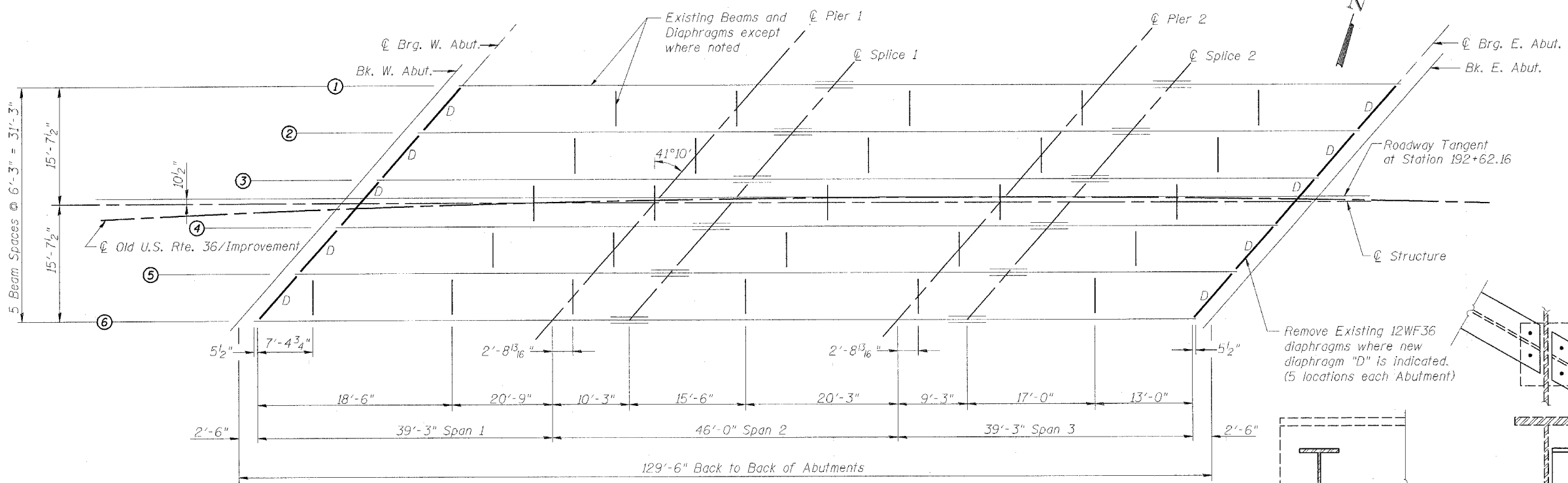


ELEVATION
(Looking North)

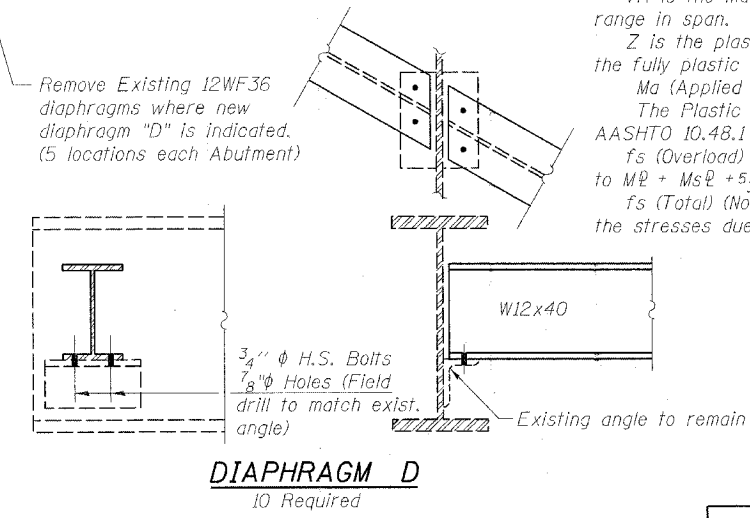
	0.4 Sp. 1	Piers	0.5 Sp. 2
I_s	(in ⁴) 3620	3620	3620
I_c (n)	(in ⁴) 9976		9976
I_c (3n)	(in ⁴) 7395		7395
S_s	(in ³) 267	267	267
S_c (n)	(in ³) 395		395
S_c (3n)	(in ³) 358		358
ψ	(k/ft.) 0.729	1.160	0.729
$M\psi$	(k) 83	194	62
$s\psi$	(k/ft.) 0.431		0.431
$M_s\psi$	(k) 55		53
$M\psi$	(k) 213	116	215
M (Imp)	(k) 64	34	62
$\psi_3[M\psi + M(Imp)]$	(k) 462	250	462
M_a	(k) 780	557	750
M_u	(k) 1042		1042
$f_s\psi$ non-comp (k.s.i.)	3.8	8.8	2.8
$f_s\psi$ (comp) (k.s.i.)	1.9		1.8
$f_s\psi_3(\psi + Imp)$ (k.s.i.)	14.1	11.3	14.1
f_s (Overload) (k.s.i.)	19.8	20.1	18.7
f_s (Total) (k.s.i.)	41.2	26.1	
VR	(k)		34.2

	Abut.	Pier
$R\psi$	(k) 17.9	54.3
$R\psi$	(k) 30.0	36.3
Imp.	(k) 9.0	8.6
R (Total)	(k) 56.9	99.2

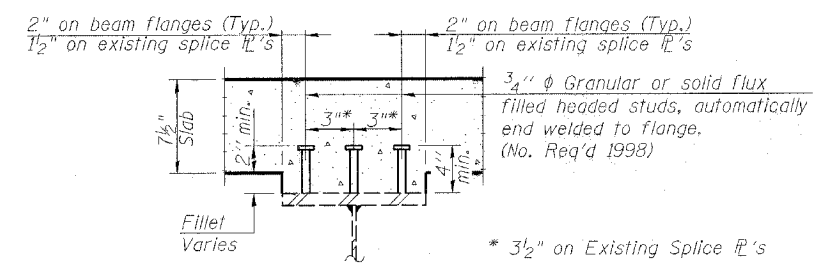
I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
 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) = $1.3[M\psi + M_s\psi + \psi_3(M\psi + M(Imp))]$.
 The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.
 f_s (Overload) is the sum of the stresses due to $M\psi + M_s\psi + \psi_3(M\psi + M(Imp))$.
 f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3[M\psi + M_s\psi + \psi_3(M\psi + M(Imp))]$.



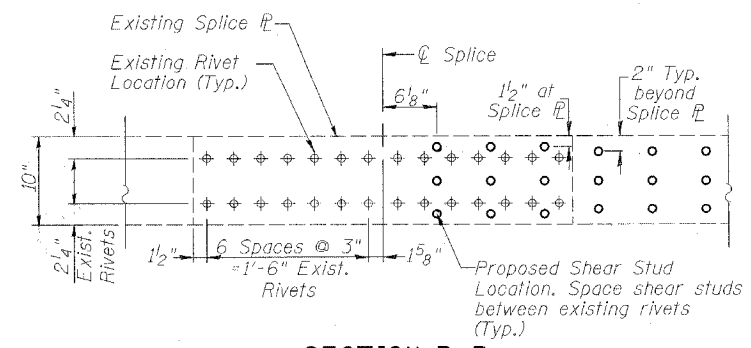
FRAMING PLAN



DIAPHRAGM D
10 Required



SECTION A-A



SECTION B-B
Showing Proposed Shear Stud Location, Space shear studs between existing rivets (Typ.)

NOTES:
 Two hardened washers shall be required over all oversize holes for diaphragms.
 See Genral Notes, Sheet 2 of 20 for priming of new diaphragms. Top coat on new diaphragms to be included with "Cleaning and Painting Steel Bridge".
 The cost of the replacement diaphragms, hardware and priming to be included in the cost of Furnishing and Erecting Structural Steel. The cost of Field Drilling Holes in Beams to be included in the cost of Furnishing and Erecting Structural Steel.
 Existing dimensions to be field verified prior to ordering of material.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	2988

ILLINOIS DEPARTMENT OF TRANSPORTATION
FRAMING PLAN
 OLD U.S. ROUTE 36 OVER
 N.B. 7TH STREET RAMP
 F.A.U. ROUTE 7978
 SECTION BR-2
 SANGAMON COUNTY
 STA. 192+62.16
 STRUCTURE NUMBER 084-0053
 DATE: JAN. 2005
 DRAWN BY: NJV
 CHECKED BY: PBB