

Benchmark: Cut square on Jaywalk at north line of Taylor Street, approximately 100' west of Des Plaines Street and 3' above walk (opposite traffic signal). Elevation 596.30.

Existing Structure: S.N. 016-2535 was originally constructed in 1988 as a five-span ramp structure carrying 1 lane of traffic from Taylor Street to I-90/94 northbound under I001 Contract C-91-433-85 (F.A.I. Route 90/94, Section 1985-080R) with plans dated August 14, 1987. The bridge has not been rehabilitated. The structure has an overall length of approximately 428'-5 1/16" (back of abutment-to-centerline expansion joint; 9'-5 5/16" / 87'-0 5/8" / 118'-0" / 117'-0" / 94'-6") and an overall width of 25'-2" (out-to-out superstructure). The bridge is oriented in the north-south direction with no skew and carries 1 traffic lane from Taylor Street to I-90/94 northbound. The bridge superstructure consists of a 7 1/2"-thick (typ.) reinforced concrete deck with no overlay supported on four (4) 42"-web plate girders. According to the existing plans, these girders have been made composite except for a portion of their lengths above the piers. Stage construction on the bridge will not be allowed. The ramp must be closed during construction and scheduling of the work should coincide with Stage 1 Construction of the Taylor Street over I-90/94 structure (S.S. 016-1165) located immediately to the south.

No Salvage.

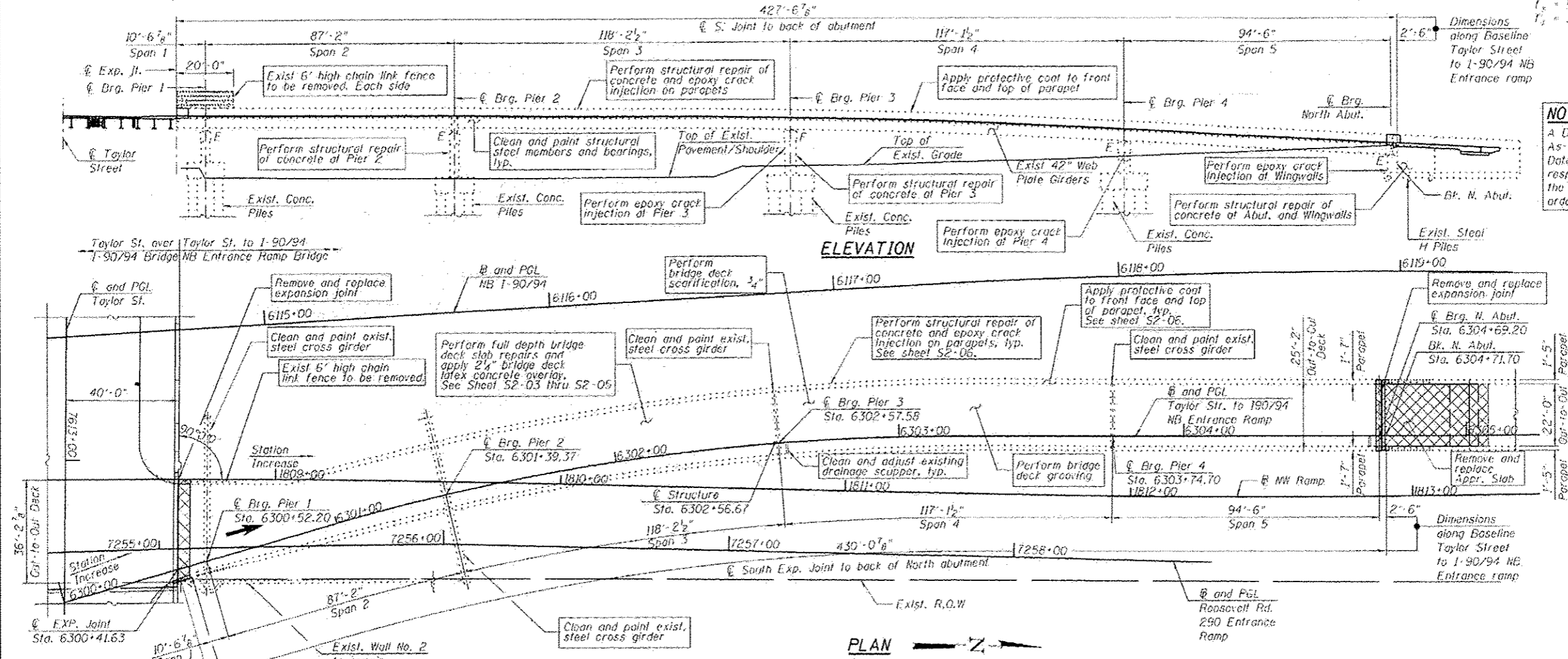
LOADING
 HS20-44 & ALLEIGHATE
 ORIGINAL CONSTRUCTION (1988)

DESIGN SPECIFICATIONS
 2002 AASHTO Standard Specifications for Highway Bridges
 ORIGINAL CONSTRUCTION (1988)
 1982 AASHTO Standard Specifications for Highway Bridges with 1984, 1985 and 1986 Interior Specifications.

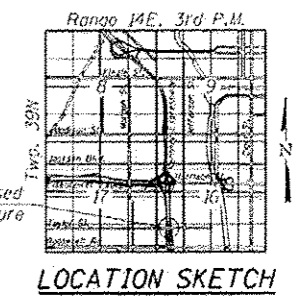
DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi (Concrete)
 $f_y = 60,000$ psi (Reinforcement)

ORIGINAL CONSTRUCTION (1988)
 $f'_c = 3,500$ psi (Concrete)
 $f_y = 60,000$ psi (Reinforcement)
 $f'_c = 50,000$ psi (M270 Grade 50)
 $f_y = 36,000$ psi (M270 Grade 36)

NOTE:
 A Discrepancy exists between the As-Built Drawings and the Survey Data. It is the Contractor's responsibility to verify all dimensions in the field prior to construction and ordering materials.



LEGEND
 [Cross-hatched box] Concrete Removal
 [Arrow] Traffic Direction



SCOPE OF WORK:

1. Provide protective shoring within limits as indicated on the plans.
2. Remove 3/4" from the existing bridge deck slab, using scarification.
3. Perform full-depth deck slab repairs.
4. Raise the existing grate on the existing drainage scuppers by adding a fabricated ring.
5. Remove and replace transverse expansion joints at the North Abutment and at the south end of the bridge with preformed joint strip seals.
6. Remove and replace portions of parapets and deck below as shown on Sheets S2-03, S2-06 and S2-07.
7. Remove existing 6' high chain link fence, perform structural repairs and epoxy crack injection for the east and west parapet.
8. Apply a 2 1/4" bridge deck latex concrete overlay to the bridge deck slab.

9. Perform bridge deck grooving for the 2 1/4" bridge deck latex concrete overlay and reconstructed transverse expansion joint areas.
10. Apply protective coat for the parapets entire length, both sides and reconstructed transverse expansion joint areas.
11. Clean and paint existing structural steel cross girders, members, and bearings as shown on Sheets S2-14 and S2-15.
12. Perform structural concrete repairs for the North Abutment, Piers 2 and 3, and the parapets.
13. Perform epoxy crack injection for the North Abutment and Wingwalls, Piers 3 and 4 and the Parapets.
14. Remove and replace North Abutment Approach Slab with a standard 30" Approach Slab.
15. Repaint pavement markings on the top of deck. See Civil Plans.
16. For protective shield limits, see Sheets S2-03 and S2-04.

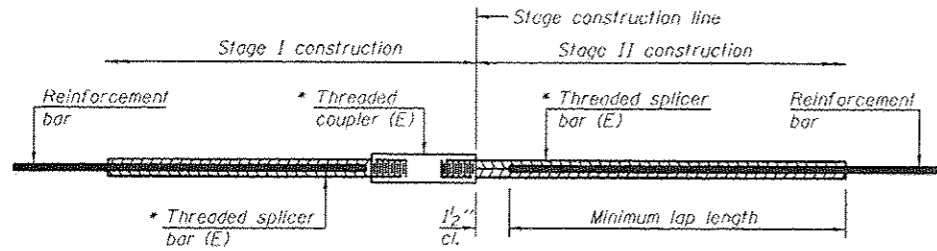
▲ Entire Sheet Revised



Signed Moussa A. Issa
 Moussa A. Issa, P.E. Il. Lic. No. 081-005738
 Expires 11-30-2016
 Date 02/18/2015 For Sheets S2-01 Thru S2-18
 (Total of 18 Sheets)

GENERAL PLAN & ELEVATION
TAYLOR ST. TO F.A.I. RTE. 90/94
NORTHBOUND ENTRANCE RAMP,
(DAN RYAN EXPRESSWAY)
F.A.I. RTE. 90/94 - SECTION 2013-012R
COOK COUNTY
STATION 6302+56.67
STRUCTURE NO. 016-2535

HBM HARRISON CONSULTING GROUP, INC. 4415 WEST HARRISON ST. SUITE 301 HILLSDALE, IL 60142 PHONE: (708) 234-0900 FAX: (708) 234-0901	0162535-R2W20-S01-0PE.dwg USER NAME: j.mastromarino PLOT SCALE: 1/4"=1'-0" PLOT DATE: 2/18/2015	DESIGNED - WM, MI DRAWN - WM, JUS CHECKED - MAL, MI DATE - 10/24/2014	REVISED ▲ 02/18/2015, KJD REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURE NO. 016-2535 SCALE: SHEET S2-01 OF S2-18 SHEETS STA. TO STA.	F.A.I. RTE. 90/94 SECTION 2013-012R COUNTY COOK TOTAL SHEETS 365 SHEET NO. 254 CONTRACT NO. 60W30
	ILLINOIS FED. AID PROJECT					



STANDARD BAR SPLICER ASSEMBLY

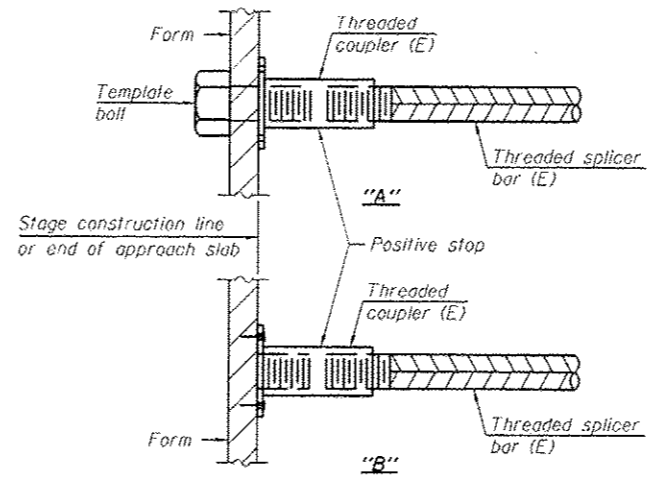
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar lap, Class C

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

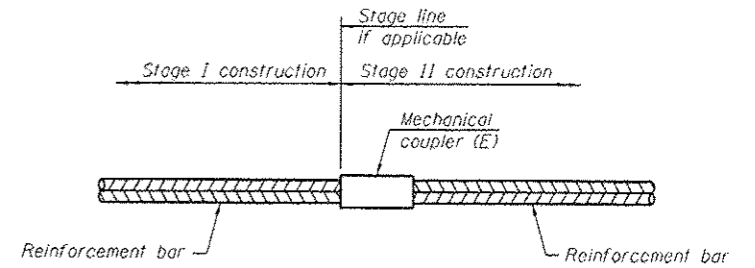
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



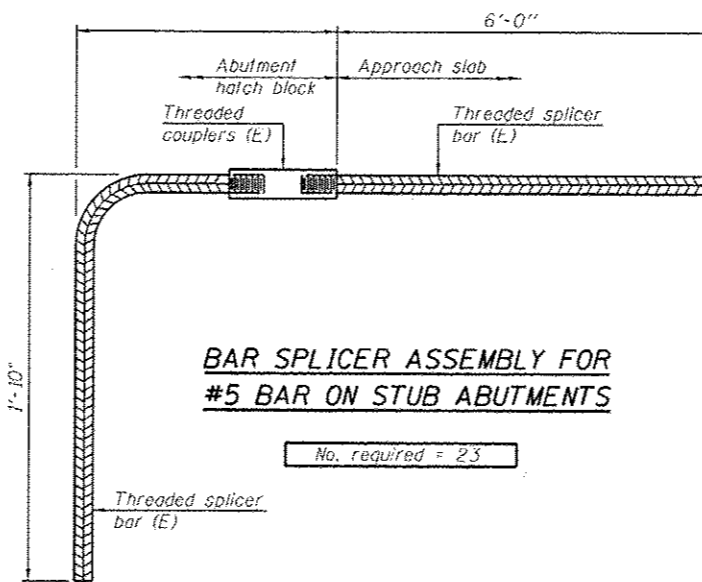
INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 23

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 50B of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

H:\Users\harrisoj\OneDrive\Documents\016-2535-60W30-518-218-271-271.dwg

BSD-1

8-31-12

Entire Sheet Revised

HBM
 ENGINEERING GROUP, LLC
 4415 WEST HARRISON ST.
 SUITE 231
 HILLSDALE, IL 60162
 PHONE: (708) 236-0900
 FAX: (708) 236-0901

0162535-60W30-518-218-271-271.dwg
 USER NAME: harrisoj
 PLOT SCALE: 0.2, 0.000 ' / in.
 PLOT DATE: 2/18/2015

DESIGNED - KJD
 DRAWN - KJD
 CHECKED - MAI, MI
 DATE - 10/24/2014

REVISED 02/18/2015, MA
 REVISED
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 016-2535

SCALE: SHEET S2-18 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	271
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	