FRONT (main elevation, left)

4'-10" ℄ 4'-10"

Detail A

Permissible Const joint

A

℄ of 4.5' X 4.5' truss ②

6'-9"

Permissible Const joint

3'-0 ½"

③

B

4'-3"

Permissible Const joint

1'-0" R

Detail A

C

2'-0"

④

Height "Z" ①

Varies ①

Detail B

2'-0"

Detail B

③

6'-0"

Finished grade

12" (Typ)

12" (Typ)

5'-8" 5'-8"

5'-0"

4" Concrete riprap

4"

FRONT

SIDE

℄

1'-11" 1'-11"

Detail A

2'-0"

4" R

③

④

Detail A

Detail B

Detail B

2'-0"

Top of SSTR

3'-0"

Finished grade

6" (Typ)

12" (Typ)

Top of footing

12" (Typ)

2'-0" 2'-0"

③

⑤

Type DS fill

4" Concrete riprap

SIDE

FRONT (base plate detail, center top)

℄ Column and ℄ truss

Chord stub (Typ)

2'-4" 2'-4"

8 ½"

2'-4"

℄ truss

2'-4"

8 ½"

6" 6" 6" 6"

6"

③ 1" dia. PVC conduit

3" dia. PVC conduit 3 places ③

FRONT

DETAIL A / DETAIL B

6"

2"

6"

2"

5"

DETAIL A

2"

1"

2"

1"

DETAIL B

SECTION A (right top)

4'-5" ℄ 4'-5"

1'-6"

℄

1'-6"

6" chamfer (Typ)

Chord stub   Chord stub

SECTION A

SECTION B

4'-5" 4'-5"

1'-0" 1'-0"

4"(Typ)   1" (Typ)   4"(Typ)

1'-6"

℄

1'-6"

4"(Typ)   4"(Typ)

6" chamfer (Typ)

SECTION B

SECTION C

4'-5" 4'-5"

1'-0" 1'-0"

1" (Typ)   4"(Typ)

1'-6"

℄

1'-6"

SECTION C

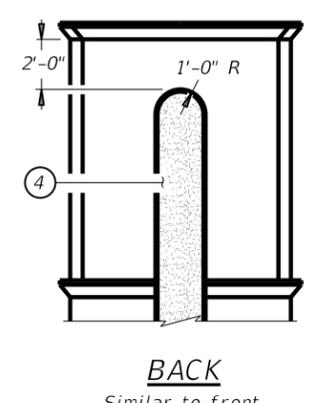## BACK

2'-0"

1'-0" R

④

BACK
Similar to front.

Notes

① Height "Z" is the total height of the column from the top of the drilled shaft. See quantities note on sheet 4 of 5.

② See Roadway plans for the height of the truss above the finished grade.

③ Electrical system conduit: Use 6" minimum radius sweeps for bends. No 90 degree elbows are permitted. Install pull tape in empty conduit. Pull tape must have 1250 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.

④ Form liner finish – Scott System #177 "Random Stone" (303-373-2500) or approved equivalent. Base color Sherman Williams SW 6142 "Macadamia" or approved equivalent. Base color is applied to all surfaces unless otherwise noted.

⑤ 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.
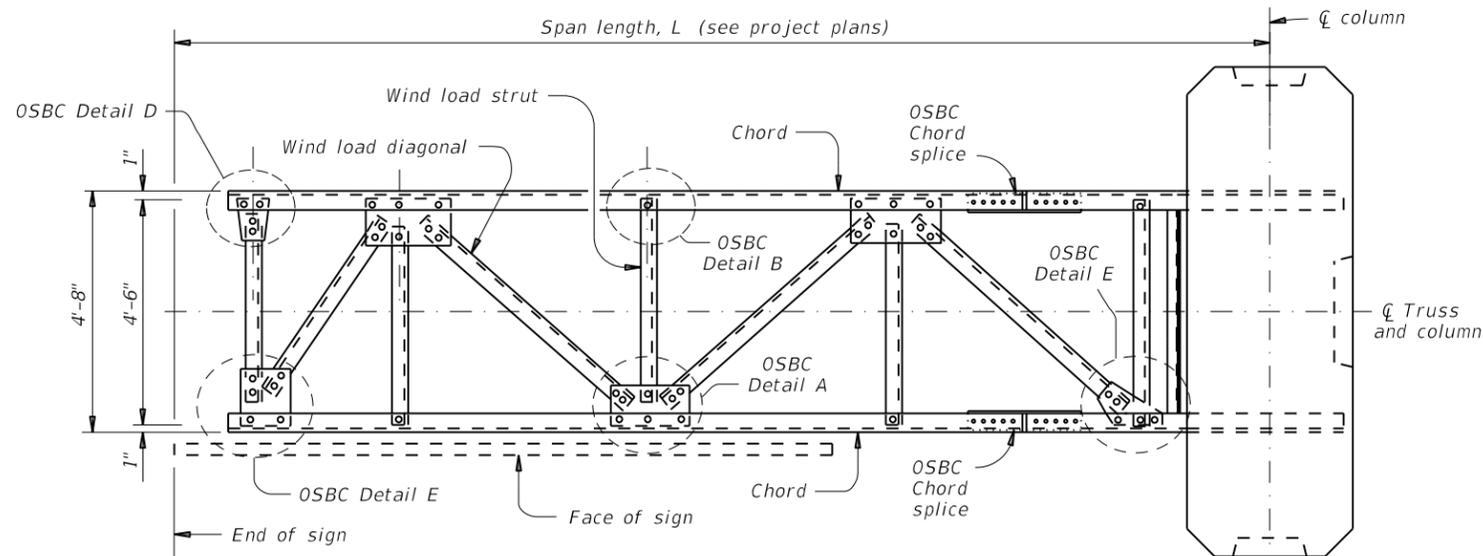
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions shown are out-to-out of bar.

SECTION A

2 ½" Clr cov (Typ)

Bars A

Bars S

Front face

Bars S (paired)

Bars A

SECTION B

Bars A 12 Eq spa = 7'-6"

2 ½" Clr cov (Typ)

Bars A 4 Eq spa = 1'-10"

Bars A 4 Eq spa = 1'-10"

Bars S (paired)

Bars A 12 Eq spa = 7'-6"

SECTION C

Bars S (paired)

Front face

2 ½" Clr cov (Typ)

SECTION D

Bars C ~ 23 ES

Bars E

3" Clr cov (Typ)

Bars B 5 ES

Column footing

Drilled shaft

4" Concrete riprap

---

2 ½" Clr cov

Bars S pairs 12" Max spa

2 ½" Clr cov

Bars A

Bars S

2 ½" Clr cov

Bars S pairs 12" Max spa

Bars E extend 8'-11"

Bars E with Bars A

2 ½" Clr cov (Typ)

2 ½" Clr cov (Typ)

S

E   E

2 ½"

Bars B

Bars C

Bars D

3" Clr cov (Typ)

Bars G

Bars D Eq spa

3" Clr cov (Typ)

4'-6" min drilled shaft vertical bars projection into footing

4 ES

4"

Bars B

6" (Typ)

3" (Typ)

4"

42" Dia. drilled shaft (Typ)

Bars B ~ 5 Eq spa Top and bottom

C DS

C Column

C DS

C DS

C Column

3'-5"

3'-5"

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.

12'-11"

5 ½" Dia. bending pin

2'-0"

BARS E

3'-6"

3"

14 ~ #9

#3 spiral at 6" pitch. One and a half flat turns top and bottom.

4'-10" minimum

3"

Bottom of 4" riprap

See Roadway plans for length

1'-0"

DRILLED SHAFT DETAIL

3'-6"

6" (Typ)

2" Dia. bending pin (Typ)

6" (Typ)

1'-11"

4'-6"

5'-3"

2" Dia. bending pin (Typ)

BARS S

BARS C

---

⑥ *This bar may be stopped at Section B to make room for the chord stubs.*

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.

DN: BCL	CK:	FILENAME: Mission Theme COSB Standard.dgn		
DW: SRF	CK:	ORIGINAL DRAWING DATE: March 2020		
DIST	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		COUNTY
SAT	6			COUNTY
CONTROL	SECTION	JOB	SHEET NO.	ROUTE
0000	00	000	000	ROUTE
REVISIONS:				

Span length, L (see project plans)

C column

OSBC Detail D
Wind load strut
Wind load diagonal
Chord
OSBC Chord splice

1"
4'-8"
4'-6"

OSBC Detail B
OSBC Detail A
OSBC Detail E

C Truss and column

1"
OSBC Detail E
End of sign
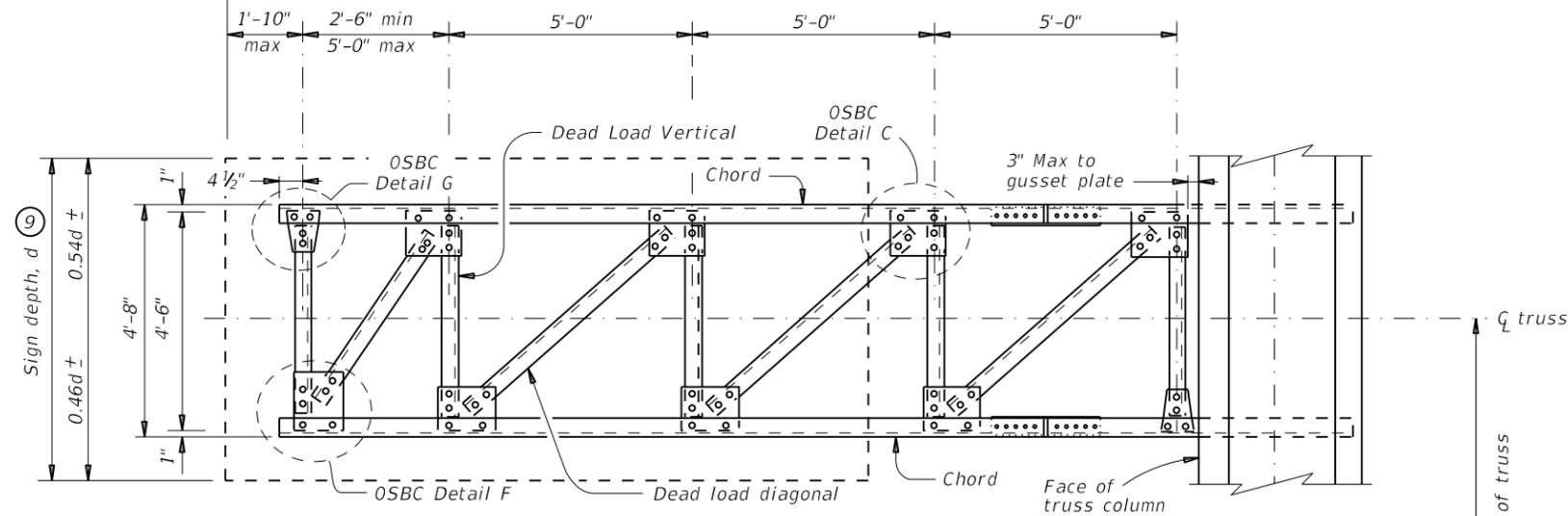Face of sign
Chord
OSBC Chord splice

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.

1'-10" max
2'-6" min / 5'-0" max
5'-0"
5'-0"
5'-0"

Dead Load Vertical
OSBC Detail C
OSBC Detail G
4 1/2"
1"
Chord
3" Max to gusset plate

9 Sign depth, d
0.54d ±
0.46d ±

4'-8"
4'-6"
1"

C truss

OSBC Detail F
Dead load diagonal
Chord
Face of truss column

DEAD LOAD DEFLECTIONS

40' SPAN	2.4"

TRUSS DETAIL – ELEVATION

See Standard Sheet OSBC for truss details not shown here

9 Sign depth d

Where signs of different depths are used, the bottom edges of all signs may be placed in line.
Where this is done, all signs should be so positioned that the bottom edges are approximately 0.46 of the depth of the deepest sign below the C of the truss.

Height from top of DS to C of truss
See roadway plans

Top of DS

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.

Eight 3/4" Dia. X 6" Shear studs per angle (Typ)
2"
C Truss and column
3"
6"
6"
6"
6"

C X Brace
X Brace
See Sheet OSCB

7 Chord stub
Chord stub 7
3"
4'-8"

EMBEDDED CHORD STUBS – PLAN

Chord stubs are the same size as the truss chords.
Chord stubs, complete with studs and holes, must be provided by the truss fabricator.
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 (no direct pay).
Weld studs to angle legs in accordance with AWS D1.5.

TRUSS DETAILS

Maximum span	40'	
W X D = Width X Depth	4.5' X 4.5'	
Chord 7	3 1/2 X 3 1/2 X 3/8	[8]
Dead load diagonal 8	3 X 2 X 3/16	[2]
Wind load diagonal 8	3 X 3 X 1/4	[3]
Dead load vertical 8	3 X 2 X 3/16	[2]
Wind load strut 8	2 1/2 X 2 1/2 X 3/16	[1]
Truss dead load	70 lb/ft	
Size of HS bolts in splice connection	3/4" diameter	
No. & size of HS bolts in chord angle to bearing angle connection	Top (both sides) 16 3/4" bolts	
	Bot (both sides) 16 3/4" bolts	
No. & size of tie rod in concrete column	Top 8 7/8" dia X 4'- 3"	
	Bottom 8 7/8" dia X 4'- 3"	

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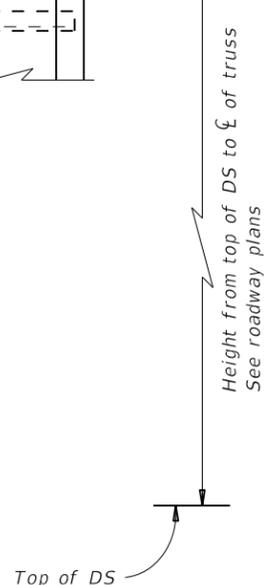
7 "Low-Alloy Steel" for non-bridge structures per Item 442, "Metal For Structures".

8 "Carbon Steel" for non-bridge structures per Item 442, "Metal For Structures".

All truss members are angles.

GENERAL NOTES:

Designed in accordance with AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals", 5th Edition and Interem Specifications.

Provide Class C concrete (f'c = 3600 psi).

Provide Grade 60 reinforcing steel.

Chamfer all exposed edges ¾" 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 hereon are applicable for Design Wind Heights up to 35' structure. Design wind speed 100 mph.

TABLE OF ESTIMATED QUANTITIES FOR ONE COLUMN "Z" = 30 FT ⑩

BAR	NO.	SIZE	LENGTH	WEIGHT
A	32	#11	30'-0"	5100
B	12	#11	10'-10"	691
C	24	#5	17'-0"	426
D	6	#6	10'-10"	98
E	26	#11	15'-3"	2107
S	52	#5	15'-4"	832
REINFORCING STEEL			LB	9254
CLASS C CONCRETE (COLUMN)			CY	25.5
CLASS C CONCRETE (FOOTING)			CY	9.4

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

⑩ 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 1'-0"
         WEIGHT BY 170 LBS

BARS S   COUNT BY 2
         WEIGHT BY 32 LBS

CLASS C CONCRETE (COLUMN) BY 0.93 CY