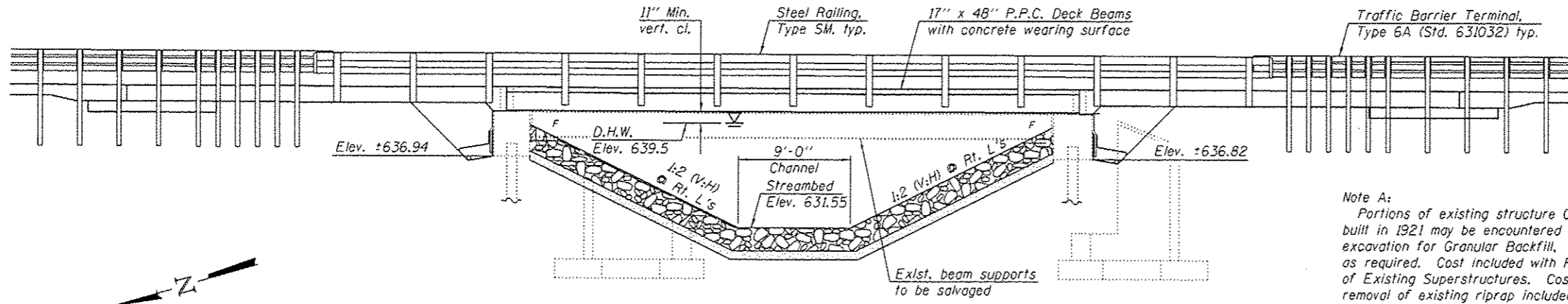
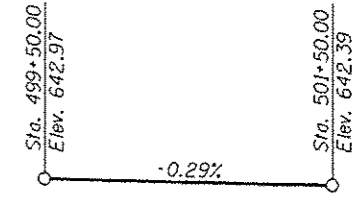


Benchmark: BM #1 - Square notch on S.W. wingwall of S.N. 038-0184; Sta. 500+72.94, 17.16' Rt., Elev. 641.781

Existing structure: Structure No. 038-0184, built in 1987 as S.B.I. Rte. 25, Section 38BR. The superstructure consists of a single span, 17" precast prestressed concrete deck beam structure with a bituminous wearing surface. The substructure consists of concrete pile bent abutments, supported on steel piles. The back-to-back of abutments dimension measures 47'-3" and the out-to-out dimension measures 32'-0". Traffic is to be detoured during construction.

Existing beam supports to be salvaged and delivered to a location to be determined by the district. Cost included with Removal of Existing Superstructures.



Note A:
Portions of existing structure 038-0113, built in 1921 may be encountered during excavation for Granular Backfill. Remove as required. Cost included with Removal of Existing Superstructures. Cost of removal of existing riprap included with Removal of Existing Superstructures.

PROFILE GRADE
(Along \bar{C} roadway)

STATION 500+53.00
REBUILT 20 BY
STATE OF ILLINOIS
F.A.S. RTE. 1324 SEC. 38BR
LOADING HL-93
STRUCTURE NO. 038-0184

NAME PLATE
See Std. 515001

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

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)
 $f'_c = 3,500$ psi
 $f'_c = 5,000$ psi (wearing surface)
 $f_y = 60,000$ psi (Reinforcement)

* Superstructure concrete shall have a 28-day mix design with compressive strength of 5,000 psi.

FIELD UNITS (EXISTING CONSTRUCTION)

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

PRECAST PRESTRESSED UNITS

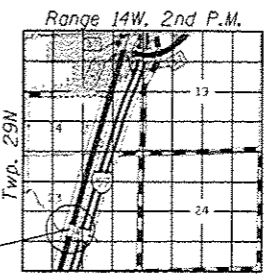
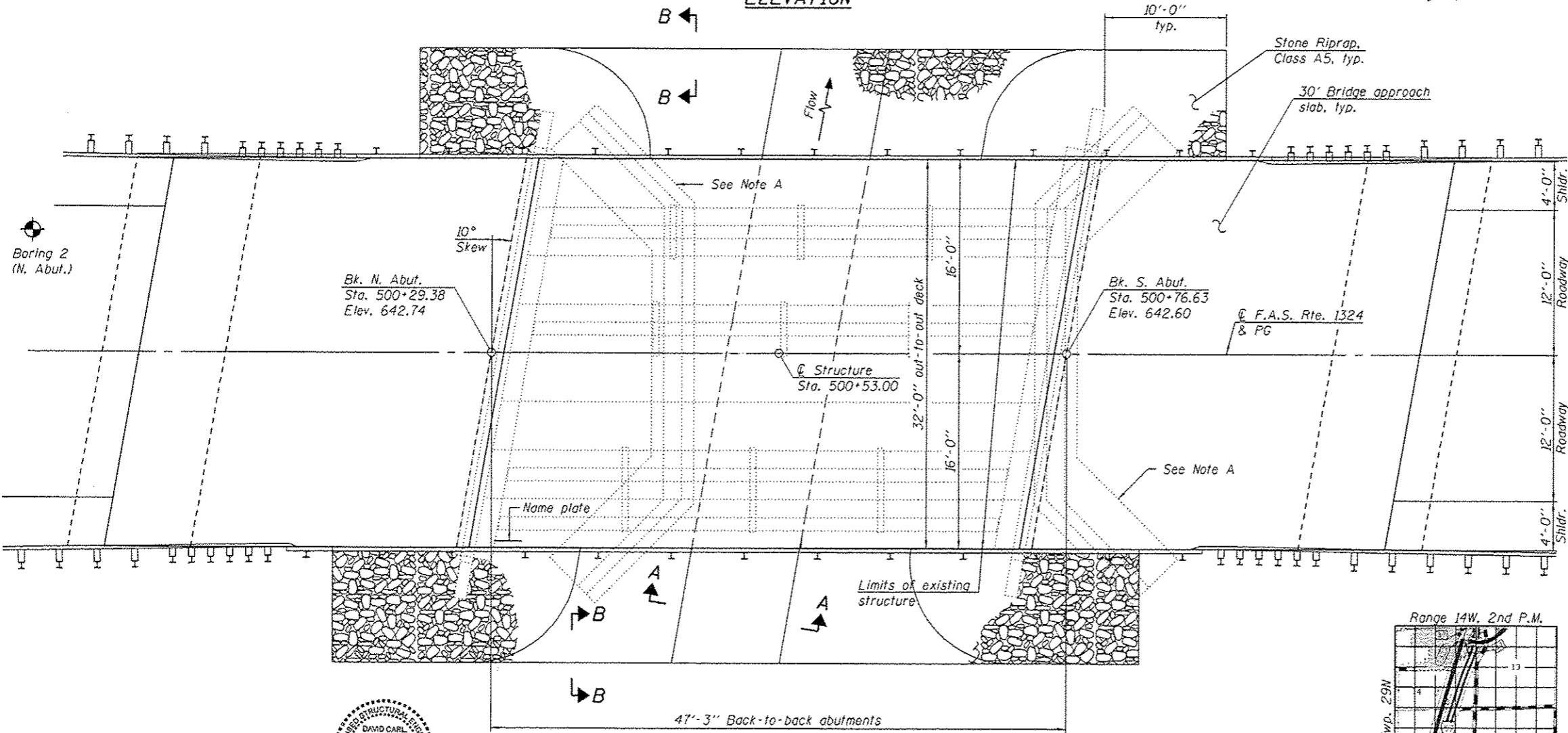
$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " low relax. strands)
 $f_{psi} = 201,960$ psi ($\frac{1}{2}$ " low relax. strands)

LOADING HL-93 (NEW CONSTRUCTION)

(No future wearing surface)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.105 g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.170 g
 Soil Site Class = D



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.S. RTE. 1324 (OLD U.S. 45)
OVER LANGAN CREEK TRIBUTARY
SECTION 38BR
IROQUOIS COUNTY
STATION 500+53.00
STRUCTURE NO. 038-0184



EXPIRES 11-30-2014

DESIGNED - <i>F. K. Lehmann</i>	EXAMINED - <i>David Carl Fuzey</i>	DATE - 9-3-14
CHECKED - <i>h.t. duong</i>	PASSED - <i>David Carl Fuzey</i>	REVISED
DRAWN - <i>h.t. duong</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED
CHECKED - <i>ETIGRA</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 038-0184

SHEET NO. 1 OF 11 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1324	38BR	IROQUOIS	35	14
CONTRACT NO. 66A72			ILLINOIS FED. AID PROJECT	