

SCOPE OF WORK

- TO PROVIDE STRUCTURAL DESIGN FOR THE PRE-FAB METAL BUILDING PER THE SPECIFIED DESIGN LOADS, AND APPLICABLE BUILDING CODES. ANY DISCREPANCIES IN DESIGN LOADS SHALL BE BROUGHT TO THE ATTN. OF THE ENGINEER OF RECORD.
- DOES NOT PROVIDE** ANY ARCHITECTURAL, SITE, ZONING, HVAC, ELEC. MECH DESIGN OR REQUIREMENTS. THESE ITEMS MUST BE ADDRESSED BY THEIR RESPECTIVE PROFESSIONALS IN CHARGE.

STRUCTURAL DRAWING INDEX

- S-1 COVER SHEET, ELEVATIONS, FOUNDATION PLAN & DETAILS
- S-2 COLUMN LAYOUT PLAN, FRAME SECTION & DETAILS
- S-3 SIDE WALL FRAMING, END WALL FRAMING & DETAILS

STRUCTURAL DESIGN CRITERIA

| | |
|------------------------|---------------------------|
| PREVAILING CODE: | NJBC 2021 |
| OCCUPANCY / USE GROUP: | U (PRIVATE GARAGE / SHED) |
| CONSTRUCTION TYPE: | II - B |
| RISK CATEGORY: | II |
| BUILDING FOOTAGE: | 5000 SQ.FT |
| 1. DEAD LOAD (D) | |
| COLLATERAL LOAD | 2.0 PSF |
| 2. ROOF LIVE LOAD (Lr) | Lr = 20 PSF |
| 3. SNOW LOAD (S) | |
| GROUND SNOW LOAD | Pg = 20 PSF |
| FLAT ROOF SNOW LOAD | Pf = 20 PSF |
| SLOPED ROOF SNOW LOAD | P _s = 20 PSF |
| MINIMUM SNOW LOAD | P _m = 20 PSF |
| 4. WIND LOAD (W) | |
| DESIGN WIND SPEED | V = 125 MPH |
| EXPOSURE | D |
| 5. SEISMIC LOAD (E) | |
| S _s / S1 | 0.111 / 0.038 |
| S _d s / SD1 | 0.118 / 0.062 |
| DESIGN CATEGORY | A |
| SITE CLASS | D (DEFAULT) |
| IMPORTANCE FACTOR | I _e = 1.00 |

- ASD LOAD COMBINATIONS:**
- D + (Lr OR S)
 - D + (0.6W OR ±0.7E)
 - D + 0.75 (0.6W OR ±0.7E) + 0.75 (Lr OR S)
 - 0.6D + (0.6W OR ±0.7E)

STRUCTURAL DESIGN NOTES

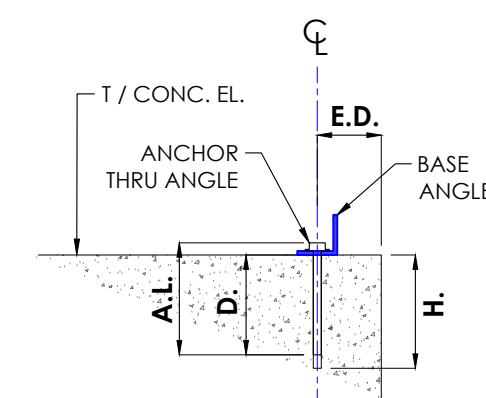
- ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH .IBC 2015, ASCE 7-10, OSHA, AISC 360, AWS D1.3 CODES AND ALL OTHER APPLICABLE LOCAL CITY OR COUNTY REQUIREMENTS.
- ALL WELDS ARE TO BE SHOP WELDS. **FIELD WELDING IS NOT PERMITTED NOR REQUIRED.** WELDING ELECTRODES PER AWS CODE. E70XX UNLESS NOTED OTHERWISE ON PLANS.
- ALL STRUCTURAL FIELD CONNECTIONS SHALL BE 3/4"-14 x 1" SDS (ESR-2196) U.N.O. NO NEOPRENE WASHERS ARE PERMITTED AT STRUCTURAL CONNECTIONS.
- ALL STRUCTURAL LIGHT GAUGE TUBING SHALL BE ASTM A500 GRADE C (Fy = 50 KSI, Fu = 62 KSI) OR EQUAL. ALL CHANNELS SHALL BE A653 (HSLA) GRADE 50 STEEL (Fy = 50 KSI, Fu = 65 KSI) OR EQUAL.
- ALL HOT ROLLED STEEL SHAPES (BASE ANGLES). IN OPEN STRUCTURES, OR ONES EXPOSED TO THE ELEMENTS, SHALL HAVE ONE COAT OF RUST PROOF PRIMER FOLLOWED BY TWO COATS OF PAINT.
- GYPSSUM BOARD OR DRYWALL FINISH OR ANY BRITTLE BASE MATERIAL IS **NOT CONSIDERED** OR ACCOUNTED FOR ON THE DESIGN CRITERIA OF THIS STRUCTURE, U.N.O.

MEMBER PROPERTIES

| | |
|---------------------------|---|
| TRUSS CHORD | 2 1/2" SQ. X 14GA TUBE |
| TRUSS WEB | 2 1/2" SQ. X 14GA TUBE |
| END WALL COLUMN POST | (2) 2 1/2" SQ. X 14GA TUBE- W/ 6" SPACER @ MAX. 18" C/C |
| END WALL ROOF MEMBER | (2) 2 1/2" SQ. X 14GA TUBE |
| TRUSS DOOR POST | TRUSS CHORD: 2 1/2" SQ. X 14GA TUBE |
| | TRUSS WEB: 2 1/2" SQ. X 14GA TUBE |
| 15" X 12" DEEP BOX HEADER | TRUSS CHORD: 2 1/2" SQ. X 14GA TUBE |
| | TRUSS WEB: 2 1/2" SQ. X 14GA TUBE |
| PEAK BRACE | 2 1/2" SQ. X 14GA TUBE |
| KNEE BRACE | 2 1/2" SQ. X 14GA TUBE |
| LATERAL BRACE | 2 1/4" SQ. X 14GA TUBE |
| PURLIN | 2 1/2" SQ. X 14GA TUBE |
| GIRTS | 2 1/2" SQ. X 14GA TUBE |
| W.I. DOOR / WINDOW | 2 1/2" SQ. X 14GA TUBE |
| CONNECTOR SLEEVE | 2 1/4" SQ. X 12GA TUBE |

CONCRETE ANCHORAGE

| | |
|----|--|
| 1A | (1) 3/4" Ø X 6" LG. TITEN HD SCREW ANCHOR (PER ESR 2713) |
| 2A | (2) 3/4" Ø X 6" LG. TITEN HD SCREW ANCHOR (PER ESR 2713) |
| 4A | (4) 3/4" Ø X 6" LG. TITEN HD SCREW ANCHOR (PER ESR 2713) |
| 5A | (5) 3/4" Ø X 6" LG. TITEN HD SCREW ANCHOR (PER ESR 2713) |
| 6A | (5) 3/4" Ø X 6" LG. TITEN HD SCREW ANCHOR (PER ESR 2713) |



ANCHORAGE DETAIL
SCALE: 1" = 1"

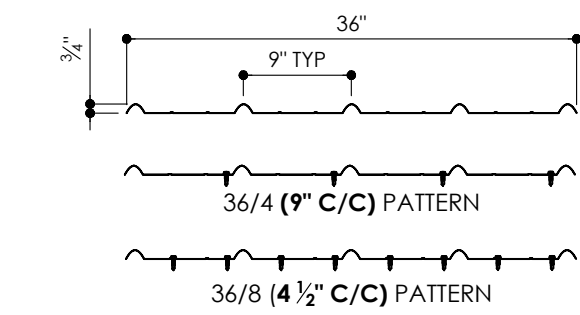
ELEVATION NOTES

- THE INTENTION OF ELEVATIONS PROVIDED ON THIS SHEET IS TO INDICATE STRUCTURAL COMPONENTS, DIMENSIONS, AND BUILDING ORIENTATION ONLY.
- ARCHITECTURAL DESIGN REQUIREMENTS ARE NOT COVERED IN THIS PLAN SET. THESE DESIGN REQUIREMENTS SHALL BE ADDRESSED IN A SEPARATE ARCHITECTURAL SET BY RESPONSIBLE LICENSED PROFESSIONALS IN CHARGE, AS NEEDED.
- ALL EXT ROOF SHEATHING SHALL BE: CLASS A RATED 29GA. 3/4" RIB HT - GALV. OR PAINTED STEEL (FY=80 KSI) OR EQ.
- ALL EXT WALL SHEATHING SHALL BE: CLASS A RATED 29GA. 3/4" RIB HT - GALV. OR PAINTED STEEL (FY=80 KSI) OR EQ.
- SHEATHING CONNECTIONS SHALL BE #12-14 X 3/4" SDS W/ BONDED NEOPRENE WASHER PER ESR 2196.**
- BASE RAIL UNDER W.I. DOOR IS OPTIONAL.

SHEATHING FASTENER SCHEDULE

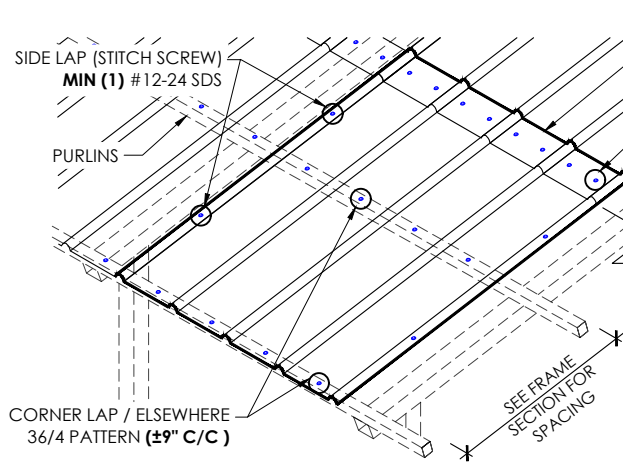
| LOCATION | CORNER PANEL | SIDE LAPS | EDGE LAPS | ELSEWHERE |
|----------|--------------|-----------|-----------|-----------|
| SPACING | 9" CC | MIN. 1 | 4 1/2" CC | 9" CC |

REF. DESIGN NOTE ON SHEET 2 FOR SHEATHING FASTENER TYPE.



29GA. - 3/4" RIB - CORRUGATED SHEET

SCALE: 3/4" = 1"

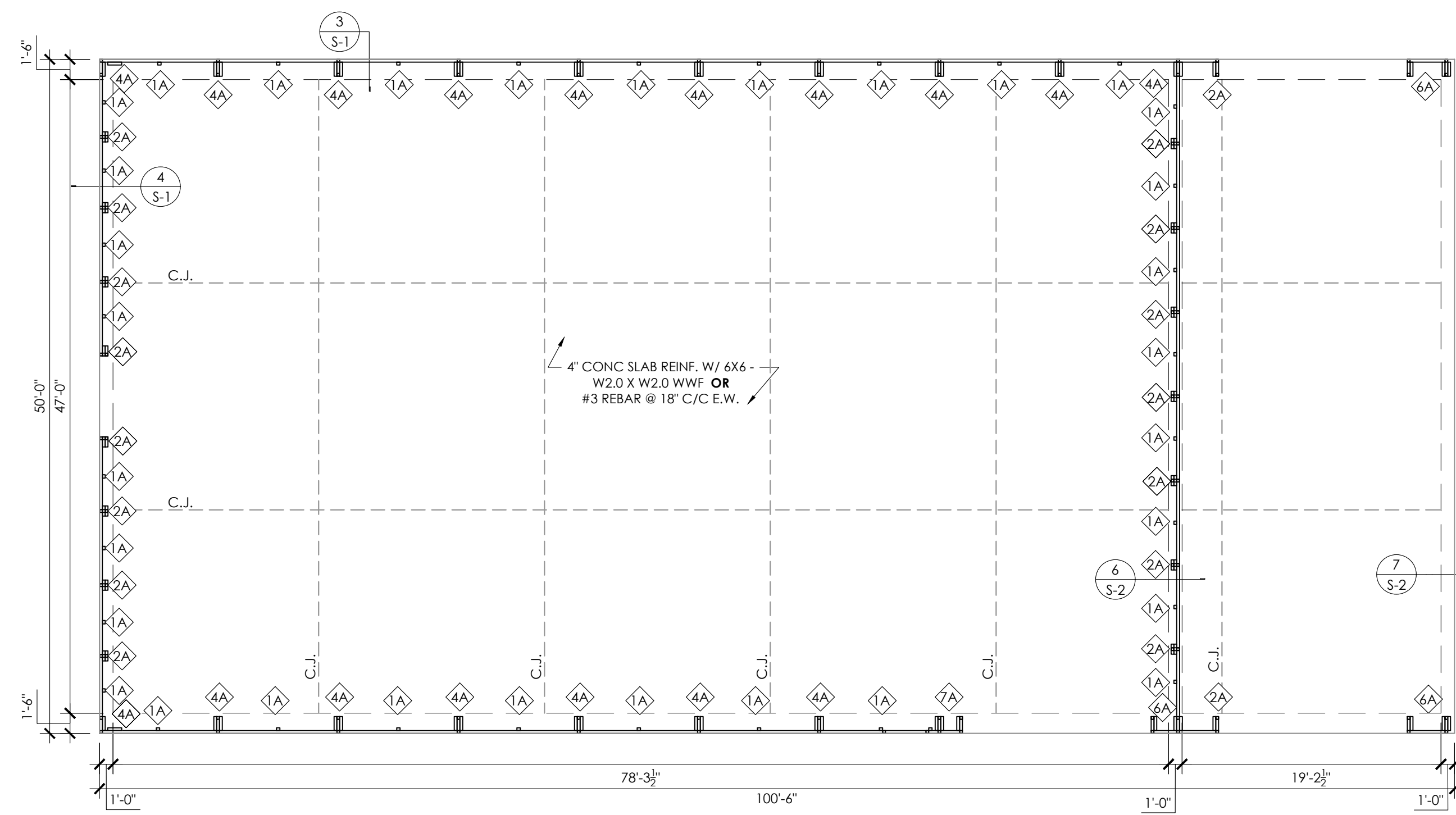


SHEATHING FASTENER PATTERN

SCALE: 3/16" = 1"

FOUNDATION NOTES:

- CONTROL JOINTS SHALL BE PLACED SO AS TO LIMIT MAX. SLAB SPANS TO 20' IN EACH DIRECTION.
- CONC ANCHORS SHALL BE LOCATED AS SHOWN ON THE FOUNDATION PLAN WITH A MINIMUM OF (4) ANCHORS PER POST.
- MIN. FOOTING DEPTH NEEDED TO RESIST BUILDING LOADS IS INDICATED ON FOUNDATION DETAILS. HOWEVER, A GREATER FOOTER DEPTH MAYBE REQUIRED TO MEET THE LOCAL FROST LINE DEPTH PER CODE.
- DEPTH OF FOOTINGS SHALL EXTEND INTO UNDISTURBED SOIL OR COMPACTED ENGINEERING FILL.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONC STRENGTH TO BE A MIN OF 3000 PSI @ 28 DAYS FOR MODERATE WEATHERING POTENTIAL.



FOUNDATION PLAN
SCALE: 1/8" = 1"

LEGEND

- (WN) WINDOWS (REF WINDOW MFG)
 - (WD) WALK-IN DOORS (REF DOOR MFG)
- NOTE 1:** ANY DOOR OR WINDOW DESIGN INFORMATION IS NOT COVERED IN THIS PLAN SET AND SHALL BE ADDRESSED BY OTHERS.
- NOTE 2:** LOC OF WALK-IN DOORS OR WINDOWS CAN BE DETERMINED ON SITE AS LONG AS THEY FALL BETWEEN BAYS (BETWEEN FULL FRAMES).

| STATEMENT OF SPECIAL INSPECTIONS | REQD | P | C |
|---|------|---|---|
| STEEL FABRICATION & GENERAL FRAMING | | | |
| 1. SHOP WELDING OF CONN. SLEEVES | Y | X | - |
| 2. STRUCTURAL STEEL MATERIALS | Y | X | - |
| 3. VERIFY MEMBER SIZES & LAYOUTS | Y | X | - |
| 4. FRAME KNEE & PEAK BRACE LAYOUTS | Y | X | - |
| 5. DIAGONAL BRACE CONN. DETAILS | Y | X | - |
| CONCRETE CONSTRUCTION | | | |
| 1. REINFORCING STEEL PLACEMENT | Y | X | - |
| 2. ON-SITE STRENGTH TESTING | Y | - | X |
| ANCHORAGE | | | |
| 1. POST-INSTALLED CONCRETE ANCHOR BOLTS (PER ICC-ESR REQUIREMENTS - REF SHEET 3B) | Y | X | - |

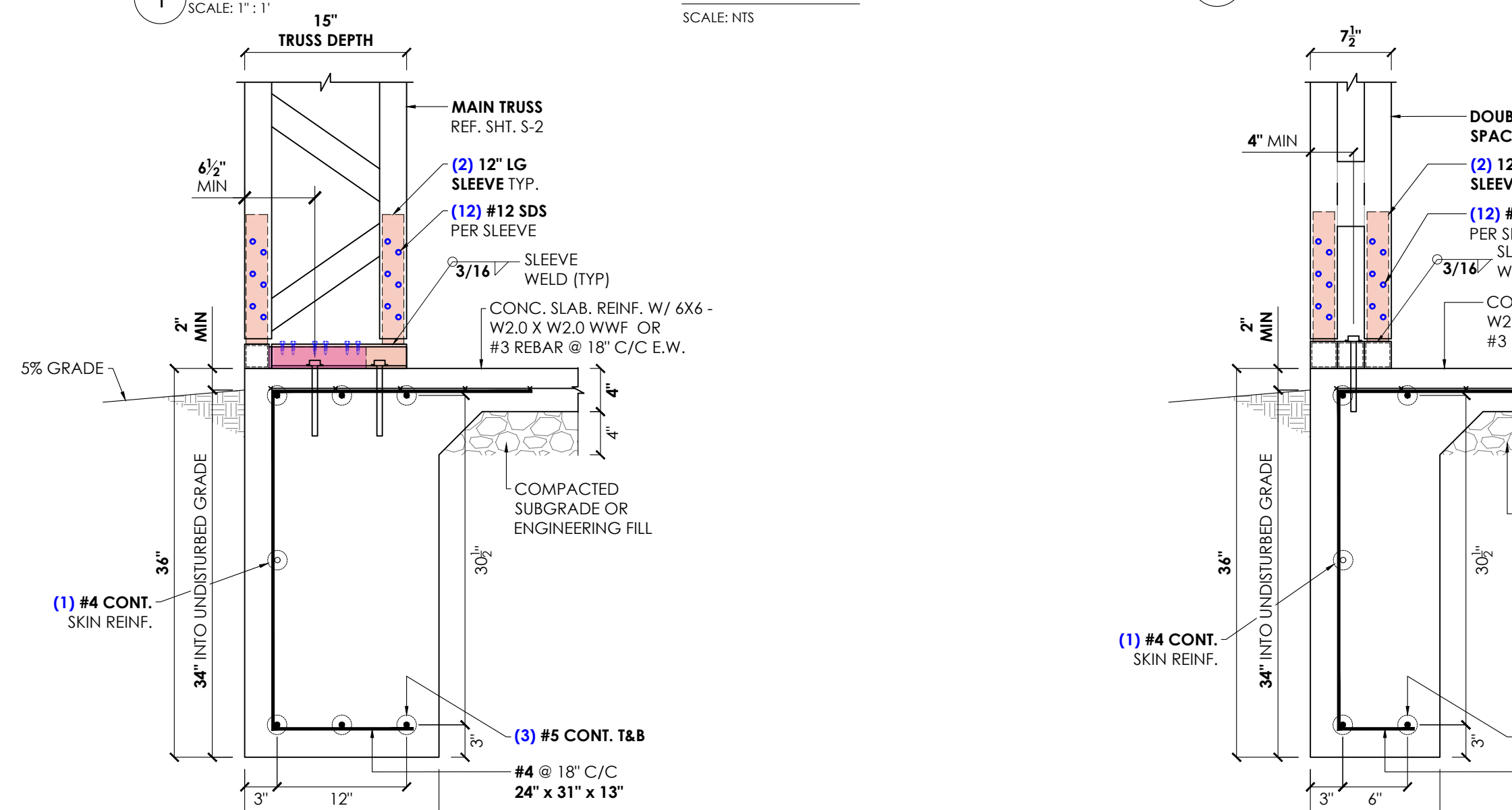
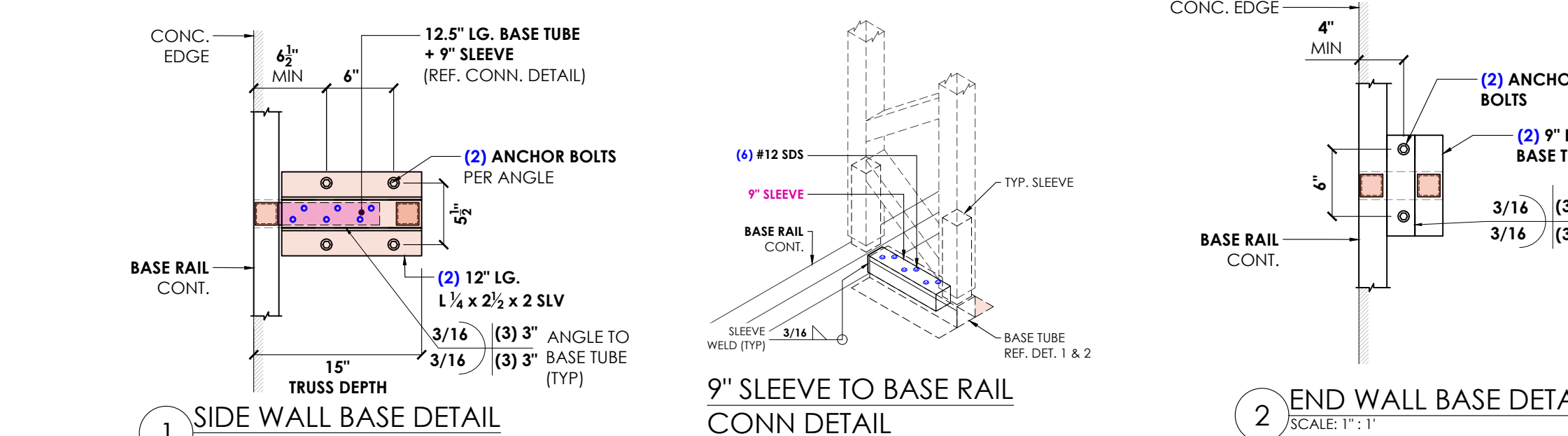
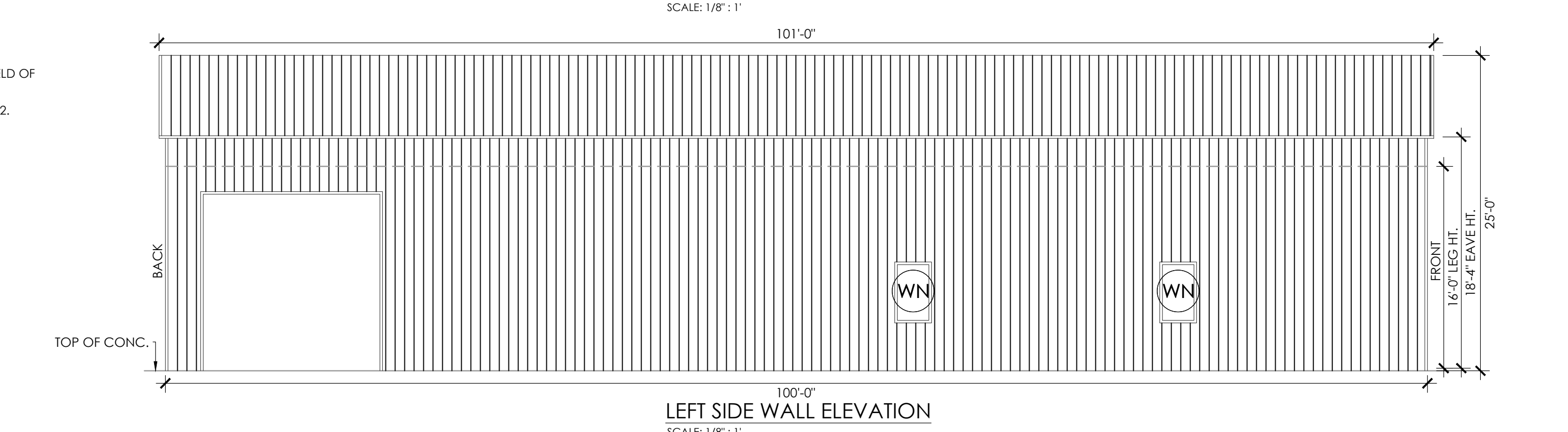
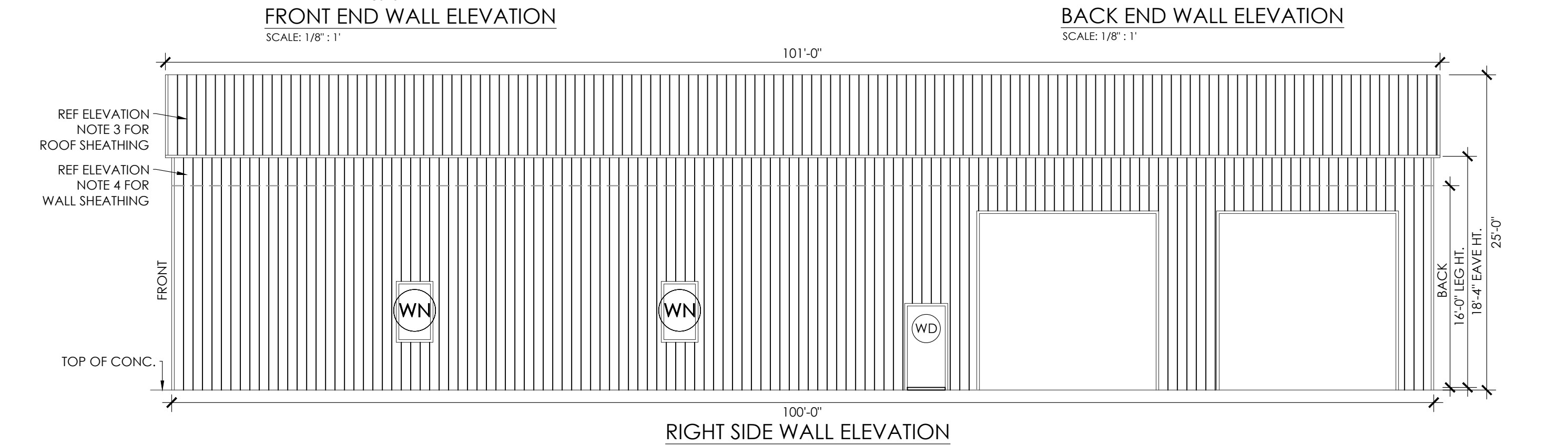
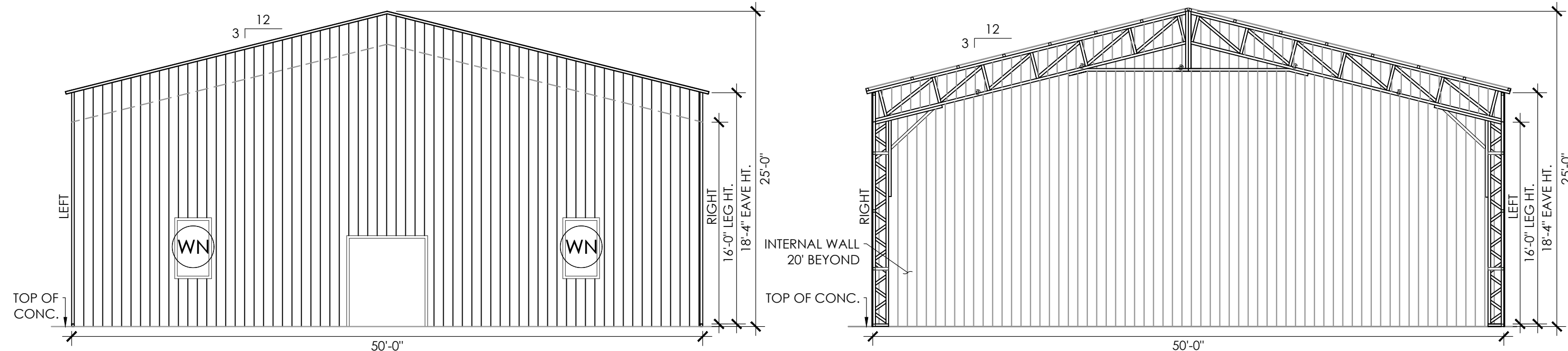
THE OWNER SHALL HIRE LICENSED SPECIAL INSPECTOR AT THEIR OWN COST. THE OWNER MAY BRING TO THE ATTENTION OF THE ENGINEER, ANY ISSUES OF CONCERN NOTED BY THE INSPECTOR.

ANCHORAGE NOTES:

- ANCHOR INSTALLATION REQUIREMENTS (REF ANCHORAGE DETAIL):
 - A.L. - ANCHOR LENGTH: 6.00'
 - E.D. - ANCHOR EDGE DISTANCE: MIN. 6.00" OR U.N.O.
 - H. - ANCHOR HOLE DEPTH: MIN. 6.25"
 - D. - CONCRETE EMBEDMENT DEPTH: MIN. 5.50"
 - SPACING BETWEEN (2) ANCHORS: MIN. 3.00" OR U.N.O.
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS OR U.N.O.
- ANCHORS TO BE INSTALLED PER MANUFACTURER'S REQ. PER SPECIFIED ESR.

REINFORCEMENT NOTES:

- REINFORCING STEEL: DEFORMED BARS CONFORMING TO ASTM A615, GRADE 40, WITH A MINIMUM YIELD OF 40 KSI FOR ALL BARS UNLESS OTHERWISE INDICATED ON DRAWINGS.
- WELDED WIRE FABRIC: ASTM A185 USING BRIGHT STEEL WIRE MEETING THE REQUIREMENTS OF ASTM A82. GAUGES AND DIMENSIONS AS NOTED ON THE DRAWINGS. PROVIDE IN FLAT SHEETS OR ROLLS.



AMERICAN STEEL CORP.
457 N. Broadway, Joshua, TX 76058
1-866-730-9865

FOR QUESTIONS, MODIFICATIONS, REVISIONS OR CORRECTING NEEDS TO PLANS, PLEASE CONTACT THE METAL BUILDING MANUFACTURER LISTED ON PLANS. ENGINEER OF RECORD REQUIRES AUTHORIZATION FROM THE METAL BUILDING MANUFACTURER TO MAKE ANY CHANGES TO PLANS.

SEAL BELOW

JOE CATANZARITI
No. 025411
LICENSED PROFESSIONAL ENGINEER

EXPIRES: 04/30/2024
SIGNED: 05/13/2024

THE ENGINEERING SEAL COVERS STRUCTURAL DESIGN ELEMENTS PRESENTED IN THIS SET OF PLANS. IT DOES NOT PROVIDE ANY ARCHITECTURAL, SITE, ZONING, HVAC, ELEC. MECH DESIGN OR REQUIREMENTS. THESE ITEMS MUST BE ADDRESSED BY THEIR RESPECTIVE PROFESSIONALS IN CHARGE.

ASA PROJECT NUMBER
033-24-0721

MARTEK OF NJ - JOE CATANZARITI
701 OLD AVALON BOULEVARD,
AVALON, NJ 08202
(CAPE MAY COUNTY, NJ)

REVISIONS

| MARK | COMMENT | DATED |
|------|-------------------|------------|
| A.1 | ISSUED FOR PERMIT | 05/13/2024 |

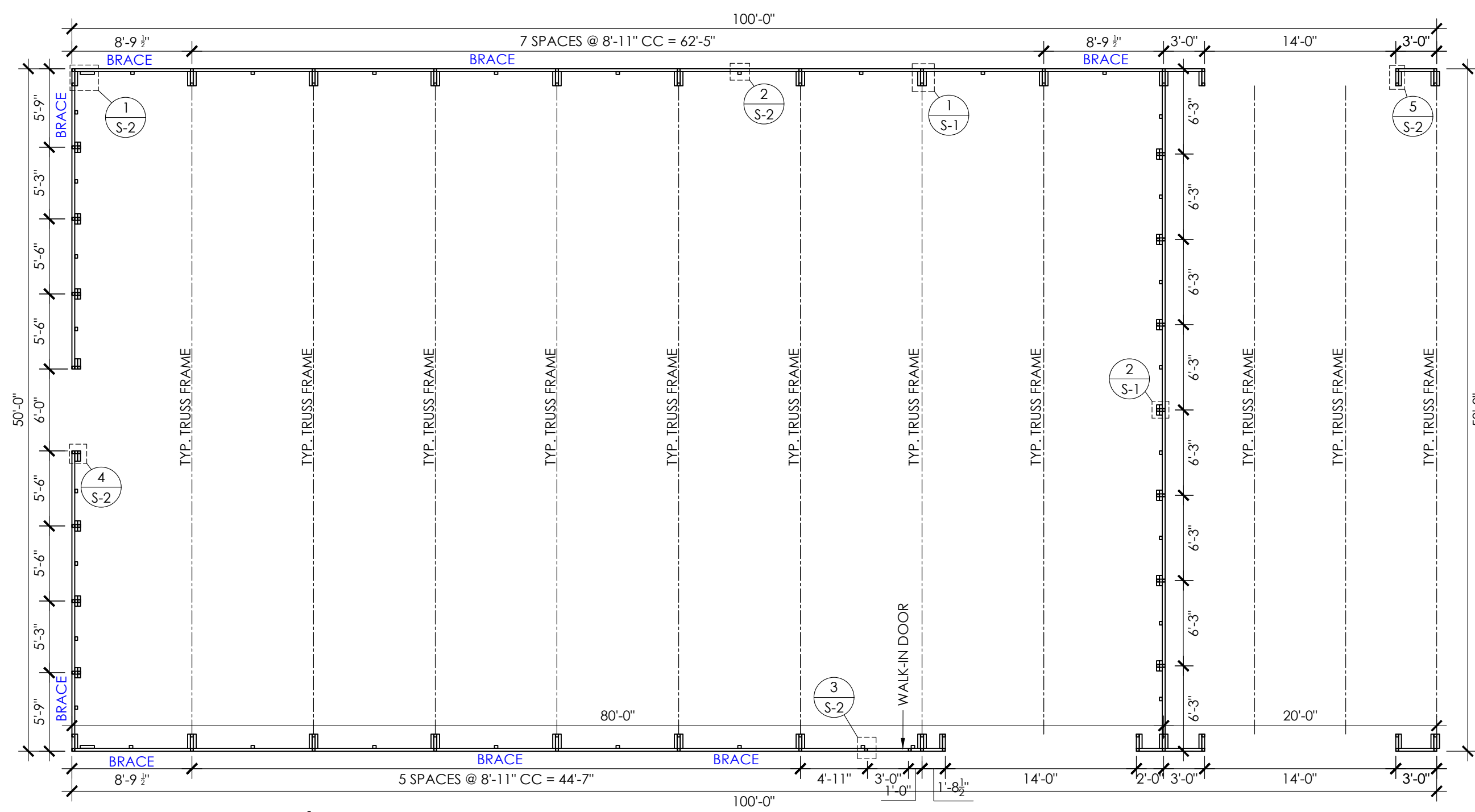
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| DRAWN BY | DATED |
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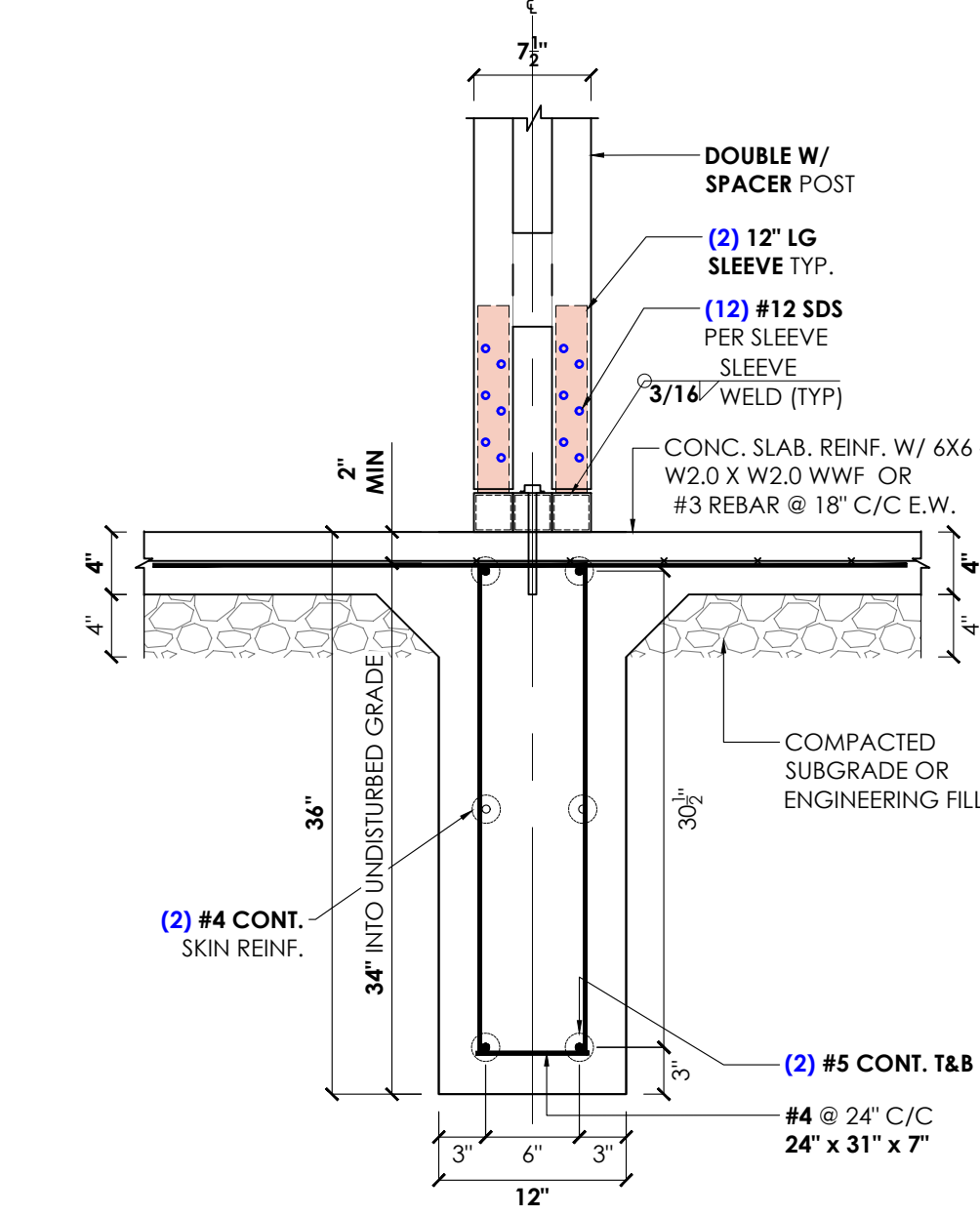
| CHECKED BY | DATED |
|------------|------------|
| A.W. | 05/13/2024 |

SHEET TITLE
COVER SHEET, ELEVATIONS, FOUNDATION PLAN & DETAILS

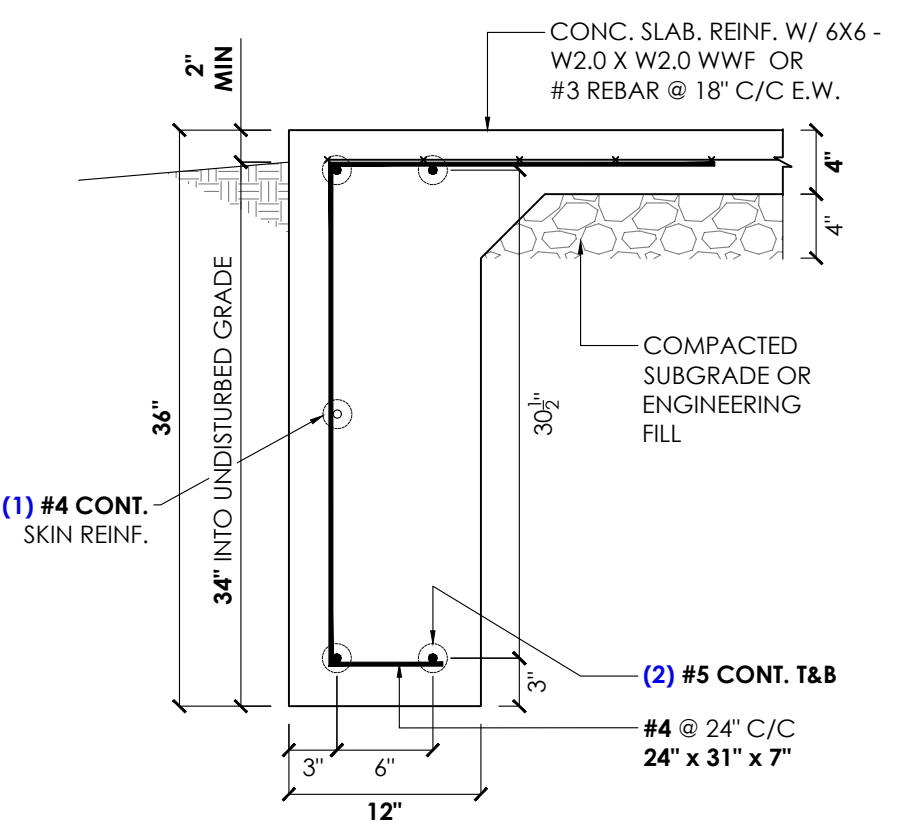
SHEET NUMBER
S - 1



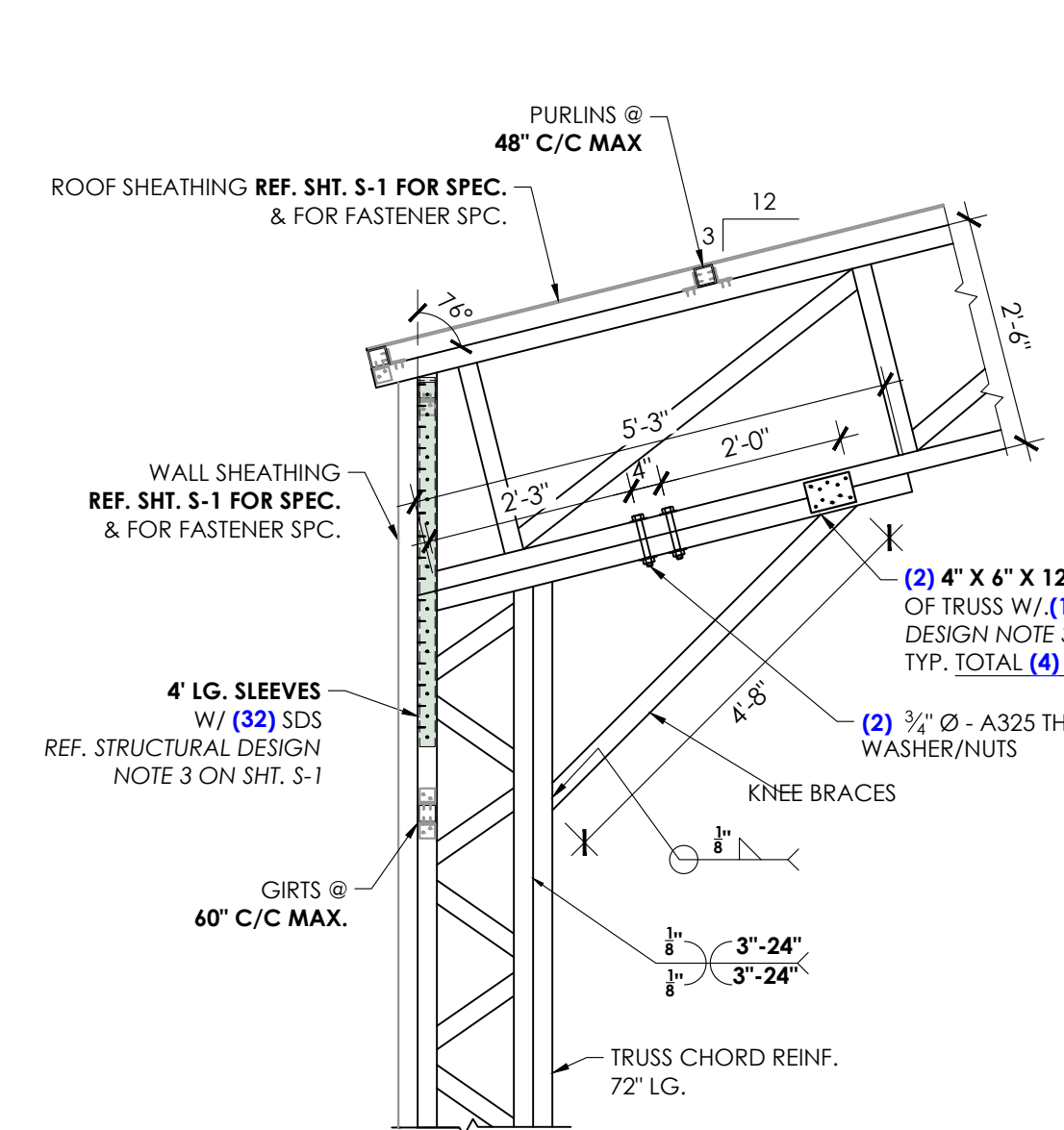
COLUMN LAYOUT PLAN
SCALE: 1/8" = 1'



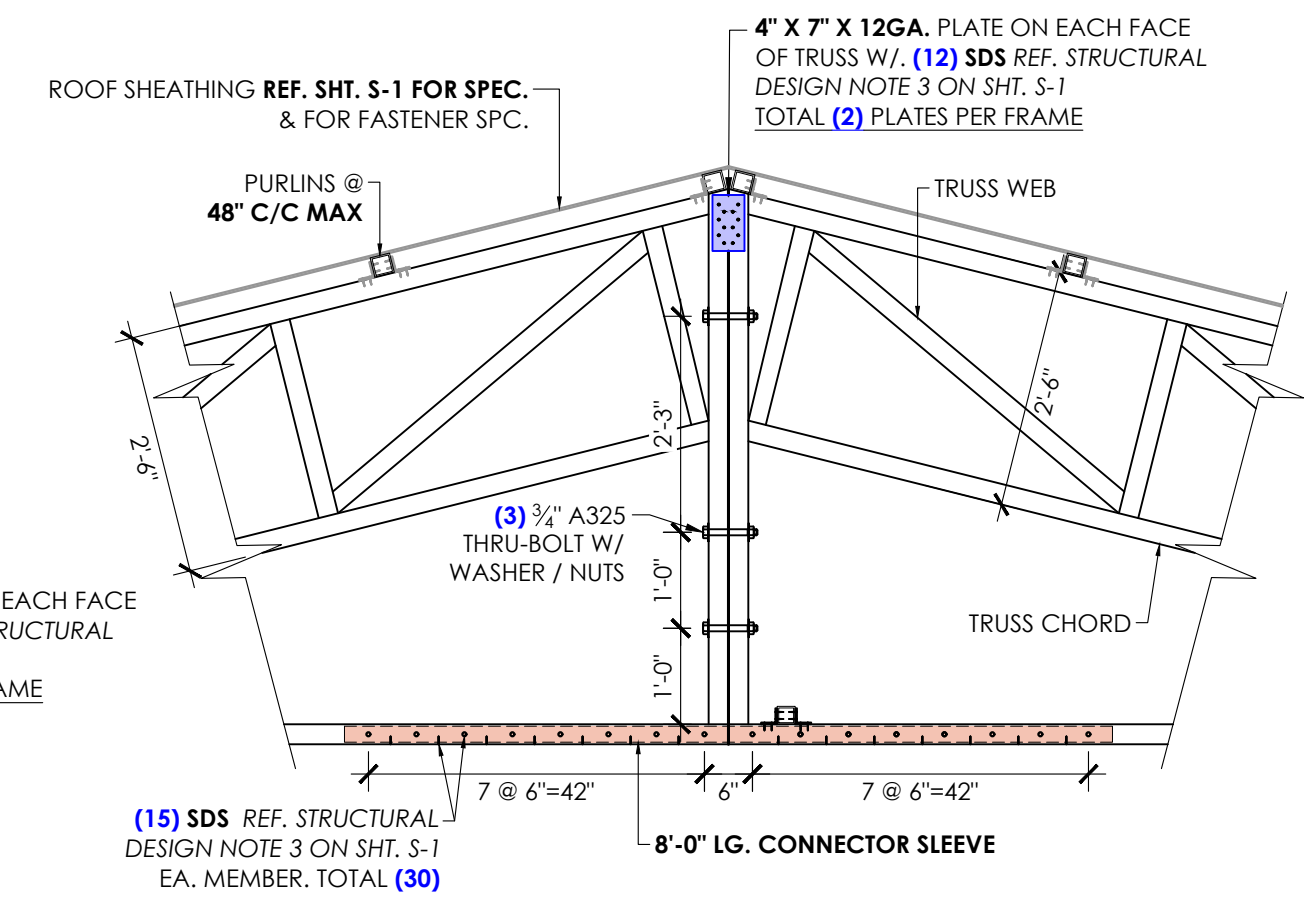
FOUNDATION @ INTERNAL WALL
SCALE: 1" = 1'



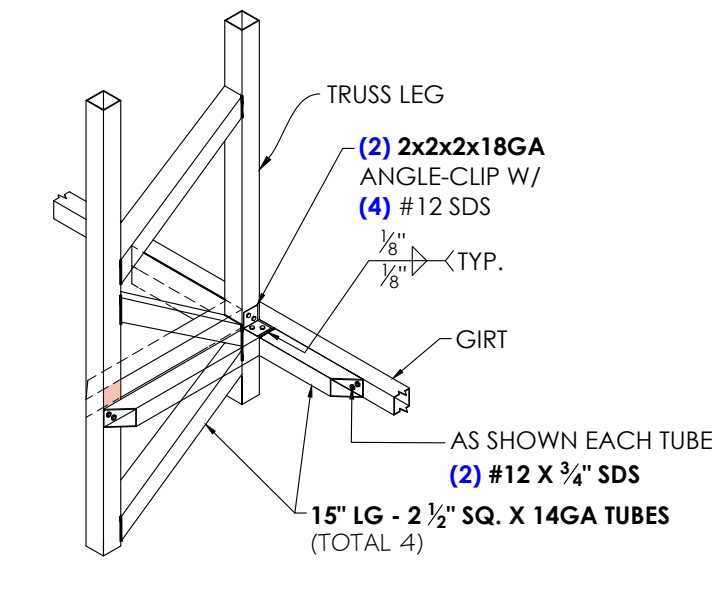
FOUNDATION @ FRONT OPEN END
SCALE: 1" = 1'



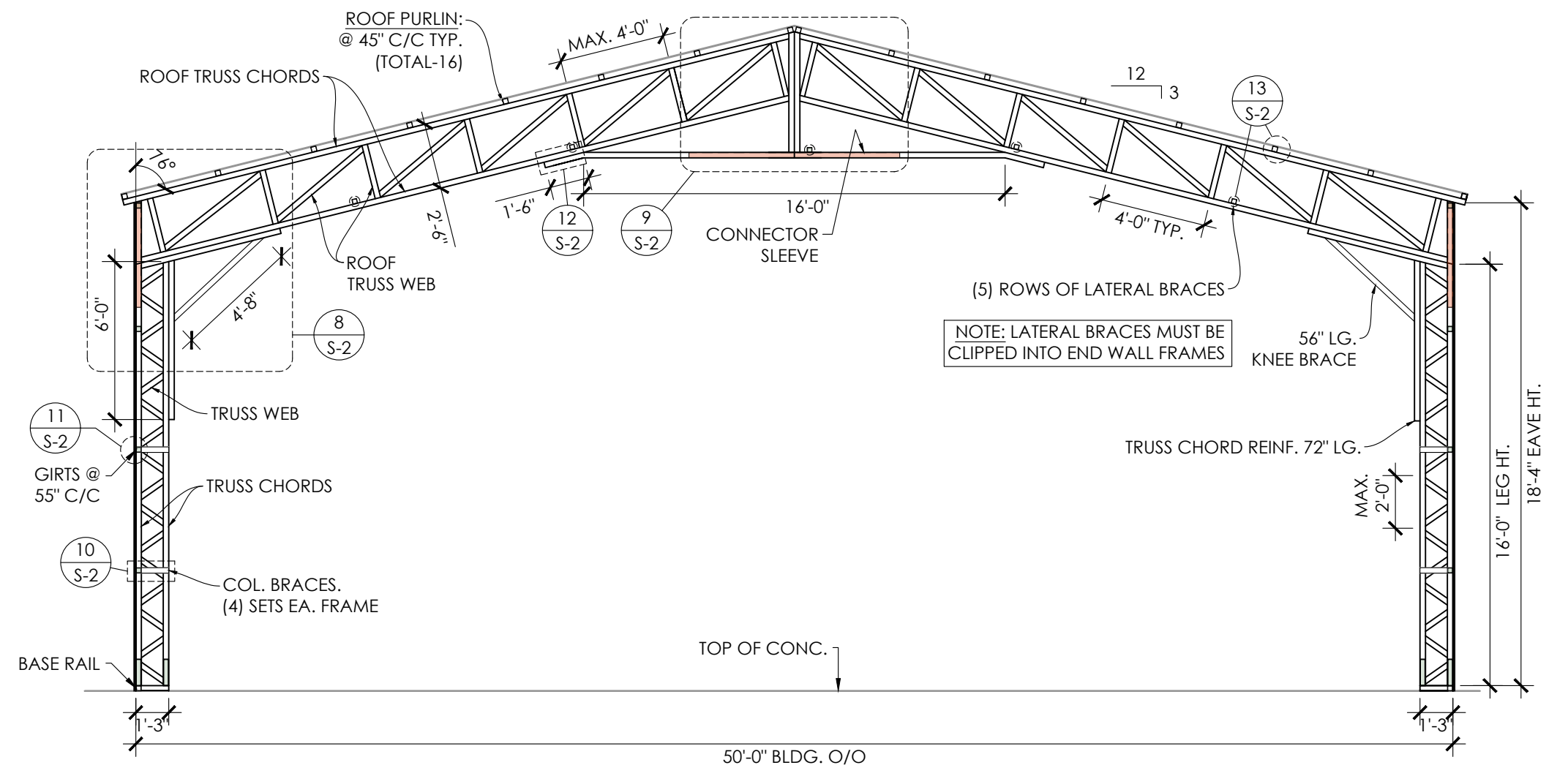
TYP. FRAME DETAIL
SCALE: 1/2" = 1'



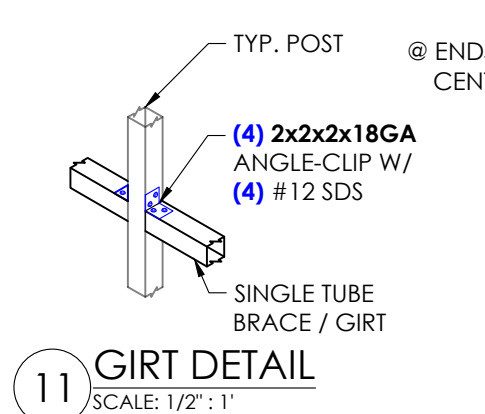
PEAK DETAIL
SCALE: 1/2" = 1'



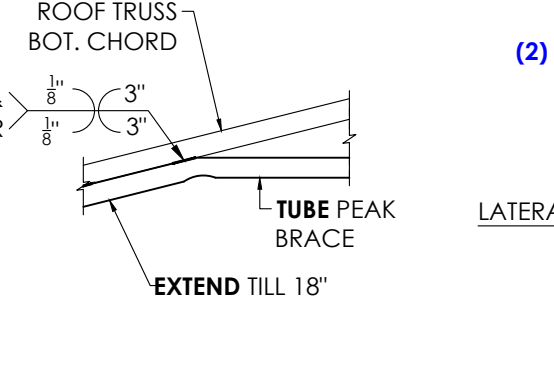
COL. BRACE DETAIL
SCALE: 1/2" = 1'



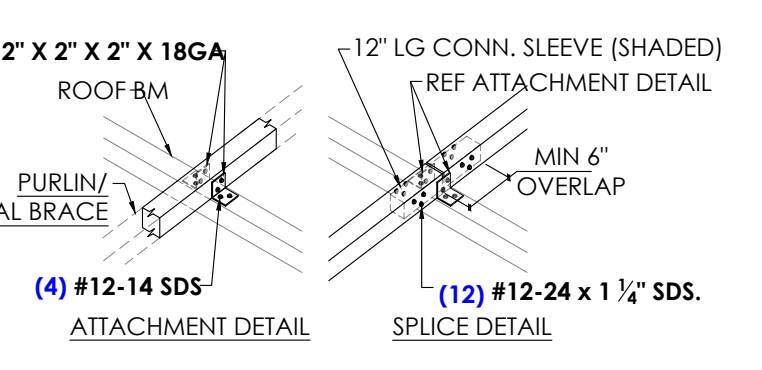
TYP. FRAME SECTION
SCALE: 3/16" = 1'



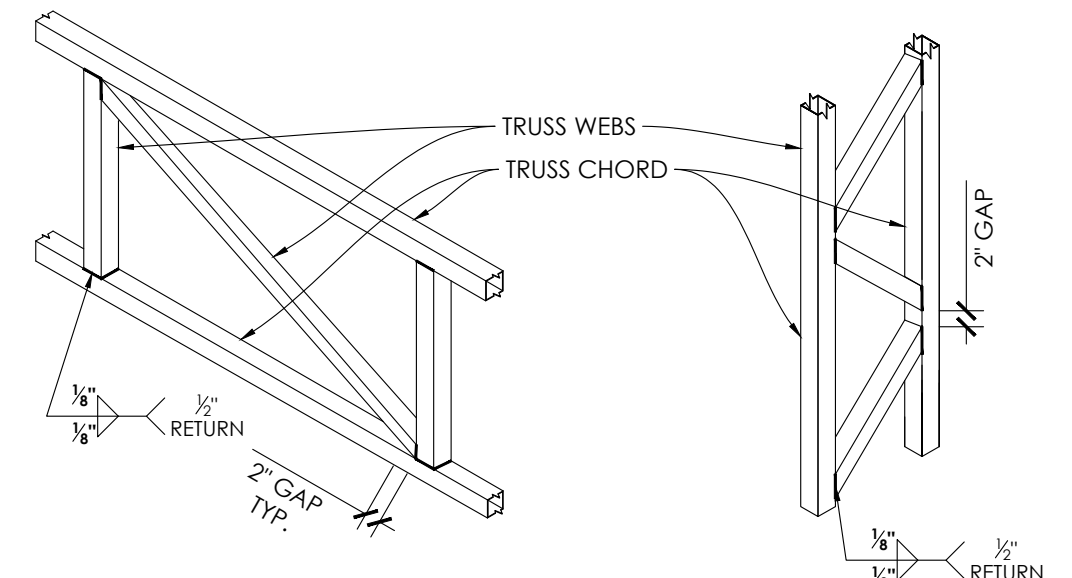
GIRT DETAIL
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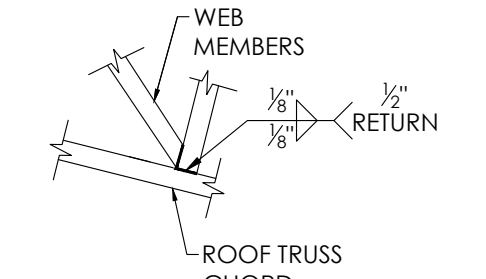
PEAK BRACE DETAIL
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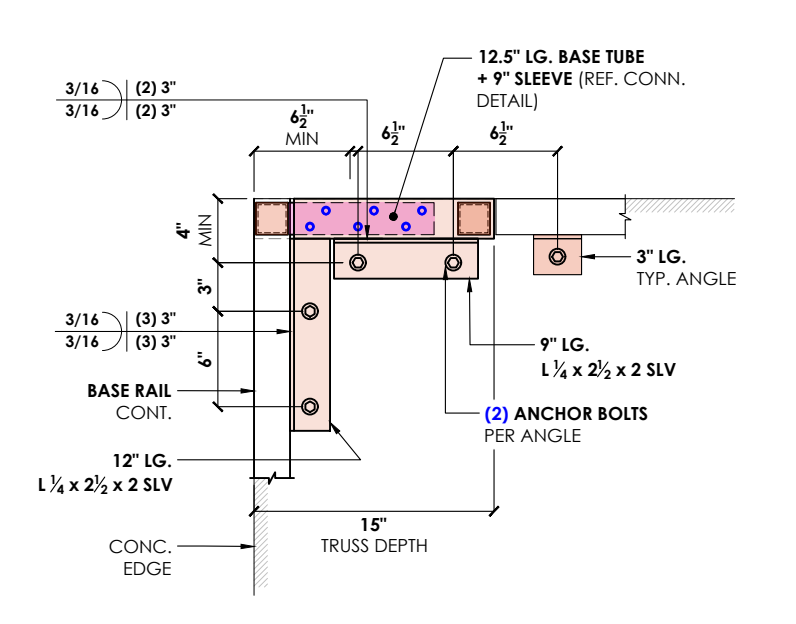
PURLIN / LATERAL BRACE DETAIL
SCALE: 1/2" = 1'



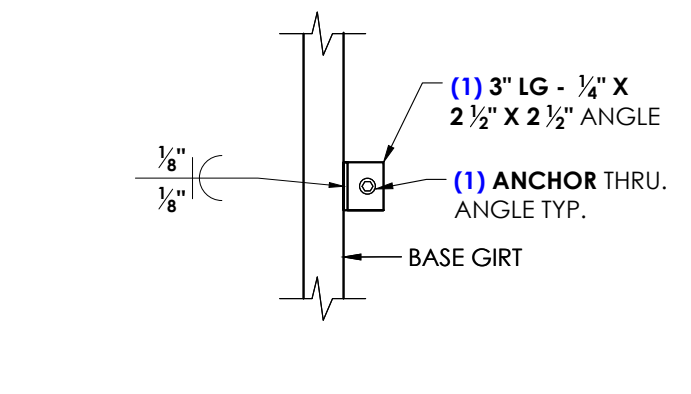
TYP. WELD DETAIL
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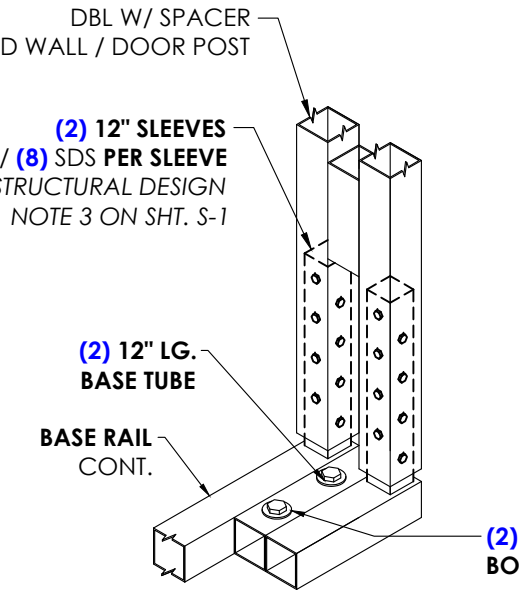
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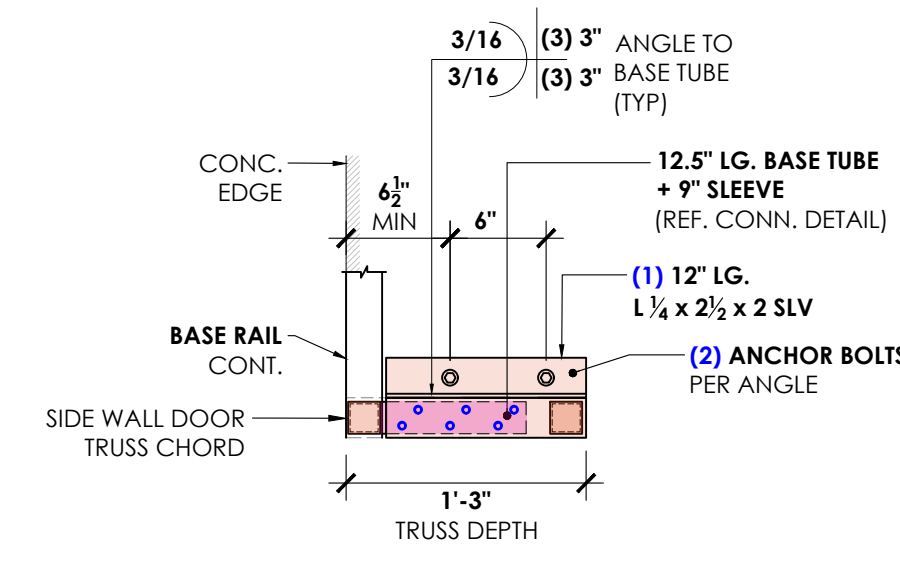
1 ANCHORAGE @ CORNER DETAIL
SCALE: 1" = 1'



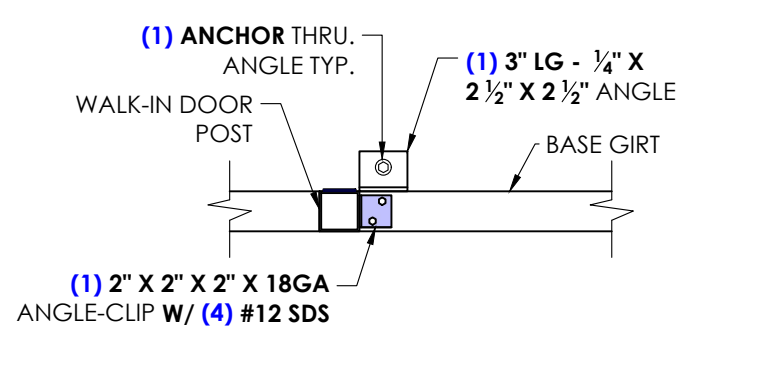
2 ANCHORAGE @ BASE DETAIL
SCALE: 1" = 1'



4 ANCHORAGE @ DOOR POST
SCALE: 1" = 1'



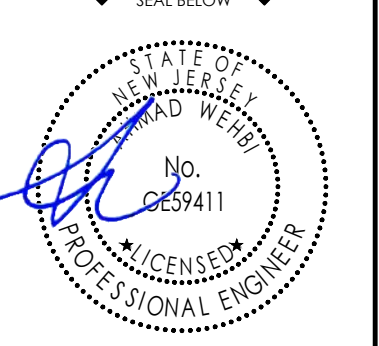
5 ANCHORAGE @ TRUSS DOOR POST
SCALE: 1" = 1'



3 ANCHORAGE @ W.I. BASE DETAIL
SCALE: 1" = 1'



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SIGNED: 05/13/2024
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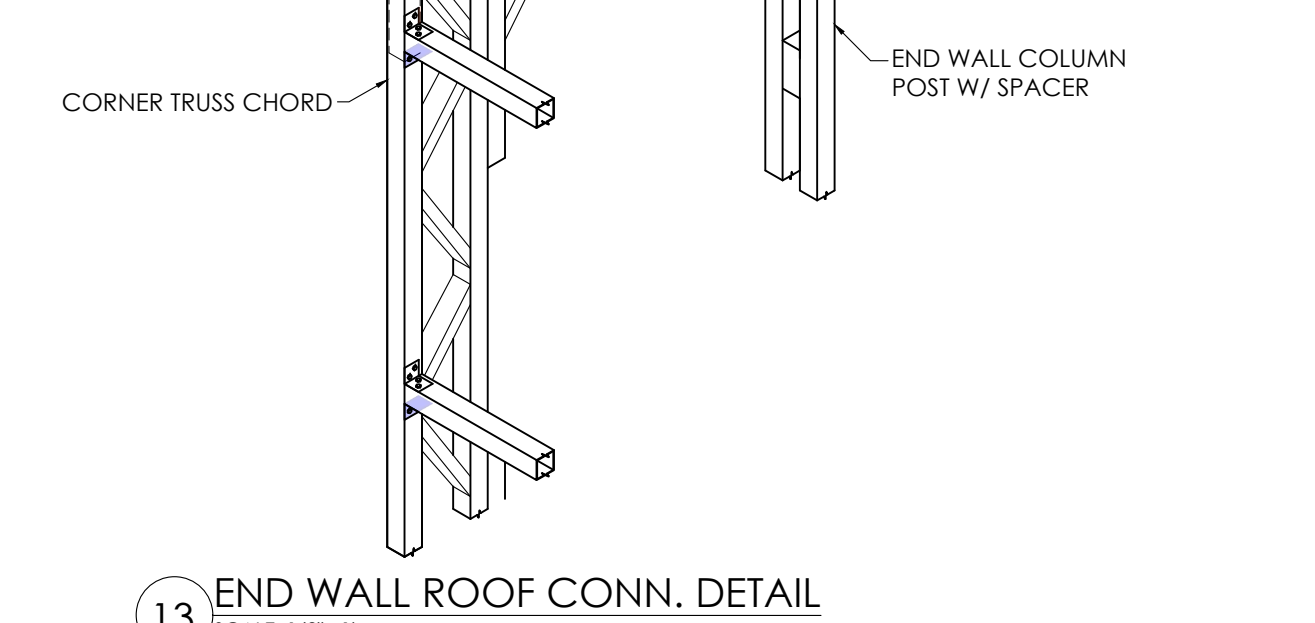
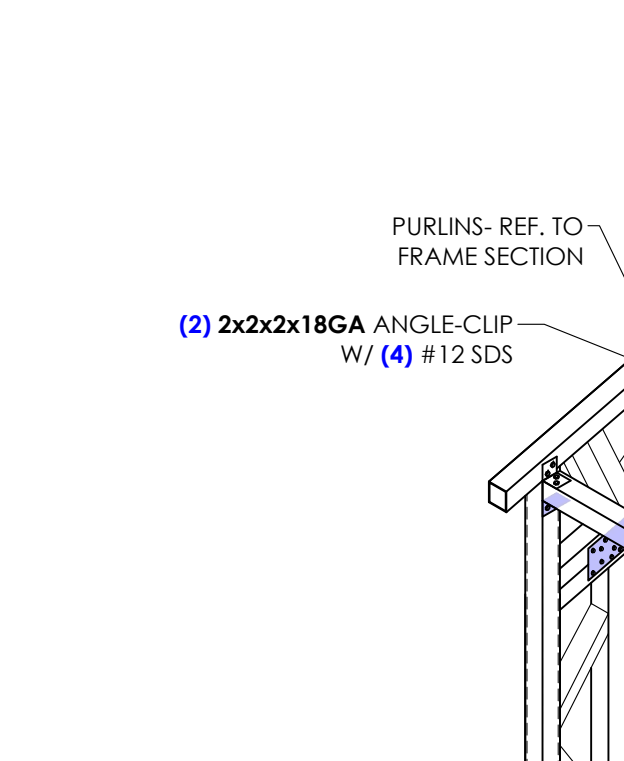
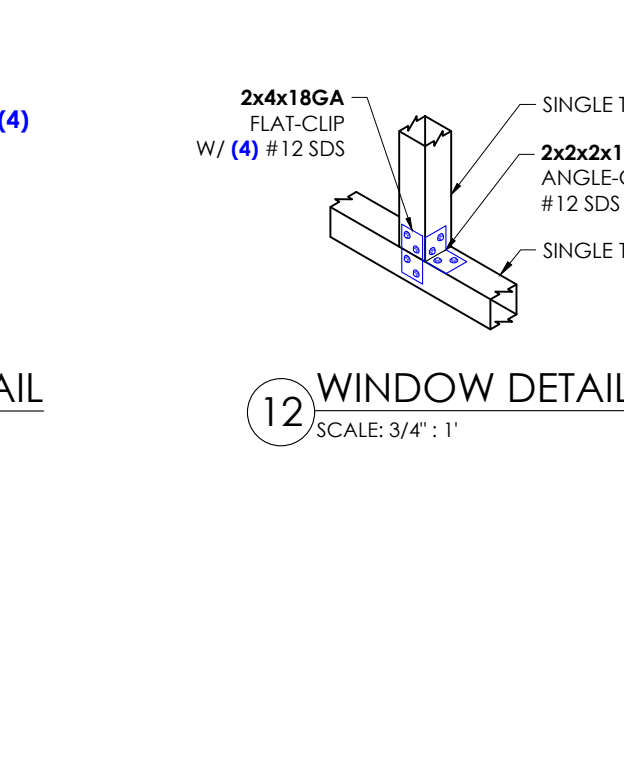
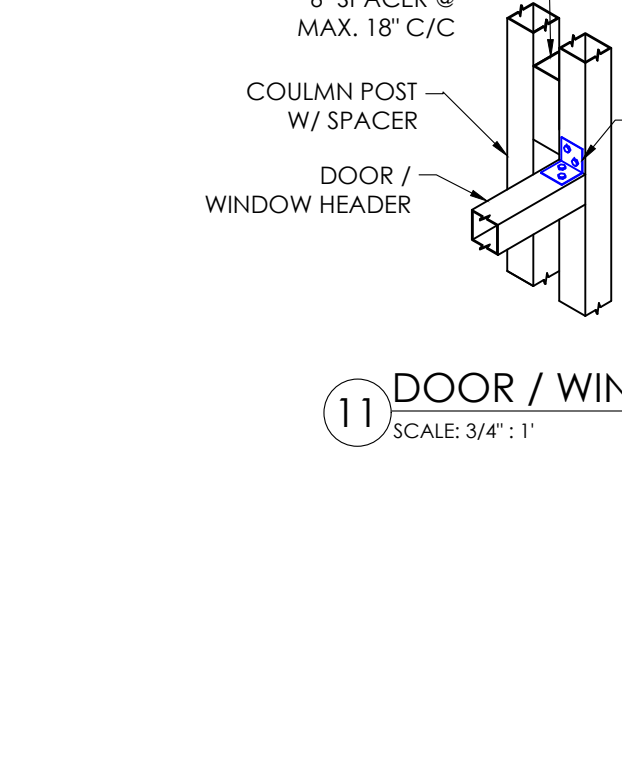
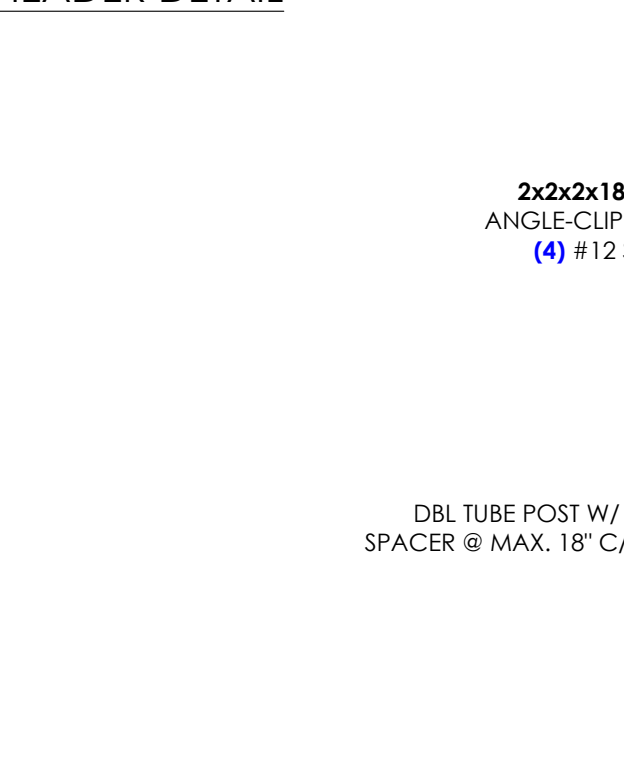
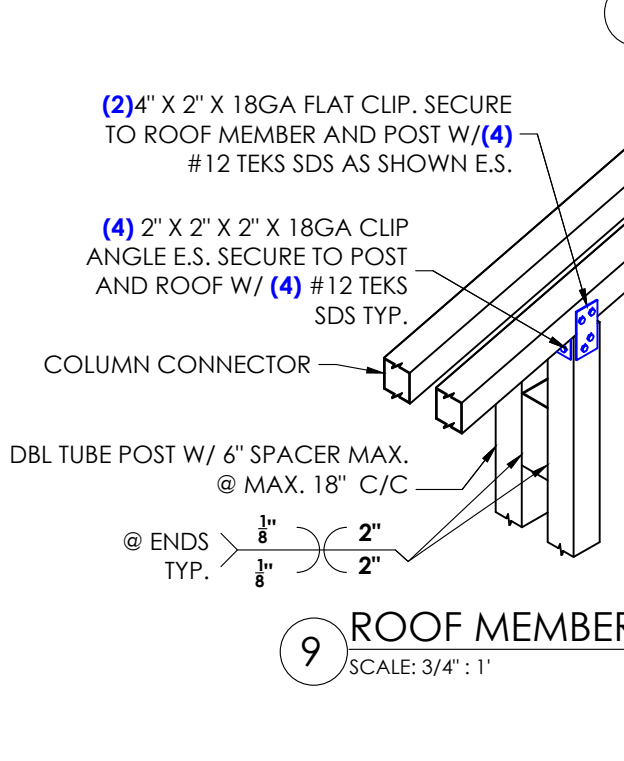
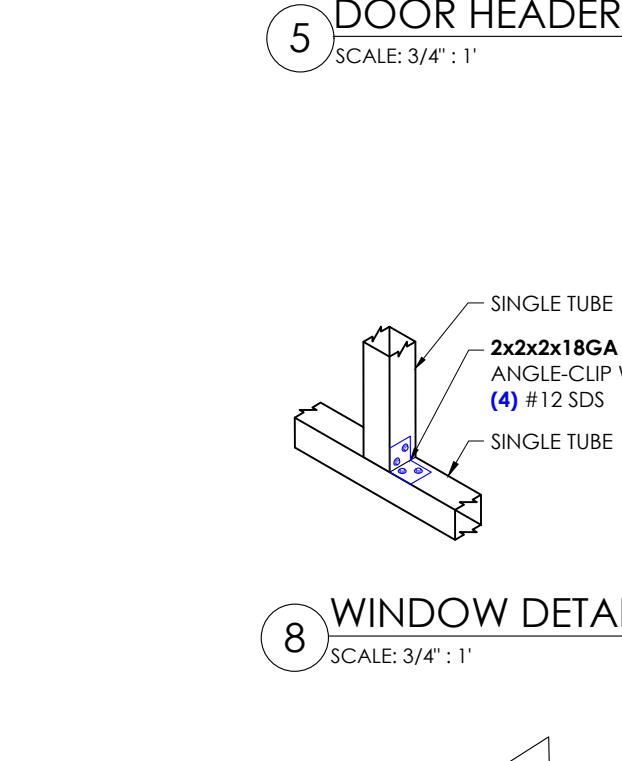
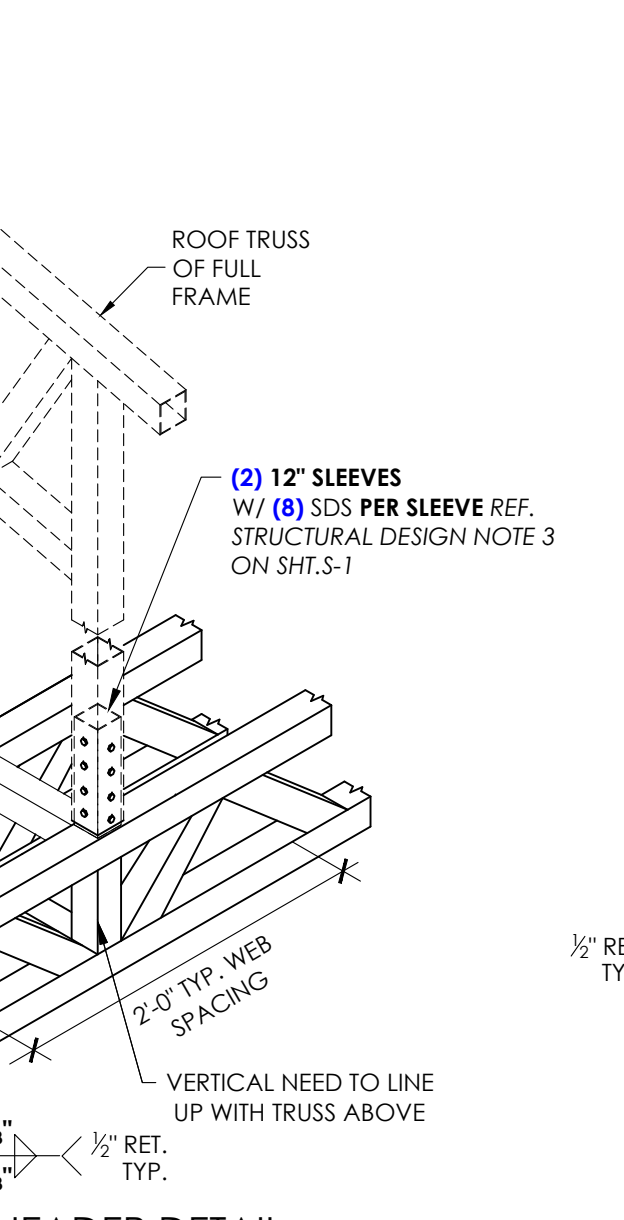
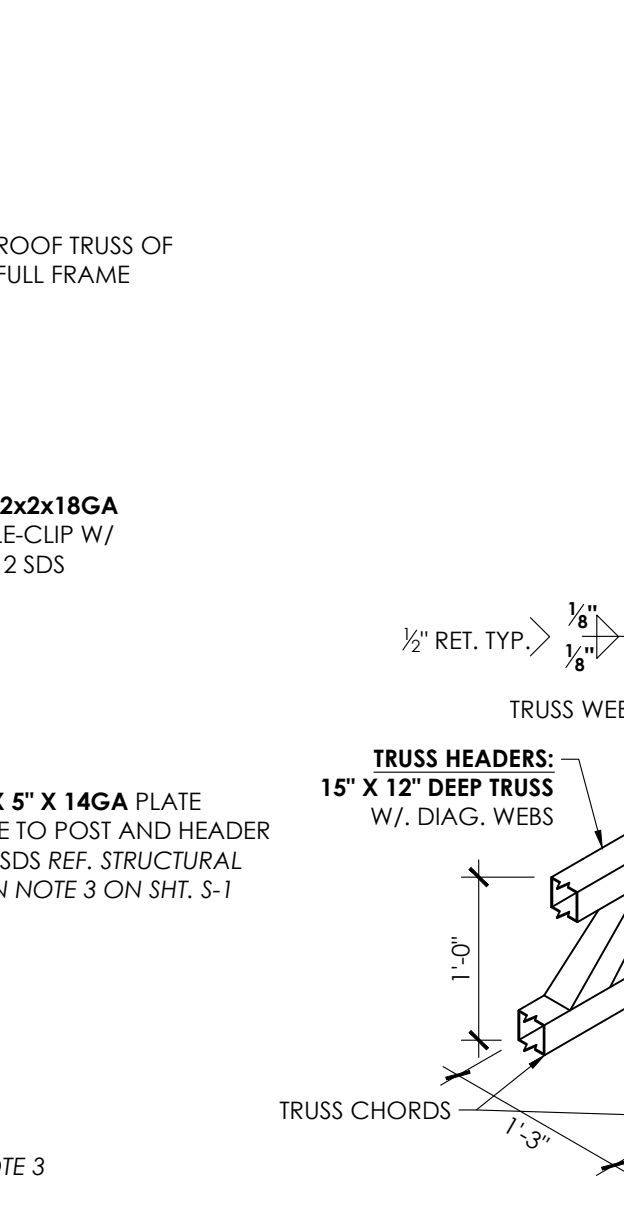
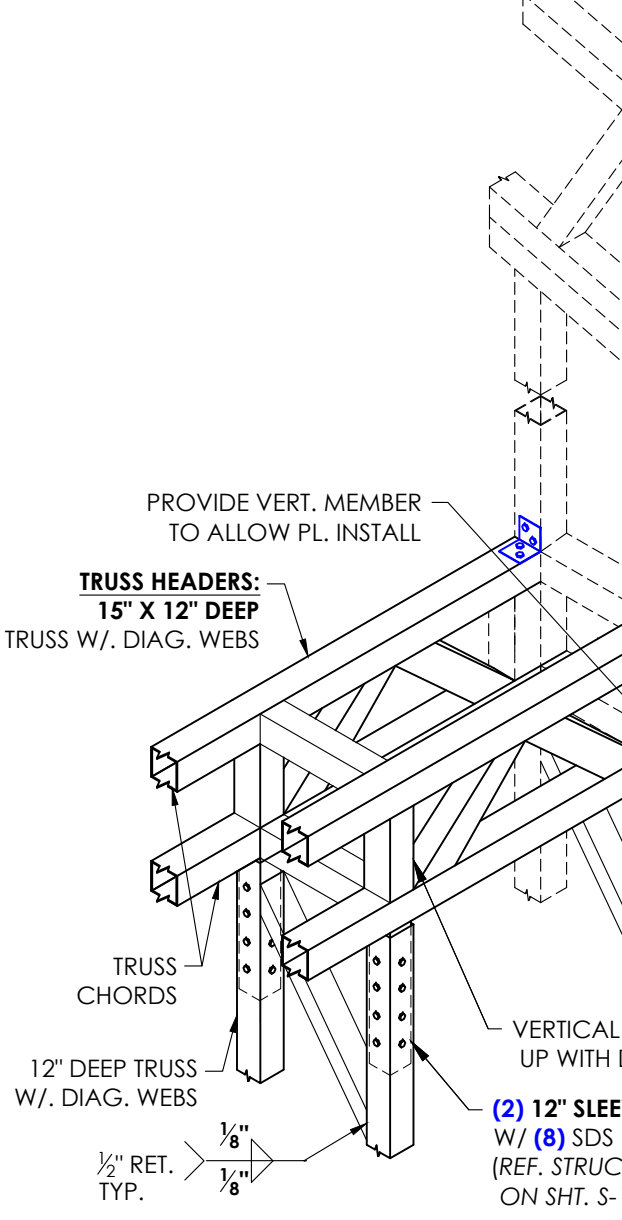
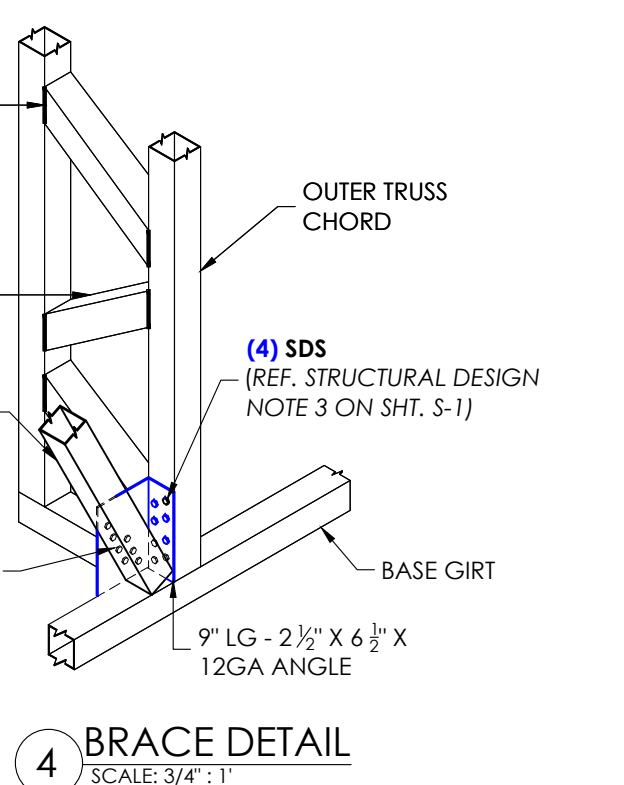
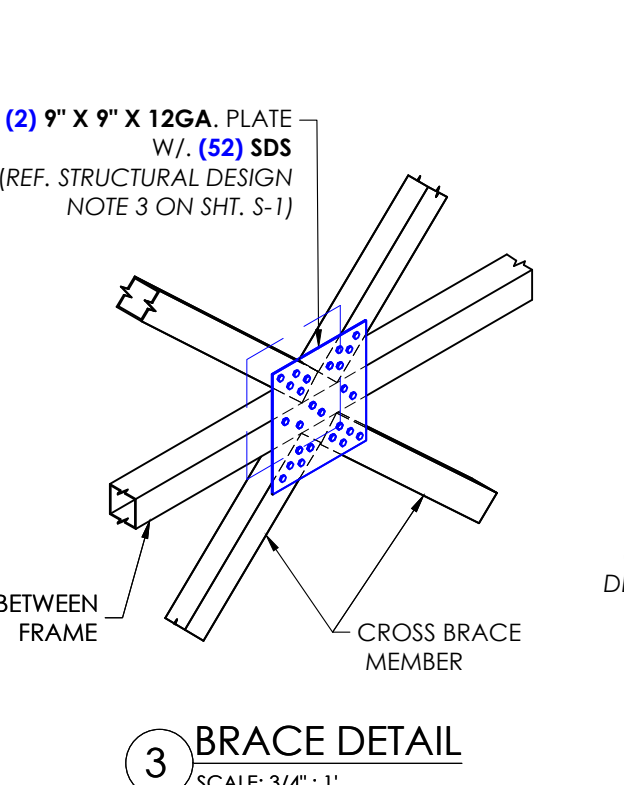
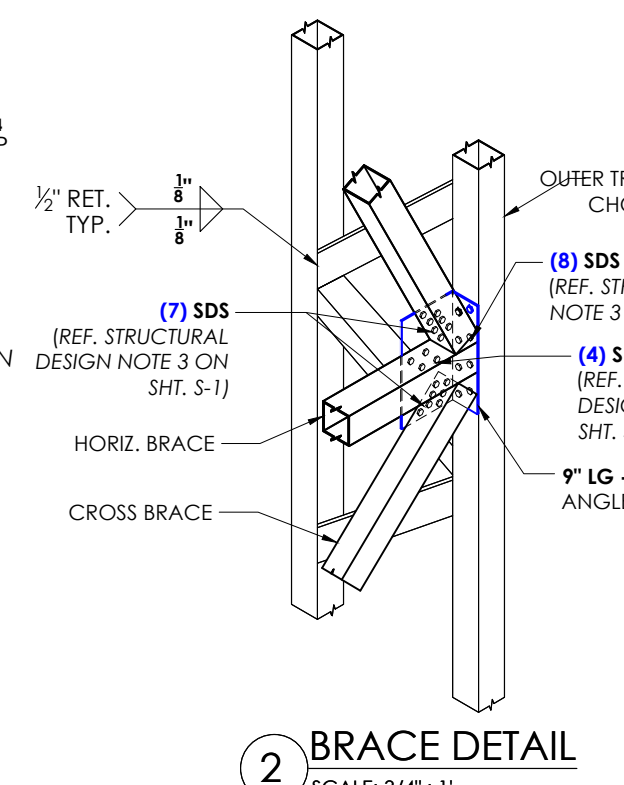
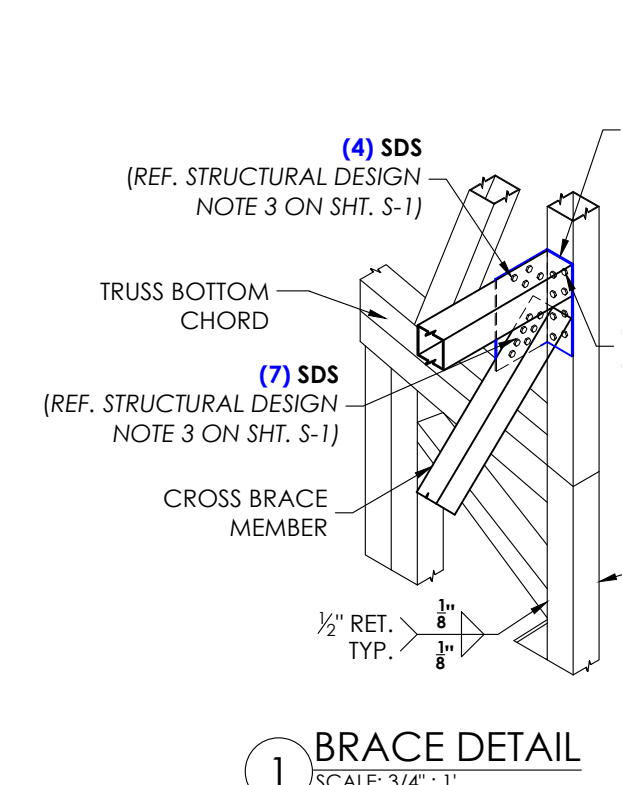
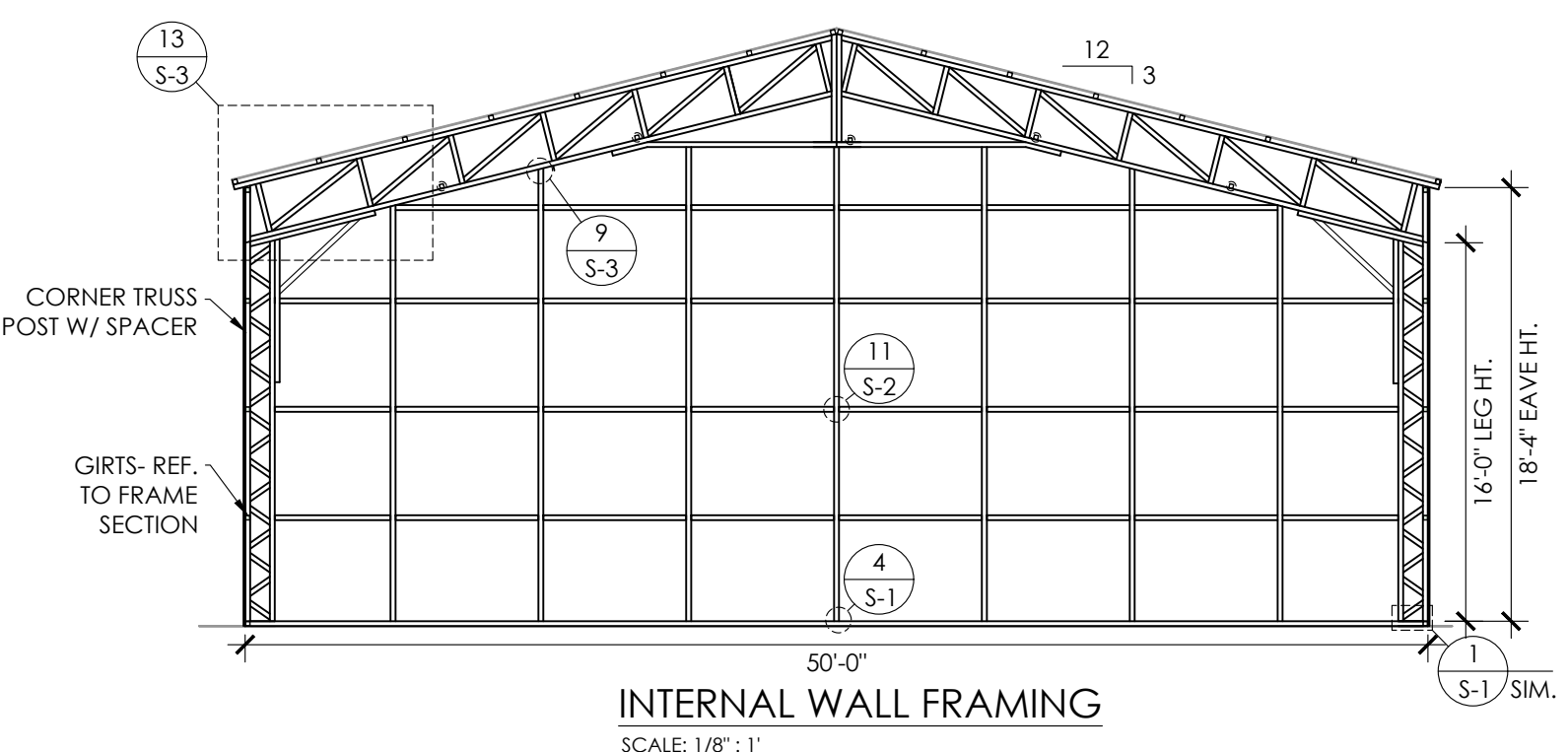
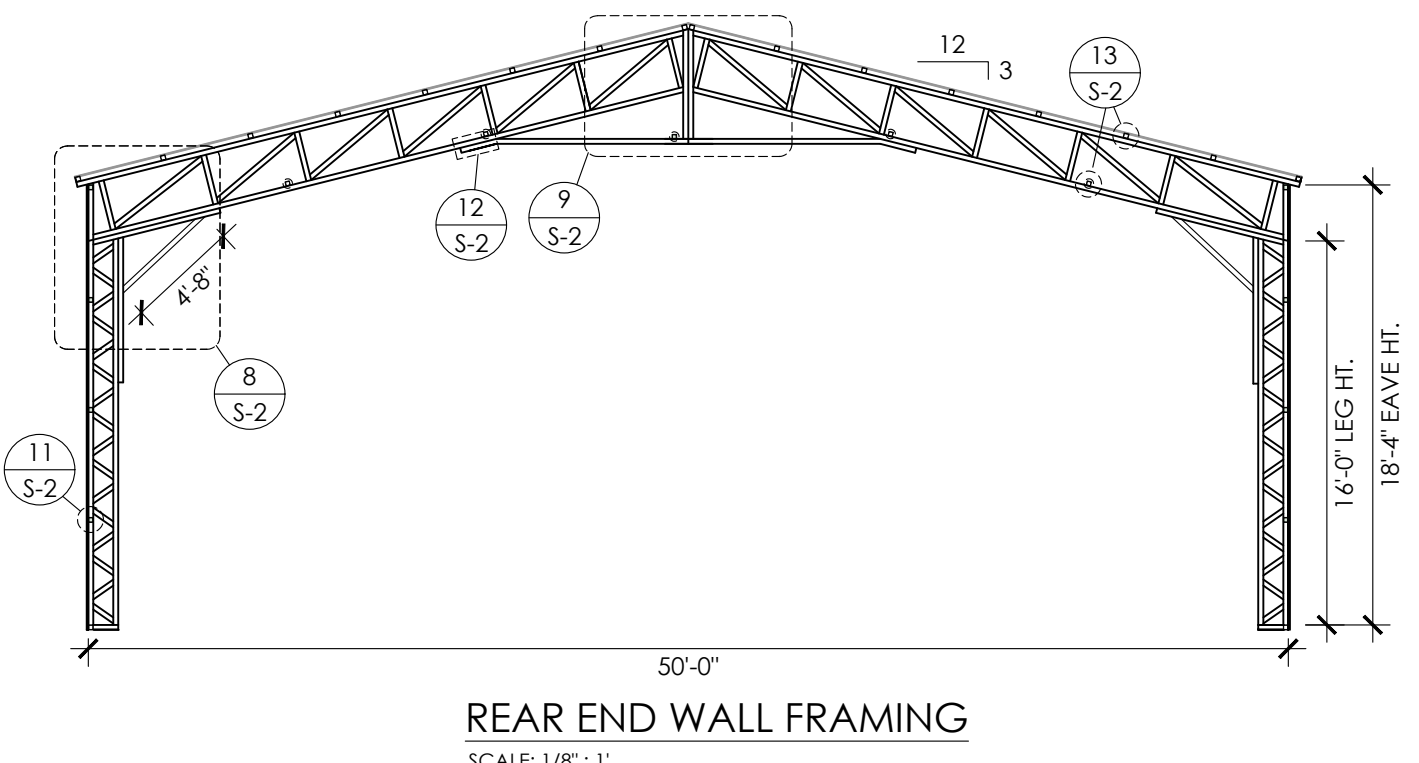
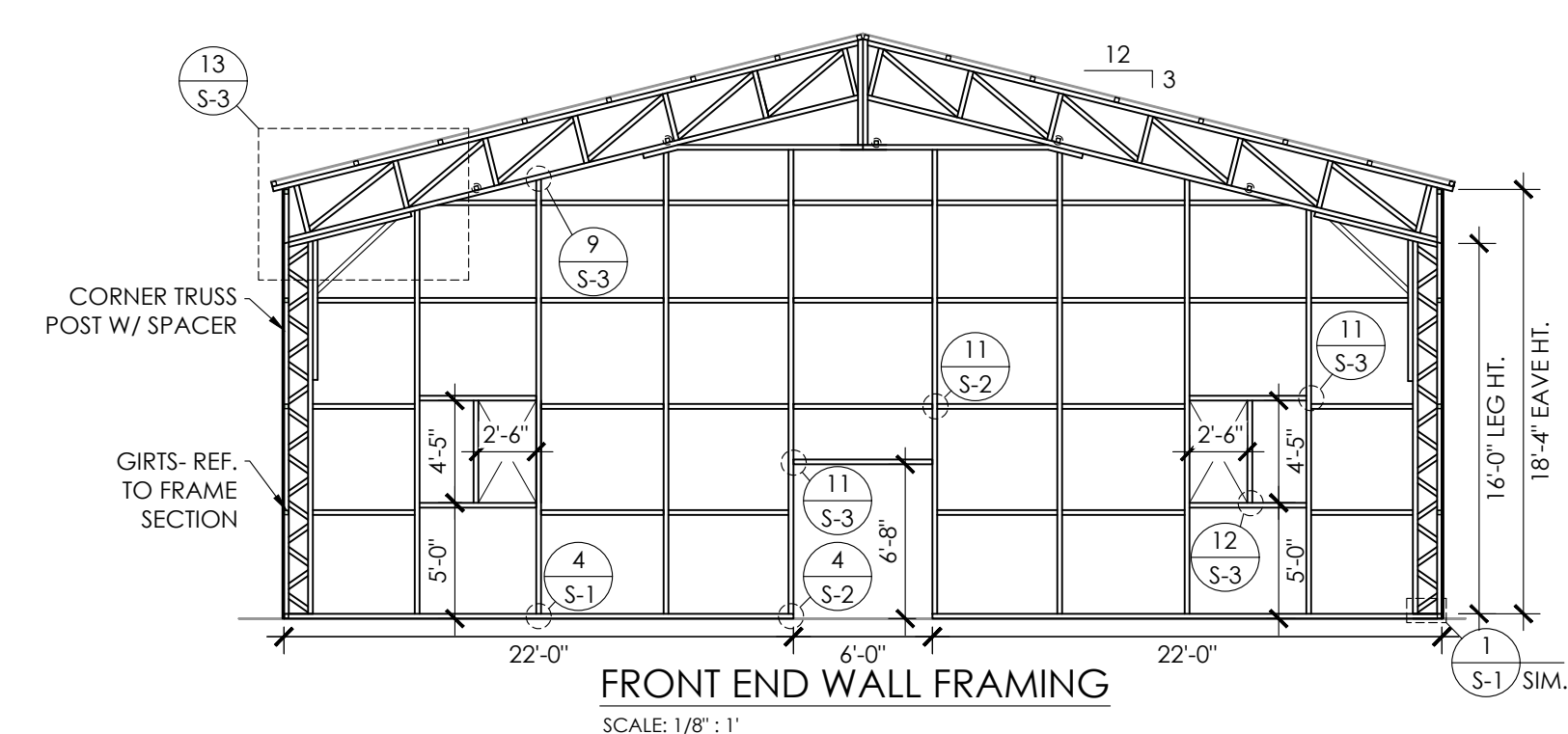
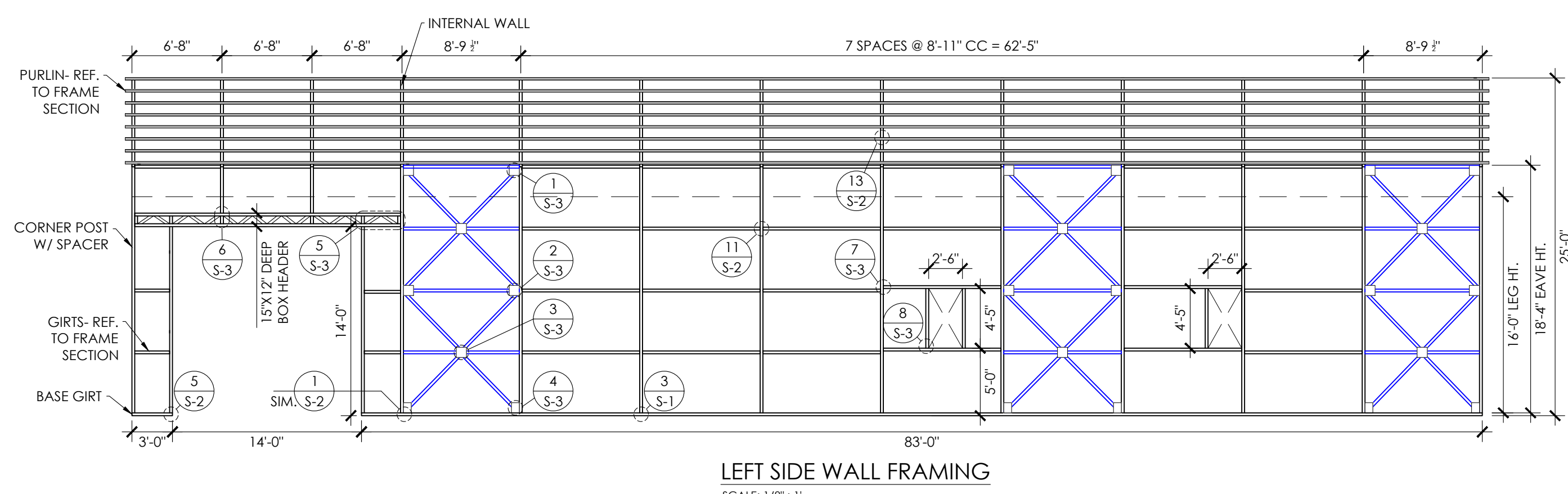
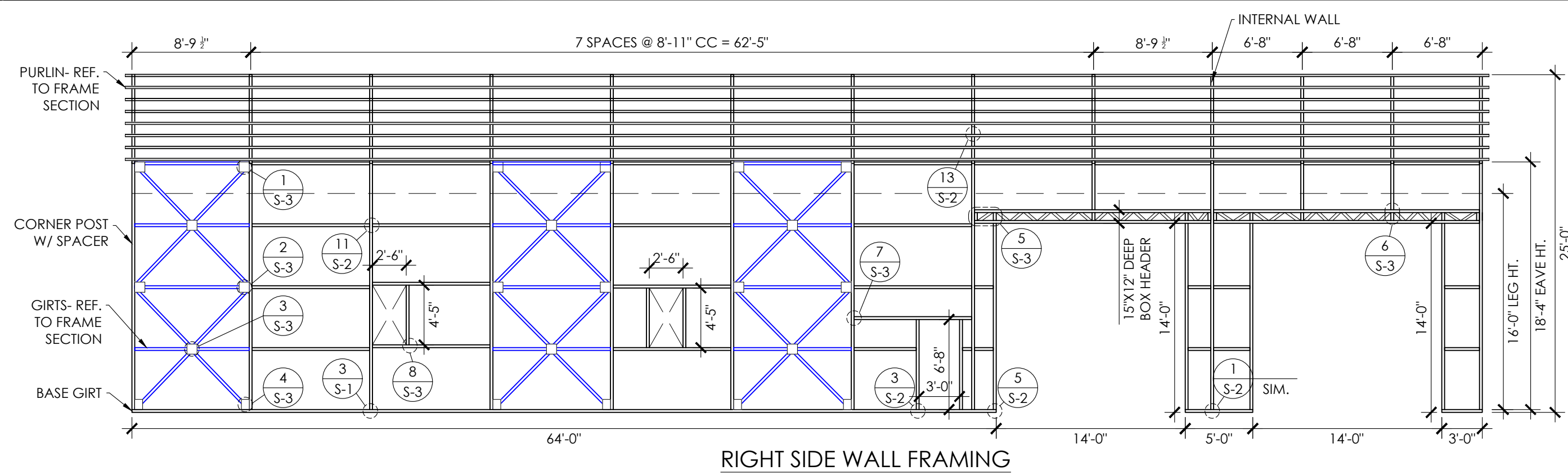
PROJECT NUMBER: **033-24-0721**

PROJECT TITLE: **MARTEK OF NJ - JOE CATANZARITI**

701 OLD AVALON BOULEVARD,
AVALON, NJ 08202
(CAPE MAY COUNTY, NJ)

| MARK | COMMENT | DATED |
|------|-------------------|------------|
| - | ISSUED FOR PERMIT | 05/13/2024 |
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| DRAWING INFO | |
|---|------------|
| DRAWN BY | DATED |
| A.J. | 05/13/2024 |
| CHECKED BY | DATED |
| A.W. | 05/13/2024 |
| SHEET TITLE | |
| COLUMN LAYOUT PLAN, FRAME SECTION & DETAILS | |
| SHEET NUMBER | |
| S - 2 | |



METAL BUILDING MANUFACTURER

AMERICAN STEEL CORP.

457 N. Broadway, Joshua, TX 76058
1-866-730-9865

FOR QUESTIONS, MODIFICATIONS, REVISIONS OR CORRECTIONS NEEDED TO PLANS, PLEASE CONTACT THE METAL BUILDINGS MANUFACTURER LISTED ON PLANS. ENGINEER OR ARCHITECT'S AUTHORIZATION FROM THE METAL BUILDINGS MANUFACTURER TO MAKE ANY CHANGES TO PLANS.

SEAL BELOW

NEW JERSEY
No. 0259411
EXPIRES: 04/30/2024
SIGNED: 05/13/2024

THE ENGINEERING SEAL COVERS STRUCTURAL DESIGN ELEMENTS PRESENTED IN THIS SET OF PLANS. IT DOES NOT PROVIDE ANY ARCHITECTURAL, SITE, FINISHING, HVAC, ELEC. MECH DESIGN OR REQUIREMENTS. THESE ITEMS MUST BE ADDRESSED BY THEIR RESPECTIVE PROFESSIONALS IN CHARGE.

ASKA PROJECT NUMBER

033-24-0721

PROJECT TITLE PROJECT LOCATION

MARTEK OF NJ - JOE CATANZARITI
701 OLD AVALON BOULEVARD,
AVALON, NJ 08202
(CAPE MAY COUNTY, NJ)

REVISIONS

| MARK | COMMENT | DATED |
|------|-------------------|------------|
| - | ISSUED FOR PERMIT | 05/13/2024 |
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DRAWING INFO

DRAWN BY: A.J. DATED: 05/13/2024

CHECKED BY: DATED: 05/13/2024

A.W. SHEET TITLE

SIDE WALL FRAMING, END WALL FRAMING & DETAILS

SHEET NUMBER

S - 3