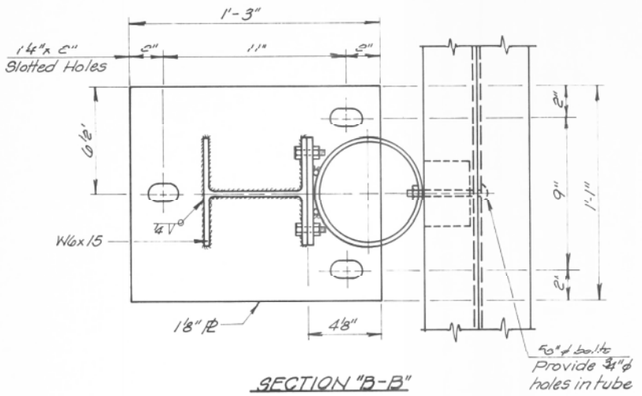
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

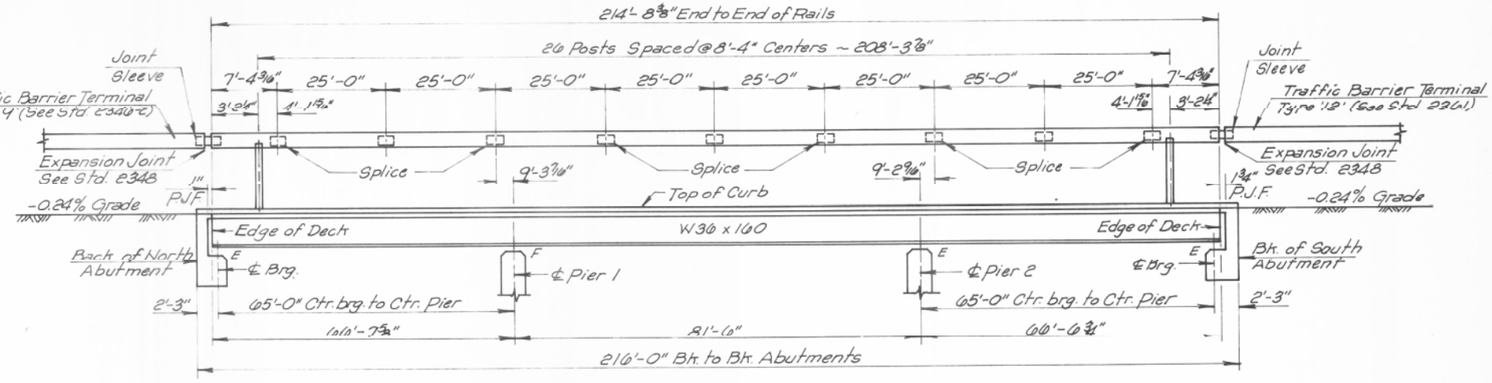
FAI 57 * Kankakee Iroquois 22 21

Sheet No.2 of 3 Sheets

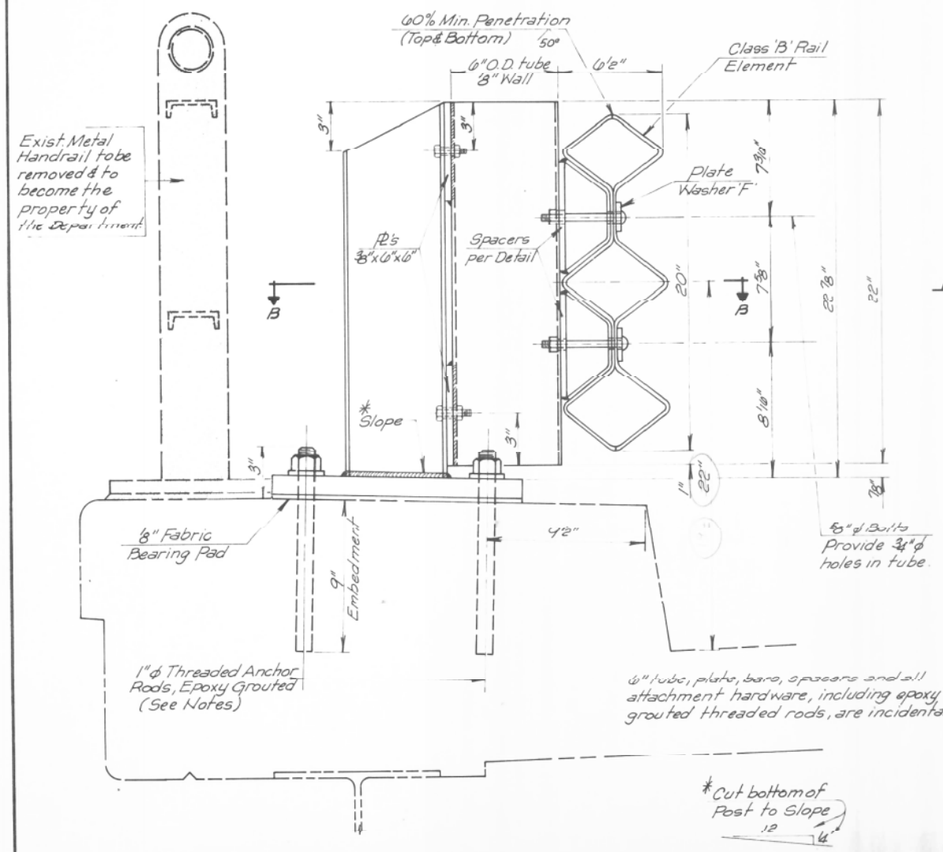
* (46-4)(46,38-1) RS&I



SECTION "B-B"

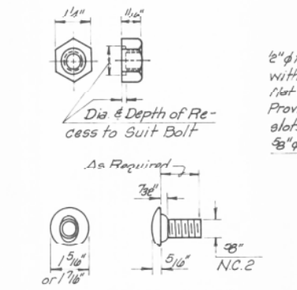


ELEVATION

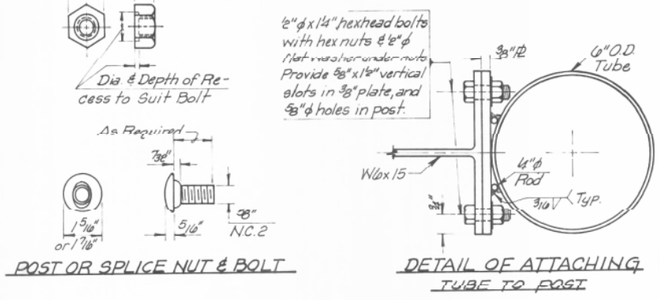


DETAIL OF POST

All tube, plate, bars, spacers and all attachment hardware, including epoxy grouted threaded rods, are incidental.



POST OR SPLICE NUT & BOLT



DETAIL OF ATTACHING TUBE TO POST

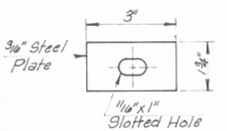
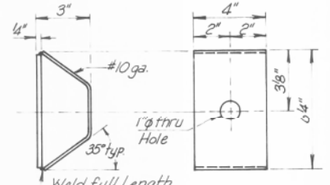


PLATE WASHER 'F'



DETAIL OF SPACER

BILL OF MATERIALS

Item	Unit	Quan.
Posts	Each	52
Splice Rails	Each	18
Joint Sleeve	Each	4
Std. 25 ft. lengths of Tubular Thrie Beam	Each	10
Custom lengths of Tubular Thrie Beam ~ 7'-4 9/16" Long	Each	4

NOTES

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Tubular Thrie Beam expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts or double nuts and shall be tightened only to a point that will allow Tubular Thrie Beam movement.

The standard length for a Tubular Thrie Beam is 25'-0". Posts shall be provided at standard 8'-4" ctrs. whenever practical.

In the event that standard lengths of Tubular Thrie Beam can not be longitudinally positioned to meet the requirements, shorter custom fabricated section (s) will be specified. When necessary to use custom length sections of Tubular Thrie Beam, the minimum length shall be 2'-6" with spacing for joints the same as the full length sections.

Provide one ⅛" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plate in size and holes.

Expansion joint width shall be 2½" at 50°F. and shall be adjusted for other temperatures according to Article 503.07 (c) of the Std. Spec's.

All splice bolts to be ⅝" diameter unless otherwise noted.

The Tubular Thrie Beam rail section shall be fabricated by welding two (2) Thrie Beam rail elements as shown. The Thrie Beam rail section shall conform to the requirements of A.A.S.H.T.O. M 180, Type I of the class specified.

All structural steel shapes and plates shall conform to A.A.S.H.T.O. M183 and shall be galvanized after fabrication in accordance with A.A.S.H.T.O. M 111 and A.S.T.M. A 385.

The Contractor shall load test 5% of the 1" diameter threaded anchor rods in the presence of the Engineer. The equipment and method used shall meet the approval of the Engineer. Pull out load shall be 7,400 lbs. per rod after epoxy has set. For each anchor that fails the test, two (2) more anchors, selected by the Engineer, shall be tested. Each anchor that fails shall be reset in epoxy and retested until it passes the test. (See Bridge Special Provisions for Epoxy Grouting of Anchor Rods and Bolts.)

BASIS OF PAYMENT: This work will be paid for at the contract unit price per lineal foot, measured in place, for TUBULAR THRIE BEAM RETROFIT RAIL FOR BRIDGES, complete in place, as shown hereon.

Handrail work to be expedited to completion once initiated. No gaps should be permitted over night or on weekends.

TUBULAR THRIE BEAM RETROFIT RAIL

By: A. K. El-Beck

FOR INFORMATION ONLY

Wight		DESIGNED	REVISED
		CHECKED	REVISED
		DRAWN	REVISED
	PLOT DATE = 12/7/2012	CHECKED BJM	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 038-0215 (S.B.)
SHEET NO. 18 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	141 BR(SB) & 38-1 BR(NB)	IROQUOIS	138	94
		CONTRACT NO. 66944		
	ILLINOIS FED. AID PROJECT			

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