

**BENCH MARK:**

Existing Structure: S.N. 016-0504, was originally built in 1900 and reconstructed in 1970 as S.B.I. Route 63, Section 31-IR. In 1985, the Structure was repaired, at that time the Bituminous Concrete Surface was removed and replaced. In 1997 the Structure rehabilitation was done due to deterioration, Bituminous Concrete Surface was replaced with a reinforced concrete overlay. In 2005 many concrete deck beams were removed and replaced. The existing two span Structure consists of Precast Prestressed Concrete Deck Beams supported on closed abutments and a solid pier. Dimensions are 44'-0" Back to Back Abutments and 74'-2" out to out deck width with a 0° skew.

**PROPOSED IMPROVEMENT:**

The existing Precast Prestressed Concrete Deck Beams and Concrete Overlay shall be removed and replaced utilizing Stage Construction, while maintaining the existing Alignment & Profile. Substructure repairs shall be performed as shown.

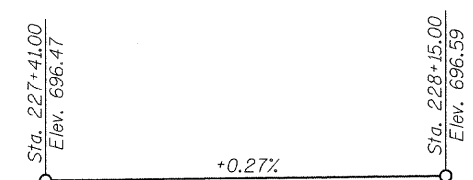
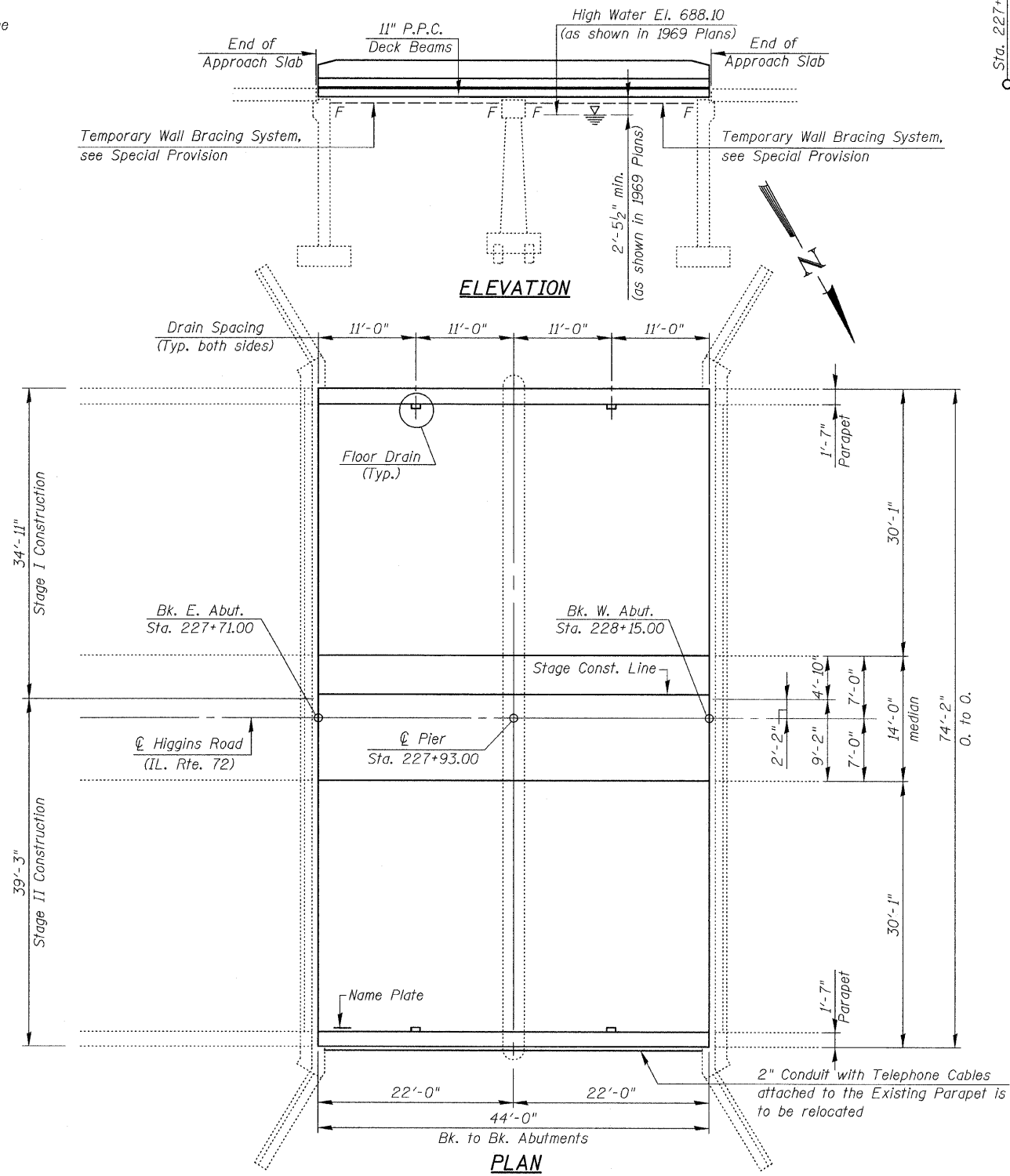
Salvage: None

**SCOPE OF WORK:**

Remove and replace the P.P.C. Deck Beam Superstructure and the Concrete Wearing Surface, 5" (min.) and perform any needed repairs to the Substructure

**INDEX OF SHEETS**

- S1 GENERAL PLAN & ELEVATION
- S2 GENERAL NOTES & TOTAL BILL OF MATERIAL
- S3 CONSTRUCTION STAGING-I
- S4 CONSTRUCTION STAGING-II
- S5 REINFORCEMENT PLAN
- S6 PARAPET DETAILS
- S7 JOINT DETAILS
- S8 P.P.C. DECK BEAM DETAILS
- S9 ABUTMENT REPAIR
- S10 PIER REPAIR
- S11 BAR SPLICER ASSEMBLY DETAILS
- S12 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION



**PROFILE  
HIGGINS ROAD**

**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)

**EXISTING CONDITIONS**

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

**PRECAST PRESTRESSED UNITS**

f'c = 5,000 psi  
f'ci = 4,000 psi  
f's = 270,000 psi (1/2"φ Low Relax Strands)  
f'si = 201,960 psi (1/2"φ Low Relax Strands)

**WATERWAY INFORMATION**

(AS SHOWN IN 1969 PLANS)  
Drainage Area 2,040 acres  
Required Opening 295 s.f.  
Present Opening 325 s.f.  
Future Prop. Opening 325 s.f.  
Ordinary Water El. 678.2  
Low Water El. 678.2  
High Water El. 688.10  
Q = 1140 cfs (50 yrs.)

**SEISMIC DATA**

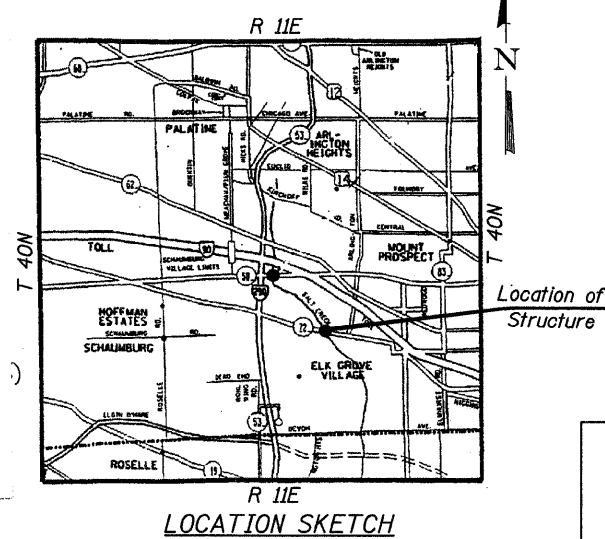
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.04g  
Site Coefficient (S) = 1.2

STATION 227+93.00  
REBUILT 2008 BY  
STATE OF ILLINOIS  
F.A.P. RTE. 341 SEC. 2008-007-B  
LOADING HS20  
STRUCTURE NO. 016-0504

**NAME PLATE**

See Std. 515001

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



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

**CR & A**  
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FILE NAME = plan.elev.sht	USER NAME = 1001	DESIGNED - B.N.S.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION HIGGINS ROAD (IL. RTE. 72) OVER SALT CREEK S.N. 016-0504</b>			F.A.P. RTE. 559/341	SECTION 2008-007 B	COUNTY COOK	TOTAL SHEETS 39	SHEET NO. 24
	PLOT SCALE = 1/8000' / IN.	DRAWN - D.L. / F.J.M.	REVISED -		SCALE: NONE	SHEET NO. S1 OF S12 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60D55	
	PLOT DATE = 6/30/2008	CHECKED - B.N.S. / J.C.N.	REVISED -									
		DATE - JUNE 30, 2008	REVISED -									