

APPLICABLE CODES AND STANDARDS

- 1. 2023 FLORIDA BUILDING CODE (8TH EDITION)
- 2. 2021 INTERNATIONAL BUILDING CODE
- 3. ASCE 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
- 4. AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)
- 5. ACI 318-14: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- 6. TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
- 7. AWS D1.1: STRUCTURAL WELDING

INSTALLATION NOTES AND SPECIFICATIONS

- 1. MAXIMUM ROOF PITCH 4:12
- 2. END WALL COLUMNS (POST) AND SIDE WALL COLUMNS ARE IDENTICAL, U.N.O.
- 3. 29 GA METAL PANELS SHALL BE FASTENED DIRECTLY TO 2.5" x 2.5" x 14 GA TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS. 29 GA METAL PANELS SHALL BE FASTENED DIRECTLY TO 18 GA HAT CHANNELS, U.N.O.
- 4. FASTENER SPACING ALONG RAFTERS OR PURLINS, AND POSTS SHALL BE AS FOLLOWS: INTERIOR - 9" O.C., END - 6" O.C.
- 5. FASTENERS SHALL BE #12-14 x 3/4" SELF-DRILLING SCREWS (SDS). USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20'-0" OR LESS AND ROOF SLOPES OF 18" (4:12 PITCH) OR LESS. SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS/SLOPES MAY VARY.
- 6. ANCHORS SHALL BE INSTALLED THROUGH THE BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES AND ENDS.
- 7. STANDARD GROUND ANCHORS (SOIL NAILS) CONSISTING OF 30" LONG #4 REBAR WITH WELDED NUT MAY BE USED IN SUITABLE SOILS AND WIND SPEEDS LESS THAN OR EQUAL TO 145 MPH.

DESIGN LOADS

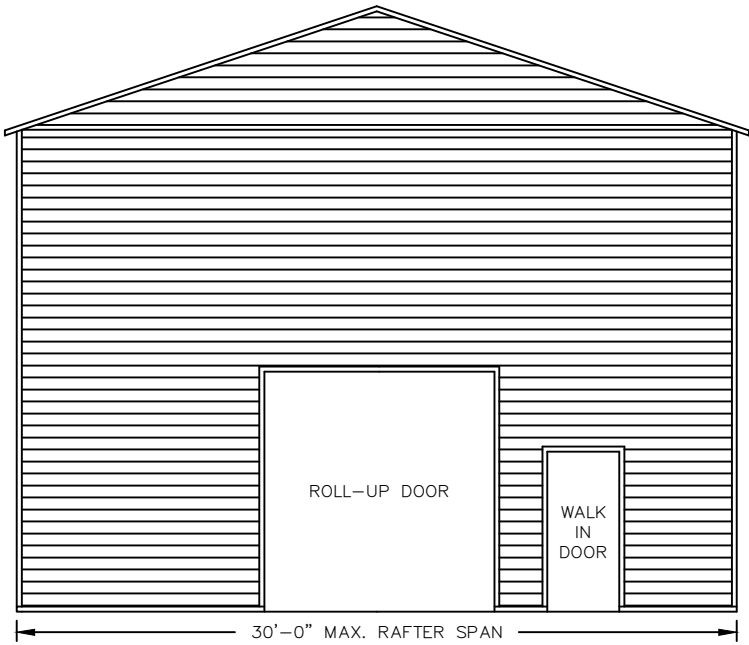
|                          |          |
|--------------------------|----------|
| DEAL LOAD                | 15 PSF   |
| LIVE LOAD                | 20 PSF   |
| NOMINAL WIND SPEED       | 108 MPH  |
| ULTIMATE WIND SPEED      | 140 MPH  |
| WIND EXPOSURE            | B        |
| RISK CATEGORY            | II       |
| ENCLOSURE CLASSIFICATION | ENCLOSED |
| OCCUPANCY CLASSIFICATION | S-2      |

| MEMBER       | PRODUCT APPROVAL NUMBER | MAX WIND DESIGN PRESSURES |
|--------------|-------------------------|---------------------------|
| ROOF PANELS  | FL47356.7               | +197.75 PSF / -93.6 PSF   |
| WALL PANELS  | FL47358.1               | +48.53 PSF / -45.07 PSF   |
| GARAGE DOOR  | C TP                    | +16.8 PSF / -21.3 PSF     |
| WALK-IN DOOR | C TP                    | +16.8 PSF / -21.3 PSF     |

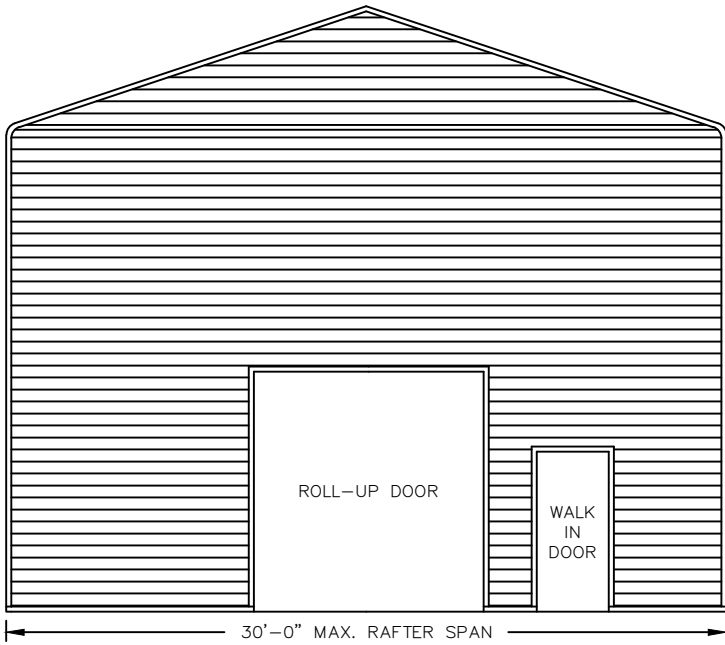


| SPACING SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                      |                          |                                              |                                                        |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|--------------------------|----------------------------------------------|--------------------------------------------------------|-----|
| RISK CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | WIND EXPOSURE CATEGORY | ULT WIND SPEED (MPH) | NOMINAL WIND SPEED (MPH) | MAXIMUM RAFTER/BOW AND END POST SPACING (FT) | FASTENER SPACING O.C. FOR RAFTERS/PURLINS & POSTS (IN) |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |                      |                          |                                              | INTERIOR                                               | END |
| I, II, III, or IV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | B, C, or D             | 110–140              | 85–108                   | 5                                            | 6                                                      | 6   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        | 141–180              | 109–139                  | 4                                            | 6                                                      | 6   |
| NOTES:<br>1. SPECIFICATIONS APPLICABLE TO 26 OR 29 GA METAL PANELS FASTENED DIRECTLY TO 12 OR 14 GA STEEL TUBE FRAMES.<br>2. FASTENERS CONSIST OF #12–14 x 3/4" SELF-DRILLING SCREWS WITH CONTROL SEAL WASHER.<br>3. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 4:12 PITCH. SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS/SLOPES MAY VARY.<br>4. GROUND ANCHOR REQUIREMENTS ARE 1 @ EACH CORNER AND ONE EVERY OTHER INTERIOR BOW/RAFTER POST LOCATION, AT MAXIMUM OF 10' O.C., AND BOTH SIDES OF OPENINGS WHERE BASE RAIL IS ABSENT.<br>5. GROUND ANCHORS ARE NOT REQUIRED WITH CONCRETE SLAB CONSTRUCTION. |                        |                      |                          |                                              |                                                        |     |

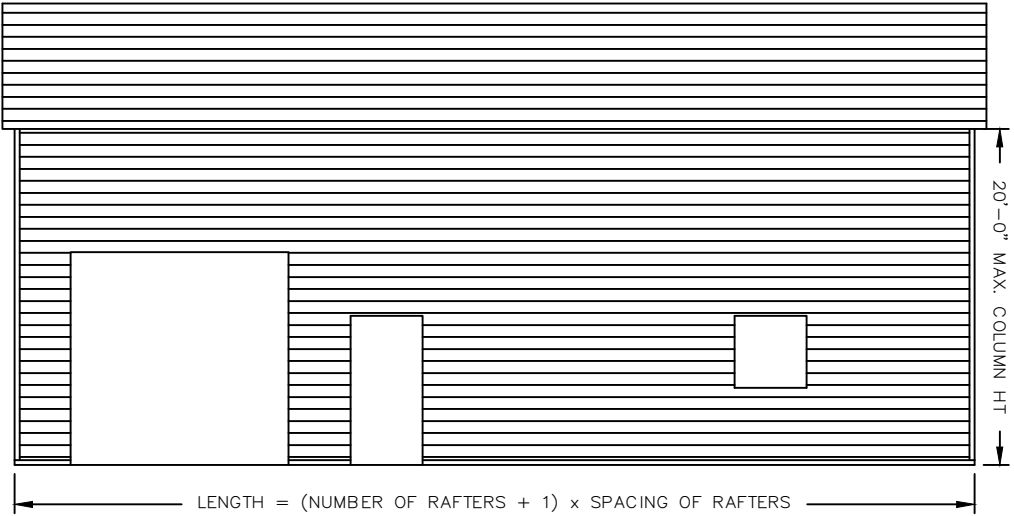
ENCLOSED METAL BUILDING  
26FT WIDE x 30FT LONG x 10FT EAVE HT.



TYPICAL ELEVATION - BOX EAVE  
SCALE: NTS



TYPICAL ELEVATION - BOW EAVE  
SCALE: NTS

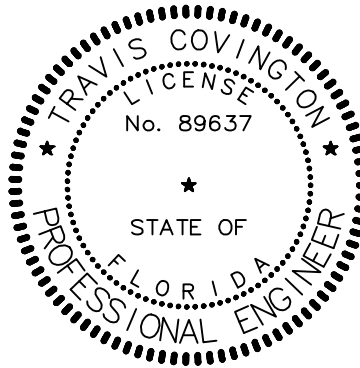


TYPICAL SIDE ELEVATION  
SCALE: NTS

| DRAWING INDEX |                                                |
|---------------|------------------------------------------------|
| SHEET NO.     | DESCRIPTION                                    |
| S.1           | GENERAL NOTES & SPECIFICATIONS                 |
| S.2           | BOX/BOW EAVE TYPICAL FRAMING SECTIONS          |
| S.3           | CONNECTION DETAILS (1 OF 2)                    |
| S.4           | BASE RAIL & ANCHORAGE DETAILS                  |
| S.5           | END WALL, SIDE WALL, & OPENING TYPICAL FRAMING |
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| S.10          | OPTIONAL CONCRETE STRIP FOOTING DETAILS        |
| S.11          | OPTIONAL HELICAL ANCHORAGE DETAILS             |

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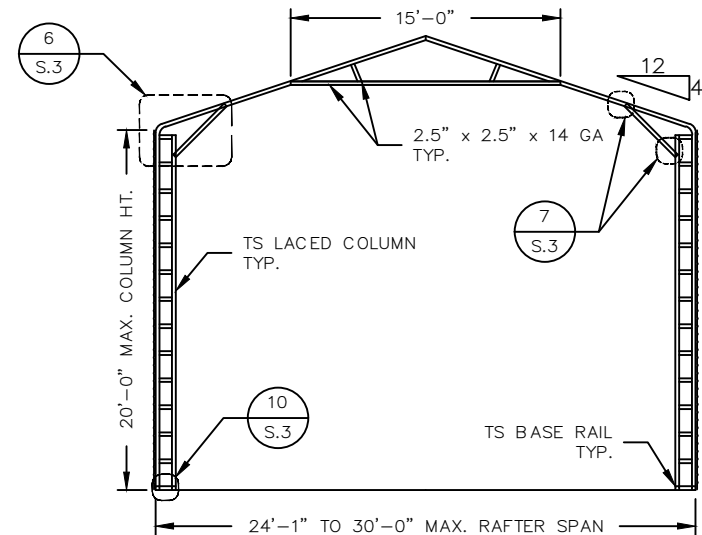
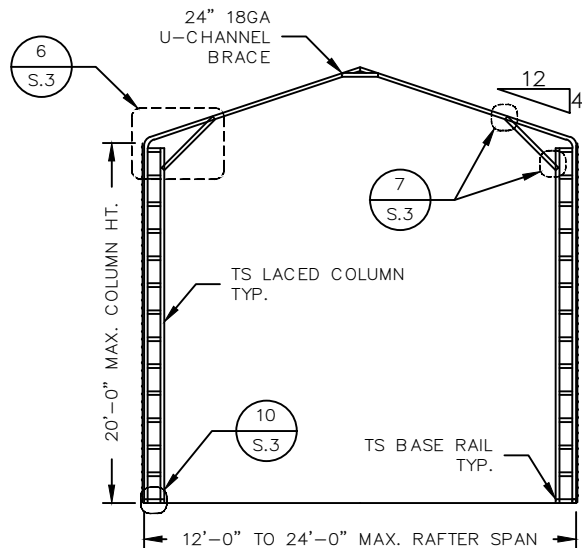
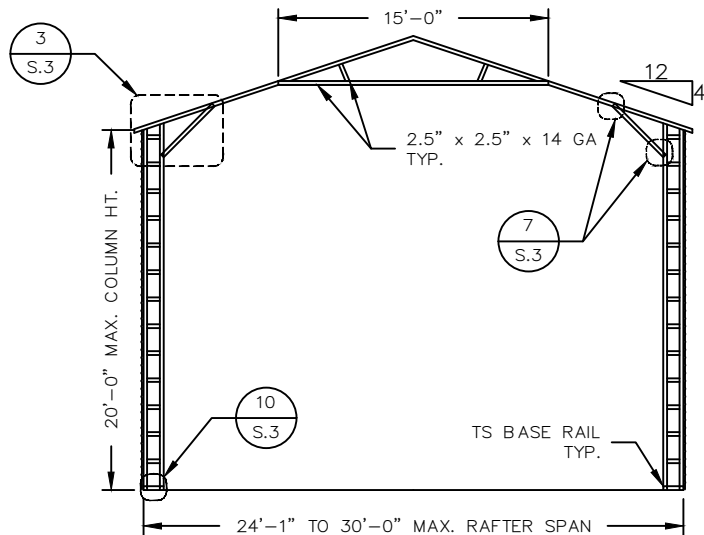
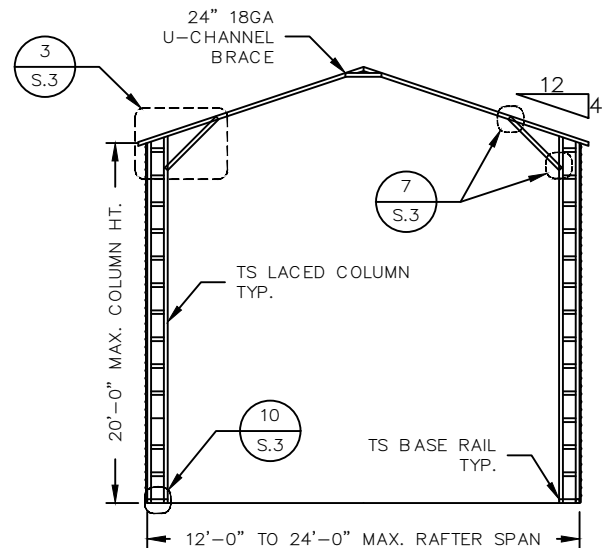
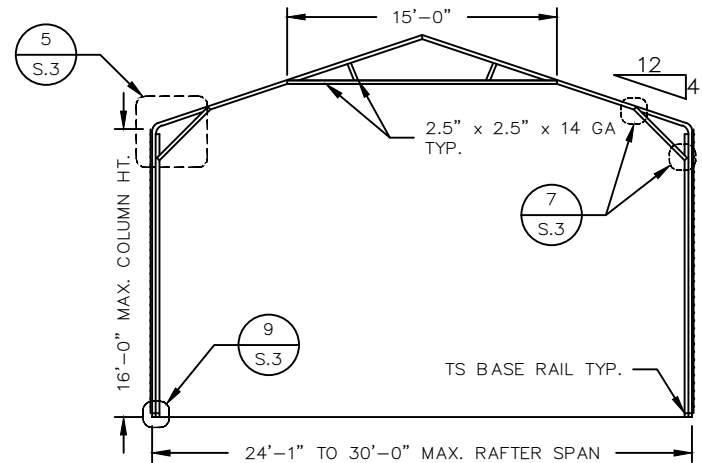
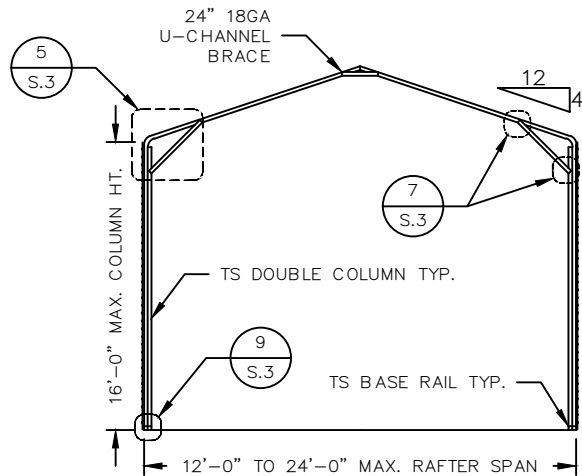
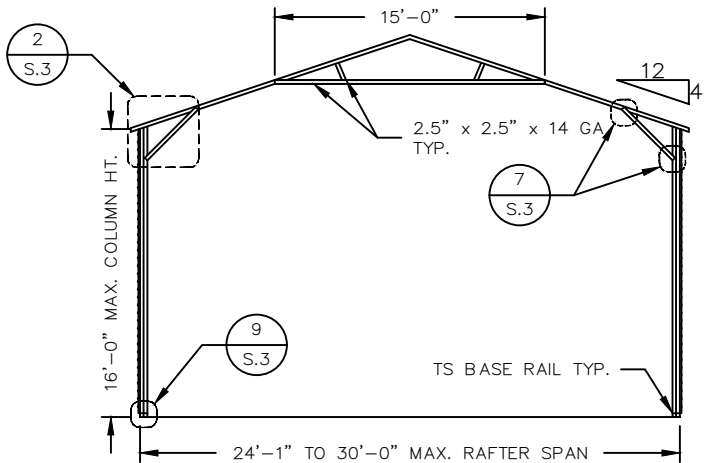
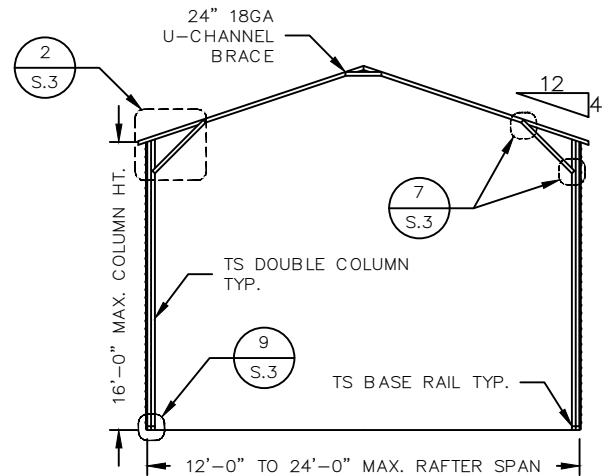
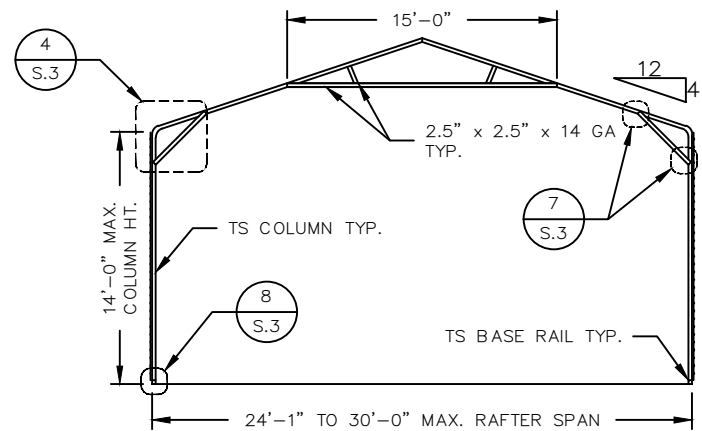
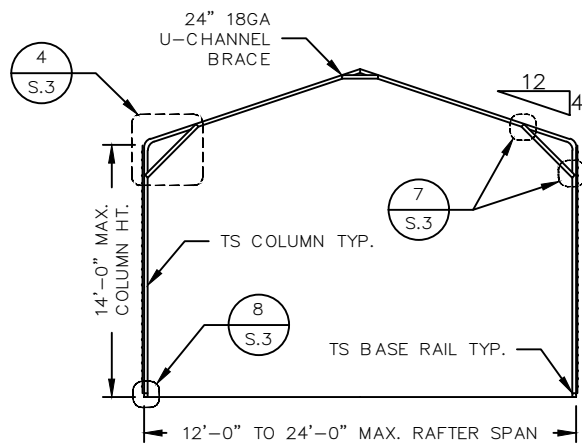
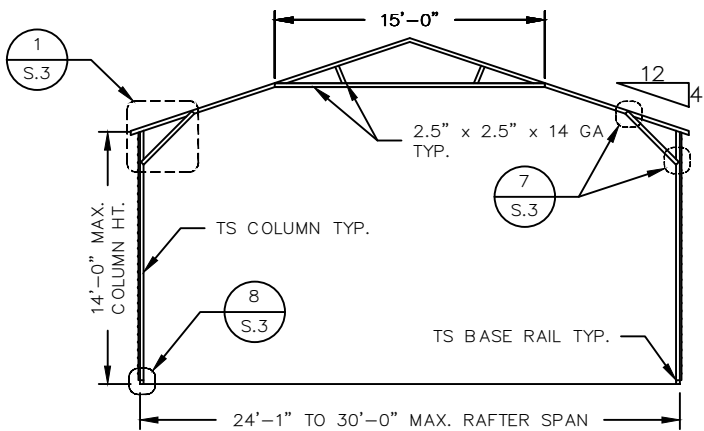
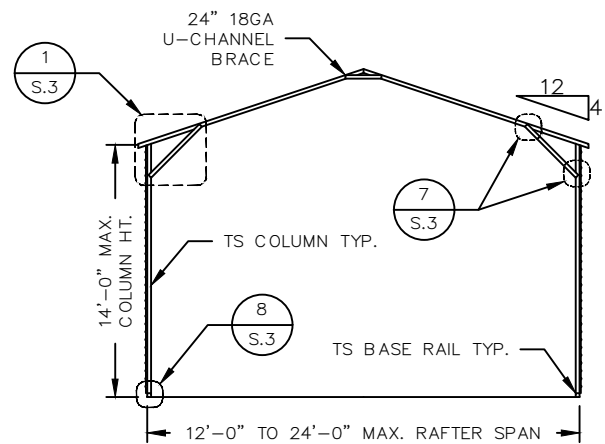
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813.770.9470  
TRAVIS@COVINGTONENG.COM

|           |                                  |
|-----------|----------------------------------|
| PROJECT:  | MANSMANN METAL BUILDING          |
| CLIENT:   | RICK & KEELY MANSMANN            |
| LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL |
| JOB NO:   | E149                             |

GENERAL NOTES & SPECIFICATIONS

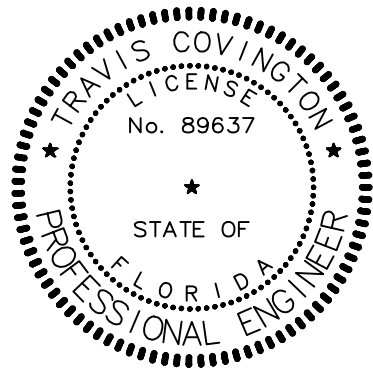
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| AS NOTED | S.1       |



BOX EAVE FRAMING  
SCALE: NTS

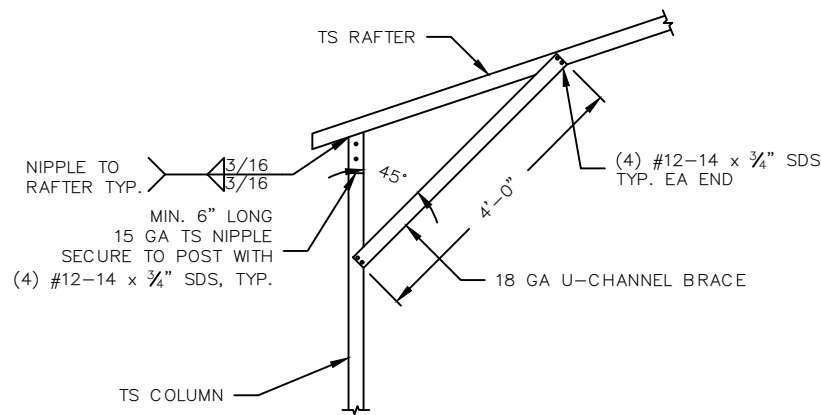
BOW EAVE FRAMING  
SCALE: NTS

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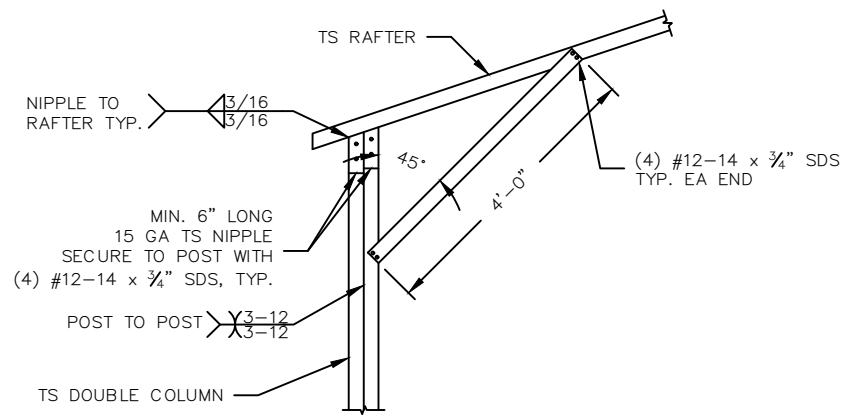


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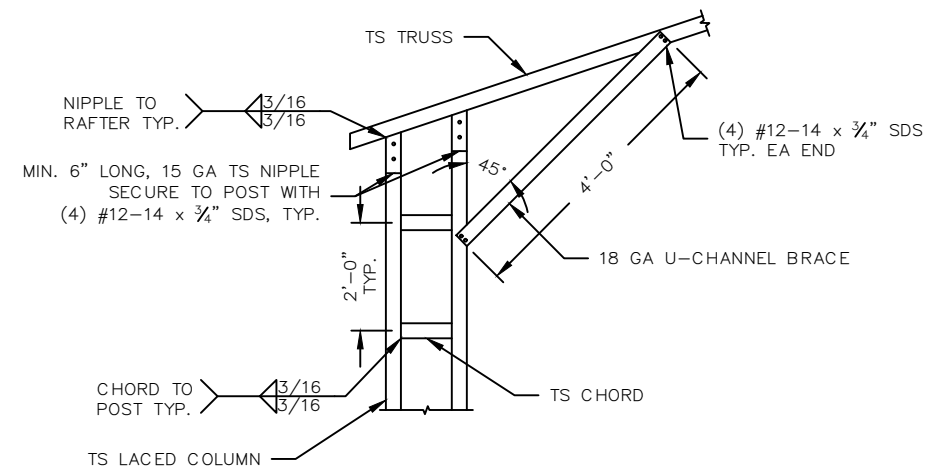
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|                                                                                                                                 |  | CLIENT:   | RICK & KEELY MANSMANN            |                                              |           |
|                                                                                                                                 |  | LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL | SCALE:                                       | SHEET NO: |
|                                                                                                                                 |  | JOB NO:   | E149                             | AS NOTED                                     | S.2       |



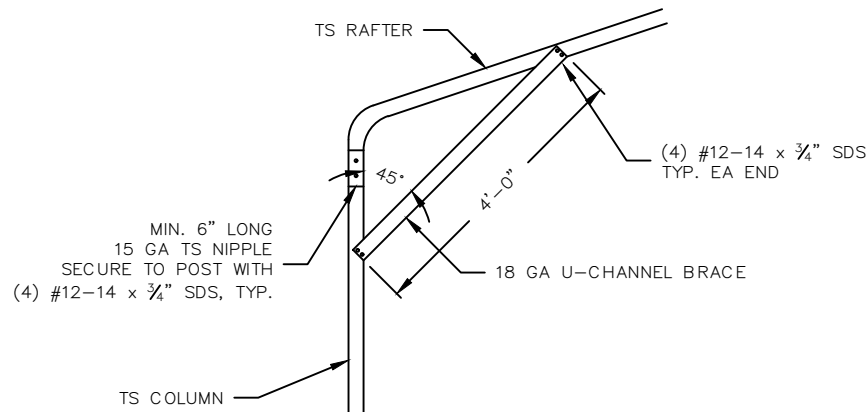
1 BOX EAVE RAFTER/CORNER POST CONNECTION  
MAX. 30' WIDTH, MAX. 14' EAVE HT  
SCALE: NTS



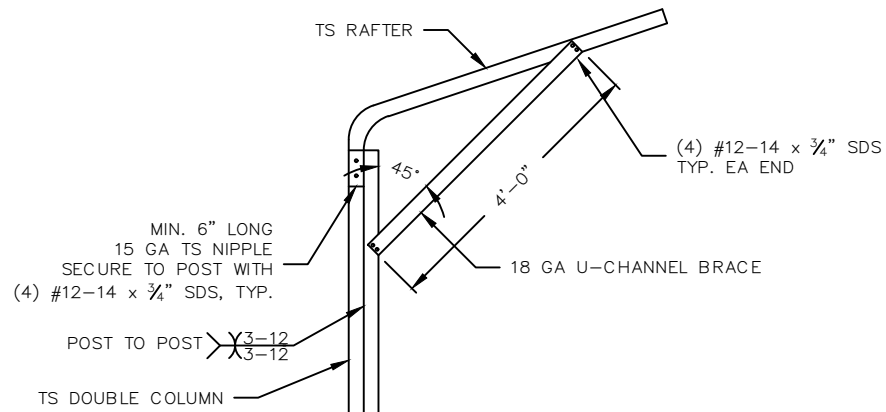
2 BOX EAVE RAFTER/CORNER POST CONNECTION  
MAX. 30' WIDTH, MAX. 16' EAVE HT  
SCALE: NTS



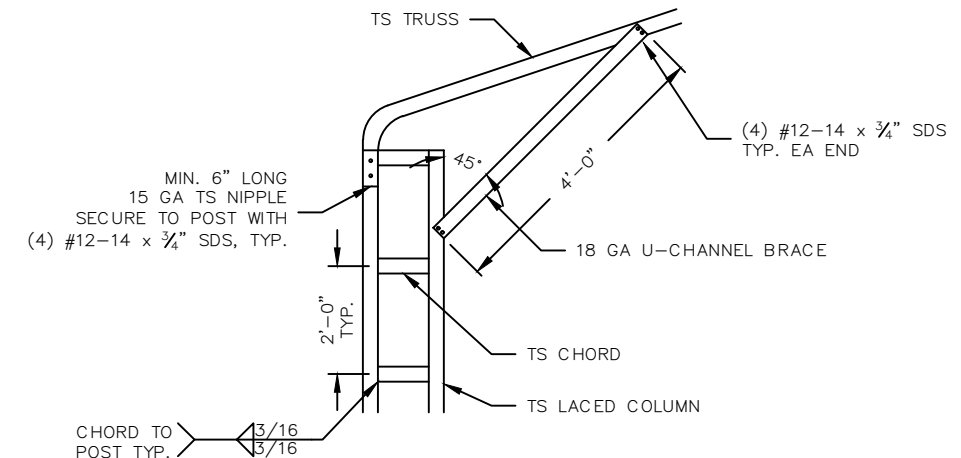
3 BOX EAVE RAFTER/CORNER POST CONNECTION  
MAX. 30' WIDTH, MAX. 20' EAVE HT  
SCALE: NTS



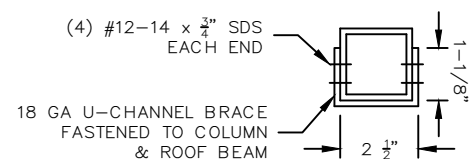
4 BOW EAVE RAFTER/CORNER POST CONNECTION  
MAX. 30' WIDTH, MAX. 14' EAVE HT  
SCALE: NTS



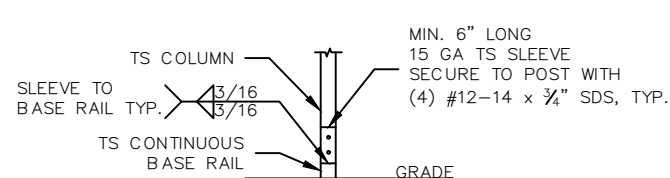
5 BOW EAVE RAFTER/CORNER POST CONNECTION  
MAX. 30' WIDTH, MAX. 16' EAVE HT  
SCALE: NTS



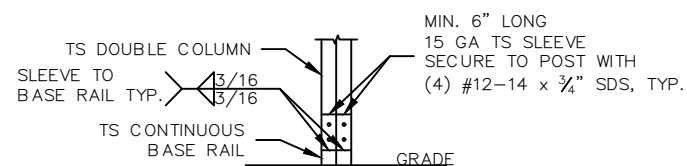
6 BOW EAVE RAFTER/CORNER POST CONNECTION  
MAX. 30' WIDTH, MAX. 20' EAVE HT  
SCALE: NTS



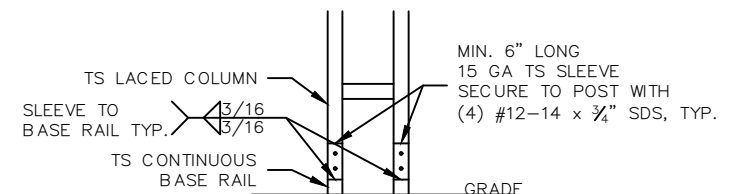
7 BRACE CONNECTION DETAIL  
SCALE: NTS



8 POST/BASE RAIL CONNECTION  
SINGLE COLUMN  
SCALE: NTS



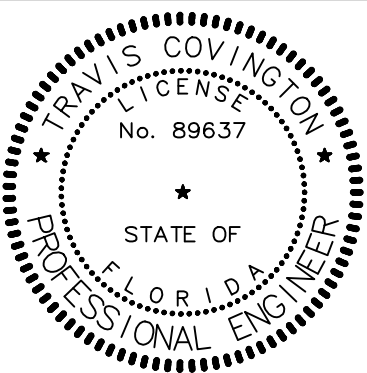
9 POST/BASE RAIL CONNECTION  
DOUBLE COLUMN  
SCALE: NTS



10 POST/BASE RAIL CONNECTION  
LACED COLUMN  
SCALE: NTS

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|-----------|-------------|------|------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------|-----------------------------|----------------------|
| NO.       | DESCRIPTION | DATE |                                                                                                                              | CLIENT:   | RICK & KEELY MANSMANN            |                             |                      |
|           |             |      |                                                                                                                              | LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL | SCALE:<br><br>AS NOTED      | SHEET NO:<br><br>S.3 |
|           |             |      |                                                                                                                              | JOB NO:   | E149                             |                             |                      |
|           |             |      |                                                                                                                              |           |                                  |                             |                      |
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GENERAL NOTES

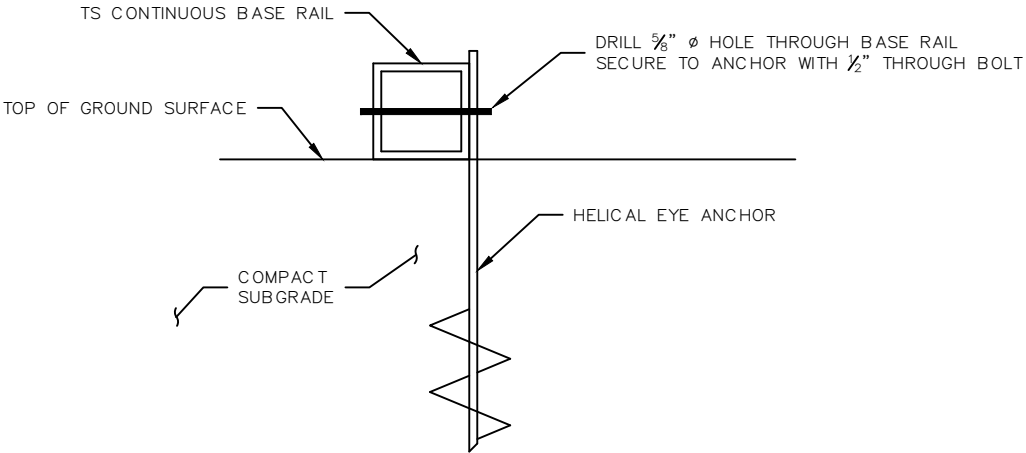
- 1. MINIMUM SOIL BEARING CAPACITY: 1500 PSF
- 2. CONCRETE STRENGTH: 3000 PSI @ 28 DAYS

REINFORCING STEEL NOTES

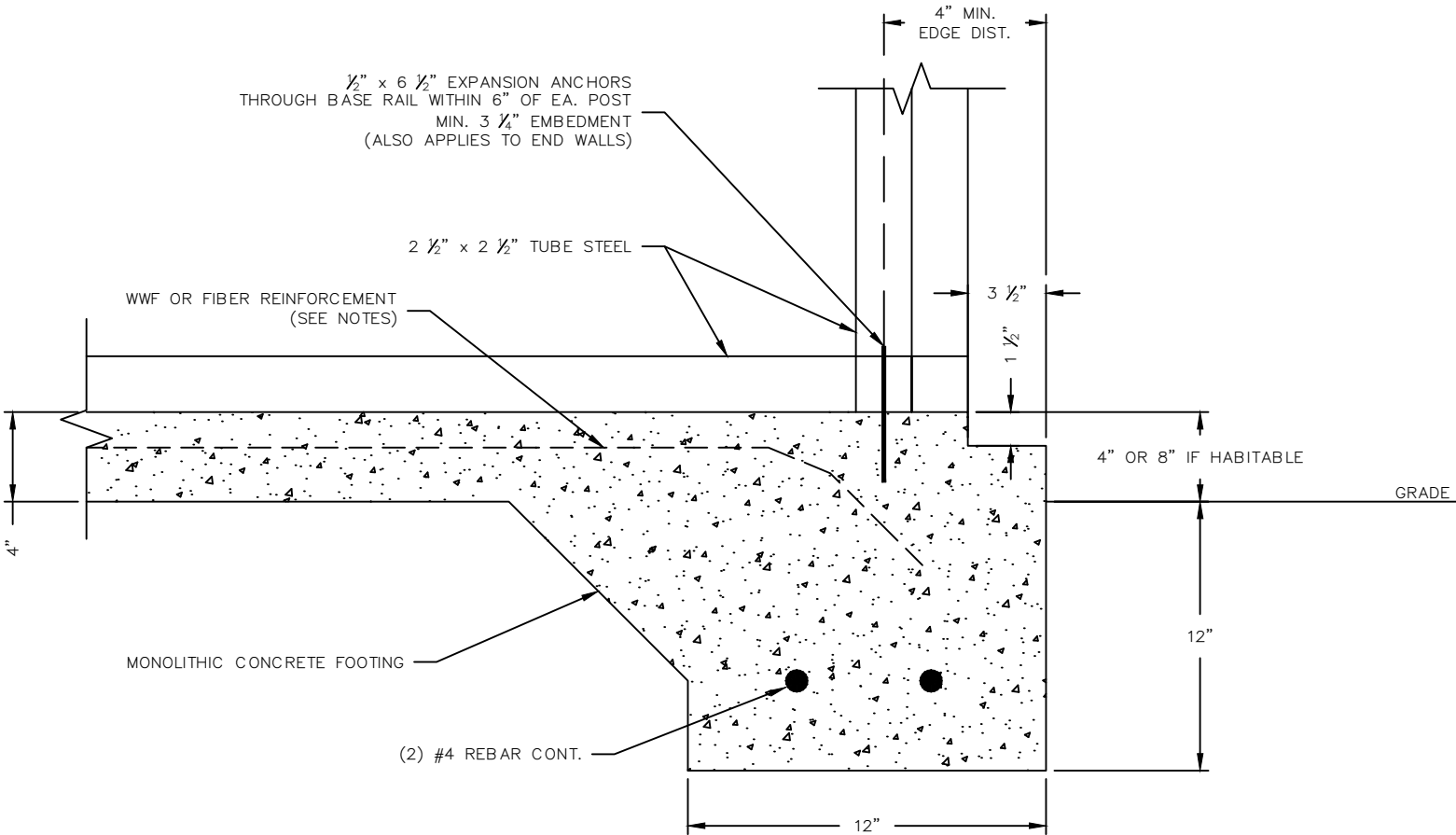
- 1. REBAR SHALL BE ASTM A615 GRADE 60
- 2. SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
- 3. CONCRETE COVER SHALL BE 3" WHERE CONCRETE IS EXPOSED TO SOIL OR WATER; 2" EVERYWHERE ELSE
- 4. REBAR SHALL BE BENT WITHOUT HEATING; MINIMUM BEND LENGTH = 6 x BAR DIAMETER
- 5. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT

HELICAL ANCHOR NOTES

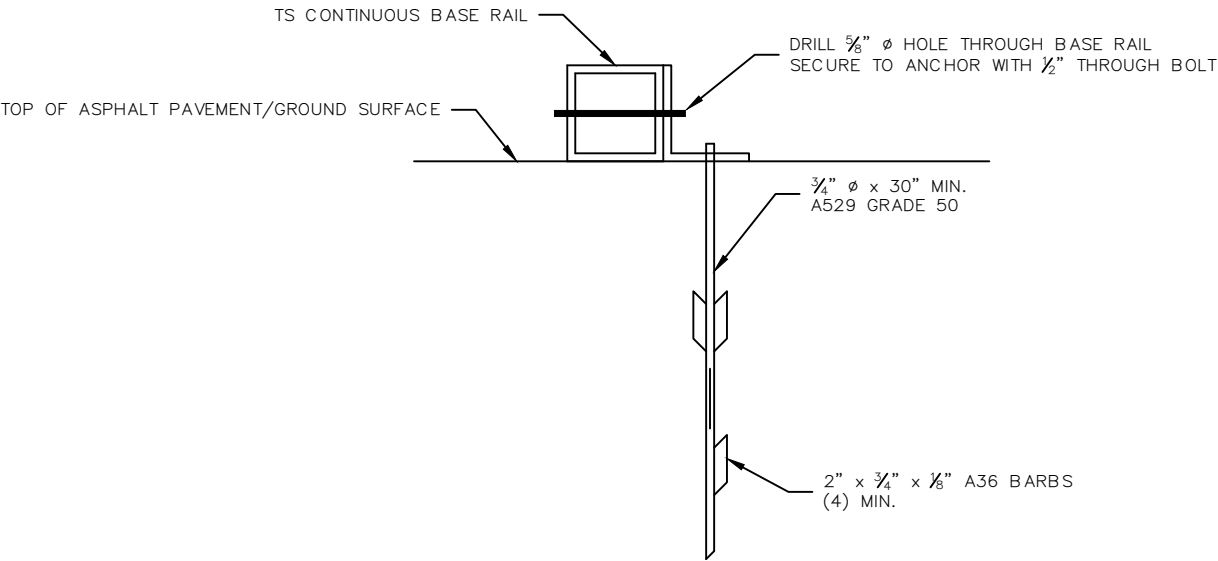
- 1. MINIMUM OF (2) 4" HELICES WITH 30" MIN. EMBEDMENT SHALL BE USED FOR THE FOLLOWING SOILS: VERY DENSE AND OR/OR CEMENTED SOILS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILT AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVEL, AND VERY STIFF SILTS AND CLAYS
- 2. MINIMUM OF (2) 6" HELICES WITH 48" MIN. EMBEDMENT SHALL BE USED FOR THE FOLLOWING SOILS: LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, AND ALLUVIAL FILL
- 3. MINIMUM OF (2) 8" HELICES WITH 60" MIN. EMBEDMENT SHALL BE USED FOR THE FOLLOWING SOILS: VERY LOOSE TO MEDIUM DENSE SANDS AND FIRM TO STIFFER CLAYS AND SILTS



**B** GROUND BASE HELICAL ANCHORAGE  
SCALE: NTS



**A** BASE RAIL ANCHORAGE  
CONCRETE MONOLITHIC SLAB  
SCALE: NTS



**C** ASPHALT BASE ANCHORAGE  
(HP9 BARBED DRIVE ANCHOR)  
SCALE: NTS

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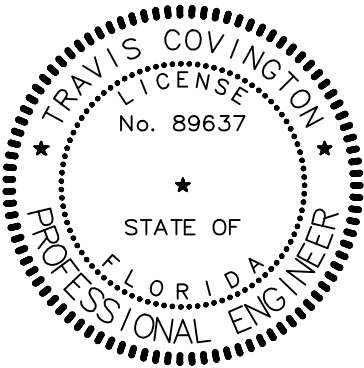
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| LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL |
| JOB NO:   | E149                             |

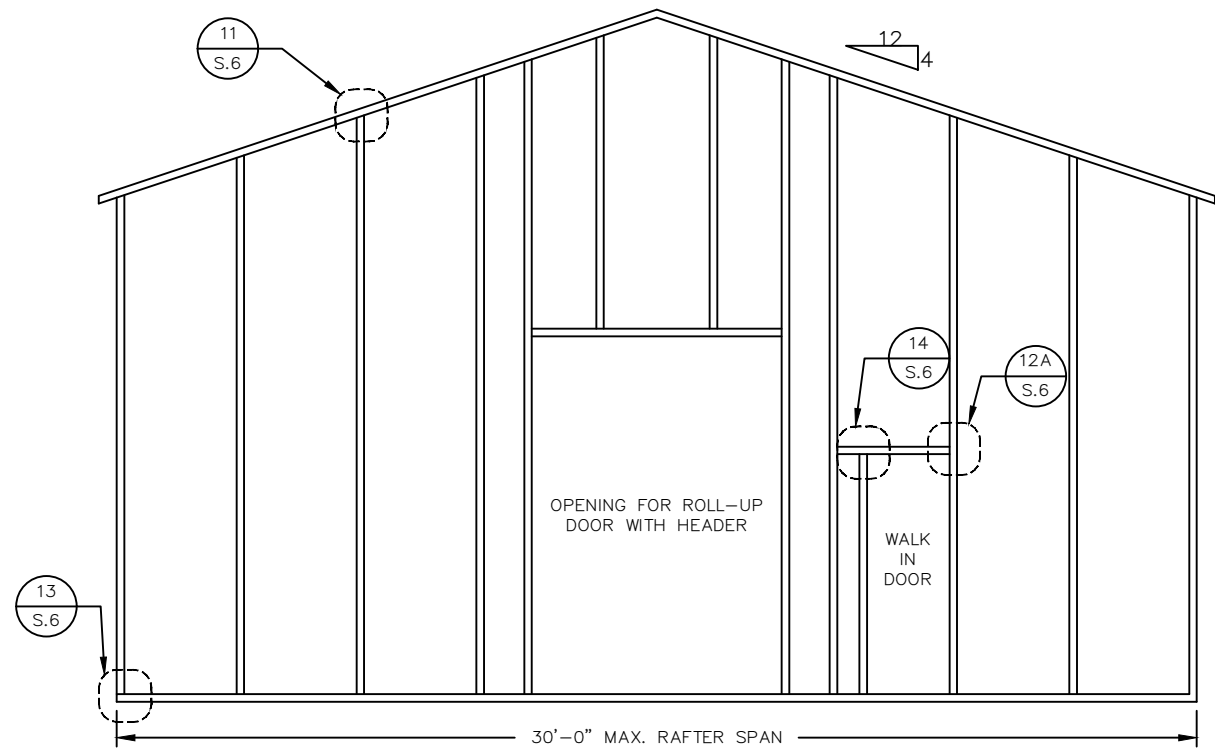
BASE RAIL & ANCHORAGE  
DETAILS

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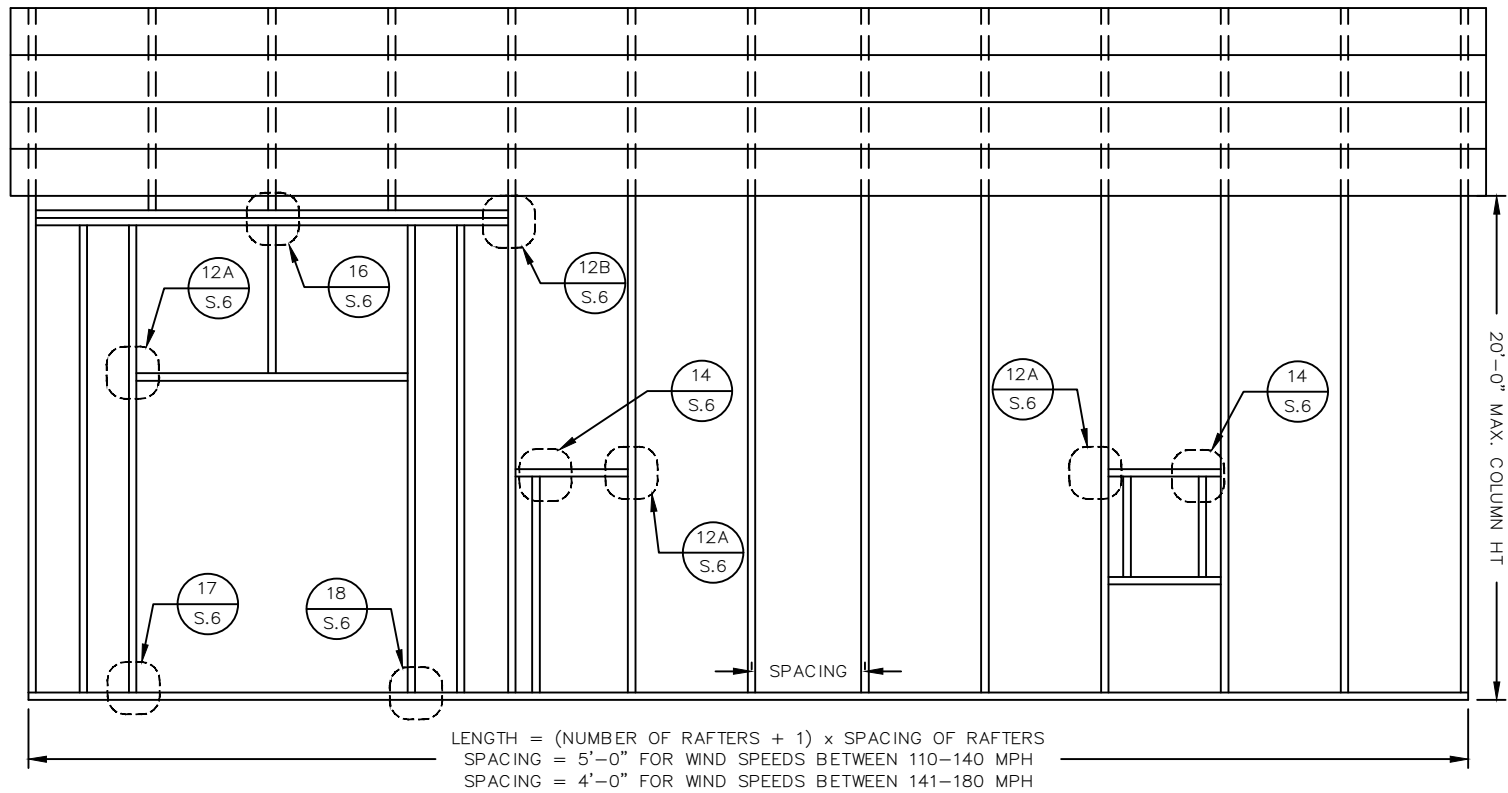
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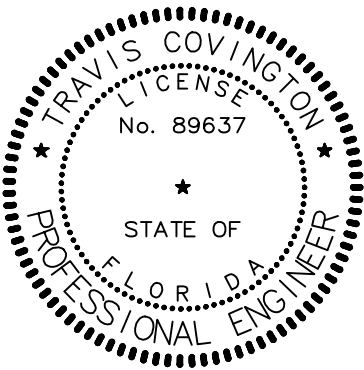


TYPICAL BOX EAVE RAFTER END WALL FRAMING  
SCALE: NTS



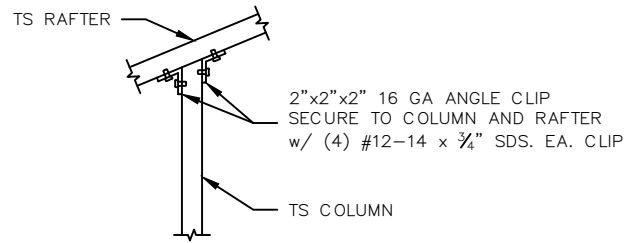
TYPICAL BOX EAVE RAFTER SIDE WALL FRAMING  
SCALE: NTS

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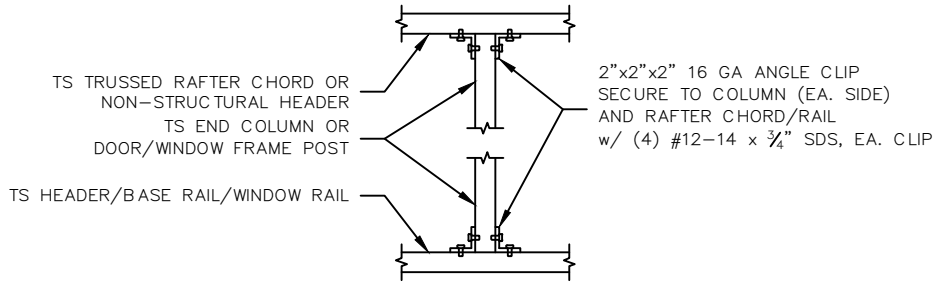


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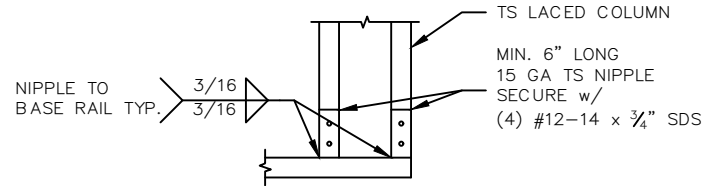
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|                                                                                                                                 | CLIENT:   | RICK & KEELY MANSMANN            |           |
|                                                                                                                                 | LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL |           |
|                                                                                                                                 | JOB NO:   | E149                             |           |
| END WALL, SIDE WALL, &<br>OPENING TYPICAL FRAMING                                                                               |           | SCALE:                           | SHEET NO: |
|                                                                                                                                 |           | AS NOTED                         | S.5       |



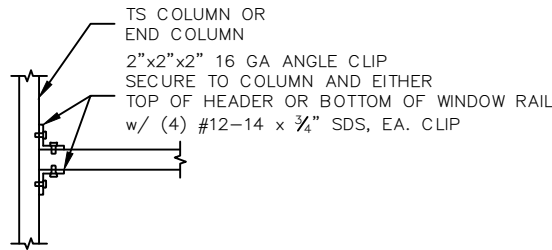
11 TYPICAL POST RAFTER CONNECTION  
END WALL FRAMING  
SCALE: NTS



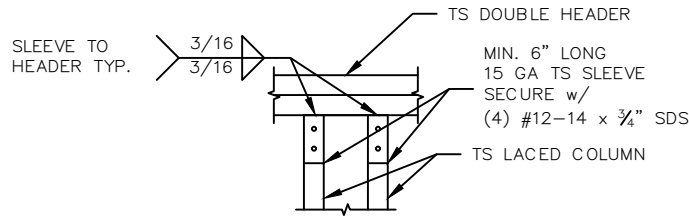
14 POST TO HEADER, BASE RAIL, OR WINDOW  
RAIL CONNECTION  
SCALE: NTS



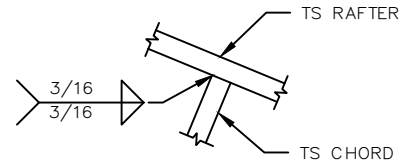
18 LACED COLUMN TO BASE RAIL CONNECTION  
SCALE: NTS



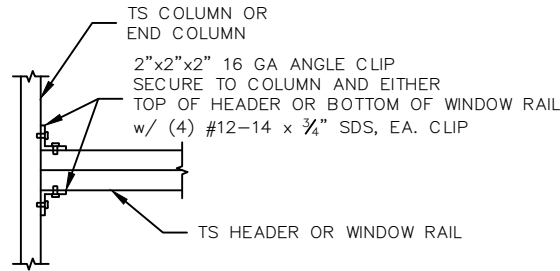
12A HEADER TO POST CONNECTION  
SCALE: NTS



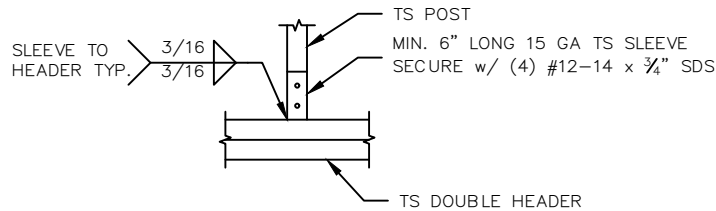
15 DOUBLE HEADER TO  
LACED COLUMN CONNECTION  
SCALE: NTS



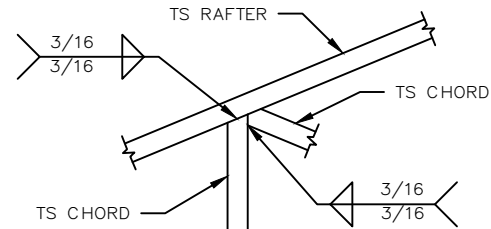
19 RAFTER TO CHORD CONNECTION  
SCALE: NTS



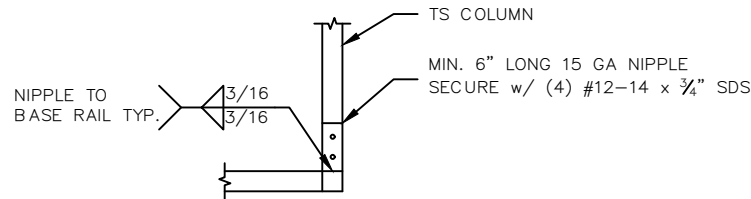
12B DOUBLE HEADER TO POST  
HORIZONTAL CONNECTION  
SCALE: NTS



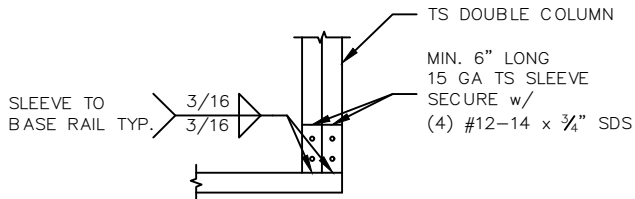
16 DOUBLE HEADER TO POST  
VERTICAL CONNECTION  
SCALE: NTS



20 RAFTER TO CHORD CONNECTION  
SCALE: NTS

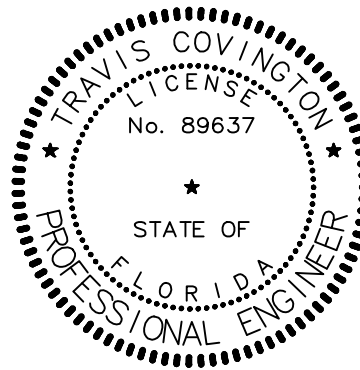


13 POST/BASE RAIL CONNECTION  
END WALL FRAMING  
SCALE: NTS



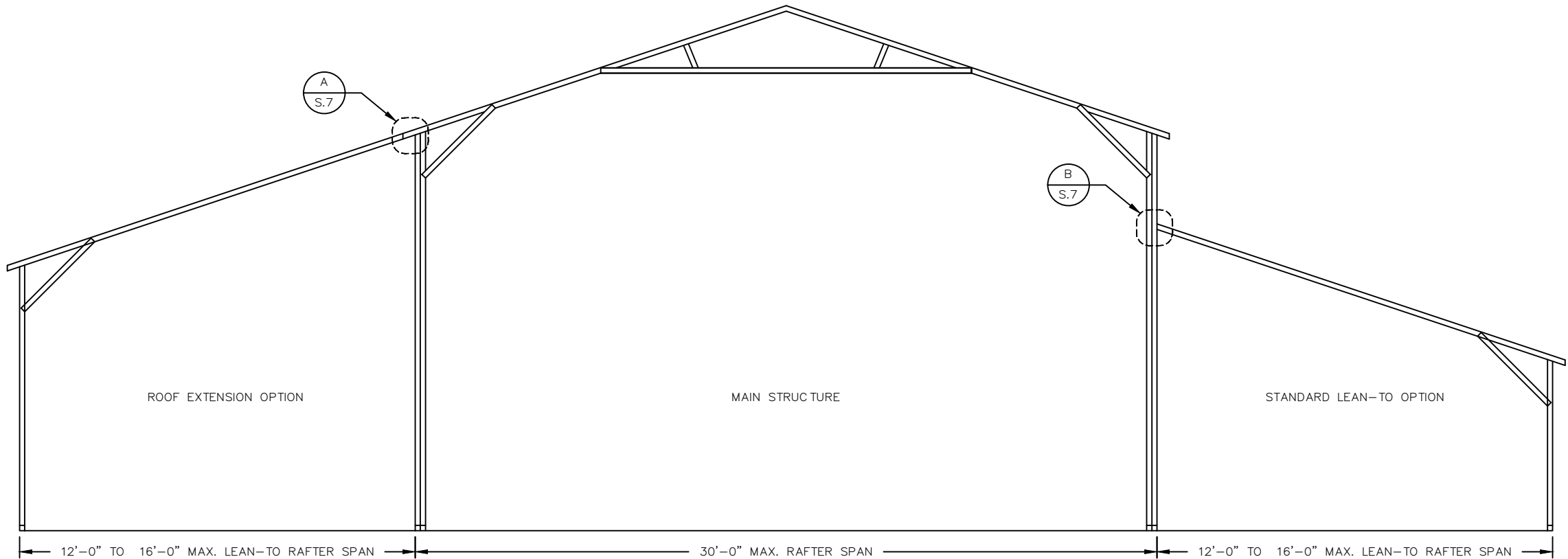
17 DOUBLE COLUMN TO BASE RAIL CONNECTION  
SCALE: NTS

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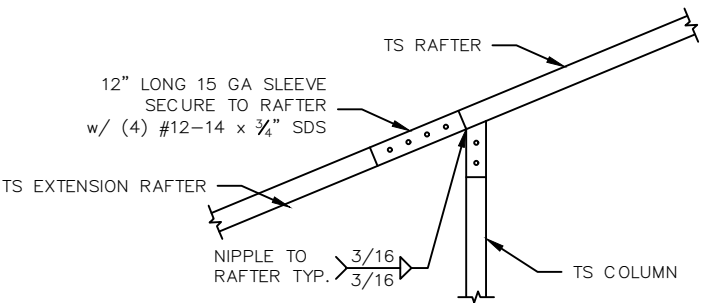


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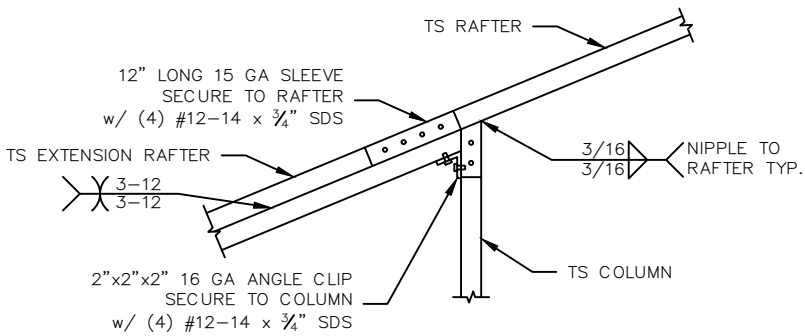
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| COVINGTON ENGINEERING SERVICES<br>272 NW COUNTRY LAKE DR, LAKE CITY, FL 32055<br>813.770.9470<br>TRAVIS@COVINGTONENG.COM |  | PROJECT:  | MANSMANN METAL BUILDING          | CONNECTION DETAILS (2 OF 2) |                      |
|                                                                                                                          |  | CLIENT:   | RICK & KEELY MANSMANN            |                             |                      |
|                                                                                                                          |  | LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL | SCALE:<br><br>AS NOTED      | SHEET NO:<br><br>S.6 |
|                                                                                                                          |  | JOB NO:   | E149                             |                             |                      |



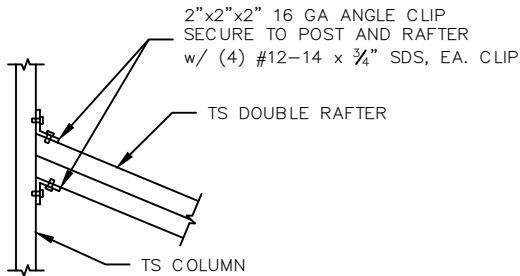
TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS  
SCALE: NTS



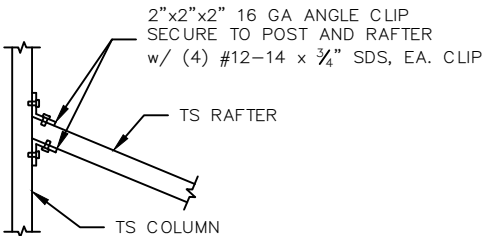
A1 SIDE EXTENSION RAFTER/POST CONNECTION  
RAFTER SPAN LESS THAN 12'-0"  
SCALE: NTS



A2 SIDE EXTENSION RAFTER/POST CONNECTION  
RAFTER SPAN BETWEEN 12'-0" AND 16'-0"  
SCALE: NTS



B2 LEAN-TO RAFTER/COLUMN CONNECTION  
RAFTER SPAN BETWEEN 12'-0" AND 16'-0"  
SCALE: NTS



B1 LEAN-TO RAFTER/COLUMN CONNECTION  
RAFTER SPAN LESS THAN 12'-0"  
SCALE: NTS

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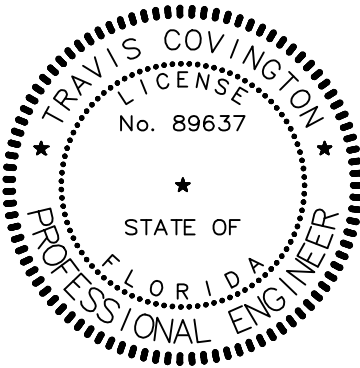
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| PROJECT:  | MANSMANN METAL BUILDING          |
| CLIENT:   | RICK & KEELY MANSMANN            |
| LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL |
| JOB NO:   | E149                             |

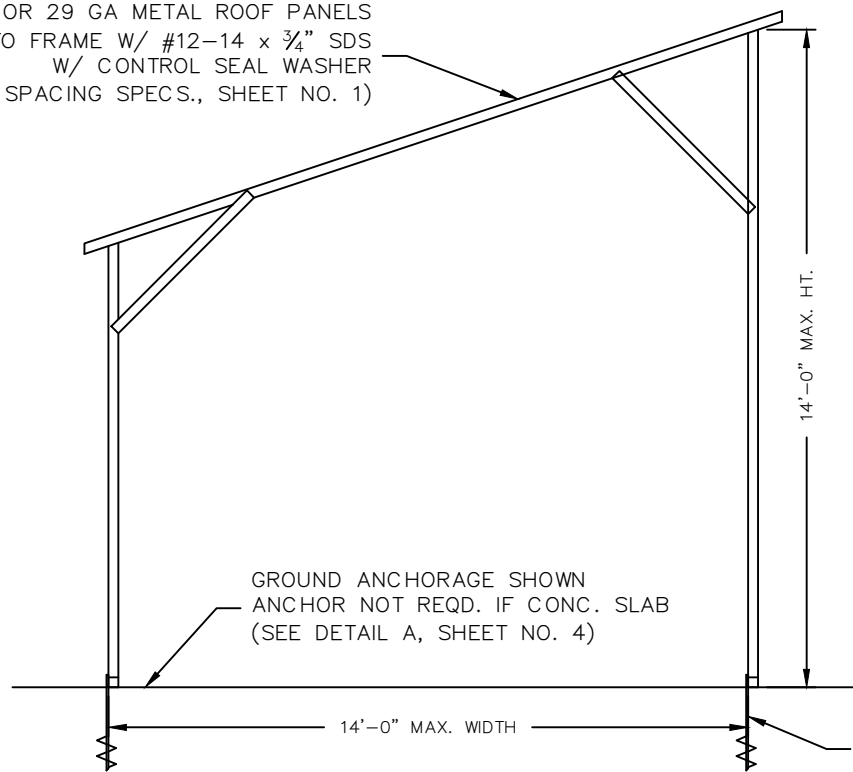
BOX EAVE LEAN-TO OPTIONS

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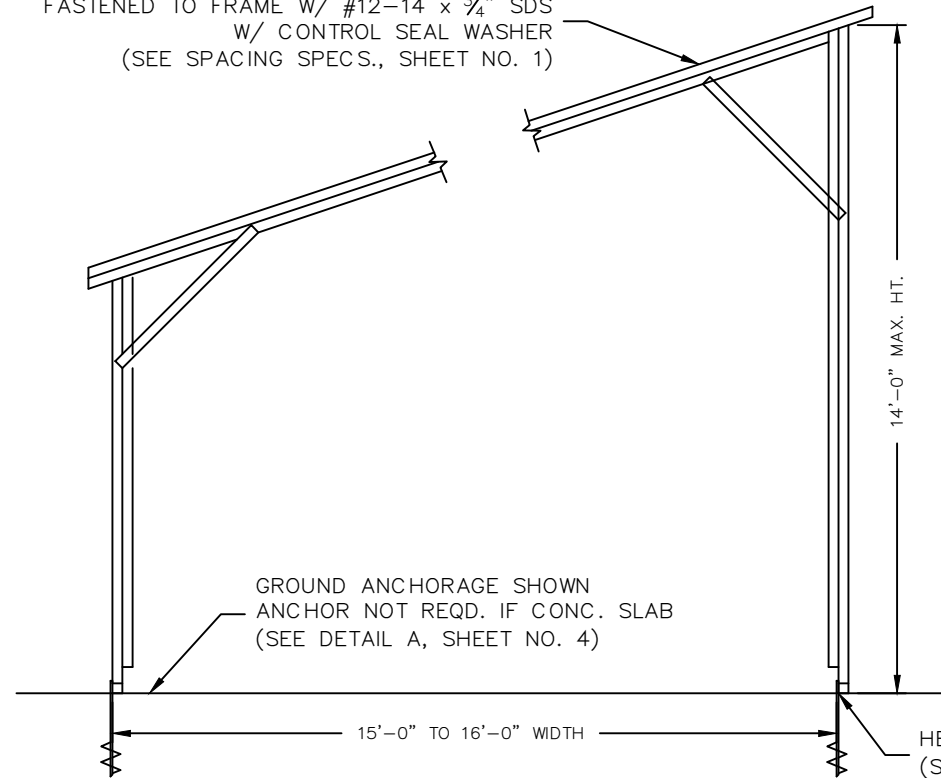
26 OR 29 GA METAL ROOF PANELS  
FASTENED TO FRAME W/ #12-14 x 3/4" SDS  
W/ CONTROL SEAL WASHER  
(SEE SPACING SPECS., SHEET NO. 1)



OPTIONAL SLOPES:  
1:12  
2:12  
3:12

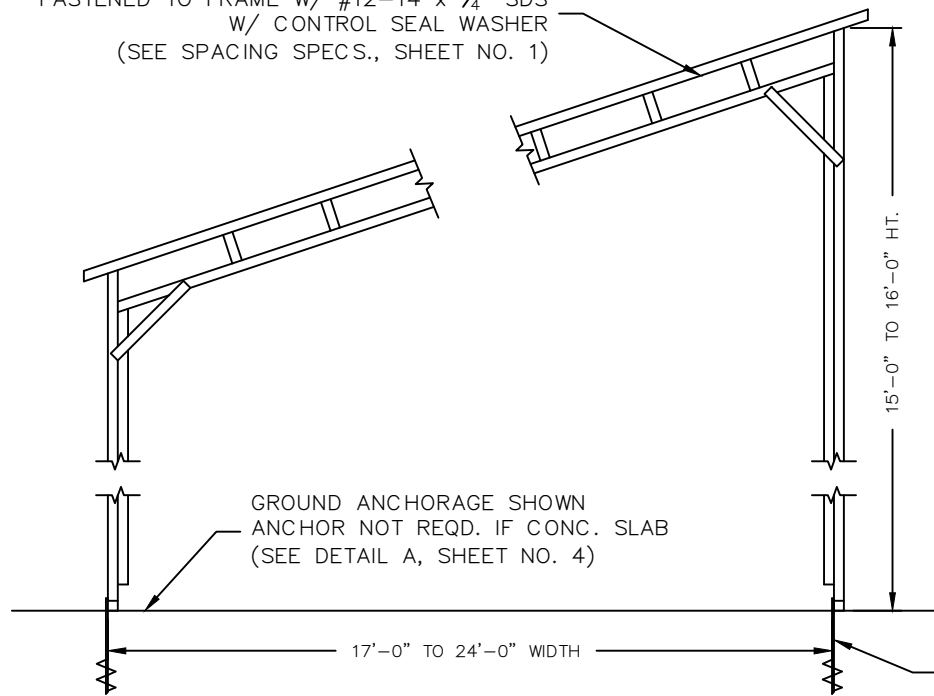
FREESTANDING LEAN-TO: MAX. 14FT WIDTH  
SCALE: NTS

26 OR 29 GA METAL ROOF PANELS  
FASTENED TO FRAME W/ #12-14 x 3/4" SDS  
W/ CONTROL SEAL WASHER  
(SEE SPACING SPECS., SHEET NO. 1)



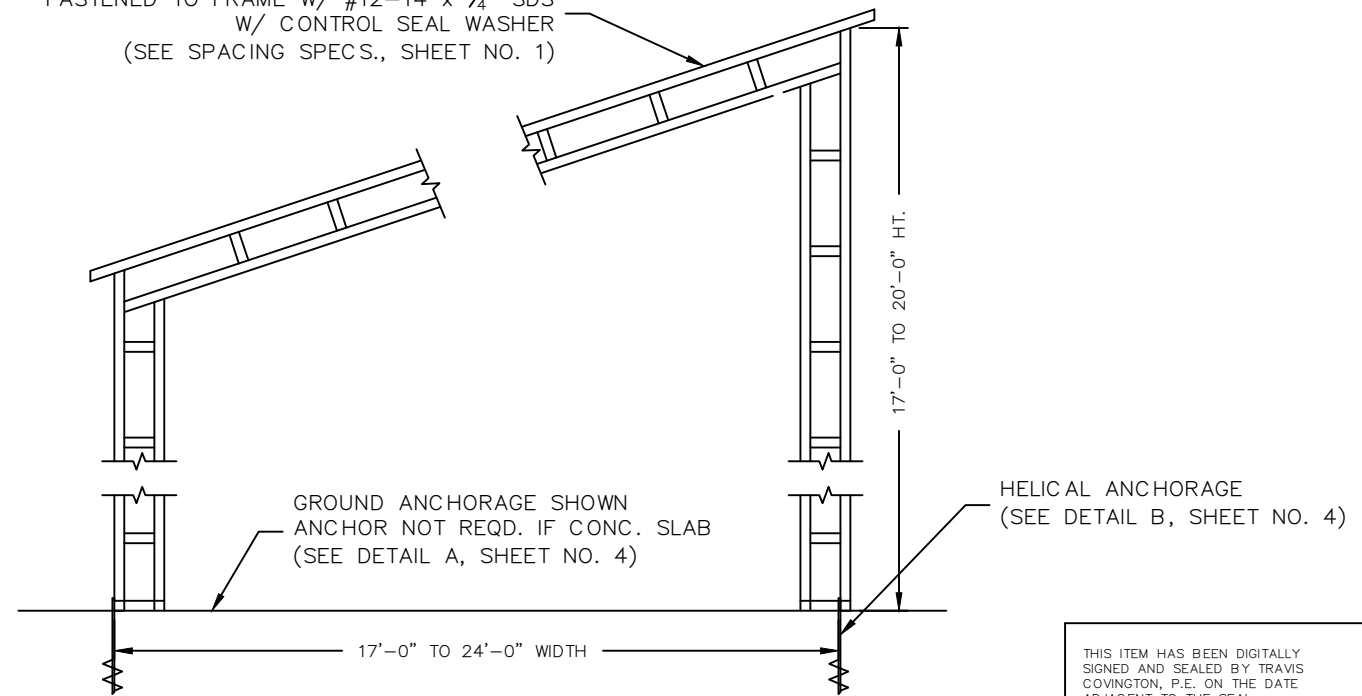
FREESTANDING LEAN-TO: 15FT TO 16FT WIDTH  
SCALE: NTS

26 OR 29 GA METAL ROOF PANELS  
FASTENED TO FRAME W/ #12-14 x 3/4" SDS  
W/ CONTROL SEAL WASHER  
(SEE SPACING SPECS., SHEET NO. 1)



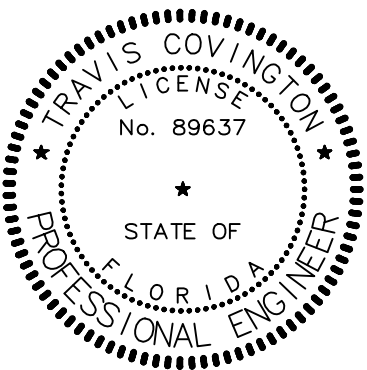
FREESTANDING LEAN-TO: 17FT TO 24FT WIDTH  
SCALE: NTS

26 OR 29 GA METAL ROOF PANELS  
FASTENED TO FRAME W/ #12-14 x 3/4" SDS  
W/ CONTROL SEAL WASHER  
(SEE SPACING SPECS., SHEET NO. 1)



FREESTANDING LEAN-TO: 17FT TO 24FT WIDTH  
SCALE: NTS

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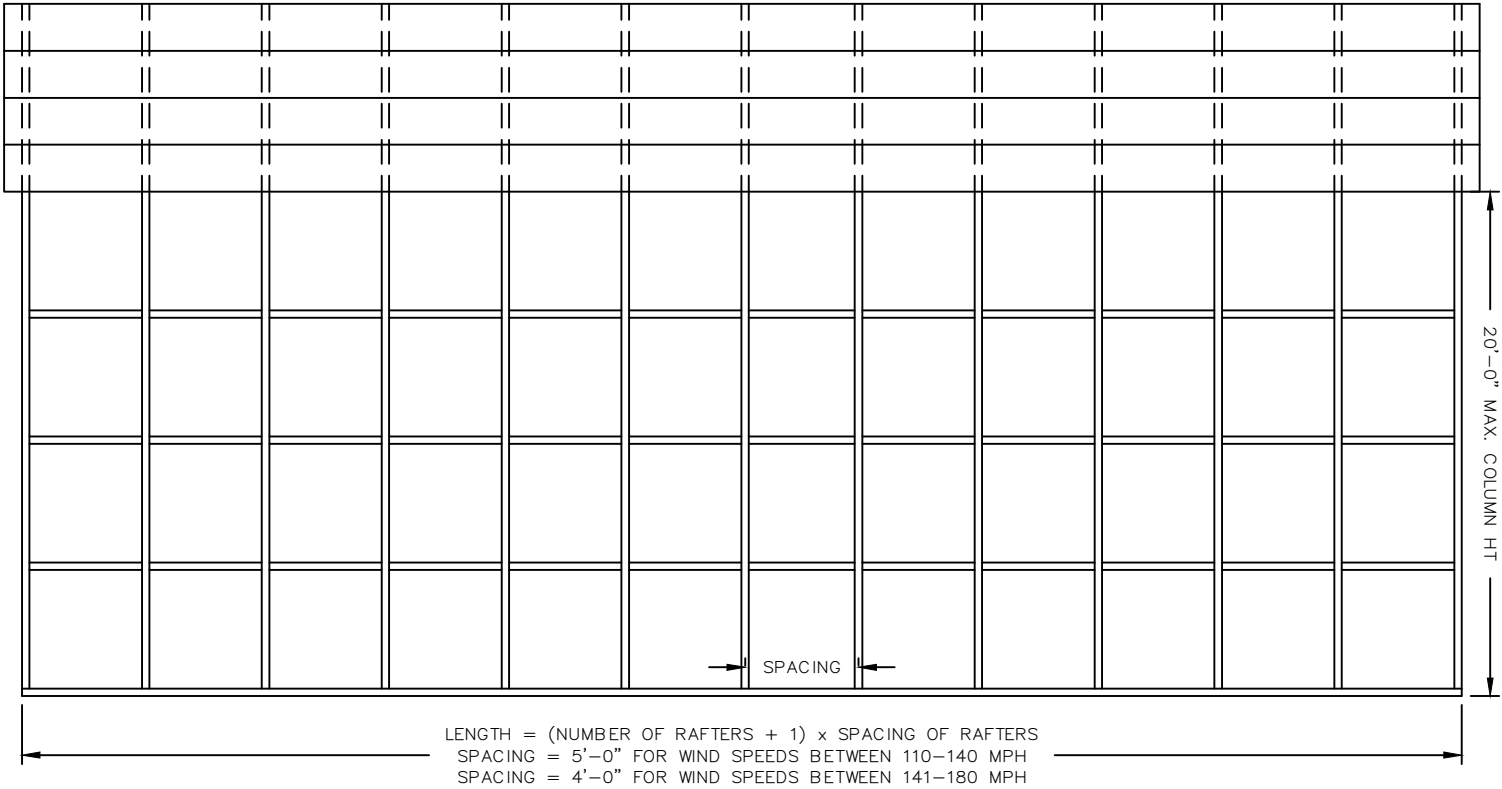


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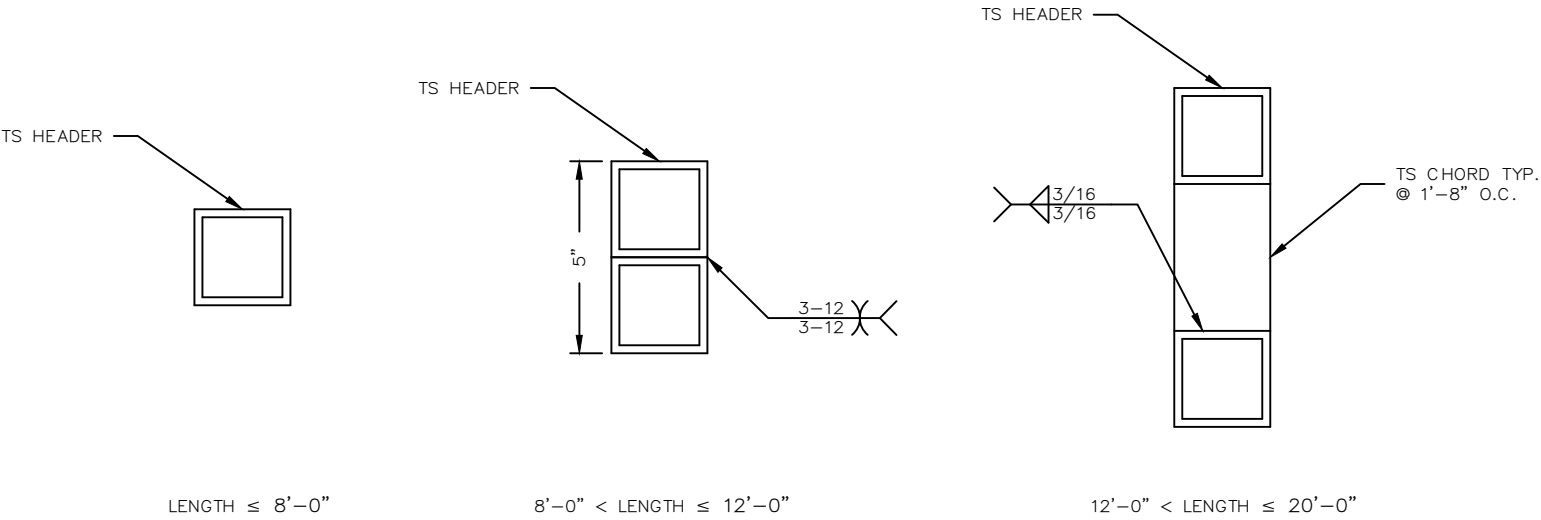
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| PROJECT:  | MANSMANN METAL BUILDING          |
| CLIENT:   | RICK & KEELY MANSMANN            |
| LOCATION: | 167 SW BEACON WAY, LAKE CITY, FL |
| JOB NO:   | E149                             |

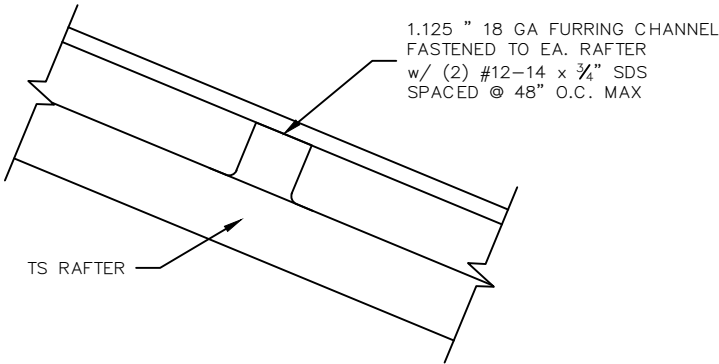
| FREESTANDING LEAN-TO<br>OPTIONS |                  |
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| SCALE:<br>AS NOTED              | SHEET NO:<br>S.8 |



TYPICAL SIDE FRAMING  
SCALE: NTS



OPTIONAL SIDE WALL HEADERS  
SCALE: NTS



VERTICAL ROOF PANEL ATTACHMENT  
SCALE: NTS

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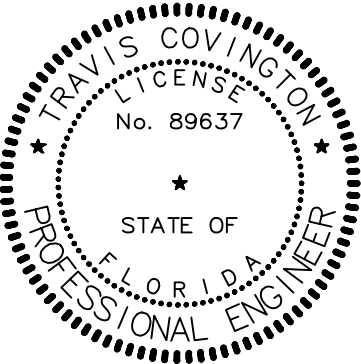
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VERTICAL ROOF-SIDING OPTION

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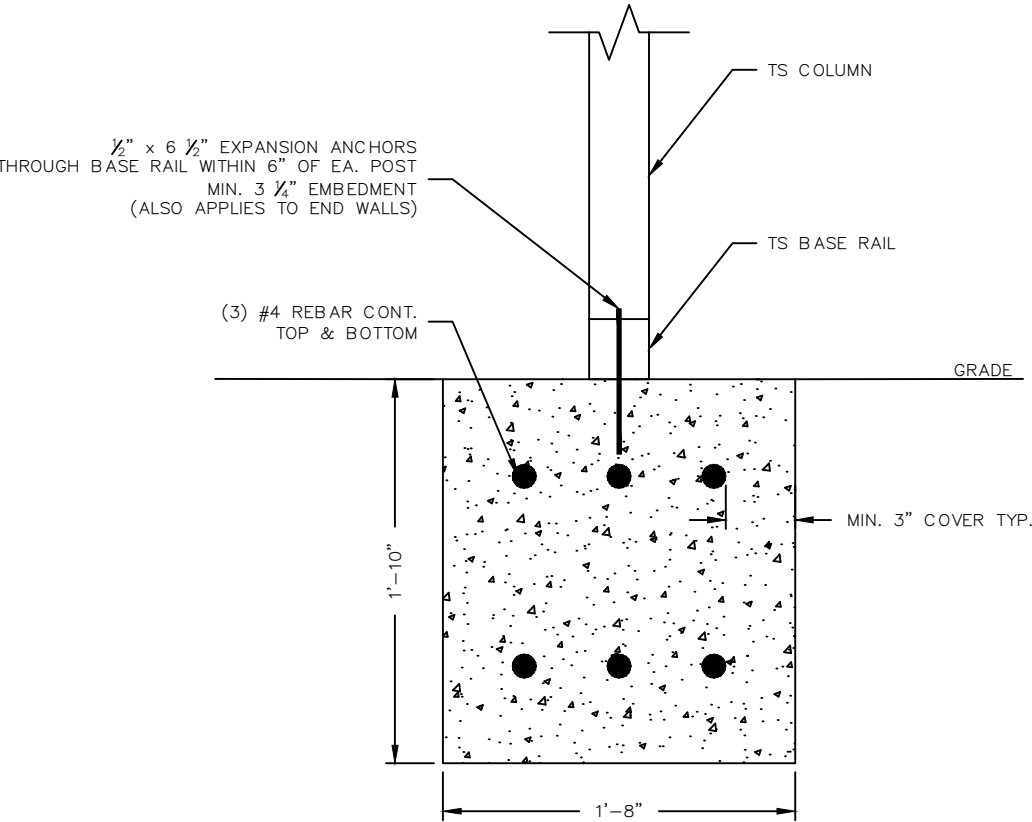


GENERAL NOTES

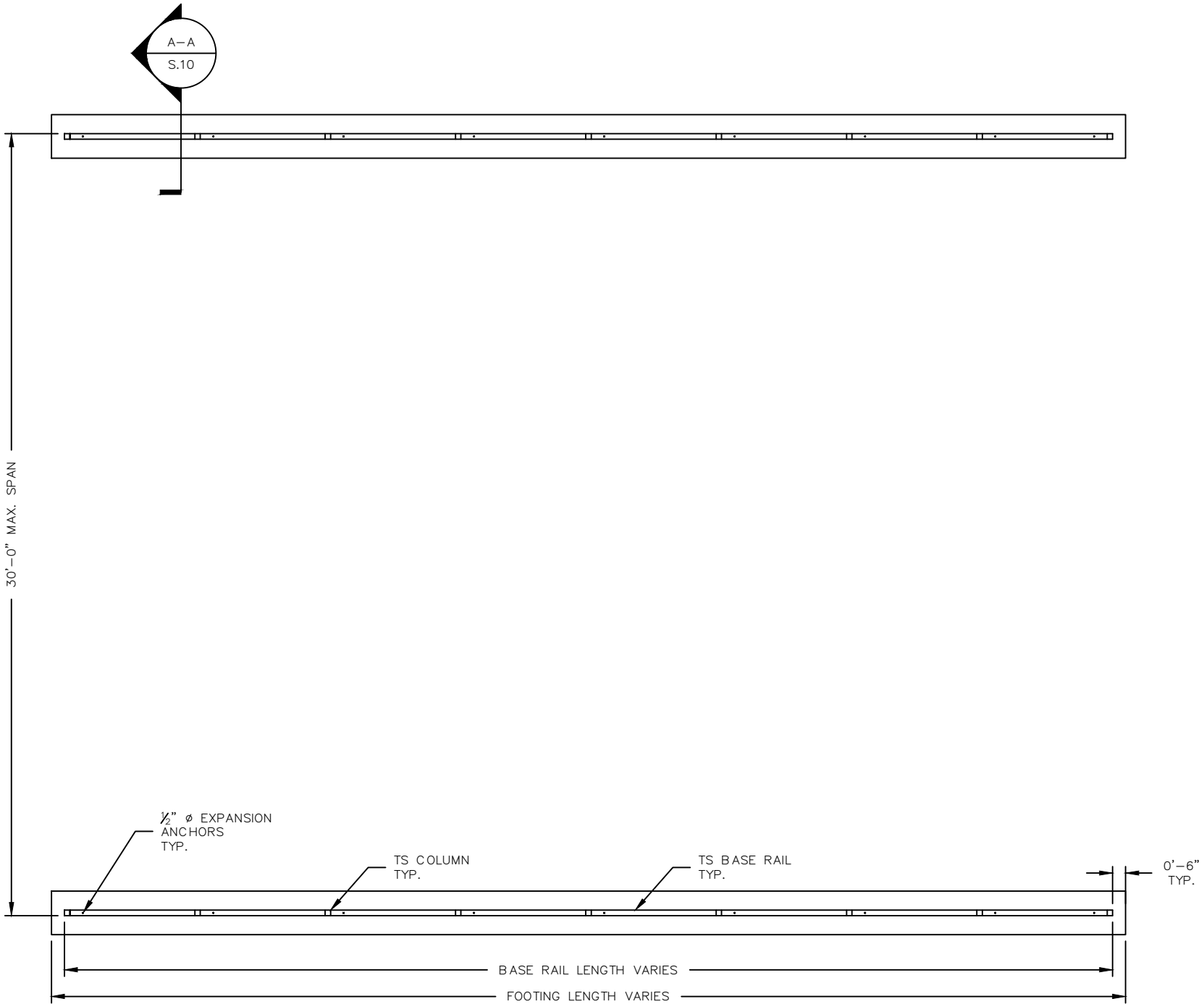
- 1. MINIMUM SOIL BEARING CAPACITY: 1500 PSF
- 2. CONCRETE STRENGTH: 3000 PSI @ 28 DAYS

REINFORCING STEEL NOTES

- 1. REBAR SHALL BE ASTM A615 GRADE 60
- 2. SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
- 3. CONCRETE COVER SHALL BE 3" WHERE CONCRETE IS EXPOSED TO SOIL OR WATER; 2" EVERYWHERE ELSE
- 4. REBAR SHALL BE BENT WITHOUT HEATING; MINIMUM BEND LENGTH = 6 x BAR DIAMETER
- 5. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT



A-A CONCRETE STRIP FOOTING DETAIL  
SCALE: NTS



CONCRETE STRIP FOOTING PLAN  
SCALE: NTS

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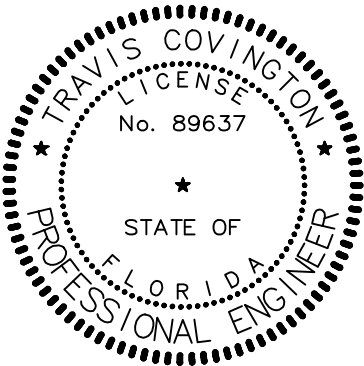
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OPTIONAL CONCRETE STRIP FOOTING

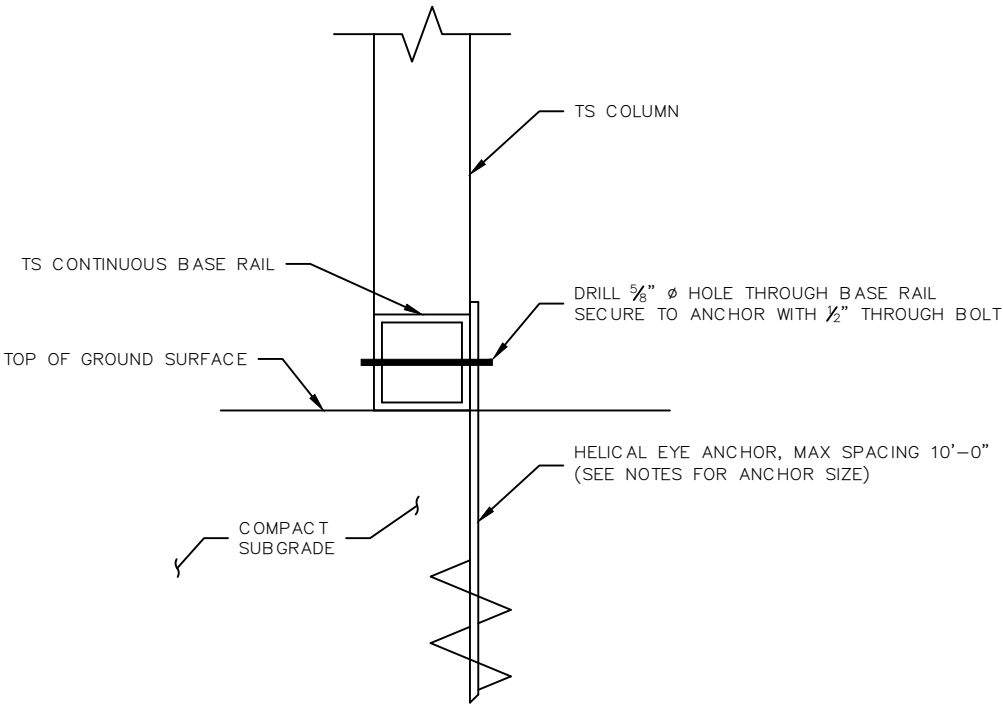
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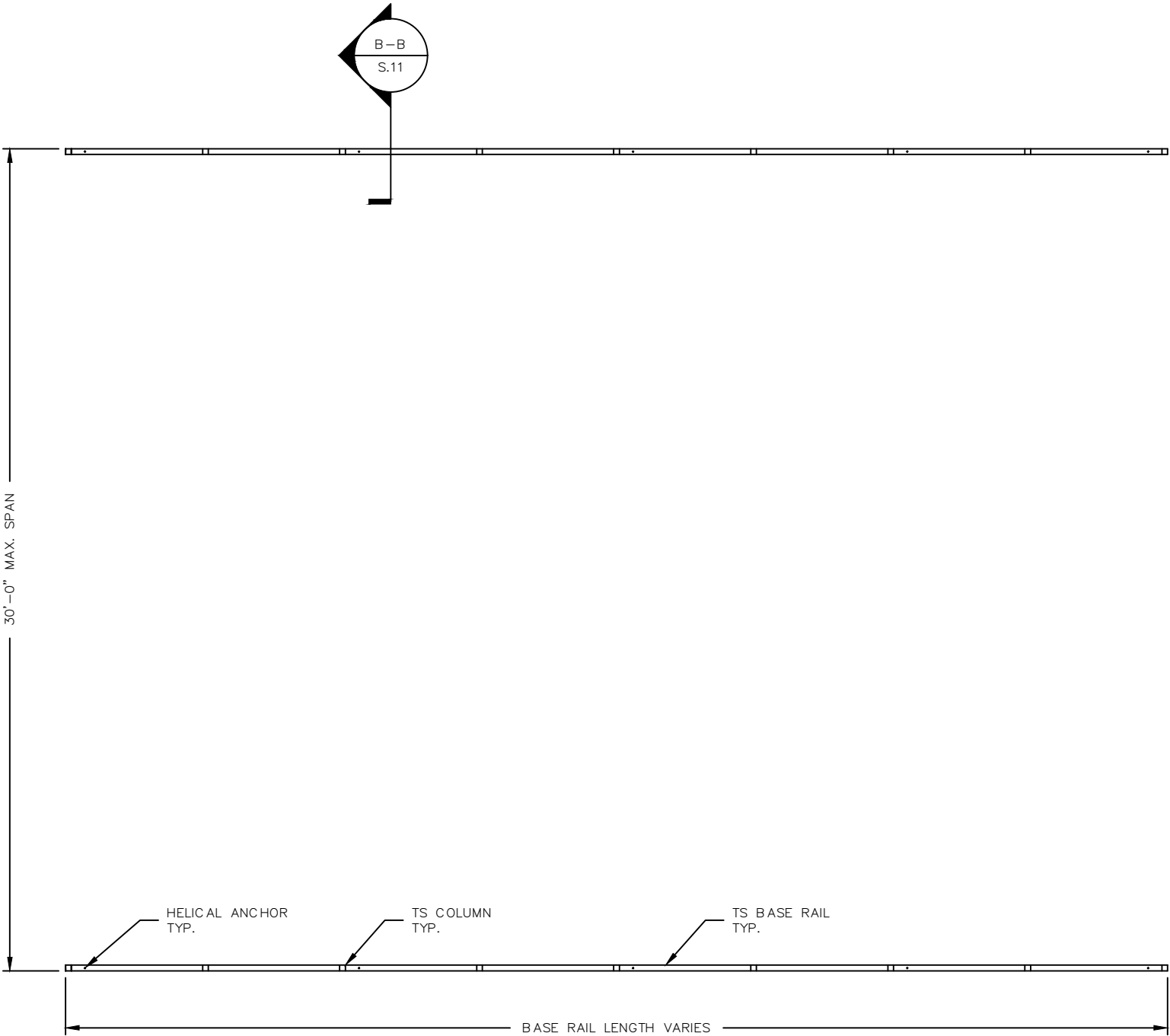


HELICAL ANCHOR NOTES

1. MINIMUM OF (2) 4" HELICES WITH 30" MIN. EMBEDMENT SHALL BE USED FOR THE FOLLOWING SOILS: VERY DENSE AND OR/OR CEMENTED SOILS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILT AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVEL, AND VERY STIFF SILTS AND CLAYS
2. MINIMUM OF (2) 6" HELICES WITH 48" MIN. EMBEDMENT SHALL BE USED FOR THE FOLLOWING SOILS: LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, AND ALLUVIAL FILL
3. MINIMUM OF (2) 8" HELICES WITH 60" MIN. EMBEDMENT SHALL BE USED FOR THE FOLLOWING SOILS: VERY LOOSE TO MEDIUM DENSE SANDS AND FIRM TO STIFFER CLAYS AND SILTS



B-B HELICAL ANCHORAGE DETAIL  
SCALE: NTS



HELICAL ANCHORAGE PLAN  
SCALE: NTS

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| OPTIONAL HELICAL ANCHORAGE |           |
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