

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15VB-1-R	COOK	243	175
STA. 4+665.229		TO STA. 4+777.600		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

**BENCH MARK:**

N. Boll of F.H. S.W. corner, Ridgeland & S.W. Hwy.-Elev. 181.826

**EXISTING STRUCTURE:**

The Existing Bridge, built in 1934, consist of 25 spans. Superstructure for spans 1-11 inclusive and 15-25 inclusive consist of Pre-Tensioned Deck Beams; span 12 and 14 consist of Longitudinal Steel Stringers and span 13 over the Railroad consist of Riveted Plate Girder with Steel Floor Beams and Stringers.

Total length of Structure is 386.75 m back to back of Abutments. Total width of the Structure is 15.7 m while the width face to face of Curb is 13.4m with two 3.35 m lanes in each direction.

For the interim improvement, the Contractor shall remove and replace existing Piers 10 thru 15 as well as the Superstructure spans 10 thru 16. Piers 9 and 16 to be modified to accommodate R.C. Slab Superstructure Spans 10 and 16. New Superstructure Spans 10 and 16 to be tapered to transition between the existing and proposed width.

Existing two Light Poles to be removed and replaced.

Traffic shall be detoured away from the structure location, see Roadway Plans.

All dimensions are in millimeters (mm) except as noted.

No Salvage.

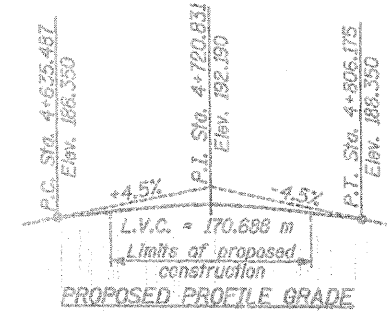
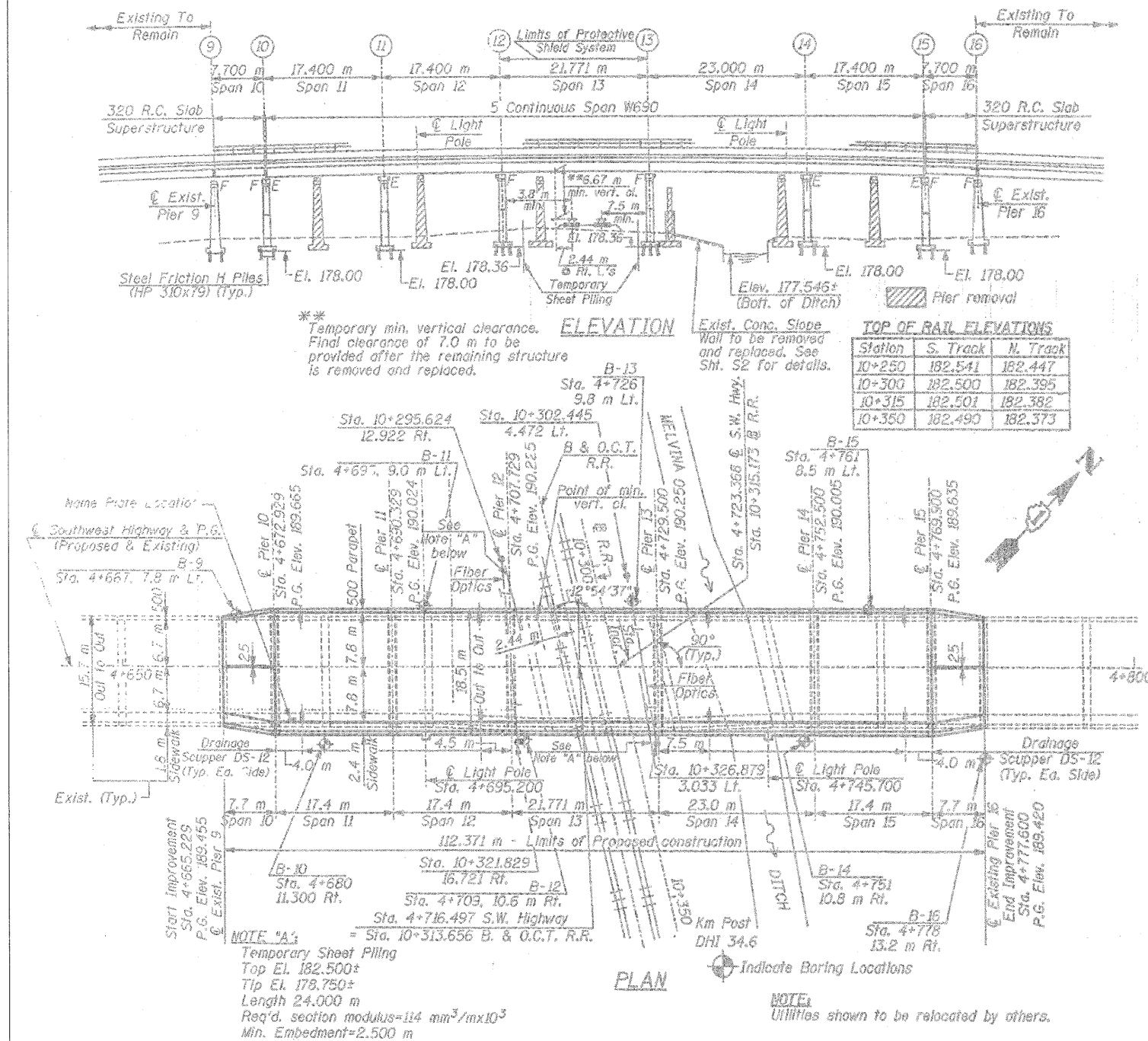
**WATERWAY INFORMATION  
(MELVINA DITCH)**

Drainage Area = 4.43 km<sup>2</sup> Low Grade Elev. 187.6 m @ 335 m W. of Melvina Ditch

Flood	Freq. Yr.	Q cms	Opening Sq. m		Nat. H.W.E. m	Head - m		Headwater Elev. - m	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	7.10	33.80	35.90	180.40	0.0	0.0	180.40	180.40
Base	50	11.80	54.30	56.90	180.80	0.0	0.0	180.80	180.80
Base	100	14.20	78.30	81.20	181.10	0.0	0.0	181.10	181.10
Overlapping									
Max. Calc.	500	20.40	117.80	121.00	181.40	0.0	0.0	181.40	181.40

Value obtained from F.I.S. for Village of Chicago Ridge, Cook County (May 1980).

Water Elevations are influenced by the Stony Creek backwater.



**DESIGN SPECIFICATIONS**  
AASHTO 1996 & 1997 Interim  
**LOADING MS 18**  
Allow 2.4 kN/m<sup>2</sup> for Future Wearing Surfaces.

**DESIGN STRESSES**  
**FIELD UNITS**  
f'c = 24 MPa  
fy = 400 MPa (reinf.)  
fy = 345 MPa (M270M Grade 345)

**SEISMIC DATA**  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.038g  
Site Coefficient (S) = 1.0

- INDEX OF SHEETS**
1. GENERAL PLAN AND ELEVATION
  2. GENERAL NOTES, TOTAL BILL OF MATERIAL AND SLOPE WALL DETAIL
  3. TOP OF SLAB ELEVATIONS-I
  4. TOP OF SLAB ELEVATIONS-II
  5. TOP OF SLAB ELEVATIONS-III
  6. TOP OF SLAB ELEVATIONS-IV
  7. DECK PLAN SPAN 11 THRU 13
  8. DECK PLAN SPAN 14 AND 15 AND SLAB CROSS SECTION
  9. DECK PLAN & CROSS SECTION SPAN 10 & 16
  10. PARAPET ELEVATIONS
  11. DECK CROSS SECTION, BILL OF MATERIAL AND DECK DETAILS.
  12. TYPE L ALUMINUM RAILING
  13. EXPANSION DEVICES
  14. FRAMING PLAN
  15. STRUCTURAL STEEL DETAILS
  16. BEARING DETAILS-PIERS 10, 12, 13 & 15
  17. BEARING DETAILS-PIER 11
  18. BEARING DETAILS-PIER 14
  19. ANCHOR BOLT DETAILS FOR BEARINGS
  20. PIER 10 DETAILS
  21. PIER 11 DETAILS
  22. PIER 12 DETAILS
  23. PIER 13 DETAILS
  24. PIER 14 DETAILS
  25. PIER 15 DETAILS
  26. PIER 9 (EXISTING) DETAILS
  27. PIER 16 (EXISTING) DETAILS
  28. FOOTING PLAN
  29. DRAINAGE SCUPPER DETAILS
  30. BORING LOGS
  31. BORING LOGS
  32. BORING LOGS

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

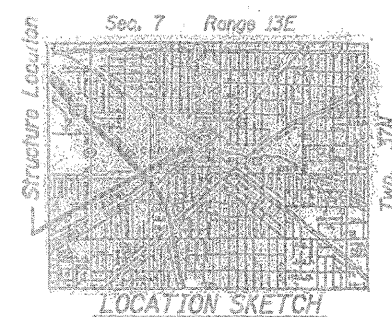


*Bhadrish N. Shah* 6/16/08  
BHADRISH N. SHAH  
LICENSED STRUCTURAL ENGINEER  
STATE OF ILLINOIS LIC. No. 081-004476  
EXPIRES: 11-30-98

ILLINOIS DEPARTMENT OF TRANSPORTATION

**GENERAL PLAN & ELEVATION**  
SOUTHWEST HIGHWAY OVER  
B. & O.C.T. RAILROAD AND MELVINA DITCH  
F.A.U. ROUTE 3578 SEC. 15VB-1-R  
COOK COUNTY STATION 4+716.471  
STRUCTURE NO. 016-0463  
SCALE: DATE: 6/17/09  
DRAWN BY: F. MUNIR  
CHECKED BY: B. SHAH  
CHRISTIAN - ROGE & ASSOC.  
CHICAGO ILLINOIS

REVISIONS	
NAME	DATE



FOR INFORMATION ONLY