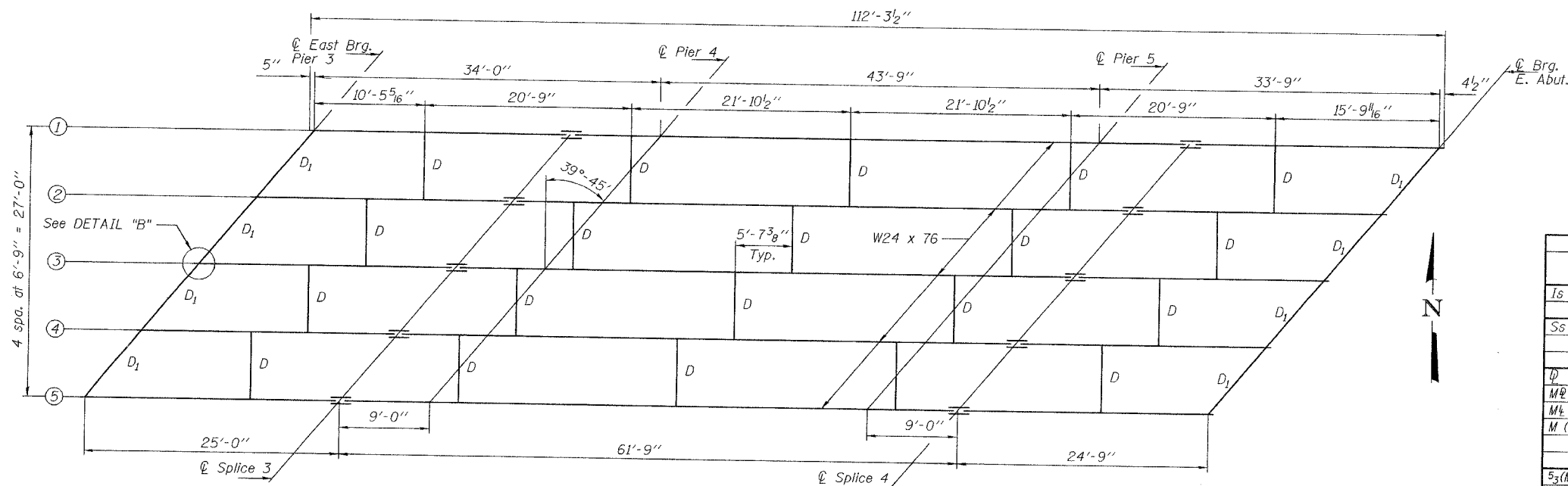


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.S. 738	SECTION #	COUNTY Greene	SHEETS 28	SHEET NO. 13	SHEET NO. 9 20 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		
*01-00072-00-BR		CONTRACT NO. 97249			



**FRAMING PLAN - UNIT 2**

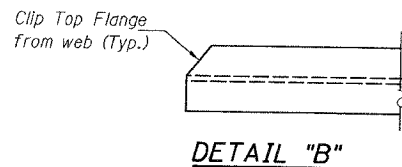
All beams shall be W24x76 AASHTO M270 Grade 50W (NTR).

**\*TOP OF BEAM ELEVATIONS**

Loc.	Bm.	Bm. #1	Bm. #2	Bm. #3	Bm. #4	Bm. #5
∅ E. brg. Pier 3		498.74	498.85	498.96	498.86	498.76
∅ Splice 3		498.64	498.75	498.86	498.76	498.66
∅ Pier 4		498.63	498.74	498.85	498.75	498.65
∅ Pier 5		498.59	498.70	498.81	498.71	498.61
∅ Splice 4		498.58	498.69	498.80	498.70	498.60
∅ E. Abut.		498.62	498.73	498.85	498.75	498.65

\* For Fabrication Only.

Note: For diaphragm and splice information see sht. 8 of 20.



	0.4 Sp. 4 or 0.6 Sp. 6	Pier 4 or 5	0.5 Sp. 5
$I_s$ (in <sup>4</sup> )	2100	2100	2100
$S_s$ (in <sup>3</sup> )	176	176	176
$\phi$ (K/ft.)	1.13	1.13	1.13
$M\phi$ (K)	91.0	176.3	94.5
$M\ddagger$ (K)	175.8	150.2	189.0
$M$ (Imp) (K)	52.7	45.1	56.0
$S_3(M\ddagger+I)$ (K)	380.8	325.4	408.3
$M_a$ (K)	613.4	652.3	653.6
$f_s\phi$ non-comp(k.s.i.)	6.2	12.0	6.4
$f_s S_3(4+I)$ (k.s.i.)	26.0	22.2	27.8
$f_s$ (Overload) (k.s.i.)	32.2	34.2	34.3
$f_s$ (Total) (k.s.i.)	41.8	44.5	44.6

	Abut.	Pier 4 or 5
$R\phi$ (K)	14.4	49.3
$R\ddagger$ (K)	30.4	40.3
Imp. (K)	9.1	12.1
$R$ (Total) (K)	53.9	101.7

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).  
 $M_a$  (Applied Moment) =  $1.3[M\phi + S_3(M\ddagger + I)]$ .  
 $f_s$  (Overload) is the sum of the stresses due to  $M\phi + S_3(M\ddagger + I)$ .  
 $f_s$  (Total) is the sum of the stresses due to  $1.3[M\phi + S_3(M\ddagger + I)]$ .

DESIGNED	ABG
CHECKED	ZBU
DRAWN	SMS
CHECKED	JFS

January 21, 2005  
 EXAMINED *Thomas J. Demagalaki*  
 ENGINEER OF BRIDGES AND STRUCTURES  
 PASSED *Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES

NOTES: "NTR" denotes members to which Notch Toughness Requirements are applicable.  
 All splice plates shall be AASHTO M270 Grade 50W.

**FRAMING PLAN - UNIT 2**  
**F.A.S. 738 OVER**  
**HURRICANE CREEK**  
**SECTION 01-00072-00-BR**  
**GREENE COUNTY**  
**STA. 144+72.46**  
**STR. NO. 031-3005**