

BENCH MARK:

#25 Chiseled "X" on existing sidewalk Sta. 42+59.19, 21.11' Rt., Elevation = 709.61
 #28 Iron Pin (5/8") on west side of RR track Sta. 51+52.10, 43.04' Lt., Elevation = 710.40

EXISTING STRUCTURE:

S.N. 101-6132, originally built in 1916 and rehabilitated in 1959, 1983 and 1993. The existing structure is an eight span open spandrel reinforced concrete arch bridge. West approach is a single span with prestressed precast concrete box beams. East approach is a two span structure with prestressed precast concrete box beams. Substructure consists of concrete abutments and piers supported on timber piles. Back to back of approach-abutment measures 797'-7 5/8" and out to out width of deck is 50'-0". Structure is to be removed and replaced using road closure. Traffic is to be detoured.

PROPOSED IMPROVEMENTS:

Existing structure to be removed and replaced with a three span bridge with composite welded plate girder end spans and a steel tied arch middle span supported on concrete abutments and piers. The proposed structure is 503'-3 3/8" back to back of abutments and 73'-2" out to out of deck.

Salvage name plate, metal pedestrian railing along southside of bridge, entire length.

DESIGN SPECIFICATIONS

2002 AASHTO "Standard Specifications for Highway Bridges" and Interims through 2005

ASCE/SEI 7-05 "Minimum Design Loads for Buildings and Other Structures".

DESIGN STRESSES FIELD UNITS

f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)
 fy = 50,000 psi (M270 Grade 50W)

LOADING HS25

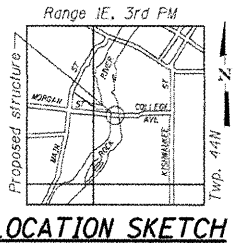
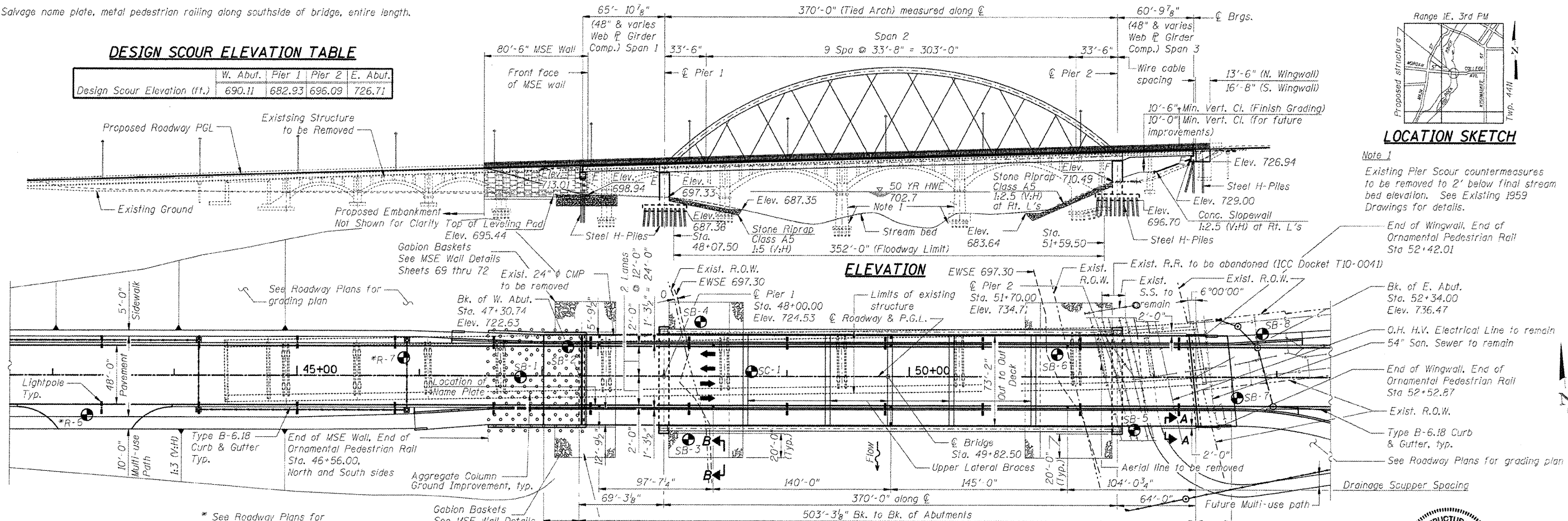
Allow 50#/sq. ft. for full wearing surfaces.
 Vessel Collision: none

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Horiz. Bedrock Acceleration Coefficient (A) = 0.033g
 Site Coefficient (S) = 1.2

DESIGN SCOUR ELEVATION TABLE

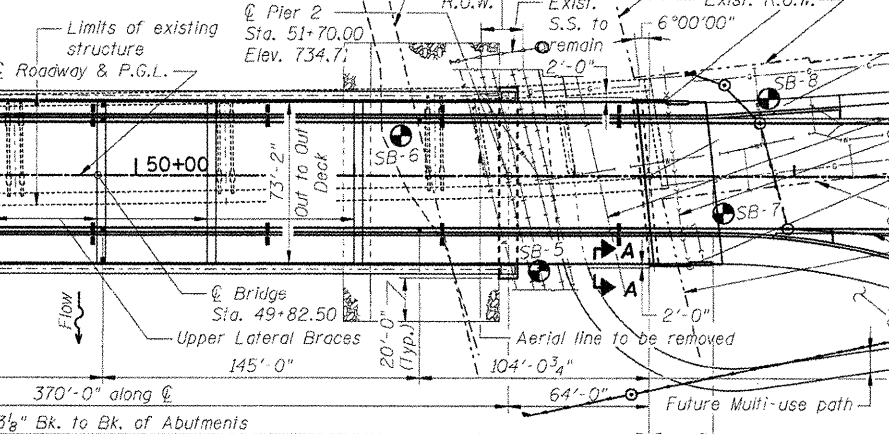
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	690.11	682.93	696.09	726.71



Note 1
 Existing Pier Scour countermeasures to be removed to 2' below final stream bed elevation. See Existing 1959 Drawings for details.

- End of Wingwall, End of Ornamental Pedestrian Rail Sta 52+42.01
- Bk. of E. Abut. Sta. 52+34.00 Elev. 736.47
- O.H. H.V. Electrical Line to remain 54" San. Sewer to remain
- End of Wingwall, End of Ornamental Pedestrian Rail Sta 52+52.87
- Exist. R.O.W.
- Type B-6.18 Curb & Gutter, typ.
- See Roadway Plans for grading plan
- Drainage Scupper Spacing

ELEVATION



PLAN

(See Sheet 2 for Sections A-A and B-B)

Professional Engineer stamps for Prabhj Ananthan and Richard J. Kerhlikar, State of Illinois, dated 02/11/2011.

"I certify that to the best of my knowledge, information and belief, this design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of the structure and complies with the requirements of the current "AASHTO Standard Specifications for Highway Bridges, 17th Edition."

WATERWAY INFORMATION

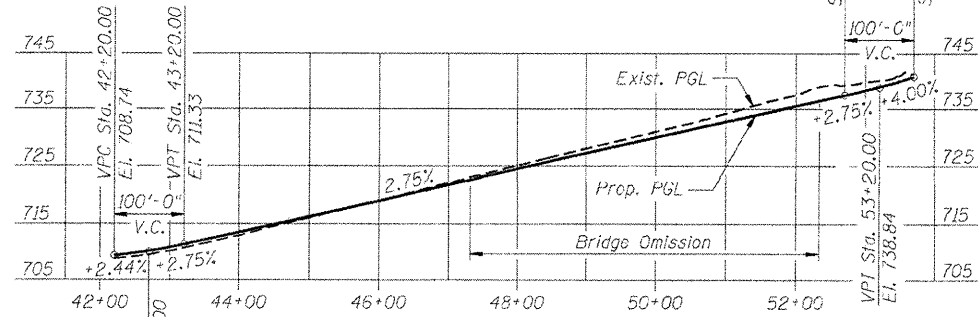
Flood Yr.	Freq. Q	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	39500	4610	6384	702.7	0	0	702.7	702.7
Base	100	44500	5090	6672	703.6	0	0	703.6	703.6
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	56500	7200	7824	707.2	0	0	707.2	707.2

GENERAL PLAN & ELEVATION
MORGAN STREET OVER ROCK RIVER
F.A.U. ROUTE 5077 - SEC. 99-00493-00-BR
WINNEBAGO COUNTY
STATION 49+82.50
STRUCTURE NO. 101-6108 (NEW)

BORING DATA

Boring No.	Station	Offset
*R-6	43+28.32	32.55' RT.
*R-7	45+87.33	14.61' LT.
SB-1	46+82.22	1.02' RT.
SB-2	47+21.39	23.72' LT.
SB-3	48+19.89	51.94' RT.
SB-4	48+29.52	44.00' LT.
SC-1	48+71.26	3.72' LT.
SB-5	51+83.95	43.36' RT.
SB-6	51+21.36	18.06' LT.
SB-7	52+68.13	16.92' RT.
SD-8	52+88.48	34.95' LT.

* See Roadway Plans for Borings R-6 and R-7



DESIGNED - PA, JDJ, BPD, CJW	REVISED -
DRAWN - GLD	REVISED -
CHECKED - RJK	REVISED -
DATE - 02/04/2011	REVISED -

CITY OF ROCKFORD
MORGAN STREET BRIDGE

GENERAL PLAN & ELEVATION
STRUCTURE NO. 101-6108

SCALE: SHEET NO. 1 OF 79 SHEETS STA. 47+00.74 TO STA. 52+63.50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5077	99-00493-00-BR	WINNEBAGO	253	127

CONTRACT NO. 85529
 FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT BRM-5091865