

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	57B-31	COOK	62	26
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		CONTRACT NO. 60440

**BRIDGE BILL OF MATERIAL**

ITEM	UNIT	SUPER.	SUB.	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.		200	200
Porous Granular Embankment (Special)	Cu. Yd.		576	576
Stone Riprap, Class A5	Sq. Yd.		977	977
Filter Fabric	Sq. Yd.	1,008		1,008
Protective Coat	Sq. Yd.	1,067		1,067
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		596	596
Cofferdam (Location - 1)	Each		1	1
Cofferdam (Location - 2)	Each		1	1
Cofferdam (Location - 3)	Each		1	1
Concrete Structures	Cu. Yd.		146.7	146.7
Concrete Superstructure	Cu. Yd.	342.1		342.1
Bridge Deck Grooving	Sq. Yd.	740		740
Erecting Elastomeric Bearing Assembly, Type 1	Each	10		10
Stud Shear Connectors	Each	3,810		3,810
Erecting Structural Steel	L. Sum	1		1
Reinforcement Bars	Pound		32,440	32,440
Reinforcement Bars, Epoxy Coated	Pound	63,750	24,840	88,590
Temporary Sheet Piling	Sq. Ft.		3,206	3,206
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		168	168
Pipe Underdrains for Structures 4"	Foot		235	235
Drainage Scuppers, DS-12	Each	4		4
Bar Splicers	Each	984	70	1,054
Drilled Shaft in Soil 36"	Foot		114	114
Drilled Shaft in Soil 42"	Foot		229	229
Drilled Shaft in Soil 48"	Foot		114	114
Drilled Shaft in Rock 30"	Foot		4	4
Drilled Shaft in Rock 36"	Foot		8	8
Drilled Shaft in Rock 42"	Foot		4	4
Permanent Casing	Foot		176	176
Form Liner Textured Surface	Sq. Ft.	2,100		2,100

**INDEX OF SHEETS**

- S1. GENERAL PLAN AND ELEVATION
- S2. GENERAL NOTES & STAGING DETAILS
- S3. SUBSTRUCTURE LAYOUT & DETAILS
- S4. DECK ELEVATIONS I
- S5. DECK ELEVATIONS II
- S6. DECK PLAN & DETAILS
- S7. DECK DETAILS
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- S10. BEARING & DIAPHRAGM DETAILS
- S11. NORTH ABUTMENT
- S12. SOUTH ABUTMENT
- S13. ANCHOR BOLTS
- S14. BAR SPLICERS
- S15. TEMPORARY CONCRETE BARRIER
- S16. DRAINAGE SCUPPER DETAILS
- S17. WATER MAIN DETAILS
- S18. BORING LOGS I
- S19. BORING LOGS II
- S20. BORING LOGS III
- S21. BORING LOGS IV

PATRICK ENGINEERING, INC.  
PAUL M. LOPEZ, S.E.



**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

Paul M. Lopez  
PAUL M. LOPEZ, S.E.  
# 081-005231

Ralph E. Anderson  
ENGINEER OF BRIDGES AND STRUCTURES

EXP 11-30-06  
DATE 9-14-06

**Bench Mark:**

Chisled square on top of the wingwall at the south east corner of the Cicero Avenue Bridge over the North Branch of the Chicago River. Elev. 605.37

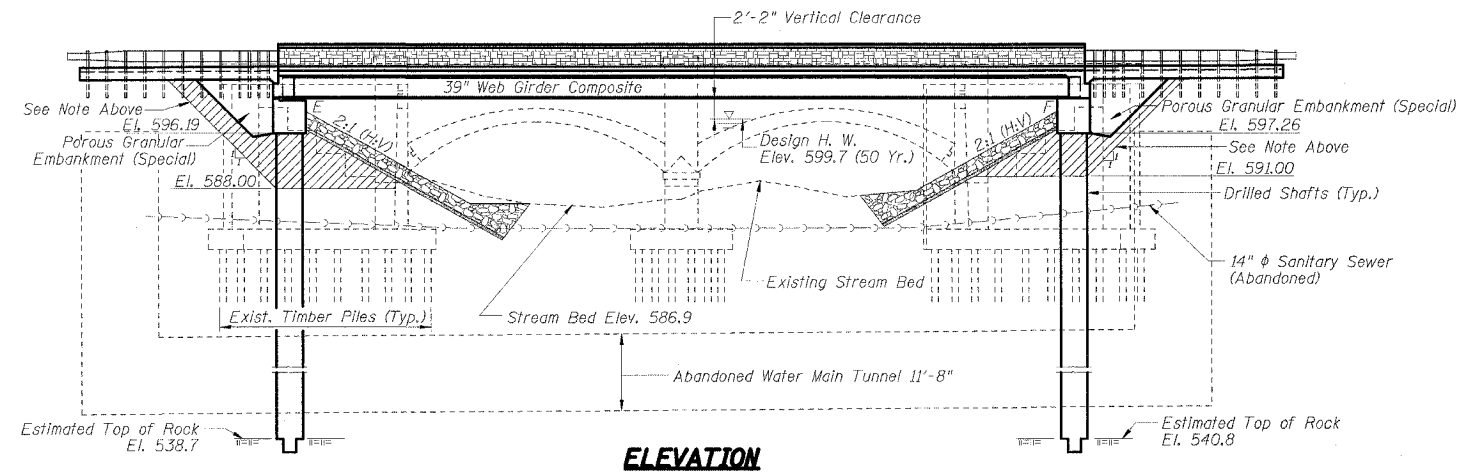
**Existing Structure:**

S.N. 016-0653 built as S.B.1 Route 57 Sec. 57B-NRM3 in 1935. The existing bridge has two simple spans which consist of a PCC wearing surface and reinforced concrete tee beams. The existing deck is 76'-0" wide and 86'-0" long. The existing structure is to be removed and replaced. Traffic to be maintained utilizing stage construction.

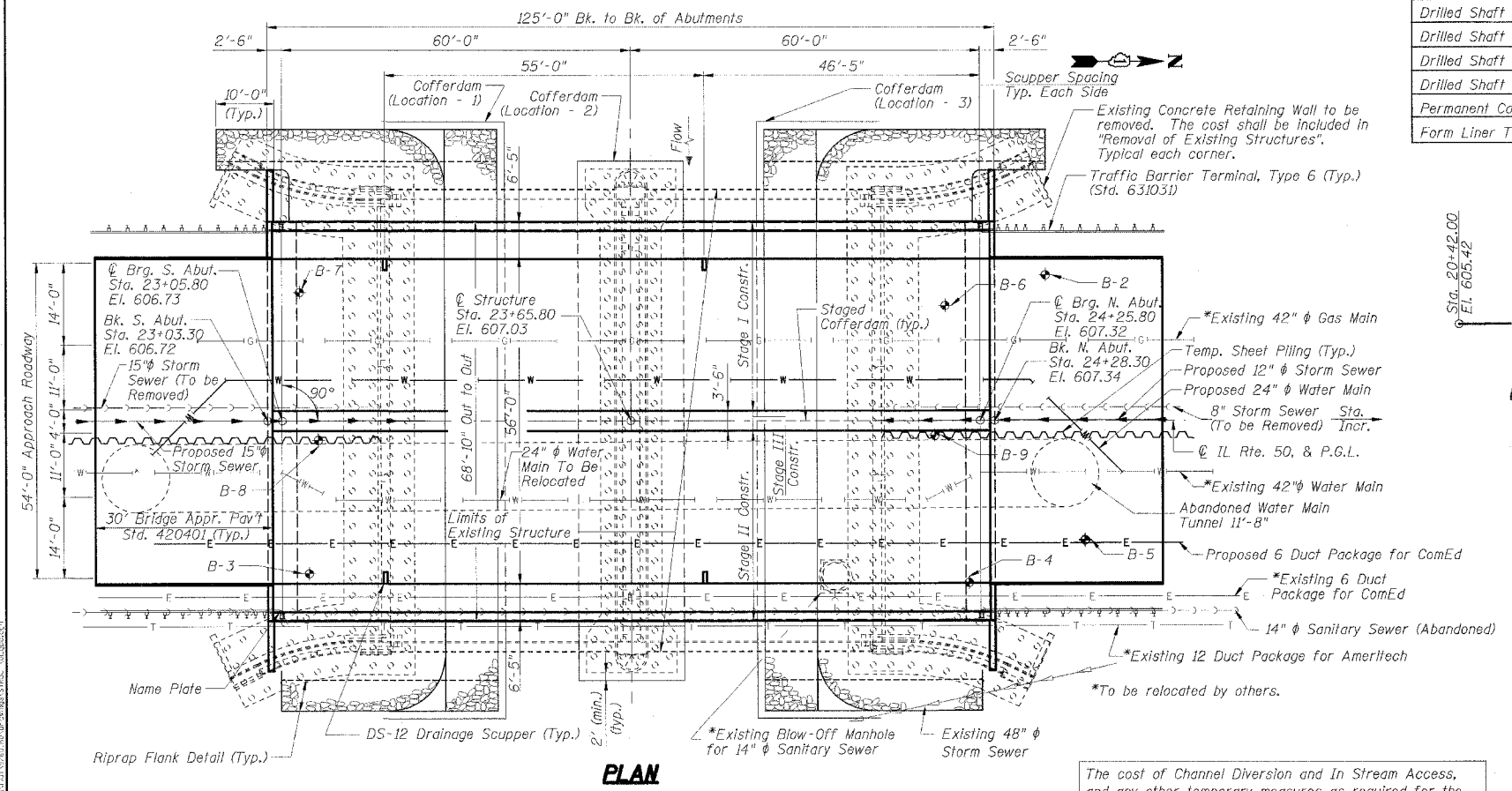
No salvage

**Note:**

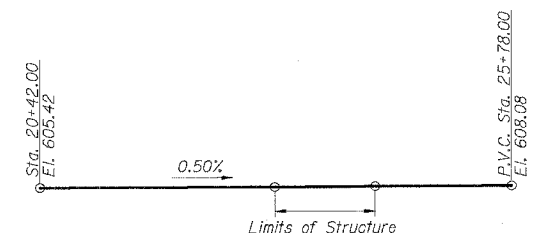
Hatched area indicates unsuitable soils behind the existing abutments in the western half of the northwest and southwest quadrants. This material shall be removed and replaced with suitable embankment. The replacement material shall be porous granular embankment (Special) with a gradation of CA-5 or CA-7. Removal of unsuitable material shall be done after temporary sheet piling is in place.



**ELEVATION**



**PLAN**

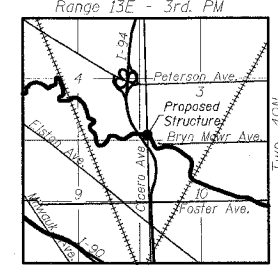


**PROPOSED PROFILE GRADE**  
(Along PGL Roadway)

STATION 23+65.80  
BUILT 200... BY  
STATE OF ILLINOIS  
F.A.P. RT. 350 SEC. 57B-31  
LOADING HS20  
STR. NO. 016-2782

**NAME PLATE**

See Standard 515001



**LOCATION SKETCH**

**DESIGN STRESSES**

**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinf.)  
fy = 50,000 psi (M270 Grade 50W)

**LOADING HS20-44**

Allowance for Future Wearing Surface = 50 lb/ft²

**DESIGN SPECIFICATIONS**

1996 AASHTO Standard Specifications for Highway Bridges and 1997-2002 Interims

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.035g  
Site Coefficient (S) = 1.0

**WATERWAY INFORMATION**

DRAINAGE AREA = 112.3 Sq. Mi.		PROPOSED LOW GRADE ELEV. = 605.4 @ Sta. 20+42							
FLOOD	FREQ. YR.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Wt. H.W.E. Ft.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
	10	2318	620	908	597.7	0.3	0.2	598.0	597.9
DESIGN	50	3510	636	1131	599.7	0.9	0.4	600.6	600.1
BASE	100	4080	636	1257	600.8	1.3	0.5	602.1	601.3
OVERTOPPING	420	5180	636	-	603.4	2.1	-	605.5	-
MAX. CALC.	500	5460	-	1427	603.5	-	0.8	-	604.3

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
GENERAL PLAN AND ELEVATION  
FAP 350 IL ROUTE 50 (CICERO AVE.) OVER  
NORTH BRANCH OF THE CHICAGO RIVER  
COOK COUNTY STATION 23+65.80  
SECTION 57B-31  
STRUCTURE NO. 016-2782

SCALE: NONE  
DATE: AUGUST 18, 2006  
DRAWN BY: M. Belton  
CHECKED BY: R. Clinton



The cost of Channel Diversion and In Stream Access, and any other temporary measures as required for the completion of work in or adjacent to the river not otherwise covered, shall be included in "Removal of Existing Structures". The design and details of each of the temporary systems required shall be submitted to the Engineer for Approval.