STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 330	16BR	KANKAKEE	37	18
		ILLINOIS		

CONTRACT NO. 66365
Sheet 1 of 18

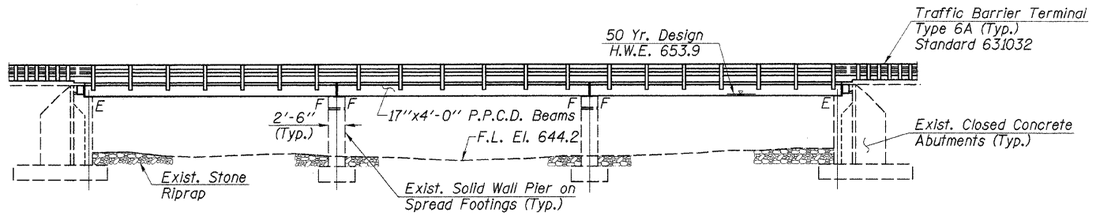
Bench Mark:

B.M. #1 - Chiseled Square on top of SE wingwall, 23.5' Rt. Sta. 355+54.3, Elev. 656.18.
B.M. #2 - RR Spike in West side of power pole, 50.8' Rt. Sta. 357+03, Elev. 652.41.

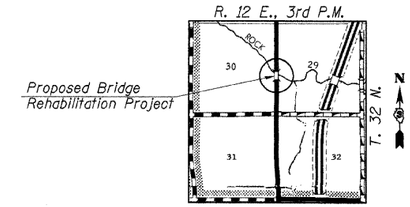
Existing Structure:

S.N. 046-0047, Built as F.A. Rte. 45, Sec. 16BR in 1966. Three span precast prestressed concrete deck beam (17" Depth) superstructure on closed concrete abutments and reinforced concrete solid wall piers. Abutments and piers are supported by spread footings.
Structure Length: 116'-6½" Bk.-Bk. Abut. Corbels, 46'-0" O.-O. Deck
The existing bridge superstructure shall be removed and replaced. Traffic to be maintained during superstructure replacement by stage construction.

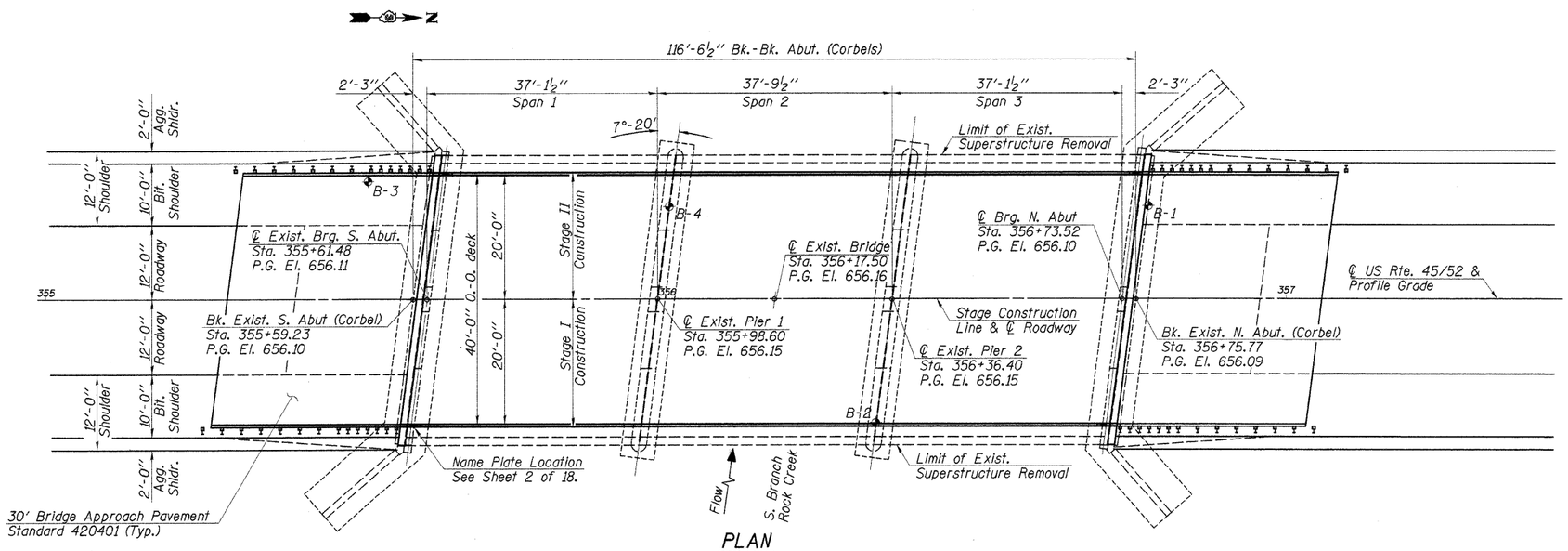
No Salvage.



ELEVATION



LOCATION SKETCH



PLAN

INDEX OF SHEETS

1.	General Plan and Elevation
2.	General Notes, Total Bill of Material & Miscellaneous Details
3.	Stage Construction Details
4.	Superstructure
5.-6.	Superstructure Details
7.	Type SM Steel Bridge Rail
8.-9.	Bridge Joint System
10.	Anchor Bolt Details
11.-12.	Abutment Details
13.-14.	Pier Repair Details
15.	Bar Splicer Details
16.	Temporary Concrete Barrier
17.-18.	Soil Boring Information

STATION 356+17.50
REBUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RTE. 330 SEC. 16BR
LOADING HS20
STR. NO. 046-0047

LETTERING FOR NAME PLATE

See Std. 515001
Existing Name Plate to be cleaned and placed adjacent to the new plate. Cost included with "Name Plates".

DESIGN SPECIFICATIONS

2002 AASHTO

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.042 g
Site Coefficient (S) = 1.0

LOADING HS20-44

Allow 25 lbs/Sq. Ft. for future wearing surface

DESIGN STRESSES

EXISTING CONSTRUCTION
Field Units:
f_c = 1,000 psi (Substructure)
f_s = 20,000 psi (Reinf.)

NEW CONSTRUCTION
Field Units:
f'_c = 3,500 psi
f_y = 60,000 psi (Reinf.)

Precast Units:
f'_c = 5,000 psi
f'_{ci} = 4,000 psi
f'_s = 270,000 psi (½"φ L-Relax Strands)
f_{si} = 201,960 psi

SCOPE OF WORK

1. Remove existing surfacing, concrete railings, deck beams and approach pavements. Reconstruct a three-span PPCD beam superstructure with concrete wearing surface and Steel Bridge Rail, Type SM, and new bridge approach pavements utilizing stage construction.
2. Seal existing cracks and repair delaminated/spalled concrete areas on substructure units. Construct substructure modifications for the proposed profile grade.
3. Construct approach pavement, connectors, and install new guard rail with barrier terminals.
4. Repair beam bearing seats at abutments & piers as required.

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

LICENSED STRUCTURAL ENGINEER
FRED J. STONE, JR.
81-2934
SPRINGFIELD
STATE OF ILLINOIS

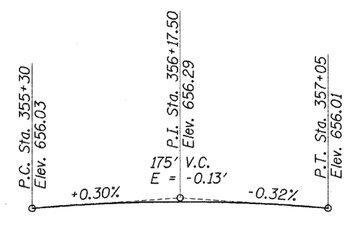
"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway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

Fred J. Stone Jr. (3-15-04)
ILLINOIS STRUCTURAL NO. 2934 (Expires 11/30/04)

WATERWAY INFORMATION

Drainage Area = 58.38 mi.² Low Grade Elev. 652.4 ft. @ Sta. 383+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1873	876	876	653.4	0.2	0.2	653.6	653.6
Design	50	2659	919	926	653.9	0.3	0.3	654.2	654.2
Base	100	2968	919	926	654.1	0.3	0.3	654.4	654.4
Overtopping	<2	730	772	772	652.4	0.0	0.0	652.4	652.4
Max. Calc.	500	3671	919	926	654.5	0.3	0.3	654.8	654.8



PROFILE GRADE

℄ Roadway U.S. Rte. 45/52

Rehabilitation Project	
DESIGNED	A.R.K.
CHECKED	P.S.L. & F.J.S.
DRAWN	S.A.P., K.T.R. & J.P.S.
CHECKED	A.R.K. & F.J.S.

GENERAL PLAN AND ELEVATION

U.S. RTE. 45/52 OVER
SOUTH BRANCH ROCK CREEK
F.A.P. RTE. 330 - SECTION 16BR
KANKAKEE COUNTY
STA. 356+17.50 - STR. NO. 046-0047

4440 ASH GROVE
SPRINGFIELD, IL 62707
(217) 793-8600
oasinc@famvid.com
OZYURT AND STONE, INC.
CONSULTING ENGINEERS

JOB NO.: 0306.3
FILE: GPE.DGN
DATE: 08-04-04