ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 0525	*	WINNEBAGO	157	132
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 25
50 SHEETS

* 02-00518-00-BR

TOP OF BEAM ELEVATIONS

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
℄ Brg. W. Abut.	797.23	797.71	798.34	798.95	799.54
℄ Pier 1	800.21	800.64	801.21	801.75	802.26
Splice 1 (W36x210)	800.92	801.33	801.89	802.41	802.90
Splice 1 (W36x170)	800.90	801.31	801.87	802.38	802.88
Splice 2 (W36x170)	804.42	804.72	805.16	805.57	805.95
℄ Pier 2	804.69	804.98	805.41	805.81	806.18
℄ Pier 3	806.45	806.66	807.01	807.33	807.62
Splice 3 (W36x170)	806.66	806.86	807.21	807.51	807.80
Splice 4 (W36x170)	808.03	808.14	808.38	808.59	808.77
Splice 4 (W36x280)	808.04	808.15	808.39	808.60	808.78
℄ Pier 4	808.23	808.30	808.52	808.70	808.85
Splice 5 (W36x280)	808.39	808.44	808.63	808.78	808.91
Splice 5 (W36x210)	808.40	808.44	808.63	808.78	808.91
℄ Brg. E. Abut.	808.45	808.39	808.48	808.52	808.55

Top of Beam Elevations are given for fabrication only.
Elevations have been adjusted up to account for
Dead Load Deflection.

INTERIOR GIRDER MOMENT TABLE

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3***	Pier 3	0.5 Sp. 4	Pier 4	0.6 Sp. 5
Is	(in4)	13,200	13,200	10,500	10,500	10,500	10,500	10,500	18,900	13,200
Ic (n)	(in4)	31,087	———	26,380	———	———	———	26,380	———	31,087
Ic (3n)	(in4)	22,554	———	19,276	———	———	———	19,276	———	22,554
Ss	(in3)	720	720	581	581	581	581	581	1035	720
Sc (n)	(in3)	1008	———	831	———	———	———	831	———	1008
Sc (3n)	(in3)	905	———	750	———	———	———	750	———	905
℄	(K/ft.)	0.98	1.51	0.94	1.49	1.48	1.50	0.96	1.53	1.00
M℄	('K)	37	1191	544	902	167	678	410	1830	609
s℄	(K/ft.)	0.55	———	0.55	———	———	———	0.55	———	0.55
Ms℄	('K)	42	———	382	———	———	———	300	———	368
M℄	('K)	413	453	752	417	198	410	736	652	832
M (Imp)	('K)	115	113	164	103	54	101	162	146	188
5/3(M℄+I)	('K)	880	943	1527	867	420	852	1497	1330	1700
Ma	('K)	1247	2774	3189	2300	764	1989	2869	4108	3480
* Mu	('K)	4290	———	3580	———	———	———	3892	———	4485
fs℄ non-comp	(k.s.i.)	0.6	19.9	11.2	18.7	3.4	14.0	8.5	21.2	10.2
fs℄ (comp)	(k.s.i.)	0.6	———	6.1	———	———	———	4.8	———	4.9
fs 5/3(℄+I)	(k.s.i.)	10.5	15.7	22.1	17.9	8.7	17.6	21.6	15.4	20.3
fs (Overload)	(k.s.i.)	11.7	35.6	39.4	36.6	12.1	31.6	34.9	36.6	35.4
** fs (Total)	(k.s.i.)	———	46.3	———	47.6	15.7	41.1	———	47.6	———
VR	(K)	65	———	65	———	———	———	67	———	64

* Compact, Braced Section
** Non-compact Section
*** Entire Span treated as negative moment region as total negative moments are larger than total positive moments.

INTERIOR GIRDER REACTION TABLE

		W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	E. Abut.
R℄	(K)	20.4	143.1	120.6	104.8	181.6	55.2
R℄	(K)	44.3	59.4	58.7	57.6	69.2	48.3
Imp.	(K)	12.3	14.8	14.4	14.2	15.5	11.0
R (Total)	(K)	77.0	217.3	193.7	176.6	266.3	114.5

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic (n) and Sc (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
Ic (3n) and Sc (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.
Ma (Applied Moment)=1.3[M℄ + Ms℄ + 5/3(M℄ + M (Imp))].
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.
fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + 5/3(M℄ + M (Imp)).
fs (Total) is the sum of the stresses due to 1.3[M℄ + Ms℄ + 5/3(M℄ + M (Imp))].

LAYOUT	S.G.	12/14/06
DRAWN	MCM/JKR	07/13/06
REVIEWED	F.I.N.	08/02/06

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STRUCTURAL STEEL DETAILS

WESTBOUND HARRISON AVENUE
OVER UP & CC&P RAILROAD
F.A.P. ROUTE 0525
SECTION 02-00518-00-BR
ROCKFORD, ILLINOIS
STATION 95+25.35
STRUCTURE NO. 101-6109

HANSON

JOB NO. 03R1751

DATE 12/14/06