

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

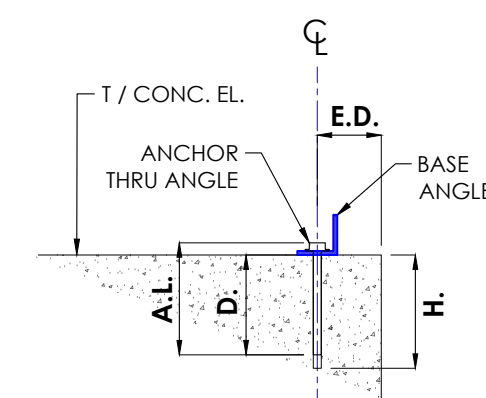
- ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH .IBC 2015, ASCE 7-10, OSHA, AISC 360, AWS D1.3 CODES AND ALL OTHER APPLICABLE LOCAL CITY OR COUNTY REQUIREMENTS.
- ALL WELDS ARE TO BE SHOP WELDS. **FIELD WELDING IS NOT PERMITTED NOR REQUIRED.** WELDING ELECTRODES PER AWS CODE. E70XX UNLESS NOTED 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"

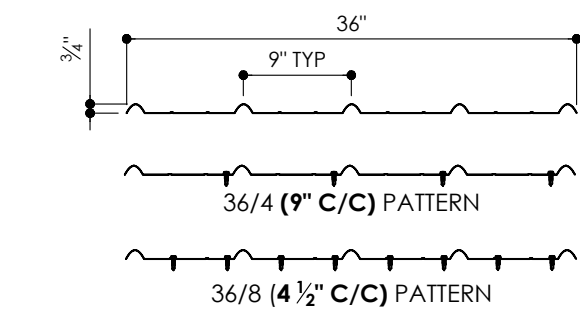
ELEVATION NOTES

- 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

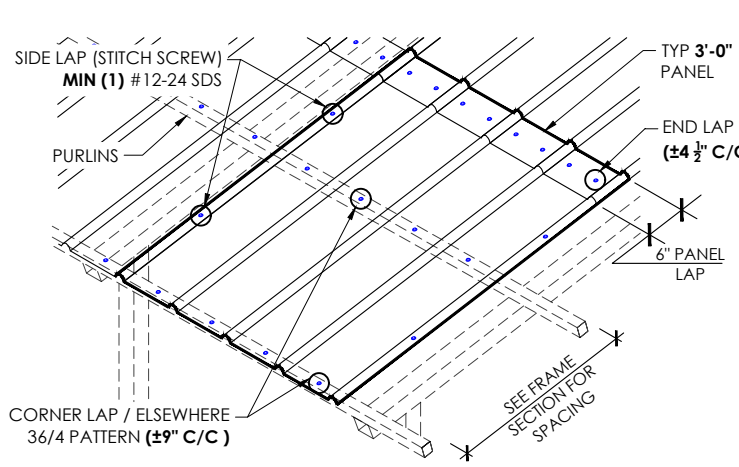
LOCATION	CORNER PANEL	SIDE LAPS	EDGE LAPS	ELSEWHERE
SPACING	9" CC	MIN. 1	4 1/2" CC	9" CC

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



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

SCALE: 3/4" = 1"

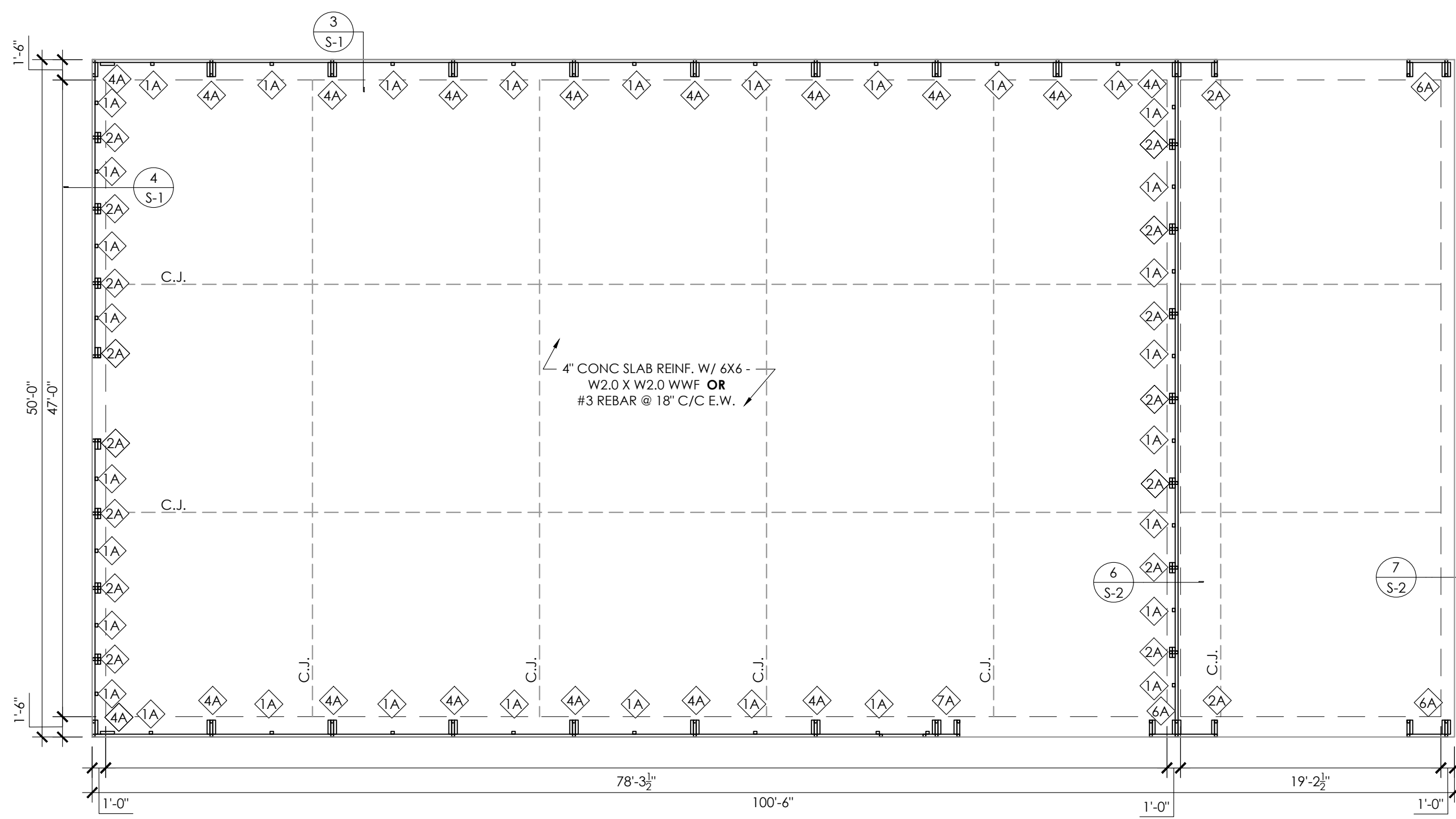


SHEATHING FASTENER PATTERN

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	-

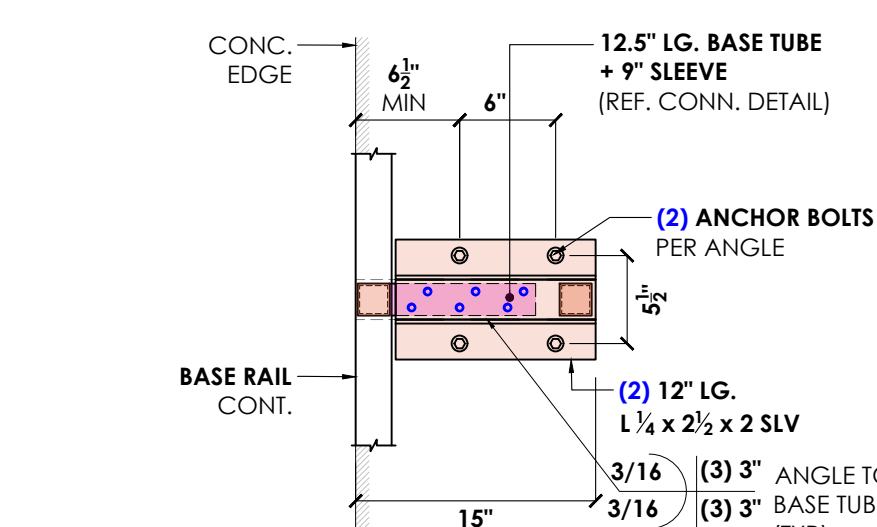
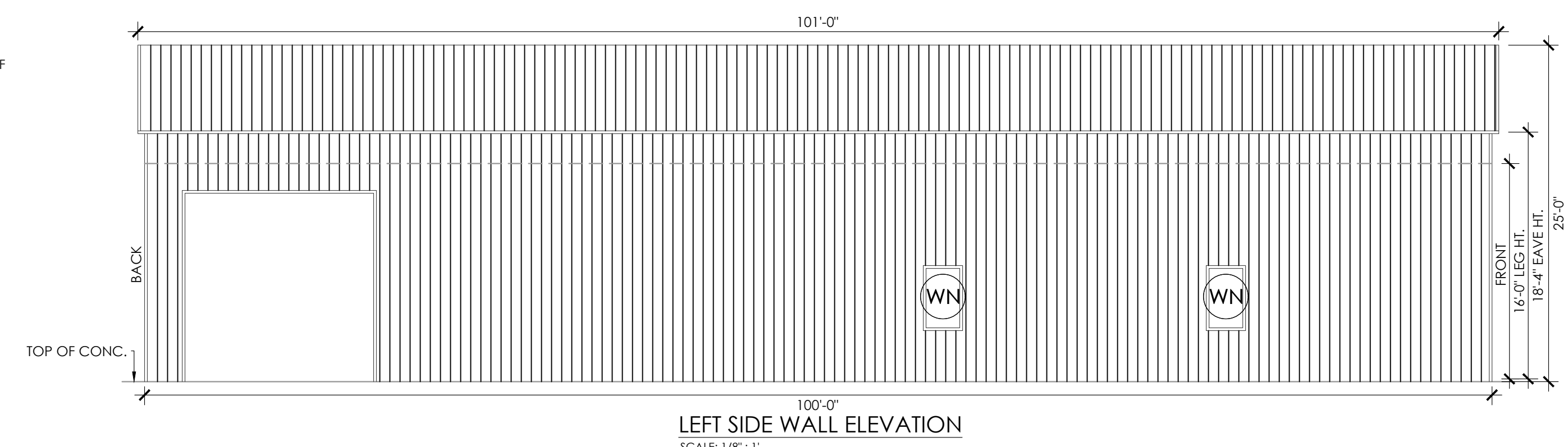
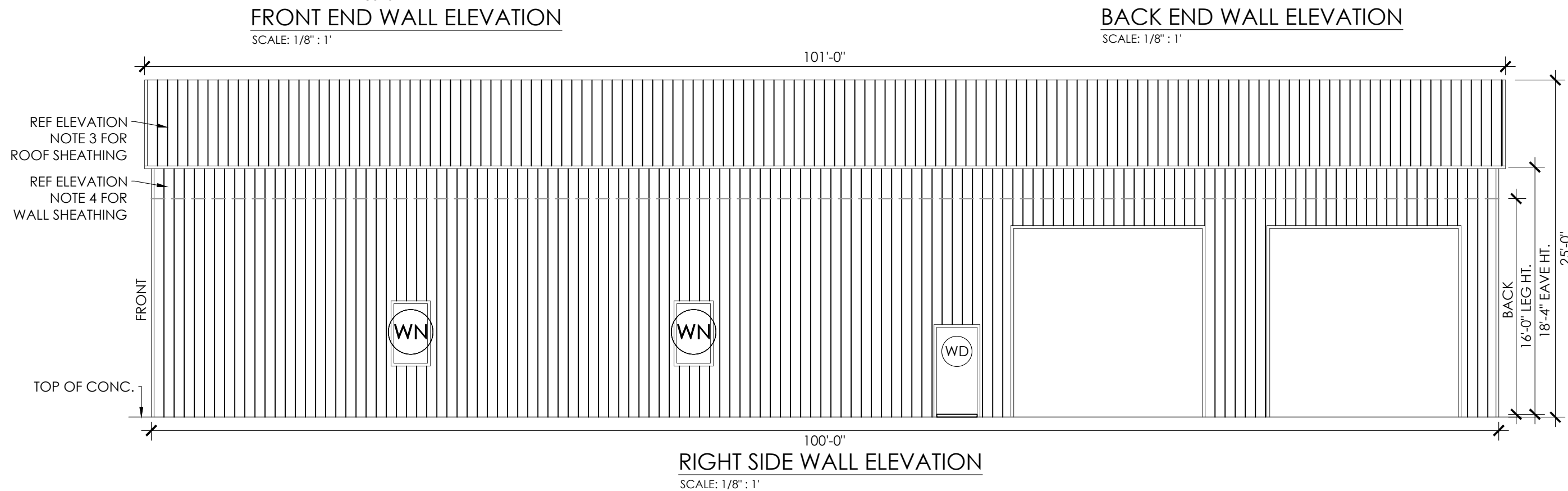
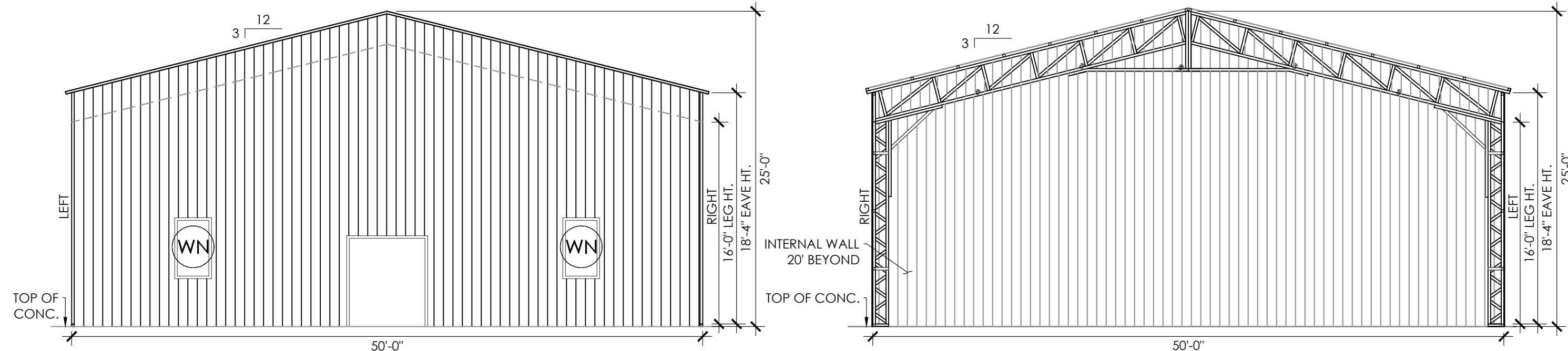
THE OWNER SHALL HIRE LICENSED SPECIAL INSPECTOR AT THEIR OWN COST. THE OWNER MAY BRING TO THE ATTENTION OF THE ENGINEER, ANY ISSUES OF CONCERN NOTED BY THE INSPECTOR.

ANCHORAGE NOTES:

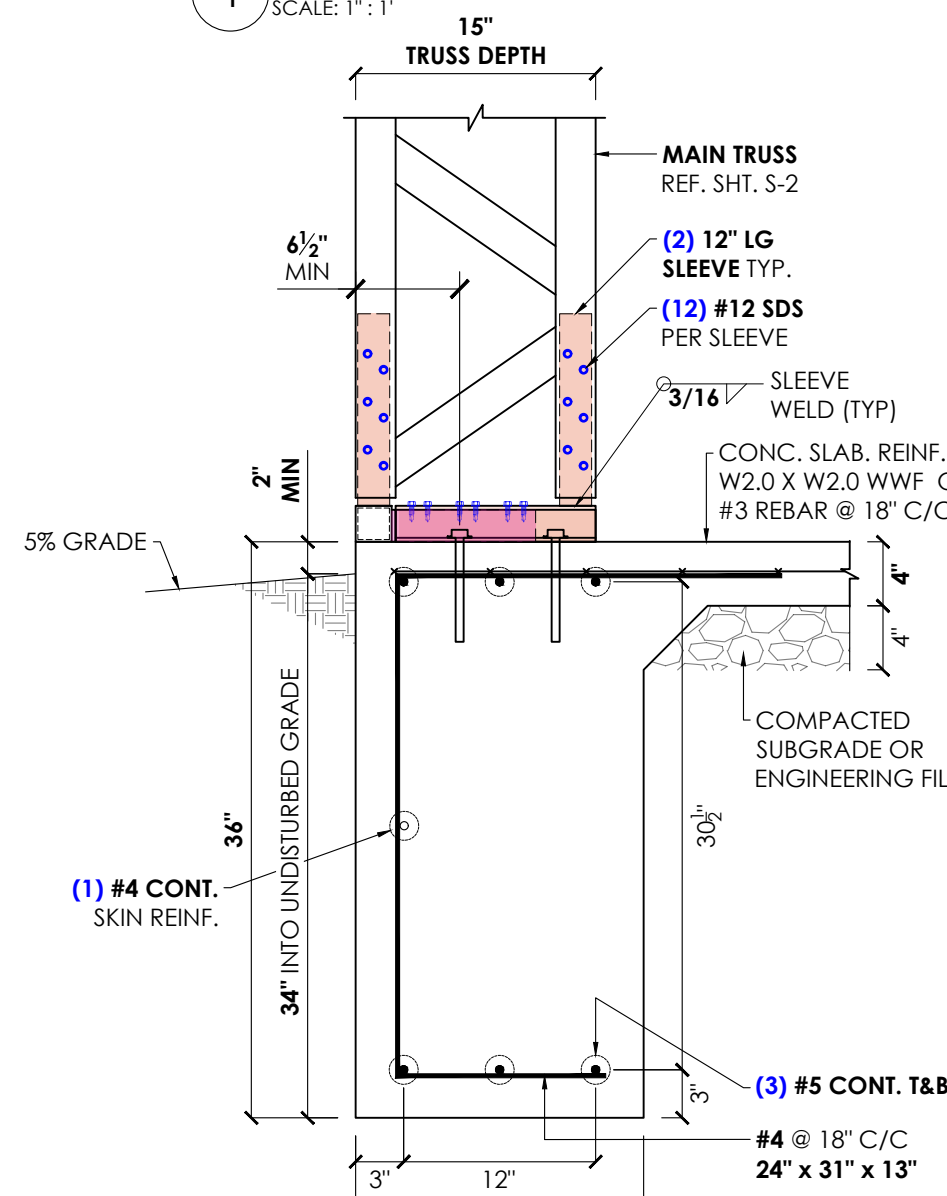
- ANCHOR INSTALLATION REQUIREMENTS (REF ANCHORAGE DETAIL):
 - A.L. - ANCHOR LENGTH: 6.00'
 - E.D. - ANCHOR EDGE DISTANCE: MIN. 6.00" OR U.N.O.
 - H. - ANCHOR HOLE DEPTH: MIN. 6.25"
 - D. - CONCRETE EMBEDMENT DEPTH: MIN. 5.50"
 - SPACING BETWEEN (2) ANCHORS: MIN. 3.00" OR U.N.O.
- ANCHORS TO BE SPACED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

REINFORCEMENT NOTES:

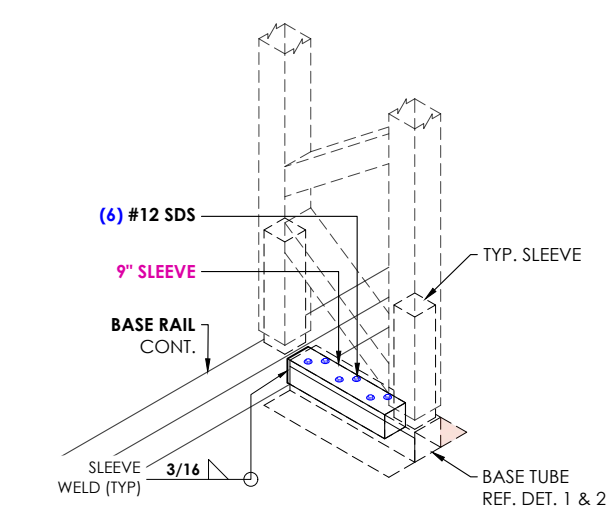
- REINFORCING STEEL: DEFORMED BARS CONFORMING TO ASTM A615, GRADE 40, WITH A MINIMUM YIELD OF 40 KSI FOR ALL BARS UNLESS OTHERWISE INDICATED ON DRAWINGS.
- WELDED WIRE FABRIC: ASTM A185 USING BRIGHT STEEL WIRE MEETING THE REQUIREMENTS OF ASTM A82. GAUGES AND DIMENSIONS AS NOTED ON THE DRAWINGS. PROVIDE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



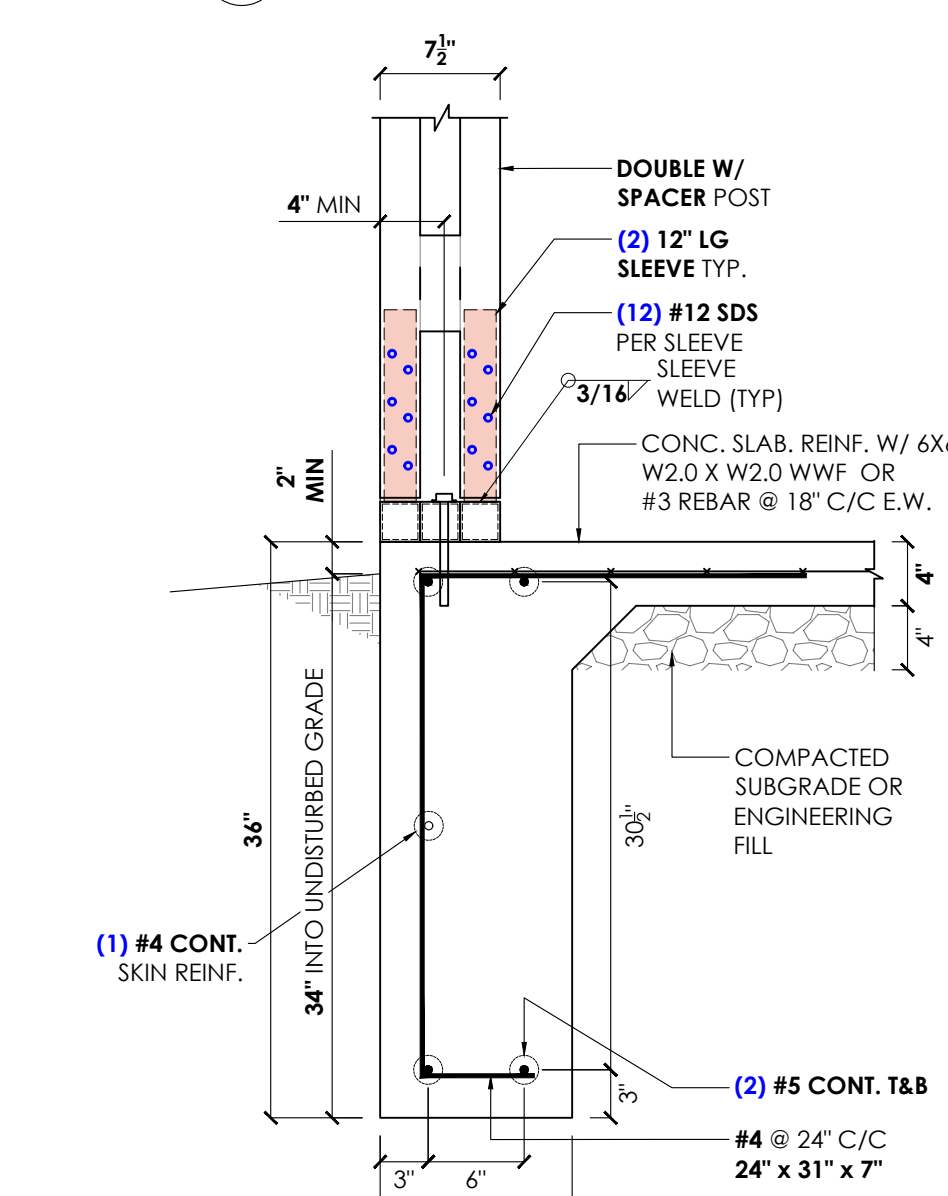
1 SIDE WALL BASE DETAIL
SCALE: 1" = 1"



3 FOUNDATION @ SIDE WALL
SCALE: 1" = 1"



2 END WALL BASE DETAIL
SCALE: 1" = 1"



4 FOUNDATION @ REAR END WALL
SCALE: 1" = 1"



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EXPIRES: 04/30/2024
SIGNED: 05/13/2024
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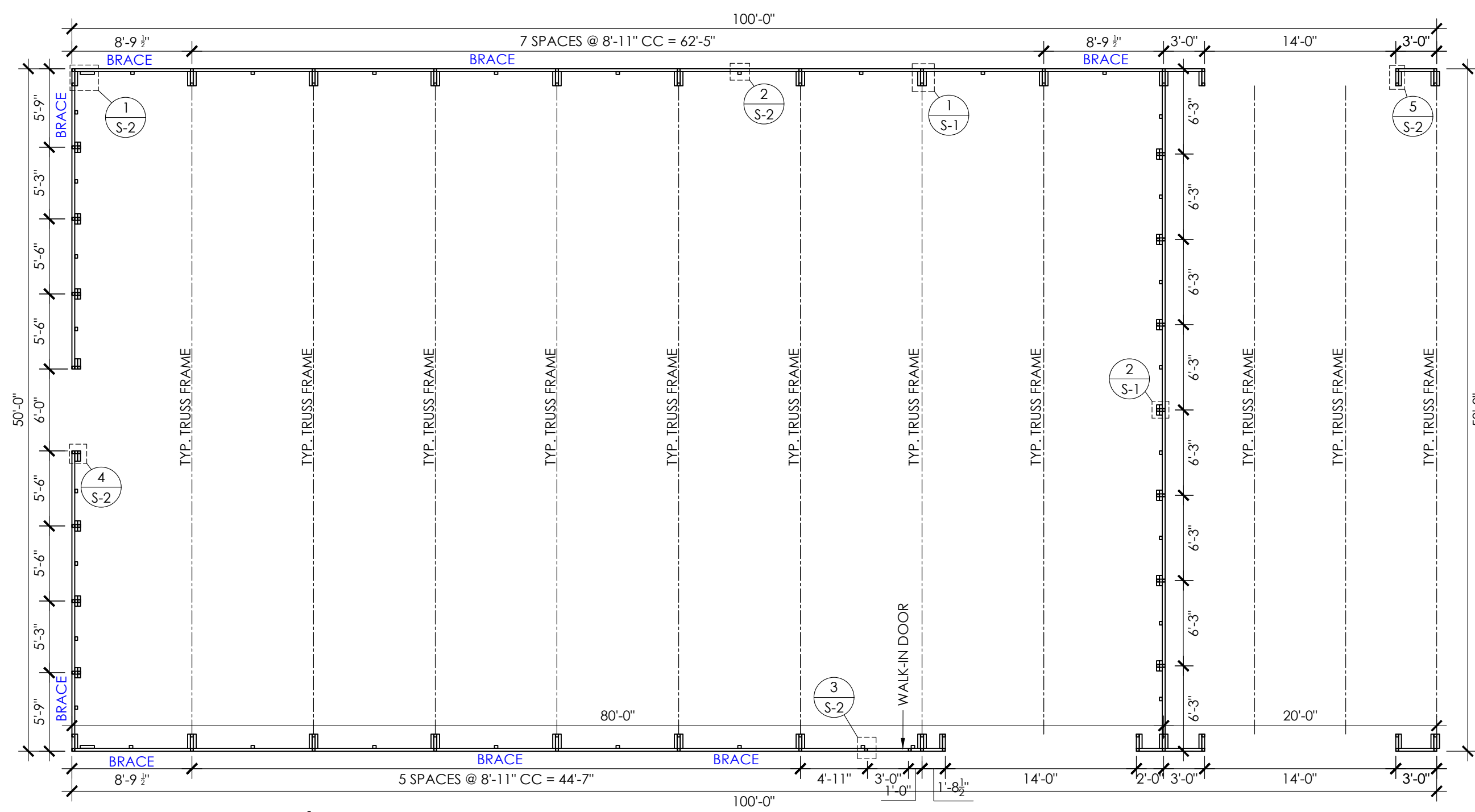
ASKA PROJECT NUMBER
033-24-0721

PROJECT TITLE PROJECT LOCATION

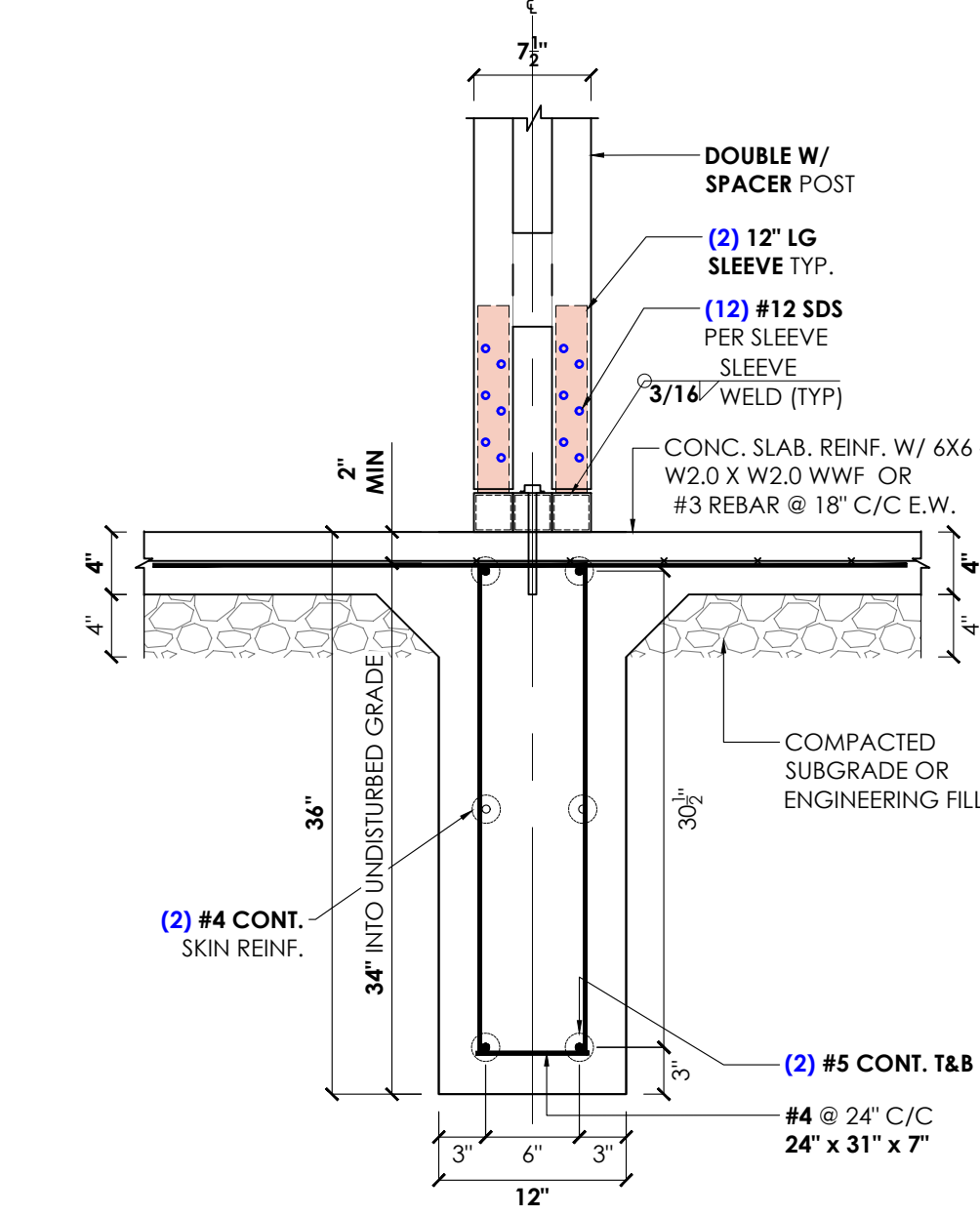
MARTEK OF NJ - JOE CATANZARITI
701 OLD AVALON BOULEVARD,
AVALON, NJ 08202
(CAPE MAY COUNTY, NJ)

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

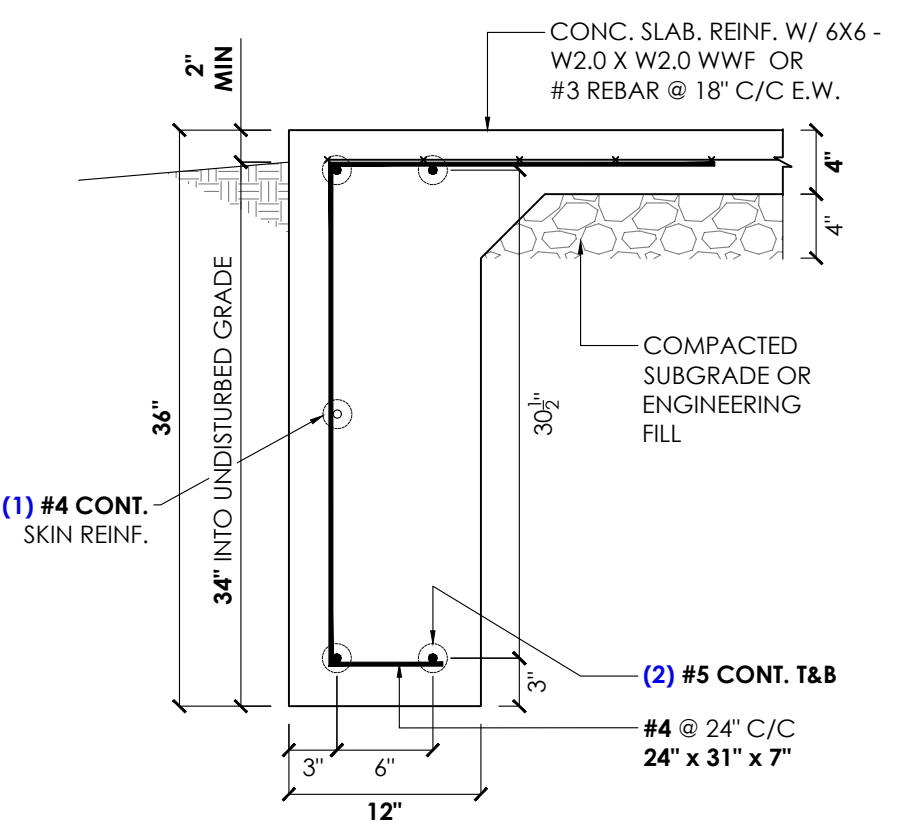
DRAWING INFO
DRAWN BY: A.J. DATED: 05/13/2024
CHECKED BY: A.W. DATED: 05/13/2024
SHEET TITLE: COVER SHEET, ELEVATIONS, FOUNDATION PLAN & DETAILS
SHEET NUMBER: S-1



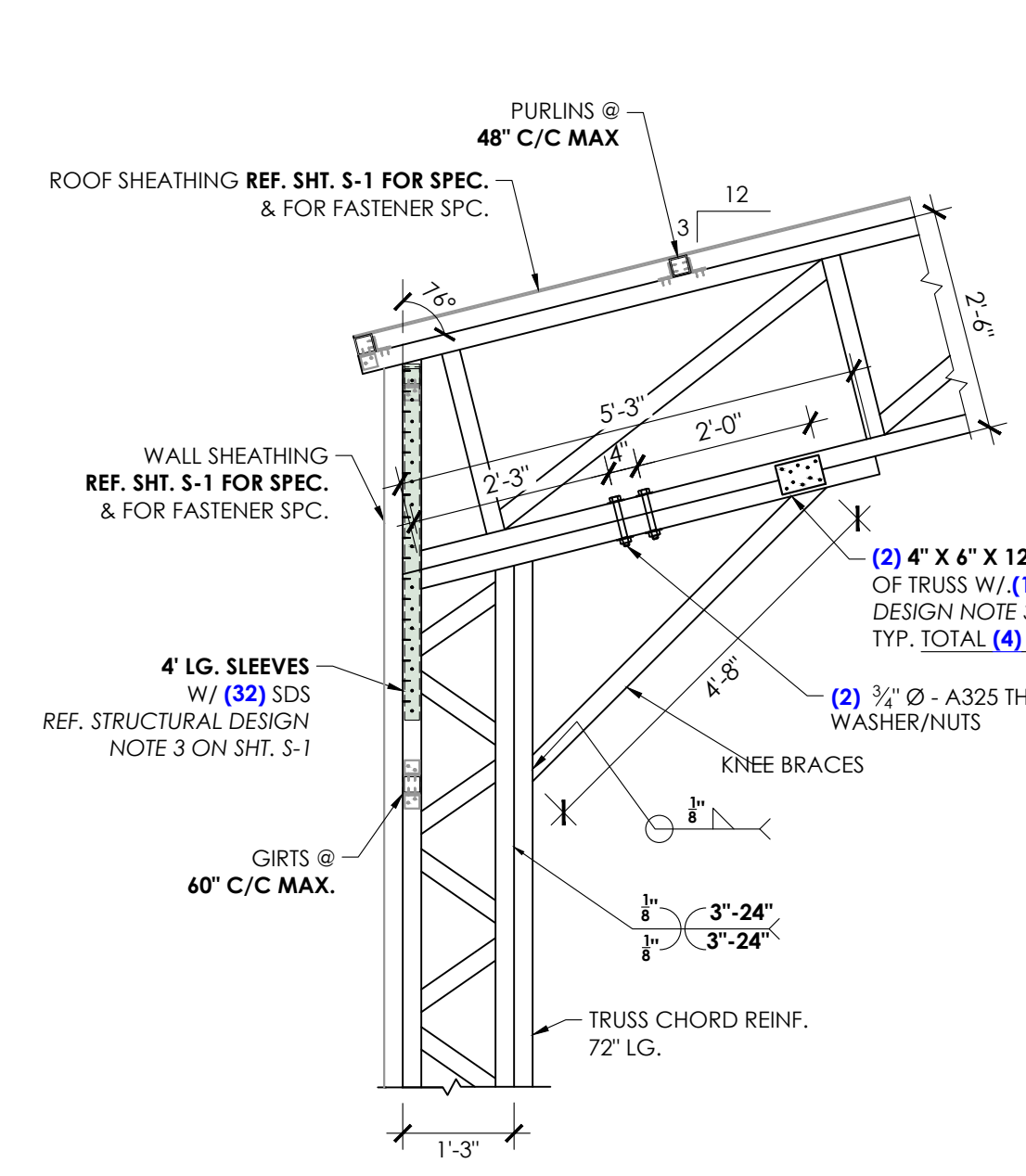
COLUMN LAYOUT PLAN
SCALE: 1/8" = 1'



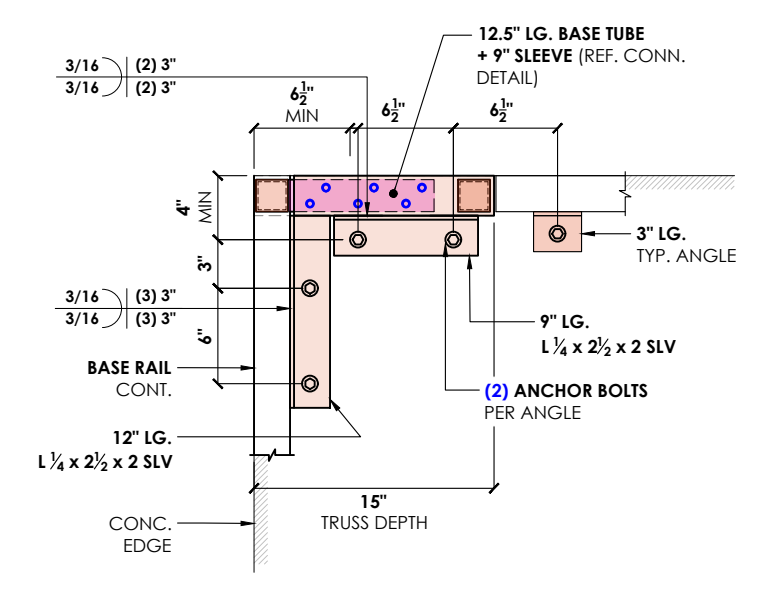
6 FOUNDATION @ INTERNAL WALL
SCALE: 1" = 1'



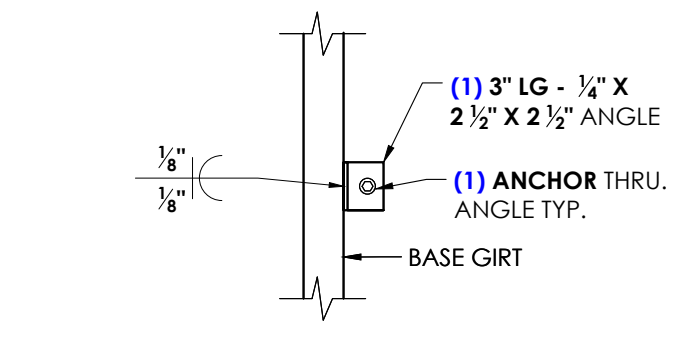
7 FOUNDATION @ FRONT OPEN END
SCALE: 1" = 1'



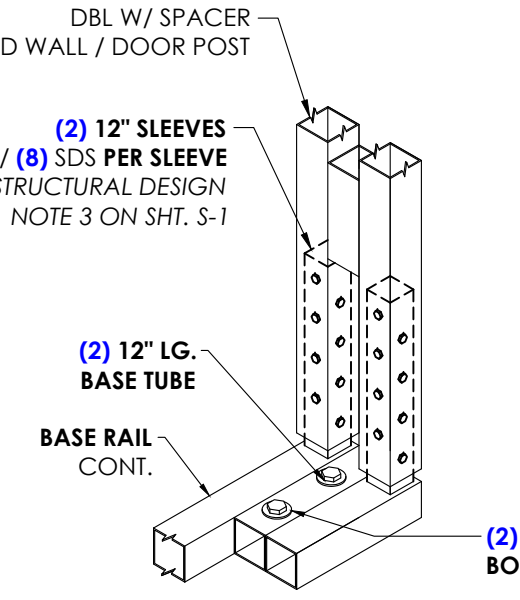
8 TYP. FRAME DETAIL
SCALE: 1/2" = 1'



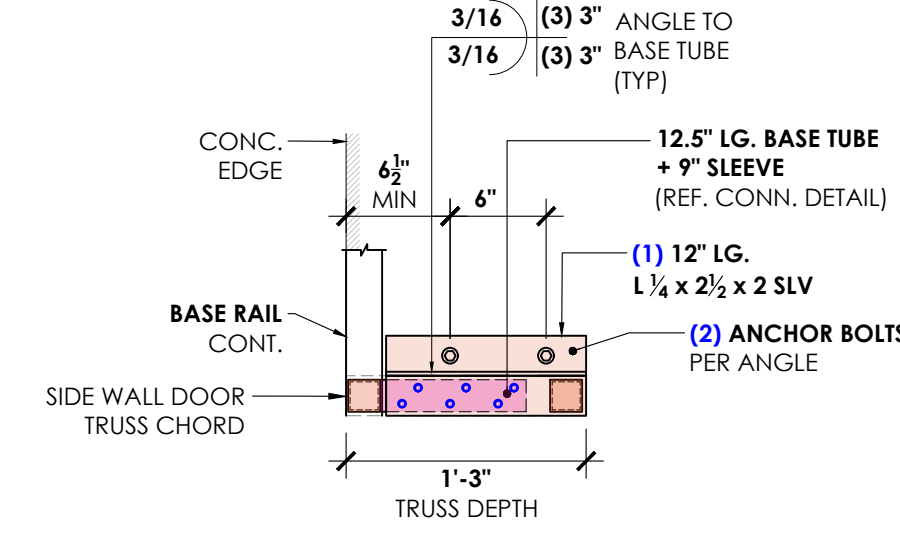
1 ANCHORAGE @ CORNER DETAIL
SCALE: 1" = 1'



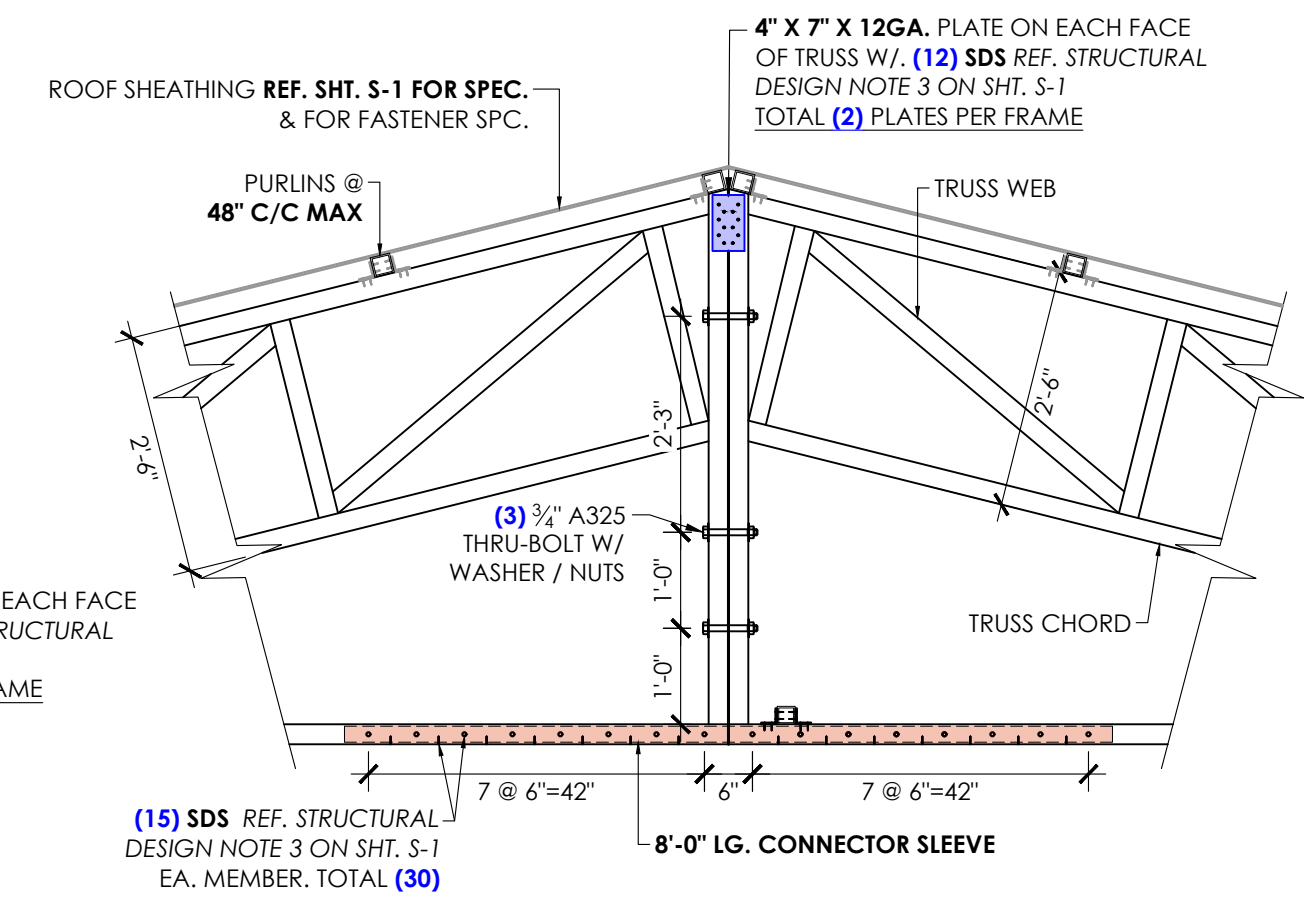
2 ANCHORAGE @ BASE DETAIL
SCALE: 1" = 1'



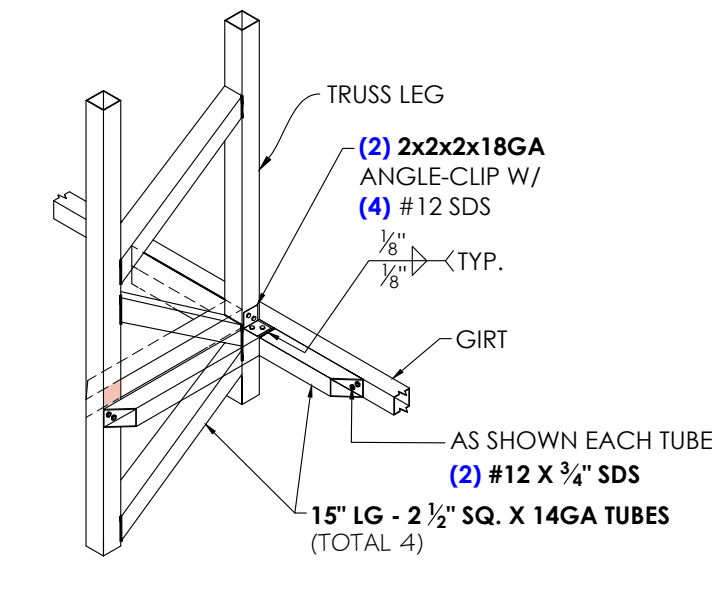
4 ANCHORAGE @ DOOR POST
SCALE: 1" = 1'



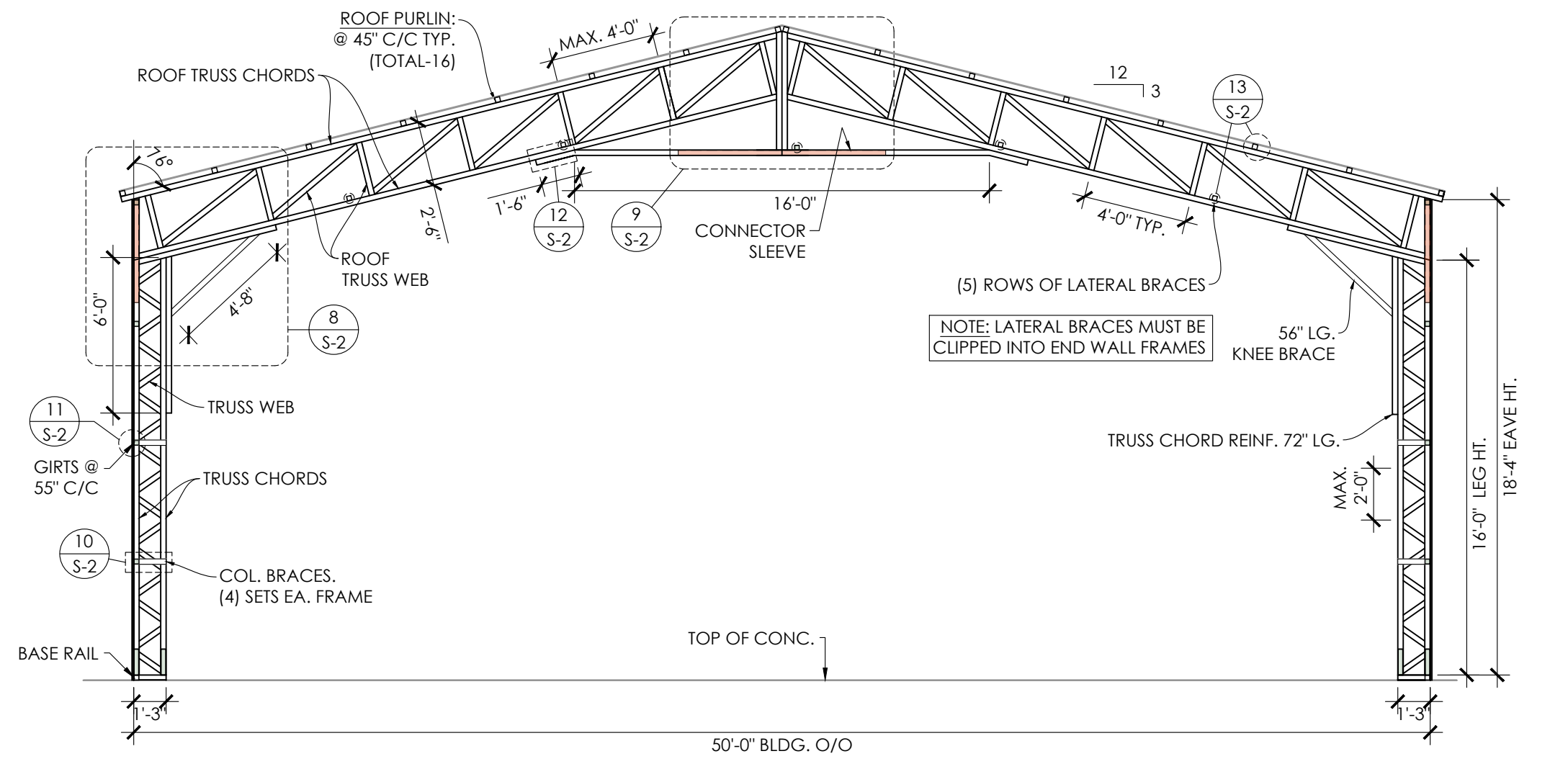
5 ANCHORAGE @ TRUSS DOOR POST
SCALE: 1" = 1'



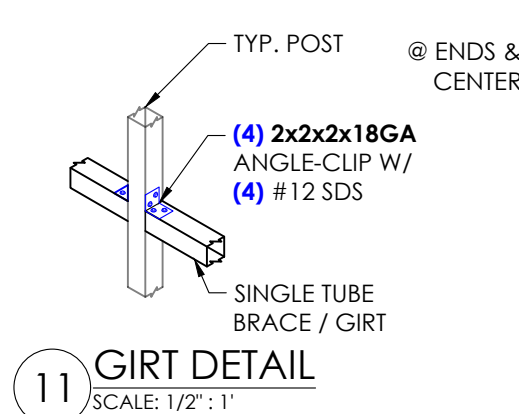
9 PEAK DETAIL
SCALE: 1/2" = 1'



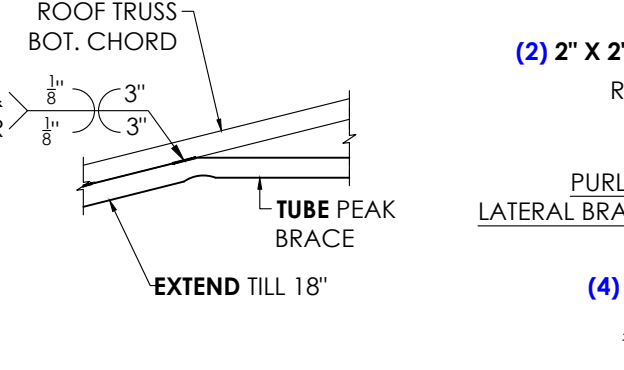
10 COL. BRACE DETAIL
SCALE: 1/2" = 1'



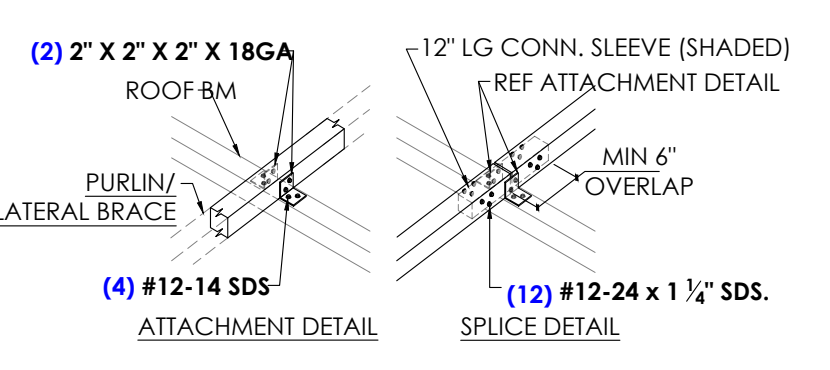
TYP. FRAME SECTION
SCALE: 3/16" = 1'



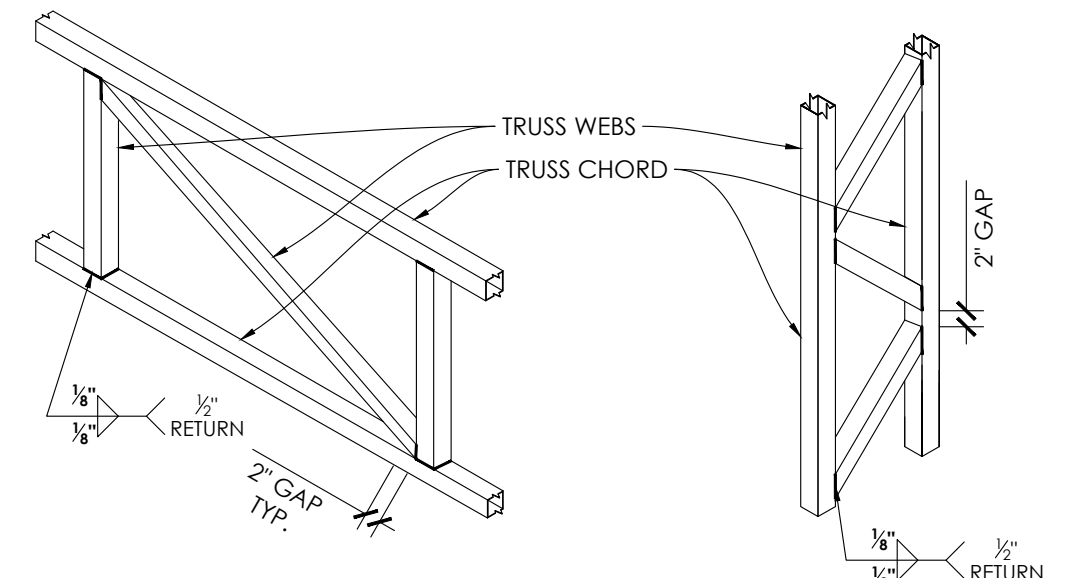
11 GIRT DETAIL
SCALE: 1/2" = 1'



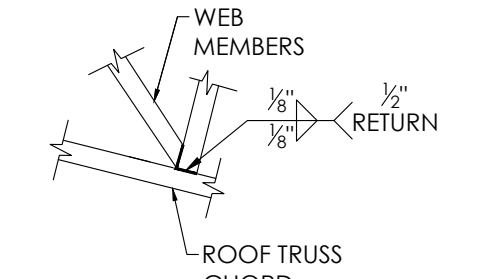
12 PEAK BRACE DETAIL
SCALE: 1/2" = 1'



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



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



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



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EXPIRES: 04/30/2026
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PROJECT NUMBER: **033-24-0721**

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

PROJECT LOCATION: **701 OLD AVALON BOULEVARD, AVALON, NJ 08202 (CAPE MAY COUNTY, NJ)**

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

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

DRAWING INFO
DRAWN BY: A.F.
CHECKED BY: A.W.
SHEET TITLE: COLUMN LAYOUT PLAN, FRAME SECTION & DETAILS
SHEET NUMBER: **S - 2**

