

Bench Mark: BM "1" PK. nail in power pole S. of pavement, Sta. 88+74, 28' Rt., Elev. 560.55

Existing Structure: SN 084-0080, 4 span PPC Deck Beam bridge on concrete abutments and solid wall concrete piers on timber piles.
192'-0" back-to-back of abutments, 33'-0" out-to-out.
Road to be closed during construction.

No Salvage

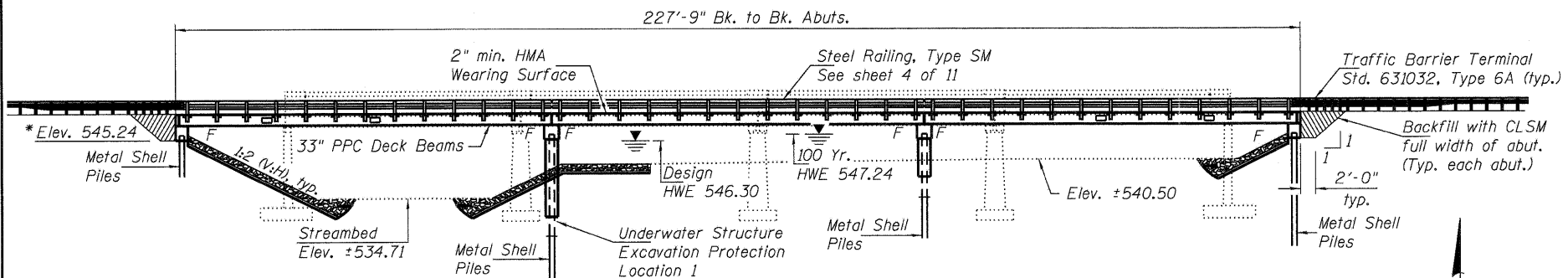
INDEX OF SHEETS

1. General Plan and Elevation
- 2.-3. PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type SM
6. Abutments
7. Pier 1
8. Pier 2
9. Metal Shell Pile Details
- 10.-11. Soil Boring Logs

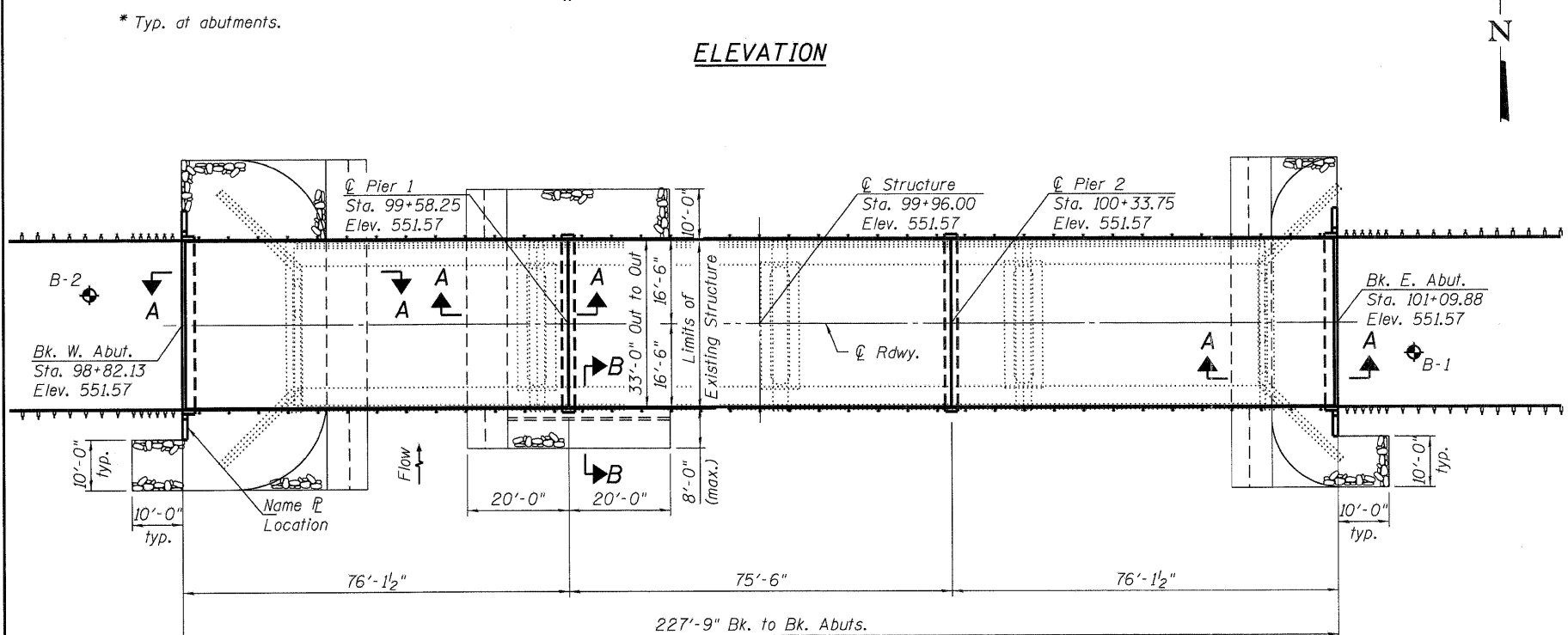
GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
Reinforcement bars designated (E) shall be epoxy coated.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
The Contractor shall drive test piles to 110% of nominal bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

NOV - 9 2011



ELEVATION



PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	545.24	531.00	534.50	545.24

BUCKHART CREEK
BUILT 20 BY
SANGAMON COUNTY
SEC. 08-00119-04-BR
F.A.S. 556 STA. 99+96
STR. NO. 084-0480 LOADING HL93

NAME PLATE
See Std. 515001

LOADING HL-93
50 psf future wearing surface

DESIGN SPECIFICATIONS
AASHTO LRFD 5th Edition with 2010 Interim Specifications

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

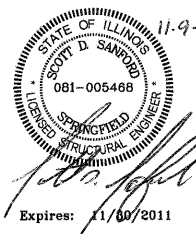
$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f'_s = 270,000$ psi (1/2" low-lax strands)
 $f'_si = 210,960$ psi (1/2" low-lax strands)

SEISMIC DATA

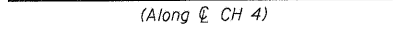
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.15g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.29g
Soil Site Class = D

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 current A.A.S.H.T.O. LRFD Design Specifications for Highway Bridges.

Signed: [Signature] Dated: 11-9-11



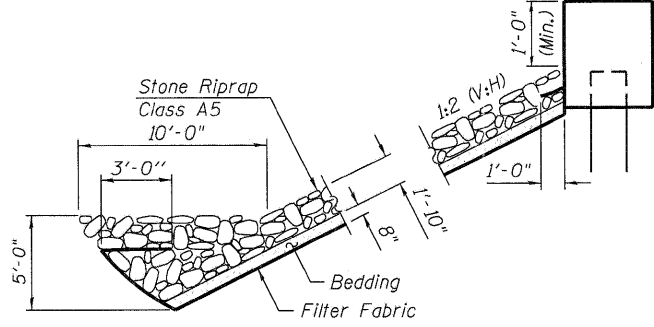
PROPOSED PROFILE GRADE
(Along C. CH 4)



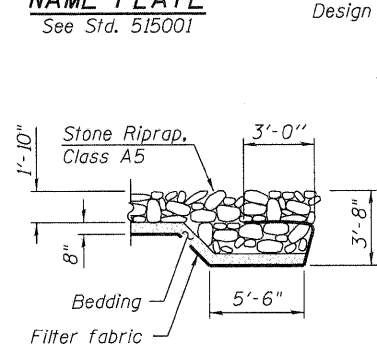
Construction Permits: The requirements of the IDNR - Office of Water Resources have been fulfilled in accordance with Statewide Permit No. 2.

WATERWAY INFORMATION

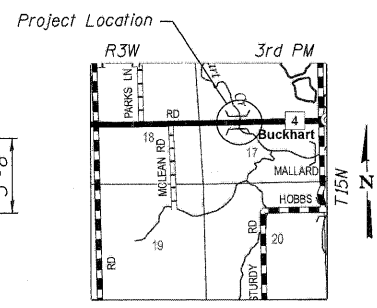
		Exist. Low Grade Elev. = 551.03 @ Sta. 107+00.28		Prop. Low Grade Elev. = 551.03 @ Sta. 107+00.28					
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E. Exist.	Head - Ft. Prop. Exist. Prop.	Headwater El. Exist. Prop.			
Design	30	5,658	1,337	1,462	546.3	0.16	0.09	546.46	546.39
Base	100	7,440	1,582	1,735	547.24	0.5	0.4	547.74	547.64
Max. Calc.	500	9,820	1,874	2,012	548.4	0.87	0.72	549.27	549.12



SECTION A-A



SECTION B-B



LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
C.H. 4 (F.A.S. 556)
OVER BUCKHART CREEK
SECTION 08-00119-04-BR
SANGAMON COUNTY
STRUCTURE NO. 084-0480**