STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmarks:

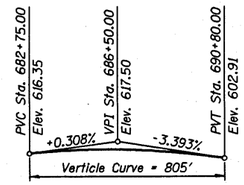
1.) BM 100 Chiseled "□" at the Southwest corner of concrete foundation of East pier of I-72 bridge over SB I-55, Elev. 589.75.
2.) BM 101A Chiseled "□" on the Northwest parapet wall of I-72 bridge over SB I-55, Elev. 615.80.
3.) MON 9911 Brass tablet set in concrete, North side of EB I-72, ±50' West of West end of bridge I-72 over SB I-55, Elev. 615.04.

Existing Structure: Structure No. 084-0078, built in 1962 as Section 84-3HB-5. The superstructure consists of a continuous three span non-composite welded plate girder bridge with a 7" concrete slab. The substructure consists of concrete pile bent abutments supported by steel piles and concrete multiple column pile bent piers supported by timber piles. The back-to-back of abutments dimension measures 347'-0" and the out-to-out of deck dimension measures 36'-0". The span lengths are 101'-0", 152'-10" and 83'-8" (℄ bearing to ℄ bearing) with a 62°43'18" left forward skew. The existing beams, piers and a portion of the abutments will be reincorporated into the new structure. One lane of traffic will be maintained utilizing stage construction.

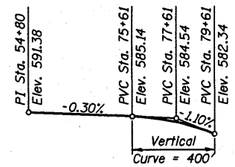
STATION 686+29.09
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RTE. 72 SEC. (84-3HB-5)BR
LOADING HS20-44
STRUCTURE NO. 084-0078

NAME PLATE
See Std. 515001

Existing name plate shall be cleaned and relocated next to the new name plate. Cost included with Name Plates.



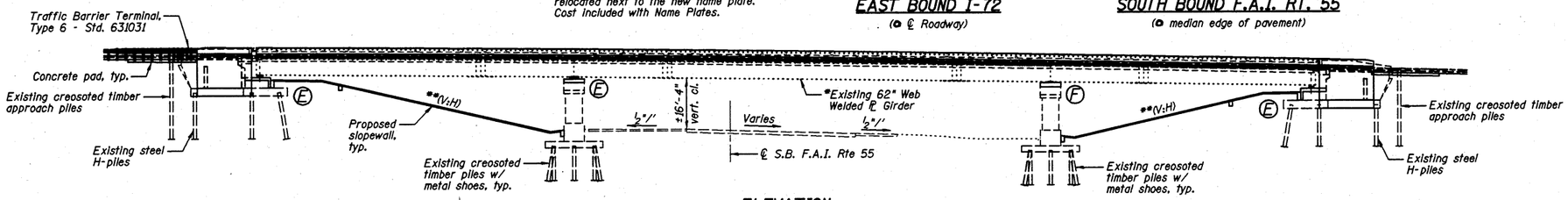
PROFILE GRADE
EAST BOUND I-72
(o ℄ Roadway)



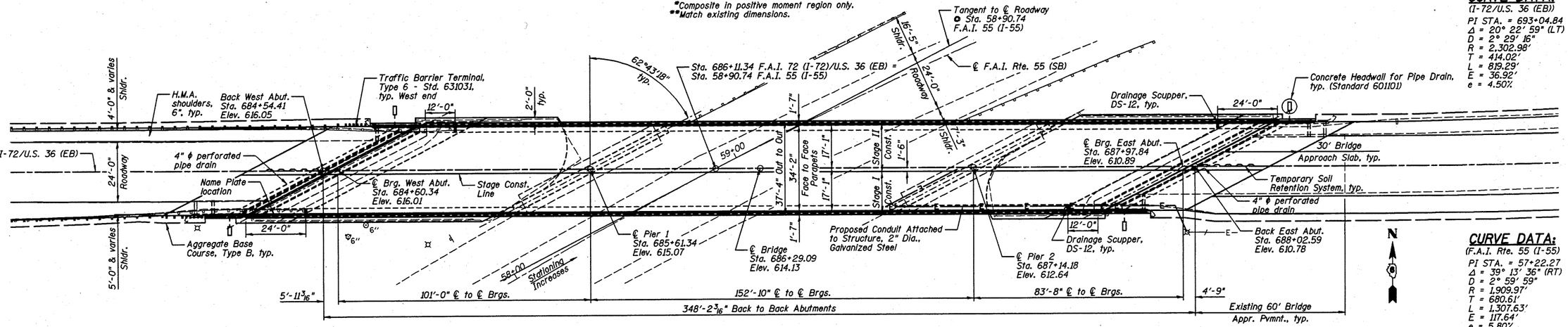
PROFILE GRADE (EXIST. PLANS)
SOUTH BOUND F.A.I. RT. 55
(o median edge of pavement)

SCOPE OF WORK

1.) Remove and replace the existing reinforced concrete deck utilizing stage construction.
2.) Remove and replace the existing concrete approach pavement.
3.) Repair structural steel as required including new end diaphragms.
4.) Raise the existing structural steel 5" in order to meet the vertical clearance requirement.
5.) Remove and replace the existing expansion bearings at the Abutments and Pier #1 with elastomeric bearings.
6.) Remove and replace the existing fixed bearings at Pier #2.
7.) Install stud shear connectors in the positive moment region in order to make the existing welded plate girders composite with the cast-in-place reinforced concrete deck.
8.) Remove and replace the existing abutment backwall and a portion of the wingwalls as shown.
9.) Place additional concrete on the abutment and pier caps in order to meet the proposed grade change.
10.) Remove and replace East and West slopewalls.
11.) Repair abutments and piers as required.
12.) Clean and paint existing structural steel under on separate contract.



ELEVATION
*Composite in positive moment region only.
**Match existing dimensions.



PLAN

CURVE DATA:
(I-72/U.S. 36 (EB))
PI STA. = 693+04.84
Δ = 20° 22' 59" (LT)
D = 2° 29' 16"
R = 2,302.98'
T = 414.02'
L = 819.29'
E = 36.92'
e = 4.50%

CURVE DATA:
(F.A.I. Rte. 55 (I-55))
PI STA. = 57+22.27
Δ = 39° 13' 36" (RT)
D = 2° 59' 59"
R = 1,909.97'
T = 680.61'
L = 1,307.63'
E = 117.64'
e = 5.80%

INDEX TO SHEETS

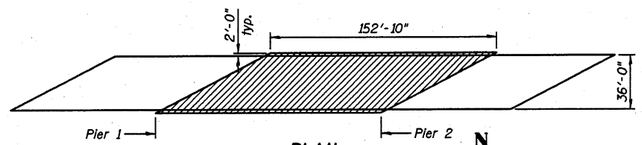
EXISTING DESIGN STRESSES
fc = 1,400 psi
fs = 20,000 psi (Reinforcement)
fs = 18,000 psi (Structural Steel)
n = 10

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi (Cast-in-Place)
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel - M270 Grade 36)
fy = 50,000 psi (Structural Steel - M270 Grade 50)

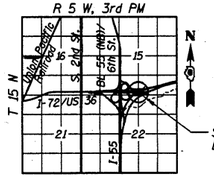
LOADING HS20-44 & ALT.
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.048
Site Coefficient (S) = 2.0



PLAN
(Limits of Protective Shield)
Proposed Protective Shield

APPROVED
For Structural Adequacy Only
Ralph E Anderson (TSD)
Engineer of Bridges & Structures



LOCATION SKETCH

JOSEPH M. LOWRANCE
081-006446
LICENSED STRUCTURAL ENGINEER OF BLOOMINGTON, ILLINOIS
Joseph M. Lowrance Date 08-09-10
JOSEPH M. LOWRANCE
ILLINOIS STRUCTURAL ENGINEER
NO. 081-006446
Exp. Date 11/30/10

DESIGNED	JML
CHECKED	MSW
DRAWN	DJM
CHECKED	MGO/MSW
DATE	08/09/10

GENERAL PLAN AND ELEVATION
I-72 / U.S. 36 OVER
S.B. F.A.I ROUTE 72
SECTION (84-3HB-5)BR
SANGAMON COUNTY
STATION 686+29.09
STRUCTURE NO. 084-0078

SHEET NO. B1	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42 SHEETS	72	(84-3HB-5)BR	SANGAMON	84	37
		SN 084-0078	CONTRACT NO. 72C70		
	FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT		