

GENERAL NOTES

GALVANIZED CANTILEVER (MODIFIED)

SPECIFICATIONS

All References to the Standard Specifications are to the Current Edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. All References to the AASHTO Specifications are to the 2002 Edition of the AASHTO Standard Specifications for Highway Bridges.

DESIGN

Designed in Accordance with Specifications for the Design and Construction of Structural Supports for Highway Signs published by AASHTO, 1968 with the Wind Reduced to 80 MPH, in Accordance with IM 40-1-69 of The Federal Highway Administration.

SUPERELEVATION OF ROADWAY

The Contractor shall allow for differences in elevation across the full shoulder width as shown on the Roadway Plans in Maintaining the required 18 foot minimum vertical clearance to the bottom of the lowest part of the sign or support. Sign to be centered over the lane or lanes to which it applies unless shown otherwise.

CONCRETE

Class "A" Concrete is to be used throughout.

BEVELED EDGES

All exposed concrete edges are to be Beveled  $\frac{3}{4}$ " unless otherwise shown.

REINFORCEMENT

Dimensions from face of concrete to bars are clear distances except as otherwise shown. Dimensions for bar spacings are distances center to center of bars.

SHOP DRAWINGS

The Contractor shall submit detailed Shop Drawings to the Division of Construction for review prior to fabrication in accordance with the specifications. The Roadway Cross Section developed by the contractor is to accompany the Shop Drawings. The Shop Drawings and Roadway Cross Section will also be forwarded to the engineer for review.

FABRICATION

The sign support shall be fabricated in accordance with the specifications. All metal components of the support except the stainless steel hardware shall be Hot-Dip galvanized after all fabrication has been completed. The galvanized material shall be loaded, hauled and handled in such a manner that the galvanizing will not be damaged. All abraded and damaged surfaces shall be galvanized or repaired by painting with coats of Zinc Oxide, Zinc Dust paint conforming to the requirements of Federal Specification MIL-P-15145. The paint is to be properly compounded in a suitable vehicle in the ratio of one part Zinc Oxide to four parts Zinc Dust, by weight. All repairs are to be as Directed by the Engineer.

MILL TEST REPORTS

Notarized test reports in triplicate shall be furnished to the Department of Highways stating that the materials used conform to the Specifications.

WELDING SPECIFICATION

All Welding and Welding Materials, except for reinforcement, shall conform to "Joint Specification ANSI/AASHTO/AWS D1. 5-2010 Bridge Welding Code."

MATERIAL SPECIFICATIONS

The following ASTM designations shall govern all materials used.  
ASTM Material

A53 Grade B Steel Pipe Galvanized in accordance with ASTM-123

A36 Structural Shapes, Plates, Bars and Anchor Bolts, Galvanized in accordance with ASTM A-123

A320 Stainless Steel Hardware - Nuts, Bolts, Washers and Screws.

A106 Grade B Seamless Carbon Steel Pipe Galvanized in accordance with ASTM A-123, may be used for pipe less than 2'Ø.

A27 Carbon Steel Casting, Grade 70-36

FOOTINGS

The Footings shall be poured against undisturbed Earth and is designed to transfer no more than 1/2 Tons Per Square Foot Bearing Pressure to the soil under any design loading condition.

VERTICAL DIMENSIONS

Vertical Dimension H shall not exceed 27' and the combined Dimensions H + F shall not exceed 36'.

ROADWAY CROSS SECTION

The Contractor shall take field measurements at each Sign location and develop a cross section showing the Sign footing Heights and Elevations, Sign clearance above the roadway and Column heights. These cross sections shall be submitted to the engineer for approval before ordering any Sign components. This cost is included in the unit price bid for "Roadway Cross Sections". A copy of these cross sections shall also accompany the Shop Drawings.

MAXIMUM SIGN AREA

Designed for a sign area of 250 sq. ft.

WELDING CERTIFICATION

Welders fabricating the cantilever/s shall be certified according to the requirements of AWS 1.5. Submit proof of certification to the Engineer.

FABRICATOR CERTIFICATION

The fabricator shall be AISC Certified for SBR (Certified Bridge Fabricator - Simple).

DATE:	CHECKED BY
DESIGNED BY: Standard Sheet ***	
DETAILED BY:	
<b>Commonwealth of Kentucky</b>	
<b>DEPARTMENT OF HIGHWAYS</b>	
COUNTY	
ROUTE	ITEM NUMBER
<b><i>GALVANIZED CANTILEVER (MODIFIED)</i></b>	
PREPARED BY	
<b>Division of Structural Design</b>	
	SHEET NO.
	DRAWING NO.

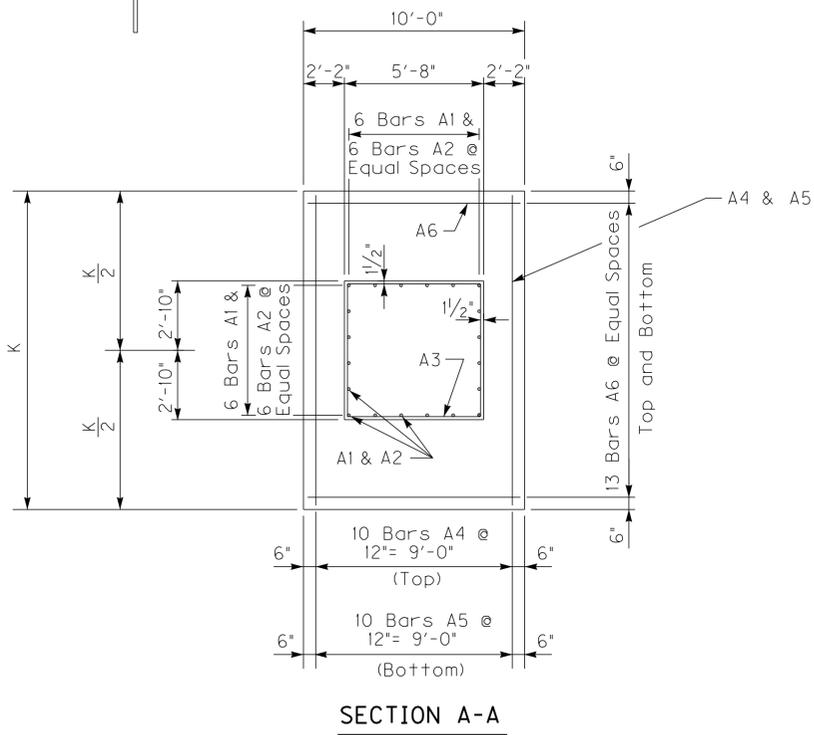
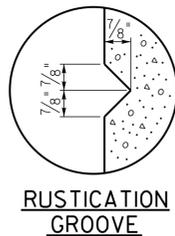
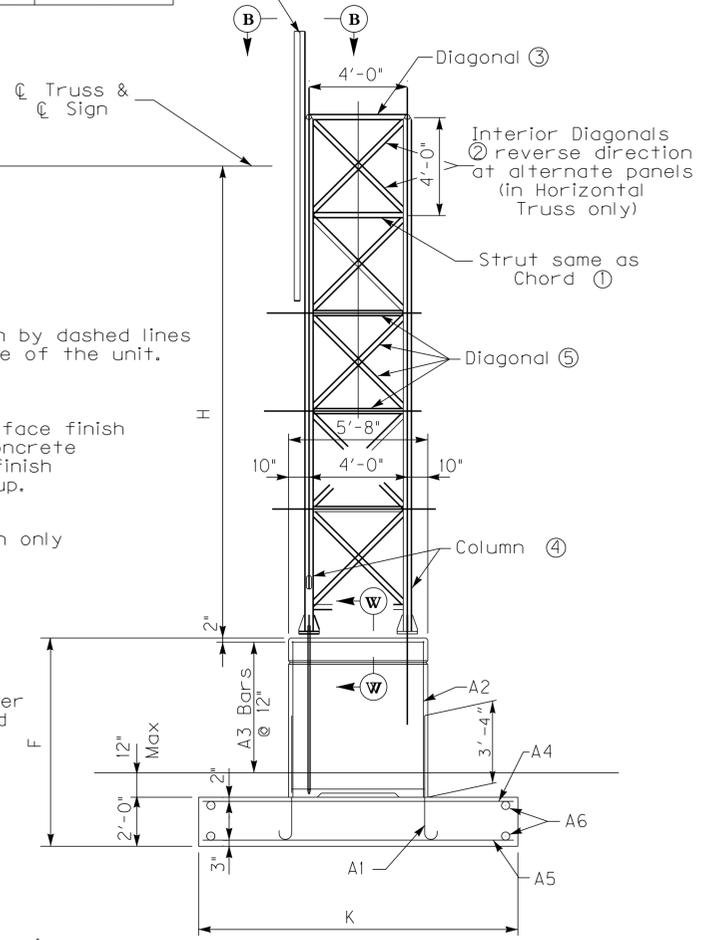
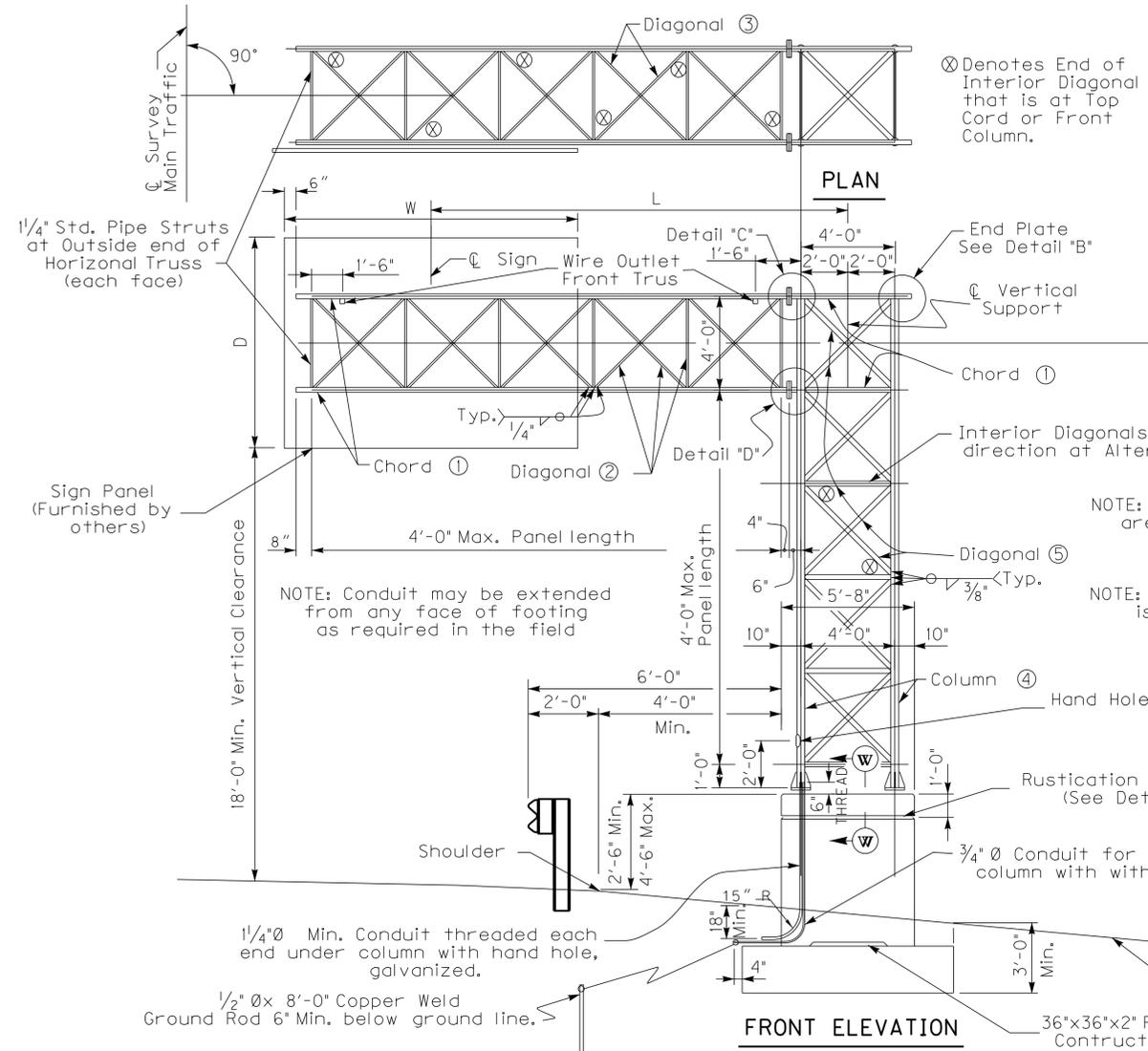
FILE NAME: U:\Bridges\Pro\Sign\2017\CANTILEVER.dgn

USERNAME: eugene.kilgore

DATE: 12-APR-2017

SHEET LOCATION:

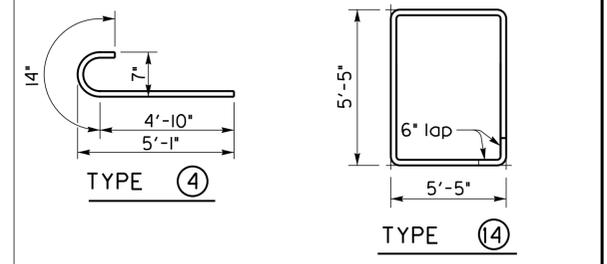
W6" x 8.5"	
SIGN LENGTH	REQD. NO.
0'-0" Thru 8'-0"	2
8'-1" Thru 12'-0"	3
12'-1" Thru 16'-0"	4
16'-1" Thru 20'-0"	5
20'-1" Thru 24'-0"	6



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	DRAWING NO.

**BILL OF REINFORCEMENT FOR FOOTING**

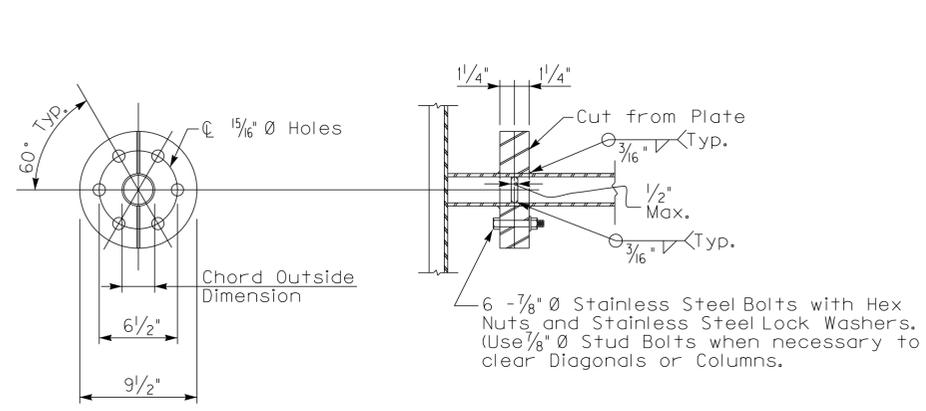
MARK	TYPE	NO.	SIZE	LENGTH		LOCATION
				FT.	IN.	
A1		20	#7	6	0	Footing & Pedestal
A2	Str	20	#5	F - 2'-2"		Pedestal
A3		var.	#4	22	5	Pedestal
A4	Str	10	#5	K - 4"		Footing
A5	Str	10	#8	K - 4"		Footing
A6	Str	26	#6	9	8	Footing



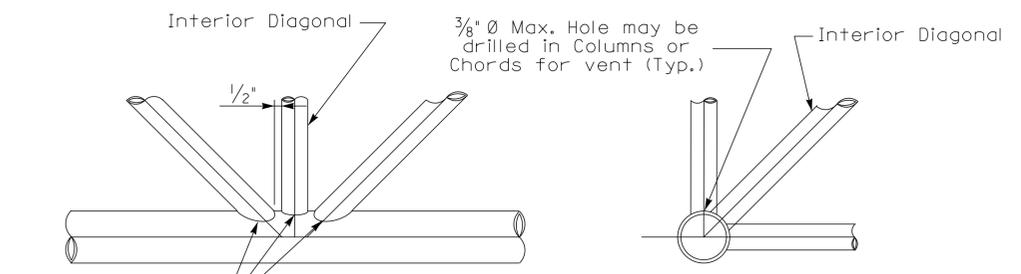
**ESTIMATE OF QUANTITIES FOR FOOTING**

	Conc. Class "A"	Reinforcement
F=6'-0" K = 15'	15.8 cu.yds.	1304 lbs.
1' of additional Pedestal height	1.2 cu.yds.	36 lbs.

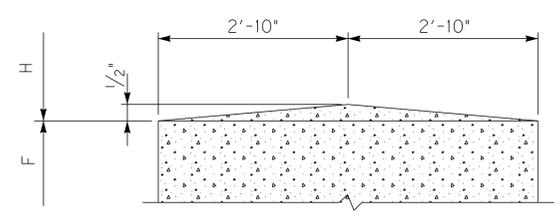
\* Approx. estimate is for information only. Tabulated F shall be verified by the Engineer in the field.



**CHORD SPLICE**

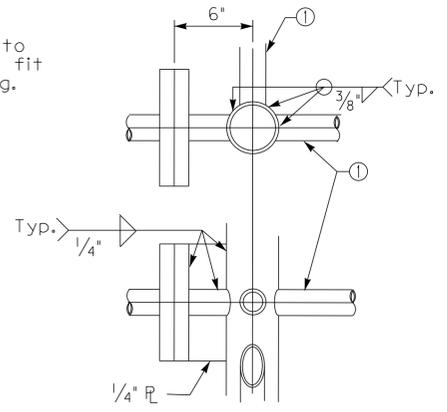


**TYPICAL PANEL POINT DETAIL**

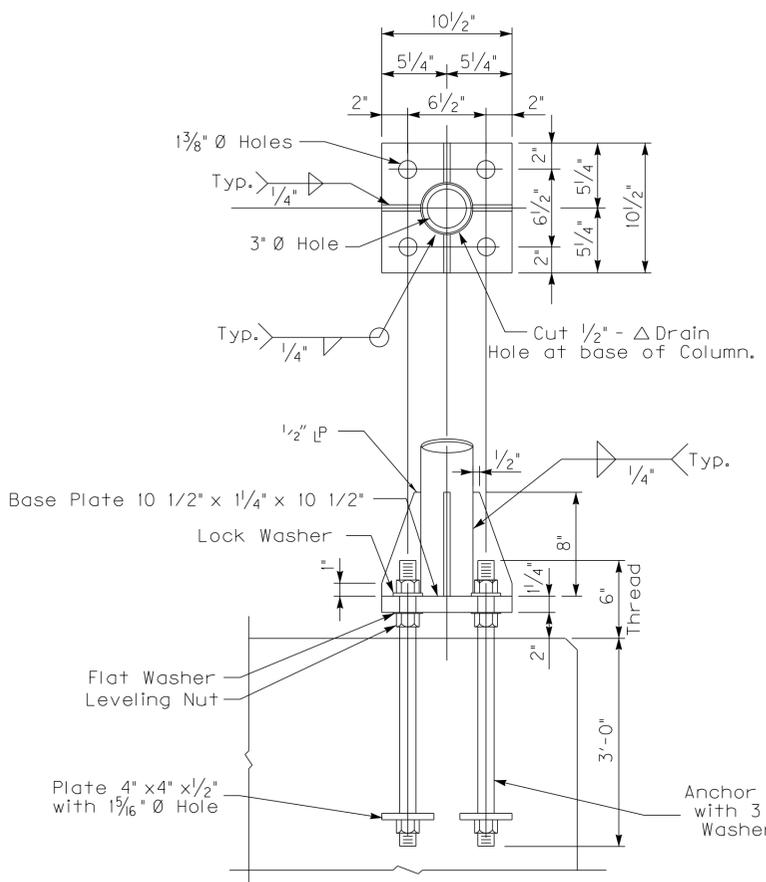


**SECTION W-W**

(Showing Wash)



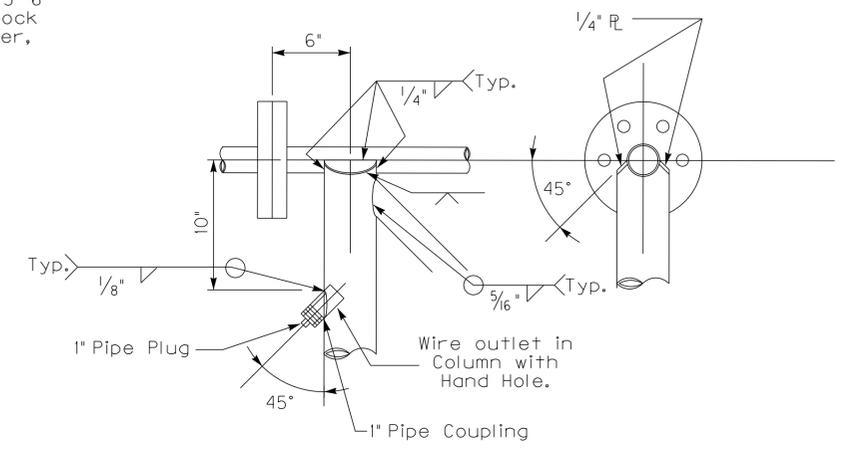
**DETAIL - D**



**BASE PLATE DETAIL**

L	X
21	1 1/2"
18	1 1/4"
15	1"

**CAMBER DIAGRAM**

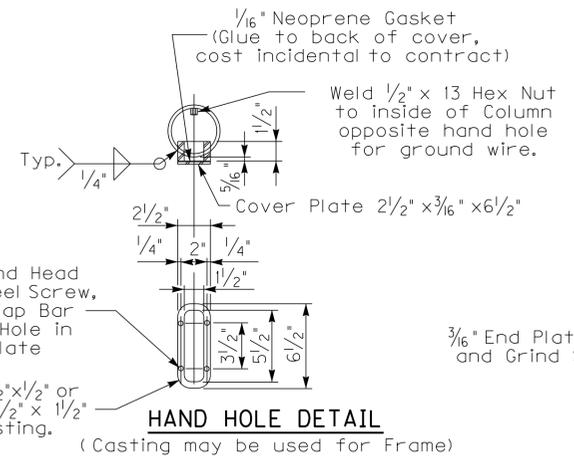


**DETAIL - C**

A registered professional engineer licensed to practice in the Commonwealth of Kentucky shall fill out the chart below based on the design cross section at the locations where the truss is to be erected, the actual signs to be used on the truss, and the instructions herein. The engineer's name is to appear in the "Checked By" box (\*\*\*) of the title block on each sheet. The engineer is responsible for verifying the information based on the contractor's submitted cross sections and for reviewing the fabricator's shop drawings in detail.

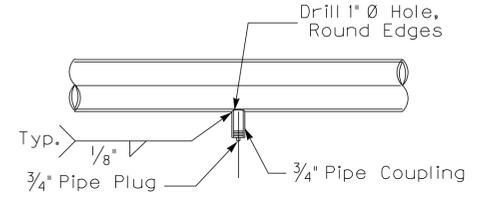
\* Total Area includes Exit Number Signs that are not shown and shall not exceed 250 square feet.

SUPPORT NO.	STATION	H	F	SIGN			
				SIGN NO.	L	HORIZ. W	VERT. D
MAX SIGN AREA	L	CHORD ①	DIAGONAL ②	DIAGONAL ③	Column ④	DIAGONAL ⑤	K
250 Sq. Ft.	21'	3" Std. Pipe	1" Std. Pipe	1/4" Std. Pipe	5" Std. Pipe	2 1/2" Std. Pipe	15
	18'	3" Std. Pipe	1" Std. Pipe	1/4" Std. Pipe	5" Std. Pipe	2 1/2" Std. Pipe	15

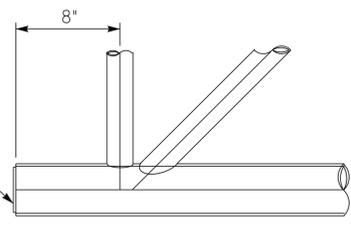


**HAND HOLE DETAIL**

(Casting may be used for Frame)



**WIRE OUTLET DETAIL**



**CHORD END DETAIL**

FILE NAME: U:\Bridges\Pro\Sign\2017\CANTILEVER.dgn  
 USERNAME: eugene.kilgore  
 DATE: 12-APR-2017  
 SHEET LOCATION:

DATE: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DESIGNED BY: Standard Sheet \*\*\*  
 DETAILED BY: \_\_\_\_\_  
**Commonwealth of Kentucky**  
**DEPARTMENT OF HIGHWAYS**  
 COUNTY: \_\_\_\_\_  
 ROUTE: \_\_\_\_\_ ITEM NUMBER: \_\_\_\_\_  
**GALVANIZED CANTILEVER (MODIFIED)**  
 PREPARED BY: **Division of Structural Design** SHEET NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_