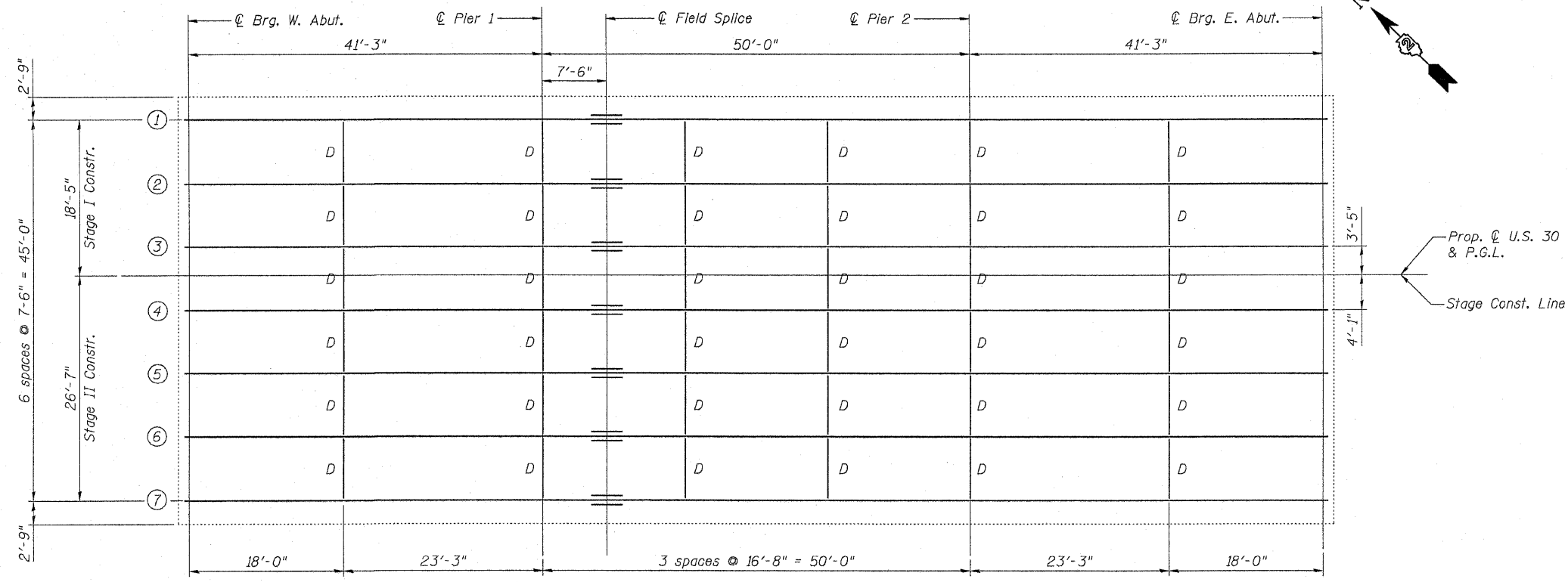


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note:
1. 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.
2. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Contract #64B74

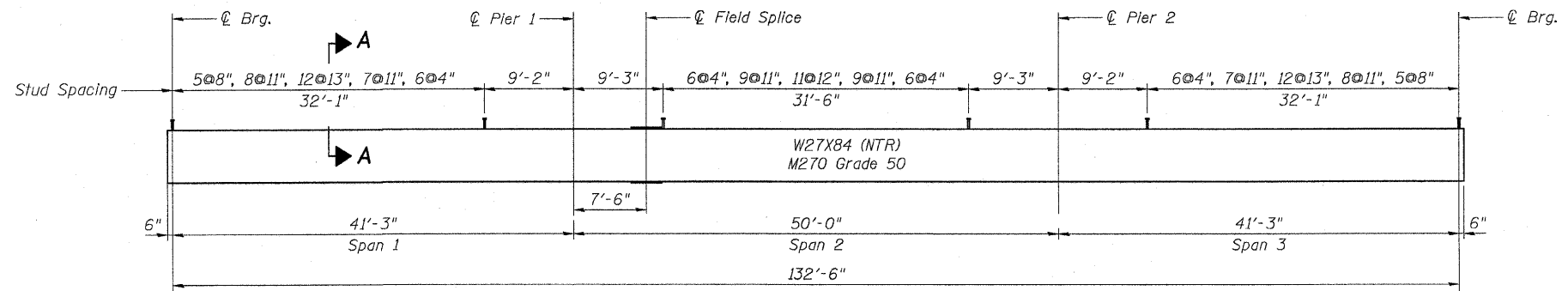


PLAN

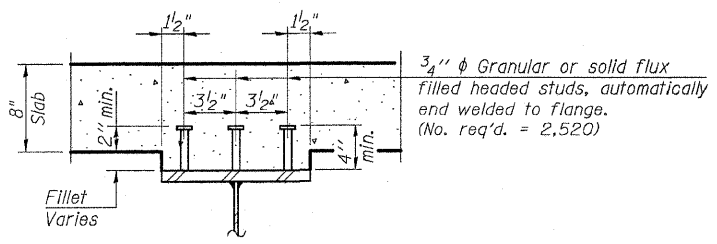
	0.4 Sp. 1	Pier 1	0.5 Sp. 2
I_s	2850.00	2850.00	2850.00
$I_c(n)$	8561.70		8561.70
$I_c(3n)$	6575.30		6575.30
S_s	213.50	213.50	213.50
$S_c(n)$	328.00		328.00
$S_c(3n)$	299.00		299.00
Z			
ρ	0.86	0.86	0.86
M_D	103.8	181.3	88.6
s_D	0.49	0.49	0.49
$M_s D$	67.0	83.6	70.1
M_L	276.0	145.7	302.4
M_{imp}	82.8	42.7	86.4
$S_3 [M_L + M_{imp}]$	598.1	313.9	647.9
M_a	999.6	752.5	1048.6
M_u	1413.3		1413.3
$f_s \rho$ non-comp	5.84	14.89	4.98
$f_s \rho$ (comp)	2.69		2.81
$f_s S_3 [M_L + M_{imp}]$	21.88	17.64	23.70
f_s (Overload)	30.41	32.53	31.50
f_s (Total)		42.30	
VR	57.4		40.6

	Abut.'s	Piers
R_D	21.5	68.3
R_L	41.5	47.4
Imp.	12.5	13.9
R_{Total}	75.5	129.5

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) 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 and Overload) due to long-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 and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
Z: Plastic Section Modulus of the steel section in non-composite areas (in.³).
 ρ : Un-factored non-composite dead load (kips/ft.).
 M_D : Un-factored moment due to non-composite dead load (kip-ft.).
 s_D : Un-factored long-term composite (superimposed) dead load (kips/ft.).
 $M_s D$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 M_L : Un-factored live load moment (kip-ft.).
 M_{imp} : Un-factored moment due to impact (kip-ft.).
 M_a : Factored design moment (kip-ft.).
 $1.3 [M_D + M_s D + \frac{5}{3} (M_L + M_{imp})]$
 M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
 f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M_D + M_s D + \frac{5}{3} (M_L + M_{imp})$
 f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M_D + M_s D + \frac{5}{3} (M_L + M_{imp})]$
VR: Maximum $\frac{1}{4}$ + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



ELEVATION FOR BEAMS



SECTION A-A

Beam	W. Abut.	Pier 1	Field Splice	Pier 2	E. Abut.
1	636.08	635.30	635.16	634.70	634.25
2	636.23	635.45	635.31	634.85	634.40
3	636.38	635.60	635.46	635.00	634.55
4	636.53	635.75	635.61	635.15	634.70
5	636.50	635.72	635.58	635.12	634.67
6	636.35	635.57	635.43	634.97	634.52
7	636.20	635.42	635.28	634.82	634.37

NOTE: For fabrication only

FRAMING PLAN
 U.S. RTE. 30/IL RTE. 78 OVER ROCK CREEK
 F.A.P. ROUTE 309, SECTION (17R)B
 WHITESIDE COUNTY
 STATION 1037+84.35
 STRUCTURE NO. 098-0113
 DATE: December 18, 2008
 DRAWN BY: D. Schettler
 CHECKED BY: A. Yargoglu

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