



**CUSTOM CHEYENNE/TRELLIS  
MODEL  
56' X 64'  
SPECIFICATIONS**

**Dimensions:**

Cheyenne Roof Dimensions	56'-0" x 64'-0"
Column Dimensions (center to center)	50'-0" x 20'-0"
Trellis Roof Dimensions	22'-0" x 44'-0"
Column Dimensions (center to center)	20'-0"
Cheyenne Minimum Clearance @ Eave	12'-0"
Trellis Minimum Clearance @ Eave	10'-0"
Roof Height @ Peak	±29'-10 ¾"
Gable Roof	6:12 pitch
Square Feet Under Roof	3584

Cheyenne Columns shall be 12"x 8" steel tube, .188 minimum wall thickness.  
All beams shall be structural steel tube sized according to engineering.  
Rafter beams shall be one piece construction.  
Ridge beam shall extend ±12" beyond cupola roof.  
All bolts shall be A-325 or A-307 and hidden at all connections.  
Roofing shall be 24 gauge 12" OC Standing Seam steel pre-cut and pre-finished with ribs running with the slope of the roof. Fascia shall be 2"x6" select grade SPF rough one side.  
Trim shall be extra long 24 gauge pre-finished to match roofing.  
Fascia shall be tube steel.  
2<sup>nd</sup> tier shall be continuous length of structure with ship prow ends.  
Open or welded "C" channel, "I" beams, "S" or "Z" purlins or angle iron shall not be allowed.

Trellis Columns shall be 8"x 8" steel tube, .188 minimum wall thickness.  
All beams shall be structural steel tube sized according to engineering.  
All bolts shall be A-307 or A-325 and hidden at all main connections.  
Roof lattice beams shall be 6"x 3" & 2"x2" steel tube with closed ends, variable spaced.  
Roof lattice connections shall be hidden to the greatest extent possible on top of the perimeter beam. All welds shall be ground smooth.  
Open or welded "C" channel, "I" beams, "S" or "Z" purlins or angle iron shall not be allowed.



## STANDARD SPECIFICATIONS

### 18" O.C. STANDING SEAM

### w/ ZINC RICH PRIMER & TGIC POLYESTER POWDER COAT

#### **GENERAL:**

1. All structures shall be designed and fabricated to the IBC (Latest Edition) or current local building code with standard load designs of the greater value of 20# per S.F. minimum live load and 100 mph sustained wind load or site specific conditions and the applicable zone for seismic loads.
2. All members shall be designed according to the "American Institute of Steel Construction (AISC) specifications and the American Iron and Steel Institute (AISI) specifications for cold-formed members.
3. All fabrication welds shall be in strict accordance with the structural welding code of the American Welding Society (AWS) specifications. All structural welds shall be in compliance with the requirements of "Pre-qualified" welded joints. All welding shall conform to ASTM A-233 series E-70XX electrodes - low hydrogen.  
*Field welding shall not be required.*
4. When required, after award of bid, the shade structure manufacturer shall submit structural calculations, sealed by a registered engineer in the state in which the structure is to be erected for review and approval by the approving agency.
5. Manufacturer qualifications: All manufacturers shall have a minimum of (20) twenty years experience in the fabrication of tubular steel shade structures. Shade structure and kiosk fabrication shall be the manufacturer's primary business. Manufacturer shall have fabricated similar structures to that which is specified. All non-specified manufacturers shall submit complete shop drawings indicating type, size & gauge of material used, with detailed connections to the specifying agency or design firm at least 10 days prior to bid opening for review and written pre-approval. All bids submitted without prior approval will be rejected.

#### **FOOTINGS & COLUMNS:**

1. Footings shall be structurally engineered by the structure manufacturer to meet local codes and site conditions. (Sample footing drawings shall be made available to the contractor or owner from the manufacturer). When required for structure installation, anchor bolts shall be supplied by the owner / contractor. Columns shall be ASTM 500 grade B. Concrete footing rebar (if required) shall be ASTM A-615 grade 40 #4 bars & smaller, grade 60 #5 bars & larger. Concrete shall be 5 sack mix "Portland" cement. Maximum slump shall not exceed 4". Concrete compressive strength shall be a minimum of 2500 psi @ 28 days.

#### **FRAME MEMBERS AND COMPRESSION RING:**

1. Only American (domestic) made steel shall be used in the construction of this shelter. Mill certification shall be made available upon request. All frame members shall be one piece hollow steel shape (HSS) tube with a minimum .120 (1/8") wall thickness, sized according to engineering. All frame members shall be bolted together with bolts totally



concealed. Compression rings shall be fabricated from hollow steel shape tube or flat plate steel and shall have all connections concealed from view. All tubing for frame members shall be ASTM 500 grade B. Beam end plates shall be ASTM A36  $f_y=36,000$  psi UNF. Bolts shall be A 325's unless noted otherwise in the structural engineering calculations. *"I" beams, Angle iron, "C", "Z" or "S" purlins or beams, open or closed, shall not be allowed.*

### **CHEYENNE ROOFING:**

1. All roofing shall be 24 gauge Zincalume / Galvalume coated steel panels. "Standing Seam" panels shall be Design Span by AEP Span, with  $1\frac{3}{4}$ " high ribs @ 18" o.c. All roofing shall be pre-finished with Duratech 5000 or equal, 30 year paint finish. All roof panels shall be pre-cut with ribs running with the slope of the roof. Trim shall be 24 gauge Zincalume / Galvalume coated pre-finished to match the roof color. Screws & rivets shall match roof color. Fascia shall be tube steel

### **TRELLIS ROOFING:**

1. All roofing shall be 6"x3" & 2"x2" tube steel lattice with a minimum .120 wall thickness. Lattice shall be spaced as noted, center to center. Ends shall be capped with 16 gauge flat plate steel.

### **SUB-ROOF & FASCIA:**

1. Sub-roof shall be 2"x 6" tongue and groove, select grade SPF, rough 1 side. T&G shall be screwed to the frame with (1) #12-24 x  $2\frac{1}{2}$ " Phillip flat head w/ wings. (One screw per board per beam connection). T&G shall run perpendicular to the ridge. Fascia shall be tube steel

### **PAINT:**

1. All frame members shall be media blasted to a white finish removing all rust, scale, oil and grease. Powder coating for all frame members shall be provisionally warranted for (5) five years with zinc rich primer (2.5-3 mils) and TGIC polyester (2.5-3 mils) minimum total 5-6 mils finish. Finish shall be a smooth uniform surface with no pits, runs or sags.

### **ERECTION:**

1. Manufacturer shall supply complete layout and detail plans with installation instructions for the structure. The structure shall be erected in a work-man-like manner with framing, roofing and trim installed according to the manufacturer's installation instructions. Care shall be taken to avoid damaging the structure during installation. Touch up powder coat paint with paint provided to prevent rusting. Components of the structure shall be covered and kept dry prior to erection.

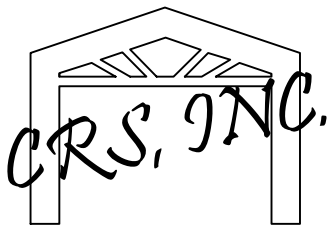
### **WARRANTEE:**

1. Manufacturer shall warranty the structure to be free from defects in material and work-man-ship for a period of (10) ten years from date of acceptance by owner. Warranty does not include damage from theft, fire, vandalism or acts of God. Manufacturer shall repair or replace structure components of like kind at his option, to match existing

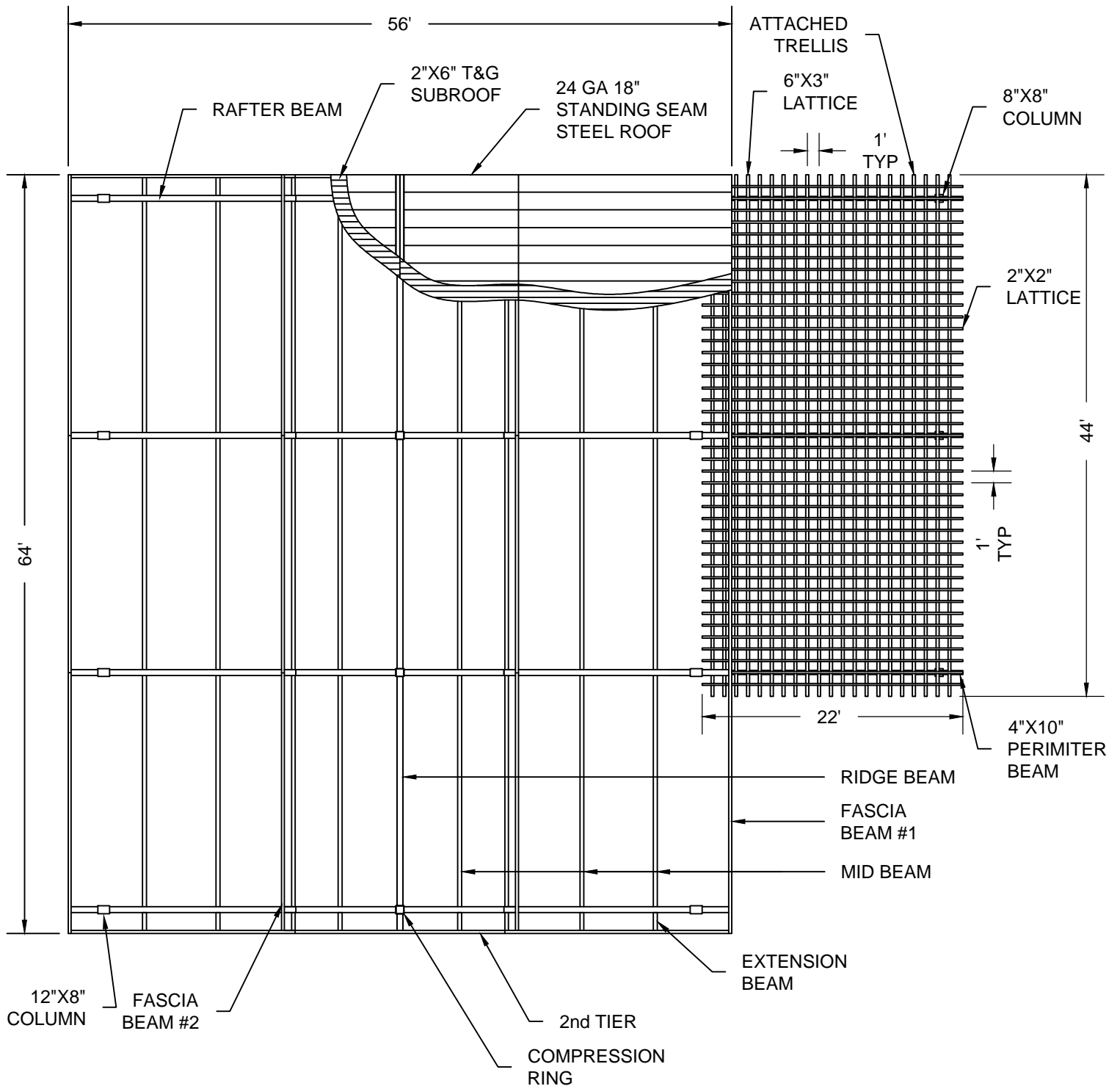


material and workmanship. Steel roof finish shall be warranted for (30) thirty years under a separate roof manufacturer's warranty. Powder coat paint shall be warranted for (5) five years after acceptance from owner against peeling, flaking and rusting. Warranty does not cover damage caused from shipping, erection of structure, lack of touchup and maintenance, overspray from lawn sprinklers or vandalism. Bolt threads are not powder coated and therefore are not covered under the powder coat warranty.

*NOTE: Engineering specifications take precedence over drawings if differences occur.*

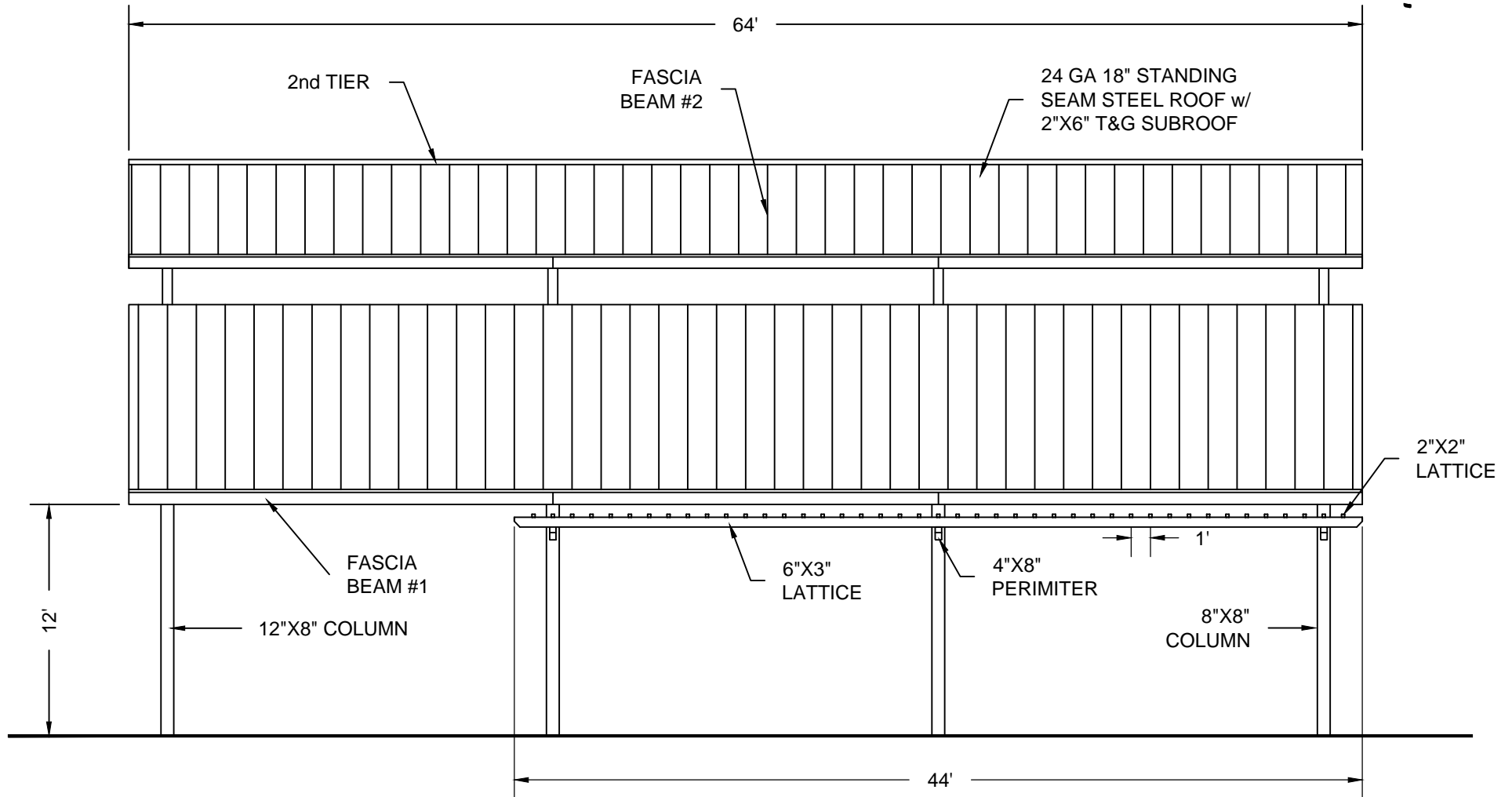
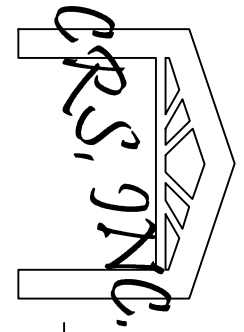


NOT FOR CONSTRUCTION



PLAN VIEW 56'X64' CUSTOM CHEYENNE MODEL<sub>NTS</sub>

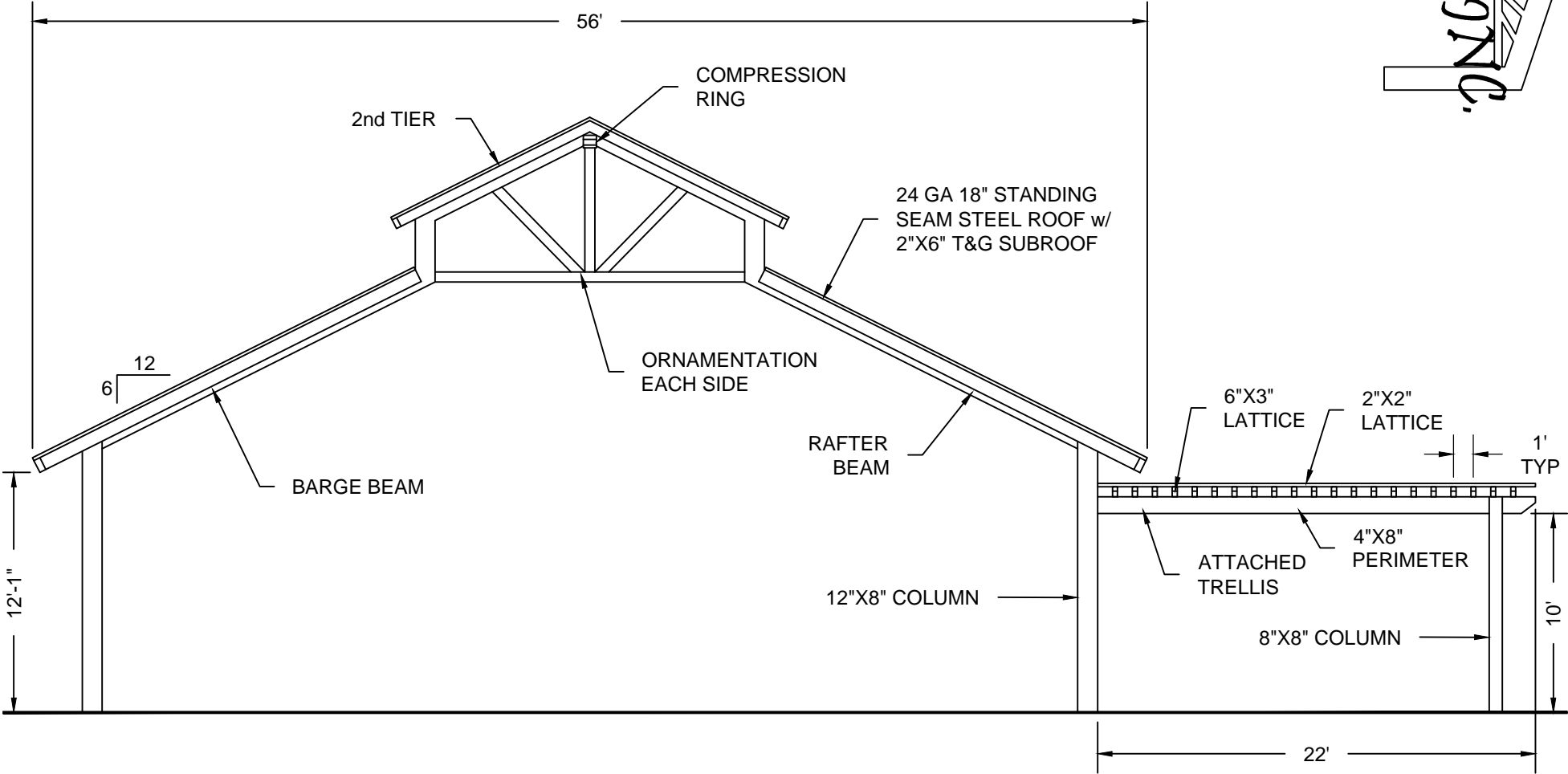
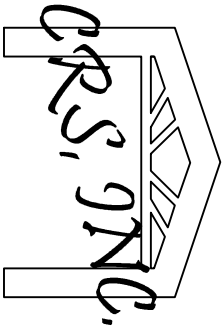
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ELEVATION 56'X64' CUSTOM CHEYENNE MODEL

NTS

NOT FOR CONSTRUCTION

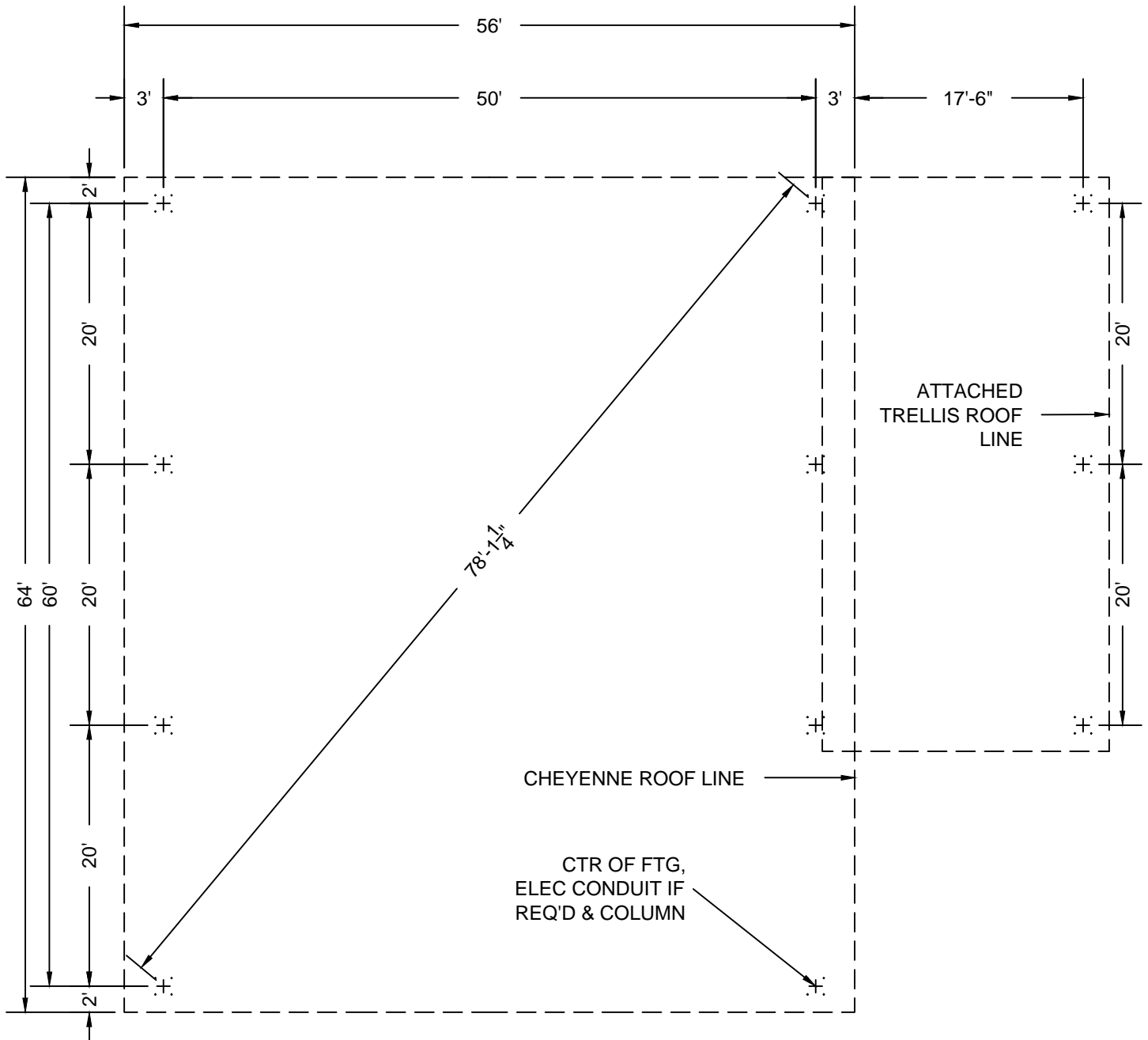


END ELEVATION 56'X64' CUSTOM CHEYENNE  
MODEL

NTS



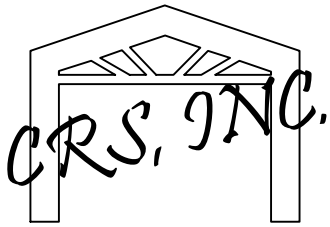
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LAYOUT PLAN 56'X64' CUSTOM CHEYENNE  
MODEL

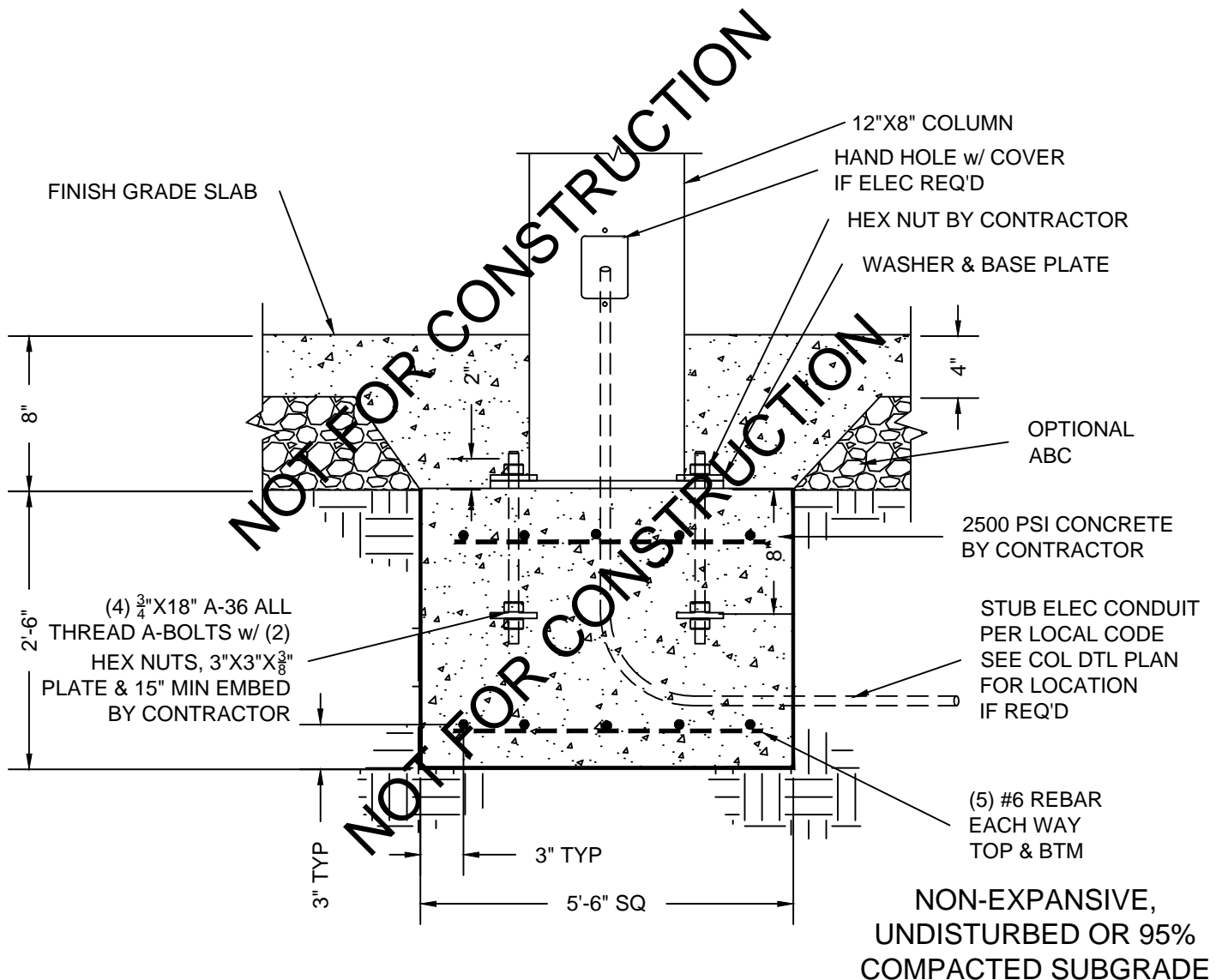
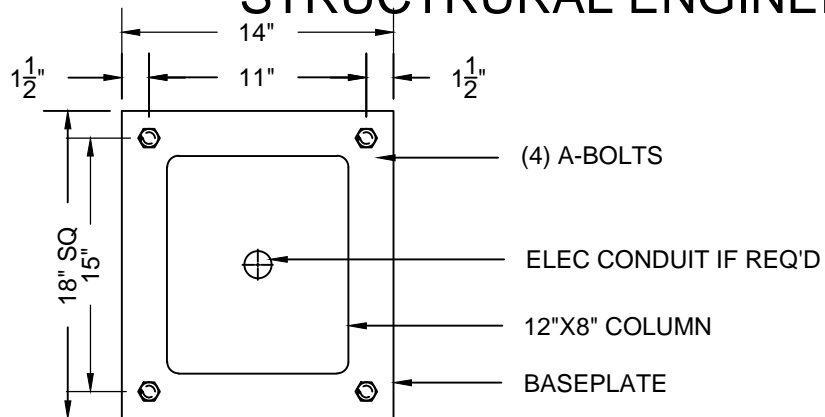
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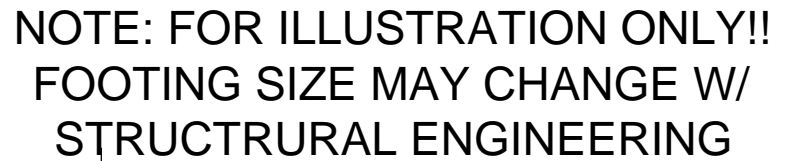


NOTE: FOR ILLUSTRATION ONLY!!  
FOOTING SIZE MAY CHANGE W/  
STRUCTURAL ENGINEERING

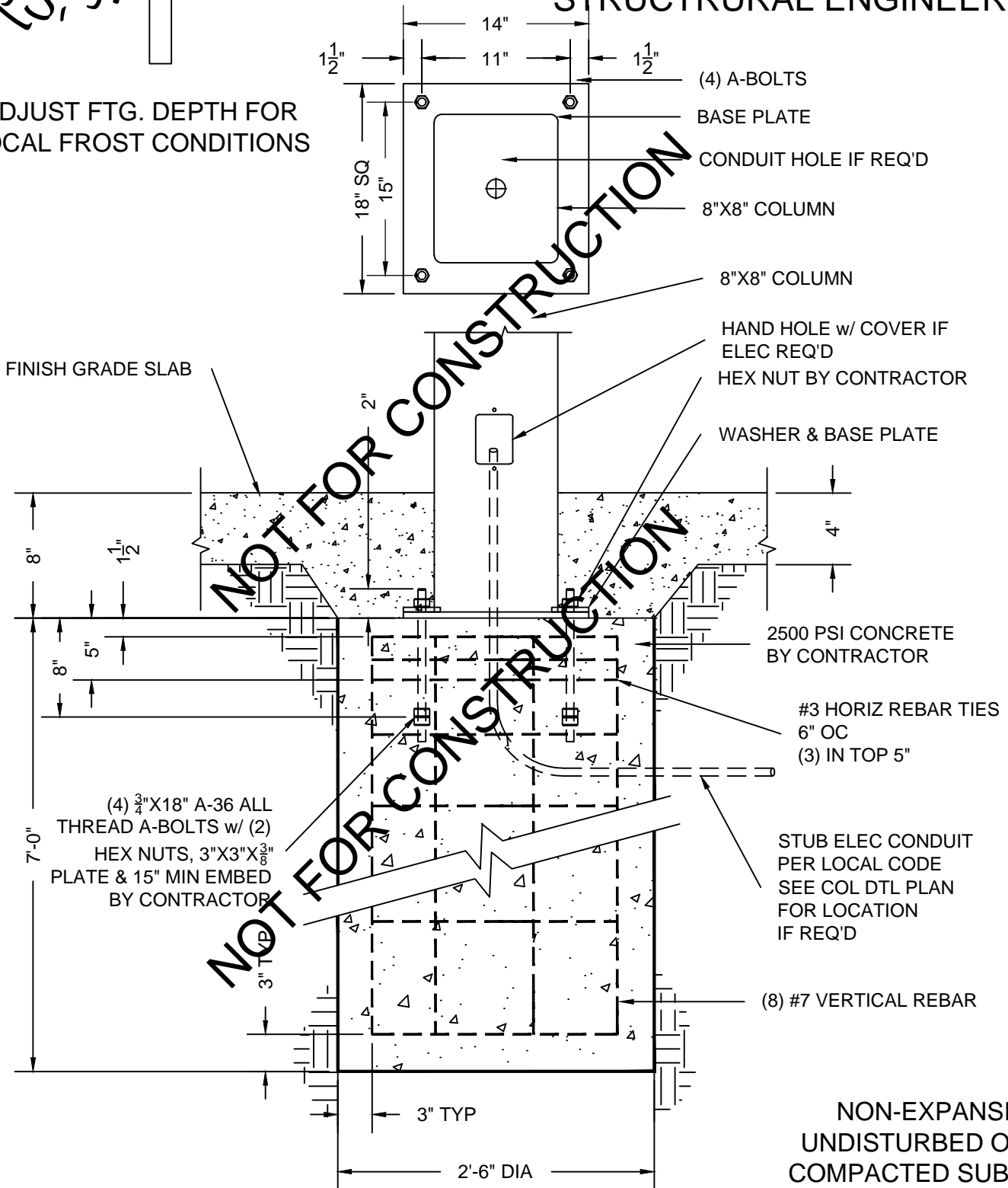
ADJUST FTG. DEPTH FOR  
LOCAL FROST CONDITIONS



SUB-SURFACE SPREAD FOOTING DETAIL  
56'X64' CUSTOM CHEYENNE MODEL  
NTS



ADJUST FTG. DEPTH FOR  
LOCAL FROST CONDITIONS



SUB-SURFACE CAISSON FOOTING DETAIL  
56'X64' CUSTOM CHEYENNE MODEL  
NTS

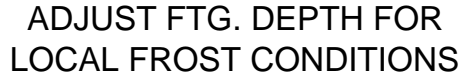
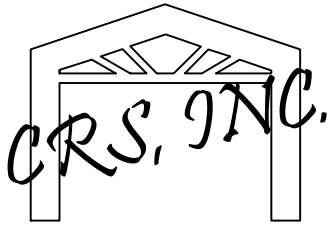


Diagram illustrating the dimensions and components of a 14" SQ column baseplate:

- Overall dimensions: 14" SQ (Square).
- Baseplate thickness: 1 1/2" (indicated on the left side).
- Column height: 11" (indicated on the left side).
- Column width: 8" X 8" (indicated on the right side).
- Baseplate thickness: 1 1/2" (indicated on the bottom side).
- Components: (4) A-BOLTS, ELEC CONDUIT IF REQ'D, 8"X8" COLUMN, BASEPLATE.

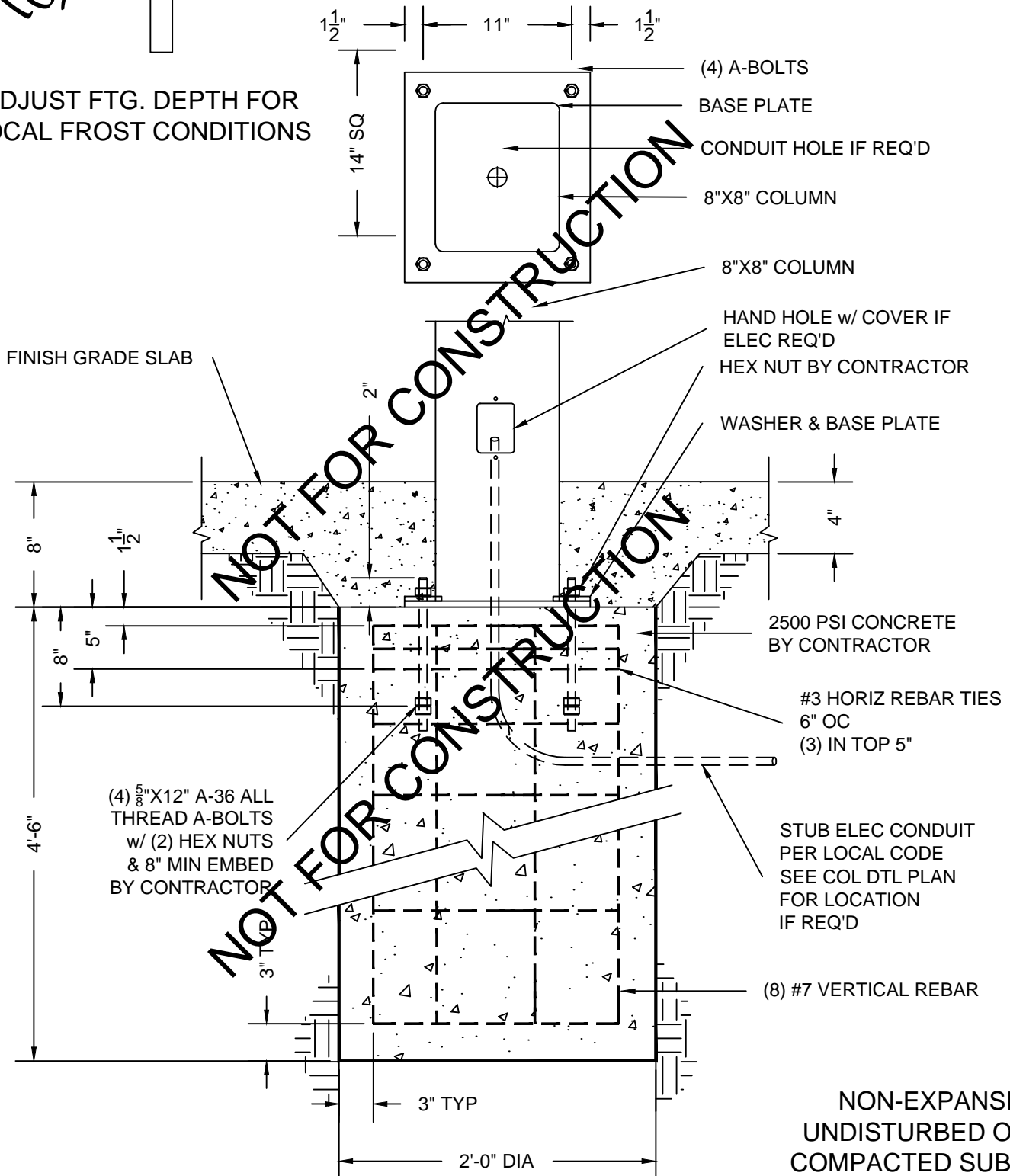


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NOTE: FOR ILLUSTRATION ONLY!!  
FOOTING SIZE MAY CHANGE W/  
STRUCTURAL ENGINEERING

ADJUST FTG. DEPTH FOR  
LOCAL FROST CONDITIONS



NON-EXPANSIVE,  
UNDISTURBED OR 95%  
COMPACTED SUBGRADE

SUB-SURFACE CAISSON FOOTING DETAIL  
56'X64' CUSTOM TRELLIS MODEL  
NTS