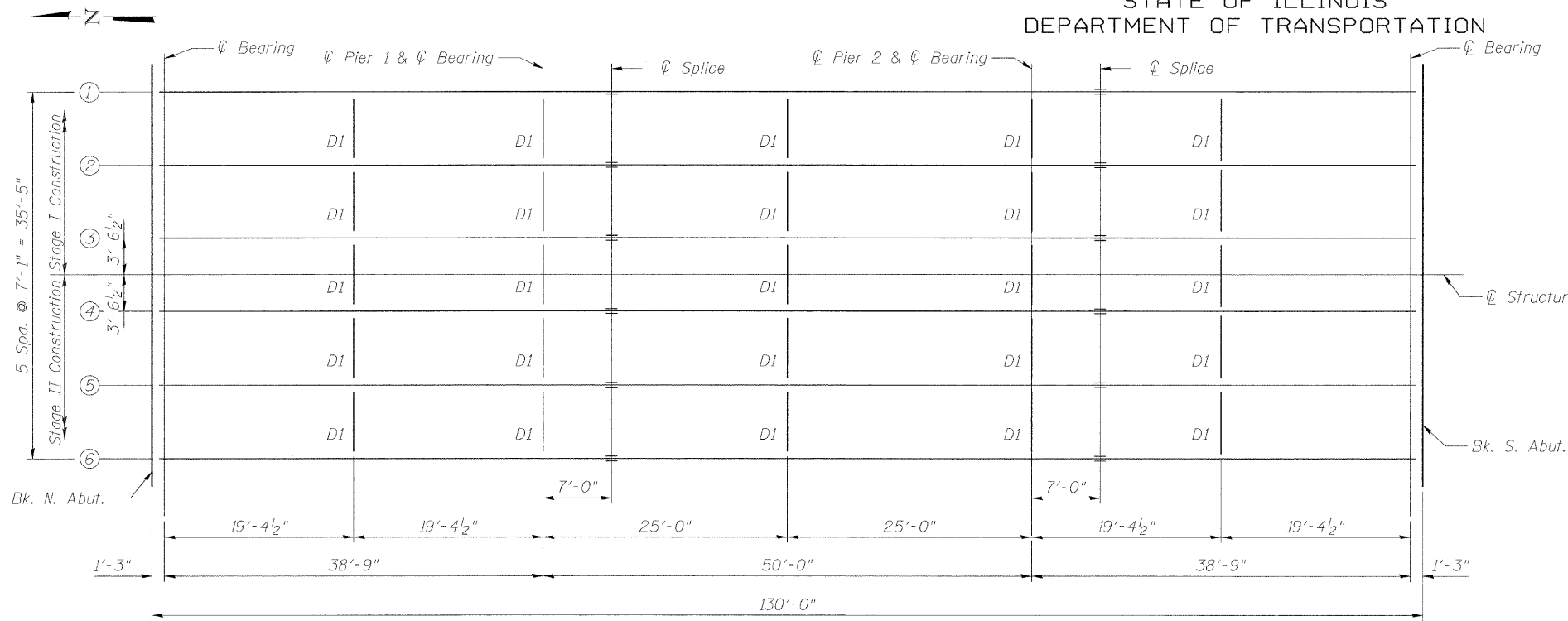


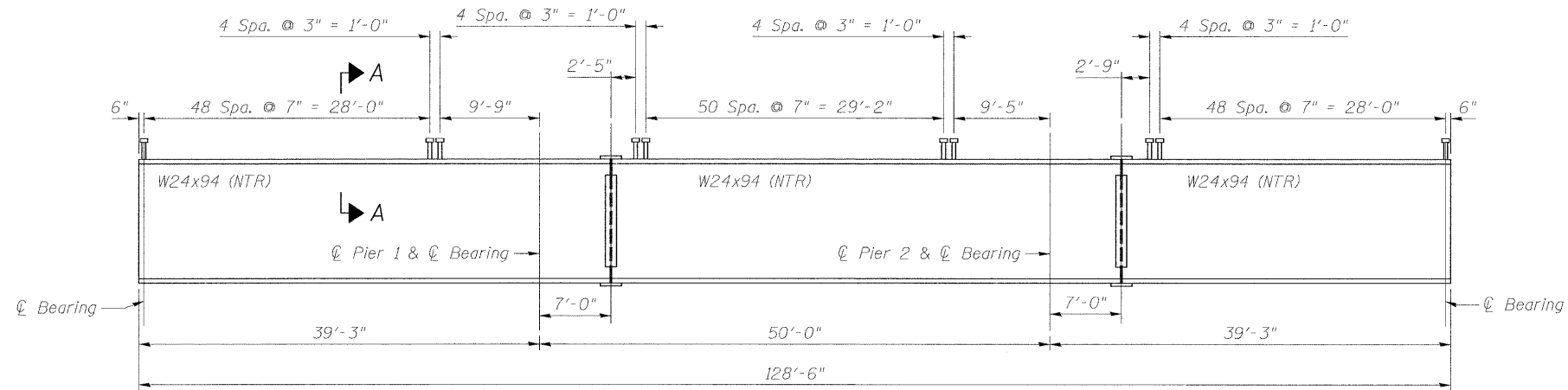
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14 22 SHEETS
FAP 322	24BR-1	FAYETTE	57	34	
FED. ROAD DIST. NO. 7		ILLINOIS	FEE-AID PROJECT		

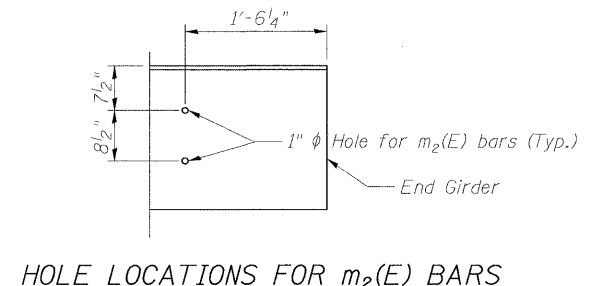
Contract # 94770



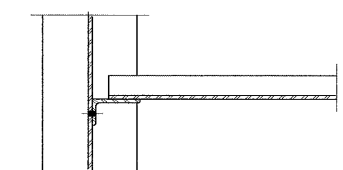
FRAMING PLAN



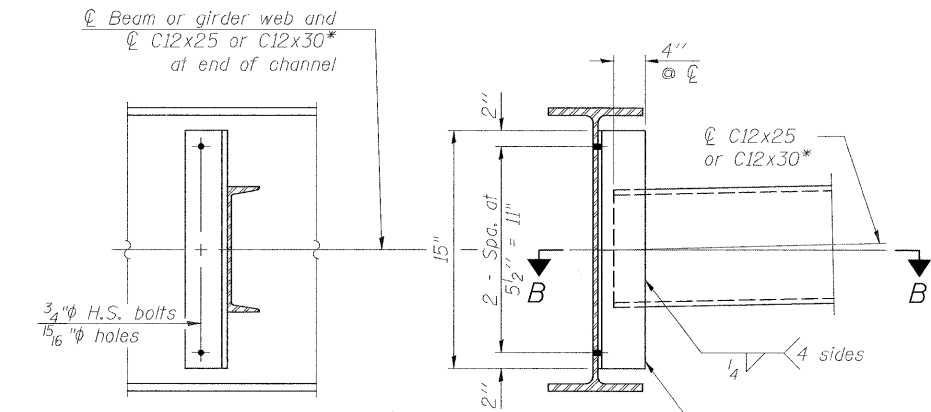
ELEVATION



HOLE LOCATIONS FOR $m_2(E)$ BARS



SECTION B-B

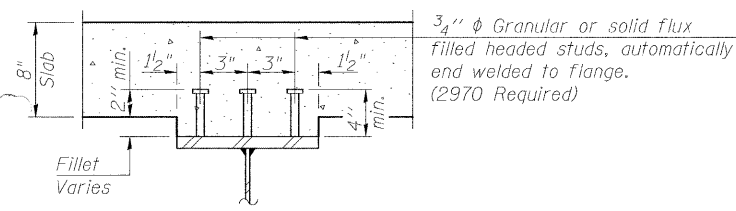


INTERIOR DIAPHRAGM (D1)
(25 Required)

Note:
Two hardened washers required for each set of oversized holes.

* Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

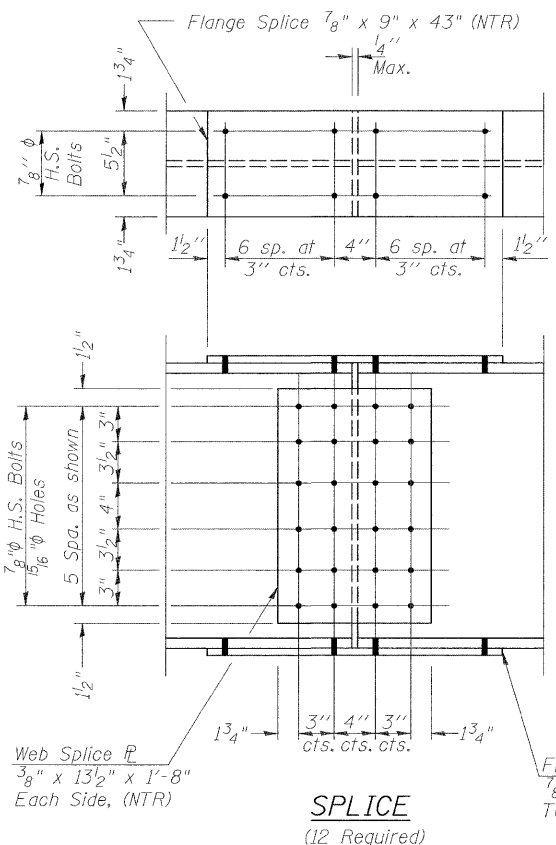


SECTION A-A

	Abut.	Pier
R _L (K)	20.4	63.6
R _R (K)	38.6	41.1
Imp. (K)	11.6	12.3
R (Total) (K)	70.6	117.0

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total & Overload).
 VR is the maximum Live Load + Impact shear range in span.
 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
 M_a (Applied Moment) = $1.3M_L + M_S + 5_3(M_L + I)$.
 M_u is the Full Plastic Moment Capacity for Compact, Braced section.
 f_s (Overload) is the sum of the stresses due to $M_L + M_S + 5_3(M_L + I)$.
 f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3M_L + M_S + 5_3(M_L + I)$.

	.4 Sp. 1 & .6 Sp. 3	Pier	.5 Sp. 2
I_s (in ⁴)	2700	2700	2700
I_c (n) (in ⁴)	8405	-	8405
I_c (3n) (in ⁴)	6475	-	6475
S_s (in ³)	222	222	222
S_c (n) (in ³)	349.3	-	349.3
S_c (3n) (in ³)	318.1	-	318.1
Z (in ³)	-	254	-
ϕ (K/ft.)	.812	1.317	.812
M_L (K)	81.6	239.7	90.3
s_L (K/ft.)	.505	-	.505
M_S (K)	60.5	-	81.5
M_I (K)	235.7	132.3	287.5
M (Imp) (K)	70.7	39.7	86.2
$5_3(M_L + I)$ (K)	510.7	286.7	622.9
M_a (K)	848.6	684.3	1033.1
M_u (K)	1455.4	-	1455.4
f_s non-comp (k.s.i.)	5.7	16.8	6.4
f_s comp (k.s.i.)	2.7	-	3.6
$f_s 5_3(M_L + I)$ (k.s.i.)	17.5	15.5	21.4
f_s (Overload) (k.s.i.)	26.0	32.3	31.4
f_s (Total) (k.s.i.)	-	42.0	-
VR (K)	46.1	-	51.7



SPLICE
(12 Required)

TOP OF BEAM ELEVATIONS
(For Fabrication Only)

Location	Beam 1&6	Beam 2&5	Beam 3&4
Br. S. Abut.	479.63	479.77	479.88
Pier 1	479.48	479.62	479.73
Splice 1	479.46	479.60	479.71
Pier 2	479.29	479.43	479.54
Splice 2	479.27	479.41	479.52
Br. N. Abut.	479.15	479.29	479.40

- Notes:
- All structural steel for girders and splice plates shall conform to the requirements of AASHTO M270, Grade 50. All other structural steel, except bearings, shall conform to the requirements of AASHTO M270, Grade 36.
 - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

FRAMING & BEAM DETAILS
US 51 / RICHLAND CREEK
F.A.P. RT. 322
FAYETTE COUNTY
SN. 026-0104

BENTON & ASSOCIATES, INC.

DESIGNED	MBH
CHECKED	NRF
DRAWN	MBH
CHECKED	NRF