

GENERAL NOTES — SUPERSTRUCTURE

SPECIFICATIONS

State of Ohio Department of Highways Construction and Material Specifications, January 1, 1959 and revisions thereof. Supplemental Specifications No. S-103 revised July 25, 1950. No. S-107 revised January 8, 1953, and No. S-207 dated April 28, 1955.

RIVETS & OPEN HOLES

Rivets 5/8" - Open holes 1/8" unless noted.
High Strength Steel Bolts, A.S.T.M. Designation A325 may be used for field connections. If used, bolts shall be in accordance with Supplemental Specification S-207 using method (a) for tightening. Bolts shall be so placed that the heads will be exposed to view.

ANCHOR BOLTS

Anchor bolts to be set in preformed holes and then fixed after the steel is erected with "Embecco" cement grout, or equal, completely filling the holes.

WELDING

All welding shall be Class "A" in accordance with the Ohio State Specifications, Section S-7.22.

PAINTING

SHOP - One coat of red lead as per Ohio State Specification, Sec. M-9.9.
FIELD - Two coats of Aluminum Paint as per Ohio State Specifications, Section M-9.12.

MEMBRANE WATERPROOFING

Type "a&d" waterproofing consists of four layers of asphalt treated felt, three layers of asphalt treated cotton fabric, and eight moppings of asphalt.
Type "g" waterproofing consists of four layers of asphalt treated felt, one layer of asphalt treated cotton fabric, and six moppings of asphalt.

WELDED WIRE FABRIC

To be lapped a minimum of 6" and to be continuous through joint between mastic and shotcrete protection.

FLASHING

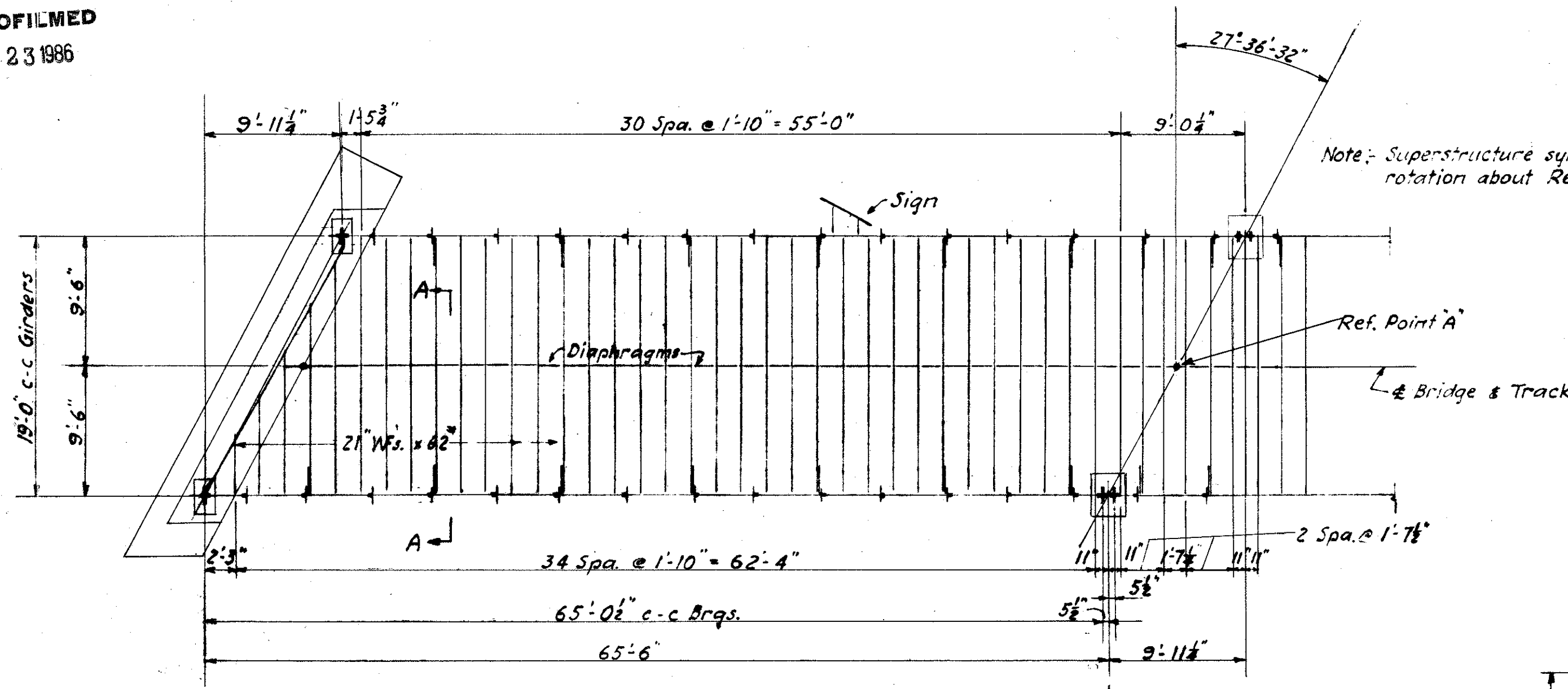
Backwall flashing to be Asphalt Roofing Felt, 65# grade, A.S.T.M. Designation D-224-50T.

ALIGNMENT

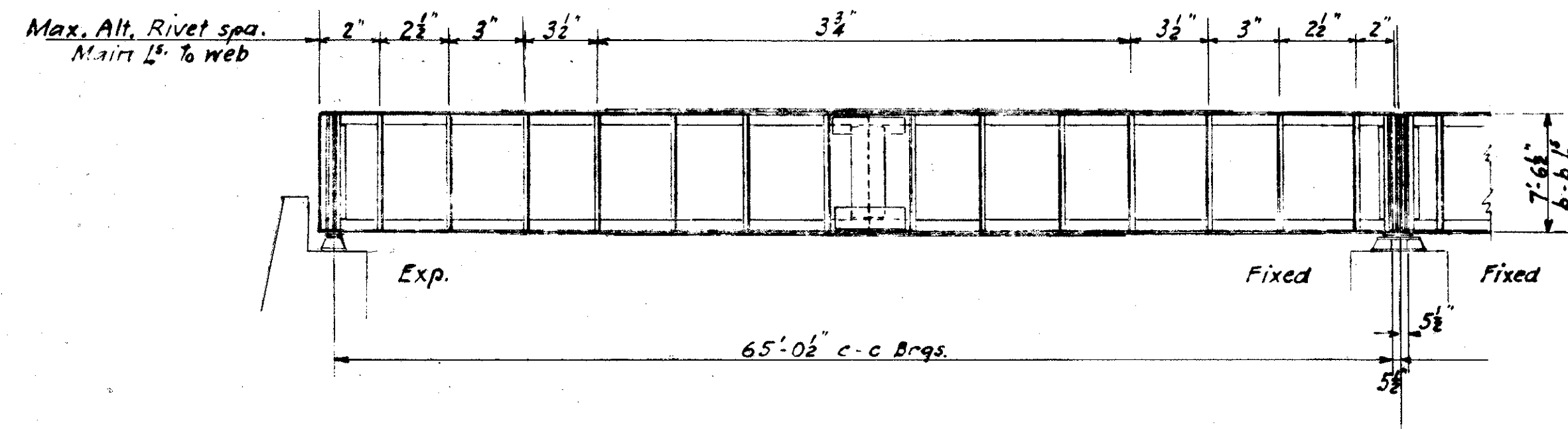
Tangent

GRADE

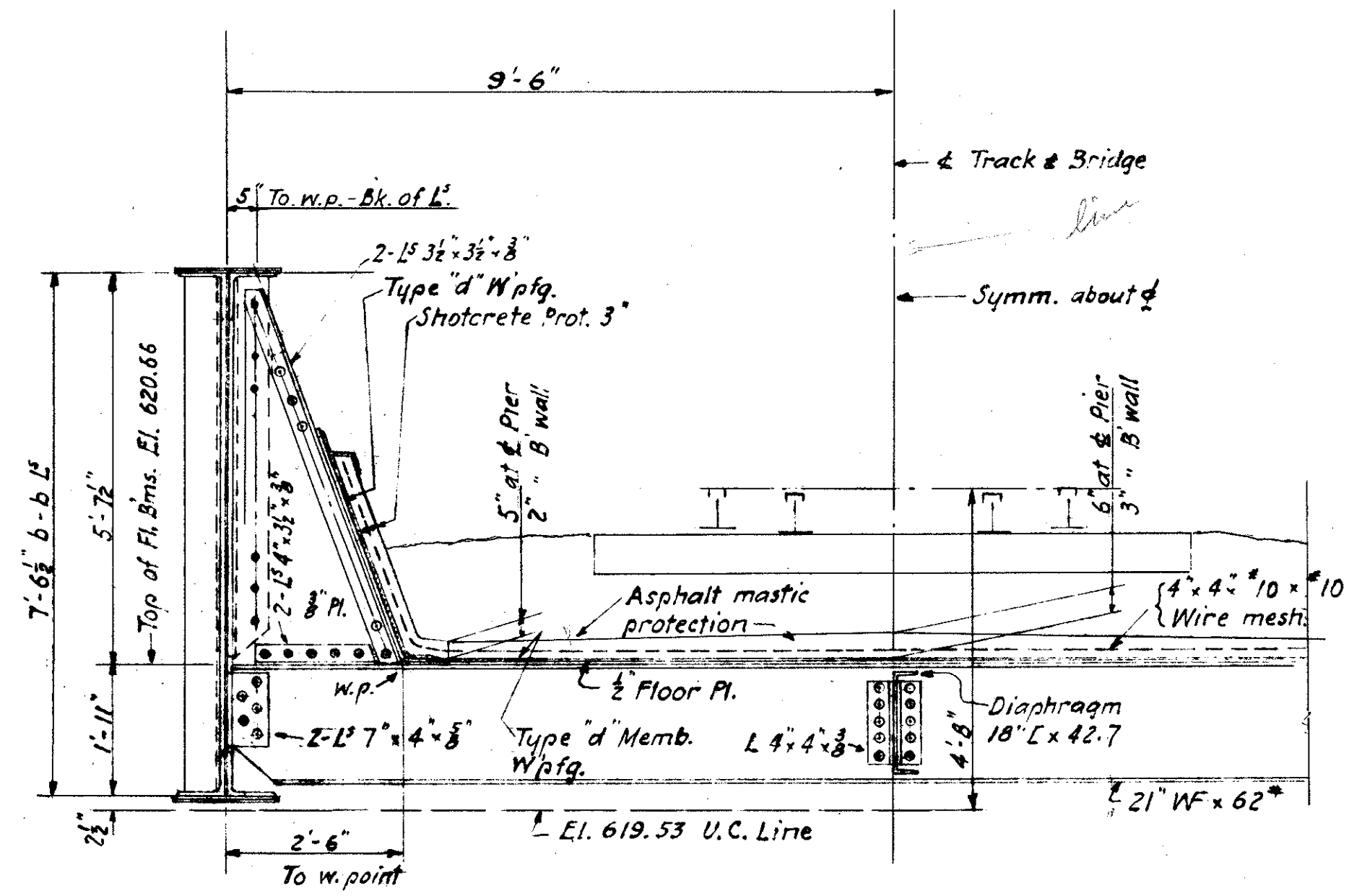
Track grade level over bridge. Steel to be set level.



HALF PLAN
Scale 1/8" = 1'



HALF ELEVATION
Scale 1/8" = 1'



SECTION A-A
Scale 1/8" = 1'

COMPUTATIONS

DESIGN DATA - A.R.E.A. 1958

19'-0" Span Floor Beam			End Floor Beam - Design span 21.4'			65' Span Girder - 7'-6 1/2" b-b L			
D.L.	Moment	Shear	D.L.	Moment	Shear	D.L.	Moment	Shear	Pier Reac.
22.1K	22.1K	4.1K	51.1K	51.1K	14.4K	1740.1K	1740.1K	115K	215K
L.L.	105	14.9	L.L.	210	40.8	L.L.	2700	187	296
I	47	6.7	I	106	20.8	I	1025	71	112
	174.1K	25.7K		367.1K	76.0		5465.1K	373K	623K
Section	Gross I	1326.8"⁴	Section	Gross I	2620.6	Section of Girder	Gross I	212226"⁴	
21" WF x 62"	Net I	1290.0"⁴	21" WF x 112"	Net. I	2572.0	1-Web Pl. 90" x 3/8"	Net. I	171,000"⁴	
	Gross S.M.	126.4"³		Gross S.M.	249.6	4-L 8" x 8" x 3/8"	Gross S.M.	4540"³	
	Net. S.M.	123.0"³		Net. S.M.	244.0	2-Cov. Pls. 18" x 2" F.L.	Net. S.M.	3660"³	
Stresses	Actual	Allowable	Stresses	Actual	Allowable	2- " " 18" x 2" 45'			
Comp.	16,500 #/a"	18,000 #/a"	Comp.	17,700 #/a"	18,000 #/a"	2- " " 18" x 2" 35'			
Tension	17,000 "	18,000 "	Tension	18,000 #/a"	18,000 #/a"				
				Flange comp.	14,440 #/a"	Actual	14,440 #/a"	Allowable	17,800 #/a"
				" tension	17,920 #/a"	" tension	17,920 #/a"	" tension	18,000 #/a"
				Web shear	9472 #/a"	Web shear	9472 #/a"	Web shear	11,000 #/a"

Correct
Approved
Chief Engineer

Drawn: A.C.R.	Checked: RC
REVISIONS	
Date	Description

Highway Bridge No. LAK-2-0453

N.Y.C. SYSTEM OFFICE OF CHIEF ENGINEER NEW YORK, N.Y.
BRIDGE # 56 1/2 - C.E.I. Co. SPUR
GRADE SEPARATION
LAKELAND EXPRESSWAY (S.R. 2)
WILLOUGHBY, OHIO.
SUPERSTRUCTURE PLAN
Western District Lake Division Sheet # 2 of 11
Scale: as shown Dec 22, 1958 Val. Sec. 203 File No. 93143