

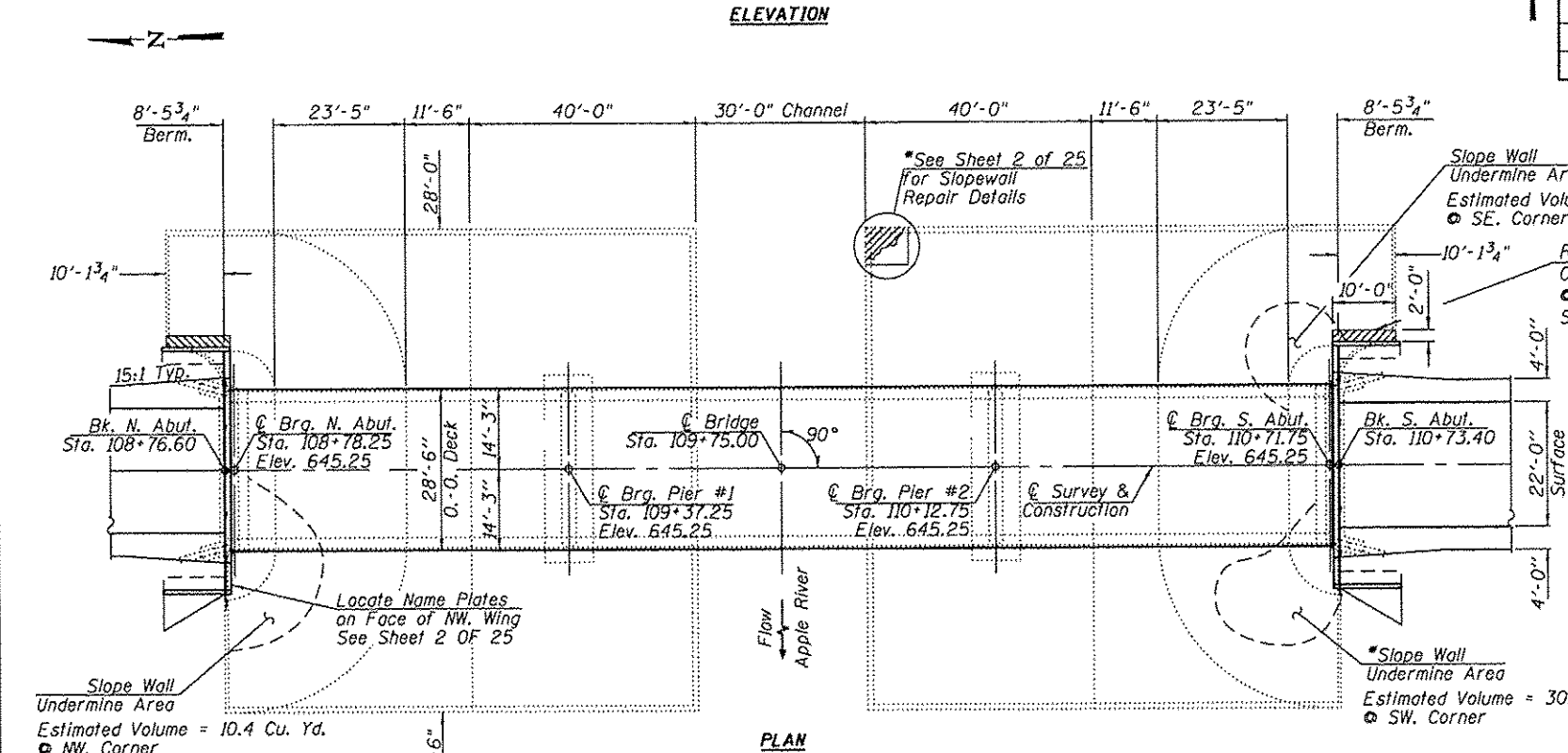
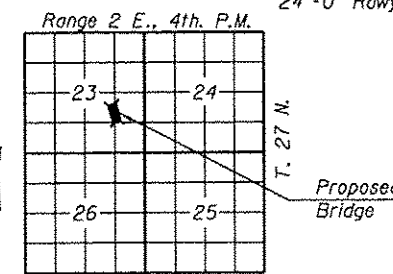
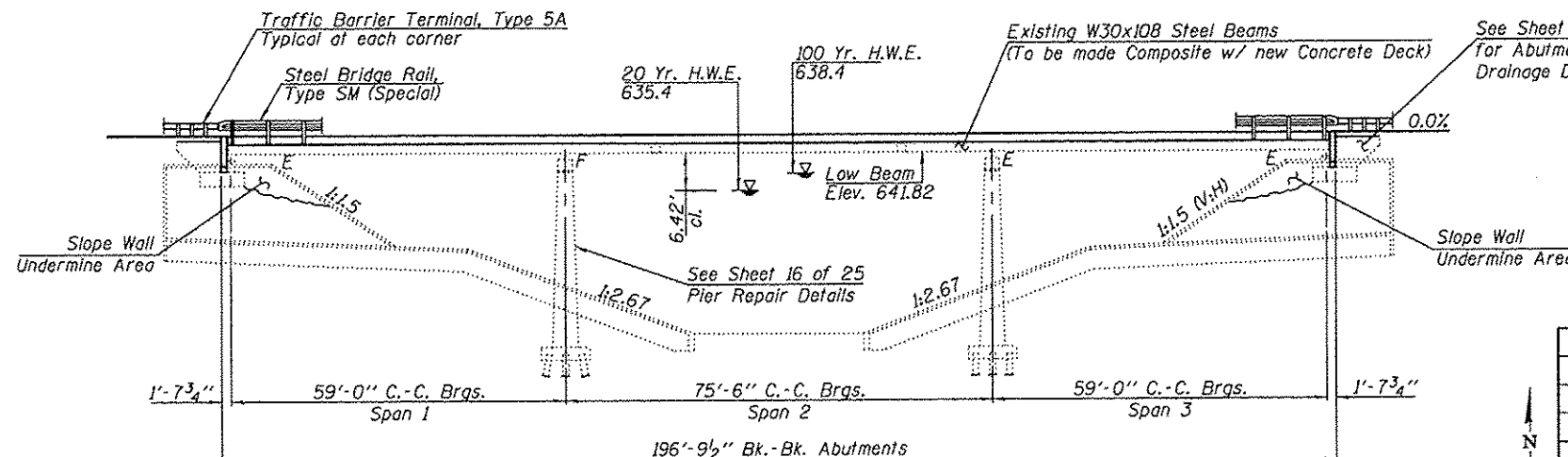
INDEX OF SHEETS

BM #2: Chiseled Square on Top of Blm.
Step of NE Wingwall, Elev. 647.04

BM #3: Chiseled Square on Top of Blm.
Step of SW Wingwall, Elev. 647.02

- General Plan & Elevation
- General Notes and Bill of Materials
- 5. Top of Slab Elevations
- Superstructure
- Preformed Joint Strip Seal
- Steel Railing Type SM
- 10. Structural Steel
- 12. Abutment Bearing Details
- 15. Abutment Details
- Pier Repair Details
- 25. Existing Plan Information

Exist. Structure: S.N. 043-3008 Built 1961 as Section 76B In F.A. Project S-71-1(1) @ Sta. 109+75. Three-span Continuous Steel Wide Flange Beam Bridge with 7" depth C.I.P. RC Deck and Metal Handrail on Concrete Pile supported Slab Spill-Through Abutments and Solid Shaft Concrete Piers on Untreated Timber Pile supported concrete footings. Structure Length 196'-9 1/2" Bk.-Bk. Abutments, 27'-8" O.-O. Deck, 24'-0" Rdwy (Fc.-Fc. Curbs). Skew = 0°.



PROPOSED SCOPE OF BRIDGE REHABILITATION WORK

- Remove concrete bridge deck and steel bridge railing with care to avoid damage to existing structural steel framing. Remove existing nameplate for later installation into new construction.
- With deck removed, the existing structural steel shall be cleaned and painted in accord with GBSP #25-Cleaning and Painting Existing Steel Structures and GBSP #26-Containment and Disposal of Lead Paint Residues. See Proposal Booklet.
- With deck removed, existing beams shall be jacked and shored for removal of existing steel rocker expansion bearings, bearing seat construction, and replacement with Elastomeric Expansion bearings at abutments.
- With the deck removed, install retrofit plates at the ends of the existing top flange cover plates.
- Perform concrete removal operations on existing abutment backwalls and wings to construct necessary modifications to accommodate the proposed deck, install expansion joints, geocomposite wall drains and pipe underdrains, construct dog ear type wingwalls and L-wing extensions. Repair spalled pier stem areas.
- Concrete slope wall undermine areas exist at the abutment corner locations shown. These areas are to be filled with Controlled Low Strength Material. The Contractor will be permitted to remove existing portions of slopewall as required to facilitate access to perform this work. Existing 6" slope wall, toe walls, or flank walls removed for this purpose shall be replaced and will not be measured for payment.
- Install stud shear connectors on midspan areas of steel beams after new deck forming system is in place.
- Construct the new bridge deck with Preformed Joint Strip Seal expansion joints. Perform bridge deck grooving following mandatory curing period. Apply protective coat to deck surface, deck fascia's, and wingwalls.
- Replace the slopewall and toe failure at the southeast toe corner area. Remove and replace slopewall sections adjacent to East wing L-type walls.
- Remove vegetation growth in contact with the structure; removed drift and flood debris present within the bridge opening.
- Erect Steel Railing Type SM Special and Type 5A Traffic Barrier Terminals.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.023g
Site Coefficient (S) = 1.0

DESIGN STRESSES

*Note: Removal of debris required to perform repairs is included in the cost of "Control Low Slump Material" or "Slope Wall 6"."

WATERWAY INFORMATION

Drainage Area 188.0 Sq. Mi.
Existing Opening (20 Yr.) 2542 Sq. Ft.
Required Opening (20 Yr.) 2542 Sq. Ft.
Proposed Opening (20 Yr.) 2542 Sq. Ft.
Design Discharge (20 Yr.) 12,234 C.F.S.
Created Head (20 Yr.) 0.3 Ft.
100 Year Discharge 18400 C.F.S.
100 Yr. Created Head 0.4 Ft.

EXISTING CONSTRUCTION

$f'_c = 1,400$ p.s.i. (Superstr. Concrete)
 $f'_s = 20,000$ p.s.i. (Reinf. & Structural Steel)
 $n = 10$
LOADING H15-S12

PROPOSED CONSTRUCTION

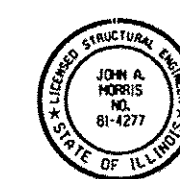
$f'_c = 5,000$ p.s.i. (Superstr. & Sub Concrete)
 $f'_s = 60,000$ p.s.i. (Reinf. Bars)
 $F_y = 36,000$ p.s.i. (A36 Struct. Steel)
LOADING HS20-44
No allowance for future wearing surface included in dead load.

DESIGN SPECIFICATIONS

AASHTO Standard Specifications - 2002

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

John A. Morris 3-28-13
ILLINOIS STRUCTURAL NO. 4277 (Expires 11/30/14)



GENERAL PLAN & ELEVATION

COUNTY HIGHWAY 4
SECTION 11-00138-00-BR
JoDAVISS COUNTY
STATION 109+75.00
S.N. 043-3008

FILE NAME * 11-194.GPE.dgn	USER NAME * ashw	DESIGNED - A.R.K.	REVISION -	FEHR GRAHAM	FREPORT, IL ROCKFORD, IL	GENERAL PLAN & ELEVATION STRUCTURE NO. 043-3008	C.H. 4	SECTION 11-00138-00-BR	COUNTY JODAVIESS	TOTAL SHEETS 34	SHEET NO. 6
PLOT SCALE * #SCALE#	PLOT DATE * 3/29/2013	CHECKED - S.F.M.	REVISION -	ENGINEERING & ENVIRONMENTAL	MONROE, VT	SHEET NO. 1 OF 25 SHEETS					
		DRAWN - A.D.S.	REVISION -	ILLINOIS DESIGN FIRM NO. 144-00242							
		CHECKED - A.R.K.	REVISION -								