A. GENERAL NOTES

- ALL STRUCTURAL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS, DRAWINGS, AND THE 2021 IBC W/ NH STATE BUILDING CODE AMENDMENTS
- 2. CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH RELATED TRADES AND WITH OTHER DESIGN DISCIPLINE REQUIREMENTS PRIOR TO MAKING SUBMITTALS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PERFORMING WORK.
- REFER TO OTHER DESIGN DISCIPLINE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION REQUIRED FOR THE SUBMITTALS AND INSTALLATION OF STRUCTURES, INCLUDING BUT NOT LIMITED TO DIMENSIONS, ELEVATIONS, SLOPES, LOCATIONS OF OTHER SYSTEMS AND EQUIPMENT, OPENINGS, WALLS, STAIRS, FINISHES, COATINGS, AND OTHER NON-STRUCTURAL ITEMS. NOTES PROVIDED ON THE DRAWINGS ARE INTENDED FOR USE IN CONJUNCTION WITH PROJECT SPECIFICATIONS
- 4. DETAILS LABELED AS TYPICAL DETAILS ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE DEMARKED AT EACH LOCATION IN THE DRAWINGS. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTALS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION DETAILS AND ACCURACY OF THE WORK; FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; FOR SELECTING FABRICATION PROCESSES, FOR TECHNIQUES OF ASSEMBLY IN ACCORDANCE WITH GENERAL CONDITIONS AND DIVISION 1 SPECIFICATION REQUIREMENTS; AND FOR PERFORMING ALL WORK IN A SAFE AND SECURE MANNER IN ACCORDANCE WITH GOVERNING JOB SAFETY STANDARDS.
- 6. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE SITE, INCLUDING LOCATIONS OF ALL EXISTING STRUCTURES AND EXISTING UTILITIES ABOVE AND BELOW GROUND (AS ANY INFORMATION SHOWN IS APPROXIMATE AND NOT NECESSARILY COMPLETE.) CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PERFORMING WORK.
- 7. LOADS APPLIED DURING CONSTRUCTION SHALL NOT EXCEED THE DESIGN LOADS NOTED ON THE DRAWINGS OR THE CAPACITY OF PARTIALLY COMPLETED CONSTRUCTIONS AS DETERMINED BY THE CONTRACTOR. THE STRUCTURAL ELEMENTS OF THE PROJECT AS SHOWN IN THE CONSTRUCTION DOCUMENTS HAVE BEEN DESIGNED FOR THE SPECIFIED VERTICAL AND LATERAL FORCES ACTING ON THE COMPLETED BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN AND PROVIDE ALL REQUIRED SHORING AND BRACING NEEDED DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF THE PARTIALLY-COMPLETED STRUCTURE AND FOR CONSTRUCTION LOADINGS THAT EXCEED THE SPECIFIED DESIGN LOADS
- 8. SHORING, BRACING, PROTECTING, AND MAINTAINING THE INTEGRITY OF ANY EXISTING, ADJACENT, AND/OR ONGOING PARTIALLY COMPLETED STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.

B. EXISTING BUILDING NOTES

- DIMENSIONS, ELEVATIONS, MEMBER SIZES, AND DETAILS OF EXISTING STRUCTURE SHOWN IN THE STRUCTURAL DRAWINGS HAVE BEEN EXTRACTED FROM RECORD DRAWINGS AND/OR LIMITED FIELD MEASUREMENTS. AS SUCH THEY ARE NOT TO BE CONSIDERED SUITABLY ACCURATE FOR ANY CONSTRUCTION WORK SHOWN, INCLUDING FABRICATIONS, SUBMITTALS, ETC. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING CONSTRUCTION, INCLUDING PLUMBNESS OR FLATNESS OF WALLS, FLOORS, ETC. AT THE JOB SITE PRIOR TO SUBMITTAL, FABRICATION OR CONSTRUCTION WORK. ANY DEVIATIONS FOUND IN THE FIELD FROM WHAT IS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION.
- TEMPORARY SHORING AND BRACING OF FLOORS, WALLS, AND OTHER STRUCTURAL ELEMENTS OF THE EXISTING BUILDINGS REQUIRED TO ACHIEVE THE INSTALLATION OF NEW AND/OR THE REMOVAL OF EXISTING STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL, AT THEIR DISCRETION AND WHERE SPECIFIED, EMPLOY ENGINEERING SERVICES FOR DESIGN OF TEMPORARY BRACING, SHORING AND PROTECTION. EXISTING BUILDING MOVEMENTS SHALL BE LIMITED TO PREVENT DISTRESS FROM OCCURRING.
- REPORT EXISTING CONDITIONS UNCOVERED, REVEALED, FOUND OR DEVELOPED DURING CONSTRUCTION INDICATIVE OF STRUCTURAL INTEGRITY LOSS OR DETERIORATION, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
- DO NOT CUT, DRILL OR ALTER ANY EXISTING STRUCTURAL ELEMENTS UNLESS SHOWN OR NOTED ON THE STRUCTURAL DRAWINGS WITHOUT NOTIFY THE ARCHITECT FOR REVIEW, INCLUDING TEMPORARY MEASURES OR FOR THE INSTALLATION OF OTHER DESIGN DISCIPLINE WORK.
- 5. MONITORING OF CONSTRUCTION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO FIRE WATCH DURING AND AT LEAST 24 HOURS AFTER ALL STEEL WELDING OR DRILLING, WOOD DRILLING, AND HEAT TRANSFERRING CONSTRUCTION MEASURES. DO NOT ALLOW HEAT OR ENERGY FROM EQUIPMENT TO DAMAGE OR OTHERWISE ALTER EXISTING STRUCTURAL ELEMENTS TO REMAIN.
- 6. FOR EXISTING STEEL ELEMENTS, DO NOT ALLOW THE THROUGH THICKNESS TEMPERATURE OF THE STEEL TO EXCEED 300° FAHRENHEIT DURING WELDING PROCESSES UNLESS SPECIFICALLY NOTED OTHERWISE. USE ACTIVE, OBSERVABLE SURFACE MONITORING METHODS.
- 7. PRE-BID SITE VISIT/DOCUMENTATION: EXISTING STRUCTURAL CONDITIONS AND BUILDING FEATURES MAY NOT BE COMPLETELY OR ACCURATELY SHOWN ON THESE DRAWINGS OR DOCUMENTS OR THOSE OF OTHER CONSULTANTS. THEREFORE, PRIOR TO SUBMITTING A BID FOR THE PROJECT, THE CONTRACTOR SHALL REVIEW ALL AVAILABLE EXISTING DRAWINGS AND CONDUCT A PRE-BID SITE VISIT TO VIEW THE EXISTING STRUCTURAL CONDITIONS AND BUILDING FEATURES

C. TEMPORARY SHORING

- 1. THE CONTRACTOR SHALL PROVIDE ALL THE NECESSARY MEASURES AND PRECAUTIONS TO PREVENT DAMAGE AND SETTLEMENT OF EXISTING OR NEW CONSTRUCTION.
- 2. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DESIGN, ADEQUATE INSTALLATION AND MAINTENANCE OF ANY AND ALL SHEETING, SHORING AND UNDERPINNING AGAINST EXISTING STRUCTURES AS REQUIRED, SO THAT THEY ARE NOT ENDANGERED BY THIS CONSTRUCTION.
- 4. TEMPORARY MEMBERS AND CONNECTIONS SHALL NOT BE REMOVED UNTIL PERMANENT MEMBERS ARE IN PLACE AND FINAL CONNECTIONS ARE MADE.
- 5. NEITHER THE ENGINEER NOR HIS/HER CONSULTANTS SHALL BE RESPONSIBLE FOR OR HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS/PROGRAMS IN CONNECTION WITH THIS PROJECT.
- 6. NEITHER THE ENGINEER NOR HIS/HER CONSULTANTS SHALL BE RESPONSIBLE FOR, OR HAVE CONTROL OVER, THE ACTS OF OMISSIONS BY THE CONTRACTOR, SUBCONTRACTORS, ANY OF THEIR AGENTS, EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THE ENTITIES OR INDIVIDUALS MENTIONED HEREIN ABOVE, TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 7. THE ATTACHED PLANS AND DETAILS ARE A GRAPHICAL REPRESENTATION OF THE EXISTING CONDITIONS AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING BUILDING PRIOR TO CONSTRUCTION.
- 8. CONTRACTOR SHALL SUBMIT A CONSTRUCTION PHASING PLAN. THE CONSTRUCTION PHASING PLAN SHALL INCLUDE AS A MINIMUM: A PLAN IN EITHER GRAPHICAL OR NARRATIVE FORMAT DESCRIBING THE SEQUENCING OF THE BRACING, SHORING, DEMO, AND NEW CONSTRUCTION; BRACING AND SHORING DRAWINGS AS REQUIRED; BRACING AND SHORING
- 9. CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING DURING REMOVAL AND ERECTION OF NEW FOUNDATION WALLS

D. FOUNDATION RELATED EARTHWORK

- 1. THE CONTRACTOR SHALL CARRY THE FOUNDATIONS TO THE ELEVATIONS INDICATED TO SUPPORT AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 PSF. THE CONTRACTOR SHALL ENGAGE A GEOTECHNICAL ENGINEER/TESTING AGENCY AS REQUIRED TO CONFIRM THESE ASSUMPTIONS PRIOR TO CONSTRUCTION.
- 2. THE GEOTECHNICAL REPORTING CONTAINS SPECIFIC REQUIREMENTS PERTAINING TO GRUBBING, SITE, SUBFLOOR AND BEARING SURFACE PREPARATION AND PROTECTION; STRUCTURAL FILL AND COMPACTION REQUIREMENTS; GROUND WATER MANAGEMENT; ETC. THAT ARE NOT NECESSARILY SHOWN BY THE DRAWINGS AND SPECIFICATIONS. ALSO, IBC CHAPTER 18 "SOILS AND FOUNDATION" REQUIREMENTS APPLY, UNLESS SPECIFICALLY NOTED OTHERWISE BY THE GEOTECHNICAL REPORTING, DRAWINGS OR SPECIFICATIONS. REPORT CONFLICTS BETWEEN THE REPORTING AND THE DRAWINGS AND SPECIFICATIONS TO THE ARCHITECT PRIOR TO COMMENCING ANY AFFECTED WORK
- 3. A LICENSED GEOTECHNICAL ENGINEER SHALL INSPECT AND REPORT ON ALL NATIVE SUB-GRADES FOR SLABS-ON-GRADE AND FOUNDATION PREPARED SOIL SURFACES PRIOR TO THE PLACEMENT OF ANY BACKFILL, FILL, AND FOUNDATION STRUCTURAL ELEMENTS. FOUNDATIONS AND FOOTING SHALL BEAR ON COMPETENT NATIVE SOILS OR COMPACTED STRUCTURAL FILLS IN ACCORDANCE WITH THE GEOTECHNICAL REPORTING.
- 4. FOOTINGS, PILE CAPS, AND SLABS CAST DIRECTLY AGAINST THE EARTH SHALL BE SIDE-FORMED AS REQUIRED TO KEEP EARTH OUT OF THE CONCRETE. COMPACT DISTURBED LOAD BEARING SOIL IN DIRECT CONTACT WITH FOUNDATIONS TO ORIGINAL BEARING CAPACITY. AS WET WEATHER OR GROUND CONDITIONS WARRANT, PLACE A MINIMUM OF 6 INCHES OF CRUSHED STONE OR 12 INCHES OF SAND-GRAVEL WRAPPED IN GEOTEXTILE FABRIC FOR SUBGRADE PROTECTION BENEATH FOUNDATIONS, DO NOT ALLOW FOR STANDING WATER ON EARTH. IF OVER-EXCAVATION OCCURS, REPLACE MATERIAL WITH BACKFILL MEASURES SPECIFIED FOR USE UNDER FOUNDATIONS, AFTER ACCEPTANCE BY GEOTECHNICAL ENGINEER.
- 5. UNLESS NOTED OTHERWISE, PLACE AND COMPACT BACKFILL IN EQUAL CONTINUOUS LAYERS NOT EXCEEDING A MAXIMUM OF 8" OF COMPACTED DEPTH FOR HAND-HELD COMPACTION EQUIPMENT AND A MAXIMUM OF 12" INCHES COMPACTED DEPTH FOR VIBRATORY ROLLERS. MAINTAIN OPTIMUM MOISTURE CONTENT OF BACKFILL MATERIALS TO ATTAIN COMPACTION DENSITY.
- 6. AT EARTH RETAINING AND FOUNDATION WALLS, BACKFILL LIFTS TO NOT EXCEED 12 INCH DIFFERENCE IN ELEVATION UNTIL FINAL ELEVATION ARE REACHED ON BOTH SIDES OF THE WALL. AT BASEMENT WALLS, DO NOT BACKFILL UNTIL GROUND FLOOR AND CONNECTED ELEVATED FRAMED LEVELS SLABS HAVE BEEN COMPLETED AND THE CONCRETE AT WALLS AND FLOORS HAS ACHIEVED FULL DESIGN STRENGTH.
- 7. THE CONSTRUCTION CONSIDERATIONS IN THE GEOTECHNICAL REPORTING AND PROJECT SPECIFICATIONS SHALL APPLY TO THIS PROJECT, INCLUDING BUT NOT LIMITED TO PROOFROLLING SUBGRADES AT THE EXCAVATION AND/OR BEARING ELEVATIONS; REMOVING AND REPLACING LOOSE OR SOFT POCKETS, FILL SLOPE CONSTRUCTIONS, ETC.
- BACKFILL REQUIREMENTS:
- A. FILL WITHIN BUILDING ENVELOPE AND EXTENDING OUTWARD AT 1:1 SLOPE TO ACCEPTABLE NATIVE SOIL CONDITIONS:

 MATERIAL: "SAND-GRAVEL"; "GRANULAR"; "CRUSHED STONE" WITH GEOTEXTILE WRAP (SEE SECTIONS) COMPACTION: 95% MODIFIED PROCTOR
- BACKFILL DIRECTLY BELOW INTERIOR SLABS-ON-GRADE ASSEMBLIES (12 INCHES UNLESS NOTED OTHERWISE): "CRUSHED STONE" WITHOUT GEOTEXTILE COMPACTION: 95% MODIFIED PROCTOR
- C. BACKFILL BELOW PAVEMENT, WALKS, ENTRY SLABS IN VICINITY OF BUILDING:
 MATERIAL: "SAND-GRAVEL" "GRANULAR" "CRUSHED STONE" (SEE SECTIONS, LAND ARCH AND CIVIL)
 COMPACTION: 95% MODIFIED PROCTOR
- D. BACKFILL BEHIND RETAINING WALLS AND BASEMENT WALLS, OUTSIDE BUILDING ENVELOPE AND UNDER PAVEMENT, WALKS, ENTRY SLABS:
 MATERIAL: "GRANULAR BACKFILL"
- BACKFILL ALONG EXTERIOR OF BUILDING AGAINST WALLS AND NOT UNDER PAVEMENT, WALKS, ENTRY SLABS:

 MATERIAL: "SUITABLE NATIVE SOIL" COVERED BY 2 FEET DEEP BY 4 FEET WIDTH OF "LESS PERMEABLE FILL COMPACTION: 92% MODIFIED PROCTOR
- BACKFILL MATERIALS: RECYCLED CONCRETE AGGREGATE TO BE USED IN WHOLE OR BLENDED WITH OTHER AGGREGATES TO ACHIEVE GRADATIONS BELOW. ONSITE MATERIALS MEETING THE FOLLOWING CLASSIFICATIONS MAY BE USED:

A.	"SAND-GRAVEL":	
	SIEVE DESIGNATION	% BY WEIGHT PASSING SIEVES
	4 INCH	100
	1/2 INCH	50-85
	No. 4	45-75
	No. 100	10-35
	No. 200	0-6
B.	"GRANULAR":	
	SIEVE DESIGNATION	% BY WEIGHT PASSING SIEVES

IOLAIN.	
SIEVE DESIGNATION	% BY WEIGHT PASSING SIEVES
3 INCH	100
No. 4	45-70
No. 40	0-12
No. 200	0-6

"CRUSHED STONE" WITH GEOTEXTILE FABRIC:

COMPACTION: 95% MODIFIED PROCTOR

/E DESIGNATION	% WEIGHT BY PASSING SIEVES
1 INCH	100
3/4 INCH	90-100
3/8 INCH	0-55
No. 4	0-10
No. 8	0-5

- "SUITABLE NATIVE SOIL": ON SITE SAND OR GRAVEL REASONABLY FREE OF LOAM, SILT, CLAY, OR ORGANIC
- E. "LESS PERMEABLE FILL" GLACIAL TILL (SEE GEOTECHNICAL REPORT)
- "RECYCLED CONCRETE AGGREGATE" STOCKPILED ON SITE FROM DECONSTRUCTION PROJECT. SUBMIT GRADATIONS PRIOR TO ANY REQUIRED BLENDING; AS WELL AS FOR BLENDED AGGREGATES. MUST BE USED AS IS OR INTEGRAL WITH "SAND-GRAVEL"; "GRANULAR"; "CRUSHED STONE" FILLS OR BACKFILLS ABOVE.
- 10. GEOTEXTILE FABRIC: NON-WOVEN WITH 12 LAPPED SEAMS SEE GEOTECHNICAL REPORTING FOR USE AND MEETING:
 - GRAB STRENGTH OF 80 POUNDS MINIMUM MEETING ASTM D4632
 PUNCTURE STRENGTH OF 25 POUNDS MINIMUM MEETING ASTM D4833
 - TRAPEZOID TEAR OF 25 POUNDS MINIMUM MEETING ASTM D4533
 APPARENT OPENING SIZE OF NO. 70-100 (US SIEVE) MEETING ASTM D4751
- 11. INSULATION AT EXTERIOR SLABS AND WALKS (NOT PAVEMENTS): EXTRUDED POLYSTYRENE, STRENGTH OF 40 PSI (UNO) AND RATED FOR UNDERSLAB/UNDERGROUND USE. STAGGER AND DO NOT TAPE BOARD JOINTS.

E. CAST-IN-PLACE CONCRETE

- CODES AND STANDARDS: COMPLY WITH THE PROVISIONS OF THE LATEST EDITIONS OF:
- A. ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
 B. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE"
- C. ACI 304 "GUIDE FOR MIXING, TRANSPORTING AND PLACING CONCRETE
- D. ACI 305 "HOT WEATHER CONCRETING"
 E. ACI 306 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING"
- F. ACI 308 "STANDARD PRACTICE FOR CURING CONCRETE".
- G. ACI 302 "GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION"
- CONCRETE TESTING: THE CONTRACTOR SHALL PREPARE A SET OF 4 CYLINDERS/TEST SET TO BE TESTED AT AN INDEPENDENT LABORATORY. THE CYLINDERS SHALL BE TAKEN FROM ONE CONCRETE TRUCK AND LABELED WITH DATE, TRUCK NUMBER, AND LOCATION OF CONCRETE PLACEMENT. EACH SAMPLE SHALL ALSO BE TESTED FOR SLUMP, AIR CONTENT, AND TEMPERATURE. THE CYLINDERS SHALL BE TESTED AS FOLLOWS: 1 AT 7 DAYS; 2 AT 28 DAYS; AND A THIRD HELD FOR A 56 DAY BREAK IF REQUIRED. TEST CYLINDERS SHALL BE TAKEN AT LEAST ONCE PER PLACEMENT OR AT THE FOLLOWING INCREMENTS:
- A. WALLS AND FOOTINGS: 50 CUBIC YARDS
- B. ISOLATED FOOTINGS: 25 CUBIC YARDSC. SLABS: 50 CUBIC YARDS
 - FIELD TESTING SHALL BE PERFORMED BY A GRADE I ACI (MINIMUM)FIELD TESTING TECHNICIAN
- SUBMIT MIX DESIGN AND EITHER TRIAL MIX DESIGNS OR HISTORIC FIELD DATA FOR APPROVAL IN ACCORDANCE WITH ACI 318, CHAPTER 5, INCLUDE TECHNICAL DATA SHEETS, GRADATIONS, AND MATERIAL VERIFICATIONS ON ALL COMPONENTS. SUBMIT MIX DESIGNS, PRIOR TO PLACEMENT OF CONCRETE, TRANSIT MIX SHALL CONFORM TO ASTM C94.
- 4. COMPRESSIVE MIXTURES AS DELINEATED IN CONCRETE MIX TABLE; SEE NOTES BELOW FOR ADDITIONAL INFORMATION.
 A. SLUMP: 3"-5" BEFORE ADDITION OF WATER REDUCER, 6"-8" AFTER ADDITION OF WATER REDUCER
 B. ALL CONCRETE NORMALWEIGHT, UNLESS NOTED OTHERWISE.
- 5. MAXIMUM AGGREGATE SIZE IN ACCORDANCE WITH ACI 301; CLEARLY NOTE LOCATION WHERE AGGREGATES GREATER THAT 3/4" MAXIMUM SIZE ARE PROPOSED FOR USE.
- 6. NO CHLORIDE OR OTHER UNAUTHORIZED ADMIXTURES SHALL BE USED. MAINTAIN MAXIMUM WATER SOLUBLE CHLORIDE ION (CL-) IN CONCRETE, BY WEIGHT OF CEMENT AT LESS THAN 1.00 FOR NON-EXPOSED CONCRETES AND 0.30 FOR EXTERIOR EXPOSED CONCRETES
- 7. WHEN AMBIENT TEMPERATURE IS BELOW 40° FAHRENHEIT OR MORE THAN 90° FAHRENHEIT PLACE AND PROTECT CONCRETE IN ACCORDANCE WITH ACI STANDARDS LISTED ABOVE.
- CONCRETE PLACEMENT MAY REQUIRE ADJUSTMENT OF REINFORCEMENT, EMBEDDED ITEMS OR ANCHOR BOLTS. REVIEW DRAWINGS IDENTIFY THESE LOCATIONS TO ARCHITECT PRIOR TO SUBMITTALS. PROVIDE ADDITIONAL SUPERVISION AT ALL STEEL TO CONCRETE CONNECTION LOCATIONS AND MODIFY PLACEMENT MEASURES TO ACCOUNT FOR CONGESTIONS.
- COMPLY WITH ACI CODES AND PLACE CONCRETE IN A CONTINUOUS OPERATION WITHIN PLANNED JOINTS OR SECTIONS. DO NOT PERMIT COLD JOINTS TO OCCUR.
- 10. CURING: COVER OR WET CURE ALL ELEMENTS. BEGIN INITIAL CURING AS SOON AS FREE WATER HAS DISAPPEARED FROM EXPOSED SURFACES. WHERE POSSIBLE, KEEP CONTINUOUSLY WET FOR 72 HOURS. CONTINUE CURING BY USE OF MOISTURE RETAINING COVER. USE OF MEMBRANE-FORMING CURING COMPOUNDS IS PROHIBITED.
- 11. SURFACE FINISHES:
- A. GENERAL: COMPLY WITH ACI 302.1R RECOMMENDATIONS FOR SCREEDING, RESTRAIGHTENING, AND FINISHING OPERATIONS FOR CONCRETE SURFACES. DO NOT WET CONCRETE SURFACES
- 12. PROVIDE CONTROL AND CONSTRUCTION JOINTS BY DETAIL AND SPECIFICATION REQUIREMENTS. SHOW LOCATION ON REINFORCING SUBMITTAL FOR COORDINATION WITH FLOORING, EQUIPMENT AND OTHER CONTRACTOR REQUIREMENTS.

 A. SLABS SAW-CUT CONTROL JOINTS AS SOON AS CONCRETE HAS HARDENED ENOUGH TO WALK ON SURFACE WITHOUT DAMAGING CONCRETE AND NO MORE THAN 4 HOURS AFTER FINAL TROWEL. JOINT SPACING SHALL, UNLESS NOTED OTHERWISE. NOT EXCEED 36 TIMES THE SLAB THICKNESS OR 18 FEET
 - B. WALLS CONTROL JOINTS: NOT EXCEEDING 20 FEET AND AT EACH INTEGRAL PILASTER; CONSTRUCTION JOINTS AT 80 FEET OF MAXIMUM SPACING.

F. CONCRETE REINFORCEMEN

- SHOP DRAWINGS SHALL BE PROVIDED PRIOR TO START OF CONCRETE PLACING AND BE IN ACCORDANCE WITH:
- B. ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
- C. ACI SP-66 "ACI DETAILING MANUAL"
- D. CRSI MSP "MANUAL OF STANDARD PRACTICE"
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. SHOW ALL SLABS IN PLAN AND ALL WALLS IN ELEVATION WITH OPENINGS AND PENETRATIONS SHOWN BASED ON MEP COORDINATION SUBMITTALS AND ARCHITECTURAL REQUIREMENTS. SUBMIT PROPOSED CONTROL AND CONSTRUCTION JOINTS FOR REVIEW ON REINFORCING SUBMITTALS
- REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60, STEEL BARS PER ASTM A305, UNLESS NOTED OTHERWISE.
- 3. PROVIDE EPOXY-COATED BARS WHERE SHOWN MEETING ASTM A775 AND USING EPOXY COATED SUPPORTS, COATED WIRE, AND EPOXY COATING FOR REPAIR OF SURFACE PRIOR TO POURING.
- 4. WHERE SPECIFICALLY SHOWN ON THE DRAWINGS, WELD REINFORCING BARS IN ACCORDANCE WITH AWSD1.4 PRE-QUALIFIED JOINT, ELECTRODE 9E90 LOW HYDROGEN) AND PROCESS REQUIREMENTS INCLUDING COORDINATED WITH MILL CERTIFIED CARBON EQUIVALENT. ALTERNATIVELY, ASTM A706, GRADE 60 MAY BE SUBSTITUTED, INDICATE MATERIAL AND WELDING REQUIREMENTS ON SUBMITTAL. DO NOT WELD AT LOCATIONS NOT DETAILED, UNLESS SUBMITTED AND REVIEWED BY ARCHITECT.
- 5. FIELD BENDING OR REINFORCEMENT SHALL CONFORM TO ACI 301, INCLUDING PRE-HEAT REQUIREMENTS.
- WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185 WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 70,000 PSI. LAP ONE CROSS WIRE SPACING PLUS 2". SUPPORT MESH ON CHAIRS PER CRSI WITH #4 AT 4'-0"oc, EACH WAY
- 7. PROVIDE MINIMUM CONCRETE COVER TO REINFORCEMENT AS FOLLOWS, UNLESS OTHERWISE NOTED:
 - A. BOTTOM OF FOOTINGS, GRADE BEAMS, AND SLABS-ON-GRADE: 3"
 - B. SIDES OF FOOTINGS AND GRADE BEAMS: 2"C. FOUNDATION WALLS, FROST WALLS, RETAINING WALLS, PIT WALLS: 2"
 - D. EXTERIOR WALLS (EXPOSED TO WEATHER): 2"
 E. FACES OF WALLS OTHER THAN THOSE NOTED ABOVE: 3/4"
 - F. FOUNDATION PIERS: 2" TO TIES
 - G. ALL FACES OF BEAMS AND COLUMNS: 1-1/2" TO TIES
 - H. TOP AND BOTTOM OF ELEVATED SLABS: 3/4"
 TOPPING SLAB: 3/4"
- J. SLAB-ON-DECK: 3/4" FROM DECK, 3/4" FROM TOP SURFACE
- ALL LAPS SHALL BE FULL TENSION LAPS (CLASS B SPLICE) UNLESS SPECIFICALLY NOTED OTHERWISE. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UNLESS OTHERWISE NOTED.
- 9. HEADED STUD ANCHORS, DEFORMED BAR ANCHORS (DBA'S), AND OTHER EMBEDDED ITEMS AS SPECIFIED FOR STRUCTURAL STEEL. ALL WELDS FOR STUDS AND DBA'S SHALL BE AUTOMATICALLY WELDED WITH MANUFACTURER'S EQUIPMENT AND RECOMMENDATIONS FOR FLUX FILLED HEADS.
- O. CHAIRS AND SPACERS SHALL BE PLACED TO ADEQUATELY SUPPORT REINFORCING DURING PLACEMENT. FOREIGN MATERIALS SUCH AS WOOD, CLAY BRICK OR OTHER UNSUITABLE SUPPORTS SHALL NOT BE USED TO SUPPORT REINFORCING. SET WIRE TIES SO ENDS ARE DIRECTED INTO CONCRETE WHERE CONCRETE WILL BE EXPOSED. DO NOT USE CONCRETE SUPPORTS OR PUDDLING FOR SLABS UNLESS SUBMITTED AND ACCEPTABLY REVIEWED.

G. CONCRETE FORMWORK

- CONCRETE FORMS SHALL BE CLEAN AND FREE FROM DEBRIS. IF FORMS ARE COATED WITH A VEGETABLE BASED (SOY) RELEASE AGENT, WHICH SHALL NOT STAIN CONCRETE OR ABSORB MOISTURE OR IMPAIR NATURAL BONDING
- COORDINATE WITH REINFORCING SUBMITTAL FOR OPENING AND ADDITIONAL REQUIREMENTS. SUBMIT, BEFORE FRAMING OPENINGS IN STRUCTURAL ELEMENTS WHICH ARE NOT INDICATED ON DRAWINGS.
- PROVIDE BRACING TO ENSURE STABILITY OF FORMWORK. FOR PLACEMENT OPERATIONS. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.
- 4. ALL WALL SIDES AND SLAB EDGES EXPOSED TO VIEW TO HAVE CLASS A CLASS OF SURFACE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

H. POST-INSTALLED ANCHORS INTO CONCRETE AND MASONRY

- 1. WHERE A MANUFACTURER'S ANCHORS IS SPECIFICALLY CALLED OUT ON THE DRAWINGS, IT SHALL BE CONSIDERED THE DESIGN BASIS FOR THE REQUIRED ANCHOR. ALTERNATES MEETING OR EXCEEDING ANCHOR SYSTEM DEMANDS, INCLUDING, BUT NOT LIMITED TO CAPACITY LOADING, EDGE DISTANCE, SUBSTRATE THICKNESS FOR CONNECTION ELEMENTS AND BASE MATERIAL SHALL BE SUBMITTED FOR PROPOSED USE PENDING ACCEPTABLE REVIEW. SUBMIT ICC-ES CODE REPORTS.
- 2. ADHESIVE ANCHORS, WHERE NOT SPECIFICALLY DETAILED, SHALL BE:
 A. FOR CONCRETE AND CONCRETE MASONRY: HILTI HIT HY-200
 B. FOR EXISTING BRICK MASONRY: HILTI HIT-HY 270

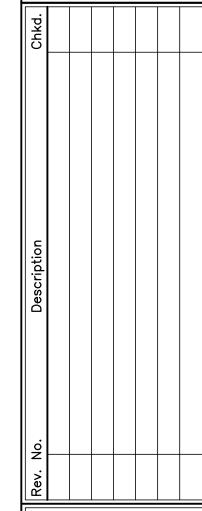
INSTALL IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. USE 3/4 INCH DIAMETER AT MINIMUM EMBEDMENT UNLESS OTHERWISE INDICATED BY DETAIL. SEE NOTE 1.

- 3. EXPANSION ANCHORS, WHERE NOT SPECIFICALLY DETAILED, SHALL BE:
- A. FOR CONCRETE: HILTI KWIK BOLT TZ
 B. FOR MASONRY: HILTI KWIK BOLT 3.

INSTALL IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. USE 3/4 INCH DIAMETER AT MINIMUM EMBEDMENT UNLESS OTHERWISE INDICATED BY DETAIL. SEE NOTE 1.

SCREW TYPE ANCHORS: WHERE NOT SPECIFICALLY DETAILED, SHALL, FOR CONCRETE AND MASONRY: SIMPSON TITEN-HD INSTALL IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. USE 3/4 INCH DIAMETER AT MINIMUM EMBEDMENT UNLESS OTHERWISE INDICATED BY DETAIL. SEE NOTE 1.





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BARRETT ARCHITECTURE

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GREENSBORO BEND, VT 05842

STRUCTURAL NOTES

** Title: LITTLETON COMMUNITY

CENTER ANNEX RENOVA

Designed By: MS
Checked By: MS
Drawn By: MS
Scale: AS NOTED
Date: 2/14/24

S0.1

I. WOOD FRAMING NOTES

- UNLESS OTHERWISE SPECIFIED. EACH PIECE OF LUMBER SHALL BEAR THE GRADE MARK. STAMP. OR OTHER IDENTIFYING MARKS INDICATING GRADES OF MATERIAL, AND RULES OR STANDARDS UNDER WHICH PRODUCED. SUCH IDENTIFYING MARKS ON A MATERIAL SHALL BE IN ACCORDANCE WITH THE RULE OR STANDARD UNDER WHICH MATERIAL IS PRODUCED, INCLUDING REQUIREMENTS FOR QUALIFICATIONS AND AUTHORITY OF THE INSPECTION ORGANIZATION, USAGE OF AUTHORIZED IDENTIFICATION, AND INFORMATION INCLUDED IN THE IDENTIFICATION. THE INSPECTION AGENCY FOR LUMBER SHALL BE APPROVED BY THE BOARD OF REVIEW, AMERICAN LUMBER STANDARDS COMMITTEE, TO GRADE SPECIES USED.
- PROTECT LUMBER AND OTHER PRODUCTS FROM DAMPNESS BOTH DURING AND AFTER DELIVERY AT THE SITE. PILE PLYWOOD AND LUMBER IN STACKS IN SUCH A MANNER AS TO PROVIDE ADEQUATE AIR CIRCULATION AND TO PREVENT WARPING. LOCATE STACKS IN WELL DRAINED AREAS, SUPPORTED AT LEAST SIX INCHES ABOVE GRADE AND COVER WITH WELL VENTILATED SHEDS HAVING A FIRMLY CONSTRUCTED OVERHANGING ROOF AS WELL AS SUFFICIENT END WALL TO PROTECT LUMBER FROM DRIVING RAIN.
- STORE SEASONED MATERIALS IN DRY PORTIONS OF BUILDING.
- 4. PROTECT SHEET MATERIALS FROM CORNERS BREAKING AND DAMAGING SURFACES WHILE UNLOADING.
- NOMINAL SIZES ARE INDICATED EXCEPT AS SHOWN BY DETAIL DIMENSIONS. PROVIDE ACTUAL SIZES AS REQUIRED BY PRODUCT STANDARD 20, DEPARTMENT OF COMMERCE.
- MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 19%.
- 7. LIGHT GAGE METAL CONNECTIONS SHALL BE SIMPSON, SUBMIT MANUFACTURERS SPECIFICATION SHEETS.

- 2x6 AND 2x4 BEARING WALLS, INTERIOR AND EXTERIOR LOCATIONS: SPRUCE-PINE-FIR No. 1 / No. 2 AS GRADED BY
- STRUCTURAL ROOF AND FLOOR FRAMING: SPRUCE-PINE-FIR No. 1 / No. 2 AS GRADED BY NLGA
- PRESERVATIVE PRESSURE TREATED (P.P.T. or P.T.) LUMBER: SOUTHERN PINE No. 2, AS GRADED BY SPIB
- LAMINATED VENEER LUMBER (LVL):
 - PROVIDE LVL HEADERS AND BEAMS AS INDICATED. LVL FRAMING SHALL BE LAMINATED DOUGLAS FIR OR SOUTHERN PINE (GP LAM BY GEORGIA PACIFIC OR MICROLAM BY TRUS-JOIST OR EQUAL) MEETING THE FOLLOWING MINIMUM ALLOWABLE STRESS CRITERIA: FB (BENDING STRESS) = 2600 PSI FV (HORIZ. SHEAR STRESS) = 285 PSI
 - E (MODULUS OF ELASTICITY) = 1,900,000 PSI FC (COMPRESSIONS PERPENDICULAR TO GRAIN) = 750 PSI
- LAMINATED STRAND LUMBER (LSL):
- PROVIDE LSL HEADERS AND BEAMS AS INDICATED. LSL FRAMING (TIMBERSTRAND BY TRUS-JOIST OR EQUAL) TO MEET THE FOLLOWING MINIMUM ALLOWABLE
- STRESS CRITERIA: FB (BENDING STRESS) = 2600 PSI
- FV (HORIZ. SHEAR STRESS) = 400 PSI E (MODULUS OF ELASTICITY) = 1,700,000 PSI
- FC (COMPRESSION PERPENDICULAR TO GRAIN) = 880 PSI
- 6. GLULAM BEAMS AND COLUMNS

GRADED BY NLGA.

- PROVIDE GLULAM BEAMS AND COLUMNS AS INDICATED.
- GLULAM BEAMS AND COLUMNS SHALL BE PRODUCED BY NORDIC ENGINEERED WOOD, OR APPROVED EQUIVALENT MEETING THE FOLLOWING MINIMUM ALLOWABLE STRESS CRITERIA
- FB (BENDING STRESS) = 2400 PSI

STRESS GRADE - 24F-ED/NPG

- FV (HORIZ. SHEAR STRESS) = 300 PSI
- E (MODULUS OF ELASTICITY = 1,900,000 PSI
- FC (COMPRESSION PERPENDICULAR TO GRAIN) = 600 PSI APPEARANCE GRADE - ARCHITECTURAL
- MISCELLANEOUS LUMBER: PROVIDE WOOD FOR SUPPORT OR ATTACHMENT OF THE WORK INCLUDING NON-BEARING PARTITIONS, CANT STRIPS, BUCKS, NAILERS, BLOCKING, FURRING, GROUNDS, STRIPPING AND SIMILAR MEMBERS. PROVIDE LUMBER OF SIZES AND SHAPES INDICATED. GRADE: SPRUCE-PINE-FIR STUD GRADE AS

MATERIALS:

- ROOF SHEATHING: 5/8" ADVANTECH ROOF SHEATHING, STRUCTURAL 1 PANEL GRADE, MANUFACTURED BY HUBER ENGINEERED WOODS WITH A PS-2 SPAN RATING OF 40/20 AS DENOTED BY CODE EVALUATION REPORT ESR 1785.
- FLOOR SHEATHING: 23/32" ADVANTECH SUBFLOOR SHEATHING, STRUCTURAL 1 PANEL GRADE, MANUFACTURED BY HUBER ENGINEERED WOODS WITH A PS-2 SPAN RATING OF 24-INCHES AS DENOTED BY CODE EVALUATION REPORT ESR 1785.
- FASTENERS AND ANCHORS: FURNISH ITEMS OF ROUGH HARDWARE, METAL CONNECTORS, BOLTS, ETC., REQUIRED TO COMPLETE THE WORK. BOLTS, NUTS AND WASHERS SHALL BE HOT DIPPED ELECTRO GALVANIZED STEEL.
- SILL GASKET ON TOP OF FOUNDATION WALL: 1/4 INCH THICK, PLATE WIDTH WIDE, CLOSED CELL POLYETHYLENE URETHANE FOAM FROM CONTINUOUS ROLLS.
- SUBFLOOR GLUE: APA AFG-01, WATERPROOF OF WATER SOLVENT BASE, AIR CURE TYPE, CARTRIDGE DISPENSED.
- BUILDING PAPER: NO. 15 ASPHALT FELT. PLAIN UNTREATED CELLULOSE BUILDING PAPER.
- WOOD PRESERVATIVE (PRESSURE TREATMENT): AWPA TREATMENT ACQ USING WATER BORNE PRESERVATIVE
- 8. SET STRUCTURAL MEMBERS LEVEL AND PLUMB, IN CORRECT POSITION.
- MAKE PROVISIONS FOR ERECTION LOADS, AND FOR SUFFICIENT TEMPORARY BRACING TO MAINTAIN STRUCTURE SAFE, PLUMB, AND IN TRUE ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRACING.
- 10. PLACE HORIZONTAL MEMBERS, CROWN SIDE UP.
- 11. CONSTRUCT LOAD BEARING FRAMING FULL LENGTH WITHOUT SPLICES.
- 12. DOUBLE MEMBERS AT OPENINGS OVER 24 INCHES WIDE. SPACE SHORT STUDS OVER AND UNDER OPENING TO STUD
- 13. CONSTRUCT DOUBLE JOIST HEADERS AT FLOOR AND CEILING OPENINGS AND UNDER WALL STUD PARTITIONS THAT ARE PARALLEL TO FLOOR JOISTS. FRAME RIGIDLY INTO JOISTS.
- 14. BRIDGE JOISTS FRAMING IN EXCESS OF 8 FEET SPAN AT MID-SPAN AND WHERE SHOWN ON DRAWINGS. FIT SOLID BLOCKING OR BRIDGING AT ENDS OF MEMBERS.
- 15. SECURE ROOF SHEATHING WITH LONGER EDGE PERPENDICULAR TO FRAMING MEMBERS AND WITH ENDS STAGGERED AND SHEET ENDS OVER BEARING.
- USE SHEATHING CLIPS BETWEEN SHEETS BETWEEN ROOF FRAMING MEMBERS
- 17. WHERE TONGUE AND GROOVE PLYWOOD IS USED, FULLY ENGAGE TONGUE AND GROOVE EDGES.
- 18. SECURE WALL SHEATHING WITH LONG DIMENSION PERPENDICULAR TO WALL STUDS, WITH ENDS OVER FIRM
- 19. PLACE BUILDING PAPER HORIZONTALLY OVER WALL SHEATHING; WEATHER LAP EDGES AND ENDS.
- 20. SECURE SUB-FLOOR SHEATHING WITH LONGER EDGE PERPENDICULAR TO FLOOR FRAMING AND WITH END JOINTS STAGGERED AND SHEET ENDS OVER BEARING. ATTACH WITH SUB-FLOOR GLUE AND 8D NAILS AT 6" ON CENTER AT PERIMETER AND 12" ON CENTER ON INTERIOR OF PANEL.

REQUIRED LOADING.

- FRAMING MEMBERS: 1/4 INCH FROM TRUE POSITION, MAXIMUM. SURFACE FLATNESS OF FLOOR: 1/4 INCH IN 10 FEET MAXIMUM, AND 1/2 INCH IN 30 FEET MAXIMUM.
- 22. ALL POSTS AND COLUMNS FROM HEADERS AND BEAMS SHALL BEAR CONTINUOUSLY TO CONCRETE FOUNDATIONS INCLUDING BLOCKING IN FLOOR AND ROOF SPACES. BLOCKING SHALL BE OF THE SIZE AND SHAPE TO CARRY THE
- 23. ALL BOTTOM BEARING PLATES, FOR STUD WALLS OR BEAM BEARING, SHALL BE ANCHORED TO THE FOUNDATION WITH 1/2" DIAMETER ANCHOR BOLTS AT 4'-0" ON CENTER, UNLESS NOTED OTHERWISE.
- ALL BEARING WALLS SHALL BE BLOCKED AT 4'-0" ON CENTER, VERTICALLY, UNLESS NOTED OTHERWISE.
- ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESERVATIVE PRESSURE TREATED, P.P.T.
- 26. ALL FASTENERS FOR PRESSURE TREATED WOOD TO BE G90 HOT-DIPPED GALVANIZED. 27. ALL HANGERS FOR PRESSURE TREATED WOOD TO BE G90 HOT-DIPPED GALVANIZED.
- 28. PROVIDE 1/4" NOMINAL GAP BETWEEN WOOD FRAMING AND HORIZONTAL FACES OF CONCRETE WALLS.

J. STRUCTURAL STEEL

- UNLESS OTHERWISE NOTED, STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
 - WIDE FLANGE SECTIONS: ASTM A572 GRADE 50 OR ASTM A992 (FY = 50 KSI) ANGLES, CHANNELS, PLATE AND OTHER HOT-ROLLED SHAPES: ASTM A36 (FY = 36 KSI)
 - TUBES: ASTM A500 GRADE C. RECTANGULAR: 50 KSI: ROUND: 46 KSI. PIPES: ASTM A53 GRADE B TYPE E OR S (FY = 35 KSI)

STAINLESS STEEL (SS) BARS & PLATES: ASTM A304, FY = 30 KSI

BOLTS MAY BE USED AT THE CONTRACTOR'S OPTION.

BASEPLATES, CONNECTION PLATES, STIFFENER PLATES: ASTM A572 GRADE 50 OR ASTM A992 (FY = 50 KSI) THREADED RODS: ASTM A572 GRADE 50

ANCHOR BOLTS: ASTM F1554 GRADE 55, UNLESS NOTED OTHERWISE, WITH SUPPLEMENTARY REQUIREMENT

BOLTS, NUTS AND WASHERS: ASTM A325 TYPE 1 BOLTS (3/4" MINIMUM DIAMETER), ASTM A563 DH HEAVY HEX NUTS WITH ASTM F436 HARDENED WASHERS. PROVIDE BOLT ASSEMBLIES GALVANIZED TO ASTM A153 AT GALVANIZED STRUCTURAL MEMBERS. PROVIDE ASTM A490 BOLTS WHERE NOTED ON DRAWINGS OR WHERE NEEDED FOR

SPECIFIED LOADS. DO NOT MIX BOLT SIZES BETWEEN A325 AND A490 BOLTS. HIGH STRENGTH LOAD INDICATOR

- DESIGN OF STEEL CONNECTIONS: CONTRACTOR IS RESPONSIBLE FOR DESIGN OF ALL STEEL CONNECTIONS OR PORTIONS OF CONNECTIONS NOT FULLY DETAILED IN THE CONTRACT DOCUMENTS, FOR THE SPECIFIED CONNECTION FORCES. SEE SPECIFICATIONS FOR DESIGN REQUIREMENTS. IN NO CASE SHALL LOADS BE LESS THAN 12 KIPS (WORKING).
- 4. SUBMITTALS FOR REVIEW
 - SHOP DRAWINGS: INDICATE PROFILES, SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, DECKING, OPENINGS, ATTACHMENTS, AND FASTENERS. SHOW ALL CONNECTION DETAILS. PROVIDE DESIGN OF CONNECTIONS NOT DETAILED ON DRAWINGS. INDICATE WELDED CONNECTIONS WITH AWS A2.0 WELDING SYMBOLS. INDICATE NET WELD LENGTHS
 - EACH SHOP DRAWING SHALL BE DATED AND IDENTIFIED WITH A UNIQUE DRAWING NUMBER AND REVISION NUMBER. RESUBMITTED SHOP DRAWINGS SHALL BE GIVEN A NEW REVISION NUMBER. AND ALL CHANGES/ADDITIONS/DELETIONS FROM THE PREVIOUS SUBMISSION SHALL BE CLEARLY IDENTIFIED.
 - ERECTION DRAWINGS SHALL INCLUDE DETAILS OF ALL FIELD WELDING AND ANY OTHER SPECIAL FIELD INSTRUCTIONS SEE SPECIFICATION SECTION 05120 AND NOTES BELOW FOR ADDITIONAL REQUIREMENTS
- SUBMITTALS FOR INFORMATION

REQUIREMENTS.

- MANUFACTURER'S MILL CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED
- MILL TEST REPORTS: SUBMIT INDICATING STRUCTURAL STRENGTH, DESTRUCTIVE AND NON-DESTRUCTIVE TEST ANALYSIS.
- WELDERS CERTIFICATES: CERTIFY WELDERS EMPLOYED ON THE WORK, VERIFYING AWS QUALIFICATION WITHIN THE PREVIOUS 12 MONTHS.
- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STEEL CONSTRUCTION." 14TH EDITION. BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. AND THE STRUCTURAL WELDING CODE (AWS D1.1) LATEST EDITION, BY THE AMERICAN WELDING SOCIETY.
- STRUCTURAL STEEL CONNECTIONS SHALL BE AS FOLLOWS:
 - ALL CONNECTIONS UNLESS INDICATED OTHERWISE SHALL BE MADE WITH 3/4 INCH DIAMETER A325 BOLTS. AT MOMENT CONNECTIONS, 3/4" DIAMETER A325 BOLTS. DESIGNED AS TYPE "SC" SLIP CRITICAL CONNECTIONS, SHALL BE USED; AND THE USE OF FULLY-TENSIONED SLIP-CRITICAL BOLTS INSTALLED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" IS REQUIRED AT THE
 - **FOLLOWING LOCATIONS:**
 - BRACING CONNECTIONS CONNECTIONS CARRYING SPECIFIED AXIAL LOADS
 - COLUMN SPLICES FOR BRACING COLUMNS
 - FLANGE AND WEB BOLTS AT MOMENT CONNECTIONS AND MOMENT SPLICES
 - ALL OTHER BOLTS MAY BE BEARING BOLTS (THREADS INCLUDED) TIGHTENED TO THE SNUG-TIGHT
 - CONDITION, UNLESS NOTED OTHERWISE. THE MINIMUM NUMBER OF BOLTS IN ANY CONNECTION SHALL BE TWO 3/4 INCH DIAMETER A325 BOLTS UNLESS INDICTED OTHERWISE
 - IN CONNECTIONS OF BEAMS AND GIRDERS. THE MINIMUM NUMBER OF BOLTS SHALL BE REQUIRED TO DEVELOP THE BEAM SHEAR "V" NOTED ON THE CONTRACT DRAWINGS -, THE PLAN NOTES SHALL ALSO BE APPLIED. IF THE BEAM SHEAR IS NOT NOTED, THE CONNECTIONS SHALL DEVELOP THE BEAM SHEAR (V=2W/3) WHERE W = THE TOTAL ALLOWABLE BEAM UNIFORM LOAD BASED ON SIMPLE SPAN MOMENTS AND BRACED COMPRESSION FLANGES. (SEE AISC MANUAL OF STEEL CONSTRUCTION, BEAMS); LOADS SHOWN ARE THE SERVICE (UNFACTORED) DESIGN FORCES INDICATED ON THE DRAWINGS. ANY 1/3 ALLOWABLE STRESS
 - INCREASE MAY NOT BE TAKEN WITH THE SPECIFIED DESIGN FORCES. CONNECTIONS OF BEAM AND GIRDERS SHALL DEVELOP THE BEAM SHEAR DESCRIBED ABOVE IN ADDITION TO AXIAL FORCES LISTED ON THE STRUCTURAL DRAWINGS. (COMPRESSION OR TENSION) DO NOT USE SINGLE PLATE CONNECTIONS FOR FRAMING WITH AXIAL LOADS.
 - ALL MOMENT CONNECTIONS SHALL DEVELOP THE FULL MOMENT CAPACITY OF THE BEAM OR GIRDER,
 - THE CONNECTION FOR DIAGONAL BRACING, VERTICAL AND HORIZONTAL, SHALL DEVELOP THE FORCE INDICATED ON THE DRAWINGS BUT NOT LESS THAN 50% OF THE AXIAL CAPACITY OF THE BRACE IN TENSION
 - DESIGN CALCULATIONS, SIGNED AND SEALED BY CONTRACTOR'S PROFESSIONAL ENGINEER SHALL BE SUBMITTED FOR ALL CONNECTIONS NOT FULLY DETAILED IN THE STRUCTURAL DRAWINGS. CALCULATIONS FOR STANDARD, REPETITIVE BEAM CONNECTIONS ARE TO BE SUBMITTED IN THE FORM OF SUMMARIZED CAPACITY TABLES FOR EACH TYPE OF CONNECTION USED (DOUBLE ANGLE, SHEAR PLATE, ETC.). THE TABLES ARE TO BE ACCOMPANIED BY A DETAIL CLEARLY SHOWING THE CONNECTION GEOMETRY
 - INCLUDING THE NUMBER, SIZE, GRADE AND TYPE (BEARING OR SLIP-CRITICAL) OF BOLTS; SIZE OF BOLT HOLES; SIZE, GRADE, AND GEOMETRY OF CONNECTION ANGLES OR PLATES; SIZE AND LENGTH OF WELDS; AND MINIMUM WEB THICKNESS FOR FULL CAPACITY. COMPUTER PRINTOUTS OF DETAILED CONNECTION CHECKS FOR EACH INDIVIDUAL PIECE (AS GENERATED BY SOME DETAILING SOFTWARE) ARE NOT ACCEPTABLE FOR THE STANDARD, REPETITIVE BEAM CONNECTIONS. CALCULATIONS FOR BRACING AND OTHER NON-STANDARD CONNECTIONS SHALL INCLUDE A DETAIL
 - SHOWING THE CONNECTION GEOMETRY AND DESIGN FORCES, AND FULL CALCULATIONS DEMONSTRATING THE ADEQUACY OF THE CONNECTION. CONTRACTOR TO SUBMIT CONNECTION DETAILS AND CALCULATIONS IN ADVANCE OF PREPARING PIECE
 - DRAWINGS SO AS TO STREAMLINE THE SHOP DRAWING PREPARATION AND REVIEW PROCESS. SEE SPECIFICATION SECTION 05120 FOR ADDITIONAL REQUIREMENTS DESIGN OF STEEL CONNECTIONS FOR SHEAR SHALL INCLUDE THE EFFECTS OF ECCENTRICITY
 - CONTRACTOR SHALL PROVIDE STIFFENERS, WEB DOUBLER PLATES, AND OTHER REINFORCEMENT AS NECESSARY TO RESIST LOCAL EFFECTS DUE TO THE SPECIFIED CONNECTION LOADS. MOMENT CONNECTIONS SHALL BE DESIGNED TO DEVELOP THE FULL MOMENT CAPACITY OF THE MEMBER
 - UNLESS NOTED OTHERWISE. SINGLE-ANGLE CONNECTIONS MAY NOT BE USED FOR BEAM CONNECTIONS.
- ALL STRUCTURAL SHOP AND FIELD WELDING SHALL BE MADE WITH ELECTRODES DESIGNED BY E70XX LOW HYDROGEN, IN ACCORDANCE WITH AWS D1.1, PERFORMED BY CERTIFIED WELDERS.
- PROVIDE 3/8" WEB STIFFENERS IN BEAMS OVER OR UNDER ALL COLUMNS OR POSTS. TWO ON EACH SIDE IN LINE
- 10. THE MINIMUM THICKNESS OF GUSSET AND FIN PLATES SHALL BE 3/8".
- PROVIDE 3/4" DIAMETER SOLID FLUXED SHEAR CONNECTIONS STUDS AUTOMATICALLY END WELDED THROUGH THE METAL DECK AS INDICATED AND IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. STUDS SHALL BE 5 INCHES LONG AFTER WELDING.
- GROUT: NON-SHRINK TYPE, PRE-MIXED COMPOUND CONSISTING OF NON-METALLIC AGGREGATE CEMENT, WATER REDUCING AND PLASTICIZING ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI AT 28 DAYS AS MANUFACTURED BY FIVE STAR PRODUCTS, INC., FAIRFIELD, CT, OR APPROVED EQUIVALENT.
- SHOP AND TOUCH-UP PRIMER (DESIGN BASIS): TNEMEC SERIES 88HS. COORDINATE WITH ARCHITECTURAL
- TOUCH-UP PRIMER FOR GALVANIZED SURFACES (DESIGN BASIS): TNEMEC SERIES 90G-1K97. COORDINATE WITH ARCHITECTURAL COATINGS AND FINISHES.
- - COORDINATE ALL COATINGS WITH DIVISION 9 SPECIFICATION REQUIREMENTS WHERE INDICATED, STRUCTURAL STEEL MEMBERS ARE TO BE GALVANIZED IN ACCORDANCE WITH ASTM A123. PROVIDE MINIMUM 1.25 OZ/SQ FT GALVANIZED COATING. ALL MEMBERS EXPOSED TO THE EXTERIOR OR EXTENDING THROUGH AND BEYOND BUILDING ELEMENT SHALL BE GALVANIZED
- ALLOW FOR ERECTION LOADS, AND FOR SUFFICIENT TEMPORARY BRACING TO MAINTAIN STRUCTURE SAFE, PLUMB, AND IN TRUE ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT
- FIELD WELD COMPONENTS INDICATED ON DRAWINGS AND SHOP DRAWINGS. DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF ARCHITECT/ENGINEER. AFTER ERECTION, PRIME WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED, EXCEPT SURFACES TO BE
- GROUT UNDER BASE PLATES WITH PRE-MIXED NON-SHRINK GROUT WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 7.000 PSI

a. Roof Live Load: b. Ground Floor Live Load (live load reduction r.c. Attic Floor Live Load: 4. Roof Snow Load: a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	15 psf 15 psf Snow Load Governs 100 psf 30 psf* 68 psf 57 psf 1.0 1.0 1.2 108 mph
b. Floor Dead Load: 3. Live Loads: a. Roof Live Load: b. Ground Floor Live Load (live load reduction nown) c. Attic Floor Live Load: 4. Roof Snow Load: a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	Snow Load Governs 100 psf 30 psf* 68 psf 57 psf 1.0 1.0 1.2
 Live Loads: a. Roof Live Load: b. Ground Floor Live Load (live load reduction rec. Attic Floor Live Load: Roof Snow Load: a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure: 	Snow Load Governs 100 psf 30 psf* 68 psf 57 psf 1.0 1.0 1.2
a. Roof Live Load: b. Ground Floor Live Load (live load reduction r.c. Attic Floor Live Load: 4. Roof Snow Load: a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	not used): 100 psf 30 psf* 68 psf 57 psf 1.0 1.0
b. Ground Floor Live Load (live load reduction not.) 4. Roof Snow Load: a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	not used): 100 psf 30 psf* 68 psf 57 psf 1.0 1.0
c. Attic Floor Live Load: 4. Roof Snow Load: a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	30 psf* 68 psf 57 psf 1.0 1.0
 4. Roof Snow Load: a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure: 	68 psf 57 psf 1.0 1.0
 a. Ground Snow Load, Pg: b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ci: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure: 	57 psf 1.0 1.0 1.2
b. Flat Roof Snow Load, Pf: c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	57 psf 1.0 1.0 1.2
c. Snow Exposure Factor, Ce: d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	1.0 1.0 1.2
d. Snow Load Importance Factor, I: e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	1.0 1.2
e. Thermal Factor, Ct: 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure:	1.2
 5. Wind Design Data: a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure: 	
 a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure: 	108 mph
 a. Basic Wind Speed (3-second gust), V: b. Wind Exposure: c. Internal Pressure Coefficients: d. Components and Cladding Wind Pressure: 	108 mph
c. Internal Pressure Coefficients:d. Components and Cladding Wind Pressure:	τοο πιριτ
d. Components and Cladding Wind Pressure:	C
ε	+/- 0.18
6 Farthquake Design Data:	per ASCE 7
5. Euriquano Besigii Bata.	Not Considered
7. Allowable Soil Bearing Pressure:	2000 psf**

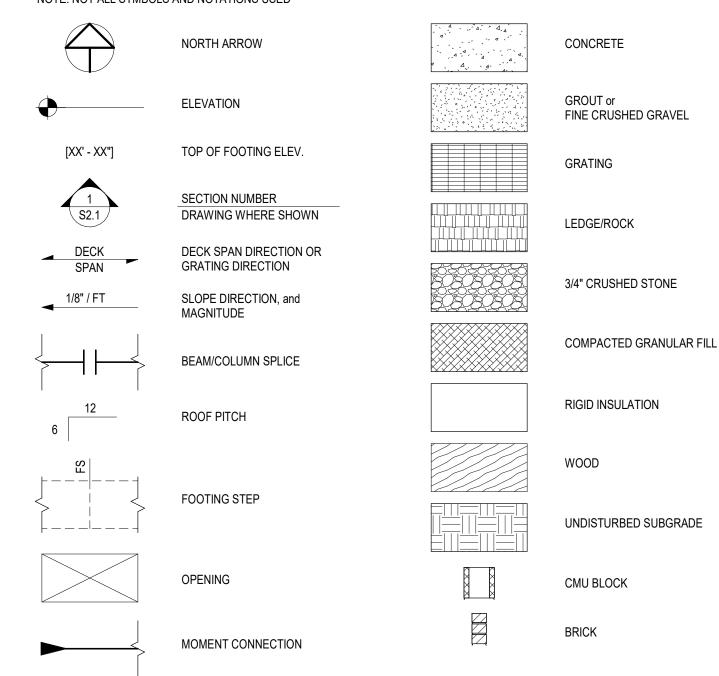
ABBREVIATIONS

AB	ANCHOR BOLT	MC	MOMENT CONNECTION
AFF	ABOVE FINISH FLOOR	N.S.	NEAR SIDE
AL	ALUMINUM	ОС	ON CENTER
B.O.F.	BOTTOM OF FOOTING	P#	PIER DESIGNATION
DWG	DRAWING	PL	PLATE
E.F.	EACH FACE	SS	STAINLESS STEEL
ELEV.	ELEVATION	STD	STANDARD
EP	EMBED PLATE	T.O.C.	TOP OF CONCRETE
EQ	EQUAL	T.O.S.	TOP OF STEEL
E.S.	EACH SIDE	T.O.SHELF	TOP OF SHELF
E.W.	EACH WAY	T.O.W.	TOP OF WALL
EX.	EXISTING	TYP.	TYPICAL
F#	FOOTING DESIGNATION	U.N.O.	UNLESS NOTED OTHERWISE
FND	FOUNDATION	V.I.F.	VERIFY IN FIELD
F.S.	FAR SIDE		
H.T.	HEAVY TIMBER		

ASSUMED - TO BE VERIFIED BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION

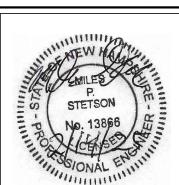
DRAWING LEGEND

NOTE: NOT ALL SYMBOLS AND NOTATIONS USED



GUARDRAIL/RAILING

BEAM PENETRATION



IGINEERING INTURES PC

Designed By: Checked By:

EV PROJECT #24169

AS NOTED

2/14/24

Drawn By:

Scale:

Date:

SPECIAL INSPECTION REQUIREMENTS

STRUCTURAL TESTS AND SPECIAL INSPECTIONS ARE REQUIRED ON THIS PROJECT FOR THE FOLLOWING PORTIONS OF CONSTRUCTION:

1. SOILS AND FOUNDATIONS 2. CAST-IN-PLACE CONCRETE

3. STRUCTURAL STEEL

4. WOOD

STRUCTURAL TESTS AND INSPECTIONS ARE TO BE PERFORMED BY THE REGISTERED DESIGN PROFESSIONAL AND/OR A QUALIFIED PERSON, COMPETANT IN THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION. THE REGISTERED DESIGN PROFESSIONALS AND SUGGESTIONS FOR TESTING AGENCIES ARE LISTED BELOW:

INSPECTION AGENT	FIRM	ADDRESS
STRUCTURAL ENGINEER OF RECORD (EV)	ENGINEERING VENTURES, PC.	208 FLYNN AVE, SUITE 2A BURLINGTON, VT 05401
ARCHITECT OF RECORD (AOR)	BARRETT ARCHITECTURE	281 THE BEND RD GREENSBORO BEND, VT 05842
TESTING AGENCY (TA)	TBD	TBD
GEOTECHNICAL ENGINEER (GE)	TBD	TBD

ITEM	FREQUENCY	AGENT	REFERNCES
VERIFICATION AND INSPECTION (APPROVED SOILS REPORT AND CONSTRUCTION DOCUMENTS SHALL BE USED TO DETERMINE COMPLIANCE)			
VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC	TA/GE	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	TA	
PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	FOR EACH SOURCE OF FILL MATERIAL	TA	SPECIFICATIONS
VERIFY USE OF PEOPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	CONTINUOUS	TA	
PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	ONCE FOR EACH AREA OF PLACEMENT	TA	
COMPACTION TESTING	EVERY OTHER LIFT, EVERY 1000 SF	TA	ASTM D2922

9. DOUBLE STUDS

10. DOUBLE TOP PLATES

DOUBLE TOP PLATES

12. RIM JOIST TO TOP PLATE

15. CEILING JOISTS TO PLATE

19. RAFTER TO PLATE

16. CONTINUOUS HEADER TO STUD

17. CEILING JOISTS, LAPS OVER PATITIONS

18. CEILING JOISTS TO PARALLEL RAFTERS

(SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)

(SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)

(SEE SECTION 2308.10.1, TABLE 2308.10.1)

20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE

22. WIDER THAN 1" x 8" SHEATHING TO EACH BEARING

21. 1" x 8" SHEATHING TO EACH BEARING

23. BUILT-UP CORNER STUDS

24. BUILT-UP GIRDER AND BEAMS

26. COLLAR TIE TO RAFTER

27. JACK RAFTER TO HIP

29. JOSIT TO BAND JOIST

30. LEDGER STRIP

28. ROOF RAFTER TO 2-by RIDGE BEAM

25. 2" PLANKS

13. TOP PLATES, LAPS AND INTERSECTIONS

14. CONTINUOUS HEADER, TWO PIECES

11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE

CAST-IN-PLACE CONCRETE

ITEM	SCOPE	FREQUENCY	REFERNCES	AGENT
MIX DESIGN	REVIEW MIX DESIGN FOR CONFORMANCE WITH SPECIFICATIONS	PRIOR TO CONSTRUCTION	ACI 318 SPECIFICATIONS	EV
MATERIAL CERTIFICATION	REVIEW SUBMITTALS FOR CONFORMANCE WITH SPECIFICATIONS	PRIOR TO CONSTRUCTION	ACI 318 SPECIFICATIONS	EV
REINFORCING INSTALLATION	REVIEW REINFORCING FOR SIZE, QUANTITY, CONDITION, AND PLACEMENT	PERIODIC	ACI 318 SPECIFICATIONS	TA
CONCRETE PLACEMENT	OBSERVE CONCRETE PLACEMENT OPERATIONS. VERIFY CONFORMANCE WITH HOT OR COLD WEATHER REQUIREMENTS. PERFORM SLUMP, DENSITY, AND AIR CONTENT TESTS AT POINT OF DISCHARGE.	PERIODIC	ACI 318 SPECIFICATIONS	TA
CURING AND PROTECTION	OBSERVE PROCEDURES FOR CONFORMANCE WITH SPECIFICATIONS	PERIODIC	ACI 318 SPECIFICATIONS	TA
EVALUATION OF CONCRETE STRENGTH	TEST (TA) AND EVALUATE (EV) FOR CONFORMANCE WITH SPECIFICATIONS	CONTINUOUS	ACI 318 SPECIFICATIONS	TA EV

STRUCTURAL STEEL

ITEM	SCOPE	FREQUENCY	REFERNCES	AGENT
FABRICATOR CERTIFICATION / QUALITY CONTROL PROCEDURES	FABRICATOR QUALITY CONTROL PROCEDURE SPECIFICATIONS AND DETAILED FABRICATION PROCEDURES	PRIOR TO CONTRUCTION	IBC SECTION 1704.2.1	EV
MATERIAL VERIFICATION OF STRUCTURAL STEEL	IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	PERIODIC	AISC 360, SECTION M5.5	TA
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS	IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	PERIODIC	AISC 360, A3.3 AND APPLICABLE ASTM STANDARDS	TA
HIGH-STRENGTH BOLTING	DETERMINATION THAT THE REQUIREMENTS FOR BOLTS, NUTS, WASHERS AND PAINT; BOLTED PARTS AND INSTALLATION AND TIGHTENTING STANDARDS ARE MET	PERIODIC	AISC 360, SECTION M2.5	TA
MATERIAL VERIFICATION OF WELD FILLER MATERIALS	IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	PERIODIC	AISC 360, SECTION A3.5, AND APPLICABLE AWS A5 DOCUMENTS	TA
WELDING	WELDING INSPECTION AND WELDING INSPECTOR QUALIFICATIONS FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AWSD1.1	PERIODIC/CONTINUOUS	AWS D1.1 AND D1.3	TA
STRUCTURAL FRAMING, DETAILS AND ASSEMBLIES	REVIEW SUBMITTALS AND SHOP DRAWINGS FOR CONFORMANCE WITH CONSTRUCTION DOCUMENTS	PRIOR TO CONTRUCTION	AISC 360, SPECIFICATION	EV

WOOD

-					
	ITEM	SCOPE	FREQUENCY	REFERNCES	AGENT
	QUALITY CONTROL	FABRICATOR QUALITY CONTROL PROCEDURE SPECIFICATIONS	PRIOR TO CONTRUCTION	IBC SECTION 1704.2	TA
	SHEAR WALL NAILING	VERIFY MATERIALS AND NAILING PATTERN	PERIODIC	IBC SECTION 1705.12.2	TA

LA9 I ENING SCHEDULE (TABLE 2304.9.1, IBC 2012) FASTENING a, m CONNECTION FASTENING a, m CONNECTION LOCATION LOCATION (3) 8d COMMON (2-1/2" x 0.131") 1/2" AND LESS 1. JOIST TO SILL OR GIRDER **TOENAIL** (3) 3" x 0.131" NAILS 2-3/8" x 0.113 NAIL n (3) 3" 14 GAGE STAPLES 1-3/4" 16 GAGE ° 31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD 19/32" TO 3/4" 8d ^d OR 6d ^e (2) 8d COMMON (2-1/2" x 0.131") SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING) b 2-3/8" x 0.113 NAIL (2) 3" x 0.131" NAÌLS 2. BRIDGING TO JOIST TOENAIL EACH END 2" 16 GAGE p (2) 3" 14 GAGE STAPLES 7/8" TO 1" 1-1/8" TO 1-1/4" 10d d OR 8d e 3. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST (2) 8d COMMON (2-1/2" x 0.131") FACE NAIL 3/4" AND LESS SINGLE FLOOR (COMBINATION SUBFLOOR-4. WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST (3) 8d COMMON (2-1/2" x 0.131") FACE NAIL 7/8" TO 1" UNDERLAYMENT TO FRAMING) 1-1/8" TO 1-1/4" 10d d OR 8d e (2) 16d COMMON (3-1/2" x 0.162") 5. 2" SUBFLOOR TO JOIST OR GIRDER BLIND AND FACE NAIL 1/2" OR LESS 32. PANEL SIDING (TO FRAMING) 6. SOLE PLATE TO JOIST OR BLOCKING 16d (3-1/2" x 0.135") AT 16"oc 3" x 0.131" NAILS AT 8"oc TYPICAL FACE NAIL 1/2" No. 11 GAGE ROOFING NAIL h 3" 14 GAGE STAPLES AT 12"oc 6d COMMON NAIL (2" x 0.113") No. 16 GAGE STAPLE i (3) 16d (3-1/2" x 0.135") AT 16"oc 33. FIBERBOARD SHEATHING 9 SOLE PLATE TO JOIST OR BLOCKING AT BRACED 25/32" No. 11 GAGE ROOFING NAIL h (4) 3" x 0.131" NAILS AT 16"oc **BRACE WALL PANELS** WALL PANEL 8d COMMON NAIL (2-1/2" x 0.113") (4) 3" 14 GAGE STAPLES AT 16"oc No. 16 GAGE STAPLE i (2) 16d COMMON (3-1/2" x 0.162") 1/4" 7. TOP PLATE TO STUD (3) 3" x 0.131" NAILS END NAIL 34. INTERIOR PANELING (3) 3" 14 GAGE STAPLES FOR SI: 1" = 25.4 mm (4) 8d COMMON (2-1/2" x 0.131") COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED. (4) 3" x 0.131" NAÌLS **TOENAIL** NAILS SPACED AT 6" ON CENTER AT PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6" AT SUPPORTS WHERE SPANS (3) 3" 14 GAGE STAPLES ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCURAL PANEL AND PARTICLEBOARD DIAPHARAGMS AND SHEAR WALLS, REFER 8. STUD TO SOLE PLATE TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING. (2) 16d COMMON (3-1/2" x 0.162") COMMON OR DEFORMED SHANK (6d - 2" x 0.113"; 8d - 2-1/2" x 0.131"; 10d - 3" x 0.148"). (3) 3" x 0.131" NAILS **END NAIL** COMMON (6d - 2" x 0.113"; 8d - 2-1/2" x 0.131"; 10d - 3" x 0.148"). (3) 3" 14 GAGE STAPLES DEFORMED SHANK (6d - 2" x 0.113"; 8d - 2-1/2" x 0.131"; 10d - 3" x 0.148"). CORROSION-RESISTANT SIDING (6d - 1-7/8" x 0.106"; 8d - 2-3/8" x 0.128") OR CASING (6d - 2" x 0.099"; 8d - 2-1/2" x 0.113"). 16d (3-1/2" x 0.135") AT 24"oc

FACE NAIL

LAP SPLICE

TOENAIL

TOENAIL

FACE NAIL

TOENAIL

TOENAIL

FACE NAIL

FACE NAIL

TOENAIL

FACE NAIL

FACE NAIL

FACE NAIL

16"oc

16"oc

FACE NAIL AT TOP AND **BOTTOM STAGGERED ON**

FACE NAIL NAIL AT ENDS

AND AT EACH SPLICE

AT EACH BEARING

FACE NAIL

TOENAILS

FACE NAIL

TOENAILS

FACE NAIL

FACE NAIL

FACE NAIL AT EACH JOIST

OPPOSITE SIDES

16"oc ALONG EDGE

TYPICAL FACE NAIL

3" x 0.131" NAIL AT 8"oc

3" 14 GAGE STAPLE AT 8"oc

16d (3-1/2" x 0.135") AT 16"oc

3" 14 GAGE STAPLE AT 12"oc

(8) 16d COMMON (3-1/2" x 0.162")

(3) 8d COMMON (2-1/2" x 0.131") AT 24"oc

3" x 0.131" NAIL AT 12"oc

(12) 3" x 0.131" NAÌLS

(3) 3" x 0.131" NAÌLS

(3) 3" 14 GAGE STAPLES

8d (2-1/2" x 0.131") AT 6"oc

(2) 16d COMMON (3-1/2" x 0.162")

16d COMMON (3-1/2" x 0.162")

(3) 8d COMMON (2-1/2" x 0.131")

(4) 8d COMMON (2-1/2" x 0.131")

(3) 8d COMMON (2-1/2" x 0.131")

(2) 8d COMMON (2-1/2" x 0.131")

(3) 8d COMMON (2-1/2" x 0.131")

(3) 8d COMMON (2-1/2" x 0.131")

16d COMMON (3-1/2" x 0.162")

20d COMMON (4" x 0.192") AT 32"oc

(2) 20d COMMON (4" x 0.192")

16d COMMON (3-1/2" x 0.162")

(3) 10d COMMON (3" x 0.148")

(3) 10d COMMON (3" x 0.148")

(2) 16d COMMON (3-1/2" x 0.162")

(2) 16d COMMON (3-1/2" x 0.162")

(2) 16d COMMON (3-1/2" x 0.162")

(3) 16d COMMON (3-1/2" x 0.162")

(3) 16d COMMON (3-1/2" x 0.162")

(3) 16d COMMON (3-1/2" x 0.162") MINIMUM,

(3) 16d COMMON (3-1/2" x 0.162") MINIMUM,

3" x 0.131" NAIL 6"oc 3" 14 GAGE STAPLE AT 6"oc

(3) 3" x 0.131" NAILS

(5) 3" x 0.131" NAÌLS

TABLE 2308.10.4.1

TABLE 2308.10.4.1

(4) 3" x 0.131" NAILS (4) 3" 14 GAGE STAPLES

(3) 3" x 0.131" NAÌLS

(2) 3" x 0.131" NAÌLS

3" x 0.131" NAILS

3" x 0.131" NAILS 3" 14 GAGE STAPLES

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(4) 3" x 0.131" NAILS

(3) 3" 14 GAGE STAPLES

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(3) 3" 14 GAGE STAPLES

3" 14 GAGE STAPLES

(3) 3" 14 GAGE STAPLES

(3) 3" 14 GAGE STAPLES

(4) 3" x 0 131" NAII S (4) 3" 14 GAGE STAPLES

(5) 3" 14 GAGE STAPLES

(3) 3" 14 GAGE STAPLES

(12) 3" 14 GAGE STAPLES

FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.

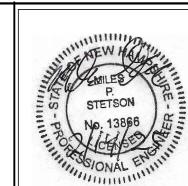
CORROSION-RESISTANT ROOFING NAILS WITH 7/16-INCH-DIAMETER HEAD AND 1-1/2-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1-3/4-INCH LENGTH FOR 25/32-INCH SHEATHING. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16-INCH CROWN OR 1-INCH CROWN AND 1-1/4-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1-1/2-INCH LENGTH FOR 25/32-INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG

DIRECTION OF THE PANEL, UNLESS NOTED OTHERWISE). CASING (1-1/2" x 0.080") OR FINISH (1-1/2" x 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.

FOR ROOF SHEATHING APPLICATIONS, 8d NAILS (2-1/2" x 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.

FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8" AT INTERMEDIATE SUPPORTS. FASTENERS SPACED AT 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.

FASTENERS SPACED AT 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



W. W	

ENGINEERING VENTURES PC

	STRUCTURAL NC SPECIAL INSPEC	CENTER ANNEX RE
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Designed By:	MS/IP
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Drawn By:	IP
Scale:	AS NOTED
Date:	2/14/24

EV PROJECT #24169

TABLE 1. CONCRETE MIXTURES								
CONCRETE USAGE	MIN. COMPRESSIVE STRENGTH (f'c)	CONCRETE TYPE	EXPOSURE CLASSES	MAX. W/CM RATIO	PERMISSIBLE AIR CONTENT	REQUIRED CEMENT REPLACEMENT	MAX. AGGREGATE SIZE	ADDITIONAL REMARKS
COMBINED FOOTINGS, CONTINUOUS FOOTINGS, SPREAD FOOTINGS	3,000 psi AT 56 DAYS	NWC	C0, F0	N/A	N/A	0 - 70%	3/4"	
FOUNDATION WALLS, COLUMNS AND PIERS	4,000 psi AT 28 DAYS	NWC	C1, F1	0.45	4.5% ±1.5%	0 - 50%	3/4"	
INTERIOR SLAB-ON-GRADE	4,000 psi AT 28 DAYS	NWC	C0, F0	0.50	N/A	0 - 50%	3/4"	
EXTERIOR SLAB-ON-GRADE	5,000 psi AT 56 DAYS	NWC	C2, F2	0.40	5.5% ±1.5%	15 - 25%	3/4"	

- NOTES:

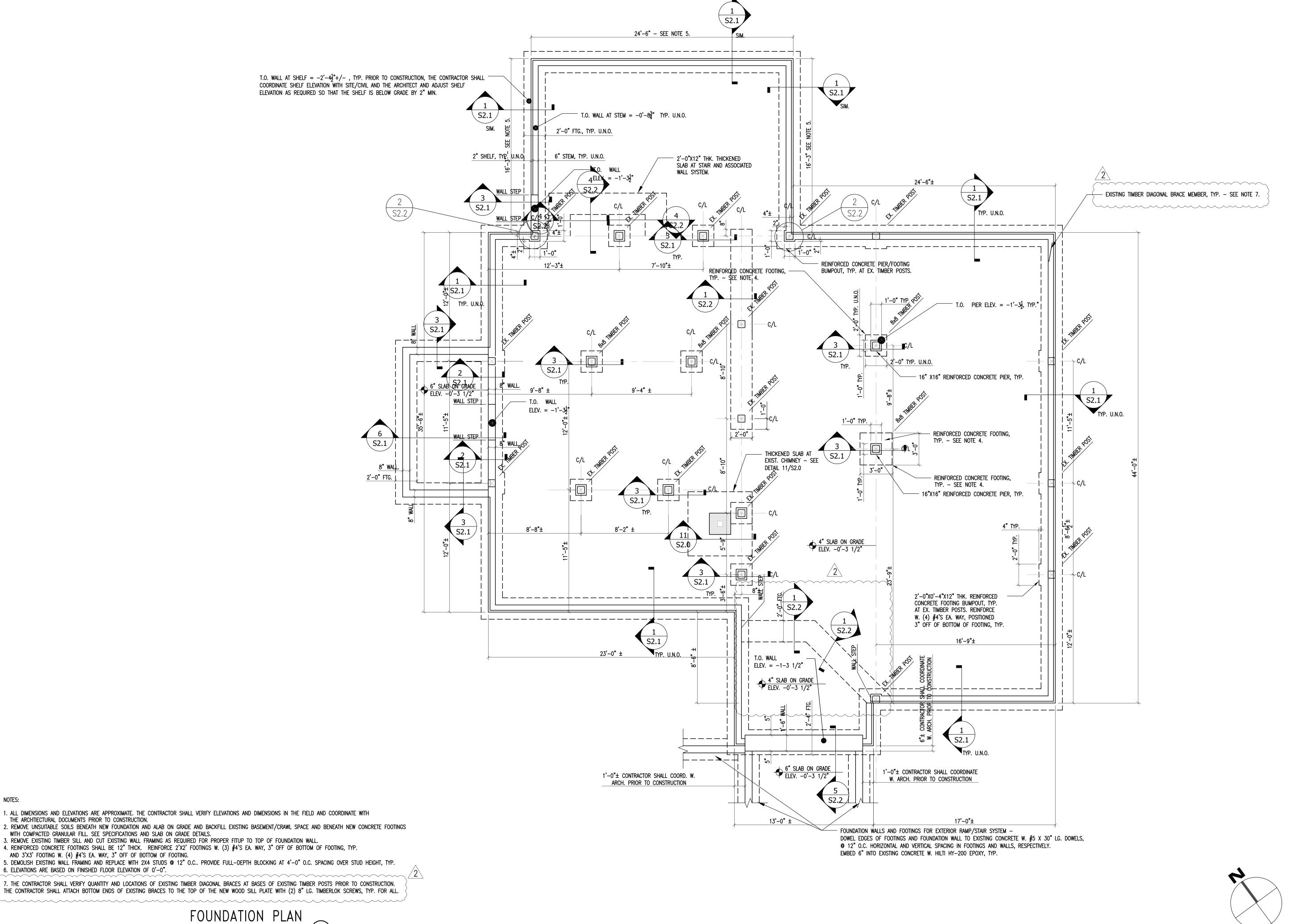
 ALL CONCRETE SHALL BE CONSIDERED TO BE IN EXPOSURE CLASS F0, S0, P0 AND C0 ACCORDING TO ACI 318-08 UNLESS NOTED OTHERWISE IN TABLE ABOVE, IN NOTES BELOW OR ELSEWHERE ON THE STRUCTURAL
- CONCRETE NOTED ABOVE OR ON PLAN AS EXPOSURE CLASS F1, F2, S1, S2, S3, P1, C1 OR C2 SHALL BE PROPORTIONED TO COMPLY WITH ACI 318-08 TABLES 4.3.1, 4.4.1 AND 4.4.2 IN ADDITION TO THE NOTATIONS IN THE REQUIREMENTS FOR VARIOUS EXPOSURE CLASSES RELATIVE TO CEMENT TYPE, AIR ENTRAINMENT REQUIREMENTS, CHLORIDE ION LIMITS AND POZZOLAN LIMITS.
- FOR SLAB, COORDINATE AND PROVIDE MIX DESIGNS MEETING MAXIMUM CEMENT CONTENT FOR AGGREGATE SIZE TO COMPLY WITH TABLE 8.4.1B OF ACI 302-15. WHERE INDICATED IN THE "ADDITIONAL REMARKS" ABOVE, CONCRETE SHALL BE PROPORTIONED FOR A MAXIMUM ALLOWABLE UNIT SHRINKAGE OF 0.035% MEASURED 28 DAYS AFTER CURING IN LIME WAS AS
- DETERMINED BY ASTM C157, USING AIR STORAGE.
- WALLS AND PIERS THAT ARE LOCATED EXTERIOR TO THE BUILDING FOOTPRINT AND EXTEND ABOVE THE FROST LINE ARE EXPOSURE CLASS C1 AND F1 AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,500 psi AT 28 DAYS, HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.45 AND HAVE A MINIMUM 4.5% AIR ENTRAINMENT.

BEARING WALL SCHEDULE							
PLAN MARK	DESCRIPTION						
BW1	2x6 AT 16"oc						
BW2	2x6 AT 12"oc						
BW3	2x4 AT 12"oc						

STUDS SHALL ALIGN WITH FRAMING ABOVE AND BELOW.

BEARING WALLS SHALL BE BLOCKED AT 4'-0" O.C. U.N.O. ALL BEARING WALLS TO BE TYPE BW1, U.N.O.

ALL BEARING WALLS TO HAVE (2) 2X TOP PLATE, U.N.O. WOOD IN CONTACT W/CONCRETE TO BE P.T.

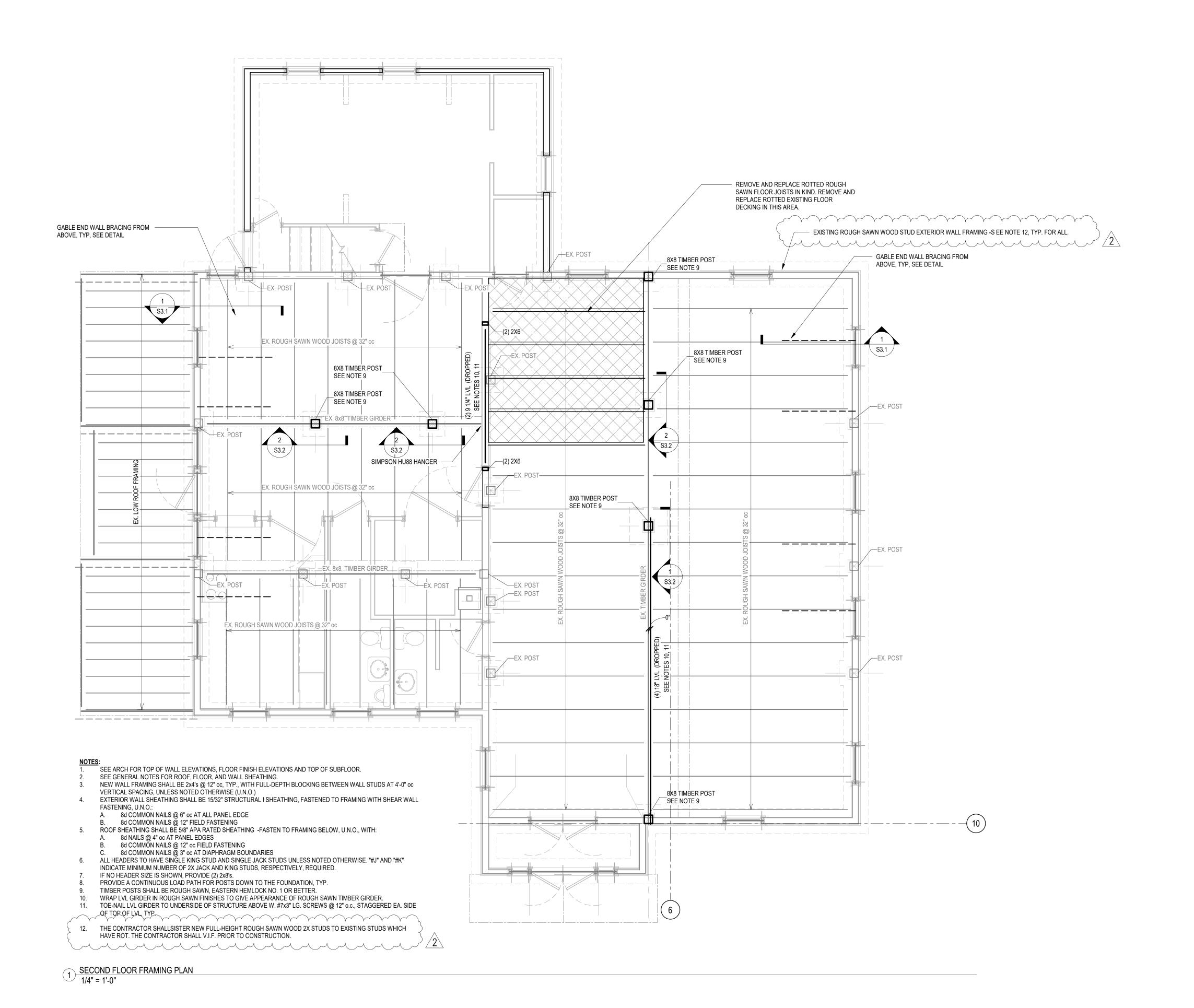


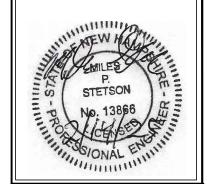
NOTES:

THE ARCHTIECTURAL DOCUMENTS PRIOR TO CONSTRUCTION.

6. ELEVATIONS ARE BASED ON FINISHED FLOOR ELEVATION OF 0'-0".

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1 7/28/25 COORDINATED REVISIONS
2 8/28/25 DESIGN UPDATES

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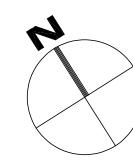
BARRETT ARCHITECTURE 281 THE BEND RD. GREENSBORO BEND, VT 05842

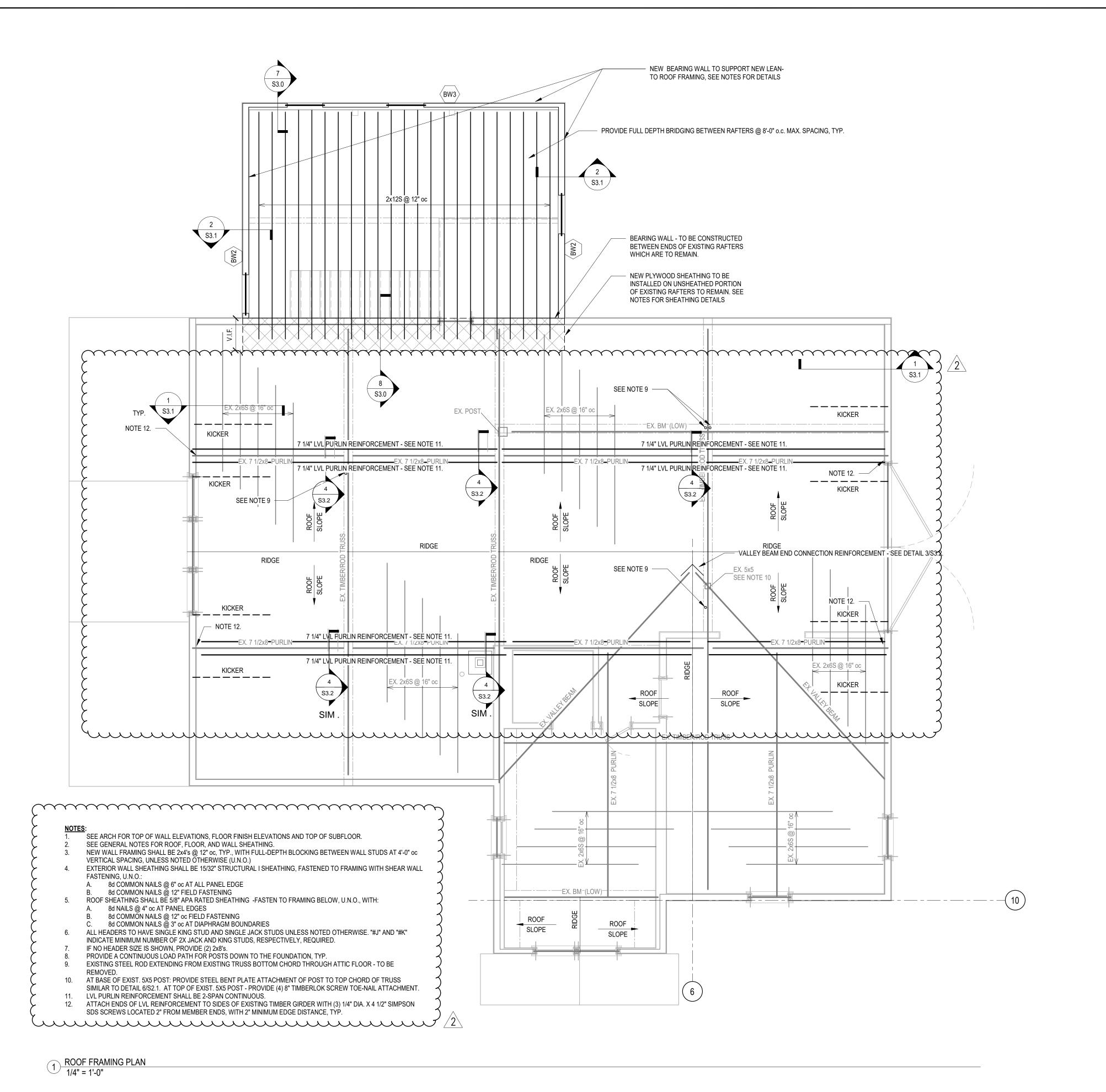
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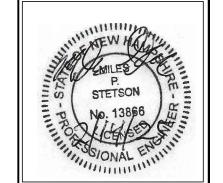
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Date: 2/14/24

S1.1 EV PROJECT #24169







ev. No. Description Chkd.

1 7/28/25 COORDINATED REVISIONS
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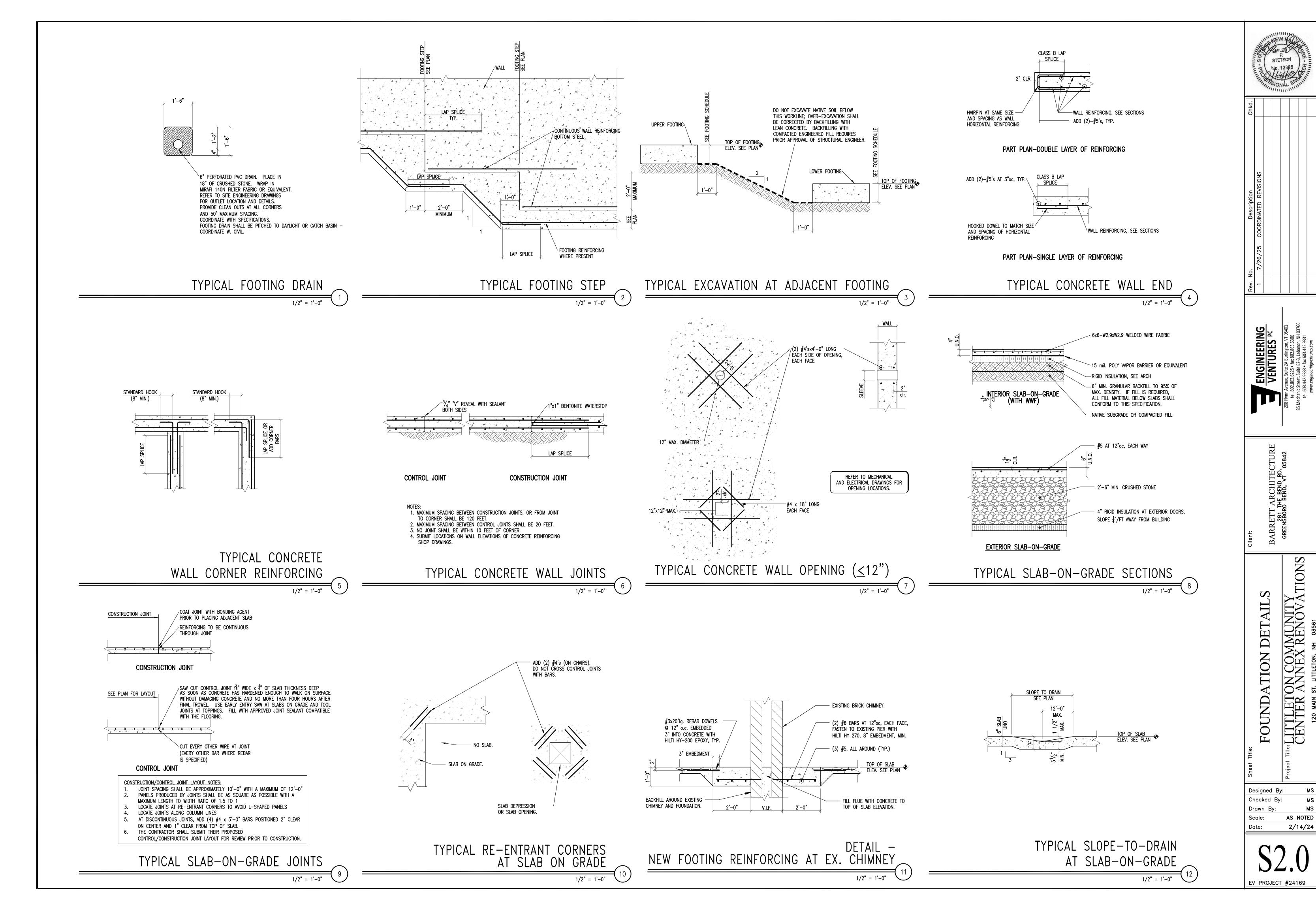
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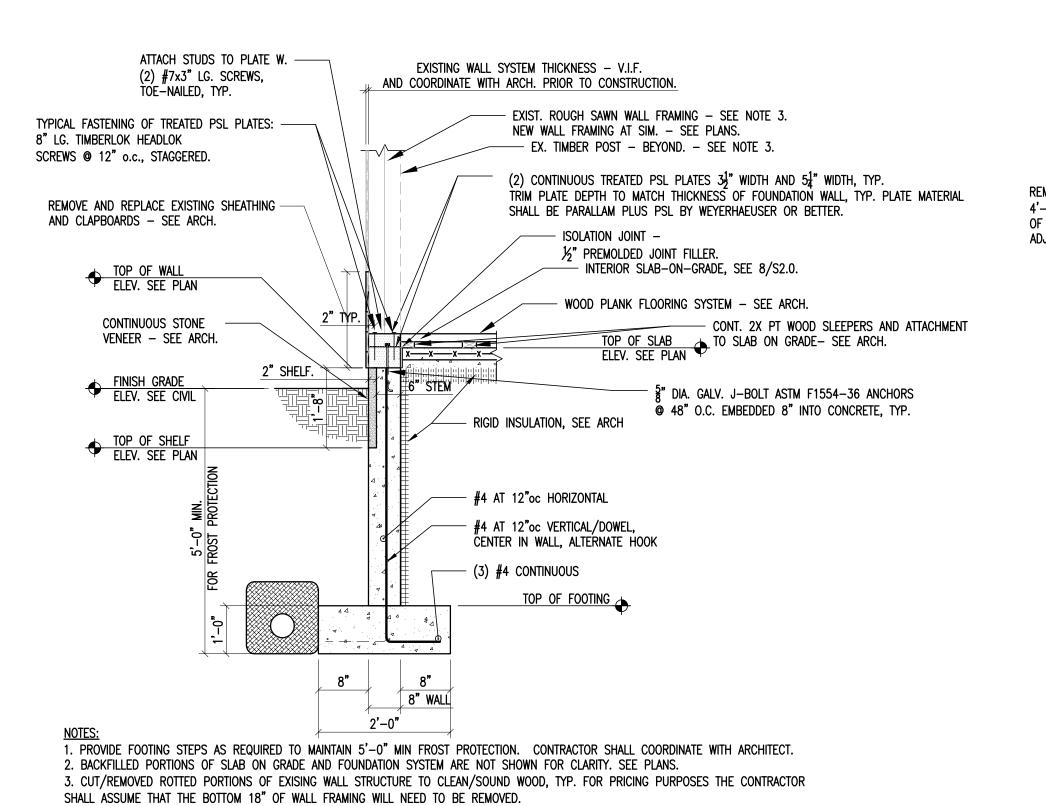
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Project Title: LITTLETON

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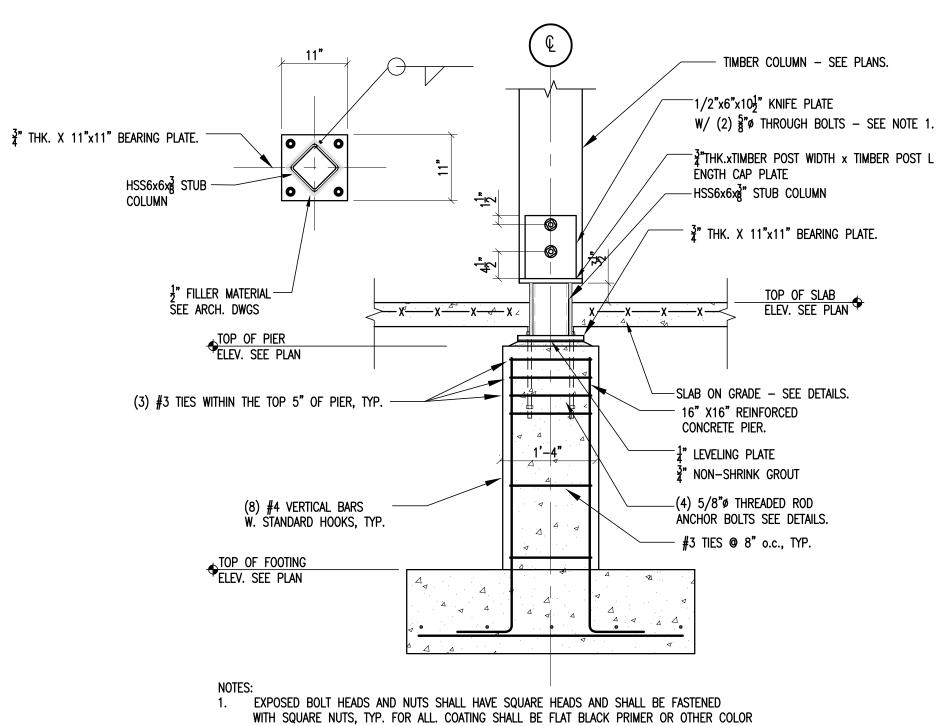
EV PROJECT #24169





TYPICAL FOUNDATION WALL SECTION

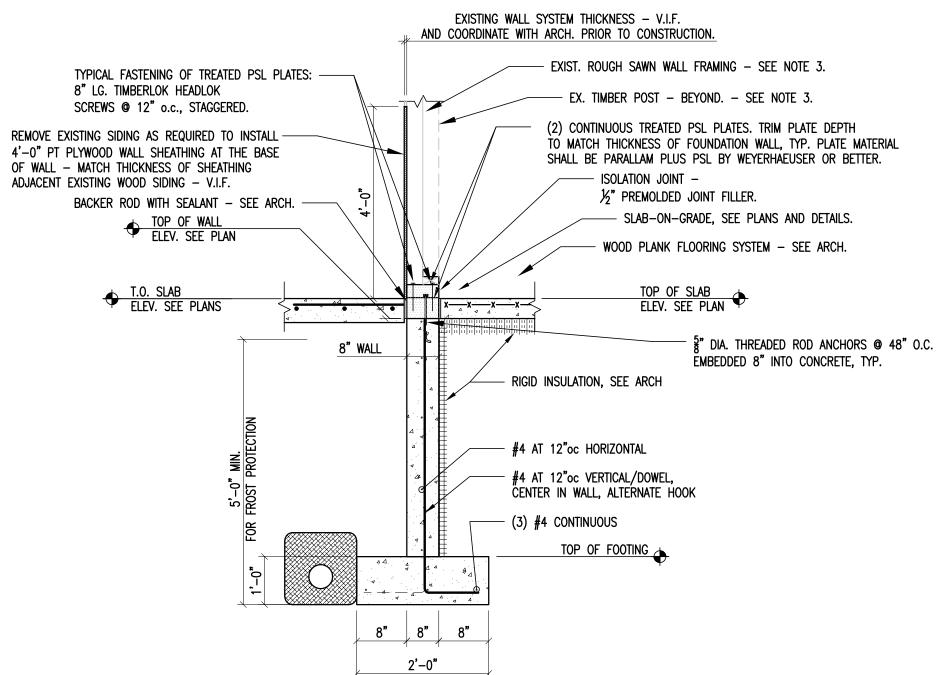
1/2" = 1'-0"



SPECIFIED BY THE ARCHITECT, TYP 2. HSS STUB COLUMN/PLATE ASSEMBLIES SHALL BE HOT DIP GALVANIZED.

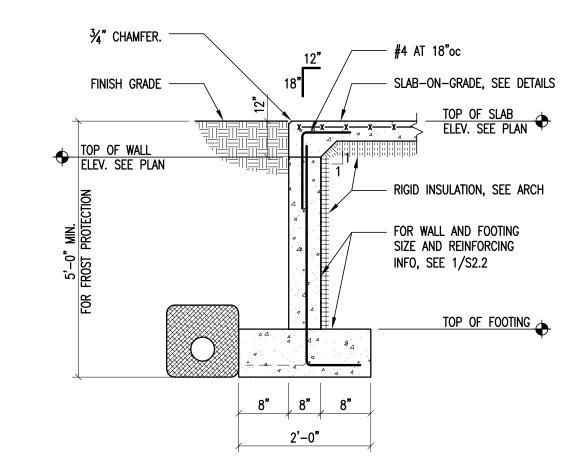
TYPICAL REINFORCED CONCRETE PIER AT TIMBER COLUMNS

3/4" = 1'-0"



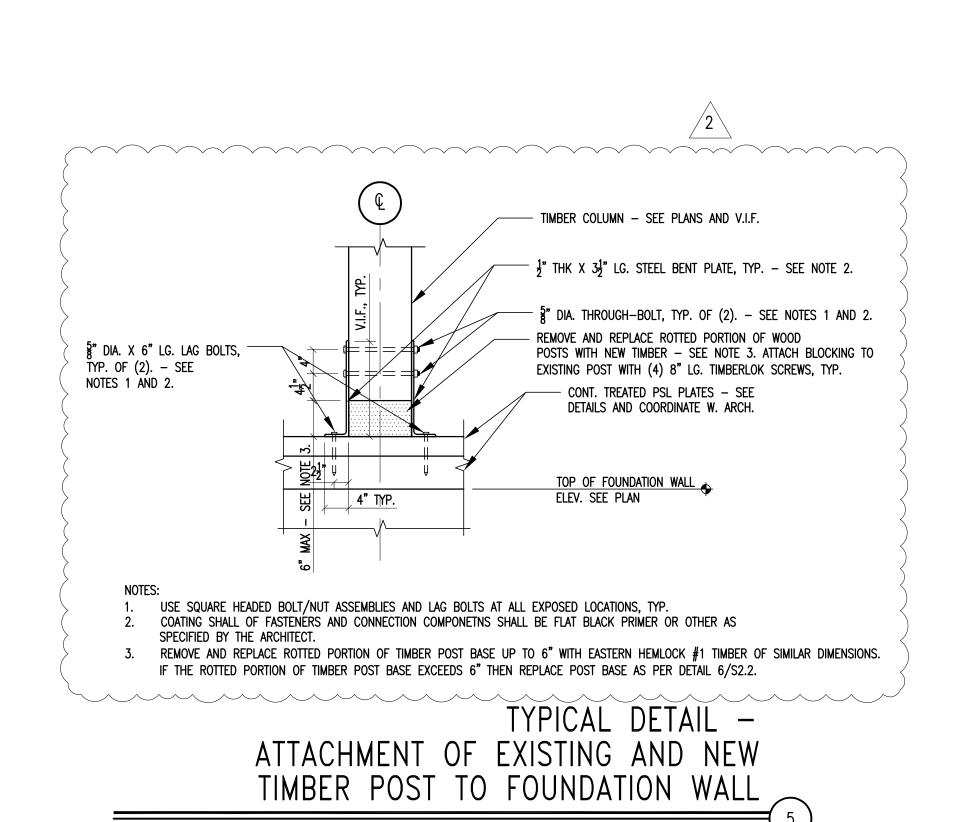
1. PROVIDE FOOTING STEPS AS REQUIRED TO MAINTAIN 5'-0" MIN FROST PROTECTION. CONTRACTOR SHALL COORDINATE WITH ARCHITECT. 2. BACKFILLED PORTIONS OF SLAB ON GRADE AND FOUNDATION SYSTEM ARE NOT SHOWN FOR CLARITY. SEE PLANS. 3. CUT/REMOVED ROTTED PORTIONS OF EXISING WALL STRUCTURE TO CLEAN/SOUND WOOD, TYP. FOR PRICING PURPOSES THE CONTRACTOR SHALL ASSUME THAT THE BOTTOM 18" OF WALL FRAMING WILL NEED TO BE REMOVED.

TYPICAL FOUNDATION WALL SECTION ADJACENT TO DOOR OPENING

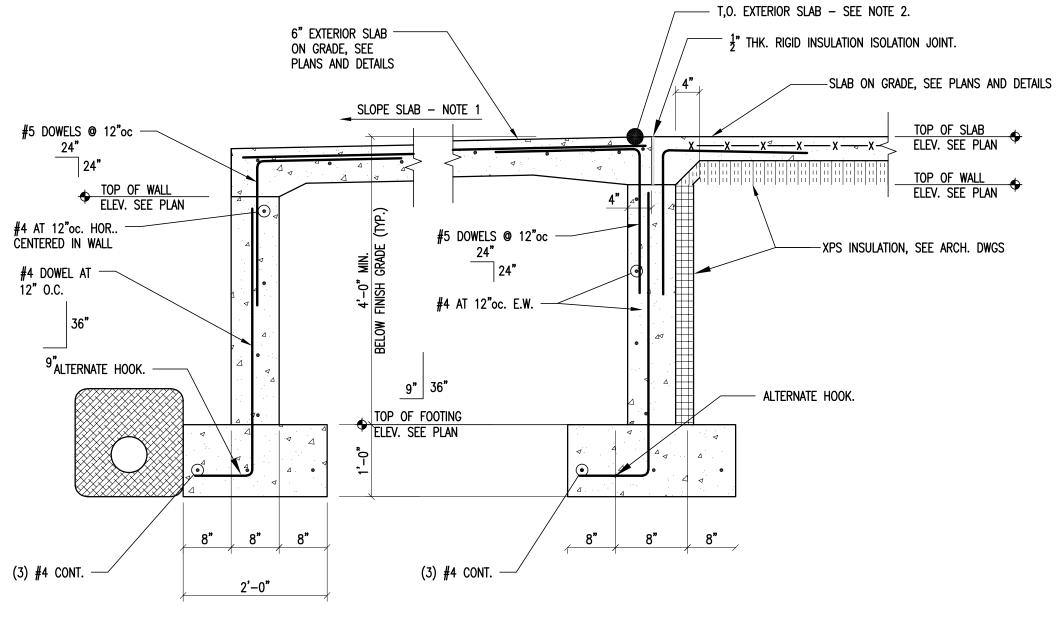


1. PROVIDE FOOTING STEPS AS REQUIRED TO MAINTAIN 5'-0" MIN FROST PROTECTION. CONTRACTOR SHALL COORDINATE WITH ARCHITECT. 2. BACKFILLED PORTIONS OF SLAB ON GRADE AND FOUNDATION SYSTEM ARE NOT SHOWN FOR CLARITY. SEE PLANS.

1/2" = 1'-0"



3/4" = 1'-0"



THE CONTRACTOR SHALL COORDINATE SLAB SLOPING REQUIREMENTS WITH THE ARCHITECTURAL AND CIVIL DRAWINGS PRIOR TO CONSTRUCTION. T.O. 6"THK. EXTERIOR/VESTIBULE SLAB = FLUSH WITH T.O. BRICK AT TOP OF CONCRETE RAMP T.O. 6" THK. EXTERIOR/VESTIBULE SLAB = $-0'-3\frac{1}{2}$ " IN AREAS WHERE BRICK IS TO BE INSTALLED.

3/4" = 1'-0"

DETAIL

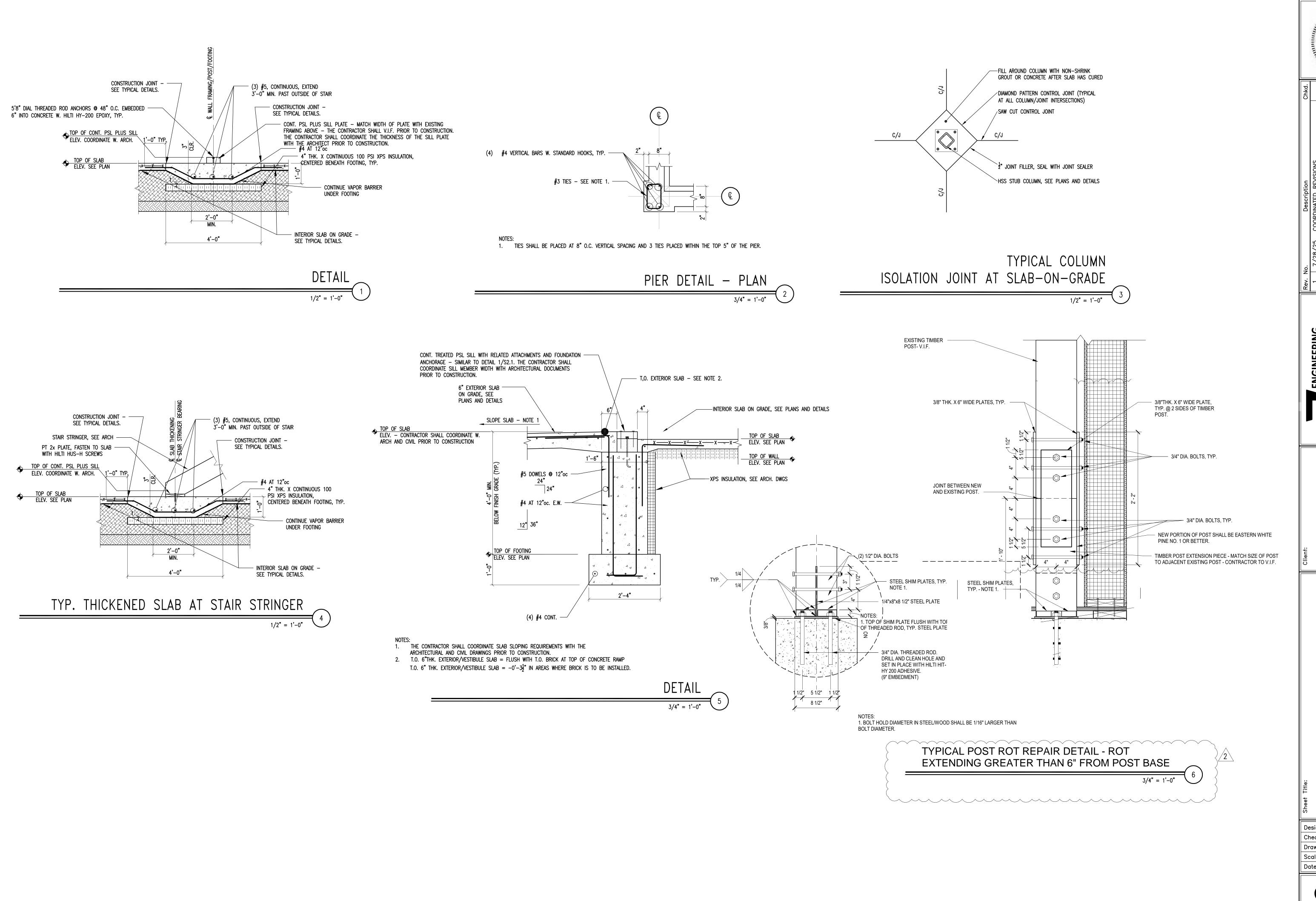
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No.	7/26/25	8/8/25			
Rev. No.	-	2			

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BARRETT ARCHITE(281 THE BEND RD. GREENSBORO BEND, VT

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1 7/28/25 COORDINATED REVISIONS

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208 Flynn Avenue, Suite 2A Burlington, VT 05401
tel. 802.863.6225 • fax 802.863.6306
85 Mechanic Street, Suite E2-3, Lebanon, NH 03766
tel. 603.442.9333 • fax 603.442.9331
www.engineeringventures.com

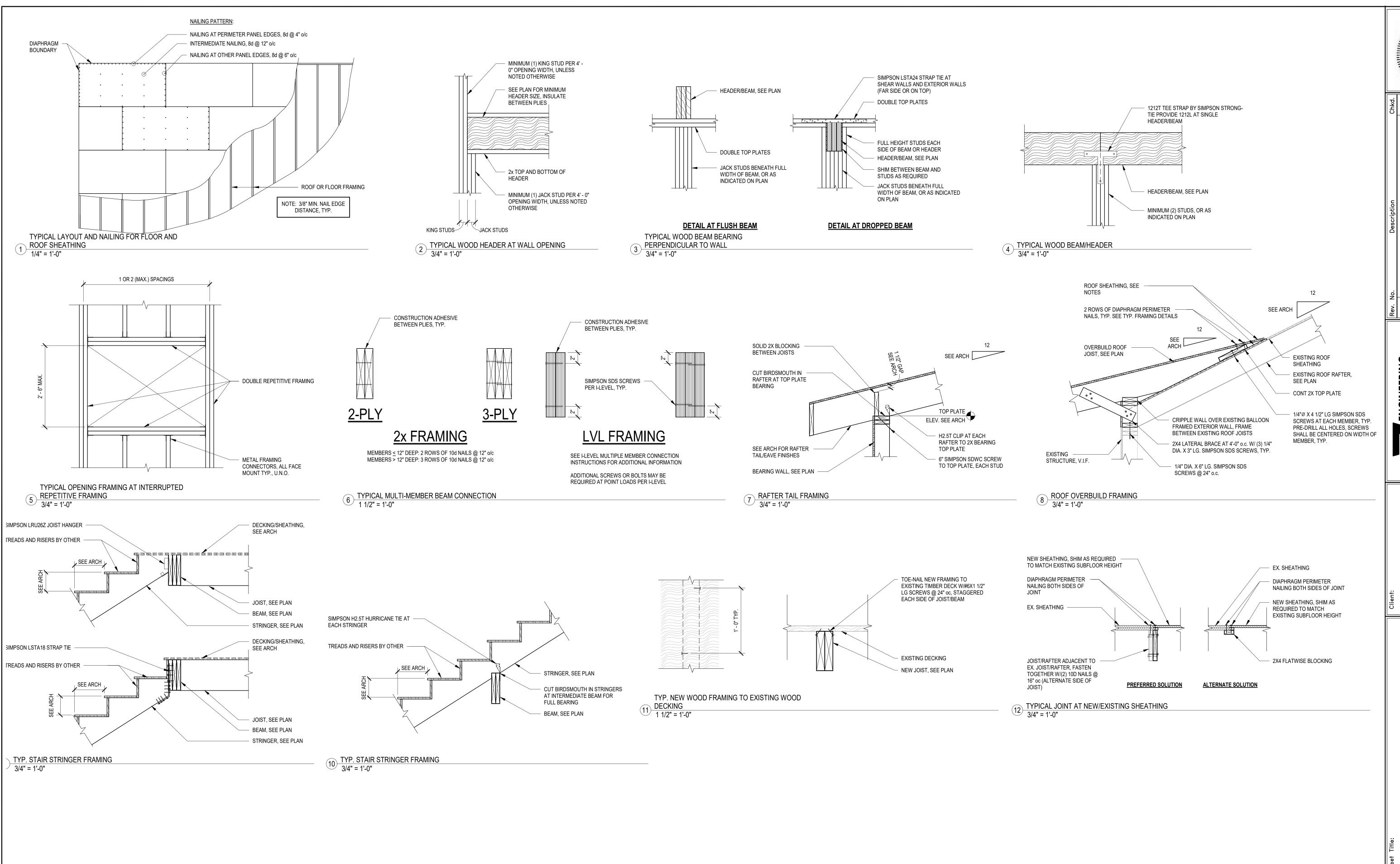
BARRETT ARCHITECTURE 281 THE BEND RD. GREENSBORO BEND, VT 05842

FOUNDATION DETAILS

SELITTLETON COMMUNITY
CENTER ANNEX RENOVATION

Designed By: MS
Checked By: MS
Drawn By: MS
Scale: AS NOTED
Date: 2/14/24

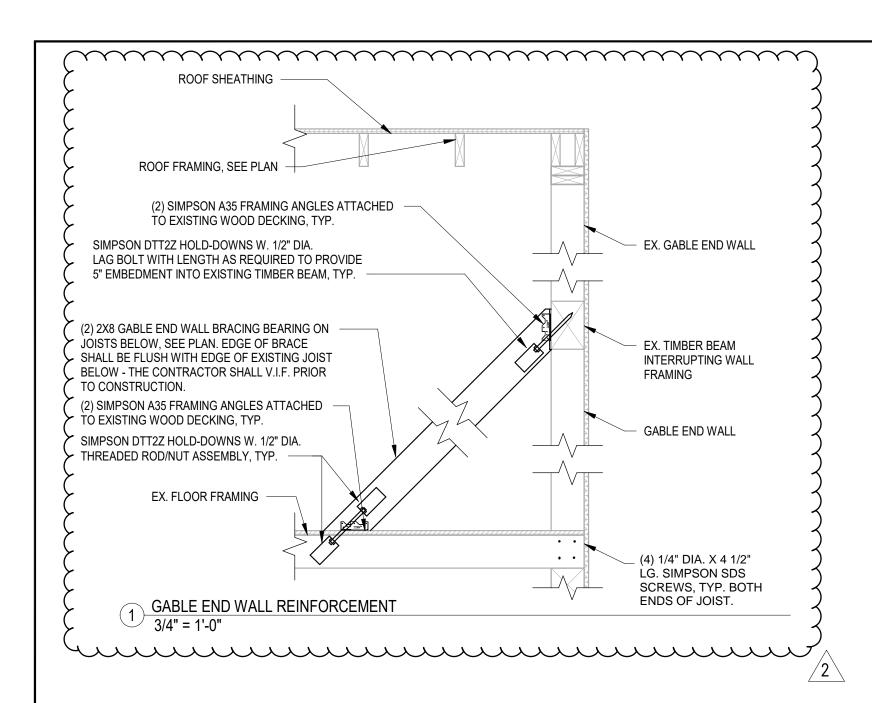
S2.2 EV PROJECT #24169

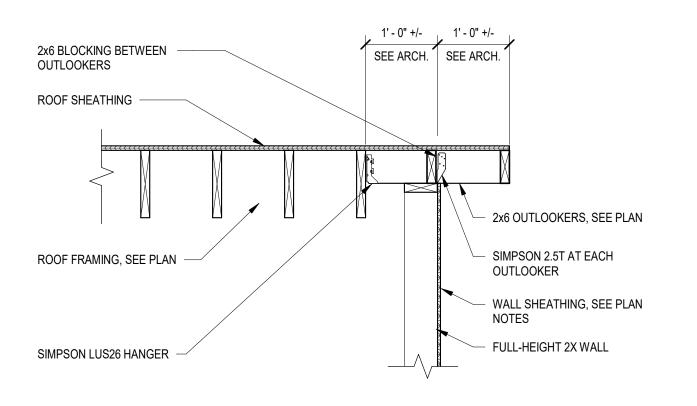


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DET FRAMING YPIC,

Designed By: Checked By: Drawn By: AS NOTED Scale: 2/14/24 Date:





2 TYPICAL OUTLOOKER FRAMING
3/4" = 1'-0"



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Chkd.							
Description							
Desc							
No.							
Rev. No.							

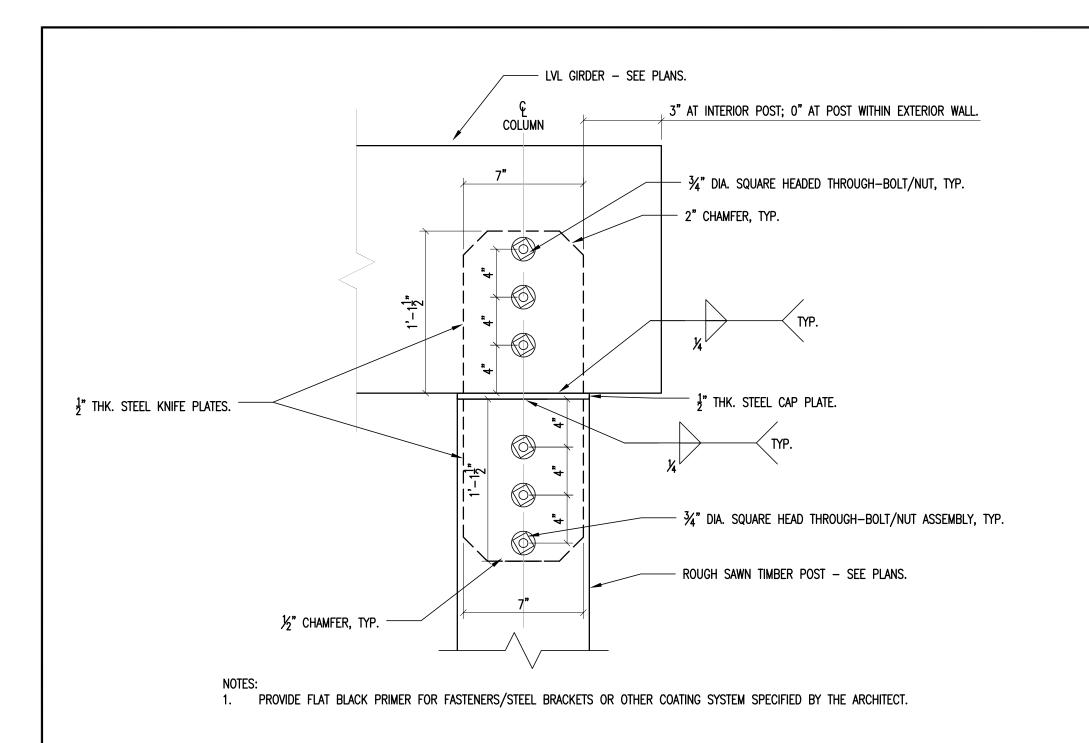
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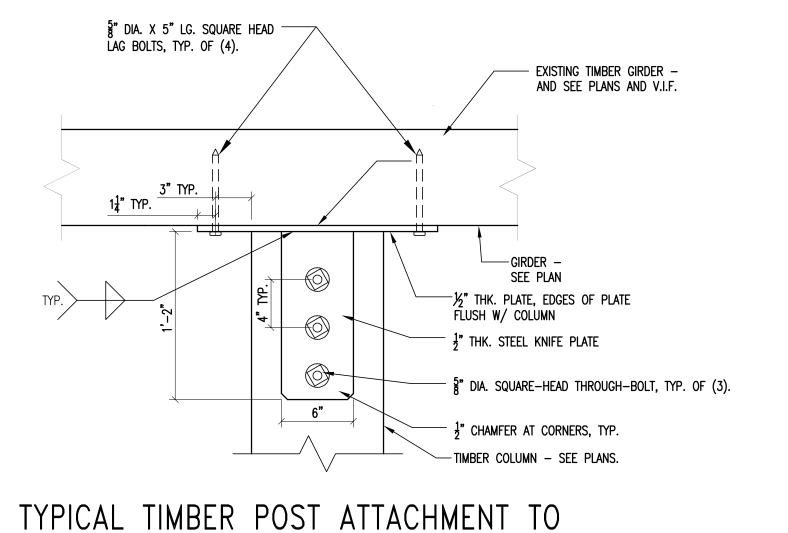
BARRETT ARCHITECTURE
281 THE BEND RD.
GREENSBORO BEND, VT 05842

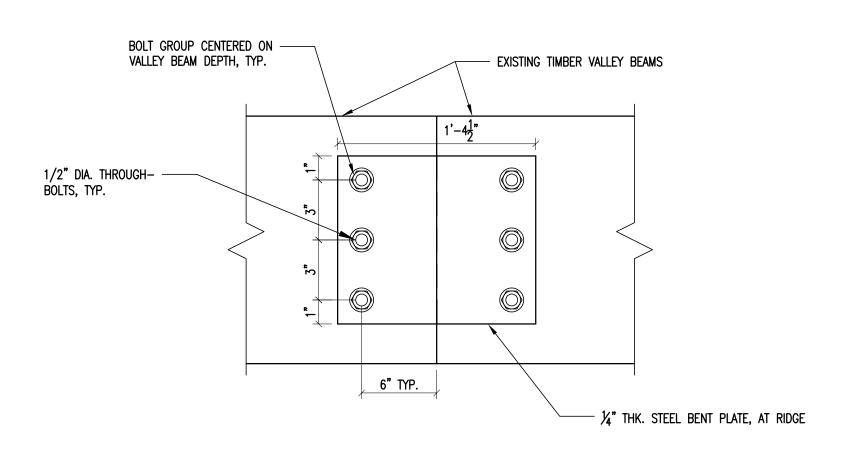
FRAMING DETAILS
LITTLETON COMMUNITY
CENTER ANNEX RENOVATIONS

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Drawn By: MS
Scale: AS NOTED
Date: 2/14/24

S3.1
EV PROJECT #24169







VALLEY BEAM END CONNECTION REINFORCEMENT DETAIL

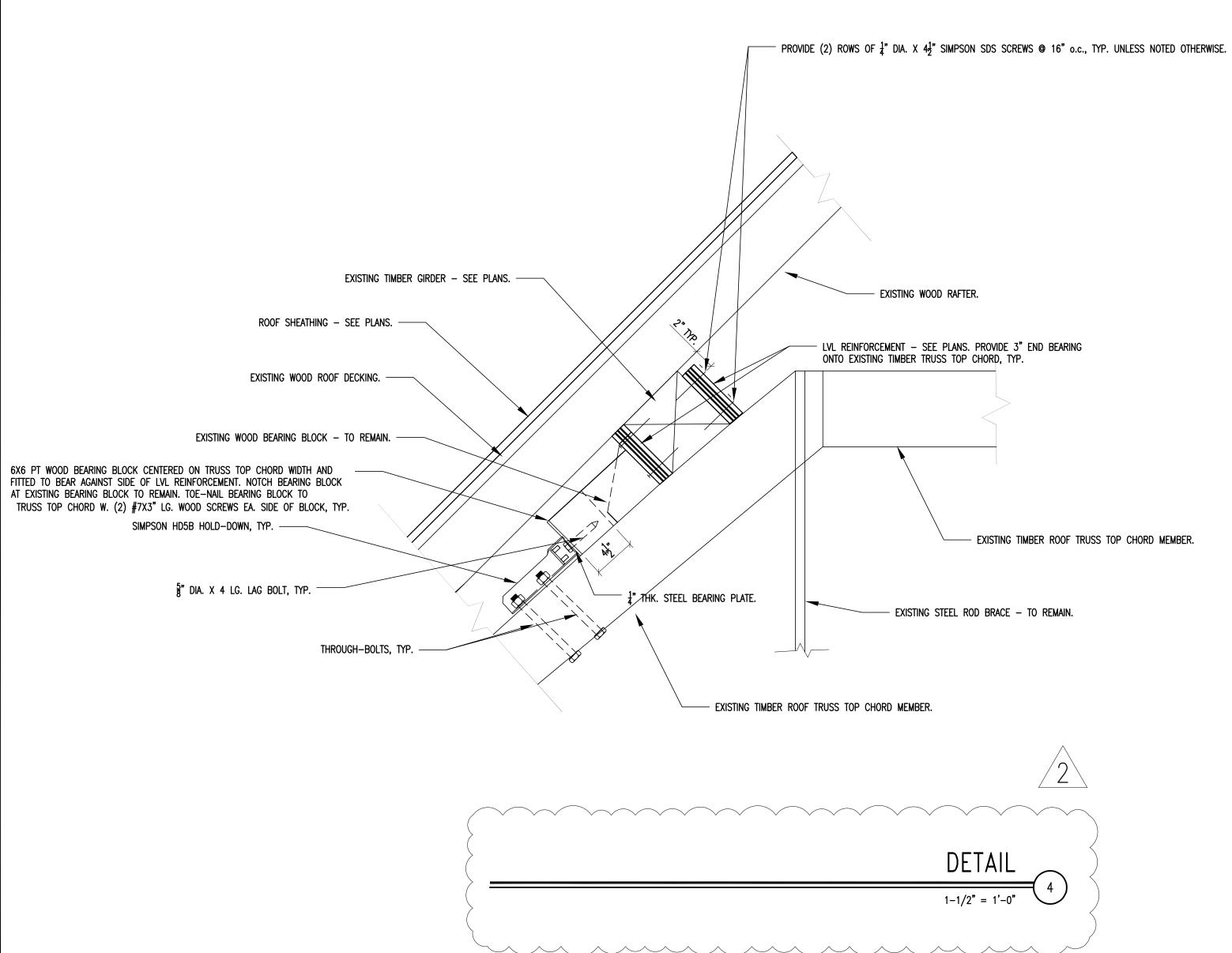
1-1/2" = 1'-0"

TIMBER GIRDER ATTACHMENT TO TIMBER POST

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

EXISTING TIMBER GIRDER.

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





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STRUCTURAL DETAILS

LITTLETON COMMUNITY
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S3.2
EV PROJECT #24169