

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 16 SHEETS
F.A.P. 885	111BR-1	Johnson	94	60	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78030

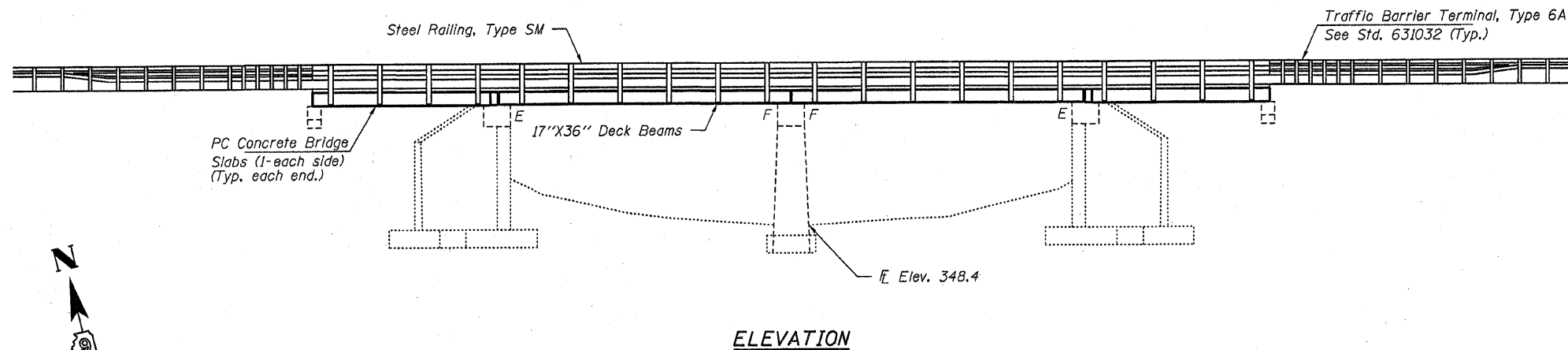
BENCHMARK: BM#1 - Chiseled square on top of wing, S.E. corner  
SN 044-0022, 18' left, Station 512+63, Elevation 361.733.

EXISTING STRUCTURE: SN 044-0022 was originally built in 1928 as  
S.B.I. Route 146, Section 111B. In 1982, the superstructure was  
replaced and widened, and precast concrete bridge slabs were used  
to widen the approaches. The superstructure consists of two simple spans of  
17"x36" deck beams. The substructure consists of two reinforced concrete  
closed abutments on timber piles and one solid concrete pier. The back-to-back  
abutment cap length is 69'-0"; the out-to-out width is 33'-0". The existing  
superstructure and the existing approach shoulder bridge slabs shall be removed  
and replaced using stage construction to maintain traffic.

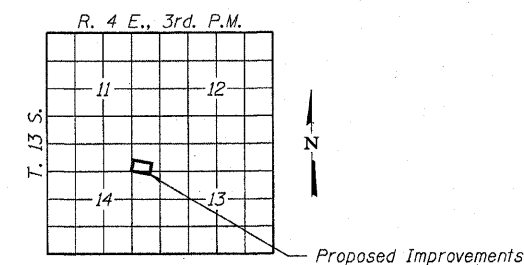
No Salvage.

**INDEX OF STRUCTURE SHEETS**

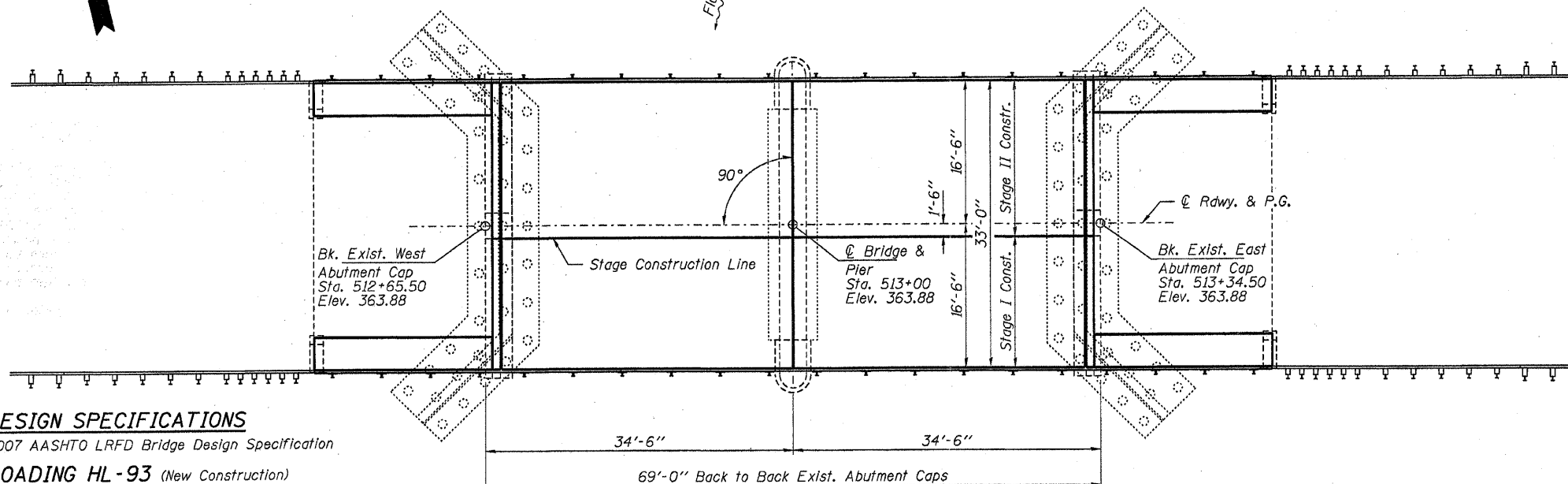
1. General Plan & Elevation
2. General Details
3. Stage Construction Details
4. Temporary Concrete Barrier
5. Superstructure
- 6-8. Superstructure Details
9. Approach Details
10. Superstructure & Approach Details
11. Steel Railing, Type SM
12. Strip Seal Expansion Joint
13. West Abutment
14. East Abutment
15. Pier
16. Bar Splicer Assembly Details



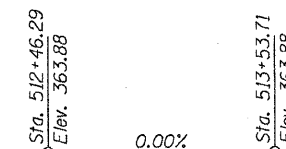
**ELEVATION**



**LOCATION SKETCH**



**PLAN**



**PROFILE GRADE**  
(Along Q Rdwy.)

**DESIGN SPECIFICATIONS**

2007 AASHTO LRFD Bridge Design Specification

**LOADING HL-93** (New Construction)

No future wearing surface allowed

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 5,000$  psi (Concrete Wearing Surface)  
 $f'_c = 3,500$  psi (All Concrete except CWS)  
 $f_y = 60,000$  psi (Reinf.)

**PRECAST PRESTRESSED UNITS**

$f'_c = 6,000$  psi  
 $f'_ci = 5,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ " low lax. strands)  
 $f'_si = 201,960$  psi ( $\frac{1}{2}$ " low lax. strands)  
 $f_y = 60,000$  psi (Reinf.)

**PRECAST UNITS**

$f'_c = 4,500$  psi  
 $f_y = 60,000$  psi (Reinf.)

**SCOPE OF WORK**

1. Remove existing superstructure, and approach shoulder bridge slabs.
2. Repair beam bearing seats and other areas on substructure as specified.
3. Reconstruct a two span PPCD beam superstructure with concrete wearing surface and Steel Railing, Type SM. Reconstruct approach shoulders with Precast Concrete Bridge Slabs with concrete wearing surface.

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

ENGINEER OF BRIDGES AND STRUCTURES



Michael D. Cirra  
ILLINOIS STRUCTURAL NO. 081-5984

4-24-08  
Expires 11-30-08

**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-52-0007-1 DATE: 04/02/08  
DESIGNED: P.S.L. CHECKED: M.D.C. DRAWN: D.T.M.

**GENERAL PLAN AND ELEVATION**

IL. ROUTE 146 OVER BELL POND  
F.A.P. ROUTE 885 / SECTION 111BR-1  
JOHNSON COUNTY  
STATION 513+00  
STRUCTURE NO. 044-0022