

**Bench Mark:**

E. Flange Bolt of F.H. at S.W. corner Ridgeland & SW Highway - El. 181.825

**Existing Structure:**

S.N. 016-0463 was originally constructed in 1934. The overall length of the existing bridge is 386.75 m. The superstructure was reconstructed in 1959 and the bridge was partially reconstructed in 1999. The portion of the existing bridge remaining from the 1959 reconstruction consists of 18 simple spans comprised of pretensioned concrete deck beams, with an out-to-out width of 15.7 m. The portion of the existing bridge reconstructed in 1999 consists of five new rolled continuous wide flange beam spans to form a unit of 96.971 m. The out-to-out width of the concrete deck is 18.50 m. Two 7.70 m reinforced concrete slab spans were also constructed in 1999 to transition the new structure to the original.

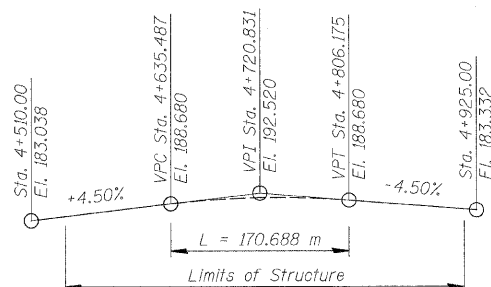
**Proposed Improvements:**

The Contractor shall remove the existing structure as required to construct new spans 1-6 and 12-18. These thirteen new spans will consist of rolled continuous wide flange beams. Spans 7-11 will be raised by 330± mm, to provide 7.0 m of vertical clearance over the railroad.

Prior to beginning Stage I Work, temporary roadway lighting shall be mounted on poles set in the existing groundline along the west parapet of the existing bridge. Temporary lighting locations are shown as See Lighting Plans for details.

**Notes:**

- Road shall be kept open to one lane of traffic in each direction at all times by utilizing stage construction. No Pedestrian Traffic is allowed on the bridge during all stages of construction.
- All dimensions are in millimeters (mm), except as noted.
- Offsets are measured from  $\phi$  SW Highway to edge of deck.
- Salvage - See note 21 of General Notes on Sheet SA 4.



**PROFILE GRADE SOUTHWEST HIGHWAY**  
(Along PGL Roadway)

**WATERWAY INFORMATION (STONY CREEK)**

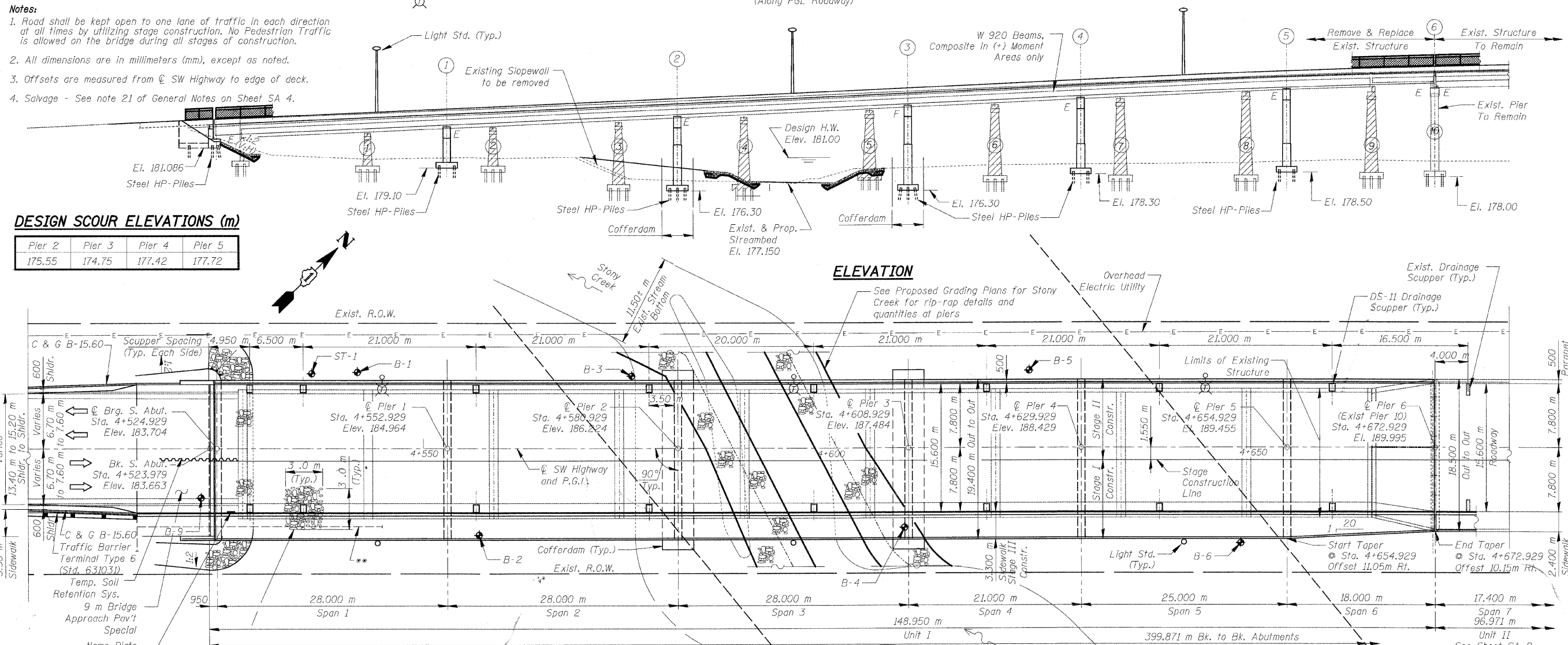
Max Recorded H.W.E. = 180.90 m (7/18-20/96)

Flood	Freq. (Yr.)	Q (cms)	Opening (Sq. m)		Natural H.W.E. (m)	Head (m)		Headwater El. (m)	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	35.25	147.3	154.3	180.61	0.00	0.00	180.61	180.61
Base	100	53.24	234.2	244.4	181.16	0.00	0.00	181.16	181.16
Overtopping	>500								
Max. Calc.	500	58.33	277.3	289.2	181.42	0.00	0.00	181.42	181.42

All elevations are in Highway Datum  
IDOT Datum = FIS Datum + 0.789 m

**DESIGN SCOUR ELEVATIONS (m)**

Pier 2	Pier 3	Pier 4	Pier 5
175.55	174.75	177.42	177.72



**ELEVATION**

See Proposed Grading Plans for Stony Creek for rip-rap details and quantities at piers

**DESIGN SPECIFICATIONS**  
2002 AASHTO Standard Specifications for Highway Bridges  
2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges

**LOADING MS18**  
Allowance for Future Wearing Surface = 2.4 kN/m<sup>2</sup>

**PATRICK ENGINEERING INC.**  
LISLE, ILLINOIS

**DESIGN STRESSES**

**EXISTING CONSTRUCTION**  
f'c = 24 MPa  
fy = 400 MPa (Reinf.)  
fy = 345 MPa (M270M Grade 345)

**NEW CONSTRUCTION**  
f'c = 24 MPa  
fy = 400 MPa (Reinf.)  
fy = 345 MPa (M270M Grade 345)

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.038g  
Site Coefficient (S) = 1.0

\*\* Conduit for future interconnect. (See Conduit Note on Sheet SA 2 of SA 110)

**APPROVED FOR STRUCTURAL ADEQUACY ONLY**

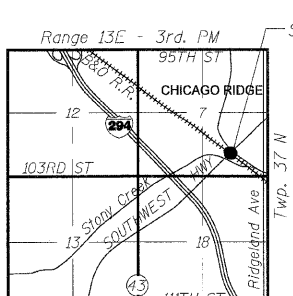
*Paul M. Lopez*  
ENGINEER OF BRIDGES AND STRUCTURES

PATRICK ENGINEERING, INC.  
PAUL M. LOPEZ, S.E.



PAUL M. LOPEZ, P.E., S.E.  
NO. 081-005231  
EXP. DATE: 11/30/10  
DATE: 06/17/2009

**PLAN**



**LOCATION SKETCH**

REVISIONS	NAME	DATE

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
**GENERAL PLAN AND ELEVATION**  
UNIT I  
**SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK**  
FAU 3578 SECTION 15V B-1-R-1  
STRUCTURE NUMBER 016-2771  
COOK COUNTY STATION 4+716.497  
SCALE: NONE DRAWN BY: E. Mroozek  
DATE: 6/17/09 CHECKED BY: G. Hatlestad

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