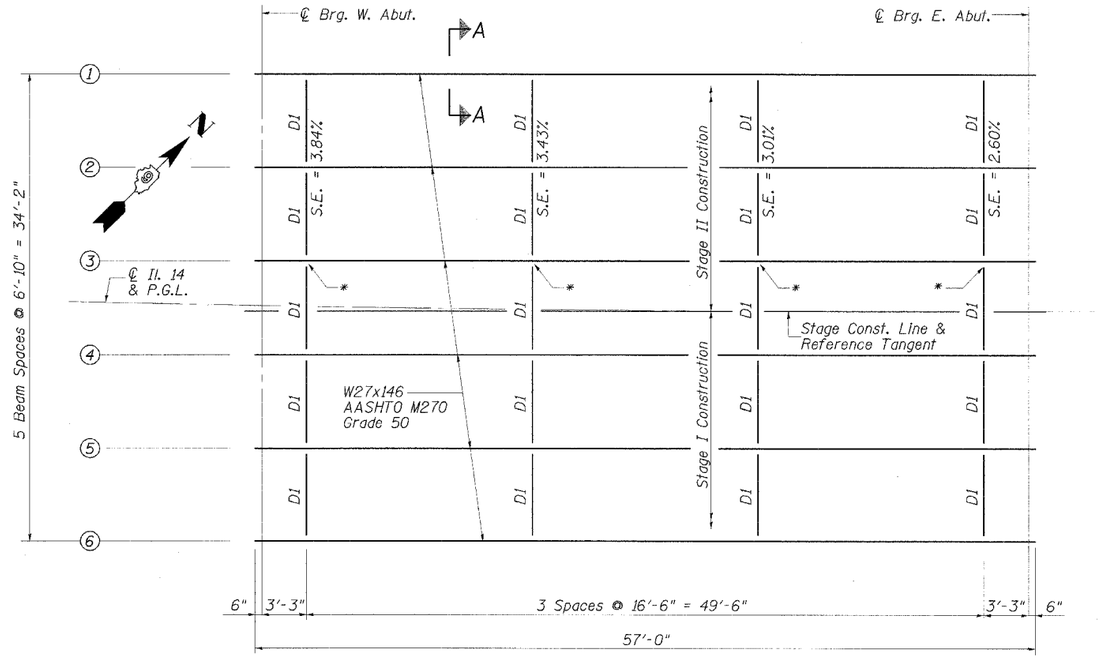
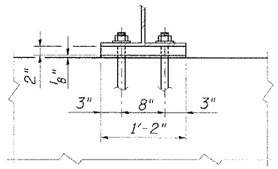
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	37
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

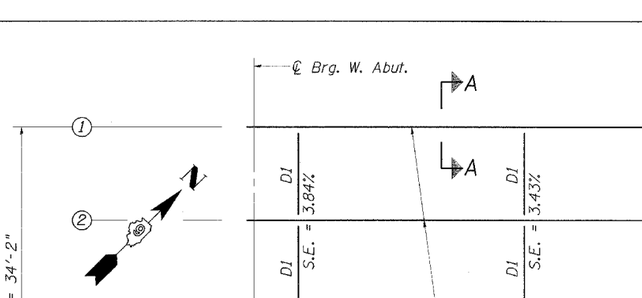
Contract #98645 SHEET 11 OF 18



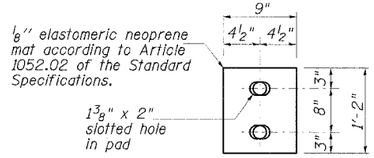
FRAMING PLAN



SECTION B-B

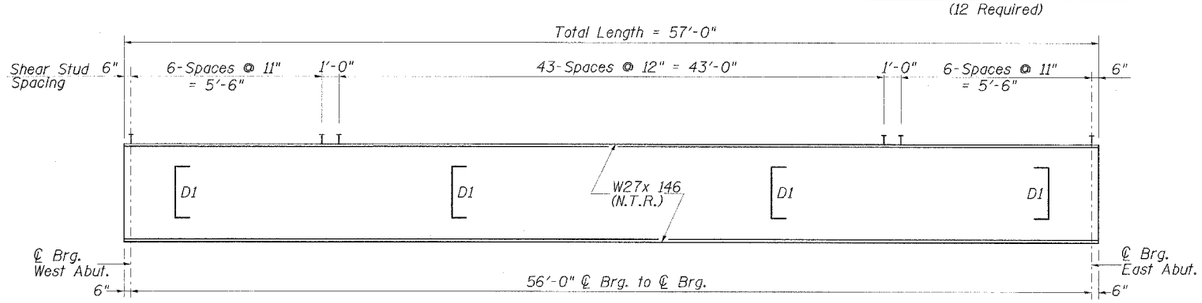


END OF BEAM ELEVATION



PLAN - ELASTOMERIC NEOPRENE MAT (ABUT.)

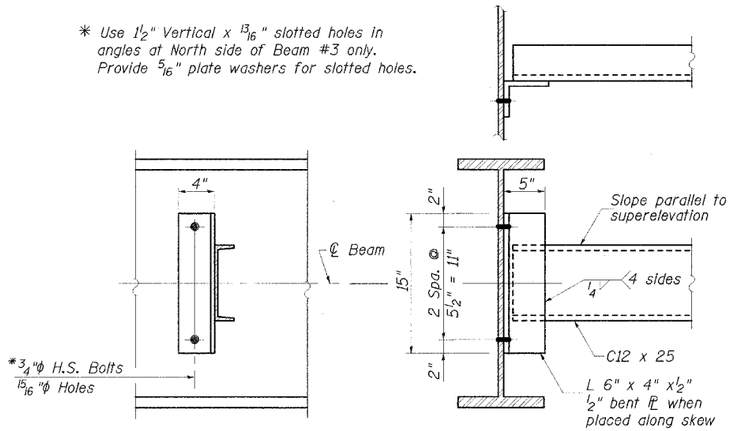
(12 Required)



NOTE
All stringers shall be AASHTO M270, Grade 50 steel. (N.T.R.)

BEAM ELEVATION

* Use 1 1/2" Vertical x 13/16" slotted holes in angles at North side of Beam #3 only. Provide 5/16" plate washers for slotted holes.



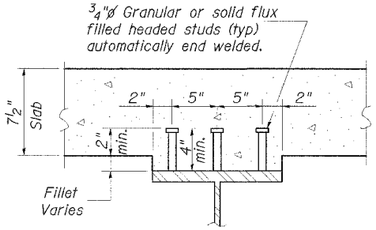
DIAPHRAGM D1

(20 Required)

NOTE
The bolts for the slotted holes in angles at Beam #3 shall only be finger tightened prior to the deck slab pouring for Stage II constr. and then be fully tightened after completion of the pouring. Two hardened washers shall be required over all 15/16" ϕ holes.

TOP OF BEAM ELEVATIONS FOR FABRICATION ONLY

Bms. / Location	Beam 1	Beam 2	Beam 3
℄ W. Abut.	409.71	409.97	410.24
℄ E. Abut.	409.91	410.08	410.25
Bms. / Location	**Beam 4**	**Beam 5**	**Beam 6**
℄ W. Abut.	410.51	410.78	411.04
℄ E. Abut.	410.42	410.59	410.77



SECTION A-A

(Total no. of studs req'd. = 1044)

NOTES:

1. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
2. All stringers shall be AASHTO M270, Grade 50 steel. (N.T.R.)
3. 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.

INTERIOR GIRDER MOMENT TABLE		0.5 Span
I_s	(in^4)	5,660
$I_c(n)$	(in^4)	14,496
$I_c(3n)$	(in^4)	10,568
S_s	(in^3)	414
$S_c(n)$	(in^3)	587
$S_c(3n)$	(in^3)	531
DC1	(k/')	0.837
M_{DC1}	('k)	320
DC2	(k/')	0.140
M_{DC2}	('k)	55
DW	(k/')	0.342
M_{DW}	('k)	134
M_{L+Imp}	('k)	717
M_u(Strength I)	('k)	1924.5
$\phi_f M_n$	('k)	3335.8
f_s DC1	(ksi)	9.28
f_s DC2	(ksi)	1.24
f_s DW	(ksi)	3.03
f_s 1.3(L+I)	(ksi)	19.06
f_s (Service II)	(ksi)	32.61
f_s (Total)(Strength I)	(ksi)	
V_f	(k)	28.3

INTERIOR GIRDER REACTION TABLE HL93 Loading		Abutment 1 & 2
R_{DC1}	(k)	22.9
R_{DC2}	(k)	13.5
R_{DW}	(k)	57.0
R_{L+Imp}	(k)	14.5
R_{Total}	(k)	107.9

NOTES:

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+Imp}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+Imp}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\ M_{L+Imp}$

f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+Imp}$

V_f: Factored shear range computed according to Article 6.10.10.

REVISIONS	
NAME	DATE

CMT
CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS
SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

ILLINOIS DEPARTMENT OF TRANSPORTATION

FRAMING PLAN & DETAILS

F.A.P. ROUTE 853 (IL. RTE. 14)
ILLINOIS ROUTE 14 OVER
DRUMMOND BRANCH
SECTION 6B-1 STA. 149+71.25
STR. NO. 028-0075 - FRANKLIN COUNTY

SCALE: NONE DRAWN BY: GLD
DATE: 6/6/07 CHECKED BY: WLB

L:\IDOT\060600\SHL\0280075\drawings\sheets\FRAMING PLAN & DETAILS.DGN
6/5/2007