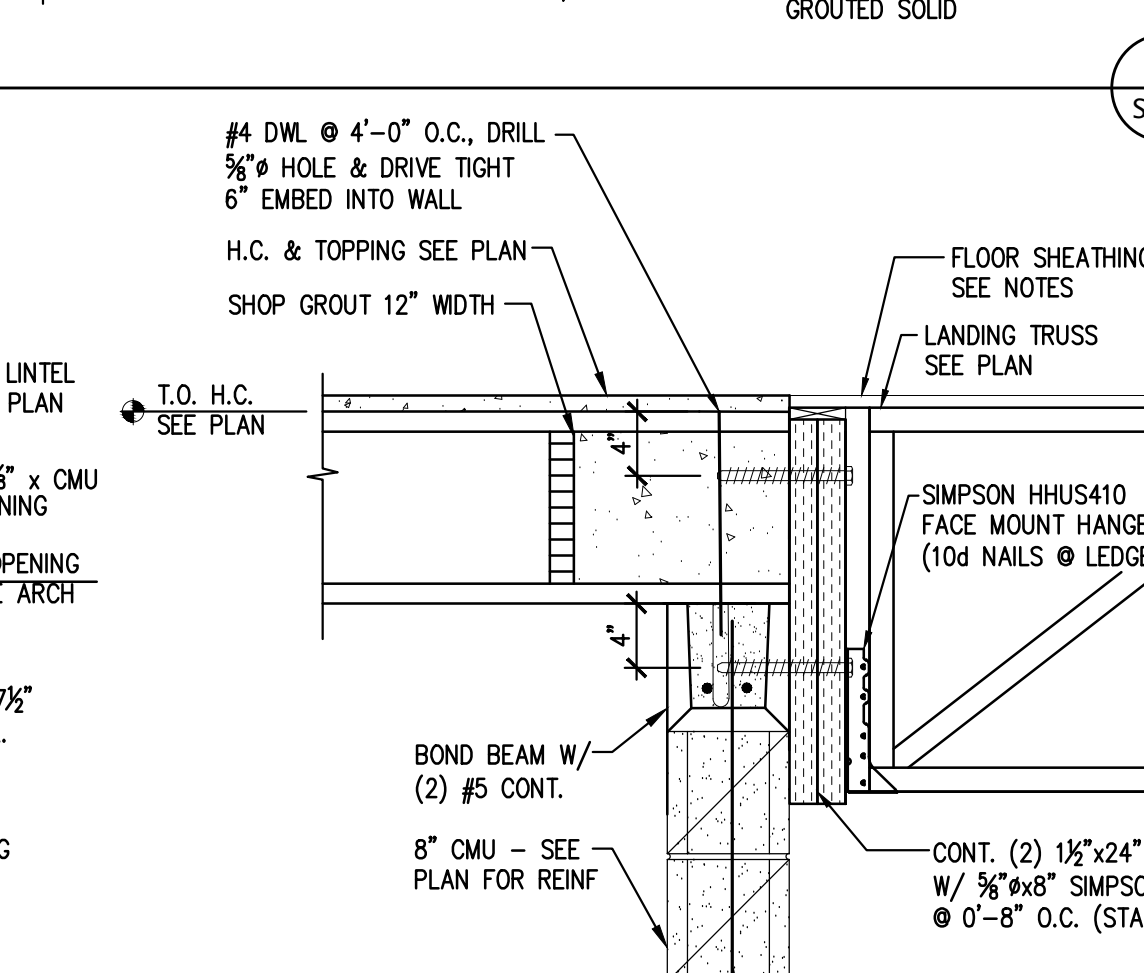
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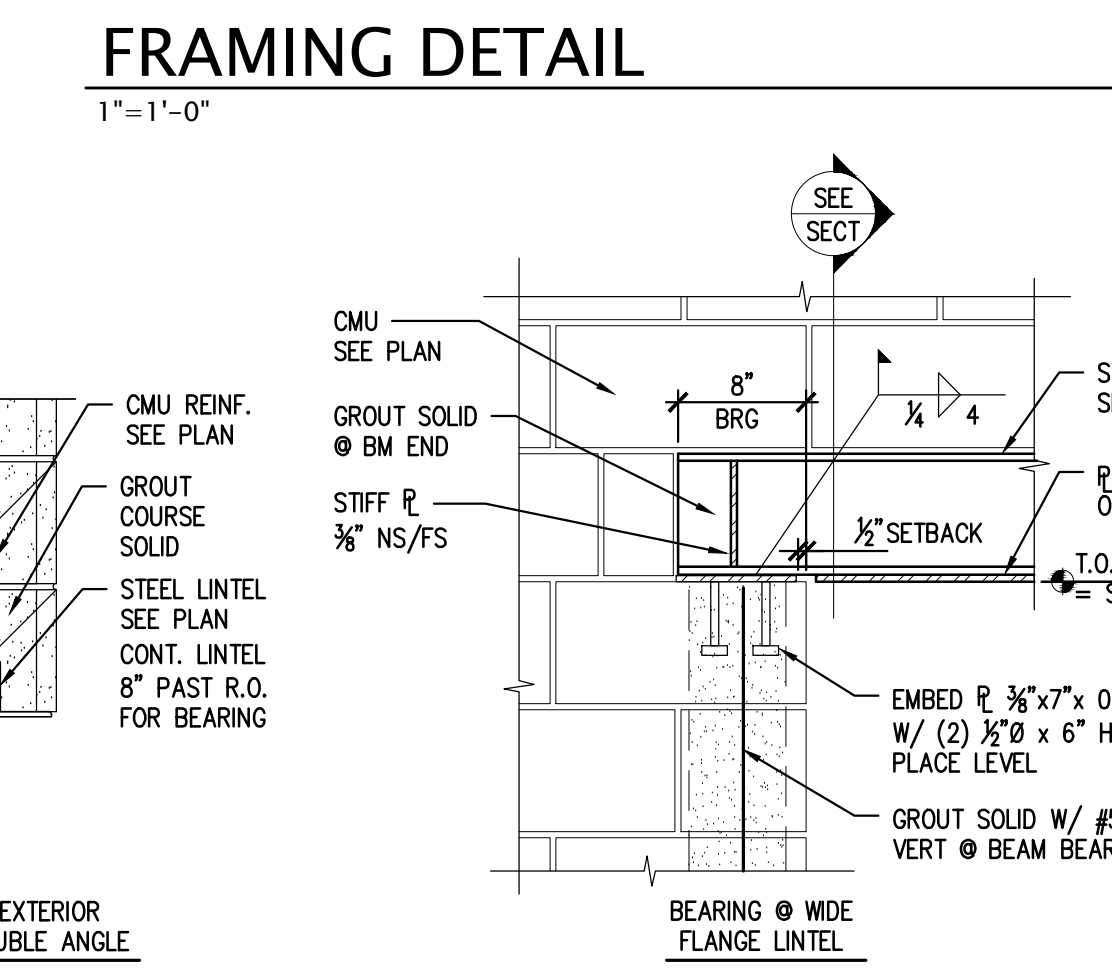
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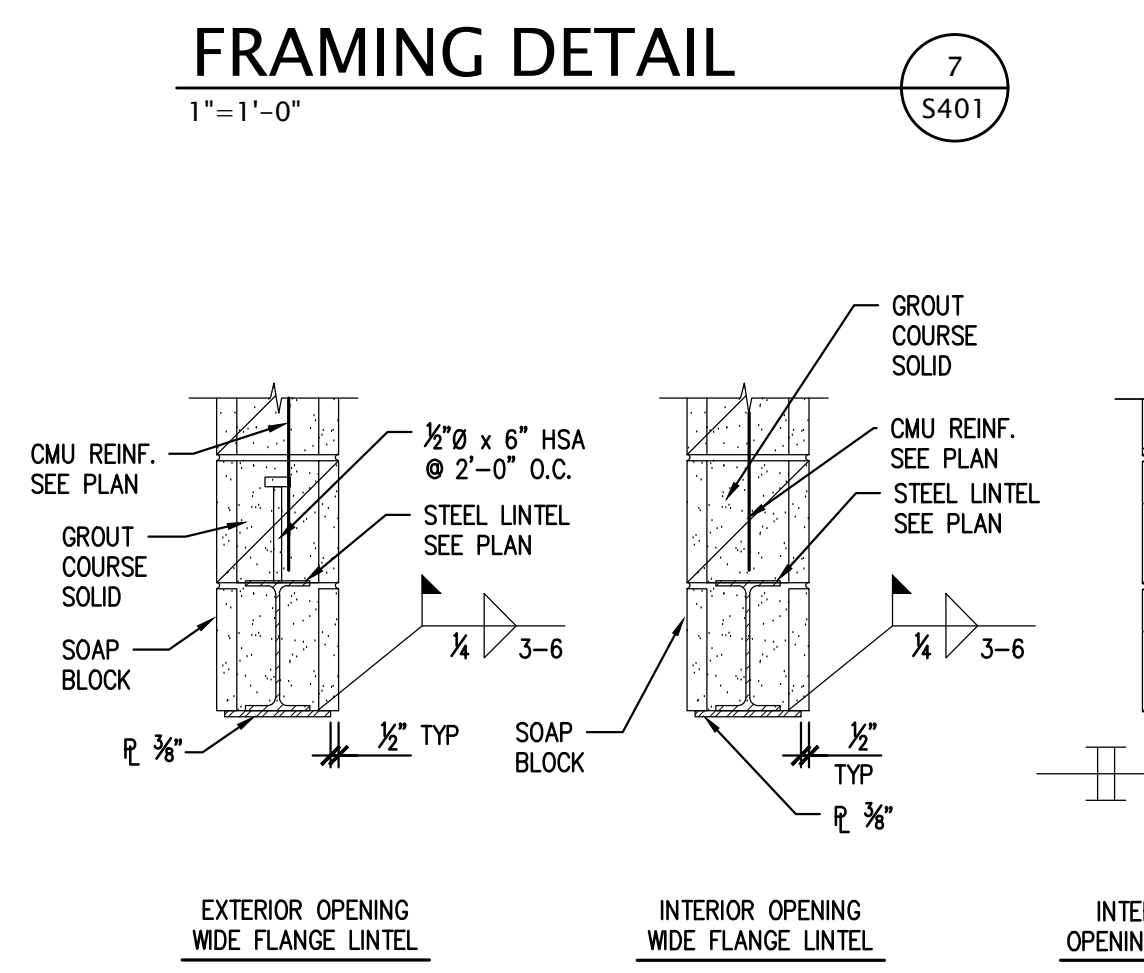
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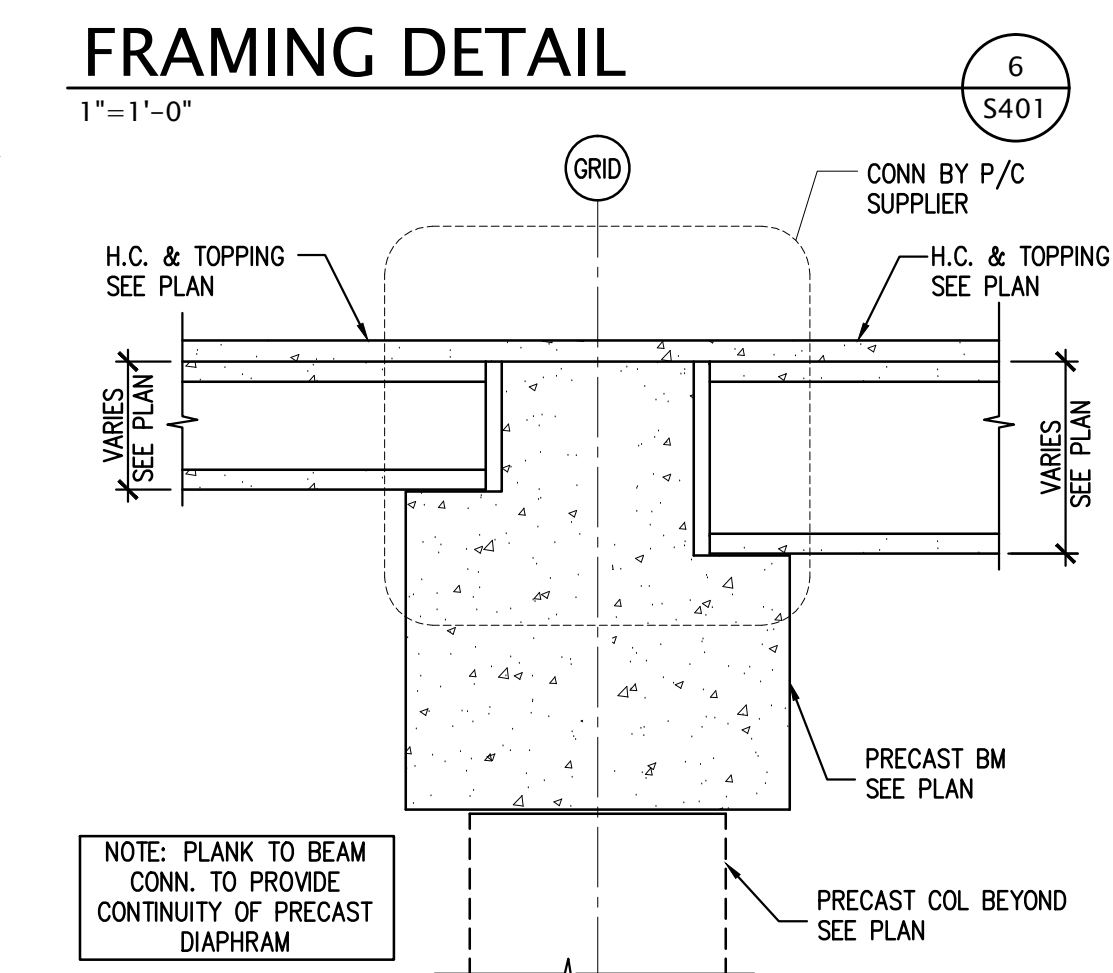
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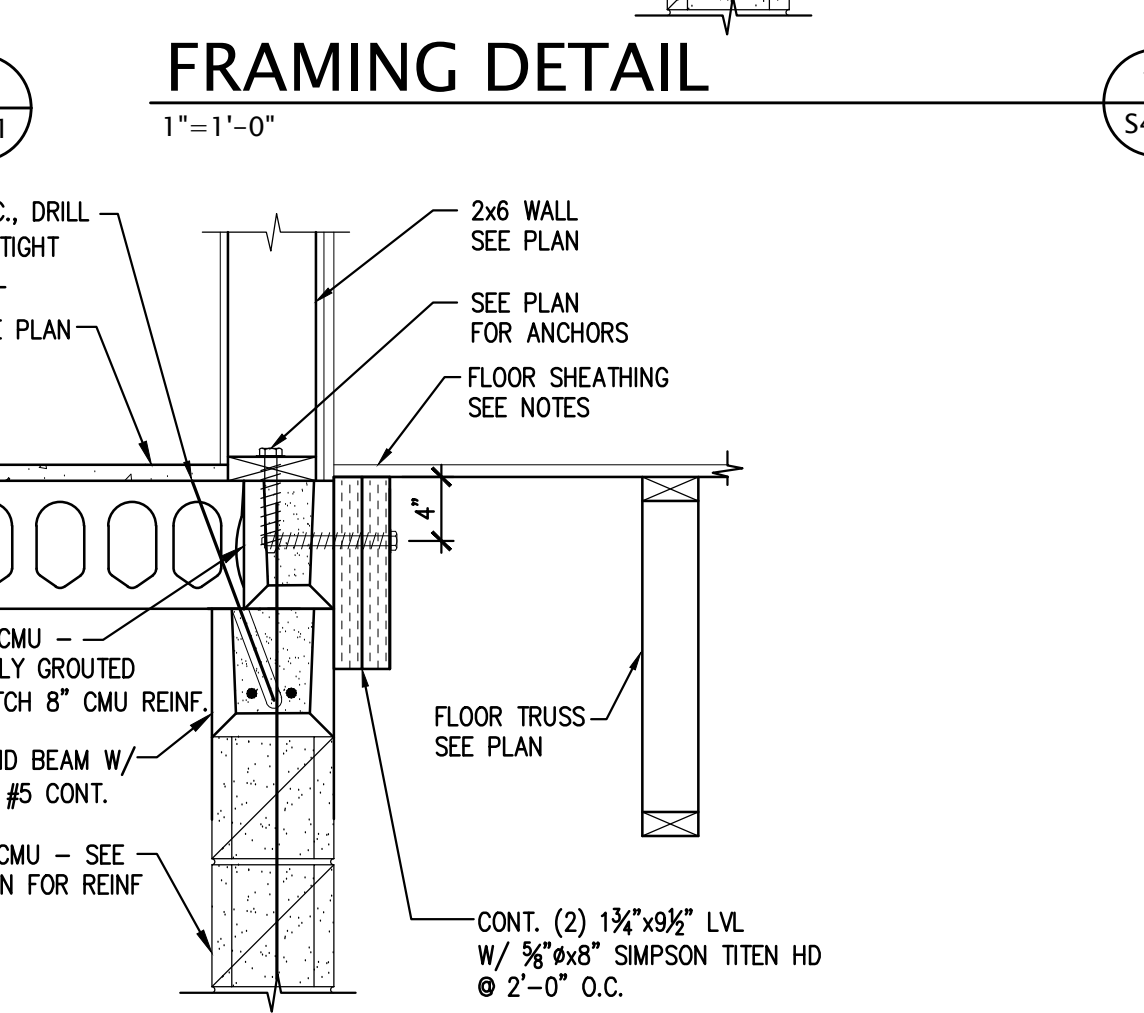
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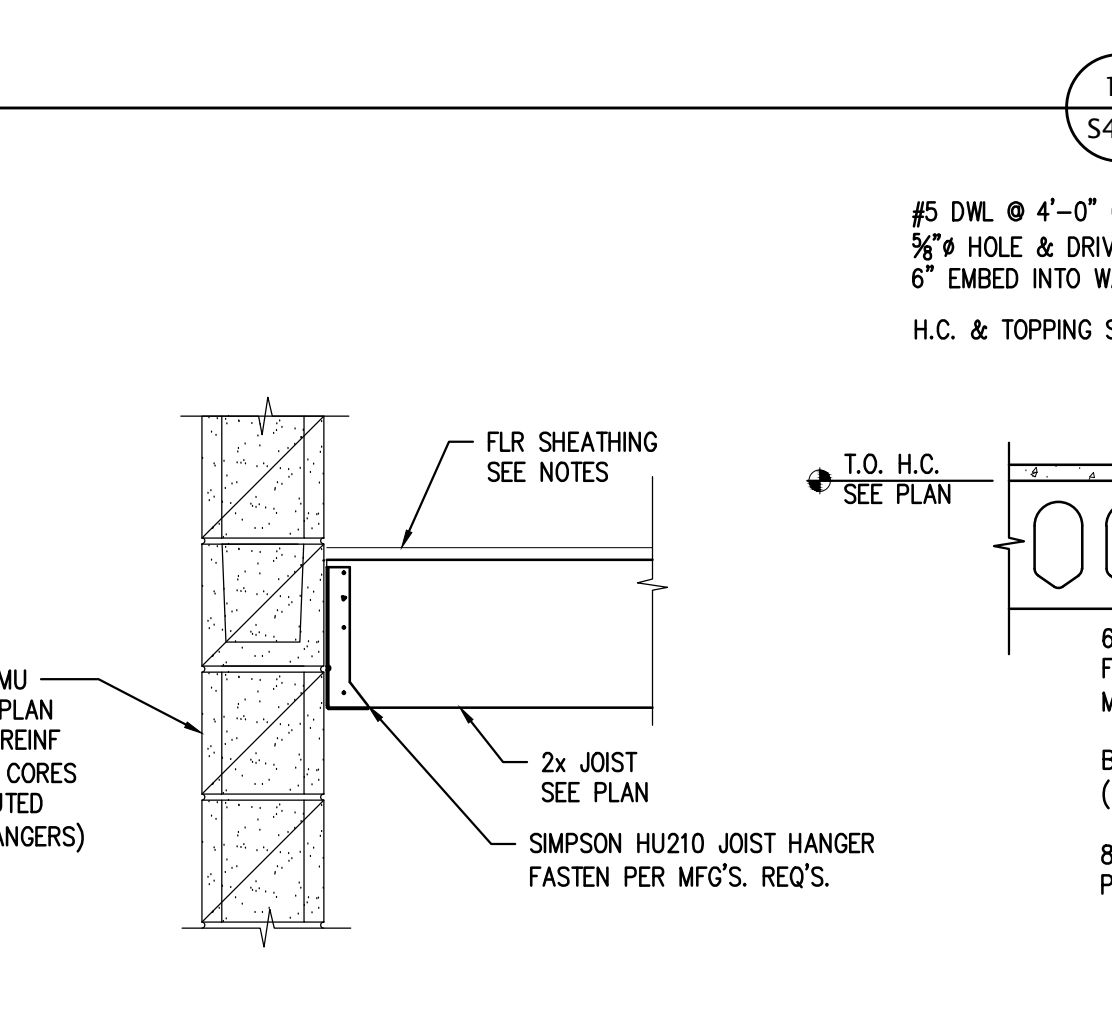
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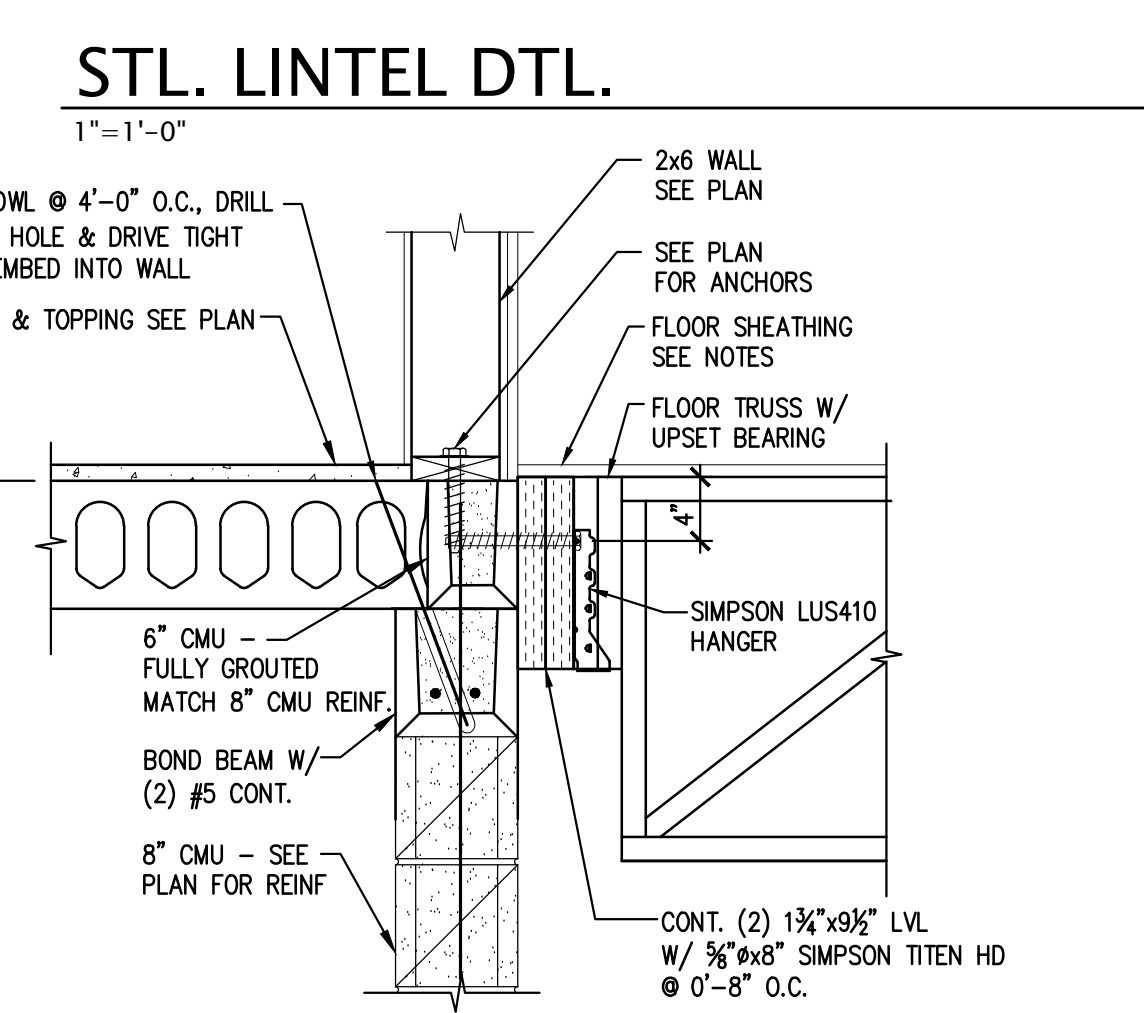
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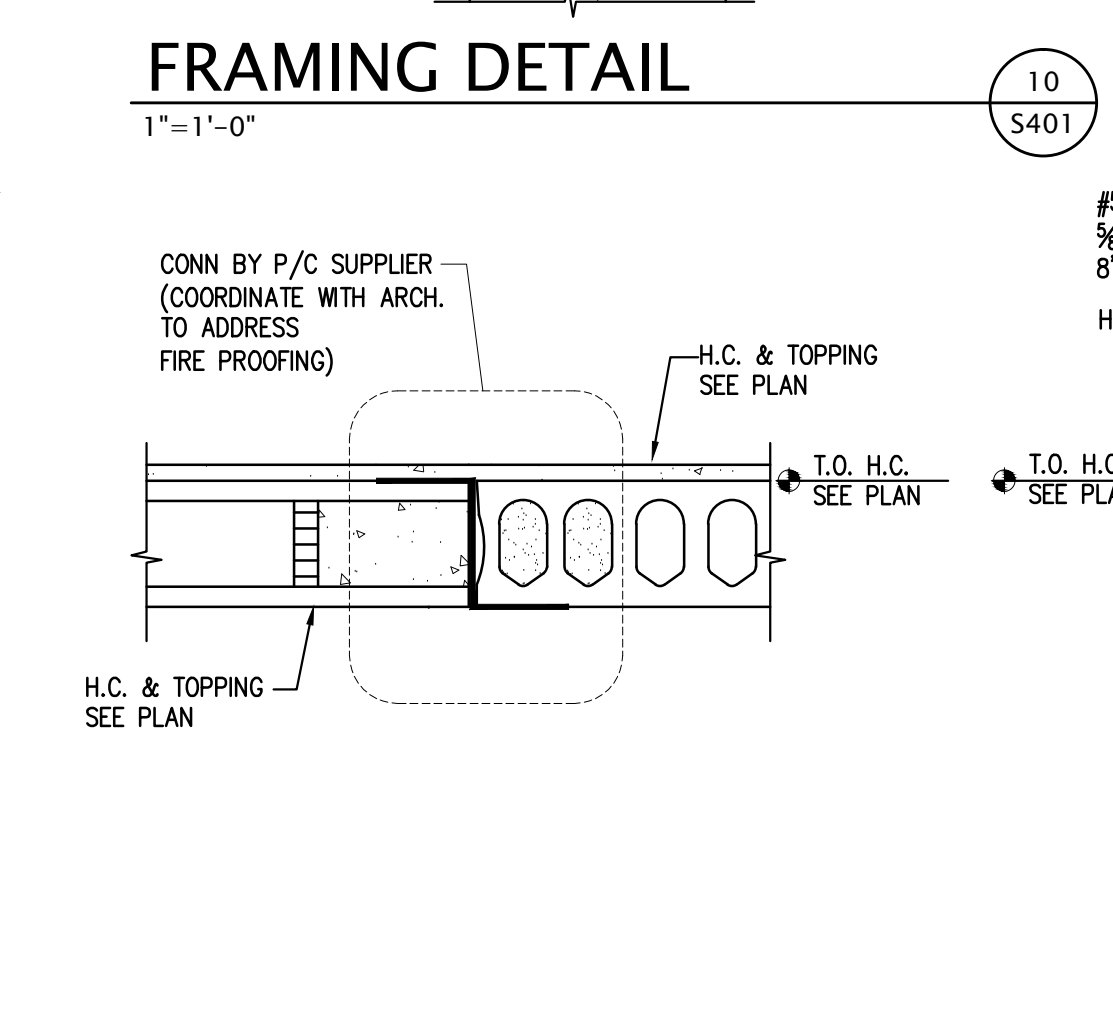
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**JOIST BEARING**  
1"=1'-0"  
16 S401



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



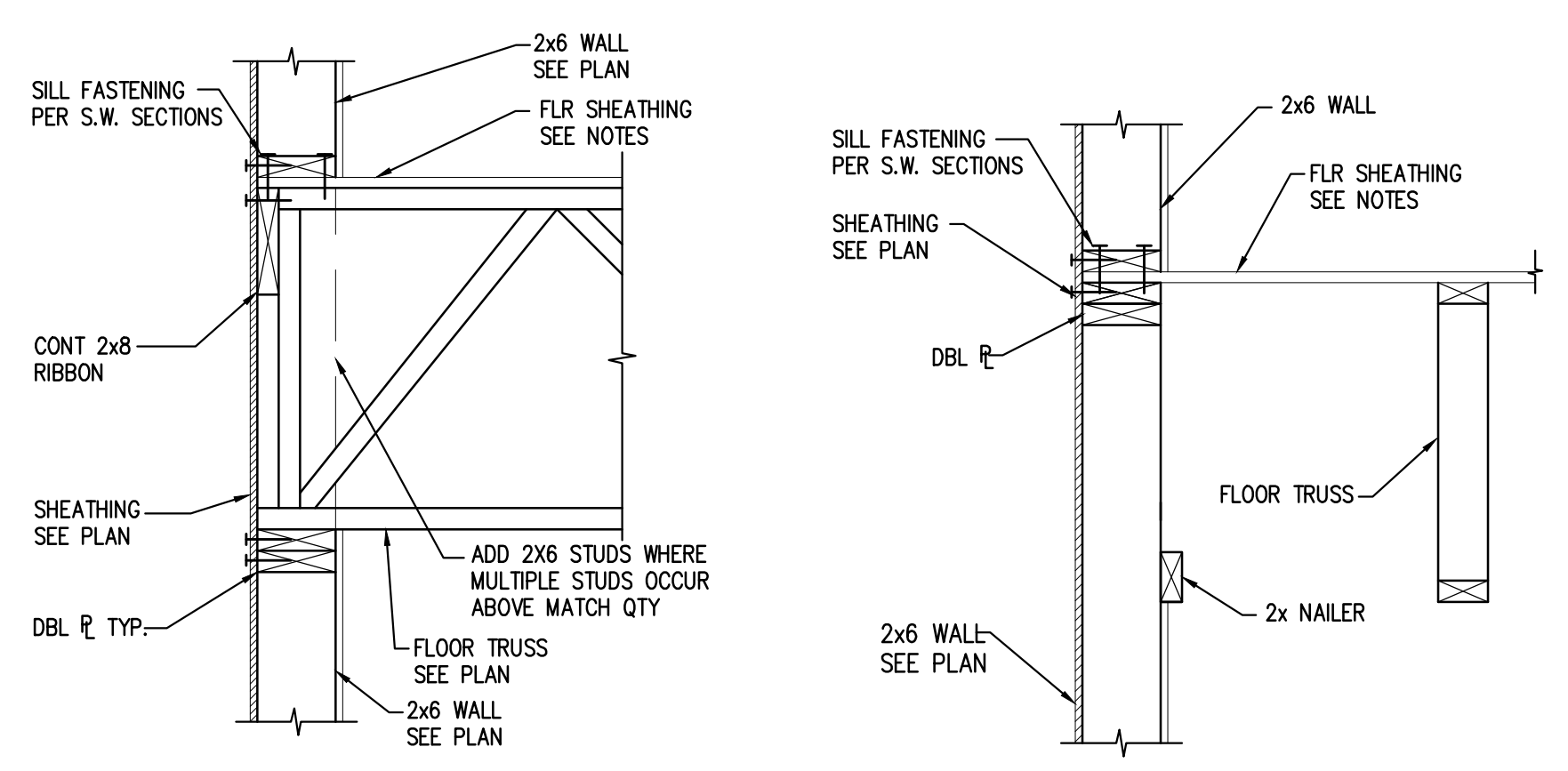
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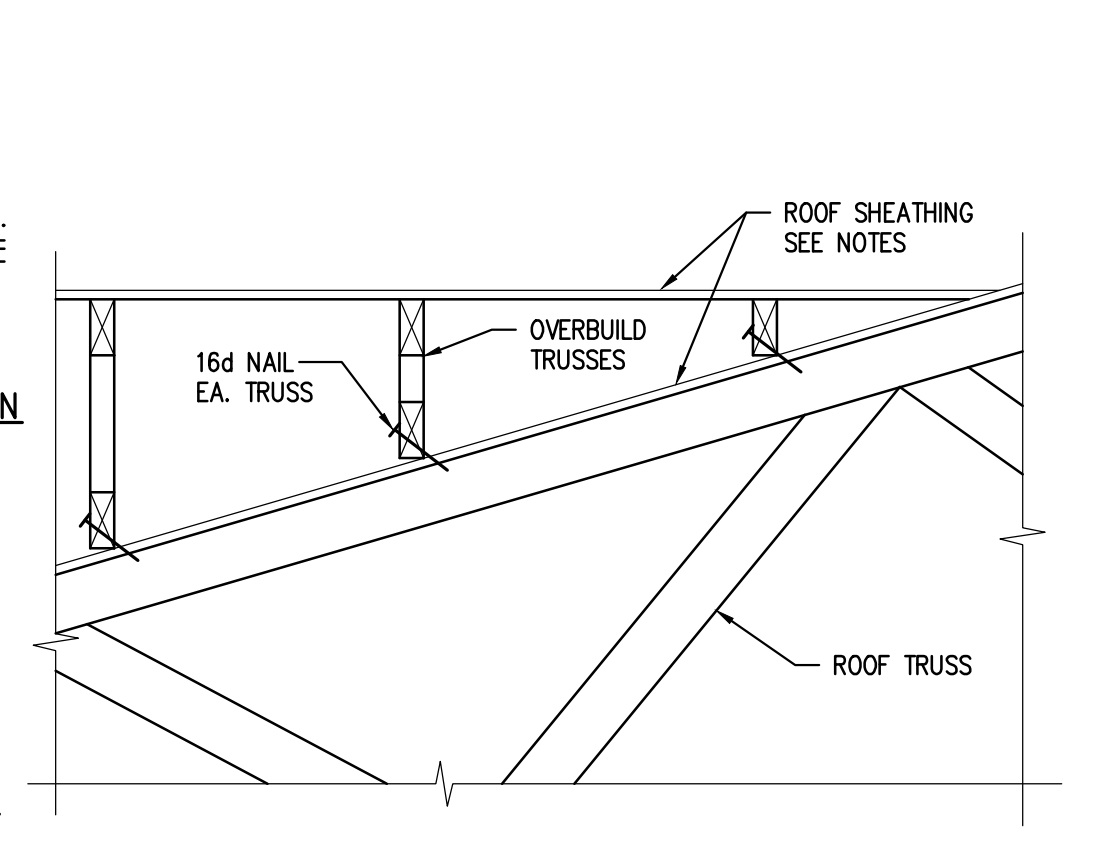
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REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

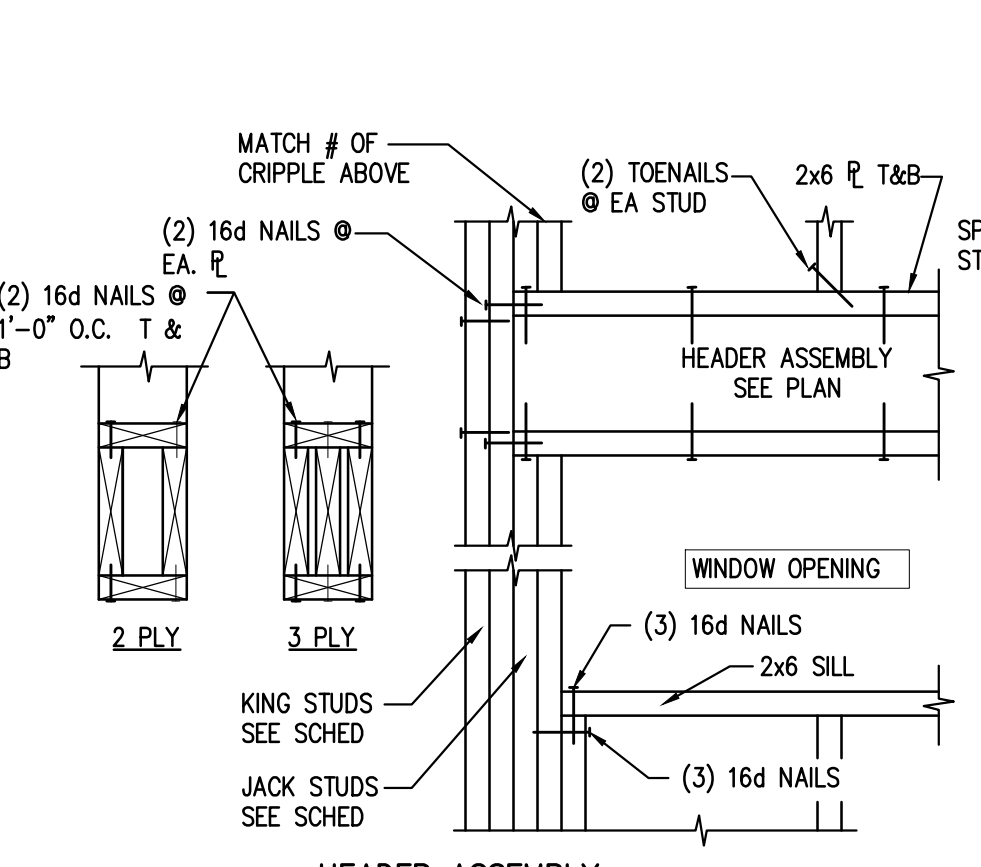
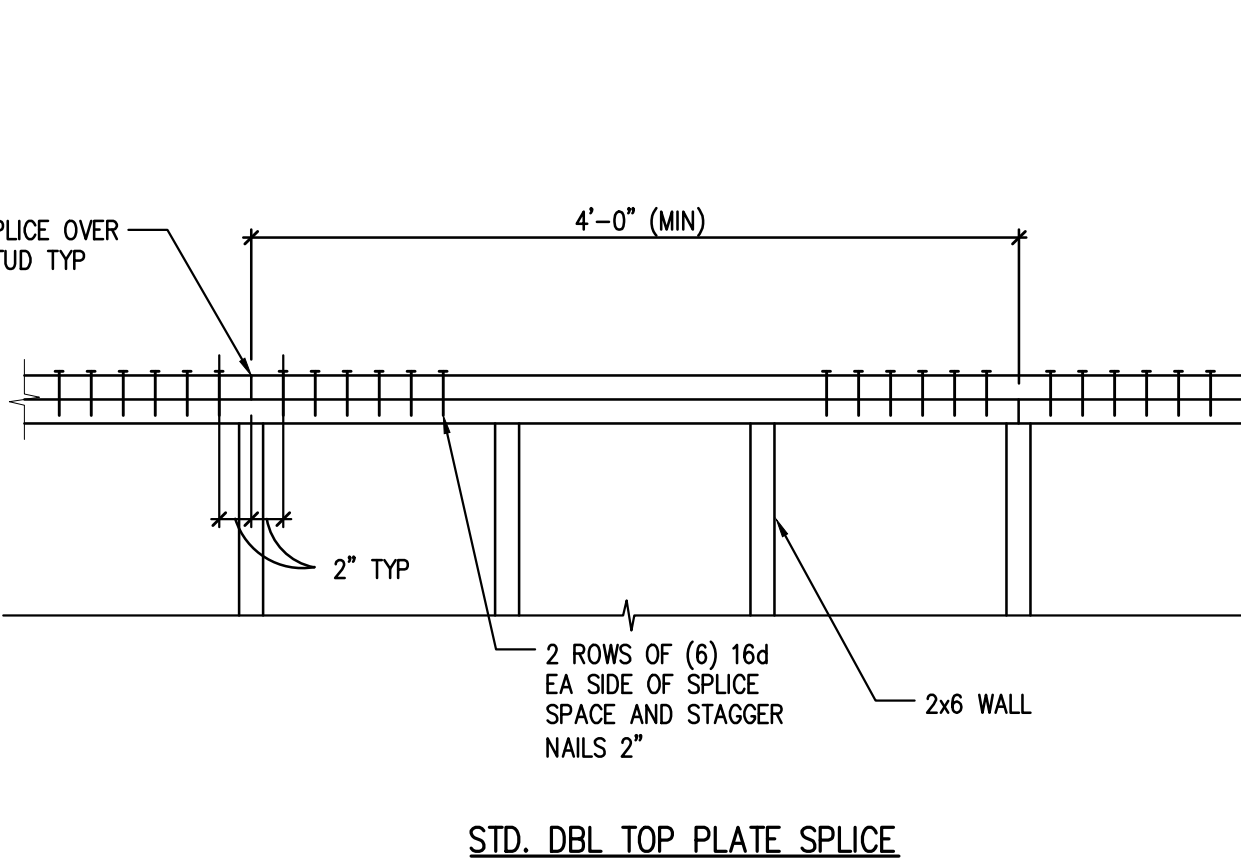
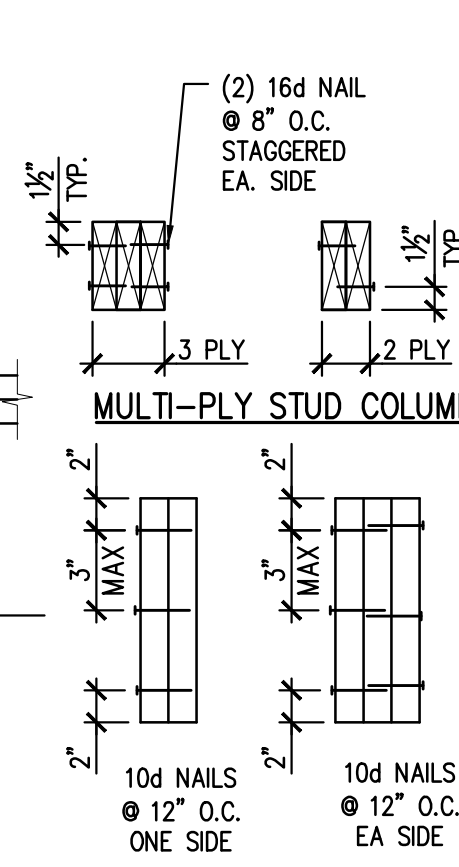
PROFESSIONAL ENGINEER  
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
Print Name: Kurt Sandman  
Signature: *[Signature]*  
Date: 12/04/2017 License #: 43486



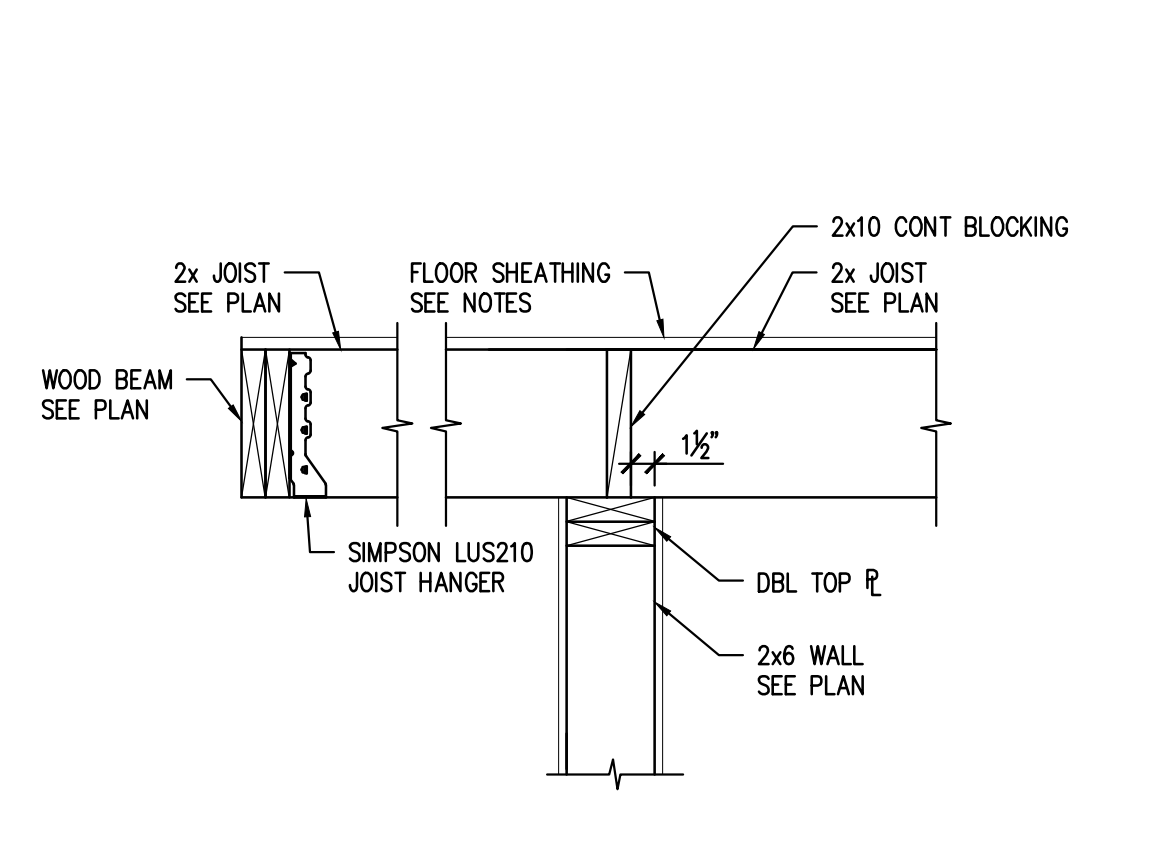
**FRAMING DETAIL** 1" = 1'-0"



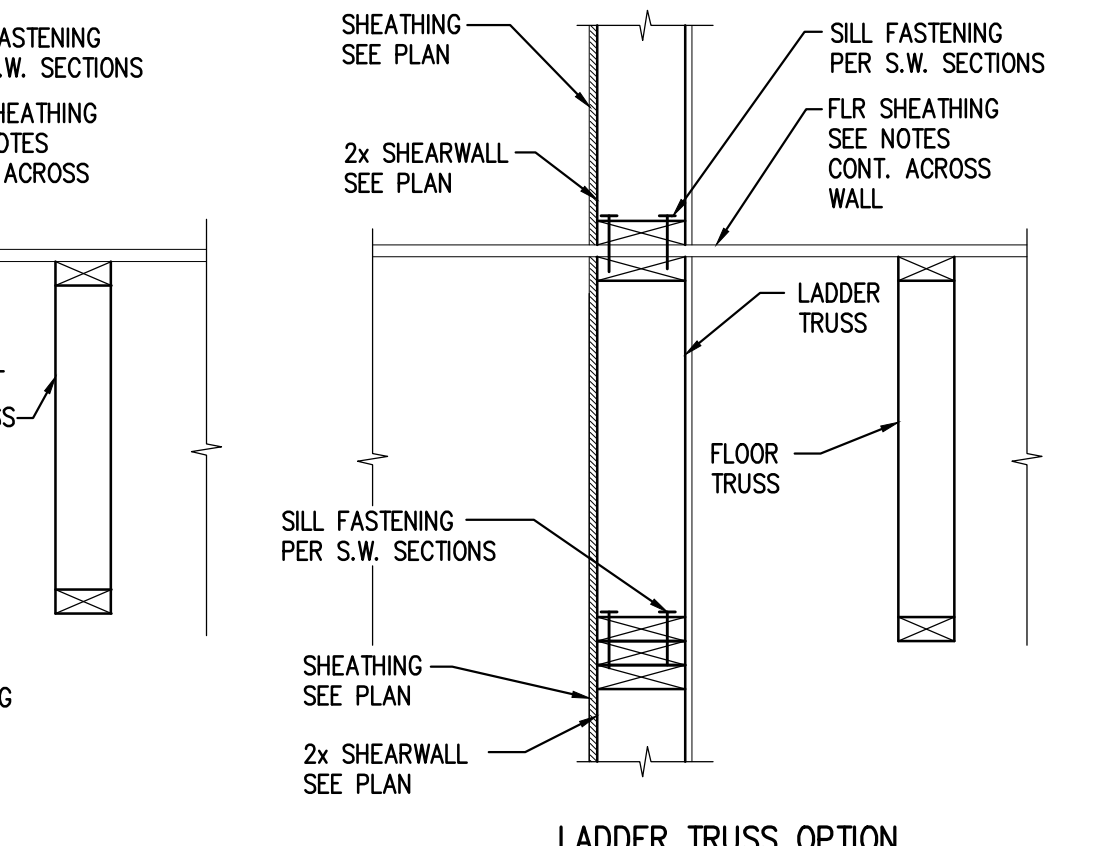
**FRAMING DETAIL** 1" = 1'-0"



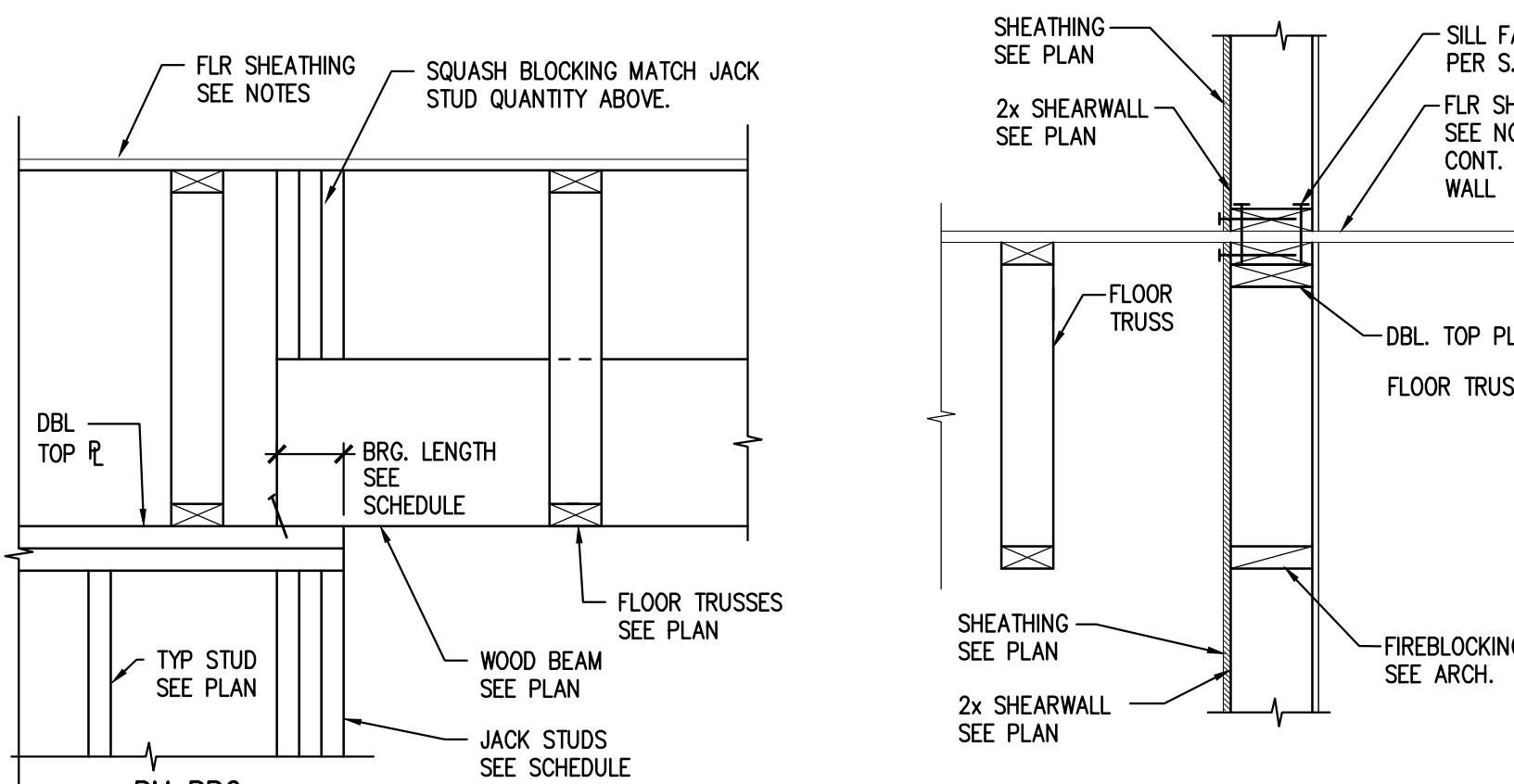
**STANDARD HEADER WOOD & STEEL FRAMING DETAILS** 1" = 1'-0"



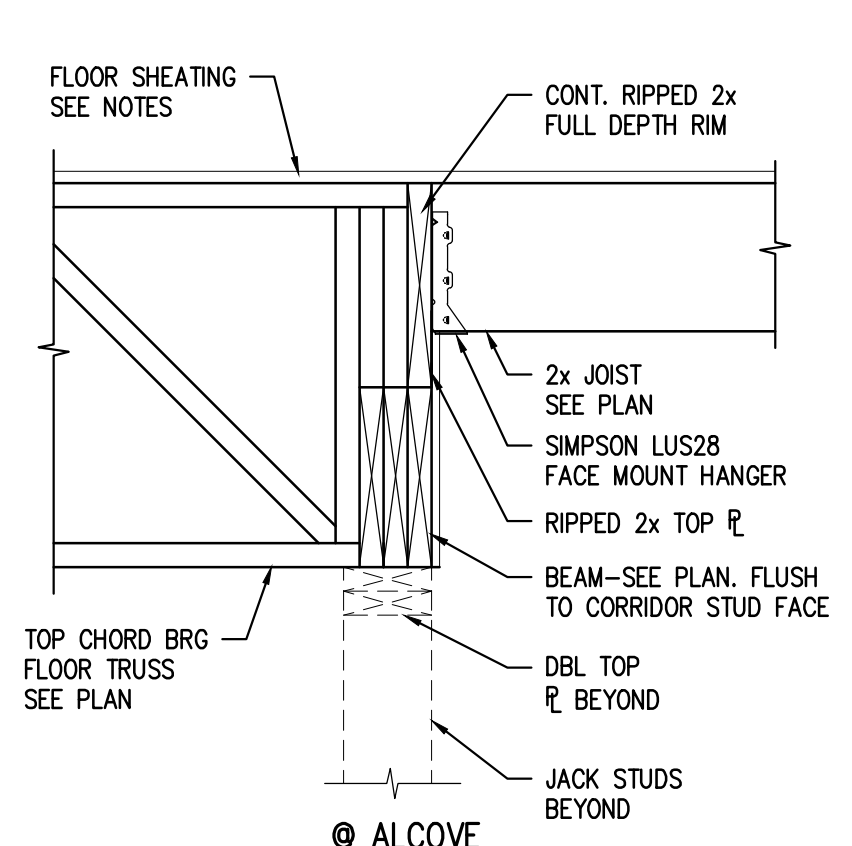
**JOIST BEARING** 1" = 1'-0"



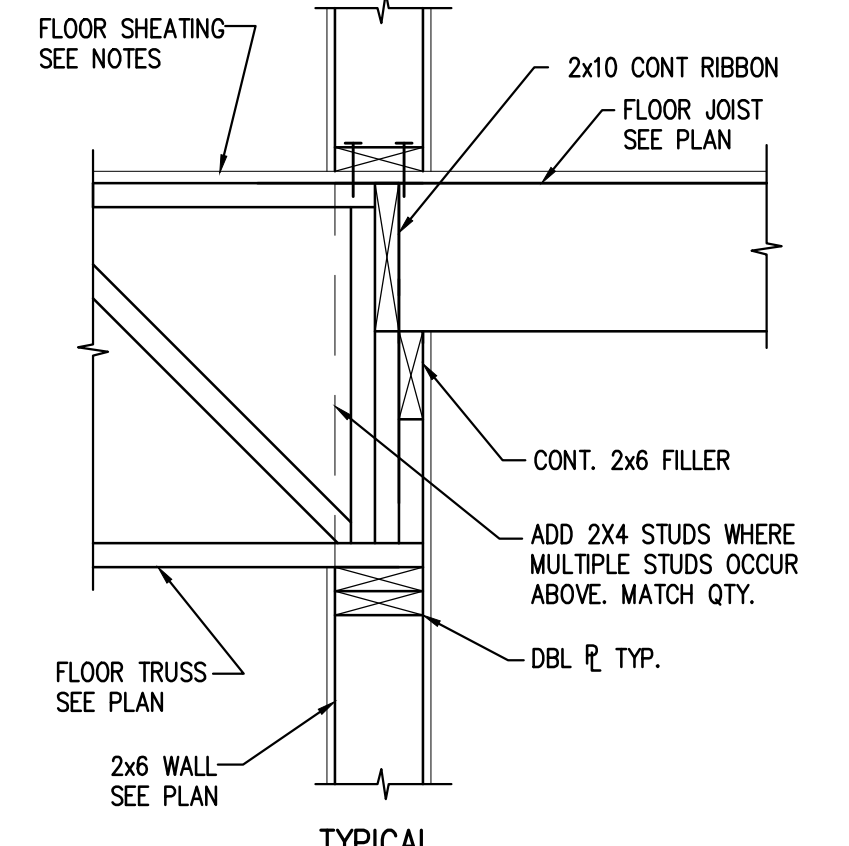
**FRAMING DETAIL** 1" = 1'-0"



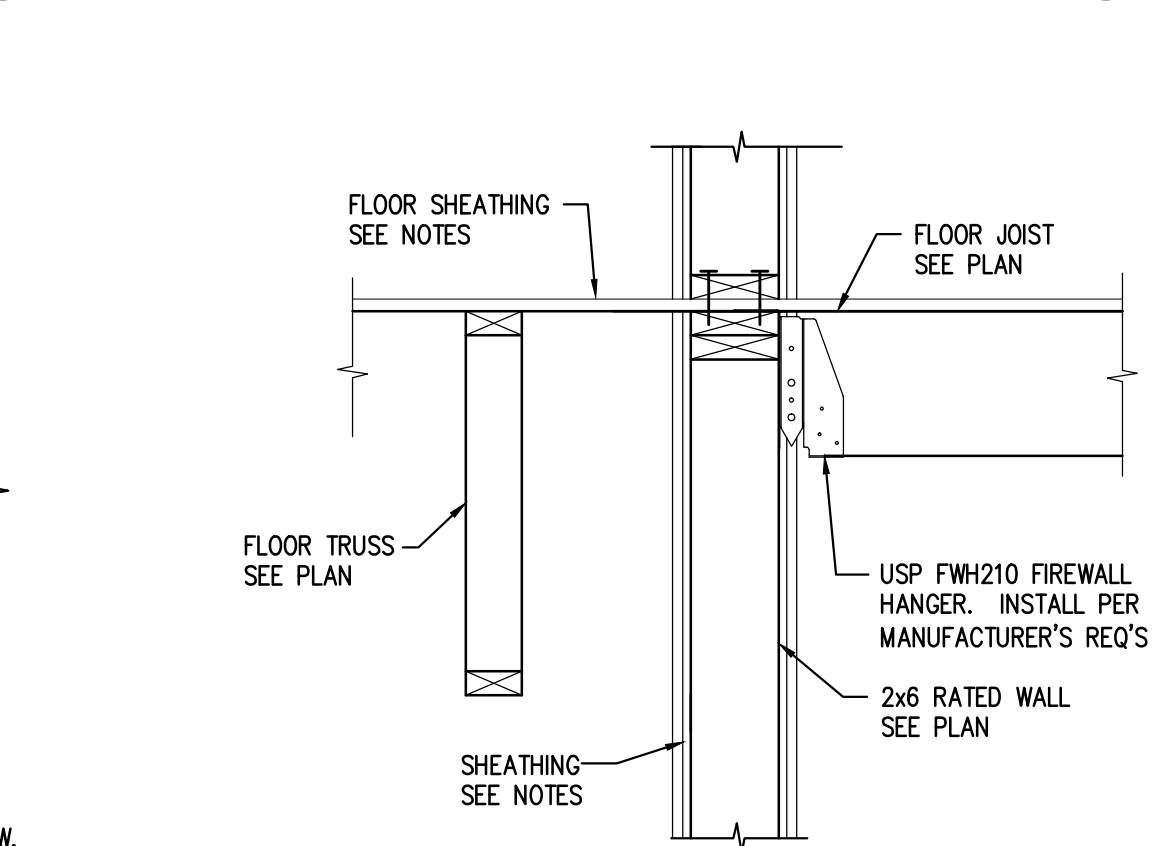
**FRAMING DETAIL** 1" = 1'-0"



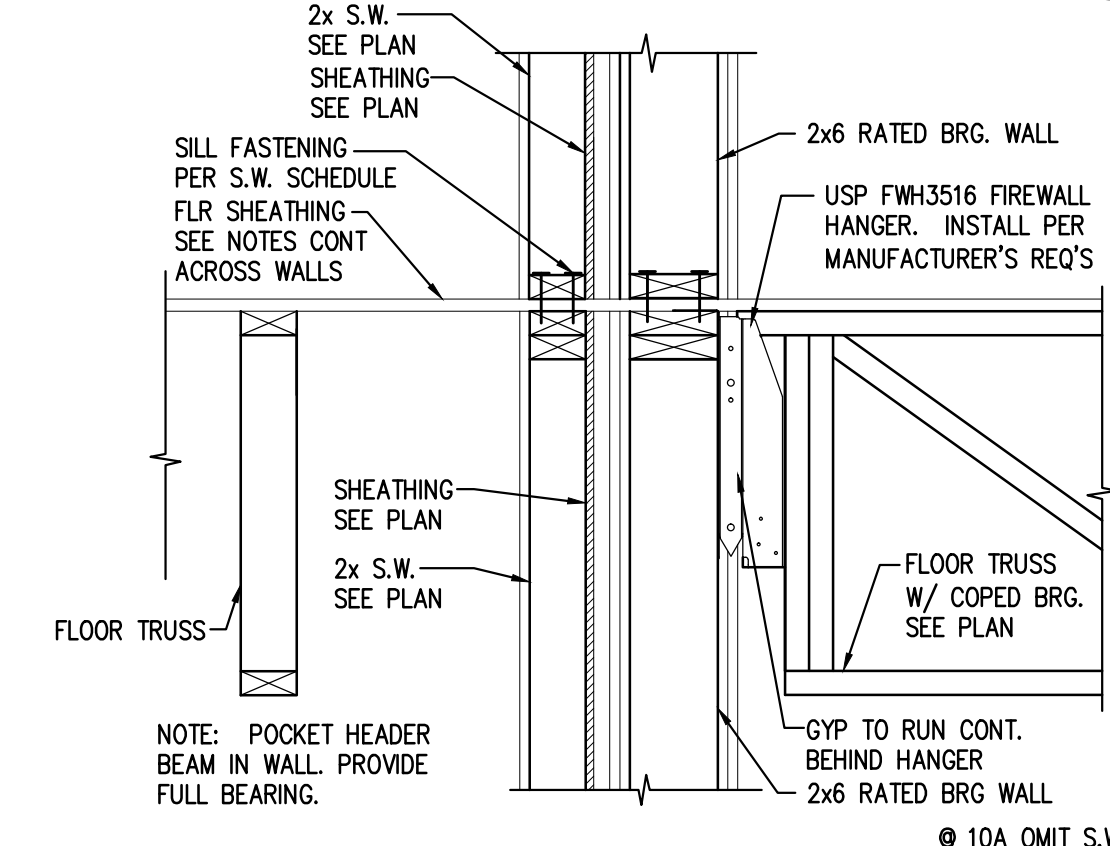
**FRAMING DETAIL** 1" = 1'-0"



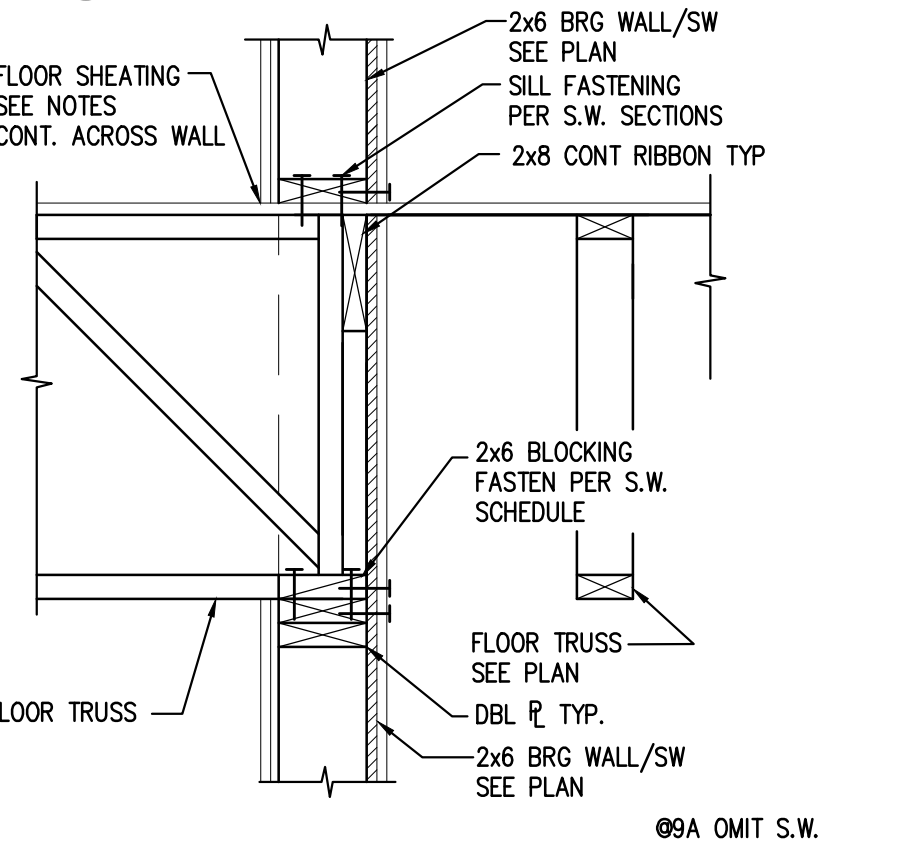
**FRAMING DETAIL** 1" = 1'-0"



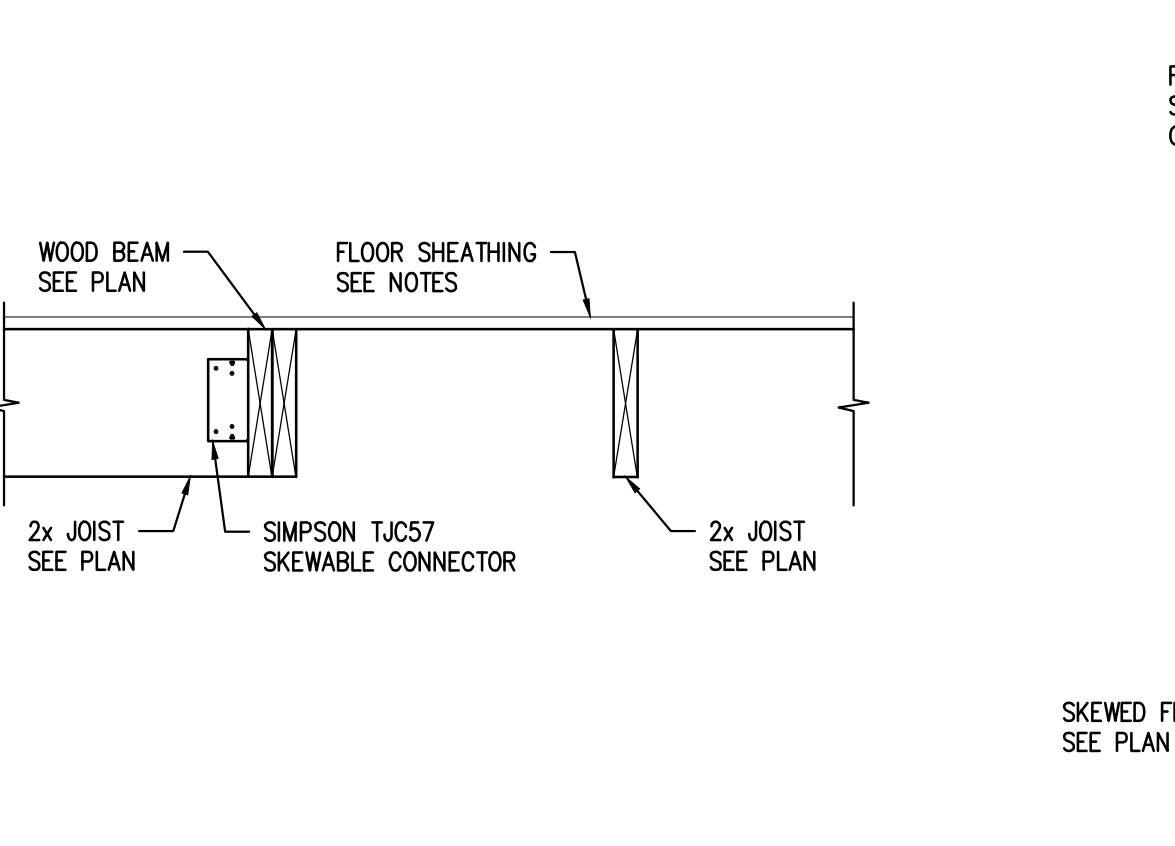
**JOIST BEARING** 1" = 1'-0"



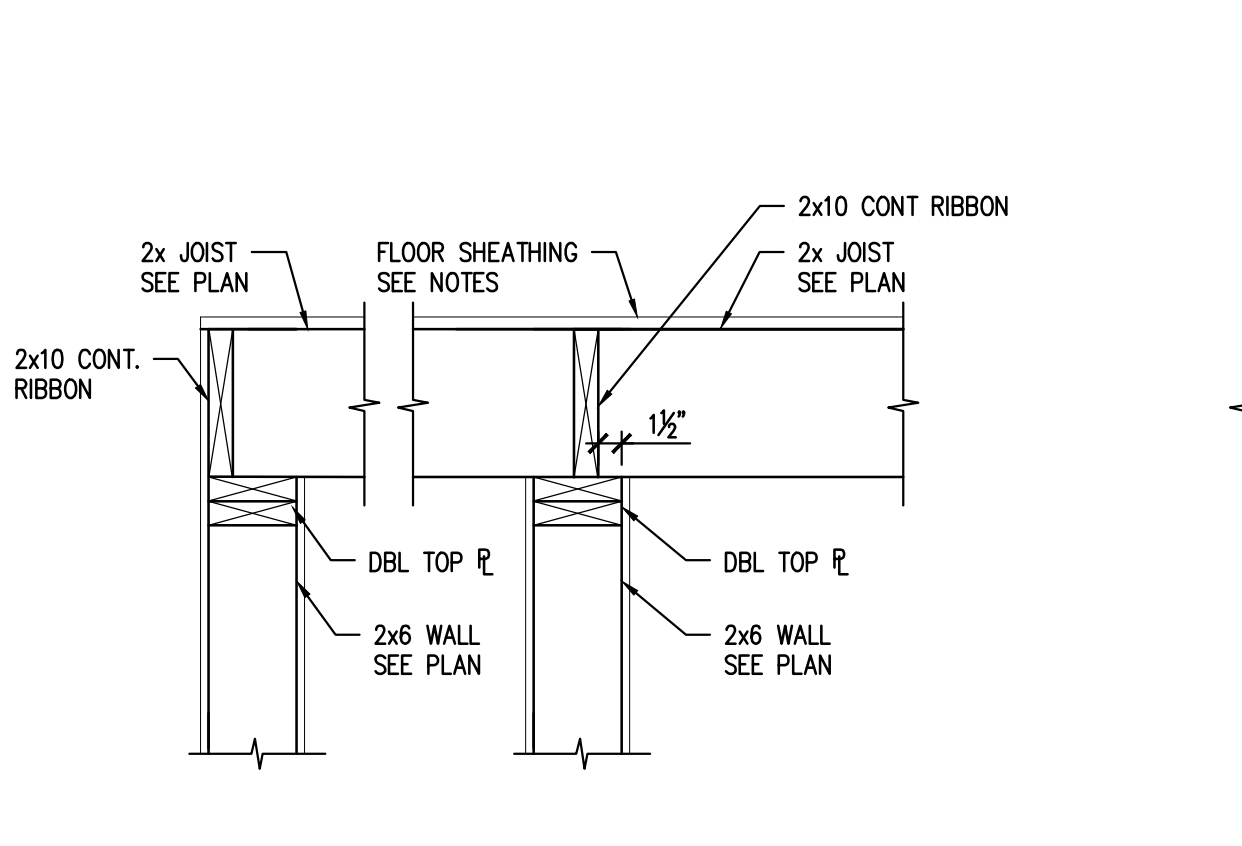
**TRUSS BEARING** 1" = 1'-0"



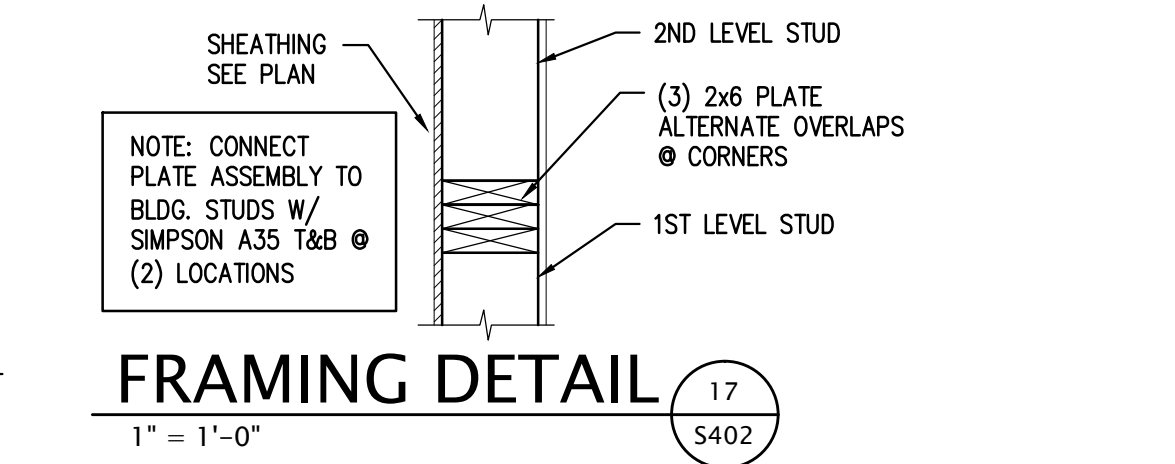
**FRAMING DETAIL** 1" = 1'-0"



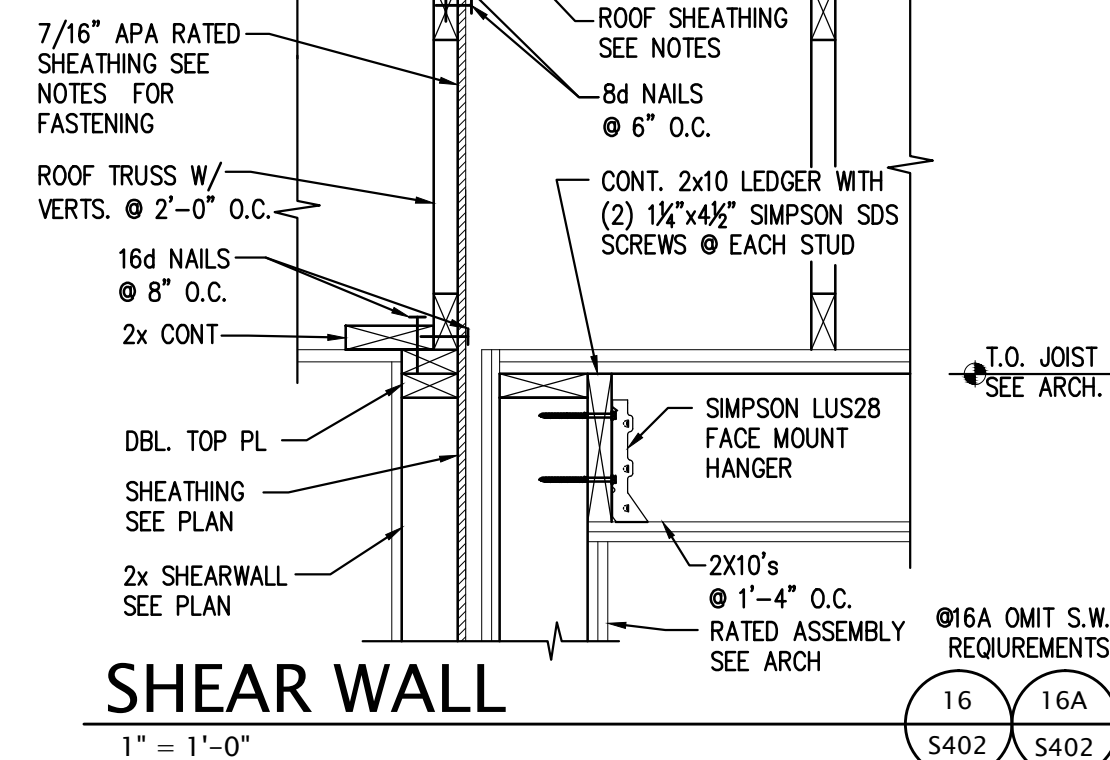
**JOIST BEARING** 1" = 1'-0"



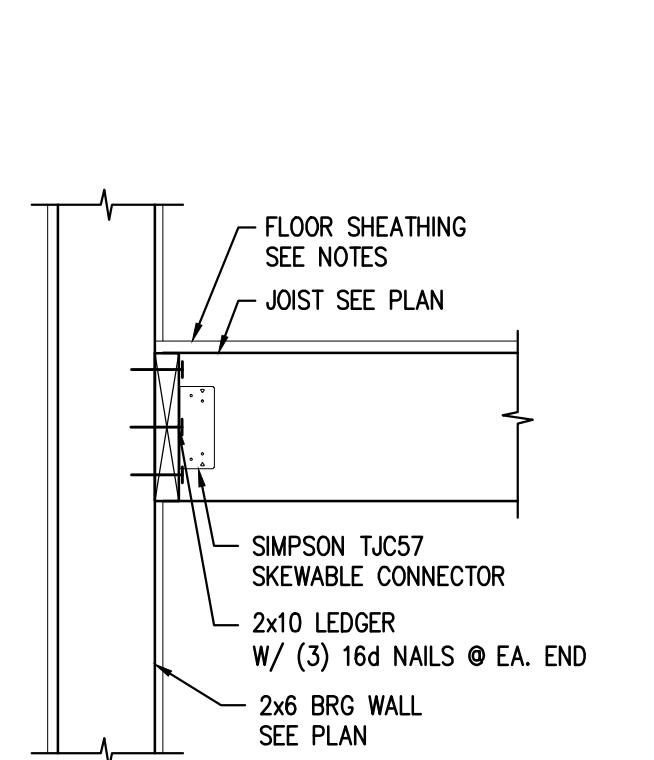
**JOIST BEARING** 1" = 1'-0"



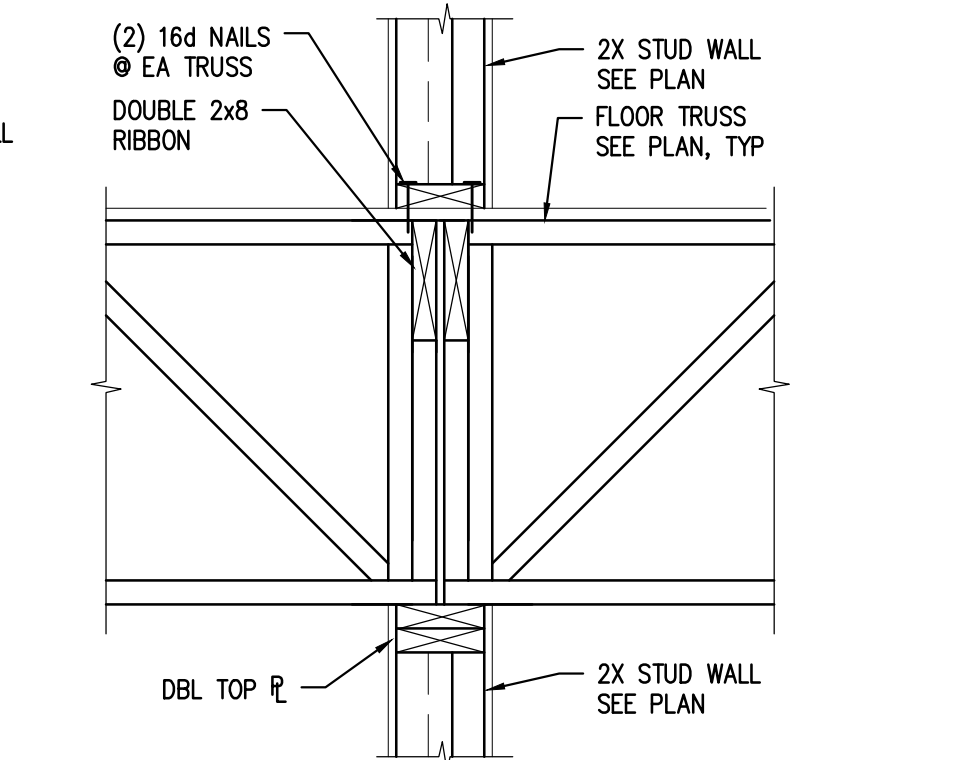
**FRAMING DETAIL** 1" = 1'-0"



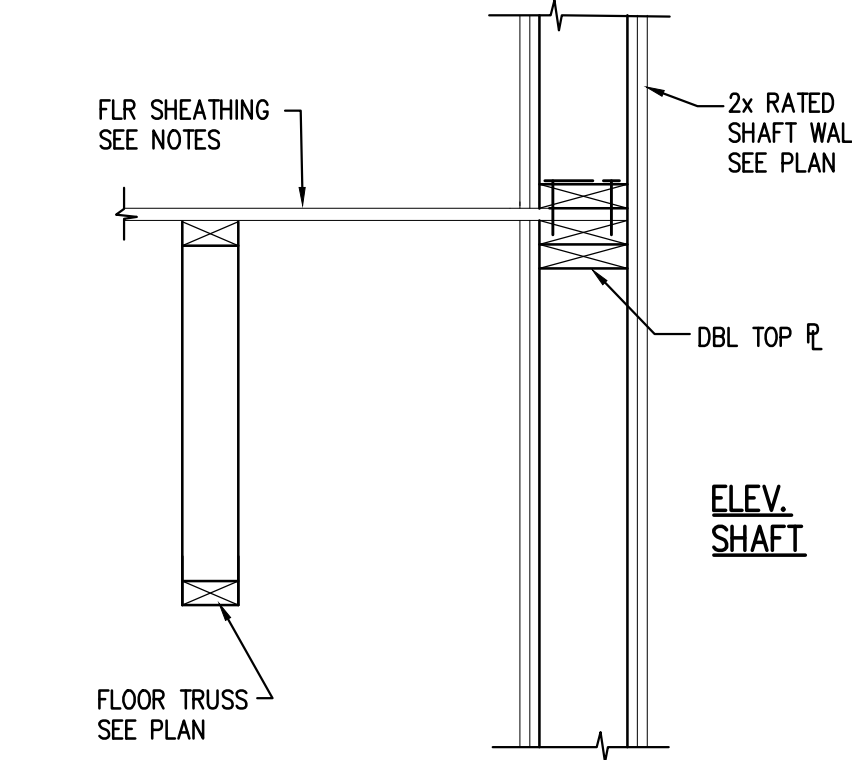
**SHEAR WALL** 1" = 1'-0"



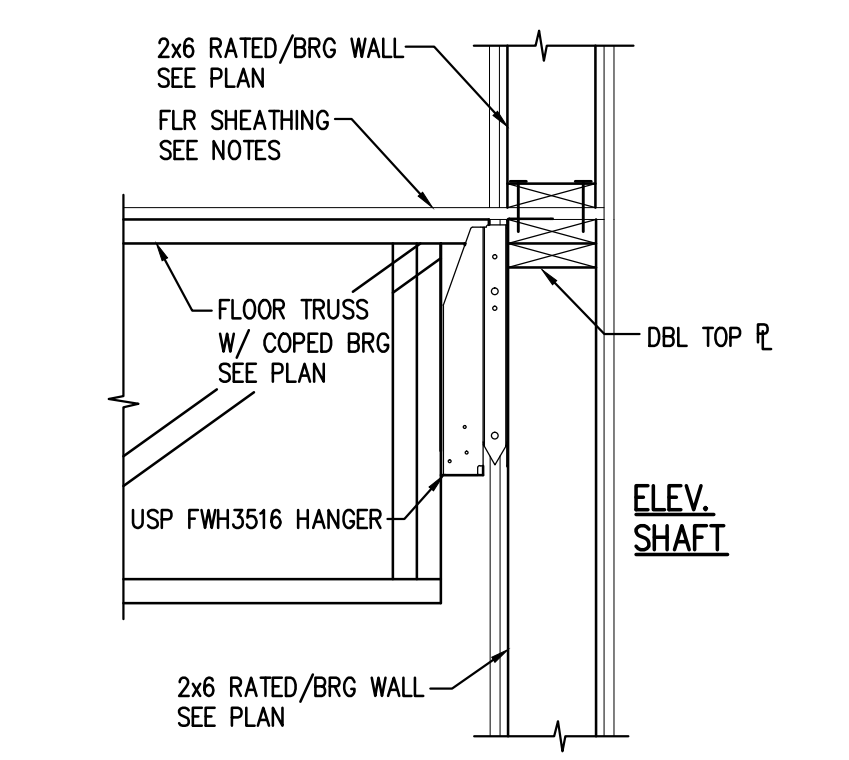
**FRAMING DETAIL** 1" = 1'-0"



**DETAIL TITLE** 1" = 1'-0"



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



**TRUSS BEARING** 1" = 1'-0"

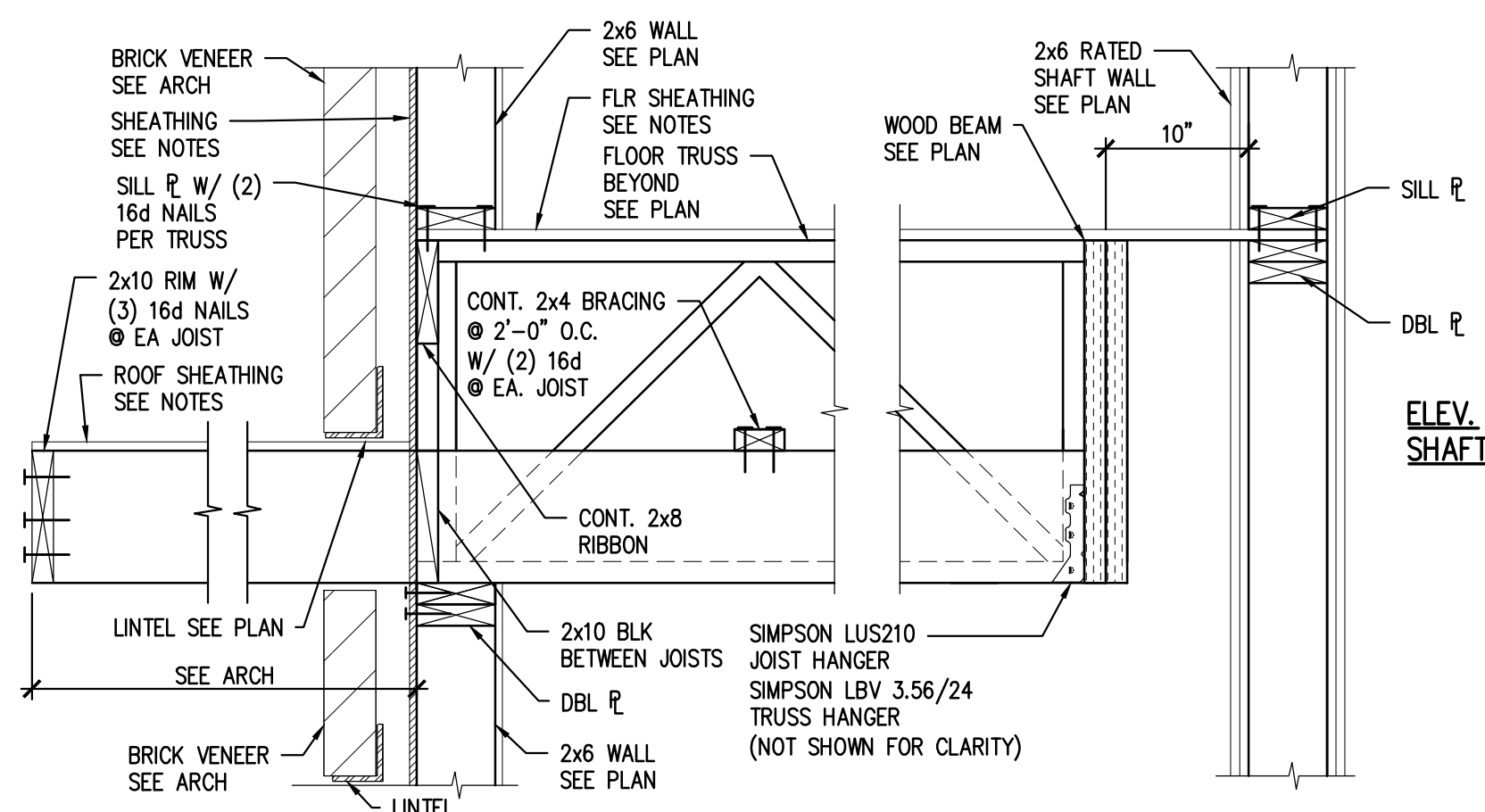
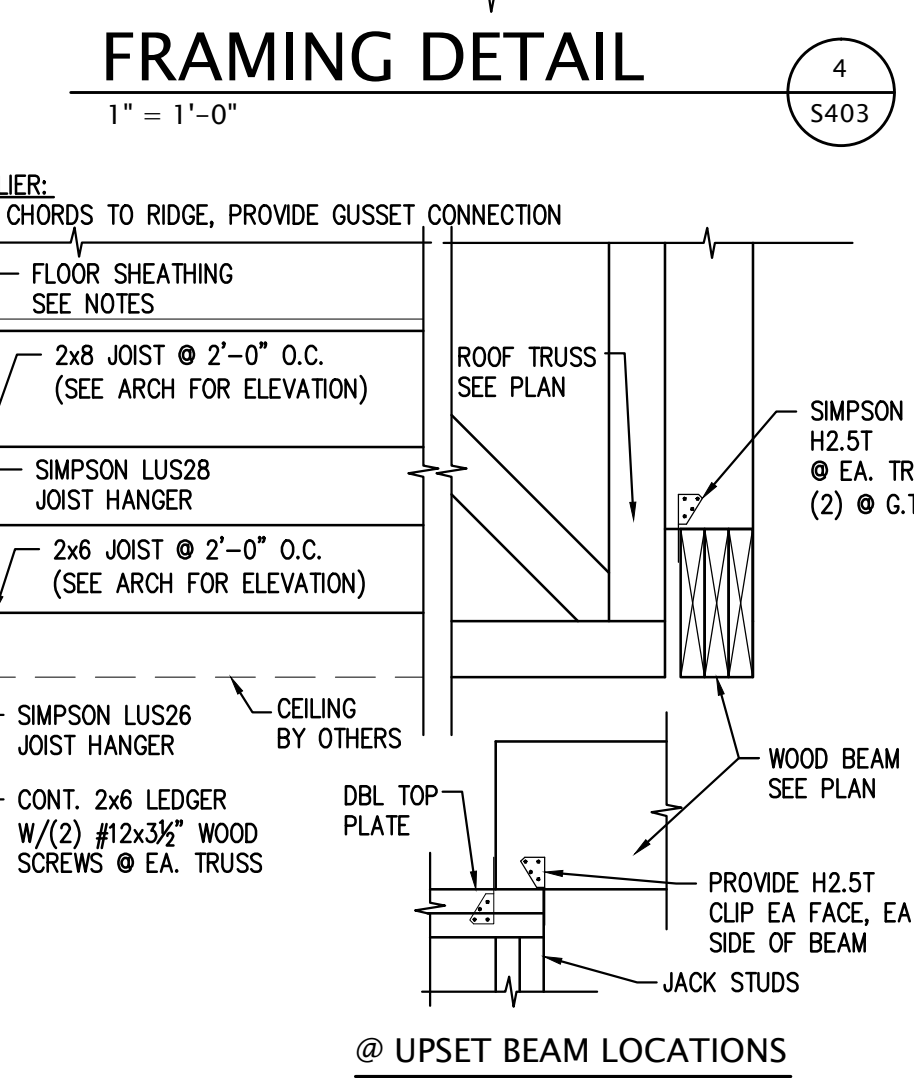
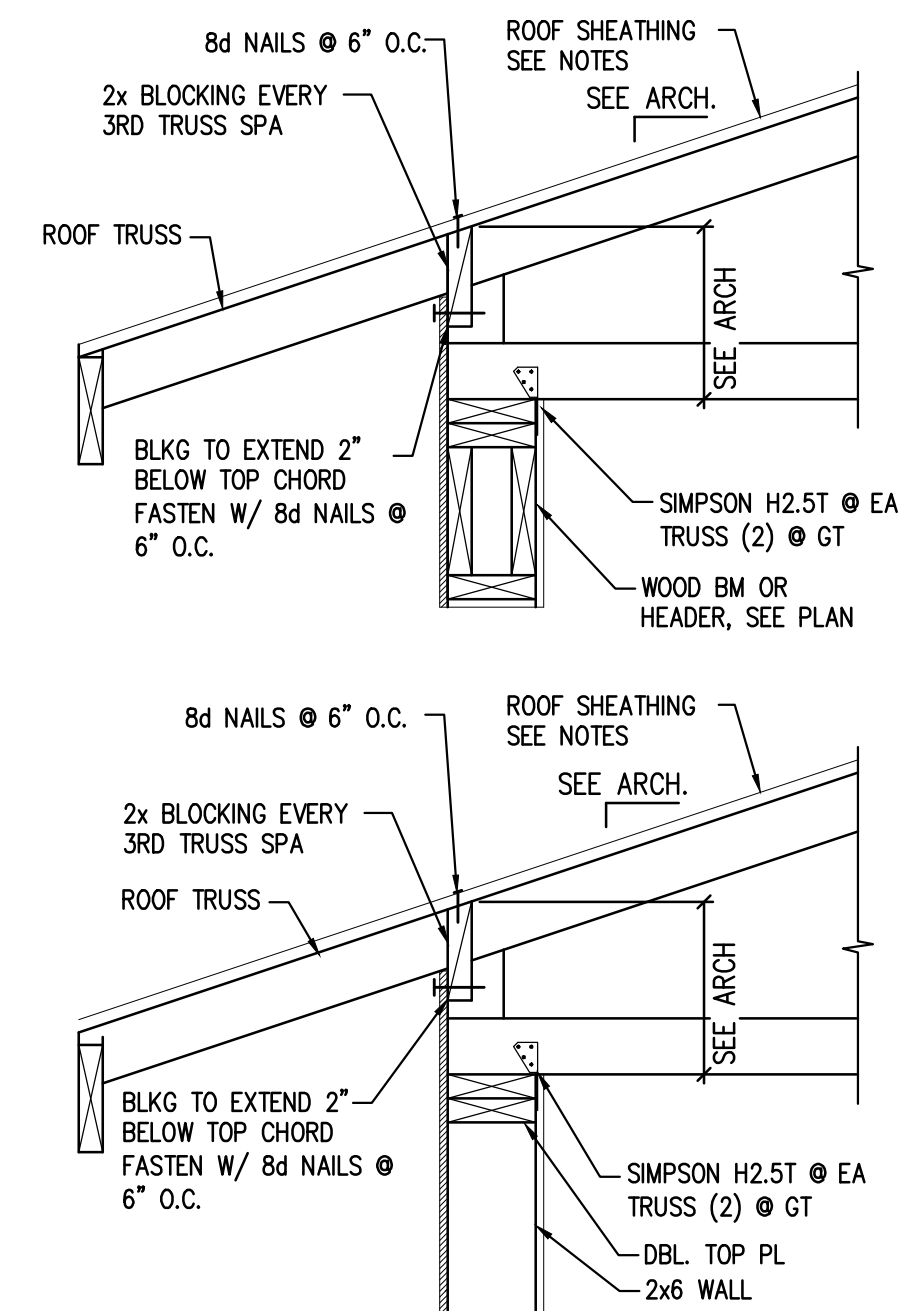


12/4/2017 9:39 AM

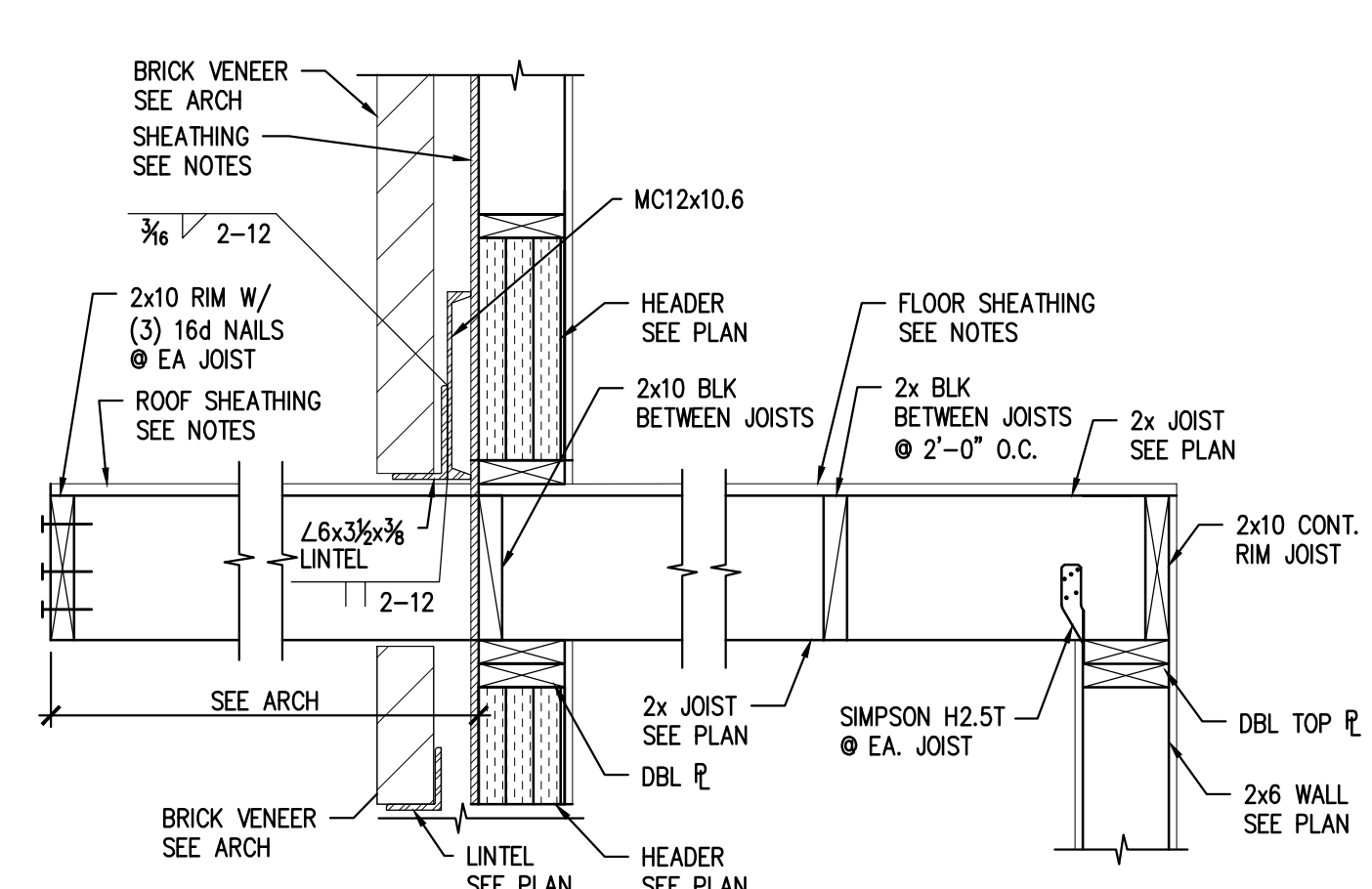
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

DATE	12/04/17
PHASE	100% CDs
PROJECT	16098
SHEET	<b>S403</b>
FRAMING DETAILS	

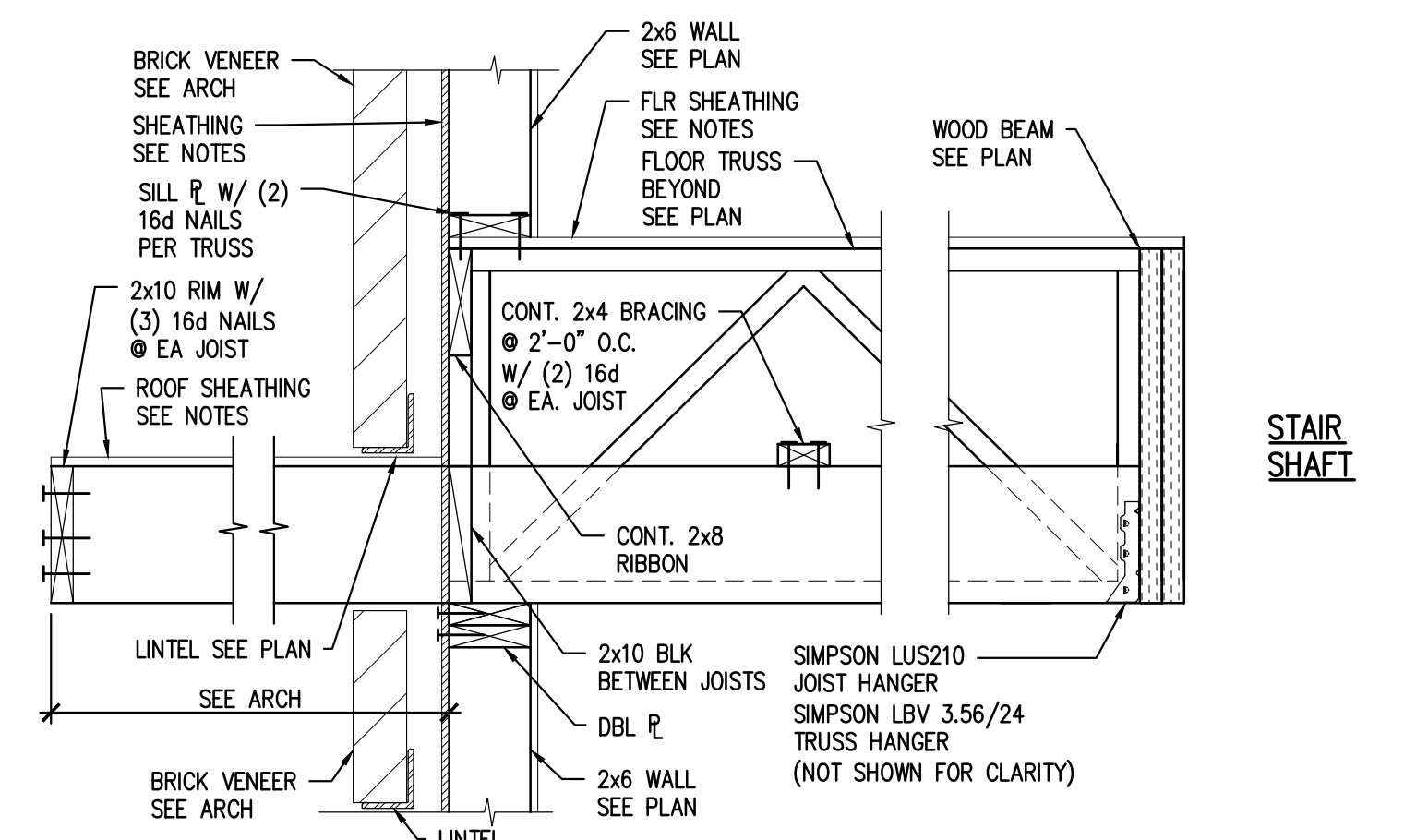
PROFESSIONAL ENGINEER  
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
Print Name: Kurt Sandman  
Signature: *[Signature]*  
Date: 12/04/2017 License #: 43486



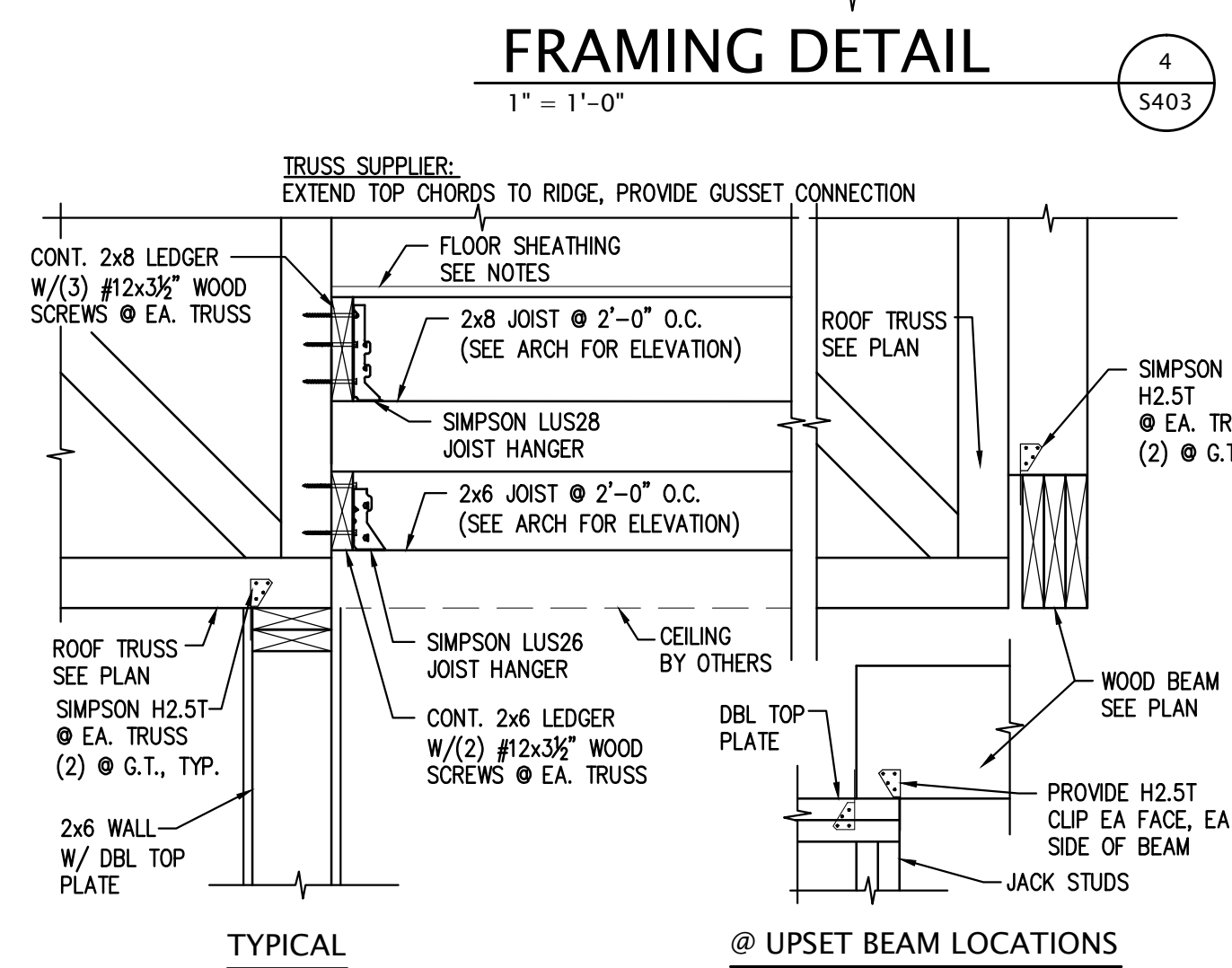
**CANOPY FRAMING**  
1" = 1'-0"  
S403



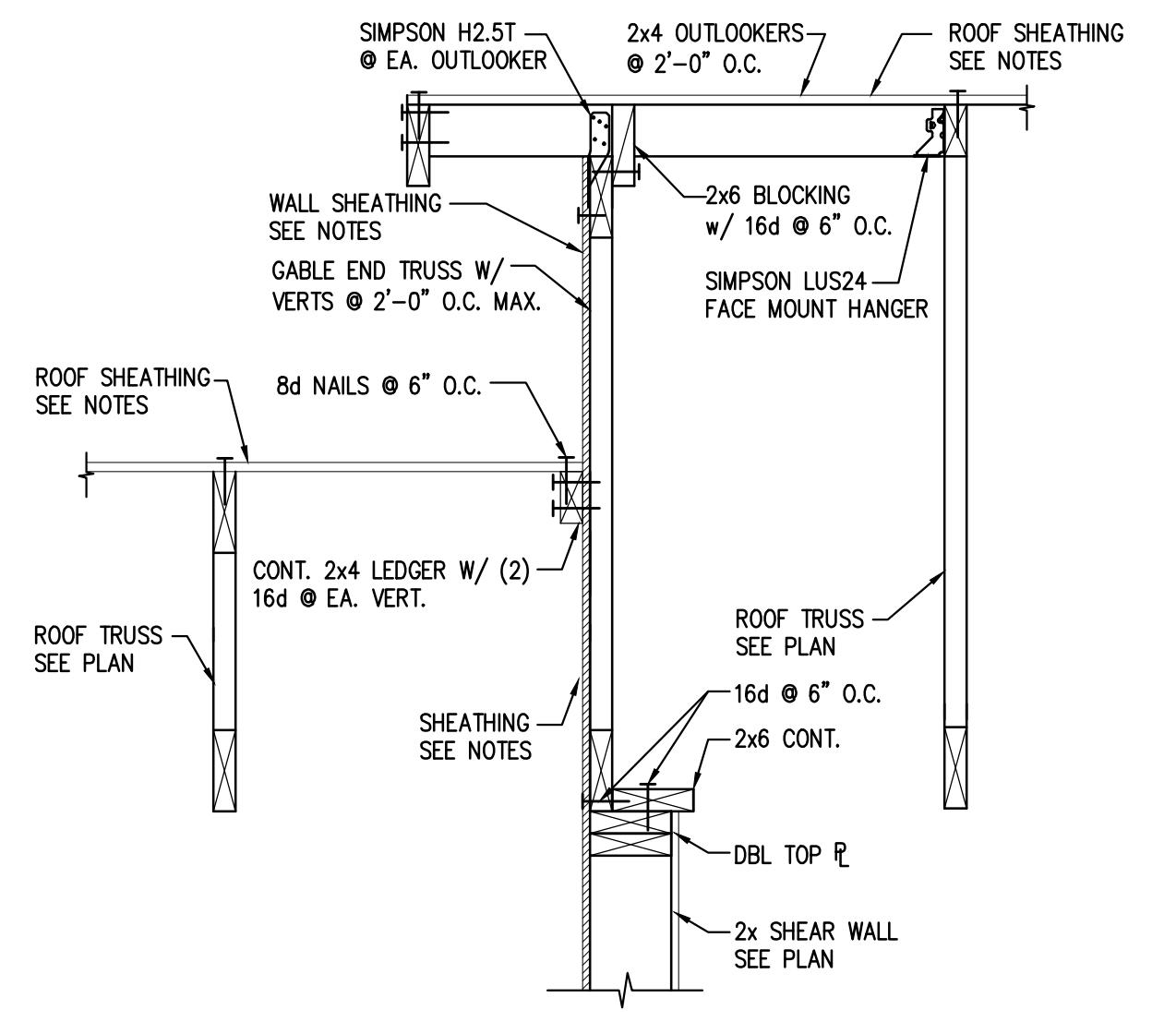
**CANOPY FRAMING**  
1" = 1'-0"  
S403



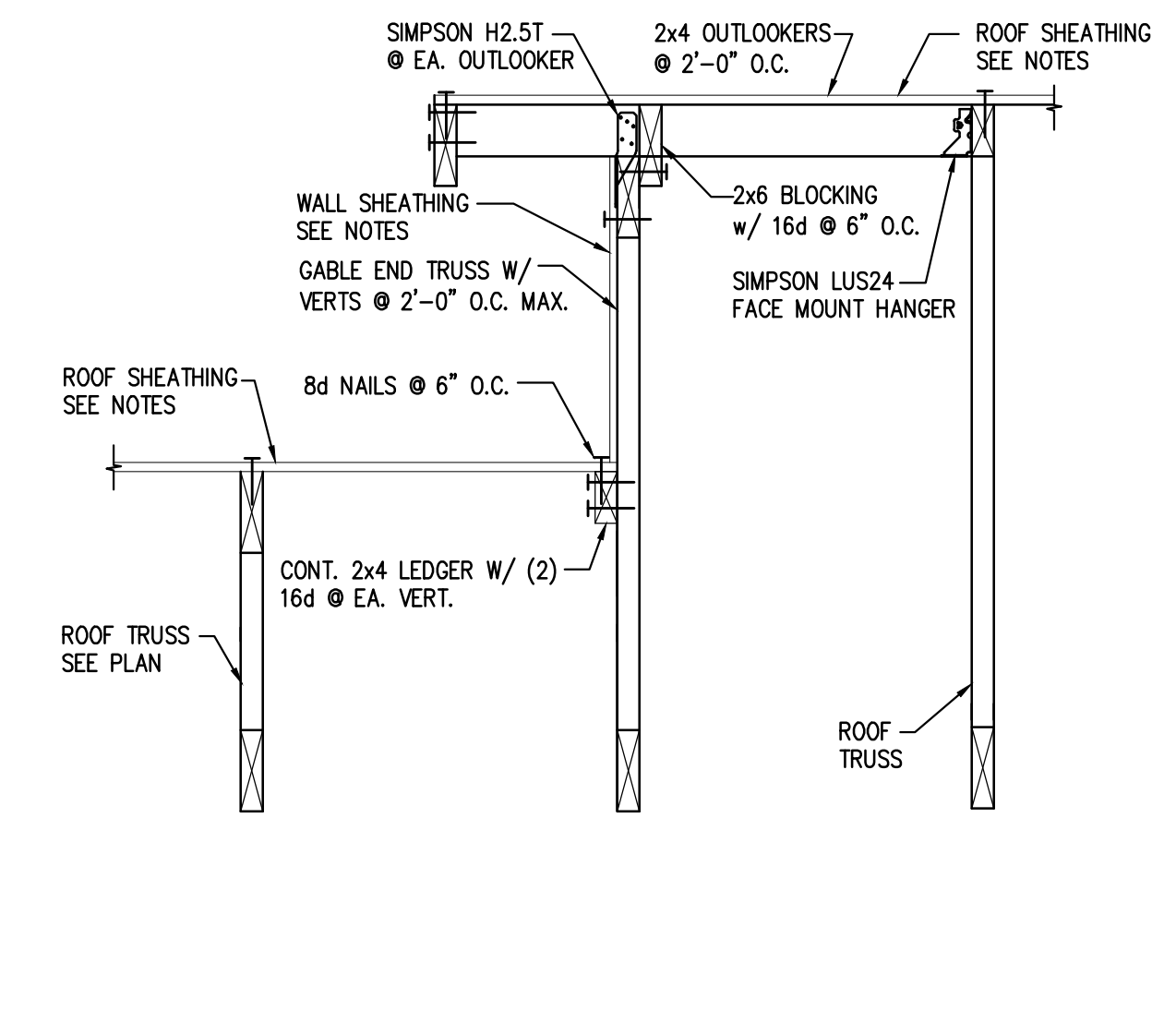
**CANOPY FRAMING**  
1" = 1'-0"  
S403



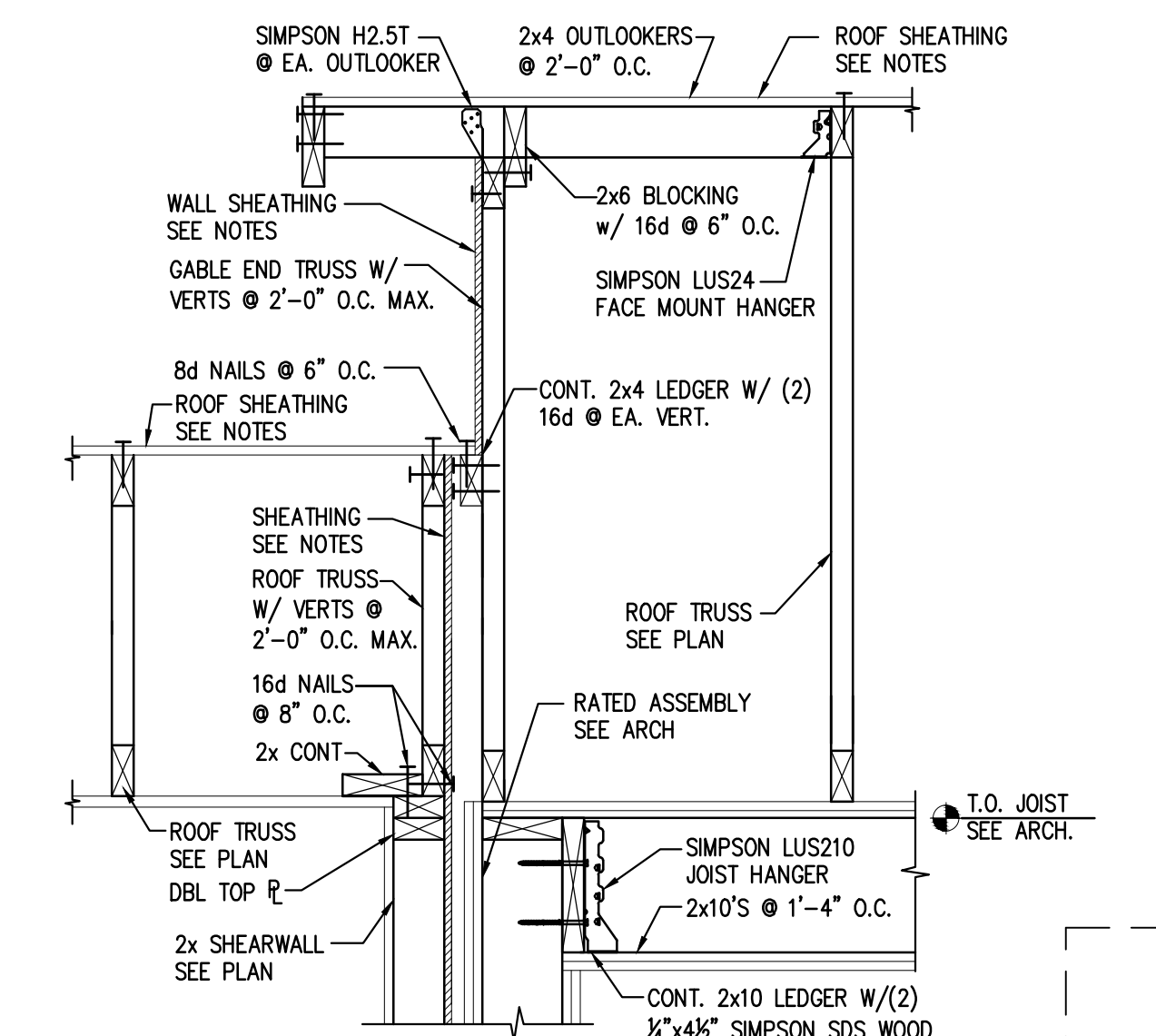
**FRAMING DETAIL**  
1" = 1'-0"  
S403



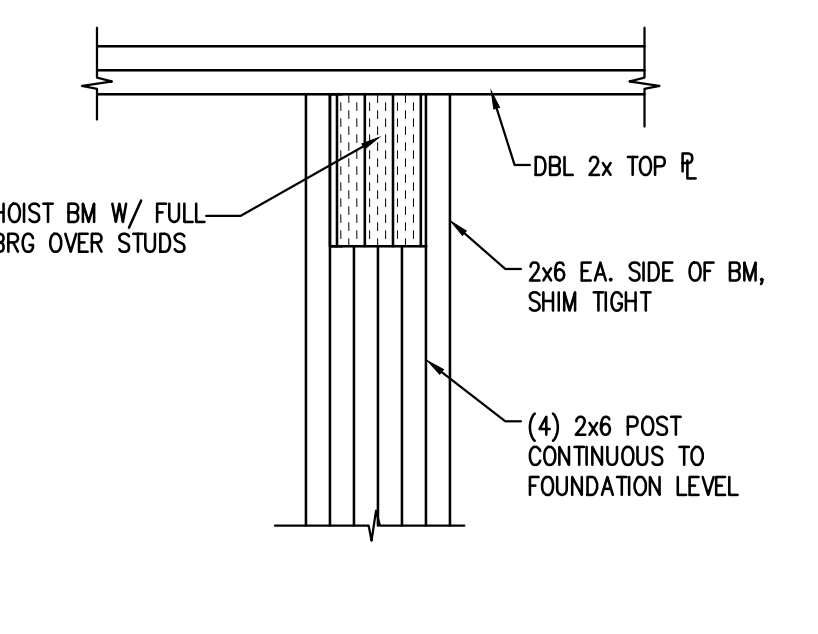
**ROOF STEP DETAIL**  
1" = 1'-0"  
S403



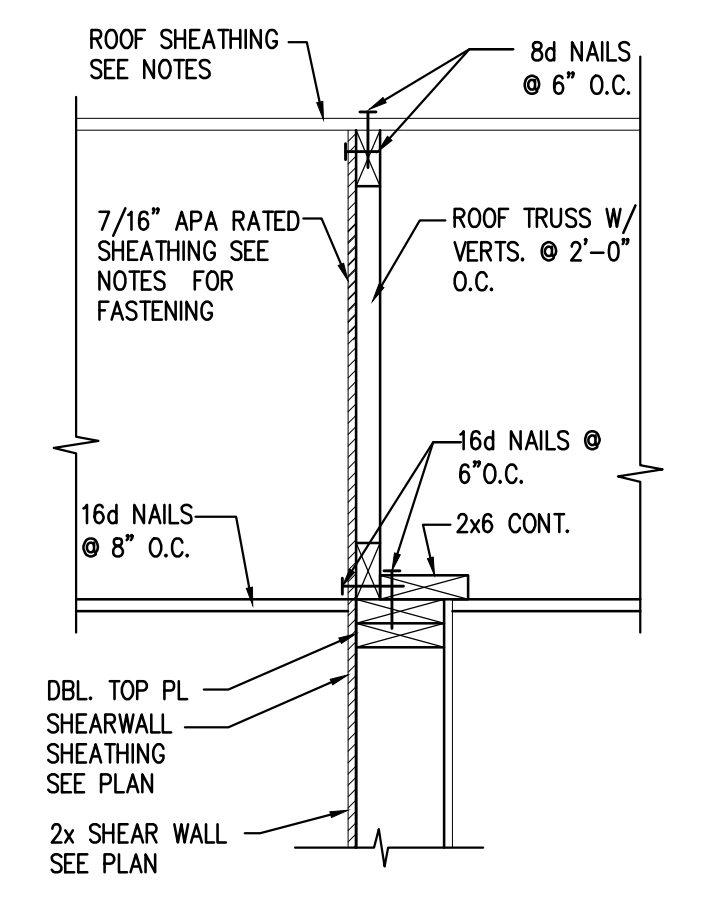
**ROOF STEP DETAIL**  
1" = 1'-0"  
S403



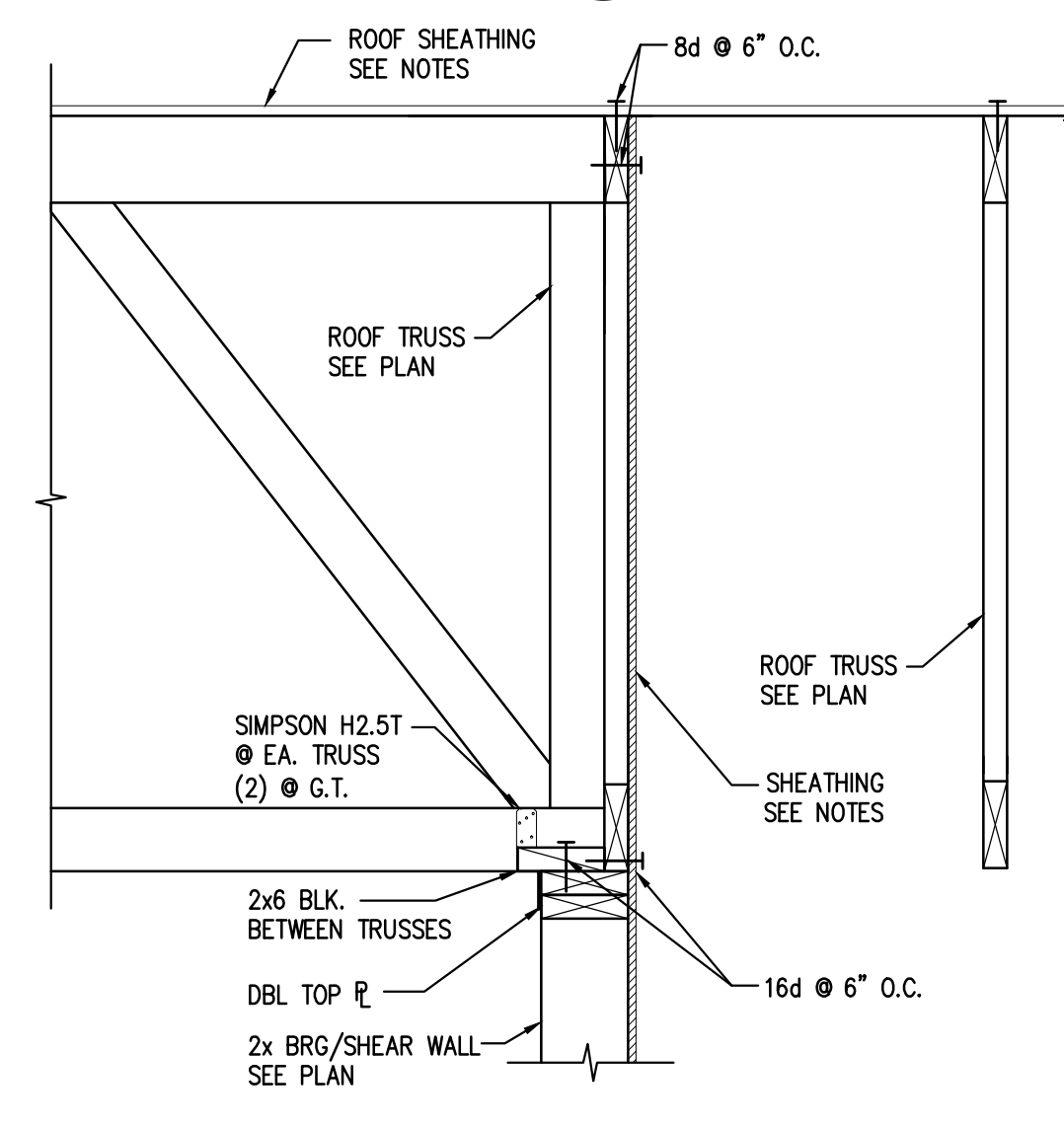
**ROOF STEP DETAIL**  
1" = 1'-0"  
S403



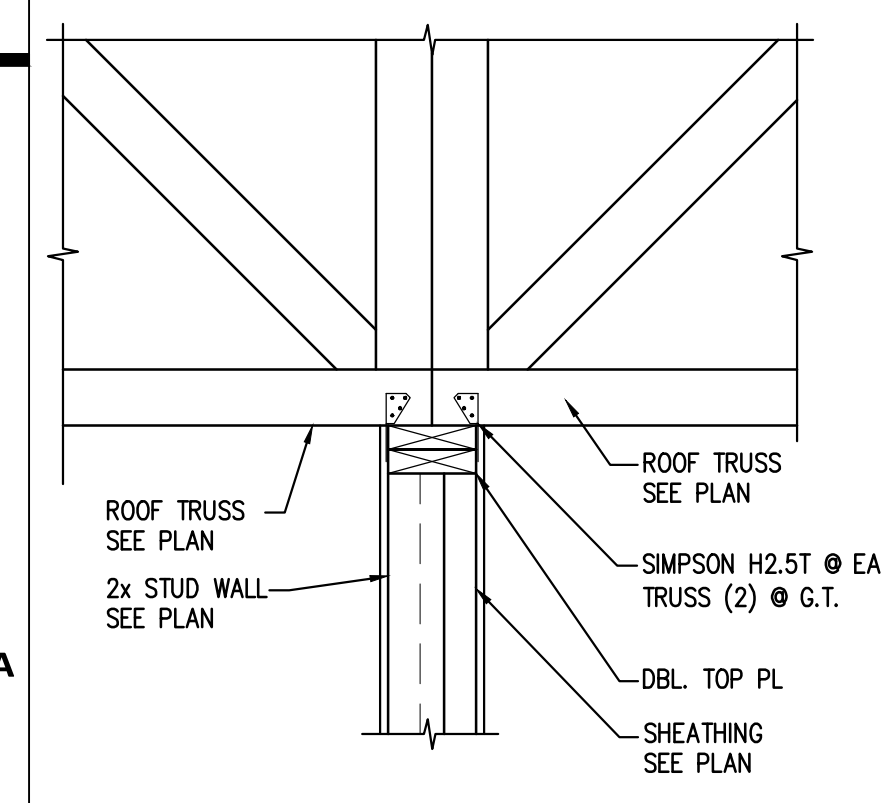
**HOIST BEAM BRG.**  
1" = 1'-0"  
S403



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



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



**TRUSS BEARING**  
1" = 1'-0"  
S403



12/4/2017 9:39 AM



REVISION SCHEDULE		
NO.	DESCRIPTION	DATE

DATE  
**12/04/17**

PHASE  
**100% CDs**

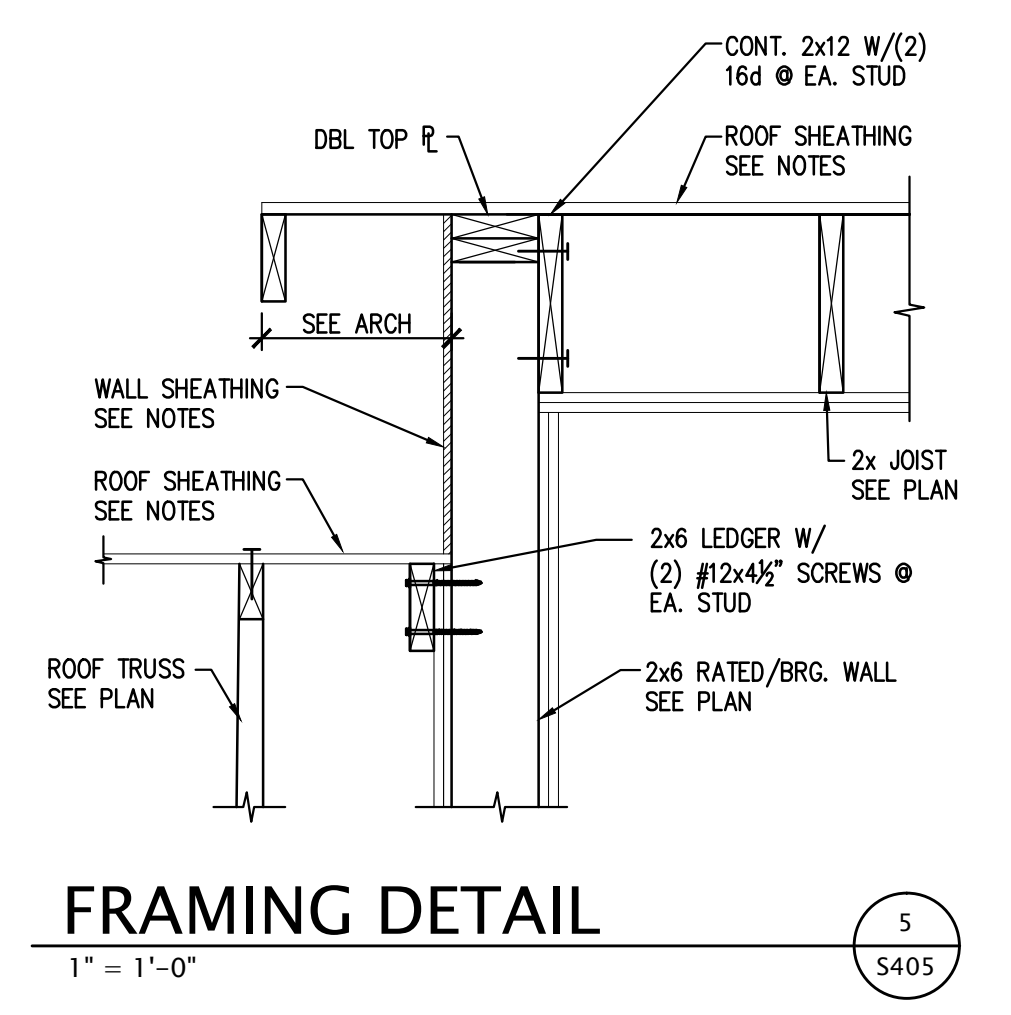
PROJECT  
**16098**

SHEET  
**S405**  
FRAMING DETAILS

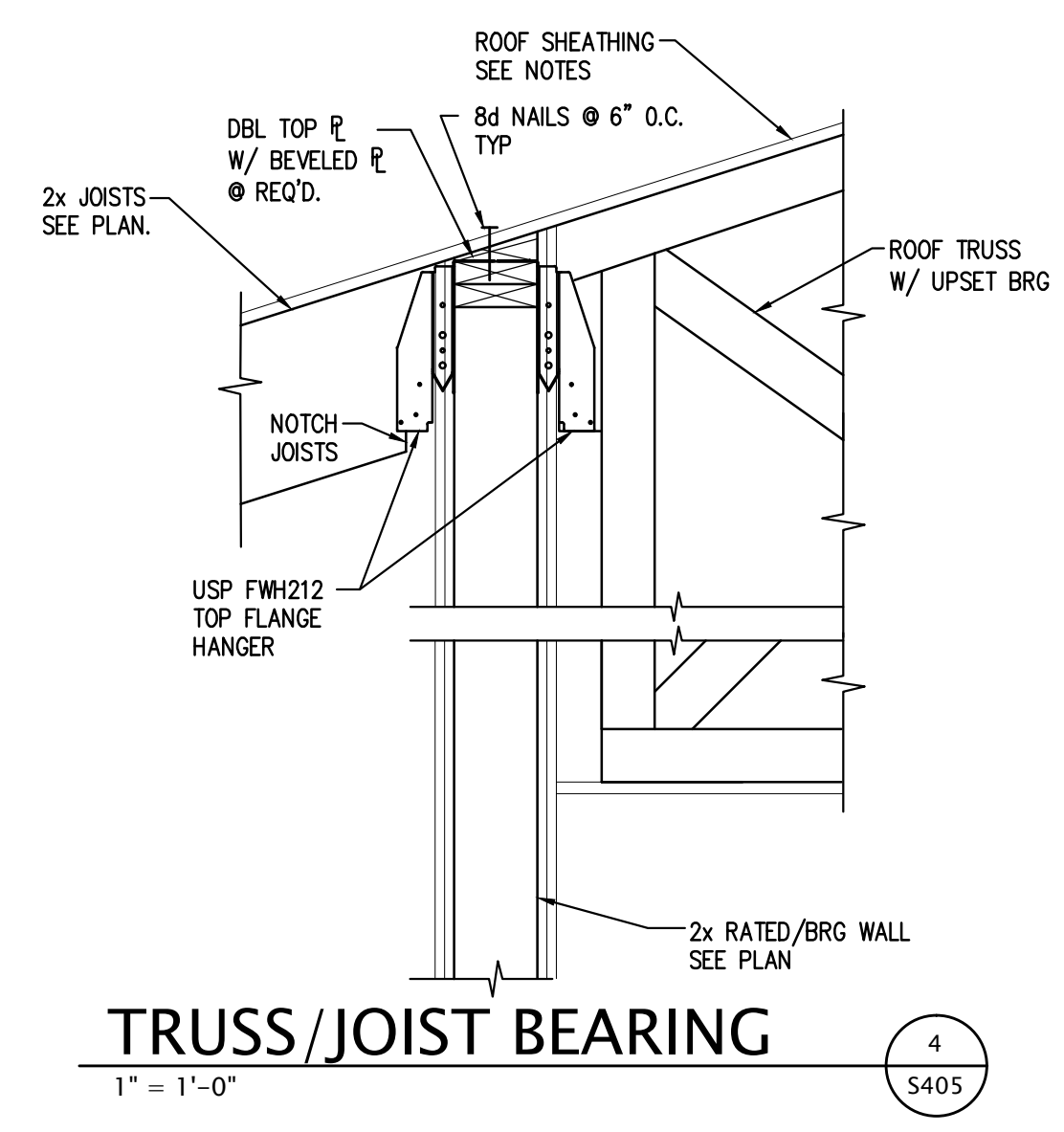
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Print Name: Kurt Sandman  
Signature: *[Signature]*  
Date: 12/04/2017 License #: 43486

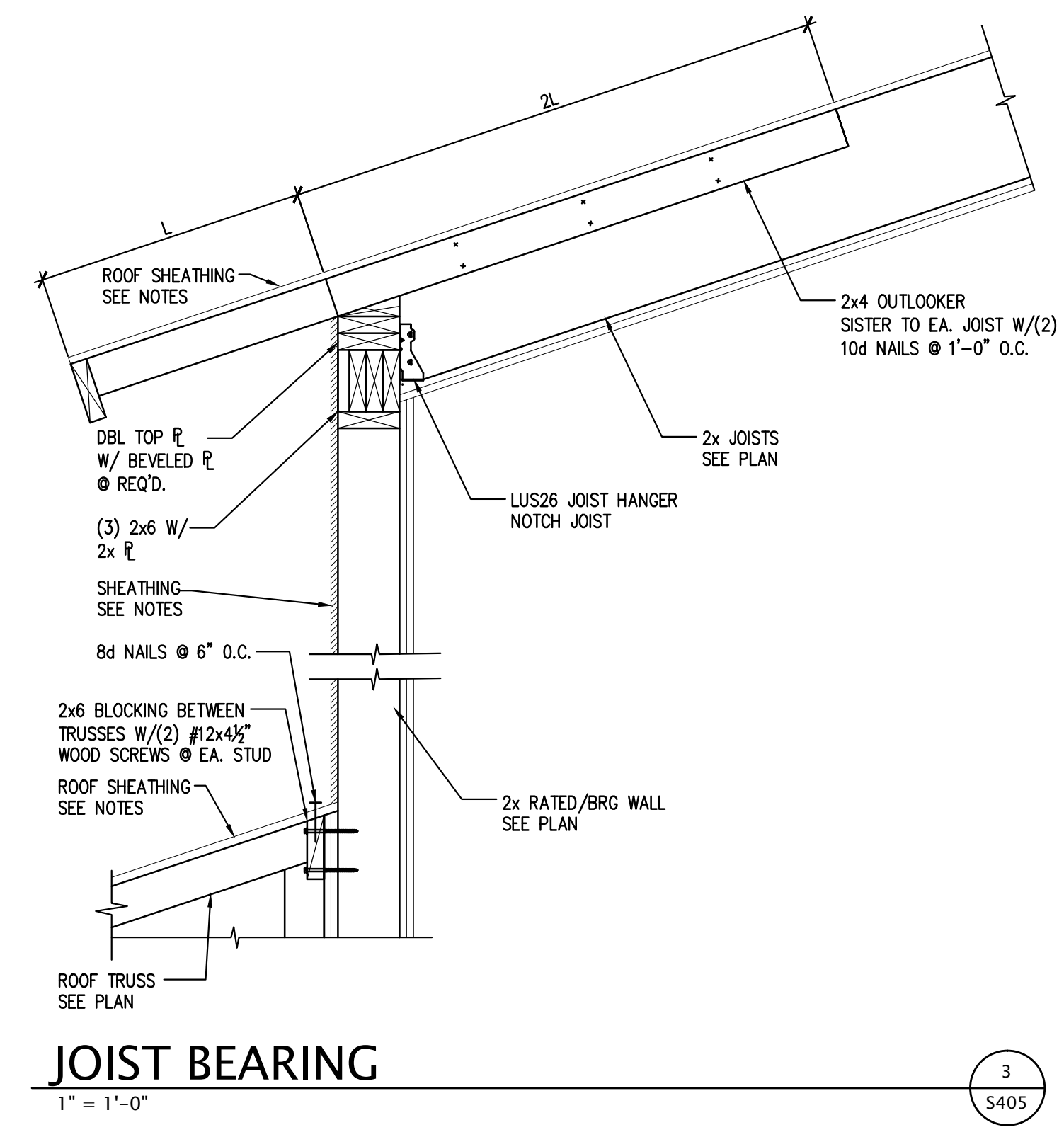
**SANDMAN**  
Structural Engineers  
137 20th Avenue South • Moorhead, MN 56506  
218.207.0002 • www.sandmanse.com • Project 16098



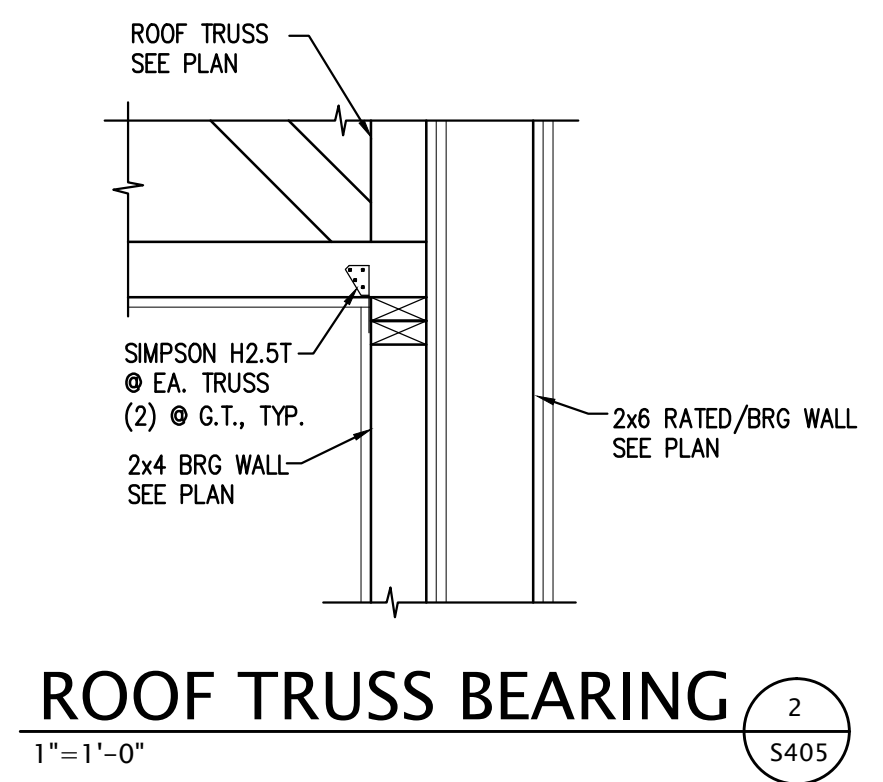
**FRAMING DETAIL** 5  
1" = 1'-0"



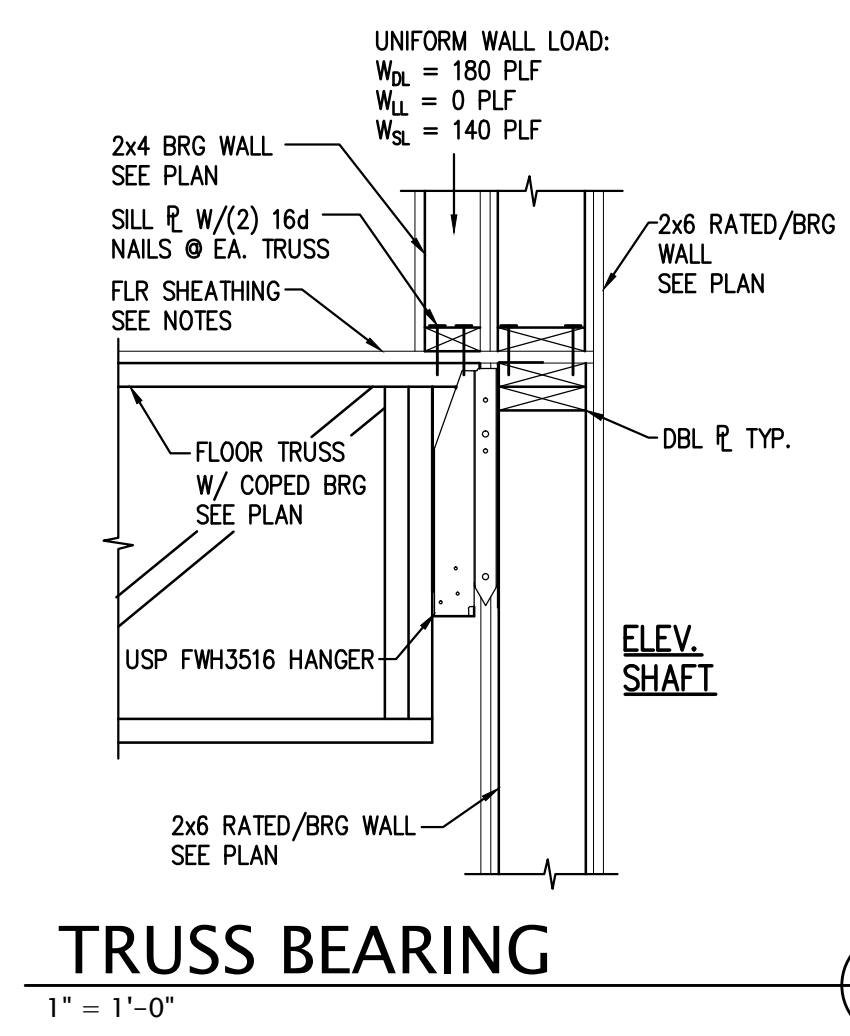
**TRUSS/JOIST BEARING** 4  
1" = 1'-0"



**JOIST BEARING** 3  
1" = 1'-0"



**ROOF TRUSS BEARING** 2  
1" = 1'-0"



**TRUSS BEARING** 1  
1" = 1'-0"

