ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	103 – 2VB	LEE	203	68
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 9 OF 19 SHEETS

TOP OF WIDE FLANGE ELEVATIONS (FOR FABRICATION ONLY)								
BEAM NO.	℄ Brg. S. Abut.	℄ F.S. 1 *	℄ Pier 1	℄ F.S. 2 *	℄ F.S. 3 *	℄ Pier 2	℄ F.S. 4 *	℄ Brg. N. Abut.
1	854.99	854.96	854.94	854.92	854.89	854.87	854.86	854.80
2	855.14	855.12	855.10	855.08	855.05	855.03	855.02	854.96
3	855.26	855.24	855.22	855.21	855.17	855.16	855.15	855.10
4	855.34	855.32	855.30	855.29	855.25	855.24	855.23	855.18
5	855.22	855.21	855.19	855.17	855.14	855.12	855.11	855.07
6	855.08	855.07	855.05	855.04	855.00	854.99	854.98	854.94
7	855.05	855.05	855.04	855.04	855.02	855.02	855.02	855.00
8	855.18	855.19	855.18	855.18	855.16	855.16	855.16	855.14
9	855.29	855.30	855.29	855.29	855.27	855.27	855.27	855.25
10	855.22	855.24	855.23	855.23	855.21	855.21	855.21	855.20
11	855.10	855.12	855.11	855.11	855.10	855.10	855.10	855.08
12	854.95	854.96	854.95	854.95	854.95	854.95	854.95	854.93

*Elevations at Splices are for top of W 33 x 152.

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1 or 3	Pier 1 or 2	0.5 Sp. 2
I_S (in^4)	5900	8160	5900
I_C (in^4)	16,329	——	16,329
S_S (in^3)	359	487	359
S_C (in^3)	535	——	535
℄ (k/l)	.837	1.197	.837
M℄ (ik)	122	369	126
f_S non-comp(ksi)	4.1	9.1	4.2
S℄ (k/i)	.321	——	.321
M_S℄ (ik)	54	——	68
M℄ (ik)	335	225	371
Mmp (ik)	97	63	100
TOTAL (ik)	486	288	539
f_S comp (ksi)	10.9	7.1	12.1
f_S TOTAL (ksi)	15.0	16.2	16.3
VR (k)	50.0	——	427

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R℄ (k)	20.4	72.2
R℄ (k)	37.5	45.6
Imp (k)	10.9	12.8
RTOTAL (k)	68.8	130.6

I_S and S_S are the moment of inertia and section modulus of the steel section used in computing f_S total.
I_C and S_C are the moment of inertia and section modulus of the composite section used in computing fs.
VR is the maximum ℄ + impact shear range in span used to determine shear connector spacing.

SECTION AT ABUTMENTS

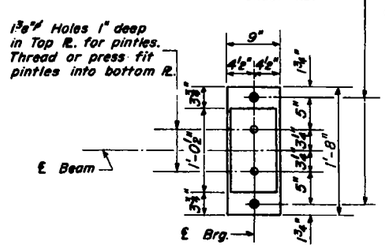
PIER 2

PIER 1

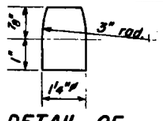
DIAPHRAGM D
20 Required

DIAPHRAGM D1
60 Required

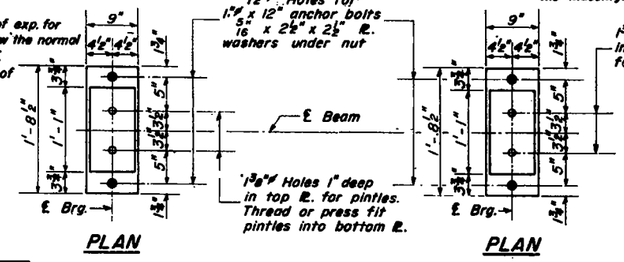
Note: Hardened washers shall be required over 15/16" ø holes for diaphragms. Contact surfaces of joint for diaphragms shall be free of paint or lacquer.



PLAN

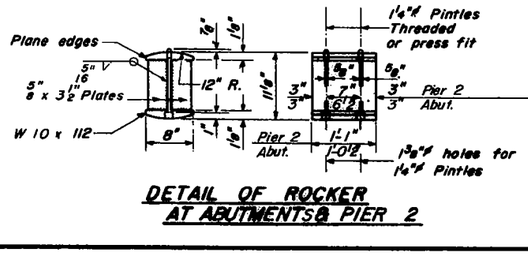


DETAIL OF PINTLE

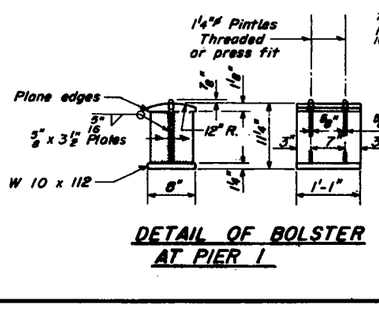


PLAN

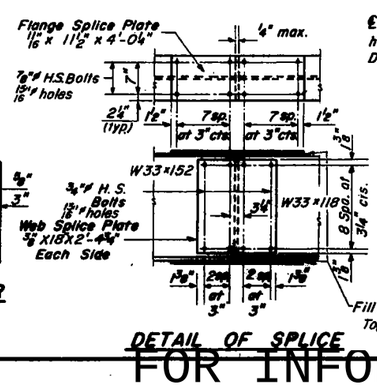
PLAN



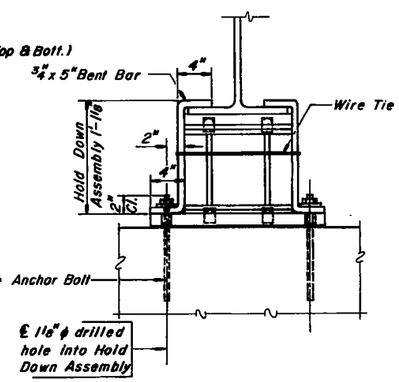
DETAIL OF ROCKER AT ABUTMENTS & PIER 2



DETAIL OF BOLSTER AT PIER 1



DETAIL OF SPLICE



BEAM HOLD DOWN DETAIL

Notes:

Beams shall be held down at the Abutment on the opposite end of Bridge from which the deck pour is commenced. After pouring is completed the Hold Down Assembly shall be removed and Nuts placed on Anchor Bolts.

Cost of Hold Down Assembly, incidental to Class X Concrete.

DESIGNED	G J K
CHECKED	K.B.D.
DRAWN	C G L
CHECKED	K.B.D.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS HNTB

Revised 12-15-82 ALB/WMB

STRUCTURAL STEEL DETAILS
F.A. 412 SECTION 103-2VB
F.A. 412 OVER B.N.R.R.
LEE COUNTY
STATION 1175+47.10
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY