F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	24	1
	ILLINOIS	CONTRACT NO. 78283		

INDEX OF SHEETS 11-18-11 LETTING ITEM 111

1 COVER SHEET, INDEX OF SHEETS
2 SIGNATURES, STANDARDS, SUMMARY OF QUANTITIES AND GENERAL NOTES
3- 24 BRIDGE PLANS

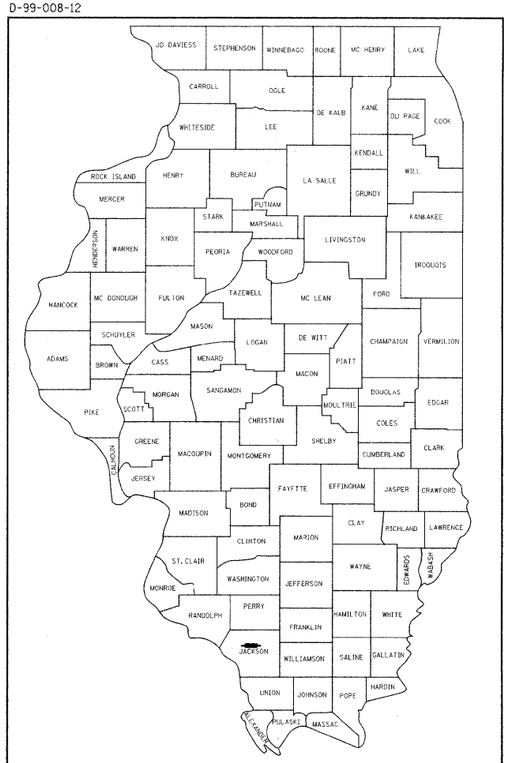
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 686 (IL 4)
IL 4 OVER BEAUCOUP CREEK
SECTION 114F-1
BEAMS AND BEARINGS FABRICATION
JACKSON COUNTY

C-99-009-12
PROJECT ACBRF-0686(011)

D-99-008-12

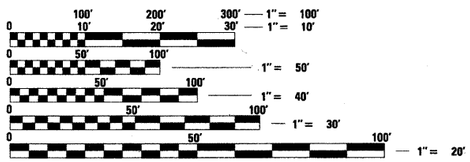


LOCATION OF SECTION INDICATED THUS: –

TRAFFIC DATA

2009 ADT = 1600
7.8% TRUCKS
POSTED SPEED = 55 MPH

VERGENNES TOWNSHIP

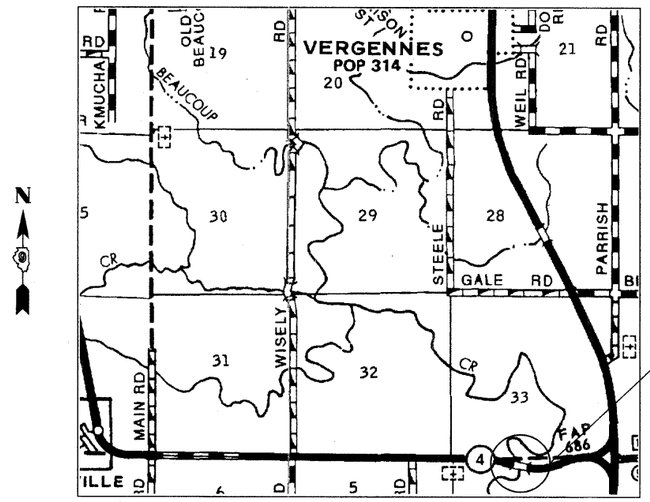


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: T. WAYNE HALSTEAD
PROJECT MANAGER: DAVID PICHE (618) 351-5227

CONTRACT NO. 78283



PROPOSED PROJECT LOCATION
STA 1120+00
PROPOSED BEAMS AND BEARINGS FABRICATION
SN 039-0042 (EXISTING)
SN 039-0074 (PROPOSED)
IL 4 OVER BEAUCOUP CREEK

GROSS LENGTH = 448 FT.
NET LENGTH = 448 FT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Sept. 29 20 11
Omer Osman
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
October 14 20 11
Scott E. Stitt P.E. /a
acting ENGINEER OF DESIGN AND ENVIRONMENT
October 14 20 11
Christine M. Reed /a
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FILE NAME = c:\pw_work\pwidot\thalstead\d0s49788\78049-sht1pln.dgn

SUMMARY OF QUANTITIES

RURAL - JACKSON COUNTY
HBP FUNDING
80% FEDERAL; 20% STATE
CONSTRUCTION TYPE CODE 0011
JACKSON
039-0042 (E); 039-0074 (P)

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
50500205	FURNISHING STRUCTURAL STEEL	L SUM	1
50500455	STORAGE OF STRUCTURAL STEEL	CAL DAY	45
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12
52100300	STORAGE OF ELASTOMERIC BEARING ASSEMBLIES	CAL DAY	45

STANDARDS

000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS

GENERAL NOTES

COMMITMENTS: NONE

Prepared By: Joe Blankenship
DISTRICT STUDIES & PLANS ENGINEER

Examined By: James Travis Emery
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By:
DISTRICT OPERATIONS ENGINEER

Examined By:
DISTRICT CONSTRUCTION ENGINEER

Examined By:
DISTRICT MATERIALS ENGINEER

Approved By: Omer Osman
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

Sept 29 2011
DATE

FILE NAME = c:\pw_work\dot\halsteadtw\dms49708\78049-sht-pln.dgn

USER NAME = halsteadtw	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 9/28/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES, GENERAL NOTES, STANDARDS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	24	2
		CONTRACT NO. 78283		
	ILLINOIS FED. AID PROJECT			

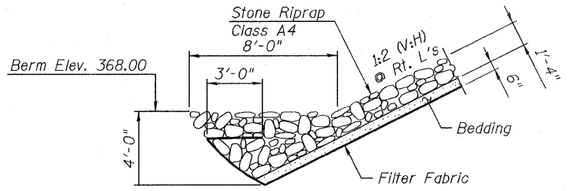
Bench Mark: Chiseled square in N.E. corner of SN 039-0042, approx. 0.5 miles west from intersection of Rte. 4/Rte. 127 "88" Elev. = 384.28

Existing Structure: SN 039-0042 was originally built in 1931. The structure consisted of 2-160' Penn trusses with 2-40' RCDG approach spans, 21' roadway on RC spill-thru abutments and solid concrete piers supported on timber piles. In 1983, the superstructure and part of substructure was replaced and four new wall piers were constructed to create an 8 simple-span PPC deck beam bridge. The structure is approximately 415'-6" back to back abutments and 35'-0" out to out deck width. The structure is to be removed and replaced. Traffic is to be detoured.

No salvage.

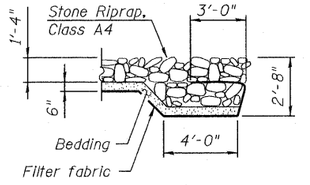
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	379.8	355.4	362.5	380.7



SECTION A-A

Typical at edges of Abutment Riprap Protection



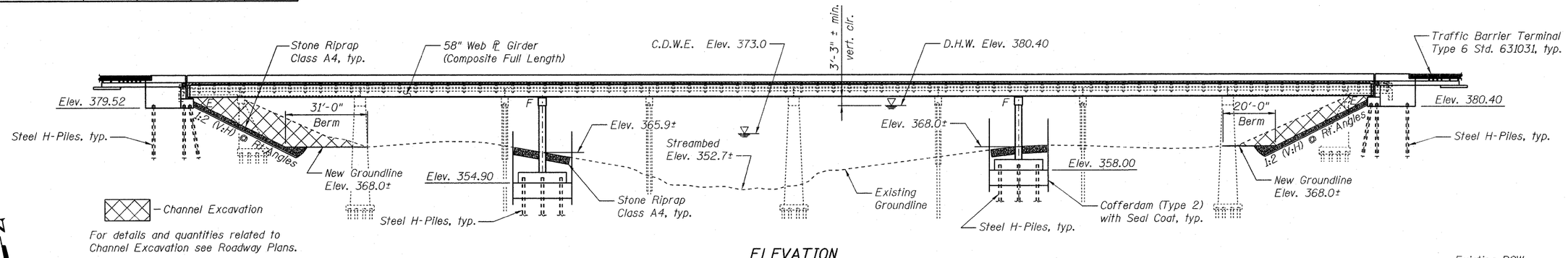
SECTION B-B

Typical at edges of Pier Riprap Protection

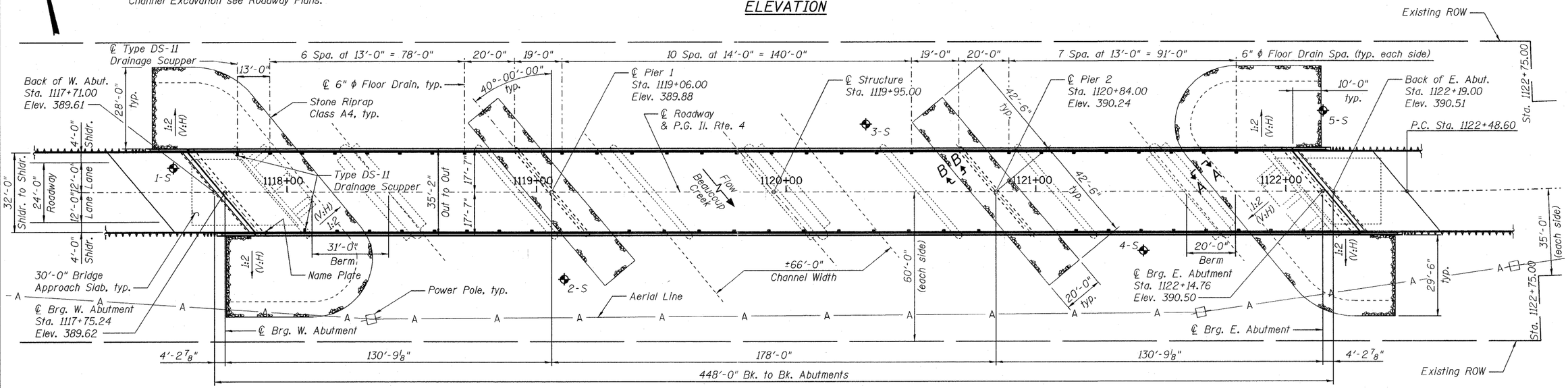
STATION 1119+95
BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. ROUTE 686 SEC. 114B-1
LOADING HL-93
STRUCTURE NO. 039-0074

NAME PLATE

See Std. 515001



ELEVATION



PLAN

WATERWAY INFORMATION

Drainage Area = 517 Sq Mi

Ex. Low Grade Elev. 384.07 @ Sta. 1105+50
Pr. Low Grade Elev. 384.07 @ Sta. 1105+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	14900	3410.0	3937.0	377.5	0.8	0.8	378.3	378.3
Design	50	22100	4192.0	4843.0	380.4	1.0	0.9	381.4	381.3
Base	100	25100	4642.0	5357.0	382.0	0.9	0.9	382.9	382.9
Overtopping		31880	5075.0	5847.0	383.5	1.3	0.9	384.8	384.4

10 Year Velocity through Existing Bridge = 4.37 fps.
10 Year Velocity through Proposed Bridge = 3.8 fps.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, Customary U.S. Units, 5th Edition

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acc. at 1.0 sec (S_{D1}) = 0.334g
Design Spectral Acc. at 0.2 sec (S_{DS}) = 0.780g
Soil Site Class D

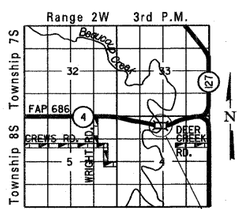
LOADING HL 93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

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

Note: See Sheet No. 2 of 35 for Curve Data and Profie Grade Along ℄ Roadway.



Proposed Structure

LOCATION SKETCH

STATE OF ILLINOIS
BENJAMIN J. ERSCHEN
081-007057
ST. LOUIS, MO
LICENSED STRUCTURAL ENGINEER

10/6/11

BENJAMIN J. ERSCHEN
ST. LOUIS, MISSOURI
ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 081-007057
EXPIRES NOV. 30, 2012

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN AND ELEVATION
IL ROUTE 4 OVER BEAUCOUP CREEK
FAP ROUTE 686 - SECTION 114B-1
JACKSON COUNTY
STATION 1119+95.00
STRUCTURE NO. 039-0074

JACOBS

USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	
	CHECKED - R. NIEMIETZ	REVISED -	
PLOT DATE = 06-OCT-2011	DRAWN - C. SALLADE	REVISED -	
FILE NAME=039-0074978049-Plan & Elevation.dgn	CHECKED - B. ERSCHEN	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 039-0074
SHEET NO. 1 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	3	24
		CONTRACT NO. 78283		
		ILLINOIS FED. AID PROJECT		

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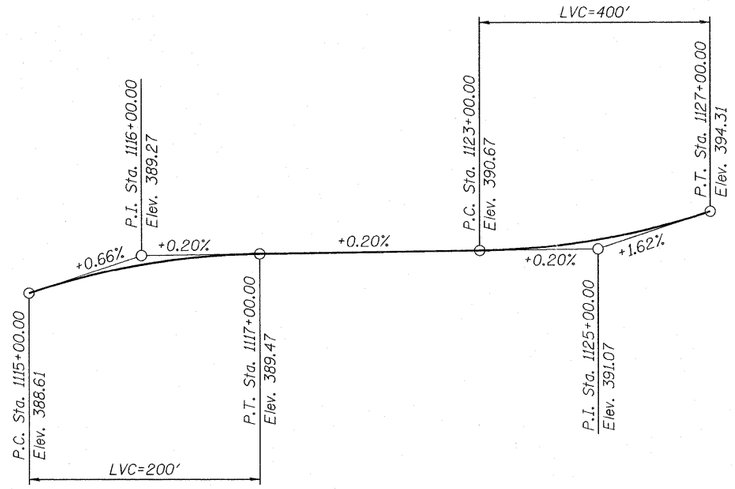

PROFILE GRADE
(Along ℄ Roadway)

CURVE DATA
(Il. Rte. 4)

D= 3°-42'-32" S.E.= 7.3%
R= 1544.83' P.C. Sta.= 1122+48.60
L= 878.40' P.T. Sta.= 1131+27.00
T= 451.43'
E= 64.41'

Note: Transition from normal crown to full superelevation is attained linearly from Sta. 1122+34.00 to Sta. 1124+38.00.

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts 7/8 in. ϕ, holes 15/16 in. ϕ unless otherwise noted.

Calculated weight of Structural Steel = 636,850 lbs.

All structural steel shall be AASHTO M270 Grade 50W except expansion joints which shall be AASHTO M270 Grade 50. All structural steel shall be cleaned as specified in the Special Provision for "Surface Prepatation and Painting Requirements for Weathering Steel".

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

*** Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

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

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

*** Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 1/8 inch (0.01 ft). Adjustment shall be made either by grinding the surface or by shimming the bearings.

*** Concrete Sealer shall be applied to the designated areas of the East and West Abutments.

All structural steel and exposed surfaces of bearings within a distance of 10 ft. each way from the deck joints shall be painted as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".

*** Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

*** Seal coat thickness design is based on the Cofferdam Design Water Elevation (CDWE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

*** Slipforming of parapets is not allowed.

*** THIS WORK IS NOT IN THE FABRICATION CONTRACT AND SHEET IS NOT INCLUDED IN THESE PLANS.

THESE PLANS ARE FOR THE FABRICATION OF THE STRUCTURAL STEEL AND BEARINGS. ALL WORK SHOWN THAT IS NOT RELATED TO THE FABRICATION IS FOR INFORMATION ONLY. IT IS NOT INCLUDED IN THIS CONTRACT AND IS IDENTIFIED AS "NOT INCLUDED IN THIS CONTRACT" OR "FOR INFORMATION ONLY."

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Furnishing Structural Steel	L. Sum	1		1
Storage of Structural Steel	Cal. Day	45		45
Elastomeric Bearing Assembly, Type II	Each	12		12
Storage of Elastomeric Bearing Assemblies	Cal. Day	45		45

INDEX OF SHEETS

1 General Plan and Elevation
2 General Structure Data
3 Foundation Layout
4-7 Top of Slab Elevations
*** 8 Top of W. Approach Slab Elevations
*** 9 Top of E. Approach Slab Elevations
10 Superstructure Plan and Section
11 Superstructure Details
*** 12-13 Bridge Approach Slab Details
*** 14 Slab Pouring Sequence
*** 15 Drainage Scupper, DS-11
16 Preformed Joint Strip Seal
17 Framing Plan and Design Data
18-20 Girder and Cross Frame Details
21 Bearing Details
22-23 West Abutment Details
24-25 East Abutment Details
26 Pier 1 Plan and Elevation
27 Pier 2 Plan and Elevation
28 Pier Details
*** 29 Bar Splicer Assembly and Mechanical Splice Details
*** 30 HP Pile Details
*** 31-35 Boring Logs

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JACOBS

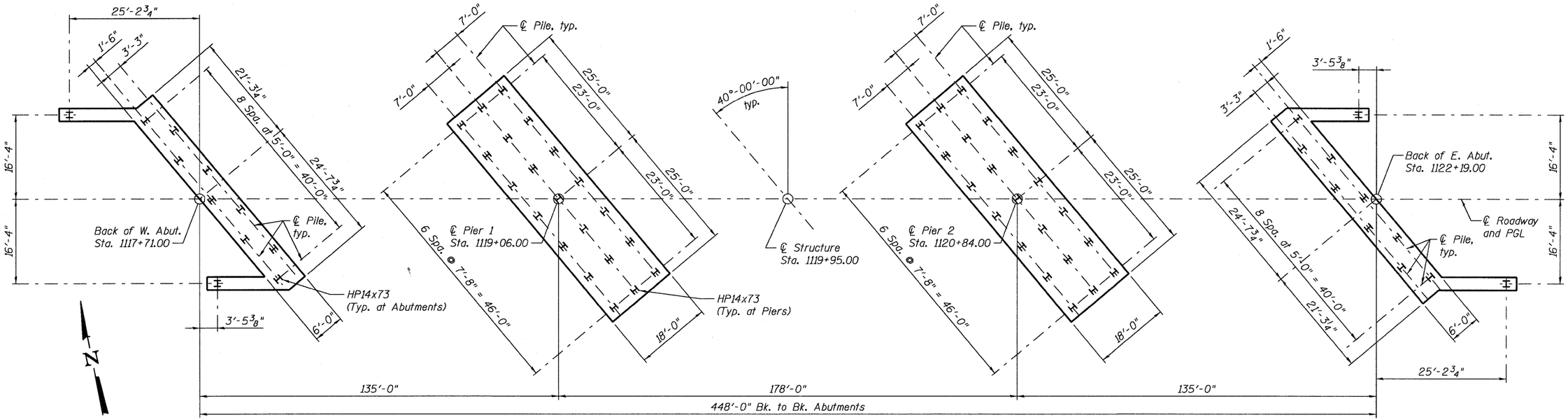
USER NAME = | DESIGNED - B. ERSCHEN | REVISED -
PLOT DATE = 06-OCT-2011 | CHECKED - R. NIEMIETZ | REVISED -
FILE NAME=039-0074978049-Structure Data.dgn | DRAWN - C. SALLADE | REVISED -
CHECKED - B. ERSCHEN | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

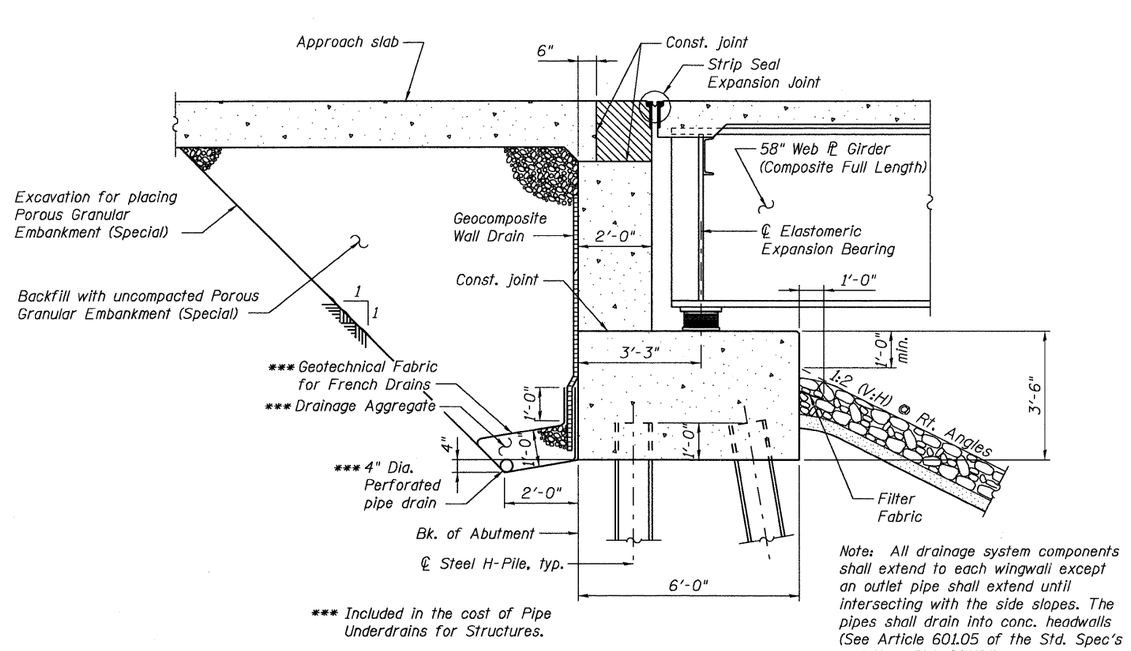
GENERAL STRUCTURE DATA
STRUCTURE NO. 039-0074
SHEET NO. 2 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	4	24
		CONTRACT NO. 78283		
	ILLINOIS	FED. AID PROJECT		

NOT FOR CONSTRUCTION



FOUNDATION LAYOUT

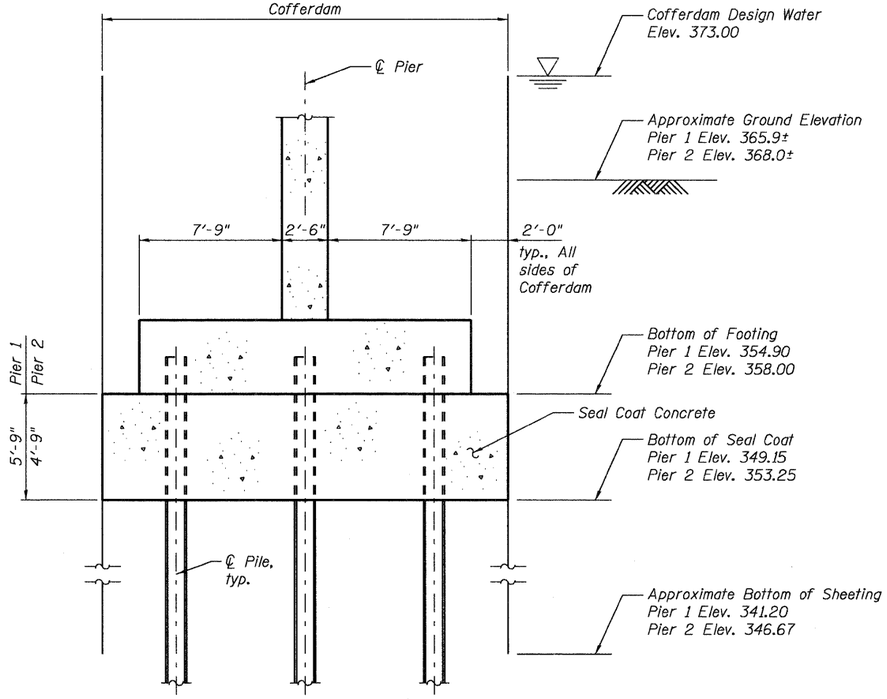


*** Included in the cost of Pipe Underdrains for Structures.

Note: All drainage system components shall extend to each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into conc. headwalls (See Article 601.05 of the Std. Spec's and Hwy. Std. 601101).

SECTION THRU ABUTMENT

(Horiz. dim. @ Rt. L's)



SECTION THRU COFFERDAM

FOR INFORMATION ONLY

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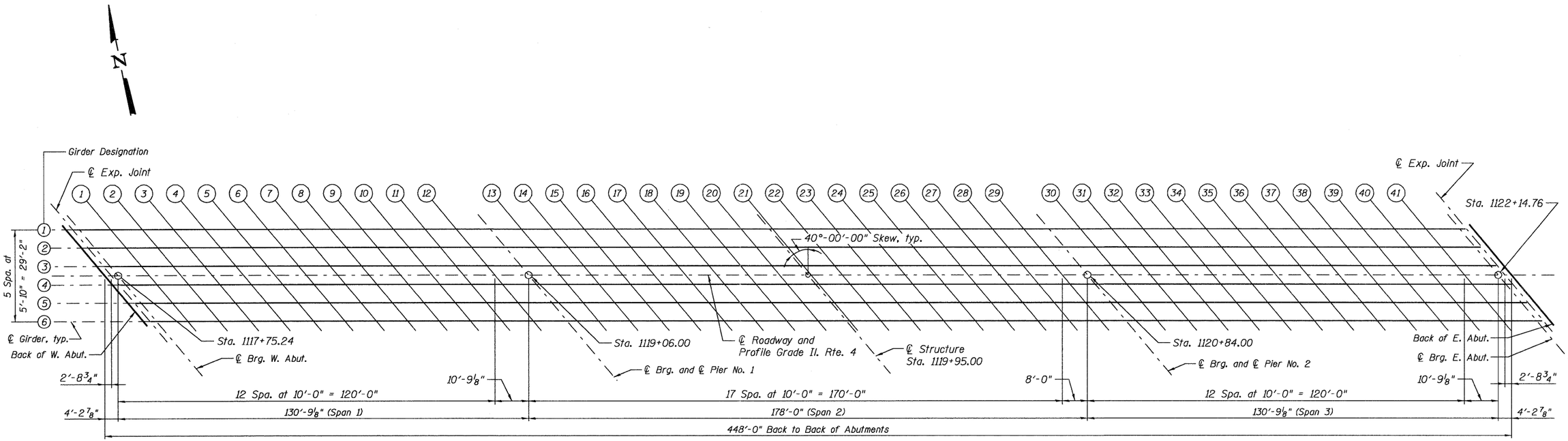
		CHECKED - N. KHATRI	REVISED -		
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -		SHEET NO. 3 OF 35 SHEETS
FILE NAME=039-0074978049-Foundation Plan.dgn		CHECKED - J. SMITH	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	5	24
		CONTRACT NO. 78283		
		ILLINOIS FED. AID PROJECT		

NOT FOR CONSTRUCTION



PLAN

FOR INFORMATION ONLY

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		CHECKED - M. CRONIN	REVISED -			686	114F-1	JACKSON	6	24
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78283		
FILE NAME=039-0074978049-TOS-01.dgn		CHECKED - F. CAMBA	REVISED -		SHEET NO. 4 OF 35 SHEETS			ILLINOIS FED. AID PROJECT		

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	1117+58.76	-14.58	389.35	-
℄ W. Exp. Jt.	1117+61.49	-14.58	389.35	-
℄ Brg. W. Abut.	1117+63.01	-14.58	389.35	389.38
1	1117+73.01	-14.58	389.37	389.44
2	1117+83.01	-14.58	389.39	389.50
3	1117+93.01	-14.58	389.41	389.56
4	1118+03.01	-14.58	389.43	389.60
5	1118+13.01	-14.58	389.45	389.62
6	1118+23.01	-14.58	389.47	389.64
7	1118+33.01	-14.58	389.49	389.64
8	1118+43.01	-14.58	389.51	389.63
9	1118+53.01	-14.58	389.53	389.62
10	1118+63.01	-14.58	389.55	389.62
11	1118+73.01	-14.58	389.57	389.61
12	1118+83.01	-14.58	389.59	389.62
℄ Brg. Pier 1	1118+93.76	-14.58	389.62	389.64
13	1119+03.76	-14.58	389.64	389.68
14	1119+13.76	-14.58	389.66	389.72
15	1119+23.76	-14.58	389.68	389.78
16	1119+33.76	-14.58	389.70	389.84
17	1119+43.76	-14.58	389.72	389.90
18	1119+53.76	-14.58	389.74	389.96
19	1119+63.76	-14.58	389.76	390.01
20	1119+73.76	-14.58	389.78	390.05
21	1119+83.76	-14.58	389.80	390.08
22	1119+93.76	-14.58	389.82	390.09
23	1120+03.76	-14.58	389.84	390.09
24	1120+13.76	-14.58	389.86	390.07
25	1120+23.76	-14.58	389.88	390.05
26	1120+33.76	-14.58	389.90	390.03
27	1120+43.76	-14.58	389.92	390.01
28	1120+53.76	-14.58	389.94	389.99
29	1120+63.76	-14.58	389.96	389.99
℄ Brg. Pier 2	1120+71.76	-14.58	389.97	389.99
30	1120+81.76	-14.58	389.99	390.02
31	1120+91.76	-14.58	390.01	390.05
32	1121+01.76	-14.58	390.03	390.09
33	1121+11.76	-14.58	390.05	390.14
34	1121+21.76	-14.58	390.07	390.19
35	1121+31.76	-14.58	390.09	390.23
36	1121+41.76	-14.58	390.11	390.27
37	1121+51.76	-14.58	390.13	390.30
38	1121+61.76	-14.58	390.15	390.32
39	1121+71.76	-14.58	390.17	390.32
40	1121+81.76	-14.58	390.19	390.30
41	1121+91.76	-14.58	390.21	390.28
℄ Brg. E. Abut.	1122+02.52	-14.58	390.23	390.25
℄ E. Exp. Jt.	1122+04.04	-14.58	390.24	-
Bk. E. Abut.	1122+06.76	-14.58	390.24	-

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	1117+63.66	-8.75	389.46	-
℄ W. Exp. Jt.	1117+66.38	-8.75	389.47	-
℄ Brg. W. Abut.	1117+67.90	-8.75	389.47	389.49
1	1117+77.90	-8.75	389.49	389.55
2	1117+87.90	-8.75	389.51	389.61
3	1117+97.90	-8.75	389.53	389.66
4	1118+07.90	-8.75	389.55	389.70
5	1118+17.90	-8.75	389.57	389.73
6	1118+27.90	-8.75	389.59	389.74
7	1118+37.90	-8.75	389.61	389.75
8	1118+47.90	-8.75	389.63	389.74
9	1118+57.90	-8.75	389.65	389.73
10	1118+67.90	-8.75	389.67	389.73
11	1118+77.90	-8.75	389.69	389.73
12	1118+87.90	-8.75	389.71	389.73
℄ Brg. Pier 1	1118+98.66	-8.75	389.73	389.75
13	1119+08.66	-8.75	389.75	389.79
14	1119+18.66	-8.75	389.77	389.83
15	1119+28.66	-8.75	389.79	389.89
16	1119+38.66	-8.75	389.81	389.95
17	1119+48.66	-8.75	389.83	390.01
18	1119+58.66	-8.75	389.85	390.06
19	1119+68.66	-8.75	389.87	390.11
20	1119+78.66	-8.75	389.89	390.15
21	1119+88.66	-8.75	389.91	390.18
22	1119+98.66	-8.75	389.93	390.18
23	1120+08.66	-8.75	389.95	390.19
24	1120+18.66	-8.75	389.97	390.17
25	1120+28.66	-8.75	389.99	390.16
26	1120+38.66	-8.75	390.01	390.14
27	1120+48.66	-8.75	390.03	390.12
28	1120+58.66	-8.75	390.05	390.11
29	1120+68.66	-8.75	390.07	390.11
℄ Brg. Pier 2	1120+76.66	-8.75	390.09	390.11
30	1120+86.66	-8.75	390.11	390.13
31	1120+96.66	-8.75	390.13	390.16
32	1121+06.66	-8.75	390.15	390.20
33	1121+16.66	-8.75	390.17	390.25
34	1121+26.66	-8.75	390.19	390.30
35	1121+36.66	-8.75	390.21	390.34
36	1121+46.66	-8.75	390.23	390.38
37	1121+56.66	-8.75	390.25	390.41
38	1121+66.66	-8.75	390.27	390.42
39	1121+76.66	-8.75	390.29	390.42
40	1121+86.66	-8.75	390.31	390.41
41	1121+96.66	-8.75	390.33	390.40
℄ Brg. E. Abut.	1122+07.42	-8.75	390.35	390.37
℄ E. Exp. Jt.	1122+08.93	-8.75	390.35	-
Bk. E. Abut.	1122+11.66	-8.75	390.36	-

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	1117+68.55	-2.92	389.56	-
℄ W. Exp. Jt.	1117+71.28	-2.92	389.57	-
℄ Brg. W. Abut.	1117+72.80	-2.92	389.57	389.59
1	1117+82.80	-2.92	389.59	389.66
2	1117+92.80	-2.92	389.61	389.71
3	1118+02.80	-2.92	389.63	389.76
4	1118+12.80	-2.92	389.65	389.80
5	1118+22.80	-2.92	389.67	389.83
6	1118+32.80	-2.92	389.69	389.84
7	1118+42.80	-2.92	389.71	389.85
8	1118+52.80	-2.92	389.73	389.84
9	1118+62.80	-2.92	389.75	389.84
10	1118+72.80	-2.92	389.77	389.83
11	1118+82.80	-2.92	389.79	389.83
12	1118+92.80	-2.92	389.81	389.83
℄ Brg. Pier 1	1119+03.55	-2.92	389.83	389.85
13	1119+13.55	-2.92	389.85	389.89
14	1119+23.55	-2.92	389.87	389.93
15	1119+33.55	-2.92	389.89	389.99
16	1119+43.55	-2.92	389.91	390.05
17	1119+53.55	-2.92	389.93	390.11
18	1119+63.55	-2.92	389.95	390.16
19	1119+73.55	-2.92	389.97	390.21
20	1119+83.55	-2.92	389.99	390.25
21	1119+93.55	-2.92	390.01	390.28
22	1120+03.55	-2.92	390.03	390.28
23	1120+13.55	-2.92	390.05	390.29
24	1120+23.55	-2.92	390.07	390.28
25	1120+33.55	-2.92	390.09	390.26
26	1120+43.55	-2.92	390.11	390.24
27	1120+53.55	-2.92	390.13	390.22
28	1120+63.55	-2.92	390.15	390.21
29	1120+73.55	-2.92	390.17	390.21
℄ Brg. Pier 2	1120+81.55	-2.92	390.19	390.21
30	1120+91.55	-2.92	390.21	390.23
31	1121+01.55	-2.92	390.23	390.26
32	1121+11.55	-2.92	390.25	390.31
33	1121+21.55	-2.92	390.27	390.35
34	1121+31.55	-2.92	390.29	390.40
35	1121+41.55	-2.92	390.31	390.44
36	1121+51.55	-2.92	390.33	390.48
37	1121+61.55	-2.92	390.35	390.51
38	1121+71.55	-2.92	390.37	390.52
39	1121+81.55	-2.92	390.39	390.52
40	1121+91.55	-2.92	390.41	390.51
41	1122+01.55	-2.92	390.43	390.50
℄ Brg. E. Abut.	1122+12.31	-2.92	390.45	390.47
℄ E. Exp. Jt.	1122+13.83	-2.92	390.45	-
Bk. E. Abut.	1122+16.55	-2.92	390.46	-

FOR INFORMATION ONLY

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - M. CRONIN	REVISED -	
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -	
FILE NAME=039-0074978049-TOS-02.dgn		CHECKED - E. KRACK	REVISED -	

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 039-0074
SHEET NO. 5 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	7	24
		CONTRACT NO. 78283		
	ILLINOIS FED. AID PROJECT			

℄ ROADWAY AND PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	1117+71.00	0.00	389.61	-
℄ W. Exp. Jt.	1117+73.73	0.00	389.62	-
℄ Brg. W. Abut.	1117+75.24	0.00	389.62	389.64
1	1117+85.24	0.00	389.64	389.71
2	1117+95.24	0.00	389.66	389.76
3	1118+05.24	0.00	389.68	389.81
4	1118+15.24	0.00	389.70	389.85
5	1118+25.24	0.00	389.72	389.88
6	1118+35.24	0.00	389.74	389.89
7	1118+45.24	0.00	389.76	389.90
8	1118+55.24	0.00	389.78	389.89
9	1118+65.24	0.00	389.80	389.89
10	1118+75.24	0.00	389.82	389.88
11	1118+85.24	0.00	389.84	389.88
12	1118+95.24	0.00	389.86	389.88
℄ Brg. Pier 1	1119+06.00	0.00	389.88	389.90
13	1119+16.00	0.00	389.90	389.94
14	1119+26.00	0.00	389.92	389.98
15	1119+36.00	0.00	389.94	390.04
16	1119+46.00	0.00	389.96	390.10
17	1119+56.00	0.00	389.98	390.16
18	1119+66.00	0.00	390.00	390.21
19	1119+76.00	0.00	390.02	390.26
20	1119+86.00	0.00	390.04	390.30
21	1119+96.00	0.00	390.06	390.33
22	1120+06.00	0.00	390.08	390.33
23	1120+16.00	0.00	390.10	390.34
24	1120+26.00	0.00	390.12	390.33
25	1120+36.00	0.00	390.14	390.31
26	1120+46.00	0.00	390.16	390.29
27	1120+56.00	0.00	390.18	390.27
28	1120+66.00	0.00	390.20	390.26
29	1120+76.00	0.00	390.22	390.26
℄ Brg. Pier 2	1120+84.00	0.00	390.24	390.26
30	1120+94.00	0.00	390.26	390.28
31	1121+04.00	0.00	390.28	390.32
32	1121+14.00	0.00	390.30	390.36
33	1121+24.00	0.00	390.32	390.40
34	1121+34.00	0.00	390.34	390.45
35	1121+44.00	0.00	390.36	390.49
36	1121+54.00	0.00	390.38	390.53
37	1121+64.00	0.00	390.40	390.56
38	1121+74.00	0.00	390.42	390.57
39	1121+84.00	0.00	390.44	390.57
40	1121+94.00	0.00	390.46	390.56
41	1122+04.00	0.00	390.48	390.55
℄ Brg. E. Abut.	1122+14.76	0.00	390.50	390.52
℄ E. Exp. Jt.	1122+16.27	0.00	390.50	-
Bk. E. Abut.	1122+19.00	0.00	390.51	-

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	1117+73.45	2.92	389.57	-
℄ W. Exp. Jt.	1117+76.17	2.92	389.58	-
℄ Brg. W. Abut.	1117+77.69	2.92	389.58	389.60
1	1117+87.69	2.92	389.60	389.66
2	1117+97.69	2.92	389.62	389.72
3	1118+07.69	2.92	389.64	389.77
4	1118+17.69	2.92	389.66	389.81
5	1118+27.69	2.92	389.68	389.84
6	1118+37.69	2.92	389.70	389.85
7	1118+47.69	2.92	389.72	389.86
8	1118+57.69	2.92	389.74	389.85
9	1118+67.69	2.92	389.76	389.85
10	1118+77.69	2.92	389.78	389.84
11	1118+87.69	2.92	389.80	389.84
12	1118+97.69	2.92	389.82	389.84
℄ Brg. Pier 1	1119+08.45	2.92	389.84	389.86
13	1119+18.45	2.92	389.86	389.90
14	1119+28.45	2.92	389.88	389.94
15	1119+38.45	2.92	389.90	390.00
16	1119+48.45	2.92	389.92	390.06
17	1119+58.45	2.92	389.94	390.12
18	1119+68.45	2.92	389.96	390.17
19	1119+78.45	2.92	389.98	390.22
20	1119+88.45	2.92	390.00	390.26
21	1119+98.45	2.92	390.02	390.29
22	1120+08.45	2.92	390.04	390.29
23	1120+18.45	2.92	390.06	390.30
24	1120+28.45	2.92	390.08	390.28
25	1120+38.45	2.92	390.10	390.27
26	1120+48.45	2.92	390.12	390.25
27	1120+58.45	2.92	390.14	390.23
28	1120+68.45	2.92	390.16	390.22
29	1120+78.45	2.92	390.18	390.22
℄ Brg. Pier 2	1120+86.45	2.92	390.20	390.22
30	1120+96.45	2.92	390.22	390.24
31	1121+06.45	2.92	390.24	390.27
32	1121+16.45	2.92	390.26	390.32
33	1121+26.45	2.92	390.28	390.36
34	1121+36.45	2.92	390.30	390.41
35	1121+46.45	2.92	390.32	390.45
36	1121+56.45	2.92	390.34	390.49
37	1121+66.45	2.92	390.36	390.52
38	1121+76.45	2.92	390.38	390.53
39	1121+86.45	2.92	390.40	390.53
40	1121+96.45	2.92	390.42	390.52
41	1122+06.45	2.92	390.44	390.51
℄ Brg. E. Abut.	1122+17.20	2.92	390.46	390.48
℄ E. Exp. Jt.	1122+18.72	2.92	390.46	-
Bk. E. Abut.	1122+21.45	2.92	390.47	-

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	1117+78.34	8.75	389.49	-
℄ W. Exp. Jt.	1117+81.07	8.75	389.50	-
℄ Brg. W. Abut.	1117+82.58	8.75	389.50	389.52
1	1117+92.58	8.75	389.52	389.58
2	1118+02.58	8.75	389.54	389.64
3	1118+12.58	8.75	389.56	389.69
4	1118+22.58	8.75	389.58	389.73
5	1118+32.58	8.75	389.60	389.76
6	1118+42.58	8.75	389.62	389.77
7	1118+52.58	8.75	389.64	389.77
8	1118+62.58	8.75	389.66	389.77
9	1118+72.58	8.75	389.68	389.76
10	1118+82.58	8.75	389.70	389.76
11	1118+92.58	8.75	389.72	389.76
12	1119+02.58	8.75	389.74	389.76
℄ Brg. Pier 1	1119+13.34	8.75	389.76	389.78
13	1119+23.34	8.75	389.78	389.82
14	1119+33.34	8.75	389.80	389.86
15	1119+43.34	8.75	389.82	389.92
16	1119+53.34	8.75	389.84	389.98
17	1119+63.34	8.75	389.86	390.04
18	1119+73.34	8.75	389.88	390.09
19	1119+83.34	8.75	389.90	390.14
20	1119+93.34	8.75	389.92	390.18
21	1120+03.34	8.75	389.94	390.20
22	1120+13.34	8.75	389.96	390.21
23	1120+23.34	8.75	389.98	390.21
24	1120+33.34	8.75	390.00	390.20
25	1120+43.34	8.75	390.02	390.19
26	1120+53.34	8.75	390.04	390.17
27	1120+63.34	8.75	390.06	390.15
28	1120+73.34	8.75	390.08	390.14
29	1120+83.34	8.75	390.10	390.14
℄ Brg. Pier 2	1120+91.34	8.75	390.12	390.14
30	1121+01.34	8.75	390.14	390.16
31	1121+11.34	8.75	390.16	390.19
32	1121+21.34	8.75	390.18	390.23
33	1121+31.34	8.75	390.20	390.28
34	1121+41.34	8.75	390.22	390.33
35	1121+51.34	8.75	390.24	390.37
36	1121+61.34	8.75	390.26	390.41
37	1121+71.34	8.75	390.28	390.44
38	1121+81.34	8.75	390.30	390.45
39	1121+91.34	8.75	390.32	390.45
40	1122+01.34	8.75	390.34	390.44
41	1122+11.34	8.75	390.36	390.42
℄ Brg. E. Abut.	1122+22.10	8.75	390.38	390.40
℄ E. Exp. Jt.	1122+23.62	8.75	390.38	-
Bk. E. Abut.	1122+26.34	8.75	390.39	-

FOR INFORMATION ONLY

JACOBS

USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	
	CHECKED - M. CRONIN	REVISED -	
PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -	
FILE NAME=039-0074978049-TOS-03.dgn	CHECKED - E. KRACK	REVISED -	

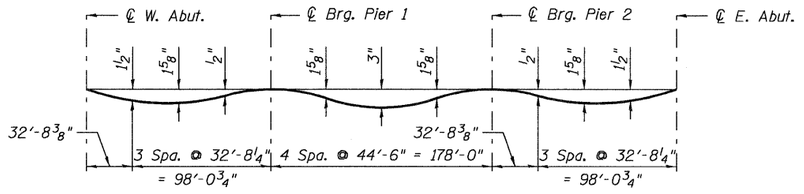
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 039-0074
SHEET NO. 6 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	8	24
		CONTRACT NO. 78283		
ILLINOIS	FED. AID PROJECT			

GIRDER 6

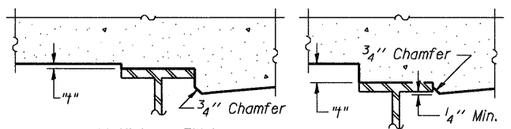
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	1117+83.24	14.58	389.40	-
℄ W. Exp. Jt.	1117+85.96	14.58	389.40	-
℄ Brg. W. Abut.	1117+87.48	14.58	389.40	389.42
1	1117+97.48	14.58	389.42	389.49
2	1118+07.48	14.58	389.44	389.55
3	1118+17.48	14.58	389.46	389.61
4	1118+27.48	14.58	389.48	389.65
5	1118+37.48	14.58	389.50	389.67
6	1118+47.48	14.58	389.52	389.69
7	1118+57.48	14.58	389.54	389.69
8	1118+67.48	14.58	389.56	389.68
9	1118+77.48	14.58	389.58	389.67
10	1118+87.48	14.58	389.60	389.67
11	1118+97.48	14.58	389.62	389.66
12	1119+07.48	14.58	389.64	389.67
℄ Brg. Pier 1	1119+18.24	14.58	389.67	389.69
13	1119+28.24	14.58	389.69	389.73
14	1119+38.24	14.58	389.71	389.77
15	1119+48.24	14.58	389.73	389.83
16	1119+58.24	14.58	389.75	389.89
17	1119+68.24	14.58	389.77	389.95
18	1119+78.24	14.58	389.79	390.01
19	1119+88.24	14.58	389.81	390.06
20	1119+98.24	14.58	389.83	390.10
21	1120+08.24	14.58	389.85	390.13
22	1120+18.24	14.58	389.87	390.13
23	1120+28.24	14.58	389.89	390.14
24	1120+38.24	14.58	389.91	390.12
25	1120+48.24	14.58	389.93	390.10
26	1120+58.24	14.58	389.95	390.08
27	1120+68.24	14.58	389.97	390.06
28	1120+78.24	14.58	389.99	390.04
29	1120+88.24	14.58	390.01	390.04
℄ Brg. Pier 2	1120+96.24	14.58	390.02	390.04
30	1121+06.24	14.58	390.04	390.07
31	1121+16.24	14.58	390.06	390.10
32	1121+26.24	14.58	390.08	390.14
33	1121+36.24	14.58	390.10	390.19
34	1121+46.24	14.58	390.12	390.24
35	1121+56.24	14.58	390.14	390.28
36	1121+66.24	14.58	390.16	390.32
37	1121+76.24	14.58	390.18	390.35
38	1121+86.24	14.58	390.20	390.37
39	1121+96.24	14.58	390.22	390.36
40	1122+06.24	14.58	390.24	390.35
41	1122+16.24	14.58	390.26	390.33
℄ Brg. E. Abut.	1122+26.99	14.58	390.28	390.30
℄ E. Exp. Jt.	1122+28.51	14.58	390.29	-
Bk. E. Abut.	1122+31.24	14.58	390.29	-



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections and Grinding" as shown on sheets 5, 6 and 7 of 35.



At Minimum Fillet

At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 4 of 35. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheet numbers 5, 6 and 7 of 35, minus slab thickness, equals the fillet heights "t" above top flange of beams.

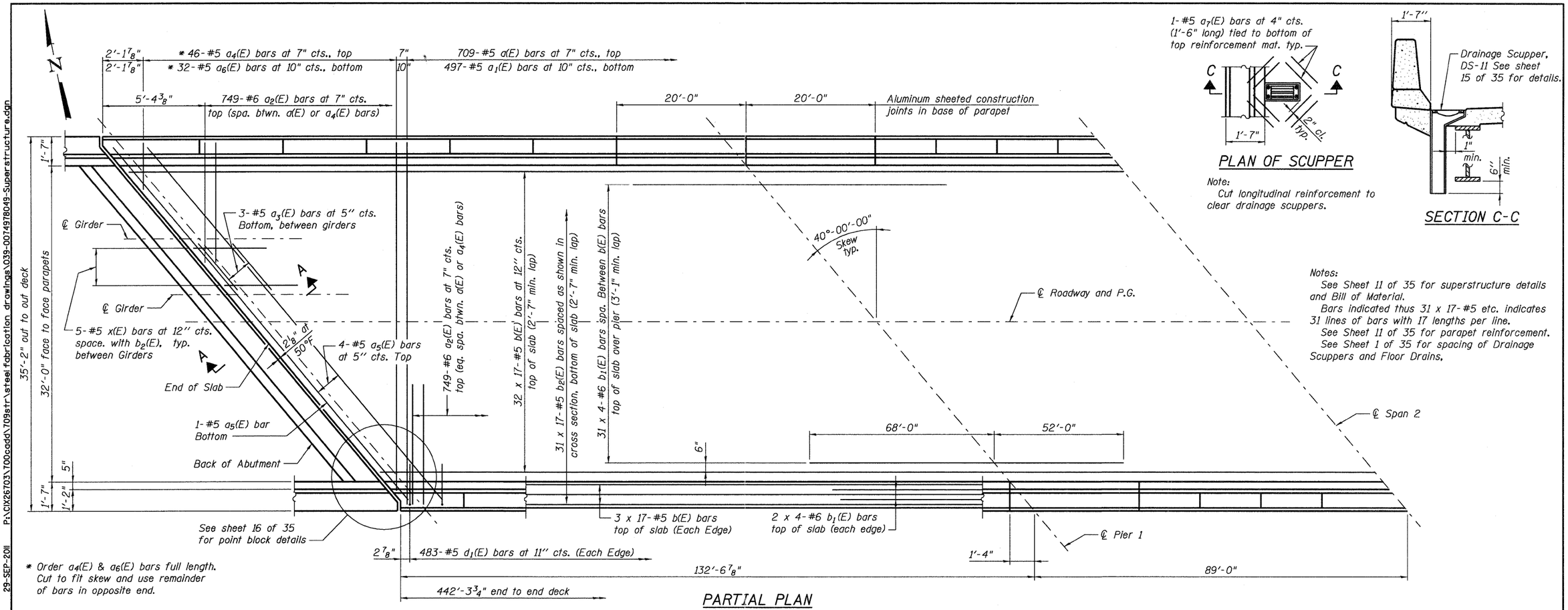
The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 5, 6, and 7 of 35. For grinding the deck, see Special Provisions.

FILLET HEIGHTS

FOR INFORMATION ONLY

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - M. CRONIN	REVISED -			686	114F-1	JACKSON	9	24
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78283		
FILE NAME=039-0074978049-TOS-04.dgn		CHECKED - E. KRACK	REVISED -		SHEET NO. 7 OF 35 SHEETS			ILLINOIS FED. AID PROJECT		

NOT FOR CONSTRUCTION



* Order a4(E) & a6(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

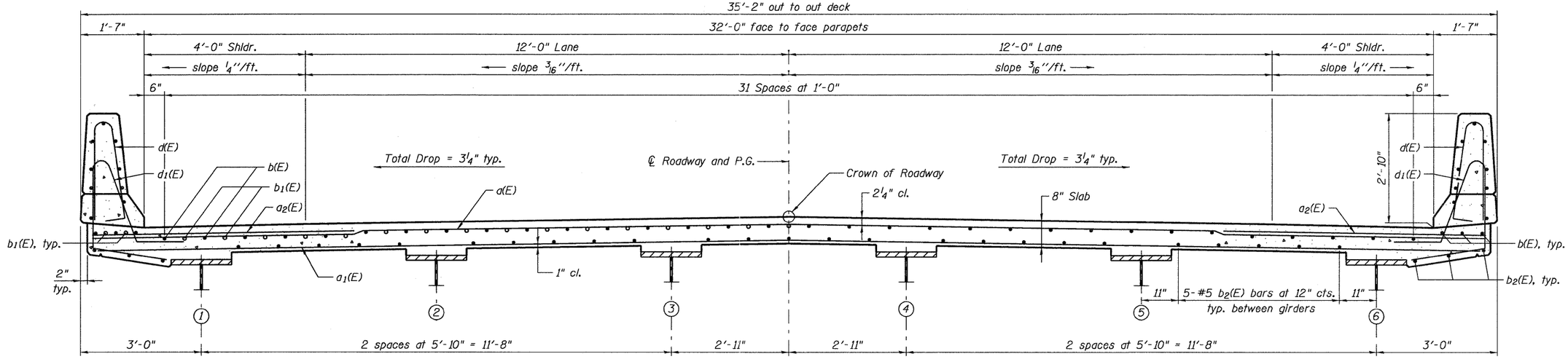
PARTIAL PLAN

PLAN OF SCUPPER

Note:
Cut longitudinal reinforcement to clear drainage scuppers.

SECTION C-C

Notes:
See Sheet 11 of 35 for superstructure details and Bill of Material.
Bars indicated thus 31 x 17-#5 etc. indicates 31 lines of bars with 17 lengths per line.
See Sheet 11 of 35 for parapet reinforcement.
See Sheet 1 of 35 for spacing of Drainage Scuppers and Floor Drains.



NEAR PIER NEAR MIDSPAN

CROSS SECTION

(Looking East/Ahead Station)

FOR INFORMATION ONLY

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE PLAN AND SECTION STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - M. CRONIN	REVISED -			686	114F-1	JACKSON	10	24
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78283		
FILE NAME=039-0074978049-Superstructure.dgn		CHECKED - F. CAMBA	REVISED -		SHEET NO. 10 OF 35 SHEETS			ILLINOIS FED. AID PROJECT		

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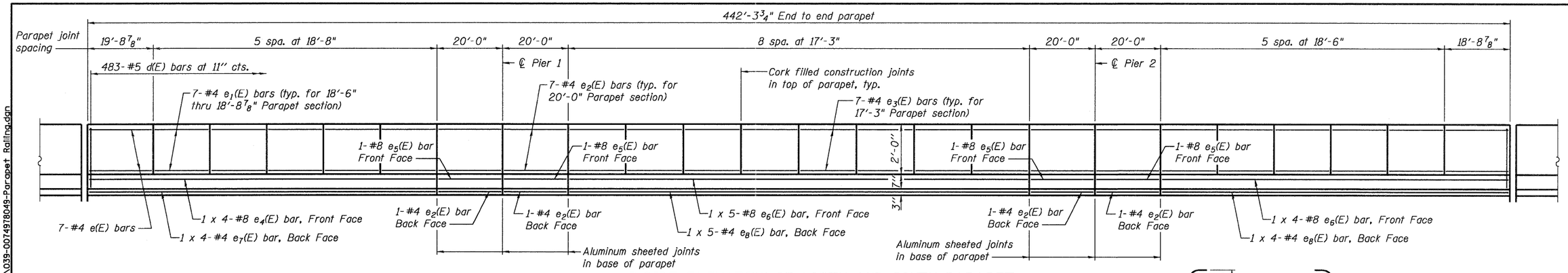
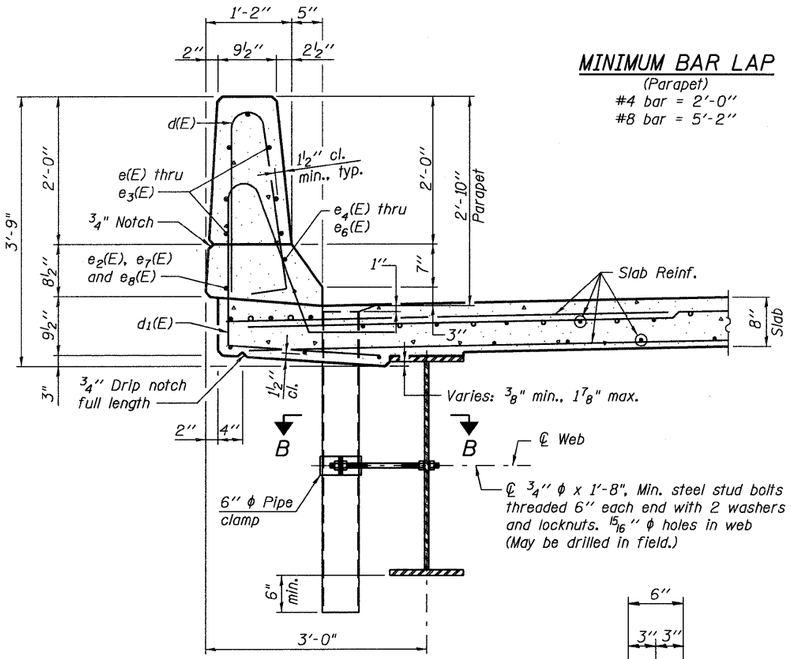
NOT FOR CONSTRUCTION



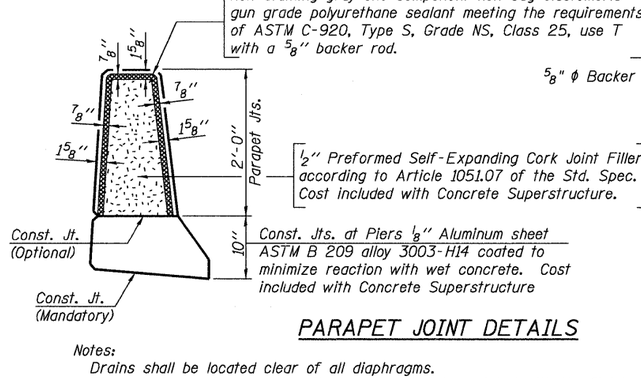
INSIDE ELEVATION OF NORTH AND SOUTH PARAPET

MINIMUM BAR LAP

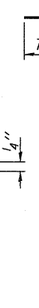
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

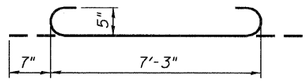


SECTION THRU PARAPET

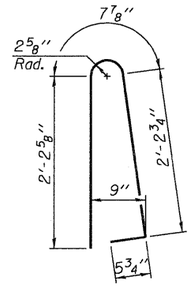


PARAPET JOINT DETAILS

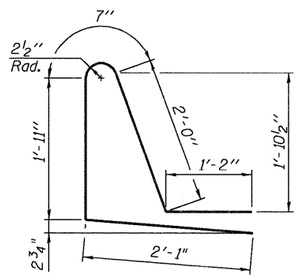




a3(E) BAR



BAR d(E)

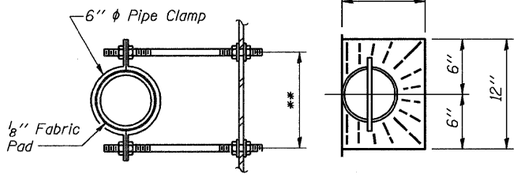


BAR d1(E)

SUPERSTRUCTURE BILL OF MATERIAL

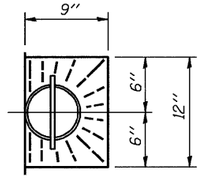
Bar	No.	Size	Length	Shape
d(E)	709	#5	34'-6"	——
d1(E)	497	#5	34'-6"	——
d2(E)	1498	#6	6'-6"	——
d3(E)	30	#5	8'-5"	⌒
d4(E)*	46	#5	36'-2"	——
d5(E)	10	#5	45'-0"	——
d6(E)*	32	#5	35'-10"	——
d7(E)	16	#5	1'-6"	——
b(E)	646	#5	28'-6"	——
b1(E)	280	#6	32'-6"	——
b2(E)	527	#5	28'-6"	——
d(E)	966	#5	5'-7"	⌐
d1(E)	966	#5	7'-9"	⌐
e(E)	14	#4	19'-6"	——
e1(E)	154	#4	18'-3"	——
e2(E)	64	#4	19'-9"	——
e3(E)	112	#4	17'-0"	——
e4(E)	8	#8	32'-1"	——
e5(E)	8	#8	19'-9"	——
e6(E)	18	#8	31'-9"	——
e7(E)	8	#4	29'-9"	——
e8(E)	18	#4	29'-3"	——
x(E)	50	#5	6'-8"	⌐
Reinforcement Bars, Epoxy Coated			Pound	131,350
Concrete Superstructure			Cu. Yds.	517.3

Bars indicated thus 1 x 5-#8 etc. indicates 1 line of bars with 5 lengths per line.



SECTION B-B

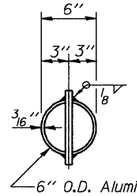
** Dimension as required by Pipe Clamp



TOP PLAN

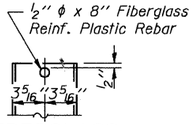
FLOOR DRAIN DETAILS

(52 Req'd.)

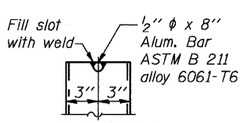


TOP PLAN

(Showing Aluminum Tube)

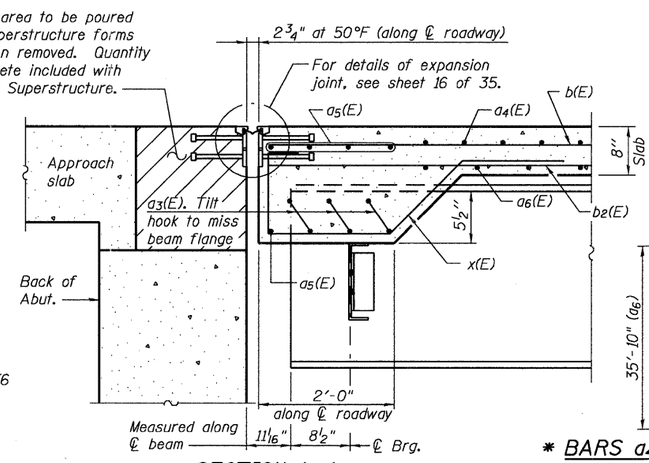


FIBERGLASS PIPE

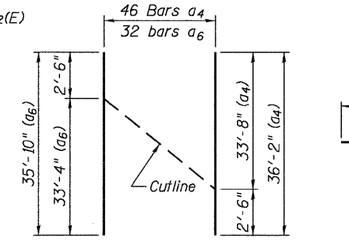


ALUMINUM TUBE

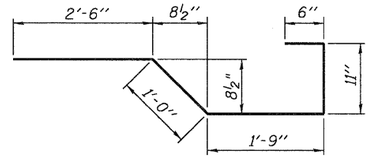
Notes:
Drains shall be located clear of all diaphragms.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coating's Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.



SECTION A-A



* BARS d4 AND d6 CUTTING DIAGRAM



BAR x(E)

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JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - M. CRONIN	REVISED -	
	PLOT DATE = 29-SEP-2011	DRAWN - E. KRACK	REVISED -	
FILE NAME=039-0074978049-Parapet Railing.dgn		CHECKED - F. CAMBA	REVISED -	

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 039-0074
SHEET NO. 11 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	11	24
		CONTRACT NO. 78283		
		ILLINOIS	FED. AID PROJECT	

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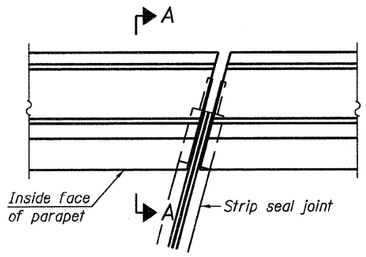
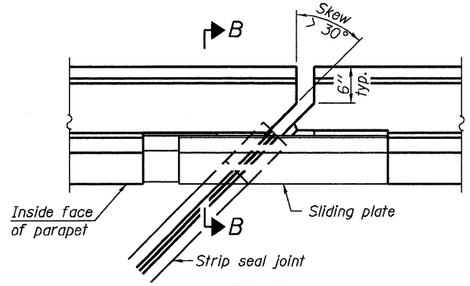
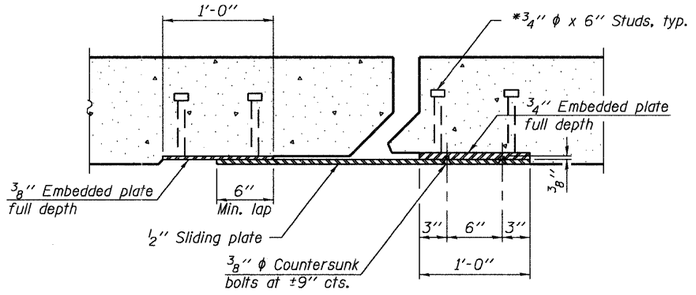
NOT FOR CONSTRUCTION



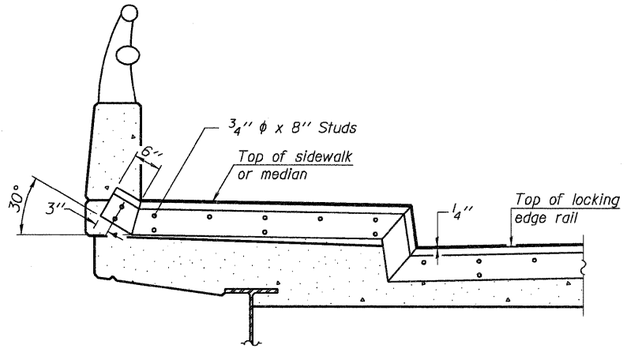
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

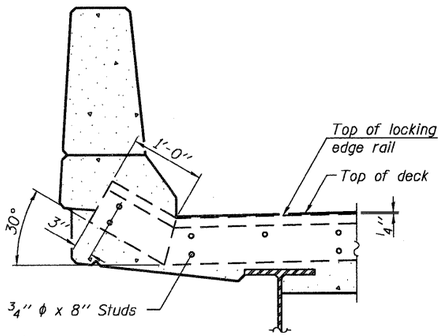


SECTION C-C

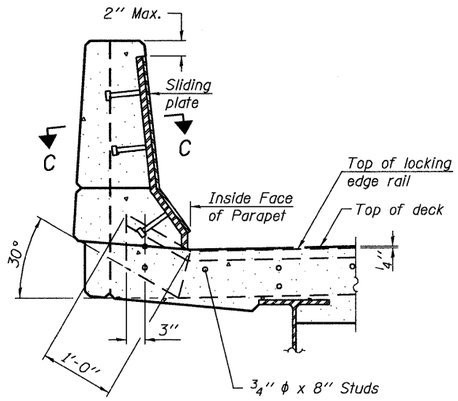


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

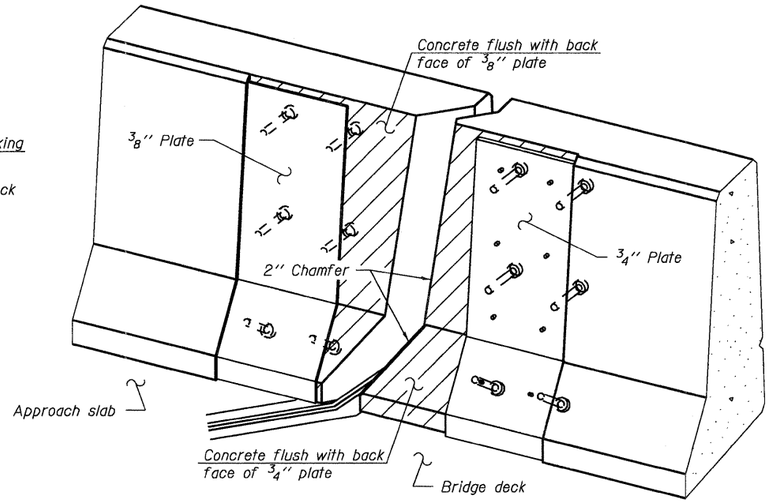
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



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.

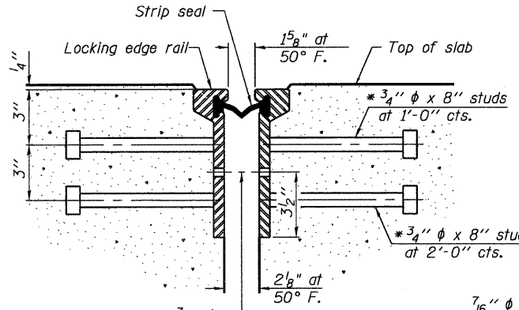
The manufacturer's recommended installation methods shall be followed.

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.

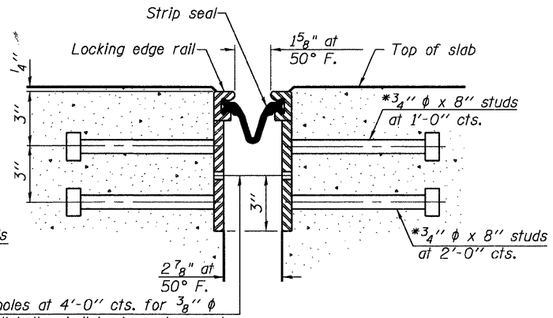
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

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.

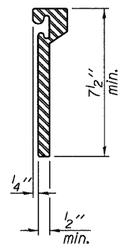
SECTION THRU ROLLED RAIL JOINT



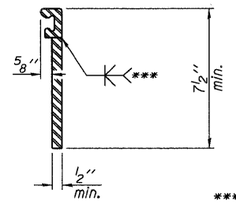
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

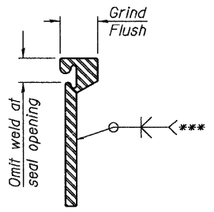
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



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	87.5

FOR INFORMATION ONLY

EJ-SSJ 7-1-10

JACOBS	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PREFORMED JOINT STRIP SEAL STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -			686	114F-1	JACKSON	12	24
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78283		
FILE NAME=039-0074978049-Strip Seal.dgn		CHECKED - B. ERSCHEN	REVISED -		SHEET NO. 16 OF 35 SHEETS			ILLINOIS FED. AID PROJECT		

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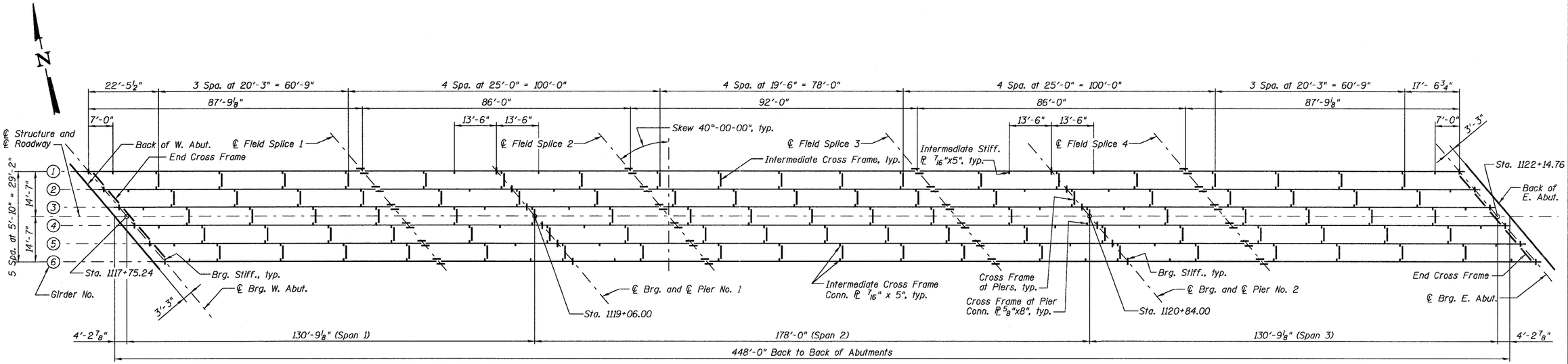

FRAMING PLAN

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_s	(in^4)	23941	59937	24957
$I_c(n)$	(in^4)	56037	67269	58529
$I_c(3n)$	(in^4)	41584	67269	43041
S_s	(in^3)	805	1868	839
$S_c(n)$	(in^3)	1115	2255	1180
$S_c(3n)$	(in^3)	1013	2255	1063
DC1	(k/')	0.78	0.93	0.79
M_{DC1}	('k)	685	2428	833
DC2	(k/')	0.15	0.15	0.15
M_{DC2}	('k)	137	428	166
DW	(k/')	0.27	0.27	0.27
M_{DW}	('k)	244	763	296
M_{LL+IM}	('k)	1588	2267	1660
M_u(Strength I)	('k)	4137	8682	4598
$\phi_f M_n$, $\phi_f M_{nc}$	('k)	5540	9191	5748
f_s DC1	(ksi)	10.2	15.6	11.9
f_s DC2	(ksi)	1.6	2.3	1.9
f_s DW	(ksi)	2.9	4.1	3.3
f_s 1.3(LL+IM)	(ksi)	22.2	15.7	21.9
f_s (Service II)	(ksi)	36.9	37.7	39.0
V_f	(k)	33.4	30.4	30.4

INTERIOR GIRDER REACTION TABLE HL93 Loading (Unfactored)			
		Abut.	Pier
R_{DC1}	(k)	35.5	151.2
R_{DC2}	(k)	6.5	26.4
R_{DW}	(k)	11.6	47.1
R_{LL+IM}	(k)	96.1	174.2
R_{Total}	(k)	149.7	398.9

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) 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-Strength I, and Service II) due to short-term composite live loads in positive moment region. Composite moment of inertia and section modulus of the steel and deck reinforcing based on cracked composite section in negative moment region. ($in.^4$ 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-Strength I, and Service II) due to long-term composite (superimposed) dead loads in positive moment region. Composite moment of inertia and section modulus of the steel and deck reinforcing based on cracked composite section in negative moment region. ($in.^4$ and $in.^3$)

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{LL+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{LL+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$\phi_f M_{nc}$: Compact composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\ M_{LL+IM}$

V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

FOR INFORMATION ONLY

Notes:

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Diaphragms and connecting plates and angles shall conform to the requirements of AASHTO M270 Grade 50W.

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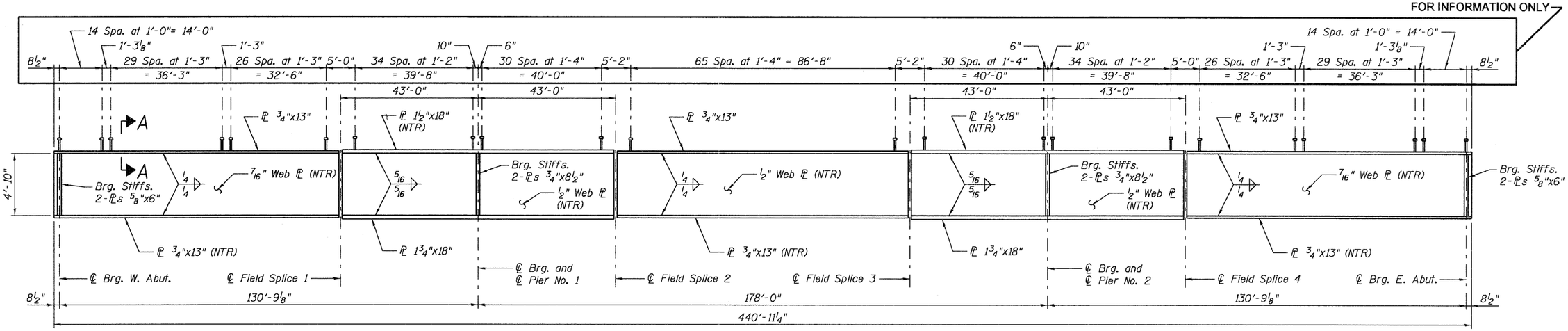
29-SEP-2011
10:39

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FRAMING PLAN AND DESIGN DATA STRUCTURE NO. 039-0074
		CHECKED - M. CRONIN	REVISED -		
	PLOT DATE = 29-SEP-2011	DRAWN - F. CAMBA	REVISED -		SHEET NO. 17 OF 35 SHEETS
FILE NAME=039-0074978049-Framing Plan.dgn		CHECKED - J. SMITH	REVISED -		

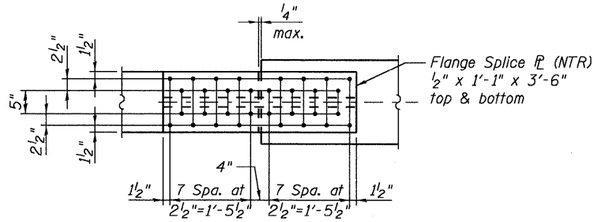
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	13	24
		CONTRACT NO. 78283		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

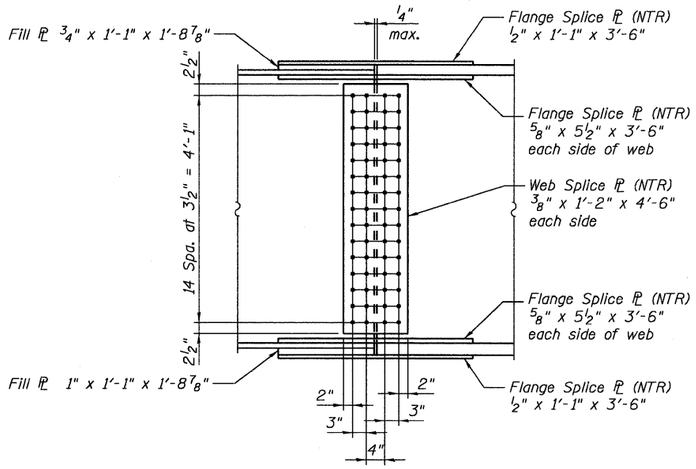


GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.



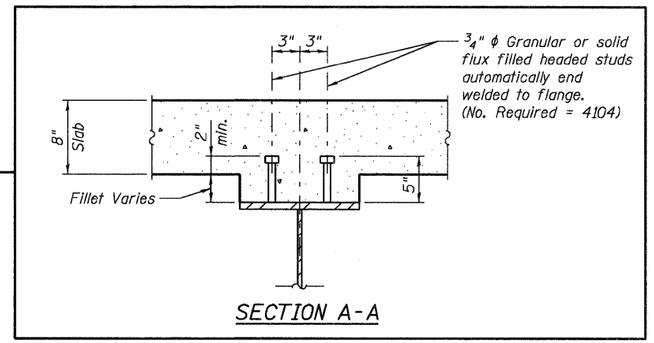
TOP AND BOTTOM SPLICE PLATES



SPLICE DETAIL

(24 Required)

FOR INFORMATION ONLY



SECTION A-A

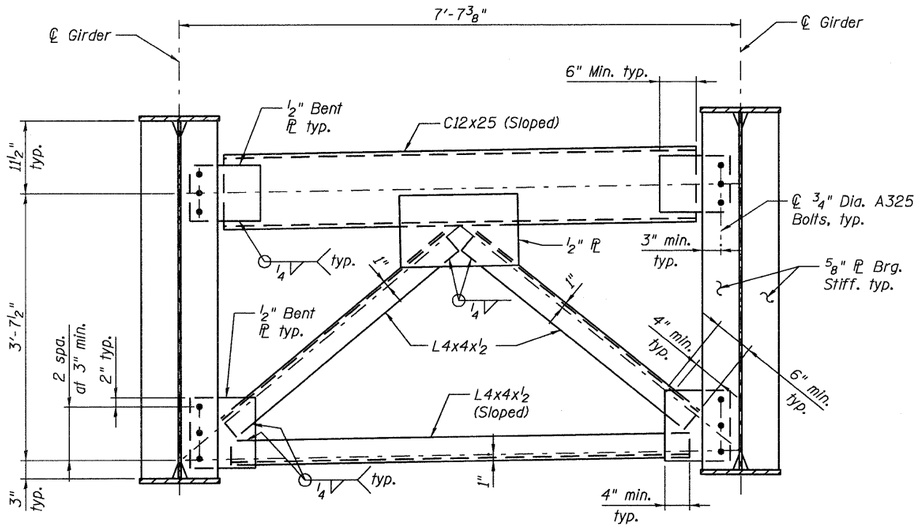
Notes:

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Structural steel shall conform to the requirements of AASHTO M270 Grade 50W except as noted.

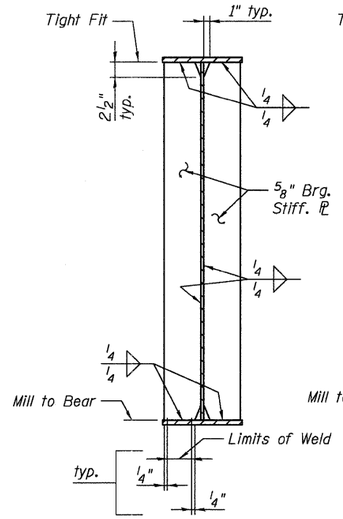
All bolts are ⅞" ϕ ASTM A325 high strength bolts in 15/16" ϕ holes.

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GIRDER DETAILS STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - M. CRONIN	REVISED -			686	114F-1	JACKSON	14	24
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78283		
FILE NAME=039-0074978049-SteelDetails.dgn		CHECKED - J. SMITH	REVISED -		SHEET NO. 18 OF 35 SHEETS			ILLINOIS FED. AID PROJECT		

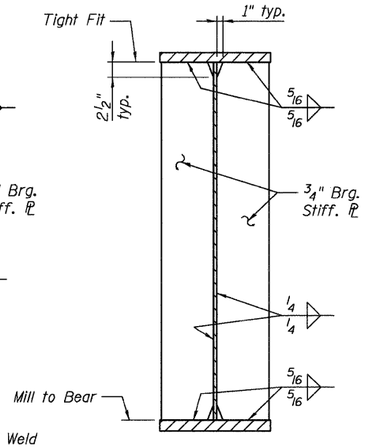


END CROSS FRAME AT ABUTMENTS

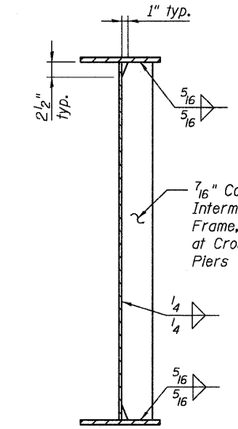
Two hardened washers shall be required for all oversized holes.



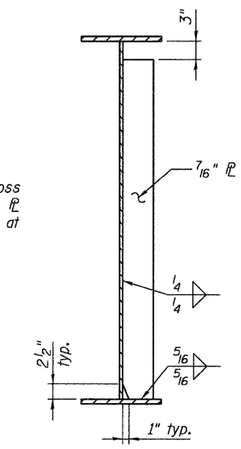
BEARING STIFFENER AT ABUTMENTS



BEARING STIFFENER AT PIERS



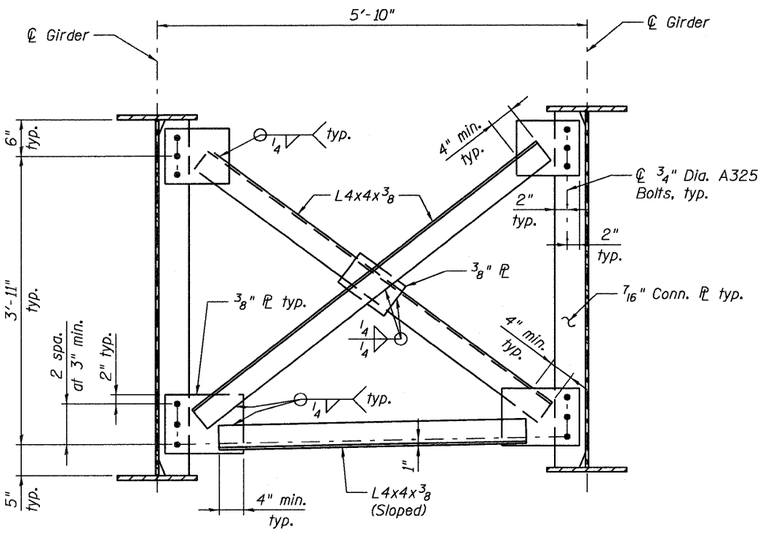
AT CROSS FRAMES



INTERMEDIATE STIFFENER

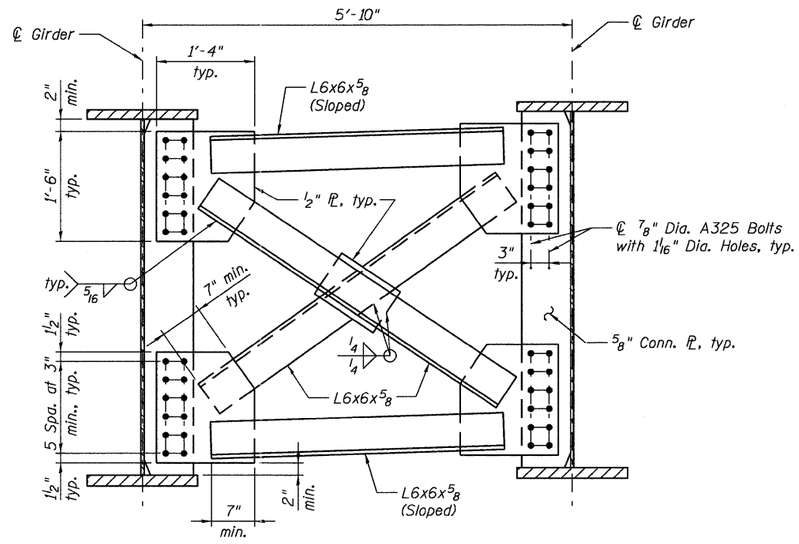
(Detail of Intermediate stiffener is shown near pier. Intermediate stiffener near abutment shall have a 3" gap at bottom flange)

CONNECTION PLATE DETAILS



TYPICAL INTERMEDIATE CROSS FRAME

Two hardened washers shall be required for all oversized holes.



CROSS FRAME AT PIERS

Two hardened washers shall be required for all oversized holes.

STRUCTURAL STEEL NOTES

All structural steel shall be AASHTO M270, Grade 50W unless otherwise noted.

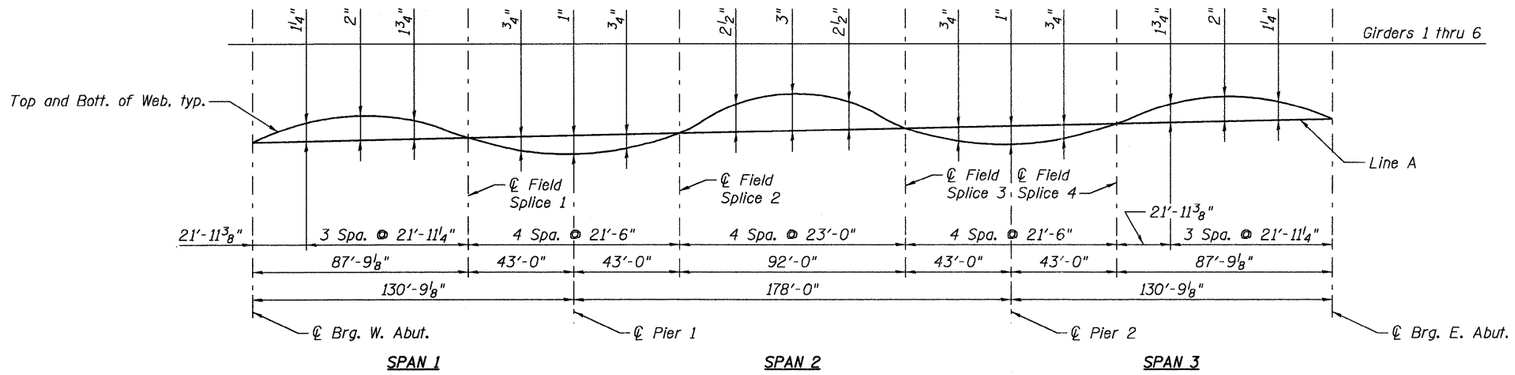
Fasteners shall be 3/4" diameter high strength bolts with 15/16" diameter open holes unless otherwise noted.

High strength bolts are designed for a Class A contact surface in a standard hole for a slip-critical connection.

The contact surface of joints with oversized holes shall be free of paint or lacquer.

All bearing stiffeners shall be vertical in the completed structure.

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS FRAME DETAILS STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - M. CRONIN	REVISED -			686	114F-1	JACKSON	15	24
	PLOT DATE = 29-SEP-2011	DRAWN - E. KRACK	REVISED -					CONTRACT NO. 78283		
FILE NAME=039-0074978049-Cross Frame.dgn		CHECKED - J. SMITH	REVISED -		SHEET NO. 19 OF 35 SHEETS			ILLINOIS FED. AID PROJECT		



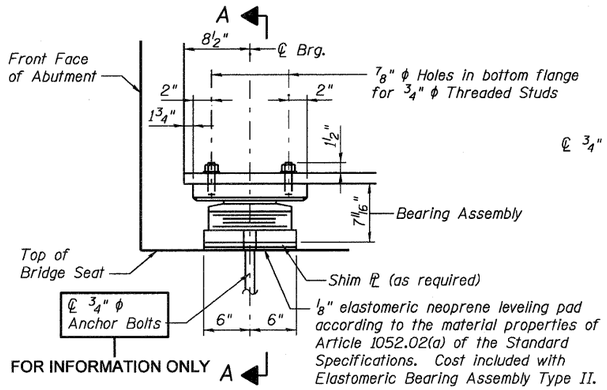
CAMBER DIAGRAM

* TOP OF GIRDER WEB ELEVATIONS

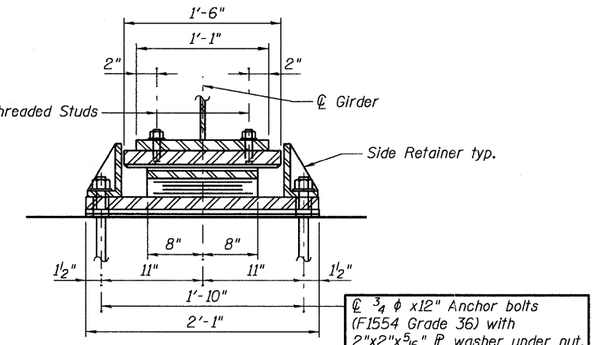
Location / Girder	℄ Brg. West Abut.	℄ Field Splice 1	℄ Brg. and ℄ Pier 1	℄ Field Splice 2	℄ Field Splice 3	℄ Brg. and ℄ Pier 2	℄ Field Splice 4	℄ Brg. East Abut.
Girder 1	388.56	388.72	388.76	388.97	389.15	389.11	389.25	389.44
Girder 2	388.68	388.83	388.87	389.07	389.26	389.22	389.36	389.56
Girder 3	388.78	388.93	388.97	389.17	389.36	389.32	389.46	389.66
Girder 4	388.79	388.94	388.98	389.18	389.37	389.33	389.47	389.67
Girder 5	388.71	388.86	388.90	389.10	389.29	389.25	389.39	389.59
Girder 6	388.61	388.77	388.81	389.01	389.20	389.16	389.30	389.49

* For fabrication only.

Notes:
Line A is a straight line at the top of web plates between ℄ bearing and ℄ field splice or from ℄ field splice to ℄ field splice.
Camber dimensions include correction for cross slope and vertical curve in addition to the correction for dead load.



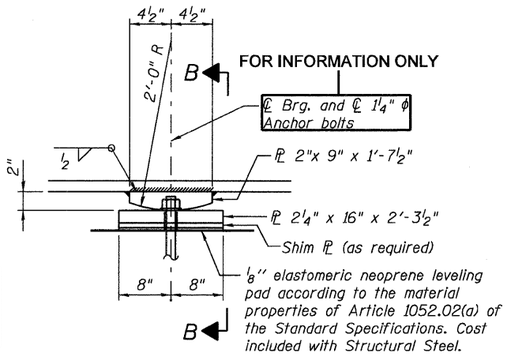
ELEVATION AT ABUTMENT



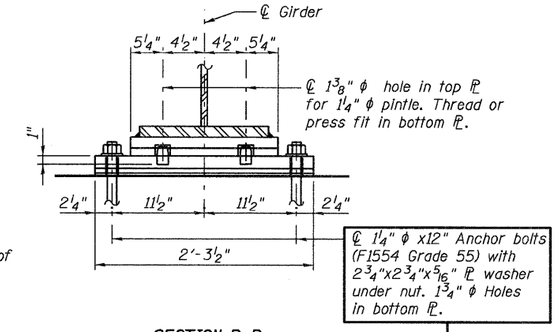
SECTION A-A

TYPE II ELASTOMERIC EXPANSION BEARING AT WEST AND EAST ABUTMENTS

(12 Required Total)



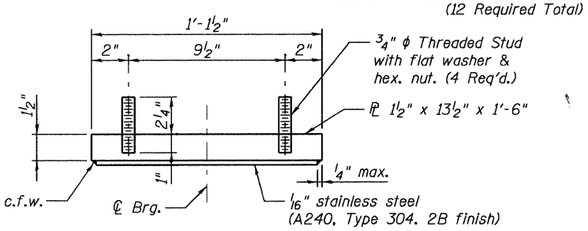
ELEVATION AT PIER



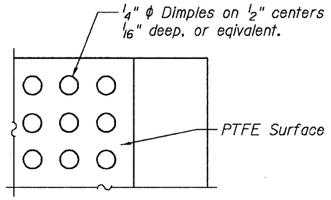
SECTION B-B

FIXED BEARING AT PIER 1 AND PIER 2

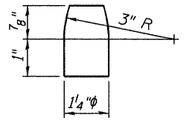
(12 Required Total)



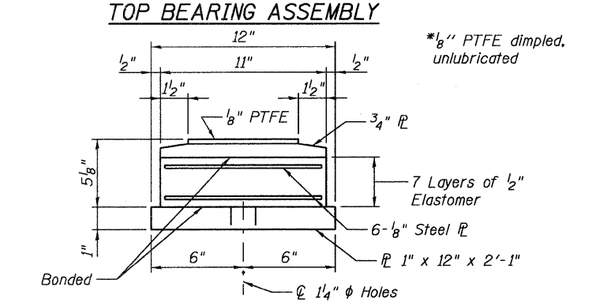
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

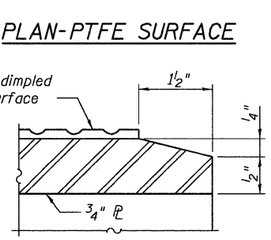


PINTLE

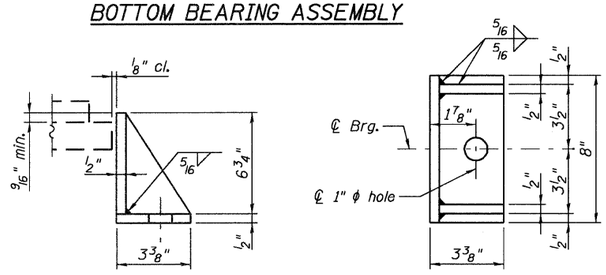


*⅛" PTFE dimpled. unlubricated

BOTTOM BEARING ASSEMBLY

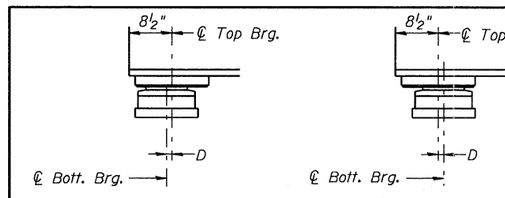


SECTION THRU PTFE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



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

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

SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

FOR INFORMATION ONLY

PLANNED SHIMS TABLE

Location	G1	G2	G3	G4	G5	G6
West Abutment	-	-	-	⅛"	-	-
Pier 1	-	-	-	⅛"	-	-
Pier 2	-	-	-	⅛"	-	-
East Abutment	-	-	-	⅛"	-	-

FOR INFORMATION ONLY

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The ⅛" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

FOR INFORMATION ONLY

The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

The structural steel of the bearing assembly shall conform to the requirements of AASHTO M270 Grade 50W.

Two ⅛" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

FOR INFORMATION ONLY

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts, ¾"	Each	24
Anchor Bolts, 1¼"	Each	24

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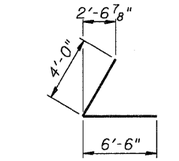
JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - M. CRONIN	REVISED -	
	PLOT DATE = 29-SEP-2011	DRAWN - E. KRACK	REVISED -	
FILE NAME=039-0074978049-Bearing Details.dgn		CHECKED - F. CAMBA	REVISED -	

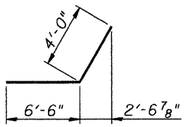
BEARING DETAILS
STRUCTURE NO. 039-0074
SHEET NO. 21 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	17	24
		CONTRACT NO. 78283		
ILLINOIS FED. AID PROJECT				

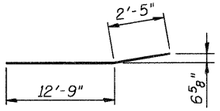
NOT FOR CONSTRUCTION



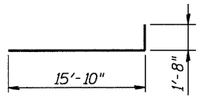
BAR $h_1(E)$



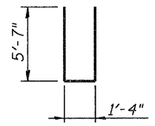
BAR $h_2(E)$



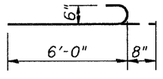
BAR $h_4(E)$



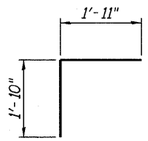
BAR $p_1(E)$



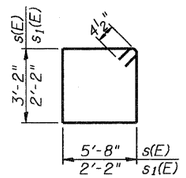
BAR $n(E)$



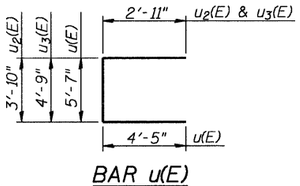
BAR $n_1(E)$



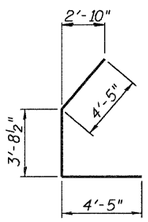
BAR $v(E)$



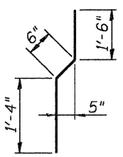
BARS $s(E)$ & $s_1(E)$



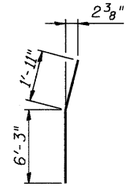
BAR $u(E)$
BAR $u_2(E)$
BAR $u_3(E)$



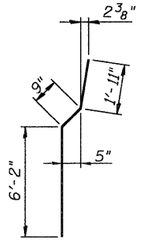
BAR $u_1(E)$



BAR $v_1(E)$



BAR $v_3(E)$

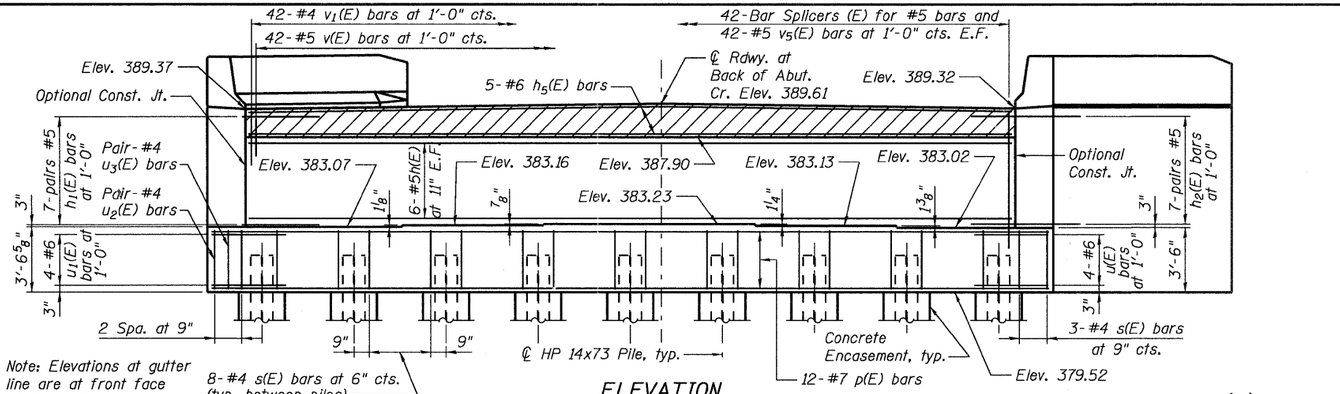


BAR $v_4(E)$

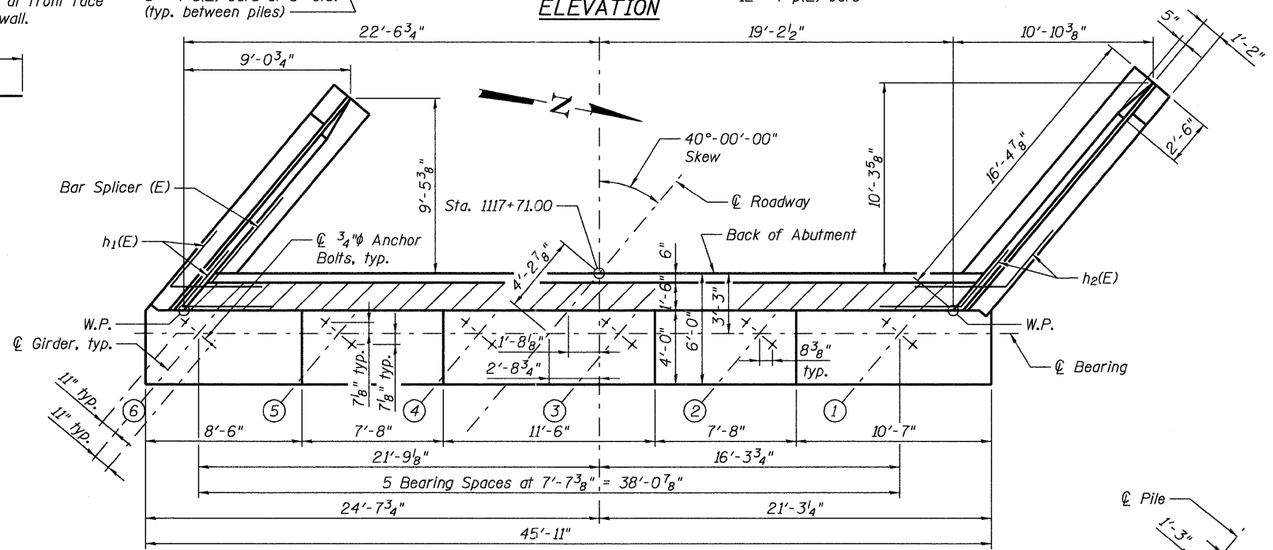
PILE DATA

Type: HP14x73
Nominal Required Bearing: 285 kips
Factored Resistance Available: 157 kips
Est. Length: 40 ft.
No. Production Piles: 10
No. Test Piles: 1

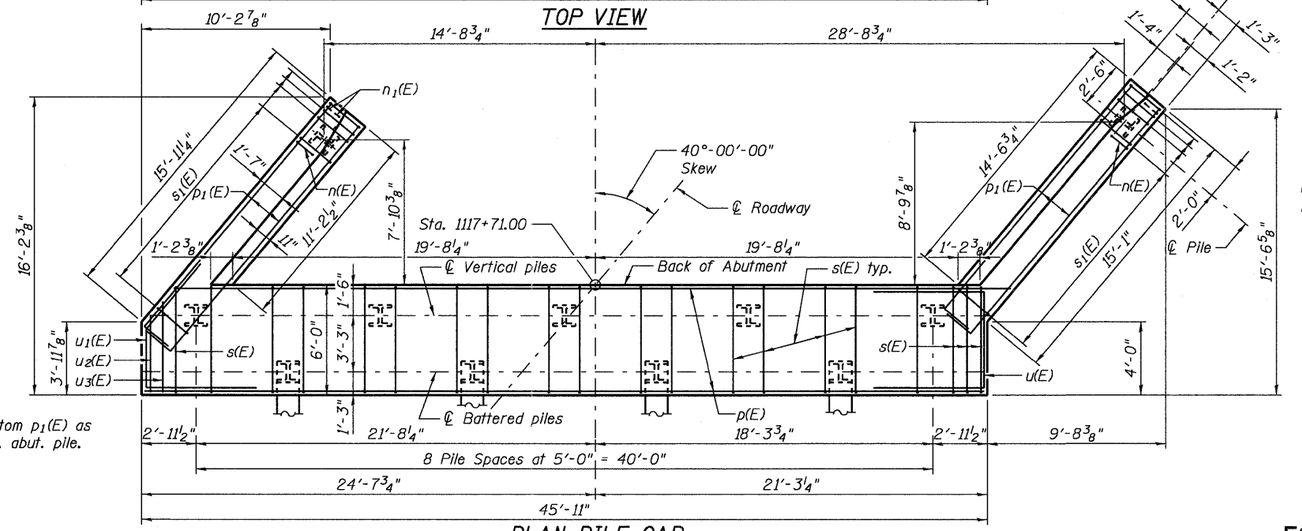
Note: Bend bottom $p_1(E)$ as required to clr. abut. pile.



ELEVATION



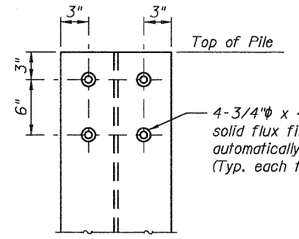
TOP VIEW



PLAN-PILE CAP

WEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	12	#5	41'-7"	
$h_1(E)$	14	#5	10'-6"	
$h_2(E)$	14	#5	10'-6"	
$h_3(E)$	26	#4	15'-3"	
$h_4(E)$	18	#4	15'-2"	
$h_5(E)$	5	#6	41'-7"	
n(E)	26	#6	12'-6"	
$n_1(E)$	12	#6	6'-8"	
p(E)	12	#7	45'-7"	
$p_1(E)$	12	#7	17'-6"	
s(E)	68	#4	18'-5"	
$s_1(E)$	32	#4	9'-5"	
u(E)	4	#6	14'-5"	
$u_1(E)$	4	#6	12'-7"	
$u_2(E)$	2	#4	9'-8"	
$u_3(E)$	2	#4	10'-7"	
v(E)	42	#5	3'-9"	
$v_1(E)$	42	#4	3'-4"	
$v_2(E)$	32	#6	8'-10"	
$v_3(E)$	6	#6	8'-2"	
$v_4(E)$	26	#6	8'-10"	
$v_5(E)$	84	#5	7'-3"	
Structure Excavation		Cu. Yd.	186	
Concrete Structures		Cu. Yd.	70.3	
Reinforcement Bars, Epoxy Coated		Pound	6,710	
Furnishing - Piles, HP14x73		Foot	400	
Driving Piles		Foot	400	
Test Pile, HP14x73		Each	1	
Concrete Encasement		Cu. Yd.	6.0	
Concrete Sealer		Sq. Ft.	640	



SEISMIC PILE DETAILS

Cost of $\frac{3}{4}$"ϕ Studs shall be included in item "Furnishing Steel Piles, HP14x73."

NOTES

Top of backwall shall conform to longitudinal grade and cross slope of roadway.

Pour steps monolithically with cap.

Space reinforcement in cap to miss anchor bolts.

Concrete Sealer should be applied to the designated areas of the abutment shown on sheet 23 of 35.

All edges shall have a standard $\frac{3}{4}$" chamfer except as noted.

For details of Bar Splicers, see sheet 29 of 35.

For details of piles and Concrete Encasement, see sheet 30 of 35.

FOR INFORMATION ONLY

JACOBS

USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	
	CHECKED - N. KHATRI	REVISED -	
PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -	
FILE NAME=039-0074978049-West Abutment.dgn	CHECKED - F. CAMBA	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 039-0074
SHEET NO. 22 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	18	24
		CONTRACT NO. 78283		
		ILLINOIS FED. AID PROJECT		

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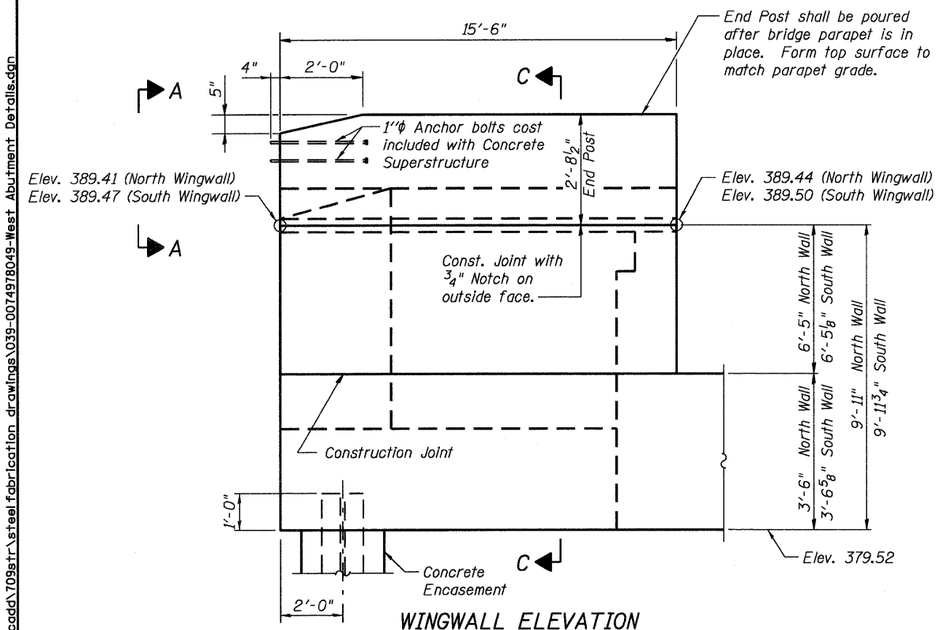
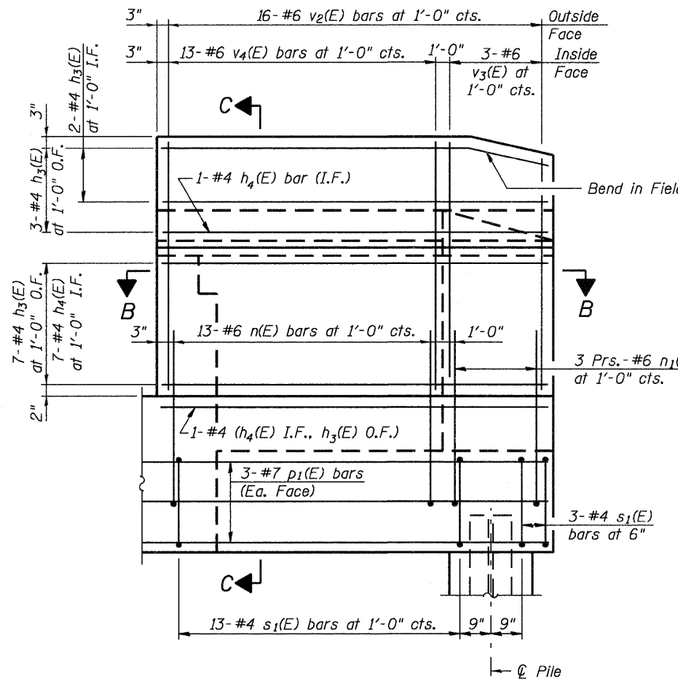


WINGWALL ELEVATION

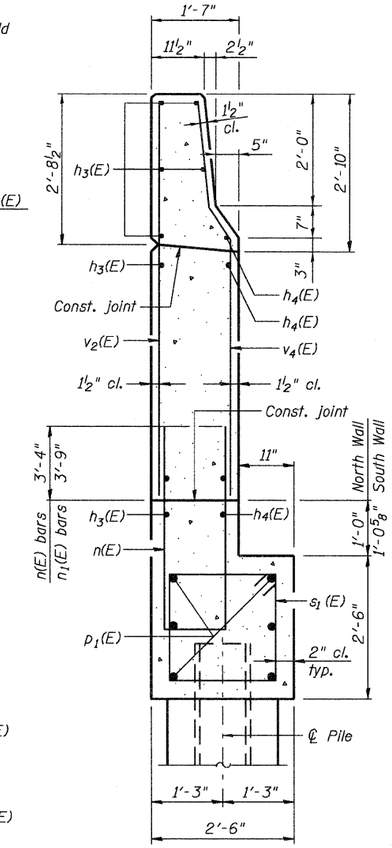
Showing Dimensions

Note: Elevations shown are at outside face of Wingwall.

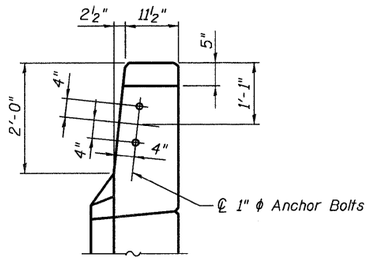


WINGWALL ELEVATION

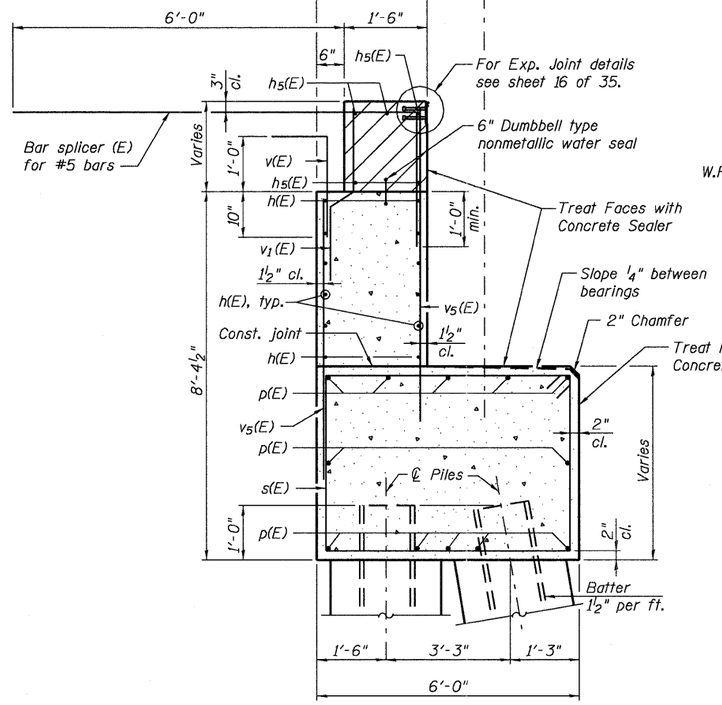
Showing Reinforcement



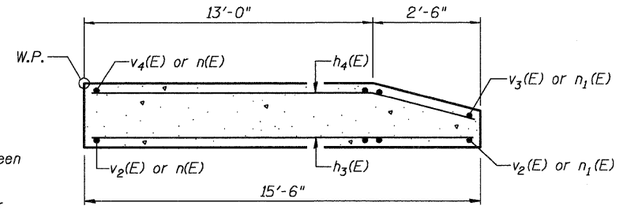
SECTION C-C



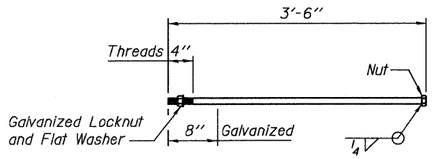
VIEW A-A



SECTION THRU ABUTMENT



SECTION B-B



1"ϕ ANCHOR BOLT

(Cost included with Concrete Superstructure)

NOTES

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

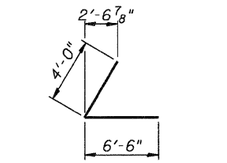
Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 35.

For Concrete Encasement details, see sheet 30 of 35.

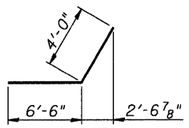
FOR INFORMATION ONLY

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST ABUTMENT DETAILS STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - N. KHATRI	REVISED -			686	114F-1	JACKSON	19	24
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78283		
FILE NAME=039-0074978049-West Abutment Details.dgn		CHECKED - F. CAMBA	REVISED -		SHEET NO. 23 OF 35 SHEETS			ILLINOIS FED. AID PROJECT		

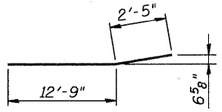
NOT FOR CONSTRUCTION



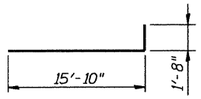
BAR $h_1(E)$



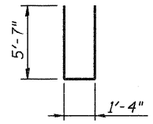
BAR $h_2(E)$



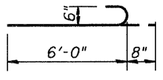
BAR $h_4(E)$



BAR $p_1(E)$



BAR $n(E)$



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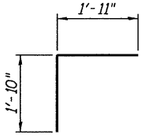
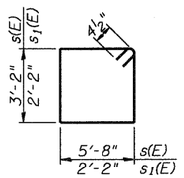
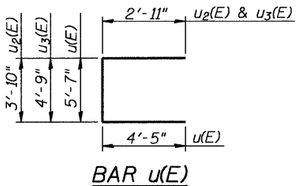


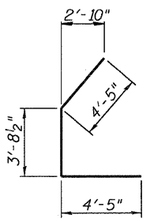
BAR $v(E)$



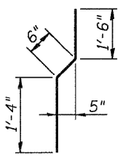
BARS $s(E)$ & $s_1(E)$



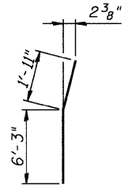
BAR $u(E)$
BAR $u_2(E)$
BAR $u_3(E)$



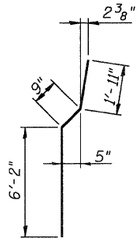
BAR $u_1(E)$



BAR $v_1(E)$



BAR $v_3(E)$

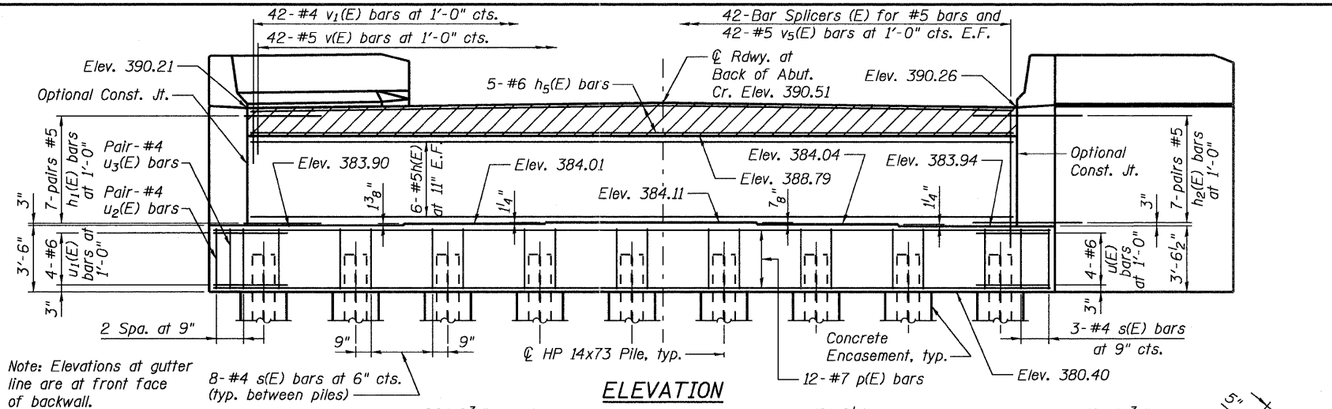


BAR $v_4(E)$

PILE DATA

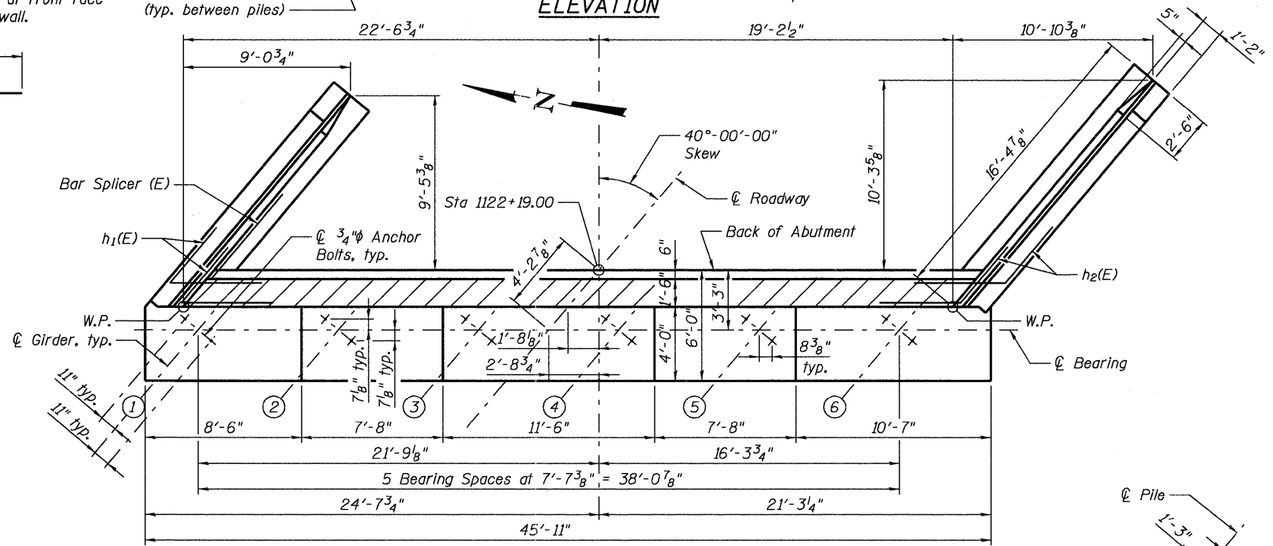
Type: HP14x73
Nominal Required Bearing: 285 kips
Factored Resistance Available: 157 kips
Est. Length: 31 ft.
No. Production Piles: 10
No. Test Piles: 1

Note: Bend bottom $p_1(E)$ as required to clr. abut. pile.

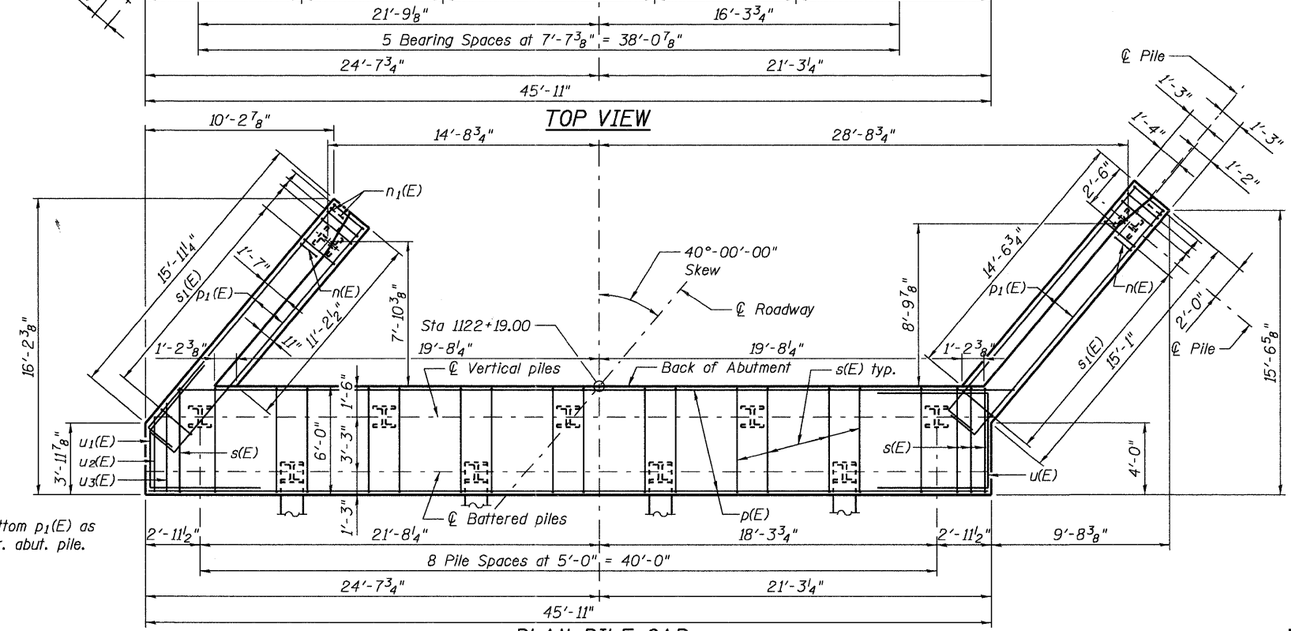


Note: Elevations at gutter line are at front face of backwall.

ELEVATION



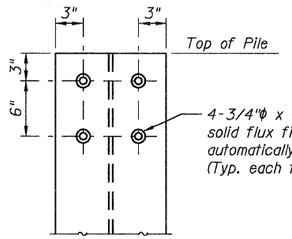
TOP VIEW



PLAN-PILE CAP

EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	12	#5	41'-7"	
$h_1(E)$	14	#5	10'-6"	
$h_2(E)$	14	#5	10'-6"	
$h_3(E)$	26	#4	15'-3"	
$h_4(E)$	18	#4	15'-2"	
$h_5(E)$	5	#6	41'-7"	
n(E)	26	#6	12'-6"	
$n_1(E)$	12	#6	6'-8"	
p(E)	12	#7	45'-7"	
$p_1(E)$	12	#7	17'-6"	
s(E)	68	#4	18'-5"	
$s_1(E)$	32	#4	9'-5"	
u(E)	4	#6	14'-5"	
$u_1(E)$	4	#6	12'-7"	
$u_2(E)$	2	#4	9'-8"	
$u_3(E)$	2	#4	10'-7"	
v(E)	42	#5	3'-9"	
$v_1(E)$	42	#4	3'-4"	
$v_2(E)$	32	#6	8'-10"	
$v_3(E)$	6	#6	8'-2"	
$v_4(E)$	26	#6	8'-10"	
$v_5(E)$	84	#5	7'-3"	
Structure Excavation		Cu. Yd.	186	
Concrete Structures		Cu. Yd.	70.4	
Reinforcement Bars, Epoxy Coated		Pound	6,710	
Furnishing - Piles, HP14x73		Foot	310	
Driving Piles		Foot	310	
Test Pile, HP14x73		Each	1	
Pile Shoe		Each	4	
Concrete Encasement		Cu. Yd.	6.0	
Concrete Sealer		Sq. Ft.	640	



SEISMIC PILE DETAILS

Cost of 3/4"ϕ Studs shall be included in item "Furnishing Steel Piles, HP14x73."

NOTES

Top of backwall shall conform to longitudinal grade and cross slope of roadway.

Pour steps monolithically with cap.

Space reinforcement in cap to miss anchor bolts.

Concrete Sealer should be applied to the designated areas of the abutment shown on sheet 25 of 35.

All edges shall have a standard 3/4" chamfer except as noted.

For details of Bar Splicers, see sheet 29 of 35.

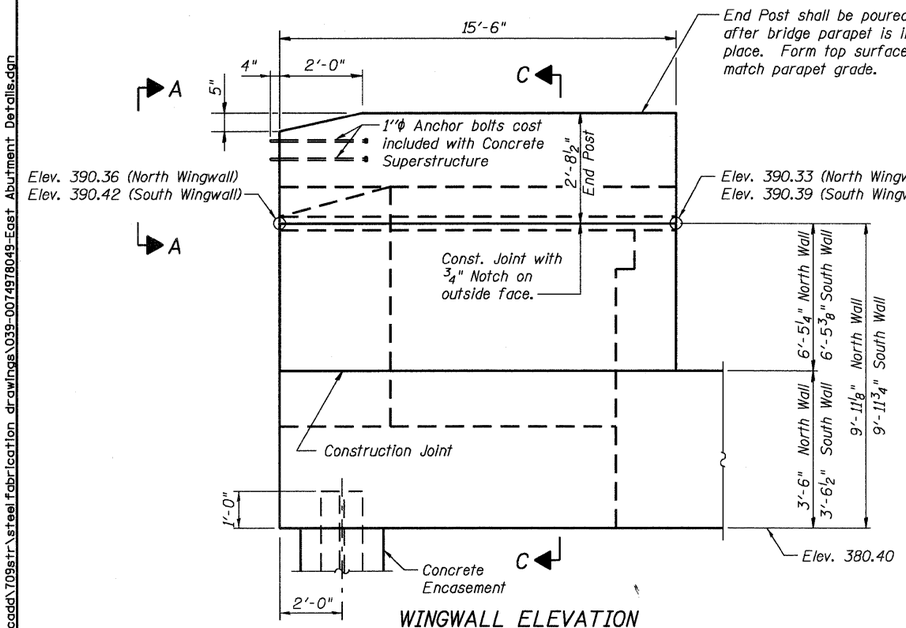
For details of piles and Concrete Encasement, see sheet 30 of 35.

FOR INFORMATION ONLY

29-SEP-2011 10:40 P:\CIX267103\700cadd\709str\steel fabrication drawings\039-0074978049-East Abutment.dgn

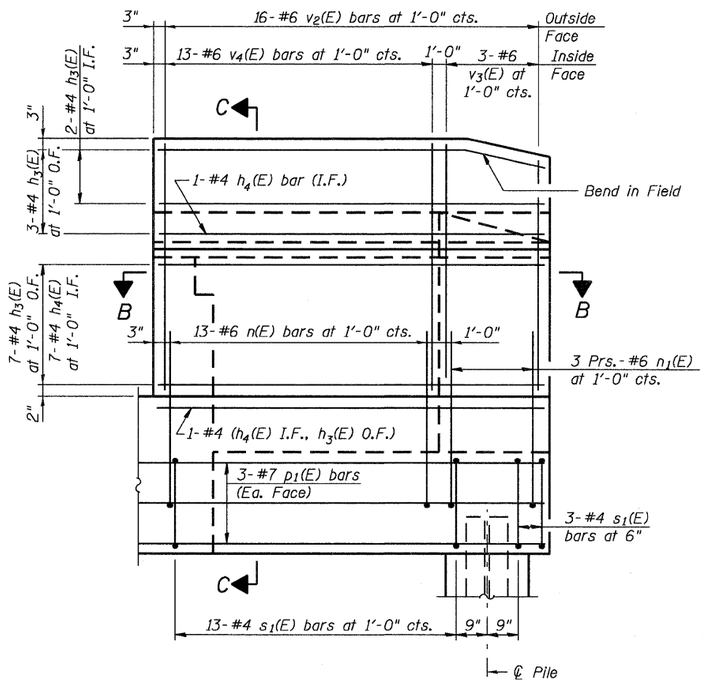
JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - M. CRONIN	REVISED -			686	114F-1	JACKSON	20	24
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -		SHEET NO. 24 OF 35 SHEETS			CONTRACT NO. 78283		
FILE NAME=039-0074978049-East Abutment.dgn		CHECKED - F. CAMBA	REVISED -					ILLINOIS FED. AID PROJECT		

NOT FOR CONSTRUCTION

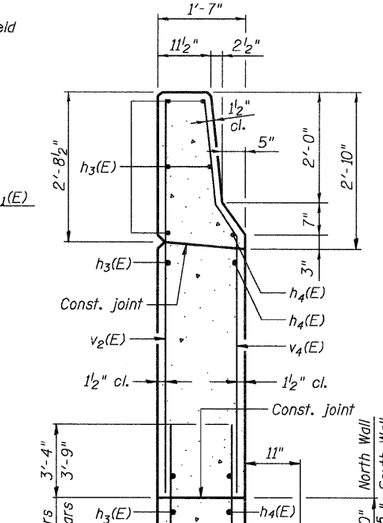


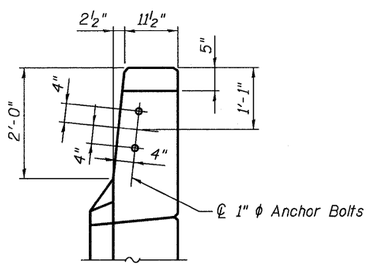
WINGWALL ELEVATION
Showing Dimensions

Note: Elevations shown are at outside face of Wingwall.

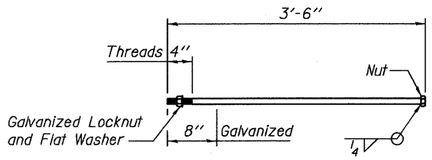


WINGWALL ELEVATION
Showing Reinforcement

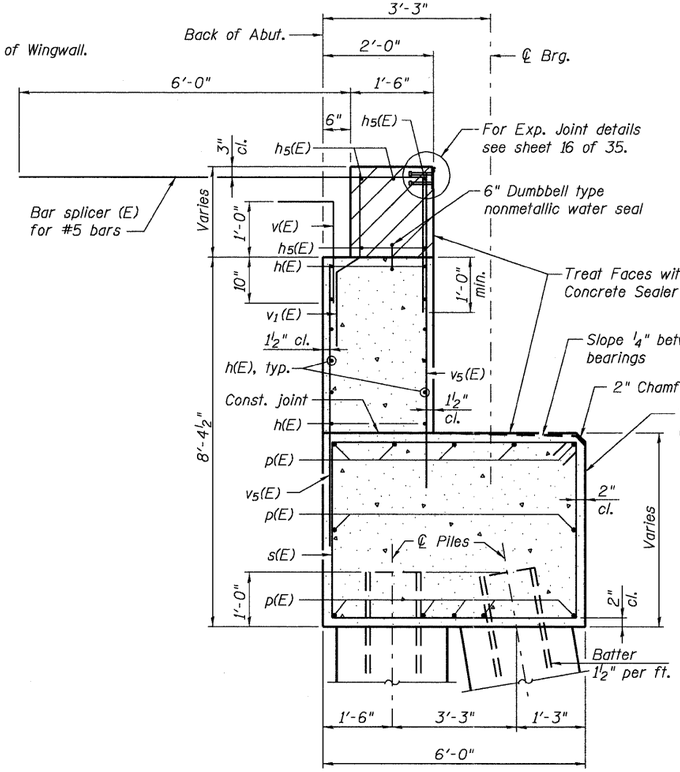




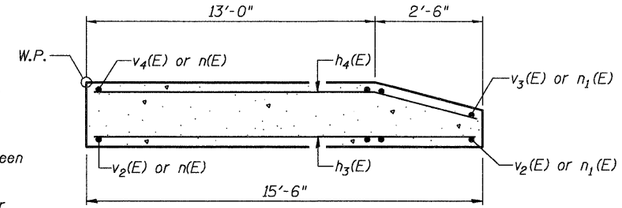
VIEW A-A



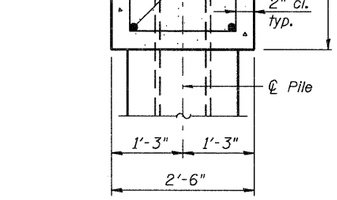
1"ϕ ANCHOR BOLT
(Cost included with Concrete Superstructure)



SECTION THRU ABUTMENT



SECTION B-B



SECTION C-C

NOTES

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

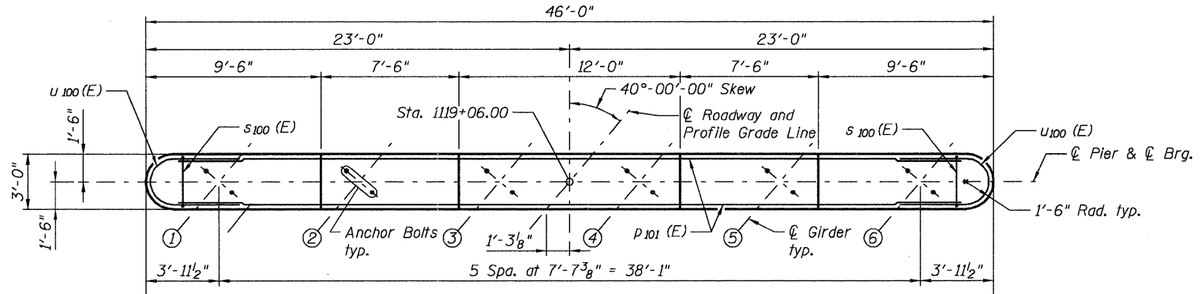
Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 35.

For Concrete Encasement details, see sheet 30 of 35.

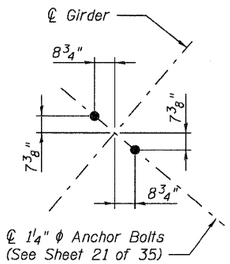
FOR INFORMATION ONLY

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT DETAILS STRUCTURE NO. 039-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -			686	114F-1	JACKSON	21	24
FILE NAME=039-0074978049-East Abutment Details.dgn		CHECKED - F. CAMBA	REVISED -		SHEET NO. 25 OF 35 SHEETS			CONTRACT NO. 78283		
							ILLINOIS FED. AID PROJECT			

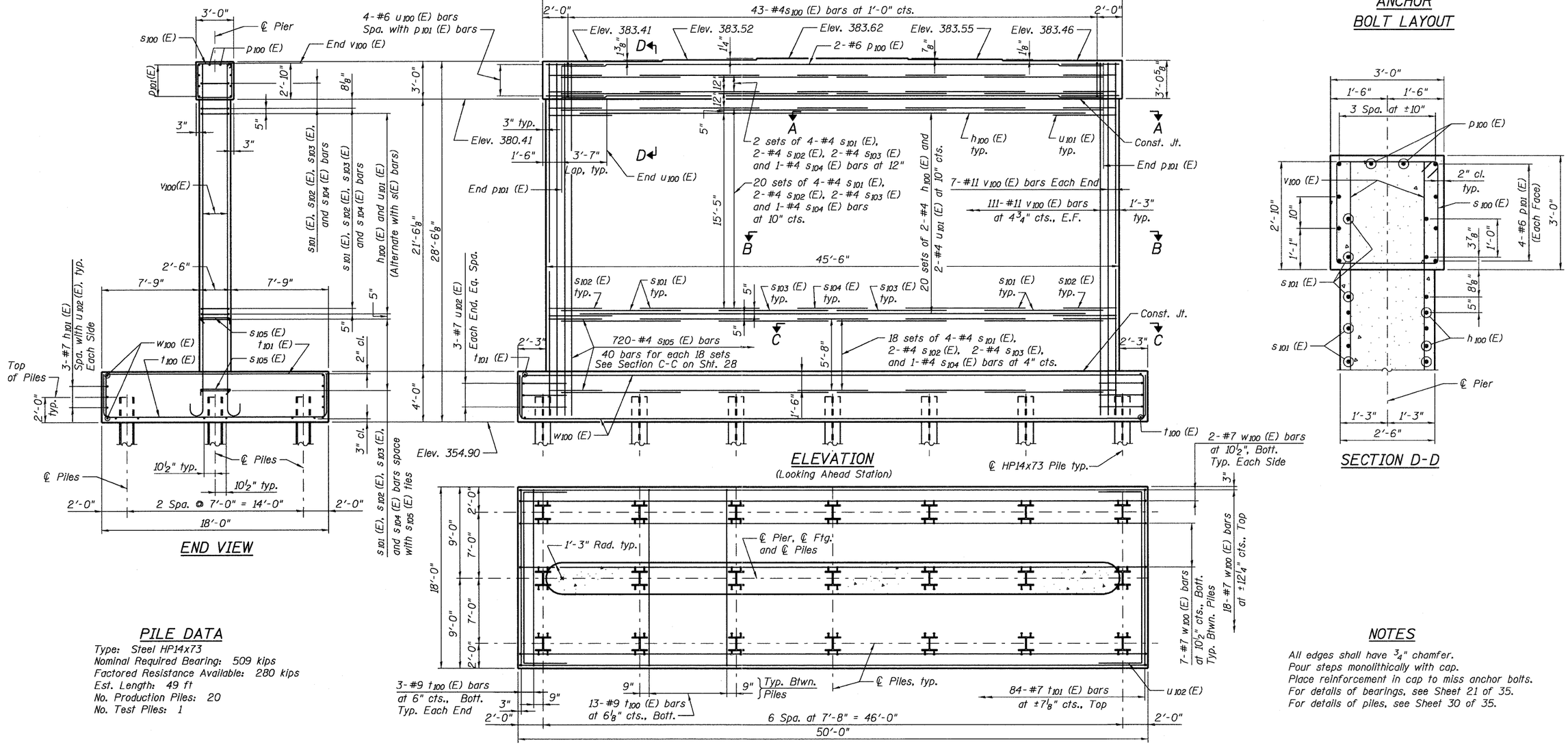
NOT FOR CONSTRUCTION



TOP PLAN



ANCHOR BOLT LAYOUT



ELEVATION
(Looking Ahead Station)

SECTION D-D

FOOTING PLAN

PILE DATA

Type: Steel HP14x73
Nominal Required Bearing: 509 kips
Factored Resistance Available: 280 kips
Est. Length: 49 ft
No. Production Piles: 20
No. Test Piles: 1

NOTES

All edges shall have ¾" chamfer.
Pour steps monolithically with cap.
Place reinforcement in cap to miss anchor bolts.
For details of bearings, see Sheet 21 of 35.
For details of piles, see Sheet 30 of 35.

FOR INFORMATION ONLY

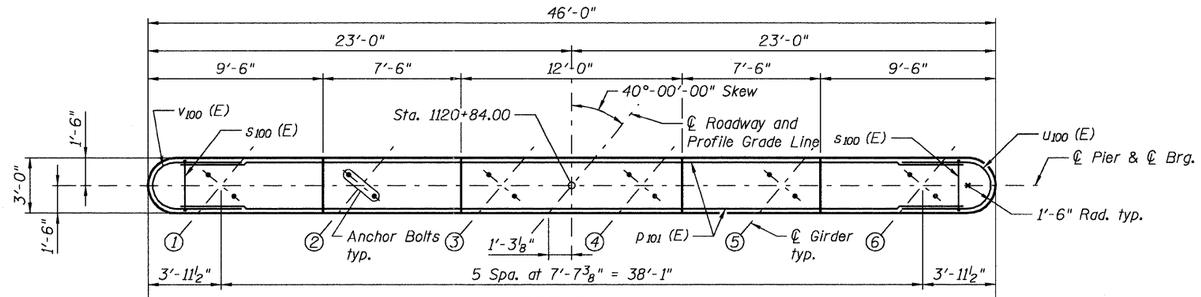
JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
		CHECKED - N. KHATRI	REVISED -
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -
FILE NAME=039-0074978049-Pier1.dgn		CHECKED - J. SMITH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

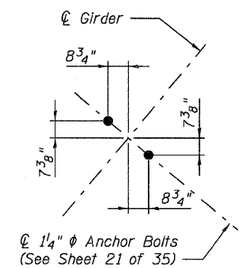
PIER 1 PLAN AND ELEVATION
STRUCTURE NO. 039-0074
SHEET NO. 26 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	22	24
		CONTRACT NO. 78283		
	ILLINOIS FED. AID PROJECT			

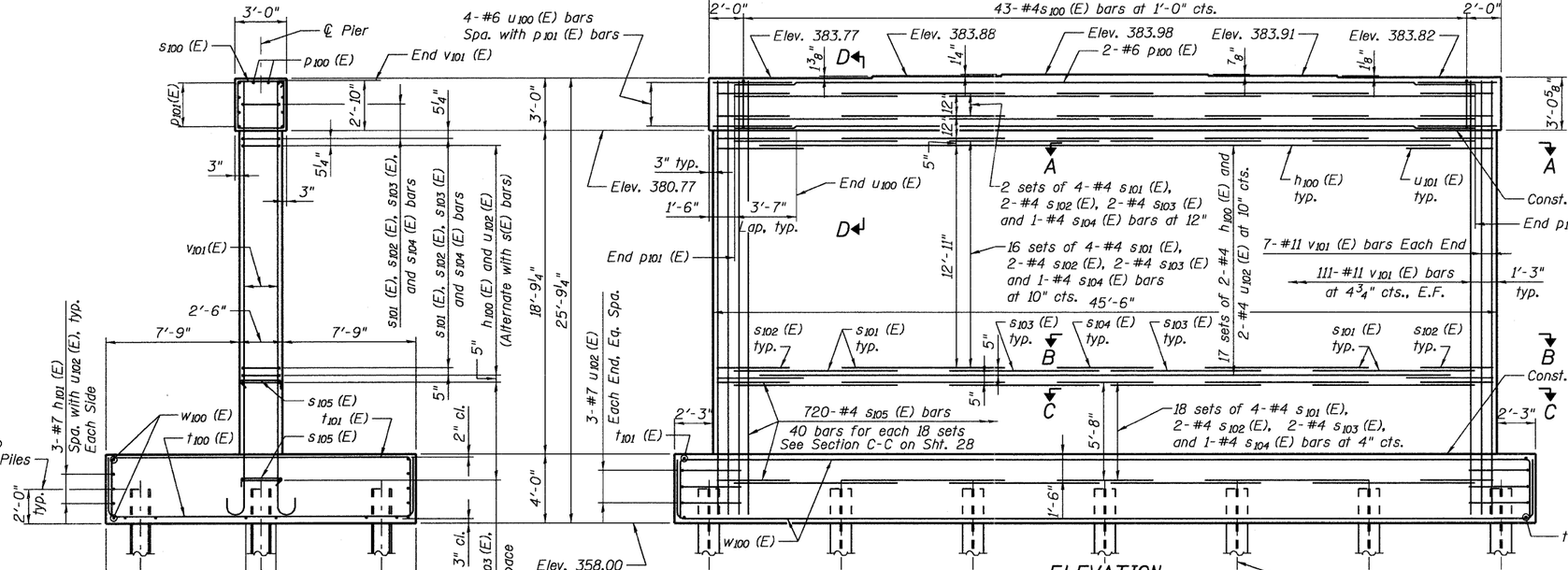
NOT FOR CONSTRUCTION



TOP PLAN



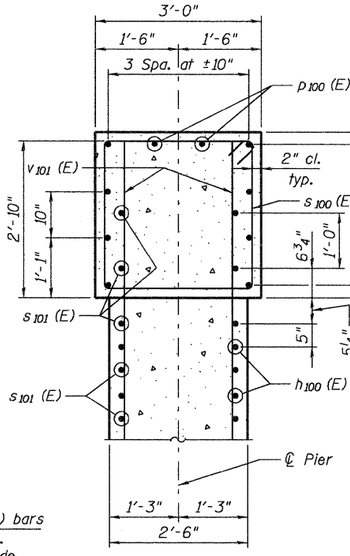
ANCHOR BOLT LAYOUT



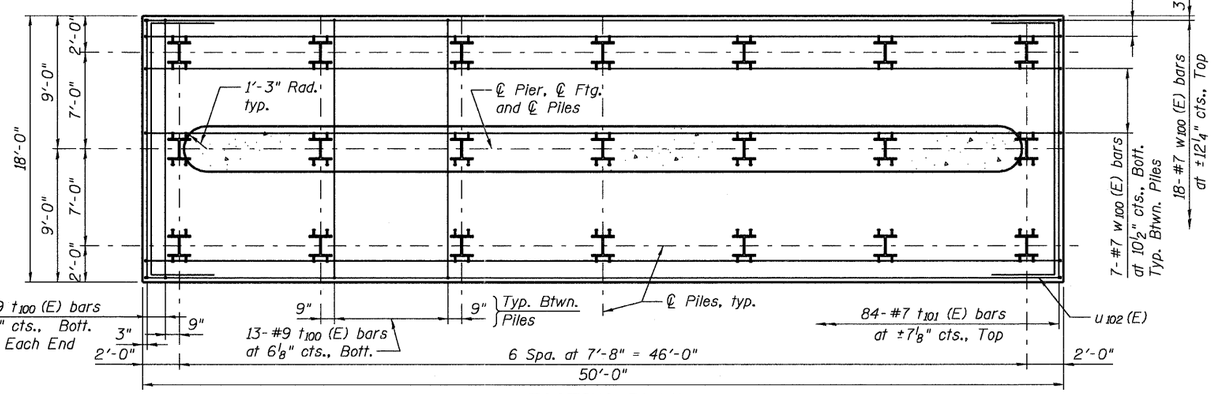
END VIEW

ELEVATION

(Looking Ahead Station)



SECTION D-D



FOOTING PLAN

PILE DATA

Type: Steel HP14x73
Nominal Required Bearing: 500 kips
Factored Resistance Available: 275 kips
Est. Length: 45 ft
No. Production Piles: 20
No. Test Piles: 1

NOTES

All edges shall have ¾" chamfer.
Pour steps monolithically with cap.
Place reinforcement in cap to miss anchor bolts.
For details of bearings, see Sheet 21 of 35.
For details of piles, see Sheet 30 of 35.

FOR INFORMATION ONLY

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
		CHECKED - N. KHATRI	REVISED -
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -
FILE NAME=039-0074978049-Pier2.dgn		CHECKED - J. SMITH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 PLAN AND ELEVATION
STRUCTURE NO. 039-0074
SHEET NO. 27 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	23	24
		CONTRACT NO. 78283		
		ILLINOIS FED. AID PROJECT		

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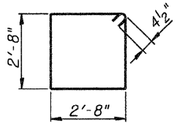
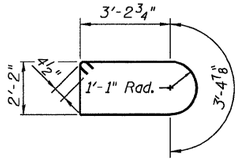
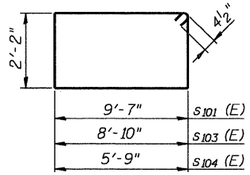


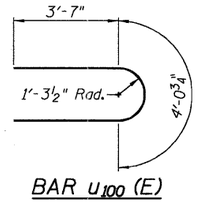
BAR s_{100} (E)



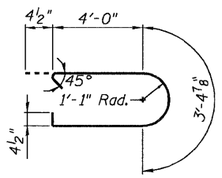
BARS s_{102} (E)



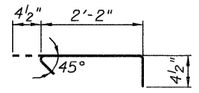
BAR s_{101} (E), s_{103} (E) & s_{104} (E)



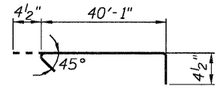
BAR u_{100} (E)



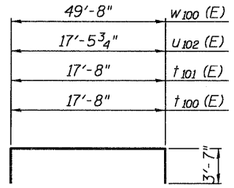
BARS u_{101} (E)



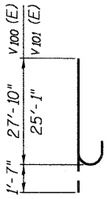
BAR s_{105} (E)



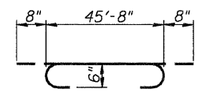
BAR h_{100} (E)



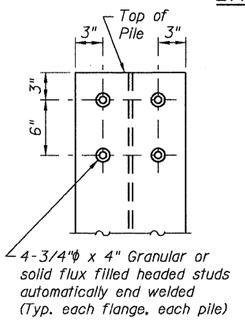
BAR t_{100} (E), t_{101} (E)
BAR u_{102} (E) & w_{100} (E)



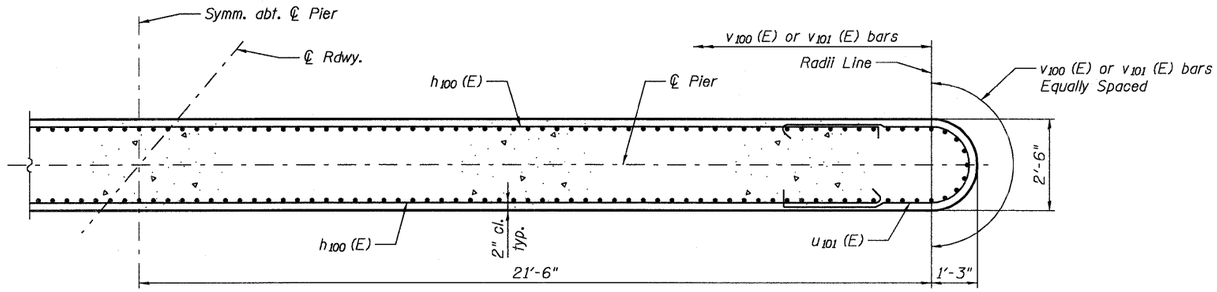
BAR v_{100} (E) & v_{101} (E)



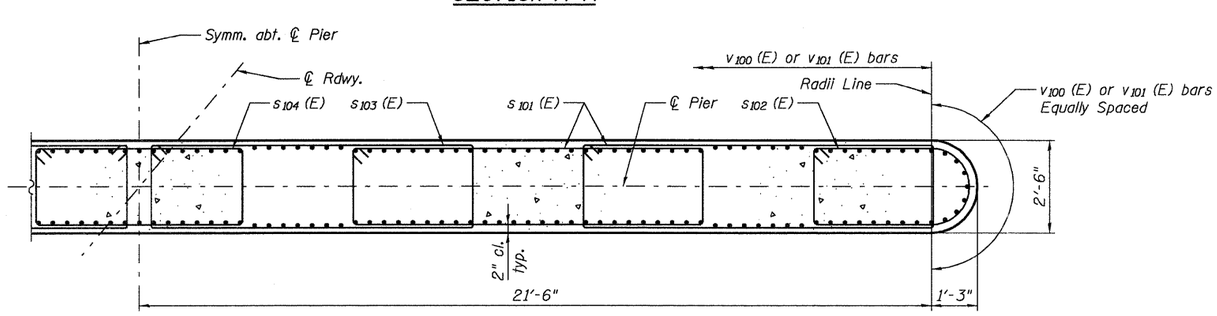
BAR p_{100} (E)



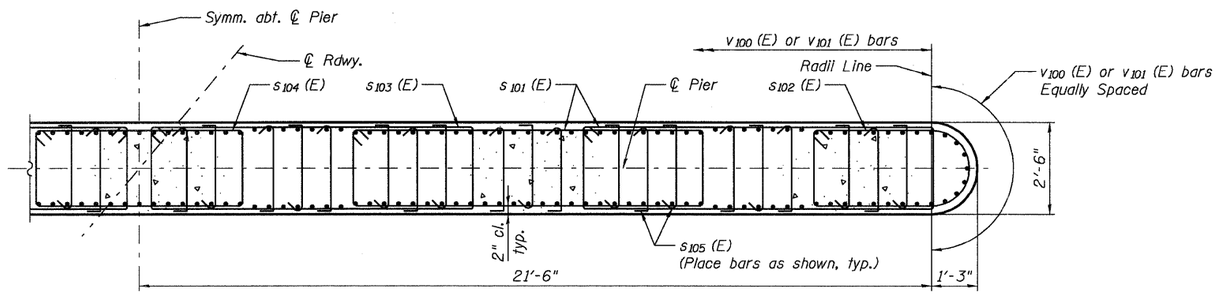
SEISMIC PILE DETAIL



SECTION A-A



SECTION B-B



SECTION C-C

Note: Place 90° leg of s_{105} (E) bar on opposite side of pier every other layer.

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{100} (E)	40	#4	40'-10"	——
h_{101} (E)	6	#7	49'-5"	——
p_{100} (E)	2	#6	47'-0"	⊂⊃
p_{101} (E)	8	#6	43'-0"	——
s_{100} (E)	43	#4	11'-5"	□
s_{101} (E)	160	#4	24'-3"	□
s_{102} (E)	80	#4	12'-10"	□
s_{103} (E)	80	#4	22'-9"	□
s_{104} (E)	40	#4	16'-7"	□
s_{105} (E)	720	#4	2'-11"	⌐
t_{100} (E)	84	#9	24'-10"	⌐¬
t_{101} (E)	84	#7	24'-10"	⌐¬
u_{100} (E)	8	#6	11'-3"	⊔
u_{101} (E)	40	#4	12'-2"	⊔
u_{102} (E)	6	#7	24'-8"	⌐¬
v_{100} (E)	236	#11	29'-5"	⊃
w_{100} (E)	36	#7	57'-0"	⌐¬
Concrete Structures		Cu. Yd.	238.8	
Reinforcement Bars, Epoxy Coated		Pound	62,220	
Furnishing - Piles, HP14x73		Foot	980	
Driving Piles		Foot	980	
Test Pile, HP14x73		Each	1	
Pile Shoes		Each	21	

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{100} (E)	34	#4	40'-10"	——
h_{101} (E)	6	#7	49'-5"	——
p_{100} (E)	2	#6	47'-0"	⊂⊃
p_{101} (E)	8	#6	43'-0"	——
s_{100} (E)	43	#4	11'-5"	□
s_{101} (E)	144	#4	24'-3"	□
s_{102} (E)	72	#4	12'-10"	□
s_{103} (E)	72	#4	22'-9"	□
s_{104} (E)	36	#4	16'-7"	□
s_{105} (E)	720	#4	2'-11"	⌐
t_{100} (E)	84	#9	24'-10"	⌐¬
t_{101} (E)	84	#7	24'-10"	⌐¬
u_{100} (E)	8	#6	11'-3"	⊔
u_{101} (E)	34	#4	12'-2"	⊔
u_{102} (E)	6	#7	24'-8"	⌐¬
v_{101} (E)	236	#11	26'-8"	⊃
w_{100} (E)	36	#7	57'-0"	⌐¬
Concrete Structures		Cu. Yd.	227.3	
Reinforcement Bars, Epoxy Coated		Pound	58,070	
Furnishing - Piles, HP14x73		Foot	900	
Driving Piles		Foot	900	
Test Pile, HP14x73		Each	1	
Pile Shoes		Each	21	

Cost of $\frac{3}{4}$" ϕ studs shall be included in item "Furnishing Steel Piles, HP14x73".

FOR INFORMATION ONLY

JACOBS	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
		CHECKED - N. KHATRI	REVISED -
	PLOT DATE = 29-SEP-2011	DRAWN - C. SALLADE	REVISED -
FILE NAME=039-0074978049-Pier details.dgn		CHECKED - J. SMITH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
STRUCTURE NO. 039-0074
SHEET NO. 28 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114F-1	JACKSON	24	24
		CONTRACT NO. 78283		
	ILLINOIS FED. AID PROJECT			