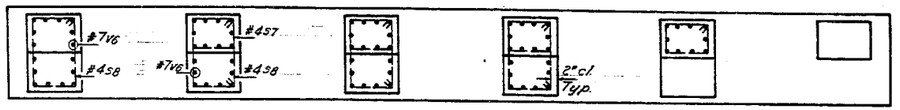
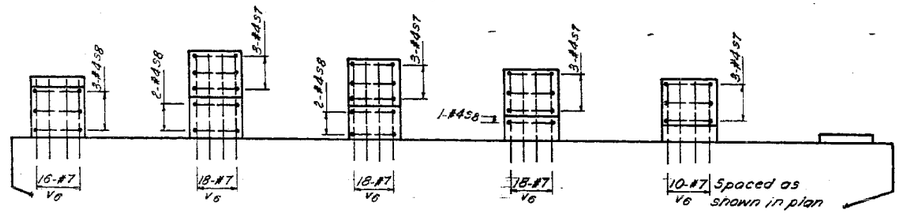
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

					SHEET NO. 17
F.A.P. RTE. 133	*	COOK	149	117	23 SHEETS

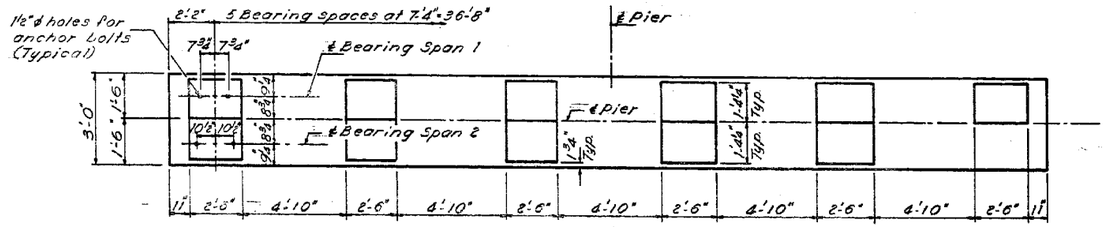
* 0102-683 HBK



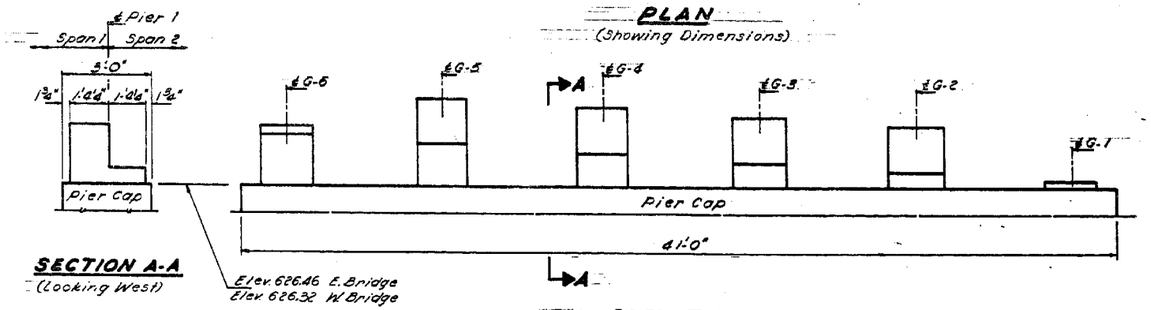
PLAN
(Showing Reinforcement)



ELEVATION
Showing Reinforcement
(Looking South)

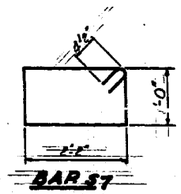


PLAN
(Showing Dimensions)

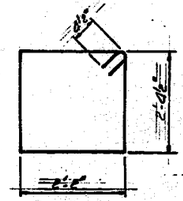


SECTION A-A
(Looking West)

ELEVATION
(Looking South)



BAR 37



BAR 38

Notes
Work this sheet with sheet 16.
Class X Concrete & Reinf. Bars for Pedestals are billed on sheet 16.
Pour Pedestals monolithically with pier cap.

DESIGNED John Hayes
CHECKED [illegible]
DRAWN J. Kessler
CHECKED [illegible]

EXAMINED Sept. 28 1967
PASSED [illegible]
APPROVED [illegible]

SEAT ELEVATIONS

	Span 1						Span 2					
	G-1	G-2	G-3	G-4	G-5	G-6	G-1	G-2	G-3	G-4	G-5	G-6
East Bridge	626.63	628.43	628.64	628.85	629.07	627.70	626.46	626.67	626.88	627.10	627.31	627.52
West Bridge	626.50	628.28	628.49	628.70	628.91	627.54	626.32	626.54	626.75	626.96	627.18	627.39

PEDESTALS - PIER 1
EAST & WEST BRIDGES
F.A. RT 133 SEC C -683 HBK
COOK COUNTY
STATION 104+82.77

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312-565-0450 Job No. 10093

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		CHECKED - RMM	REVISED -
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	PLOT DATE = 12/20/2012	CHECKED - RMM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (13 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX13 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	301
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

					SHEET NO. 18
A.A. 193	4	Cook	149	118	25 SHEETS

A 0102-683 HBK

TOP PLAN

ELEVATION
Looking North

END VIEW

DIMENSIONS

REINFORCEMENT

FOOTING PLAN

Note:
Space reinforcement in cap to miss anchor bolts.
Min. bar laps = 20 dia. unless otherwise noted.
All exposed edges shall have standard ¾" chamfer except as noted.
Work this sheet with sheets 19 and 20
See sheet 20 for placement of lighting conduit in piers

SECTION A-A

SECTION B-B

BARS - s

A B B DIMENSIONS

Bar	A	B
s3	0'8"	3'3"
s4	1'10"	2'8"
s5	0'7"	2'6"
s7	0'2"	7'9"
s9	0'2"	6'0"

BAR s2

BAR u2

TWO PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2	76	#5	6'10"	
h11	40	#5	30'9"	
n1	84	#8	6'0"	
p2	5	#10	40'8"	
p3	76	#10	18'0"	
p4	20	#3	6'2"	
p5	10	#6	29'10"	
s2	58	#4	16'5"	
s3	64	#8	7'10"	
s4	36	#4	6'10"	
s5	36	#5	7'1"	
s7	24	#4	7'4"	
s8	16	#4	9'10"	
s9	64	#5	17'8"	
s10	64	#3	12'1"	
t	68	#5	6'9"	
u2	12	#6	8'2"	
v5	64	#8	21'5"	
v8	160	#7	3'6"	
w	10	#5	32'9"	
Class X Concrete			Cu.Yds. 116.	
Reinforcement Bars			Lbs. 13772	

DESIGNED John Hooper
CHECKED
DRAWN W. E. Gaestel Systems Inc.
CHECKED
PLANS FILED by H.C. Baumann
APPROVED
Sept 28 1962

P-5 7-2-62

PIER 2
EAST & WEST BRIDGES
F.A. RT. 133 SEC. 0102-683 HBK
COOK COUNTY
STATION 104+82.71

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (14 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX14 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	302
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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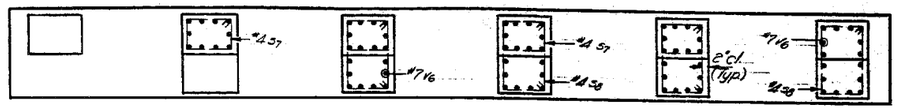
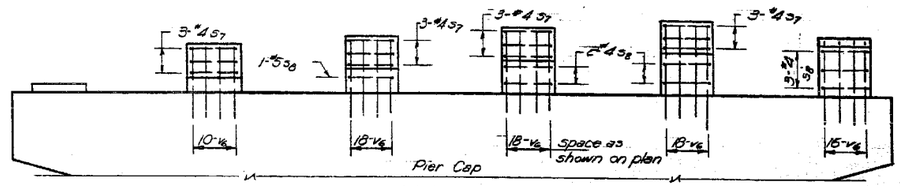
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

					SHEET NO. 19
F.A.P. RTE. 133	K	COOK	149	119	23 SHEETS

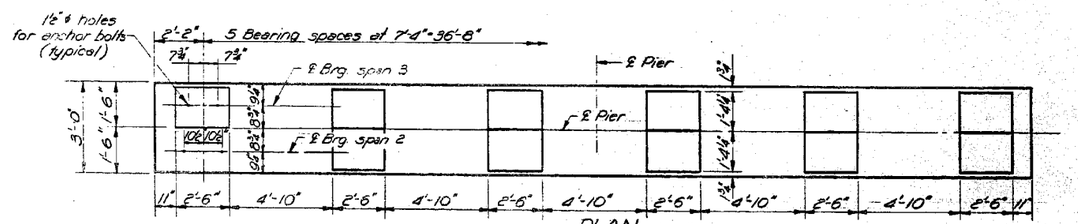
#0102-683HBK



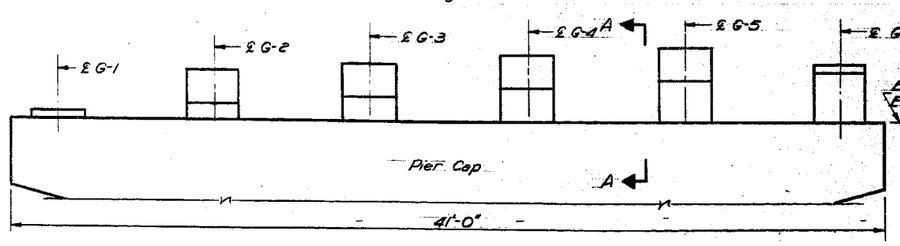
PLAN
(Showing Reinforcement)



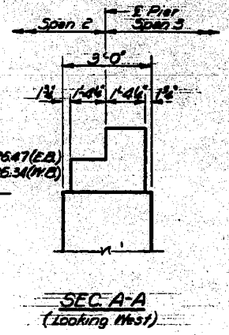
ELEVATION
Looking North, showing reinforcement



PLAN
(Showing dimensions)



ELEVATION
Looking North, showing elevations



SEC A-A
(Looking West)

See sheet 17 for details of bars 3 & 4
Work this sheet with sheet 18
Class X Concrete & Reinf. bars for Pedestals are billed on sheet 18
Pour Pedestals monolithically with Pier Cap.

SEAT ELEVATIONS

	Span 2						Span 3					
	G-1	G-2	G-3	G-4	G-5	G-6	G-1	G-2	G-3	G-4	G-5	G-6
E Bridge	626.47	626.69	626.90	627.11	627.32	627.54	626.66	628.46	628.67	628.88	629.09	627.72
W Bridge	626.34	626.55	626.77	626.98	627.19	627.41	626.53	628.32	628.54	628.75	628.96	627.59

DESIGNED	John Harper
CHECKED	Stanley S Janicke
DRAWN	JIM HENNINGER
CHECKED	Stanley S Janicke

EXAMINED — SEPT. 28 1967
PASSED — H.E. Baumann, ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

PEDESTALS-PIER 2
EAST & WEST BRIDGES
F.A. RT. 133 SEC ( )-683 HBK
COOK COUNTY
STA. 104+82.77

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (15 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX15 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	303
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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6/23/2014

BENCHMARK

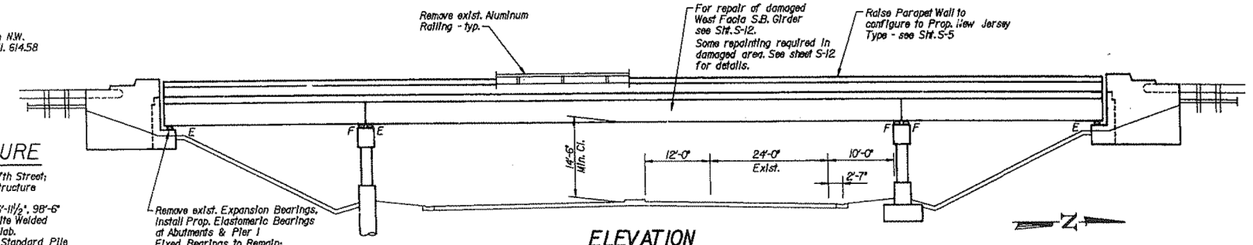
"D" cut on N.W. Corner of Acculator on N.W. Corner of IL 171 and 47th Street - El. 614.58

EXISTING STRUCTURE

Sta. 104+82.77: Illinois Route 171 / 47th Street; Section 102-683HBK; built in 1968; Structure No. 016-1000 SB & 016-1001 NB. Consisting of three Simple Spans, 36'-11½", 98'-6" & 36'-11½", Wide Flange and Composite Welded Plate Girder with 8" Concrete Deck Slab. The Superstructure is supported by Standard Pile Abutments and 2 Multiple Column Concrete Piers. The Bridges shall be repaired, the Deck Slab shall receive 2" Microsilica Concrete Overlay. Traffic is to be maintained utilizing Stage Construction.

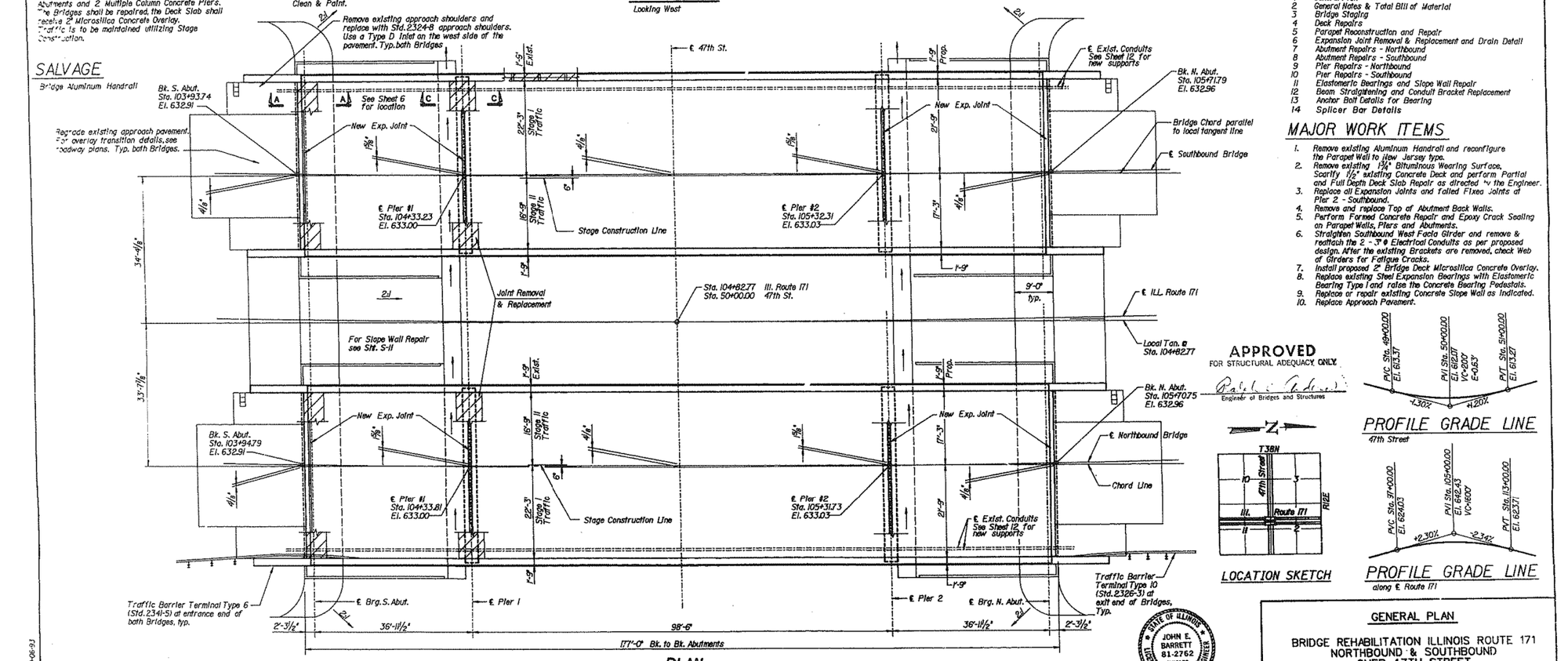
SALVAGE

Bridge Aluminum Handrail



ELEVATION

Looking West



PLAN

DESIGNED	LM
CHECKED	ELD
DRAWN	MF
CHECKED	ELD

12-dpw47.dgn prt date 10-05-93

STAGING INSTRUCTIONS

STAGE I:
Outer lanes shall be used for traffic while inner lanes are repaired.

STAGE II:
Inner lanes of renovated bridge shall be used for traffic while outer lanes are repaired.

CURVE DATA

Ill. Rt. 171
P.I. Station 105+97.15
Δ = 14°
D = 1°
T = 703.504'
L = 1,400'
E = 43.088
R = 5729.58'

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
111 W. MONROE AVENUE SUITE 1200 CHICAGO, ILLINOIS 60603
JOB NO. 124

STATE OF ILLINOIS — JOHN E. BARRETT 81-2762 CHICAGO, IL — REGISTERED STRUCTURAL ENGINEER
LICENSE EXPIRES: 11-30-14
CURRENT DATE: 11-2-12

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 2746	102-683 HBK	COOK	398	92
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-1
SHEETS S-14

DESIGN SPECIFICATIONS

AASHTO 1989 Standard Specifications with 1990 and 1991 Interims for Highway Bridges

DESIGN STRESSES

Existing Construction
Substructure and Deck f'_c = 1,400 psi
New Const: f'_c = 3500 psi; f_y=60,000 psi (Reinf.)
Loading: HS20-44 F_y = 36 KSI M270 Grade 36
F_y = 50 KSI M270 Grade 50

INDEX OF DRAWINGS

MAJOR WORK ITEMS

1. Remove existing Aluminum Handrail and reconfigure the Parapet Wall to New Jersey type.
2. Remove existing 1¾" Bituminous Wearing Surface. Scarify ½" existing Concrete Deck and perform Partial and Full Depth Deck Slab Repair as directed by the Engineer.
3. Replace all Expansion Joints and failed Fixed Joints at Pier 2 - Southbound.
4. Remove and replace Top of Abutment Back Walls.
5. Perform Formed Concrete Repair and Epoxy Crack Sealing on Parapet Walls, Piers and Abutments.
6. Straighten Southbound West Facia Girder and remove & reattach the 2 - 3" ϕ Electrical Conduits as per proposed design. After the existing Brackets are removed, check Web of Girders for Fatigue Cracks.
7. Install proposed 2" Bridge Deck Microsilica Concrete Overlay.
8. Replace existing Steel Expansion Bearings with Elastomeric Bearing Type I and raise the Concrete Bearing Pedestals.
9. Replace or repair existing Concrete Slope Wall as indicated.
10. Replace Approach Pavement.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

PROFILE GRADE LINE
47th Street

LOCATION SKETCH

PROFILE GRADE LINE
along ℄ Route 171

GENERAL PLAN

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.
STRUCTURE NO. 016-1000 S.B.

TAMERAN

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	PLOT DATE = 12/20/2012	CHECKED - RMM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (16 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX16 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	304
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	

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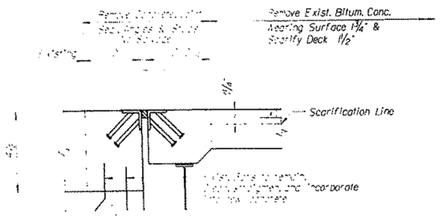
6/23/2014

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 2746	102-683 HBK	COOK	383	5-6
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

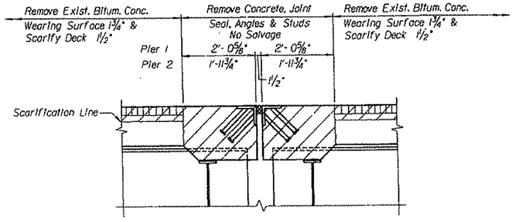
SHEET NO. S-6
SHEETS S-14



REMOVAL OF EXISTING EXPANSION JOINT AT ABUTMENT - TYPICAL

SECTION A-A

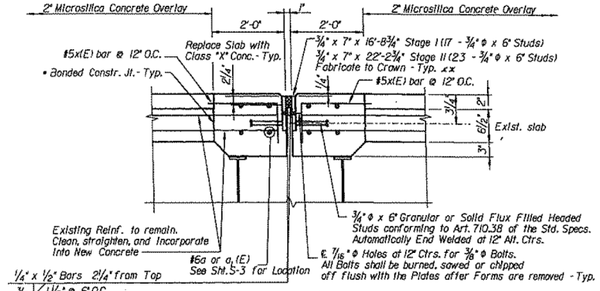
See Sheet S-4 for Location



REMOVAL OF EXISTING EXPANSION JOINT AT PIER 1 & FIXED JOINT AT PIER 2 - SOUTHBOUND

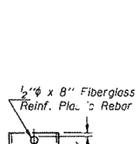
SECTION C-C (PIER 1 & 2)

See Sheet S-1 for Location

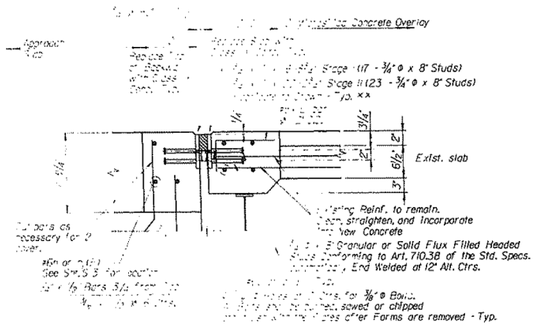


PREFORMED JOINT SEAL (1¾") REPLACEMENT OVER FIXED JOINT AT PIER 2 - SOUTHBOUND

SECTION E-E

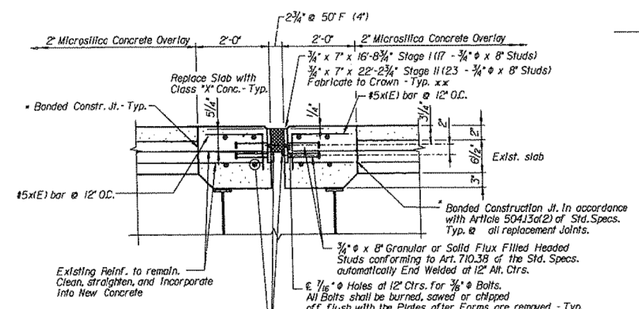


BAR x(E)



PREFORMED JOINT SEAL (2½") REPLACEMENT AT ABUTMENT

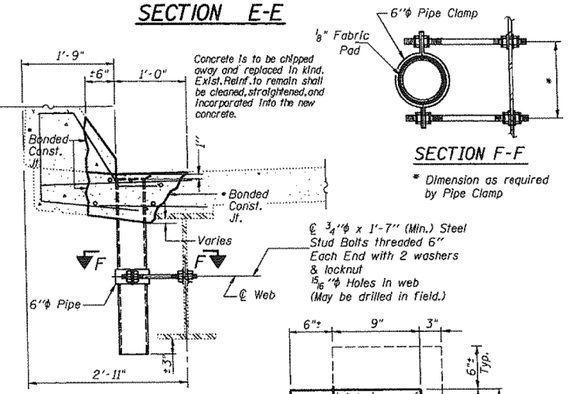
SECTION B-B



PREFORMED JOINT SEAL (4") REPLACEMENT AT PIER 1

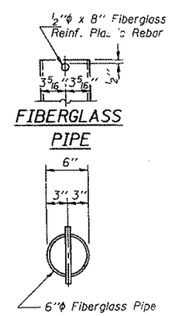
SECTION D-D

Saw cutting over existing beams will not be permitted.



SECTION THRU PARAPET

TOP PLAN



FIBERGLASS PIPE

TOP PLAN

Concrete Removal Line for new Drains

Notes:

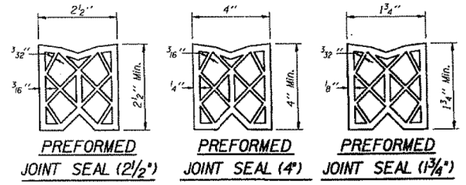
Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

The exterior surfaces of the floor drain shall be painted with the paint system specified for structural steel. The exterior surfaces of the drain shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC-Paint 27 prior to painting.

Notes:

After fabrication all surfaces of the Steel Plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.

xx - Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.



PREFORMED JOINT SEAL (2½")

PREFORMED JOINT SEAL (4")

PREFORMED JOINT SEAL (1¾")

END TREATMENT

PREFORMED JOINT SEAL DETAILS

DESIGNED	LM
CHECKED	ELD
DRAWN	MF
CHECKED	JAA

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
332 N. MICHIGAN AVENUE SUITE 2205 CHICAGO, ILLINOIS 60601
JOB NO. 124

EXPANSION JOINT REMOVAL & REPLACEMENT AND DRAIN DETAIL

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.
STRUCTURE NO. 016-1000 S.B.

D C B A 0 A B C D

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Chicago, Illinois 60601
312-565-0450 Job No. 10093

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	PLOT DATE = 12/20/2012	CHECKED - RMM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (17 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX17 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	305
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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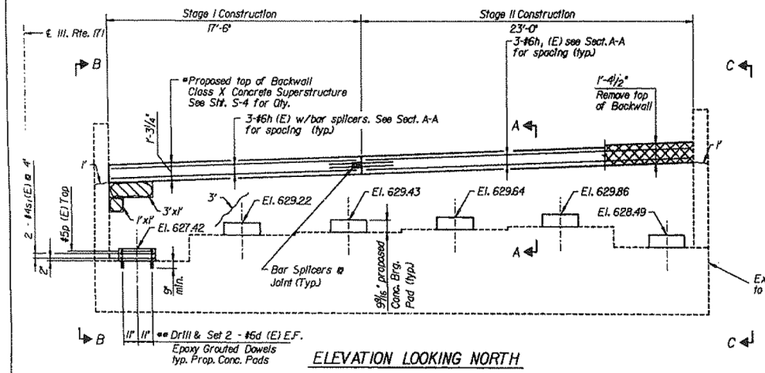
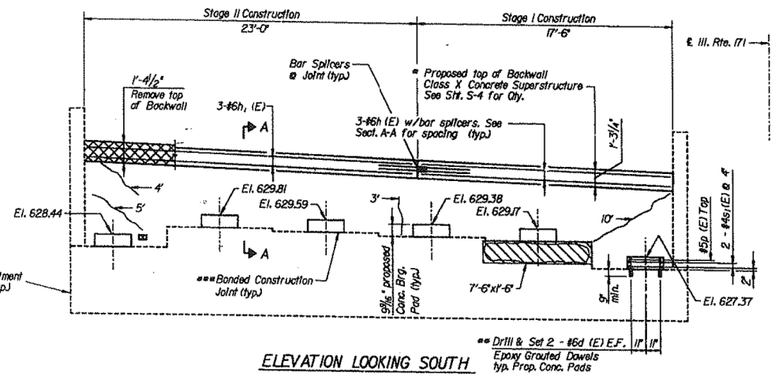


ELEVATION LOOKING NORTH



ELEVATION LOOKING SOUTH

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 372	102-683 HBK	COOK	825	18
PED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

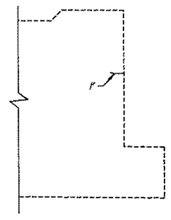
SHEET NO. S-7
SHEETS S-14

BILL OF MATERIAL

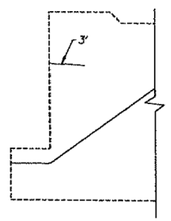
Bar	No.	Size	Length	Shape
d (E)	48	#6	2'-2"	⌐
p (E)	24	#5	2'-0"	—
s_1(E)	24	#4	6'-11"	□
h (E)	6	#6	17'-2"	—
h_1(E)	6	#6	22'-7"	—

ITEM	UNIT	QTY.
Concrete Removal	Cu.Yd.	41
Class X Concrete	Cu.Yd.	1.4
Epoxy Crack Sealing	Lin. Ft.	30
Reinforcement Bars, Epoxy Coated	Pound	680
Formed Concrete Repair Depth ≤ 5"	Sq. Ft.	16

Quantities shown are for Northbound Bridge - N & S Abutments



ELEVATION B - B

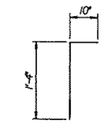


ELEVATION C - C

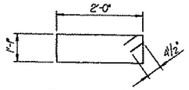
* Class X Concrete Superstructure is included in Bill of Material for Deck Repairs Sht. S-4

** Epoxy grout d (E) bars in 1" diameter x 9" minimum drilled holes. The grout and the method of application shall be approved by the Department. (See Special Provisions).

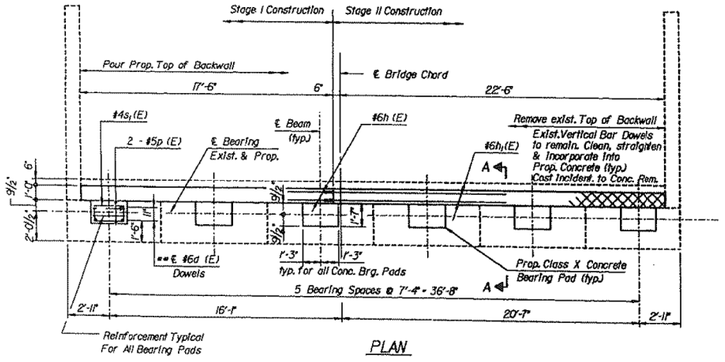
*** Bonded Construction Joint in accordance to Article 504.13(a)(2) of Standard Specifications.



BAR d (E)

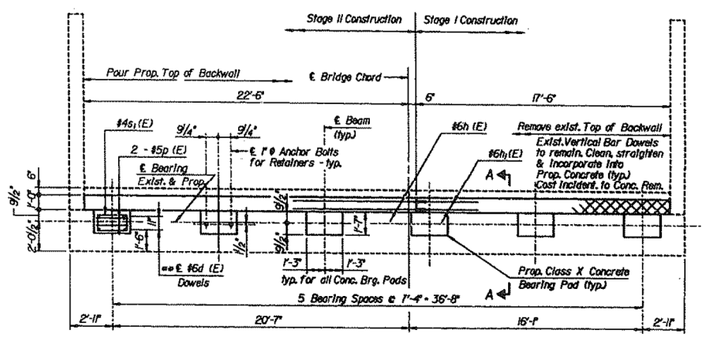


BAR s_1(E)



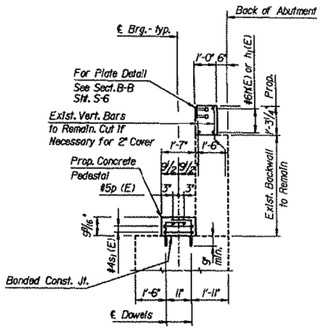
PLAN

NORTH ABUTMENT - NORTHBOUND



PLAN

SOUTH ABUTMENT - NORTHBOUND



SECTION A-A

LEGEND

- Formed Concrete Repair ≤ 5" deep.
- Concrete Removal
- Exposed Reinforcing Bars
- Epoxy Crack Sealing

ABUTMENT REPAIRS - NORTHBOUND

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.

STRUCTURE NO. 016-1000 S.B.

DESIGNED	LM
CHECKED	ELD
DRAWN	MF
CHECKED	JAA

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
111 N. MICHIGAN AVENUE SUITE 1200 CHICAGO, ILLINOIS 60601
JOB NO. 124

1240x837.dgn prt date 12-03-93

D C B A

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FOR INFORMATION ONLY

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		CHECKED - RMM	REVISED -
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	PLOT DATE = 12/20/2012	CHECKED - RMM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (18 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX18 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	306
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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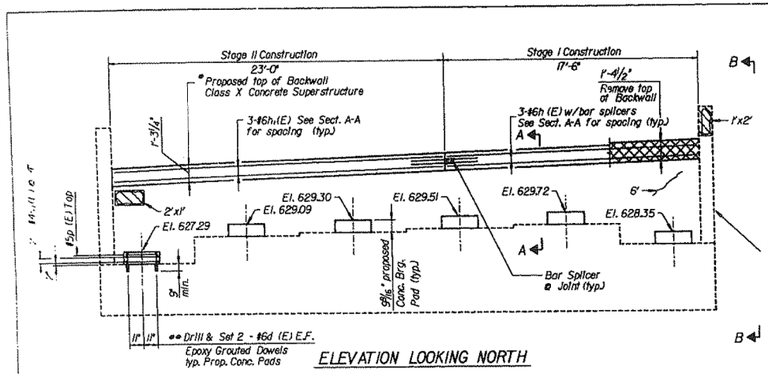
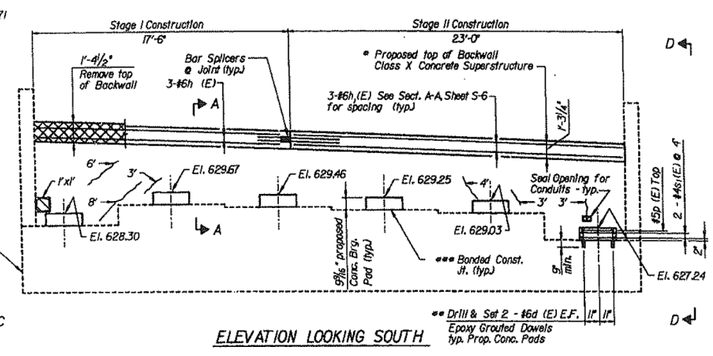


ELEVATION LOOKING NORTH



ELEVATION LOOKING SOUTH

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 2746	102-683 HBK	COOK	821	99
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

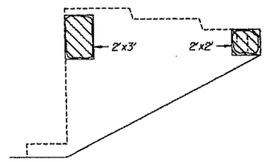
SHEET NO. S-8
SHEETS S-14

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d (E)	48	#6	2'-2"	⌐
p (E)	24	#5	2'-0"	—
s_1(E)	24	#4	6'-11"	▭
h (E)	6	#6	17'-2"	—
h_1(E)	6	#6	22'-7"	—

ITEM	UNIT	QTY.
Concrete Removal	Cu. Yd.	41
Class X Concrete	Cu. Yd.	1.4
Epoxy Crack Sealing	Lin. Ft.	33
Reinforcement Bars, Epoxy Coated	Pound	680
Formed Concrete Repair Depth ≤ 5"	Sq. Ft.	23

Quantities shown are for Southbound Bridge - N & S Abutments

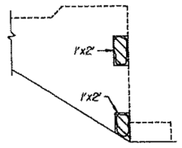


ELEVATION B - B

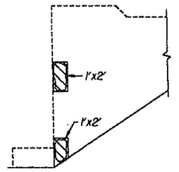
* Class X Concrete Superstructure is included in Bill of Material for Deck Repairs Sht. S-4

** Epoxy grout d (E) bars in 1" diameter x 9" minimum drilled holes. The grout and the method of application shall be approved by the Department. (See Special Provisions.)

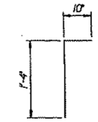
*** Bonded Construction Joint in accordance to Article 504.13(a)(2) of Standard Specifications.



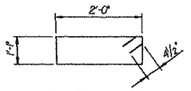
ELEVATION C - C



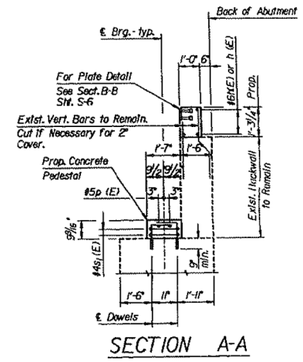
ELEVATION D - D



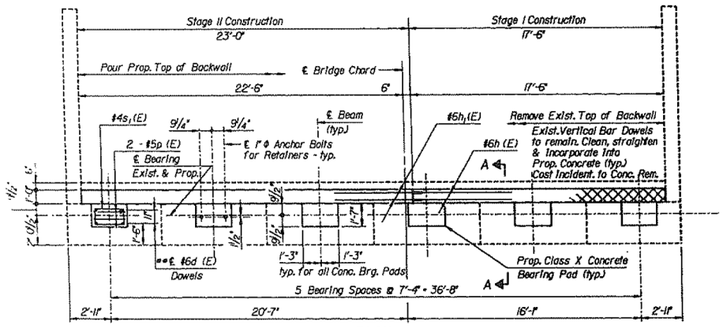
BAR d (E)



BAR s_1(E)

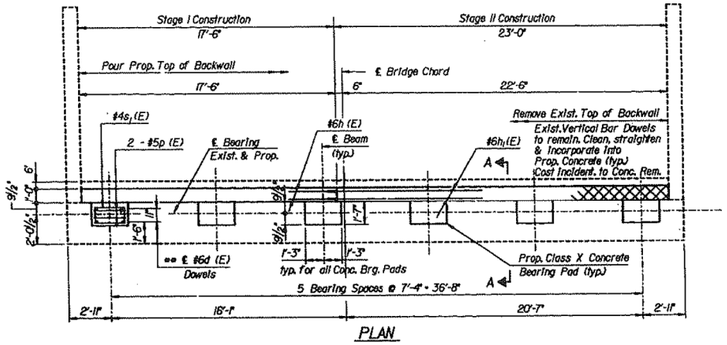


SECTION A-A



PLAN

NORTH ABUTMENT - SOUTHBOUND



PLAN

SOUTH ABUTMENT - SOUTHBOUND

LEGEND

- Formed Concrete Repair ≤ 5" deep
- Concrete Removal
- Exposed Reinforcing Bars
- Epoxy Crack Sealing

DESIGNED	LM
CHECKED	ELD
DRAWN	MF
CHECKED	JAA

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
225 N. MICHIGAN AVENUE SUITE 1200 CHICAGO, ILLINOIS 60601
JOB NO. 124

ABUTMENT REPAIRS - SOUTHBOUND

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.

STRUCTURE NO. 016-1000 S.B.

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (19 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX19 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	307
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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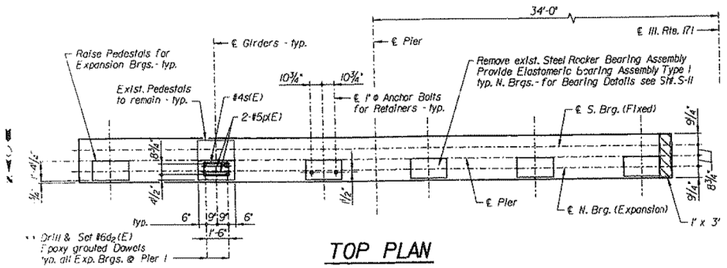
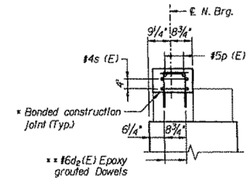
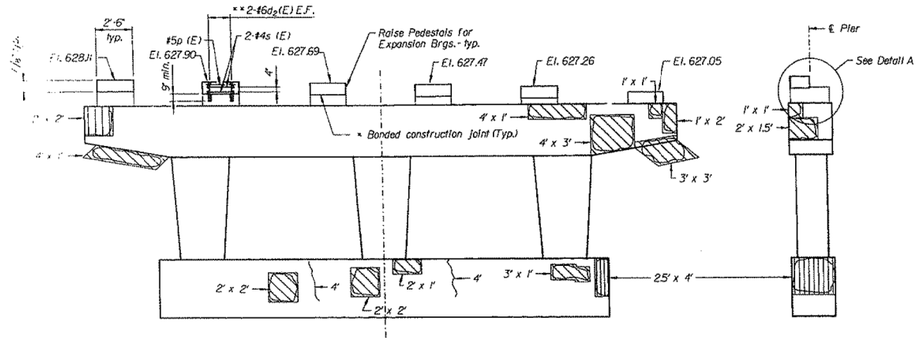


TOP PLAN



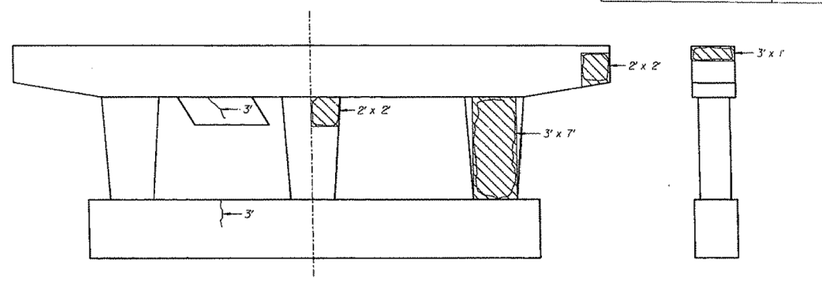
DETAIL A



NORTH ELEVATION - PIER NO. 1

END VIEW

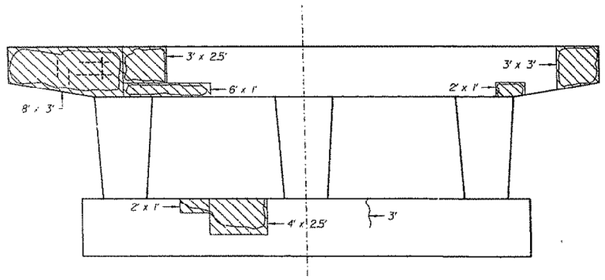
Looking East



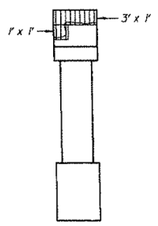
NORTH ELEVATION - PIER NO. 2

END VIEW

Looking East

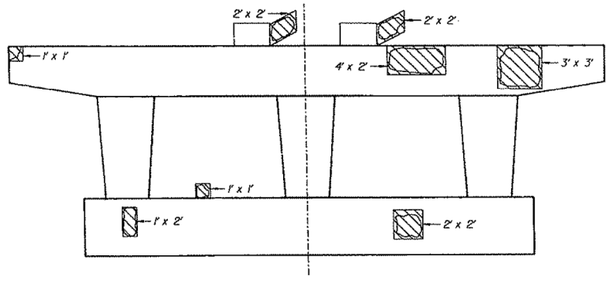


SOUTH ELEVATION - PIER NO. 1 NORTHBOUND

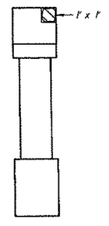


END VIEW

Looking West



SOUTH ELEVATION - PIER NO. 2 NORTHBOUND



END VIEW

Looking West

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
d_2(E)	24	#6	2'-0"	⌐
p (E)	12	#5	2'-0"	—
s (E)	12	#4	5'-11"	▭

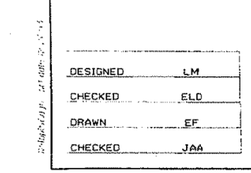
ITEM	UNIT	QTY.
Class X Concrete	Cu. Yd.	0.5
Reinforcement Bars, Epoxy Coated	Pound	40
Formed Concrete Repair Depth ≤ 5"	Sq. Ft.	8
Formed Concrete Repair Depth > 5"	Sq. Ft.	8
Epoxy Crack Sealing	Lin. Ft.	7

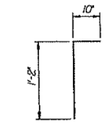
* Bonded construction joint in accordance to Article 504.13(a)(2) of Standard Specifications

** Epoxy grout d_2(E) bars in 1" diameter x 9" minimum drilled holes. The grout and the method of application shall be approved by the Department. (See Special Provisions.)

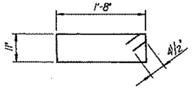
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R.O.I. F.A.U. 2746	102-063 HBK	COOK	385	100
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. S-9
SHEETS S-14





BAR d_2(E)



BAR s (E)

LEGEND

- Formed Concrete Repair ≤ 5" deep
- Formed Concrete Repair > 5" deep
- Exposed Reinforcing Bars
- Epoxy Crack Sealing

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
122 N. MICHIGAN AVENUE SUITE 2020 CHICAGO, ILLINOIS 60601
JOB NO. 124

PIER REPAIRS - NORTHBOUND

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.
STRUCTURE NO. 016-1000 S.B.

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

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	PLOT DATE = 12/20/2012	CHECKED - RMM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (20 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX20 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	308
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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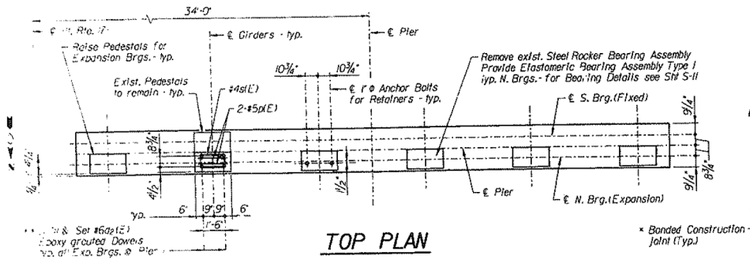
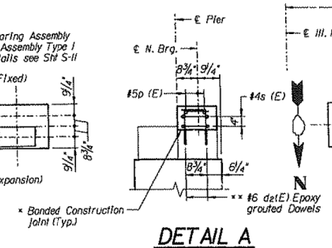
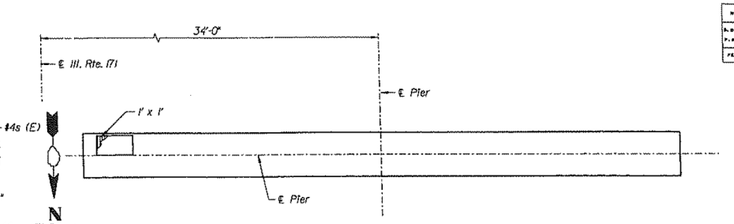


TOP PLAN



DETAIL A

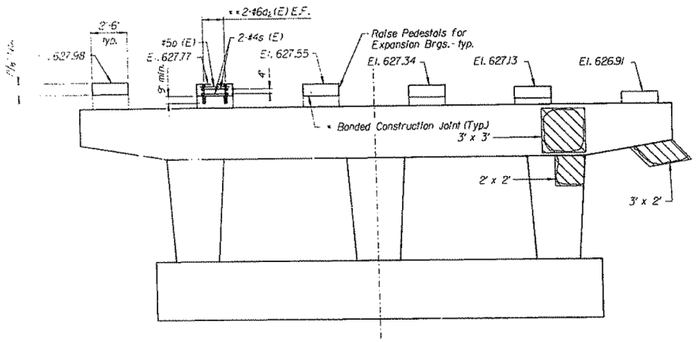


TOP PLAN

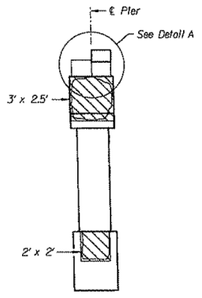
BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
d_2(E)	24	#6	2'-0"	⌜
p (E)	12	#5	2'-0"	– –
s (E)	12	#4	5'-11"	▭
ITEM			UNIT	QTY.
Class X Concrete			Cu. Yd.	0.5
Reinforcement Bars, Epoxy Coated			Pound	140
Formed Concrete Repair Depth ≤ 5"			Sq. Ft.	74
Formed Concrete Repair Depth > 5"			Sq. Ft.	4

* Bonded construction joint in accordance to Article 504.3(10)(2) of Standard Specifications.

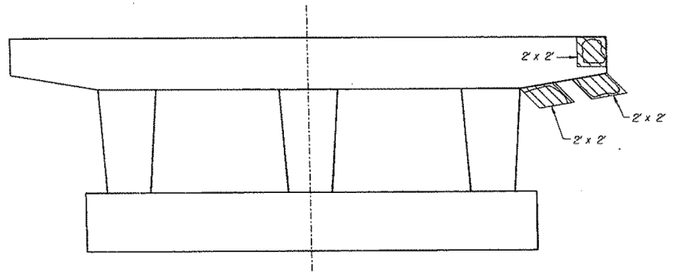
** Epoxy grout d_2(E) bars in 1" diameter x 9" minimum drilled holes. The grout and the method of application shall be approved by the Department. (See Special Provisions)



NORTH ELEVATION - PIER NO. 1

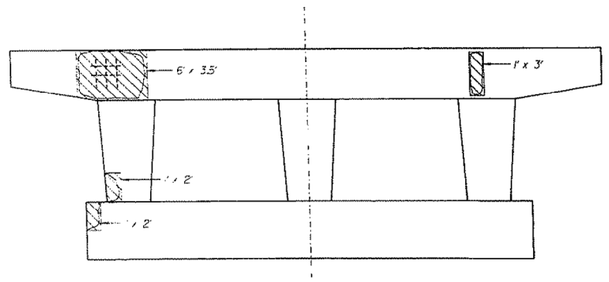


END VIEW
Looking East

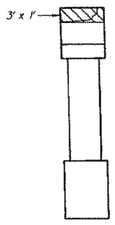


NORTH ELEVATION - PIER NO. 2

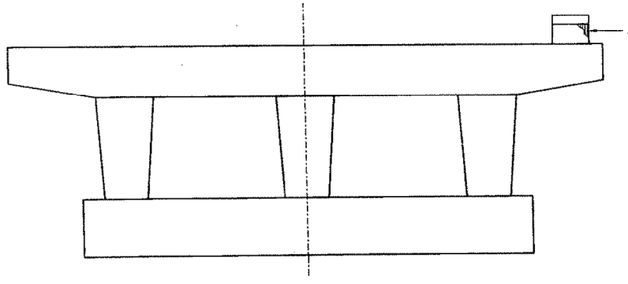
END VIEW
Looking East



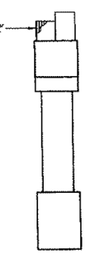
SOUTH ELEVATION - PIER NO. 1
SOUTHBOUND



END VIEW
Looking West

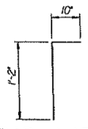


SOUTH ELEVATION - PIER NO. 2
SOUTHBOUND

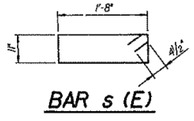


END VIEW
Looking West

DESIGNED	LM
CHECKED	ELD
DRAWN	EF
CHECKED	JAA



BAR d_2(E)



BAR s (E)

LEGEND

- Formed Concrete Repair ≤ 5" deep
- Formed Concrete Repair > 5" deep
- Exposed Reinforcing Bars

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JOB NO. 124

PIER REPAIRS - SOUTHBOUND

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.
STRUCTURE NO. 016-1000 S.B.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N.B. I. F.A.U. 2746	102-683 HBK	COOK	383	101
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. S-13
SHEETS S-14

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Chicago, Illinois 60601
312-565-0450 Job No. 10093

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		CHECKED - RMM	REVISED -
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	PLOT DATE = 12/20/2012	CHECKED - RMM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (21 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX21 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	309
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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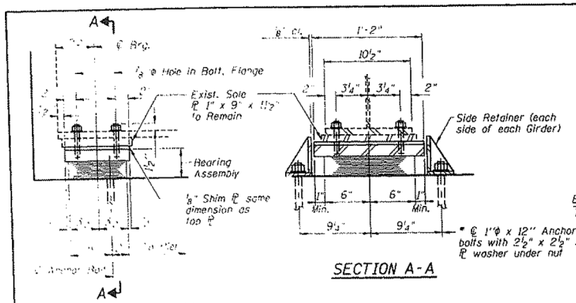
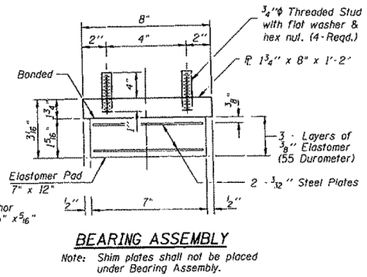


ELEVATION AT ABUT.

SECTION A-A

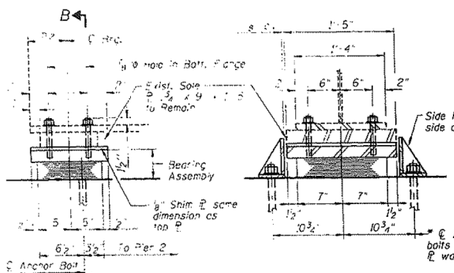
TYPE I ELASTOMERIC EXP. BRG.

* See Sheet S-13 for Anchor Bolt installation.



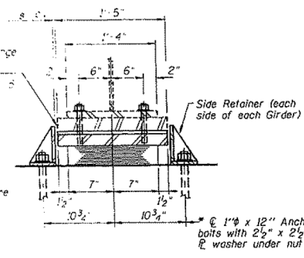
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



ELEVATION AT PIER 1

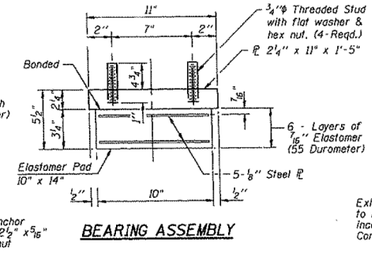
North Bearings typ. Southbound and Northbound



SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

* See Sheet S-13 for Anchor Bolt installation.



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

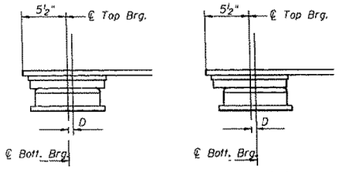
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Stee.

SECTION C-C

SECTION D-D

BEAM REACTIONS (KIPS)	End Spans	Center Span
Live Load (L)	36.8	43.5
Dead Load (L)	22.0	62.6
Impact (I)	11.0	9.7
Total (T)	69.8	115.8

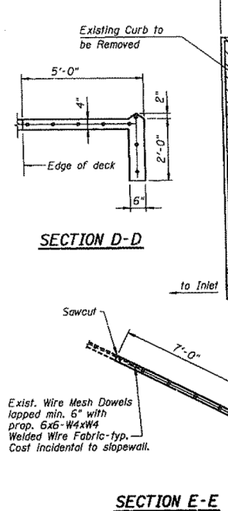


BELOW 50°F. (Move bott. brg. away from fixed brg.)

ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING BOLSTER AT EXP. BRG.

D=½" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



SECTION E-E

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type 1	Each	36

Quantities shown are for both North & Southbound Bridges

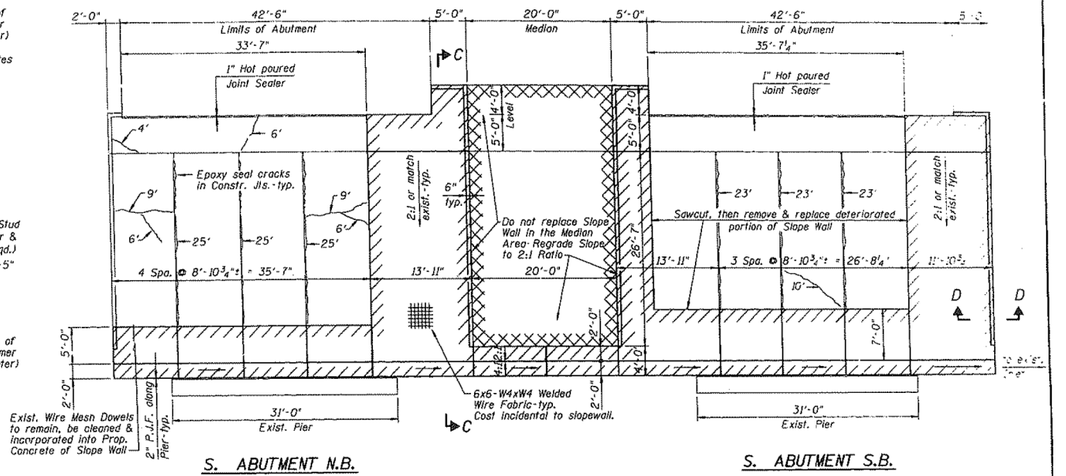
BILL OF MATERIAL

Item	Unit	Total
Slope Wall Removal	Sq. Yd.	519.2
Slope Wall 4 Inch	Sq. Yd.	405.1
Joint Sealer	Lin. Ft.	519

Quantities shown are for both North & Southbound Bridges

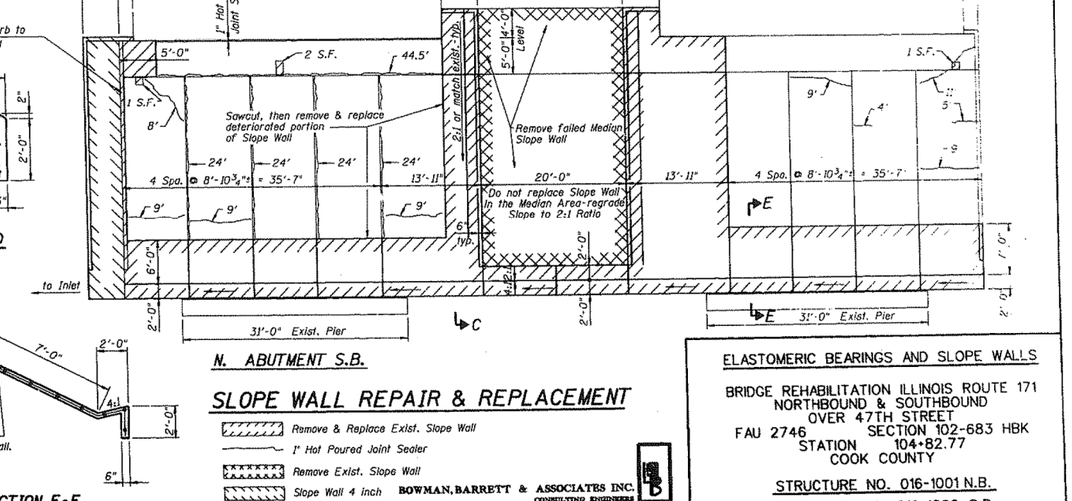
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 2746	2013-038B-R	COOK	383	1002
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8 OF
SHEETS 8-14



S. ABUTMENT N.B.

S. ABUTMENT S.B.



N. ABUTMENT S.B.

SLOPE WALL REPAIR & REPLACEMENT

- Remove & Replace Exist. Slope Wall
- 1" Hot Poured Joint Sealer
- Remove Exist. Slope Wall
- Slope Wall 4 inch

BOWMAN, BARRETT & ASSOCIATES INC.
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JOB NO. 124

ELASTOMERIC BEARINGS AND SLOPE WALLS

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.

STRUCTURE NO. 016-1000 S.B.

DESIGNED	JAA
CHECKED	ELD
DRAWN	JAA
CHECKED	ELD

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	PLOT DATE = 12/20/2012	CHECKED - RMM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (22 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX22 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	310
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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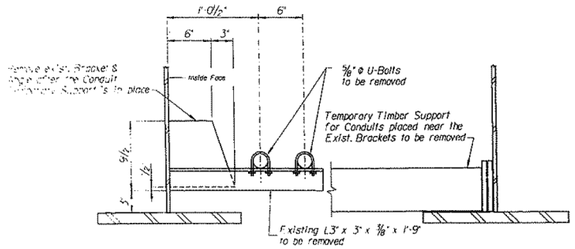
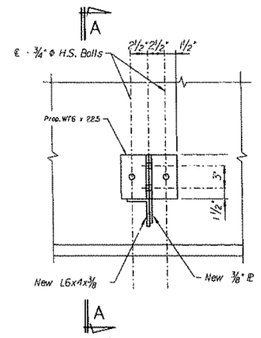
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 2746	102-683 HBK	COOK	585	103
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. S-12
SHEETS S-14

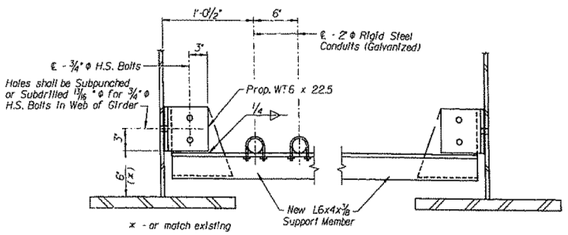


CONDUITS SUPPORT REMOVAL

25 Locations, Southbound Bridge
25 Locations, Northbound Bridge

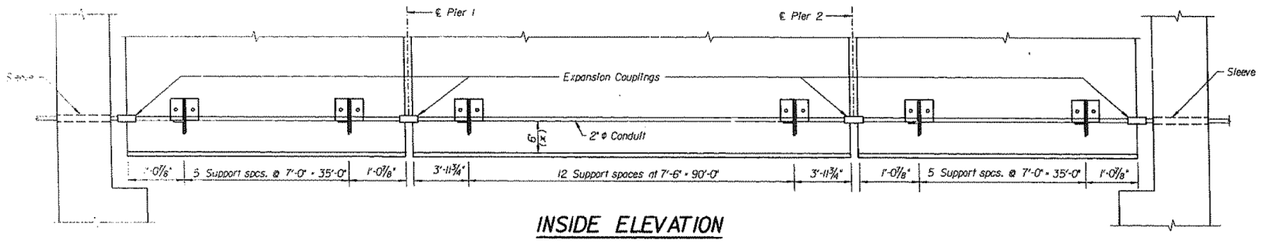


ELEVATION



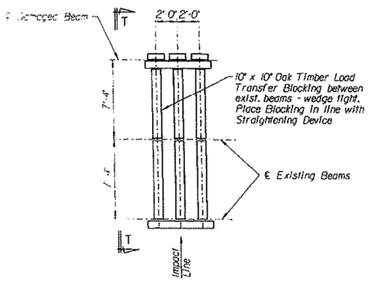
SECTION A - A

CONDUIT SUPPORT RECONSTRUCTION

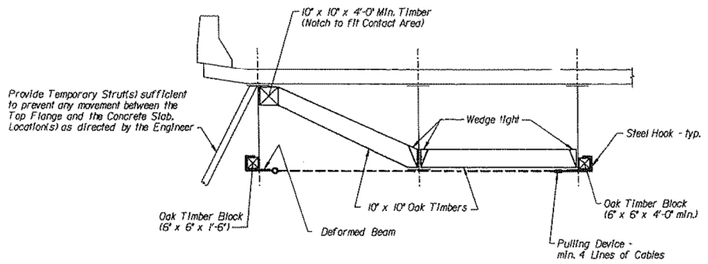


INSIDE ELEVATION

Hanger Location on Inside West Fascia Girder - Southbound Bridge,
Similar for East Fascia Girder - Northbound Bridge.



PULLING DEVICE - PARTIAL PLAN



SECTION T - T

SUGGESTED BEAM STRAIGHTENING METHOD

Estimated Length of Beam Straightening = 33 feet.

NOTES FOR BEAM STRAIGHTENING

1. All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled 13/16 " ø and reamed in the field to ⅞" ø for ⅞" ø high strength bolts (except as noted on the plans) after new structural steel sections are properly fitted into position.
2. After the beam straightening operations have been completed, the field Engineer shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. Cost to be incidental to "Beam Straightening". See Special Provisions.
3. The beam straightening as described on the plans shall be performed by mechanical means only. The use of heat will not be allowed to facilitate the straightening process. See Special Provisions.
4. If the method of straightening differs from that shown on the plans, it shall be approved by the Engineer prior to ordering materials and installation.
5. All materials used in the straightening of the beam shall be included in the pay item "Beam Straightening".
6. When noted by the field Engineer, the Contractor shall grind all cracked welds parallel to the direction of the existing weld and not perpendicular to the weld (no live load on beams). The weld shall then be replaced.
7. Grind existing nicks, gouges and shallow cracks in the damaged beam. Ground surfaces shall be inspected for cracks using liquid dye penetrant prior to initiating any beam straightening operations. Cost is incidental to "Beam Straightening". Any cracks that cannot be removed by grinding approximately ¼" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition.
8. Oil and all loose paint shall be removed from the damaged beam in the area of impact.

NOTES FOR CONDUIT BRACKET REMOVAL AND REPLACEMENT

1. All new structural steel shall conform to AASHTO Classification M-270 Grade 36.
2. All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled 13/16 " ø and reamed in the field to ⅞" ø for ⅞" ø high strength bolts (except as noted on the plans) after new structural steel sections are properly fitted into position.
3. The Contractor shall provide support and/or shoring systems in the area of existing bracket removal. The support and/or shoring systems shall be approved by the Engineer. Such approval will not relieve the Contractor of responsibility for the safety of the structure. See Special Provisions.
4. After the brackets have been removed, the girder web shall be ground smooth.
5. The Contractor shall grind all welds, that connect existing bracket to web, parallel to the direction of the existing weld and not perpendicular to the weld.
6. Grind existing nicks, gouges and shallow cracks in the web of the beam. Ground surfaces shall be inspected for cracks using liquid dye penetrant. Cost is incidental to "Structural Steel Repair." Any cracks that can not be removed by grinding approximately ¼" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition.
7. Calculated weight of new structural steel = 6600 lbs., including bolts.
8. All contact surfaces of joints for the brackets shall be free of paint or lacquer.
9. Holes shall be subpunched or subdrilled and reamed in the field as noted on the plans.
10. All areas of paint damage in the repair areas shall be cleaned and painted as specified by "Cleaning and Painting Existing Steel Structures, Partial removal (Modified SSPC SP3) Surface Preparation."

QUANTITIES		
Conduit Bracket Removal	L. SUM	
Furnishing and Erecting Structural Steel	POUND	6600
Structural Steel Repair	POUND	2049

DESIGNED	LM
CHECKED	ELD
DRAWN	JAA
CHECKED	ELD

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
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JOB NO. 124

BEAM STRAIGHTENING & CONDUIT BRACKET REPLACEMENT
BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER 47TH STREET
FAU 2746 SECTION 102-683 HBK
STATION 104+82.77
COOK COUNTY

STRUCTURE NO. 016-1001 N.B.
STRUCTURE NO. 016-1000 S.B.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (23 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX23 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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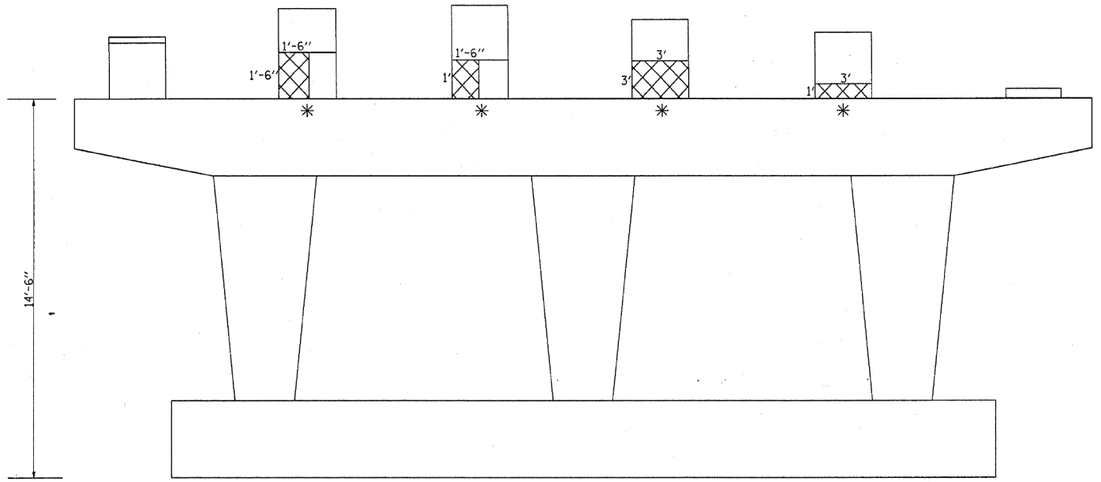
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



PIER 1 (NORTH FACE)
(LOOKING SOUTH)

PIER 1 BILL OF MATERIAL	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE > 5"	SQ FT	16
TEMPORARY SHORING AND CRIBBING	EA	4

BEAM REACTIONS TABLE

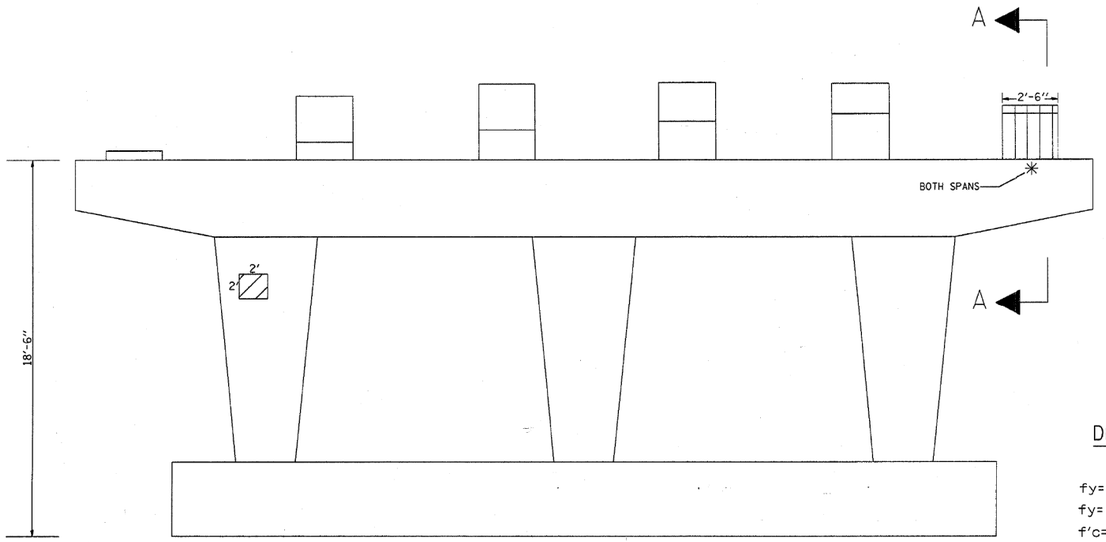
D.L.	62.6 K
L.L.	43.5 K
IMP.	9.7 K
TOTAL	115.8 K

PIER 1 & 2
SPAN 2

BEAM REACTIONS TABLE

D.L.	22 K
L.L.	36.8 K
IMP.	11 K
TOTAL	69.8 K

PIER 1 & 2
SPAN 1 & 3



PIER 2 (SOUTH FACE)
(LOOKING NORTH)

✳ TEMPORARY SHORING AND CRIBBING

PIER 2 BILL OF MATERIAL	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE > 5"	SQ FT	15
STRUCTURAL REPAIR OF CONCRETE ≤ 5"	SQ FT	4
TEMPORARY SHORING AND CRIBBING	EA	2
CONCRETE REMOVAL	CU YD	.3
CONCRETE STRUCTURES	CU YD	.3
REINFORCEMENT BARS, EPOXY COATED	POUND	70
FURNISHING & ERECTING STRUCTURAL STEEL	POUND	200
ANCHOR BOLTS, 1"Ø	EACH	4

DESIGN STRESSES
FIELD UNITS

fy= 60,000*(REINFORCEMENT)
fy= 36,000*(AASHTO M-270 GR 36)
f'c= 3,500 psi

* psi

STRUCTURAL REPAIR OF CONCRETE > 5"

STRUCTURAL REPAIR OF CONCRETE ≤ 5"

CONCRETE REMOVAL & CONCRETE STRUCTURES

SHEET 1 OF 3

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 1: SN 016-1000
PIERS STRUCTURAL REPAIR **SHEET 1 OF 4**
SCALE: | SHEET NO. | OF | SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	2007-0071	VARIOUS	25	7
		CONTRACT NO. 60C36		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (24 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX24 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	312
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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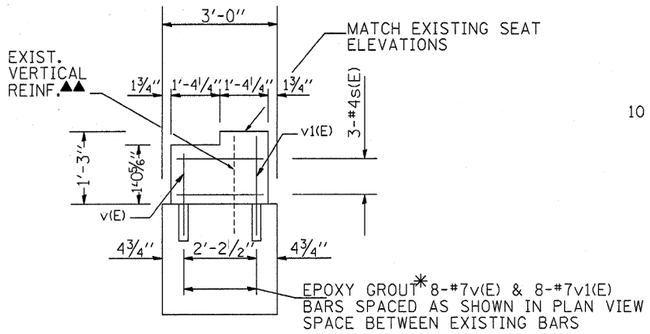
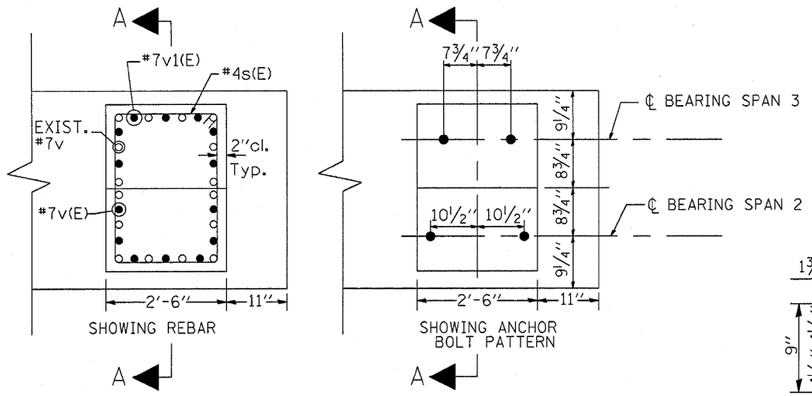
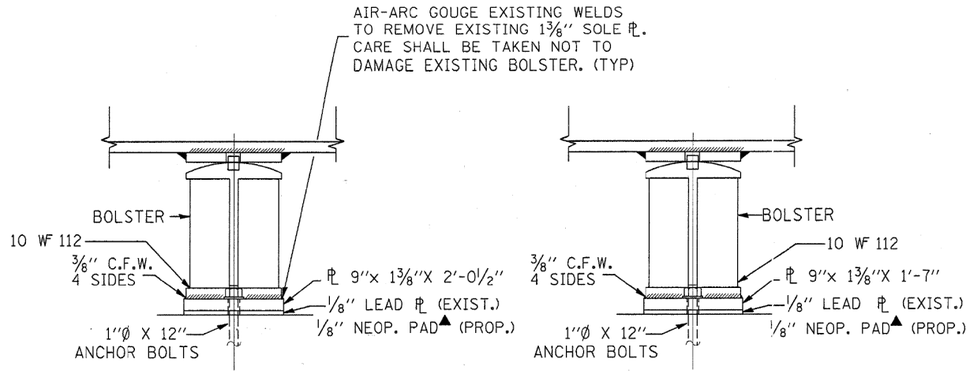


SECTION A-A



DETAIL A
PLAN VIEW

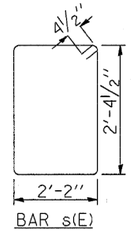


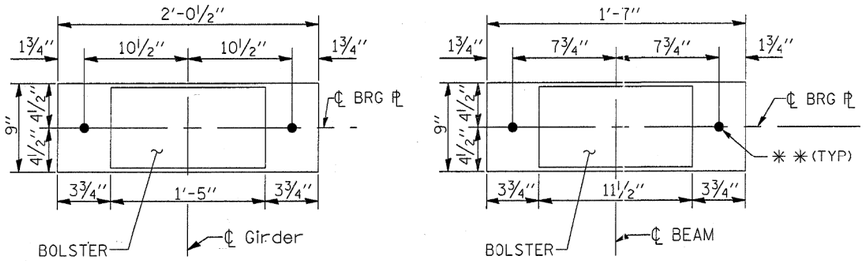
▲ New ⅛" elastomeric neoprene leveling pad according to Article 1052.02 of the Standard Specifications. Cost included with Structural Steel.

BAR LIST

BAR	NO	SIZE	LENGTH	SHAPE
s(E)	3	#4	9'-10"	
v(E)	7	#7	1'-7"	
v1(E)	7	#7	1'-10"	

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED





PLAN VIEW
SHOWING SOLE PLATE

✳ DRILL & EPOXY GROUT 9" MINIMUM INTO THE EXISTING CONCRETE ACCORDING TO ART. 584 OF THE STD. SPECS.

▲▲ CLEAN, STRAIGHTEN & INCORPORATE EXISTING VERTICAL REINFORCEMENT INTO NEW CONSTRUCTION.

✳✳1½"Ø HOLES FOR 1"Ø ANCHOR BOLTS 2½"X 2½" X5⁄16" ℙ WASHERS UNDER NUT.

NOTE:

REMOVE EXIST. SOLE-ℙS, LEAD ℙS AND ANCHOR BOLTS. COST OF REMOVAL INCLUDED IN THE COST OF CONCRETE REMOVAL. INSTALL NEW SOLE ℙS, ⅛" NEOP. PADS & ANCHOR BOLTS WITH ℙ WASHERS & NUTS.

PRIOR TO ORDER ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT AND SHIM THICKNESS DIMENSIONS

SHEET 3 OF 3

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 1: SN 016-1000
STRUCTURAL DETAILS SHEET 3 OF 4
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	2007-0071	VARIOUS	25	9
		CONTRACT NO. 60C36		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (25 OF 25)
STRUCTURE NO. 016-1000/1001
SHEET NO. SAX25 OF SAX25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	313
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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Benchmark: Square cut in N.W. corner of Traffic Control Box north of Joliet Road 20' ± east of the IL 171 Bridge - El. 611.99

Existing Structure:
The structure is a six simple span, composite multi-beam bridge with a 7½ inch reinforced concrete deck. The original structure was built in 1964. In 1994, the approach slab, deck, parapets, and joints were replaced, one fascia beam was added to the west with added slopewall, piers and abutments were widened, steel painted, fixed and expansion bearings were replaced, and substructure was repaired. In 1998, substructure concrete was repaired.

A crossover shall be utilized to maintain traffic during construction.

No salvage.

DESIGN SPECIFICATIONS

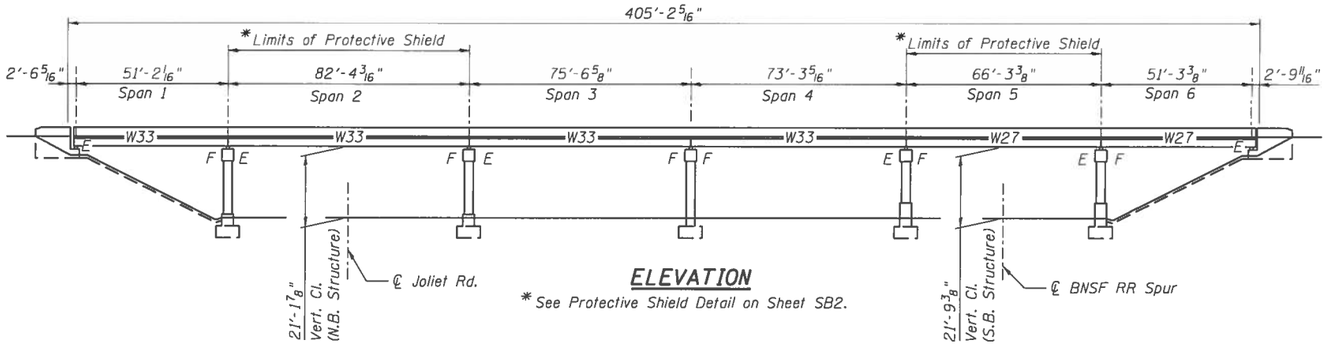
2002 AASHTO Standard Specifications for highway Bridges, 17th Edition

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 36,000 psi (structural steel)

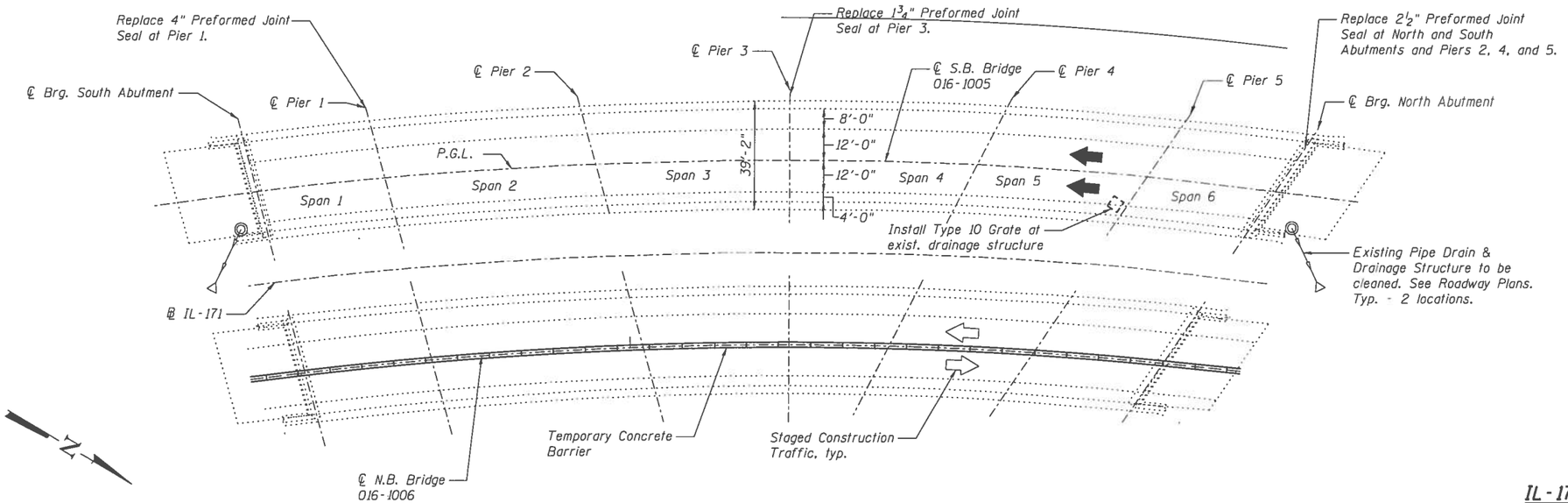
SCOPE OF WORK

1. Repair abutments and piers with epoxy crack sealing.
2. Structural concrete repair of abutments and piers.
3. Replace all preformed joint seals.
4. Vegetation removal.
5. Install grate at existing drainage structure located near southeast end of Pier 5.
6. Clean existing deck floor drains.
7. Clean and seal bridge deck, approach slabs and parapets.
8. Tighten loose nuts of the anchor bolts on west fascia bearing on north side of Pier 1.
9. Remove abandoned conduit attached to girder.

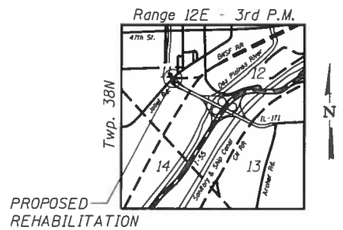


ELEVATION

* See Protective Shield Detail on Sheet SB2.



PLAN



LOCATION SKETCH

KURT J. NAUS
081-006678
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2014
DATE: 06-23-2014

GENERAL PLAN AND ELEVATION
IL-171 OVER JOLIET ROAD & BNSF RR SPUR
FAP 372 - SECTION 2013-038B-R
COOK COUNTY
STATION 77+49.49
STRUCTURE NO. 016-1005 (SB)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. SB1 OF SB6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	314
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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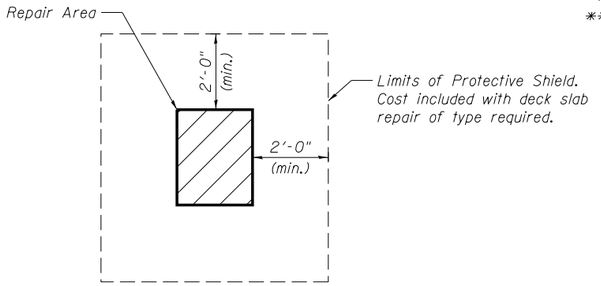
GENERAL NOTES

1. 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.
2. Protective Coat shall be applied to the entire top surface of the deck and approach slabs and the tops and inside vertical faces of all parapets. All surfaces to be sealed shall be cleaned thoroughly prior to sealer application.
3. A crossover shall be utilized to maintain traffic during construction.
4. There are 17 floor drains on this bridge. The floor drains shall be cleaned with the bridge deck prior to application of the Protective Coat. Cost included with "Protective Coat".
5. Cost of vegetation removal to be included with "Selective Clearing". See Special Provision.
6. Type 10 Grate to be installed at existing drainage structure located near the southeast end of Pier 5. Steel plate currently covering the drainage structure shall be removed and disposed of. Cost included with "Grates, Type 10".

INDEX OF SHEETS

For existing bridge plans, see Sheets SBX1 thru SBX7, immediately following Sheet SB6.



PROTECTIVE SHIELD DETAIL

TOTAL BILL OF MATERIAL

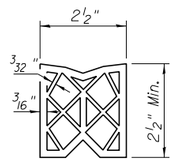
	ITEM	UNIT	SUPER	SUB	TOTAL
	Protective Coat	Sq Yd	2,257		2,257
*	Preformed Joint Seal 1 3/4"	Foot	39.0		39.0
*	Preformed Joint Seal 2 1/2"	Foot	227.5		227.5
*	Preformed Joint Seal 4"	Foot	42.0		42.0
**	Epoxy Crack Injection	Foot		31	31
	Grates, Type 10	Each		1	1
	Remove Conduit Attached to Structure	Foot	810		810
**	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft		168	168
**	Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq Ft		9	9
***	Deck Slab Repair (Full Depth, Type I)	Sq Yd	5		5
***	Deck Slab Repair (Full Depth, Type II)	Sq Yd	5		5
***	Deck Slab Repair (Partial)	Sq Yd	10		10
****	Selective Clearing	Unit		2	2

* Includes cost of Removal and Disposal of Existing Joint Seals.

** Quantity includes a contingency (above the amounts shown in the bills of material) to account for uncertainties associated with the condition of the existing substructure and the age of the original inspection (2008-9). Actual repair areas will be determined by the Engineer in the field.

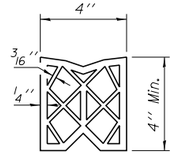
*** The quantity shown is an estimate. Actual repair areas and locations shall be determined by the Engineer and shown on As-Built plans.

**** The quantity for this work is estimated. The intent for this work is to remove accumulations of rubbish, vegetation, etc., on the existing slopewalls and other areas.



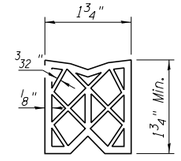
PREFORMED JOINT SEAL (2½")

(Abutments, Piers 2, 4, & 5)



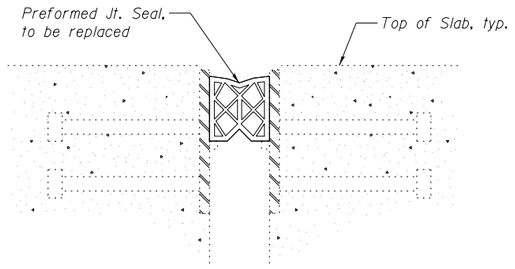
PREFORMED JOINT SEAL (4")

(Pier 1)

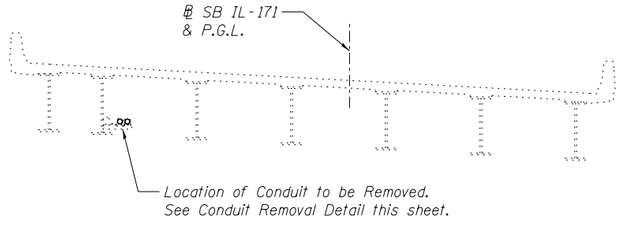


PREFORMED JOINT SEAL (1¾")

(Pier 3)

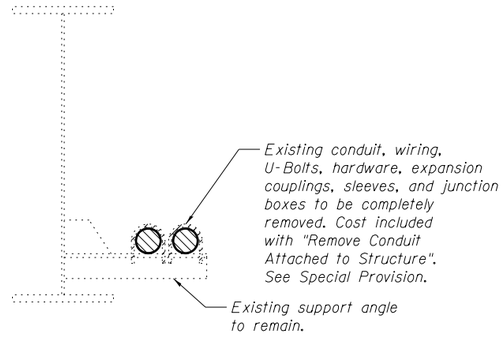


PREFORMED JOINT SEAL PLACEMENT DETAIL



SECTION - CONDUIT REMOVAL LOCATION

(Looking North)



CONDUIT REMOVAL DETAIL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, BILL OF MATERIAL AND INDEX OF SHEETS
STRUCTURE NO. 016-1005
SHEET NO. SB2 OF SB6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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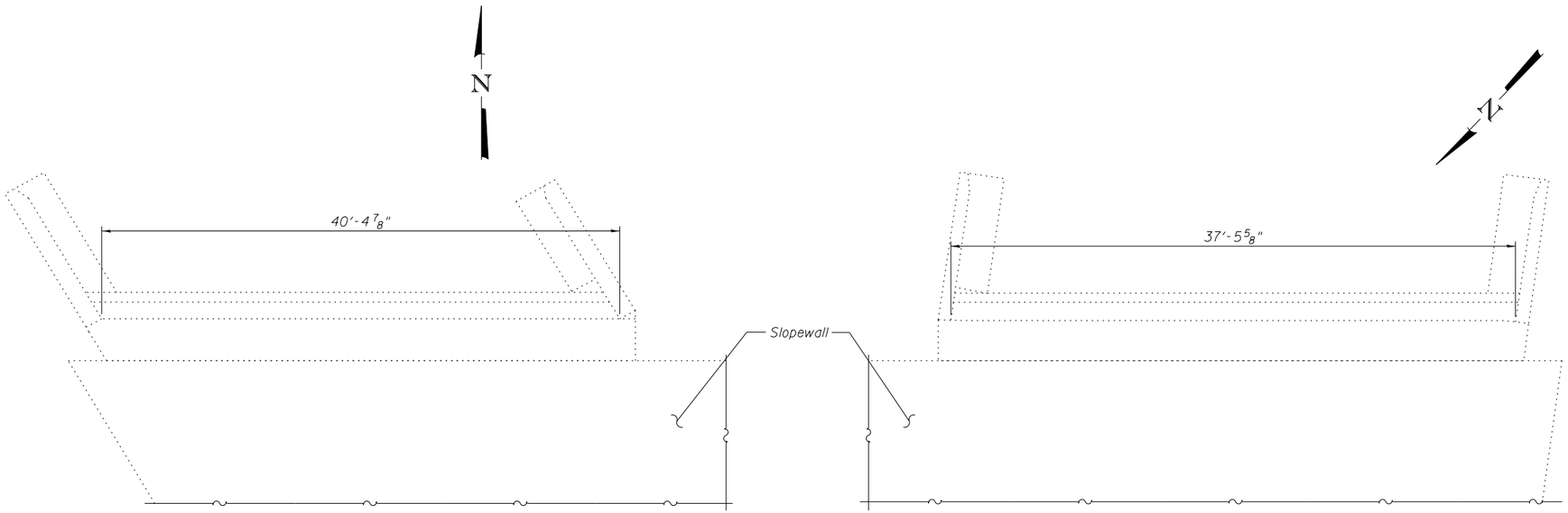
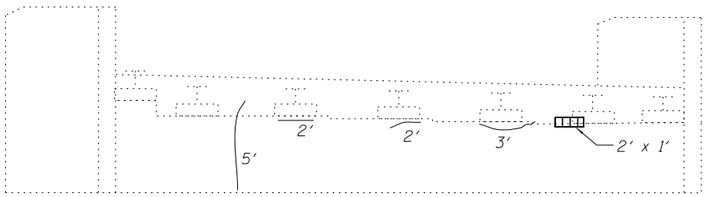
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

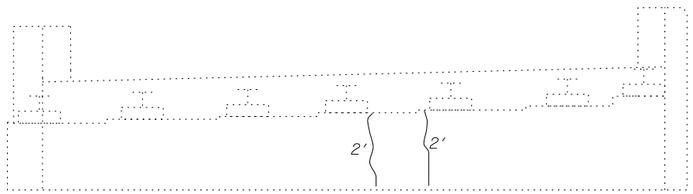


PLAN - NORTH ABUTMENT

PLAN - SOUTH ABUTMENT



ELEVATION - NORTH ABUTMENT



ELEVATION - SOUTH ABUTMENT

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	2
	Epoxy Crack Injection	Foot	16

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS – ABUTMENTS
STRUCTURE NO. 016–1005
SHEET NO. SB3 OF SB6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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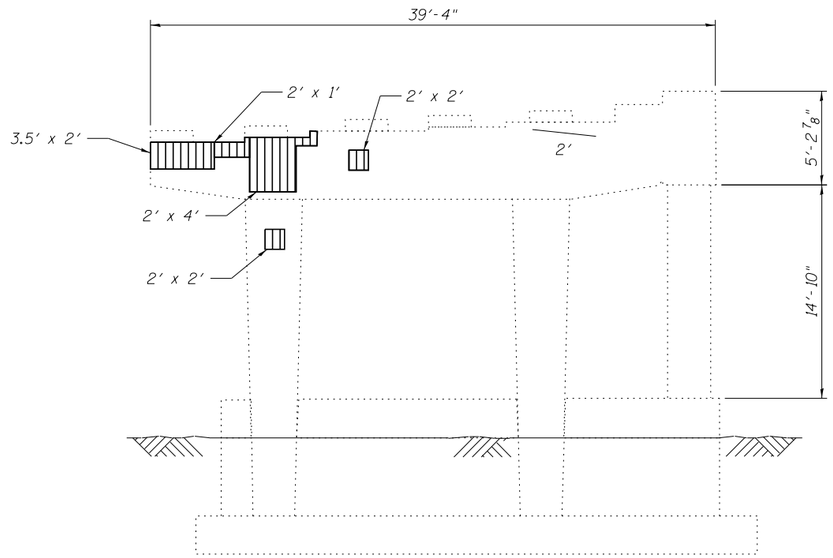
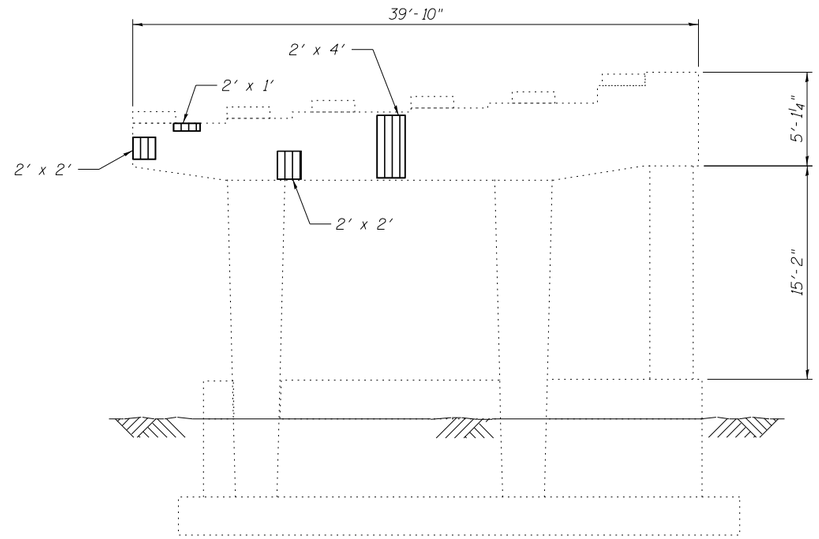
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



PIER 1
(Looking South)



PIER 2
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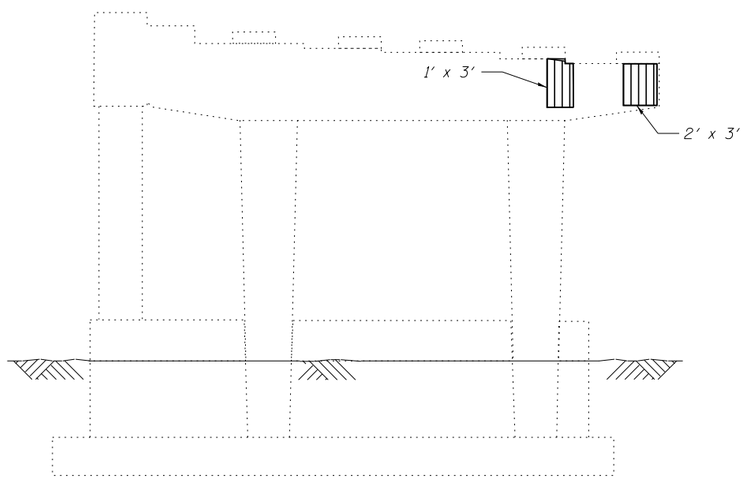

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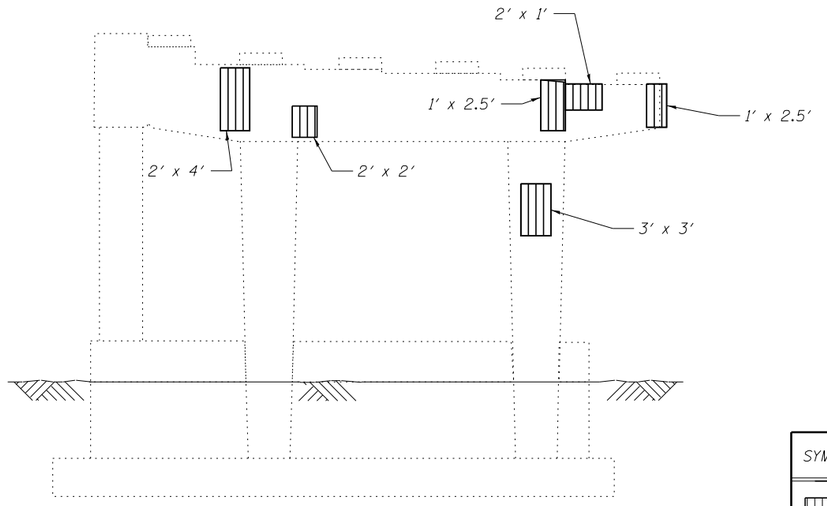

PIER 2
(Looking North)

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	80
	Epoxy Crack Injection	Foot	2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS – PIERS 1 & 2
STRUCTURE NO. 016–1005
SHEET NO. SB4 OF SB6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	317
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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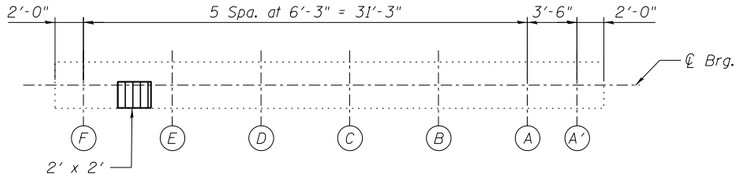

PIER 3
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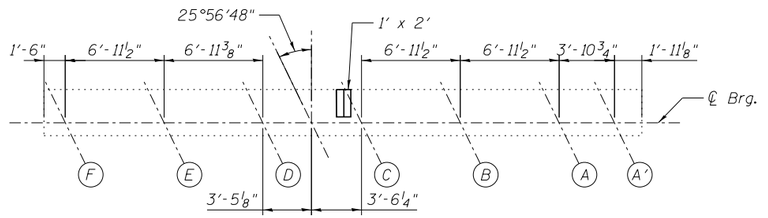

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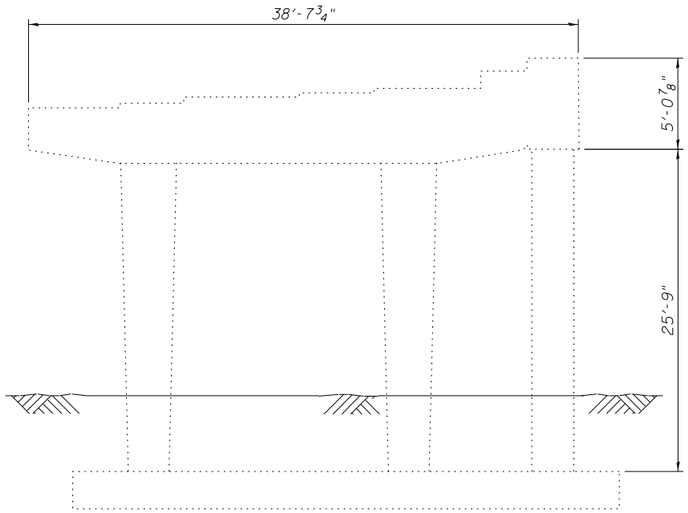

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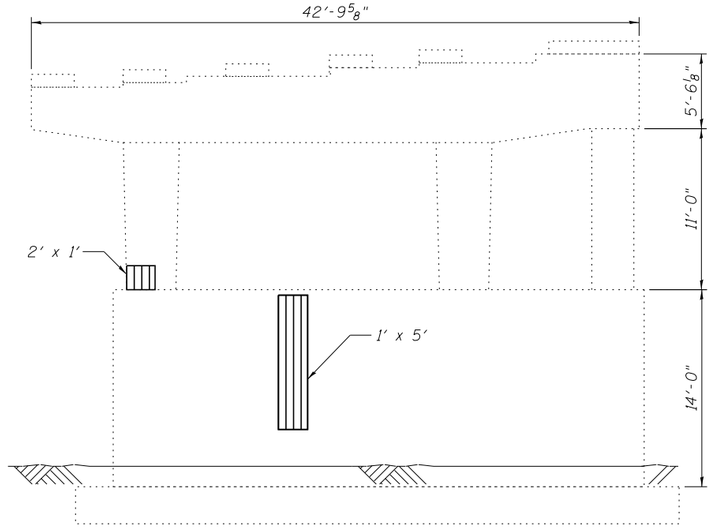

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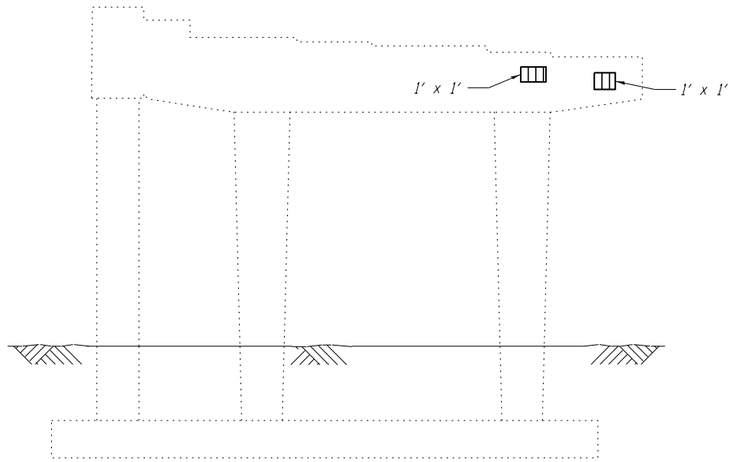
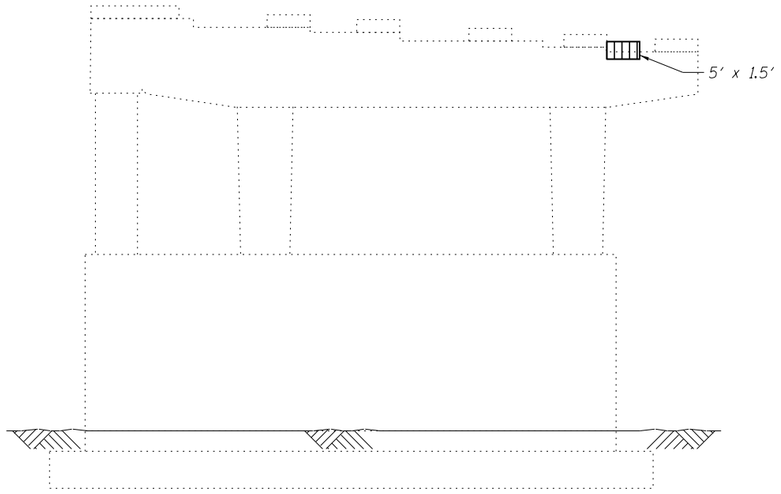


PIER 3
(Looking North)



PIER 4
(Looking North)

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
▥	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	23

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS – PIERS 3 AND 4
STRUCTURE NO. 016–1005
SHEET NO. SB5 OF SB6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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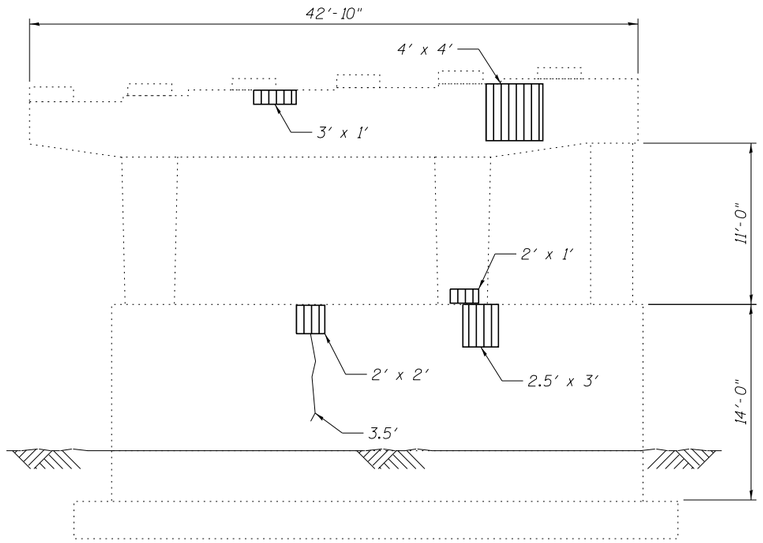
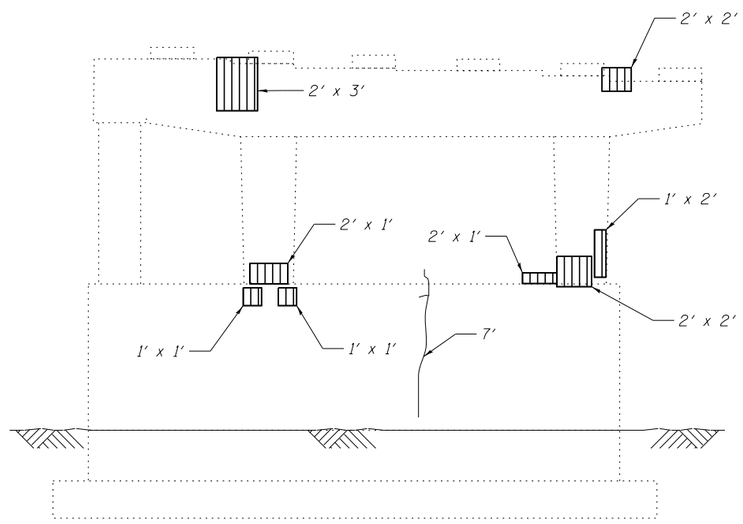
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



PIER 5
(Looking South)



PIER 5
(Looking North)

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	55
	Epoxy Crack Injection	Foot	11

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME = 016-1005-60J16-006-pier 5.dgn	USER NAME = tjanicke	DESIGNED - CMK	REVISED -
		CHECKED - JAW	REVISED -
	PLOT SCALE =	DRAWN - CMK	REVISED -
	PLOT DATE = 6/23/2014	CHECKED - JAW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS – PIER 5
STRUCTURE NO. 016–1005
SHEET NO. SB6 OF SB6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	319
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R. & L. F. A. U. 2746	606-628VB	COOK	383	1006
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-1
SHEETS S-48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark

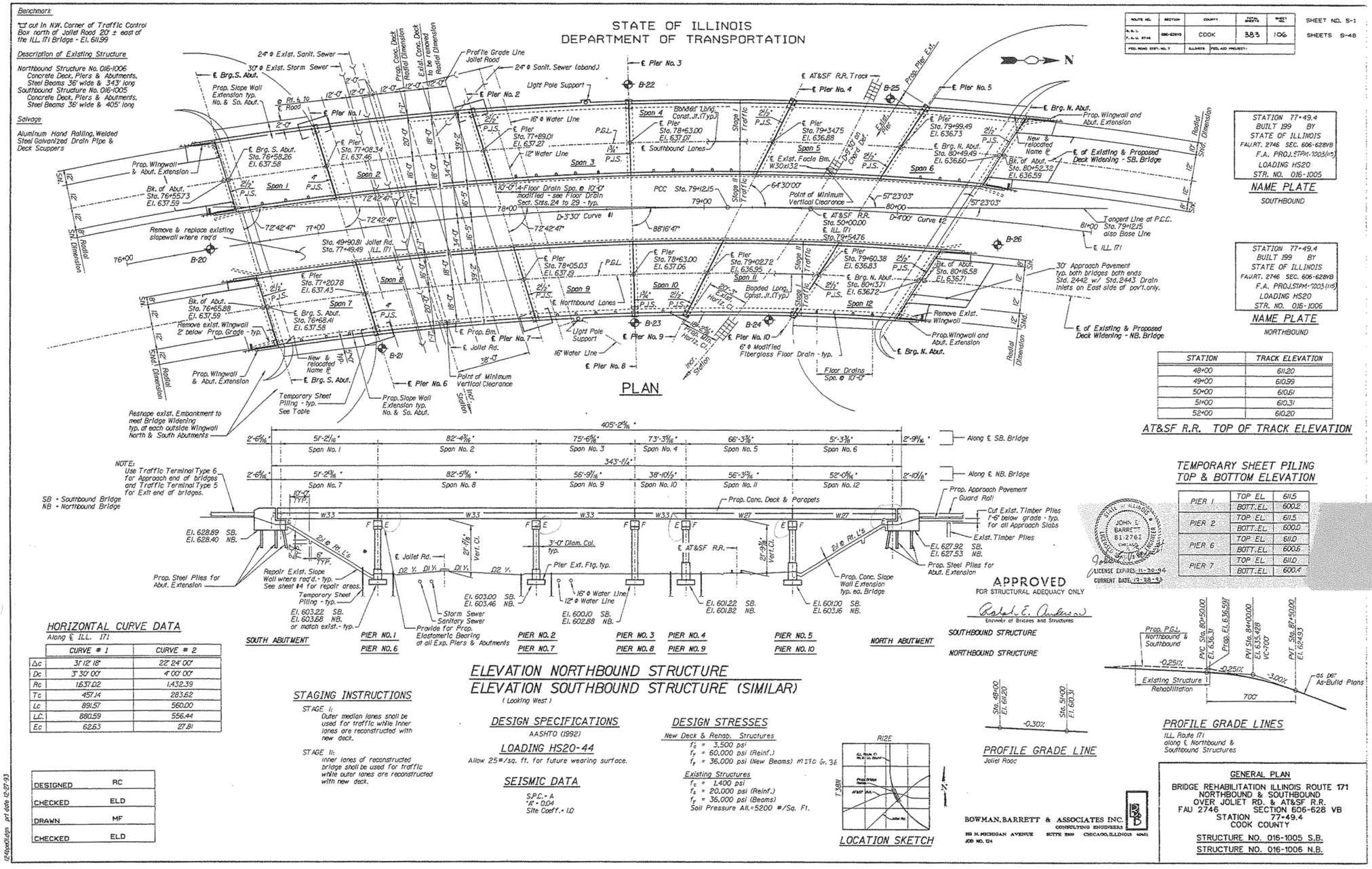
"□" cut in NW. Corner of Traffic Control Box north of Joliet Road 20' ± east of the ILL. 171 Bridge - El. 611.99

Description of Existing Structure

Northbound Structure No. 016-1006
Concrete Deck, Piers & Abutments,
Steel Beams 36' wide & 343' long
Southbound Structure No. 016-1005
Concrete Deck, Piers & Abutments,
Steel Beams 36' wide & 405' long

Salvage

Aluminum Hand Railing, Welded Steel Galvanized Drain Pipe & Deck Scuppers



HORIZONTAL CURVE DATA

Along ℄ ILL. 171

	CURVE # 1	CURVE # 2
Δc	31° 12' 18"	22° 24' 00"
Dc	3° 30' 00"	4° 00' 00"
Rc	1637.02	1,432.39
Tc	457.14	283.62
Lc	891.57	560.00
LC.	880.59	556.44
Ec	62.63	27.81

STAGING INSTRUCTIONS

STAGE I:
Outer median lanes shall be used for traffic while inner lanes are reconstructed with new deck.

STAGE II:
Inner lanes of reconstructed bridge shall be used for traffic while outer lanes are reconstructed with new deck.

DESIGN SPECIFICATIONS

AASHTO (1992)

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

SEISMIC DATA

S.P.C. - A
"A" - 0.04
Site Coeff. - 1.0

DESIGN STRESSES

New Deck & Rehab. Structures
f'_c = 3,500 psi
f_s = 60,000 psi (Reinf.)
f_y = 36,000 psi (New Beams) M 270 Gr. 36

Existing Structures
f'_c = 1,400 psi
f_s = 20,000 psi (Reinf.)
f_y = 36,000 psi (Beams)
Soil Pressure All.=5200 #/Sq. Ft.

STATION 77+49.4
BUILT 199 BY
STATE OF ILLINOIS
FAURT. 2746 SEC. 606-628VB
F.A. PROJ. STPM-1005(11C)
LOADING HS20
STR. NO. 016-1005

NAME PLATE
SOUTHBOUND

STATION 77+49.4
BUILT 199 BY
STATE OF ILLINOIS
FAURT. 2746 SEC. 606-628VB
F.A. PROJ. STPM-1005(11B)
LOADING HS20
STR. NO. 016-1006

NAME PLATE
NORTHBOUND

STATION	TRACK ELEVATION
48+00	611.20
49+00	610.99
50+00	610.61
51+00	610.31
52+00	610.20

AT&SF R.R. TOP OF TRACK ELEVATION

TEMPORARY SHEET PILING TOP & BOTTOM ELEVATION

PIER 1	TOP EL.	611.5
	BOTT. EL.	600.2
PIER 2	TOP EL.	611.5
	BOTT. EL.	600.0
PIER 6	TOP EL.	611.0
	BOTT. EL.	600.5
PIER 7	TOP EL.	611.0
	BOTT. EL.	600.4

JOHN E. BARRETT 81-2762 CHICAGO ILLINOIS
LICENSE EXPIRES: 11-30-96
CURRENT DATE: 12-28-95

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

SOUTHBOUND STRUCTURE
NORTHBOUND STRUCTURE

PROFILE GRADE LINE
Joliet Road

PROFILE GRADE LINES
ILL. Route 171
along ℄ Northbound & Southbound Structures

GENERAL PLAN

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER JOLIET RD. & AT&SF R.R.
FAU 2746 SECTION 606-628 VB
STATION 77+49.4
COOK COUNTY

STRUCTURE NO. 016-1005 S.B.
STRUCTURE NO. 016-1006 N.B.

DESIGNED	RC
CHECKED	ELD
DRAWN	MF
CHECKED	ELD

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
211 N. MICHIGAN AVENUE SUITE 2300 CHICAGO, ILLINOIS 60601
JOB NO. 124

NOTE:
Use Traffic Terminal Type 6 for Approach end of bridges and Traffic Terminal Type 5 for Exit end of bridges.

Restrape exist. Embankment to meet Bridge Widening typ. at each outside Wingwall North & South Abutments

Temporary Sheet Piling - typ. See Table

Remove & replace existing slopewall where req'd

Remove exist. Wingwall 2' below Prop. Grade - typ.

Remove Exist. Wingwall

Prop. Wingwall & Abut. Extension

Prop. Slope Wall Extension typ. No. & So. Abut.

Prop. Pier Ext.

Exist. Pier

Exist. Conc. Deck to be removed

Prop. Conc. Deck

Radial Dimension

Skew

Point of Minimum Vertical Clearance

Incr. Station

Light Pole Support

16" Water Line

Bonded Long. Const. Jt. (Typ.)

Stage I Traffic

Stage II Traffic

Tangent Line at P.C.C. Sta. 79+12.15 also Base Line

30' Approach Pavement typ. both bridges both ends Std. 2442 w/ Std. 2443 Drain Inlets on East side of pav't. only.

℄ of Existing & Proposed Deck Widening - SB. Bridge

℄ of Existing & Proposed Deck Widening - NB. Bridge

6" ø Modified Fiberglass Floor Drain - typ.

Floor Drains Spa. @ 10'-0"

Prop. Wingwall and Abut. Extension

New & relocated Name ℄

Bk. of Abut. Sta. 80+52.32 El. 636.59

Bk. of Abut. Sta. 80+16.58 El. 636.71

Ahead Back

Sta. 49+90.81 Joliet Rd.
Sta. 77+49.49 ILL. 171

Sta. 80+63.00 El. 637.06

Sta. 80+71.37 El. 636.72

Sta. 80+13.71 El. 636.72

Sta. 80+49.49 El. 636.60

Sta. 79+99.49 El. 636.73

Sta. 79+34.75 El. 636.88

Sta. 79+02.72 El. 636.95

Sta. 78+63.00 El. 637.07

Sta. 78+05.03 El. 637.19

Sta. 77+20.78 El. 637.43

Sta. 76+65.88 El. 637.59

Sta. 76+58.26 El. 637.58

Sta. 76+55.73 El. 637.59

Sta. 77+08.34 El. 637.46

Sta. 79+60.38 El. 636.83

Sta. 80+16.58 El. 636.71

Sta. 50+00.00 ℄ ILL. 171

Sta. 79+54.76 ℄ AT&SF R.R.

Sta. 79+12.15

Sta. 77+00

Sta. 76+00

Sta. 78+00

Sta. 79+00

Sta. 80+00

Sta. 81+00

Span 1 2½" P.J.S.
Span 2 4" P.J.S.
Span 3 2½" P.J.S.
Span 4 2½" P.J.S.
Span 5 2½" P.J.S.
Span 6 2½" P.J.S.
Span 7 4" P.J.S.
Span 8 2½" P.J.S.
Span 9 2½" P.J.S.
Span 10 2½" P.J.S.
Span 11 2½" P.J.S.
Span 12 2½" P.J.S.

D-3°30' Curve #1
D-4°00' Curve #2

72°42'47"
88°16'47"
64°30'00"
57°23'03"

PCC Sta. 79+12.15

Point of Minimum Vertical Clearance

℄ AT&SF R.R. Sta. 50+00.00

℄ Brg. N. Abut. Sta. 80+49.49

℄ Brg. N. Abut. Sta. 80+52.32

℄ Brg. S. Abut. Sta. 76+58.26

℄ Brg. S. Abut. Sta. 76+65.88

℄ Brg. S. Abut. Sta. 77+08.34

℄ Brg. N. Abut.

℄ Brg. S. Abut.

℄ Pier No. 1

℄ Pier No. 2

℄ Pier No. 3

℄ Pier No. 4

℄ Pier No. 5

℄ Pier No. 6

℄ Pier No. 7

℄ Pier No. 8

℄ Pier No. 9

℄ Pier No. 10

B-20 B-21 B-22 B-23 B-24 B-25 B-26

Prop. Wingwall & Abut. Extension

Prop. Slope Wall Extension typ. No. & So. Abut.

Rt. & to ℄ Road

Light Pole Support

16" Water Line

12" Water Line

24" ø Exist. Sanit. Sewer

30" ø Exist. Storm Sewer

24" ø Sanit. Sewer (aband.)

Profile Grade Line Joliet Road

Northbound & Southbound Lanes

℄ Joliet Rd.

℄ Prop. Brg.

Prop. Wingwall & Abut. Extension

Bk. of Abut. Sta. 76+55.73 El. 637.59

Bk. of Abut. Sta. 76+65.88 El. 637.59

Prop. Wingwall and Abut. Extension

Exist. Fascia Brn. W30x132

Exist. Facia Brn. W30x132

Span 1 Span 2 Span 3 Span 4 Span 5 Span 6 Span 7 Span 8 Span 9 Span 10 Span 11 Span 12

Stage I Traffic

Stage II Traffic

Radial Dimension

Skew

Incr. Station

Point of Minimum Vertical Clearance

Temporary Sheet Piling - typ. See Table

Prop. Steel Piles for Abut. Extension

Prop. Conc. Deck & Parapets

Prop. Approach Pavement Guard Rail

Cut Exist. Timber Piles 1'-6" below grade - typ. for all Approach Slabs

Exist. Timber Piles

Prop. Steel Piles for Abut. Extension

Prop. Conc. Slope Wall Extension typ. ea. Bridge

Repair Exist. Slope Wall where req'd. - typ. See sheet #4 for repair areas.

Temporary Sheet Piling - typ.

Provide for Prop. Elastomeric Bearing at all Exp. Piers & Abutments

Storm Sewer

Sanitary Sewer

Pier Ext. Fig. typ.

3'-0" Diam. Col. typ.

16" ø Water Line

12" ø Water Line

El. 628.89 SB.
El. 628.40 NB.

El. 603.22 SB.
El. 603.68 NB. or match exist.- typ.

El. 603.00 SB.
El. 603.46 NB.

El. 600.10 SB.
El. 602.88 NB.

El. 601.22 SB.
El. 601.82 NB.

El. 601.00 SB.
El. 603.16 NB.

El. 627.92 SB.
El. 627.53 NB.

SOUTH ABUTMENT
PIER NO. 1
PIER NO. 6
PIER NO. 2
PIER NO. 7
PIER NO. 3
PIER NO. 8
PIER NO. 4
PIER NO. 9
PIER NO. 5
PIER NO. 10
NORTH ABUTMENT

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	PLOT DATE = 6/23/2014	CHECKED - JAW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 1 OF 7
STRUCTURE NO. 016-1005
SHEET NO. SBX1 OF SBX7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	320
			CONTRACT NO. 60J16	
		ILLINOIS	FED. AID PROJECT	

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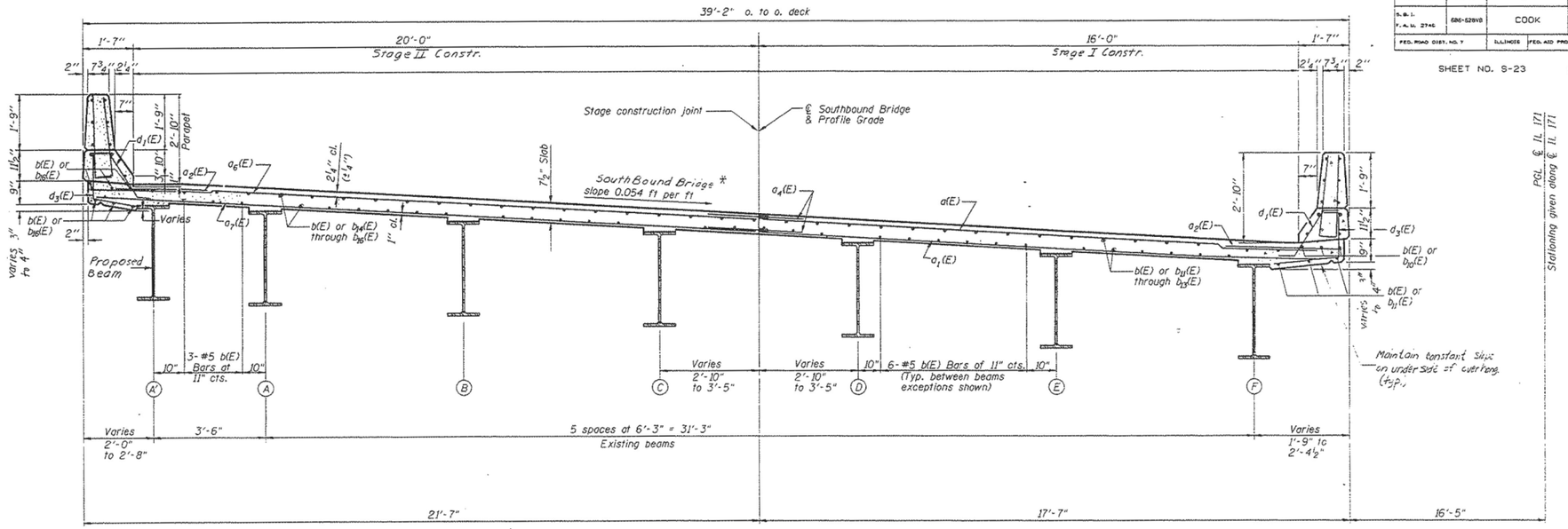
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.U. 2746	606-628VB	COOK	385	128
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-23 SHEETS S-48



NORTHBOUND BRIDGE CROSS SECTION
(LOOKING SOUTH)

SOUTHBOUND BRIDGE CROSS SECTION
(Looking North)

Bars shown are specific to span #4; other spans are similar.

* South Bound Bridge & North Bound Bridge are symmetrical by 180° Rotation, & Keep the Superelevation of both bridges slope down toward the East

Notes: See Sheet #s S11 thru S22 for superstructure details and Sheet #s S24 thru S29 for Bills of Material. Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line. See Sheet #s S24 thru S29 for parapet reinforcement.

DESIGNED	MK
CHECKED	JAA
DRAWN	EF
CHECKED	JAA

DECK CROSS SECTION

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER JOLIET RD. & AT&SF R.R.
FAU 2746 SECTION 606-628 VB
STATION 77+49.4
COOK COUNTY
STRUCTURE NO. 016-1005 SOUTHBOUND
STRUCTURE NO. 016-1006 NORTHBOUND

BOWMAN, BARRETT & ASSOCIATES INC. CONSULTING ENGINEERS
223 N. MICHIGAN AVENUE SUITE 2300 CHICAGO, ILLINOIS 60601
JOB NO. 124

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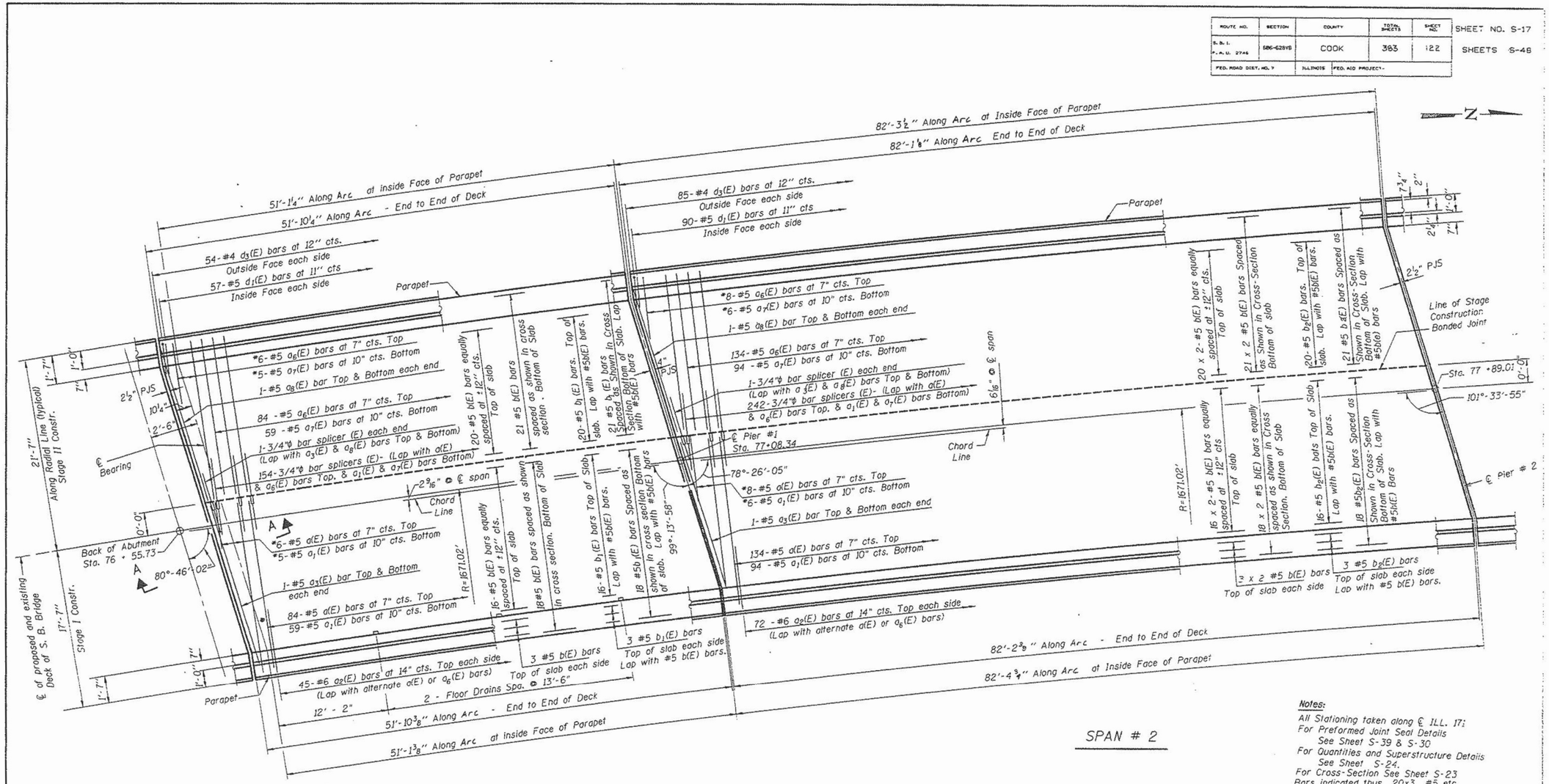
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 2 OF 7
STRUCTURE NO. 016-1005
SHEET NO. SBX2 OF SBX7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	321
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S. B. I. F. A. U. 2746	606-628VB	COOK	383	122	SHEET NO. S-17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			SHEETS S-48



* Order a(E), a6(E), a1(E) & a7(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

MIN. BAR LAP

#5 BARS = 1'-8"

Notes:

All Stationing taken along ℄ ILL. 17;
For Preformed Joint Seal Details See Sheet S-39 & S-30
For Quantities and Superstructure Details See Sheet S-24.
For Cross-Section See Sheet S-23
Bars indicated thus 20x3 #5 etc. indicate 20 lines of bars with 3 lengths per line.

DESIGNED	MK
CHECKED	JAA
DRAWN	EF
CHECKED	JAA

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
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JOB NO. 124

DECK PLAN SPAN NO.1 AND SPAN NO.2

BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER JOLIET RD. & AT&SF R.R.
FAU 2746 SECTION 606-628 VB
STATION 77+49.4
COOK COUNTY

STRUCTURE NO. 016-1005 SOUTHBOUND

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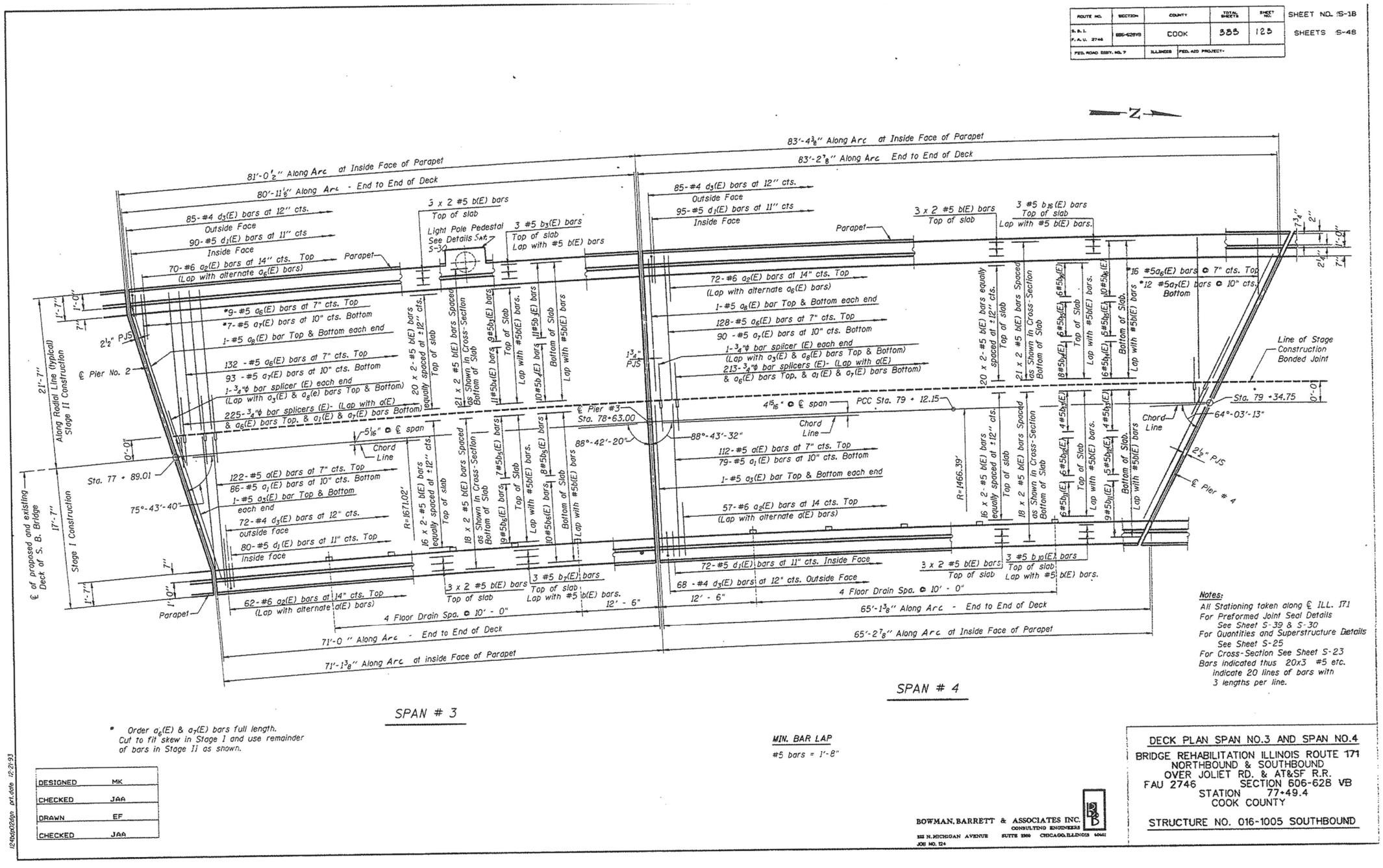
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 3 OF 7
STRUCTURE NO. 016-1005
SHEET NO. SBX3 OF SBX7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	322
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. U. 2746	606-628VB	COOK	385	125
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-18
SHEETS S-48



* Order $a_6(E)$ & $a_7(E)$ bars full length. Cut to fit skew in Stage I and use remainder of bars in Stage II as shown.

Notes:
All Stationing taken along ℄ ILL. 171
For Preformed Joint Seal Details See Sheet S-39 & S-30
For Quantities and Superstructure Details See Sheet S-25
For Cross-Section See Sheet S-23
Bars indicated thus 20x3 #5 etc. indicate 20 lines of bars with 3 lengths per line.

MIN. BAR LAP
#5 bars = 1'-8"

DESIGNED	MK
CHECKED	JAA
DRAWN	EF
CHECKED	JAA

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BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
333 N. MICHIGAN AVENUE SUITE 1900 CHICAGO, ILLINOIS 60601
JOB NO. 124

DECK PLAN SPAN NO.3 AND SPAN NO.4
BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER JOLIET RD. & AT&SF R.R.
FAU 2746 SECTION 606-628 VB
STATION 77+49.4
COOK COUNTY
STRUCTURE NO. 016-1005 SOUTHBOUND

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 4 OF 7
STRUCTURE NO. 016-1005
SHEET NO. SBX4 OF SBX7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	323
			CONTRACT NO. 60J16	
	ILLINOIS	FED. AID PROJECT		

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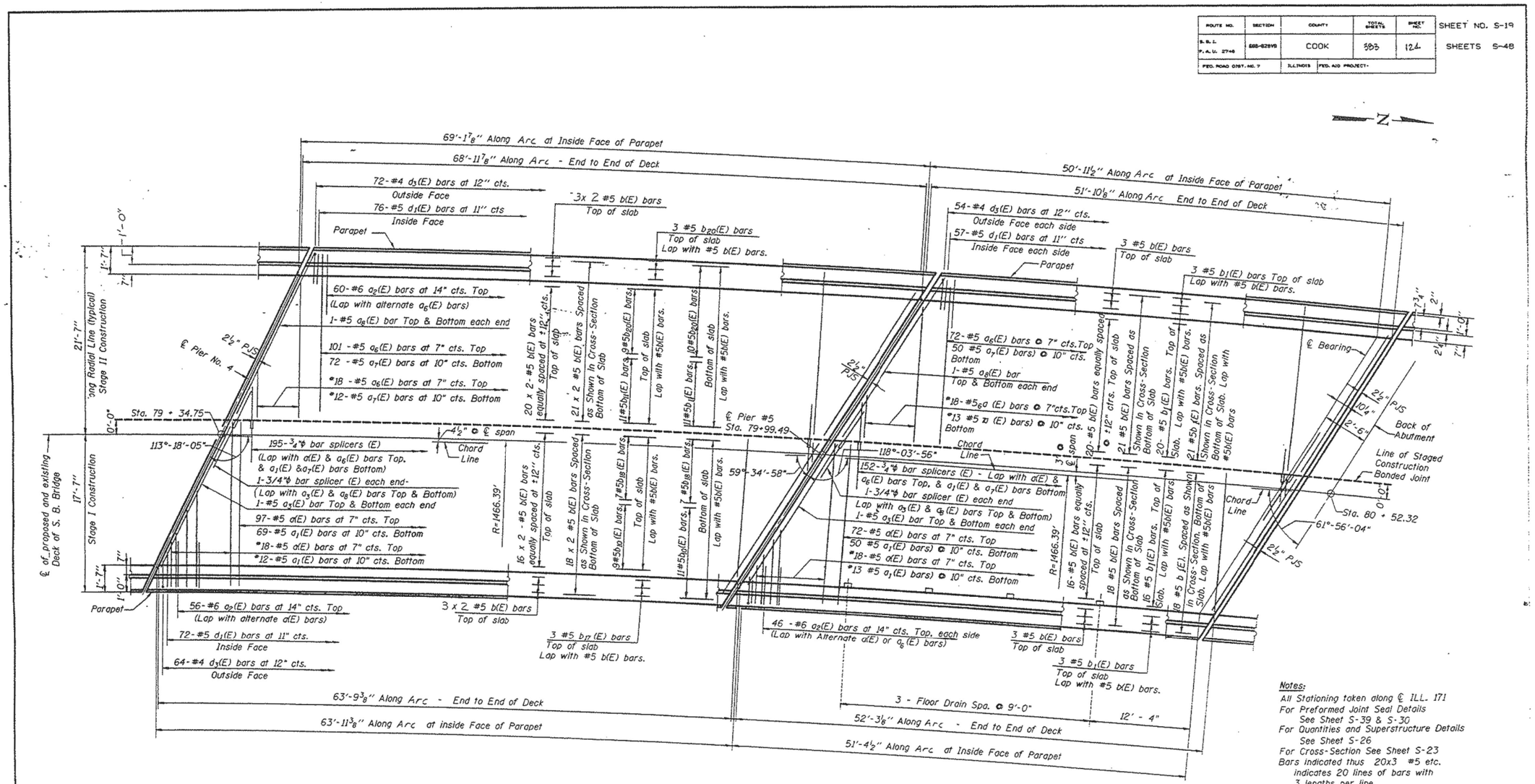
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. U. 2746	606-628VB	COOK	383	124
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-19
SHEETS S-48



* Order a(E) a_1(E), a_6(E) & a_7(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:
All Stationing taken along ℄ ILL. 171
For Preformed Joint Seal Details See Sheet S-39 & S-30
For Quantities and Superstructure Details See Sheet S-26
For Cross-Section See Sheet S-23
Bars indicated thus 20x3 #5 etc. indicates 20 lines of bars with 3 lengths per line.

MIN. BAR LAP
#5 bars = 1'-8"

DESIGNED	MK
CHECKED	JAA
DRAWN	EF
CHECKED	JAA

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
221 N. MICHIGAN AVENUE SUITE 2300 CHICAGO, ILLINOIS 60601
JOB NO. 124

DECK PLAN SPAN NO.5 AND SPAN NO.6
BRIDGE REHABILITATION ILLINOIS ROUTE 171
NORTHBOUND & SOUTHBOUND
OVER JOLIET RD. & AT&SF R.R.
FAU 2746 SECTION 606-628 VB
STATION 77+49.4
COOK COUNTY
STRUCTURE NO. 016-1005 SOUTHBOUND

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Chicago, Illinois 60601
312-565-0450 Job No. 10093

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		CHECKED - JAW	REVISED -
	PLOT SCALE =	DRAWN - CMK	REVISED -
	PLOT DATE = 6/23/2014	CHECKED - JAW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 5 OF 7
STRUCTURE NO. 016-1005
SHEET NO. SBX5 OF SBX7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	324
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. U. 2746	606-628VB	COOK	703	116
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

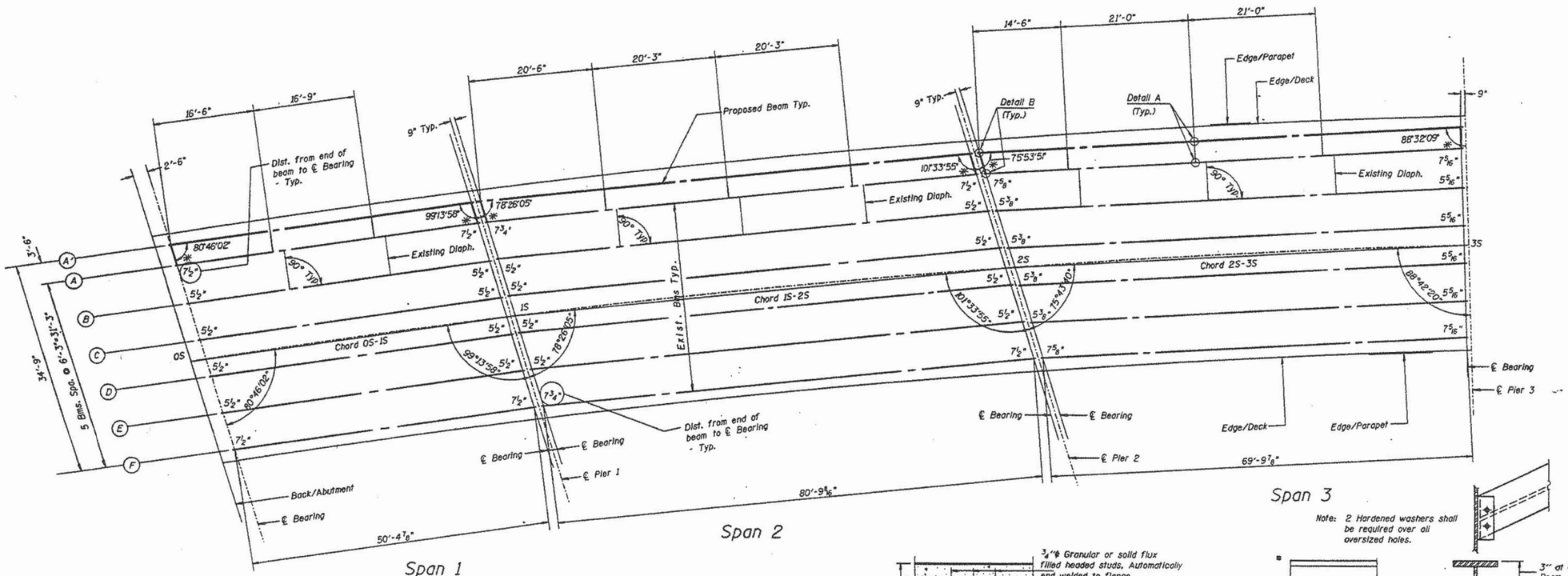
SHEET NO. S-11
SHEETS S-48

N

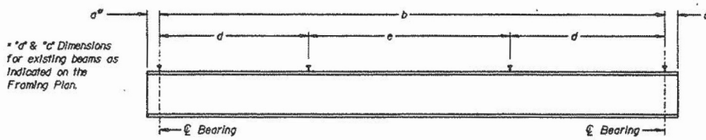
Note: For new beam table of Moments and Shears, see next sheet.

Contractor shall exercise extreme care to not damage the existing beams during removal of the concrete deck.

Saw cutting of existing slab over stringers will not be allowed.



* "d" & "e" Dimensions for existing beams as indicated on the Framing Plan.



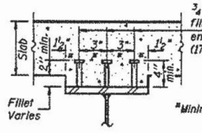
NEW BEAM DATA

Span	Bm Size	a	b	c	d	e	Top of Steel South	Top of Steel North	Bearing Ht. South	Bearing Ht. North	End Diaph. Length South	End Diaph. Length North
1	W33x118	7 1/2"	50'-4 7/8"	7 1/2"	25 @ 8 1/2"	14 @ 1'-7 1/2"	637.94	637.81	E 3 1/4"	F 1'-1 3/4"	3'-6 1/2"	3'-6 1/2"
2	W33x221	7 1/2"	80'-9 5/16"	7 1/2"	25 @ 10"	32 @ 1'-3"	637.81	637.60	E 4 5/8"	F 1'-2"	3'-6 1/8"	3'-6 1/8"
3	W33x221	7 7/8"	79'-4"	7 5/8"	25 @ 10"	31 @ 1'-3"	637.60	637.42	E 4 5/8"	F 1'-2"	3'-7 1/4"	3'-6"
4	W33x221	7 1/2"	81'-11 3/8"	8 1/4"	25 @ 10"	33 @ 1'-3"	637.41	637.22	F 1'-2"	E 4 5/8"	3'-6"	3'-10 3/4"
5	W27x178	10"	66'-9 1/2"	7 1/2"	37 @ 7 1/2"	27 @ 1'-0"	637.21	637.03	F 1'-2"	E 4 5/8"	3'-9 1/2"	4'-0 1/4"
6	W27x84	8 1/8"	50'-5 3/8"	7 1/2"	25 @ 6 1/2"	27 @ 10 5/8"	637.03	636.93	F 1'-1 3/8"	E 3 1/4"	3'-11 5/8"	3'-11 5/8"

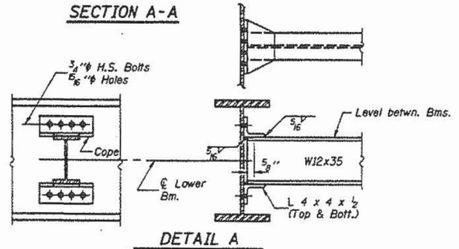
Notes:
All new beams shall have 3/4" ϕ x 4" shear studs, 3 across. See Section A-A.
All new end diaphragms are W12x40.
New intermediate diaphragms are W12x35, 3'-6" long.

Top of Steel elevations are for fabrication use only. Contractor shall leave existing studs in place, inspecting them for possible damage.

3/4"ϕ Granular or solid flux filled headed studs. Automatically end welded to flange. (1710 Req'd. Total)

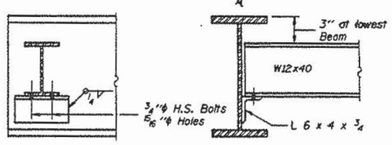


SECTION A-A



DETAIL A
All intermediate diaphragms

Note: 2 Hardened washers shall be required over all oversized holes.



DETAIL B
End diaphragm at new beam*

* End diaphragm connection to existing beam: In lieu of the weld shown above, the angle shall be bolted to the web. The existing bolts shall be removed, and the hole pattern shall be drilled into the new angle. Attach the existing and proposed angles back-to-back using 3/4" ϕ H.S. bolts

DESIGNED	JAA
CHECKED	ELD
DRAWN	JAA
CHECKED	ELD

12dtlDGdgn prt date 12-21-93

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
311 N. MICHIGAN AVENUE SUITE 1300 CHICAGO, ILLINOIS 60601
JOB NO. 124

FRAMING PLAN SPANS 1, 2, & 3

BRIDGE REHABILITATION ILLINOIS ROUTE 171 SOUTHBOUND
OVER JOLIET RD. & AT&SF R.R.
FAU 2746 SECTION 606-62B VB
STATION 77+49.4
COOK COUNTY

STRUCTURE NO. 016-1005 S.B.

FOR INFORMATION ONLY

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME = 016-1005-60J16-012-framing plan1.dgn	USER NAME = tjanicke	DESIGNED - CMK	REVISED -
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	PLOT DATE = 6/23/2014	CHECKED - JAW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 6 OF 7
STRUCTURE NO. 016-1005
SHEET NO. SBX6 OF SBX7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	325
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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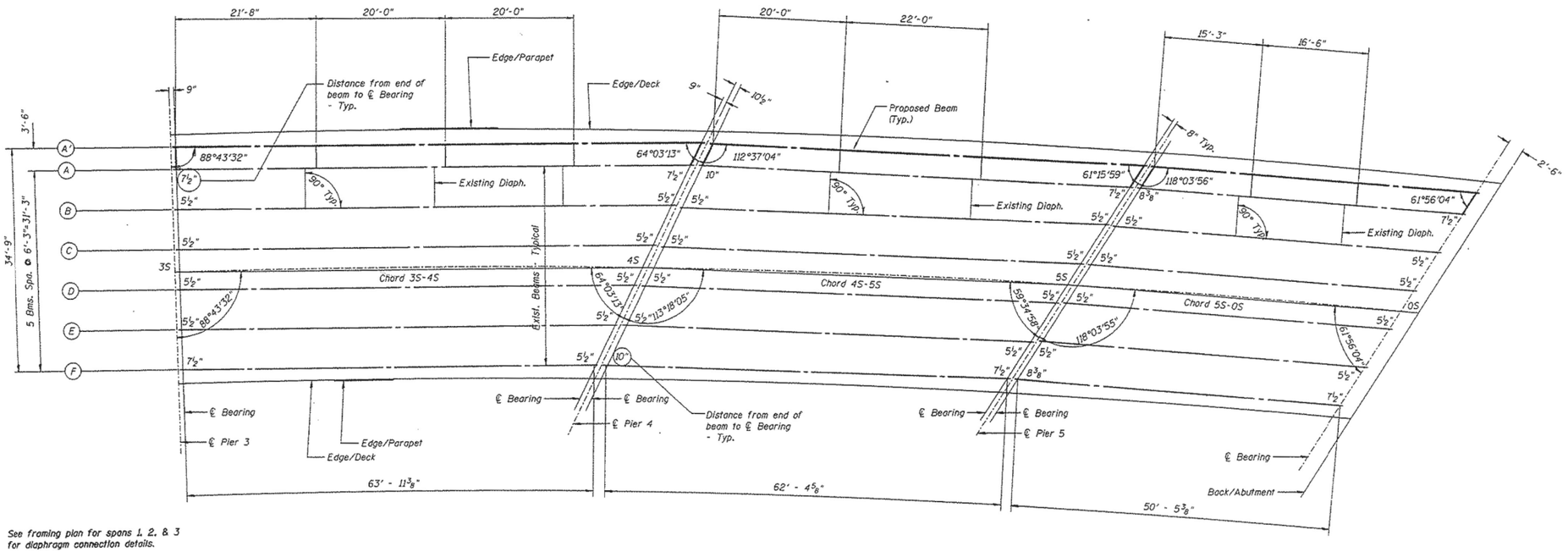
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. U. 2746	606-628VB	COOK	583	117
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-12
SHEETS S-48

Contractor shall exercise extreme care to not damage the existing beams during removal of the concrete deck.

Saw cutting of existing slab over stringers will not be allowed.



See framing plan for spans 1, 2, & 3 for diaphragm connection details.

Span 4 Span 5 Span 6

EXTERIOR GIRDER MOMENT TABLE					
		Sp. 4	Sp. 5	Sp. 7	Sp. 12
Similar for Spans		2, 3, 8	-	1, 9, 10	6, 11
Sections		W33X221	W27X178	W33X118	W27X84
Is	(in⁴)	12800	6990	5900	2850
Ic	(in⁴)	22410	13503	13337	7404
Ss	(in³)	755	503	359	214
Sc	(in³)	942	929	498	313
Z	(in³)	855	567	415	244
w	(K/ft.)	0.643	0.600	0.540	0.506
Mℓ	('K)	539	335	172	168
sℓ	(K/ft.)	0.488	0.488	0.488	0.488
Msℓ	('K)	409	272	155	162
Mℓ	('K)	483	373	253	262
M (Imp)	('K)	117	97	72	74
⅔(Mℓ+I)	('K)	1000	784	544	561
Mo	('K)	2633	1809	1131	1159
Mu	('K)	2632	1960	1843	1273
fsℓ non-comp(k.s.i.)		8.6	8.0	5.7	9.5
fsℓ (comp)	(k.s.i.)	14.4	13.6	9.9	16.4
fs⅔(Mℓ+I)	(k.s.i.)	12.9	14.6	13.1	21.5
fs (Overload)	(k.s.i.)	27.3	28.2	23.1	37.9
fs (Total)	(k.s.i.)	-	-	-	-
VR	(K)	33	33	31	32

EXTERIOR GIRDER REACTION TABLE					
		Sp. 4	Sp. 5	Sp. 7	Sp. 12
Similar for Spans		2, 3, 8	-	1, 9, 10	6, 11
Sections		W33X221	W27X178	W33X118	W27X84
Rℓ + Rsℓ	(K)	46.3	36.4	25.9	25.7
R+	(K)	26.6	25.8	24.5	24.6
Imp.	(K)	6.5	6.7	7.0	7.0
R (Total)	(K)	79.4	68.9	57.4	57.3

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum live Load + Impact shear range in span.
Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.
Mo (Applied Moment)=1.3[Mℓ + Msℓ + ⅔(Mℓ + I)].
Mu is the Full Plastic Moment Capacity for Compact, Braced section.
fs (Overload) is the sum of the stresses due to Mℓ + Msℓ + ⅔(Mℓ + I).
fs (Total) is the sum of the stresses due to 1.3[Mℓ + Msℓ + ⅔(Mℓ + I)].

Note: For new beam dimensions and other data, see previous sheet.

DESIGNED	JAA
CHECKED	ELD
DRAWN	JAA
CHECKED	ELD

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
211 N. MICHIGAN AVENUE SUITE 2300 CHICAGO, ILLINOIS 60601
JOB NO. 124

FRAMING PLAN SPANS 4, 5, & 6

BRIDGE REHABILITATION ILLINOIS ROUTE 171
SOUTHBOUND
OVER JOLIET RD. & AT&SF R.R.
FAU 2746 SECTION 606-628 VB
STATION 77+49.4
COOK COUNTY

STRUCTURE NO. 016-1005 S.B.

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205 North Michigan Avenue, Suite 2400
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312-565-0450 Job No. 10093

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	PLOT DATE = 6/23/2014	CHECKED - JAW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 7 OF 7
STRUCTURE NO. 016-1005
SHEET NO. SBX7 OF SBX7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	326
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

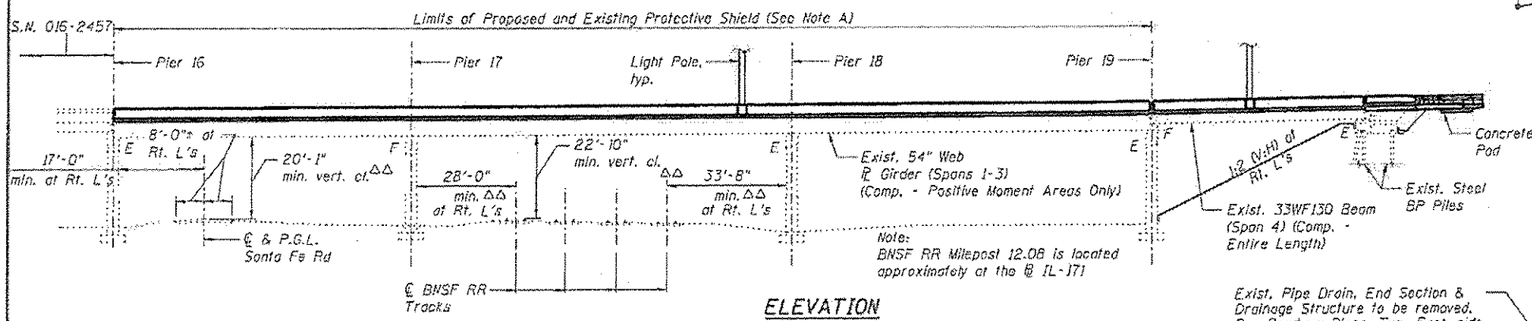
Bench Mark: Chiseled square of SW corner of SB IL-171 bridge wingwall over Des Plaines River El. 622.14

Existing Structure: S.N. 016-2455 (SB) was built in 1964 as F.A. Rte. 133, Section 0606-627VB at Sta. 65+06.90. Existing structure consists of a three span reinforced concrete deck on eight continuous 54" steel welded plate girders in spans 1 thru 3 and a single span reinforced concrete deck on eight steel 33" WF beams in span 4. The reinforced concrete deck is 8½" thick, including a 1½" microsilica concrete overlay. The substructure consists of open stub abutments founded on steel piles at the north end and by multi-column circular piers founded on spread footings. The south pier is shared with S.N. 016-2457 (SB). S.N. 016-2455 measures 374'-9" from back of north abutment to centerline of south pier, with an out-to-out deck width varying from 50'-7½" to 58'-2¾". Piers 16, 17, and 18 are at a skew angle of 6°08'00" and Pier 19 and the North Abutment are at a skew angle of 15°03'45". The concrete deck is to be removed and replaced with traffic maintained utilizing crossovers. No salvage.

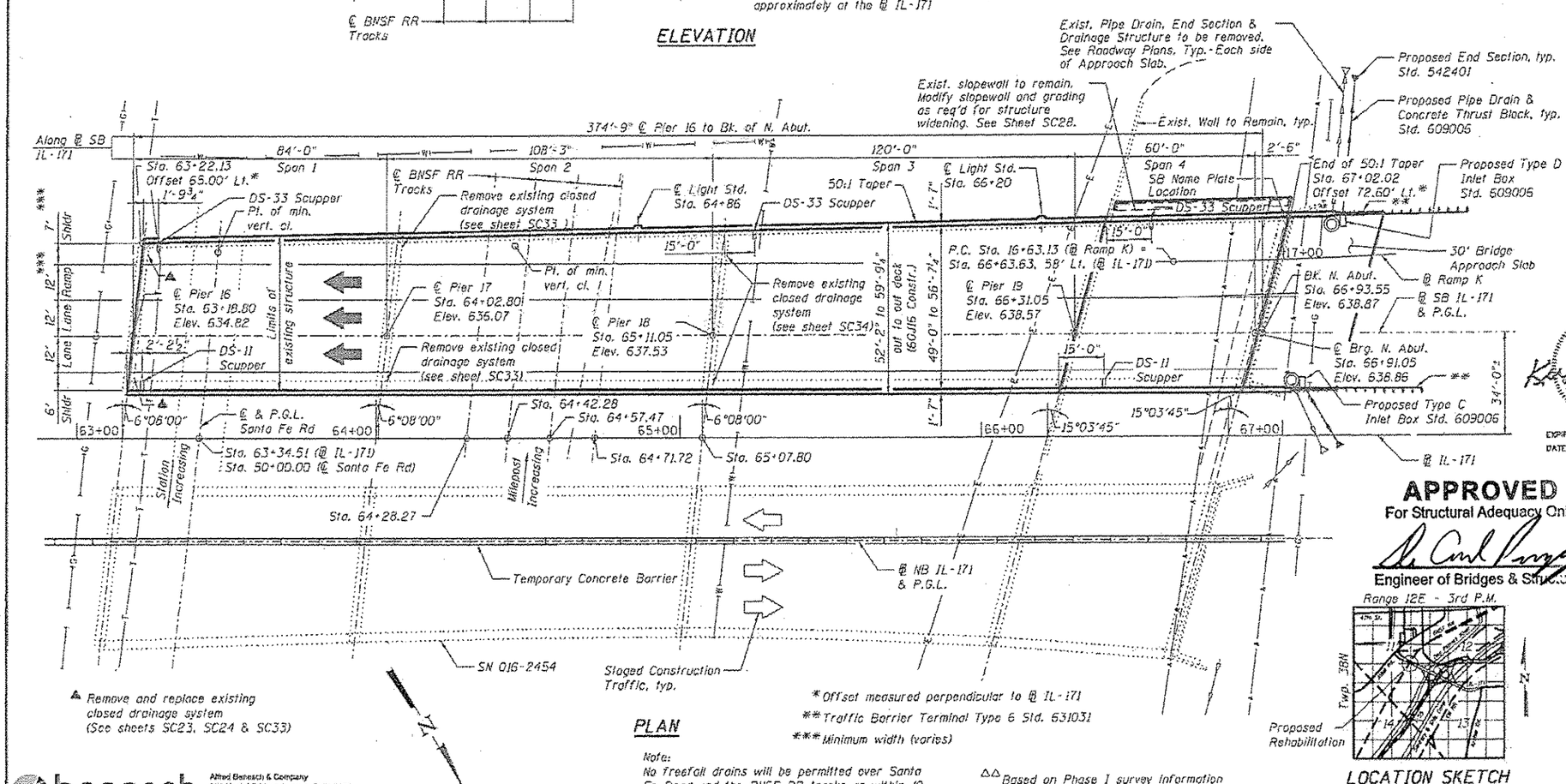
All Elevations in the proposed plans are based on NAVD88 Datum. Elevations in the existing plans are based on the NGVD29 Datum. NGVD29 Elev. 584.50 = NAVD88 Elev. 584.22.

NOTE A:
Existing Protective Shield to be removed. (Cost included in "Removal of Existing Deck No. 1").

NOTE B:
See Roadway Plans-Bridge Approach Schedule for Proposed Drainage Quantities.



ELEVATION



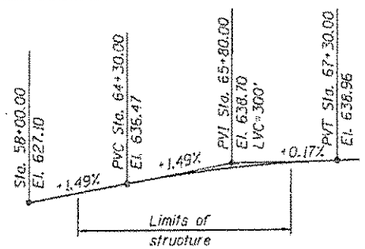
▲ Remove and replace existing closed drainage system (See sheets SC23, SC24 & SC33)

* Offset measured perpendicular to ℙ IL-171
** Traffic Barrier Terminal Type 6 Std. 631031
*** Minimum width (varies)

PLAN

Note:
No freefall drains will be permitted over Santa Fe Road and the BNSF RR tracks or within 10 ft. of cross arms of a railroad pole line.

△△ Based on Phase I survey information dated 08/11/2008



PROFILE GRADE SB IL-171

(Along ℙ SB IL-171)

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (New Construction)

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

FIELD UNITS (Exist. Construction)

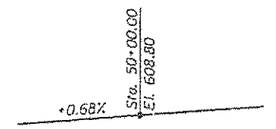
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel)

LOADING HS20-44

No future wearing surface allowed.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0



PROFILE GRADE SANTA FE RD

(Along ℄ Santa Fe Rd)

CURVE DATA - ℙ RAMP K

P.I. Sta. = 17+59.11
Δ = 9°08'46" (LT)
D = 4°46'29"
R = 1,200.00'
L = 191.55'
T = 95.98'
E = 3.83'
P.C. Sta. = 16+63.13
P.T. Sta. = 18+54.68
S.E. = 4.5%

KURT J. KAUS
062-060574
LICENSED
STRUCTURAL
ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2014
DATE: 06-24-2014

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

EXISTING UTILITY LEGEND

- Underground Storm Sewer
- Aerial Electric Line
- Underground Gas Line
- Underground Electric Line
- Underground Telephone Line
- Underground Water Line
- Existing Drainage Structure

LOCATION SKETCH

GENERAL PLAN AND ELEVATION
SB IL-171 OVER BNSF RR
FAP 372 - SECTION 2013-038B-R
COOK COUNTY
STATION 65+07.80
STRUCTURE NO. 016-2455

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Alfred Benesch & Company
200 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME	USER NAME	DESIGNED - JDM	REVISED -
		CHECKED - ROK	REVISED -
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	PLOT DATE = 12/28/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. SC1 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	327
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$" dia., holes $\frac{15}{16}$" dia., unless otherwise noted.

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

3. The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant(PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.

4. Reinforcement bars designated (E) shall be epoxy coated.

5. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding $\frac{1}{4}$ in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

6. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

7. 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.

8. Concrete Sealer shall be applied to the exposed faces of the reconstructed backwall and widened portions of the north abutment.

9. The Inorganic Zinc Rich Primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel. Only Inorganic Zinc Rich Primer shall be applied to the new structural steel in the shop under this contract and is included in "Furnishing and Erecting Structural Steel". The intermediate and top coats shall be applied under a separate painting contract.

10. The existing structural steel coating contains lead. The Contractor shall take all precautions to deal with the presence of lead on this project.

11. Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

12. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".

13. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutment.

INDEX OF SHEETS

For existing bridge plans, see Sheets SCX1 thru SCX14, immediately following Sheet SC35.

SCOPE OF WORK

1. Remove existing concrete deck and microsilica concrete overlay and replace with new 8" reinforced concrete deck.
2. Make new deck composite in positive moment areas only by adding shear studs to all girders and beams where not already installed as shown.
3. Remove and replace existing expansion joints.
4. Remove and replace approach slab.
5. Remove and replace backwall.
6. Repair spalls, delaminations and open cracks in substructures using structural repair of concrete and epoxy crack injection as shown.
7. Repair failed slopewall panel as shown.
8. Modify wingwalls and slopewall as shown for the new deck width.
9. Retrofit steel superstructure fatigue prone details at cover plates as shown.
10. Remove wind bracing (bottom lateral angles and, where shown, the corresponding gusset plates).
11. Replace one end cross frame at Pier 18 and three end cross frames at Pier 16 as shown.
12. Remove and dispose of existing electrical conduits and junction boxes attached to the beams and/or deck.
13. Remove and replace the existing closed drainage system at Pier 16.
14. Remove the existing closed drainage systems at Piers 17 and 18.
15. Perform miscellaneous repairs including repairing unseated anchor bolts, and removing debris and vegetation at slopewalls.
16. Remove and replace existing roadway lighting.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Concrete Removal	Cu Yd		27.0	27.0
	Slope Wall Removal	Sq Yd		8	8
	Removal of Existing Concrete Deck No. 1	Each	1		1
	Protective Shield	Sq Yd	1,904		1,904
	Structure Excavation	Cu Yd		92	92
	Concrete Structures	Cu Yd		53.7	53.7
	Concrete Superstructure	Cu Yd	749.4		749.4
	Bridge Deck Grooving	Sq Yd	2,300		2,300
	Concrete Encasement	Cu Yd		0.7	0.7
	Protective Coat	Sq Yd	2,765		2,765
	Furnishing and Erecting Structural Steel	Pound	1,640		1,640
	Stud Shear Connectors	Each	2,112		2,112
	Reinforcement Bars, Epoxy Coated	Pound	187,060	8,340	195,400
	Bar Splicers	Each		59	59
	Slope Wall 4 Inch	Sq Yd		21	21
	Furnishing Steel Piles HP12x53	Foot		76	76
	Driving Piles	Foot		76	76
	Name Plates	Each	1		1
	Preformed Joint Strip Seal	Foot	171.5		171.5
	Anchor Bolts, 1 1/2"	Each	1		1
	Concrete Sealer	Sq Ft		273	273
*	Epoxy Crack Injection	Foot		6	6
	Geocomposite Wall Drain	Sq Yd		45	45
	Structural Steel Removal	Pound	12,970		12,970
	Structural Steel Repair	Pound	4,620		4,620
	Cleaning Bridge Seats	Sq Ft		942	942
*	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft		367	367
*	Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq Ft		19	19
	Drainage Scuppers, DS-11	Each	2		2
	Drainage Scuppers, DS-33	Each	3		3
	Drainage System	L. Sum	1		1
	Pipe Underdrains for Structures 4"	Foot		95	95
**	Selective Clearing	Unit		1	1
	Temporary Shoring and Cribbing	Each		9	9
	Remove Conduit Attached to Structure	Foot	800		800
	Granular Backfill for Structures	Cu Yd		78	78

* Quantity includes a contingency (above the amounts shown in the bills of material) to account for uncertainties associated with the condition of the existing substructure and the age of the original inspection (2008-9). Actual repair areas will be determined by the Engineer in the field.

** The quantity for this work is estimated. The intent for this work is to remove accumulations of rubbish, vegetation, etc., on the existing slopewalls and other areas.

STATION 65+07.80
RE-BUILT 20__ BY
STATE OF ILLINOIS
FAP 372-SEC. 2013-038B-R
LOADING HS-20
STRUCTURE NO. 016-2455

SB NAME PLATE

(See Std. 515001)

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

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

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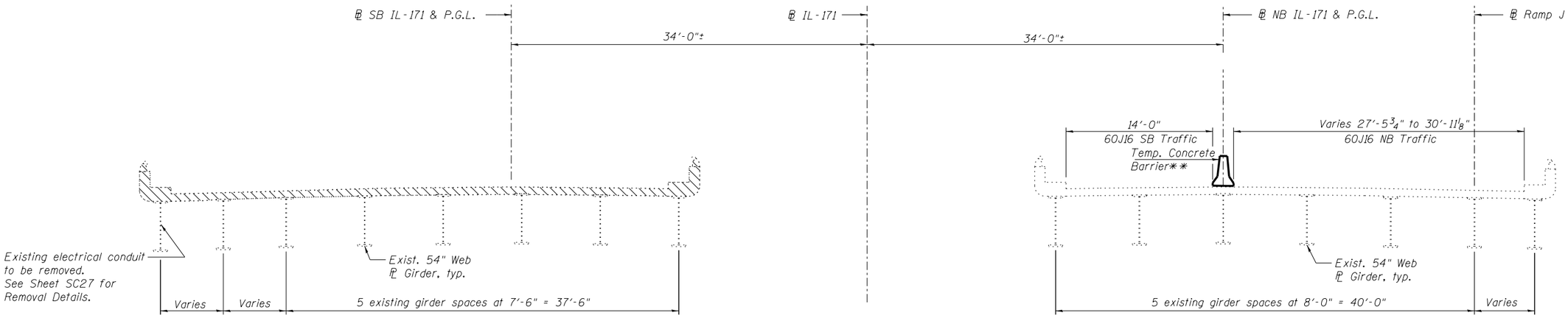
	PLOT DATE = 12/20/2013	CHECKED - RDK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

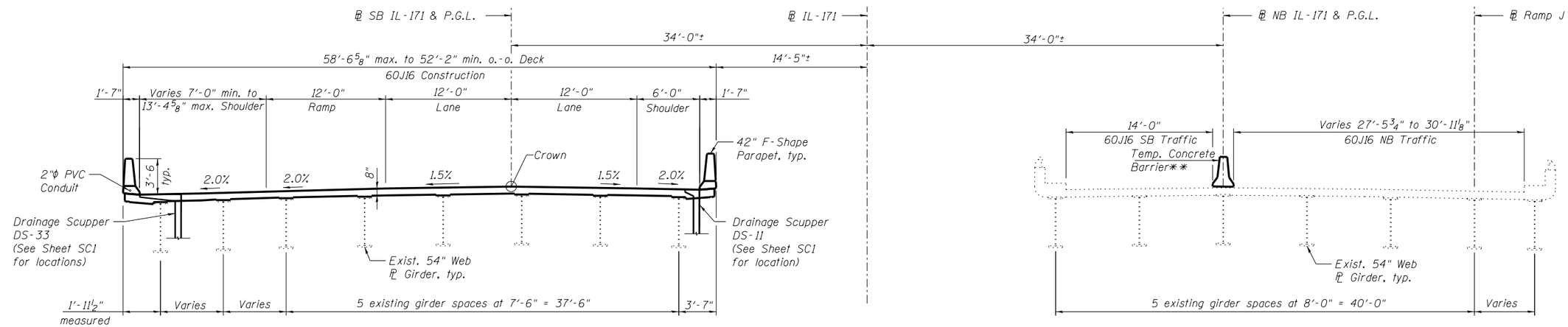
GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
STRUCTURE NO. 016-2455
SHEET NO. SC2 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	328
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	



CONTRACT 60J16 REMOVAL

(Spans 1 thru 3, Looking Upstation)



CONTRACT 60J16 CONSTRUCTION

(Spans 1 thru 3, Looking Upstation)

** See Sheet SC5 and maintenance of traffic sheets for more information

LEGEND

Removal of Existing Concrete Deck No. 1

NOTES:

1. All dimensions are measured perpendicular to ℄ NB or SB IL-171 unless noted otherwise.
2. Do not anchor Temp. Concrete Barrier to existing deck.

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FILE NAME = 0162455_60J16_003_stageconst.dgn	USER NAME = tjanicke	DESIGNED - JDM	REVISED -
		CHECKED - RDK	REVISED -
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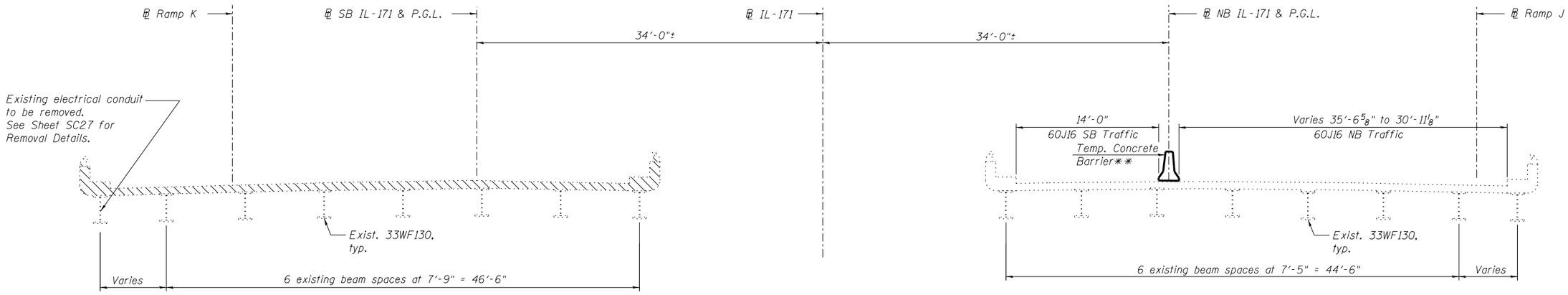
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

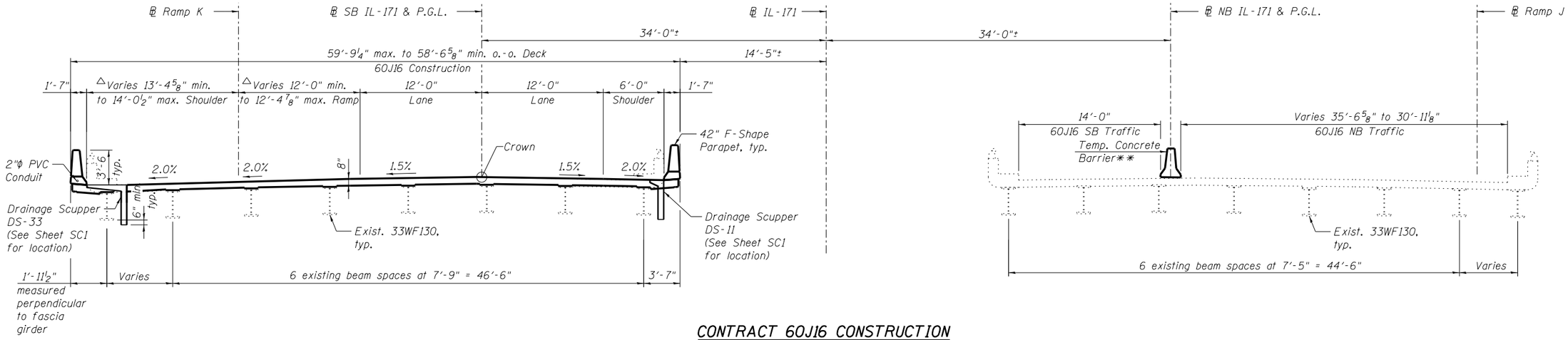
STAGE CONSTRUCTION DETAILS (1 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC3 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	329
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



CONTRACT 60J16 REMOVAL

(Span 4, Looking Upstation)



CONTRACT 60J16 CONSTRUCTION

(Span 4, Looking Upstation)

LEGEND

▨ Removal of Existing Concrete Deck No. 1

NOTES:

1. All dimensions are measured perpendicular to ℄ NB or SB IL-171 unless noted otherwise.
2. Do not anchor Temp. Concrete Barrier to existing deck.

** See Sheet SC5 and maintenance of traffic sheets for more information

△ Measured Perpendicular to ℄ Ramp K

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS (2 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC4 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	330
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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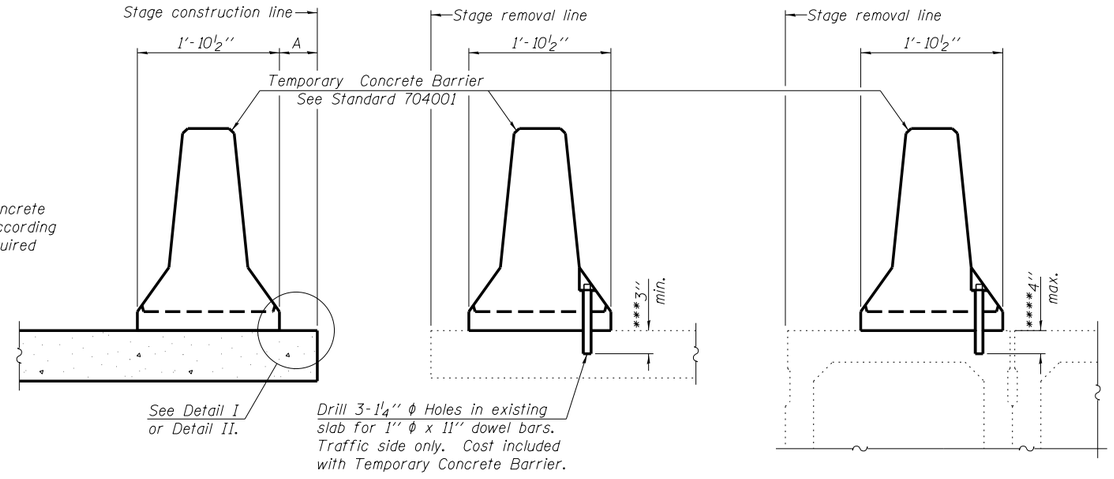
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℙ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

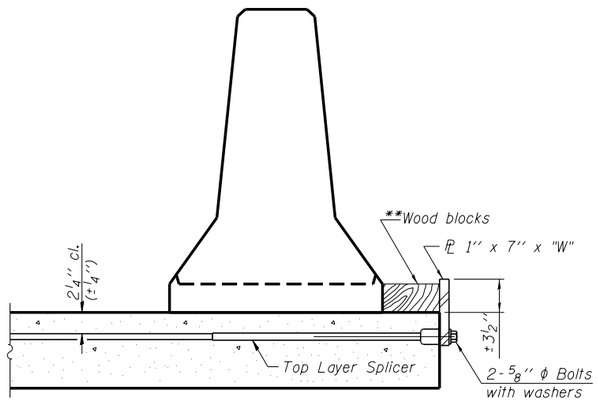
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

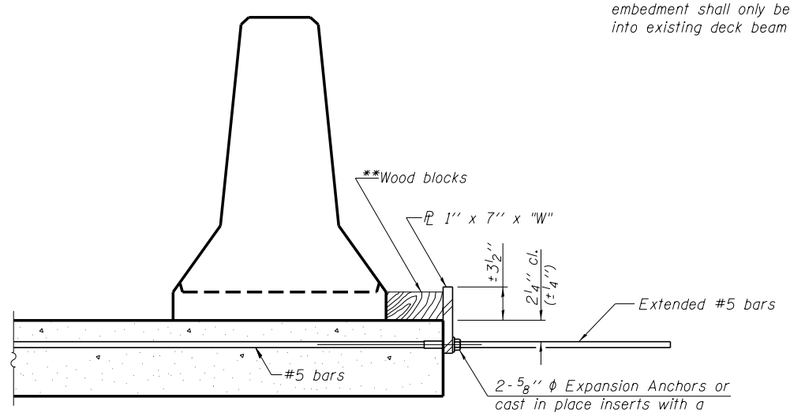
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



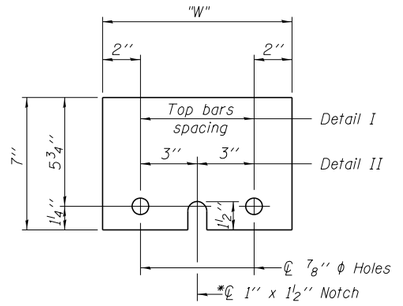
DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



STEEL RETAINER ℙ 1" x 7" x "W"

* Required only with Detail II

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R-27 7-1-10

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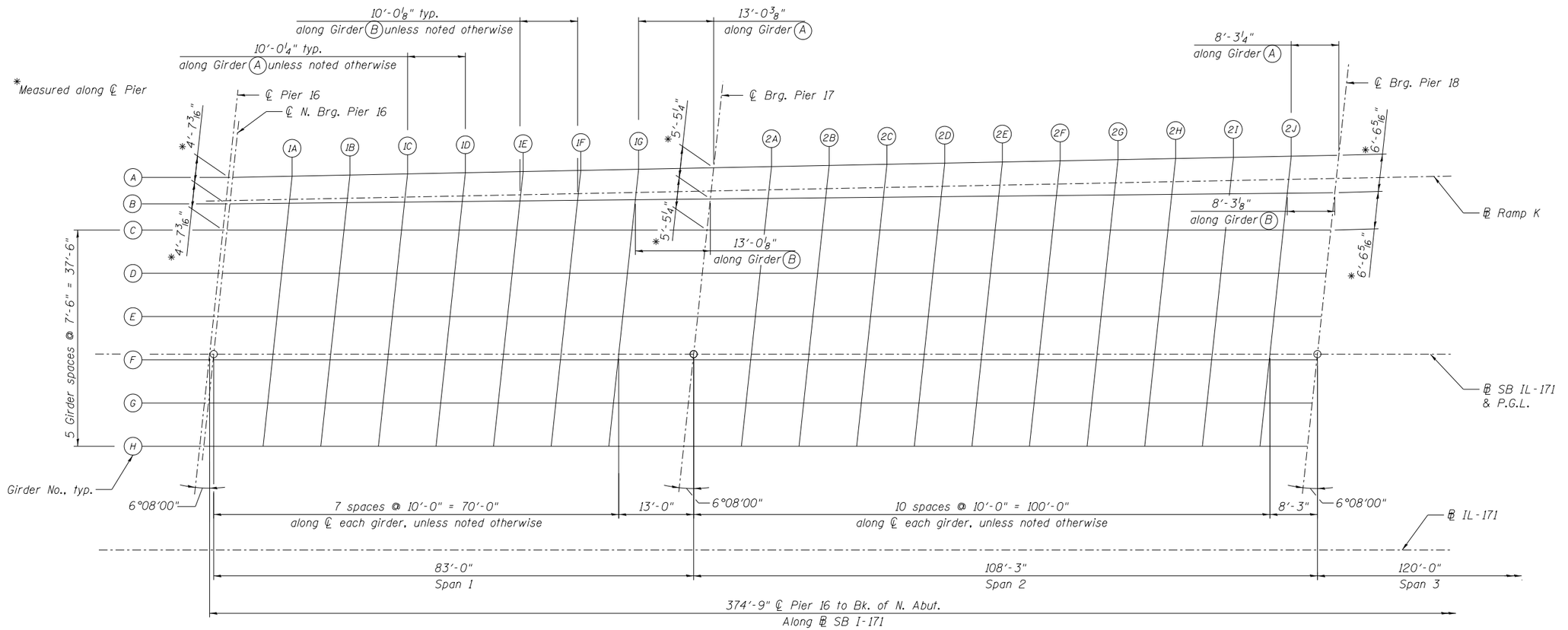
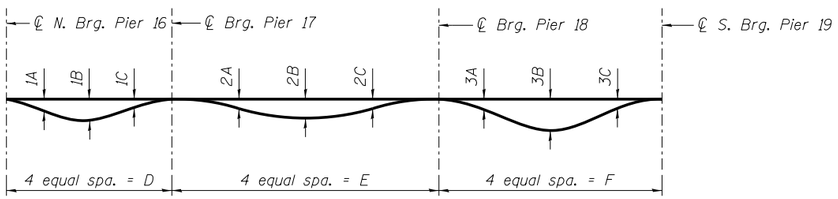
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-2455
SHEET NO. SC5 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	331
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



PARTIAL PLAN



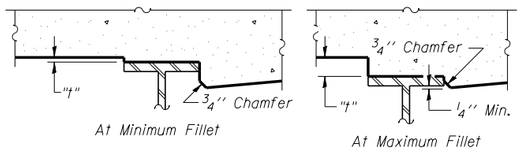
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection".

DEAD LOAD DEFLECTION TABLE

Girder	1A	1B	1C	2A	2B	2C	3A	3B	3C	D	E	F
A	1/2"	1/2"	1/4"	0"	0"	-1/4"	1 3/8"	2 1/2"	2"	83′-2 3/8"	108′-6 1/16"	125′-4 13/16"
B										83′-1 1/8"	108′-4 7/16"	123′-11 15/16"
C	5/8"	3/4"	3/8"	1/8"	1/8"	-1/8"	1 1/8"	2 1/4"	1 7/8"	83′-0"	108′-3"	122′-7 3/16"
D												121′-4 11/16"
E												120′-2 1/8"
F							1"	2"	1 5/8"			118′-11 9/16"
G												117′-9"
H												116′-6 7/16"



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below and on sheets SC8, SC9, & SC10 of SC35. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet SC8, SC9, & SC10 of SC35 minus 8" slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

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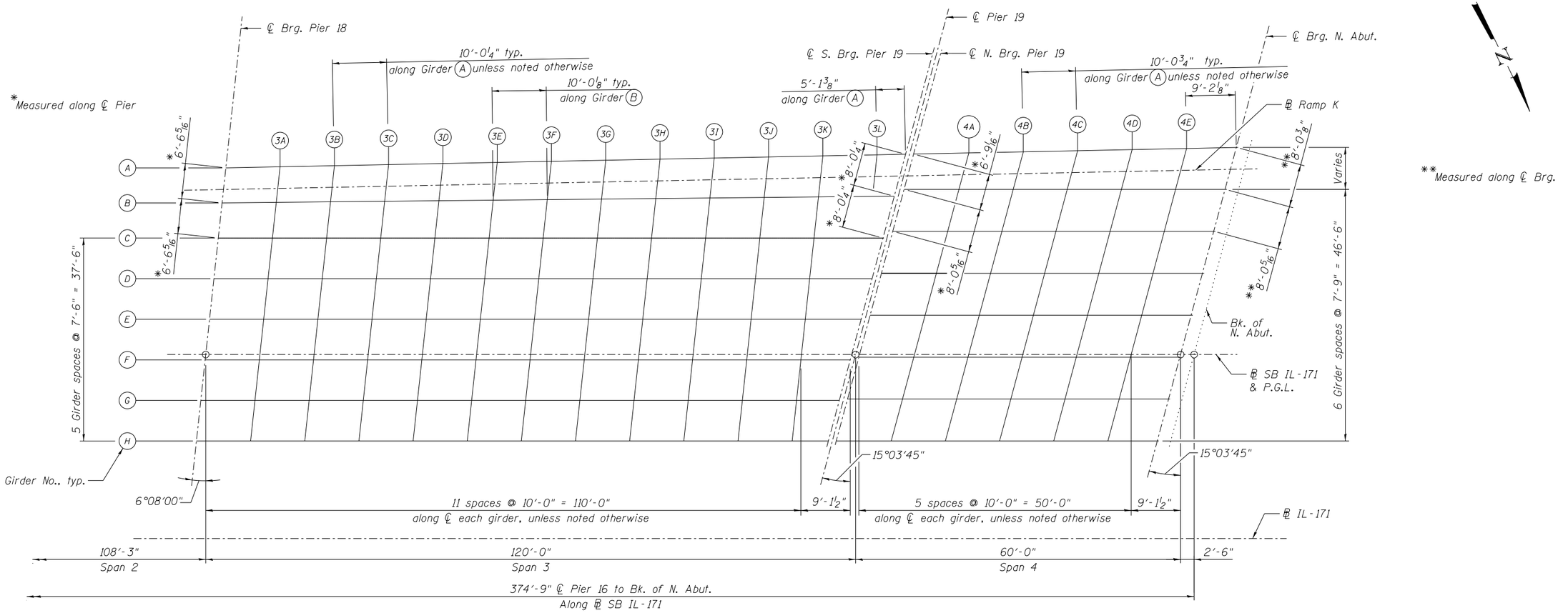
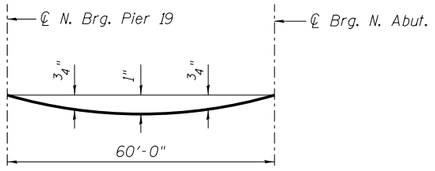
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS PLAN (1 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC6 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	332
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	



PARTIAL PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection".

DISTANCE ALONG ℄ GIRDER FROM SCREED LINE 3K TO ℄ S. BRG. AT PIER 19

Girder	Distance
(B)	13′-10⅜"
(C)	12′-7¼"
(D)	11′-4⅝"
(E)	10′-2⅛"
(F)	8′-11½"
(G)	7′-9"
(H)	6′-6½"

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TOP OF SLAB ELEVATIONS PLAN (2 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC7 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	333
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

GIRDER A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+23.09	-30.65	634.32	634.32
1A	63+33.09	-30.85	634.46	634.48
1B	63+43.09	-31.05	634.61	634.65
1C	63+53.09	-31.25	634.75	634.80
1D	63+63.09	-31.45	634.90	634.95
1E	63+73.08	-31.65	635.04	635.08
1F	63+83.08	-31.85	635.19	635.22
1G	63+93.08	-32.05	635.33	635.35
℄ BRG. & ℄ PIER 17	64+06.27	-32.31	635.53	635.53
2A	64+16.27	-32.51	635.67	635.67
2B	64+26.27	-32.71	635.82	635.82
2C	64+36.27	-32.91	635.96	635.96
2D	64+46.26	-33.11	636.10	636.10
2E	64+56.26	-33.31	636.23	636.24
2F	64+66.26	-33.51	636.37	636.36
2G	64+76.26	-33.71	636.49	636.48
2H	64+86.26	-33.91	636.62	636.59
2I	64+96.25	-34.11	636.73	636.71
2J	65+06.25	-34.31	636.85	636.83
℄ BRG. & ℄ PIER 18	65+14.76	-34.48	636.94	636.94
3A	65+24.75	-34.68	637.05	637.07
3B	65+34.75	-34.88	637.15	637.21
3C	65+44.75	-35.08	637.24	637.35
3D	65+54.75	-35.28	637.34	637.48
3E	65+64.75	-35.48	637.42	637.60
3F	65+74.74	-35.68	637.51	637.71
3G	65+84.74	-35.88	637.59	637.79
3H	65+94.74	-36.08	637.66	637.86
3I	66+04.74	-36.28	637.73	637.91
3J	66+14.74	-36.48	637.80	637.94
3K	66+24.73	-36.68	637.86	637.95
3L	66+34.73	-36.88	637.92	637.95
℄ S. BRG. PIER 19	66+40.13	-36.99	637.94	637.94
℄ N. BRG. PIER 19	66+41.89	-37.02	637.95	637.95
4A	66+51.89	-37.22	638.00	638.04
4B	66+61.88	-37.42	638.05	638.11
4C	66+71.88	-37.62	638.09	638.16
4D	66+81.88	-37.82	638.13	638.19
4E	66+91.88	-38.02	638.16	638.20
℄ BRG. N. ABUT.	67+01.33	-38.21	638.18	638.18

GIRDER B

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+22.60	-26.07	634.40	634.40
1A	63+32.60	-26.17	634.55	634.57
1B	63+42.60	-26.27	634.70	634.73
1C	63+52.60	-26.37	634.84	634.89
1D	63+62.60	-26.47	634.99	635.04
1E	63+72.60	-26.57	635.14	635.18
1F	63+82.60	-26.67	635.29	635.31
1G	63+92.60	-26.77	635.43	635.45
℄ BRG. & ℄ PIER 17	64+05.69	-26.90	635.62	635.62
2A	64+15.69	-27.00	635.77	635.77
2B	64+25.69	-27.10	635.92	635.92
2C	64+35.69	-27.20	636.07	636.07
2D	64+45.69	-27.30	636.21	636.21
2E	64+55.69	-27.40	636.35	636.35
2F	64+65.69	-27.50	636.48	636.47
2G	64+75.69	-27.60	636.61	636.59
2H	64+85.69	-27.70	636.73	636.71
2I	64+95.69	-27.80	636.85	636.83
2J	65+05.69	-27.90	636.97	636.95
℄ BRG. & ℄ PIER 18	65+14.06	-27.99	637.06	637.06
3A	65+24.06	-28.09	637.17	637.20
3B	65+34.06	-28.19	637.27	637.34
3C	65+44.06	-28.29	637.37	637.48
3D	65+54.06	-28.39	637.47	637.61
3E	65+64.06	-28.49	637.56	637.74
3F	65+74.05	-28.59	637.64	637.84
3G	65+84.05	-28.69	637.72	637.93
3H	65+94.05	-28.79	637.80	638.00
3I	66+04.05	-28.89	637.87	638.05
3J	66+14.05	-28.99	637.94	638.08
3K	66+24.05	-29.09	638.01	638.09
℄ S. BRG. PIER 19	66+38.04	-29.23	638.09	638.09
℄ N. BRG. PIER 19	66+40.13	-30.50	638.07	638.07
4A	66+50.13	-30.50	638.13	638.17
4B	66+60.13	-30.50	638.18	638.25
4C	66+70.13	-30.50	638.22	638.30
4D	66+80.13	-30.50	638.27	638.33
4E	66+90.13	-30.50	638.30	638.34
℄ BRG. N. ABUT.	66+99.26	-30.50	638.33	638.33

GIRDER C

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+22.11	-21.50	634.49	634.49
1A	63+32.11	-21.50	634.64	634.66
1B	63+42.11	-21.50	634.79	634.83
1C	63+52.11	-21.50	634.93	634.99
1D	63+62.11	-21.50	635.08	635.14
1E	63+72.11	-21.50	635.23	635.28
1F	63+82.11	-21.50	635.38	635.41
1G	63+92.11	-21.50	635.53	635.55
℄ BRG. & ℄ PIER 17	64+05.11	-21.50	635.72	635.72
2A	64+15.11	-21.50	635.87	635.87
2B	64+25.11	-21.50	636.02	636.02
2C	64+35.11	-21.50	636.17	636.18
2D	64+45.11	-21.50	636.32	636.33
2E	64+55.11	-21.50	636.46	636.46
2F	64+65.11	-21.50	636.59	636.59
2G	64+75.11	-21.50	636.72	636.71
2H	64+85.11	-21.50	636.85	636.83
2I	64+95.11	-21.50	636.97	636.95
2J	65+05.11	-21.50	637.09	637.08
℄ BRG. & ℄ PIER 18	65+13.36	-21.50	637.18	637.18
3A	65+23.36	-21.50	637.29	637.32
3B	65+33.36	-21.50	637.40	637.46
3C	65+43.36	-21.50	637.50	637.60
3D	65+53.36	-21.50	637.60	637.74
3E	65+63.36	-21.50	637.69	637.86
3F	65+73.36	-21.50	637.78	637.97
3G	65+83.36	-21.50	637.86	638.06
3H	65+93.36	-21.50	637.94	638.13
3I	66+03.36	-21.50	638.02	638.18
3J	66+13.36	-21.50	638.09	638.21
3K	66+23.36	-21.50	638.15	638.23
℄ S. BRG. PIER 19	66+35.96	-21.50	638.23	638.23
℄ N. BRG. PIER 19	66+38.05	-22.75	638.22	638.22
4A	66+48.05	-22.75	638.27	638.31
4B	66+58.05	-22.75	638.32	638.39
4C	66+68.05	-22.75	638.37	638.45
4D	66+78.05	-22.75	638.41	638.48
4E	66+88.05	-22.75	638.45	638.49
℄ BRG. N. ABUT.	66+97.17	-22.75	638.48	638.48

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		CHECKED - RDK/DTS	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JOB/DTS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (1 OF 3)
STRUCTURE NO. 016-2455
SHEET NO. SC8 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	334
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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GIRDER D

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+21.30	-14.00	634.63	634.63
1A	63+31.30	-14.00	634.77	634.80
1B	63+41.30	-14.00	634.92	634.97
1C	63+51.30	-14.00	635.07	635.13
1D	63+61.30	-14.00	635.22	635.28
1E	63+71.30	-14.00	635.37	635.42
1F	63+81.30	-14.00	635.52	635.56
1G	63+91.30	-14.00	635.67	635.69
℄ BRG. & ℄ PIER 17	64+04.30	-14.00	635.86	635.86
2A	64+14.30	-14.00	636.01	636.01
2B	64+24.30	-14.00	636.16	636.16
2C	64+34.30	-14.00	636.31	636.32
2D	64+44.30	-14.00	636.45	636.47
2E	64+54.30	-14.00	636.59	636.61
2F	64+64.30	-14.00	636.73	636.74
2G	64+74.30	-14.00	636.86	636.86
2H	64+84.30	-14.00	636.99	636.98
2I	64+94.30	-14.00	637.11	637.10
2J	65+04.30	-14.00	637.23	637.22
℄ BRG. & ℄ PIER 18	65+12.55	-14.00	637.33	637.33
3A	65+22.55	-14.00	637.44	637.46
3B	65+32.55	-14.00	637.54	637.60
3C	65+42.55	-14.00	637.64	637.74
3D	65+52.55	-14.00	637.74	637.88
3E	65+62.55	-14.00	637.83	638.00
3F	65+72.55	-14.00	637.92	638.11
3G	65+82.55	-14.00	638.01	638.20
3H	65+92.55	-14.00	638.09	638.27
3I	66+02.55	-14.00	638.16	638.32
3J	66+12.55	-14.00	638.23	638.35
3K	66+22.55	-14.00	638.30	638.36
℄ S. BRG. PIER 19	66+33.94	-14.00	638.37	638.37
℄ N. BRG. PIER 19	66+35.96	-15.00	638.36	638.36
4A	66+45.96	-15.00	638.42	638.46
4B	66+55.96	-15.00	638.47	638.53
4C	66+65.96	-15.00	638.52	638.59
4D	66+75.96	-15.00	638.56	638.62
4E	66+85.96	-15.00	638.60	638.63
℄ BRG. N. ABUT.	66+95.09	-15.00	638.63	638.63

GIRDER E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+20.50	-6.50	634.74	634.74
1A	63+30.50	-6.50	634.88	634.91
1B	63+40.50	-6.50	635.03	635.08
1C	63+50.50	-6.50	635.18	635.25
1D	63+60.50	-6.50	635.33	635.40
1E	63+70.50	-6.50	635.48	635.53
1F	63+80.50	-6.50	635.63	635.67
1G	63+90.50	-6.50	635.78	635.80
℄ BRG. & ℄ PIER 17	64+03.50	-6.50	635.97	635.97
2A	64+13.50	-6.50	636.12	636.12
2B	64+23.50	-6.50	636.27	636.28
2C	64+33.50	-6.50	636.42	636.43
2D	64+43.50	-6.50	636.56	636.58
2E	64+53.50	-6.50	636.71	636.72
2F	64+63.50	-6.50	636.84	636.85
2G	64+73.50	-6.50	636.97	636.97
2H	64+83.50	-6.50	637.10	637.09
2I	64+93.50	-6.50	637.22	637.21
2J	65+03.50	-6.50	637.34	637.33
℄ BRG. & ℄ PIER 18	65+11.75	-6.50	637.44	637.44
3A	65+21.75	-6.50	637.55	637.57
3B	65+31.75	-6.50	637.66	637.72
3C	65+41.75	-6.50	637.76	637.86
3D	65+51.75	-6.50	637.86	637.99
3E	65+61.75	-6.50	637.95	638.12
3F	65+71.75	-6.50	638.04	638.22
3G	65+81.75	-6.50	638.12	638.31
3H	65+91.75	-6.50	638.20	638.38
3I	66+01.75	-6.50	638.28	638.43
3J	66+11.75	-6.50	638.35	638.46
3K	66+21.75	-6.50	638.42	638.48
℄ S. BRG. PIER 19	66+31.92	-6.50	638.48	638.48
℄ N. BRG. PIER 19	66+33.88	-7.25	638.48	638.48
4A	66+43.88	-7.25	638.54	638.58
4B	66+53.88	-7.25	638.59	638.66
4C	66+63.88	-7.25	638.64	638.71
4D	66+73.88	-7.25	638.68	638.75
4E	66+83.88	-7.25	638.72	638.76
℄ BRG. N. ABUT.	66+93.00	-7.25	638.75	638.75

℄ SB IL-171 & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+19.80	0.00	634.82	634.82
1A	63+29.80	0.00	634.97	635.00
1B	63+39.80	0.00	635.12	635.17
1C	63+49.80	0.00	635.27	635.33
1D	63+59.80	0.00	635.42	635.48
1E	63+69.80	0.00	635.57	635.62
1F	63+79.80	0.00	635.72	635.75
1G	63+89.80	0.00	635.87	635.88
℄ BRG. & ℄ PIER 17	64+02.80	0.00	636.06	636.06
2A	64+12.80	0.00	636.21	636.21
2B	64+22.80	0.00	636.36	636.36
2C	64+32.80	0.00	636.51	636.52
2D	64+42.80	0.00	636.65	636.67
2E	64+52.80	0.00	636.79	636.82
2F	64+62.80	0.00	636.93	636.95
2G	64+72.80	0.00	637.06	637.07
2H	64+82.80	0.00	637.19	637.19
2I	64+92.80	0.00	637.31	637.30
2J	65+02.80	0.00	637.43	637.43
℄ BRG. & ℄ PIER 18	65+11.05	0.00	637.53	637.53
3A	65+21.05	0.00	637.64	637.66
3B	65+31.05	0.00	637.75	637.80
3C	65+41.05	0.00	637.85	637.94
3D	65+51.05	0.00	637.95	638.07
3E	65+61.05	0.00	638.04	638.19
3F	65+71.05	0.00	638.13	638.29
3G	65+81.05	0.00	638.21	638.38
3H	65+91.05	0.00	638.29	638.45
3I	66+01.05	0.00	638.37	638.50
3J	66+11.05	0.00	638.44	638.54
3K	66+21.05	0.00	638.51	638.56
℄ S. BRG. PIER 19	66+30.18	0.00	638.57	638.57
℄ N. BRG. PIER 19	66+31.93	0.00	638.58	638.58
4A	66+41.93	0.00	638.63	638.67
4B	66+51.93	0.00	638.69	638.75
4C	66+61.93	0.00	638.74	638.81
4D	66+71.93	0.00	638.78	638.85
4E	66+81.93	0.00	638.82	638.86
℄ BRG. N. ABUT.	66+91.05	0.00	638.86	638.86

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	PLOT DATE = 12/20/2013	CHECKED - JOB/DTS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (2 OF 3)
STRUCTURE NO. 016-2455
SHEET NO. SC9 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	335
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

GIRDER F

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+19.69	1.00	634.81	634.81
1A	63+29.69	1.00	634.96	634.98
1B	63+39.69	1.00	635.10	635.15
1C	63+49.69	1.00	635.25	635.31
1D	63+59.69	1.00	635.40	635.46
1E	63+69.69	1.00	635.55	635.60
1F	63+79.69	1.00	635.70	635.74
1G	63+89.69	1.00	635.85	635.87
℄ BRG. & ℄ PIER 17	64+02.69	1.00	636.04	636.04
2A	64+12.69	1.00	636.19	636.19
2B	64+22.69	1.00	636.34	636.35
2C	64+32.69	1.00	636.49	636.51
2D	64+42.69	1.00	636.64	636.66
2E	64+52.69	1.00	636.78	636.80
2F	64+62.69	1.00	636.91	636.93
2G	64+72.69	1.00	637.05	637.05
2H	64+82.69	1.00	637.17	637.17
2I	64+92.69	1.00	637.30	637.29
2J	65+02.69	1.00	637.42	637.41
℄ BRG. & ℄ PIER 18	65+10.94	1.00	637.51	637.51
3A	65+20.94	1.00	637.62	637.65
3B	65+30.94	1.00	637.73	637.78
3C	65+40.94	1.00	637.83	637.92
3D	65+50.94	1.00	637.93	638.05
3E	65+60.94	1.00	638.02	638.17
3F	65+70.94	1.00	638.11	638.28
3G	65+80.94	1.00	638.20	638.37
3H	65+90.94	1.00	638.28	638.43
3I	66+00.94	1.00	638.35	638.49
3J	66+10.94	1.00	638.43	638.52
3K	66+20.94	1.00	638.49	638.54
℄ S. BRG. PIER 19	66+29.91	1.00	638.55	638.55
℄ N. BRG. PIER 19	66+31.79	0.50	638.57	638.57
4A	66+41.79	0.50	638.63	638.67
4B	66+51.79	0.50	638.68	638.75
4C	66+61.79	0.50	638.73	638.80
4D	66+71.79	0.50	638.77	638.84
4E	66+81.79	0.50	638.81	638.85
℄ BRG. N. ABUT.	66+90.92	0.50	638.85	638.85

GIRDER G

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+18.89	8.50	634.68	634.68
1A	63+28.89	8.50	634.83	634.86
1B	63+38.89	8.50	634.98	635.03
1C	63+48.89	8.50	635.13	635.19
1D	63+58.89	8.50	635.28	635.34
1E	63+68.89	8.50	635.43	635.48
1F	63+78.89	8.50	635.58	635.61
1G	63+88.89	8.50	635.72	635.74
℄ BRG. & ℄ PIER 17	64+01.89	8.50	635.92	635.92
2A	64+11.89	8.50	636.07	636.07
2B	64+21.89	8.50	636.22	636.22
2C	64+31.89	8.50	636.37	636.38
2D	64+41.89	8.50	636.51	636.53
2E	64+51.89	8.50	636.65	636.68
2F	64+61.89	8.50	636.79	636.81
2G	64+71.89	8.50	636.92	636.93
2H	64+81.89	8.50	637.05	637.05
2I	64+91.89	8.50	637.18	637.17
2J	65+01.89	8.50	637.29	637.29
℄ BRG. & ℄ PIER 18	65+10.14	8.50	637.39	637.39
3A	65+20.14	8.50	637.50	637.52
3B	65+30.14	8.50	637.61	637.66
3C	65+40.14	8.50	637.71	637.80
3D	65+50.14	8.50	637.81	637.93
3E	65+60.14	8.50	637.90	638.05
3F	65+70.14	8.50	637.99	638.16
3G	65+80.14	8.50	638.08	638.25
3H	65+90.14	8.50	638.16	638.31
3I	66+00.14	8.50	638.24	638.36
3J	66+10.14	8.50	638.31	638.40
3K	66+20.14	8.50	638.38	638.42
℄ S. BRG. PIER 19	66+27.89	8.50	638.42	638.42
℄ N. BRG. PIER 19	66+29.70	8.25	638.44	638.44
4A	66+39.70	8.25	638.50	638.54
4B	66+49.70	8.25	638.55	638.62
4C	66+59.70	8.25	638.60	638.68
4D	66+69.70	8.25	638.65	638.72
4E	66+79.70	8.25	638.69	638.73
℄ BRG. N. ABUT.	66+88.83	8.25	638.72	638.72

GIRDER H

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ N. BRG. PIER 16	63+18.08	16.00	634.54	634.54
1A	63+28.08	16.00	634.69	634.71
1B	63+38.08	16.00	634.84	634.88
1C	63+48.08	16.00	634.98	635.05
1D	63+58.08	16.00	635.13	635.20
1E	63+68.08	16.00	635.28	635.33
1F	63+78.08	16.00	635.43	635.47
1G	63+88.08	16.00	635.58	635.60
℄ BRG. & ℄ PIER 17	64+01.08	16.00	635.77	635.77
2A	64+11.08	16.00	635.92	635.92
2B	64+21.08	16.00	636.07	636.08
2C	64+31.08	16.00	636.22	636.24
2D	64+41.08	16.00	636.37	636.39
2E	64+51.08	16.00	636.51	636.53
2F	64+61.08	16.00	636.65	636.66
2G	64+71.08	16.00	636.78	636.79
2H	64+81.08	16.00	636.91	636.91
2I	64+91.08	16.00	637.03	637.02
2J	65+01.08	16.00	637.15	637.14
℄ BRG. & ℄ PIER 18	65+09.33	16.00	637.25	637.25
3A	65+19.33	16.00	637.36	637.38
3B	65+29.33	16.00	637.47	637.52
3C	65+39.33	16.00	637.57	637.66
3D	65+49.33	16.00	637.67	637.79
3E	65+59.33	16.00	637.76	637.91
3F	65+69.33	16.00	637.85	638.02
3G	65+79.33	16.00	637.94	638.11
3H	65+89.33	16.00	638.02	638.17
3I	65+99.33	16.00	638.10	638.22
3J	66+09.33	16.00	638.17	638.25
3K	66+19.33	16.00	638.24	638.27
℄ S. BRG. PIER 19	66+25.87	16.00	638.28	638.28
℄ N. BRG. PIER 19	66+27.62	16.00	638.29	638.29
4A	66+37.62	16.00	638.35	638.40
4B	66+47.62	16.00	638.41	638.49
4C	66+57.62	16.00	638.46	638.55
4D	66+67.62	16.00	638.50	638.59
4E	66+77.62	16.00	638.55	638.59
℄ BRG. N. ABUT.	66+86.74	16.00	638.58	638.58

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	PLOT SCALE =	DRAWN - MAK	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (3 OF 3)
STRUCTURE NO. 016-2455
SHEET NO. SC10 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	336
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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WEST EDGE OF SHOULDER

Location	Station along ℄ IL-171	Offset from ℄ IL-171 & P.G.L.	Theoretical Grade Elevations
S. End of North Appr. Pav't.	67+03.43	-72.65	638.19
A1	67+13.54	-73.03	638.21
A2	67+23.66	-73.50	638.23
N. End of North Appr. Pav't.	67+33.81	-74.06	638.24

EAST EDGE OF RAMP

Location	Station along ℄ IL-171	Offset from ℄ IL-171 & P.G.L.	Theoretical Grade Elevations
S. End of North Appr. Pav't.	66+96.38	-46.44	638.69
A1	67+06.47	-46.76	638.72
A2	67+16.57	-47.16	638.74
N. End of North Appr. Pav't.	67+26.70	-47.64	638.75

℄ SB IL-171, P.G.L & CROWN

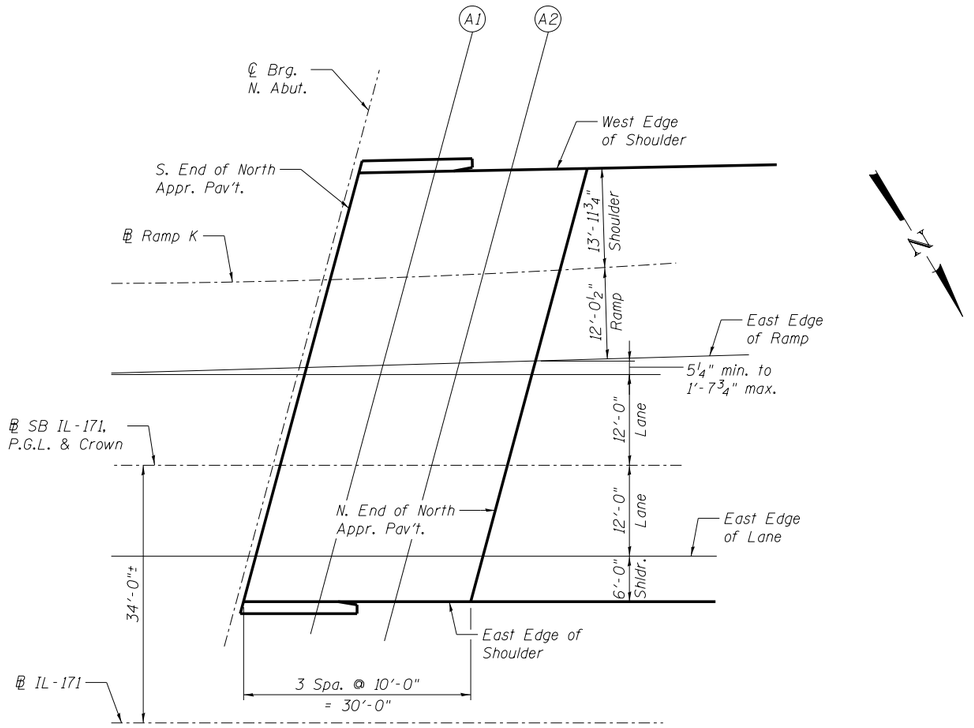
Location	Station along ℄ IL-171	Offset from ℄ IL-171 & P.G.L.	Theoretical Grade Elevations
S. End of North Appr. Pav't.	66+93.03	-34.00	638.87
A1	67+03.03	-34.00	638.90
A2	67+13.03	-34.00	638.92
N. End of North Appr. Pav't.	67+23.03	-34.00	638.95

EAST EDGE OF LANE

Location	Station along ℄ IL-171	Offset from ℄ IL-171 & P.G.L.	Theoretical Grade Elevations
S. End of North Appr. Pav't.	66+89.80	-22.00	638.68
A1	66+99.80	-22.00	638.71
A2	67+09.80	-22.00	638.74
N. End of North Appr. Pav't.	67+19.80	-22.00	638.76

EAST EDGE OF SHOULDER

Location	Station along ℄ IL-171	Offset from ℄ IL-171 & P.G.L.	Theoretical Grade Elevations
S. End of North Appr. Pav't.	66+88.19	-16.00	638.55
A1	66+98.19	-16.00	638.58
A2	67+08.19	-16.00	638.61
N. End of North Appr. Pav't.	67+18.19	-16.00	638.64



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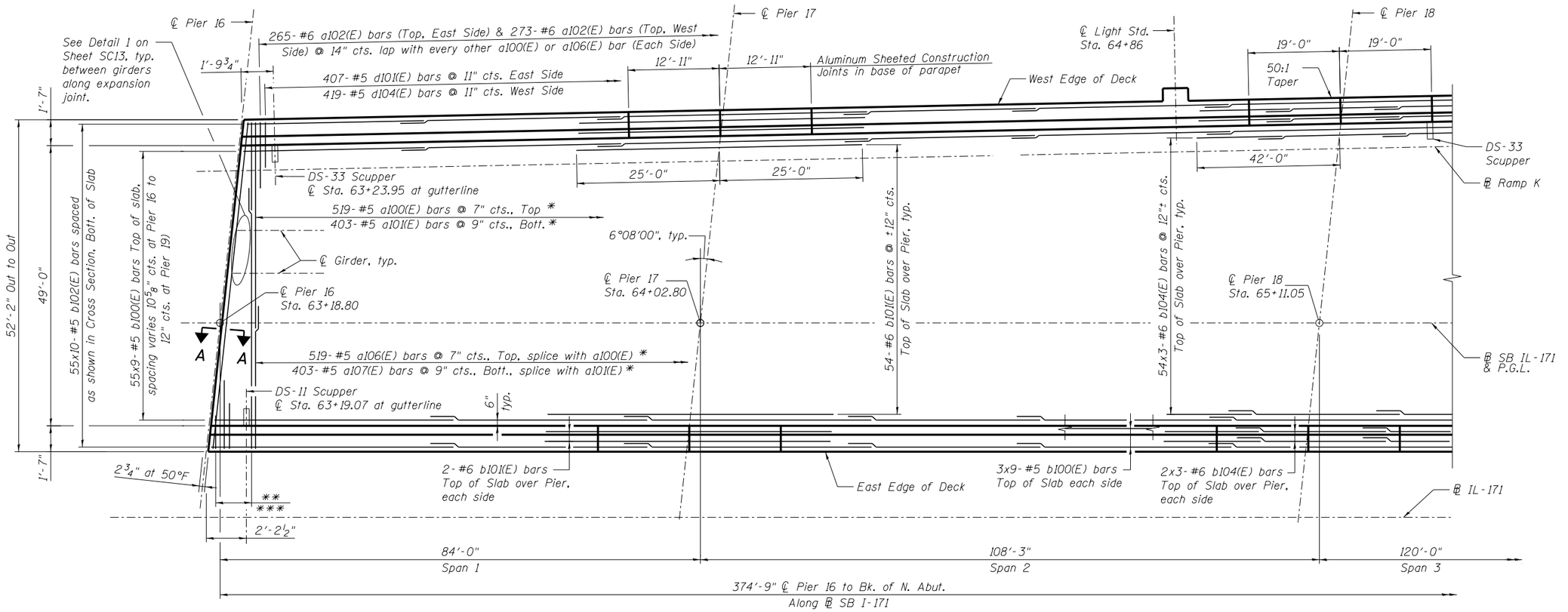
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

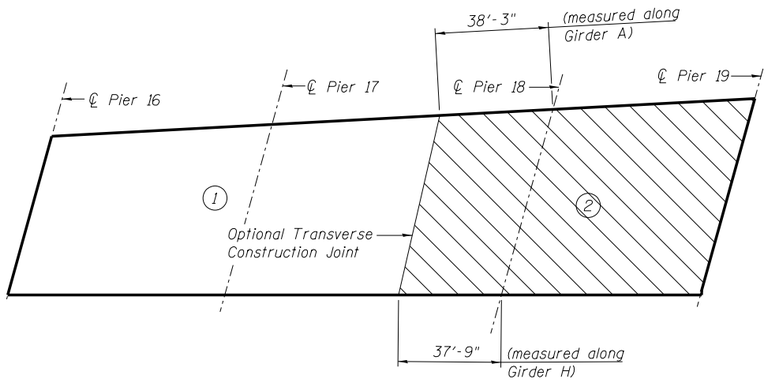
TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 016-2455
SHEET NO. SC11 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	337
		CONTRACT NO. 60J16		
ILLINOIS	FED. AID PROJECT			



* Vary lap to account for tapered deck.
Do not lap Top and Bott. bars at the same location.
** 10-#5 a100(E) bars @ 7" cts., Top
(cut to fit and use excess where laps are needed)
*** 8-#5 a107(E) bars @ 9" cts., Bott.
(cut to fit and use excess where laps are needed)

PARTIAL PLAN



OPTIONAL DECK POUR SEQUENCE

MINIMUM BAR LAP

(Slab)
#5 bar - 3'-3"
#6 bar - 3'-10"

NOTES:

1. See Sheets SC15 & SC16 of SC35 for superstructure details, parapet reinforcement and Bill of Material.
2. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. See Sheet SC16 of SC35 for additional bars at scuppers.
4. See Sheet SC35 of SC35 for Bar Splicer Details.
5. When the deck pour is stopped for the day at one or more of the transverse construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

   A) At least 72 hours shall have lapsed from the end of the previous pour.

   B) the concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

6. The Contractor is alerted that camber and dead load deflection values were developed based on the deck pouring sequence shown. Any deviations from this pouring sequence will result in changes to camber and deck elevations. These changes shall be submitted to the Engineer for review and approval.
7. See Sheet SC13 of SC35 for section A-A and Detail 1.
8. Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet SC20.

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		CHECKED - GJK	REVISED -
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	PLOT DATE = 12/20/2013	CHECKED - JOB/TPS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN (1 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC12 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	338
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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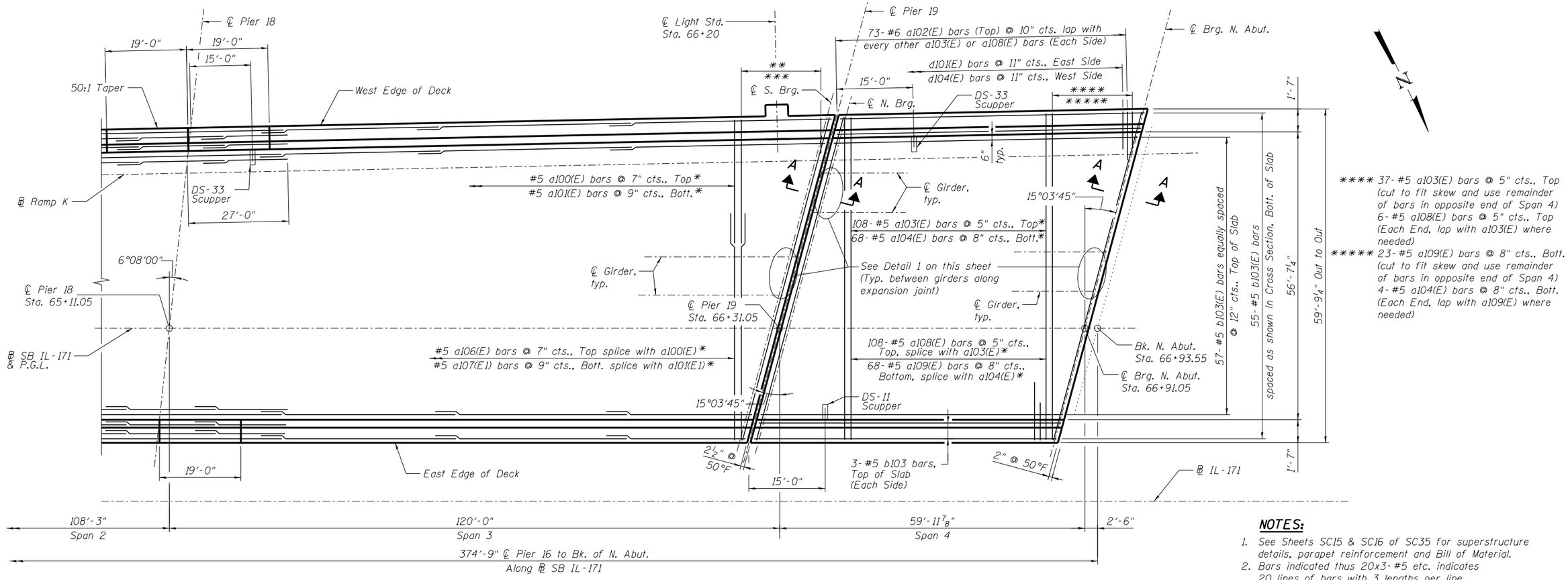
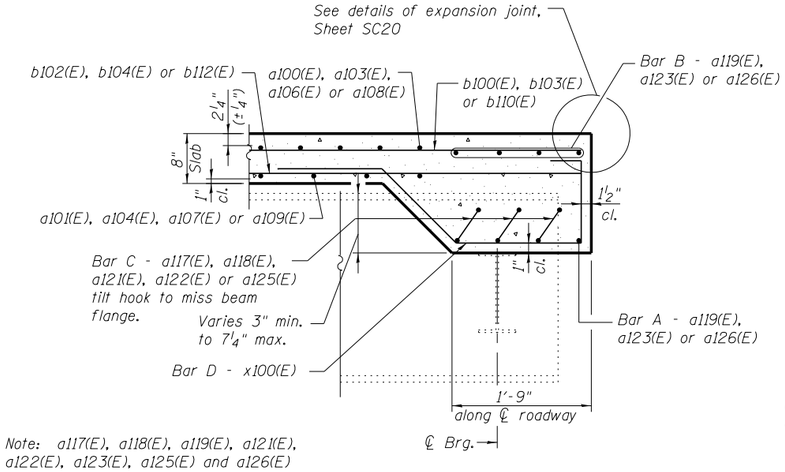


**** 37-#5 a103(E) bars @ 5" cts., Top (cut to fit skew and use remainder of bars in opposite end of Span 4) 6-#5 a108(E) bars @ 5" cts., Top (Each End, lap with a103(E) where needed)

***** 23-#5 a109(E) bars @ 8" cts., Bott. (cut to fit skew and use remainder of bars in opposite end of Span 4) 4-#5 a104(E) bars @ 8" cts., Bott. (Each End, lap with a109(E) where needed)

NOTES:

1. See Sheets SC15 & SC16 of SC35 for superstructure details, parapet reinforcement and Bill of Material.
2. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. See Sheet SC35 of SC35 for Bar Splicer Details.
4. See Sheet SC16 of SC35 for additional bars at scuppers.
5. For section through Preformed Joint Strip Seal at Pier 19 and N Abut, see Sheet SC20 of SC35.
6. Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet SC20.



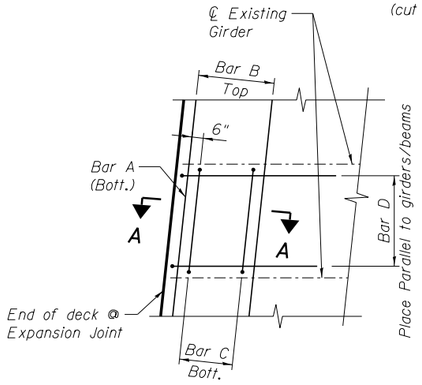
Note: a117(E), a118(E), a119(E), a121(E), a122(E), a123(E), a125(E) and a126(E) bars placed along skew.

SECTION A-A

(016-2457 side of Pier 16, Span 4 side of Pier 19 & Abutment not shown for clarity)
(The concrete edge beam shall be placed from ℄ web of fascia Beam to ℄ web of fascia beam and not on the overhang of the stucture.)

PARTIAL PLAN

* Vary lap to account for tapered deck. Do not lap Top and Bott. bars at the same location.
** 26-#5 a100(E) bars @ 7" cts., Top (cut to fit and use excess where laps are needed)
*** 21-#5 a107(E) bars @ 9" cts., Bott. (cut to fit and use excess where laps are needed)



DETAIL 1

MINIMUM BAR LAP

(Slab)
#5 bar - 3'-3"
#6 bar - 3'-10"

BAR	DESIGNATION	EDGE BEAM LOCATION
A	1-#6 a119(E) bar, bott.	016-2455 side of Pier 16
	1x2-#6 a123(E) bar, bott.	Both sides of Pier 19
	1x2-#6 a126(E) bar, bott.	N. Abut.
B	4-#6 a119(E) bars at 6" cts. top	016-2455 side of Pier 16
	4x2-#6 a123(E) bars at 6" cts. top	Both sides of Pier 19
	4x2-#6 a126(E) bars at 6" cts. top	N. Abut.
C	3-#6 a117(E) bars at 6" cts. bott. between girders	016-2455 side of Pier 16 between Girders C thru H
	3-#6 a118(E) bars at 6" cts. bott. between girders	016-2455 side of Pier 16 between Girders A thru C
	3-#6 a121(E) bars at 6" cts. bott. between girders	Span 3 side of Pier 19 between Girders C thru H
	3-#6 a122(E) bars at 6" cts. bott. between girders	Span 3 side of Pier 19 between Girders A thru C
	3-#6 a122(E) bars at 6" cts. bott. between beams	Span 4 side of Pier 19 between Beams B thru H
	3-#6 a125(E) bars at 6" cts. bott. between beams	Span 4 side of Pier 19 between Beams A and B
	3-#6 a122(E) bars at 6" cts. bott. between beams	N. Abut. between all beams
D	7-#5 x100(E) bars at 12" cts. between girders	016-2455 side of Pier 16 between Girders C thru H
	4-#5 x100(E) bars at 12" cts. between girders	016-2455 side of Pier 16 between Girders A thru C
	7-#5 x100(E) bars at 12" cts. between girders	Span 3 side of Pier 19 between Girders C thru H
	8-#5 x100(E) bars at 12" cts. between girders	Span 3 side of Pier 19 between Girders A thru C
	8-#5 x100(E) bars at 12" cts. between beams	Span 4 side of Pier 19 between Beams B thru H
	6-#5 x100(E) bars at 12" cts. between beams	Span 4 side of Pier 19 between Beams A and B
	8-#5 x100(E) bars at 12" cts. between beams	N. Abut. between all beams

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN (2 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC13 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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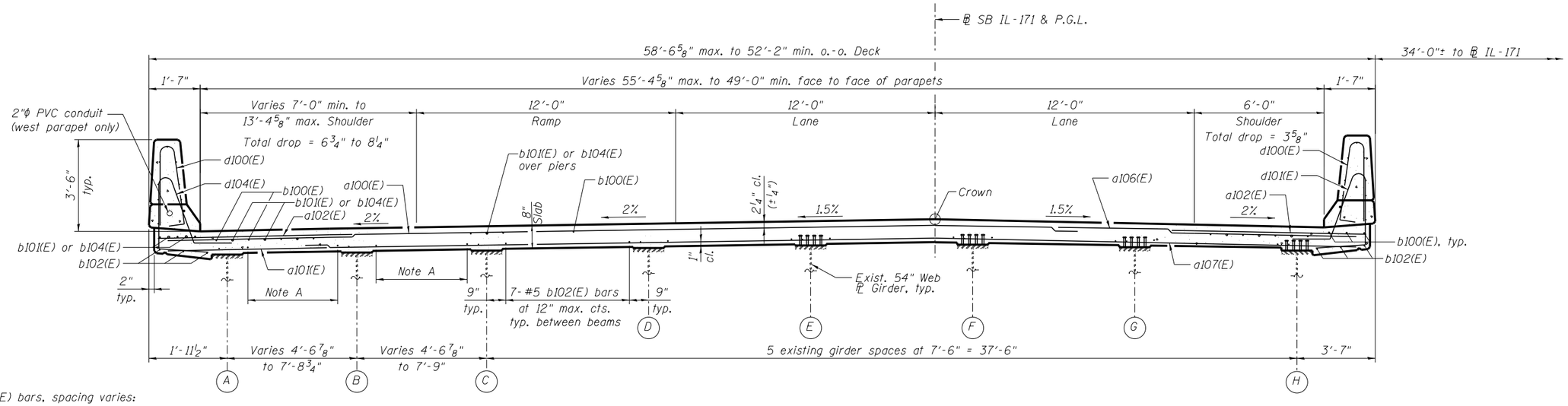
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

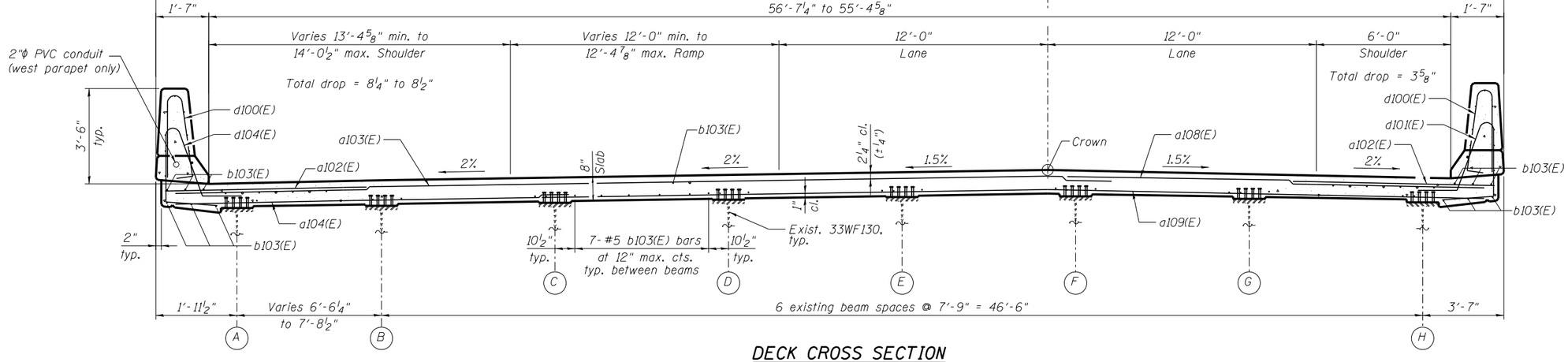


NOTE A:

7-#5 b102(E) bars, spacing varies:
6″ cts. at Pier 16
7 3/4″ cts. at Pier 17
10″ cts. at Pier 18
12 1/2″ cts. at Pier 19

DECK CROSS SECTION

(Spans 1 thru 3, Looking Upstation)



DECK CROSS SECTION

(Span 4, Looking Upstation)

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DEPARTMENT OF TRANSPORTATION

DECK CROSS SECTIONS
STRUCTURE NO. 016-2455
SHEET NO. SC14 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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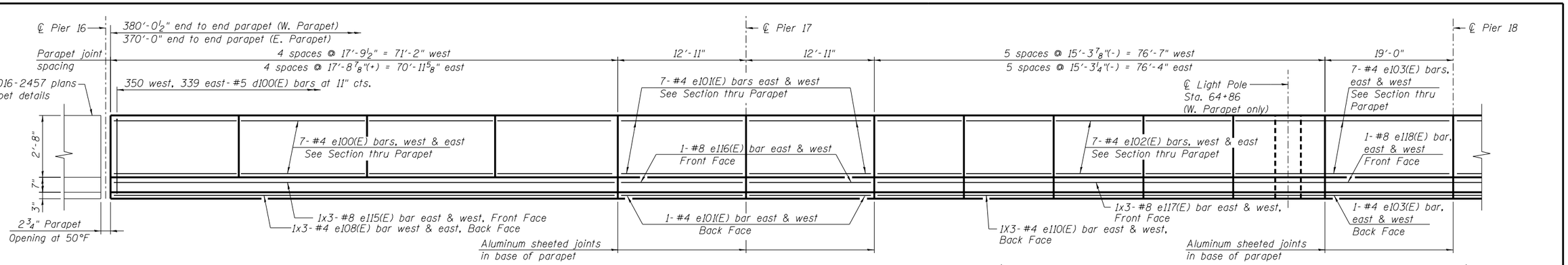
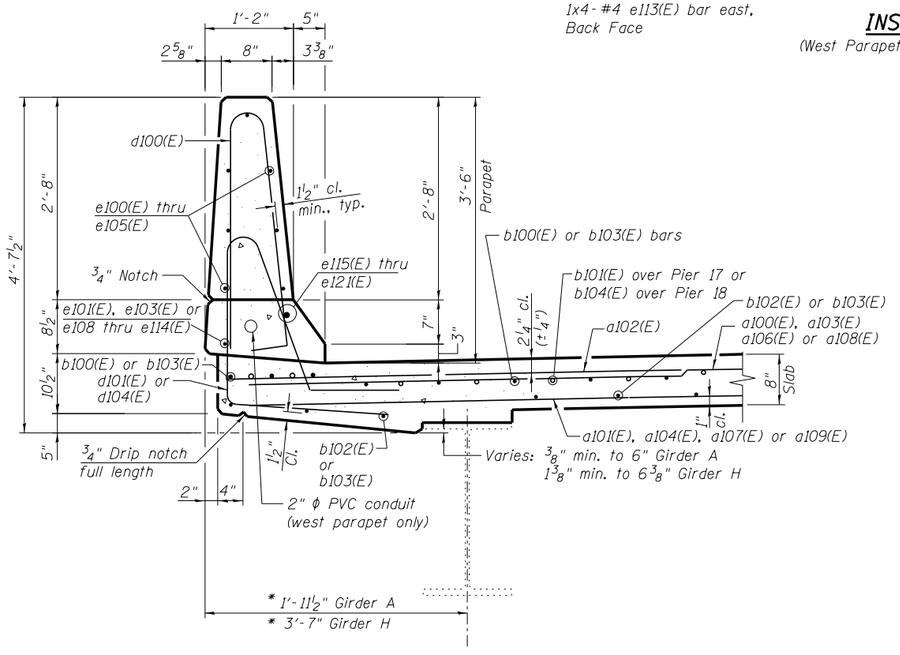
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		



INSIDE ELEVATION OF PARAPET

(West Parapet shown, East Parapet opposite hand and as noted)

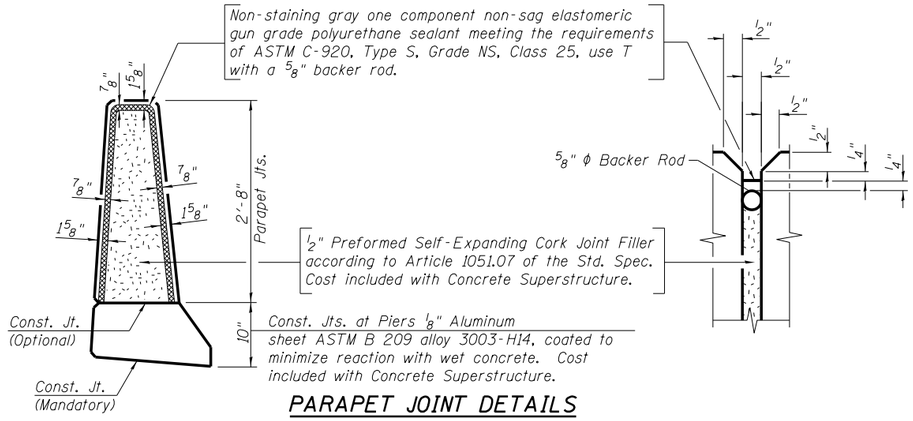


SECTION THRU PARAPET

* Measured perpendicular to Fascia Girder

MINIMUM BAR LAP

(Parapets)
#4 bar = 2'-0"
#8 bar = 5'-2"



PARAPET JOINT DETAILS

NOTE:
Dimensions measured along toe of parapet (gutterline).

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS (1 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC15 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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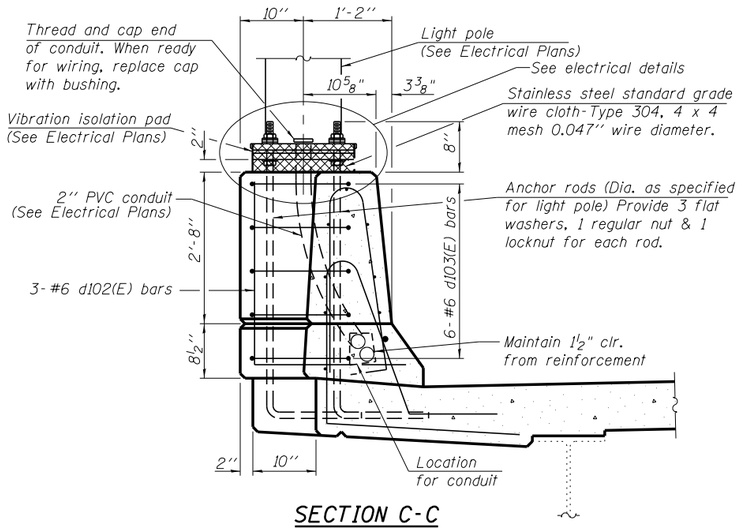
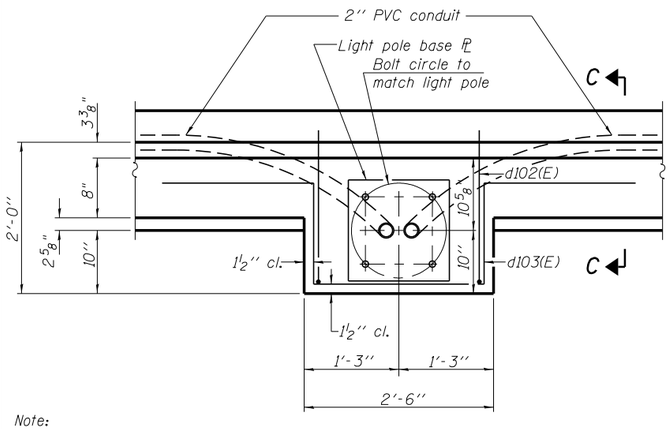
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

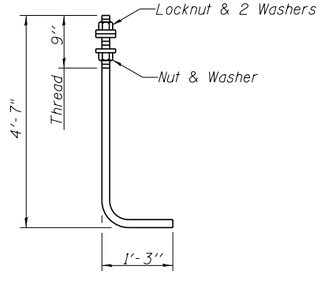


SECTION C-C



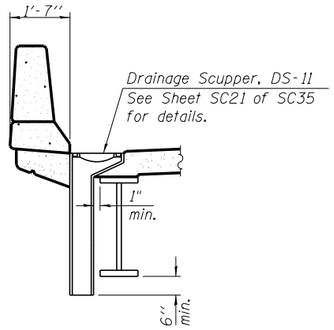
PLAN

Note:
Cost of anchor rods is included with "Concrete Superstructure".



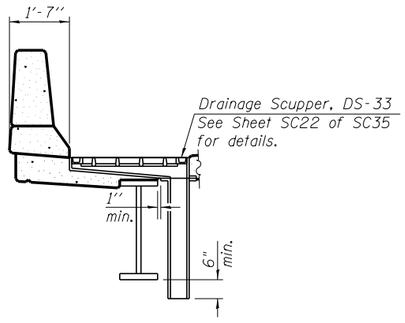
ANCHOR ROD

Diameter as specified for light poles.
(ASTM F 1554 Grade 105)
Full length hot dipped galvanized.



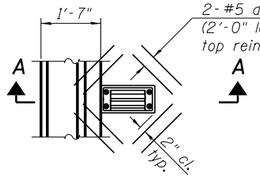
SECTION A-A

Girder H

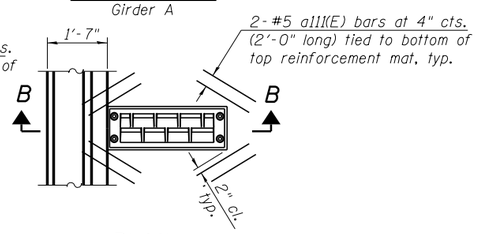


SECTION B-B

Girder A

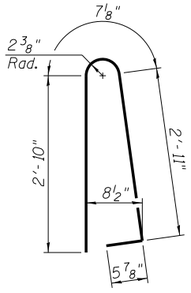


PLAN

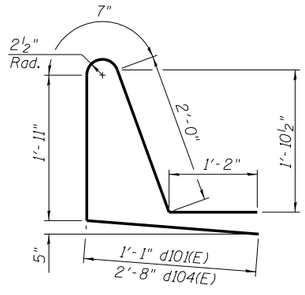


PLAN

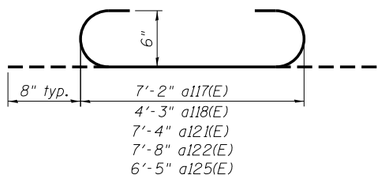
Note: Cut longitudinal reinforcement to clear drainage scuppers.



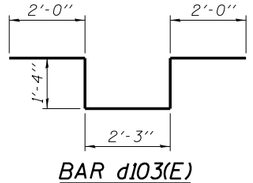
BAR d100(E)



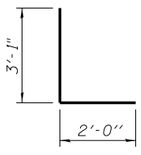
BARS d101(E) & d104(E)



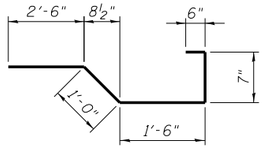
BARS a117(E), a118(E), a121(E), a122(E), a125(E)



BAR d103(E)



BAR d102(E)



BARS x100(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a100(E)	555	#5	46'-8"	
a101(E)	403	#5	15'-0"	
a102(E)	684	#6	6'-6"	
a103(E)	145	#5	47'-10"	
a104(E)	76	#5	15'-0"	
a106(E)	519	#5	15'-0"	
a107(E)	432	#5	46'-4"	
a108(E)	120	#5	15'-0"	
a109(E)	91	#5	47'-6"	
a111(E)	40	#5	2'-0"	
a117(E)	15	#6	8'-6"	
a118(E)	6	#6	5'-7"	
a119(E)	5	#6	46'-7"	
a121(E)	15	#6	8'-8"	
a122(E)	45	#6	9'-0"	
a123(E)	20	#6	29'-3"	
a125(E)	3	#6	7'-9"	
a126(E)	10	#6	29'-11"	
b100(E)	549	#5	38'-4"	
b101(E)	58	#6	50'-0"	
b102(E)	550	#5	34'-10"	
b103(E)	118	#5	60'-4"	
b104(E)	174	#6	25'-11"	
d100(E)	826	#5	6'-10"	
d101(E)	407	#5	6'-9"	
d102(E)	6	#6	5'-1"	
d103(E)	12	#6	8'-11"	
d104(E)	419	#5	8'-4"	
e100(E)	56	#4	17'-6"	
e101(E)	32	#4	12'-8"	
e102(E)	175	#4	15'-0"	
e103(E)	32	#4	18'-9"	
e105(E)	49	#4	13'-9"	
e108(E)	6	#4	25'-0"	
e110(E)	6	#4	26'-10"	
e112(E)	4	#4	28'-3"	
e113(E)	4	#4	26'-0"	
e114(E)	4	#4	31'-8"	
e115(E)	6	#8	27'-1"	
e116(E)	4	#8	12'-8"	
e117(E)	6	#8	28'-11"	
e118(E)	4	#8	18'-9"	
e119(E)	4	#8	30'-8"	
e120(E)	4	#8	28'-4"	
e121(E)	4	#8	33'-3"	
x100(E)	204	#5	6'-1"	
Reinforcement Bars, Epoxy Coated			Pound	167,220
Concrete Superstructure			Cu. Yd.	658.3

NOTES:

1. For Conduit and other electrical components see Electrical Plans.
2. The conduit shall be PVC pipe, Sch. 40.

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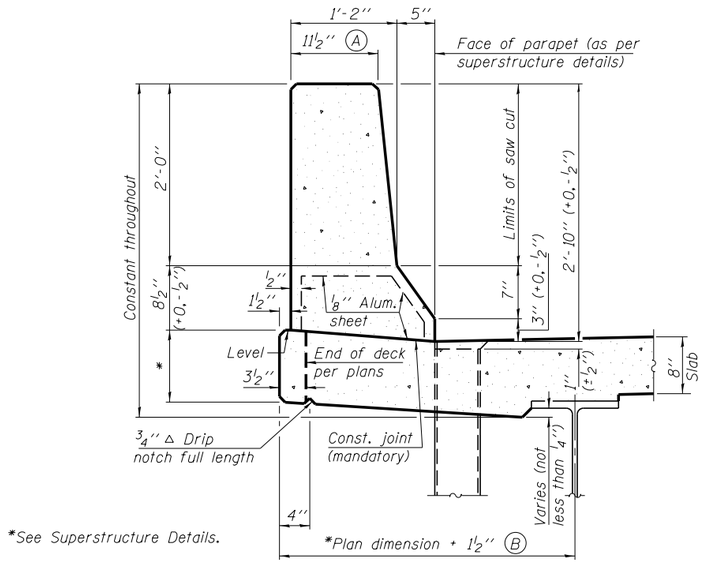
	PLOT DATE = 12/20/2013	CHECKED - RDK/TPS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

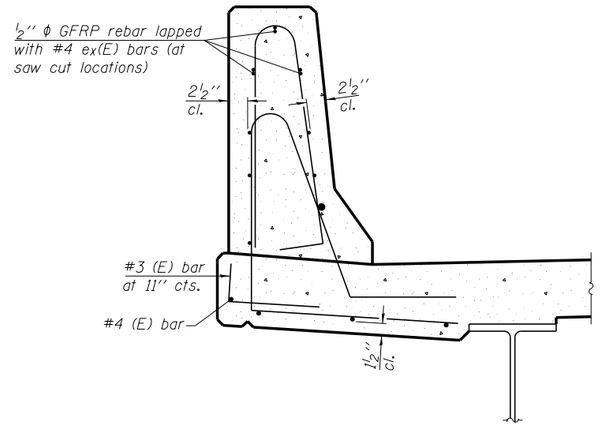
SUPERSTRUCTURE DETAILS (2 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC16 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	342
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



34" F SHAPE PARAPET SECTION

(Showing dimensions)



SECTION

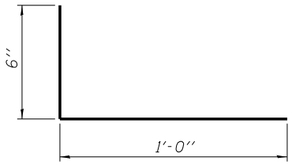
(34" parapet shown - 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

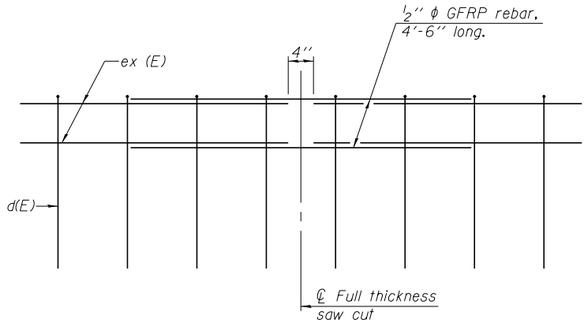
Steel superstructure shown. Other superstructure types similar.



#3 (E) BAR

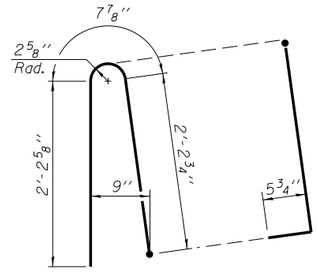
42" F SHAPE PARAPET SECTION

(Showing dimensions)



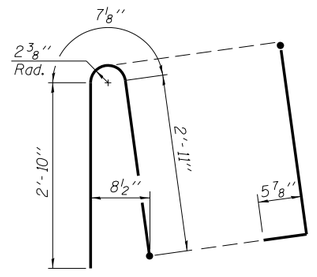
GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)



ALTERNATE BAR d(E)

(For 34" parapet when conduit is present)



ALTERNATE BAR d(E)

(For 42" parapet when conduit is present)

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SFP 34-42 8-16-12

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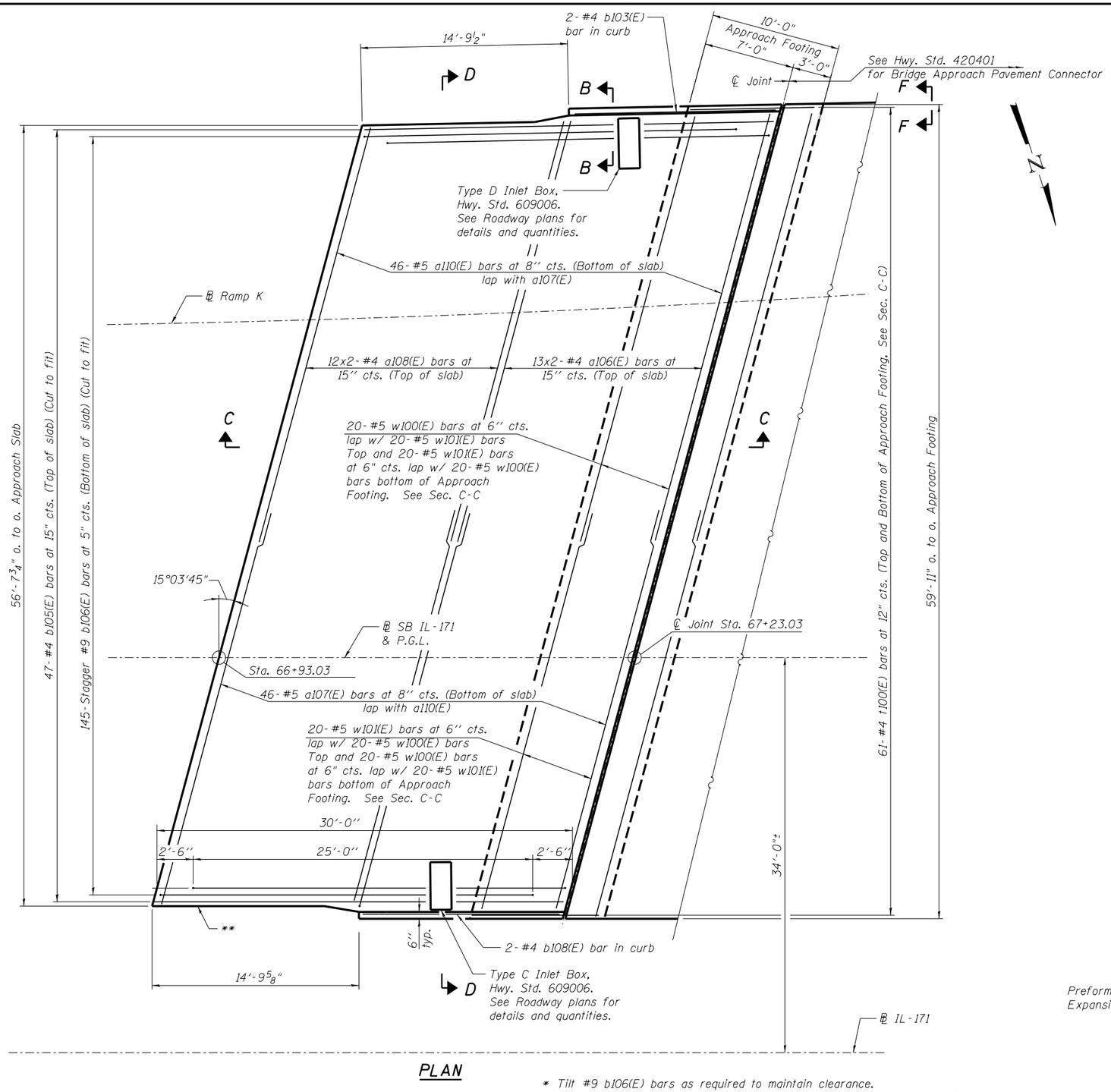
	PLOT DATE = 12/20/2013	CHECKED - RDK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 016-2455
SHEET NO. SC17 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	343
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

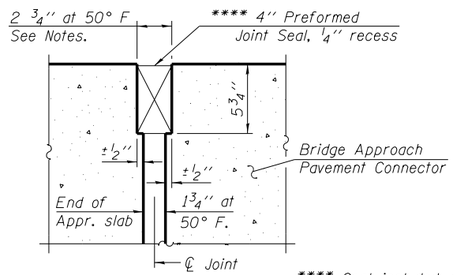


PLAN

* Tilt #9 b106(E) bars as required to maintain clearance.
** Preformed Flexible Foam Expansion Joint Filler according to Article 1051.09 of the Std. Specifications; full depth of slab, full length of parapet. Typ. each parapet. Cost included with "Concrete Superstructure".

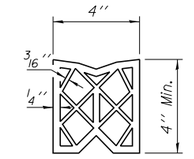
NOTES:

1. See sheet SC19 of SC35 for Sections C-C & D-D and View E-E. a106(E), a107(E) and a108(E) bar spacings measured along ℄ Rdwy.
2. The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1 1/2" for installation purposes.
3. Bars indicated thus 12x2-#4 etc. indicates 12 lines of bars with 2 lengths per line.



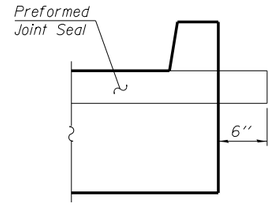
RIGID PAVEMENT

**** Cost included with "Concrete Superstructure".

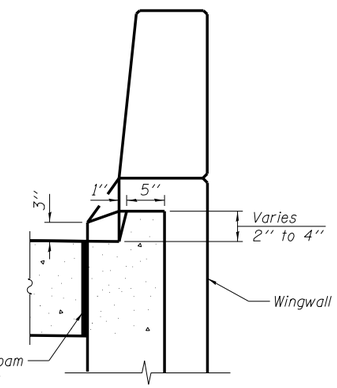


PREFORMED JOINT SEAL

DETAIL A



VIEW F-F



VIEW B-B

MINIMUM BAR LAP (APPROACH)

#4 bar = 2'-7"
#5 bar = 3'-3"

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FILE NAME = 0162455_60J16_018_appslabdet-1.dgn	USER NAME = jsurber	DESIGNED - JOB	REVISED -
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	PLOT DATE = 12/20/2013	CHECKED - JOB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE NORTH APPROACH SLAB DETAILS (1 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC18 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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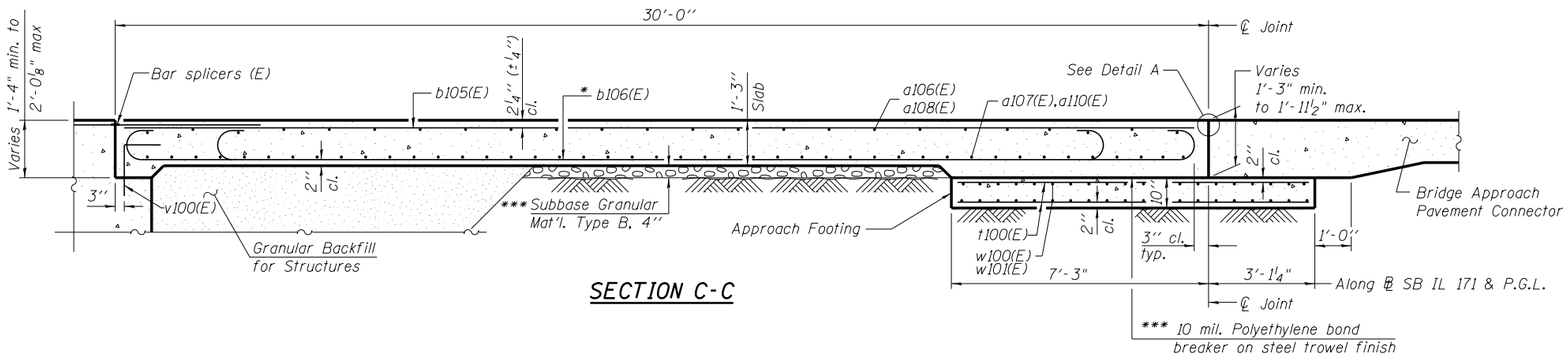
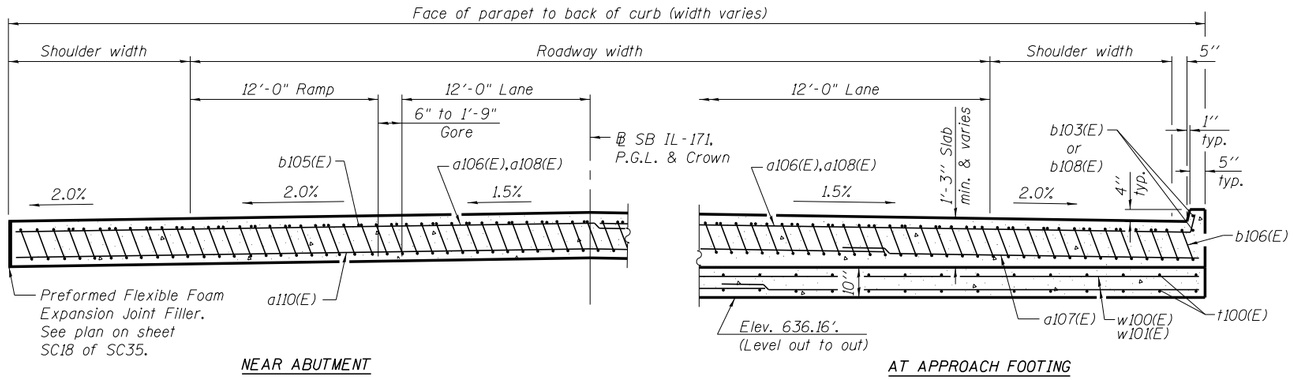
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



SECTION C-C

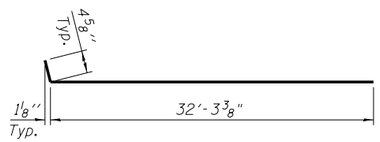


NEAR ABUTMENT

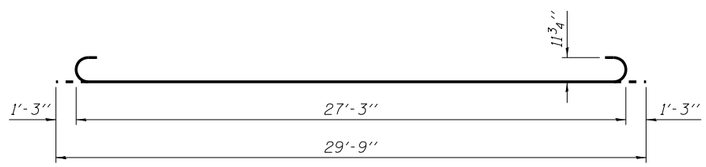
AT APPROACH FOOTING

SECTION D-D

(See Plan for dimensions not shown)



BAR a106(E)



BAR b106(E)

NOTES:

1. See sheet SC18 of SC35 for Detail A and View B-B.
2. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v100(E) bar details, see sheet SC15 of SC35.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. For bar splicer details, see sheet SC35 of SC35.
8. Cost of excavation for approach footing included with Concrete Structures.
9. For Granular Backfill for Structures and drainage treatment details, see sheet SC2 of SC35.
10. For additional parapet details, see sheet SC17 of SC35.

* Tilt #9 b106(E) bars as required to maintain clearance.

*** Cost included with "Concrete Superstructure".

ONE APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a106(E)	26	#4	32'-8"	
a107(E)	46	#5	39'-11"	
a108(E)	24	#4	31'-8"	
a110(E)	46	#5	25'-1"	
b103(E)	2	#4	15'-5"	
b105(E)	47	#4	29'-8"	
b106(E)	145	#9	29'-9"	
b108(E)	2	#4	14'-8"	
t100(E)	122	#4	9'-8"	
w100(E)	40	#5	36'-0"	
w101(E)	40	#5	29'-0"	
Concrete Superstructure			Cu. Yd.	91.1
Concrete Structures			Cu. Yd.	18.6
Reinforcement Bars, Epoxy Coated			Pound	23,340

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		CHECKED - GJK	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JOB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE NORTH APPROACH SLAB DETAILS (2 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC19 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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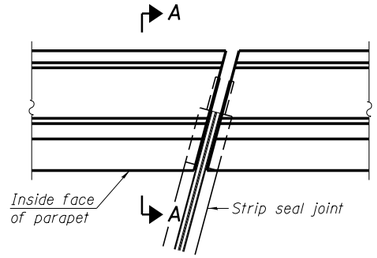
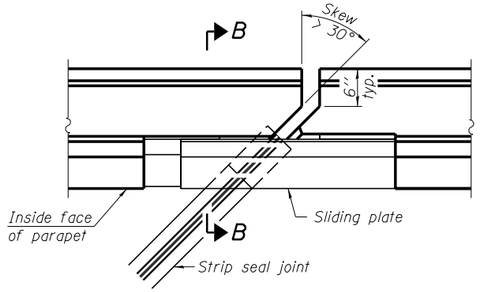
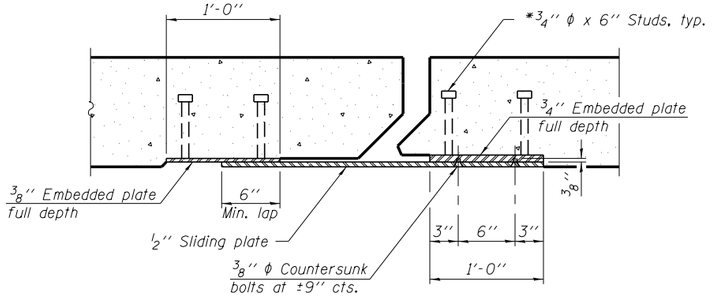
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



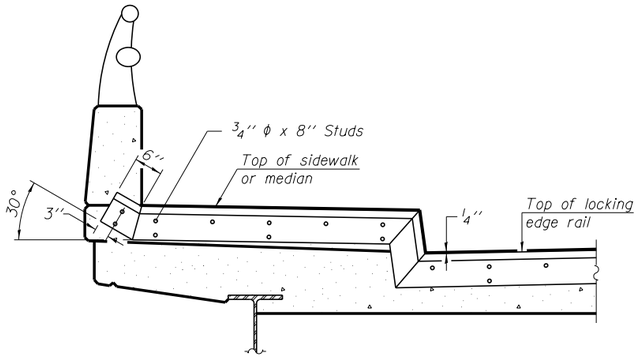
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

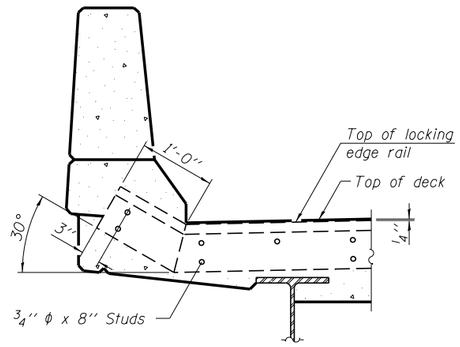


SECTION C-C

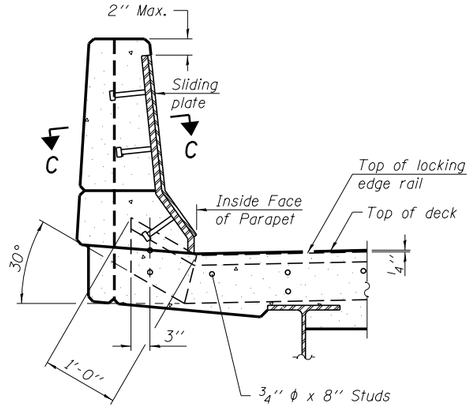


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

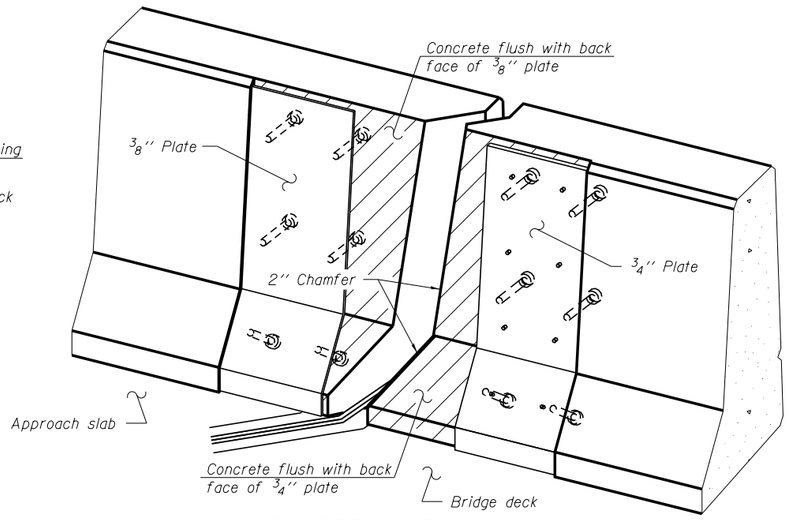
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

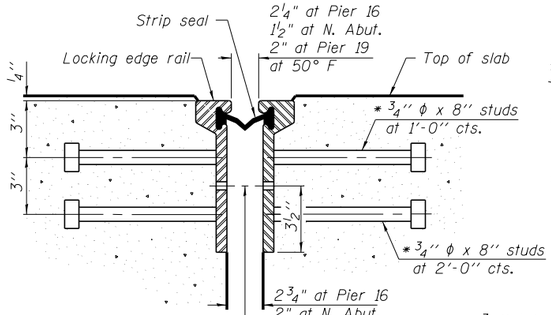
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

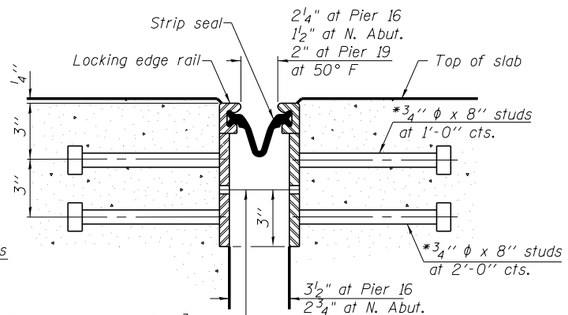
Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT

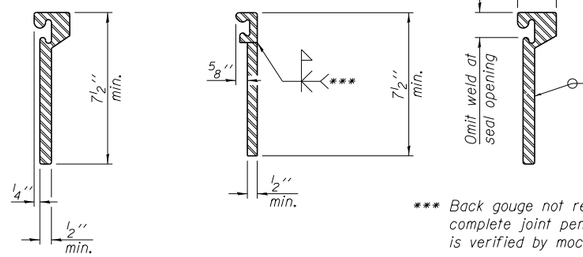
(Strip Seal at Pier 16 shall be installed when the temperature is between 30°F and 90°F)



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

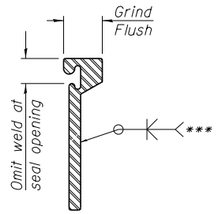
SECTION THRU WELDED RAIL JOINT

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL

WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	171.5

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EJ-SSJ 1-27-12

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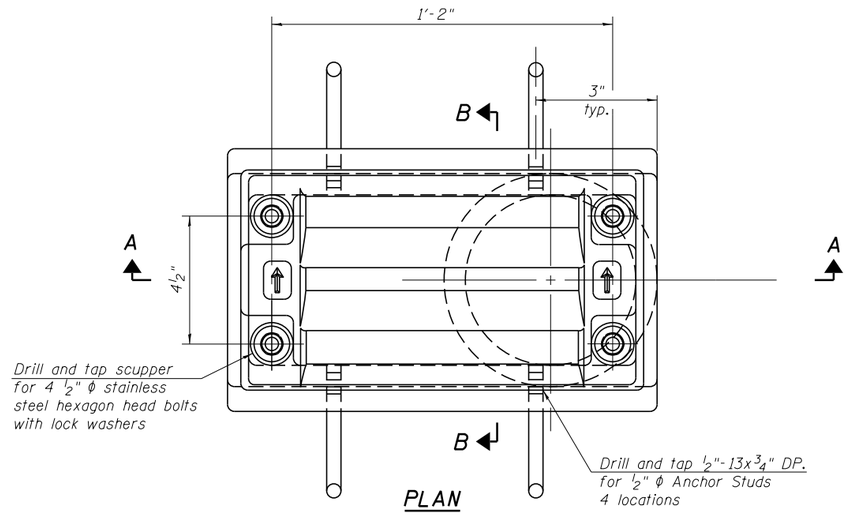
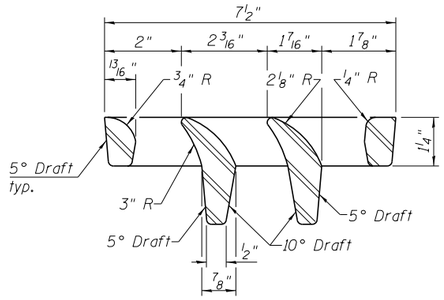
	PLOT SCALE =	CHECKED - RDK/AJK	REVISED -		
	PLOT DATE = 12/20/2013	DRAWN - MAK	REVISED -		SHEET NO. SC20 OF SC35 SHEETS
		CHECKED - GJK	REVISED -		

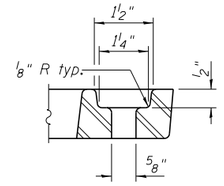
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	346
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



PLAN



VANE GRATE DETAIL



BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a fascia beam shall be painted under a separate painting contract.

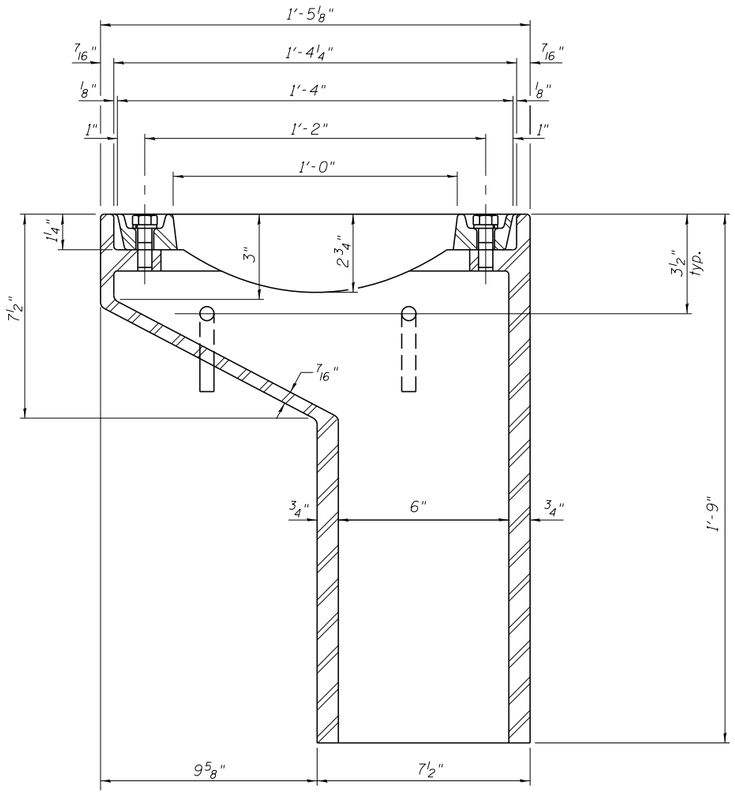
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

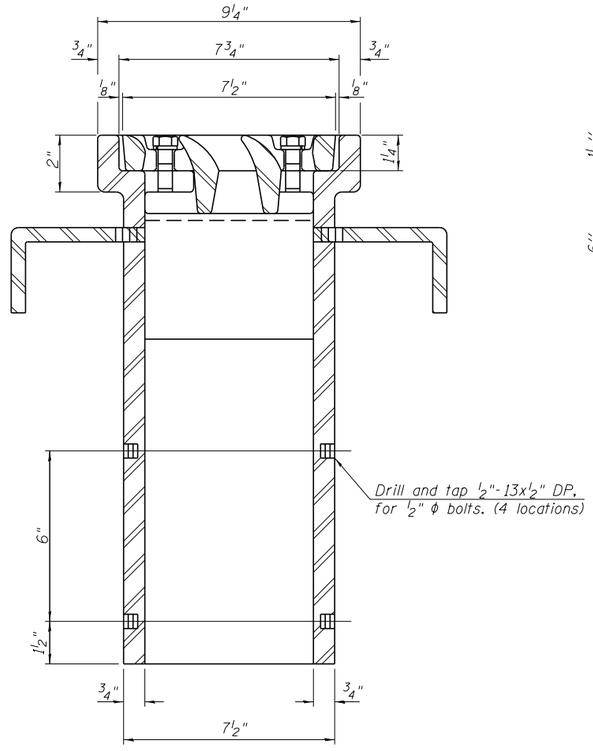
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

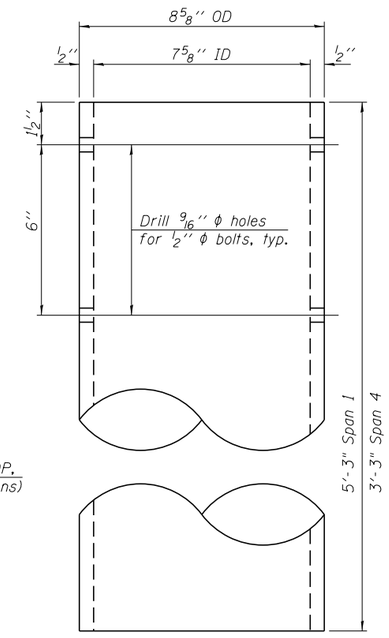


SECTION A-A

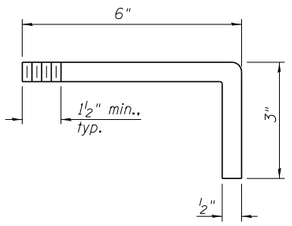
See Sheet SC16 of SC35 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

DS-11 7-1-10

FILE NAME = 0162455_60J16_021_scupper_DS-11.dgn	USER NAME = jsurber	DESIGNED - JDM	REVISED -
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	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 016-2455
SHEET NO. SC21 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	347
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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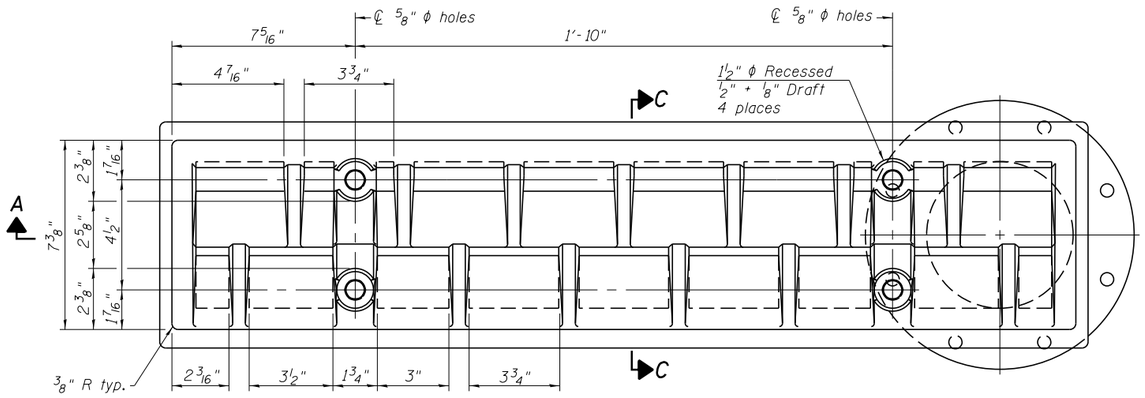
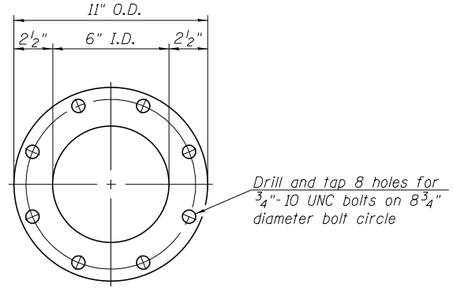


PLAN



VIEW B-B

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a fascia beam shall be painted under a separate painting contract.

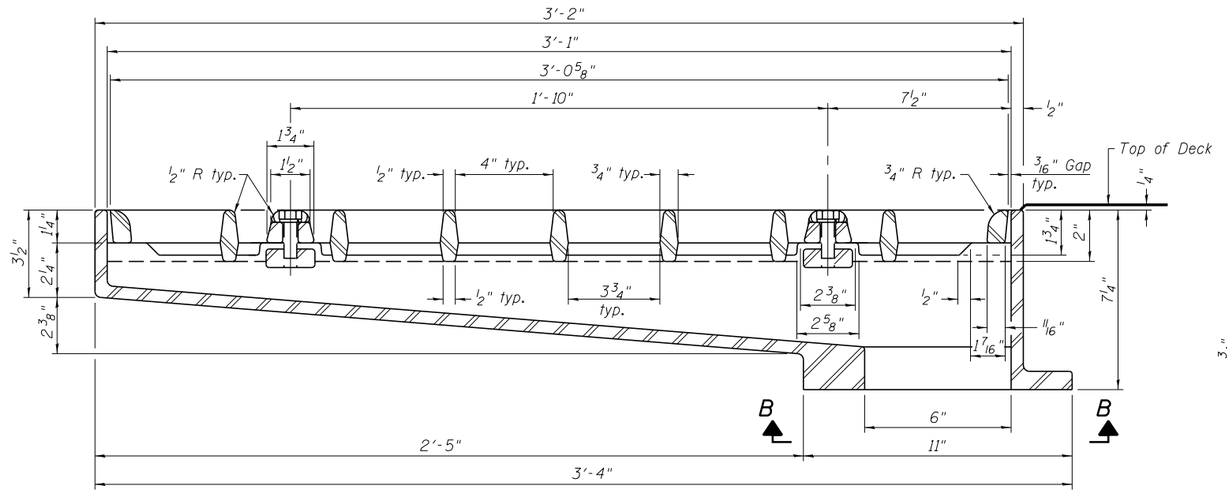
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

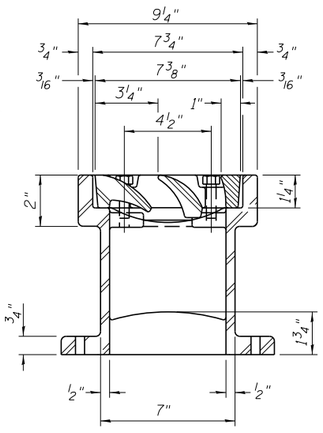
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-33.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

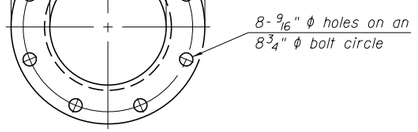


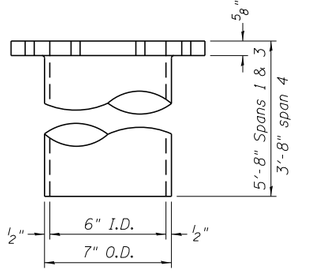
SECTION A-A

See Sheet SC16 of SC35 for scupper location relative to parapet.

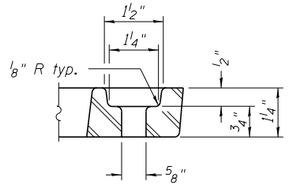


SECTION C-C

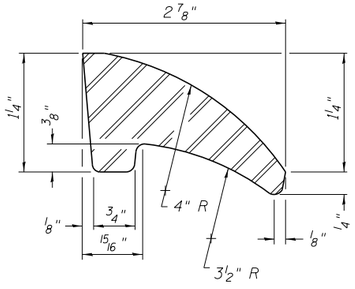




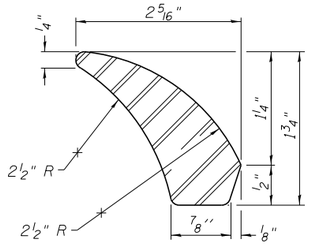
DOWNSPOUT



BOLT HOLE DETAIL



FIRST VANE DETAIL



SECOND VANE DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-33	Each	3

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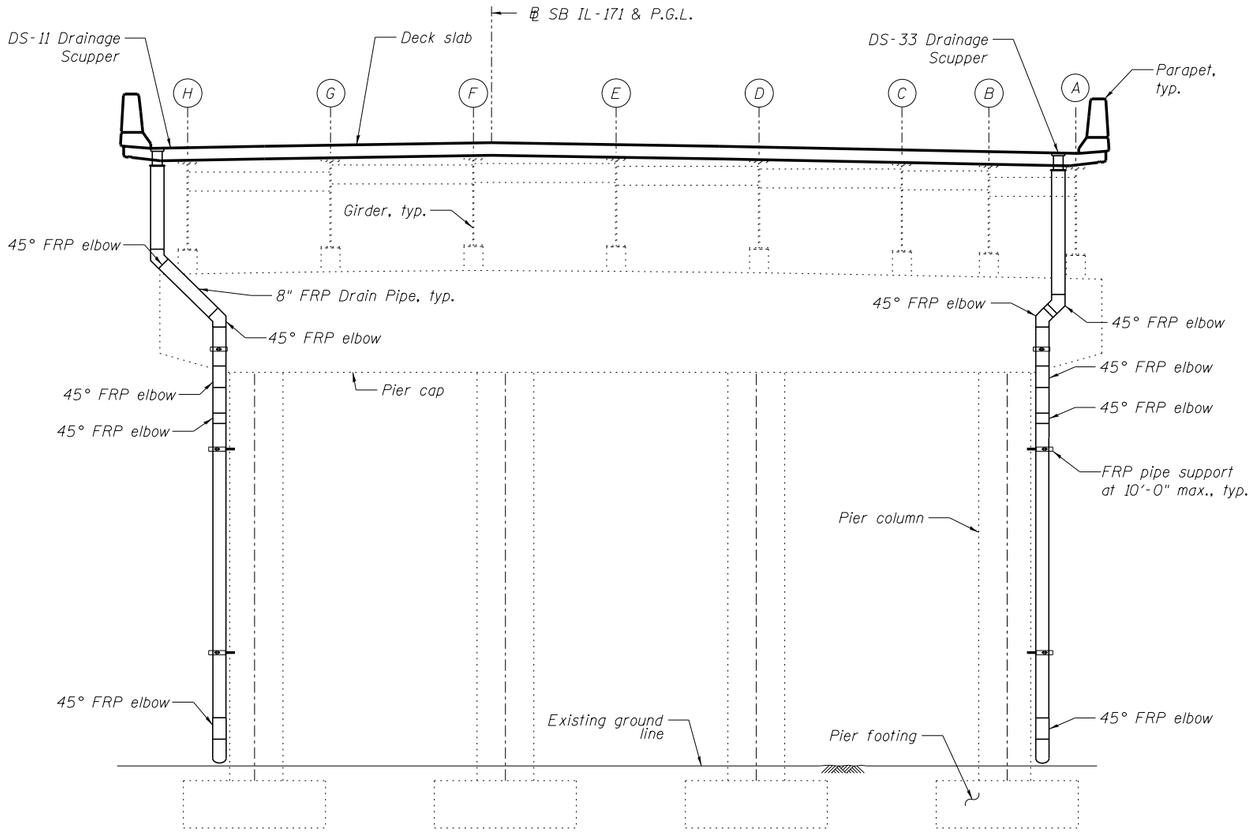
DS-33 7-1-10

FILE NAME = 0162455_60J16_022_scupper_DS-33.dgn	USER NAME = jsurber	DESIGNED - JDM	REVISED -
		CHECKED - GJK	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

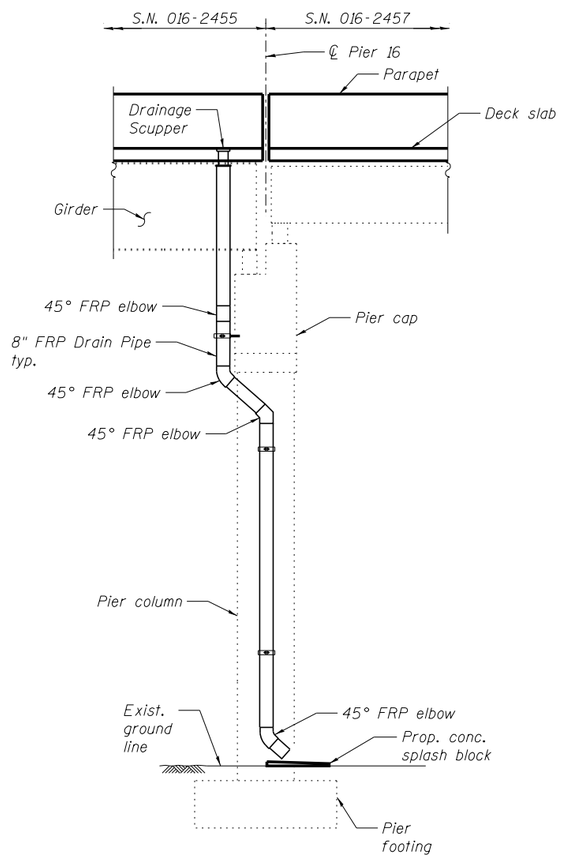
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-33
STRUCTURE NO. 016-2455
SHEET NO. SC22 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	348
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



ELEVATION - PIER 16
(Looking Downstation / South)



END VIEW - PIER 16
(Looking East)

NOTES:

1. Closed Drainage system shall be fabricated and installed in accordance with Special Provision "Drainage System".
2. The surface of the fiberglass shall be free of bond inhibiting agents.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Drainage System	L. Sum	1

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FILE NAME = 0162455_60J16_023_pierdraindet-1.dgn	USER NAME = tjanicke	DESIGNED - DTS	REVISED -
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	PLOT DATE = 12/20/2013	CHECKED - JLS	REVISED -

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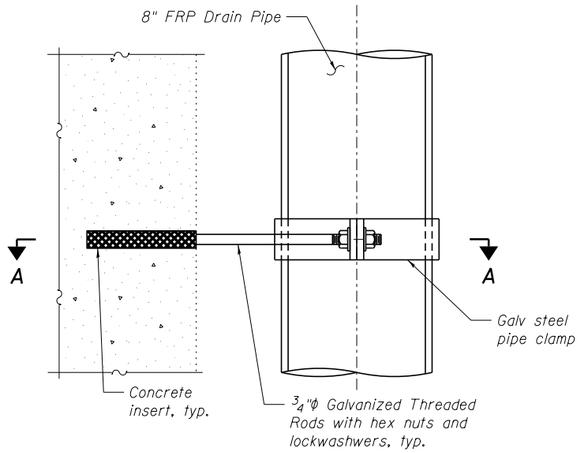
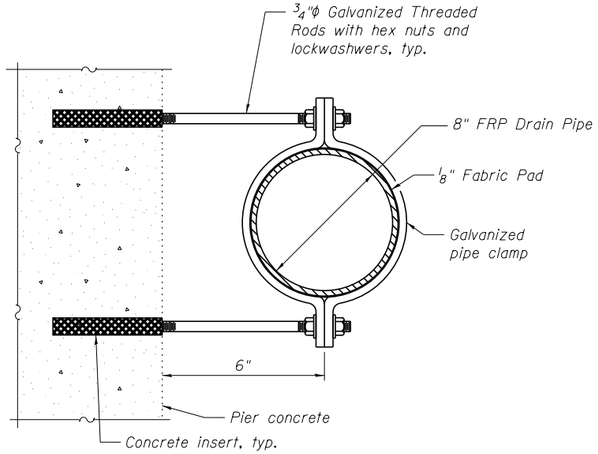
PIER DRAINAGE SYSTEM DETAILS (1 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC23 OF SC35 SHEETS

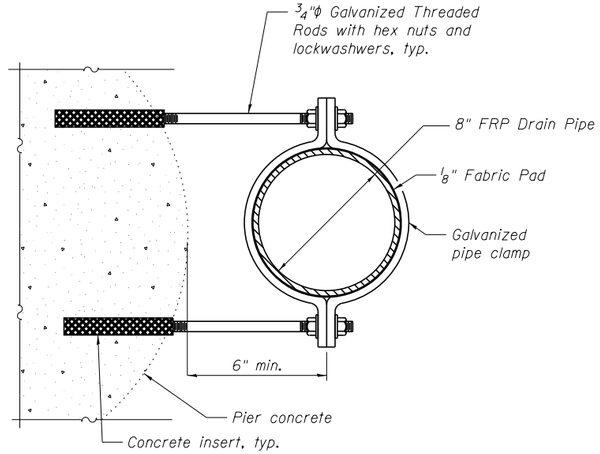
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	349
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



PIPE SUPPORT PLAN AT PIER



SECTION A-A
Pier Cap



SECTION A-A
Pier Column

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FILE NAME = 0162455_60J16_024_pierdraindet-2.dgn	USER NAME = tjanicke	DESIGNED - GJK/DTS	REVISED -
		CHECKED - RDK/JLS	REVISED -
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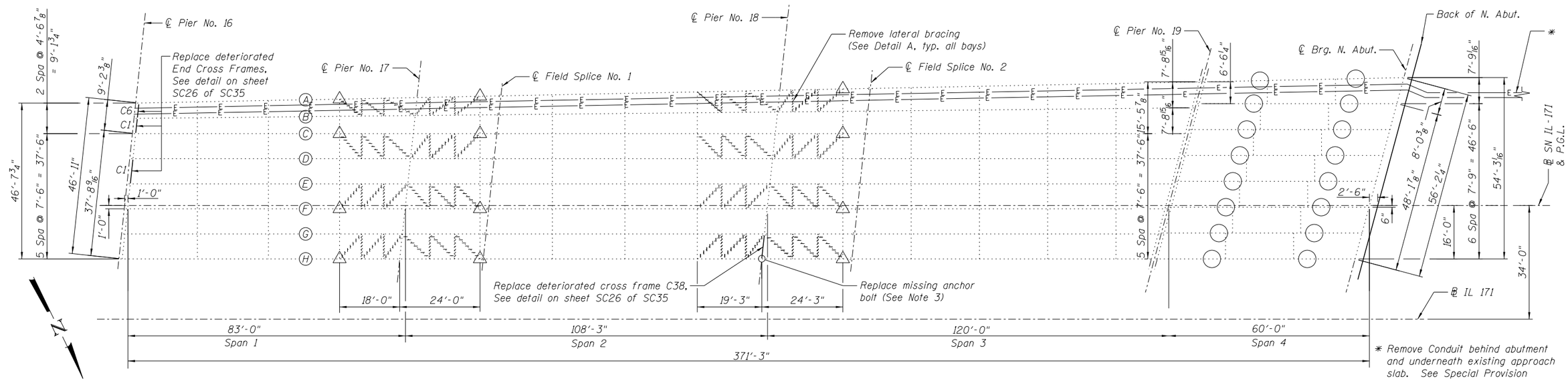
	PLOT DATE = 12/20/2013	CHECKED - JDM/JLS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DRAINAGE SYSTEM DETAILS (2 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC24 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	350
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



* Remove Conduit behind abutment and underneath existing approach slab. See Special Provision "Remove Conduit Attached to Structure".

EXISTING FRAMING PLAN

INTERIOR GIRDER D AND BEAM D MOMENT TABLE							
		0.4 Span 1	Pier 17	0.5 Span 2	Pier 18	0.6 Span 3	0.5 Span 4
I_s	(in^4)	18,240	29,123	18,411	51,136	30,375	8,507
$I_c(n)$	(in^4)	48,232	29,123	44,923	51,136	77,868	24,977
$I_c(3n)$	(in^4)	36,334	----	34,392	----	56,297	18,011
S_s	(in^3)	710	1040	663	1794	1350	585
$S_c(n)$	(in^3)	993	----	913	----	1743	846
$S_c(3n)$	(in^3)	918	----	843	----	1625	773
Z	(in^3)	----	----	----	----	----	----
ϱ	(k/')	0.931	1.128	0.931	1.250	1.013	0.958
M_ϱ	('k)	472	847	209	1,789	1,148	418
s_ϱ	(k/')	0.131	----	0.131	----	0.131	0.156
$M_s\varrho$	('k)	69	----	49	----	157	68
M_L	('k)	707.8	571.3	752.0	861.3	1098.5	552.5
M_{IM}	('k)	170.2	129.5	161.2	179.6	222.9	150.1
$\frac{5}{3}[M_L + I]$	('k)	1466	1170	1525	1738	2207	1173
M_a	('k)	2609.7	2622.9	2318.9	4585.6	4565.1	2156.8
* M_u	('k)	3081.5	----	4035.1	----	5476.5	3202.7
f_s ϱ non-comp	(ksi)	8.0	9.8	3.8	12.0	10.2	8.6
f_s ϱ (comp)	(ksi)	0.9	----	0.7	----	1.2	1.1
f_s $\frac{5}{3}[M_L + M_I]$	(ksi)	17.7	13.5	20.1	11.6	19.6	24.0
f_s (Overload)	(ksi)	26.6	23.3	24.5	23.6	31.0	33.7
** f_s (Total)	(ksi)	----	30.3	----	30.7	----	----
VR	(k)	65.6	----	54.1	----	64.7	61.1

INTERIOR GIRDER D & BEAM D REACTION TABLE							
		Pier 16 North	Pier 17	Pier 18	Pier 19 South	Pier 19 North	North Abutment
$R\varrho$	(k)	34.4	104.6	154.1	54.6	33.1	33.1
R_L	(k)	52.2	80.3	94.2	54.5	51.8	51.8
R_I	(k)	12.5	12.7	13.3	11.1	14.1	14.1
R_{Total}	(k)	99.1	197.5	261.7	120.2	99.0	99.0

* Compact section
** Braced non-compact and partially braced section

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total and Overload) due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total and Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).

ϱ: Un-factored non-composite dead load (kips/ft.).

M_ϱ: Un-factored moment due to non-composite dead load (kip-ft.).

s_ϱ: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$M_s\varrho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_I: Un-factored moment due to impact (kip-ft.).

M_a: Factored design moment (kip-ft.).
$1.3\ [M_\varrho + M_s\varrho + \frac{5}{3}(M_L + M_I)]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

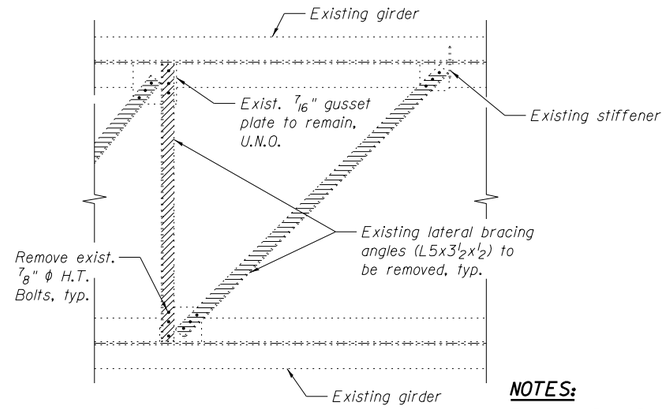
f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M_\varrho + M_s\varrho + \frac{5}{3}(M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M_\varrho + M_s\varrho + \frac{5}{3}(M_L + M_I)]$

VR: Maximum L + impact shear range within the composite portion of the span for stud shear connector design (kips).

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Anchor Bolts, $1\frac{1}{2}$"	Each	1



DETAIL A

(Removal of lateral bracing and gusset plates paid for as "Structural Steel Removal")

LEGEND

E — Existing electrical conduit, wiring and appurtenances to be removed. See Conduit Removal Detail on sheet SC27 of SC49.

◯ Location of Cover Plate Ends to be Retrofitted

△ Remove existing gusset plates per "Structural Steel Removal" Special Provision. See Detail A. (12 Locations)

Remove lateral bracing angles per "Structural Steel Removal" Special Provision.

NOTES:

1. For Cover Plate Retrofit, see sheet SC27 of SC49.
2. The Engineer will inspect all existing bearing anchor bolts to ascertain their condition. Any damaged anchor bolts shall be reported to the BBS for further direction. The Contractor shall provide all means and access for the Engineer to perform the anchor bolt inspections. All costs associated with providing the access shall be considered included in the unit price for "Furnishing and Erecting Structural Steel".
3. Install new $1\frac{1}{2}$" dia. anchor bolt, 1'-9" long, with hexagonal nut and 3"x3"x$\frac{5}{16}$" plate washer, at existing bearing. Anchor Bolts shall be ASTM F1554, Grade 105, all-thread or an Engineer-approved alternate material. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. If a drilled hole in the existing concrete does not exist, or is not deep enough to allow for the new anchor bolt projection above the existing side retainer angle to match the projection of the other existing anchor bolts, then a hole shall be drilled in the existing concrete to the appropriate depth. Holes in the existing concrete may be drilled through the existing holes in the bottom bearing plate, if this can be done without damaging the bearing. Drilled and set anchors shall be installed according to Article 521.06 of the Standard Specifications. The cost of this work shall be included with "Anchor Bolts, $1\frac{1}{2}$".

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	PLOT DATE = 12/20/2013	CHECKED - JDM/TPS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 016-2455
SHEET NO. SC25 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	351
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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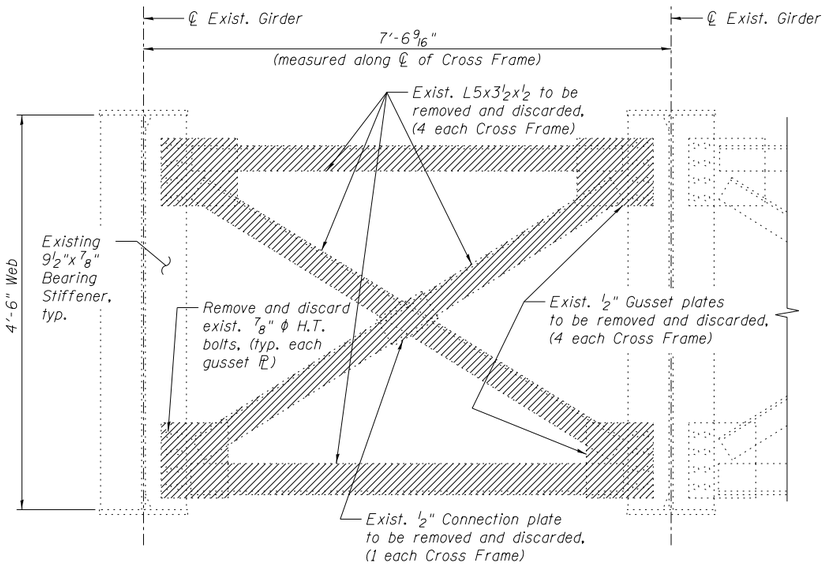
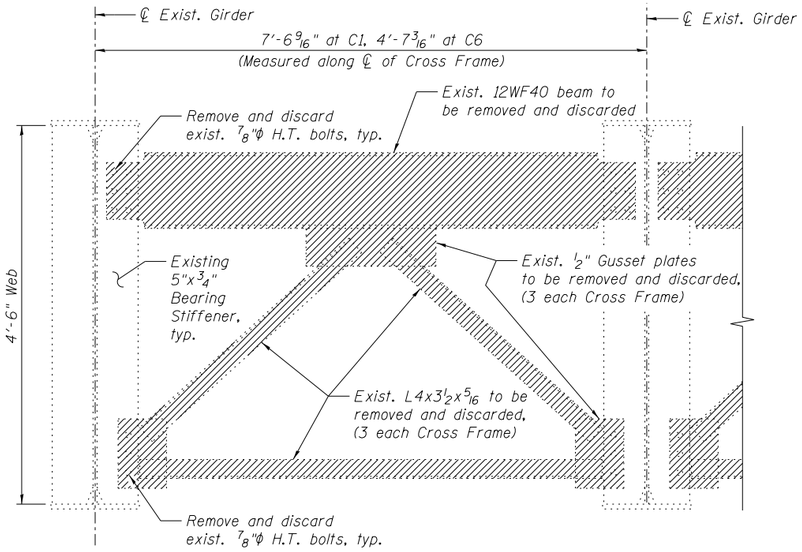


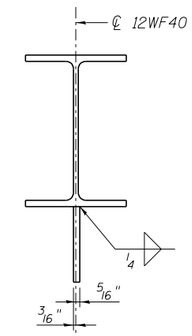
EXIST. CROSS FRAME REMOVAL AT PIER 18

(C38)
(No. Removed = 1)



EXIST. CROSS FRAME REMOVAL AT PIER 16

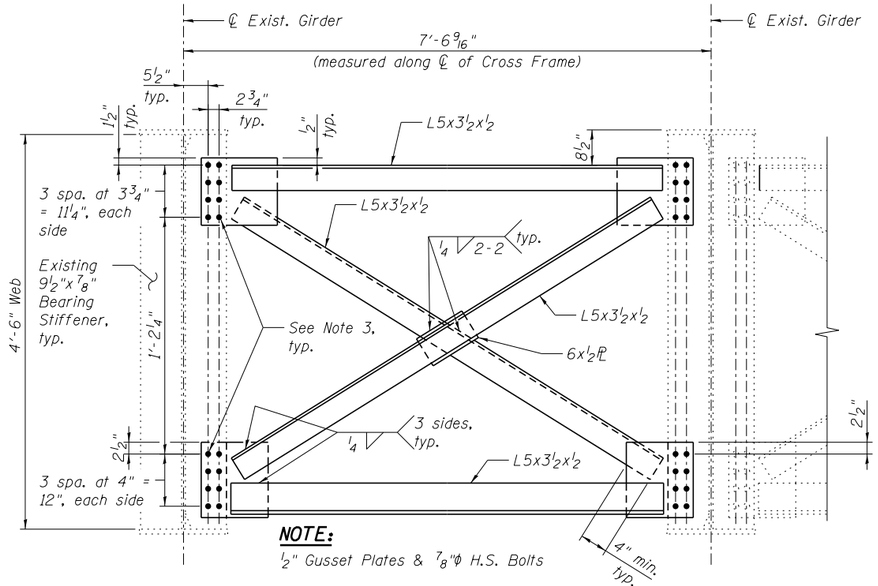
(C1 & C6)
(C1 No. Removed = 2)
(C6 No. Removed = 1)



SECTION D-D

NOTES:

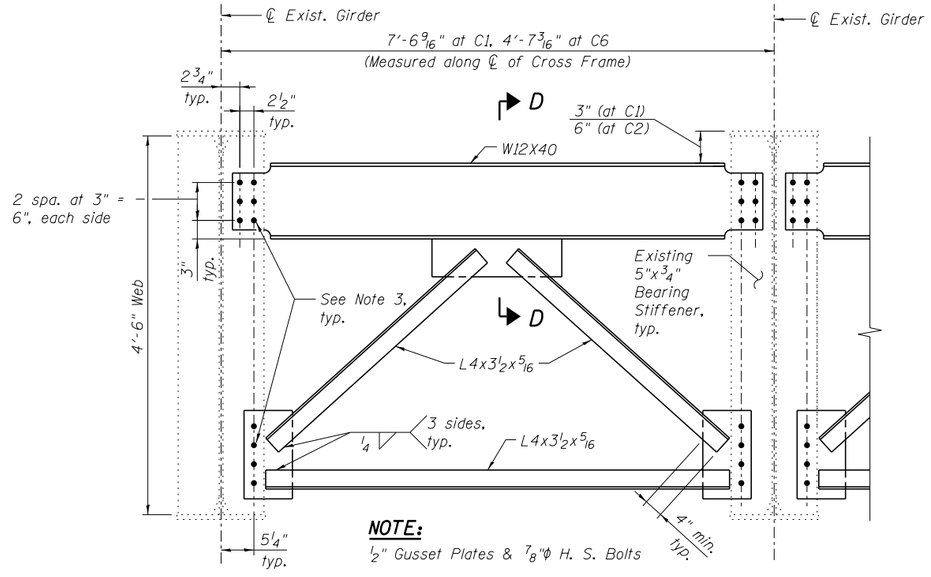
1. For existing Cross Frame References (C1, C6, C38), see Sheet SC25 of SC35.
2. Structural steel for new cross frames may be AASHTO M270 Grade 36.
3. New 7/8" dia. fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Holes in new steel shall be subpunched or subdrilled 13/16" dia. and reamed in the field to 15/16" dia. Reuse existing 15/16" dia. holes in existing steel. Contractor to field verify location and spacing of existing holes and existing bearing stiffener sizes prior to ordering new materials. Cost included with "Furnishing and Erecting Structural Steel".



NOTE:
1/2" Gusset Plates & 7/8"ϕ H.S. Bolts

NEW CROSS FRAME AT PIER 18

(C38)
(No. Req'd = 1)



NOTE:
1/2" Gusset Plates & 7/8"ϕ H. S. Bolts

NEW CROSS FRAME AT PIER 16

(C1 & C6)
(C1 No. Req'd = 2)
(C6 No. Req'd = 1)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structural Steel Removal	Pound	12,970
Furnishing and Erecting Structural Steel	Pound	1640

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FILE NAME = 0162455_60J16_026_structdet-1.dgn	USER NAME = jsurber	DESIGNED - GJK	REVISED -
		CHECKED - RDK	REVISED -
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	PLOT DATE = 12/20/2013	CHECKED - RDK	REVISED -

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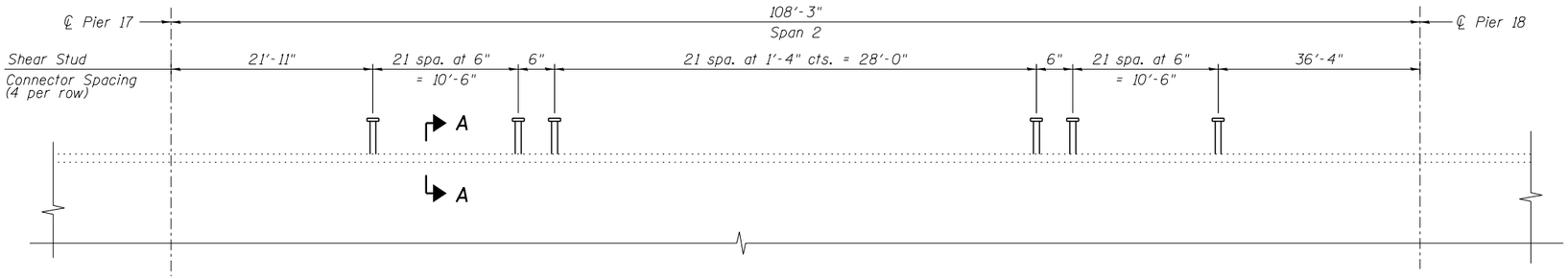
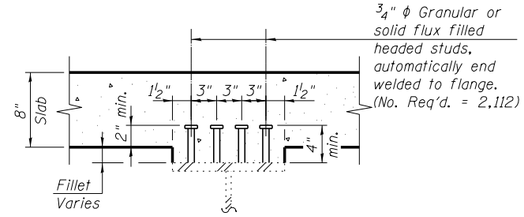
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS (1 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC26 OF SC35 SHEETS

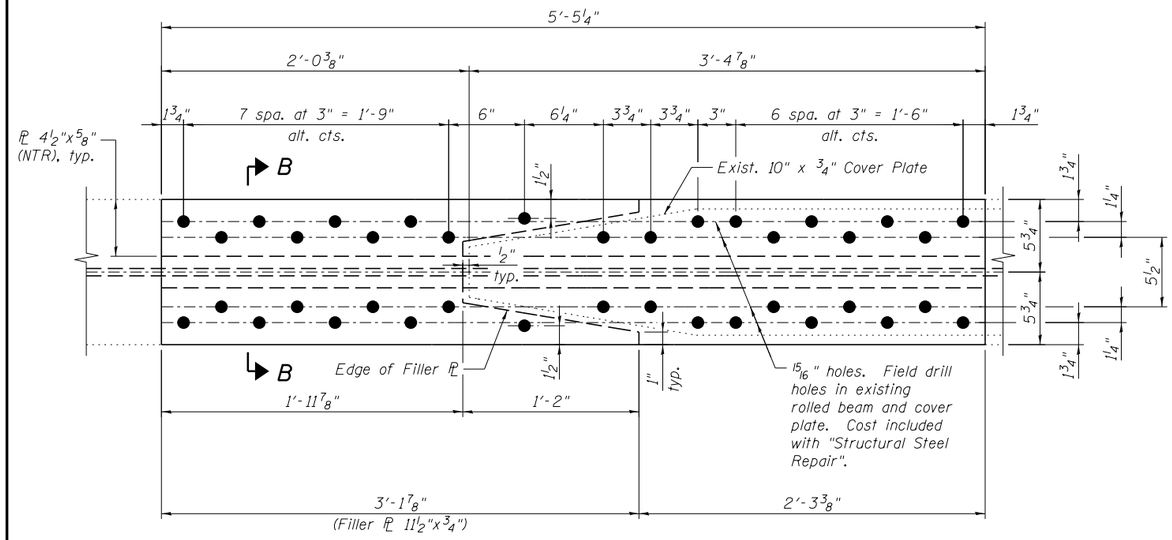
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	352
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



PARTIAL GIRDER ELEVATION



SECTION A-A

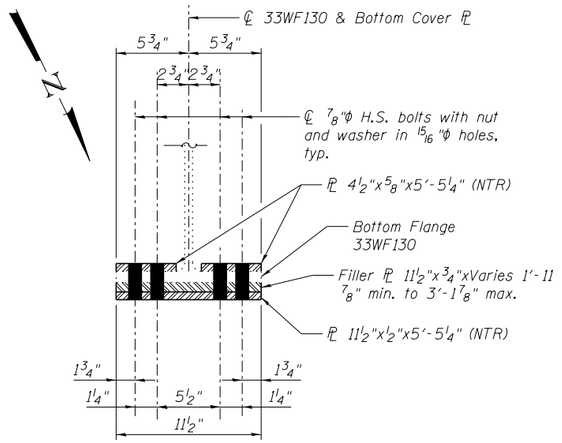


COVER PLATE RETROFIT

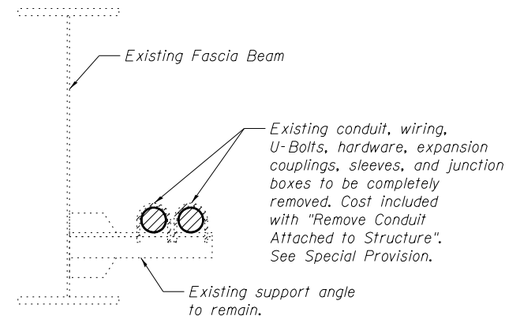
(Bottom Flange 33WF130 - Span 4, 16 Locations)

NOTE:

Cover plate retrofit is typical for both ends of existing bottom flange cover plate. South cover plate retrofit is shown, north cover plate retrofit is opposite hand. See Framing Plan for location of retrofit. Cost of cover plate retrofit to be included with "Structural Steel Repair".



SECTION B-B



CONDUIT REMOVAL DETAIL

NOTES:

1. Load carrying componenets designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
2. Structural steel plates shall conform to the requirements of AASHTO M270 Grade 50.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stud Shear Connectors	Each	2,112
Structural Steel Repair	Pound	4,620
Remove Conduit Attached to Structure	Foot	800

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FILE NAME = 0162455_60J16_027_structdet-2.dgn	USER NAME = tjanicke	DESIGNED - JDM/TPS	REVISED -
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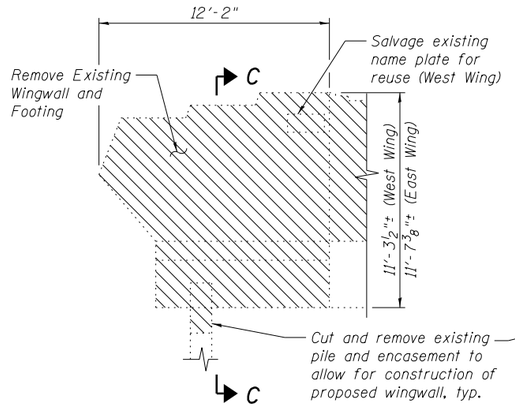
	PLOT DATE = 12/20/2013	CHECKED - RDK/TPS	REVISED -

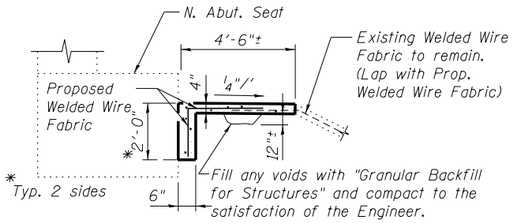
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS (2 OF 2)
STRUCTURE NO. 016-2455
SHEET NO. SC27 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	353
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

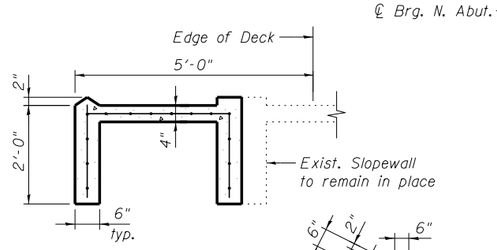


TYPICAL WINGWALL ELEVATION

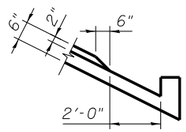


SECTION THRU SLOPE WALL REMOVAL AND SLOPE WALL 4 INCH

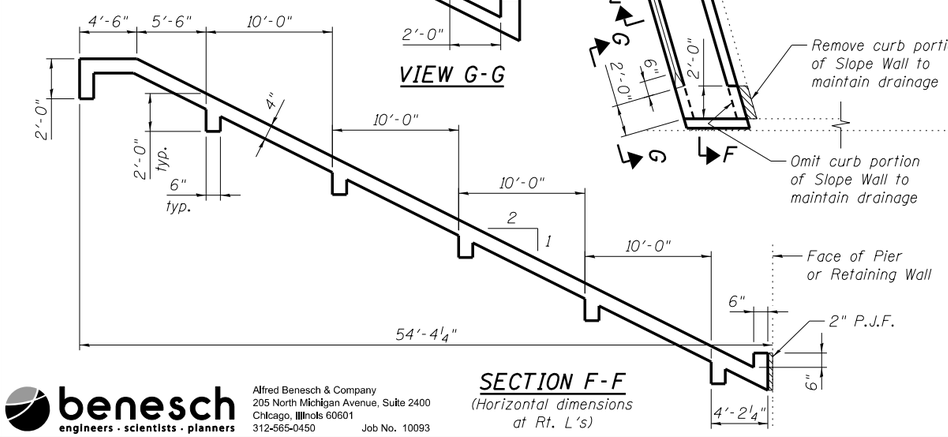
(west end of S.N. 016-2455 abutment, approx. 15' in length)



SECTION E-E

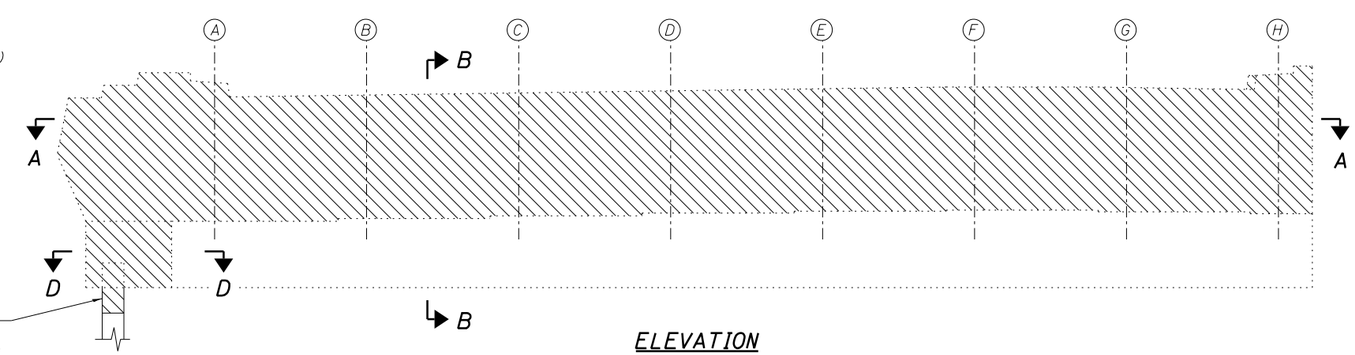


VIEW G-G

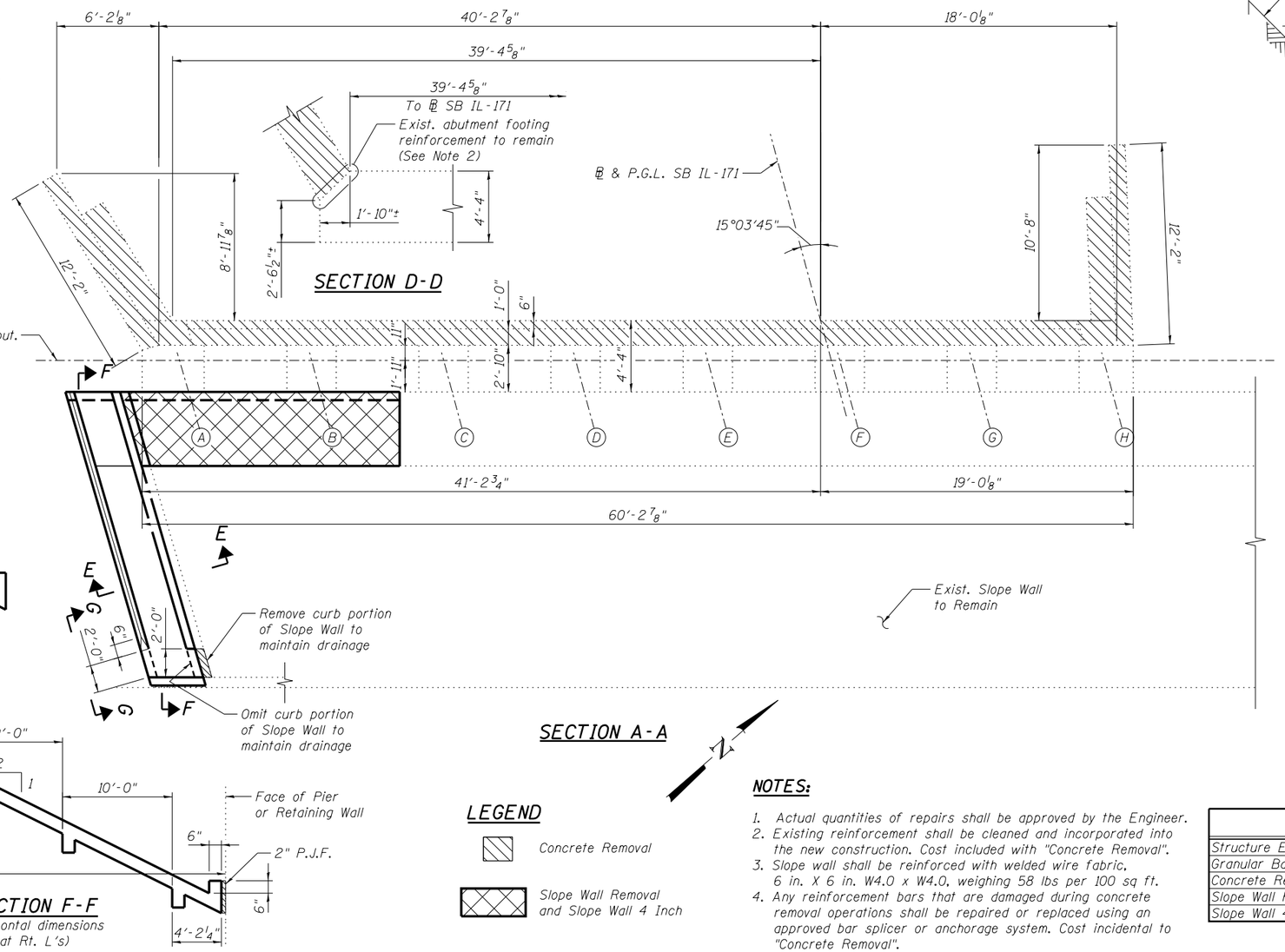


SECTION F-F

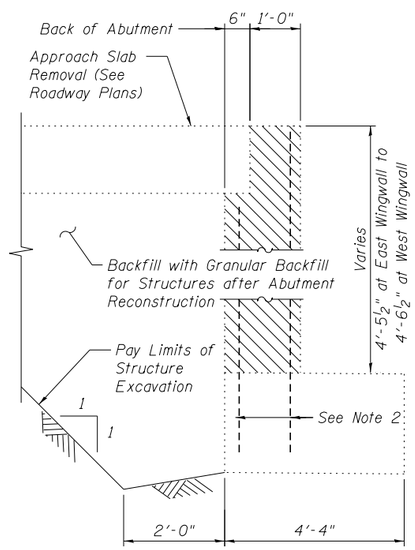
(Horizontal dimensions at Rt. L's)



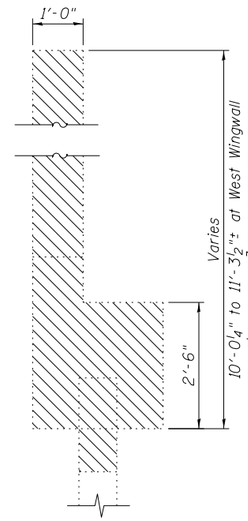
ELEVATION



SECTION D-D



SECTION B-B



SECTION C-C

SECTION A-A

LEGEND

Concrete Removal

Slope Wall Removal and Slope Wall 4 Inch

NOTES:

1. Actual quantities of repairs shall be approved by the Engineer.
2. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
3. Slope wall shall be reinforced with welded wire fabric, 6 in. X 6 in. W4.0 x W4.0, weighing 58 lbs per 100 sq ft.
4. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	92
Granular Backfill for Structures	Cu. Yd.	78
Concrete Removal	Cu. Yd.	27.0
Slope Wall Removal	Sq Yd	8
Slope Wall 4 Inch	Sq Yd	21

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		CHECKED - RDK	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT CONCRETE REMOVAL AND REPAIR DETAILS
STRUCTURE NO. 016-2455

SHEET NO. SC28 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	354
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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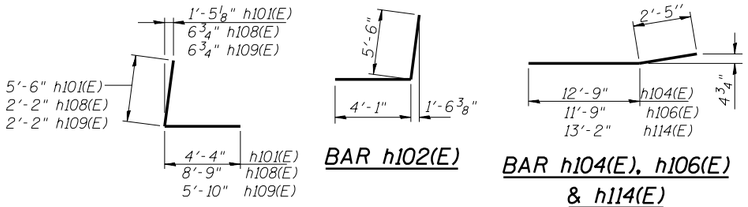
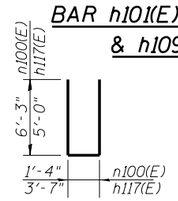


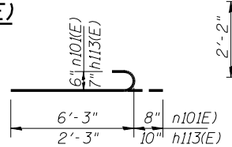
BAR h101(E), h108(E) & h109(E)

BAR h102(E)

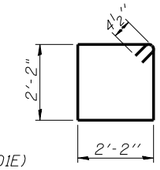
BAR h104(E), h106(E) & h114(E)



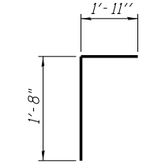
BAR n100(E) & h117(E)



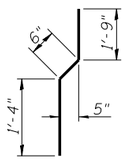
BAR n101(E) & h113(E)



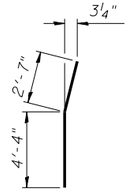
BAR s101(E)



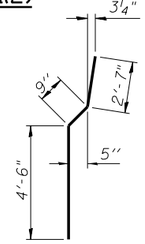
BAR v100(E)



BAR v101(E)



BAR v103(E)



BAR v104(E)

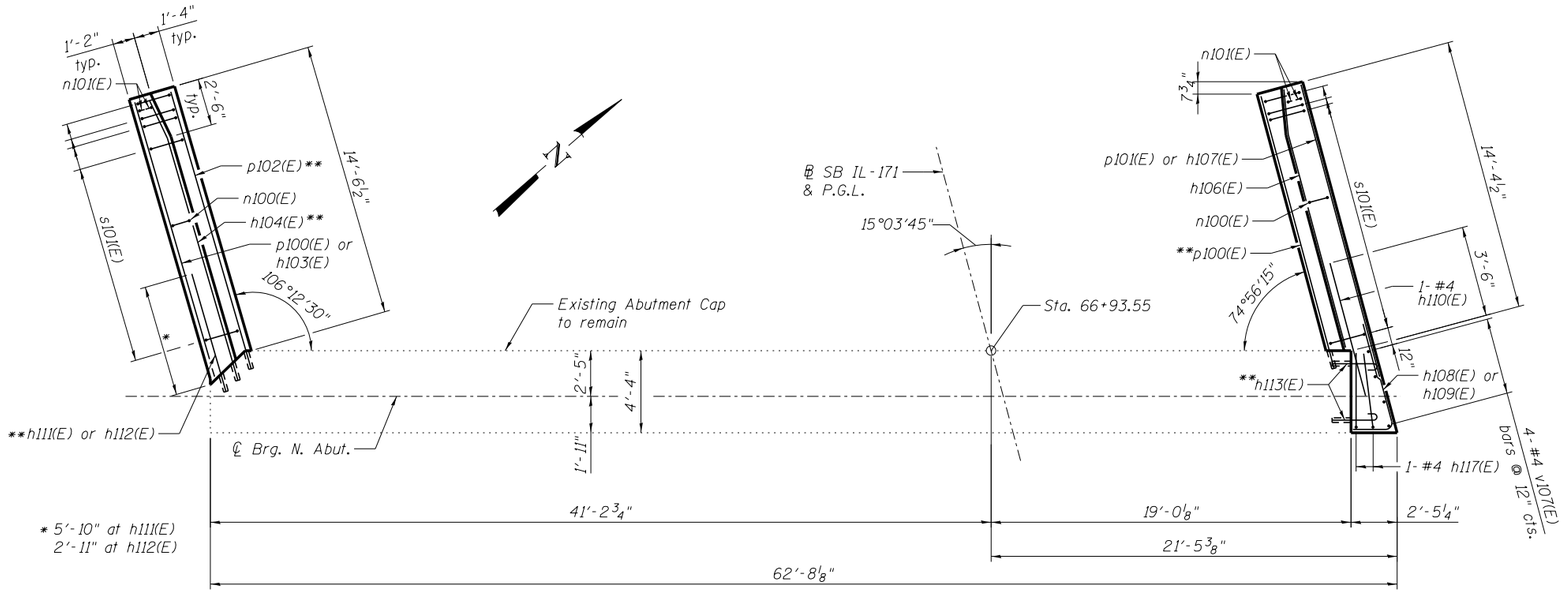
ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	16	#5	31'-0"	
h101(E)	10	#5	9'-10"	
h102(E)	10	#5	9'-7"	
h103(E)	1	#4	14'-8"	
h104(E)	1	#4	15'-2"	
h105(E)	10	#6	31'-6"	
h106(E)	1	#4	14'-2"	
h107(E)	1	#4	15'-11"	
h108(E)	3	#7	10'-11"	
h109(E)	1	#4	8'-0"	
h110(E)	1	#4	6'-6"	
h111(E)	3	#7	6'-9"	
h112(E)	1	#4	3'-5"	
h113(E)	6	#7	3'-1"	
h114(E)	14	#4	15'-7"	
h115(E)	11	#4	15'-10"	
h116(E)	11	#4	14'-11"	
h117(E)	2	#4	13'-7"	
n100(E)	27	#6	13'-10"	
n101(E)	12	#6	6'-11"	
p100(E)	6	#7	14'-8"	
p101(E)	3	#7	16'-0"	
p102(E)	3	#7	15'-2"	
s101(E)	34	#4	9'-5"	

Bar	No.	Size	Length	Shape
v100(E)	60	#5	3'-7"	
v101(E)	60	#4	3'-7"	
v102(E)	36	#6	7'-4"	
v103(E)	6	#6	6'-11"	
v104(E)	30	#6	7'-10"	
v105(E)	60	#5	2'-4"	
v106(E)	60	#5	4'-0"	
v107(E)	4	#4	3'-7"	
v108(E)	59	#5	3'-3"	
Concrete Structures			Cu. Yd.	35.1
Reinforcement Bars, Epoxy Coated			Pound	4,840
Furnishing Steel Piles, HP12x53			Foot	76
Driving Piles			Foot	76
Concrete Encasement			Cu. Yd.	0.7
Concrete Sealer			Sq. Ft.	273

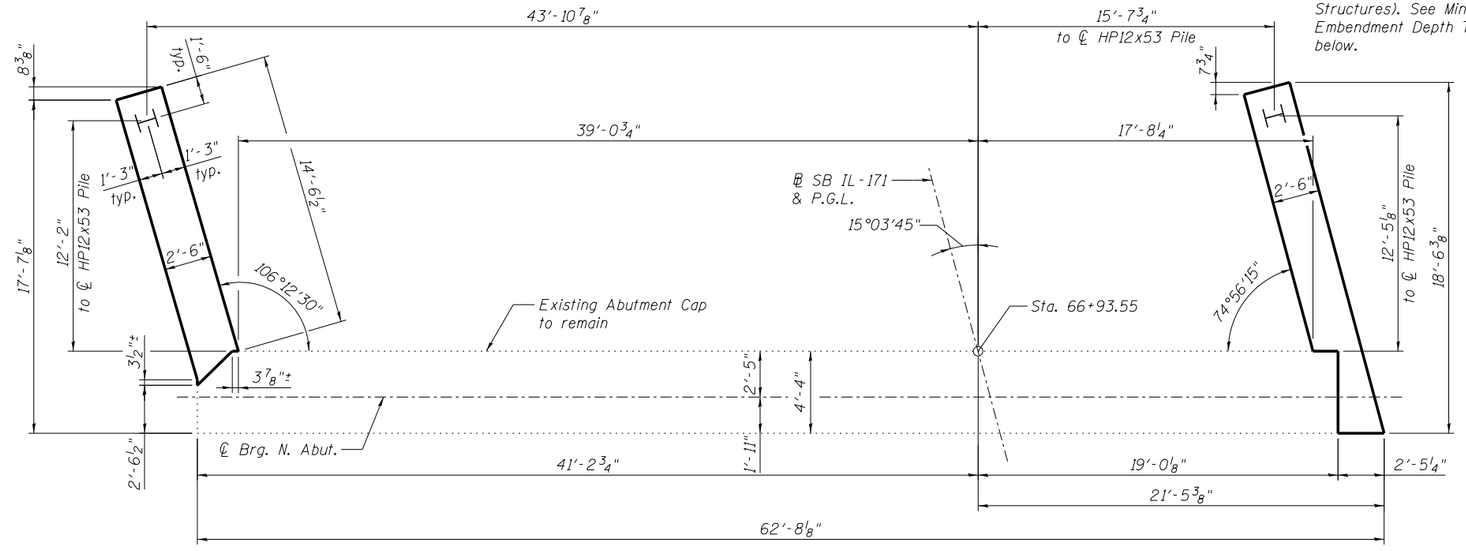
NOTES:

1. For details of Bar Splicers, see sheet SC35 of SC35.
2. For details of piles and Concrete Encasement, see sheet SC32 of SC35.



PLAN - PILE CAP

** Epoxy grout into existing abutment cap per Section 584 of Standard Specification. (Cost included with Concrete Structures). See Minimum Embedment Depth Table below.



PLAN - PILE LAYOUT

PILE DATA

Type: HP12x53
Nominal Required Bearing: 264 k
Allowable Resistance Available: 88 k
Est. Length: 38'-0"
No. Production Piles: 2
No. Test Piles: 0

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 3'-6"
#6 bar = 3'-9"
#7 bar = 4'-6"

MINIMUM EMBEDMENT DEPTHS

#4 bar = 6"
#7 bar = 11"

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT MODIFICATION DETAILS (1 OF 3)
STRUCTURE NO. 016-2455
SHEET NO. SC29 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	355
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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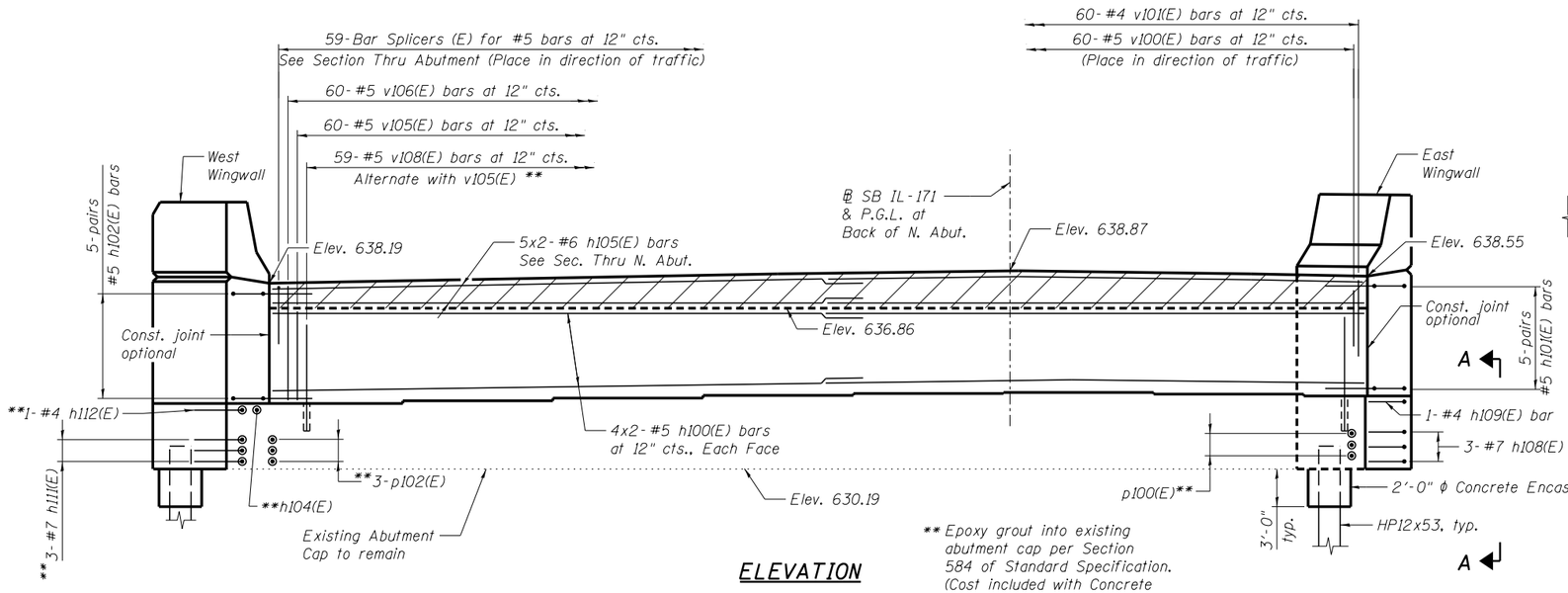
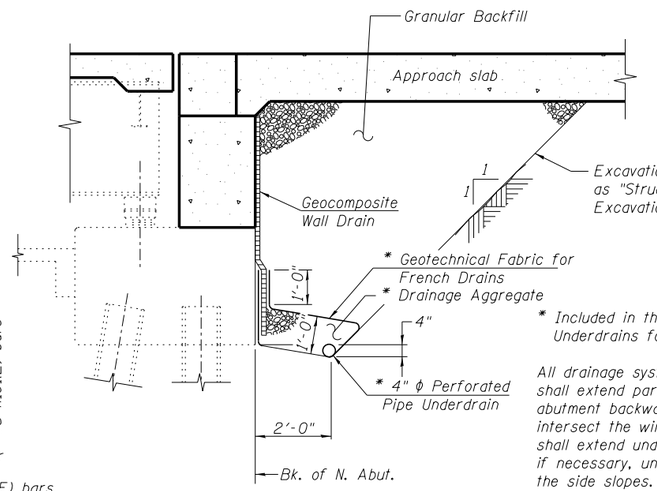


** Epoxy grout into existing abutment cap per Section 584 of Standard Specification. (Cost included with Concrete Structures). See Minimum Embedment Depth Table below.

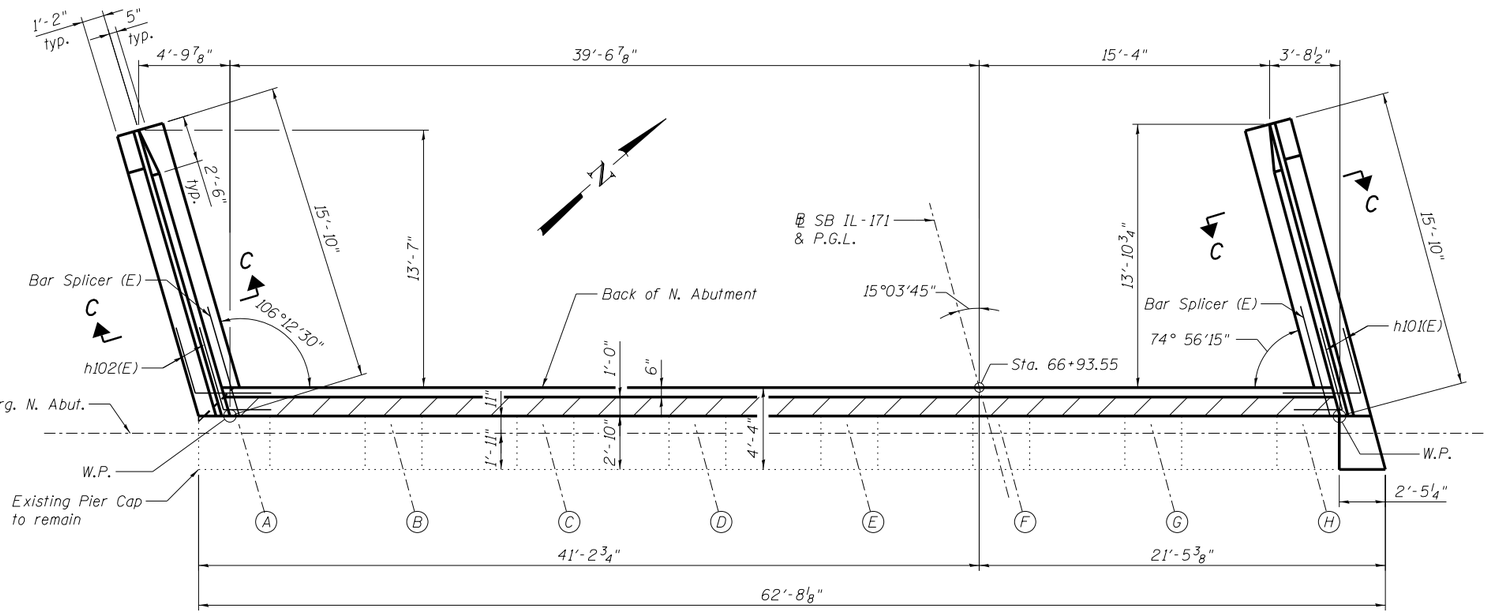
ELEVATION



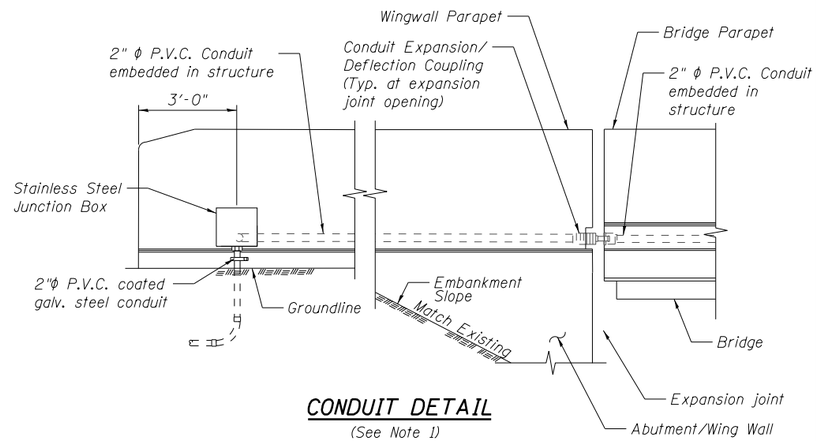
* Included in the cost of Pipe Underdrains for Structures.

All drainage system components shall extend parallel to the abutment backwall until they intersect the wingwalls. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

BACKFILL AND DRAINAGE DETAIL



TOP VIEW



CONDUIT DETAIL

(See Note 1)

MINIMUM BAR LAP

#5 bar = 3'-6"
#6 bar = 3'-9"

MINIMUM EMBEDMENT DEPTHS

#4 bar = 6"
#5 bar = 9"
#7 bar = 11"

NOTES:

1. For Conduit, Junction Box & Couplings, see Electrical Plans.
2. For Section C-C, see sheet SC31 of SC35.
3. For View A-A, see Sheet SC31 of SC35.
4. Concrete Sealer shall be applied to the area of the bearing seats and the exposed front face of the abutment pile cap for the newly placed concrete only. Concrete Sealer shall also be applied to the area of the backwall and the vertical faces of both wingwalls underneath the parapet and in line with the backwall.
5. Concrete Sealer does not need to be applied to existing concrete.

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DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT MODIFICATION DETAILS (2 OF 3)
STRUCTURE NO. 016-2455
SHEET NO. SC30 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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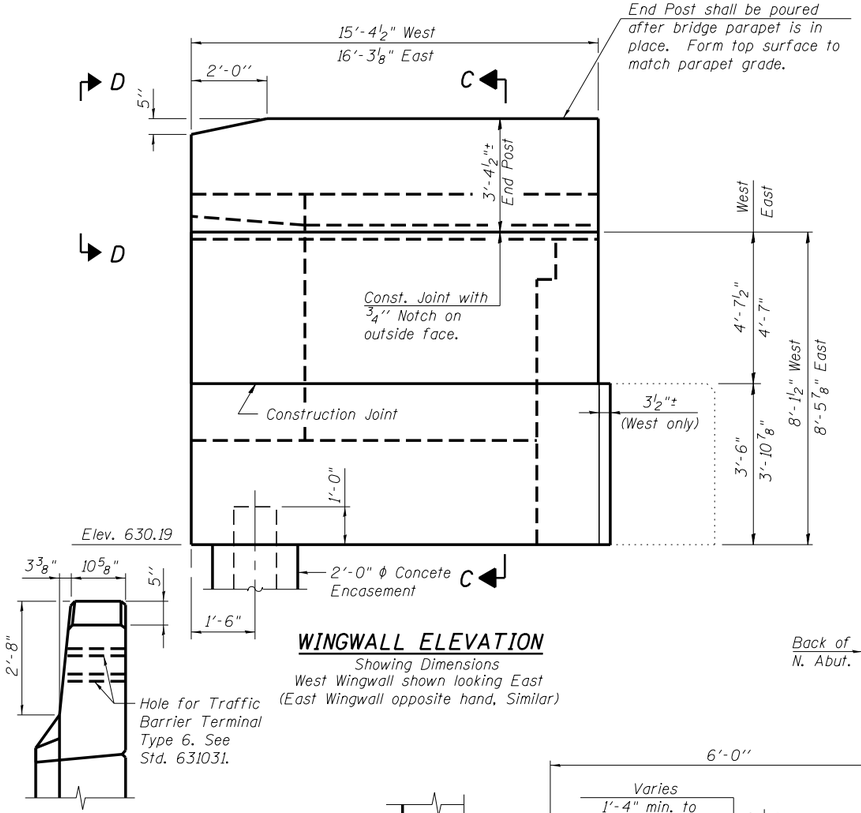
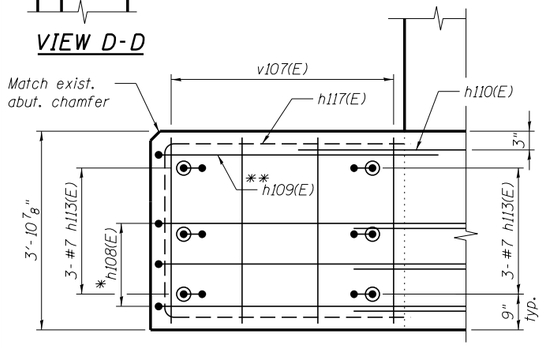
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



WINGWALL ELEVATION

Showing Dimensions
West Wingwall shown looking East
(East Wingwall opposite hand, Similar)



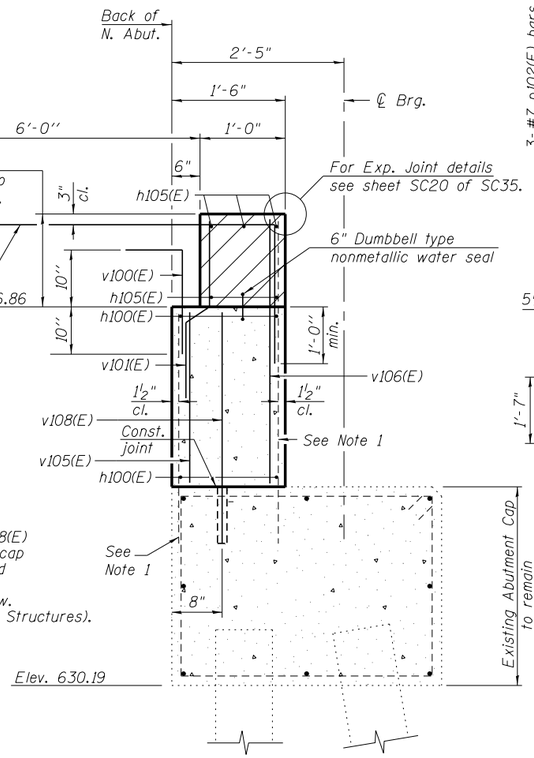
VIEW D-D

* Lap with p101(E) bars

** Lap with h107(E) bar

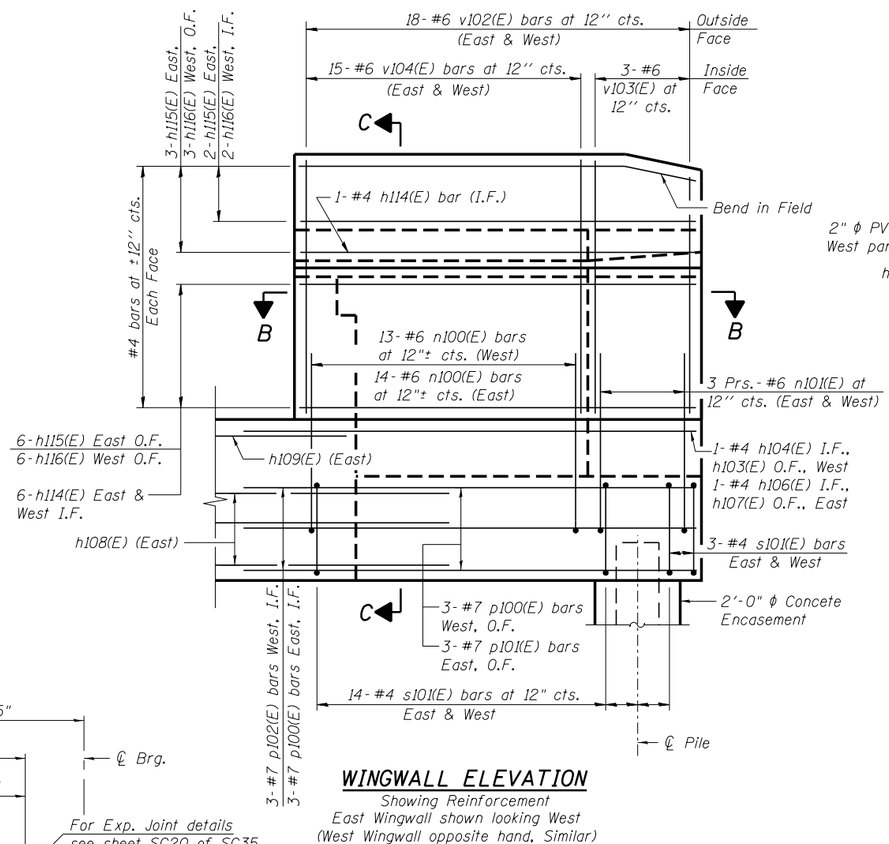
VIEW A-A

For location of View A-A, see Sheet SC30.



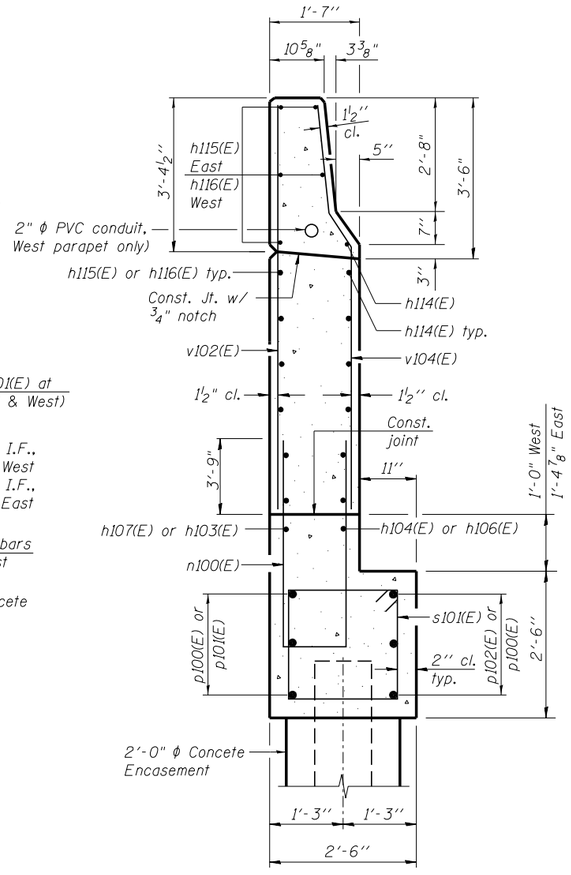
Note:
Epoxy grout h113(E) and v108(E) bars into existing abutment cap per Section 584 of Standard Specifications. See Minimum Embedment Depth table below. (Cost included with Concrete Structures).

SEC. THRU N. ABUT.

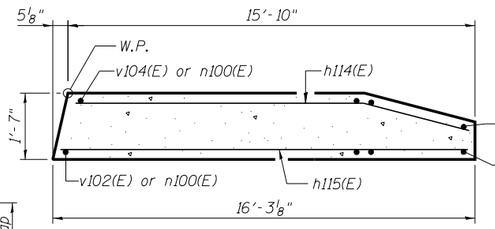


WINGWALL ELEVATION

Showing Reinforcement
East Wingwall shown looking West
(West Wingwall opposite hand, Similar)

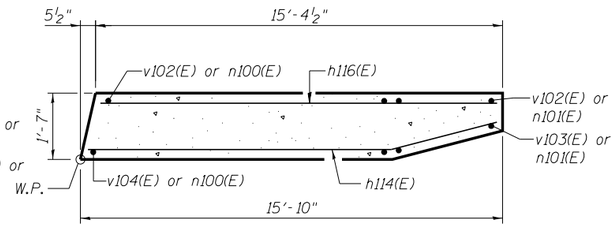


SECTION C-C



SECTION B-B

East Wingwall



SECTION B-B

West Wingwall

NOTES:

1. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal". Lap with v105(E), v106(E), v102(E) or v104(E) bars.
2. Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with "Concrete Superstructure".
3. Quantity of concrete in end post included with "Concrete Superstructure" on sheet SC16 of SC35.
4. For Concrete Encasement details, see sheet SC32 of SC35.
5. See Std. 631031 for Traffic Barrier Terminal Type 6 Connection.

MINIMUM EMBEDMENT DEPTHS

#4 bar = 6"
#5 bar = 9"
#7 bar = 11"

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	PLOT DATE = 12/20/2013	CHECKED - JDM/TPS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT MODIFICATION DETAILS (3 OF 3)
STRUCTURE NO. 016-2455
SHEET NO. SC31 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	357
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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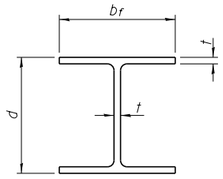
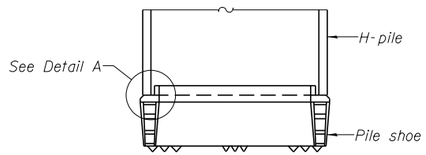
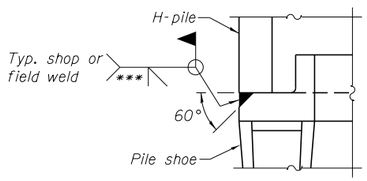


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

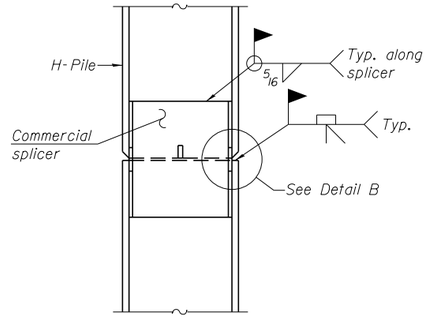


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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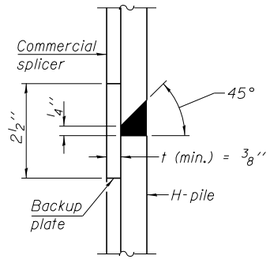
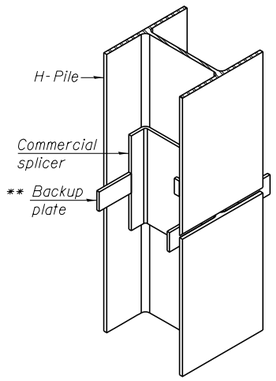
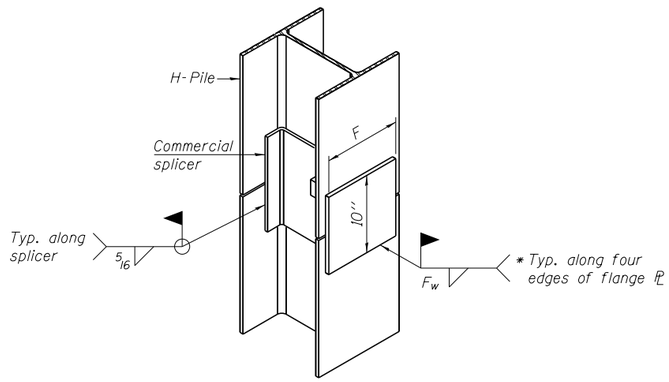


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



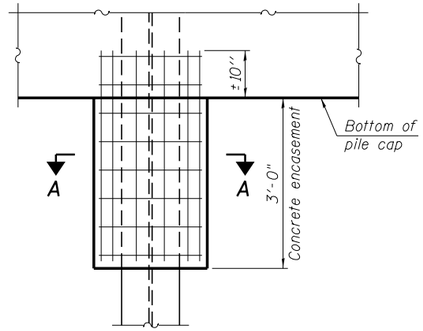
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

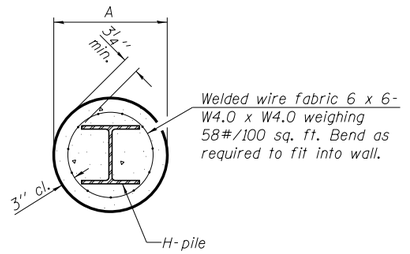
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



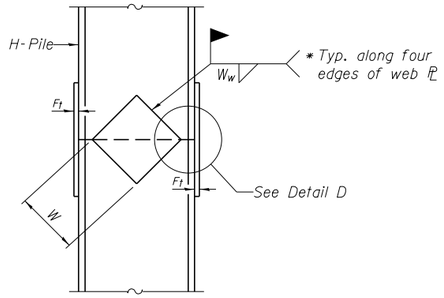
ELEVATION



SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

PILE ENCASEMENT



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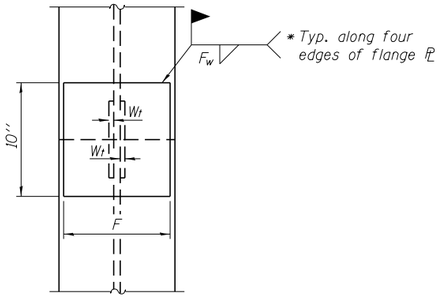
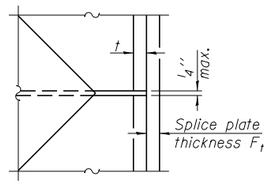


END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

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312-565-0450 Job No. 10093

F-HP 1-27-12

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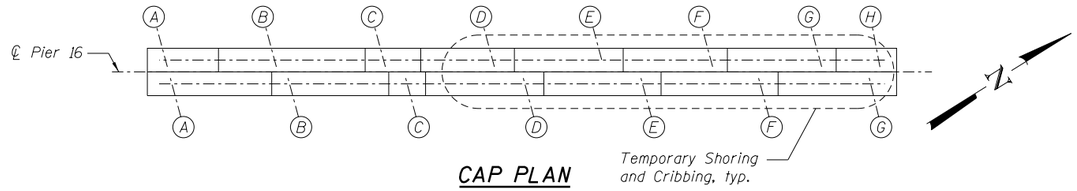
		CHECKED - JDM	REVISED -
0162455_60J16_032_HP_Pile_Details.dgn	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

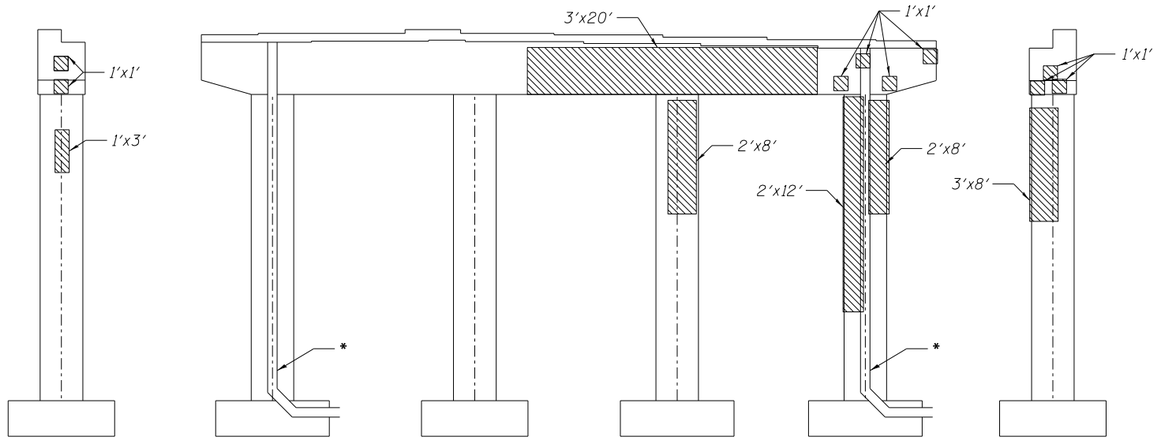
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 016-2455
SHEET NO. SC32 OF SC35 SHEETS

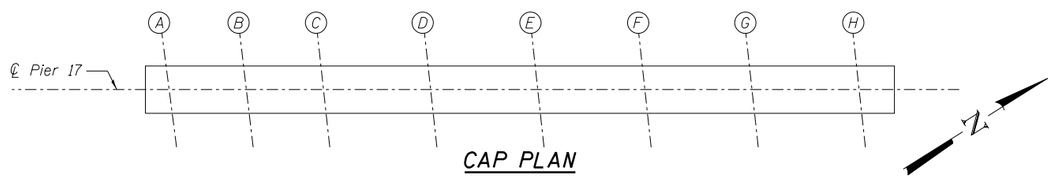
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	358
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		



CAP PLAN



PIER 16
Looking East



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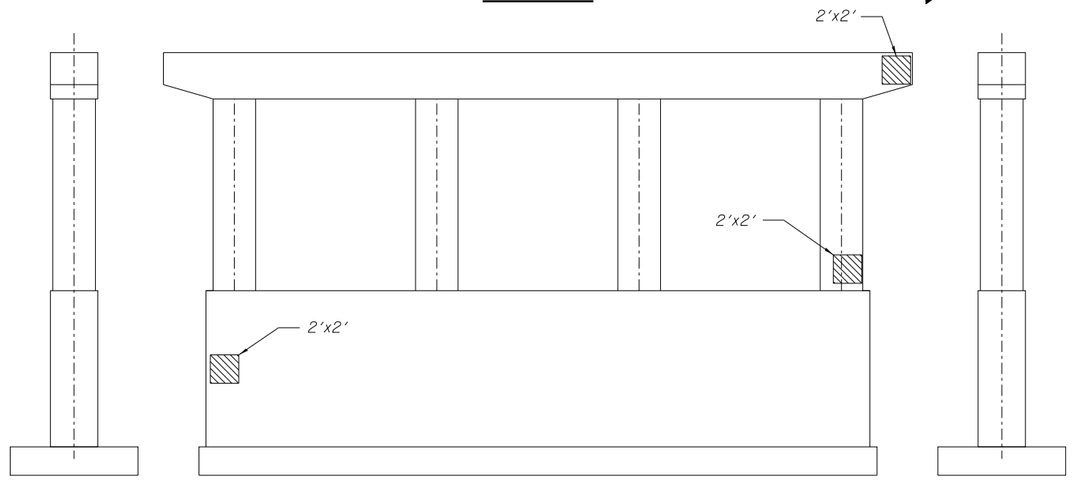
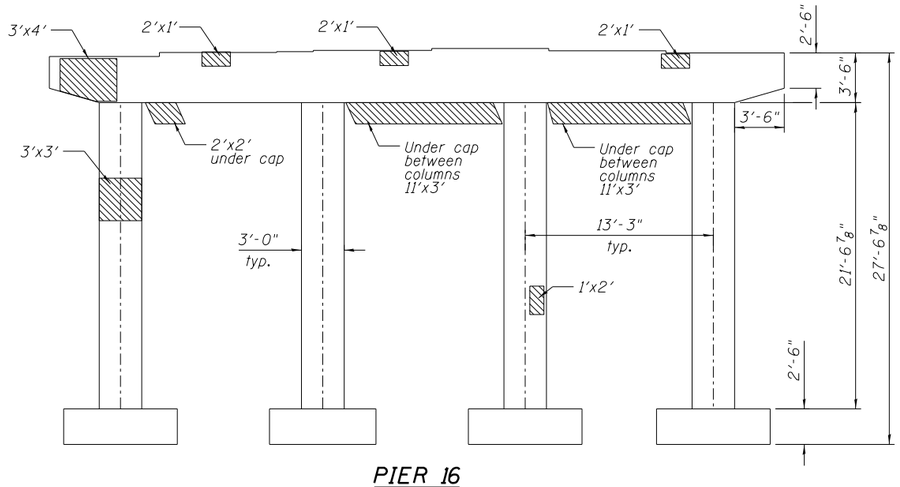


PIER 17
Looking East

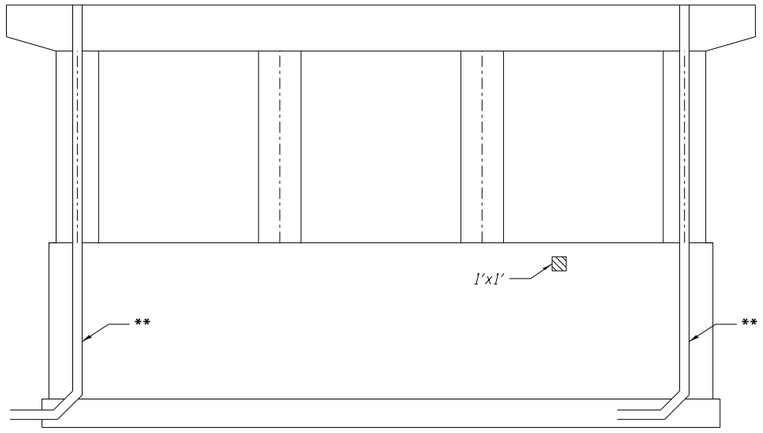


PIER 16
Looking West

UNFACTORED BEAM REACTIONS (KIPS)

LOCATION	STEEL DEAD LOAD
Pier 16 South	8
Pier 16 North	6

The installation of Temporay Shoring and Cribbing shall not commence until the deck has been removed entirely.



PIER 17
Looking West

EXISTING CONDITION - PIERS

LEGEND

- Structural Repair of Concrete Area
- * Existing closed drainage system to be removed & replaced
- ** Existing closed drainage system to be removed

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	264
Temporary Shoring and Cribbing	Each	9

NOTES:

1. Removal of existing closed drainage system is included in "Removal of Existing Concrete Deck No. 1".
2. Replacement of existing closed drainage systems is included in the "Drainage System" pay item.

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		CHECKED - JDM/TJJ	REVISED -
	PLOT SCALE =	DRAWN - MAK/RMG	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM/TPS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS 16 AND 17 CONCRETE REPAIR DETAILS
STRUCTURE NO. 016-2455
SHEET NO. SC33 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	359
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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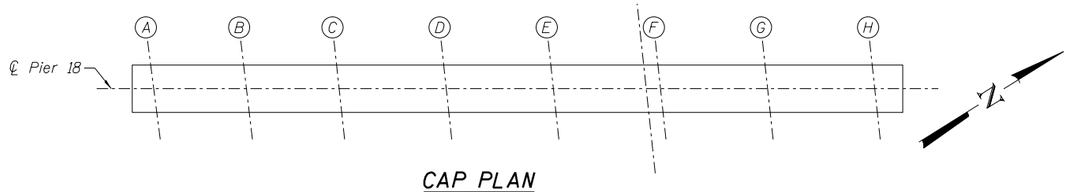
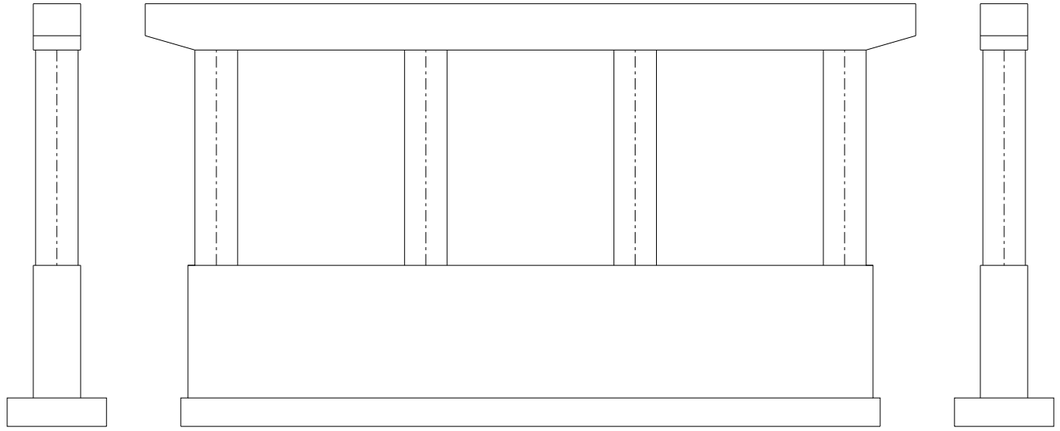
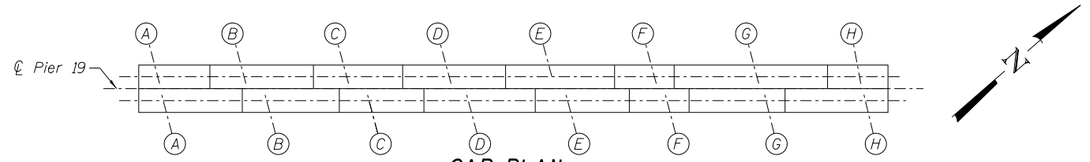


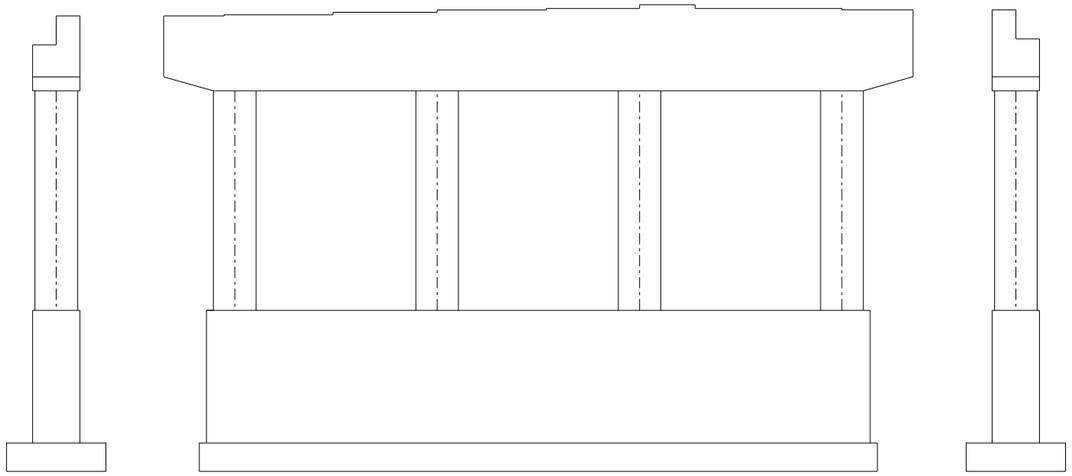
CAP PLAN



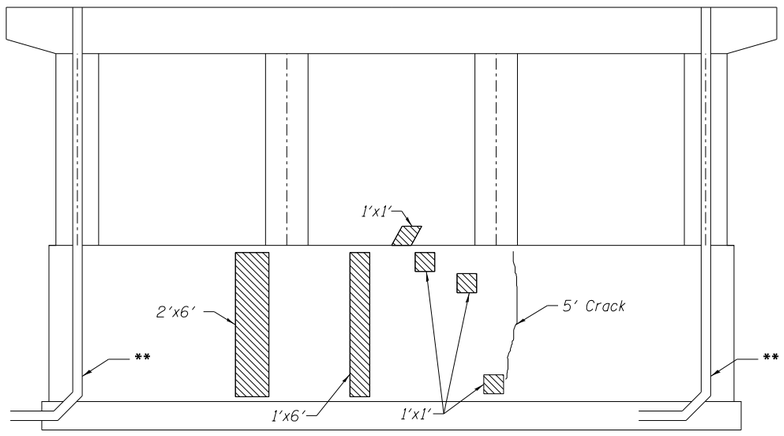
PIER 18
Looking East



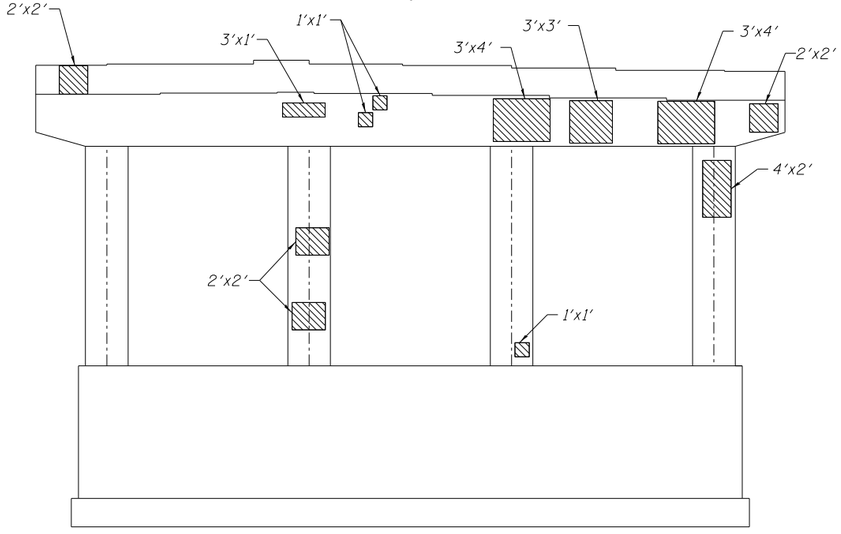
CAP PLAN



PIER 19
Looking East



PIER 18
Looking West



PIER 19
Looking West

EXISTING CONDITION - PIERS

LEGEND

Structural Repair of Concrete Area

5' Epoxy Crack Injection

** Existing closed drainage system to be removed

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Injection	Foot	5
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	85

NOTES:

1. Removal of existing closed drainage system is included in "Removal of Existing Concrete Deck No. 1".
2. Replacement of existing closed drainage systems is included in the "Drainage System" pay item.

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		CHECKED - JDM	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS 18 AND 19 CONCRETE REPAIR DETAILS
STRUCTURE NO. 016-2455
SHEET NO. SC34 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	360
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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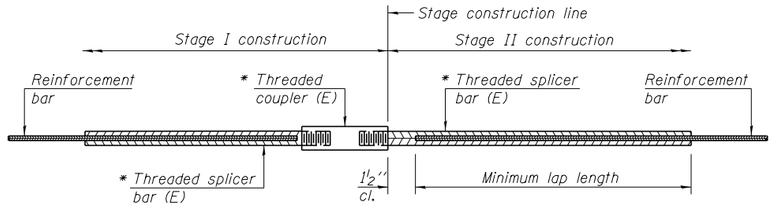


STANDARD BAR SPLICER ASSEMBLY

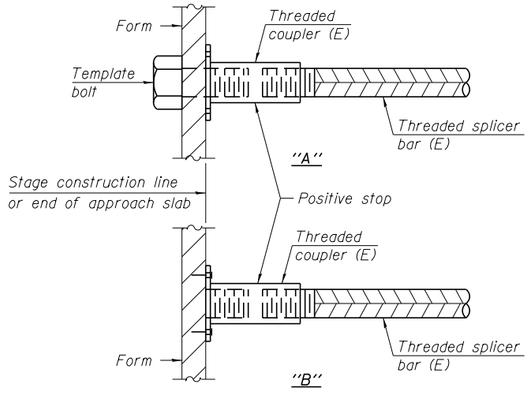
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

Threaded splicer bar length = min. lap length + 1½" + thread length

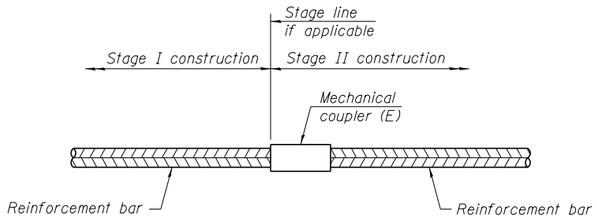
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

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



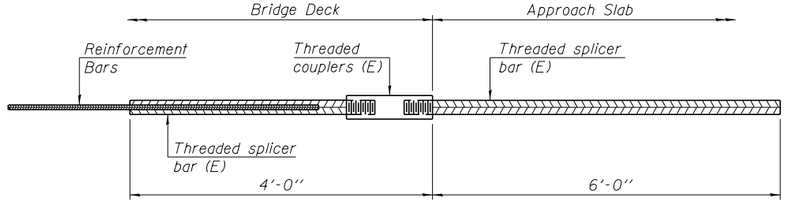
INSTALLATION AND SETTING METHODS

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



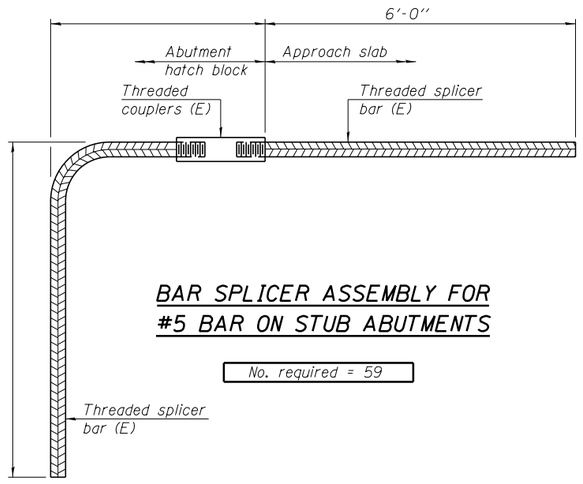
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 59

NOTES:

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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BSD-1 1-27-12

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		CHECKED - RDK	REVISED -
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	PLOT DATE = 12/20/2013	CHECKED - RDK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 016-2455
SHEET NO. SC35 OF SC35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	361
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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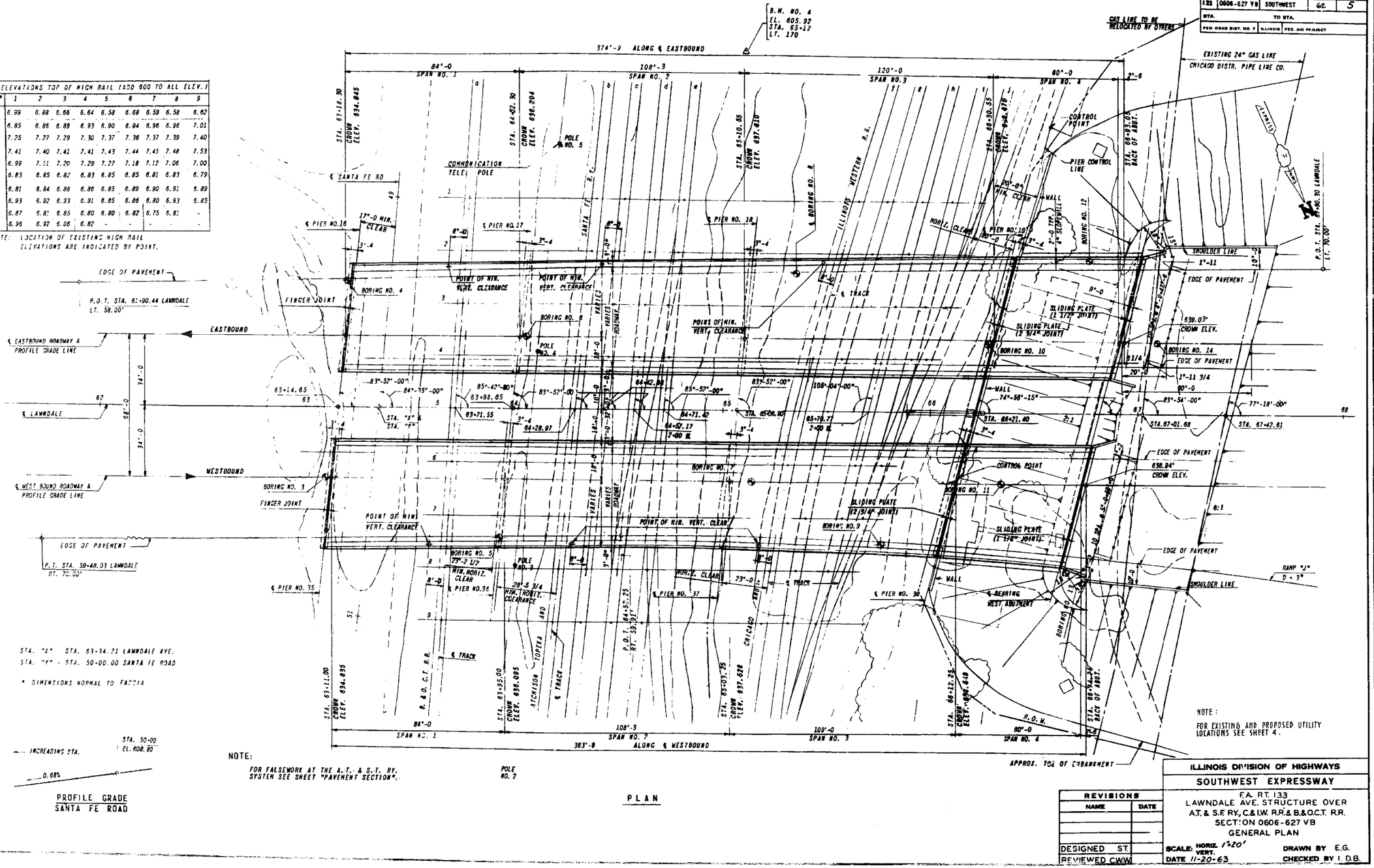
F.A.I. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-627 VB	SOUTHWEST	62	5
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

ELEVATIONS TOP OF HIGH RAIL (ADD 600 TO ALL ELEV.)									
ROW TRACK	1	2	3	4	5	6	7	8	9
a	6.99	6.88	6.66	6.64	6.58	6.68	6.59	6.58	6.62
b	6.85	6.86	6.89	6.93	6.90	6.94	6.96	6.96	7.01
c	7.25	7.27	7.29	7.30	7.37	7.36	7.37	7.39	7.40
d	7.41	7.40	7.41	7.41	7.43	7.44	7.45	7.48	7.53
e	6.99	7.11	7.20	7.29	7.27	7.18	7.12	7.06	7.00
f	6.83	6.85	6.82	6.83	6.85	6.85	6.81	6.83	6.79
g	6.81	6.84	6.86	6.86	6.85	6.89	6.90	6.91	6.89
h	6.93	6.92	6.93	6.91	6.85	6.86	6.80	6.83	6.85
i	6.87	6.81	6.85	6.80	6.80	6.82	6.75	6.81	-
j	6.96	6.92	6.86	6.82	-	-	-	-	-

NOTE: LOCATION OF EXISTING HIGH RAIL ELEVATIONS ARE INDICATED BY POINT.



REVISIONS	
NAME	DATE
DESIGNED ST.	
REVIEWED CWW	

ILLINOIS DIVISION OF HIGHWAYS

SOUTHWEST EXPRESSWAY

F.A. RT. 133
LAWNDALE AVE. STRUCTURE OVER A.T. & S.F RY., C.& I.W. R.R.& B.&O.C.T. R.R.
SECTION 0606-627 VB
GENERAL PLAN

SCALE: HORIZ. 1"=20' VERT.
DRAWN BY E.G.
DATE 11-20-63
CHECKED BY I.D.B.

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	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (1 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX1 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	362
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	

F.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO
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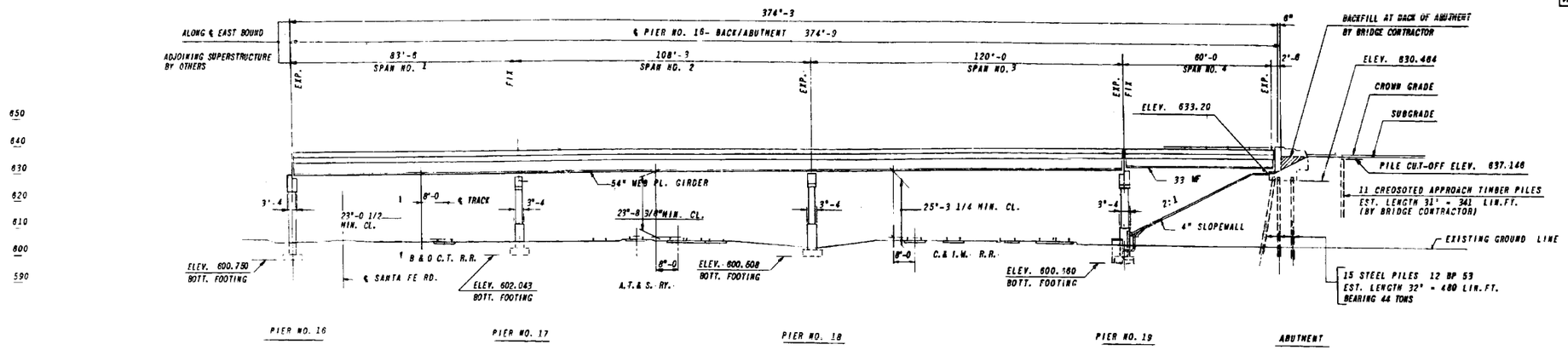
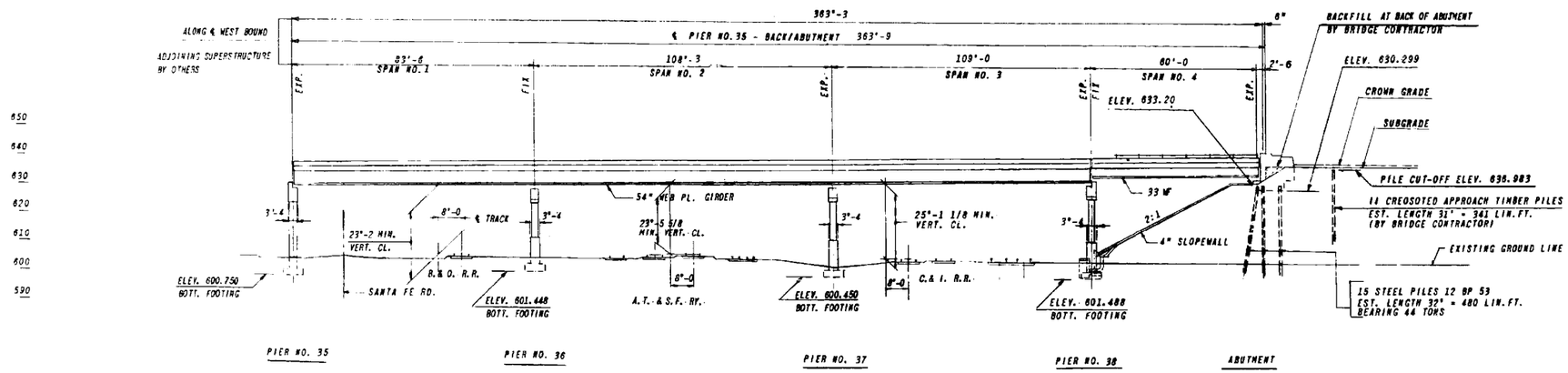
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



ELEVATION EASTBOUND STRUCTURE

B. M. NO. 4
EL. 605.92
STA. 65+12
LT. 170'



ELEVATION WESTBOUND STRUCTURE

REVISIONS	
NAME	DATE
DESIGNED ST.	
REVIEWED CWW	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A. RT. 133
LAWNDALE AVE. STRUCTURE OVER
A.T. & S.F. RY, C.& I.W. R.R.& B&O.C.T. R.R.
SECTION 0606-627 VB
ELEVATIONS
SCALE: HORIZ. 1"=30' VERT. 1"=30'
DRAWN BY E.G.
DATE 11-26-13
CHECKED BY L.D.P.

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Chicago, Illinois 60601
312-565-0450 Job No. 10093

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		CHECKED - JDM	REVISED -
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	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (2 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX2 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	363
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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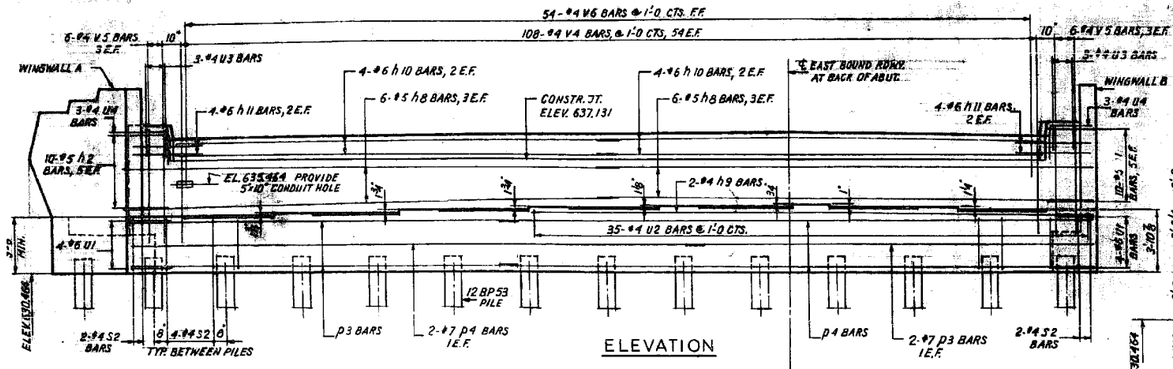
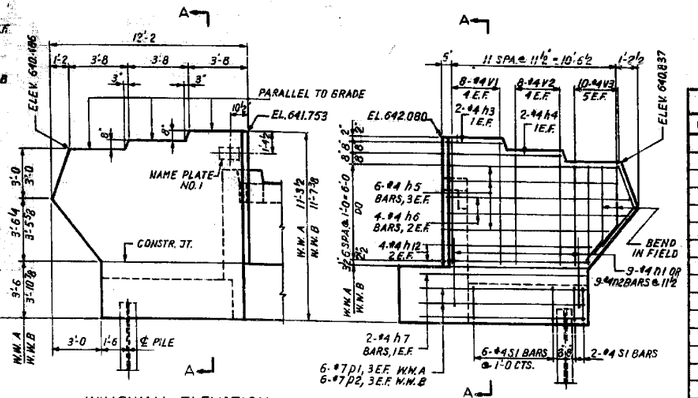
F.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-627 VB	SOUTHWEST	62	24
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



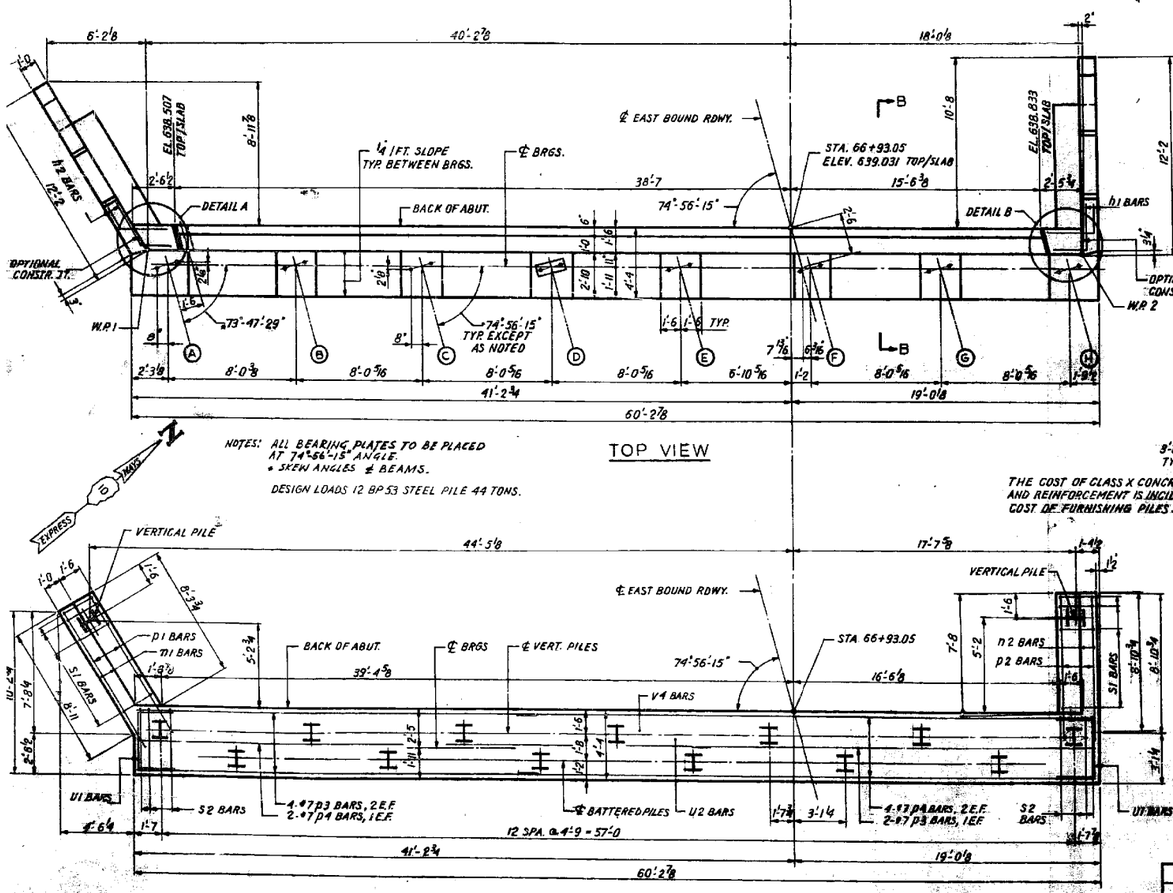


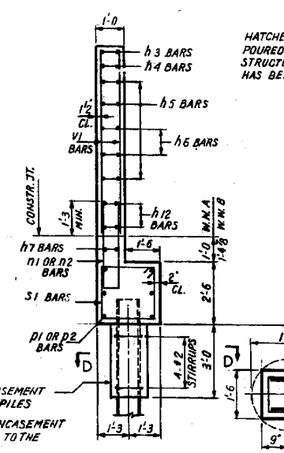
BILL OF REINFORCEMENT

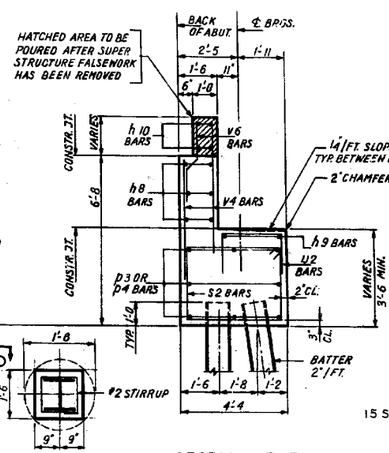
BAR	NO.	SIZE	LENGTH	SHAPE
h1	10	5	4'-3	
h2	10	5	4'-6	
h3	4	4	3'-2	
h4	4	4	6'-10	
h5	12	4	10'-6	
h6	8	4	11'-7	
h7	4	4	9'-3	
h8	12	5	30'-9	
h9	2	4	35'-0	
h10	8	6	27'-8	
h11	9	6	4'-0	
h12	8	4	9'-0	
n1	9	4	7'-9	
n2	9	4	8'-7	
p1	6	7	10'-0	
p2	6	7	9'-3	
p3	8	7	25'-5	
p4	8	7	36'-0	
S1	16	4	9'-5	
S2	52	4	15'-1	
U1	8	6	7'-11	
U2	35	4	5'-6	
U3	6	4	4'-3	
U4	6	4	5'-0	
V6	54	4	3'-2	
V1	16	4	7'-6	
V2	16	4	6'-9	
V3	20	4	6'-2	
V4	108	4	5'-3	
V5	12	4	6'-0	

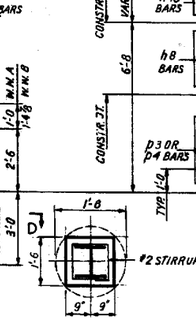
ABUTMENT E.B. QUANTITIES		
CLASS X CONCRETE	CU. YDS.	606
REINFORCING BARS	LBS.	41,150
PILES 12 BP 53	LIN. FT.	480

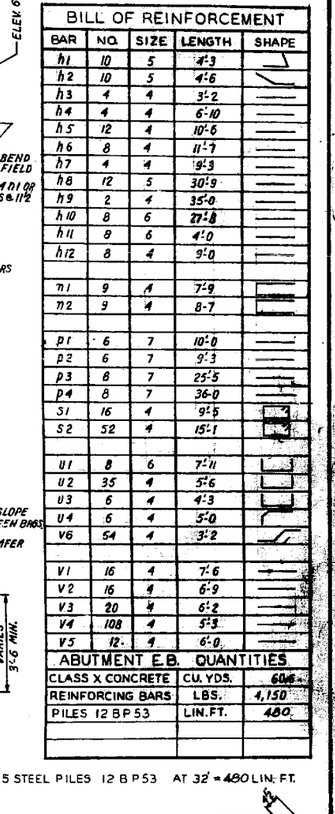
15 STEEL PILES 12 BP 53 AT 32' = 480 LIN. FT.











BEARING SEAT ELEVATIONS AT BEAMS							
A	B	C	D	E	F	G	H
633.954	634.110	634.256	634.402	634.590	634.538	634.471	634.383

REVISIONS	
NAME	DATE
DRAWN ST.	
CHECKED L.E.E.	

ILLINOIS DIVISION OF HIGHWAYS

SOUTHWEST EXPRESSWAY

FA. RT. 133
LAWNDALE AVE. STRUCTURE OVER A.T. & S.F. RY., C. & I.W. R.R. & B. & O.C.T. R.R.
SECTION 0606-627 VB
ABUTMENT EAST BOUND

SCALE: HORIZ. 3/8"=1'-0 VERT. EXCEPT AS NOTED
DATE 1-20-62
DRAWN BY J.W.
CHECKED BY L.E.E.

benesch engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FOR INFORMATION ONLY

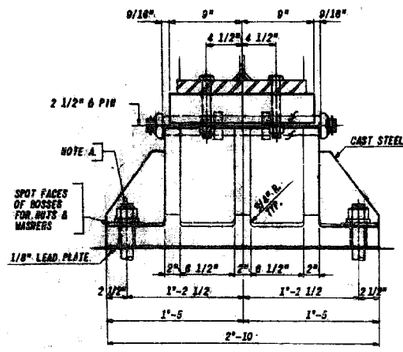
FILE NAME =	USER NAME = tjanicke	DESIGNED - RDK	REVISED -
		CHECKED - JDM	REVISED -
0162455_60J16_038_existplan.dgn	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

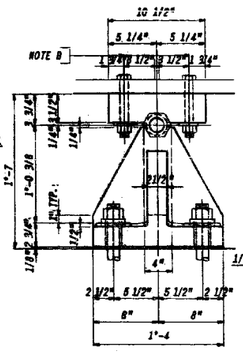
EXISTING PLAN INFORMATION (3 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX3 OF SCX14 SHEETS

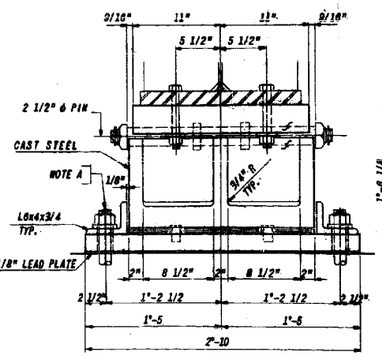
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	364
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

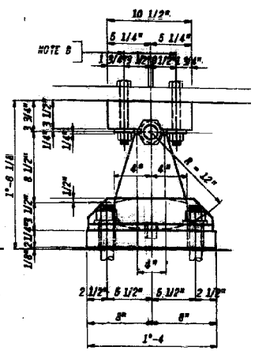
6/23/2014 2:37:38 PM X:\100000S\10093\Eng_Docs_Phase_II\SN_016_2454_2455_1st_Ave_over_AT&SF_RR_Final\0162455_60J16_038_existplan.dgn



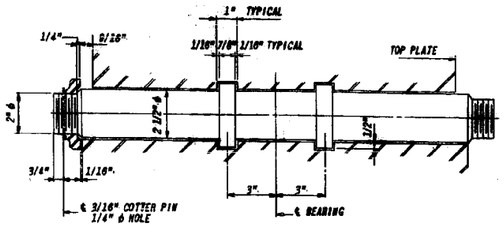
FIXED BEARING F2
15 REQ'D.



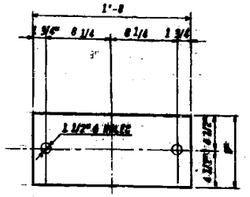




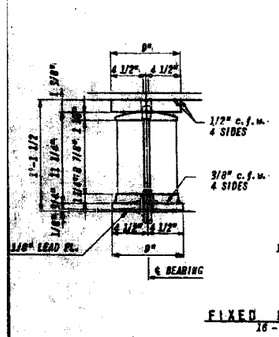
EXPANSION BEARING E3
15 REQ'D

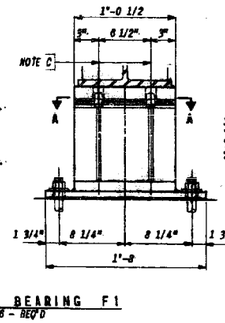


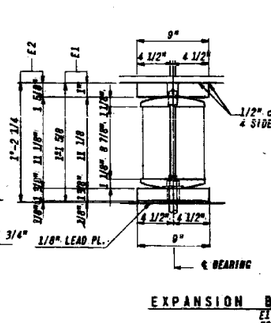
DETAIL OF PIN
ALL PINS SHALL BE TURNED FROM SOLID
1" = 1'-0



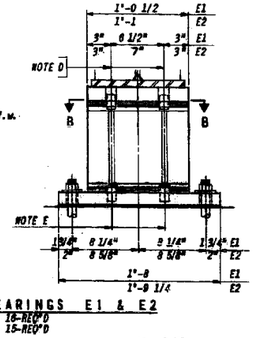
SHIM PLATES F1
1 REQ'D 9/16"
1 REQ'D 5/8"

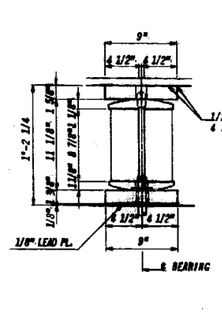




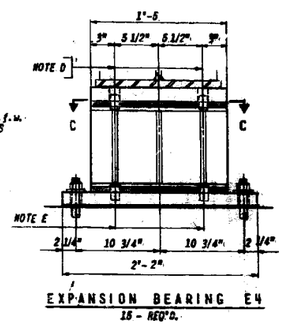


FIXED BEARING F1
16 - REQ'D

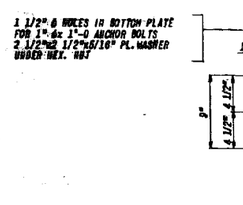




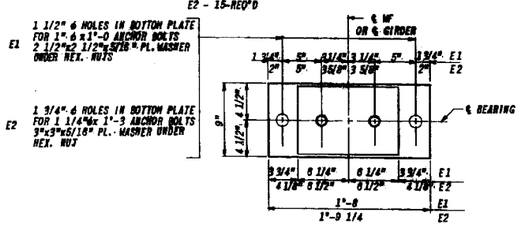
EXPANSION BEARINGS E1 & E2
E1 - 16-REQ'D
E2 - 15-REQ'D



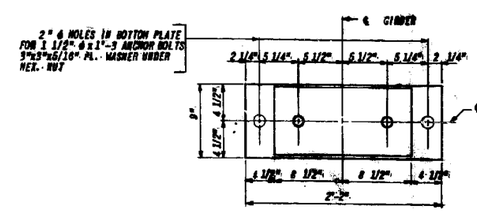
EXPANSION BEARING E4
15 - REQ'D.



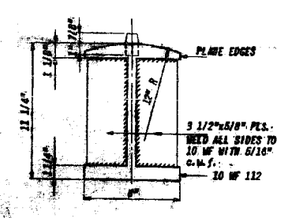
SECTION A-A



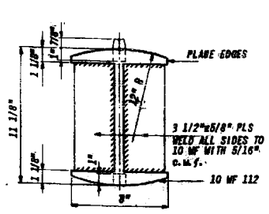
SECTION B-B



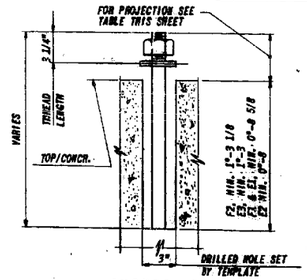
SECTION C-C



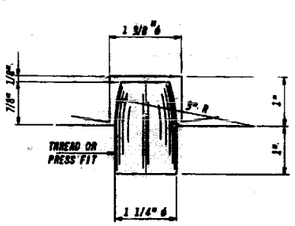
ROLLER DETAIL
6"=1'-0



ROCKER DETAIL
3/16"=1"



ANCHOR BOLT
NO SCALE



PINTLE DETAIL
3"=1'-0

ANCHOR BOLT PROJECTION (INCH)									
	TYPE	A	B	C	D	E	F	G	H
EAST BOUND									
PIER NO. 16	E2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	¢	¢	9 1/2
PIER NO. 17	F2	5 5/8	5 5/8	5 5/8	5 5/8	5 5/8	5 5/8	5 3/4	5 5/8
PIER NO. 18	E3	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	¢	¢	6 1/2
PIER NO. 19 *	E4	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	¢	9 1/2	9 1/2
PIER NO. 19 **	F1	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
ABUTMENT	E1	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8
WEST BOUND	TYPE	I	J	K	L	M	N	P	R
PIER NO. 35	E2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	-
PIER NO. 36	F2	5 5/8	5 5/8	5 5/8	5 5/8	5 5/8	5 5/8	5 5/8	-
PIER NO. 37	E3	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	-
PIER NO. 38 *	E4	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	-
PIER NO. 38 **	F1	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
ABUTMENT	E1	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8

* SPAN NO. 3
** SPAN NO. 4

NOTE A: 1 3/4" ϕ HOLES FOR 1 3/8" ϕ x 1'-0 ANCHOR BOLTS WITH HEXAGON NUTS AND 3"x3"x1/2" PLATE WASHERS.

NOTE B: 4-1" ϕ THREAD BOLTS WITH HEXAGON NUTS AND STANDARD WASHERS.

NOTE C: 1 3/8" ϕ HOLES IN TOP PLATE FOR 1 1/4" ϕ PINTLES, 1 1/4" ϕ PINTLES - 1 7/8" LONG IN ROCKER, THREAD OR PRESS FIT.

NOTE D: 1 3/8" ϕ HOLES IN TOP PLATE FOR 1 1/4" ϕ PINTLES 1 1/4" ϕ PINTLES - 1 7/8" LONG IN ROCKER, THREAD OR PRESS FIT.

NOTE E: 1 3/8" ϕ HOLE - 3" DEEP IN ROCKER FOR 1 1/4" ϕ PINTLE 1 1/4" ϕ PINTLES - 1 7/8" LONG IN BOTTOM PLATE, THREAD OR PRESS FIT.

NOTE F: COAT ALL FINISHED PARTS OF BEARINGS WITH ANTI RUST CLEANER OR LACQUER.

NOTE G: ALL CASTINGS SHALL BE ASTM A27-60 GRADE 65-35, FULLY ANNEALED. ALL PINS SHALL BE FORGED AND SHALL BE ASTM A108, GRADE 1045.

NOTE H: EXCEPT STAINLESS STEEL, ALL ROCKER, ROLLER, BEARING PLATES, PINTLES AND ANCHOR BOLTS SHALL BE FABRICATED FROM STRUCTURAL STEEL CONFORMING TO ASTM A709-50W.

WEIGHT OF BEARING DEVICES (E2, F2, E3 & E4) 47,170 LBS.
(CONTINUOUS SPANS NO. 1 THRU NO. 3, E.B. & W.B.)

WEIGHT OF BEARING DEVICES (E1, & F1) 8,305 LBS.
(SPAN NO. 4 EAST BOUND & WEST BOUND)

NOTE 1:
ALL PLAQUES UNDER AND REAR REARING DEVICES TO BE PLACED NORMAL TO THE ¢ EASTBOUND OR ¢ WESTBOUND ROADWAY.

REVISION ⚠ TO REMOVE REVISION ⚠ SHOW ⚠

AS BUILT

This sheet (30A) replaces sheet (30) of the contract drawings
All revisions made by Consultant 1-24-14

REVISIONS	
NAME	DATE
REVISION ⚠	4/2/2014
REVISION ⚠	2-25-14
DESIGNED - LSE	
DRAWN -	
CHECKED - LSE	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
E.B. & W.B. L.A.N.E. S.E.P.A.R.A.T.E. STRUCTURE OVER
AT. & S.F. R.R. & C.R.I. & P.R.R. & C.G.T. R.R.
IN THE CITY OF CHICAGO
COOK COUNTY, ILLINOIS
SCALE: AS NOTED
DATE: 12/20/2013
DRAWN BY: MAK
CHECKED BY: LSE

P.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
55	6055-037W			30A
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME = 0162455.60J16.039.existplan.dgn	USER NAME = tjanicke	DESIGNED - RDK	REVISED -
		CHECKED - JDM	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (4 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX4 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	365
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	

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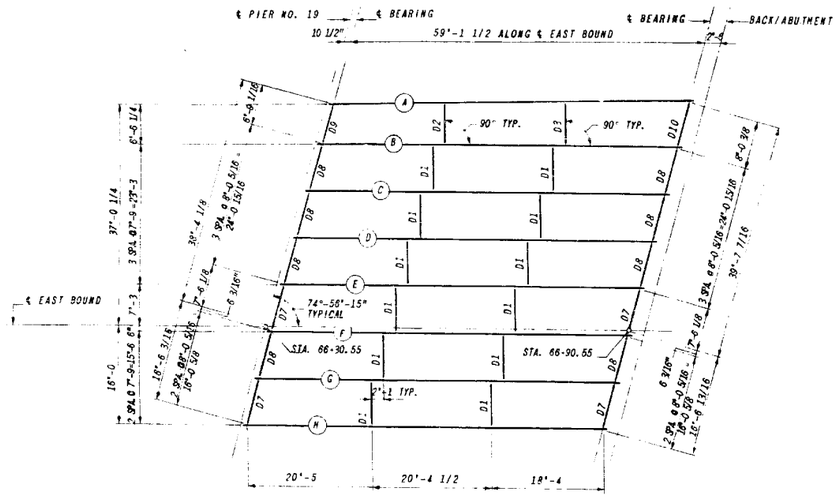
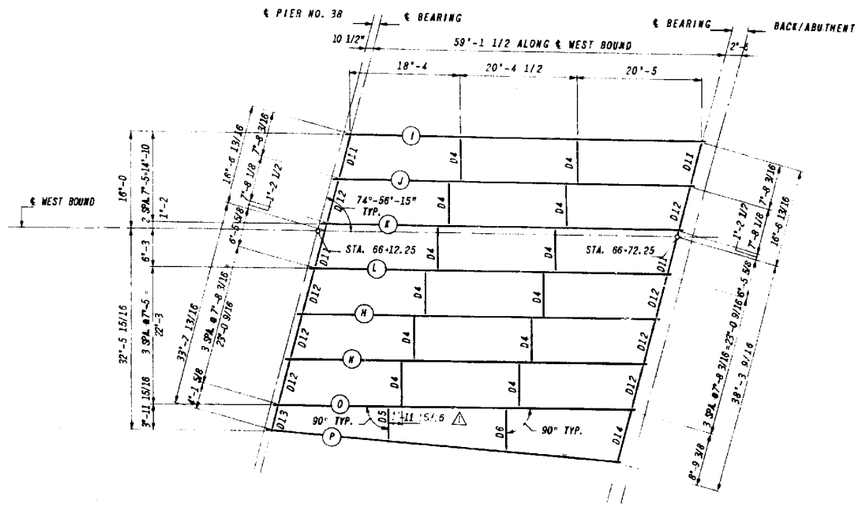
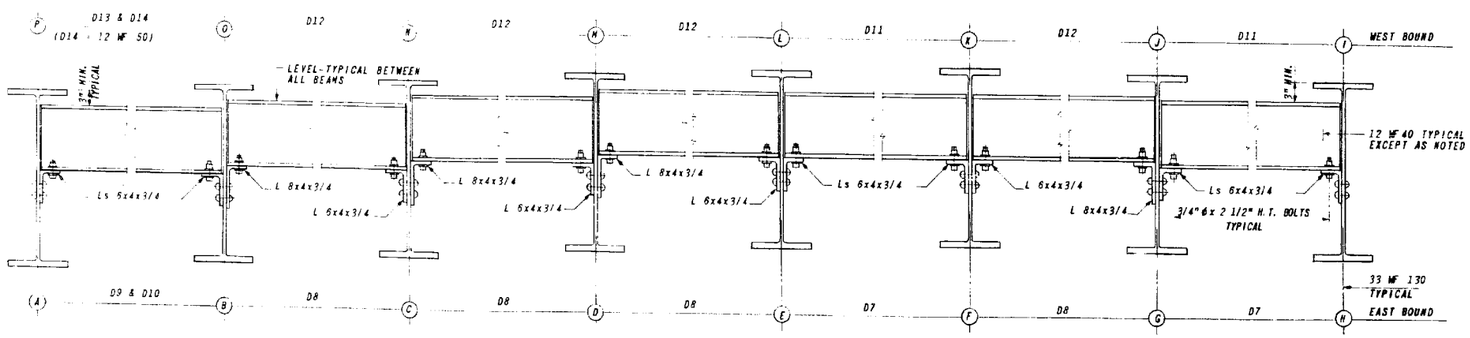
F.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-627 VB	SOUTHWEST		3-A
STA.		TO STA.		
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		



FRAMING PLAN SPAN NO. 4 EAST BOUND

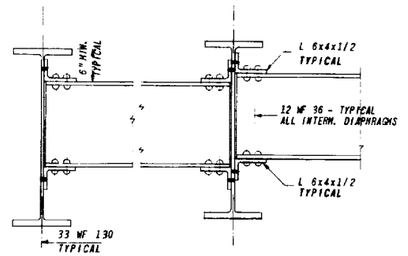


FRAMING PLAN SPAN NO. 4 WEST BOUND



END DIAPHRAGM - SPAN NO. 4 - EAST BOUND & WEST BOUND

D7 & D11 - 4 EACH REQ'D
D8 & D12 - 8 EACH REQ'D
D9, D10, D13 & D14 - 1 EACH REQ'D
NO SCALE



INTERMEDIATE DIAPHRAGM

D1 & D4 - 12 EACH REQ'D
D2, D3, D5 & D6 - 1 EACH REQ'D
NO SCALE

AS BUILT

This sheet (3-A) replaces sheet (3) of the contract drawings. All revisions are made by the consultant. (R.P.E. 5-29-64)

REVISIONS	
NAME	DATE
REVISED J.	5-6-64
DESIGNED S.T-P.J.	
REVIEWED E.W.H.	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.RT. 133
LAWNDALE AVE. STRUCTURE OVER
A.T. & S.F.RY. C&I.W. R.R. & B&O.C.T. R.R.
SECTION 0606-627 VB
FRAMING PLAN SPAN NO. 4 E.B. & W.B.
SCALE: HORIZ. 3/8"=1'-0 EXCEPT AS NOTED
VERT.
DATE 11-20-63
DRAWN BY J.W.
CHECKED BY L.B.E.

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME = 0162455.60J16.040.existplan.dgn	USER NAME = tjanicke	DESIGNED - RDK	REVISED -
		CHECKED - JDM	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

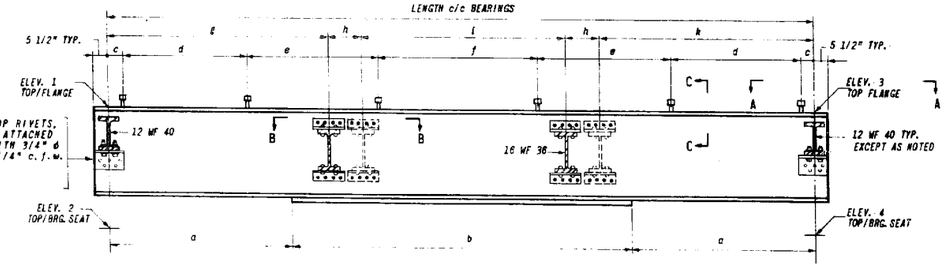
EXISTING PLAN INFORMATION (5 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX5 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	366
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

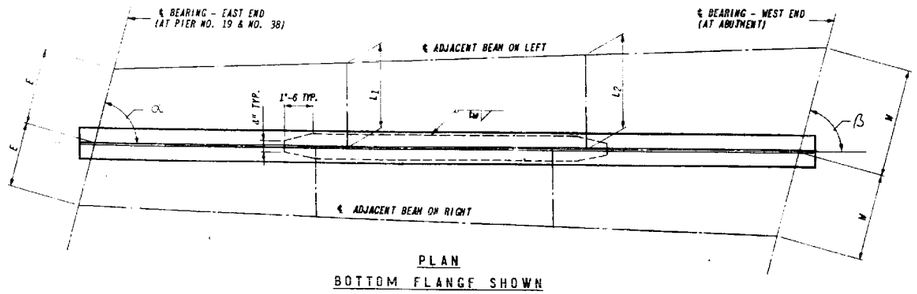
6/23/2014 2:38:00 PM X:\100005\10093\Eng_Docs_Phase_II\SN_016_2454_2455_1st_Ave_over_AT&SF_RR\Final\0162455_60J16_040_existplan.dgn

F.A. RTE	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-627 VB	SOUTHWEST		32A
STA		TO STA		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

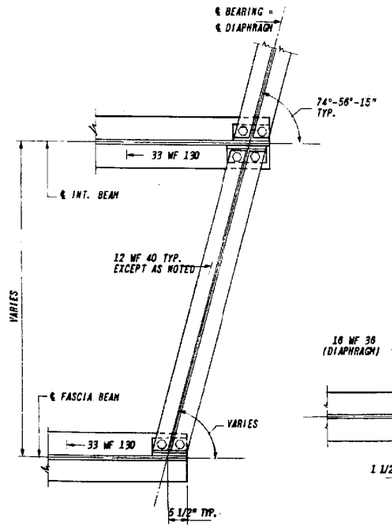
SPAN	BEAM	EAST END DATA E	EAST END DATA ELEVATION 1	EAST END DATA ELEVATION 2	EAST END DATA ANGLE α	WEST END DATA W	WEST END DATA ELEVATION 3	WEST END DATA ELEVATION 4	WEST END DATA ANGLE β	BEAM DATA BEAM SIZE	BEAM DATA LENGTH C/C BEARING	BEAM DATA FLANGE PLATES SIZE	BEAM DATA FLANGE PLATES WELD "t_w"	BEAM DATA FLANGE PLATES a	BEAM DATA FLANGE PLATES b	BEAM DATA SHEAR CONNECTOR SPACING c	BEAM DATA SHEAR CONNECTOR SPACING d	BEAM DATA SHEAR CONNECTOR SPACING e	BEAM DATA SHEAR CONNECTOR SPACING f	BEAM DATA INTERMEDIATE DIAPHRAGM SPACING g	BEAM DATA INTERMEDIATE DIAPHRAGM SPACING h	BEAM DATA INTERMEDIATE DIAPHRAGM SPACING i	BEAM DATA INTERMEDIATE DIAPHRAGM SPACING k	BEAM DATA INTERMEDIATE DIAPHRAGM SPACING L1	BEAM DATA INTERMEDIATE DIAPHRAGM SPACING L2	EAST END BRG. TYPE	EAST END SHIM PL.	WEST END BRG. TYPE	WEST END SHIM PL.	BEAM	REMARKS
SPAN NO. 4 EAST BOUND	A		637.567	633.585	73°-44'-51"	8'-0 3/8	637.858	633.964	73°-44'-51"	33 WF 130	59'-5 5/8	10"x3/4"	1/4"	16'-2 13/16	27'-0	8 13/16"	11 @ 1'-0	~	24 @ 1'-6	18'-8	~	20'-4 9/16	20-5 1/16					-		-	A
	B	6'-9 1/16	637.686	633.802	74°-56'-15"		638.004	634.110	74°-56'-15"	do	59'-1 1/2	do	do	11'-0 3/4	37'-0	6 3/4"	25 @ 6"	10 @ 9"	18 @ 1'-0	18'-4	2'-1	18'-3 1/2	18'-4	6'-10 15/16	7'-4	F1	-	E1	-	B
	C	8'-0 5/16	637.827	633.944	do	8'-0 5/16	638.150	634.256	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	7'-9	7'-9	do	-	do	-	C
	D	do	637.969	634.086	do	do	638.296	634.402	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	-	do	-	D
	E	do	638.063	634.179	do	do	638.394	634.500	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	-	do	-	E
	F	do	638.116	634.179	do	do	638.452	634.558	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	-	do	-	F
	G	do	638.024	634.114	do	do	638.365	634.471	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	5/8"	do	-	G
	N	8'-0 5/16	637.913	634.029	74°-56'-15"	8'-0 5/16	638.257	634.363	74°-56'-15"	33 WF 130	59'-1 1/2	10"x3/4"	1/4"	16'-0 3/4	27'-0	6 3/4"	11 @ 1'-0	~	24 @ 1'-6	20'-3	~	20'-4 1/2	18'-4	7'-9	7'-9	do	5/16"	do	-		
																											F1	-	E1	-	N	
SPAN NO. 4 WEST BOUND	I	7'-8 3/16	637.844	633.961	74°-56'-15"	7'-8 3/16	638.209	634.316	74°-56'-15"	33 WF 130	59'-1 1/2	10"x5/8"	1/4"	16'-0 3/4	27'-0	6 3/4"	11 @ 1'-0	~	24 @ 1'-6	18'-4	~	20'-4 1/2	20'-5								
	J	7'-8 1/8	637.924	634.041	do	7'-8 1/8	638.293	634.399	do	do	do	do	do	11'-0 3/4	37'-0	do	25 @ 6"	10 @ 9"	18 @ 1'-0	do	1'-11 15/16	18'-3 1/2	18'-4	7'-5	7'-5	F1	-	E1	-	I
	K	7'-8 1/8	637.983	634.100	do	7'-8 1/8	638.357	634.463	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	-	do	-	J
	L	7'-8 3/16	637.918	634.035	do	7'-8 3/16	638.296	634.402	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	-	do	-	K
	M	do	637.812	633.929	do	do	638.194	634.300	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	-	do	-	L
	N	7'-8 3/16	637.649	633.765	do	7'-8 3/16	638.035	634.141	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	-	do	-	M
	O	4'-1 5/8	637.485	633.607	74°-56'-15"	8'-9 3/8	637.875	633.982	74°-56'-15"	do	59'-1 1/2	do	do	11'-0 3/4	37'-0	6 3/4"	25 @ 6"	11 @ 9"	18 @ 1'-0	18'-4	1'-11 15/16	18'-3 1/2	18'-4	5'-5 15/16	7'-0 7/8	do	-	do	-	N
	P		637.397	633.514	79°-21'-57"		637.693	633.799	79°-21'-57"	33 WF 130	58'-1 1/8	10"x5/8	1/4"	15'-6 1/2	27'-0 1/8	9"	11 @ 1'-0	11 @ 1'-6	1 @ 1'-7 1/8	19'-5 3/8	~	20'-5 1/4	18'-2 5/16			do	-	do	-	O
																											F1	-	E1	-	P	



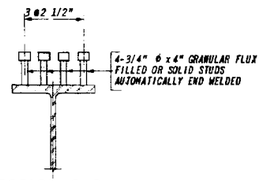
ELEVATION
TYPICAL INTERIOR GIRDER



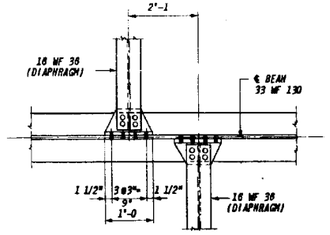
PLAN
BOTTOM FLANGE SHOWN



SECTION A-A



SECTION C-C
SHEAR CONNECTOR DETAIL



SECTION B-B

STRUCTURAL STEEL SPANS NO. 4 EAST BOUND & WEST BOUND

FRAMING STEEL SPAN NO. 4 E.B. & W.B. . . . . 157,505 LBS.
STUDS . . . . . 4,270 LBS.
BEARING DEVICES (*) . . . . . 8,305 LBS.

FURNISHING AND ERECTING STRUCTURAL STEEL. . . . 170,080 LBS.

NOTE: (*) SEE SHEET: " BEARING DEVICES ".

AS BUILT

This sheet (32A) replaces sheet (32) of the contract drawings. All revisions made by consultant. (R.P.E. 5-29-64)

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
FA. RT. 133
LAWNDALE AVE. STRUCTURE OVER
A.T. & S.F.RY., C. & I.W. R.R. & B. & O.C.T. R.R.
SECTION 0606-627 VB
SUMMARY OF BEAMS SPAN NO. 4 E.B. & W.B.

REVISIONS NAME	DATE
REVISED ⚠	5-6-64
DESIGNED P.K.-ST.	
REVIEWED C.H.W.	

SCALE: HORIZ. VERT.
DATE 11-20-63
DRAWN BY A.S.
CHECKED BY L.B.B.

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FOR INFORMATION ONLY

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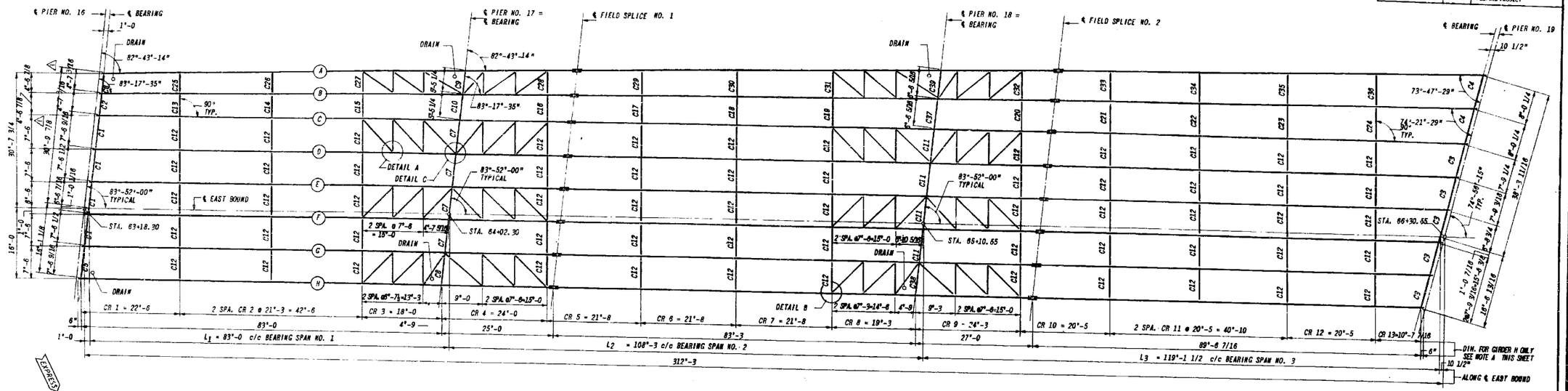
		CHECKED - JDM	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

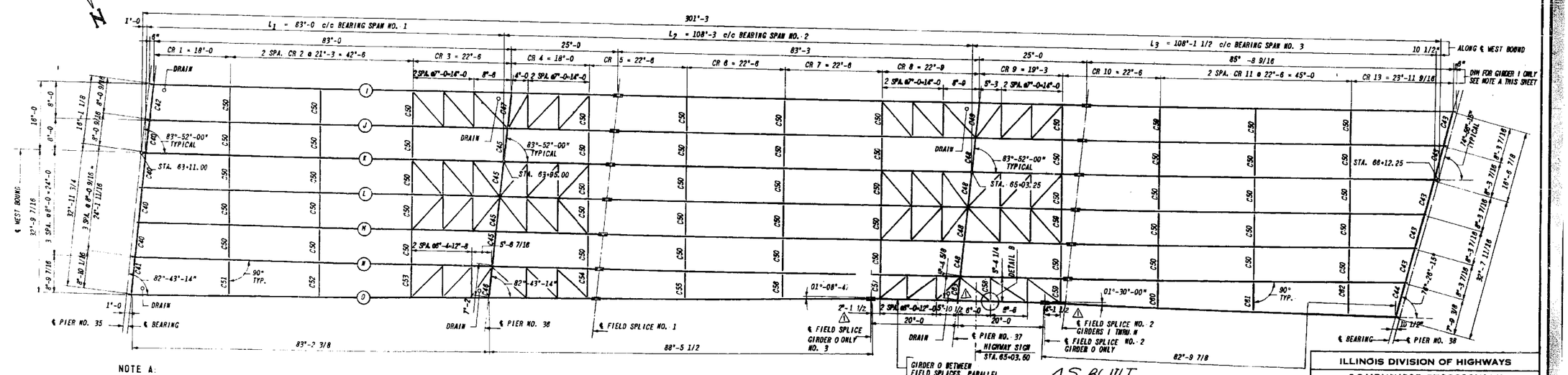
EXISTING PLAN INFORMATION (6 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX6 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	367
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

F.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-627 VB	SOUTHWEST		33A
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



FRAMING PLAN SPAN NO. 1 THRU SPAN NO. 3 EAST BOUND



FRAMING PLAN SPAN NO. 1 THRU NO. 3 WEST BOUND

NOTE A.

FOR INDIVIDUAL CROSS FRAME AND INTERMEDIATE STIFFENER SPACINGS, FOR WEB PLATE AND FLANGE PLATE DIMENSIONS, FOR WEB PLATE AND FLANGE PLATE CUT OFFS, FOR BLOCKING OF EACH GIRDER SEE SHEETS:

(1) CONTINUOUS GIRDER
(2) SUMMARY OF CONTINUOUS GIRDERS

AS BUILT
This sheet(33-A) replaces sheet(33) of the contract drawings. All revisions are made by the consultant
R.R.E. 5-29-64

REVISIONS		
	NAME	DATE
REVISED		5-6-64
DESIGNED	P.K.-S.T.	
DETAILED		
REVIEWED	E.W.W.	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.R.T. 133
LAWNDALE AVE. STRUCTURE OVER A.T.& S.F. RY, C&I.W. R.R. & B&O C.T. R.R.
SECTION 0606-627 VB
FRAMING PLAN SPAN NO. 1 THRU NO. 3 E.B. & W.B.
SCALE: HORIZ. 3/32"-1:0 VERT.
DATE 11-20-63
DRAWN BY J.W.
CHECKED BY L.B.B.

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312-565-0450 Job No. 10093

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	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (7 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX7 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	368
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	

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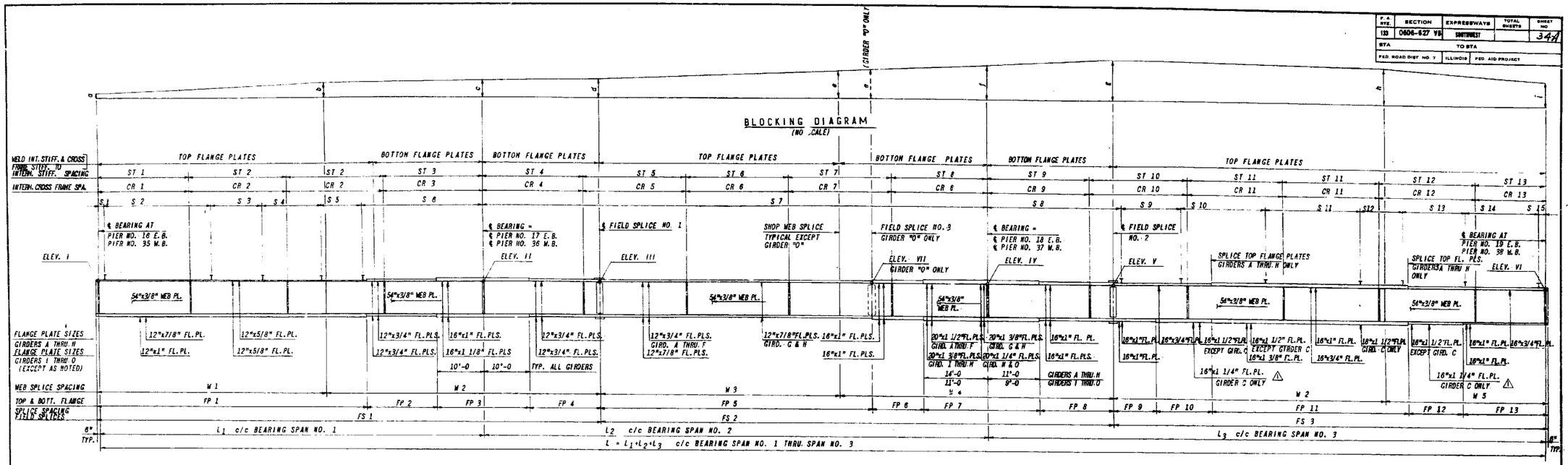
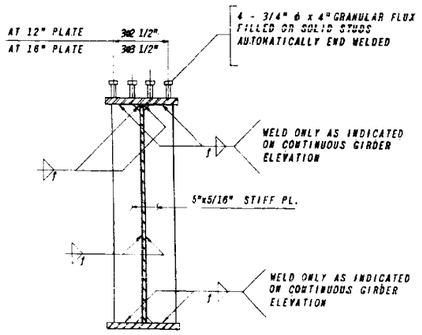
6/23/2014 2:38:19 PM

F.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO
133	0606-627 VB	SOUTHWEST		34A
STA		TO STA		
FED. ROAD DIST NO. 7	ILLINOIS	FED. AID PROJECT		

BLOCKING DIAGRAM
(NO SCALE)

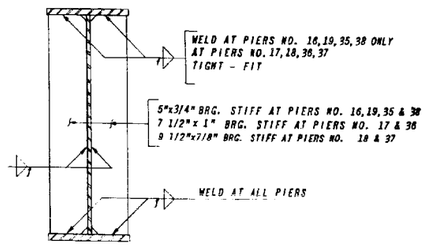


CONTINUOUS GIRDER ELEVATION

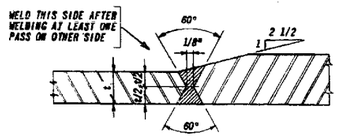


TYPICAL INTERMEDIATE STIFFENER AND SHEAR CONNECTOR DETAIL

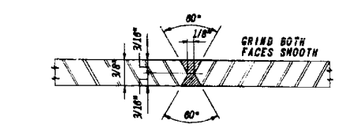
FILLET WELD SIZES	
MATERIAL THICKNESS OF THICKER PART JOINED, IN.	MINIMUM SIZE OF FILLET WELD IN.
TO 1/2" INCL.	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	5/16"



BEARING STIFFENER DETAIL



FLANGE SPLICE - SHOP WELD



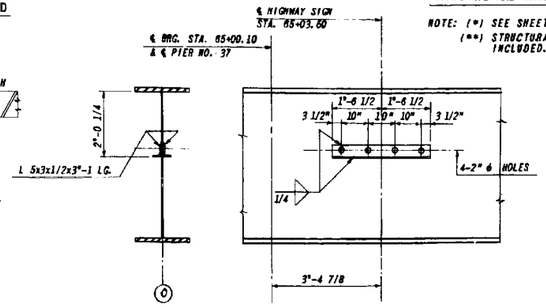
WEB SPLICE - S" WELD

STRUCTURAL STEEL SPANS NO. 1 THRU 3 EAST BOUND & WEST BOUND

FRAMING STEEL SPAN NO. 1 THRU 3 E.B. & W.B. (**)	921,350 LBS.
STUDS	7,020 LBS.
BEARING DEVICES(*)	47,170 LBS.
FURNISHING AND ERECTING STRUCTURAL STEEL	975,540 LBS.

NOTE: (*) SEE SHEET: "BEARING DEVICES".
(**) STRUCTURAL STEEL, SHOWN ON SHEET "ELECTRICAL DETAILS" INCLUDED.

AS BUILT
This sheet(34-A) replaces sheet(34) of the contract drawings. All revisions are made by the consultant. (R.P.E. 5-29-64)



DETAIL AT HIGHWAY SIGN
GIRDER O - WEST BOUND

REVISIONS		
NAME	DATE	
REVISION ⚠	5-6-64	
DESIGNED PX-ST		
REVIEWED E.M.R.		

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.P. RTE. 133
LAWNDALE AVE STRUCTURE OVER A.T. & S.F. RY., C. & I.W. R.R. & B. & O.C.T. R.R.
SECTION 0606-627VB
CONTINUOUS GIRDER
SCALE: HORIZ. VERT.
DATE 11-20-63
DRAWN BY E.M.
CHECKED BY L.B.B.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (8 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX8 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	369
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

F.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO
133	0606-627 VB	SOUTHWEST		35A
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

	GIRDER	SPAN LENGTH C/C BEARING L_1	L_2	L_3	$L=L_1+L_2+L_3$	FIELD SPLICES FS 1	FS 2	FS 3	TOP & BOTTOM FLANGE PLATES CUT-OFF FP 1	FP 2	FP 3	FP 4	FP 5	FP 6	FP 7	FP 8	FP 9 **	FP 10 **	FP 11 **	FP 12 **	FP 13 **	WEB PLATE SPLICES (SHOP & FIELD SPLICES) W 1	W 2	W 3	W 4	W 5	GIRDER
EAST BOUND	A	83'-2 3/8	108'-6 1/16	125'-4 13/16	317'-1 1/4	108'-9 1/16	110'-6 1/8	98'-10 1/16	58'-8 3/8	15'-0	20'-0	15'-0 11/16	58'-5 3/8	11'-0	25'-0	16'-0 3/4	9'-0	12'-0	47'-4 1/16	12'-0	18'-6	49'-9 1/16	59'-0	51-6 1/8	59'-0	39'-10 1/16	A
	B	83'-1 1/8	108'-4 7/16	123'-11 15/16	315'-5 1/2	108'-7 7/16	110'-4 1/2	97'-5 9/16	58'-7 1/8	do	do	15'-0 5/16	58'-4 1/8	do	do	16'-0 3/8	do	do	45'-11 9/16	do	do	49'-7 7/16	do	51'-4 1/2	do	38'-5 9/16	B
	C	83'-0	108'-3	122'-7 3/16	313'-10 3/16	108'-8	110'-3	96'-1 3/16	58'-6	do	do	15'-0	58'-3	do	do	16'-0	do	do	44'-7 3/16	do	do	49'-8	do	51'-3	do	37'-1 3/16	C
	D	do	do	121'-4 11/16	312'-7 11/16	do	do	94'-10 11/16	do	do	do	do	do	do	do	do	do	do	43'-4 11/16	do	do	do	do	do	do	35'-10 11/16	D
	E	do	do	120'-2 1/8	311'-5 1/8	do	do	93'-8 1/8	do	do	do	do	do	do	do	do	do	do	42'-2 1/8	do	do	do	do	do	do	34'-8 1/8	E
	F	do	do	118'-11 9/16	310'-2 9/16	do	do	92'-5 9/16	do	do	do	do	do	do	do	do	do	do	40'-11 9/16	do	do	do	do	do	do	33'-5 9/16	F
	G	do	do	117'-9	309'-0	do	do	91'-3	do	do	do	do	do	do	do	do	do	do	39'-9	do	do	do	do	do	do	32'-3	G
	H	83'-0	108'-3	116'-6 7/16	307'-9 7/16	108'-6	110'-3	90'-0 7/16	58'-6	15'-0	20'-0	15'-0	58'-3	11'-0	25'-0	16'-0	9'-0	12'-0	38'-8 7/16	12'-0	18'-6	49'-6	59'-0	51'-3	59'-0	31'-0 7/16	H
WEST BOUND	I	83'-0	108'-3	110'-8 9/16	301'-11 9/16	108'-6	108'-3	86'-2 9/16	58'-6	15'-0	20'-0	15'-0	62'-3	10'-0	20'-0	16'-0	19'-0	-	45'-2 9/16	-	22'-0	49'-6	59'-0	51'-3	57'-0	27'-2 9/16	I
	J	do	do	109'-5	300'-8	do	do	84'-11	do	do	do	do	do	do	do	do	do	-	43'-11	-	do	do	do	do	do	25'-11	J
	K	do	do	108'-1 1/2	299'-4 1/2	do	do	83'-7 1/2	do	do	do	do	do	do	do	do	do	-	42'-7 1/2	-	do	do	do	do	do	24'-7 1/2	K
	L	do	do	106'-10	298'-1	do	do	82'-4	do	do	do	do	do	do	do	do	do	-	41'-4	-	do	do	do	do	do	23'-4	L
	M	do	do	105'-8 7/16	296'-9 7/16	do	do	81'-0 7/16	do	do	do	do	do	do	do	do	do	-	40'-0 7/16	-	do	do	do	do	do	22'-0 7/16	M
	N	83'-0	108'-3	104'-2 15/16	295'-5 15/16	108'-6	108'-3	79'-8 15/16	58'-6	do	do	15'-0	62'-3	10'-0	do	16'-0	19'-0	-	38'-8 15/16	-	do	49'-6	do	51'-3	57'-0	20'-8 15/16	N
	O	83'-2 7/8	108'-5 1/2 *	102'-9 7/8 *	294'-5 3/4 *	108'-9 1/16	63'-4 13/16 +40'-0	83'-3 7/8	58'-8 3/8	15'-0	20'-0	15'-0 11/16	63'-4 13/16	9'-0	20'-0	11'-0	24'-0	-	37'-3 7/8	-	22'-0	49'-9 1/16	59'-0	63'-4 13/16	40'-0	24'-3 7/8	O

	GIRDER	INTERMEDIATE STIFFENER SPACINGS AND INTERMEDIATE CROSSFRAME SPACINGS (C/C STIFFENERS) ST 1	CR 1	ST 2	CR 2	ST 3	CR 3	ST 4	CR 4	ST 5	CR 5	ST 6	CR 6	ST 7	CR 7	ST 8	CR 8	ST 9	CR 9	ST 10	CR 10	ST 11	CR 11	ST 12	CR 12	ST 13	CR 13	GIRDER
EAST BOUND	A	3 @ 4'-5+1 @ 4'-3 3/8	17'-6 3/8	4 @ 4'-3+1 @ 4'-3 5/8	21'-3 5/8	5 @ 3'-5+1 @ 4'-3 3/4	23'-0 3/4	1 @ 4'-0 3/8 + 4 @ 3'-9	19'-0 3/8	2 @ 4'-1 5/16+3 @ 4'-6	21'-8 5/8	4 @ 4'-4+1 @ 4'-4 5/8	21'-8 5/8	SAME AS ST 6	SAME AS CR 6	6 @ 3'-9+1 @ 1'-9 13/16	24'-3 13/16	1 @ 4-3 3/8+4 @ 3'-9	19'-3 3/8	4 @ 4'-6+1 @ 2'-5 9/16	20'-5 9/16	4 @ 4'-1+1 @ 4'-1 9/16	20'-5 9/16			5 @ 4'-0+1 @ 4'-3 3/16	24'-3 3/16	A
	B	4 @ 4'-6	18'-0	4 @ 4'-3+1 @ 4'-3 5/16	21'-3 5/16	5 @ 3'-9+1 @ 3'-9 1/2	22'-6 1/2	1 @ 4'-6+4 @ 3'-9	19'-6	2 @ 4'-1 1/8+3 @ 4'-6	21'-8 5/16	4 @ 4'-4+1 @ 4'-4 5/16	21'-8 5/16			5 @ 3'-9+2 @ 2'-6 1/4	23'-3 1/2	2 @ 2'-4 1/2+4 @ 3'-9	19'-9	4 @ 4'-6+1 @ 2'-5 1/4	20'-5 1/4	4 @ 4'-1+1 @ 4'-1 1/4	20'-5 1/4			4 @ 4'-6+1 @ 4'-1 5/16	22'-5 15/16	B
	C	4 @ 3'-9+1 @ 3'-5 5/8	18'-5 5/8	5 @ 4'-3	21'-3	5 @ 3'-9+1 @ 3'-9 3/8	22'-0 3/8	2 @ 2'-5 13/16+4 @ 3'-9	19'-11 5/8	1 @ 3'-8+4 @ 4'-6	21'-8	5 @ 4'-4	21'-8			5 @ 3'-9+1 @ 2'-11 5/8	23'-3 3/8	1 @ 1'-5 5/16+5 @ 3'-9	20'-2 5/8	3 @ 4'-6+2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5			4 @ 4'-3+1 @ 3'-8 9/16	20'-8 9/16	C
	D	4 @ 3'-9+1 @ 4'-3 5/16	19'-3 5/16	do	do	5 @ 3'-9+1 @ 2'-5 11/16	21'-2 11/16	2 @ 2'-0 5/16+5 @ 3'-9	20'-9 5/16	1 @ 2'-11+5 @ 3'-9	do	do	do			5 @ 3'-9+1 @ 2'-10 5/8	23'-3 3/8	1 @ 1'-5 5/16+5 @ 3'-9	21'-0 5/16	3 @ 4'-6+2 @ 3'-5 1/2	do	do	do			4 @ 3'-9+1 @ 3'-8 11/16	22'-5 11/16	D
	E	4 @ 4'-0+1 @ 4'-1	20'-1	do	do	4 @ 3'-9+2 @ 2'-8 1/2	20'-5	1 @ 2'-10 +5 @ 3'-9	21'-7	4 @ 4'-6+1 @ 3'-8	do	do	do			5 @ 3'-9+1 @ 2'-11	21'-8	1 @ 3'-1+5 @ 3'-9	21'-10	2 @ 3'-5 1/2+3 @ 4'-6	do	do	do			4 @ 3'-9+1 @ 3'-8 3/8	18'-8 3/8	E
	F	4 @ 4'-3+1 @ 3'-10 11/16	20'-10 11/16	do	do	4 @ 3'-9+2 @ 2'-3 11/16	19'-7 5/16	1 @ 3'-7 11/16+5 @ 3'-9	22'-4 11/16	do	do	do	do			5 @ 3'-9+1 @ 2'-1 5/16	20'-10 5/16	1 @ 3'-10 11/16+5 @ 3'-9	22'-7 11/16	1 @ 2'-9+4 @ 4'-5	do	do	do			3 @ 4'-3+1 @ 3'-11 1/8	16'-8 1/8	F
	G	4 @ 4'-6+1 @ 3'-8 5/16	21'-8 5/16	do	do	5 @ 3'-9 3/4+1 @ 2'-4 15/16	18'-8 11/16	1 @ 4'-5 5/16+5 @ 3'-9	23'-2 5/16	do	do	do	do			5 @ 3'-7 1/2+1 @ 1'-11 3/16	20'-0 11/16	2 @ 2'-11 7/16+4 @ 3'-9	23'-5 5/16	3 @ 4'-6+2 @ 3'-5 1/2	do	do	do			3 @ 4'-6+1 @ 4'-1 7/8	14'-7 7/8	G
	H	5 @ 4'-6	22'-6	5 @ 4'-3	21'-3	4 @ 3'-9 +2 @ 2'-4 1/2	18'-0	2 @ 4'-6 +4 @ 3'-9	24'-0	4 @ 4'-6+1 @ 3'-8	21'-8	5 @ 4'-4	21'-8			4 @ 3'-7 1/2 +2 @ 2'-4 1/2	19'-3	3 @ 3'-1 +4 @ 3'-9	24'-3	3 @ 4'-6+2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5			2 @ 4'-4+1 @ 4'-1 11/16	12'-7 11/16	H
WEST BOUND	I	4 @ 4'-6	18'-0	5 @ 4'-3	21'-3	4 @ 3'-8 +2 @ 4'-3	22'-6	1 @ 4'-0 +4 @ 3'-8	18'-0	5 @ 4'-6	22'-6	5 @ 4'-6	22'-6			4 @ 3'-8 +2 @ 4'-4 1/2	22'-9	2 @ 2'-7 1/2 +4 @ 3'-8	19'-3	5 @ 4'-6	22'-6	5 @ 4'-6	22'-6	–	–	2 @ 3'-7+1 @ 4'-4 11/16	23'-11 9/16	I
	J	4 @ 3'-9+1 @ 3'-10 5/16	18'-10 5/16	do	do	5 @ 3'-8+1 @ 4'-1 11/16	21'-7 11/16	2 @ 2'-5 1/8+4 @ 3'-8	18'-10 5/16	5 @ 4'-6	do	do	do			5 @ 3'-8 +1 @ 4'-4 11/16	21'-10 11/16	1 @ 2'-7 5/16+3 @ 3'-8	20'-1 5/16	2 @ 3'-3+4 @ 4'-0	do	do	do	–	–	4 @ 4'-8+1 @ 3'-9 11/16	21'-9 11/16	J
	K	4 @ 4'-0+1 @ 3'-8 5/8	19'-6 5/8	do	do	5 @ 3'-8+1 @ 3'-3 3/8	20'-9 3/8	1 @ 2'-2 5/8 + 5 @ 3'-8	19'-8 5/8	2 @ 3'-3+4 @ 4'-0	do	do	do			5 @ 3'-8 + 1 @ 3'-8 5/8	21'-6 3/8	1 @ 3'-5 3/16+3 @ 3'-8	20'-11 5/8	2 @ 2'-9+4 @ 4'-3	do	do	do	–	–	4 @ 4'-8+1 @ 3'-7 7/8	19'-7 7/8	K
	L	4 @ 4'-3+1 @ 3'-8 15/16	20'-6 15/16	do	do	5 @ 3'-8+1 @ 2'-5 1/16	19'-11 1/16	1 @ 2'-2 5/8 +5 @ 3'-8	20'-6 15/16	2 @ 3'-3+4 @ 4'-0	do	do	do			5 @ 3'-8 + 1 @ 3'-8 1/16	20'-2 1/16	1 @ 3'-5 3/16+3 @ 3'-8	21'-9 15/16	5 @ 4'-8	do	do	do	–	–	4 @ 4'-8+1 @ 3'-7 1/4	19'-7 1/4	L
	M	4 @ 4'-6+1 @ 3'-5 1/4	21'-5 1/4	do	do	5 @ 3'-8+1 @ 1'-8 3/4	19'-0 3/4	1 @ 3'-11 1/4 +5 @ 3'-8	21'-5 1/4	5 @ 4'-6	do	do	do			5 @ 3'-8 + 1 @ 1'-9 3/4	19'-3 3/4	2 @ 2'-7 1/8+3 @ 3'-8	22'-8 1/4	do	do	do	do	–	–	3 @ 4'-8+1 @ 3'-7 3/16	15'-4 3/16	M
	N	4 @ 4'-6+1 @ 4'-3 9/16	22'-3 9/16	5 @ 4'-3	21'-3	5 @ 3'-2+1 @ 2'-4 7/16	18'-2 7/16	2 @ 2'-4 13/16+5 @ 3'-8	22'-3 9/16	5 @ 4'-6	22'-6	5 @ 4'-6	22'-6			5 @ 3'-8 +1 @ 3'-5 7/16	18'-5 7/16	2 @ 2'-8 5/8+3 @ 3'-8	23'-6 9/16	5 @ 4'-6	22'-6	5 @ 4'-6	22'-6	–	–	2 @ 4'-8+1 @ 3'-7 7/16	13'-2 3/8	N
	O	5 @ 4'-0+1 @ 3'-3 9/16	23'-3 9/16	4 @ 4'-3+1 @ 4'-3 5/8	21'-3 5/8	5 @ 3'-2+1 @ 1'-5 9/16	17'-3 9/16	1 @ 2'-3 9/16 + 6 @ 3'-8	23'-3 9/16	4 @ 4'-6+1 @ 4'-6 5/8	22'-6 5/8	4 @ 4'-6+1 @ 4'-6 5/8	22'-6 5/8			4 @ 4'-6+1 @ 2'-0 11/16 +1 @ 2'-5 3/8	20'-0 11/16 +2'-5 3/8	5 @ 3'-0 +1 @ 2'-6 5/8	17'-6 5/8	2 @ 2'-10 1/2+3 @ 4'-0 +1 @ 2'-5 3/8	20'-0+ 4'-1 1/8	4 @ 4'-6+1 @ 4'-4 3/8	22'-4 3/8	4 @ 4'-6+1 @ 4'-4 3/8	22'-4 3/8	–	–	2 @ 4'-0+1 @ 3'-7 5/8	11'-7 5/8	O

	GIRDER	SHEAR CONNECTOR SPACING S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10	S 11	S 12	S 13	S 14	S 15
EAST BOUND	A	6"	18 @ 9"=13'-6	12 @ 1'-0=12'-0	11 @ 1'-6=16'-6	15@1'-0=15'-0	25"-8 3/8	108"-6 1/16	29'-10 13/16	13 @ 1'-0=13'-0	9@1'-3=10'-0	20@1'-6=30'-0	10 @ 1'-3=12'-6	15 @ 1'-0=15'-0	20 @ 9"=15'-0	3"
	B	6"	do	do	do	do	25'-7 1/8	108"-4 7/16	29'-11 15/16	do	do	19@1'-6=29'-6	do	do	do	6"
	C	6"	do	do	do	do	25'-6	108"-3	30'-1 3/16	13 @ 1'-0=13'-0	do	18@1'-6=27'-0	do	do	do	6"
	D	6"	do	do	do	do	do	do	30'-4 11/16	14 @ 1'-0=14'-0	do	17@1'-6=25'-6	do	do	do	3"
	E	6"	do	do	do	do	do	do	29'-8 1/8	14 @ 1'-0=14'-0	do	16@1'-6=24'-0	do	do	do	6"
	F	6"	do	do	do	do	do	do	29'-11 9/16	14 @ 1'-0=14'-0	do	15@1'-6=22'-6	do	do	do	6"
	G	6"	do	do	do	do	do	do	29"-9	13 @ 1'-0=13'-0	do	15@1'-6=22'-6	do	do	do	6"
	H	6"	18 @ 9"=13'-6	12 @ 1'-0=12'-0	11 @ 1'-6=16'-6	15@1'-0=15'-0	25"-6	108"-3	30'-0 7/16	13 @ 1'-0=13'-0	9@1'-3=10'-0	14@1'-6=21'-0	10 @ 1'-3=12'-6	15 @ 1'-0=15'-0	20 @ 9"=15'-0	6"
WEST BOUND	I	6"	20 @ 9"=15'-0	12 @ 1'-0=12'-0	10 @ 1'-6=15'-0	15@1'-0=15'-0	25"-6	108"-3	27"-8 9/16	13 @ 1'-0=13'-0	9@1'-3=10'-0	14@1'-6=21'-0	10 @ 1'-3=12'-6	11 @ 1'-0=11'-0	20 @ 9"=15'-0	6"
	J	6"	do	do	do	do	do	do	27"-11	13 @ 1'-0=13'-0	do	13@1'-6=19'-6	do	do	do	6"
	K	6"	do	do	do	do	do	do	28'-1 1/2	14 @ 1'-0=14'-0	do	12@1'-6=18'-0	do	do	do	6"
	L	6"	do	do	do	do	do	do	28'-4	do	do	11@1'-6=16'-6	do	do	do	6"
	M	6"	do	do	do	do	do	do	28'-8 7/16	14 @ 1'-0=14'-0	do	10@1'-6=15'-0	do	do	do	6"
	N	5"	do	do	do	do	do	108"-3	28'-2 15/16	13 @ 1'-0=13'-0	do	10@1'-6=15'-0	do	do	do	6"
	O	6"	20 @ 9"=15'-0	12 @ 1'-0=12'-0	10 @ 1'-6=15'-0	15@1'-0=15'-0	25"-8 3/8	108"-5 1/2 *	28'-3 7/8 *	18 @ 1'-0=18'-0	9@1'-3=10'-0	9@1'-6=13'-6	10 @ 1'-3=12'-6	11 @ 1'-0=11'-0	20 @ 9"=15'-0	6"

	GIRDER	TOP OF WEB PLATE ELEVATIONS AT *** I	II	III	IV	V	VI	VII
EAST BOUND	A	3.829	5.042	5.391	6.394	6.664	7.431	–
	B	3.913	5.142	5.496	6.616	6.787	7.573	–
	C	3.997	5.241	5.600	6.658	6.820	7.714	–
	D	4.135	5.379	5.739	6.779	7.052	7.850	–
	E	4.217	5.462	5.823	6.865	7.149	7.932	–
	F	4.260	5.505	5.867	6.911	7.196	7.973	–
	G	4.184	5.429	5.791	6.838	7.124	7.895	–
	H	4.077	5.322	5.685	6.734	7.021	7.786	–
WEST BOUND	I	4.019	5.264	5.630	6.691	6.961	7.717	–
	J	4.106	5.351	5.718	6.781	7.052	7.801	–
	K	4.179	5.418	5.786	6.851	7.123	7.865	–
	L	4.080	5.325	5.694	6.761	7.034	7.769	–
	M	3.947	5.192	5.561	6.632	6.905	7.633	–
	N	3.785	5.030	5.399	6.472	6.746	7.467	–
	O	3.595	4.876	5.256	6.367	6.580	7.301	6.123

	GIRDER	BLOCKING AT a	b	c	d	e	f	g	h	i	GIRDER
EAST BOUND	A	0	0"-9 3/8	1"-2 9/16	1'-7	2'-2 1/4	2'-6 3/4	2'-10 5/8	3'-6 15/16	3'-7 1/4	A
	B	0	0"-9 3/16	1"-2 3/4	1'-7 1/16	2'-2 9/16	2'-7 1/4	2'-11 9/16	3'-8 3/4	3'-7 15/16	B
	C	0	0"-9 5/16	1"-2 15/16	1'-7 3/8	2'-2 15/16	2'-7 11/16	2'-11 11/16	3'-7 1/4	3'-8 5/8	C
	D	0	0"-9 3/8	do	1'-7 7/16	2'-3	2'-7 3/4	2'-11 11/16	3'-7 1/4	3'-8 9/16	D
	E	0	0"-9 3/8	do	1'-7 7/16	2'-3 1/16	2'-7 3/4	2'-11 3/4	3'-7 3/16	do	E
	F	0	do	do	1'-7 7/16	2'-3 1/16	2'-7 19/16	2'-11/13/16	3'-7 3/16	do	F
	G	0	0"-9 3/8	do	1'-7 1/2	2'-3 1/16	2'-7 7/8	2'-11 7/8	3'-7 3/16	3'-8 9/16	G
	H	0	0"-9 9/16	do	1'-7 5/8	2'-3 3/16	2'-7 7/8	2'-11 7/8	3'-7 5/8	3'-8 1/2	H
WEST BOUND	I	0	0"-9 1/2	do	1'-7 11/16	2'-3 5/16	2'-8 1/16	2'-11 3/4	3'-7 1/2	3'-8 3/8	I
	J	0	0"-9 3/8	do	1'-7 5/8	2'-3 5/16	2'-8 1/8	2'-11 13/16	3'-7 1/8	3'-8 5/16	J
	K	0	do	do	1'-7 5/8	2'-3 5/16	2'-8 1/8	2'-11 7/8	3'-7 1/16	3'-8 5/16	K
	L	0	do	do	1'-7 5/8	2'-3 3/8	2'-8 3/16	2'-11 15/16	3'-7"	3'-8 1/4	L
	M	0	do	do	1'-7 11/16	2'-3 3/8	2'-8 3/16	3"-0	3'-7	3'-8 1/4	M
	N	0	0"-9 3/8	1'-2 15/16	1'-7 5/8	2'-3 3/8	2'-8 1/4	3'-0 1/16	3'-8 15/16	3'-8 3/16	N
	O	0	0"-9 13/16	1'-3 3/8	1'-8 1/4	2'-8 1/16	2'-9 3/16	3'-0 1/4	3'-7 7/16	3'-8 5/8	O

NOTES:

* INDICATES THRU LENGTH OF GIRDER O.

** DOES NOT APPLY TO TOP FLANGE GIRDERS I THRU O.

*** ADD 830.00 TO ALL ELEVATIONS.

**** PROVIDE ONE EXTRA STIFFENER 5"x5/16" EACH GIRDER N. & O. FOR CROSSFRAME C57.

AS BUILT
This sheet (35A) replaces sheet (35) of the contract drawings. All revisions are made by the consultants.
R.P.E. 6-1-64

REVISIONS NAME	DATE
REVISED	5-6-64
DESIGNED P.K.-S.T.	
REVIEWED E.W.W.	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.R.T. 133
LAWNDALE AVE. STRUCTURE OVER
A.T. & S.F. RY., C.&I.W.R.R.& B.& O.C.T. R.R.
SECTION 0606-627VB
SUMMARY OF CONTINUOUS GIRDERS
SCALE: HORIZ. VERT.
DATE 11-20-63
DRAWN BY A.S.
CHECKED BY L.B.E.

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FOR INFORMATION ONLY

FILE NAME =	USER NAME = tjanicke	DESIGNED - RDK	REVISED -
		CHECKED - JDM	REVISED -
0162455_60J16_044_existplan.dgn	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (9 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX9 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	370
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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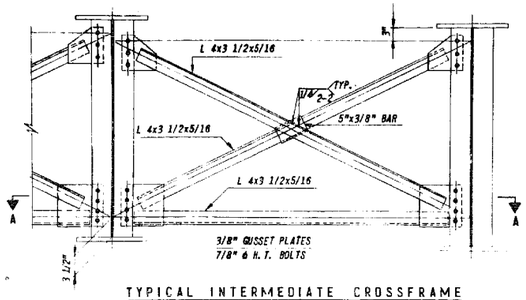
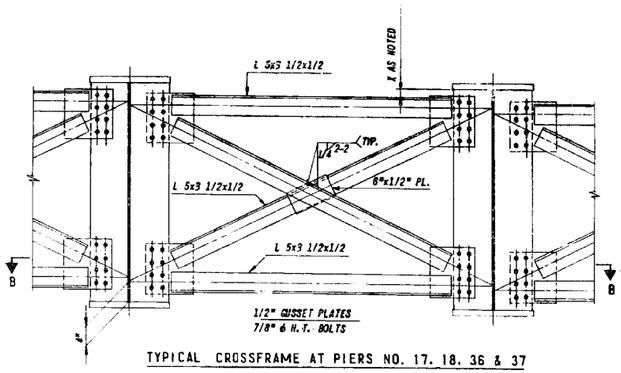
6/23/2014 2:38:34 PM

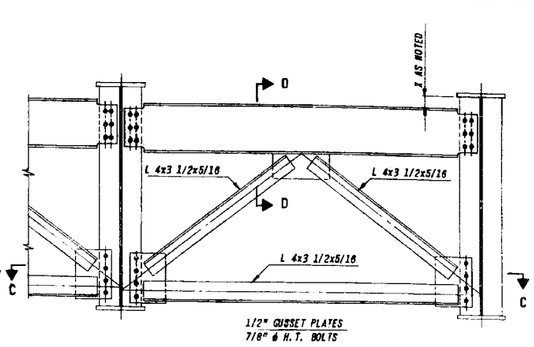
F.A. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-627 VB	SOUTHWEST		36A
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



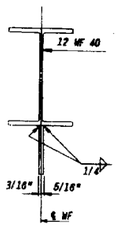
TYPICAL INTERMEDIATE CROSSFRAME



TYPICAL CROSSFRAME AT PIERS NO. 17. 18. 36 & 37



TYPICAL END CROSSFRAME

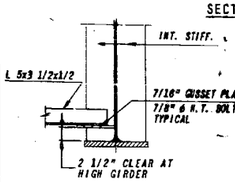


SECTION D-D

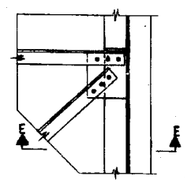
EAST BOUND		WEST BOUND	
TYPE	REQ'D	TYPE	REQ'D
C12	60	C50	55
C13 THRU C36	1 EACH	C51 THRU C62	1 EACH

EAST BOUND			WEST BOUND		
TYPE	REQ'D	X	TYPE	REQ'D	X
C7	4	4"	C45	4	4"
C8 & C9	1 EACH	8 1/2"	C46 & C47	1 EACH	8 1/2"
C10 & C37	1 EACH	4"	C48	4	4"
C11	4	4"	C49 & C63	1 EACH	8 1/2"
C38 & C39	1 EACH	8 1/2"	-	-	-

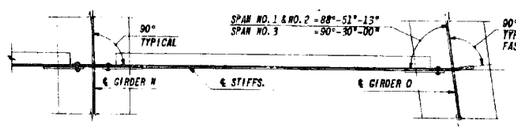
EAST BOUND			WEST BOUND		
TYPE	REQ'D	X	TYPE	REQ'D	X
C1	4	3"	C40	4	3"
C2	1	3"	C41 & C42	1 EACH	6"
C3	5	3"	C43	5	3"
C4	2	3"	C44	1	3"
C5 & C6	1 EACH	6"	-	-	-



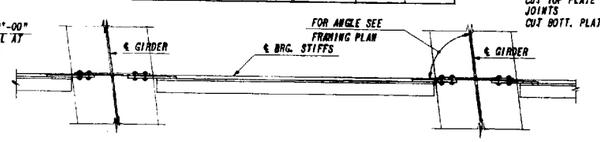
SECTION E-E



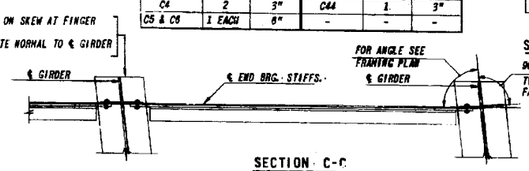
DETAIL A



SECTION A-A AT GIRDERS N & O WEST BOUND
(BEARING STIFFENERS SIMILAR)

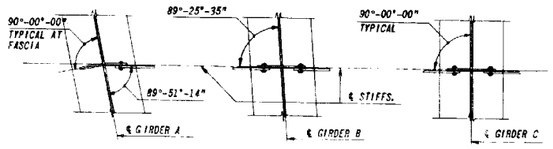


SECTION B-B

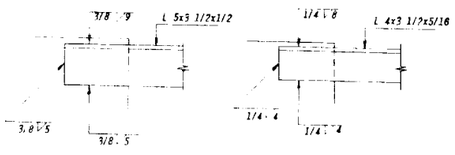


SECTION C-C

LATERAL BRACING

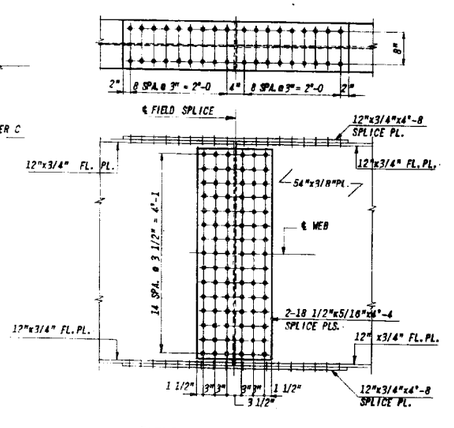


SECTION A-A AT GIRDERS A THRU C EAST BOUND
(BEARING STIFFENERS SIMILAR)

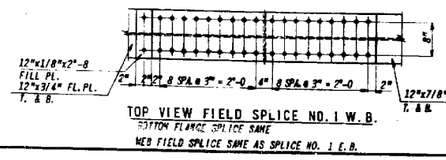


CROSSFRAMES - WELDING DETAILS

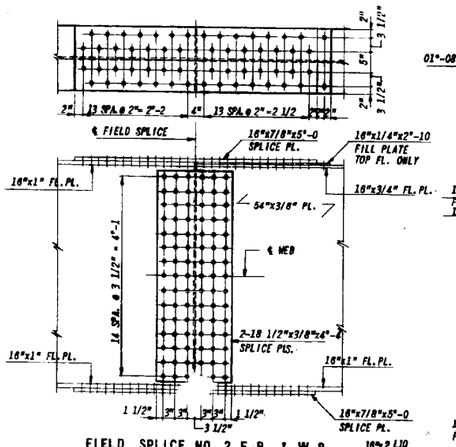
NOTE: 7/8" ø H.T. BOLTS IN FIELD SPLICE FLANGES AND 3/4" ø H.T. BOLTS IN FIELD SPLICE WEBS.



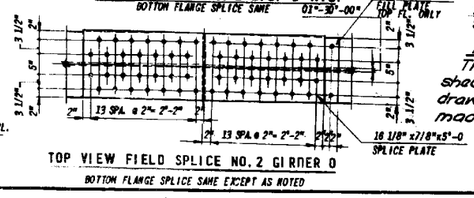
FIELD SPLICE NO. 1 E.B.
BOTTOM FLANGE SPLICE SAME



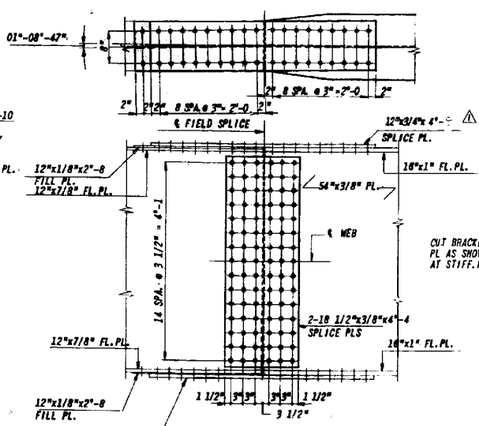
TOP VIEW FIELD SPLICE NO. 1 W.B.
BOTTOM FLANGE SPLICE SAME
WEB FIELD SPLICE SAME AS SPLICE NO. 1 E.B.



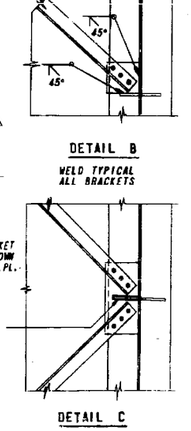
FIELD SPLICE NO. 2 E.B. & W.B.
BOTTOM FLANGE SPLICE SAME



TOP VIEW FIELD SPLICE NO. 2 GIRDER O
BOTTOM FLANGE SPLICE SAME EXCEPT AS NOTED



FIELD SPLICE NO. 3 - GIRDER O
BOTTOM FLANGE SPLICE SAME



AS-BUILT
This sheet (36A) replaces sheet (36) of the contract drawings. All revision were made by the consultant.
R.R.E. 6-1-64

REVISIONS	
NAME	DATE
REVISED ⚠	5-6-64
DESIGNED PX-S.T.	
REVIEWED E.W.W.	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.R.T. 133
LAWNDALE AVE. STRUCTURE OVER
A.T. & S.F. RY., C.& I.W. R.R.& B.& O.C.T. R.R.
SECTION 0606-627VB
SRUCTURAL STEEL DETAILS
SCALE: HORIZ. 1/4"=1'-0 VERT.
DATE 11-20-65
DRAWN BY D.U.
CHECKED BY L.B.B.

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312-565-0450 Job No. 10093

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FILE NAME = 0162455_60J16_045_existplan.dgn	USER NAME = tjanicke	DESIGNED - RDK	REVISED -
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	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (10 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX10 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	371
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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F.A. RTE.	SECTION	REFERENCE WAYS	TOTAL SHEETS	SHEET NO.
133	0808-027 YB		62	41
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

END OF CONTRACT
STA. 63+21.39
CONTINUATION OF ELECTRICAL WORK BY OTHERS

℄ LIGHT POLE AT STA. 63+45

℄ LIGHT POLE AT STA. 64+66

℄ LIGHT POLE AT STA. 66+20

℄ EAST BOUND

℄ RELOCATED LAWNDALE AVE.

℄ WEST BOUND

63 64 65 66 67

clogged clogged clogged clogged

℄ LIGHT POLE AT STA. 63+49

℄ LIGHT POLE AT STA. 64+78

℄ RECEIVAY 31CM STA. 65+65.60

℄ LIGHT POLE AT STA. 66+60

END OF CONTRACT
STA. 63+07.47
CONTINUATION OF ELECTRICAL WORK BY OTHERS

PLAN

NERVES

NERVES

HERE CONDUITS EXT TO POSITION UNDER SHOULDER 25' CAP ENDS

THREAD AND CAP END OF CONDUIT. WHEN READY FOR WIRING REPLACE CAP WITH BUSHING

3 1/2" ℄ STANDARD WEIGHT GALVANIZED STEEL CONDUIT BEND IN FIELD

90° ELBOW

BUSHED LONG 3 1/2" ℄ RIGID STEEL CONDUIT

SECTION D-D

℄ LIGHT POLE

E C B

7'-6 MAX.

EXPANSION COUPLING

2" ℄ RIGID STEEL CONDUIT EXTEND 28" INTO SHOULDER

SLEEVE

SECTION A-A

EXPANSION COUPLING
TYPICAL EACH PIER AND ABUTMENT

57 W 130

5/8" PLATE

5/8" ℄ H. BOLTS

L 3½x3½x5/16x1'-0 1/2 INCLINED TO STRUCTURAL STEEL

2" ℄ RIGID STEEL CONDUIT

SECTION B-B

54" PLATE GIRDER

5/16" PLATE

5/8" ℄ H. BOLTS

L 3½x3½x5/16x1'-0 1/2 INCLINED TO STRUCTURAL STEEL

2" ℄ RIGID STEEL CONDUIT

SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CONDUIT IN TRENCH 2" DIA.- GALV. STEEL	LIN.FT.	200
CONDUIT ATTACHED TO STRUCTURE 3 1/2"DIA.- GALV.- STEEL	LIN.FT.	18
CONDUIT ATTACHED TO STRUCTURE 2" DIA. GALV. STEEL	LIN.FT.	2,850
CONDUIT IN CONCRETE 3 1/2" DIA. GALV. STEEL	LIN.FT.	38
CONDUIT IN CONCRETE 2" DIA. GALV. STEEL	LIN.FT.	4
TRENCH AND BACKFILL	LIN.FT.	30

NOTES:
FOR SECTION E-E, SEE LIGHT STANDARD BASE DETAILS ON SHEET: "PARAPET AND HANDRAIL DETAILS".
PRICE PER UNIT FOOT OF CONDUIT SHALL INCLUDE ALL COUPLINGS, ELBOWS, FITTINGS ETC., NECESSARY TO COMPLETE INSTALLATION.

REVISIONS	
NAME	DATE
DESIGNED ST	
DRAWN ERE	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A. RT 133
LAWNDALE AVE. STRUCTURE OVER AT & SF RY, C&IW RR & B&OCT RR
SECTION 0808-027 YB
ELECTRICAL DETAILS
SCALE: HORIZ. 1"=20'-0 VERT.
DATE 11-20-65
DRAWN BY O.U.
CHECKED BY LEE

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312-565-0450 Job No. 10093

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	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (11 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX11 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	372
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

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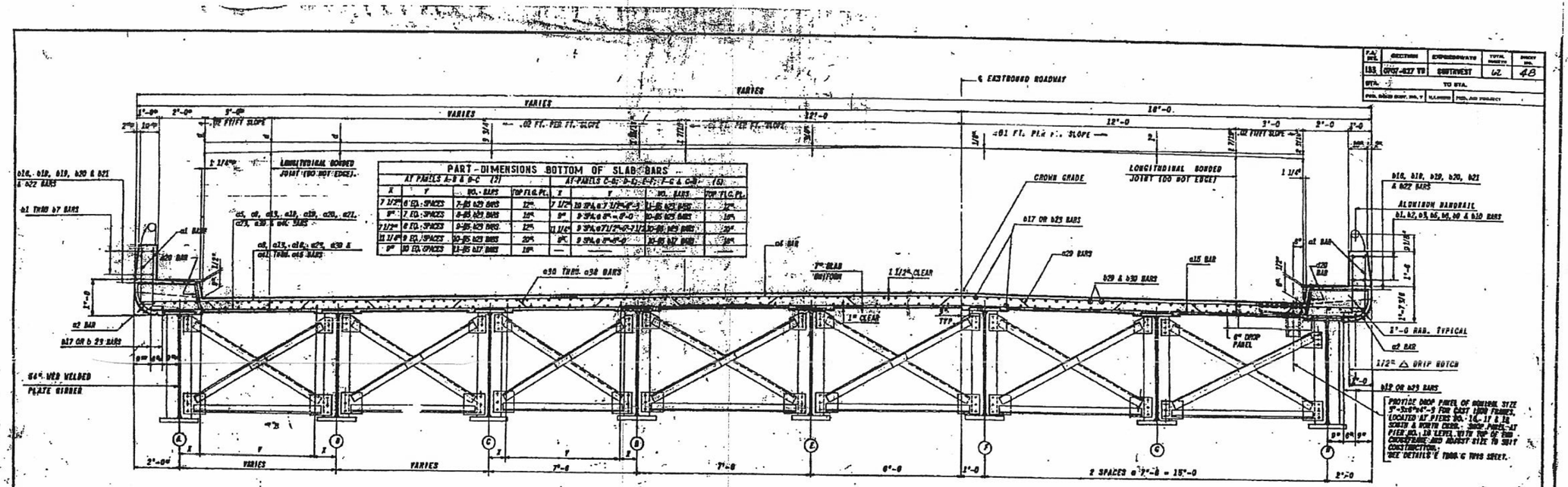
F.A.P. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0608-827 VB	SOUTHWEST	42	40
STA.		TO STA.		
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		



TYPICAL DECK SECTION SPAN NO. 1 THRU NO. 3 EASTBOUND STRUCTURE

* - DIMENSIONS NORMAL TO FASCIA
d - DROP VARIES

REVISIONS	
NAME	DATE
DESIGNED - RDK	
DETAILED -	
CHECKED - JDM	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.R.T. 133
LAWNDALE AVE. STRUCTURE OVER A.T. & S.F. RY., C. & I.W. R.R. & B. & O.C.T. R.R.
SECTION 0608-827VB
DECK SECTION SPAN NO. 1 THRU NO. 3 E.B.
SCALE: HORIZ. 1"=1'-0" VERT.
DRAWN BY E.M.
DATE 11-20-63
CHECKED BY E.M.

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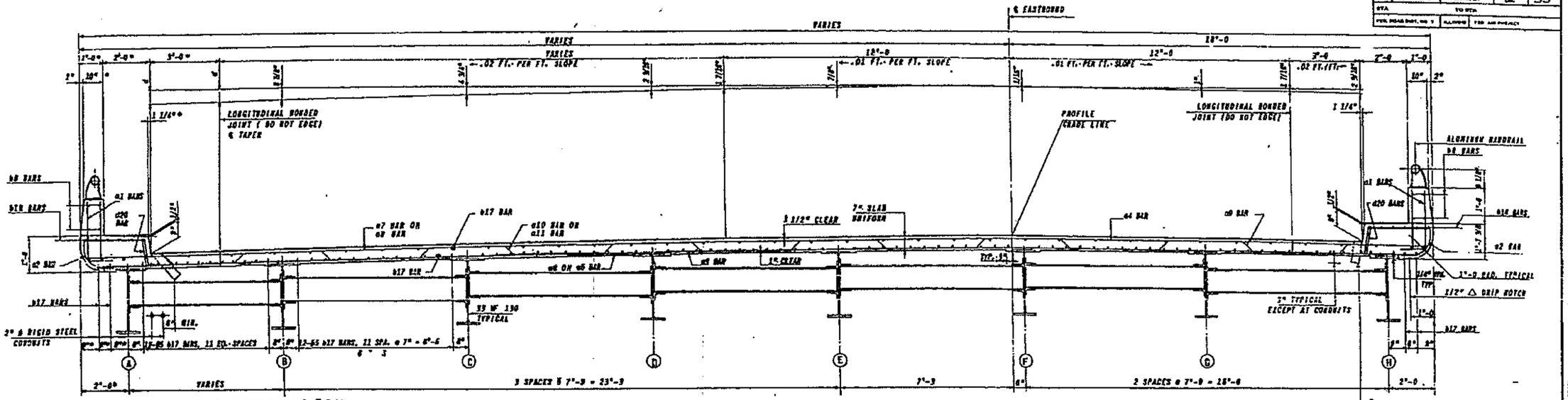
		CHECKED - JDM	REVISED -
	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

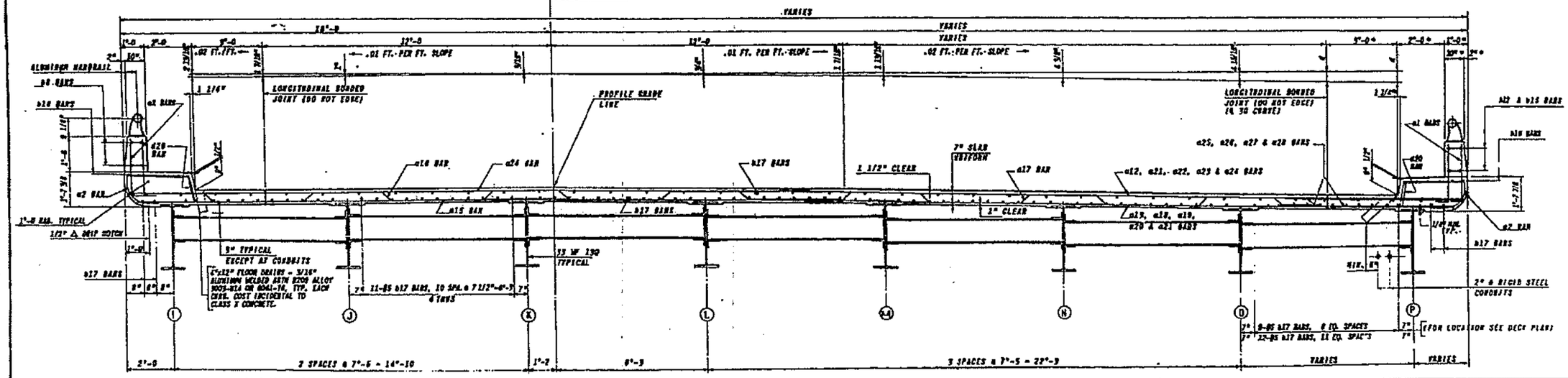
EXISTING PLAN INFORMATION (12 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX12 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	373
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		



DECK SECTION SPAN NO. 4 EAST BOUND
(LOOKING UP-STATION)

016-2455



DECK SECTION SPAN NO. 4 WEST BOUND
(LOOKING UP-STATION)

016-2454

F.A.P. RTE.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-027 VB	DISTRICT	62	53
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.R.T. 133
LAWNDALE AVE STRUCTURE OVER A.T. & S.F. RY., C.&I.W. R.R. & B.&O.C.T. R.R.
SECTION 0606-027VB
DECK SECTION SPAN NO. 4 E.B. & W.B.

REVISIONS	
NAME	DATE
DESIGNED - S.T.	
DRAWN - E.B.K.	

SCALE: HORIZ. 1"=5'-0" VERT.
DATE 11-20-13
DRAWN BY E.M.
CHECKED BY L.B.S.

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0162455_60J16_048_existplan.dgn	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (13 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX13 OF SCX14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	374
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	

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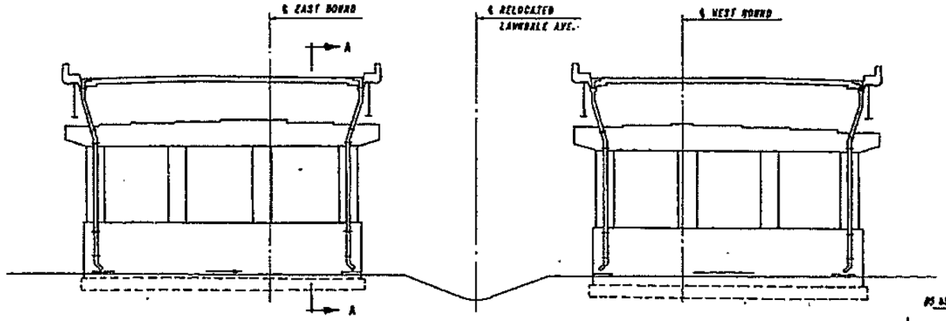
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
133	0606-627 VB	DUPAGE/DUPAGE	68	57
STA.		STA. TO STA.		
PROJ. FEDERAL AID NO.		PLAN NOS.	FED. AID PROJECT	

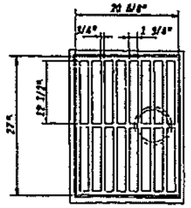
NOTES:. CAST IRON FRAMES SHALL CONFORM TO THE SPECIFICATIONS FOR GRAY IRON CASTINGS A.S.T.M.- DESIGNATION:. A48, CLASS 30

* SEE DETAILS E THRU G AT SHEET: "DECK SECTION, SPAN NO. 1 THRU 9 E.B."

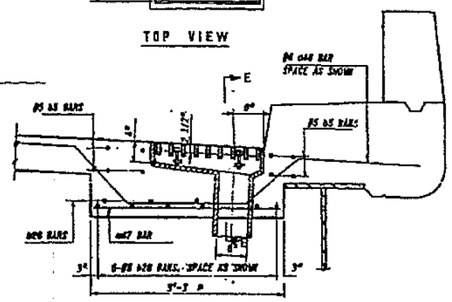
SECTION B-D LOCATION ON SHEET "DECK SECTION SPAN NO.. 1 THRU NO.. 9 E.B".



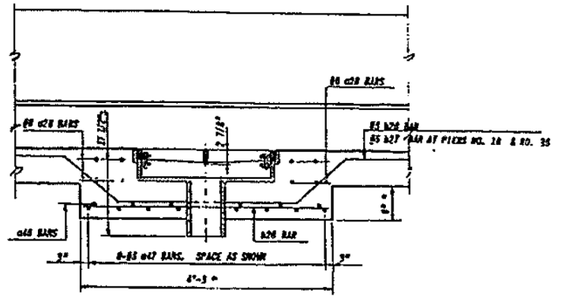
TYPICAL CROSS SECTION E.B. & W.B.
PIERS NO. 17 & NO. 36 SHOWN, OTHERS SIMILAR
1" = 10'



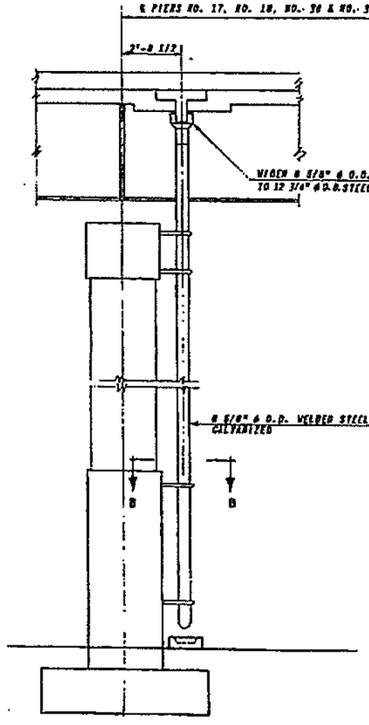
TOP VIEW



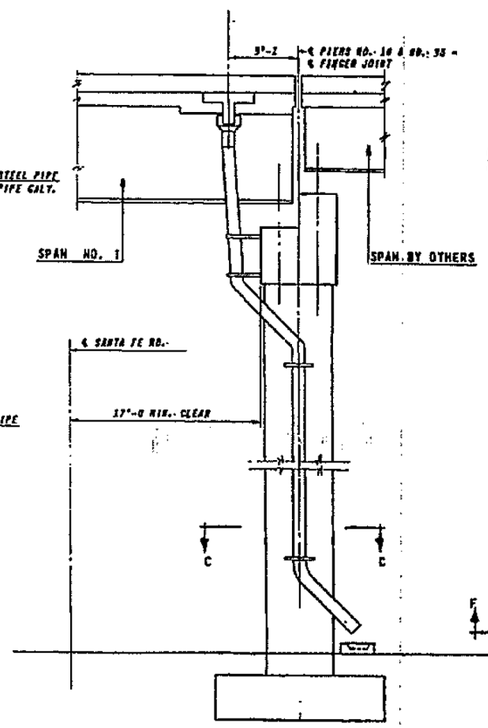
SECTION D-D
3/4" = 1'-0"



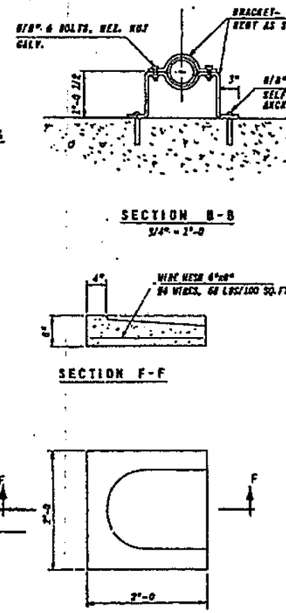
SECTION E-E
1" = 1'-0"



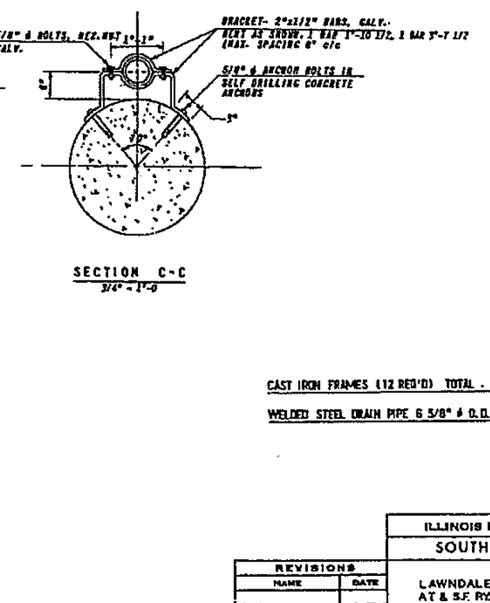
SECTION A-A
3/8" = 1'-0



SECTION THRU PIERS NO. 16 & NO. 35
3/8" = 1'-0

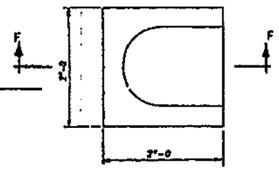


SECTION B-B
3/4" = 1'-0



SECTION C-C
3/4" = 1'-0

SECTION F-F



TOP VIEW - CONCRETE SPLASH BLOCK
1" = 1'-0"

CAST IRON FRAMES (12 REQ'D) TOTAL . . . . 4,800 LBS

WELDED STEEL DRAIN PIPE 6 5/8" ø O.D. . . . 350 LIN. FT.

REVISIONS	
NAME	DATE
DRAWN ST.	
CHECKED E.R.B.	

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
F.A.P. 133
LAWNDALE AVE. STRUCTURE OVER AT & S.F. RY. C.A.I.W. RR A.B.& C. RR
SECTION 0606-627 VB
DECK DRAINAGE
SCALE: HORIZ. 1" = AS SHOWN VERT.
DATE 11-20-63
DRAWN BY J.S.
CHECKED BY E.R.B.

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Chicago, Illinois 60601
312-565-0450 Job No. 10093

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	PLOT SCALE =	DRAWN - MAK	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - JDM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (14 OF 14)
STRUCTURE NO. 016-2455
SHEET NO. SCX14 OF SCX14 SHEETS

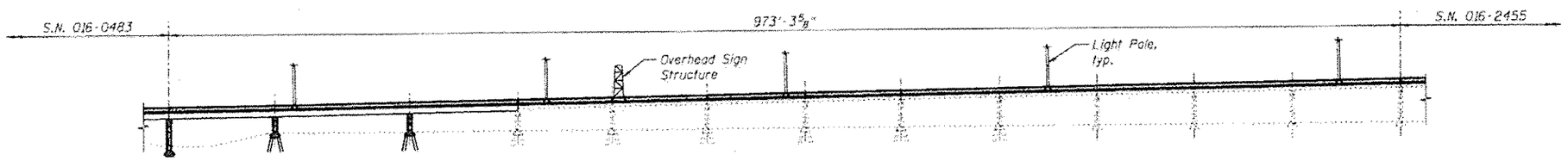
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	375
		CONTRACT NO. 60J16		
		ILLINOIS	FED. AID PROJECT	

Bench Mark: Chiseled square of SW corner of SB IL 171 bridge wingwall over Des Plaines River. El. 622.14.

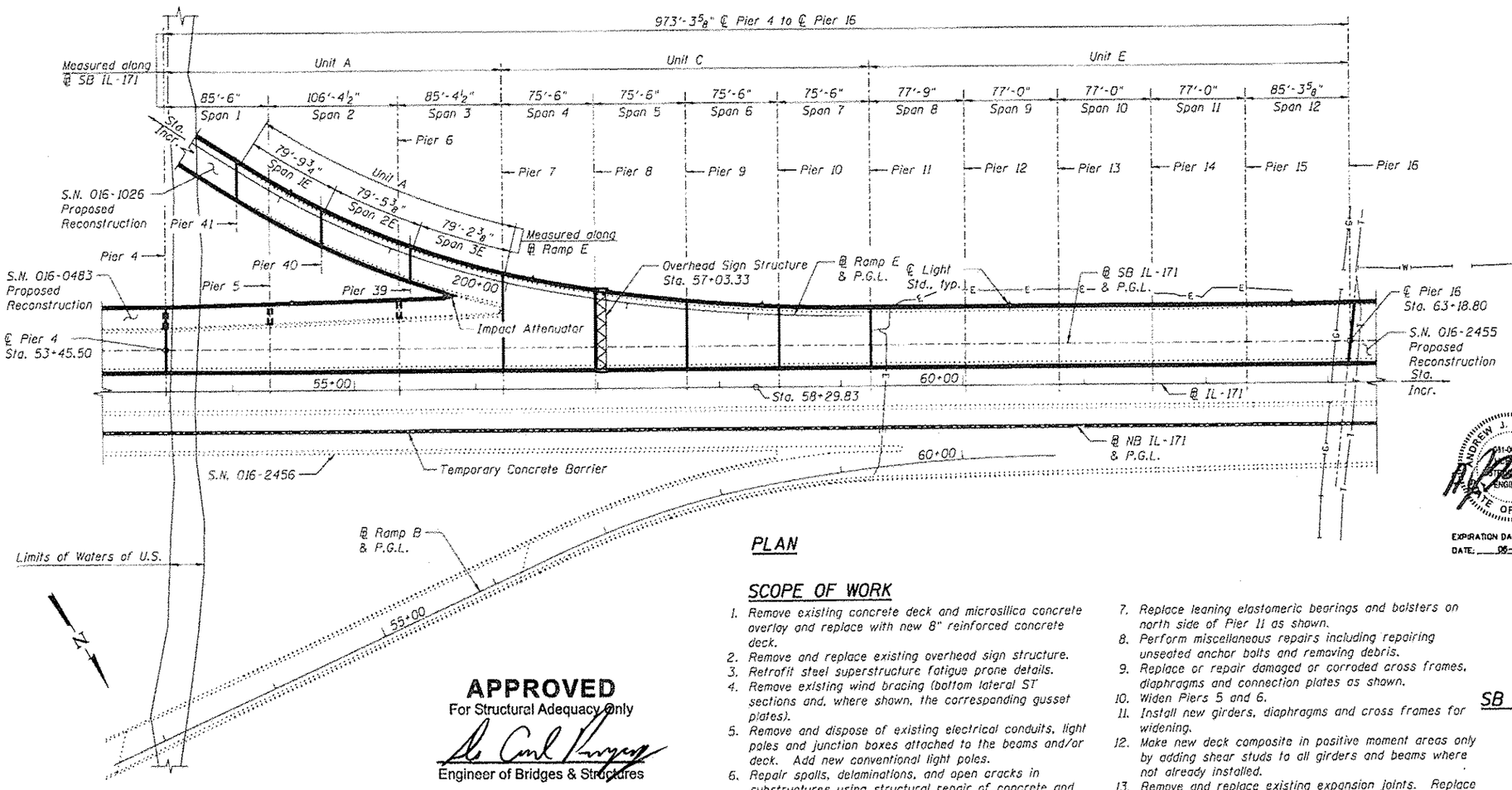
Existing Structure: S.N. 016-2457 (Southbound) was originally built in 1964 under Section 0707-675HB. The structure consists of a 7" concrete deck with a 1½" microsilica overlay. The structure consists of a twelve span mainline bridge and a three span ramp bridge (Ramp E), supported by 13 multi-column concrete piers (End piers 4, 16 & 41 not included), predominantly founded on steel BP-piles with a select few on the north side of the structure supported on spread footings. The mainline structure is 973'-3⅝" centerline of pier to centerline of pier, with an out to out deck width which varies from 36'-0" to 79'-1" with no skew angle. The Ramp E Structure has an out to out deck width of 28'-0", with a varying skew angle. Traffic to be maintained utilizing crossovers.

No salvage.

All elevations in the proposed plans are based on NAVD88 Datum. Elevations in the existing plans are based on the NGVD29 Datum. NGVD29 Elev. 584.50 = NAVD88 Elev. 584.22.



REFLECTED ELEVATION
(Looking South)



PLAN

SCOPE OF WORK

1. Remove existing concrete deck and microsilica concrete overlay and replace with new 8" reinforced concrete deck.
2. Remove and replace existing overhead sign structure.
3. Retrofit steel superstructure fatigue prone details.
4. Remove existing wind bracing (bottom lateral ST sections and, where shown, the corresponding gusset plates).
5. Remove and dispose of existing electrical conduits, light poles and junction boxes attached to the beams and/or deck. Add new conventional light poles.
6. Repair spalls, delaminations, and open cracks in substructures using structural repair of concrete and epoxy crack injection.
7. Replace leaning elastomeric bearings and bolsters on north side of Pier 11 as shown.
8. Perform miscellaneous repairs including repairing unseated anchor bolts and removing debris.
9. Replace or repair damaged or corroded cross frames, diaphragms and connection plates as shown.
10. Widen Piers 5 and 6.
11. Install new girders, diaphragms and cross frames for widening.
12. Make new deck composite in positive moment areas only by adding shear studs to all girders and beams where not already installed.
13. Remove and replace existing expansion joints. Replace filled in joints at Piers 8 and 39 with new expansion joints.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LOADING HS20-44

No future wearing surface allowed.

DESIGN STRESSES

FIELD UNITS (New Construction)

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M270 Grade 50)

FIELD UNITS (Exist. Construction)

f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel)

DESIGN SPECIFICATIONS

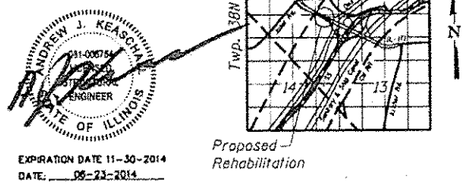
2002 AASHTO Standard Specifications for Highway Bridges

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

EXISTING UTILITY LEGEND

E — E — Underground Electric Line
T — T — Underground Telephone Line
G — G — Underground Gas Line
W — W — Underground Water Line



LOCATION SKETCH

ANDREW J. KEASCHALL
031-006754
PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXPIRATION DATE 11-30-2014
DATE: 05-23-2014

GENERAL PLAN AND ELEVATION
SB IL-171 OVER DES PLAINES RIVER VALLEY
FAP 372 - SECTION 2013-038B-R
COOK COUNTY
STATION 58+29.83
STRUCTURE NO. 016-2457

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Chicago, Illinois 60601
312-565-0450 Job No. 10093

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. SD1 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	376
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

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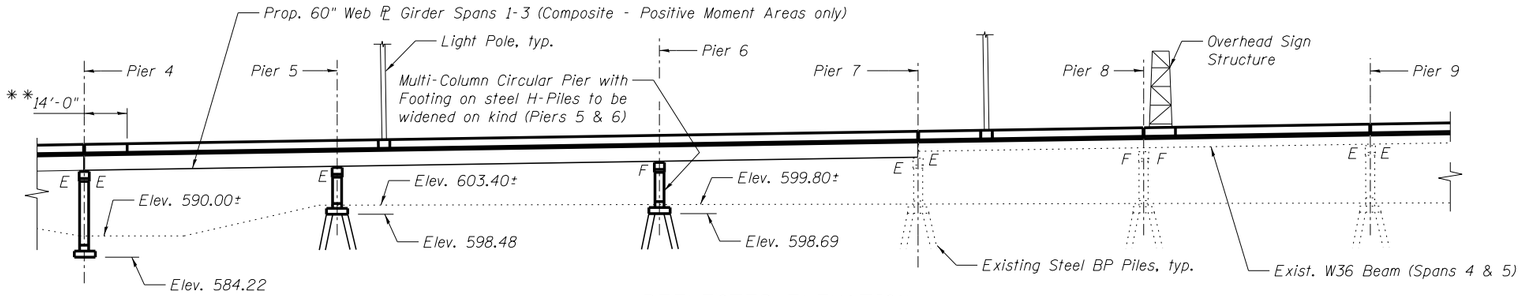
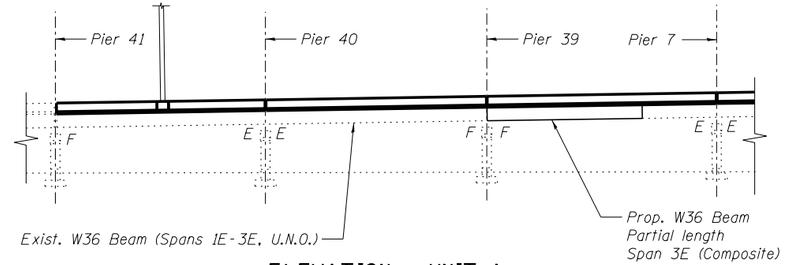


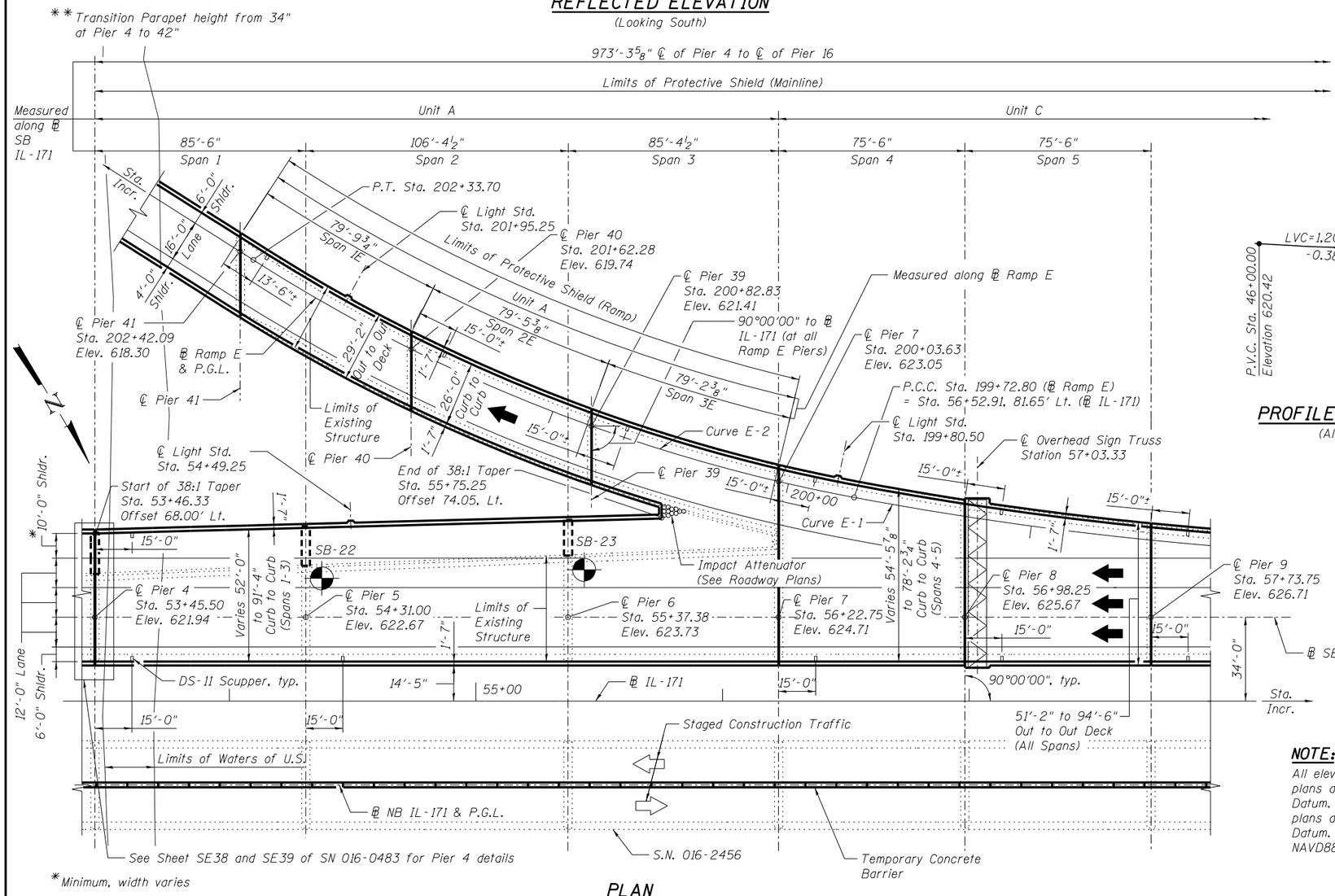
REFLECTED ELEVATION

(Looking South)

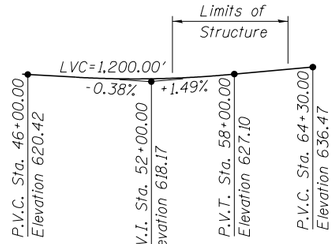


ELEVATION - UNIT A

(Looking Southwest)



PLAN



PROFILE GRADE SB IL-171

(Along ℄ SB IL-171)

CURVE DATA - ℄ RAMP E

CURVE E-1

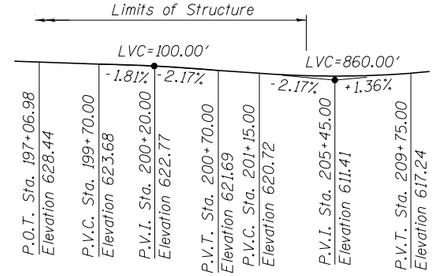
P.I. Sta. = 198+45.45
Δ = 10°38'33" (RT)
D = 4°09'59"
R = 1,375.22'
T = 128.09'
L = 255.44'
E = 5.95'
P.C. Sta. = 197+17.36
P.C.C. Sta. = 199+72.80

CURVE E-2

P.I. Sta. = 201+04.82
Δ = 21°37'58" (RT)
D = 8°17'30"
R = 691.00'
T = 132.02'
L = 260.90'
E = 12.50'
P.C.C. Sta. = 199+72.80
P.T. Sta. = 202+33.70

S.E. DATA - RAMP E

Normal Crown = Sta. 197+06.62
2.0% to 3.56% S.E. = Sta. 197+06.62 to Sta. 198+21.67
3.56% to 3.95% S.E. = Sta. 198+21.67 to Sta. 198+50.00
3.95% to 4.55% S.E. = Sta. 198+50.00 to Sta. 198+75.00
4.55% to 5.15% S.E. = Sta. 198+75.00 to Sta. 199+00.00
5.15% to 6.2% S.E. = Sta. 199+00.00 to Sta. 199+50.00
6.2% S.E. = Sta. 199+50.00 to Sta. 201+70.00
6.2% S.E. to 2.3% S.E. = Sta. 201+70.00 to 203+00.00



PROFILE GRADE RAMP E

(Along ℄ Ramp E)

NOTE:

All elevations in the proposed plans are based on NAVD88 Datum. Elevations in the existing plans are based on the NGVD29 Datum. NGVD29 Elev. 584.50 = NAVD88 Elev. 584.22.

GENERAL PLAN AND ELEVATION
UNIT A & C
SB IL-171 OVER DES PLAINES RIVER VALLEY
FAP 372 - SECTION 2013-038B-R
COOK COUNTY
STATION 58+29.83
STRUCTURE NO. 016-2457

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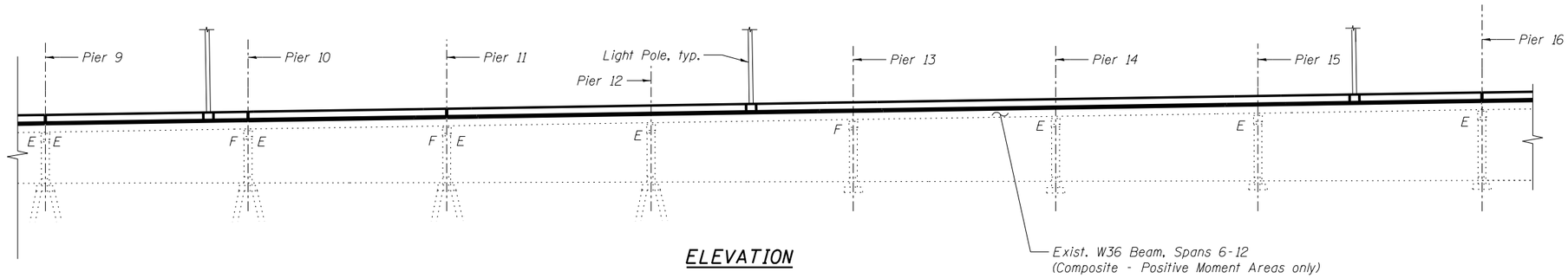
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. SD2 OF SD83 SHEETS

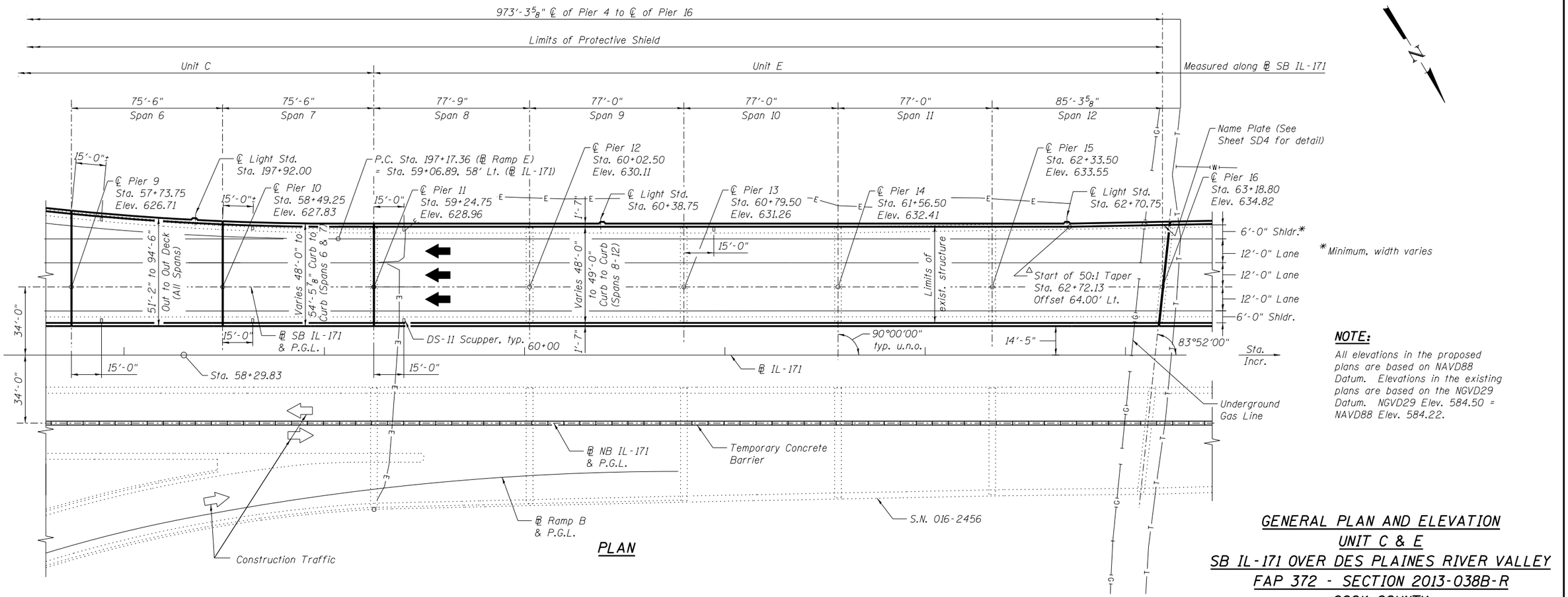
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	377
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		



ELEVATION

EXISTING UTILITY LEGEND

- E — E — Underground Electric Line
- T — T — Underground Telephone Line
- G — Underground Gas Line
- W — Underground Water Line



PLAN

△ End of Taper at Sta. 67+02.02 Offset 72.60' Lt.

NOTE:

All elevations in the proposed plans are based on NAVD88 Datum. Elevations in the existing plans are based on the NGVD29 Datum. NGVD29 Elev. 584.50 = NAVD88 Elev. 584.22.

GENERAL PLAN AND ELEVATION
UNIT C & E
SB IL-171 OVER DES PLAINES RIVER VALLEY
FAP 372 - SECTION 2013-038B-R
COOK COUNTY
STATION 58+29.83
STRUCTURE NO. 016-2457

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. SD3 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	378
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $^{7}/_{8}$" dia., holes $^{15}/_{16}$" dia., unless otherwise noted.

2. Calculated weight of structural steel =
   M270 Grade 36: 22,550 lbs.
   M270 Grade 50: 116,880 lbs.

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

4. The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant(PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.

5. Reinforcement bars designated (E) shall be epoxy coated.

6. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

   As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding $^{1}/_{4}$ in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

7. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

8. 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.

9. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$" (0.01). Adjustment shall be made either by grinding the surface or shimming the bearings.

10. Concrete sealer shall be applied to the designated areas of the new bearing seats at Piers 7 and 39.

11. The existing structural steel coating contains lead. The Contractor shall take all precautions to deal with the presence of lead on this project.

12. The Inorganic Zinc Rich Primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel and the steel portions of new elastomeric bearings. Only Inorganic Zinc Rich Primer shall be applied to the new structural steel and the steel portions of the new elastomeric bearings in the shop under this contract and is included in "Furnishing and Erecting Structural Steel" and the elastomeric bearing pay items, respectively. The intermediate and top coats shall be applied under a separate painting contract.

13. Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Concrete Removal	Cu Yd		0.8	0.8
	Removal of Existing Concrete Deck No. 2	Each	1		1
	Protective Shield	Sq Yd	6,087		6,087
	Structure Excavation	Cu Yd		68	68
	Concrete Structures	Cu Yd		54.9	54.9
	Concrete Superstructure	Cu Yd	1,994.2		1,994.2
	Bridge Deck Grooving	Sq Yd	6,171		6,171
	Protective Coat	Sq Yd	7,558		7,558
	Furnishing and Erecting Structural Steel	L Sum	0.17		0.17
	Stud Shear Connectors	Each	12,246		12,246
	Reinforcement Bars, Epoxy Coated	Pound	525,120	8,080	533,200
	Furnishing Steel Piles HP12x53	Foot		195	195
	Driving Piles	Foot		195	195
	Test Pile Steel HP12x53	Each		2	2
	Pile Shoes	Each		12	12
	Name Plates	Each	1		1
	Preformed Joint Strip Seal	Foot	397.5		397.5
	Finger Plate Expansion Joint, 4"	Foot	52.0		52.0
	Elastomeric Bearing Assembly, Type I	Each	4		4
	Elastomeric Bearing Assembly, Type II	Each	9		9
	Anchor Bolts, 3/4"	Each	18		18
	Anchor Bolts, 1"	Each	14		14
	Concrete Sealer	Sq Ft		42	42
*	Epoxy Crack Injection	Foot		21	21
	Jack and Remove Existing Bearings	Each	7		7
	Structural Steel Removal	Pound	27,220		27,220
	Structural Steel Repair	Pound	62,730		62,730
	Cleaning Bridge Seats	Sq Ft		2,056	2,056
*	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft		1,115	1,115
*	Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq Ft		56	56
	Drainage Scuppers, DS-11	Each	17		17
	Temporary Shoring and Cribbing	Each		7	7
	Remove Conduit Attached to Structure	Foot	3,008		3,008

* Quantity includes a contingency (above the amounts shown in the bills of material) to account for uncertainties associated with the condition of the existing substructure and the age of the original inspection (2008-2009). Actual repair areas will be determined by the Engineer in the field.

INDEX OF SHEETS (CONT'D)

For existing bridge plans, see Sheets SDX1 thru SDX26, immediately following Sheet SD83.

STATION 58+29.83
RE-BUILT 20__ BY
STATE OF ILLINOIS
FAP 372-SEC. 2013-038B-R
LOADING HS-20
STRUCTURE NO. 016-2457

SB NAME PLATE

(See Std. 515001)

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

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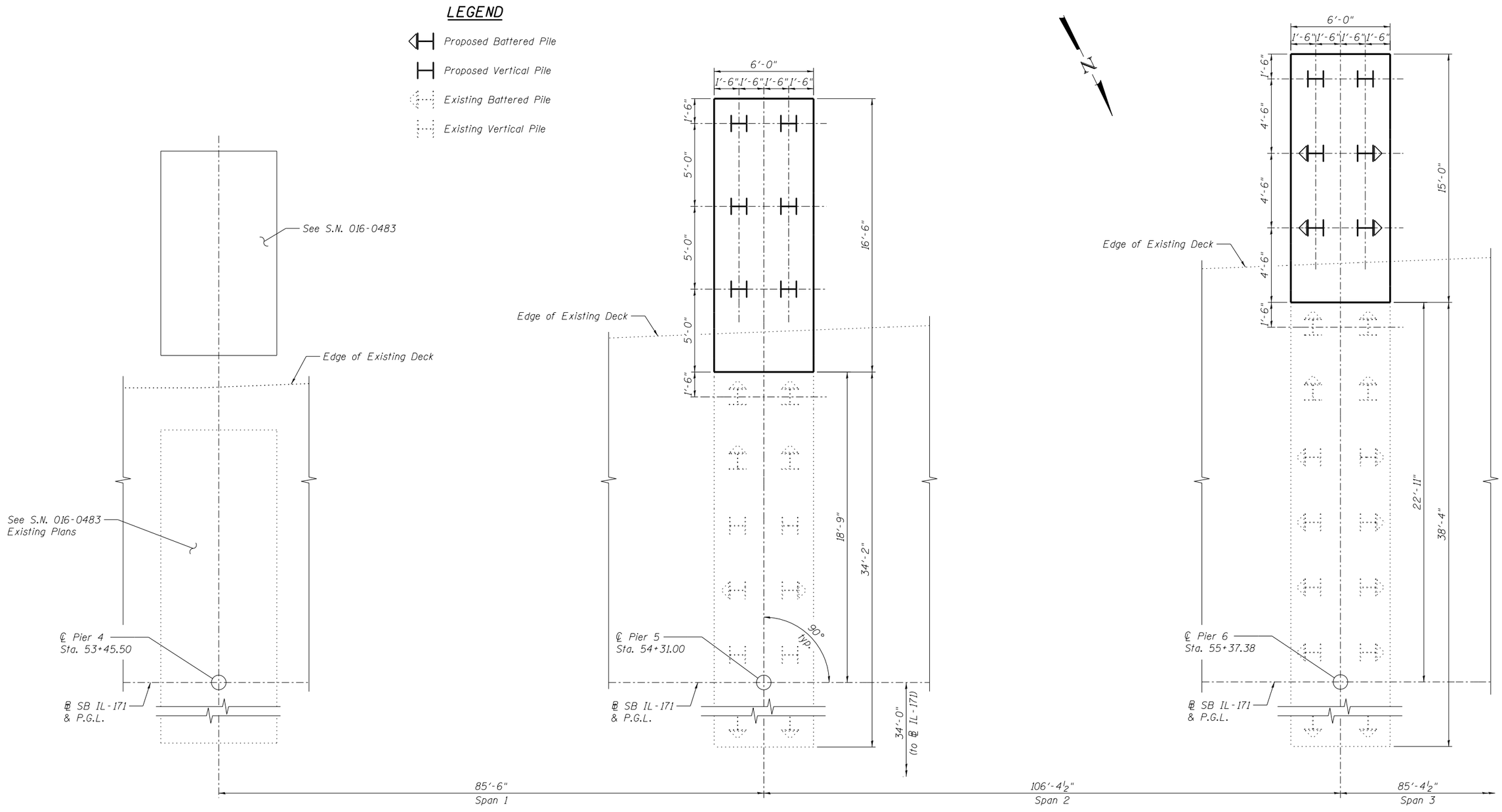
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
STRUCTURE NO. 016-2457
SHEET NO. SD4 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	379
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

LEGEND

- Proposed Battered Pile
- Proposed Vertical Pile
- Existing Battered Pile
- Existing Vertical Pile



FOUNDATION LAYOUT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOUNDATION LAYOUT
STRUCTURE NO. 016-2457
SHEET NO. SD5 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	380
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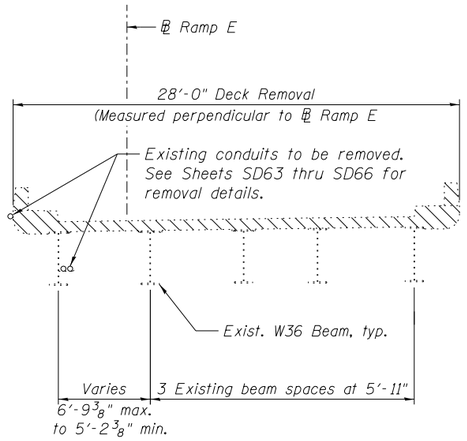
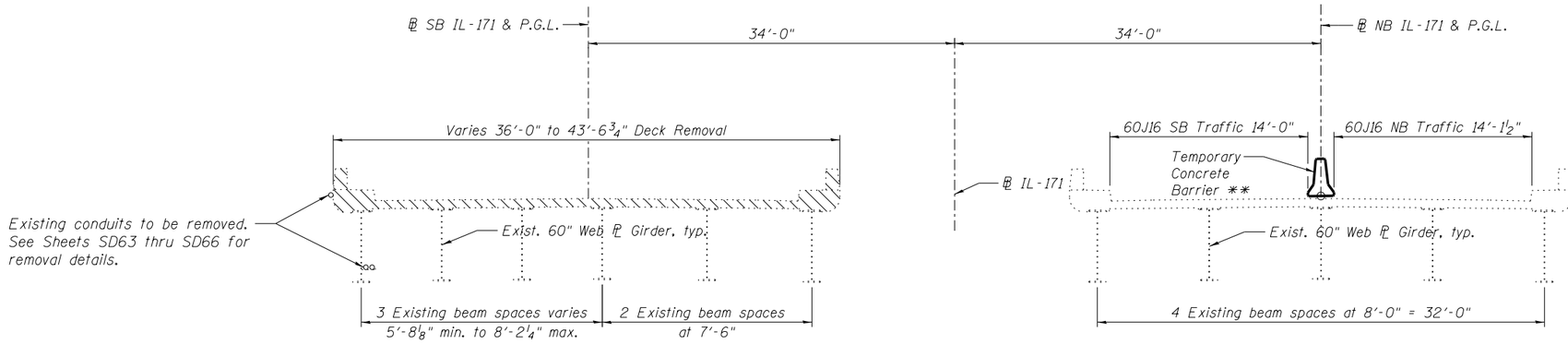
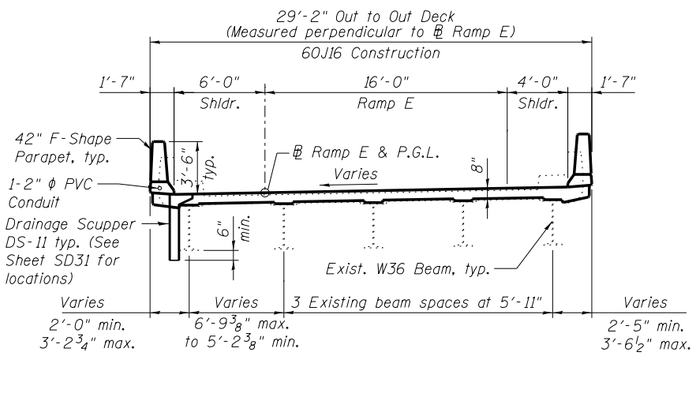
	ILLINOIS FED. AID PROJECT			

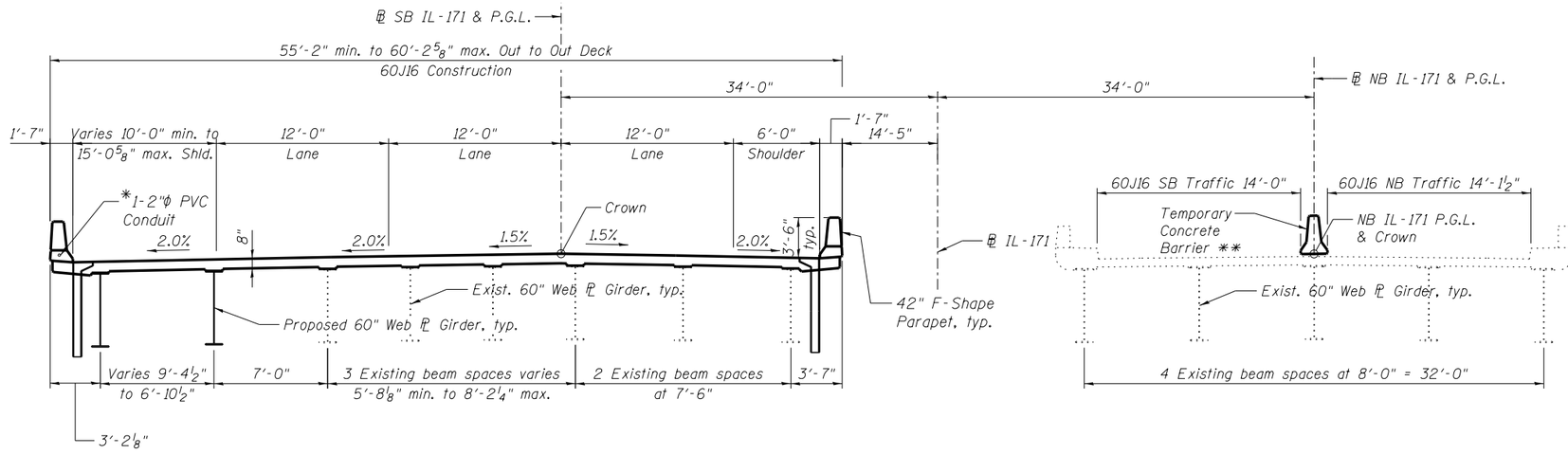




CONTRACT 60J16 REMOVAL

(From Pier 4 to Pier 6;
From Pier 41 to Pier 39)
(Looking North, Upstation ℄ IL-171)





CONTRACT 60J16 CONSTRUCTION

(From Pier 4 to Pier 6;
From Pier 41 to Pier 39)
(Looking North, Upstation ℄ IL-171)

* Conduit not required for all of Span 2.
See Lighting Plans.

LEGEND

Indicates Removal of Existing Concrete Deck No. 2

NOTES:

1. Barrier widths are measured perpendicular from the edge of deck. Overhang widths are measured perpendicular from the fascia girders. Girder spacings are measured perpendicular from the east girder to the west girder at the centerline of bearing. All remaining deck dimensions are measured perpendicular to the IL-171 baseline shown unless noted otherwise.
2. Do not anchor Temp. Concrete Barrier to existing deck.

** See Sheet SD11 and maintenance of traffic sheets for more information

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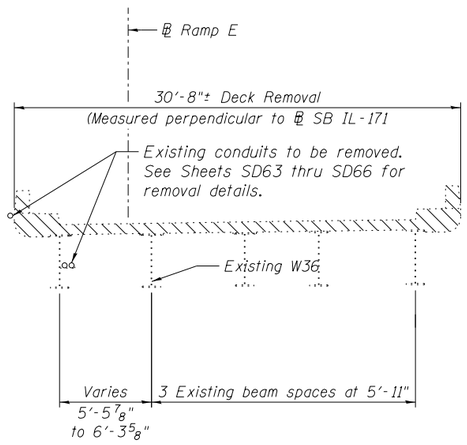
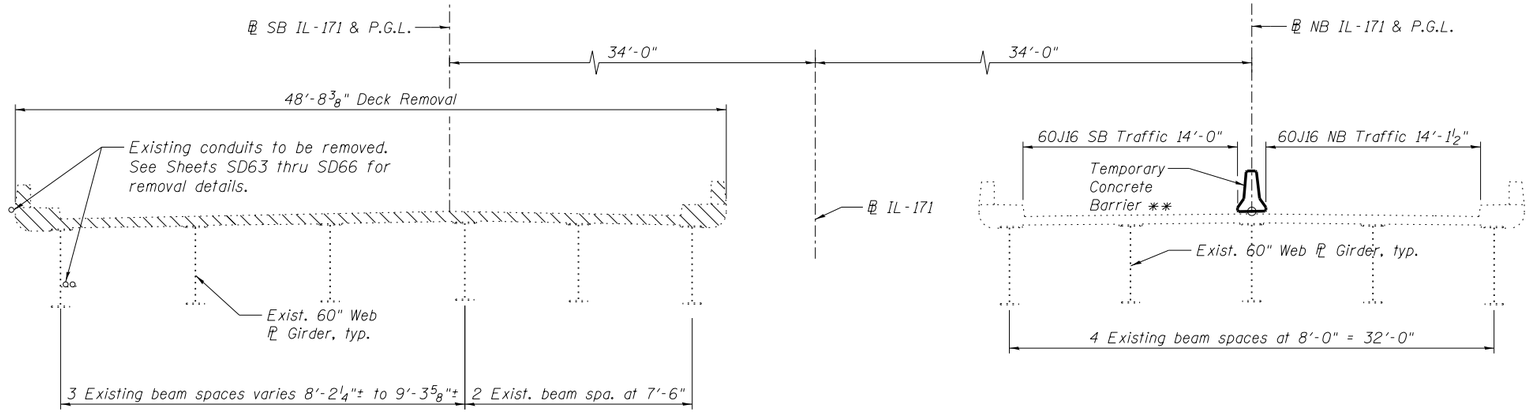
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS SPANS 1 AND 2
STRUCTURE NO. 016-2457
SHEET NO. SD6 OF SD83 SHEETS

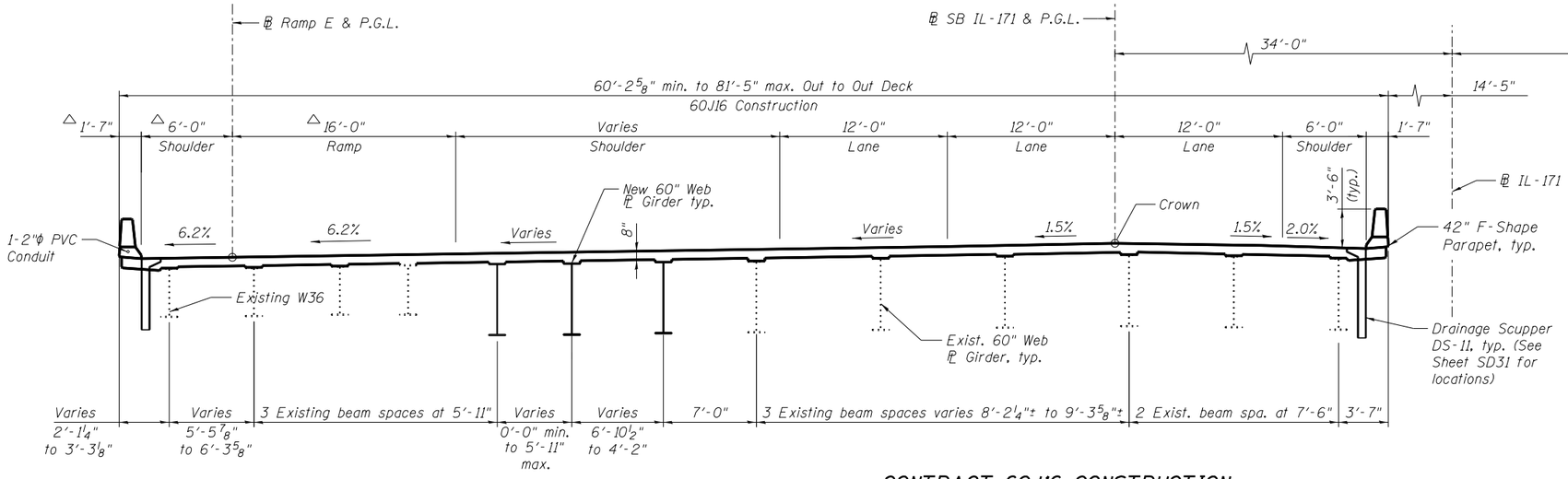
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	381
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		





CONTRACT 60J16 REMOVAL

(From Pier 6 to Pier 7;
From Pier 39 to Pier 7)
(Looking North, Upstation ℄ IL-171)



CONTRACT 60J16 CONSTRUCTION

(From Pier 6 to Pier 7;
From Pier 39 to Pier 7)
(Looking North, Upstation ℄ IL-171)

LEGEND

▨ Indicates Removal of Existing Concrete Deck No. 2

NOTES:

1. Barrier widths are measured perpendicular from the edge of deck. Overhang widths are measured perpendicular from the fascia girders. Girder spacings are measured perpendicular from the east girder to the west girder at the centerline of bearing. All remaining deck dimensions are measured perpendicular to the IL-171 baseline shown unless noted otherwise.
2. Do not anchor Temp. Concrete Barrier to existing deck.

△ Dimensions perpendicular to ℄ Ramp E

** See Sheet SD11 and maintenance of traffic sheets for more information

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS SPAN 3
STRUCTURE NO. 016-2457
SHEET NO. SD7 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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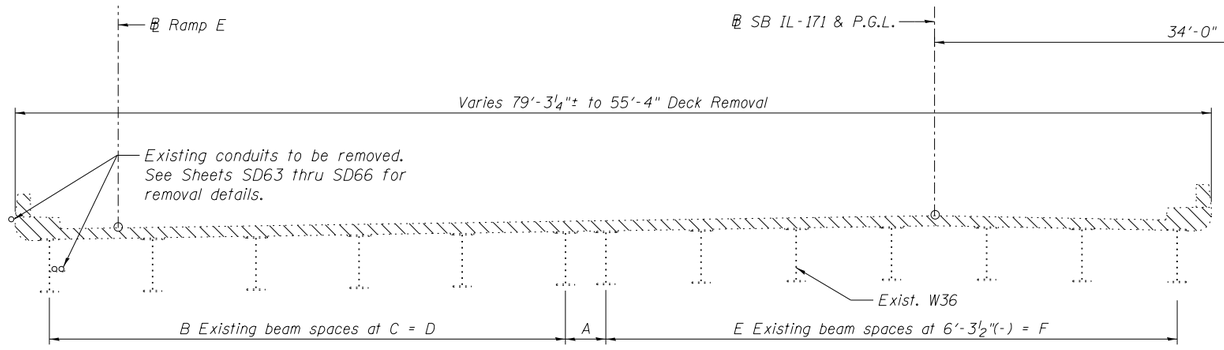
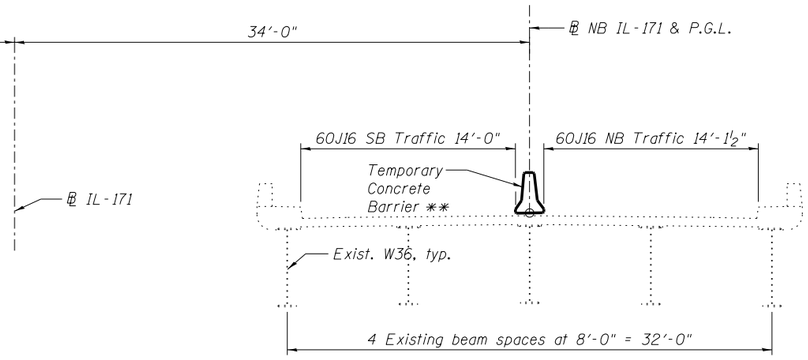
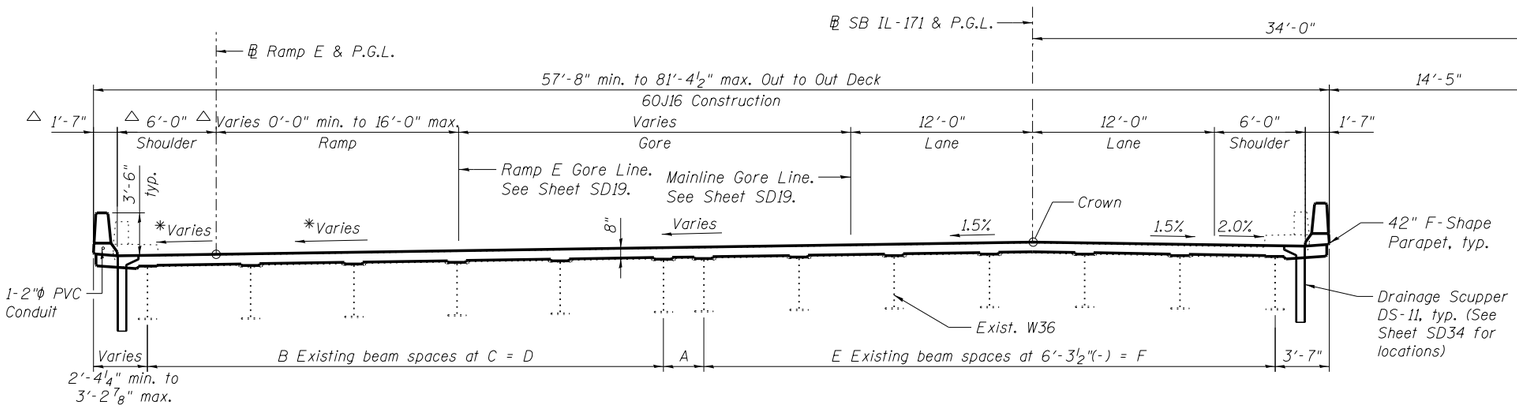
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

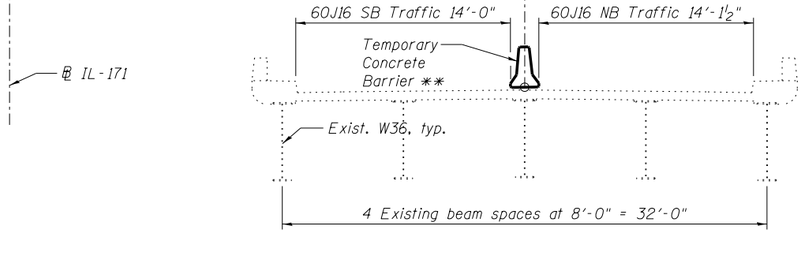




CONTRACT 60J16 REMOVAL

(From Pier 7 to Pier 9)
(Looking North, Upstation ℄ IL-171)





* See S.E. Data Table on Sheet SD30.

CONTRACT 60J16 CONSTRUCTION

(From Pier 7 to Pier 9)
(Looking North, Upstation ℄ IL-171)

SOUTHBOUND CROSS SECTION

	A	B	C	D	E	F
Pier 7W	2'-8"	5	6'-9¾"	34'-0¾"	6	37'-8⅝"
Pier 8E	2'-8"	5	4'-0¾"(-)	20'-3½"(-)	6	37'-8⅝"
Pier 8W	0'-0"	3	7'-6⅞"	22'-8⅝"	6	37'-8⅝"
Pier 9E	0'-0"	3	4'-4¾"	13'-2¼"	6	37'-8⅝"

△ Dimensions perpendicular to ℄ Ramp E

LEGEND

Indicates Removal of Existing Concrete Deck No. 2

NOTES:

1. Barrier widths are measured perpendicular from the edge of deck. Overhang widths are measured perpendicular from the fascia girders. Girder spacings are measured perpendicular from the east girder to the west girder at the centerline of bearing. All remaining deck dimensions are measured perpendicular to the IL-171 baseline shown unless noted otherwise.
2. Do not anchor Temp. Concrete Barrier to existing deck.

** See Sheet SD11 and maintenance of traffic sheets for more information

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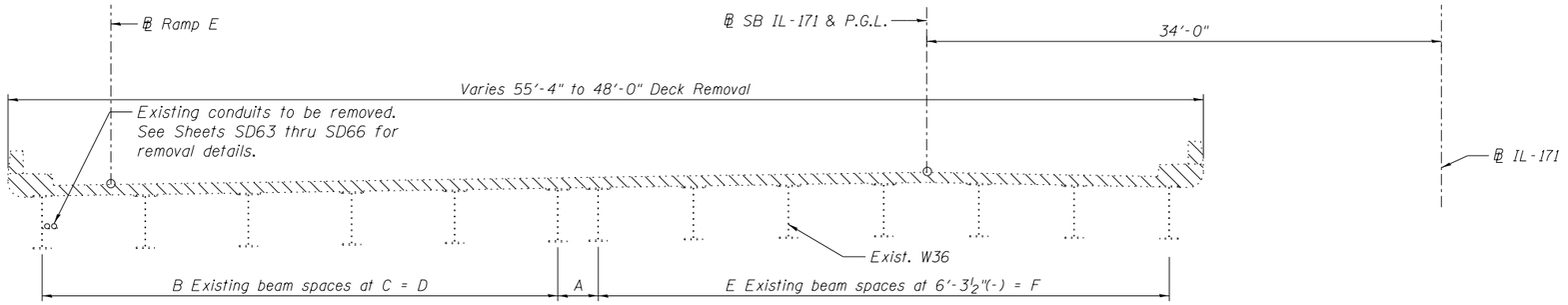
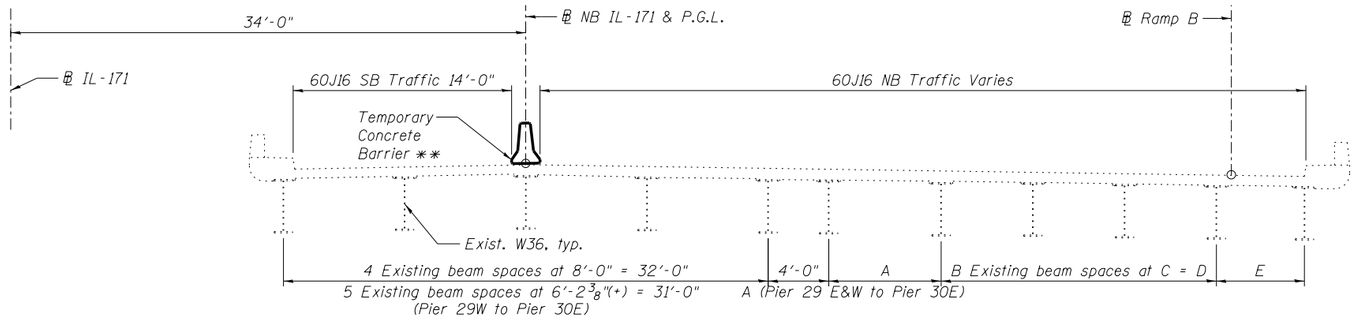
STAGE CONSTRUCTION DETAILS SPANS 4 AND 5
STRUCTURE NO. 016-2457
SHEET NO. SD8 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	383
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		



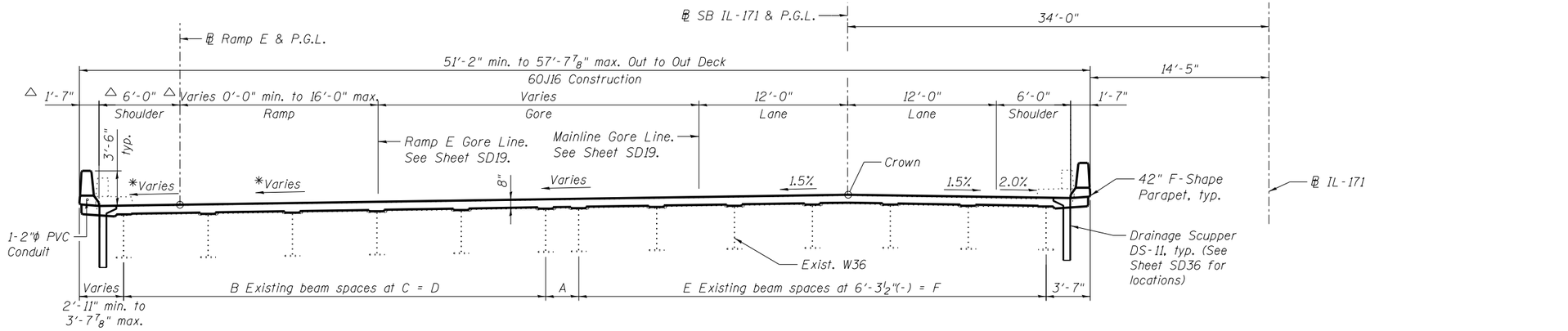


SOUTHBOUND CROSS SECTION

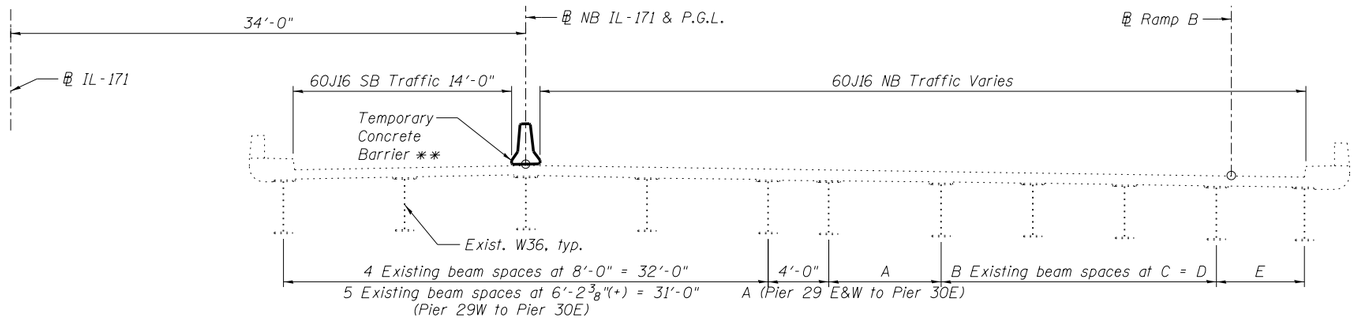
	A	B	C	D	E	F
Pier 9W	0'-0"	3	6'-5 1/4"	19'-3 3/4"	5	31'-5 1/4"(-)
Pier 10E	0'-0"	3	4'-7"(+)	13'-9 1/4"(-)	5	31'-5 1/4"(-)
Pier 10W	0'-0"	2	6'-10 1/4"(-)	13'-8 3/8"	5	31'-5 1/4"(-)
Pier 11E	0'-0"	0	0'-0"	0'-0"	7	44'-0"(+)

CONTRACT 60J16 REMOVAL

(From Pier 9 to Pier 11)
(Looking North, Upstation ℄ IL-171)



*See S.E. Data Table on Sheet SD30.



LEGEND

Indicates Removal of Existing Concrete Deck No. 2

CONTRACT 60J16 CONSTRUCTION

(From Pier 9 to Pier 11)
(Looking North, Upstation ℄ IL-171)

NOTES:

1. Barrier widths are measured perpendicular from the edge of deck. Overhang widths are measured perpendicular from the fascia girders. Girder spacings are measured perpendicular from the east girder to the west girder at the centerline of bearing. All remaining deck dimensions are measured perpendicular to the IL-171 baseline shown unless noted otherwise.

2. Do not anchor Temp. Concrete Barrier to existing deck.

△ Dimensions perpendicular to ℄ Ramp E

** See Sheet SD11 and maintenance of traffic sheets for more information

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STAGE CONSTRUCTION DETAILS SPANS 6 AND 7
STRUCTURE NO. 016-2457
SHEET NO. SD9 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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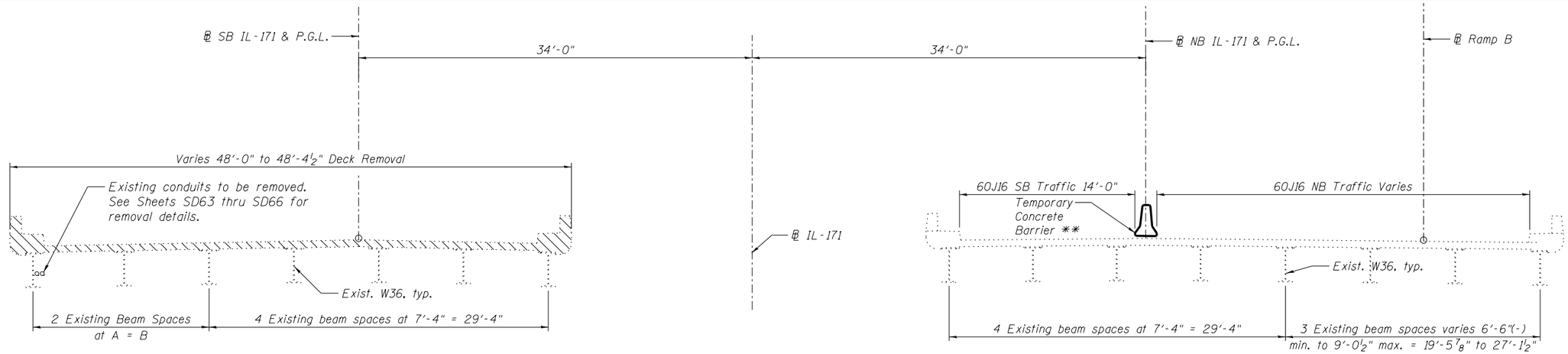
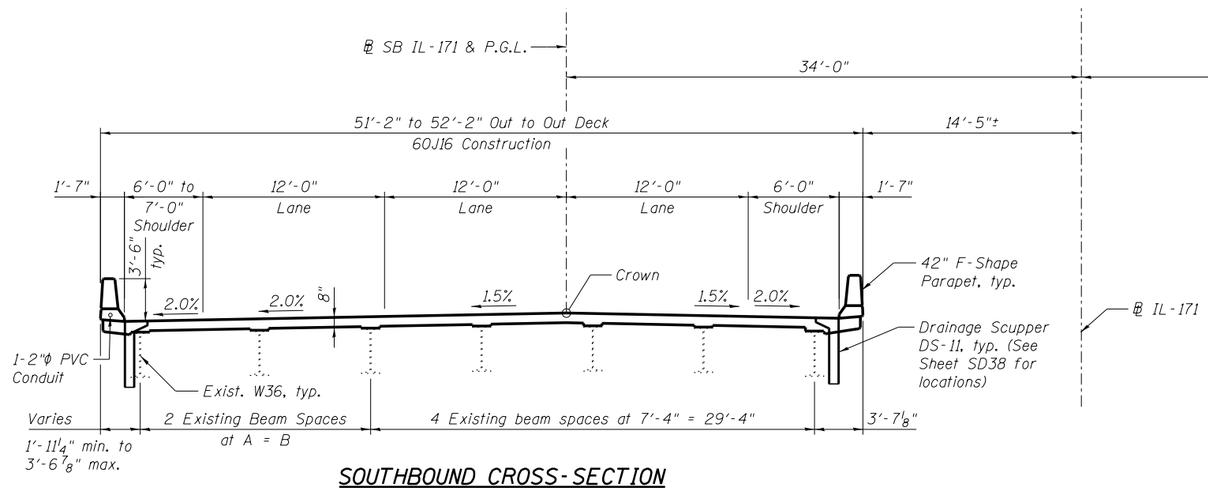
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

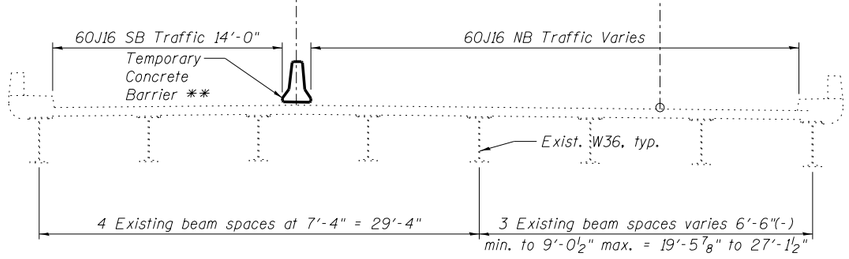


CONTRACT 60J16 REMOVAL

(From Pier 11 to Pier 16)
(Looking North, Upstation ℄ IL-171)



SOUTHBOUND CROSS-SECTION



SOUTHBOUND CROSS-SECTION

	A	B
Pier 11	7'-4"	14'-8"
Existing Field Splice #4	7'-4"	14'-8"
Pier 16	8'-7⅝"(+)	17'-3¼"(+)

CONTRACT 60J16 CONSTRUCTION

(From Pier 11 to Pier 16)
(Looking North, Upstation ℄ IL-171)

LEGEND

▨ Indicates Removal of Existing Concrete Deck No. 2

NOTES:

1. Barrier widths are measured perpendicular from the edge of deck. Overhang widths are measured perpendicular from the fascia girders. Girder spacings are measured perpendicular from the east girder to the west girder at the centerline of bearing. All remaining deck dimensions are measured perpendicular to the IL-171 baseline shown unless noted otherwise.
2. Do not anchor Temp. Concrete Barrier to existing deck.

△ Dimension perpendicular to ℄ Ramp B

** See Sheet SD11 and maintenance of traffic sheets for more information

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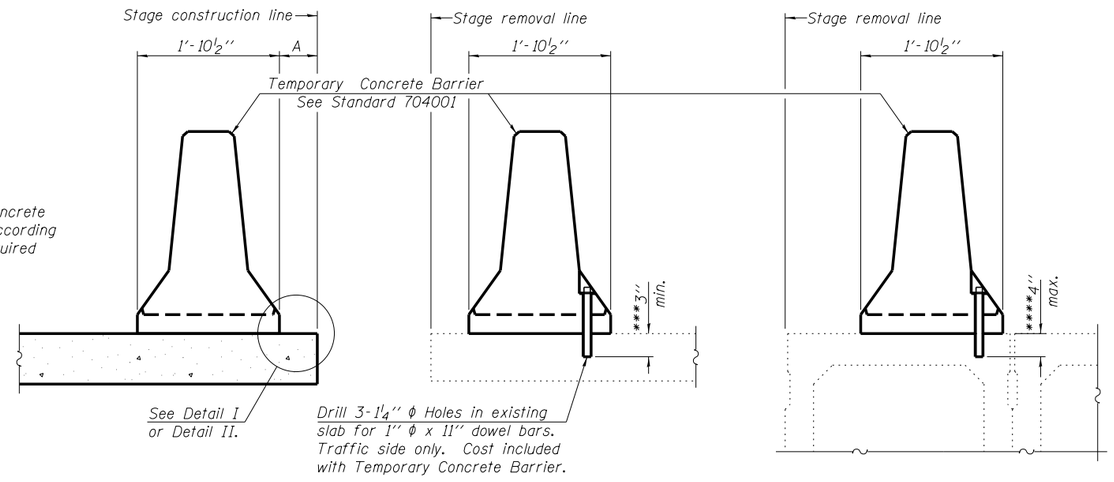
STAGE CONSTRUCTION DETAILS SPANS 8 THRU 12
STRUCTURE NO. 016-2457
SHEET NO. SD10 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	385
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7' 'x "W" steel PL to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel PL to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

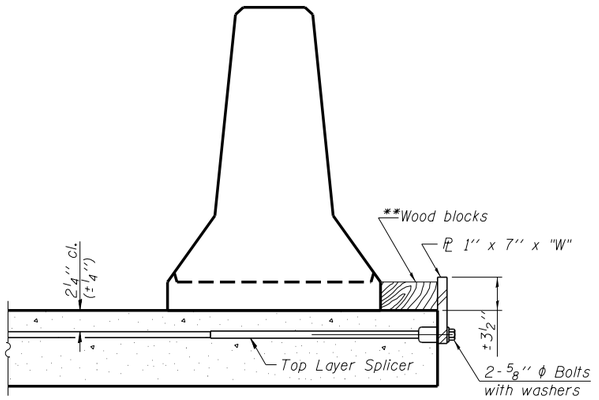
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

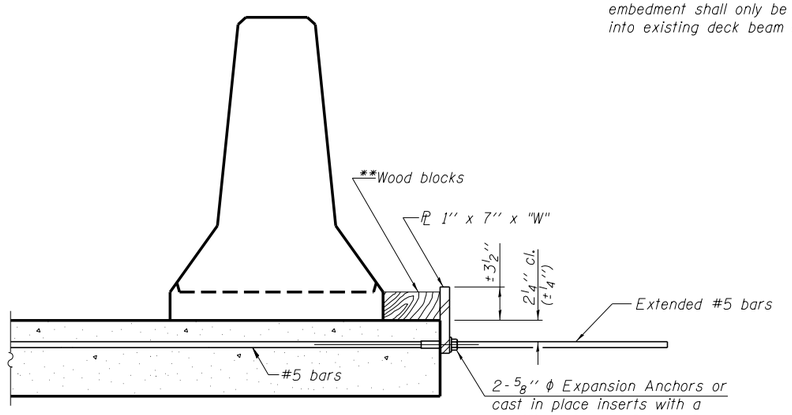
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

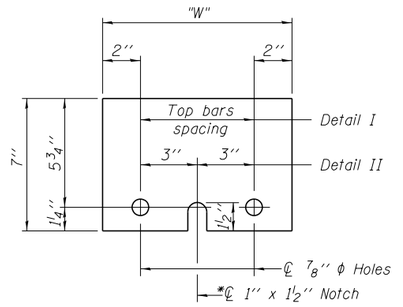
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x "W"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

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R-27

7-1-10

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TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-2457
SHEET NO. SD11 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	386
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

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SCREED SPACING
(Ramp E)

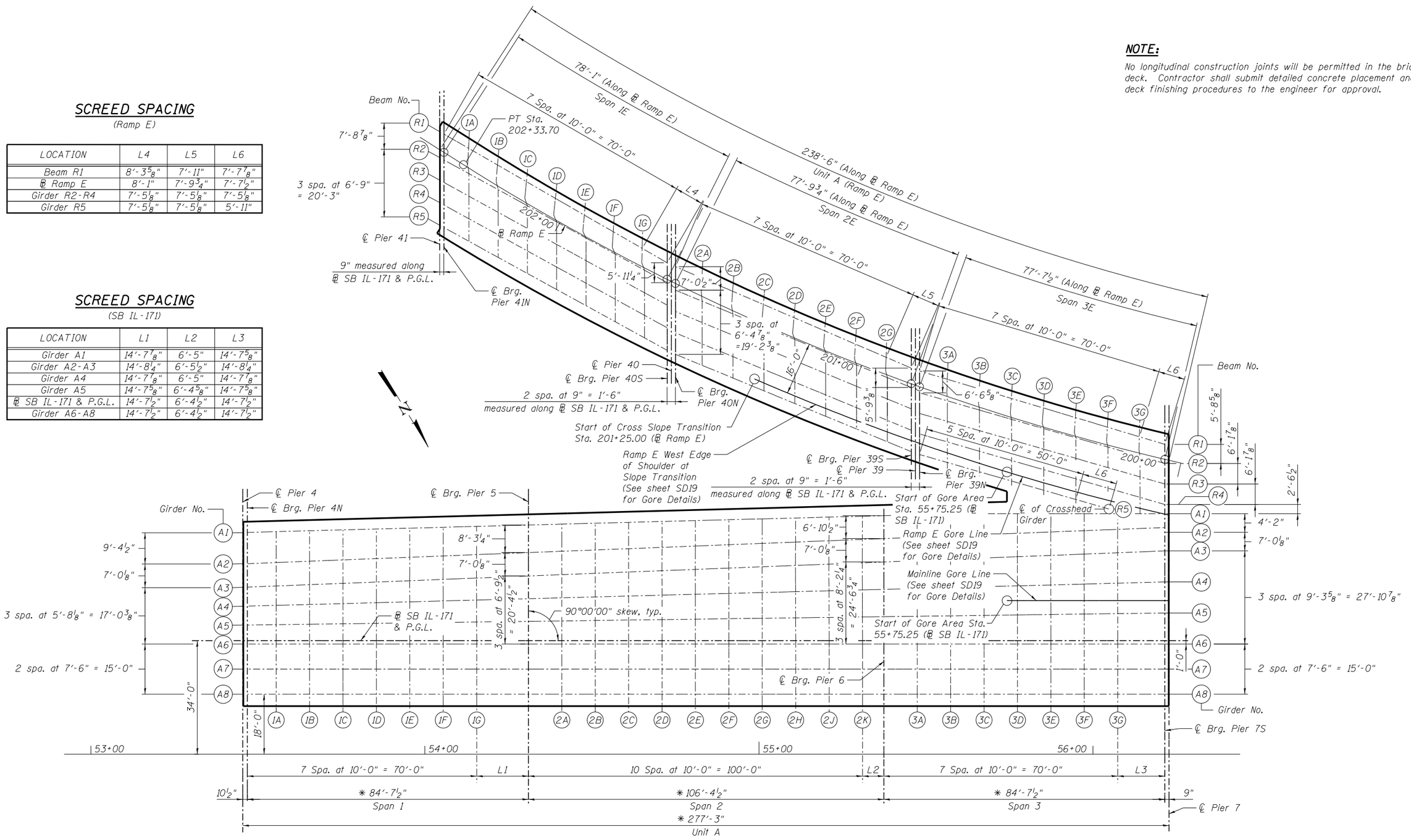
LOCATION	L4	L5	L6
Beam R1	8'-3 5/8"	7'-11"	7'-7 7/8"
℄ Ramp E	8'-1"	7'-9 3/4"	7'-7 1/2"
Girder R2-R4	7'-5 1/8"	7'-5 1/8"	7'-5 1/8"
Girder R5	7'-5 1/8"	7'-5 1/8"	5'-11"

SCREED SPACING
(SB IL-171)

LOCATION	L1	L2	L3
Girder A1	14'-7 7/8"	6'-5"	14'-7 5/8"
Girder A2-A3	14'-8 1/4"	6'-5 1/2"	14'-8 1/4"
Girder A4	14'-7 7/8"	6'-5"	14'-7 7/8"
Girder A5	14'-7 5/8"	6'-4 5/8"	14'-7 5/8"
℄ SB IL-171 & P.G.L.	14'-7 1/2"	6'-4 1/2"	14'-7 1/2"
Girder A6-A8	14'-7 1/2"	6'-4 1/2"	14'-7 1/2"

NOTE:

No longitudinal construction joints will be permitted in the bridge deck. Contractor shall submit detailed concrete placement and deck finishing procedures to the engineer for approval.



PLAN - UNIT A

* Measured along ℄ SB IL-171 & P.G.L.

NOTES:

1. All screed spacing is measured along girder/beam ℄.
2. All girder/beam spacing is measured perpendicular to ℄ IL-171.

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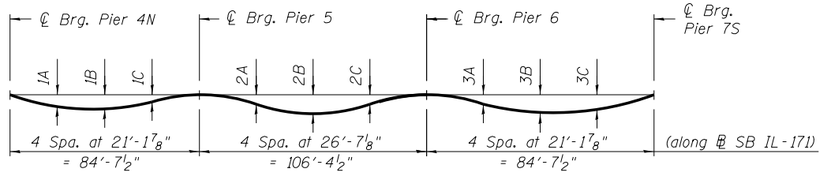
TOP OF SLAB ELEVATIONS PLAN UNIT A MAINLINE & RAMP E
STRUCTURE NO. 016-2457
SHEET NO. SD12 OF SD83 SHEETS

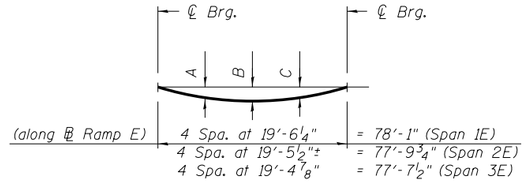
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	387
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



DEAD LOAD DEFLECTION DIAGRAM - MAINLINE SPANS 1-3

Girder	1A	1B	1C	2A	2B	2C	3A	3B	3C
A1	1/2"	1/2"	1/4"	3/8"	1/2"	1/4"	1/4"	1/2"	1/4"
A2	1/2"	1/2"	1/4"	3/8"	3/4"	3/8"	1/4"	1/2"	1/4"
A3-A8	3/8"	1/2"	1/4"	3/8"	5/8"	3/8"	1/4"	1/2"	3/8"

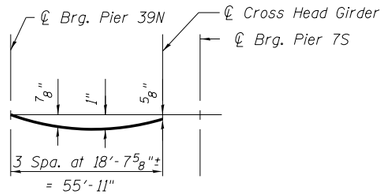
(Includes weight of concrete only.)



DEAD LOAD DEFLECTION DIAGRAM - RAMP SPANS 1E - 3E

Beam	Span	A	B	C
R1	1E-3E	1 3/8"	1 7/8"	1 3/8"
R2-R4	1E-2E	1 1/8"	1 5/8"	1 1/8"
R5	1E-2E	1 5/8"	2 1/4"	1 5/8"
R2-R4	3E	1 1/8"	1 5/8"	1 1/8"

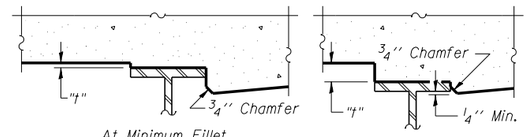
(Includes weight of concrete only.)



DEAD LOAD DEFLECTION DIAGRAM - SPAN 3E, BEAM R5

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on SD13 thru SD18.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown herein. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown herein, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

GIRDER A1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	-32.42	621.35	621.35
CL. BRG. PIER 4N	53+46.38	-32.42	621.36	621.36
1A	53+56.37	-32.68	621.43	621.45
1B	53+66.37	-32.94	621.51	621.54
1C	53+76.36	-33.21	621.58	621.63
1D	53+86.36	-33.47	621.66	621.71
1E	53+96.36	-33.74	621.74	621.78
1F	54+06.35	-34.00	621.82	621.85
1G	54+16.35	-34.26	621.91	621.92
CL. BRG. PIER 5	54+31.00	-34.65	622.03	622.03
2A	54+41.00	-34.92	622.12	622.12
2B	54+50.99	-35.18	622.21	622.23
2C	54+60.99	-35.44	622.30	622.33
2D	54+70.99	-35.71	622.39	622.43
2E	54+80.98	-35.97	622.48	622.53
2F	54+90.98	-36.23	622.58	622.62
2G	55+00.98	-36.50	622.67	622.71
2H	55+10.97	-36.76	622.77	622.80
2J	55+20.97	-37.03	622.87	622.88
2K	55+30.97	-37.29	622.97	622.97
CL. BRG. PIER 6	55+37.38	-37.46	623.04	623.04
3A	55+47.37	-37.72	623.14	623.15
3B	55+57.37	-37.99	623.25	623.27
3C	55+67.36	-38.08	623.36	623.40
3D	55+77.36	-38.08	623.44	623.49
3E	55+87.36	-38.08	623.58	623.62
3F	55+97.35	-38.08	623.72	623.75
3G	56+07.35	-38.08	623.87	623.88
CL. BRG. PIER 7S	56+22.00	-38.08	624.08	624.08
CL. PIER 7	56+22.75	-38.08	624.08	624.08

GIRDER A2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	-23.04	621.54	621.54
CL. BRG. PIER 4N	53+46.38	-23.04	621.55	621.55
1A	53+56.37	-23.44	621.62	621.64
1B	53+66.36	-23.83	621.69	621.72
1C	53+76.35	-24.22	621.76	621.81
1D	53+86.34	-24.62	621.84	621.88
1E	53+96.34	-25.01	621.92	621.95
1F	54+06.33	-25.41	622.00	622.02
1G	54+16.32	-25.80	622.08	622.09
CL. BRG. PIER 5	54+31.00	-26.38	622.20	622.20
2A	54+40.99	-26.78	622.28	622.29
2B	54+50.98	-27.17	622.37	622.39
2C	54+60.98	-27.57	622.46	622.49
2D	54+70.97	-27.96	622.54	622.60
2E	54+80.96	-28.35	622.63	622.69
2F	54+90.95	-28.75	622.73	622.78
2G	55+00.95	-29.14	622.82	622.87
2H	55+10.94	-29.54	622.92	622.95
2J	55+20.93	-29.93	623.01	623.03
2K	55+30.92	-30.33	623.11	623.12
CL. BRG. PIER 6	55+37.38	-30.58	623.18	623.18
3A	55+47.37	-30.98	623.28	623.28
3B	55+57.36	-31.37	623.38	623.40
3C	55+67.35	-31.76	623.48	623.52
3D	55+77.34	-32.16	623.56	623.61
3E	55+87.34	-32.55	623.69	623.73
3F	55+97.33	-32.95	623.82	623.85
3G	56+07.32	-33.34	623.96	623.97
CL. BRG. PIER 7S	56+22.00	-33.92	624.16	624.16
CL. PIER 7	56+22.75	-33.92	624.17	624.17

Note:
Offset measured perpendicular to ℄ SB IL-171

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT A (1 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD13 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	388
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

8/6/2014 3:38:47 PM Y:\chicago\10000S\10093\Eng_Docs_Phase_II\SN_016_2456_2457_1st_Ave_over_Des_Plaines_River_Valley\Final\2457 Final\0162457_60J16_013_TOS_Elev_Unit_A_1_of_6.dgn

GIRDER A3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	-16.03	621.68	621.68
CL. BRG. PIER 4N	53+46.38	-16.03	621.69	621.69
1A	53+56.37	-16.43	621.76	621.78
1B	53+66.36	-16.82	621.83	621.86
1C	53+76.35	-17.21	621.90	621.95
1D	53+86.34	-17.61	621.98	622.02
1E	53+96.34	-18.00	622.06	622.09
1F	54+06.33	-18.40	622.14	622.16
1G	54+16.32	-18.79	622.22	622.23
CL. BRG. PIER 5	54+31.00	-19.37	622.34	622.34
2A	54+40.99	-19.77	622.42	622.43
2B	54+50.98	-20.16	622.51	622.53
2C	54+60.98	-20.56	622.60	622.63
2D	54+70.97	-20.95	622.68	622.73
2E	54+80.96	-21.34	622.78	622.83
2F	54+90.95	-21.74	622.87	622.92
2G	55+00.95	-22.13	622.96	623.00
2H	55+10.94	-22.53	623.06	623.09
2J	55+20.93	-22.92	623.15	623.17
2K	55+30.92	-23.32	623.25	623.25
CL. BRG. PIER 6	55+37.38	-23.57	623.32	623.32
3A	55+47.37	-23.97	623.42	623.42
3B	55+57.36	-24.36	623.52	623.53
3C	55+67.35	-24.75	623.62	623.65
3D	55+77.34	-25.15	623.71	623.75
3E	55+87.34	-25.54	623.83	623.87
3F	55+97.33	-25.94	623.96	623.99
3G	56+07.32	-26.33	624.08	624.11
CL. BRG. PIER 7S	56+22.00	-26.91	624.27	624.27
CL. PIER 7	56+22.75	-26.91	624.29	624.29

MAINLINE GORE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Start	55+75.25	-12.00	623.97	624.00
3D	55+77.38	-12.00	623.99	624.03
3E	55+87.38	-12.00	624.11	624.15
3F	55+97.38	-12.00	624.22	624.26
3G	56+07.38	-12.00	624.34	624.37
CL. BRG. PIER 7S	56+22.00	-12.00	624.52	624.52
CL. PIER 7	56+22.75	-12.00	624.53	624.53

GIRDER A4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	-10.35	621.78	621.78
CL. BRG. PIER 4N	53+46.38	-10.35	621.79	621.79
1A	53+56.37	-10.62	621.87	621.89
1B	53+66.37	-10.88	621.94	621.98
1C	53+76.36	-11.14	622.02	622.06
1D	53+86.36	-11.41	622.10	622.14
1E	53+96.36	-11.67	622.18	622.22
1F	54+06.35	-11.93	622.27	622.29
1G	54+16.35	-12.19	622.35	622.36
CL. BRG. PIER 5	54+31.00	-12.58	622.47	622.47
2A	54+41.00	-12.84	622.56	622.57
2B	54+50.99	-13.11	622.65	622.67
2C	54+60.99	-13.37	622.74	622.78
2D	54+70.99	-13.63	622.83	622.88
2E	54+80.98	-13.89	622.92	622.98
2F	54+90.98	-14.16	623.02	623.07
2G	55+00.98	-14.42	623.12	623.16
2H	55+10.97	-14.68	623.21	623.24
2J	55+20.97	-14.95	623.31	623.33
2K	55+30.97	-15.21	623.41	623.42
CL. BRG. PIER 6	55+37.38	-15.38	623.48	623.48
3A	55+47.37	-15.64	623.58	623.59
3B	55+57.37	-15.90	623.69	623.70
3C	55+67.36	-16.17	623.79	623.82
3D	55+77.36	-16.43	623.90	623.94
3E	55+87.36	-16.69	624.01	624.05
3F	55+97.35	-16.96	624.13	624.17
3G	56+07.35	-17.22	624.25	624.27
CL. BRG. PIER 7S	56+22.00	-17.60	624.43	624.43
CL. PIER 7	56+22.75	-17.60	624.44	624.44

Note:
Offset measured perpendicular to ℄ SB IL-171

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Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME = 0162457_60J16_014_TOS_Elev_Unit_A_2_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT A (2 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD14 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	389
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

GIRDER A5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	-4.68	621.87	621.87
CL. BRG. PIER 4N	53+46.38	-4.68	621.88	621.88
1A	53+56.37	-4.81	621.95	621.97
1B	53+66.37	-4.94	622.03	622.07
1C	53+76.37	-5.07	622.11	622.15
1D	53+86.37	-5.20	622.19	622.24
1E	53+96.37	-5.33	622.28	622.31
1F	54+06.37	-5.47	622.36	622.38
1G	54+16.37	-5.60	622.45	622.46
CL. BRG. PIER 5	54+31.00	-5.79	622.58	622.58
2A	54+41.00	-5.92	622.67	622.68
2B	54+51.00	-6.05	622.76	622.78
2C	54+61.00	-6.18	622.85	622.89
2D	54+71.00	-6.32	622.95	623.00
2E	54+81.00	-6.45	623.05	623.10
2F	54+90.99	-6.58	623.14	623.20
2G	55+00.99	-6.71	623.24	623.29
2H	55+10.99	-6.84	623.34	623.37
2J	55+20.99	-6.97	623.45	623.46
2K	55+30.99	-7.11	623.55	623.55
CL. BRG. PIER 6	55+37.38	-7.19	623.62	623.62
3A	55+47.37	-7.32	623.73	623.73
3B	55+57.37	-7.45	623.83	623.85
3C	55+67.37	-7.58	623.94	623.97
3D	55+77.37	-7.72	624.06	624.09
3E	55+87.37	-7.85	624.17	624.21
3F	55+97.37	-7.98	624.28	624.32
3G	56+07.37	-8.11	624.40	624.43
CL. BRG. PIER 7S	56+22.00	-8.30	624.57	624.57
CL. PIER 7	56+22.75	-8.30	624.58	624.58

℄ SB IL-171 & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	0.00	621.94	621.94
CL. BRG. PIER 4N	53+46.38	0.00	621.95	621.95
1A	53+56.38	0.00	622.03	622.04
1B	53+66.38	0.00	622.11	622.14
1C	53+76.38	0.00	622.19	622.23
1D	53+86.38	0.00	622.27	622.31
1E	53+96.38	0.00	622.36	622.39
1F	54+06.38	0.00	622.44	622.47
1G	54+16.38	0.00	622.53	622.54
CL. BRG. PIER 5	54+31.00	0.00	622.67	622.67
2A	54+41.00	0.00	622.76	622.76
2B	54+51.00	0.00	622.85	622.87
2C	54+61.00	0.00	622.95	622.98
2D	54+71.00	0.00	623.04	623.09
2E	54+81.00	0.00	623.14	623.20
2F	54+91.00	0.00	623.24	623.29
2G	55+01.00	0.00	623.34	623.39
2H	55+11.00	0.00	623.45	623.48
2J	55+21.00	0.00	623.55	623.57
2K	55+31.00	0.00	623.66	623.66
CL. BRG. PIER 6	55+37.38	0.00	623.73	623.73
3A	55+47.38	0.00	623.84	623.84
3B	55+57.38	0.00	623.95	623.96
3C	55+67.38	0.00	624.06	624.09
3D	55+77.38	0.00	624.17	624.21
3E	55+87.38	0.00	624.29	624.33
3F	55+97.38	0.00	624.40	624.44
3G	56+07.38	0.00	624.52	624.55
CL. BRG. PIER 7S	56+22.00	0.00	624.70	624.70
CL. PIER 7	56+22.75	0.00	624.71	624.71

GIRDER A6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	1.00	621.92	621.92
CL. BRG. PIER 4N	53+46.38	1.00	621.93	621.93
1A	53+56.38	1.00	622.01	622.03
1B	53+66.38	1.00	622.09	622.13
1C	53+76.38	1.00	622.17	622.22
1D	53+86.38	1.00	622.26	622.30
1E	53+96.38	1.00	622.34	622.38
1F	54+06.38	1.00	622.43	622.45
1G	54+16.38	1.00	622.52	622.53
CL. BRG. PIER 5	54+31.00	1.00	622.65	622.65
2A	54+41.00	1.00	622.74	622.75
2B	54+51.00	1.00	622.84	622.86
2C	54+61.00	1.00	622.93	622.97
2D	54+71.00	1.00	623.03	623.08
2E	54+81.00	1.00	623.13	623.18
2F	54+91.00	1.00	623.23	623.28
2G	55+01.00	1.00	623.33	623.37
2H	55+11.00	1.00	623.43	623.46
2J	55+21.00	1.00	623.54	623.55
2K	55+31.00	1.00	623.64	623.65
CL. BRG. PIER 6	55+37.38	1.00	623.71	623.71
3A	55+47.38	1.00	623.82	623.83
3B	55+57.38	1.00	623.93	623.95
3C	55+67.38	1.00	624.04	624.07
3D	55+77.38	1.00	624.16	624.19
3E	55+87.38	1.00	624.27	624.31
3F	55+97.38	1.00	624.39	624.43
3G	56+07.38	1.00	624.51	624.53
CL. BRG. PIER 7S	56+22.00	1.00	624.68	624.68
CL. PIER 7	56+22.75	1.00	624.69	624.69

Note:
Offset measured perpendicular to ℄ SB IL-171

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FILE NAME = 0162457_60J16_015_TOS_Elev_Unit_A_3_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT A (3 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD15 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	390
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

GIRDER A7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	8.50	621.81	621.81
CL. BRG. PIER 4N	53+46.38	8.50	621.82	621.82
1A	53+56.38	8.50	621.90	621.92
1B	53+66.38	8.50	621.98	622.01
1C	53+76.38	8.50	622.06	622.10
1D	53+86.38	8.50	622.14	622.19
1E	53+96.38	8.50	622.23	622.26
1F	54+06.38	8.50	622.32	622.34
1G	54+16.38	8.50	622.41	622.41
CL. BRG. PIER 5	54+31.00	8.50	622.54	622.54
2A	54+41.00	8.50	622.63	622.64
2B	54+51.00	8.50	622.72	622.74
2C	54+61.00	8.50	622.82	622.86
2D	54+71.00	8.50	622.92	622.96
2E	54+81.00	8.50	623.01	623.07
2F	54+91.00	8.50	623.11	623.17
2G	55+01.00	8.50	623.22	623.26
2H	55+11.00	8.50	623.32	623.35
2J	55+21.00	8.50	623.42	623.44
2K	55+31.00	8.50	623.53	623.53
CL. BRG. PIER 6	55+37.38	8.50	623.60	623.60
3A	55+47.38	8.50	623.71	623.71
3B	55+57.38	8.50	623.82	623.83
3C	55+67.38	8.50	623.93	623.96
3D	55+77.38	8.50	624.04	624.08
3E	55+87.38	8.50	624.16	624.20
3F	55+97.38	8.50	624.28	624.31
3G	56+07.38	8.50	624.39	624.42
CL. BRG. PIER 7S	56+22.00	8.50	624.57	624.57
CL. PIER 7	56+22.75	8.50	624.58	624.58

GIRDER A8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 4	53+45.50	16.00	621.68	621.68
CL. BRG. PIER 4N	53+46.38	16.00	621.69	621.69
1A	53+56.38	16.00	621.77	621.78
1B	53+66.38	16.00	621.85	621.88
1C	53+76.38	16.00	621.93	621.97
1D	53+86.38	16.00	622.01	622.05
1E	53+96.38	16.00	622.10	622.13
1F	54+06.38	16.00	622.18	622.21
1G	54+16.38	16.00	622.27	622.28
CL. BRG. PIER 5	54+31.00	16.00	622.41	622.41
2A	54+41.00	16.00	622.50	622.50
2B	54+51.00	16.00	622.59	622.61
2C	54+61.00	16.00	622.69	622.72
2D	54+71.00	16.00	622.78	622.83
2E	54+81.00	16.00	622.88	622.94
2F	54+91.00	16.00	622.98	623.03
2G	55+01.00	16.00	623.08	623.13
2H	55+11.00	16.00	623.19	623.22
2J	55+21.00	16.00	623.29	623.31
2K	55+31.00	16.00	623.40	623.40
CL. BRG. PIER 6	55+37.38	16.00	623.47	623.47
3A	55+47.38	16.00	623.58	623.58
3B	55+57.38	16.00	623.69	623.70
3C	55+67.38	16.00	623.80	623.83
3D	55+77.38	16.00	623.91	623.95
3E	55+87.38	16.00	624.03	624.07
3F	55+97.38	16.00	624.14	624.18
3G	56+07.38	16.00	624.26	624.29
CL. BRG. PIER 7S	56+22.00	16.00	624.44	624.44
CL. PIER 7	56+22.75	16.00	624.45	624.45

BEAM R1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 41	-	-	-	-
CL. BRG. PIER 41N	202+44.11	4.60	618.08	618.08
1A	202+34.12	5.00	618.21	618.27
1B	202+24.05	5.34	618.35	618.46
1C	202+13.97	5.53	618.50	618.65
1D	202+03.89	5.58	618.67	618.82
1E	201+93.81	5.48	618.84	618.97
1F	201+83.74	5.23	619.02	619.13
1G	201+73.67	4.84	619.22	619.27
CL. BRG. PIER 40S	201+65.32	4.40	619.41	619.41
CL. PIER 40	-	-	-	-
CL. BRG. PIER 40N	201+63.67	4.48	619.43	619.43
2A	201+53.61	4.96	619.60	619.67
2B	201+43.54	5.30	619.79	619.90
2C	201+33.47	5.49	619.98	620.13
2D	201+23.39	5.53	620.19	620.35
2E	201+13.31	5.43	620.42	620.56
2F	201+03.23	5.19	620.65	620.76
2G	200+93.17	4.79	620.89	620.94
CL. BRG. PIER 39S	200+85.22	4.38	621.09	621.09
CL. PIER 39	-	-	-	-
CL. BRG. PIER 39N	200+83.63	4.42	621.12	621.12
3A	200+73.57	4.90	621.31	621.38
3B	200+63.51	5.24	621.51	621.62
3C	200+53.43	5.43	621.71	621.86
3D	200+43.35	5.47	621.92	622.08
3E	200+33.27	5.37	622.13	622.28
3F	200+23.20	5.12	622.35	622.46
3G	200+13.13	4.73	622.57	622.63
CL. BRG. PIER 7S	200+05.43	4.33	622.75	622.75
CL. PIER 7	-	-	-	-

Notes:
1. Girder A7 & A8 offset measured perpendicular to ℄ SB IL-171
2. Beam R1 offset measured radial to ℄ Ramp E & P.G.L.

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312-565-0450 Job No. 10093

FILE NAME = 0162457_60J16_016_TOS_Elev_Unit_A_4_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT A (4 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD16 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	391
		CONTRACT NO. 60J16		
	ILLINOIS	FED. AID PROJECT		

℄ RAMP E & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 41	202+42.09	0.00	618.30	618.30
CL. BRG. PIER 41N	202+41.20	0.00	618.31	618.31
1A	202+31.20	0.00	618.48	618.53
1B	202+21.20	0.00	618.65	618.75
1C	202+11.20	0.00	618.82	618.95
1D	202+01.20	0.00	619.00	619.14
1E	201+91.20	0.00	619.19	619.31
1F	201+81.20	0.00	619.37	619.46
1G	201+71.20	0.00	619.56	619.61
CL. BRG. PIER 40S	201+63.12	0.00	619.72	619.72
CL. PIER 40	201+62.28	0.00	619.74	619.74
CL. BRG. PIER 40N	201+61.44	0.00	619.76	619.76
2A	201+51.44	0.00	619.96	620.01
2B	201+41.44	0.00	620.16	620.26
2C	201+31.44	0.00	620.37	620.49
2D	201+21.44	0.00	620.58	620.71
2E	201+11.44	0.00	620.79	620.91
2F	201+01.44	0.00	621.01	621.10
2G	200+91.44	0.00	621.23	621.27
CL. BRG. PIER 39S	200+83.63	0.00	621.40	621.40
CL. PIER 39	200+82.83	0.00	621.41	621.41
CL. BRG. PIER 39N	200+82.03	0.00	621.43	621.43
3A	200+72.03	0.00	621.65	621.70
3B	200+62.03	0.00	621.86	621.96
3C	200+52.03	0.00	622.08	622.20
3D	200+42.03	0.00	622.28	622.42
3E	200+32.03	0.00	622.49	622.61
3F	200+22.03	0.00	622.69	622.78
3G	200+12.03	0.00	622.89	622.93
CL. BRG. PIER 7S	200+04.40	0.00	623.04	623.04
CL. PIER 7	200+03.63	0.00	623.05	623.05

BEAM R2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 41	-	-	-	-
CL. BRG. PIER 41N	202+39.98	-1.94	618.41	618.41
1A	202+30.01	-1.35	618.56	618.61
1B	202+20.03	-0.87	618.71	618.81
1C	202+10.05	-0.53	618.87	619.00
1D	202+00.06	-0.34	619.04	619.17
1E	201+90.06	-0.29	619.22	619.34
1F	201+80.07	-0.39	619.42	619.51
1G	201+70.08	-0.64	619.63	619.67
CL. BRG. PIER 40S	201+62.66	-0.91	619.79	619.79
CL. PIER 40	-	-	-	-
CL. BRG. PIER 40N	201+60.54	-1.83	619.89	619.89
2A	201+50.58	-1.25	620.05	620.10
2B	201+40.60	-0.80	620.23	620.32
2C	201+30.62	-0.51	620.42	620.54
2D	201+20.62	-0.36	620.62	620.75
2E	201+10.63	-0.35	620.83	620.95
2F	201+00.64	-0.49	621.06	621.15
2G	200+90.65	-0.77	621.29	621.33
CL. BRG. PIER 39S	200+83.24	-1.07	621.47	621.47
CL. PIER 39	-	-	-	-
CL. BRG. PIER 39N	200+81.41	-1.75	621.55	621.55
3A	200+71.45	-1.20	621.73	621.79
3B	200+61.47	-0.79	621.92	622.02
3C	200+51.48	-0.52	622.12	622.24
3D	200+41.49	-0.40	622.32	622.45
3E	200+31.50	-0.42	622.53	622.65
3F	200+21.50	-0.59	622.74	622.83
3G	200+11.52	-0.90	622.95	623.00
CL. BRG. PIER 7S	200+04.11	-1.23	623.12	623.12
CL. PIER 7	-	-	-	-

BEAM R3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 41	-	-	-	-
CL. BRG. PIER 41N	202+36.37	-7.65	618.71	618.71
1A	202+26.46	-7.08	618.88	618.93
1B	202+16.57	-6.66	619.05	619.15
1C	202+06.67	-6.37	619.23	619.35
1D	201+96.76	-6.23	619.42	619.55
1E	201+86.85	-6.23	619.62	619.74
1F	201+76.94	-6.38	619.84	619.92
1G	201+67.04	-6.66	620.06	620.10
CL. BRG. PIER 40S	201+59.69	-6.97	620.22	620.22
CL. PIER 40	-	-	-	-
CL. BRG. PIER 40N	201+57.75	-7.58	620.30	620.30
2A	201+47.87	-7.03	620.46	620.52
2B	201+37.98	-6.63	620.64	620.74
2C	201+28.07	-6.37	620.83	620.96
2D	201+18.16	-6.25	621.04	621.17
2E	201+08.25	-6.28	621.25	621.37
2F	200+98.35	-6.45	621.48	621.57
2G	200+88.44	-6.76	621.71	621.75
CL. BRG. PIER 39S	200+81.10	-7.09	621.89	621.89
CL. PIER 39	-	-	-	-
CL. BRG. PIER 39N	200+79.36	-7.55	621.96	621.96
3A	200+69.48	-7.02	622.14	622.19
3B	200+59.58	-6.64	622.33	622.42
3C	200+49.68	-6.40	622.52	622.64
3D	200+39.77	-6.31	622.72	622.85
3E	200+29.86	-6.35	622.93	623.04
3F	200+19.96	-6.55	623.14	623.22
3G	200+10.06	-6.88	623.35	623.40
CL. BRG. PIER 7S	200+02.72	-7.22	623.52	623.52
CL. PIER 7	-	-	-	-

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Note:
Offset measured radial to ℄ Ramp E & P.G.L.

FILE NAME = 0162457_60J16_017_TOS_Elev_Unit_A_5_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT A (5 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD17 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	392
		CONTRACT NO. 60J16		
		ILLINOIS FED. AID PROJECT		

BEAM R4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 41	-	-	-	-
CL. BRG. PIER 41N	202+32.78	-13.36	619.03	619.03
1A	202+22.98	-12.84	619.21	619.26
1B	202+13.17	-12.46	619.40	619.50
1C	202+03.34	-12.23	619.60	619.72
1D	201+93.52	-12.13	619.81	619.94
1E	201+83.69	-12.18	620.03	620.15
1F	201+73.87	-12.37	620.27	620.35
1G	201+64.05	-12.70	620.49	620.53
CL. BRG. PIER 40S	201+56.77	-13.04	620.66	620.66
CL. PIER 40	-	-	-	-
CL. BRG. PIER 40N	201+54.99	-13.34	620.71	620.71
2A	201+45.19	-12.83	620.88	620.93
2B	201+35.37	-12.47	621.06	621.15
2C	201+25.55	-12.24	621.25	621.38
2D	201+15.73	-12.16	621.46	621.59
2E	201+05.90	-12.22	621.67	621.79
2F	200+96.08	-12.43	621.90	621.98
2G	200+86.26	-12.77	622.13	622.17
CL. BRG. PIER 39S	200+78.99	-13.12	622.31	622.31
CL. PIER 39	-	-	-	-
CL. BRG. PIER 39N	200+77.35	-13.35	622.36	622.36
3A	200+67.55	-12.85	622.54	622.58
3B	200+57.73	-12.50	622.73	622.81
3C	200+47.91	-12.29	622.92	623.02
3D	200+38.09	-12.22	623.12	623.23
3E	200+28.26	-12.29	623.33	623.42
3F	200+18.44	-12.51	623.54	623.61
3G	200+08.63	-12.86	623.75	623.78
CL. BRG. PIER 7S	200+01.35	-13.22	623.91	623.91
CL. PIER 7	-	-	-	-

RAMP E WEST EDGE OF SHOULDER AT SLOPE TRANSITION

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Start	201+25.00	-16.00	621.49	621.62
2C	201+24.42	-16.00	621.51	621.63
2D	201+14.64	-16.00	621.72	621.85
2E	201+04.87	-16.00	621.93	622.05
2F	200+95.09	-16.00	622.14	622.23
2G	200+85.32	-16.00	622.35	622.39
CL. BRG. PIER 39S	200+78.00	-16.00	622.51	622.51
CL. PIER 39	200+77.22	-16.00	622.53	622.53
CL. BRG. PIER 39N	200+76.44	-16.00	622.54	622.54
3A	200+66.66	-16.00	622.76	622.80
3B	200+56.89	-16.00	622.96	623.04
3C	200+47.12	-16.00	623.17	623.27

RAMP E GORE LINE

(Station measured along ℄ IL-171 and offset measured perpendicular to ℄ SB IL-171)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Start	55+75.25	-50.23	623.18	623.28
3D	55+77.38	-49.59	623.20	623.30
3E	55+87.38	-46.67	623.41	623.50
3F	55+97.38	-43.90	623.61	623.68
3G	56+07.38	-41.30	623.81	623.85
CL. BRG. PIER 7S	56+22.00	-37.77	624.10	624.10
CL. PIER 7	56+22.75	-37.60	624.11	624.11

BEAM R5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 41	-	-	-	-
CL. BRG. PIER 41N	202+29.28	-19.08	619.35	619.35
1A	202+19.56	-18.61	619.55	619.63
1B	202+09.82	-18.28	619.76	619.90
1C	202+00.08	-18.09	619.98	620.16
1D	201+90.33	-18.05	620.21	620.40
1E	201+80.59	-18.14	620.45	620.62
1F	201+70.85	-18.37	620.71	620.83
1G	201+61.12	-18.75	620.92	620.98
CL. BRG. PIER 40S	201+53.90	-19.12	621.09	621.09
CL. PIER 40	-	-	-	-
CL. BRG. PIER 40N	201+52.29	-19.11	621.12	621.12
2A	201+42.57	-18.64	621.29	621.37
2B	201+32.83	-18.31	621.47	621.61
2C	201+23.09	-18.13	621.67	621.84
2D	201+13.35	-18.08	621.86	622.05
2E	201+03.60	-18.18	622.07	622.23
2F	200+93.86	-18.41	622.28	622.40
2G	200+84.13	-18.79	622.49	622.55
CL. BRG. PIER 39S	200+76.91	-19.16	622.65	622.65
CL. PIER 39	-	-	-	-
CL. BRG. PIER 39N	200+75.37	-19.17	622.68	622.68
3A	200+65.65	-18.70	622.86	622.90
3B	200+55.91	-18.37	623.05	623.12
3C	200+46.17	-18.19	623.24	623.33
3D	200+36.43	-18.14	623.43	623.51
3E	200+26.69	-18.24	623.63	623.70
3F	200+20.92	-18.36	623.75	623.80

Note:
Offset measured radial to ℄ Ramp E & P.G.L. unless noted otherwise.

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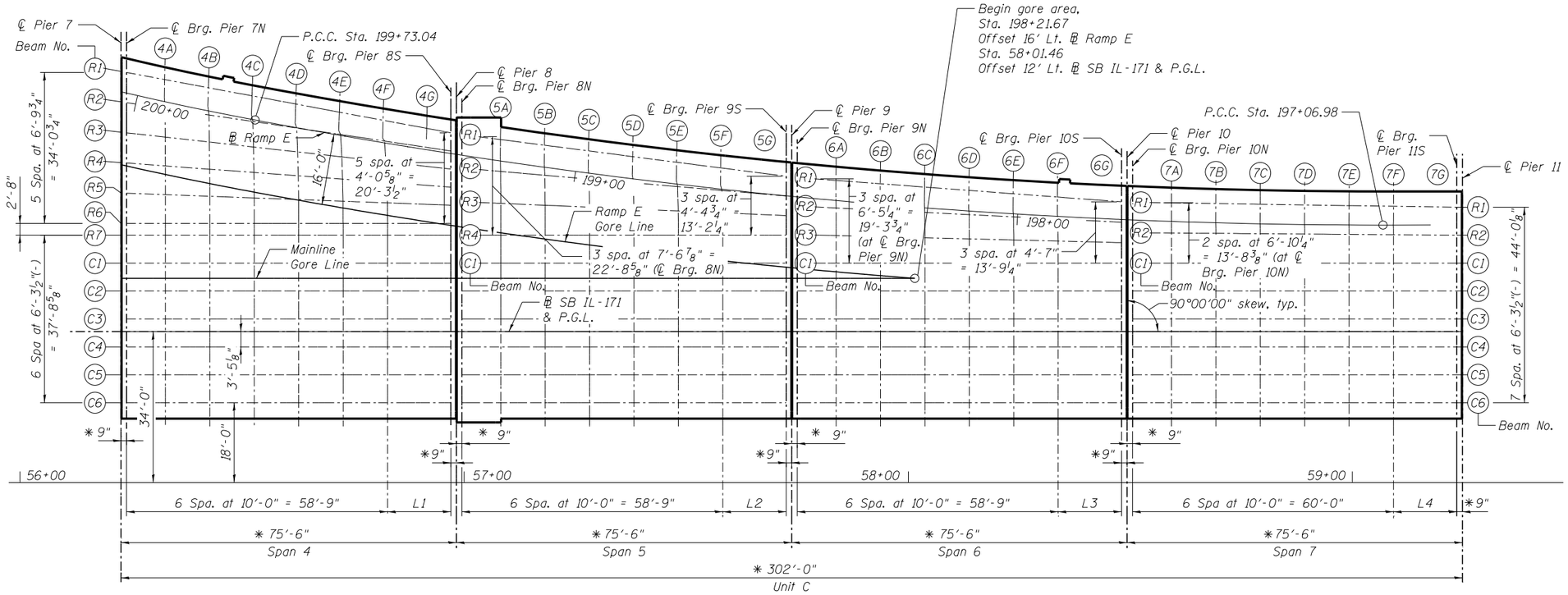
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT A (6 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD18 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	393
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

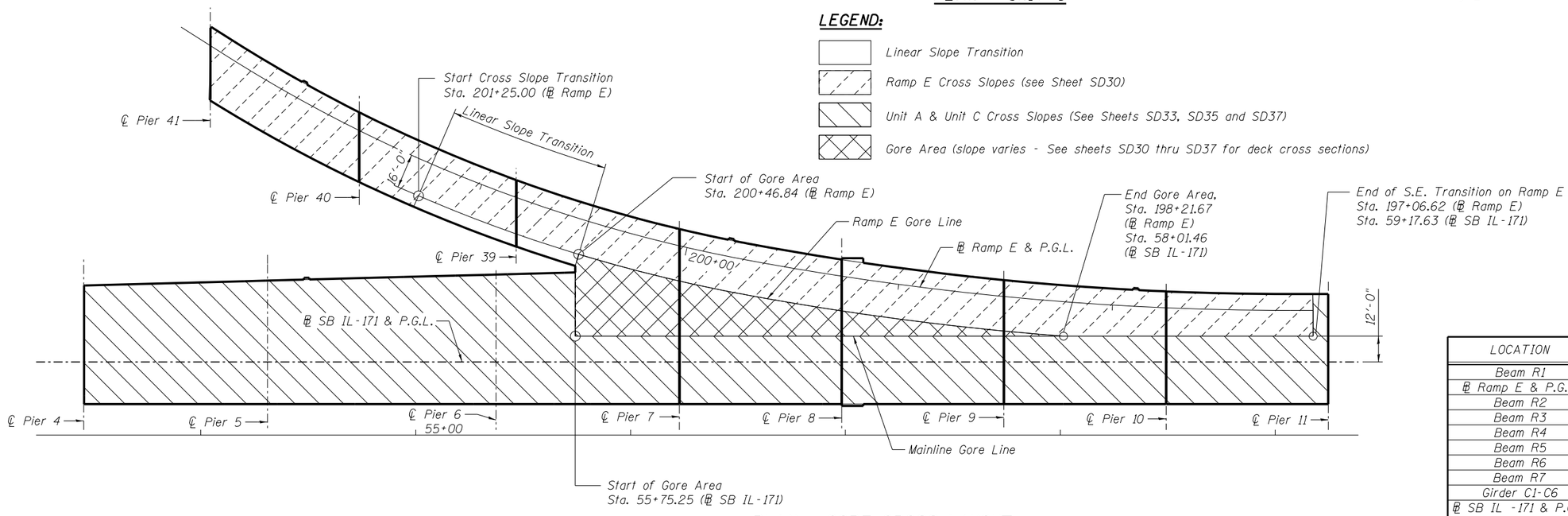


PLAN - UNIT C

* Measured along ℄ SB IL-171 & P.G.L.

LEGEND:

- Linear Slope Transition
- Ramp E Cross Slopes (see Sheet SD30)
- Unit A & Unit C Cross Slopes (See Sheets SD33, SD35 and SD37)
- Gore Area (slope varies - See sheets SD30 thru SD37 for deck cross sections)



PLAN - GORE CROSS LAYOUT

SCREED SPACING

(SB IL-171)

LOCATION	L1	L2	L3	L4
Beam R1	5'-3 1/4"	14'-7 3/8"	14'-2 1/2"	14'-0 1/8"
℄ Ramp E & P.G.L.	5'-3 1/2"	14'-7 1/8"	14'-1 1/8"	14'-0"
Beam R2	14'-9 3/4"	14'-3 1/4"	14'-0 1/4"	---
Beam R3	14'-5 1/2"	14'-0 7/8"	---	---
Beam R4	14'-2 1/2"	14'-0"	---	---
Beam R5	14'-0 5/8"	---	---	---
Beam R6	14'-0"	---	---	---
Beam R7	14'-0"	---	---	---
Girder C1-C6	14'-0"	14'-0"	14'-0"	14'-0"
℄ SB IL-171 & P.G.L.	14'-0"	14'-0"	14'-0"	14'-0"

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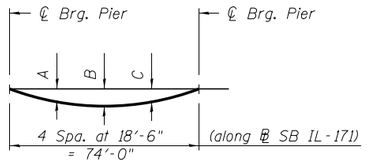
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS PLAN UNIT C
STRUCTURE NO. 016-2457
SHEET NO. SD19 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	394
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			



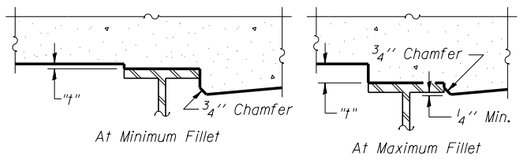
DEAD LOAD DEFLECTION DIAGRAM

DEAD LOAD DEFLECTION TABLE

Beam	Span	A	B	C
C1-C5	4-7	1"	1 3/8"	1"
C6	4-7	1 1/4"	1 3/4"	1 1/4"
R1	4	1 1/2"	2 1/8"	1 1/2"
R1	5	1 1/4"	1 3/4"	1 1/4"
R1	6	1 3/8"	2"	1 3/8"
R1	7	1 1/4"	1 3/4"	1 1/4"
R2	4	1 1/4"	1 3/4"	1 1/4"
R2	5	1 1/8"	1 1/2"	1 1/8"
R2	6	1 1/8"	1 1/2"	1 1/8"
R2	7	1"	1 3/8"	1"
R3	4	1 1/4"	1 3/4"	1 1/4"
R3	5	1 1/8"	1 1/2"	1 1/8"
R3	6	1 1/8"	1 1/2"	1 1/8"
R4	4	1 1/4"	1 3/4"	1 1/4"
R4	5	1 1/8"	1 1/2"	1 1/8"
R5	4	1"	1 3/8"	1"
R6	4	5/8"	7/8"	5/8"
R7	4	5/8"	7/8"	5/8"

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on SD20 thru SD25.



To determine "t": Elevations of the top flanges of the beams shall be taken at intervals shown herein. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown herein, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM C1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	-15.43	624.47	624.47
CL. BRG. PIER 7N	56+23.50	-15.43	624.48	624.48
4A	56+33.50	-15.43	624.61	624.66
4B	56+43.50	-15.43	624.74	624.83
4C	56+53.50	-15.43	624.87	624.98
4D	56+63.50	-15.43	625.00	625.12
4E	56+73.50	-15.43	625.14	625.24
4F	56+83.50	-15.43	625.27	625.34
CL. BRG. PIER 8S	56+97.50	-15.43	625.45	625.45
CL. PIER 8	56+98.25	-15.43	625.46	625.46
CL. BRG. PIER 8N	56+99.00	-15.43	625.47	625.47
5A	57+09.00	-15.43	625.61	625.66
5B	57+19.00	-15.43	625.75	625.84
5C	57+29.00	-15.43	625.88	626.00
5D	57+39.00	-15.43	626.02	626.14
5E	57+49.00	-15.43	626.16	626.26
5F	57+59.00	-15.43	626.29	626.36
CL. BRG. PIER 9S	57+73.00	-15.43	626.44	626.44
CL. PIER 9	57+73.75	-15.43	626.45	626.45
CL. BRG. PIER 9N	57+74.50	-15.43	626.46	626.46
6A	57+84.50	-15.43	626.59	626.64
6B	57+94.50	-15.43	626.71	626.81
6C	58+04.50	-15.43	626.86	626.97
6D	58+14.50	-15.43	627.02	627.14
6E	58+24.50	-15.43	627.17	627.28
6F	58+34.50	-15.43	627.33	627.39
CL. BRG. PIER 10S	58+48.50	-15.43	627.54	627.54
CL. PIER 10	58+49.25	-15.43	627.55	627.55
CL. BRG. PIER 10N	58+50.00	-15.43	627.56	627.56
7A	58+60.00	-15.43	627.72	627.77
7B	58+70.00	-15.43	627.87	627.96
7C	58+80.00	-15.43	628.02	628.14
7D	58+90.00	-15.43	628.18	628.30
7E	59+00.00	-15.43	628.33	628.43
7F	59+10.00	-15.43	628.49	628.55
CL. BRG. PIER 11S	59+24.00	-15.43	628.70	628.70
CL. PIER 11	59+24.75	-15.43	628.71	628.71

MAINLINE GORE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	-12.00	624.53	624.53
CL. BRG. PIER 7N	56+23.50	-12.00	624.53	624.53
4A	56+33.50	-12.00	624.66	624.71
4B	56+43.50	-12.00	624.78	624.87
4C	56+53.50	-12.00	624.91	625.02
4D	56+63.50	-12.00	625.03	625.15
4E	56+73.50	-12.00	625.16	625.26
4F	56+83.50	-12.00	625.29	625.36
CL. BRG. PIER 8S	56+97.50	-12.00	625.48	625.48
CL. PIER 8	56+98.25	-12.00	625.49	625.49
CL. BRG. PIER 8N	56+99.00	-12.00	625.50	625.50
5A	57+09.00	-12.00	625.63	625.68
5B	57+19.00	-12.00	625.77	625.86
5C	57+29.00	-12.00	625.90	626.02
5D	57+39.00	-12.00	626.04	626.16
5E	57+49.00	-12.00	626.18	626.28
5F	57+59.00	-12.00	626.32	626.39
CL. BRG. PIER 9S	57+73.00	-12.00	626.52	626.52
CL. PIER 9	57+73.75	-12.00	626.53	626.53
CL. BRG. PIER 9N	57+74.50	-12.00	626.55	626.55
6A	57+84.50	-12.00	626.69	626.74
6B	57+94.50	-12.00	626.84	626.93
End	58+01.46	-12.00	626.94	627.05

Note:
Offset measured perpendicular to ℄ SB IL-171

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FILE NAME = 0162457_60J16_020_TOS_Elev_Unit_C_1_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT C (1 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD20 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	395
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

BEAM C2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	-9.15	624.57	624.57
CL. BRG. PIER 7N	56+23.50	-9.15	624.58	624.58
4A	56+33.50	-9.15	624.70	624.75
4B	56+43.50	-9.15	624.82	624.91
4C	56+53.50	-9.15	624.95	625.06
4D	56+63.50	-9.15	625.08	625.19
4E	56+73.50	-9.15	625.20	625.31
4F	56+83.50	-9.15	625.33	625.40
CL. BRG. PIER 8S	56+97.50	-9.15	625.52	625.52
CL. PIER 8	56+98.25	-9.15	625.53	625.53
CL. BRG. PIER 8N	56+99.00	-9.15	625.54	625.54
5A	57+09.00	-9.15	625.67	625.72
5B	57+19.00	-9.15	625.81	625.90
5C	57+29.00	-9.15	625.95	626.06
5D	57+39.00	-9.15	626.08	626.20
5E	57+49.00	-9.15	626.22	626.33
5F	57+59.00	-9.15	626.37	626.43
CL. BRG. PIER 9S	57+73.00	-9.15	626.57	626.57
CL. PIER 9	57+73.75	-9.15	626.58	626.58
CL. BRG. PIER 9N	57+74.50	-9.15	626.59	626.59
6A	57+84.50	-9.15	626.73	626.78
6B	57+94.50	-9.15	626.88	626.97
6C	58+04.50	-9.15	627.03	627.14
6D	58+14.50	-9.15	627.18	627.30
6E	58+24.50	-9.15	627.33	627.43
6F	58+34.50	-9.15	627.48	627.54
CL. BRG. PIER 10S	58+48.50	-9.15	627.68	627.68
CL. PIER 10	58+49.25	-9.15	627.70	627.70
CL. BRG. PIER 10N	58+50.00	-9.15	627.71	627.71
7A	58+60.00	-9.15	627.86	627.91
7B	58+70.00	-9.15	628.00	628.09
7C	58+80.00	-9.15	628.15	628.27
7D	58+90.00	-9.15	628.30	628.42
7E	59+00.00	-9.15	628.45	628.55
7F	59+10.00	-9.15	628.60	628.67
CL. BRG. PIER 11S	59+24.00	-9.15	628.81	628.81
CL. PIER 11	59+24.75	-9.15	628.82	628.82

BEAM C3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	-2.86	624.66	624.66
CL. BRG. PIER 7N	56+23.50	-2.86	624.67	624.67
4A	56+33.50	-2.86	624.79	624.84
4B	56+43.50	-2.86	624.92	625.01
4C	56+53.50	-2.86	625.04	625.16
4D	56+63.50	-2.86	625.17	625.29
4E	56+73.50	-2.86	625.30	625.40
4F	56+83.50	-2.86	625.43	625.50
CL. BRG. PIER 8S	56+97.50	-2.86	625.61	625.61
CL. PIER 8	56+98.25	-2.86	625.62	625.62
CL. BRG. PIER 8N	56+99.00	-2.86	625.63	625.63
5A	57+09.00	-2.86	625.77	625.82
5B	57+19.00	-2.86	625.90	625.99
5C	57+29.00	-2.86	626.04	626.15
5D	57+39.00	-2.86	626.18	626.30
5E	57+49.00	-2.86	626.32	626.42
5F	57+59.00	-2.86	626.46	626.53
CL. BRG. PIER 9S	57+73.00	-2.86	626.66	626.66
CL. PIER 9	57+73.75	-2.86	626.67	626.67
CL. BRG. PIER 9N	57+74.50	-2.86	626.68	626.68
6A	57+84.50	-2.86	626.83	626.88
6B	57+94.50	-2.86	626.98	627.07
6C	58+04.50	-2.86	627.12	627.24
6D	58+14.50	-2.86	627.27	627.39
6E	58+24.50	-2.86	627.42	627.52
6F	58+34.50	-2.86	627.57	627.64
CL. BRG. PIER 10S	58+48.50	-2.86	627.78	627.78
CL. PIER 10	58+49.25	-2.86	627.79	627.79
CL. BRG. PIER 10N	58+50.00	-2.86	627.80	627.80
7A	58+60.00	-2.86	627.95	628.00
7B	58+70.00	-2.86	628.10	628.19
7C	58+80.00	-2.86	628.25	628.36
7D	58+90.00	-2.86	628.40	628.52
7E	59+00.00	-2.86	628.55	628.65
7F	59+10.00	-2.86	628.69	628.76
CL. BRG. PIER 11S	59+24.00	-2.86	628.90	628.90
CL. PIER 11	59+24.75	-2.86	628.91	628.91

℄ SB IL-171 & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	0.00	624.71	624.71
CL. BRG. PIER 7N	56+23.50	0.00	624.71	624.71
4A	56+33.50	0.00	624.84	624.89
4B	56+43.50	0.00	624.96	625.05
4C	56+53.50	0.00	625.09	625.20
4D	56+63.50	0.00	625.21	625.33
4E	56+73.50	0.00	625.34	625.44
4F	56+83.50	0.00	625.47	625.54
CL. BRG. PIER 8S	56+97.50	0.00	625.66	625.66
CL. PIER 8	56+98.25	0.00	625.67	625.67
CL. BRG. PIER 8N	56+99.00	0.00	625.68	625.68
5A	57+09.00	0.00	625.81	625.86
5B	57+19.00	0.00	625.95	626.04
5C	57+29.00	0.00	626.08	626.20
5D	57+39.00	0.00	626.22	626.34
5E	57+49.00	0.00	626.36	626.46
5F	57+59.00	0.00	626.50	626.57
CL. BRG. PIER 9S	57+73.00	0.00	626.70	626.70
CL. PIER 9	57+73.75	0.00	626.71	626.71
CL. BRG. PIER 9N	57+74.50	0.00	626.73	626.73
6A	57+84.50	0.00	626.87	626.92
6B	57+94.50	0.00	627.02	627.11
6C	58+04.50	0.00	627.17	627.28
6D	58+14.50	0.00	627.32	627.43
6E	58+24.50	0.00	627.46	627.57
6F	58+34.50	0.00	627.61	627.68
CL. BRG. PIER 10S	58+48.50	0.00	627.82	627.82
CL. PIER 10	58+49.25	0.00	627.83	627.83
CL. BRG. PIER 10N	58+50.00	0.00	627.84	627.84
7A	58+60.00	0.00	627.99	628.04
7B	58+70.00	0.00	628.14	628.23
7C	58+80.00	0.00	628.29	628.40
7D	58+90.00	0.00	628.44	628.56
7E	59+00.00	0.00	628.59	628.69
7F	59+10.00	0.00	628.74	628.81
CL. BRG. PIER 11S	59+24.00	0.00	628.95	628.95
CL. PIER 11	59+24.75	0.00	628.96	628.96

Note:
Offset measured perpendicular to ℄ SB IL-171

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME = 0162457_60J16_021_TOS_Elev_Unit_C_2_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT C (2 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD21 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	396
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

BEAM C4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	3.43	624.65	624.65
CL. BRG. PIER 7N	56+23.50	3.43	624.66	624.66
4A	56+33.50	3.43	624.79	624.84
4B	56+43.50	3.43	624.91	625.00
4C	56+53.50	3.43	625.03	625.15
4D	56+63.50	3.43	625.16	625.28
4E	56+73.50	3.43	625.29	625.39
4F	56+83.50	3.43	625.42	625.49
CL. BRG. PIER 8S	56+97.50	3.43	625.60	625.60
CL. PIER 8	56+98.25	3.43	625.61	625.61
CL. BRG. PIER 8N	56+99.00	3.43	625.62	625.62
5A	57+09.00	3.43	625.76	625.81
5B	57+19.00	3.43	625.89	625.98
5C	57+29.00	3.43	626.03	626.15
5D	57+39.00	3.43	626.17	626.29
5E	57+49.00	3.43	626.31	626.41
5F	57+59.00	3.43	626.45	626.52
CL. BRG. PIER 9S	57+73.00	3.43	626.65	626.65
CL. PIER 9	57+73.75	3.43	626.66	626.66
CL. BRG. PIER 9N	57+74.50	3.43	626.67	626.67
6A	57+84.50	3.43	626.82	626.87
6B	57+94.50	3.43	626.97	627.06
6C	58+04.50	3.43	627.12	627.23
6D	58+14.50	3.43	627.26	627.38
6E	58+24.50	3.43	627.41	627.52
6F	58+34.50	3.43	627.56	627.63
CL. BRG. PIER 10S	58+48.50	3.43	627.77	627.77
CL. PIER 10	58+49.25	3.43	627.78	627.78
CL. BRG. PIER 10N	58+50.00	3.43	627.79	627.79
7A	58+60.00	3.43	627.94	627.99
7B	58+70.00	3.43	628.09	628.18
7C	58+80.00	3.43	628.24	628.35
7D	58+90.00	3.43	628.39	628.51
7E	59+00.00	3.43	628.54	628.64
7F	59+10.00	3.43	628.69	628.75
CL. BRG. PIER 11S	59+24.00	3.43	628.89	628.89
CL. PIER 11	59+24.75	3.43	628.91	628.91

BEAM C5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	9.71	624.56	624.56
CL. BRG. PIER 7N	56+23.50	9.71	624.57	624.57
4A	56+33.50	9.71	624.69	624.74
4B	56+43.50	9.71	624.82	624.91
4C	56+53.50	9.71	624.94	625.05
4D	56+63.50	9.71	625.07	625.19
4E	56+73.50	9.71	625.20	625.30
4F	56+83.50	9.71	625.33	625.39
CL. BRG. PIER 8S	56+97.50	9.71	625.51	625.51
CL. PIER 8	56+98.25	9.71	625.52	625.52
CL. BRG. PIER 8N	56+99.00	9.71	625.53	625.53
5A	57+09.00	9.71	625.66	625.71
5B	57+19.00	9.71	625.80	625.89
5C	57+29.00	9.71	625.94	626.05
5D	57+39.00	9.71	626.08	626.19
5E	57+49.00	9.71	626.22	626.32
5F	57+59.00	9.71	626.36	626.43
CL. BRG. PIER 9S	57+73.00	9.71	626.56	626.56
CL. PIER 9	57+73.75	9.71	626.57	626.57
CL. BRG. PIER 9N	57+74.50	9.71	626.58	626.58
6A	57+84.50	9.71	626.73	626.78
6B	57+94.50	9.71	626.87	626.96
6C	58+04.50	9.71	627.02	627.14
6D	58+14.50	9.71	627.17	627.29
6E	58+24.50	9.71	627.32	627.42
6F	58+34.50	9.71	627.47	627.54
CL. BRG. PIER 10S	58+48.50	9.71	627.68	627.68
CL. PIER 10	58+49.25	9.71	627.69	627.69
CL. BRG. PIER 10N	58+50.00	9.71	627.70	627.70
7A	58+60.00	9.71	627.85	627.90
7B	58+70.00	9.71	628.00	628.09
7C	58+80.00	9.71	628.14	628.26
7D	58+90.00	9.71	628.29	628.41
7E	59+00.00	9.71	628.44	628.54
7F	59+10.00	9.71	628.59	628.66
CL. BRG. PIER 11S	59+24.00	9.71	628.80	628.80
CL. PIER 11	59+24.75	9.71	628.81	628.81

BEAM C6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	56+22.75	16.00	624.45	624.45
CL. BRG. PIER 7N	56+23.50	16.00	624.45	624.45
4A	56+33.50	16.00	624.58	624.64
4B	56+43.50	16.00	624.70	624.81
4C	56+53.50	16.00	624.83	624.96
4D	56+63.50	16.00	624.95	625.09
4E	56+73.50	16.00	625.08	625.20
4F	56+83.50	16.00	625.21	625.29
CL. BRG. PIER 8S	56+97.50	16.00	625.40	625.40
CL. PIER 8	56+98.25	16.00	625.41	625.41
CL. BRG. PIER 8N	56+99.00	16.00	625.42	625.42
5A	57+09.00	16.00	625.55	625.61
5B	57+19.00	16.00	625.69	625.79
5C	57+29.00	16.00	625.82	625.96
5D	57+39.00	16.00	625.96	626.10
5E	57+49.00	16.00	626.10	626.22
5F	57+59.00	16.00	626.24	626.32
CL. BRG. PIER 9S	57+73.00	16.00	626.44	626.44
CL. PIER 9	57+73.75	16.00	626.45	626.45
CL. BRG. PIER 9N	57+74.50	16.00	626.47	626.47
6A	57+84.50	16.00	626.61	626.67
6B	57+94.50	16.00	626.76	626.87
6C	58+04.50	16.00	626.91	627.04
6D	58+14.50	16.00	627.06	627.20
6E	58+24.50	16.00	627.20	627.33
6F	58+34.50	16.00	627.35	627.43
CL. BRG. PIER 10S	58+48.50	16.00	627.56	627.56
CL. PIER 10	58+49.25	16.00	627.57	627.57
CL. BRG. PIER 10N	58+50.00	16.00	627.58	627.58
7A	58+60.00	16.00	627.73	627.79
7B	58+70.00	16.00	627.88	627.99
7C	58+80.00	16.00	628.03	628.17
7D	58+90.00	16.00	628.18	628.32
7E	59+00.00	16.00	628.33	628.45
7F	59+10.00	16.00	628.48	628.56
CL. BRG. PIER 11S	59+24.00	16.00	628.69	628.69
CL. PIER 11	59+24.75	16.00	628.70	628.70

Note:
Offset measured perpendicular to ℄ SB IL-171

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engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME = 0162457_60J16_022_TOS_Elev_Unit_C_3_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT C (3 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD22 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	397
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

BEAM R1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	-	-	-	-
CL. BRG. PIER 7N	56+23.50	-58.45	622.77	622.77
4A	56+33.33	-56.62	622.94	623.01
4B	56+43.15	-54.79	623.11	623.24
4C	56+52.98	-52.96	623.29	623.46
4D	56+62.81	-51.13	623.47	623.65
4E	56+72.64	-49.30	623.66	623.81
4F	56+82.46	-47.47	623.86	623.96
4G	56+92.28	-45.60	624.07	624.11
CL. BRG. PIER 8S	56+97.50	-44.67	624.17	624.17
CL. PIER 8	-	-	-	-
CL. BRG. PIER 8N	56+99.00	-44.44	624.20	624.20
5A	57+08.92	-43.16	624.38	624.44
5B	57+18.83	-41.88	624.57	624.67
5C	57+28.75	-40.61	624.75	624.89
5D	57+38.67	-39.33	624.95	625.09
5E	57+48.59	-38.05	625.15	625.27
5F	57+58.50	-36.77	625.35	625.43
CL. BRG. PIER 9S	57+73.00	-34.91	625.64	625.64
CL. PIER 9	-	-	-	-
CL. BRG. PIER 9N	57+74.50	-34.74	625.67	625.67
6A	57+84.47	-34.00	625.85	625.92
6B	57+94.44	-33.25	626.04	626.16
6C	58+04.42	-32.50	626.26	626.42
6D	58+14.39	-31.75	626.47	626.63
6E	58+24.36	-31.01	626.66	626.80
6F	58+34.33	-30.26	626.86	626.96
CL. BRG. PIER 10S	58+48.50	-29.20	627.14	627.14
CL. PIER 10	-	-	-	-
CL. BRG. PIER 10N	58+50.00	-29.13	627.17	627.17
7A	58+60.00	-28.98	627.34	627.40
7B	58+70.00	-28.83	627.52	627.63
7C	58+80.00	-28.67	627.69	627.83
7D	58+90.00	-28.52	627.87	628.01
7E	58+99.99	-28.37	628.04	628.16
7F	59+09.99	-28.22	628.22	628.30
CL. BRG. PIER 11S	59+24.00	-28.01	628.45	628.45
CL. PIER 11	-	-	-	-

℄ RAMP E & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	200+03.63	0.00	623.05	623.05
CL. BRG. PIER 7N	200+02.86	0.00	623.07	623.07
4A	199+92.86	0.00	623.26	623.32
4B	199+82.86	0.00	623.44	623.55
4C	199+72.86	0.00	623.63	623.77
4D	199+62.86	0.00	623.81	623.95
4E	199+52.86	0.00	623.99	624.12
4F	199+42.86	0.00	624.17	624.26
4G	199+32.86	0.00	624.35	624.38
CL. BRG. PIER 8S	199+27.57	0.00	624.45	624.45
CL. PIER 8	199+26.81	0.00	624.46	624.46
CL. BRG. PIER 8N	199+26.05	0.00	624.47	624.47
5A	199+16.05	0.00	624.66	624.71
5B	199+06.05	0.00	624.84	624.93
5C	198+96.05	0.00	625.02	625.14
5D	198+86.05	0.00	625.20	625.32
5E	198+76.05	0.00	625.38	625.49
5F	198+66.05	0.00	625.56	625.63
CL. BRG. PIER 9S	198+51.46	0.00	625.82	625.82
CL. PIER 9	198+50.71	0.00	625.84	625.84
CL. BRG. PIER 9N	198+49.95	0.00	625.85	625.85
6A	198+39.95	0.00	626.03	626.09
6B	198+29.95	0.00	626.21	626.32
6C	198+21.67	0.00	626.36	626.50

BEAM R2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	-	-	-	-
CL. BRG. PIER 7N	56+23.50	-51.64	623.21	623.21
4A	56+33.39	-50.16	623.35	623.41
4B	56+43.28	-48.69	623.50	623.61
4C	56+53.17	-47.22	623.66	623.80
4D	56+63.06	-45.74	623.82	623.96
4E	56+72.95	-44.27	623.98	624.11
4F	56+82.84	-42.80	624.15	624.24
CL. BRG. PIER 8S	56+97.50	-40.61	624.41	624.41
CL. PIER 8	-	-	-	-
CL. BRG. PIER 8N	56+99.00	-36.86	624.65	624.65
5A	57+08.96	-36.01	624.79	624.84
5B	57+18.93	-35.15	624.94	625.03
5C	57+28.89	-34.30	625.09	625.21
5D	57+38.85	-33.44	625.25	625.37
5E	57+48.82	-32.59	625.41	625.52
5F	57+58.78	-31.73	625.58	625.65
CL. BRG. PIER 9S	57+73.00	-30.51	625.83	625.83
CL. PIER 9	-	-	-	-
CL. BRG. PIER 9N	57+74.50	-28.31	625.94	625.94
6A	57+84.49	-27.81	626.10	626.15
6B	57+94.48	-27.31	626.26	626.36
6C	58+04.46	-26.81	626.45	626.57
6D	58+14.45	-26.31	626.65	626.78
6E	58+24.44	-25.81	626.83	626.94
6F	58+34.43	-25.31	627.02	627.09
CL. BRG. PIER 10S	58+48.50	-24.61	627.27	627.27
CL. PIER 10	-	-	-	-
CL. BRG. PIER 10N	58+50.00	-22.28	627.37	627.37
7A	58+60.00	-22.21	627.53	627.58
7B	58+70.00	-22.13	627.69	627.78
7C	58+80.00	-22.05	627.86	627.97
7D	58+90.00	-21.98	628.02	628.14
7E	59+00.00	-21.90	628.19	628.29
7F	59+10.00	-21.83	628.35	628.42
CL. BRG. PIER 11S	59+24.00	-21.72	628.57	628.57
CL. PIER 11	-	-	-	-

Note:
Offset measured perpendicular to ℄ SB IL-171 except for ℄ Ramp E screeds.

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FILE NAME = 0162457_60J16_023_TOS_Elev_Unit_C_4_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT C (4 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD23 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	398
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

BEAM R3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	-	-	-	-
CL. BRG. PIER 7N	56+23.50	-44.82	623.65	623.65
4A	56+33.44	-43.71	623.77	623.83
4B	56+43.38	-42.60	623.90	624.00
4C	56+53.31	-41.49	624.03	624.17
4D	56+63.25	-40.38	624.16	624.31
4E	56+73.19	-39.27	624.31	624.43
4F	56+83.13	-38.16	624.44	624.53
CL. BRG. PIER 8S	56+97.50	-36.56	624.65	624.65
CL. PIER 8	-	-	-	-
CL. BRG. PIER 8N	56+99.00	-29.29	625.09	625.09
5A	57+08.99	-28.86	625.19	625.25
5B	57+18.98	-28.43	625.30	625.40
5C	57+28.97	-28.00	625.42	625.54
5D	57+38.96	-27.58	625.54	625.66
5E	57+48.95	-27.15	625.67	625.78
5F	57+58.94	-26.72	625.81	625.88
CL. BRG. PIER 9S	57+73.00	-26.11	626.01	626.01
CL. PIER 9	-	-	-	-
CL. BRG. PIER 9N	57+74.50	-21.87	626.20	626.20
6A	57+84.50	-21.62	626.34	626.40
6B	57+94.49	-21.37	626.49	626.59
6C	58+04.49	-21.12	626.66	626.78
6D	58+14.49	-20.87	626.84	626.96
6E	58+24.48	-20.62	627.00	627.11
6F	58+34.48	-20.37	627.17	627.24
CL. BRG. PIER 10S	58+48.50	-20.02	627.41	627.41
CL. PIER 10	-	-	-	-

BEAM R4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	-	-	-	-
CL. BRG. PIER 7N	56+23.50	-38.01	624.09	624.09
4A	56+33.47	-37.27	624.19	624.25
4B	56+43.44	-36.53	624.29	624.40
4C	56+53.42	-35.78	624.39	624.53
4D	56+63.39	-35.04	624.51	624.65
4E	56+73.36	-34.30	624.63	624.75
4F	56+83.33	-33.55	624.73	624.81
CL. BRG. PIER 8S	56+97.50	-32.50	624.89	624.89
CL. PIER 8	-	-	-	-
CL. BRG. PIER 8N	56+99.00	-21.72	625.44	625.44
5A	57+09.00	-21.72	625.57	625.63
5B	57+19.00	-21.72	625.66	625.76
5C	57+29.00	-21.72	625.74	625.86
5D	57+39.00	-21.72	625.83	625.95
5E	57+49.00	-21.72	625.92	626.03
5F	57+59.00	-21.72	626.03	626.10
CL. BRG. PIER 9S	57+73.00	-21.72	626.19	626.19
CL. PIER 9	-	-	-	-

RAMP E GORE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. BRG. PIER 7N	56+23.50	-37.43	624.13	624.13
4A	56+33.50	-35.23	624.32	624.37
4B	56+43.50	-33.18	624.50	624.59
4C	56+53.50	-31.27	624.69	624.80
4D	56+63.50	-29.46	624.87	624.98
4E	56+73.50	-27.72	625.05	625.14
4F	56+83.50	-26.05	625.19	625.26
CL. BRG. PIER 8S	56+97.50	-23.85	625.40	625.40
CL. PIER 8	56+98.25	-23.73	625.41	625.41
CL. BRG. PIER 8N	56+99.00	-23.62	625.42	625.42
5A	57+09.00	-22.15	625.57	625.62
5B	57+19.00	-20.75	625.72	625.81
5C	57+29.00	-19.42	625.86	625.97
5D	57+39.00	-18.17	626.00	626.12
5E	57+49.00	-16.99	626.14	626.25
5F	57+59.00	-15.88	626.29	626.35
CL. BRG. PIER 9S	57+73.00	-14.46	626.48	626.48
CL. PIER 9	57+73.75	-14.39	626.50	626.50
CL. BRG. PIER 9N	57+74.50	-14.31	626.51	626.51
6A	57+84.50	-13.39	626.67	626.72
6B	57+94.50	-12.55	626.82	626.91
End	58+01.46	-12.00	626.94	627.05

Note:
Offset measured perpendicular to ℄ SB IL-171

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FILE NAME = 0162457_60J16_024_TOS_Elev_Unit_C_5_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS UNIT C (5 OF 6) STRUCTURE NO. 016-2457	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - AJK	REVISED -			372	2013-038B-R	COOK	821	399
	PLOT SCALE =	DRAWN - KMS	REVISED -							CONTRACT NO. 60J16
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -		SHEET NO. SD24 OF SD83 SHEETS			ILLINOIS	FED. AID PROJECT	

BEAM R5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	-	-	-	-
CL. BRG. PIER 7N	56+23.50	-31.20	624.23	624.23
4A	56+33.49	-30.83	624.38	624.43
4B	56+43.49	-30.45	624.54	624.63
4C	56+53.48	-30.08	624.70	624.81
4D	56+63.47	-29.71	624.85	624.96
4E	56+73.47	-29.34	624.94	625.04
4F	56+83.46	-28.97	625.01	625.08
CL. BRG. PIER 8S	56+97.50	-28.44	625.13	625.13
CL. PIER 8	-	-	-	-

BEAM R6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	-	-	-	-
CL. BRG. PIER 7N	56+23.50	-24.39	624.34	624.34
4A	56+33.50	-24.39	624.48	624.51
4B	56+43.50	-24.39	624.62	624.68
4C	56+53.50	-24.39	624.76	624.84
4D	56+63.50	-24.39	624.92	624.99
4E	56+73.50	-24.39	625.07	625.14
4F	56+83.50	-24.39	625.20	625.25
CL. BRG. PIER 8S	56+97.50	-24.39	625.37	625.37
CL. PIER 8	-	-	-	-

BEAM R7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL. PIER 7	-	-	-	-
CL. BRG. PIER 7N	56+23.50	-21.72	624.38	624.38
4A	56+33.50	-21.72	624.51	624.55
4B	56+43.50	-21.72	624.65	624.71
4C	56+53.50	-21.72	624.79	624.87
4D	56+63.50	-21.72	624.94	625.02
4E	56+73.50	-21.72	625.09	625.16
4F	56+83.50	-21.72	625.22	625.27
CL. BRG. PIER 8S	56+97.50	-21.72	625.41	625.41
CL. PIER 8	-	-	-	-

Note:
Offset measured perpendicular to ℄ SB IL-171

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FILE NAME = 0162457_60J16_025_TOS_Elev_Unit_C_6_of_6.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS UNIT C (6 OF 6)
STRUCTURE NO. 016-2457
SHEET NO. SD25 OF SD83 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	400
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			