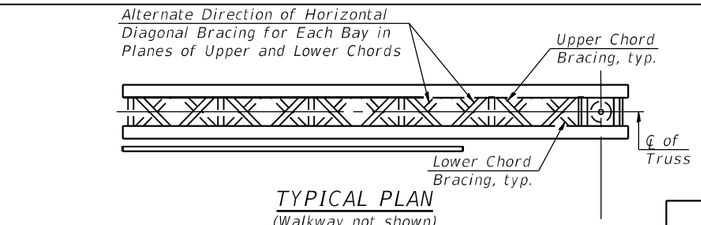
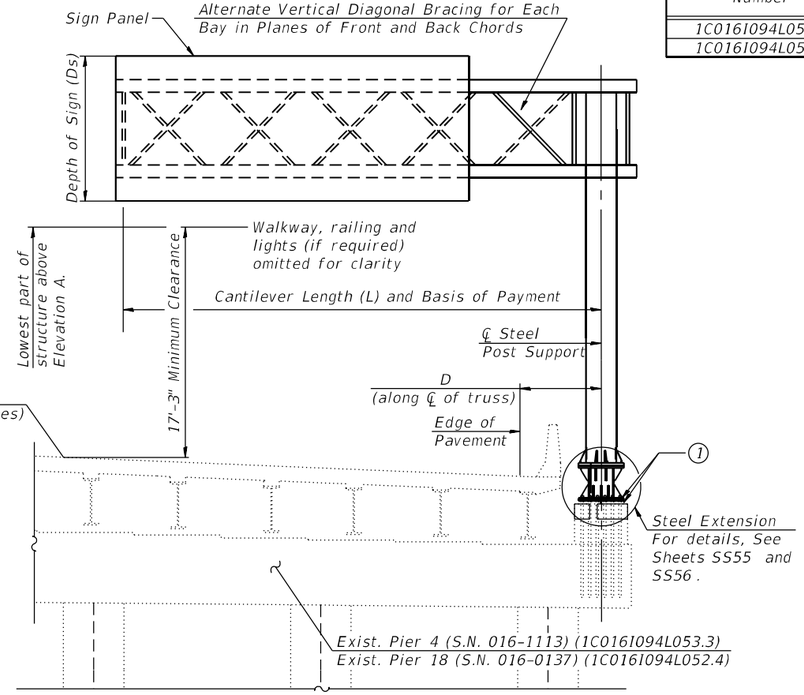


TYPICAL PLAN
(Walkway not shown)



TYPICAL ELEVATION
Looking in Direction of Traffic

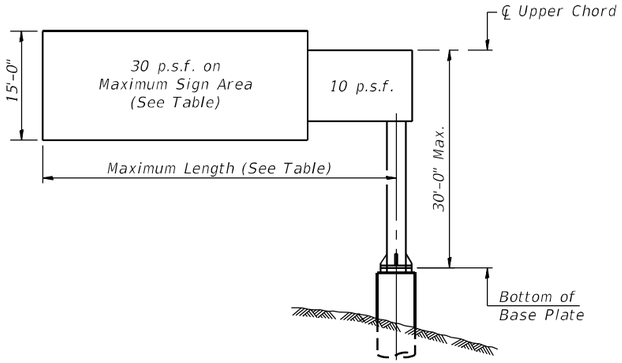
Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

** Measured along Exist. ℄ NB I-90/94. It should be noted that the station included in the Table is measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.

Structure Number	**Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	Ds	Total Sign Area
1C016I094L053.3	130+60.47	II-C-A	25'-0"	639.58	7'-6"	8'-6"	187 Sq. Ft.
1C016I094L052.4	178+42.70	II-C-A	21'-6"	614.00	6'-4¼"	12'-0"	198 Sq. Ft.

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



DESIGN WIND LOADING DIAGRAM
Parameters shown are basis for I.D.O.T. Standards Installations not within dimensional limits shown require special analysis for all components.

Note:
Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

(1) After adjustments to level truss and ensure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

STATE OF ILLINOIS — MOUSSA A. ISSA — 081-005738 — CHICAGO, ILLINOIS — LICENSED STRUCTURAL ENGINEER

SIGNED Moussa A. Issa

DR. MOUSSA A. ISSA. S.E., IL. LIC. NO. 081-005738
EXPIRES 11-30-2020

DATE 01/29/2020

FOR SHEETS SS51 THRU SS58 AND SS59 TO SS74 (TOTAL OF 24 SHEETS)

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:

Field Units	Existing Construction
f'c = 3,500 p.s.i.	f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)	fy = 60,000 p.s.i. (reinforcement)
fy = 50,000 p.s.i. (AASHTO M270 Grade 50 Struct. Steel)	fy = 55,000 p.s.i. (Anchor Bolts - ASTM A576)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: The existing anchor rods shall be cleaned, primed, painted (after Grout Pad Removal) and revised. Cost shall be included with Grout Pad Removal. The top of concrete pedestal shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications. Cost included with Grout Pad Removal.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

WALKWAY: Walking grating, walking brackets, handrails, lighting and associated components shown in these plans on the traffic side of the sign structure/sign panel will not be installed with Contract 62A76. The truss grating and maintenance walkway behind the sign panel will be included with Overhead Sign Structure Cantilever Type II-C-A.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3,090
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	FOOT	47
STRUCTURAL REPAIR OF CONCRETE (DEPTH < 5")	SQ FT	6
GROUT PAD REMOVAL	EACH	2

HBM ENGINEERING GROUP, LLC

USER NAME = marina.stoica		DESIGNED - JJS, WM		REVISED -
		CHECKED - MAI, JMG		REVISED -
PLOT SCALE = N.T.S		DRAWN - JJS, WM		REVISED -
PLOT DATE = 1/29/2020		CHECKED - MAI, JMG		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL POST

SHEET NO. SS51 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1001
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local:AECOM_D502_NAIDocuments\01 Americas\Transportation\60269938 CircleTPhase_IN000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cantl-SS201-SignStruct.dgn
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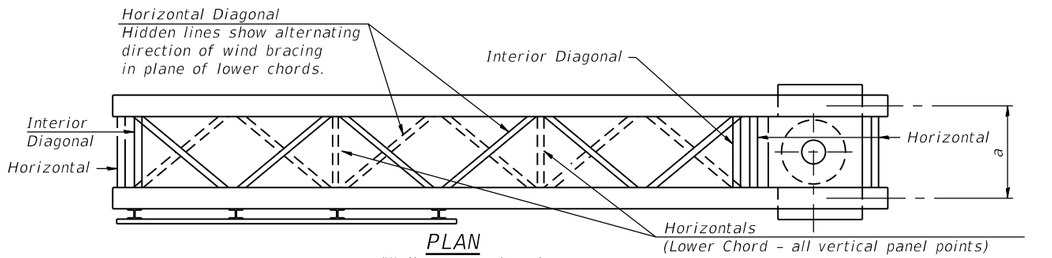
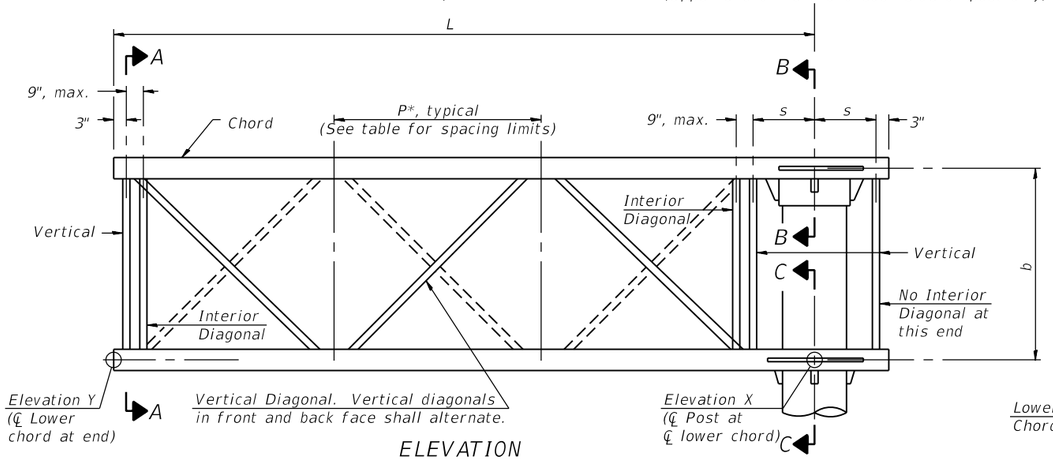


PLAN

(Walkway not shown)



ELEVATION

(Sign and walkway omitted for clarity)

TYPICAL TRUSS UNIT

For Section B–B and Section C–C, see Sheet SS54 .

Note:
There are twice as many horizontal diagonals as there are vertical diagonals.

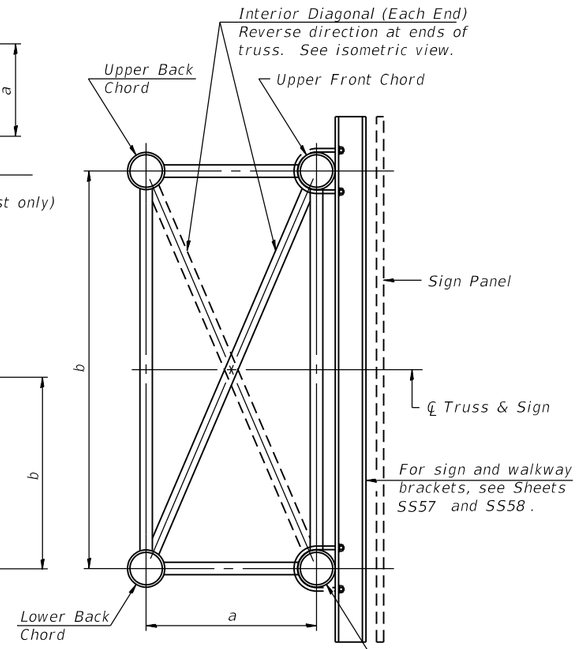
TRUSS UNIT TABLE

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I–C–A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2½"	5/16"
II–C–A	36"	66"	21"	42" min. to 54" max.	6½"	5/16"	3¼"	5/16"
III–C–A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3½"	3/8"
III–C–A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3½"	3/8"

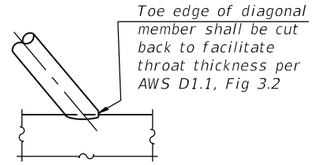
$$*P = \frac{L - s - 3"}{\#\ Panels}$$

Structure Number	***Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
1C016I094L053.3	130+60.47	II–C–A	25'–0"	6	3'–10"
1C016I094L052.4	178+42.70	II–C–A	21'–6"	5	3'–10¾"

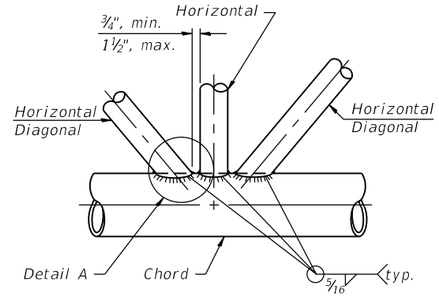
*** Measured along Exist. ℄ NB I–90/94. It should be noted that the station included in the Table is measured along the Exist. ℄ NB I–90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.



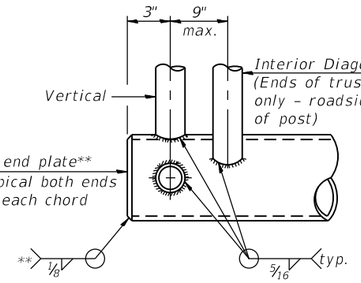
SECTION A–A



DETAIL A

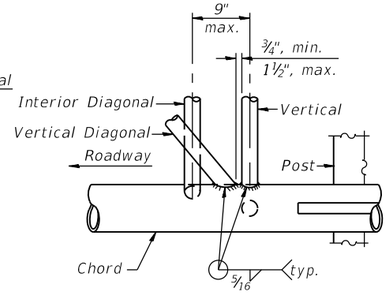


TRUSS INTERIOR JOIN DETAIL

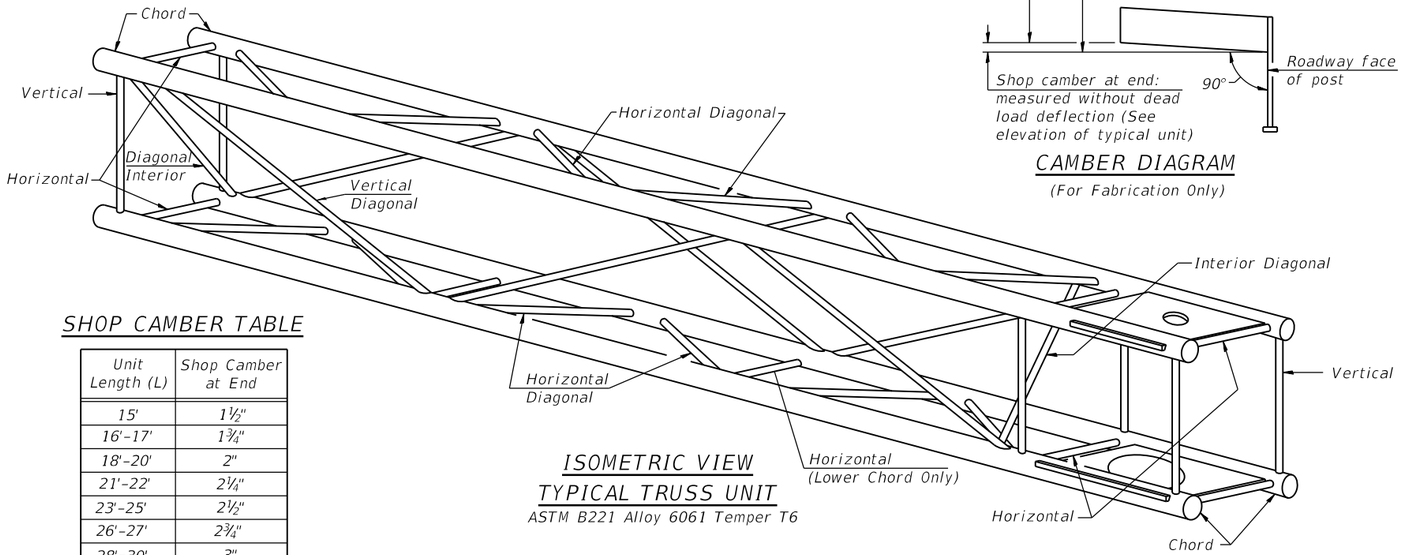


CANTILEVER END JOINT DETAIL

** Contractor may alternatively use standard aluminum drive-fit cap to close ends. ½" Ø Drain hole in end plate / drive-fit cap.



POST END JOINT DETAIL



ISOMETRIC VIEW

TYPICAL TRUSS UNIT

ASTM B221 Alloy 6061 Temper T6

CAMBER DIAGRAM

(For Fabrication Only)

SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1½"
16'–17'	1¾"
18'–20'	2"
21'–22'	2¼"
23'–25'	2½"
26'–27'	2¾"
28'–30'	3"
31'–32'	3¼"
33'–35'	3½"
36'–37'	4"
38'–40'	4½"

OSC–A–2 2–17–2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, WM	REVISED -	
		CHECKED - MAI, JMG	REVISED -	
PLOT SCALE = N.T.S		DRAWN - JJS, WM	REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

SHEET NO. SS52 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1002
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

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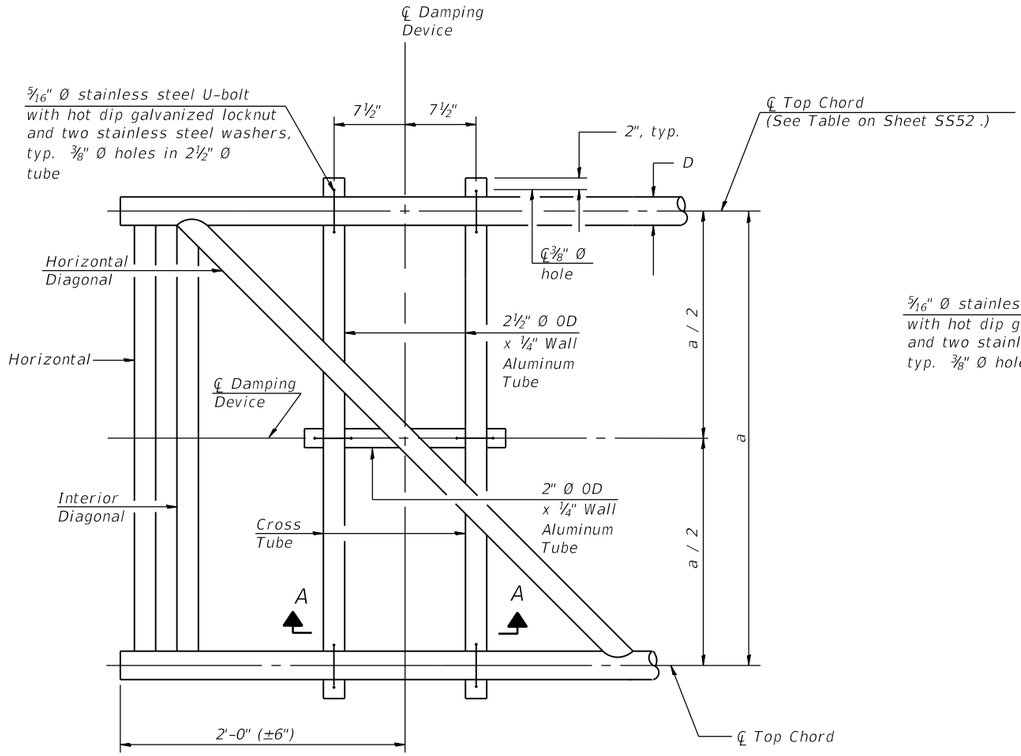
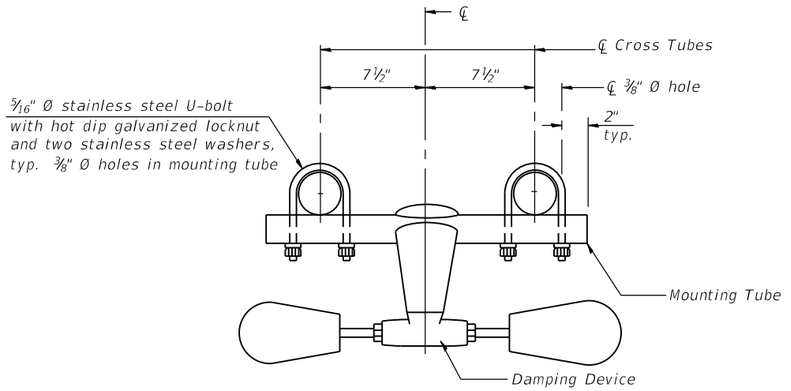
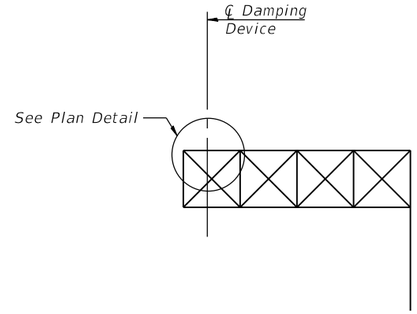


PLAN DETAIL



TRUSS DAMPING DEVICE CONNECTION DETAIL



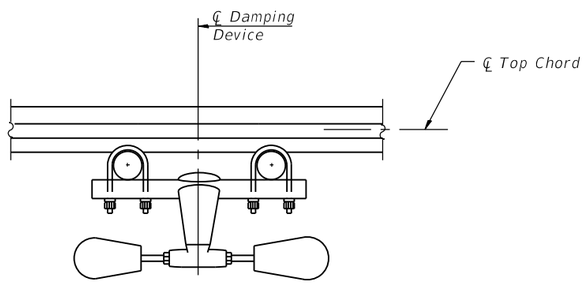
ELEVATION

Aluminum Cantilever Sign Structure

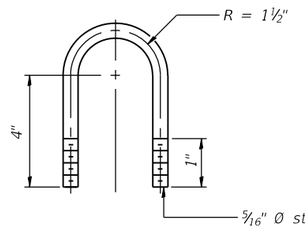
GENERAL NOTES

Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)

Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6

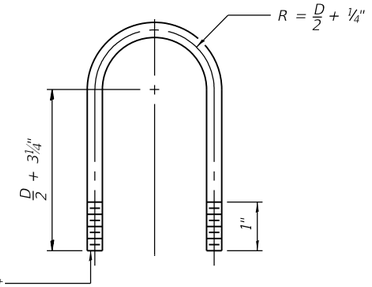


SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL

(Typical)



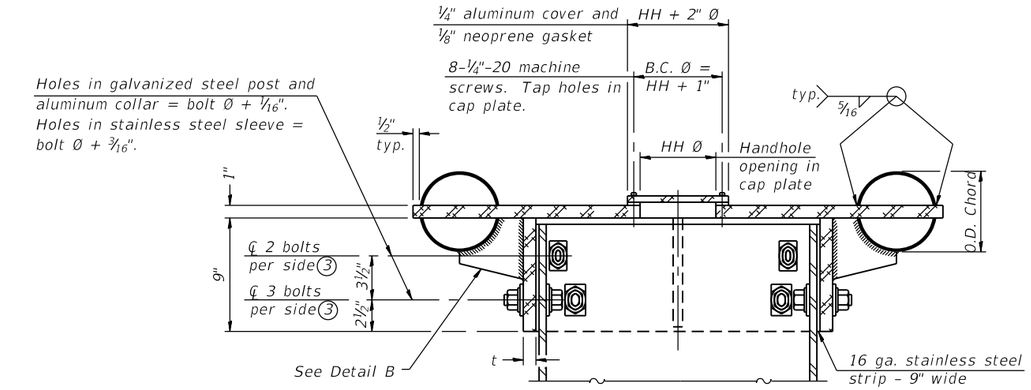
TOP CHORD TO CROSS TUBE U-BOLT DETAIL

(Typical)

OSC-A-D 2-17-2017

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURE DAMPING DEVICE
		CHECKED - MAI, JMG	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		
	PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		SHEET NO. SS53 OF SS129 SHEETS

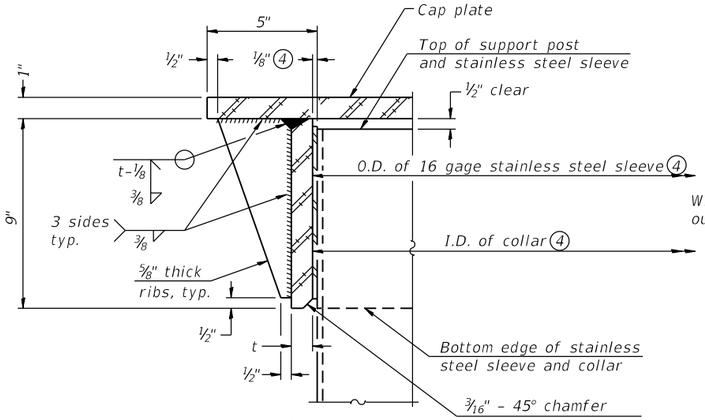
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1003
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			



SECTION B-B

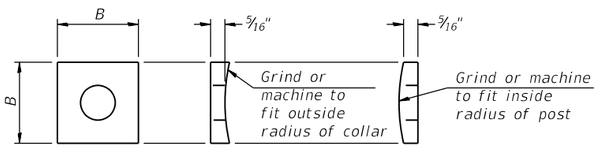
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.

④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus ⅛" (±1/16"). Maximum gap between post and collar at any location equals ⅛" before tightening bolts.



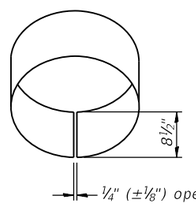
DETAIL A

(Two locations)



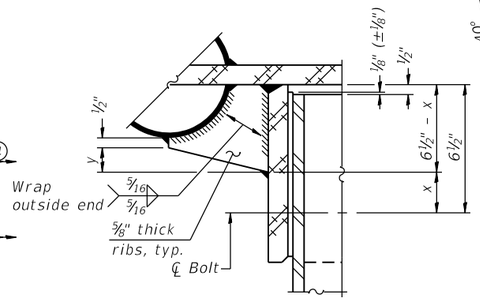
CONTOURED WASHERS

Bolt Size	Contoured Washers	
	Hole Dia.	B
⅞"	1"	2½"
1"	1⅛"	3"
1¼"	1⅜"	3¼"



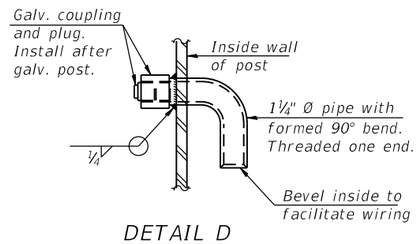
DETAIL OF STAINLESS STEEL SLEEVE

Weld to post after galvanizing.
(Prepare post surface to ensure tight, uniform fit and allow welding.)
Welds to be 1½" long at 6" cts. along top edge and at ¼" opening.

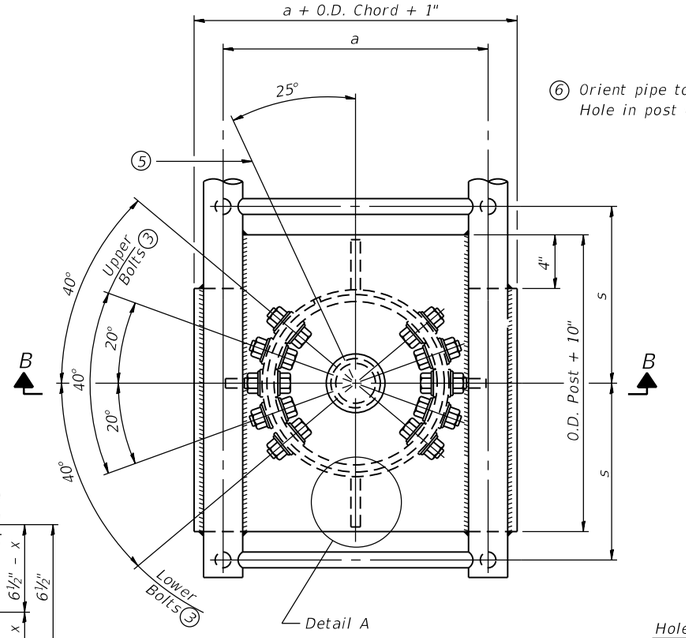


DETAIL B

Two locations
(For details not shown, see Detail C)



DETAIL D

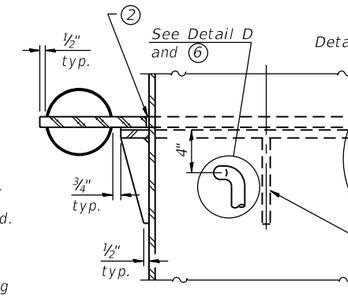


PLAN VIEW - TOP OF COLUMN

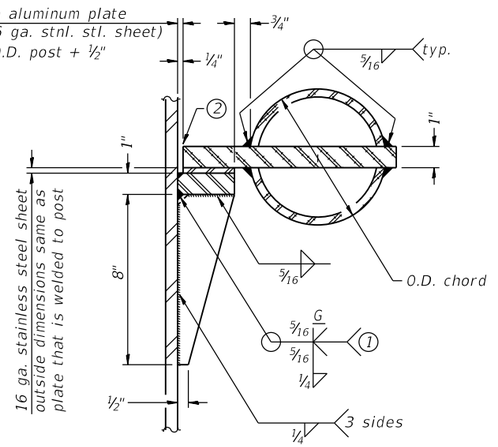
⑤ Optional full penetration weld in collar.
(Two locations maximum....(180° apart)....X-ray or UT 100%)

⑥ Orient pipe toward walkway side. Hole in post = O.D. pipe + ⅛".

SECTION THRU POST ABOVE LOWER CHORDS



SECTION C-C



DETAIL C

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" Ø (83#/')	⅞"	3¼"	8"	⅝"	1¾"	2¼"
II-C-A	24" Ø (125#/')	1"	3½"	12"	⅞"	2"	1¼"
III-C-A (35' max.)	24" Ø (125#/')	1¼"	3½"	12"	⅞"	2"	1"
III-C-A (>35' to 40')	24" Ø (171#/')	1¼"	3½"	12"	⅞"	2"	1"

① Grind top if required to fully seat aluminum plate and stainless steel sheet.

② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.

③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

OSC-A-3 2-17-2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	
	CHECKED - MAI, JMG	REVISED -	
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -	
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST
SHEET NO. SS54 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1004
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_D502_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cant-SS204-SignStruct.dgn
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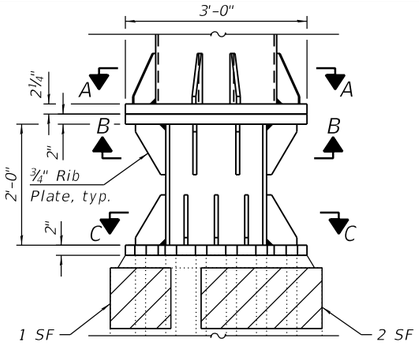
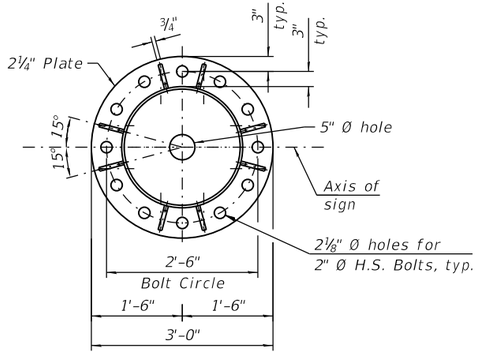
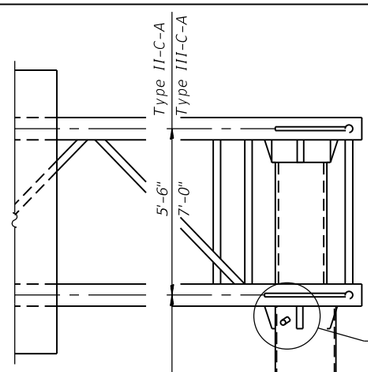


DETAIL B

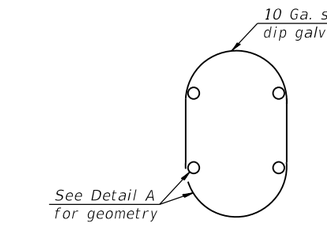


SECTION A-A

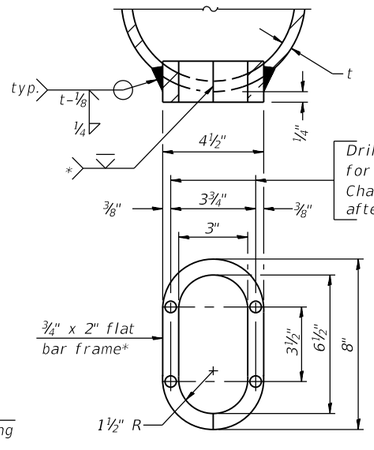


FRONT ELEVATION

(Exist. Bridge Superstructure and Exist. Pier reinforcement not shown for clarity – See Exist. Record Drawings for details)



HANDHOLE COVER

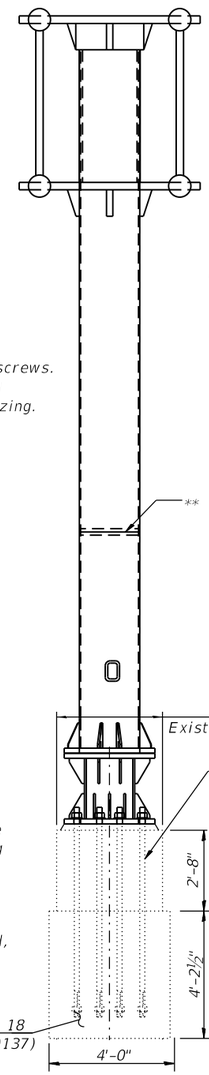


Provide 8" x 4½" cover. Outside corners = 2¼" radius. Provide 4-5⁄16" Ø holes in cover for ¼" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

DETAIL A

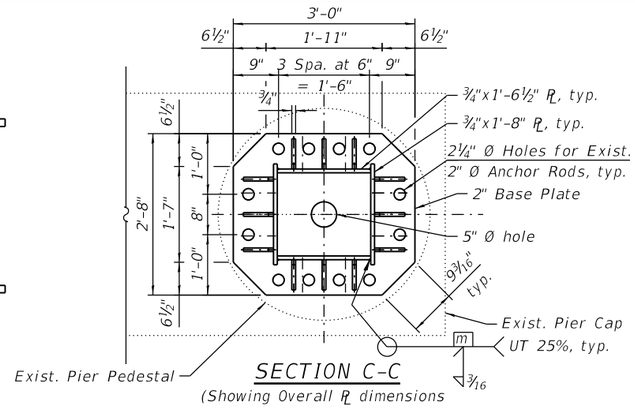
* Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500µ in or less.

** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.



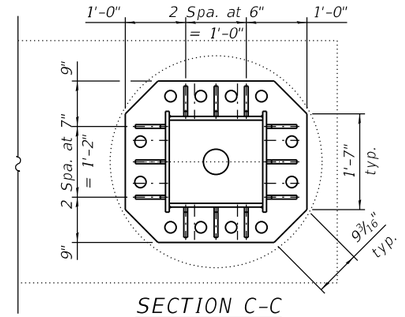
SIDE ELEVATION

(Exist. Bridge Superstructure and Exist. Pier reinforcement not shown for clarity – See Exist. Record Drawings for details)



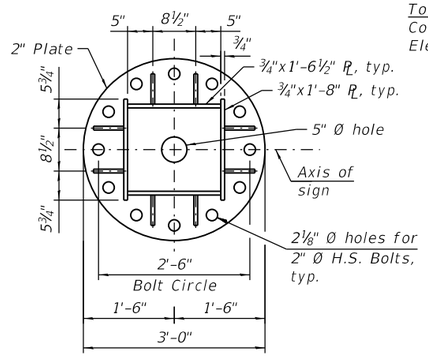
SECTION C-C

(Showing Overall PL dimensions and Anchor Rod Locations)
(Exist. Pier/Pedestal reinforcement not shown for clarity – see Exist. Record Drawings for details)



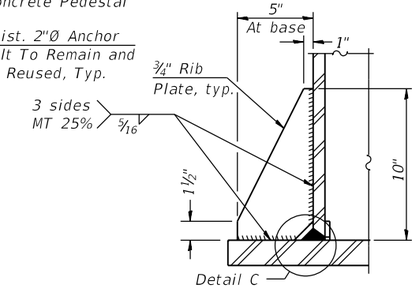
SECTION C-C

(Showing Bottom Stiffener Locations)



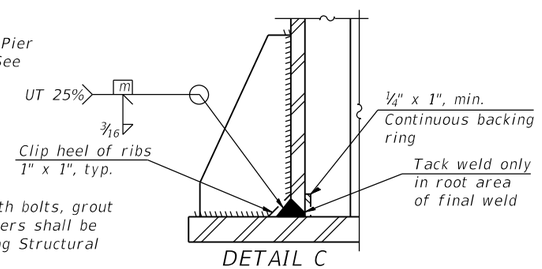
SECTION B-B

(Showing Top Stiffener Locations)



POST-PLATE CONNECTION

(Typical for all rib plates)



DETAIL C

(Typical for all post-plate connections)

Structure Number	***Station	H
1C016I094L052.4	178+42.70	23'-3¾"

Note: "H" based on 15'-0" or actual sign height, whichever is greater.

*** Measured along Exist. ℄ NB I-90/94. It should be noted that the stations included in the Table are measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing And Erecting Structural Steel	POUND	1570
Structural Repair of Concrete (Depth < 5")	SQ FT	3

LEGEND

Structural Repair of Concrete (Depth < 5")

NOTE:

1. Cost of steel extension, high-strength bolts, grout pad, and all required nuts and washers shall be included with Furnishing and Erecting Structural Steel.

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_D502_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_StructuralTSign Structures\62A76 Sign Structure\62A76-Cant-SS205A-SignStruct.dgn
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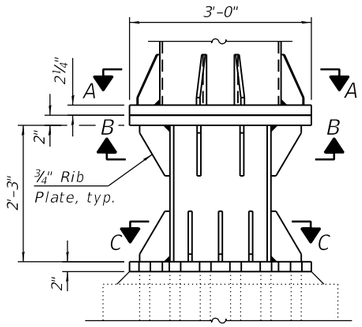
HBM ENGINEERING GROUP, LLC

USER NAME = hassan.issa	DESIGNED - JJS, WM	REVISED -
	CHECKED - MAI, JMG	REVISED -
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -
PLOT DATE = 1/29/2020	CHECKED - MAI, JMG	REVISED -

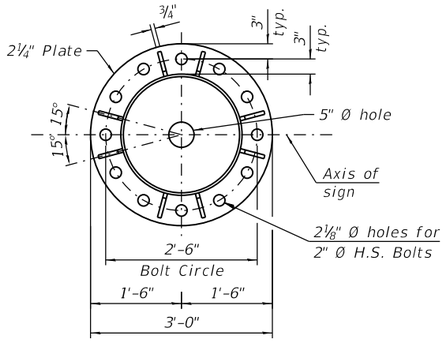
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – TYPE II-C-A
TRUSS SUPPORT POST – ALUMINUM TRUSS & STEEL POST
SHEET NO. SS55 OF SS129 SHEETS

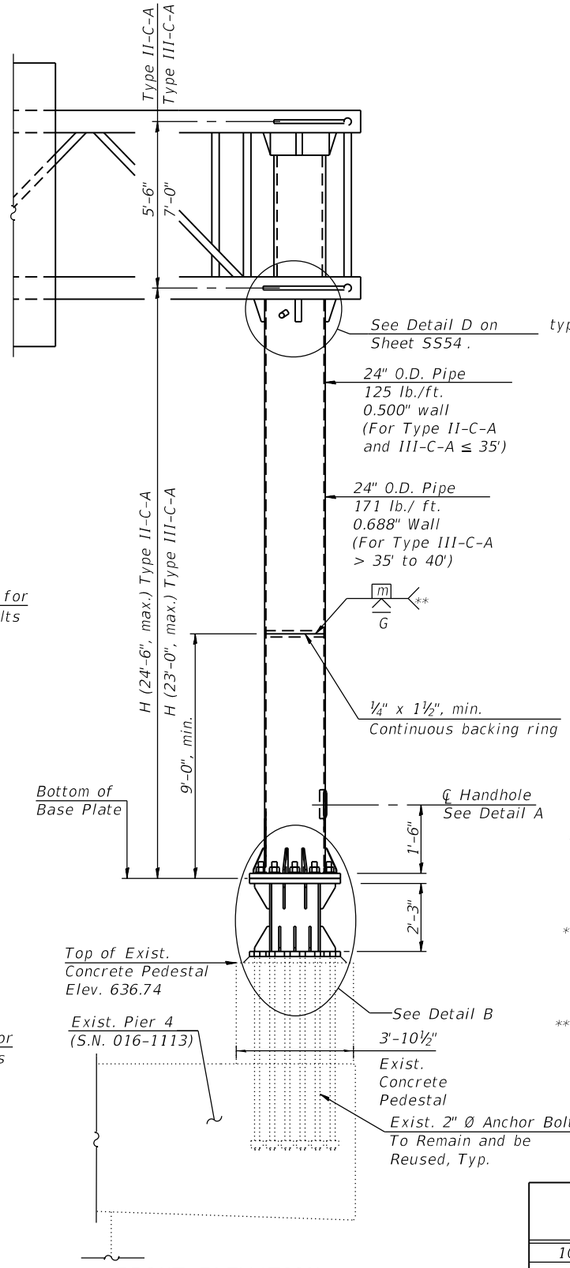
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1005
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		



DETAIL B

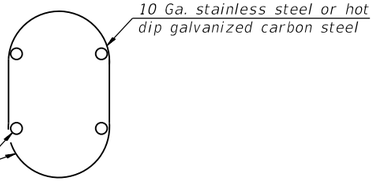


SECTION A-A

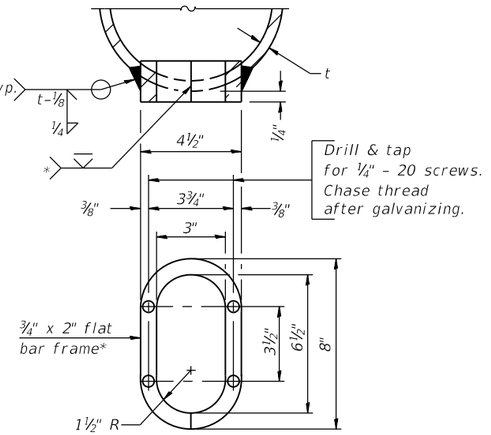


FRONT ELEVATION

(Exist. Bridge Superstructure and Exist. Pier reinforcement not shown for clarity – see Existing Record Drawings for Details)



HANDHOLE COVER



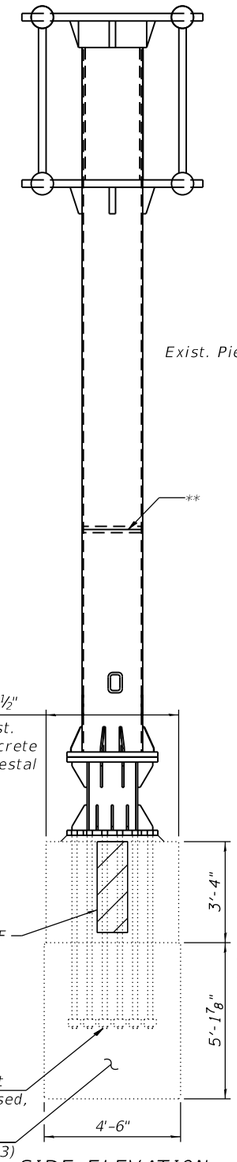
Provide 8" x 4½" cover. Outside corners = 2¼" radius. Provide 4-5⁄16" Ø holes in cover for ¼" – 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

DETAIL A

* Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500μ in or less.

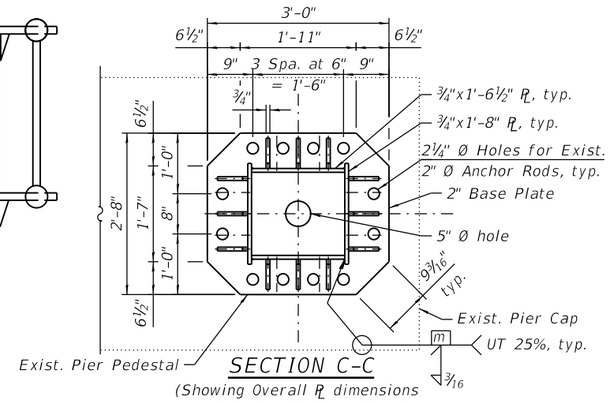
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

*** Measured along Exist. ℄ NB I-90/94. It should be noted that the station included in the Table is measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.



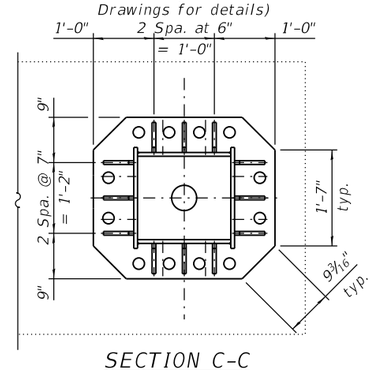
SIDE ELEVATION

(Exist. Bridge Superstructure and Exist. Pier reinforcement not shown for clarity – See Exist. Record Drawings for details)



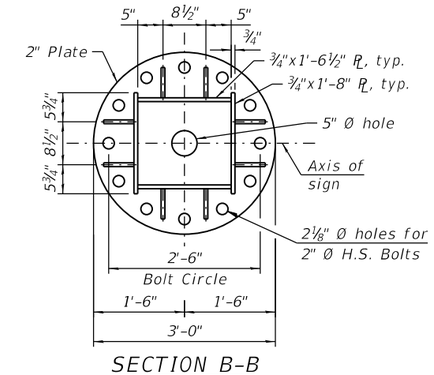
SECTION C-C

(Showing Overall ℄ dimensions and Anchor Rod Locations)
(Exist. Pier/Pedestal reinforcement not shown for clarity – see Exist. Record Drawings for details)



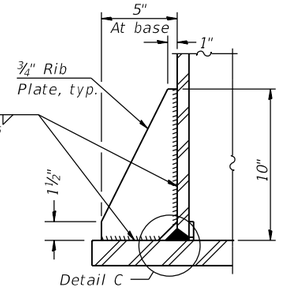
SECTION C-C

(Showing Bottom Stiffener Locations)



SECTION B-B

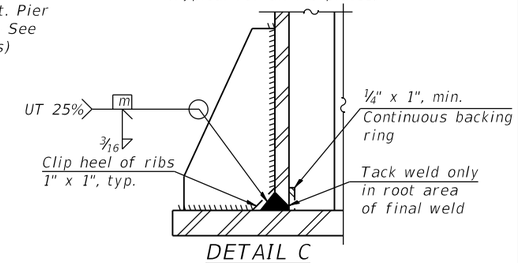
(Showing Top Stiffener Locations)



Detail C

POST-PLATE CONNECTION

(Typical for all rib plates)



DETAIL C

(Typical for all post-plate connections)

Structure Number	***Station	H
1C0161094L053.3	130+60.47	23'-3¾"

Note: "H" based on 15'-0" or actual sign height, whichever is greater.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing And Erecting Structural Steel	POUND	1520
Structural Repair of Concrete (Depth < 5")	SQ FT	3

LEGEND

Structural Repair of Concrete (Depth < 5")

NOTE:

1. Cost of steel extension high strength bolts, grout pad and all required nuts and washers shall be included with Furnishing and Erecting Structural Steel.

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NADocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cantl-SS2058-SignStruct.dgn
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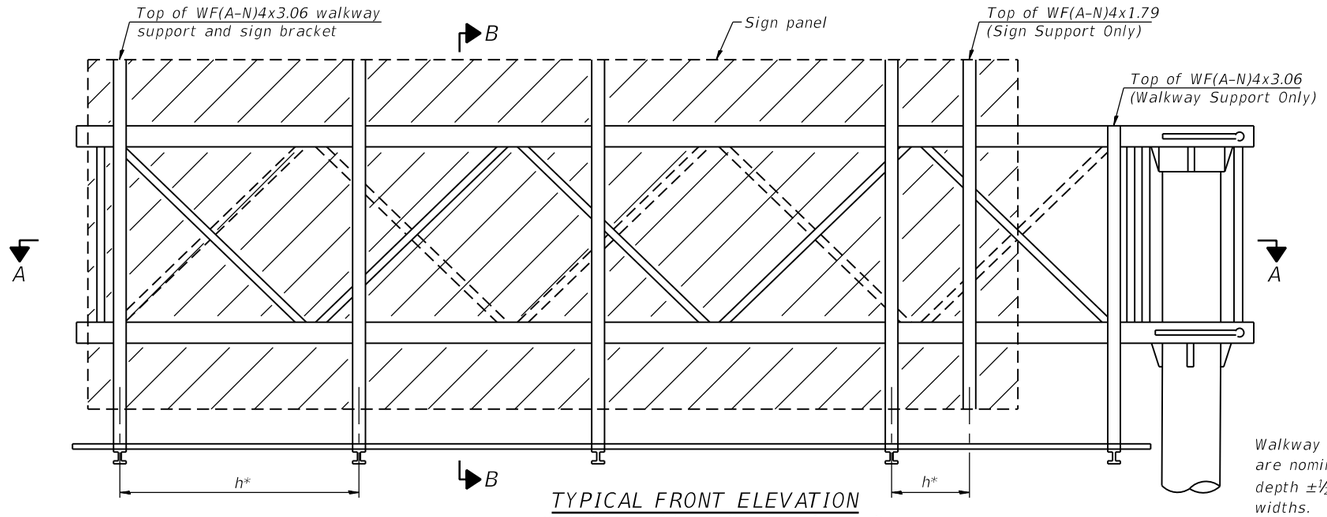
HBM ENGINEERING GROUP, LLC

USER NAME = hassan,issa	DESIGNED - JJS, WM	REVISED -		
	CHECKED - MAI, JMG	REVISED -		
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		
PLOT DATE = 1/29/2020	CHECKED - MAI, JMG	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – TYPE II-C-A
TRUSS SUPPORT POST – ALUMINUM TRUSS & STEEL POST
SHEET NO. SS56 OF SS129 SHEETS

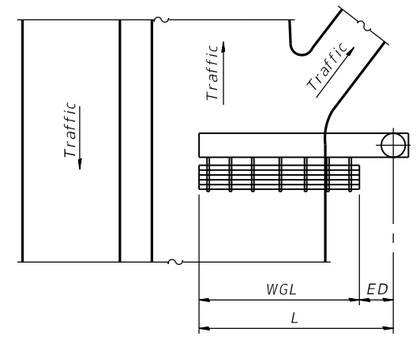
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1006
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		



TYPICAL FRONT ELEVATION

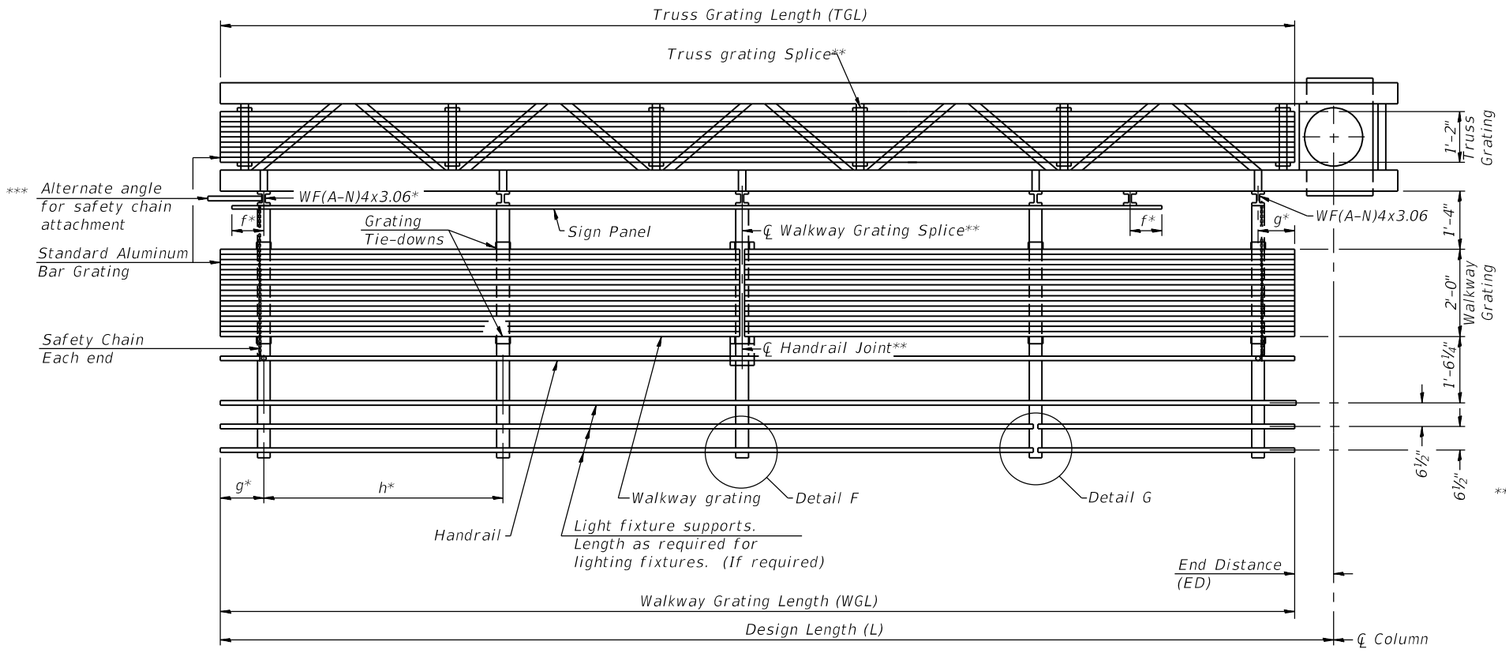
With lights and handrail omitted for clarity.

Walkway and truss grating dimensions are nominal and may vary (width ±½", depth ±½") based on available standard widths.



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.

** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

$$TGL = L - \left(\frac{\text{Post O.D.}}{2} + 6" \right)$$

Structure Number	t Station	WGL	ED	TGL
1C016I094L053.3	130+60.47	-	-	23'-6"
1C016I094L052.4	178+42.70	-	-	20'-0"

Notes:

* Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway to ℄ of nearest bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)

*** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on Base Sheet 0SC-A-8.

For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Sheet SS58 .
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet 0SC-A-8.

t Measured along Exist. ℄ NB I-90/94. It should be noted that the stations included in the Table are measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06
ASTM B308, Alloy 6061-T6

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

0SC-A-6 2-17-2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURES – ALUMINUM WALKWAY DETAILS – ALUMINUM TRUSS & STEEL POST
		CHECKED - MAI, JMG	REVISED -		
PLOT SCALE = N.T.S		DRAWN - JJS, WM	REVISED -		
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG	REVISED -		SHEET NO. SS57 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1007
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 AmericasTransportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cant-SS206-SignStruct.dgn

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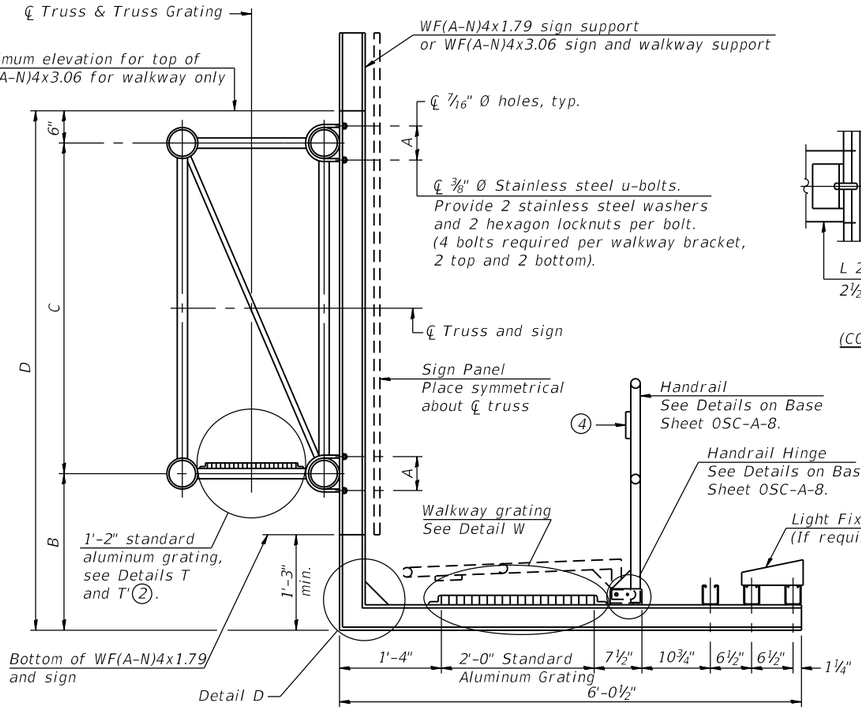
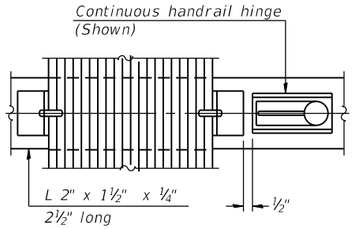
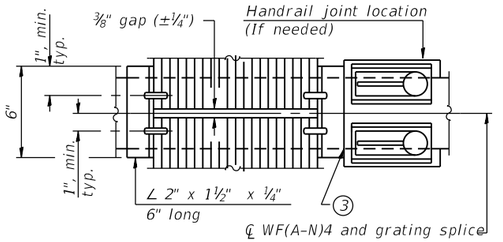


SECTION B–B

Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

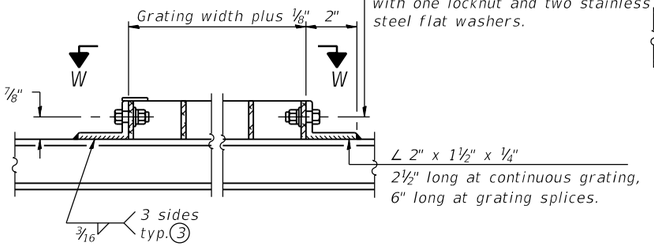


(CONTINUOUS WALKWAY GRATING)



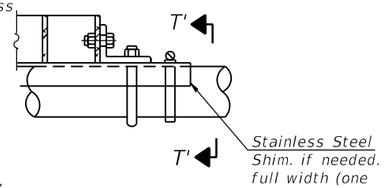
(AT WALKWAY GRATING SPLICE)

SECTION W–W



DETAIL W

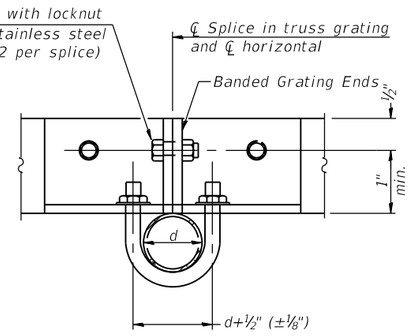
(Walkway grating)



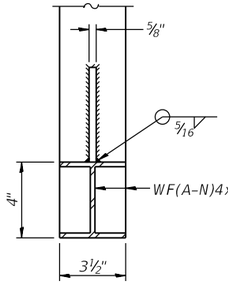
DETAIL T'

(Truss grating splice)

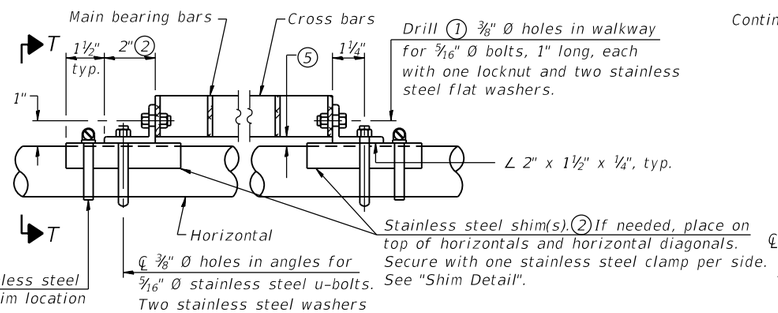
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



SECTION T–T

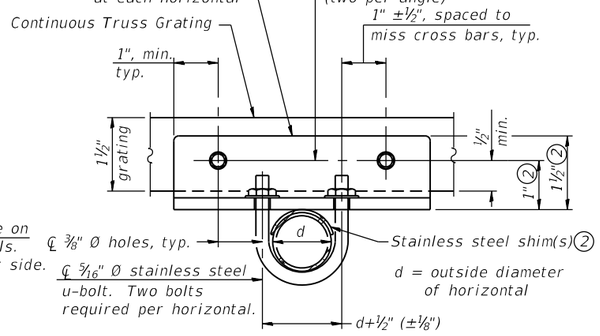


SECTION D–D

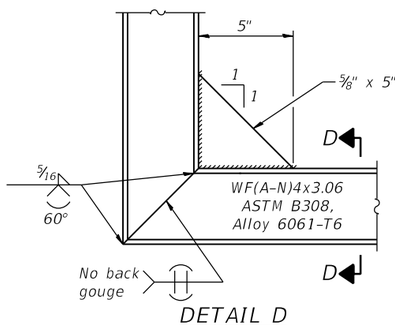


DETAIL T

(Continuous Truss grating)



SECTION T–T



DETAIL D

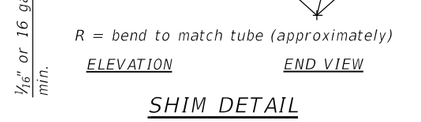
Structure Number	Station	A	(6) B	C	(6) D
1C016I094L053.3	131+47.33	7½"	2'–9"	5'–6"	8'–9"
1C016I094L052.4	179+17.00	7½"	4'–6"	5'–6"	10'–6"

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars (MBB) shall be ⅜" x 1½" on 1⁹⁄16" centers and conform to ASTM B211 Alloy 6061–T6.
Cross bars (CB) shall be ⅜" x 1½" on 4" centers and conform to ASTM B221 Alloy 6063–T5 or 6061–T6.

OR

Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:
Main bars shall conform to ASTM B221 Alloy 6061–T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1½", spaced on 1⁹⁄16" centers.
Cross bars shall conform to ASTM B221 Alloy 6063–T5 or T–42 and spaced on 4" centers.



SHIM DETAIL

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.

(3) If Handrail Joint present, weld angle to WF(A–N)4 and ¼" extension bars. (See Base Sheet 0SC–A–8.)

(4) PL ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.

(5) Tube to grating gap may vary from 0 to ½", max. to align walkway, allow for camber, etc.

(6) Based on actual sign height, Ds, given on Base Sheet 0SC–A–1.

t Measured along Exist. ℄ NB I–90/94. It should be noted that the stations included in the Table are measured along the Exist. ℄ NB I–90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.

0SC–A–7 2–17–2017

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cant-SS207-SignStruct.dgn
11:20:40 AM

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURES – WALKWAY DETAILS ALUMINUM TRUSS & STEEL POST
	CHECKED - MAI, JMG	REVISED -		
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		SHEET NO. SS58 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1008
			CONTRACT NO. 62A76	
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

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	STRUCTURAL	
3.	STRUCTURE NO. 016-0137 (MAXWELL ST. TO 15TH ST.)	65
4.	STRUCTURE NO. 016-1110 (15TH ST. TO 16TH ST.)	33
5.	STRUCTURE NO. 016-1111 (16TH ST. TO 18TH ST.)	51
6.	STRUCTURE NO. 016-1112 (18TH ST. TO CERMAK RD.)	91
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14	ROADWAY LIGHTING & SURVEILLANCE	49
	TOTAL	926

DESIGN DESIGNATION

100' 200' 300' 1" = 100'
0 10 20 30 1" = 10'
50' 100' 1" = 50'
50' 100' 1" = 40'
50' 100' 1" = 30'
50' 100' 1" = 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. 80065

CONSULTANT SECTION ENGINEER: K. HEWSTREET / J. KOS 312 703-4269

COUNTY COOK SECTION 1985-077 B-R ROUTE(S)-90/94 (DAN RYAN EXPRESSWAY)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

SCALES		
PLAN	1 INCH = * FEET	* SEE PLANS
PROFILE HORIZ.	1 INCH = * FEET	
PROFILE VERT.	1 INCH = * FEET	
CROSS SECTIONS	1 INCH = * FEET HORIZONTAL	
	1 INCH = * FEET VERTICAL	

VOLUME NO. 3

F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)

SECTION 1985-077 R

~~PROJECT~~

COOK COUNTY

~~C-91-430-85~~

NORTHBOUND MAINLINE RECONSTRUCTION
28TH PL. TO MAXWELL ST.

R 14 E

SCALE: 1 INCH = 1810 FEET

END STA. 183+87.100
STA. EQ. 183+87.10 (BK.) = STA. 183+13.36 (AH.)

STA. EQ. 165+08.650 (BK.) = STA. 164+94.890 (AH.)

STA. EQ. 122+01.688 (BK.) = STA. 123+47.028 (AH.)

STA. EQ. 103+85.412 (BK.) = STA. 103+85.570 (AH.)

BEGIN STA. 63+20.000

NET LENGTH = 11,934 FT. = 2.260 MILES
GROSS LENGTH = 11,934 FT. = 2.260 MILES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	65	1
F.A.I. RTE.	ILLINOIS	PROJECT		

*1985-077 B R
P-91-179-84

LOCATION OF SECTION INDICATED THUS: —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED _____ 19__
DISTRICT ENGINEER
EXAMINED _____ 19__
PASSED _____ 19__
APPROVED _____ 19__

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
DIVISION ENGINEER DATE

12-1-1988

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - MAI, JMG	REVISED -	
	PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -	
	PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -	

EXISTING RECORD DRAWINGS
STRCUTURE NO. 016-0137
SHEET NO. SS59 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1009
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_D502_NAIDocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cont-SS208-SignStruct.dgn
11:21:05 AM

FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	65	2
STA.		TO STA.		
MED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 1985-077BR

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE WERE OBTAINED FROM EXISTING PLANS

. AND ARE SUBJECT TO MINIMAL 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 WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

CALCULATED WEIGHT OF STRUCTURAL STEEL = M-183 = 827,960 LBS. (TO BE ERECTED)

THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESSES SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS INCLUDE TENSION FLANGES AND WEBS OF PLATE GIRDERS, WIDE FLANGE BEAMS AND ALL SPLICE PLATES MATERIAL OF THE WELDED PLATE GIRDERS AND ARE DESIGNATED ON THE PLANS BY "N.T.R.".

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

REINFORCEMENT BARS NOTED (E) SHALL BE EPOXY COATED.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF ROLLED OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-EIGHTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE INSTALLING DIAPHRAGMS OR CROSS FRAMES OVER SUPPORTS.

FASTENERS SHALL CONFORM TO THE REQUIREMENT OF AASHTO M164 TYPE I (ASTM A325). ALL FASTENERS SHALL BE 7/8" DIAMETER UNLESS OTHERWISE NOTED WITH 15/16" DIAMETER BOLT HOLES. BOLT HOLES SHALL BE DRILLED 1-1/16" DIAMETER FOR 7/8" DIAMETER BOLTS AT CROSS FRAME CONNECTIONS. DIAPHRAGMS SHALL BE CONNECTED WITH 3/4" DIAMETER BOLTS AND BOLT HOLES SHALL BE PREDRILLED TO 15/16" DIAMETER. BEVELED WASHERS SHALL BE USED FOR ALL CROSS FRAME AND DIAPHRAGM CONNECTION.

EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,000 LBS., FOR 3/4" DIAMETER X 18" HOOKED BOLTS, AND 2000 LBS FOR 1/2"DIA. X 10" HOOKED BOLTS

ROADWAY EXPANSION GUARDS SHALL BE ASSEMBLED IN THE PROPER POSITION WITH THE ENDS IN PLACE BUT SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION.

THE ROADWAY EXPANSION PLATES SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04(1) OF THE STANDARD SPECIFICATIONS.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARINGS. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE BE PROVIDED AND PLACED AS DETAILED).

STUD SHEAR CONNECTORS

STUD SHEAR CONNECTORS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M169 COLD DRAWN BARS, GRADES 1015, 1018 OR 1020 EITHER SEMI-OR FULLY-KILLED, GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED. STUD SHEAR CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 507.08(a).

MATERIAL SHALL CONFORM TO ARTICLE 7.10.38 OF THE STANDARD SPECS.

NOTES FOR NEW CONCRETE PIERS

A) THE CONTRACTOR SHALL SPACE REINFORCEMENT BARS IN PIER CAP TO MISS ANCHOR BOLTS.

B) ALL EXPOSED EDGES TO HAVE STANDARD 3/4 INCH CHAMFERS, EXCEPT NOTED OTHERWISE.

FIELD CLEANING AND PAINTING

1) EXISTING STRUCTURAL STEEL SURFACES IN CONTACT WITH NEW STRUCTURAL STEEL SHALL BE FIELD CLEANED IN ACCORDANCE WITH ARTICLE 509.06(b) METHOD III. SURFACES BLAST CLEANED TO RECEIVE NEW STRUCTURAL STEEL SHALL BE PAINTED WITH ONE COAT LEAD AND CHROMATE FREE PAINT PRIMER. CONTACT SURFACES SHALL NOT BE PAINTED.

2) EXISTING TOP FLANGE SURFACES IN CONTACT WITH NEW CONCRETE SHALL BE CLEANED IN ACCORDANCE WITH ARTICLE 509.06(b), METHOD III.

3) SURFACES TO RECEIVE STUD SHEAR CONNECTORS SHALL BE CLEANED IN ACCORDANCE WITH ARTICLE 509.06(b), METHOD II AND ARTICLE 507.08(a)(2).

4) NEW STRUCTURAL STEEL SHALL BE SPOT PAINTED WITH ZINC SILICATE PRIMER APPLIED ON HEADS OF FIELD BOLTS, FIELD WELDS, AND ALL AREAS WHERE PAINT HAS BEEN REMOVED OR DAMAGED.

STATION 171+73.00
REBUILT 1989 BY
STATE OF ILLINOIS

F.A. PROJ. IDR-ACER-94-3(276)
LOADING HS20
STR. NO. 016-0137

NAME PLATE
(See Std. 2113)

LOAD FOR TEMPORARY SUPPORT		
BEARING LINE	D.L. REACTION	L.L. REACTION
7S	106K	—
7N	52K	—
11S	52K	—
11N	46K	—
13	172K	—
14	164K	—
15S	46K	—
15N	93.5K	—
16	253K	—
18	208K	—
19S	70K	—
19N	51K	—

Note
D.L. Reaction includes the weight of existing steel beams only.

SHEET No.	INDEX	
1	A1	TITLE SHEET
2	A2	GENERAL NOTE, INDEX & BILL OF MATERIAL
3	A3	GENERAL PLAN
4	A4	PIER REMOVAL
5-15	A5-A15	PIER REPLACEMENT DETAILS
16	A16	ABUTMENT DETAILS
17-18	A17-A18	SUBSTRUCTURE BAR SCHEDULE
19-20	A19-A20	FRAMING PLANS
21-22	A21-A22	STRESS TABLE
23-28	A23-A28	STRUCTURAL STEEL DETAILS
29-32	A29-A32	36" PPC I-BEAM AND DECK DETAILS
33	A33	TRANSVERSE DECK JOINT ELEVATIONS
34-43	A34-A43	TOP OF SLAB ELEVATIONS
44-54	A44-A54	DECK PLAN, CROSS SECTION & PARAPET DETAILS
55-56	A55-A56	DECK BAR SCHEDULE
57-65	A57-A65	SUBSTRUCTURE WIDENING, REHABILITATION & REPLACEMENT

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
*STRUCTURE EXCAVATION	CU. YD.	89.4
*CONCRETE REMOVAL	CU. YD.	478.8
*CONCRETE REMOVAL (SPECIAL)	CU. YD.	53.9
*REMOVAL OF EXISTING CONCRETE DECK	L. SUM	.092
*EXPANSION BOLTS 3/4 INCH DIA.	EACH	44
*PROTECTIVE SHIELD	SQ. YD.	18,575
*CLASS "X" CONCRETE	CU. YD.	898.8
*CLASS "X" CONCRETE (SUPERSTRUCTURE)	CU. YD.	2988.6
PREFORMED JOINT SEAL 2 1/2 INCH	LIN. FT.	183.8
* NEOPRENE EXPANSION JOINT 2 1/2 INCH	LIN. FT.	182.1
* NEOPRENE EXPANSION JOINT 4 INCH	LIN. FT.	338.1
** PROTECTIVE COAT	SQ. YD.	1389.5
EPOXY CRACK SEALING	LIN. FT.	186
*FORMED CONCRETE REPAIR (≤ 5" depth)	SQ. FT.	128
*FORMED CONCRETE REPAIR (> 5" depth)	SQ. FT.	182
*PROTECTIVE SURFACE TREATMENT	SQ. FT.	42,933
*MECHANICAL SPLICERS	EACH	476
*REINFORCEMENT BARS (EPOXY COATED)	POUND	104,210
*INSTALLING PPC I-BEAMS	LIN. FT.	1772
*ERECTING STRUCTURAL STEEL	L. SUM	0.16
STUD SHEAR CONNECTORS	EACH	44,478
*STRUCTURAL STEEL REPAIR	POUND	1,200
*INSTALLING BRIDGE SCUPPERS	EACH	21
*DOWNSPOUT DRAINAGE SYSTEM	LIN. FT.	560
*NAME PLATES	EACH	1
*TEMPORARY SUPPORT SYSTEM (HEIGHT ≤ 30 FT.)	EACH	6
*TEMPORARY SUPPORT SYSTEM (HEIGHT > 30 FT.)	EACH	2
*CLASS 'X' CONCRETE (RETAINING WALL)	CU. YD.	5.0
* REMOVAL OF EXISTING FOUNDATIONS	CU. YD.	15.0

* SPECIAL PROVISIONS
** QUANTITY DOES NOT INCLUDE BRIDGE DECK SURFACE

SHEET A2 OF A65

REVISIONS	
Name	Date

△ 12-1-1988

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077BR COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 0137
GENERAL NOTES, INDEX & BILL OF MATERIAL

Scale: NONE — Drawn By: AV
Date: AUGUST 1988 — Checked By: M.E.M.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS STRUCTURE NO. 016-0137
		CHECKED - MAI, JMG	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		SHEET NO. SS60 OF SS129 SHEETS
	PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		

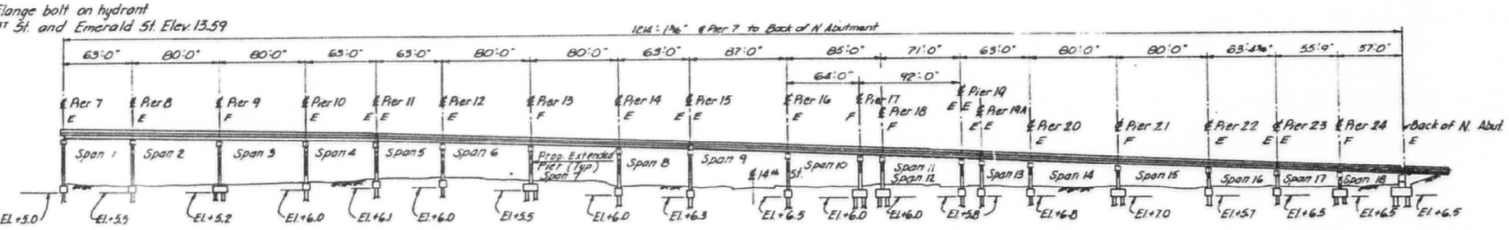
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1010
			CONTRACT NO. 62A76	
		ILLINOIS	FED. AID PROJECT	

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CADD\08_Structural\Sign Structures\62A76 Sign Structure\62A76-Cont-SS208-SignStruct.dgn
11:21:11 AM

FOR INFORMATION ONLY

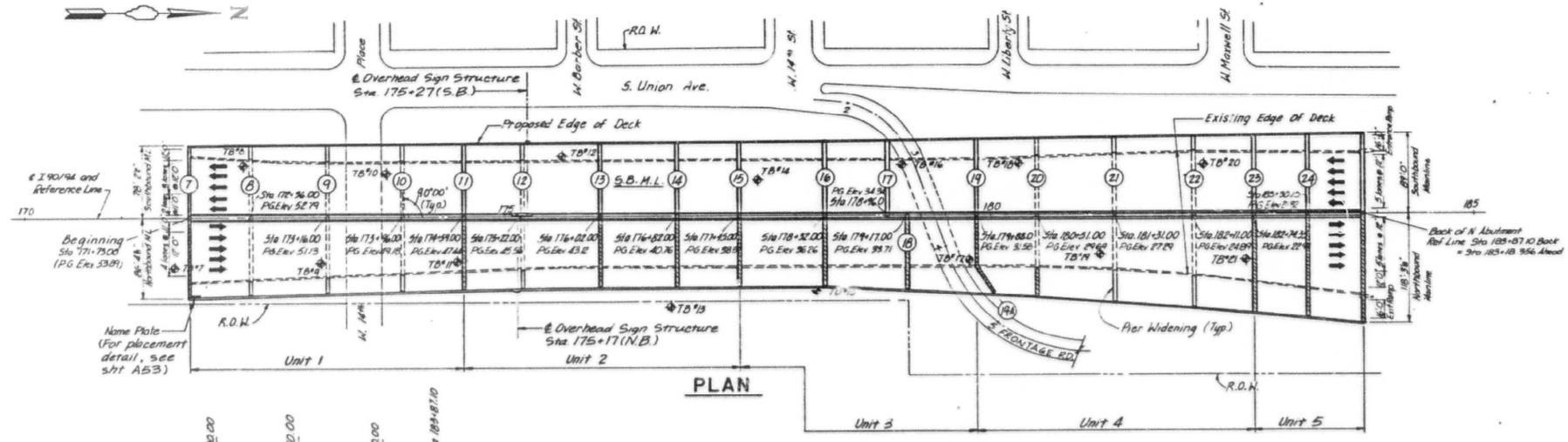
FEDERAL AID RO/ITE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	-R	COOK	65	3
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		
		R 1985-077 BR		

Bench Mark
TBM #49 North NE Flange bolt on hydrant on NW corner of 21st St. and Emerald St. Elev. 13.59

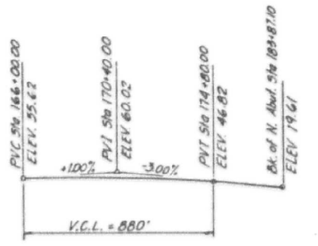


ELEVATION

Existing Structure
Structure No. 016-0137 is part of the Dan Ryan Expressway Viaduct. The superstructure consists of four span, three span and two span continuous steel and concrete structures. Spans 1 thru 16 are rolled beam spans and spans 17 & 18 are concrete beam spans. The substructure consists of multiple column concrete piers and an abutment supported on concrete caisson. The structure was built in 1961 and opened to traffic in 1962. The contractor shall maintain traffic at all times on existing structure while widening the substructures.



PLAN



PROPOSED PROFILE GRADE

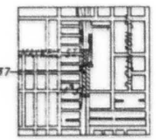
DAN RYAN EXPRESSWAY (I 90 / 94)

Design Stresses

New Construction	Existing Construction
f'_c = 3500 PSI	f'_c = 3300 PSI
f_c = 1400 PSI	f_c = 1400 PSI W/O Earth Pressure
f_y = 60,000 PSI (Reinforcement)	f_c = 1,000 PSI W/ Earth Pressure
f_s = 20,000 PSI	V = 75 PSI Max Shear in Footings
Working Stress Design Method	f_s = 20,000 PSI
Allowable Bearing Pressure on Rock = 60 Tons / Sq. Ft.	Bedrock Bearing for Drilled Sub-Piers = 60 Tons / Sq. Ft.

Loading HS 20-44 and Alt.
Design Specifications : AASHTO (1983) and applicable interims (1984, 1985 Thr 1987)

Legend
- Indicates existing soil borings
- New Pier Replacement or Widening completed in previous contracts
- Indicates Pier Number
- Pier Replacement or Widening



LOCATION PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985 - 077BR - COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-0137
GENERAL PLAN

Scale : NONE
Date : AUG. , 1988
Drawn By : D.C.
Checked By : M.E.M.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

SHEET A3 OF A65

REVISIONS	
Name	Date

RALPH E. SMITH 81-3938 REGISTERED STRUCTURAL ENGINEER

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Engineer of Bridges and Structures

HBM ENGINEERING GROUP, LLC

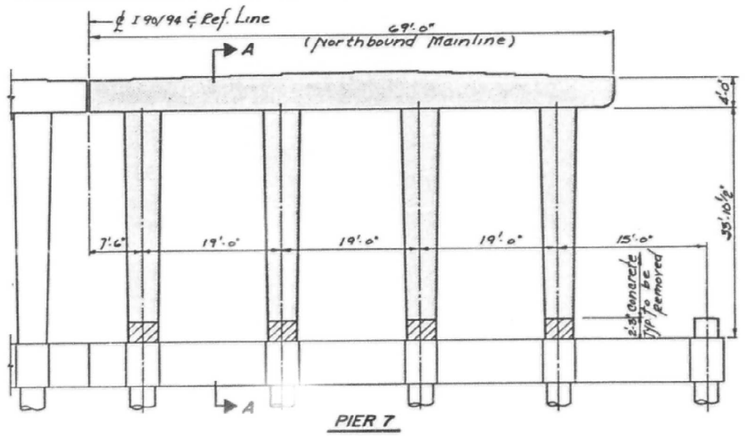
USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS STRUCTURE NO. 016-0137	F.A.I. RTE. 90/94/290
	CHECKED - MAI, JMG	REVISED -			SECTION 2015-019R
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -			COUNTY COOK
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		SHEET NO. SS61 OF SS129 SHEETS	TOTAL SHEETS 2155
					SHEET NO. 1011
					CONTRACT NO. 62A76
					ILLINOIS FED. AID PROJECT

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 Circle\Phase_II\0000_CADD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cont-SS208-SignStruct.dgn
11:21:19 AM

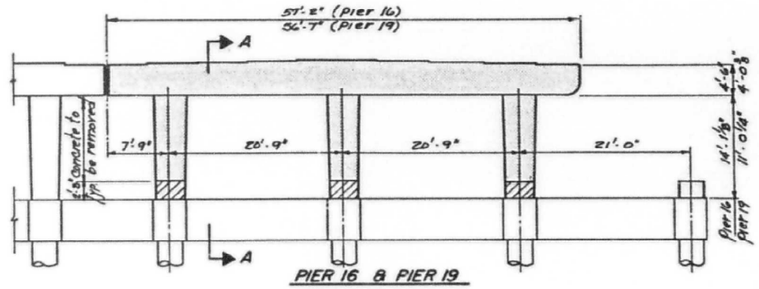
FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	65	4
STA.	TO STA.			
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

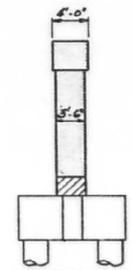
* 1985-077BR



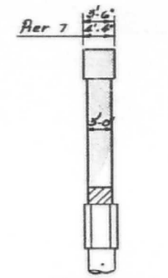
PIER 7



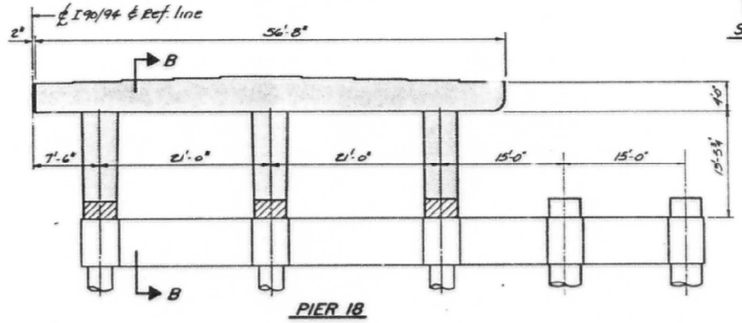
PIER 16 & PIER 19



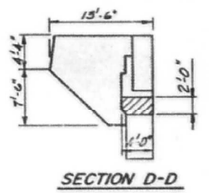
SECTION B-B



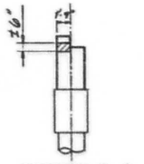
SECTION A-A



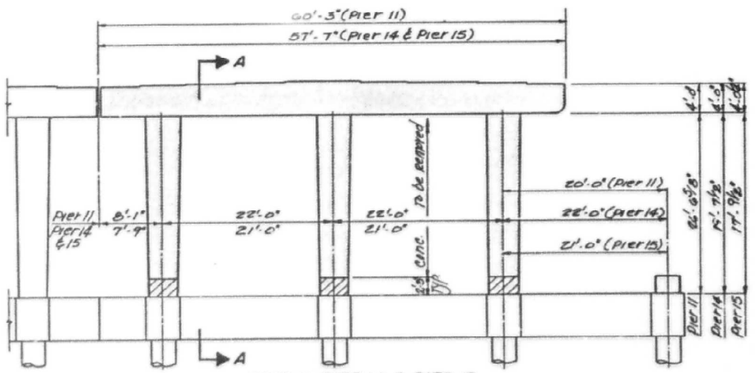
PIER 18



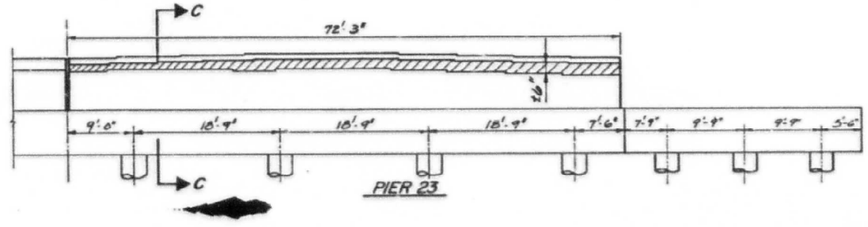
SECTION D-D



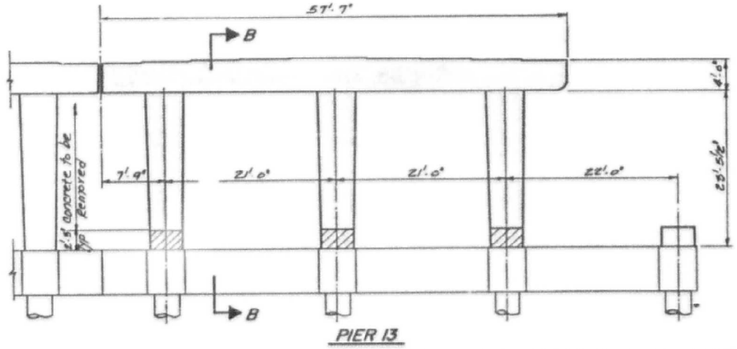
SECTION C-C



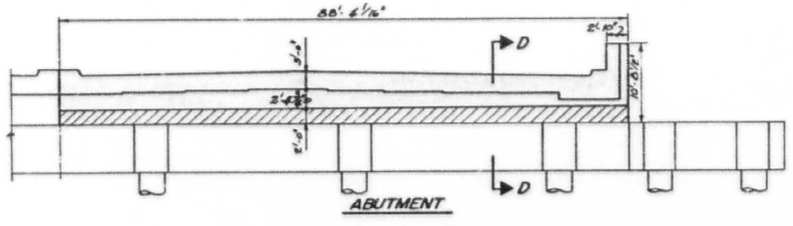
PIER 11, PIER 14 & PIER 15



PIER 23



PIER 13



ABUTMENT

BILL OF MATERIALS			
SYMBOL	ITEM	UNIT	QUANTITY
	Concrete Removal	Cu. Yd.	472.0
	Conc. Rem (Special)	Cu. Yd.	48.8

SHEET A4 OF A65

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90 /94 (DAN RYAN EXPRESSWAY)
SECTION 1985 - 077 BR- COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE ONS - 0137
PIER REMOVAL

Scale : NONE
Date : AUG. , 1988
Drawn By: M.M.S.
Checked By: M.E.M.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - MAI, JMG	REVISED -	
	PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -	
	PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -	

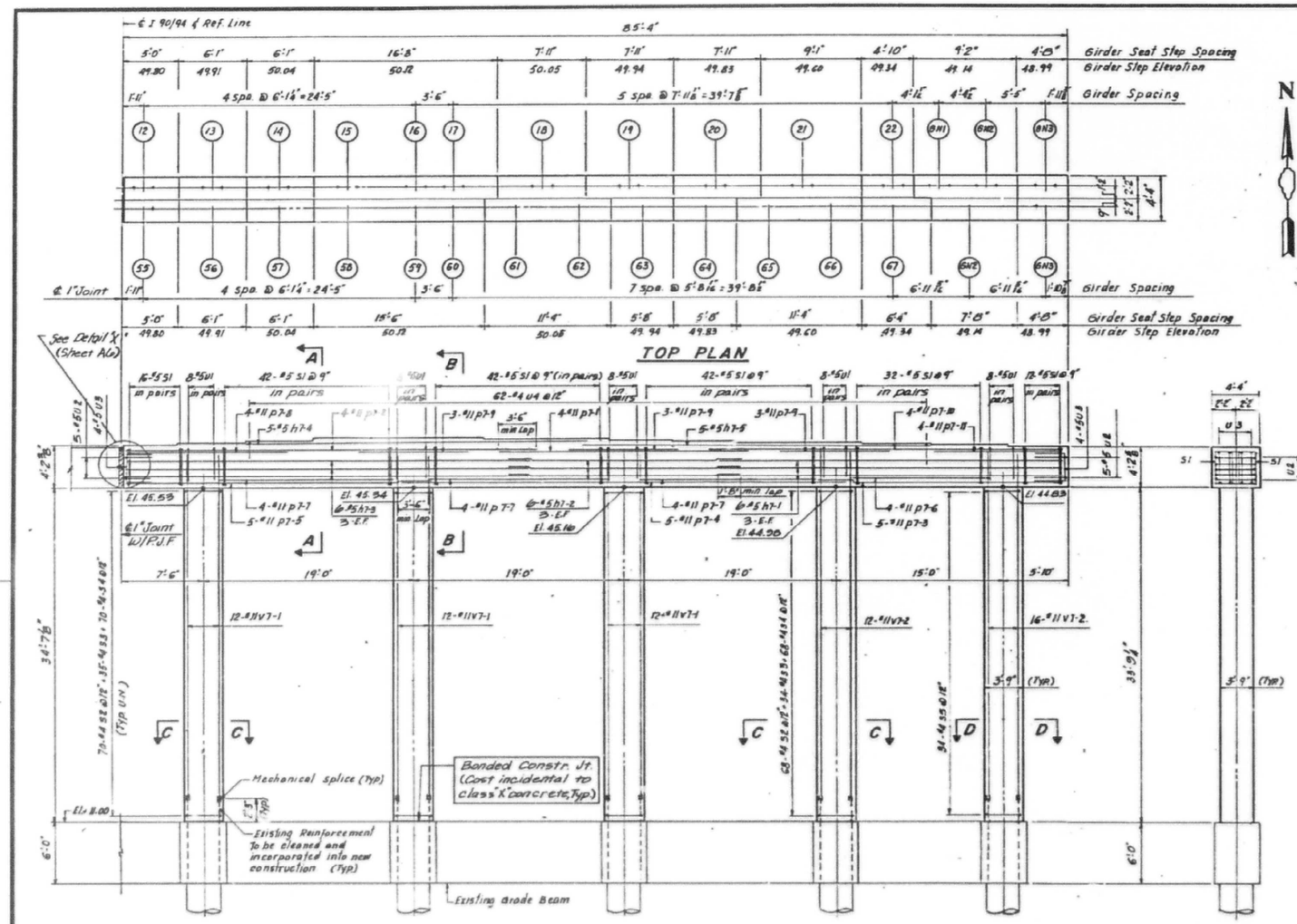
EXISTING RECORD DRAWINGS
STRUCTURE NO. 016-0137
SHEET NO. SS62 OF SS129 SHEETS

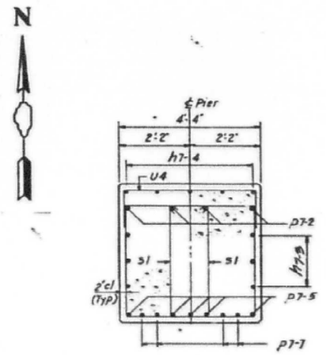
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1012
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

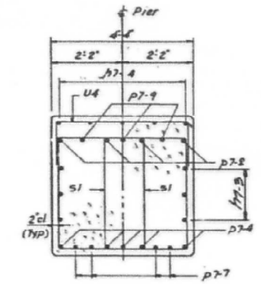
FOR INFORMATION ONLY

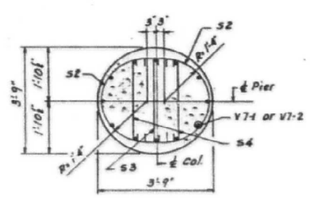
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	65	5
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

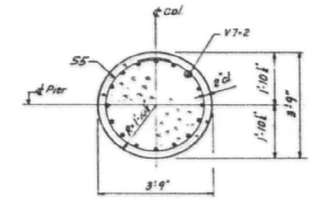
* 1985-077 BR











NOTES:

1. All edges shall have std ¾ chamfer except as noted.
2. Pour steps monolithic with cap.
3. For reinforcement bar schedules see sheet no. A17 & A18
4. For concrete removal see sheet no. A8
5. Contractor to verify all existing top of pier elevations
6. All Expansion bolts and anchor bolts shall be placed in sound concrete

BILL OF MATERIAL

ITEM	UNIT	PIER NO. 7
Reinforcement Bars (Epoxy Coated)	Lbs	25,920
Class 'X' Concrete	cu. Yd	132.5
Mechanical Splicers	Each	64

SHEET A5 OF A65

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077BR - COOK COUNTY
N. B. MAINLINE RECONSTRUCTION
STRUCTURE 016- 0137
PIER 7

Scale : NONE
Date : AUG. , 1988
Drawn By: ASR
Checked By: MEM

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, WM		REVISED -
		CHECKED - MAI, JMG		REVISED -
PLOT SCALE = N.T.S		DRAWN - JJS, WM		REVISED -
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
STRUCTURE NO. 016-0137
SHEET NO. SS63 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1013
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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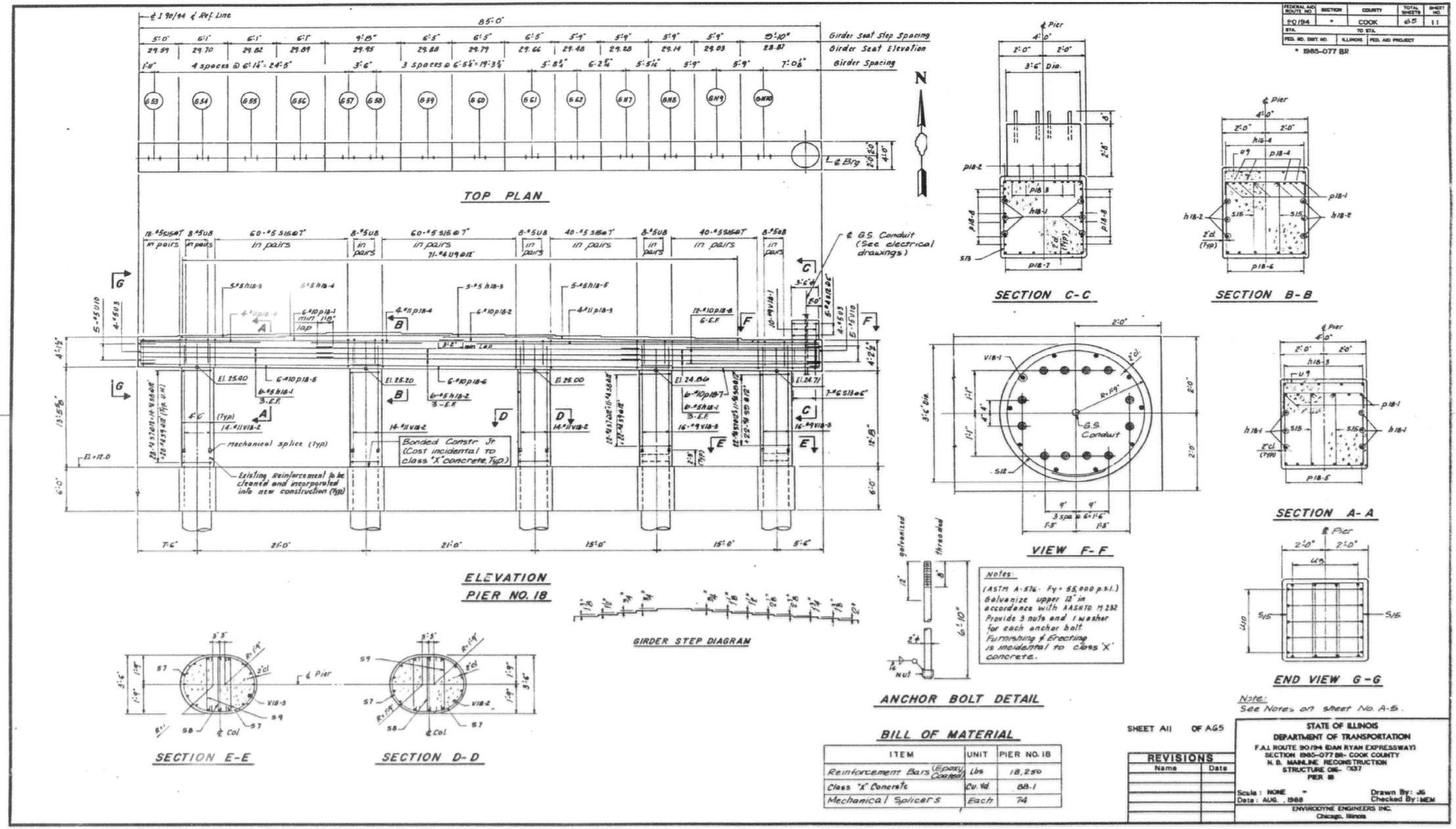
FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	65	11
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 1985-077 BR



Notes:
(ASTM A-576 · Fy = 55,000 p.s.i.)
Galvanize upper 12" in accordance with AASHTO M 232
Provide 3 nuts and 1 washer for each anchor bolt
Furnishing & Erecting is incidental to class 'X' concrete.

Note:
See Notes on sheet No. A-5.

BILL OF MATERIAL

ITEM	UNIT	PIER NO. 18
Reinforcement Bars (Epoxy Coated)	Lbs	18,250
Class "X" Concrete	Cu. Yd	88.1
Mechanical Splicers	Each	74

SHEET A11 OF AG5

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 BR- COOK COUNTY
N. B. MAINLINE RECONSTRUCTION
STRUCTURE ONE- 1137
PIER 18

Scale: NONE = Drawn By: JG
Date: AUG. , 1988 Checked By: MEM

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	
		CHECKED - MAI, JMG	REVISED -	
	PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -	
	PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
STRUCTURE NO. 016-0137
SHEET NO. SS64 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1014
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

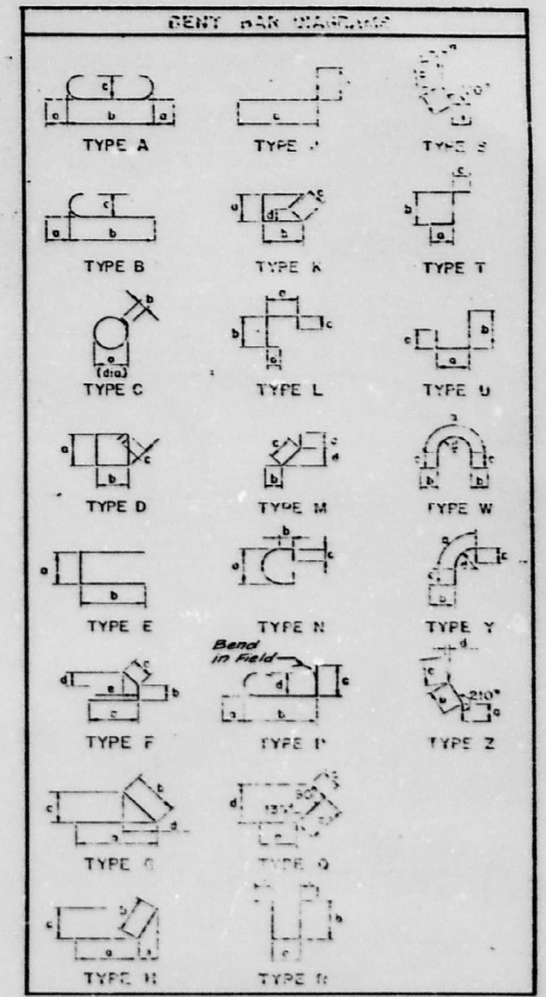
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	4	COOK	65	17
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

P-1965-077BR

REINFORCEMENT BAR SCHEDULE

STRUCTURE	MARK	NUMBER	SIZE	LENGTH	TYPE
PIER No. 7	h7-1(E)	6	#5	31'-0"	—
PIER No. 7	h7-2(E)	6	#5	21'-0"	—
PIER No. 7	h7-3(E)	6	#5	35'-6"	—
PIER No. 7	h7-4(E)	5	#5	30'-4"	—
PIER No. 7	h7-5(E)	5	#5	31'-0"	—
PIER No. 7	p7-1(E)	4	#11	22'-0"	—
PIER No. 7	p7-2(E)	4	#11	37'-6"	—
PIER No. 7	p7-3(E)	5	#11	22'-6"	—
PIER No. 7	p7-4(E)	5	#11	41'-6"	—
PIER No. 7	p7-5(E)	5	#11	28'-0"	—
PIER No. 7	p7-6(E)	4	#11	13'-0"	—
PIER No. 7	p7-7(E)	12	#11	17'-0"	—
PIER No. 7	p7-8(E)	4	#11	15'-0"	—
PIER No. 7	p7-9(E)	9	#11	11'-0"	—
PIER No. 7	p7-10(E)	4	#11	30'-6"	—
PIER No. 7	p7-11(E)	4	#11	12'-0"	—
PIER No. 7	s1(E)	166	#5	13'-7"	—
PIER No. 7	s2(E)	278	#4	6'-6"	—
PIER No. 7	s3(E)	139	#4	3'-8"	—
PIER No. 7	s4(E)	278	#4	3'-7"	—
PIER No. 7	s5(E)	34	#4	12'-1"	—
PIER No. 7	u1(E)	40	#5	10'-1"	—
PIER No. 7	u2(E)	10	#5	7'-11"	—
PIER No. 7	u3(E)	8	#5	7'-8"	—
PIER No. 7	u4(E)	62	#4	6'-6"	—
PIER No. 7	v7-1(E)	36	#11	36'-4"	—
PIER No. 7	v7-2(E)	28	#11	35'-5"	—
PIER No. 11	h11-1(E)	5	#5	27'-4"	—
PIER No. 11	h11-2(E)	5	#5	17'-0"	—
PIER No. 11	h11-3(E)	5	#5	13'-0"	—
PIER No. 11	h11-4(E)	18	#5	29'-6"	—
PIER No. 11	p11-1(E)	6	#10	17'-0"	—
PIER No. 11	p11-2(E)	6	#10	24'-0"	—
PIER No. 11	p11-3(E)	6	#10	40'-0"	—
PIER No. 11	p11-4(E)	12	#10	14'-0"	—
PIER No. 11	p11-5(E)	6	#10	22'-6"	—
PIER No. 11	p11-6(E)	6	#10	15'-6"	—
PIER No. 11	p11-7(E)	6	#11	31'-9"	—
PIER No. 11	p11-8(E)	6	#11	25'-9"	—
PIER No. 11	p11-9(E)	6	#11	29'-3"	—
PIER No. 11	s2(E)	210	#4	6'-6"	—
PIER No. 11	s3(E)	105	#4	3'-8"	—
PIER No. 11	s4(E)	210	#4	3'-7"	—
PIER No. 11	s6(E)	234	#5	12'-9"	—
PIER No. 11	u3(E)	8	#5	7'-8"	—
PIER No. 11	u5(E)	32	#5	9'-8"	—
PIER No. 11	u6(E)	10	#5	7'-1"	—
PIER No. 11	u7(E)	56	#4	5'-8"	—
PIER No. 11	v11-1(E)	36	#11	28'-3"	—
PIER No. 11	v11-2(E)	16	#9	27'-6"	—
PIER No. 13	h13-1(E)	5	#5	28'-3"	—
PIER No. 13	h13-2(E)	5	#5	20'-6"	—
PIER No. 13	h13-3(E)	5	#5	15'-0"	—
PIER No. 13	h13-4(E)	12	#5	40'-3"	—
PIER No. 13	p13-1(E)	12	#10	41'-0"	—
PIER No. 13	p13-2(E)	8	#11	15'-0"	—
PIER No. 13	p13-3(E)	9	#11	14'-0"	—
PIER No. 13	p13-4(E)	12	#10	30'-6"	—
PIER No. 13	p13-5(E)	6	#10	24'-6"	—
PIER No. 13	s7(E)	184	#4	7'-4"	—
PIER No. 13	s8(E)	92	#4	4'-2"	—
PIER No. 13	s9(E)	184	#4	4'-1"	—
PIER No. 13	s15(E)	222	#5	13'-3"	—
PIER No. 13	u3(E)	8	#5	7'-8"	—
PIER No. 13	u8(E)	32	#5	9'-11"	—
PIER No. 13	u9(E)	63	#4	6'-2"	—
PIER No. 13	u10(E)	10	#5	7'-7"	—
PIER No. 13	v13-1(E)	42	#11	25'-0"	—
PIER No. 13	v13-2(E)	16	#9	24'-2"	—
PIER No. 14	h14-1(E)	5	#5	12'-6"	—
PIER No. 14	h14-2(E)	5	#5	22'-2"	—
PIER No. 14	h14-3(E)	5	#5	20'-0"	—
PIER No. 14	h14-4(E)	5	#5	14'-6"	—
PIER No. 14	h14-5(E)	12	#5	40'-0"	—
PIER No. 14	p14-1(E)	12	#10	40'-9"	—
PIER No. 14	p14-2(E)	6	#10	16'-0"	—
PIER No. 14	p14-3(E)	18	#10	14'-0"	—
PIER No. 14	p14-4(E)	12	#11	30'-4"	—
PIER No. 14	p14-5(E)	6	#11	24'-6"	—
PIER No. 14	s2(E)	154	#4	6'-6"	—
PIER No. 14	s3(E)	77	#4	3'-8"	—
PIER No. 14	s4(E)	154	#4	3'-7"	—
PIER No. 14	s6(E)	226	#5	12'-9"	—
PIER No. 14	u3(E)	8	#5	7'-8"	—
PIER No. 14	u5(E)	22	#5	9'-8"	—
PIER No. 14	u6(E)	10	#5	7'-1"	—
PIER No. 14	u7(E)	69	#4	5'-8"	—
PIER No. 14	v14-1(E)	26	#11	21'-3"	—
PIER No. 14	v14-2(E)	16	#9	20'-6"	—
PIER No. 15	h15-1(E)	12	#5	40'-0"	—
PIER No. 15	h15-2(E)	8	#5	12'-8"	—
PIER No. 15	h15-3(E)	6	#5	22'-0"	—
PIER No. 15	h15-4(E)	6	#5	13'-4"	—
PIER No. 15	h15-5(E)	3	#5	20'-4"	—
PIER No. 15	h15-6(E)	5	#5	6'-6"	—
PIER No. 15	h15-7(E)	3	#5	15'-4"	—
PIER No. 15	h15-8(E)	3	#5	17'-9"	—
PIER No. 15	p15-1(E)	12	#10	40'-6"	—
PIER No. 15	p15-2(E)	12	#10	16'-0"	—
PIER No. 15	p15-3(E)	12	#10	14'-0"	—
PIER No. 15	p15-4(E)	12	#11	30'-4"	—
PIER No. 15	p15-5(E)	6	#11	24'-6"	—
PIER No. 15	s2(E)	138	#4	6'-6"	—
PIER No. 15	s3(E)	69	#4	3'-8"	—
PIER No. 15	s4(E)	138	#4	3'-7"	—
PIER No. 15	s6(E)	206	#5	12'-9"	—
PIER No. 15	u2(E)	9	#5	7'-8"	—
PIER No. 15	u5(E)	28	#5	9'-8"	—
PIER No. 15	u6(E)	10	#5	7'-1"	—
PIER No. 15	u7(E)	7	#4	5'-8"	—
PIER No. 15	u11(E)	64	#4	3'-9"	—
PIER No. 15	u13(E)	76	#4	4'-11"	—
PIER No. 15	v15-1(E)	30	#11	19'-0"	—
PIER No. 15	v15-2(E)	16	#9	18'-9"	—
PIER No. 16	h16-1(E)	12	#5	40'-0"	—
PIER No. 16	h16-2(E)	8	#5	12'-8"	—
PIER No. 16	h16-3(E)	6	#5	21'-10"	—
PIER No. 16	h16-4(E)	5	#5	29'-4"	—
PIER No. 16	p16-1(E)	12	#10	40'-3"	—
PIER No. 16	p16-2(E)	12	#10	16'-0"	—
PIER No. 16	p16-3(E)	12	#10	14'-0"	—
PIER No. 16	p16-4(E)	6	#11	31'-0"	—
PIER No. 16	p16-5(E)	6	#11	30'-0"	—
PIER No. 16	p16-6(E)	6	#11	24'-3"	—
PIER No. 16	s2(E)	108	#4	6'-6"	—
PIER No. 16	s3(E)	54	#4	3'-8"	—
PIER No. 16	s4(E)	108	#4	3'-7"	—
PIER No. 16	s11(E)	226	#5	13'-7"	—
PIER No. 16	u6(E)	10	#5	7'-1"	—
PIER No. 16	u7(E)	64	#4	5'-8"	—
PIER No. 16	u14(E)	32	#5	10'-6"	—
PIER No. 16	v15(E)	8	#5	8'-1"	—
PIER No. 16	v16-1(E)	36	#11	16'-0"	—
PIER No. 16	v16-2(E)	16	#9	15'-6"	—
PIER No. 18	h18-1(E)	12	#5	24'-0"	—
PIER No. 18	h18-2(E)	6	#5	40'-0"	—
PIER No. 18	h18-3(E)	10	#5	13'-6"	—
PIER No. 18	h18-4(E)	5	#5	21'-10"	—
PIER No. 18	h19-5(E)	5	#5	23'-6"	—
PIER No. 18	p18-1(E)	6	#10	40'-0"	—
PIER No. 18	p18-2(E)	6	#10	43'-0"	—
PIER No. 18	p18-3(E)	4	#11	43'-0"	—
PIER No. 18	p18-4(E)	8	#11	14'-0"	—
PIER No. 18	p18-5(E)	6	#10	30'-0"	—
PIER No. 18	p18-6(E)	6	#10	33'-2"	—
PIER No. 18	p18-7(E)	6	#10	22'-0"	—
PIER No. 18	p18-8(E)	12	#10	16'-6"	—
PIER No. 18	s7(E)	128	#4	7'-4"	—
PIER No. 18	s8(E)	64	#4	4'-2"	—
PIER No. 18	s9(E)	128	#4	4'-1"	—
PIER No. 18	s12(E)	5	#4	11'-3"	—
PIER No. 18	s13(E)	7	#6	15'-11"	—
PIER No. 19	s15(E)	218	#5	13'-3"	—
PIER No. 19	u3(E)	8	#5	7'-8"	—
PIER No. 19	u8(E)	48	#5	9'-11"	—
PIER No. 16	u9(E)	71	#4	6'-2"	—
PIER No. 18	u10(E)	10	#5	7'-7"	—
PIER No. 18	v18-1(E)	15	#7	6'-5"	—
PIER No. 18	v18-2(E)	42	#11	25'-0"	—
PIER No. 18	v18-3(E)	32	#9	14'-3"	—
PIER No. 19	h19-1(E)	5	#5	13'-0"	—
PIER No. 19	h19-2(E)	5	#5	29'-6"	—
PIER No. 19	h19-3(E)	5	#5	6'-8"	—
PIER No. 19	h19-4(E)	12	#5	39'-0"	—
PIER No. 19	h19-5(E)	6	#5	33'-0"	—
PIER No. 19	p19-1(E)	6	#10	40'-0"	—
PIER No. 19	p19-2(E)	6	#10	43'-0"	—
PIER No. 19	p19-3(E)	4	#11	43'-0"	—
PIER No. 19	p19-4(E)	8	#11	14'-0"	—
PIER No. 19	p19-5(E)	6	#10	30'-0"	—
PIER No. 19	p19-6(E)	6	#10	33'-2"	—
PIER No. 19	p19-7(E)	6	#10	22'-0"	—
PIER No. 19	p19-8(E)	12	#10	16'-6"	—
PIER No. 19	s2(E)	106	#4	6'-6"	—
PIER No. 19	s3(E)	53	#4	3'-8"	—
PIER No. 19	s4(E)	106	#4	3'-7"	—
PIER No. 19	s6(E)	226	#5	12'-9"	—
PIER No. 19	u3(E)	8	#5	7'-8"	—
PIER No. 19	u5(E)	40	#5	9'-8"	—
PIER No. 19	u6(E)	20	#5	7'-1"	—
PIER No. 19	u7(E)	17	#4	5'-8"	—
PIER No. 19	v19-1(E)	40	#11	33'-2"	—
PIER No. 19	v19-2(E)	32	#9	32'-0"	—

BENT BAR MARKS



Note:
All bar dimensions are out to out.

SHEET A17 OF A65

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1965-077BR COOK COUNTY
NB MAINLINE RECONSTRUCTION
STRUCTURE 016-0137
PIER BAR SCHEDULE

Scale : NONE
Date : AUGUST
Drawn By: CAD/AV
Checked By: M.E.M.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC				
USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS STRUCTURE NO. 016-0137
	CHECKED - MAI, JMG	REVISED -		SHEET NO. SS65 OF SS129 SHEETS
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1015
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cant-SS208-SignStruct.dgn

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FOR INFORMATION ONLY

REINFORCEMENT BAR SCHEDULE

STRUCTURE	MARK	NUMBER	SIZE	LENGTH	TYPE
PIER No. 20	h20-3(E)	26	#5	31'-11"	
PIER No. 20	u21(E)	12	#5	5'-3"	
PIER No. 20	u22(E)	33	#5	5'-4"	
PIER No. 20	v20-2(E)	66	#5	10'-9"	
PIER No. 23	h23-1(E)	21	#5	7'-4"	
PIER No. 23	h23-2(E)	3	#5	13'-4"	
PIER No. 23	h23-3(E)	3	#5	6'-5"	
PIER No. 23	h23-4(E)	3	#5	11'-6"	
PIER No. 23	h23-5(E)	6	#5	6'-8"	
PIER No. 23	h23-6(E)	3	#5	8'-6"	
PIER No. 23	u23(E)	101	#4	2'-3"	
PIER No. 24	h24-1(E)	6	#5	14'-0"	
PIER No. 24	h24-2(E)	6	#5	40'-8"	
PIER No. 24	h24-3(E)	6	#5	25'-6"	
PIER No. 24	h24-5(E)	6	#5	31'-2"	
PIER No. 24	n(E)	32	#8	1'-6"	
PIER No. 24	p24-1(E)	4	#9	12'-10"	
PIER No. 24	p24-2(E)	4	#9	20'-0"	
PIER No. 24	u19(E)	32	#4	8'-4"	
PIER No. 24	u20(E)	79	#4	4'-6"	
PIER No. 24	u24(E)	2	#4	6'-3"	
PIER No. 24	u25(E)	6	#4	4'-1 1/2"	
PIER No. 24	u26(E)	2	#4	4'-0"	

REINFORCEMENT BAR SCHEDULE

STRUCTURE	MARK	NUMBER	SIZE	LENGTH	TYPE
ABUTMENT	b(E)	2	#9	15'-2"	
ABUTMENT	b1(E)	2	#5	15'-2"	
ABUTMENT	b2(E)	6	#8	0'-8"	
ABUTMENT	b3(E)	6	#5	0'-8"	
ABUTMENT	d(E)	25	#4	5'-0"	
ABUTMENT	d2(E)	25	#5	5'-0"	
ABUTMENT	d3(E)	103	#5	2'-3"	
ABUTMENT	e(E)	8	#4	15'-2"	
ABUTMENT	e1(E)	24	#4	0'-8"	
ABUTMENT	hA-1(E)	12	#5	28'-9"	
ABUTMENT	hA-2(E)	24	#5	25'-4"	
ABUTMENT	hA-3(E)	12	#5	17'-8"	
ABUTMENT	hA-4(E)	12	#5	23'-10"	
ABUTMENT	hA-5(E)	18	#5	31'-10"	
ABUTMENT	hA-6(E)	2	#5	26'-6"	
ABUTMENT	hA-7(E)	4	#6	13'-0"	
ABUTMENT	hA-8(E)	2	#6	10'-8"	
ABUTMENT	hA-9(E)	2	#6	8'-4"	
ABUTMENT	hA-10(E)	2	#6	6'-1"	
ABUTMENT	hA-11(E)	2	#6	3'-9"	
ABUTMENT	hA-12(E)	2	#6	2'-10"	
ABUTMENT	pA-1(E)	18	#9	27'-6"	
ABUTMENT	pA-2(E)	6	#9	26'-6"	
ABUTMENT	hA-13(E)	2	#6	14'-0"	
ABUTMENT	u29(E)	82	#5	5'-2"	
ABUTMENT	u30(E)	6	#5	4'-5"	
ABUTMENT	u31(E)	28	#5	3'-8"	
ABUTMENT	u32(E)	50	#5	3'-2"	
ABUTMENT	u34(E)	25	#5	2'-8"	
ABUTMENT	u35(E)	14	#5	2'-2"	
ABUTMENT	u36(E)	24	#5	4'-2"	
ABUTMENT	u37(E)	50	#5	8'-0"	
ABUTMENT	u39(E)	25	#5	7'-8"	
ABUTMENT	u40(E)	14	#5	6'-10"	
ABUTMENT	u42(E)	6	#4	3'-1"	
ABUTMENT	u43(E)	27	#4	5'-1"	
ABUTMENT	u44(E)	12	#6	5'-1"	
ABUTMENT	vA-1(E)	116	#5	3'-0"	
ABUTMENT	vA-2(E)	82	#5	5'-6"	
ABUTMENT	vA-3(E)	6	#5	4'-9"	
ABUTMENT	vA-4(E)	28	#5	4'-8"	
ABUTMENT	vA-5(E)	14	#4	4'-2"	
ABUTMENT	vA-6(E)	6	#4	3'-0"	
ABUTMENT	vA-7(E)	6	#4	1'-10"	

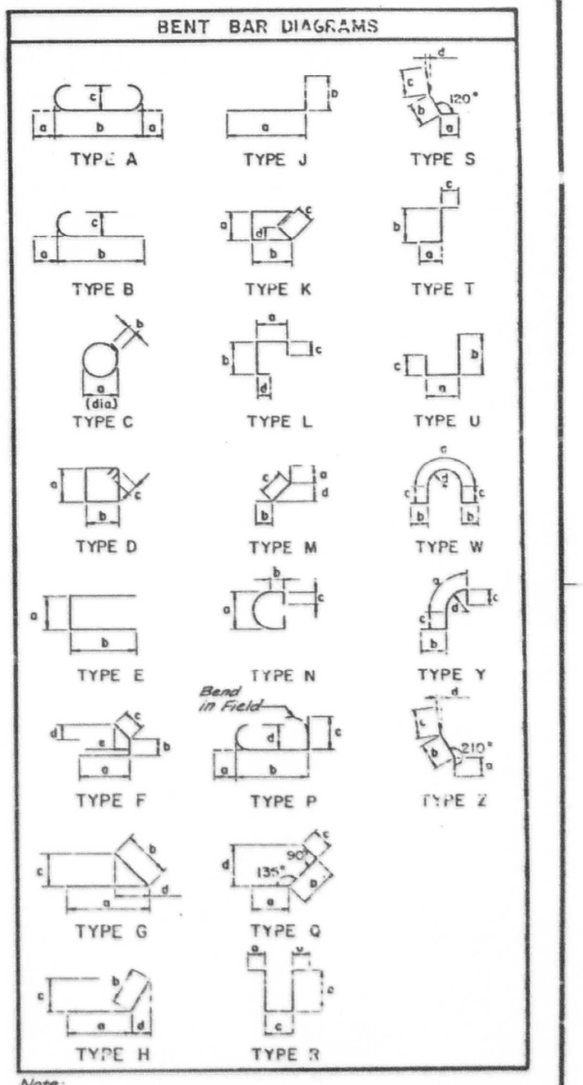
BENT BAR DETAILS

TYPE	MARK	a	b	c	d
	s5(E)	3'-5"	1'-4"		
	s12(E)	3'-2"	1'-4"		
	s1(E)	3'-9"	2'-7"	0'-5 1/2"	
	s5(E)	3'-9"	2'-2"	0'-5 1/2"	
	s11(E)	4'-2"	2'-2"	0'-5 1/2"	
	s13(E)	3'-9"	3'-8"	0'-6 1/2"	
	s15(E)	3'-9"	2'-5"	0'-5 1/2"	
	u1(E)	2'-7"	3'-9"		
	u2(E)	3'-11"	2'-0"		
	u3(E)	3'-8"	2'-0"		
	u4(E)	4'-0"	1'-3"		
	u5(E)	2'-2"	3'-9"		
	u6(E)	3'-1"	2'-0"		
	u7(E)	3'-2"	1'-3"		
	u8(E)	2'-5"	3'-9"		
	u9(E)	3'-8"	1'-3"		
	u10(E)	3'-7"	2'-0"		
	u13(E)	1'-5"	1'-9"		
	u14(E)	2'-2"	'-2"		
	u15(E)	4'-1"	2'-0"		
	u19(E)	2'-2"	3'-1"		
	u20(E)	2'-2"	1'-2"		
	u21(E)	2'-1"	1'-7"		
	u22(E)	2'-2"	1'-7"		
	u23(E)	1'-5"	0'-5"		
	u42(E)	1'-1"	1'-0"		
	u43(E)	1'-1"	2'-0"		
	u26(E)	2'-0"	2'-0"	1'-5"	
	u32(E)	2'-6"	0'-8"	0'-5 3/4"	
	u34(E)	2'-0"	0'-8"	0'-5 3/4"	
	u35(E)	1'-6"	0'-8"	0'-5 3/4"	
	u11(E)	2'-6"	1'-3"		
	u29(E)	4'-0"	1'-2"		
	u30(E)	3'-3"	1'-2"		
	u31(E)	2'-6"	1'-2"		
	u36(E)	3'-8"	0'-6"		
	u44(E)	4'-0"	1'-1"		
	s2(E)	2'-8"	0'-8"	0'-6"	
	s7(E)	3'-2"	0'-8"	0'-6"	
	u24(E)	2'-1"	1'-0"	0'-6"	
	s3(E)	6'-6"	2'-8"	0'-6"	0'-3 1/2"
	s4(E)	0'-6"	2'-7"	0'-6"	0'-3 1/2"
	s8(E)	0'-6"	3'-2"	0'-6"	0'-3 1/2"
	s9(E)	6'-6"	3'-1"	0'-6"	0'-3 1/2"
	u25(E)	2'-0"	0'-3 1/2"	1'-10"	1'-3 1/2"
	u37(E)	3'-3"	2'-10"	1'-6"	
	u39(E)	3'-6"	3'-6"	1'-6"	
	u40(E)	3'-0"	1'-10"	1'-4"	
	d2(E)	2'-3"	1'-1"	1'-2"	0'-2 1/2"

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	-R	COOK	65	18
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

R 1985-077 BR

BENT BAR DIAGRAMS



Note:
All bar dimensions are out to out.

SHEET A18 OF A65

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077BR COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-0137
PIER BAR SCHEDULE

Scale: NONE
Date: AUGUST 1988
Drawn By: CAD/AV
Checked By: M.E.M

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_II\000_CADD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cont-SS208-SignStruct.dgn
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HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -
	CHECKED - MAI, JMG	REVISED -
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
STRUCTURE NO. 016-0137
SHEET NO. SS66 OF SS129 SHEETS

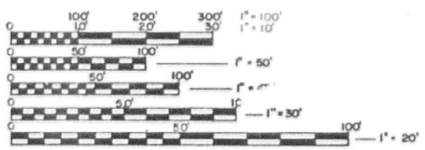
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1016
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

INDEX OF VOLUMES

VOL. NO.	DESCRIPTION	NO. OF SHEETS
	CIVIL	
1.	ROADWAY PLAN & GENERAL SHEETS	127
2.	MAINTENANCE OF TRAFFIC & ROADWAY CROSS SECTIONS	45
	STRUCTURAL	
3.	STRUCTURE NO. 016-0137 (MAXWELL ST. TO 15TH ST.)	65
4.	STRUCTURE NO. 016-1110 (15TH ST. TO 16TH ST.)	33
5.	STRUCTURE NO. 016-1111 (16TH ST. TO 18TH ST.)	51
6.	STRUCTURE NO. 016-1112 (18TH ST. TO CERMAK RD.)	91
7.	STRUCTURE NO. 016-1113 (CERMAK RD. TO CHICAGO RIVER)	88
8.	STRUCTURE NO. 016-1114 & 1070 (CHICAGO RIVER BRIDGE)	16
9.	STRUCTURE NO. 016-1115 (I-55 INTERCHANGE-MAINLINE)	101
10.	STRUCTURE NO. 016-1047 & 1140 (I-55 INTERCHANGE-RAMPS)	53
11.	STRUCTURE NO. 016-1116 (CANAL ST. TO STEWART AVE.)	21
12.	STRUCTURE NO. 016-1117 & 1118 (STEWART AVE. TO 28TH PL.)	98
13.	MISCELLANEOUS VIADUCT DETAILS	88
	ELECTRICAL	
14	ROADWAY LIGHTING & SURVEILLANCE	49
	TOTAL	926

DESIGN DESIGNATION



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. 80065

COUNTY COOK SECTION 1985-077 R ROUTE I-90/94 (DAN RYAN EXPRESSWAY)

CONSULTANT SECTION ENGINEER: K. HEWSTREET / J. KOS 312 705-4189

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

SCALES: PLAN 1 INCH = * FEET; PROFILE HORIZ. 1 INCH = * FEET; PROFILE VERT. 1 INCH = * FEET; CROSS SECTIONS 1 INCH = * FEET HORIZONTAL, 1 INCH = * FEET VERTICAL. * SEE PLANS

VOLUME NO. 7

F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)

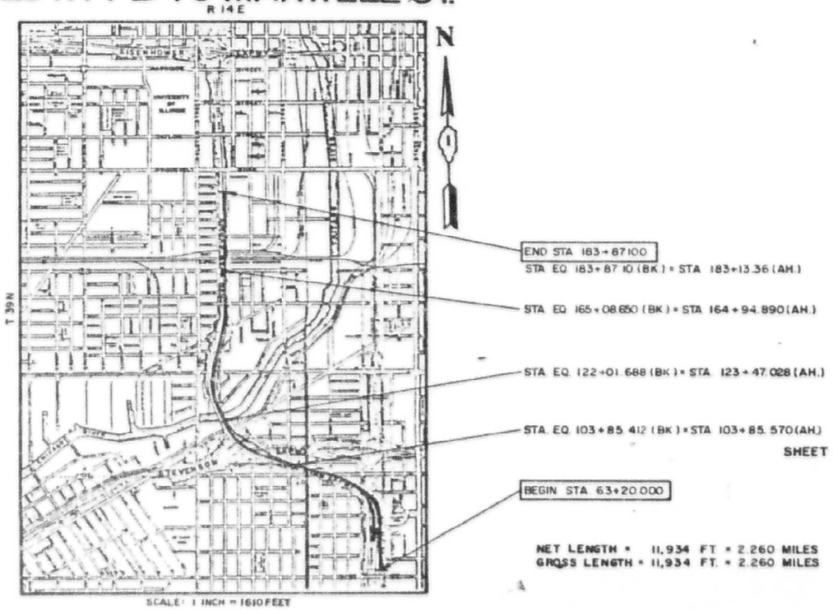
SECTION 1985-077 B-R

~~PROJECT~~

COOK COUNTY

~~C-91-430-85~~

NORTHBOUND MAINLINE RECONSTRUCTION
28TH PL TO MAXWELL ST.



END STA 183+67.100
STA EQ 183+87.10 (BK) = STA 183+13.36 (AH.)

STA EQ 165+08.650 (BK) = STA 164+94.890 (AH.)

STA EQ 122+01.688 (BK) = STA 123+47.028 (AH.)

STA EQ 103+85.412 (BK) = STA 103+85.570 (AH.)

BEGIN STA 63+20.000

NET LENGTH = 11,934 FT. = 2.260 MILES
GROSS LENGTH = 11,934 FT. = 2.260 MILES

SHEET E1 OF 88

12-1-88

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	88	1

*1985-077 B-R
P-91-179-84

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED _____ 19__
DISTRICT ENGINEER
EXAMINED _____ 19__
ENGINEER OF PLANS AND CONTRACTS
PASSED _____ 19__
ENGINEER OF RESEARCH
APPROVED _____ 19__
DIRECTOR DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

DIVISION ENGINEER _____ DATE _____

FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	88	2
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 1985-077 B-R

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE WERE OBTAINED FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL 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 WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

CALCULATED WEIGHT OF STRUCTURAL STEEL = M-183 = 830860 LBS. (TO BE ERECTED)

THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESSES SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS INCLUDE TENSION FLANGES AND WEBS OF PLATE GIRDERS, WIDE FLANGE BEAMS AND ALL SPLICE PLATES MATERIAL OF THE WELDED PLATE GIRDERS AND ARE DESIGNATED ON THE PLANS BY "N.T.R.".

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

REINFORCEMENT BARS NOTED (E) SHALL BE EPOXY COATED.

REINFORCEMENT BARS NOTED THUSLY 44 X 3 - #5 ETC. INDICATES 44 LINES OF BARS WITH 3 LENGTHS PER LINE.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE INSTALLING DIAPHRAGMS OR CROSS FRAMES OVER SUPPORTS.

FASTENERS SHALL CONFORM TO THE REQUIREMENT OF AASHTO M164. ALL FASTENERS SHALL BE 7/8" DIAMETER UNLESS OTHERWISE NOTED WITH 15/16" DIAMETER BOLT HOLES. BOLT HOLES SHALL BE DRILLED 1-1/16" DIAMETER FOR 7/8" DIAMETER BOLTS AT CROSS FRAME CONNECTIONS. DIAPHRAGMS SHALL BE CONNECTED WITH 3/4" DIAMETER BOLTS AND BOLT HOLES SHALL BE PREDRILLED TO 15/16" DIAMETER. HARDENED WASHERS SHALL BE USED FOR ALL CROSS FRAME AND DIAPHRAGM CONNECTION.

EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4" DIAMETER X 12" HOOKED BOLTS.

ROADWAY EXPANSION GUARDS SHALL BE ASSEMBLED IN THE PROPER POSITION WITH THE ENDS IN PLACE AND SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION.

THE ROADWAY EXPANSION PLATES SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04(1) OF THE STANDARD SPECIFICATIONS.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARINGS. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE BE PROVIDED AND PLACED AS DETAILED).

STUD SHEAR CONNECTORS

STUD SHEAR CONNECTORS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M169 COLD DRAWN BARS, GRADES 1015, 1018 OR 1020 EITHER SEMI-OR FULLY-KILLED, GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED. STUD SHEAR CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 507.08(m). MATERIAL SHALL CONFORM TO ARTICLE 710.38 OF STD. SPECS.

NOTES FOR NEW CONCRETE PIERS

A) THE CONTRACTOR SHALL SPACE REINFORCEMENT BARS IN PIER CAP TO MISS ANCHOR BOLTS.

B) ALL EXPOSED EDGES TO HAVE STANDARD 3/4 INCH CHAMFERS, EXCEPT NOTED OTHERWISE.

FIELD CLEANING AND PAINTING

1) EXISTING STRUCTURAL STEEL SURFACES IN CONTACT WITH NEW STRUCTURAL STEEL SHALL BE FIELD CLEANED IN ACCORDANCE WITH ARTICLE 509.06(b) METHOD III. SURFACES BLAST CLEANED TO RECEIVE NEW STRUCTURAL STEEL SHALL BE PAINTED WITH ONE COAT LEAD AND CHROMATE FREE ALKYD PAINT PRIMER. CONTACT SURFACES SHALL NOT BE PAINTED.

2) EXISTING TOP FLANGE SURFACES IN CONTACT WITH NEW CONCRETE SHALL BE CLEANED IN ACCORDANCE WITH ARTICLE 509.06(b), METHOD III.

3) SURFACES TO RECEIVE STUD SHEAR CONNECTORS SHALL BE CLEANED IN ACCORDANCE WITH ARTICLE 509.06(b), METHOD II AND ARTICLE 507.08(m)(2).

4) NEW STRUCTURAL STEEL SHALL BE FIELD SPOT PAINTED WITH ZINC SILICATE PRIMER APPLIED ON HEADS OF FIELD BOLTS, FIELD WELDS, AND ALL AREAS WHERE PAINT HAS BEEN REMOVED OR DAMAGED.

TOTAL BILL OF MATERIALS

	ITEM	UNIT	TOTAL
	* MECHANICAL SPLICERS	EACH	556
	* CONCRETE REMOVAL	CU. YD.	1079.3
	* CONCRETE REMOVAL (SPECIAL)	CU. YD.	134
⚠	* EXPANSION BOLTS - 3/4 INCH DIAMETER	EACH	6
	* REMOVAL OF EXISTING CONCRETE DECK	L. SUM	.151
	* STRUCTURE EXCAVATION	CU. YD.	215
	PREFORMED JOINT SEAL - 2 1/2 INCHES	LIN. FT.	209
	PREFORMED JOINT SEAL - 4 INCHES	LIN. FT.	117
	* NEOPRENE EXPANSION JOINT - 2 INCHES	LIN. FT.	79
	* NEOPRENE EXPANSION JOINT - 2 1/2 INCHES	LIN. FT.	281
	* NEOPRENE EXPANSION JOINT - 4 INCHES	LIN. FT.	102
	**PROTECTIVE COAT	SQ. YD.	2560
	* CLASS "X" CONCRETE	CU. YD.	1427.1
	* CLASS "X" CONCRETE (SUPERSTRUCTURE)	CU. YD.	4608.7
⚠	* ERECTING STRUCTURAL STEEL	L. SUM	.161
	STUD SHEAR CONNECTORS	EACH	55300
	* STRUCTURAL STEEL REMOVAL	L. SUM	.09
	* REINFORCEMENT BARS (EPOXY COATED)	POUND	156740
	* PROTECTIVE SHIELD	SQ. YD.	16040
	* REINFORCED NEOPRENE EXPANSION JOINT TREATMENT	LIN. FT.	136
	* DOWNSPOUT DRAINAGE SYSTEM	LIN. FT.	670
	EPOXY CRACK SEALING	LIN. FT.	31
	* FIELD DRILLING 1" ø HOLES IN EXISTING GIRDER WEBS	EACH	20
	* PROTECTIVE SURFACE TREATMENT	SQ. FT.	74140
⚠	* FORMED CONCRETE REPAIR (DEPTH ≤ 5 INCHES)	SQ. FT.	1844
	* NAME PLATE	EACH	1
	* RELOCATING EXISTING STEEL STRINGERS	POUND	33780
	* FATIGUE RETROFIT TYPE I REPAIR	POUND	509
	* FATIGUE RETROFIT TYPE II REPAIR	POUND	135
	* INSTALLING BRIDGE SCUPPERS	EACH	17
⚠	* TEMPORARY SUPPORT SYSTEM (HEIGHT ≤ 30FT)	EACH	0
⚠	* " " " (HEIGHT > 30FT)	EACH	11
	* STRUCT FIELD INSPECTION - TYPE I CONN	EACH	14
***	TEMPORARY STRUCTURAL STEEL SUPPORT TOWERS	POUND	223,650
	* DRILL AND GROUT #9 COL BARS	EACH	25
	* DRILL AND GROUT #11 COL BARS	EACH	15
	* REMOVAL OF EXISTING FOUNDATION	CU. YD.	18
⚠	* FORMED CONCRETE REPAIR (DEPTH > 5 INCHES)	SQ. FT.	2766

** QUANTITY DOES NOT INCLUDE BRIDGE DECK SURFACE
* SPECIAL PROVISIONS
NOTE: FINGER JOINTS INCLUDED IN "ERECTING STRUCTURAL STEEL"

*** See sheet 74 & 75 in Volume 13 for details

LOAD FOR TEMPORARY SUPPORT		
PIER NO.	D.L. REACTION S.BRG. LINE	D.L. REACTION N.BRG. LINE
1		116 K
3	87 K	87 K
4	11 K	11 K
7	105 K	115 K
8	115 K	126 K
C3	72 K	76 K
C4	77 K	99 K
C6	151 K	53 K
C7	53 K	19 K
C8	65 K	—
C10	19 K	24 K
C13	24 K	—

NOTE:
D.L. REACTION INCLUDES WEIGHT OF STEEL BEAM ONLY.

STATION BUILT 1988 BY STATE OF ILLINOIS
F.A. PROJ. IDR-ACIR443(270)
LOADING HS 20
STR. NO. 016-1113

NAME PLATE
(See Std. 2113)

INDEX

SHEET E2 OF 88

REVISIONS	
Name	Date

⚠ 12-1-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077-B-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113
GENERAL NOTE, INDEX AND BILL OF MATERIAL
Scale: NONE Drawn By: J.R
Date: AUGUST, 1988 Checked By: M.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS STRCUTURE NO. 016-1113
	CHECKED - MAI, JMG	REVISED -		
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		SHEET NO. SS68 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1018
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 AmericasTransportation\60269938 CirclePhase_II\000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-Cant-SS208-SignStruct.dgn

11:22:08 AM

FOR INFORMATION ONLY

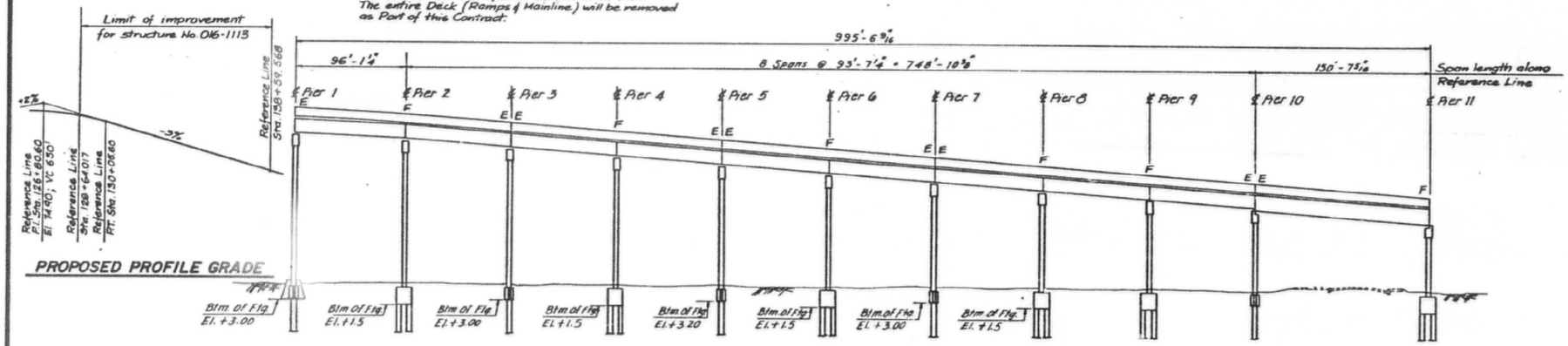
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	88	3
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 1985-077 B-R

Bench Mark:
TBM #49 North NE Flange bolt on hydrant on NW corner of 27th St. and Emerald St. Elev. 13.59..

EXISTING STRUCTURE

Structure No. 016-1113 is part of the Dan Ryan Expressway Viaduct. The superstructure is Series of simple and continuous Spans Welded plate Girders. The substructure consists of multiple Column Concrete piers supported on concrete caissons. The Structure was built in 1961 and opened to traffic in 1962. The entire Deck (Ramps & Mainline) will be removed as Part of this Contract.



DESIGN STRESSES

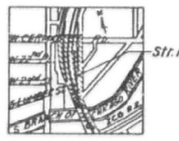
New Construction
- f'c = 3500 PSI
- fc = 1400 PSI
- fy = 60,000 PSI
- fs = 20,000 PSI Str. Steel (M-183)
- Working Stress Design Method
- Allowable Bearing Pressure on Rock = 60 Tons/Sq. ft.

Existing Construction
- f'c = 3500 PSI
- fc = 1,400 PSI W/O Earth Pressure
- fc = 1,000 PSI W/Earth Pressure
- V = 75 PSI Max. Shear in Footings
- Fs = 18,000 PSI (Str. Shell)
- Bed rock Bearings for Drilled Caisson = 60 Tons/Sq. Ft
- fy = 40,000 PSI (Reinforcement)

Loading HS 20-44 and Alt

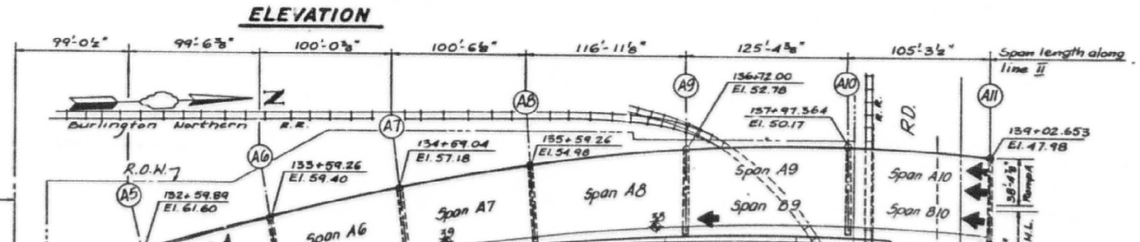
Design Specification: AASHTO (1983) and interims 1984 thru 1987

LEGEND
- Indicates Existing Soil Borings, SRS
- Proposed pier Widening, not part of this Contract.



LOCATION PLAN

ELEVATION



Elevations are Profile Grade Line elevations.

APPROVED FOR STRUCTURE - ADEQUACY ONLY

REVISIONS	
Name	Date

SHEET E3 OF 88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 B-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113
GENERAL PLAN

Scale: NONE
Date: AUGUST, 1988
Drawn By: J.R.
Checked By: M.M./T.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cant-SS208-SignStruct.dgn
11:22:15 AM

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	
		CHECKED - MAI, JMG	REVISED -	
	PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -	
	PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

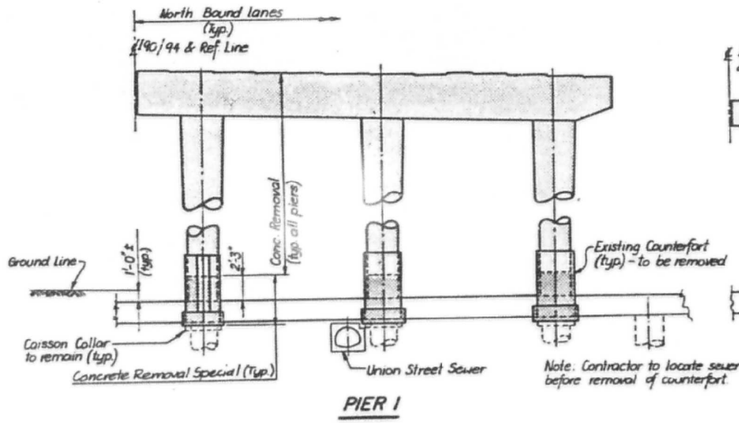
EXISTING RECORD DRAWINGS
STRCUTURE NO. 016-1113
SHEET NO. SS69 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1019
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	%	COOK	88	4
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 985-077 B-R



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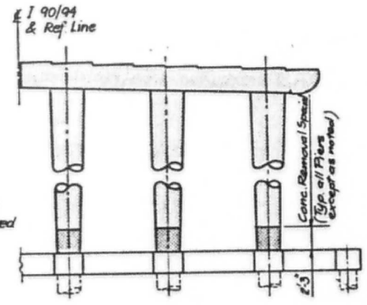
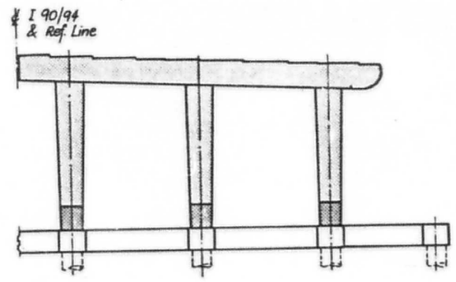


PIER 3



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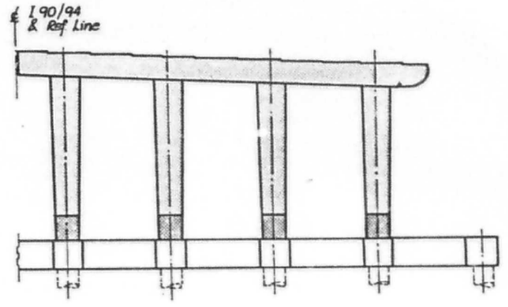

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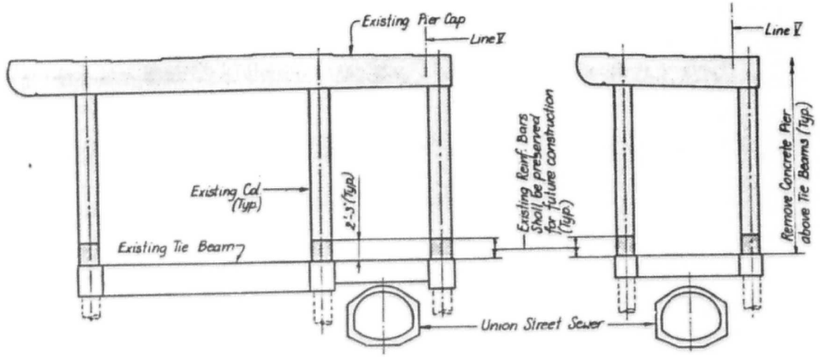
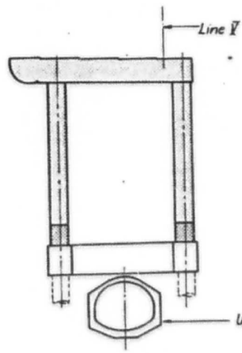


PIER C6

PIER C7



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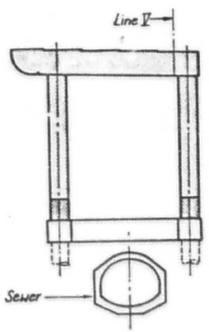

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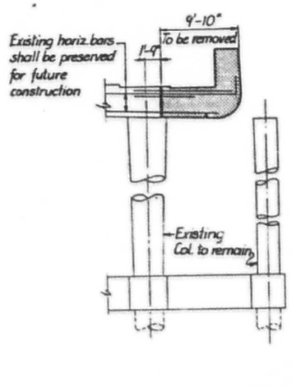

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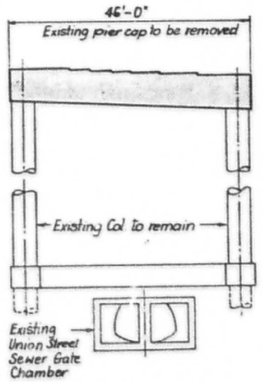

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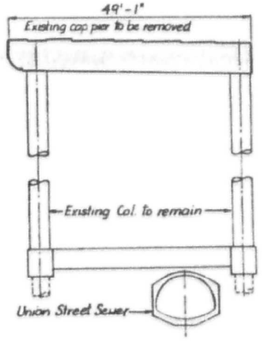

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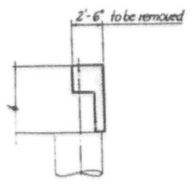

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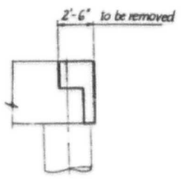

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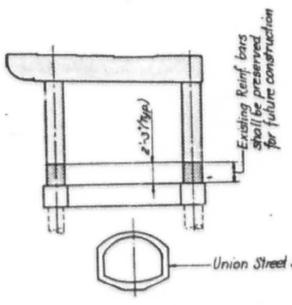


PIER C13

- CONCRETE REMOVAL
- CONCRETE REMOVAL SPECIAL

BILL OF MATERIAL		
ITEM	UNIT	ALL PIERS
Concrete Removal	Cu. Yds.	1079.3
Concrete Removal Special	Cu. Yds.	134.0
Structural Excavation	Cu. Yds.	213.0

SHEET E 4 OF 88

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 B-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113
PIERS REMOVAL PLAN (N.B.)

Scale: NONE
Date: AUGUST, 1988
Drawn By: D.M.T.S.
Checked By: M.M.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cam-SS208-SignStruct.dgn
11:22:23 AM

HBM ENGINEERING GROUP, LLC

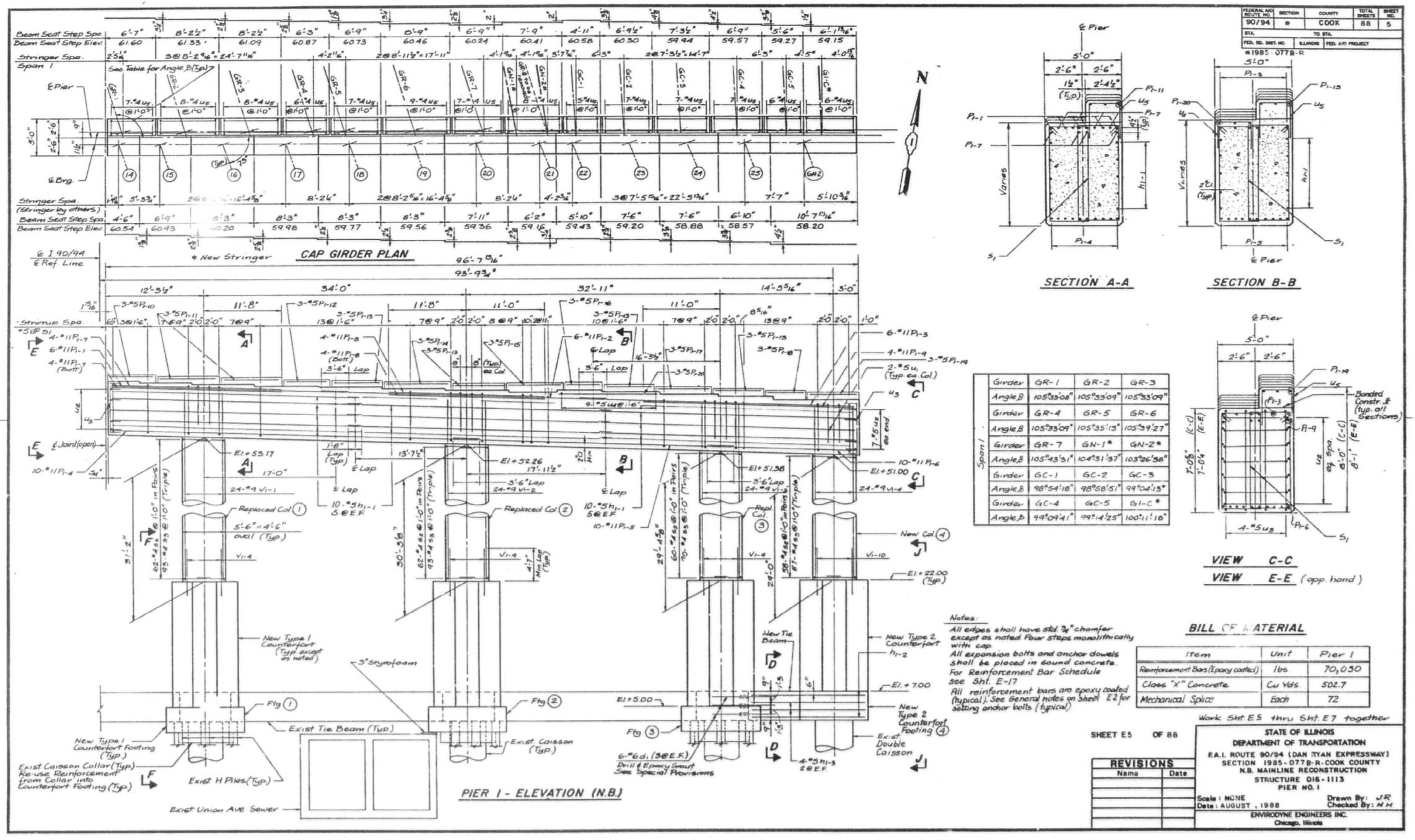
USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -
	CHECKED - MAI, JMG	REVISED -
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
STRCUTURE NO. 016-1113
SHEET NO. SS70 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1020
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



Girder	GR-1	GR-2	GR-3
Angle β	105°33'08"	105°33'09"	105°33'09"
Girder	GR-4	GR-5	GR-6
Angle β	105°33'09"	105°35'13"	105°39'27"
Girder	GR-7	GN-1*	GN-2*
Angle β	105°43'31"	104°31'37"	103°26'58"
Girder	GC-1	GC-2	GC-3
Angle β	98°54'18"	98°58'51"	99°04'13"
Girder	GC-4	GC-5	G1-C*
Angle β	99°09'41"	99°14'23"	100°11'16"

Span I

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	88	5
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 1985-077B-R

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	
	CHECKED - MAI, JMG	REVISED -	
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -	
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -	

HBM ENGINEERING GROUP, LLC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
STRCUTURE NO. 016-1113
SHEET NO. SS71 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1021
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomnfinc.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cant-SS208-SignStruct.dgn

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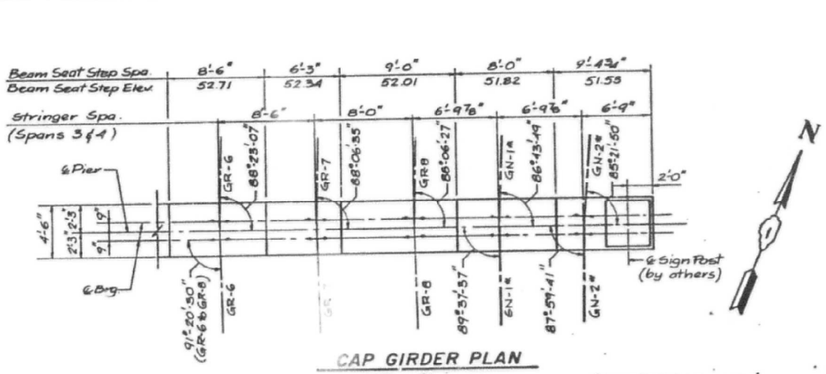
FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	88	9
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 1985-077 B-R



BILL OF MATERIAL

Item	Unit	Pier 4
Reinforcement Bars (Epoxy coated)	lbs.	6480
Class "X" Concrete	Cu. Yds.	22.6

See Sht. E5 for Notes

SHEET E9 OF 88

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 B-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113
PIER NO. 4
Scale: NONE
Date: AUGUST, 1988
Drawn By: J.R.
Checked By: M.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS STRCUTURE NO. 016-1113	F.A.I. RTE. 90/94/290 | SECTION 2015-019R | COUNTY COOK | TOTAL SHEETS 2155 | SHEET NO. 1022
	CHECKED - MAI, JMG	REVISED -			CONTRACT NO. 62A76
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		SHEET NO. SS72 OF SS129 SHEETS	ILLINOIS | FED. AID PROJECT
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -			

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Cont-SS208-SignStruct.dgn

11:22:37 AM

FOR INFORMATION ONLY

REINFORCEMENT BAR SCHEDULE

STRUCTURE	MARK	NUMBER	SIZE	LENGTH	TYPE
PIER 1	d1(E)	6	#6	3'-0"	
PIER 1	d1-1(E)	36	#11	14'-1"	
PIER 1	d1-2(E)	114	#9	9'-0"	
PIER 1	d1-3(E)	48	#9	9'-6"	
PIER 1	d1-4(E)	12	#11	14'-7"	
PIER 1	h1-1(E)	30	#5	33'-4"	
PIER 1	h1-2(E)	6	#6	15'-0"	
PIER 1	h1-3(E)	4	#5	15'-0"	
PIER 1	h1-4(E)	256	#4	4'-10"	
PIER 1	h1-5(E)	96	#5	12'-8"	
PIER 1	h1-6(E)	32	#5	11'-8"	
PIER 1	n1-1(E)	24	#9	8'-5"	
PIER 1	p1-1(E)	6	#11	30'-10"	
PIER 1	p1-2(E)	6	#11	36'-11"	
PIER 1	p1-3(E)	6	#11	35'-6"	
PIER 1	p1-4(E)	10	#11	47'-10"	
PIER 1	p1-5(E)	10	#11	36'-5"	
PIER 1	p1-6(E)	10	#11	19'-0"	
PIER 1	p1-7(E)	8	#11	23'-9"	
PIER 1	p1-8(E)	8	#11	22'-6"	
PIER 1	p1-9(E)	4	#11	28'-3"	
PIER 1	p1-10(E)	3	#5	6'-1"	
PIER 1	p1-11(E)	6	#5	7'-10"	
PIER 1	p1-12(E)	3	#5	5'-11"	
PIER 1	p1-13(E)	12	#5	6'-5"	
PIER 1	p1-14(E)	3	#5	8'-5"	
PIER 1	p1-15(E)	3	#5	7'-5"	
PIER 1	p1-16(E)	3	#5	4'-7"	
PIER 1	p1-17(E)	3	#5	6'-11"	
PIER 1	p1-18(E)	3	#5	5'-2"	
PIER 1	p1-19(E)	3	#5	5'-9"	
PIER 1	p1-20(E)	3	#5	13'-0"	
PIER 1	p1-21(E)	18	#11	19'-8"	
PIER 1	p1-22(E)	64	#9	12'-0"	
PIER 1	p1-23(E)	54	#7	9'-8"	
PIER 1	p1-24(E)	24	#9	21'-0"	
PIER 1	p1-25(E)	18	#7	18'-8"	
PIER 1	s1(E)	168	#5	19'-9"	C
PIER 1	s2(E)	306	#4	9'-10"	C
PIER 1	s3(E)	363	#4	5'-4"	C
PIER 1	s31(E)	46	#5	18'-11"	
PIER 1	s32(E)	128	#5	22'-7"	
PIER 1	s33(E)	7	#4	11'-5"	
PIER 1	u1(E)	8	#5	17'-8"	
PIER 1	u2(E)	14	#5	7'-2"	
PIER 1	u3(E)	8	#5	9'-2"	
PIER 1	u4(E)	9	#5	4'-8"	
PIER 1	u5(E)	98	#4	6'-8"	
PIER 1	u23(E)	9	#9	23'-11"	
PIER 1	u24(E)	4	#6	26'-2"	
PIER 1	v1-1(E)	24	#9	37'-10"	
PIER 1	v1-2(E)	24	#9	37'-0"	
PIER 1	v1-3(E)	24	#9	36'-3"	
PIER 1	v1-4(E)	24	#9	35'-11"	
PIER 1	v1-5(E)	12	#9	14'-7"	
PIER 1	v1-6(E)	78	#9	16'-10"	
PIER 1	v1-7(E)	36	#11	18'-4"	
PIER 1	v1-8(E)	34	#9	14'-10"	
PIER 1	v1-9(E)	72	#9	17'-4"	
PIER 1	v1-10(E)	24	#9	19'-7"	
PIER 1	v1-11(E)	12	#11	16'-3"	
PIER 1	v1-12(E)	4	#9	4'-7"	
PIER 1	v1-13(E)	4	#9	8'-7"	
PIER 1	v1-14(E)	4	#9	12'-7"	
PIER 1	v1-15(E)	12	#9	6'-7"	
PIER 1	v1-16(E)	12	#9	10'-7"	
PIER 1	u35(E)	12	#5	12'-4"	
PIER 3	h3-1(E)	10	#5	36'-0"	
PIER 3	h3-2(E)	10	#5	28'-1"	
PIER 3	p3-1(E)	6	#11	39'-5"	
PIER 3	p3-2(E)	6	#11	29'-0"	
PIER 3	p3-3(E)	9	#9	29'-6"	
PIER 3	p3-4(E)	9	#9	38'-7"	
PIER 3	p3-5(E)	3	#11	15'-4"	
PIER 3	p3-6(E)	3	#11	24'-2"	
PIER 3	s4(E)	344	#4	8'-1"	C

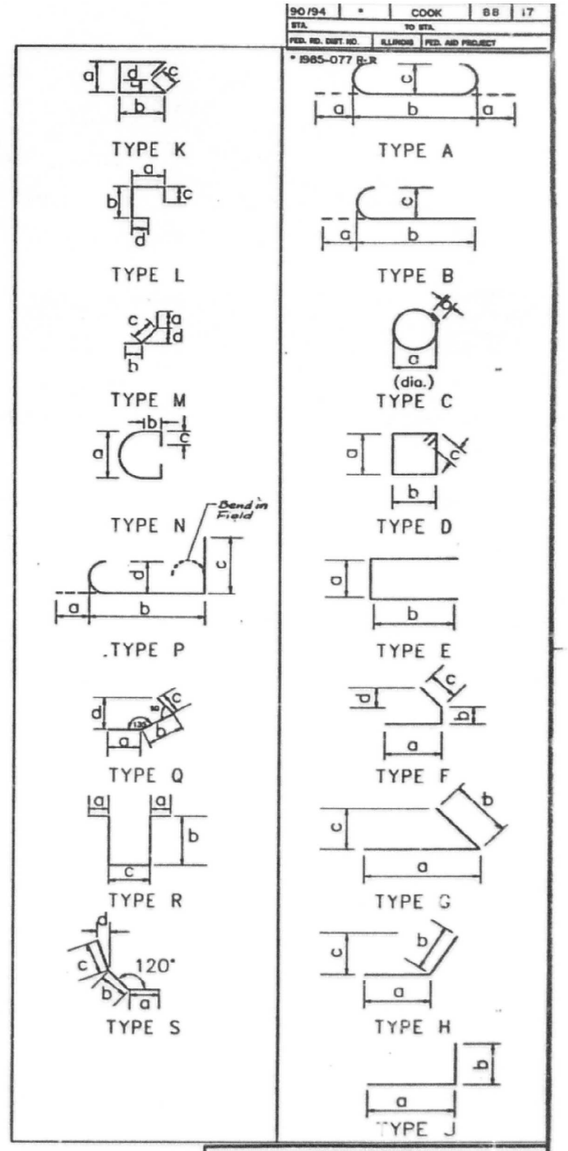
REINFORCEMENT BAR SCHEDULE

STRUCTURE	MARK	NUMBER	SIZE	LENGTH	TYPE
PIER 3	s5(E)	346	#4	4'-11"	C
PIER 3	s20(E)	173	#4	6" 0"	
PIER 3	s40(E)	102	#5	15'-5"	
PIER 3	u2(E)	8	#5	7'-2"	
PIER 3	u8(E)	8	#5	11'-2"	
PIER 3	u19(E)	10	#5	6'-8"	
PIER 3	v3-1(E)	20	#9	47'-4"	
PIER 3	v3-2(E)	20	#9	46'-7"	
PIER 3	v3-3(E)	20	#9	45'-10"	
PIER 3	v3-4(E)	20	#9	45'-3"	
PIER 4	p4-1(E)	26	#11	25'-2"	
PIER 4	p4-2(E)	11	#9	26'-2"	
PIER 4	s25(E)	26	#4	11'-3"	
PIER 4	s41(E)	34	#5	15'-5"	
PIER 4	s42(E)	34	#6	15'-5"	
PIER 4	u12(E)	4	#5	6'-11"	
PIER 4	u8(E)	2	#5	11'-2"	
PIER 4	u13(E)	6	#5	6'-8"	
PIER 4	v4-1(E)	24	#11	8'-9"	
PIER 4	u11(E)	10	#5	9'-10"	
PIER 7	h7-1(E)	6	#5	49'-6"	
PIER 7	h7-2(E)	6	#5	37'-2"	
PIER 7	p7-1(E)	6	#11	50'-0"	
PIER 7	p7-2(E)	6	#11	38'-6"	
PIER 7	p7-3(E)	6	#11	35'-10"	
PIER 7	p7-4(E)	10	#11	27'-11"	
PIER 7	p7-5(E)	6	#11	28'-3"	
PIER 7	p7-6(E)	6	#11	19'-2"	
PIER 7	p7-7(E)	6	#11	19'-0"	
PIER 7	p7-8(E)	6	#11	36'-0"	
PIER 7	p7-9(E)	4	#11	26'-7"	
PIER 7	p7-10(E)	4	#11	20'-10"	
PIER 7	s6(E)	248	#4	7'-3"	C
PIER 7	s7(E)	248	#4	4'-5"	C
PIER 7	s21(E)	124	#4	4'-6"	C
PIER 7	s24(E)	112	#5	16'-1"	
PIER 7	u7(E)	8	#5	10'-8"	
PIER 7	u10(E)	8	#5	7'-5"	
PIER 7	u16(E)	27	#5	6'-2"	
PIER 7	v7-1(E)	20	#11	36'-0"	
PIER 7	v7-2(E)	20	#11	35'-0"	
PIER 7	v7-3(E)	20	#11	34'-0"	
PIER 7	v7-4(E)	20	#9	33'-9"	
PIER 7	p7-11(E)	6	#5	11'-9"	
PIER 7	p7-12(E)	6	#5	4'-6"	
PIER 8	h8-1(E)	6	#5	49'-2"	
PIER 8	h8-2(E)	6	#5	46'-0"	
PIER 8	p8-1(E)	6	#10	40'-3"	
PIER 8	p8-2(E)	6	#10	22'-10"	
PIER 8	p8-3(E)	6	#10	37'-0"	
PIER 8	p8-4(E)	6	#10	46'-10"	
PIER 8	p8-5(E)	6	#10	50'-0"	
PIER 8	p8-6(E)	4	#10	19'-2"	
PIER 8	p8-7(E)	4	#10	16'-6"	
PIER 8	p8-8(E)	6	#5	11'-7"	
PIER 8	p8-9(E)	6	#5	3'-5"	
PIER 8	s4(E)	278	#4	8'-1"	C
PIER 8	s5(E)	278	#4	4'-11"	C
PIER 8	s12(E)	140	#5	15'-0"	
PIER 8	s20(E)	24	#4	5'-0"	
PIER 8	u8(E)	10	#5	11'-2"	
PIER 8	u 2(E)	8	#5	6'-11"	
PIER 8	u13(E)	26	#5	6'-8"	
PIER 8	v8-1(E)	24	#11	32'-8"	
PIER 8	v8-2(E)	24	#11	31'-10"	
PIER 8	v8-3(E)	24	#11	31'-2"	
PIER 8	v8-4(E)	24	#11	30'-3"	
PIER 8	v8-5(E)	20	#10	29'-4"	
PIER C3	hC3-1(E)	16	#6	16'-0"	
PIER C3	pC3-1(E)	8	#9	12'-4"	
PIER C3	pC3-2(E)	6	#9	45'-8"	
PIER C3	pC3-3(E)	30	#11	45'-8"	

BENT BAR DETAILS

TYPE	MARK	a	b	c	
	p1-21(E)	1'-7"	16'-6"	1'-2 1/4"	
	p1-22(E)	1'-3"	9'-6"	0'-11 1/4"	
	p1-24(E)	1'-3"	18'-6"	0'-11 1/4"	
	d1-1(E)	1'-7"	12'-6"	1'-2 1/4"	
	d1-2(E)	1'-3"	7'-9"	0'-11 1/4"	
	d1-3(E)	1'-3"	8'-3"	0'-11 1/4"	
	d1-4(E)	1'-7"	13'-0"	1'-2 1/4"	
	s25(E)	3'-2"	1'-4"		
	s26(E)	3'-8"	1'-4"		
	s1(E)	6'-8"	2'-9"	0'-5 1/2"	
	s12(E)	4'-8"	2'-7 1/2"	0'-5 1/2"	
	s17(E)	4'-2"	2'-2"	0'-5 1/2"	
	s24(E)	5'-2"	2'-5"	0'-5 1/2"	
	s28(E)	6'-9"	2'-8"	0'-5 1/2"	
	s31(E)	5'-4"	3'-8"	0'-5 1/2"	
	s32(E)	4'-2"	6'-8"	0'-5 1/2"	
	s33(E)	3'-8"	1'-8"	0'-4 1/2"	
	s34(E)	5'-5"	2'-4"	0'-5 1/2"	
	s35(E)	4'-2"	2'-5"	0'-5 1/2"	
	s36(E)	4'-5"	2'-3"	0'-5 1/2"	
	s37(E)	4'-10"	3'-8"	0'-5 1/2"	
	s38(E)	4'-4"	3'-8"	0'-5 1/2"	
	s39(E)	5'-9 1/2"	2'-5 1/2"	0'-5 1/2"	
	s40(E)	4'-8"	2'-7"	0'-5 1/2"	
	s41(E)	4'-5"	2'-7"	0'-5 1/2"	
	s42(E)	4'-5"	2'-7"	0'-5 1/2"	
	h1-4(E)	2'-10"	1'-0"		
	h1-5(E)	2'-6"	5'-0"		
	h1-6(E)	2'-8"	4'-6"		
	u1(E)	4'-8"	6'-6"		
	u2(E)	4'-8"	1'-3"		
	u3(E)	6'-8"	1'-3"		
	u4(E)	2'-2"	1'-3"		
	u5(E)	2'-0 1/2"	2'-4"		
	u7(E)	3'-8"	3'-6"		
	u8(E)	4'-2"	3'-6"		
	u10(E)	4'-11"	1'-3"		
	u11(E)	4'-2"	2'-10"		
	u12(E)	4'-5"	1'-3"		
	u13(E)	4'-2"	1'-3"		
	u16(E)	3'-8"	1'-3"		
	u17(E)	3'-11"	1'-3"		
	u23(E)	16'-7"	3'-8"		
	u24(E)	16'-8"	4'-9"		
	u19(E)	5'-8"	1'-3"		
	u27(E)	3'-11"	3'-6"		
	u28(E)	1'-8 1/2"	2'-0"		
	u29(E)	4'-8"	3'-6"		
	u31(E)	5'-9"	1'-3"		
	u33(E)	3'-8"	2'-0"		
	u34(E)	3'-8"	3'-0"		
	u35(E)	6'-9"	1'-3"		
	v1-7(E)	8'-0"	2'-2"		
	v1-11(E)	17'-4"	4'-10"		
	s2(E)	15'-3"	4'-4"		
	s4(E)	4'-2"	1'-0"	0'-11 1/2"	
	s6(E)	3'-8"	0'-8"	0'-6"	
	s3(E)	3'-2"	0'-8"	0'-6"	
	s5(E)	0'-6"	4'-2"	0'-8"	0'-4"
	s7(E)	0'-6"	3'-7"	0'-10"	0'-3 1/2"
	s20(E)	0'-6"	3'-1"	0'-10"	0'-3 1/2"
	s21(E)	0'-6"	3'-8"	0'-10"	0'-3 1/2"
			3'-2"	0'-10"	0'-3 1/2"

Note: All bars designated (E) shall be epoxy coated. Work shts E17 and E18 together.



90/94	*	COOK	88	17
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS	FED. AID PROJECT	

* 1985-077 B-R

SHEET E17 OF 88

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 BR COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113
BAR SCHEDULE

Scale :NONE — Drawn By: T.V./D.L.
Date : AUGUST, 1988 — Checked By: T.V.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-Cant-SS208-SignStruct.dgn
11:22:44 AM

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -		
	CHECKED - MAI, JMG	REVISED -		
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -		
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
STRCUTURE NO. 016-1113
SHEET NO. SS73 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1023
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

REINFORCEMENT BAR SCHEDULE

STRUCTURE	MARK	NUMBER	SIZE	LENGTH	TYPE
PIER C3	s28(E)	102	#5	19'-9"	
PIER C3	u2(E)	8	#5	7'-2"	
PIER C3	u28(E)	4	#5	11'-8"	
PIER C3	u34(E)	8	#5	9'-3"	
PIER C4	hC4-1(E)	12	#6	26'-10"	
PIER C4	pC4-1(E)	4	#10	18'-9"	
PIER C4	pC4-2(E)	16	#10	27'-8"	
PIER C4	C4-3(E)	4	#10	20'-2"	
PIER C4	pC4-4(E)	24	#11	44'-6"	
PIER C4	pC4-5(E)	8	#11	6'-6"	
PIER C4	pC4-6(E)	8	#11	7'-11"	
PIER C4	u8(E)	4	#5	11'-2"	
PIER C4	u13(E)	8	#5	6'-8"	
PIER C4	u29(E)	8	#5	8'-3"	
PIER C4	s39(E)	128	#5	17'-5"	
PIER C6	hC6-1(E)	12	#6	41'-9"	
PIER C6	hC6-2(E)	12	#6	50'-0"	
PIER C6	hC6-3(E)	4	#5	7'-0"	
PIER C6	hC6-4(E)	4	#5	16'-4"	
PIER C6	pC6-1(E)	10	#11	43'-8"	
PIER C6	pC6-2(E)	20	#11	31'-8"	
PIER C6	pC6-3(E)	10	#11	50'-0"	
PIER C6	pC6-4(E)	10	#11	26'-0"	
PIER C6	pC6-5(E)	10	#11	18'-5"	
PIER C6	pC6-6(E)	20	#11	48'-0"	
PIER C6	pC6-7(E)	10	#11	30'-7"	
PIER C6	s26(E)	99	#4	12'-10"	
PIER C6	s34(E)	196	#5	16'-11"	
PIER C6	u8(E)	28	#5	11'-2"	
PIER C6	u13(E)	10	#5	6'-8"	
PIER C6	u19(E)	8	#5	8'-2"	
PIER C6	vC6-1(E)	72	#11	35'-10"	
PIER C7	hC7-1(E)	8	#6	41'-11"	
PIER C7	hC7-2(E)	5	#5	3'-2"	
PIER C7	hC7-3(E)	5	#5	5'-2"	
PIER C7	hC7-4(E)	20	#5	6'-11"	
PIER C7	hC7-5(E)	5	#5	3'-11"	
PIER C7	pC7-1(E)	8	#11	41'-11"	
PIER C7	pC7-2(E)	8	#11	25'-1"	
PIER C7	pC7-3(E)	8	#9	41'-11"	
PIER C7	s25(E)	63	#4	11'-3"	
PIER C7	s36(E)	80	#5	14'-3"	
PIER C7	u12(E)	8	#5	6'-11"	
PIER C7	u17(E)	8	#5	6'-5"	
PIER C7	u26(E)	4	#5	10'-11"	
PIER C7	u27(E)	47	#5	5'-8"	
PIER C7	vC7-1(E)	14	#9	33'-6"	
PIER C7	vC7-2(E)	14	#9	33'-0"	
PIER C8	hC8-1(E)	8	#6	38'-8"	
PIER C8	pC8-1(E)	12	#10	38'-8"	
PIER C8	pC8-2(E)	12	#9	38'-8"	
PIER C8	s25(E)	61	#4	11'-3"	
PIER C8	s35(E)	80	#5	14'-1"	
PIER C8	u7(E)	4	#5	10'-8"	
PIER C8	u13(E)	8	#5	6'-8"	
PIER C8	u16(E)	8	#5	6'-2"	
PIER C8	vC8-1(E)	20	#11	32'-9"	
PIER C8	vC8-2(E)	20	#11	32'-4"	
PIER C9	s37(E)	2	#5	17'-11"	
PIER C9	u30(E)	6	#10	7'-10"	
PIER C9	u31(E)	5	#5	7'-8"	
PIER C10	hC10-1(E)	8	#6	37'-8"	
PIER C10	pC10-1(E)	8	#11	37'-8"	
PIER C10	pC10-2(E)	4	#11	15'-10"	
PIER C10	pC10-3(E)	4	#11	12'-11"	

REINFORCEMENT BAR SCHEDULE

STRUCTURE	MARK	NUMBER	SIZE	LENGTH	TYPE
PIER C10	pC10-4(E)	8	#10	37'-8"	
PIER C10	pC10-5(E)	8	#10	24'-11"	
PIER C10	s14(E)	48	#5	14'-1"	
PIER C10	s25(E)	54	#4	11'-3"	
PIER C10	u7(E)	4	#5	10'-8"	
PIER C10	u12(E)	8	#5	6'-11"	
PIER C10	u16(E)	8	#5	6'-2"	
PIER C10	vC10-1(E)	14	#9	28'-11"	
PIER C10	vC10-2(E)	14	#9	28'-4"	
PIER C12	s38(E)	4	#5	16'-11"	
PIER C12	u32(E)	6	#10	8'-4"	
PIER C12	u33(E)	4	#5	9'-8"	
PIER C13	hC13-1(E)	8	#6	37'-8"	
PIER C13	pC13-1(E)	16	#11	37'-8"	
PIER C13	pC13-2(E)	4	#11	26'-0"	
PIER C13	pC13-3(E)	4	#11	15'-10"	
PIER C13	pC13-4(E)	4	#11	11'-10"	
PIER C13	s17(E)	50	#5	13'-7"	
PIER C13	s25(E)	41	#4	11'-3"	
PIER C13	u7(E)	4	#5	10'-8"	
PIER C13	u13(E)	8	#5	6'-8"	
PIER C13	u16(E)	8	#5	6'-2"	
PIER C13	vC13-1(E)	14	#9	22'-7"	
PIER C13	vC13-2(E)	14	#9	22'-2"	

BENT BAR DETAILS

TYPE	MARK	a	b	c	d
	p1-21(E)	1'-7"	16'-6"	1'-2 1/4"	
	p1-22(E)	1'-3"	9'-6"	0'-11 1/4"	
	p1-24(E)	1'-3"	18'-6"	0'-11 1/4"	
	d1-1(E)	1'-7"	12'-6"	1'-2 1/4"	
	d1-2(E)	1'-3"	7'-9"	0'-11 1/4"	
	d1-3(E)	1'-3"	8'-3"	0'-11 1/4"	
	d1-4(E)	1'-7"	13'-0"	1'-2 1/4"	
	s25(E)	3'-2"	1'-4"		
	s26(E)	3'-8"	1'-4"		
	s1(E)	6'-8"	2'-9"	0'-5 1/2"	
	s12(E)	4'-8"	2'-7 1/2"	0'-5 1/2"	
	s14(E)	4'-5"	2'-2"	0'-5 1/2"	
	s17(E)	4'-2"	2'-2"	0'-5 1/2"	
	s24(E)	5'-2"	2'-5"	0'-5 1/2"	
	s28(E)	6'-9"	2'-8"	0'-5 1/2"	
	s31(E)	5'-4"	3'-8"	0'-5 1/2"	
	s32(E)	4'-2"	6'-8"	0'-5 1/2"	
	s33(E)	3'-8"	1'-8"	0'-4 1/2"	
	s34(E)	5'-8"	2'-4"	0'-5 1/2"	
	s35(E)	4'-2"	2'-5"	0'-5 1/2"	
	s36(E)	4'-5"	2'-3"	0'-5 1/2"	
	s37(E)	4'-10"	3'-8"	0'-5 1/2"	
	s38(E)	4'-4"	3'-8"	0'-5 1/2"	
	s39(E)	5'-9 1/2"	2'-5 1/2"	0'-5 1/2"	
	s40(E)	4'-8"	2'-7"	0'-5 1/2"	
	s41(E)	4'-5"	2'-7"	0'-5 1/2"	
	s42(E)	4'-5"	2'-7"	0'-5 1/2"	
	h1-4(E)	2'-10"	1'-0"		
	h1-5(E)	2'-8"	5'-0"		
	h1-6(E)	2'-8"	4'-6"		
	u1(E)	4'-8"	6'-6"		
	u2(E)	4'-8"	1'-3"		
	u3(E)	6'-8"	1'-3"		
	u4(E)	2'-2"	1'-8"		
	u5(E)	2'-0 1/2"	2'-4"		
	u7(E)	3'-8"	3'-6"		
	u8(E)	4'-2"	3'-6"		
	u10(E)	4'-11"	1'-3"		
	u11(E)	4'-2"	2'-10"		
	u12(E)	4'-5"	1'-3"		
	u13(E)	4'-2"	1'-3"		
	u16(E)	3'-8"	1'-3"		
	u17(E)	3'-11"	1'-3"		
	u23(E)	16'-7"	3'-8"		
	u24(E)	15'-8"	4'-9"		
	u19(E)	5'-8"	1'-3"		
	u26(E)	3'-11"	3'-6"		
	u27(E)	1'-8 1/2"	2'-0"		
	u28(E)	4'-8"	3'-6"		
	u29(E)	5'-9"	1'-3"		
	u31(E)	3'-8"	2'-0"		
	u33(E)	3'-8"	3'-0"		
	u34(E)	6'-9"	1'-3"		
	u30(E)	3'-0"	4'-10"		
	u32(E)	4'-0"	4'-4"		
	s2(E)	4'-2"	1'-2"	0'-6"	
	s4(E)	3'-8"	0'-8"	0'-6"	
	s6(E)	3'-2"	0'-8"	0'-6"	
	s3(E)	0'-6"	4'-2"	0'-8"	0'-4"
	s5(E)	0'-6"	3'-7"	0'-10"	0'-3 1/2"
	s7(E)	0'-6"	3'-1"	0'-10"	0'-3 1/2"
	s20(E)	0'-6"	3'-8"	0'-10"	0'-3 1/2"
	s21(E)	0'-6"	3'-2"	0'-10"	0'-3 1/2"

Note: All bars designated (E) shall be epoxy coated.
Work shts E17 and E18 together.

TYPE K

TYPE L

TYPE M

TYPE N

TYPE P

TYPE Q

TYPE R

TYPE S

* 1985-077 R=R

TYPE A

TYPE B

TYPE C

TYPE D

TYPE E

TYPE F

TYPE G

TYPE H

TYPE J

REGIONAL AND ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	88	18
STA.		TO STA.		
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET E18 OF 88

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 BR-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-813
BAR SCHEDULE

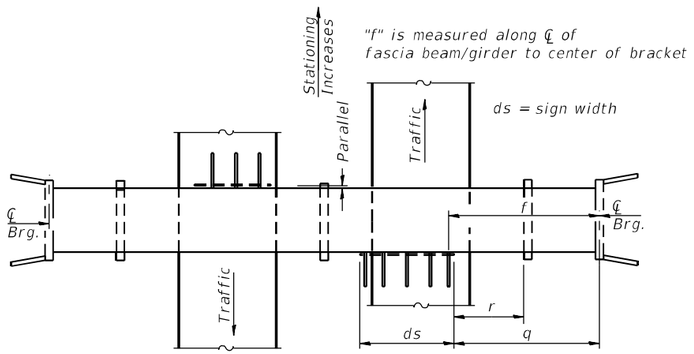
Scale :NONE
Date : AUGUST, 1988
Drawn By: T.V./D.L.
Checked By: T.V.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, WM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS STRCUTURE NO. 016-1113	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - MAI, JMG	REVISED -			90/94/290	2015-019R	COOK	2155	1024
PLOT SCALE = N.T.S	DRAWN - JJS, WM	REVISED -					CONTRACT NO. 62A76		
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		SHEET NO. SS74 OF SS129 SHEETS		ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_D502_NAIDocuments\01 Americas\Transportation\60269938 CircletPhase_II\000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-Cont-SS208-SignStruct.dgn
11:22:51 AM

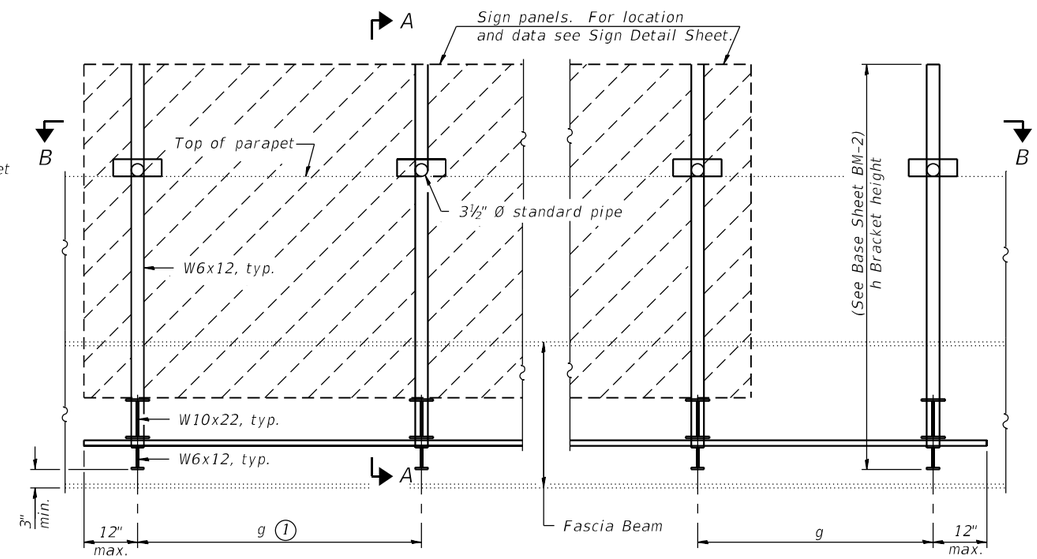


PLAN

(For Sign Skew ≤ 15°, all brackets constant)

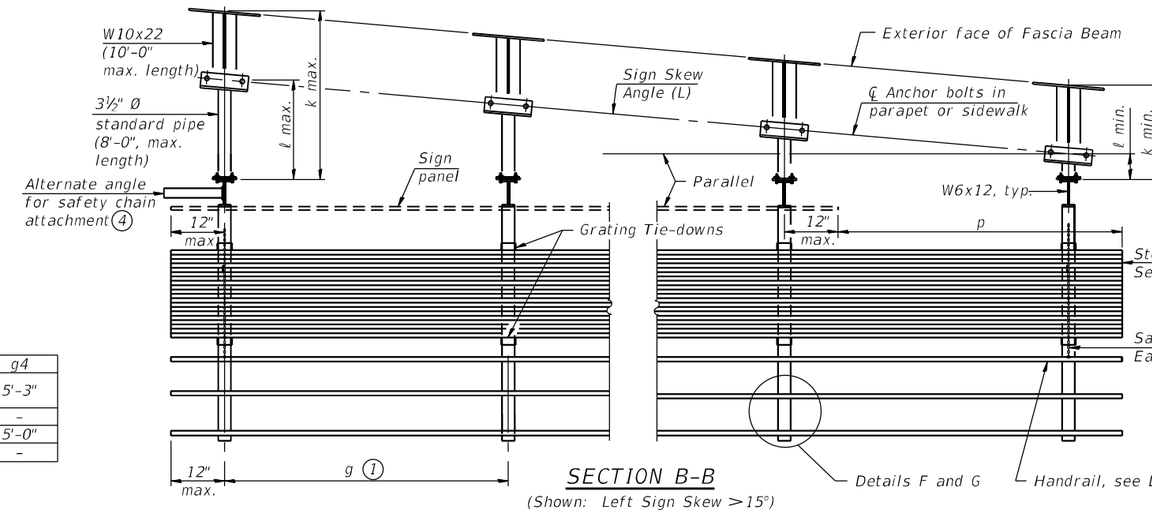
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION

(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B

(Shown: Left Sign Skew > 15°)

NOTES:

1. "q" is measured from ℄ Brg. of abutment along ℄ of fascia beam/girder to edge of sign.
2. "r" is measured from face of pier along ℄ of fascia beam/girder to edge of sign.
3. Walkway grating, walkway brackets, handrail, lighting and associated components will not be installed in Contract 62A76.

Dimensions f & g may vary as approved by the Engineer, see (1). When cw < cs and/or dw < ds, use alternate brackets without walkway supports where applicable, see (3).

Structure Number	Bridge Name	g1	g2	g3	g4
1B016I094L051.8	Congress Pkwy (I290 EB)	6'-0"	6'-0"	5'-3"	5'-3"
1B016I094L051.4C	Adams Street	5'-4"	4'-4"	4'-4"	–
1B016I094L051.3B	Monroe Street	4'-6"	5'-0"	5'-0"	5'-0"
1B016I094L051.2A	Washington Street	4'-11 1/2"	4'-10"	–	–

Structure Number	Sign Skew Angle (L) or	Bridge Station	Bridge Structure Number	Bridge Name	Contract Route Designation	ds	r	f	g	No. of Brackets	q
1B016I094L051.8	0°	5160+01.31	016-1704	Congress Pkwy (I290 EB)	NB I-90/94	24'-0"	–	51'-2 1/2"	*	5	50'-8 1/2"
1B016I094L051.5A	0°	8214+28.34	016-1702	Jackson Blvd	NB I-90/94	17'-0"	–	22'-11 7/8"	5'-4"	4	22'-5 7/8"
1B016I094L051.5B	0°	8214+45.30	016-1702	Jackson Blvd	NB I-90/94	14'-6"	–	7'-3 3/8"	4'-6"	4	6'-9 3/8"
1B016I094L051.4A	0°	8313+79.09	016-1701	Adams Street	NB I-90/94	17'-6"	18'-9 1/4"	91'-0 1/4"	5'-2"	4	–
1B016I094L051.4B	0°	8314+31.76	016-1701	Adams Street	NB I-90/94	17'-6"	–	38'-1 5/8"	5'-4"	4	37'-4 1/8"
1B016I094L051.4C	0°	8314+61.75	016-1701	Adams Street	NB I-90/94	15'-0"	–	9'-1 1/4"	*	4	8'-7 1/4"
1B016I094L051.3A	0°	8414+55.55	016-1700	Monroe Street	NB I-90/94	17'-6"	–	50'-1"	5'-2"	4	49'-1"
1B016I094L051.3B	0°	8414+82.08	016-1700	Monroe Street	NB I-90/94	21'-0"	–	21'-7"	*	5	20'-9 5/8"
1B016I094L051.3C	0°	8415+00.58	016-1700	Monroe Street	NB I-90/94	15'-0"	–	6'-3 5/8"	4'-4"	4	5'-3 5/8"
1B016I094L051.2A	0°	8614+63.71	016-0601	Washington Street	NB I-90/94	11'-6"	–	50'-6 5/8"	*	0 **	49'-8 3/8"
1B016I094L051.2B	0°	8614+82.42	016-0601	Washington Street	NB I-90/94	20'-0"	–	27'-8 7/8"	6'-0"	3 **	26'-8 7/8"

* Varies, see separate table. Note Signs A, B, C and g1-g4 are listed from west to east

Note the following brackets shall be placed at the locations of existing holes in the beams:

1B016I094L051.3A (Monroe St): one east bracket; 1B016I094L051.3B (Monroe St): two west brackets

Note the following brackets shall be reused:

1B016I094L051.2A (Washington St): all three brackets; 1B016I094L051.2B (Washington St): one west bracket

** On signs with existing brackets to be reused, only proposed brackets are listed

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specifications.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, ¾" Ø x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

(1) Bracket spacing g ≤ 6'-0", max. Spacing shall be uniform if possible but may vary ±6" to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.

(2) Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.

(3) Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on sign width (ds). For Safety Chain Details and Details D, F and G, see Sheet SS80.

(4) If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Sheet SS80.

STATE OF ILLINOIS — MOUSSA A. ISSA — 081-005738 — CHICAGO, ILLINOIS — LICENSED STRUCTURAL ENGINEER

SIGNED Moussa A. Issa

DR. MOUSSA A. ISSA, S.E., IL. LIC. NO. 081-005738 EXPIRES 11-30-2020

DATE 01/29/2020

FOR SHEETS SS75 THRU SS80 (TOTAL OF 6 SHEETS)

TOTAL BILL OF MATERIAL

(3)	OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	FOOT	159
	STRUCTURAL STEEL SUPPORT FOR OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	EACH	3
	MODIFICATION OF ORNAMENTAL CLADDING	FOOT	32

HBM ENGINEERING GROUP, LLC

USER NAME = marina.stoica		DESIGNED - CP, LAB		REVISED -	
		CHECKED - JJS, MAI		REVISED -	
PLOT SCALE = N.T.S		DRAWN - CP		REVISED -	
PLOT DATE = 1/29/2020		CHECKED - JJS, MAI		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
GENERAL PLAN AND ELEVATION

SHEET NO. SS75 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1025
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 CircleMPhase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-BM-SS301-SignStruct.dgn

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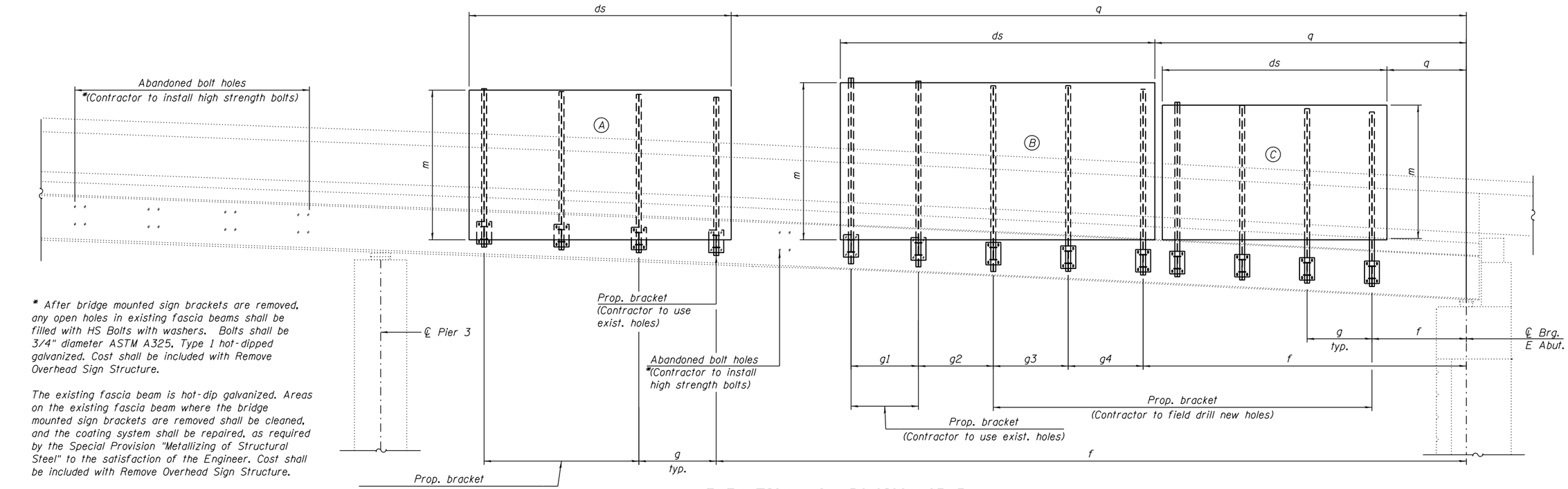
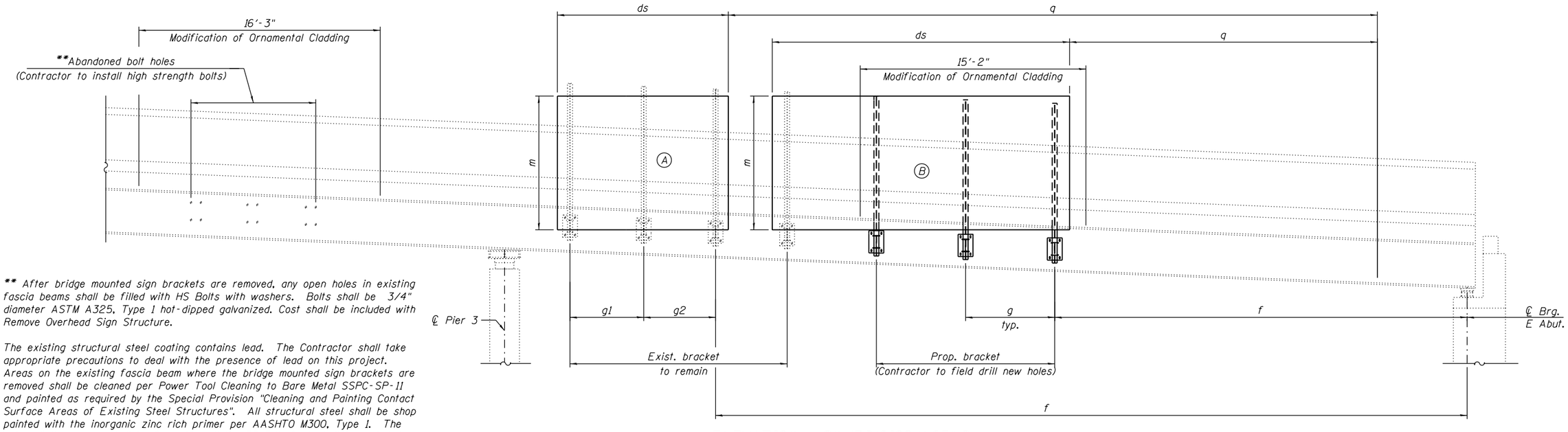


* After bridge mounted sign brackets are removed, any open holes in existing fascia beams shall be filled with HS Bolts with washers. Bolts shall be 3/4" diameter ASTM A325, Type 1 hot-dipped galvanized. Cost shall be included with Remove Overhead Sign Structure.

The existing fascia beam is hot-dip galvanized. Areas on the existing fascia beam where the bridge mounted sign brackets are removed shall be cleaned, and the coating system shall be repaired, as required by the Special Provision "Metallizing of Structural Steel" to the satisfaction of the Engineer. Cost shall be included with Remove Overhead Sign Structure.

ELEVATION - SN 1B0161094L051.3

South Fascia Girder of Monroe Street Bridge SN 016-1700
(Looking North)



** After bridge mounted sign brackets are removed, any open holes in existing fascia beams shall be filled with HS Bolts with washers. Bolts shall be 3/4" diameter ASTM A325, Type 1 hot-dipped galvanized. Cost shall be included with Remove Overhead Sign Structure.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Areas on the existing fascia beam where the bridge mounted sign brackets are removed shall be cleaned per Power Tool Cleaning to Bare Metal SSPC-SP-11 and painted as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures". All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type I. The color of the primer shall be Gray, Munsell No. 5B 7/1. Cost shall be included with Remove Overhead Sign Structure.

ELEVATION - SN 1B0161094L051.2

South Fascia Girder of Washington Street Bridge SN 016-0601
(Looking North)
(Ornamental cladding not shown for clarity)

HBM ENGINEERING GROUP, LLC	USER NAME = marina.stoica	DESIGNED - AMS, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES ELEVATION
		CHECKED - JJS, MAI	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - AMS	REVISED -		SHEET NO. SS76 OF SS129 SHEETS
	PLOT DATE = 1/29/2020	CHECKED - JJS, MAI	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1026
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-BM-SS301A-SignStruct.dgn

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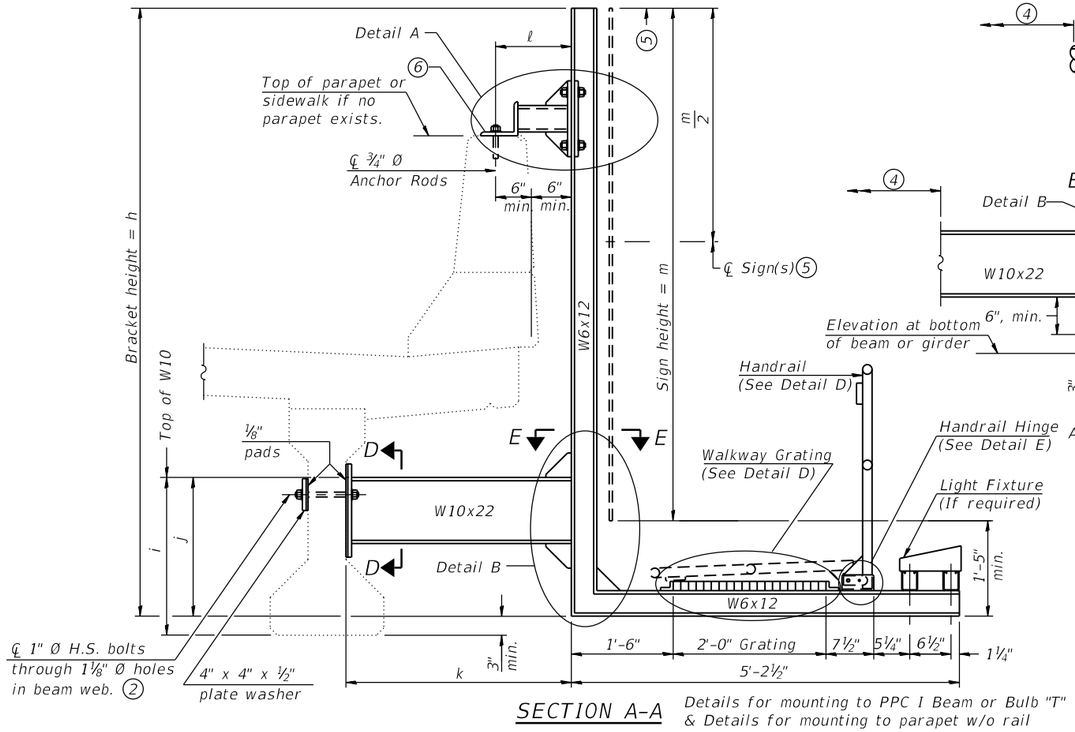
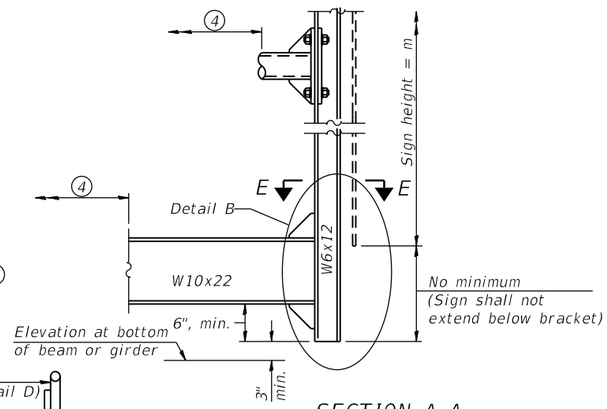


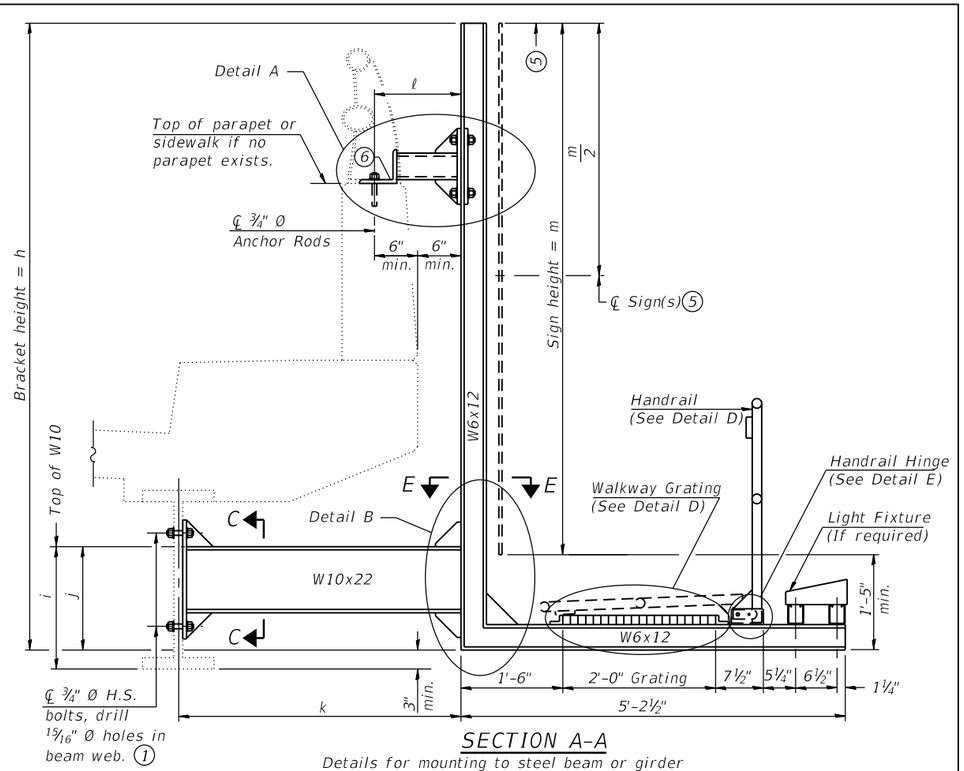
SECTION A-A

Details for mounting to PPC I Beam or Bulb "T" & Details for mounting to parapet w/o rail



SECTION A-A

Alternate with no lights or walkways



SECTION A-A

Details for mounting to steel beam or girder & Details for mounting with existing parapet mounted rail

Notes:
Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval. Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.
All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.
The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

NOTES:

1. *Walkway grating, walkway brackets, handrail, lighting and associated components will not be installed in Contract 62A76.*

For Details A & B, Sections C-C, D-D and E-E, see Sheet SS79.
For Details D & E, see Sheet SS80.

(1) *Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.*

(2) *For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during field drilling of existing beams.*

(3) *For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing/damage during field drilling of existing concrete. Spalls over ¼" deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.*

(4) *For attachment details of 3½" pipe and W10x22, see other sections as applicable.*

(5) *Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)*

(6) *For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.*

Structure Number	Bridge Name	Bridge Station	h	i	j	k max. (10'-0" max.)	l max. (8'-0" max.)	m (15'-0" max.)
1B016I094L051.8	Congress Pkwy (I290 EB)	5160+01.31	8'-6"	2'-3"	1'-4 1/2"	3'-8"	1'-0"	6'-6"
1B016I094L051.5A	Jackson Blvd	8214+28.34	11'-6"	*	1'-4 1/2"	3'-4 1/2"	1'-0"	10'-6"
1B016I094L051.5B	Jackson Blvd	8214+45.30	10'-6"	1'-9"	1'-4 1/2"	3'-4 1/2"	1'-0"	9'-0"
1B016I094L051.4A	Adams Street	8313+79.09	8'-6"	1'-8 1/4"	1'-4 1/2"	3'-4 1/2"	1'-0"	8'-0"
1B016I094L051.4B	Adams Street	8314+31.76	11'-0"	*	1'-4 1/2"	3'-4 1/2"	1'-0"	10'-0"
1B016I094L051.4C	Adams Street	8314+61.75	10'-0"	1'-8 1/4"	1'-4 1/2"	3'-4 1/2"	1'-0"	8'-6"
1B016I094L051.3A	Monroe Street	8414+55.55	10'-7"	*	1'-4 1/2"	3'-0"	1'-0"	10'-0"
1B016I094L051.3B	Monroe Street	8414+82.08	12'-5"	*	*	3'-0"	1'-0"	10'-6"
1B016I094L051.3C	Monroe Street	8415+00.58	11'-8"	1'-11"	1'-4 1/2"	3'-0"	1'-0"	9'-0"
1B016I094L051.2A	Washington Street	8614+63.71	–	–	–	–	–	9'-0"
1B016I094L051.2B	Washington Street	8614+82.42	10'-9"	1'-11 1/4"	1'-4 1/2"	6'-0"	2'-11 1/2"	9'-0"

* Varies, see separate table

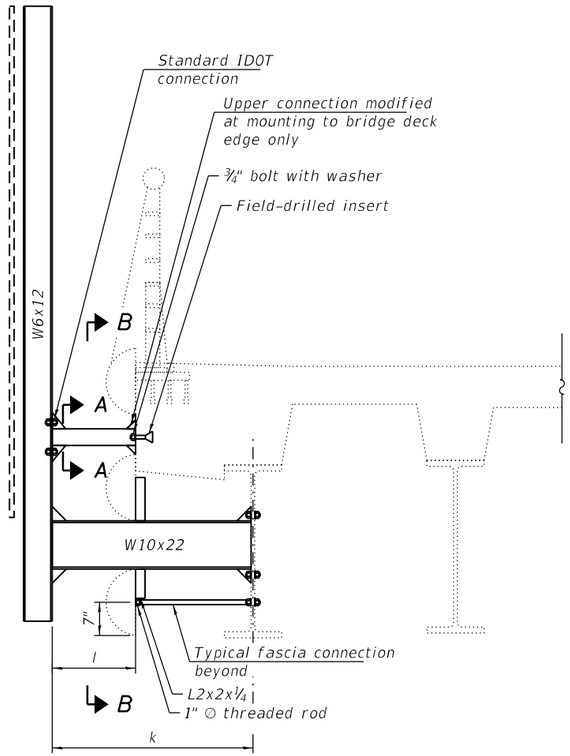
Structure Number	Bridge Name	i1	i2	i3	i4	i5
1B016I094L051.5A	Jackson Blvd	1'-10 1/4"	1'-9"	1'-9"	1'-9"	–
1B016I094L051.4B	Adams Street	1'-9 1/2"	1'-8 1/4"	1'-8 1/4"	1'-8 1/4"	–
1B016I094L051.3A	Monroe Street	1'-11 3/4"	1'-11 3/4"	1'-11 3/4"	2'-0"	–
1B016I094L051.3B	Monroe Street	2'-0"	2'-0"	1'-11"	1'-11"	1'-11"

Structure Number	Bridge Name	j1	j2	j3	j4	j5
1B016I094L051.3B	Monroe Street	1'-7 1/2"	1'-7 1/2"	1'-7 1/2"	1'-4 1/2"	1'-4 1/2"

HBM ENGINEERING GROUP, LLC

USER NAME = lisa.buntin	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES WALKWAY AND CONNECTION DETAILS I
	CHECKED - JJS, MAI	REVISED -		
PLOT SCALE = N.T.S	DRAWN - CP	REVISED -		SHEET NO. SS77 OF SS129 SHEETS
PLOT DATE = 1/28/2020	CHECKED - JJS, MAI	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1027
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

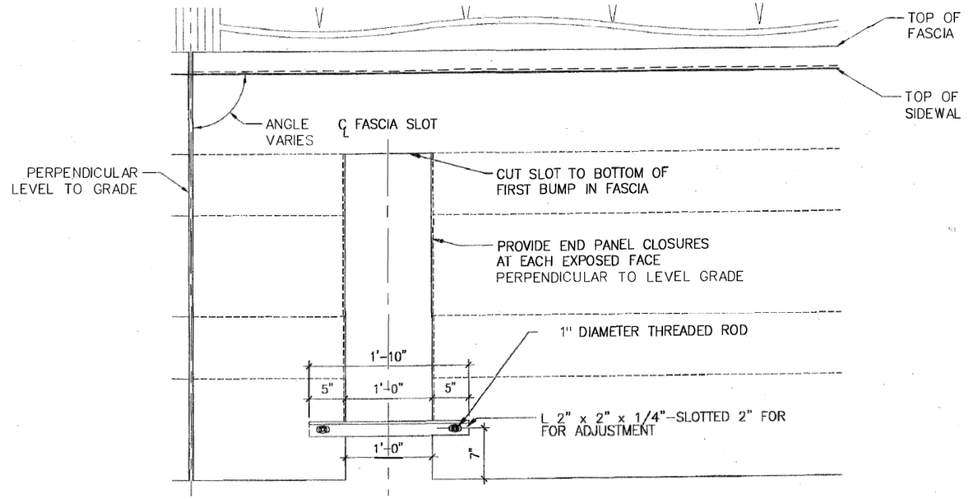


ORNAMENTAL CLADDING CONNECTION DETAIL

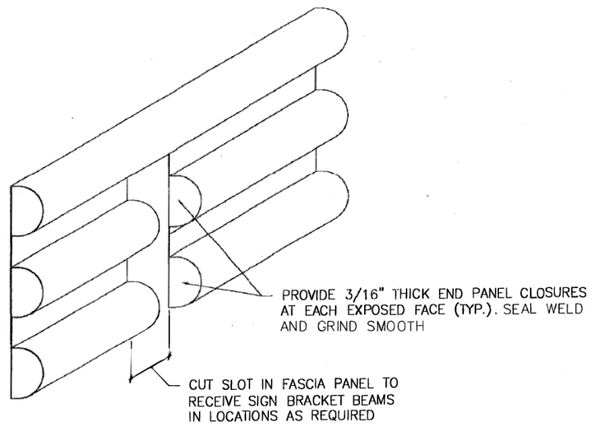
Note: All threaded rod conforming to ASTM A307, ¾"x12" long each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be epoxy grouted in accordance with section 584 of the standard specifications. Minimum embedment in concrete shall be 9".

NOTES:

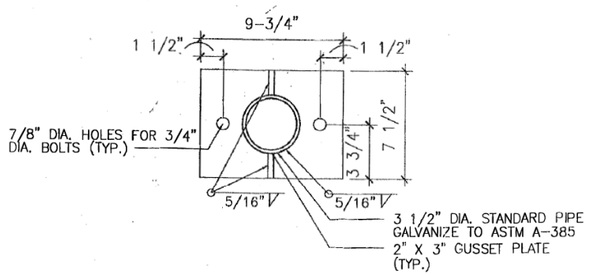
1. *Existing slots which are abandoned, due to removal or relocation of the sign structure supports, shall be filled.*
2. *The existing ornamental cladding shall be modified per the details shown in the plans, or as directed by the Engineer, to permit connection of new sign structure supports to the existing structure.*
3. *Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field-verify existing dimensions and details affecting new construction 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 scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.*
4. *The Contractor shall take all necessary precautions during removal/construction activities to avoid damage to existing elements to remain. Any damage to existing elements to remain, caused by the Contractor in the performance of his/her work, shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.*
5. *See Special Provision for Modification of Ornamental Cladding for details.*



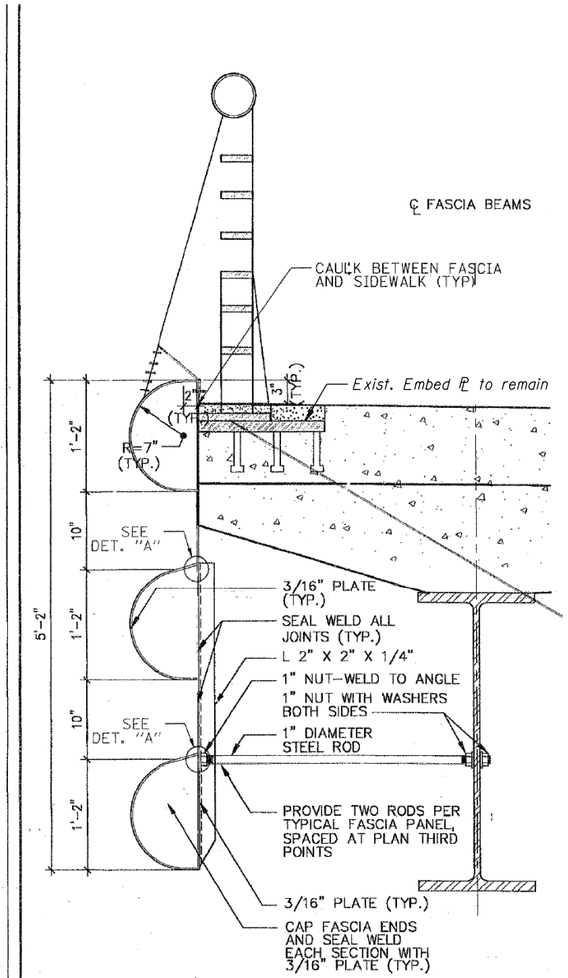
VIEW B-B FASCIA SLOT DETAIL

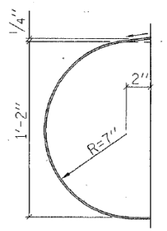


FASCIA PANEL AT SIGN BRACKET–SCHEMATIC VIEW (TYP.)



VIEW A-A SUPPORT BRACKET DETAIL





ORNAMENTAL CLADDING DETAIL

(SN 016-0601, For Information Only)

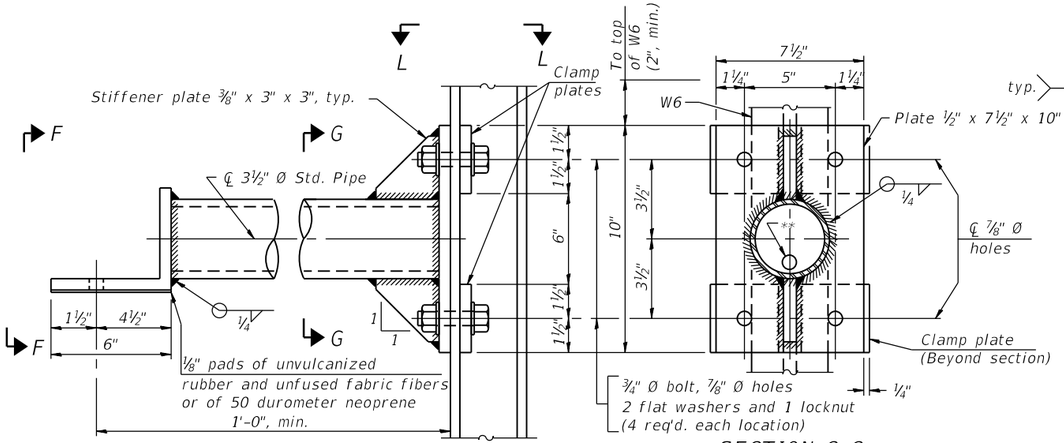
HBM ENGINEERING GROUP, LLC

USER NAME = elizabath.kurian	DESIGNED - CP, LAB	REVISED -	
	CHECKED - JJS, MAI	REVISED -	
PLOT SCALE = N.T.S	DRAWN - CP	REVISED -	
PLOT DATE = 1/29/2020	CHECKED - JJS, MAI	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

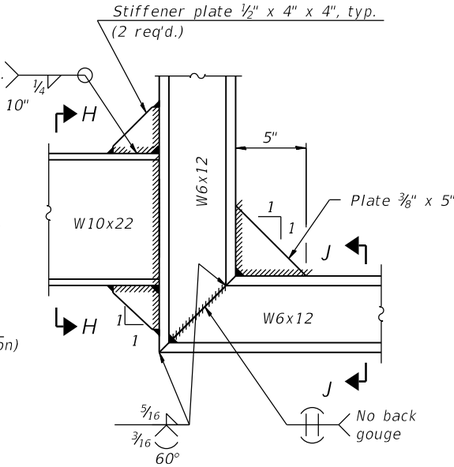
BRIDGE MOUNT SIGN STRUCTURES
WALKWAY AND CONNECTION DETAILS II
SHEET NO. SS78 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1028
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

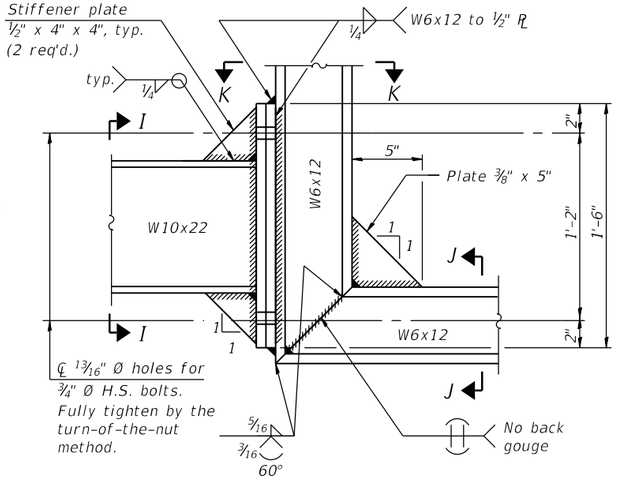


DETAIL A

SECTION G-G

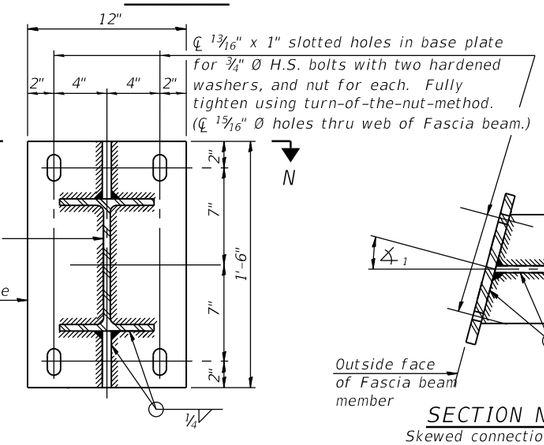


DETAIL B – WELDED W10x22 TO W6x12 CONNECTION



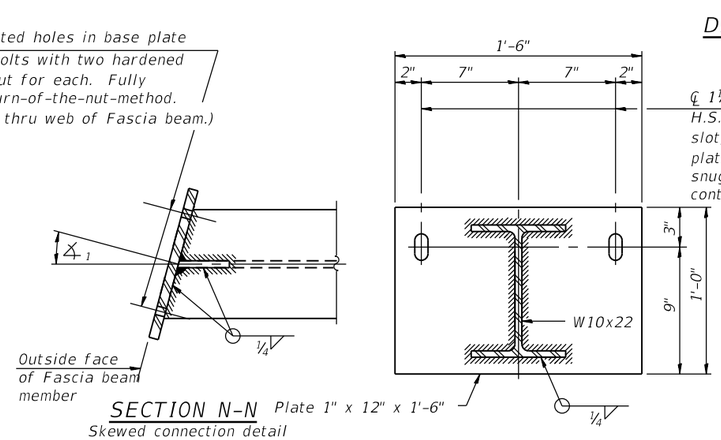
DETAIL B – ALTERNATE BOLTED W10x22 TO W6x12 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.



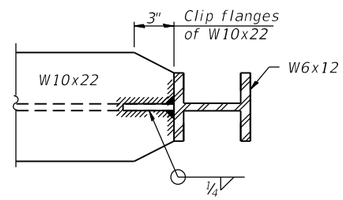
SECTION C-C

Steel beam or girder connection plate details



SECTION D-D

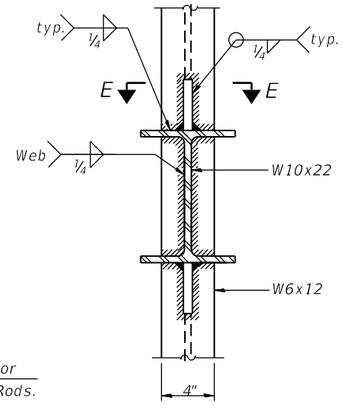
Concrete beam or girder connection plate details.



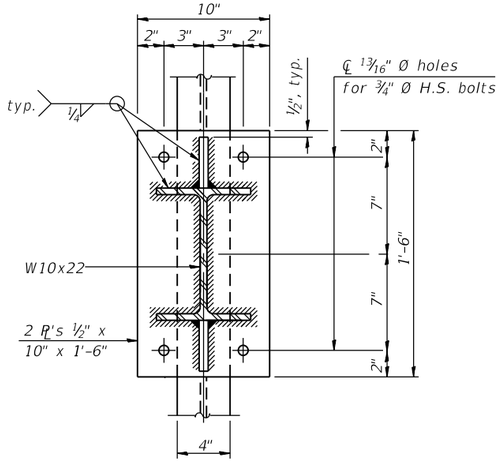
SECTION E-E

VIEW F-F

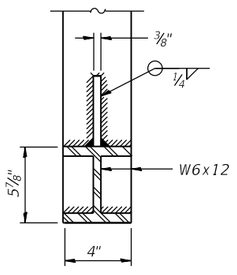
** 13/16" Ø holes for galvanizing. After galvanizing, install ⅞" Ø A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in ½" plate.)



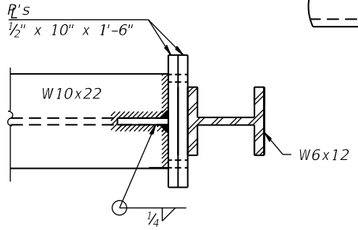
SECTION H-H



SECTION I-I

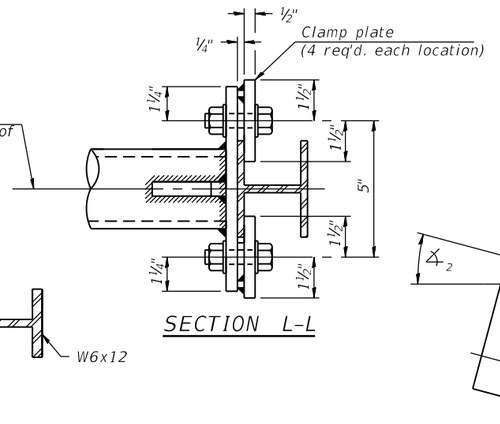


SECTION J-J

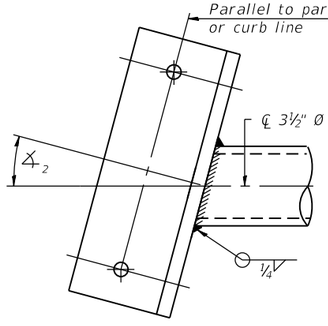


SECTION K-K

Note: For constant slab overhang at Fascia beam, ∠1 = ∠2 = sign angle. For flared beams or other special cases where ∠1 ≠ ∠2, ∠1 = sign angle.

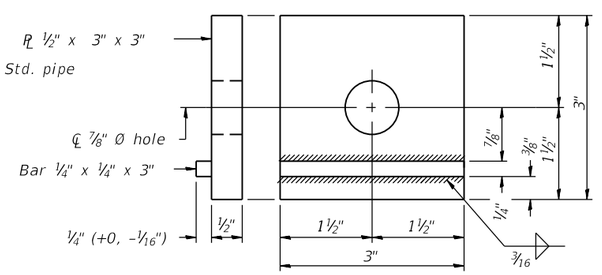


SECTION L-L



SECTION M-M

Skewed connection detail for 3½" Ø pipe to parapet.



CLAMP PLATE DETAILS

BM-3

2-17-2017

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - JJS, MAI	REVISED -	
	PLOT SCALE = N.T.S	DRAWN - CP	REVISED -	
	PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -	

BRIDGE MOUNT SIGN STRUCTURES
CONNECTION DETAILS
SHEET NO. SS79 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1029
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_D502_NAIDocuments\01 AmericasTransportation\60269938 CirclePhase_II\000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-BM-SS303-SignStruct.dgn
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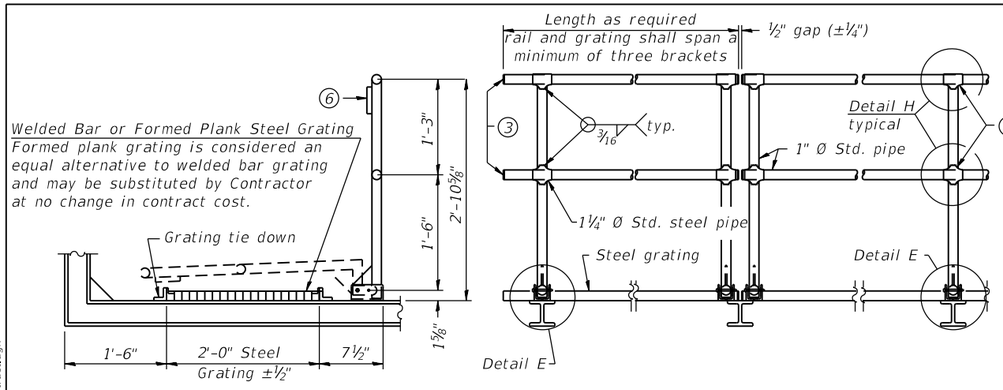
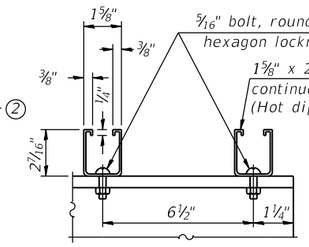


SIDE ELEVATION

DETAIL D HANDRAIL

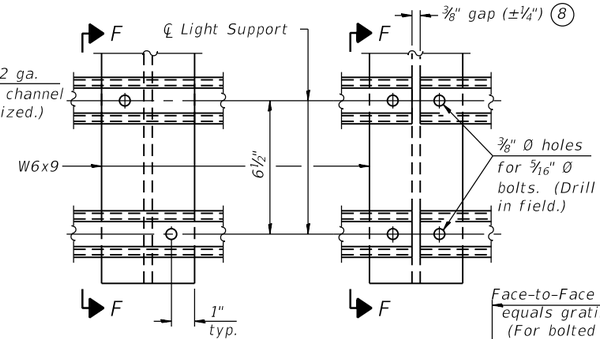
FRONT ELEVATION



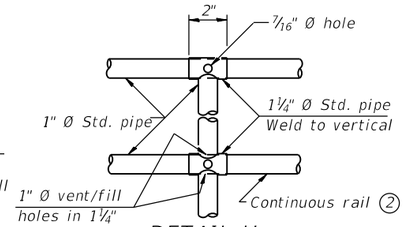
SECTION F-F

LIGHTING FIXTURE MOUNTS

(If required)



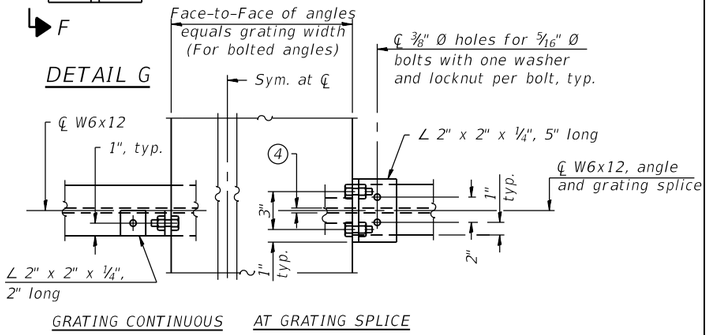
DETAIL F



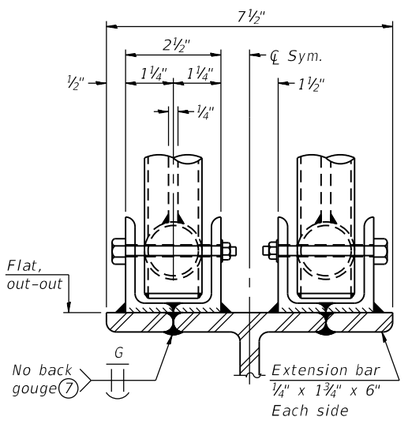
DETAIL H

Welds ³⁄₁₆" continuous

DETAIL G

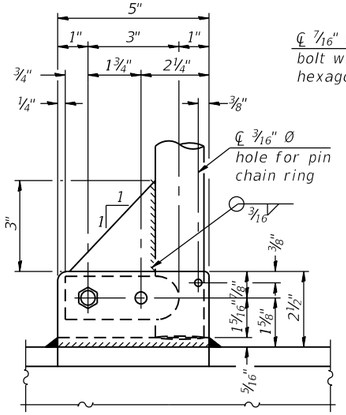


GRATING CONTINUOUS AT GRATING SPLICE

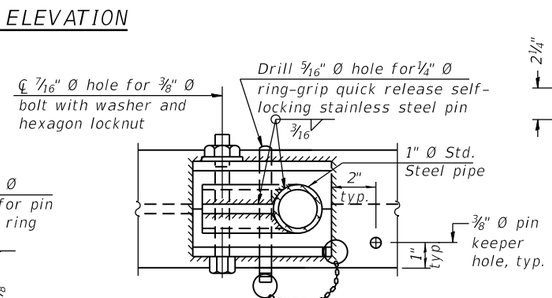


ELEVATION AT HANDRAIL JOINT

(Details not shown same as "FRONT ELEVATION")

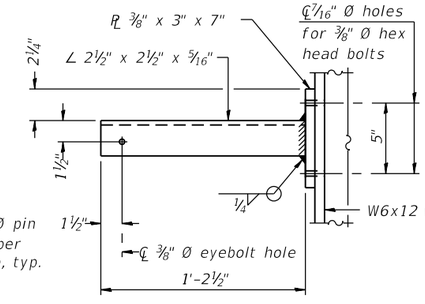


SIDE ELEVATION

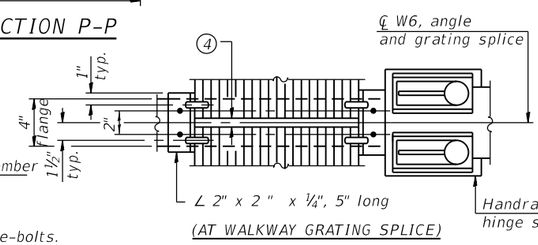


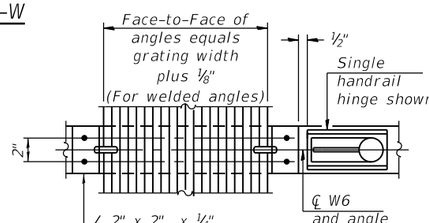
PLAN AT SINGLE HANDRAIL HINGE

DETAIL E



SECTION P-P





(WALKWAY GRATING CONTINUOUS)

PLAN

Field drill ⅜" Ø hole for 5⁄16" Ø eye-bolt. (At approximately elevation of upper handrail pipe.)

Vertical member of walkway bracket

⅜16" welded links stainless steel chain. (5) Approximately 12 links per foot.

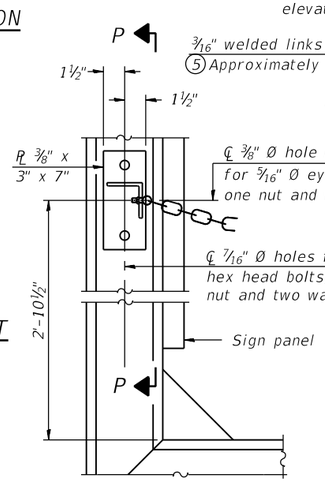
5⁄16" Ø eye-bolts. Provide washer and hexagon locknut. (Stainless steel.)

Attach stainless steel swivel eye snap at handrail end.

No Sign at Bracket

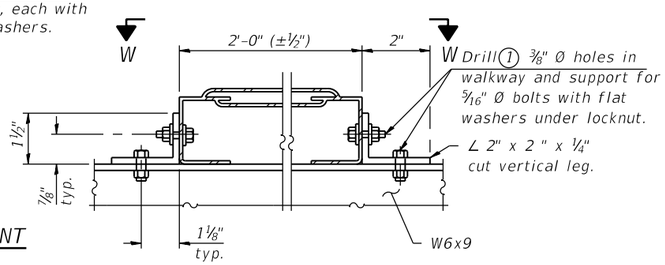
SAFETY CHAIN

One (1) required for each end of each walkway.



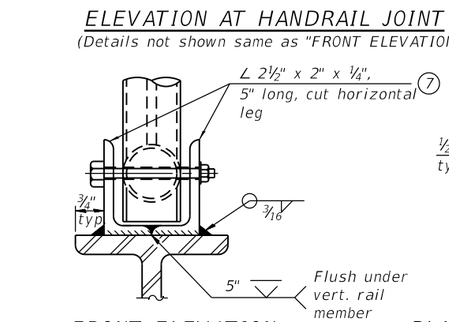
SAFETY CHAIN ATTACHMENT

(With Sign Present)
Items not shown same as "SIDE ELEVATION" and "SAFETY CHAIN"



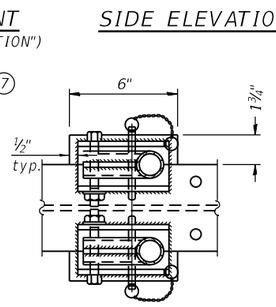
ALTERNATE FORMED PLANK GRATING DETAILS

Plank Grating: nominal depth = 2½" (±½"); perforated or expanded steel sheet with a non-skid surface (non-serrated) concentrated load capacity = 500 lbs. with 6'-0" clear span.



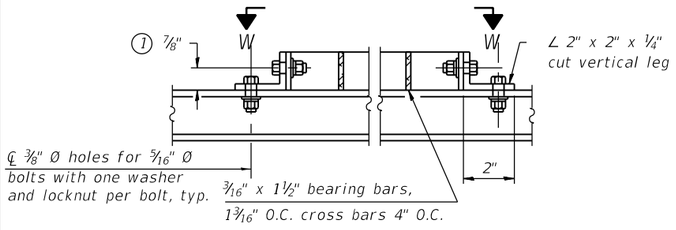
FRONT ELEVATION

(See above Elevations for dimensions.)



PLAN AT HANDRAIL JOINT

(For Details, see Elevations.)



WELDED BAR GRATING DETAILS

NOTES

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment. Field drilled holes must be touched up with galvanized paint.

(2) Horizontal rail member shall be continuous thru 1¼" Ø pipe. Provide 7⁄16" Ø hole in 1¼"Ø pipe for ⅜" Ø bolt. Field drill 7⁄16" Ø hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5⁄16" eyebolts in 7⁄16" Ø holes on top rail at ends only.)

(3) Install standard force-fit end caps or weld ⅛" end plates with ⅛" c.f.w. and grind smooth. (All rail ends.)

(4) ⅜" (±¼") gap between grating panels at splice.

(5) Chain to be type 304L stainless steel suitable for prolonged exterior exposure. Approximately 3'-6" long chain per location. Maximum sag with handrail erected = 4".

(6) PL ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.

(7) Extrusions may be used in lieu of details shown, with approval by Engineer.

(8) Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

BM-4

2-17-2017

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES WALKWAY DETAILS
		CHECKED - JJS, MAI	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - CP	REVISED -		SHEET NO. SS80 OF SS129 SHEETS
	PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1030
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 CirclePhase_III\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-BM-SS304-SignStruct.dgn

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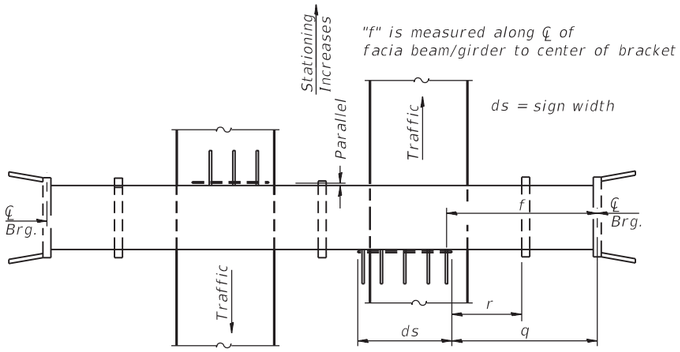
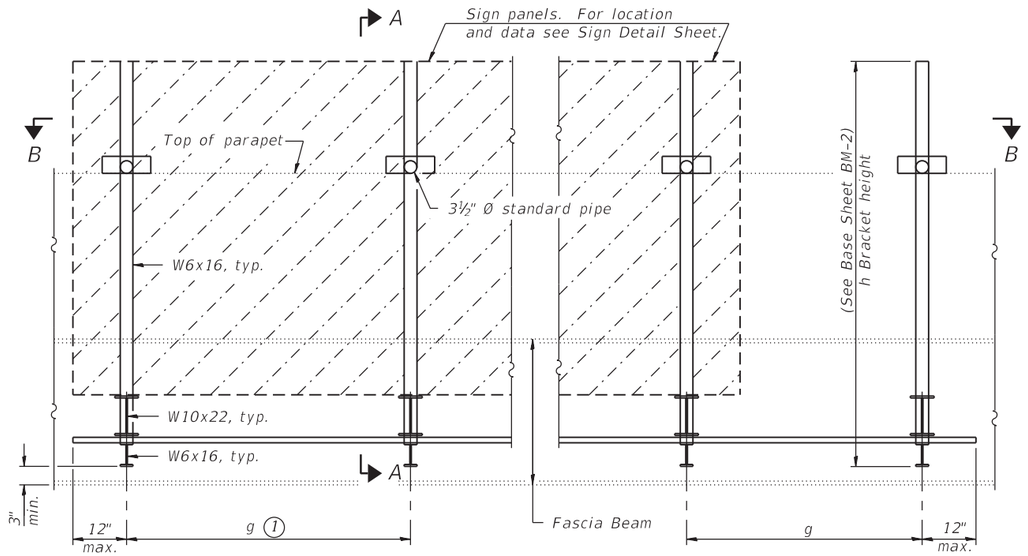


PLAN

(For Sign Skew ≤ 15°, all brackets constant)

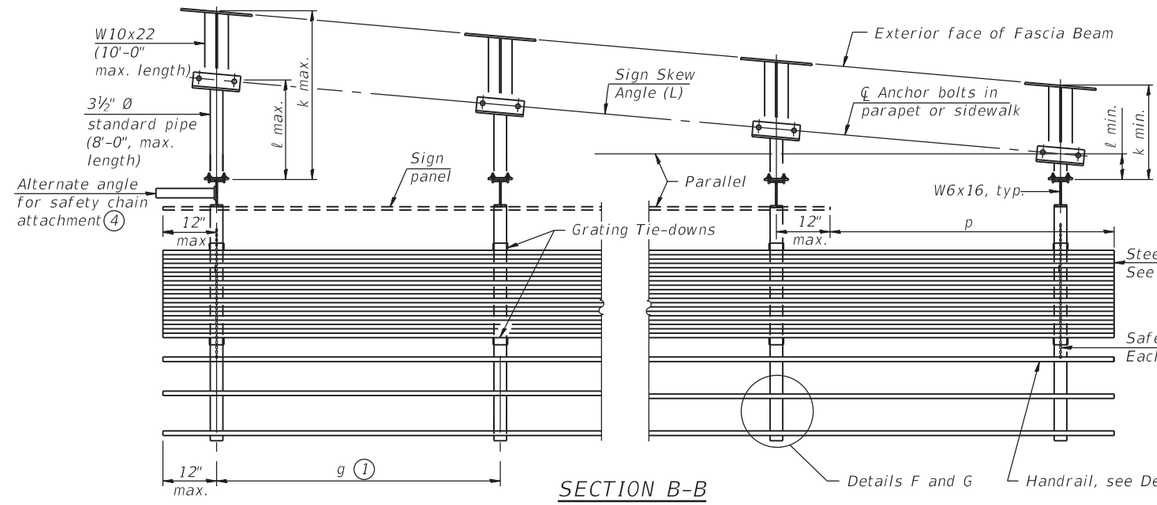
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION

(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B

(Shown: Left Sign Skew >15°)

NOTES:

1. "q" is measured from ℄ Brg. of abutment along ℄ of fascia beam/girder to edge of sign.
2. "r" is measured from face of pier along ℄ of fascia beam/girder to edge of sign.
3. Walkway grating, walkway brackets, handrail, lighting and associated components will not be installed in Contract 62A76.

Dimensions f & g may vary as approved by the Engineer, see (1).
When cw < cs and/or dw < ds, use alternate brackets without walkway supports where applicable, see (3).

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Bridge Name	Contract Route Designation	ds	r	f	g	No. of Brackets (Total)	q
1B016I094L052.1	0°	7612+74.62	016-1165	Taylor Street	NB 1-90/94	25'-6"	3'-5 1/2"	58'-6 1/4"	*	7	-

* Varies, see separate table

Structure Number	Bridge Name	g1	g2	g3	g4	g5-g6
1B016I094L052.1	Taylor Street	3'-10"	4'-1"	4'-4"	3'-10"	4'-1"

Note g1-g6 are numbered west to east

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specifications.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, ¾" Ø x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

(1) Bracket spacing g ≤ 6'-0", max. Spacing shall be uniform if possible but may vary ±6" to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.

(2) Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.

(3) Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on sign width (ds). For Safety Chain Details and Details D, F and G, see Sheet SS84.

(4) If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Sheet SS84.

STATE OF ILLINOIS
MOUSSA A. ISSA
081-005738
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

SIGNED Moussa A. Issa

DR. MOUSSA A. ISSA. S.E., IL. LIC. NO. 081-005738
EXPIRES 11-30-2020

DATE 01/29/2020 FOR SHEETS SS81 THRU SS84 (TOTAL OF 4 SHEETS)

TOTAL BILL OF MATERIAL

(3)	OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED (SPECIAL)	Foot	26

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES GENERAL PLAN AND ELEVATION	
	CHECKED - JJS, MAI	REVISED -			
PLOT SCALE = N.T.S	DRAWN - CP	REVISED -			
PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		SHEET NO. SS81 OF SS129 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1031
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 CirclePhase_III\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-BM-SS305-Special-SignStruct.dgn
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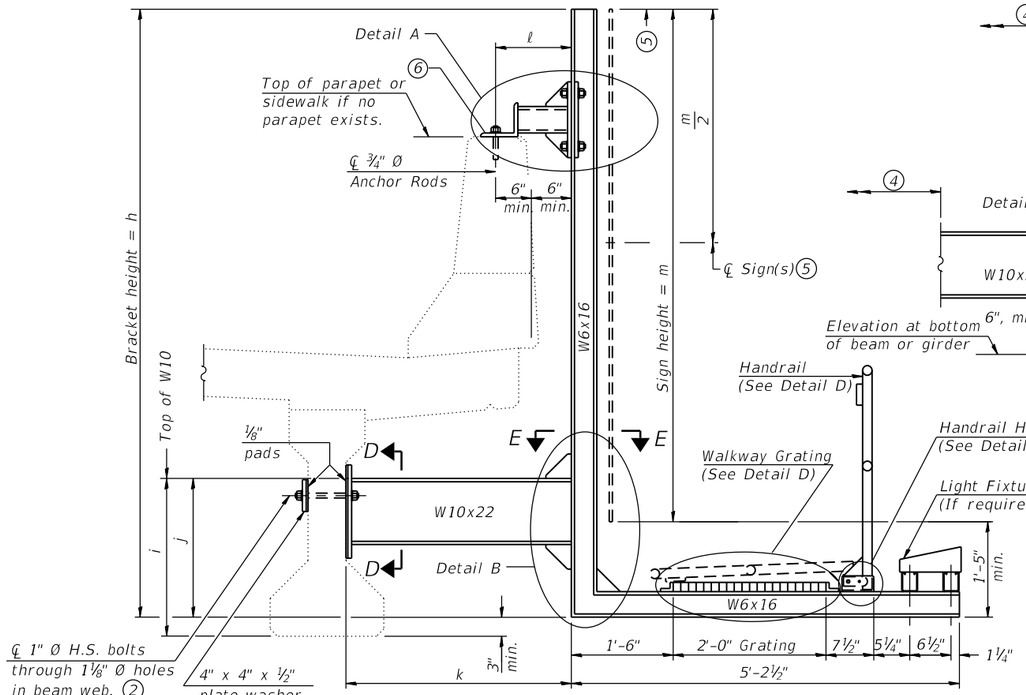
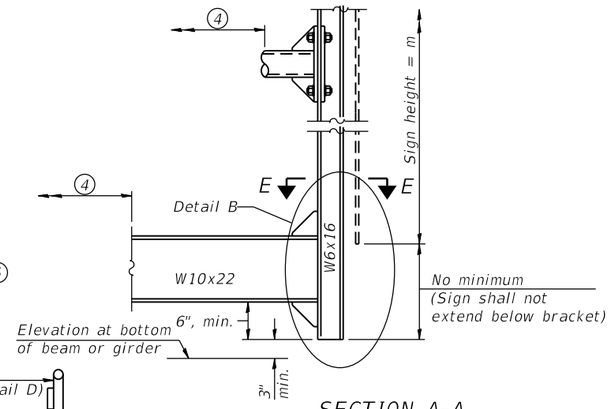


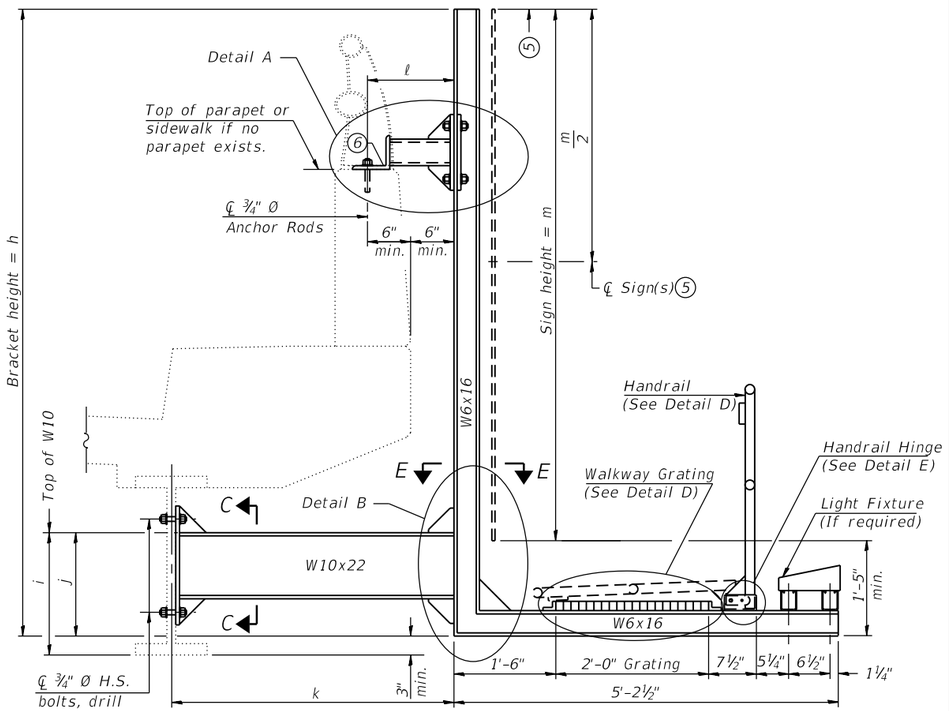
SECTION A-A

Details for mounting to PPC I Beam or Bulb "T" & Details for mounting to parapet w/o rail



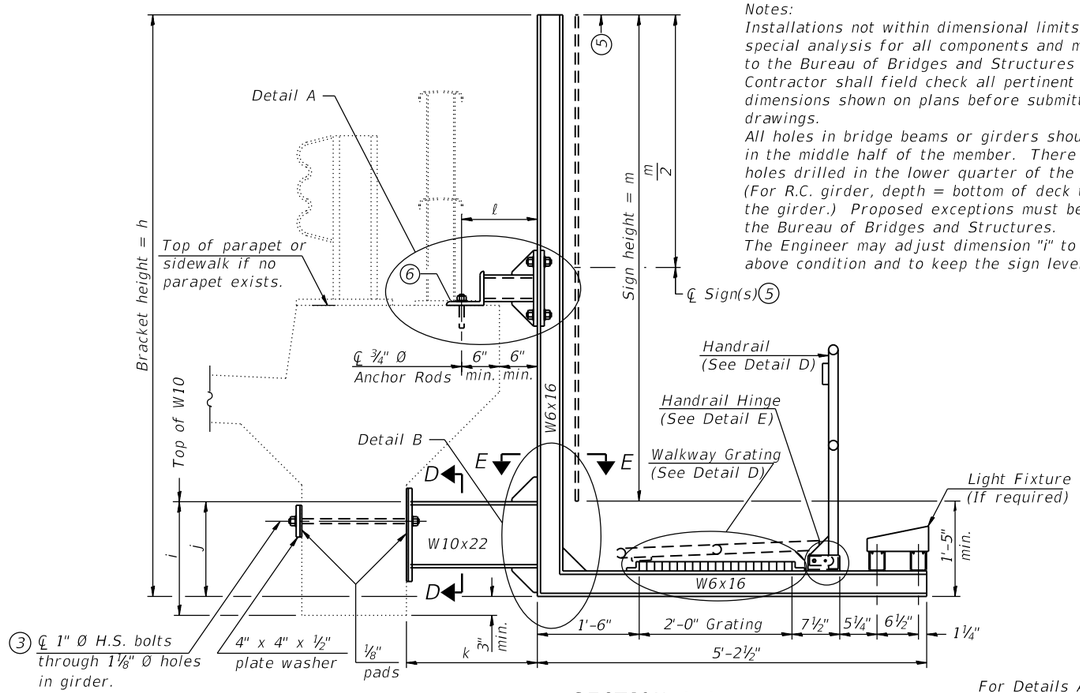
SECTION A-A

Alternate with no lights or walkways



SECTION A-A

Details for mounting to steel beam or girder & Details for mounting with existing parapet mounted rail



SECTION A-A

Details for mounting to integral reinforced concrete girder & Details for mounting on safety curb with surface-mount bridge rail

Notes:
Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval. Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.
All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.
The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

① Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.

② For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during field drilling of existing beams.

③ For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing/damage during field drilling of existing concrete. Spalls over ¼" deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.

④ For attachment details of 3½" pipe and W10x22, see other sections as applicable.

⑤ Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)

⑥ For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.

NOTES:

1. Walkway grating, walkway brackets, handrail, lighting, and associated components of the sign structure/sign panel will not be installed.

Structure Number	Bridge Name	Bridge Station	h	i	j	k max. (10'-0" max.)	l max. (8'-0" max.)	m
1B016I094L052.1	Taylor Street	7612+74.62	16'-10"	2'-1"	1'-4 1/2"	2'-7"	1'-0"	16'-0"

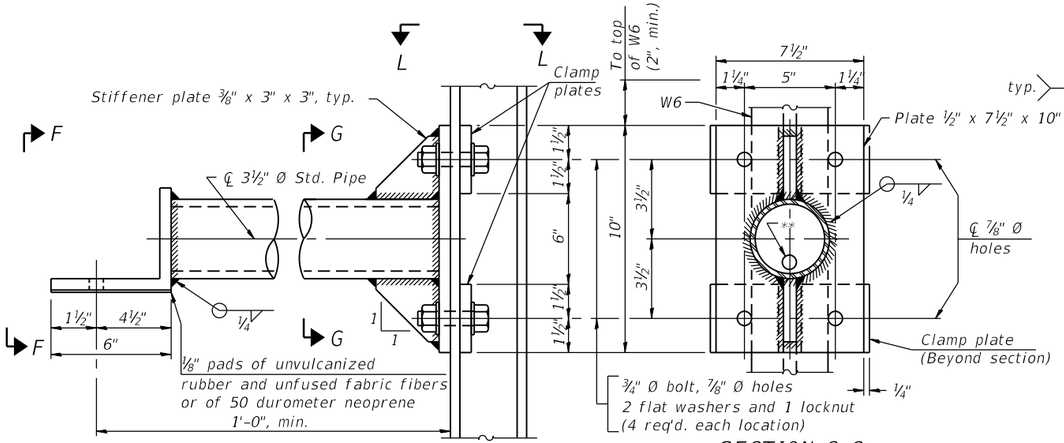
For Details A & B, Sections C-C, D-D and E-E, see Sheet SS83.
For Details D & E, see Sheet SS84.

BM-2-SPECIAL 2-17-2017

HBM ENGINEERING GROUP, LLC

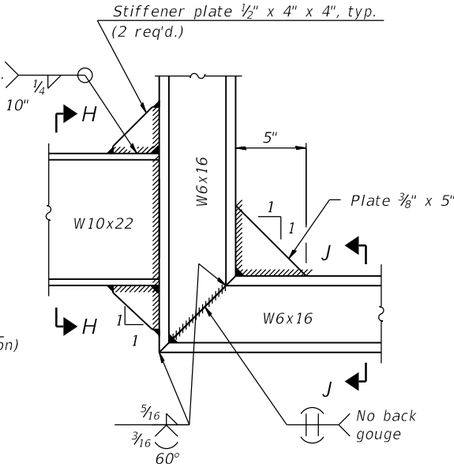
USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES WALKWAY AND CONNECTION DETAILS	
	CHECKED - JJS, MAI	REVISED -			
PLOT SCALE = N.T.S	DRAWN - CP	REVISED -			
PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		SHEET NO. SS82 OF SS129 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1032
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

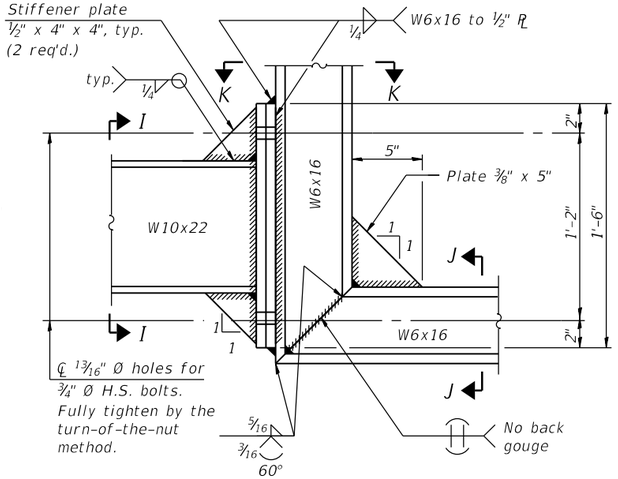


DETAIL A

SECTION G-G

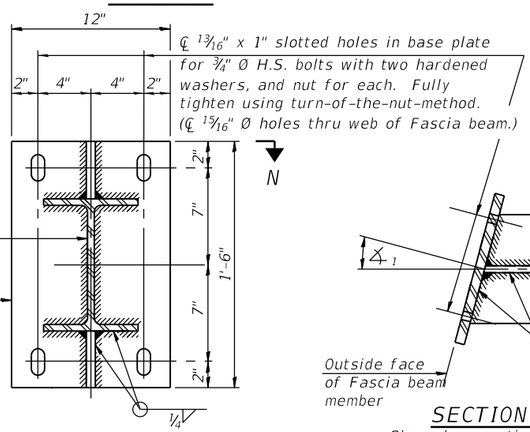


DETAIL B – WELDED W10x22 TO W6x16 CONNECTION



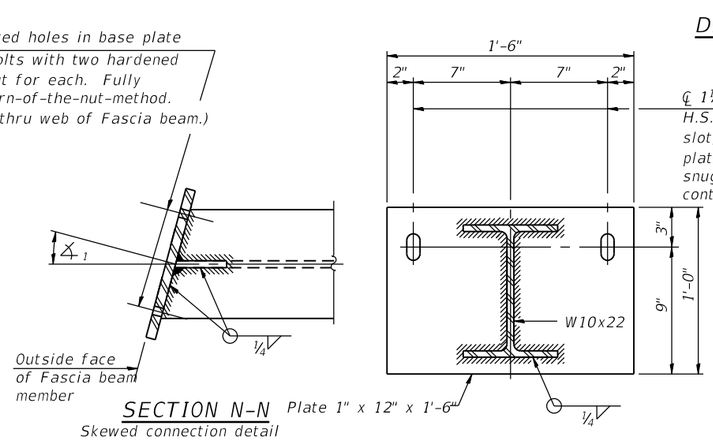
DETAIL B – ALTERNATE BOLTED W10x22 TO W6x16 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.



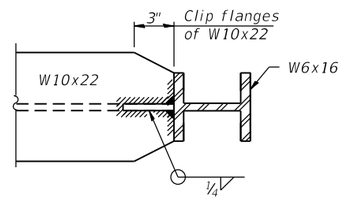
SECTION C-C

Steel beam or girder connection plate details



SECTION D-D

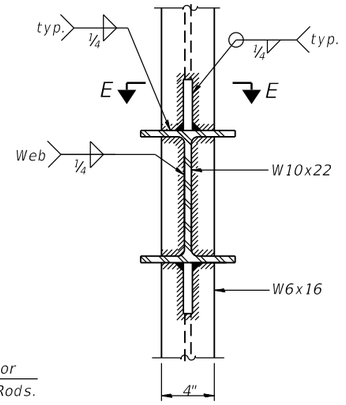
Concrete beam or girder connection plate details.



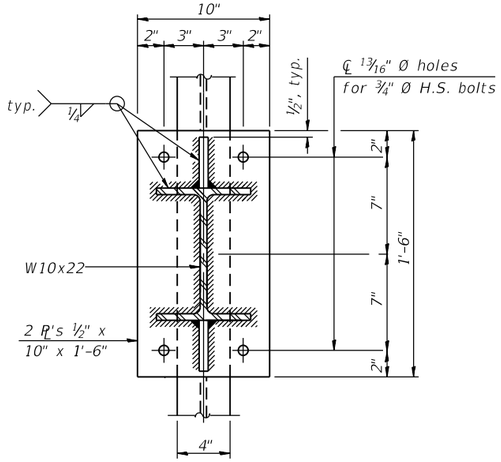
SECTION E-E

VIEW F-F

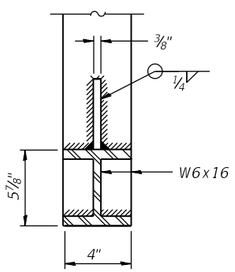
** 13/16" Ø holes for galvanizing. After galvanizing, install ⅞" Ø A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in ½" plate.)



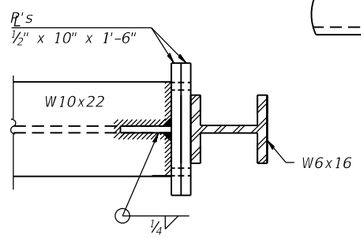
SECTION H-H



SECTION I-I

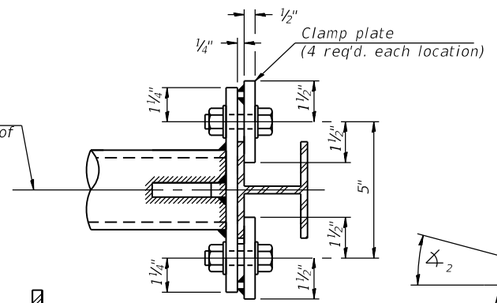


SECTION J-J

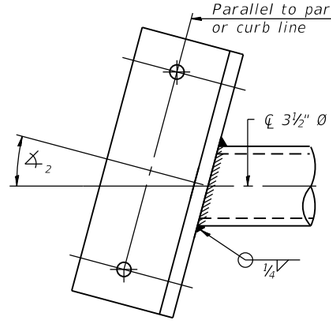


SECTION K-K

Note: For constant slab overhang at Fascia beam, ∠1 = ∠2 = sign angle. For flared beams or other special cases where ∠1 ≠ ∠2, ∠1 = sign angle.

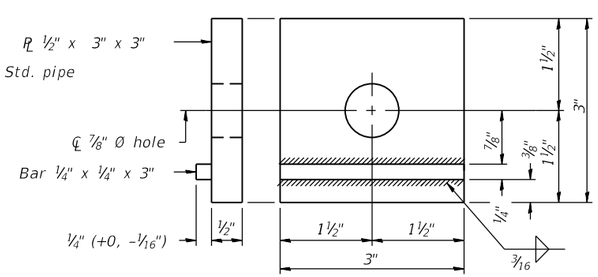


SECTION L-L



SECTION M-M

Skewed connection detail for 3½" Ø pipe to parapet.



CLAMP PLATE DETAILS

BM-3-SPECIAL 2-17-2017

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES CONNECTION DETAILS
		CHECKED - JJS, MAI	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - CP	REVISED -		SHEET NO. SS83 OF SS129 SHEETS
	PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1033
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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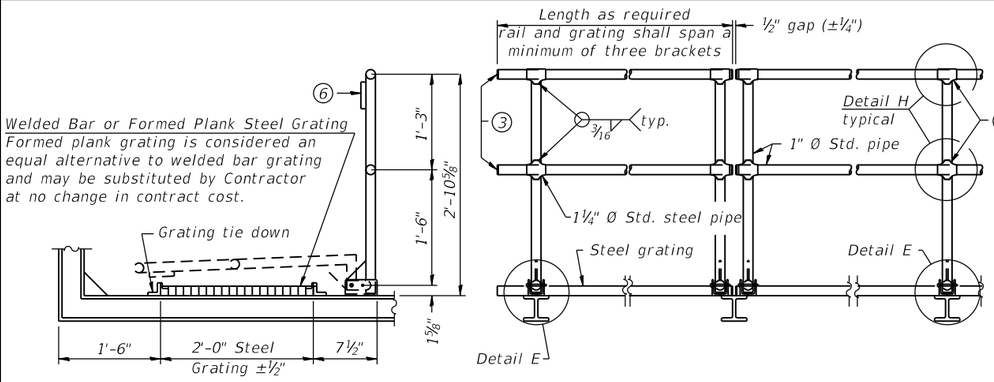
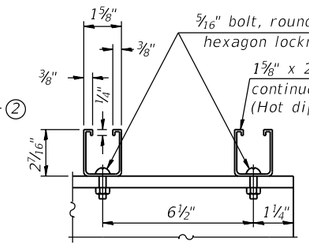
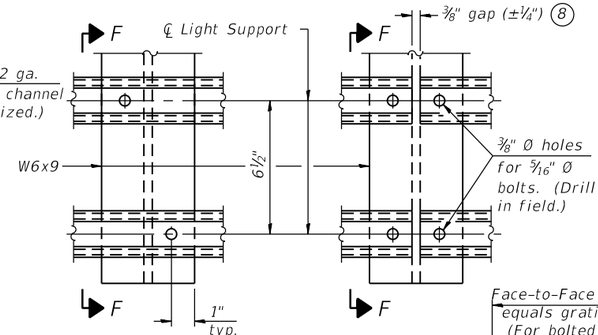


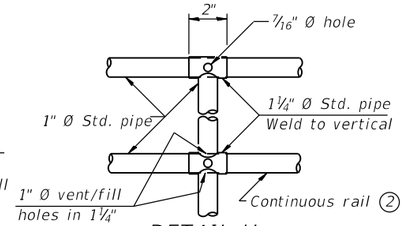
SIDE ELEVATION



SECTION F-F
LIGHTING FIXTURE MOUNTS
(If required)



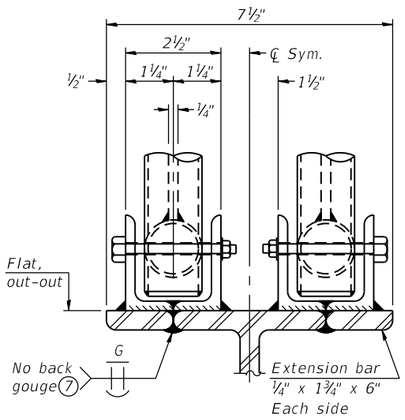
DETAIL F



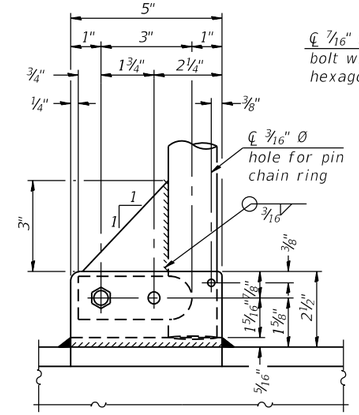
DETAIL H
Welds 3/16" continuous

DETAIL D HANDRAIL

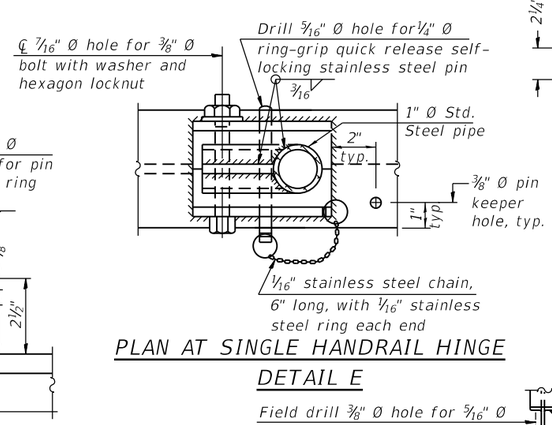
FRONT ELEVATION



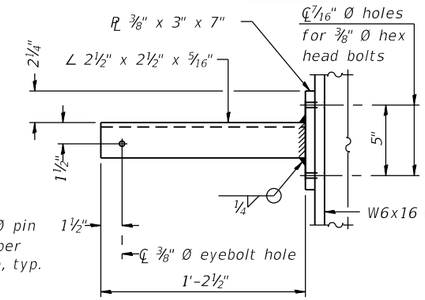
ELEVATION AT HANDRAIL JOINT
(Details not shown same as "FRONT ELEVATION")



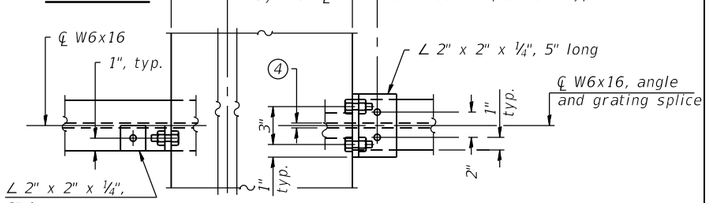
SIDE ELEVATION



PLAN AT SINGLE HANDRAIL HINGE

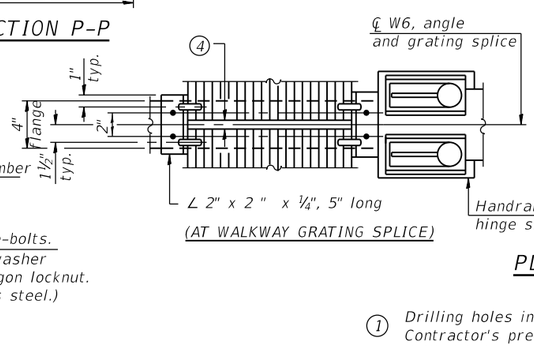


SECTION P-P

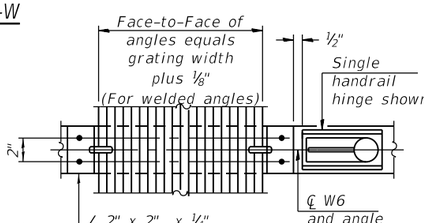


GRATING CONTINUOUS AT GRATING SPLICE

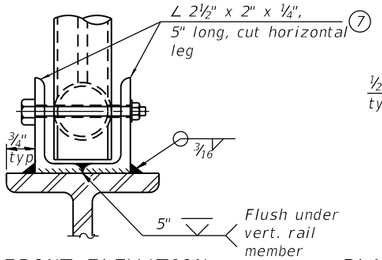
VIEW W-W



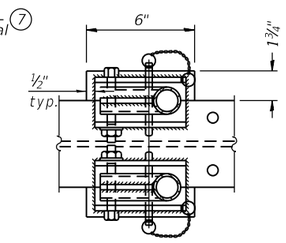
(AT WALKWAY GRATING SPLICE)



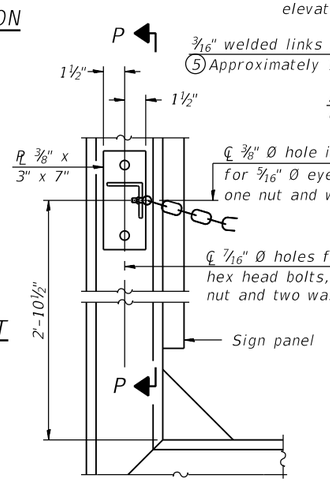
(WALKWAY GRATING CONTINUOUS)



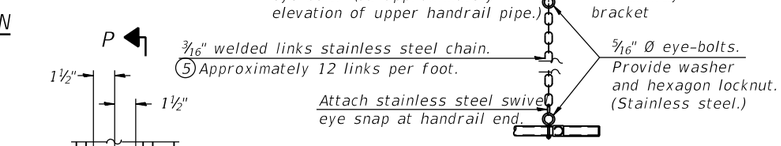
FRONT ELEVATION
(See above Elevations for dimensions.)



PLAN AT HANDRAIL JOINT
(For Details, see Elevations.)

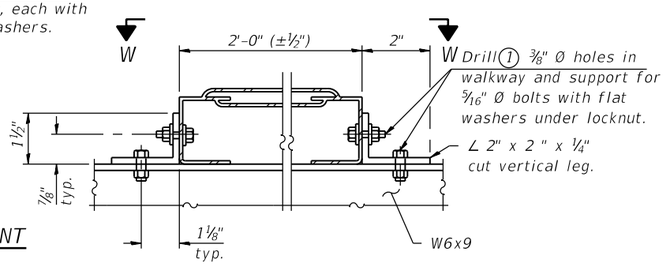


SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "SIDE ELEVATION" and "SAFETY CHAIN"

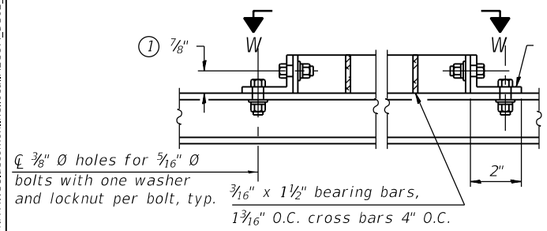


No Sign at Bracket

SAFETY CHAIN
One (1) required for each end of each walkway.



ALTERNATE FORMED PLANK GRATING DETAILS
Plank Grating: nominal depth = 2½" (±½"); perforated or expanded steel sheet with a non-skid surface (non-serrated) concentrated load capacity = 500 lbs. with 6'-0" clear span.



WELDED BAR GRATING DETAILS

PLAN

NOTES

1. Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment. Field drilled holes must be touched up with galvanized paint.
2. Horizontal rail member shall be continuous thru 1¼" Ø pipe. Provide 7/16" Ø hole in 1¼"Ø pipe for ⅜" Ø bolt. Field drill 7/16" Ø hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" Ø holes on top rail at ends only.)
3. Install standard force-fit end caps or weld ⅛" end plates with ⅛" c.f.w. and grind smooth. (All rail ends.)
4. ⅜" (±¼") gap between grating panels at splice.
5. Chain to be type 304L stainless steel suitable for prolonged exterior exposure. Approximately 3'-6" long chain per location. Maximum sag with handrail erected = 4".
6. PL ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.
7. Extrusions may be used in lieu of details shown, with approval by Engineer.
8. Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

BM-4-SPECIAL 2-17-2017

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES WALKWAY DETAILS
		CHECKED - JJS, MAI	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - CP	REVISED -		SHEET NO. SS84 OF SS129 SHEETS
	PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1034
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

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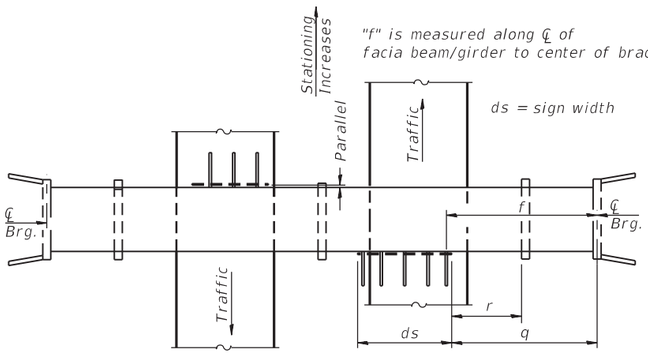
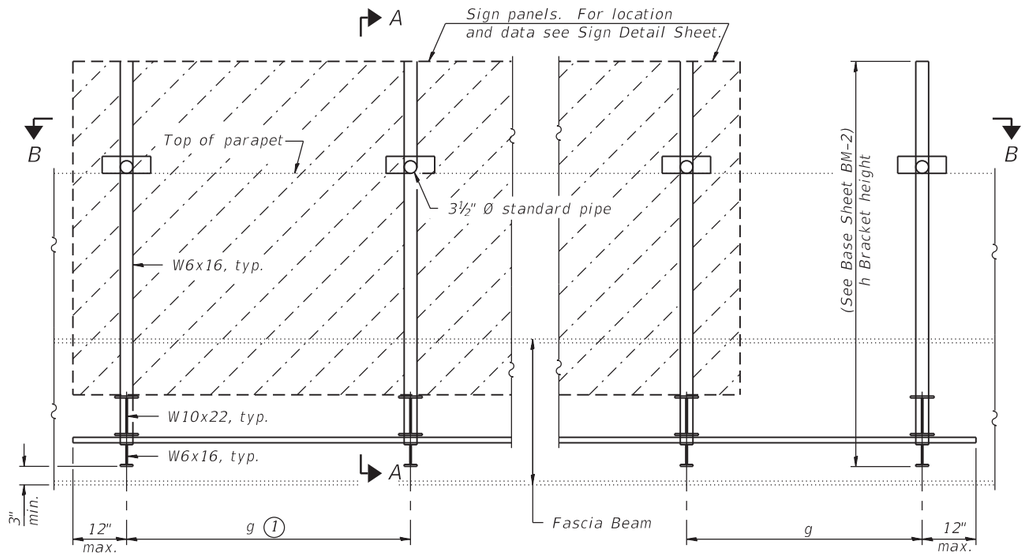


PLAN

(For Sign Skew ≤ 15°, all brackets constant)

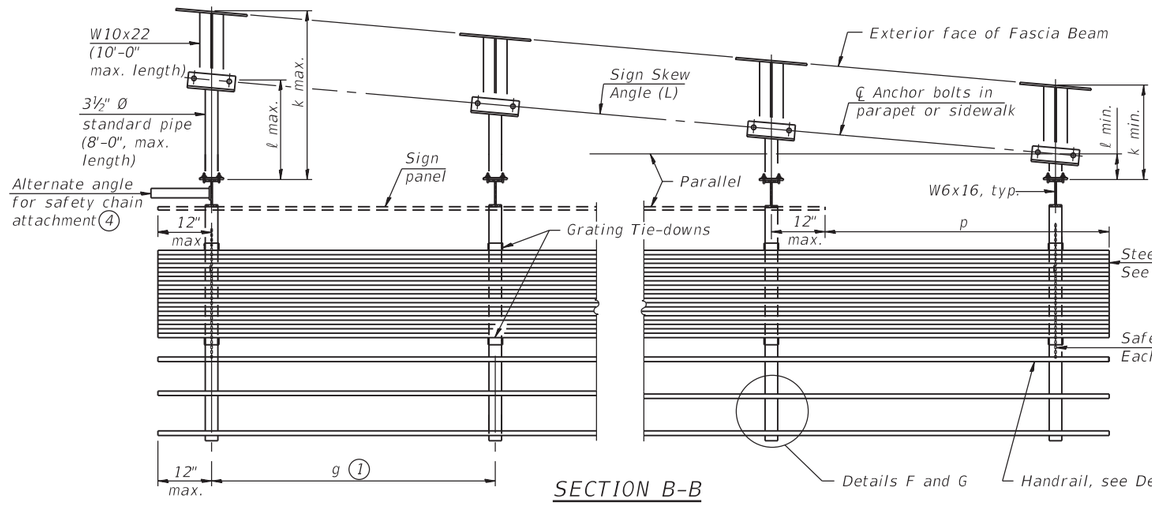
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION

(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B

(Shown: Left Sign Skew >15°)

Dimensions f & g may vary as approved by the Engineer, see (1).

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Bridge Name	Contract Route Designation	ds	r	f	g	No. of Brackets (Total)	q
1B016I094L52.2	0°	6+37.37	016-0478	Roosevelt Road	NB I-90/94	56'-6"	-	38'-2"	*	12	37'-7 7/8"

Note the following brackets shall be placed at the locations of existing holes in the beams:
1B016I094L52.2 (Roosevelt Rd): brackets 7-11
* Varies, see separate table
Note brackets 1-12 and spacing g1-g11 are numbered west to east.

Structure Number	Bridge Name	g1	g2-g3	g4	g5	g6	g7-g8	g9	g10	g11
1B016I094L52.2	Roosevelt Road	5'-7 1/4"	5'-0"	4'-0"	5'-10"	4'-0"	4'-11"	5'-0 1/2"	5'-3 1/2"	5'-11 1/2"

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specifications.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, ¾" Ø x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

(1) Bracket spacing g ≤ 6'-0", max. Spacing shall be uniform if possible but may vary ±6" to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.

(2) Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.

(3) Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on sign width (ds). For Safety Chain Details and Details D, F and G, see Sheet SS89.

(4) If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Sheet SS89.

NOTES:

1. "q" is measured from ℄ Brg. of abutment along ℄ of fascia beam/girder to edge of sign.
2. "r" is measured from face of pier along ℄ of fascia beam/girder to edge of sign.
3. Walkway grating, walkway brackets, handrail, lighting and associated components will not be installed in Contract 62A76.

TOTAL BILL OF MATERIAL

(3) OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED (SPECIAL)	Foot	57

STATE OF ILLINOIS — MOUSSA A. ISSA 081-005738 CHICAGO, ILLINOIS — LICENSED STRUCTURAL ENGINEER

SIGNED Moussa A. Issa

DR. MOUSSA A. ISSA, S.E., IL LIC. NO. 081-005738 EXPIRES 11-30-2020

DATE 01/29/2020 FOR SHEETS SS85 THRU SS89 (TOTAL OF 5 SHEETS)

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES GENERAL PLAN AND ELEVATION
	CHECKED - JJS, MAI	REVISED -		
PLOT SCALE = N.T.S	DRAWN - CP	REVISED -		SHEET NO. SS85 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1035
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 CirclePhase_III\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-BM-SS309-Special-SignStruct.dgn

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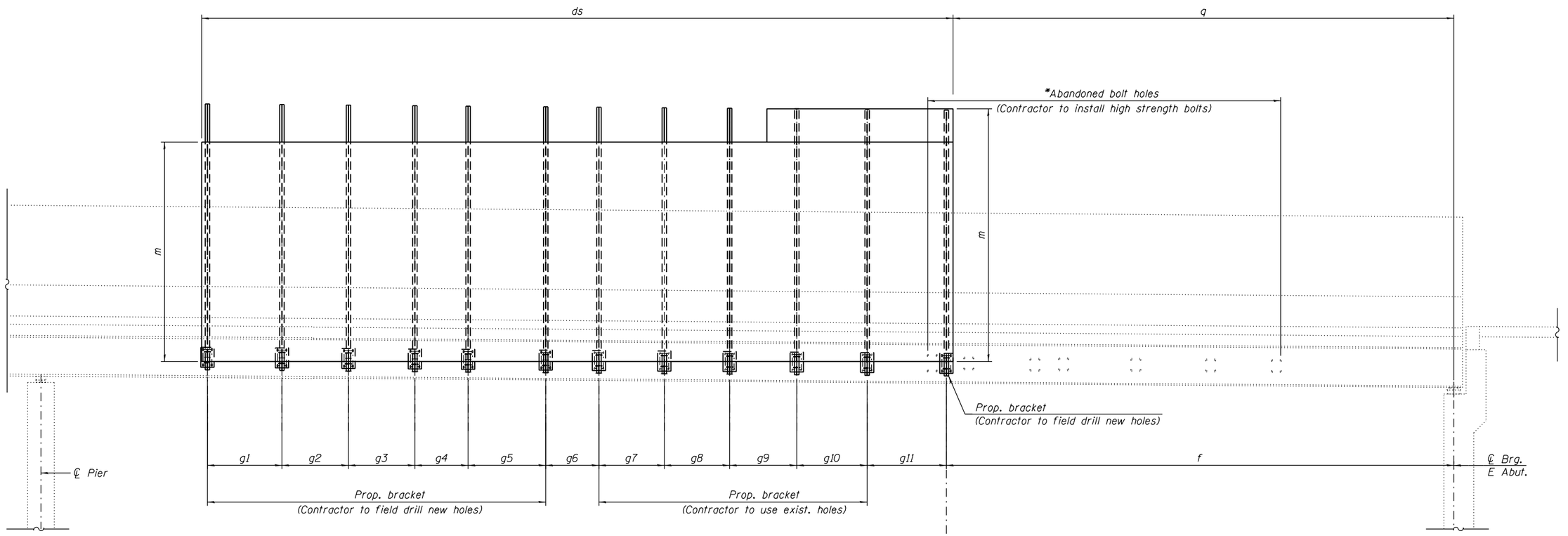

ELEVATION - SN 1B0161094L52.2

South Fascia Girder of Roosevelt Road Bridge SN 016-0478
Looking North

* After bridge mounted sign brackets are removed, any open holes in existing fascia beams shall be filled with HS Bolts with washers. Bolts shall be 3/4" diameter ASTM A325, Type 1 hot-dipped galvanized. Cost shall be included with Remove Overhead Sign Structure.

Areas on the existing fascia beam where the bridge mounted sign brackets are removed shall be cleaned per Power Tool Cleaning to Bare Metal SSPC-SP-11 and painted as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures". All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. The color of the primer shall be Reddish Brown, Munsell No. 2.5YR 3/4. Cost shall be included with Remove Overhead Sign Structure.

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 AmerEastTransportation\60269938 CirclePhase_IN000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-BM-SS309A-Special-SignStruct.dgn
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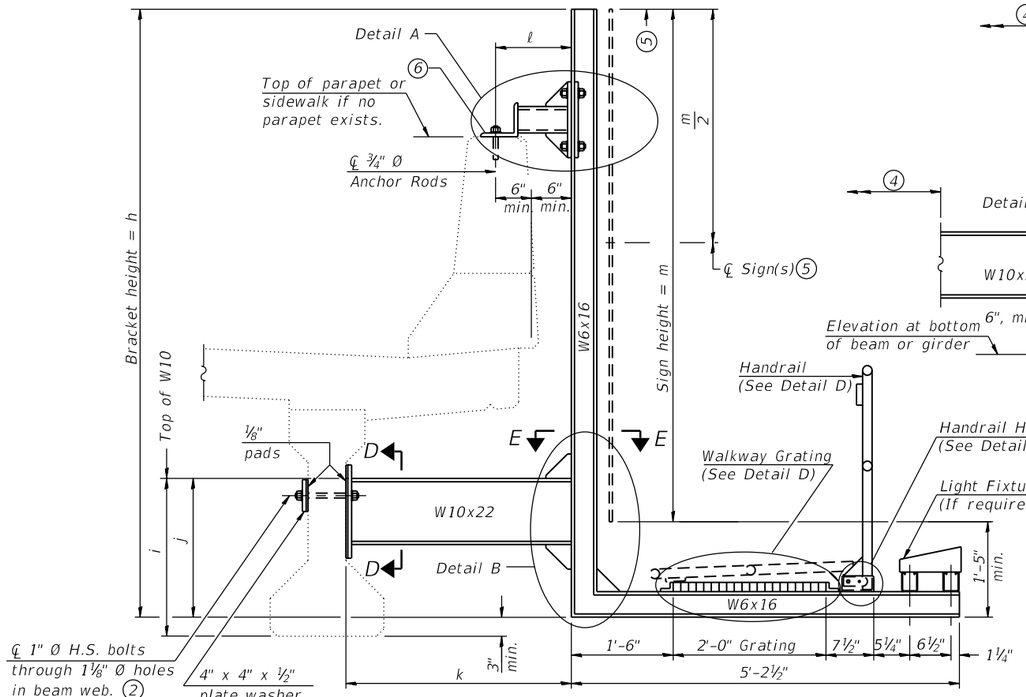
HBM ENGINEERING GROUP, LLC

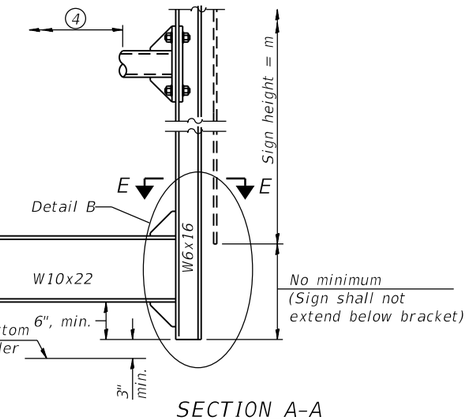
USER NAME = charles.pigozzi	DESIGNED - AMS, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES ELEVATION	
	CHECKED - JJS, MAI	REVISED -			
PLOT SCALE = N.T.S	DRAWN - AMS	REVISED -			
PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		SHEET NO. SS86 OF SS129 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1036
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		



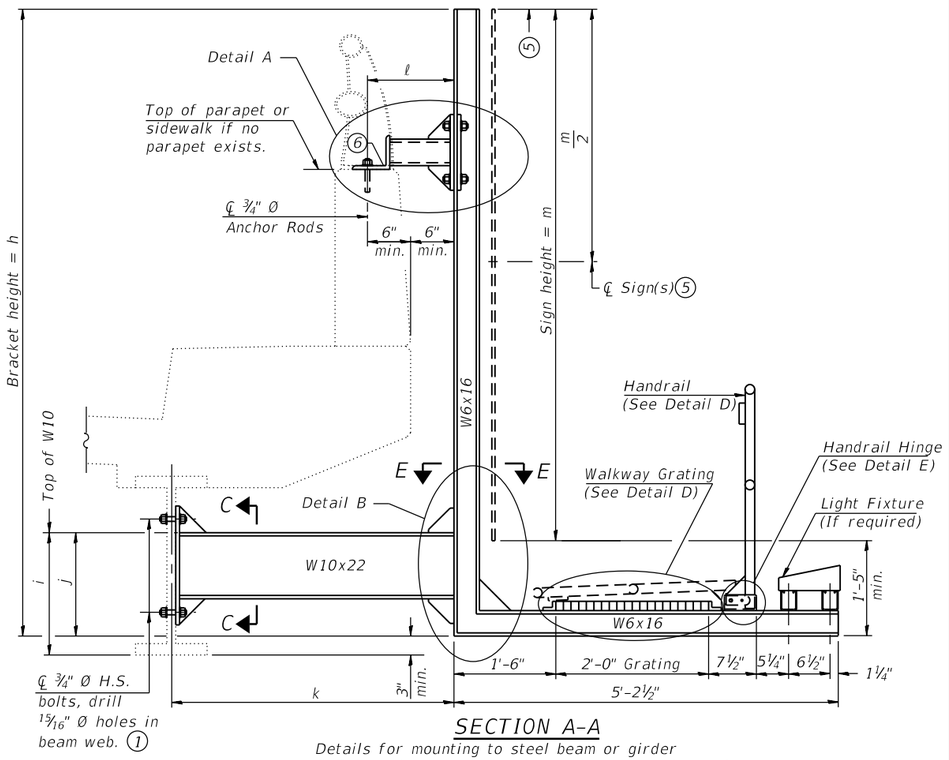
SECTION A-A

Details for mounting to PPC I Beam or Bulb "T" & Details for mounting to parapet w/o rail



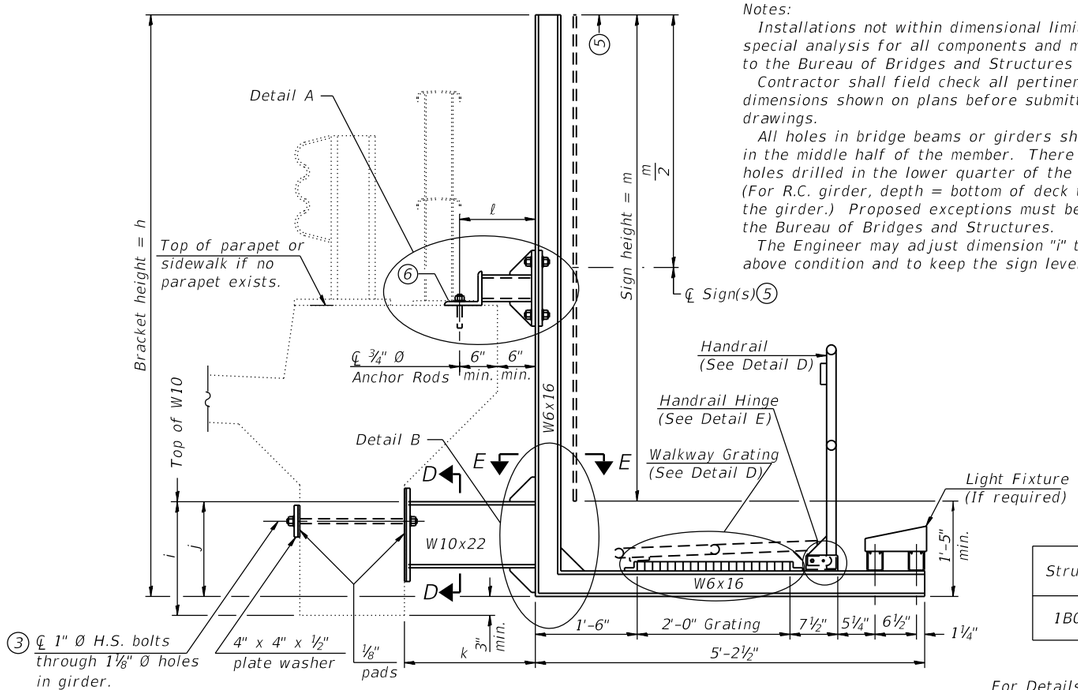
SECTION A-A

Alternate with no lights or walkways



SECTION A-A

Details for mounting to steel beam or girder & Details for mounting with existing parapet mounted rail



SECTION A-A

Details for mounting to integral reinforced concrete girder & Details for mounting on safety curb with surface-mount bridge rail

Notes:

Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.

Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.

All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.

The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

(1) *Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.*

(2) *For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during field drilling of existing beams.*

(3) *For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing/damage during field drilling of existing concrete. Spalls over ¼" deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.*

(4) *For attachment details of 3½" pipe and W10x22, see other sections as applicable.*

(5) *Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)*

(6) *For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.*

NOTES:

1. *Walkway grating, walkway brackets, handrail, lighting and associated components will not be installed in Contract 62A76.*

Structure Number	Bridge Name	Bridge Station	h	i	j	k max. (10'-0" max.)	l max. (8'-0" max.)	m
1B016I094L52.2	Roosevelt Road	6+37.37	20'-0"	1'-11"	1'-4 1/2"	4'-6 1/2"	1'-10"	varies from 16'-6" to 19'-0"

For Details A & B, Sections C-C, D-D and E-E, see Sheet SS88.
For Details D & E, see Sheet SS89.

BM-2-SPECIAL 2-17-2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -		
	CHECKED - JJS, MAI	REVISED -		
PLOT SCALE = N.T.S	DRAWN - CP	REVISED -		
PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
WALKWAY AND CONNECTION DETAILS
SHEET NO. SS87 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1037
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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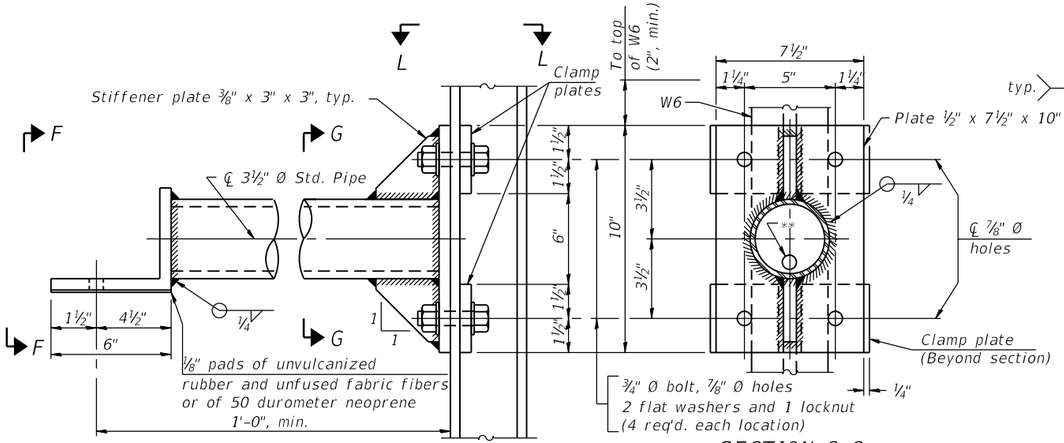
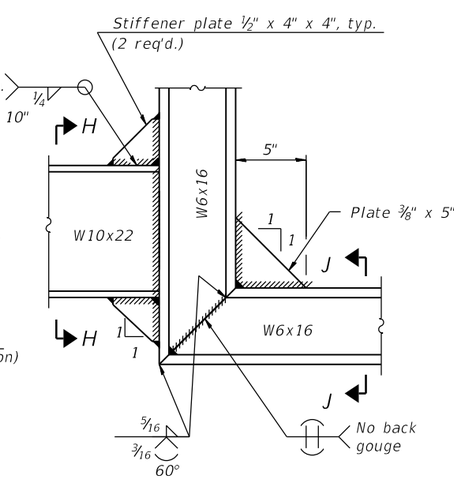
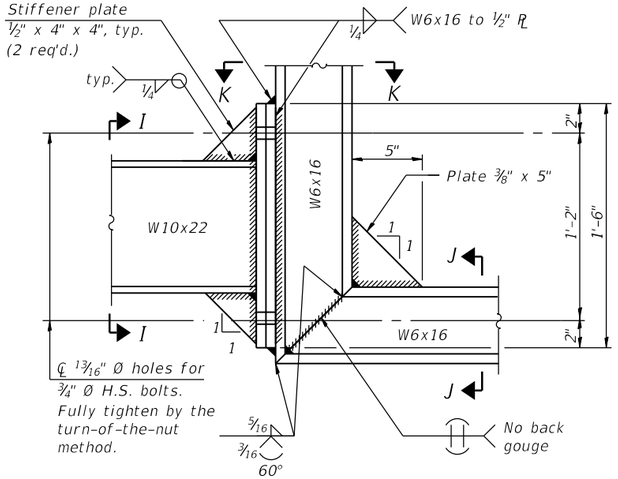


DETAIL A

SECTION G-G

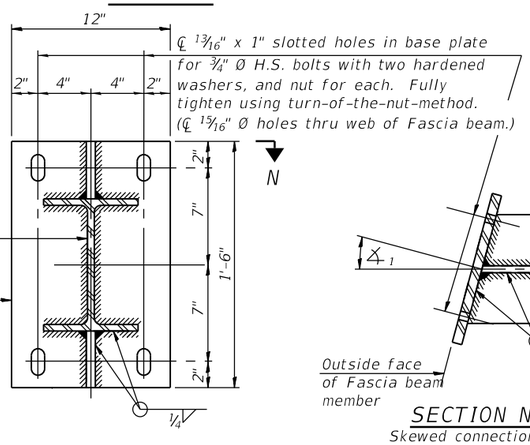


DETAIL B – WELDED W10x22 TO W6x16 CONNECTION



DETAIL B – ALTERNATE BOLTED W10x22 TO W6x16 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.



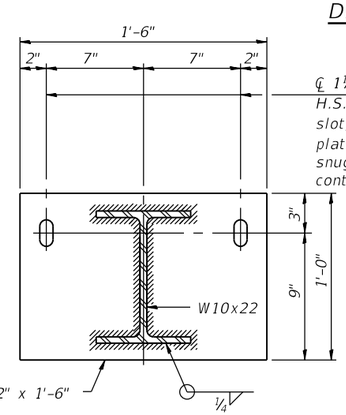
SECTION C-C

Steel beam or girder connection plate details

SECTION N-N

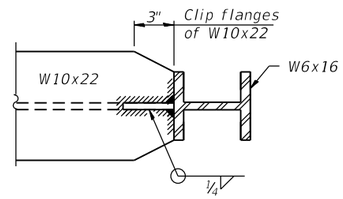
Skewed connection detail for W10x22 to Fascia beam.

Plate 1" x 12" x 1'-6"

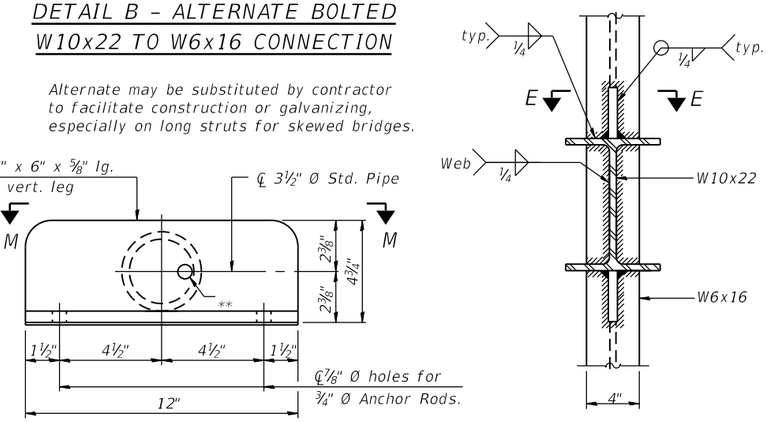


SECTION D-D

Concrete beam or girder connection plate details.



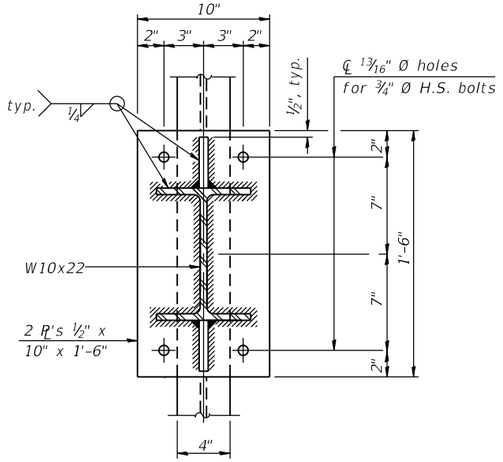
SECTION E-E



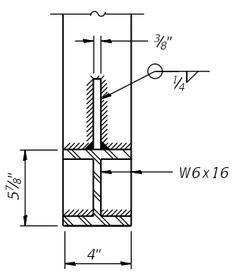
VIEW F-F

** 13/16" Ø holes for galvanizing. After galvanizing, install ⅞" Ø A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in ½" plate.)

SECTION H-H

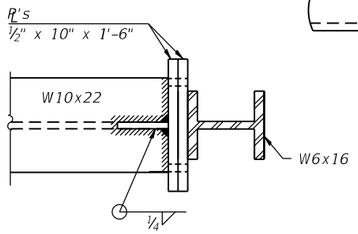


SECTION I-I

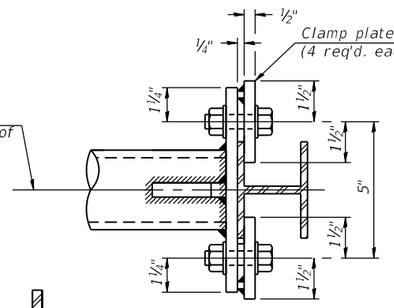


SECTION J-J

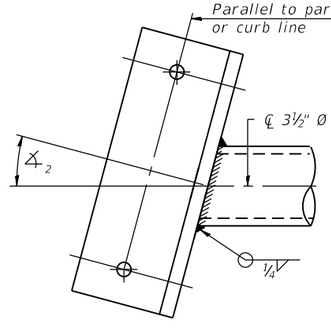
Note: For constant slab overhang at Fascia beam, ∠1 = ∠2 = sign angle. For flared beams or other special cases where ∠1 ≠ ∠2, ∠1 = sign angle.



SECTION K-K

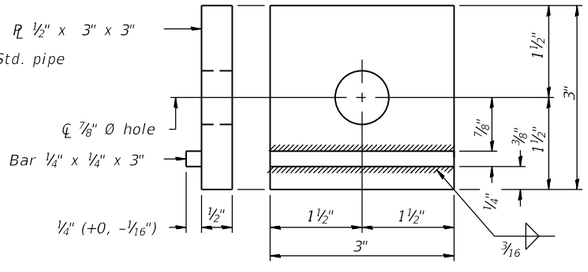


SECTION L-L



SECTION M-M

Skewed connection detail for 3½" Ø pipe to parapet.



CLAMP PLATE DETAILS

BM-3-SPECIAL 2-17-2017

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - JJS, MAI	REVISED -	
	PLOT SCALE = N.T.S	DRAWN - CP	REVISED -	
	PLOT DATE = 1/24/2020	CHECKED - JJS, MAI	REVISED -	

BRIDGE MOUNT SIGN STRUCTURES
CONNECTION DETAILS
SHEET NO. SS88 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1038
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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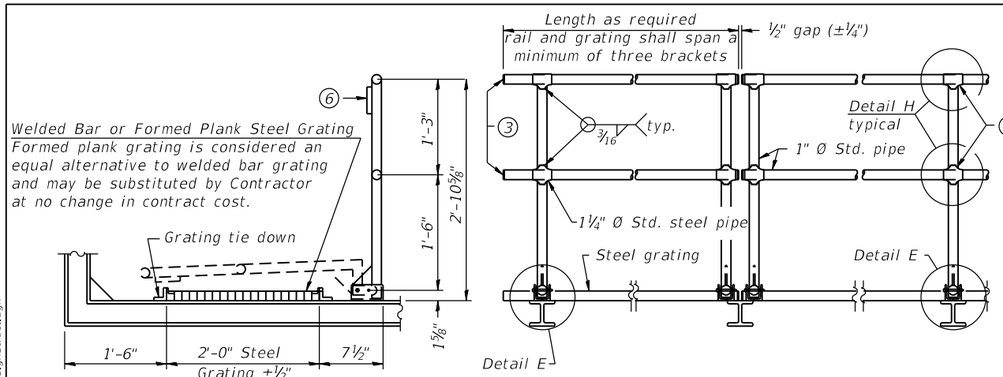
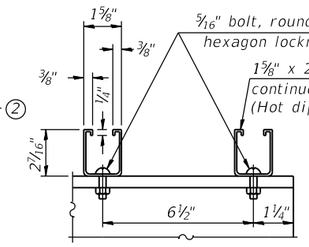
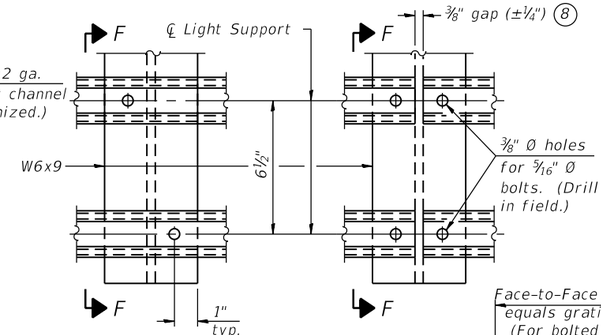


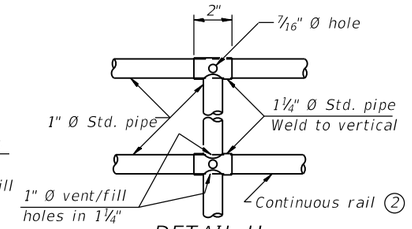
SIDE ELEVATION



SECTION F-F
LIGHTING FIXTURE MOUNTS
(If required)

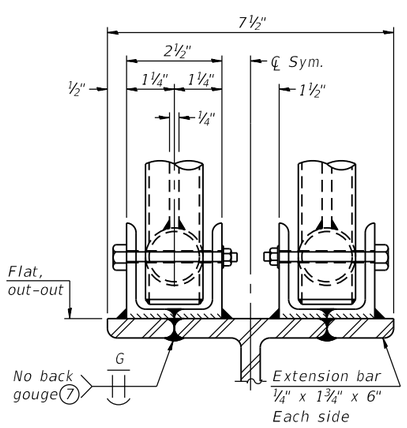


DETAIL F

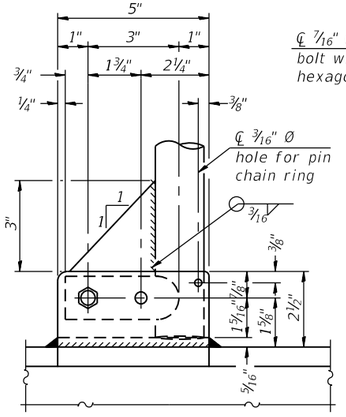


DETAIL H
Welds 3⁄16" continuous

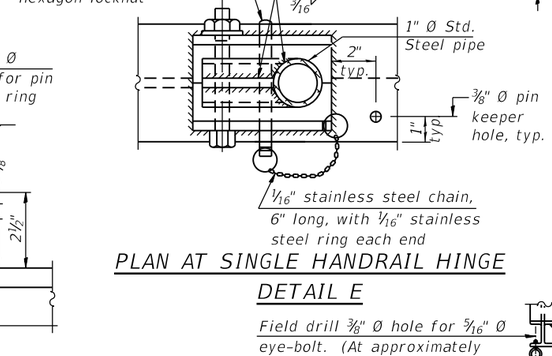
DETAIL D HANDRAIL



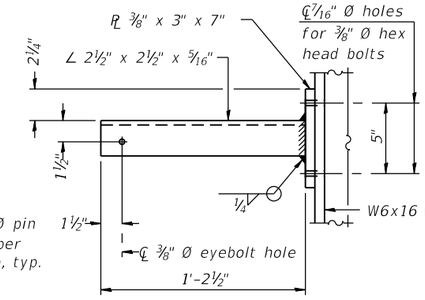
ELEVATION AT HANDRAIL JOINT
(Details not shown same as "FRONT ELEVATION")



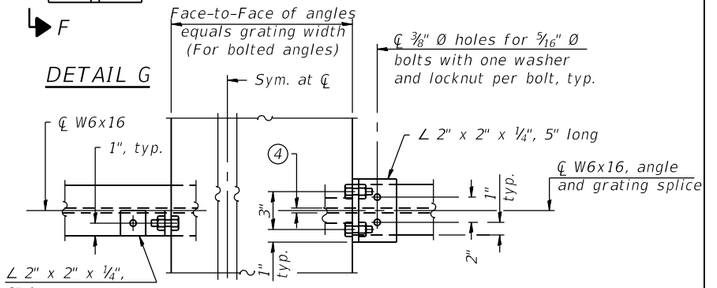
SIDE ELEVATION



PLAN AT SINGLE HANDRAIL HINGE

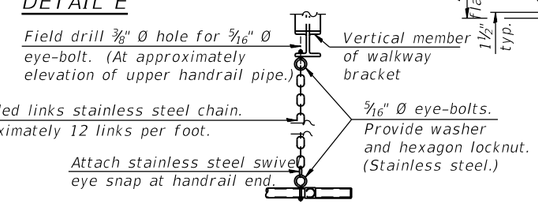


SECTION P-P



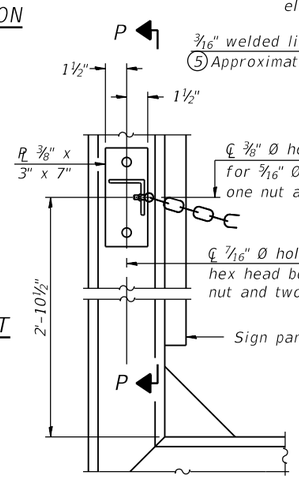
GRATING CONTINUOUS AT GRATING SPLICE

DETAIL E

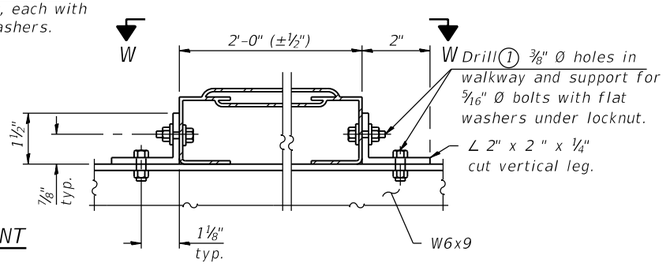


No Sign at Bracket

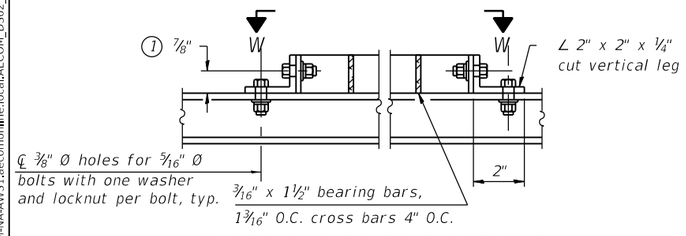
SAFETY CHAIN
One (1) required for each end of each walkway.



SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "SIDE ELEVATION" and "SAFETY CHAIN"

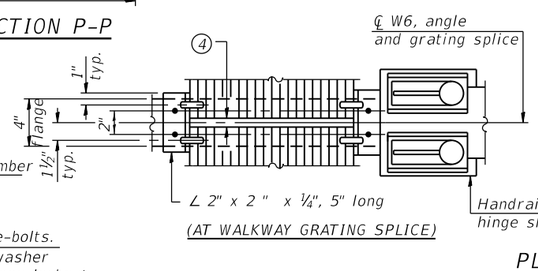


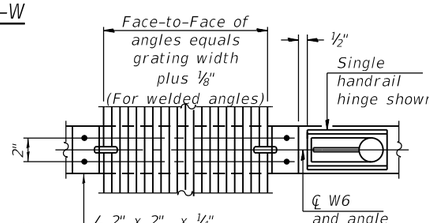
ALTERNATE FORMED PLANK GRATING DETAILS
Plank Grating: nominal depth = 2½" (±½"); perforated or expanded steel sheet with a non-skid surface (non-serrated) concentrated load capacity = 500 lbs. with 6'-0" clear span.



WELDED BAR GRATING DETAILS

VIEW W-W





(WALKWAY GRATING CONTINUOUS)

PLAN

NOTES

1. Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment. Field drilled holes must be touched up with galvanized paint.
2. Horizontal rail member shall be continuous thru 1¼" Ø pipe. Provide 7⁄16" Ø hole in 1¼"Ø pipe for ⅜" Ø bolt. Field drill 7⁄16" Ø hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5⁄16" eyebolts in 7⁄16" Ø holes on top rail at ends only.)
3. Install standard force-fit end caps or weld ⅛" end plates with ⅛" c.f.w. and grind smooth. (All rail ends.)
4. ⅜" (±¼") gap between grating panels at splice.
5. Chain to be type 304L stainless steel suitable for prolonged exterior exposure. Approximately 3'-6" long chain per location. Maximum sag with handrail erected = 4".
6. PL ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.
7. Extrusions may be used in lieu of details shown, with approval by Engineer.
8. Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

BM-4-SPECIAL 2-17-2017

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - CP, LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES WALKWAY DETAILS
		CHECKED - JJS, MAI	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - CP	REVISED -		SHEET NO. SS89 OF SS129 SHEETS
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1039
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

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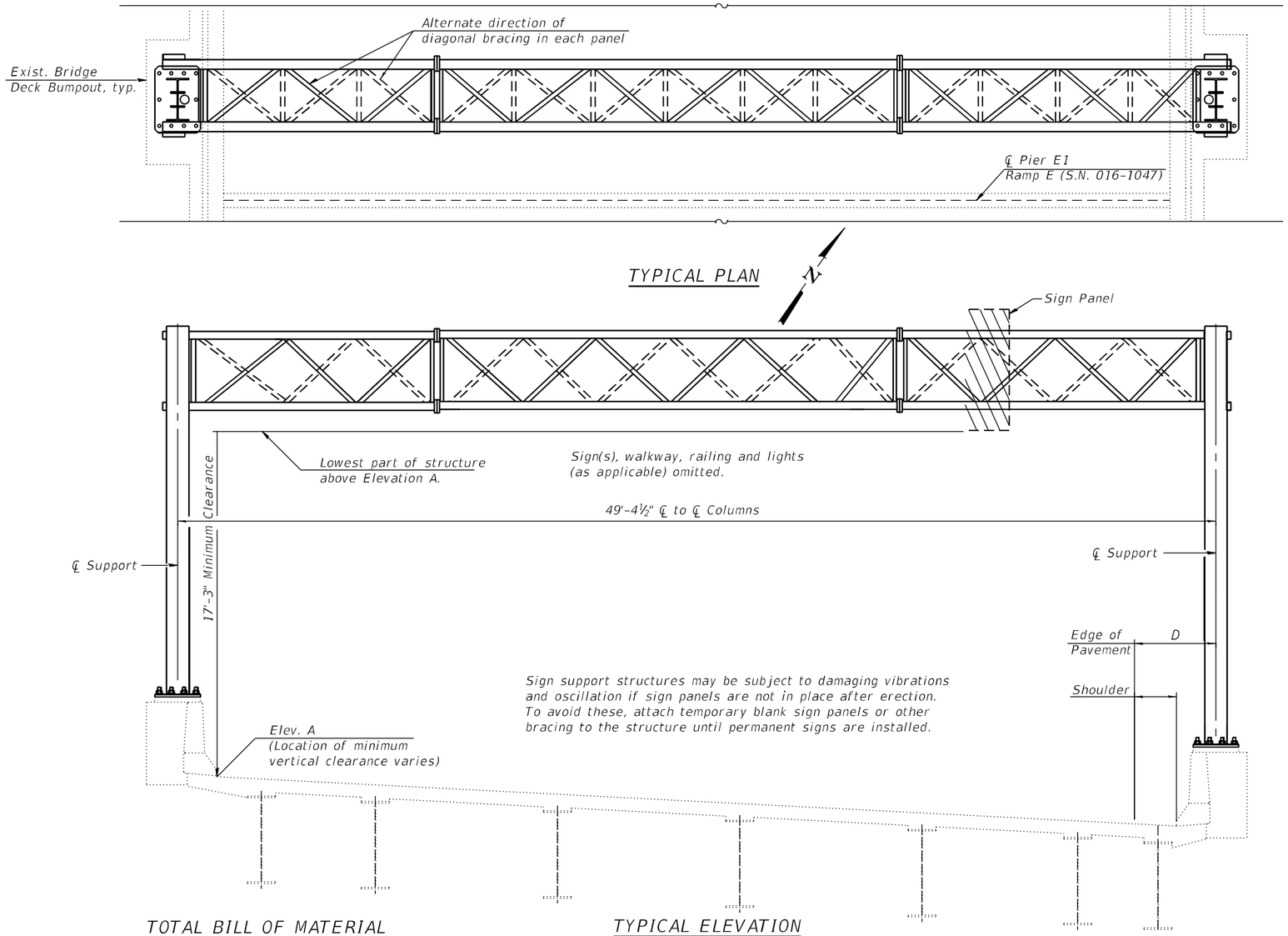


TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
EPOXY CRACK INJECTION	FOOT	9
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	45
OVERHEAD SIGN STRUCTURE - TRICHORD - TYPE TRI-I-S	FOOT	50
GROUT PAD REMOVAL	EACH	2

TYPICAL ELEVATION

(Looking at Face of Signs)

WALKWAY: Walkway grating, walkway brackets, handrails, lighting, and associated components shown in these plans on the traffic side of the sign structure/sign panel will not be installed in Contract 62A76. The truss grating and maintenance walkway behind the sign panel will be included with Overhead Sign Structure - Trichord Type Tri-I-S.

Structure Number	** Station	Design Truss Type	c. to c. Supports	*** Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
1S0161094L053.6	120+18.82	TRI-I-S	49'-4½"	636.36	7'-5"	13'-0"	370 Sq. Ft.

*Estimated from Existing Plans. Contractor shall verify and make necessary approved adjustments prior to construction or ordering materials.

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

** Measured along Exist. ℄ NB I-90/94. It should be noted that the station included in the Table is measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.

*** Verify in Field

STATE OF ILLINOIS
MOUSSA A. ISSA
081-005738
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

SIGNED Moussa A. Issa

DR. MOUSSA A. ISSA, S.E., IL. LIC. NO. 081-005738
EXPIRES 11-30-2020

DATE 01/29/2020 FOR SHEETS SS90 THRU SS97
(TOTAL OF 8 SHEETS)

GENERAL NOTES

EXISTING STRUCTURE: Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field-verify existing dimensions and details affecting new construction 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 scope of the work; however, the Contractor will be paid for the quantity furnished at the unit price bid for the work.

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. (2001, 4th edition, 2002 interim) ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

MINIMUM CLEARANCE: Vertical Roadway Clearance = 17'-3" (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specifications.

MATERIALS: Structural steel pipe for chords shall be ASTM A500 Grade C. Structural steel pipe for perpendiculars and diagonals shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 50 or ASTM A992 Gr. 50. The W24 columns and stiffening ribs at the base plate shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

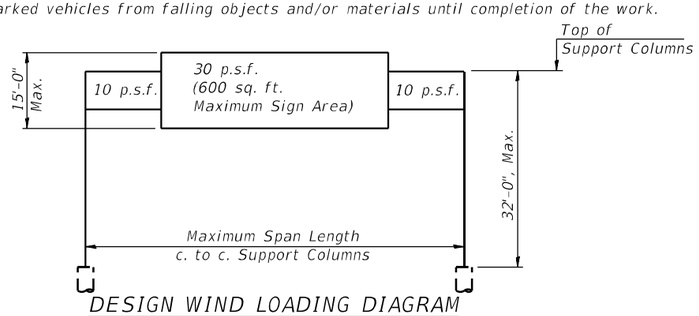
GALVANIZING: All steel grating, plates, shapes and pipe shall be hot dip galvanized after fabrication in accordance with AASHTO M111. All bolts, u-bolts, eye bolts, lock nuts and washers must be hot dip galvanized per AASHTO M232.

FASTENERS FOR STEEL TRUSSES: All bolts noted as "high strength" (HS) must satisfy the requirements of AASHTO M164 (ASTM A325), ASTM A449, or an Engineer-approved alternate, and must have matching lock nuts and washers. All bolts, u-bolts, eye bolts, lock nuts and washers not specified to be "high strength" must satisfy the requirements of ASTM A307 Gr B. All lock nuts must have nylon or steel inserts. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the Standard Specifications.
Rotational capacity ("ROCAP") testing will not be required.

ANCHOR RODS: After removed of the existing grout pads, exposed portions of anchor bolts shall be cleaned and painted with one coat of primer. The primer shall meet the requirements of sections 4 and 5 of SSPC-PS25 for red iron oxide zinc oxide raw linseed oil and alkyd primer. Cleaning and painting of existing anchor bolts shall not be paid separately but shall be included with Concrete Removal.

REINFORCEMENT BARS: All supplemental reinforcement bars shall be epoxy-coated in accordance with the Standard Specifications.

PROTECTION: The Contractor shall take all necessary precautions for the protection of passing and/or parked vehicles from falling objects and/or materials until completion of the work.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

HBM ENGINEERING GROUP, LLC

USER NAME = marina.stoica		DESIGNED - JJS, FL		REVISED -	
		CHECKED - MAI, JMG		REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL		REVISED -	
PLOT DATE = 1/29/2020		CHECKED - MAI, JMG		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRI-CHORD SIGN STRUCTURES - GENERAL PLAN & ELEVATION - STEEL TRUSS & STEEL SUPPORTS

SHEET NO. SS90 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1040
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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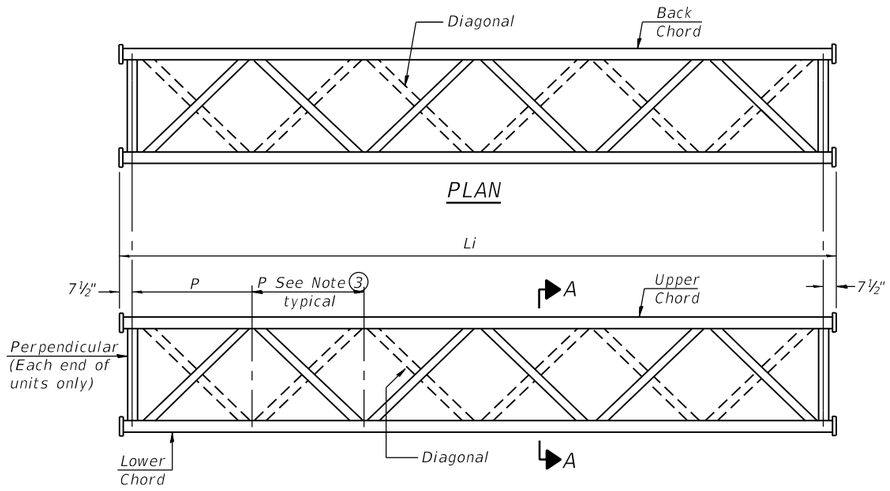
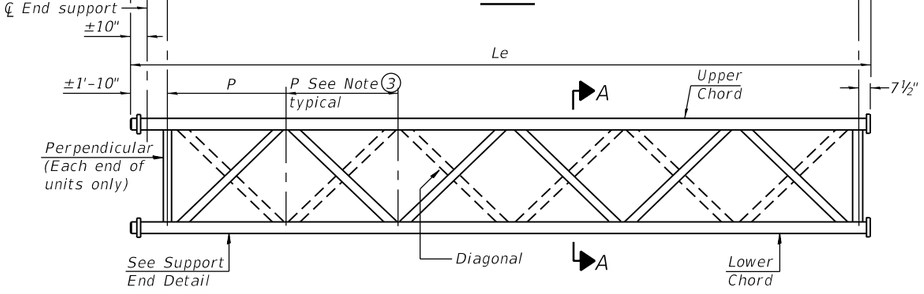


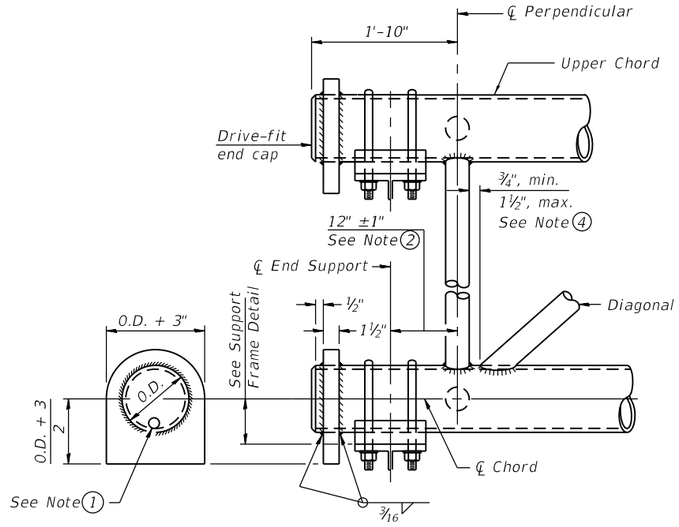
ELEVATION
TYPICAL INTERIOR UNIT

Even number of panels/interior unit required. For two interior units, each unit may have even or odd number of panels.

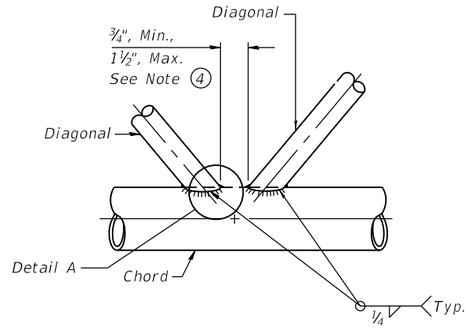


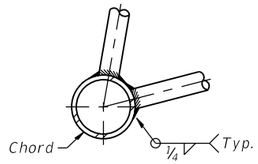
ELEVATION
TYPICAL EXTERIOR UNIT

Even or odd number of panels/exterior unit allowed.

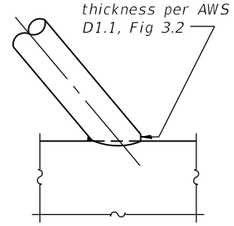


SUPPORT END DETAIL FOR EXTERIOR UNIT

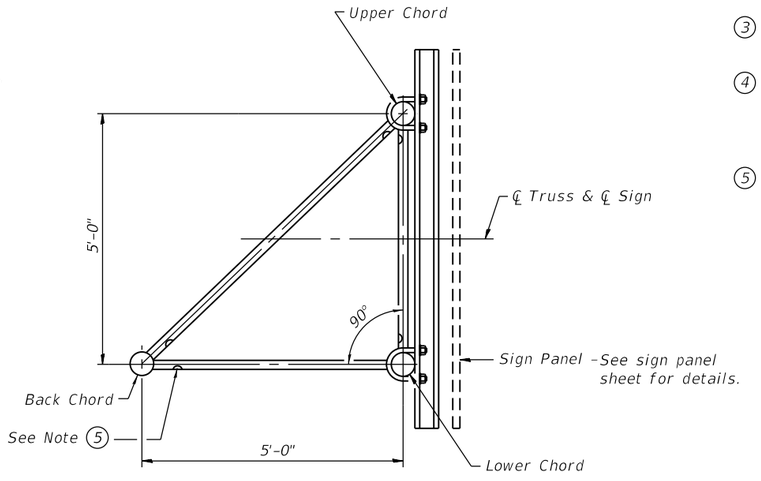




TYPICAL JOINT DETAILS



DETAIL A



SECTION A-A

NOTES

1. Contractor must use standard drive-fit cap to close end. The drive-fit cap must have a ½" Ø drain hole and must be installed after galvanizing. (Typ. at non-splice ends of chords)
2. 1'-10" end dimension may vary by ±1" to provide uniform panel spacing (P).
3. Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0". (Fabricator may vary for uniform diagonals).
4. All diagonals shall be offset from the panel point based on the following: offset shall provide a ¾" minimum to 1½" maximum clearance between diagonal and any other diagonal, or perpendicular member, and to provide clearance for U-bolt connections of signs or walkway brackets.
5. Galvanizing vent holes of adequate size must be provided at each end of truss members except chords. Place on underside of sloping members and truss side of vertical members. Alternately, holes may be provided in wall of chords. All vent holes must be drilled and de-burred, typ.

TRI-S-2 2-17-2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, FL	REVISED -	
		CHECKED - MAI, JMG	REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL	REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRI-CHORD SIGN STRUCTURES – STEEL TRUSS DETAILS FOR TRUSS TYPES TRI-I-S, TRI-II-S AND TRI-III-S

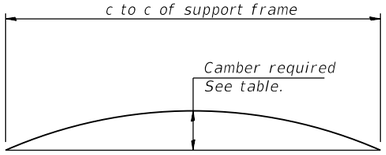
SHEET NO. SS91 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1041
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

TRICHORD UNIT TABLE

Structure Number	** Station	Design Truss Type	Exterior Units (2)			Interior Unit			
			No. Panels per Unit	Unit Lgth.(Le)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(Li)	Panel Lgth.(P)
1S016I094L053.6	120+18.82	TRI-I-S	5	25'-6¼"	4'- 7¼"	–	–	–	–

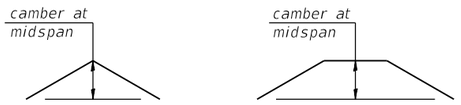
** Measured along Exist. ℄ NB I-90/94. It should be noted that the station included in the Table is measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations show in Existing Record Drawings.



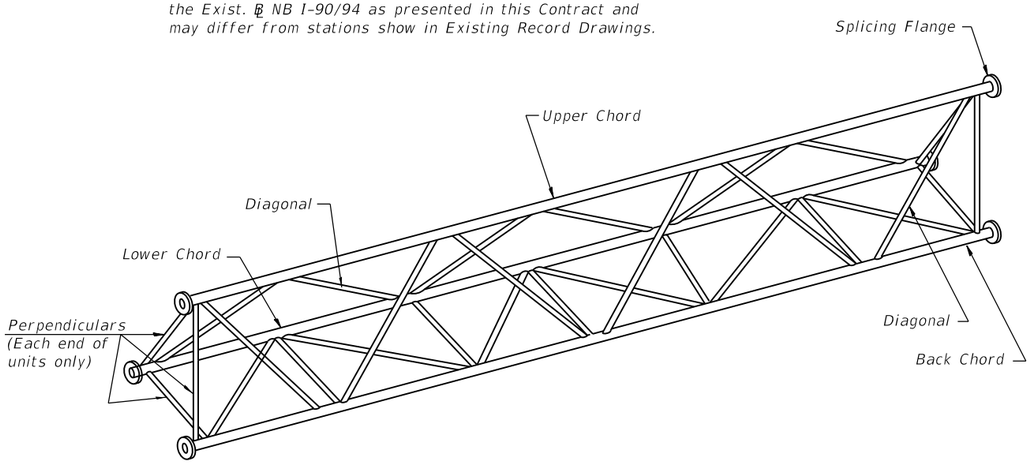
CAMBER DIAGRAM

Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

CAMBER ATTAINMENT EXAMPLES:

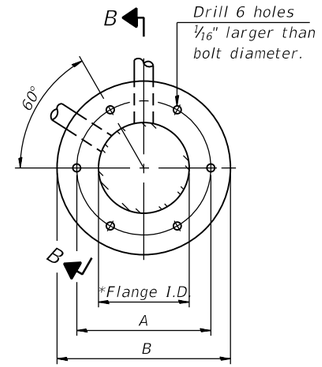


Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)

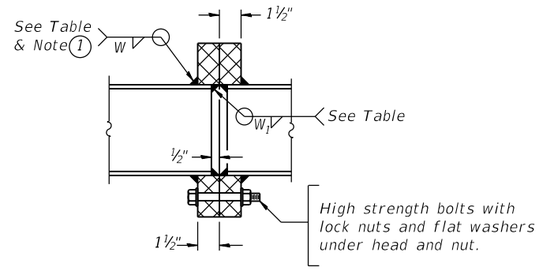


ISOMETRIC VIEW
TYPICAL INTERIOR TRUSS UNIT

Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy-dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



TRUSS TYPES I-S, II-S, & III-S



SECTION B-B

(1) Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop-bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match-marked" to ensure proper field assembly.

TRICHORD DESIGN TABLE

Truss Type	Maximum Span Length	Chords		Diagonals and Perpendiculars		*Camber at Midspan	Splicing Flange					
							H.S. Bolts		Weld Sizes			
		O.D.	Wall	O.D.	Wall		No./Splice	Diameter	W	W1	A	B
	(ft.)	(in.)	(in.)	(in.)	(in.)	(in.)	(each)	(in.)	(in.)	(in.)	(in.)	(in.)
TRI-I-S	80	4.500	0.237	2.875	0.203	2.25	6	⅞	¼	⅜16	8¼	11¼
TRI-II-S	100	5.563	0.258	2.875	0.203	3.25	6	⅞	⅜	¼	9¼	12¼
TRI-III-S	120	6.625	0.280	2.875	0.203	5.00	6	1	⅜	¼	11½	15
TRI-IV-S	140	8.625	0.322	3.500	0.216	6.25	6	1¼	9⁄16	7⁄16	13	16½

* Note to fabricator: For spans between maximum span lengths given in table, use linear interpolation to determine camber.
Minimum AASHTO Camber = L / 1000

TRI-S-3 2-17-2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - JJS, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRI-CHORD SIGN STRUCTURES – STEEL TRUSS DETAILS FOR TRUSS TYPES TRI-I-S, TRI-II-S AND TRI-III-S
	CHECKED - MAI, JMG	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS92 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1042
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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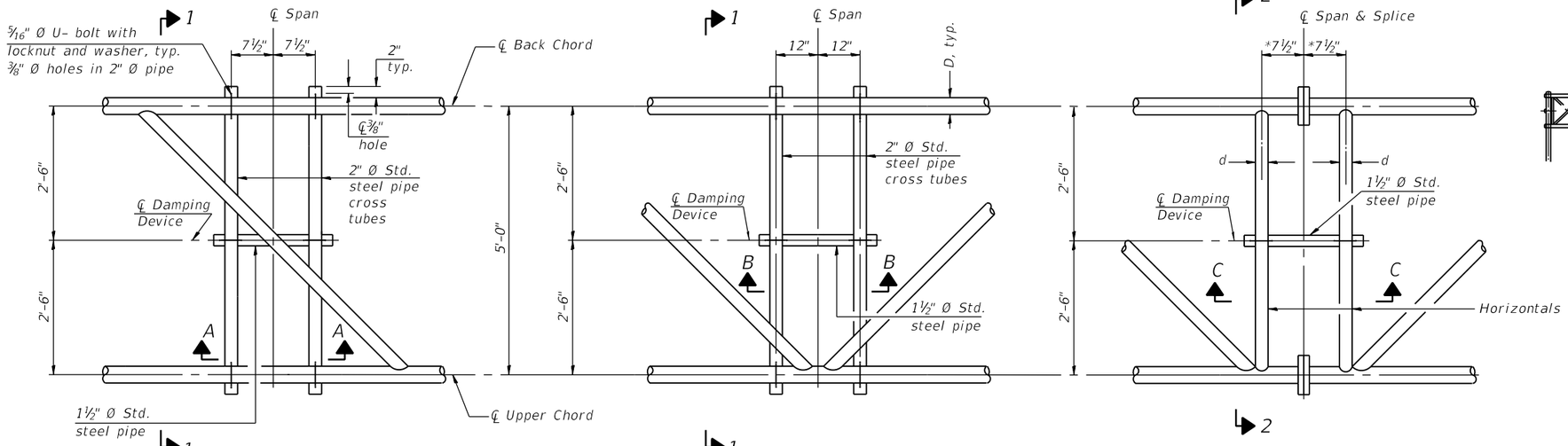
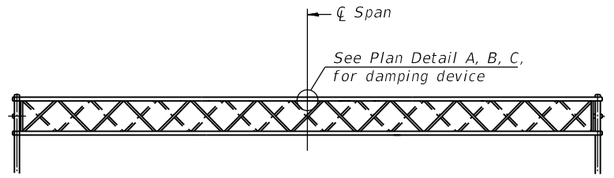


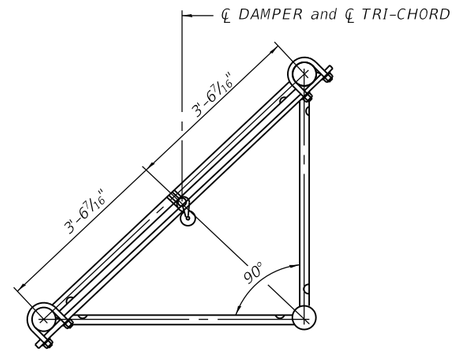


ELEVATION

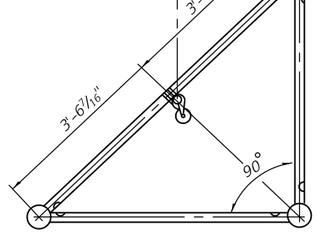
TRI-CHORD SIGN STRUCTURE

NOTES

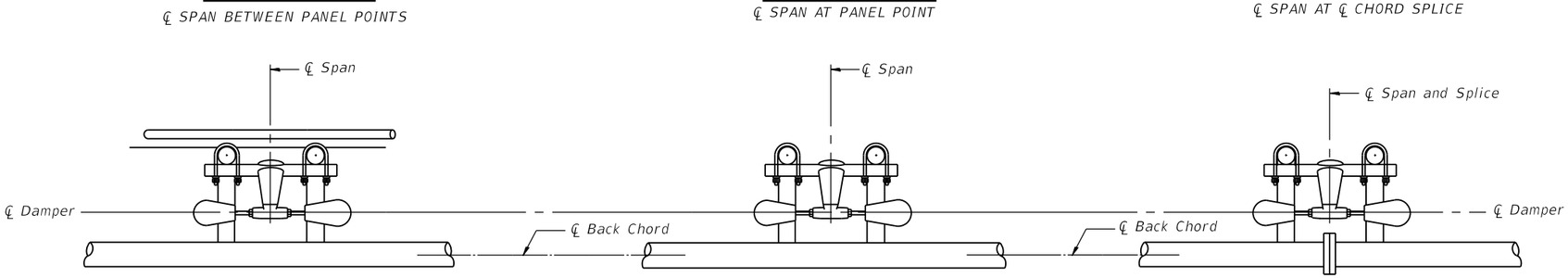
Damper: One damper per truss. (31 Lbs. Stockbridge-Type - 29" minimum between ends of weights) Cost included in TRI-CHORD Sign Structure...



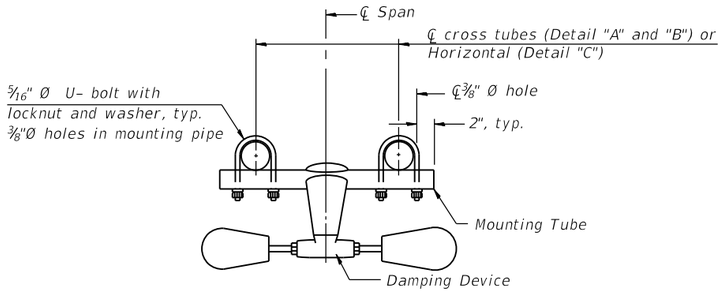
SECTION 1-1



SECTION 2-2



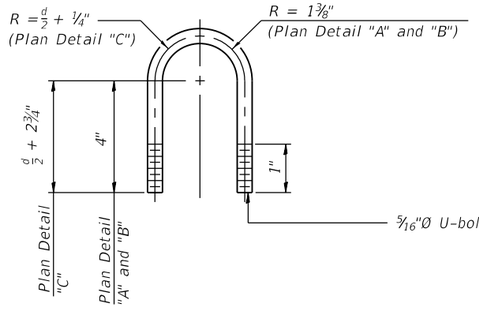
SECTION A-A



TRUSS DAMPING DEVICE CONNECTION DETAIL

(Typical)

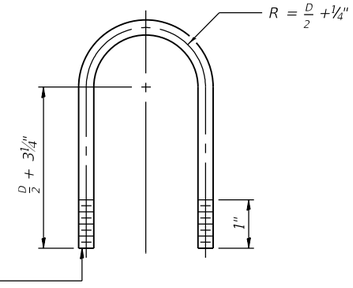
SECTION B-B



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL

(Typical)

SECTION C-C



TOP CHORD TO CROSS TUBE U-BOLT DETAIL

(Typical - Detail "A" and "B")

TRI-S-4 2-17-2017

HBM ENGINEERING GROUP, LLC

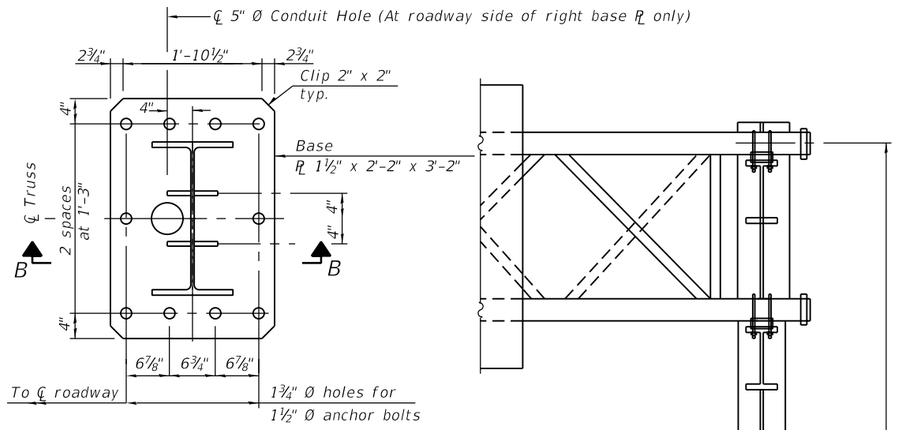
USER NAME = charles.pigozzi	DESIGNED - JJS, FL	REVISED -	
	CHECKED - MAI, JMG	REVISED -	
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -	
PLOT DATE = 1/24/2020	CHECKED - MAI, JMG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

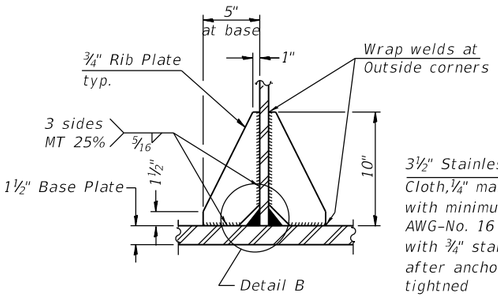
TRI-CHORD SIGN STRUCTURE
DAMPING DEVICE

SHEET NO. SS93 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1043
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		



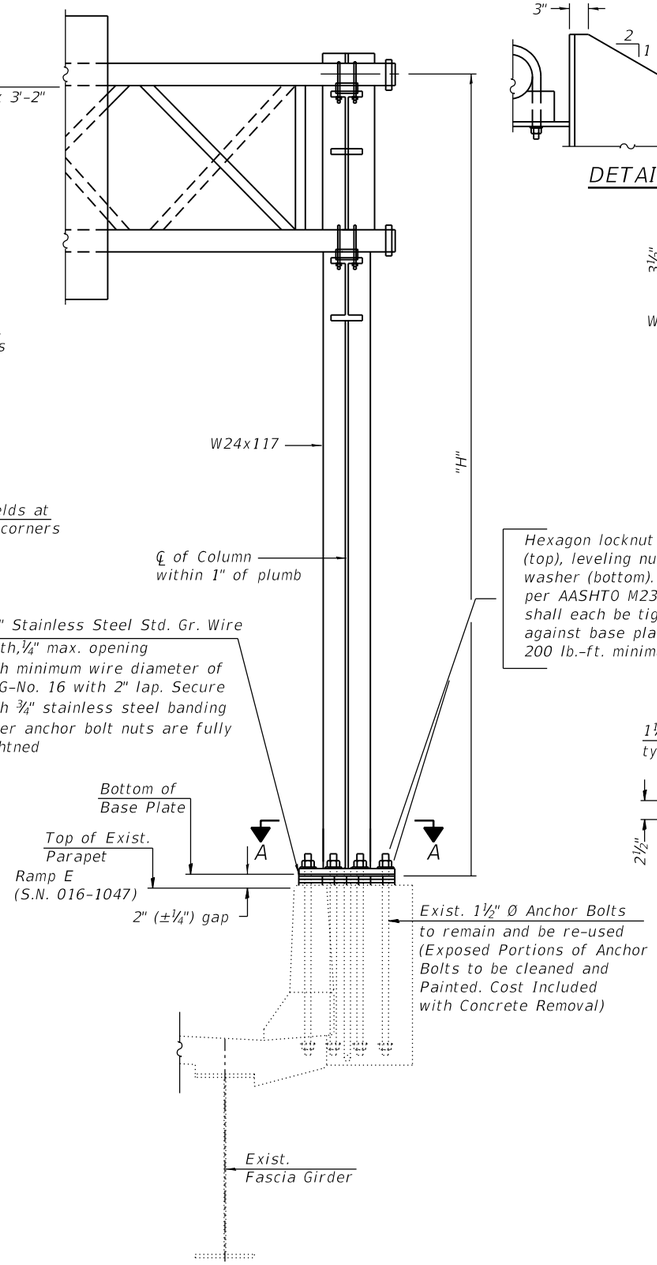
SECTION A-A



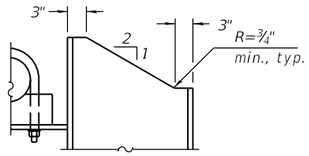
SECTION B-B

DETAIL B
(Typical rib)

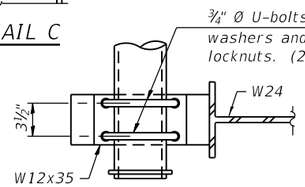
Note 1: Extend welds to clip to facilitate galvanizing.



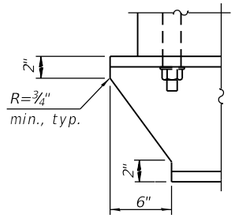
FRONT ELEVATION



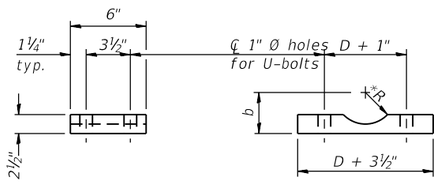
DETAIL C



SECTION C-C

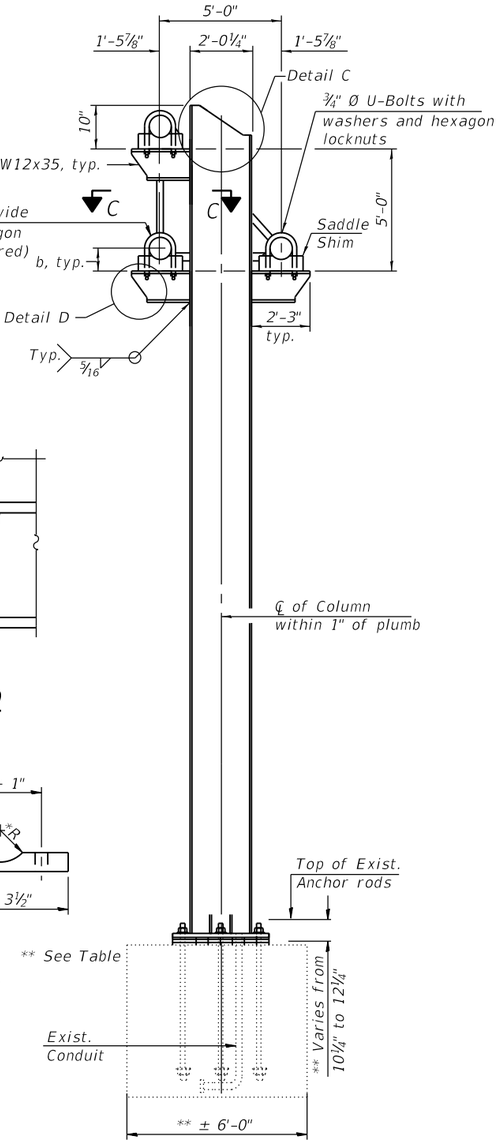


DETAIL D



SADDLE SHIM DETAIL

Chord Outside Diameter	R	b
4.500	2 5/16"	4"
5.563	2⅞"	4½"
6.625	3⅜"	4¾"
8.625	4⅜"	5½"



END ELEVATION

** Dimensions taken from field measurements. Contractor shall verify and adjust as required (subject to the approval of the Engineer) prior to construction or ordering of materials.

*** Measured along Exist. ℄ NB I-90/94. It should be noted that the station included in the Table is measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.

Structure Number	***Station	Column		H (ft.)	Anchor Rod Diameter (in.)
		Left	Right		
IS016I094L053.6	120+18.82	X		25'-0"	Exist.
			X	27'-6"	Exist.

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, FL		REVISED -	
		CHECKED - MAI, JMG		REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL		REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRI-CHORD SIGN STRUCTURES - TRUSS SUPPORT COLUMN - STEEL TRUSS & STEEL POST

SHEET NO. SS94 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1044
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAADocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CADD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-TriChord-SS105-SignStruct.dgn
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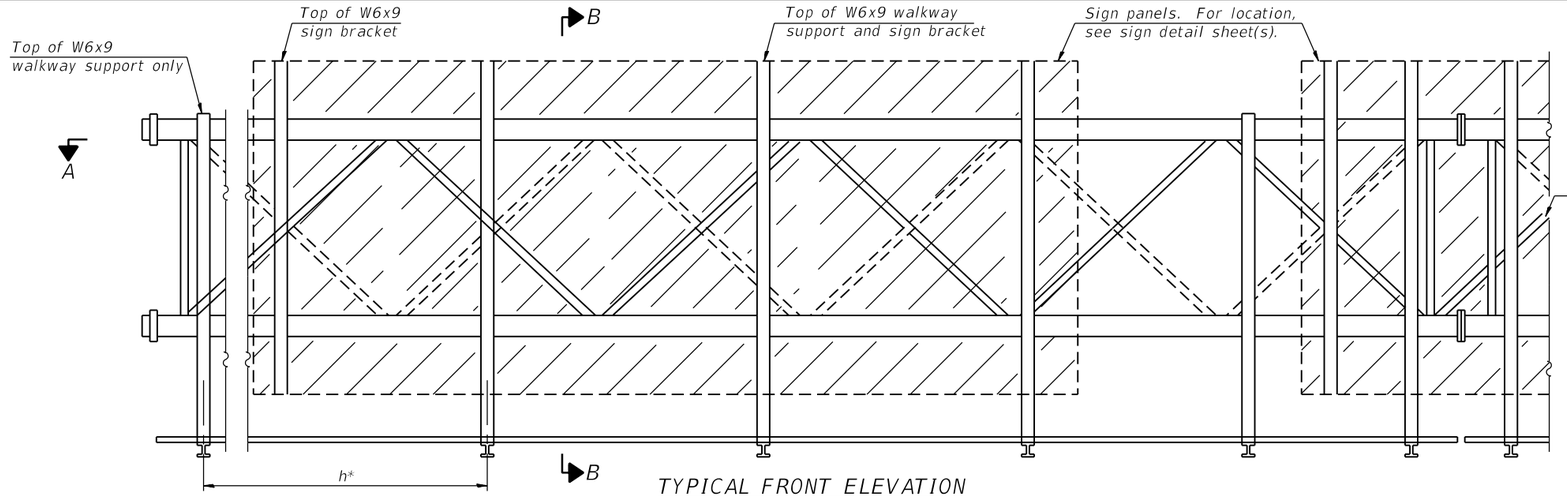
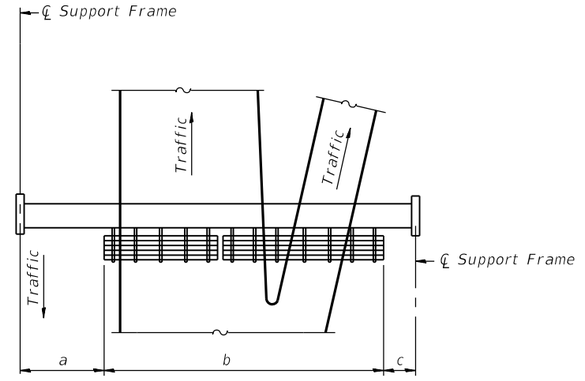


TYPICAL FRONT ELEVATION

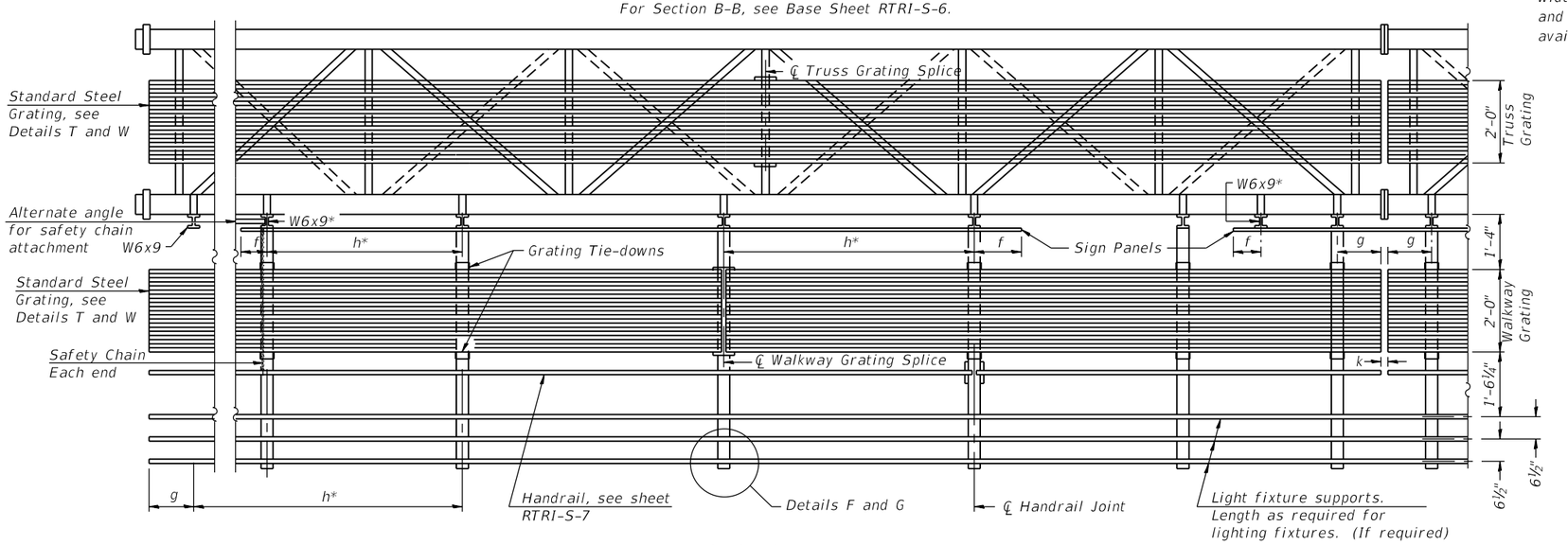
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet RTRI-S-6.



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)

Walkway Grating
width dimensions is nominal
and may vary ±½" based on
available standard widths.



BRACKET TABLE

W6x9		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Handrail joint, grating and light support splices placed as needed.

Structure Number	*** Station	a	b	c	Walkway Grating and Handrail Lengths
1S016I094L053.6	120+18.82	–	–	–	–

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Notes:

* *Space W6x9 walkway brackets and sign brackets W6x9 for efficiency and within limits shown:*

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, W6x9)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

** *If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet RTRI-S-7*

For Details T and W, Section B-B and Grating Splice Details, see Base Sheet RTRI-S-6.
For Handrail Details, see Base Sheet RTRI-S-7.

*** *Measured along Exist. ℄ NB I-90/94. It should be noted that the station included in the Table is measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations show in Existing Record Drawings.*

TRI-S-6 2-17-2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, FL	REVISED -	
		CHECKED - MAI, JMG	REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL	REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRI-CHORD SIGN STRUCTURES
STEEL WALKWAY DETAILS
SHEET NO. SS95 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1045
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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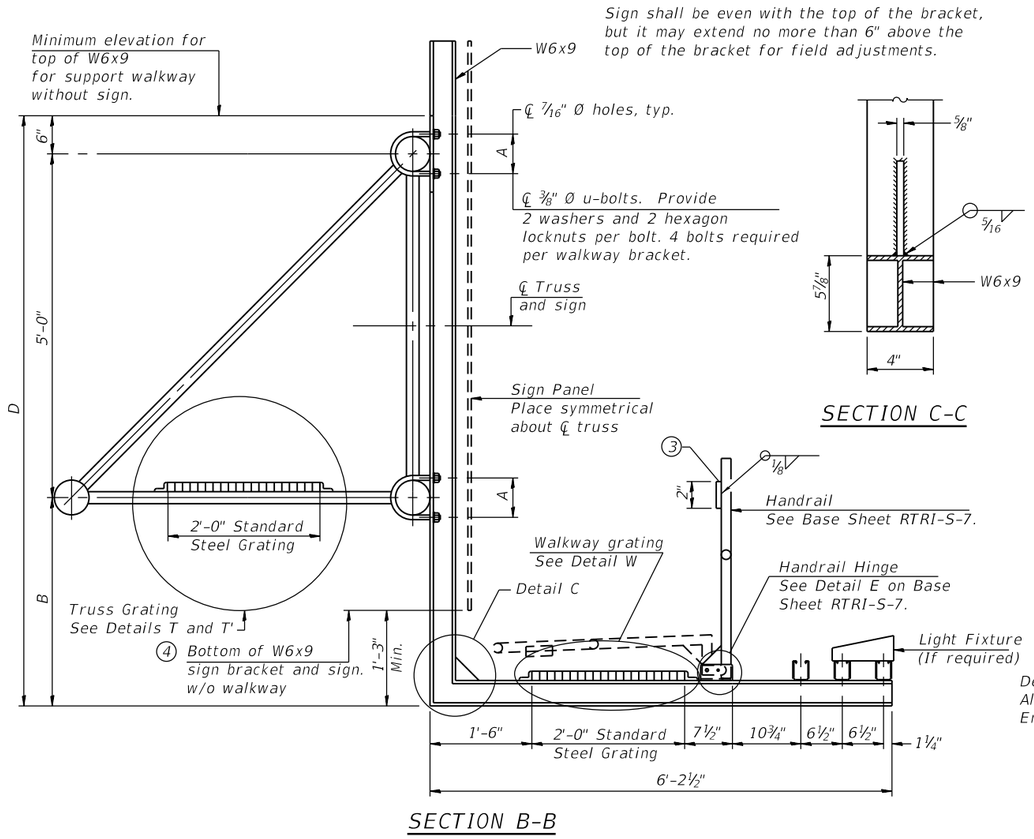
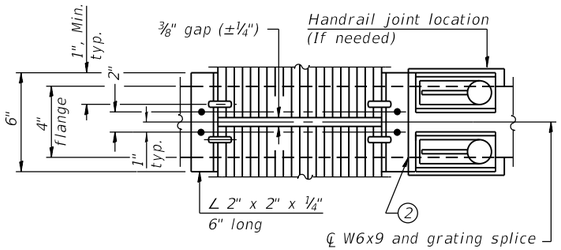
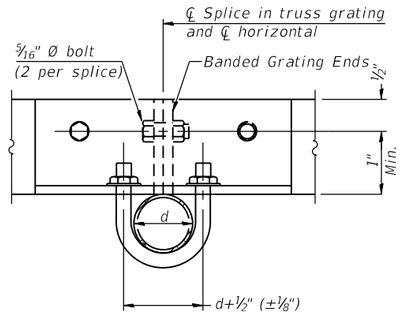


SECTION B-B

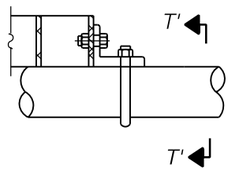
SECTION C-C



(AT WALKWAY GRATING SPLICE)

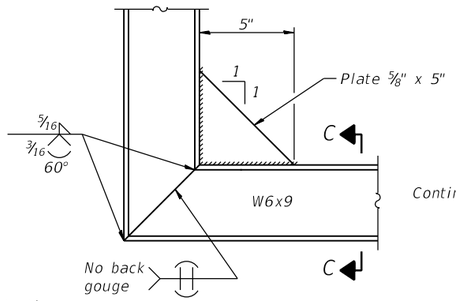


SECTION T'-T'

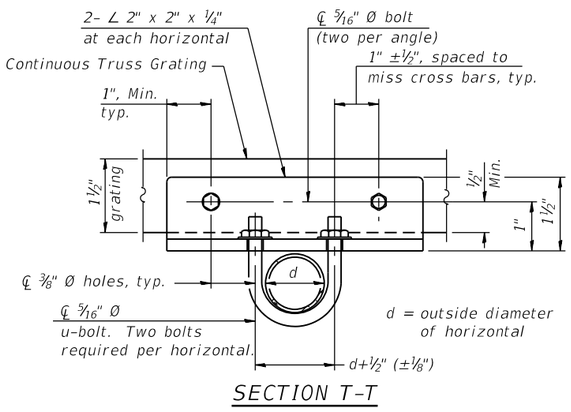


DETAIL T'

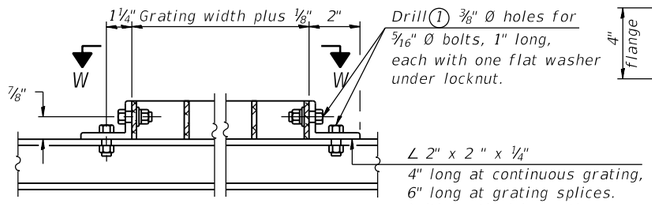
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



DETAIL C

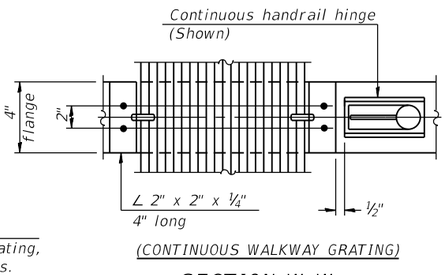


SECTION T-T



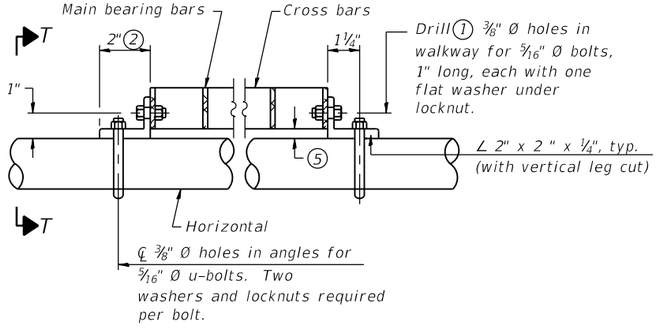
DETAIL W

(Walkway grating)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W



DETAIL T

(Continuous Truss grating)

BARS SIZES FOR STANDARD STEEL GRATING

WALKWAY GRATING — Main bearing bars 3/16" x 1½" on 1 3/16" centers. Cross bars 3/16" x 1½" on 4" centers. All intersects welded.

Structure Number	* Station	A	⑥ B	⑥ D
1S016I094L053.6	120+18.82	5½"	5'-3"	10'-9"

* Measured along Exist. ℄ NB I-90/94. It should be noted that the station included in this Table is measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings.

1. Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
2. If Handrail Joint present, weld angle to W6x9 and ¼" extension bars. (See Base Sheet TRI-S-7.)
3. PL ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.
4. For projects that don't require walkway and lighting.
5. Tube to grating gap may vary from 0 to ½", max. to align walkway, allow for camber, etc.
6. Based on actual height of tallest sign given on TRI-S-1.

TRI-S-7 2-17-2017

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, FL	REVISED -		
		CHECKED - MAI, JMG	REVISED -		
PLOT SCALE = N.T.S		DRAWN - HI, FL	REVISED -		
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRI-CHORD SIGN STRUCTURES - STEEL
SIGN BRACKET AND WALKWAY DETAILS
SHEET NO. SS96 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1046
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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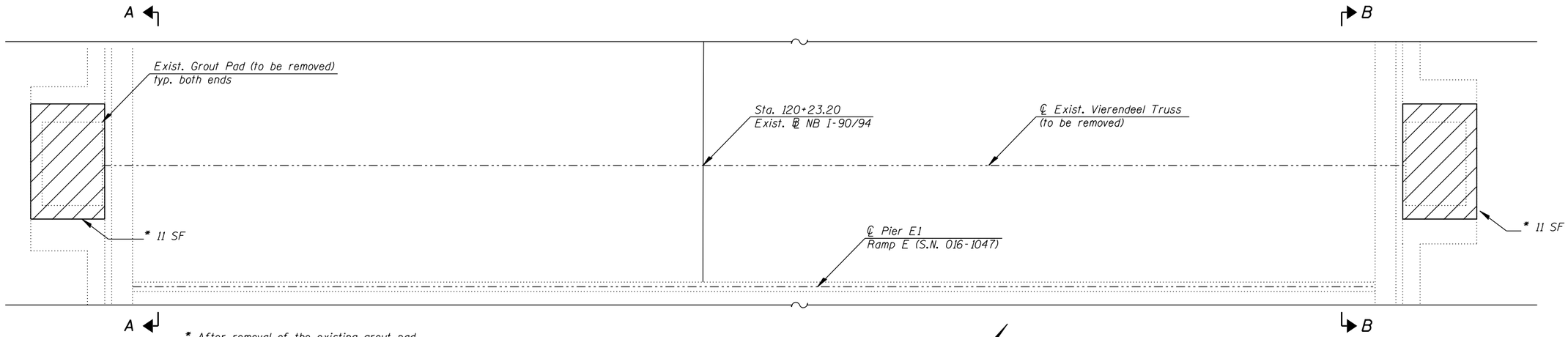
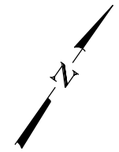


* After removal of the existing grout pad, the Contractor shall perform structural repair of concrete to the top of parapet including area previously covered by grout pad.

PLAN

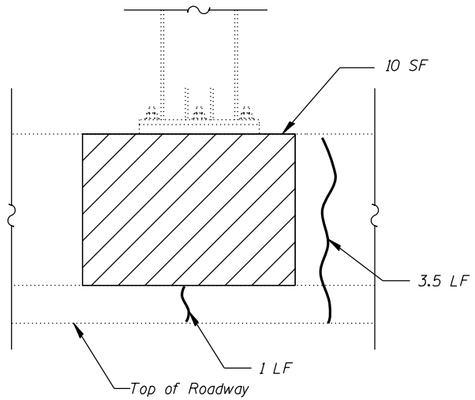
(Existing Vierendeel Truss not shown for clarity)



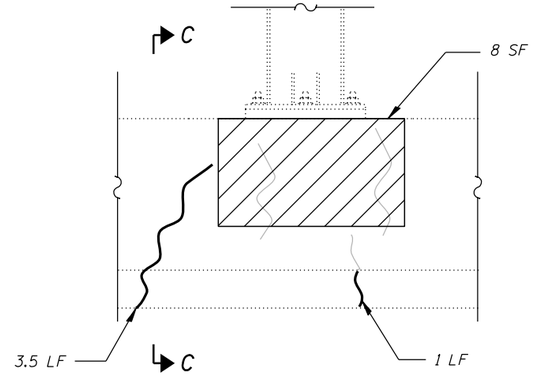
NOTES:

1. Parapet repair locations are approximate and were determined from field inspection performed at the time of plan preparation. The necessary adjustments based on current field conditions will be made at time of construction. Such variations shall not be cause for additional compensation for a change in the scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

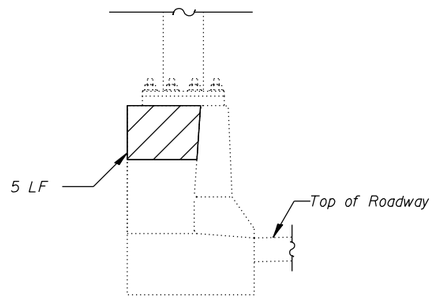
2. Existing reinforcing steel which is exposed by the concrete repair or removal process but is to remain in the existing structure and be reused, shall be cleaned (to be free of existing concrete and rust) and straightened (if necessary). Existing reinforcing steel which is cut, stretched, or damaged by the Contractor during the concrete repair/removal process shall be replaced by embedded reinforcing steel or anchorage, equal to or greater than the size of original reinforcing steel, subject to approval of the Engineer and at no cost to the Department. See Special Provisions for Structural Repair of Concrete and Concrete Removal.



SECTION A-A



SECTION B-B



SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
EPOXY CRACK INJECTION	FOOT	9
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ. FT.	45
GROUT PAD REMOVAL	EACH	2

LEGEND

Structural Repair of Concrete (Depth Less than or Equal to 5 inches)

Hairline Crack (Width < 0.06")

Epoxy Crack Injection (Width > 0.06")

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - JJS, FL		REVISED -	
		CHECKED - MAI, JMG		REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL		REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JMG		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXIST. PARAPET PARTIAL REMOVAL AND REPAIRS
STRUCTURE NO. 016-1047

SHEET NO. SS97 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1047
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Trichord-SS110_SignStruct.dgn
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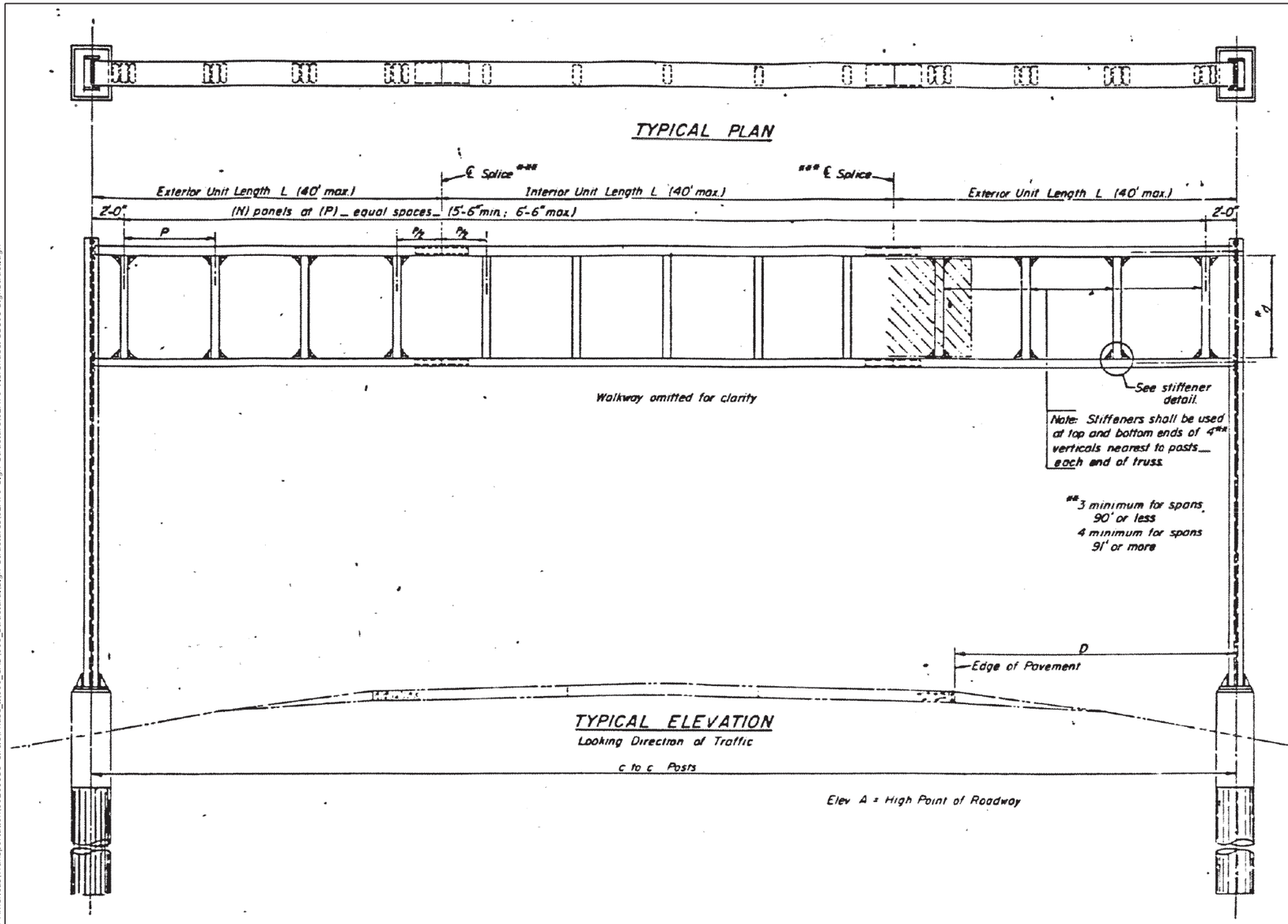

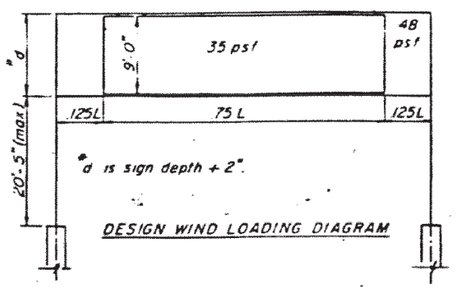

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, dated January, 1985.

CONSTRUCTION: Standard Specifications for Road and Bridge Construction, State of Illinois, (dated October 1, 1983), Supplemental Specifications for Road and Bridge Construction; Standard Specifications for Traffic Control Items (dated Feb. 1, 1984) and Special Provisions.

MINIMUM CLEARANCE: Vertical Roadway Clearance = 17'-3" (All Obstructions)

LOADING--80 MPH WIND VELOCITY PLUS 30% GUST FACTOR

WIND LOADING: 35 p.s.f. normal to Sign Panel Area as shown below in Wind Loading Diagram plus 48 p.s.f. normal to exposed frame members.

WALKWAY LOADING: Dead Load plus 500# concentrated Live Load.

MATERIALS:

REINFORCEMENT BARS shall conform to the requirements of AASHTO M31 or M53, Grade 60.

CLASS X CONCRETE shall be used throughout.

STRUCTURAL STEEL: All material for structural chords, verticals, or chord splices shall conform to either ASTM A500, Grade C, AASHTO M222 or AASHTO M223, Grade 50 and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 40° F.

Posts shall conform to AASHTO M222 or M223, Grade 50, and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 40° F.

HIGH STRENGTH BOLTS shall conform to the requirements of AASHTO M164.

STRUCTURAL SHAPES and PLATES shall conform to the requirements of AASHTO M223, Grade 50, or M222, unless otherwise specified.

PAINTING: The zinc-silicate and vinyl paint system shall be used for shop and field painting of all structural steel. Exterior surfaces of all structural steel that are painted with the high-build vinyl paint shall receive one coat of vinyl enamel. Paint system, including field coat, for the walkway gratings may be done in the shop or just prior to erection. Chords and verticals will require painting on exterior surfaces only.

WELDING: All welding shall be in accordance with Article 507.04(s) of the Standard Specifications for Road and Bridge Construction.

NOTES:

1. For General Notes, General Paint Notes, Index of Sheets, Total Bill of Material and Miscellaneous Details, see Sheet SS99.

   For Existing Vierendeel Truss Sign Structure Location Map, see Sheet SS100.

DESIGNATION	STRUCTURE NO.	[d]STATION	LOCATION DESCRIPTION
NB-01	IS0161094L054.0	101+36.60	South of 18th St.
NB-03	IS0161094L053.3	130+31.78	North of 26th St. over UPRR
NB-05A	IS0161094L053.0	149+69.96	Ramp C near Lumber St.
NB-08	IS0161094L052.5	174+42.54	North of 14th Place
NB-11	IS0161094L052.2	7247+64.90	S. End of Roosevelt Rd. Ramp to I-290

[d] NB-01, NB-03, NB-05A, NB-08 Measured along Exist. ℄ NB I-90/94.

NB-11 Measured along Prop. ℄ Roosevelt Road Entrance Ramp. It should be noted that the stations included in the Table for sign structures NB-01, NB-03, NB-05A and NB-08 are measured along the Exist. ℄ NB I-90/94 as presented in this Contract and may differ from stations shown in Existing Record Drawings

STATE OF ILLINOIS
MOUSSA A. ISSA
081-005738
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

SIGNED Moussa A. Issa

DR. MOUSSA A. ISSA, S.E., IL. LIC. NO. 081-005738
EXPIRES 11-30-2020

DATE 01/29/2020

FOR SHEETS SS98 THRU SS129
(TOTAL OF 32 SHEETS)

HBM ENGINEERING GROUP, LLC

USER NAME = marian.agamy		DESIGNED - HI, FL	REVISED -		
		CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S		DRAWN - HI, FL	REVISED -		
PLOT DATE = 1/29/2020		CHECKED - MAI, JJS	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING VIERENDEEL TRUSS SIGN STRUCTURE
TYPICAL PLAN, ELEVATION AND SPECIFICATIONS
SHEET NO. SS98 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1048
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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GENERAL NOTES:

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. All new fasteners, and associated hardware such as nuts and washers, shall match existing sizes. See Existing Record Drawings included within these plans for details.

2. No field welding is permitted except as specified in the contract documents.

3. Existing Vierendeel truss sign structure repairs, and associated concrete repairs, were determined from field inspection performed at the time of plan preparation. The necessary adjustments based on current field conditions will be made at time of construction. Such variations shall not be cause for additional compensation for a change in the scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

4. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field-verify existing dimensions and details affecting new construction 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 work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

5. The Contractor shall take all necessary precautions for the protection of passing vehicles for falling objects and/or materials until completion of the work.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
EPOXY CRACK INJECTION	FOOT	27
POLYURETHANE SEALANT	FOOT	54
REPLACE JOINT FILLER	FOOT	56
REPLACE HANDRAIL LOCKING PIN CONNECTION	EACH	58
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1
TIGHTEN SUPPORT ANCHOR BOLT	EACH	3
METAL SCREEN	EACH	10
SAFETY CHAIN	EACH	10
REPLACE SPLICE FLANGE BOLT	EACH	280
CLEANING AND PAINTING SIGN STRUCTURE NO. 1	L SUM	1
CLEANING AND PAINTING SIGN STRUCTURE NO. 2	L SUM	1
CLEANING AND PAINTING SIGN STRUCTURE NO. 3	L SUM	1
CLEANING AND PAINTING SIGN STRUCTURE NO. 4	L SUM	1
CLEANING AND PAINTING SIGN STRUCTURE NO. 5	L SUM	1
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	4
GROUT PAD REMOVAL	EACH	9

GENERAL PAINT NOTES:

1. Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Overhead Sign Structures".

2. All cleaning shall be performed per SSPC-SP11, Power Tool Cleaning to Bare Metal, and all painting shall be performed according to Paint System 1-OZ/E/U. The color of the final finish coat shall be Reddish Brown, Munsell No. 2.5 YR 3/4.

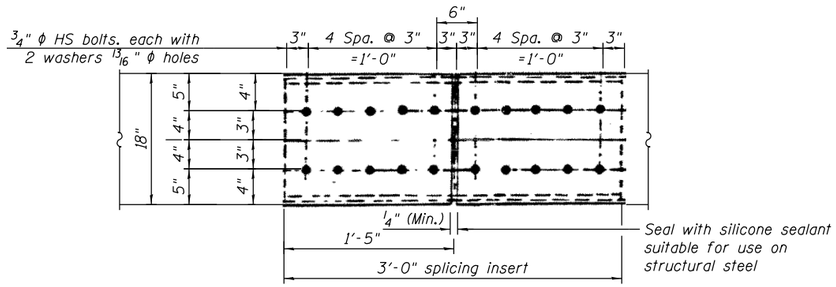
3. All items attached to the structure such as, but not limited to, existing conduits and brackets shall be cleaned and painted.

4. All work associated with the cleaning and painting of existing overhead sign structures shall be performed using temporary expressway lane closures in accordance with the Special Provision for Keeping Expressways Open to Traffic, or as otherwise permitted by the Department, and shall not proceed until the appropiate permits have been secured from the Department.

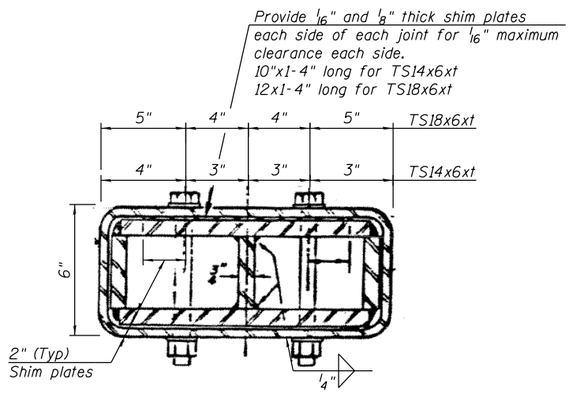
5. At no time shall work associated with containment, cleaning, or painting be performed on more than one (1) Vierendeel truss sign structure simultaneously; rather, all such work shall be completed at one sign structure prior to commencing work on a different sign structure.

6. Temporary relocation, and/or removal, storage and re-erection, of existing sign panels may be required to accomplish the work. At no time shall sign panels with exit arrows be removed from the sign structures with the exception of immediate relocation to allow for completion of the remaining work at the same sign structure. Temporary Support Brackets shall be as per the "District One Overhead Sign Structure Hanger Detail for Vierendeel Truss" show in the Signing Plans or as otherwise permitted by the Engineer. All materials, fabrication erection, and other work associated with temporary relocation, and/or removal, storage and re-erection, of sign panels (including temporary support brackets) shall be included in this item and shall not be paid separately.

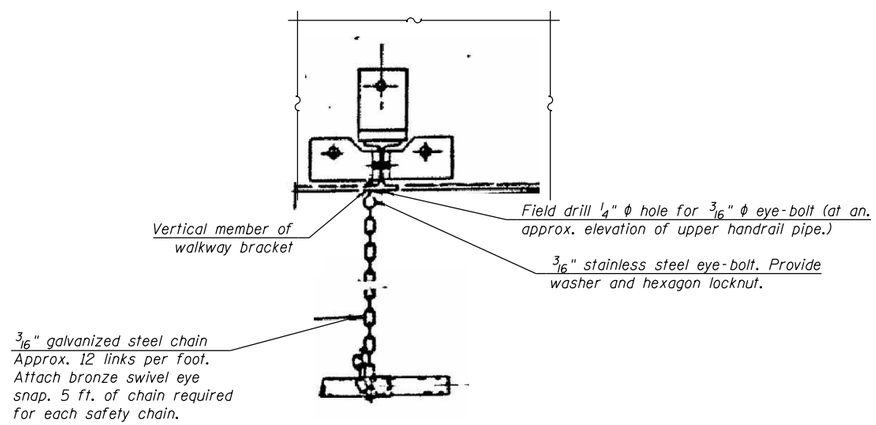
7. No additional holes shall be made in members of the existing Vierendeel truss for any reason.



PLAN VIEW OF CHORD SPLICES

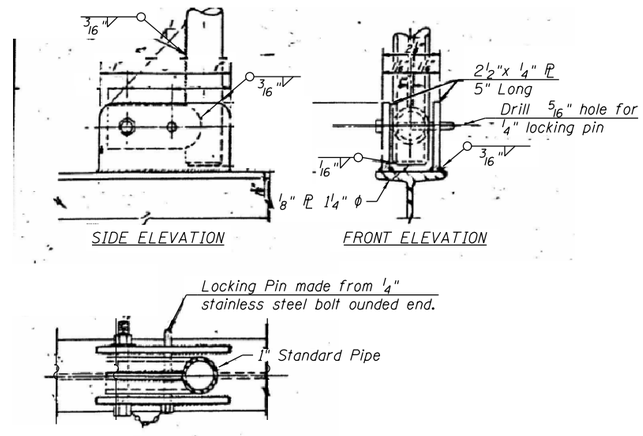


SECTION THRU SPLICE



SAFETY CHAIN

One (1) required for each end of each walkway



For additional information, see Existing Record Drawings

DETAILS OF HANDRAIL HINGE

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4:55:20 PM

HBM ENGINEERING GROUP, LLC

USER NAME = marina.stoica		DESIGNED - HI, FL		REVISED -	
		CHECKED - MAI, JJS		REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL		REVISED -	
PLOT DATE = 1/29/2020		CHECKED - MAI, JJS		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS, TOTAL BILL OF MATERIAL AND MISCELLANEOUS DETAILS

SHEET NO. SS99 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1049
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

NB-03 (ISO161094L053.3)

NB-05A (ISO161094L053.0)

NB-11 (ISO161094L052.2)

S. SEENOUR

S. CORBETT ST.

SOUTH BRANCH CHICAGO RIVER

S. MORGAN

W. 28TH PL.

S. MORGAN ST.

S. MILLER ST.

S. MORGAN ST.

S. MORGAN ST.

S. MORGAN ST.

W. 28TH ST.

W. 23RD ST.

W. 22ND PL.

S. LUMBER ST.

W. 21ST ST.

W. 19TH PL.

S. PEORIA ST.

S. PEORIA ST.

W. 14TH ST.

S. NEWBERRY AVE.

S. ARCHER AVE.

S. CANALPORT AVE.

S. HALSTED ST.

S. HALSTED ST.

W. 19TH PL.

W. 18TH ST.

W. 17TH PL.

W. 17TH ST.

W. 16TH ST.

W. 15TH PL.

W. 15TH ST.

W. 14TH PL.

W. 14TH ST.

W. LIBERTY ST.

W. MAXWELL ST.

W. 13TH ST.

W. JAMES M. ROCHFORD ST.

W. 12TH PL.

W. TAYLOR ST.

W. 28TH ST.

W. 26TH ST.

S. RUBBLE ST.

W. ROOSEVELT RD.

S. DESPLAINES ST.

S. LUMBER ST.

W. CERMAK RD.

SOUTH BRANCH CHICAGO RIVER

S. DESPLAINES ST.

S. JEFFERSON ST.

S. JEFFERSON ST.

S. JEFFERSON ST.

W. DEKOVEN

W. 28TH ST.

W. 27TH ST.

W. 25TH PL.

W. 24TH ST.

S. ARCHER AVE.

S. LUMBER ST.

S. CLINTON ST.

S. CLINTON ST.

S. CLINTON ST.

S. NORMAL AV.

W. 24TH

W. 23RD ST.

S. CANAL ST.

S. CANAL ST.

S. CANAL ST.

S. STEWART AVE.

W. 24TH

W. 23RD ST.

SOUTH BRANCH CHICAGO RIVER

NB-01 (ISO161094L054.0)

NB-08 (ISO161094L052.5)

N

LOCATION MAP

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_D502_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS102A-SignStruct.dgn

11:33:32 AM

HBM ENGINEERING GROUP, LLC

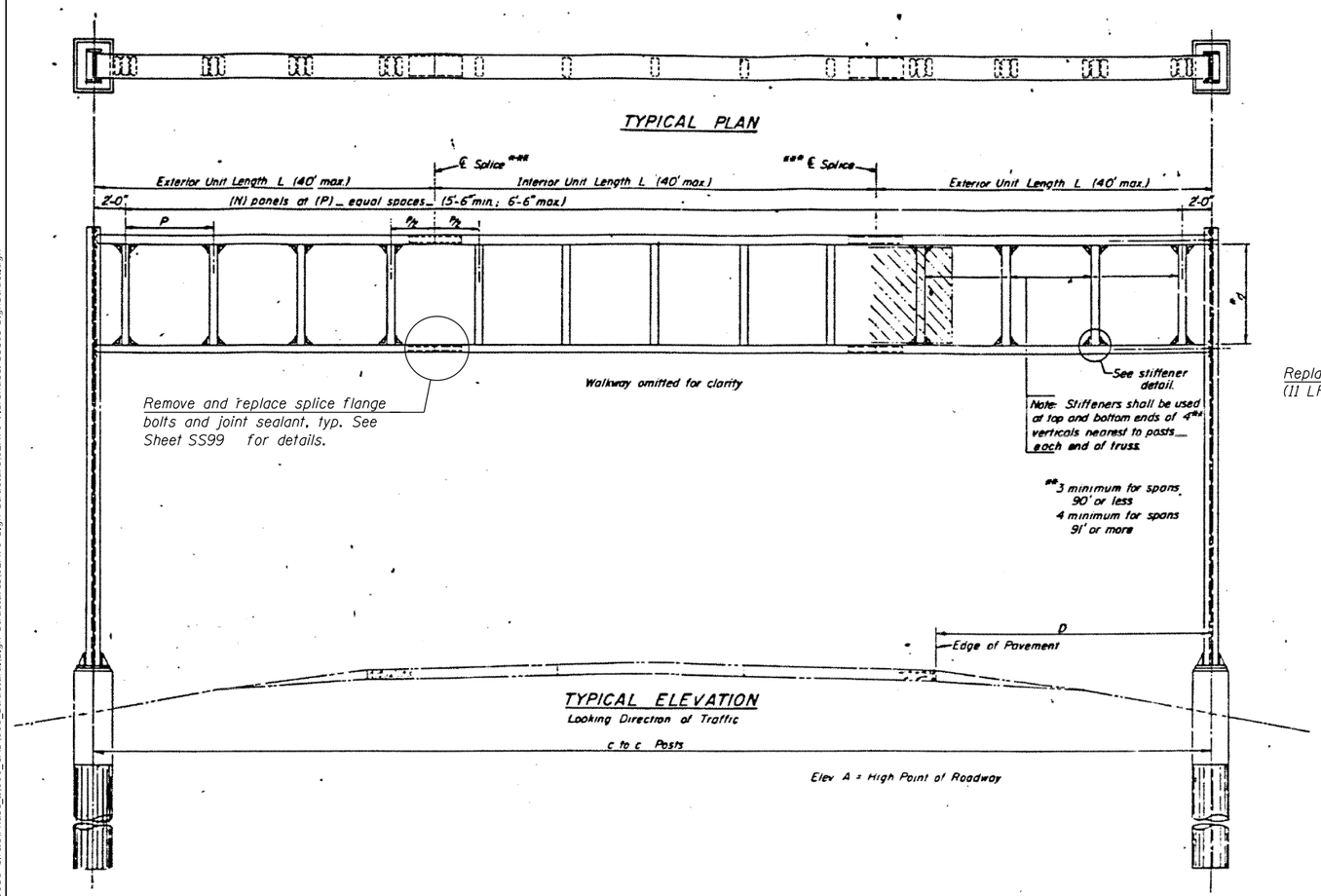
USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -		
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING VIERENDEEL TRUSS SIGN STRUCTURE LOCATION MAP
VIERENDEEL TRUSS SIGN STRUCTURE REPAIRS

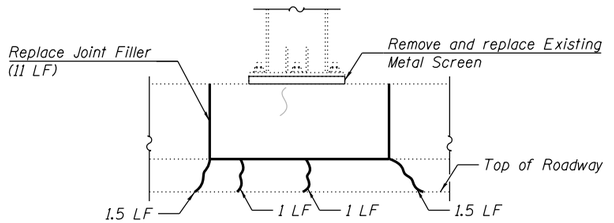
SHEET NO. SS100 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1050
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

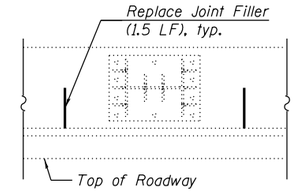


BILL OF MATERIAL

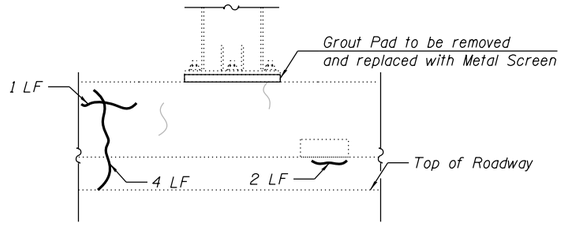
ITEM	UNIT	QUANTITY
EPOXY CRACK INJECTION	FOOT	12
POLYURETHANE SEALANT	FOOT	8
REPLACE JOINT FILLER	FOOT	14
REPLACE HANDRAIL LOCKING PIN CONNECTION	EACH	14
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1.0
METAL SCREEN	EACH	2
SAFETY CHAIN	EACH	2
REPLACE SPLICE FLANGE BOLT	EACH	40
CLEANING AND PAINTING SIGN STRUCTURE NO. 1	L SUM	1.0
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	1
GROUT PAD REMOVAL	EACH	1



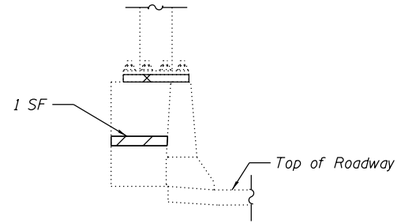
ELEVATION - LEFT PARAPET FOUNDATION



PLAN - LEFT PARAPET FOUNDATION



ELEVATION - RIGHT PARAPET FOUNDATION



SIDE ELEVATION - RIGHT PARAPET FOUNDATION

(NORTH FACE)

PROPOSED SCOPE OF WORK

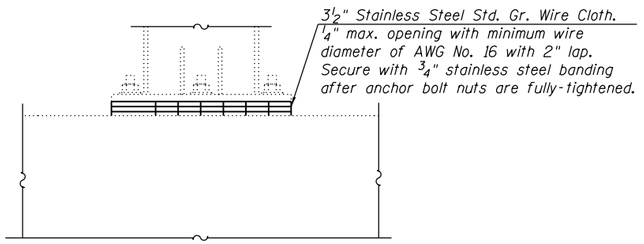
1. Remove and replace existing splice flange bolts and existing splice joint sealant material.
2. Install new hangers to support taller sign panels. See Signing Plans for Details and quantities.
3. Replace three (3) missing handrail locking pins and realign eleven (11) misaligned handrail locking pins.
4. Install two (2) new Safety Chains.
5. Perform epoxy crack injection and structural repair of concrete to the left and right parapets/foundations as required.
6. Remove existing wire mesh rodent shield, and remove and replace existing joint filler at left foundation.
7. Remove existing grout pad at right foundation.
8. Clean and paint exposed portions of existing anchor bolts and install new metal screens at both foundations.
9. Sandblast and repaint sign structure and walkway.

LEGEND

Epoxy Crack Injection (Width > 0.06")

Replace Joint Filler

Structural Repair of Concrete (Depth Less than or Equal to 5")



METAL SCREEN

NOTES:

1. For splice, handrail locking pin connection and safety chain details, see Sheet SS99 .

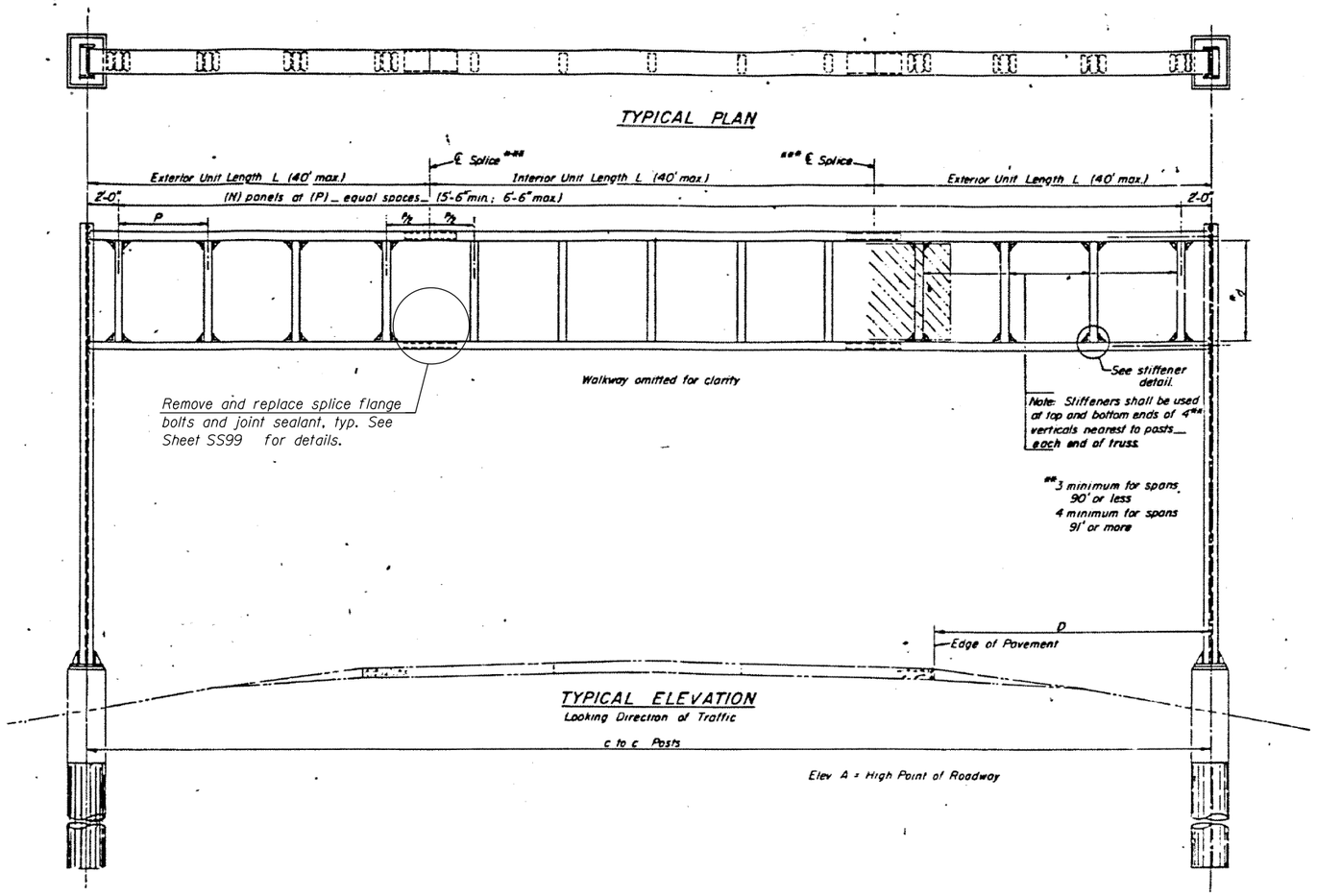
HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -
	CHECKED - MAI, JJS	REVISED -
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

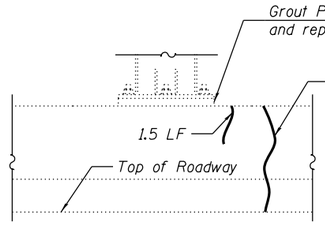
NB-01 (1S016I094L054.0)
VIERENDEEL TRUSS SIGN STRUCTURE REPAIRS
SHEET NO. SS101 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1051
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

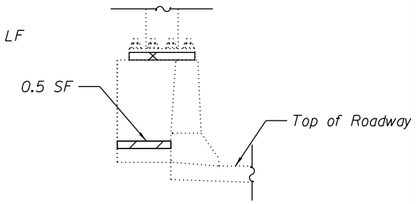


BILL OF MATERIAL

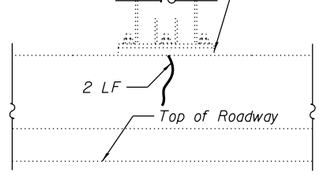
ITEM	UNIT	QUANTITY
EPOXY CRACK INJECTION	FOOT	7
POLYURETHANE SEALANT	FOOT	7
REPLACE HANDRAIL LOCKING PIN CONNECTION	EACH	8
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1.0
METAL SCREEN	EACH	2
SAFETY CHAIN	EACH	2
REPLACE SPLICE FLANGE BOLT	EACH	40
CLEANING AND PAINTING SIGN STRUCTURE NO. 2	L SUM	1.0
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	1
GROUT PAD REMOVAL	EACH	2



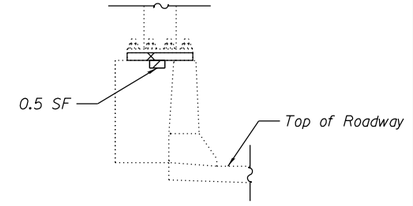
ELEVATION - RIGHT PARAPET FOUNDATION



SIDE ELEVATION - RIGHT PARAPET FOUNDATION
(North Face)



ELEVATION - LEFT PARAPET FOUNDATION



SIDE ELEVATION - LEFT PARAPET FOUNDATION
(South Face)

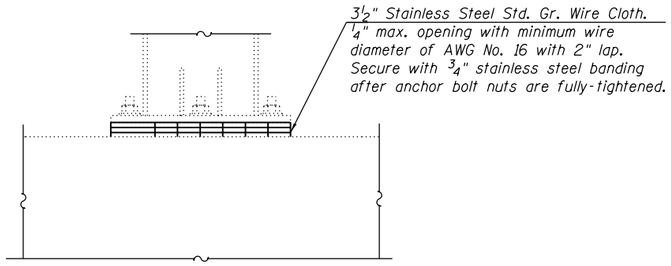
PROPOSED SCOPE OF WORK

1. Remove and replace existing splice flange bolts and existing splice joint sealant material.
2. Realign eight (8) misaligned handrail locking pins.
3. Install two (2) new Safety Chains.
4. Perform epoxy crack injection and structural repair of concrete to the left and right parapets/foundations as required.
5. Remove existing grout pad, clean and paint exposed portions of existing anchor bolts and install new metal screens at both foundations.
6. Sandblast and repaint sign structure and walkway.

LEGEND

Epoxy Crack Injection (Width > 0.06")

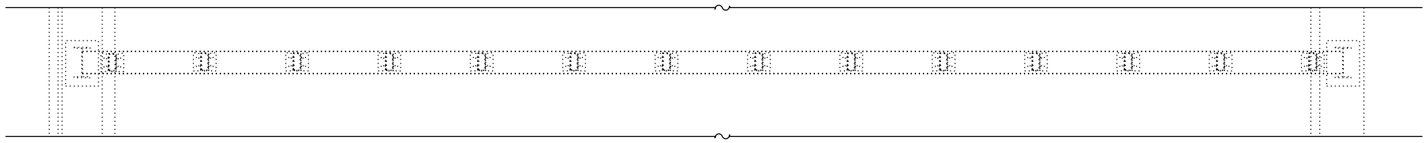
Structural Repair of Concrete (Depth Less than or Equal to 5")



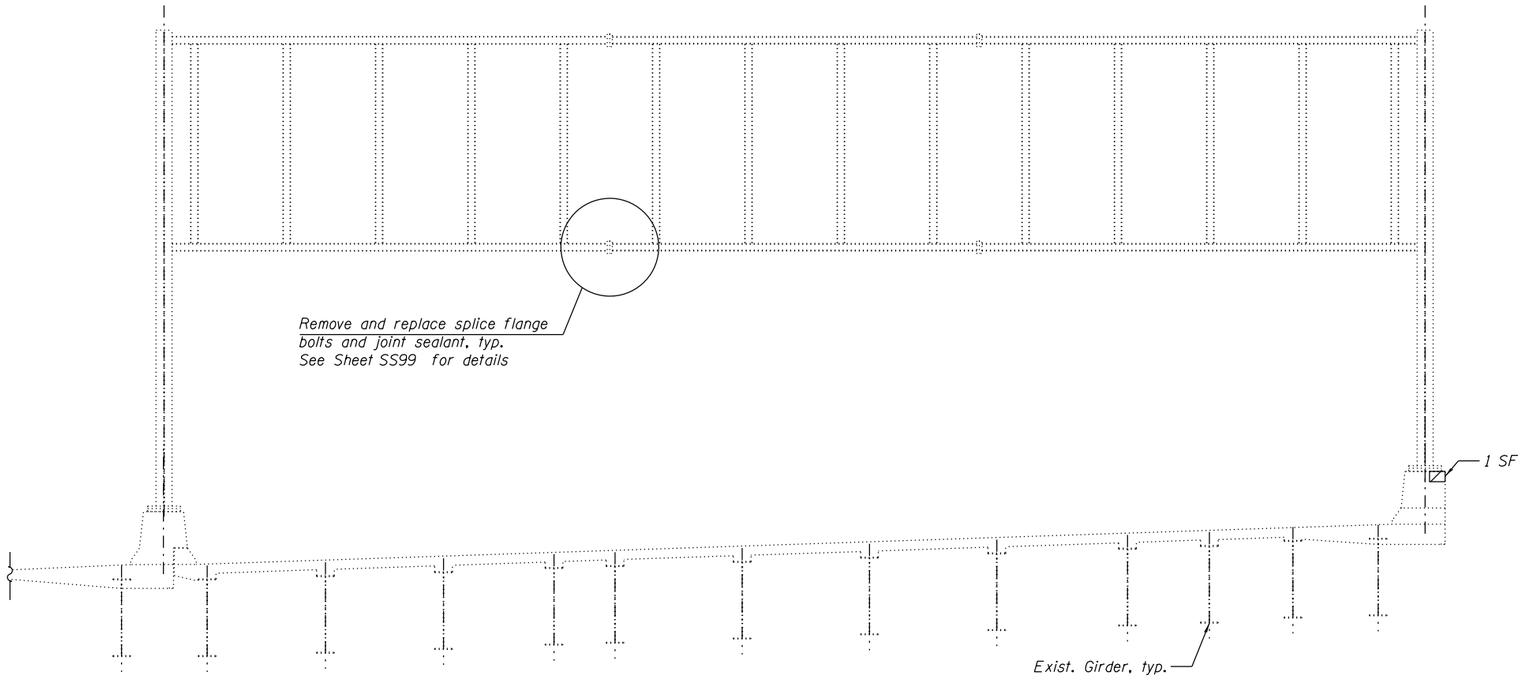
METAL SCREEN

NOTE:

1. For splice, handrail locking pin connection and safety chain details, see Sheet SS99.



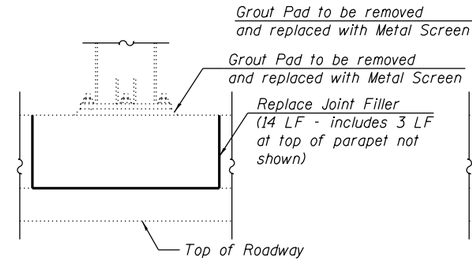
TYPICAL PLAN



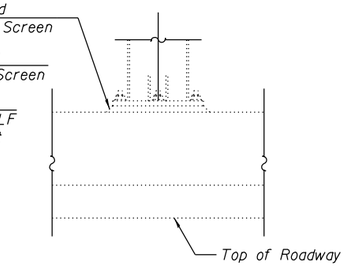
TYPICAL ELEVATION

BILL OF MATERIAL

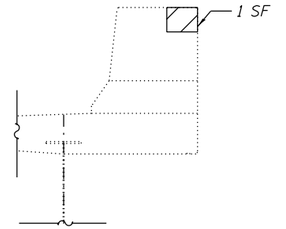
ITEM	UNIT	QUANTITY
POLYURETHANE SEALANT	FOOT	16
REPLACE JOINT FILLER	FOOT	14
REPLACE HANDRAIL LOCKING PIN CONNECTION	EACH	14
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1.0
TIGHTEN SUPPORT ANCHOR BOLT	EACH	2
METAL SCREEN	EACH	2
SAFETY CHAIN	EACH	2
REPLACE SPLICE FLANGE BOLT	EACH	80
CLEANING AND PAINTING SIGN STRUCTURE NO. 3	L SUM	1.0
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	1
GROUT PAD REMOVAL	EACH	2



ELEVATION - LEFT PARAPET FOUNDATION

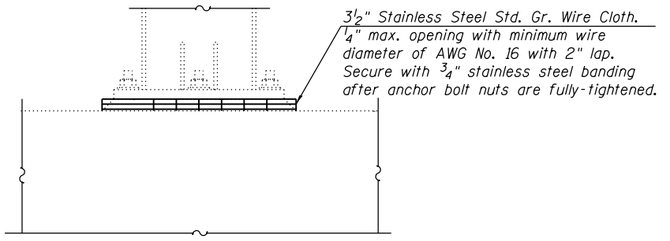


ELEVATION - RIGHT PARAPET FOUNDATION



SIDE ELEVATION - LEFT PARAPET FOUNDATION

(North Face)



METAL SCREEN

PROPOSED SCOPE OF WORK

1. Remove and replace existing splice flange bolts and existing splice joint sealant material.
2. Realign 14 misaligned handrail locking pins.
3. Install two (2) new Safety Chains.
4. Perform epoxy crack injection and structural repair of concrete to the right parapet/foundation as required.
5. Tighten loose anchor bolt nut at west foundation.
6. Remove existing grout pad, clean and paint exposed portions of existing anchor bolts and install new metal screens at both foundations.
7. Sandblast and repaint sign structure and walkway.

NOTES:

1. For Splice, Handrail Locking Pin Connection and Safety Chain details, see Sheet SS99.

LEGEND

Replace Joint Filler

Structural Repair of Concrete (Depth Less than or Equal to 5")

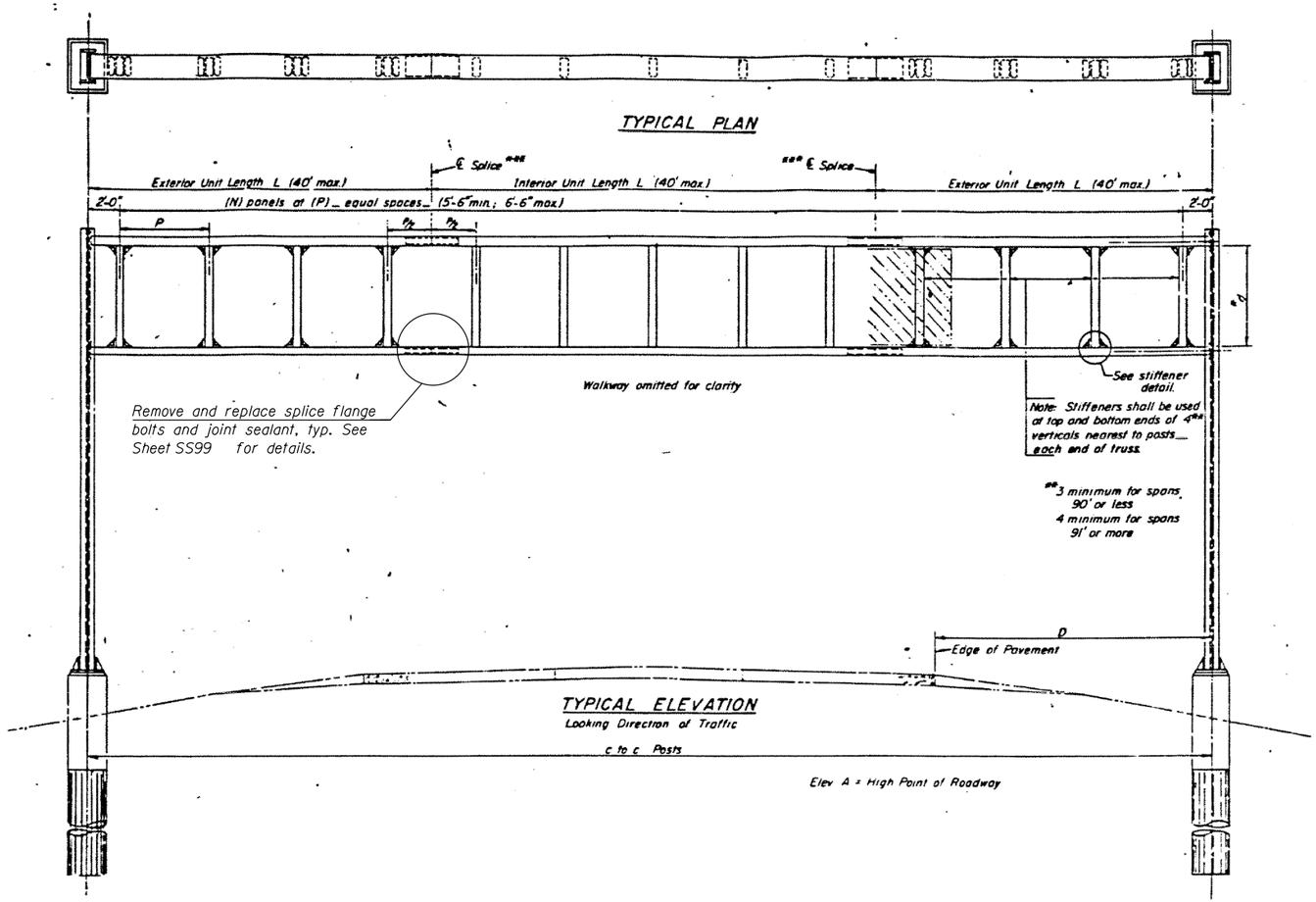
HBM ENGINEERING GROUP, LLC

USER NAME =	marina.stoica	DESIGNED -	HI, FL	REVISED -	
		CHECKED -	MAI, JJS	REVISED -	
PLOT SCALE =	N.T.S	DRAWN -	HI, FL	REVISED -	
PLOT DATE =	1/29/2020	CHECKED -	MAI, JJS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

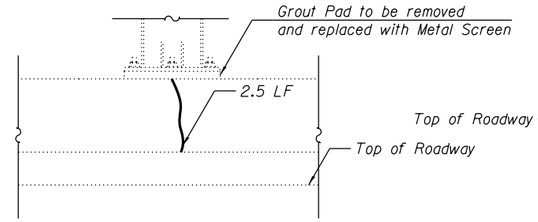
NB-05A (1S016I094L053.0)
VIERENDEEL TRUSS SIGN STRUCTURE REPAIRS
SHEET NO. SS103 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1053
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

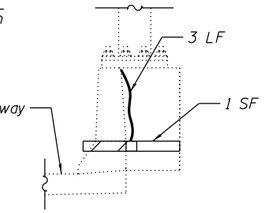


BILL OF MATERIAL

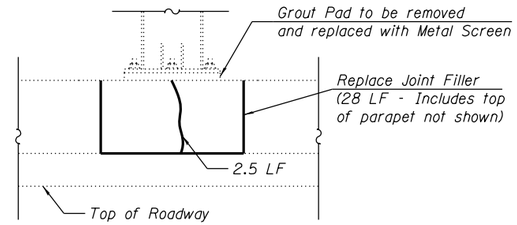
ITEM	UNIT	QUANTITY
EPOXY CRACK INJECTION	FOOT	8
POLYURETHANE SEALANT	FOOT	16
REPLACE JOINT FILLER	FOOT	28
REPLACE HANDRAIL LOCKING PIN CONNECTION	EACH	14
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1.0
TIGHTEN SUPPORT ANCHOR BOLT	EACH	1
METAL SCREEN	EACH	2
SAFETY CHAIN	EACH	2
REPLACE SPLICE FLANGE BOLT	EACH	80
CLEANING AND PAINTING SIGN STRUCTURE NO. 4	L SUM	1.0
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	1
GROUT PAD REMOVAL	EACH	2



ELEVATION - RIGHT PARAPET FOUNDATION



SIDE ELEVATION - RIGHT PARAPET FOUNDATION
(South Face)



ELEVATION - LEFT PARAPET FOUNDATION

PROPOSED SCOPE OF WORK

1. Remove and replace existing splice flange bolts and existing splice joint sealant material.
2. Replace three (3) damaged handrail locking pins and realign eleven (11) misaligned handrail locking pins.
3. Install two (2) new Safety Chains.
4. Perform epoxy crack injection and structural repair of concrete to the left and right parapets/foundations as required.
5. Remove and replace existing joint filler at the left parapet/foundation as required.
6. Remove existing grout pad, clean and paint, exposed portions of existing anchor bolts and install new metal screens at both foundations.
7. Tighten loose anchor bolt nut at west foundation.
8. Sandblast and repaint sign structure and walkway.

NOTES:

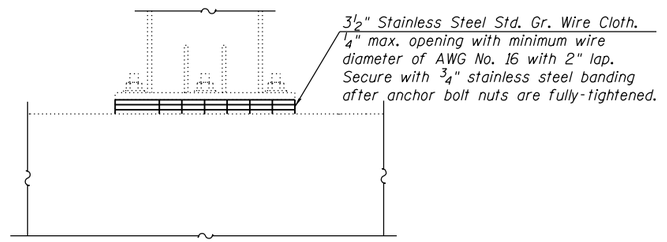
1. For Splice, Handrail Locking Pin Connection and Safety Chain details, see Sheet SS99.

LEGEND

Epoxy Crack Injection (Width > 0.06")

Replace Joint Filler

Structural Repair of Concrete (Depth Less than or Equal to 5")



METAL SCREEN

HBM ENGINEERING GROUP, LLC

USER NAME = marina.stoica	DESIGNED - HI, FL	REVISED -
	CHECKED - MAI, JJS	REVISED -
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -
PLOT DATE = 1/29/2020	CHECKED - MAI, JJS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NB-08 (1S016I094L052.5)
VIERENDEEL TRUSS SIGN STRUCTURE REPAIRS
SHEET NO. SS104 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1054
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

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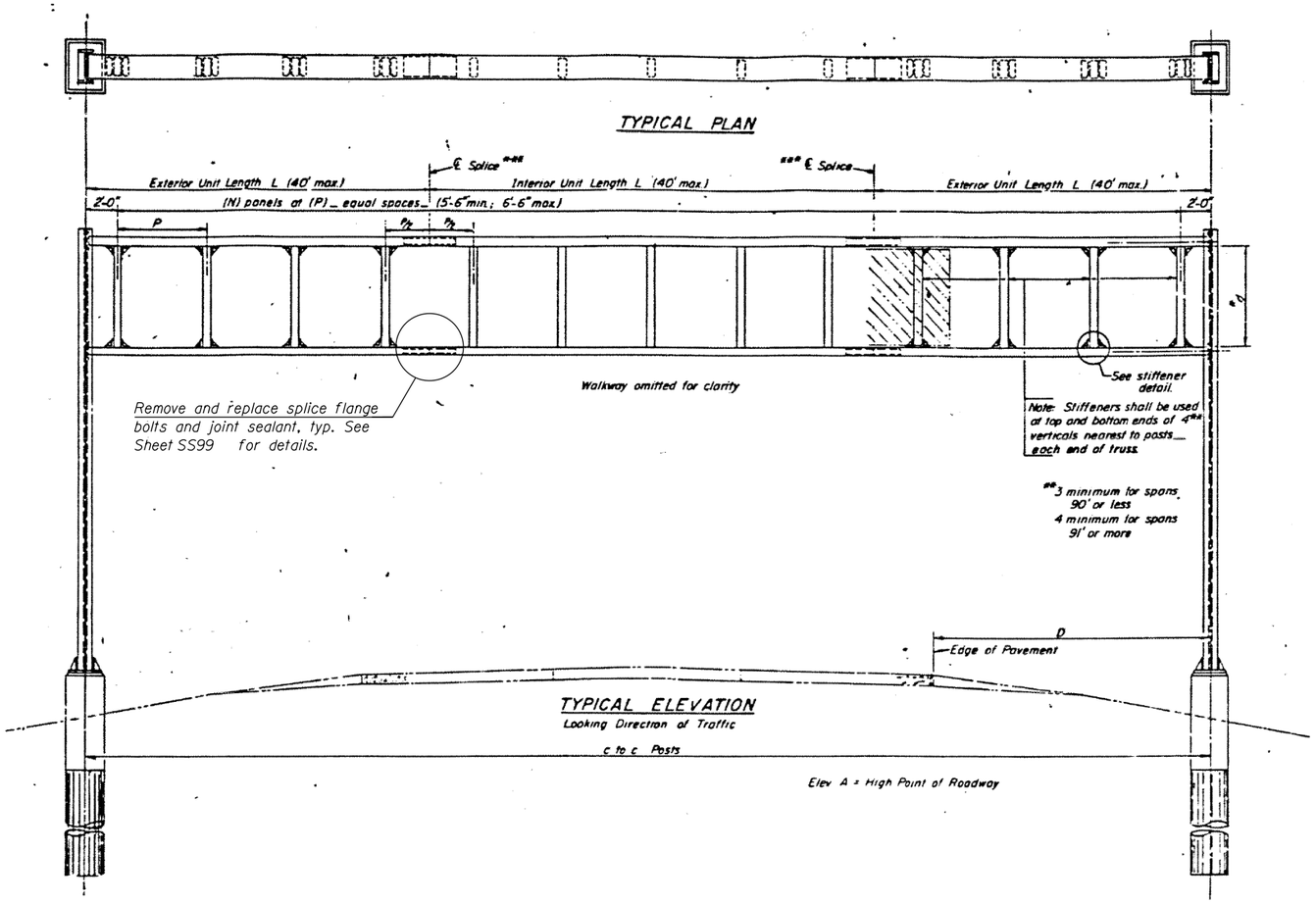
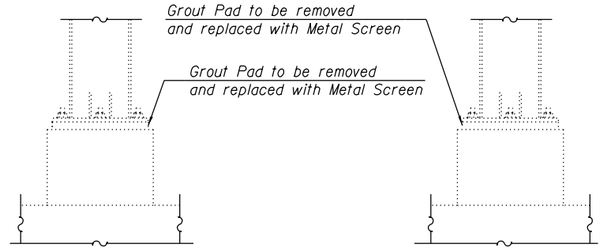


BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYURETHANE SEALANT	FOOT	7
REPLACE HANDRAIL LOCKING PIN CONNECTION	EACH	8
CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1.0
METAL SCREEN	EACH	2
SAFETY CHAIN	EACH	2
REPLACE SPLICE FLANGE BOLT	EACH	40
CLEANING AND PAINTING SIGN STRUCTURE NO. 5	L SUM	1.0
GROUT PAD REMOVAL	EACH	2



ELEVATION - LEFT FOUNDATION

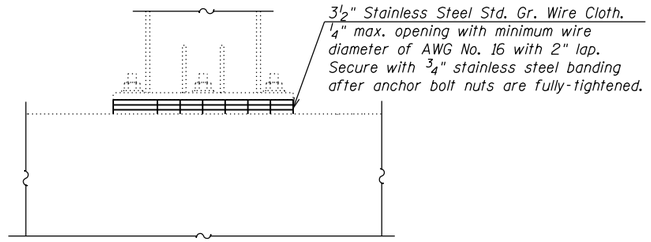
ELEVATION - RIGHT FOUNDATION

PROPOSED SCOPE OF WORK

1. Remove and replace existing splice flange bolts and install splice joint sealant material.
2. Realign eight (8) misaligned handrail locking pins.
3. Install two (2) new Safety Chains.
4. Remove grout pad, and paint exposed portions of anchor bolts and install metal screen at both foundations.
5. Install washers at all anchor bolts on both foundations.
6. Sandblast and repaint sign structure and walkway.

NOTES:

1. For Splice, Handrail Locking Pin Connection and Safety Chain details, see Sheet SS99.



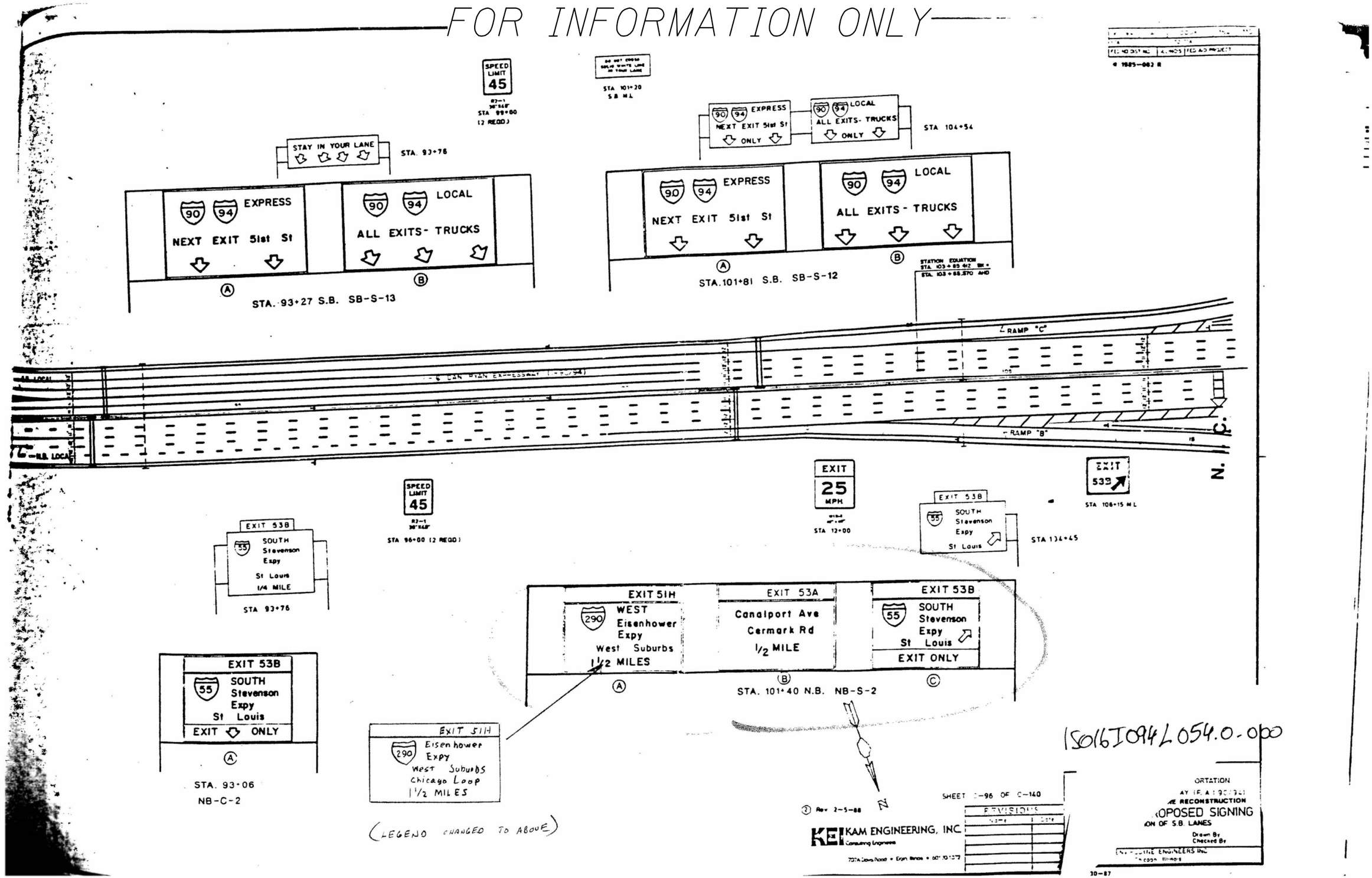
METAL SCREEN

HBM ENGINEERING GROUP, LLC

USER NAME = marina.stoica	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NB-11 (1S016I094L052.2) VIERENDEEL TRUSS SIGN STRUCTURE REPAIRS	
	CHECKED - MAI, JJS	REVISED -			
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -			
PLOT DATE = 1/29/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS105 OF SS129 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1055
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



IS016I094L054.0-000

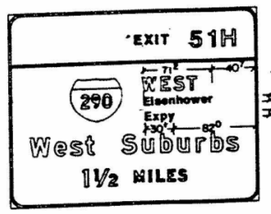
HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MAI, JJS	REVISED -			90/94/290	2015-019R	COOK	2155	1056
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -						CONTRACT NO. 62A76	
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS106 OF SS129 SHEETS			ILLINOIS	FED. AID PROJECT	

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NA\Documents\01 AmericasTransportation\60269938 CircletPhase_IN000_CADD\008_StructuralSign Structures\62A76 Sign Structure\62A76-Vierendeel-SS107-SignStruct.dgn
11:35:36 AM

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	117	93
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

* 1065-0778-R



STA. 100+50
NB-S-2-PANEL A

SHIELD STANDARD(S)
R1 - 1 - 4536

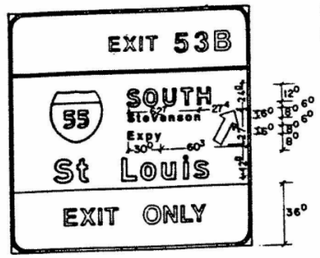
ARROW SIZE(S)

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 18.8 FEET
TOTAL HEIGHT IS 12.5 FEET
TOTAL AREA IS 225.00 SQ. FT.

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	118/4	32/3	15/0	33/3							18/6	86/6
2	6/4	2/0	0/0- 0/0	2/0	212/0									2/0	212/0
3	12/0	36/0	12/0- 0/0	40/7	45/0	18/0	47/6							64/3	110/6
4	13/0	16/0	16/0-12/0	17/6	55/5	24/0	102/0							16/6	181/5
5	12/0	15/0	15/0-10/0	63/6	30/3	15/0	46/2							60/5	91/5
6	14/0														
7															
8															
BOTTOM EDGE															



STA. 100+50
NB-S-2-PANEL C

SHIELD STANDARD(S)
R1 - 1 - 3638

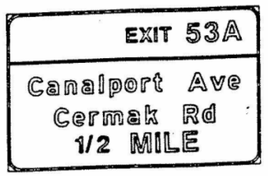
ARROW SIZE(S)
35 5/8 X 22 1/4

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 14.8 FEET
TOTAL HEIGHT IS 12.5 FEET
TOTAL AREA IS 181.25 SQ. FT.

BACKGROUND/LEGEND COLOR IS GREEN/WHITE TOP 9.50 FEET
YELLOW/BLACK BOTTOM 3.0 FEET

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	70/1	32/3	15/0	43/6							12/6	81/1
2	6/4	2/0	0/0- 0/0	2/0	170/0									2/0	170/0
3	12/0	36/0	12/0- 0/0	29/5	36/0	18/0	68/6							29/5	114/6
4	12/0	16/0	16/0-12/0	12/5	23/7	18/0	82/7	16/0	27/7					12/6	148/5
5	14/0	12/0	12/0- 0/0	33/6	39/3	18/0	49/2							33/5	106/5
6															
7															
8															
BOTTOM EDGE															



STA. 100+50
NB-S-2-PANEL B

SHIELD STANDARD(S).

ARROW SIZE(S)

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 19.0 FEET
TOTAL HEIGHT IS 12.5 FEET
TOTAL AREA IS 237.50 SQ. FT.

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	118/0	32/3	15/0	44/5							18/0	92/0
2	6/4	2/0	0/0- 0/0	2/0	224/0									2/0	224/0
3	19/0	16/0	16/0-12/0	18/6	121/3	24/0	45/7							18/0	191/2
4	19/0	16/0	16/0-12/0	41/5	93/5	24/0	27/2							41/6	144/7
5	19/0	15/0	10/0- 0/0	78/3	20/1	15/0	36/2							78/2	71/3
6	14/0														
7															
8															
BOTTOM EDGE															

SHEET C-94 OF C-119

ILLINOIS DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
SIGN PANEL DETAILS
28TH PL. TO MAXWELL ST
SCALE: VERT. 1 INCH, HORIZ.
DATE: 9/88

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
		CHECKED - MAI, JJS	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS107 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1057
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NA\Documents\01 AmericasTransportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS108-SignStruct.dgn
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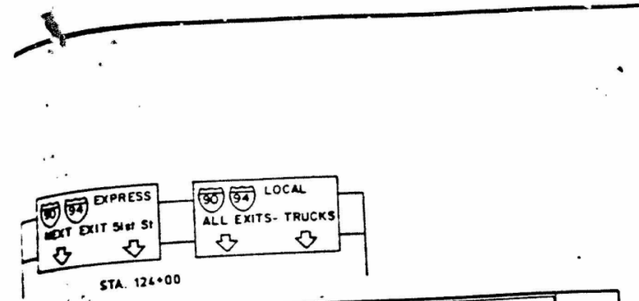
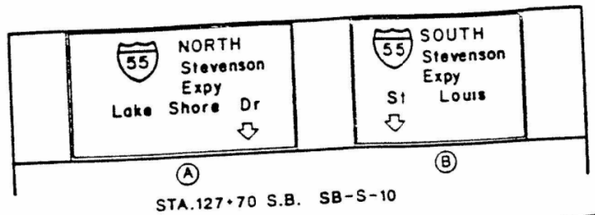
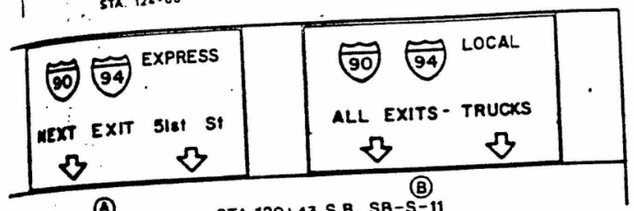
FOR INFORMATION ONLY







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SHEET C-98 OF C-140

② Rev 2-5-88

KAM ENGINEERING, INC.
Consulting Engineers
7074 Davis Road • Elgin, Illinois • 60123-1377

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (F.A.I. 90/94)
SOUTHBOUND MAINLINE RECONSTRUCTION
EXISTING & PROPOSED SIGNING
CONSTRUCTION OF S.B. LANES

Scale
Date
Drawn By
Checked By

ENGINEERS INC.
CHICAGO, ILLINOIS

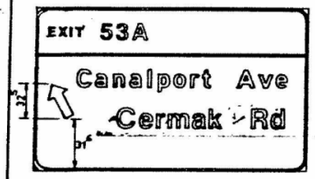
11-30-87

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES	
	CHECKED - MAI, JJS	REVISED -			
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -			
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS108 OF SS129 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1058
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



STA. 131+11

NB-S-3-PANEL A

SHIELD STANDARD(S)

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 8.0 INCHES

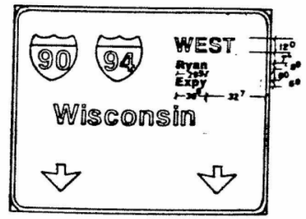
TOTAL WIDTH IS 20.0 FEET
TOTAL HEIGHT IS 10.5 FEET
TOTAL AREA IS 210.00 SQ. FT.

ARROW SIZE(S)

35 5/8 X 22 1/4 AT 30 FROM VERTICAL (LEFT)

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-18/0	13/0	32/3	15/0	44/5							135/0	92/0
2	8/4	2/0	0/0- 0/0	2/0	266/0									2/0	266/0
3	24/0	16/0	16/0-12/0	13/0	229/5	42/0	12/3	12/0	45/7					13/1	213/7
4	12/0	16/0	16/0-12/0	62/4	93/5	16/0	27/2							34/3	136/7
5	26/0														
6															
7															
8															
BOTTOM EDGE															



STA. 131+11

NB-S-3-PANEL B

SHIELD STANDARD(S)

HI - 1 - 3636

HI - 1 - 3636

ARROW SIZE(S)

32 X 22

32 X 22

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	COOK	127	84
STA.	TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	

$ 1985-078-R

BORDER WIDTH IS 2.0 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 14.5 FEET
TOTAL HEIGHT IS 10.5 FEET
TOTAL AREA IS 152.25 SQ. FT.

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	14/0	36/0	12/0- 0/0	15/1	36/0	12/0	36/0	12/0	47/6					15/1	143/6
2	12/0	16/0	16/0-12/0	25/7	122/2									25/7	122/2
3	12/0	22/0	0/0-0/0	11/0	32/0	88/0	32/0							11/0	152/0
4	14/0														
5															
6															
7															
8															
BOTTOM EDGE															

SHEET C-75 OF C-(1)

ILLINOIS DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
SIGN PANEL DETAILS
28TH PL. TO MAXWELL ST.
SCALE VERT.: NONE HORIZ.
DATE: 9/08

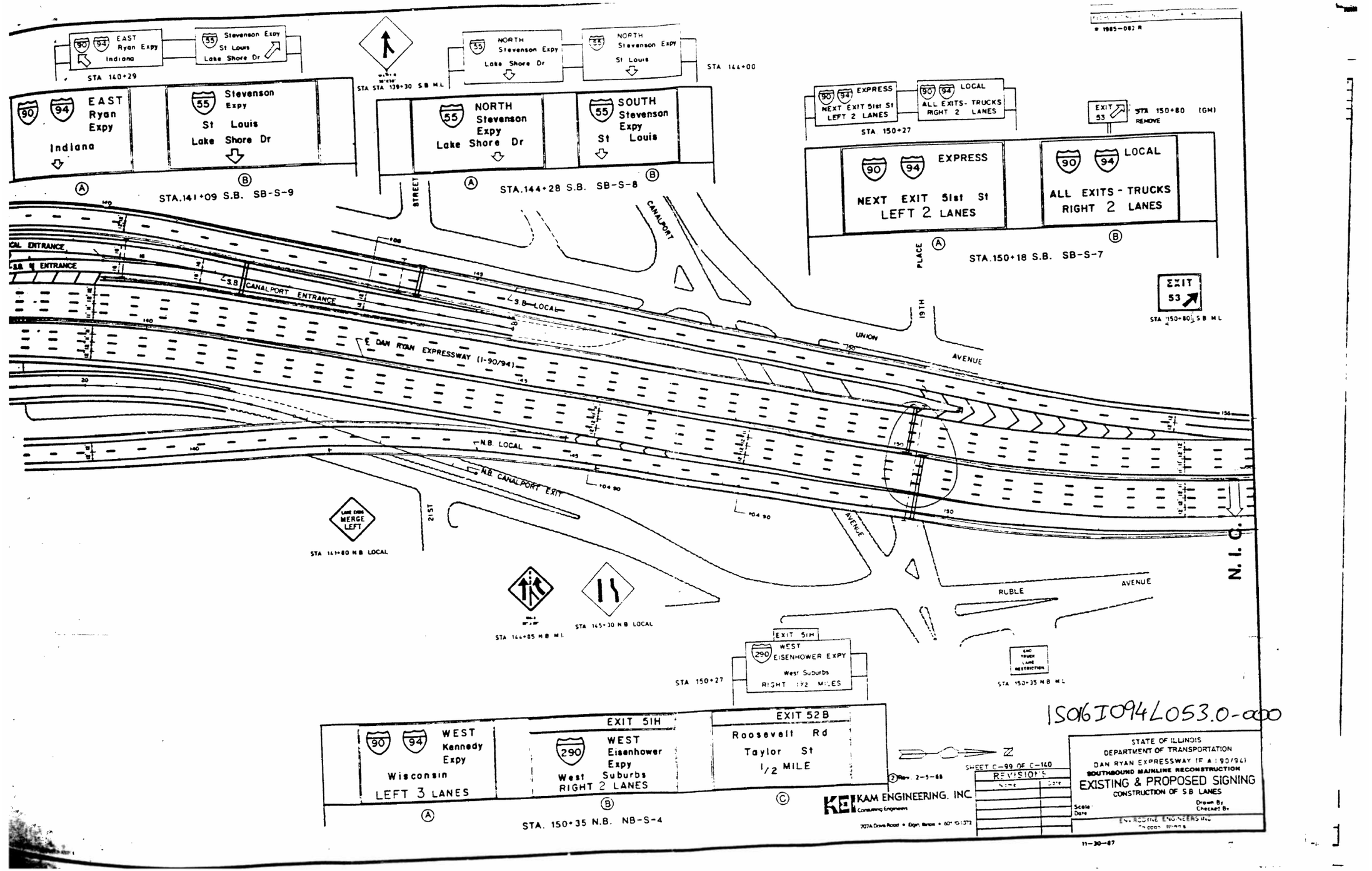
KEJ KAM ENGINEERING, INC. Consulting Engineers
207A Dove Road • Elgin, Illinois • 60120-1372
(312) 931-4211

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_II\000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-Vierendeel-SS110-SignStruct.dgn
11:36:18 AM

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES	F.A.I. RTE. 90/94/290
	CHECKED - MAI, JJS	REVISED -			SECTION 2015-019R
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -			COUNTY COOK
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS109 OF SS129 SHEETS	TOTAL SHEETS 2155
					SHEET NO. 1059
					CONTRACT NO. 62A76
					ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY



HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
		CHECKED - MAI, JJS	REVISED -		SHEET NO. SS110 OF SS129 SHEETS
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1060
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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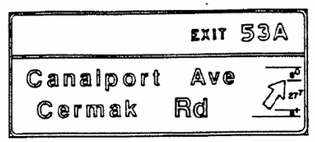
FOR INFORMATION ONLY



STA. 131+47
NB-C-4-PANEL A

SHIELD STANDARD(S)

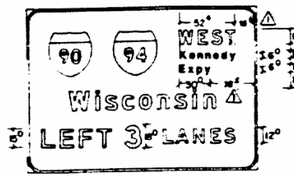
BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 22.5 FEET
TOTAL HEIGHT IS 8.5 FEET
TOTAL AREA IS 191.25 SQ. FT.

ARROW SIZE(S)
35 5/8 X 22 1/4

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	160/5	32/3	15/0	44/5							17/3	92/0
2	6/4	2/0	0/0-0/0	2/0	266/0									2/0	266/0
3	12/0	16/0	16/0-12/0	17/4	121/3	24/0	45/7	15/0	27/7					17/3	234/1
4	12/0	16/0	16/0-12/0	40/4	103/5	24/0	27/2							84/5	144/7
5	14/0														
6															
7															
8															
BOTTOM EDGE															



STA. 150+70
NB-S-4-PANEL A

SHIELD STANDARD(S)
M1 - 1 - 3636

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 16.0 FEET
TOTAL HEIGHT IS 13.0 FEET
TOTAL AREA IS 208.00 SQ. FT.

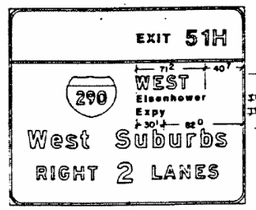
ARROW SIZE(S)

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	24/7	36/0	12/0-0/0	15/6	36/0	18/0	36/0	18/0	47/6					20/4	155/6
2	22/6	18/0	16/0-12/0	34/5	122/2									35/1	122/2
3	22/6	18/0	18/0-15/0-12/0	13/0	55/6	18/0	13/7	18/0	60/5					13/0	166/0
4	15/5														
5															
6															
7															
8															
BOTTOM EDGE															

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	127	95
STA	TO STA			
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT		

*1985-077B-R



STA. 150+ 70
NB-S-4-PANEL B

SHIELD STANDARD(S)
M1 - 1 - 4536

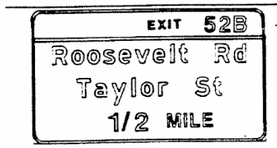
BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 18.0 FEET
TOTAL HEIGHT IS 13.0 FEET
TOTAL AREA IS 234.00 SQ. FT.

ARROW SIZE(S)

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	113/4	32/3	15/0	39/3							16/6	86/6
2	6/4	2/0	0/0- 0/0	2/0	212/0									2/0	212/0
3	11/5	36/0	12/0- 0/0	40/7	45/0	18/0	47/6							64/3	110/6
4	13/0	16/0	16/0-12/0	17/4	55/5	24/0	102/0							16/7	181/5
5	13/6	18/0	18/0-12/0	25/6	55/2	18/0	13/7	18/0	60/5					24/4	165/6
6	15/5														
7															
8															
BOTTOM EDGE															



STA. 150+70
NB-S-4-PANEL C

SHIELD STANDARD(S)

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 17.0 FEET
TOTAL HEIGHT IS 13.0 FEET
TOTAL AREA IS 221.00 SQ. FT.

ARROW SIZE(S)

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	RIGHT BORDER	LEGEND WIDTH
TOP EDGE										
1	8/4	15/0	15/0-10/0	97/3	32/3	15/0	42/5		16/5	90/0
2	6/4	2/0	0/0-0/0	2/0	200/0				2/0	200/0
3	20/4	16/0	16/0-12/0	17/6	118/2	24/0	27/2		16/6	169/4
4	20/4	16/0	16/0-12/0	38/5	79/0	24/0	23/7		38/4	126/7
5	20/3	15/0	10/0-0/0	66/3	20/0	15/0	36/2		66/3	91/2
6	15/5									
7										
8										
BOTTOM EDGE										

SHEET C-76 OF C-. 104

ILLINOIS DEPARTMENT OF TRANSPORTATION

DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION

SIGN PANEL DETAILS
28TH PL. TO MAXWELL ST.

SCALE: VERT. : NONE
HORIZ.

DATE: 9/88

⚠ 12-1-88

KEKAM ENGINEERING, INC.
7014 Cove Road • Elgin, Illinois • 60120-1372
(312)931-4211

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
		CHECKED - MAI, JJS	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS111 OF SS129 SHEETS
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

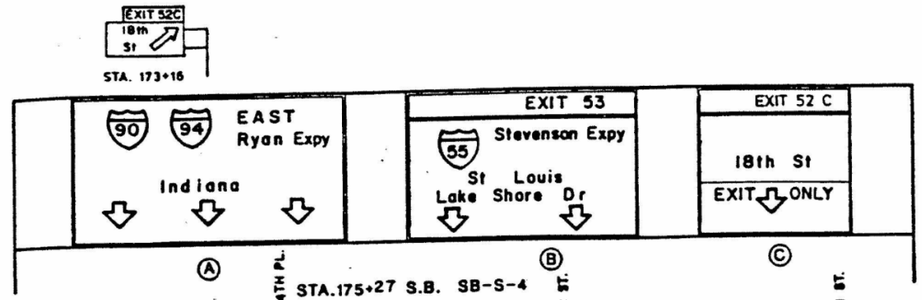
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1061
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

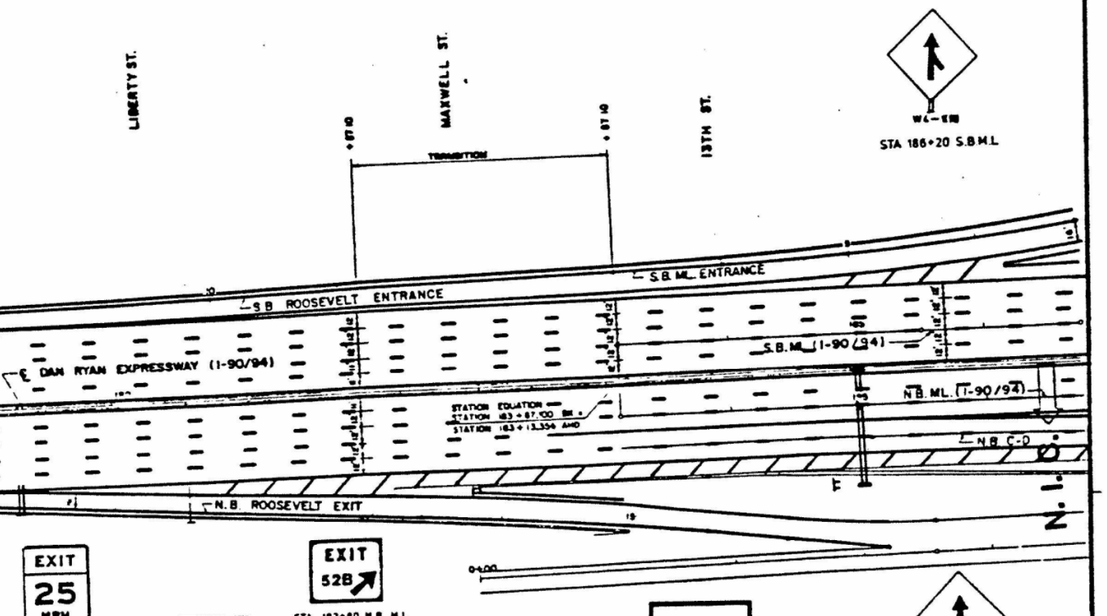
FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NA\Documents\01 AmericasTransportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS110B-SignStruct.dgn
11:36:51 AM

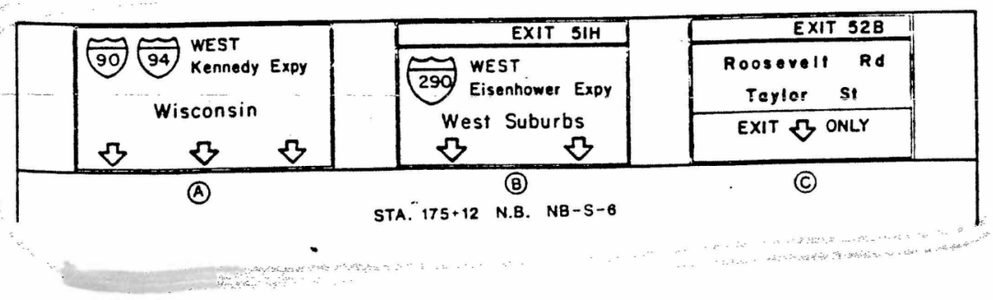
FOR INFORMATION ONLY

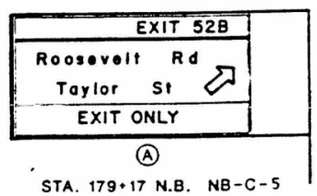
ALT. RTE.	SECTION	COUNTY	SHEET NO.	PROJ.
90/94	*	COOK	154	175
STA		TO STA.		
FED RD DIST NO.	ILLINOIS	FED. AID PROJECT		

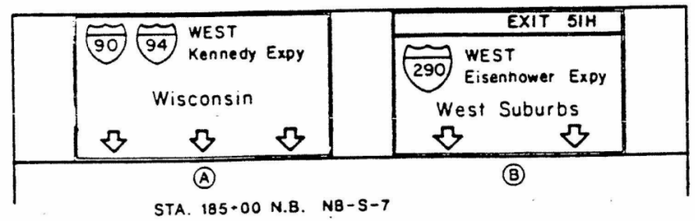
* 1995-082 R











I5016I094L052.5-000

SHEET C-101 OF C-140

② Rev. 2-5-68

KAM ENGINEERING, INC. Consulting Engineers
7024 Dove Road • Flora, Illinois • 62839-1377

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (F.A.I. 90/94)
SOUTHBOUND MAINLINE RECONSTRUCTION
EXISTING & PROPOSED SIGNING
CONSTRUCTION OF S.B. LANES

Scale
Date
Drawn By
Checked By

ENVIROSYNE ENGINEERS INC.
Chicago, Illinois

11-30-67

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS112 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1062
			CONTRACT NO. 62A76	
		ILLINOIS	FED. AID PROJECT	

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM_D502_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS111-SignStruct.dgn
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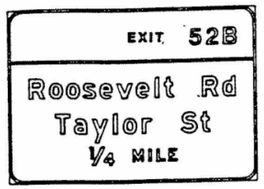
FOR INFORMATION ONLY



STA. 165+00
NB-S-5-PANEL C

SHIELD STANDARD(S)

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 17.0 FEET
TOTAL HEIGHT IS 13.0 FEET
TOTAL AREA IS 221.00 SQ. FT.

ARROW SIZE(S)

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	97/3	32/3	15/0	42/5							16/5	90/0
2	6/4	2/0	0/0- 0/0	2/0	200/0									2/0	200/0
3	18/6	16/0	16/0-12/0	17/6	118/2	24/0	27/2							16/5	168/4
4	18/6	16/0	16/0-12/0	38/5	78/0	24/0	23/7							38/4	125/7
5	18/6	15/0	10/0- 0/0	66/5	20/1	15/0	36/2							65/8	71/3
6	20/6														
7															
8															
BOTTOM EDGE															

STA. 175+17
NB-S-5-PANEL B

SHIELD STANDARD(S)
R1 - 1 - 4536

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 17.0 FEET
TOTAL HEIGHT IS 13.0 FEET
TOTAL AREA IS 221.00 SQ. FT.

ARROW SIZE(S)
32 X 22
32 X 22

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	102/1	32/3	15/0	39/3							15/1	86/6
2	6/4	2/0	0/0- 0/0	2/0	200/0									2/0	200/0
3	12/0	36/0	12/0- 0/0	17/8	45/0	12/0	47/6							81/4	104/6
4	12/0	16/0	16/0-12/0	15/2	55/5	16/0	102/0							15/1	173/5
5	12/0	22/0	0/0- 0/0	14/0	32/0	112/0	32/0							14/0	176/0
6	16/0														
7															
8															
BOTTOM EDGE															

STA. 175+17
NB-S-6-PANEL A

SHIELD STANDARD(S)
R1 - 1 - 3636
R1 - 1 - 3636

ARROW SIZE(S)
32 X 22
32 X 22
32 X 22

1 LIN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
90/94	*	COOK	12.7	97
STA		TO STA		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

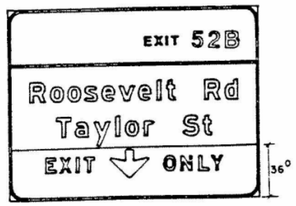
* 1985-077B-R

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 12.0 INCHES

TOTAL WIDTH IS 29.5 FEET
TOTAL HEIGHT IS 13.0 FEET
TOTAL AREA IS 383.50 SQ. FT.

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	24/0	36/0	12/0- 0/0	75/5	36/0	18/0	36/0	18/0	47/6					122/5	155/6
2	22/0	16/0	16/0-12/0	115/4	122/2									116/1	122/2
3	22/0	22/0	0/0- 0/0	17/0	32/0	112/0	32/0	112/0	32/0					17/0	320/0
4	14/0														
5															
6															
7															
8															
BOTTOM EDGE															



STA. 175+17
NB-S-6-PANEL C

SHIELD STANDARD(S)

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 16.0 FEET
TOTAL HEIGHT IS 13.0 FEET
TOTAL AREA IS 208.00 SQ. FT.

ARROW SIZE(S)
32 X 22

BACKGROUND/LEGEND COLOR IS GREEN/WHITE TOP 10.00 FEET
YELLOW/BLACK BOTTOM 3.0 FEET

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	8/4	15/0	15/0-10/0	86/6	32/2	15/0	42/5							15/2	90/8
2	6/4	2/0	0/0- 0/0	2/0	188/0									2/0	188/0
3	21/0	16/0	16/0-12/0	15/2	118/2	16/0	27/2							15/2	161/4
4	21/0	16/0	16/0-12/0	36/5	78/0	16/0	23/7							36/4	118/7
5	20/0	22/0	12/0- 0/0	23/6	28/3	12/0	32/0	12/0	48/2					23/5	144/5
6	8/0														
7															
8															
BOTTOM EDGE															

SHEET C-78 OF C-107

ILLINOIS DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
SIGN PANEL DETAILS
28TH PL TO MAXWELL ST
SCALE VERT. : NONE
HORIZ.
DATE : 4/88

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -
	CHECKED - MAI, JJS	REVISED -
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
VIERENDEEL TRUSS SIGN STRUCTURES
SHEET NO. SS113 OF SS129 SHEETS

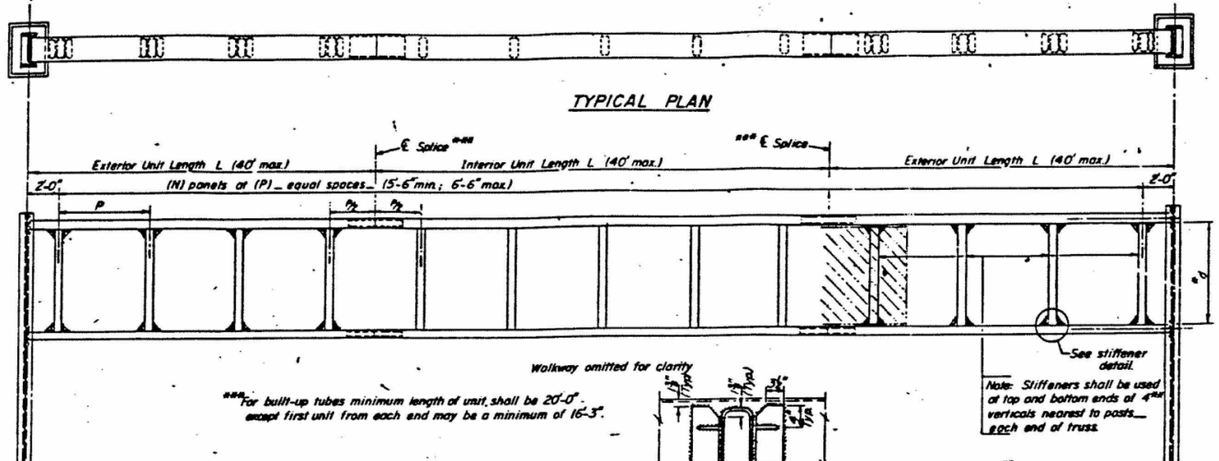
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1063
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

DEPARTMENT OF TRANSPORTATION

					SHEET NO.
90/94	#	COOK	127	105	SHEETS

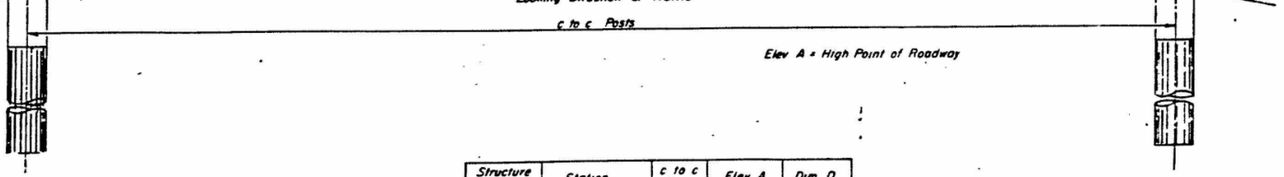
* 1985 - 077B - R

TYPICAL PLAN



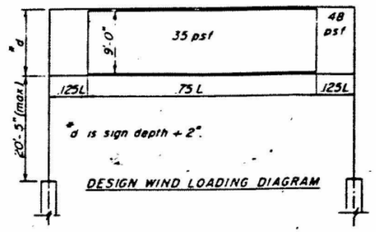
TYPICAL ELEVATION

Looking Direction of Traffic



Structure No.	Station	c to c Posts	Elev A	Dim. D
NB-S-1	78+50	30'-0"	70.8	18'-0"
NB-S-2	100+50	66'-9 1/2"	62.74	5'-2"
NB-S-3	131+11	52'-11 5/8"	58.46	8'-2"
NB-S-4	150+78	83'-3 1/4"	40.24	8'-1"
NB-S-5	165+00	95'-7 1/2"	55.12	5'-2"
NB-S-6	175+17	80'-4 5/16"	48.35	6'-1 1/2"
NB-S-7	185+00	98'-8"	14.54	16'-0"
NB-S-8	12+17	60'-0"	11.65	15'-0"
NB-S-9	212+18	48'-9 3/4"	4.33	8'-0"
EB-S-2	12+00 RAMP 'D' 9+50 RAMP 'C'	48'-0"		6'-0"
EB-S-3	32+82 RAMP 'E'	49'-4 7/16"	55.33	7'-6"
CMS-10	124+62	90'-11"	70.65	6'-2"
NB-S-10	93+08	58'-9 1/2"	53.81	5'-2"

N.I.C.



DESIGN WIND LOADING DIAGRAM

DESIGNED	EXAMINED	19
CHECKED	PASSED	BUREAU OF BRIDGE DESIGN
DRAWN	APPROVED	BUREAU OF BRIDGES AND STRUCTURES
CHECKED		DIRECTOR OF HIGHWAYS

OS-S-1 SPECIAL

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, dated January, 1985.

CONSTRUCTION: Standard Specifications for Road and Bridge Construction, State of Illinois, (dated October 1, 1983), Supplemental Specifications for Road and Bridge Construction; Standard Specifications for Traffic Control Items (dated Feb. 1, 1984) and Special Provisions.

MINIMUM CLEARANCE: Vertical Roadway Clearance = 17'-3" (All Obstructions)

LOADING: 80 M.P.H. WIND VELOCITY PLUS 30% GUST FACTOR

WIND LOADING: 35 p.s.f. normal to Sign Panel Area as shown below in Wind Loading Diagram plus 48 p.s.f. normal to exposed frame members.

WALKWAY LOADING: Dead Load plus 500# concentrated Live Load.

MATERIALS:

REINFORCEMENT BARS shall conform to the requirements of AASHTO M31 or M53, Grade 60.

CLASS X CONCRETE shall be used throughout.

STRUCTURAL STEEL: All material for structural chords, verticals, or chord splices shall conform to either ASTM A500, Grade C, AASHTO M222 or AASHTO M223, Grade 50 and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 40° F.

Posts shall conform to AASHTO M222 or M223, Grade 50, and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 40° F.

HIGH STRENGTH BOLTS shall conform to the requirements of AASHTO M164.

STRUCTURAL SHAPES and PLATES shall conform to the requirements of AASHTO M223, Grade 50, or M222, unless otherwise specified.

PAINTING: The zinc-silicate and vinyl paint system shall be used for shop and field painting of all structural steel. Exterior surfaces of all structural steel that are painted with the high-build vinyl paint shall receive one coat of vinyl enamel. Paint system, including field coat, for the walkway gratings may be done in the shop or just prior to erection. Chords and verticals will require painting on exterior surfaces only.

WELDING: All welding shall be in accordance with Article 507.04(s) of the Standard Specifications for Road and Bridge Construction.

NOTE: CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO ORDERING ANY MATERIAL OR HARDWARE, OR REWORKING EXISTING ITEMS.

TOTAL BILL of MATERIAL

OVERHEAD SIGN STRUCTURE_SPAN (SPECIAL)	Lm Ft	583'-10 1/2"
OVERHEAD SIGN STRUCTURE WALKWAY_TYPE S	Lm Ft	455'-1"
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu Yds	0

12/1/88

SHEET C-86 OF C-194

OVERHEAD SIGN STRUCTURES GENERAL PLAN & ELEVATION

DAN RYAN EXPRESSWAY (F.A.I. 90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
28TH PL. TO MAXWELL ST.

Scale : NONE
Date : 9/88

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM_D502_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_IN000_CAD\008_StructuralFSign Structures\62A76 Sign Structure\62A76-Vierendeel-SS113-SignStruct.dgn
11:37:39 AM

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - HI, FL		REVISED -	
		CHECKED - MAI, JJS		REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL		REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JJS		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
VIERENDEEL TRUSS SIGN STRUCTURES
SHEET NO. SS114 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1064
			CONTRACT NO. 62A76	
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	*	COOK	127	106	SHEET NO.
* -90P94					SHEETS

*Prelas-0778-R

*d is sign depth + 2"

Span	Camber at Centerline	Chord	Vertical	Post	c-c Chords
0 to 70'	4"	TS14x6x⅜	TS10x6x⅜	W24x104	"d+6"
71' to 80'	4"	TS14x6x½	TS10x6x⅜	W24x104	"d+6"
81' to 90'	6"	TS18x6x⅜	TS14x6x⅜	W24x104	"d+6"
91' to 100'	6"	TS19x6x⅜	TS14x6x⅜	W24x104	"d+6"
101' to 110'	6"	TS18x6x½	TS14x6x½	W24x104	"d+6"
111' to 124'	6"	TS18x6x⅝	TS14x6x½	W24x104	"d+6"

Clip corners of stiffener plates 1"-45°
Tight fit (Typ.)
6" x ½" plates
PLAN

SEC. A-A
Top of upper chord

4 sp. of 4"=16"
Top of upper chord See Sec. A-A
Top of bottom chord
7/16" ø holes
2½" Grout Mixture — (See Standard Specifications for Traffic Control Items.)
℄ Conduit
FRONT ELEVATION
SIDE ELEVATION
POST
W24 x 104

Machine or grind ⅜"-45° bevel
BRACING ANGLES
L5x5x⅜ for W24 x 104

Clip heel 1"-45°
¾" th'k Gusset Plate
(Angles and Gusset Plate shall conform to AASHTO M-183)

Cut to suit top of Post
3"ø Hole (For CMS-10 RH. Base ℄ Only)
Typ.
Typ. for gusset plate
5"ø hole
2"ø holes for spans 91' to 124'
1¾"ø holes for spans 0 to 90'
Distance to Edge of Pavement
SEC. B-B

Typ.
Center ⅜" gusset plates between holes. Gusset plates shall conform to AASHTO M-183.
½" plate
4 sp. at 4½"=18"
1'-9" Plate
18" or 14"
½" min (Typ.)
PLAN
⅞" ø holes for ¾" ø H.S. bolts
Clip heel of gusset at 1½"-45° (Typ.)
1'-4" Plate
ELEVATION
CHORD END CONNECTION

¾" ø H.S. bolts, each with 2 washers, ⅞" ø holes
4 sp. at 3"=1'-0"
4"(Min.)
1'-5"
3'-0" splicing insert
PLAN VIEW of CHORD SPLICE
Seal with silicone sealant suitable for use on structural steel.

TYPICAL CONNECTION
Chord to Vertical
Vertical
Chord
¾" ø hole Top & Btm.
See, also, Sheet OS-S-1 SPECIAL

Provide ⅛" and ¼" thick shim plates each side of each joint for ⅛" maximum clearance each side.
10" x 1'-4" long for TS 14 x 6 x t
12" x 1'-4" long for TS 18 x 6 x t
TS 18 x 6 x t
TS 14 x 6 x t
2" (Typ.) Shim plates
SECTION THRU SPLICE

R = 2½t (min.)
Penetration 75% to 90% Required
60°
ALTERNATE BUILT-UP TUBE
Width, depth and thickness shall be as indicated for TS members indicated in table.

Tube th'kness
½" Maximum
Tube th'kness
Corner of Chord Splice

Camber required See table
CAMBER DIAGRAM

Structure No	Station	Span	"d"	Camber at ℄	Exterior Unit Lgth (L)	Interior Unit Lgth (L)	No. of Panels (N)	Panel Lgth (P)	Chord Size	Vertical Size	Post Size	L.H. Post Dim. H	R.H. Post Dim. H
NB-S-1	79+60	82'-0"	12'-2"	4"	31'-0"	N.I.C.	8	5'-3 3/16"	TS14X6X3/8	TS10X6X3/8	W24 X 104	17'-7"	16'-1"
NB-S-2	100+50	86'-9½"	12'-8"	6"	33'-4¾"		11	5'-8½"	TS18X6X3/8	TS14X6X3/8	W24 X 104	15'-2"	15'-5"
NB-S-3	131+11	52'-1⅝"	10'-6"	4"	26'-6 13/16"		9	5'-5⅞"	TS14X6X3/8	TS10X6X3/8	W24 X 104	14'-11"	18'-9"
NB-S-4	150+70	83'-3½"	13'-2"	6"	29'-8¼"	24'-4⅜"	13	6'-1 3/16"	TS18X6X3/8	TS14X6X3/8	W24 X 104	17'-4"	14'-8"
NB-S-5	165+00	93-7½"	13'-2"	6"	34'-10½"	23'-10½"	15	5'-11¾"	TS18X6X5/8	TS14X6X½	W24 X 104	15'-2"	23'-1"
NB-S-6	175+17	80-5⅛"	13'-2"	6"	28'-4⅛"	23'-8"	13	5'-10¼"	TS18X6X5/8	TS14X6X1/2	W24 X 104	15'-2"	15'-9"
NB-S-7	189+88	89'-0"	12'-8"	6"	33'-6 1/8"	22'-11 3/4"	15	5'-8 3/4"	TS18X6X3/8	TS14X6X3/8	W24 X 104	15'-11"	15'-7"
NB-S-8	12+17	80'-0"	10'-8"	4"	30'-0"		9	8'-2 5/8"	TS14X6X3/8	TS10X6X3/8	W24 X 104	16'-3"	15'-7"
NB-S-9	212+18	46'-9"	10'-8"	4"	23'-4 1/2"		7	6'-1 7/16"	TS14X6X3/8	TS10X6X3/8	W24 X 104	16'-3"	15'-5"
EB-S-2	12+00 RAMP "D" 9+50 RAMP "C"	49'-0"	11'-2"	4"	26'-8"		9	5'-0"	TS14X6X3/8	TS10X6X3/8	W24 X 104	16'-8"	16'-8"
EB-S-3	32+82 RAMP "E"	49-4⅜"	10'-8"	4"	24'-8¼"		7	6'-5⅞"	TS14X6X3/8	TS10X6X3/8	W24 X 104	14'-8"	17'-0"
EB-S-4	8+48 (L=55)	N.I.C.											
CMS-10	124+62	90-8"	5'-0"	6"	33'-10½"	25'-2"	15	5'-9½"	TS18X6X3/8	TS14X6X3/8	W24 X 104	14'-8"	16'-4"
NB-S-10	93+08	66'-9½"	12'-8"	4"	33'-4⅛"		11	5'-8½"	TS14X6X3/8	TS10X6X3/8	W24 X 104	16'-3"	15'-8"

N.I.C.

SHEET C-87 OF C-104

OVERHEAD SIGN STRUCTURES
POST and CHORD DETAILS

DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
28TH PL. TO MAXWELL ST.

Scale : NONE
Date : 9/08

DESIGNED		EXAMINED	19
CHECKED		PASSED	BUREAU OF BRIDGES AND STRUCTURES
DRAWN		APPROVED	DIRECTOR OF HIGHWAYS
CHECKED			

OS-S-2 SPECIAL

△1 12-1-08

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - HI, FL		REVISED -	
		CHECKED - MAI, JJS		REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL		REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JJS		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
VIERENDEEL TRUSS SIGN STRUCTURES
SHEET NO. SS115 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1065
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 CirclePhase_II\000_CAD\008_StructuralFSign Structures\62A76 Sign Structure\62A76-Vierendeel-SS114-SignStruct.dgn
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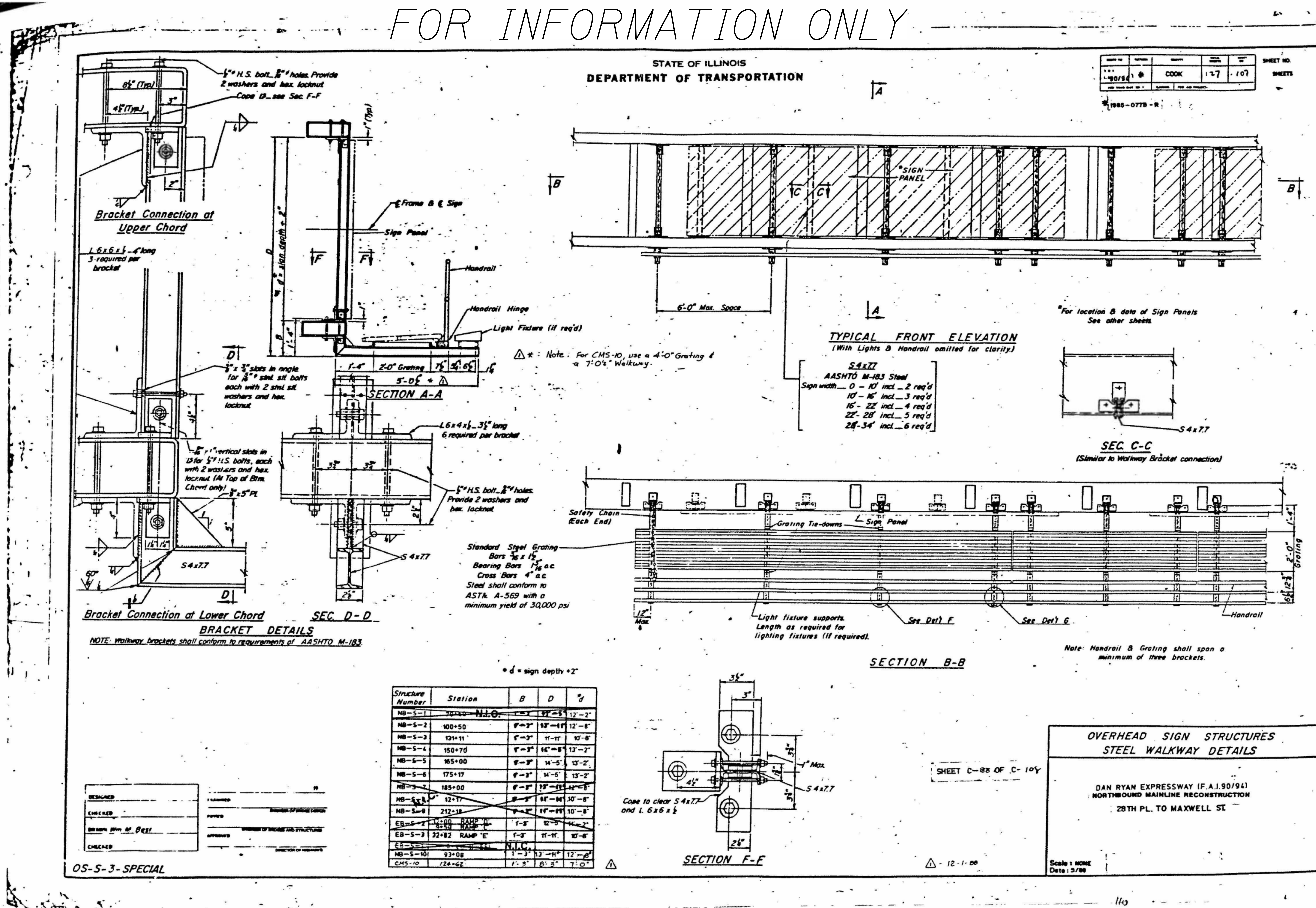
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



* d = sign depth + 2"

Structure Number	Station	B	D	*d
NB-S-1	[illegible] N.I.C.	1'-3"	13'-5"	12'-2"
NB-S-2	100+50	1'-3"	13'-11"	12'-8"
NB-S-3	131+11	1'-3"	11'-11"	10'-8"
NB-S-4	150+70	1'-3"	16'-5"	13'-2"
NB-S-5	165+00	1'-3"	14'-5"	13'-2"
NB-S-6	175+17	1'-3"	14'-5"	13'-2"
NB-S-7	185+00	1'-3"	13'-11"	12'-8"
NB-S-8 N.I.C.	12+17	1'-3"	31'-11"	30'-8"
NB-S-9	212+18	1'-3"	11'-11"	10'-8"
EB-S-2	12+00 RAMP "D" 8+50 RAMP "C"	1'-3"	12'-5"	11'-2"
EB-S-3	32+82 RAMP "E"	1'-3"	11'-11"	10'-8"
EB-S-?	N.I.C.			
NB-S-10	93+08	1'-3"	13'-11"	12'-8"
CMS-10	124+62	1'-3"	8'-3"	7'-0"

OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

DAN RYAN EXPRESSWAY (F.A.I. 90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
28TH PL. TO MAXWELL ST.

Scale: NONE
Date: 5/88

110

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS115-SignStruct.dgn

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES	
		CHECKED - MAI, JJS	REVISED -			
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -			
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS116 OF SS129 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1066
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

11:38:06 AM

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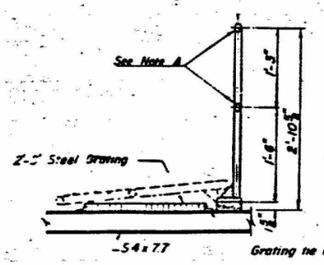
DEPARTMENT OF TRANSPORTATION

DIST.	COUNTY	TOTAL SHEETS	SHEET NO.
1	COOK	127	108

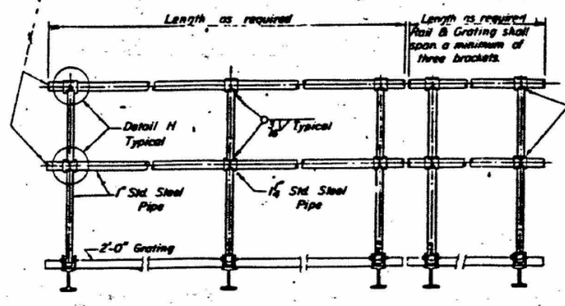
SHEET NO
SHEETS

© 1985 - 0778 - R

Contractor shall install standard force-fit end cap. (All rail ends)

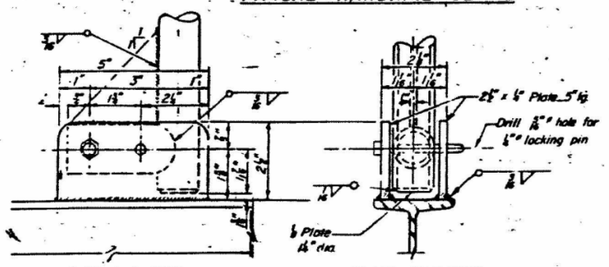


SIDE ELEVATION



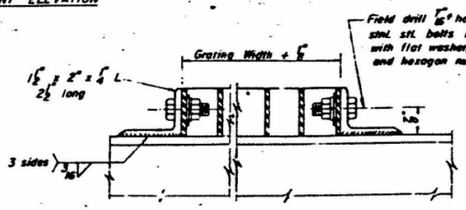
FRONT ELEVATION

TYPICAL HANDRAIL DETAIL



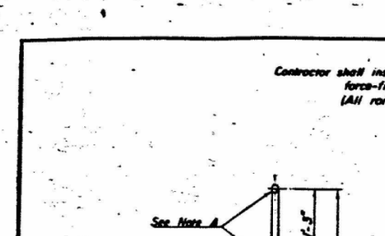
SIDE ELEVATION

FRONT ELEVATION



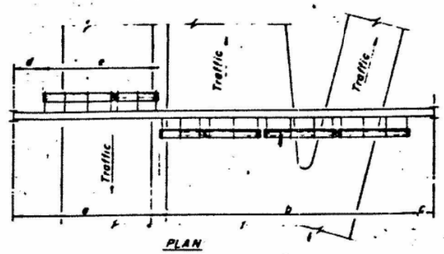
GRATING TIE DOWN

2 Req'd per Walkway Bracket



PLAN

DETAILS OF HANDRAIL HINGE

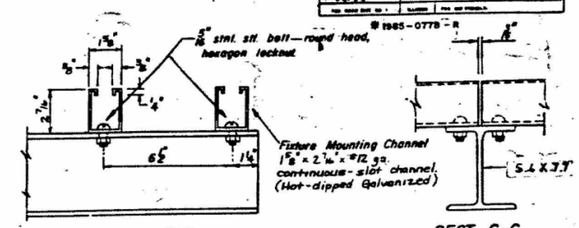


PLAN

WALKWAY AND HANDRAIL SKETCH

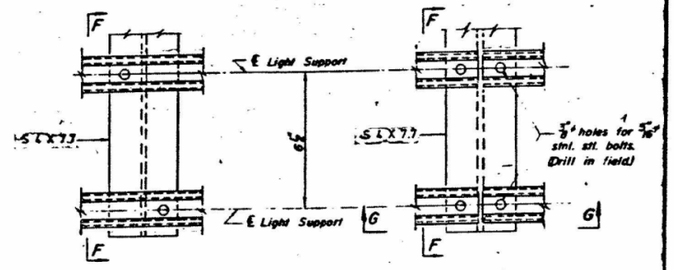
Note: Road Plan shown beneath truss just typical.

Structure Number	Station	a	b	c	d	e	Grating & Handrail Lengths
NB-S-1	79+50	3'-3½"	23'-8"	11'-6"	N.I.C.		45'-0"
NB-S-2	100+50	6'-9½"	80'-6"	5'-6"			86'-6"
NB-S-3	131+11	2'-11⅞"	42'-6"	7'-9"			42'-6"
NB-S-4	150+70	3'-3¼"	78'-0"	2'-0"			79'-0"
NB-S-5	165+00	5'-7½"	87'-0"	1'-0"			87'-0"
NB-S-6	175+17	5'-5 15/16"	93'-3"	8'-9½"			79'-0"
NB-S-7	485+00	4'-8"	65'-8"	29'-8"			
NB-S-8	12+17	3'-8"	42'-8"	14'-8"			
NB-S-9	212+18	3'-8"	42'-8"	5'-8"			
EB-S-2	12+88 RAMP 'D' 9+50 RAMP 'E'	5'-0"	40'-0"	1'-0"			40'-0"
EB-S-3	32+82 RAMP 'E'	5'-0"	42'-0"	2'-5"			42'-0"
CMS-10	124+62.	14'-1"	45'-7"	55'-3"			45'-7"
NB-S-18	93+08	47'-6½"	99'-6"	9'-8"			19'-6"



SECT. F-F

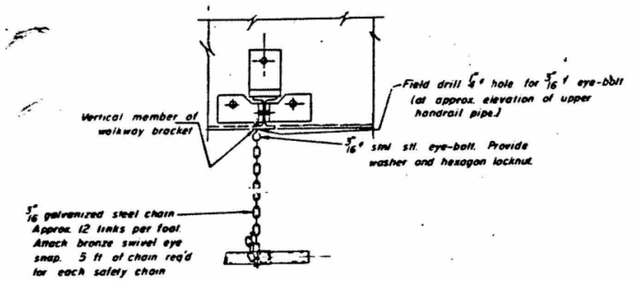
SECT. G-G



DETAIL F

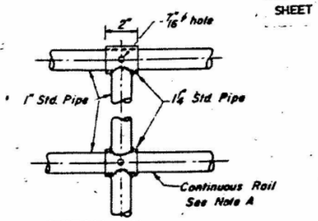
DETAIL G

LIGHTING FIXTURE MOUNTS (IF REQ'D.)



SAFETY CHAIN

One (1) required for each end of each walkway.



DETAIL H

Welds ⅜ continuous

⚠ 12-1-86

Note: All bolts, nuts, and washers shall be stainless steel, conforming to ASTM A 193, Class 1, Grade 88.

SHEET C-89 OF C-148

OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

DAN RYAN EXPRESSWAY (F.A.I. 90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
28TH PL. TO MAXWELL ST.

Scale: 1 NONE
Date: 9/88

DESIGNED	EXAMINED	19
CHECKED	PASSED	ENGINEER OF BRIDGE DESIGN
Drawn Am M. Best	APPROVED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED		DIRECTOR OF HIGHWAYS

OS-S-4-SPECIAL

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS116-SignStruct.dgn
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HBM ENGINEERING GROUP, LLC				
USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS117 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1067
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

		COOK	127	109

SHEET NO.
SHEETS

©1985-0779-R

D (Distance to Edge of Pavement)

Well compacted impervious material. 10' minimum all around. Cost incidental.

#6 copper wire or cable

Approved clamps for grounding

⅝" ø x 8'-0" copper weld ground rod driven into ground. Cost of rod, cable and clamps shall be incidental to cost of Concrete Foundations.

3 hoops minimum top and bottom

Elev. Top

Elev. Bottom

3'-0" diameter

FRONT ELEVATION

SIDE ELEVATION

SEC. A-A

3" galvanized steel conduit. Thread and cap both ends.

NOTE: The anchor bolts and reinforcing cage must be in place before pouring concrete, and shall be adjusted for proper placement of anchor bolts as shown.

SEC. B-B

NOTES:

The foundation details shown are for Average Cohesive Soil Conditions (stiff clays, sandy clays) and with minimum Qu = 1.0 Tons/Sq. Ft. "Qu" being the average value of hand penetrometer readings at various depths of the shaft as determined by the Engineer at time of drilling operations or previous soil investigation.

NOTE:
ANCHOR BOLTS THAT ARE IN THE PARAPET OR PIER CAP ARE INCIDENTAL TO CLASS "X" CONCRETE. LENGTH AND SHAPE OF THESE BOLTS ARE ON THE STRUCTURAL PLANS.

ANCHOR BOLT DETAILS

(ASTM A-576 — F_y = 55,000 p.s.i.)

Galvanize upper 12" in accordance with AASHTO M 232.

Provide 3 nuts and 1 washer for each anchor bolt.

BAR LIST — EACH FOUNDATION

Bar	No	Size	Lgth.	Shape
s	12	#4	11'-9"	
v	14	#9	6'-5"	
u	4	#5	5'-3"	

#4 bar spiral — see Front Elevation

BAR s

DEPTH TABLE

Span	B (min.)
70'	15'
80'	15'
90'	16'
100'	17'
110'	18'
124'	20'

Structure No.	Station	B	Anchor Bolt Size	Left Foundation Elev. Top	Left Foundation Elev. Btm.	Left Foundation A	Right Foundation Elev. Top	Right Foundation Elev. Btm.	Right Foundation A	Class X Concrete
NB-S-10	93+08									
NB-S-2	100+50			65.76			65.49			
NB-S-3	139+11			58.46			56.85			
NB-S-4	150+70			41.04			43.74			
NB-S-5	165+00			58.11			55.11			
NB-S-6	175+17			49.34			48.77			
NB-S-7	185+00	N.I.C.		18.76			17.88			
NB-S-8	12+17			13.52			14.27			
NB-S-9	212+18			6.28			6.78			
EB-S-2	12+00 RAMP "D" 9+50 RAMP "C"									
EB-S-3	22+82 RAMP "E"			58.83			56.52			
EB-S-4	8+46 (I-55)	N. I. C.								
NB-S-11	93+08			55.64			57.81			

SHEET C-90 OF C-101

DRILLED SHAFT FOUNDATION DETAILS

* FOR PARAPET MOUNTED OVERHEAD SIGNS SEE VOL. 13, SHEET NO. PD 1

OVERHEAD SIGN STRUCTURES-SPAN FOUNDATION DETAILS *

DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
28TH PL. TO MAXWELL ST.

Scale : NONE
Date : 5/98

⚠ 12/1/98

DESIGNED
CHECKED
DRAWN
CHECKED

EXAMINED 19
PASSED — BUREAU OF BRIDGE ENGINEERING
APPROVED — ENGINEER OF BRIDGES AND STRUCTURES
DIRECTOR OF HIGHWAYS

OS-S-5-SPECIAL

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS118 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

HBM ENGINEERING GROUP, LLC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1068
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

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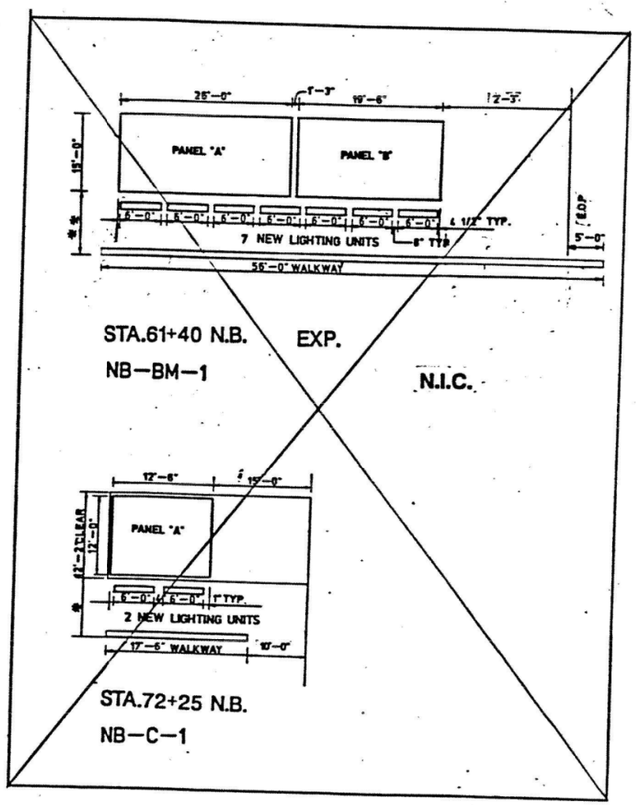

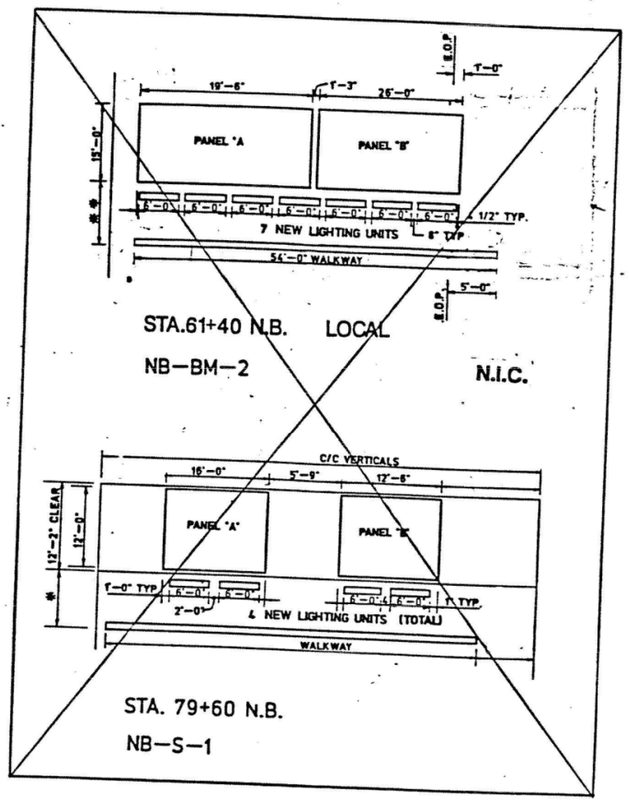

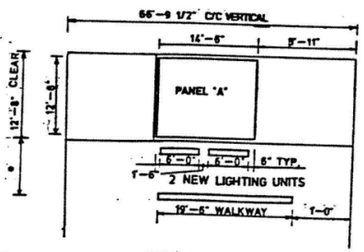

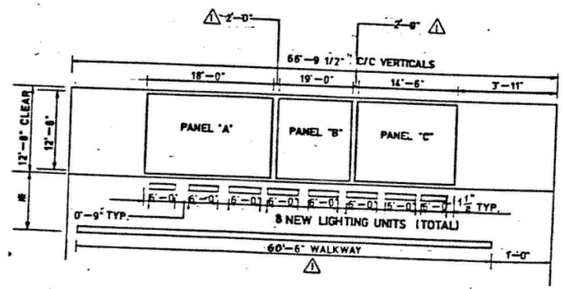

* 1'-3" MIN. TOP OF BOTTOM CHORD TO BOTTOM OF WALKWAY

** 1'-5" MIN. BOTTOM OF SIGN TO BOTTOM OF WALKWAY

SHEET C-82 OF C-105

12-1-66

ILLINOIS DEPARTMENT OF TRANSPORTATION

DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION

SIGN PANEL AND

LIGHT FIXTURE PLACEMENT

28TH PL. TO MAXWELL ST

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94 *	COOK	127	101
STA.	TO STA.		

*1985-0778-R

SHEET NO.

KAM ENGINEERING, INC.

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi		DESIGNED - HI, FL		REVISED -	
		CHECKED - MAI, JJS		REVISED -	
PLOT SCALE = N.T.S		DRAWN - HI, FL		REVISED -	
PLOT DATE = 1/24/2020		CHECKED - MAI, JJS		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
VIERENDEEL TRUSS SIGN STRUCTURES

SHEET NO. SS119 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1069
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

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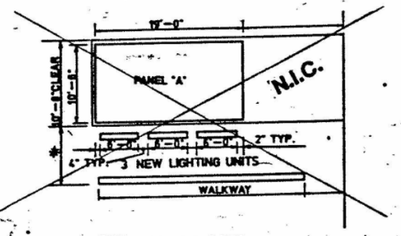

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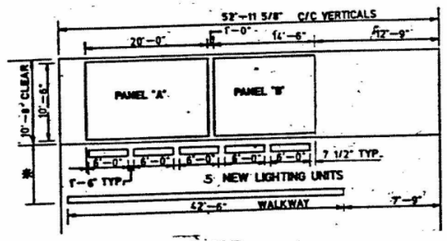
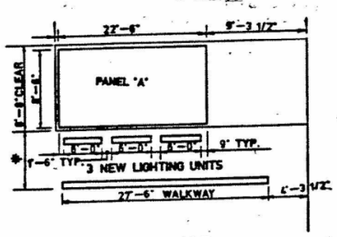
NB—C—3



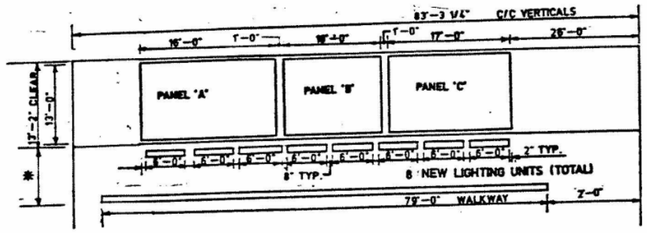
STA. 131+11 N.B.

NB—S—3



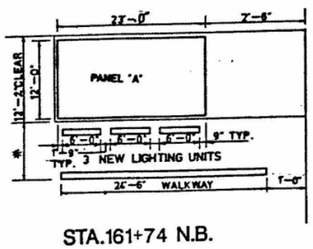
STA.131+47 N.B.

NB—C—4



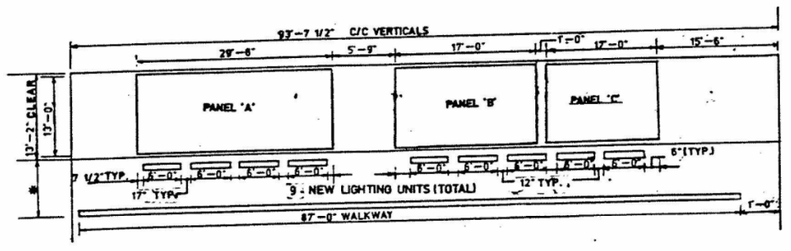
STA. 150+70 N.B.

NB—S—4



STA.161+74 N.B.

NB—C—5.



STA. 165+00 N.B.

NB—S—5

* 1'-3" MIN. TOP OF BOTTOM CHORD TO BOTTOM OF WALKWAY

SHEET C-83 OF C-179

△ 12-1-88

ILLINOIS DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION
SIGN PANEL AND
LIGHT FIXTURE PLACEMENT
28TH PL. TO MAXWELL ST.
SCALE: VERT. 1" = 10'
HORIZ. 1" = 10'
DATE: 7/88

KAM ENGINEERING, INC. Consulting Engineers
707A Davis Road • Elgin, Illinois • 60120-1372
(312) 931-4211

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1070
			CONTRACT NO. 62A76	
		ILLINOIS	FED. AID PROJECT	

HBM ENGINEERING GROUP, LLC

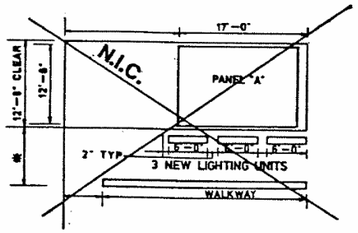
USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS120 OF SS129 SHEETS

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local\AECOM_D502_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS119-SignStruct.dgn
11:39:02 AM

FOR INFORMATION ONLY

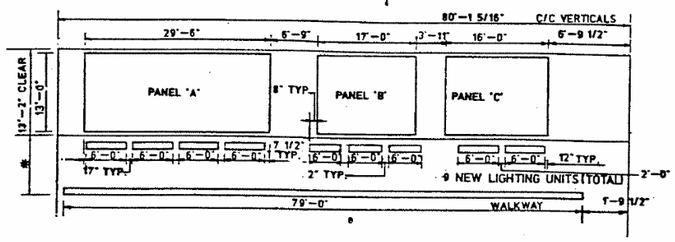
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	COOK	127	103
STA.	TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	

1985-0778-R



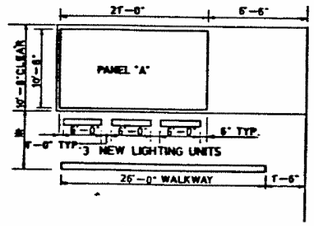
~~STA. 165+08 N.B.~~

~~NB-C-6~~



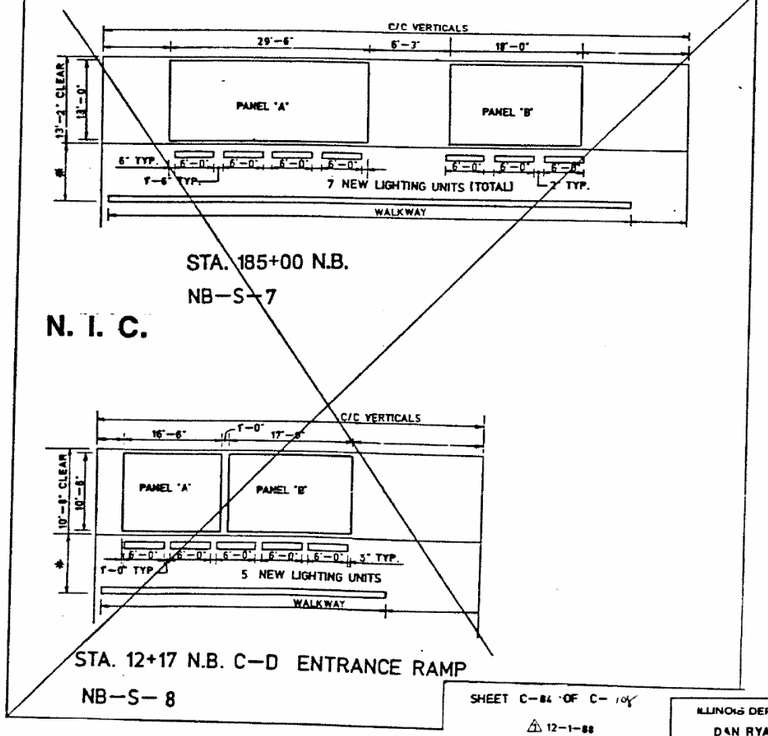
STA. 175+17 N.B.

NB-S-6



STA.179+17 N.B.

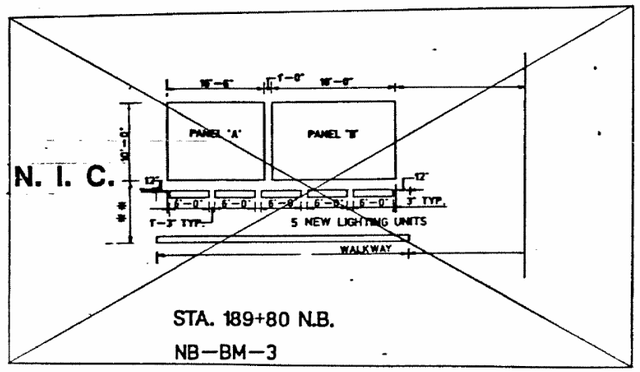
NB-C-7



STA. 185+00 N.B.

NB-S-7

N. I. C.



STA. 189+80 N.B.

NB-BM-3

N. I. C.

STA. 12+17 N.B. C-D ENTRANCE RAMP

NB-S-8

** 1'-5" MIN. BOTTOM OF SIGN TO BOTTOM OF WALKWAY

* 1'-3" MIN. TOP OF BOTTOM CHORD TO BOTTOM OF WALKWAY

SHEET C-84 OF C-104

12-1-88

ILLINOIS DEPARTMENT OF TRANSPORTATION

DAN RYAN EXPRESSWAY (F.A.I.90/94)
NORTHBOUND MAINLINE RECONSTRUCTION

SIGN PANEL AND

LIGHT FIXTURE PLACEMENT

28TH PL. TO MAXWELL ST.

SCALE VERT. : NONE
HORIZ.

DATE: 3/88

KAM ENGINEERING, INC. Consulting Engineers
703A Davis Road • Elgin, Illinois • 60120-1372
(312) 931-4211

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS121 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1071
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 CircletPhase_IN000_CAD\008_StructuralSign Structures\62A76 Sign Structure\62A76-Vierendeel-SS120-SignStruct.dgn

11:39:16 AM

FOR INFORMATION ONLY

90/94		COOK	151	117
STA		TO STA		
FED RD DIST NO	ILLINOIS	FED AID PROJECT		

1985-080 R

EXIT 52C
18th St
1/2 MILE

STA. 190+32 (BM)

EXIT 53
Stevenson Expy
55
St Louis
Lake Shore Dr
1/2 MILE

EXIT 52C
18th St
1/4 MILE

Ⓐ STA.190+85 S.B. SB-BM-3 Ⓑ

RIGHT LANE MUST TURN RIGHT
R 3-7(R) 30"x36"
STA 0+58 UNION AVE
PROPOSED

ONLY ONLY
66"X36"
STA 0+50 UNION AVE (LT. & RT.)
PROPOSED

W 4-2(L) 36"x36"
STA 0+50 UNION AVE
PROPOSED

SPEED LIMIT 45
R2-1 30"X48"
STA 198+00
(2 REQD.) PROPOSED

TO CROSSOVER RD. 66"X36"
STA. 24+70 S.B. M.L. EXIT RAMP.
PROPOSED

UNION AVE.
S.B. M ENTRANCE
S.B. M EXIT
S.B. C-D EXIT
S.B. C-D
SOUTHBOUND MAINLINE (I-90/94)
NORTHBOUND MAINLINE (I-90/94)
N.B. M ENTRANCE
N.B. C-D ENTRANCE
N.B. COLLECTOR-DISTRIBUTOR
RUBLE ST.
TAYLOR
DES PLAINES AVE
ROOSEVELT

LEFT LANE MUST TURN LEFT
R3-7 30"x30"
STA 5+58 RUBLE ST (LT. & RT.)
PROPOSED

STA 7+35 RUBLE ST (RT.)
48"X36"
PROPOSED

EXIT 51H
290 WEST EISENHOWER EXPY West Suburbs
RIGHT 1/2 MILE

EXIT 51I
Congress Pkwy
Chicago Loop
NEXT RIGHT

STA. 189+35

290 WEST Eisenhower Expy West Suburbs LEFT LANE
Congress Pkwy Chicago Loop RIGHT LANE
Ⓐ Ⓑ
STA. 189+80 N.B. NB-BM-3

ONLY
STA 7+35 RUBLE ST (LT & RT.)
66"X36"
PROPOSED

STA 12+17 RUBLE ST
(LEFT TO RT. VERTICAL)
LEFT 36"
PROPOSED

W 4-1(R) 36"X36"
STA 195+10 ± N.B. C-D
PROPOSED

90 94 WEST KENNEDY EXPY
3 LANES

EXIT 51H
290 WEST EISENHOWER EXPY West Suburbs
RIGHT LANE
MUST EXIT

STA 197+25

290 WEST Eisenhower Expy West Suburbs
TO 90 94 WEST Kennedy Expy Wisconsin
Ⓐ Ⓑ
STA. 12+17 N.B. C-D ENTRANCE RAMP NB-S-8

290 WEST Eisenhower Expy West Suburbs
Congress Pkwy Chicago Loop
Ⓐ Ⓑ
STA. 199+05 N.B. NB-BM-4

SHEET C- 97 OF C-131

REVISIONS	
Name	Date
2 REVISION	12-5-88

KAM ENGINEERING, INC. Consulting Engineers
707A Dove Road • Elgin, Illinois • 60120-1372

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (IF A I 90/94)
ROADWAY GRADING AND PAVING
EXISTING & PROPOSED SIGNING
Scale
Date
Drawn By
Checked By
ENVIROTYPE ENGINEERS INC.
CHICAGO, ILLINOIS

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS122 OF SS129 SHEETS
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

HBM ENGINEERING GROUP, LLC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1072
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM_D502_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS121-SignStruct.dgn
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FOR INFORMATION ONLY

Congress Pkwy
Chicago Loop
RIGHT LANE

STA. 189+80
NB-BM-3-PANEL B

SHIELD STANDARD(S)

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 9.0 INCHES

TOTAL WIDTH IS 18.0 FEET
TOTAL HEIGHT IS 10.0 FEET
TOTAL AREA IS 180.00 SQ. FT.

ARROW SIZE(S)

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	20/1	16/0	16/0-12/0	12/4	112/0	16/0	62/7							12/5	190/7
2	19/6	16/0	16/0-12/0	25/2	96/7	16/0	52/5							25/2	165/4
3	19/5	12/0	12/0- 0/0	50/2	58/2	12/0	48/3							50/1	115/5
4	16/3														
5															
6															
7															
8															
BOTTOM EDGE															

STA 12+17
NB-S-8-PANEL A

SHIELD STANDARD(S)
R1 - 1 - 4536

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 12.0 INCHES

TOTAL WIDTH IS 16.5 FEET
TOTAL HEIGHT IS 10.5 FEET
TOTAL AREA IS 173.25 SQ. FT.

ARROW SIZE(S)
36 X 22

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	13/6	36/0	12/0- 0/0	31/7	45/0	18/0	47/6							55/3	110/6
2	12/6	16/0	16/0-12/0	12/3	55/5	16/0	102/0							12/0	173/5
3	11/6	22/0	0/0- 0/0	104/0	32/0									62/0	32/0
4	13/6														
5															
6															
7															
8															
BOTTOM EDGE															

STA. 12+17
NB-S-8-PANEL B

SHIELD STANDARD(S)
R1 - 1 - 3636
R1 - 1 - 3636

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 12.0 INCHES

TOTAL WIDTH IS 17.0 FEET
TOTAL HEIGHT IS 10.5 FEET
TOTAL AREA IS 178.50 SQ. FT.

ARROW SIZE(S)
32 X 22

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	13/6	36/0	12/0- 0/0	13/4	16/5	12/0	36/0	12/0	36/0	12/0	47/6			18/1	172/3
2	12/0	16/0	16/0-12/0	40/6	122/2									47/0	122/2
3	11/6	22/0	0/0- 0/0	62/0	32/0									110/0	32/0
4	13/6														
5															
6															
7															
8															
BOTTOM EDGE															

STA 199+05
NB-BM-4-PANEL A

SHIELD STANDARD(S)
R1 - 1 - 4536

BORDER WIDTH IS 2.00 INCHES CORNER RADIUS IS 12.0 INCHES

TOTAL WIDTH IS 16.5 FEET
TOTAL HEIGHT IS 10.5 FEET
TOTAL AREA IS 173.25 SQ. FT.

ARROW SIZE(S)
32 X 22

BACKGROUND/LEGEND COLOR IS GREEN/WHITE

LINE	VERTICAL SPACING	LEGEND HEIGHT	LETTER HEIGHT	LEFT BORDER	WORD 1 WIDTH	HORIZ. SPACING	WORD 2 WIDTH	HORIZ. SPACING	WORD 3 WIDTH	HORIZ. SPACING	WORD 4 WIDTH	HORIZ. SPACING	WORD 5 WIDTH	RIGHT BORDER	LEGEND WIDTH
TOP EDGE															
1	12/6	36/0	12/0- 0/0	13/5	45/0	12/0	47/6							79/4	104/5
2	12/6	16/0	16/0-12/0	12/3	55/5	16/0	102/0							12/0	173/5
3	12/5	22/0	0/0- 0/0	104/0	32/0									62/0	32/0
4	13/7														
5															
6															
7															
8															
BOTTOM EDGE															

SHEET C-104 OF C-131

② REVISED 2-9-88

ILLINOIS DEPARTMENT OF TRANSPORTATION
DAN RYAN EXPRESSWAY (F.A.I. 90/94)
ROADWAY GRADING AND PAVING
SIGN PANEL DETAILS
CONSTRUCTION OF N.B. LANES
SCALE VERT / HORIZ
DATE 11-12-87 11-16-87

KAM ENGINEERING, INC. Consulting Engineers
1024 Commerce Road • Elgin, Illinois • 60120-1373
(312) 931-4211

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
		CHECKED - MAI, JJS	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS123 OF SS129 SHEETS
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1073
			CONTRACT NO. 62A76	
		ILLINOIS	FED. AID PROJECT	

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS122-SignStruct.dgn
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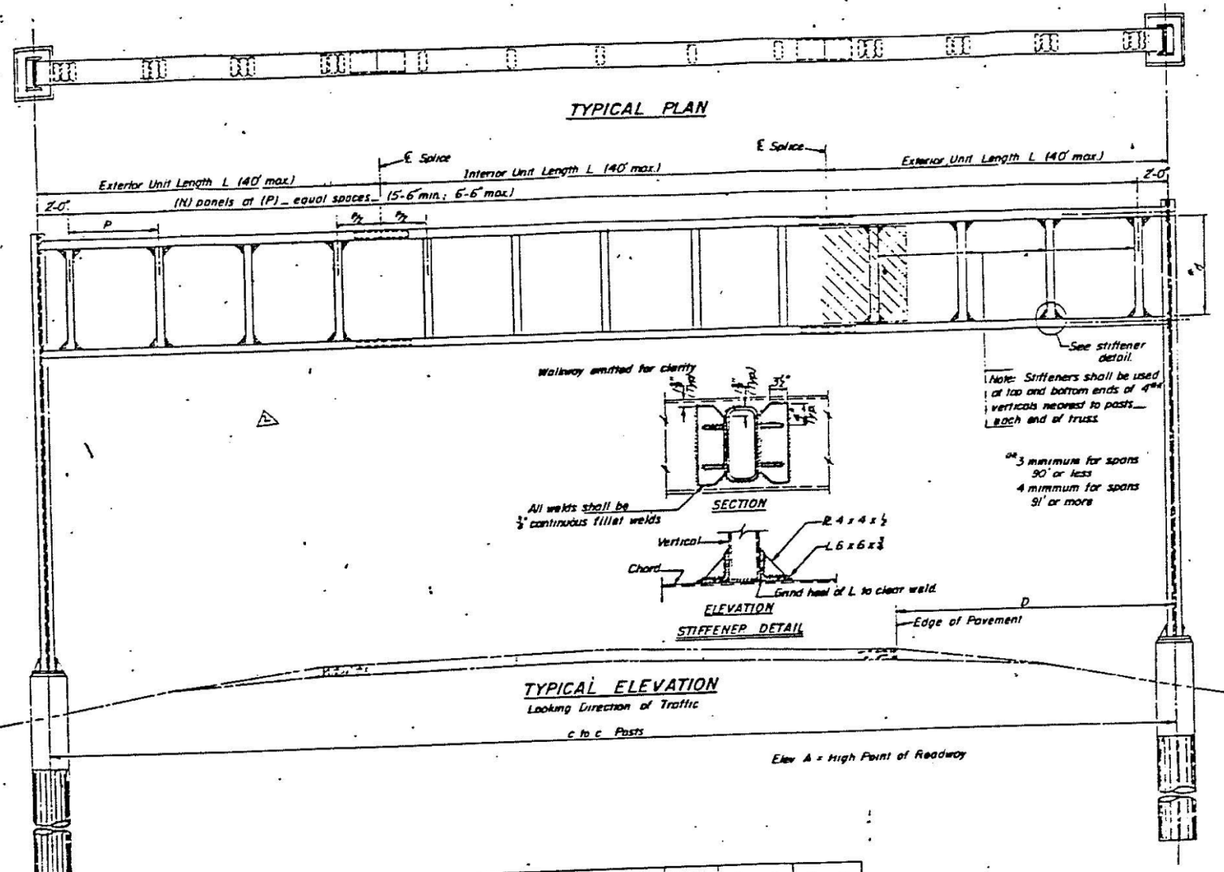
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

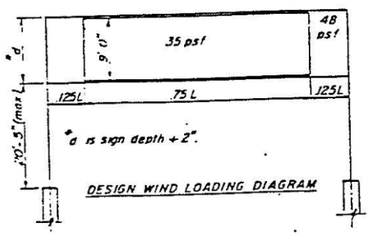
TYPICAL PLAN



Note: Stiffeners shall be used at top and bottom ends of 4 end verticals nearest to posts, each end of truss.

4 minimum for spans 90' or less
4 minimum for spans 91' or more

Structure No	Station	c to c Posts	Elev A	Dim. D
NB-S-1	79+60	62'-0"	20.6	14
NB-S-2	98+[illegible]	66'-0"	52.84	4
NB-S-3	131+2[illegible]	55'-0"	57.98	8
NB-S-4	150+35	82'-6"	38.20	7
NB-S-5	161+98	92'-0"	53.42	4
NB-S-6	175+12	78'-6"	46.35	6
NB-S-7	185+00	88'-0"	44.54	16
NB-S-8	12+17	68'-0"	41.65	15
NB-S-9	209+50	42'-6"	3.20	10'-9"
EB-S-3	12+00 PAVT 6+57 PAVT			
EB-S-2	CA 82 1000 ft			
EB-S-1	8+40 11+55			
NB-S-10	93+06	88'-0"	53.99	



	#	COOK	151	135	SHEETS
90/94					

GENERAL NOTES

* 1985-080 R

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, dated January, 1975

CONSTRUCTION: Standard Specifications for Road and Bridge Construction, State of Illinois, (dated October 1, 1983), Supplemental Specifications for Road and Bridge Construction; Standard Specifications for Traffic Control Items (dated Feb 1, 1984) and Special Provisions

MINIMUM CLEARANCE: Vertical Roadway Clearance = 17'-3" (All Obstructions)

LOADING-80 MPH WIND VELOCITY PLUS 30% GUST FACTOR
WIND LOADING: 35 p.s.f. normal to Sign Panel Area as shown below on Wind Loading Diagram plus 48 p.s.f. normal to exposed frame members.

WALKWAY LOADING: Dead Load plus 500# concentrated Live Load

MATERIALS
REINFORCEMENT BARS shall conform to the requirements of AASHTO M.31 or M.53, Grade 60
CLASS X CONCRETE shall be used throughout
STRUCTURAL STEEL: All material for structural chords, verticals, or chord splices shall conform to either ASTM A.500, Grade C, AASHTO M.222 or AASHTO M.223, Grade 50 and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 40° F.
Posts shall conform to AASHTO M.222 or M.223, Grade 50, and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 40° F.

HIGH STRENGTH BOLTS shall conform to the requirements of AASHTO M.164.

STRUCTURAL SHAPES and PLATES shall conform to the requirements of AASHTO M.223, Grade 50, or M.222, unless otherwise specified.

PAINTING: The zinc-silicate and vinyl paint system shall be used for shop and field painting of all structural steel. Exterior surfaces of all structural steel that are painted with the high-build vinyl paint shall receive one coat of vinyl enamel. Paint system, including field coat, for the walkway gratings may be done in the shop or just prior to erection. Chords and verticals will require painting on exterior surfaces only.

WELDING: All welding shall be in accordance with Article 507.04(a) of the Standard Specifications for Road and Bridge Construction.

NOTE: CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO ORDERING ANY MATERIAL OR HARDWARE, OR REWORKING EXISTING ITEMS.

TOTAL BILL of MATERIAL

OVERHEAD SIGN STRUCTURE, SPAN (SPECIAL)	Lm Ft	192'-6"
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE S	Lm Ft	147'-6" A
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu Yds	

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

EXAMINED 19
PASSED
APPROVED
BUREAU OF BRIDGES AND STRUCTURES
DIRECTOR OF HIGHWAYS

OS-S-1 SPECIAL

SHEET C-115 OF C-131

OVERHEAD SIGN STRUCTURES
GENERAL PLAN & ELEVATION

DAN RYAN EXPRESSWAY (F.A.I. 90/94)
ROADWAY GRADING AND PAVING
CONSTRUCTION OF N.B. LANES

A REVISED 11-23-87 Rev 12-9-87

11-16-87

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES	F.A.I. RTE. 90/94/290
	CHECKED - MAI, JJS	REVISED -			SECTION 2015-019R
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -			COUNTY COOK
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS124 OF SS129 SHEETS	TOTAL SHEETS 2155
					SHEET NO. 1074
					CONTRACT NO. 62A76
					ILLINOIS FED. AID PROJECT

HBM ENGINEERING GROUP, LLC

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NADocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS123-SignStruct.dgn
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FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO	SHEETS
151	136

COOK

* 1985-080 R

Clip corners of stiffener plates 1"-45°
Tight fit (Typ)
6" x ½" plates
PLAN

SEC. A-A

Top of upper chord
Top of upper chord See Sec. A-A
Top of bottom chord
4 sp at 4'-0"
7/16" ø holes
Grout Mixture - Standard thickness for the Control No.
℄ Conduit
FRONT ELEVATION
SIDE ELEVATION

POST
W24 x 104

1½" plate
Center ⅜" gusset plates between holes. Gusset plates shall conform to AASHTO M-183
Typ
1'-9" Plate
4 sp at 4'-1½"
1½" min. (Typ)
PLAN
Clip heel of gusset at 1½"-45° (Typ)
1'-4" Plate
ELEVATION
CHORD END CONNECTION

¾" ø H.S. bolts, each with 2 washers, ¾" ø holes
3" 4 sp at 3'-1'-0" 3" 3" 4 sp at 3'-1'-0" 3"
¼" thk shim
1'-5"
3'-0" splicing insert
Seal with silicone sealant suitable for use on structural steel.
PLAN VIEW of CHORD SPLICE

Machine or grind ⅜"-45° bevel
BRACING ANGLES
L 5 x 5 x ¾ for W24 x 104
(Angles and Gusset Plate shall conform to AASHTO M-183)

Clip heel 1"-45°
⅜" th'k Gusset Plate

Distance to Edge of Pavement
for gusset plate
5" ø hole
2" ø holes for spans 91' to 124'
1¾" ø holes for spans 0 to 90'
SEC. B-B

Span	Camber at Centerline	Chord	Vertical	Post	c-c Chords
0 to 70'	4"	TS 14 x 6 x ⅜	TS 10 x 6 x ⅜	W 24 x 104	"d+6"
71' to 80'	4"	TS 14 x 6 x ½	TS 10 x 6 x ⅜	W 24 x 104	"d+6"
81' to 90'	6"	TS 18 x 6 x ⅜	TS 14 x 6 x ½	W 24 x 104	"d+6"
91' to 100'	6"	TS 19 x 6 x ½	TS 14 x 6 x ½	W 24 x 104	"d+6"
101' to 110'	6"	TS 19 x 6 x ½	TS 14 x 6 x ½	W 24 x 104	"d+6"
111' to 124'	6"	TS 18 x 6 x ½	TS 14 x 6 x ½	W24 x 104	"d+6"

"d is sign depth + 2"

Vertical
Chord
⅝" ø hole Top & Btm
TYPICAL CONNECTION
Chord to Vertical
See, also, Sheet OS-S-1 SPECIAL

Provide 1/16" and ⅛" thick shim plates each side of each joint for ⅛" maximum clearance each side.
10" x 1'-4" long for TS 14 x 6 x t
12" x 1'-4" long for TS 18 x 6 x t
5" 4" 4" 5" TS 19 x 6 x t
4" 3" 3" 4" TS 14 x 6 x t
6"
2" (Typ) Shim plates
SECTION THRU SPLICE

R = 2½t (min)
t
Penetration 75% to 90% Required
60°
ALTERNATE BUILT-UP TUBE
Width, depth and thickness shall be as indicated for TS members indicated in table.

Tube thickness
⅛" Maximum
Tube thickness
Corner of Chord Splice

Camber required See table
CAMBER DIAGRAM

Structure No.	Station	Span	"d"	Camber at ℄	Exterior Un-Supported Length (L)	Interior Unit Length L'	No. of Panels (N)	Panel Length (P)	Chord Size	Vertical Size	Post Size	L.H. Post Dim. H	R.H. Post Dim. H
NB-S-1	79+60	62'-0"	12'-2"	4"	31'-0"		9	6'-5 5/16"	TS14X6X3/8	TS10X6X3/8	W24 X 104	17'-0"	16'-1"
NB-S-2	101+40	66'-0"	12'-8"	4"	33'-0"		11	5'-7 5/8"	TS14X6X3/8	TS10X6X3/8	W24 X 104	15'-10"	16'-2"
NB-S-3	131+24	56'-0"	11'-2"	4"	28'-0"		9	6'-2 5/16"	TS14X6X3/8	TS10X6X3/8	W24 X 104	15'-5"	17'-1"
NB-S-4	150+35	83'-0"	12'-2"	6"	29'-3 7/8"	26'-6 1/2"	13	6'-0 7/16"	TS18X6X3/8	TS14X6X3/8	W24 X 104	17'-9"	15'-5"
NB-S-5	164+98	93'-0"	12'-8"	6"	34'-3 7/16"	23'-5 3/16"	15	5'-10 3/8"	TS18X6X3/8	TS14X6X3/8	W24 X 104	15'-10"	16'-2"
NB-S-6	175+12	78'-6"	12'-8"	4"	39'-3"		13	5'-8 13/16"	TS14X6X3/8	TS10X6X3/8	W24 X 104	15'-10"	16'-5"
NB-S-7	185+00	98'-0"	13'-2"	6"	33'-6 1/8"	22'-11 3/4"	15	5'-8 1/4"	TS18X6X3/8	TS14X6X3/8	W24 X 104	15'-11"	15'-7"
NB-S-8	12+17	60'-0"	10'-8"	4"	30'-0"		9	6'-2 5/8"	TS14X6X3/8	TS10X6X3/8	W24 X 104	16'-3"	15'-7"
NB-S-9	209+50	42'-4"	10'-8"	4"	21'-2"		7	5'-5 3/4"	TS14X6X3/8	TS10X6X3/8	W24 X 104	15'-10"	6'-5 1/4"
EB-S-2	32+52 RAMP		11'-2"										
EB-S-3	32+82 RAMP												
EB-S-1	8+ [illegible]												
NB-S-10	230+00	66'-0"		4"	33'-0"		11	5'-7 5/8"	TS14X6X3/8	TS10X6X3/8	W24 X 104	15'-2"	15'-5"

N.T.S.

EB-S-2
EB-S-3
EB-S-1
NB-S-10
S-S-2 SPECIAL

EXAMINED 19
PASSED Bureau of Bridges & Structures
APPROVED Bureau of Bridges and Structures
DIRECTOR OF HIGHWAYS

SHEET C-116 OF C-131

OVERHEAD SIGN STRUCTURES
POST and CHORD DETAILS

DAN RYAN EXPRESSWAY (F.A.I 90/94)
ROADWAY GRADING AND PAVING
CONSTRUCTION OF NB LANES

REVISION 2-5-88
11-12-87

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	
		CHECKED - MAI, JJS	REVISED -	
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -	
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RECORD DRAWINGS
VIERENDEEL TRUSS SIGN STRUCTURES
SHEET NO. SS125 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1075
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

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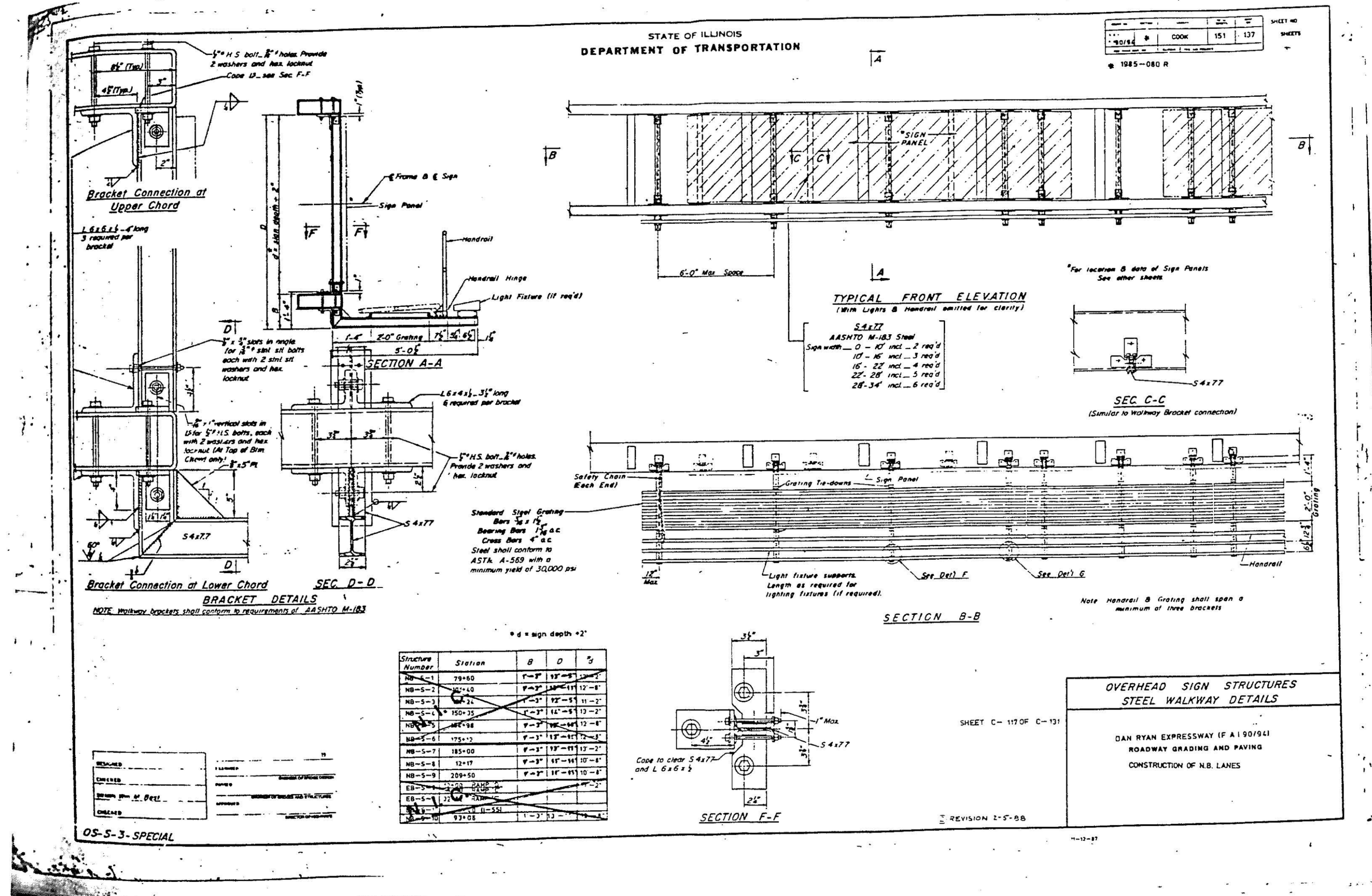
FOR INFORMATION ONLY



* d = sign depth +2"

Structure Number	Station	B	D	*d
NB-S-1	79+60	1'-3"	13'-5"	12'-2"
NB-S-2	[illegible]+40	1'-3"	13'-11"	12'-8"
NB-S-3	[illegible]+24	1'-3"	12'-5"	11'-2"
NB-S-4	150+35	1'-3"	14'-5"	13'-2"
NB-S-5	[illegible]+98	1'-3"	[illegible]	12'-8"
NB-S-6	175+12	1'-3"	13'-11"	12'-8"
NB-S-7	185+00	1'-3"	13'-11"	13'-2"
NB-S-8	12+17	1'-3"	11'-11"	10'-8"
NB-S-9	209+50	1'-3"	11'-11"	10'-8"
EB-S-[illegible]	[illegible] RAMP [illegible]			1'-2"
EB-S-[illegible]	32[illegible] RAMP [illegible]			
[illegible]	[illegible] (I-55)			
NB-S-10	93+08	1'-3"	13-[illegible]	[illegible]

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS126 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1076

CONTRACT NO. 62A76

ILLINOIS | FED. AID PROJECT

HBM ENGINEERING GROUP, LLC

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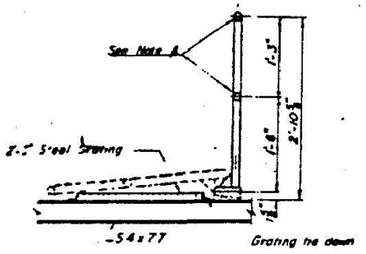
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

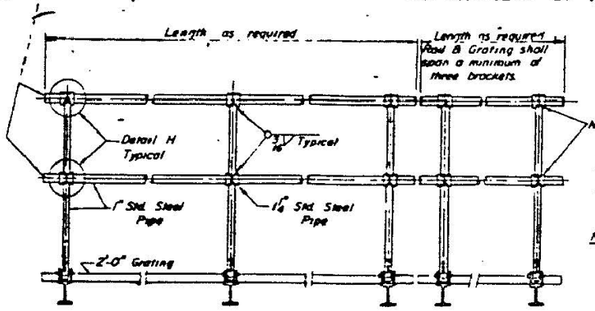
90/94	95	COOK	151	138

SHEET NO
SHEETS

Contractor shall install standard force-fit end cap (All rail ends)



SIDE ELEVATION

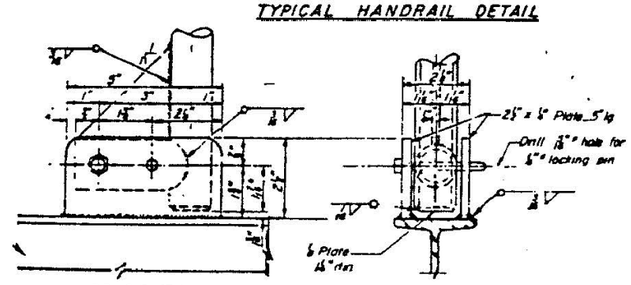


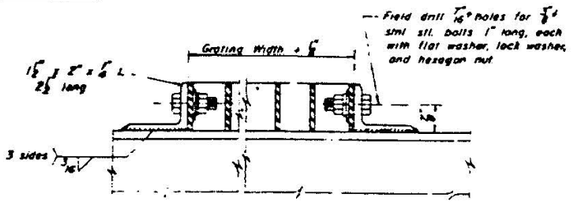
FRONT ELEVATION

Note A
Horizontal rail member shall be continuous thru fitting. Provide 7/16" hole in fitting for ⅜" bolt. Field drill 7/16" hole in horizontal rail member. Provide washer and locknut for bolt.

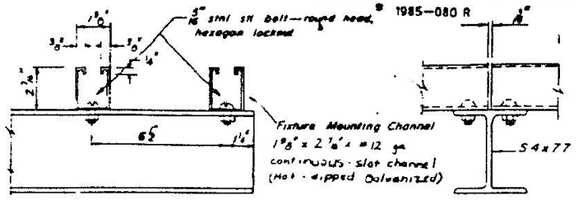
Note: Handrail Pipe shall be ASTM A-120

TYPICAL HANDRAIL DETAIL



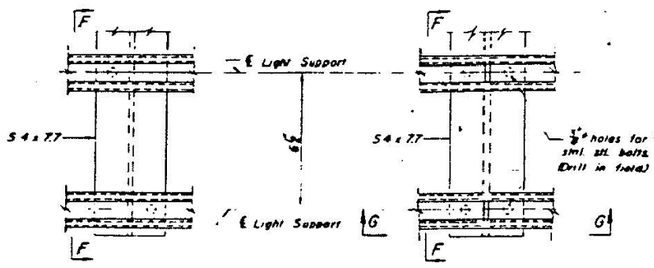


GRATING TIE DOWN
2 Req'd per Walkway Bracket



SECT. F-F

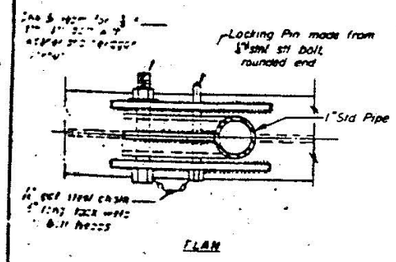
SECT. G-G



DETAIL F

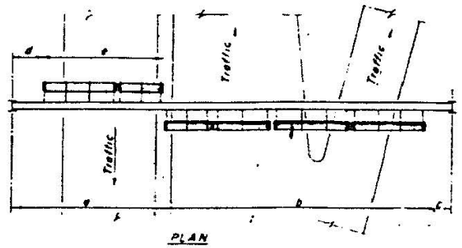
DETAIL G

LIGHTING FIXTURE MOUNTS (IF REQ'D.)

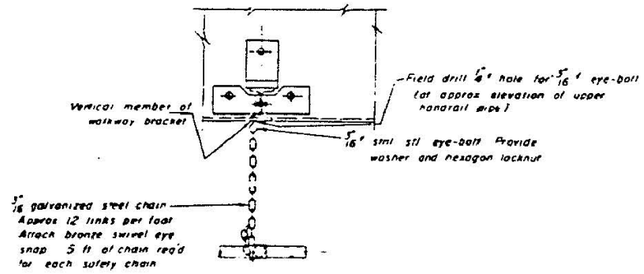


PLAN

DETAILS OF HANDRAIL HINGE



WALKWAY AND HANDRAIL SKETCH
Note Road Plan shown beneath truss just typical

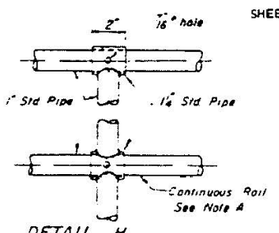


SAFETY CHAIN
One (1) required for each end of each walkway

Structure Number	Station	a	b	c	d	e	Grating & Handrail Lengths
NB-S-1	79+60	8"-8"	45'-8"	11"-8"			
NB-S-2	101+40	6"-8"	89'-8"	5"-0"			
NB-S-3	131+94	8"-8"	47'-8"	7"-8"			
NB-S-4 = 150+35		7"-8"	28'-8"	5"-8"			
NB-S-5	164+98	4"-8"	86'-8"	6"-8"			
NB-S-6	175+12	7"-8"	92'-8"	8"-8"			
NB-S-7	185+00	6"-8"	85'-8"	2"-8"	N.A.	N.A.	85'-0"
NB-S-8	192+17	7"-6"	42'-8"	10"-6"	N.A.	N.A.	42'-0"
NB-S-9	209+50	2"-7"	40'-6"	6"-3"	N.A.	N.A.	40'-6"
EB-S-1	1+22	RAMP E					
EB-S-2	1+32	RAMP E					
EB-S-3	8+40 (1-55)						
NB-S-10	83+86	6"-8"	18'-3"	9"-8"			

Note All bolts, nuts, and washers shall be stainless steel, conforming to ASTM A 193, Class 1, Grade B8

SHEET C-118 OF C-131



DETAIL H
Welds 3/16 continuous

OVERHEAD SIGN STR
STEEL WALKWAY S

DAN RYAN EXPRESS
ROADWAY GRAD
CONSTRUCTIO

OS-S-4 - SPECIAL

REVISION 3-5-20

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS127 OF SS129 SHEETS
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

HBM ENGINEERING GROUP, LLC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1077
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

FILE NAME: pw:\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NAIDocuments\01 Americas\Transportation\60269938 Circle\Phase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS126-SignStruct.dgn
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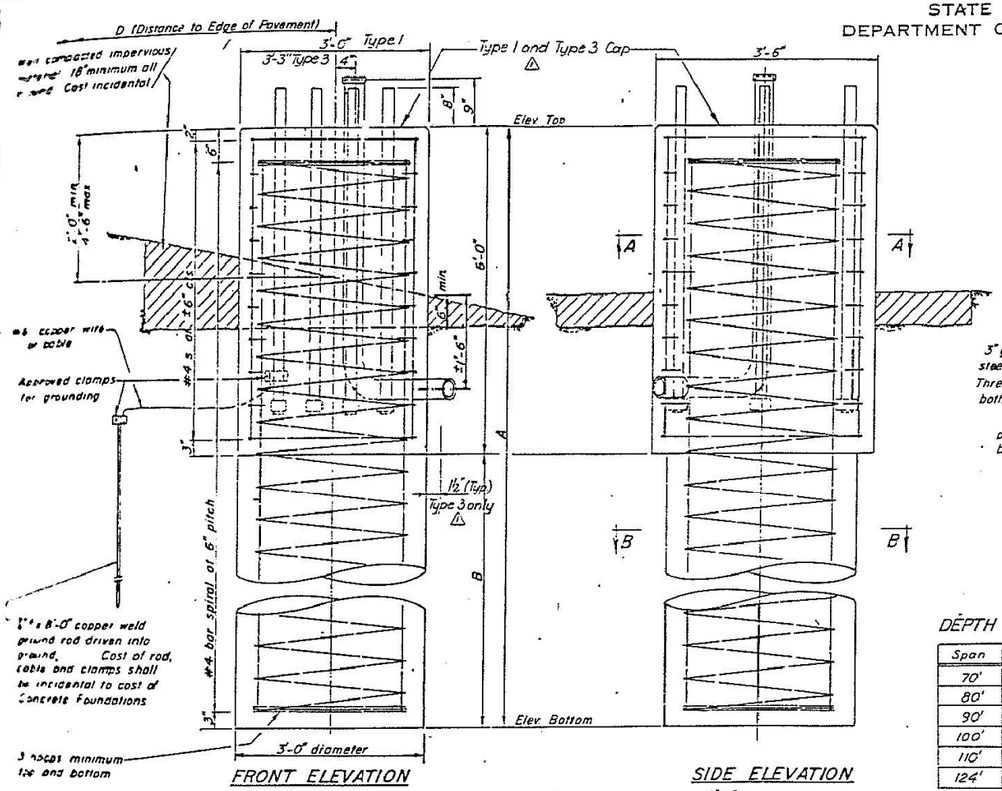
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

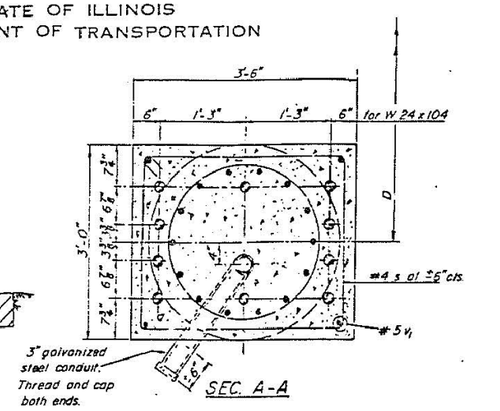
* 90/94	*	COOK	151	139

SHEET NO.
SHEETS

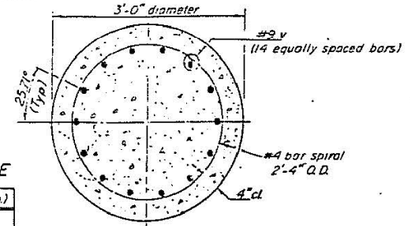
* 1985-080 R



¾"ø 8'-0" copper weld ground rod driven into ground. Cost of rod, cable and clamps shall be incidental to cost of Concrete Foundations



NOTE The anchor bolts and reinforcing cage must be in place before pouring concrete, and shall be adjusted for proper placement of anchor bolts as shown.



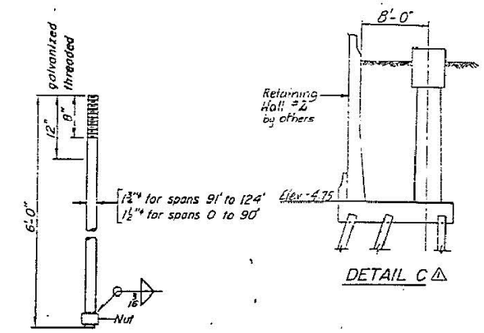
DEPTH TABLE

Span	B (min.)
70'	15'
80'	15'
90'	16'
100'	17'
110'	16'
124'	20'

NOTES:

The foundation details shown are for Average Cohesive Soil Conditions (stiff clays, sandy clays) and with minimum Qu=1.0 Tons/Sq. Ft. "Qu" being the average value of hand penetrometer readings at various depths of the shaft as determined by the Engineer at time of drilling operations or previous soil investigation.

1. Top of retaining wall #6, See Volume #4, Sheet RNB
2. See detail C this sheet
3. Type 2 Cap only
4. To be determined in field.
5. Type 1 Cap only



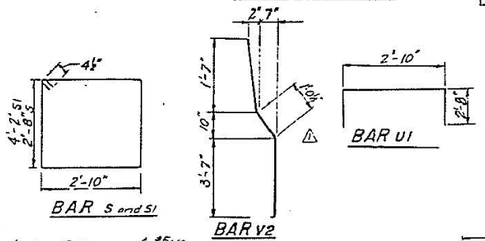
ANCHOR BOLT DETAILS
(ASTM A-576 f_y = 55,000 p.s.i.)

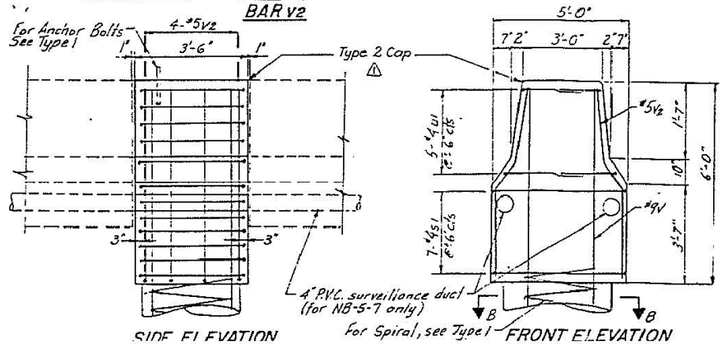
Galvanize upper 12" in accordance with AASHTO M 232.

Provide 3 nuts and 1 washer for each anchor bolt.

L BAR LIST — EACH FOUNDATION

Bar	No	Size	Lath	Shape
s (5)	12	#4	11'-9"	
v	14	#9	B+(5'-7")	
n (5)	4	#5	5'-3"	
v2 (3)	6	#6	6'-2	
#4 bar spiral — see Front Elevation				
u1 (3)	10	#4	8'-2"	
s1 (3)	7	#4	14'-9"	





Structure No.	Station	B	Anchor Bolt Size	Left Foundation: Elev. Top	Elev. Btm.	A	Cap Type	Right Foundation: Elev. Top	Elev. Btm.	A	Cap Type	Class X Concrete
NB-S-1	79+60			20.93				22.44				
NB-S-2	101+40			64.88				64.67				
NB-S-3	131+24			60.69				59.03				
NB-S-4	150+35			39.57				41.90				
NB-S-5	184+98			57.41				57.07				
NB-S-6	175+12			48.64				48.85				
NB-S-7	185+00			16.74	(4)		3	17.08	(4)		1	23.4 ⚠
NB-S-8	12+17			13.52(2)	-4.75	18.27	1	14.27	(4)		1	23.2 ⚠
NB-S-9	209+50			6.11	(4)		2	15.52(1)	—	—	—	12.9 ⚠
EB-S-2	12+62 RAMP "B" 9+50											
EB-S-3	27+82 RAMP "E"											
EB-S-4	8+40 (I-55)											
NB-S-10	7+06			54.86								

N.B. C.

SHEET C- 119 OF C- 131

DRILLED SHAFT FOUNDATION DETAILS

⚠ Rev. 11-23-87

OVERHEAD SIGN STRUCTURES
FOUNDATION DETAILS

DAN RYAN EXPRESSWAY (F.A.I.90/94)
ROADWAY GRADING AND PAVING
CONSTRUCTION OF N.B. LANES

		19
DESIGNED	EXAMINED	
CHECKED	PASSED	ENGINEER OF BRIDGE DESIGN
DRAWN	APPROVED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED		DIRECTOR OF HIGHWAYS

OS-5-5 - SPECIAL

HBM ENGINEERING GROUP, LLC	USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
		CHECKED - MAI, JJS	REVISED -		
	PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		SHEET NO. SS128 OF SS129 SHEETS
	PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1078
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

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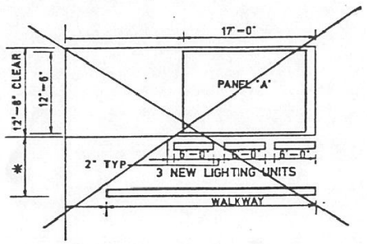
FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	151	128
STA		TO STA		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

* 1985-080 R

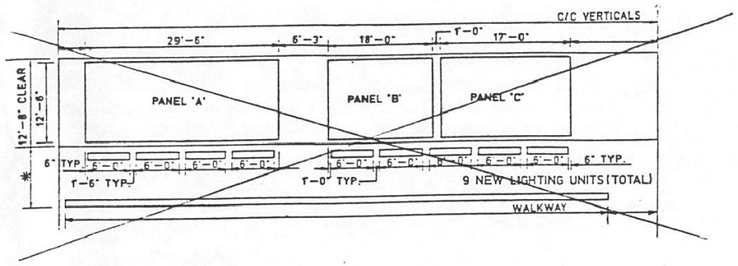
N. I. C.



~~STA. 165+08 N.B.~~

~~NB-C-6~~

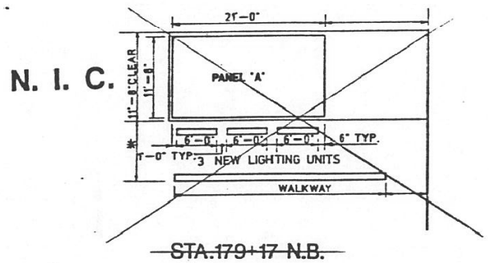
N. I. C.



~~STA. 175+12 N.B.~~

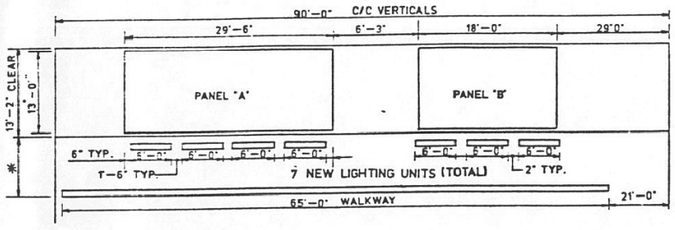
~~NB-S-6~~

N. I. C.



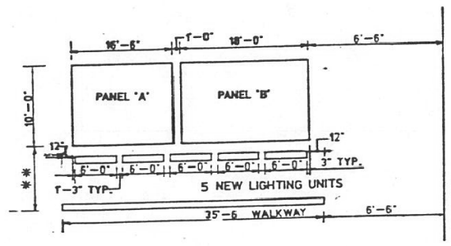
~~STA.179+17 N.B.~~

~~NB-C-7~~



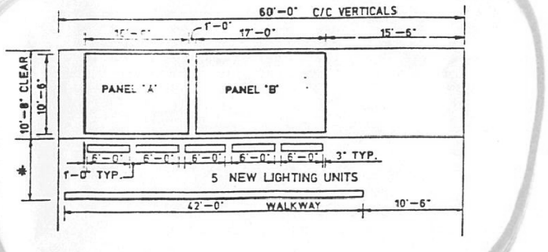
STA. 185+00 N.B.

NB-S-7



STA. 189+80 N.B.

NB-BM-3



STA. 12+17 N.B. C-D ENTRANCE RAMP

NB-S-8

SHEET C-108 OF C-131

* * 1'-5" MIN. BOTTOM OF SIGN TO BOTTOM OF WALKWAY

* 1'-3" MIN. BOTTOM OF TRUSS TO BOTTOM OF WALKWAY

ILLINOIS DEPARTMENT OF TRANSPORTATION

DAN RYAN EXPRESSWAY (F.A.I.90/94)

ROADWAY GRADING AND PAVING

SIGN PANEL AND

LIGHT FIXTURE PLACEMENT

CONSTRUCTION OF N.B. LANES

SCALE: VERT. HORIZ.

DATE

KAM ENGINEERING, INC. 707A Davis Road • Elgin, Illinois • 60120-1372

HBM ENGINEERING GROUP, LLC

USER NAME = charles.pigozzi	DESIGNED - HI, FL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING RECORD DRAWINGS VIERENDEEL TRUSS SIGN STRUCTURES
	CHECKED - MAI, JJS	REVISED -		
PLOT SCALE = N.T.S	DRAWN - HI, FL	REVISED -		
PLOT DATE = 1/24/2020	CHECKED - MAI, JJS	REVISED -		SHEET NO. SS129 OF SS129 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-019R	COOK	2155	1079
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

FILE NAME: pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 CirclePhase_II\000_CAD\008_Structural\Sign Structures\62A76 Sign Structure\62A76-Vierendeel-SS128-SignStruct.dgn

11:41:11 AM

ELECTRICAL SYMBOLS FOR PROPOSED WORK

LIGHT TOWER:
LED LUMINAIRES, TYPE I
NUMBER INDICATES TOWER TYPE

TYPE	TOWER HEIGHT
13	130 FEET
15	150 FEET

LIGHTING UNIT: TYPE AS INDICATED

47'-6" M.H., 6 FT. DAVIT ARM
LED M-C-III LUMINAIRE.
MOUNTED ON PARAPET WALL

47'-6" M.H., 12 FT. DAVIT ARM
LED M-C-III LUMINAIRE.
MOUNTED ON PARAPET WALL

47'-6" M.H., 2-6 FT. DAVIT ARM
2-LED M-C-III LUMINAIRES.
MOUNTED ON PARAPET WALL

TEMPORARY LED LUMINAIRE AND POLE;
80 FOOT WOOD POLE

TEMPORARY LIGHTING UNIT: 80 FOOT WOOD POLE WITH FOUR TYPE I LED HIGH MAST LUMINAIRES

UNDERPASS LUMINAIRE:
LED, TYPE AS SHOWN ON PLANS (PRIMARY DISTRIBUTION PATTERN DIRECTION AS INDICATED BY ARROW)

MANHOLE

ELECTRIC HANDHOLE: TYPE AS INDICATED

TYPE E1: PRECAST CONCRETE, 21.5"x21.5"x30", IDOT STANDARD 814001

TYPE E2: PRECAST CONCRETE-HEAVY DUTY, 22"x22"x30", IDOT STANDARD 814001

TYPE C1: COMMUNICATIONS VAULT, 49⅝"x32⅛"x57"

TYPE S1: PRECAST CONCRETE-HEAVY DUTY, 22"x22"x36"

TYPE S2: PRECAST CONCRETE-HEAVY DUTY SPECIAL, 30"x30"x36"

DOUBLE ELECTRIC HANDHOLE

JUNCTION BOX: TYPE AND SIZE AS INDICATED ON PLANS

PULL BOX: TYPE AND SIZE AS INDICATED ON PLANS

TELEPHONE CONNECTION

FIBER OPTIC COMMUNICATIONS HUT

LIGHTED SIGN STRUCTURE-CANTILEVER TYPE (NUMBER OF FLUORESCENT FIXTURES AS INDICATED - TYP.)

LIGHTED SIGN STRUCTURE-TRUSS TYPE

LIGHTED SIGN STRUCTURE-BRIDGE MOUNT TYPE

DYNAMIC MESSAGE SIGN

FLASHING BEACON SIGN

CLOSED CIRCUIT TELEVISION CAMERA

MICROWAVE DETECTOR

DETECTOR LOOP

CONTROLLER CABINET: LIGHTING, RADIO CONTROL DUPLEX TYPE WITH SCADA (DOOR SIDE AS INDICATED)

CONTROLLER CABINET: SURVEILLANCE

CONTROLLER CABINET: SURVEILLANCE, TYPE 334

RAMP METER SIGNAL POLE/HEAD

RAMP METER FLASHER POST

TEMPORARY WOOD POLE, LENGTH AS INDICATED ON THE PLANS

RELOCATED TEMPORARY WOOD POLE

HIGHWAY ADVISORY RADIO ANTENNA

ELECTRIC UTILITY POLE

CCTV CAMERA POLE

POLE MOUNTED ELECTRIC UTILITY TRANSFORMER(S)

PAD MOUNTED ELECTRIC UTILITY TRANSFORMER

GROUND ROD

MAIN SERVICE FUSED DISCONNECT SWITCH (RATING AS INDICATED)

PHOTOCELL

AERIAL CABLE

FLEXIBLE CONDUIT

RACEWAY EMBEDDED IN STRUCTURE

EXPOSED CONDUIT

RACEWAY OR DIRECT BURIAL CABLE UNDERGROUND WITHOUT ENCASEMENT

TYPE AS SHOWN ON PLANS CONDUIT SLEEVE, INSTALLED BELOW PAVEMENT

UNDERGROUND REINFORCED CONCRETE ENCASED CONDUIT DUCTBANK, UNLESS NOTED OTHERWISE. (NUMBER, TYPE, AND SIZE OF DUCTS AS SHOWN)

CONDUIT TURNED DOWN

CONDUIT TURNED UP

ELECTRICAL SYMBOLS FOR EXISTING CONDITIONS

EXISTING LIGHT TOWER

EXISTING LIGHTING UNIT, TWIN LUMINAIRE

EXISTING LIGHTING UNIT

EXISTING TEMPORARY LIGHTING UNIT

EXISTING CDOT LIGHTING UNIT

EXISTING UNDERPASS LUMINAIRE

EXISTING ELECTRIC MANHOLE

EXISTING ELECTRIC HANDHOLE

EXISTING JUNCTION BOX

EXISTING PULL BOX

EXISTING TELEPHONE CONNECTION

EXISTING FIBER OPTIC COMMUNICATIONS HUT

EXISTING ELECTRIC HANDHOLE/MANHOLE

EXISTING CDOT SURVEILLANCE CABINET

EXISTING CDOT ELECTRIC HANDHOLE/MANHOLE

EXISTING LIGHTED SIGN STRUCTURE-CANTILEVER TYPE

EXISTING LIGHTED SIGN STRUCTURE-TRUSS TYPE

EXISTING LIGHTED SIGN STRUCTURE-BRIDGE MOUNT TYPE

EXISTING DYNAMIC MESSAGE SIGN

EXISTING FLASHING BEACON SIGN

EXISTING CLOSED CIRCUIT TELEVISION CAMERA

EXISTING MICROWAVE DETECTOR

EXISTING DETECTOR LOOP

EXISTING LIGHTING CONTROLLER, DUPLEX

EXISTING CONTROLLER CABINET

EXISTING RAMP METER FLASHER

EXISTING HIGHWAY ADVISORY RADIO ANTENNA

EXISTING CCTV CAMERA POLE

EXISTING UTILITY SERVICE CONNECTION, POLE MOUNTED

EXISTING UTILITY SERVICE CONNECTION, PAD MOUNTED

EXISTING CONCEALED CONDUIT IN STRUCTURE

EXISTING EXPOSED CONDUIT

EXISTING RACEWAY OR DIRECT BURIED CABLE WITHOUT ENCASEMENT

EXISTING CONCEALED CONDUIT UNDERGROUND, TRENCHED OR PUSHED

EXISTING ELECTRIC CABLE IN CONDUIT SLEEVE

EXISTING AERIAL CABLE TO REMAIN

EXISTING ELECTRICAL EQUIPMENT TO BE ABANDONED

GENERAL ELECTRICAL CALLOUTS

NUMBER OF LUMINAIRES
CONTROLLER DESIGNATION
CIRCUIT DESIGNATION (RED PHASE)
CIRCUIT DESIGNATION (BLACK PHASE)
UNIT NUMBER
13 — 7 WAB1

CONTROLLER DESIGNATION
CIRCUIT DESIGNATION
LIGHTING UNIT NUMBER
WA3
STA. 1700+00, 65' RT

CKTS. C&D: 3#2, 1#4 GND, 1 1/4" UD

4" CONDUIT SLEEVE SCH. 80 PVC BELOW PAVEMENT

HANDHOLE NUMBER
TYPE DESIGNATION
H — HHXX TYPE E1

J — JB, SS, 18"x18"x8" ATS

CONDUIT-SPARE
CONDUIT WITH CABLE OR UNITDUCT
DUCTBANK LENGTH
150LF

FIBER OPTIC
START LOCATION
END LOCATION
FO O1 C01 - CABLE DESIGNATOR

NN SHELTER NUMBER
C CCTV CAMERA
H HAR
V VEHICLE DETECTOR
R RAMP METER
S DYNAMIC MESSAGE SIGN

4 SM, 1-4
FIBER COUNT
SINGLE MODE
NUMBER OF FIBERS

NUMBER OF LUMINAIRES
CONTROLLER DESIGNATION
SIGN STRUCTURE NUMBER
6 — W1

PROPOSED IDOT CONTROLLER "U"
STA. 1528+10, 160LT

TYPICAL EXISTING TO BE REMOVED SYMBOLS

EXISTING LIGHTING UNIT TO BE REMOVED AND NO SALVAGE

EXISTING UNDERPASS LUMINAIRE TO BE REMOVED AND NO SALVAGE

EXISTING JUNCTION BOX TO BE REMOVED

EXISTING LIGHTED SIGN STRUCTURE-CANTILEVER TYPE TO BE REMOVED

DYNAMIC MESSAGE SIGN TO BE REMOVED

FLASHING BEACON SIGN TO BE REMOVED

EXISTING LIGHTING CONTROLLER, DUPLEX TO BE REMOVED

EXISTING CONTROLLER CABINET TO BE REMOVED

EXISTING DETECTOR LOOP TO BE REMOVED

EXISTING RAMP METER SIGNAL POLE/HEAD TO BE REMOVED

EXISTING RAMP METER FLASHER TO BE REMOVED

EXISTING POLE MOUNTED UTILITY SERVICE CONNECTION TO BE REMOVED

EXISTING LIGHT TOWER, PAD, AND FOUNDATION TO BE REMOVED AND NO SALVAGE

EXISTING TEMPORARY LIGHTING UNIT TO BE REMOVED AND LUMINAIRES SALVAGED TO IDOT

EXISTING SIGN LUMINAIRE TO BE REMOVED AND NO SALVAGE

E-01

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-sht-Light-01	DESIGNED - TJL	REVISED -
USER NAME = mgersc	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT ELECTRICAL SYMBOLS

SCALE: N.T.S. | SHEET 1 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1080
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase 1\000_CAD\016_Electrical\Sheets\62A76_Contract\D162A76-sht-Light-01

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.

2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.

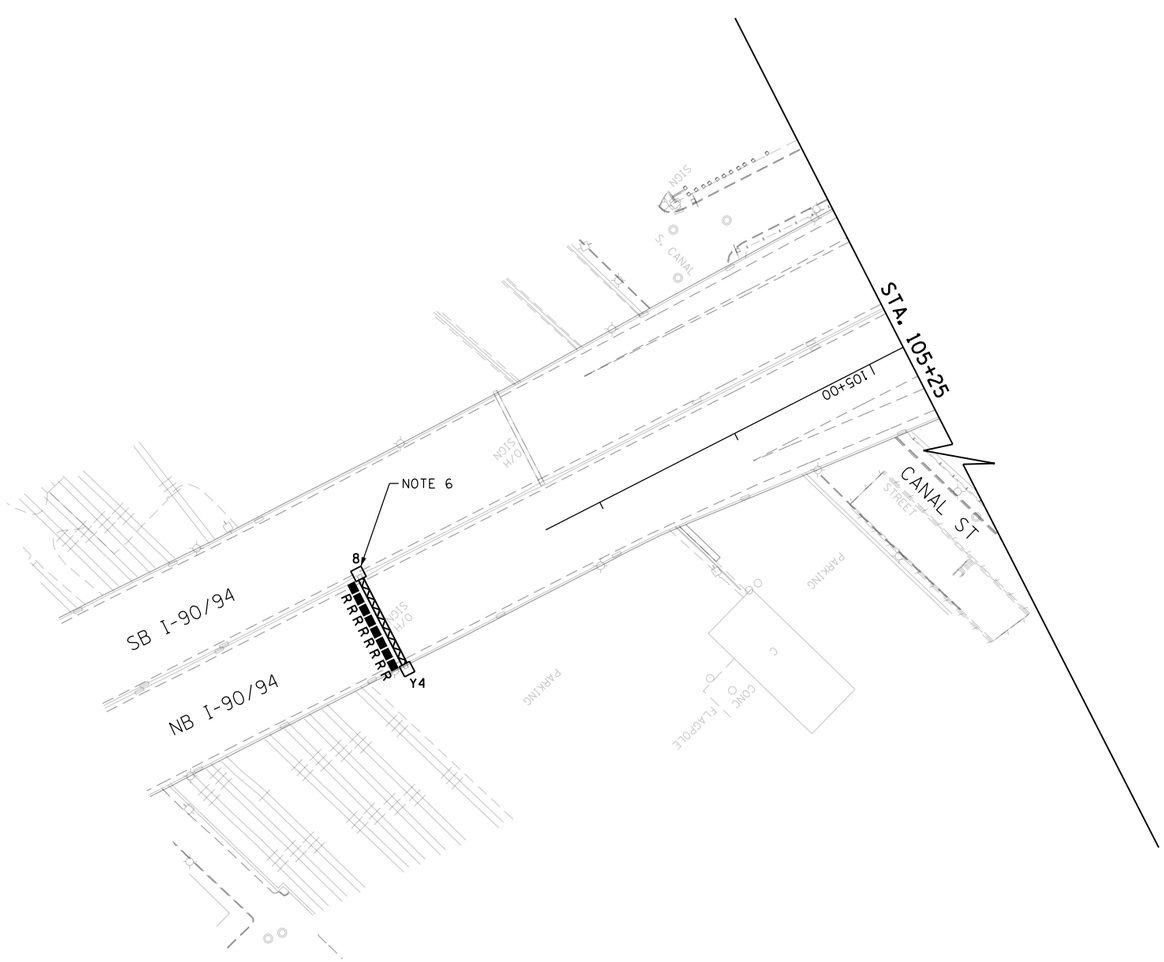
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.

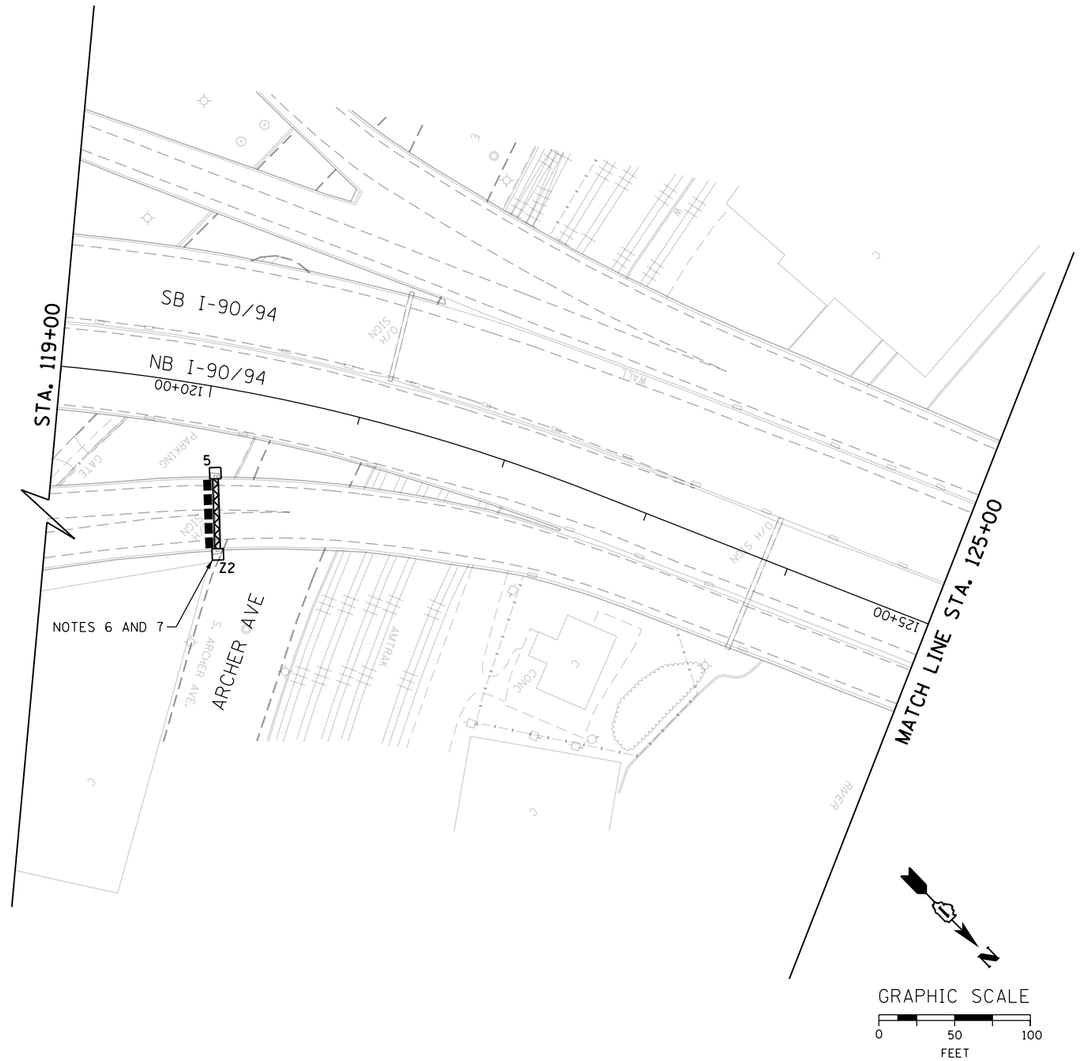
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.

5. NOT USED

6. DISCONNECT THE EXISTING SIGN LIGHTING ELECTRICAL FEED AND REMOVE CABLES BACK TO THE NEAREST SPLICE POINT UNAFFECTED BY CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE "DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO THE NEAREST SPLICE" PAY ITEM.

7. REMOVE EXISTING SIGN LUMINAIRES. THIS REMOVAL WORK SHALL BE INCLUDED IN THE COST OF THE "REMOVE OVERHEAD SIGN STRUCTURE-SPAN" PAY ITEM.





E-02

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-sht-Light-02	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 2 OF 33 SHEETS | STA. | TO STA. 125+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1081
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase 1\1000_CAD\016 Electrical\Sheets\62A76_Contract\D162A76-sht-Light-02

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.

2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.

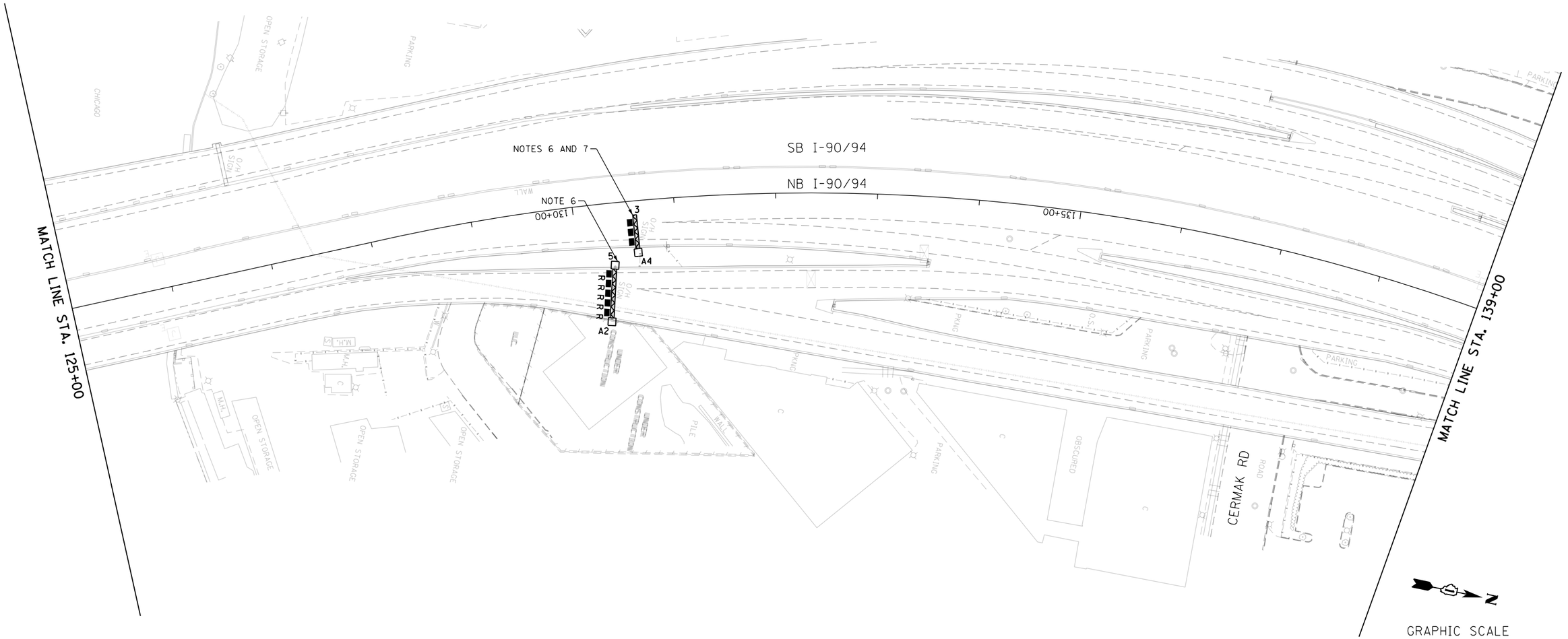
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.

4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.

5. NOT USED

6. DISCONNECT THE EXISTING SIGN LIGHTING ELECTRICAL FEED AND REMOVE CABLES BACK TO THE NEAREST SPLICE POINT UNAFFECTED BY CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE "DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO THE NEAREST SPLICE" PAY ITEM.

7. REMOVE EXISTING SIGN LUMINAIRES. THIS REMOVAL WORK SHALL BE INCLUDED IN THE COST OF THE "REMOVE OVERHEAD SIGN STRUCTURE -CANTILEVER" PAY ITEM.



E-03

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-sht-Light-03	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 3 OF 33 SHEETS | STA. 125+00 | TO STA. 139+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1082
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE PATH = pw:\\AECOM-NA-AWSI.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase 1\1000_CAD\016_Electrical\Sheets\62A76_Contract\D162A76-sht-Light-03

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.

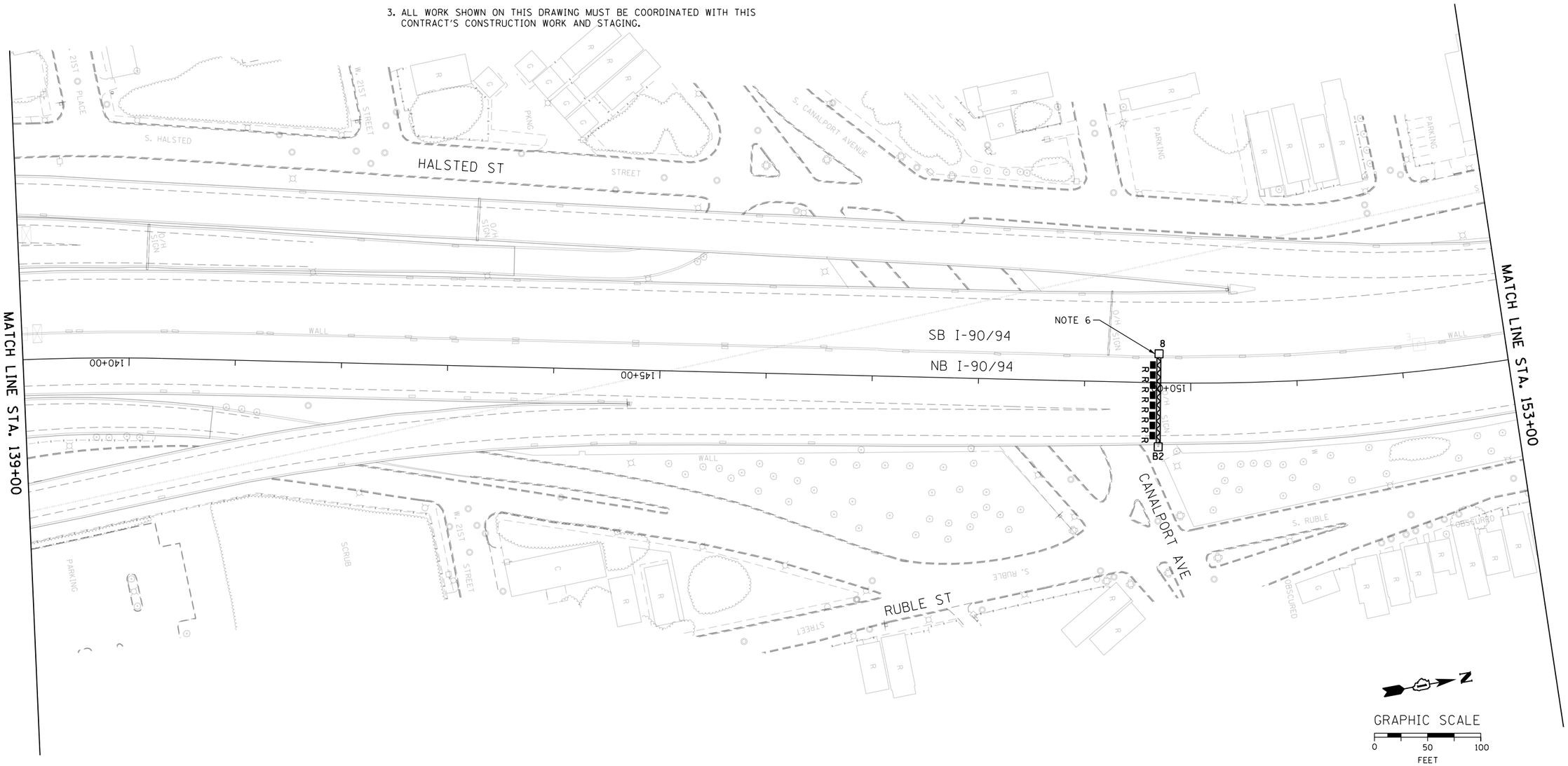
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.

3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.

4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.

5. NOT USED

6. DISCONNECT THE EXISTING SIGN LIGHTING ELECTRICAL FEED AND REMOVE CABLES BACK TO THE NEAREST SPLICE POINT UNAFFECTED BY CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE "DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO THE NEAREST SPLICE" PAY ITEM.



E-04

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-sht-Light-04	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 4 OF 33 SHEETS | STA. 139+00 TO STA. 153+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1083
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE PATH = pw:\\AECOM-NA-AWSI.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase 1\1000_CAD\016 Electrical\Sheets\62A76_Contract\D162A76-sht-Light-04

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.

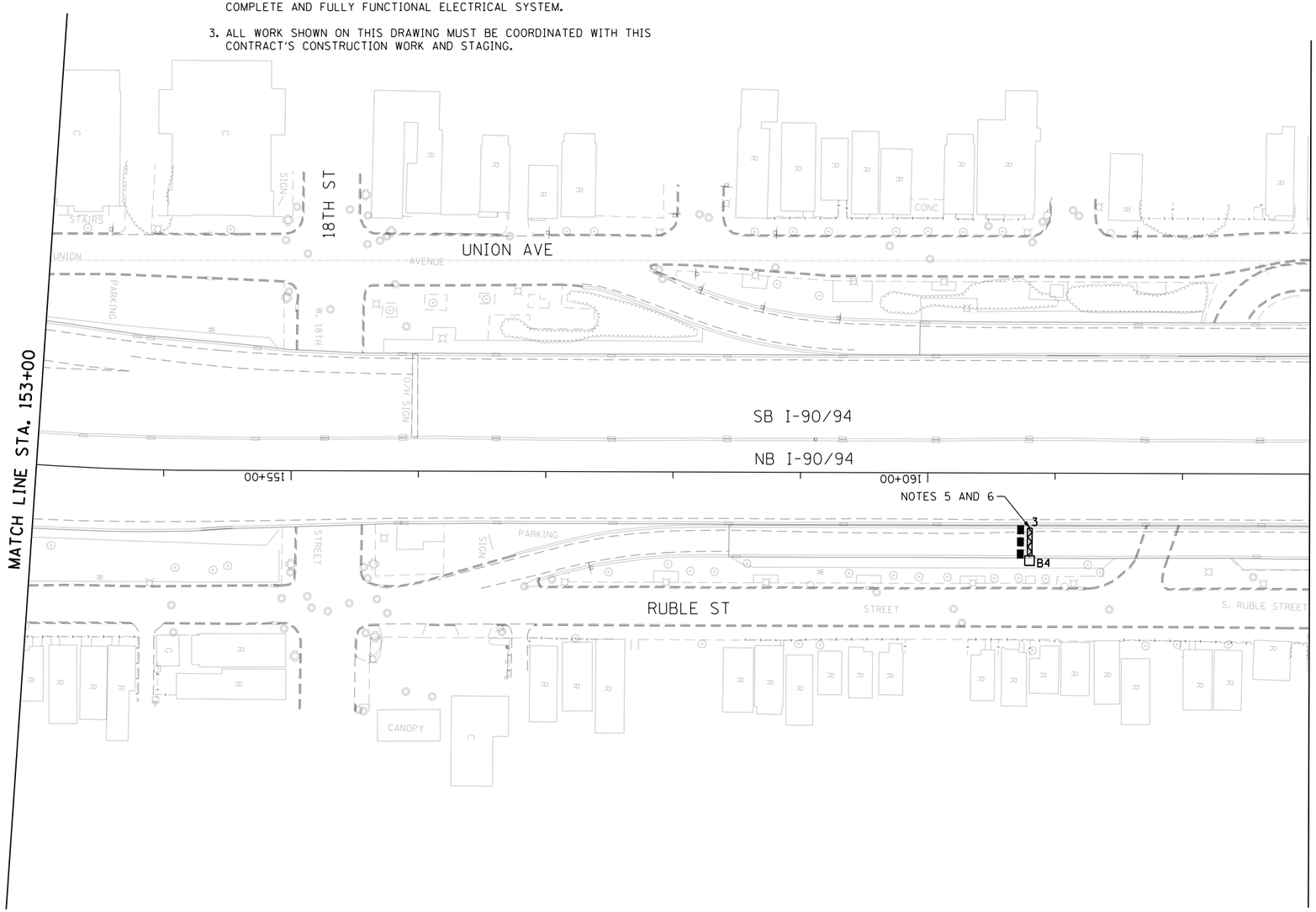
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.

3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.

4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.

5. REMOVE EXISTING SIGN LUMINAIRES. THIS REMOVAL WORK SHALL BE INCLUDED IN THE COST OF THE "REMOVE OVERHEAD SIGN STRUCTURE -CANTILEVER" PAY ITEM.

6. DISCONNECT THE EXISTING SIGN LIGHTING ELECTRICAL FEED AND REMOVE CABLES BACK TO THE NEAREST SPLICE POINT UNAFFECTED BY CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE "DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO THE NEAREST SPLICE" PAY ITEM.



GRAPHIC SCALE
0 50 100
FEET

E-05

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM.DS02.NA\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000 CAD\016 Electrical\Sheets\62A76_Contract\D162A76-sht-Light-05

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-sht-Light-05	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

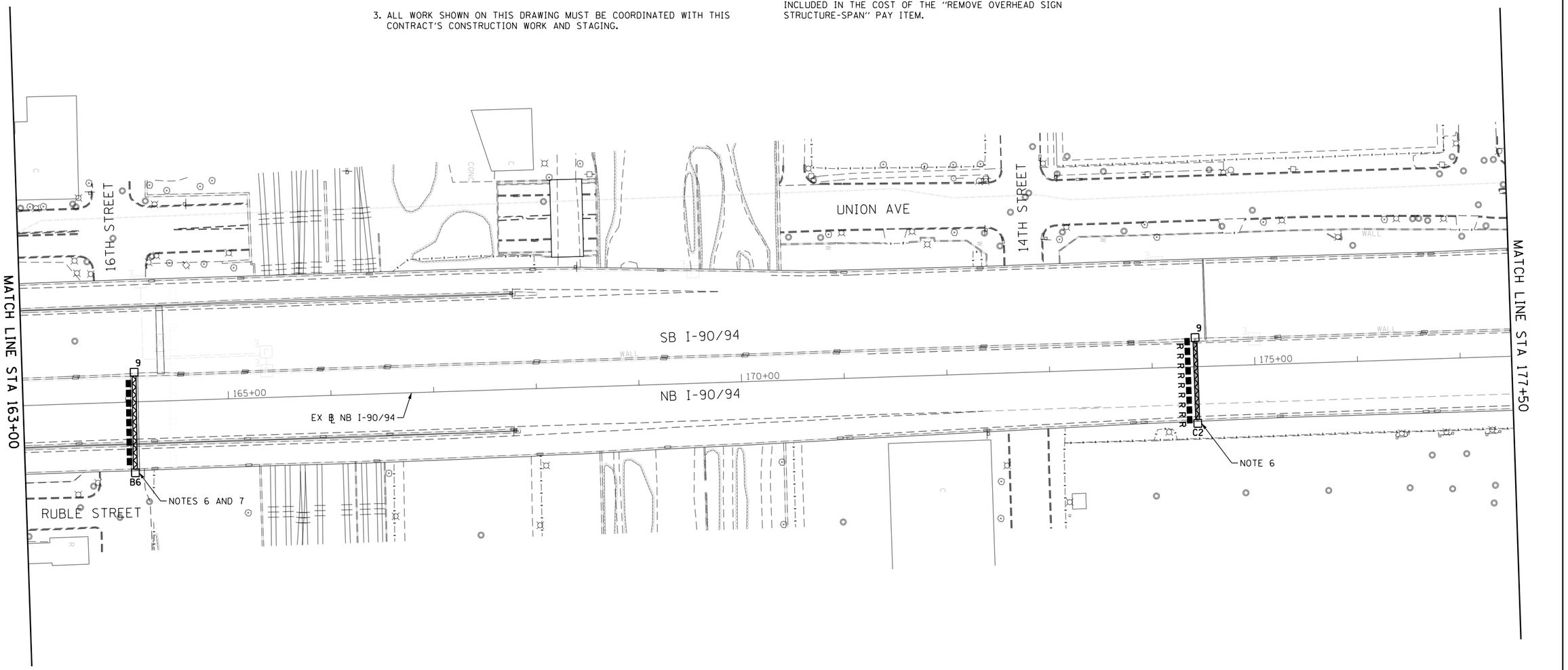
EXISTING LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 5 OF 33 SHEETS | STA. 153+00 | TO STA. 163+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1084
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
5. NOT USED
6. DISCONNECT THE EXISTING SIGN LIGHTING ELECTRICAL FEED AND REMOVE CABLES BACK TO THE NEAREST SPLICE POINT UNAFFECTED BY CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE "DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO THE NEAREST SPLICE" PAY ITEM.
7. REMOVE EXISTING SIGN LUMINAIRES. THIS REMOVAL WORK SHALL BE INCLUDED IN THE COST OF THE "REMOVE OVERHEAD SIGN STRUCTURE-SPAN" PAY ITEM.



E-06

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-Sht-Light-06	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 6 OF 33 SHEETS | STA. 163+00 TO STA. 177+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1085
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\\AECOM-NA-ANSI.aecomonline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase 1\000.CAD\016.Electrical\Sheets\62A76_Contract\D162A76-Sht-Light-06

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.

2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.

3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.

4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.

5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

6. ALL EXISTING LIGHT TOWERS SHOWN TO BE REMOVED SHALL BE DISPOSED OF PROPERLY OFFSITE.

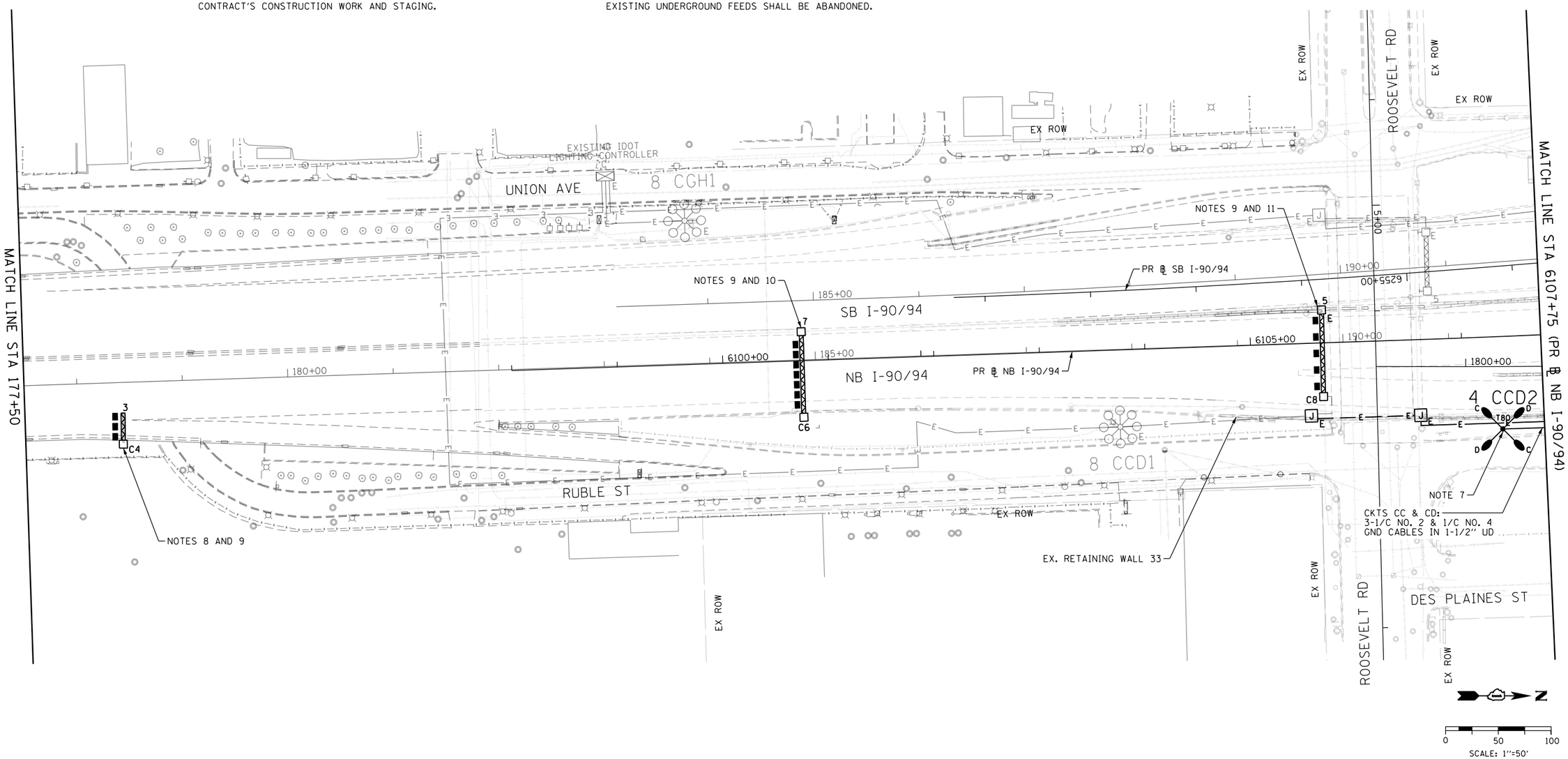
7. TEMPORARY LIGHTING UNIT 4 CCD2 SHALL BE REMOVED ONCE PROPOSED LIGHT TOWER 8 CCD2 ON DRAWING E-18 HAS BEEN INSTALLED, ENERGIZED, TESTED, AND APPROVED BY IDOT. ALL EXISTING UNDERGROUND FEEDS SHALL BE ABANDONED.

8. REMOVE EXISTING SIGN LUMINAIRES. THIS REMOVAL WORK SHALL BE INCLUDED IN THE COST OF THE "REMOVE OVERHEAD SIGN STRUCTURE -CANTILEVER" PAY ITEM.

9. DISCONNECT THE EXISTING SIGN LIGHTING ELECTRICAL FEED AND REMOVE CABLES BACK TO THE NEAREST SPLICE POINT UNAFFECTED BY CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE "DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO THE NEAREST SPLICE" PAY ITEM.

10. REMOVE EXISTING SIGN LUMINAIRES. THIS REMOVAL WORK SHALL BE INCLUDED IN THE COST OF THE "REMOVE OVERHEAD SIGN STRUCTURE-SPAN" PAY ITEM.

11. REMOVE EXISTING SIGN LUMINAIRES. THIS REMOVAL WORK SHALL BE INCLUDED IN THE COST OF THE "REMOVE OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED" PAY ITEM.



E-07

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM.DS02.NA\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000 CAD\016 Electrical\Sheets\62A76 Sht-Light-07

AECOM
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D162A76-Sht-Light-07	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

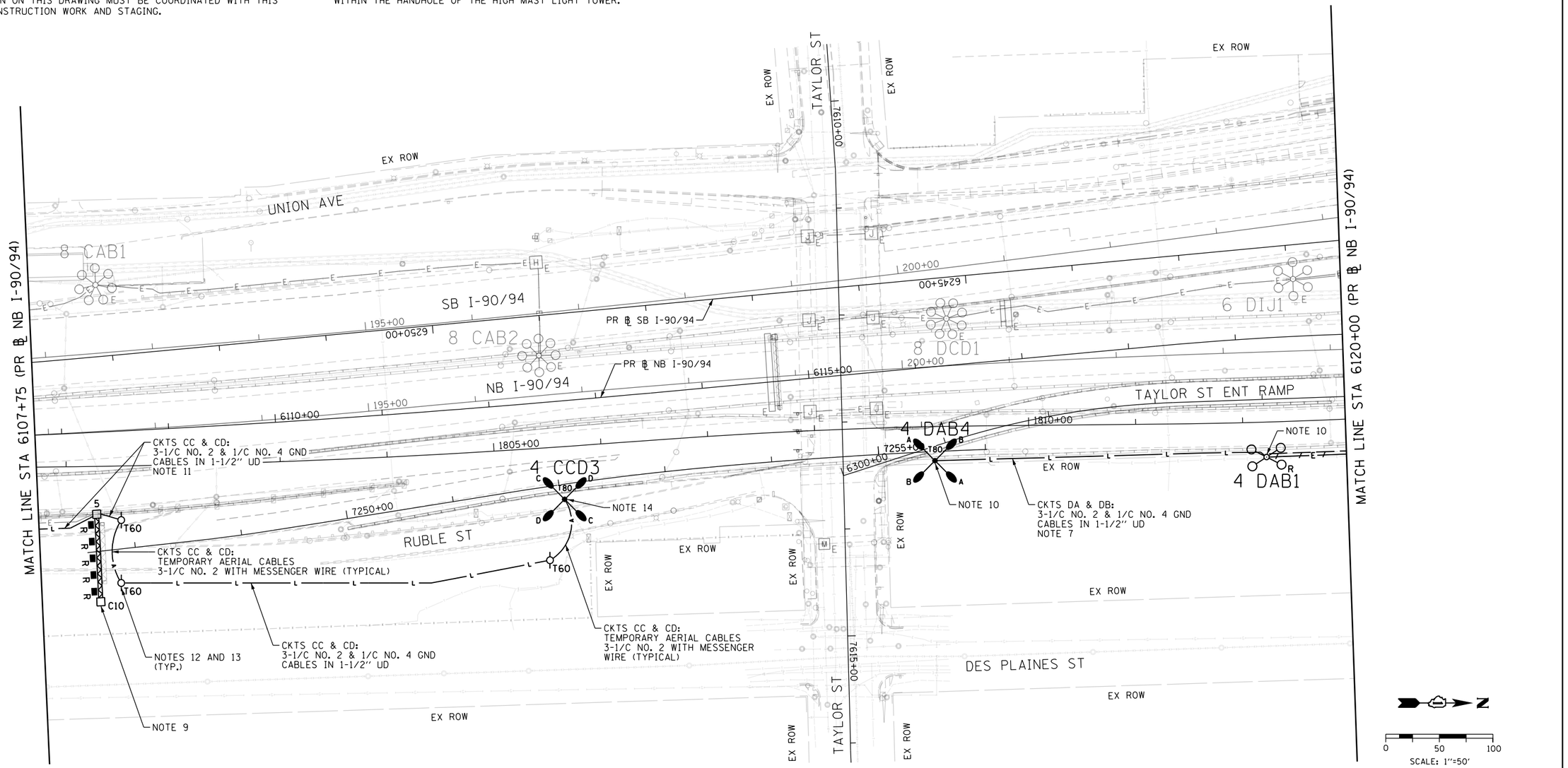
EXISTING/TEMPORARY LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 7 OF 33 SHEETS | STA. 177+50 | TO STA. 6107+75

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1086
		CONTRACT NO. 62A76		
		ILLINOIS FED. AID PROJECT		

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
6. ALL EXISTING LIGHT TOWERS SHOWN TO BE REMOVED SHALL BE DISPOSED OF PROPERLY OFFSITE.
7. ROUTE THE PROPOSED UNIT DUCT INTO THE BASE OF EXISTING LIGHT TOWER 4 DAB1 AND CONNECT THE CABLES TO THE EXISTING CABLES WITHIN THE HANDHOLE OF THE HIGH MAST LIGHT TOWER.
8. NOT USED
9. DISCONNECT THE EXISTING SIGN LIGHTING ELECTRICAL FEED AND REMOVE CABLES BACK TO THE NEAREST SPLICE POINT UNAFFECTED BY CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE "DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO THE NEAREST SPLICE" PAY ITEM.
10. ONCE PROPOSED LIGHT TOWER 7 DIJ2 ON DRAWING E-18 HAS BEEN INSTALLED, ENERGIZED, TESTED, AND APPROVED BY IDOT THE EXISTING LIGHT TOWER 4 DAB1, AND TEMPORARY LIGHTING UNIT 4 DAB4, SHALL BE DEENERGIZED AND REMOVED. ALL EXISTING UNDERGROUND CABLES AND CONDUITS SHALL BE ABANDONED.
11. SPLICE THE PROPOSED UNIT DUCT TO THE EXISTING LIGHTING CIRCUIT CABLES LOCATED IN THE JUNCTION BOX ATTACHED TO THE EXISTING SIGN TRUSS.
12. THE LOCATIONS OF THE WOOD POLES SHOWN ARE APPROXIMATIONS. THE FINAL INSTALLATION LOCATION OF THE POLE SHALL BE STAKED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION TO IDENTIFY ANY CONFLICTS WITH EXISTING/PROPOSED UTILITIES AND WORK TO BE PERFORMED BY OTHER DISCIPLINES.
13. THE TEMPORARY WOOD POLES AND ASSOCIATED AERIAL CABLES SHALL BE REMOVED ONCE THE PERMANENT FEEDS HAVE BEEN INSTALLED. ANY TEMPORARY UNIT DUCT INSTALLED SHALL BE DISCONNECTED AND ABANDONED IN PLACE. REMOVAL OF AERIAL CABLES ATTACHED TO WOOD POLES WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF "REMOVE TEMPORARY WOOD POLE" PAY ITEM.
14. TEMPORARY LIGHTING UNIT 4 CCD3 SHALL BE REMOVED ONCE PROPOSED LIGHT TOWER 7 CCD3 ON DRAWING E-18 HAS BEEN INSTALLED, ENERGIZED, TESTED, AND APPROVED BY IDOT. ALL EXISTING UNDERGROUND FEEDS SHALL BE ABANDONED.



E-08

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-Sht-Light-08	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING/TEMPORARY LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 8 OF 33 SHEETS | STA. 6107+75 TO STA. 6120+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1087
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\\AECOM-NA-ANSI.eecomonline.local\AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000.CAD\016.Electrical\Sheets\62A76-Sht-Light-08

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.

2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.

3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.

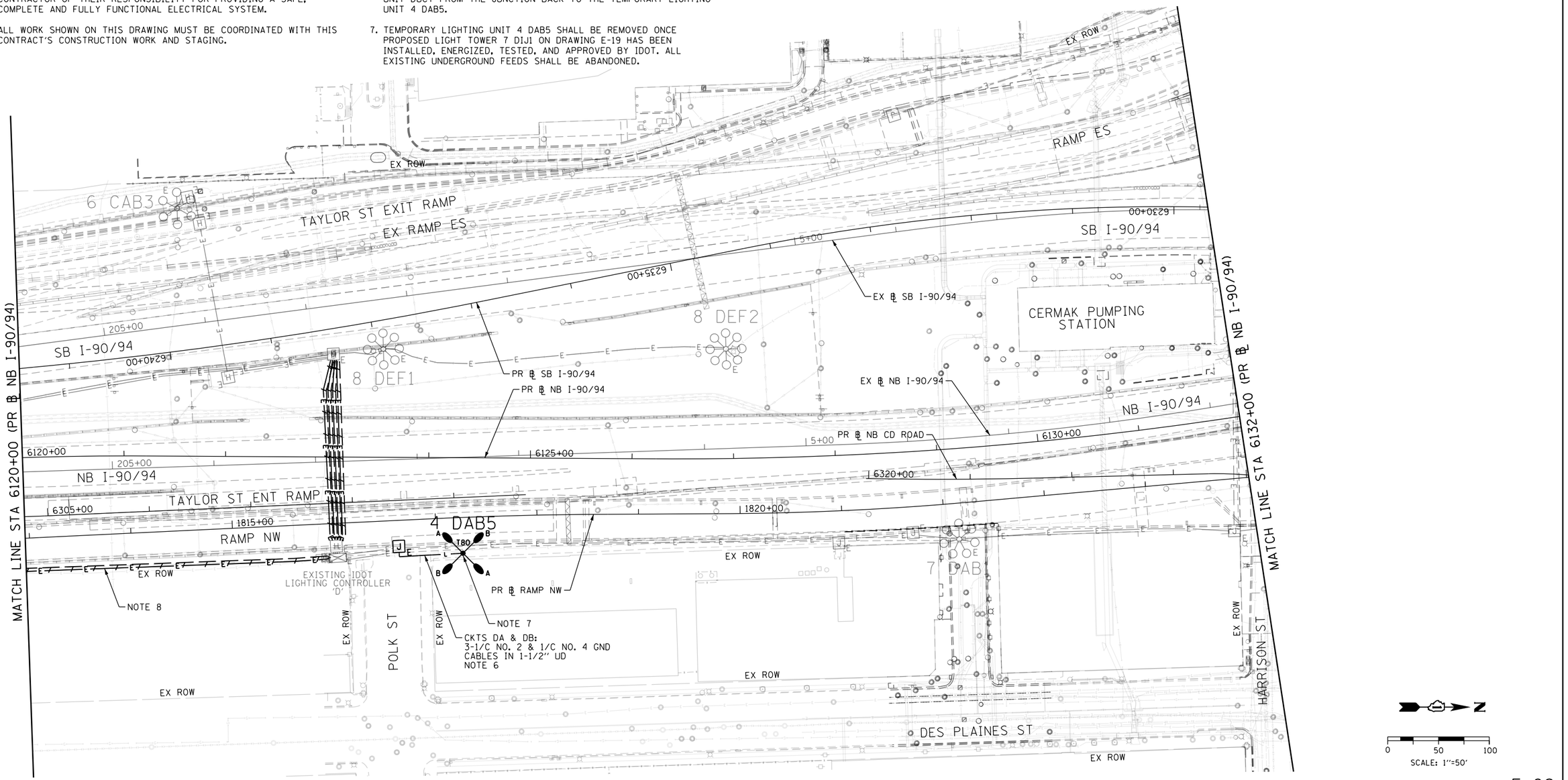
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.

5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

6. DRILL THE EXISTING JUNCTION BOX ATTACHED TO THE BACK OF THE RETAINING WALL AND CONNECT THE PROPOSED UNIT DUCT TO THE EXISTING LIGHTING CABLES WITHIN THE JUNCTION BOX. ROUTE THE UNIT DUCT FROM THE JUNCTION BACK TO THE TEMPORARY LIGHTING UNIT 4 DAB5.

7. TEMPORARY LIGHTING UNIT 4 DAB5 SHALL BE REMOVED ONCE PROPOSED LIGHT TOWER 7 DIJ1 ON DRAWING E-19 HAS BEEN INSTALLED, ENERGIZED, TESTED, AND APPROVED BY IDOT. ALL EXISTING UNDERGROUND FEEDS SHALL BE ABANDONED.

8. THE EXISTING FEED FOR LIGHT TOWER 4 DAB1 SHALL REMAIN ACTIVE UNTIL LIGHT TOWER 7 DIJ2 ON DRAWING E-18 HAS BEEN INSTALLED, ENERGIZED, TESTED, AND APPROVED BY IDOT.



E-09

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AECOM
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D162A76-Sht-Light-09	DESIGNED - TJL	REVISED -
USER NAME = mgersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

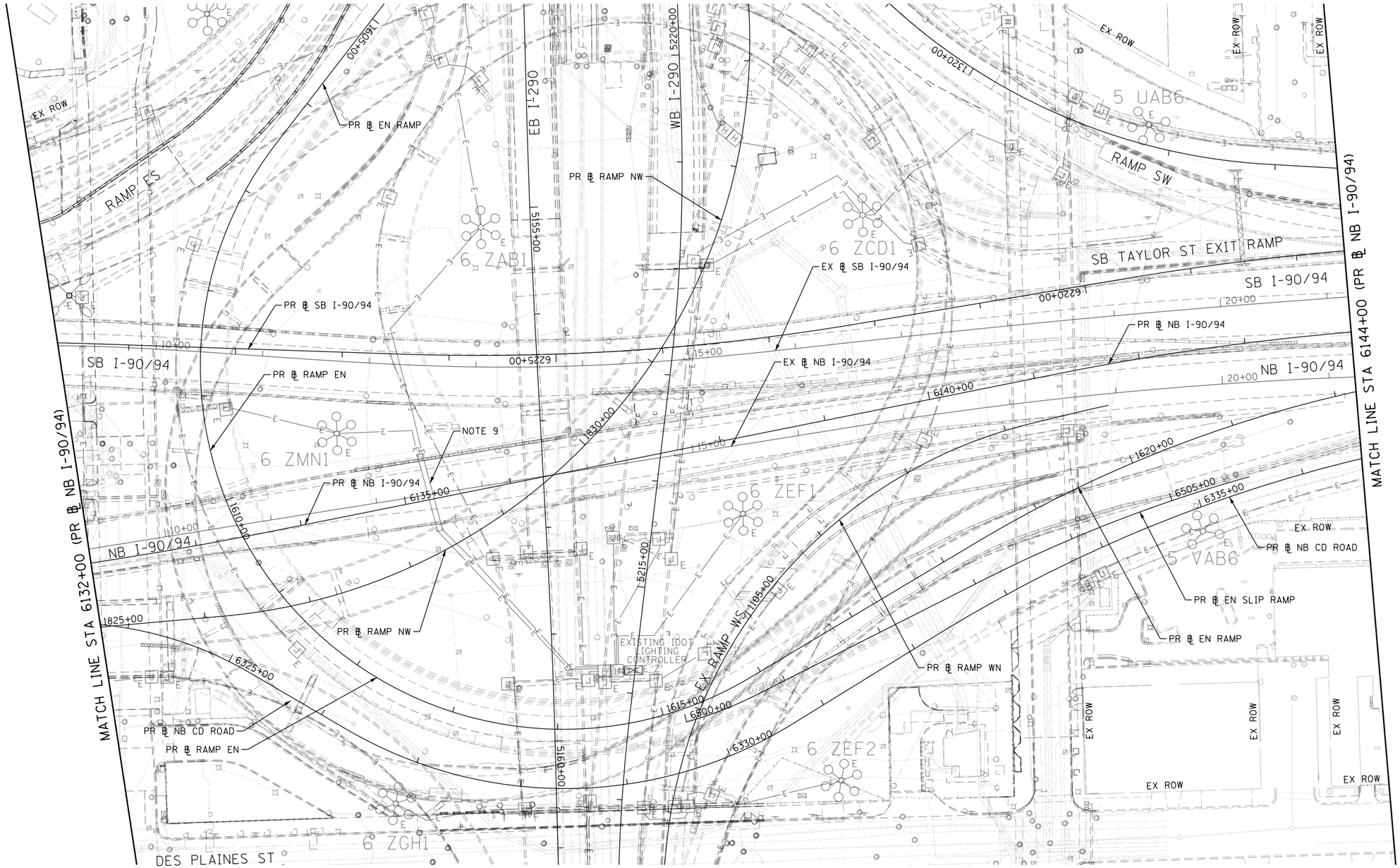
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING/TEMPORARY LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 9 OF 33 SHEETS | STA. 6120+00 | TO STA. 6132+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1088
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

NO WORK SHOWN ON THIS SHEET



NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.

N

0 50 100

SCALE: 1"=50'

E-10

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AECOM
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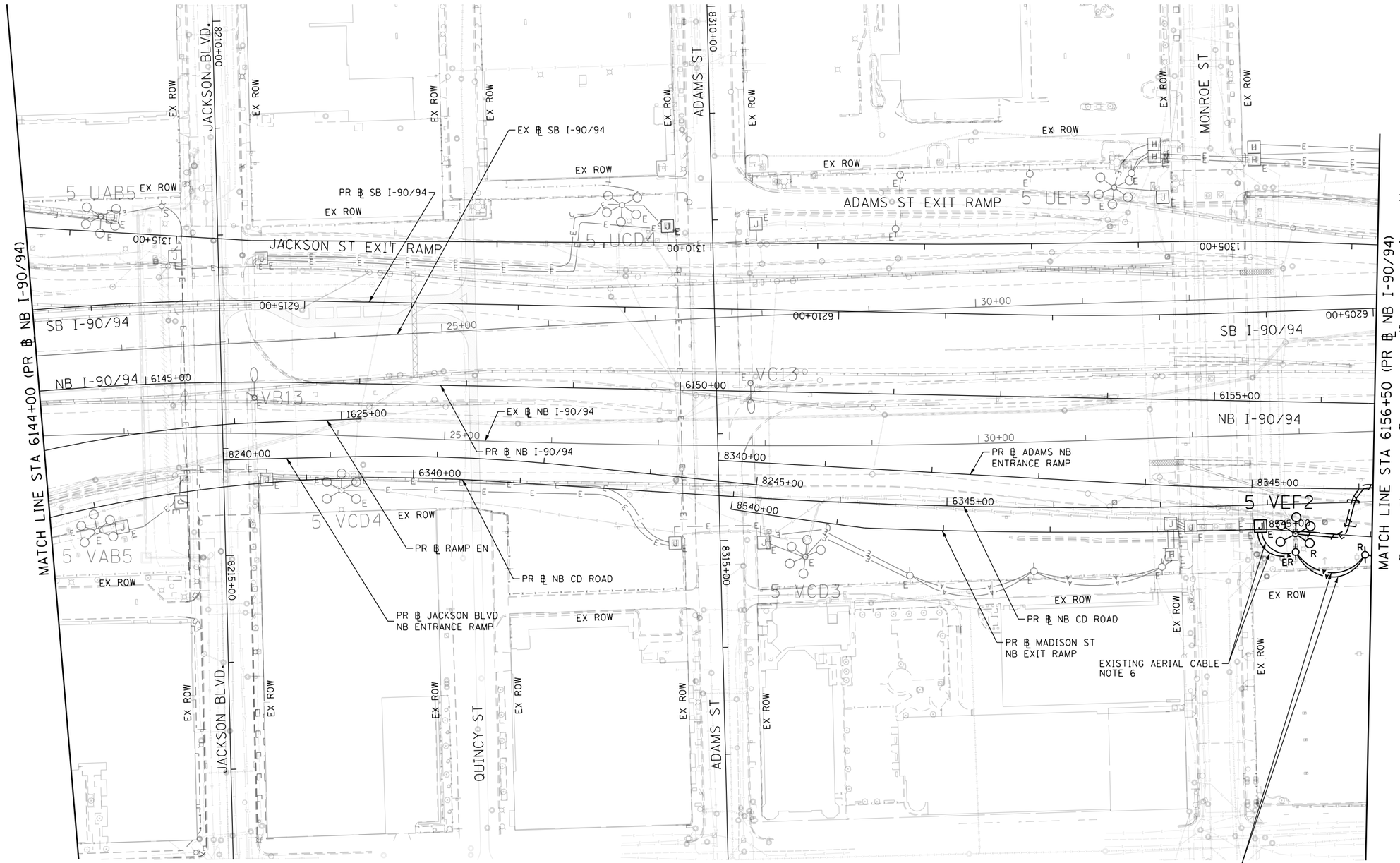
D162A76-Sht-Light-10	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 10 OF 33 SHEETS | STA. 6132+00 | TO STA. 6144+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1089
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
6. RELOCATE THE EXISTING AERIAL CABLE AND TEMPORARY WOOD POLE AS SHOWN ON DRAWING E-12. ALL NECESSARY WORK FOR RELOCATING THE AERIAL CABLES AND WOOD POLE SHALL BE INCLUDED IN THE COST OF THE "RELOCATE EXISTING WOOD POLES" PAY ITEM.
7. ALL EXISTING LIGHT TOWERS SHOWN TO BE REMOVED SHALL BE DISPOSED OF PROPERLY OFFSITE.
8. REMOVAL OF THE AERIAL CABLES ATTACHED TO THE TEMPORARY WOOD POLES WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF THE "REMOVE TEMPORARY WOOD POLE" PAY ITEM.

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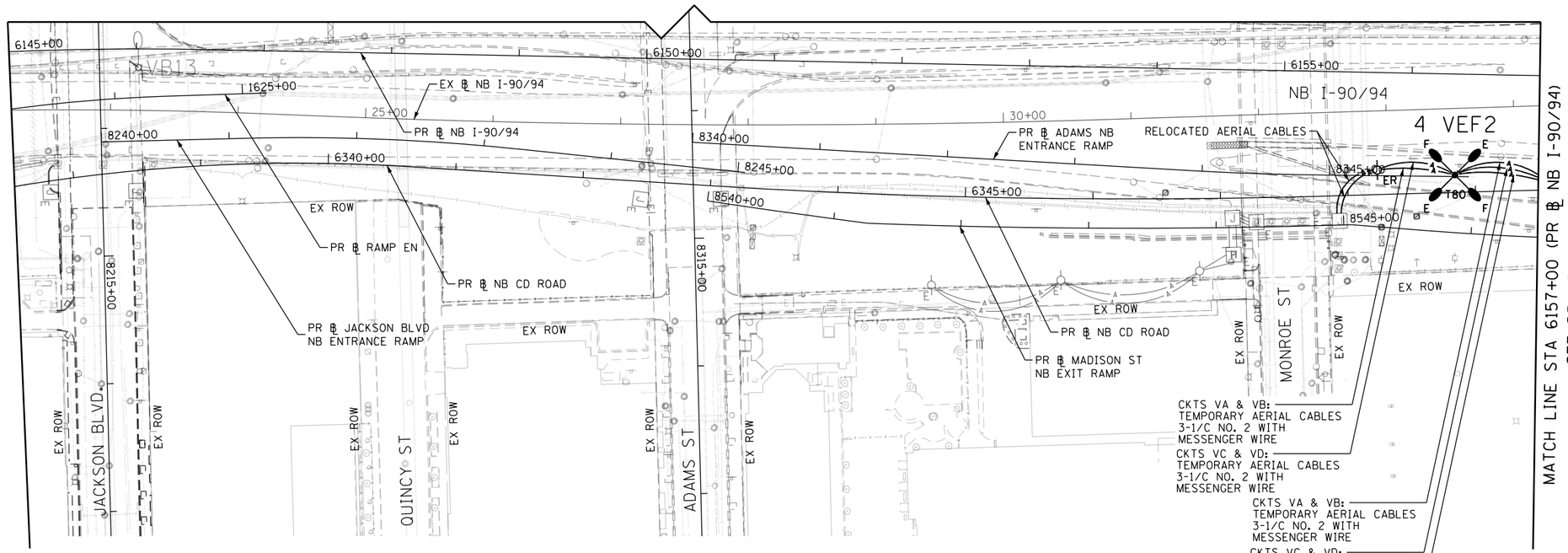
D162A76-Sht-Light-11	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

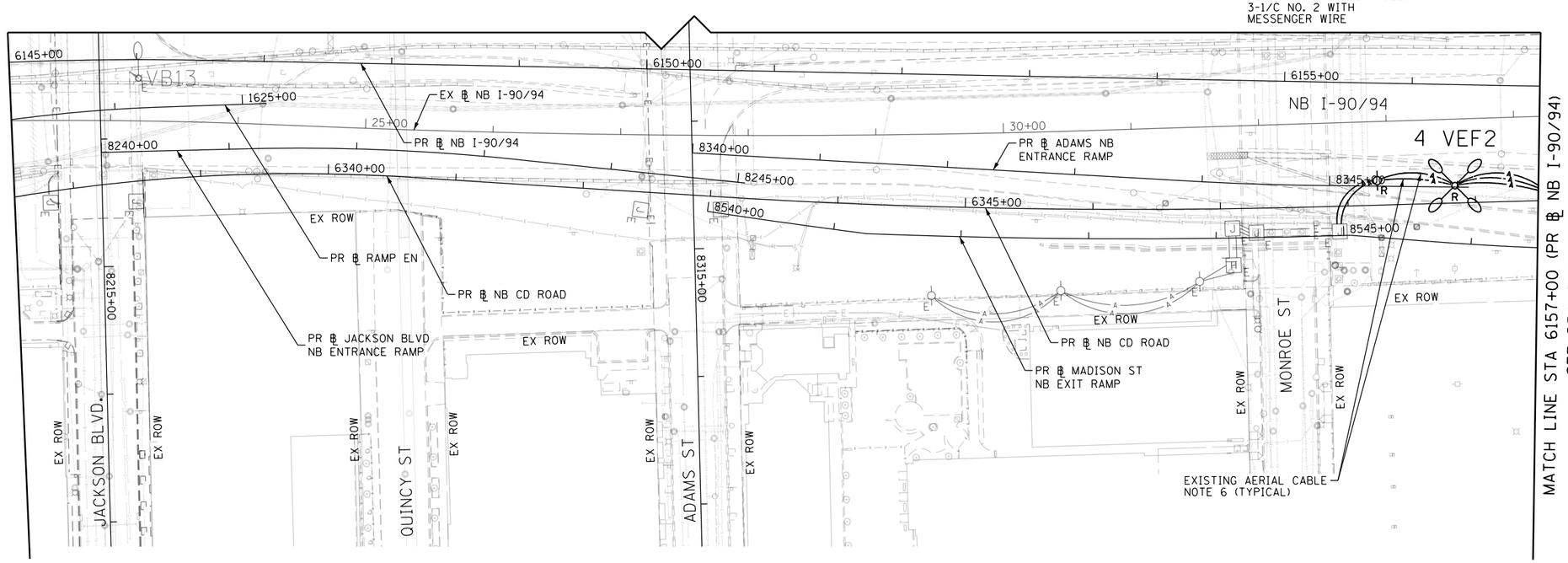
EXISTING LIGHTING REMOVAL PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 11 OF 33 SHEETS | STA. 6144+00 | TO STA. 6156+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1090
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			



TEMPORARY LIGHTING PLAN - STAGE 1



TEMPORARY LIGHTING PLAN - STAGE 2
NOTE 7

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
6. REMOVAL OF THE AERIAL CABLES ATTACHED TO THE TEMPORARY WOOD POLES WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF THE "REMOVE TEMPORARY WOOD POLE" PAY ITEM.
7. THE TEMPORARY WOOD POLES AND ASSOCIATED AERIAL CABLES SHALL BE REMOVED ONCE THE PERMANENT FEEDS SHOWN ON DRAWING E-21 HAVE BEEN INSTALLED, ENERGIZED, TESTED AND APPROVED BY IDOT.

N

0 50 100
SCALE: 1"=50'

E-12

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM.0502.NA\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000 CAD\016 Electrical\Sheets\62A76 Sht-Light-12

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

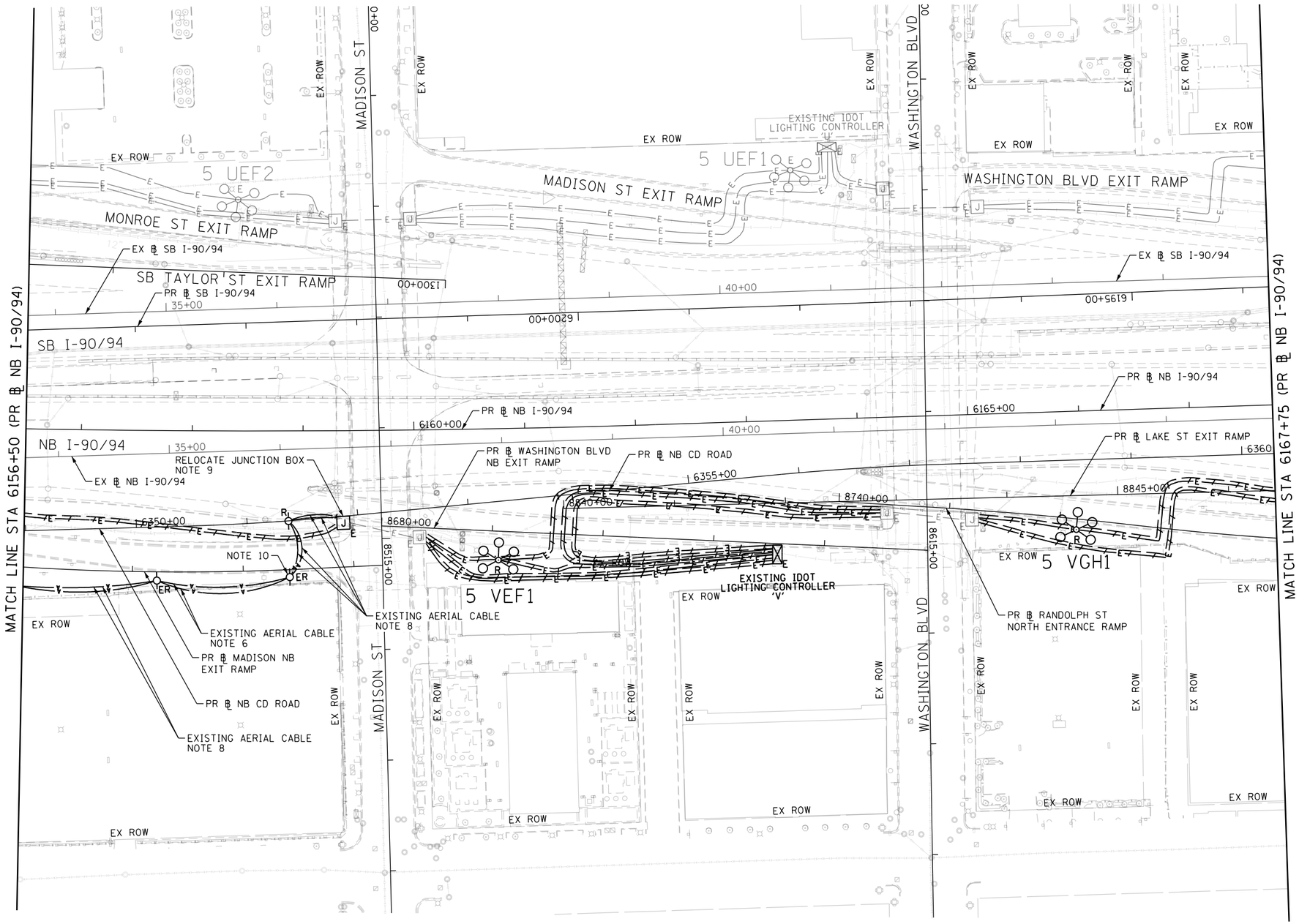
D162A76-Sht-Light-12	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 12 OF 33 SHEETS | STA. 6145+00 | TO STA. 6157+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1091
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
6. RELOCATE THE EXISTING AERIAL CABLE AND TEMPORARY WOOD POLE AS SHOWN ON DRAWING E-14. ALL NECESSARY WORK FOR RELOCATING THE AERIAL CABLES AND WOOD POLE SHALL BE INCLUDED IN THE COST OF THE "RELOCATE EXISTING WOOD POLES" PAY ITEM.
7. ALL EXISTING LIGHT TOWERS SHOWN TO BE REMOVED SHALL BE DISPOSED OF PROPERLY OFFSITE.
8. REMOVAL OF THE AERIAL CABLES ATTACHED TO THE TEMPORARY WOOD POLES WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF THE "REMOVE TEMPORARY WOOD POLE" PAY ITEM.
9. REMOVE THE EXISTING JUNCTION BOX ATTACHED TO THE SOUTH END OF THE MADISON STREET ABUTMENT AND RELOCATE IT TO THE WEST FACE OF THE ABUTMENT IN LINE WITH THE EXISTING CONDUIT ATTACHED TO STRUCTURE.
10. THE EXISTING WOOD POLE SHALL BE RELOCATED TO AVOID CONFLICT WITH THE PROPOSED TSRS BEING INSTALLED FOR THE CONSTRUCTION OF PROPOSED RETAINING WALL 31. SEE STRUCTURAL PLANS FOR LIMITS OF TSRS.

N

0 50 100

SCALE: 1"=50'

E-13

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-Sht-Light-13	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 3/2/2020	DATE - 3/4/20	REVISED -

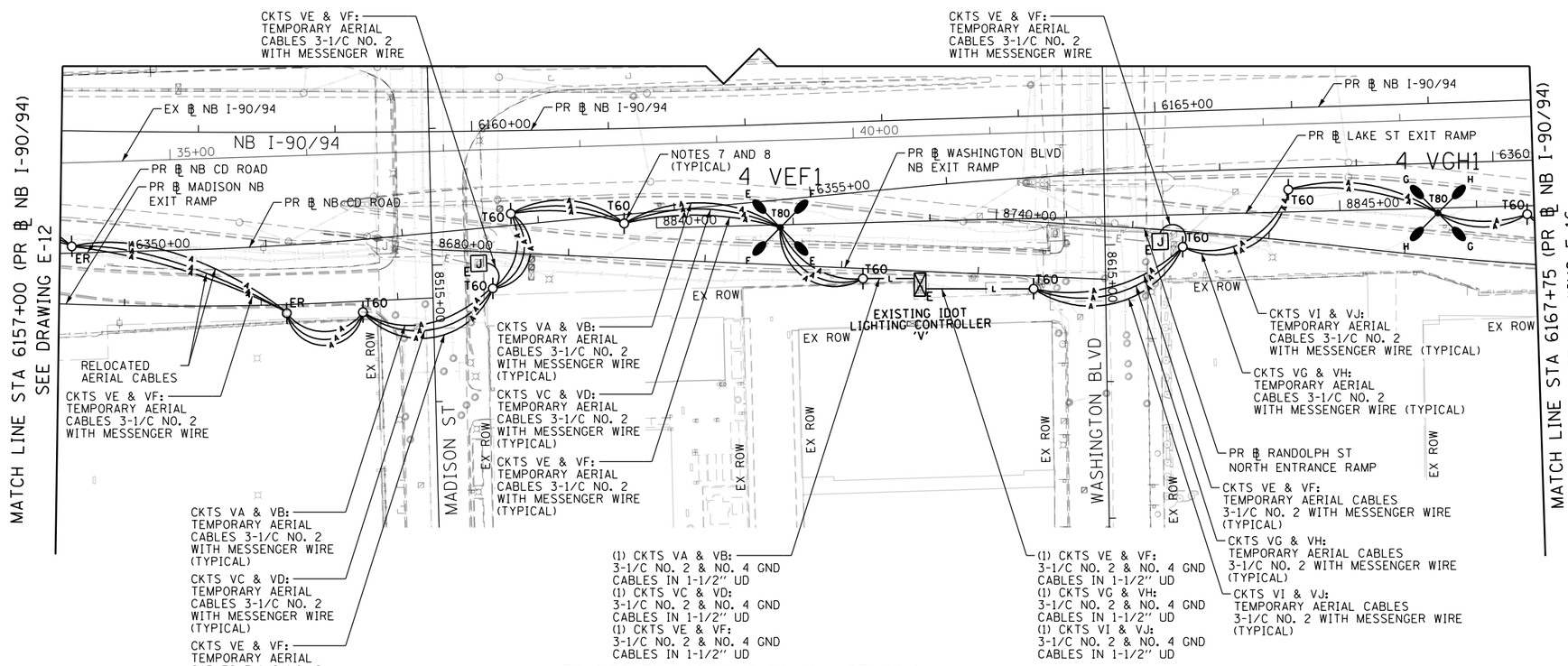
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
NB I-90/94

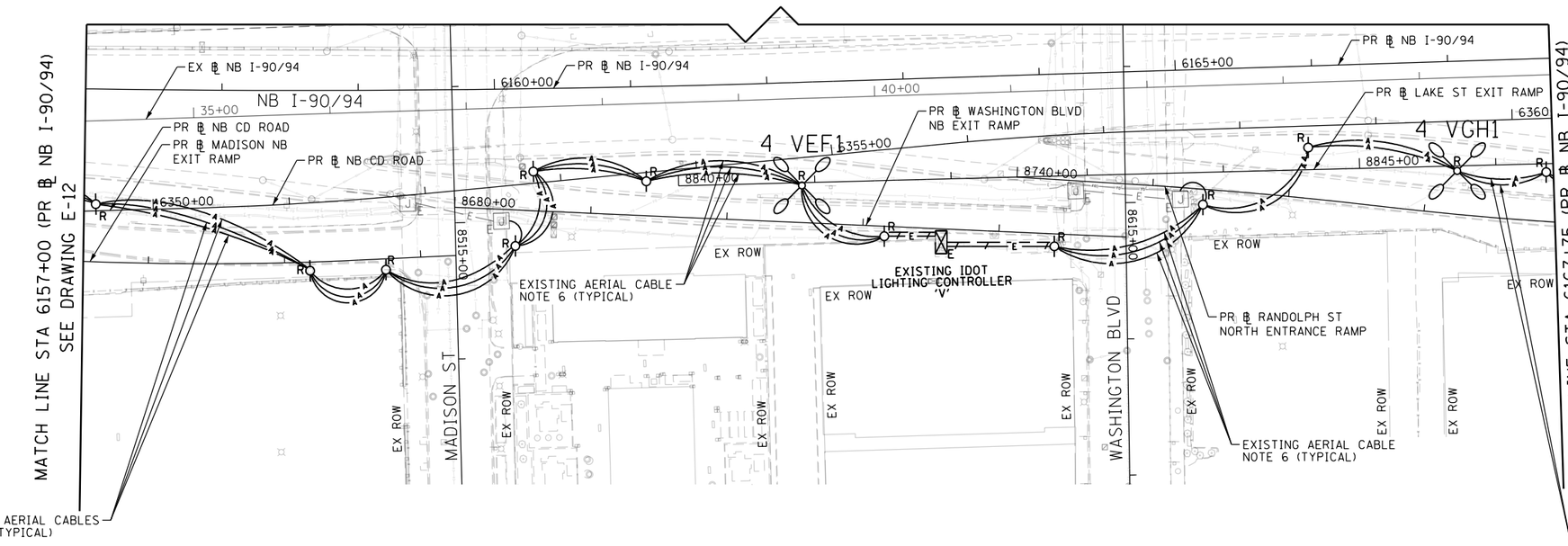
SCALE: 1"=50' | SHEET 13 OF 33 SHEETS | STA. 6156+50 | TO STA. 6167+75

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1092
		CONTRACT NO. 62A76		
		ILLINOIS FED. AID PROJECT		

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local\dECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000_CAD\016_Electrical\Sheets\62A76_Contract\D162A76-Sht-Light-13



TEMPORARY LIGHTING PLAN - STAGE 1



TEMPORARY LIGHTING PLAN - STAGE 2
NOTE 9

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
6. REMOVAL OF THE AERIAL CABLES ATTACHED TO THE TEMPORARY WOOD POLES WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF THE "REMOVE TEMPORARY WOOD POLE" PAY ITEM.
7. THE LOCATIONS OF THE WOOD POLES SHOWN ARE APPROXIMATIONS. THE FINAL INSTALLATION LOCATION OF THE POLE SHALL BE STAKED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION TO IDENTIFY ANY CONFLICTS WITH EXISTING/PROPOSED UTILITIES AND WORK TO BE PERFORMED BY OTHER DISCIPLINES.
8. PROVIDE 50 FEET OF SLACK CABLE AT EACH TEMPORARY WOOD POLE TO ALLOW FOR RELOCATION OF AERIAL CABLES DURING THE DIFFERENT STAGES OF CONSTRUCTION.
9. THE TEMPORARY WOOD POLES AND ASSOCIATED AERIAL CABLES SHALL BE REMOVED ONCE THE PERMANENT FEEDS SHOWN ON DRAWING E-22 HAVE BEEN INSTALLED, ENERGIZED, TESTED, AND APPROVED BY IDOT. ANY TEMPORARY UNIT DUCT INSTALLED SHALL BE DISCONNECTED AND ABANDONED IN PLACE.

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

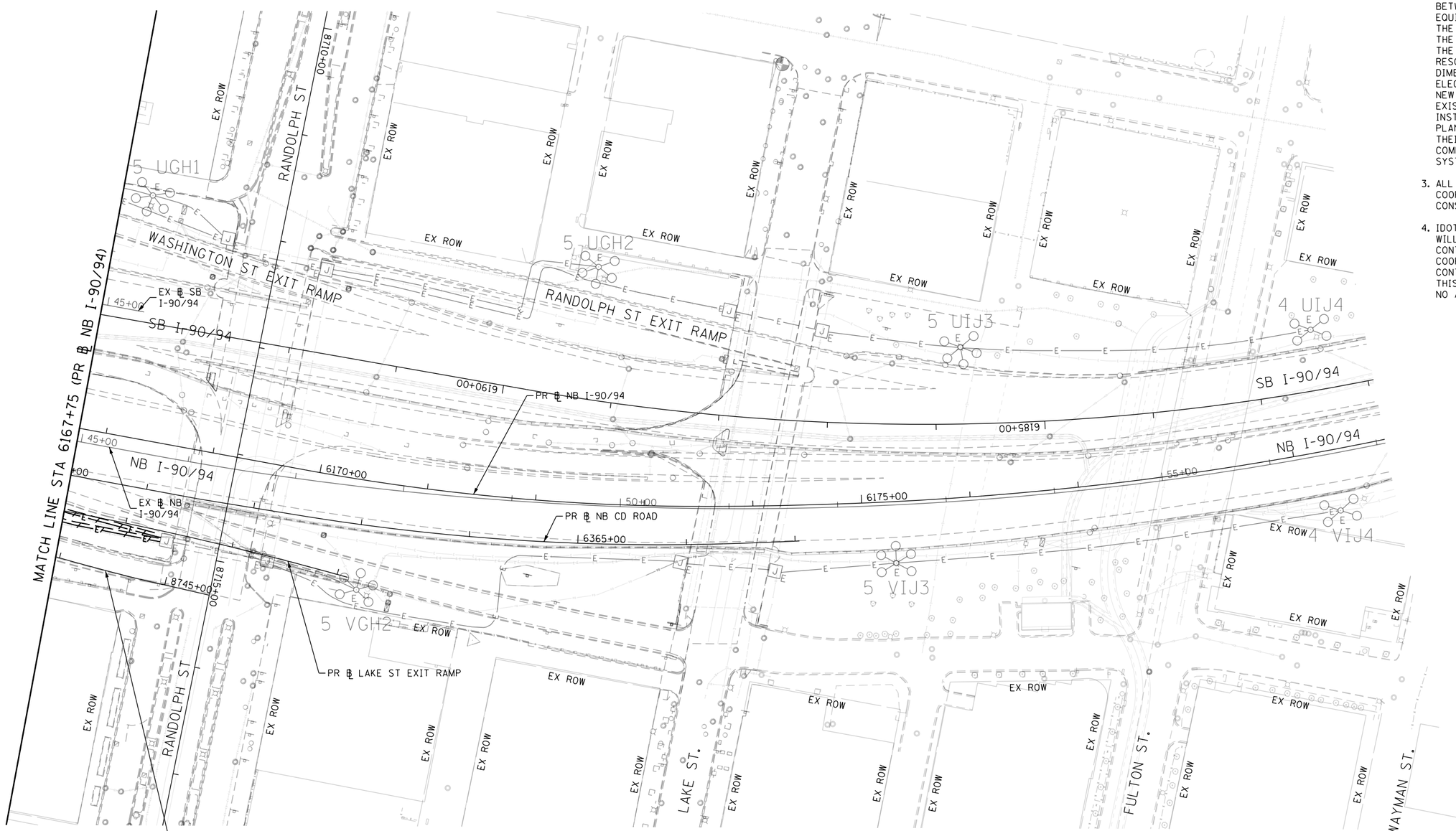
D162A76-Sht-Light-14	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 14 OF 33 SHEETS | STA. 6157+00 | TO STA. 6167+75

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1093
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.

N

0 50 100
SCALE: 1"=50'

E-15

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

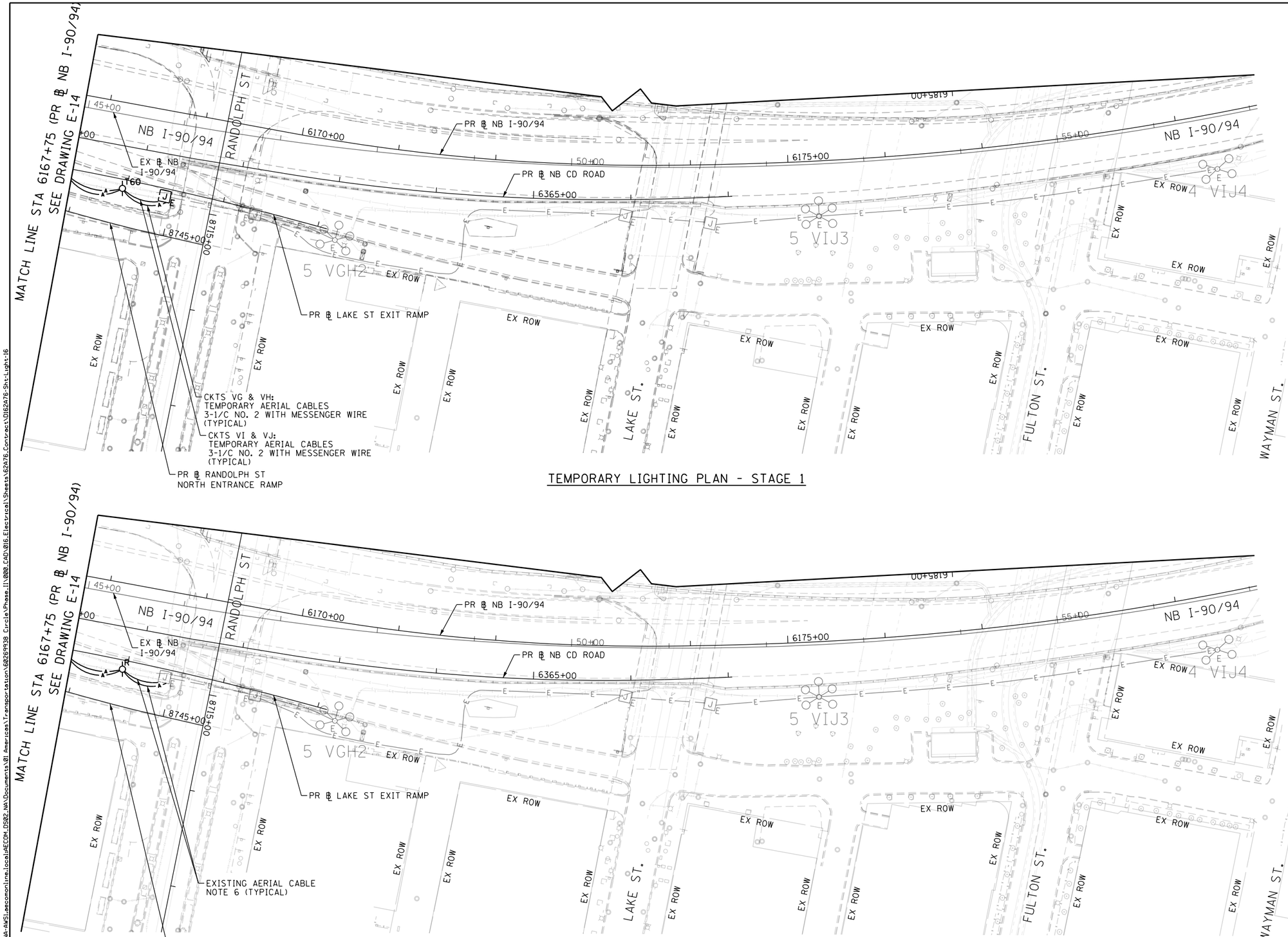
D162A76-Sht-Light-15	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0095 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 15 OF 33 SHEETS | STA. 6167+75 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1094
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			



TEMPORARY LIGHTING PLAN - STAGE 1

TEMPORARY LIGHTING PLAN - STAGE 2

0 50 100
SCALE: 1"=50'

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING ELECTRICAL SYSTEMS, AS DEPICTED ON THE PLANS, ARE INTENDED TO INDICATE THE GENERAL EQUIPMENT INSTALLATIONS INVOLVED AND SHALL NOT BE CONSTRUED AS AN EXACT REPRESENTATION OF THE FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND ASCERTAIN THE EXACT CONDITION, SIZE, TYPE, QUANTITY AND LOCATION OF THE EXISTING ELECTRICAL EQUIPMENT. ANY DISCREPANCIES BETWEEN THE ACTUAL EXISTING ELECTRICAL EQUIPMENT IN THE FIELD AND THE DEPICTION OF THE EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER FOR RESOLUTION. FAILURE TO VERIFY THE CONDITIONS, DIMENSIONS AND DETAILS OF THE EXISTING ELECTRICAL EQUIPMENT TO CONFIRM THAT THE NEW EQUIPMENT IS COMPATIBLE WITH THE EXISTING EQUIPMENT AND CAN BE PROPERLY INSTALLED AND CONNECTED AS SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING A SAFE, COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
3. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
4. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
5. ALL OF THE EXISTING LIGHTING UNITS AND LIGHTING CIRCUITS CURRENTLY FED FROM EXISTING IDOT LIGHTING CONTROLLERS SHALL REMAIN ENERGIZED DURING NIGHTTIME HOURS FOR THE DURATION OF THE CONTRACT. ANY TEMPORARY POWER REQUIRED TO KEEP THE LIGHTING SYSTEM ENERGIZED WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
6. REMOVAL OF THE AERIAL CABLES ATTACHED TO THE TEMPORARY WOOD POLES WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF THE "REMOVE TEMPORARY WOOD POLE" PAY ITEM.

E-16

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-Sht-Light-16	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0095 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY LIGHTING PLAN
NB I-90/94

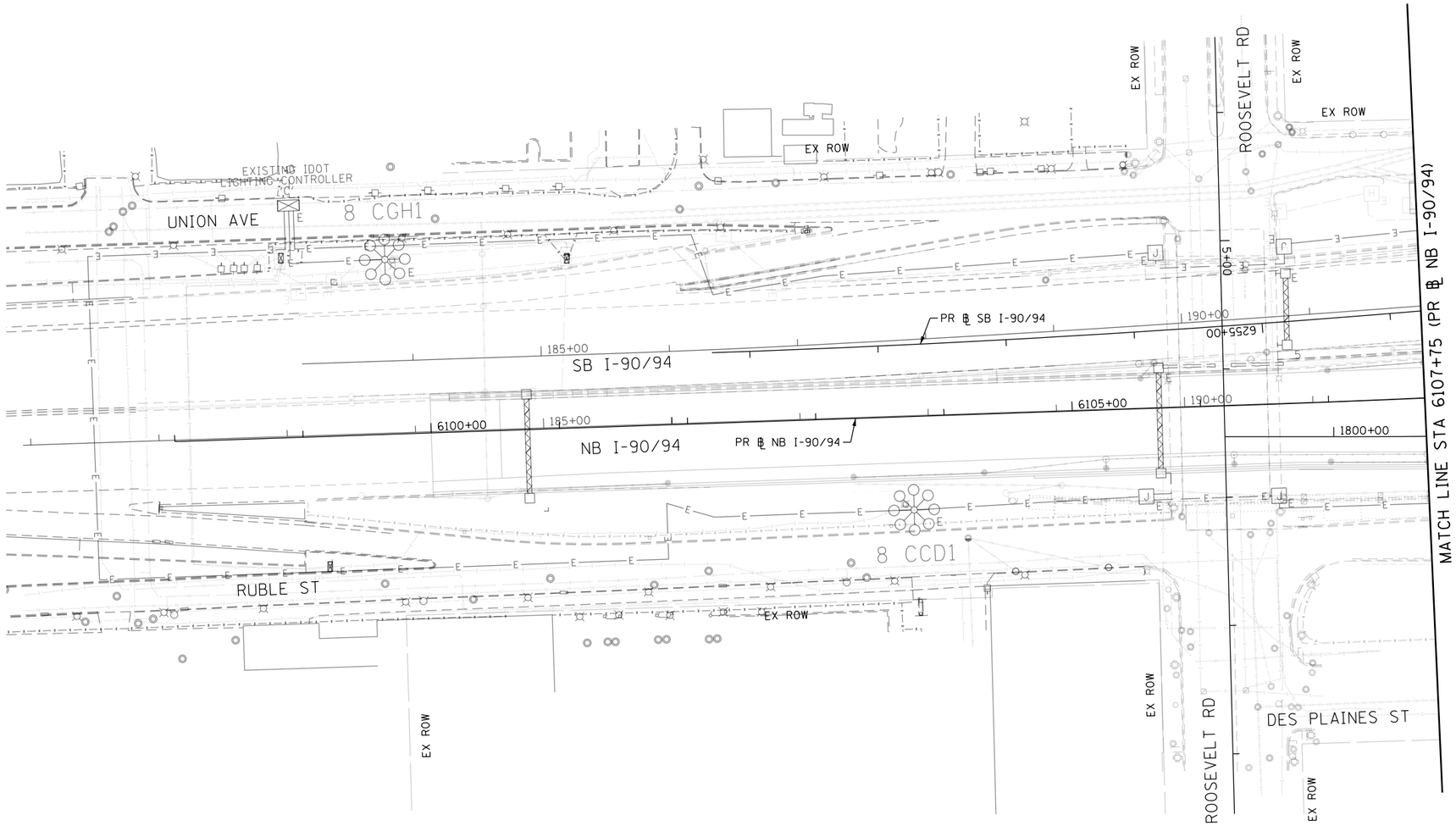
SCALE: 1"=50' | SHEET 16 OF 33 SHEETS | STA. 6167+75 | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1095
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

FILE PATH = pw:\\AECOM-NA-AWSLaeconnline.local:AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase_II\000.CAD\016.Electrical\Sheets\62A76_Contract\D162A76-Sht-Light-16

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
3. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.



NO WORK SHOWN ON THIS SHEET

N

0 50 100

SCALE: 1"=50'

E-17

FILE PATH = pw:\AECOM-NA-AWS1.aecomonline.local\AECOM.DS02.NA\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000 CAD\016 Electrical\Sheets\62A76_Contract\D162A76-Sht-Light-17

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-Sht-Light-17	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

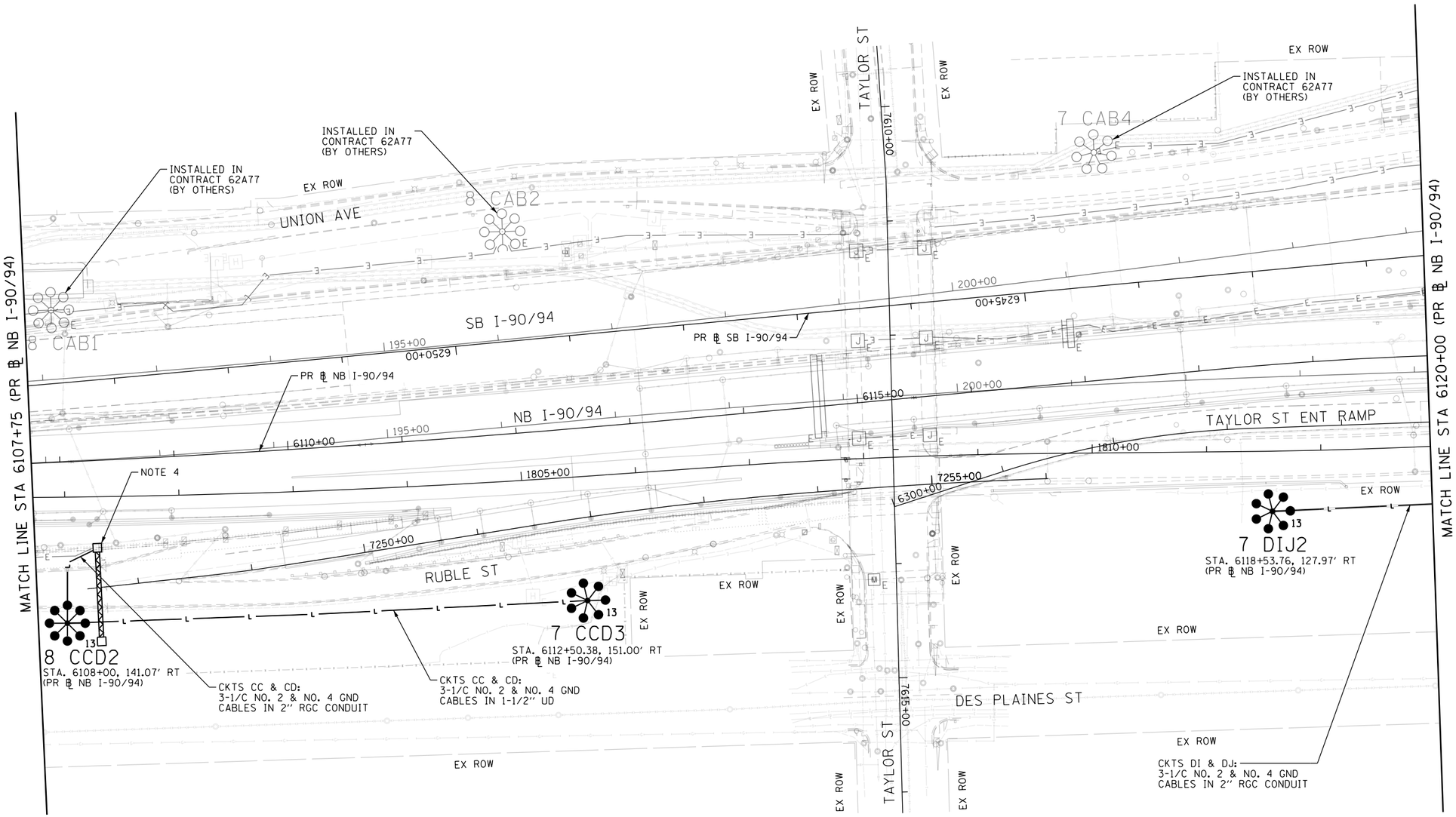
PROPOSED LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 17 OF 33 SHEETS | STA. | TO STA. 6107+75

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1096
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
3. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
4. CONNECT NEW LIGHTING CIRCUIT CABLES TO EXISTING CABLES LOCATED IN JUNCTION BOX ATTACHED TO SIGN STRUCTURE.



N

0 50 100

SCALE: 1"=50'

E-18

AECOM 303 EAST WACKER DRIVE, SUITE 1400 CHICAGO, IL 60601-5276 PHONE: (312) 373-7700 FAX: (312) 373-6800	D162A76-Sht-Light-18	DESIGNED - TJL	REVISED -
	USER NAME = myersc	DRAWN - CAM	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
	PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
NB I-90/94

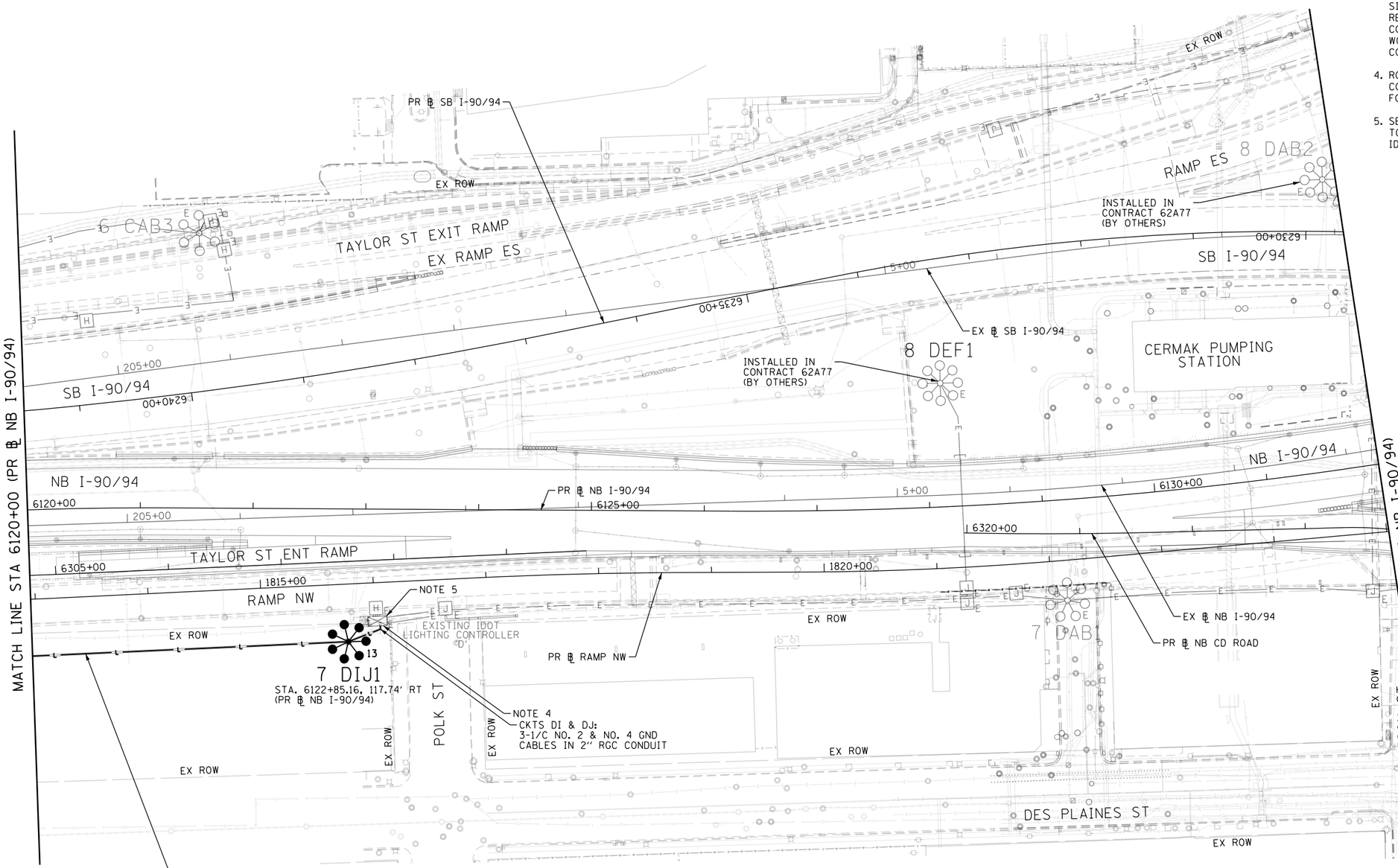
SCALE: 1"=50' | SHEET 18 OF 33 SHEETS | STA. 6107+75 TO STA. 6120+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1097
		CONTRACT NO. 62A76		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM.DS02.NA\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000 CAD\016 Electrical\Sheets\62A76_Contract\D162A76-Sht-Light-18

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
3. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
4. ROUTE NEW LIGHT CIRCUITS DI & DJ INTO EXISTING IDOT LIGHTING CONTROLLER 'D' THROUGH EXISTING CONDUIT SLEEVE AT BASE OF FOUNDATION.
5. SEE DRAWING E-31 FOR THE DETAILS SHOWING THE SAFETY BOLLARDS TO BE INSTALLED AROUND PROPOSED ITS CABINET 'D4' AND EXISTING IDOT LIGHTING CONTROLLER 'D'.



N

0 50 100

SCALE: 1"=50'

E-19

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-Sht-Light-19	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/24/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
NB I-90/94

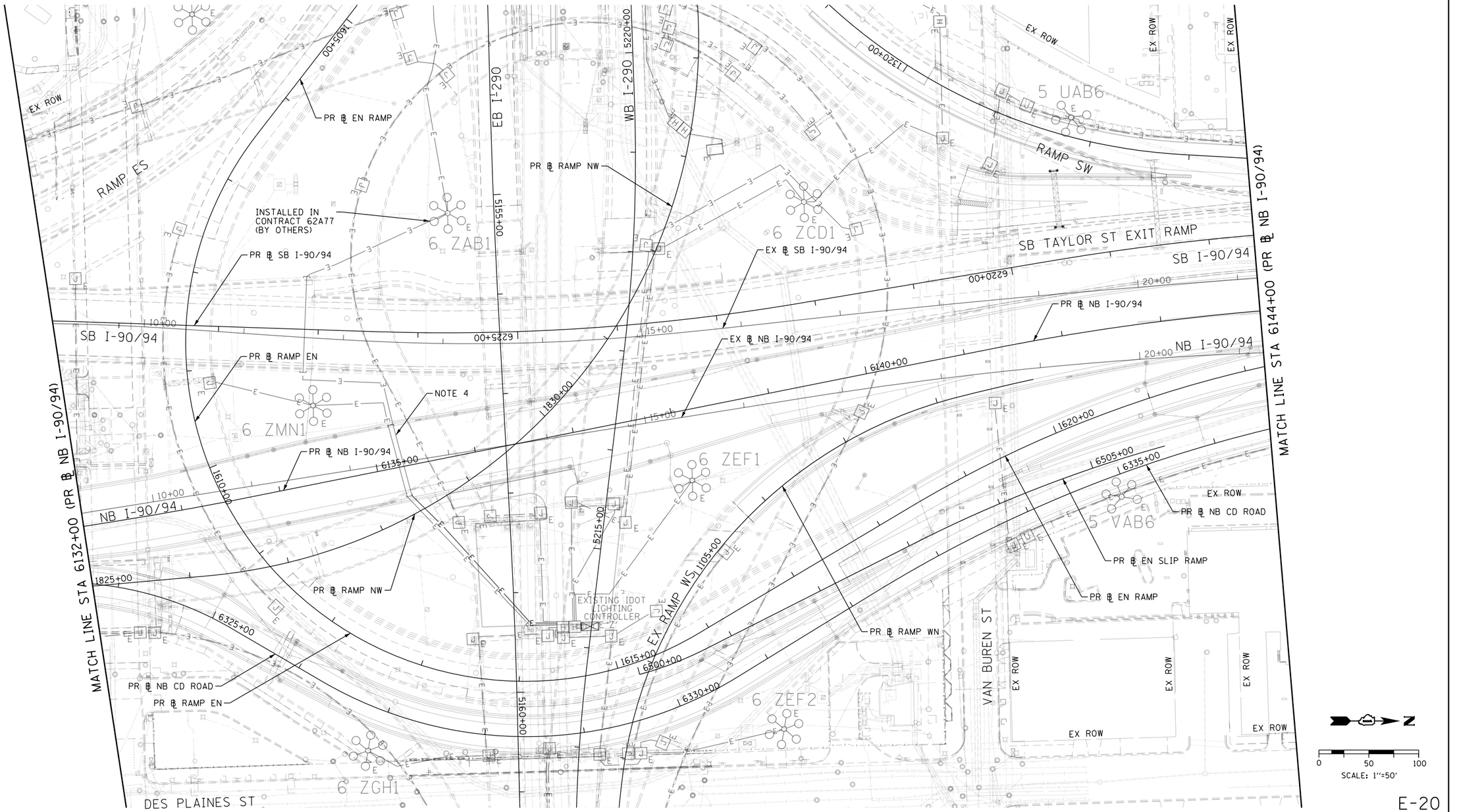
SCALE: 1"=50' | SHEET 19 OF 33 SHEETS | STA. 6120+00 | TO STA. 6132+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1098
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
3. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
4. PROTECT THE EXISTING CONDUIT SLEEVES ROUTED UNDER NB I-90/94 FROM DAMAGE DURING THE PAVEMENT EXCAVATION AND RECONSTRUCTION WORK. ANY DAMAGE INCURRED TO THE CONDUIT SLEEVES AND THE LIGHTING CIRCUITS CONTAINED WITHIN SHALL BE REPLACED IN KIND AT NO COST TO THE CONTRACT.

NO WORK SHOWN ON THIS SHEET



E-20

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D162A76-Sht-Light-20	DESIGNED - TJL	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
NB I-90/94

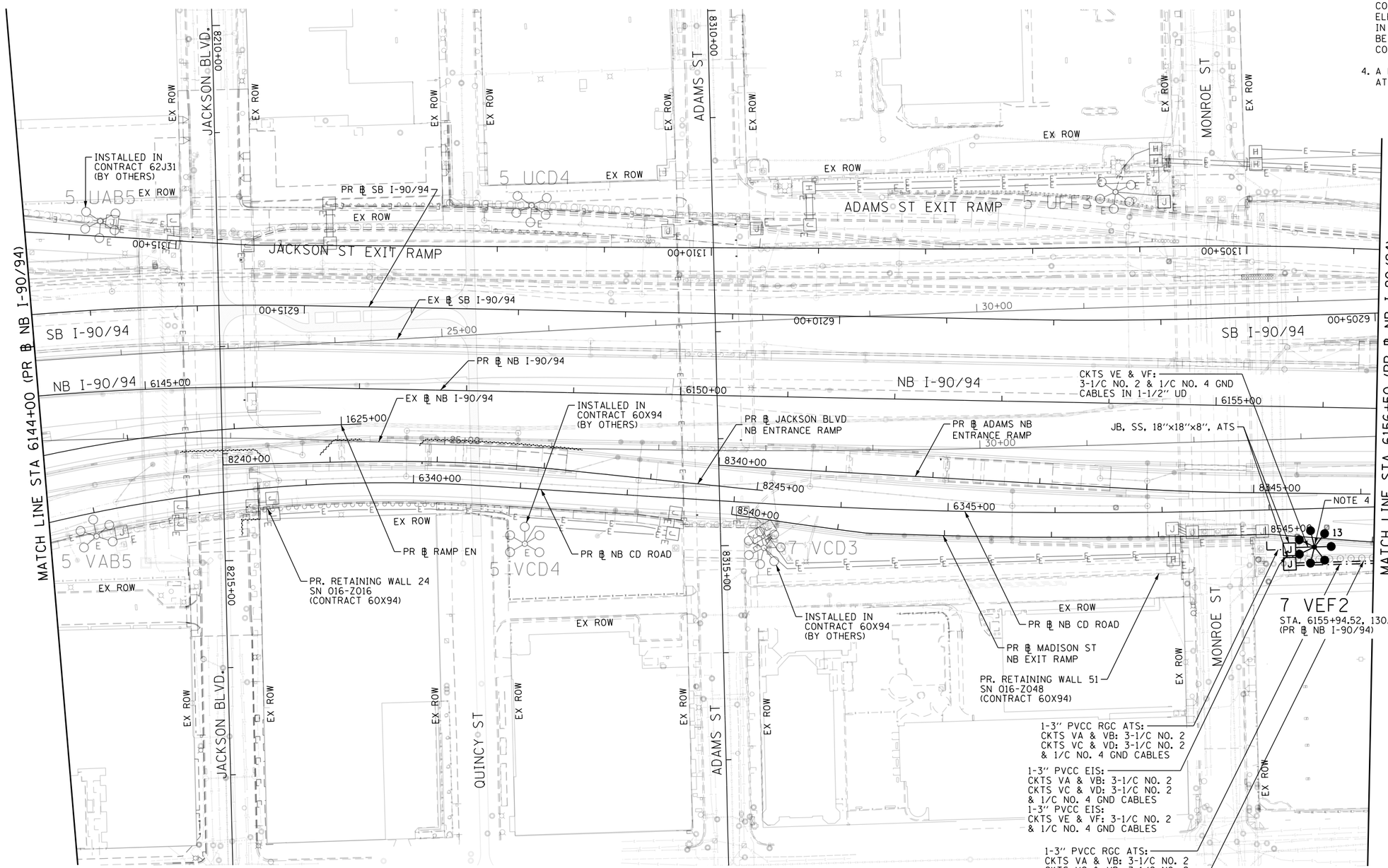
SCALE: 1"=50' | SHEET 20 OF 33 SHEETS | STA. 6132+00 | TO STA. 6144+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1099
		CONTRACT NO. 62A76		
		ILLINOIS	FED. AID PROJECT	

FILE PATH = p:\\AECOM-NA-AWS1.aecomonline.local\AECOM_DS02_NA\Documents\01 Americas\Transportation\60269938 Circle\Phase 1\000_CAD\016_Electrical\Sheets\62A76_Contract\D162A76-Sht-Light-20

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. ALL WORK SHOWN ON THIS DRAWING MUST BE COORDINATED WITH THIS CONTRACT'S CONSTRUCTION WORK AND STAGING.
3. IDOT CONTRACTS 60X94, 62A77, 62A76 AND 60Y00 WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK FOR THIS CONTRACT WITH THE WORK IN THOSE CONTRACTS. THIS COORDINATION WORK SHALL BE INCLUDED AT NO ADDITIONAL COST TO THIS CONTRACT.
4. A LIGHT TOWER SERVICE PAD SHALL NOT BE INSTALLED AT THIS LOCATION.



E-21

AECOM 303 EAST WACKER DRIVE, SUITE 1400 CHICAGO, IL 60601-5276 PHONE: (312) 373-7700 FAX: (312) 373-6800	D162A76-Sht-Light-21	DESIGNED - TJL	REVISED -
	USER NAME = myersc	DRAWN - CAM	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - WDS	REVISED -
	PLOT DATE = 1/23/2020	DATE - 1/29/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
NB I-90/94

SCALE: 1"=50' | SHEET 21 OF 33 SHEETS | STA. 6144+00 | TO STA. 6156+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2015-D18R	COOK	2155	1100
		CONTRACT NO. 62A76		
		ILLINOIS FED. AID PROJECT		

FILE PATH = pw:\\AECOM-NA-AWS1.aecomonline.local\AECOM.DS02.NA\Documents\01 Americas\Transportation\60269938 Circle\Phase 1\000 CAD\016 Electrical\Sheets\62A76_Contract\D162A76-Sht-Light-21