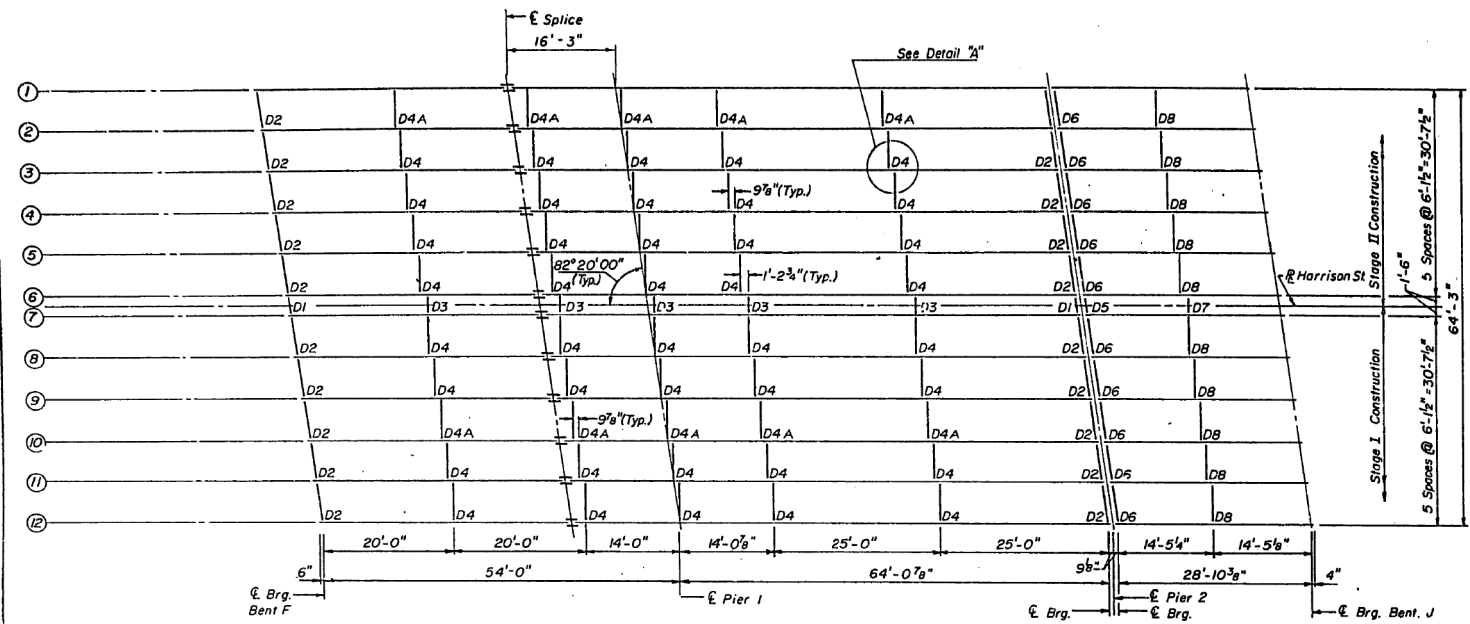


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

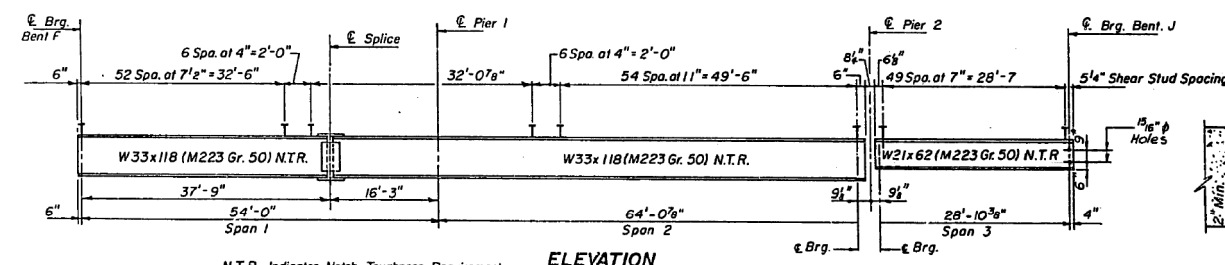
W 1985-080 R

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	8	COOK	79	92
REVISED				
DATE	BY	REASON		

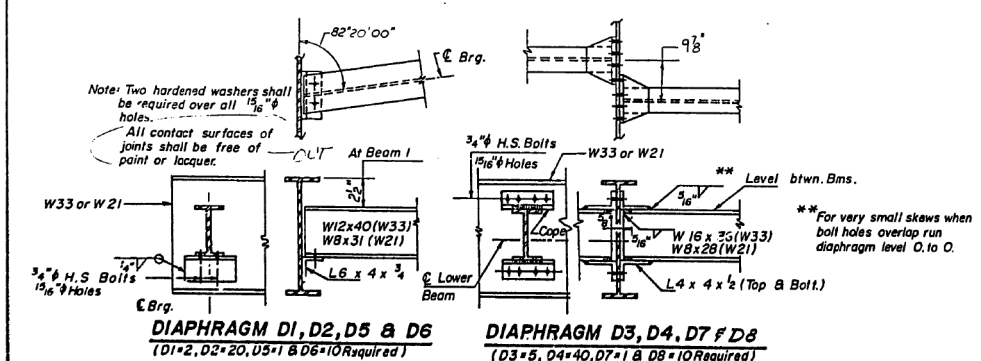


FRAMING PLAN

NOTE: Diaphragm D1, D3, D5 & D7 shall be installed during Stage II Construction. All structural steel shall be M183 unless noted.

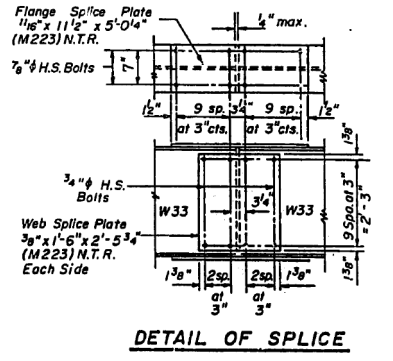


ELEVATION

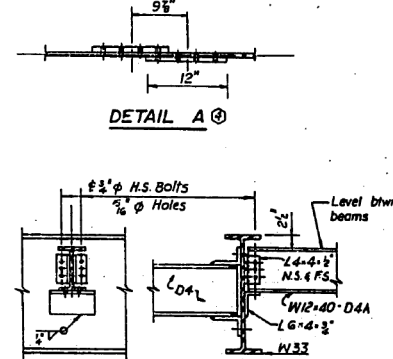


DIAPHRAGM D1, D2, D5 & D6 (D1=2, D2=20, D5=1 & D6=1 OR Required)

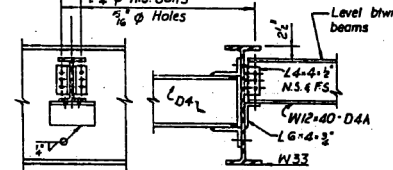
DIAPHRAGM D3, D4, D7 & D8 (D3=5, D4=40, D7=1 & D8=1 OR Required)



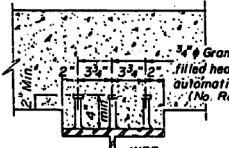
DETAIL OF SPLICE



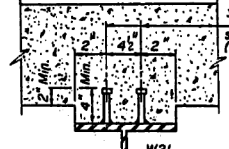
DETAIL A



DIAPHRAGM D4A (10 Required)



SHEAR STUDS (Spans 1 & 2)



SHEAR STUDS (Span 3)

	0.4 SPAN 1	PIER	0.6 SPAN 2	0.5 SPAN 3
I_s (in. 4)	5,900	5,900	5,900	1,330
I_c (in. 4)	13,688	-	13,688	4,474
S_s (in. 3)	359	-	359	127
S_c (in. 3)	528	-	528	208
Z (in. 3)	-	-	-	-
R (K/')	0.71	1.25	0.71	0.66
M_E (K')	123	536	223	68
M_L (K')	0.54	-	0.54	0.54
M_D (K')	93	-	169	58
M_I (K')	317	273	385	156
M_{imp} (K')	89	74	102	50
$M_{(M.L.+I)}$ (K')	678	578	812	360
$M_{(M.L.+I)}$ (K')	1160	434	1,568	629
$M_{(M.L.+I)}$ (K')	-	-	-	-
f_u (non-comp) (k.s.i.)	4.11	18.58	7.52	6.43
f_u (comp) (k.s.i.)	2.11	-	3.65	3.23
f_u (L+I) (k.s.i.)	15.37	19.33	18.45	20.77
f_u (Overload) (k.s.i.)	21.59	37.91	29.82	30.43
f_u (Total) (k.s.i.)	28.07	49.28	38.77	38.56
VR (K)	40.9	-	41.5	36.0

	BENT F	PIER 1	PIER 2 (SPAN 2)	PIER 3 (SPAN 3)	BENT J
R_E (K)	23.5	92.7	31.4	17.2	122
R_L (K)	35.8	44.2	36.9	27.1	27.1
R_{imp} (K)	10.0	12.0	9.8	8.1	8.1
R_{Total} (K)	69.3	148.9	18.1	52.4	52.4

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total and Overload).
 VR is the maximum V_u impact shear range in span.
 Z is the plastic section modulus used to determine the Fully Plastic Moments in non-composite areas.
 The Fully Plastic Moment capacity (M_u) is computed according to AASHTO 10.4.1.1 & 10.50.1.1. f_u (Total) is the sum of stresses due to 1.3 (M_{DL} + M_{SD} + 1/2 (M_{LL} + I)) f_u (Overload) is the sum of the stresses due to M_{DL} + M_{SD} + 1/2 (M_{LL} + I).
 M_{DL} - Moment due to dead loads on non-composite section.
 M_{SD} - Moment due to dead loads on composite section.
 M_{LL} - Moment due to live load on non-composite or composite section.
 I - Live load impact.
 M_u = 1.3 [M_{DL} + M_{SD} + 1/2 (M_{LL} + I)]
 * Values given in Reaction Table are based upon Service Loads.

Location	€ Brg. Bent F	€ Splice	€ Pier #1	€ Brg. Span #2	€ Brg. Span #3	€ Brg. Bent J
1	17.313	18.439	18.602	19.245	19.234	18.840
2	17.442	18.556	18.714	19.335	19.323	18.920
3	17.570	18.671	18.823	19.424	19.412	18.999
4	17.698	18.787	18.934	19.513	19.500	19.078
5	17.826	18.902	19.044	19.602	19.587	19.157
6	17.953	19.017	19.153	19.691	19.677	19.235
7	17.969	19.027	19.160	19.687	19.673	19.227
8	17.904	18.950	19.078	19.584	19.569	19.114
9	17.840	18.872	18.995	19.480	19.465	19.000
10	17.775	18.795	18.913	19.376	19.360	18.886
11	17.710	18.718	18.830	19.272	19.256	18.772
12	17.644	18.640	18.747	19.168	19.151	18.658

SHEET 9-10 OF 9-17

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-080 R - COOK COUNTY
HARRISON STREET OVER DAN RYAN EXPRESSWAY
STRUCTURAL STEEL FRAMING PLAN

Scale: None
Date: AUGUST 14, 1987
Checked By: S.D.D.
ENVIRODYNE ENGINEERS INC
Chicago, Ill.

NAME	DATE
Revisions	4-22-88

PLANS PREPARED BY
R.G. ENGINEERING ASSOCIATES, INC.
400 WEST JACKSON BLVD.
CHICAGO, ILL. 60604

USER NAME = dunkerleyb	DESIGNED -	REVISED -
PLOT SCALE = N.T.S.	CHECKED -	REVISED -
PLOT DATE = 11/26/2013	DRAWN -	REVISED -
	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AS-BUILTS SN 016-1088

SHEET NO. AS-13 OF AS-72 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-036R	COOK	256	155
CONTRACT NO. 60W71			ILLINOIS FED. AID PROJECT -NUMBER-	

D:\60W71-sht-AS-BUILT-13.dgn