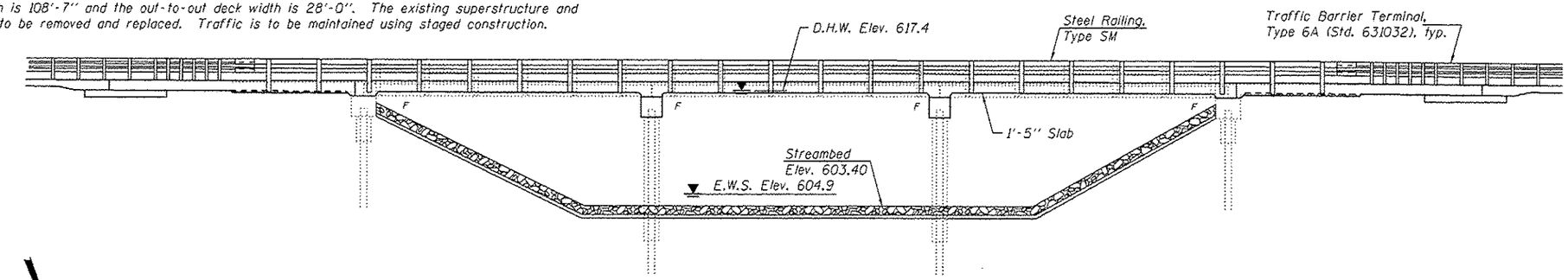
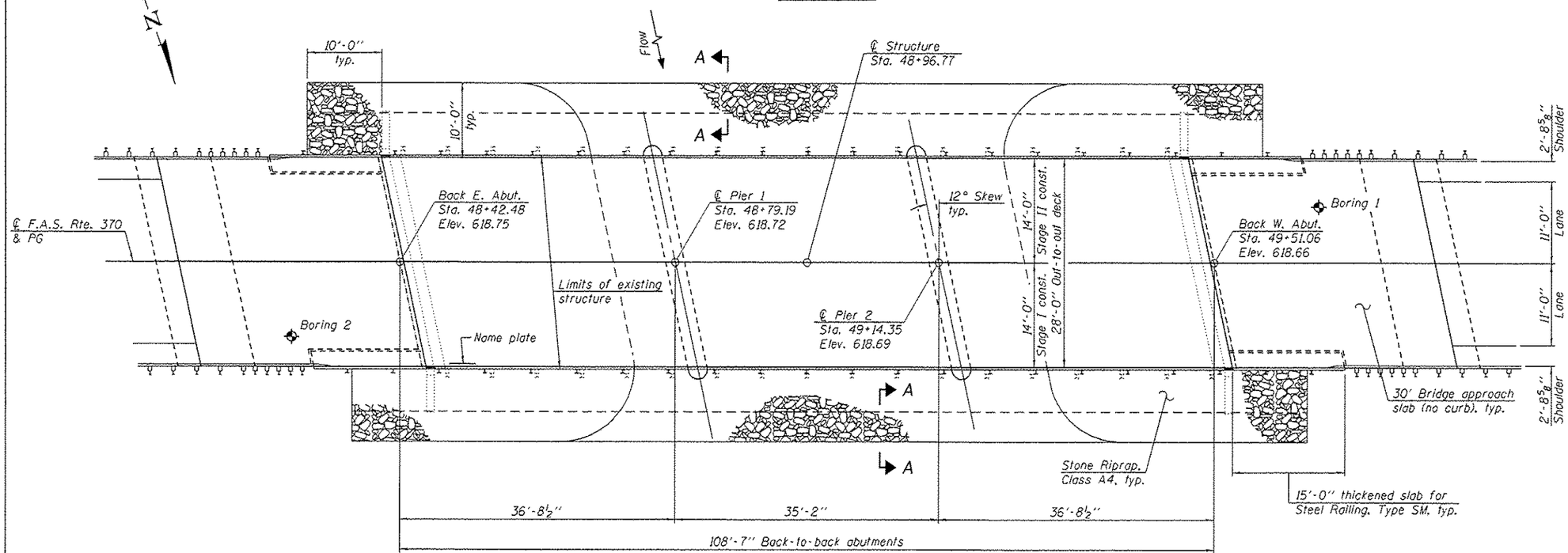
Benchmark: Chiseled "□" on NW wingwall; 14.889' Rt. Sta. 49+53; Elev. 618.307.

Existing Structure: S.N. 053-0157 built in 1989 as F.A.S. Route 370, Section 102BR at Sta. 48+96.77. The existing structure consists of a three-span precast, prestressed concrete deck beams with bituminous wearing surface on concrete abutments and piers founded on steel H-piles. The back-to-back abutment length is 108'-7" and the out-to-out deck width is 28'-0". The existing superstructure and pier caps are to be removed and replaced. Traffic is to be maintained using staged construction.

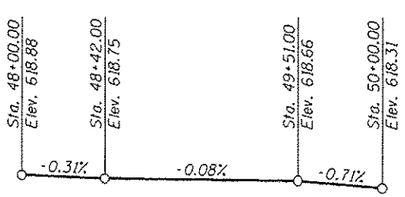
Salvage: None



ELEVATION



PLAN



PROFILE GRADE
(Along F.A.S. Rte. 370)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)			
E. Abut.	Pier 1	Pier 2	W. Abut.
614.1	595.1	595.1	614.0

LICENSED STRUCTURAL ENGINEER DAVID CARL PUZEY 081-005470 SPRINGFIELD ILLINOIS STATE OF ILLINOIS

EXPIRES 11-30-2014

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims
1995 Seismic Retrofitting Manual for Highway Bridges FHWA-RD-94/052

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi*
fy = 60,000 psi (Reinforcement)

*Superstructure concrete shall have a 28-day mix design with a compressive strength of 5000 psi.

LOADING HL-93

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

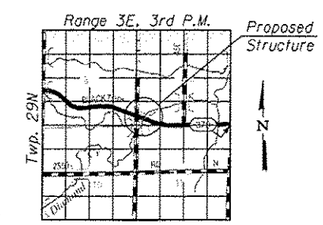
SEISMIC DATA

(500 Year return per AASHTO Standard Specifications)
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.041g
Site Coefficient (S) = 1.0

STATION 48+96.77
REBUILT 20 BY
STATE OF ILLINOIS
F.A.S. RT. 370 SEC. (102BR)BR
LOADING HL-93
STR. NO. 053-0157

NAME PLATE
See Std. 515001

Existing name plate shall be cleaned and relocated next to new name plate. Cost included with Name Plates.



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 55.6 mi.²
Existing Low Grade Elev. 618.32 @ Sta. 50+00
Proposed Low Grade Elev. 618.39 @ Sta. 50+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	3390	848	848	618.5	0.2	0.2	618.7	618.7
Design	50	5330	913	913	617.4	0.6	0.6	618.0	618.0
Exist. Overtopping	65	5670	913	913	617.6	0.7	0.8	618.3	618.4
Prop. Overtopping	68	5720	913	913	617.7	0.7	0.7	618.4	618.4
Base	100	6170	913	913	618.0	0.8	0.8	618.7	618.8
Max. Calc.	500	8210	913	913	619.2	0.7	0.7	619.9	619.9

10 Year velocity through existing bridge = 4.0 ft/s.
10 Year velocity through proposed bridge = 4.0 ft/s.

GENERAL PLAN & ELEVATION
LONG POINT ROAD OVER
LONG POINT CREEK
F.A.S. RTE. 370 - SEC. (102BR)BR
LIVINGSTON COUNTY
STATION 48+96.77
STRUCTURE NO. 053-0157

DESIGNED -	Ronald A. Johnson	EXAMINED	
CHECKED -	Jeffrey Bruhn	PASSED	
DRAWN -	Chut. Duong		
CHECKED -	PSJ ZTB		

ACTING ENGINEER OF BRIDGE DESIGN
ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - 10/16/2014
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	(102BR)BR	LIVINGSTON	65	22

CONTRACT NO. 66A18
ILLINOIS FED. AID PROJECT