

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

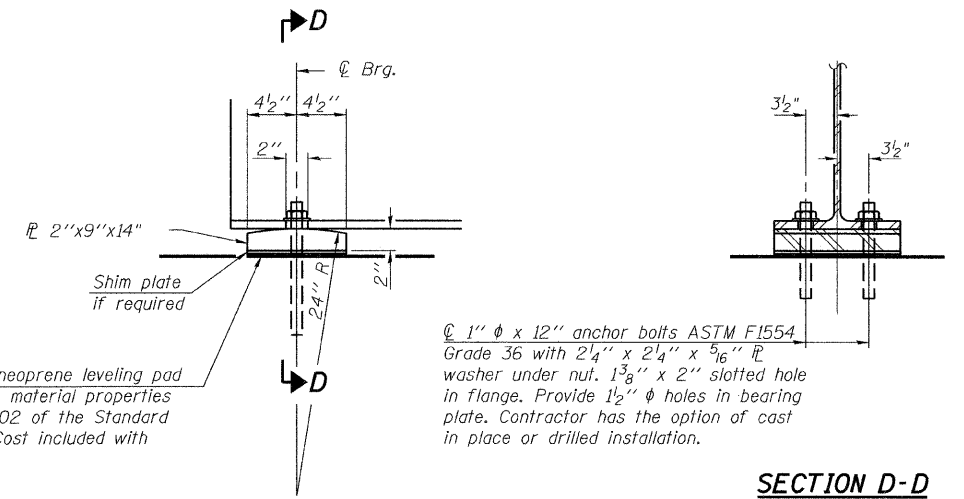
INTERIOR GIRDER MOMENT TABLE		
0.5 Span 1		
$I_s$	(in <sup>4</sup> )	5660
$I_c(n)$	(in <sup>4</sup> )	16116
$I_c(3n)$	(in <sup>4</sup> )	11417
$S_s$	(in <sup>3</sup> )	414
$S_c(n)$	(in <sup>3</sup> )	630
$S_c(3n)$	(in <sup>3</sup> )	561
DC1	(k/')	0.807
$M_{DC1}$	(k)	382
DC2	(k/')	0.150
$M_{DC2}$	(k)	71
DW	(k/')	0.267
$M_{DW}$	(k)	126
$M_L \cdot IM$	(k)	802
$M_u$ (Strength I)	(k)	2159
$\phi_r M_n, \phi_r M_{nc}$	(k)	2909
$f_s$ DC1	(ksi)	11.1
$f_s$ DC2	(ksi)	1.5
$f_s$ DW	(ksi)	2.7
$f_s$ 1.3(4+IM)	(ksi)	19.9
$f_s$ (Service II)	(ksi)	35.2
$f_s$ (Total)(Strength I)	(ksi)	---
$V_f$	(k)	21.7

\* Compact sections  
\*\* Non-Compact and slender sections

INTERIOR GIRDER REACTION TABLE		
		Abuts.
$R_{DC1}$	(k)	25.6
$R_{DC2}$	(k)	4.6
$R_{DW}$	(k)	8.2
$R_L \cdot IM$	(k)	68.9
$R_{Total}$	(k)	107.3

$I_s, S_s$ : 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<sup>4</sup> and in<sup>3</sup>).  
 $I_c(n), S_c(n)$ : 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<sup>4</sup> and in<sup>3</sup>).  
 $I_c(3n), S_c(3n)$ : 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<sup>4</sup> and in<sup>3</sup>).

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.).  
 $M_L \cdot IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).  
 $M_u$  (Strength I): Factored design moment (kip-ft.).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L \cdot IM$   
 $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).  
 $\phi_r M_{nc}$ : Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).  
 $f_s$  (Service II): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L \cdot IM$   
 $f_s$  (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L \cdot IM$   
 $V_f$ : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



ELEVATION AT ABUTMENT

FIXED BEARING

NOTES:

- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Steel members required for the bearing assembly shall be included in the cost of Structural Steel.
- Work this sheet with sheet S13.

MOMENT TABLE AND BEARING DETAILS  
STRUCTURE NO. 027-0097

DESIGNED -	MRB
CHECKED -	KWS
DRAWN -	VH
CHECKED -	MRB

benesch

alfred benesch & company  
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Job # 3938.02

SHEET NO. S14	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEETS S22	796	104 I & 105 BR-1	FORD	51	28
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
			CONTRACT NO. 66848		