

STRUCTURAL NOTES

GENERAL

1. THIS PROJECT SHALL MEET ALL REQUIREMENTS OF THE ATHENS, GEORGIA AND THE 2018 INTERNATIONAL BUILDING CODE WITH GEORGIA AMENDMENTS.
2. THE GENERAL CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL OPENINGS (COORDINATE WITH APPLICABLE TRADES). THE CONTRACTOR SHALL PROVIDE FOR ALL OPENINGS, WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT. ANY DEVIATION FROM OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO CONSTRUCTION.
3. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR INCONSISTENCIES BEFORE PROCEEDING WITH THE WORK.
4. COMPLETE SHOP DRAWINGS AS REQUIRED FOR THE STRUCTURAL WORK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF CONSTRUCTION IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH REVIEW BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR CORRECT FABRICATION AND CONSTRUCTION OF THE WORK. ALLOW TEN (10) BUSINESS DAYS FOR REVIEW FROM THE TIME SUBMITTALS ARE RECEIVED IN OUR OFFICE.
5. ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO THE STRUCTURE OR ANY PART OF THE STRUCTURE DETAILED ON THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN-WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.
6. THE STRUCTURAL DRAWINGS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS, OR FIT OF MATERIALS.
7. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS DURING CONSTRUCTION.

SPECIAL INSPECTION

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION:
(REFERENCE SO.1 FOR ADDITIONAL INFORMATION.)

1. SOILS AND FOUNDATIONS
2. CAST-IN-PLACE CONCRETE
3. POST INSTALLED CONCRETE ANCHORS

DESIGN LOADS

1. ROOF LIVE LOAD 20 PSF
2. ROOF DEAD LOAD 20 PSF
3. WIND LOAD BASED ON ASCE 7-16
 $V_{ULT} = 110$ MPH
 $V_{ASD} = 85$ MPH
RISK CATEGORY: II
EXPOSURE CATEGORY: C
 $I_w = 1.0$
INTERNAL PRESSURE COEFFICIENT $GC_p: \pm 0.18$
COMPONENTS & CLADDING:
MAIN ROOF (FLAT ROOF: 0 TO 7 DEGREES)
ULTIMATE
+16.0 PSF (ZONE 1, EFF. AREA = 100 FT.²)
-28.0 PSF
+16.0 PSF (ZONE 2, EFF. AREA = 100 FT.²)
-37.1 PSF
+16.0 PSF (ZONE 3, EFF. AREA = 100 FT.²)
-44.3 PSF
+21.5 PSF (ZONE 4, EFF. AREA = 20 FT.²)
-23.4 PSF
+21.5 PSF (ZONE 5, EFF. AREA = 20 FT.²)
-28.0 PSF
4. SEISMIC LOADS
 $I_e = 1.0$
 $S_{DS} = 0.209g$
 $S_{D1} = 0.086g$
SITE CLASS: D
 $S_{D5} = 0.223g$
 $S_{D1} = 0.136g$
DESIGN CATEGORY: C
BASIC SEISMIC-FORCE-RESISTING SYSTEM: LIGHT FRAME WALLS WITH SHEAR PANELS- WOOD STRUCTURAL PANELS.
DESIGN BASE SHEAR $V = 2,526$ LBS.
 $R = 6.5$
ANALYSIS PROCEDURE: SIMPLIFIED ANALYSIS
5. SNOW LOADS
GROUND SNOW $P_g = 5$ PSF
FLAT ROOF SNOW $P_f = 5$ PSF
 $C_s = 1.0$
 $I_s = 1.0$
 $C_e = 1.0$
REFER TO SO.0 FOR SNOW DRIFT LOADING REQUIREMENTS.
6. SEE ROOF PLAN FOR ADDITIONAL MECHANICAL LOADS.

FOUNDATION DESIGN AND SITEWORK FOR BUILDING

1. FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS CONTAINED IN A GEOTECHNICAL INVESTIGATION REPORT BY ECS SOUTHEAST, LLP, DATED OCTOBER 6, 2023; REPORT NO. 10-12015.
2. FOUNDATION DESIGN IS BASED ON A NET ALLOWABLE BEARING PRESSURE OF 3,000 PSF FOUNDED AT LEAST EIGHTEEN (18) INCHES BELOW ADJACENT EXTERIOR GRADE INTO SUITABLE NEWLY PLACED SELECT FILL. CONTINUOUS STRIP FOOTINGS AND COLUMN FOOTING WIDTHS SHALL BE EIGHTEEN (18) INCHES MINIMUM.
3. THE CONTRACTOR SHALL READ THE SOILS REPORT REFERENCED ABOVE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE AND SUBGRADE PREPARATION RECOMMENDATIONS CONTAINED THEREIN. INFORMATION CONTAINED IN THE "FOUNDATION DESIGN AND SITEWORK FOR BUILDING" SECTION OF THE STRUCTURAL NOTES REPRESENTS A GENERAL OVERVIEW OF SITE WORK TO BE PERFORMED, AND SHALL NOT BE USED AS A SUBSTITUTE FOR THE SOILS REPORT REFERENCED ABOVE.
4. REMOVE ALL VEGETATION AND DEBRIS, INCLUDING PAVEMENTS, SIDEWALKS, BUILDING FOUNDATIONS, AND ABANDONED UTILITIES.
5. EXISTING FILL MATERIAL EXISTS AT THIS SITE AT DEPTHS RANGING FROM 3 TO 8 FEET BELOW EXISTING GRADE. ALL EXISTING FILL MATERIAL SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER AND REMOVED AND REPLACED AS REQUIRED IN A CONTROLLED MANNER.
6. PRIOR TO FILL PLACEMENT SUBGRADES WITHIN THE PROPOSED BUILDING AREA SHOULD BE PROOFROLLED, IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER, WITH APPROPRIATE RUBBER-TIRE MOUNTED HEAVY CONSTRUCTION EQUIPMENT OR A LOADED DUMP TRUCK TO DETECT LOOSE YIELDING SOILS WHICH MUST BE REMOVED TO A STABLE SUBGRADE.
7. AFTER OVEREXCAVATION, EXPOSED SUBGRADE SHOULD BE SCARIFIED MINIMUM OF 12 INCHES, MOISTURE CONDITIONED, AND COMPACTED.
8. AFTER SCARIFICATION, MOISTURE CONDITIONING, AND RE-COMPACTION, STRUCTURAL FILL MATERIAL AS OUTLINED IN THE GEOTECHNICAL REPORT, SHOULD BE PLACED, TO LIFT GRADES AS REQUIRED, DURING WET WEATHER, SUBGRADE STABILITY PROBLEMS SHOULD BE EXPECTED. IN THE EVENT THE PROBLEMS DEVELOP, OVEREXCAVATION ON THE ORDER OF 8 TO 10 INCHES SHOULD BE EXPECTED TO ACHIEVE A STABLE SUBGRADE.
10. PROVIDE POSITIVE DRAINAGE AWAY FROM EXCAVATIONS SO AS NOT TO ALLOW STANDING WATER FOR LONG PERIODS OF TIME.
11. PROVIDE A VAPOR BARRIER CONSISTING OF 10 MIL. POLYETHYLENE SHEETING PLACED DIRECTLY ABOVE THE BASE COURSE.
12. DO NOT PUNCTURE THE VAPOR BARRIER, LAP AND TAPE ENDS.
13. PERFORM ALL SITEWORK UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER.
14. REFERENCE THE SOILS REPORT FOR ANY QUESTIONS CONCERNING SUBGRADE PREPARATION, SITE CONDITIONS OR FOUNDATION PLACEMENT.

CONCRETE

1. ALL CONCRETE SHALL BE NORMAL WEIGHT, WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS, (U.N.O.).
2. CEMENT SHALL CONFORM TO ASTM C150, AND SHALL BE TYPE V MATERIAL, U.N.O. MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.45.
3. MINIMUM CEMENT CONTENT SHALL BE 5 SACKS PER CUBIC YARD.
4. TYPE F FLY ASH MAY BE USED UP TO 20% OF TOTAL CEMENT CONTENT BY VOLUME. THIS IS ONLY FOR CONCRETE SPECIFIED IN THESE STRUCTURAL DRAWINGS. REFER TO SPECIFICATIONS BY OTHER DISCIPLINES.
5. MAXIMUM SLUMP SHALL BE 5 IN., U.N.O.
6. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE'S "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 301.
7. CONCRETE MIX SHALL NOT USE ANY ADMIXTURES WHICH CONTAIN CALCIUM CHLORIDE.
8. CONCRETE TEST REPORTS SHALL BE MADE AVAILABLE AT THE JOB SITE. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN PER SPECIFICATIONS PRIOR TO PLACEMENT CONCRETE.

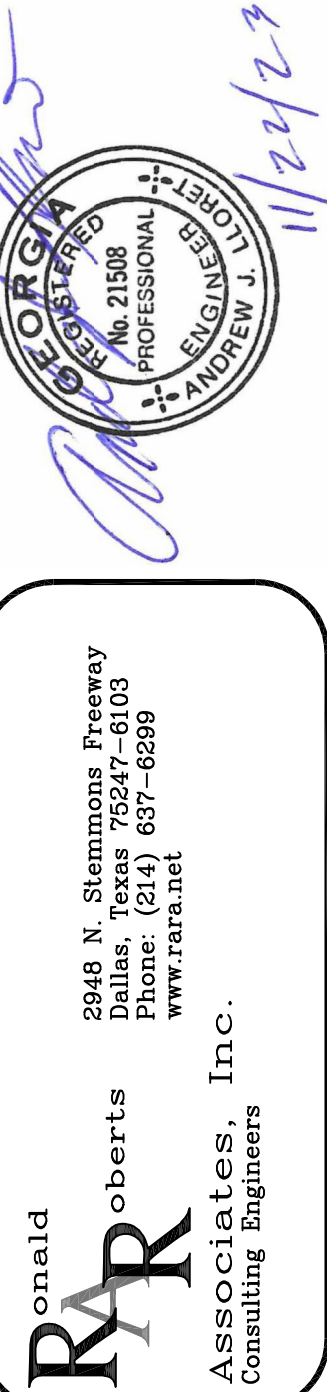
REINFORCING STEEL

1. BARS SHALL BE ASTM A615, GRADE 60.
2. DETAIL, FABRICATE, AND PLACE IN CONFORMANCE WITH ACI 315 AND 318.
3. LAP ALL REINFORCING STEEL 40 BAR DIAMETERS (U.N.O.).
4. LAP CONTINUOUS BARS IN GRADE BEAMS 40 BAR DIAMETERS (U.N.O. ON DRAWINGS). TOP BARS TO BE SPLICED BETWEEN SUPPORTS AND BOTTOM BARS TO BE SPLICED AT SUPPORTS, AS APPLICABLE.
5. PROVIDE ACCESSORIES FOR SUPPORT OF ALL REINFORCING.
6. SUBMIT SHOP DRAWINGS SHOWING ALL REINFORCING FOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
7. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

	MINIMUM COVER, IN.
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B. CONCRETE EXPOSED TO EARTH OR WEATHER: #6 THROUGH #18 BAR #5 BAR, W31 OR D31 WIRE, AND SMALLER	2 1½
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: #14 AND #18 BARS #11 BAR AND SMALLER BEAMS, COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1½ ¾ ¾ 1½

POST-INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, THE FOLLOWING HILTI OR SIMPSON PRODUCTS MAY BE USED. CONTACT HILTI AT (800) 879-8000 OR SIMPSON AT WWW.STRONGTIE.COM FOR PRODUCT RELATED QUESTIONS.
- A. ANCHORAGE TO CONCRETE
- a. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
- (1) HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z ROD OR HAS -E THREADED ROD PER ICC-ES ESR-3187.
- (2) SIMPSON SET-3G SYSTEM WITH F1554 THREADED ROD PER ICC-ES ESR-4057
- b. MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
- (1) HILTI KWIK HUS EZ AND KWIK HUS EZ-I SCREW ANCHORS PER ICC-ES ESR-3027
- (2) SIMPSON TITEN HD SCREW ANCHORS PER ICC-ES ESR-2713
- (3) SIMPSON TITEN HD STAINLESS STEEL SCREW ANCHOR PER IAMPO UES ER-493
- B. REBAR DOWELING INTO CONCRETE
- a. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
- (1) HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187.
- (2) SIMPSON SET-3G SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC-ES ESR-4057.
2. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
4. CONTRACTOR SHALL USE THE NECESSARY MEANS, AS REQUIRED BY OSHA, TO PROTECT FROM DUST DURING DRILLING OPERATIONS.
5. INSTALL ACCORDING TO MANUFACTURER'S SPECIFICATIONS. THREADED ROD AND REBAR DIAMETERS AND EMBEDMENT LENGTHS SHALL BE AS NOTED ON DRAWINGS.
6. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING PRODUCTS WHICH HAVE SPECIFIC APPLICATIONS THAT ARE INTENDED FOR OVERHEAD USE.
7. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
8. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
9. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY FERROSCAN, GPR, X-RAY, CHIPPING OR OTHER MEANS.
11. WOOD FRAMING SHALL COMPLY WITH THE SOUTHERN PINE INSPECTION BUREAU, OR SHALL CONFORM TO SPECIFICATIONS AS PUBLISHED BY THE WESTERN WOODS PRODUCTS ASSOCIATION.
12. WOOD FRAMING 2 INCHES X 4 INCHES AND LARGER SHALL BE NO. 2 SOUTHERN PINE, NO. 2 DOUGLAS FIR LARCH, OR EQUIVALENT (U.N.O.).
3. WOOD COLUMNS 6 INCHES X 6 INCHES AND LARGER SHALL BE NO. 1 SOUTHERN PINE, NO. 1 DOUGLAS FIR LARCH, OR EQUIVALENT.
4. ALL EXPOSED WOOD FRAMING, UNLESS NOTED OTHERWISE, SHALL BE "SELECT" GRADE LUMBER.
5. ALL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED (USE CATEGORY 2 AS SPECIFIED BY AFWA) FOR MOISTURE PROTECTION. ALL WOOD EXPOSED TO WEATHER SHALL BE PRESSURE TREATED (USE CATEGORY 3B AS SPECIFIED BY AFWA) OR WESTERN RED CEDAR.
6. GLUED-LAMINATED MEMBERS SHALL BE INDUSTRIAL APPEARANCE, E1.8, WITH GRADES AND SPECIES AS FOLLOWS, U.N.O. MEMBER SIZES BASED ON CURRENT NDS WESTERN SPECIES.
- SIMPLY SUPPORTED SPAN MEMBERS
- | SPECIES | GRADE |
|---------------|--------|
| DOUGLAS FIR | 24F-V4 |
| SOUTHERN PINE | 24F-V3 |
- MULTI SPAN MEMBERS
- | SPECIES | GRADE |
|---------------|--------|
| DOUGLAS FIR | 24F-V8 |
| SOUTHERN PINE | 24F-V8 |
7. METAL-PLATE-CONNECTED WOOD TRUSSES
- A. TRUSS FABRICATION AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING STANDARDS:
- a. ANSI / TPI 1- 2014- NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION
- b. BCSI-B1: GUIDE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF TRUSSES
- c. BCSI-B2: TRUSS INSTALLATION & TEMPORARY RESTRAINT/ BRACING
- c. BCSI-B3: PERMANENT RESTRAINT/BRACING OF CHORDS & WEB MEMBERS
- B. TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS
- a. TOP CHORD: DEAD LOAD = 15 PSF
LIVE LOAD = 20 PSF
NON-CONCURRENT LIVE LOAD = 10 PSF
- b. BOTTOM CHORD: DEAD LOAD = 5 PSF
LIVE LOAD = 0 PSF
- c. ADDITIONAL MECHANICAL LOADS SHALL BE APPLIED TO THEIR RESPECTIVE CHORD MEMBER AS NOTED ON THE FLOOR/ROOF PLAN
- d. SNOW DRIFT LOADS AND UNBALANCED ROOF SNOW LOADS AS INDICATED (WHERE APPLICABLE)
- e. REQUIRED UPLIFT FOR COMPONENTS AND CLADDING LOADS AS INDICATED IN THE DESIGN LOADS SECTION OF THESE STRUCTURAL NOTES
- f. ALLOWABLE VERTICAL DEFLECTION LIMITS: DEAD + LIVE: L/240
LIVE: L/360
- g. TRUSS CAMBER: TO BE PROVIDED BY THE TRUSS DESIGNER AS REQUIRED TO MEET SERVICEABILITY LIMITS UNLESS SPECIFICALLY NOTED BY THE BUILDING DESIGNER
- C. ALL TRUSS-TO-TRUSS CONNECTORS SHALL BE SPECIFIED BY THE TRUSS DESIGNER. TRUSS-TO-STRUCTURAL ELEMENT CONNECTIONS SHALL BE SPECIFIED BY THE BUILDING DESIGNER, UNLESS SPECIFICALLY NOTED.
- D. PERMANENT MEMBER RESTRAINT/ BRACING OF TRUSS SYSTEM SHALL BE SPECIFIED BY THE TRUSS DESIGNER. TRUSS DESIGNER IS PERMITTED TO SUBSTITUTE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT WITH REINFORCEMENT DESIGNED TO PREVENT BUCKLING. IF SPECIFIC TRUSS MEMBER PERMANENT RESTRAINT DESIGN IS NOT PROVIDED, THE METHOD OF PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT AND DIAGONAL BRACING FOR THE TRUSS TOP CHORD, BOTTOM CHORD, AND WEB MEMBERS SHALL BE IN ACCORDANCE WITH BCSI-B3 OR BCSI-B7
- E. A "TRUSS SUBMITTAL PACKAGE" AS DEFINED BY ANSI/ TPI-1, SHALL BE SUBMITTED TO THE BUILDING DESIGNER FOR REVIEW FOR COMPATIBILITY WITH THE BUILDING DESIGN. THE TRUSS SUBMITTAL PACKAGE SHALL INCLUDE: INDIVIDUAL TRUSS DESIGN DRAWINGS, THE TRUSS PLACEMENT DIAGRAM (INCLUDING TRUSS BRIDGING LAYOUT), THE COVER/TRUSS INDEX SHEET, LATERAL RESTRAINT AND DIAGONAL BRACING DETAILS DESIGNED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICE, APPLICABLE BCSI-DEFINED LATERAL RESTRAINT AND DIAGONAL BRACING DETAILS AND ANY OTHER STRUCTURAL DETAILS GERMANE TO THE TRUSSES. EACH INDIVIDUAL TRUSS DESIGN DRAWING, OR COVER/TRUSS IN SHEET IF USED, SHALL BEAR THE SEAL AND SIGNATURE OF THE TRUSS DESIGNER REGISTERED IN THE PROJECT STATE.
- F. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE "REQUIREMENTS OF THE CONTRACTOR" AS DEFINED BY ANSI/TPI 1.
8. ROOF DECK
- A. ALL ROOF DECK SHALL BE APA RATED PLYWOOD OR OSB (ORIENTED STRAND BOARD, AND SHALL HAVE EITHER AN EXTERIOR OR EXPOSURE I DESIGNATION (U.N.O.).
- B. ROOF SHEATHING SHALL BE 5/8 INCH (NOMINAL) THICKNESS WITH A 40/20 SPAN RATING U.N.O.
- C. STAGGER ENDS OF SHEETS.
- D. PROVIDE BLOCKING AT EDGES OF ALL ROOF SHEETS. PLYWOOD CLIPS MAY BE USED AT ROOF INSTEAD OF BLOCKING, UNLESS BLOCKING REQUIRED FOR NAILING.
- E. NAIL EDGES OF ROOF SHEETS AT 6 IN. O.C. MAXIMUM (U.N.O.).
- F. NAIL FACES OF ROOF SHEETS AT 12 IN. O.C. MAXIMUM.
- G. USE MINIMUM 10d COMMON NAILS (U.N.O.).
9. WALL SHEATHING
- A. ALL WALL SHEATHING WHERE REQUIRED SHALL BE APA RATED PLYWOOD OR OSB (ORIENTED STRAND BOARD) SHALL HAVE EITHER AN EXTERIOR OR EXPOSURE I DESIGNATION (U.N.O.).
- B. WALL SHEATHING SHALL BE 1/2 INCH (NOMINAL) THICKNESS WITH A 32/16 SPAN RATING U.N.O.
- C. STAGGER ENDS OF SHEETS.
- D. PROVIDE BLOCKING AT EDGES OF ALL SHEARWALL SHEETS.
- E. NAIL EDGES OF SHEARWALL SHEETS PER SCHEDULE ON PLAN (OTHER WALLS AT 6 IN. O.C. MAXIMUM).
- F. NAIL FACES OF WALL SHEETS AT 12 IN. O.C. MAXIMUM.
- G. USE MINIMUM 10d COMMON NAILS (U.N.O.).
10. CONNECTORS SHALL BE AS MANUFACTURED BY THE SIMPSON CO. OR APPROVED EQUAL. CONNECTORS USED WITH PRESSURE TREATED LUMBER OR IN UNCONDITIONED SPACE, SHALL HAVE THE ZMAX (6185) COATING. ALL NAILS USED FOR CONNECTORS SHALL MATCH THOSE SPECIFIED BY THE SUPPLIER'S PRODUCT CATALOG.
11. NAILING, UNLESS NOTED OTHERWISE, SHALL BE PER THE 2018 INTERNATIONAL BUILDING CODE.
12. ALL REFERENCES TO NAILS ON THE STRUCTURAL DRAWINGS ARE BASED ON COMMON WIRE NAILS (U.N.O.) WITH THE FOLLOWING DIMENSIONS, TYPICAL, U.N.O.
- | | |
|-------------|------------------------|
| 8d COMMON: | 0.131" DIA. X 2½" LONG |
| 10d COMMON: | 0.148" DIA. X 3" LONG |
| 16d COMMON: | 0.162" DIA. X 3½" LONG |
- POWER AUTOMATED NAIL GUNS SHALL USE NAILS TO MATCH THE ABOVE NAILS AS SPECIFIED.



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Revisions:

File Name: 23131
Project No: 23131
Date: 11/22/23
Drawn By: CR
Checked By: CB

SHEET

S0.0

STRUCTURAL NOTES

Statement of Special Inspections

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- ☒ Soils and Foundations
- ☒ Cast-in-Place Concrete
- ☐ Masonry
- ☐ Structural Steel
- ☐ Wood Construction
- ☒ Special Cases

General Notes

The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

The qualifications of all personnel performing Special Inspections and testing activities are subject to the approval of the Building Official and E.O.R. The credentials of all inspectors and testing technicians shall be provided if requested.

The special inspectors shall keep records of inspections and shall furnish inspection reports to the owner, Engineer of Record (E.O.R.) and Architect of Record (A.O.R.). Field and testing result reports shall be submitted to all designated parties as they are completed. The reports shall indicate that the work performed was done in accordance to the construction drawings. Discrepancies shall be brought to the attention of the general contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the E.O.R. prior to completion of that phase of work. A final report that documents required special inspections and corrections of discrepancies shall be submitted by the General Contractor to the Owner, E.O.R. and A.O.R.

Soils and Foundations

Item	Scope	Monitoring: Periodic (P) Continuous (C)
1. Shallow Foundations	Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.	P
	Inspect removal of unsuitable material and preparation of subgrade prior to placement of controlled fill.	C
2. Controlled Structural Fill	Perform sieve tests (ASTM D422 & D1140) and modified Proctor tests (ASTM D1557) of each source of fill material. Inspect placement, lift thickness and compaction of controlled fill. Test density of each lift of fill by nuclear methods (ASTM D2922) Verify extent and slope of fill placement.	C

Note:
1. Special Inspection is not required during placement of controlled fill having a total depth of 12 inches or less.

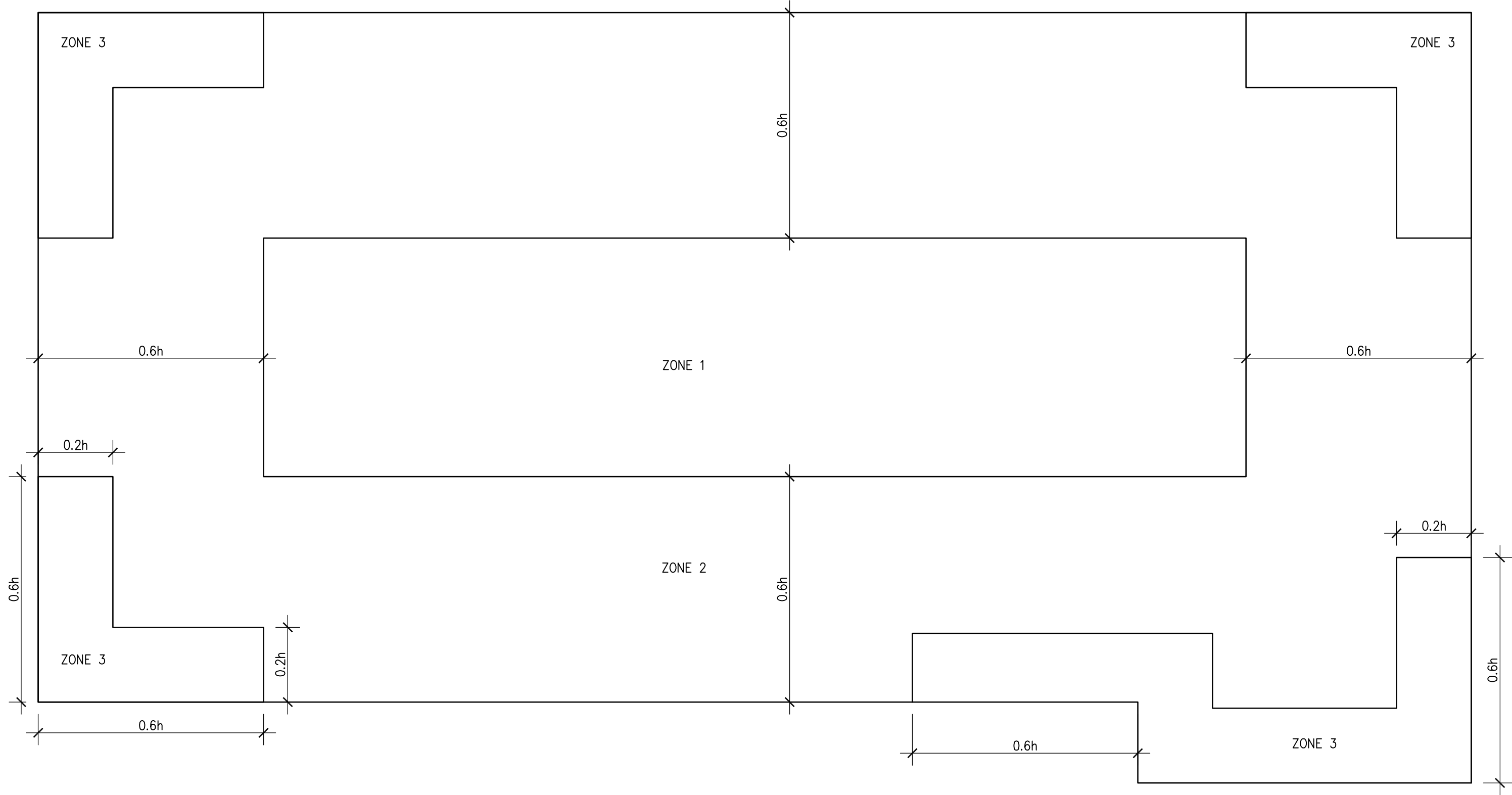
Cast-in-Place Concrete

Item	Scope	Monitoring: Periodic (P) Continuous (C)
1. Mix Design	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at the site does not exceed that allowed by the mix design. Submit proposed mix design of each class of concrete to Structural Engineer of Record and to inspection and testing firm for review prior to commencement of work.	P
2. Material Certification	Review for conformance to contract documents. Submit to Structural Engineer of Record for review.	P
3. Reinforcement Installation	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters. Submit certified copies of mill test report of reinforcement materials analysis.	P
4. Anchor Rods	Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.	C
5. Concrete Placement	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.	C
6. Sampling and Testing of Concrete	Test concrete compressive strength (ASTM C31 & C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064). Three concrete test cylinders will be taken for every 75 or less cubic yards of each class of concrete placed, or concrete placed on any given day. One additional test cylinder will be taken during cold weather concreting, cured on job site under same conditions as concrete represents.	C
7. Curing and Protection	Inspect curing, cold weather protection and hot weather protection procedures.	P

Note: Special Inspection is not required for flatwork patios, driveways and sidewalks, on grade not shown on structural drawings.

Special Cases

Item	Scope	Monitoring: Periodic (P) Continuous (C)
Epoxy Anchors in Concrete or CMU	Review anchors and product being used for conformance to contract documents. Observe installation for compliance to manufacturers specifications. Perform pull test to 125% of allowable design load per manufacturer specifications. (Minimum of 10% of total anchors, to include a minimum of one of each type, size or embedment.)	C



01 C & C WIND UPLIFT ZONES DIAGRAM

SCALE: 1/4"=1'-0"

NOTES:

1. "h" = 15'-6" (MEAN ROOF HEIGHT)



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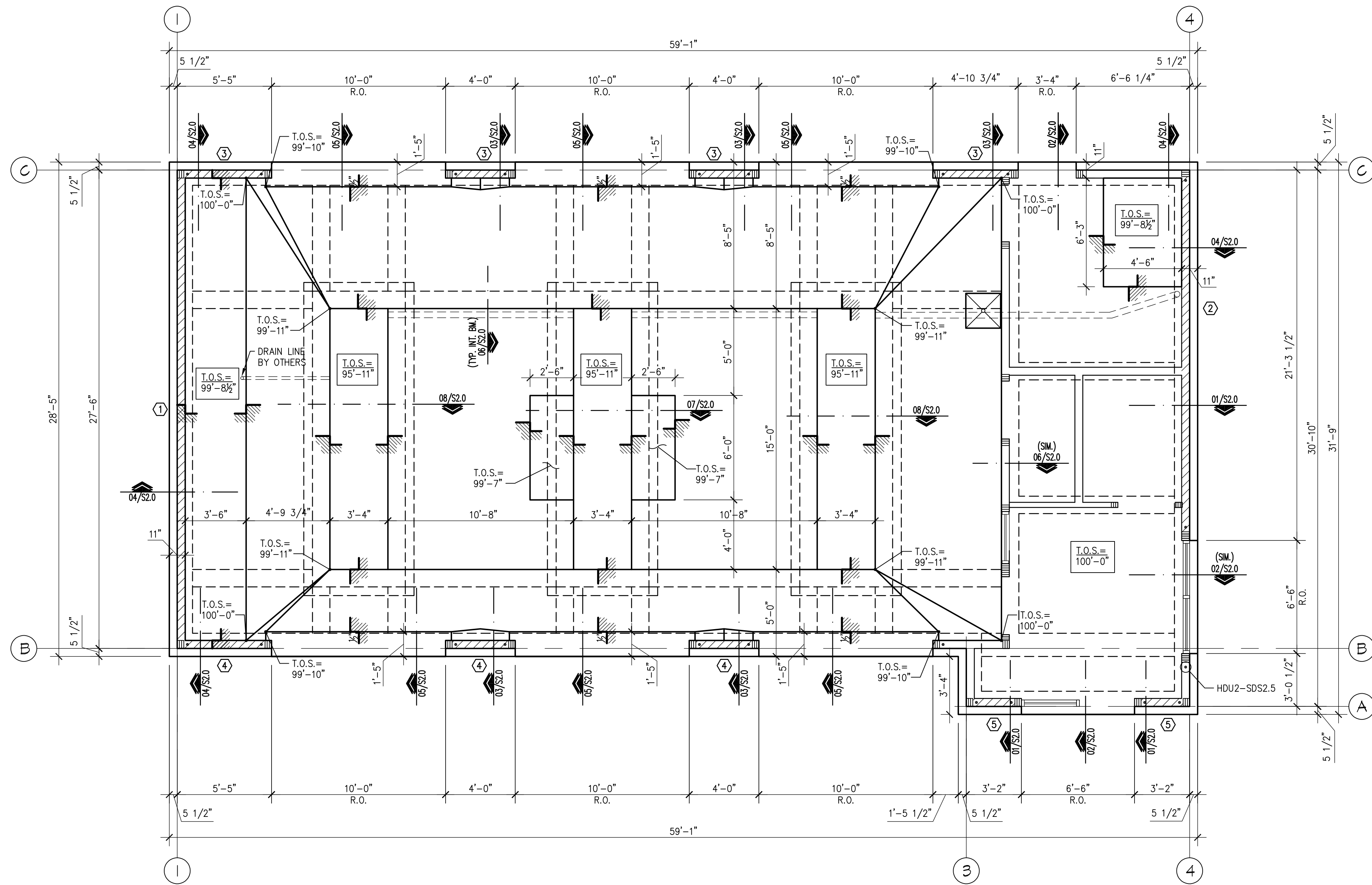
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Revisions:

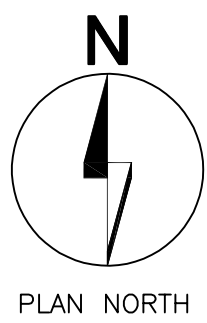
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Project No: 23131
Date: 11/22/23
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Checked By: CB

SHEET
S0.1
SPECIAL INSPECTIONS
& WIND DIAGRAM



CONSTRUCTION NOTE:
PIT WALL FORMWORK AND SHORING TO
REMAIN IN PLACE DURING BACK FILL
OPERATIONS AND UNTIL FLOOR SLAB
HAS BEEN INSTALLED AND ALLOWED TO
CURE FOR 72 HOURS (MINIMUM).

NOTE TO G.C.:
VERIFY QUANTITY OF LIFTS WITH
OWNER PRIOR TO INSTALLATION
OF CONCRETE FOUNDATIONS.



01 FOUNDATION PLAN

SCALE: 1/4"=1'-0"

PLAN NOTES:

- REF. SHEET S0.0 FOR STRUCTURAL NOTES AND S0.1 FOR SPECIAL INSPECTION REQUIREMENTS.
- REF. 09/S2.0 FOR TYPICAL CORNER BAR DETAIL AS REQUIRED.
- REF. 10/S2.0 FOR TYPICAL SLAB RECESS DETAIL AS REQUIRED.
- REF. 01/S2.1 FOR TYPICAL GRADE BEAM PENETRATION DETAIL AS REQUIRED.
- REF. 02/S2.1 FOR TYPICAL CURB DETAIL AS REQUIRED.
- (*) INDICATES SIMPSON HDU HOLDDOWN. REFER TO SHEARWALL SCHEDULE ON S1.1 FOR SIZE AND 03/S2.1 FOR TYPICAL HOLDDOWN DETAIL.
- REFER TO 05/S2.1 FOR TYPICAL TRASH ENCLOSURE SECTION. REFER TO A0.3 FOR TRASH ENCLOSURE PLAN.

Revisions:

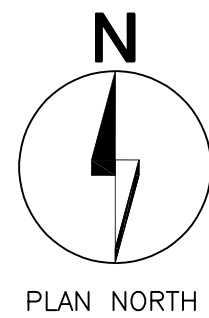
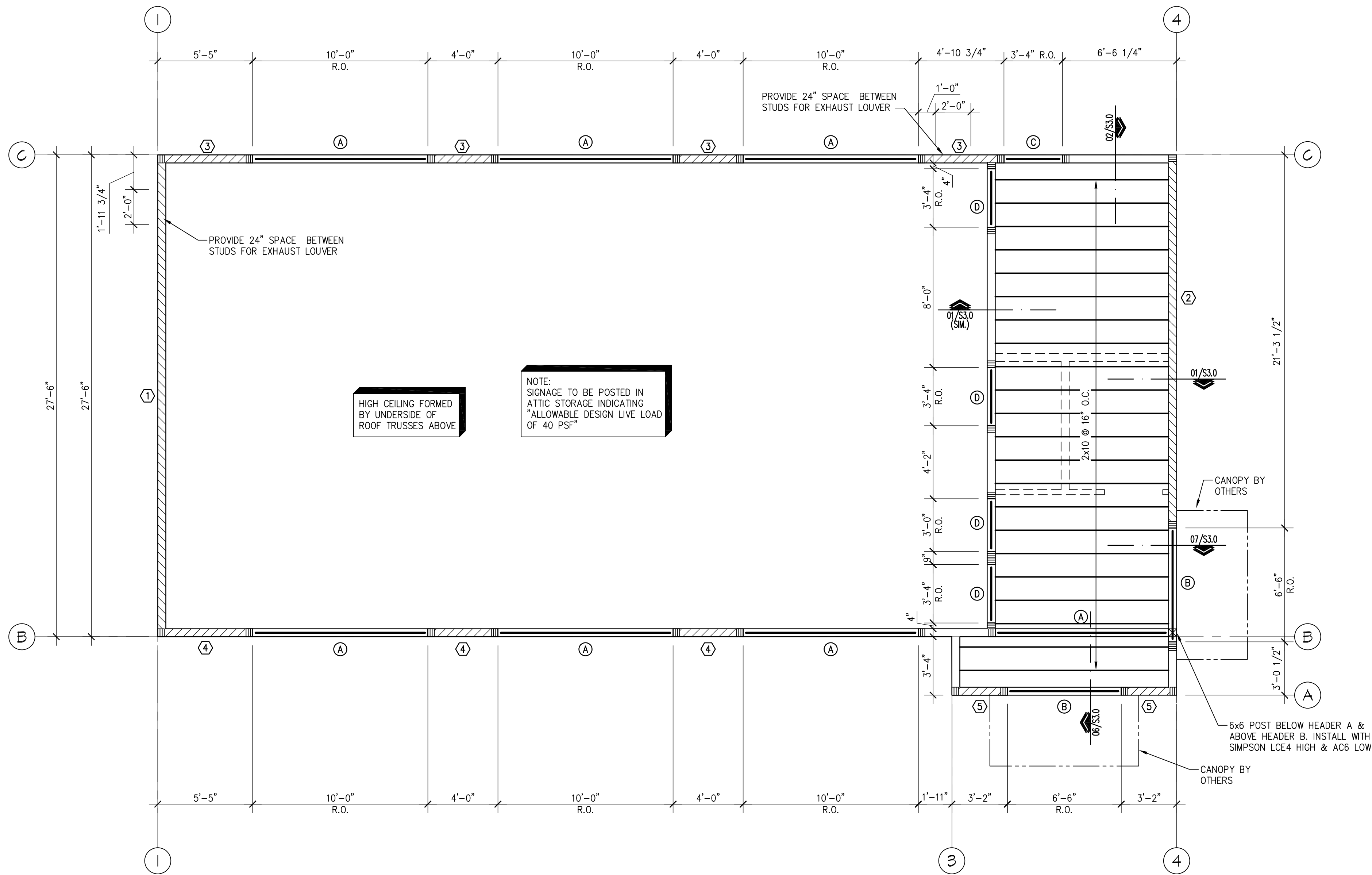
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SHEET
S1.0
FOUNDATION
PLAN

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01 WALL/CEILING FRAMING PLAN

SCALE: 1/4"=1'-0"

PLAN NOTES:

1. REF. SHEET S0.0 FOR STRUCTURAL NOTES AND S0.1 FOR SPECIAL INSPECTION REQUIREMENTS.

HEADER SCHEDULE	
TYPE	SIZE
(A)	5 1/2" x 11 1/4" GLB
(B)	(3) 2x10 W/ 1/2" PLYWD. SPACERS
(C)	(3) 2x8 W/ 1/2" PLYWD. SPACERS
(D)	(3) 2x6 W/ 1/2" PLYWD. SPACERS

(X) - DESIGNATES HEADER TYPE

NOTES:

1. REF. 09/S3.0 FOR TYPICAL HEADER DETAIL (U.N.O.)
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL BOTTOM OF HEADER ELEVATIONS (U.N.O.)

SHEARWALL SCHEDULE			
TYPE	NAIL SPACING	HOLDOWN	ANCHOR BOLTS
(1)	10d @ 6" O.C.	HDU4-SDS2.5	3/8" @ 32" O.C.
(2)	10d @ 6" O.C.	HDU5-SDS2.5	3/8" @ 32" O.C.
(3)	10d @ 6" O.C.	HDU2-SDS2.5	3/8" @ 32" O.C.
(4)	10d @ 4" O.C.	HDU11-SDS2.5	3/8" @ 32" O.C.
(5)	10d @ 6" O.C.	HDU2-SDS2.5	3/8" @ 32" O.C.

(X) - DESIGNATES SHEARWALL TYPE

NOTES:

1. USE 10d COMMON NAILS.
2. NAIL PANEL FACES @ 12" O.C.
3. USE 1/2" WOOD SHEATHING ON EXTERIOR. REFER TO STRUCTURAL NOTES S0.0.
4. STAGGER PLYWOOD JOINT AND SILL PLATE NAILING.
5. FRAMING MEMBERS OR BLOCKING SHALL BE PROVIDED AT THE EDGES OF ALL SHEETS IN SHEARWALLS.
6. REFER TO 03/S2.1 FOR TYPICAL HOLDOWN DETAIL.
7. HOLDOWN ANCHORS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION IF CAST IN PLACE.
- *8. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3 INCH NOMINAL OR THICKER AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED AT 2" O.C. OR ARE ON EACH FACE.



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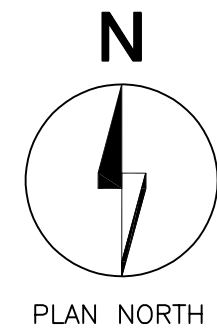
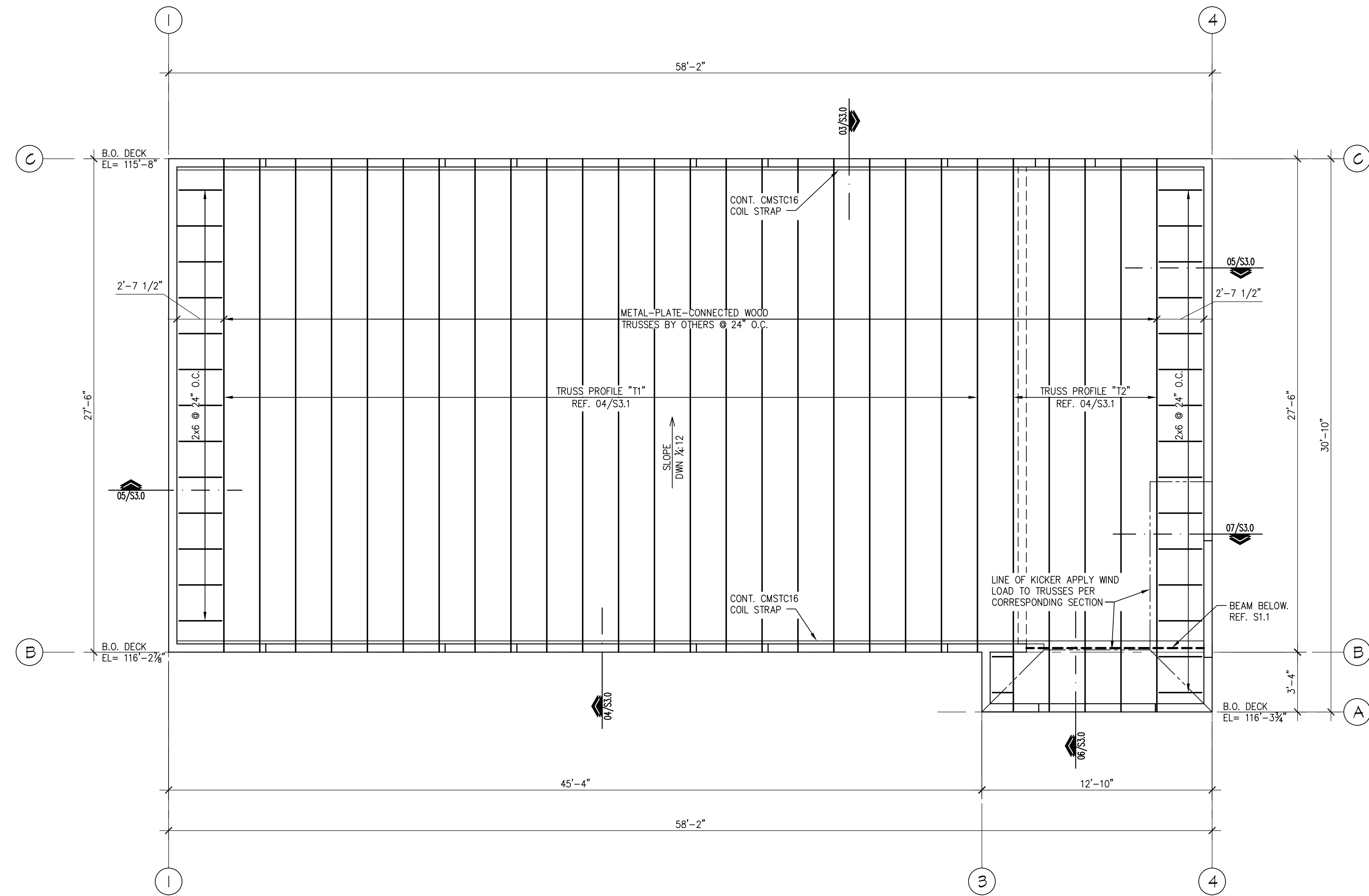
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Project No: 23131
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SHEET
S1.1
WALL/CEILING
FRAMING PLAN



01 ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

PLAN NOTES:

1. REF. SHEET S0.1 FOR STRUCTURAL NOTES AND S0.1 FOR SPECIAL INSPECTION REQUIREMENTS.
2. ROOF TRUSSES (U.N.O) ARE TO BE MANUFACTURED WOOD TRUSSES DESIGNED BY OTHERS. MAXIMUM SPACING SHALL BE 24" O.C. TRUSS LINES INDICATED ARE GRAPHICAL REPRESENTATION ONLY. ACTUAL LAYOUT SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER. REFER TO S0.0 FOR GENERAL TRUSS DESIGN NOTES.
3. REFER TO 09/S3.0 FOR TYPICAL ROOF DIAPHRAGM NAILING AND DECK LAYOUT REQUIREMENTS.
4. REFER TO 03/S3.1 FOR TYPICAL (2) 2X BEARING PLATE SPLICE REQUIREMENTS.



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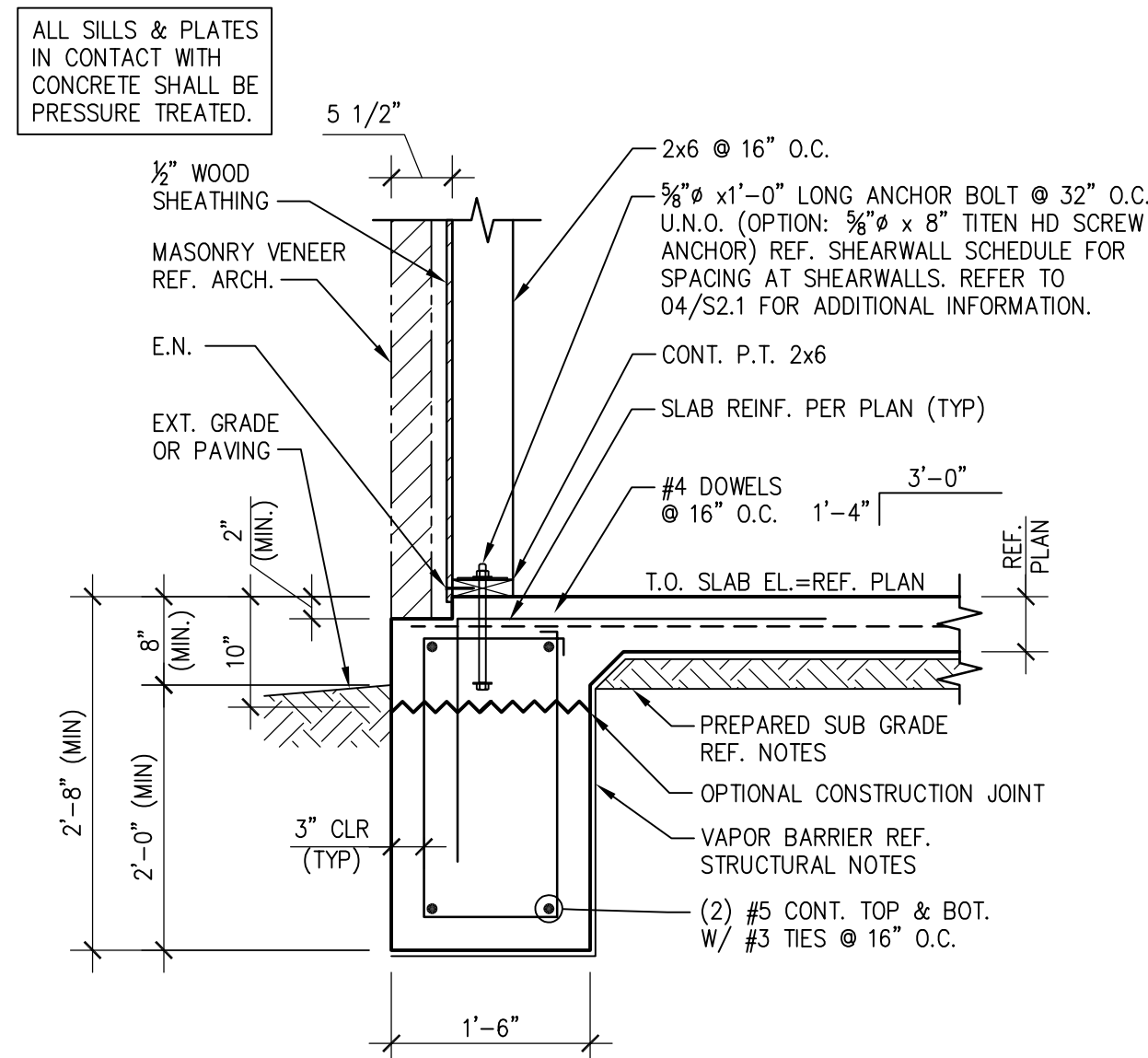
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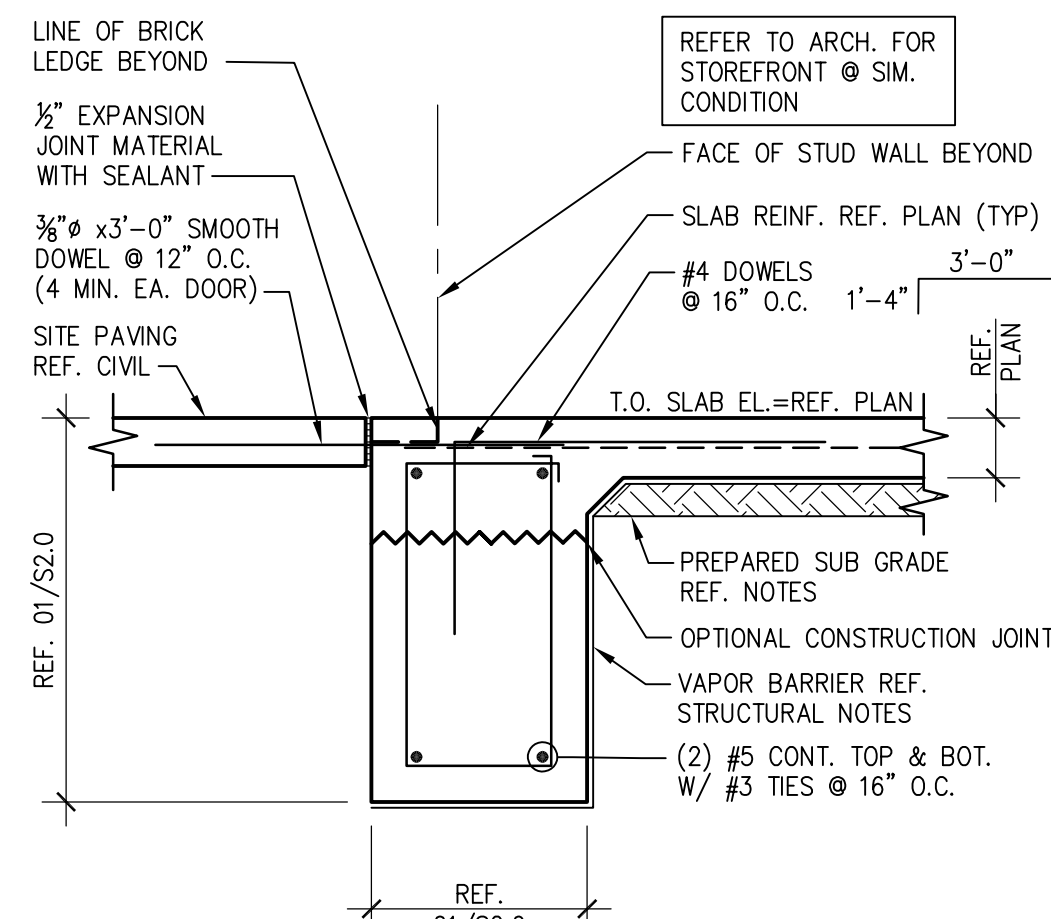
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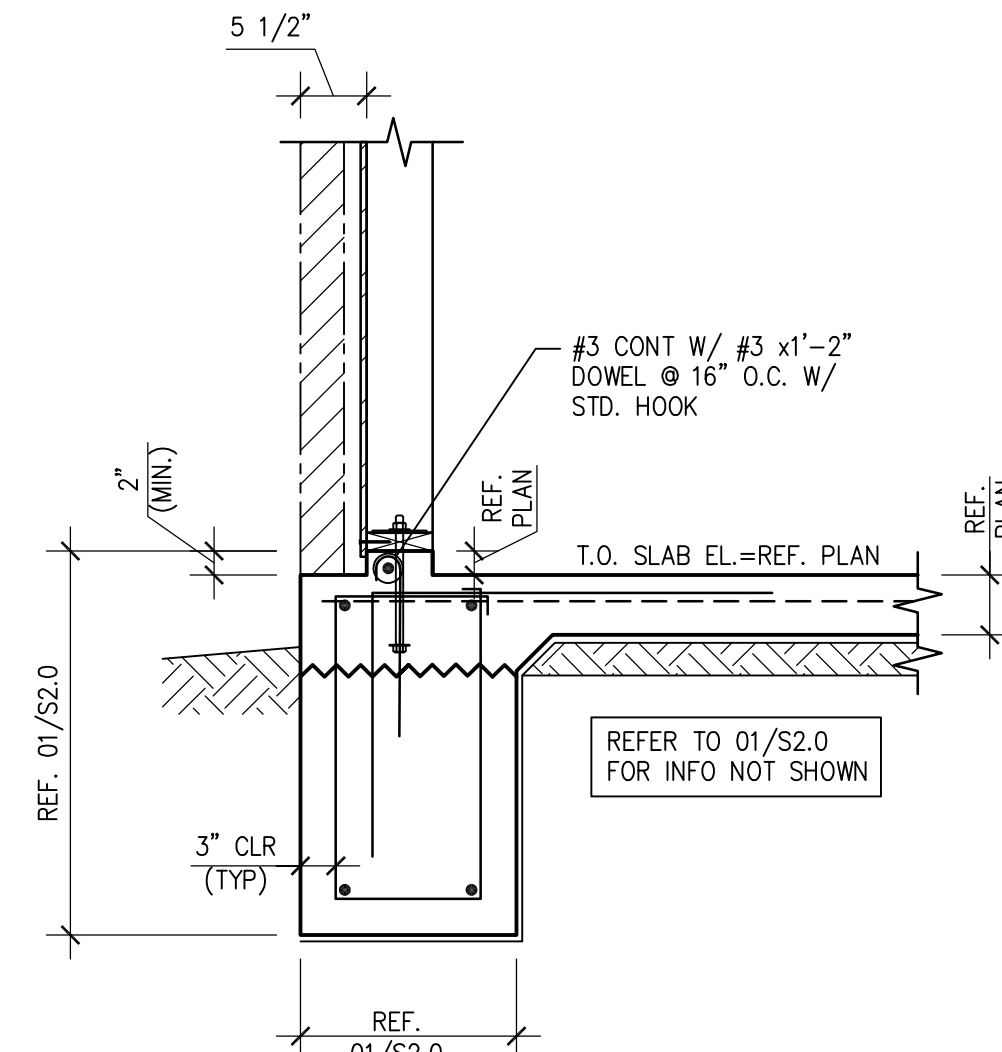
SHEET
S1.2
ROOF FRAMING
PLANS



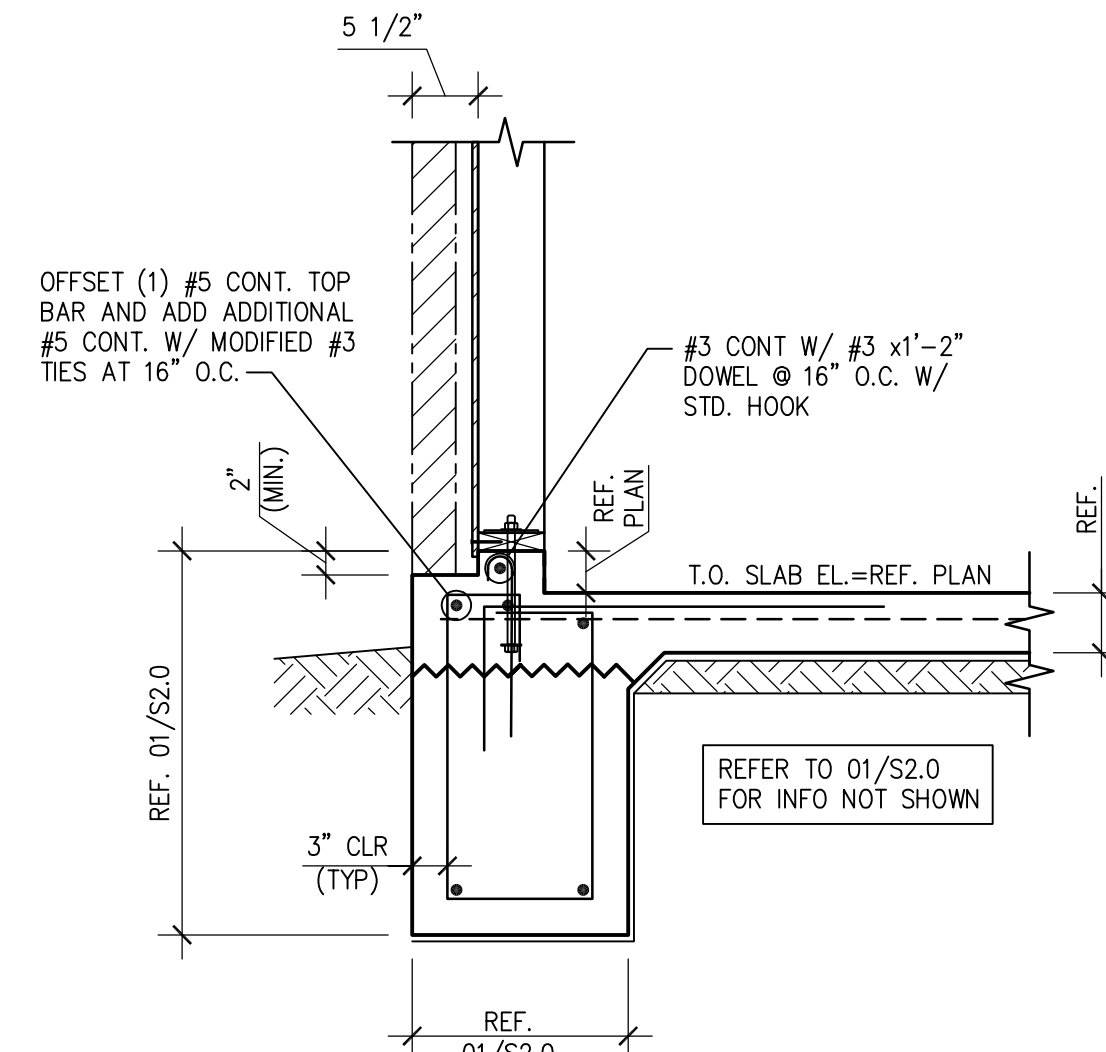
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SCALE: 3/4"=1'-0"



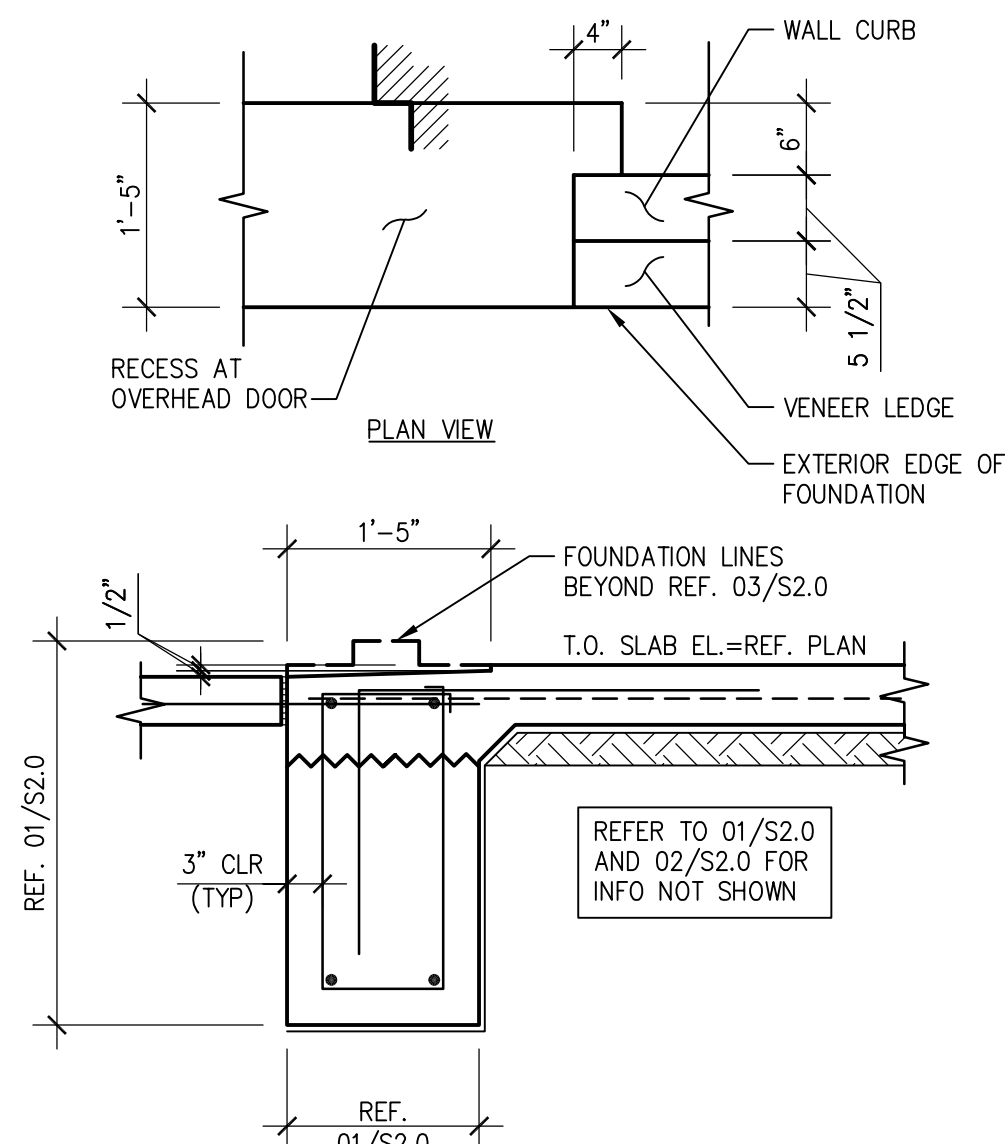
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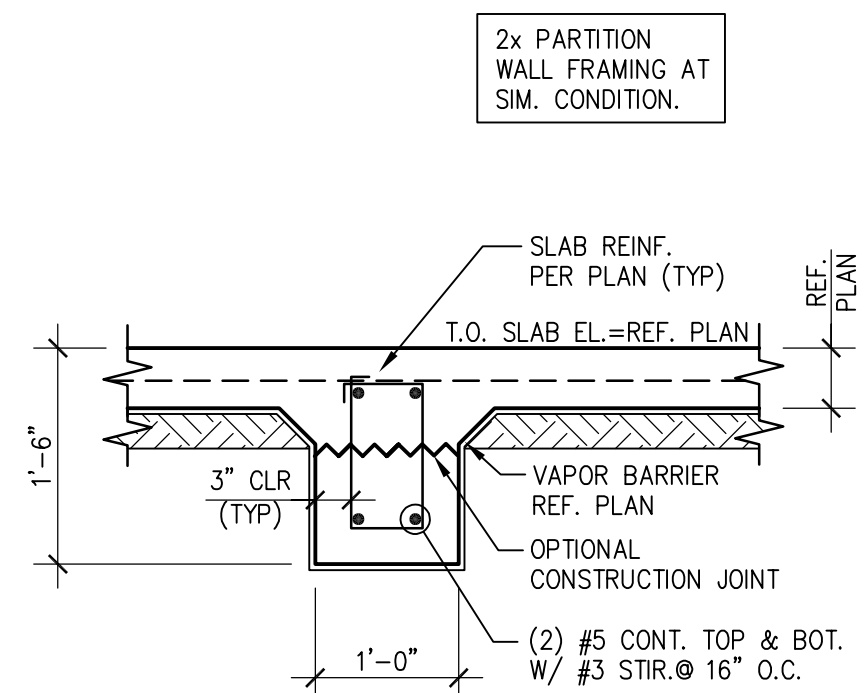
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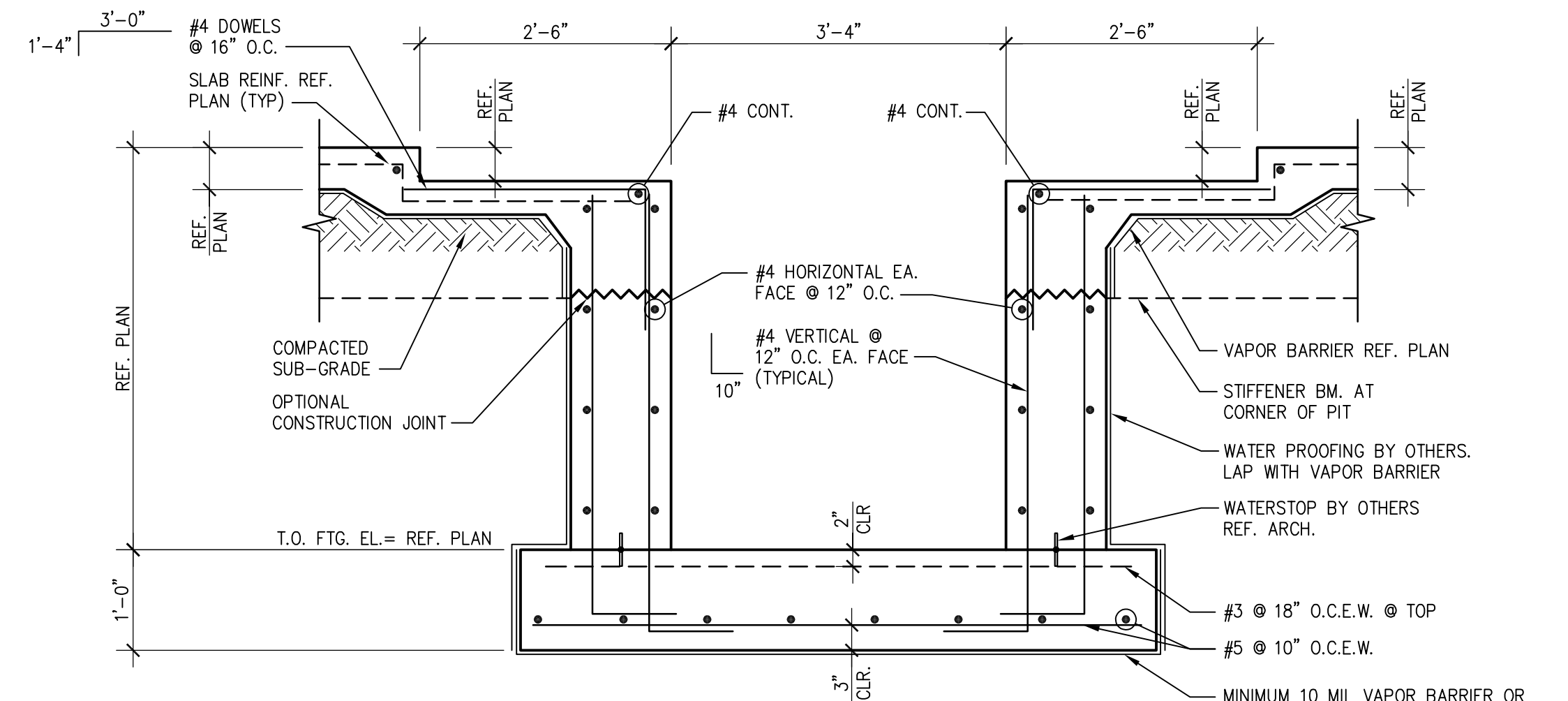
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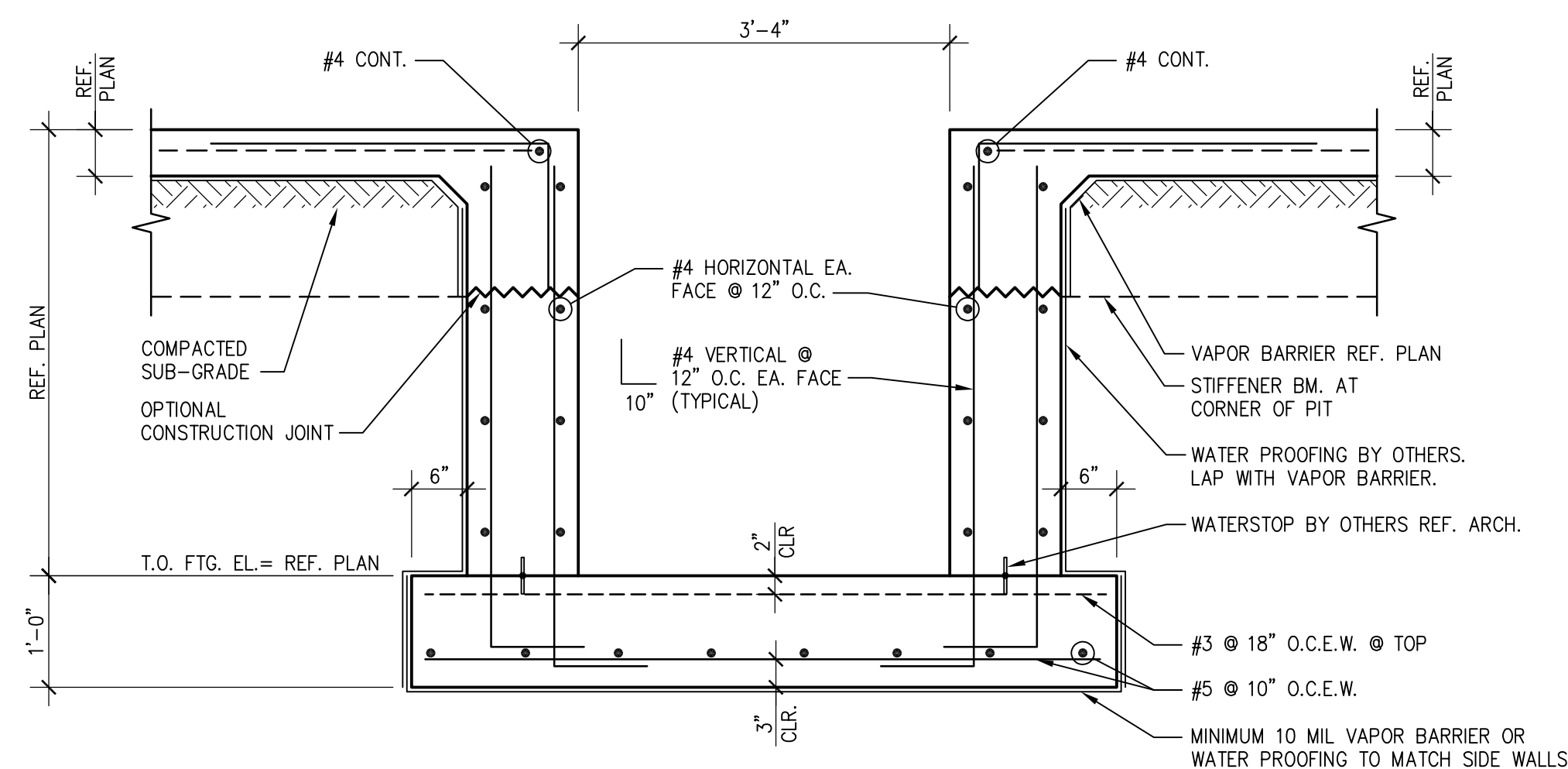
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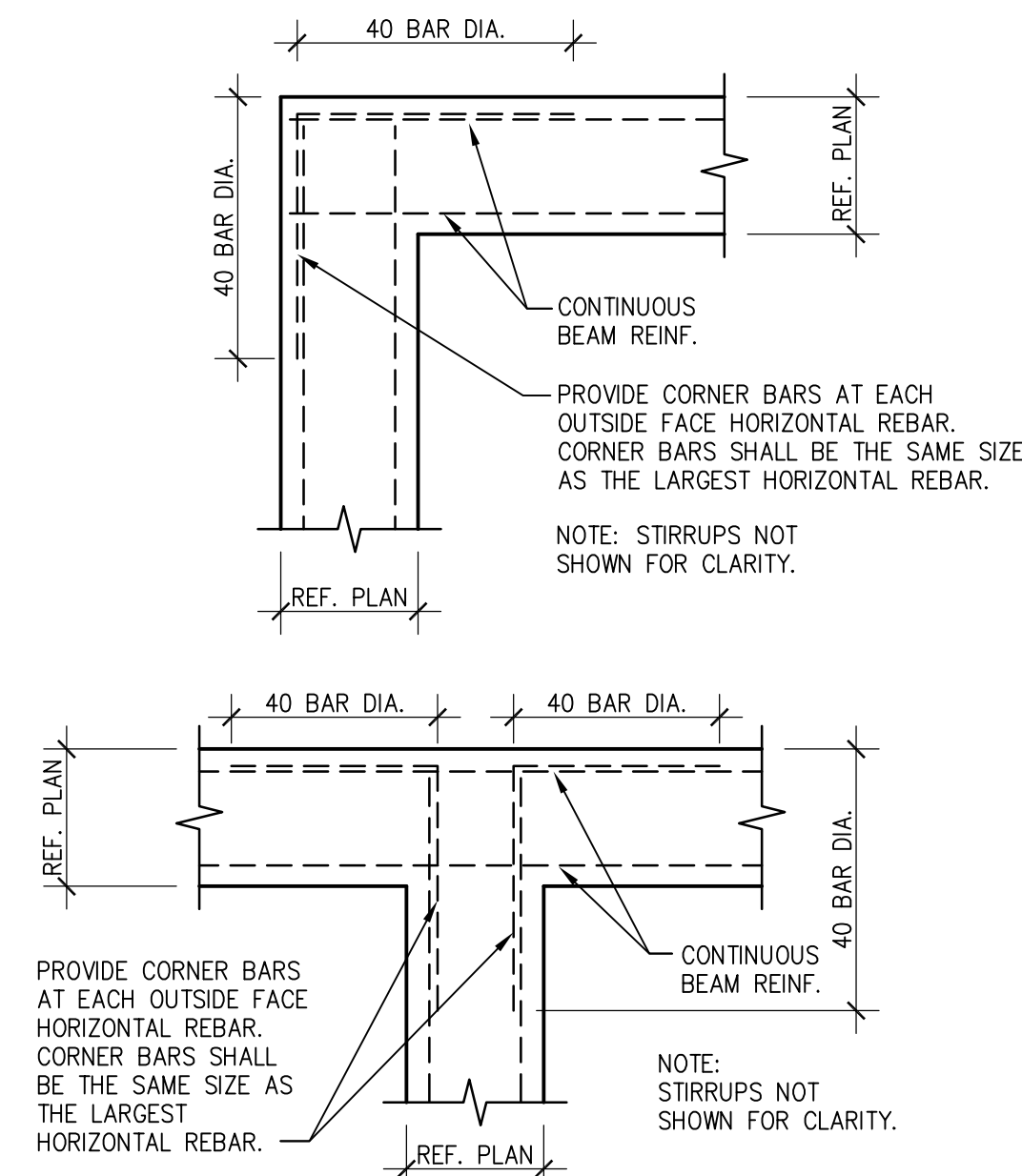
06 TYP. INTERIOR STIFFNER
SCALE: 3/4"=1'-0"



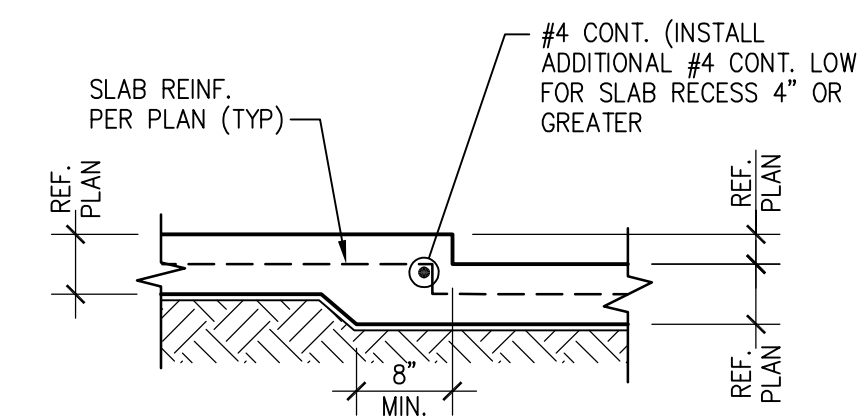
07 SECTION
SCALE: 3/4"=1'-0"



08 SECTION
SCALE: 3/4"=1'-0"



09 TYP. CORNER BAR DETAILS
SCALE: 3/4"=1'-0"



10 TYP. SLAB RECESS
SCALE: 3/4"=1'-0"

11/22/23

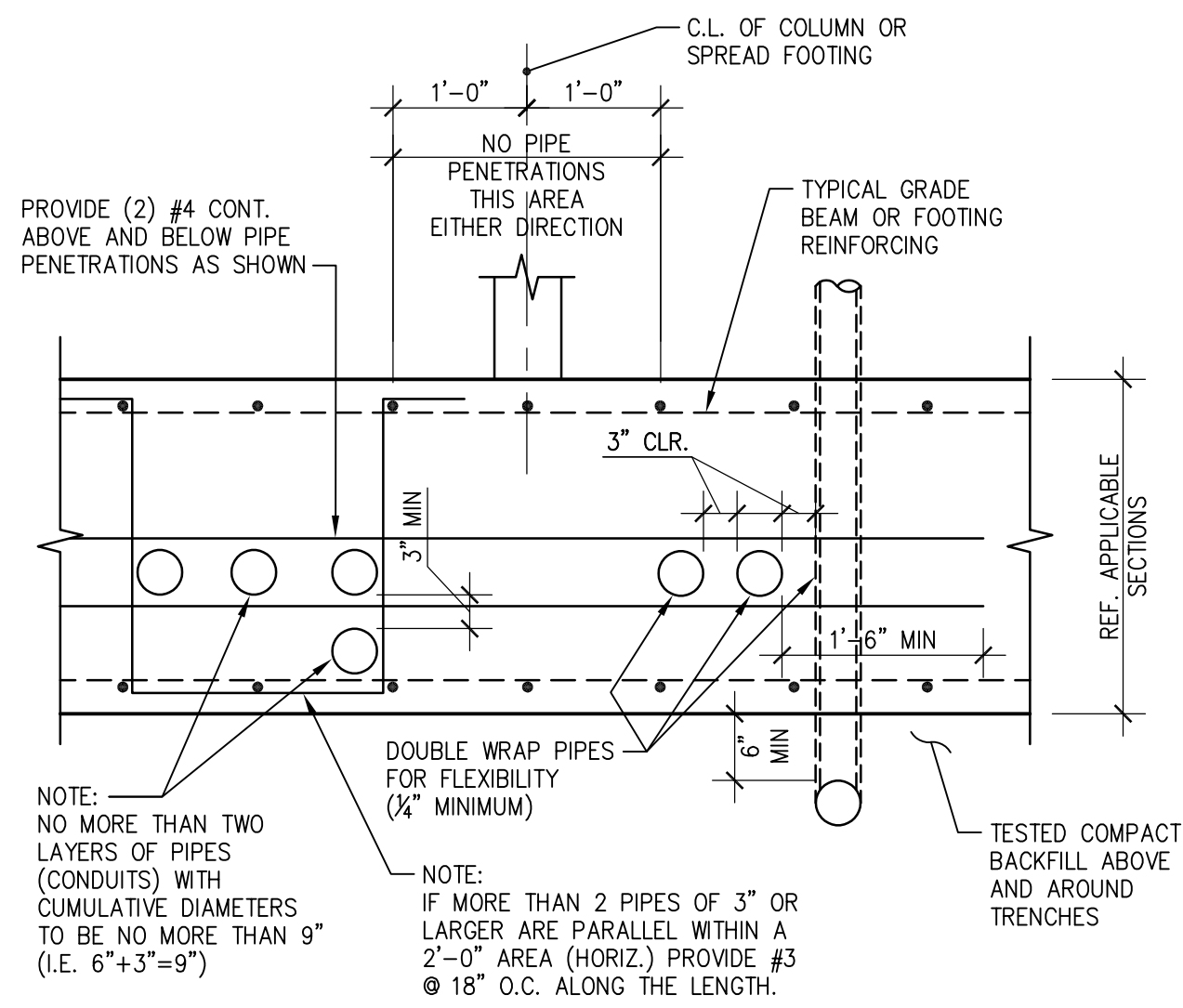
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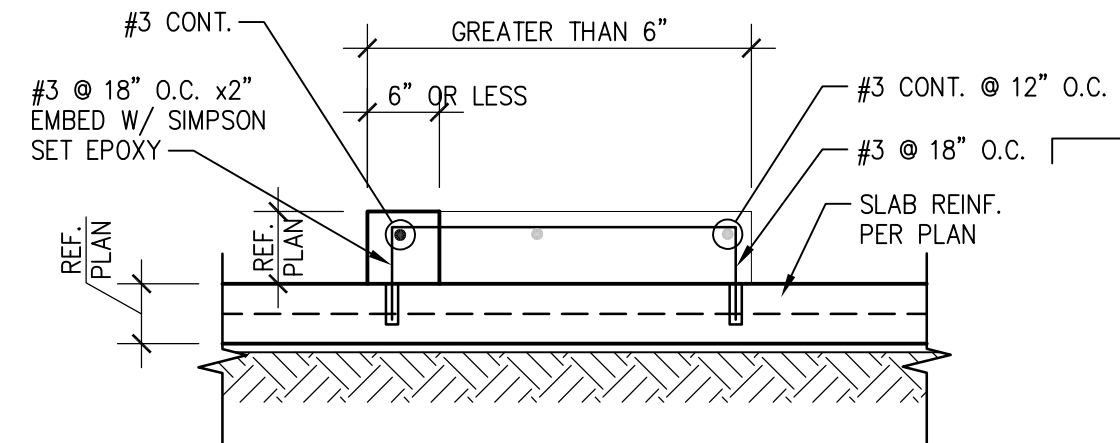
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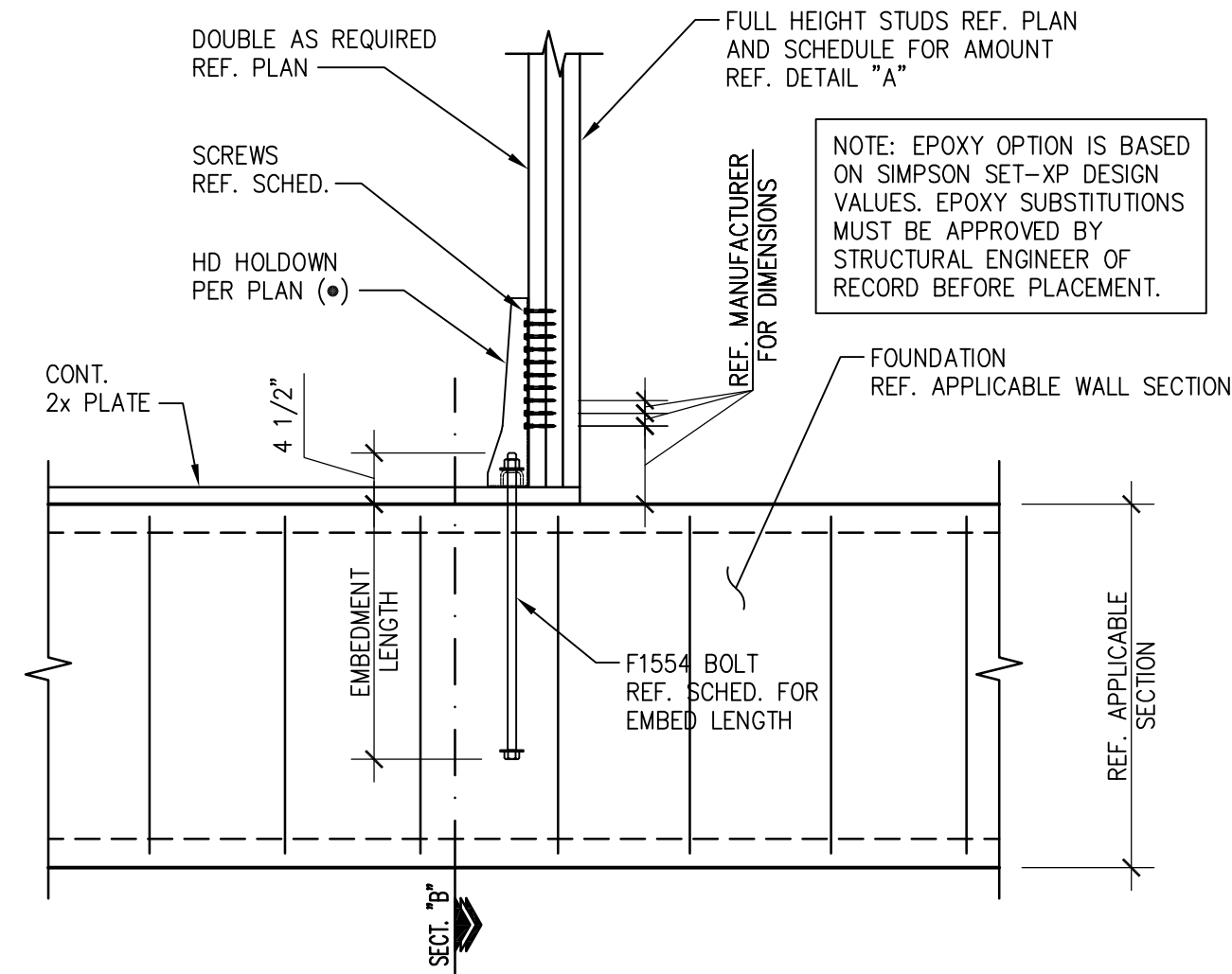
SHEET
S2.0
FOUNDATION
DETAILS



01 TYP. PENETRATION THRU FOOTINGS OR GRADE BEAMS
SCALE: 3/4"=1'-0"

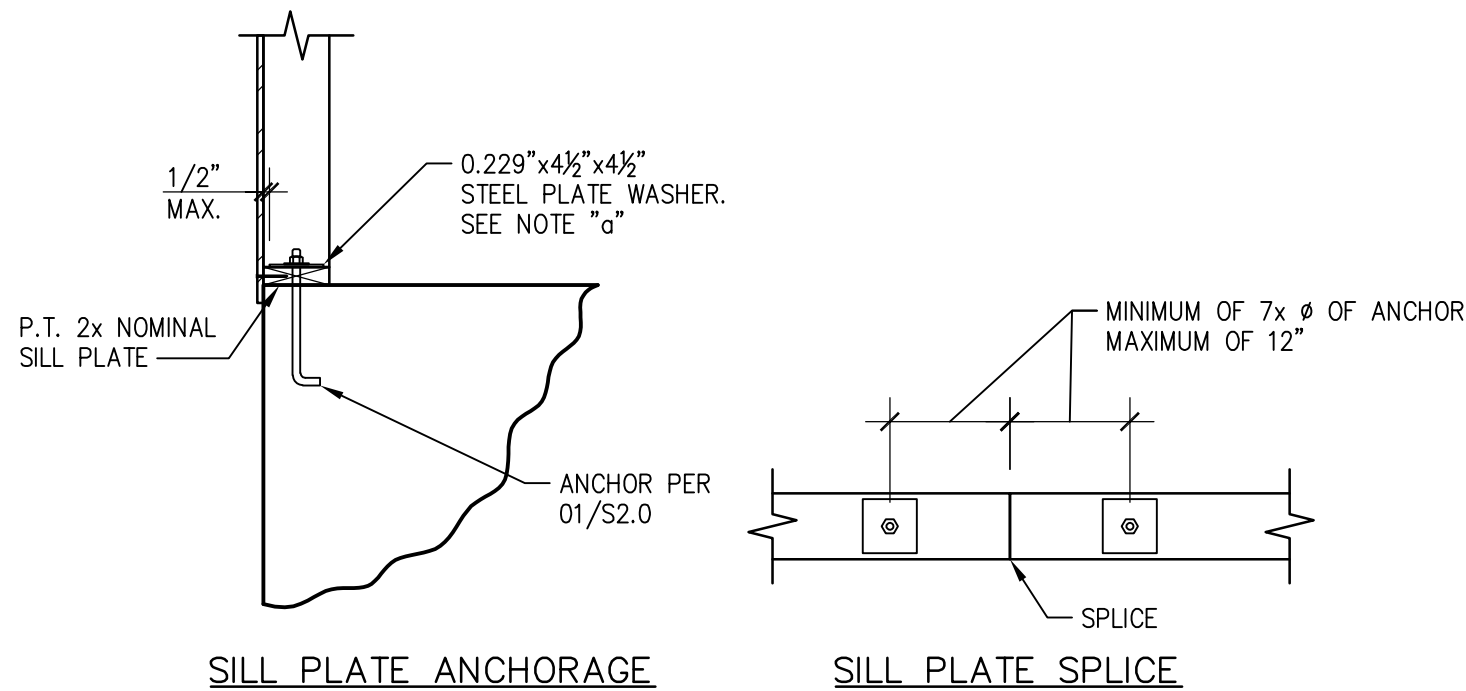


02 TYP. CURB
SCALE: 3/4"=1'-0"



HOLDOWN	POST/2x	BOLT/SCREW #	ANCH. BOLT	EDGE DISTANCE	CAST IN PLACE REQUIREMENTS	EPOXY OPTION REQUIREMENTS
HDU5-SDS2.5	3	(14) SDS 1/4"x2 1/2"	3/8" Ø	14"	1'-0"	1'-0"
HDU8-SDS2.5	3	(20) SDS 1/4"x2 1/2"	3/8" Ø	14"	1'-0"	1'-0"
HDU11-SDS2.5	4x6	(30) SDS 1/4"x2 1/2"	1" Ø	16"	1'-2"	1'-4"
HDU14-SDS2.5	6x6	(36) SDS 1/4"x2 1/2"	1" Ø	16"	1'-2"	1'-4"

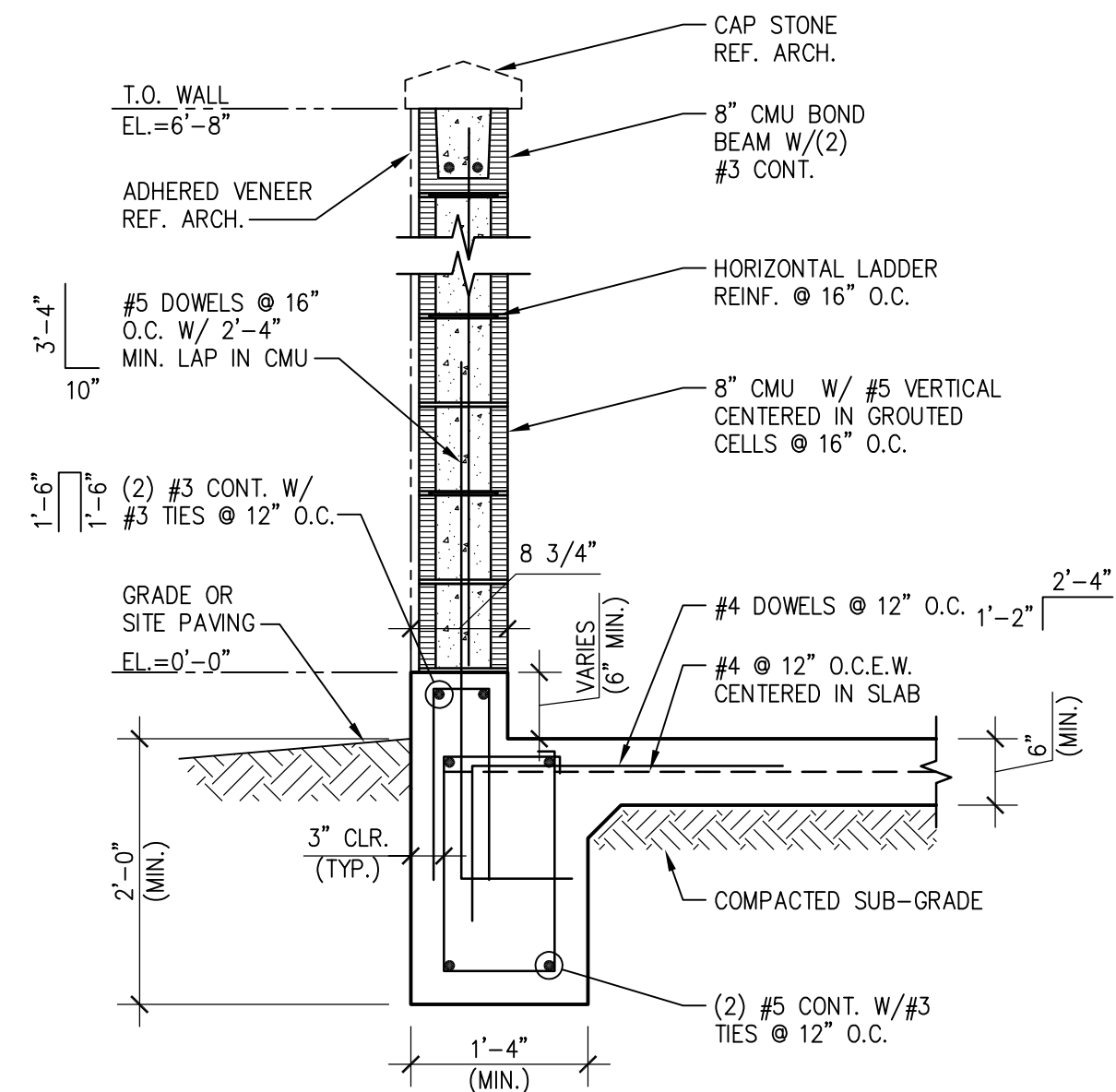
03 TYP. HOLDOWN DETAIL
SCALE: 3/4"=1'-0"



04 TYP. SILL PLATE ANCHORAGE
SCALE: 3/4"=1'-0"

NOTES:

a. IF STANDARD CUT WASHER IS PLACED BETWEEN PLATE WASHER AND NUT, THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED UP TO 1 3/4" WITH WIDTH UP TO 3/16" LARGER THAN BOLT DIAMETER.



05 TYP. TRASH ENCLOSURE SECTION
SCALE: 3/4"=1'-0"

EMBEDMENT LENGTHS
CONCRETE 28-DAY COMPRESSIVE STRENGTH - 3,000 PSI

BAR SIZE	STRAIGHT BARS		HOOKED BARS
	"TOP" BAR	OTHER BAR	
3	1'-10"	1'-5"	0'-9"
4	2'-5"	1'-10"	0'-11"
5	3'-0"	2'-4"	1'-2"
6	3'-7"	2'-9"	1'-5"
7	5'-3"	4'-0"	1'-8"
8	6'-0"	4'-7"	1'-10"
9	6'-8"	5'-2"	2'-1"
10	7'-5"	5'-9"	2'-4"
11	8'-2"	6'-4"	2'-6"

GRADE 60 REINFORCEMENT. MINIMUM LENGTHS SHOWN ABOVE SHALL BE USED UNLESS OTHERWISE NOTED ON THE PLANS. "TOP" BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

LAP SPLICE LENGTHS
CONCRETE 28-DAY COMPRESSIVE STRENGTH - 3,000 PSI

BAR SIZE	SPACING 6" OR GREATER		SPACING LESS THAN 6"	
	"TOP" BAR	OTHER BAR	"TOP" BAR	OTHER BAR
3	2'-5"	1'-10"	2'-11"	2'-3"
4	3'-2"	2'-5"	3'-10"	2'-11"
5	3'-11"	3'-1"	4'-9"	3'-9"
6	4'-8"	3'-7"	5'-8"	4'-4"
7	6'-10"	5'-3"	8'-3"	6'-4"
8	7'-10"	6'-0"	9'-5"	7'-3"
9	8'-8"	6'-9"	10'-5"	8'-2"
10	9'-8"	7'-6"	11'-8"	9'-0"
11	10'-8"	8'-3"	12'-10"	9'-11"

GRADE 60 REINFORCEMENT. MINIMUM LENGTHS SHOWN ABOVE SHALL BE USED UNLESS OTHERWISE NOTED ON THE PLANS. "TOP" BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.



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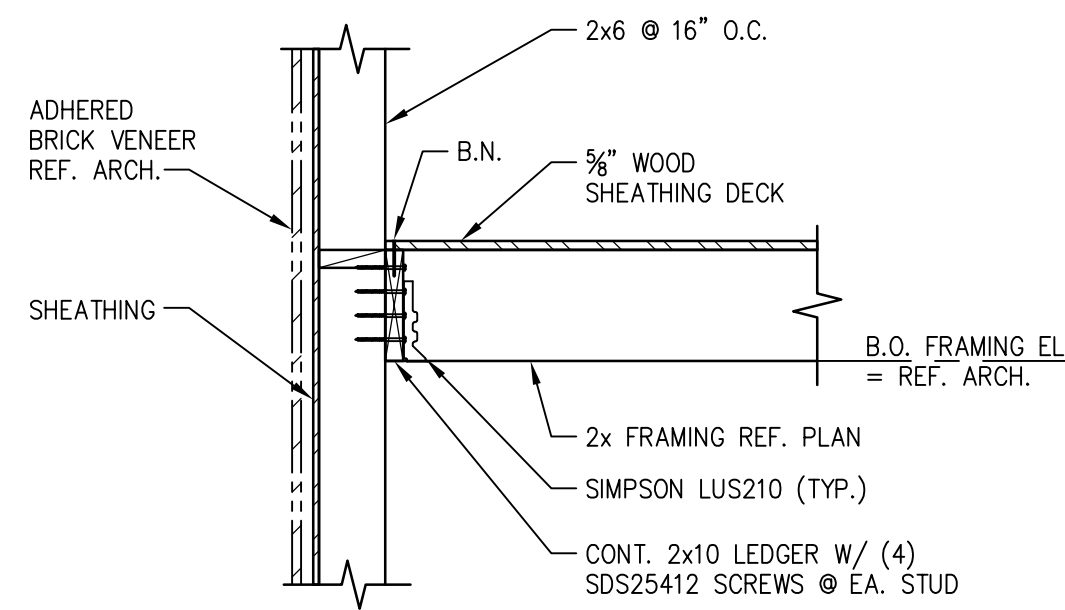
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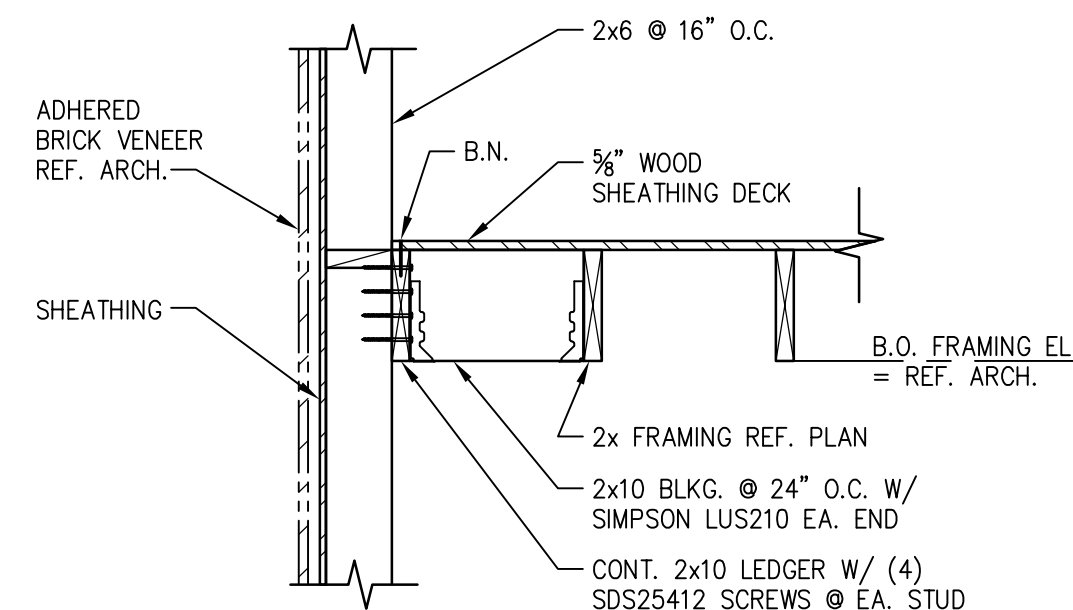
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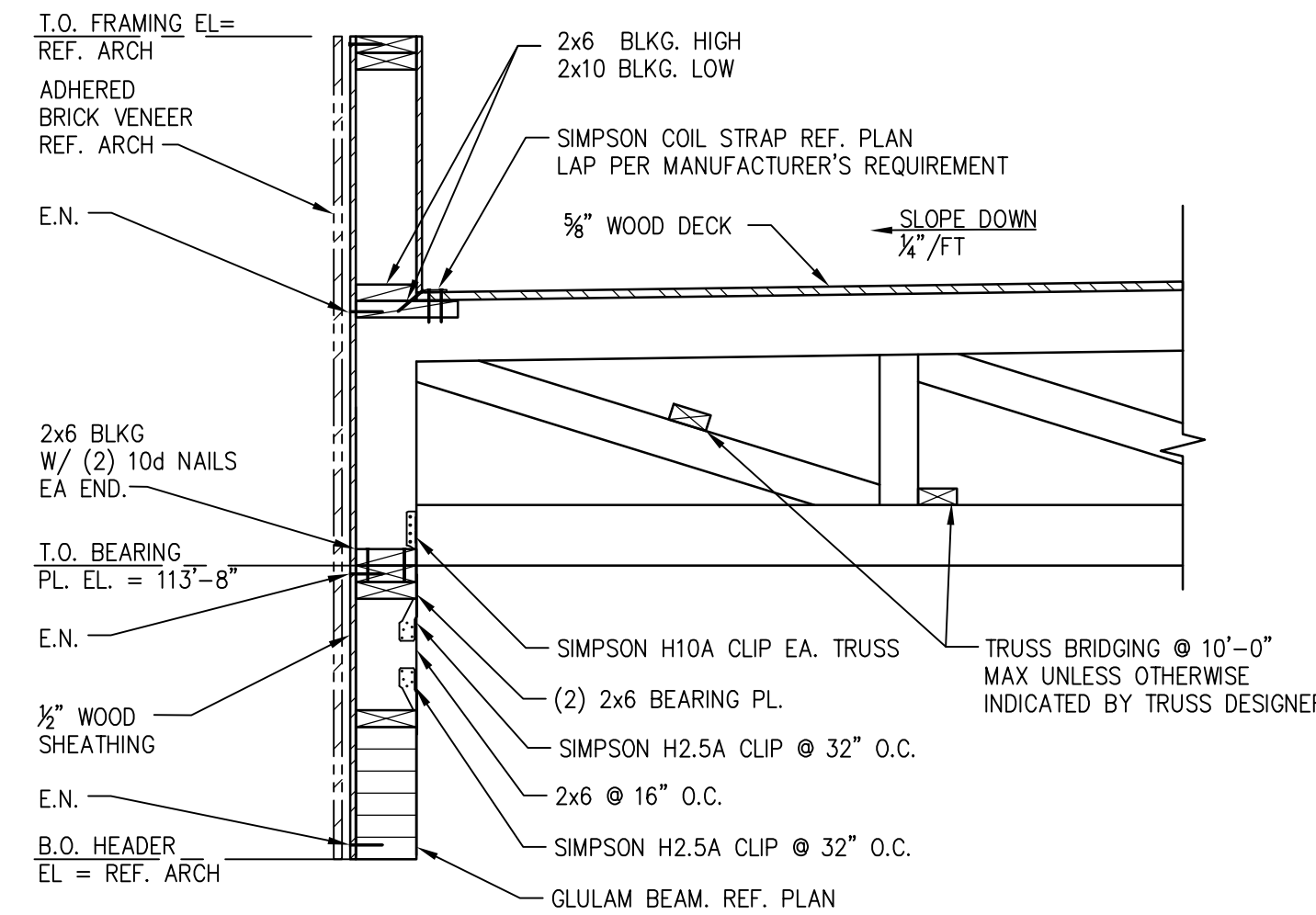
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S2.1
FOUNDATION
DETAILS



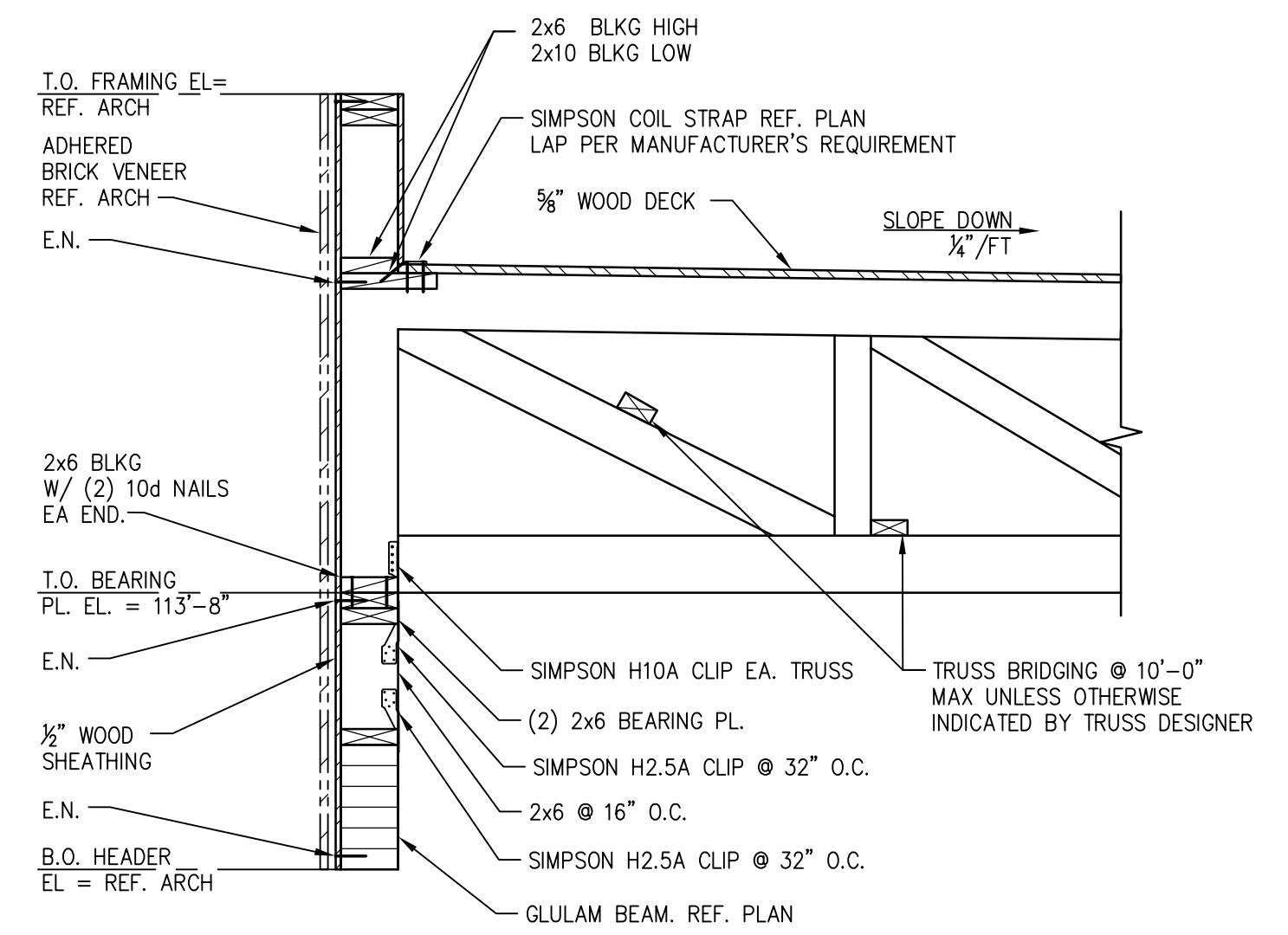
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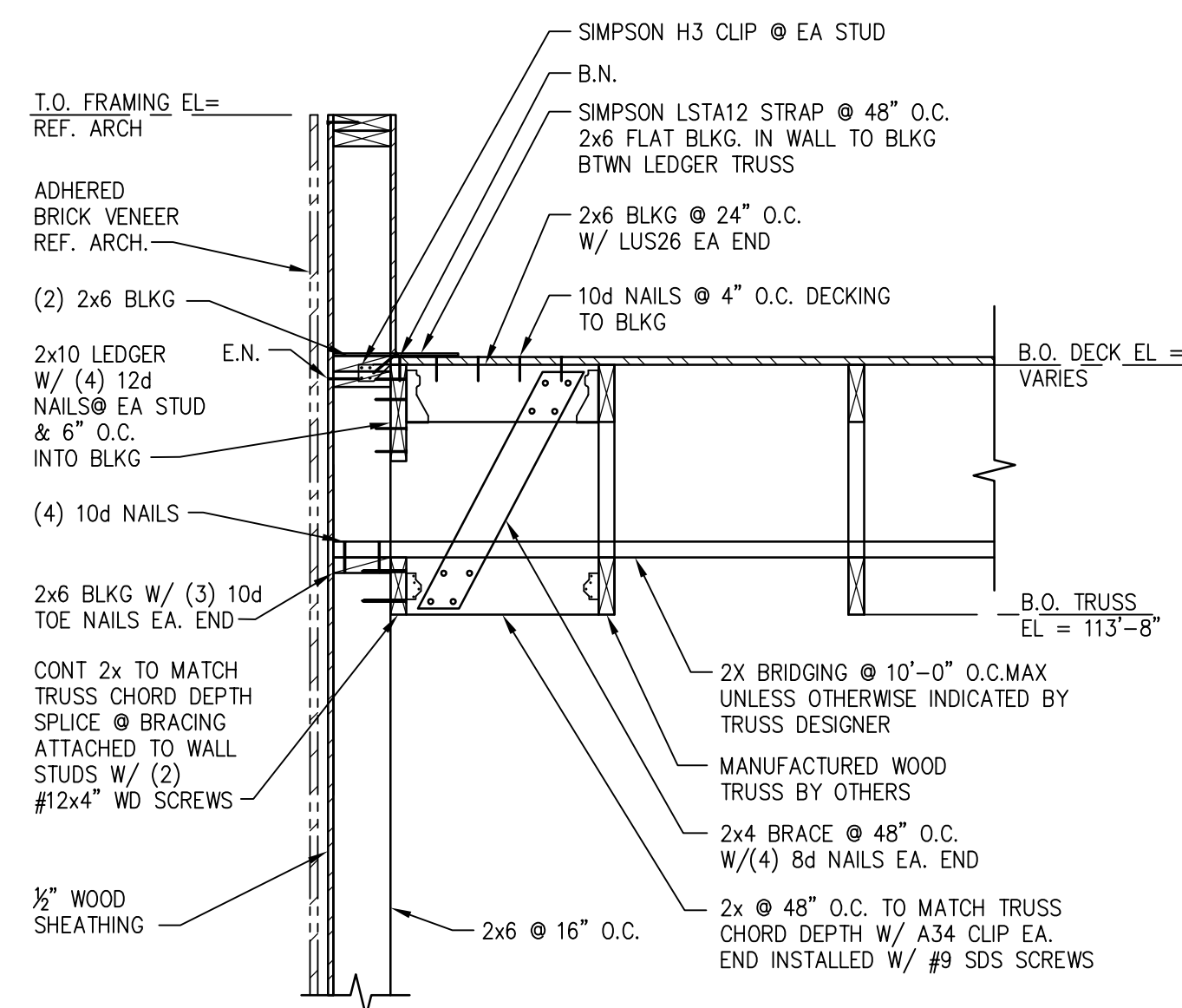
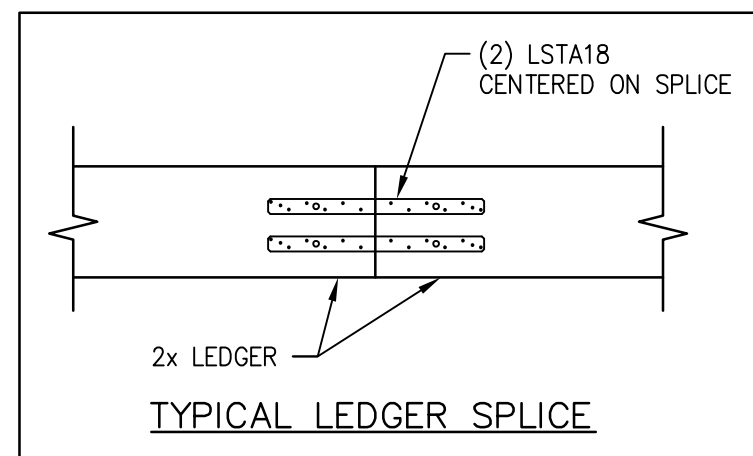
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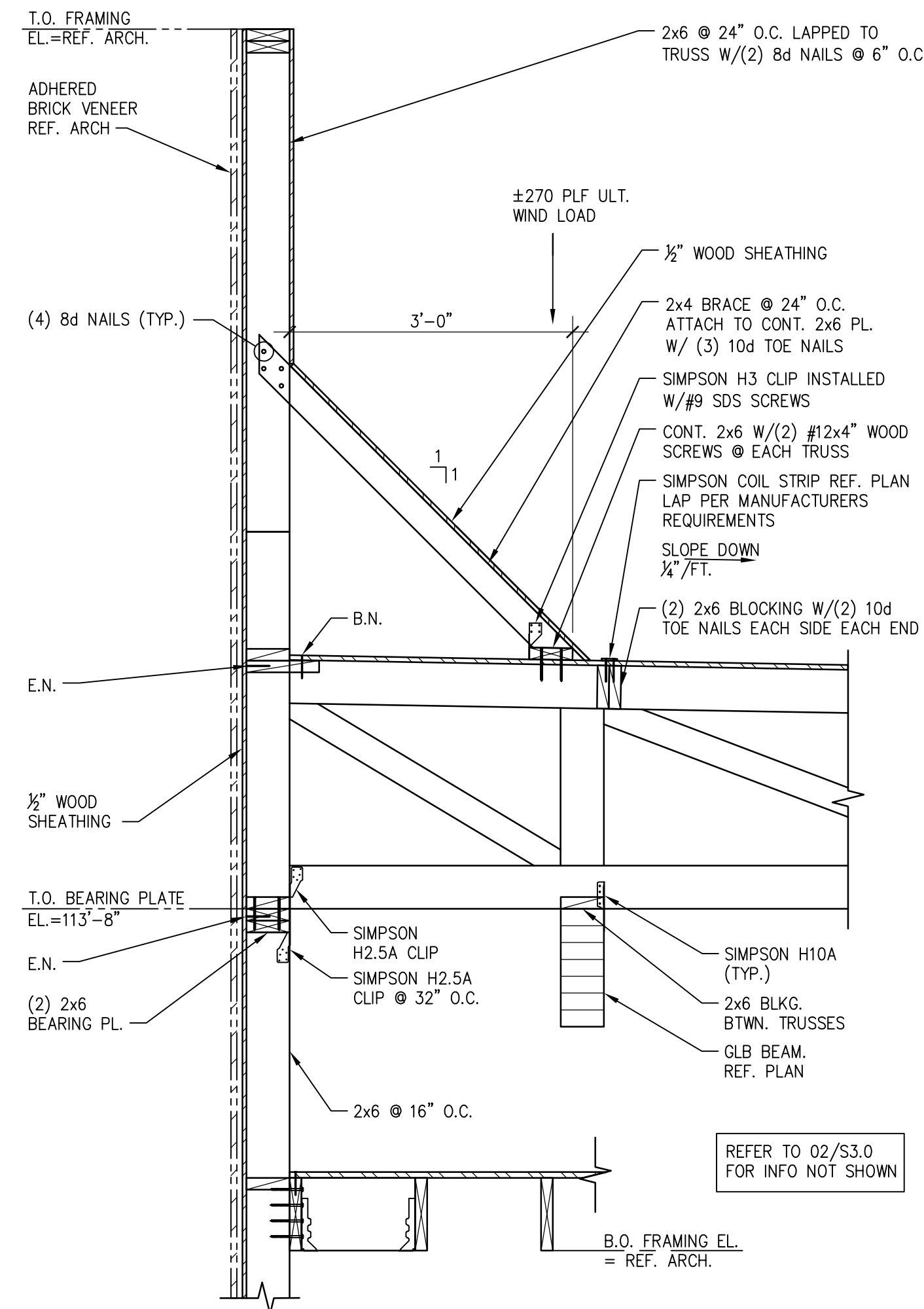
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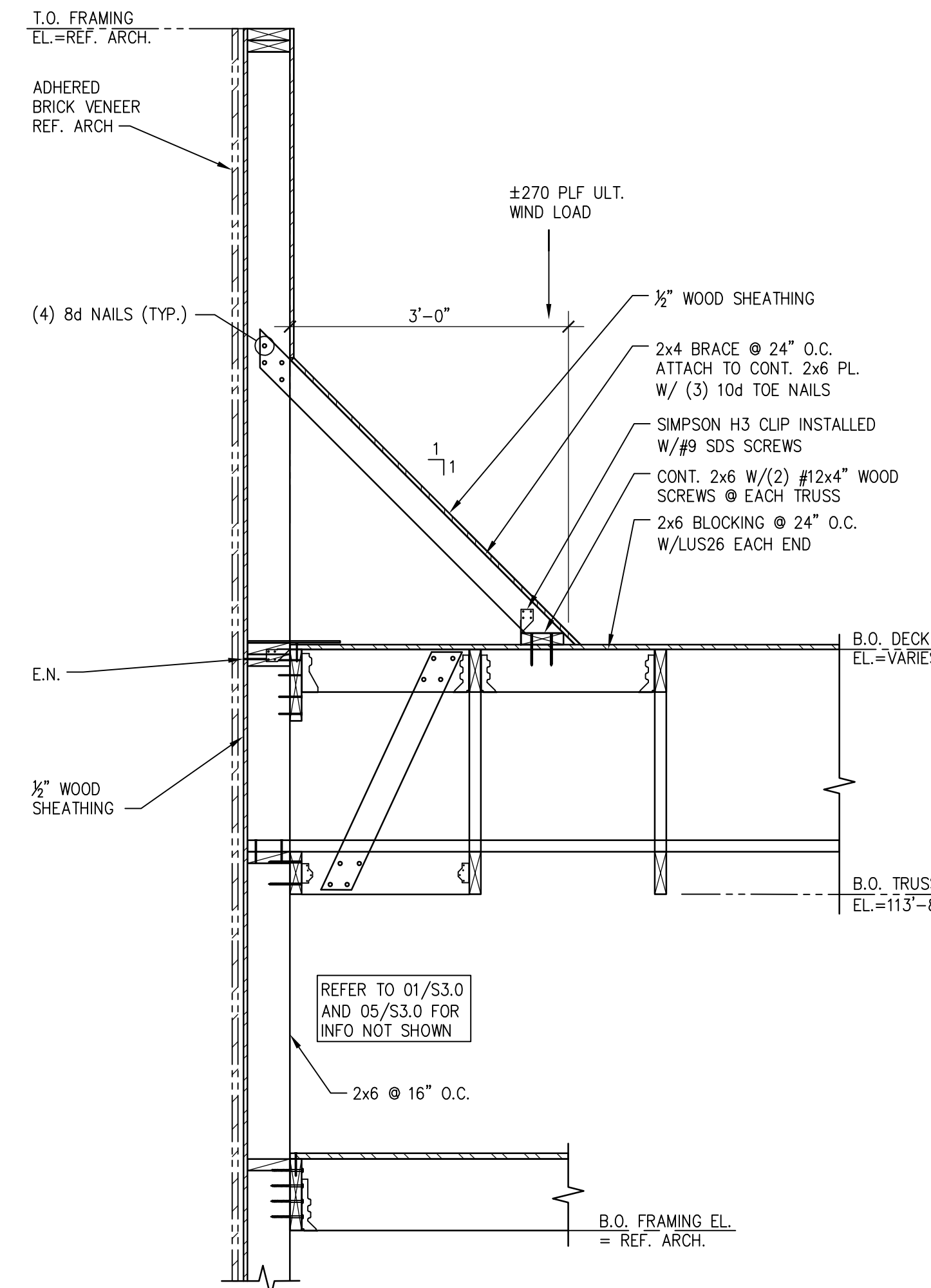
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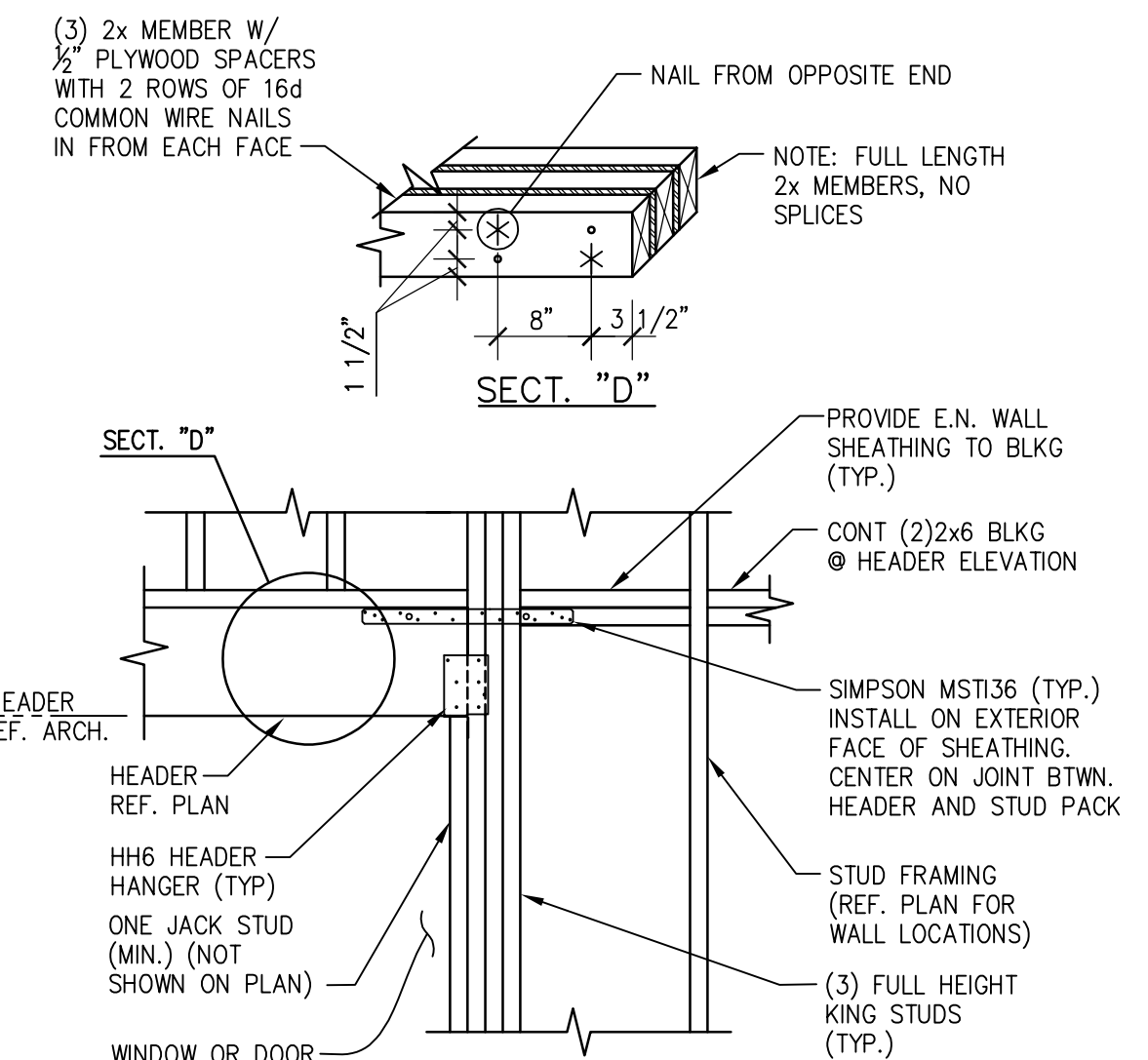
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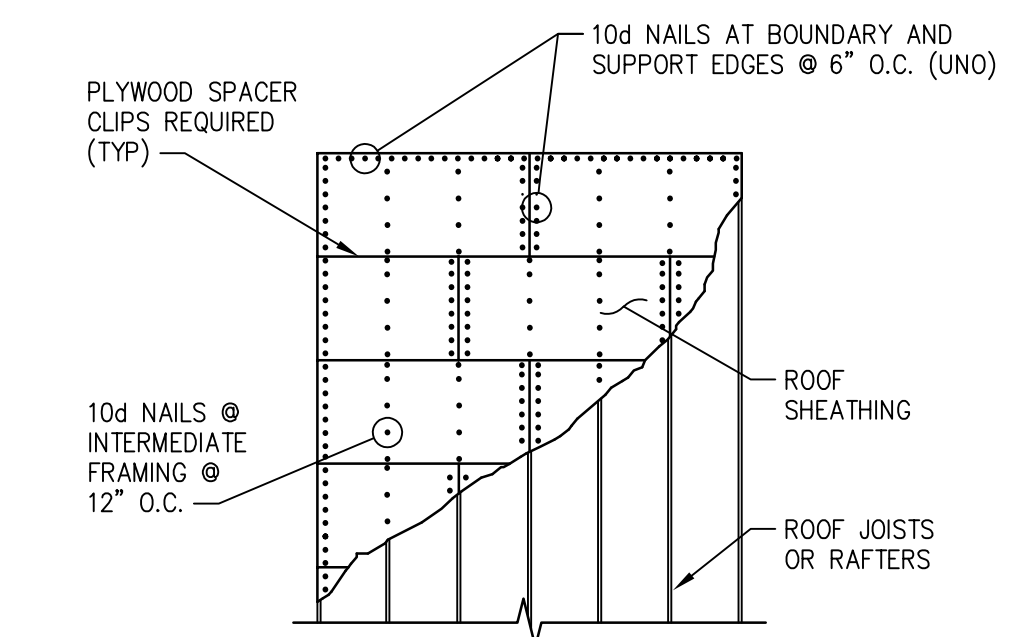
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07 SECTION
SCALE: 3/4"=1'-0"



08 SECTION
SCALE: 3/4"=1'-0"



09 ROOF DIAPHRAGM NAILING
SCALE: NONE



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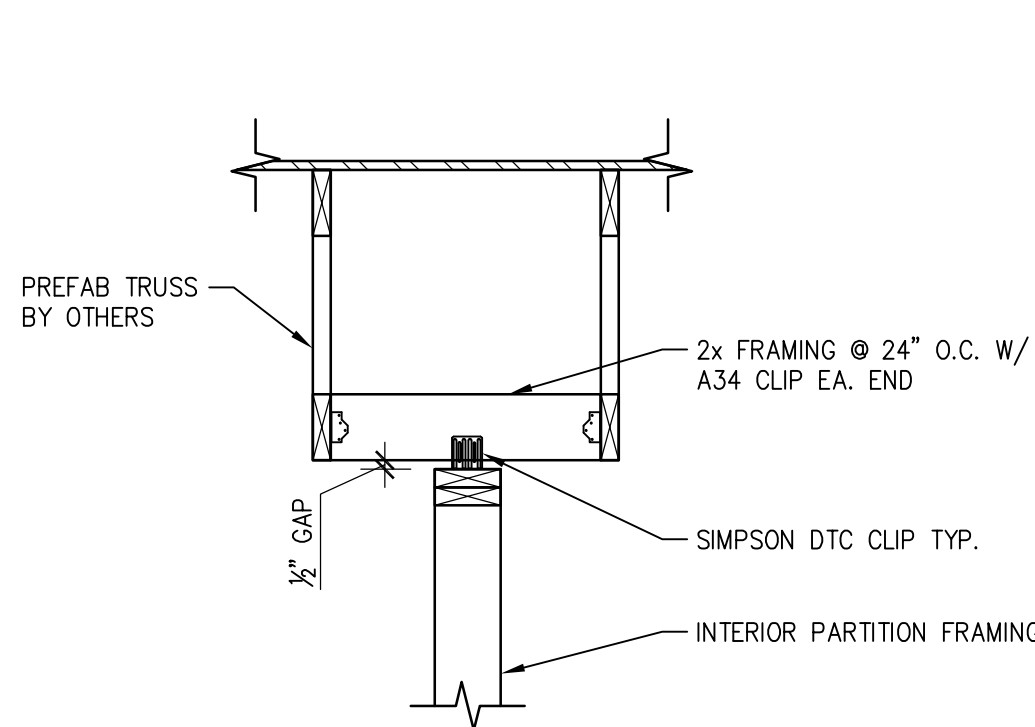
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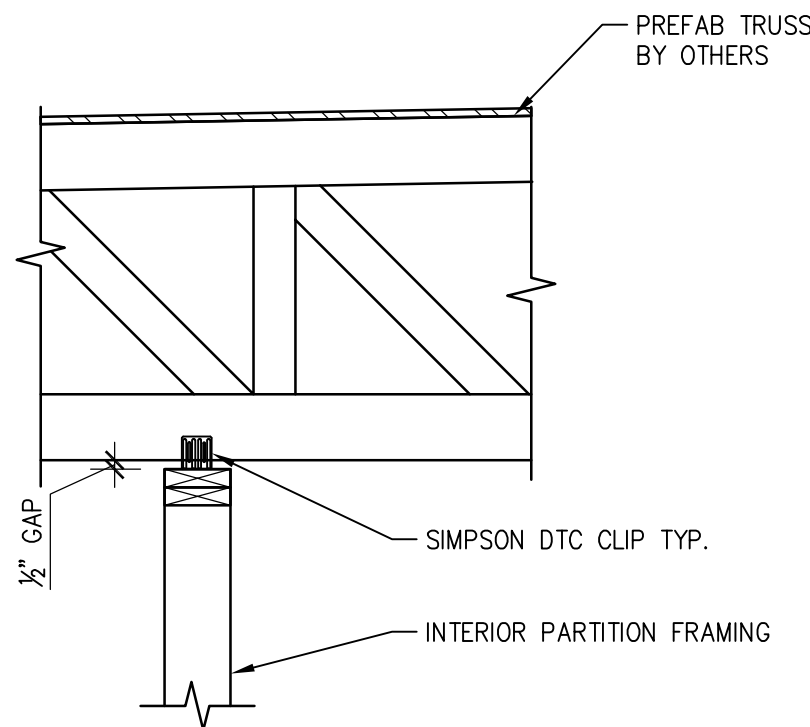
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FRAMING
DETAILS

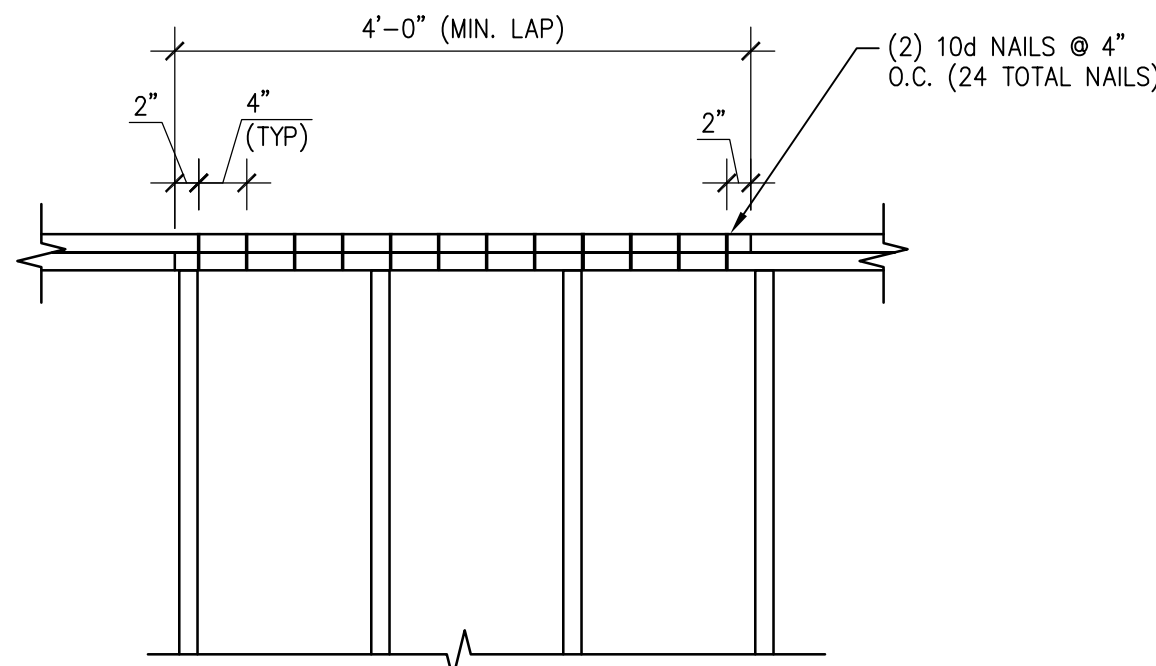
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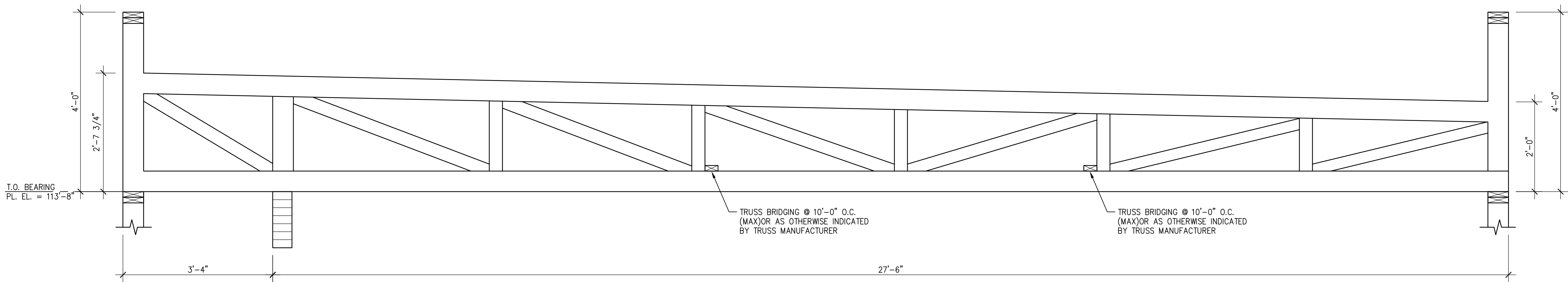
01 NON LOAD BEARING PARTITION
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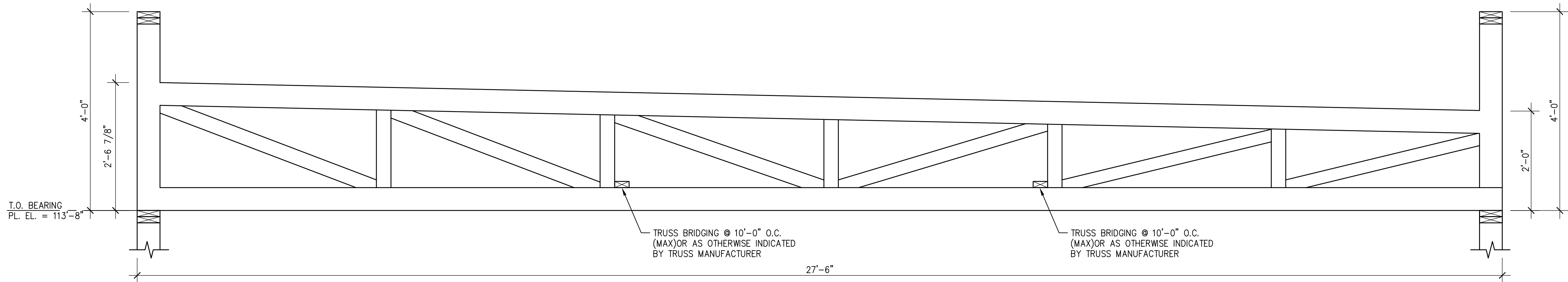
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SCALE: 3/4"=1'-0"



03 TYP. BEARING PLATE SPLICE
SCALE: 3/4"=1'-0"



TRUSS PROFILE T2



TRUSS PROFILE T1

04 TRUSS PROFILES
SCALE: 3/4"=1'-0"



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SHEET

S3.1

FRAMING
DETAILS