GENERAL NOTES - OVERHEAD TRAFFIC SIGNS

CONSTRUCTION SPECIFICATIONS: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. LATEST EDITION EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, 2001 AND INTERM SPECIFICATIONS UP TO 2006.

STEEL: MISCELLANEOUS STEEL SHALL CONFORM TO A.S.T.M. A-709, GRADE 36. STEEL TUBING FOR TRUSS AND POST MEMBERS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF COLD-FORMED TUBING (A-500) GRADE "B" OR "C" (FY=42 KSI MIN.) UNLESS OTHERWISE NOTED.

ALUMINUM: ALL ALUMINUM EXCEPT SIGN PANELS SHALL CONFORM TO ASTM B-221, B-308, OR B-429 ALLOY 6061-T6 UNLESS OTHERWISE NOTED. SIGN PANELS SHALL BE .080" THICK ALUMINUM CONFORMING TO ASTM B-209 ALLOY 5052-H38 OR 6061-T6.

CONCRETE AND REINFORCING STEEL: CONCRETE USED IN FOOTINGS FOR OVERHEAD SIGN TRUSSES AND OVERHEAD CANTILEVER TRUSSES SHALL BE CLASS "A1". CONCRETE FOR DRILLED SHAFTS SHALL BE CLASS "S". ALL OTHER CONCRETE MAY BE CLASS "M". DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT TO OUT OF BAR UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER TO CENTER OF BAR OR FACE OF CONCRETE TO CENTERLINE OF BAR. REINFORCING STEEL SHALL HAVE A MINIMUM COVERING OF 2" EXCEPT WHEN CONCRETE IS CAST AGAINST THE EARTH THEN THE COVERING WILL BE 3". ALL REINFORCING STEEL SHALL BE GRADE 60. THE FIRST DIGIT OF REINFORCING BAR NUMBER INDICATES THE BAR SIZE. THE TOP EDGES OF THE FOOTING SHALL BE CHAMFERED ¾".

CONCRETE FINISH: ALL PORTIONS OF THE FOOTINGS FOR CANTILEVERS AND TRUSSES ABOVE GROUNDLINE SHALL HAVE A FINISH IN ACCORDANCE WITH LOUISIANA SPECIFICATION. 805.08.3.

WELDING: ALL WELDING SHALL CONFORM TO THE LA. STANDARD SPECIFICATIONS-SECTION 809 AND SUPPLEMENTAL SPECIFICATIONS. WELDING OF GALVANIZED MEMBERS SHALL NOT BE ALLOWED WITHOUT THE PRIOR, WRITTEN APPROVAL OF THE FABRICATION ENGINEER.

NON-DESTRUCTIVE TESTING: ALL WELDS SHALL BE VISUALLY INSPECTED. MAGNETIC PARTICLE TESTING IS REQUIRED ON NOT LESS THAN 10% OF THE WELDS ON THE TRUSSES AND THEIR SUPPORT STRUCTURES.

SHOP DRAWINGS: SHOP DRAWINGS ARE REQUIRED FOR ALL OVERHEAD TRUSS, OVERHEAD CANTILEVER, FASCIA, AND ANY STRUCTURE MOUNTED SIGNS. SHOP DRAWINGS ARE NOT REQUIRED FOR EXTRUDED SIGN PANELS, UNLESS FABRICATOR INTENDS TO DEVIATE FROM THE DETAILS HEREIN. CONTRACTOR SHALL NOT INITIATE FABRICATION OF SIGNS OR SUPPORT STRUCTURES UNTIL ALL SHOP DRAWINGS ARE APPROVED BY THE ENGINEER.

GALVANIZING: ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-123. THICKNESS OF GALVANIZING SHALL PROVIDE A MINIMUM 20 YEAR PROTECTION. PROPER VENTING PRACTICES SHALL BE USED AND DETAILED ON THE SHOP DRAWINGS. DAMAGE TO GALVANIZED SURFACES THAT ARE NOT TO BE ENCASED IN CONCRETE SHALL BE REPAIRED IN ACCORDANCE WITH LA. STANDARD SPECIFICATIONS SUBSECTION 811.08. ALL BOLTS, NUTS, WASHERS, AND MISC. HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-153. ALL FIELD HOLES IN GALVANIZED MATERIAL SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND FROM THE A.M.L.

BOLTS: UNLESS NOTED, ALL THREADED CONNECTIONS SHALL INCORPORATE A LOCKING DEVICE AND HAVE A MINIMUM OF 3 THREADS BEYOND THE NUTS. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS, A.S.T.M. A-325, UNLESS OTHERWISE NOTED. STAINLESS STEEL FOR BOLTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-320 B8, CLASS 2 TYPE 304, OR A-193 B8, CLASS 2 TYPE 304, UNLESS OTHERWISE NOTED. STAINLESS STEEL NUTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-194, GRADE 8, TYPE 304. ALUMINUM BOLTS SHALL CONFORM TO A.S.T.M. F-468 ALLOY 2024-T4 AND NUTS ARE A.S.T.M. F-467 ALLOY 6061-T6 OR 6262-T9. WHERE BOLTS ARE USED ON BEVELED SURFACES, BEVELED WASHERS SHALL BE PROVIDED TO GIVE FULL BEARING TO THE HEAD AND/OR THE NUT.

D.T.I. WASHERS: DIRECT TENSION INDICATING (D.T.I.) WASHERS SHALL BE USED ON ALL BOLTS WHERE TENSION VERIFICATION IS REQUIRED.

ANCHOR BOLTS: ANCHOR BOLTS SHALL CONFORM TO AASHTO M314, GRADE 55 (OR APPROVED EQUAL) AND BE HOT DIP GALVANIZED TO A.S.T.M. A-123. ANCHOR BOLT NUTS TO BE TIGHTENED A MINIMUM ROTATION OF 240°(2/3 TURNS) FROM THE SNUG TIGHT CONDITION. UNLESS OTHERWISE NOTED, ALL THREADED CONNECTIONS SHALL INCORPORATE A LOCKING DEVICE AND HAVE A MINIMUM OF 3 THREADS BEYOND THE NUTS.

RIVETS: ALL RIVETS SHALL BE ¼" DIAMETER BLIND RIVETS WITH POSITIVE MANDREL RETENTION. THE RIVET BODY AND MANDREL SHALL BE ALUMINUM WITH A ½" MAXIMUM DIAMETER DOME HEAD. THE RIVETS SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH = 875 LBS., AND CONFORM TO ASTM B-316 5056-H32.

SIGN SHEETING: UNLESS OTHERWISE REQUIRED, ALL SIGN MATERIAL SHALL BE A MINIMUM ASTM D4956 TYPE X RETRO-REFLECTIVE SIGN SHEETING. IN ORDER TO OBTAIN AN ACCEPTABLE COLOR MATCH BETWEEN MULTIPLE PANELS ON A GUIDE SIGN, ALL OF THE BACKGROUND SHEETING FOR ANY GUIDE SIGN SHALL BE THE MINIMUM WIDTH OF THE LARGEST PANEL AND SHALL COME FROM THE SAME LOT OR RUN NUMBER FROM THE SHEETING MANUFACTURER UNLESS OTHERWISE APPROVED IN WRITING, RETRO-REFLECTIVE SHEETING SHALL BE APPLIED TO PANELS IN SUCH A MANNER THAT THERE ARE NO HORIZONTAL SPLICES.

MISCELLANEOUS: THE CONTRACTOR SHALL MARK THE DATE OF FABRICATION, SHEETING MANUFACTURER CODE, AND SIZE OF SIGN ON THE BACK OF EACH SIGN WITH AN APPROVED WEATHER RESISTANT PAINT STICK. SEE DETAIL "A", SHEET NO. 3 OF 16.

ALL DIMENSIONS REQUIRED FOR SATISFACTORY INSTALLATION SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE FABRICATION. ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE ENGINEER.

ALL ALUMINUM SURFACES PLACED IN CONTACT WITH, OR FASTENED TO UNGALVANIZED STEEL MEMBERS SHALL BE THROUGHLY COATED WITH AN APPROVED ALUMINUM IMPREGNATED CAULKING COMPOUND.

BEFORE SHIPPING A TRUSS, IT SHALL BE ASSEMBLED IN THE SHOP WITH ALL BOLTS IN PLACE. THE DISTANCE BETWEEN CENTER LINES OF BASE PLATES SHALL BE MEASURED AND CHECKED AGAINST FIELD MEASUREMENTS OF THE COLUMN SUPPORT SYSTEM PRIOR TO SHIPMENT.

IN GENERAL, A STRUCTURE MOUNTED OVERHEAD SIGN SUPPORT SHOULD BE PLACED IN A LOW MOMENT AREA OF THE STRUCTURAL SPAN. THE IDEAL LOCATION IS WITHIN THE END 1/3 OF THE SPAN LENGTH FOR A SIMPLE SPAN STRUCTURE AND NEAR THE POINT OF CONTRAFLEXURE FOR A CONTINUOUS SPAN STRUCTURE. FOR OVERHEAD MOUNTED TYPE SIGNS, THE VERTICAL SUPPORT MEMBERS SHALL BE REPLACED WITH ONE PIECE FULL HEIGHT VERTICAL SUPPORT MEMBERS.

USE OF SECTIONS PROVIDING EQUAL OR GREATER STRENGTH THAN THE MEMBERS DESIGNATED BY THE PLANS SHALL BE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL.

TREE TRIMMING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MISCELLANEOUS BRUSH AND TREE TRIMMING TO ALLOW FOR FULL SIGN PRESENTATION AS DIRECTED BY THE PROJECT ENGINEER.

GUARD RAIL REQUIREMENTS: A SITE SPECIFIC GUARD RAIL LAYOUT DETAIL SHALL BE PROVIDED FOR EACH GROUND MOUNTED SIGN TRUSS AND CANTILEVER. SEE GUARD RAIL STANDARD PLANS FOR ALL DESIGN CRITERIA AND DETAILS.

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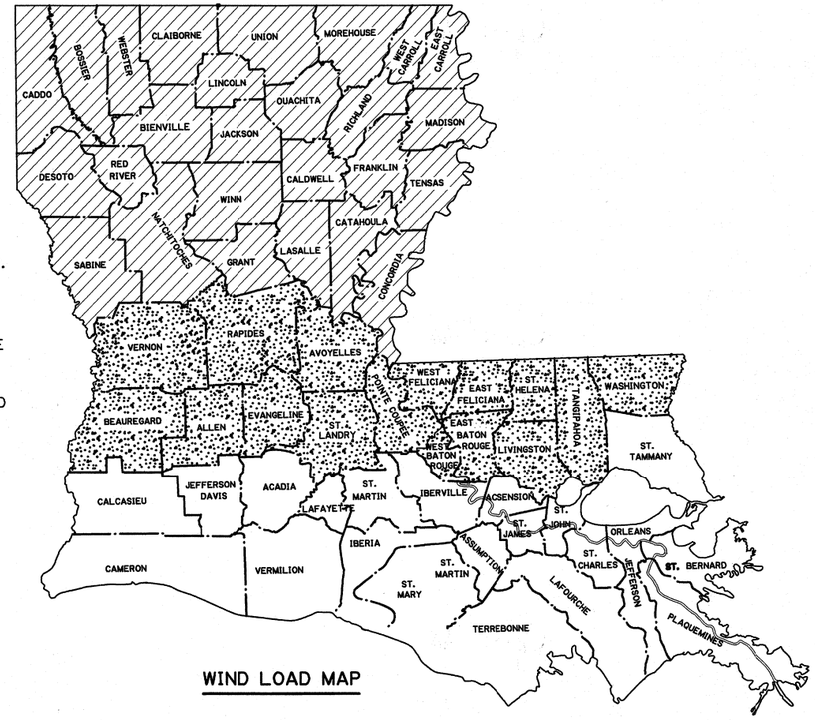
KURT M. BRAUNER
License No. 30067
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
9/29/11



WIND LOAD MAP

WIND LOAD MAP LEGEND		
SYMBOL	ZONE	DESIGN WIND VELOCITY (MPH)
	1	90
	2	110
	3	130

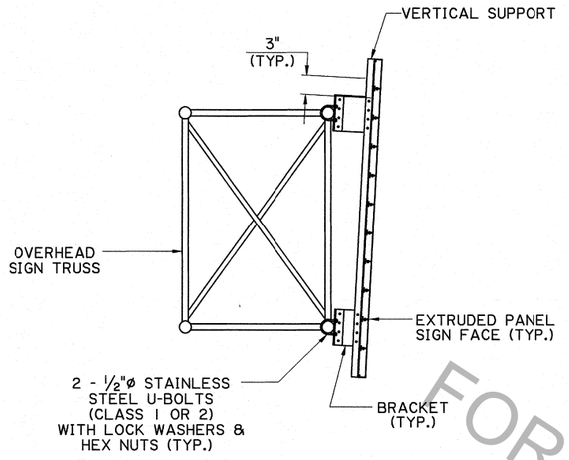
SHEET	BRIDGE STANDARD INDEX NO.	DESCRIPTION
1 OF 16	BD.2.7.1.0.1	INDEX, WIND LOAD MAP AND GENERAL NOTES
2 OF 16	BD.2.7.1.0.2	SIGN PANEL DETAILS
3 OF 16	BD.2.7.1.0.3	EXTRUDED ALUMINUM PANELS
4 OF 16	BD.2.7.1.0.4	EXTRUDED ALUMINUM PANELS
5 OF 16	BD.2.7.1.0.5	OVERHEAD SIGN TRUSS
6 OF 16	BD.2.7.1.0.6	MISCELLANEOUS DETAILS
7 OF 16	BD.2.7.1.0.7	OVERHEAD TRUSS DESIGN TABLES
8 OF 16	BD.2.7.1.0.8	PILE FOOTING DETAILS
9 OF 16	BD.2.7.1.0.9	GROUND MOUNTED CANTILEVER
10 OF 16	BD.2.7.1.0.10	STRUCTURE MOUNTED CANTILEVER
11 OF 16	BD.2.7.1.0.11	CANTILEVER DESIGN TABLES
12 OF 16	BD.2.7.1.0.12	OVERHEAD SIGN DATA TABLES
13 OF 16	BD.2.7.1.0.13	DRILL SHAFT FOOTING ALT.
14 OF 16	BD.2.7.1.0.14	DRILL SHAFT FOOTING ALT.
15 OF 16	BD.2.7.1.0.15	FASCIA MOUNTED BRACKETS
16 OF 16	BD.2.7.1.0.16	FASCIA MOUNTED BRACKETS

SHEET NUMBER
PARISH | FEDERAL PROJECT | STATE PROJECT
DESIGNED K. BRAUNER
CHECKED P. FOSSIER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 1 OF 16
BY K.M.B.
NO. 1 — 02-13-17 — UPDATED FOR 2016 SPECIFICATIONS
REVISION DESCRIPTION | DATE

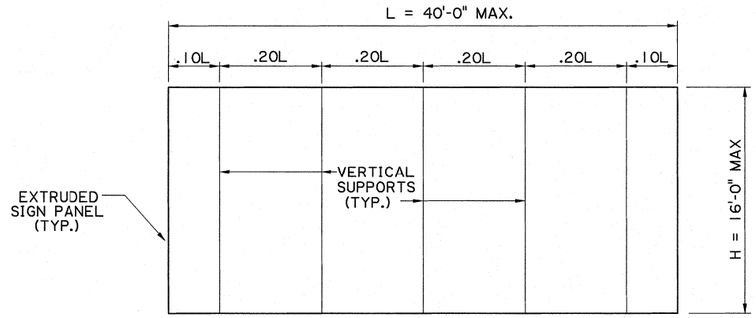
WIND LOAD MAP & GENERAL NOTES

BD.2.7.1.0.1 - OVERHEAD TRAFFIC SIGNS

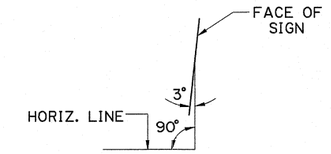
BRIDGE AND STRUCTURAL DESIGN



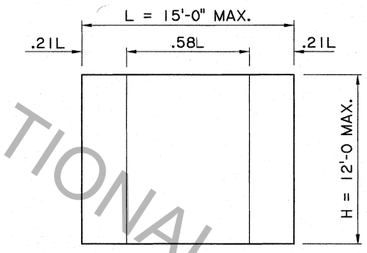
SIGN SUPPORT DETAIL



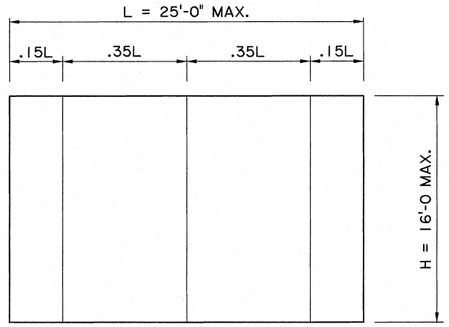
5 SUPPORTS



FINAL SIGN PANEL ORIENTATION

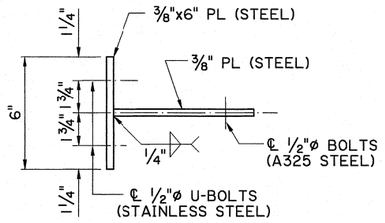


2 SUPPORTS

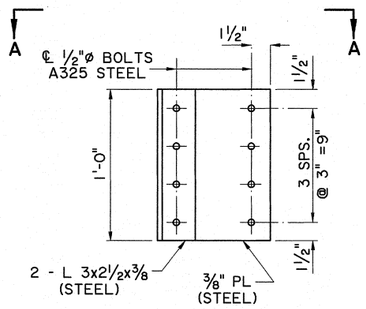


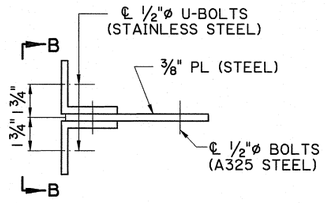
3 SUPPORTS

SPACING OF VERTICAL SUPPORTS FOR
OVERHEAD SIGN AND FASCIA SIGN INSTALLATIONS

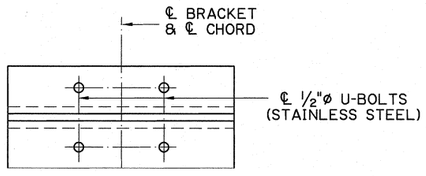


ALT. SECTION A-A





SECTION A-A



SECTION B-B

BRACKET DETAILS

NOTE: ALL STRUCTURAL STEEL SHALL BE GALVANIZED

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KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
4/29/11

NOTES:

VERTICAL SUPPORTS FOR OVERHEAD SIGNS SHALL BE 4x3x⅜ ALUMINUM ANGLE. TWO (2) ANGLES ARE REQUIRED FOR EACH VERTICAL SUPPORT.

FOR NEW OVERHEAD SIGN PANELS (INCLUDING FASCIA MOUNTED) INCORPORATING EXISTING STRUCTURE SUPPORTS (SIGN TRUSS, SIGN CANTILEVER, AND FASCIA), THE CONTRACTOR WILL PLACE NEW VERTICAL SUPPORT ANGLES WITHOUT SPLICES THAT EXTEND THE FULL HEIGHT OF THE PRIMARY SIGN PANEL. THESE SUPPORTS AND ALL OTHER MATERIALS REQUIRED TO CONNECT TO AN EXISTING MOUNT SHALL BE INCLUDED IN THE COST OF THE SIGN PANEL.

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED K. BRAUNER
CHECKED P. FOSSIER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 2 OF 16

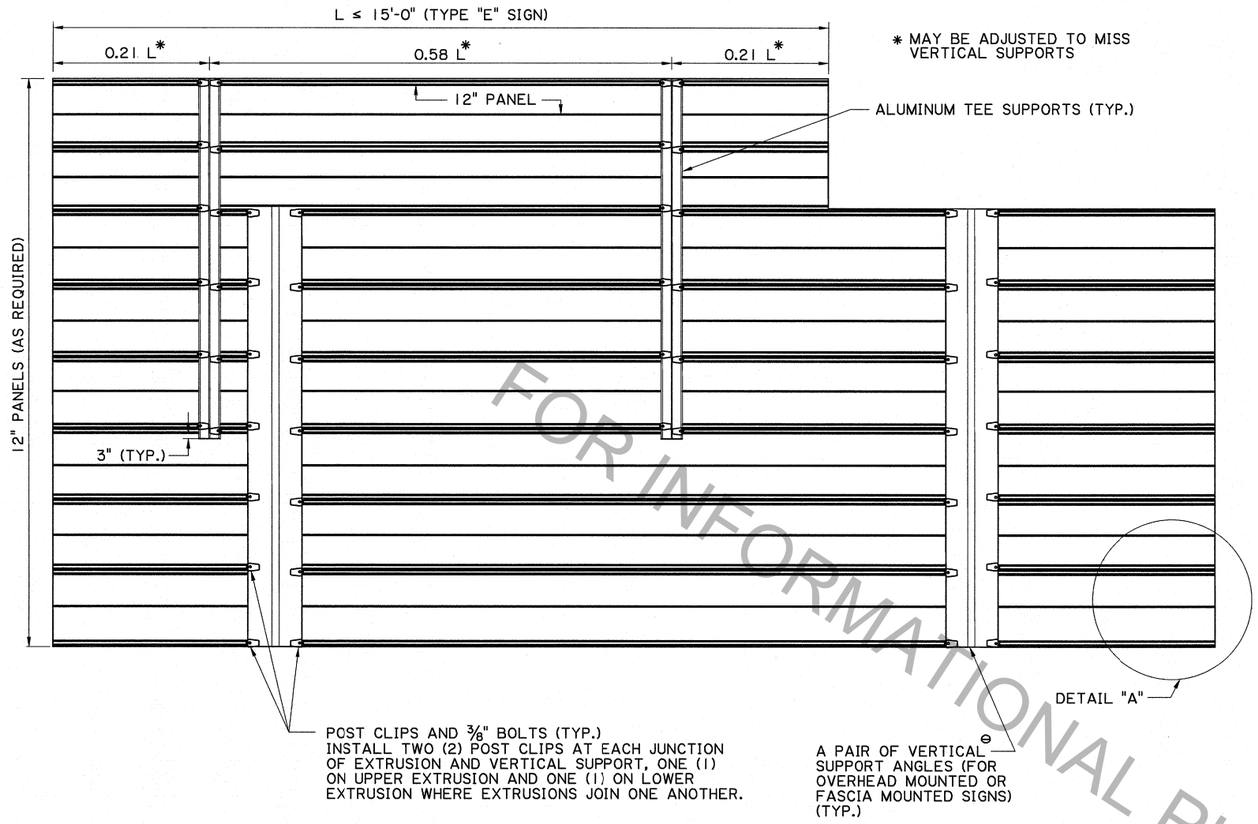
NO. | DATE | REVISION DESCRIPTION | BY

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
dotd

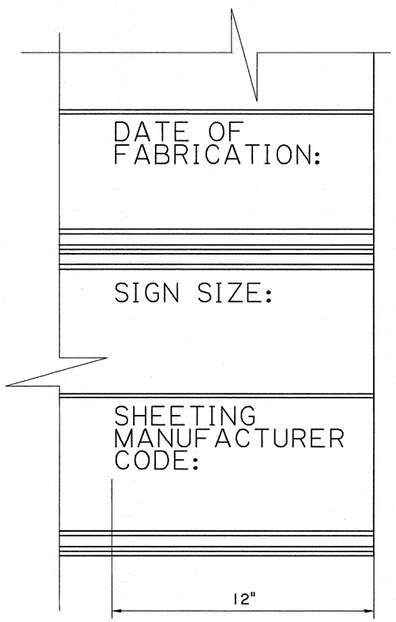
BRIDGE AND STRUCTURAL DESIGN

SIGN PANEL DETAILS

BD.2.7.1.0.2 - OVERHEAD TRAFFIC SIGNS

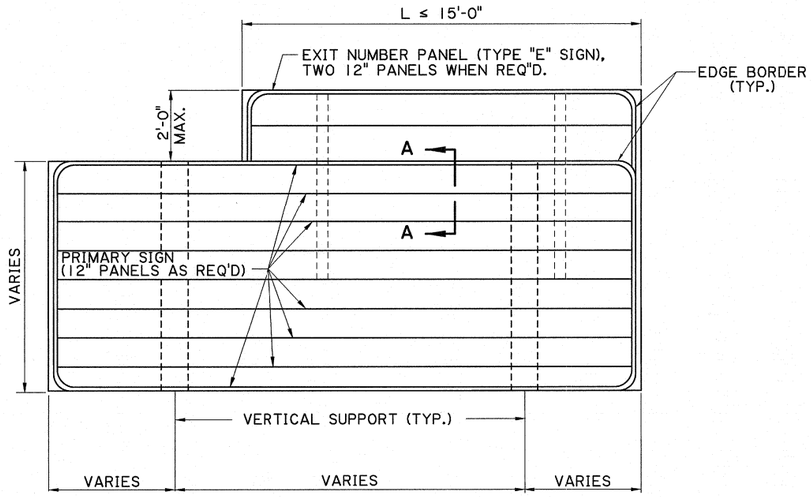


BACK ELEVATION



DETAIL "A"

2" LETTERING IN LAST 12" OF SIGN, SEE MISCELLANEOUS NOTE ON GENERAL NOTE SHEET.



FRONT ELEVATION ⊠

(SEE SHEET NO. 4 OF 16 FOR SECTION VIEW)

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

NOTES:

ALL 12" EXTRUDED ALUMINUM PANELS SHALL BE ALUMINUM ALLOY 6063-T6.
ALL POST CLIPS SHALL BE ALUMINUM ALLOY 356-T6.
ALL EXTRUDED PANEL BOLTS AND POST CLIP BOLTS SHALL BE ALUMINUM.
ALL HEX LOCK NUTS SHALL BE ALUMINUM ALLOY 2017-T4.
ALL POST CLIP BOLTS SHALL BE TORQUED TO A MINIMUM OF 175 IN.-LBS.
ALL POST CLIP BOLTS, SHALL HAVE HEADS DESIGNED TO FIT THE BOLT SLOTS IN THE PANELS.

TYPE "E" SIGNS SHALL BE ATTACHED TO PRIMARY SIGNS WITH ALUMINUM TEE SUPPORTS, (DOUBLE THE HEIGHT OF THE TYPE "E" SIGN PLUS ONE (1) FOOT, ONE (1) INCH FOR LENGTH OF TEE), POST CLIPS, POST CLIP BOLTS, AND HEX LOCK NUTS.

FOR NEW OVERHEAD SIGNS (INCLUDING FASCIA MOUNTED) INCORPORATING EXISTING MOUNTS, THE CONTRACTOR WILL PLACE VERTICAL SUPPORT ANGLES WITHOUT SPLICES THAT EXTEND THE FULL HEIGHT OF THE EXTRUDED PRIMARY SIGN PANEL.

FOR NEW TYPE "D" SIGNS INCORPORATING EXISTING MOUNTS, THE EXISTING POST MAY BE REUSED IF THE NEW SIGN PANEL DOES NOT EXTEND OVER 2'-0" ABOVE THE EXISTING POST. SUCH NEW SIGNS WILL BE MOUNTED TO ALUMINUM TEE SUPPORTS BEGINNING AT THE TOP OF THE SIGN AND EXTENDING DOWNWARD FROM THE TOP OF THE POST THE DISTANCE THE NEW SIGN IS ABOVE THE EXISTING POST PLUS 1'-0". ONE TEE IS REQUIRED ADJACENT TO EACH EXISTING POST AND ATTACHED WITH POST CLIPS AS SHOWN FOR NEW TYPE "E" SIGNS. IF THE NEW SIGN EXTENDS OVER 2'-0" ABOVE THE EXISTING POST, THE CONTRACTOR IS TO REPLACE THE EXISTING POST AND MEET DETAILS FOR NEW CONSTRUCTION.

REFLECTIVE SHEETING FOR EXTRUDED PANELS: ONLY SPLICES THAT OCCUR AS PART OF THE MANUFACTURING PROCESS SHALL BE PERMITTED. A MAXIMUM OF TWO VERTICAL SPLICES ON ANY ONE SIGN FABRICATED USING EXTRUDED PANELS, WITH ONE SPLICE PER EXTRUDED PANELS SHALL BE ALLOWED. ALL "EXIT ONLY" PANELS THAT ARE DETAILED WITH THE TOP AND/OR BOTTOM EDGE NOT AT AN EXTRUDED PANEL EDGE SHALL BE FABRICATED FROM .080" ALUMINUM AND ATTACHED AS AN OVERLAY. ALL OTHER "EXIT ONLY" PANELS SHALL BE FABRICATED BY APPLYING THE YELLOW REFLECTIVE SHEETING ON THE EXTRUDED PANELS. THE REFLECTIVE SHEETING APPLIED TO EXTRUDED PANELS SHALL EXTEND APPROXIMATELY 1/4" OVER EACH SIDE AND SHALL BE ADHERED TO THE SIDE OF THE PANEL.

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTES SHEET.

⊠ POSSIBLE LOWER MOUNTED TYPE "E" SIGN NOT SHOWN. WHEN LOWER MOUNT IS REQUIRED, IT SHALL BE CENTERED BETWEEN THE EDGES OF THE MAIN SIGN.

⊖ SPACING AND NUMBER OF SUPPORTS VARIES. (SEE SHT. NO. 2 OF 16)

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED K. BRAUNER
CHECKED P. FOSSIER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 3 OF 16

REVISION DESCRIPTION | BY | NO. | DATE

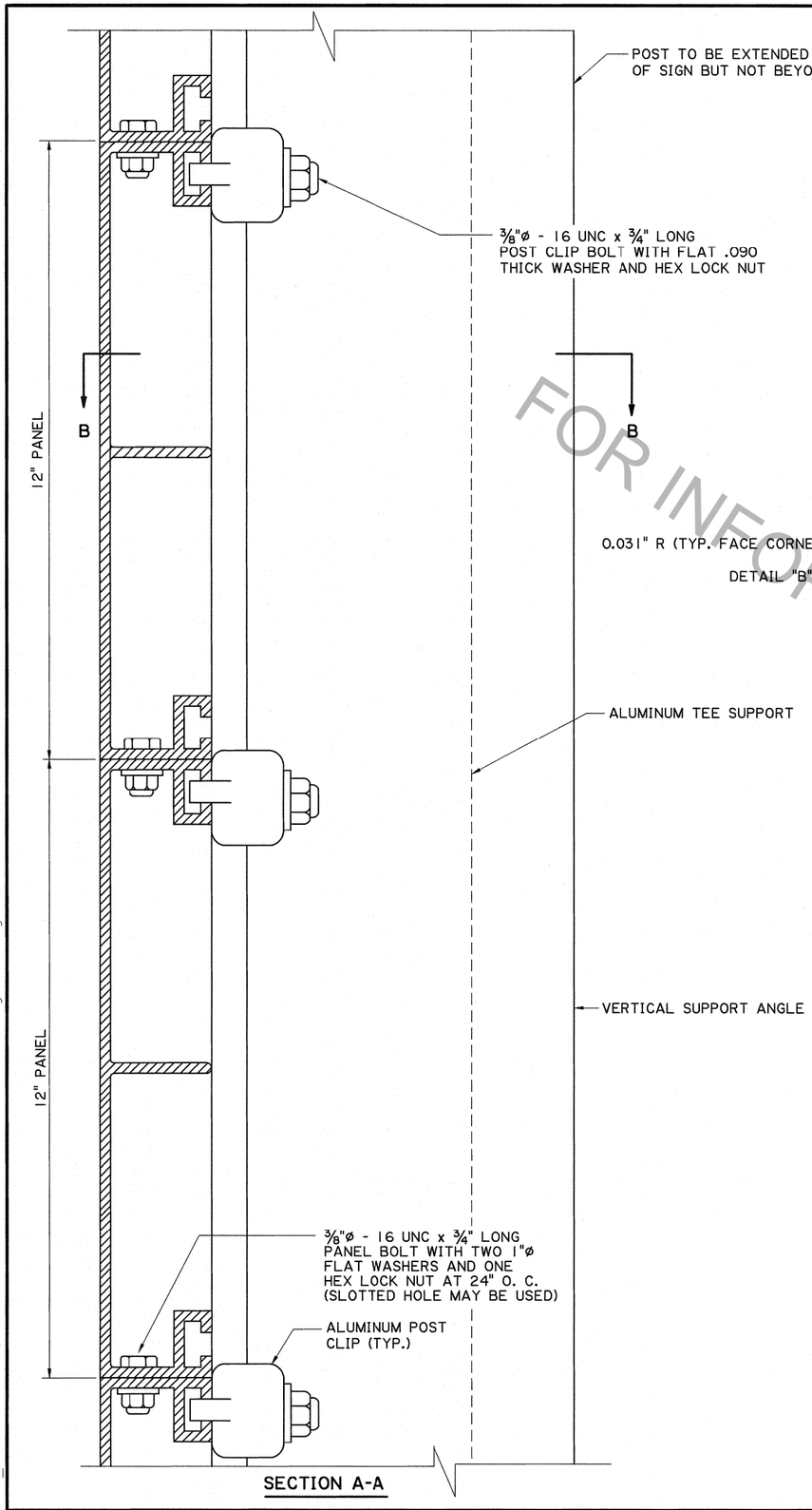
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

EXTRUDED ALUMINUM PANELS

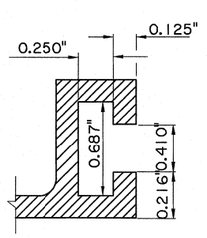
BD.2.7.1.0.3 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

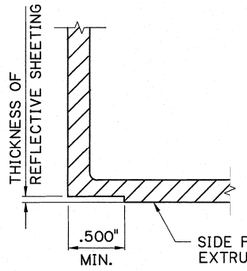
5/25/2017 09:54
IP_PWP:d0695341\BD.2.7.1.0.03 - Overhead Traffic Signs 03.dgn



SECTION A-A



DETAIL "A"



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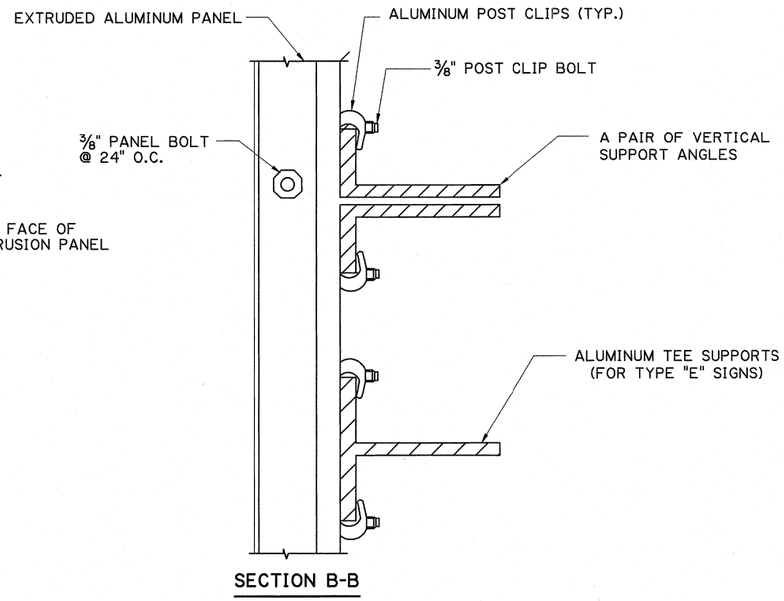

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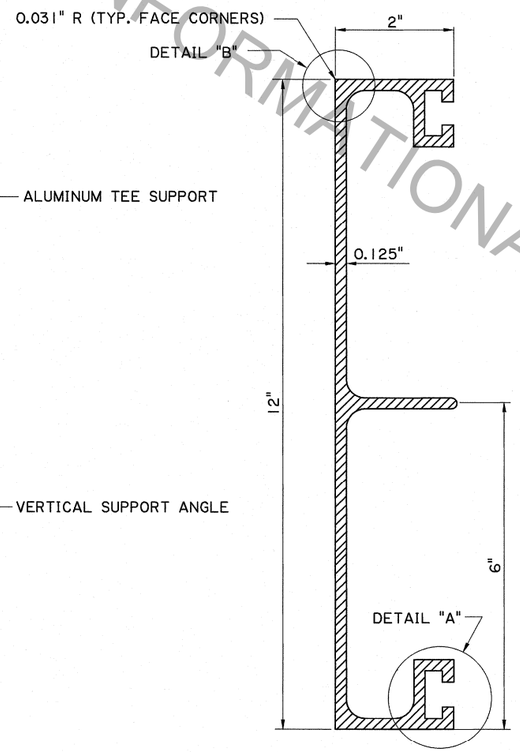
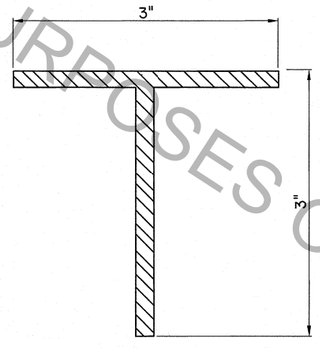
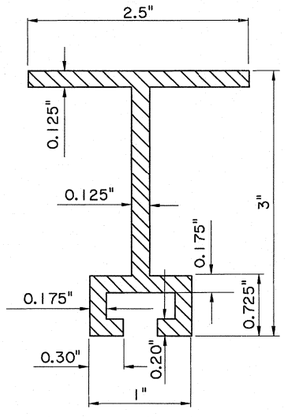


12" PANEL

MINIMUM WALL THICKNESS IS 0.080" UNLESS OTHERWISE SPECIFIED



3"x3"x⅜"



3"x2.5"

ALUMINUM TEE SUPPORTS (FOR TYPE "E" SIGNS)

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

SHEET NUMBER		
PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED K. BRAUNER CHECKED P. FOSSIER	DETAILED I.KORILOVA CHECKED K. BRAUNER	DATE JAN. 2011 SHEET 4 OF 16

NO.	DATE	REVISION DESCRIPTION	BY

EXTRUDED ALUMINUM PANELS

BD.2.7.1.0.4 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

5/25/2017 09:56

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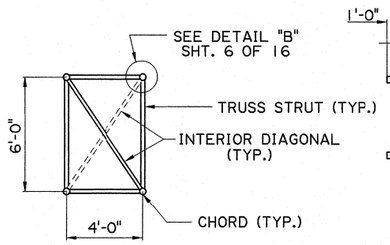
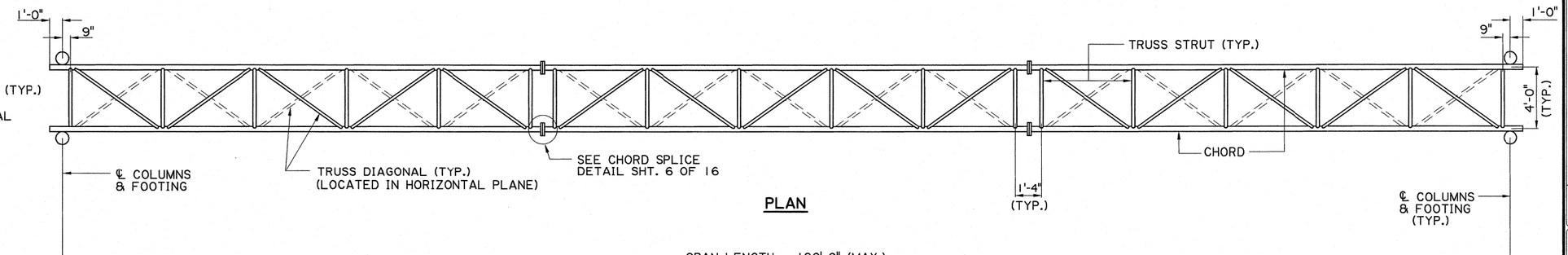
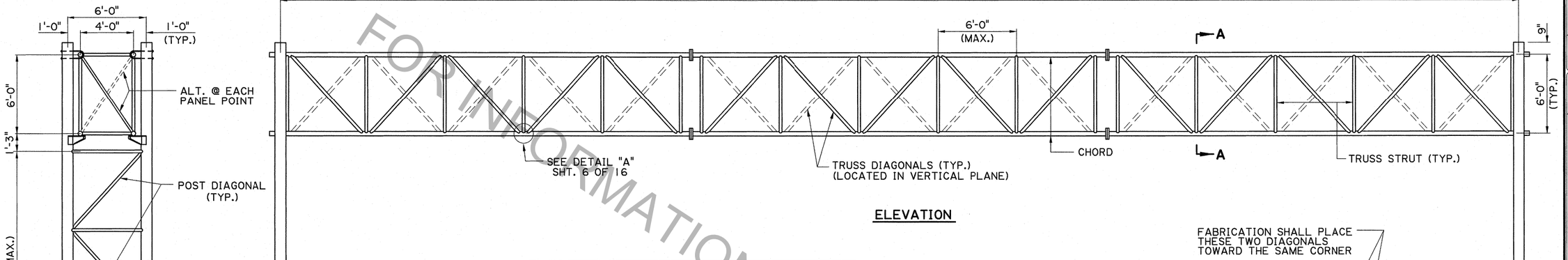


SECTION A-A



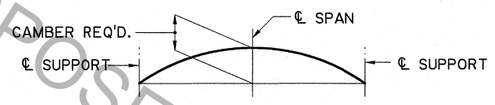
PLAN



ELEVATION

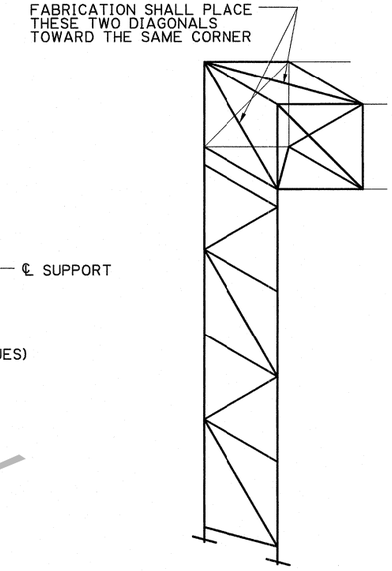
SIDE ELEVATION

ARRANGEMENT OF TRUSS SECTIONS		
SPAN LENGTH UP TO	TRUSS SECTIONS & NO. OF PANELS	ALTERNATE METHOD
60'-0"	2 @ 5	1 @ 10
66'-0"	1 @ 4 & 1 @ 7	1 @ 5 & 1 @ 6
72'-0"	3 @ 4	
78'-0"	2 @ 4 & 1 @ 5	
84'-0"	2 @ 5 & 1 @ 4	2 @ 4 & 1 @ 6
90'-0"	3 @ 5	2 @ 4 & 1 @ 7
96'-0"	2 @ 5 & 1 @ 6	
102'-0"	2 @ 5 & 1 @ 7	
108'-0"	3 @ 6	2 @ 7 & 1 @ 4
114'-0"	2 @ 6 & 1 @ 7	2 @ 7 & 1 @ 5
120'-0"	2 @ 7 & 1 @ 6	2 @ 6 & 1 @ 8



CAMBER DETAIL

(SEE SHT. NO. 7 OF 16 FOR VALUES)



ISOMETRIC OF COLUMN

NOTES:

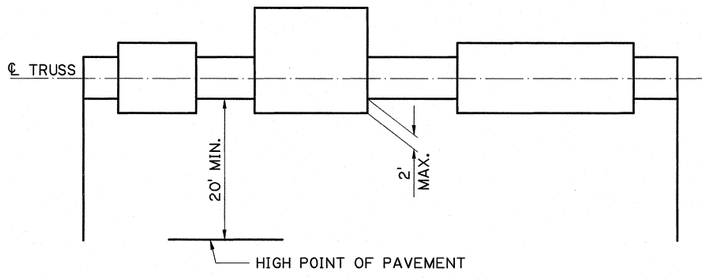
ALL TRUSS AND POST MEMBERS SHALL BE STEEL AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123. STEEL FOR ANCHOR BOLTS SHALL HAVE MIN. Fy = 55 ksi AND SHALL BE GALVANIZED. ALL MISCELLANEOUS STEEL SHALL BE A- 36 AND GALVANIZED AS PER ASTM A- 123. ALL EXPOSED ENDS OF PIPE SHALL BE SEALED WITH EITHER A ¼" PLATE, (MINIMUM THICKNESS WELDED AND GROUND SMOOTH) OR A FRICTION CAP. (SEE SHT. NO. 6 OF 16 FOR DETAILS).

GRINDING OF WELD ON SEAMED PIPE WILL NOT BE REQUIRED, HOWEVER, GOOD SHOP PRACTICES WILL BE FOLLOWED IN THE APPEARANCE OF THE WELD. FOR TRUSS MEMBER SIZES NOT SHOWN, SEE TRUSS DESIGN AND FOOTING DETAIL SHEET.

METHOD OF TRANSPORTATION OF TRUSS FROM POINT OF FABRICATION TO ERECTION LOCATION SHALL SUPPORT THE TRUSS AND NOT UTILIZE THE TRUSS TO CARRY LOAD.

THIS SHEET TO BE USED WITH THE OVERHEAD TRUSS DESIGN TABLES AND THE WIND LOAD MAP AND GENERAL NOTES SHEET.

* SIGN POSTS TO BE PROTECTED WITH GUARD RAIL OR BARRIER SYSTEM AS PER LADOTD GUARD RAIL STANDARD PLANS. GUARD RAIL LAYOUT DETAILS ARE TO BE INCLUDED IN THE PLANS.



LOCATION OF TRUSS AND SIGNS

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
8/29/11

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED C. PORTER
CHECKED K. BRAUNER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 5 OF 16

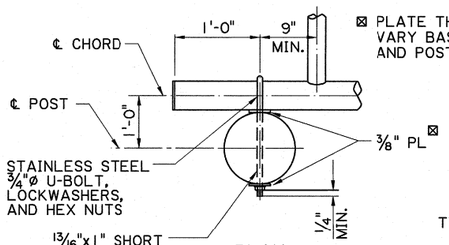
REVISION DESCRIPTION | BY | NO. | DATE

OVERHEAD SIGN TRUSS

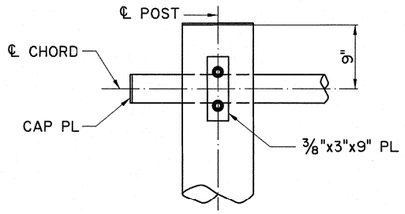
(STEEL)

BD.2.7.1.0.5 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

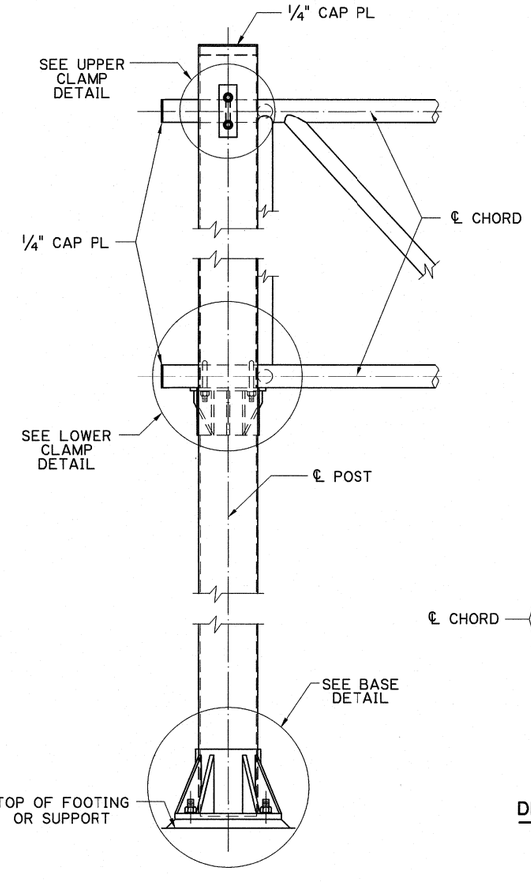


PLAN

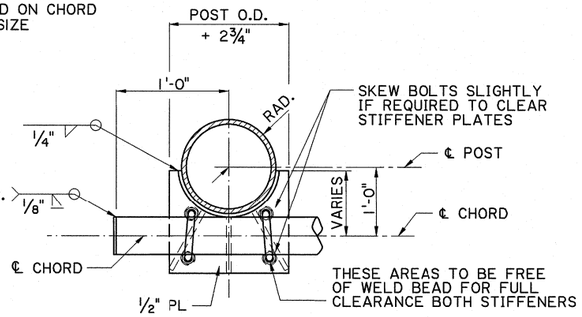


ELEVATION

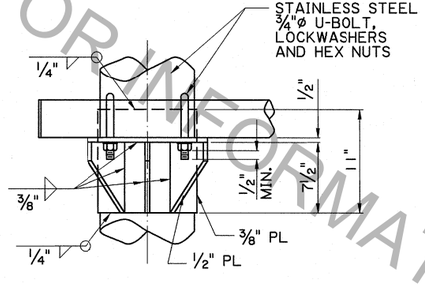
UPPER CLAMP DETAIL



POST ELEVATION

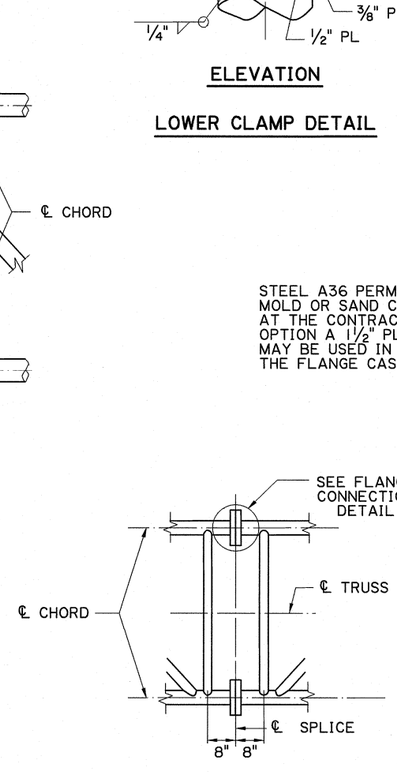


PLAN

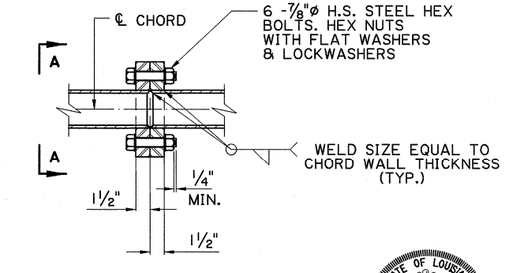


ELEVATION

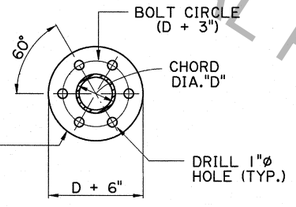
LOWER CLAMP DETAIL



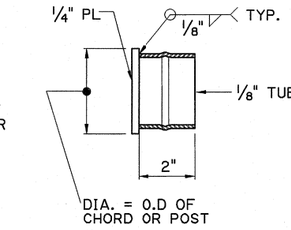
DETAIL OF CHORD SPLICE



FLANGE CONNECTION DETAIL



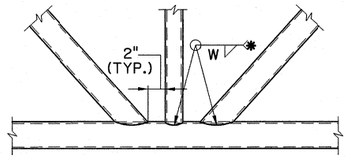
SECTION A-A



FRICTION CAP DETAIL

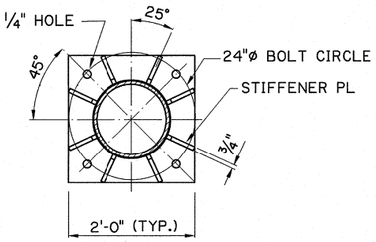
CAP PL DETAIL

FRICTION WATER TIGHT CAP MAY BE USED ON EXPOSED ENDS OF ALL PIPES, SEE DETAIL.



DETAIL "A"

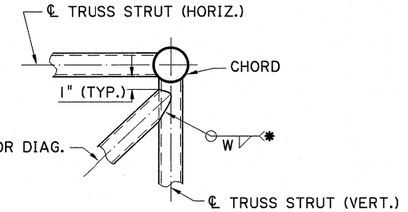
✱ "W" WILL EQUAL THE WALL THICKNESS OF THE TRUSS STRUT OR TRUSS DIAGONAL WELDED TO THE CHORD. WELD SIZE NEED NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.



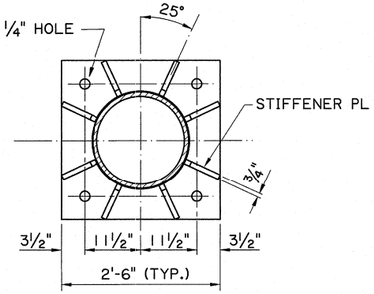
PLAN

BASE DETAIL - ELEVATION ⊙

(PLATE "A")



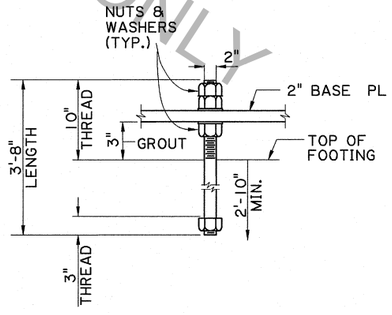
DETAIL "B"



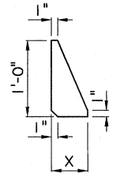
PLAN

BASE DETAIL - ELEVATION △

(PLATE "B")



2"ø ANCHOR BOLT DETAIL



"X" = $\frac{(2'\text{-}1\frac{3}{4}" - D)}{2}$ (PLATE "A")

"X" = $\frac{(2'\text{-}8\frac{1}{2}" - D)}{2}$ (PLATE "B")

¾" STIFFENER PL

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

⊙ TO BE USED WITH FOOTING "A" ONLY. (SEE SHT. NO. 8 OF 16)

△ TO BE USED WITH FOOTING "B" ONLY. (SEE SHT. NO. 8 OF 16)

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED K. BRAUNER	DETAILED I.KOURILOVA	DATE JAN. 2011
CHECKED C. PORTER	CHECKED K. BRAUNER	SHEET 6 OF 16

NO.	DATE	REVISION DESCRIPTION	BY

MISCELLANEOUS DETAILS (STEEL)

BD.2.7.1.0.6 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

5/25/2017 10:17

IP_PWP:d0695341\BD.2.7.1.0.06 - Overhead Traffic Signs 06.dgn

GROUND MOUNTED ☑ OVERHEAD SIGN TRUSS DESIGN TABLE

90 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	1	15/16"	N/A	N/A	N/A	N/A
60 - 84 FT	1	1 7/16"	2	1 9/16"	3	1 1/2"
84 - 96 FT	1	1 7/8"	3	1 15/16"	4	1 13/16"
96 - 120 FT	2	2 13/16"	4	2 3/4"	5	2 11/16"

110 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	1	15/16"	N/A	N/A	N/A	N/A
60 - 84 FT	3	1 7/16"	5	1 7/16"	6	1 7/16"
84 - 96 FT	3	1 13/16"	5	1 13/16"	6	1 3/4"
96 - 120 FT	5	2 1/2"	6	2 1/2"	8 *	2 1/2"

130 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	5	7/8"	N/A	N/A	N/A	N/A
60 - 84 FT	5	1 3/8"	8 *	1 3/8"	9 *	1 3/8"
84 - 96 FT	6	1 11/16"	8 *	1 11/16"	9 *	1 5/8"
96 - 120 FT	7	2 3/8"	10 *	2 3/8"	11 *	2 3/8"

STRUCTURE MOUNTED ⊗ OVERHEAD SIGN TRUSS DESIGN TABLE

90 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	1	15/16"	N/A	N/A	N/A	N/A
60 - 84 FT	2	1 7/16"	4	1 7/16"	4	1 7/16"
84 - 96 FT	2	1 13/16"	4	1 13/16"	5	1 3/4"
96 - 120 FT	4	2 9/16"	5	2 11/16"	7	2 1/2"

110 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	3	7/8"	N/A	N/A	N/A	N/A
60 - 84 FT	4	1 3/8"	7	1 3/8"	8	1 3/8"
84 - 96 FT	5	1 11/16"	7	1 11/16"	8	1 11/16"
96 - 120 FT	7	2 3/8"	8	2 1/2"	10	2 3/8"

130 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	6	7/8"	N/A	N/A	N/A	N/A
60 - 84 FT	7	1 5/16"	9	1 3/8"	10	1 5/16"
84 - 96 FT	8	1 5/8"	10	1 5/8"	11	1 5/8"
96 - 120 FT	10	2 1/4"	11	2 3/8"	N/A	N/A

OVERHEAD TRUSS MEMBER SIZES

MEMBER DIAMETER (IN.) x MEMBER THICKNESS (IN.)

GROUP NO.	POSTS	CHORDS	TRUSS STRUTS	TRUSS DIAGONALS	INTERIOR DIAGONALS	POST STRUTS	POST DIAGONALS
1	12.75 X 0.25	4.0 X 0.226	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
2	12.75 X 0.25	4.5 X 0.237	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
3	14.00 X 0.25	4.5 X 0.237	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
4	14.00 X 0.25	5.563 X 0.258	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
5	16.00 X 0.25	5.563 X 0.258	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
6	18.00 X 0.25	5.563 X 0.258	2.875 X 0.203	2.875 X 0.203	2.875 X 0.203	3.5 X 0.216	4.0 X 0.226
7	18.00 X 0.25	5.563 X 0.375	2.875 X 0.203	2.875 X 0.203	2.875 X 0.203	3.5 X 0.216	4.0 X 0.226
8	18.00 X 0.312	5.563 X 0.375	2.875 X 0.203	3.5 X 0.216	2.875 X 0.203	3.5 X 0.216	4.5 X 0.237
9	18.00 X 0.375	5.563 X 0.375	2.875 X 0.203	3.5 X 0.216	2.875 X 0.203	3.5 X 0.216	5.563 X 0.258
10	18.00 X 0.375	5.563 X 0.50	2.875 X 0.203	3.5 X 0.216	2.875 X 0.203	3.5 X 0.216	5.563 X 0.258
11	18.00 X 0.438	5.563 X 0.50	2.875 X 0.203	4.0 X 0.226	2.875 X 0.203	3.5 X 0.216	6.625 X 0.432

HOW TO USE TABLES:

1. DETERMINE IF TRUSS IS GROUND MOUNTED OR STRUCTURE MOUNTED.
2. FIND WIND VELOCITY USING WIND MAP ON GENERAL NOTES SHEET (SHT. NO. 1 OF 16) AND CHOOSE APPROPRIATE SECTION IN TABLE.
3. DETERMINE DESIGN SIGN AREA AND SELECT THE APPROPRIATE COLUMN. (DESIGN SIGN AREA = SUM OF ACTUAL SIGN PANEL AREAS X 1.3)
4. DETERMINE SPAN LENGTH AND CHOOSE APPROPRIATE ROW.
5. FIND CORRESPONDING GROUP NUMBER IN THE "OVERHEAD TRUSS MEMBER SIZES" TABLE AND APPLY MEMBER SIZES ACCORDINGLY. FILL IN THE "OVERHEAD TRUSS DATA TABLE" WITH THE APPROPRIATE DESIGN INFORMATION (SEE SHT NO. 12 OF 16).

NOTES:

ALL MEMBERS LISTED IN THE OVERHEAD TRUSS MEMBER SIZES TABLE SHALL BE STEEL PIPE OR TUBE AND SHALL HAVE A MINIMUM YIELD STRENGTH (Fy) OF 42 KSI.

TUBE OR A.N.S.I. PIPE SECTIONS PROVIDING EQUAL OR GREATER STRENGTH THAN ANY MEMBER DESIGNATED IN THE TABLE MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

ALL DESIGNS MUST BE CONFIRMED ON THE FABRICATION DRAWINGS AND APPROVED BY LA DOTD BEFORE FABRICATION IS INITIATED.

ALL STRUCTURE MOUNTED TRUSSES SHALL USE PLATE "B". (SEE SHT. NO. 6 OF 16.)

* FOR GROUND MOUNTED TRUSSES, GROUP NOS. 8 THROUGH 11 SHALL USE PLATE "B" AND FOOTING "B" ONLY. (SEE SHT. NO. 8 OF 16)

☑ GROUND MOUNTED TRUSSES USED ON EMBANKMENTS ≥ 10 FT. HIGH SHALL BE DESIGNED USING THE STRUCTURE MOUNTED DESIGN TABLES.

⊗ A DESIGN REQUEST MUST BE SUBMITTED FOR ALL TRUSSES WHOSE SIGN CENTERS ARE MORE THAN 50 FT. ABOVE THE SURROUNDING GROUNDLINE.

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
9/29/11

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED C. PORTER
CHECKED K. BRAUNER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 7 OF 16

REVISION DESCRIPTION | BY | NO. | DATE

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

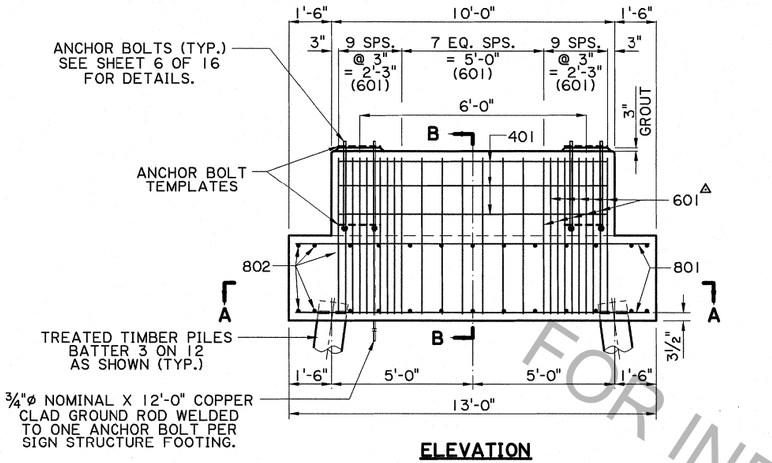
OVERHEAD TRUSS DESIGN TABLES

(STEEL)

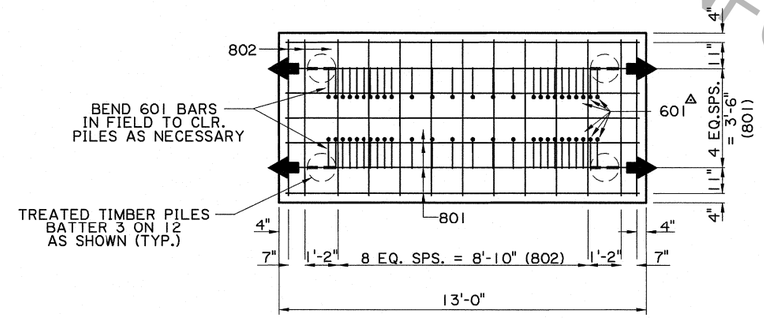
BD.2.7.1.0.7 - OVERHEAD TRAFFIC SIGNS

DOTD

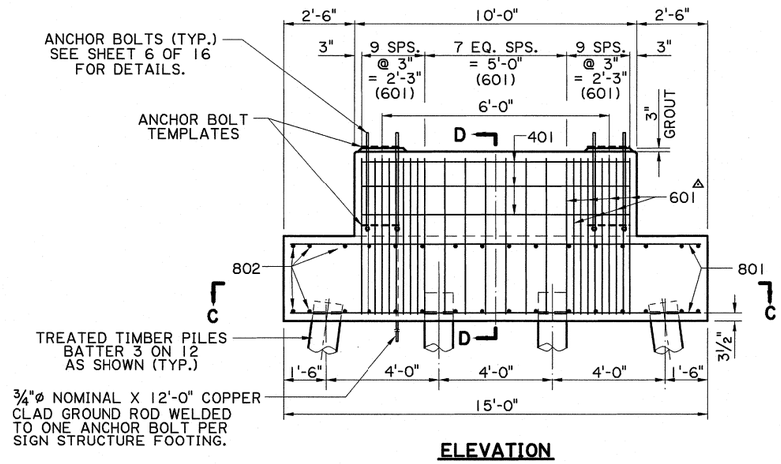
BRIDGE AND STRUCTURAL DESIGN



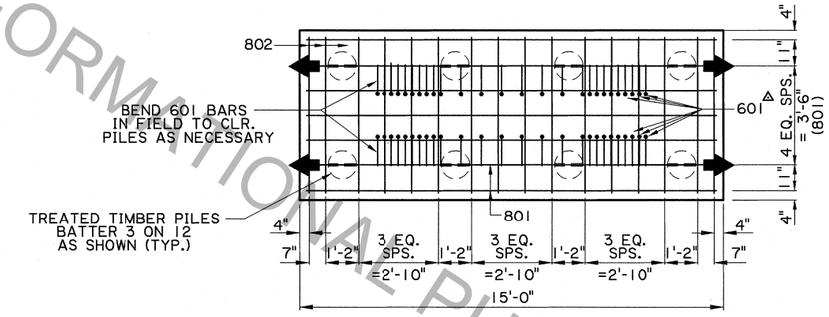
ELEVATION



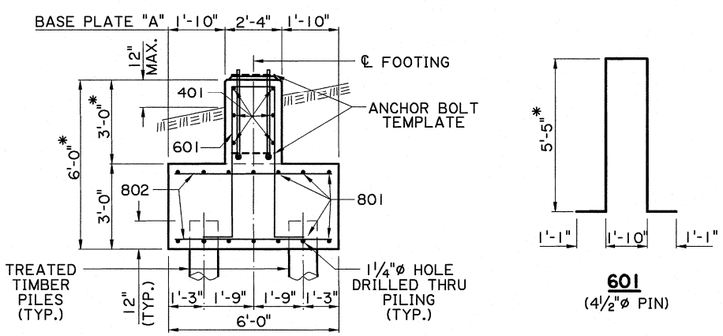
SECTION A-A



ELEVATION

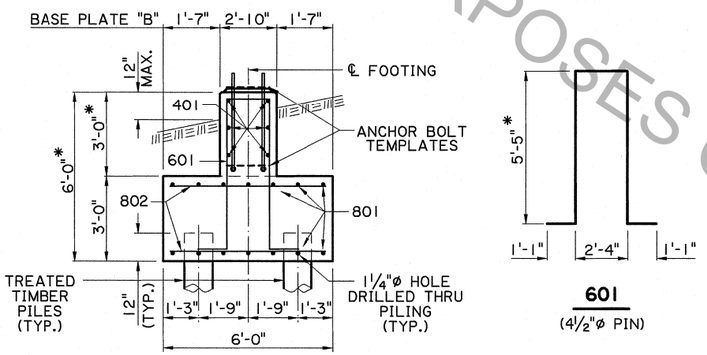


SECTION C-C



SECTION B-B

601
(4½"ø PIN)



SECTION D-D

601
(4½"ø PIN)

FOOTING "A" ⊠

FOOTING PILE DATA TABLE ⊠				
WIND ZONE	FOOTING TYPE	PILE SIZE (IN.) BUTT	PILE SIZE (IN.) TIP	PILE LENGTH (FT.)
1	A	12.4	8	55
2	A	12.7	8	60
	B	11.9	8	50
3	A	13.9	8	75
	B	13.9	8	75

FOOTING "B" ⊠

ESTIMATED QUANTITIES (FOOTING "A")				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	14	12'-6"	175'-0"	FOOTING
802	26	5'-6"	143'-0"	FOOTING
TOTAL NO. 8 BARS = 318'-0"			=	849 LBS.
601	26	14'-10"	385'-8"	STIRRUPS IN FOOTING & PED
TOTAL NO. 6 BARS = 385'-8"			=	579 LBS.
401	6	9'-6"	57'-0"	PEDESTAL
TOTAL NO. 4 BARS = 57'-0"			=	38 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	1466 LBS.
TOTAL CLASS A1 CONCRETE			=	11.14 CU.YDS.
STRUCTURAL EXCAVATION			=	40.0 CU.YDS.
STRUCTURAL STEEL			=	(SEE A.B. DETAILS)
⊠⊖ TREATED TIMBER PILES			=	240 LIN. FT.

⊖ WIND ZONE 2 ASSUMED FOR PILE QUANTITIES. FOR OTHER WIND ZONES, ADJUST QUANTITIES ACCORDINGLY. SEE FOOTING PILE DATA TABLE.

ESTIMATED QUANTITIES (FOOTING "B")				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	14	14'-6"	203'-0"	FOOTING
802	32	5'-6"	176'-0"	FOOTING
TOTAL NO. 8 BARS = 379'-0"			=	1012 LBS.
601	26	15'-4"	398'-8"	STIRRUPS IN FOOTING & PED
TOTAL NO. 6 BARS = 398'-8"			=	599 LBS.
401	6	9'-6"	57'-0"	PEDESTAL
TOTAL NO. 4 BARS = 57'-0"			=	38 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	1649 LBS.
TOTAL CLASS A1 CONCRETE			=	12.92 CU.YDS.
STRUCTURAL EXCAVATION			=	45.0 CU.YDS.
STRUCTURAL STEEL			=	(SEE A.B. DETAILS)
⊠⊖ TREATED TIMBER PILES			=	400 LIN. FT.

⊖ WIND ZONE 2 ASSUMED FOR PILE QUANTITIES. FOR OTHER WIND ZONES, ADJUST QUANTITIES ACCORDINGLY. SEE FOOTING PILE DATA TABLE.

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
9/29/11

STATE OF LOUISIANA
CHING-NIEN TSAI
REG. No. 23092
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

FOR GEOTECHNICAL INFORMATION ONLY

NOTES:

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTES SHEET.

MAXIMUM PILE DESIGN LOAD IS 30 TONS PER PILE.

ANCHOR BOLTS SHALL BE FURNISHED IN A PREPOSITIONED ANCHOR BOLT ASSEMBLY. (TWO TEMPLATES REQUIRED)

FOR BASE PLATE DETAILS, SEE SHT. NO. 6 OF 16.

* THESE DIMENSIONS MAY BE VARIED ± ONE FOOT TO ADJUST ELEVATION FOR SITE CONDITIONS. ADJUST BARS 401 & 601 ACCORDINGLY.

△ NO. 601 BARS MAY BE MOVED TO CLEAR TRUSS ANCHOR BOLTS.

⊠ DRILLED SHAFT ALTERNATE ALLOWED. SEE SHT. NOS. 13 & 14 OF 16.

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED C. PORTER | CHECKED K. BRAUNER | DETAILED I.KOURILOVA | CHECKED K. BRAUNER | DATE JAN. 2011 | SHEET 8 OF 16

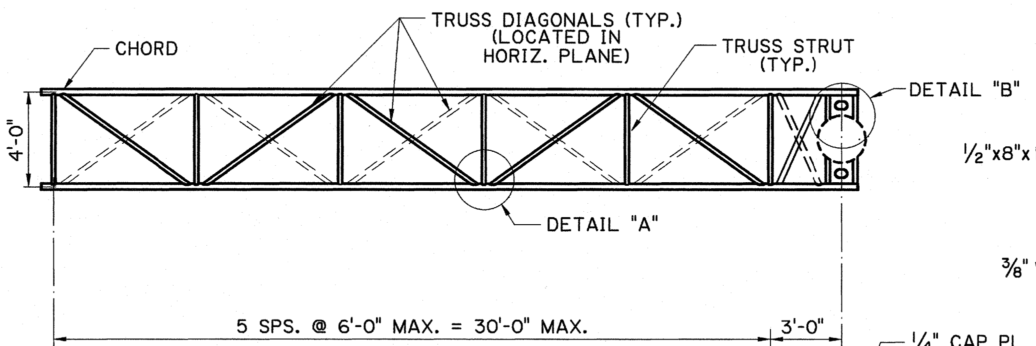
K.M.B. BY

NO. 1 | DATE 02-13-17 | UPDATED FOR 2016 SPECIFICATIONS
REVISION DESCRIPTION

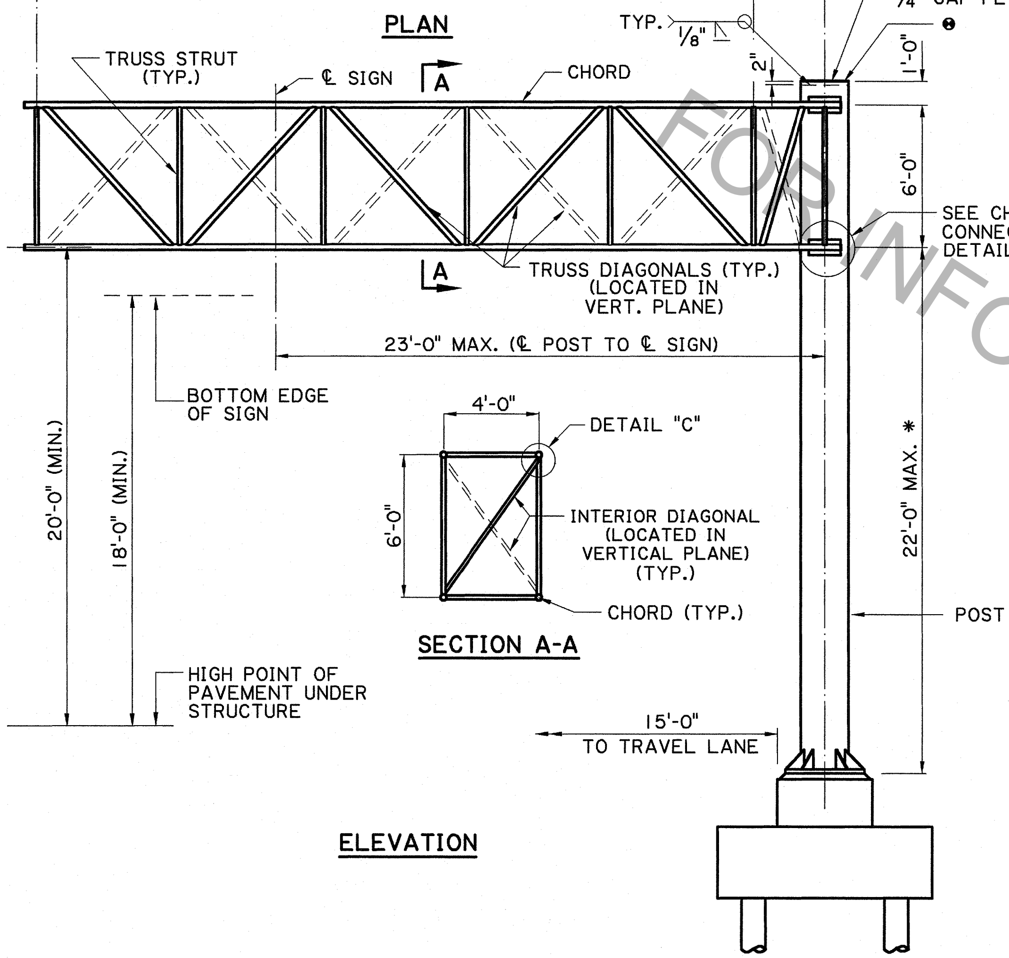
PILE FOOTING DETAILS

BD.2.7.1.0.8 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

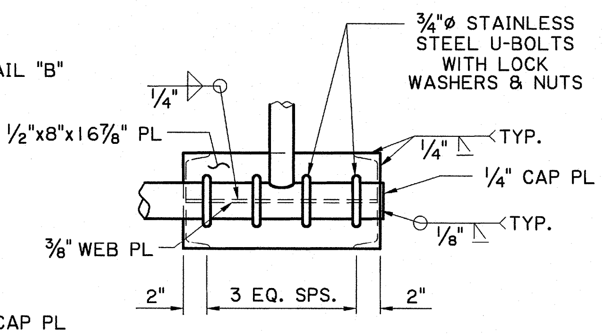


PLAN

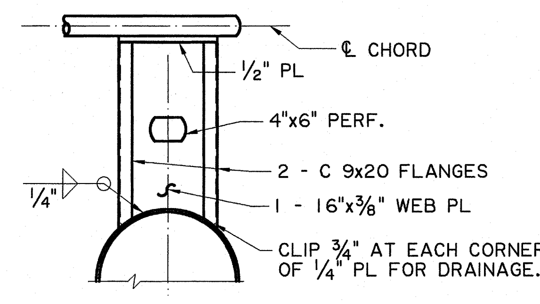


SECTION A-A

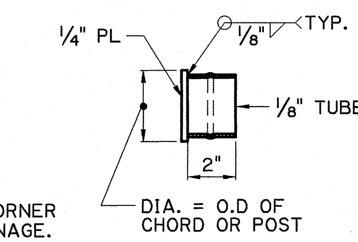
ELEVATION



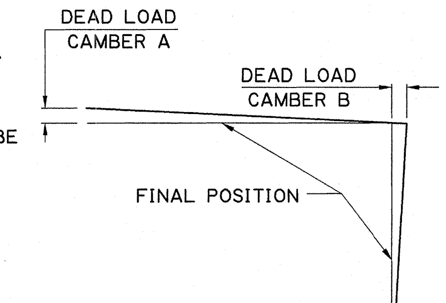
CHORD CONNECTION



DETAIL B

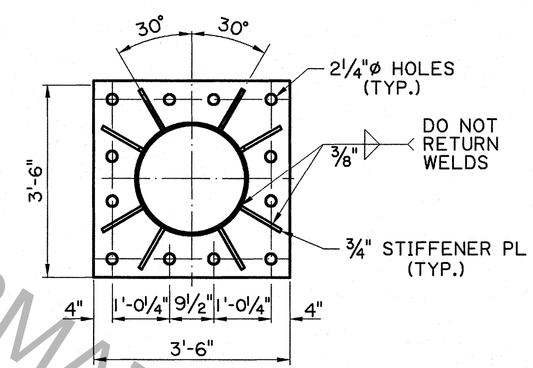


FRICTION CAP DETAIL

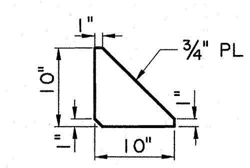


CAMBER DIAGRAM

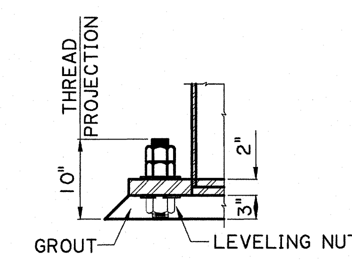
(SEE SHT. NO 11 OF 16 FOR CAMBER VALUES)



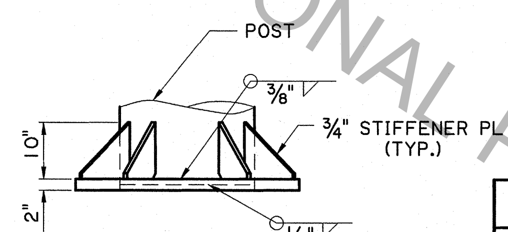
PLAN



3/4" STIFFENER PLATE



ANCHOR CONNECTION



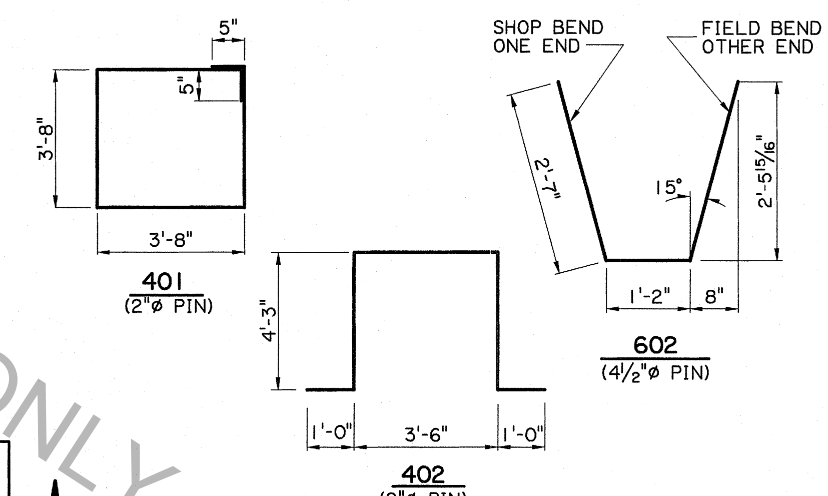
ELEVATION

(POST BASE)

ESTIMATED QUANTITIES (ONE FOOTING)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
601	72	7'-8"	552'-0"	FOOTING
602	8	6'-4"	50'-8"	FOOTING
TOTAL NO. 6 BARS = 602'-8"		=		905 LBS.
401	4	15'-6"	62'-0"	STIRRUPS IN FOOTING
402	6	14'-0"	84'-0"	STIRRUPS IN FOOTING
TOTAL NO. 4 BARS = 146'-0"		=		98 LBS.
TOTAL DEFORMED REINFORCING STEEL		=		1003 LBS.
TOTAL CLASS A1 CONCRETE		=		10.17 CU.YDS.
STRUCTURAL EXCAVATION		=		34.7 CU.YDS.
STRUCTURAL STEEL (ANCHOR BOLTS)		=		578 LBS.
⊠ ⊖ TREATED TIMBER PILES		=		200 LIN.FT.

⊖ WIND ZONE 2 ASSUMED FOR PILE QUANTITIES. FOR OTHER WIND ZONES, ADJUST QUANTITIES ACCORDINGLY. SEE FOOTING PILE DATA TABLE.

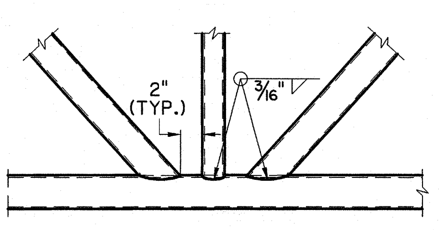
FOOTING PILE DATA TABLE ⊠			
WIND ZONE	PILE SIZE (IN.)		PILE LENGTH (FT.)
	BUTT	TIP	
1	11.6	8	45
2	11.9	8	50
3	13.9	8	75



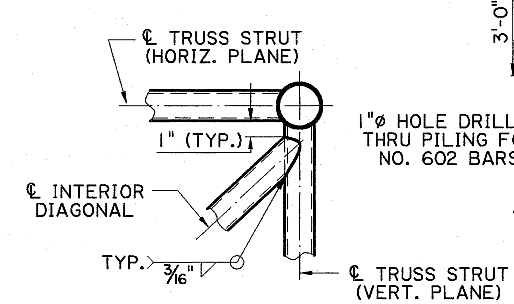
* IN SPECIAL CASES, WITH PRIOR APPROVAL FROM THE D.O.T.D. BRIDGE DESIGN ENGINEER, THIS DIMENSION MAY BE EXCEEDED.

△ ANCHOR BOLTS TO BE TIGHTENED ACCORDING TO SPECIAL PROVISIONS. ANCHOR BOLTS SHALL BE FURNISHED IN A PREPOSITIONED ANCHOR BOLT ASSEMBLY. (TWO TEMPLATES REQUIRED)

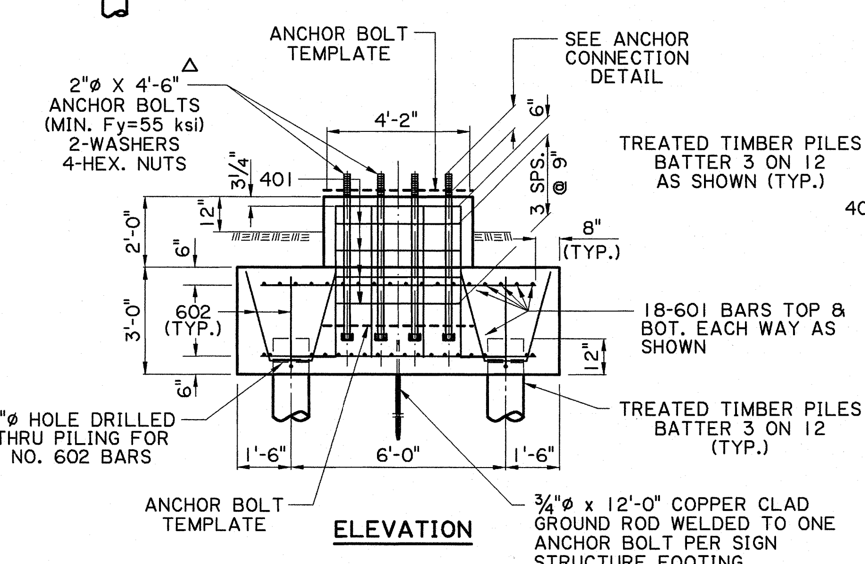
❸ ALTERNATE CAP: FRICTION WATER TIGHT CAP MAY BE USED ON EXPOSED ENDS OF ALL PIPES. SEE DETAILS.



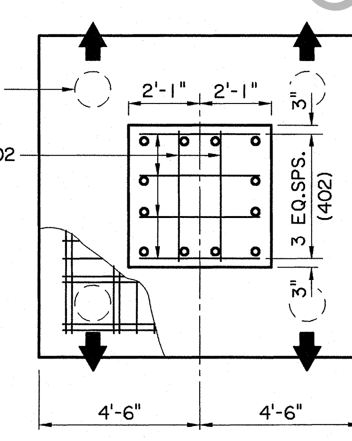
DETAIL A



DETAIL C



ELEVATION



PLAN

DIRECTION OF TRAFFIC

FOOTING DETAIL ⊠

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

[illegible]
8/29/11

STATE OF LOUISIANA
CHING-NIEN TSAI
REG. No. 23092
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

[illegible]
8/29/11

FOR GEOTECHNICAL INFORMATION ONLY

NOTES:

ALL TRUSS AND POST MEMBERS SHALL BE STEEL AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123.

THIS SHEET TO BE USED WITH THE CANTILEVER DESIGN TABLES AND THE GENERAL NOTES SHEET.

THE MAXIMUM PILE DESIGN LOAD IS 30 TONS PER PILE.

⊠ DRILLED SHAFT ALTERNATE ALLOWED. SEE SHT. NO. 13 OF 16.

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED K. BRAUNER
CHECKED C. PORTER
DETAILED I.KORILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 9 OF 16

NO.	DATE	REVISION DESCRIPTION	BY
1	02-13-17	UPDATED FOR 2016 SPECIFICATIONS	K.M.B.

STATE OF LOUISIANA · UNION JUSTICE CONFIDENCE

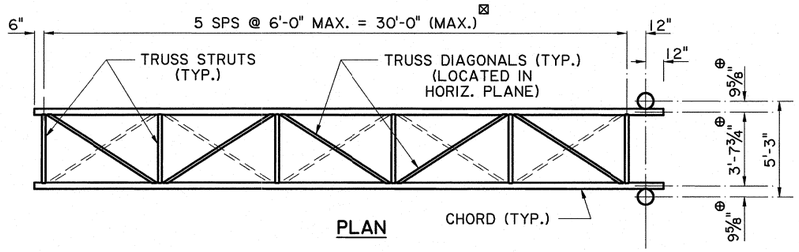
GROUND MOUNTED CANTILEVER

(STEEL)

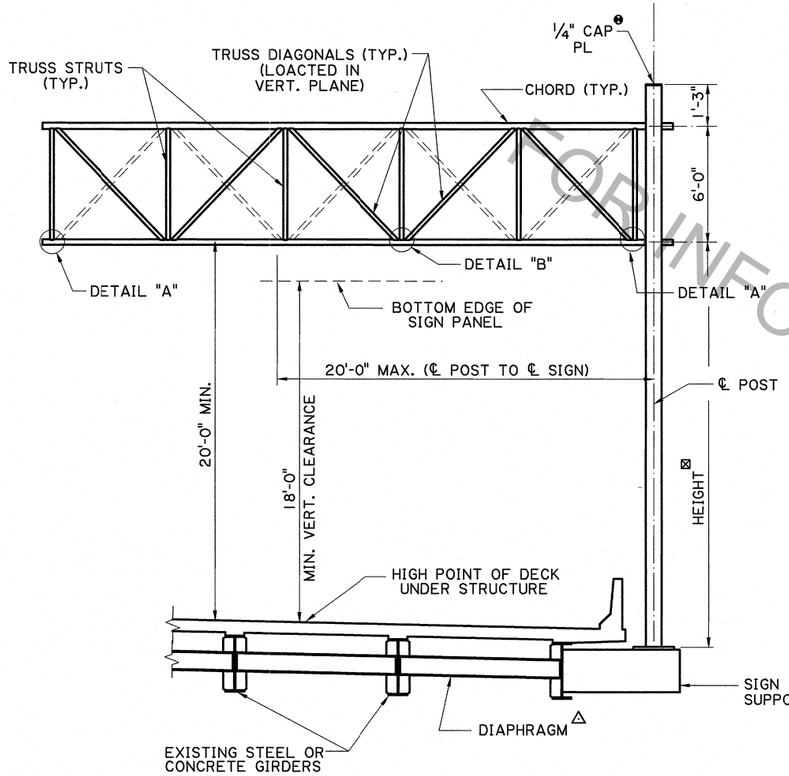
BD.2.7.1.0.9 - OVERHEAD TRAFFIC SIGNS

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT · DOTD

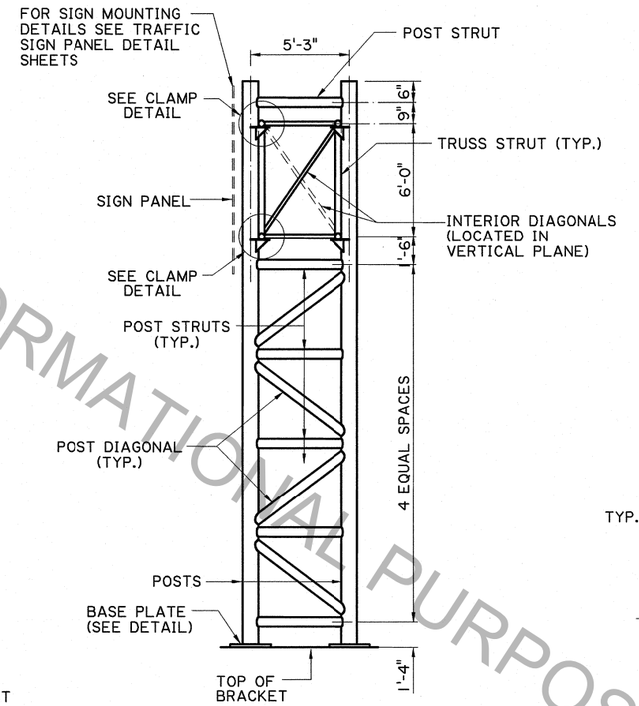
BRIDGE AND STRUCTURAL DESIGN



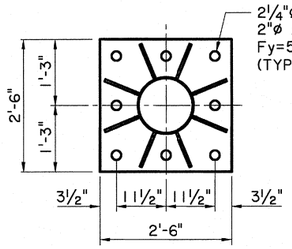
PLAN



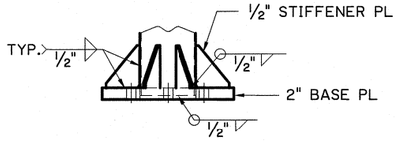
ELEVATION



SIDE ELEVATION

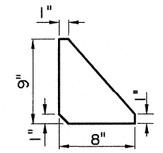


PLAN

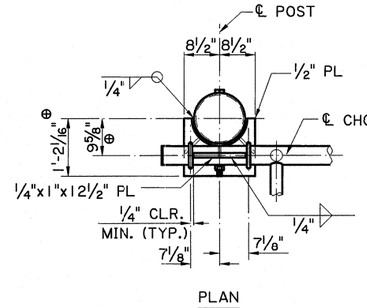


ELEVATION

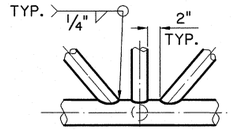
BASE PLATE DETAILS



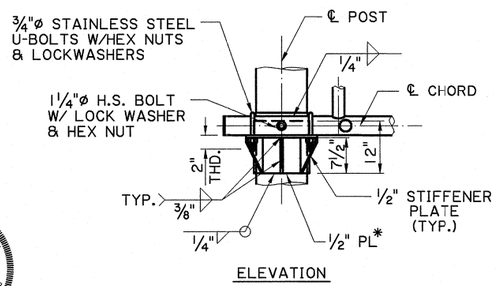
½" STIFFENER PL



PLAN

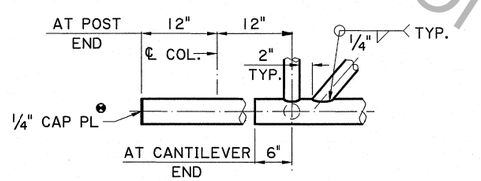


DETAIL "B"

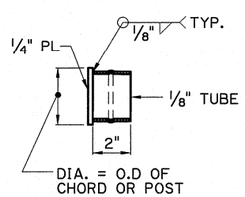


ELEVATION

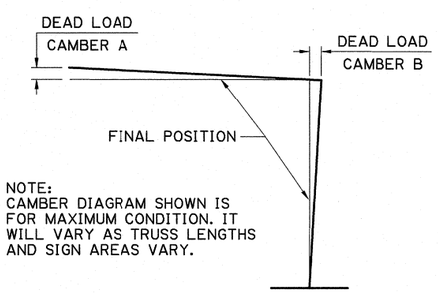
CLAMP DETAIL



DETAIL "A"



FRICTION CAP DETAIL
(ALTERNATE TO WELDED CAP PLATE)



CAMBER DIAGRAM

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

NOTES:

ALL TRUSS AND POST MEMBERS SHALL BE STEEL AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123.

⊕ EXACT DIMENSION TO BE DETERMINED BY FABRICATOR PRIOR TO SUBMITTING SHOP DRAWINGS.

⊠ EXACT LENGTH TO BE DETERMINED IN THE FIELD BEFORE SHOP DRAWINGS ARE SUBMITTED FOR APPROVAL.

✱ TO PREVENT WALL DAMAGE TO POST DURING GALVANIZING, DRILL A HIGH & A LOW ¼" ø HOLE IN THE ½" THICK PLATE FOR VENTING.

△ SIGN SUPPORT MAY BE STEEL OR CONCRETE. IT MAY BE ATTACHED TO THE STRUCTURE (SHOWN) OR MAY BE ATTACHED TO THE SUBSTRUCTURE OR TO AN ADJACENT RETAINING WALL.

❷ SEE FRICTION CAP DETAIL FOR ALTERNATE TO WELDED CAP PLATE.

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED K. BRAUNER	DETAILED I.KOURILOVA	DATE JAN. 2011
CHECKED C. PORTER	CHECKED K. BRAUNER	SHEET 10 OF 16

NO.	DATE	REVISION DESCRIPTION	BY

STRUCTURE MOUNTED CANTILEVER (STEEL)

BD.2.7.1.0.10 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

GROUND MOUNTED ⊕ CANTILEVER DESIGN TABLE

WIND SPEED	GROUP NO.	CAMBER A	CAMBER B	MAX. SIGN AREA
90 MPH	1	2 1/8"	3/4"	300 SQ.FT.
110 MPH	2	1 7/8"	5/8"	300 SQ.FT.
130 MPH	3	1 13/16"	5/8"	300 SQ.FT.

GROUND MOUNTED CANTILEVER MEMBER SIZES

MEMBER DIAMETER (IN.) X MEMBER THICKNESS (IN.)

GROUP NO.	POSTS	CHORDS	TRUSS STRUTS	TRUSS DIAGONALS	INTERIOR DIAGONALS
1	24.0 X 0.375	2.875 X 0.203	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154
2	24.0 X 0.50	3.5 X 0.216	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154
3	24.0 X 0.562	4.5 X 0.237	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154

STRUCTURE MOUNTED ⊡ CANTILEVER DESIGN TABLE

WIND SPEED	GROUP NO.	CAMBER A	CAMBER B	MAX. SIGN AREA
90 MPH	1	6"	3 3/4"	250 SQ.FT.
110 MPH	2	6"	3 3/4"	250 SQ.FT.
130 MPH	3	6"	3 3/4"	200 SQ.FT.

STRUCTURE MOUNTED CANTILEVER MEMBER SIZES

MEMBER DIAMETER (IN.) X MEMBER THICKNESS (IN.)

GROUP NO.	POSTS	CHORDS	TRUSS STRUTS	TRUSS DIAGONALS	INTERIOR DIAGONALS	POST STRUTS	POST DIAGONALS
1	12.75 X 0.375	5.563 X 0.258	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	6.625 X 0.280	6.625 X 0.280
2	14.00 X 0.50	5.563 X 0.375	2.875 X 0.203	2.875 X 0.203	2.875 X 0.203	6.625 X 0.432	6.625 X 0.432
3	14.00 X 0.50	5.563 X 0.375	2.875 X 0.203	2.875 X 0.203	2.875 X 0.203	6.625 X 0.562	6.625 X 0.562

HOW TO USE TABLES:

1. DETERMINE IF CANTILEVER IS GROUND MOUNTED OR STRUCTURE MOUNTED.
2. FIND WIND VELOCITY USING WIND MAP ON GENERAL NOTES SHEET (SHT. NO. 1 OF 16) AND CHOOSE APPROPRIATE ROW IN TABLE.
3. VERIFY THAT THE PROPOSED SIGN AREA DOES NOT EXCEED THE MAXIMUM ALLOWABLE AREA.
4. FIND CORRESPONDING GROUP NUMBER IN THE APPROPRIATE "CANTILEVER MEMBER SIZES" TABLE AND APPLY MEMBER SIZES ACCORDINGLY. FILL IN THE "CANTILEVER DATA TABLE" WITH THE APPROPRIATE DESIGN INFORMATION. (SHT NO. 12 OF 16)

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

NOTES:

ALL MEMBERS LISTED IN THE CANTILEVER MEMBER SIZES TABLE SHALL BE STEEL PIPE OR TUBE AND SHALL HAVE A MINIMUM YIELD STRENGTH (Fy) OF 42 KSI.

TUBE OR A.N.S.I. PIPE SECTIONS PROVIDING EQUAL OR GREATER STRENGTH THAN ANY MEMBER DESIGNATED IN THE TABLE MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

ALL DESIGNS MUST BE CONFIRMED ON THE FABRICATION DRAWINGS AND APPROVED BY LA DOTD BEFORE FABRICATION IS INITIATED.

THE CAMBER VALUES LISTED IN THE TABLES ARE THEORETICAL VALUES ONLY. THE CONTRACTOR SHALL ENSURE THAT AFTER ERECTION OF THE SIGN TRUSS AND INSTALLATION OF THE SIGN PANELS, THE TRUSS SPAN DOES NOT DEFLECT BELOW HORIZONTAL.

⊕ A DESIGN REQUEST MUST BE SUBMITTED FOR ALL GROUND MOUNTED CANTILEVERS USED ON EMBANKMENTS ≥ 10 FT. HIGH.

⊡ A DESIGN REQUEST MUST BE SUBMITTED FOR ALL STRUCTURE MOUNTED CANTILEVERS WHOSE SIGN CENTERS ARE MORE THAN 50 FT. ABOVE THE SURROUNDING GROUNDLINE.

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED K. BRAUNER
CHECKED C. PORTER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 11 OF 16

REVISION DESCRIPTION | DATE | BY | NO.

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

CANTILEVER DESIGN TABLES

(STEEL)

BD.2.7.1.0.11 - OVERHEAD TRAFFIC SIGNS

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT dotd

BRIDGE AND STRUCTURAL DESIGN

OVERHEAD TRUSS DATA TABLE

SIGN NO.	STA.	MOUNTING TYPE (GROUND OR STR.)	WIND SPEED (M.P.H.)	SPAN LENGTH (FT.)	DESIGN SIGN AREA (SQ. FT.)	GROUP NO.	CAMBER (IN.)

CANTILEVER DATA TABLE

SIGN NO.	STA.	MOUNTING TYPE (GROUND OR STR.)	WIND SPEED (M.P.H.)	SIGN AREA (SQ. FT.)	GROUP NO.	CAMBER (IN.)	
						A	B

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED K. BRAUNER
CHECKED C. PORTER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 12 OF 16

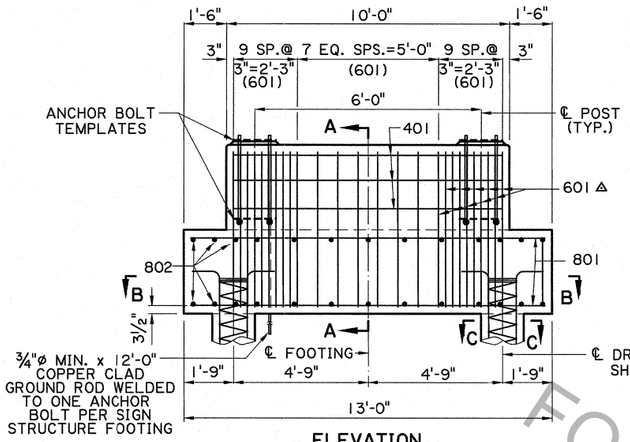
NO.	DATE	REVISION DESCRIPTION	BY

OVERHEAD SIGN DATA TABLES

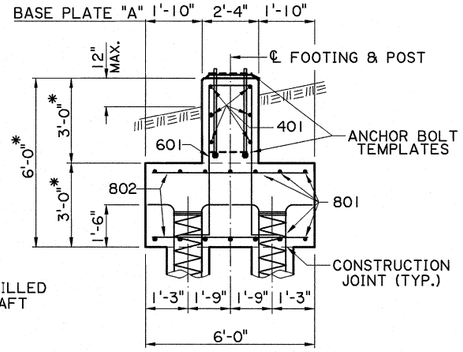
(STEEL)

BD.2.7.1.0.12 - OVERHEAD TRAFFIC SIGNS

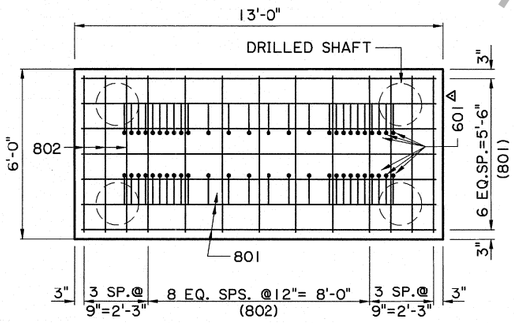
BRIDGE AND STRUCTURAL DESIGN



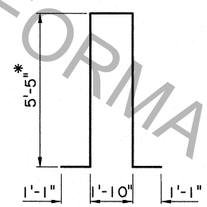
ELEVATION



SECTION A-A



SECTION B-B

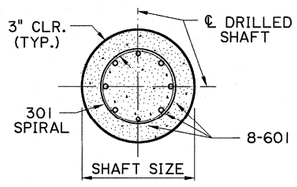


601
(4½"ø PIN)

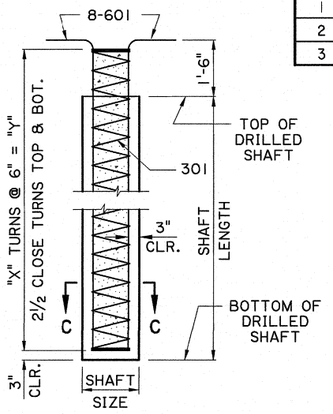
DRILLED SHAFT FOOTING "A"

(OVERHEAD SIGN TRUSS)

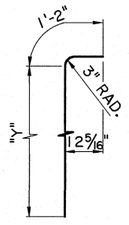
DRILLED SHAFT DATA TABLE (FOOTING "A")				
WIND ZONE	SHAFT SIZE (IN.)	SHAFT LENGTH (FT.)	X	Y (FT.)
1	18	30	62	31
2	18	35	72	36
3	18	60	122	61



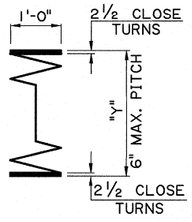
SECTION C-C



DRILLED SHAFT DETAIL



601 ☑
(4½"ø PIN)

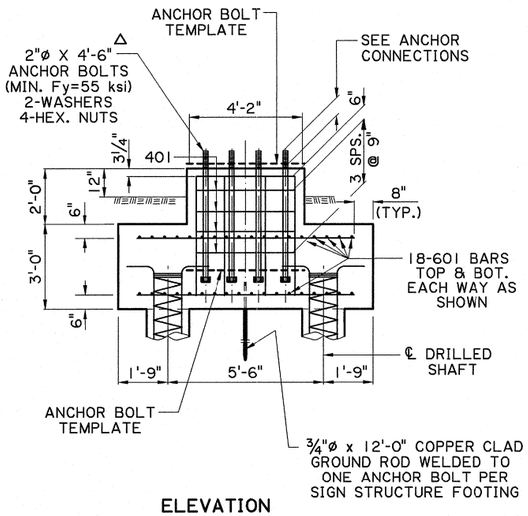


301 ⊗

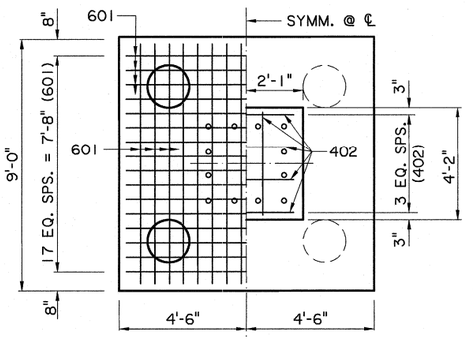
ESTIMATED QUANTITIES (DRILLED SHAFT FOOTING "A")				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	14	12'-6"	175'-0"	FOOTING
802	26	5'-6"	143'-0"	FOOTING
TOTAL NO. 8 BARS = 318'-0"			=	849 LBS.
601	26	14'-10"	385'-8"	STIRRUPS IN FOOTING & PED.
TOTAL NO. 6 BARS = 385'-8"			=	579 LBS.
401	6	9'-6"	57'-0"	PEDESTAL
TOTAL NO. 4 BARS = 57'-0"			=	38 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	1466 LBS.
TOTAL CLASS A1 CONCRETE			=	11.26 CU.YDS.
STRUCTURAL EXCAVATION			=	40.0 CU.YDS.
STRUCTURAL STEEL			=	(SEE ANCHOR BOLT DETAILS)
⊖ DRILLED SHAFT			=	140 LIN. FT.

ESTIMATED QUANTITIES (CANTILEVER SIGN TRUSS ; ONE FOOTING)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
601	72	7'-8"	552'-0"	FOOTING
TOTAL NO. 6 BARS = 552'-0"			=	829 LBS.
401	4	15'-6"	62'-0"	STIRRUPS IN FOOTING & PED.
402	6	14'-0"	84'-0"	STIRRUPS IN FOOTING & PED.
TOTAL NO. 4 BARS = 146'-0"			=	98 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	927 LBS.
TOTAL CLASS A1 CONCRETE			=	10.29 CU.YDS.
STRUCTURAL EXCAVATION			=	34.7 CU.YDS.
STRUCTURAL STEEL			=	(SEE ANCHOR BOLT DETAILS)
⊖ DRILLED SHAFT			=	120 LIN.FT.

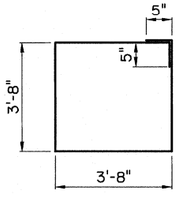
ESTIMATED QUANTITIES (ONE DRILLED SHAFT ; L = 35'-0") ⊖				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
☑ 601	8	37'-2"	297'-4"	DRILLED SHAFT
TOTAL NO. 6 BARS = 297'-4"			=	447 LBS.
⊗ 301	1	237'-3"	237'-3"	SPIRAL
TOTAL NO. 3 BARS = 237'-3"			=	89 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	536 LBS.
TOTAL CLASS S CONCRETE			=	2.29 CU.YDS.



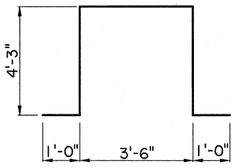
ELEVATION



PLAN



401
(2"ø PIN)



402
(2"ø PIN)

DRILLED SHAFT CANTILEVER FOOTING

DRILLED SHAFT DATA TABLE (CANTILEVER FOOTING)				
WIND ZONE	SHAFT SIZE (IN.)	SHAFT LENGTH (FT.)	X	Y (FT.)
1	18	30	62	31
2	18	30	62	31
3	18	60	122	61

NOTES:

THIS DRILLED SHAFT ALTERNATE IS ALLOWED IN LIEU OF TIMBER PILES AND IS A SUPPLEMENT TO PLAN SHEET NO. 8 OF 16.

FOR ANCHOR BOLT DETAILS, SEE TYPE II TRUSS & CANTILEVER DETAILS AND THE GENERAL NOTES.

ANCHOR BOLTS SHALL BE FURNISHED IN A PREPOSITIONED ANCHOR BOLT ASSEMBLY. (TWO TEMPLATES REQUIRED)

* THESE DIMENSIONS MAY VARY ± ONE FOOT TO ADJUST ELEVATION FOR SITE ADJUST 401 & 601 BARS ACCORDINGLY.

△ NO. 601 BARS MAY BE MOVED TO CLEAR TRUSS ANCHOR BOLTS.

⊖ WIND ZONE 2 ASSUMED FOR SHAFT QUANTITIES. FOR OTHER WIND ZONES, ADJUST QUANTITIES ACCORDINGLY. SEE DRILLED SHAFT DATA TABLES.

☑ IF A SPLICE IS REQUIRED, THE MINIMUM SPLICE LENGTH SHALL BE 2'-9".

⊗ IF A SPLICE IS REQUIRED, THE MINIMUM SPLICE LENGTH SHALL BE 1½ TURNS.

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
8/29/11

STATE OF LOUISIANA
CHING-NIEN TSAI
REG. No. 23092
REGISTERED PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
8/29/2011

FOR GEOTECHNICAL INFORMATION ONLY

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED K. BRAUNER	DETAILED I.KOURILOVA	DATE JAN. 2011
CHECKED C. PORTER	CHECKED K. BRAUNER	SHEET 13 OF 16

NO.	DATE	REVISION DESCRIPTION	BY
1	02-13-17	UPDATED FOR 2016 SPECIFICATIONS	K.M.B.

DRILLED SHAFT FOOTING ALT.

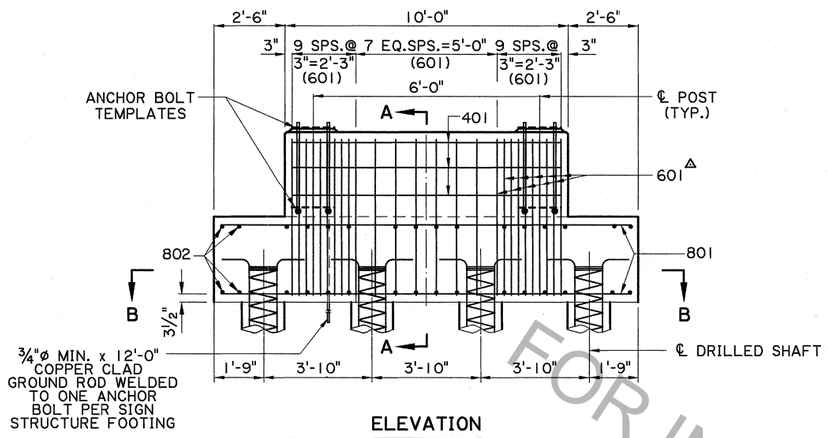
BD.2.7.1.0.13 - OVERHEAD TRAFFIC SIGNS

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

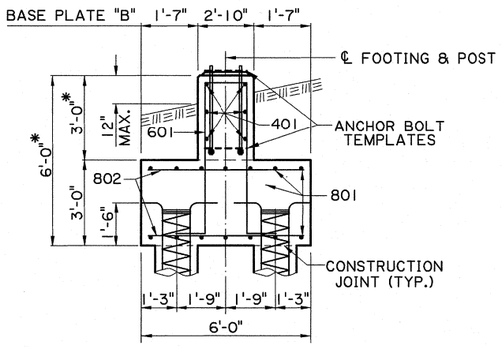
BRIDGE AND STRUCTURAL DESIGN

5/25/2017 13:14

IP_PWP:d0695341\BD.2.7.1.0.13 - Overhead Traffic Signs 13.dgn



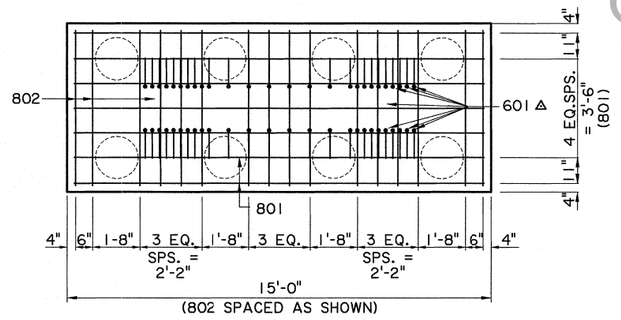
ELEVATION



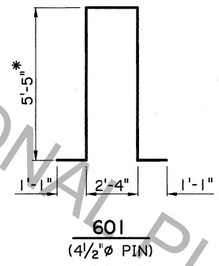
SECTION A-A

ESTIMATED QUANTITIES (DRILLED SHAFT FOOTING "B")				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	14	14'-6"	203'-0"	FOOTING
802	32	5'-6"	176'-0"	FOOTING
TOTAL NO. 8 BARS = 379'-0"			=	1012 LBS.
601	26	15'-4"	398'-8"	STIRRUPS IN FOOTING & PED.
TOTAL NO. 6 BARS = 398'-8"			=	599 LBS.
401	6	9'-6"	57'-0"	PEDESTAL
TOTAL NO. 4 BARS = 57'-0"			=	38 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	1649 LBS.
TOTAL CLASS A1 CONCRETE			=	13.15 CU.YDS.
STRUCTURAL EXCAVATION			=	45.0 CU.YDS.
STRUCTURAL STEEL			=	(SEE ANCHOR BOLT DETAILS)
⊖ DRILLED SHAFT			=	240 LIN. FT.

ESTIMATED QUANTITIES (ONE DRILLED SHAFT ; L = 30'-0") ⊖				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
☑ 601	8	32'-2"	257'-4"	DRILLED SHAFT
TOTAL NO. 6 BARS = 257'-4"			=	387 LBS.
⊗ 301	1	206'-5"	206'-5"	SPIRAL
TOTAL NO. 3 BARS = 206'-5"			=	78 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	465 LBS.
TOTAL CLASS S CONCRETE			=	1.96 CU.YDS.

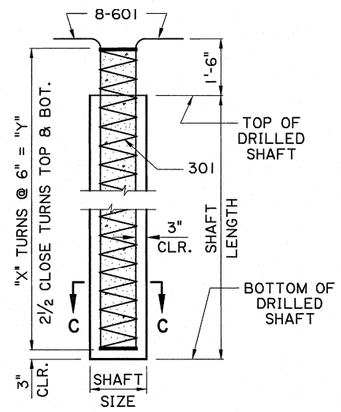


SECTION B-B

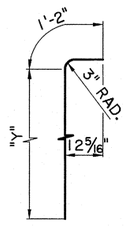


DRILLED SHAFT FOOTING "B"

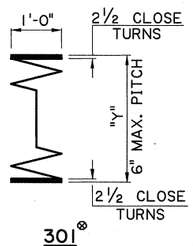
(OVERHEAD SIGN TRUSS)



DRILLED SHAFT DETAIL

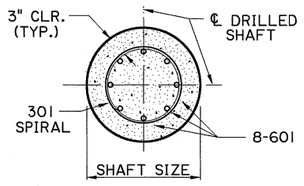


601 ☑
(4½"ø PIN)



301 ⊗

DRILLED SHAFT DATA TABLE (FOOTING "B")				
WIND ZONE	SHAFT SIZE (IN.)	SHAFT LENGTH (FT.)	X	Y (FT.)
1	N/A			
2	18	30	62	31
3	18	65	132	66



SECTION C-C

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
8/29/11

STATE OF LOUISIANA
CHING-NIEN TSAI
REG. No. 23092
REGISTERED PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
8/29/11

FOR GEOTECHNICAL INFORMATION ONLY

NOTES:

THIS DRILLED SHAFT ALTERNATE IS ALLOWED IN LIEU OF TIMBER PILES AND IS A SUPPLEMENT TO PLAN SHEET NO. 8 OF 16.

FOR ANCHOR BOLT DETAILS, SEE TYPE II TRUSS & CANTILEVER DETAILS AND THE GENERAL NOTES.

ANCHOR BOLTS SHALL BE FURNISHED IN A PREPOSITIONED ANCHOR BOLT ASSEMBLY. (TWO TEMPLATES REQUIRED)

* THESE DIMENSIONS MAY VARY ± ONE FOOT TO ADJUST ELEVATION FOR SITE ADJUST 401 & 601 BARS ACCORDINGLY.

△ NO. 601 BARS MAY BE MOVED TO CLEAR TRUSS ANCHOR BOLTS.

⊖ WIND ZONE 2 ASSUMED FOR SHAFT QUANTITIES. FOR OTHER WIND ZONES, ADJUST QUANTITIES ACCORDINGLY. SEE DRILLED SHAFT DATA TABLES.

☑ IF A SPLICE IS REQUIRED, THE MINIMUM SPLICE LENGTH SHALL BE 2'-9".

⊗ IF A SPLICE IS REQUIRED, THE MINIMUM SPLICE LENGTH SHALL BE 1½ TURNS.

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED K. BRAUNER
CHECKED C. PORTER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 14 OF 16

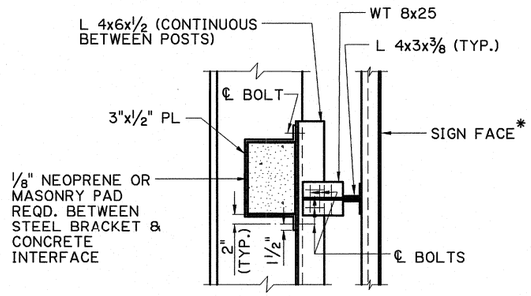
K.M.B. 07

NO.	DATE	REVISION DESCRIPTION
2	02-13-17	UPDATED FOR 2016 SPECIFICATIONS

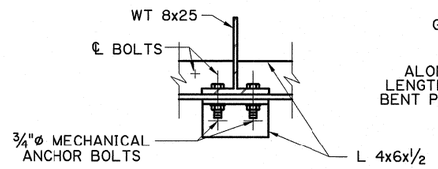
DRILLED SHAFT FOOTING ALT.

BD.2.7.1.0.14 - OVERHEAD TRAFFIC SIGNS

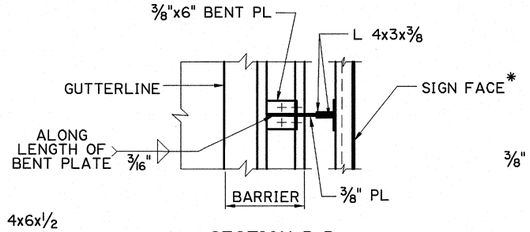
BRIDGE AND STRUCTURAL DESIGN



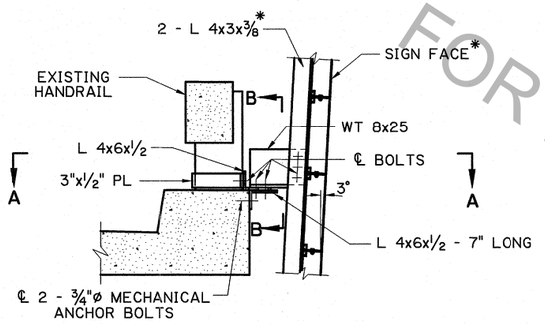
SECTION A-A



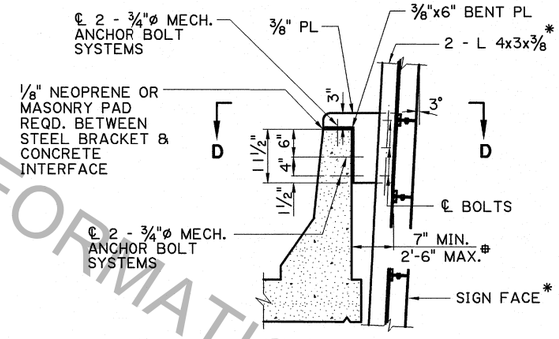
SECTION B-B



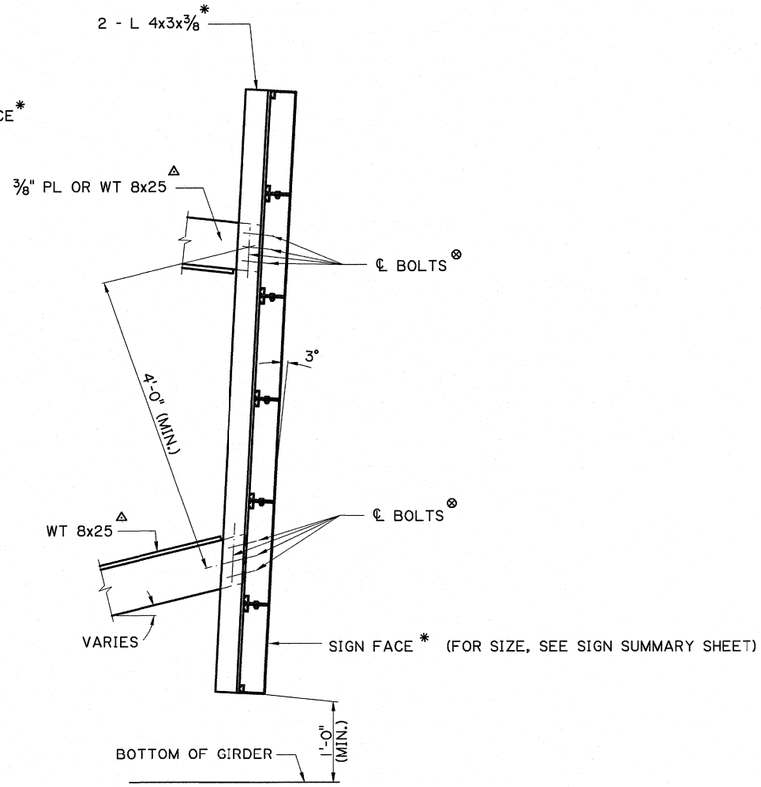
SECTION D-D



POST BRACKET

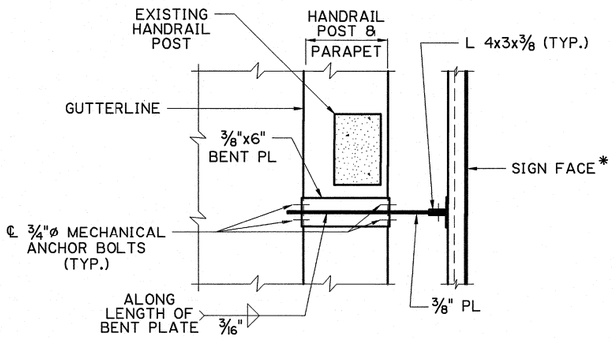


BARRIER RAIL BRACKET

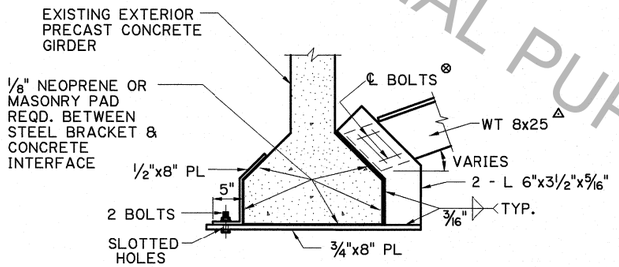


ELEVATION

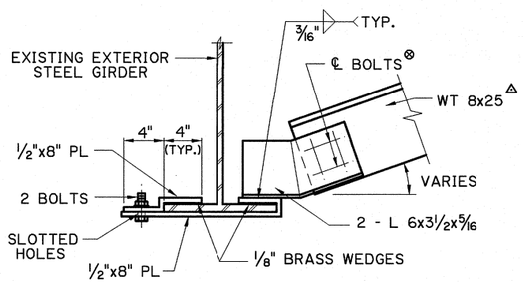
SIGN CONNECTION DETAIL



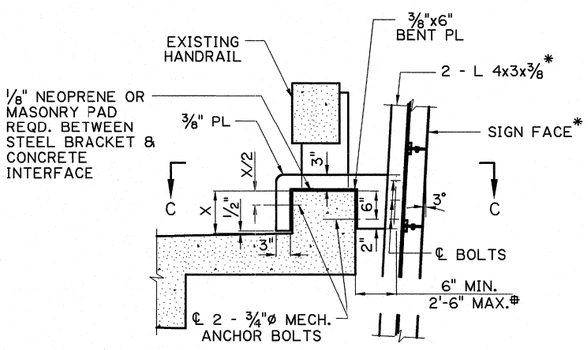
SECTION C-C



PRESTRESSED CONCRETE GIRDER BRACKET



STEEL GIRDER BRACKET



SIDEWALK BRACKET

NOTES:

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTES

ALL BRACKET MEMBERS SHALL BE STEEL (A-36), UNLESS OTHERWISE NOTED, BOLTS TO BE ¾" ASTM A-325 AND BE GALVANIZED. BOLTS SHALL HAVE TWO (2) FLAT WASHERS, ONE (1) LOCK WASHER & ONE (1) HEX NUT, ALL GALVANIZED.

DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED IN ACCORDANCE WITH STA. SPECS. SUBSECTION 811.08.

DIMENSIONS OF EXISTING BRIDGE MEMBERS TO BE OBTAINED IN FIELD PRIOR TO FABRICATION OF MOUNTING BRACKET BY THE CONTRACTOR AND ADJUSTED AS DIRECTED BY THE PROJECT ENGINEER.

NUMBER OF POST, CURB OR GIRDER BRACKETS REQUIRED SHALL BE DETERMINED IN THE FIELD (WITH TWO (2) EACH MIN.) FOR EACH SIGN LOCATION, AS DIRECTED BY THE PROJECT ENGINEER.

UNLESS OTHERWISE NOTED, PAYMENT SHALL BE MADE UNDER ITEM 729-13-00100 "MOUNTING (BRIDGE FASCIA MOUNTED)" PER EACH.

MECHANICAL ANCHOR SYSTEM SHALL BE FROM THE APPROVED MATERIALS LIST AND SHALL BE GALVANIZED.

* PAYMENT TO BE UNDER ITEM 729-06-00100.
⊗ SLOT ONE HOLE AND FIELD DRILL THE OTHERS
△ LENGTH VARIES.
⊕ WHEN DIMENSIONS EXCEED 2'-6", SEE SIDEWALK BARRIER RAIL BRACKET DETAIL, SHEET 16 OF 16.

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

SHEET NUMBER

DESIGNED / CHECKED	DETAILED / CHECKED	DATE / SHEET	BY
K. BRAUNER / P. FOSSIER	I.KOURILOVA / K. BRAUNER	JAN. 2011 / 15 OF 16	K.M.B.

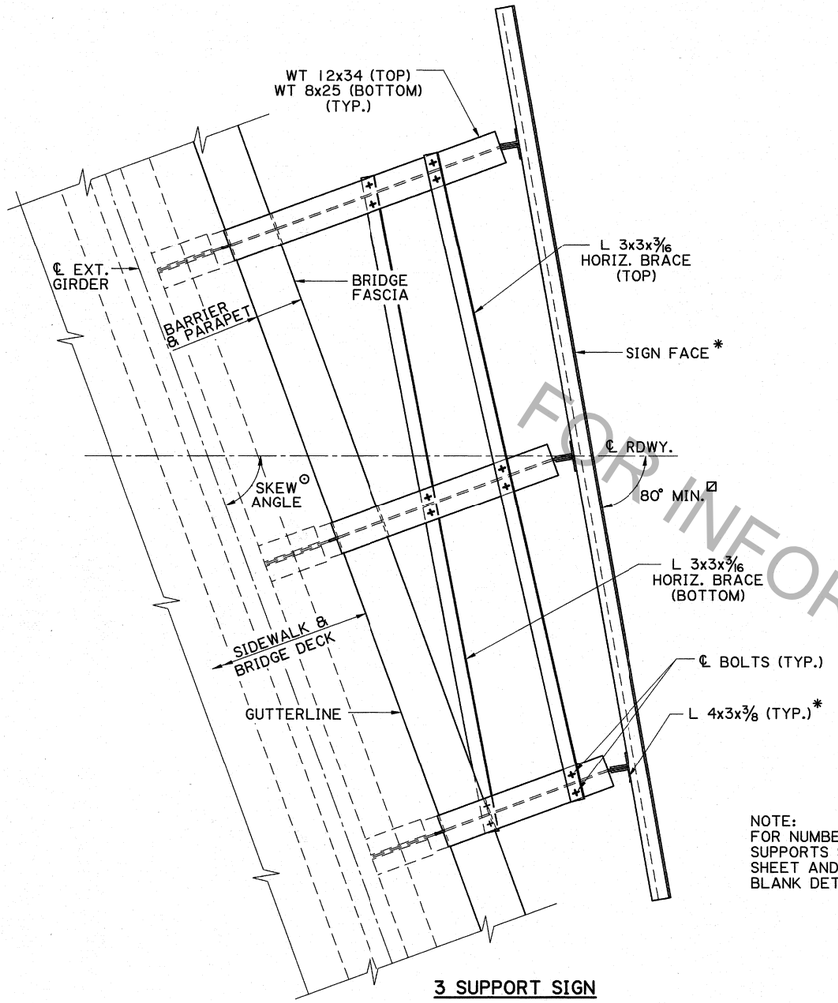
PARISH | FEDERAL PROJECT | STATE PROJECT

NO.	DATE	REVISION DESCRIPTION
0	02-13-17	UPDATED FOR 2016 SPECIFICATIONS

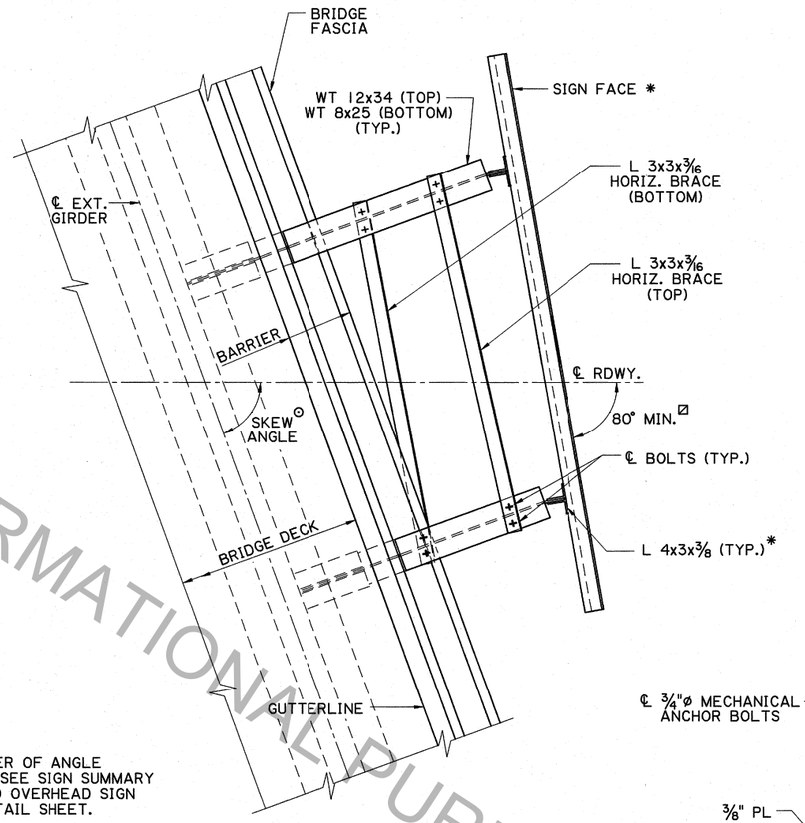
FASCIA MOUNTED BRACKETS (STEEL)

BD.2.7.1.0.15 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN

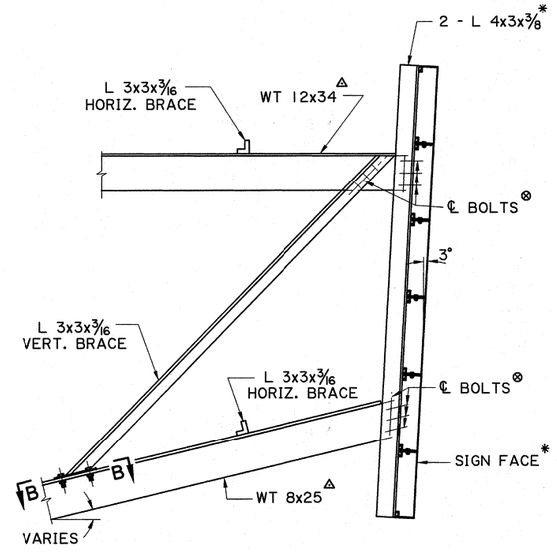


3 SUPPORT SIGN

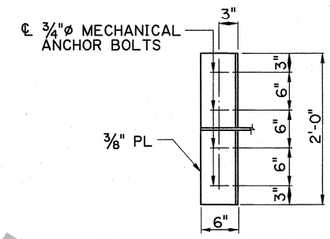


NOTE:
FOR NUMBER OF ANGLE SUPPORTS SEE SIGN SUMMARY SHEET AND OVERHEAD SIGN BLANK DETAIL SHEET.

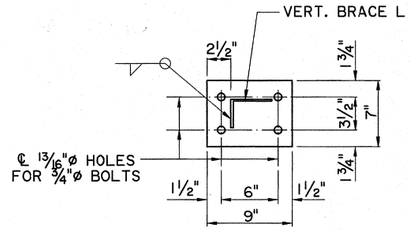
2 SUPPORT SIGN



SIGN CONNECTION DETAIL

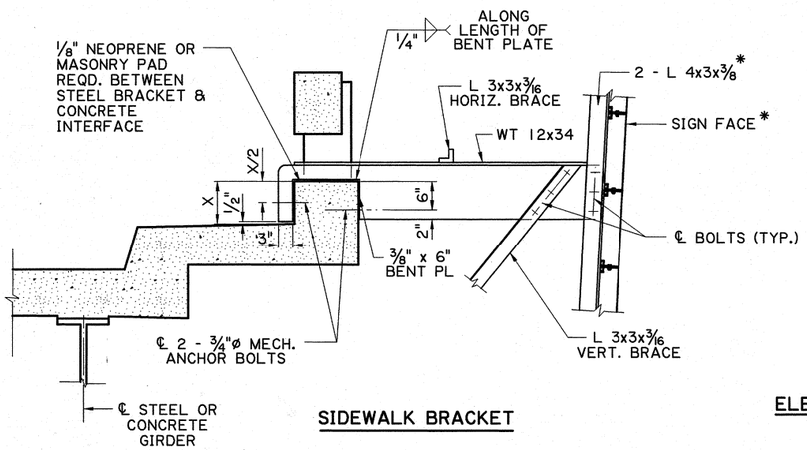


SECTION A-A



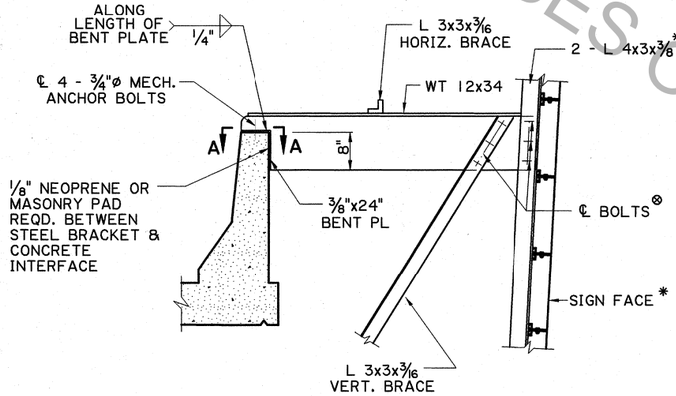
SECTION B-B

PLAN



SIDEWALK BRACKET

ELEVATION



BARRIER RAIL BRACKET

LATERAL AND VERTICAL BRACING DETAILS

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/24/11

NOTES:

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET. ALL BRACKET MEMBERS SHALL BE STEEL (A36) AND GALVANIZED UNLESS OTHERWISE NOTED.

* PAYMENT TO BE UNDER ITEM 729-06-00100.
⊗ SLOT ONE HOLE AND FIELD DRILL THE OTHERS
△ LENGTH VARIES
⊙ 35° ≤ SKEW ANGLE ≤ 80°
⊠ WHEN USED OVER A CURVED SECTION OF ROADWAY, THE ANGLE SHALL BE ADJUSTED TO PLACE SIGN PERPENDICULAR TO THE CURVE OR AS DIRECTED BY THE PROJECT ENGINEER.

SHEET NUMBER

PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED K. BRAUNER	DETAILED I.KOURILOVA	DATE JAN. 2011
CHECKED P. FOSSIER	CHECKED K. BRAUNER	SHEET 16 OF 16

NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

FASICA MOUNTED BRACKETS (STEEL)

BD.2.7.1.0.16 - OVERHEAD TRAFFIC SIGNS

BRIDGE AND STRUCTURAL DESIGN