# UNINHABITED UTILITY SHED UP TO 12' WIDE x UP TO 24' LONG

## PPTR, PPR, PTR, TR800

STRUCTURAL NOTES:

1. BUILDING CODE: 2018 NC BUILDING CODE
   2015 IBC & IRC
2. DESIGN LOADING:
   A. ROOF LOADS
      1. UNIFORM ROOF (LIVE): 20 PSF
         A. SNOW EXPOSURE FACTOR, $C_e$: 1.0
         B. IMPORTANCE FACTOR, I: 1.0
         C. THERMAL FACTOR, $C_t$: 1.0
         D. LUMBER DURATION, $C_D$: 1.25
      2. DEAD LOAD: 10 PSF
   B. WIND LOADS
      1. BASIC WIND SPEED ($v_{ult}$): 120 MPH
      2. EXPOSURE: C
      3. INTERNAL PRESSURE COEFFICIENT GCpi: ±0.18
   C. SEISMIC DESIGN
      1. IMPORTANCE FACTOR: 1.0
      2. SPECTRAL RESPONSE ACCELERATIONS: $S_s$ = 0.42
         $S_1$ = 0.14
      3. SITE CLASS: D
      4. SITE COEFFICIENTS: $S_{DS}$ = 0.44
         $S_{D1}$ = 0.22
      5. SEISMIC DESIGN CATEGORY: C

LUMBER:

1. ALL LUMBER SHALL BE SPRUCE PINE FIR #2 GRADE (U.O.N.).
2. REFER TO THE TRUSS DESIGN FOR DESIGN INFORMATION.

HEADER NAILING:
HEADER TO STUD - 4-16d END NAIL
DOUBLED HEADER
- 16d @ 16" STAGGERED FACE NAIL

NAILING:
REFER TO SHEET 1 FOR WALL AND ROOF SHEATHING NAILING.

**MAX WALL HEIGHT FOR EACH SHED:**
PPTR, PTR, TR/TRD800 - 7'-8¼" (92¼")
PPR - 6'-8¼" (80¼")

**MAX ROOF SLOPE FOR EACH SHED:**
PPTR, PPR - 5:12
PTR, TR800 - 4:12

**SIDE WALL EDGE NAILING REQUIREMENTS**

| MARK WALLS BEING USED | END WALL WIDTH | SIDE WALL LENGTH | EDGE NAILING | MAX. COMB. OPENING (NOTE 2) | MIN TOTAL COMBINED SHEAR WALL |
|---|---|---|---|---|---|
| **NO OPENINGS ALONG THE WALL** | | | | | |
| | 8' | 8'-24' | 8d NAILS @ 6" O.C. | 0' | 8'-24' |
| | 10' | 10'-24' | 8d NAILS @ 6" O.C. | 0' | 10'-24' |
| | 12' | 12'-24' | 8d NAILS @ 6" O.C. | 0' | 12'-24' |
| ▪ MIN 2'-6" RTN WALLS ON EACH END OF WALL- | | | | ▪ MIN 2'-6" WALL SEGMENT | |
| | 8' | 8'-24' | 8d NAILS @ 6" O.C. | UP TO 12' | 5' |
| | 10' | 10'-24' | 8d NAILS @ 6" O.C. | UP TO 12' | 5' |
| | 12' | 12'-24' | 8d NAILS @ 6" O.C. | UP TO 12' | 6' |
| | 12' | 12'-24' | 8d NAILS @ 4" O.C. | UP TO 12' | 5' |

TABLE NOTES:

1. NAILING IS FOR ⅜" SMARTSIDE PANEL OR ⅜" SILVERSIDE PANEL.
2. NO SINGLE OPENING GREATER THAN 8'-0"
3. USE COMMON NAILS WITH A MINIMUM SHANK DIAMETER OF 0.113" AND A MINIMUM LENGTH OF 2½".
4. FIELD NAILING FOR ⅜" SMARTSIDE: 8d @ 12" O.C.
5. (BS)- DESIGNATES WALLS THAT NEED TO BE SHEATHED ON BOTH SIDES.

**ROOF SHEATHING (7/16" OSB)**

| WIDTH | LENGTH | FIELD NAILING | EDGE NAILING |
|---|---|---|---|
| 8' | 8'-24' | 8d NAILS @ 6" O.C. | 8d NAILS @ 4" O.C. |
| 10' | 10'-24' | 8d NAILS @ 6" O.C. | 8d NAILS @ 4" O.C. |
| 12' | 12'-24' | 8d NAILS @ 6" O.C. | 8d NAILS @ 4" O.C. |

NOTES:
USE 0.113" X 2⅜" GALVANIZED RING SHANK NAILS OR 8d COMMON.

**END WALL EDGE NAILING REQUIREMENTS**

| MARK WALLS BEING USED | END WALL WIDTH | SIDE WALL LENGTH | EDGE NAILING | MAX. COMB. OPENING | MIN TOTAL COMBINED SHEAR WALL |
|---|---|---|---|---|---|
| **NO OPENINGS ALONG THE WALL** | | | | | |
| | 8' | 8'-20' | 8d NAILS @ 6" O.C. | 0' | 8' |
| | 8' | 22'-24' | 8d NAILS @ 4" O.C. | 0' | 8' |
| | 10' | 10'-24' | 8d NAILS @ 6" O.C. | 0' | 10' |
| | 12' | 12'-24' | 8d NAILS @ 6" O.C. | 0' | 12' |
| ▪ MIN 2'-6" RTN WALLS ON EACH END OF WALL- | | | | ▪ MIN 2'-6" WALL SEGMENT | |
| | 8' | 8'-12' | 8d NAILS @ 6" O.C. | 3' | 5' |
| | 8' | 14'-18' | 8d NAILS @ 4" O.C. | 3' | 5' |
| | 8' | 20'-24' | 8d NAILS @ 3" O.C. | 3' | 5' |
| | 10' | 10'-14' | 8d NAILS @ 6" O.C. | 4' | 6' |
| | 10' | 16'-20' | 8d NAILS @ 4" O.C. | 4' | 6' |
| | 10' | 22'-24' | 8d NAILS @ 3" O.C. | 4' | 6' |
| | 10' | 10'-12' | 8d NAILS @ 6" O.C. | 5' | 5' |
| | 10' | 14'-18' | 8d NAILS @ 4" O.C. | 5' | 5' |
| | 10' | 20'-22' | 8d NAILS @ 3" O.C. | 5' | 5' |
| | 10' | 24' | 8d NAILS @ 4" O.C.(BS) | 5' | 5' |
| | 12' | 12'-18' | 8d NAILS @ 6" O.C. | 4' | 8' |
| | 12' | 20'-24' | 8d NAILS @ 4" O.C. | 4' | 8' |
| | 12' | 12'-14' | 8d NAILS @ 6" O.C. | 6' | 6' |
| | 12' | 16'-20' | 8d NAILS @ 4" O.C. | 6' | 6' |
| | 12' | 22'-24' | 8d NAILS @ 3" O.C. | 6' | 6' |
| | 12' | 12'-16' | 8d NAILS @ 4" O.C. | 7' | 5' |
| | 12' | 18'-22' | 8d NAILS @ 3" O.C. | 7' | 5' |
| | 12' | 24' | 8d NAILS @ 4" O.C. (BS) | 7' | 5' |

**TUFF SHED**
Storage Buildings & Garages
TUFF SHED, MFG. FACILITIES

Order #. _____
Customer: _____
Site Address: _____
Building Size: WIDTH - LENGTH - HEIGHT - SQ. FT. AREA

P.O. #
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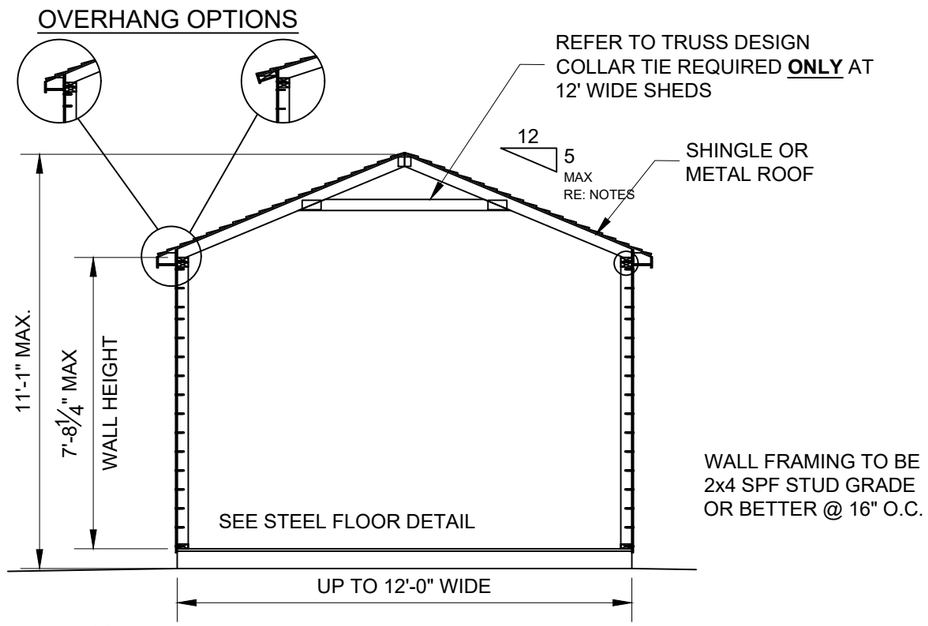
NORTH CAROLINA PROFESSIONAL SEAL 044353 ENGINEER RICHARD J. WILLS

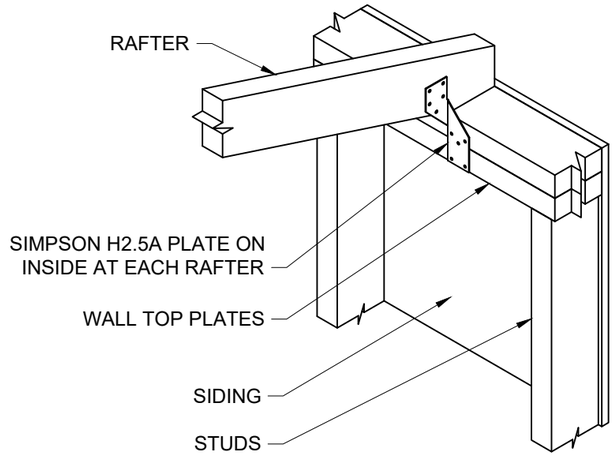
**TITLE**
GENERAL NOTES
NAILING REQUIRMENTS
120 MPH, EXP. C

**DRAWING NO.** NC-PPTR-TR800-01
**REV. LEVEL** 01
**SHEET** 1

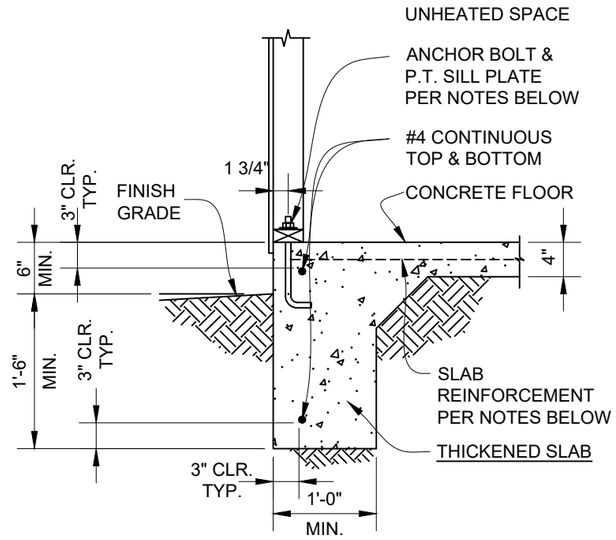

10 APR 2023



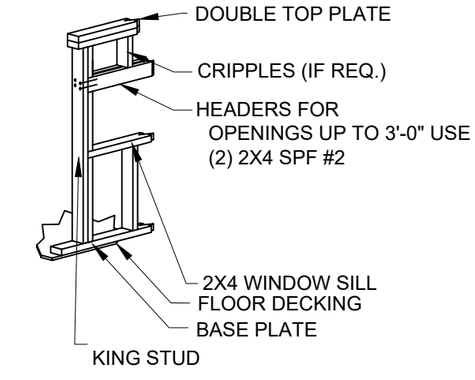

1 BUILDING SECTION
SCALE: N.T.S.



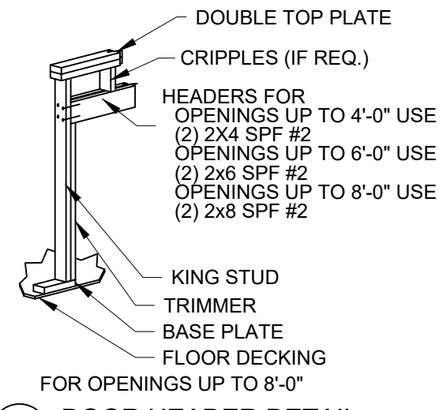

2 TRUSS ATTACHMENT DETAIL
SCALE: N.T.S.



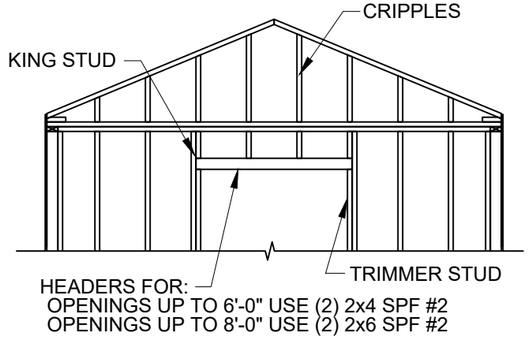

MONOLITHIC FOUNDATION




3A DOOR HEADER DETAIL FOR SIDE WALLS
SCALE: N.T.S.




3B DOOR HEADER DETAIL FOR SIDE WALLS
SCALE: N.T.S.




4 HEADER DETAIL FOR END WALLS
SCALE: N.T.S.

CONTINUOUS FOOTING NOTES
1. TOP OF CONCRETE TO BE 6" MIN. ABOVE GRADE. SLAB REINFORCEMENT SHALL BE WWF 6X6 W10xW10 PER ASTM A185. LOCATE AT MID-DEPTH OF SLAB.
2. ALL FOOTING FORMS SHALL BE INSPECTED FOR SIZE AND REINFORCING BEFORE POURING CONCRETE.
3. FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL, COMPETENT SOIL,OR PROPERLY COMPACTED STRUCTURAL FILL. ALLOWABLE SOIL BEARING PRESSURE IS 1500 PSF AT 12" BELOW GRADE.
4. CONCRETE: MINIMUM 28 DAY COMPRESSIVE STRENGTH, $f'_c$ = 2500 PSI.
5. REINFORCING STEEL: A615, GRADE 40 OR GRADE 60. ALL REINFORCING STEEL SHOWN TO BE CONTINUOUS MAY BE LAPPED A MINIMUM OF 38 BAR DIAMETERS OR 24".
6. SEISMIC DESIGN CATEGORY: C
   A. ATTACH PRESSURE TREATED SILL PLATE TO THE FOOTING USING 1/2" DIA X 10" LONG 'L' BOLTS WITH NUTS AND WASHERS.
   B. ANCHOR BOLTS SHALL BE EMBEDDED AT LEAST 7" INTO THE CONCRETE AND SHALL BE SPACED NOT MORE THAN 6' OC.
   C. THERE SHALL BE A MINIMUM OF 2 BOLTS PER SILL PLATE PIECE WITH 1 BOLT LOCATED NOT MORE THAN 12" NOR LESS THAN 7 BOLT DIAMETERS FROM EACH END OF EACH PIECE.

NOTE: FOR BUILDINGS 20' AND LONGER OR ANY BUILDING DESIGNED AS A 3-SIDED DIAPHRAGM, ADD SIMPSON SSTB16 ANCHORS AND HDU2 HOLD DOWNS AT EACH CORNER OF THE END WALLS. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5 OPTIONAL CONCRETE FOUNDATION DETAIL
SCALE: N.T.S.

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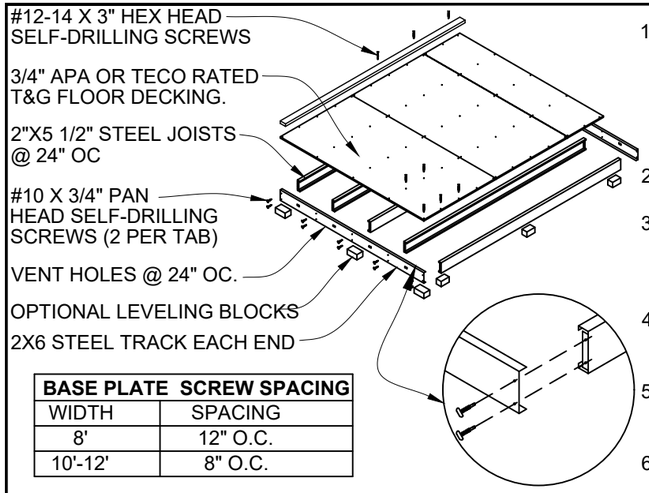
10 APR 2023

**TITLE**
GENERAL DETAILS
HEADER FRAMING DETAILS
120 MPH, EXP. C

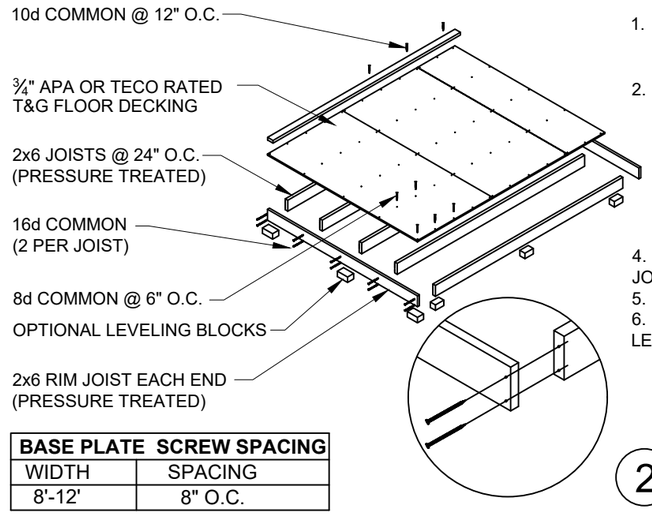
**DRAWING NO.** NC-PPTR-TR800-01
**REV. LEVEL** 01
**SHEET** 2




| BASE PLATE SCREW SPACING | |
|---|---|
| WIDTH | SPACING |
| 8' | 12" O.C. |
| 10'-12' | 8" O.C. |

1. STEEL SHED FOUNDATION:
   550T125-054 - 16 GAUGE STEEL TRACKS G140 ZINC COATED
   550S137-054 - 16 GAUGE STEEL JOISTS G140 ZINC COATED @ 24" O.C.
   (SUPPLIER: ALLIED STUDCO (JOIST: 550S137-054 / TRACK: 550T125-054) ICC ER-4943P.
2. 3/4" APA OR TECO RATED TONGUE AND GROOVE FLOOR DECKING. 24" MAX PANEL SPAN. STAGGER PANEL LAYOUT.
3. FASTEN FLOOR DECKING TO JOIST & TRACKS USING #8 x 1-5/8" ZINC PLATED SCREWS @ 12" O.C.
   NO BLOCKING REQUIRED. ALL EDGES SHALL LIE ON FLOOR JOISTS. STAGGER PANEL LAYOUT PER APA CONDITION 1.
4. FASTEN SOLE PLATE THROUGH FLOOR DECKING INTO JOISTS OR TRACKS WITH #12-14 X 3" GALVANIZED SELF-DRILLING SCREWS @ 12" O.C.
5. ALLOWABLE FLOOR LIVE LOAD: 75 PSF FOR STEEL JOISTS CONTINUOUSLY SUPPORTED. 50 PSF FOR JOISTS ON BLOCKS AS SHOWN.
6. USE OPTIONAL CONCRETE BLOCKS AS REQUIRED TO LEVEL BUILDING:
   SUGGESTED SIZES: 2X8 x 16", 4" x 8" x 16", OR 8" x 8" x 16".
   BLOCKS UNDER JOISTS SPACED @ 8'-0" O.C. MAXIMUM.
   BLOCKS UNDER TRACK SPACED @ 4'-0" O.C. MAXIMUM.

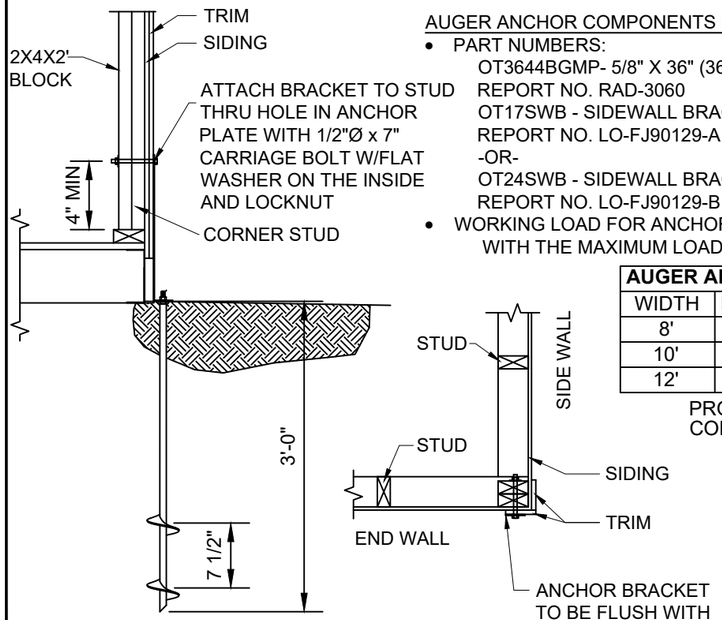
## 1 STEEL SHED BASE DETAIL
SCALE: N.T.S.




| BASE PLATE SCREW SPACING | |
|---|---|
| WIDTH | SPACING |
| 8'-12' | 8" O.C. |

1. WOOD SHED FOUNDATION:
   2x6 #2 PRESSURE TREATED HEM FIR RIM JOISTS
   2x6 #2 PRESSURE TREATED HEM FIR JOISTS @ 24" O.C.
2. 3/4" APA OR TECO RATED TONGUE AND GROOVE FLOOR DECKING. 24" MAX PANEL SPAN. NO BLOCKING REQUIRED. ALL EDGES SHALL LIE ON FLOOR JOISTS. STAGGER PANEL LAYOUT PER APA CONDITION 1.
   NAIL PLYWOOD TO JOISTS AND RIM JOISTS:
   BORDER: 8d COMMON SPACED @ 6" O.C.
   EDGE: 8d COMMON SPACED @ 6" O.C.
   FIELD: 8d COMMON SPACED @ 12" O.C.
4. FASTEN SOLE PLATE THROUGH FLOOR DECKING INTO JOISTS OR RIM JOISTS WITH 10d COMMON SPACED @ 12" O.C.
5. ALLOWABLE FLOOR LIVE LOAD: 40 PSF
6. USE OPTIONAL CONCRETE BLOCKS AS REQUIRED TO LEVEL BUILDING:
   SUGGESTED SIZES: 2" x 8" x 16", 4" x 8" x 16", OR 8" x 8" x 16".
   BLOCKS UNDER JOISTS SPACED @ 8'-0" O.C. MAXIMUM.
   BLOCKS UNDER RIM JOISTS SPACED @ 4'-0" O.C. MAXIMUM.

## 2 OPTIONAL WOOD SHED BASE DETAIL
SCALE: N.T.S.




AUGER ANCHOR COMPONENTS BY OLIVER TECHNOLOGIES

- PART NUMBERS:
  OT3644BGMP- 5/8" X 36" (36" IMBED) GALVANIZED AUGER
  REPORT NO. RAD-3060
  OT17SWB - SIDEWALL BRACKET FOR USE WITH THRU BOLTS
  REPORT NO. LO-FJ90129-A
  -OR-
  OT24SWB - SIDEWALL BRACKET FOR USE WITH THRU BOLTS
  REPORT NO. LO-FJ90129-B
- WORKING LOAD FOR ANCHOR SYSTEM IS 3,150 LBS WITH THE MAXIMUM LOAD OF 4,725 LBS

| AUGER ANCHORS | | |
|---|---|---|
| WIDTH | LENGTH | # OF ANCHORS |
| 8' | 8'-24' | 4 ANCHORS |
| 10' | 10'-24' | 4 ANCHORS |
| 12' | 12'-24' | 4 ANCHORS |

PROVIDE (1) ANCHOR AT EACH CORNER OF BUILDING.

## 3 AUGER ANCHOR DETAIL
SCALE: N.T.S.




**3/8" X 3" SIMPSON TITEN BOLT,** GALVANIZED, WITH 3/4" WASHER EMBEDMENT DEPTH = MIN 2 1/4" MIN. EDGE DISTANCE = 6" ANCHOR SPACING: RE: TITEN BOLT ANCHORS TABLE, SHEET 3

## 4 SIDEWALL BRACKET DETAIL
SCALE: N.T.S.

| TITEN HD ANCHOR BOLTS (INTO CONCRETE) RE: DETAIL 4 SHEET 3 | | |
|---|---|---|
| WIDTH | LENGTH | QTY |
| 8' | 8'-24' | 6 |
| 10' | 10'-24' | 6 |
| 12' | 12'-24' | 6 |

NOTES:
1. ANCHORS TO BE SIMPSON TITEN HD ANCHORS. ANCHORS MAY BE GALVANIZED OR STAINLESS STEEL.

2. PROVIDE (1) ANCHOR AT EA. CORNER OF THE BUILDING. THE REMAINING ANCHORS EQUALLY SPACED ALONG THE LENGTH OF THE BUILDING. (½ THE REMAINING ANCHORS ON EA. LENGTH SIDE EQUALLY SPACED).

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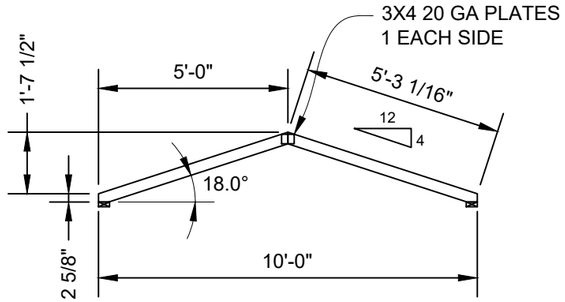
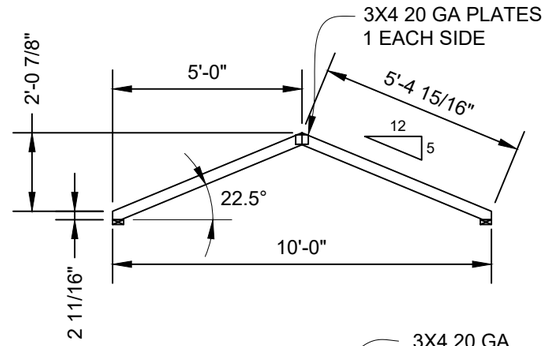
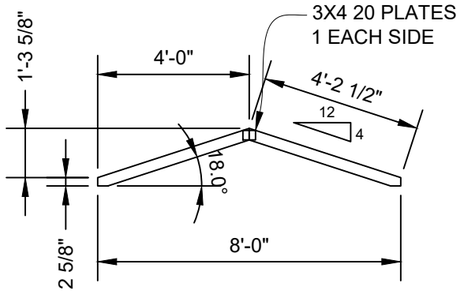
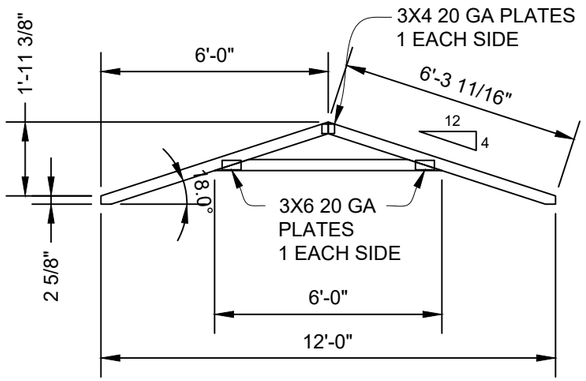
TITLE: GENERAL DETAILS
120 MPH, EXP. C

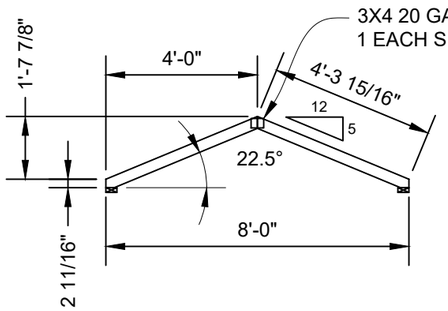
DRAWING NO. NC-PPTR-TR800-01
REV. LEVEL 01
SHEET 3
PAGE 3 OF 4

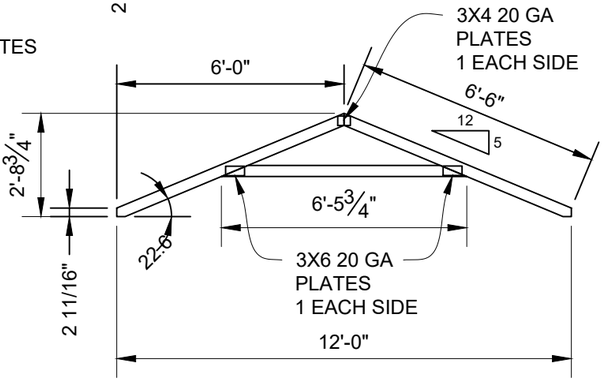



DESIGN LOADS:
TOP CHORD LIVE LOAD = 20 PSF
TOP CHORD DEAD LOAD = 10 PSF
COLLAR TIE DEAD LOAD = 5 PSF

NOTES:
2015 IBC & IRC, 2018 NCBC
ANSI/TPI 1-2014
TRUSSES TO BE SPACED @ 24" OC
MATERIAL TO BE 2X4 SPRUCE PINE FIR GRADE #2 OR BETTER PLATES ARE TO BE PRESSED IN THE WOOD PER TPI.

REP MEMBER INCREASE: YES
LUMBER D.O.L.: 1.25

WIND:
ASCE 7-10, 120 MPH, Exposure C, D.O.L.=1.60

PLATES ARE MANUFACTURED BY EAGLE METAL PRODUCTS, ICC-ES #ESR-1082.

8' SPAN
REACTIONS:
MAX. VERTICAL: 240 LBS.
MAX. UPLIFT: -135 LBS.

NOTE:
TRUSS MAY BE USED ON BUILDING LENGTHS UP TO 14FT UNLESS CEILING JOIST OR OTHER TENSION TIE IS PROVIDED.

10' SPAN
REACTIONS:
MAX. VERTICAL: 300 LBS.
MAX. UPLIFT: -160 LBS.

NOTE:
TRUSS MAY BE USED ON BUILDING LENGTHS UP TO 16FT UNLESS CEILING JOIST OR OTHER TENSION TIE IS PROVIDED.

12' SPAN
REACTIONS:
MAX. VERTICAL: 420 LBS.
MAX. UPLIFT: -215 LBS.

NOTE:
TRUSS MAY BE USED ON BUILDING LENGTHS UP TO 20FT UNLESS CEILING JOIST OR OTHER TENSION TIE IS PROVIDED.

MAXIMUM DEFLECTION (12 FT. SPAN)
VERT LL: 0.06 in.
VERT TL: 0.08 in.

ALL PERSONS FABRICATING, HANDLING, ERECTING OR INSTALLING THIS TRUSS ARE TO DO SO IN ACCORDANCE TO THE RECOMMENDATIONS OF THE LATEST VERSION OF THE BCSI.

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**TITLE**
TRUSS DETAILS
AND CALCULATIONS
115 MPH, EXP. C

**DRAWING NO.** NC-PPTR-TR800-01
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**SHEET** 4
**PAGE** 4 **OF** 4

10 APR 2023