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STRUCTURAL CODE/CRITERIA

ALL CONSTRUCTION WILL BE IN ACCORDANCE WITH THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE.

DESIGN LOAD CRITERIA

ROOF:

LIVE LOAD 20 PSF  
DEAD LOAD AS REQUIRED

WIND LOADS:

BASIC WIND SPEED, V 140 MPH  
IMPORTANCE FACTOR, I 1.0  
EXPOSURE B

SEISMIC LOADS

RISK CATEGORY II  
SEISMIC DESIGN CATEGORY D  
SDS 1.501 g  
SDL 0.564 g  
SITE CLASS D

CONTRACTOR TO NOTIFY ENGINEER OF ANY UNUSUAL AND/OR EXCESSIVE LOADS DUE TO EQUIPMENT OR CONSTRUCTION REQUIREMENTS.

THE ENGINEER SHALL HAVE NO CONTROL OVER, NOR RESPONSIBILITY FOR, THE CONTRACTOR'S MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES IN PERFORMING THE WORK, SITE, SAFETY, OR SAFETY PROGRAMS WHILE PERFORMING THE WORK. THESE ARE SOLELY THE RESPONSIBILITIES OF THE CONTRACTOR, WHO IS ALSO RESPONSIBLE FOR COMPLYING WITH ALL HEALTH AND SAFETY PRECAUTIONS AS REQUIRED BY ANY REGULATORY AGENCIES.

ARCHITECTURAL DRAWINGS ARE THE PRIMARY BASIS FOR THE DIMENSIONS ON THIS PROJECT. THE ARCHITECTURAL DRAWINGS SHALL BE CONSIDERED AS THE LEAD DRAWINGS FOR THE PROJECT AND FOR DIMENSIONING.

FOUNDATION NOTES

CLEAR SITE AND REMOVE STUMPS, LOGS AND ROOTS TO A MINIMUM DEPTH OF 18" BELOW ALL FOOTINGS.

FOOTING ELEVATION SHOWN REPRESENTS THE MINIMUM DEPTH TO WHICH FOOTINGS SHALL BE CARRIED. FOOTING SHALL BE LOWERED AS REQUIRED TO OBTAIN SUITABLE BEARING. ALL UNSUITABLE BEARING MATERIAL SHALL BE REMOVED WITH FOOTINGS RESTING ON UNDISTURBED SOIL.

PROVIDE SUITABLE FILL MATERIAL SUCH AS THOSE CLASSIFIED BY ASTM D2487 AS GROUPS GW, GP, GM, SW, SP, SM; FREE OF ROCK OR GRAVEL LARGER THAN 2" IN ANY DIMENSION, VEGETATION OR OTHER DELETERIOUS MATTER.

A GEOTECHNICAL EVALUATION WAS NOT COMPLETED. AN ALLOWABLE BEARING PRESSURE OF 2000 PSF WAS USED BASED ON THE PRESCRIPTIVE REQUIREMENTS OF IBC CHAPTER 18.

CONCRETE NOTES

CONCRETE SHALL BE MADE OF PORTLAND CEMENT (ASTM C 150, TYPE I) AND NORMAL WEIGHT AGGREGATES (ASTM C33).

THE 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3000 PSI MINIMUM.

CONCRETE REINFORCING SHALL BE GRADE 60 (MINIMUM) ASTM A615.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185

ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315-96.

ALL CONCRETE REINFORCING SHALL BE LAP SPLICED MINIMUM LENGTH PER ACI.

ALL WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL MESH PANELS.

ALL METAL ACCESSORIES SHALL BE GALVANIZED.

SLAB-ON-GRADE

SLAB-ON-GRADE SHALL BE REINFORCED WITH W 6X6-W1.4 x W1.4 WWF ON 4" OF COARSE SAND.

WELDED WIRE FABRIC SHALL BE LAPPED A MINIMUM OF 1'-0".

PROVIDE CONTROL JOINTS SUCH THAT GROUND SLAB AREAS ARE LIMITED TO 450 SQUARE FEET AND THE LENGTH TO WIDTH RATIO DOES NOT EXCEED 1:5.

MASONRY NOTES

CONCRETE MASONRY TO HAVE A MINIMUM F'm OF 1500 PSI. AT 28 DAYS.

CMU SHALL CONFORM TO ASTM C90 TYPE I NORMAL WEIGHT

MORTAR WILL TYPE TYPE S. EITHER PORTLAND CEMENT (ASTM C150) OR MASONRY CEMENT (ASTM C91) WILL BE USED IN ACCORDANCE WITH THE PROPORTION SPECIFICATION OF ASTM C270.

STRUCTURAL STEEL NOTES

ALL BEAMS AND COLUMNS SHALL BE ASTM A992, FY = 50 KSI OR GREATER

ALL PLATE MATERIAL SHALL BE ASTM A56

ALL TUBE STEEL SECTIONS TO BE ASTM A500 GRADE B, FY=46 KSI

ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325. ALL BOLTS SHALL BE 3/4"φ

ALL DETAILING, FABRICATION, ERECTION SHALL CONFORM TO AISC SPECIFICATIONS AND CODES

ALL WELDS TO BE E70XX

ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO THE AISC "CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION", LATEST EDITION

ALL BEAMS SHALL BE FABRICATED WITH NATURAL CAMBER UP. PROVIDE CAMBERS AS INDICATED ON THE DRAWINGS.

THERE SHALL BE NO FIELD CUTTING OF THE STRUCTURAL STEEL MEMBERS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE TWO (2)

WOOD FRAMING NOTES

• JOISTS / GIRDERS

JOISTS / GIRDERS ARE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION.

JOISTS / GIRDERS SHALL BE SOUTHERN PINE NO. 2 OR BETTER.

SEE 3/52.2 FOR MULTI-PLY GIRDER NAILING REQUIREMENTS.

• ROOF DIAPHRAGM

ROOF SHEATHING SHALL BE 5/8 IN. PLYWOOD OR OSB.

WOOD FASTENINGS

THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THAT OF THOSE SPECIFIED IN IBC TABLE 2304.9.1.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS ARE TYPICAL FOR THESE STRUCTURAL DRAWINGS. THE CONTRACTOR SHOULD CONTACT THE STRUCTURAL ENGINEER IF THERE ARE ANY QUESTIONS CONCERNING ANY ABBREVIATIONS.

d	PENNY
ACI	AMERICAN CONCRETE INSTITUTE
AF&PA	AMERICAN FOREST & PAPER ASSOCIATION
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
BLKG	BLOCKING
BPL	BEARING PLATE
BSMT	BASEMENT
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
CONT	CONTINUOUS
DL	DEAD LOAD
EQ	EQUAL
FF	FINISHED FLOOR
FT	FEET
FTG	FOOTING
FV	FIELD VERIFY
IN	INCH
IBC	INTERNATIONAL BUILDING CODE
IRC	INTERNATIONAL RESIDENTIAL CODE
INT	INTERIOR
JT	JOINT
LL	LIVE LOAD
MAS	MASONRY
MAX	MAXIMUM
MISC	MISCELLANEOUS
NTS	NOT TO SCALE
OC	ON CENTER
PCF	POUNDS PER CUBIC FOOT
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REBAR	DEFORMED REINFORCING BARS
SIM	SIMILAR
SQ	SQUARE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WNF	WELDED WIRE FABRIC

TOWN OF SUMMERVILLE  
COURT RENOVATION  
118 WEST RICHARDSON AVE  
SUMMERVILLE, SC



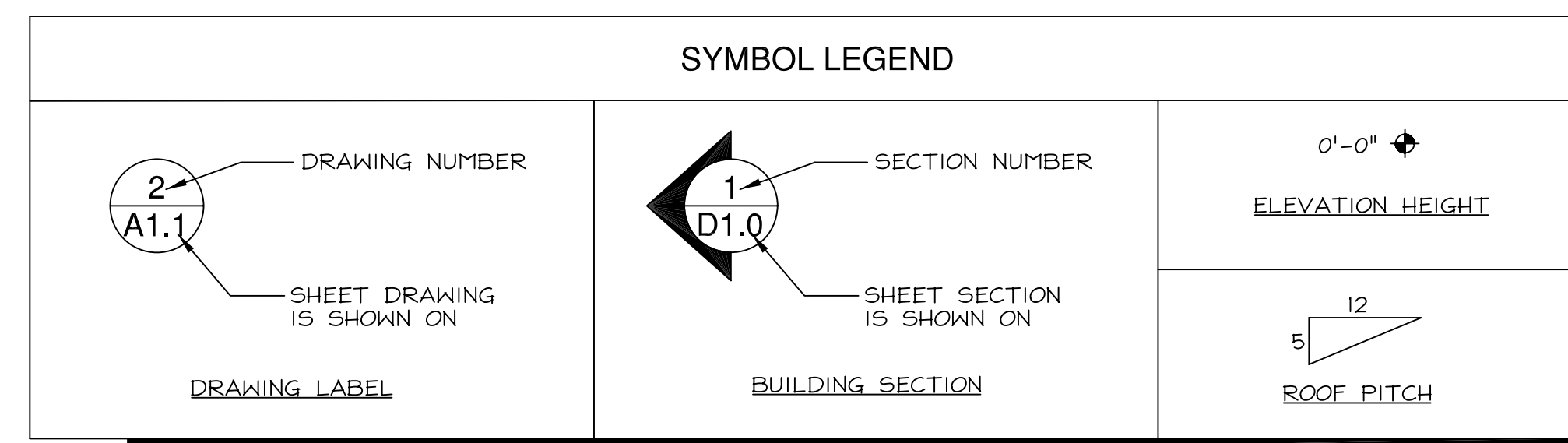
No.	Revision/Issue	Date

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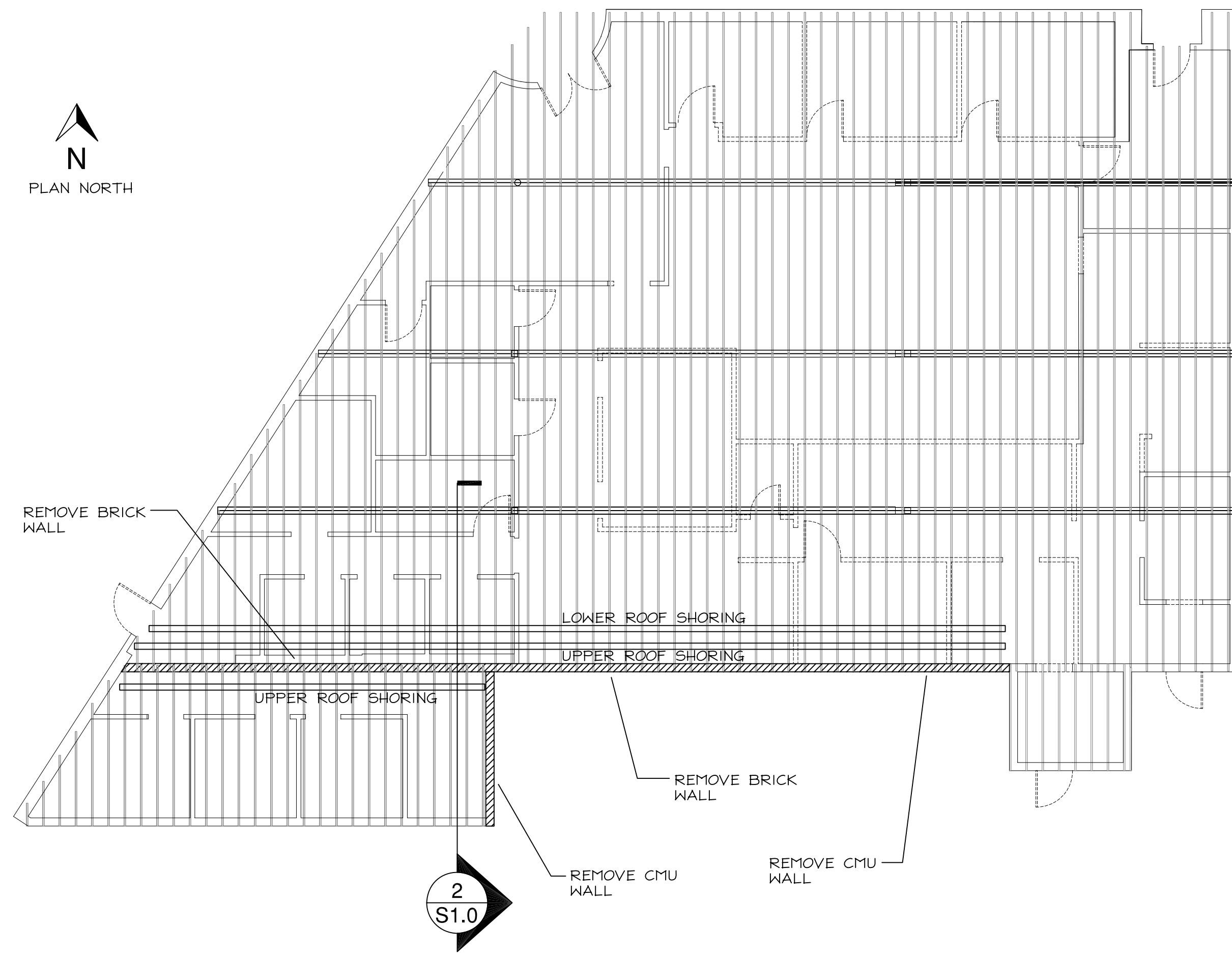
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Sheet Title  
**STRUCTURAL NOTES**

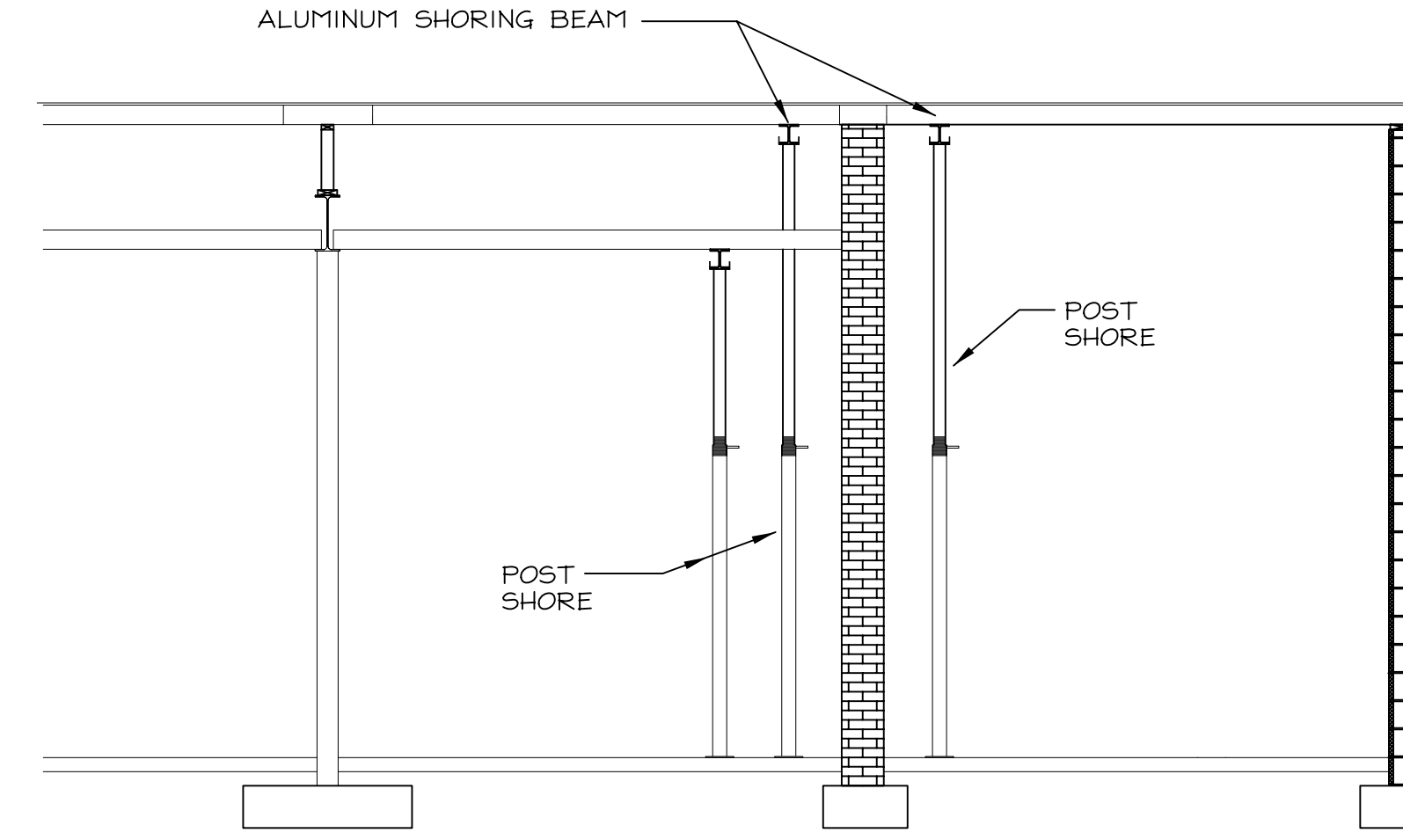
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**1**  
S1.0 DEMO / SHORING PLAN  
SCALE: 1/8"=1'-0"



**2**  
S1.0 SHORING SECTION  
SCALE: 1/4"=1'-0"

**EXISTING STRUCTURE**

COMMERCIAL STRUCTURE ORIGINALLY BUILT OF BRICK MASONRY WALLS AND WOOD ROOF SYSTEM. STRUCTURE HAS BEEN RENOVATED IN THE PAST.

AT SOME POINT IN THE PAST, THE ORIGINAL ROOF SYSTEM WAS MODIFIED / REPLACED. A NEW STEEL BEAM AND COLUMN SYSTEM WAS INSTALLED TO ELIMINATE ANY INTERIOR BRICK MASONRY BEARING WALLS. IT IS NOT CLEAR IF THE ORIGINAL ROOF JOISTS REMAINED OR WERE REPLACED. THIS ALLOWED PARTITION WALLS TO CREATE INTERIOR SEPARATE SPACES. A WOOD CEILING SYSTEM WAS ALSO INSTALLED CREATING TWO LEVELS OF WOOD JOISTS. ALSO ADDITIONAL SPACE WAS ADDED TO THE STRUCTURE BY THE CONSTRUCTION OF ADDITIONAL EXTERIOR CONCRETE MASONRY UNIT (CMU) WALLS.

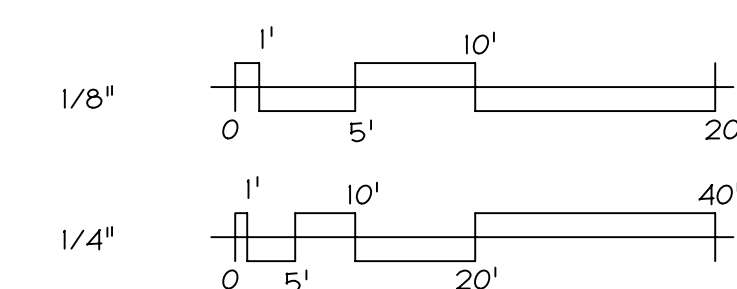
**SHORING REQUIRED**

MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE SHORING METHOD PROVIDED IS TO ENSURE THAT AT LEAST ON PLAUSIBLE METHOD EXISTS TO ALLOW THE REQUIRED WALL REMOVAL AND GIRDER INSTALLATION.

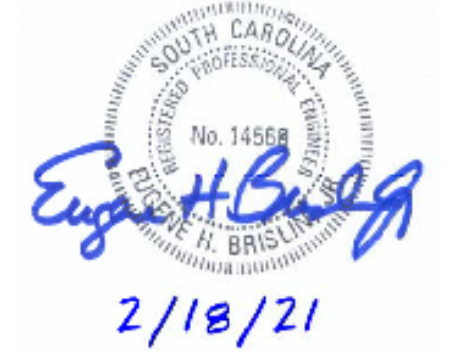
TO REMOVE THE SOUTH WALL NOTED, SHORING MUST BE USED TO SUPPORT THE EXISTING ROOF AND CEILING SYSTEM. ON THE NORTH SIDE OF THE WALL SHORING WILL BE REQUIRED FOR THE UPPER WOOD ROOF JOISTS AND LOWER WOOD CEILING JOISTS. ON THE SOUTH SIDE OF THE WALL THERE ARE NO LOWER CEILING JOISTS, SO SHORING IS ONLY REQUIRED FOR THE UPPER WOOD ROOF JOISTS.

TYPICAL SHORING CONSISTS OF POST-SHORES WITH A CAPACITY OF 3000 LBS PLACED AT 8'-0" O.C. MAX. THESE SHORES SHOULD SUPPORT A SHORING 4" ALUMINUM I-BEAM. THE BASE OF THE POST SHORES SHOULD BE SUPPORTED ON THE EXISTING SLAB ON GRADE.

**GRAPHIC SCALES**



TOWN OF SUMMERVILLE  
COURT RENOVATION  
118 WEST RICHARDSON AVE  
SUMMERVILLE, SC



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**Eugene H. Brislin Jr., PE**

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Suite 202  
Summerville, SC 29485  
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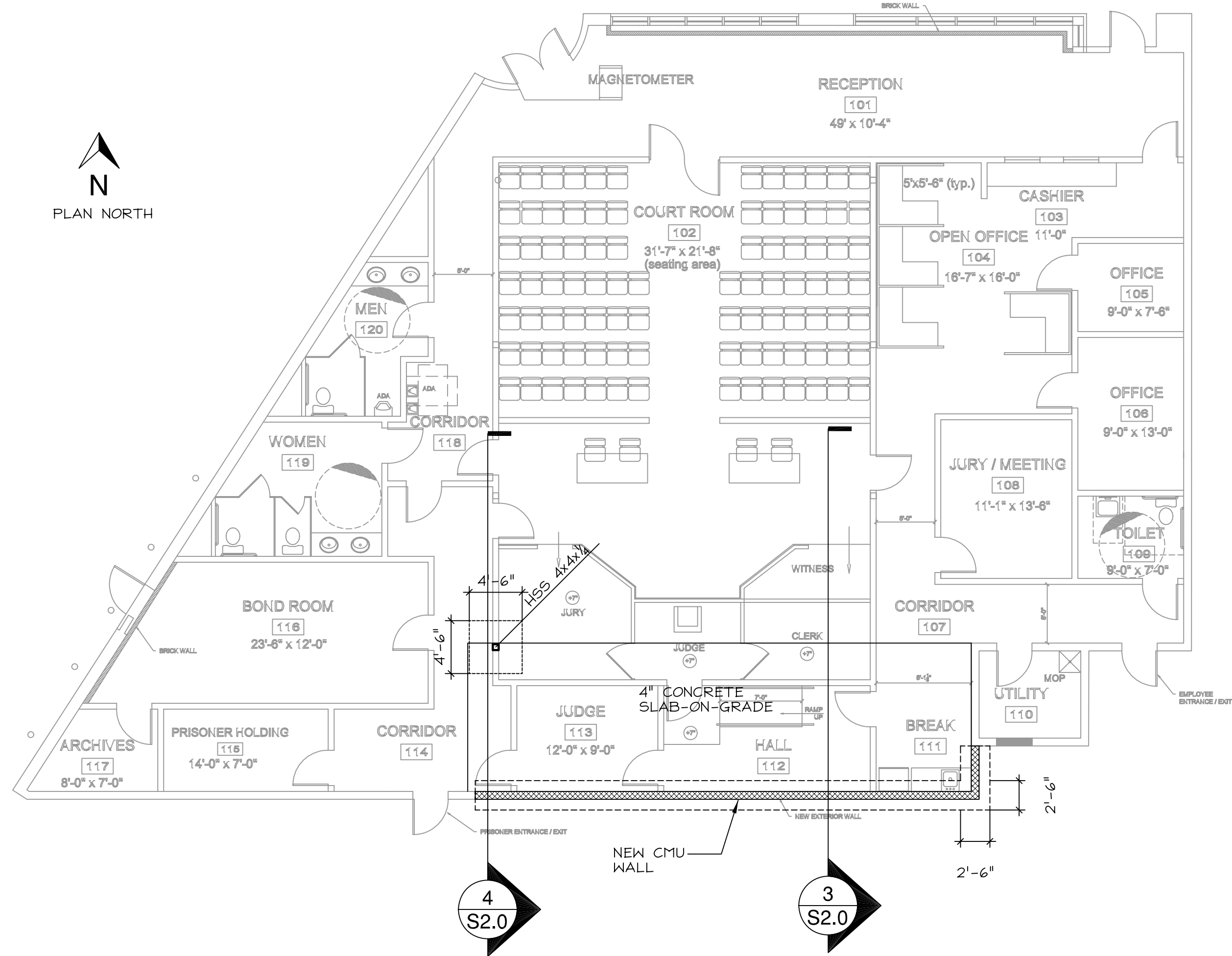
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**DEMO / SHORING PLANS**

Date  
**15 FEB 2021**

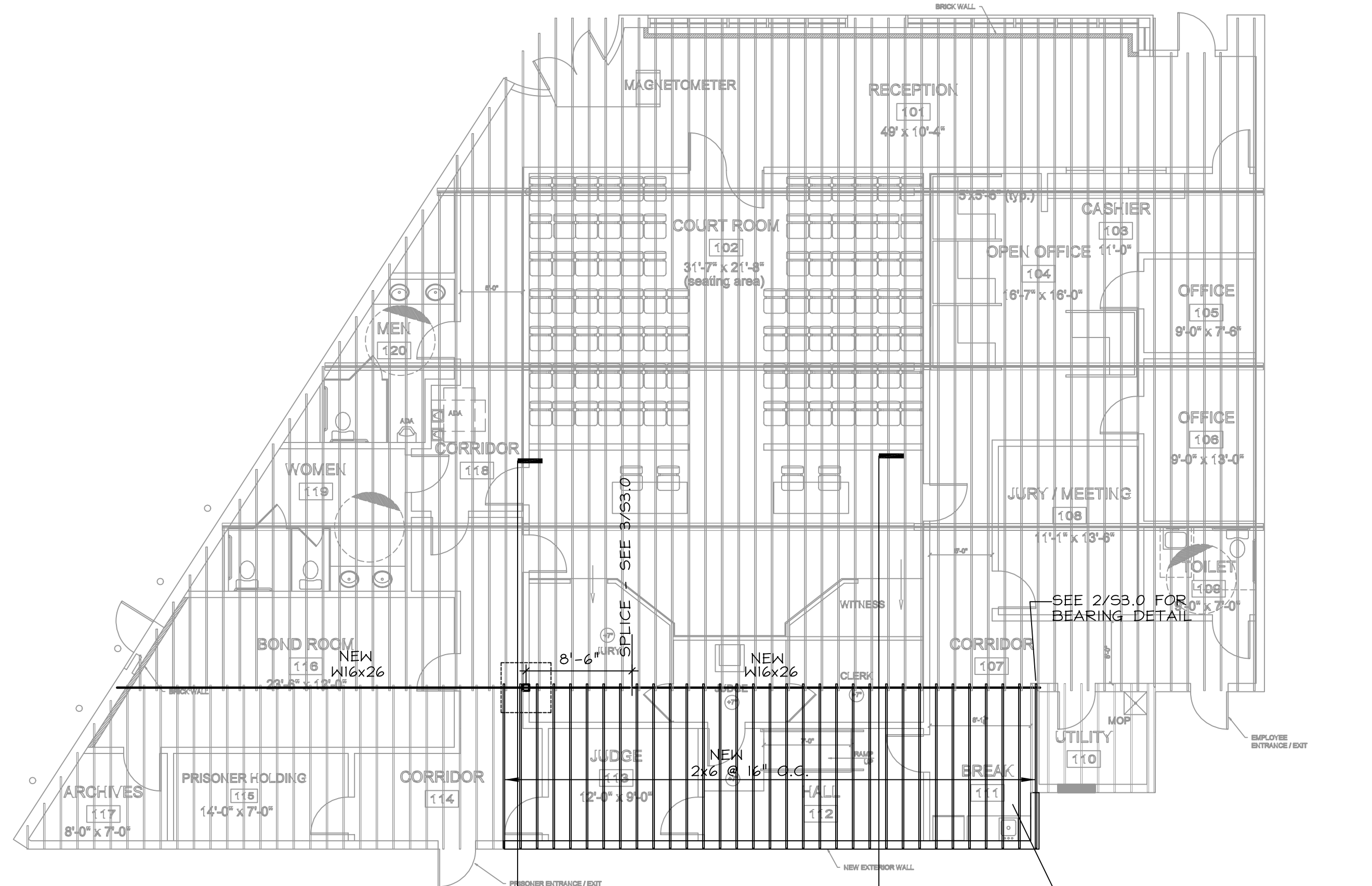
Scale  
**AS NOTED**

Sheet  
**S1.0**

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**1**  
S2.0  
NEW FOOTING / FLOOR SLAB PLAN  
SCALE: 1/8"=1'-0"

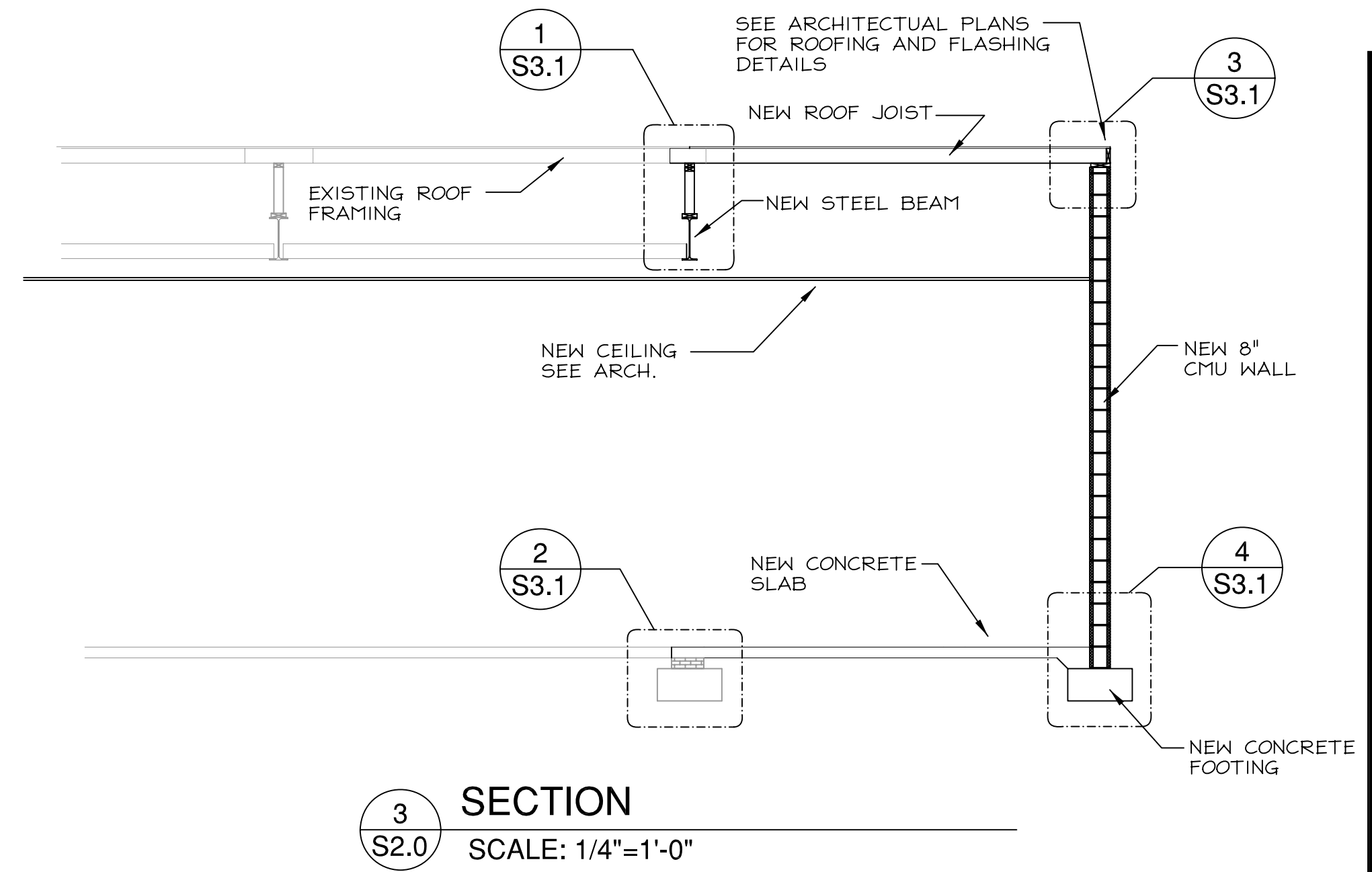


**2**  
S2.0  
NEW ROOF FRAMING PLAN  
SCALE: 1/8"=1'-0"

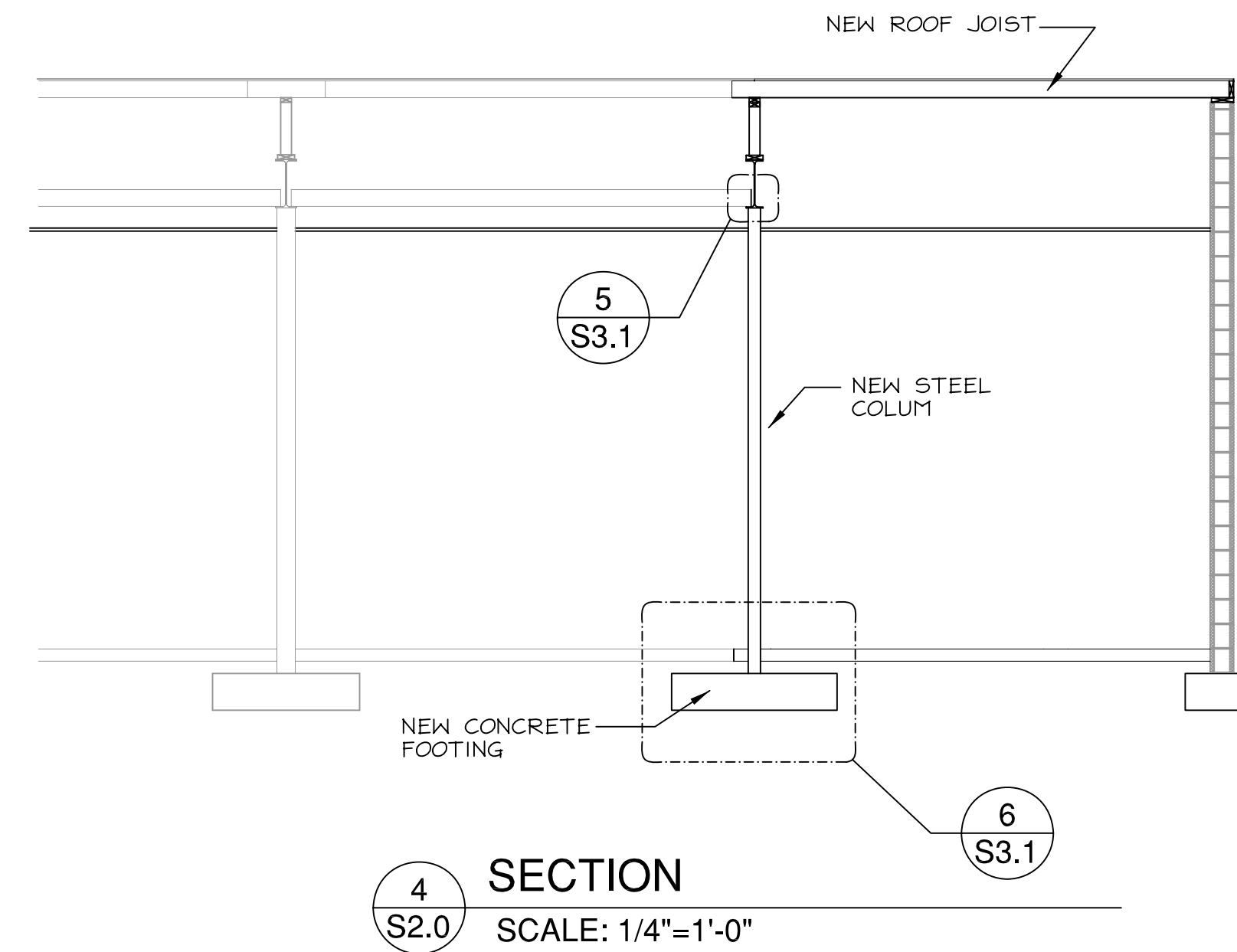
**4**  
S2.0

**3**  
S2.0

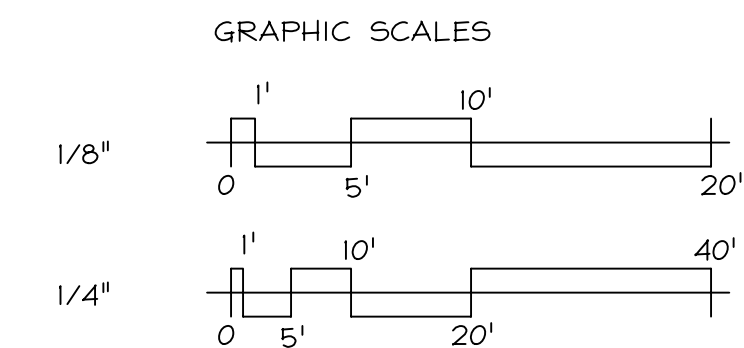
5/8" PLYWOOD SHEATHING  
ON TOP OF 2x6 JOISTS  
(MATCH EXISTING CONDITIONS)  
SEE 1/S3.0 FOR NAILING



**3**  
S2.0  
SECTION  
SCALE: 1/4"=1'-0"



**4**  
S2.0  
SECTION  
SCALE: 1/4"=1'-0"



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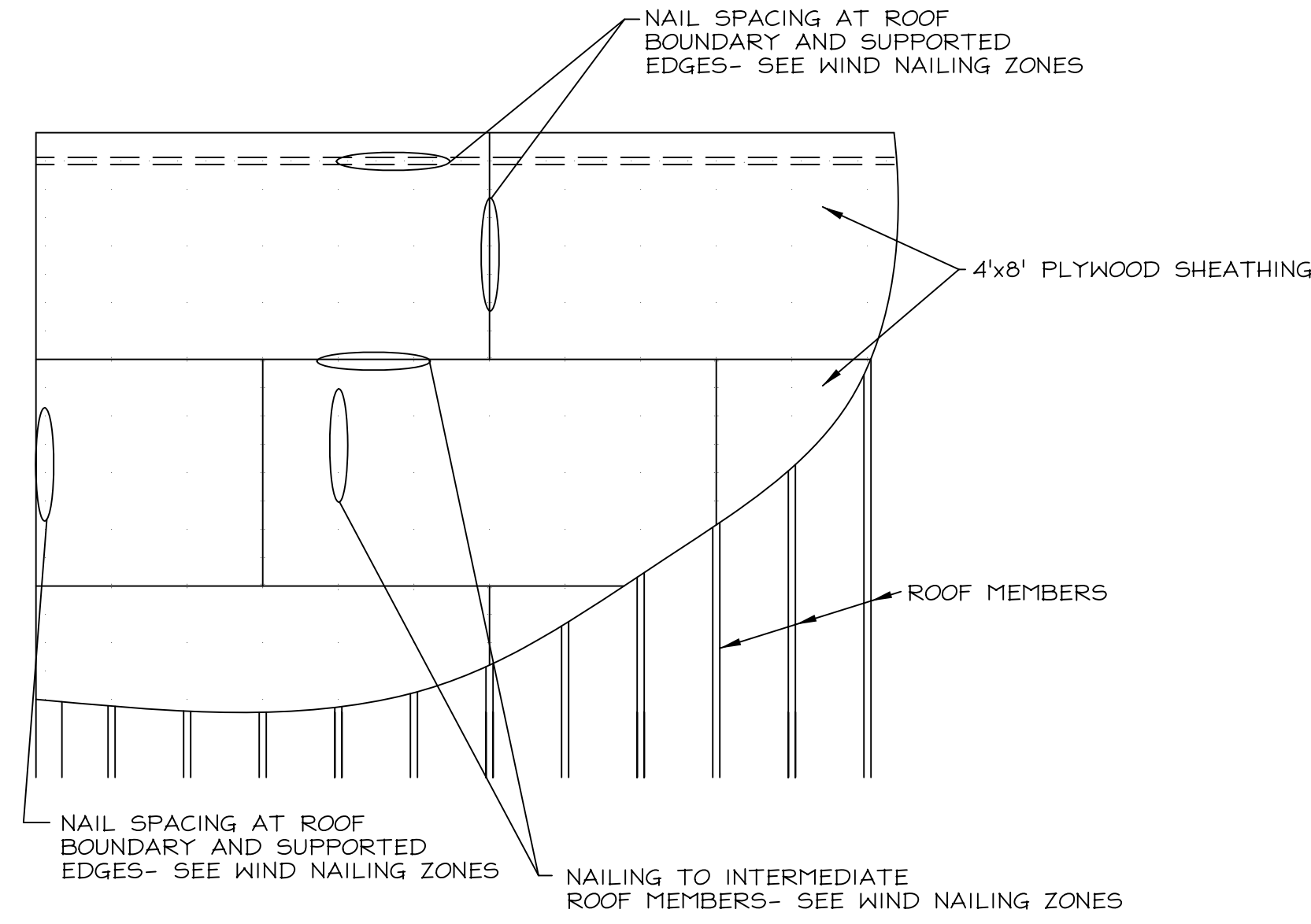
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STRUCTURAL  
RENOVATIONS

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15 FEB 2021

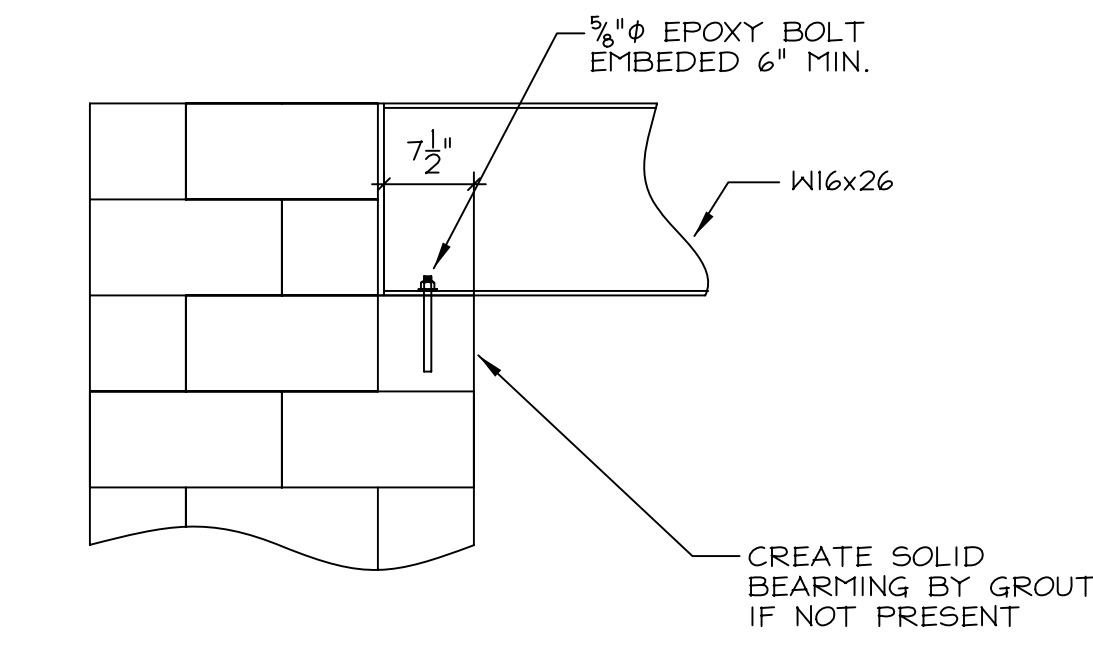
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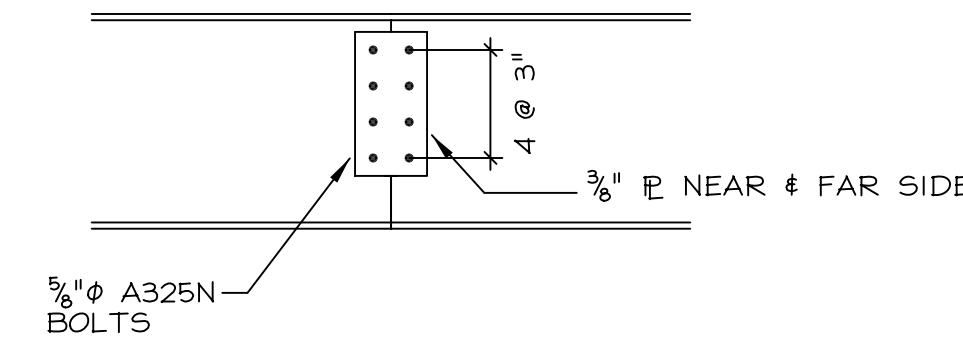
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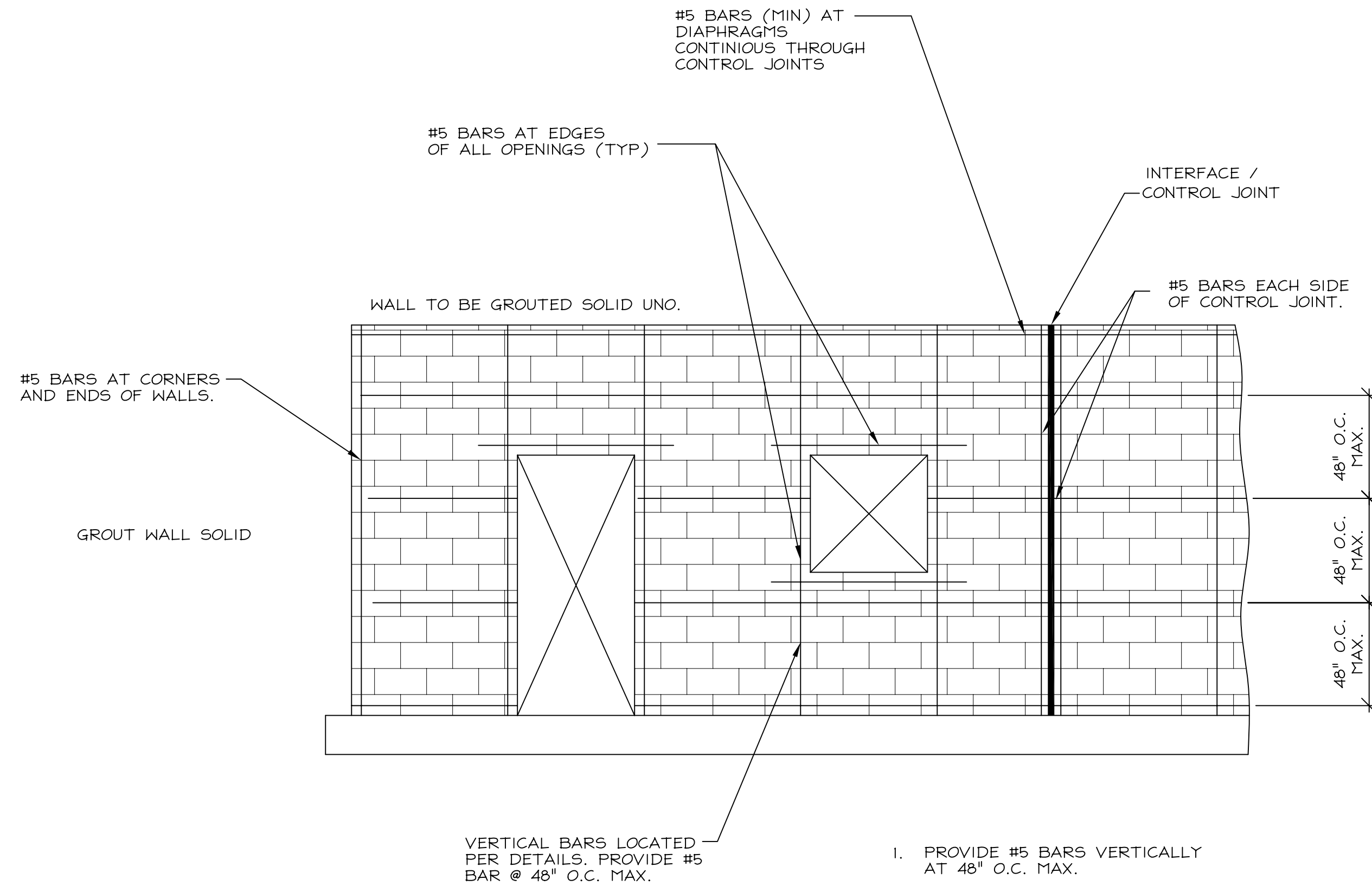
1 TYPICAL ROOF NAILING DIAGRAM  
S3.0



2 DETAIL  
S3.0

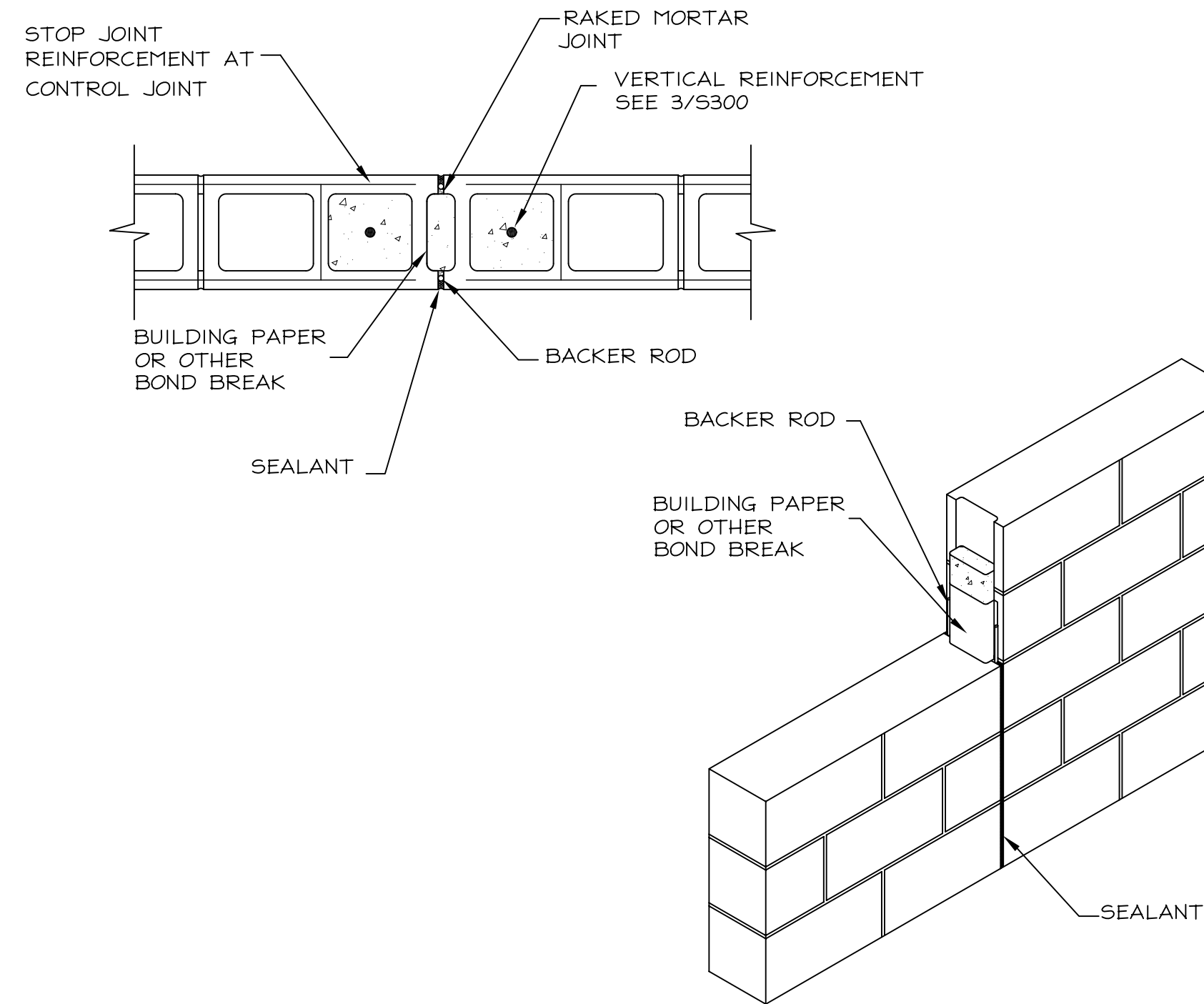


3 DETAIL  
S3.0



1. PROVIDE #5 BARS VERTICALLY AT 48" O.C. MAX.
2. PROVIDE HORIZONTAL BARS THROUGH BOND BEAMS @ 48" O.C. MAX.
3. PROVIDE #5 BARS @ DOORS AND WINDOWS AS SHOWN.

4 TYPICAL MASONRY REINFORCING DETAILS  
S3.0



5 TYPICAL JOINTS  
S3.0

TOWN OF SUMMERVILLE  
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Professional Engineer  
Eugene H. Brislin Jr.  
No. 14566  
2/18/21

No.	Revision/Issue	Date

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DETAILS

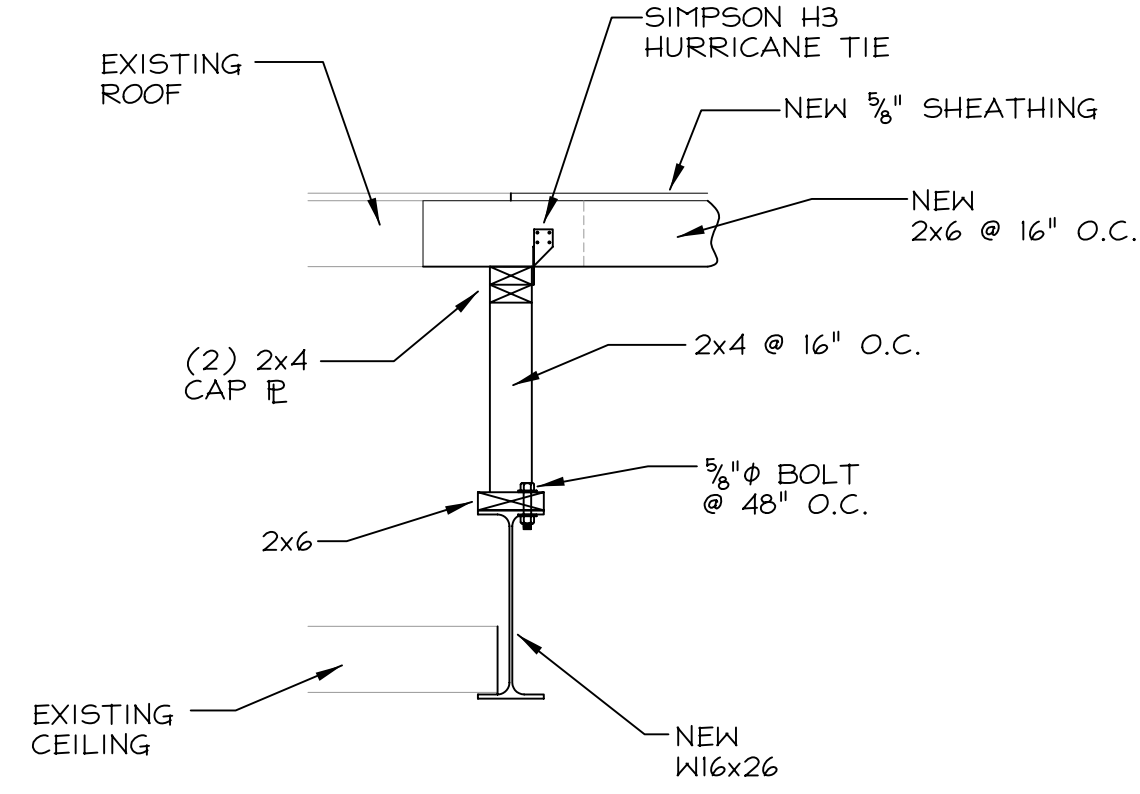
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15 FEB 2021

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3/4"=1'-0"

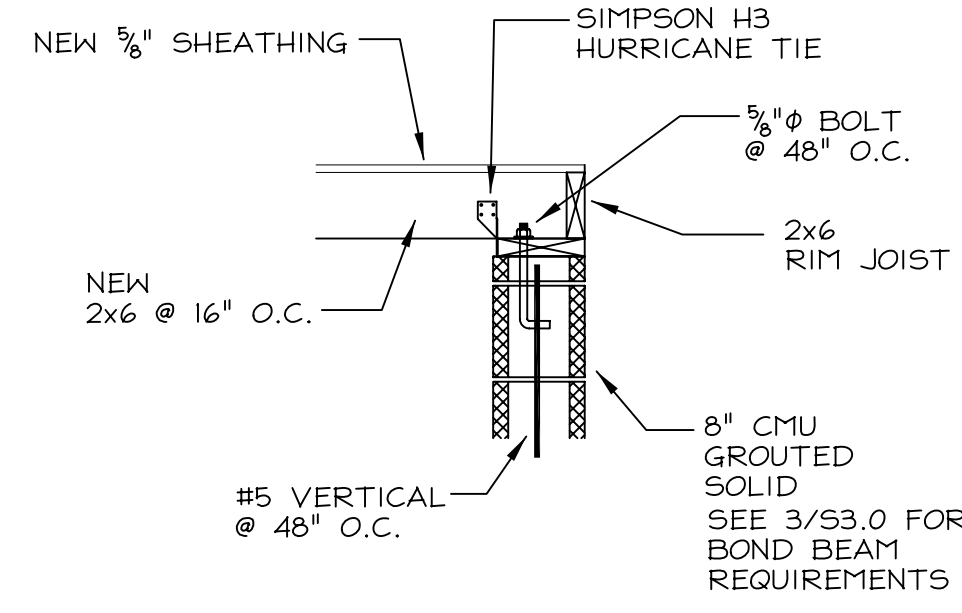
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S3.0

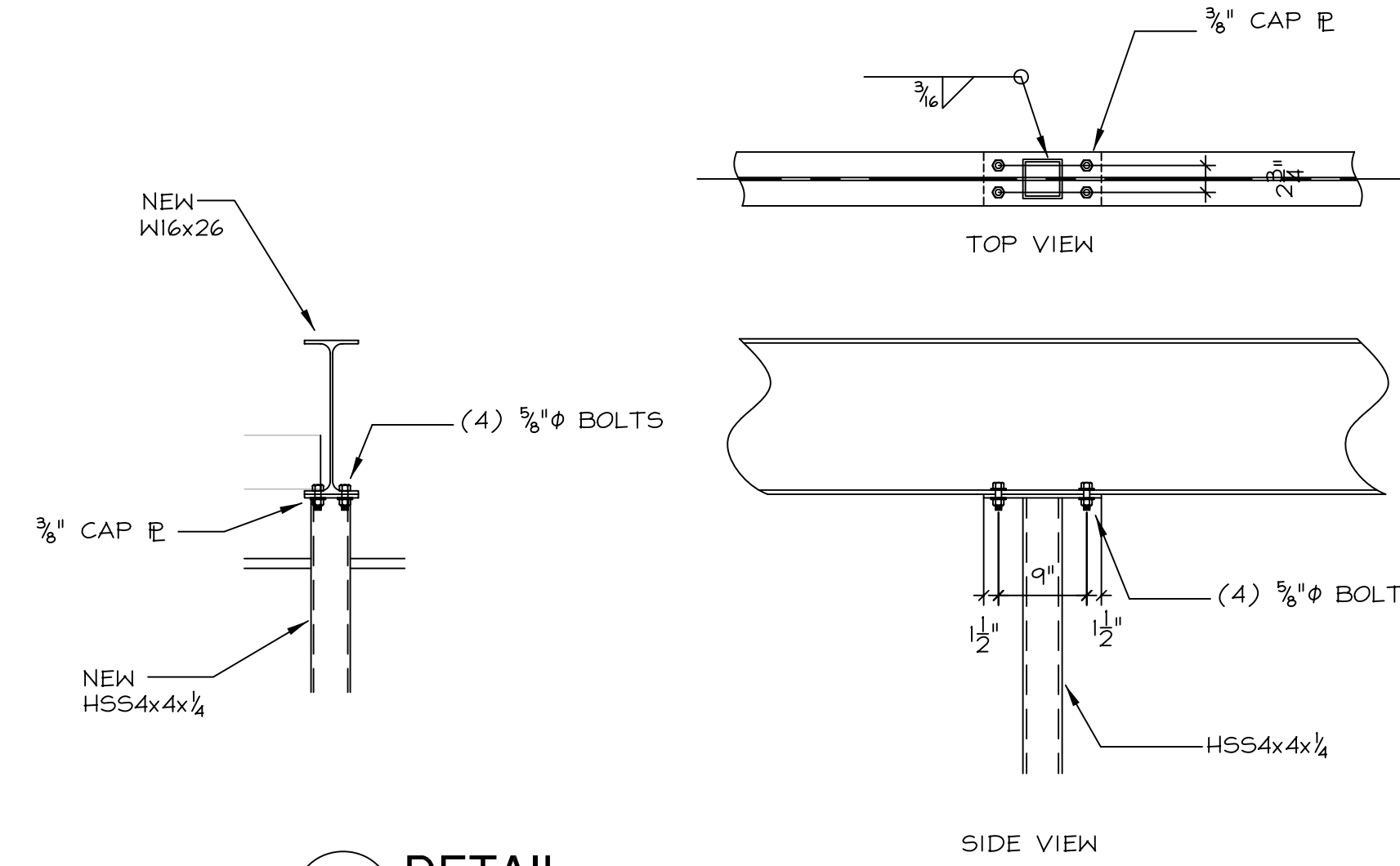
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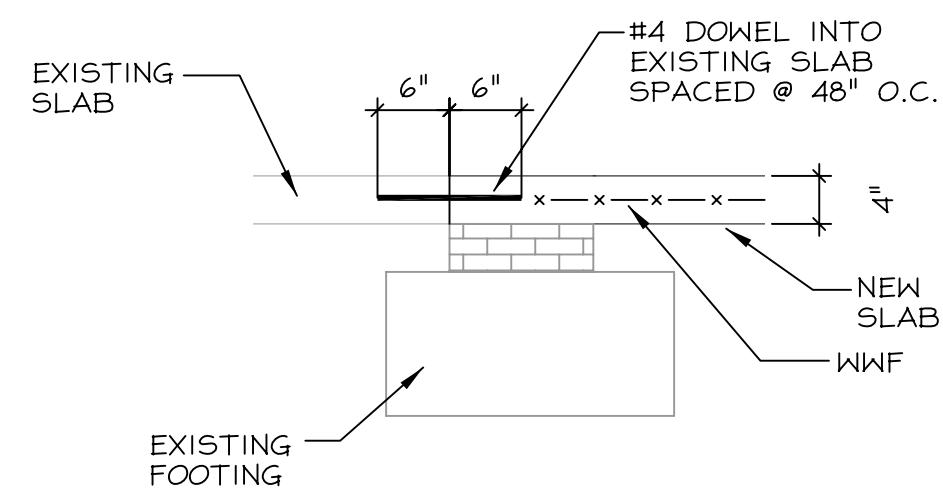
**1** DETAIL  
S3.1 SCALE: 3/4"=1'-0"



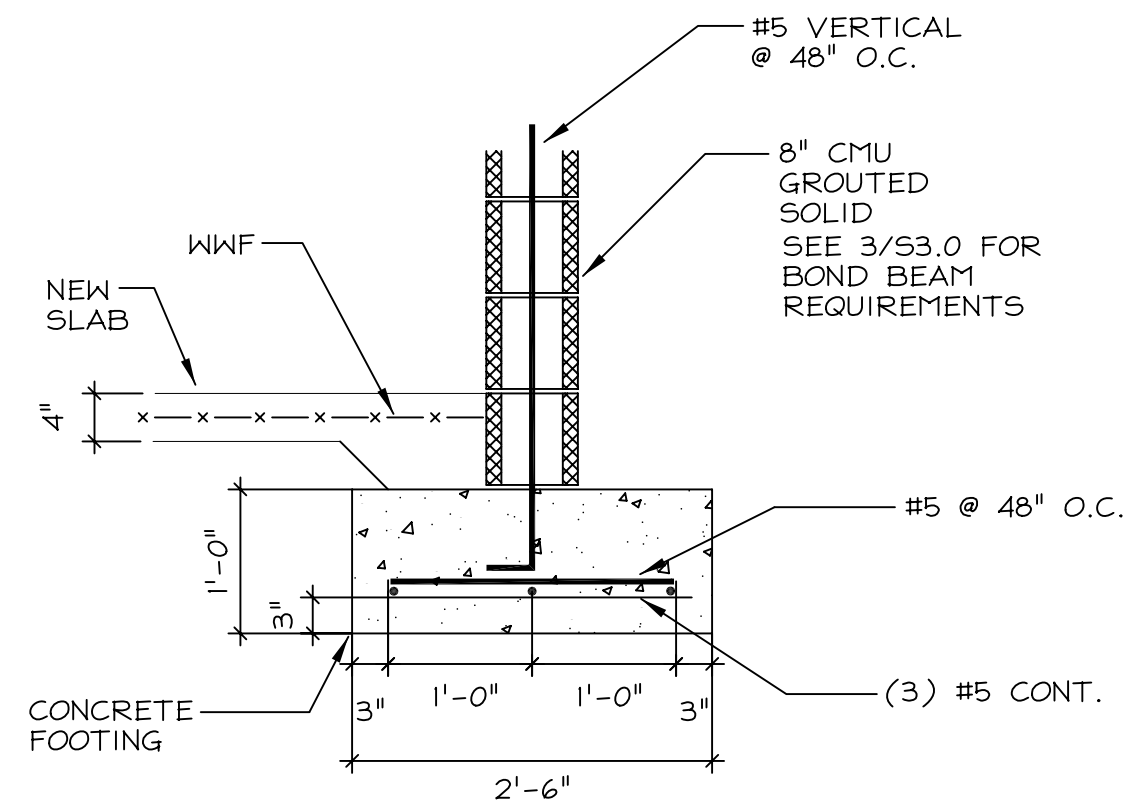
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S3.1 SCALE: 3/4"=1'-0"



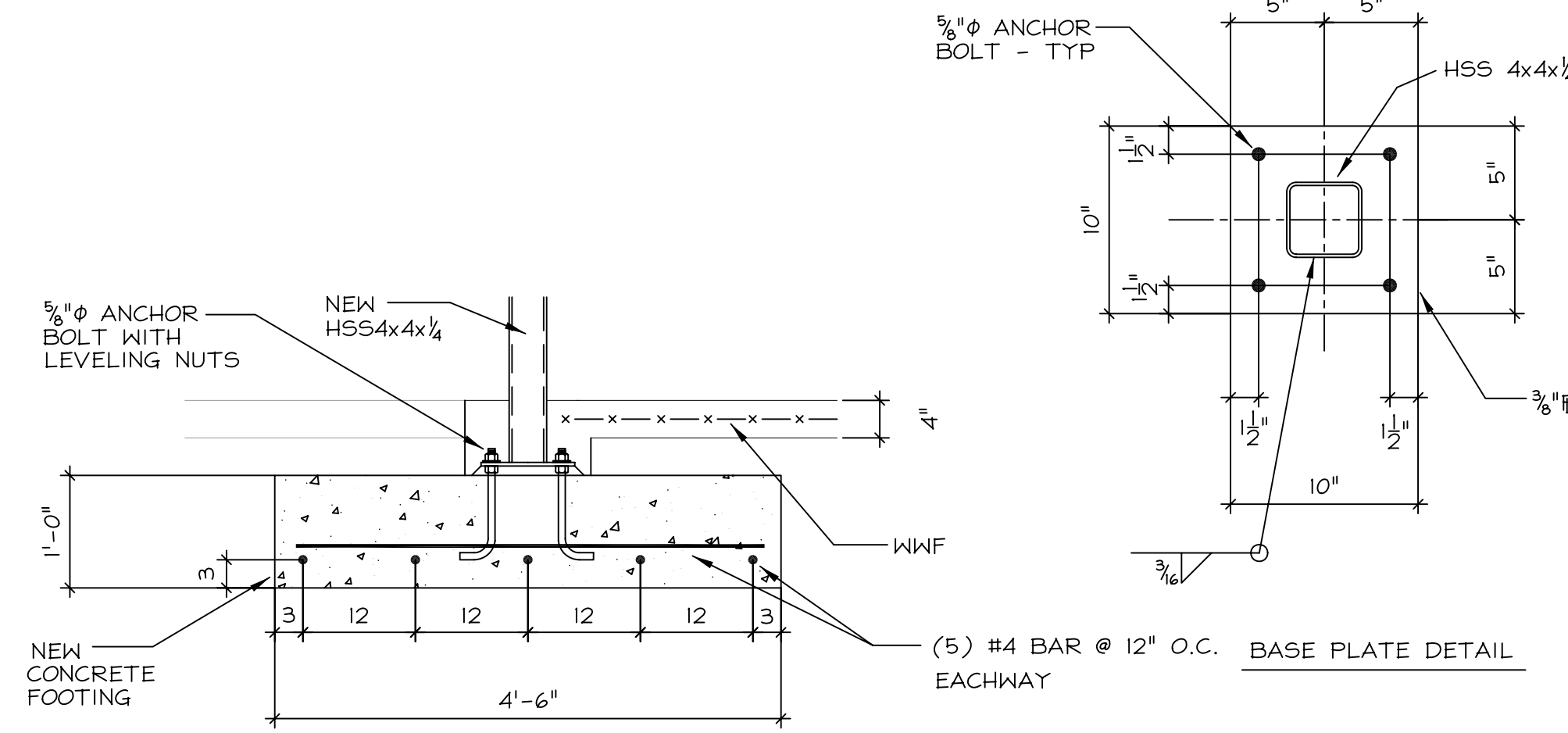
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S3.1 SCALE: 3/4"=1'-0"



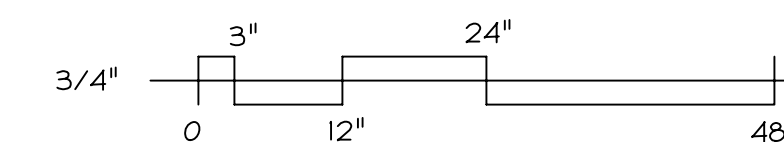
**2** DETAIL  
S3.1 SCALE: 3/4"=1'-0"



**4** DETAIL  
S3.1 SCALE: 3/4"=1'-0"



**6** DETAIL  
S3.1



**TOWN OF SUMMERVILLE**  
**COURT RENOVATION**  
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*Eugene H. Brislin Jr.*  
No. 14558  
2/18/21

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**DETAILS**

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**S3.1**