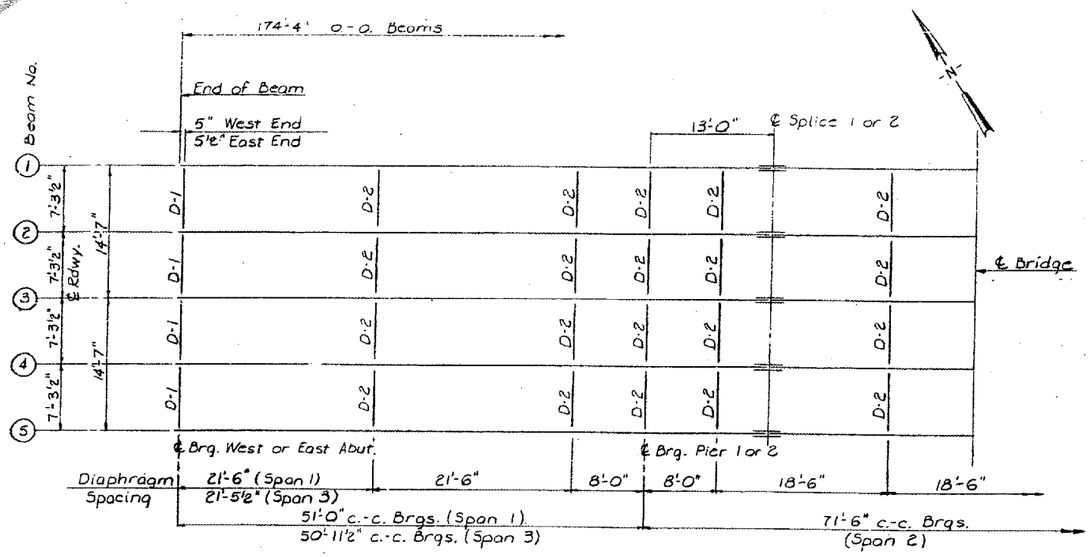
CONTRACT NO.: 98880
ROUTE: VARIOUS
COUNTY: VARIOUS
SECTION: D-9 CONTRACT MAINTENANCE 05-7
SHEET NO.: 35 OF 37

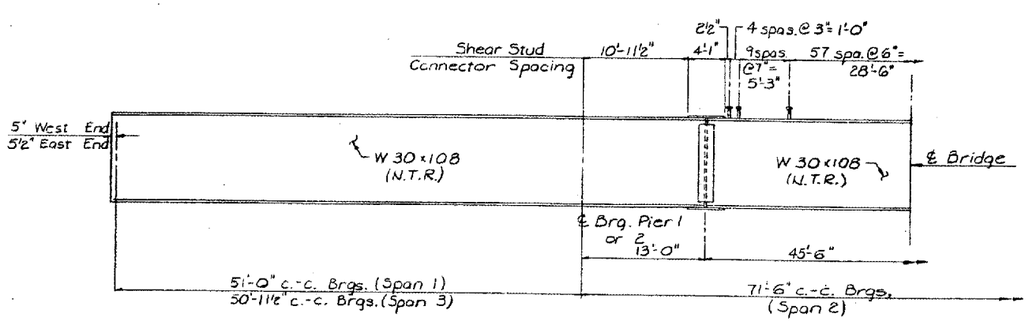
Sec. 129 BC-BR

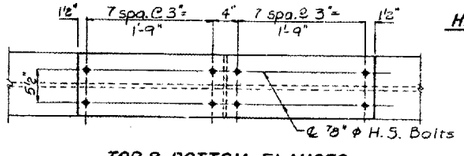
Sheet 7 of 16



HALF FRAMING PLAN

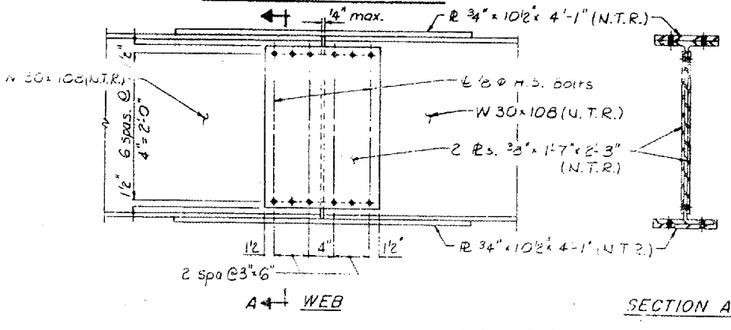
All Beams W30 x 108 (NTR)





HALF ELEVATION

TOP & BOTTOM FLANGES



SPLICES 1 & 2

TOP OF BEAM ELEVATIONS *

	Bm. #1 or #5	Bm. #2 or #4	Bm. #3
℄ Brg. West Abut.	384.83	384.95	385.06
℄ Brg. Pier #1	↓	↓	↓
℄ Splice #1	↓	↓	↓
℄ Splice #2	↓	↓	↓
℄ Brg. Pier #2	↓	↓	↓
℄ Brg. East Abut.	384.83	384.95	385.06

* Elevations are for Fabrication Only

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Overload)

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Overload)

Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Fully Plastic Moments (Mu) are computed according to A.A.S.H.T.O. 1.7.59(A) & 1.7.62(A).

fs (Overload) is the sum of the stresses due to $M_{\ell} + M_{s\ell} + .53(M_{\ell} + M_I)$

VR is the maximum ℄ + impact shear range in span used to determine shear connector spacing.

Note: NTR indicates components to which notch toughness requirements are applicable.

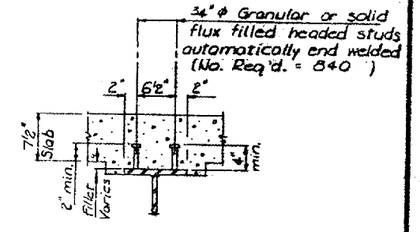
Work this Sht. W/ Shts. 10 & 11.

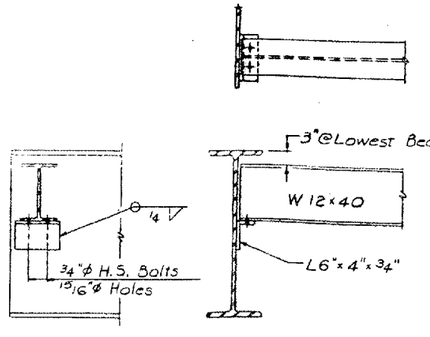
INTERIOR BEAM MOMENT TABLE

		0.4 Span 1 or 0.6 Span 3	Pier 1 or Pier 2	0.5 Span 2
Is	(in.⁴)	4470	4470	4470
Ic	(in.⁴)	——	——	13356
Ss	(in.³)	299	299	299
Sc (n=27, n=9)	(in.³)	——	——	422,467
Z	(in.³)	——	——	346
ℓ	(k/ₗ)	1.151	1.151	.823
Mℓ	('k)	184	437	202
Sℓ	(k/ₗ)	——	——	.328
Msℓ	('k)	——	——	96
Mℓ	('k)	331	264	510
M Imp	('k)	94	71	130
$S_3(M_{\ell}+I)$	('k)	710	560	1069
$1.3(M\ell + M_{s\ell} + S_3(M_{\ell}+I))$	('k)	1162	1296	1778
Fully Plastic Moment	('k)	1442	1442	2723
fs ℓ non-comp	(KSI)	7.4	17.54	8.1
fs sℓ comp	(ksi)	——	——	2.7
$f_s\ S_3(\ell+I)$	(ksi)	28.5	22.5	27.5
fs (overload)	(ksi)	35.9	40.0	38.3
VR	(k)	——	——	47.7

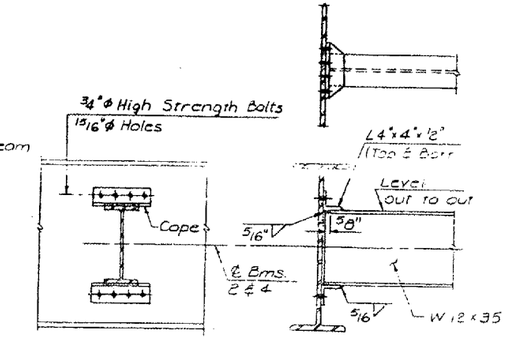
INTERIOR BEAM REACTION TABLE

	East or West Abut.	Pier 1 or Pier 2
Rℓ	20.7	79.1
R	36.9	47.4
Imp.	10.5	12.7
Rℓ + ℓ + I	68.1	139.2





END DIAPHRAGM D-1
(8 Required)



INTERIOR DIAPHRAGMS D-2
(10 Required)

Note: Hardened washers shall be required over 15/16" ϕ holes for diaphragm connections (2' Bolt).

FOR INFORMATION ONLY:

BRIDGE NO. 7 STRUCTURE 100-0033

STRUCTURAL STEEL
FEDERAL AID PRIMARY RT. 726 (ILL. 148)
SECTION 129-BC-BR-1
OVER POND CREEK
WILLIAMSON COUNTY
STATION 222+8000

P.K.B.	HANSON ENGINEERS INCORPORATED	PROJECT NO. 80S2006
T.E.H.		DATE 11-12-81
M.L.B.		
T.E.H.		