TBM#100: Chiseled "□" on top ⊕ N.E. Cor. of East Abutment, Station 425+50, 16.8' Lt., Elev. 614.30

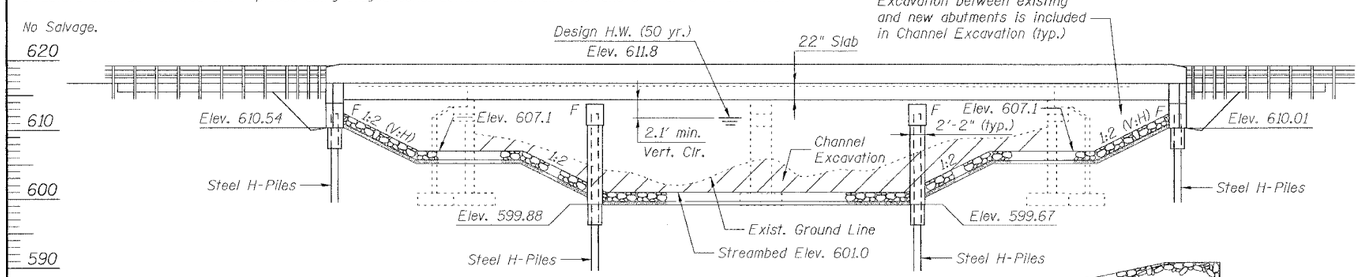
EXISTING STRUCTURE: S.N. 078-0015, originally constructed in 1932 as SBI Route 89c, Section 105 B at Station 425+08, superstructure replaced on a widened substructure in 1974 as FA Route 146, Section 105 BR-1 at Station 425+08 with 17" PPC deck beams and 1.5" bituminous overlay, two simple spans @ 42'-7½", 85'-3" back-back abutments, 33'-0" o. to o. width, R.C. closed abutments, R.C. solid pier, both on untreated timber piles. Existing structure shall be removed and replaced using staged construction to maintain one lane of traffic at all times.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

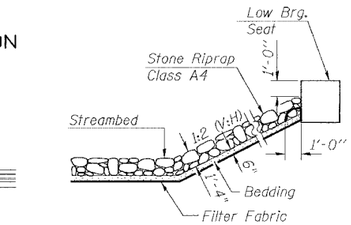
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	105 BR-2	PUTNAM		21
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

SHEET 1 OF 14

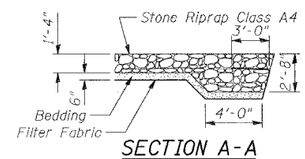
CONTRACT NO. 66284



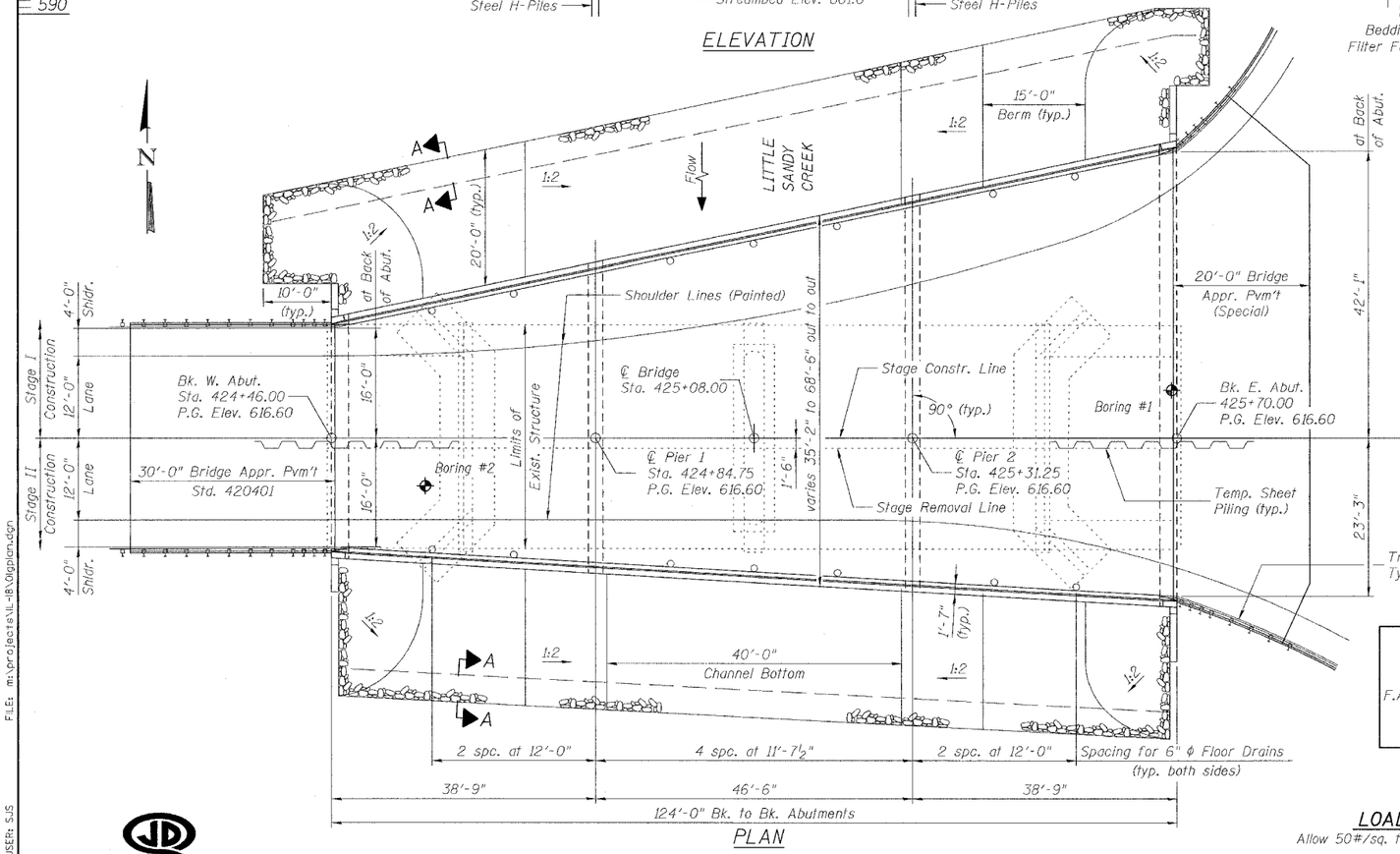
ELEVATION



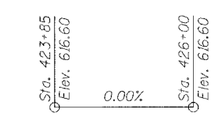
STONE RIPRAP DETAIL



SECTION A-A



PLAN



PROFILE GRADE
(Along ℄ Roadway)

INDEX OF SHEETS

Sheet No.	Description
1	General Plan, General Notes & Total Bill of Material
2	Stage Construction Details, Temp Sheet Piling
3	Temporary Concrete Barrier for Stage Construction
4	Top of Slab Elevations
5	Superstructure Deck Plan
6	Superstructure Details & Typical Section
7	Superstructure Parapet and Drain Details
8	West Abutment
9	Pier 1
10	Pier 2
11	East Abutment
12	Bar Splicer Assembly Details
13-14	Soil Borings

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 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 one (1) test pile in a permanent location at each substructure unit (4 total) as directed by the Engineer before ordering the remainder of piles.

All construction joints shall be bonded.

The existing bearing pads at the pier contain asbestos. The Contractor shall take appropriate precautions to deal with the presence and disposal of asbestos on this project. (See Special Provisions).

Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I removal.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	--	155	155
Stone Riprap, Class A4	Sq Yd	--	1243	1243
Filter Fabric For Use With Riprap	Sq Yd	--	1243	1243
Removal of Existing Structures	Each	1	--	1
Structure Excavation	Cu Yd	--	265	265
Floor Drains	Each	14	--	14
Concrete Structures	Cu Yd	--	157.3	157.3
Concrete Superstructure	Cu Yd	477.4	--	477.4
Bridge Deck Grooving	Sq Yd	638	--	638
Protective Coat	Sq Yd	770	--	770
Reinforcement Bars, Epoxy Coated	Pound	89740	14540	104280
Furnishing Steel Piles HP12x53	Foot	--	1785	1785
Driving Steel Piles	Foot	--	1785	1785
Test Pile Steel HP12x53	Each	--	4	4
Temporary Sheet Piling	Sq Ft	--	1144	1144
Name Plates	Each	1	--	1
Underwater Structure Excavation Protection - Location 1	Each	--	1	1
Underwater Structure Excavation Protection - Location 2	Each	--	1	1
Asbestos Bearing Pad Removal	Each	--	22	22
Bar Splicers	Each	222	72	294

STATION 425+08.00
BUILT ____ BY
STATE OF ILLINOIS
F.A.P. RTE. 653 SEC. 105 BR-2
LOADING HS20
STR. NO. 078-0039

NAME PLATE
See Std. 515001

Johnson, Depp & Quisenberry
Consulting Engineers Springfield, Illinois

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	CDB/DCD

WATERWAY INFORMATION

Prop. Low Grade Elev. = 616.50' @ Sta. 424+00
Drainage Area = 30.82 Sq. Mi. Exist. Low Grade Elev. = 616.27' @ Sta. 424+00

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	2023	381	651	610.7	0.3	0.1	611.0	610.8
Design	50	2973	465	763	611.8	0.4	0.2	612.2	612.0
Base	100	3360	489	796	612.1	0.4	0.2	612.5	612.3
Overtopping	-								
Max. Calc.	500	4263	528	852	612.6	1.7	0.3	614.3	612.9

STATE OF ILLINOIS
DAVID C. DEPP
081-005117
LICENSED
STRUCTURAL ENGINEER

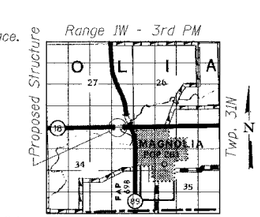
Signed: David Depp
Date: 6-29-2004
Lic. Expires: 11-30-2004

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.2



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN
ILLINOIS 18 OVER
LITTLE SANDY CREEK
FAP ROUTE 653 SECTION 105 BR-2
PUTNAM COUNTY
STATION 425+08.00
STRUCTURE NO. 078-0039

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