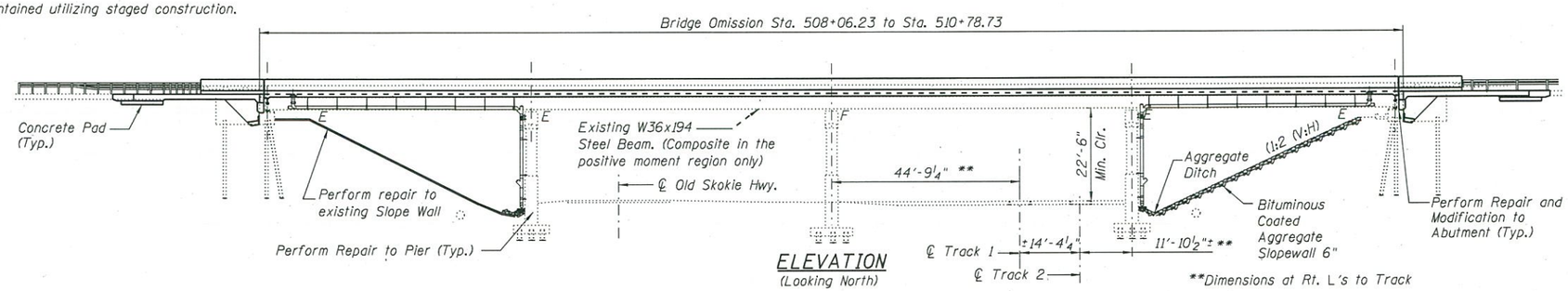
Bench Mark: Square cut in end of Southwest Wingwall S.N. 049-0051. Sta. 508+01.91' RT., 44.04' RT. Elev. 735.44 NAVD 88.

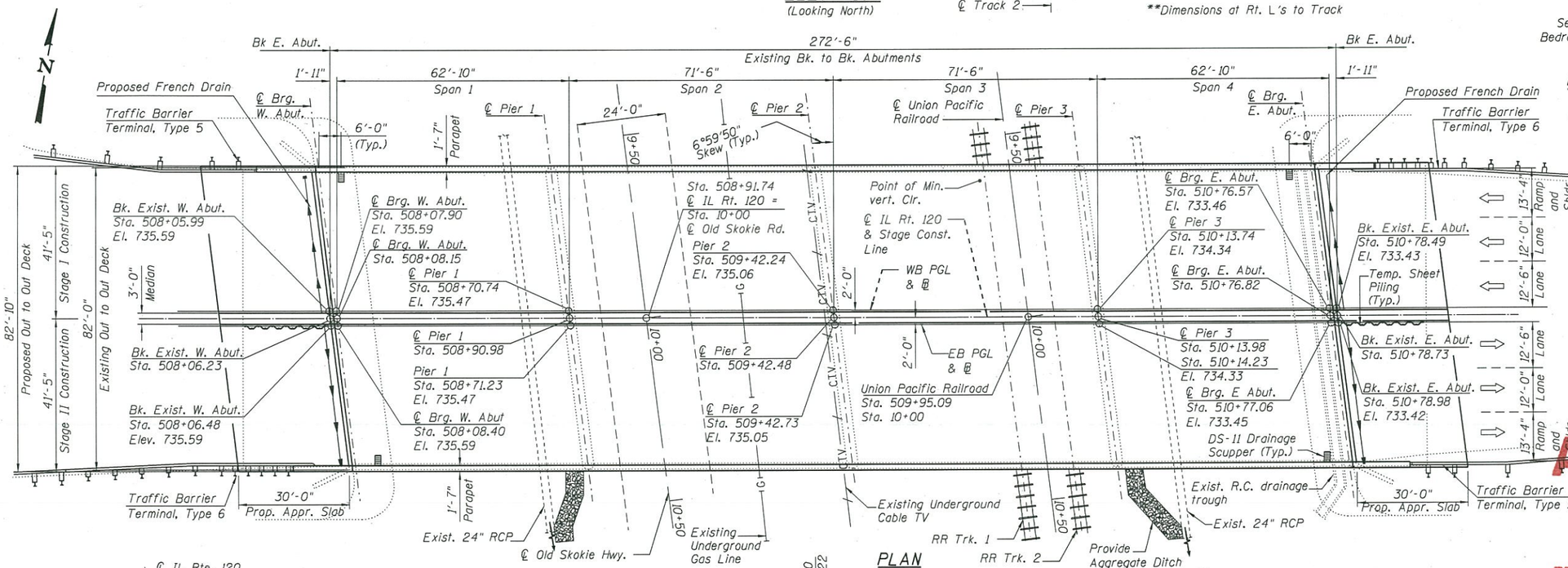
Existing Structure: SN 049-0051, originally constructed in 1959 as F.A Rte. 21, Sec 12-VB over Old Skokie Road and the Union Pacific Railroad, consists of two 12 foot through lanes with a 13'-4" ramp and outer shoulder in each direction and a 2'-6" wide raised median. In 1983, the structure was repaired, deck was waterproofed and overlaid, longitudinal joint was eliminated and the existing railing was replaced with 36" New Jersey Type concrete parapet. In Septemeber 2003, the bridge was repainted. The superstructure is a 4 span multi-girder with an $8\frac{3}{4}$" deck (7" original concrete slab with $1\frac{3}{4}$" bituminous overlay) supported by 12 - W36x194 non-composite, continuous rolled steel beams. The substructure consists of a reinforced concrete pile bent abutments with backwalls and multi-column piers on pile supported spread footing. The west abutment is about 2 feet higher than the east abutment. The out to out of deck measures 82'-0" and the back to back abutments is 272'-6".

Traffic is to be maintained utilizing staged construction.

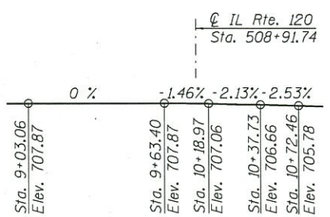
Salvage: None



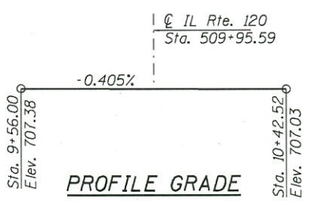
ELEVATION
(Looking North)



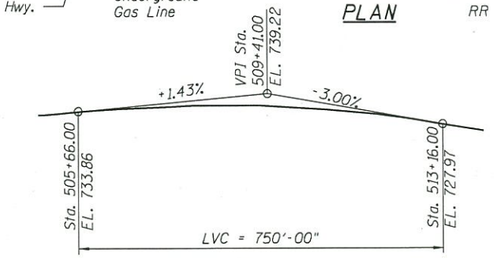
PLAN



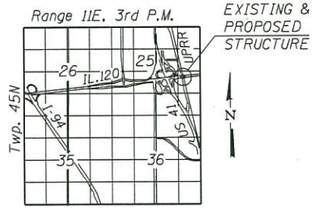
PROFILE GRADE
Along ℄ Old Skokie Highway (Looking East)



PROFILE GRADE
Top of Rail Track 2 UPRR (Looking East)



PROFILE GRADE
Along IL Rte. 120 - WB & EB PGL



LOCATION SKETCH

LOADING HS20-44
(New Construction)

No future wearing surface is allowed.

DESIGN SPECIFICATIONS
(New Construction)

2002 AASHTO Standard Specifications, 17th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M270 Grade 50) (Bearing Plates)
fy = 36,000 psi (Side retainers and Fill Plates)

EXISTING

fc = 1,200 psi (Deck & Piers)
fc = 800 psi (Abutments)
fs = 20,000 psi (Reinforcement)
fy = 33,000 psi (Structural Steel)

SEISMIC DATA

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

HIGHWAY CLASSIFICATION

F.A.P. Rte. 342 - Rte. IL. 120
Functional Class: Other Minor Arterial
ADT: 29,800 (2013); 31,164 (2032)
ADTT: 1,490 (2013); 1,558 (2032)
DHV: 2,980 (2013); 3,116 (2032)
Design Speed: 50 m.p.h.
Posted Speed: 45 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

F.A.P. Rte. 346 - Old Skokie Road
Functional Class: Local Road
ADT: 825 (2011); 918 (2033)
ADTT: 82 (2011); 92 (2032)
DHV: 164 (2011); 184 (2032)
Design Speed: - m.p.h.
Posted Speed: 40 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

APPROVED
MAR 11 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN AND ELEVATION
IL RTE. 120 OVER OLD SKOKIE HWY. & U.P.R.R.
F.A.P. RTE. 342 SEC. 12 (HB&VB) BR
LAKE COUNTY
STATION 509+42.48
STRUCTURE NO. 049-0051

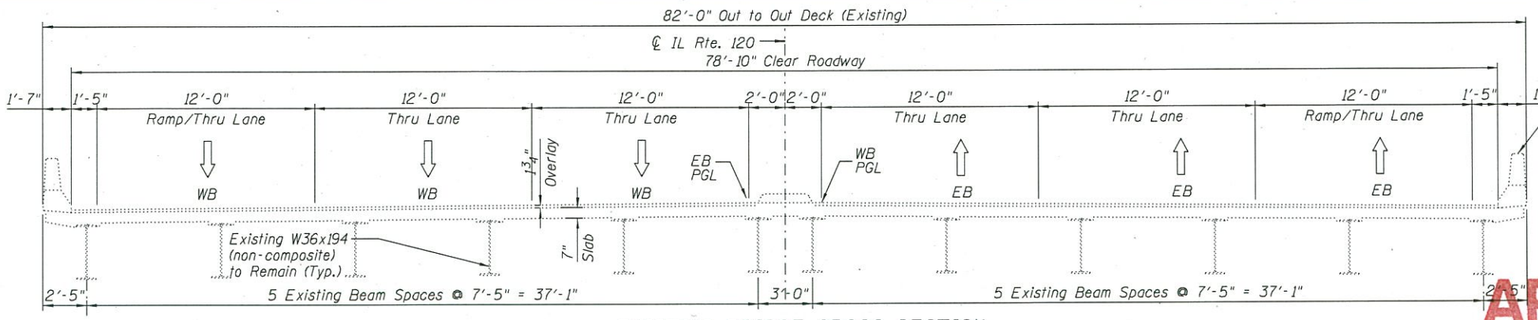
Primera
100 S. WACKER DRIVE, SUITE 700, CHICAGO, IL 60606, P:312-636-0910 F:312-636-0915

USER NAME =	DESIGNED - SMO	REVISED	
	CHECKED - JPM	REVISED	
PLOT SCALE =	DRAWN - MPS	REVISED	
PLOT DATE =	CHECKED - JPM/TPG	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

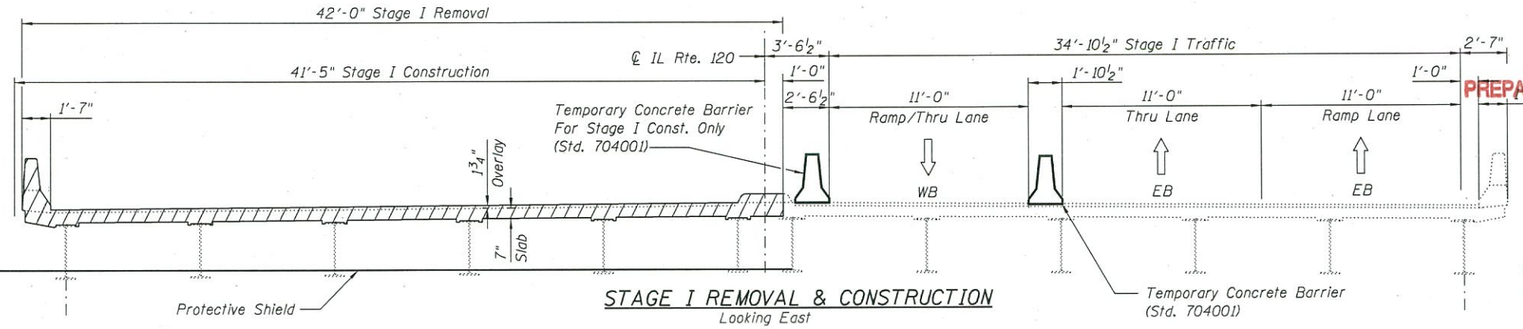
SHEET NO.1 OF 2 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR	LAKE		
		CONTRACT NO. 60X39		
	ILLINOIS FED. AID PROJECT			



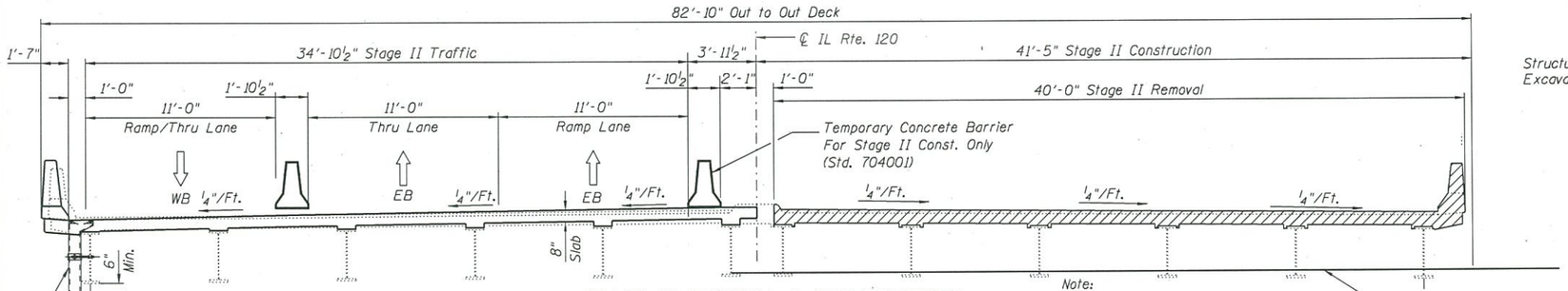
EXISTING BRIDGE CROSS SECTION

Looking East



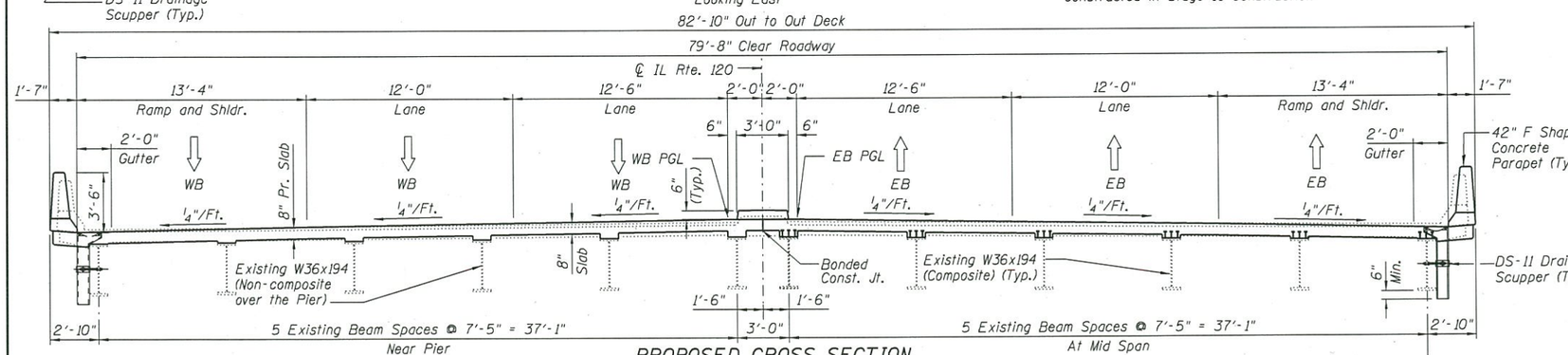
STAGE I REMOVAL & CONSTRUCTION

Looking East



STAGE II REMOVAL & CONSTRUCTION

Looking East



PROPOSED CROSS SECTION

Looking East

SCOPE OF WORK

1. Remove and replace existing bridge deck with 8" thick concrete deck.
2. Remove and replace approach slabs.
3. Remove and replace existing abutments backwall and modify abutments
4. Remove and replace existing roller bearing with Type II Elastomeric Bearing at both abutments.
5. Provide French drain behind abutments.
6. Remove and replace expansion joint system at each abutment.
7. Repair Piers using Structural Repair of Concrete and Epoxy Crack Sealing.
8. Clean and repaint entire structural steel and diaphragms.
9. Remove existing abutment wingwalls and rebuild parallel to bridge parapet.
10. Install Drainage Scupper and Drainage System.
11. Repair cracks on the existing slopewall of west abutment and install Bituminous Coated Aggregate Slopewall 6" for east slopewall.

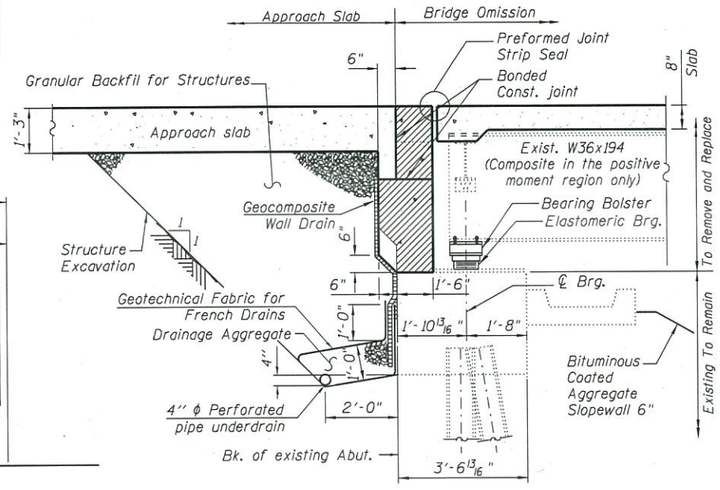
APPROVED

MAR 11 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS

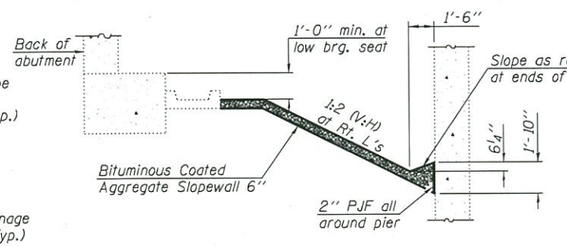
LEGEND

Removal of existing Concrete Deck



SECTION THRU ABUTMENT

(Horiz. dim. @ Rt. L's)



SECTION THRU BITUMINOUS COATED AGGREGATE SLOPEWALL

Primera	USER NAME =	DESIGNED - SMQ	REVISED
		CHECKED - JPM	REVISED
	PLOT SCALE =	DRAWN - MPS	REVISED
	PLOT DATE =	CHECKED - JPM/TPG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION STAGING DETAILS
STRUCTURE NO.049-0051 – STA. 509+42.48
SHEET NO. 2 OF 2 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR	LAKE		
		CONTRACT NO. 60X39		
	ILLINOIS FED. AID PROJECT			