

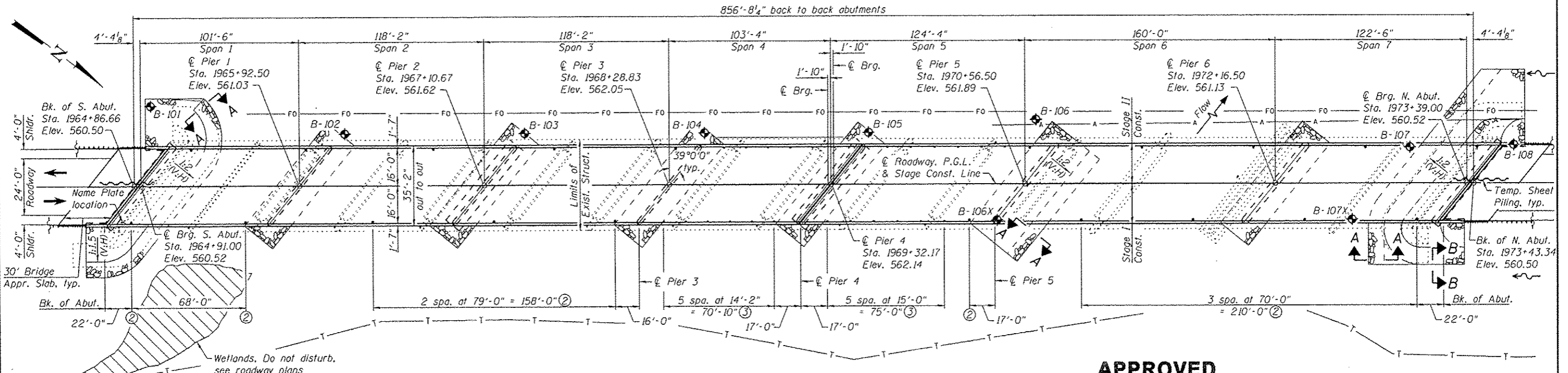
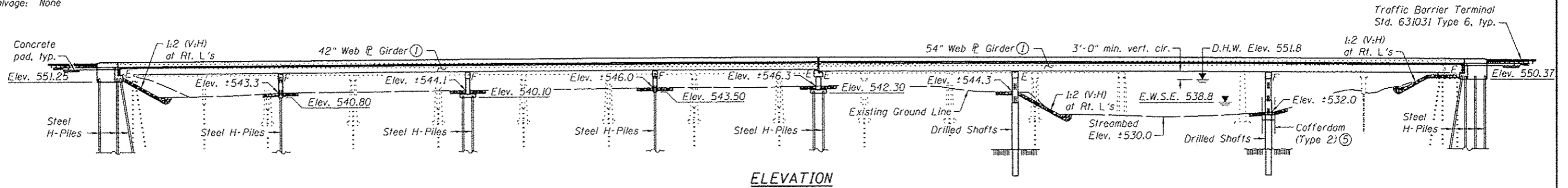
Bench Mark: BM 17 - Chiseled square, top of southwest parapet, Sta. 1965+15.37, 20.71' LT. Elev. 562.09.

Existing Structure: S.N. 048-0075 was originally built in 1926 as S.B.I. Route 8, Section 44B. In 1976, the superstructure and portions of the substructure were removed and replaced under section 44-B-1. The existing superstructure consists of thirteen spans of 36" PPC I-beams and two spans of 33"x36" PPC deck beams. The superstructure is supported by two solid wall pile bent piers founded on steel H-piles, eleven solid wall piers on spread footings founded on timber piles with solid wall pile bent extensions founded on steel H-piles, one solid wall pier founded on a spread footing, and stub abutments founded on steel H-piles. Several PPC deck beams were replaced in 2009 under Section (44-B-1)I. The back-to-back abutment length is 831'-3" and the out-to-out deck width is 42'-0". Structure to be removed and replaced.

Traffic Control: Stage construction will be utilized to maintain one lane of traffic.

Salvage: None

- Notes:
- ① Composite full length.
 - ② Drainage Scuppers, DS-II (Typ. both sides of structure)
 - ③ 6" ϕ Floor Drains (Typ. both sides of structure)
 - ④ For Sections A-A, B-B and Riprap Protection at Piers, see sheet 2 of 62.
 - ⑤ For Cofferdam details, see sheet 5 of 62.



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)								
	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	N. Abut.
0/100	551.3	539.3	536.1	538.0	540.3	538.3	524.0	550.4
0/500	551.3	538.3	534.1	536.0	538.8	536.8	523.0	550.4

WATERWAY INFORMATION

Exist. Low Grade Elev. 558.1 ϕ Sta. 1977+25.00 Prop. Low Grade Elev. 558.1 ϕ Sta. 1977+25.00								
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.
			Exist.	Prop.		Exist.	Prop.	
Design	10	19,600	3,095	4,859	549.8	0.5	0.5	550.3
Base	50	25,750	4,074	6,200	551.8	0.5	0.5	552.3
Overtopping	100	28,250	4,479	6,674	552.5	0.5	0.5	553.0
Max. Calc.	500	34,500	5,413	7,693	554.1	0.6	0.6	554.7

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50W)

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.08g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.12g
 Soil Site Class = C

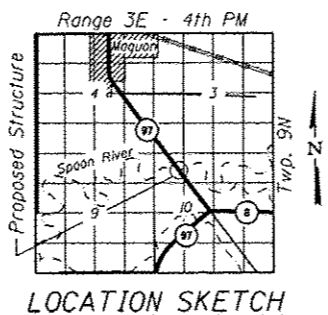
APPROVED
 For Structural Adequacy Only

Daniel George Lutz
Engineer of Bridges & Structures

STATION 1969+15.00
 BUILT 20... BY
 STATE OF ILLINOIS
 F.A.P. RT. 626 SEC. (44-B-1)BR
 LOADING HL-93
 STRUCTURE NO. 048-0100

NAME PLATE
 See Std. 515001

GENERAL PLAN AND ELEVATION
 IL RTE. 97 OVER SPOON RIVER
 F.A.P. RTE. 626 - SEC. (44-B-1)BR
 KNOX COUNTY
 STATION 1969+15.00
 STRUCTURE NO. 048-0100



LICENSED STRUCTURAL ENGINEER
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 STATE OF ILLINOIS
Daniel George Lutz
 DATE: 8/18/2013
 EXPIRATION: 11/30/2014