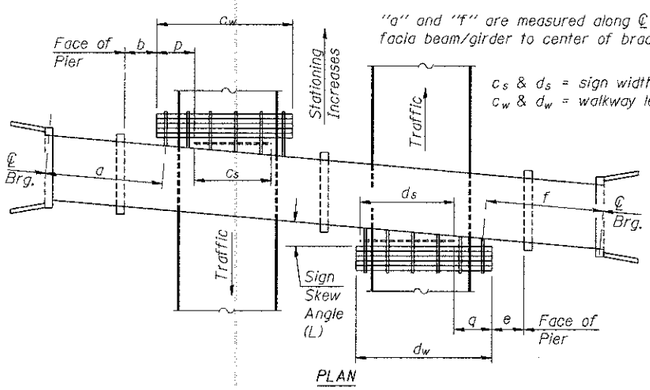
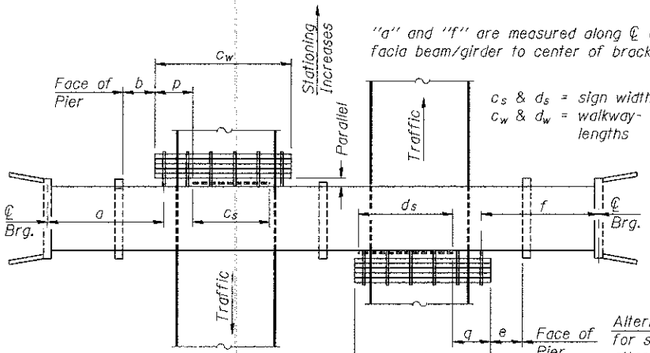


PLAN

(Left Sign Skew > 15°)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

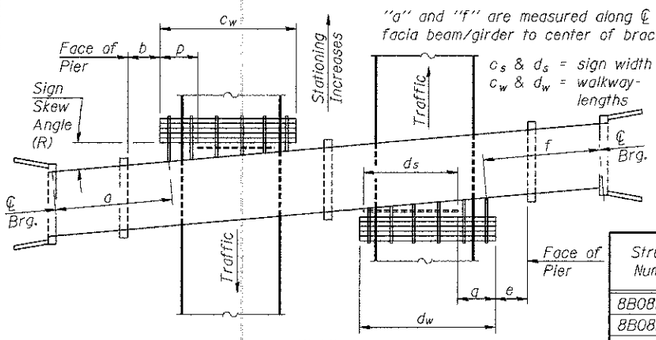


PLAN

(For Sign Skew ≤ 15°, all brackets constant)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

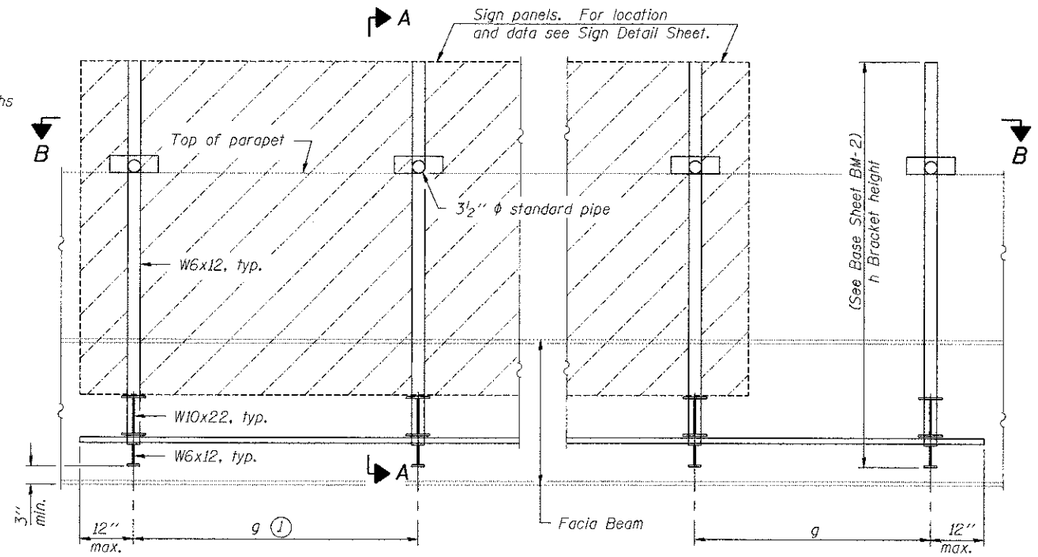


PLAN

(Right Sign Skew > 15°)

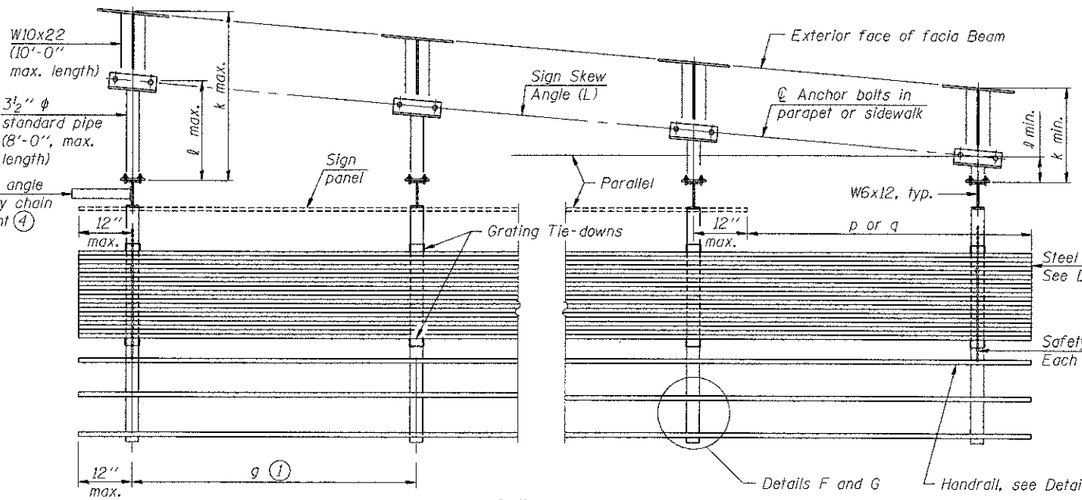
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION

(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B

(Shown: Left Sign Skew > 15°)

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	c_s	c_w	d_s	d_w	e	f	g	No. of Brackets (Total)	p	q	Total Grating/ Hndrl. Lengths (c_w + d_w)
8B0821070R001.9	0	172+40	082-0328	76C43	-	-	-	-	13'-6"	19'-3"	31'-0"	35'-6"	5'-9"	4	-	5'-9"	19'-3"
8B0821070L001.9	0	173+02	082-0328	76C43	43'-1"	41'-2"	17'-6"	22'-9"	-	-	-	-	5'-3"	5	5'-3"	-	22'-9"

Dimensions a, b, e, f & g may vary as approved by the Engineer, see (1).
When c_w < c_s and/or d_w < d_s, use alternate brackets without walkway supports where applicable, see (3).

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specificiations.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, ¾" ϕ x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

(1) Bracket spacing g ≤ 6'-0", max. Spacing shall be uniform if possible but may vary ±6" to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.

(2) Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.

(3) Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on grating length (cw, dw) unless otherwise specified. For Safety Chain Details and Details D, F and G, see Base Sheet BM-4.

(4) If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Base Sheet BM-4.

TOTAL BILL OF MATERIAL

(3) OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	Foot	42.0

BM-1

6-1-12

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - MDJ	REVISED -
		DRAWN - MDJ	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - JLR	REVISED -
TENG TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	PLOT DATE = $DATE$	DATE - 06/29/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
I-70 CONNECTION

BRIDGE MOUNT SIGN STRUCTURES
GENERAL PLAN AND ELEVATION

SCALE: | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
998	82-1R	ST. CLAIR	294	203
		CONTRACT NO. 76C43		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

..\DRCONN-08 DESIGNATION, ..\DECONN-08-BORDER.DGN
6-27-2012, 9:57:33 BONDHUJO \\TS-0044-MKV\VAULT_D-TRANS.07\2202\20868-001\STRUCTURE\CADD\DESIGN\STRUCTURE\SHEET\DRCONN-08-SHT-SIGNS.DGN