

Benchmark:  
Square Cut on Concrete Base of the Street Lighting Cabinet at  
Northwest Corner of IL Rte. 53 and Southport Ave. Elev. 669.02

Existing Structure:  
Structure No. 022-0082 was originally built in 1932 as a concrete deck slab bridge. In 1967, the bridge was widened to accommodate one additional traffic lane in each direction. In 1986, the existing structure was rehabilitated a second time. The single span structure consists of cast in place deck slab and P.P.C. deck beams supported on Integral Abutment on piles. The out to out of deck is 65'-4" and the back to back of abutments is 53'-8".  
Traffic will be maintained utilizing staged construction.  
Salvage: None

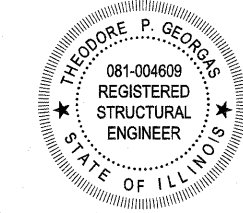
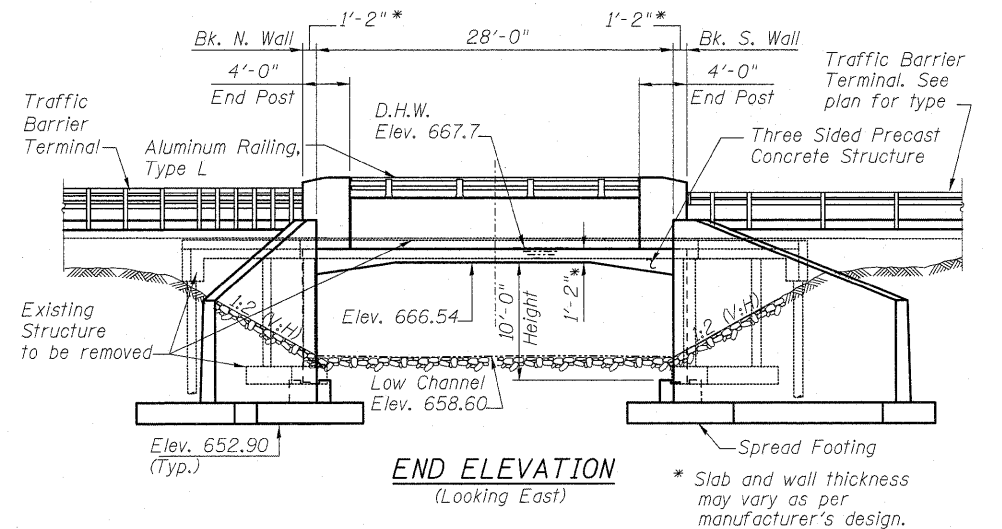
**WATERWAY INFORMATION**

Drainage Area = 11.8 sq. mi. Prop. Low Grade Elev. 669.05 feet @ Sta. 99+16.5

Flood	Freq. Year	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	10	730	187.6	219.5	666.1	0.2	0.0	666.3	666.1	
Base	50	1160	187.6	219.5	667.7	0.7	0.2	668.4	667.9	
Overtopping	100	1365	187.6	219.5	668.3	0.9	0.4	669.2	668.7	
Max. Calc.	195	1492	187.6	219.5	668.5	N/A	0.5	N/A	669.0	
	500	1900	187.6	219.5	669.1	1.0	0.8	670.1	669.9	

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	South Foundation	North Foundation
	655.1	652.9



*Theodore P. Georgas* 10-11-11  
Theodore P. Georgas Date  
Licensed Structural Engineer  
State of Illinois 081-4609  
Expires 11/30/2012

**SEISMIC DATA**  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.04g  
Site Coefficient (S) = 1.0

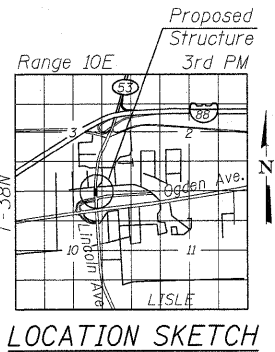
**LOADING HS-20**  
Allow 50#/#sq. ft. for future wearing surface

**DESIGN SPECIFICATIONS**  
2002 AASHTO Standard Specifications, 17th Edition

**DESIGN STRESSES**

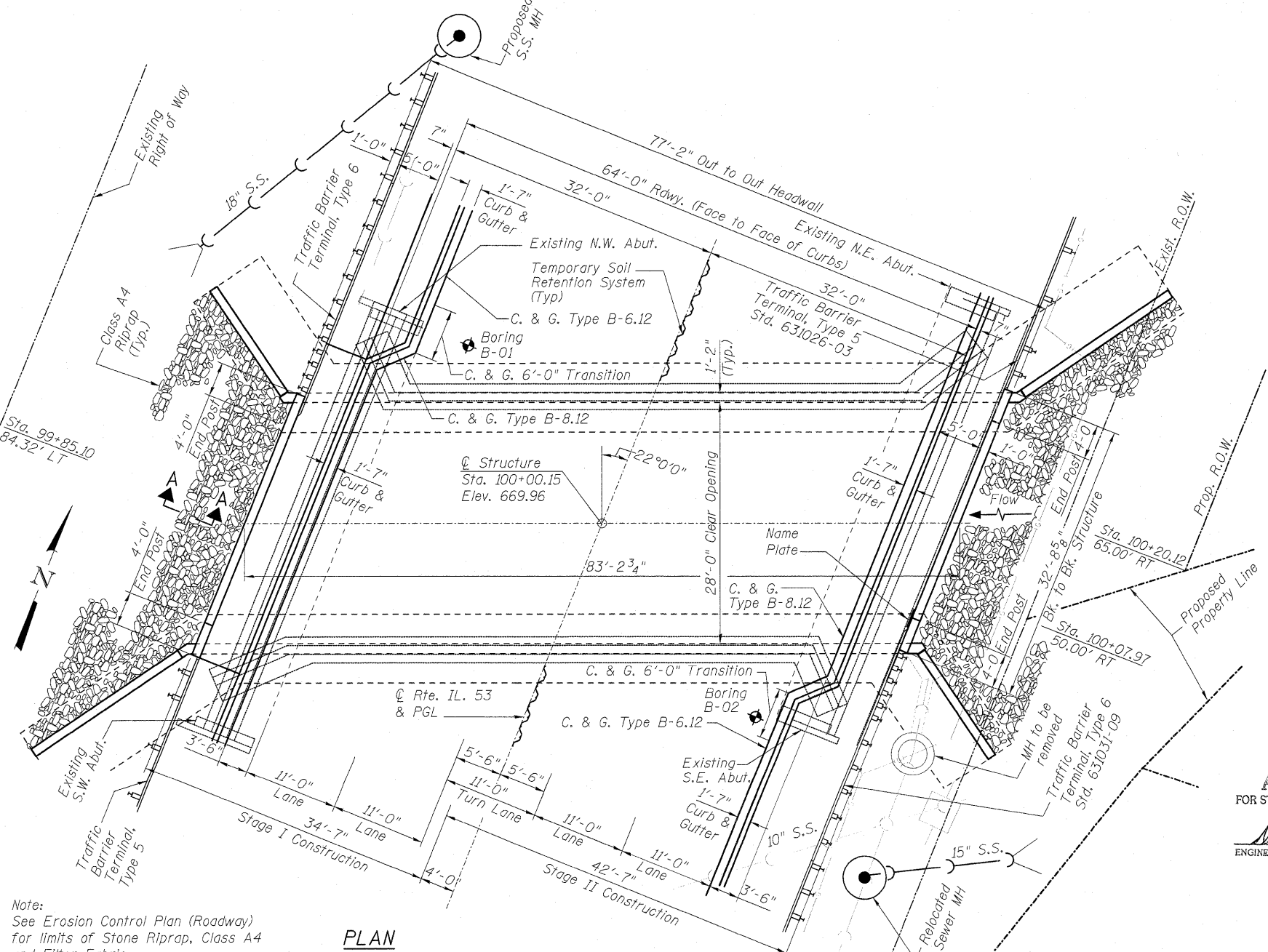
**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST UNITS**  
f'c = 5,000 psi  
fy = 60,000 psi (Reinforcement)  
fy = 65,000 psi (Welded wire fabric)



**GENERAL PLAN**  
**ILLINOIS ROUTE 53 (LINCOLN AVE.)**  
**OVER ST. JOSEPH'S CREEK**  
**F.A.P. 870 - SEC. 534R-B**  
**DUPAGE COUNTY**  
**STATION 100+00.15**  
**STRUCTURE NO. 022-3054**

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
*N. Cal. Perry*  
ENGINEER OF BRIDGES AND STRUCTURES



Note:  
See Erosion Control Plan (Roadway)  
for limits of Stone Riprap, Class A4  
and Filter Fabric.



USER NAME	DESIGNED	REVISIONS
JPM	JPM	-
JXH	JXH	-
MPS	MPS	-
JPM/JXH/TPG	JPM/JXH/TPG	-

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN**  
**STRUCTURE NO. 022-3054 STA. 100 + 00.15**  
SHEET NO. S1 OF S12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
870	534R-B	DUPAGE	51	29

CONTRACT NO. 60M83  
DATE: OCTOBER 4, 2011 ILLINOIS FED. AID PROJECT