

BENCH MARK: (Existing Shown in 1969 Plans)

Standard County Disc set in Concrete Monument in triangle at intersection of Milwaukee Avenue, Glenview Road and Dearlove Road, Elev. 674.444

Existing Structure: S.N. 016-0243, was originally built in 1969 as F.A. Route 22 (S.B.I. Route 21), Section 211-KVX-W & BR. In 1998 the Structure was repaired, at that time the Bituminous Concrete Overlay was replaced with a Reinforced Concrete Overlay. The Existing three span structure consists of Precast Prestressed Concrete Deck Beams supported by open abutments and two (2) Column Piers. Dimensions are 166'-4⁵/₈" bk. to bk. Abutments and 82'-0" out to out with a 17°-54'-3.5" Skew.

PROPOSED APPROVEMENT:

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

Salvage: None

SCOPE OF WORK:

Remove and replace P.P.C. Deck Beam Superstructure with 5" min. Concrete Overlay and repair Substructure.

SHEET S1 OF S13

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RTE. 374 (IL. RTE. 21)	211-K-V-X-B	COOK	38	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60C20

INDEX OF SHEETS

- 1 GENERAL PLAN & ELEVATION
- 2 GENERAL NOTES & TOTAL BILL OF MATERIAL
- 3 CONSTRUCTION STAGING-I
- 4 CONSTRUCTION STAGING-II
- 5 REINFORCEMENT PLAN
- 6 PARAPET DETAILS
- 7 JOINT DETAILS
- 8 P.P.C. DECK BEAM DETAILS
- 9 ALUMINUM RAILING, TYPE L
- 10 ABUTMENT REPAIR
- 11 PIER REPAIR
- 12 BAR SPLICER ASSEMBLY DETAILS
- 13 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

LOADING HS20-44

Allow 50#/sq. ft. for Future Wearing Surface

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS
NEW CONSTRUCTION

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

EXISTING CONDITIONS
(SERVICE DESIGN)

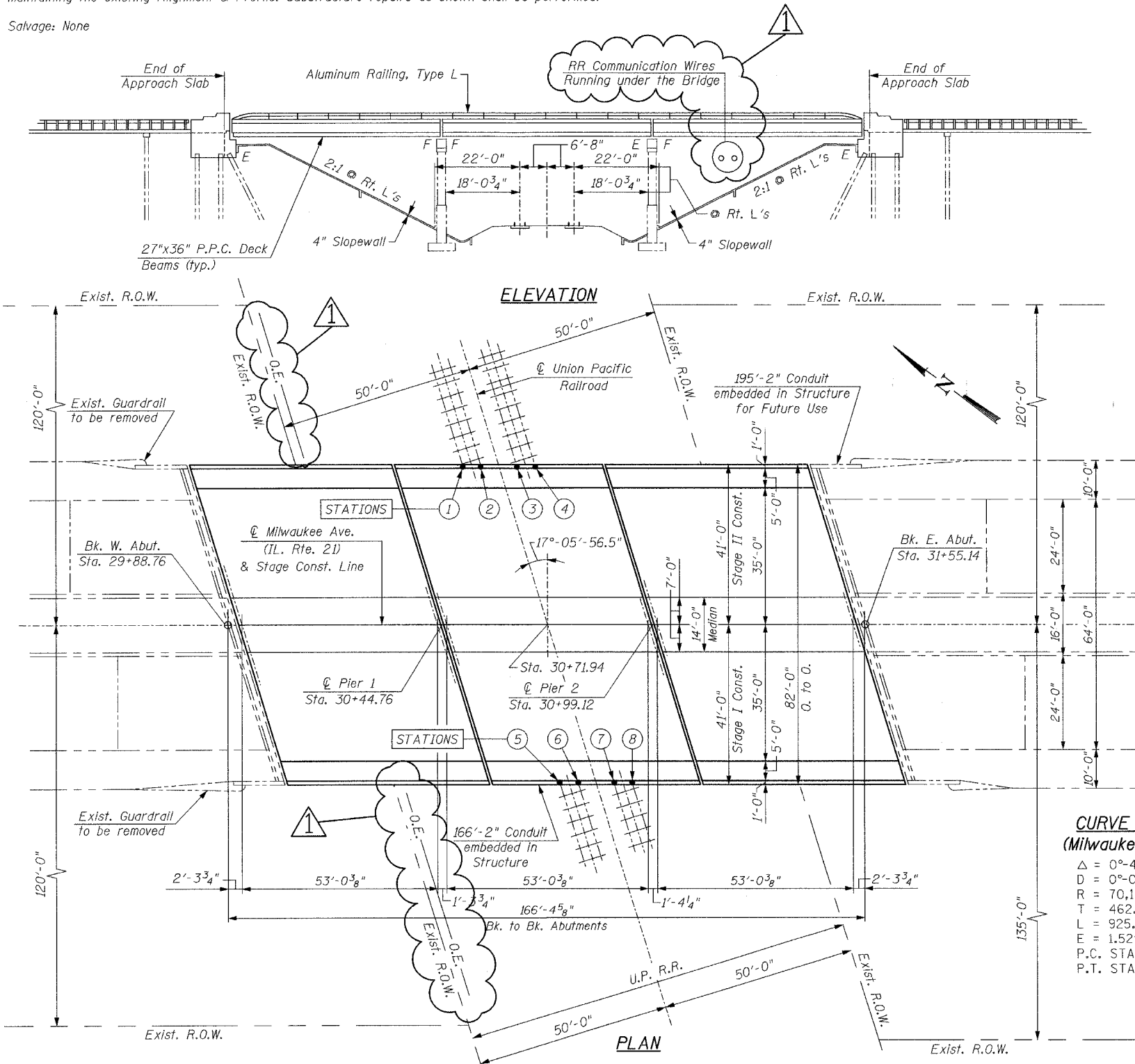
f'c = 1,400 psi
fy = 20,000 psi (Reinforcement)

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)

SEISMIC DATA

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



ELEVATION TABLE

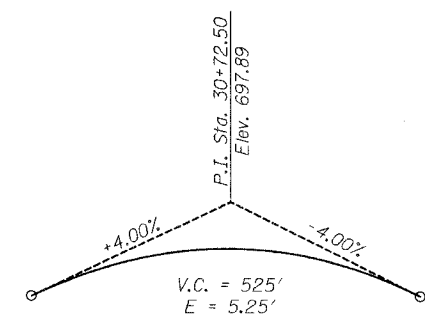
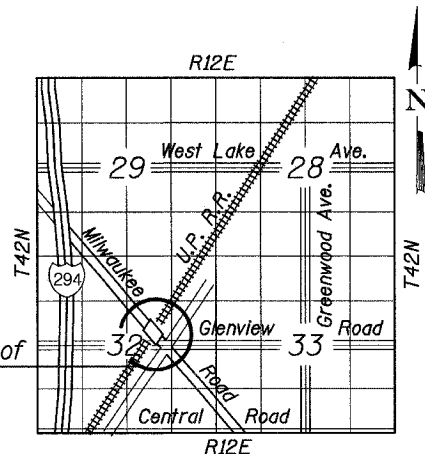
TOP OF RAIL	ELEVATION
At Station 1	667.30
At Station 4	667.12

VERTICAL CLEARANCE RAIL

FROM TOP OF RAIL	VERTICAL CLEARANCE
At Station 1	22'-2"
At Station 2	22'-2"
At Station 3	22'-3 ⁷ / ₈ "
At Station 4	22'-4 ³ / ₈ "
At Station 5	22'-4 ⁹ / ₈ "
At Station 6	22'-4 ⁹ / ₈ "
At Station 7	22'-6 ⁵ / ₈ "
At Station 8	22'-7 ³ / ₈ "

CURVE DATA

(Milwaukee Ave.)
Δ = 0°-45'-20"
D = 0°-04'-54"
R = 70,141.13'
T = 462.44'
L = 925.00'
E = 1.52'
P.C. STA. = 27+05.91
P.T. STA. = 36+30.91



PROFILE S.B.I. RTE. 21

(Milwaukee Ave.)
(Existing Shown in 1969 Plans)

APPROVED

FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Adams
ENGINEER OF BRIDGES AND STRUCTURES



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

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
MILWAUKEE AVE. (IL. RTE. 21) OVER
UNION PACIFIC RAILROAD
F.A. RTE. 374 (S.B.I. RTE. 21)
SECTION: 211-K-V-X-B
COOK COUNTY STATION 30+71.94
STRUCTURE NO. 016-0243

SCALE: DATE: JULY 23, 2007 DRAWN BY: F.M. CHECKED BY: B.N.S.

CHRISTIAN-ROGE & ASSOC., INC.
CHICAGO ILLINOIS

REVISIONS	
NAME	DATE
	09-10-07