

BENCH MARK:

Chisled "L" on top of Northwest Wingwall, Elev. 675.14

EXISTING STRUCTURE:

S.N. 099-0122, was originally built in 1968 as F.A. Route 45, Section 17B-1. In 2002 the Structure was repaired, at that time the Bituminous Concrete Surface and 12 of 15 P.P.C. Deck Beams were removed and replaced. The Existing single span structure consists of Precast Prestressed Concrete Deck Beams supported by closed abutments. Dimensions are 38'-3" bk. to bk. Abutments and 46'-0" out to out with a 35° Skew.

PROPOSED IMPROVEMENT:

During Stage I Construction, the existing Hot-Mix Asphalt Surface on the West half of the Bridge shall be removed. The existing West Concrete Parapet shall be removed. Precast Prestressed Concrete Deck Beam No's. 1 & 6 shall be removed and replaced with new Beams. A new 5" (Min.) Reinforced Concrete Overlay shall be placed utilizing the existing Alignment and Profile. A new Reinforced Concrete Parapet on the West end of the Deck shall be Constructed.

During Stage II Construction, the existing Hot-Mix Asphalt Surface on the East half of the Bridge shall be removed. Portions of the existing East Concrete Parapet shall be removed. Precast Prestressed Concrete Deck Beam No. 10 shall be removed and replaced with a new Beam. A new 5" (Min.) Reinforced Concrete Overlay shall be placed utilizing the existing Alignment and Profile. The East Parapet shall be Reconstructed.

Perform Substructure Repairs

Salvage: None

LOADING HS20-44

No Future Wearing Surface will be allowed

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

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

EXISTING CONDITIONS

(SERVICE DESIGN)

f'c = 1,400 psi
fy = 20,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

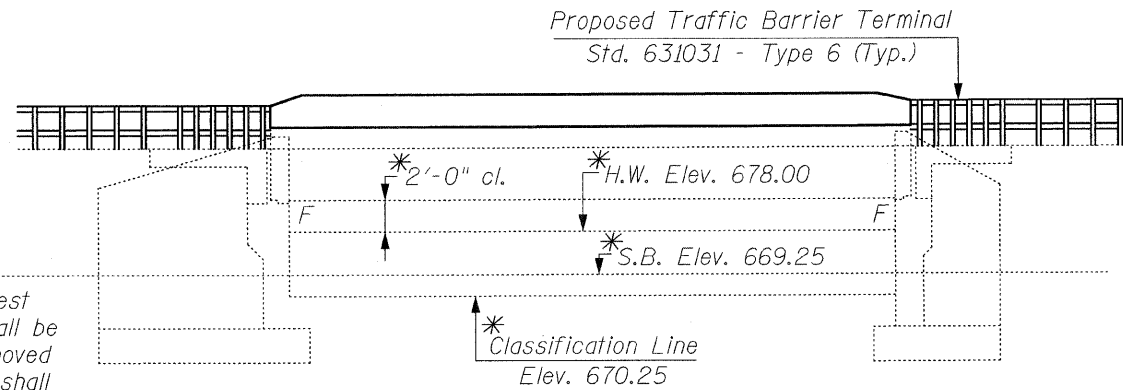
BEAM NO'S. 1, 6 & 10 (PROPOSED)

f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (1/2"φ Low Relax Strands)
fsi = 201,960 psi (1/2"φ Low Relax Strands)

WATERWAY INFORMATION

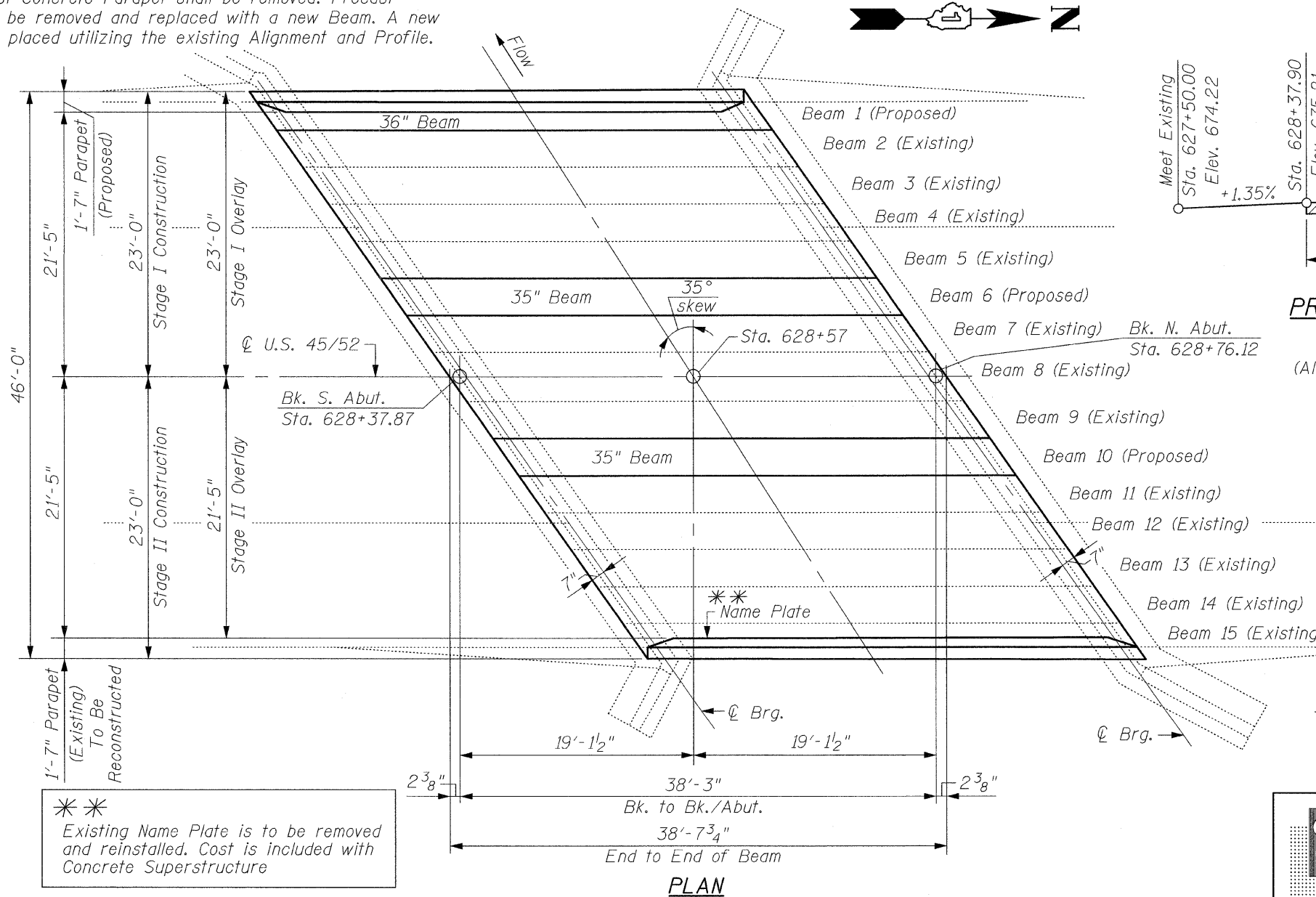
(AS SHOWN IN 1967 PLANS)

Drainage Area 1.100 acres
Character Level & Rolling, Sand, Loam = 110 Sq. Ft.
Required Opening 50 yr flood
Present Opening 60 Sq. Ft.
Proposed Opening 10 Sq. Ft.



ELEVATION

*
As shown in 1967 Plans

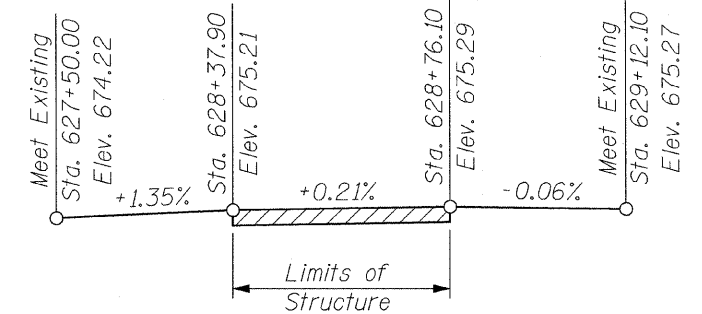


PLAN

** Existing Name Plate is to be removed and reinstalled. Cost is included with Concrete Superstructure

INDEX OF SHEETS

- S1 GENERAL PLAN & ELEVATION
- S2 GENERAL NOTES & TOTAL BILL OF MATERIAL
- S3 DECK CROSS SECTIONS
- S4 REINFORCEMENT PLAN
- S5 WEST PARAPET ELEVATION & DETAILS
- S6 EAST PARAPET ELEVATION & DETAILS
- S7 P.P.C. DECK BEAM DETAILS-I
- S8 P.P.C. DECK BEAM DETAILS-II
- S9 ABUTMENT REPAIRS
- S10 BAR SPLICER ASSEMBLY DETAILS
- S11 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION



PROFILE GRADE

U.S. 45/52
(Along Q of Roadway)



Bhadrish N. Shah
BHADRISH N. SHAH 07107108
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. No. 081-004476
EXPIRES: 11-30-08

CR & A CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS / PLANNERS / SURVEYORS
211 W. WACKER DRIVE CHICAGO, IL 60606
PHONE: (312)372-2023 FAX: (312)372-5274

FILE NAME = plan.elev.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION U.S. 45 / 52 OVER SMALL STREAM S.N. 099-0122		F.A.P. R.T.E. 330	SECTION 17 B-1-1-1	COUNTY WILL	TOTAL SHEETS 29	SHEET NO. 13		
PLOT SCALE = 50.0000' / IN.	CHECKED - B.N.S. / J.C.N.	REVISOR -	DATE - JULY 7, 2008		SCALE:	SHEET NO. S1 OF S11 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60D68			
PLOT DATE = 7/7/2008	DATE -	REVISOR -	REVISOR -										