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9/8/2010

P:\06611\les\060245\021_0101_Lamoine\BRIDGE PLANS\PE & GENERAL DETAILS.s.dgn

Bench Mark: Chiseled square on Pier #1, Sta. 557+41, right of C, Elev. 497.43

Existing Structure: Structure Number 085-0016 was built in 1928 as S.B.I. Rte. 101, Section 120B over the Lamoine River. The superstructure was replaced in 1977 with PPC deck beams under Section 120BR. The substructure was also widened during the 1977 construction and Piers 2 and 3 were added. A 5" reinforced concrete wearing surface was constructed over the deck beams in 1998 under Section (120BR)I, along with expansion joint replacement and riprap placement around the piers. In 2006, two deck beams were replaced in span 4 under Section (120BR)I-1. In 2008, three deck beams were replaced in span 3 and twelve deck beams were braced using steel wide flange beams under Section (120BR)I-2. The existing structure is an eleven span PPC deck beam bridge on closed concrete abutments and concrete piers on footings. The existing structure is 486'-0" long back-to-back abutments and 33'-0" wide out-to-out of deck.

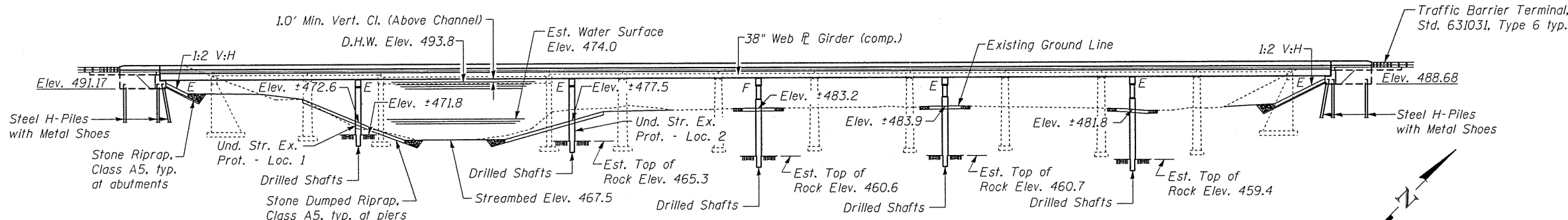
The existing structure shall be removed and replaced.

Traffic to be maintained utilizing stage construction.

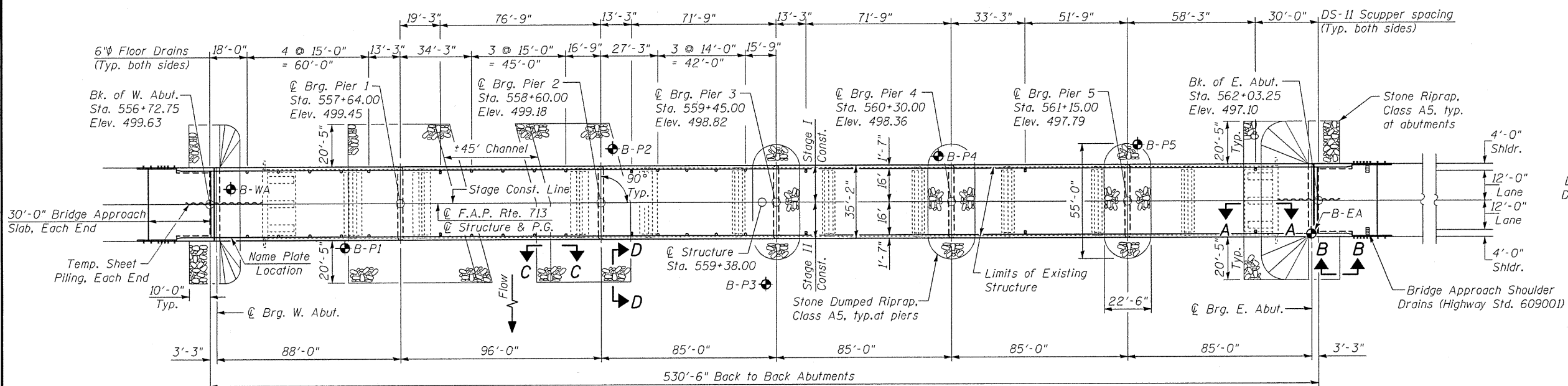
Existing structural steel to remain property of IDOT. Contact Buddy Foster at (217) 782-7416 to arrange a pick-up time.

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Note:
See sheet 2 of 45 for Sections A-A, B-B, C-C and D-D.



LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
4th Edition with 2008 & 2009 interims

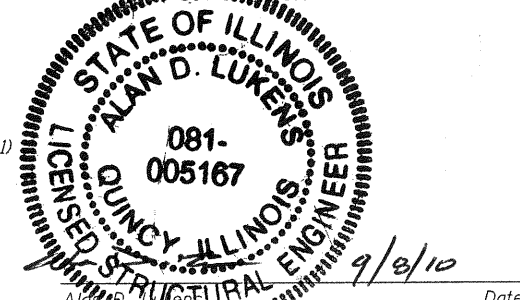
DESIGN STRESSES

FIELD UNITS

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

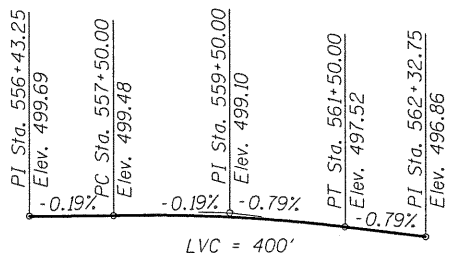
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S₀₁) = 0.117g
Design Spectral Acceleration at 0.2 sec. (S₀₅) = 0.183g
Class = D



APPROVED
For Structural Adequacy Only

Ralph E. Anderson (TJD)
Engineer of Bridges & Structures



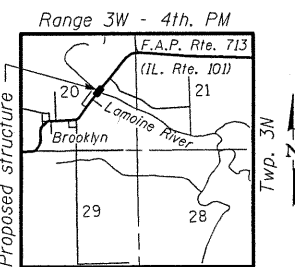
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	E. Abut.
	491.2	471.8	468.1	474.2	475.0	473.3	488.7

WATERWAY INFORMATION

Drainage Area = 995.4 Sq. Mi. Low Grade Elev. 495.4 @ Sta. 569+49

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	38,400	5,252	5,788	493.8	6.3	6.4	500.1	500.2
Base	100	44,500	5,514	6,097	494.4	6.2	6.4	500.6	500.8
Overtopping	-	-	12 yr.	13 yr.	-	-	-	-	-
Max. Calc.	500	59,100	6,012	6,097	495.6	5.9	6.5	501.6	502.1



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL 101 OVER LAMOINE RIVER
FAP ROUTE 713 SECTION 120B-3
SCHUYLER COUNTY
STATION 559+38.00
S.N. 085-0514

SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
45 SHEETS	713	120B-3	SCHUYLER	75	21
FED. ROAD DIST. NO. _ ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 72A03					

Klingner & Associates P.C.