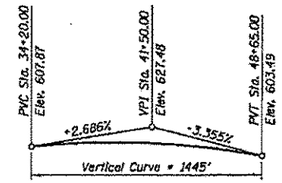
Benchmarks:
1.) BM TA16 Chiseled "□" on Northwest corner of concrete median, where I-55 N.B. and South Sixth St. split, 2.55 miles North of North end to lake bridges, Sta. 29+74.15/15.92' LT., Elev. 599.05.
2.) BM TA17 Chiseled "□" in Southwest wingwall of hubguard of South Sixth St. bridge S.N. 084-0028, Sta. 40+00.06/16.68' RT., Elev. 616.53.

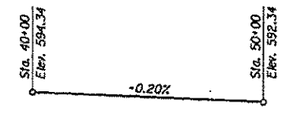
Existing Structure: Structure No. 084-0028, built in 1963 as Section 84-3HB-6. The superstructure consists of a continuous three span non-composite welded plate girder bridge with a 7" concrete slab. The substructure consists of concrete pile bent abutments supported by steel piles and concrete multiple column piers supported by timber piles. The back-to-back of abutments dimension measures 280'-3" and the out-to-out of deck dimension measures 36'-0". The span lengths are 82'-9", 113'-9" and 76'-1" (℄ bearing to ℄ bearing) with a 58°42'45" right forward skew. The existing beams, piers and a portion of the abuments will be reincorporated into the new structure. One lane of traffic will be maintained utilizing stage construction.

STATION 41+64.82
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RTE. 55 SEC. (84-3HB-6)BR
LOADING HS20-44
STRUCTURE NO. 084-0028

NAME PLATE
See Std. 515001



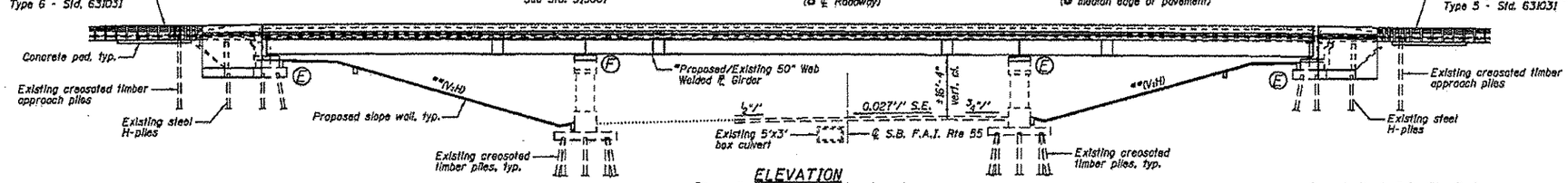
PROFILE GRADE
BL 55 (NB) / 6th St.
(@ ℄ Roadway)



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

SCOPE OF WORK

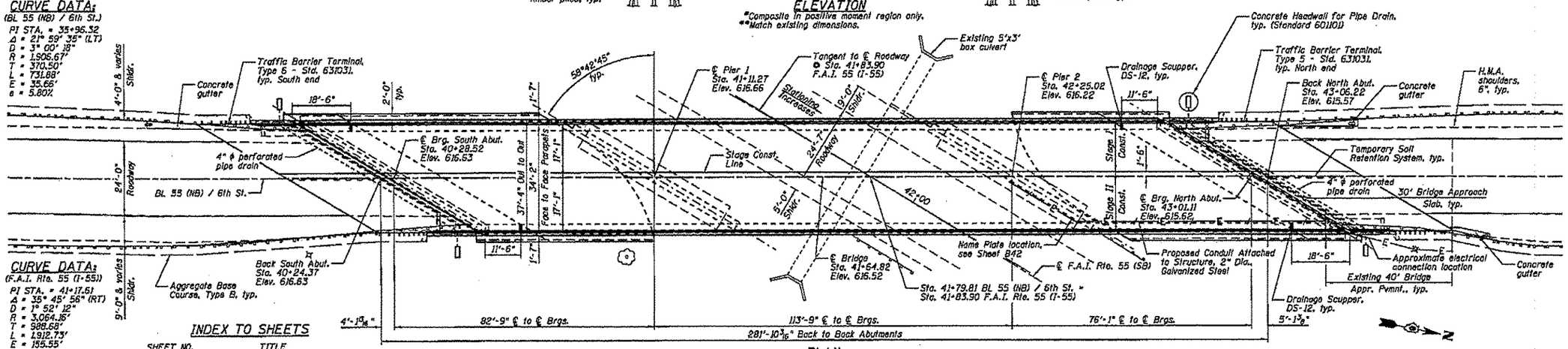
1.) Remove and replace the existing reinforced concrete deck utilizing stage construction.
2.) Remove and replace the existing concrete approach pavement.
3.) Remove and replace exterior girders, all cross frames in exterior bays and all end diaphragms.
4.) Raise the remaining existing girders 3" in order to meet the vertical clearance requirement.
5.) Remove and replace the existing expansion bearings at the Abutments and Pier #2 with elastomeric bearings.
6.) Remove and replace the existing fixed bearings at Pier #1.
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 North and South Slopewalls.
11.) Repair abutments and piers as required.
12.) Clean and paint existing structural steel under a separate contract.



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

CURVE DATA:
(BL 55 (NB) / 6th St.)
PI STA. = 35+96.32
Δ = 21° 59' 35" (LT)
D = 3° 00' 18"
R = 1,906.67'
T = 370.50'
L = 731.88'
E = 35.66'
e = 5.80%

CURVE DATA:
(F.A.I. Rte. 55 (I-55))
PI STA. = 41+17.51
Δ = 35° 45' 56" (RT)
D = 1° 52' 12"
R = 3,064.16'
T = 988.68'
L = 1,912.73'
E = 155.55'
e = 2.70%



PLAN

INDEX TO SHEETS

SHEET NO.	TITLE
B1	GENERAL PLAN AND ELEVATION
B2	BILL OF MATERIAL, GENERAL NOTES AND MISCELLANEOUS DETAILS
B3	STAGE CONSTRUCTION
B4	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
B5	TOP OF SLAB ELEVATION LOCATIONS
B6-B8	TOP OF SLAB ELEVATIONS
B9	TOP OF SOUTH APPROACH SLAB ELEVATIONS
B10	TOP OF NORTH APPROACH SLAB ELEVATIONS
B11-B13	SUPERSTRUCTURE DECK
B14	SUPERSTRUCTURE CROSS SECTION
B15-B16	SUPERSTRUCTURE DETAILS
B17	SOUTH BRIDGE APPROACH SLAB DETAILS
B18	NORTH BRIDGE APPROACH SLAB DETAILS
B19	DRAINAGE SCUPPER, DS-12
B20	PREFORMED JOINT STRIP SEAL
B21	MODULAR EXPANSION JOINT DETAILS
B22-B26	STRUCTURAL STEEL
B27	EXISTING/PROPOSED GIRDER FIXED BEARING DETAILS
B28	EXISTING GIRDER TYPE I BEARING DETAILS
B29	PROPOSED GIRDER TYPE I BEARING DETAILS
B30	EXISTING GIRDER TYPE II BEARING DETAILS
B31	PROPOSED GIRDER TYPE II BEARING DETAILS
B32	SOUTH ABUTMENT REMOVAL AND REPAIR
B33-B35	SOUTH ABUTMENT
B36	NORTH ABUTMENT REMOVAL AND REPAIR
B37-B39	NORTH ABUTMENT
B40	PIER NO. 1 REPAIR
B41	PIER NO. 1
B42	PIER NO. 2 REPAIR
B43	PIER NO. 2
B44	BAR SPLICER ASSEMBLY DETAILS

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

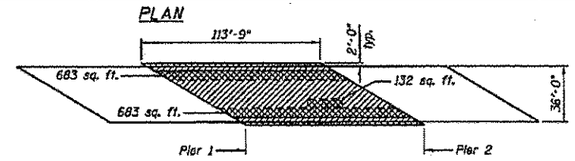
FIELD UNITS
f'c = 3,500 psi (Cast-in-Place)
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel - M270 Grade 36)
fy = 50,000 psi (Structural Steel - M270 Grade 50)

LOADING HS20-44

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

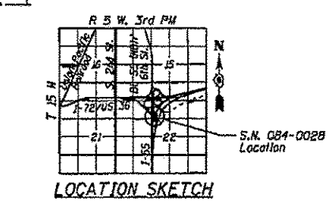


PLAN
(Limits of Protective Shield)

Proposed Protective Shield
Existing Protective Shield

JOSEPH M. LOWRANCE
081-006446
LICENSED
STRUCTURAL
ENGINEER
OF
BLOOMINGTON
ILLINOIS

Date
JOSEPH M. LOWRANCE
ILLINOIS STRUCTURAL ENGINEER
NO. 081-006446
Exp. Date 11/30/10



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
BUSINESS 55 / 6th STREET OVER
S.B. F.A.I ROUTE 55
SECTION (84-3HB-6)BR
SANGAMON COUNTY
STATION 41+64.82
STRUCTURE NO.084-0028

FOR INFORMATION ONLY

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL
PLAN AND ELEVATION

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 PAINTING 2013	SANGAMON	26	4
		CONTRACT NO. 72F85		
		ILLINOIS FED. AID PROJECT		