

Bench Mark: Sta. 57+13.00, 31.8' R offset. Elev. 763.329, chiseled "□" on southeast corner of bridge.
 Existing Structure: S.N. 089-0008 Built in 1956 as S.B.I. 5, Section 19B-1, at Stat 56+25.00.
 Existing structure consists of a reinforced concrete deck with approximately 2" of plasticized concrete for an 8" thick slab. The superstructure is supported by concrete stub abutments and concrete piers on solid timber pile. 178'-0" Bk - Bk. of abuts. Clear deck width is 58'-0" with two 12 foot lanes in each direction, with a 6 foot flush median. Concrete deck and abutment bearings to be removed and replaced. Two lanes of traffic to be maintained utilizing stage construction.

No salvage

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STATION 56+25.00
 REBUILT 20__ BY
 STATE OF ILLINOIS
 F.A. ROUTE 5 SEC. 19 BR-2-D
 LOADING HS20-44
 STR. NO. 089 - 0008

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
S.B.I.	19B-2-D	STEPHENSON	57	17
F.A. 5				23 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

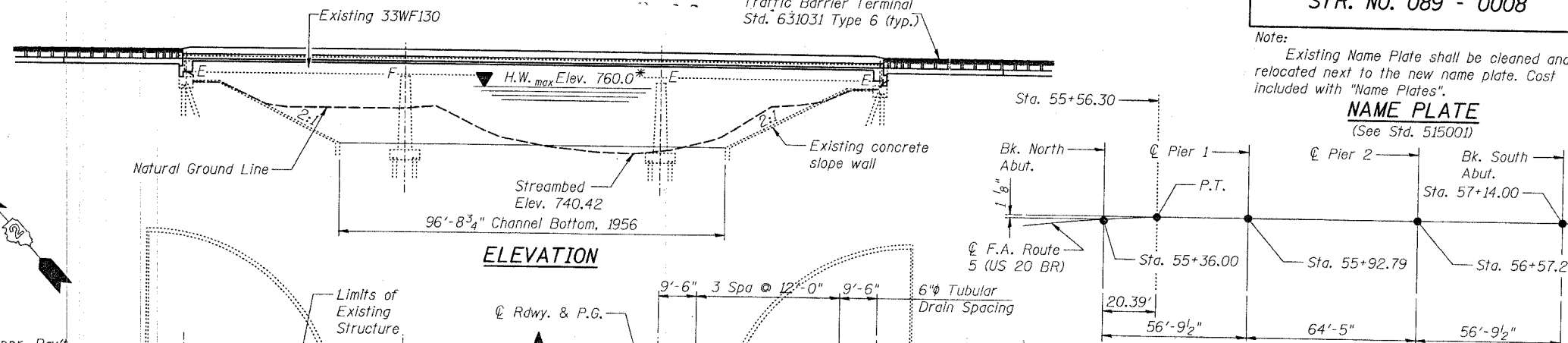
GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ open holes $\frac{7}{8}$ " ϕ unless otherwise noted.
 Field welding of construction accessories will not be permitted to beams or girders. Reinforcement bars shall conform to the requirements of AASHTO M-31, or M-32Z Grade 60.
 Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to normal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
 All existing construction accessories welded to the top flange over the pier(s) between the quarter points of the beams or girders shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that can not be removed by grinding approximately $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.
 All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1.
 Painting of structural steel will be done under a separate painting contract. The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

All construction joints shall be bonded.
 Cost of removing existing bridge rail is included with "Removal of Existing Concrete Deck".

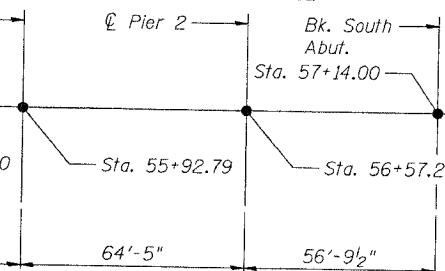
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1	-	1
Concrete Removal	Cu. Yd.	-	27.5	27.5
Structure excavation	Cu. Yd.	-	100.3	100.3
Floor Drains	Each	16	-	16
Concrete Superstructure	Cu. Yd.	397.7	-	397.7
Protective Coat	Sq. Yd.	1 393	-	1 393
Elastomeric Bearing Assembly Type I	Each	24	-	24
Concrete Structures	Cu. Yd.	-	11.7	11.7
Stud Shear Connectors	Each	4 896	-	4 896
Reinforcement Bars, Epoxy Coated	Pound	81 978	2 226	84 204
Temporary Sheet Piling	Sq. Ft.	-	581	581
Bar Splicers	Each	673	-	673
Name Plates	Each	1	-	1
Bridge Deck Grooving	Sq. Yd.	1 205	-	1 205
Jack and Remove Existing Bearings	Each	24	-	24
Formed Concrete Repair Depth > 5"	Sq. Ft.	-	28.3	28.3
Furnishing and Erecting Structural Steel	Pound	4 448	-	4 448
Porous Granular Embankment	Cu. Yd.	-	272.5	272.5



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

NAME PLATE
 (See Std. 515001)

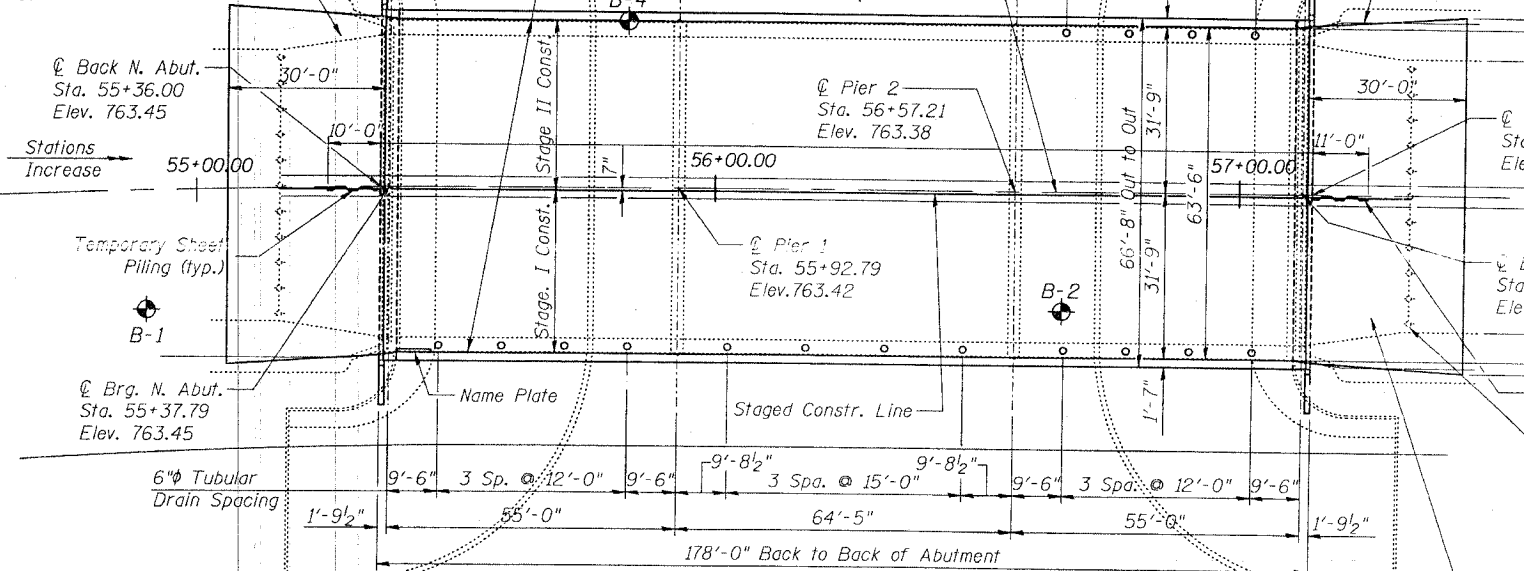


OFFSET SKETCH

OUTGOING CURVE DATA
 (F.A. Route 5)

PI STA. = 68+45.48
 Δ = 38° 10' 00" (LT)
 D = 2° 00' 00"
 R = 2,864.79'
 T = 991.09'
 L = 1,908.33'
 E = 166.59'
 e = 3.13%
 T.R. AT P.C. = 74.10 ft (BEGIN @ STA. 57+45.39)
 S.E. TRANS. STA. 57+45.39 TO 59+35.39
 P.C. STA. = 58+54.39
 P.T. STA. = 77+62.72

30 ft Bridge Appr. Pav't. Std. 420401 and as Modified per Detail on sheet 14 of 51 (typ.)



INCOMING CURVE DATA
 (F.A. Route 5)

PI STA. = 47+41.70
 Δ = 42° 51' 00" (RT)
 D = 2° 30' 00"
 R = 2,291.83'
 T = 899.31'
 L = 1,714.00'
 E = 170.13'
 e = 4.5%
 T.R. AT P.T. = 89 ft
 S.E. RUN = 200 ft (50% ON TAN & 50% ON CURVE)
 P.C. STA. = 38+42.39
 P.T. STA. = 55+56.39
 S.E. TRANS. STA. 54+56.39 TO 57+45.39
 2.00% NORMAL CROWN AT 57+45.39

DESIGNED	L.C.M.
CHECKED	S.D.K.
DRAWN	T.L.N.
CHECKED	S.D.K.

EXAMINED
 ENGINEER OF BRIDGE DESIGN
 PASSED
 ENGINEER OF BRIDGES AND STRUCTURES

BORING LOCATION TABLE

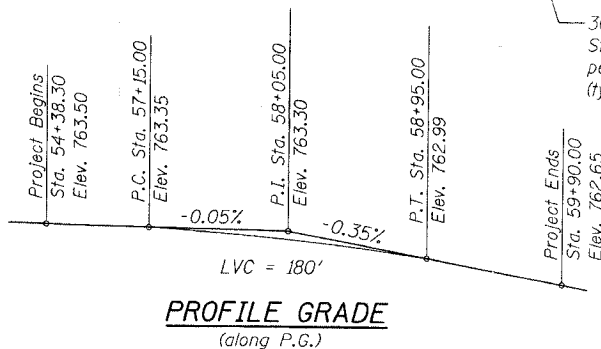
No.	Station	Offset
B-1	54+90.00	23.0' Rt.
B-2	56+67.00	23.0' Rt.
B-3	57+60.00	25.0' Lt.
B-4	55+83.00	32.0' Lt.

WATERWAY INFORMATION*

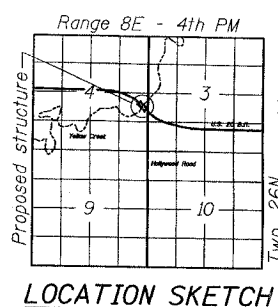
Drainage Area = 194 sq. mi.
 Low Grade Elev. 761.63 @ Sta. 67+00.00
 Low Beam Elev. 759.065
 Max. Recorded Highwater Elev. 760.0

* An abbreviated hydraulic study was completed. Design discharges, highwater elevations, and waterway openings were not computed.

PROFILE GRADE
 (along P.G.)



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



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

DESIGN SPECIFICATIONS
 1996 AASHTO with 1997, 1998, 1999, 2000, and 2002 Interims

DESIGN STRESSES

EXISTING STRUCTURE
 f_c = 800 psi (Substructure)
 f_c = 1400 psi (Superstructure)
 f_y = 20,000 psi (Reinforcement)
 f_y = 33,000 psi (Structural Steel)

NEW CONSTRUCTION
 f'_c = 3500 psi
 f_y = 60,000 psi (Reinforcement)
 f_y = 36,000 psi (Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 3.1% g
 Site Coefficient (S) = 1.5



Stephen D. Kahl
 1/5/2004

License expires 11-30-2004

GENERAL PLAN
 U.S. 20 B.R. OVER YELLOW CREEK
 F.A. RT. 5 SEC. 19B-2-D
 STEPHENSON COUNTY
 STATION 56+25.00
 STRUCTURE NUMBER 089-0008

