See quantities note on sheet 4 of 5. 

Electrical system conduit: Use 6" minimum radius sweeps for bends. No 90 degree elbows are permitted. 
Install pull tape in entry conduit. Pull tape must have 2250 lbs. minimum tensile strength, and foot length markings. Conduit must extend 6" beyond the concrete as shown, and must be threaded and capped. 
This conduit may be cut to exact dimension shown on the TMS or other electrical system detail sheet when installed. 

Install conduit into drilled shafts. Use 6" minimum radius sweeps for bends. 

Type DS fill must conform to Item 423, "Retaining Walls", Table 2. 

Contractor is responsible for verifying all dimensions and quantities in the Field before beginning work.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions shown are out-to-out of bar.

SAN ANTONIO DISTRICT STANDARD SHEET 1 OF 4

MISSION THEME CANTILEVERED OVERHEAD SIGN SUPPORT (COSS)

SPANS UP TO 40 FEET

Texas Department of Transportation 
San Antonio District (Structural Design)

PREPARED BY: ____________ DATE: ____________ CHECKED BY: ____________ APPROVED BY: ____________

FILE: Mission Theme COSB Standard.dgn 
REVISIONS: c

FILENAME: Mission Theme COSB Standard.dgn

CANTILEVERED OVERHEAD SPANS UP TO 40 FEET

SIGN SUPPORT (COSS)

Cantilevered Overhead spans up to 40 feet

Sheet 1 of 4

SAN ANTONIO DISTRICT STANDARD
Contractor is responsible for verifying all dimensions and quantities in the field before beginning work.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions shown are out-to-out of bar.

This bar may be stopped at Section B to make room for the chord stubs.

Provide #3 reinforcing bars at 18" Spa c-c. or Welded Wire Reinforcement (WWR) as 6x6-D2.9xD2.9 or D3xD3.

Provide 3" clear cover at edges and minimum 1" clear cover top and bottom.

See Highway plans for length.

This bar may be stopped at Section B to make room for the chord stubs.

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See Highway plans for length.
TRUSS DETAIL - PLAN

See Standard Sheet OSBC for truss details not shown here.
If single shear chord splices conflict with the gusset plates, then use double shear splices.

Chord stubs are the same size as the truss chords. Chord stubs, complete with studs and holes, must be provided by the truss fabricator. The contractor is responsible for determining and maintaining location and orientation of the embedded angles for truss fit-up, camber, and deflection. Templates may be needed to hold the angles in place for direct pay.
Wind studs in angle legs in accordance with AWS D1.5.

TRUSS DETAILS

<table>
<thead>
<tr>
<th>Maximum span</th>
<th>40'</th>
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<tbody>
<tr>
<td># &amp; D = Width x Depth</td>
<td>4.5' x 4.5'</td>
</tr>
<tr>
<td>Chord</td>
<td>3 ½ x 3 ½ x ½</td>
</tr>
<tr>
<td>Dead load diagonal</td>
<td>3 ½ x 2 x ½</td>
</tr>
<tr>
<td>Dead load vertical</td>
<td>3 ½ x 2 x ½</td>
</tr>
<tr>
<td>Wind load strut</td>
<td>2 ½ x 2 x ½</td>
</tr>
<tr>
<td>Truss dead load</td>
<td>7/10/11</td>
</tr>
<tr>
<td>Size of M5 bolts in splice connection</td>
<td>W, diameter</td>
</tr>
<tr>
<td>No. &amp; size of M5 bolts in chord angle to bearing angle connection</td>
<td>Top (both sides) 16 W, bolts</td>
</tr>
<tr>
<td>No. &amp; size of tie rod in concrete column</td>
<td>Top 8 ½ Dia x 4 - 3</td>
</tr>
<tr>
<td>Bottom 8 ½ Dia x 4 - 3</td>
<td></td>
</tr>
</tbody>
</table>

Number of High Strength (HS) bolts required in truss connection or splice are indicated with brackets [ ] after the member size.
1. Low-Alloy Steel for non-bridge structures per Item 442, "Metal For Structures".
2. Carbon Steel for non-bridge structures per Item 442, "Metal For Structures".
All truss members are angles.

MEMBER STARS PLAN

OSB DETAIL D

Face of sign

Chord stub

End of sign

TRUSS DETAIL - ELEVATION

See Standard Sheet OSBC for truss details not shown here.

TRUSS DETAIL - PLAN

Chord stub

TRUSS DETAIL - PLAN

Chord stub

TRUSS DETAILS

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1. Low-Alloy Steel for non-bridge structures per Item 442, "Metal For Structures".
2. Carbon Steel for non-bridge structures per Item 442, "Metal For Structures".
All truss members are angles.
GENERAL NOTES:

- Provide Class C concrete (f'c = 3600 psi)
- Provide Grade 60 reinforcing steel
- Chamfer all exposed edges unless noted otherwise.
- Unless otherwise noted, all concrete surfaces must be smooth and finished with the following paints or approved equivalent:
  - BASE COLOR: SHERMAN WILLIAMS 6142 "MACADAMIA"
- OSB must be paid under Item 650 "OVERHEAD SIGN SUPPORTS" or as shown in the plans.
- All connection bolts must conform to Item 447 "Structural Bolting".
- All structural steel components must be galvanized in accordance with Item 455, "Galvanizing".
- Details called for herein are applicable for Design Wind Heights up to 35' structure.
- Design wind speed 100 mph.

Table of Estimated Quantities

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<tr>
<th>BAR</th>
<th>NO.</th>
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<th>LENGTH</th>
<th>WEIGHT</th>
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REINFORCING STEEL

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CLASS C CONCRETE (COLUMN) CY: 2.5
CLASS C CONCRETE (FOOTING) CY: 9.4

Quantities shown are for Contractor information only. Footing quantity includes riprap.

**Quantities are based on a total height "Z" of 30'-0". For each 1'-0" variation in "Z", adjust as follows:**

- BARS A: LENGTH BY 0'-0" WEIGHT BY 170 LBS
- BARS S: COUNT BY 2 WEIGHT BY 32 LBS
- CLASS C CONCRETE (COLUMN) BY 0.93 CY