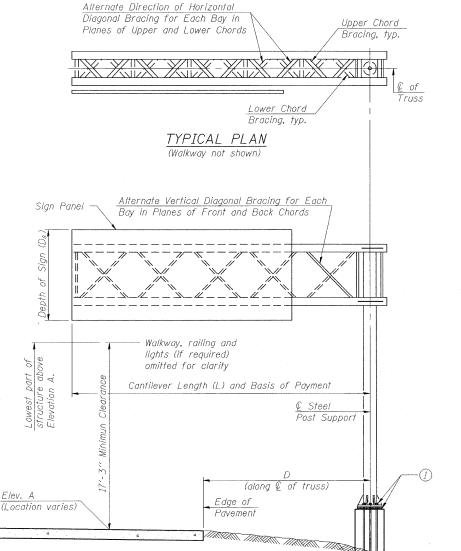
## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



## TYPICAL ELEVATION

Looking in Direction of Traffic

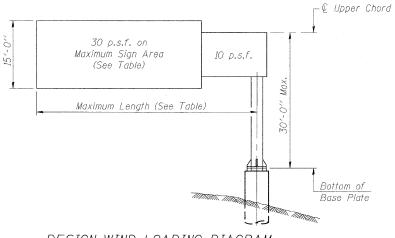
NUMBER

REVISION

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D <sub>s</sub>	Total Sign Area
#7C058UB51L017.13	1152+86	III-C-A	<i>35′-10"</i>	669.78	19'-10"	7	113
#7C058UB51R017.11	1156+75	III-C-A	35′-10"	669.45	19'-10"	6	90
				***************************************			
		l	L				

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



# DESIGN WIND LOADING DIAGRAM Parameters shown are basis for I.D.O.T. Standards

Parameters shown are basis for 1.D.O.1. Standard Installations not within dimensional limits shown require special analysis for all components.

(1) After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

#### Note:

DATE

Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

\* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

UNIT TOTAL

Cu. Yds. 25.0

35.5

Foot

Foot

Foot

#### GALVANIZING: All Steel Grating, P.

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

GENERAL NOTES

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard

Specifications for Road and Bridge Construction, Supplemental Specifications and Special

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in

accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum)

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be

ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the

requirements of AASHTO MI64 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM

A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts

must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under

Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the

IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP")

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 or Gr. 50W\*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer. The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs,

Luminaires and Traffic Signals, ("AASHTO Specifications")

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

Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

fy = 60,000 p.s.i. (reinforcement)

and the Standard Specificiations.

testing of bolts will not be required.

each U-Bolt and Eyebolt lock nut.

DESIGN STRESSES:

 $f'_c = 3,500 \text{ p.s.i.}$ 

Field Units

ANCHOR RODS: Shall conform to AASHTO M314 Gr. 105 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at  $10^\circ$  F.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

### TOTAL BILL OF MATERIAL

			ITEM		
OVERHEAD	SIGN	STRUCTURE	CANTILEVER	TYPE	I-C-A
OVERHEAD	SIGN	STRUCTURE	CANTILEVER	TYPE	II-C-A
OVERHEAD	SIGN	STRUCTURE	CANTILEVER	TYPE	III-C-A (3'-0"x7'-0"
OVERHEAD	SIGN	STRUCTURE	WALKWAY, TY	PE A	
DRILLED S	HAFT	CONCRETE I	FOUNDATIONS		

# CANTILEVER SIGN STRUCTURES GENERAL PLAN & ELEVATION ALUMINUM TRUSS & STEEL POST

THOUVENOT, CORPORATE OFFICE
WADE & Swarses, Illinois 62226
WOERCHEN, INC. Fax 618,624,4488
SWANSEA \* WATERLOO - EDWARDSVILLE - CARBONDALE - ST. CHARLES

ENGINEERS + SUREVORS + PLANNERS

NTY TOTAL SHEET NO.

SHEET NO. 6 15 SHEETS

RTE. SECTION COUNTY SHEETS NO.

322 (58-64HB-1)B-1 MACON 149 101

US ROUTE 51 CONTRACT NO. 74387

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

DESIGNED MJJ - 200

CHECKED JTH

ENGINEER OF BRIDGE DESIGN

DRAWN MJJ

CHECKED JTH/ALN

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

OSC-A-1 12-1-08 \080276\US 5Iover I-72\4-CADD\4.2-TR\SHEETS\D774387-sht-sign-006.dgn

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

TYPIC

Looking

Sign support structures may be oscillations when sign panels are t

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mjoost