

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#	DUPAGE	106	22	S1
of S34 SHEETS				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		
* 00-00116-00-BR				

Bench Mark: Bronze Disk in concrete headwall of storm sewer at S.W. corner of bridge, Elevation 676.893

Existing Structure: S.N. 022-3026 built 1962 as P.P.C. deck beams with bituminous wearing surface, three equal simple spans of 50'-0". Substructure consists of closed abutments with solid piers, all supported on steel H-pile footings. Existing structure to be removed and replaced. Traffic to be maintained utilizing a detour.

Salvage: Metal grating at 78" storm sewer headwall. See Sheet S32.

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS 2002 AASHTO

DESIGN STRESSES

FIELD UNITS

- $f'_c = 3,500$  psi
- $f'_e = 4,000$  psi (Drilled Shafts)
- $f_y = 60,000$  psi (Reinforcement)
- $f_y = 50,000$  psi (Structural Steel M270 Gr 50W)

SEISMIC DATA

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

CURVE DATA

PROP. CURVE PRC11-15  
PI STA. = 10+11.15  
 $\Delta = 16^\circ 48' 37"$   
 $R = 2,685.00'$   
 $L = 396.74$   
 $T = 787.77$   
 $E = 29.15$   
P.C. STA. = 6+14.41  
P.T. STA. = 14+02.18

CONSTRUCTION SEQUENCE

Relocate existing 78" storm sewer. Detour traffic, install permanent casing for drilled shafts before placing Rock Fill, reconstruct bridge.

Concurrently, perform electrical duct and cable work outside the bridge deck area. Lastly, complete remaining electrical work on the bridge.

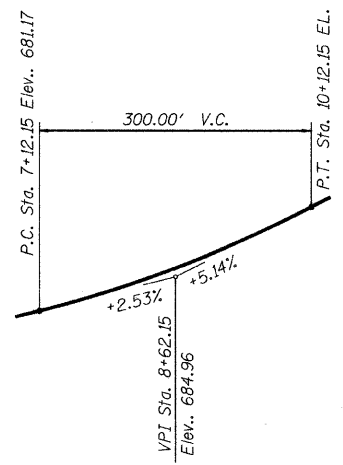
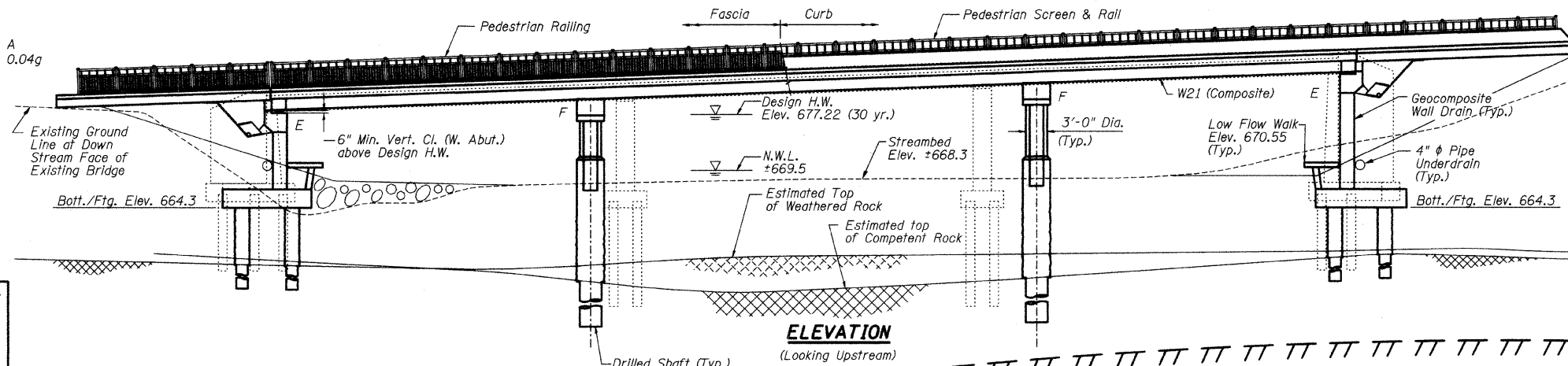
WEST BRANCH OF DUPAGE RIVER  
BUILT 20... BY  
CITY OF NAPERVILLE  
SEC. 00-00116-00-BR  
F.A.U. 3570 STATION 7+64  
STR. NO. 022-6756 LOADING HS20

LEGEND:

- B-1 (2001)
- B1 (C. 1961)

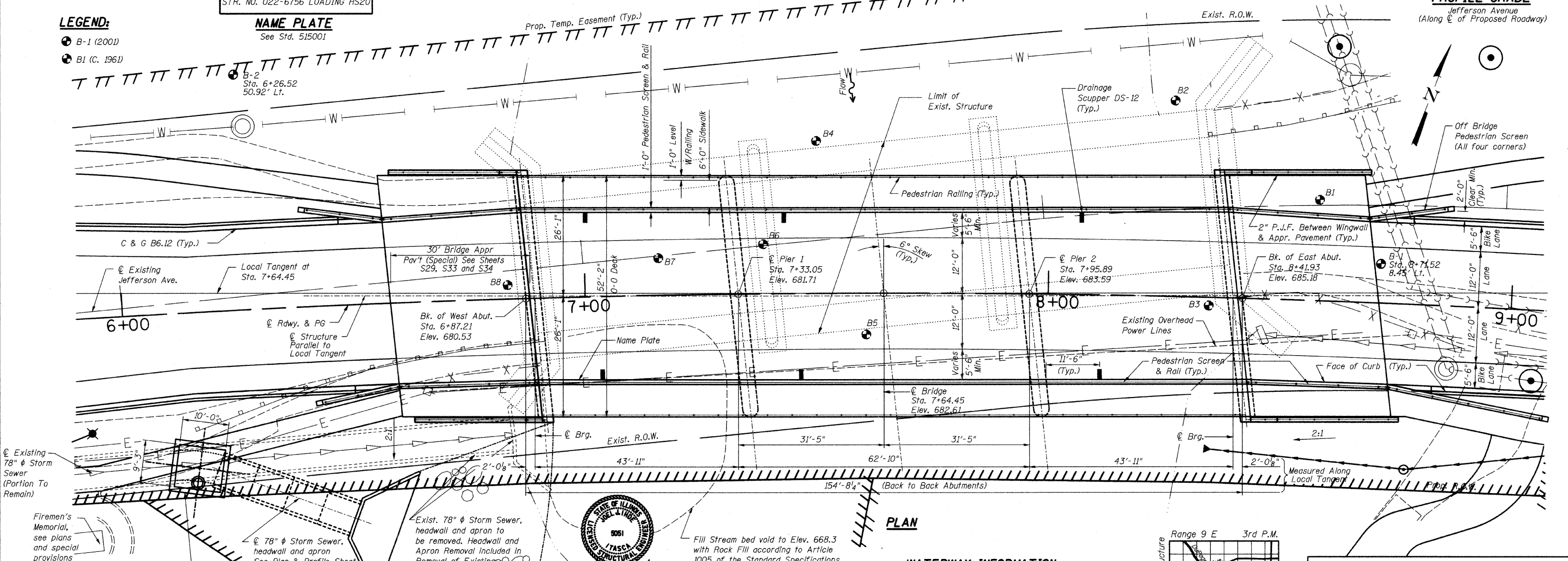
NAME PLATE

See Std. 515001



PROFILE GRADE

Jefferson Avenue (Along C of Proposed Roadway)

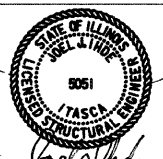


PLAN

Firemen's Memorial, see plans and special provisions

Precast Concrete Junction Chamber (See Sht. S31 of S34)

Prop. Perm. Easement (Typ.)



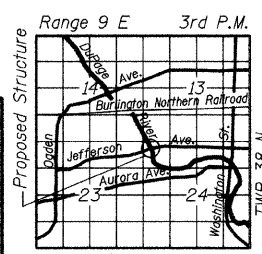
DATE SIGNED: 7-14-09  
EXP. DATE: 11-30-10

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges."

Fill Stream bed void to Elev. 668.3 with Rock Fill according to Article 1005 of the Standard Specifications.

WATERWAY INFORMATION

Drainage Area = 105.9 mi <sup>2</sup>		Low Grade Elev. 677.05 @ Sta. 4+65.65					
Flood Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop. Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.	
Design	30	3730	1271.6	1270.6	677.22	9.32	677.22/677.22
Base	100	4400	1534.4	1520.3	678.10	10.08	677.98/677.98
Overtopping	-	3375	1165.5	1165.5	676.80	8.90	676.80/676.80
Max. Calc.	500	5250	1905.3	1854.0	678.90	11.00	678.90/678.90
Record Flood	-	-	-	-	-	-	-



LOCATION SKETCH

GENERAL PLAN

JEFFERSON AVENUE OVER WEST BRANCH DUPAGE RIVER  
FAU 3570 SECTION 00-00116-00-BR  
DUPAGE COUNTY  
STA. 7+64.45  
STRUCTURE NUMBER 022-6756

Bellinger, Lach & Associates, Inc.