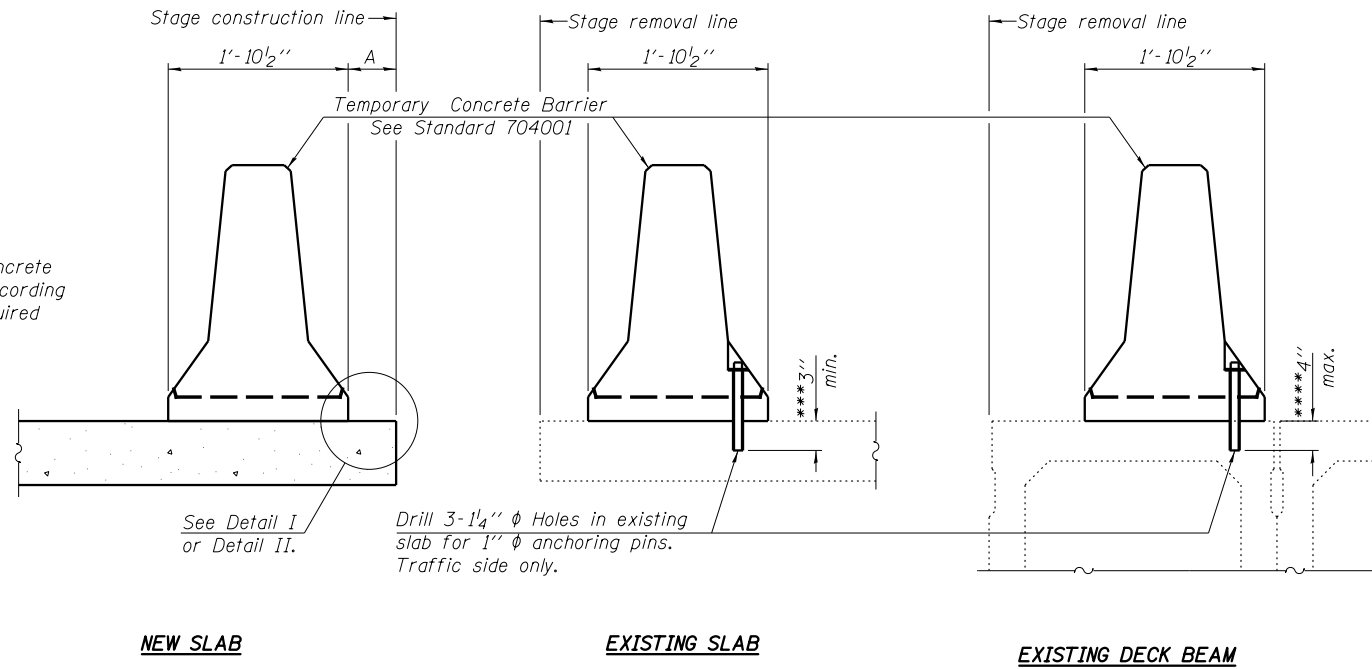


When "A" is 3'-1" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-1".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

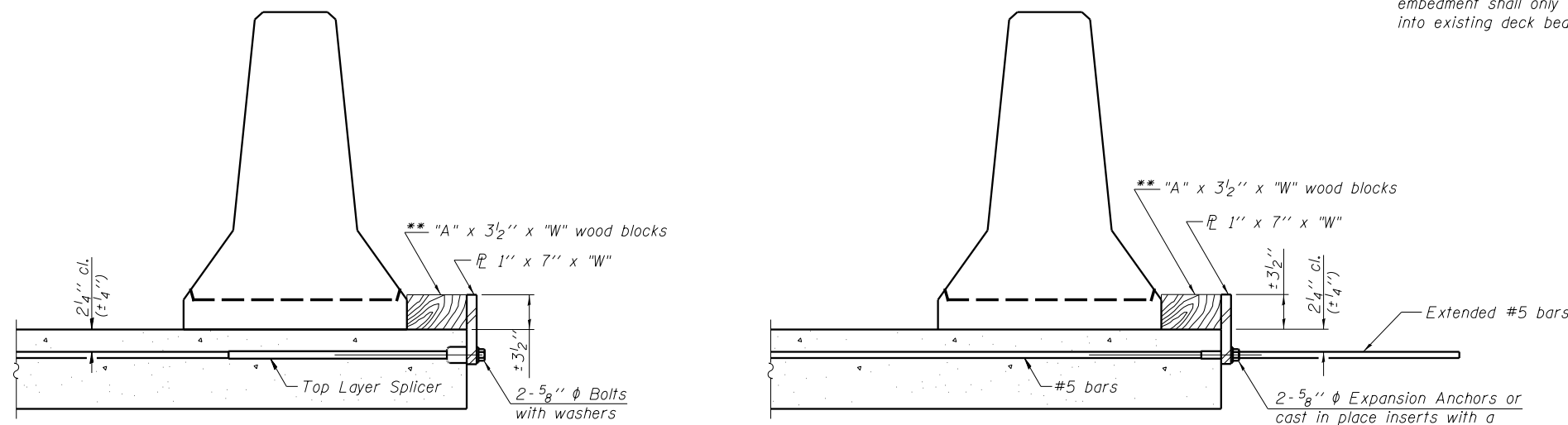
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

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 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

Cost of retainer assembly 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.

*** 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.

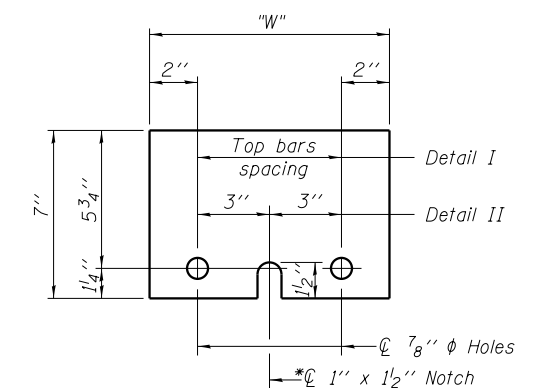


DETAIL I

DETAIL II

RETAINER ASSEMBLY

** 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.



STEEL RETAINER PL 1" x 7" x "W"

* Required only with Detail II

R-27

1-12-15

PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - P.JL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - AH	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

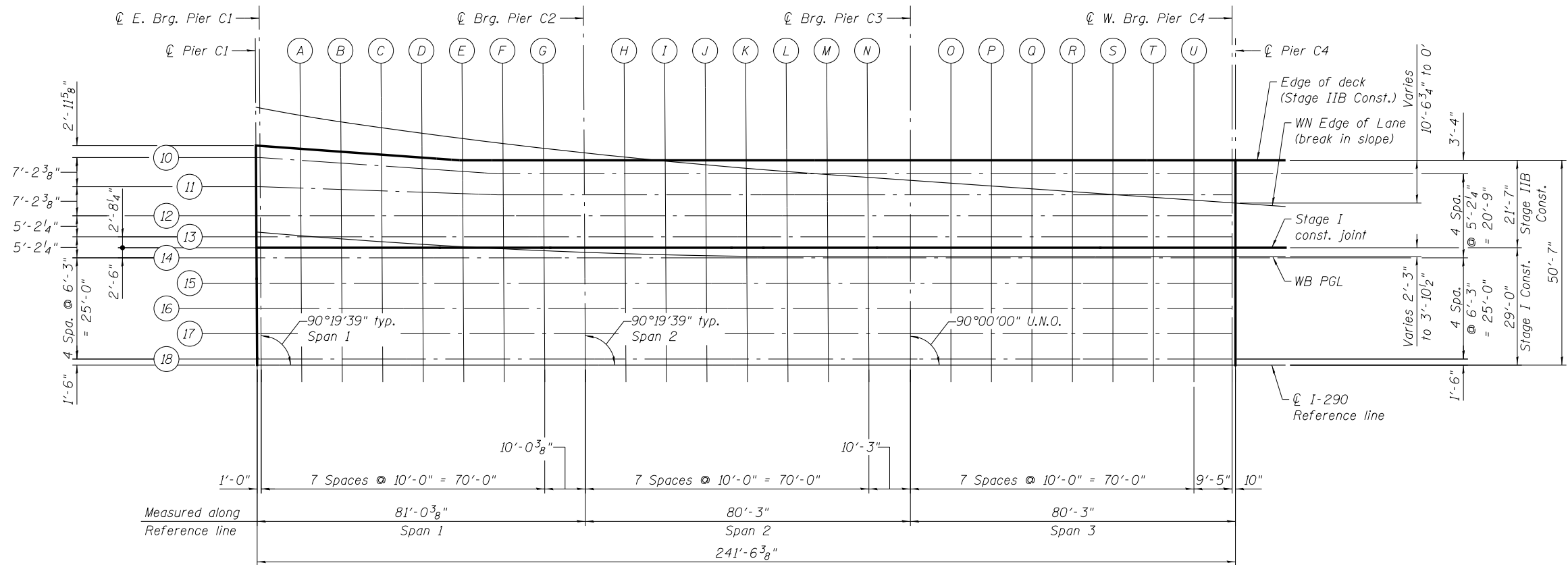
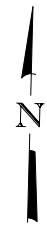
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-0461**

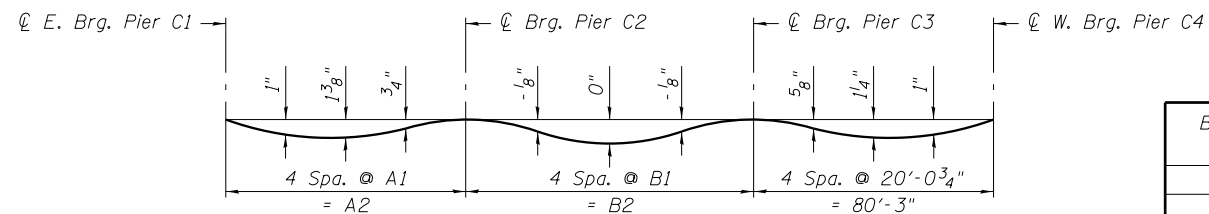
F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	301
CONTRACT NO. 60X78				

SHEET NO. S2-24 OF S2-145 SHEETS

ILLINOIS FED. AID PROJECT



PLAN - UNIT I



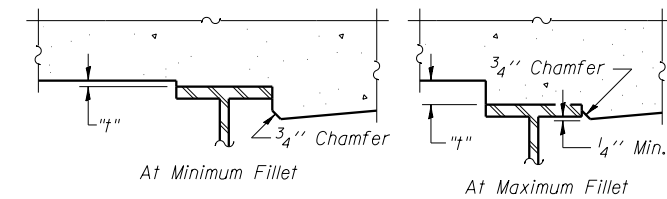
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in tables, see sheets S2-26 thru S2-29.

Beam No.	Span 1		Span 2	
	A1	A2	B1	B2
10	±20'-0 1/2"	80'-2 1/8"	±20'-1 5/8"	80'-6 1/4"
11	±20'-0 1/4"	80'-0 7/8"	±20'-1 1/2"	80'-5 7/8"
12	±20'-0 1/8"	80'-0 3/8"	20'-1 3/8"	80'-5 1/2"
13	±20'-0 1/8"	80'-0 3/8"	±20'-1 1/4"	80'-5 1/8"
14	±20'-0 1/8"	80'-0 3/8"	±20'-1 1/4"	80'-4 3/4"
15	±20'-0 1/8"	80'-0 3/8"	±20'-1 1/8"	80'-4 3/8"
16	±20'-0 1/8"	80'-0 3/8"	±20'-1"	80'-3 7/8"
17	±20'-0 1/8"	80'-0 3/8"	20'-0 7/8"	80'-3 1/2"
18	±20'-0 1/8"	80'-0 3/8"	±20'-0 3/4"	80'-3 1/8"



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheets S2-26 thru S2-29. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S2-26 thru S2-29, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

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PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - P.J.L.	REVISED -
PLOT SCALE = N.T.S.	CHECKED - L.F.C.	REVISED -
PLOT DATE = 3/23/2016	DRAWN - D.C.P.	REVISED -
	CHECKED - J.I.G.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATION PLAN - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-25 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	302
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

WN EDGE OF LANE (BREAK IN SLOPE)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓜ Pier C1 to H				
I	1102+01.50	-16.00	609.58	609.57
J	1101+91.55	-16.00	609.78	609.77
K	1101+81.61	-16.00	609.96	609.96
L	1101+71.67	-16.00	610.15	610.14
M	1101+61.74	-16.00	610.33	610.32
N	1101+51.72	-16.00	610.50	610.50
Ⓜ Brg. Pier C3	1101+41.18	-16.00	610.68	610.68
O	1101+31.16	-16.00	610.84	610.86
P	1101+21.13	-16.00	610.95	611.00
Q	1101+11.11	-16.00	611.06	611.14
R	1101+01.09	-16.00	611.17	611.28
S	1100+91.06	-16.00	611.28	611.38
T	1100+81.04	-16.00	611.39	611.48
U	1100+71.01	-16.00	611.50	611.55
Ⓜ W. Brg. Pier C4	1100+61.57	-16.00	611.60	611.60
Ⓜ Pier C4	1100+60.74	-16.00	611.61	611.61

EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓜ Pier C1	5212+94.32	21.28	608.57	608.57
Ⓜ E. Brg. Pier C1	5212+93.30	21.29	608.58	608.58
A	5212+83.14	21.38	608.70	608.74
B	5212+72.97	21.40	608.81	608.90
C	5212+62.81	21.36	608.92	609.02
D	5212+52.64	21.26	609.02	609.14
E	5212+42.49	21.30	609.12	609.21
F	5212+32.37	21.83	609.19	609.25
G	5212+22.25	22.30	609.27	609.30
Ⓜ Brg. Pier C2	5212+12.08	22.70	609.35	609.35
H	5212+01.94	23.05	609.43	609.42
I	1102+01.52	-15.81	609.57	609.56
J	1101+91.66	-14.89	609.73	609.72
K	1101+81.78	-14.03	609.88	609.88
L	1101+71.90	-13.24	610.04	610.04
M	1101+62.00	-12.50	610.21	610.20
N	1101+52.04	-11.80	610.37	610.36
Ⓜ Brg. Pier C3	1101+41.53	-11.07	610.54	610.54
O	1101+31.55	-10.37	610.69	610.71
P	1101+21.58	-9.67	610.80	610.85
Q	1101+11.60	-8.97	610.91	610.99
R	1101+01.63	-8.28	611.01	611.11
S	1100+91.65	-7.58	611.10	611.20
T	1100+81.67	-6.88	611.20	611.28
U	1100+71.70	-6.18	611.29	611.34
Ⓜ W. Brg. Pier C4	1100+62.30	-5.53	611.38	611.38
Ⓜ Pier C4	1100+61.47	-5.47	611.39	611.39

BEAM NO. 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓜ Pier C1	5212+94.05	18.38	608.70	608.70
Ⓜ E. Brg. Pier C1	5212+93.03	18.40	608.71	608.71
A	5212+82.89	18.56	608.83	608.87
B	5212+72.75	18.65	608.94	609.02
C	5212+62.61	18.69	609.04	609.14
D	5212+52.46	18.66	609.14	609.26
E	5212+42.32	18.56	609.24	609.33
F	5212+32.18	18.50	609.34	609.40
G	5212+22.08	18.97	609.42	609.45
Ⓜ Brg. Pier C2	5212+11.93	19.37	609.49	609.49
H	5212+01.82	19.72	609.58	609.57
I	5211+91.70	20.00	609.71	609.70
J	5211+81.58	20.22	609.86	609.85
K	5211+71.45	20.37	610.01	610.01
L	5211+61.33	20.47	610.16	610.16
M	1101+61.75	-15.82	610.32	610.31
N	1101+51.79	-15.13	610.48	610.47
Ⓜ Brg. Pier C3	1101+41.30	-14.39	610.64	610.64
O	1101+31.32	-13.69	610.77	610.80
P	1101+21.34	-13.00	610.88	610.93
Q	1101+11.37	-12.30	610.98	611.06
R	1101+01.39	-11.60	611.08	611.18
S	1100+91.42	-10.90	611.18	611.27
T	1100+81.44	-10.21	611.27	611.36
U	1100+71.47	-9.51	611.37	611.41
Ⓜ W. Brg. Pier C4	1100+62.07	-8.85	611.45	611.45
Ⓜ Pier C4	1100+61.24	-8.79	611.46	611.46

BEAM NO. 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓜ Pier C1	5212+93.37	11.19	609.02	609.02
Ⓜ E. Brg. Pier C1	5212+92.36	11.24	609.03	609.03
A	5212+82.29	11.73	609.13	609.18
B	5212+72.22	12.16	609.23	609.31
C	5212+62.15	12.53	609.32	609.42
D	5212+52.06	12.84	609.40	609.51
E	5212+41.98	13.09	609.49	609.57
F	5212+31.89	13.32	609.57	609.63
G	5212+21.82	13.79	609.65	609.68
Ⓜ Brg. Pier C2	5212+11.71	14.19	609.72	609.72
H	5212+01.63	14.53	609.81	609.80
I	5211+91.54	14.81	609.93	609.92
J	5211+81.45	15.03	610.06	610.05
K	5211+71.36	15.19	610.19	610.19
L	5211+61.26	15.28	610.33	610.33
M	5211+51.17	15.31	610.47	610.46
N	5211+41.17	15.31	610.62	610.61
Ⓜ Brg. Pier C3	5211+30.68	15.31	610.76	610.76
O	5211+20.68	15.31	610.90	610.92
P	5211+10.68	15.31	610.99	611.04
Q	5211+00.68	15.31	611.09	611.16
R	5210+90.68	15.31	611.18	611.28
S	5210+80.68	15.31	611.28	611.37
T	1100+81.08	-15.38	611.38	611.46
U	1100+71.10	-14.68	611.48	611.52
Ⓜ W. Brg. Pier C4	1100+61.71	-14.03	611.56	611.56
Ⓜ Pier C4	1100+60.88	-13.97	611.57	611.57

- ① Elevations controlled by WB PGL
- ② Elevations controlled by WN PGL
- ③ Portion of WN Edge of Lane (break in slope) off of Bridge (future construction)

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ILLINOIS FED. AID PROJECT

BEAM NO. 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier C1	5212+92.69	3.99	609.35	609.35
Ⓞ E. Brg. Pier C1	5212+91.70	4.07	609.36	609.36
A	5212+81.70	4.90	609.44	609.48
B	5212+71.70	5.67	609.52	609.60
C	5212+61.69	6.38	609.59	609.69
D	5212+51.67	7.03	609.66	609.77
E	5212+41.64	7.62	609.73	609.82
F	5212+31.61	8.14	609.80	609.86
G	5212+21.57	8.60	609.88	609.91
Ⓞ Brg. Pier C2	5212+11.49	9.01	609.95	609.95
H	5212+01.43	9.35	610.04	610.03
I	5211+91.38	9.63	610.14	610.13
J	5211+81.32	9.84	610.26	610.25
K	5211+71.26	10.00	610.38	610.38
L	5211+61.20	10.09	610.50	610.50
M	5211+51.14	10.13	610.63	610.62
N	5211+41.14	10.13	610.75	610.75
Ⓞ Brg. Pier C3	5211+30.68	10.13	610.88	610.88
O	5211+20.68	10.13	611.00	611.03
P	5211+10.68	10.13	611.10	611.15
Q	5211+00.68	10.13	611.19	611.27
R	5210+90.68	10.13	611.29	611.39
S	5210+80.68	10.13	611.38	611.48
T	5210+70.68	10.13	611.48	611.56
U	5210+60.68	10.13	611.57	611.62
Ⓞ W. Brg. Pier C4	5210+51.26	10.13	611.66	611.66
Ⓞ Pier C4	5210+50.43	10.13	611.67	611.67

BEAM NO. 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier C1	5212+92.22	-1.18	609.58	609.58
Ⓞ E. Brg. Pier C1	5212+91.22	-1.09	609.59	609.59
A	5212+81.26	-0.26	609.67	609.72
B	5212+71.29	0.50	609.75	609.83
C	5212+61.31	1.21	609.82	609.92
D	5212+51.32	1.85	609.89	610.01
E	5212+41.32	2.44	609.96	610.05
F	5212+31.32	2.96	610.03	610.09
G	5212+21.31	3.42	610.11	610.14
Ⓞ Brg. Pier C2	5212+11.26	3.82	610.18	610.18
H	5212+01.24	4.16	610.26	610.26
I	5211+91.22	4.44	610.36	610.35
J	5211+81.20	4.66	610.46	610.45
K	5211+71.17	4.81	610.56	610.56
L	5211+61.14	4.91	610.67	610.67
M	5211+51.11	4.94	610.78	610.77
N	5211+41.11	4.94	610.89	610.88
Ⓞ Brg. Pier C3	5211+30.68	4.94	611.00	611.00
O	5211+20.68	4.94	611.11	611.14
P	5211+10.68	4.94	611.21	611.26
Q	5211+00.68	4.94	611.30	611.38
R	5210+90.68	4.94	611.40	611.50
S	5210+80.68	4.94	611.49	611.58
T	5210+70.68	4.94	611.59	611.67
U	5210+60.68	4.94	611.68	611.72
Ⓞ W. Brg. Pier C4	5210+51.26	4.94	611.77	611.77
Ⓞ Pier C4	5210+50.43	4.94	611.78	611.78

STAGE I CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier C1	5212+91.97	-3.85	609.70	609.70
Ⓞ E. Brg. Pier C1	5212+90.97	-3.77	609.71	609.71
A	5212+81.03	-2.94	609.79	609.84
B	5212+71.07	-2.18	609.87	609.95
C	5212+61.11	-1.47	609.94	610.04
D	5212+51.14	-0.83	610.01	610.13
E	5212+41.16	-0.24	610.08	610.17
F	5212+31.17	0.28	610.15	610.21
G	5212+21.18	0.74	610.23	610.26
Ⓞ Brg. Pier C2	5212+11.15	1.14	610.30	610.30
H	5212+01.15	1.48	610.38	610.38
I	5211+91.14	1.75	610.47	610.46
J	5211+81.13	1.97	610.56	610.56
K	5211+71.12	2.13	610.66	610.66
L	5211+61.11	2.22	610.76	610.75
M	5211+51.09	2.25	610.86	610.85
N	5211+41.09	2.25	610.96	610.96
Ⓞ Brg. Pier C3	5211+30.68	2.25	611.07	611.07
O	5211+20.68	2.25	611.17	611.19
P	5211+10.68	2.25	611.26	611.31
Q	5211+00.68	2.25	611.36	611.43
R	5210+90.68	2.25	611.45	611.56
S	5210+80.68	2.25	611.55	611.64
T	5210+70.68	2.25	611.64	611.73
U	5210+60.68	2.25	611.74	611.78
Ⓞ W. Brg. Pier C4	5210+51.26	2.25	611.83	611.83
Ⓞ Pier C4	5210+50.43	2.25	611.83	611.83

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USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - LFC	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS II - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-27 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	304
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

WESTBOUND PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C1	5212+92.32	0.00	609.53	609.53
⊕ E. Brg. Pier C1	5212+91.32	0.00	609.54	609.54
A	5212+81.28	0.00	609.66	609.70
B	5212+71.25	0.00	609.77	609.86
C	5212+61.22	0.00	609.88	609.98
D	5212+51.19	0.00	609.97	610.09
E	5212+41.17	0.00	610.07	610.16
F	5212+31.16	0.00	610.16	610.23
G	5212+21.14	0.00	610.26	610.29
⊕ Brg. Pier C2	5212+11.10	0.00	610.35	610.35
H	5212+01.09	0.00	610.45	610.44
I	5211+91.09	0.00	610.54	610.53
J	5211+81.08	0.00	610.64	610.63
K	5211+71.08	0.00	610.73	610.73
L	5211+61.08	0.00	610.83	610.82
M	5211+51.08	0.00	610.92	610.91
N	5211+41.08	0.00	611.02	611.01
⊕ Brg. Pier C3	5211+30.68	0.00	611.12	611.12
O	5211+20.68	0.00	611.21	611.24
P	5211+10.68	0.00	611.31	611.36
Q	5211+00.68	0.00	611.40	611.48
R	5210+90.68	0.00	611.50	611.60
S	5210+80.68	0.00	611.59	611.69
T	5210+70.68	0.00	611.69	611.77
U	5210+60.68	0.00	611.78	611.83
⊕ W. Brg. Pier C4	5210+51.26	0.00	611.87	611.87
⊕ Pier C4	5210+50.43	0.00	611.88	611.88

BEAM NO. 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C1	5212+91.74	-6.34	609.82	609.82
⊕ E. Brg. Pier C1	5212+90.75	-6.26	609.82	609.82
A	5212+80.82	-5.43	609.91	609.95
B	5212+70.88	-4.67	609.98	610.07
C	5212+60.93	-3.96	610.05	610.15
D	5212+50.97	-3.32	610.12	610.24
E	5212+41.01	-2.74	610.19	610.28
F	5212+31.03	-2.22	610.26	610.33
G	5212+21.06	-1.76	610.34	610.37
⊕ Brg. Pier C2	5212+11.04	-1.36	610.41	610.41
H	5212+01.05	-1.02	610.49	610.49
I	5211+91.06	-0.74	610.58	610.57
J	5211+81.07	-0.53	610.66	610.65
K	5211+71.07	-0.37	610.75	610.75
L	5211+61.08	-0.28	610.84	610.83
M	5211+51.08	-0.25	610.93	610.92
N	5211+41.08	-0.25	611.03	611.02
⊕ Brg. Pier C3	5211+30.68	-0.25	611.12	611.12
O	5211+20.68	-0.25	611.22	611.24
P	5211+10.68	-0.25	611.31	611.36
Q	5211+00.68	-0.25	611.41	611.48
R	5210+90.68	-0.25	611.50	611.61
S	5210+80.68	-0.25	611.60	611.69
T	5210+70.68	-0.25	611.69	611.78
U	5210+60.68	-0.25	611.79	611.83
⊕ W. Brg. Pier C4	5210+51.26	-0.25	611.88	611.88
⊕ Pier C4	5210+50.43	-0.25	611.88	611.88

BEAM NO. 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C1	5212+91.17	-12.57	610.10	610.10
⊕ E. Brg. Pier C1	5212+90.18	-12.48	610.11	610.11
A	5212+80.29	-11.66	610.19	610.23
B	5212+70.39	-10.90	610.26	610.35
C	5212+60.47	-10.20	610.33	610.43
D	5212+50.55	-9.56	610.40	610.51
E	5212+40.63	-8.98	610.47	610.56
F	5212+30.69	-8.46	610.54	610.60
G	5212+20.75	-8.00	610.61	610.65
⊕ Brg. Pier C2	5212+10.78	-7.60	610.69	610.69
H	5212+00.83	-7.27	610.77	610.77
I	5211+90.87	-6.99	610.84	610.83
J	5211+80.92	-6.78	610.90	610.90
K	5211+70.96	-6.62	610.97	610.97
L	5211+61.00	-6.53	611.04	611.04
M	5211+51.04	-6.50	611.12	611.11
N	5211+41.04	-6.50	611.19	611.19
⊕ Brg. Pier C3	5211+30.68	-6.50	611.27	611.27
O	5211+20.68	-6.50	611.35	611.37
P	5211+10.68	-6.50	611.42	611.47
Q	5211+00.68	-6.50	611.50	611.57
R	5210+90.68	-6.50	611.58	611.68
S	5210+80.68	-6.50	611.67	611.77
T	5210+70.68	-6.50	611.77	611.85
U	5210+60.68	-6.50	611.86	611.91
⊕ W. Brg. Pier C4	5210+51.26	-6.50	611.95	611.95
⊕ Pier C4	5210+50.43	-6.50	611.96	611.96

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USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - LFC	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS III - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-28 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	305
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

BEAM NO. 16

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C1	5212+90.60	-18.79	610.38	610.38
☉ E. Brg. Pier C1	5212+89.62	-18.71	610.39	610.39
A	5212+79.76	-17.89	610.47	610.51
B	5212+69.90	-17.13	610.54	610.62
C	5212+60.02	-16.43	610.61	610.71
D	5212+50.14	-15.79	610.68	610.79
E	5212+40.25	-15.22	610.75	610.84
F	5212+30.36	-14.70	610.82	610.88
G	5212+20.45	-14.24	610.89	610.92
☉ Brg. Pier C2	5212+10.51	-13.85	610.97	610.97
H	5212+00.60	-13.51	611.05	611.04
I	5211+90.69	-13.24	611.09	611.08
J	5211+80.77	-13.03	611.14	611.14
K	5211+70.85	-12.87	611.19	611.19
L	5211+60.93	-12.78	611.24	611.24
M	5211+51.01	-12.75	611.30	611.29
N	5211+41.01	-12.75	611.36	611.35
☉ Brg. Pier C3	5211+30.68	-12.75	611.42	611.42
O	5211+20.68	-12.75	611.47	611.50
P	5211+10.68	-12.75	611.53	611.58
Q	5211+00.68	-12.75	611.59	611.66
R	5210+90.68	-12.75	611.66	611.76
S	5210+80.68	-12.75	611.76	611.85
T	5210+70.68	-12.75	611.85	611.93
U	5210+60.68	-12.75	611.95	611.99
☉ W. Brg. Pier C4	5210+51.26	-12.75	612.03	612.03
☉ Pier C4	5210+50.43	-12.75	612.04	612.04

BEAM NO. 17

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C1	5212+90.04	-25.02	610.66	610.66
☉ E. Brg. Pier C1	5212+89.06	-24.93	610.67	610.67
A	5212+79.24	-24.12	610.75	610.79
B	5212+69.41	-23.36	610.82	610.90
C	5212+59.58	-22.67	610.89	610.99
D	5212+49.73	-22.03	610.96	611.07
E	5212+39.88	-21.46	611.03	611.11
F	5212+30.02	-20.94	611.10	611.16
G	5212+20.16	-20.49	611.17	611.20
☉ Brg. Pier C2	5212+10.25	-20.09	611.25	611.25
H	5212+00.38	-19.76	611.33	611.32
I	5211+90.50	-19.49	611.35	611.34
J	5211+80.62	-19.27	611.38	611.38
K	5211+70.74	-19.12	611.41	611.41
L	5211+60.85	-19.03	611.45	611.44
M	5211+50.97	-19.00	611.48	611.47
N	5211+40.97	-19.00	611.52	611.52
☉ Brg. Pier C3	5211+30.68	-19.00	611.56	611.56
O	5211+20.68	-19.00	611.60	611.62
P	5211+10.68	-19.00	611.64	611.69
Q	5211+00.68	-19.00	611.67	611.75
R	5210+90.68	-19.00	611.75	611.85
S	5210+80.68	-19.00	611.84	611.93
T	5210+70.68	-19.00	611.94	612.02
U	5210+60.68	-19.00	612.03	612.07
☉ W. Brg. Pier C4	5210+51.26	-19.00	612.12	612.12
☉ Pier C4	5210+50.43	-19.00	612.13	612.13

BEAM NO. 18

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C1	5212+89.49	-31.24	610.94	610.94
☉ E. Brg. Pier C1	5212+88.51	-31.16	610.95	610.95
A	5212+78.73	-30.34	611.03	611.07
B	5212+68.93	-29.59	611.10	611.18
C	5212+59.13	-28.90	611.17	611.27
D	5212+49.33	-28.27	611.24	611.35
E	5212+39.51	-27.69	611.30	611.39
F	5212+29.69	-27.18	611.37	611.44
G	5212+19.86	-26.73	611.45	611.48
☉ Brg. Pier C2	5212+09.99	-26.34	611.52	611.52
H	5212+00.16	-26.00	611.60	611.60
I	5211+90.32	-25.73	611.61	611.60
J	5211+80.47	-25.52	611.62	611.62
K	5211+70.63	-25.37	611.63	611.63
L	5211+60.78	-25.28	611.65	611.64
M	5211+50.93	-25.25	611.67	611.66
N	5211+40.93	-25.25	611.69	611.68
☉ Brg. Pier C3	5211+30.68	-25.25	611.71	611.71
O	5211+20.68	-25.25	611.73	611.75
P	5211+10.68	-25.25	611.74	611.80
Q	5211+00.68	-25.25	611.76	611.84
R	5210+90.68	-25.25	611.83	611.94
S	5210+80.68	-25.25	611.93	612.02
T	5210+70.68	-25.25	612.02	612.10
U	5210+60.68	-25.25	612.12	612.16
☉ W. Brg. Pier C4	5210+51.26	-25.25	612.21	612.21
☉ Pier C4	5210+50.43	-25.25	612.21	612.21

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**PARSONS
BRINCKERHOFF**

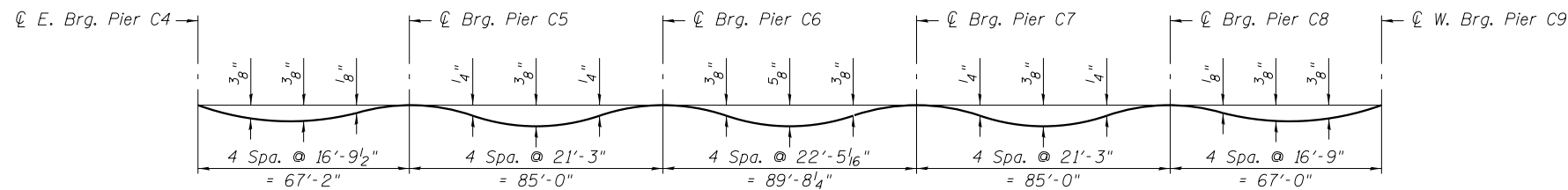
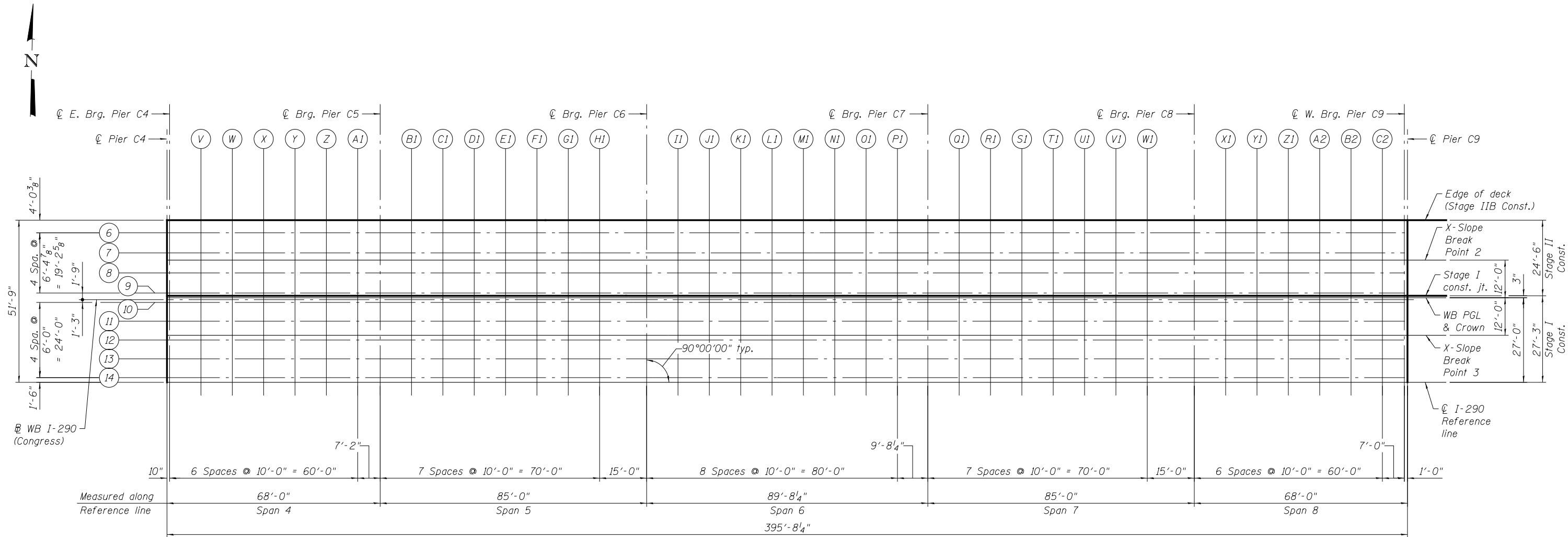
USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - LFC	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

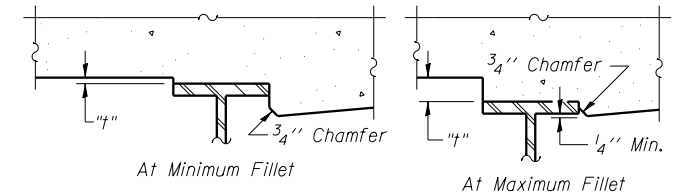
**TOP OF SLAB ELEVATIONS IV - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-29 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	306
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



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 in tables, see sheets S2-31 thru S2-35.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheets S2-31 thru S2-35. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S2-31 thru S2-35, minus slab thickness, equals the fillet heights "t" above top flange of beams.

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - P.JL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - J.Z	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATION PLAN - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-30 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	307
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C4	5210+50.43	25.00	611.35	611.35
⊕ E. Brg. Pier C4	5210+49.60	25.00	611.37	611.37
V	5210+39.60	25.00	611.52	611.54
W	5210+29.60	25.00	611.65	611.68
X	5210+19.60	25.00	611.78	611.81
Y	5210+09.60	25.00	611.88	611.91
Z	5209+99.60	25.00	611.98	611.99
A1	5209+89.60	25.00	612.05	612.05
⊕ Brg. Pier C5	5209+82.43	25.00	612.09	612.09
B1	5209+72.43	25.00	612.15	612.16
C1	5209+62.43	25.00	612.22	612.24
D1	5209+52.43	25.00	612.28	612.31
E1	5209+42.43	25.00	612.34	612.37
F1	5209+32.43	25.00	612.39	612.42
G1	5209+22.43	25.00	612.44	612.46
H1	5209+12.43	25.00	612.48	612.49
⊕ Brg. Pier C6	5208+97.43	25.00	612.51	612.51
I1	5208+87.43	25.00	612.56	612.57
J1	5208+77.43	25.00	612.58	612.61
K1	5208+67.43	25.00	612.61	612.65
L1	5208+57.43	25.00	612.64	612.69
M1	5208+47.43	25.00	612.66	612.71
N1	5208+37.43	25.00	612.67	612.71
O1	5208+27.43	25.00	612.66	612.69
P1	5208+17.43	25.00	612.64	612.66
⊕ Brg. Pier C7	5208+07.74	25.00	612.63	612.63
Q1	5207+97.74	25.00	612.62	612.63
R1	5207+87.74	25.00	612.60	612.62
S1	5207+77.74	25.00	612.58	612.60
T1	5207+67.74	25.00	612.56	612.59
U1	5207+57.74	25.00	612.53	612.56
V1	5207+47.74	25.00	612.51	612.53
W1	5207+37.74	25.00	612.46	612.48
⊕ Brg. Pier C8	5207+22.74	25.00	612.40	612.40
X1	5207+12.74	25.00	612.37	612.38
Y1	5207+02.74	25.00	612.34	612.35
Z1	5206+92.74	25.00	612.31	612.34
A2	5206+82.74	25.00	612.29	612.32
B2	5206+72.74	25.00	612.26	612.29
C2	5206+62.74	25.00	612.23	612.24
⊕ W. Brg. Pier C9	5206+55.74	25.00	612.20	612.20
⊕ Pier C9	5206+54.74	25.00	612.20	612.20

BEAM NO. 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C4	5210+50.43	20.97	611.44	611.44
⊕ E. Brg. Pier C4	5210+49.60	20.97	611.45	611.45
V	5210+39.60	20.97	611.60	611.62
W	5210+29.60	20.97	611.73	611.76
X	5210+19.60	20.97	611.85	611.88
Y	5210+09.60	20.97	611.96	611.98
Z	5209+99.60	20.97	612.05	612.06
A1	5209+89.60	20.97	612.12	612.12
⊕ Brg. Pier C5	5209+82.43	20.97	612.16	612.16
B1	5209+72.43	20.97	612.23	612.23
C1	5209+62.43	20.97	612.29	612.31
D1	5209+52.43	20.97	612.35	612.38
E1	5209+42.43	20.97	612.41	612.44
F1	5209+32.43	20.97	612.46	612.49
G1	5209+22.43	20.97	612.51	612.53
H1	5209+12.43	20.97	612.55	612.56
⊕ Brg. Pier C6	5208+97.43	20.97	612.58	612.58
I1	5208+87.43	20.97	612.63	612.64
J1	5208+77.43	20.97	612.66	612.68
K1	5208+67.43	20.97	612.68	612.72
L1	5208+57.43	20.97	612.71	612.76
M1	5208+47.43	20.97	612.73	612.78
N1	5208+37.43	20.97	612.74	612.78
O1	5208+27.43	20.97	612.73	612.76
P1	5208+17.43	20.97	612.71	612.73
⊕ Brg. Pier C7	5208+07.74	20.97	612.70	612.70
Q1	5207+97.74	20.97	612.69	612.70
R1	5207+87.74	20.97	612.67	612.69
S1	5207+77.74	20.97	612.65	612.67
T1	5207+67.74	20.97	612.63	612.66
U1	5207+57.74	20.97	612.60	612.63
V1	5207+47.74	20.97	612.58	612.60
W1	5207+37.74	20.97	612.54	612.55
⊕ Brg. Pier C8	5207+22.74	20.97	612.48	612.48
X1	5207+12.74	20.97	612.45	612.46
Y1	5207+02.74	20.97	612.42	612.44
Z1	5206+92.74	20.97	612.39	612.42
A2	5206+82.74	20.97	612.37	612.40
B2	5206+72.74	20.97	612.35	612.38
C2	5206+62.74	20.97	612.31	612.33
⊕ W. Brg. Pier C9	5206+55.74	20.97	612.29	612.29
⊕ Pier C9	5206+54.74	20.97	612.28	612.28

BEAM NO. 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C4	5210+50.43	14.56	611.56	611.56
⊕ E. Brg. Pier C4	5210+49.60	14.56	611.58	611.58
V	5210+39.60	14.56	611.72	611.74
W	5210+29.60	14.56	611.85	611.88
X	5210+19.60	14.56	611.97	612.00
Y	5210+09.60	14.56	612.07	612.09
Z	5209+99.60	14.56	612.16	612.17
A1	5209+89.60	14.56	612.23	612.23
⊕ Brg. Pier C5	5209+82.43	14.56	612.27	612.27
B1	5209+72.43	14.56	612.34	612.35
C1	5209+62.43	14.56	612.40	612.42
D1	5209+52.43	14.56	612.47	612.49
E1	5209+42.43	14.56	612.53	612.56
F1	5209+32.43	14.56	612.58	612.60
G1	5209+22.43	14.56	612.62	612.65
H1	5209+12.43	14.56	612.66	612.67
⊕ Brg. Pier C6	5208+97.43	14.56	612.70	612.70
I1	5208+87.43	14.56	612.74	612.76
J1	5208+77.43	14.56	612.77	612.80
K1	5208+67.43	14.56	612.79	612.83
L1	5208+57.43	14.56	612.82	612.87
M1	5208+47.43	14.56	612.85	612.89
N1	5208+37.43	14.56	612.86	612.89
O1	5208+27.43	14.56	612.84	612.87
P1	5208+17.43	14.56	612.83	612.84
⊕ Brg. Pier C7	5208+07.74	14.56	612.81	612.81
Q1	5207+97.74	14.56	612.80	612.81
R1	5207+87.74	14.56	612.78	612.80
S1	5207+77.74	14.56	612.76	612.79
T1	5207+67.74	14.56	612.74	612.77
U1	5207+57.74	14.56	612.71	612.74
V1	5207+47.74	14.56	612.69	612.71
W1	5207+37.74	14.56	612.66	612.68
⊕ Brg. Pier C8	5207+22.74	14.56	612.62	612.62
X1	5207+12.74	14.56	612.59	612.59
Y1	5207+02.74	14.56	612.56	612.57
Z1	5206+92.74	14.56	612.53	612.55
A2	5206+82.74	14.56	612.50	612.53
B2	5206+72.74	14.56	612.48	612.51
C2	5206+62.74	14.56	612.45	612.46
⊕ W. Brg. Pier C9	5206+55.74	14.56	612.42	612.42
⊕ Pier C9	5206+54.74	14.56	612.42	612.42

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USER NAME = pateld	DESIGNED - P.JL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS I - UNIT II
STRUCTURE NO. 016-0461**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	308
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

SHEET NO. S2-31 OF S2-145 SHEETS

CROSS SLOPE BREAK POINT 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier C4	5210+50.43	12.25	611.61	611.61
Ⓞ E. Brg. Pier C4	5210+49.60	12.25	611.62	611.62
V	5210+39.60	12.25	611.77	611.79
W	5210+29.60	12.25	611.89	611.92
X	5210+19.60	12.25	612.01	612.05
Y	5210+09.60	12.25	612.11	612.14
Z	5209+99.60	12.25	612.20	612.21
A1	5209+89.60	12.25	612.27	612.27
Ⓞ Brg. Pier C5	5209+82.43	12.25	612.31	612.31
B1	5209+72.43	12.25	612.38	612.39
C1	5209+62.43	12.25	612.44	612.46
D1	5209+52.43	12.25	612.51	612.53
E1	5209+42.43	12.25	612.57	612.60
F1	5209+32.43	12.25	612.62	612.64
G1	5209+22.43	12.25	612.66	612.69
H1	5209+12.43	12.25	612.70	612.71
Ⓞ Brg. Pier C6	5208+97.43	12.25	612.74	612.74
I1	5208+87.43	12.25	612.78	612.80
J1	5208+77.43	12.25	612.81	612.84
K1	5208+67.43	12.25	612.83	612.87
L1	5208+57.43	12.25	612.86	612.91
M1	5208+47.43	12.25	612.89	612.93
N1	5208+37.43	12.25	612.90	612.93
O1	5208+27.43	12.25	612.88	612.91
P1	5208+17.43	12.25	612.87	612.88
Ⓞ Brg. Pier C7	5208+07.74	12.25	612.85	612.85
Q1	5207+97.74	12.25	612.84	612.85
R1	5207+87.74	12.25	612.82	612.84
S1	5207+77.74	12.25	612.80	612.83
T1	5207+67.74	12.25	612.78	612.81
U1	5207+57.74	12.25	612.76	612.78
V1	5207+47.74	12.25	612.73	612.75
W1	5207+37.74	12.25	612.71	612.72
Ⓞ Brg. Pier C8	5207+22.74	12.25	612.66	612.66
X1	5207+12.74	12.25	612.64	612.64
Y1	5207+02.74	12.25	612.60	612.62
Z1	5206+92.74	12.25	612.57	612.60
A2	5206+82.74	12.25	612.55	612.58
B2	5206+72.74	12.25	612.53	612.56
C2	5206+62.74	12.25	612.50	612.51
Ⓞ W. Brg. Pier C9	5206+55.74	12.25	612.47	612.47
Ⓞ Pier C9	5206+54.74	12.25	612.46	612.46

BEAM NO. 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier C4	5210+50.43	8.16	611.69	611.69
Ⓞ E. Brg. Pier C4	5210+49.60	8.16	611.71	611.71
V	5210+39.60	8.16	611.85	611.87
W	5210+29.60	8.16	611.96	612.00
X	5210+19.60	8.16	612.08	612.11
Y	5210+09.60	8.16	612.17	612.19
Z	5209+99.60	8.16	612.25	612.26
A1	5209+89.60	8.16	612.32	612.32
Ⓞ Brg. Pier C5	5209+82.43	8.16	612.37	612.37
B1	5209+72.43	8.16	612.43	612.44
C1	5209+62.43	8.16	612.49	612.51
D1	5209+52.43	8.16	612.56	612.58
E1	5209+42.43	8.16	612.62	612.65
F1	5209+32.43	8.16	612.67	612.70
G1	5209+22.43	8.16	612.72	612.74
H1	5209+12.43	8.16	612.75	612.77
Ⓞ Brg. Pier C6	5208+97.43	8.16	612.79	612.79
I1	5208+87.43	8.16	612.82	612.84
J1	5208+77.43	8.16	612.85	612.88
K1	5208+67.43	8.16	612.88	612.92
L1	5208+57.43	8.16	612.90	612.95
M1	5208+47.43	8.16	612.93	612.98
N1	5208+37.43	8.16	612.94	612.98
O1	5208+27.43	8.16	612.92	612.95
P1	5208+17.43	8.16	612.91	612.92
Ⓞ Brg. Pier C7	5208+07.74	8.16	612.90	612.90
Q1	5207+97.74	8.16	612.88	612.89
R1	5207+87.74	8.16	612.87	612.89
S1	5207+77.74	8.16	612.84	612.87
T1	5207+67.74	8.16	612.82	612.85
U1	5207+57.74	8.16	612.80	612.83
V1	5207+47.74	8.16	612.77	612.80
W1	5207+37.74	8.16	612.75	612.76
Ⓞ Brg. Pier C8	5207+22.74	8.16	612.71	612.71
X1	5207+12.74	8.16	612.68	612.68
Y1	5207+02.74	8.16	612.65	612.66
Z1	5206+92.74	8.16	612.62	612.64
A2	5206+82.74	8.16	612.59	612.62
B2	5206+72.74	8.16	612.57	612.60
C2	5206+62.74	8.16	612.54	612.55
Ⓞ W. Brg. Pier C9	5206+55.74	8.16	612.51	612.51
Ⓞ Pier C9	5206+54.74	8.16	612.51	612.51

BEAM NO. 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier C4	5210+50.43	1.75	611.83	611.83
Ⓞ E. Brg. Pier C4	5210+49.60	1.75	611.84	611.84
V	5210+39.60	1.75	611.97	611.99
W	5210+29.60	1.75	612.08	612.11
X	5210+19.60	1.75	612.18	612.21
Y	5210+09.60	1.75	612.26	612.29
Z	5209+99.60	1.75	612.33	612.34
A1	5209+89.60	1.75	612.40	612.40
Ⓞ Brg. Pier C5	5209+82.43	1.75	612.45	612.45
B1	5209+72.43	1.75	612.51	612.52
C1	5209+62.43	1.75	612.57	612.59
D1	5209+52.43	1.75	612.64	612.66
E1	5209+42.43	1.75	612.70	612.73
F1	5209+32.43	1.75	612.75	612.78
G1	5209+22.43	1.75	612.80	612.82
H1	5209+12.43	1.75	612.83	612.85
Ⓞ Brg. Pier C6	5208+97.43	1.75	612.86	612.86
I1	5208+87.43	1.75	612.89	612.90
J1	5208+77.43	1.75	612.92	612.95
K1	5208+67.43	1.75	612.94	612.98
L1	5208+57.43	1.75	612.97	613.02
M1	5208+47.43	1.75	613.00	613.04
N1	5208+37.43	1.75	613.01	613.04
O1	5208+27.43	1.75	612.99	613.02
P1	5208+17.43	1.75	612.98	612.99
Ⓞ Brg. Pier C7	5208+07.74	1.75	612.96	612.96
Q1	5207+97.74	1.75	612.95	612.96
R1	5207+87.74	1.75	612.93	612.95
S1	5207+77.74	1.75	612.91	612.94
T1	5207+67.74	1.75	612.89	612.92
U1	5207+57.74	1.75	612.86	612.89
V1	5207+47.74	1.75	612.84	612.86
W1	5207+37.74	1.75	612.82	612.83
Ⓞ Brg. Pier C8	5207+22.74	1.75	612.77	612.77
X1	5207+12.74	1.75	612.74	612.75
Y1	5207+02.74	1.75	612.71	612.73
Z1	5206+92.74	1.75	612.68	612.71
A2	5206+82.74	1.75	612.66	612.69
B2	5206+72.74	1.75	612.64	612.67
C2	5206+62.74	1.75	612.61	612.62
Ⓞ W. Brg. Pier C9	5206+55.74	1.75	612.58	612.58
Ⓞ Pier C9	5206+54.74	1.75	612.57	612.57

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USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS II - UNIT II
STRUCTURE NO. 016-0461**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	309
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

SHEET NO. S2-32 OF S2-145 SHEETS

STAGE I CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C4	5210+50.43	0.50	611.85	611.85
⊙ E. Brg. Pier C4	5210+49.60	0.50	611.86	611.86
V	5210+39.60	0.50	611.99	612.01
W	5210+29.60	0.50	612.10	612.13
X	5210+19.60	0.50	612.20	612.23
Y	5210+09.60	0.50	612.28	612.30
Z	5209+99.60	0.50	612.35	612.36
A1	5209+89.60	0.50	612.42	612.42
⊙ Brg. Pier C5	5209+82.43	0.50	612.46	612.46
B1	5209+72.43	0.50	612.52	612.53
C1	5209+62.43	0.50	612.59	612.61
D1	5209+52.43	0.50	612.65	612.68
E1	5209+42.43	0.50	612.71	612.74
F1	5209+32.43	0.50	612.76	612.79
G1	5209+22.43	0.50	612.81	612.83
H1	5209+12.43	0.50	612.85	612.86
⊙ Brg. Pier C6	5208+97.43	0.50	612.88	612.88
I1	5208+87.43	0.50	612.90	612.92
J1	5208+77.43	0.50	612.93	612.96
K1	5208+67.43	0.50	612.96	613.00
L1	5208+57.43	0.50	612.98	613.03
M1	5208+47.43	0.50	613.01	613.06
N1	5208+37.43	0.50	613.02	613.06
O1	5208+27.43	0.50	613.00	613.03
P1	5208+17.43	0.50	612.99	613.00
⊙ Brg. Pier C7	5208+07.74	0.50	612.98	612.98
Q1	5207+97.74	0.50	612.96	612.97
R1	5207+87.74	0.50	612.95	612.97
S1	5207+77.74	0.50	612.92	612.95
T1	5207+67.74	0.50	612.90	612.93
U1	5207+57.74	0.50	612.88	612.91
V1	5207+47.74	0.50	612.85	612.88
W1	5207+37.74	0.50	612.83	612.84
⊙ Brg. Pier C8	5207+22.74	0.50	612.79	612.79
X1	5207+12.74	0.50	612.76	612.76
Y1	5207+02.74	0.50	612.73	612.74
Z1	5206+92.74	0.50	612.70	612.72
A2	5206+82.74	0.50	612.67	612.70
B2	5206+72.74	0.50	612.65	612.68
C2	5206+62.74	0.50	612.62	612.63
⊙ W. Brg. Pier C9	5206+55.74	0.50	612.59	612.59
⊙ Pier C9	5206+54.74	0.50	612.59	612.59

WESTBOUND PROFILE GRADE LINE & CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C4	5210+50.43	0.25	611.86	611.86
⊙ E. Brg. Pier C4	5210+49.60	0.25	611.87	611.87
V	5210+39.60	0.25	612.00	612.02
W	5210+29.60	0.25	612.10	612.13
X	5210+19.60	0.25	612.21	612.24
Y	5210+09.60	0.25	612.28	612.31
Z	5209+99.60	0.25	612.35	612.36
A1	5209+89.60	0.25	612.42	612.42
⊙ Brg. Pier C5	5209+82.43	0.25	612.46	612.46
B1	5209+72.43	0.25	612.53	612.54
C1	5209+62.43	0.25	612.59	612.61
D1	5209+52.43	0.25	612.66	612.68
E1	5209+42.43	0.25	612.72	612.75
F1	5209+32.43	0.25	612.77	612.79
G1	5209+22.43	0.25	612.81	612.84
H1	5209+12.43	0.25	612.85	612.86
⊙ Brg. Pier C6	5208+97.43	0.25	612.88	612.88
I1	5208+87.43	0.25	612.91	612.92
J1	5208+77.43	0.25	612.93	612.96
K1	5208+67.43	0.25	612.96	613.00
L1	5208+57.43	0.25	612.99	613.03
M1	5208+47.43	0.25	613.01	613.06
N1	5208+37.43	0.25	613.02	613.06
O1	5208+27.43	0.25	613.01	613.03
P1	5208+17.43	0.25	612.99	613.00
⊙ Brg. Pier C7	5208+07.74	0.25	612.98	612.98
Q1	5207+97.74	0.25	612.97	612.98
R1	5207+87.74	0.25	612.95	612.97
S1	5207+77.74	0.25	612.93	612.95
T1	5207+67.74	0.25	612.90	612.93
U1	5207+57.74	0.25	612.88	612.91
V1	5207+47.74	0.25	612.86	612.88
W1	5207+37.74	0.25	612.83	612.85
⊙ Brg. Pier C8	5207+22.74	0.25	612.79	612.79
X1	5207+12.74	0.25	612.76	612.77
Y1	5207+02.74	0.25	612.73	612.74
Z1	5206+92.74	0.25	612.70	612.73
A2	5206+82.74	0.25	612.68	612.71
B2	5206+72.74	0.25	612.65	612.69
C2	5206+62.74	0.25	612.62	612.64
⊙ W. Brg. Pier C9	5206+55.74	0.25	612.59	612.59
⊙ Pier C9	5206+54.74	0.25	612.59	612.59

BEAM NO. 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C4	5210+50.43	-1.25	611.88	611.88
⊙ E. Brg. Pier C4	5210+49.60	-1.25	611.89	611.89
V	5210+39.60	-1.25	612.01	612.03
W	5210+29.60	-1.25	612.11	612.14
X	5210+19.60	-1.25	612.21	612.24
Y	5210+09.60	-1.25	612.29	612.31
Z	5209+99.60	-1.25	612.35	612.36
A1	5209+89.60	-1.25	612.42	612.42
⊙ Brg. Pier C5	5209+82.43	-1.25	612.46	612.46
B1	5209+72.43	-1.25	612.52	612.53
C1	5209+62.43	-1.25	612.58	612.60
D1	5209+52.43	-1.25	612.65	612.67
E1	5209+42.43	-1.25	612.70	612.73
F1	5209+32.43	-1.25	612.75	612.78
G1	5209+22.43	-1.25	612.80	612.82
H1	5209+12.43	-1.25	612.83	612.85
⊙ Brg. Pier C6	5208+97.43	-1.25	612.87	612.87
I1	5208+87.43	-1.25	612.89	612.90
J1	5208+77.43	-1.25	612.92	612.95
K1	5208+67.43	-1.25	612.94	612.98
L1	5208+57.43	-1.25	612.97	613.01
M1	5208+47.43	-1.25	612.99	613.04
N1	5208+37.43	-1.25	613.00	613.04
O1	5208+27.43	-1.25	612.99	613.01
P1	5208+17.43	-1.25	612.97	612.98
⊙ Brg. Pier C7	5208+07.74	-1.25	612.96	612.96
Q1	5207+97.74	-1.25	612.95	612.95
R1	5207+87.74	-1.25	612.93	612.95
S1	5207+77.74	-1.25	612.91	612.93
T1	5207+67.74	-1.25	612.88	612.91
U1	5207+57.74	-1.25	612.86	612.89
V1	5207+47.74	-1.25	612.84	612.86
W1	5207+37.74	-1.25	612.81	612.83
⊙ Brg. Pier C8	5207+22.74	-1.25	612.77	612.77
X1	5207+12.74	-1.25	612.74	612.75
Y1	5207+02.74	-1.25	612.71	612.72
Z1	5206+92.74	-1.25	612.68	612.71
A2	5206+82.74	-1.25	612.66	612.69
B2	5206+72.74	-1.25	612.64	612.67
C2	5206+62.74	-1.25	612.61	612.62
⊙ W. Brg. Pier C9	5206+55.74	-1.25	612.58	612.58
⊙ Pier C9	5206+54.74	-1.25	612.57	612.57

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PARSONS BRINCKERHOFF	USER NAME = alkhatab	DESIGNED - PJL	REVISED -
		CHECKED - JZ	REVISED -
	PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
	PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS III - UNIT II
STRUCTURE NO. 016-0461**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	310
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

SHEET NO. S2-33 OF S2-145 SHEETS

BEAM NO. 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C4	5210+50.43	-7.25	611.95	611.95
⊕ E. Brg. Pier C4	5210+49.60	-7.25	611.96	611.96
V	5210+39.60	-7.25	612.07	612.09
W	5210+29.60	-7.25	612.16	612.19
X	5210+19.60	-7.25	612.24	612.27
Y	5210+09.60	-7.25	612.30	612.33
Z	5209+99.60	-7.25	612.35	612.36
A1	5209+89.60	-7.25	612.41	612.41
⊕ Brg. Pier C5	5209+82.43	-7.25	612.45	612.45
B1	5209+72.43	-7.25	612.50	612.51
C1	5209+62.43	-7.25	612.56	612.58
D1	5209+52.43	-7.25	612.61	612.64
E1	5209+42.43	-7.25	612.66	612.69
F1	5209+32.43	-7.25	612.70	612.73
G1	5209+22.43	-7.25	612.74	612.76
H1	5209+12.43	-7.25	612.77	612.79
⊕ Brg. Pier C6	5208+97.43	-7.25	612.81	612.81
I1	5208+87.43	-7.25	612.83	612.84
J1	5208+77.43	-7.25	612.85	612.88
K1	5208+67.43	-7.25	612.88	612.92
L1	5208+57.43	-7.25	612.88	612.93
M1	5208+47.43	-7.25	612.91	612.96
N1	5208+37.43	-7.25	612.92	612.96
O1	5208+27.43	-7.25	612.90	612.93
P1	5208+17.43	-7.25	612.89	612.90
⊕ Brg. Pier C7	5208+07.74	-7.25	612.88	612.88
Q1	5207+97.74	-7.25	612.86	612.87
R1	5207+87.74	-7.25	612.85	612.87
S1	5207+77.74	-7.25	612.83	612.85
T1	5207+67.74	-7.25	612.80	612.83
U1	5207+57.74	-7.25	612.78	612.81
V1	5207+47.74	-7.25	612.75	612.78
W1	5207+37.74	-7.25	612.73	612.74
⊕ Brg. Pier C8	5207+22.74	-7.25	612.69	612.69
X1	5207+12.74	-7.25	612.66	612.67
Y1	5207+02.74	-7.25	612.63	612.64
Z1	5206+92.74	-7.25	612.60	612.63
A2	5206+82.74	-7.25	612.59	612.62
B2	5206+72.74	-7.25	612.58	612.61
C2	5206+62.74	-7.25	612.54	612.56
⊕ W. Brg. Pier C9	5206+55.74	-7.25	612.51	612.51
⊕ Pier C9	5206+54.74	-7.25	612.51	612.51

CROSS SLOPE BREAK POINT 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C4	5210+50.43	-12.25	612.01	612.01
⊕ E. Brg. Pier C4	5210+49.60	-12.25	612.02	612.02
V	5210+39.60	-12.25	612.12	612.13
W	5210+29.60	-12.25	612.19	612.22
X	5210+19.60	-12.25	612.27	612.30
Y	5210+09.60	-12.25	612.31	612.34
Z	5209+99.60	-12.25	612.35	612.37
A1	5209+89.60	-12.25	612.40	612.41
⊕ Brg. Pier C5	5209+82.43	-12.25	612.44	612.44
B1	5209+72.43	-12.25	612.49	612.50
C1	5209+62.43	-12.25	612.53	612.55
D1	5209+52.43	-12.25	612.58	612.61
E1	5209+42.43	-12.25	612.63	612.66
F1	5209+32.43	-12.25	612.66	612.69
G1	5209+22.43	-12.25	612.70	612.72
H1	5209+12.43	-12.25	612.72	612.74
⊕ Brg. Pier C6	5208+97.43	-12.25	612.76	612.76
I1	5208+87.43	-12.25	612.78	612.80
J1	5208+77.43	-12.25	612.81	612.84
K1	5208+67.43	-12.25	612.83	612.87
L1	5208+57.43	-12.25	612.82	612.87
M1	5208+47.43	-12.25	612.85	612.90
N1	5208+37.43	-12.25	612.86	612.90
O1	5208+27.43	-12.25	612.84	612.87
P1	5208+17.43	-12.25	612.83	612.84
⊕ Brg. Pier C7	5208+07.74	-12.25	612.82	612.82
Q1	5207+97.74	-12.25	612.80	612.81
R1	5207+87.74	-12.25	612.79	612.81
S1	5207+77.74	-12.25	612.76	612.79
T1	5207+67.74	-12.25	612.74	612.77
U1	5207+57.74	-12.25	612.72	612.75
V1	5207+47.74	-12.25	612.69	612.72
W1	5207+37.74	-12.25	612.67	612.68
⊕ Brg. Pier C8	5207+22.74	-12.25	612.63	612.63
X1	5207+12.74	-12.25	612.60	612.60
Y1	5207+02.74	-12.25	612.57	612.58
Z1	5206+92.74	-12.25	612.55	612.57
A2	5206+82.74	-12.25	612.54	612.57
B2	5206+72.74	-12.25	612.53	612.56
C2	5206+62.74	-12.25	612.50	612.51
⊕ W. Brg. Pier C9	5206+55.74	-12.25	612.47	612.47
⊕ Pier C9	5206+54.74	-12.25	612.46	612.46

BEAM NO. 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C4	5210+50.43	-13.25	612.03	612.03
⊕ E. Brg. Pier C4	5210+49.60	-13.25	612.04	612.04
V	5210+39.60	-13.25	612.13	612.15
W	5210+29.60	-13.25	612.20	612.23
X	5210+19.60	-13.25	612.27	612.30
Y	5210+09.60	-13.25	612.31	612.33
Z	5209+99.60	-13.25	612.35	612.36
A1	5209+89.60	-13.25	612.39	612.40
⊕ Brg. Pier C5	5209+82.43	-13.25	612.43	612.43
B1	5209+72.43	-13.25	612.47	612.48
C1	5209+62.43	-13.25	612.52	612.54
D1	5209+52.43	-13.25	612.56	612.59
E1	5209+42.43	-13.25	612.60	612.63
F1	5209+32.43	-13.25	612.64	612.66
G1	5209+22.43	-13.25	612.66	612.69
H1	5209+12.43	-13.25	612.69	612.71
⊕ Brg. Pier C6	5208+97.43	-13.25	612.73	612.73
I1	5208+87.43	-13.25	612.75	612.76
J1	5208+77.43	-13.25	612.78	612.80
K1	5208+67.43	-13.25	612.80	612.84
L1	5208+57.43	-13.25	612.79	612.84
M1	5208+47.43	-13.25	612.82	612.87
N1	5208+37.43	-13.25	612.83	612.87
O1	5208+27.43	-13.25	612.81	612.84
P1	5208+17.43	-13.25	612.80	612.81
⊕ Brg. Pier C7	5208+07.74	-13.25	612.79	612.79
Q1	5207+97.74	-13.25	612.77	612.78
R1	5207+87.74	-13.25	612.76	612.77
S1	5207+77.74	-13.25	612.73	612.76
T1	5207+67.74	-13.25	612.71	612.74
U1	5207+57.74	-13.25	612.69	612.71
V1	5207+47.74	-13.25	612.66	612.69
W1	5207+37.74	-13.25	612.64	612.65
⊕ Brg. Pier C8	5207+22.74	-13.25	612.60	612.60
X1	5207+12.74	-13.25	612.57	612.57
Y1	5207+02.74	-13.25	612.54	612.55
Z1	5206+92.74	-13.25	612.52	612.54
A2	5206+82.74	-13.25	612.51	612.54
B2	5206+72.74	-13.25	612.50	612.53
C2	5206+62.74	-13.25	612.46	612.48
⊕ W. Brg. Pier C9	5206+55.74	-13.25	612.44	612.44
⊕ Pier C9	5206+54.74	-13.25	612.43	612.43

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USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS IV - UNIT II
STRUCTURE NO. 016-0461**

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	311
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

SHEET NO. S2-34 OF S2-145 SHEETS

BEAM NO. 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C4	5210+50.43	-19.25	612.11	612.11
⊙ E. Brg. Pier C4	5210+49.60	-19.25	612.12	612.12
V	5210+39.60	-19.25	612.19	612.21
W	5210+29.60	-19.25	612.23	612.27
X	5210+19.60	-19.25	612.28	612.31
Y	5210+09.60	-19.25	612.30	612.32
Z	5209+99.60	-19.25	612.32	612.34
A1	5209+89.60	-19.25	612.36	612.36
⊙ Brg. Pier C5	5209+82.43	-19.25	612.38	612.38
B1	5209+72.43	-19.25	612.41	612.42
C1	5209+62.43	-19.25	612.45	612.47
D1	5209+52.43	-19.25	612.48	612.50
E1	5209+42.43	-19.25	612.51	612.54
F1	5209+32.43	-19.25	612.53	612.56
G1	5209+22.43	-19.25	612.54	612.57
H1	5209+12.43	-19.25	612.57	612.58
⊙ Brg. Pier C6	5208+97.43	-19.25	612.60	612.60
I1	5208+87.43	-19.25	612.63	612.64
J1	5208+77.43	-19.25	612.65	612.68
K1	5208+67.43	-19.25	612.67	612.71
L1	5208+57.43	-19.25	612.67	612.72
M1	5208+47.43	-19.25	612.69	612.74
N1	5208+37.43	-19.25	612.70	612.74
O1	5208+27.43	-19.25	612.69	612.72
P1	5208+17.43	-19.25	612.67	612.69
⊙ Brg. Pier C7	5208+07.74	-19.25	612.66	612.66
Q1	5207+97.74	-19.25	612.65	612.66
R1	5207+87.74	-19.25	612.63	612.65
S1	5207+77.74	-19.25	612.61	612.63
T1	5207+67.74	-19.25	612.59	612.62
U1	5207+57.74	-19.25	612.56	612.59
V1	5207+47.74	-19.25	612.54	612.56
W1	5207+37.74	-19.25	612.51	612.53
⊙ Brg. Pier C8	5207+22.74	-19.25	612.47	612.47
X1	5207+12.74	-19.25	612.44	612.45
Y1	5207+02.74	-19.25	612.41	612.43
Z1	5206+92.74	-19.25	612.39	612.42
A2	5206+82.74	-19.25	612.38	612.41
B2	5206+72.74	-19.25	612.37	612.40
C2	5206+62.74	-19.25	612.34	612.35
⊙ W. Brg. Pier C9	5206+55.74	-19.25	612.31	612.31
⊙ Pier C9	5206+54.74	-19.25	612.31	612.31

BEAM NO. 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C4	5210+50.43	-25.25	612.19	612.19
⊙ E. Brg. Pier C4	5210+49.60	-25.25	612.20	612.20
V	5210+39.60	-25.25	612.25	612.26
W	5210+29.60	-25.25	612.27	612.30
X	5210+19.60	-25.25	612.29	612.32
Y	5210+09.60	-25.25	612.29	612.31
Z	5209+99.60	-25.25	612.30	612.31
A1	5209+89.60	-25.25	612.32	612.33
⊙ Brg. Pier C5	5209+82.43	-25.25	612.34	612.34
B1	5209+72.43	-25.25	612.36	612.37
C1	5209+62.43	-25.25	612.38	612.40
D1	5209+52.43	-25.25	612.40	612.42
E1	5209+42.43	-25.25	612.41	612.44
F1	5209+32.43	-25.25	612.42	612.45
G1	5209+22.43	-25.25	612.42	612.45
H1	5209+12.43	-25.25	612.44	612.46
⊙ Brg. Pier C6	5208+97.43	-25.25	612.48	612.48
I1	5208+87.43	-25.25	612.50	612.51
J1	5208+77.43	-25.25	612.53	612.55
K1	5208+67.43	-25.25	612.55	612.59
L1	5208+57.43	-25.25	612.54	612.59
M1	5208+47.43	-25.25	612.57	612.62
N1	5208+37.43	-25.25	612.58	612.62
O1	5208+27.43	-25.25	612.56	612.59
P1	5208+17.43	-25.25	612.55	612.56
⊙ Brg. Pier C7	5208+07.74	-25.25	612.54	612.54
Q1	5207+97.74	-25.25	612.52	612.53
R1	5207+87.74	-25.25	612.51	612.52
S1	5207+77.74	-25.25	612.48	612.51
T1	5207+67.74	-25.25	612.46	612.49
U1	5207+57.74	-25.25	612.44	612.46
V1	5207+47.74	-25.25	612.41	612.44
W1	5207+37.74	-25.25	612.39	612.40
⊙ Brg. Pier C8	5207+22.74	-25.25	612.35	612.35
X1	5207+12.74	-25.25	612.32	612.32
Y1	5207+02.74	-25.25	612.29	612.30
Z1	5206+92.74	-25.25	612.27	612.29
A2	5206+82.74	-25.25	612.26	612.29
B2	5206+72.74	-25.25	612.25	612.28
C2	5206+62.74	-25.25	612.21	612.23
⊙ W. Brg. Pier C9	5206+55.74	-25.25	612.19	612.19
⊙ Pier C9	5206+54.74	-25.25	612.18	612.18

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**PARSONS
BRINCKERHOFF**

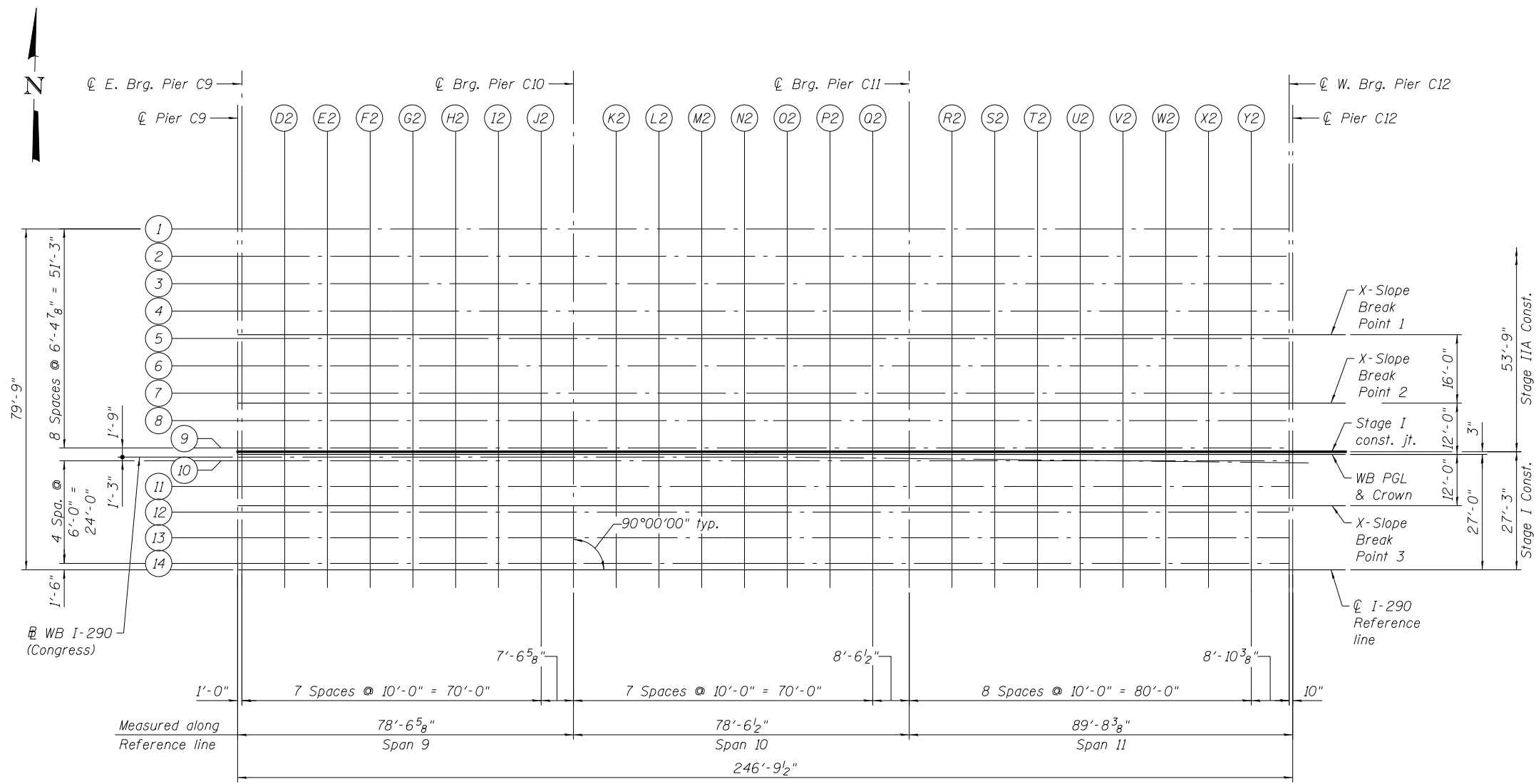
USER NAME = pateld	DESIGNED - P.JL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

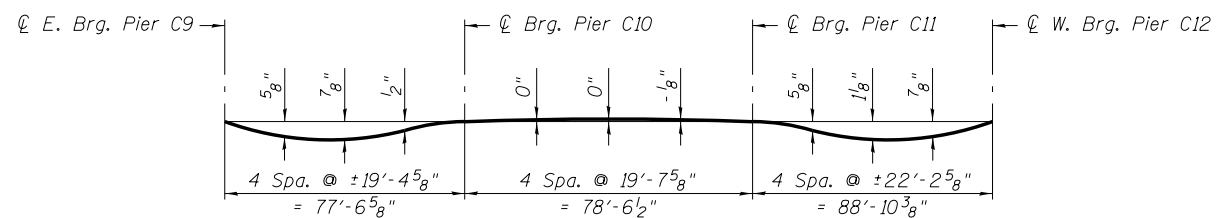
**TOP OF SLAB ELEVATIONS V - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-35 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	312
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



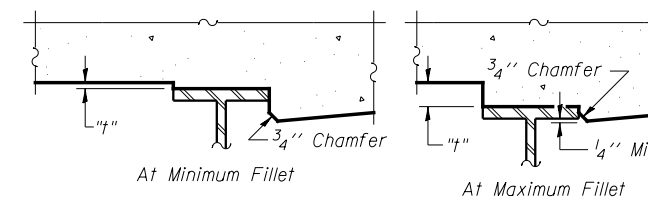
PLAN - UNIT III



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 grade elevations adjusted for dead load deflections as shown in tables, see sheets S2-36 thru S2-43.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheets S2-36 thru S2-43. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S2-36 thru S2-43, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - PJJ	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATION PLAN - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-36 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	313
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

BEAM NO. 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C9	5206+54.74	53.00	611.55	611.55
☉ E.Brg. Pier C9	5206+53.74	53.00	611.54	611.54
D2	5206+43.74	53.00	611.51	611.54
E2	5206+33.74	53.00	611.48	611.53
F2	5206+23.74	53.00	611.42	611.49
G2	5206+13.74	53.00	611.38	611.45
H2	5206+03.74	53.00	611.33	611.39
I2	5205+93.74	53.00	611.29	611.33
J2	5205+83.74	53.00	611.25	611.27
☉ Brg. Pier C10	5205+76.19	53.00	611.22	611.22
K2	5205+66.19	53.00	611.17	611.17
L2	5205+56.19	53.00	611.13	611.13
M2	5205+46.19	53.00	611.09	611.09
N2	5205+36.19	53.00	611.05	611.05
O2	5205+26.77	53.02	611.01	611.01
P2	5205+16.77	52.80	610.98	610.97
Q2	5205+06.78	53.30	610.94	610.94
☉ Brg. Pier C11	5204+98.23	53.33	610.91	610.91
R2	5204+88.24	53.44	610.87	610.89
S2	5204+78.24	53.55	610.83	610.88
T2	5204+68.24	53.66	610.80	610.86
U2	5204+58.24	53.77	610.77	610.85
V2	5204+48.24	53.89	610.74	610.83
W2	5204+38.24	54.00	610.71	610.79
X2	5204+28.24	54.11	610.69	610.75
Y2	5204+18.24	54.22	610.66	610.69
☉ W.Brg. Pier C12	5204+09.38	54.31	610.63	610.63
☉ Pier C12	5204+08.54	54.32	610.63	610.63

BEAM NO. 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C9	5206+54.74	46.59	611.70	611.70
☉ E.Brg. Pier C9	5206+53.74	46.59	611.70	611.70
D2	5206+43.74	46.59	611.66	611.69
E2	5206+33.74	46.59	611.63	611.68
F2	5206+23.74	46.59	611.57	611.64
G2	5206+13.74	46.59	611.53	611.60
H2	5206+03.74	46.59	611.49	611.54
I2	5205+93.74	46.59	611.44	611.48
J2	5205+83.74	46.59	611.40	611.42
☉ Brg. Pier C10	5205+76.19	46.59	611.37	611.37
K2	5205+66.19	46.59	611.32	611.32
L2	5205+56.19	46.59	611.28	611.28
M2	5205+46.19	46.59	611.24	611.24
N2	5205+36.19	46.59	611.20	611.20
O2	5205+26.70	46.61	611.17	611.16
P2	5205+16.70	46.72	611.13	611.12
Q2	5205+06.70	46.83	611.09	611.09
☉ Brg. Pier C11	5204+98.16	46.93	611.06	611.06
R2	5204+88.16	47.04	611.02	611.04
S2	5204+78.17	47.15	610.98	611.03
T2	5204+68.17	47.26	610.95	611.01
U2	5204+58.17	47.37	610.92	611.00
V2	5204+48.17	47.48	610.89	610.98
W2	5204+38.17	47.59	610.86	610.94
X2	5204+28.17	47.70	610.84	610.90
Y2	5204+18.17	47.81	610.81	610.84
☉ W.Brg. Pier C12	5204+09.30	47.91	610.78	610.78
☉ Pier C12	5204+08.47	47.92	610.78	610.78

BEAM NO. 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C9	5206+54.74	40.19	611.85	611.85
☉ E.Brg. Pier C9	5206+53.74	40.19	611.85	611.85
D2	5206+43.74	40.19	611.81	611.84
E2	5206+33.74	40.19	611.78	611.83
F2	5206+23.74	40.19	611.72	611.79
G2	5206+13.74	40.19	611.68	611.75
H2	5206+03.74	40.19	611.64	611.69
I2	5205+93.74	40.19	611.60	611.63
J2	5205+83.74	40.19	611.55	611.57
☉ Brg. Pier C10	5205+76.19	40.19	611.52	611.52
K2	5205+66.19	40.19	611.47	611.47
L2	5205+56.19	40.19	611.43	611.43
M2	5205+46.19	40.19	611.39	611.39
N2	5205+36.19	40.19	611.35	611.35
O2	5205+26.63	40.21	611.32	611.31
P2	5205+16.63	40.32	611.28	611.27
Q2	5205+06.63	40.43	611.24	611.24
☉ Brg. Pier C11	5204+98.09	40.52	611.21	611.21
R2	5204+88.09	40.63	611.17	611.19
S2	5204+78.09	40.74	611.13	611.18
T2	5204+68.09	40.85	611.10	611.16
U2	5204+58.10	40.96	611.07	611.15
V2	5204+48.10	41.07	611.04	611.13
W2	5204+38.10	41.18	611.01	611.09
X2	5204+28.10	41.29	610.99	611.05
Y2	5204+18.10	41.40	610.96	610.99
☉ W.Brg. Pier C12	5204+09.23	41.50	610.93	610.93
☉ Pier C12	5204+08.40	41.51	610.93	610.93

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS I - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-37 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	314
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

BEAM NO. 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C9	5206+54.74	33.78	612.00	612.00
☉ E.Brg. Pier C9	5206+53.74	33.78	612.00	612.00
D2	5206+43.74	33.78	611.97	611.99
E2	5206+33.74	33.78	611.93	611.98
F2	5206+23.74	33.78	611.87	611.94
G2	5206+13.74	33.78	611.83	611.90
H2	5206+03.74	33.78	611.79	611.84
I2	5205+93.74	33.78	611.75	611.78
J2	5205+83.74	33.78	611.70	611.72
☉ Brg. Pier C10	5205+76.19	33.78	611.67	611.67
K2	5205+66.19	33.78	611.62	611.62
L2	5205+56.19	33.78	611.58	611.58
M2	5205+46.19	33.78	611.54	611.54
N2	5205+36.19	33.78	611.50	611.50
O2	5205+26.56	33.80	611.47	611.46
P2	5205+16.56	33.91	611.43	611.42
Q2	5205+06.56	34.02	611.39	611.39
☉ Brg. Pier C11	5204+98.02	34.12	611.36	611.36
R2	5204+88.02	34.23	611.32	611.34
S2	5204+78.02	34.34	611.28	611.33
T2	5204+68.02	34.45	611.25	611.31
U2	5204+58.02	34.56	611.22	611.30
V2	5204+48.03	34.67	611.19	611.28
W2	5204+38.03	34.78	611.16	611.24
X2	5204+28.03	34.89	611.14	611.20
Y2	5204+18.03	35.00	611.11	611.14
☉ W.Brg. Pier C12	5204+09.16	35.10	611.08	611.08
☉ Pier C12	5204+08.33	35.11	611.08	611.08

CROSS SLOPE BREAK POINT 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C9	5206+54.74	28.25	612.13	612.13
☉ E.Brg. Pier C9	5206+53.74	28.25	612.13	612.13
D2	5206+43.74	28.25	612.10	612.12
E2	5206+33.74	28.25	612.06	612.11
F2	5206+23.74	28.25	612.00	612.07
G2	5206+13.74	28.25	611.96	612.03
H2	5206+03.74	28.25	611.92	611.97
I2	5205+93.74	28.25	611.88	611.91
J2	5205+83.74	28.25	611.83	611.85
☉ Brg. Pier C10	5205+76.19	28.25	611.80	611.80
K2	5205+66.19	28.25	611.75	611.75
L2	5205+56.19	28.25	611.71	611.71
M2	5205+46.19	28.25	611.67	611.67
N2	5205+36.19	28.25	611.63	611.63
O2	5205+26.50	28.27	611.60	611.59
P2	5205+16.50	28.38	611.56	611.55
Q2	5205+06.50	28.49	611.52	611.52
☉ Brg. Pier C11	5204+97.96	28.58	611.49	611.49
R2	5204+87.96	28.70	611.45	611.47
S2	5204+77.96	28.81	611.41	611.46
T2	5204+67.96	28.92	611.38	611.44
U2	5204+57.96	29.03	611.35	611.43
V2	5204+47.96	29.14	611.32	611.41
W2	5204+37.97	29.25	611.29	611.37
X2	5204+27.97	29.36	611.27	611.33
Y2	5204+17.97	29.47	611.24	611.27
☉ W.Brg. Pier C12	5204+09.10	29.57	611.21	611.21
☉ Pier C12	5204+08.27	29.58	611.21	611.21

BEAM NO. 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier C9	5206+54.74	27.38	612.15	612.15
☉ E.Brg. Pier C9	5206+53.74	27.38	612.14	612.14
D2	5206+43.74	27.38	612.11	612.14
E2	5206+33.74	27.38	612.07	612.13
F2	5206+23.74	27.38	612.02	612.09
G2	5206+13.74	27.38	611.98	612.05
H2	5206+03.74	27.38	611.93	611.99
I2	5205+93.74	27.38	611.89	611.93
J2	5205+83.74	27.38	611.85	611.87
☉ Brg. Pier C10	5205+76.19	27.38	611.82	611.82
K2	5205+66.19	27.38	611.77	611.77
L2	5205+56.19	27.38	611.73	611.73
M2	5205+46.19	27.38	611.69	611.69
N2	5205+36.19	27.38	611.65	611.65
O2	5205+26.49	27.39	611.61	611.61
P2	5205+16.49	27.50	611.58	611.57
Q2	5205+06.49	27.62	611.54	611.54
☉ Brg. Pier C11	5204+97.95	27.71	611.51	611.51
R2	5204+87.95	27.82	611.47	611.49
S2	5204+77.95	27.93	611.43	611.48
T2	5204+67.95	28.04	611.40	611.46
U2	5204+57.95	28.15	611.37	611.45
V2	5204+47.95	28.26	611.34	611.43
W2	5204+37.96	28.37	611.31	611.39
X2	5204+27.96	28.48	611.29	611.35
Y2	5204+17.96	28.59	611.26	611.29
☉ W.Brg. Pier C12	5204+09.09	28.69	611.23	611.23
☉ Pier C12	5204+08.26	28.70	611.23	611.23

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USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS II - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-38 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	315
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

BEAM NO. 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C9	5206+54.74	20.97	612.28	612.28
⊙ E.Brg. Pier C9	5206+53.74	20.97	612.28	612.28
D2	5206+43.74	20.97	612.25	612.27
E2	5206+33.74	20.97	612.21	612.26
F2	5206+23.74	20.97	612.16	612.22
G2	5206+13.74	20.97	612.11	612.18
H2	5206+03.74	20.97	612.07	612.12
I2	5205+93.74	20.97	612.03	612.06
J2	5205+83.74	20.97	611.98	612.00
⊙ Brg. Pier C10	5205+76.19	20.97	611.95	611.95
K2	5205+66.19	20.97	611.90	611.90
L2	5205+56.19	20.97	611.86	611.86
M2	5205+46.19	20.97	611.82	611.82
N2	5205+36.19	20.97	611.78	611.78
O2	5205+26.42	20.99	611.75	611.74
P2	5205+16.42	21.10	611.71	611.70
Q2	5205+06.42	21.21	611.68	611.67
⊙ Brg. Pier C11	5204+97.88	21.30	611.64	611.64
R2	5204+87.88	21.41	611.60	611.62
S2	5204+77.88	21.52	611.56	611.61
T2	5204+67.88	21.64	611.53	611.60
U2	5204+57.88	21.75	611.50	611.59
V2	5204+47.88	21.86	611.47	611.56
W2	5204+37.88	21.97	611.44	611.52
X2	5204+27.89	22.08	611.42	611.48
Y2	5204+17.89	22.19	611.40	611.42
⊙ W.Brg. Pier C12	5204+09.02	22.28	611.36	611.36
⊙ Pier C12	5204+08.19	22.29	611.36	611.36

BEAM NO. 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C9	5206+54.74	14.56	612.42	612.42
⊙ E.Brg. Pier C9	5206+53.74	14.56	612.41	612.41
D2	5206+43.74	14.56	612.38	612.41
E2	5206+33.74	14.56	612.34	612.39
F2	5206+23.74	14.56	612.29	612.35
G2	5206+13.74	14.56	612.24	612.31
H2	5206+03.74	14.56	612.20	612.26
I2	5205+93.74	14.56	612.16	612.20
J2	5205+83.74	14.56	612.12	612.13
⊙ Brg. Pier C10	5205+76.19	14.56	612.08	612.08
K2	5205+66.19	14.56	612.04	612.04
L2	5205+56.19	14.56	612.00	612.00
M2	5205+46.19	14.56	611.95	611.95
N2	5205+36.19	14.56	611.92	611.92
O2	5205+26.35	14.58	611.88	611.88
P2	5205+16.35	14.69	611.85	611.84
Q2	5205+06.35	14.80	611.81	611.80
⊙ Brg. Pier C11	5204+97.81	14.90	611.77	611.77
R2	5204+87.81	15.01	611.73	611.76
S2	5204+77.81	15.12	611.70	611.74
T2	5204+67.81	15.23	611.66	611.73
U2	5204+57.81	15.34	611.63	611.72
V2	5204+47.81	15.45	611.60	611.69
W2	5204+37.81	15.56	611.58	611.65
X2	5204+27.81	15.67	611.55	611.61
Y2	5204+17.82	15.78	611.53	611.56
⊙ W.Brg. Pier C12	5204+08.95	15.88	611.50	611.50
⊙ Pier C12	5204+08.12	15.89	611.49	611.49

CROSS SLOPE BREAK POINT 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C9	5206+54.74	12.25	612.46	612.46
⊙ E.Brg. Pier C9	5206+53.74	12.25	612.46	612.46
D2	5206+43.74	12.25	612.43	612.46
E2	5206+33.74	12.25	612.39	612.44
F2	5206+23.74	12.25	612.34	612.40
G2	5206+13.74	12.25	612.29	612.36
H2	5206+03.74	12.25	612.25	612.30
I2	5205+93.74	12.25	612.21	612.25
J2	5205+83.74	12.25	612.17	612.18
⊙ Brg. Pier C10	5205+76.19	12.25	612.13	612.13
K2	5205+66.19	12.25	612.09	612.09
L2	5205+56.19	12.25	612.04	612.04
M2	5205+46.19	12.25	612.00	612.00
N2	5205+36.19	12.25	611.96	611.96
O2	5205+26.33	12.27	611.93	611.92
P2	5205+16.33	12.38	611.89	611.89
Q2	5205+06.33	12.49	611.86	611.85
⊙ Brg. Pier C11	5204+97.78	12.59	611.82	611.82
R2	5204+87.79	12.70	611.78	611.81
S2	5204+77.79	12.81	611.75	611.79
T2	5204+67.79	12.92	611.71	611.78
U2	5204+57.79	13.03	611.68	611.77
V2	5204+47.79	13.14	611.65	611.74
W2	5204+37.79	13.25	611.62	611.70
X2	5204+27.79	13.36	611.60	611.66
Y2	5204+17.79	13.47	611.58	611.61
⊙ W.Brg. Pier C12	5204+08.93	13.57	611.55	611.55
⊙ Pier C12	5204+08.09	13.58	611.54	611.54

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USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS III - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-39 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	316
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

BEAM NO. 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C9	5206+54.74	8.16	612.51	612.51
⊕ E.Brg. Pier C9	5206+53.74	8.16	612.50	612.50
D2	5206+43.74	8.16	612.47	612.50
E2	5206+33.74	8.16	612.43	612.49
F2	5206+23.74	8.16	612.38	612.44
G2	5206+13.74	8.16	612.33	612.40
H2	5206+03.74	8.16	612.29	612.35
I2	5205+93.74	8.16	612.25	612.29
J2	5205+83.74	8.16	612.21	612.22
⊕ Brg. Pier C10	5205+76.19	8.16	612.17	612.17
K2	5205+66.19	8.16	612.13	612.13
L2	5205+56.19	8.16	612.09	612.09
M2	5205+46.19	8.16	612.04	612.04
N2	5205+36.19	8.16	612.01	612.01
O2	5205+26.28	8.18	611.97	611.97
P2	5205+16.28	8.29	611.94	611.93
Q2	5205+06.28	8.40	611.90	611.89
⊕ Brg. Pier C11	5204+97.74	8.49	611.87	611.87
R2	5204+87.74	8.60	611.83	611.85
S2	5204+77.74	8.71	611.79	611.84
T2	5204+67.74	8.82	611.75	611.82
U2	5204+57.74	8.93	611.72	611.81
V2	5204+47.74	9.04	611.70	611.78
W2	5204+37.74	9.15	611.67	611.75
X2	5204+27.74	9.26	611.64	611.71
Y2	5204+17.74	9.38	611.62	611.65
⊕ W.Brg. Pier C12	5204+08.88	9.47	611.59	611.59
⊕ Pier C12	5204+08.05	9.48	611.59	611.59

BEAM NO. 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C9	5206+54.74	1.75	612.57	612.57
⊕ E.Brg. Pier C9	5206+53.74	1.75	612.57	612.57
D2	5206+43.74	1.75	612.54	612.56
E2	5206+33.74	1.75	612.50	612.55
F2	5206+23.74	1.75	612.45	612.51
G2	5206+13.74	1.75	612.40	612.47
H2	5206+03.74	1.75	612.36	612.41
I2	5205+93.74	1.75	612.32	612.36
J2	5205+83.74	1.75	612.27	612.29
⊕ Brg. Pier C10	5205+76.19	1.75	612.24	612.24
K2	5205+66.19	1.75	612.20	612.20
L2	5205+56.19	1.75	612.15	612.15
M2	5205+46.19	1.75	612.11	612.11
N2	5205+36.19	1.75	612.07	612.07
O2	5205+26.21	1.77	612.04	612.03
P2	5205+16.21	1.88	612.00	611.99
Q2	5205+06.21	1.99	611.97	611.96
⊕ Brg. Pier C11	5204+97.67	2.09	611.93	611.93
R2	5204+87.67	2.20	611.89	611.92
S2	5204+77.67	2.31	611.86	611.90
T2	5204+67.67	2.42	611.82	611.89
U2	5204+57.67	2.53	611.79	611.88
V2	5204+47.67	2.64	611.76	611.85
W2	5204+37.67	2.75	611.73	611.81
X2	5204+27.67	2.86	611.71	611.77
Y2	5204+17.67	2.97	611.69	611.72
⊕ W.Brg. Pier C12	5204+08.81	3.07	611.66	611.66
⊕ Pier C12	5204+07.98	3.08	611.65	611.65

STAGE I CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C9	5206+54.74	0.50	612.59	612.59
⊕ E.Brg. Pier C9	5206+53.74	0.50	612.58	612.58
D2	5206+43.74	0.50	612.55	612.58
E2	5206+33.74	0.50	612.51	612.57
F2	5206+23.74	0.50	612.46	612.52
G2	5206+13.74	0.50	612.41	612.48
H2	5206+03.74	0.50	612.37	612.43
I2	5205+93.74	0.50	612.33	612.37
J2	5205+83.74	0.50	612.29	612.30
⊕ Brg. Pier C10	5205+76.19	0.50	612.25	612.25
K2	5205+66.19	0.50	612.21	612.21
L2	5205+56.19	0.50	612.17	612.17
M2	5205+46.19	0.50	612.12	612.12
N2	5205+36.19	0.50	612.09	612.09
O2	5205+26.19	0.52	612.05	612.05
P2	5205+16.20	0.63	612.02	612.01
Q2	5205+06.20	0.74	611.98	611.97
⊕ Brg. Pier C11	5204+97.65	0.84	611.95	611.95
R2	5204+87.66	0.95	611.90	611.93
S2	5204+77.66	1.06	611.87	611.92
T2	5204+67.66	1.17	611.83	611.90
U2	5204+57.66	1.28	611.80	611.89
V2	5204+47.66	1.39	611.78	611.86
W2	5204+37.66	1.50	611.75	611.82
X2	5204+27.66	1.61	611.72	611.79
Y2	5204+17.66	1.72	611.70	611.73
⊕ W.Brg. Pier C12	5204+08.80	1.82	611.67	611.67
⊕ Pier C12	5204+07.96	1.83	611.67	611.67

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WESTBOUND PROFILE GRADE LINE & CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊘ Pier C9	5206+54.74	0.25	612.59	612.59
⊘ E.Brg. Pier C9	5206+53.74	0.25	612.58	612.58
D2	5206+43.74	0.25	612.55	612.58
E2	5206+33.74	0.25	612.52	612.57
F2	5206+23.74	0.25	612.46	612.53
G2	5206+13.74	0.25	612.42	612.49
H2	5206+03.74	0.25	612.37	612.43
I2	5205+93.74	0.25	612.33	612.37
J2	5205+83.74	0.25	612.29	612.31
⊘ Brg. Pier C10	5205+76.19	0.25	612.26	612.26
K2	5205+66.19	0.25	612.21	612.21
L2	5205+56.19	0.25	612.17	612.17
M2	5205+46.19	0.25	612.13	612.13
N2	5205+36.19	0.25	612.09	612.09
O2	5205+26.19	0.27	612.05	612.05
P2	5205+16.20	0.38	612.02	612.01
Q2	5205+06.20	0.49	611.98	611.98
⊘ Brg. Pier C11	5204+97.65	0.59	611.95	611.95
R2	5204+87.66	0.70	611.91	611.93
S2	5204+77.66	0.81	611.87	611.92
T2	5204+67.66	0.92	611.84	611.90
U2	5204+57.66	1.03	611.81	611.89
V2	5204+47.66	1.14	611.78	611.87
W2	5204+37.66	1.25	611.75	611.83
X2	5204+27.66	1.36	611.73	611.79
Y2	5204+17.66	1.47	611.70	611.73
⊘ W.Brg. Pier C12	5204+08.80	1.57	611.67	611.67
⊘ Pier C12	5204+07.96	1.58	611.67	611.67

BEAM NO. 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊘ Pier C9	5206+54.74	-1.25	612.57	612.57
⊘ E.Brg. Pier C9	5206+53.74	-1.25	612.57	612.57
D2	5206+43.74	-1.25	612.54	612.56
E2	5206+33.74	-1.25	612.50	612.55
F2	5206+23.74	-1.25	612.45	612.51
G2	5206+13.74	-1.25	612.40	612.47
H2	5206+03.74	-1.25	612.36	612.41
I2	5205+93.74	-1.25	612.32	612.36
J2	5205+83.74	-1.25	612.27	612.29
⊘ Brg. Pier C10	5205+76.19	-1.25	612.24	612.24
K2	5205+66.19	-1.25	612.20	612.20
L2	5205+56.19	-1.25	612.15	612.15
M2	5205+46.19	-1.25	612.11	612.11
N2	5205+36.19	-1.25	612.07	612.07
O2	5205+26.18	-1.23	612.04	612.03
P2	5205+16.18	-1.12	612.00	611.99
Q2	5205+06.18	-1.01	611.97	611.96
⊘ Brg. Pier C11	5204+97.64	-0.91	611.93	611.93
R2	5204+87.64	-0.80	611.89	611.92
S2	5204+77.64	-0.69	611.86	611.90
T2	5204+67.64	-0.58	611.82	611.89
U2	5204+57.64	-0.47	611.79	611.88
V2	5204+47.64	-0.36	611.76	611.85
W2	5204+37.64	-0.25	611.73	611.81
X2	5204+27.64	-0.14	611.71	611.77
Y2	5204+17.64	-0.03	611.69	611.72
⊘ W.Brg. Pier C12	5204+08.78	0.07	611.66	611.66
⊘ Pier C12	5204+07.94	0.08	611.65	611.65

BEAM NO. 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊘ Pier C9	5206+54.74	-7.25	612.51	612.51
⊘ E.Brg. Pier C9	5206+53.74	-7.25	612.51	612.51
D2	5206+43.74	-7.25	612.47	612.50
E2	5206+33.74	-7.25	612.44	612.49
F2	5206+23.74	-7.25	612.38	612.45
G2	5206+13.74	-7.25	612.34	612.41
H2	5206+03.74	-7.25	612.30	612.35
I2	5205+93.74	-7.25	612.26	612.29
J2	5205+83.74	-7.25	612.21	612.23
⊘ Brg. Pier C10	5205+76.19	-7.25	612.18	612.18
K2	5205+66.19	-7.25	612.13	612.13
L2	5205+56.19	-7.25	612.09	612.09
M2	5205+46.19	-7.25	612.05	612.05
N2	5205+36.19	-7.25	612.01	612.01
O2	5205+26.11	-7.23	611.98	611.97
P2	5205+16.11	-7.12	611.94	611.93
Q2	5205+06.11	-7.01	611.90	611.90
⊘ Brg. Pier C11	5204+97.57	-6.91	611.87	611.87
R2	5204+87.57	-6.80	611.83	611.85
S2	5204+77.57	-6.69	611.79	611.84
T2	5204+67.57	-6.58	611.76	611.82
U2	5204+57.57	-6.47	611.73	611.81
V2	5204+47.57	-6.36	611.70	611.79
W2	5204+37.57	-6.25	611.67	611.75
X2	5204+27.57	-6.14	611.65	611.71
Y2	5204+17.57	-6.03	611.62	611.65
⊘ W.Brg. Pier C12	5204+08.71	-5.93	611.59	611.59
⊘ Pier C12	5204+07.88	-5.92	611.59	611.59

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS V - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-41 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	318
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

CROSS SLOPE BREAK POINT 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C9	5206+54.74	-11.75	612.46	612.46
⊙ E.Brg. Pier C9	5206+53.74	-11.75	612.46	612.46
D2	5206+43.74	-11.75	612.43	612.46
E2	5206+33.74	-11.75	612.39	612.44
F2	5206+23.74	-11.75	612.34	612.40
G2	5206+13.74	-11.75	612.29	612.36
H2	5206+03.74	-11.75	612.25	612.30
I2	5205+93.74	-11.75	612.21	612.25
J2	5205+83.74	-11.75	612.17	612.18
⊙ Brg. Pier C10	5205+76.19	-11.75	612.13	612.13
K2	5205+66.19	-11.75	612.09	612.09
L2	5205+56.19	-11.75	612.04	612.04
M2	5205+46.19	-11.75	612.00	612.00
N2	5205+36.19	-11.75	611.96	611.96
O2	5205+26.06	-11.73	611.93	611.92
P2	5205+16.06	-11.62	611.89	611.89
Q2	5205+06.06	-11.51	611.86	611.85
⊙ Brg. Pier C11	5204+97.52	-11.41	611.82	611.82
R2	5204+87.52	-11.30	611.78	611.81
S2	5204+77.52	-11.19	611.75	611.79
T2	5204+67.52	-11.08	611.71	611.78
U2	5204+57.53	-10.97	611.68	611.77
V2	5204+47.53	-10.86	611.65	611.74
W2	5204+37.53	-10.75	611.62	611.70
X2	5204+27.53	-10.64	611.60	611.66
Y2	5204+17.53	-10.53	611.58	611.61
⊙ W.Brg. Pier C12	5204+08.66	-10.43	611.55	611.55
⊙ Pier C12	5204+07.83	-10.42	611.54	611.54

BEAM NO. 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C9	5206+54.74	-13.25	612.43	612.43
⊙ E.Brg. Pier C9	5206+53.74	-13.25	612.43	612.43
D2	5206+43.74	-13.25	612.40	612.42
E2	5206+33.74	-13.25	612.36	612.41
F2	5206+23.74	-13.25	612.31	612.37
G2	5206+13.74	-13.25	612.26	612.33
H2	5206+03.74	-13.25	612.22	612.27
I2	5205+93.74	-13.25	612.18	612.22
J2	5205+83.74	-13.25	612.13	612.15
⊙ Brg. Pier C10	5205+76.19	-13.25	612.10	612.10
K2	5205+66.19	-13.25	612.05	612.05
L2	5205+56.19	-13.25	612.01	612.01
M2	5205+46.19	-13.25	611.97	611.97
N2	5205+36.19	-13.25	611.93	611.93
O2	5205+26.04	-13.23	611.90	611.89
P2	5205+16.04	-13.12	611.86	611.85
Q2	5205+06.04	-13.01	611.82	611.82
⊙ Brg. Pier C11	5204+97.50	-12.91	611.79	611.79
R2	5204+87.50	-12.80	611.75	611.77
S2	5204+77.50	-12.69	611.71	611.76
T2	5204+67.50	-12.58	611.68	611.75
U2	5204+57.51	-12.47	611.65	611.74
V2	5204+47.51	-12.36	611.63	611.72
W2	5204+37.51	-12.25	611.60	611.68
X2	5204+27.51	-12.14	611.57	611.64
Y2	5204+17.51	-12.03	611.55	611.58
⊙ W.Brg. Pier C12	5204+08.64	-11.93	611.52	611.52
⊙ Pier C12	5204+07.81	-11.92	611.52	611.52

BEAM NO. 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C9	5206+54.74	-19.25	612.31	612.31
⊙ E.Brg. Pier C9	5206+53.74	-19.25	612.30	612.30
D2	5206+43.74	-19.25	612.27	612.30
E2	5206+33.74	-19.25	612.23	612.29
F2	5206+23.74	-19.25	612.18	612.25
G2	5206+13.74	-19.25	612.13	612.21
H2	5206+03.74	-19.25	612.09	612.15
I2	5205+93.74	-19.25	612.05	612.09
J2	5205+83.74	-19.25	612.01	612.03
⊙ Brg. Pier C10	5205+76.19	-19.25	611.97	611.97
K2	5205+66.19	-19.25	611.93	611.93
L2	5205+56.19	-19.25	611.89	611.89
M2	5205+46.19	-19.25	611.85	611.85
N2	5205+36.19	-19.25	611.81	611.81
O2	5205+25.98	-19.23	611.77	611.77
P2	5205+15.98	-19.12	611.74	611.73
Q2	5205+05.98	-19.01	611.70	611.70
⊙ Brg. Pier C11	5204+97.44	-18.91	611.67	611.67
R2	5204+87.44	-18.80	611.63	611.65
S2	5204+77.44	-18.69	611.59	611.64
T2	5204+67.44	-18.58	611.56	611.63
U2	5204+57.44	-18.47	611.54	611.63
V2	5204+47.44	-18.36	611.52	611.61
W2	5204+37.44	-18.25	611.49	611.57
X2	5204+27.44	-18.14	611.47	611.53
Y2	5204+17.44	-18.03	611.45	611.48
⊙ W.Brg. Pier C12	5204+08.58	-17.93	611.41	611.42
⊙ Pier C12	5204+07.74	-17.92	611.41	611.41

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS VI - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-42 OF S2-145 SHEETS

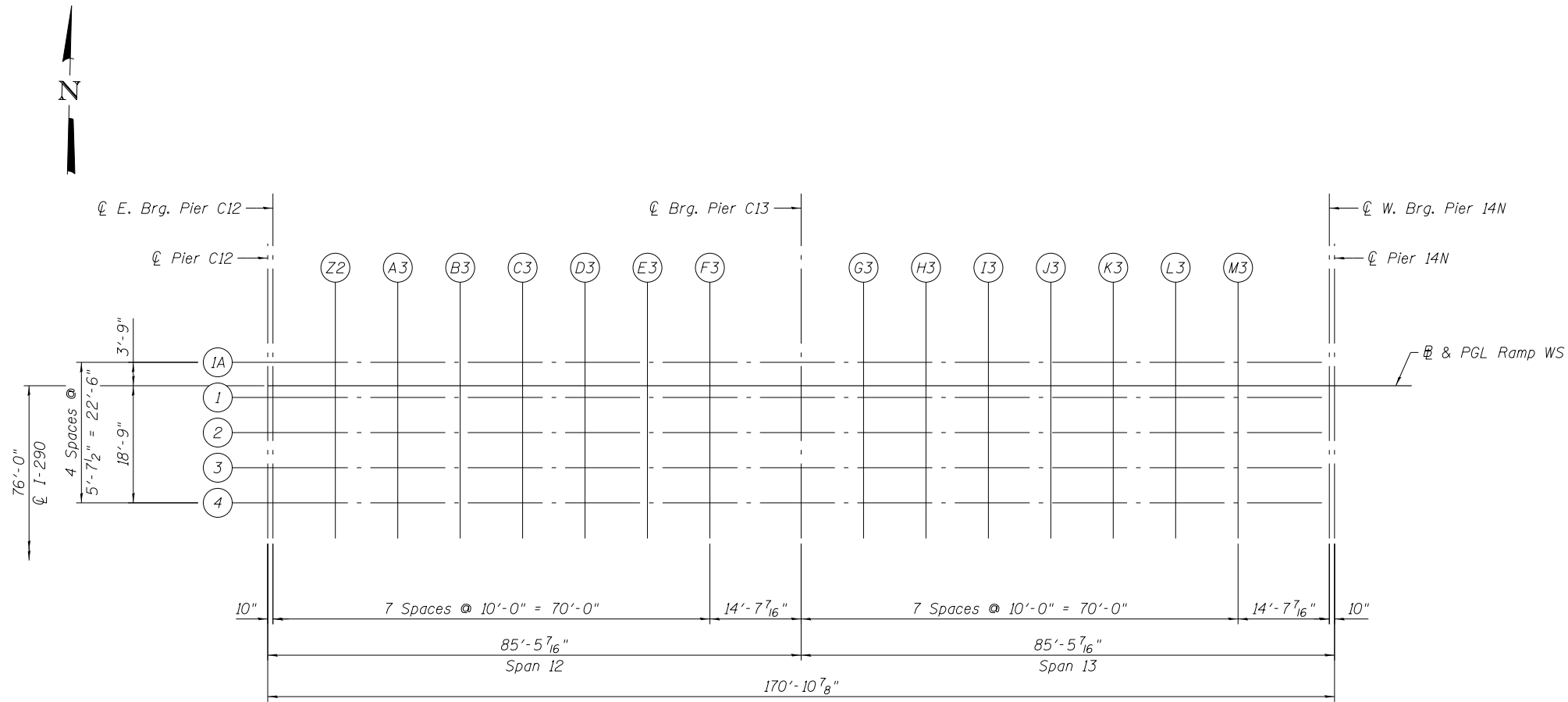
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	319
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

BEAM NO. 14

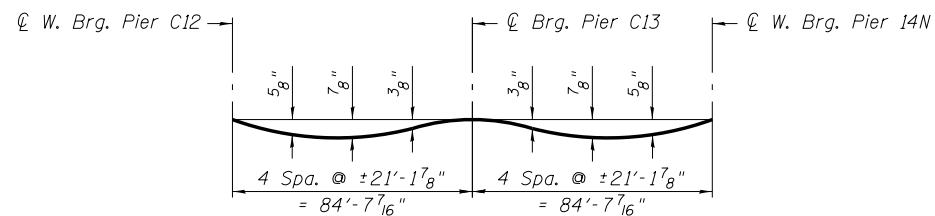
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier C9	5206+54.74	-25.25	612.18	612.18
⊕ E.Brg. Pier C9	5206+53.74	-25.25	612.18	612.18
D2	5206+43.74	-25.25	612.15	612.17
E2	5206+33.74	-25.25	612.11	612.16
F2	5206+23.74	-25.25	612.06	612.12
G2	5206+13.74	-25.25	612.01	612.08
H2	5206+03.74	-25.25	611.97	612.02
I2	5205+93.74	-25.25	611.93	611.97
J2	5205+83.74	-25.25	611.88	611.90
⊕ Brg. Pier C10	5205+76.19	-25.25	611.85	611.85
K2	5205+66.19	-25.25	611.80	611.80
L2	5205+56.19	-25.25	611.76	611.76
M2	5205+46.19	-25.25	611.72	611.72
N2	5205+36.19	-25.25	611.68	611.68
O2	5205+25.91	-25.23	611.65	611.64
P2	5205+15.91	-25.12	611.61	611.60
Q2	5205+05.91	-25.01	611.57	611.57
⊕ Brg. Pier C11	5204+97.37	-24.91	611.54	611.54
R2	5204+87.37	-24.80	611.50	611.52
S2	5204+77.37	-24.69	611.46	611.51
T2	5204+67.37	-24.58	611.44	611.51
U2	5204+57.37	-24.47	611.43	611.52
V2	5204+47.37	-24.36	611.42	611.51
W2	5204+37.37	-24.25	611.39	611.47
X2	5204+27.37	-24.14	611.36	611.43
Y2	5204+17.38	-24.03	611.34	611.37
⊕ W.Brg. Pier C12	5204+08.51	-23.93	611.31	611.31
⊕ Pier C12	5204+07.68	-23.92	611.31	611.31

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PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS VII - UNIT III STRUCTURE NO. 016-0461	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -			90/94/290	2014-004 R&B (WB)	COOK	706	320
	PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -			CONTRACT NO. 60X78				
	CHECKED - JIG	REVISED -		SHEET NO. S2-43 OF S2-145 SHEETS		ILLINOIS FED. AID PROJECT				



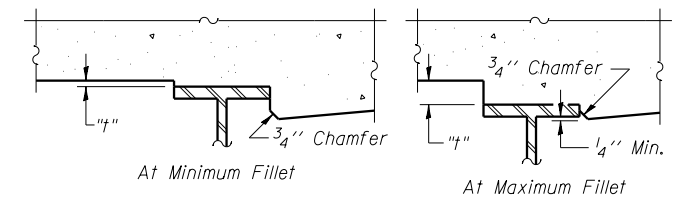
PLAN - ENTRANCE RAMP



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 grade elevations adjusted for dead load deflections as shown in tables, see sheet S2-45.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheet S2-45. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet S2-45, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - PJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATION PLAN - ENTRANCE RAMP
STRUCTURE NO. 016-0461**

SHEET NO. S2-44 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	321
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

BEAM NO. 1A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C12	1202+33.34	-3.75	610.63	610.63
⊙ E.Brg. Pier C12	1202+32.51	-3.75	610.62	610.62
Z2	1202+22.51	-3.75	610.52	610.55
A3	1202+12.51	-3.75	610.34	610.39
B3	1202+02.51	-3.75	610.08	610.14
C3	1201+92.51	-3.75	609.74	609.81
D3	1201+82.51	-3.75	609.32	609.38
E3	1201+72.51	-3.75	608.84	608.88
F3	1201+62.51	-3.75	608.37	608.39
⊙ Brg. Pier C13	1201+47.89	-3.75	607.67	607.67
G3	1201+37.89	-3.75	607.20	607.21
H3	1201+27.89	-3.75	606.72	606.75
I3	1201+17.89	-3.75	606.25	606.30
J3	1201+07.89	-3.75	605.77	605.84
K3	1200+97.89	-3.75	605.30	605.36
L3	1200+87.89	-3.75	604.82	604.88
M3	1200+77.89	-3.75	604.35	604.38
⊙ W.Brg. Pier 14N	1200+63.27	-3.75	603.67	603.67
⊙ Pier 14N	1200+62.43	-3.75	603.63	603.63

RAMP WS PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C12	1202+33.34	0.00	610.72	610.72
⊙ E.Brg. Pier C12	1202+32.51	0.00	610.71	610.71
Z2	1202+22.51	0.00	610.61	610.64
A3	1202+12.51	0.00	610.43	610.48
B3	1202+02.51	0.00	610.17	610.23
C3	1201+92.51	0.00	609.83	609.90
D3	1201+82.51	0.00	609.41	609.46
E3	1201+72.51	0.00	608.93	608.97
F3	1201+62.51	0.00	608.46	608.48
⊙ Brg. Pier C13	1201+47.89	0.00	607.76	607.76
G3	1201+37.89	0.00	607.29	607.30
H3	1201+27.89	0.00	606.81	606.84
I3	1201+17.89	0.00	606.34	606.39
J3	1201+07.89	0.00	605.86	605.93
K3	1200+97.89	0.00	605.39	605.45
L3	1200+87.89	0.00	604.91	604.97
M3	1200+77.89	0.00	604.44	604.47
⊙ W.Brg. Pier 14N	1200+63.27	0.00	603.74	603.74
⊙ Pier 14N	1200+62.43	0.00	603.70	603.70

BEAM NO. 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C12	1202+33.34	1.88	610.76	610.76
⊙ E.Brg. Pier C12	1202+32.51	1.88	610.76	610.76
Z2	1202+22.51	1.88	610.66	610.68
A3	1202+12.51	1.88	610.48	610.52
B3	1202+02.51	1.88	610.21	610.28
C3	1201+92.51	1.88	609.87	609.94
D3	1201+82.51	1.88	609.45	609.51
E3	1201+72.51	1.88	608.98	609.01
F3	1201+62.51	1.88	608.50	608.52
⊙ Brg. Pier C13	1201+47.89	1.88	607.81	607.81
G3	1201+37.89	1.88	607.33	607.35
H3	1201+27.89	1.88	606.86	606.89
I3	1201+17.89	1.88	606.38	606.43
J3	1201+07.89	1.88	605.91	605.97
K3	1200+97.89	1.88	605.43	605.50
L3	1200+87.89	1.88	604.96	605.01
M3	1200+77.89	1.88	604.48	604.52
⊙ W.Brg. Pier 14N	1200+63.27	1.88	603.78	603.78
⊙ Pier 14N	1200+62.43	1.88	603.74	603.74

BEAM NO. 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C12	1202+33.34	7.50	610.89	610.89
⊙ E.Brg. Pier C12	1202+32.51	7.50	610.89	610.89
Z2	1202+22.51	7.50	610.79	610.81
A3	1202+12.51	7.50	610.61	610.66
B3	1202+02.51	7.50	610.35	610.41
C3	1201+92.51	7.50	610.00	610.08
D3	1201+82.51	7.50	609.58	609.64
E3	1201+72.51	7.50	609.11	609.15
F3	1201+62.51	7.50	608.63	608.65
⊙ Brg. Pier C13	1201+47.89	7.50	607.94	607.94
G3	1201+37.89	7.50	607.46	607.48
H3	1201+27.89	7.50	606.99	607.02
I3	1201+17.89	7.50	606.51	606.56
J3	1201+07.89	7.50	606.04	606.11
K3	1200+97.89	7.50	605.56	605.63
L3	1200+87.89	7.50	605.09	605.14
M3	1200+77.89	7.50	604.61	604.65
⊙ W.Brg. Pier 14N	1200+63.27	7.50	603.89	603.89
⊙ Pier 14N	1200+62.43	7.50	603.85	603.85

BEAM NO. 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C12	1202+33.34	13.13	611.03	611.03
⊙ E.Brg. Pier C12	1202+32.51	13.13	611.02	611.02
Z2	1202+22.51	13.13	610.92	610.95
A3	1202+12.51	13.13	610.74	610.79
B3	1202+02.51	13.13	610.48	610.54
C3	1201+92.51	13.13	610.14	610.21
D3	1201+82.51	13.13	609.71	609.77
E3	1201+72.51	13.13	609.24	609.28
F3	1201+62.51	13.13	608.77	608.79
⊙ Brg. Pier C13	1201+47.89	13.13	608.07	608.07
G3	1201+37.89	13.13	607.60	607.61
H3	1201+27.89	13.13	607.12	607.15
I3	1201+17.89	13.13	606.65	606.69
J3	1201+07.89	13.13	606.17	606.24
K3	1200+97.89	13.13	605.70	605.76
L3	1200+87.89	13.13	605.22	605.28
M3	1200+77.89	13.13	604.75	604.78
⊙ W.Brg. Pier 14N	1200+63.27	13.13	604.00	604.00
⊙ Pier 14N	1200+62.43	13.13	603.96	603.96

BEAM NO. 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier C12	1202+33.34	18.75	611.16	611.16
⊙ E.Brg. Pier C12	1202+32.51	18.75	611.15	611.15
Z2	1202+22.51	18.75	611.05	611.08
A3	1202+12.51	18.75	610.87	610.92
B3	1202+02.51	18.75	610.61	610.67
C3	1201+92.51	18.75	610.27	610.34
D3	1201+82.51	18.75	609.85	609.90
E3	1201+72.51	18.75	609.37	609.41
F3	1201+62.51	18.75	608.90	608.92
⊙ Brg. Pier C13	1201+47.89	18.75	608.20	608.20
G3	1201+37.89	18.75	607.73	607.74
H3	1201+27.89	18.75	607.25	607.28
I3	1201+17.89	18.75	606.78	606.83
J3	1201+07.89	18.75	606.30	606.37
K3	1200+97.89	18.75	605.83	605.89
L3	1200+87.89	18.75	605.35	605.41
M3	1200+77.89	18.75	604.88	604.91
⊙ W.Brg. Pier 14N	1200+63.27	18.75	604.12	604.12
⊙ Pier 14N	1200+62.43	18.75	604.07	604.07

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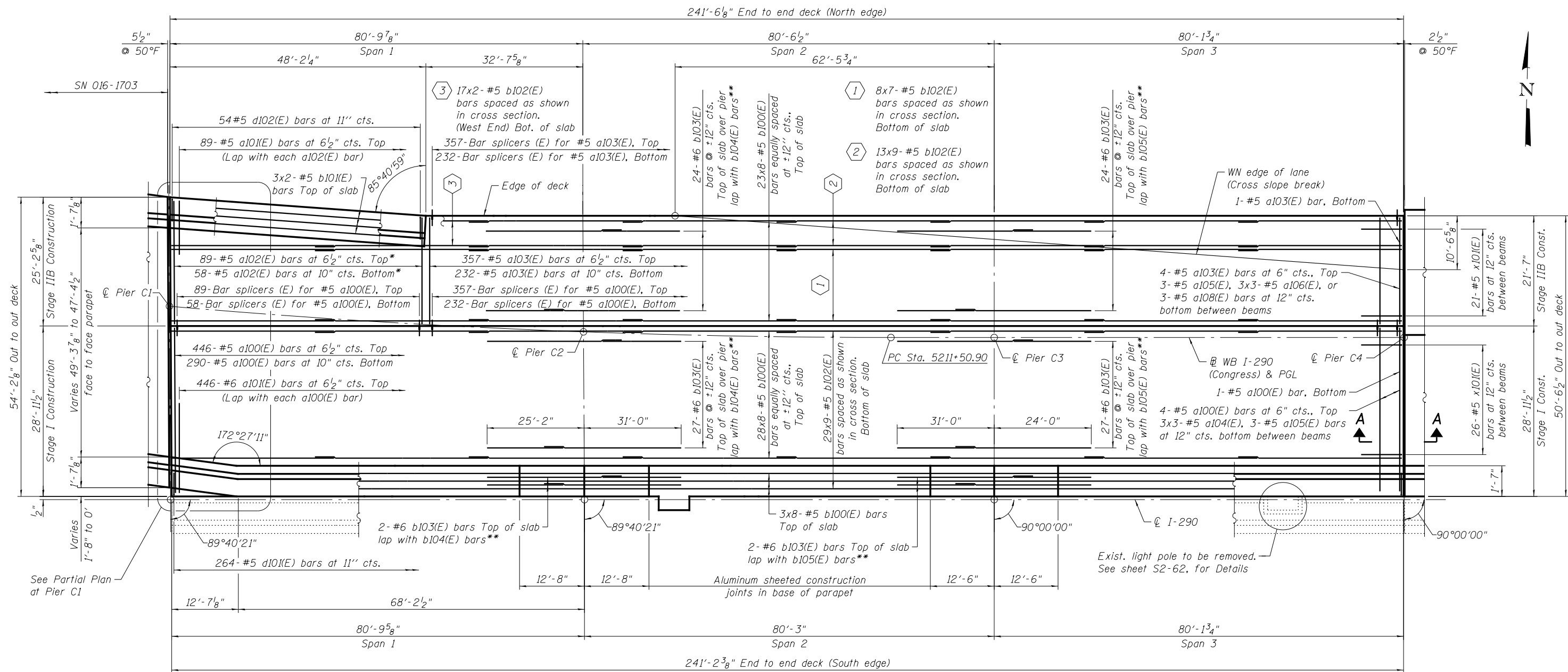
USER NAME = pateld	DESIGNED - PJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS - ENTRANCE RAMP
STRUCTURE NO. 016-0461**

SHEET NO. S2-45 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	322
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



DECK PLAN - UNIT I

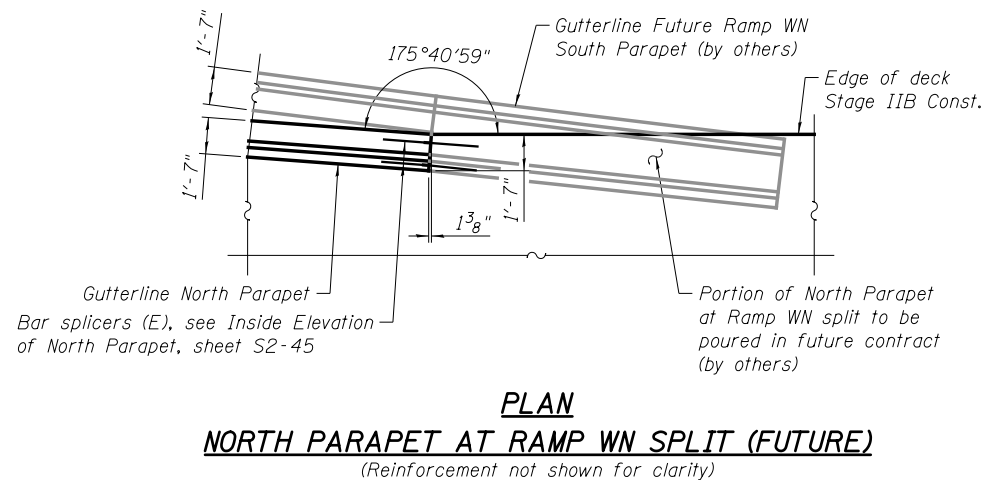
- * Order a102(E) bars full length. Cut to fit skew.
- ** Alternate location of lap.

MINIMUM BAR LAP

- #5 bar = 2'-7"
- #6 bar = 3'-1"

Notes:

1. See sheet S2-47, for cross sections.
2. See sheet S2-48, for parapet reinforcement.
3. See sheet S2-49 thru S2-51, for superstructure details, Partial Plan at Pier C1, and Bill of Material.
4. See sheet S2-57, for Section A-A.
5. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
6. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
7. 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 S2-70.



PLAN

NORTH PARAPET AT RAMP WN SPLIT (FUTURE)

(Reinforcement not shown for clarity)

0160461-60X78-5046-DEK.dgn

PARSONS BRINCKERHOFF

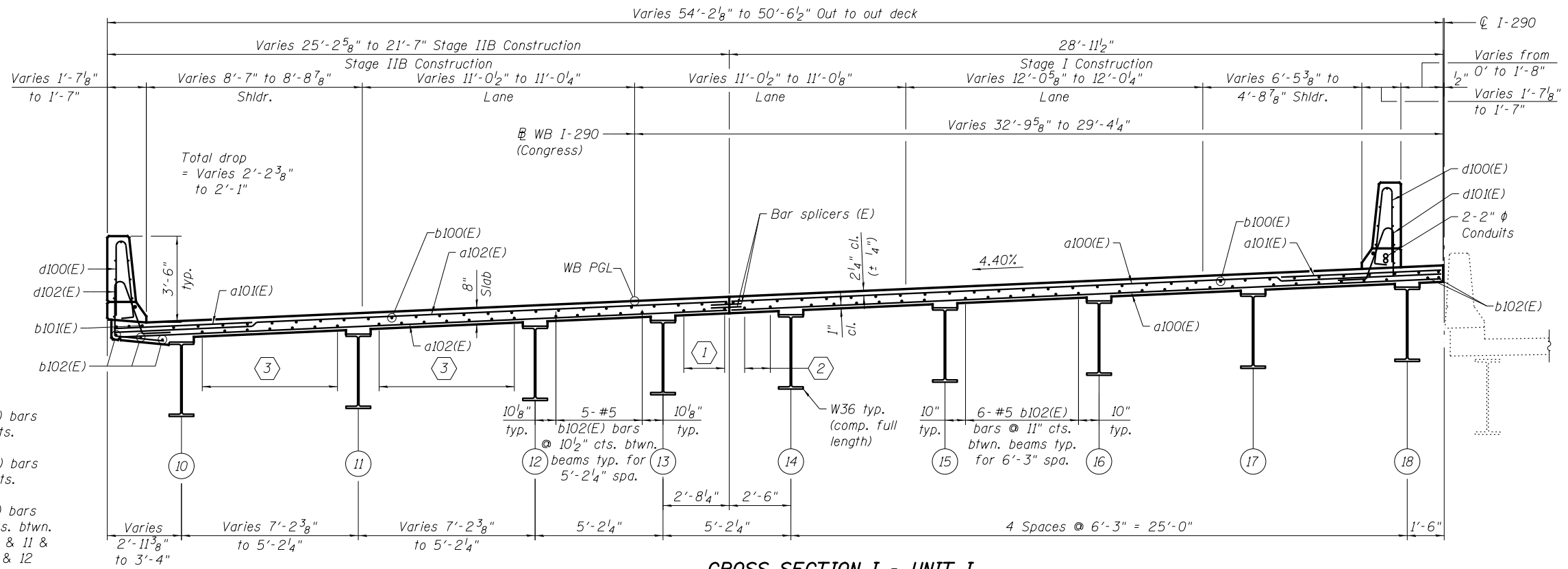
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PLLOT DATE = 3/23/2016	DRAWN - D.C.P	REVISED -
	CHECKED - J.G	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK PLAN - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-46 OF S2-145 SHEETS

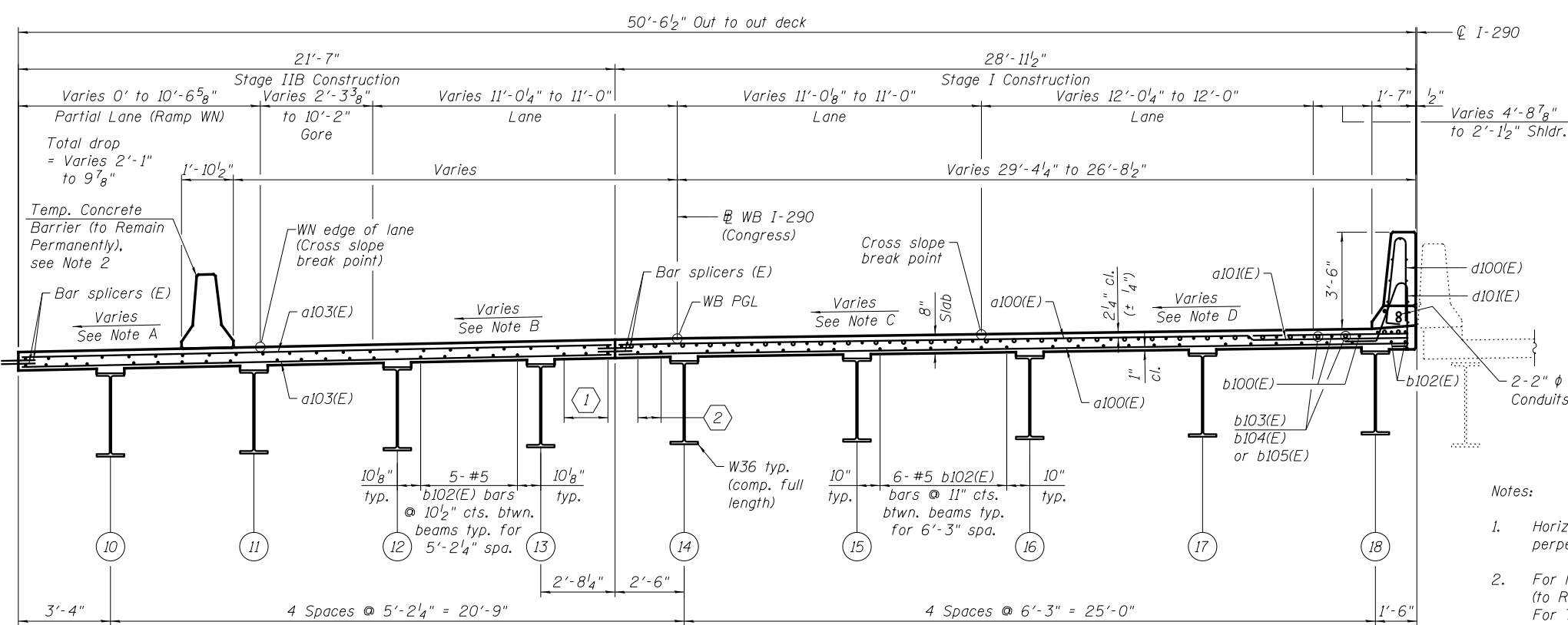
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	323
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



CROSS SECTION I - UNIT I

(Looking East)
Sta. 5212+92.22 to Sta. 5212+44.11

- Note A: (Direction of slope referenced from WB PGL, stations decreasing looking east)
Transition (-4.31% to -2.00%)
Sta. 5212+06.63 to Sta. 5210+97.41
Constant cross slope (-2.00%)
Sta. 5210+97.41 to Sta. 5210+50.53
- Note B: (Direction of slope referenced from WB PGL, stations decreasing looking east)
Constant cross slope (-4.40%)
Sta. 5212+44.11 to Sta. 5211+99.79
Transition (-4.40% to -2.08%)
5211+99.79 to Sta. 5211+22.79
Constant cross slope (-2.08%)
Sta. 5211+22.79 to Sta. 5210+50.53
- Note C: (Direction of slope referenced from WB PGL, stations decreasing looking east)
Constant cross slope (4.40%)
Sta. 5212+44.11 to Sta. 5211+99.79
Transition (4.40% to 1.37%)
Sta. 5211+99.79 to Sta. 5210+98.79
Transition (1.37% to 1.25%)
Sta. 5210+98.79 to Sta. 5210+94.79
Constant cross slope (1.25%)
Sta. 5210+94.79 to Sta. 5210+50.53
- Note D: (Direction of slope referenced from WB PGL, stations decreasing looking east)
Constant cross slope (4.40%)
Sta. 5212+44.11 to Sta. 5211+99.79
Transition (4.40% to 1.37%)
Sta. 5211+99.79 to Sta. 5210+98.79
Constant cross slope (1.37%)
Sta. 5210+98.79 to Sta. 5210+50.53



CROSS SECTION II - UNIT I

(Looking East)
Sta. 5212+44.11 to Sta. 5210+50.53

- Notes:
- Horizontal dimensions are measured perpendicular to ϕ I-290.
 - For location of Temporary Concrete Barrier (to Remain Permanently), see Civil sheets. For Temporary Concrete Barrier details, see sheet S2-24.

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PARSONS BRINCKERHOFF

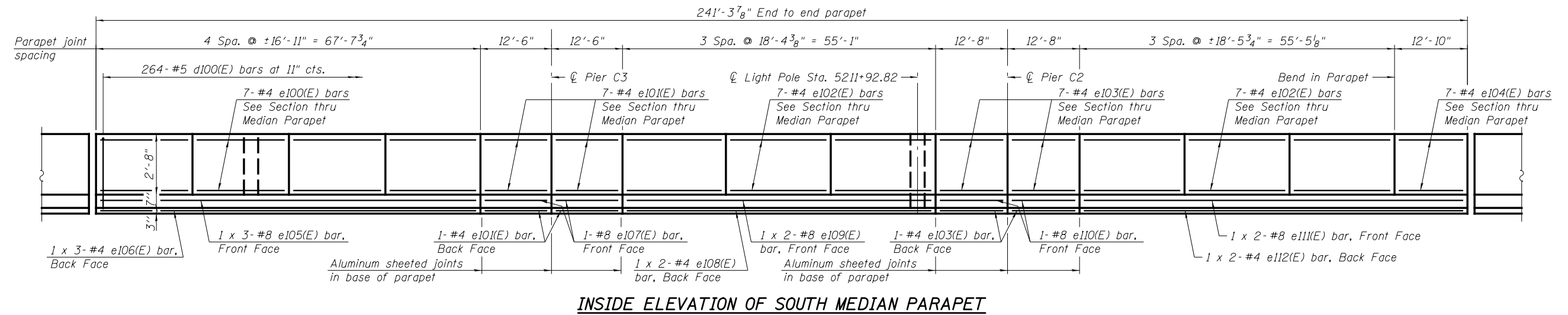
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PLLOT DATE = 3/23/2016	DRAWN - D.C.P	REVISED -
	CHECKED - J.I.G	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

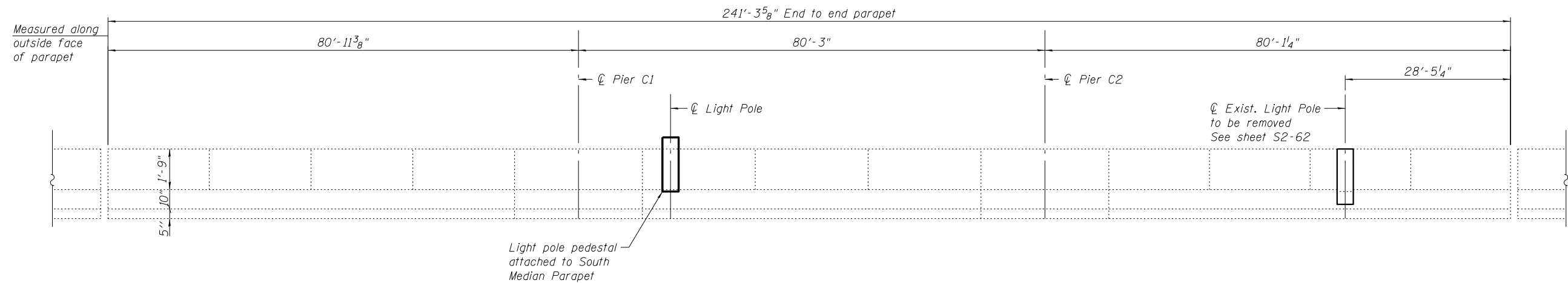
DECK DETAILS I - UNIT I
STRUCTURE NO. 016-0461

SHEET NO. S2-47 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

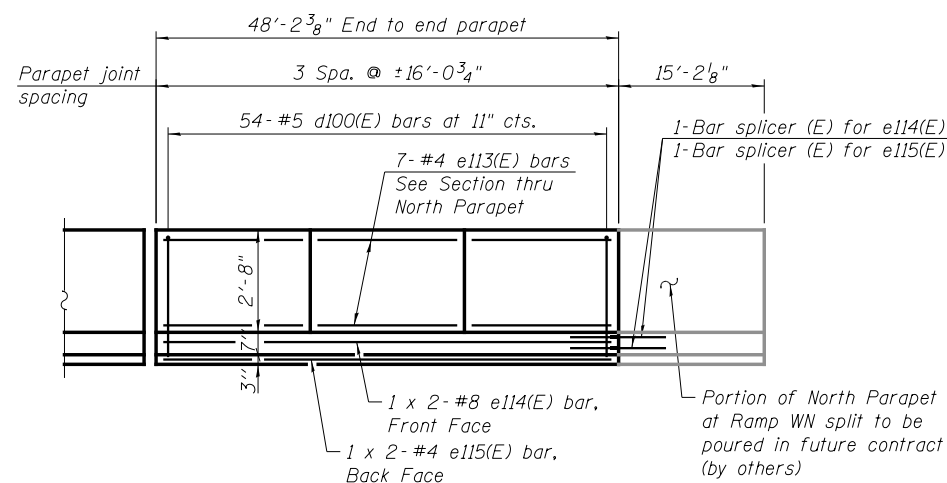


INSIDE ELEVATION OF SOUTH MEDIAN PARAPET



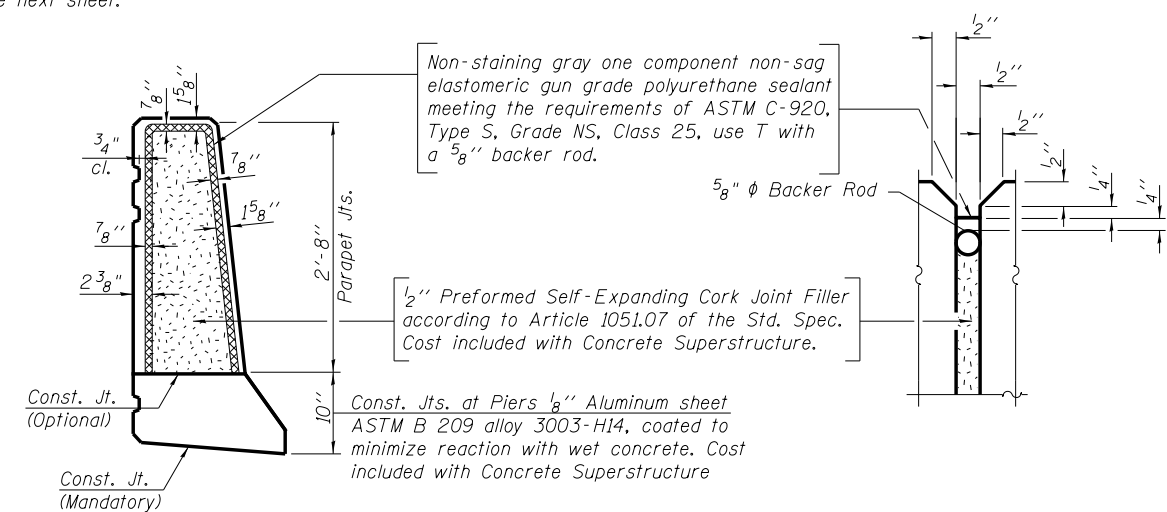
INSIDE ELEVATION OF EXIST. NORTH MEDIAN PARAPET

Note:
For Section thru Median Parapet &
Section thru North Parapet, see next sheet.



INSIDE ELEVATION OF NORTH PARAPET

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



PARAPET JOINT DETAILS

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**PARSONS
BRINCKERHOFF**

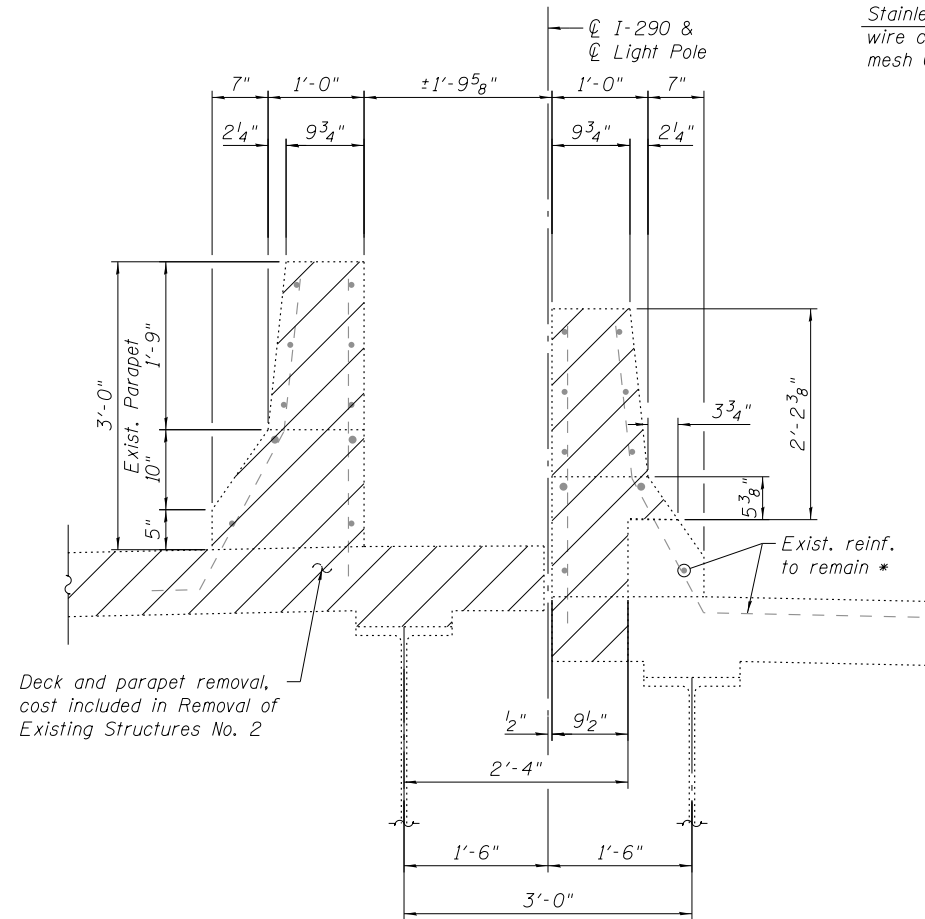
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PLOT SCALE = N.T.S.	CHECKED - LFC	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

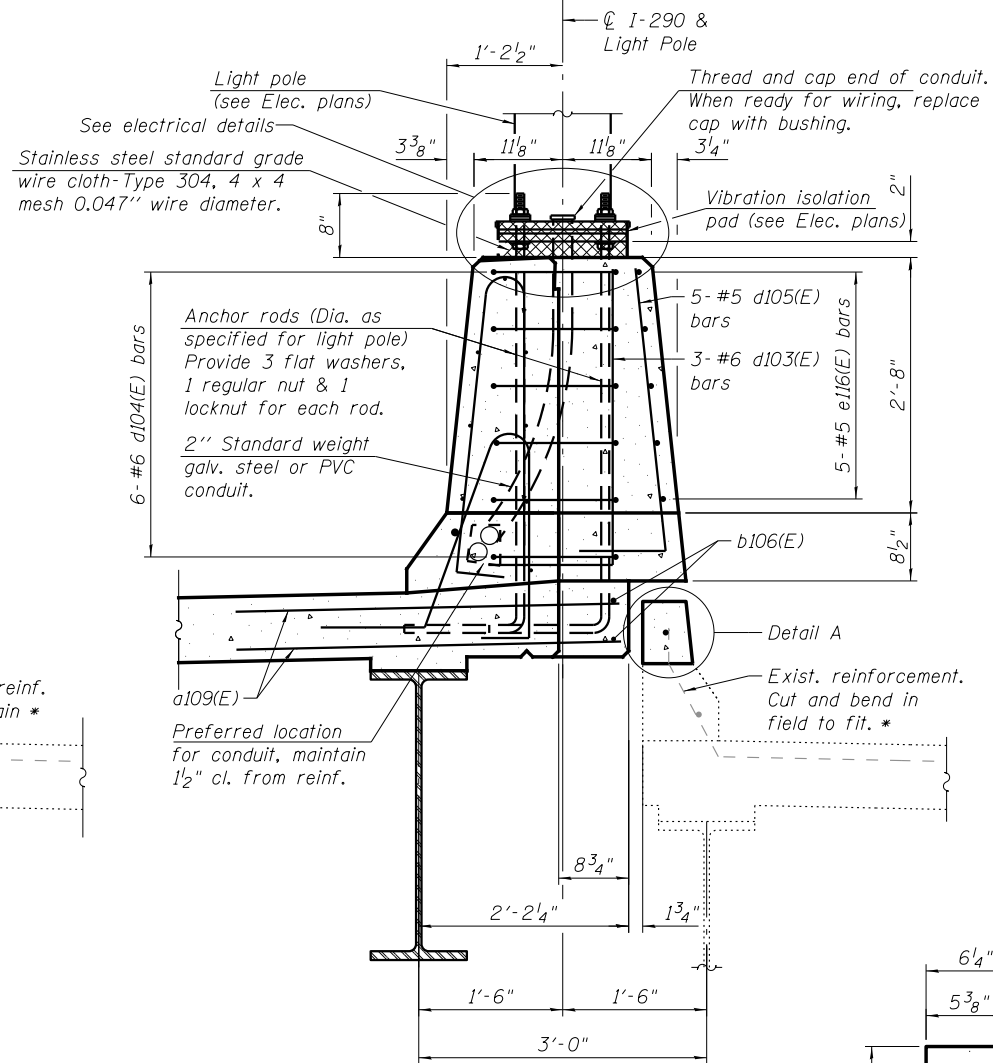
**DECK DETAILS II - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-48 OF S2-145 SHEETS

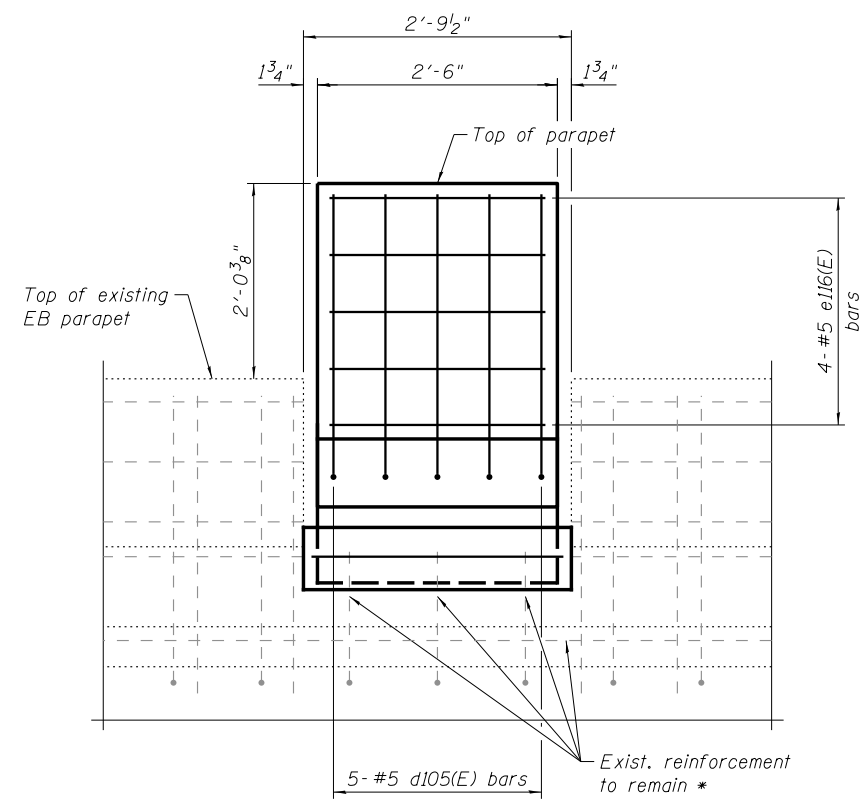
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	325
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



REMOVAL SECTION AT LIGHT POLE

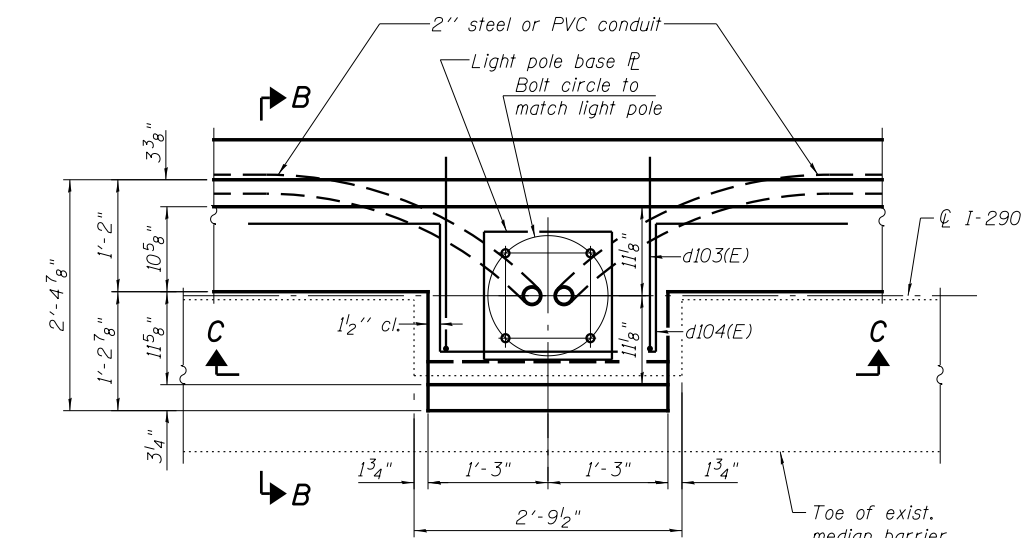


SECTION B-B

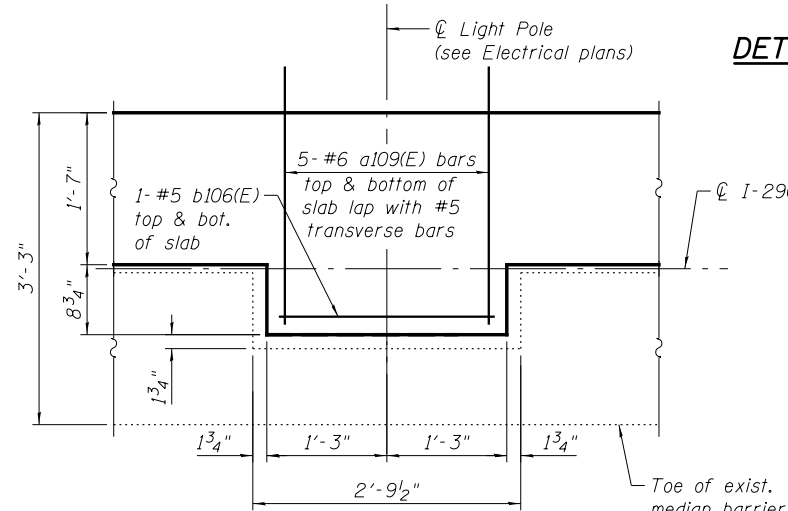


SECTION C-C

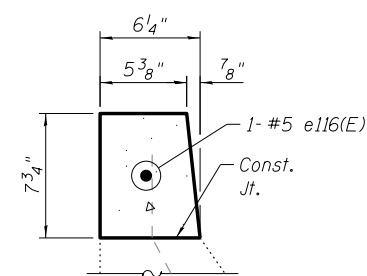
* Existing reinforcement shall be cleaned and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.



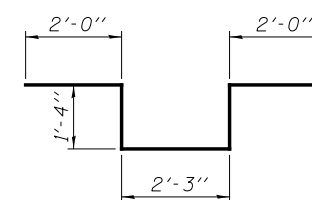
LIGHT POLE FOUNDATION PLAN



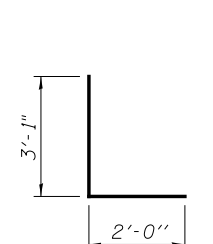
BOTTOM PLAN



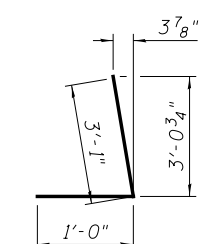
DETAIL A



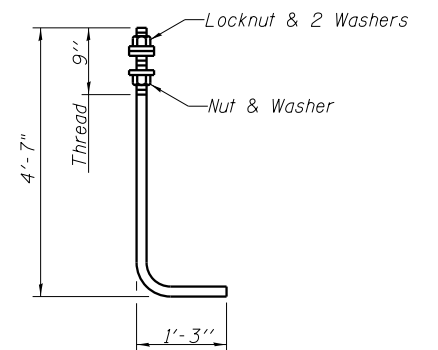
BAR d104(E)



BAR d103(E)



BAR d105(E)



ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105) full length hot dipped galvanized. Cost included with cost of Concrete Superstructure

Note:
See sheet S2-51, for superstructure details and Bill of Material.

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PARSONS BRINCKERHOFF

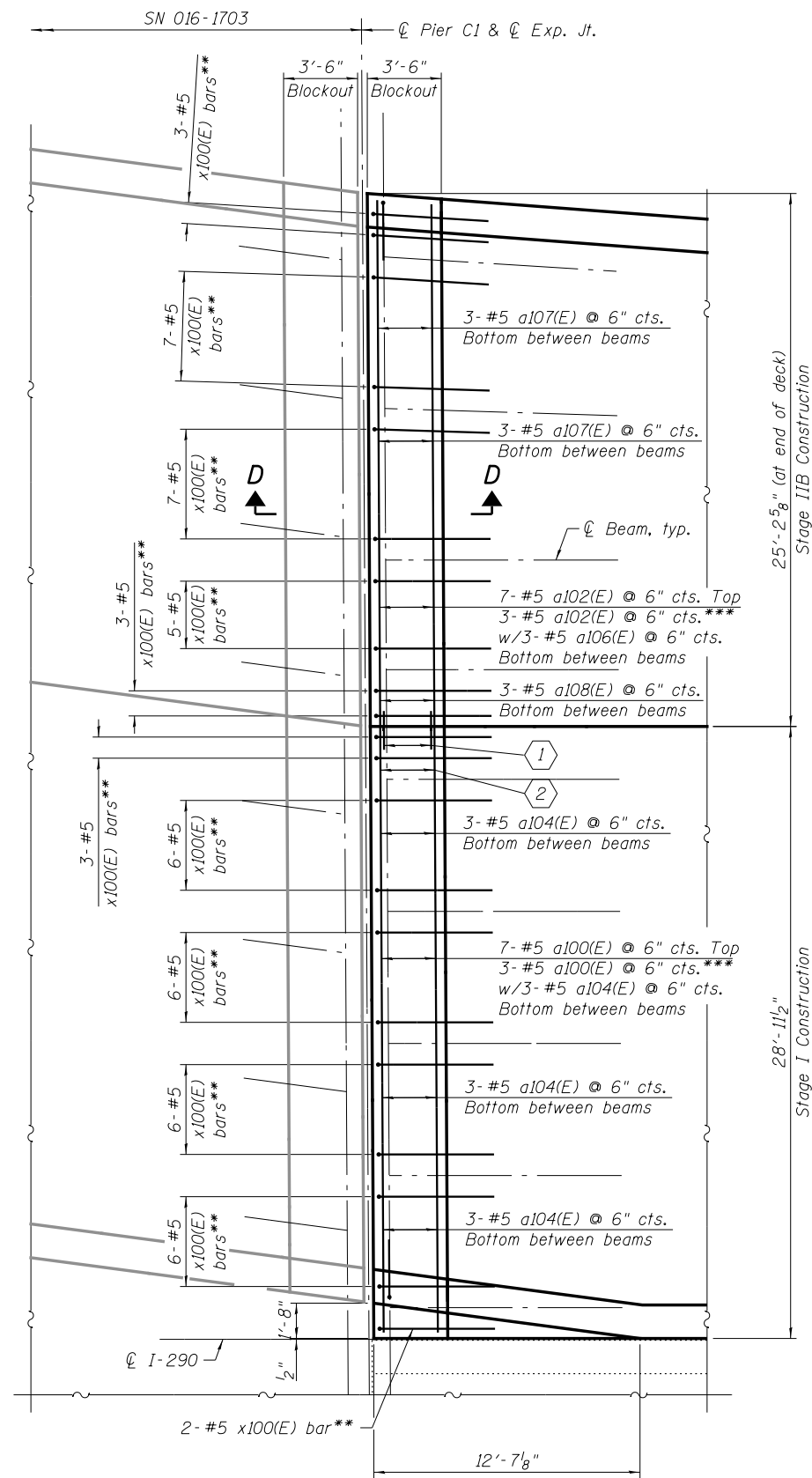
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PLOT DATE = 3/23/2016	DRAWN - D.C.P.	REVISED -
	CHECKED - J.I.G.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

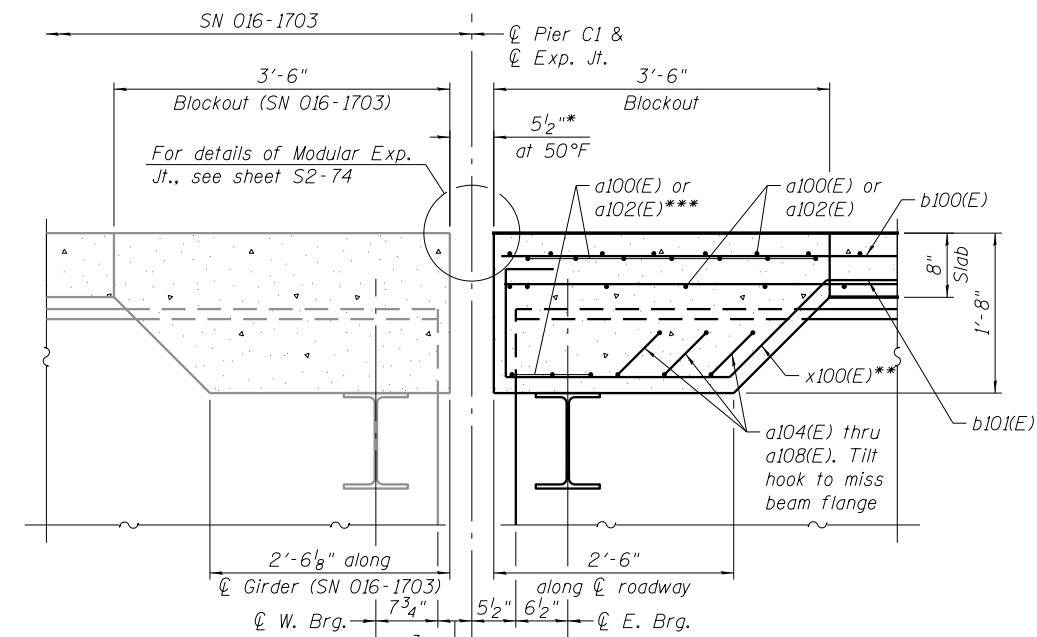
**DECK DETAILS IV - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-50 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	327
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

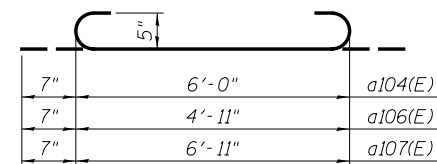


PARTIAL PLAN AT PIER C1

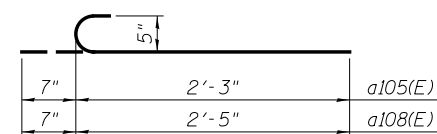


SECTION D-D

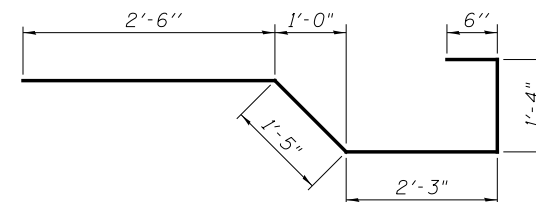
- ① 13-Bar Splicers (E) for #5 a100(E) and a105(E) bars top and bottom
- ② 3- #5 a105(E) @ 6" cts. Bottom between beams



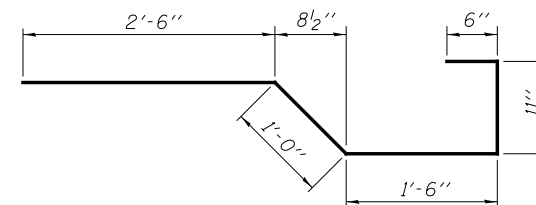
a104(E), a106(E) or a107(E) BAR



a105(E) or a108(E) BAR



BAR x100(E)



BAR x101(E)

* Actual dimension may vary depending on Manufacturer's design

** x100(E) bars to be placed at 12" cts. between beams and adjusted in field to miss support boxes

*** Bars to be adjusted and/or cut in field to miss support boxes and beam webs, as allowed by the Engineer. The Contractor shall reference and coordinate rebar installation with the approved modular joint shop drawings.

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a100(E)	751	#5	28'-7"	—
a101(E)	535	#6	6'-6"	—
a102(E)	157	#5	24'-10"	—
a103(E)	594	#5	21'-4"	—
a104(E)	24	#5	7'-2"	—
a105(E)	6	#5	2'-10"	—
a106(E)	12	#5	6'-1"	—
a107(E)	6	#5	8'-1"	—
a108(E)	6	#5	3'-0"	—
a109(E)	10	#6	7'-2"	—
b100(E)	432	#5	32'-5"	—
b101(E)	6	#5	26'-8"	—
b102(E)	468	#5	29'-2"	—
b103(E)	110	#6	32'-0"	—
b104(E)	55	#6	24'-5"	—
b105(E)	55	#6	22'-10"	—
b106(E)	2	#5	2'-3"	—
d100(E)	318	#5	6'-10"	—
d101(E)	264	#5	6'-2"	—
d102(E)	54	#5	7'-2"	—
d103(E)	3	#6	5'-1"	—
d104(E)	6	#6	8'-11"	—
d105(E)	5	#5	4'-1"	—
e100(E)	28	#4	16'-8"	—
e101(E)	16	#4	12'-3"	—
e102(E)	42	#4	18'-1"	—
e103(E)	16	#4	12'-5"	—
e104(E)	7	#4	12'-7"	—
e105(E)	3	#8	26'-0"	—
e106(E)	3	#4	23'-10"	—
e107(E)	2	#8	12'-3"	—
e108(E)	2	#4	28'-5"	—
e109(E)	2	#8	30'-0"	—
e110(E)	2	#8	12'-5"	—
e111(E)	2	#8	30'-2"	—
e112(E)	2	#4	28'-7"	—
e113(E)	21	#4	15'-9"	—
e114(E)	2	#8	26'-7"	—
e115(E)	2	#4	25'-0"	—
e116(E)	6	#5	2'-3"	—
x100(E)	54	#5	7'-6"	—
x101(E)	47	#5	6'-5"	—
Reinforcement Bars, Epoxy Coated		Pound	91,120	
Concrete Superstructure		Cu. Yds.	377.7	
Protective Coat		Sq. Yd.	1,462	
Bridge Deck Grooving		Sq. Yd.	1,280	

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**PARSONS
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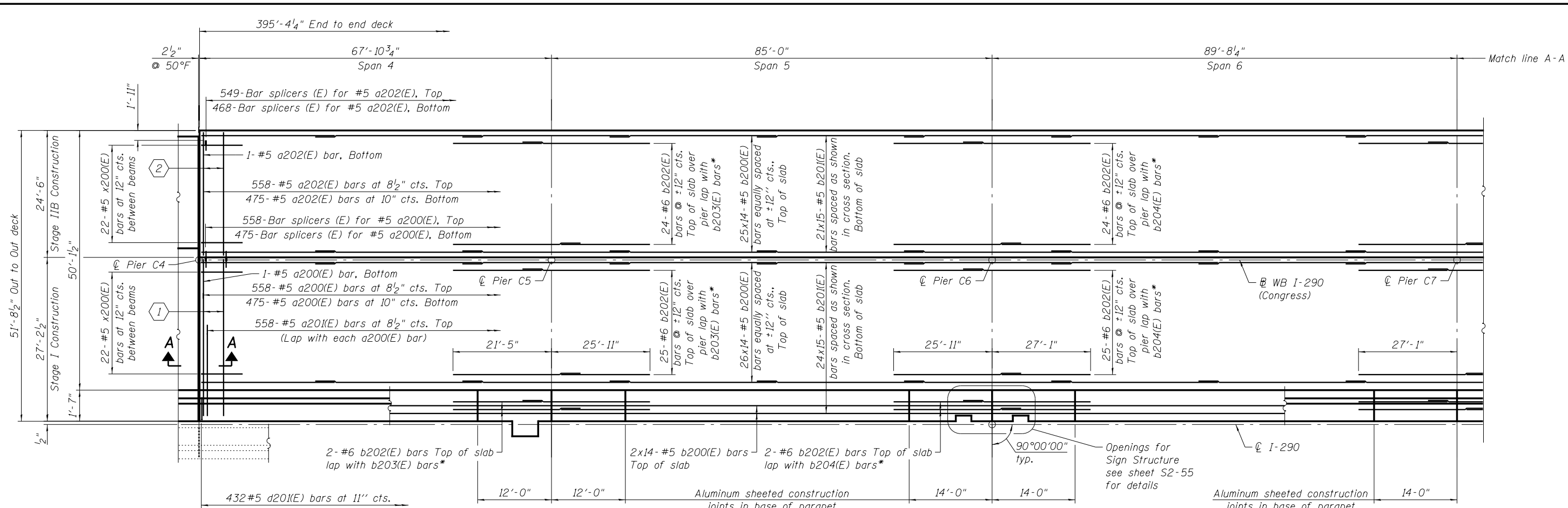
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PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS V - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-51 OF S2-145 SHEETS

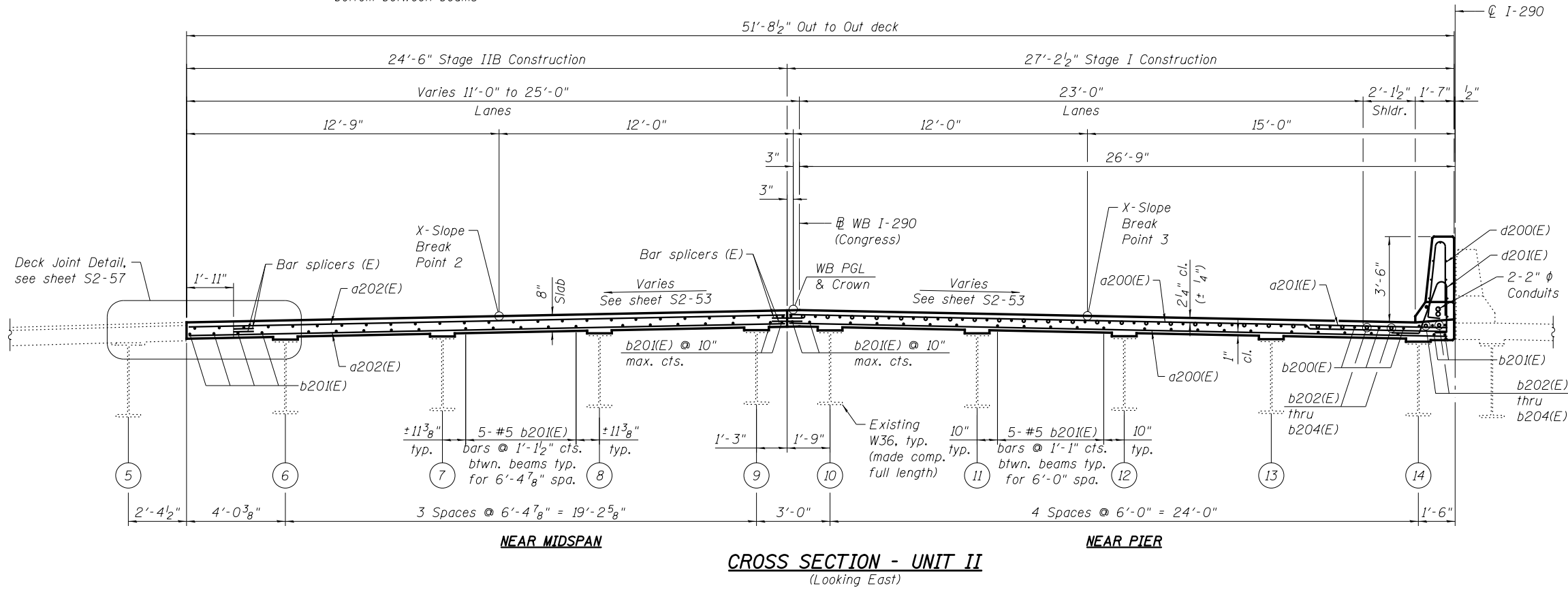
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	328
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



- ① 4-#5 a200(E) bars at 6" cts., Top
4x3-#5 a203(E) or 3-#5 a204(E)
bars at 6" cts. bottom between beams
- ② 4-#5 a202(E) bars at 6" cts., Top
3-#5 a205(E), 3x3-#5 a206(E),
or 3-#5 a207(E) bars at 6" cts.
bottom between beams

* Alternate location of lap.

PARTIAL DECK PLAN - UNIT II



MINIMUM BAR LAP

- #5 bar = 2'-7"
- #6 bar = 3'-1"

Notes:

1. See sheet S2-54, for parapet reinforcement.
2. See sheet S2-55 thru S52-54, for superstructure details, Section A-A, and Bill of Material.
3. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
4. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
5. 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 S2-70.

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**PARSONS
BRINCKERHOFF**

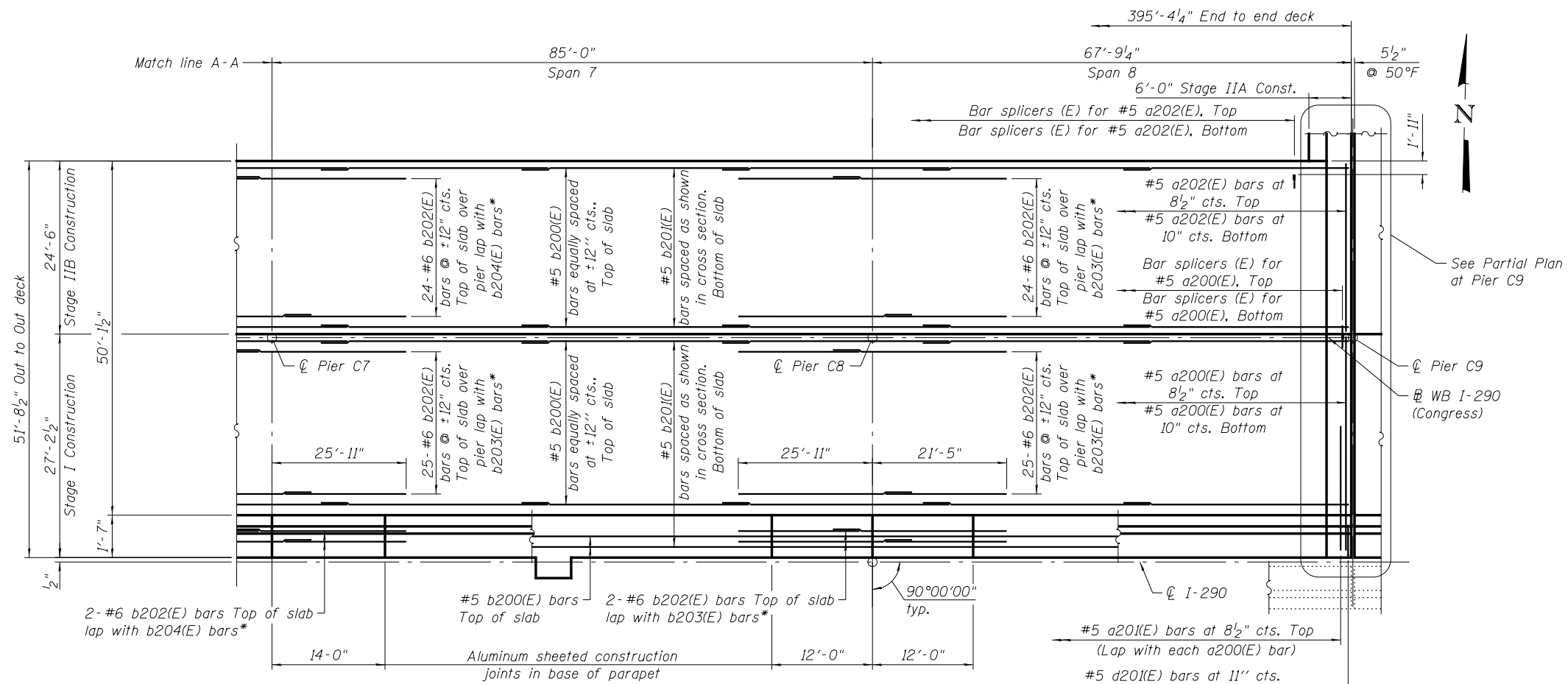
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK PLAN I - UNIT II
STRUCTURE NO. 016-0461**

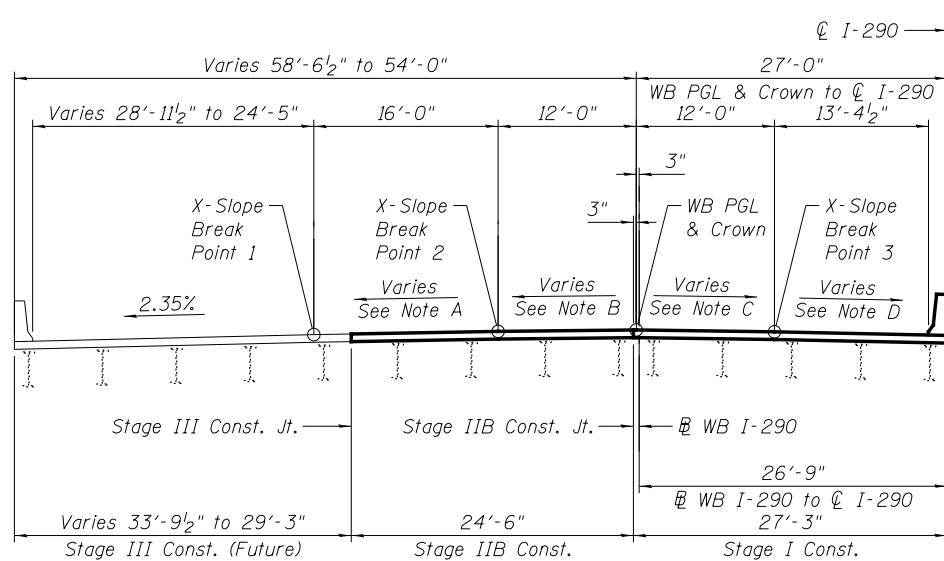
SHEET NO. S2-52 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	329
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



* Alternate location of lap.

PARTIAL DECK PLAN - UNIT II



DECK CROSS SLOPES - UNIT II

(Looking East)

Note A: (Direction of slope referenced from WB Crown)
 Transition (-2.00% to -1.75%) Sta. 5210+50.43 to Sta. 5209+99.01
 Constant cross slope (-1.75%) Sta. 5209+99.01 to Sta. 5207+49.01
 Transition (-1.75% to -2.08%) Sta. 5207+49.01 to Sta. 5207+24.01
 Constant cross slope (-2.08%) Sta. 5207+24.01 to Sta. 5206+54.74

Note B: (Direction of slope referenced from WB Crown)
 Transition (-2.08% to -1.25%) Sta. 5210+50.43 to Sta. 5209+99.01
 Constant cross slope (-1.25%) Sta. 5209+99.01 to Sta. 5208+89.01
 Transition (-1.25% to -1.04%) Sta. 5208+89.01 to Sta. 5208+54.74
 Constant cross slope (-1.04%) Sta. 5208+54.74 to Sta. 5206+54.74

Note C: (Direction of slope referenced from WB Crown)
 Transition (1.25% to 0%) Sta. 5210+50.43 to Sta. 5209+99.01
 Transition (0% to -1.04%) Sta. 5209+99.01 to Sta. 5209+19.01
 Constant cross slope (-1.04%) Sta. 5209+19.01 to Sta. 5208+69.01
 Transition (-1.04% to -1.35%) Sta. 5208+69.01 to Sta. 5208+59.01
 Constant cross slope (-1.35%) Sta. 5208+59.01 to Sta. 5206+74.01
 Transition (-1.35% to -1.04%) Sta. 5206+74.01 to Sta. 5206+54.74
 Constant cross slope (-1.04%) Sta. 5206+54.74 to Sta. 5206+54.74

Note D: (Direction of slope referenced from WB Crown)
 Transition (1.37% to -0.20%) Sta. 5210+50.43 to Sta. 5210+09.01
 Transition (-0.20% to -2.08%) Sta. 5209+09.01 to Sta. 5209+19.01
 Constant cross slope (-2.08%) Sta. 5209+19.01 to Sta. 5206+54.74

MINIMUM BAR LAP

#5 bar = 2'-7"
 #6 bar = 3'-1"

Notes:

1. See sheet S2-54, for parapet reinforcement.
2. See sheet S2-55 thru S52-54, for superstructure details, Section A-A, and Bill of Material.
3. See sheet S2-63, for Partial Plan at Pier C9.
4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
5. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.

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PARSONS BRINCKERHOFF

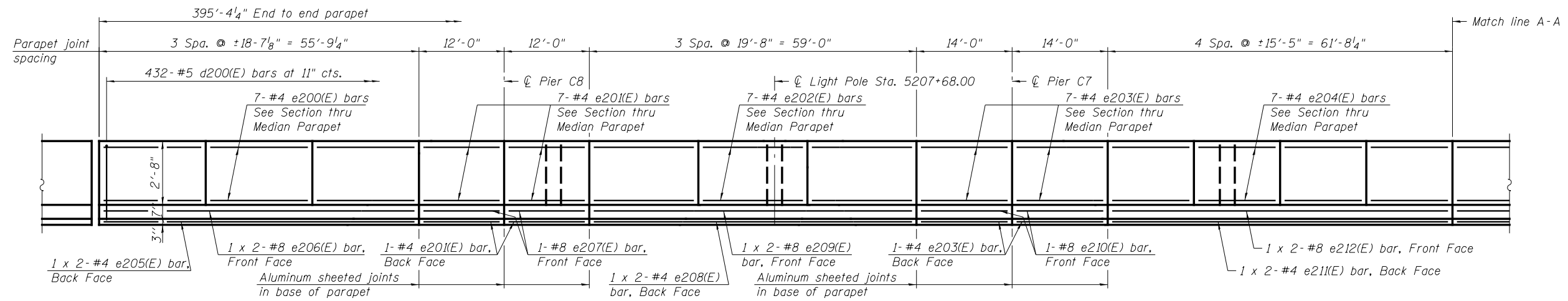
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PLOT SCALE = N.T.S.	CHECKED - J.Z	REVISED -
PLOT DATE = 3/23/2016	DRAWN - D.C.P	REVISED -
	CHECKED - J.G	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DECK PLAN II - UNIT II
 STRUCTURE NO. 016-0461**

SHEET NO. S2-53 OF S2-145 SHEETS

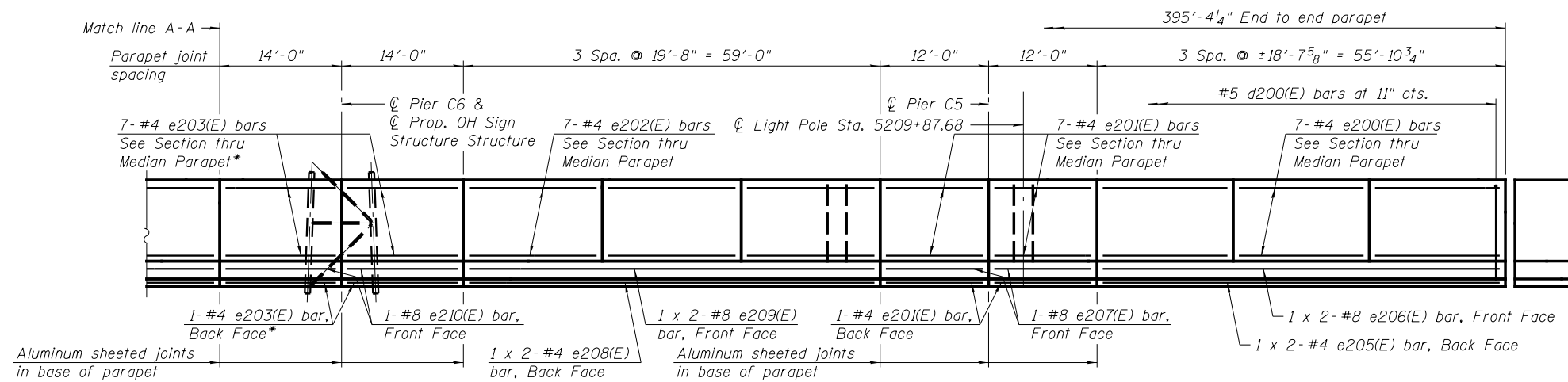
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	330
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF SOUTH MEDIAN PARAPET

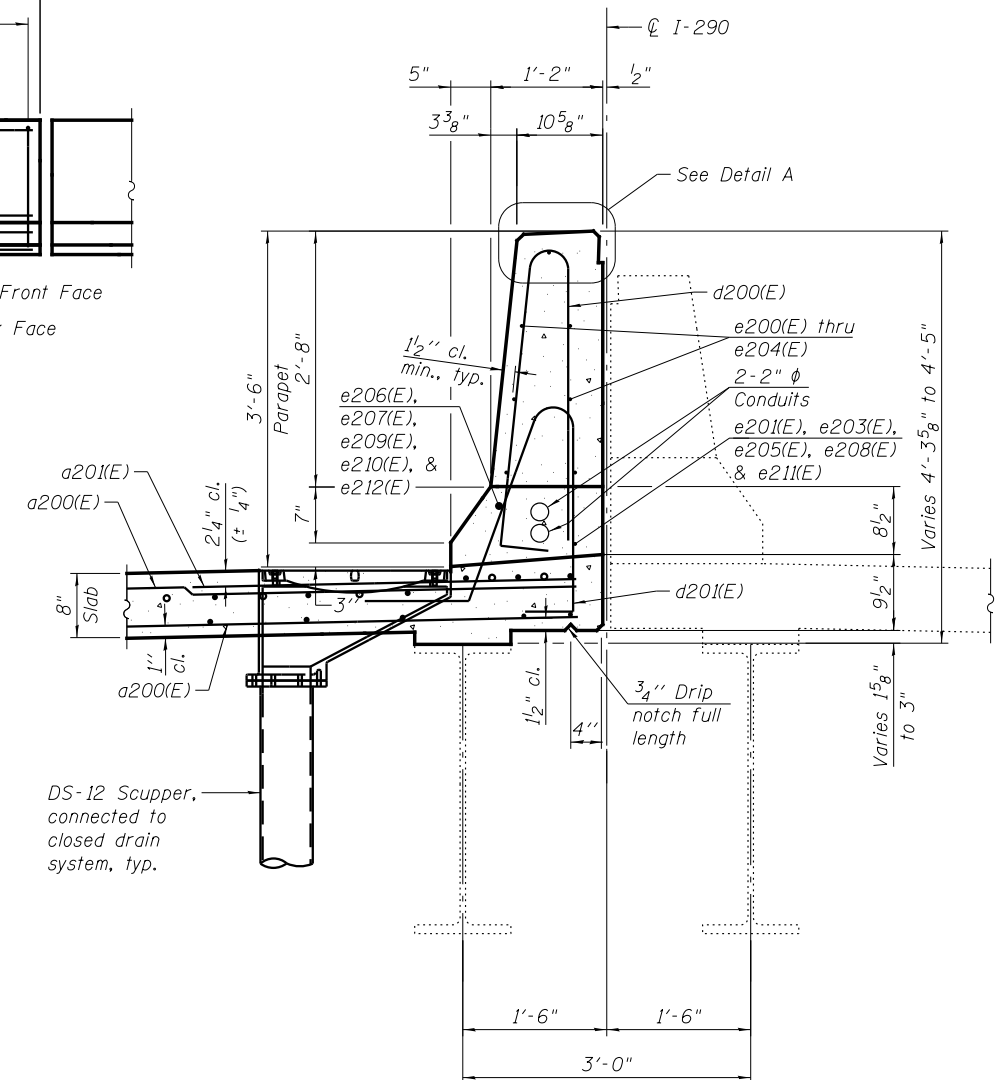
MINIMUM BAR LAP

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

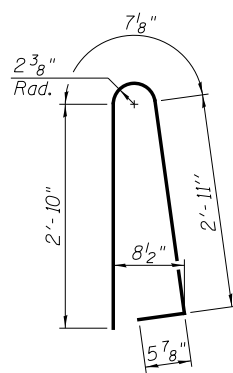


INSIDE ELEVATION OF SOUTH MEDIAN PARAPET

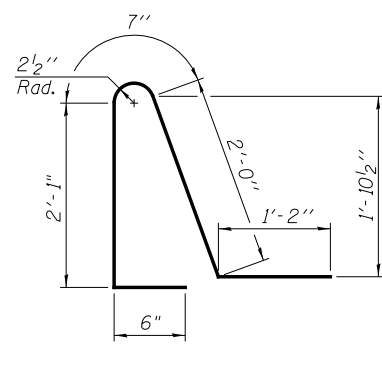
* Cut in field to clear openings. See sheet S2-55, for details of openings for Sign Structure



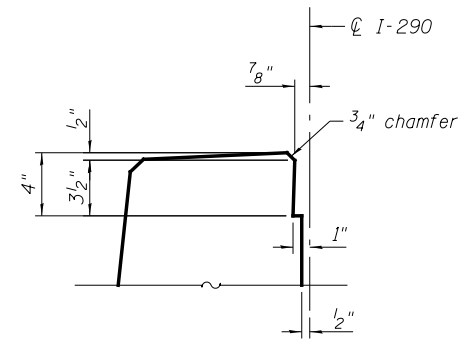
SECTION THRU MEDIAN PARAPET



BAR d200(E)



BAR d201(E)



DETAIL A

0160461-60X78-5054-DET.dgn

PARSONS BRINCKERHOFF

USER NAME = pateld
 PLOT SCALE = N.T.S.
 PLOT DATE = 3/23/2016

DESIGNED - PJL
 CHECKED - JZ
 DRAWN - DCP
 CHECKED - JIG

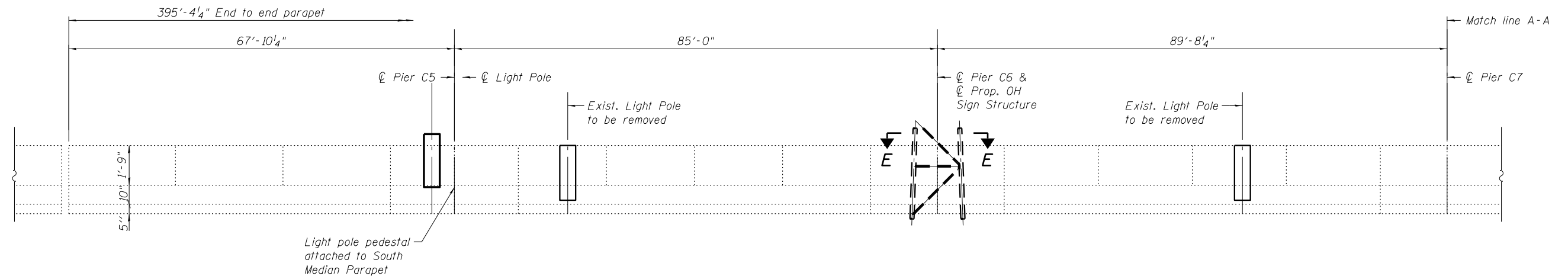
REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS I - UNIT II
 STRUCTURE NO. 016-0461**

SHEET NO. S2-54 OF S2-145 SHEETS

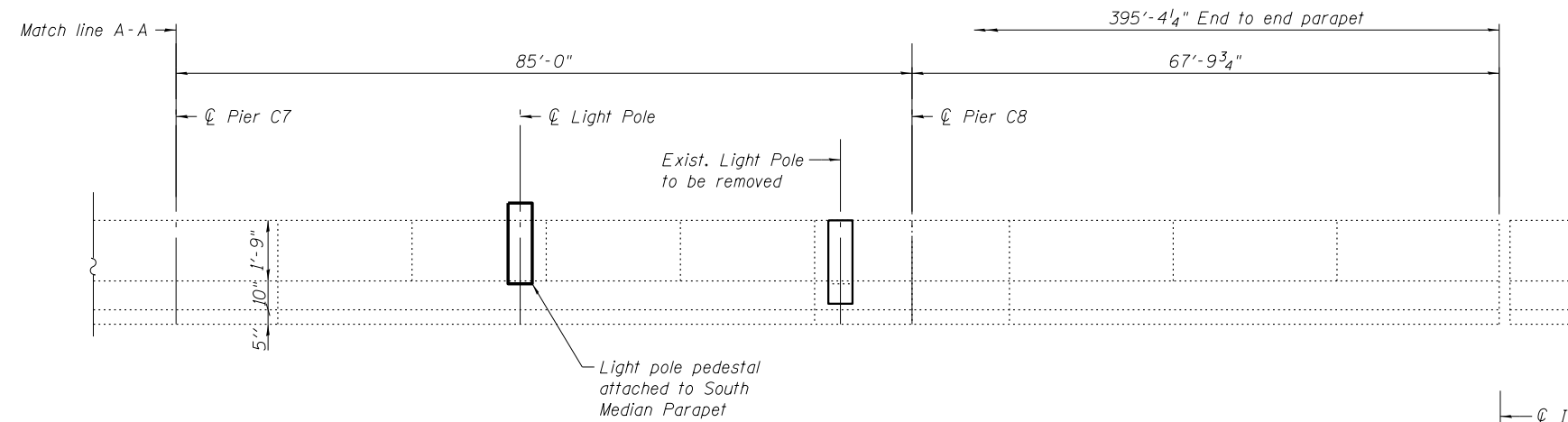
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	331
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



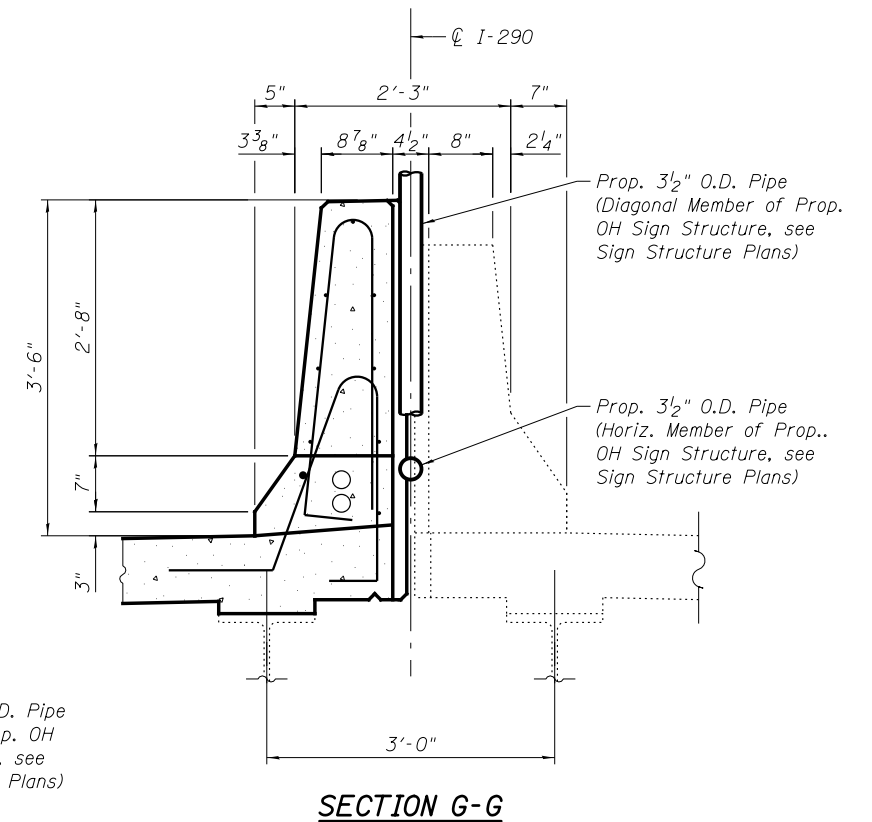
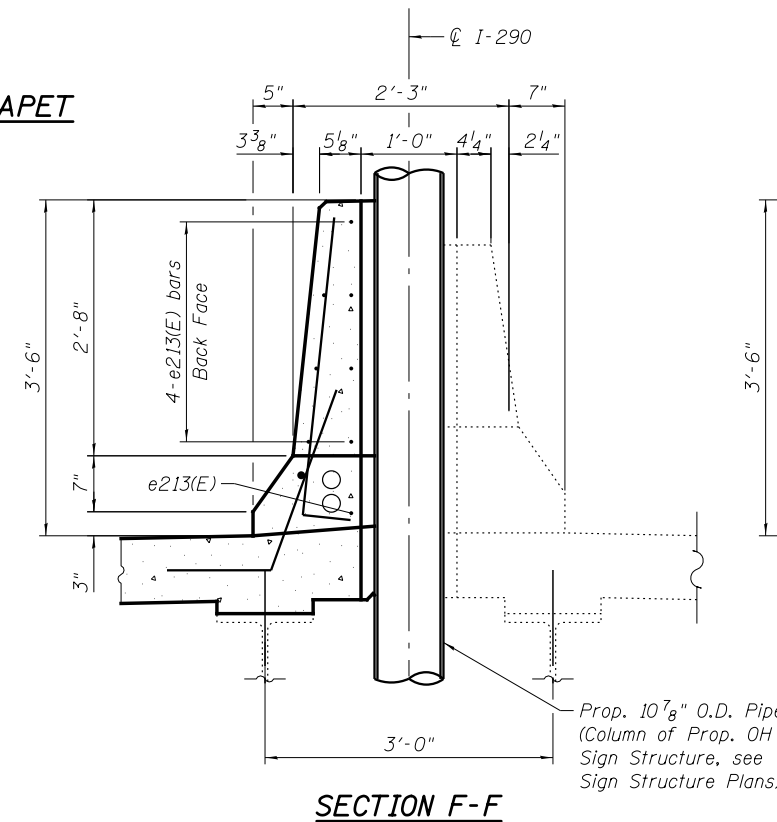
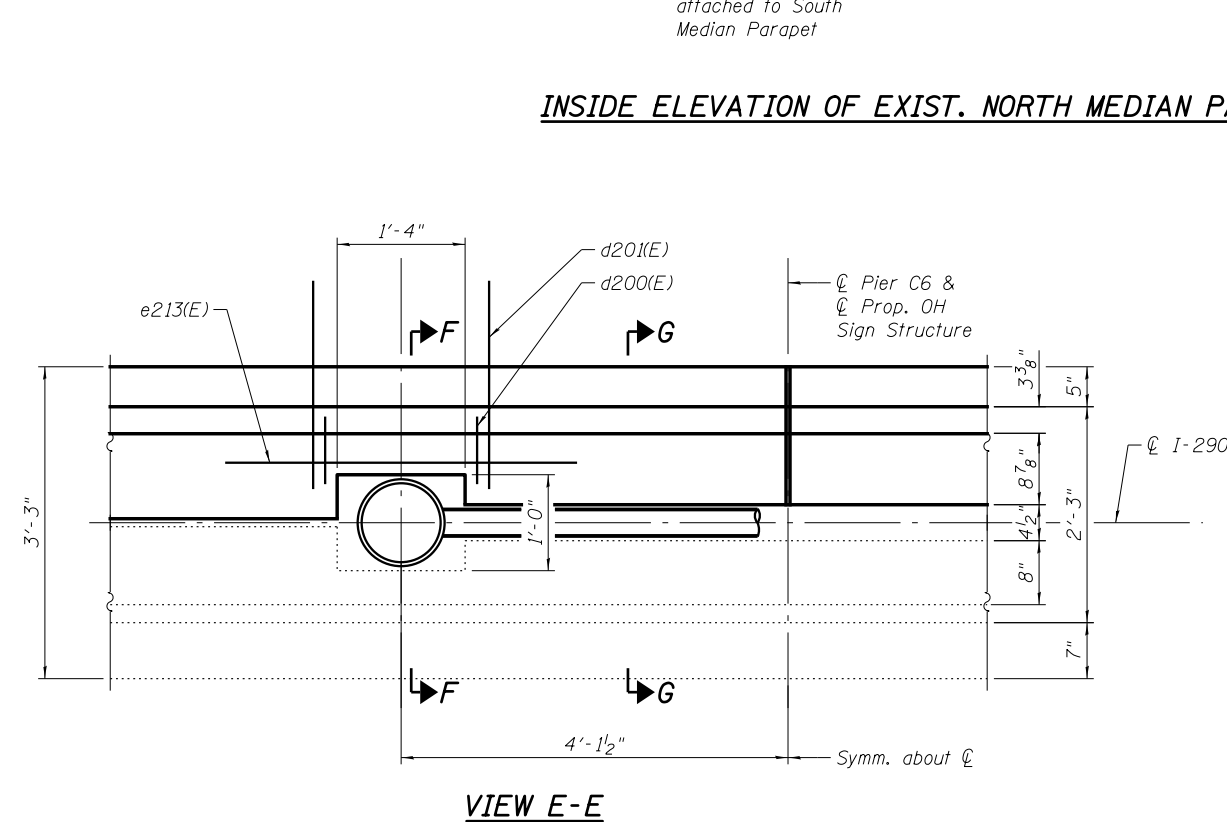
INSIDE ELEVATION OF EXIST. NORTH MEDIAN PARAPET

Notes:

See sheet S2-57, for superstructure details and Bill of Material.



INSIDE ELEVATION OF EXIST. NORTH MEDIAN PARAPET



0160461-60X78-5055-DET.dgn

PARSONS BRINCKERHOFF

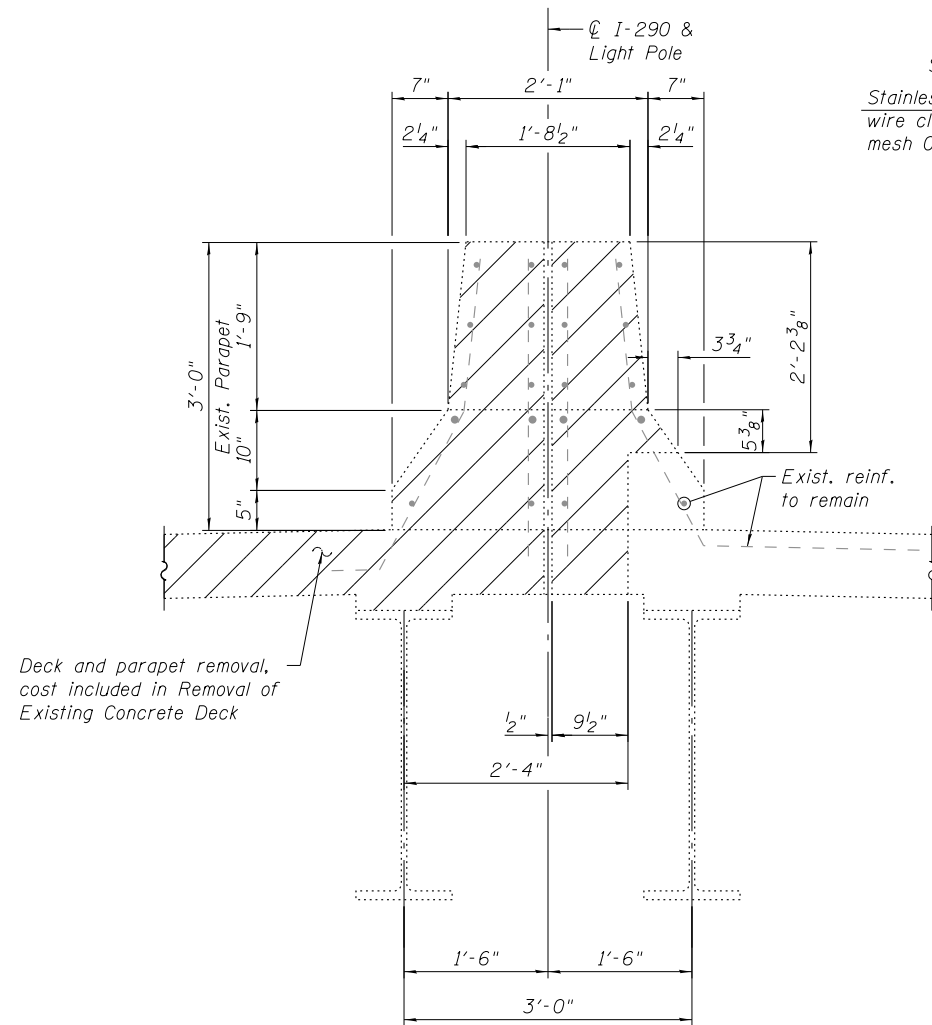
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PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS II - UNIT II
STRUCTURE NO. 016-0461**

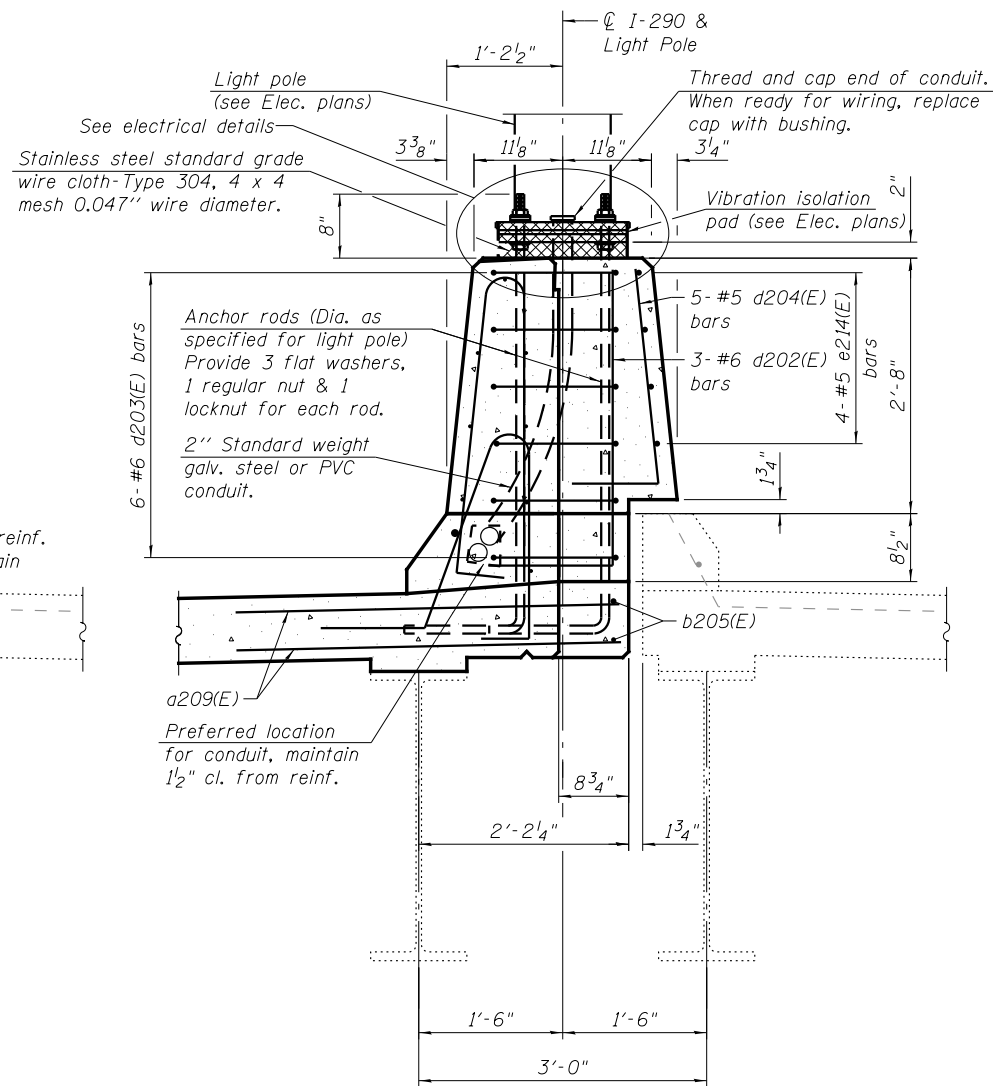
SHEET NO. S2-55 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	332
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

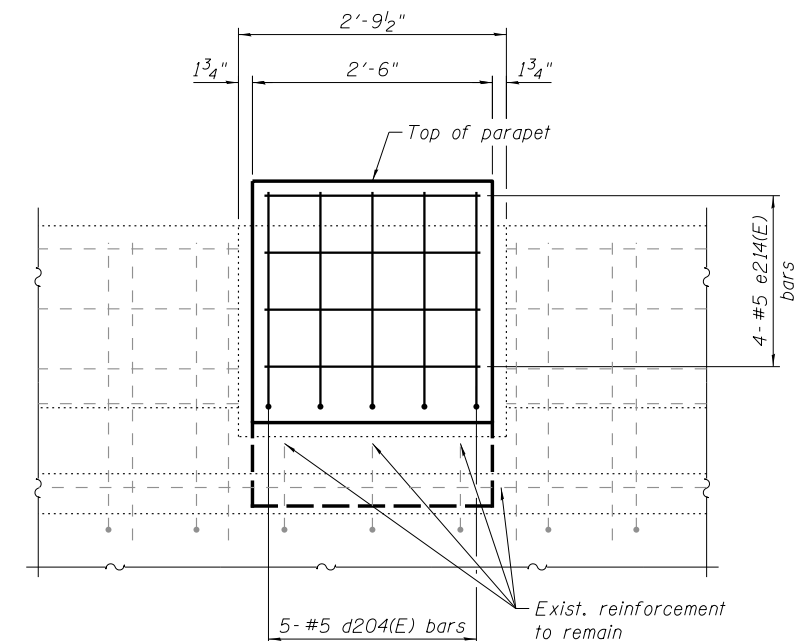


Deck and parapet removal, cost included in Removal of Existing Concrete Deck

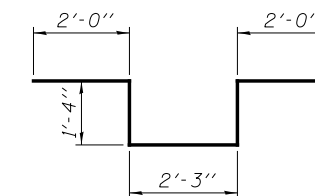
REMOVAL SECTION AT LIGHT POLE



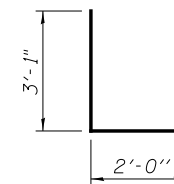
SECTION H-H



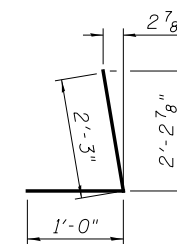
SECTION I-I



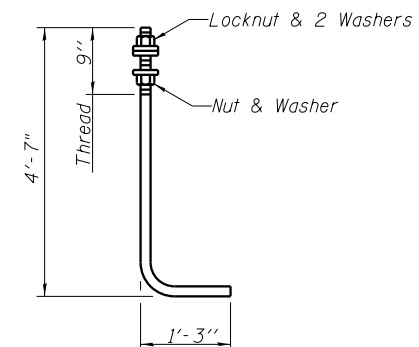
BAR d203(E)



BAR d202(E)



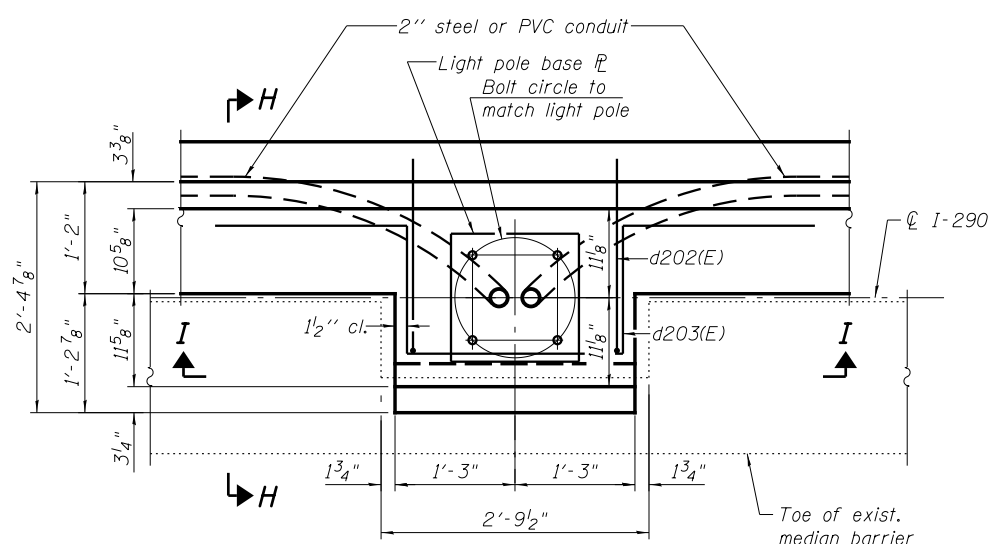
BAR d204(E)



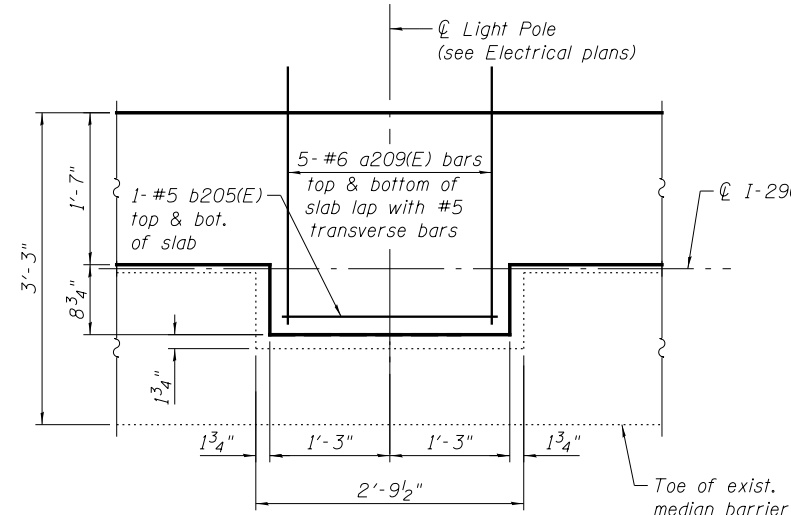
ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105) full length hot dipped galvanized. Cost included with cost of Concrete Superstructure

Note: See sheet S2-57, for superstructure details and Bill of Material.



LIGHT POLE FOUNDATION PLAN



BOTTOM PLAN

0160461-60X78-S056-DET.dgn

PARSONS BRINCKERHOFF

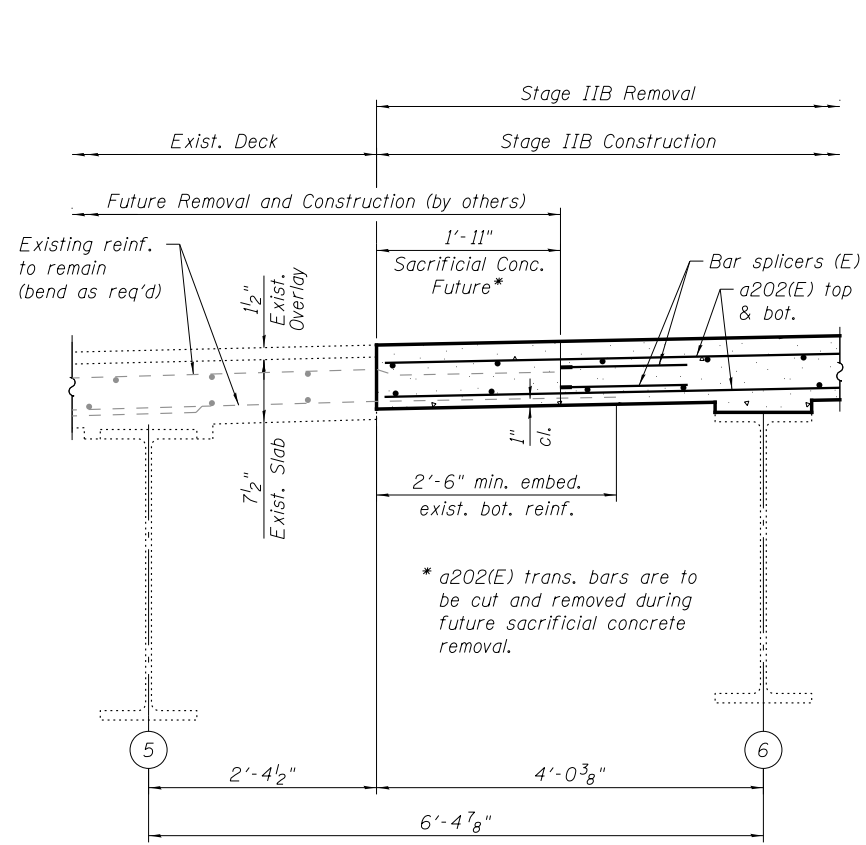
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PLOT SCALE = N.T.S.	CHECKED - J.Z.	REVISED -
PLOT DATE = 3/23/2016	DRAWN - D.C.P.	REVISED -
	CHECKED - J.I.G.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

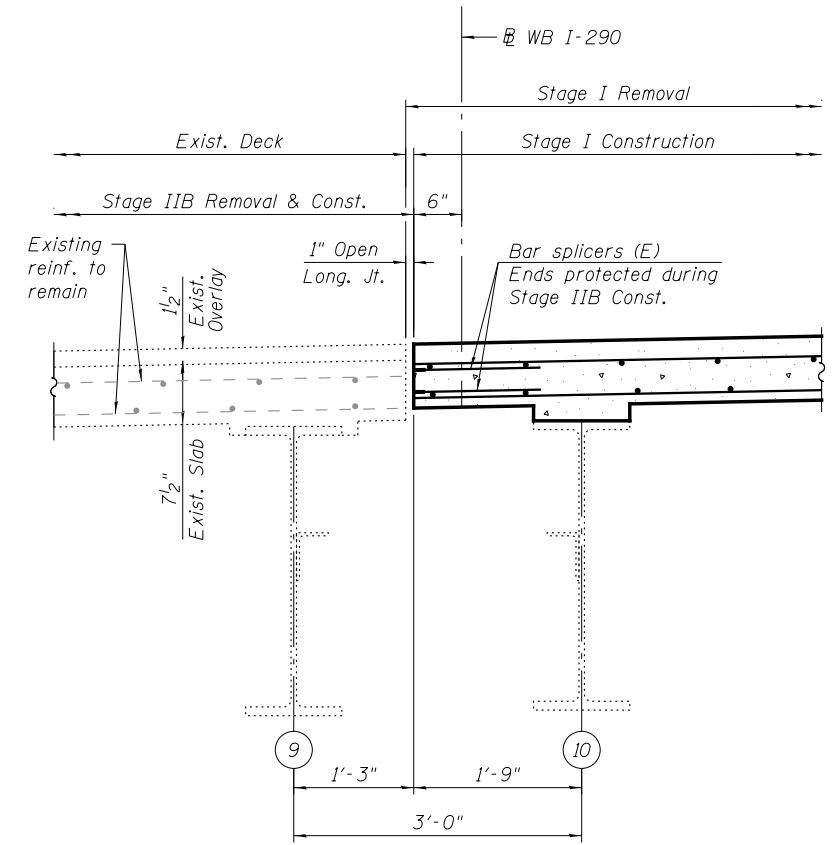
**DECK DETAILS III - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-56 OF S2-145 SHEETS

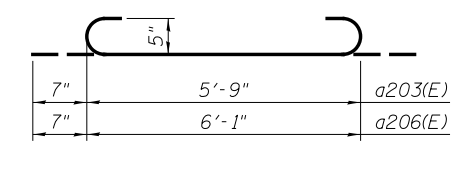
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	333
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



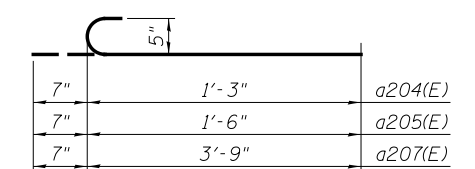
**DECK JOINT DETAIL
FOR FINAL TRAFFIC "CROSS OVER"**



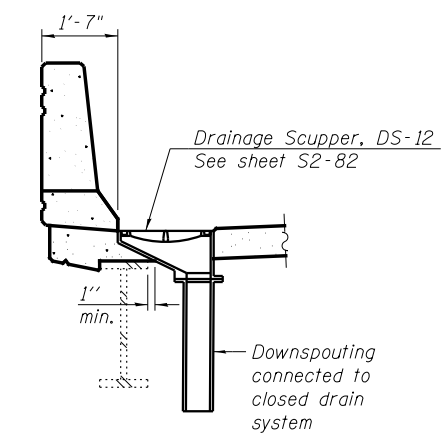
**LONGITUDINAL OPEN JOINT DETAIL
FOR STAGE IIA TRAFFIC "CROSS OVER"**



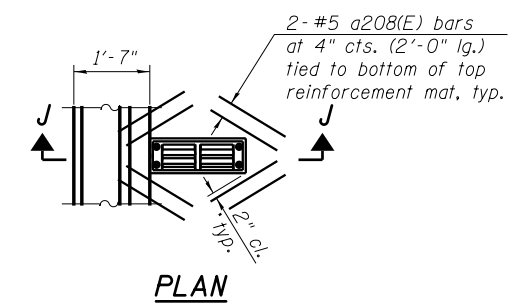
a203(E) or a206(E) BAR



a203(E), a205(E) or a207(E) BAR



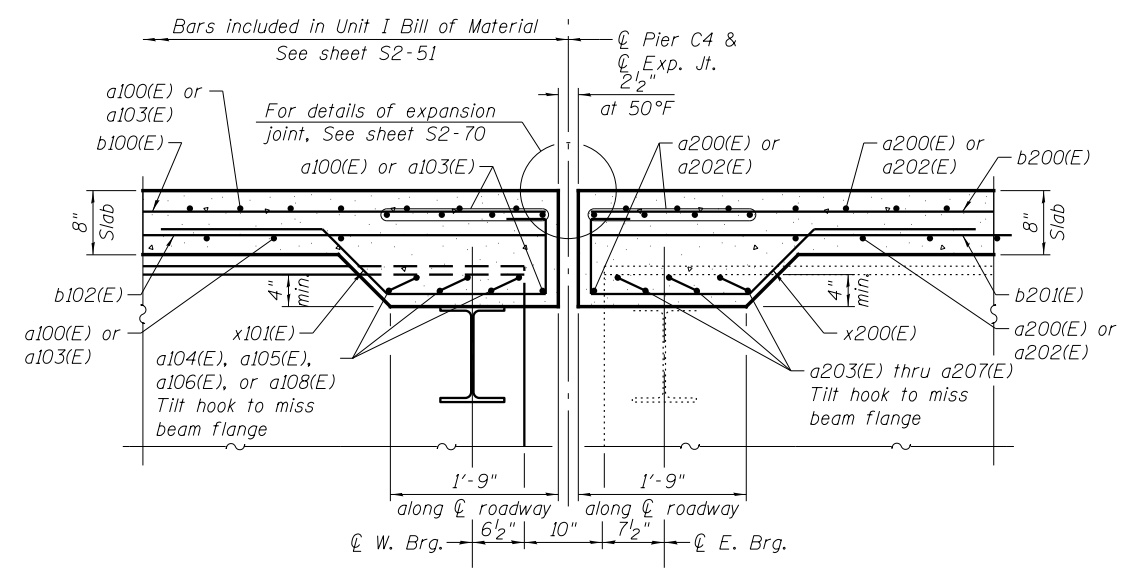
SECTION J-J



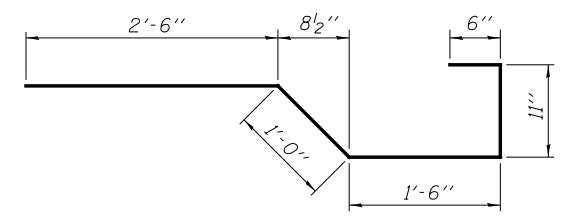
- Note:
1. Cut longitudinal reinforcement to clear drainage scuppers.
 2. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Removal of Existing Concrete Deck.
 3. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Removal of Existing Concrete Deck.

**SUPERSTRUCTURE
BILL OF MATERIAL**

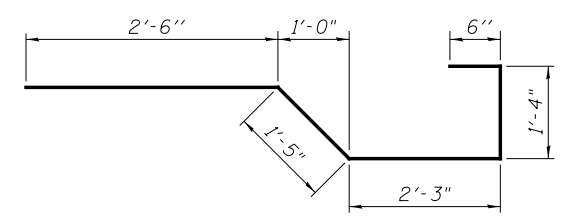
Bar	No.	Size	Length	Shape
a200(E)	1,048	#5	26'-9"	—
a201(E)	567	#6	6'-6"	—
a202(E)	1,048	#5	24'-3"	—
a203(E)	20	#5	6'-11"	—
a204(E)	4	#5	1'-10"	—
a205(E)	4	#5	2'-1"	—
a206(E)	12	#5	7'-3"	—
a207(E)	4	#5	4'-4"	—
a208(E)	64	#5	2'-0"	—
a209(E)	20	#6	7'-2"	—
a210(E)	27	#5	31'-6"	—
b200(E)	742	#5	30'-7"	—
b201(E)	690	#5	28'-8"	—
b202(E)	204	#6	32'-0"	—
b203(E)	102	#6	18'-5"	—
b204(E)	102	#6	24'-1"	—
b205(E)	4	#5	2'-3"	—
b206(E)	51	#5	5'-8"	—
d200(E)	440	#5	6'-11"	—
d201(E)	440	#5	6'-4"	—
d202(E)	6	#6	5'-1"	—
d203(E)	12	#6	8'-11"	—
d204(E)	10	#5	3'-3"	—
e200(E)	42	#4	18'-4"	—
e201(E)	32	#4	11'-9"	—
e202(E)	42	#4	19'-5"	—
e203(E)	32	#4	13'-9"	—
e204(E)	28	#4	15'-2"	—
e205(E)	4	#4	28'-9"	—
e206(E)	4	#8	30'-4"	—
e207(E)	4	#8	11'-9"	—
e208(E)	4	#4	30'-5"	—
e209(E)	4	#8	32'-0"	—
e210(E)	4	#8	13'-9"	—
e211(E)	4	#4	31'-9"	—
e212(E)	4	#8	33'-4"	—
e213(E)	10	#4	3'-8"	—
e214(E)	8	#5	2'-3"	—
e215(E)	8	#4	5'-8"	—
e216(E)	1	#8	5'-8"	—
x200(E)	44	#5	6'-5"	—
x201(E)	68	#5	7'-6"	—
Reinforcement Bars, Epoxy Coated		Pound	134,370	
Concrete Superstructure		Cu. Yds.	611.7	
Protective Coat		Sq. Yd.	2,428	
Bridge Deck Grooving		Sq. Yd.	2,175	



SECTION A-A



BAR x200(E)



BAR x201(E)

0160461-60X78-5057-DET.dgn

**PARSONS
BRINCKERHOFF**

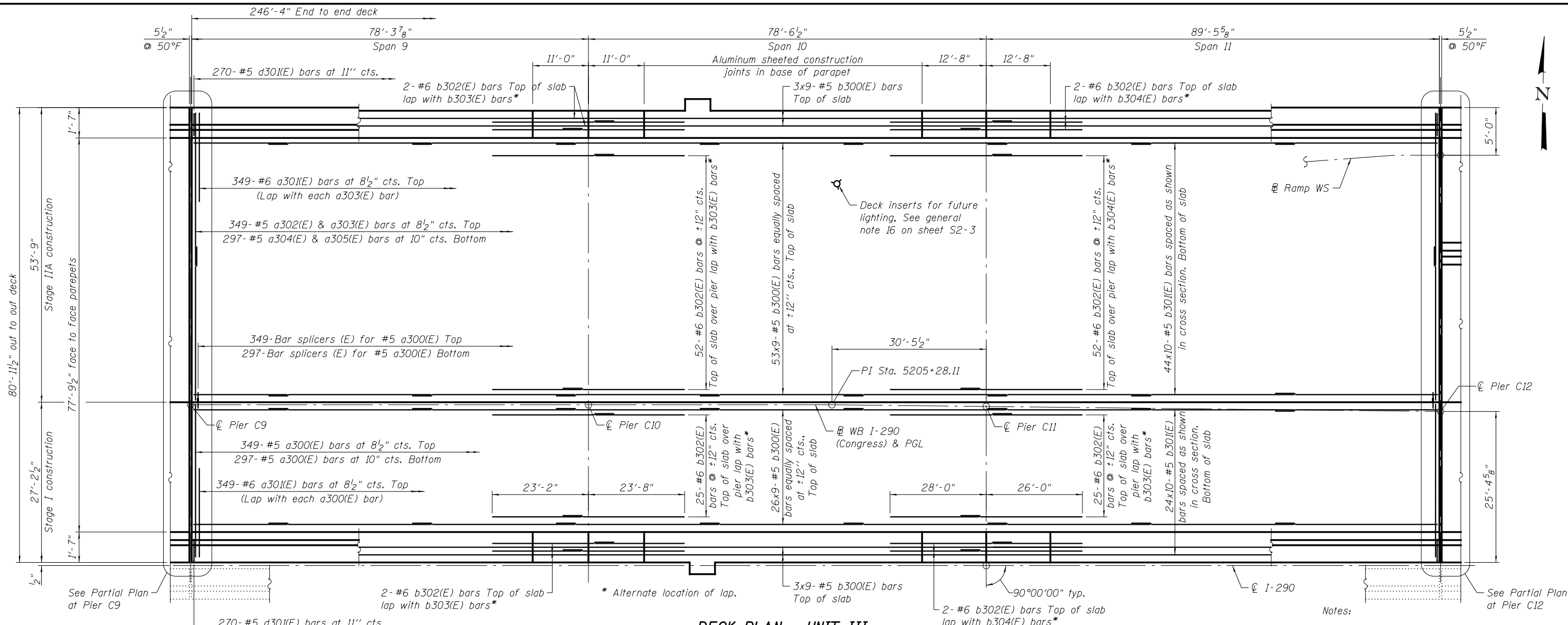
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PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

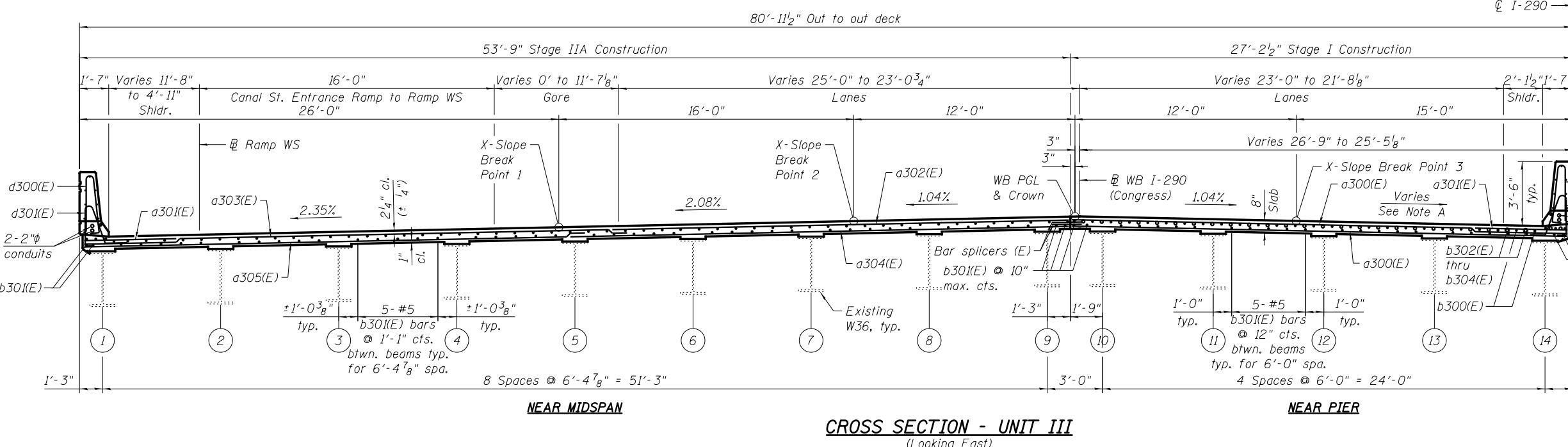
**DECK DETAILS IV - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-57 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	334
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X78	



DECK PLAN - UNIT III



CROSS SECTION - UNIT III
(Looking East)

- Notes:
1. See sheet S2-59, for parapet reinforcement.
 2. See sheets S2-60 thru S2-59, for superstructure details.
 3. See sheet S2-63, for Partial Plan at Pier C9 and Bill of Material.
 4. See sheet S2-66, for Partial Plan at Pier C12
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
4. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.

MINIMUM BAR LAP

#5 bar = 2'-7"
#6 bar = 3'-1"

** 2-2" ϕ Conduits

Note A: (Direction of slope referenced from WB Crown)
Constant cross slope (-2.08%)
Sta. 5206+54.74 to Sta. 5204+74.02
Transition (-2.08% to -1.75%)
Sta. 5204+74.02 to Sta. 5204+49.02

0160461-60X78-5058-DEK.dgn

PARSONS BRINCKERHOFF

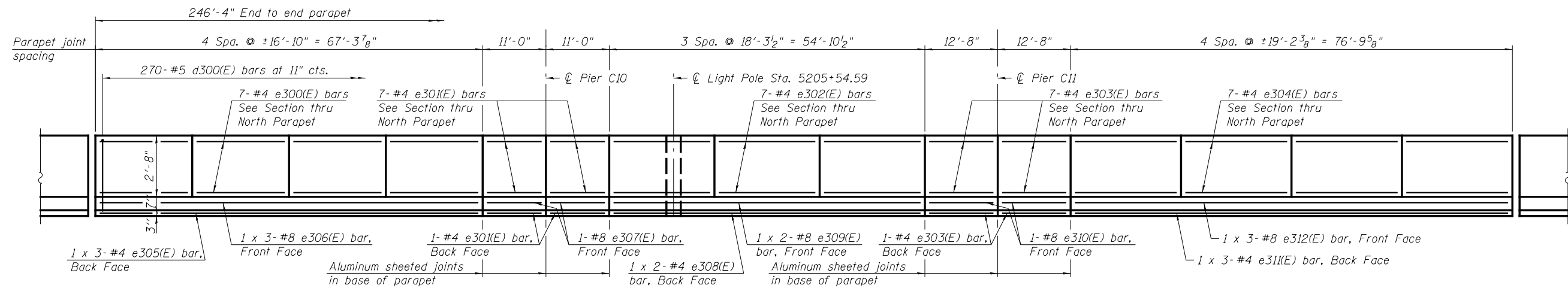
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PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN - UNIT III
STRUCTURE NO. 016-0461

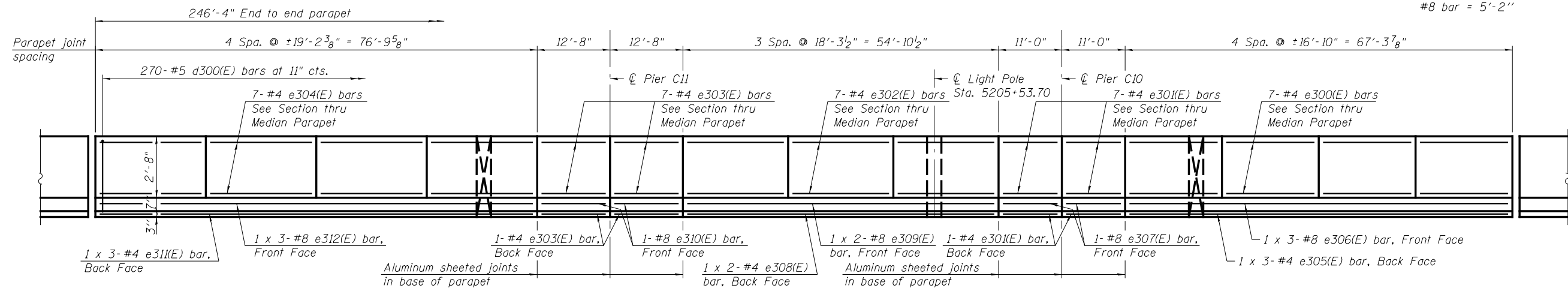
SHEET NO. S2-58 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	335
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

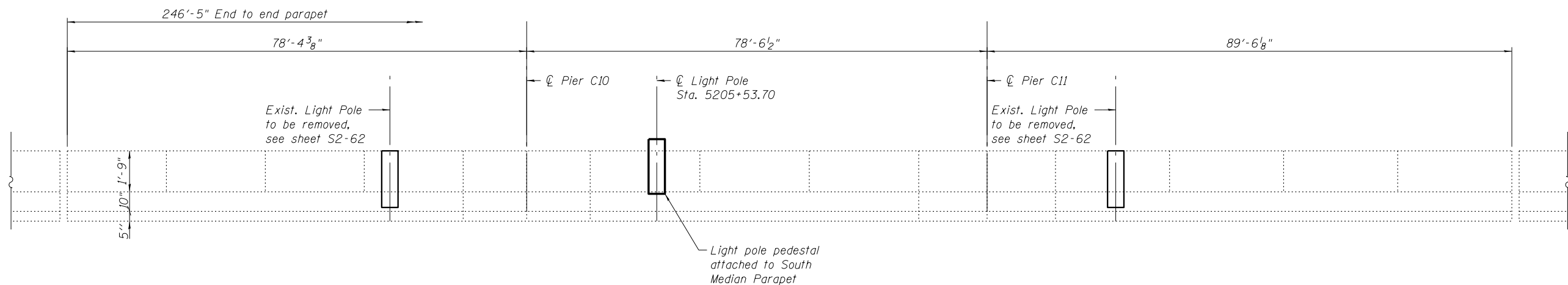


INSIDE ELEVATION OF NORTH PARAPET

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



INSIDE ELEVATION OF SOUTH MEDIAN PARAPET



INSIDE ELEVATION OF EXIST. NORTH MEDIAN PARAPET

Note:
For Section thru Median Parapet &
Section thru North Parapet, see sheet S2-60.

0160461-60X78-5059-DET.dgn

**PARSONS
BRINCKERHOFF**

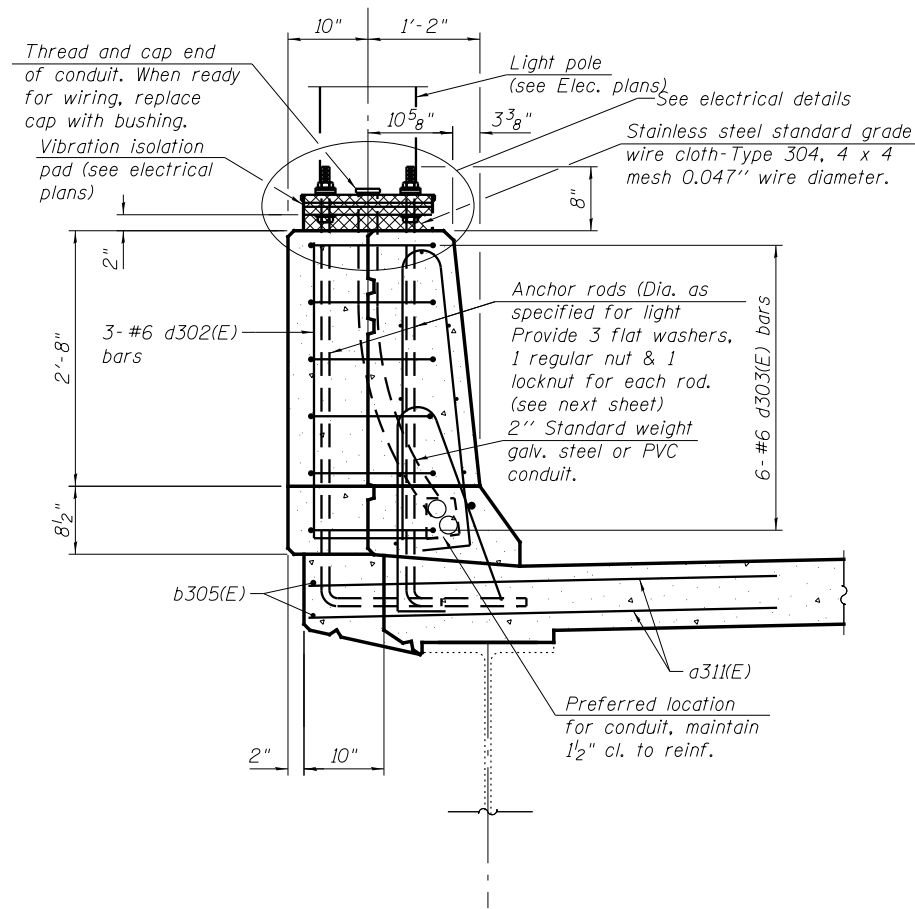
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

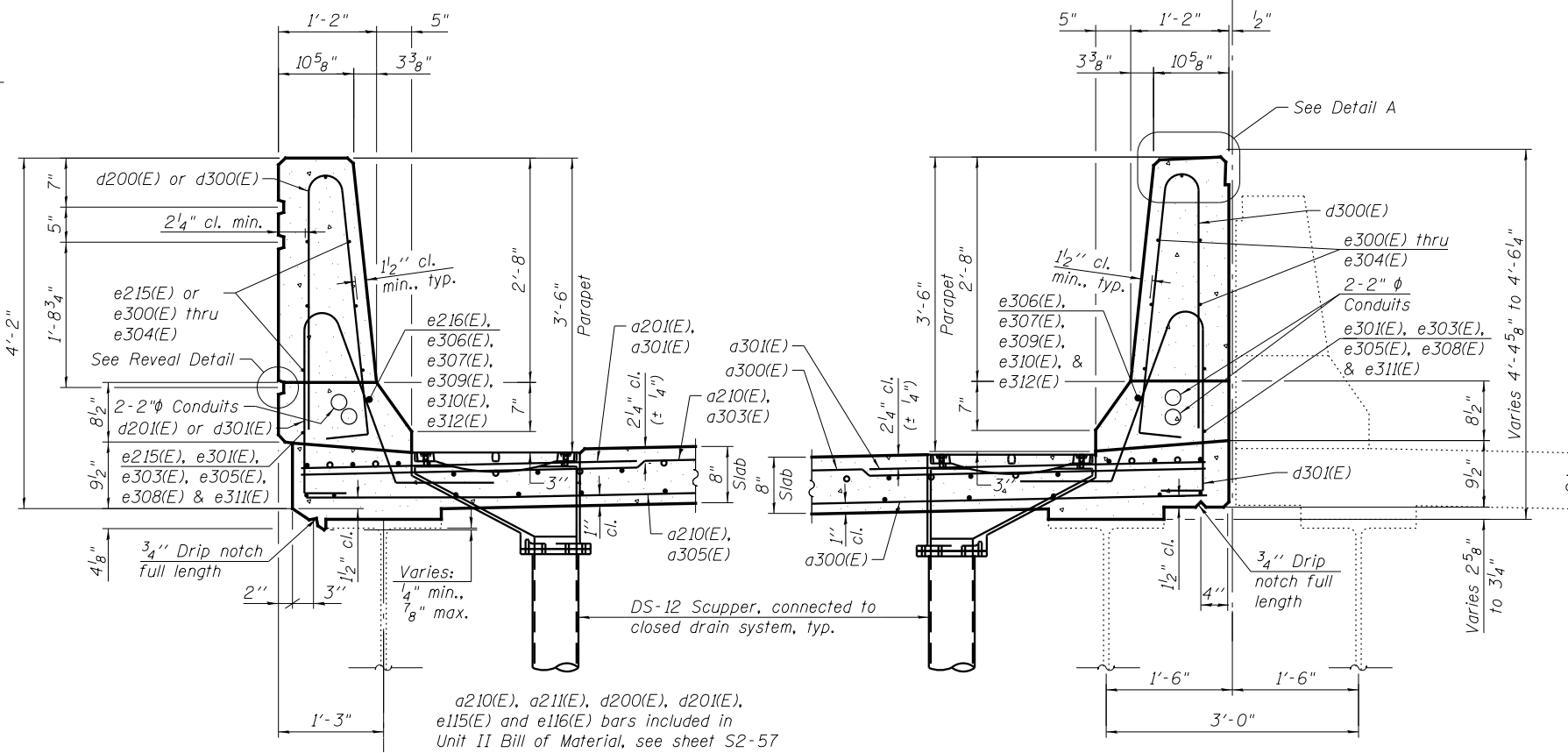
**DECK DETAILS I - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-59 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	336
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

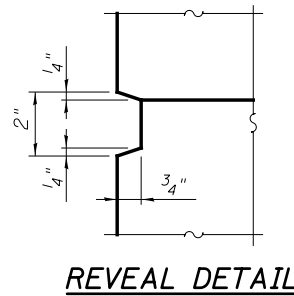


SECTION L-L

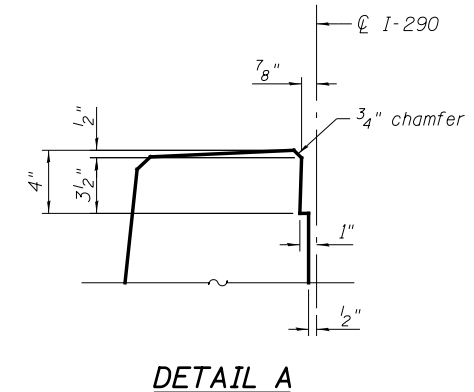


SECTION THRU NORTH PARAPET

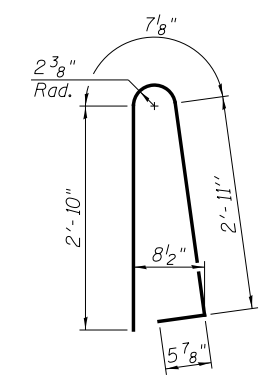
SECTION THRU MEDIAN PARAPET



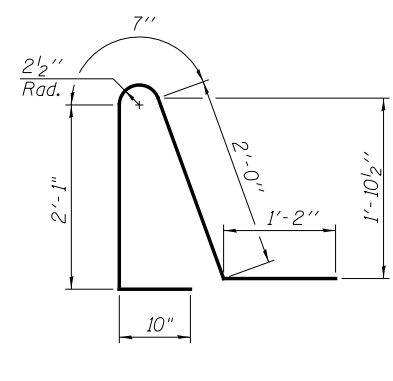
REVEAL DETAIL



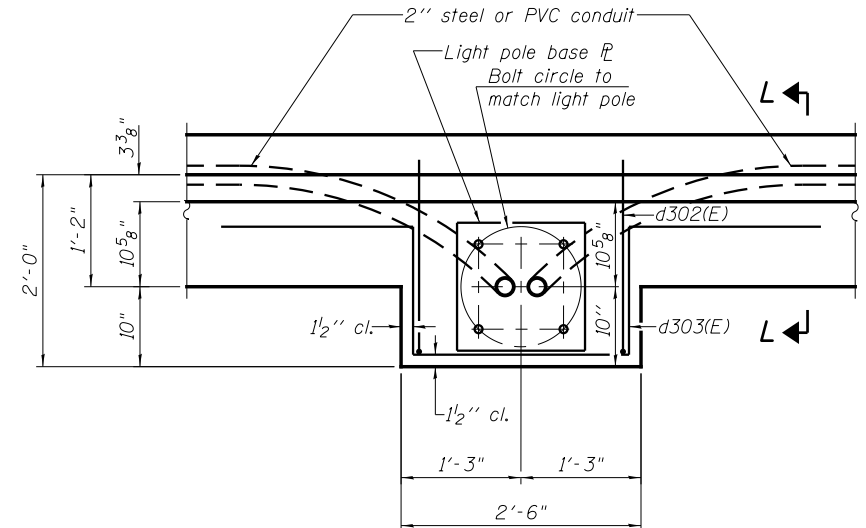
DETAIL A



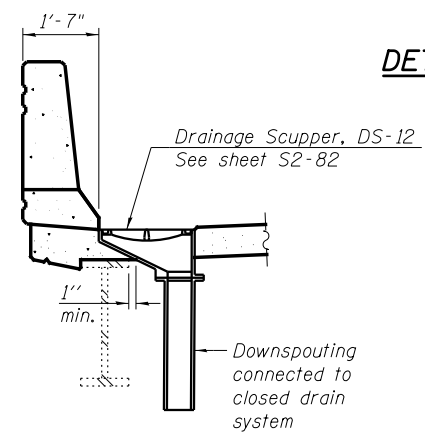
BAR d300(E)



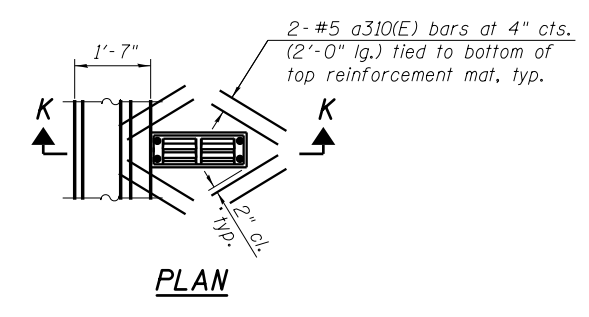
BAR d301(E)



PLAN



SECTION K-K



PLAN

- Notes:
1. See sheet S2-60, for anchor rod details.
 2. See sheet S2-63, for Bill of Material.
 3. Reveal is included in cost of Concrete Superstructure.
 4. Cut longitudinal reinforcement to clear drainage scupper.

0160461-60X78-5060-DET.dgn

**PARSONS
BRINCKERHOFF**

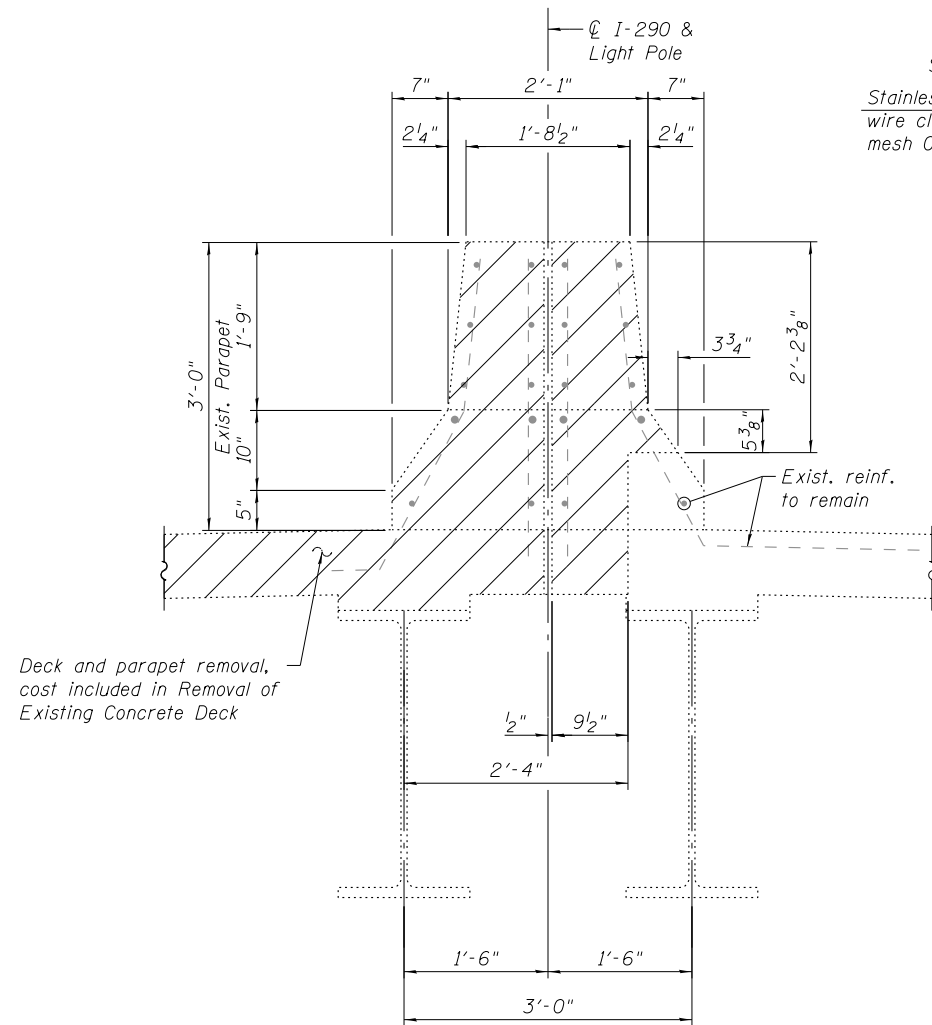
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PLLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

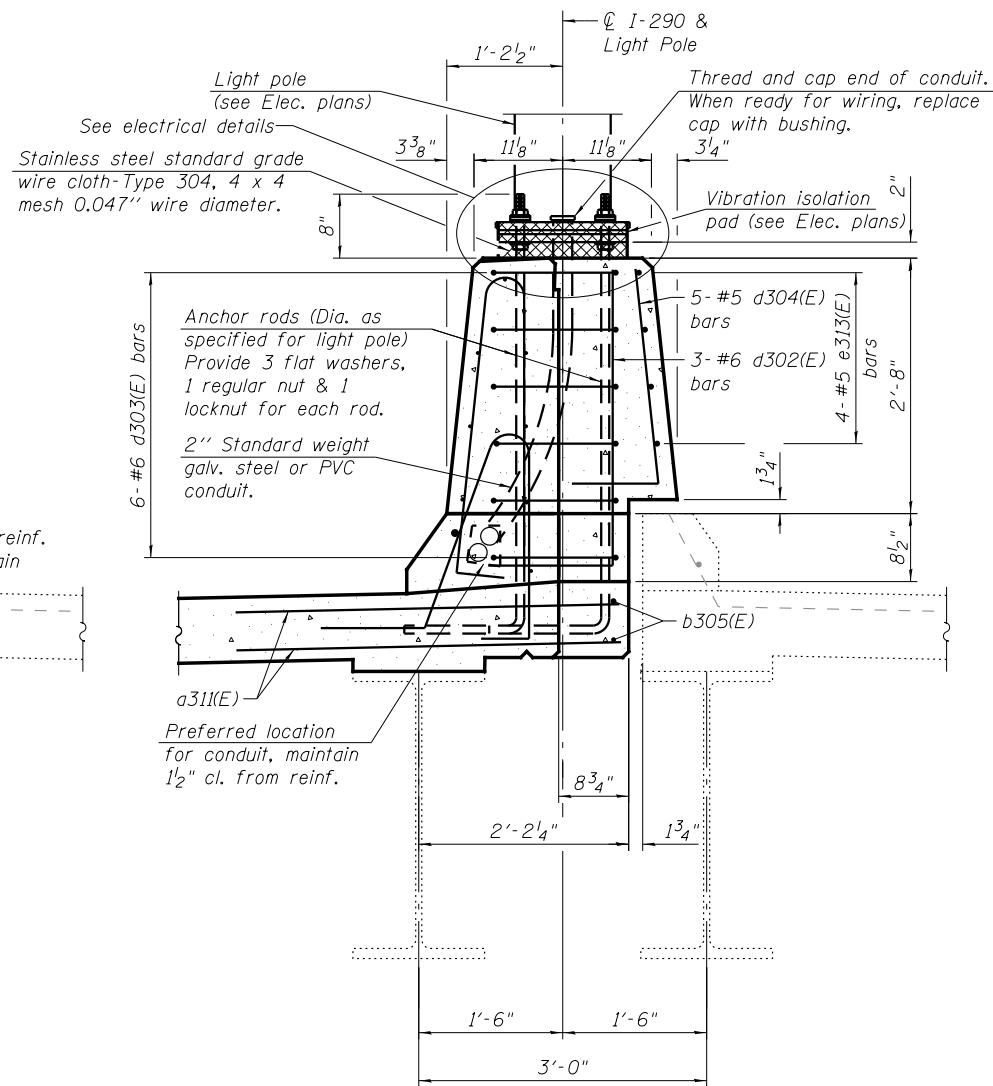
**DECK DETAILS II - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-60 OF S2-145 SHEETS

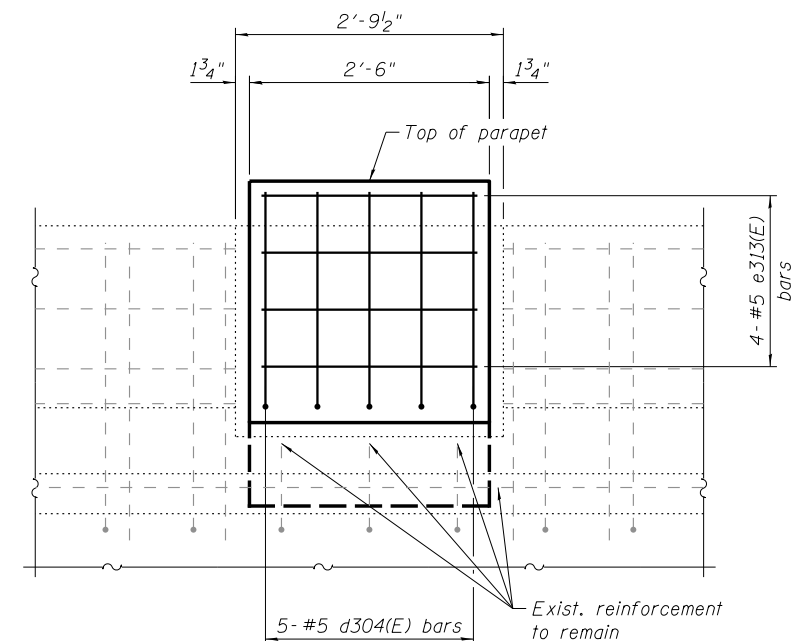
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	337
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



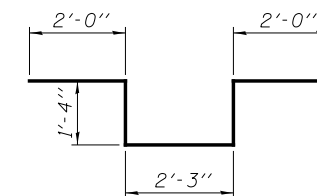
REMOVAL SECTION AT LIGHT POLE



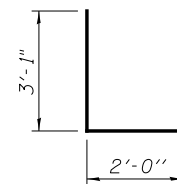
SECTION M-M



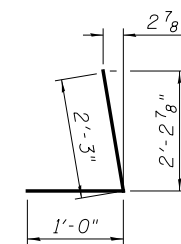
SECTION N-N



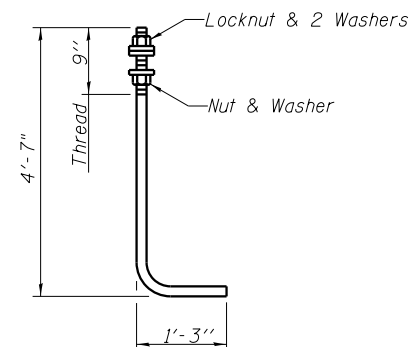
BAR d303(E)



BAR d302(E)



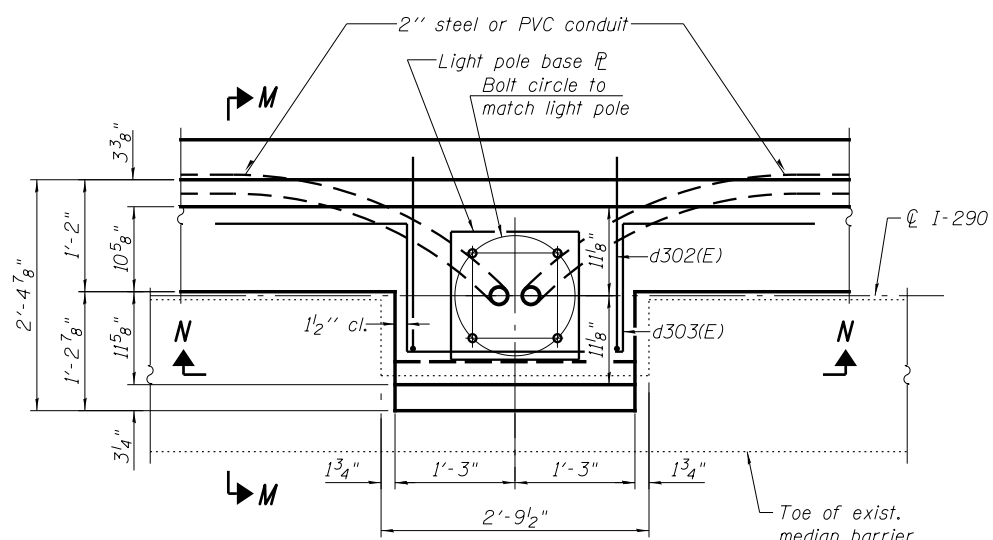
BAR d304(E)



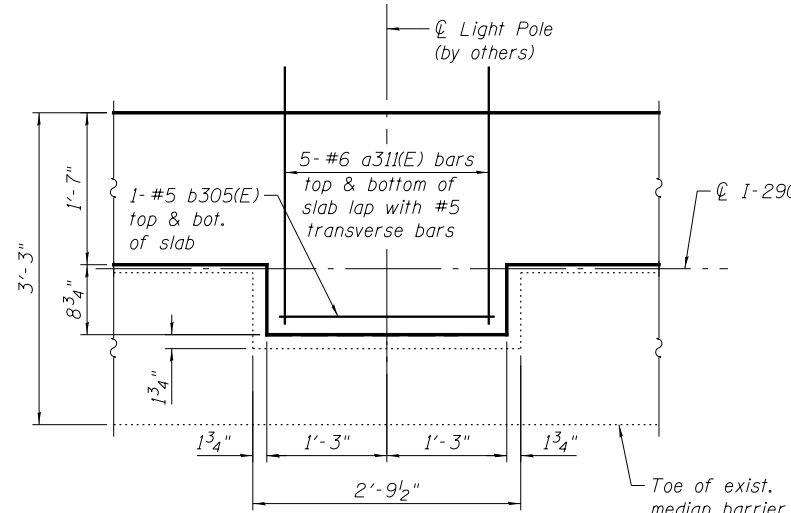
ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105) full length hot dipped galvanized. Cost included with cost of Concrete Superstructure

Note:
See sheet S2-63, for superstructure details and Bill of Material.



LIGHT POLE FOUNDATION PLAN



BOTTOM PLAN

0160461-60X78-5061-DET.dgn

PARSONS BRINCKERHOFF

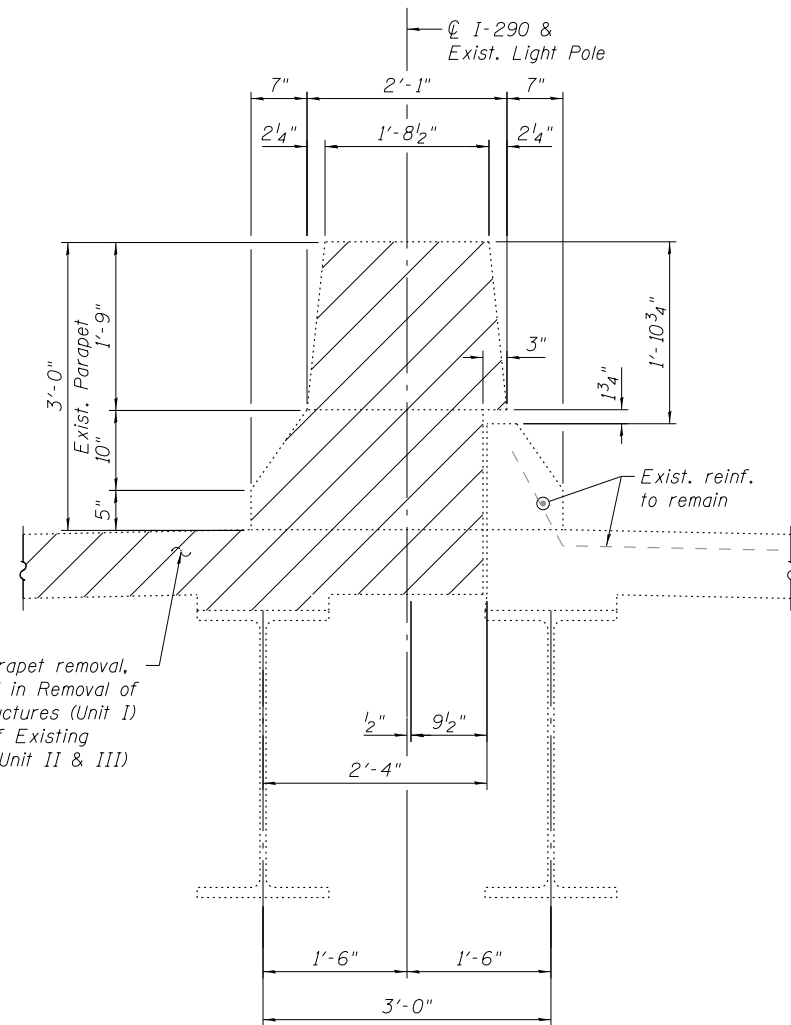
USER NAME = pateld	DESIGNED - PJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS III - UNIT III
STRUCTURE NO. 016-0461**

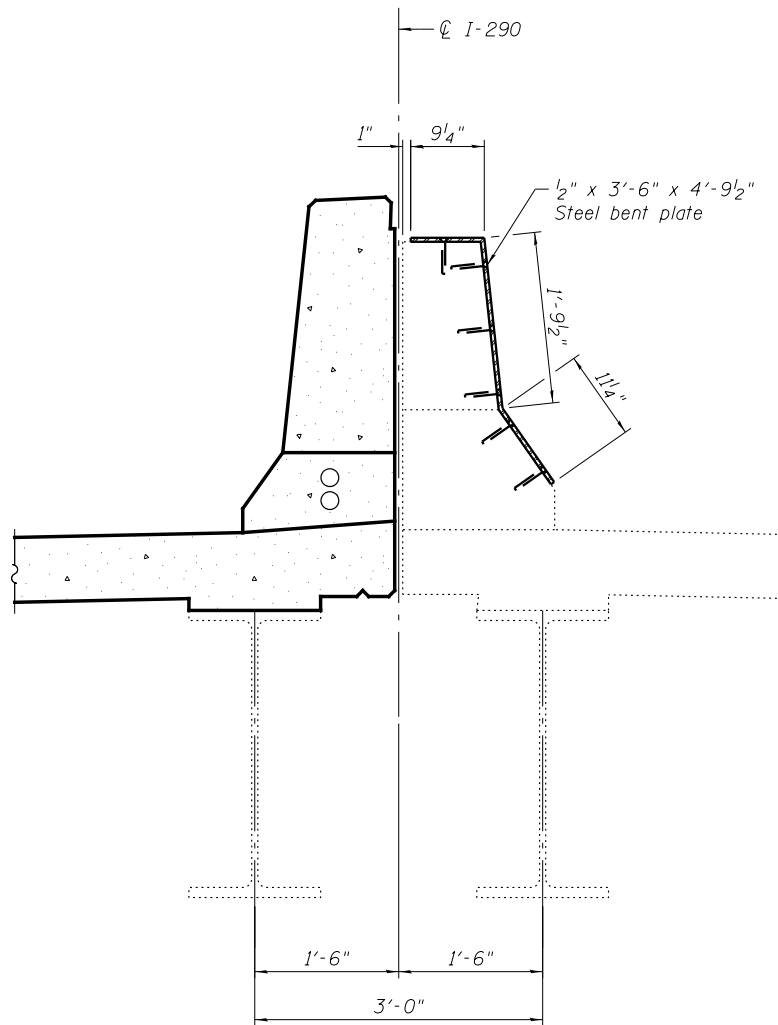
SHEET NO. S2-61 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	338
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

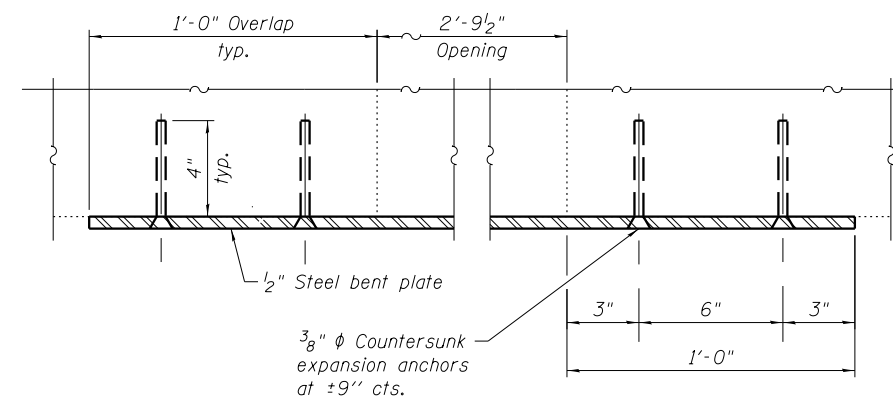


Deck and parapet removal, cost included in Removal of Existing Structures (Unit I) & Removal of Existing Conc. Deck (Unit II & III)

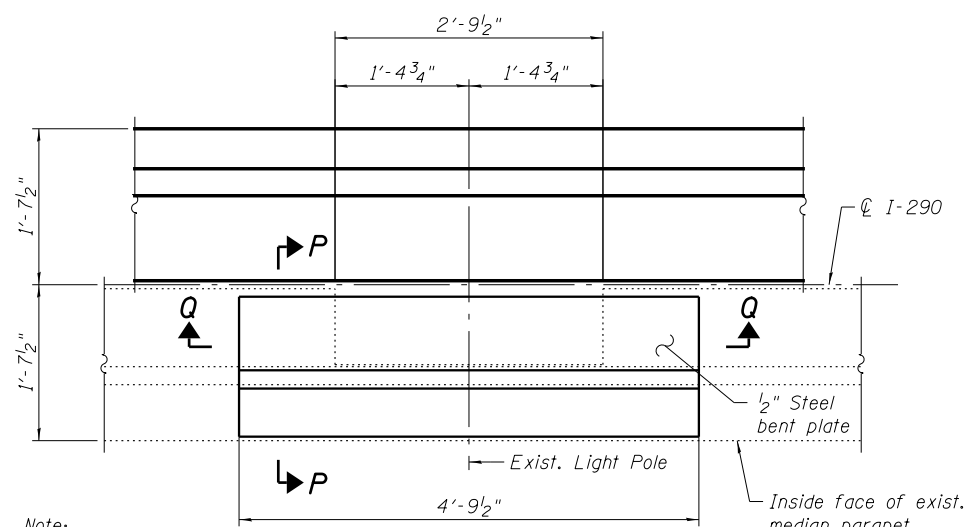
REMOVAL SECTION AT EXISTING LIGHT POLE



SECTION P-P



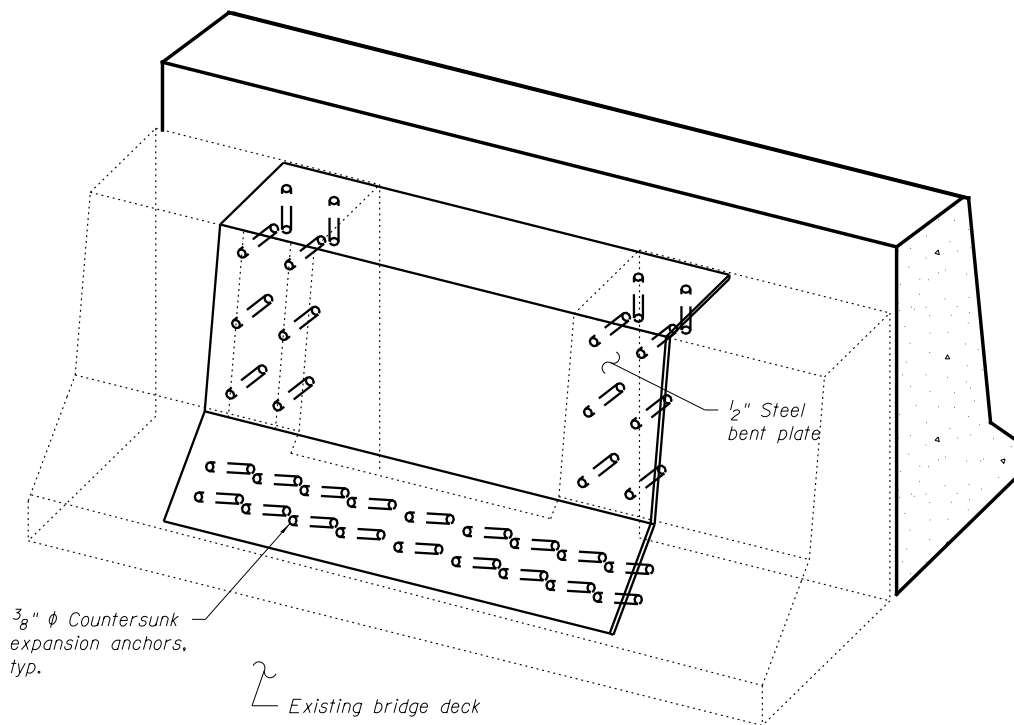
SECTION Q-Q



Note:
Cost of steel plate and countersunk expansion anchors is included with Concrete Superstructure.

PLAN

1 location, Unit I
3 locations, Unit II
2 locations, Unit III



TRIMETRIC VIEW

0160461-60X78-5062-DET.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - PJJ	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

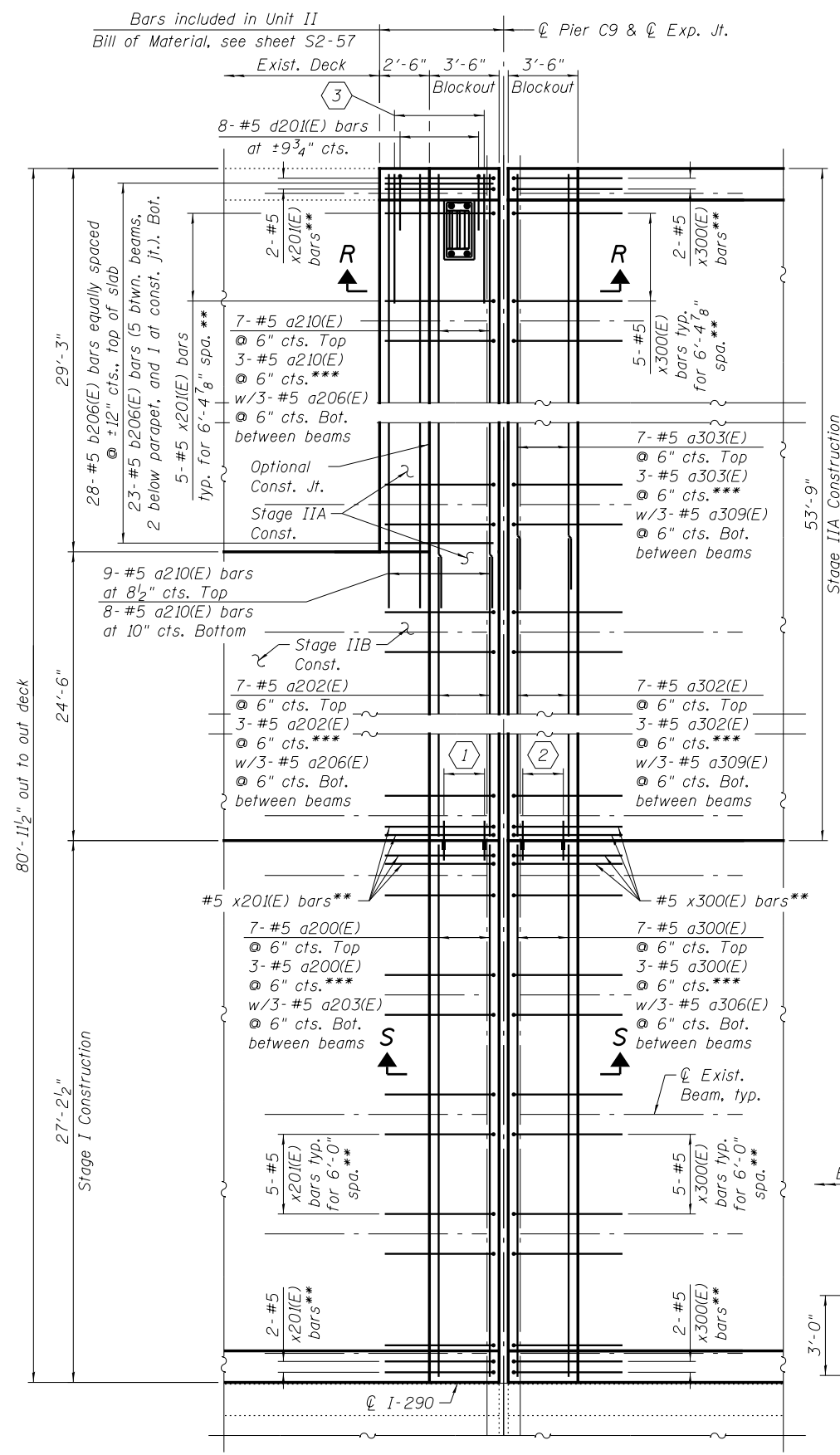
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS IV - UNIT III
STRUCTURE NO. 016-0461**

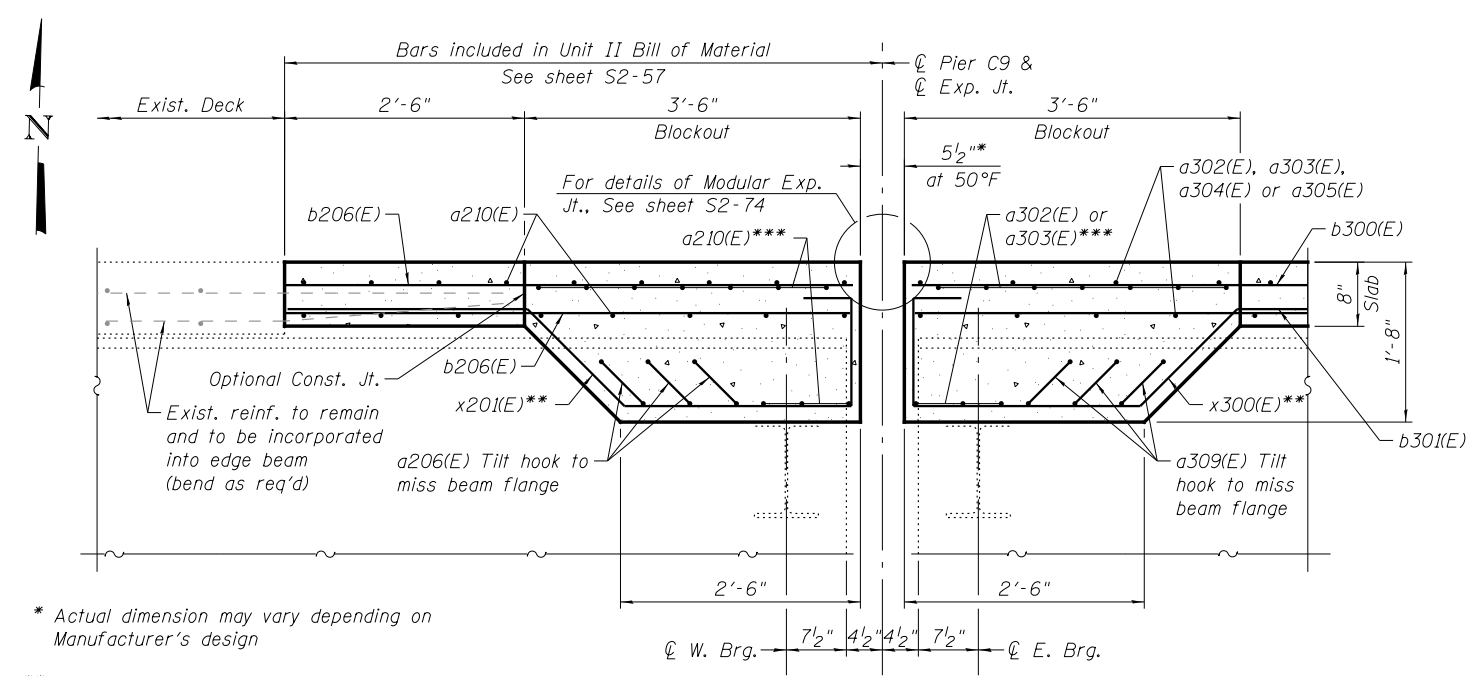
SHEET NO. S2-62 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	339
CONTRACT NO. 60X78				

ILLINOIS FED. AID PROJECT



PARTIAL PLAN AT PIER C9



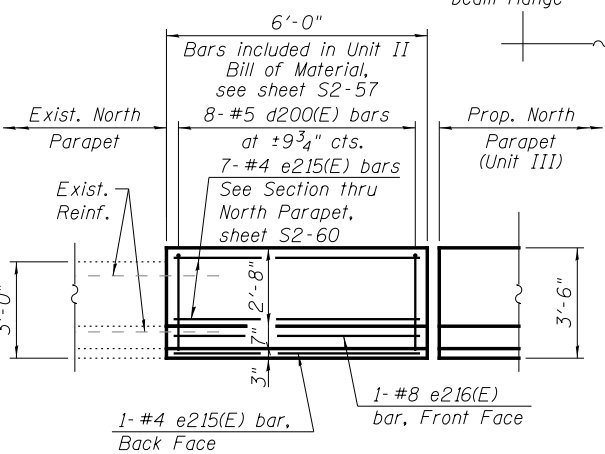
SECTION R-R

* Actual dimension may vary depending on Manufacturer's design

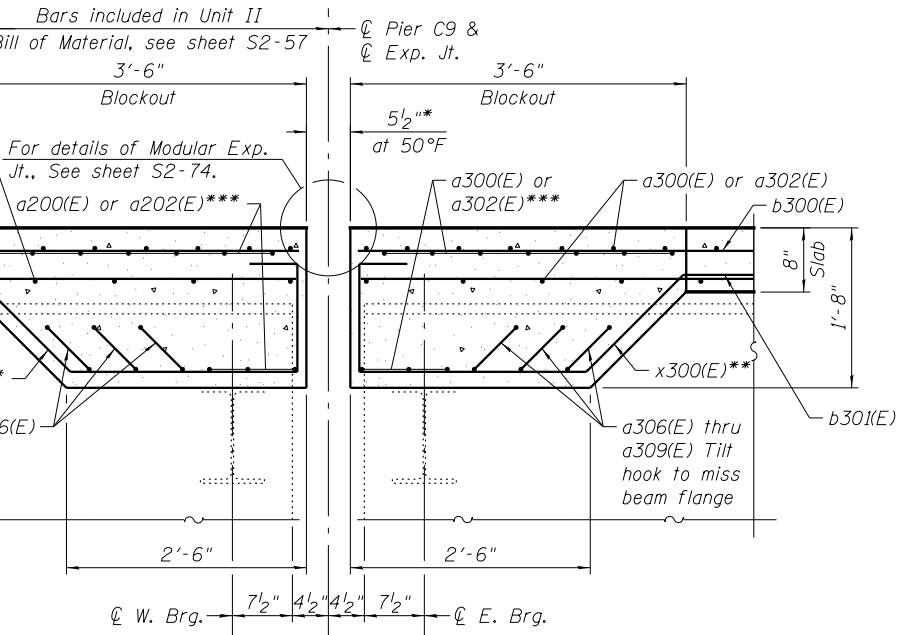
** x20(E) & x300(E) bars to be placed at 12" cts. between beams and adjusted in field to miss support boxes

*** Bars to be adjusted and/or cut in field to miss support boxes and beam webs, as allowed by the Engineer. The Contractor shall reference and coordinate rebar installation with the approved modular joint shop drawings.

- 1 3- #5 a204(E) bars, 3- #5 a205(E) bars & 13-Bar Splicers (E) for #5 a200(E) and a204(E)-a205(E) bars top and bottom
- 2 3- #5 a307(E) bars, 3- #5 a308(E) bars & 13-Bar Splicers (E) for #5 a300(E) and a307(E)-a308(E) bars top and bottom
- 3 9- #6 a20(E) bars at 8 1/2" cts. Top (Lap with b210(E) bar)



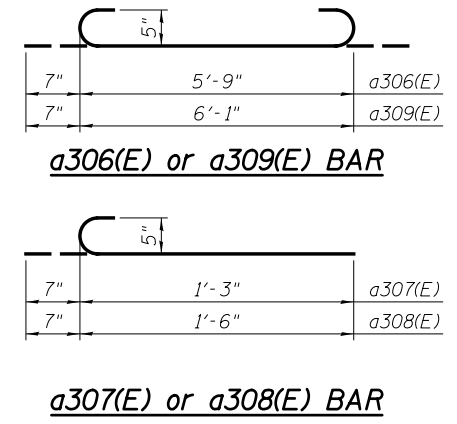
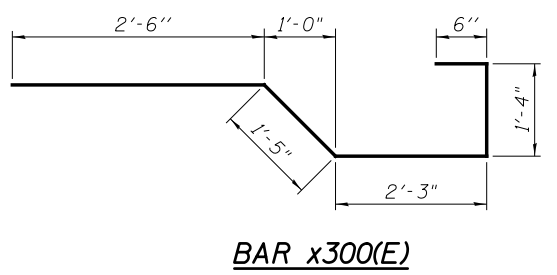
INSIDE ELEVATION OF PARAPET AT EXIST. NORTH PARAPET



SECTION S-S

Notes:

- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Removal of Existing Concrete Deck.
- 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 Removal of Existing Concrete Deck.



SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a300(E)	666	#5	26'-9"	—
a301(E)	698	#6	6'-6"	—
a302(E)	369	#5	24'-11"	—
a303(E)	369	#5	31'-0"	—
a304(E)	297	#5	30'-0"	—
a305(E)	297	#5	25'-11"	—
a306(E)	20	#5	6'-11"	—
a307(E)	4	#5	1'-10"	—
a308(E)	4	#5	2'-1"	—
a309(E)	12	#5	7'-3"	—
a310(E)	80	#5	2'-0"	—
a311(E)	20	#6	7'-2"	—
b300(E)	765	#5	30'-1"	—
b301(E)	680	#5	27'-3"	—
b302(E)	162	#6	32'-0"	—
b303(E)	81	#6	17'-11"	—
b304(E)	81	#6	25'-1"	—
b305(E)	4	#5	2'-3"	—
d300(E)	540	#5	6'-11"	—
d301(E)	540	#5	6'-2"	—
d302(E)	6	#6	5'-1"	—
d303(E)	12	#6	8'-11"	—
d304(E)	5	#5	3'-3"	—
e300(E)	56	#4	16'-8"	—
e301(E)	32	#4	10'-9"	—
e302(E)	42	#4	18'-0"	—
e303(E)	32	#4	12'-5"	—
e304(E)	56	#4	18'-11"	—
e305(E)	6	#4	23'-9"	—
e306(E)	6	#8	25'-10"	—
e307(E)	4	#8	10'-9"	—
e308(E)	4	#4	28'-4"	—
e309(E)	4	#8	29'-11"	—
e310(E)	4	#8	12'-5"	—
e311(E)	6	#4	26'-11"	—
e312(E)	6	#8	29'-0"	—
e313(E)	4	#5	2'-3"	—
x300(E)	136	#5	7'-6"	—
Reinforcement Bars, Epoxy Coated	Pound		133,960	
Concrete Superstructure	Cu. Yds.		613.8	
Protective Coat	Sq. Yd.		2,380	
Bridge Deck Grooving	Sq. Yd.		2,072	

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PARSONS BRINCKERHOFF

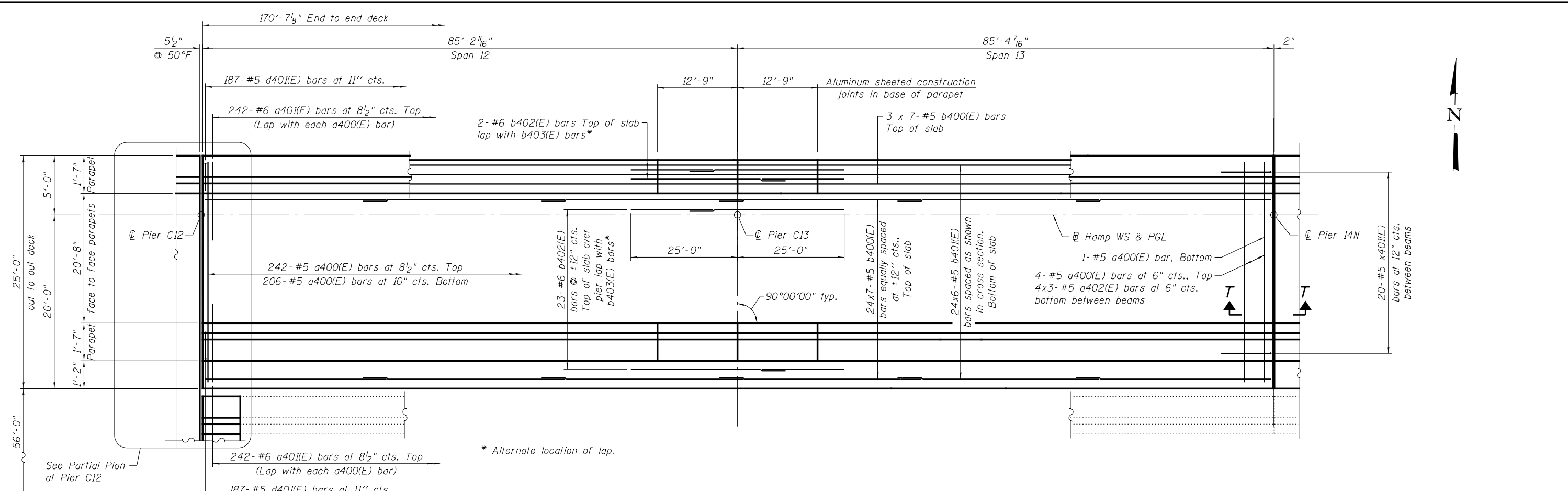
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CHECKED - JZ	REVISIONS -	
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISIONS -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISIONS -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

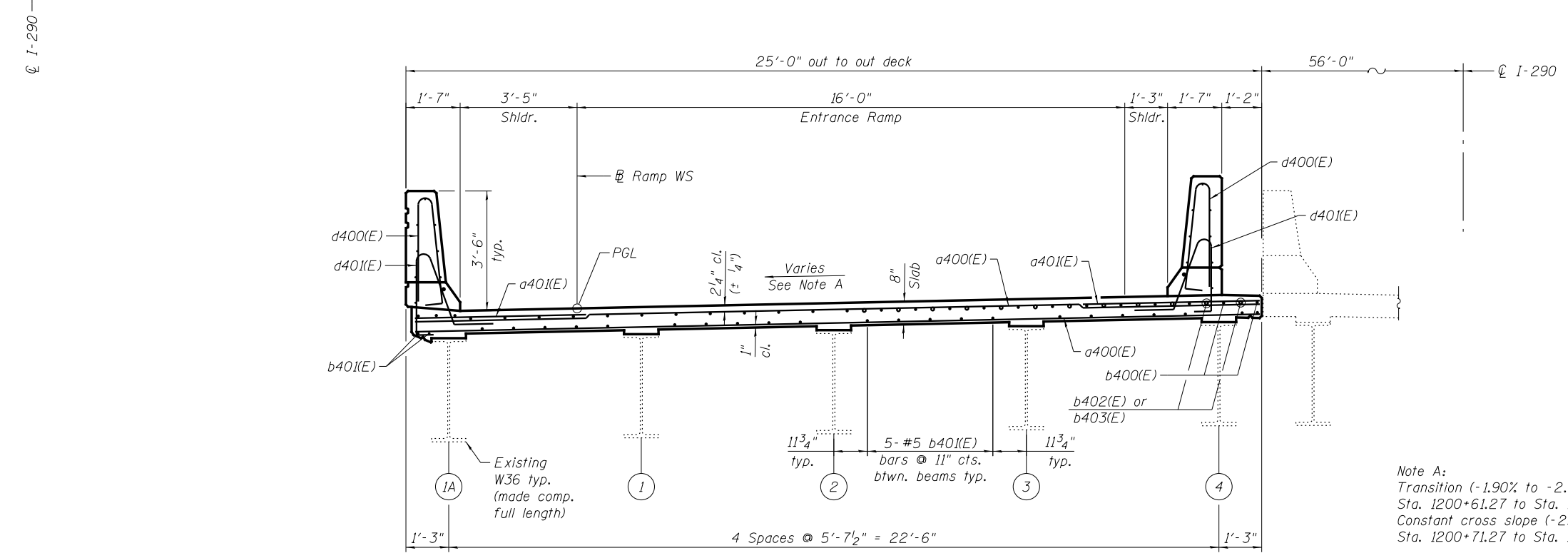
DECK DETAILS V - UNIT III
STRUCTURE NO. 016-0461

SHEET NO. S2-63 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	340
CONTRACT NO. 60X78			ILLINOIS FED. AID PROJECT	



DECK PLAN - ENTRANCE RAMP



CROSS SECTION - ENTRANCE RAMP
(Looking East)

MINIMUM BAR LAP
#5 bar = 2'-7"
#6 bar = 3'-1"

- Notes:
- See sheet S2-65, for parapet reinforcement.
 - See sheet S2-66, for Partial Plan at Pier C12.
 - See sheet S2-67, for superstructure details, Section T-T, and Bill of Material.
 - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.

Note A:
Transition (-1.90% to -2.35%)
Sta. 1200+61.27 to Sta. 1200+71.27
Constant cross slope (-2.35%)
Sta. 1200+71.27 to Sta. 1202+33.34

0160461-60X78-5064-DEK.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - PJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
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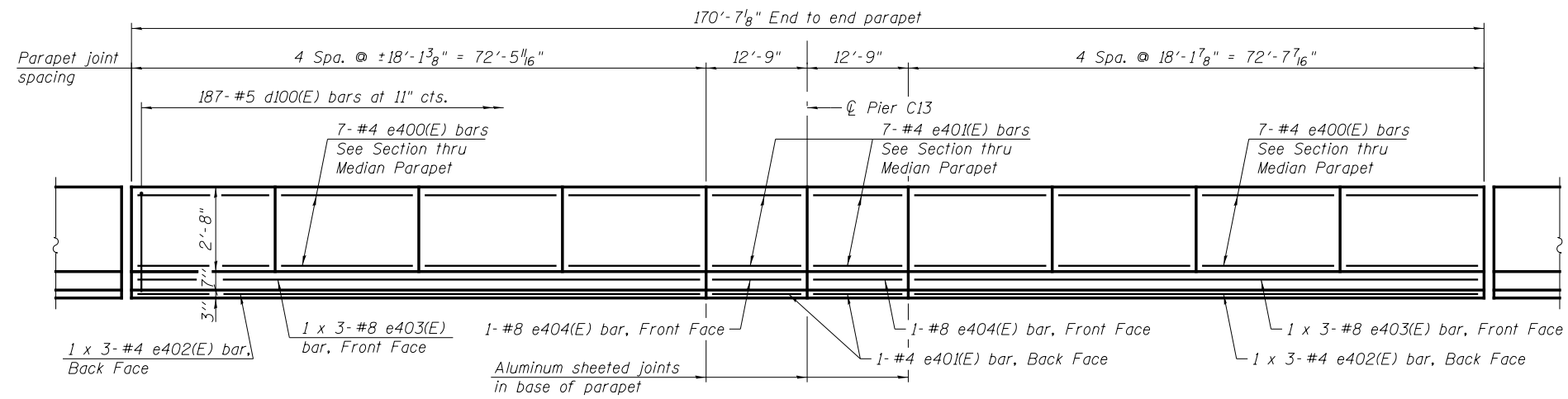
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK PLAN ENTRANCE RAMP
STRUCTURE NO. 016-0461**

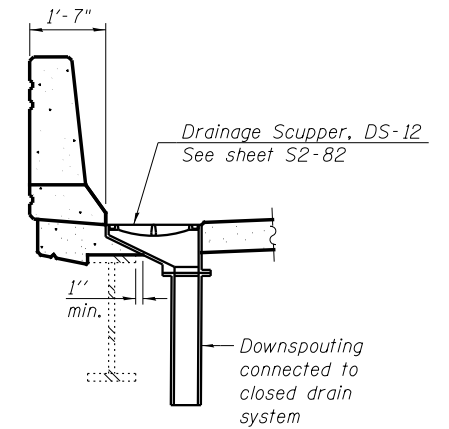
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	341
CONTRACT NO. 60X78				

SHEET NO. S2-64 OF S2-145 SHEETS

ILLINOIS FED. AID PROJECT



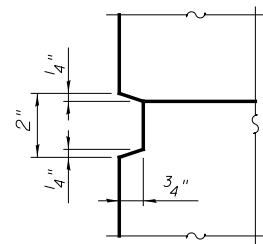
INSIDE ELEVATION OF PARAPET
(North Parapet Shown, South Parapet similar but opposite hand)



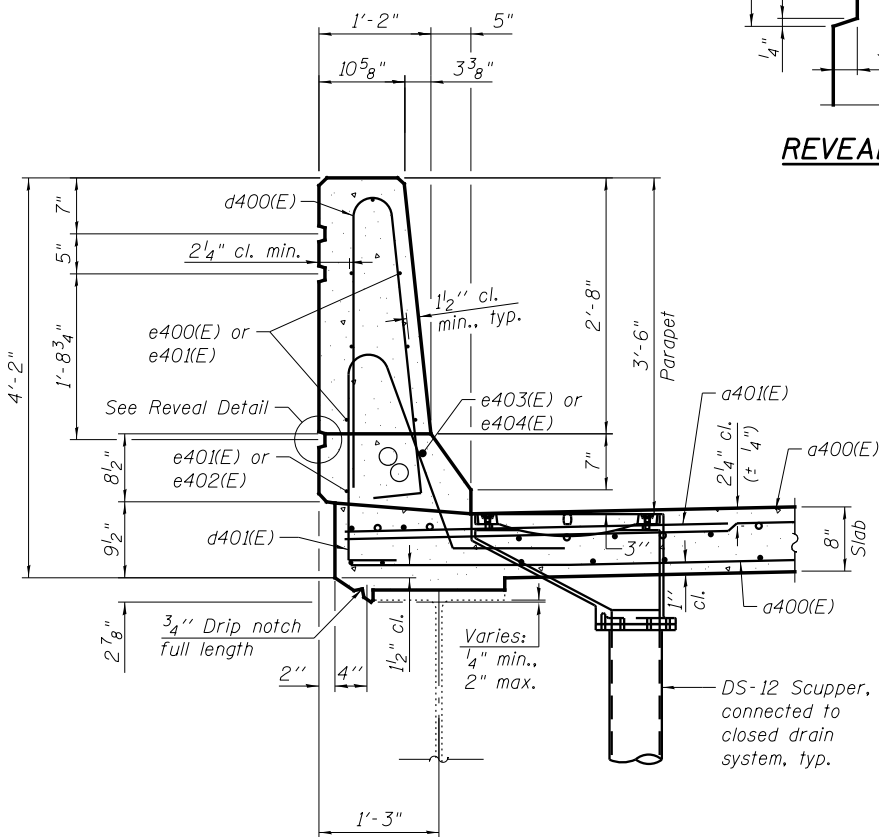
SECTION U-U

MINIMUM BAR LAP

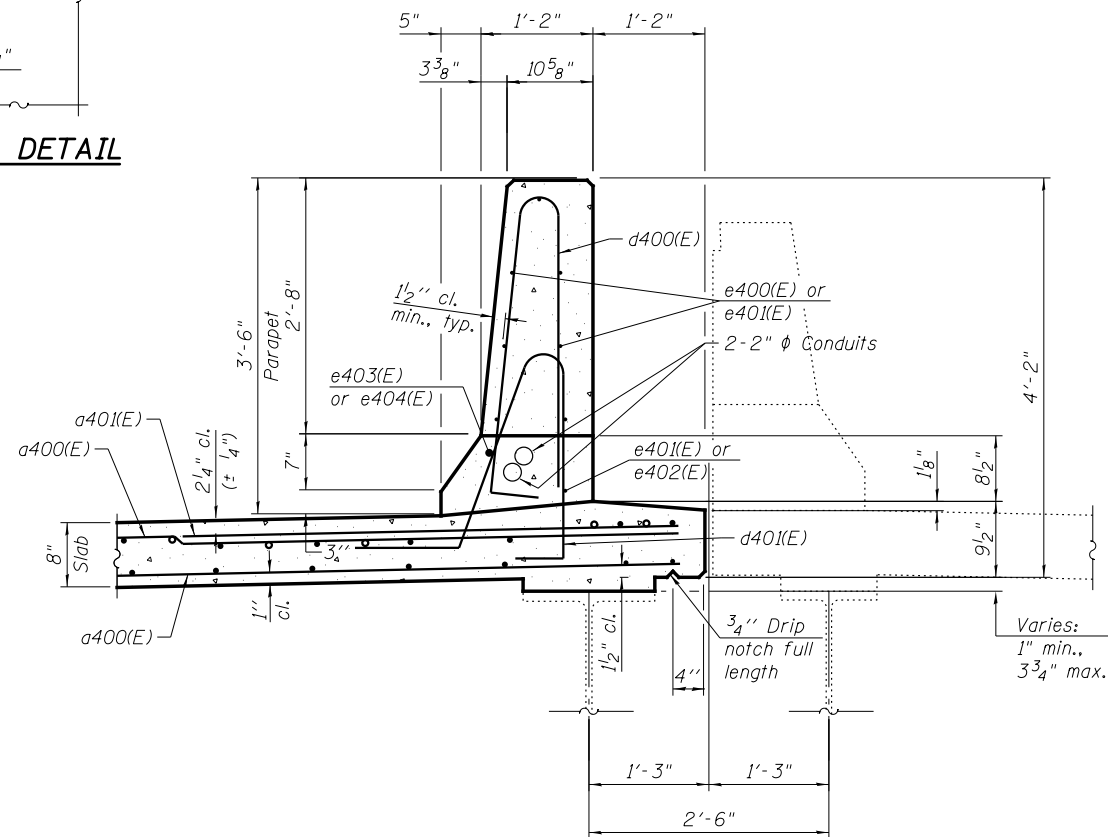
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



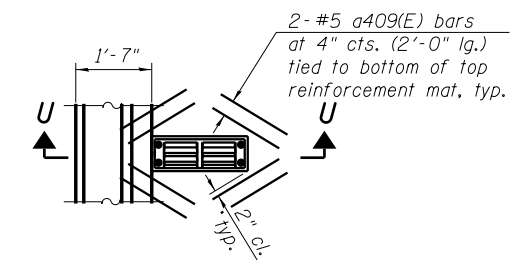
REVEAL DETAIL



SECTION THRU NORTH PARAPET



SECTION THRU SOUTH PARAPET



PLAN

Note:
Reinforcement bars designated (E) shall be epoxy coated.
Cut longitudinal reinforcement to clear drainage scuppers.

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PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - PJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
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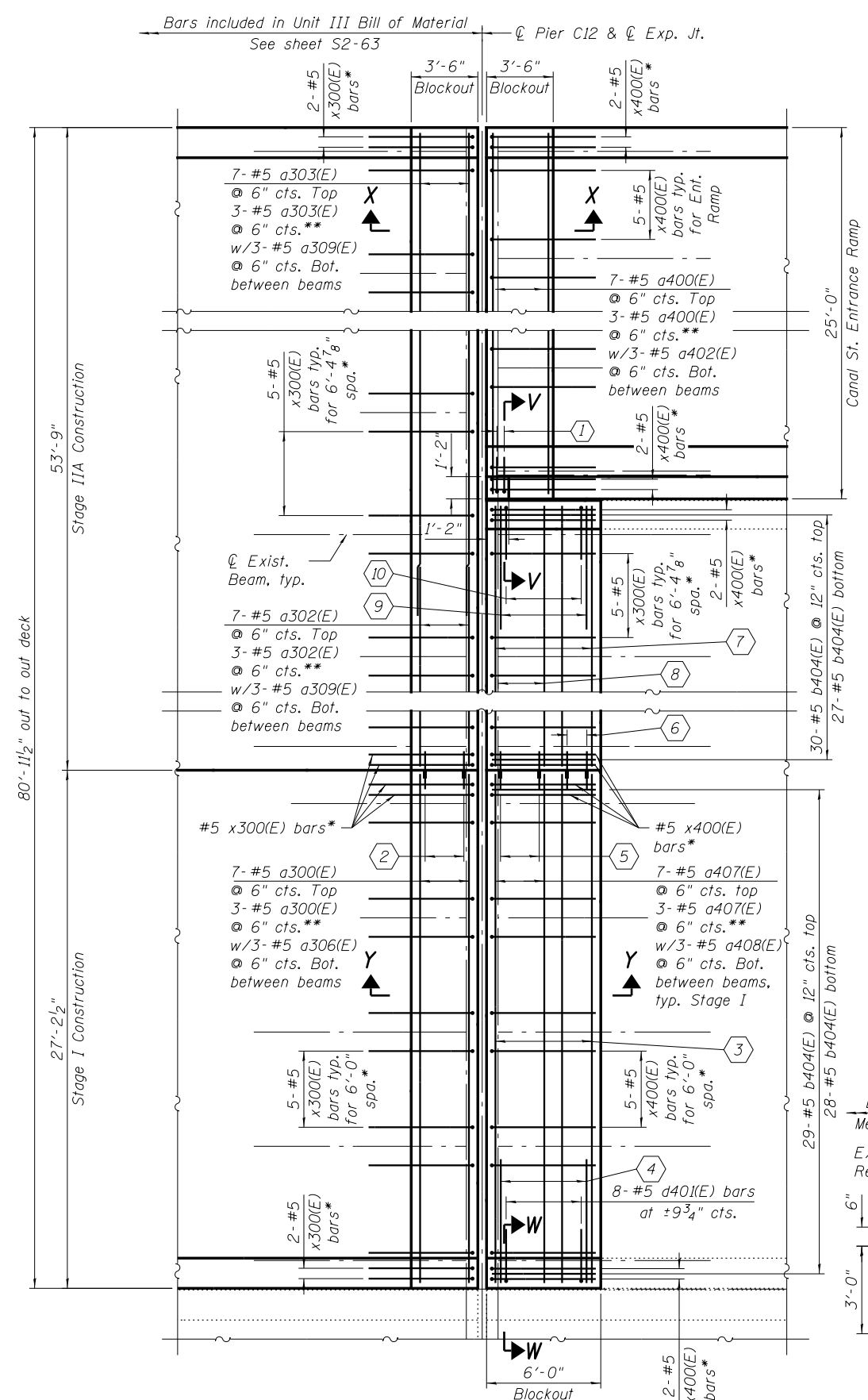
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS I - ENTRANCE RAMP
STRUCTURE NO. 016-0461**

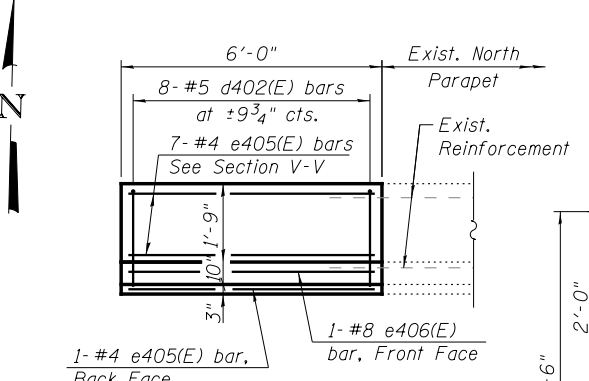
SHEET NO. S2-65 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	342
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

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PARTIAL PLAN AT PIER C12

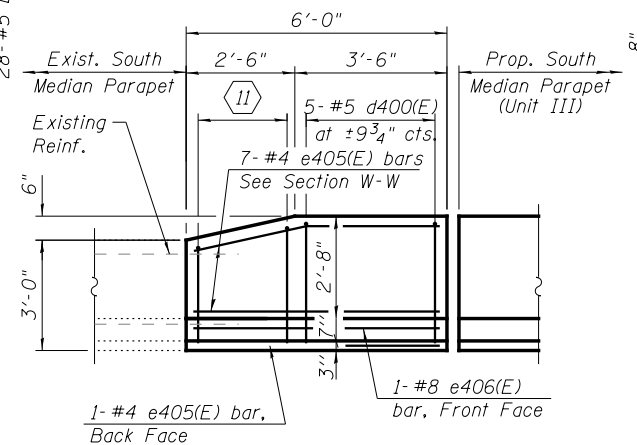


INSIDE ELEVATION OF PARAPET AT EXIST. NORTH PARAPET

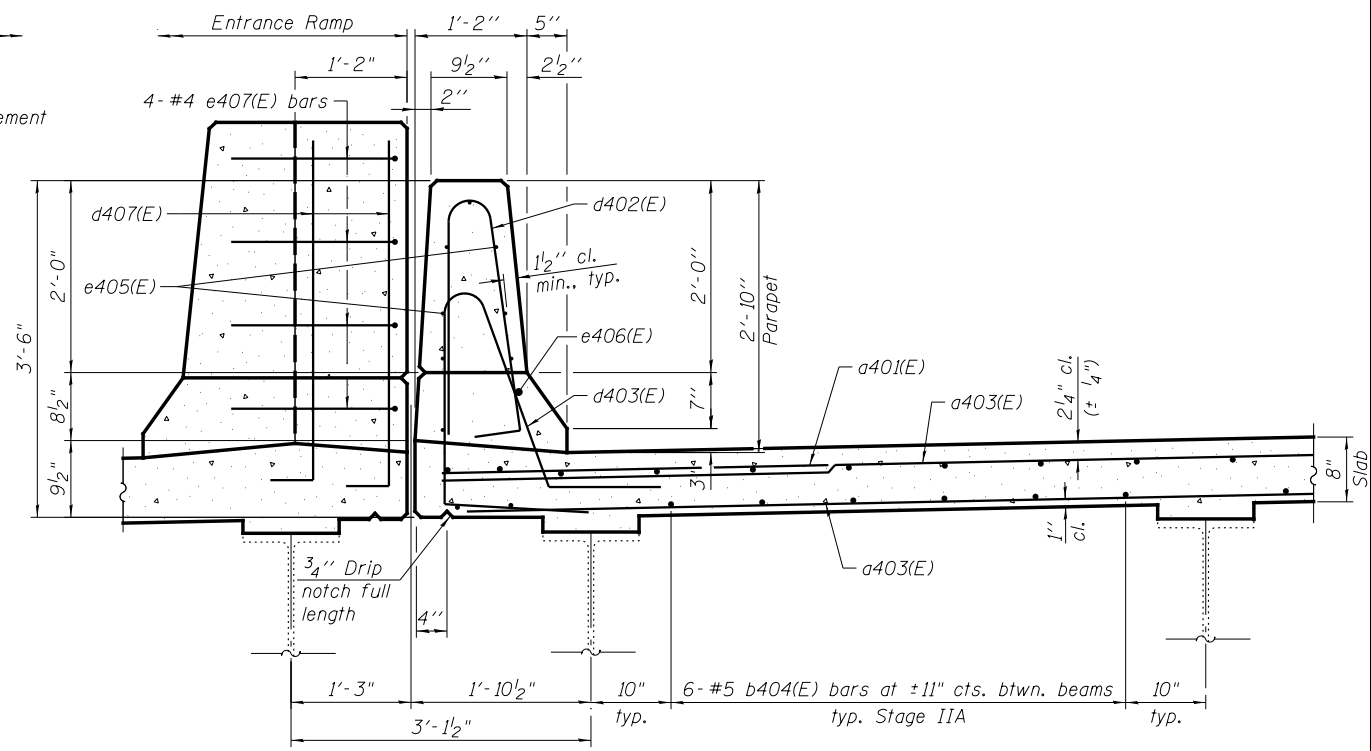
* x300(E) and x400(E) bars to be placed at 12" cts. between beams and adjusted in field to miss support boxes

** Bars to be adjusted and/or cut in field to miss support boxes and beam webs, as allowed by the Engineer. The Contractor shall reference and coordinate rebar installation with the approved modular joint shop drawings.

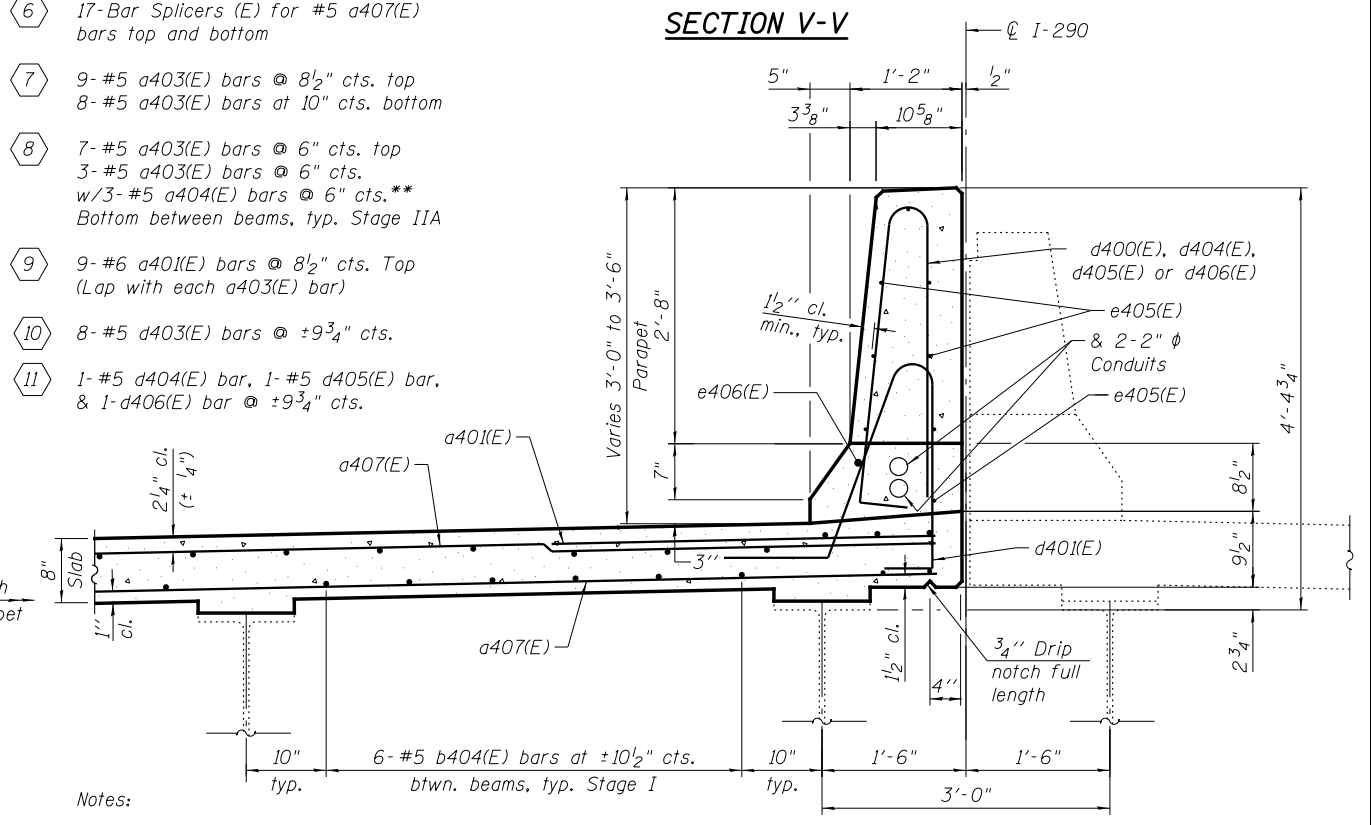
- ① 2-Pairs #5 d407(E) bars at 11" cts.
- ② 3-#5 a307(E) bars, 3-#5 a308(E) bars & 13-Bar Splicers (E) for #5 a300(E) and a307(E)-a308(E) bars top and bottom
- ③ 9-#5 a407(E) bars @ 8 1/2" cts. 8-#5 a407(E) bars @ 10" cts.
- ④ 9-#6 a401(E) bars @ 8 1/2" cts. Top (Lap with each a407(E) bar)
- ⑤ 3-#5 a405(E) bars, 3-#5 a406(E) bars & 13-Bar Splicers (E) for #5 a407(E) and a405(E)-a406(E) bars top and bottom
- ⑥ 17-Bar Splicers (E) for #5 a407(E) bars top and bottom
- ⑦ 9-#5 a403(E) bars @ 8 1/2" cts. top 8-#5 a403(E) bars at 10" cts. bottom
- ⑧ 7-#5 a403(E) bars @ 6" cts. top 3-#5 a403(E) bars @ 6" cts. w/3-#5 a404(E) bars @ 6" cts.** Bottom between beams, typ. Stage IIA
- ⑨ 9-#6 a401(E) bars @ 8 1/2" cts. Top (Lap with each a403(E) bar)
- ⑩ 8-#5 d403(E) bars @ ±9 3/4" cts.
- ⑪ 1-#5 d404(E) bar, 1-#5 d405(E) bar, & 1-d406(E) bar @ ±9 3/4" cts.



INSIDE ELEVATION OF PARAPET AT EXIST. SOUTH MEDIAN PARAPET



SECTION V-V



SECTION W-W

- Notes:
- See sheet S2-67, for superstructure details and Bill of Material.
 - Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Removal of Existing Concrete Deck.
 - 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 Removal of Existing Concrete Deck.

PARSONS BRINCKERHOFF

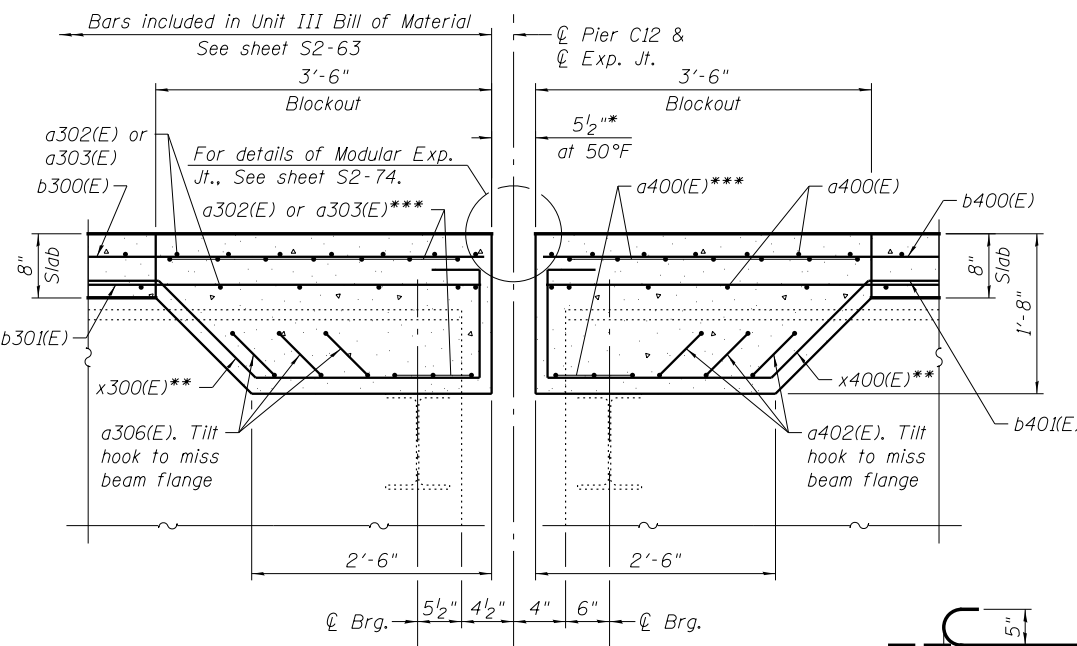
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CHECKED - JZ	REVISIONS -	
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

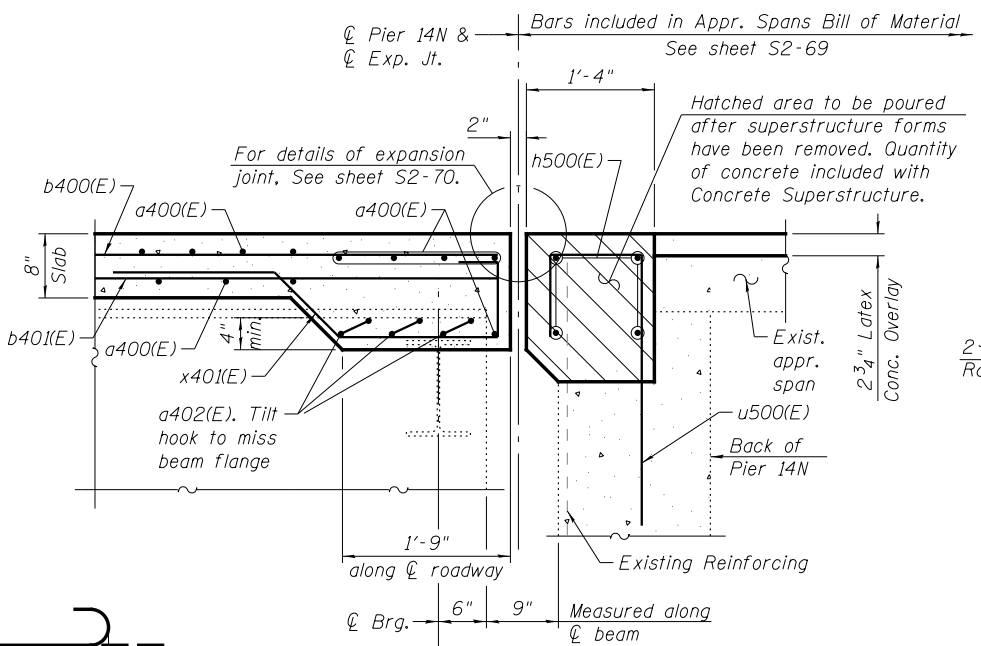
DECK DETAILS II - ENTRANCE RAMP STRUCTURE NO. 016-0461

SHEET NO. S2-66 OF S2-145 SHEETS

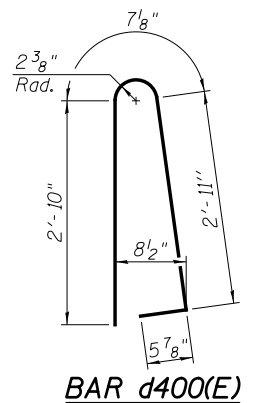
F.A.I. RTE. 90/94/290	SECTION 2014-004 R&B (WB)	COUNTY COOK	TOTAL SHEETS 706	SHEET NO. 343
CONTRACT NO. 60X78				ILLINOIS FED. AID PROJECT



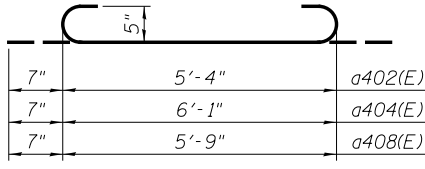
SECTION X-X



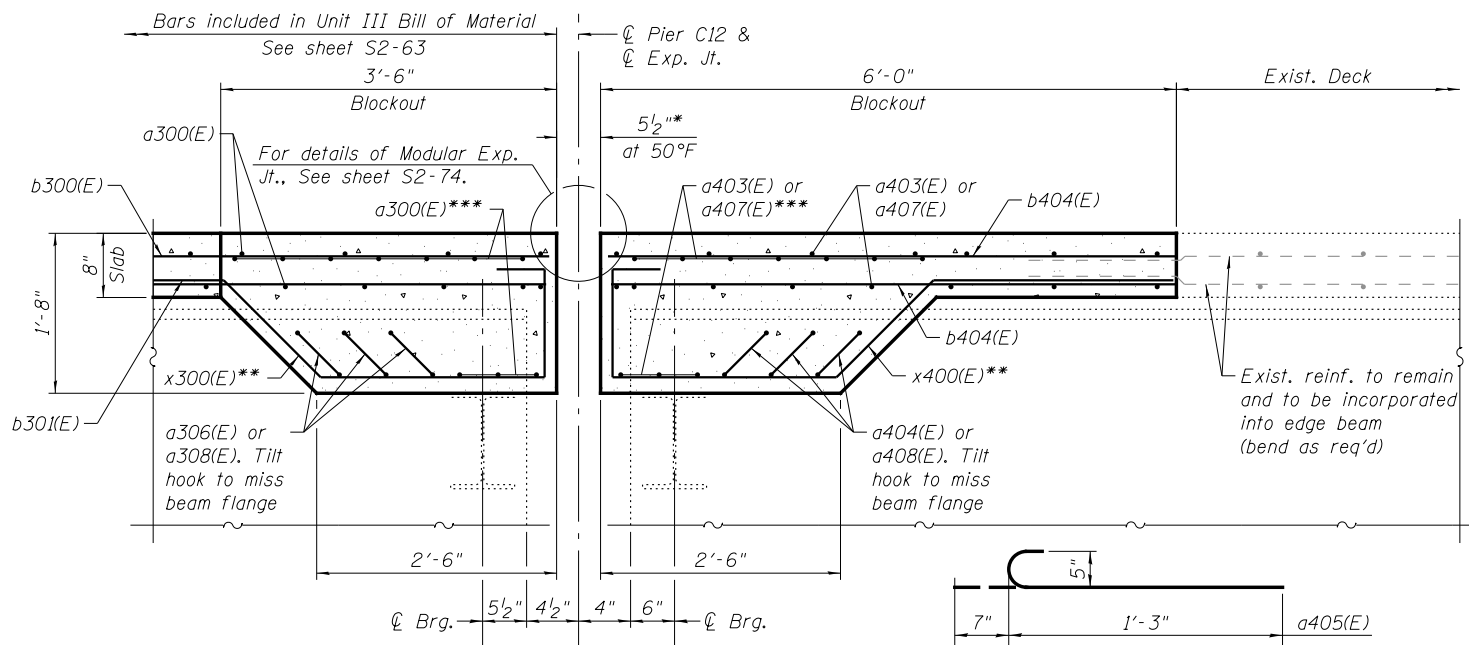
SECTION T-T



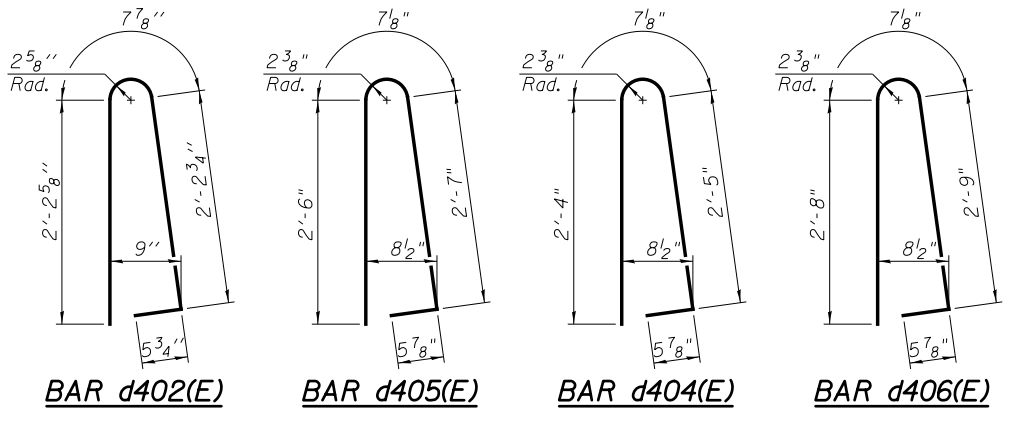
BAR d400(E)



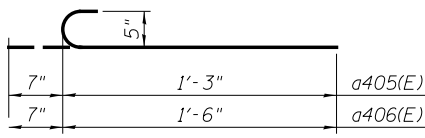
a402(E), a404(E) or a408(E) BAR



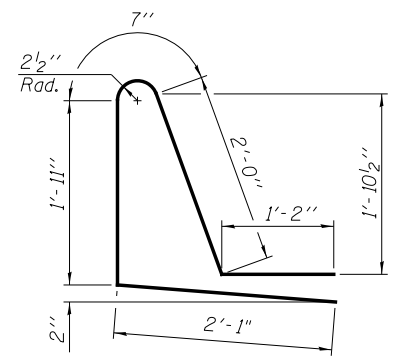
SECTION Y-Y



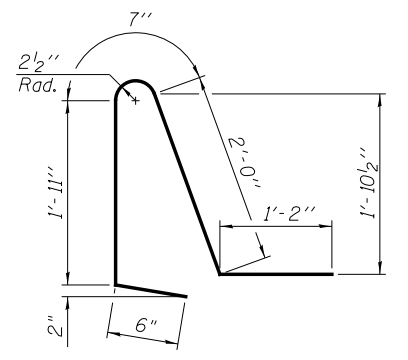
BAR d402(E) BAR d405(E) BAR d404(E) BAR d406(E)



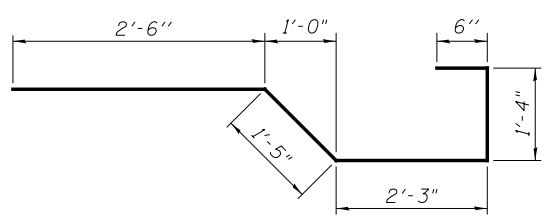
a405(E) or a406(E) BAR



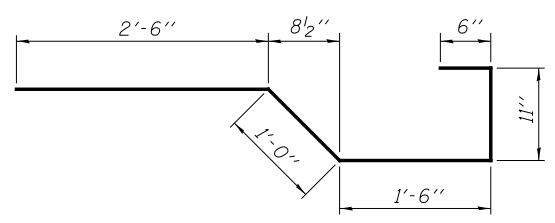
BAR d403(E)



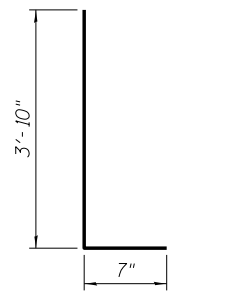
BAR d401(E)



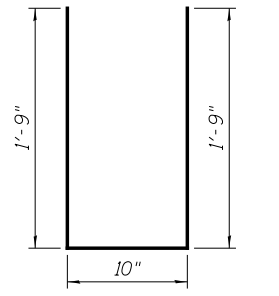
BAR x400(E)



BAR x401(E)



BAR d407(E)



BAR e407(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a400(E)	463	#5	24'-7"	—	
a401(E)	502	#6	6'-6"	—	
a402(E)	24	#5	6'-6"	—	
a403(E)	27	#5	28'-5"	—	
a404(E)	12	#5	7'-3"	—	
a405(E)	3	#5	1'-10"	—	
a406(E)	3	#5	2'-1"	—	
a407(E)	27	#5	26'-11"	—	
a408(E)	12	#5	6'-11"	—	
a409(E)	16	#5	2'-0"	—	
b400(E)	189	#5	26'-7"	—	
b401(E)	144	#5	30'-7"	—	
b402(E)	25	#6	32'-0"	—	
b403(E)	25	#6	21'-1"	—	
b404(E)	114	#5	5'-8"	—	
d400(E)	379	#5	6'-10"	—	
d401(E)	382	#5	6'-2"	—	
d402(E)	8	#5	5'-7"	—	
d403(E)	8	#5	7'-9"	—	
d404(E)	1	#5	5'-10"	—	
d405(E)	1	#5	6'-2"	—	
d406(E)	1	#5	6'-6"	—	
d407(E)	4	#5	4'-5"	—	
e400(E)	112	#4	17'-10"	—	
e401(E)	32	#4	12'-6"	—	
e402(E)	12	#4	25'-6"	—	
e403(E)	12	#8	27'-7"	—	
e404(E)	4	#8	12'-6"	—	
e405(E)	16	#4	5'-9"	—	
e406(E)	2	#8	5'-9"	—	
e407(E)	4	#4	4'-4"	—	
x400(E)	72	#5	7'-6"	—	
x401(E)	20	#5	6'-5"	—	
Reinforcement Bars, Epoxy Coated				Pound	40,150
Concrete Superstructure				Cu. Yds.	200.7
Protective Coat				Sq. Yd.	608
Bridge Deck Grooving				Sq. Yd.	387

Notes:

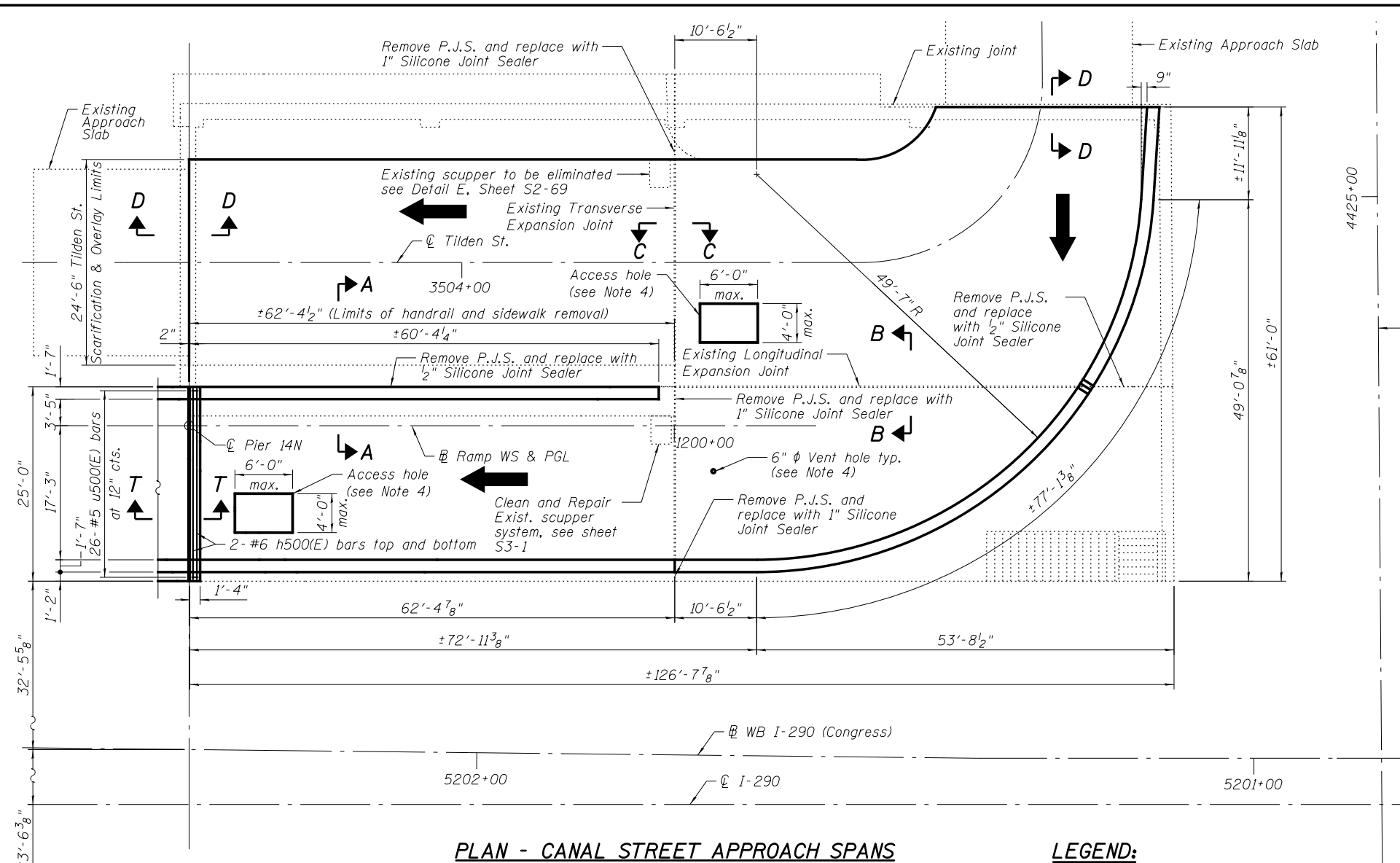
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Removal of Existing Concrete Deck.
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Removal of Existing Concrete Deck.

- * Actual dimension may vary depending on Manufacturer's design
- ** x300(E) and x400(E) bars to be placed at 12" cts. between beams and adjusted in field to miss support boxes
- *** Bars to be adjusted and/or cut in field to miss support boxes and beam webs, as allowed by the Engineer. The Contractor shall reference and coordinate rebar installation with the approved modular joint shop drawings.

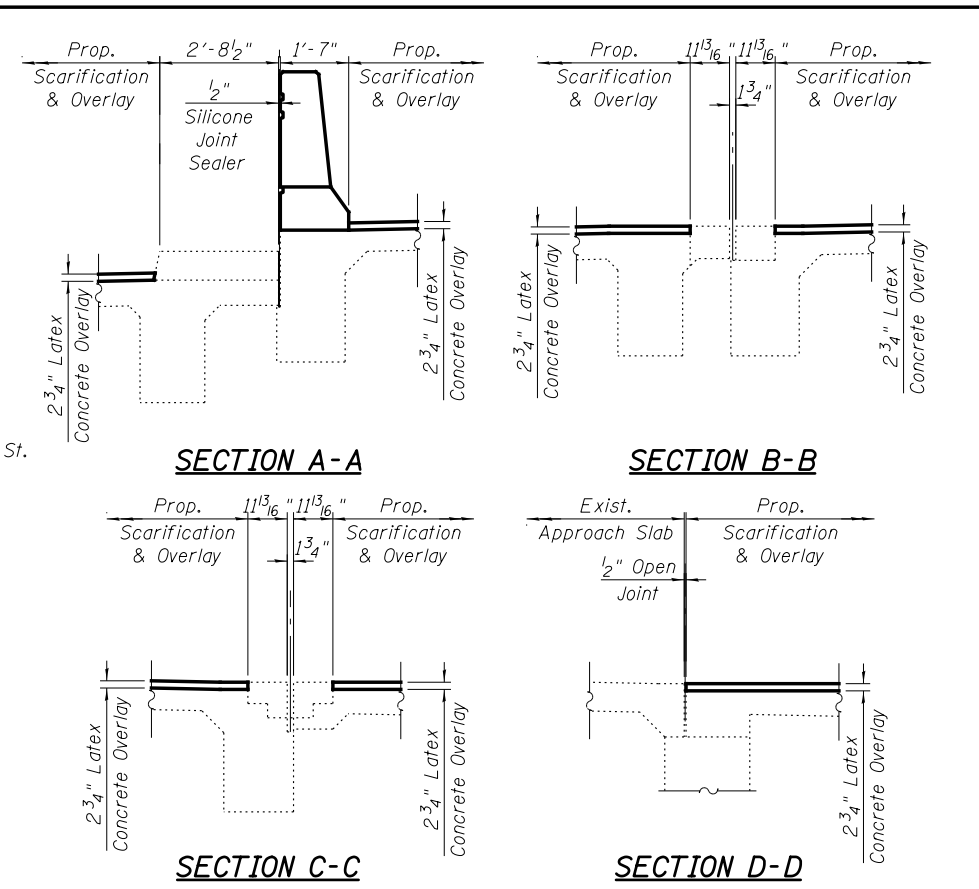
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PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	344
CONTRACT NO. 60X78			ILLINOIS FED. AID PROJECT	

0160461-60X78-5067-DET.dgn



PLAN - CANAL STREET APPROACH SPANS

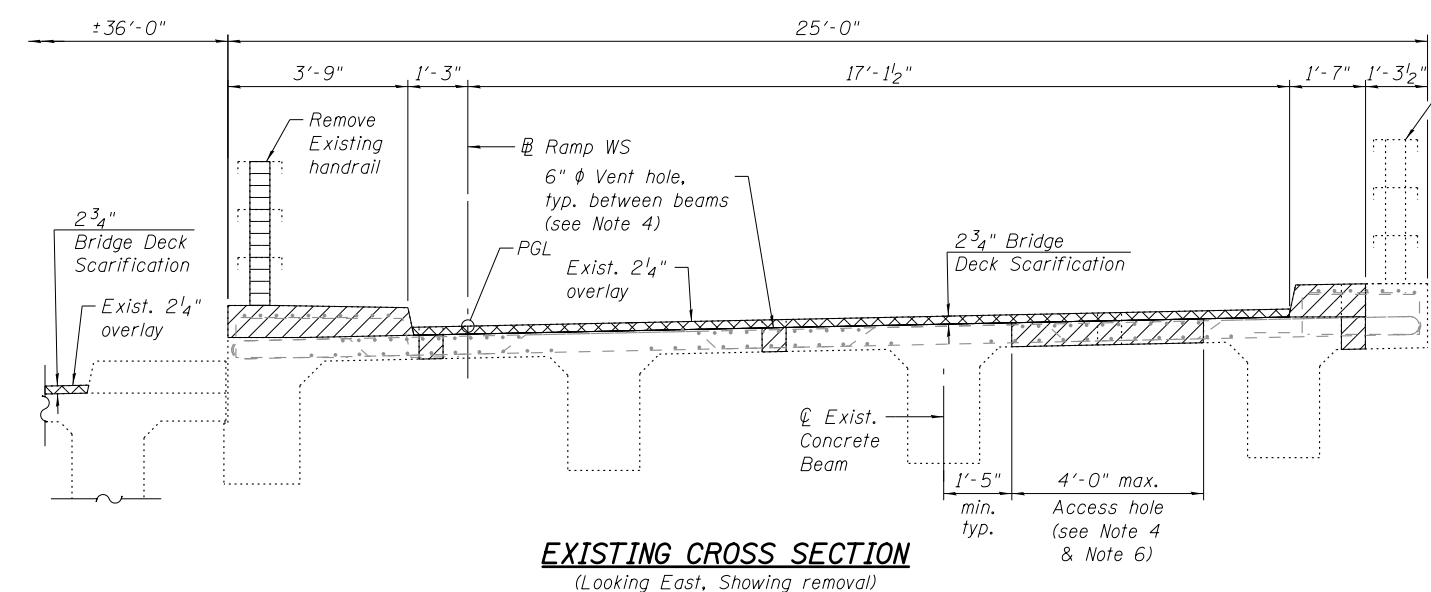


Notes:

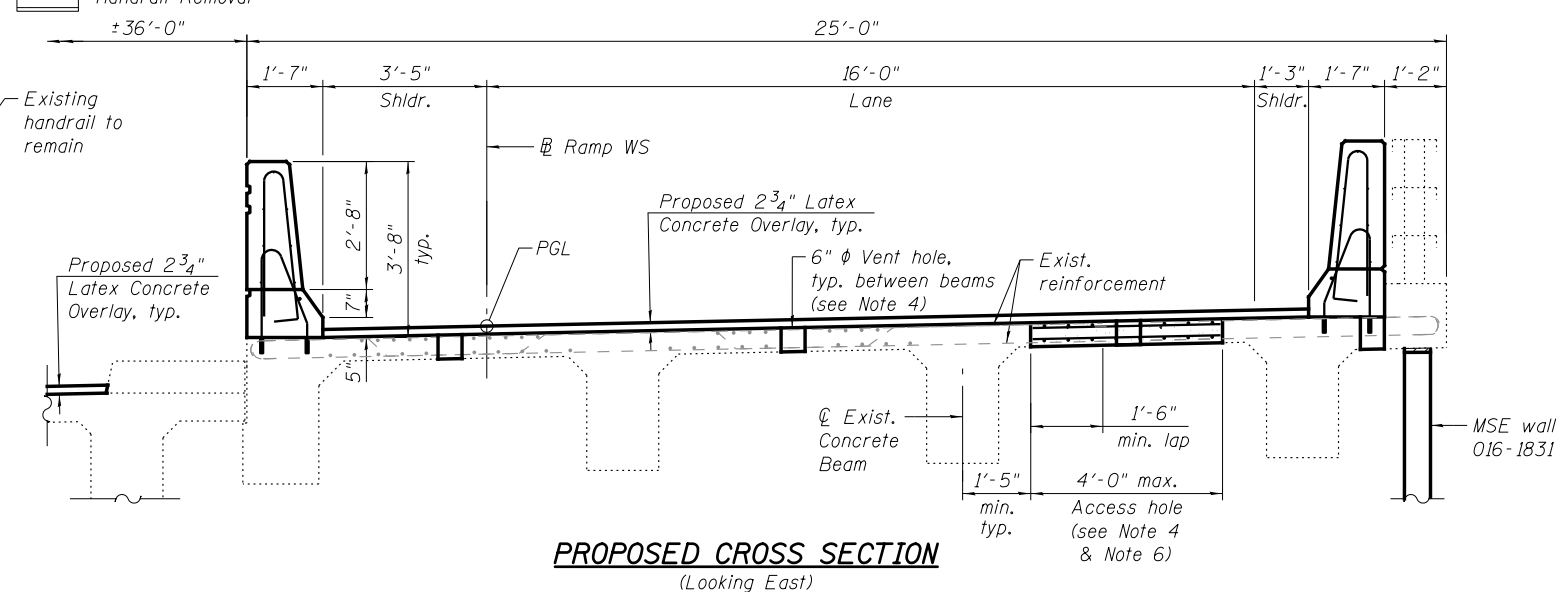
1. See sheet S2-67, for section T-T.
2. See sheet S2-69, for parapet details, reinforcement and Bill of Material.
3. The cabinet for traffic surveillance loops on the Canal Street Entrance Ramp near Sta. 1200+60 (Ramp WS), is attached to the existing structure at the Canal Street Entrance Ramp. ITS infrastructure will be relocated, as necessary, to avoid conflict with the proposed parapet.
4. Proposed access holes and vent holes between existing beams shall be reconstructed to original deck level as shown in proposed cross section. The location to be determined by Contractor. Cost of access holes and vent holes removal and reconstruction shall be included in Lightweight Cellular Concrete Fill, see MSE wall plans (SN 016-1831) Sheets S3-1 and S3-2.
5. Bridge deck scarification and latex concrete overlay work shall be performed in stages to allow continuous access to the entrance and garage of 525 W. Van Buren St.
6. Existing reinforcement shall be cleaned and incorporated into the new construction.
7. Any reinforcement bars that are damaged during access hole and vent hole removal and reconstruction shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Lightweight Cellular Concrete Fill.

LEGEND:

- Concrete Removal
- Bridge Deck Scarification
- Handrail Removal



EXISTING CROSS SECTION
(Looking East, Showing removal)



PROPOSED CROSS SECTION
(Looking East)

PARSONS BRINCKERHOFF

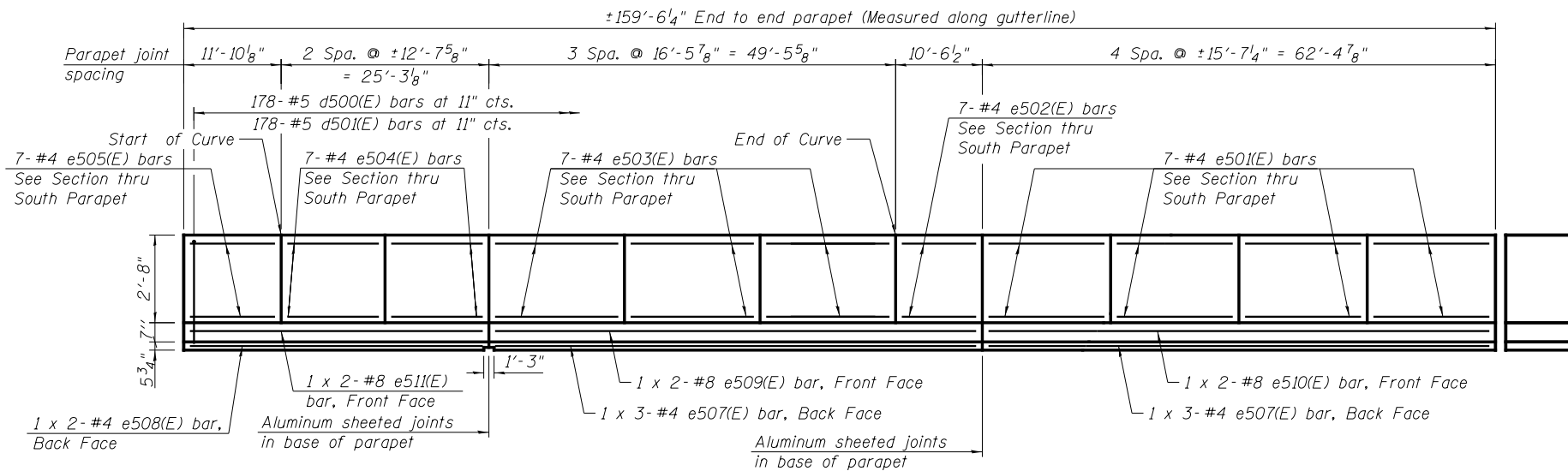
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CHECKED - LFC	REVISIONS -	
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**APPROACH SPAN PLAN
STRUCTURE NO. 016-0461**

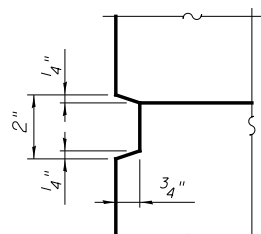
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CONTRACT NO. 60X78			ILLINOIS FED. AID PROJECT	

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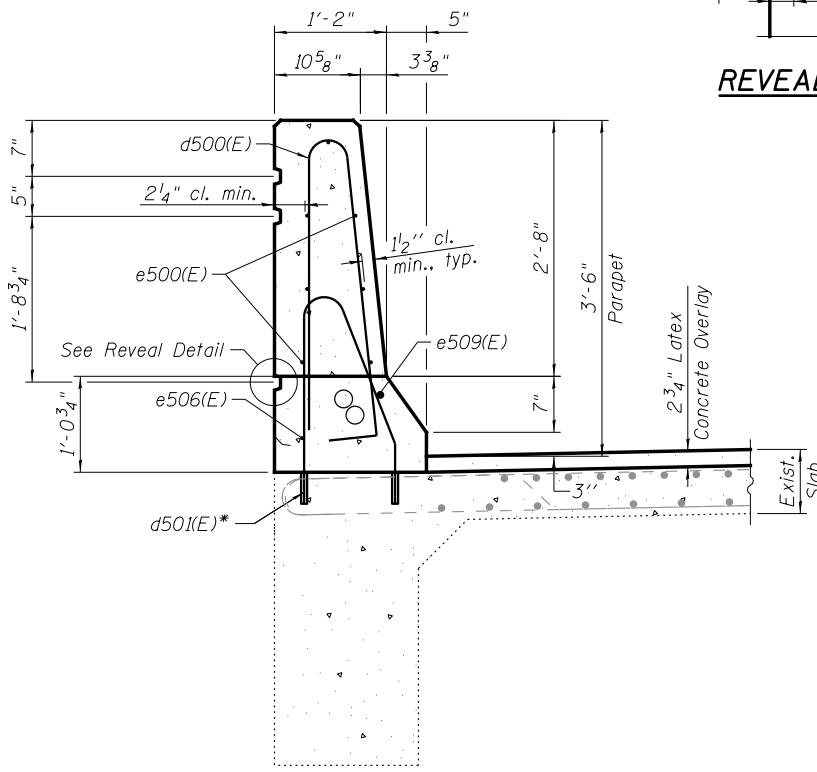


INSIDE ELEVATION OF SOUTH PARAPET

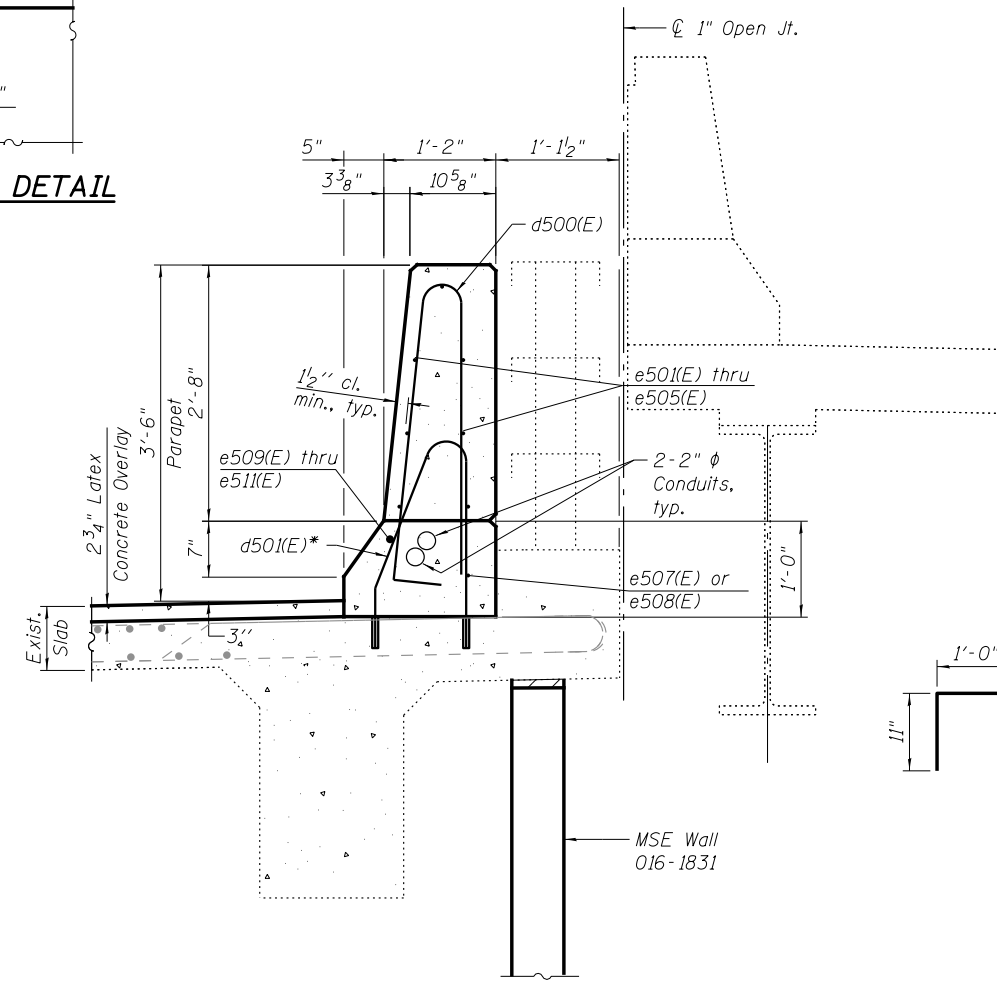
* Core and set #5 d501(E) bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". Cost included with Reinforcement Bars, Epoxy Coated.



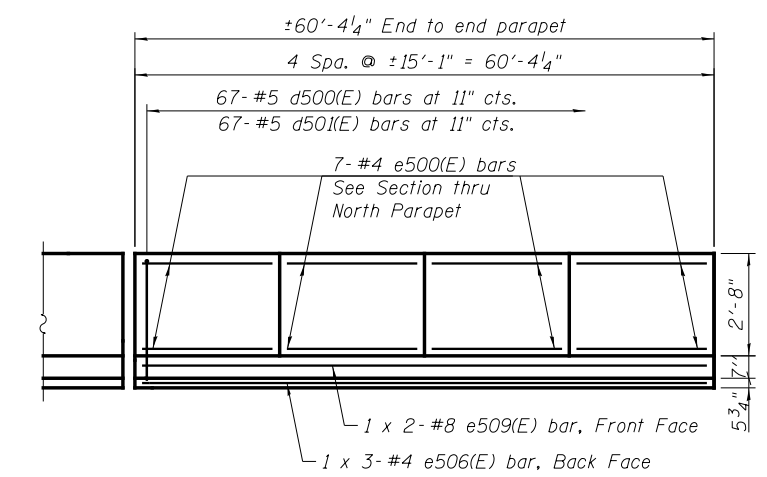
REVEAL DETAIL



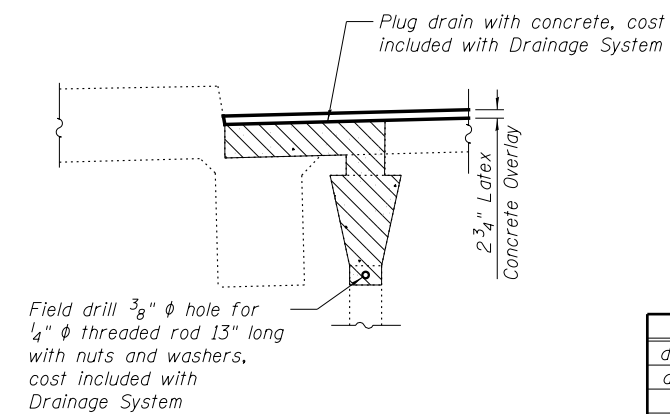
SECTION THRU NORTH PARAPET



SECTION THRU SOUTH PARAPET



INSIDE ELEVATION OF NORTH PARAPET



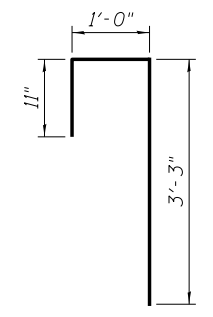
DETAIL E

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

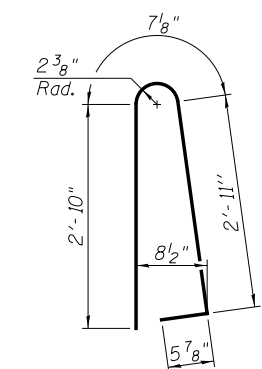
**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
d500(E)	245	#5	6'-10"	U	
d501(E)	245	#5	4'-8"	U	
e500(E)	28	#4	14'-9"	—	
e501(E)	28	#4	15'-3"	—	
e502(E)	7	#4	10'-3"	—	
e503(E)	21	#4	16'-4"	—	
e504(E)	14	#4	12'-5"	—	
e505(E)	7	#4	11'-7"	—	
e506(E)	3	#4	21'-5"	—	
e507(E)	6	#4	22'-1"	—	
e508(E)	2	#4	19'-11"	—	
e509(E)	4	#8	32'-8"	—	
e510(E)	2	#8	33'-8"	—	
e511(E)	2	#8	21'-6"	—	
h500(E)	4	#6	24'-8"	—	
u500(E)	26	#5	5'-2"	U	
Reinforcement Bars, Epoxy Coated				Pound	5,040
Concrete Superstructure				Cu. Yds.	33.2
Bridge Deck Scarification 2-3/4"				Sq. Yds.	613
Bridge Deck Latex Concrete Overlay, 2-3/4"				Sq. Yds.	613
Concrete Removal				Cu. Yds.	13
Handrail Removal				Foot	62.5
Silicone Joint Sealer, 1/2"				Foot	75
Silicone Joint Sealer, 1"				Foot	21

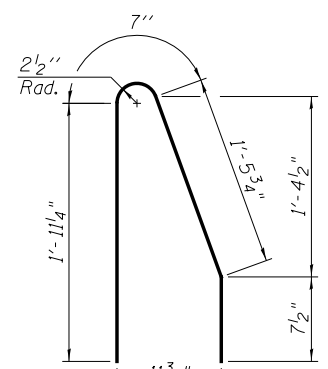
Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.



BAR u500(E)



BAR d500(E)



BAR d501(E)

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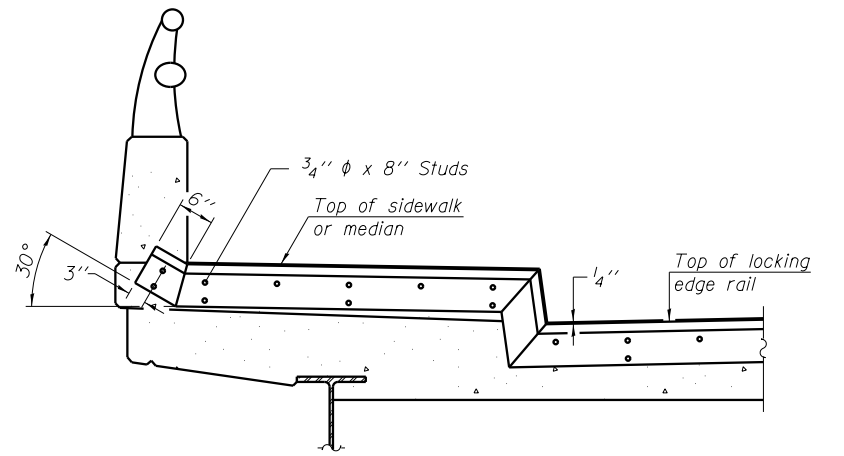
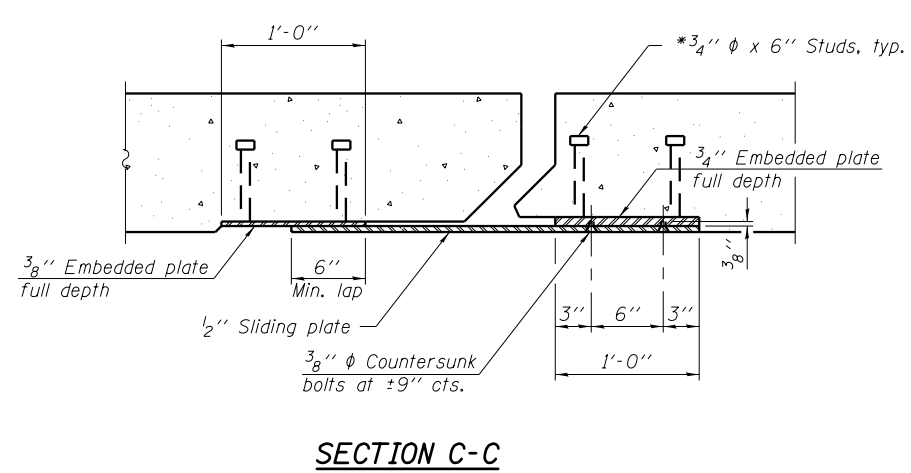
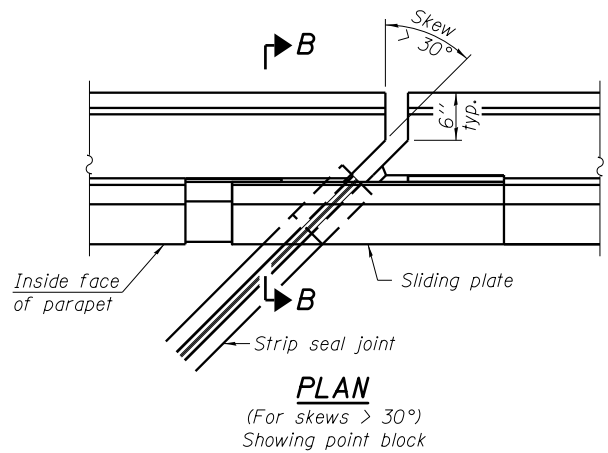
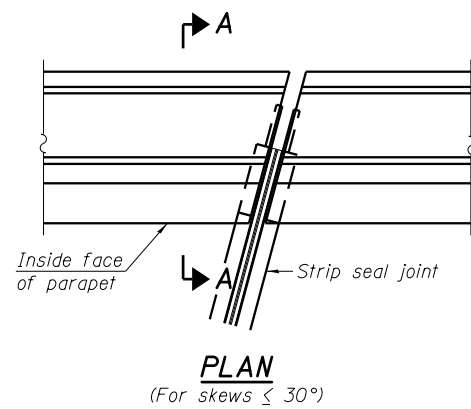
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

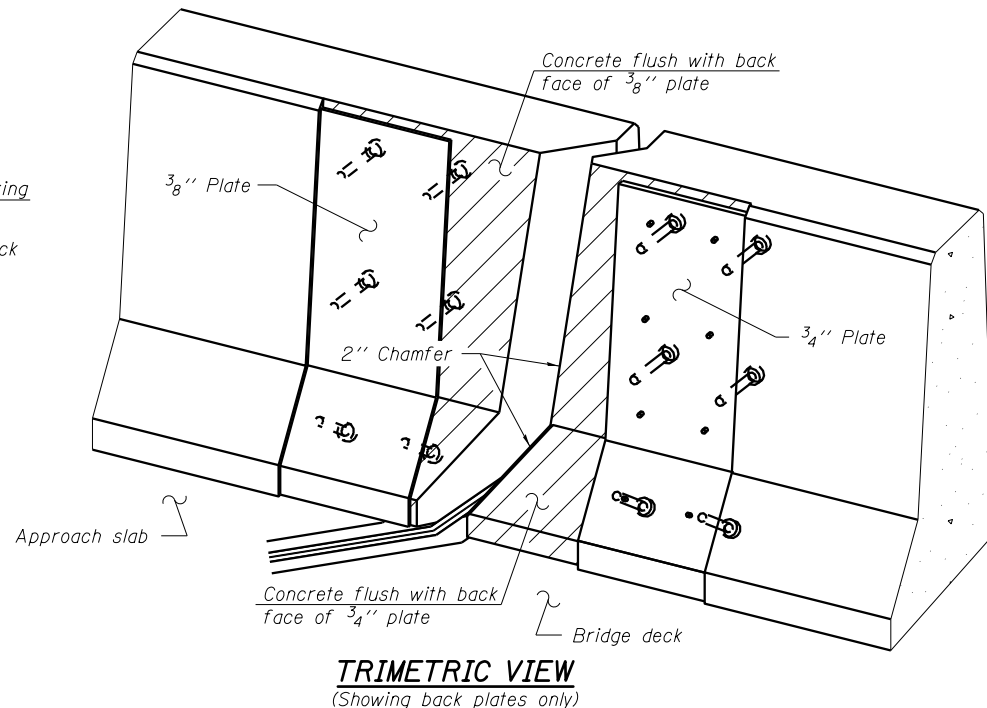
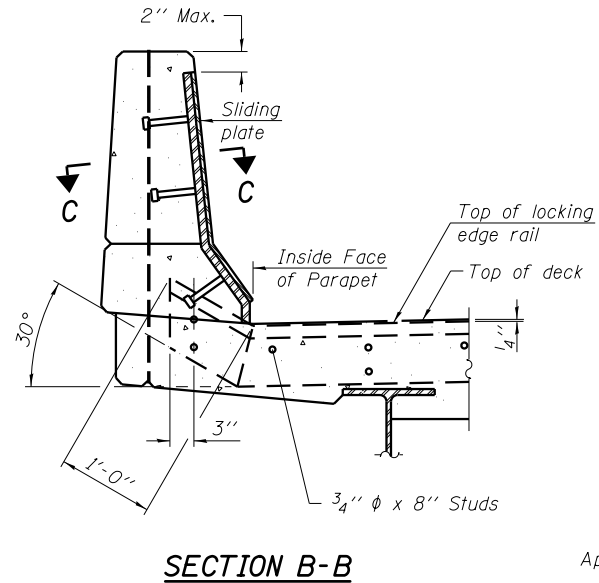
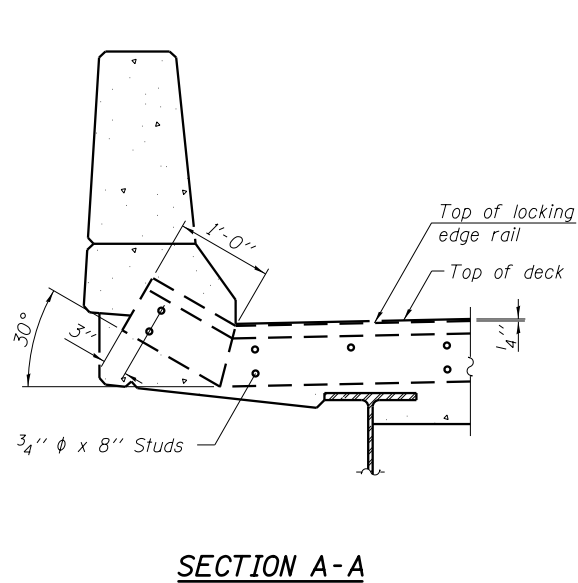
**APPROACH SPAN DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-69 OF S2-145 SHEETS

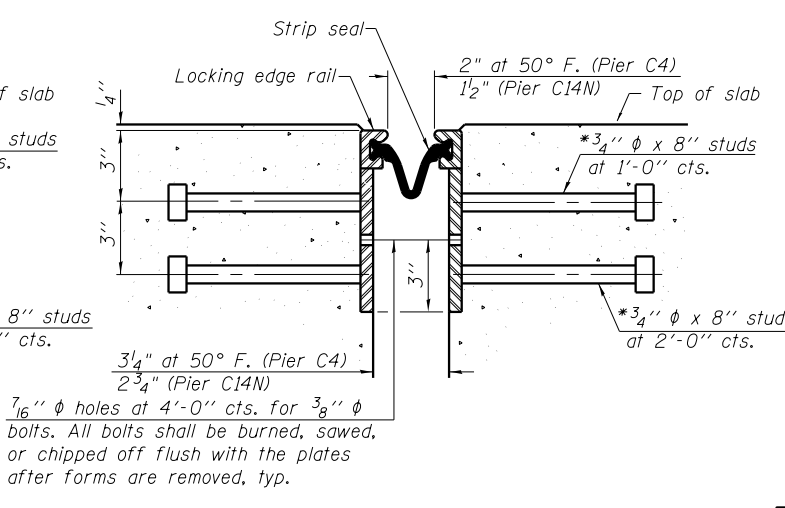
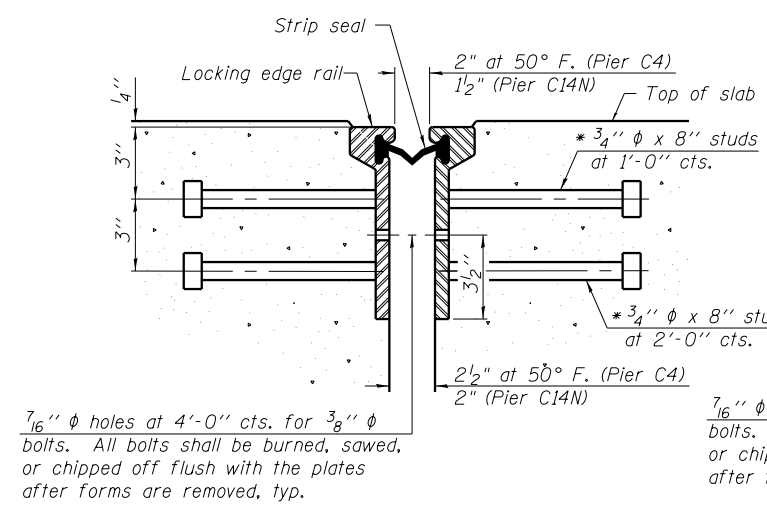
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	346
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



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.

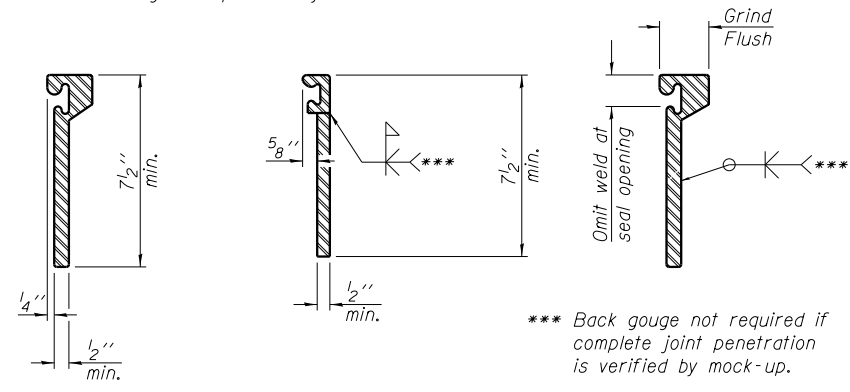


Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement 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 degrees included in the cost of Preformed Joint Strip Seal.



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

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



LOCKING EDGE RAILS
ROLLED EXTRUDED RAIL
WELDED RAIL
LOCKING EDGE RAIL SPLICE
 The inside of the locking edge rail groove shall be free of weld residue.
 Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	75

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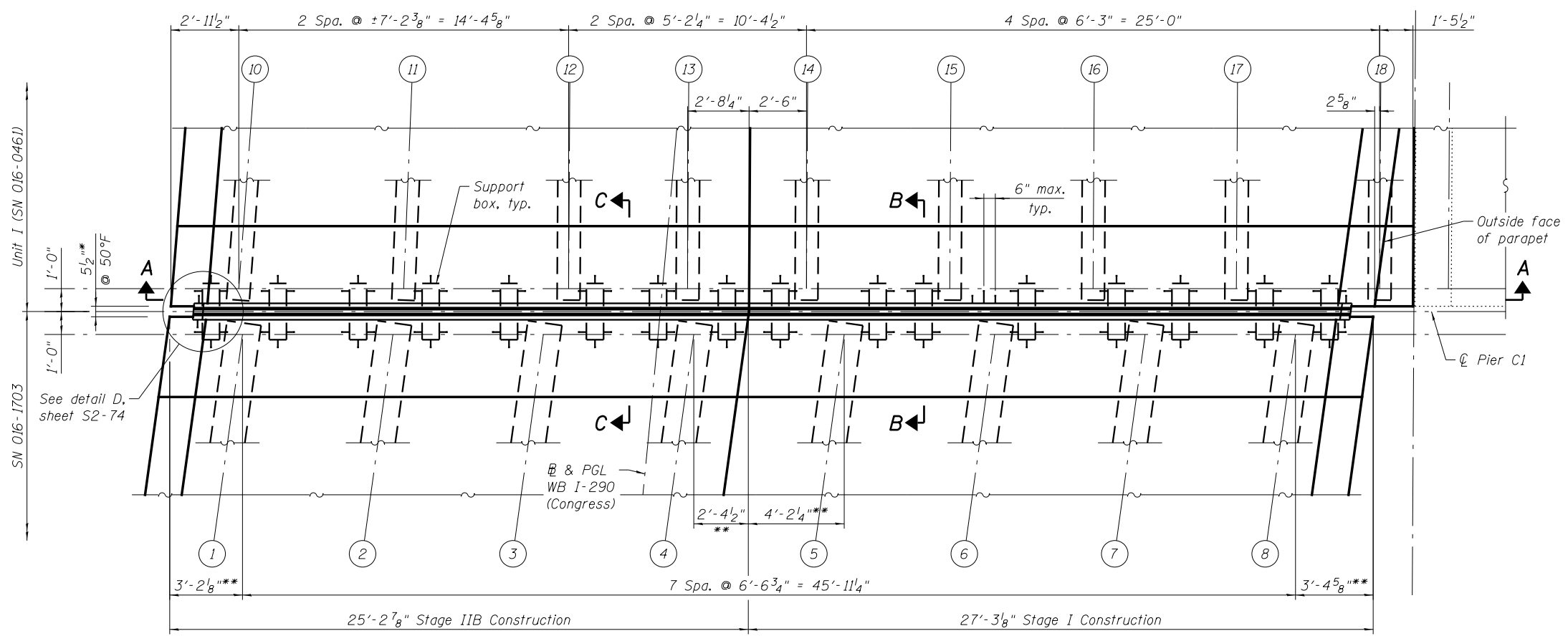
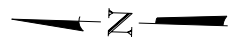
EJ-SSJ 1-27-12

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	PLOT DATE = 3/23/2016	DRAWN - D.C.P.	REVISED -
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STATE OF ILLINOIS
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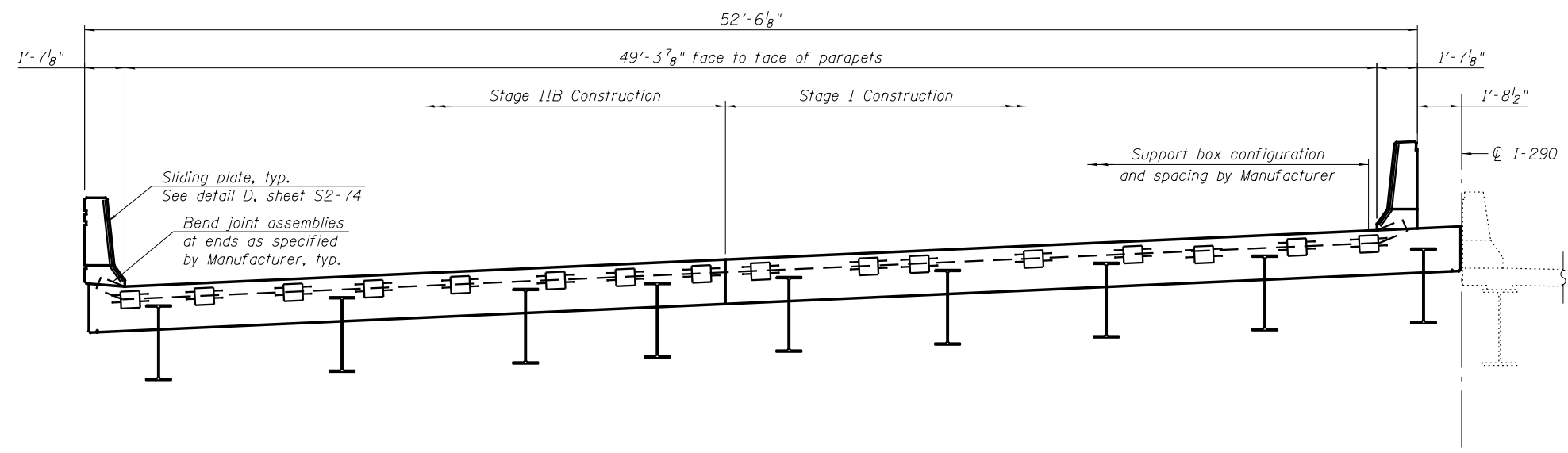
PREFORMED JOINT STRIP SEAL - PIER C4 & 14N
 STRUCTURE NO. 016-0461
 SHEET NO. S2-70 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	347
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



PLAN

* Actual dimension may vary depending on Manufacturer's design
 ** Measured to edge of deck



SECTION A-A

Notes:

1. Modular expansion joint shall be designed according to Section 14 of the 2014 AASHTO specifications for HL-93 truck loading with impact and the Special Provision.
2. The joint shall be a shop-fabricated modular assembly with multiple support bars, edge and separation beams and transverse neoprene seals, providing a continuous seal across the deck.
3. Joint shall be fabricated and installed according to the manufacturer's recommendations and as specified in the special provisions for a modular joint system and as approved by the Engineer.
4. Joint shall be fabricated to conform to the roadway profile and cross-slope.
5. All exposed structural steel elements such as separation beams, edge beams, support bars, sliding plate assemblies and cover plates shall be fabricated with AASHTO M270 Grade 50 ksi steel.
6. The expansion joint assembly shall be hot dip galvanized in accordance with AASHTO M111 or M232 after fabrication.
7. Modular expansion joints shall be shipped in one piece unless noted.
8. Concrete anchor studs attached to the modular expansion joint shall conform to the requirements of Article 1006.32 of the Standard Specifications. The cost of the anchor studs shall be included with Modular Expansion Joints, 6". Number and spacing of concrete anchor studs shall be determined by Joint Manufacturer in accordance with Note 1 above.
9. No aluminum components shall be allowed.
10. All splices of center beams and edge beams located in the roadway shall be full penetration welds. (Upturn splices may be partial penetration welds)
11. See deck reinforcement plan sheet for bar size, designation and blockout dimensions.
12. Sliding plate assemblies as shown shall be provided for the parapets. The cost of furnishing and installing sliding plate assemblies shall be included with Modular Expansion Joint, 6".
13. Coordinate blockout dimensions and pocket locations and reinforcement bar layout with Joint Manufacturer. Blockout area to be poured after expansion assemblies have been adjusted.
14. Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
15. The manufacturer's recommended installation methods shall be followed.
16. Modular Expansion Joint 6" shall provide a minimum total movement of 4 1/4".
17. See sheet S2-74 for sections B-B and C-C.

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint, 6"	Foot	51

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PARSONS BRINCKERHOFF

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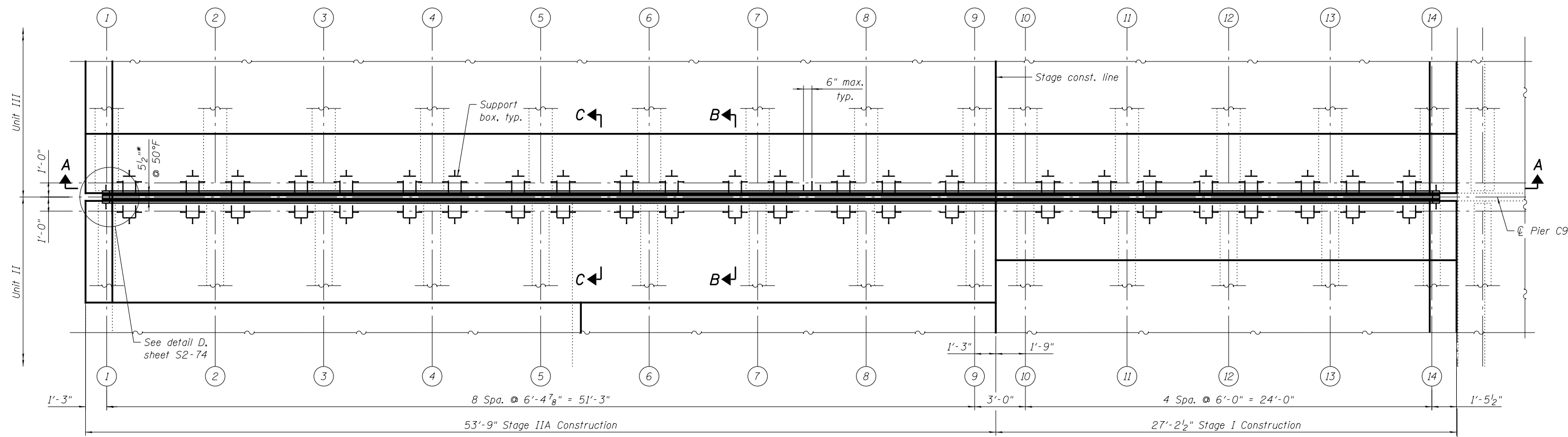
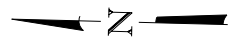
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MODULAR EXPANSION JOINT - PIER C1
STRUCTURE NO. 016-0461**

SHEET NO. S2-71 OF S2-145 SHEETS

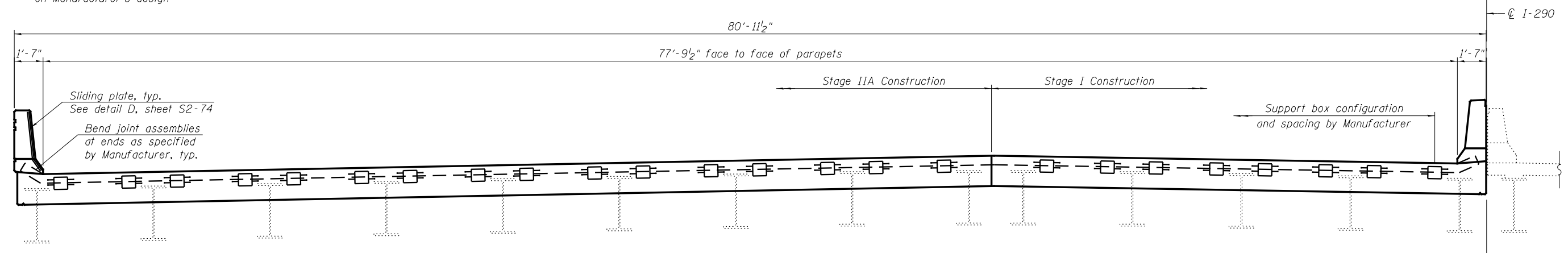
F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	348
CONTRACT NO. 60X78				

ILLINOIS FED. AID PROJECT



PLAN

* Actual dimension may vary depending on Manufacturer's design



SECTION A-A

Notes:

See sheet S2-71, for modular expansion joint notes.

See sheet S2-74, for sections B-B and C-C.

Modular Expansion Joint 6" shall provide a minimum total movement of 5 1/4".

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint, 6"	Foot	79

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**PARSONS
BRINCKERHOFF**

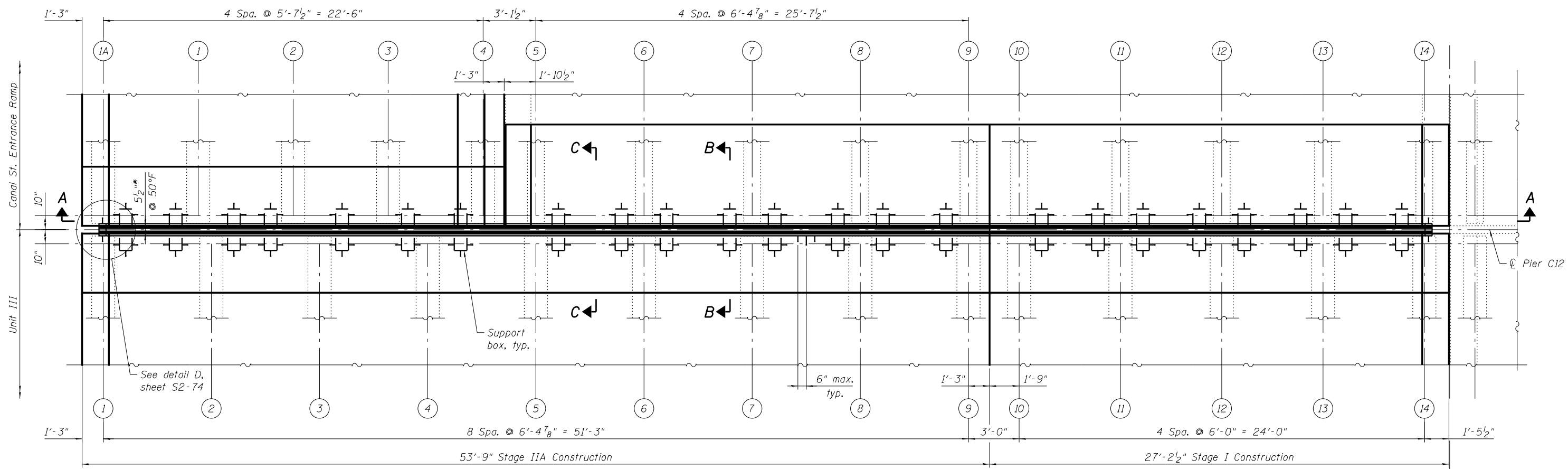
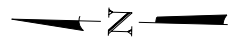
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MODULAR EXPANSION JOINT - PIER C9
STRUCTURE NO. 016-0461**

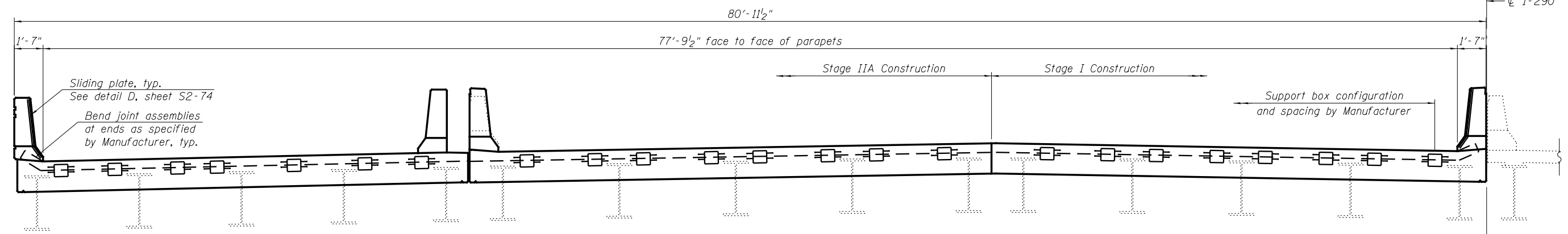
SHEET NO. S2-72 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	349
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



PLAN

* Actual dimension may vary depending on Manufacturer's design



SECTION A-A

Notes:

See sheet S2-71, for modular expansion joint notes.

See sheet S2-74, for sections B-B and C-C.

Modular Expansion Joint 6" shall provide a minimum total movement of 4 1/2".

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint, 6"	Foot	79

0160461-60X78-5073-EXP.dgn

**PARSONS
BRINCKERHOFF**

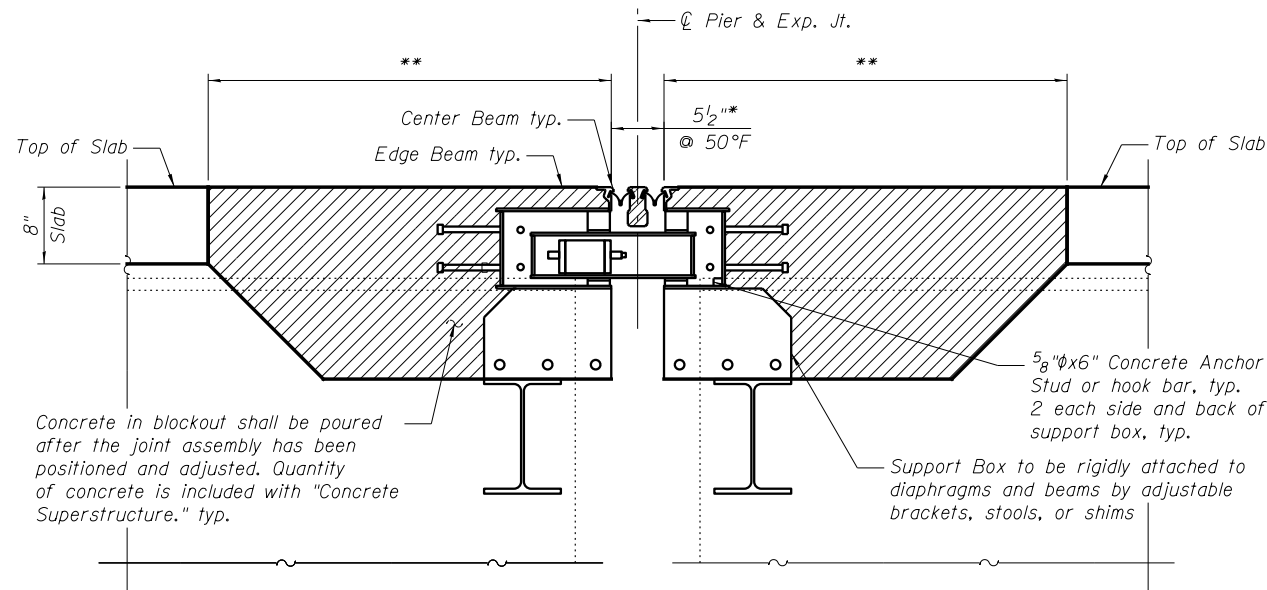
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**STATE OF ILLINOIS
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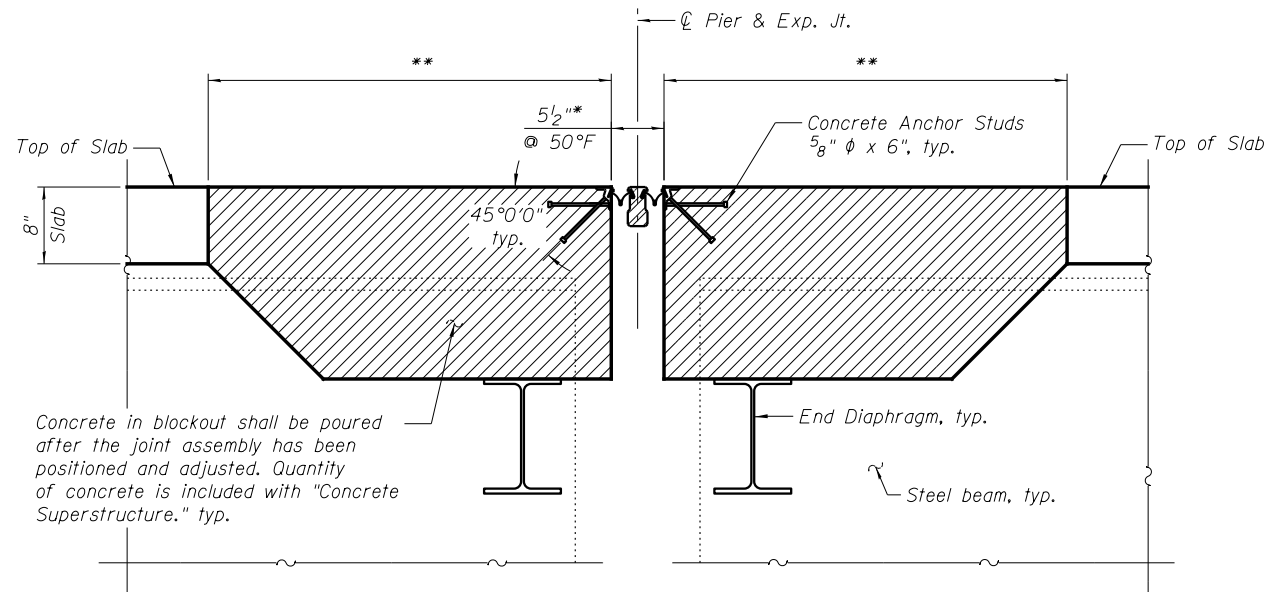
**MODULAR EXPANSION JOINT - PIER C12
STRUCTURE NO. 016-0461**

SHEET NO. S2-73 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



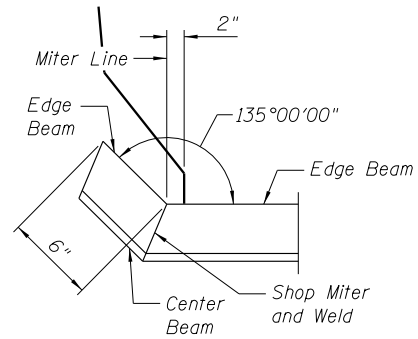
SECTION B-B



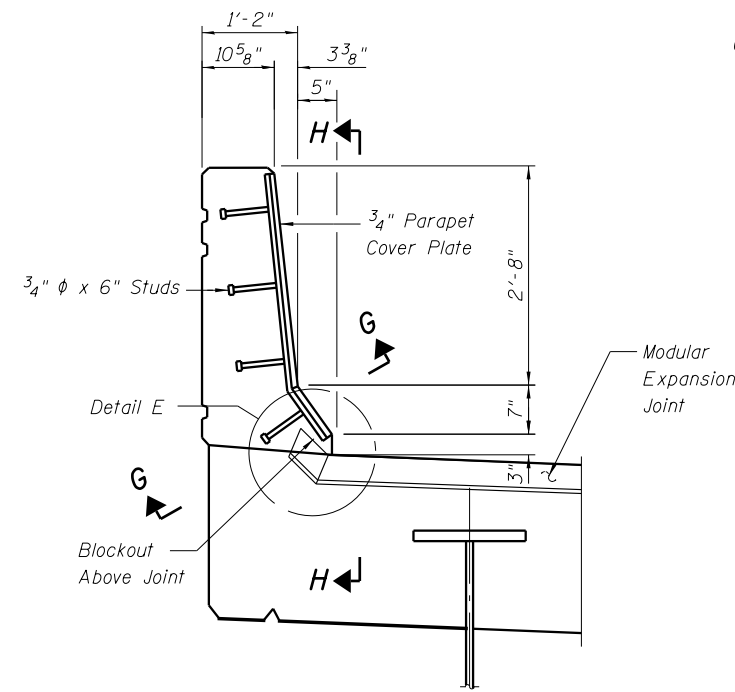
SECTION C-C

* Number of beams and seals determined by manufacturer

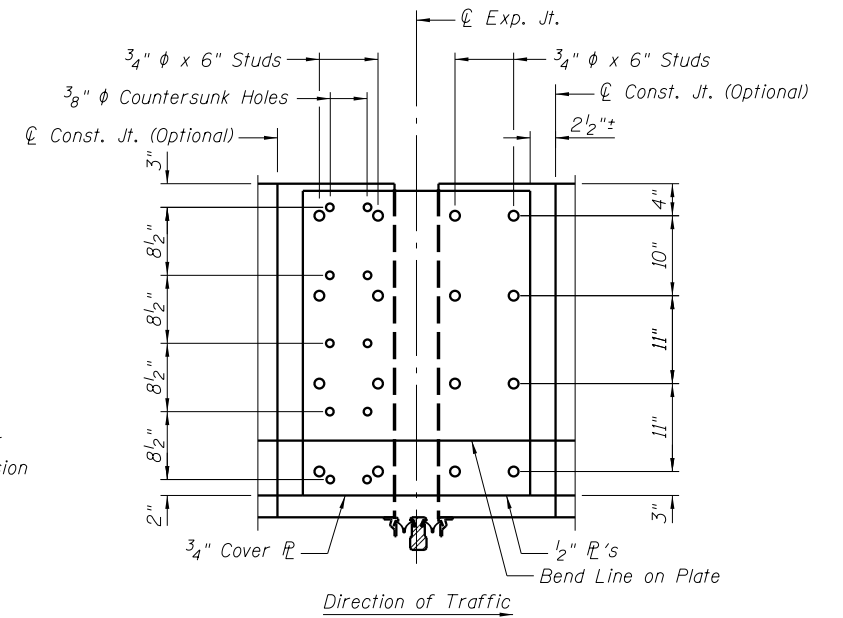
** Blockout dimensions to be verified by Contractor with Joint Manufacturer. See sheet S2-51 for blockout dimensions and additional details of edge beam at Pier C1. See sheet S2-63 for blockout dimensions and additional details of edge beam at Pier C9. See sheet S2-66 for blockout dimensions and additional details for edge beam at Pier C12.



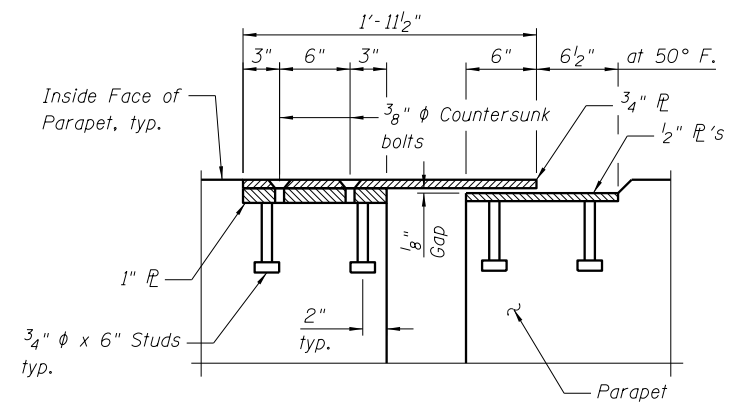
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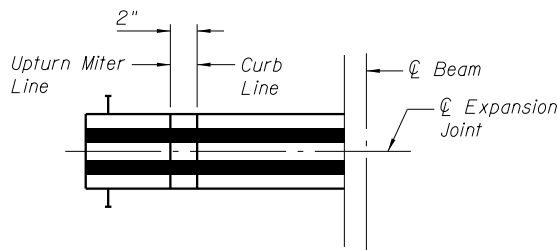
DETAIL D



SECTION H-H



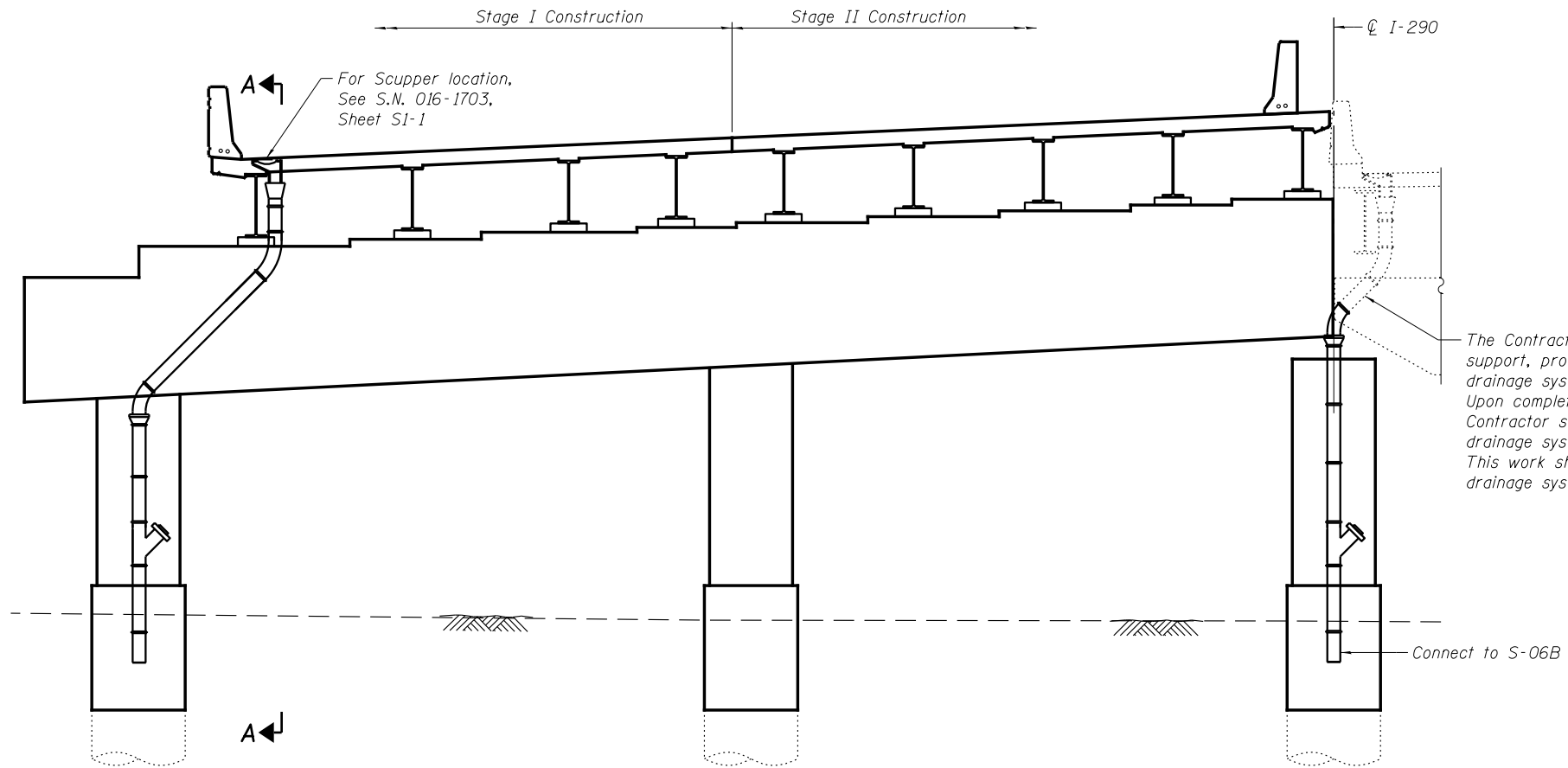
SECTION G-G



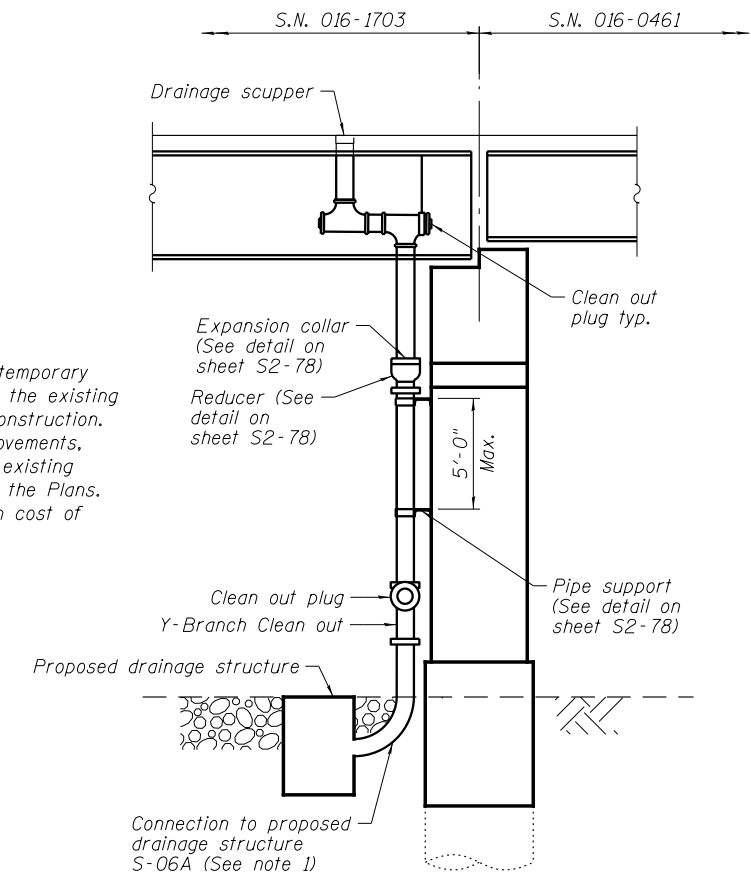
DETAIL F

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90/94/290	2014-004 R&B (WB)	COOK	706	351
CONTRACT NO. 60X78				

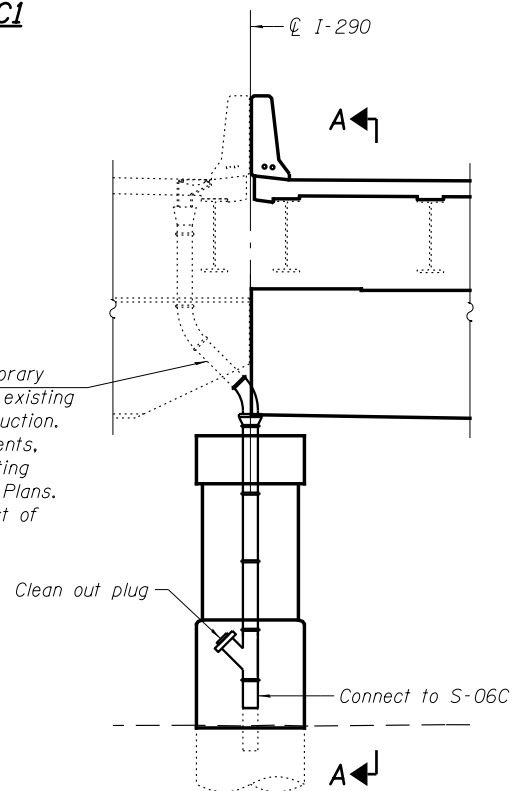


ELEVATION - PIER C1
(Looking East)



SECTION A-A

The Contractor shall provide temporary support, protect and maintain the existing drainage system throughout construction. Upon completion of pier improvements, Contractor shall reattach the existing drainage system as shown on the Plans. This work shall be included in cost of drainage system.



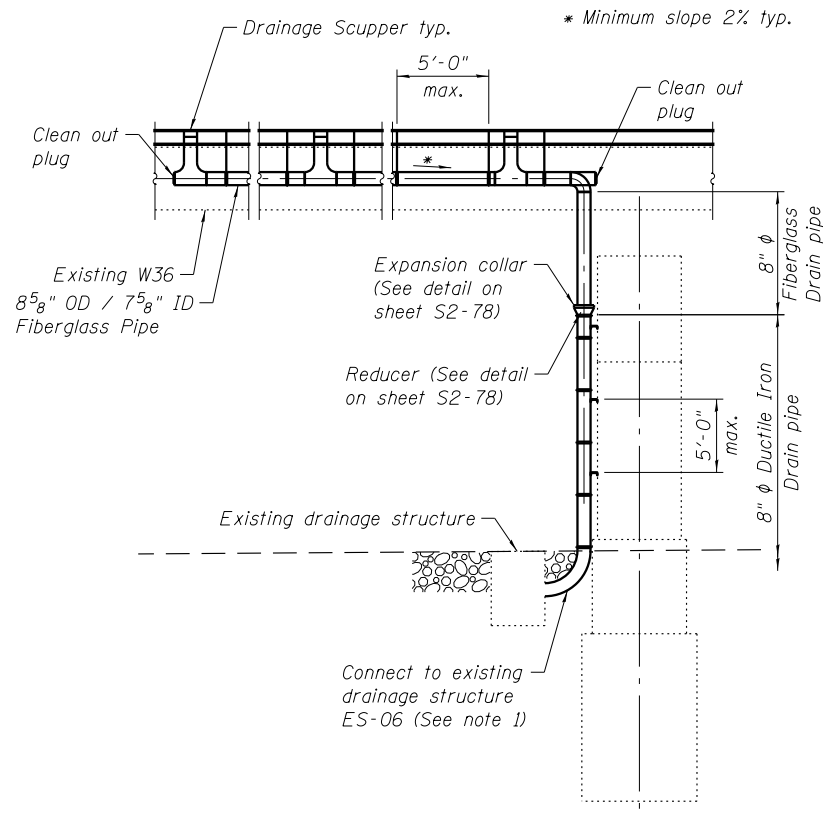
ELEVATION - PIER C4
(Looking West)

- Notes:
1. Drainage system shall connect to drainage structure. See drainage schedule for stationing and offsets of drainage structure.
 2. Drainage system and ITS work must be coordinated prior to their placement on the pier to avoid any conflicts.
 3. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.

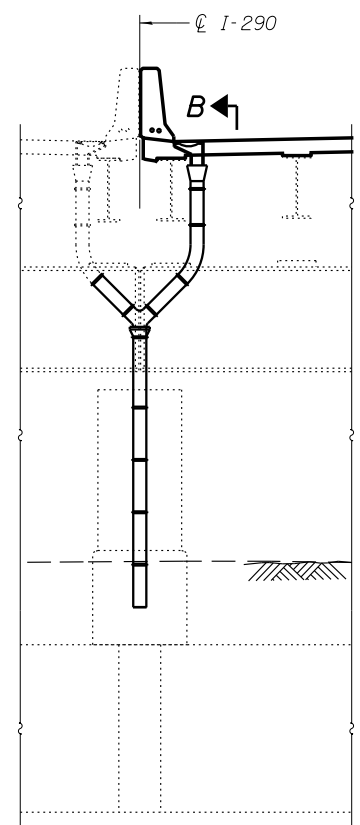
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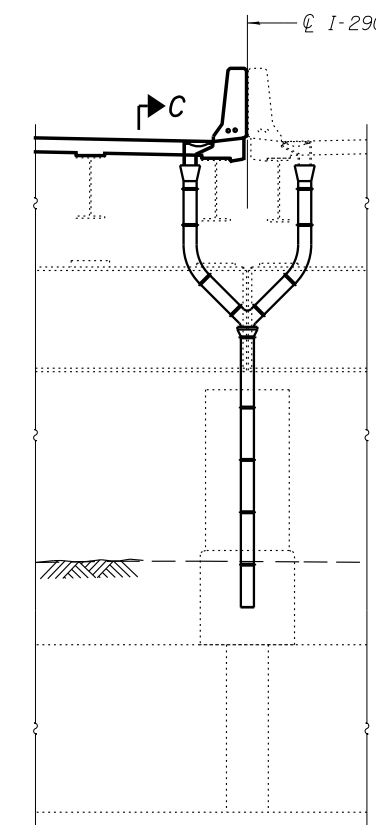
ILLINOIS FED. AID PROJECT



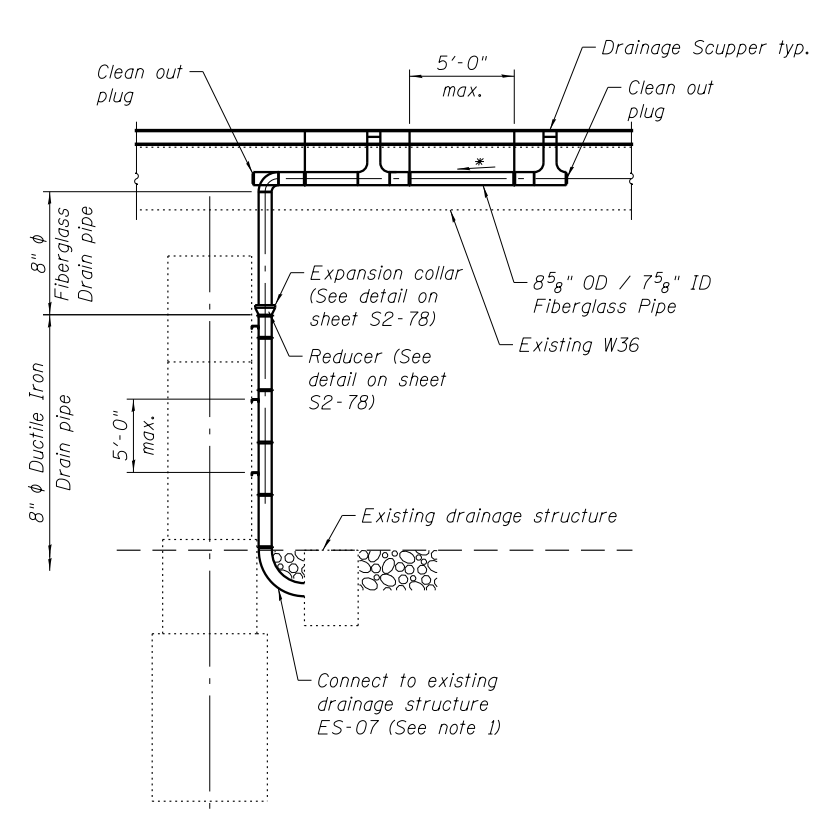
SECTION B-B



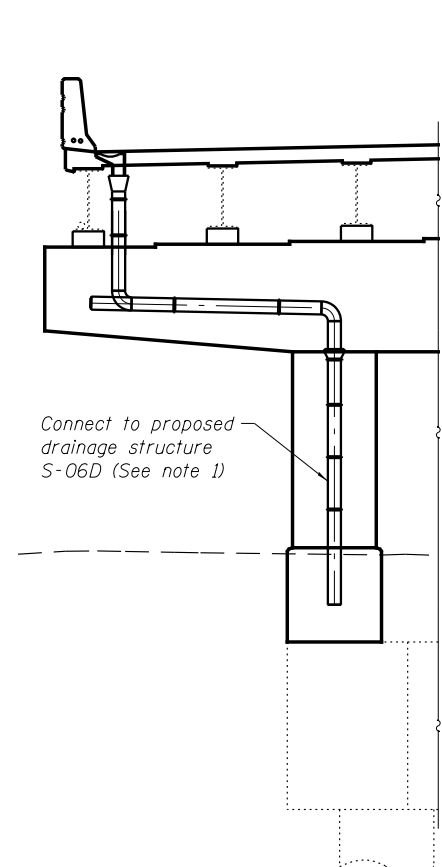
ELEVATION PIER C5
(Looking West)



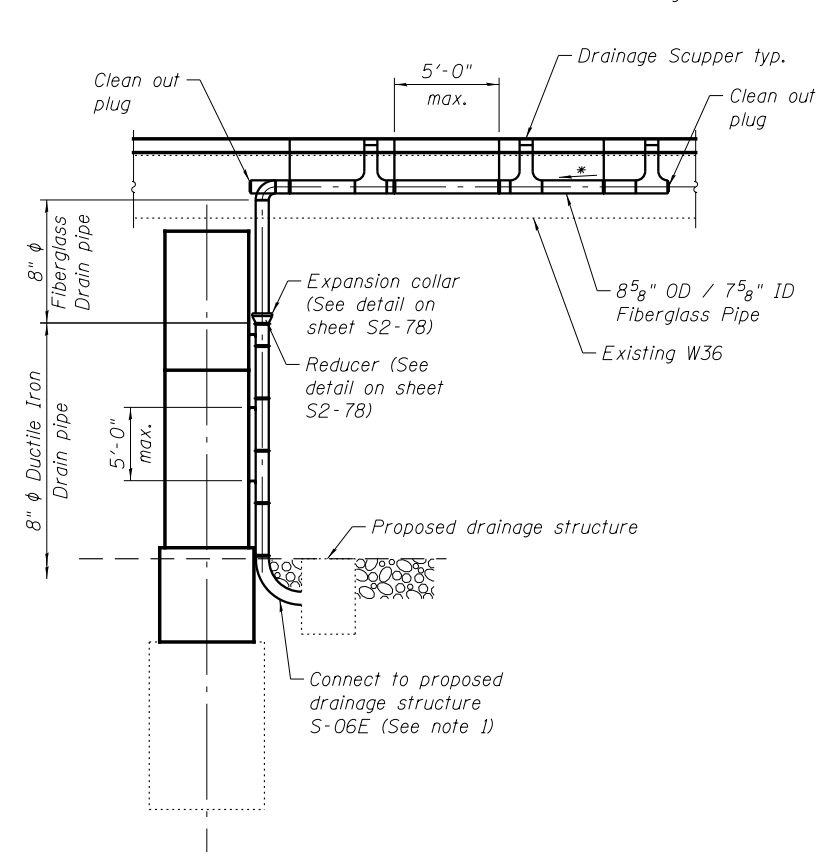
ELEVATION PIER C8
(Looking East)



SECTION C-C



ELEVATION PIER C9
(Looking East)



SECTION D-D

- Notes:
1. Drainage system shall connect to drainage structure. See drainage schedule for stationing and offsets of drainage structure.
 2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.

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**PARSONS
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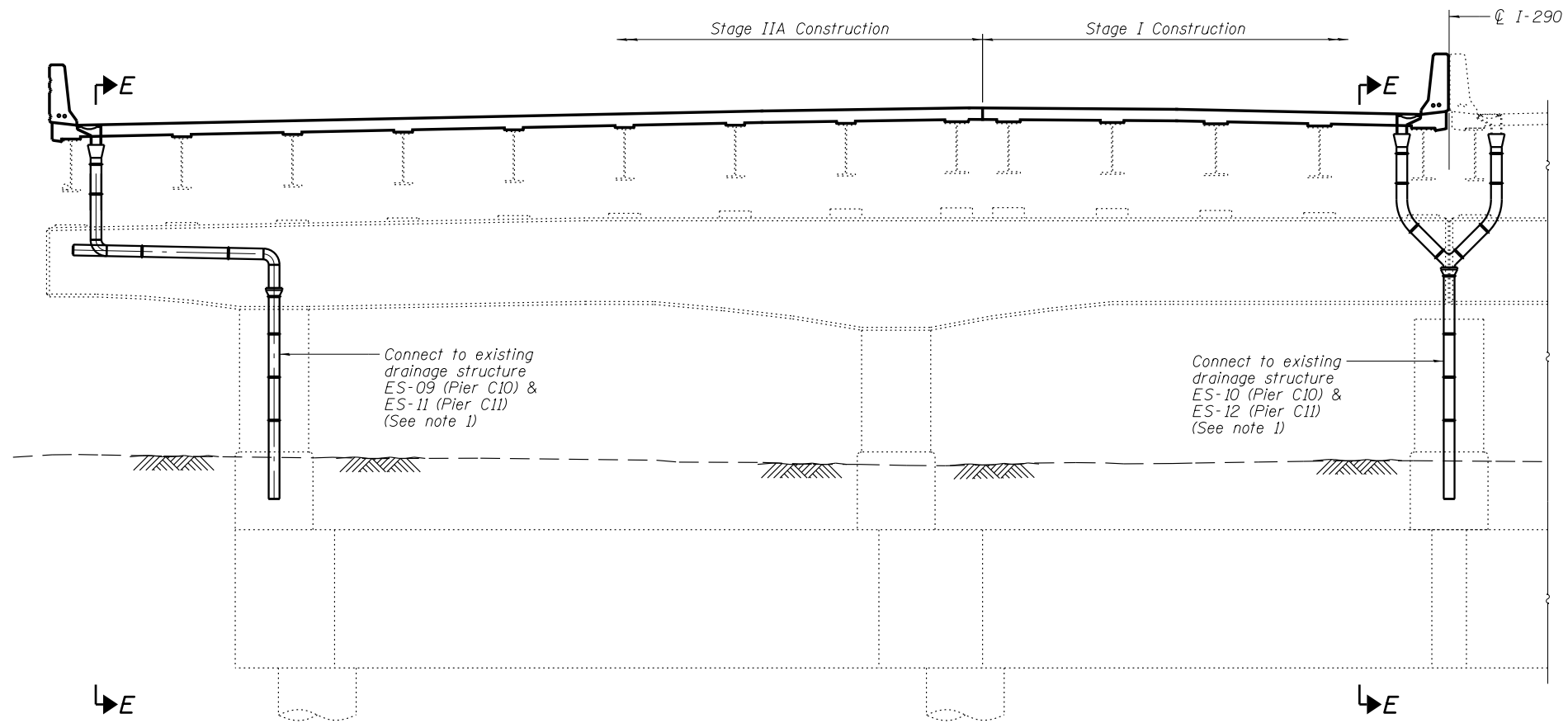
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

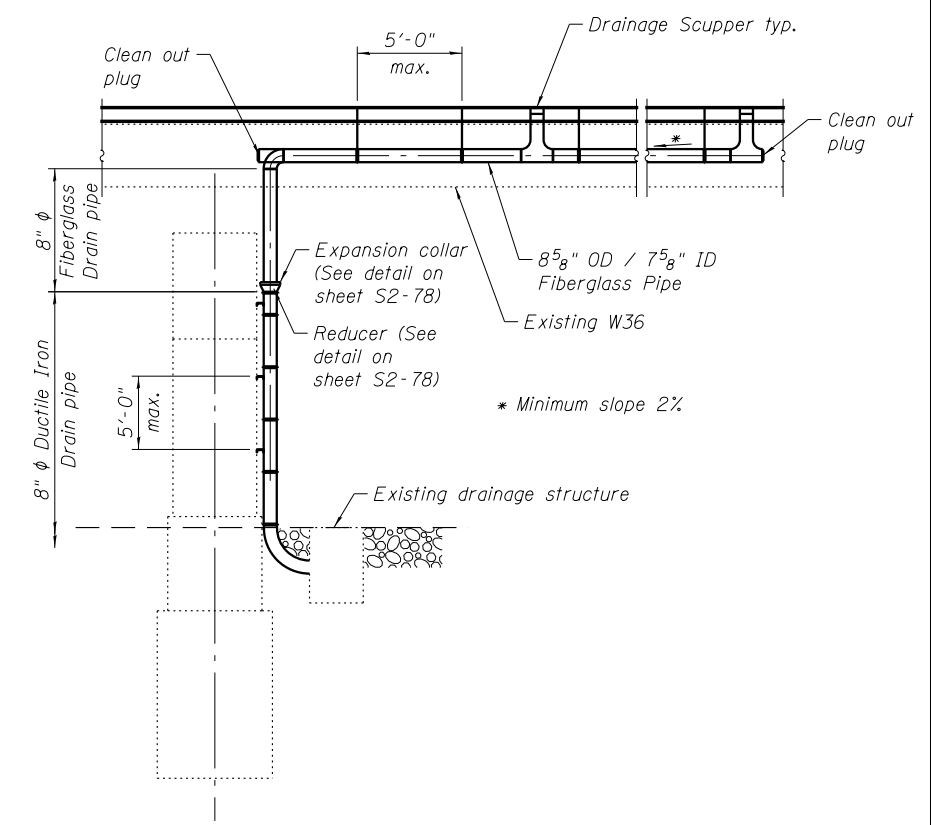
**DRAINAGE SYSTEM DETAILS - PIER C5, C8 & C9
STRUCTURE NO. 016-0461**

SHEET NO. S2-76 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	353
CONTRACT NO. 60X78				
<small>ILLINOIS FED. AID PROJECT</small>				



ELEVATION PIER C10 & C11
(Looking East)



SECTION E-E

Notes:

1. Drainage system shall connect to an existing drainage structure. See drainage schedule for stationing and offsets of existing drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.

0160461-60X78-5077-DRN.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - HA	REVISED -
	CHECKED - HA	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

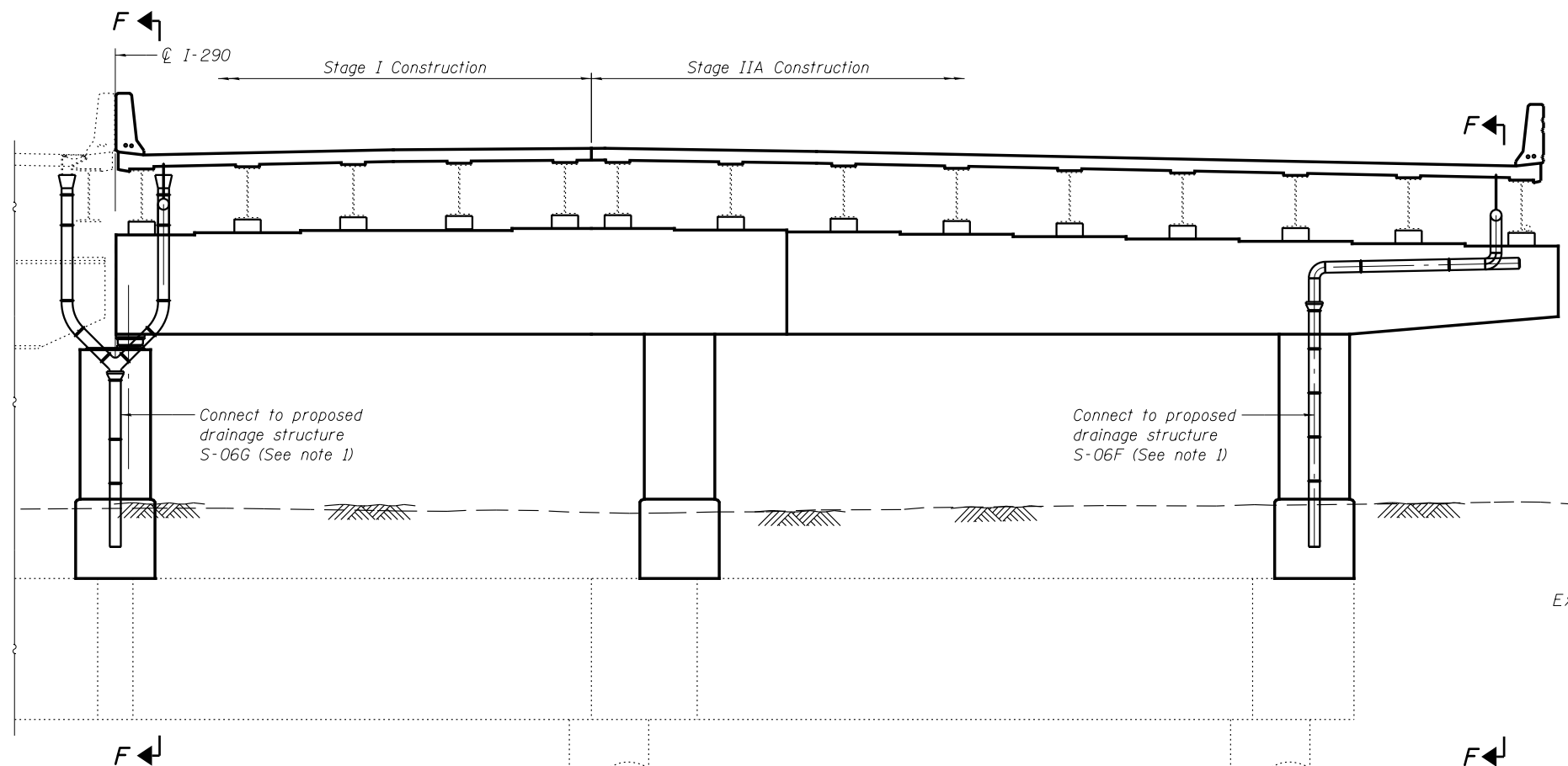
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SYSTEM DETAILS - PIER C10 & C11
STRUCTURE NO. 016-0461**

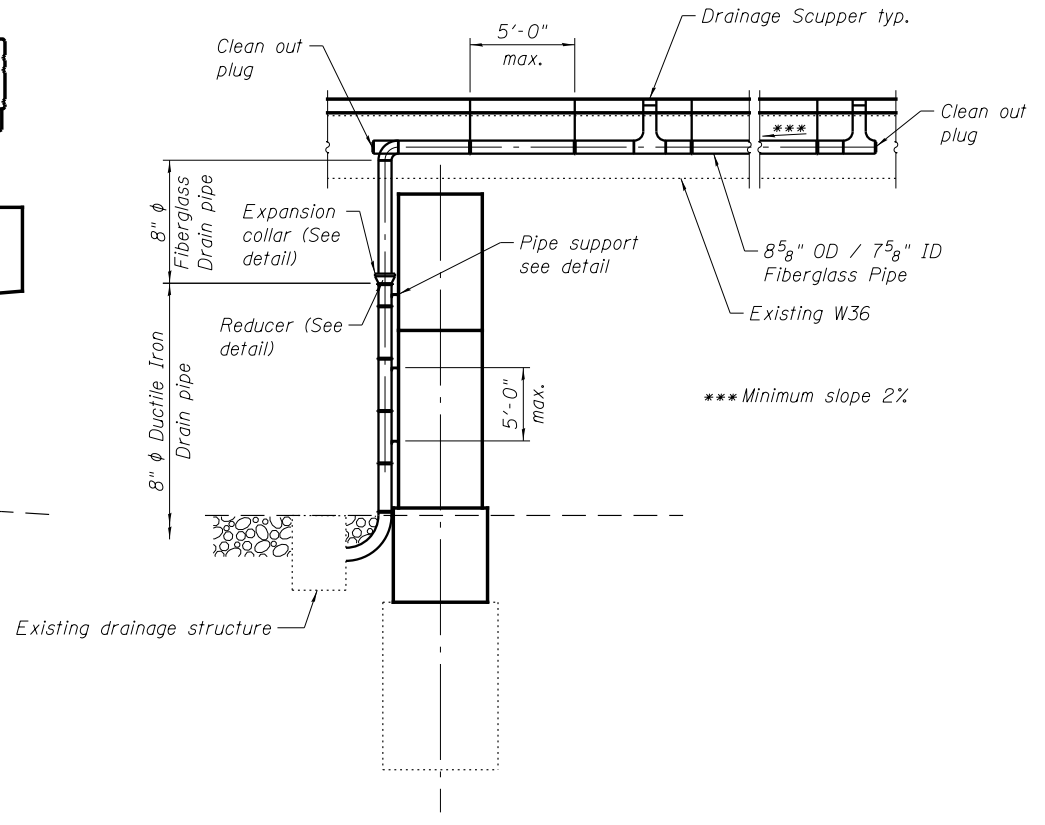
SHEET NO. S2-77 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	354
CONTRACT NO. 60X78				

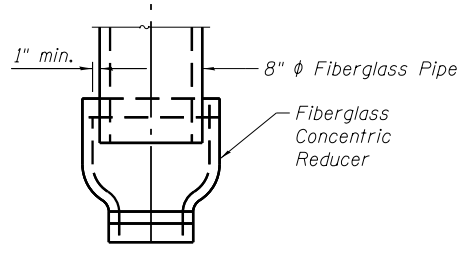
ILLINOIS FED. AID PROJECT



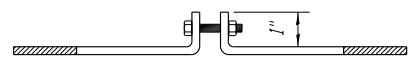
ELEVATION PIER C12
(Looking West)



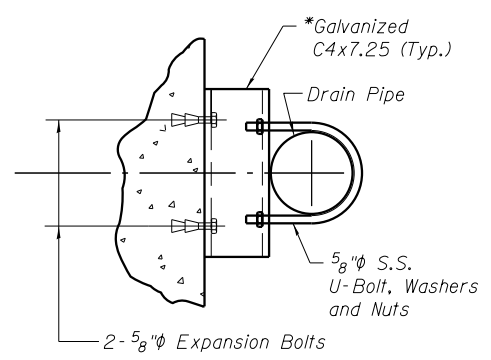
SECTION F-F



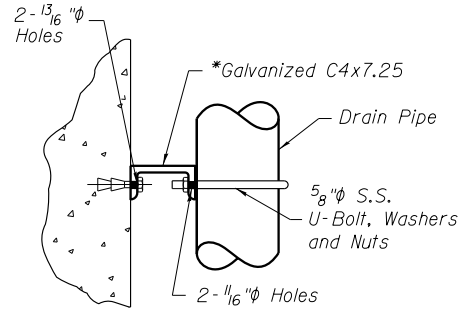
REDUCER DETAIL



SECTION G-G



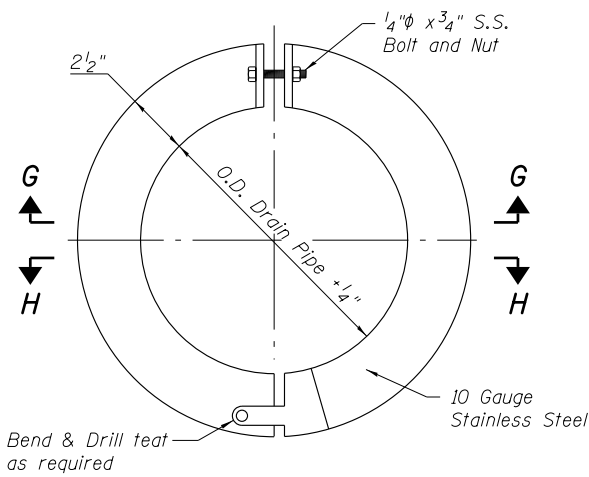
PLAN



ELEVATION

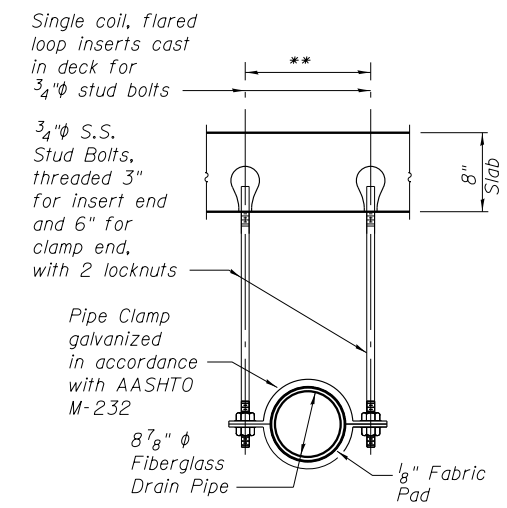
PIPE SUPPORT DETAIL

*Provide curved C6x8.2 to fit Round Pier Columns where needed



SECTION H-H

DETAIL OF EXPANSION COLLAR



PIPE SUPPORT DETAIL

** Dimension as required by Pipe Clamp

Notes:

1. Drainage system shall connect to drainage structure. See drainage schedule for stationing and offsets of drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.
3. S.S. denotes Stainless Steel.

BILL OF MATERIAL

Item	Unit	Quantity
Drainage System	L. Sum	0.7

0160461-60X78-5078-DRN.dgn

PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - HA	REVISED -
PLOT SCALE = N.T.S.	CHECKED - HA	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
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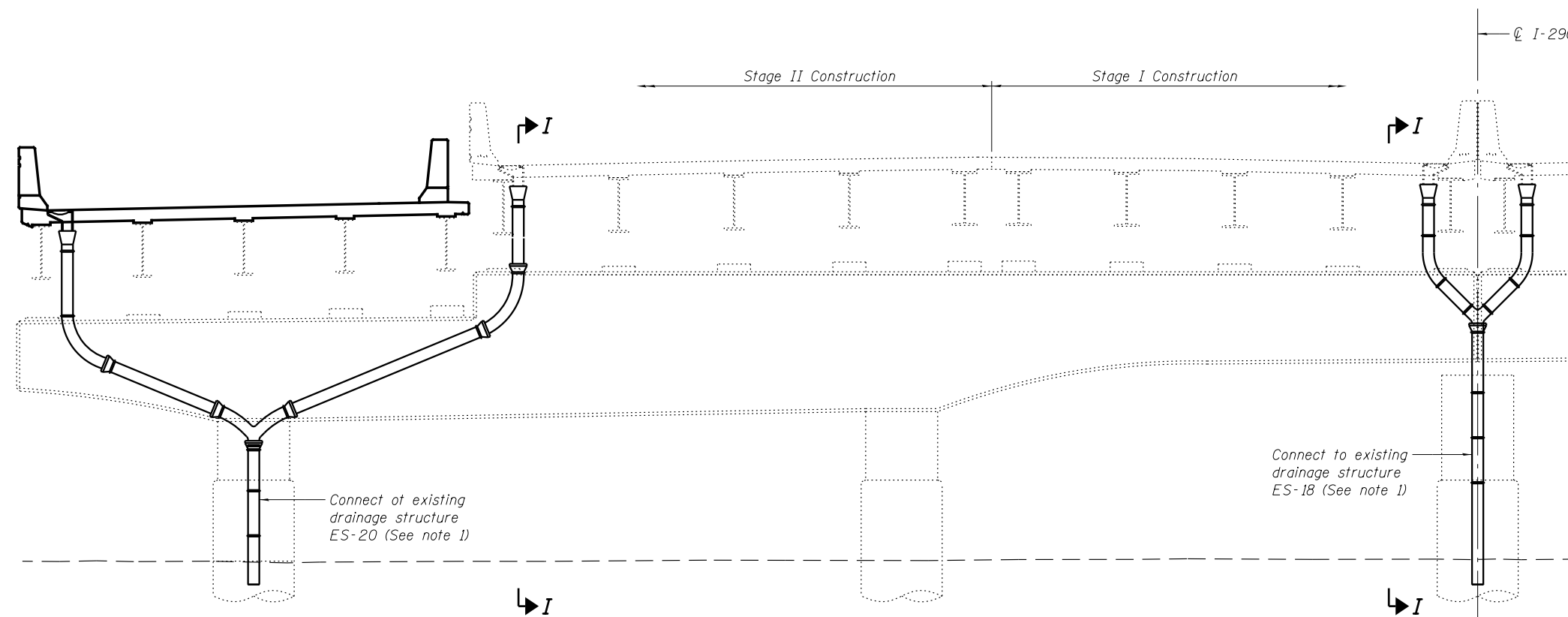
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SYSTEM DETAILS - PIER C12
STRUCTURE NO. 016-0461**

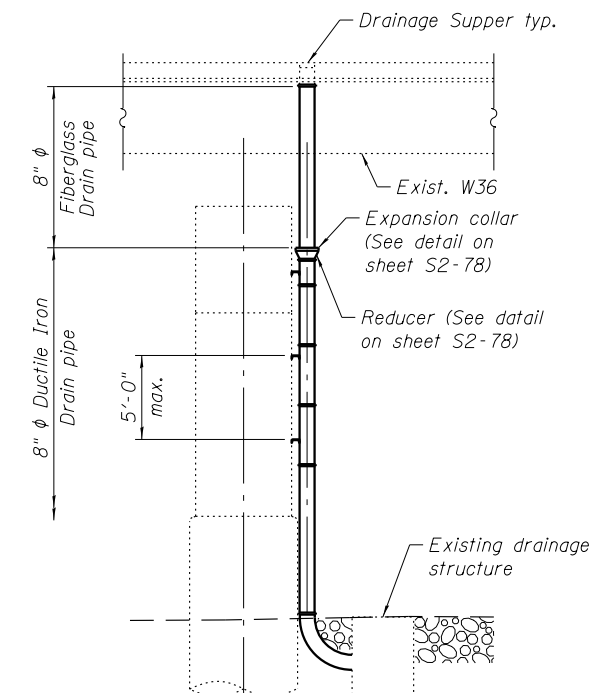
SHEET NO. S2-78 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	355
CONTRACT NO. 60X78				

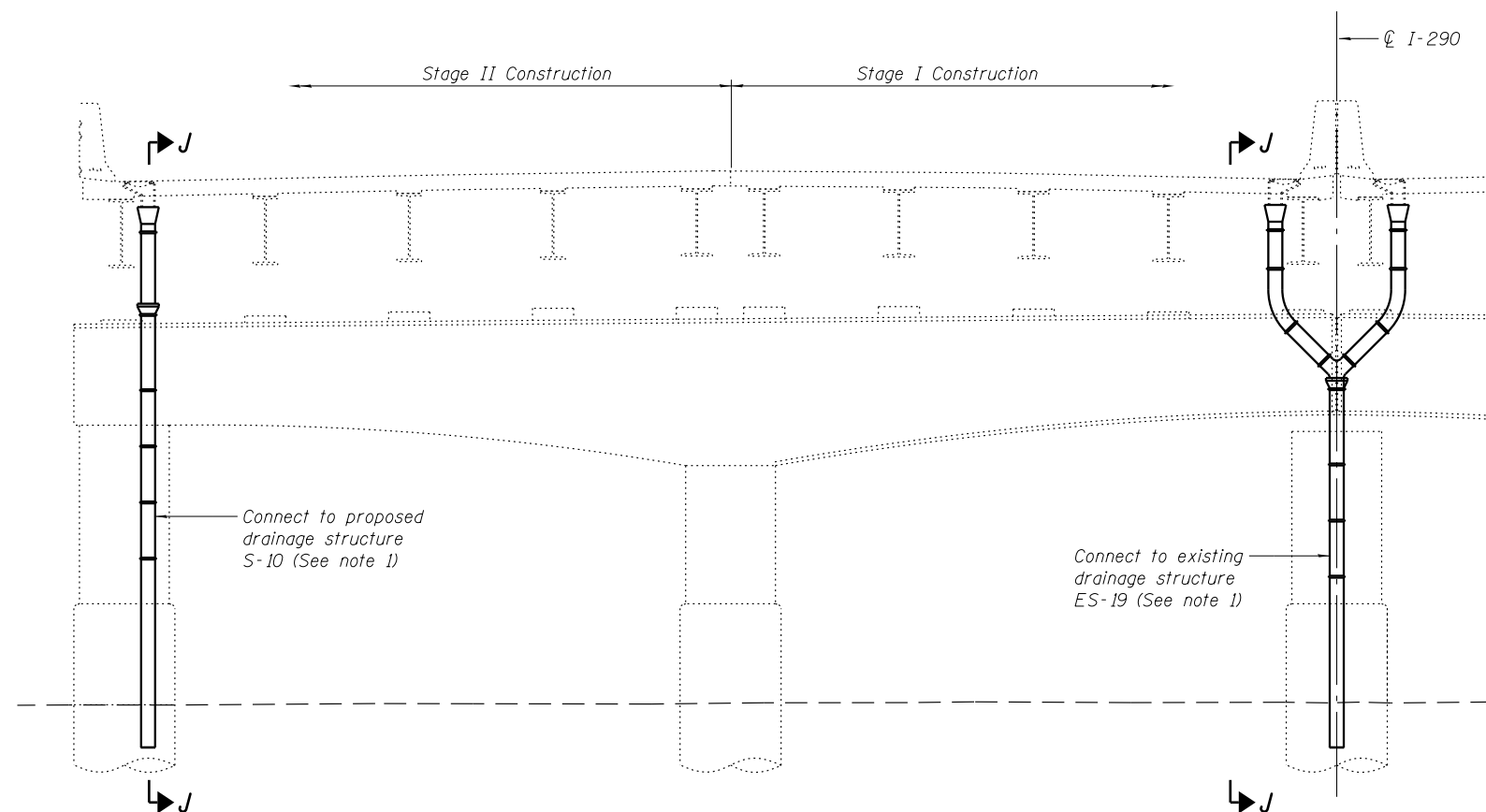
ILLINOIS FED. AID PROJECT



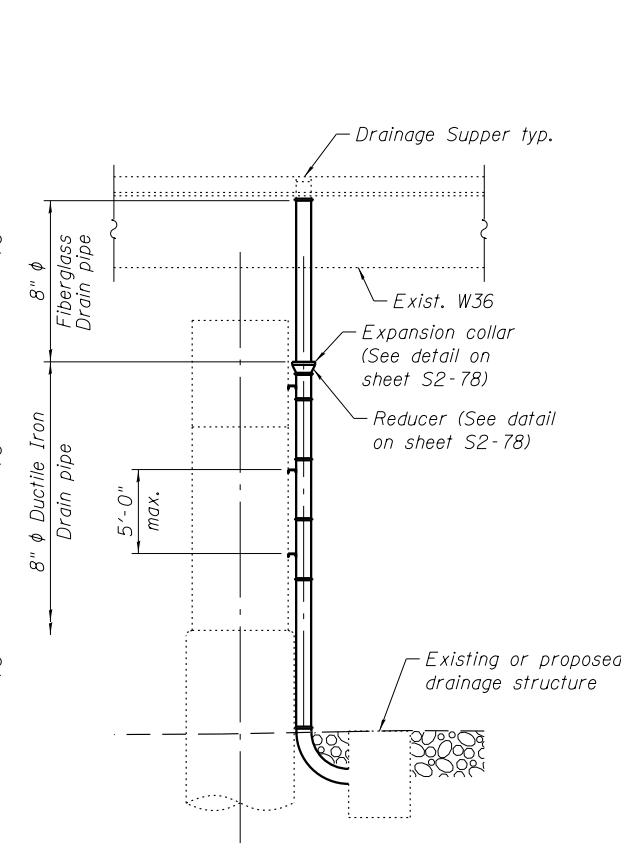
ELEVATION - PIER C13
(Looking East)



SECTION I-I



ELEVATION - PIER C14
(Looking East)



SECTION J-J

Notes:

1. Drainage system shall connect to an existing drainage structure. See drainage schedule for stationing and offsets of existing drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.

0160461-60X78-5079-DRN.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - HA	REVISD -
	CHECKED - HA	REVISD -
PLOT SCALE = N.T.S.	DRAWN - DE	REVISD -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISD -

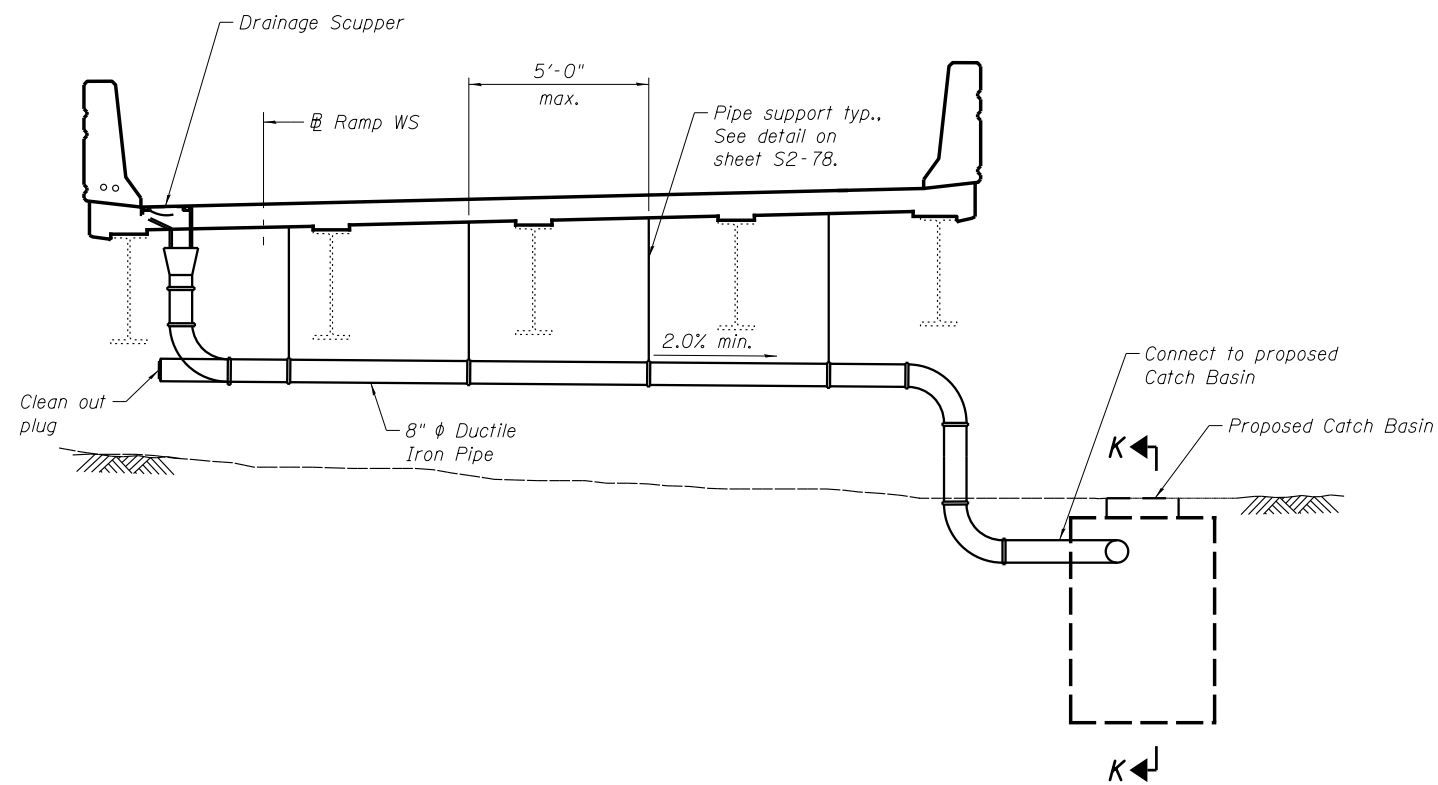
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SYSTEM DETAILS - PIER C13 & C14
STRUCTURE NO. 016-0461**

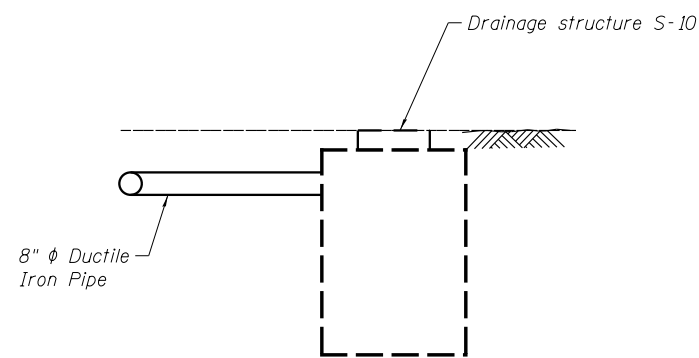
SHEET NO. S2-79 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	356
CONTRACT NO. 60X78				

ILLINOIS FED. AID PROJECT



PIER 14N - ELEVATION
(Looking East)



SECTION K-K

Notes:

1. Drainage system shall connect to an proposed drainage structure. See drainage schedule for stationing and offsets of proposed drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.

0160461-60X78-5080-DRN.dgn

**PARSONS
BRINCKERHOFF**

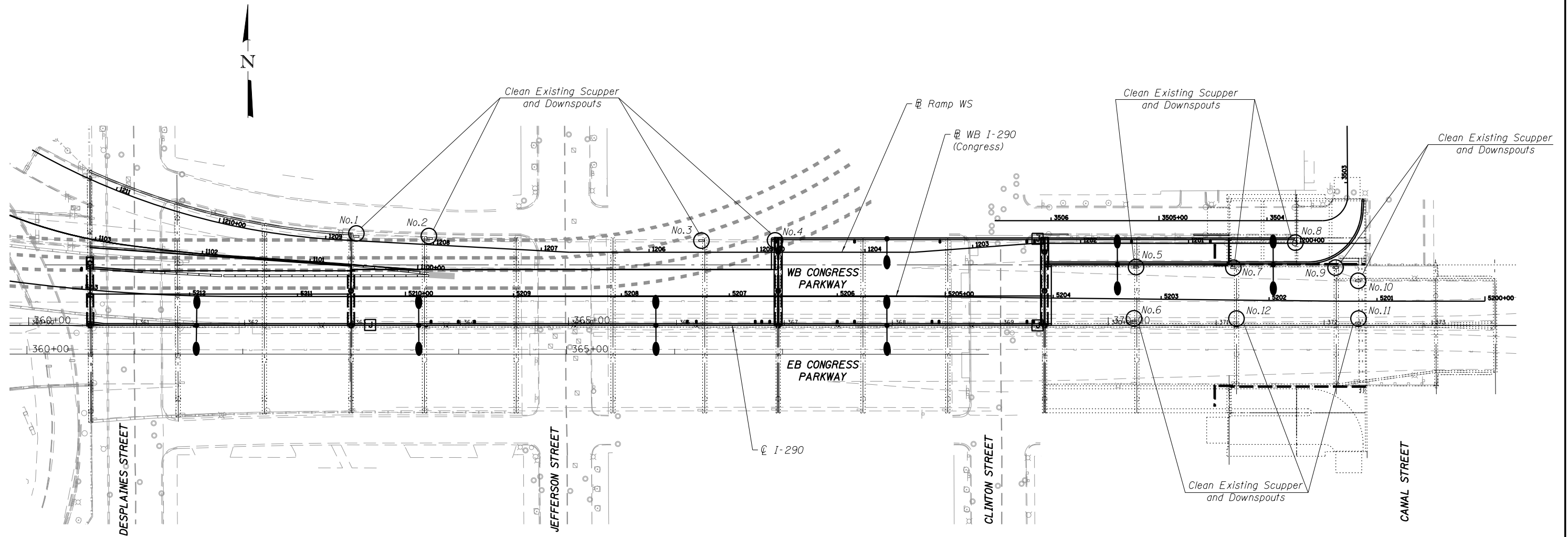
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	CHECKED - HA	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DE	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SYSTEM DETAILS - PIER 14N
STRUCTURE NO. 016-0461**

SHEET NO. S2-80 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	357
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



PLAN

BRIDGE SCUPPER STATION/OFFSET

Scupper No.	Station	Offset
1	363+03.48	82.50' Lt.
2	363+71.56	80.58' Lt.
3	366+23.18	78.55' Lt.
4	366+91.37	78.77' Lt.
5	370+25.75	54.03' Lt.
6	370+2.87	2.86' Lt.
7	371+15.93	53.39' Lt.
8	371+72.86	76.23' Lt.
9	372+10.56	53.53' Lt.
10	372+31.51	41.33' Lt.
11	372+31.45	2.02' Lt.
12	371+18.22	2.73' Lt.

Note:

1. Bridge scupper Station/Offset are measured along \varnothing I-290.

BILL OF MATERIAL

Item	Unit	Quantity
Cleaning Bridge Scuppers and Downspouts	Each	12

0160461-60X78-5081-DRN.dgn

**PARSONS
BRINCKERHOFF**

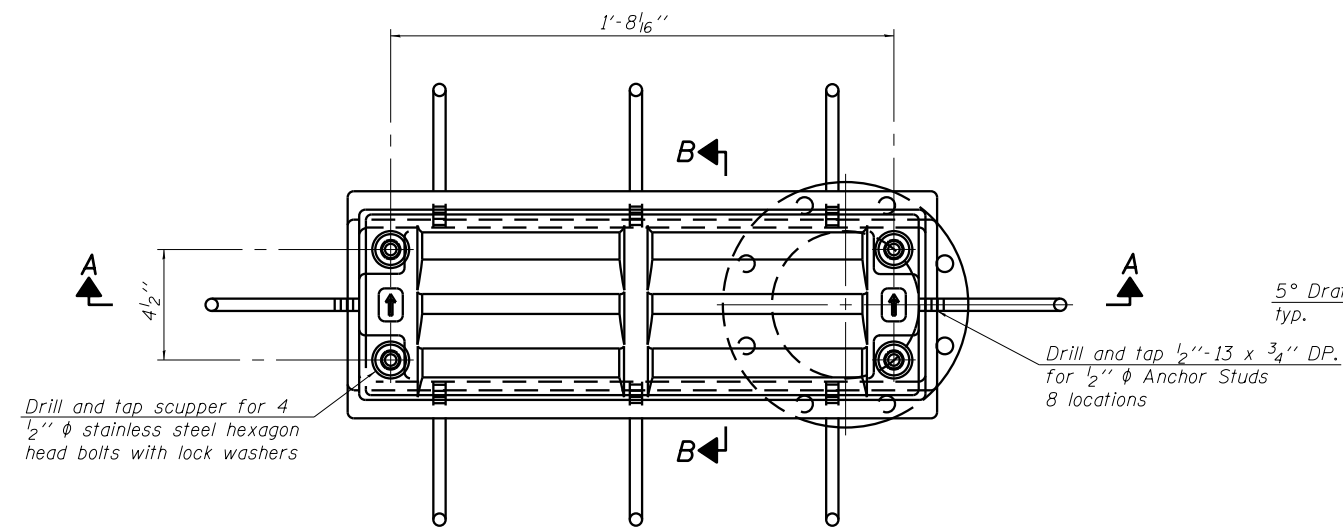
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

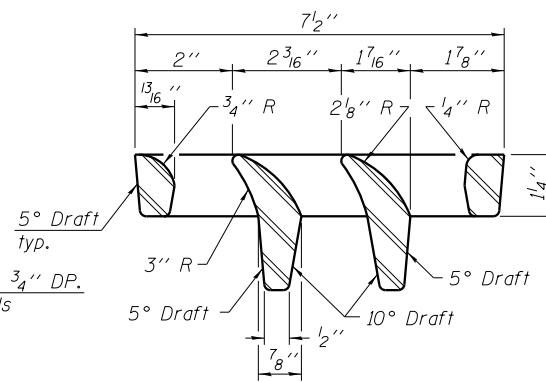
**CLEANING BRIDGE SCUPPERS AND DOWNSPOUTS
STRUCTURE NO. 016-0461**

SHEET NO. S2-81 OF S2-145 SHEETS

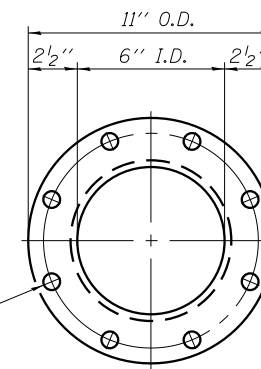
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	358
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



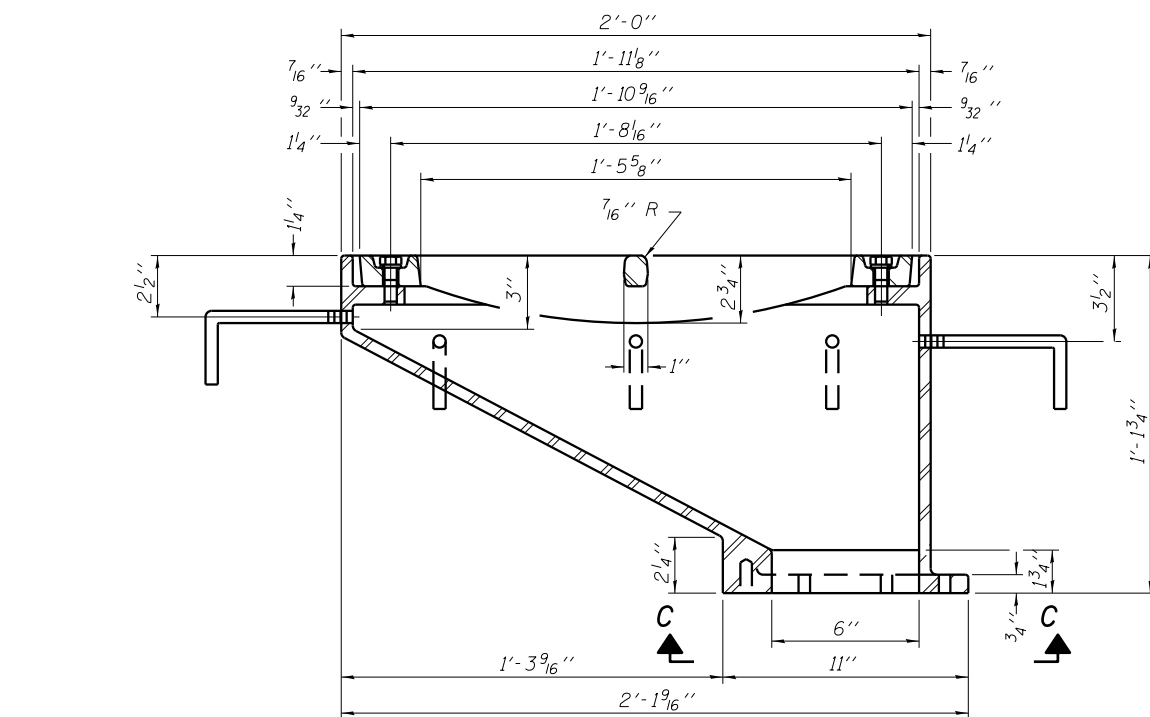
PLAN



VANE GRATE DETAIL

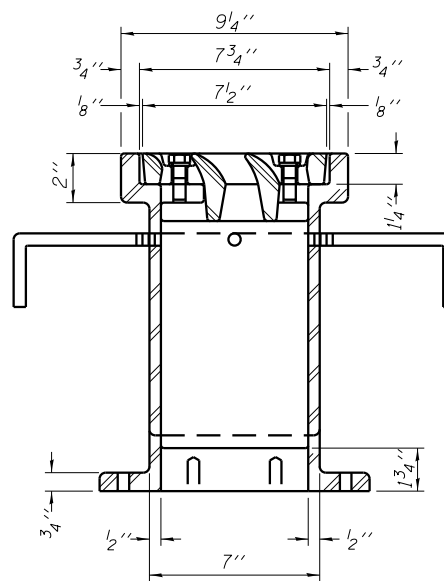


VIEW C-C

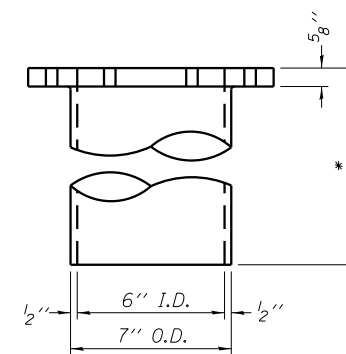


SECTION A-A

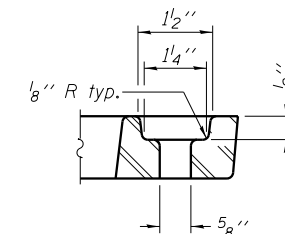
See sheet S2-57, S2-60 & S2-65 for scupper location relative to parapet.



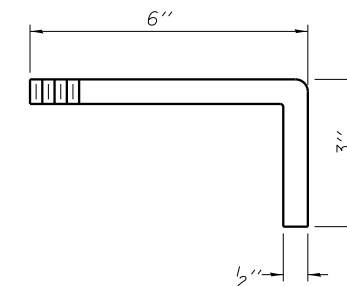
SECTION B-B



DOWNSPOUT



BOLT HOLE DETAIL



ANCHOR STUD 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 painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

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-12.

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.

* Length of downspout to be coordinated with Drainage System

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	21

DS-12

7-1-10

PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - P.JL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - AH	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SCUPPER, DS-12
STRUCTURE NO. 016-0461**

SHEET NO. S2-82 OF S2-145 SHEETS

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	359
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

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INTERIOR BEAM MOMENT TABLE - UNIT 1						
	0.4 Sp. 1	Pier C2	0.5 Sp. 2	Pier C3	0.6 Sp. 3	
I_s	(in ⁴)	7,800	11,300	7,800	11,300	7,800
$I_c(n)$	(in ⁴)	22,815	-	22,815	-	22,815
$I_c(3n)$	(in ⁴)	16,546	-	16,546	-	16,546
$I_c(cr)$	(in ⁴)	-	14,579	-	14,579	-
S_s	(in ³)	439	623	439	623	439
$S_c(n)$	(in ³)	686	-	686	-	686
$S_c(3n)$	(in ³)	615	-	615	-	615
$S_c(cr)$	(in ³)	-	707	-	707	-
DC1	(k/')	0.80	0.85	0.80	0.85	0.80
M _{DC1}	(k)	388	560	102	564	380
DC2	(k/')	0.13	0.13	0.06	0.06	0.06
M _{DC2}	(k)	69	73	-2	36	34
DW	(k/')	0.13	0.14	0.14	0.14	0.14
M _{DW}	(k)	68	92	18	93	67
M _{ℓ + IM}	(k)	838	902	694	903	826
M _u (Strength I)	(k)	2,140	2,508	1,367	2,469	2,064
Φ _r M _n	(k)	3,333	3,624	3,473	3,624	3,346
f _s DC1	(ksi)	10.6	10.8	2.8	10.9	10.4
f _s DC2	(ksi)	1.3	1.2	0.0	0.6	0.7
f _s DW	(ksi)	1.3	1.6	0.4	1.6	1.3
f _s (ℓ+IM)	(ksi)	14.7	15.3	12.1	15.3	14.4
f _s (Service II)	(ksi)	32.3	33.5	18.9	33.0	31.2
0.95R _n F _{yf}	(ksi)	47.5	47.5	47.5	47.5	47.5
f _s (Total)(Strength I)	(ksi)	42.6	44.3	25.4	43.7	41.1
Φ _r F _n	(ksi)	-	-	-	-	-
V _r	(k)	29.7	32.6	26.5	32.2	27.7

INTERIOR BEAM REACTION TABLE - UNIT 1					
	Pier C1	Pier C2	Pier C3	Pier C4	
R _{DC1}	(k)	25.6	73.1	73.2	25.5
R _{DC2}	(k)	4.2	9.2	5.1	2.1
R _{DW}	(k)	4.3	12.1	12.1	4.3
R _{ℓ + IM}	(k)	84.0	136.4	136.7	83.7
R _{Total}	(k)	118.2	230.8	227.0	115.6

TOP OF BEAM ELEVATIONS

(For fabrication only)

	Beam 10	Beam 11	Beam 12	Beam 13	Beam 14	Beam 15	Beam 16	Beam 17	Beam 18
℄ E. Brq. Pier C1	607.88	608.20	608.53	608.76	608.99	609.27	609.55	609.83	610.11
℄ Splice 1	608.58	608.81	609.04	609.27	609.50	609.78	610.06	610.34	610.61
℄ Pier C2	608.66	608.89	609.12	609.35	609.58	609.86	610.14	610.41	610.69
℄ Splice 2	608.74	608.97	609.20	609.43	609.66	609.93	610.21	610.49	610.76
℄ Splice 3	609.48	609.63	609.76	609.89	610.03	610.21	610.39	610.58	610.76
℄ Pier C3	609.80	609.93	610.05	610.17	610.29	610.44	610.58	610.73	610.87
℄ Splice 4	610.12	610.23	610.34	610.44	610.55	610.66	610.77	610.87	610.98
℄ W. Brq. Pier C4	610.62	610.73	610.83	610.94	611.04	611.12	611.20	611.29	611.37

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 (in⁴ and in³).

$I_c(n), S_c(n)$: 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) in uncracked sections due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: 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) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).

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

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

Φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (ℓ+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_{ℓ + IM} / S_c(n)$ or $M_{ℓ + IM} / cS (cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
 $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (ℓ + IM)$

0.95R_nF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
 $1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (ℓ + IM)$

Φ_rF_n: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_r: Maximum factored shear range in span computed according to Article 6.10.10.

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**PARSONS
BRINCKERHOFF**

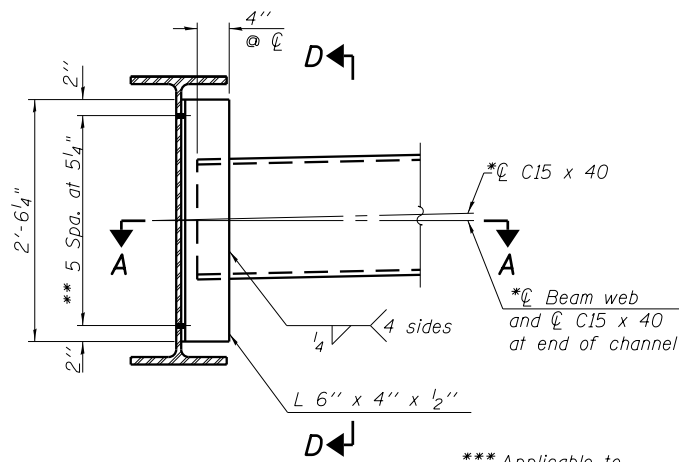
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PLOT DATE = 4/25/2016	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE STEEL DETAILS I - UNIT I
STRUCTURE NO. 016-0461

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	361
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

SHEET NO. S2-84 OF S2-145 SHEETS



INTERIOR DIAPHRAGM

D4 (44 Required)
 D5 (40 Required)
 D6 (2 Required)
 D7 (2 Required)

Note:

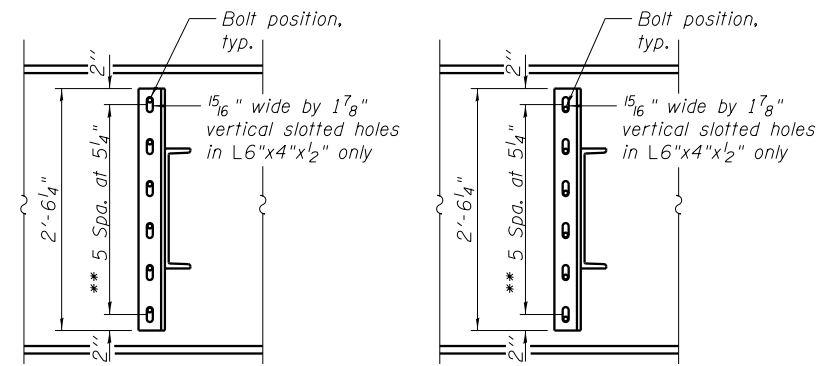
Two hardened washers required for each set of oversized holes.

*Alternate channel C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

The alternate, if utilized, shall be provided at no additional cost to the Department.

**3/4" ϕ HS bolts, 15/16" ϕ holes

*** Applicable to Interior D5 Diaphragms Between Beams 13 & 14 Only (at 11 of the 40 D5 diaphragms)



SECTION D-D

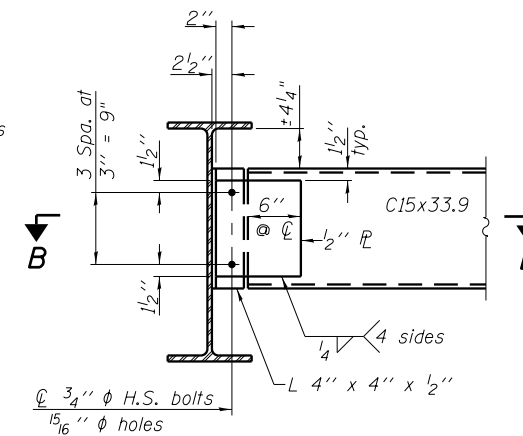
At Beam 13 on before placing Stage IIB concrete slab

SECTION D-D

At Beam 13 on after placing Stage IIB concrete slab

SUGGESTED SEQUENCE OF CONSTRUCTION FOR INTERIOR DIAPHRAGMS AT STAGE CONSTRUCTION

1. Prior to Stage IIB deck work, connect diaphragm to Beam 14. Bolts in slots of Beam 13 and in diaphragm connection angle shall be finger tight until the Stage IIB pour is complete. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load.
2. Set slab forms and place reinforcement.
3. Place Stage IIB concrete slab. Once beam 13 deflects, tighten bolts as required.

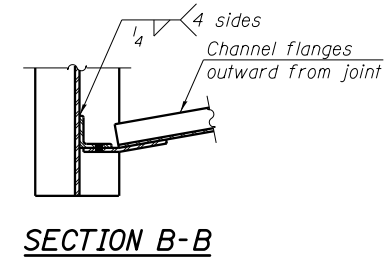


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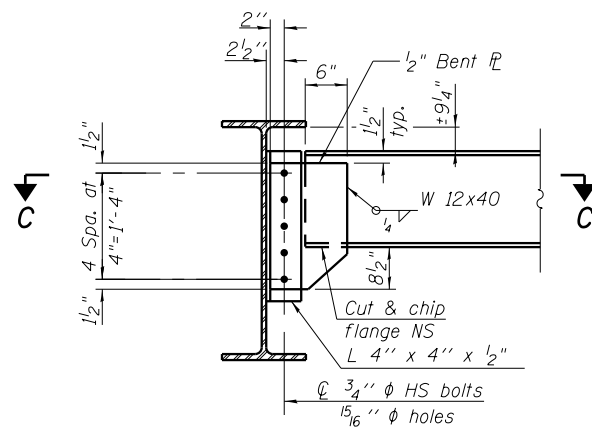
D8 (4 Required)
 D9 (4 Required)

Note:

Two hardened washers required for each set of oversized holes.



SECTION B-B

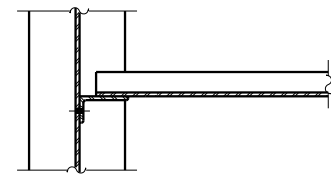


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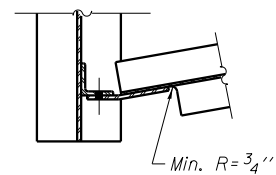
D1 (4 Required)
 D2 (2 Required)
 D3 (2 Required)

Note:

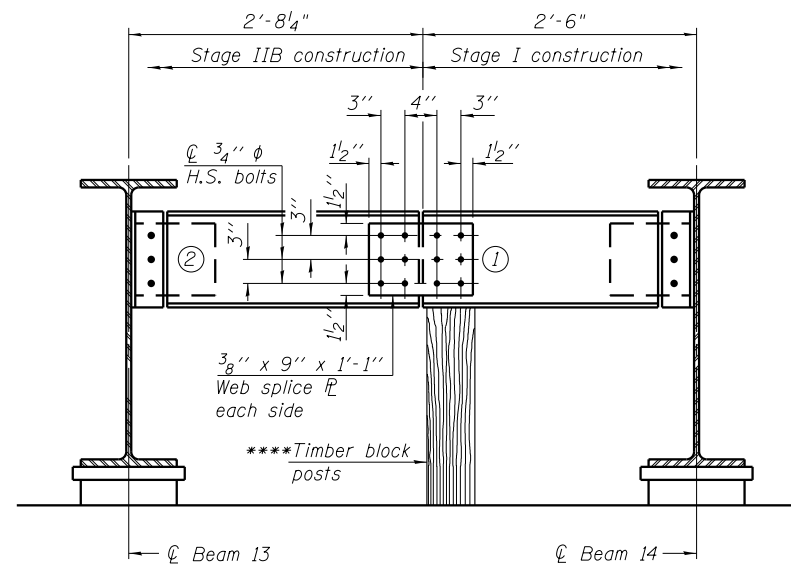
Two hardened washers required for each set of oversized holes.



SECTION A-A



SECTION C-C

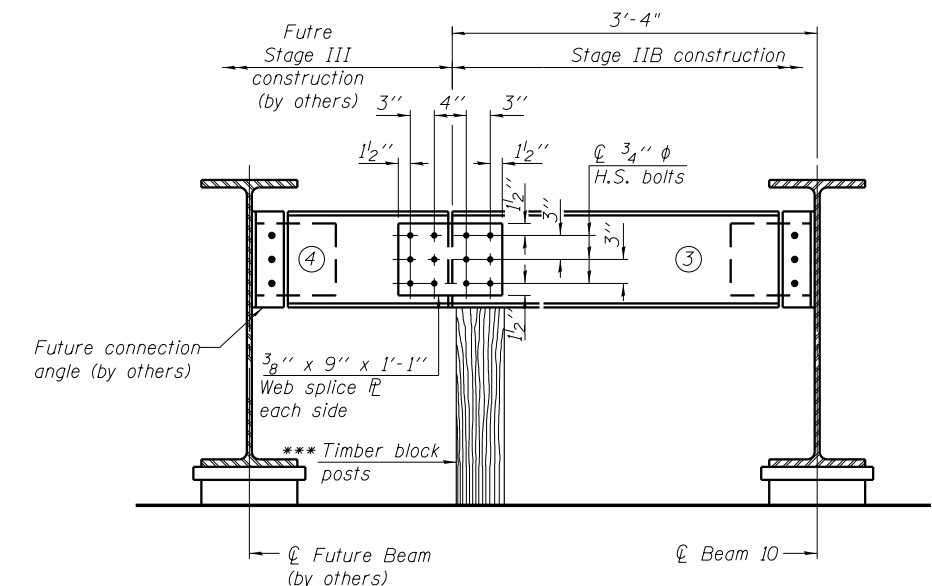


END DIAPHRAGM STAGE I AND IIB

(Looking East, 2 Required)
 End diaphragm (D2) at Pier C4 shown, end diaphragm (D9) at Pier C1 similar

END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE

- 1.) Order diaphragm in two sections.
- 2.) Attach section ① of diaphragm to beam 14.
- 3.) Place timber block posts between section ① of diaphragm and pier bearing section.
- 4.) Attach section ② of diaphragm to both beam 13 and section ① of diaphragm during stage IIB construction with splice plates.
- 5.) Remove timber block posts.



END DIAPHRAGM STAGE IIB AND FUTURE STAGE III

(Looking East, 1 Required)

END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE

- 1.) Order diaphragm in two sections.
- 2.) Attach section ③ of diaphragm to beam 10.
- 3.) Place timber block posts between section ③ of diaphragm and pier bearing section.
- 4.) Attach section ④ of diaphragm to section ③ of diaphragm after stage IIB construction with splice plates.
- 5.) Timber block posts to remain in place and be removed as part of future contract.

****Cost of Timber Block Posts is included with Structural Steel.

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PARSONS BRINCKERHOFF

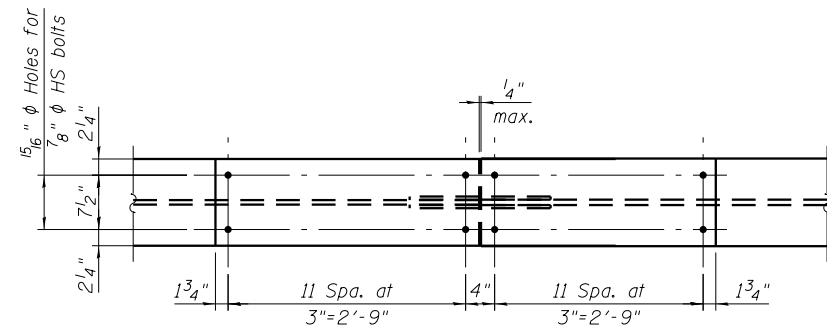
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PLOT SCALE = N.T.S.	CHECKED - PJL	REVISED -
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	CHECKED - JIG	REVISED -

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 DEPARTMENT OF TRANSPORTATION**

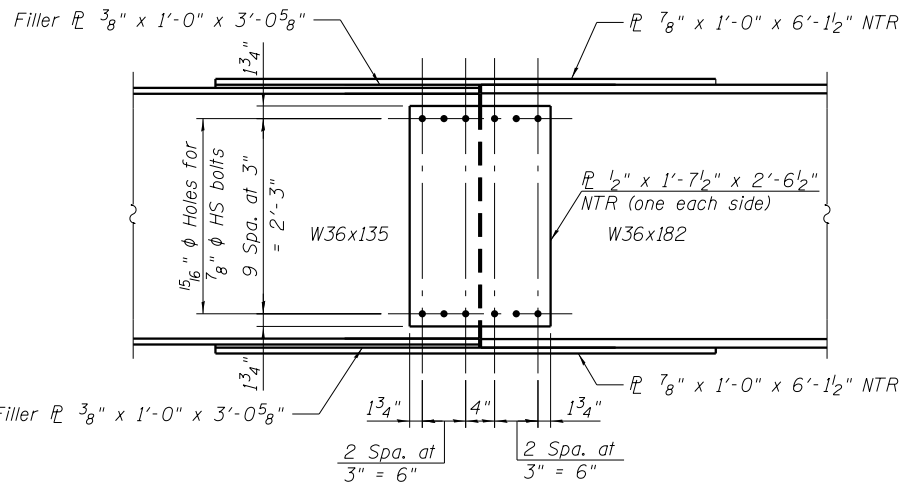
**SUPERSTRUCTURE STEEL DETAILS II - UNIT I
 STRUCTURE NO. 016-0461**

SHEET NO. S2-85 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	362
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

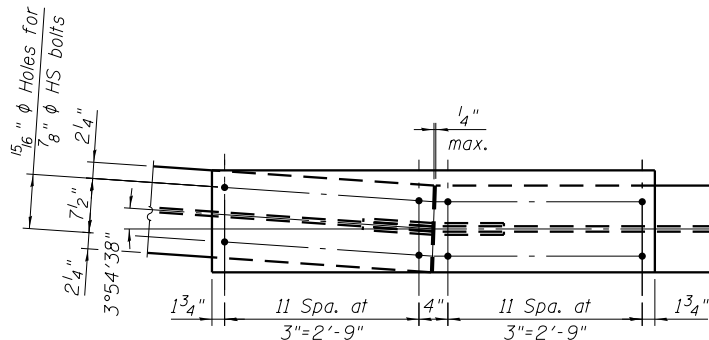


PLAN

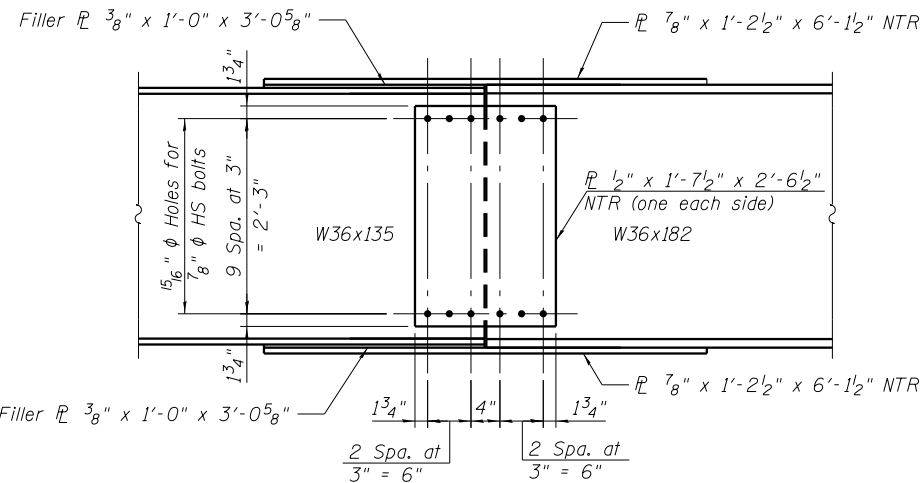


ELEVATION

TYPICAL SPLICE DETAIL
(34 Required)

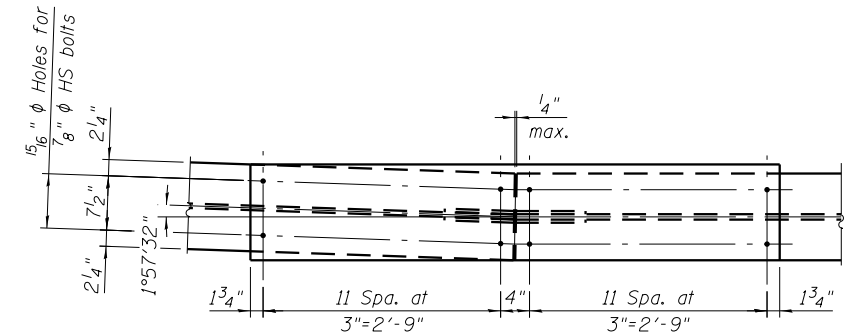


PLAN

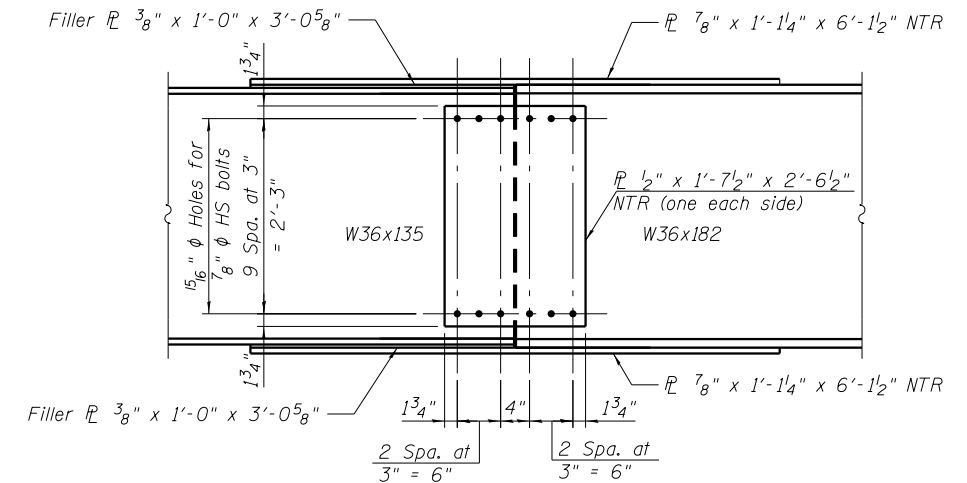


ELEVATION

SPLICE DETAIL (BEAM 10, SPLICE 1)
(1 Required)



PLAN



ELEVATION

SPLICE DETAIL (BEAM 11, SPLICE 1)
(1 Required)

Note:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

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**PARSONS
BRINCKERHOFF**

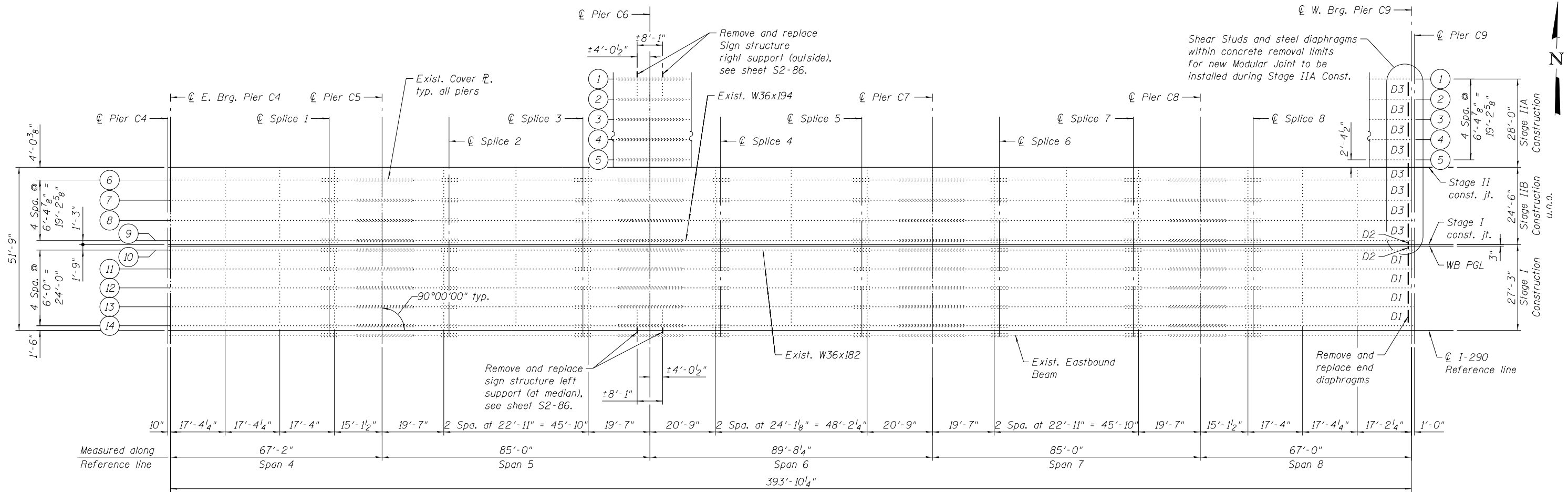
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CHECKED - PJL	REVISED -	
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
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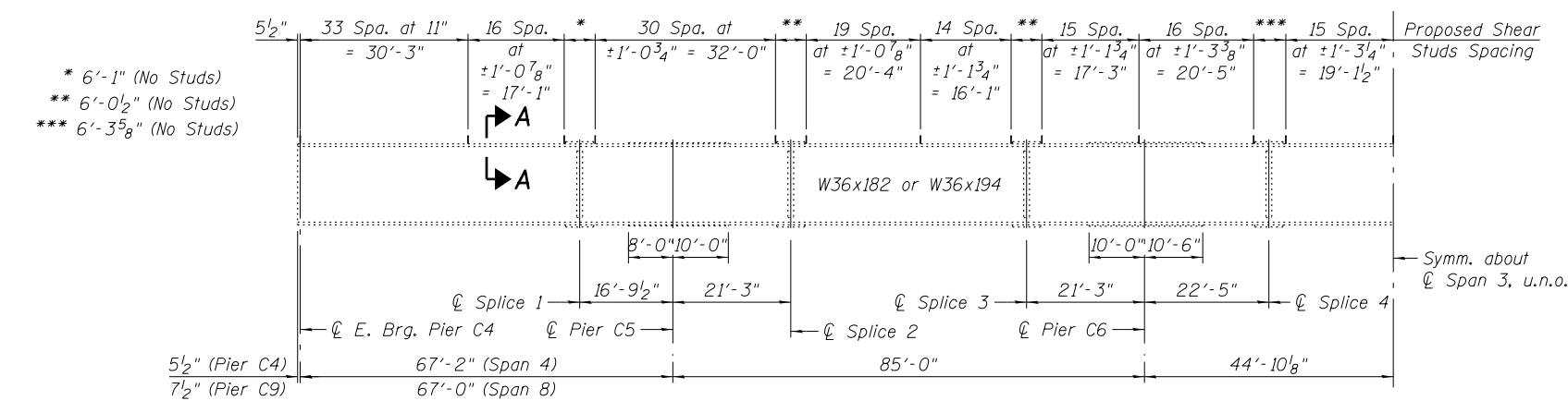
**SUPERSTRUCTURE STEEL DETAILS III - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-86 OF S2-145 SHEETS

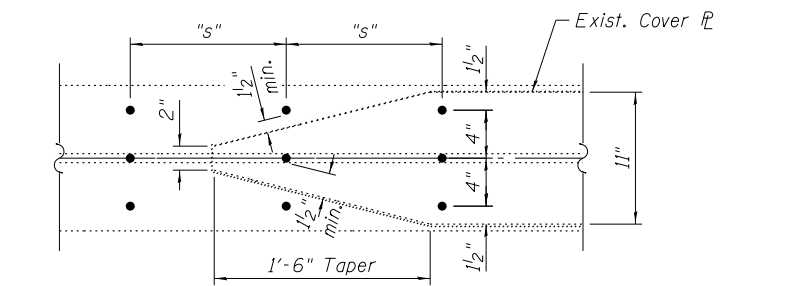
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	363
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



EXISTING FRAMING PLAN - UNIT II

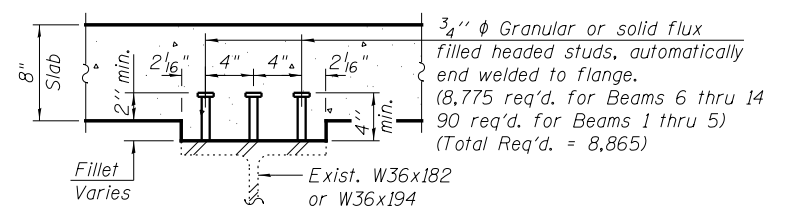


EXISTING BEAM ELEVATION - UNIT II



SHEAR STUDS AT ENDS OF COVER PLATE

Shear connector spacing, "s", may be adjusted up to 3" to maintain minimum clearances.



SECTION A-A

Notes:
 For top of existing beam elevations and notes and tables, see sheet S2-88.
 For diaphragm replacement details, see sheet S2-93.

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - PJL	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
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**FRAMING PLAN - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-87 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	364
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

INTERIOR BEAM MOMENT TABLE						
	0.4 Sp. 4 or 0.6 Sp. 8	Pier C5 or Pier C8	0.5 Sp. 5 or 0.5 Sp. 7	Pier C6 or Pier C7	0.5 Sp. 6	
I_s	(in ⁴)	12100	15865	12100	16838	12100
$I_c(n)$	(in ⁴)	30740	19320	30740	20304	30740
$I_c(3n)$	(in ⁴)	21792	19320	21792	20304	21792
S_s	(in ³)	664	846	664	892	664
$S_c(n)$	(in ³)	977	1157	977	1201	977
$S_c(3n)$	(in ³)	866	1157	866	1201	866
ϕ	(k/')	0.879	0.920	0.879	0.931	0.879
$M\phi$	(k)	268	523	237	598	290
$s\phi$	(k/')	0.230	0.230	0.230	0.230	0.230
$M_s\phi$	(k)	70	135	63	155	77
M_L	(k)	435	416	450	479	475
M_I	(k)	113	103	107	113	111
$^{53} [M_L + I]$	(k)	913	865	928	987	977
M_a	(k)	1627	1980	1597	2262	1747
M_u	(k)	2829		3455		3455
$f_s \phi$ non-comp	(ksi)	4.8	7.4	4.3	8.0	5.2
$f_s \phi$ (comp)	(ksi)	1.0	1.4	0.9	1.5	1.1
$f_s \phi [M_L + M_I]$	(ksi)	11.2	9.0	11.4	9.9	12.0
f_s (Overload)	(ksi)	17.0	17.8	16.6	19.4	18.3
f_s (Total)	(ksi)		23.1		25.2	
VR	(k)	54.5	58.7	41.9	57.2	41.9

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

INTERIOR BEAM REACTION TABLE					
	Pier C4 & C9	Pier C5 & C8	Pier C6	Pier C7	
$R\phi$	(k)	28.3	94.0	106.6	99.4
R_L	(k)	45.4	59.0	62.4	62.4
R_I	(k)	11.8	14.7	14.7	14.7
R_{Total}	(k)	85.6	167.7	183.7	176.5

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 (in⁴ and in³).
 $I_c(n), S_c(n)$: 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 (in⁴ and in³).
 $I_c(3n), S_c(3n)$: 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 (in⁴ and in³).
 Z : Plastic Section Modulus of the steel section in non-composite areas (in³).
 ϕ : Un-factored non-composite dead load (kips/ft.).
 $M\phi$: Un-factored moment due to non-composite dead load (kip-ft.).
 $s\phi$: Un-factored long-term composite (superimposed) dead load (kips/ft.).
 $M_s\phi$: 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.).
 $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)]$
 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).
 $M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)$
 f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)]$
 VR : Maximum $L + impact$ shear range within the composite portion of the span for stud shear connector design (kips).

TOP OF EXISTING BEAM ELEVATION ***

	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10	Beam 11	Beam 12	Beam 13	Beam 14
ϕ E. Brg. Pier C4	610.67	610.80	610.93	611.03	611.08	611.15	611.23	611.31	611.39
ϕ Splice 1	611.11	611.24	611.37	611.42	611.43	611.43	611.43	611.43	611.43
ϕ Brg. Pier C5	611.23	611.36	611.49	611.54	611.55	611.54	611.51	611.49	611.46
ϕ Splice 2	611.38	611.52	611.64	611.70	611.70	611.67	611.62	611.56	611.50
ϕ Splice 3	611.61	611.74	611.86	611.92	611.92	611.87	611.76	611.63	611.51
ϕ Brg. Pier C6	611.67	611.81	611.93	611.99	611.99	611.93	611.82	611.70	611.57
ϕ Splice 4	611.74	611.88	612.00	612.06	612.06	612.00	611.89	611.77	611.64
ϕ Splice 5	611.79	611.92	612.04	612.10	612.10	612.05	611.94	611.81	611.69
ϕ Brg. Pier C7	611.76	611.89	612.02	612.07	612.07	612.02	611.91	611.79	611.66
ϕ Splice 6	611.74	611.87	611.99	612.05	612.05	612.00	611.89	611.76	611.64
ϕ Splice 7	611.61	611.74	611.86	611.92	611.92	611.87	611.76	611.63	611.51
ϕ Brg. Pier C8	611.53	611.66	611.79	611.84	611.84	611.79	611.68	611.56	611.43
ϕ Splice 8	611.47	611.61	611.73	611.79	611.79	611.73	611.62	611.50	611.37
ϕ W. Brg. Pier C9	611.40	611.53	611.66	611.71	611.71	611.66	611.55	611.43	611.30

FOR INFORMATION ONLY

TOP OF EXISTING BEAM ELEVATION (STAGE IIA) ***

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
ϕ W. Brg. Pier C9	610.73	610.87	611.00	611.13	611.27

*** Elevations have been converted from the City of Chicago Datum on the original construction plans dated June 26, 1950 to the current NAVD 88 datum using a conversion of 579.19 feet.

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**PARSONS
BRINCKERHOFF**

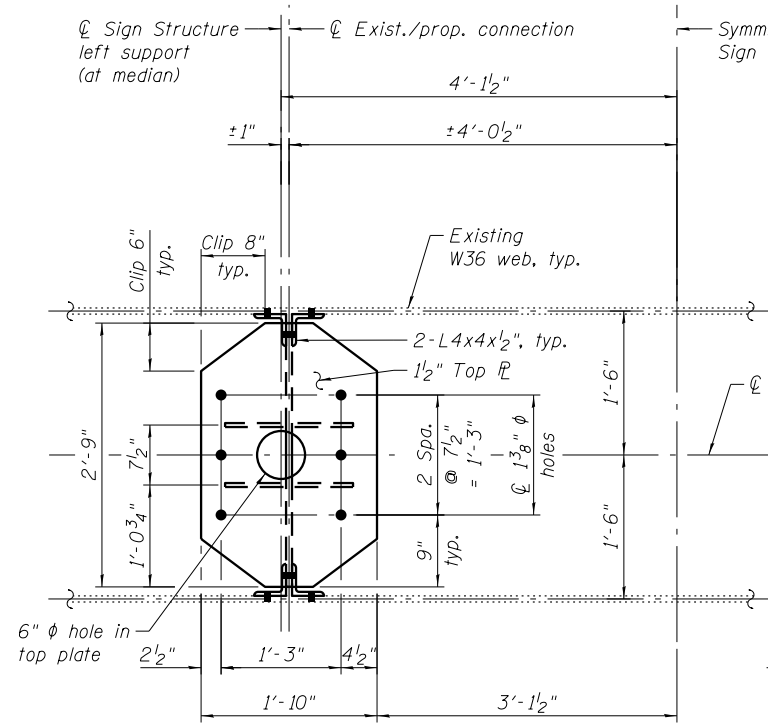
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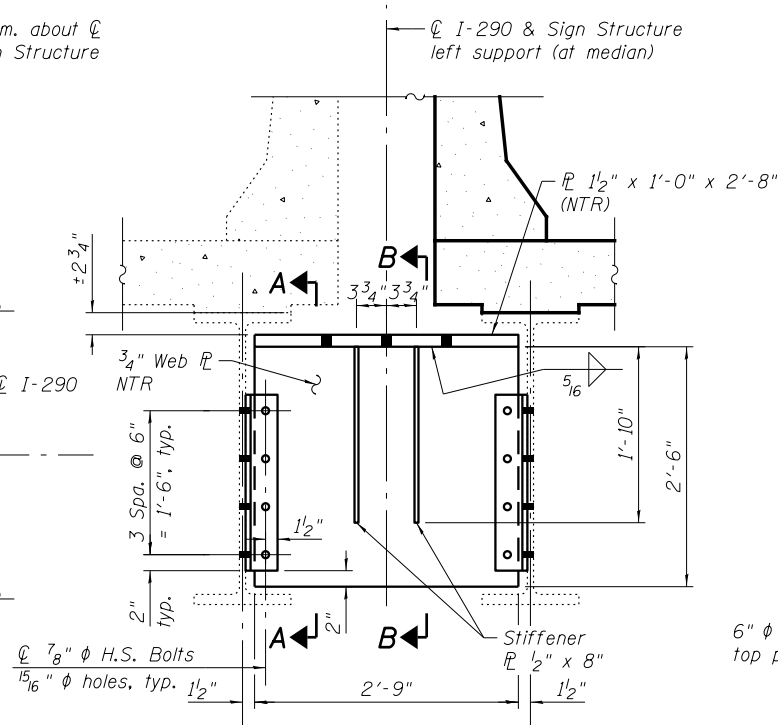
SUPERSTRUCTURE STEEL DETAILS I - UNIT II
STRUCTURE NO. 016-0461

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

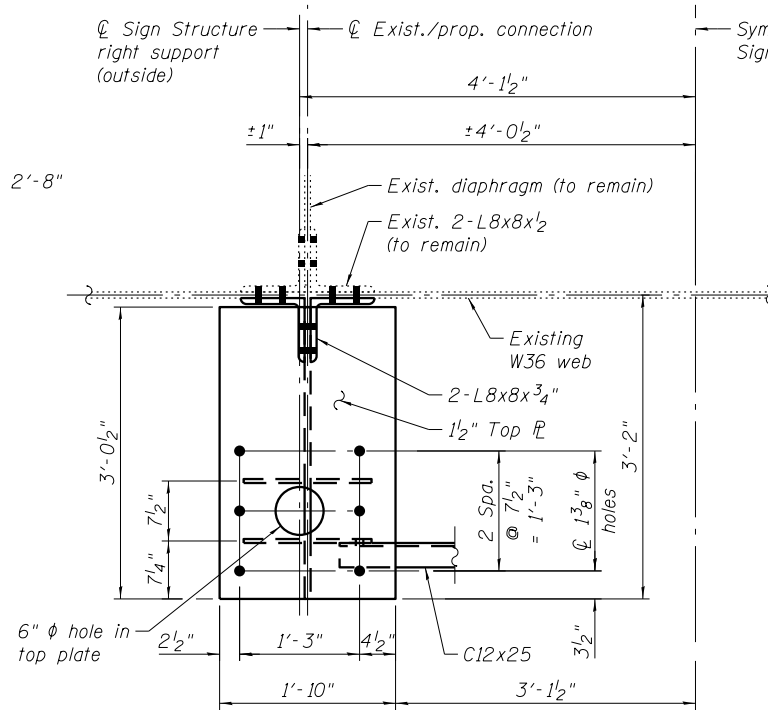
SHEET NO. S2-88 OF S2-145 SHEETS



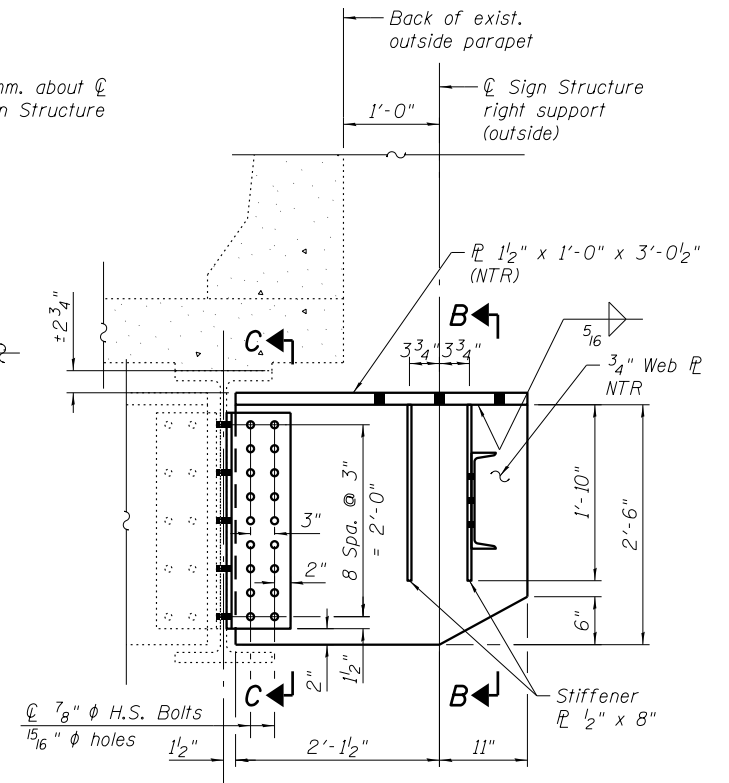
PLAN - SUPPORT AT MEDIAN
(Front support shown, back support similar)



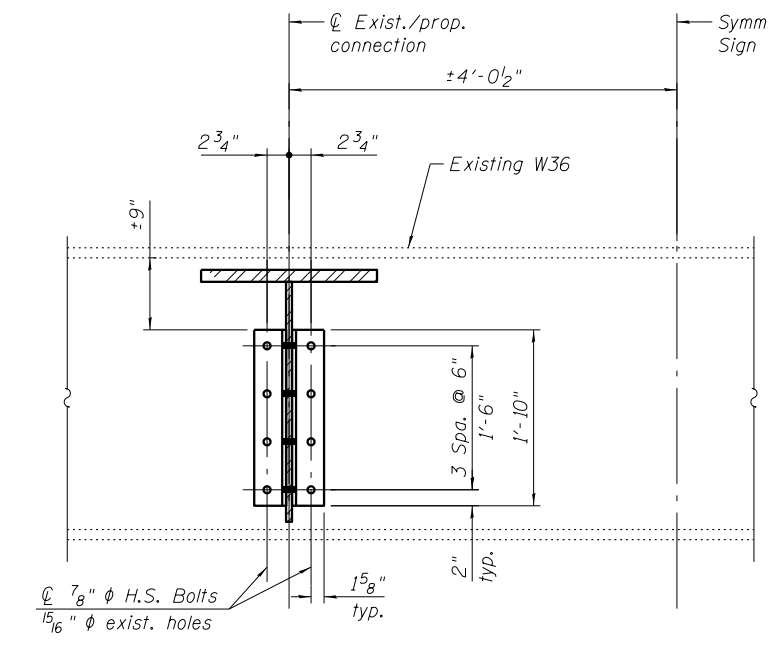
ELEVATION - SUPPORT AT MEDIAN
Looking West



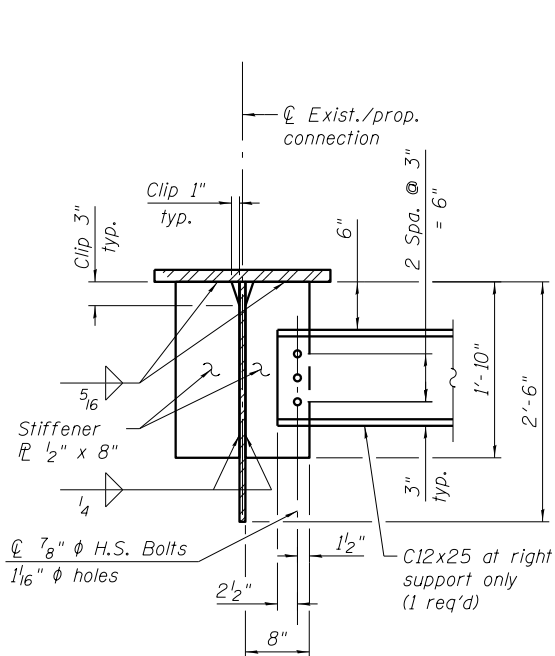
PLAN - RIGHT SUPPORT
(Front support shown, back support similar)



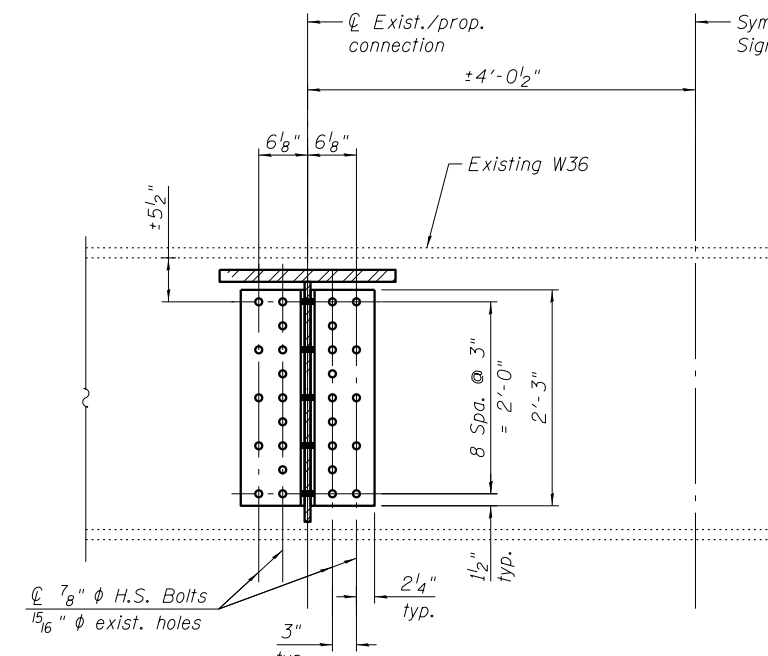
ELEVATION - RIGHT SUPPORT
Looking West



SECTION A-A



SECTION B-B
(Stiffener PL's, 8 locations)



SECTION C-C

- Notes:
- For sign structure, see Civil Plans.
 - All structural steel for supports shall be AASHTO M270 Grade 50 and shall be hot dipped galvanized. Cost included with Structural Steel Repair.
 - Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	3,489

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**PARSONS
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USER NAME = pateld
 PLOT SCALE = N.T.S.
 PLOT DATE = 3/23/2016

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 CHECKED - JIG
 DRAWN - PJL
 CHECKED - JIG

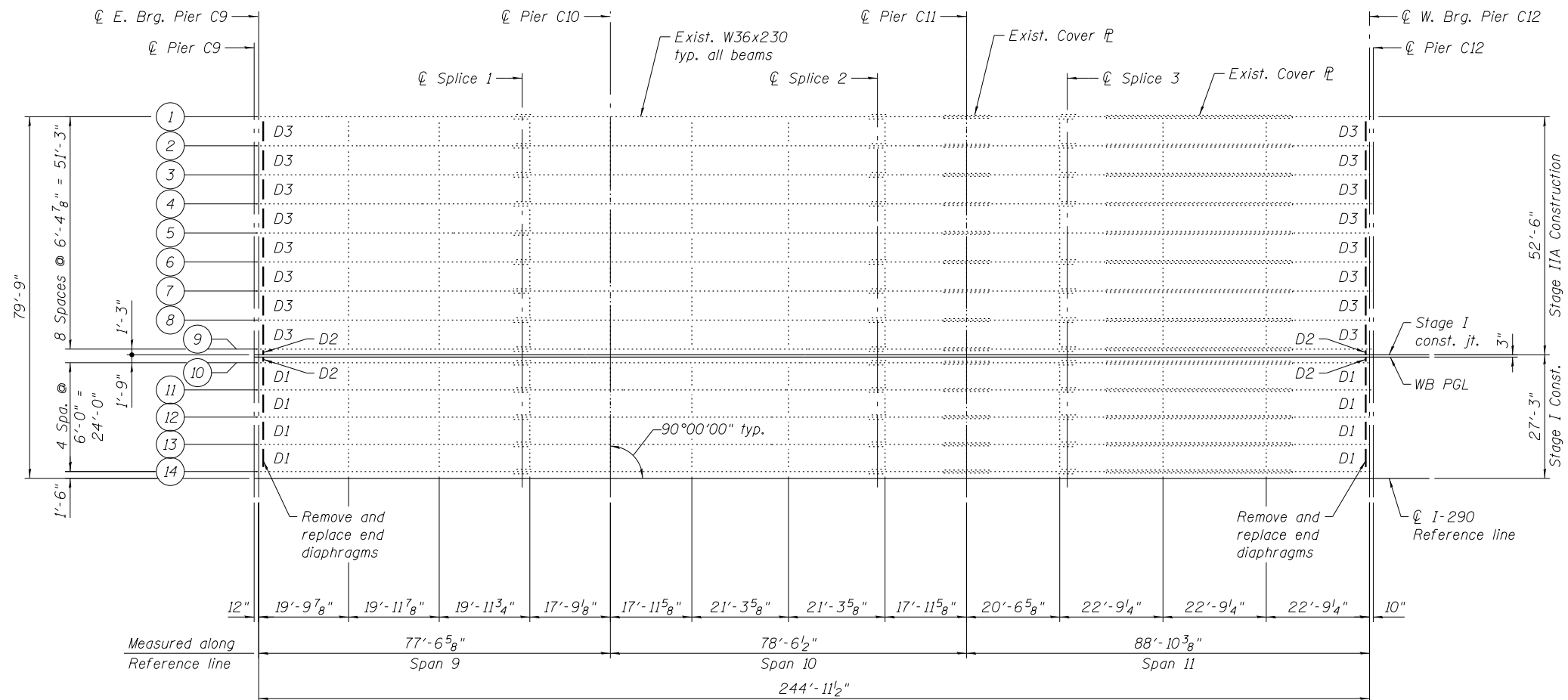
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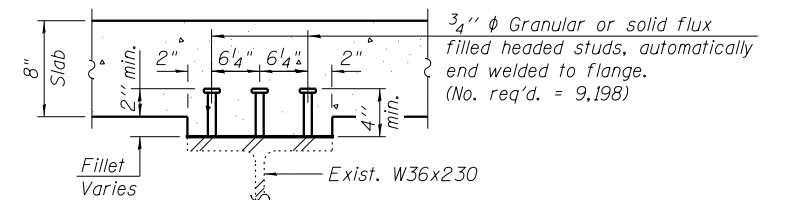
**SUPERSTRUCTURE STEEL DETAILS II - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-89 OF S2-145 SHEETS

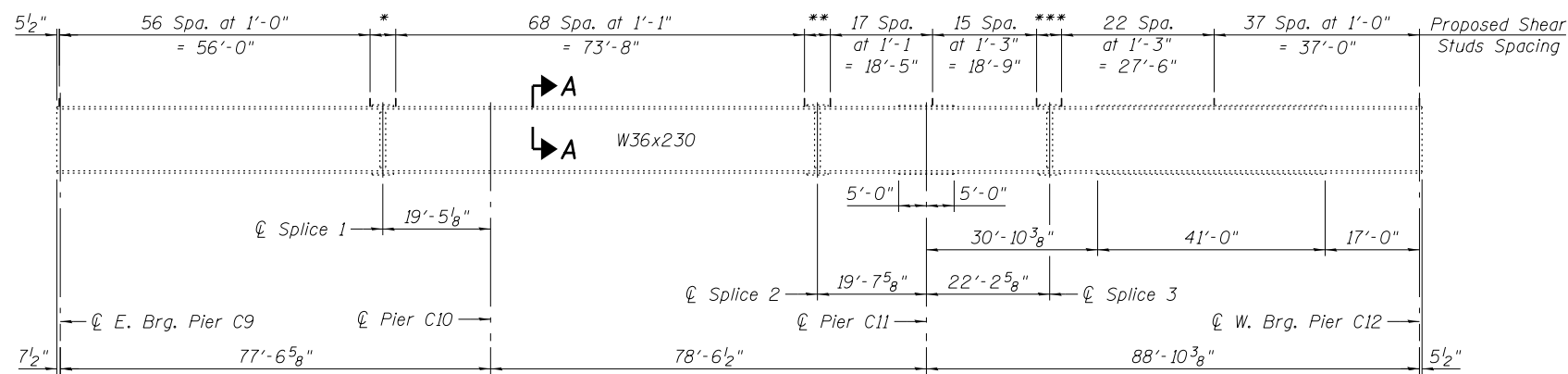
F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	366
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



EXISTING FRAMING PLAN - UNIT III



SECTION A-A



EXISTING BEAM ELEVATION - UNIT III

Notes:
 For minimum clearances of shear studs at ends of cover plates, see sheet S2-87.
 For interior beam moment table and reactions, see sheet S2-91.
 For diaphragm replacement details, see sheet S2-93.

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**PARSONS
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USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - PJL	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
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**FRAMING PLAN - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-90 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	367
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

INTERIOR BEAM MOMENT TABLE						
	0.4 Sp. 9	Pier C10	0.5 Sp. 10	Pier C11	0.6 Sp. 11	
I_s	(in ⁴)	15000	15000	15000	21254	21254
$I_c(n)$	(in ⁴)	34857	18370	34857	24686	43499
$I_c(3n)$	(in ⁴)	24894	18370	24894	24686	31714
S_s	(in ³)	837	837	837	1144	1144
$S_c(n)$	(in ³)	1162	1155	1162	1456	1492
$S_c(3n)$	(in ³)	1038	1155	1038	1456	1346
ϕ	(k/')	0.928	0.928	0.928	0.998	0.998
$M\phi$	('k)	461	530	107	687	654
$s\phi$	(k/')	0.230	0.230	0.230	0.230	0.230
$M_s\phi$	('k)	113	133	26	169	151
M_L	('k)	518	410	430	466	614
M_{IM}	('k)	128	101	105	112	143
$S_3 [M_L + i]$	('k)	1077	852	892	963	1262
M_a	('k)	2146	1969	1332	2365	2687
M_u	('k)	3309		3883		4424
$f_s \phi$ non-comp	(ksi)	6.6	7.6	1.5	7.2	6.9
$f_s \phi$ (comp)	(ksi)	1.3	1.4	0.3	1.4	1.3
$f_s S_3 [M_L + M_I]$	(ksi)	11.1	8.9	9.2	7.9	10.1
f_s (Overload)	(ksi)	19.0	17.9	11.0	16.5	18.3
f_s (Total)	(ksi)		23.3		21.5	
VR	(k)	53.1	59.3	41.8	58.2	53.1

* Compact section

** Braced non-compact and partially braced section

INTERIOR BEAM REACTION TABLE					
	Pier C9	Pier C10	Pier C11	Pier C12	
$R\phi$	(k)	37.3	96.5	110.8	44.6
R_L	(k)	46.4	59.3	62.9	47.4
R_I	(k)	11.5	14.6	15.1	11.1
R_{Total}	(k)	95.2	170.4	188.8	103.1

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 (in⁴ and in³).

$I_c(n), S_c(n)$: 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 (in⁴ and in³).

$I_c(3n), S_c(3n)$: 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 (in⁴ and in³).

Z: Plastic Section Modulus of the steel section in non-composite areas (in³).

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

$M\phi$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\phi$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\phi$: 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.).
 $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)]$

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).
 $M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)$

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

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

TOP EXISTING BEAM ELEVATION ***

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10	Beam 11	Beam 12	Beam 13	Beam 14
ϕ E. Brg. Pier C9	610.72	610.86	610.99	611.12	611.26	611.39	611.52	611.65	611.71	611.71	611.65	611.54	611.42	611.29
ϕ Splice 1	610.41	610.55	610.68	610.81	610.95	611.08	611.22	611.34	611.40	611.40	611.34	611.23	611.01	610.98
ϕ Brg. Pier C10	610.34	610.48	610.61	610.74	610.88	611.01	611.14	611.27	611.33	611.33	611.27	611.16	611.04	610.91
ϕ Splice 2	610.13	610.26	610.40	610.53	610.66	610.80	610.93	611.05	611.11	611.11	611.06	610.95	610.82	610.70
ϕ Brg. Pier C11	610.05	610.19	610.32	610.45	610.59	610.72	610.85	610.98	611.04	611.04	610.99	610.87	610.75	610.62
ϕ Splice 3	609.97	610.10	610.24	610.37	610.50	610.64	610.77	610.89	610.95	610.95	610.90	610.79	610.66	610.54
ϕ W. Brg. Pier C12	609.81	609.94	610.07	610.21	610.34	610.47	610.61	610.73	610.79	610.79	610.74	610.62	610.50	610.37

*** Elevations have been converted from the City of Chicago Datum on the original construction plans dated June 26, 1950 to the current NAVD 88 datum using a conversion of 579.19 feet.

FOR INFORMATION ONLY

0160461-60X78-5091-DET.dgn

**PARSONS
BRINCKERHOFF**

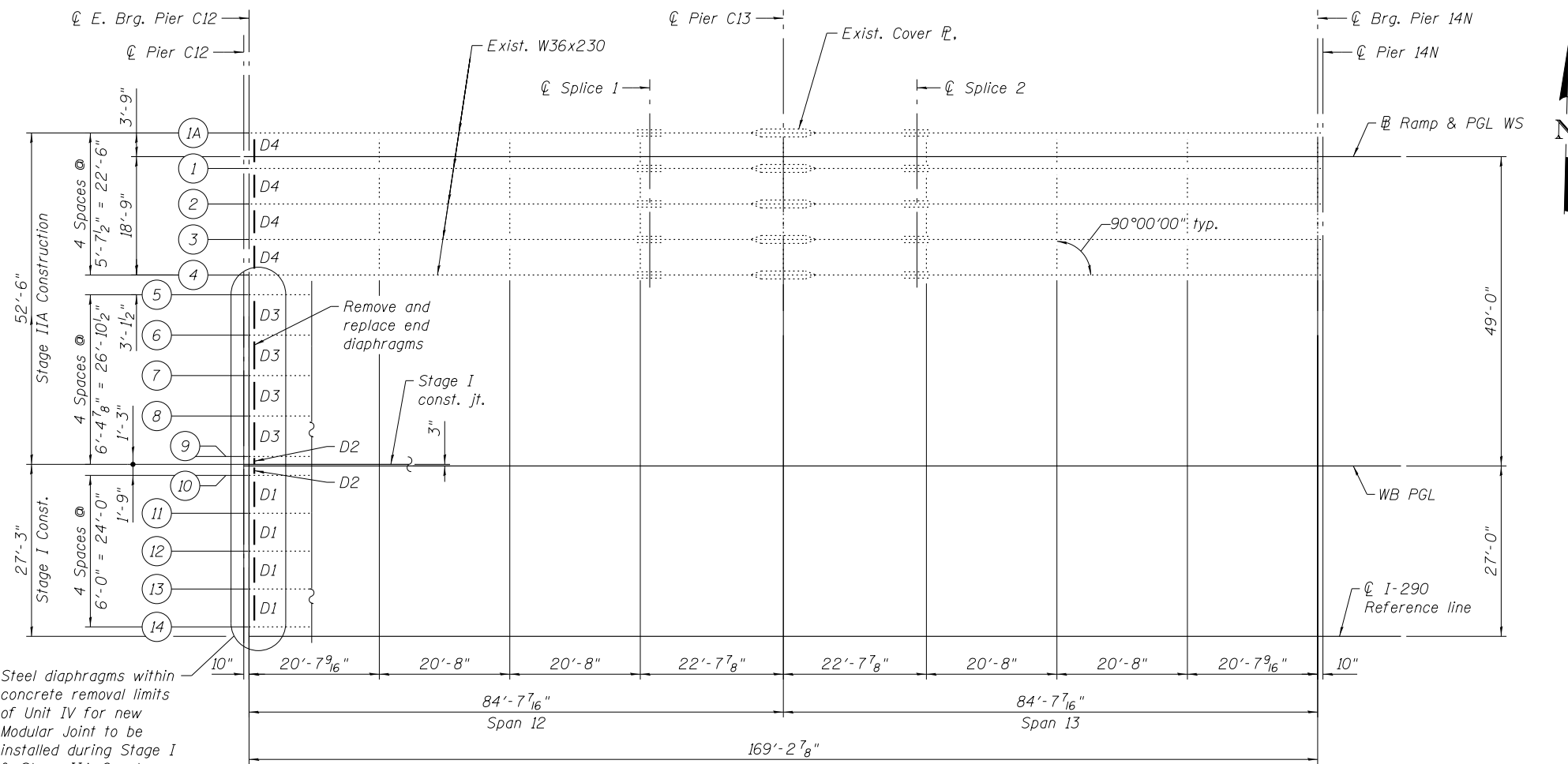
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PLOT SCALE = N.T.S.	DRAWN - IJL	REVISED -
PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE STEEL DETAILS - UNIT III
STRUCTURE NO. 016-0461

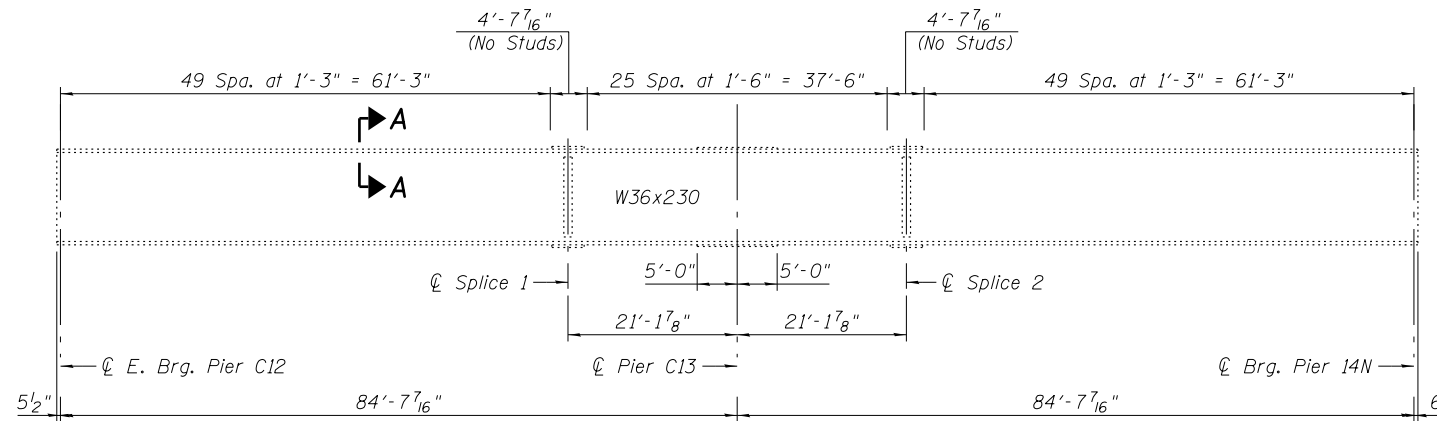
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	368
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

SHEET NO. S2-91 OF S2-145 SHEETS



Steel diaphragms within concrete removal limits of Unit IV for new Modular Joint to be installed during Stage I & Stage IIA Const.

EXISTING FRAMING PLAN - ENTRANCE RAMP

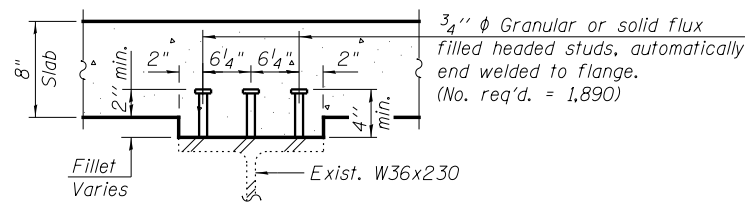


EXISTING BEAM ELEVATION - ENTRANCE RAMP

TOP EXISTING BEAM ELEVATION

(For information only)

	Beam 1A	Beam 1	Beam 2	Beam 3	Beam 4
℄ E. Brg. Pier C12	609.80	609.92	610.03	610.15	610.27
℄ Splice 1	607.76	607.87	607.99	608.11	608.23
℄ Brg. Pier C13	606.77	606.88	607.00	607.12	607.24
℄ Splice 2	605.78	605.89	606.01	606.13	606.24
℄ Brg. Pier 14N	602.90	603.02	603.14	603.26	603.38



SECTION A-A

*** Elevations have been converted from the City of Chicago Datum on the original construction plans dated June 26, 1950 to the current NAVD 88 datum using a conversion of 579.19 feet.

INTERIOR BEAM MOMENT TABLE			
		0.4 Sp. 12 or 0.6 Sp. 13	Pier C13
I_s	(in ⁴)	15000	21254
$I_c(n)$	(in ⁴)	33553	24292
$I_c(3n)$	(in ⁴)	23960	24292
S_s	(in ³)	837	1144
$S_c(n)$	(in ³)	1149	1417
$S_c(3n)$	(in ³)	1023	1417
ϕ	(k/')	0.850	0.920
$M\phi$	(k)	416	788
$s\phi$	(k/')	0.340	0.340
$M_s\phi$	(k)	166	314
M_L	(k)	510	451
M_{IM}	(k)	122	108
$^5_3 [M_L + I]$	(k)	1053	932
M_a	(k)	2126	2644
M_u	(k)	3326	
$f_s \phi$ non-comp	(ksi)	6.0	8.3
$f_s \phi$ (comp)	(ksi)	1.9	2.7
$f_s \phi_3 [M_L + M_I]$	(ksi)	11.0	7.9
f_s (Overload)	(ksi)	18.9	18.9
f_s (Total)	(ksi)		24.6
VR	(k)	49.5	48.1

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

INTERIOR BEAM REACTION TABLE		
	Pier C12 or Pier 14N	Pier C13
$R\phi$	(k)	38.1
R_L	(k)	45.5
R_I	(k)	10.9
R_{Total}	(k)	94.5

- 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 (in⁴ and in³).
- $I_c(n), S_c(n)$: 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 (in⁴ and in³).
- $I_c(3n), S_c(3n)$: 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 (in⁴ and in³).
- Z: Plastic Section Modulus of the steel section in non-composite areas (in³).
- ϕ : Un-factored non-composite dead load (kips/ft.).
- $M\phi$: Un-factored moment due to non-composite dead load (kip-ft.).
- $s\phi$: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- $M_s\phi$: 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.).
- $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)]$
- 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).
- $M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)$
- f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
- $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)]$
- VR: Maximum $\frac{L}{4}$ + impact shear range within the composite portion of the span for stud shear connector design (kips).

Notes:
For minimum clearances of shear studs at ends of cover plates, see sheet S2-87.
For diaphragm replacement details, see sheet S2-93.

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PARSONS BRINCKERHOFF

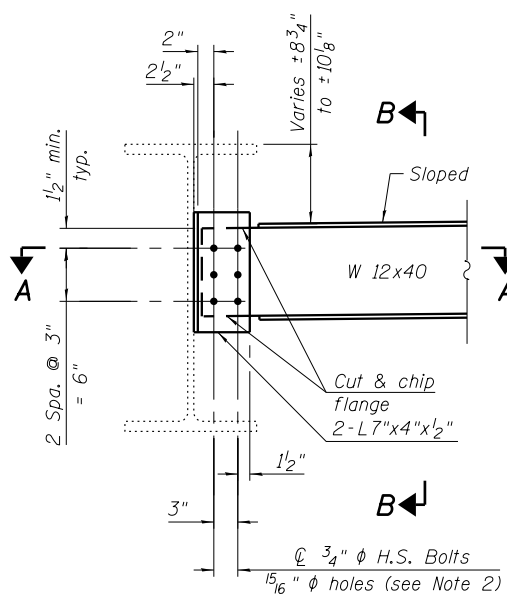
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
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FRAMING PLAN - ENTRANCE RAMP
STRUCTURE NO. 016-0461

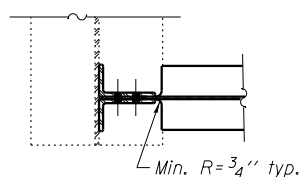
SHEET NO. S2-92 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

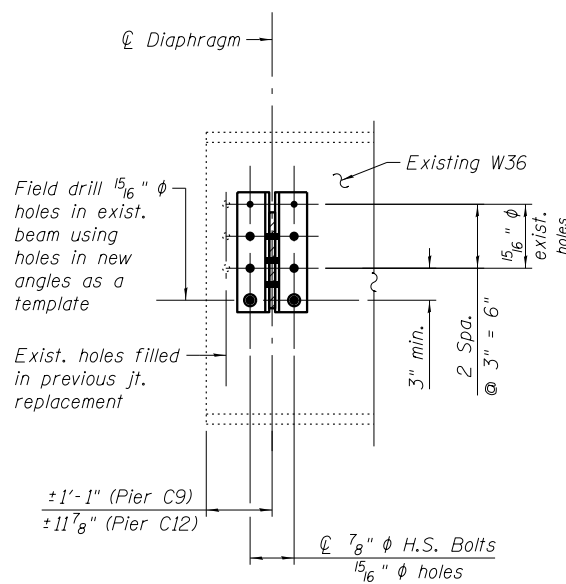


END DIAPHRAGM D1, D3 & D4

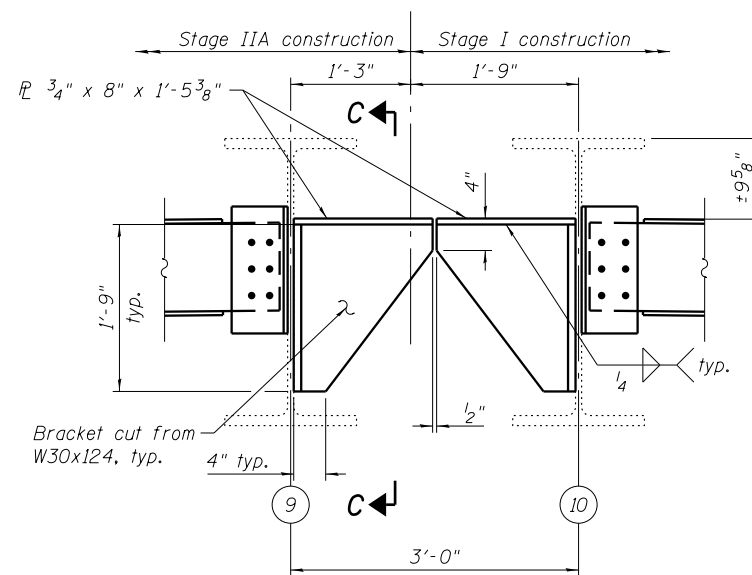
- D1 (4 Required, Unit II, C. E. Brg. Pier C9, 4 Required, Unit III, C. W. Brg. Pier C9, 4 Required, Unit III, C. E. Brg. Pier C12, 4 Required, Unit IV, C. W. Brg. Pier C12)
- D3 (8 Required, Unit II, C. E. Brg. Pier C9, 8 Required, Unit III, C. W. Brg. Pier C9, 8 Required, Unit III, C. E. Brg. Pier C12, 4 Required, Unit IV, C. W. Brg. Pier C12)
- D4 (4 Required Entrance Ramp, C. W. Brg. Pier C12)



SECTION A-A

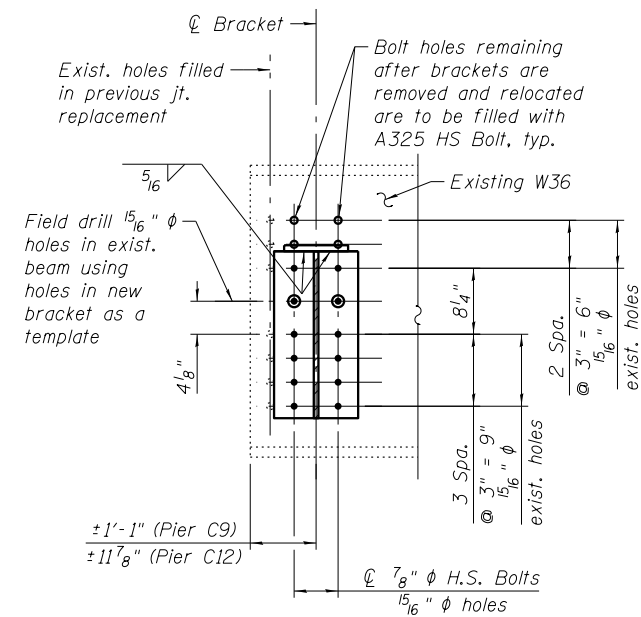


SECTION B-B



END DIAPHRAGM (BRACKETS) D2 AT STAGE LINE

- D2 (2 Required, Unit II, C. E. Brg. Pier C9, 2 Required, Unit III, C. W. Brg. Pier C9, 2 Required, Unit III, C. E. Brg. Pier C12, 2 Required, Unit IV, C. W. Brg. Pier C12)



SECTION C-C

Notes:

1. All structural steel for diaphragms and brackets at Pier C9 & Pier C12 may be AASHTO M270 Grade 36 and shall be hot dipped galvanized. Cost of removal and replacement of steel diaphragms, brackets, and connections included in Structural Steel Repair.
2. Two hardened washers required for each set of oversized holes.
3. Cost of field drilling is included in Structural Steel Repair.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	18,774

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PARSONS BRINCKERHOFF

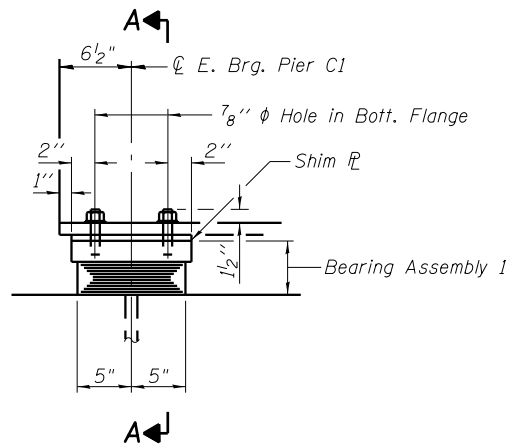
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PLOT DATE = 3/23/2016	DRAWN - P.JL	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

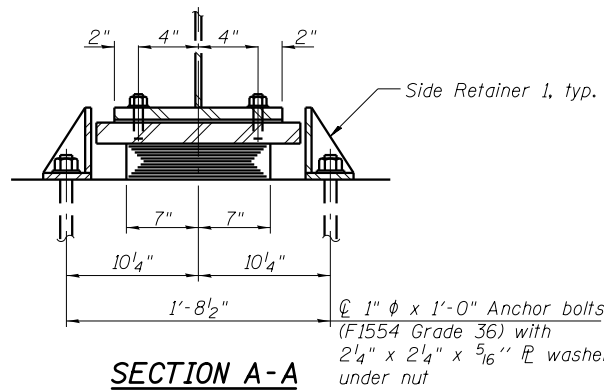
**SUPERSTRUCTURE STEEL DETAILS - UNIT II, UNIT III & ENTRANCE RAMP
STRUCTURE NO. 016-0461**

SHEET NO. S2-93 OF S2-145 SHEETS

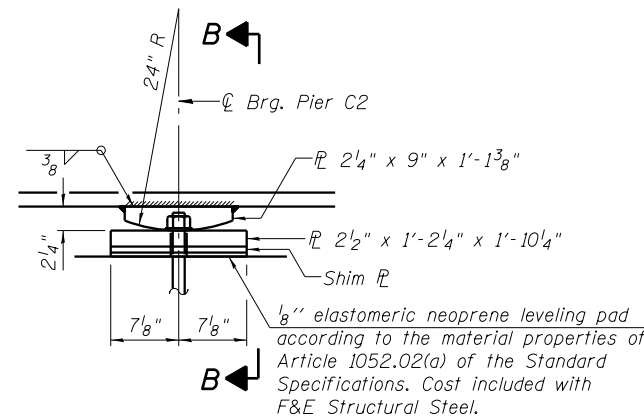
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	370
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X78	



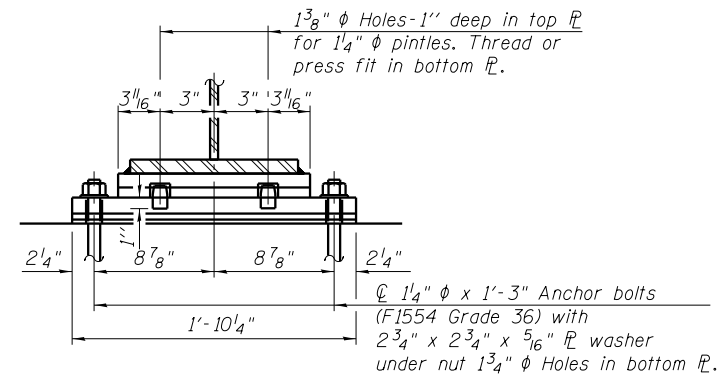
ELEVATION AT E. BRG. PIER C1



SECTION A-A



ELEVATION AT PIER C2



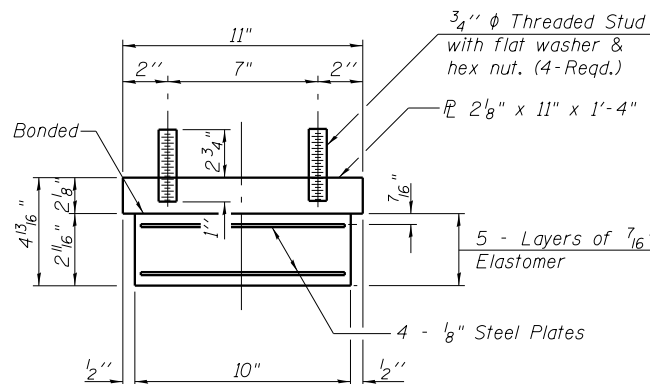
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT E. BRG. PIER C1

(9 Required)

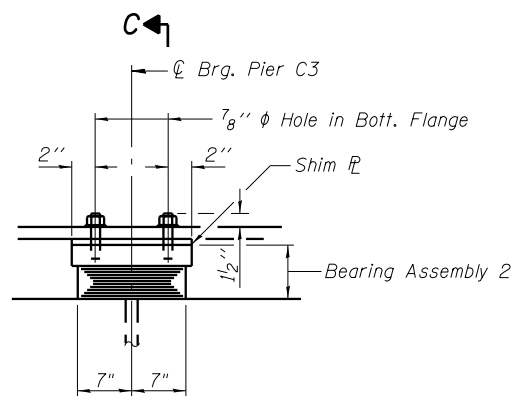
FIXED BEARING AT PIER C2

(9 Required)

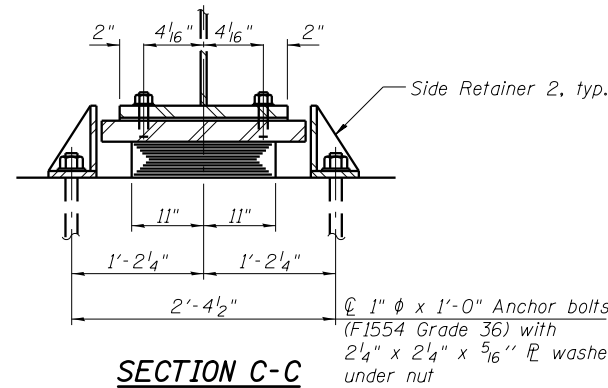


BEARING ASSEMBLY 1

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



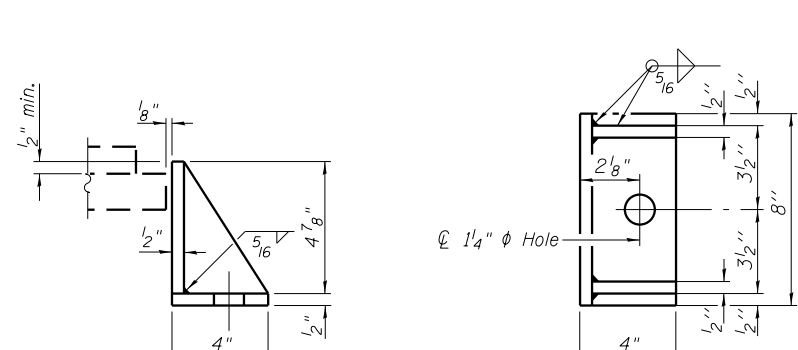
ELEVATION AT PIER C3



SECTION C-C

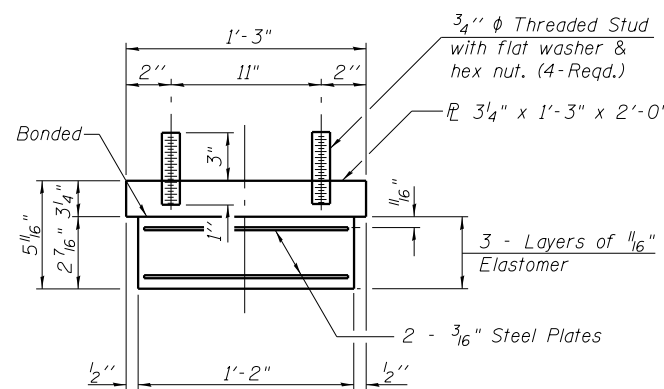
TYPE I ELASTOMERIC EXP. BRG. AT PIER C3

(9 Required)



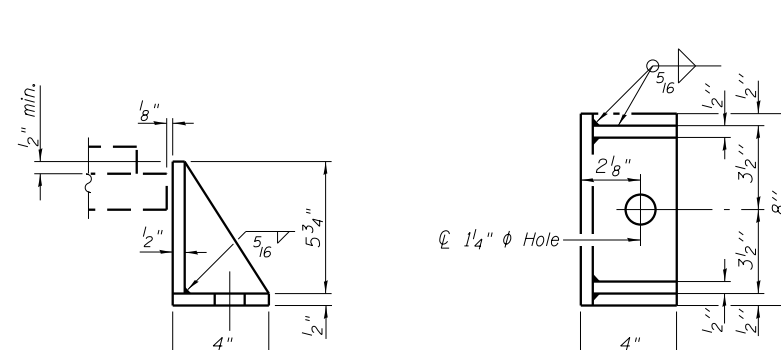
SIDE RETAINER 1

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



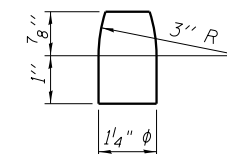
BEARING ASSEMBLY 2

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



SIDE RETAINER 2

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



PINTLE

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. 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 side retainers may be cast in place or installed in holes drilled before or after members are in place.

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 I.

Fixed Bearing Assembly included in the cost of Furnishing and Erecting Structural Steel.

Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	18
Anchor Bolts 1"	Each	36
Anchor Bolts 1 1/4"	Each	18

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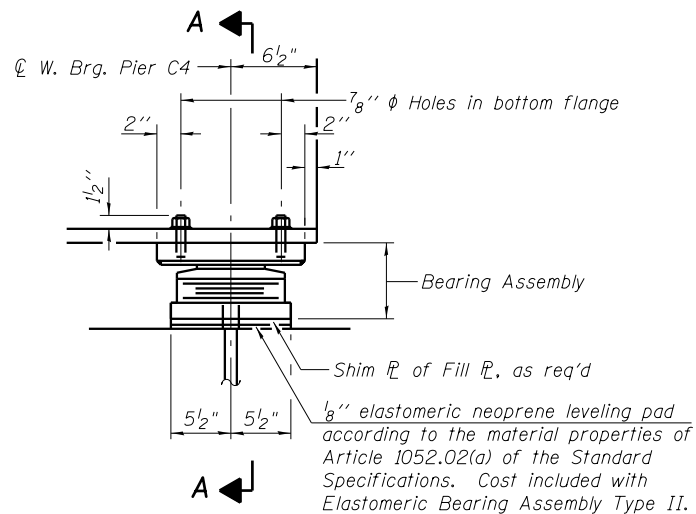
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**STATE OF ILLINOIS
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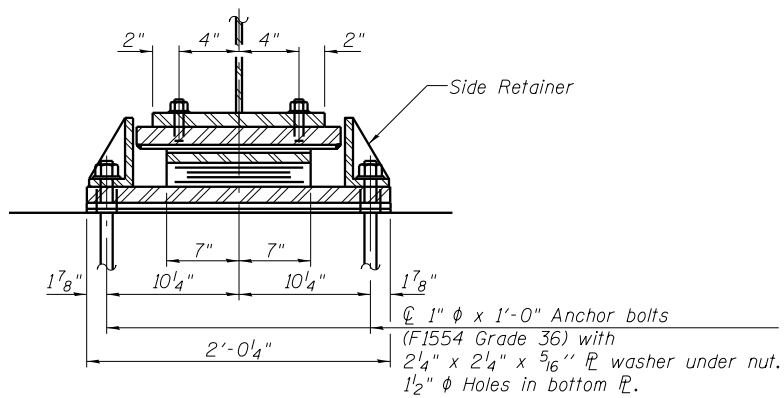
**BEARING DETAILS I - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-94 OF S2-145 SHEETS

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	371
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



ELEVATION AT W. BRG. PIER C4



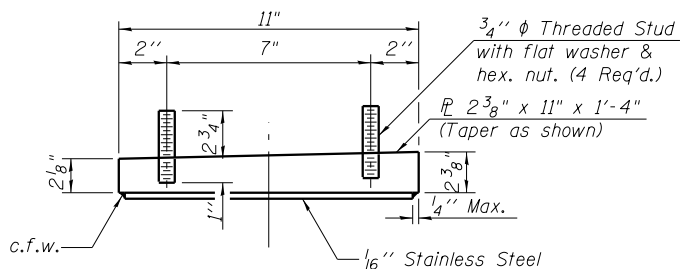
SECTION A-A

**FILL PLATE THICKNESS TABLE
AT W. BRG. PIER C4**

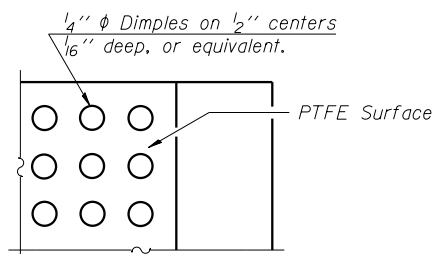
Beam No.	Thickness
15	1/2"
17	5/8"

TYPE II ELASTOMERIC EXP. BRG. AT W. BRG. PIER C4

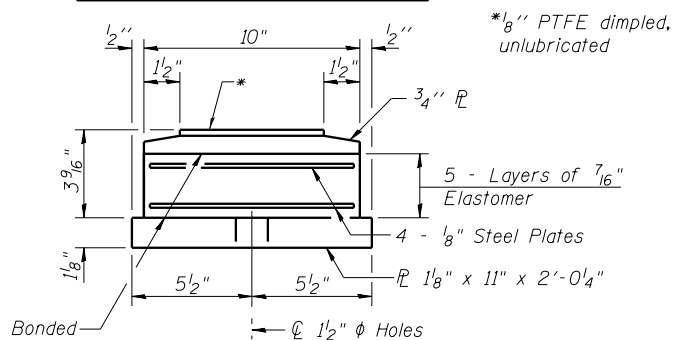
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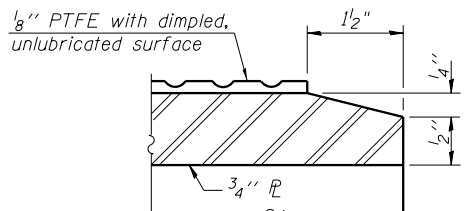
TOP BEARING ASSEMBLY



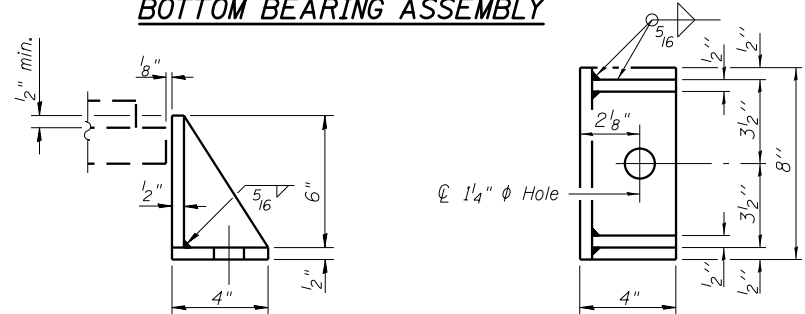
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY

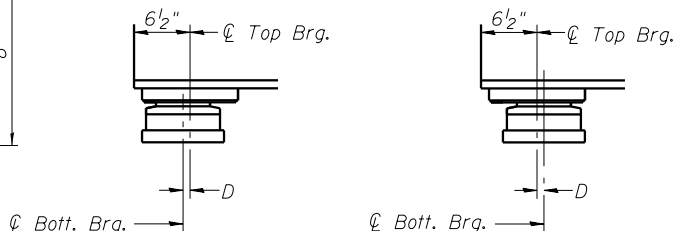


SECTION THRU PTFE



SIDE RETAINER

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



BELOW 50°F.

ABOVE 50°F.

(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

Notes:

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

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 1/8" 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 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	9
Anchor Bolts 1"	Each	18

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**PARSONS
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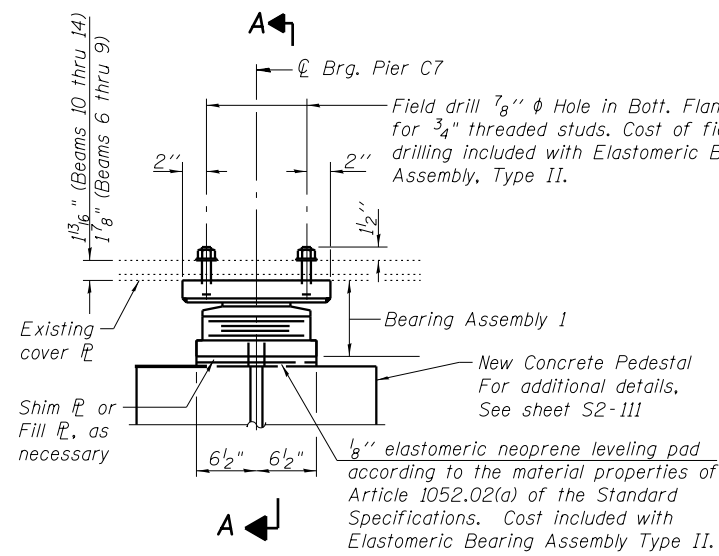
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

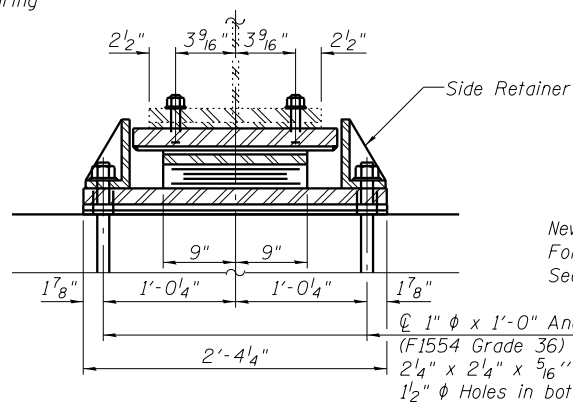
**BEARING DETAILS II - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-95 OF S2-145 SHEETS

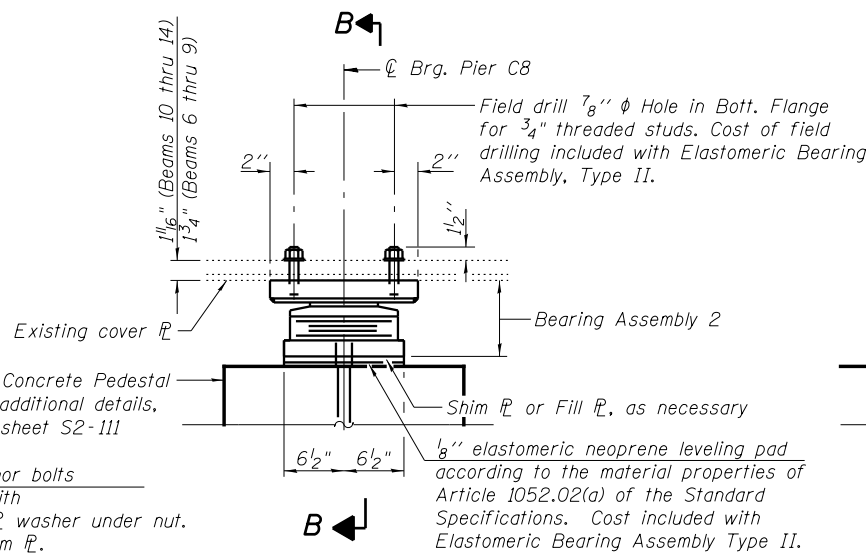
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	372
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



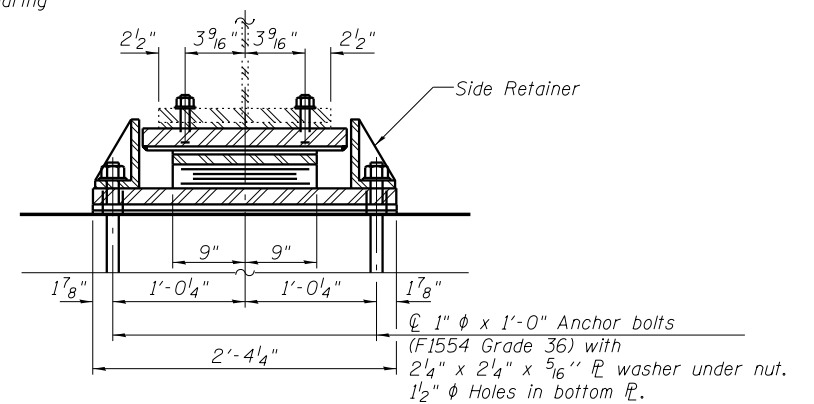
ELEVATION AT PIER C7



SECTION A-A



ELEVATION AT PIER C8



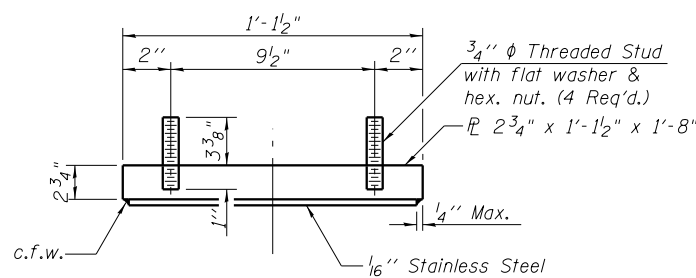
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG. AT PIER C7

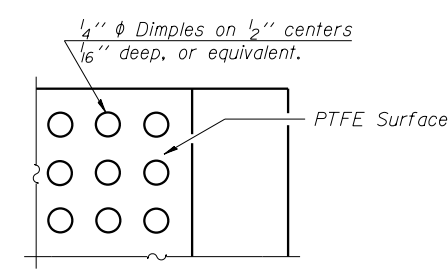
(9 Required)

TYPE II ELASTOMERIC EXP. BRG. AT PIER C8

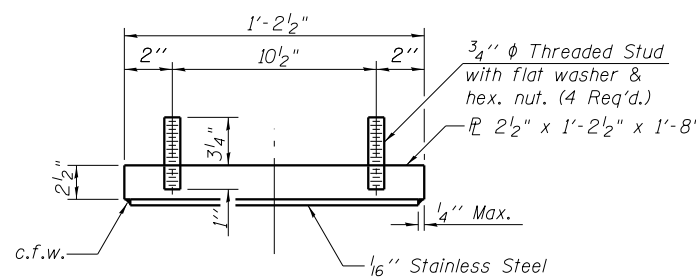
(9 Required)



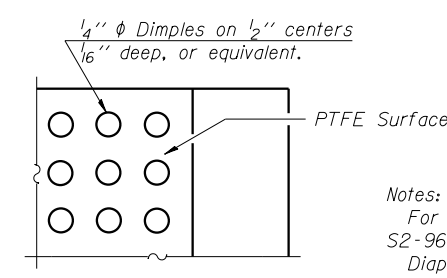
TOP BEARING ASSEMBLY 1



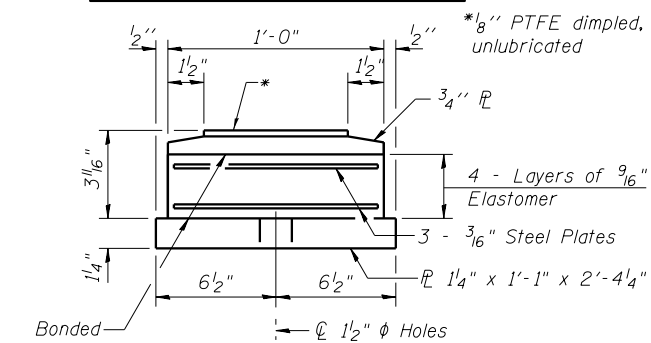
PLAN-PTFE SURFACE



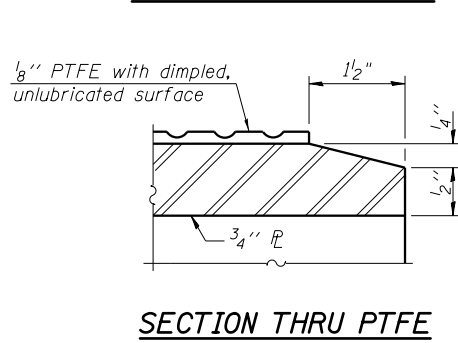
TOP BEARING ASSEMBLY 2



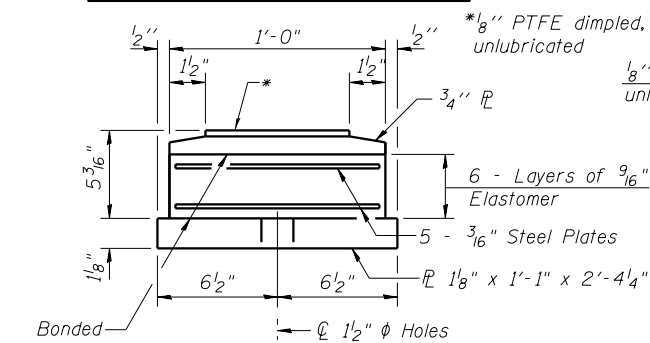
PLAN-PTFE SURFACE



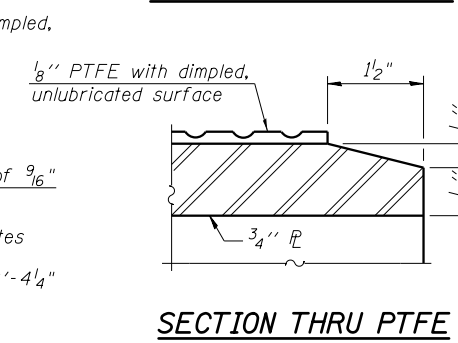
BOTTOM BEARING ASSEMBLY 1



SECTION THRU PTFE

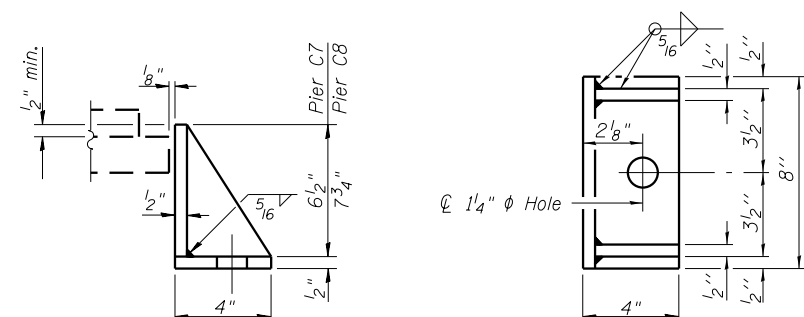


BOTTOM BEARING ASSEMBLY 2



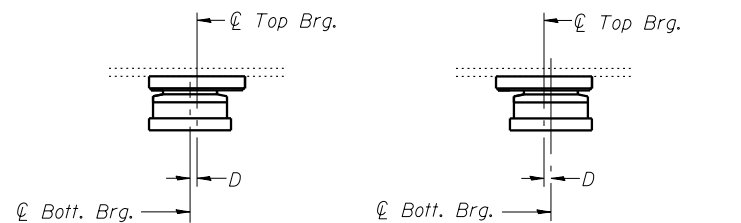
SECTION THRU PTFE

Notes:
 For bearing removal details and quantity, see sheet S2-96.
 Diaphragm removal and installation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly Type II.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 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 1/8 inch 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 1/8 inch PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
 Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



SIDE RETAINER

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



BELOW 50°F.

ABOVE 50°F.

(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8 inch per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

FILL PLATE THICKNESS TABLE AT PIERS C7 & C8

Pier	Beam No.	Thickness
C7	10	1/8"
C8	10	1/4"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	18
Anchor Bolts 1"	Each	36

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PARSONS BRINCKERHOFF

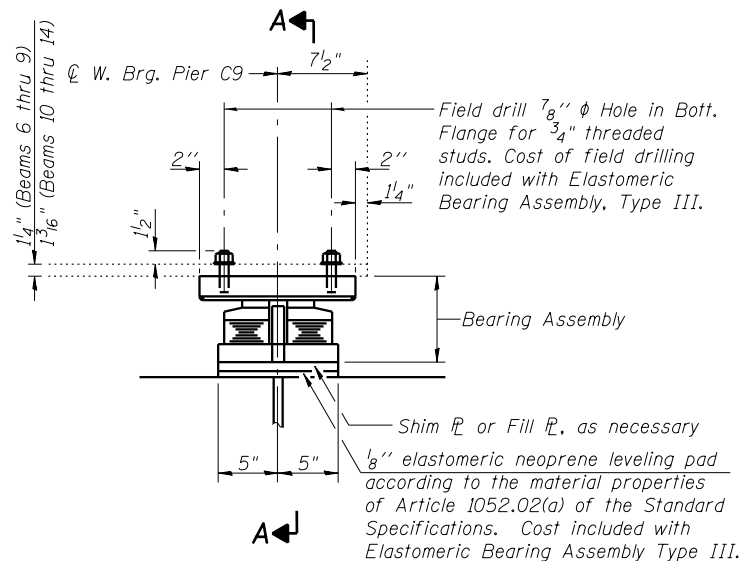
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PLOT SCALE = N.T.S.	CHECKED - PJL	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL/DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS II - UNIT II STRUCTURE NO. 016-0461

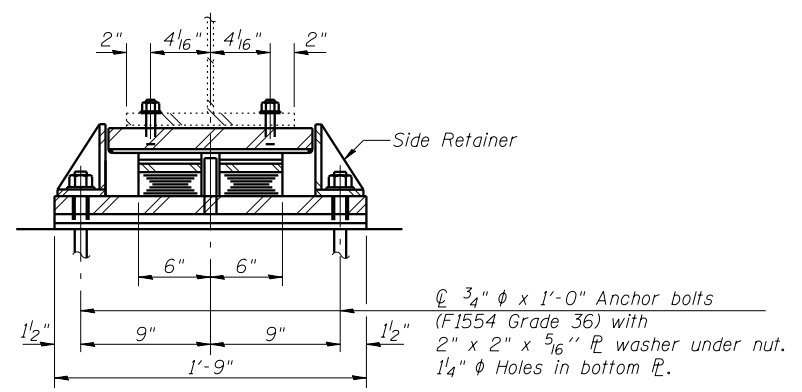
SHEET NO. S2-97 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	374
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

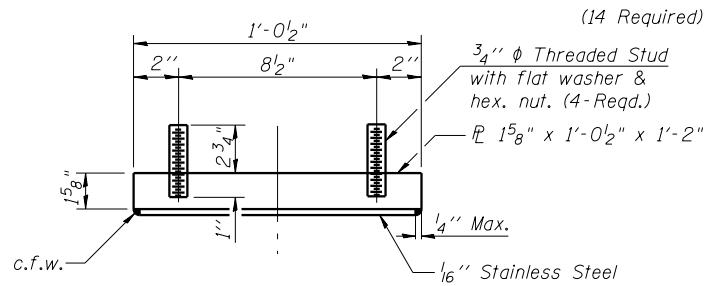


ELEVATION AT W. BRG. PIER C9

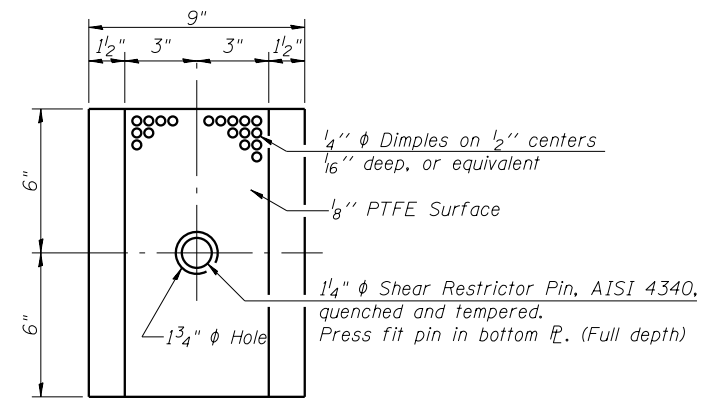
TYPE III ELASTOMERIC EXP. BRG. AT W. BRG. PIER C9



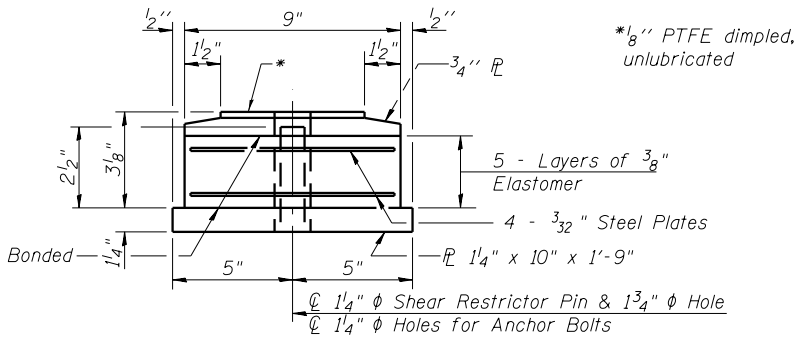
SECTION A-A



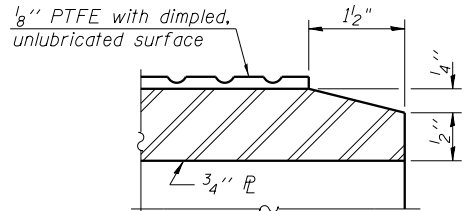
TOP BEARING ASSEMBLY



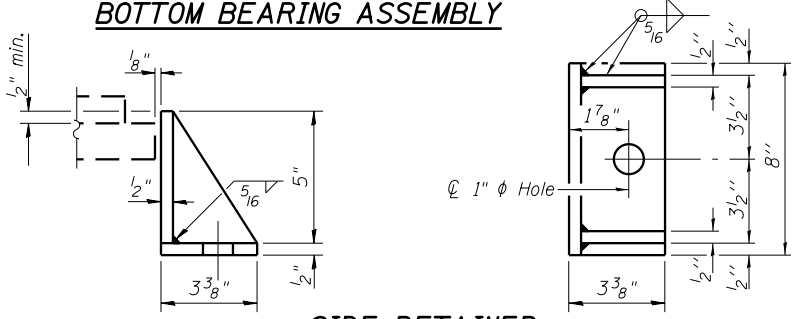
PLAN-PTFE ELASTOMERIC BRG.



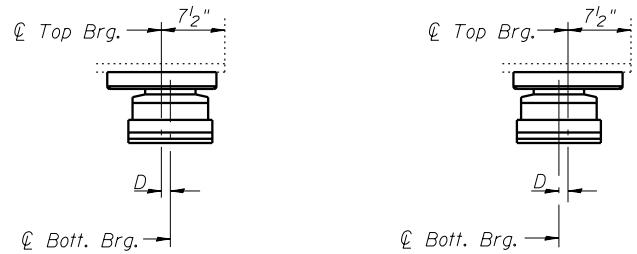
BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



SIDE RETAINER



SETTING ANCHOR BOLTS AT EXP. BRG.
 D = 1/8 inch per each 100 feet of expansion for every 15 degrees temp. change from the normal temp. of 50 degrees F.

FILL PLATE THICKNESS TABLE AT E. BRG. PIER C9

Beam No.	Thickness
9	3/4"
10	1"
11	3/8"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type III	Each	14
Anchor Bolts 3/4"	Each	28

Notes:
 For bearing removal details and quantity, see sheet S2-96.
 Diaphragm removal and installation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type III.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts for Type III 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 III.
 The 1/8 inch 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 1/8 inch PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
 Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

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PARSONS BRINCKERHOFF

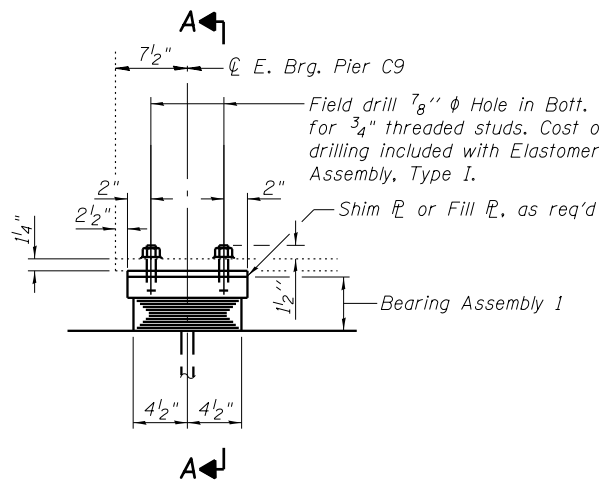
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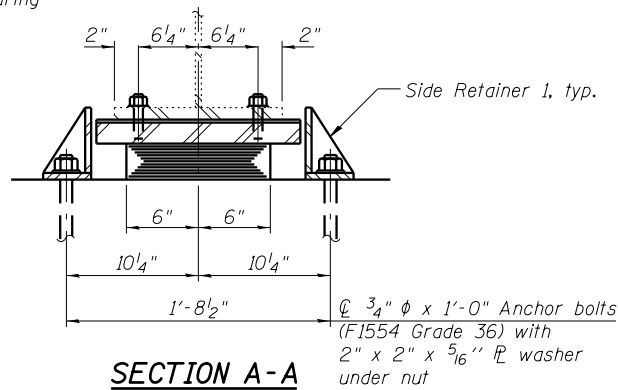
**BEARING DETAILS III - UNIT II
 STRUCTURE NO. 016-0461**

SHEET NO. S2-98 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	375
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

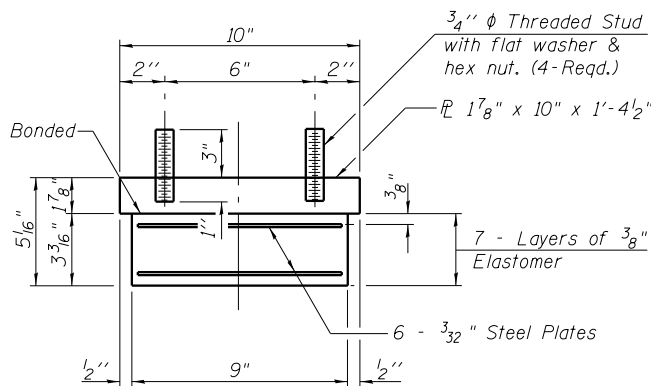


ELEVATION AT E. BRG. PIER C9



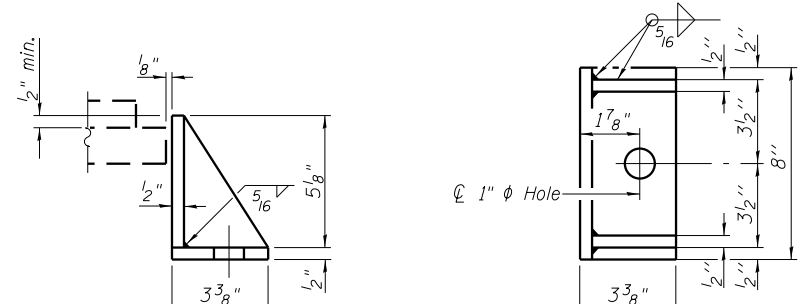
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT E. BRG. PIER C9
(14 Required)



BEARING ASSEMBLY 1

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER 1

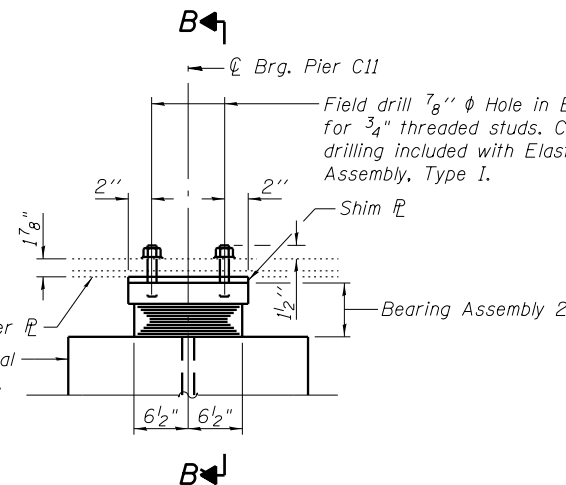
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

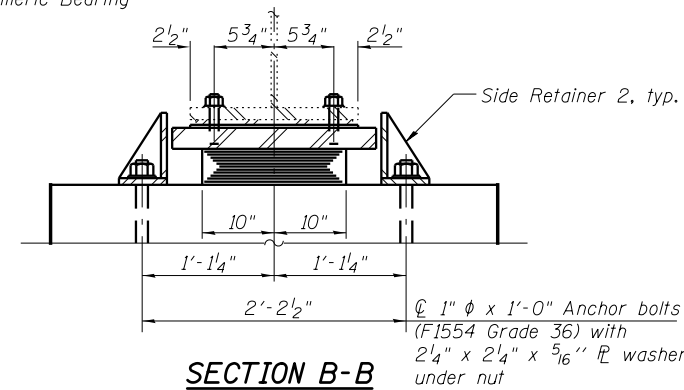
For bearing removal details and quantity, see sheet S2-96. Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type I.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
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 I.
Two 5/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

FILL PLATE THICKNESS TABLE AT E. BRG. PIER C9

Beam No.	Thickness
9	3/4"
10	3/4"
11	1/2"

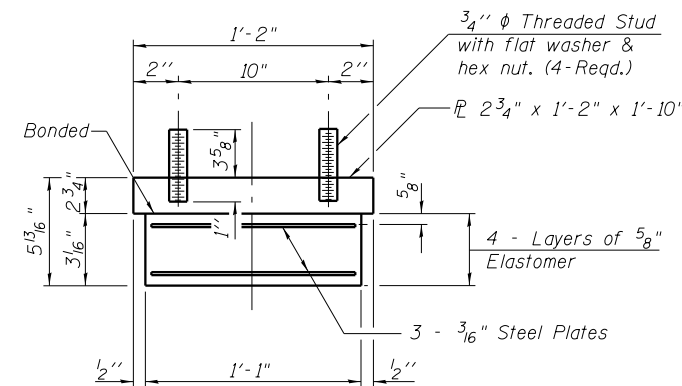


ELEVATION AT PIER C11



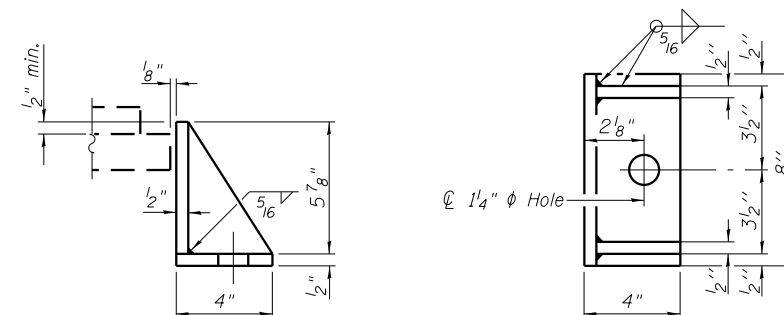
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT PIER C11
(14 Required)



BEARING ASSEMBLY 2

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER 2

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	28
Anchor Bolts, 3/4"	Each	28
Anchor Bolts, 1"	Each	28

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PARSONS BRINCKERHOFF

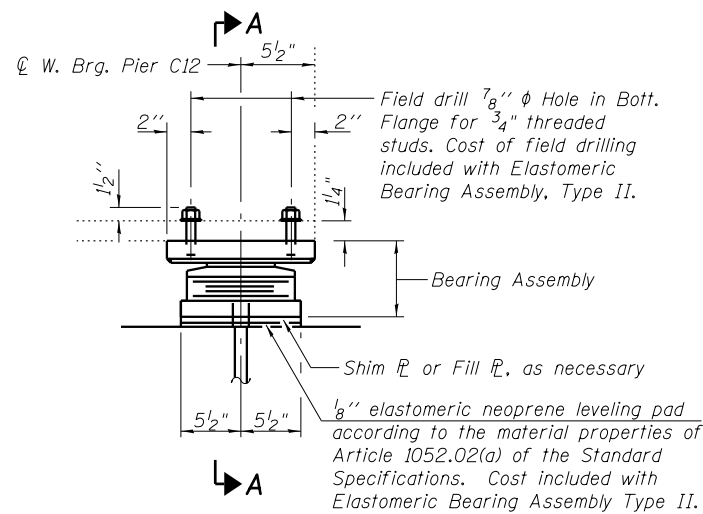
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

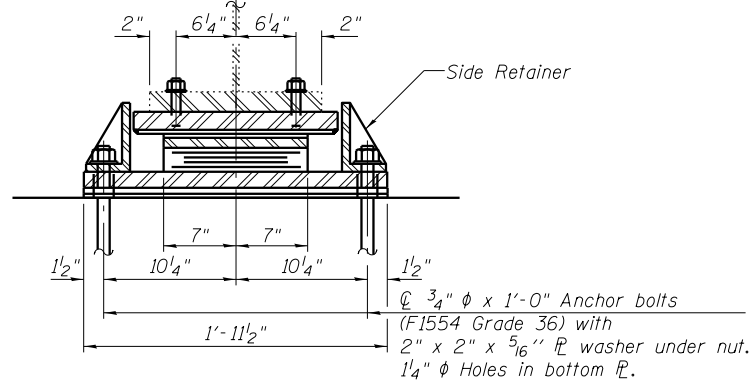
**BEARING DETAILS I - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-99 OF S2-145 SHEETS

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	376
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



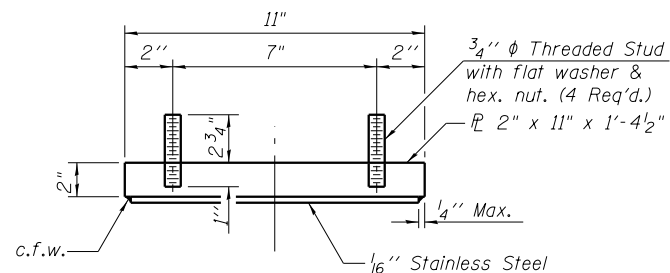
ELEVATION AT W. BRG. PIER C12



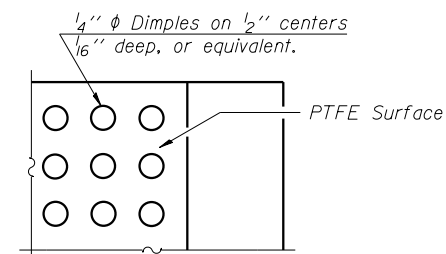
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG. AT W. BRG. PIER C12

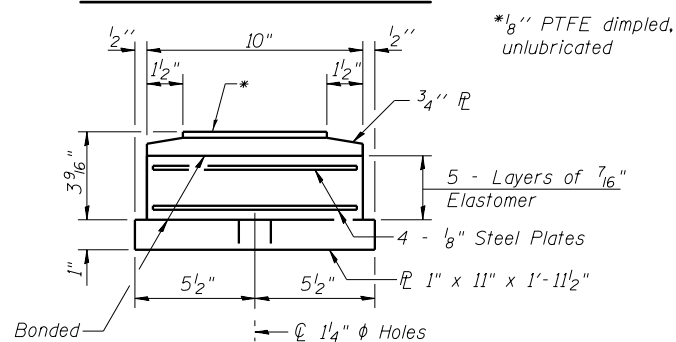
(14 Required)



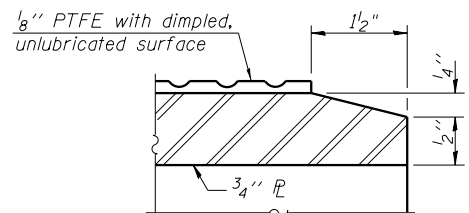
TOP BEARING ASSEMBLY



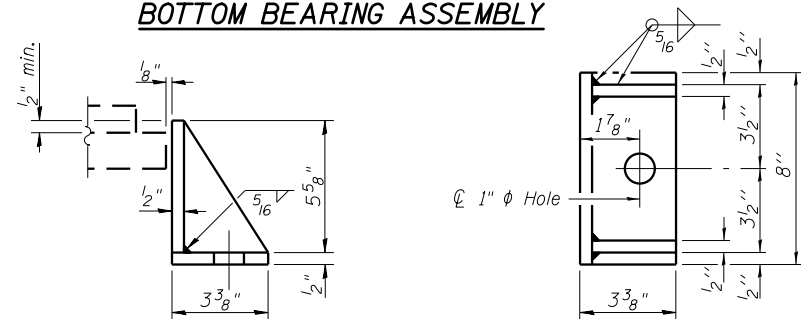
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



SIDE RETAINER

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



BELOW 50°F.

ABOVE 50°F.

(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8 inch per each 100 feet of expansion for every 15 degrees temperature change from the normal temperature of 50 degrees Fahrenheit.

FILL PLATE THICKNESS TABLE AT W. BRG. PIER C12

Beam No.	Thickness
9	3/4 inch
10	3/4 inch
11	1/8 inch

Notes:

For bearing removal details and quantity, see sheet S2-96.

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type II.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

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

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 1/8 inch 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 1/8 inch PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two 1/8 inch 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

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	14
Anchor Bolts 3/4 inch	Each	28

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PARSONS BRINCKERHOFF

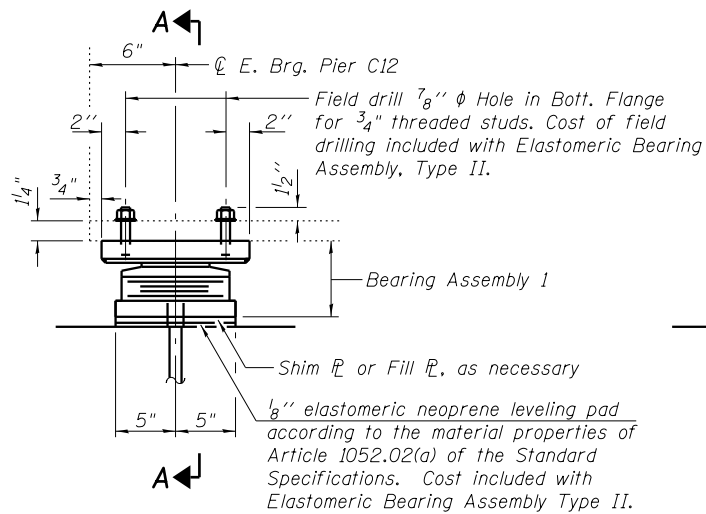
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

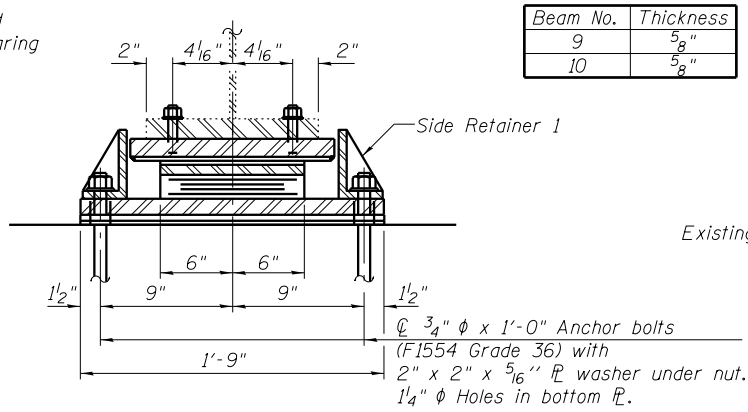
BEARING DETAILS II - UNIT III STRUCTURE NO. 016-0461

SHEET NO. S2-100 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	377
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



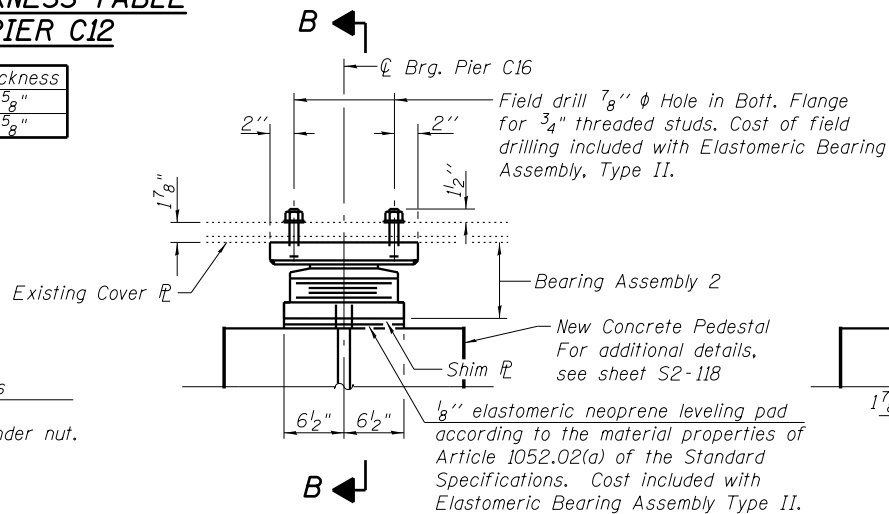
ELEVATION AT E. BRG. PIER C12



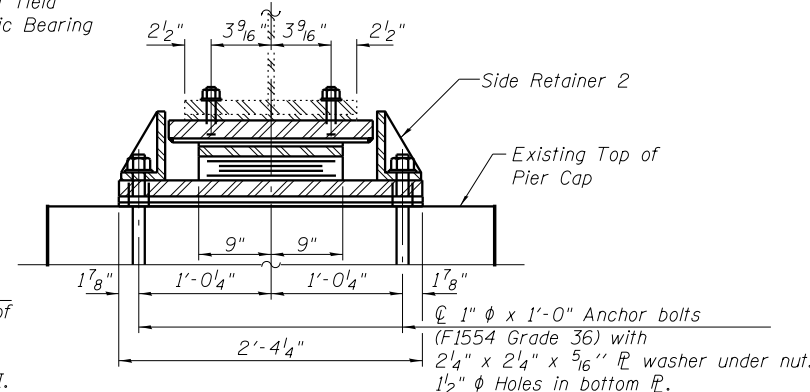
SECTION A-A

FILL PLATE THICKNESS TABLE AT E. BRG. PIER C12

Beam No.	Thickness
9	5/8"
10	3/8"



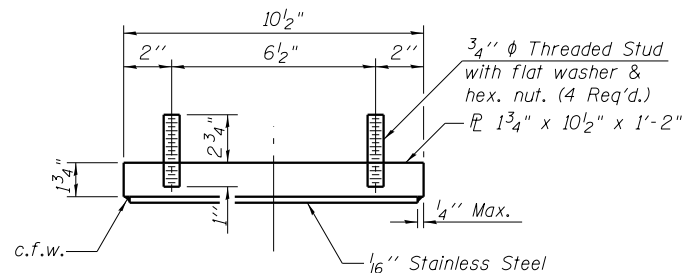
ELEVATION AT PIER C16



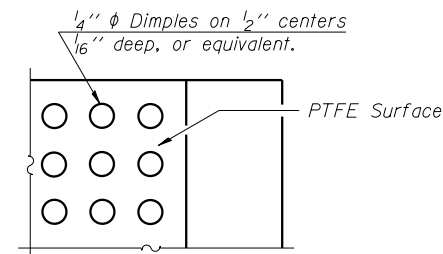
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG. AT E. BRG. PIER C12

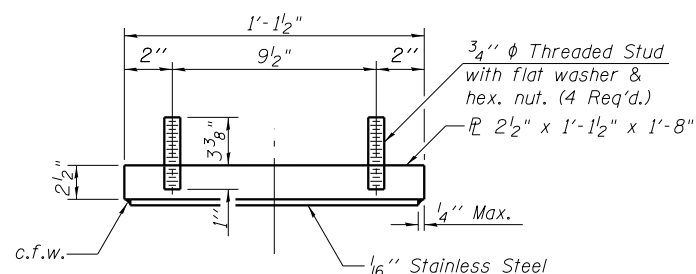
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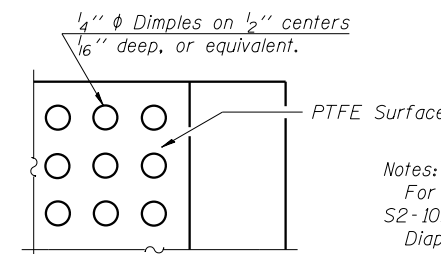
TOP BEARING ASSEMBLY 1



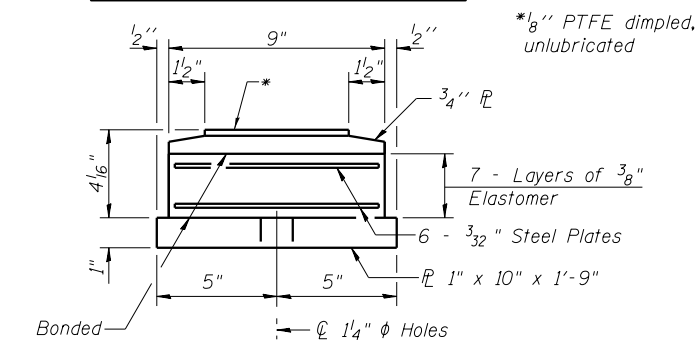
PLAN-PTFE SURFACE



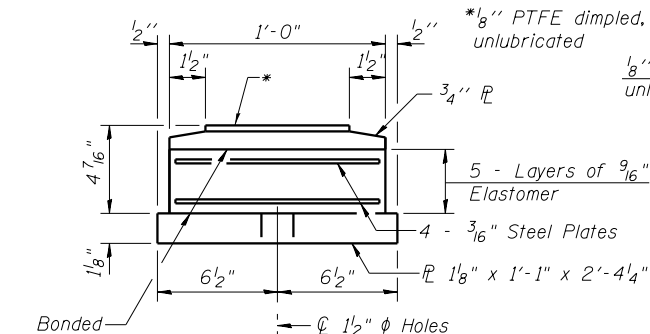
TOP BEARING ASSEMBLY 2



PLAN-PTFE SURFACE



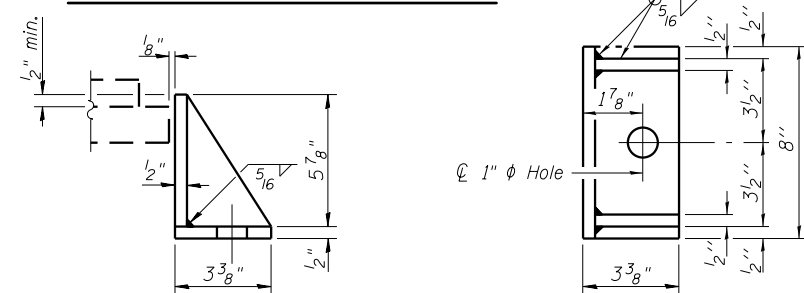
SECTION THRU PTFE



SECTION THRU PTFE

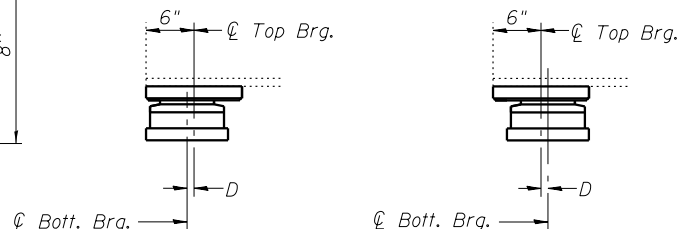
Notes:
 For bearing removal details and quantity, see sheet S2-102.
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type II.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

BOTTOM BEARING ASSEMBLY 1



SIDE RETAINER 1

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



SETTING ANCHOR BOLTS AT EXP. BRG.

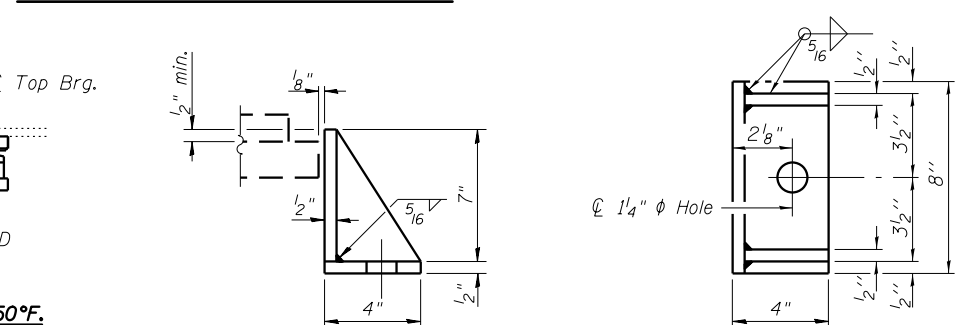
(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

BELOW 50°F. ABOVE 50°F.

(Pier C12 shown, Pier C16 similar except beam is continuous)

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BOTTOM BEARING ASSEMBLY 2



SIDE RETAINER 2

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	20
Anchor Bolts 1"	Each	20
Anchor Bolts 3/4"	Each	20

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PARSONS BRINCKERHOFF

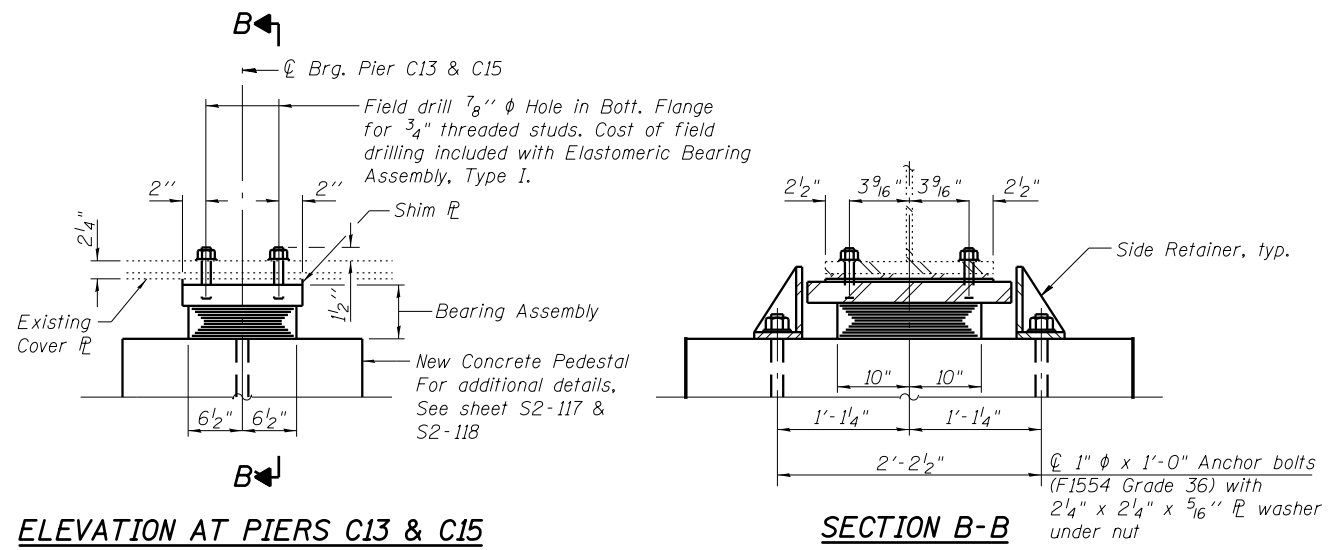
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PLOT SCALE = N.T.S.	CHECKED - PJL	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL/DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS I - UNIT IV STRUCTURE NO. 016-0461

SHEET NO. S2-101 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	378
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

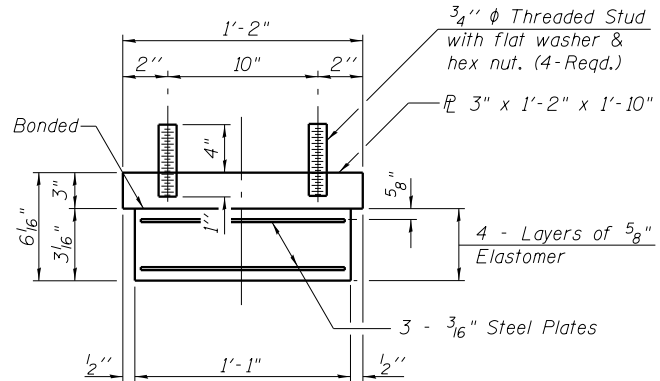


ELEVATION AT PIERS C13 & C15

SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT PIERS C13 & C15

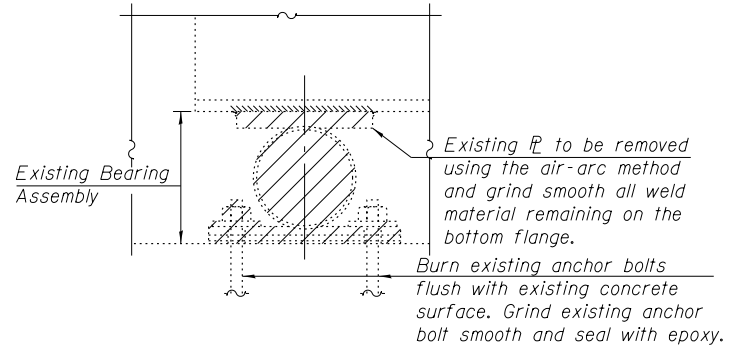
(10 Required at Pier C13 and 10 Required at Pier C15)



BEARING ASSEMBLY

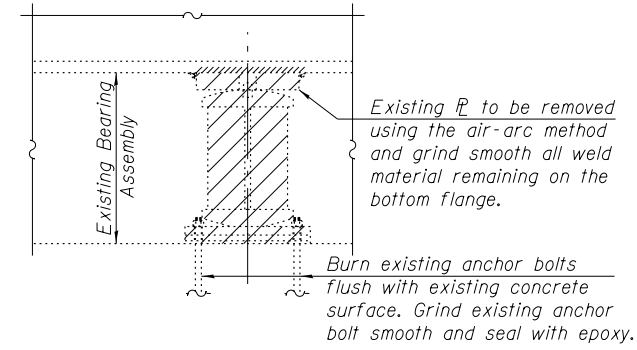
(At Pier C13 & C15)

Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL PIER C12

Cost included with Jack and Remove Existing Bearings. (15 Required)



EXISTING BEARING REMOVAL DETAIL PIERS C13, C15 & C16

Cost included with Jack and Remove Existing Bearings. (35 Required)

JACK AND REMOVE EXISTING BEARINGS PROCEDURE - UNIT IV

- A. The Contractor shall submit for approval by the Engineer, plans for jacking existing bearings and installing new bearings prior to commencing any related work.
- B. Jacking and removing existing bearings shall be done with existing deck remaining in place and without live load traffic, except for beam 9 which will support live load traffic during jacking and removing existing bearing.
- C. The jacking system for beam 9 shall be designed to support dead load and full live load (with impact).
- D. See table below for dead load reaction, live load plus impact reaction, and minimum jack capacities per beam at each Pier.
- E. The new concrete pedestals shall be poured and cured prior to the lowering and removal of the jacks.

BEAM REACTIONS

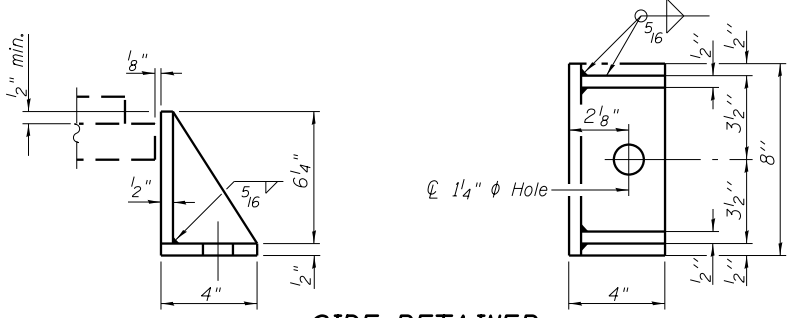
(Applicable to all beams, except Beam 9)

Pier	R _D (kips)	Min. Jack Capacity (kips)
C12 (East)	36.6	55
C13	109.3	164
C15	105.8	159
C16	90.2	136

BEAM REACTIONS

(Applicable to Beam 9 only)

Pier	R _D (kips)	R _{L+IM} (kips)	Min. Jack Capacity (kips)
C12 (East)	36.6	58.3	143
C13	109.3	81.3	286
C15	105.8	80.8	280
C16	90.2	74.5	248



SIDE RETAINER

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

Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type I.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
 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 I.
 Two 1/8" 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

Item	Unit	Total
Elastomeric Bearing, Assembly, Type I	Each	20
Anchor Bolts, 1"	Each	40
Jack and Remove Existing Bearings	Each	50

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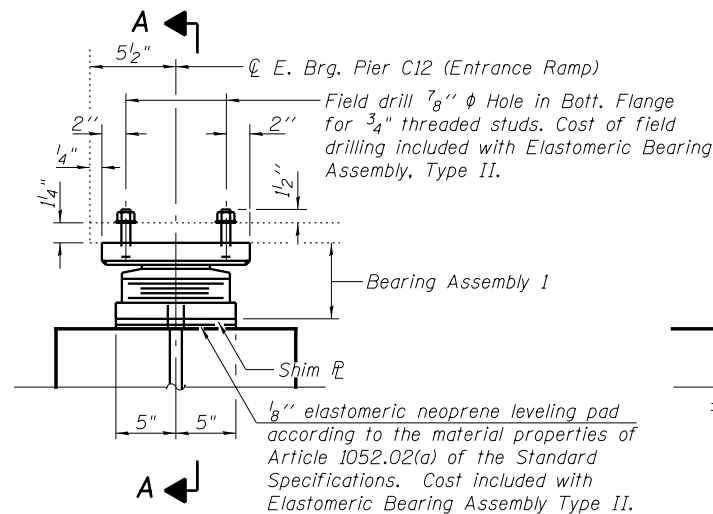
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PLOT SCALE = N.T.S.	CHECKED - P.JL	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL/DCP	REVISED -
	CHECKED - JIG	REVISED -

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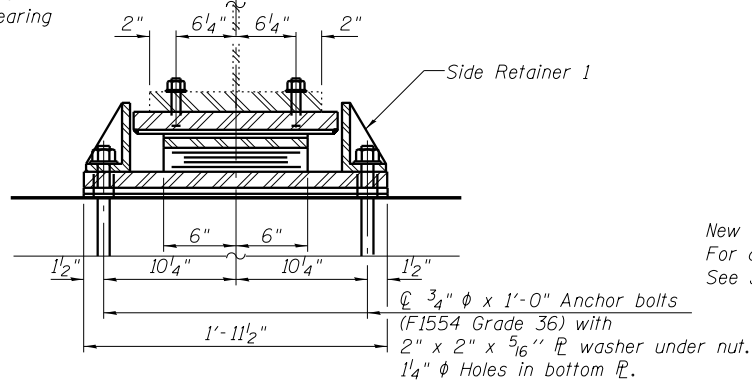
BEARING DETAILS II - UNIT IV STRUCTURE NO. 016-0461

SHEET NO. S2-102 OF S2-145 SHEETS

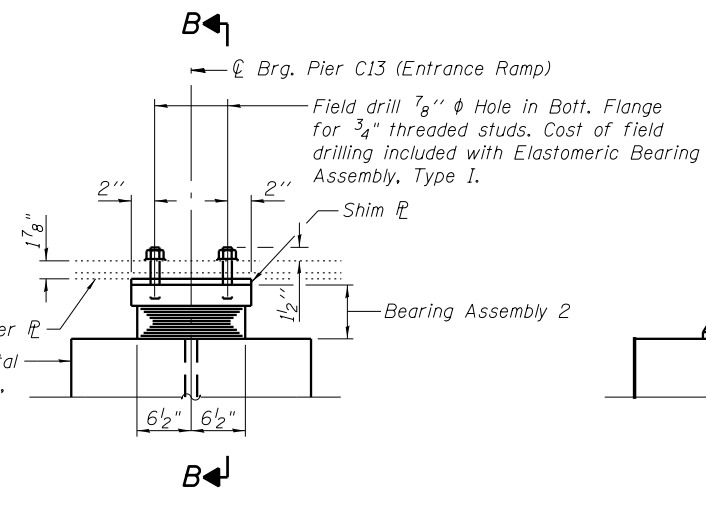
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	379
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



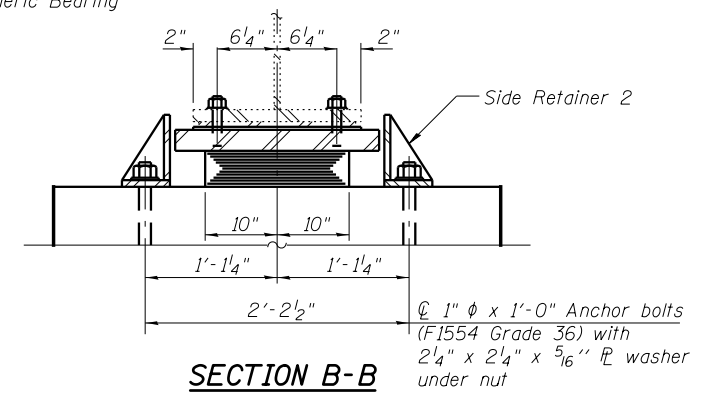
ELEVATION AT E. BRG. PIER C12



SECTION A-A



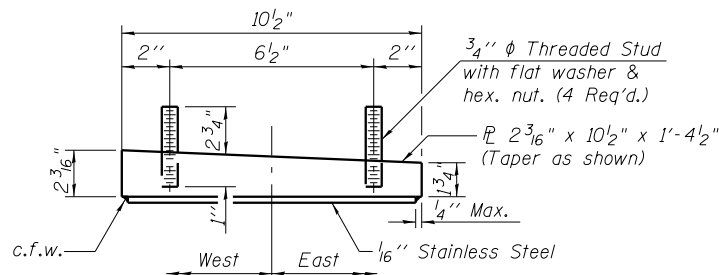
ELEVATION AT PIER C13



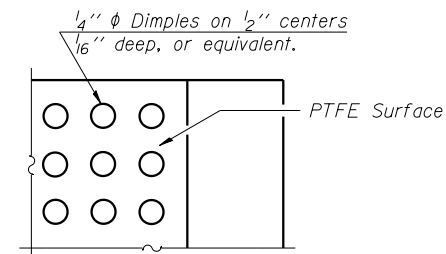
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG. AT E. BRG. PIER C12 (ENTRANCE RAMP)

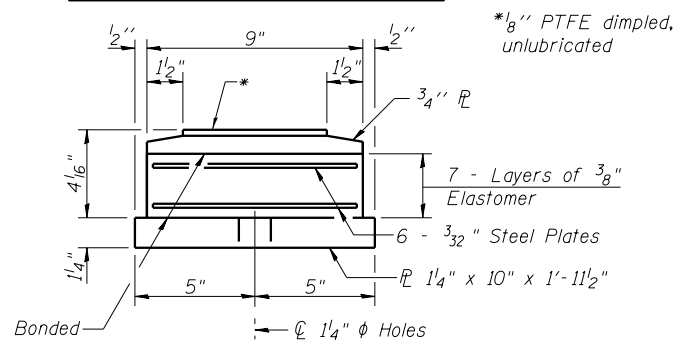
(5 Required)



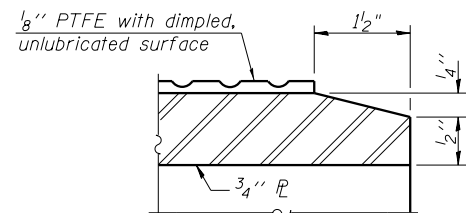
TOP BEARING ASSEMBLY 1



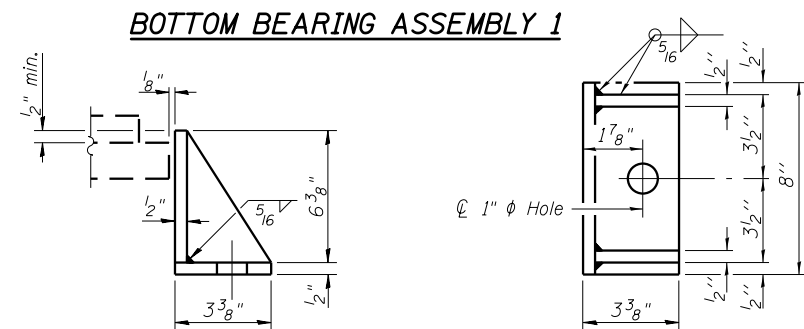
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY 1

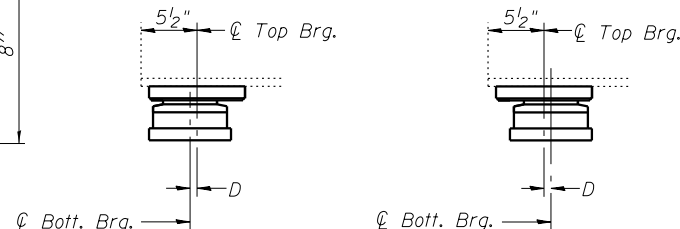


SECTION THRU PTFE



SIDE RETAINER 1

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



BELOW 50°F.

ABOVE 50°F.

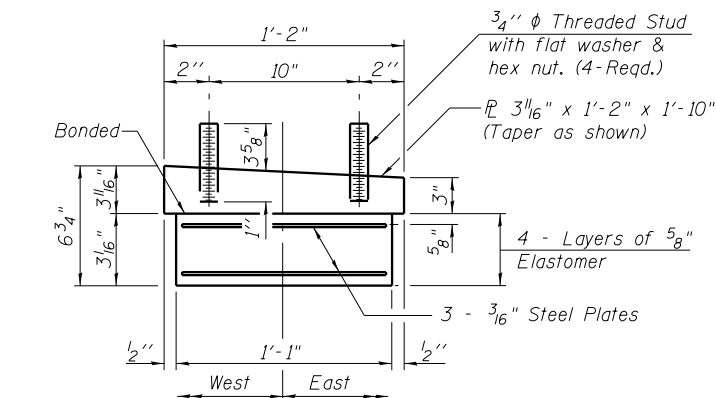
(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

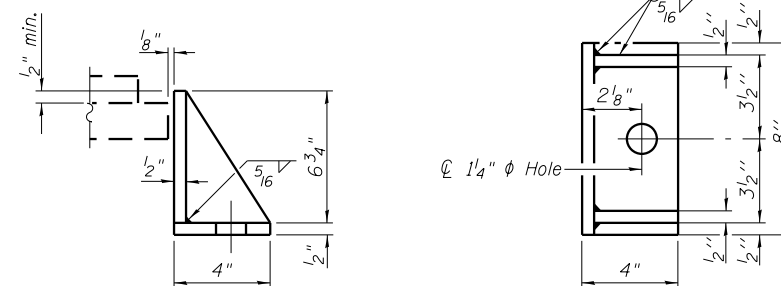
TYPE I ELASTOMERIC EXP. BRG. AT PIER C13 (ENTRANCE RAMP)

(5 Required)



BEARING ASSEMBLY 2

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER 2

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

Notes:

- For bearing removal details and quantity, see sheet S2-102.
- Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly Type I or Elastomeric Bearing Assembly Type II as applicable.
- Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Anchor bolts for Type I side retainers may be cast in place or installed in holes drilled before or after members are 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 I or Elastomeric Bearing Assembly Type II as applicable.
- The 1/8" 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 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
- Two 1/8" 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

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	5
Elastomeric Bearing Assembly, Type II	Each	5
Anchor Bolts, 3/4"	Each	10
Anchor Bolts, 1"	Each	10

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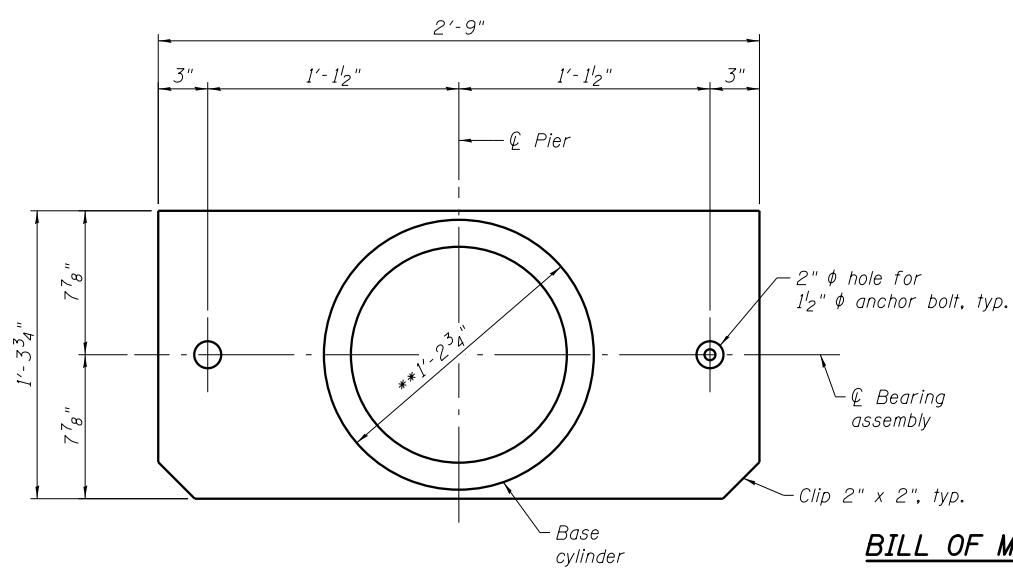
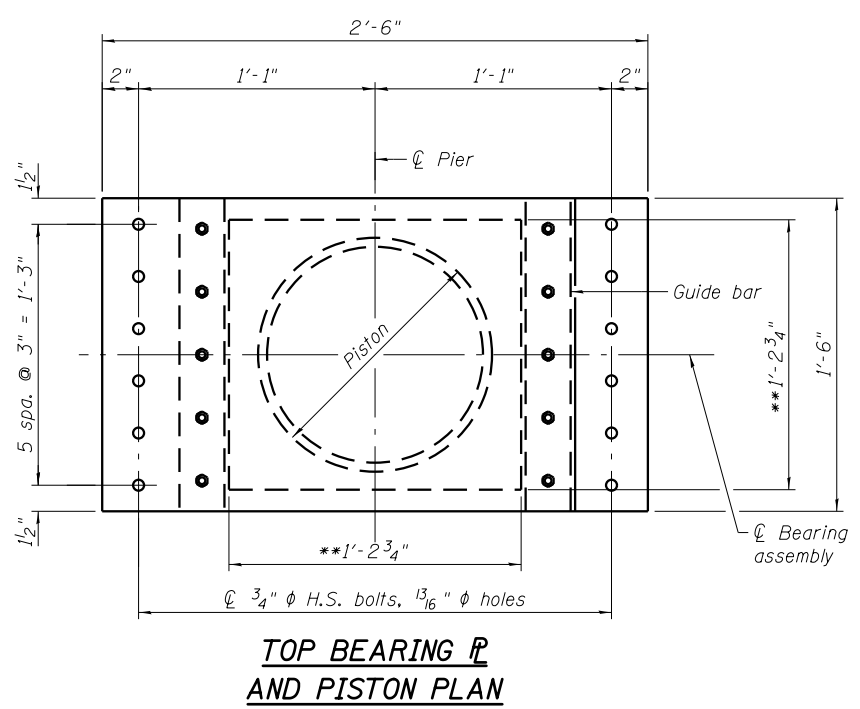
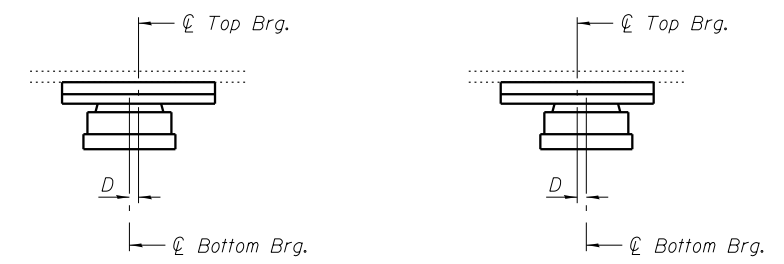
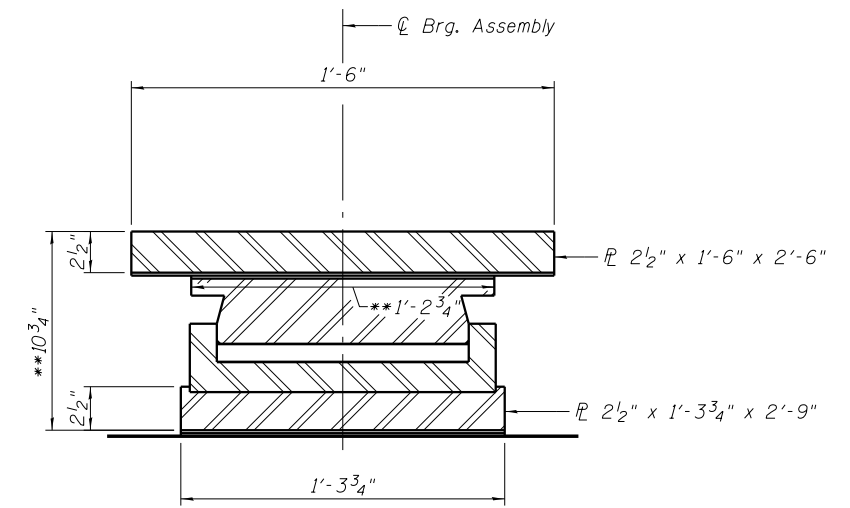
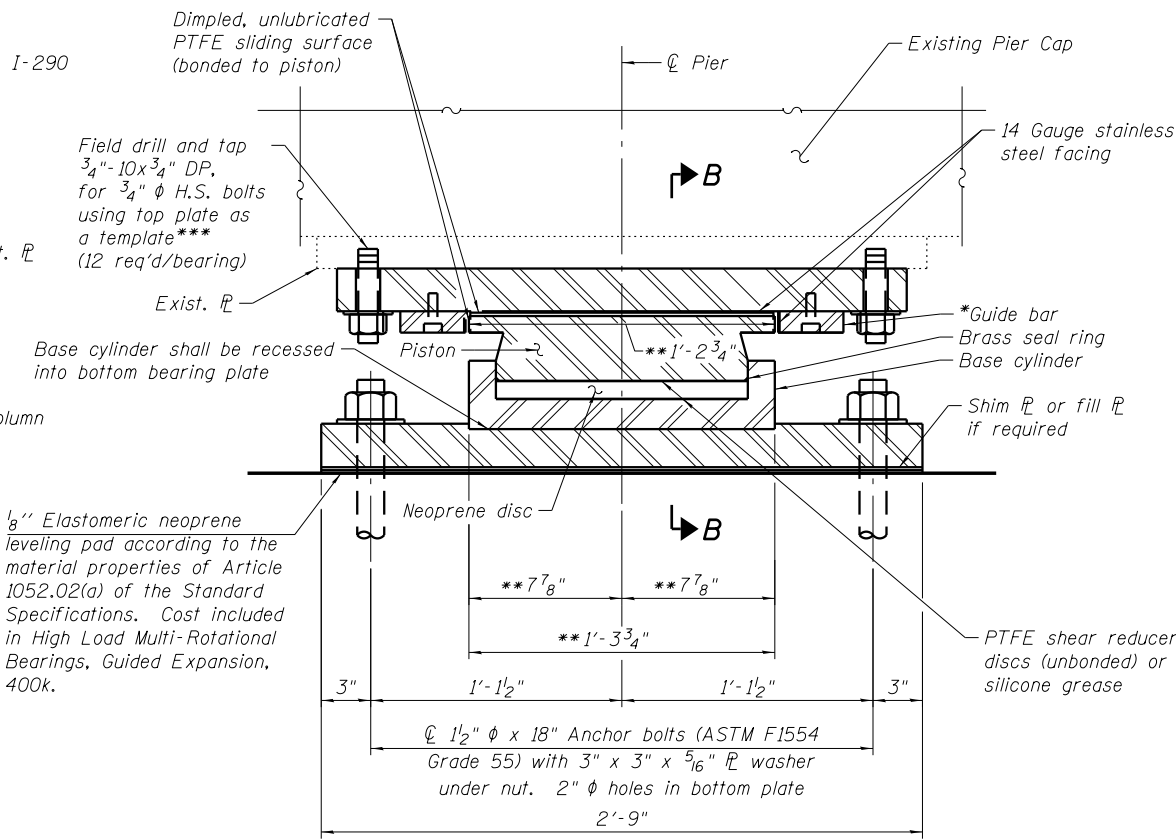
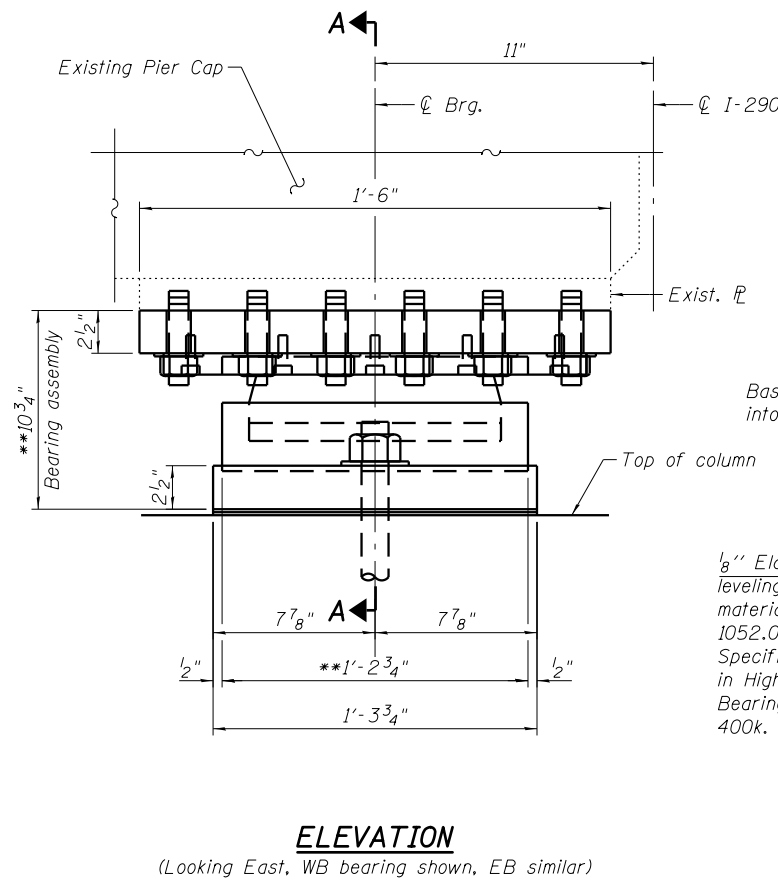
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PLOT SCALE = N.T.S.	CHECKED - P.JL	REVISIONS -
PLOT DATE = 3/23/2016	DRAWN - IJL/DCP	REVISIONS -
	CHECKED - JIG	REVISIONS -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - ENTRANCE RAMP STRUCTURE NO. 016-0461

SHEET NO. S2-103 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	380
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



NESTED BEARING
(AT PIERS C2, C3, C5, C6, C7, C8, C10, C11, C13 & C14)
(20 Required)

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 450k	Each	20
Anchor Bolts, 1 1/2"	Each	40

DESIGN DATA

Bearing Manufacturer Design Criteria	Exist. Piers
Vertical Design Load (kips)	443.3
Horizontal Design Load (kips), H _u	88.7
Design Rotation (rad), θ_u	0.02
Total Required Movement (in.)	1"

- * As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.
- ** Dimensions may vary depending on Manufacturer's design.
- *** Field drilling and tapping into exist. top plate to take place prior to casting concrete for center column.

Notes:
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts shall be cast in place and installed according to Article 521.06 of the Standard Specifications.
 For anchor bolt locations, see sheet S2-108.
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270, Grade 50.
 Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
 Bearing dimensions and details shown are for a pot type HLMR bearing. Disc type HLMR bearing dimensions and details will vary.

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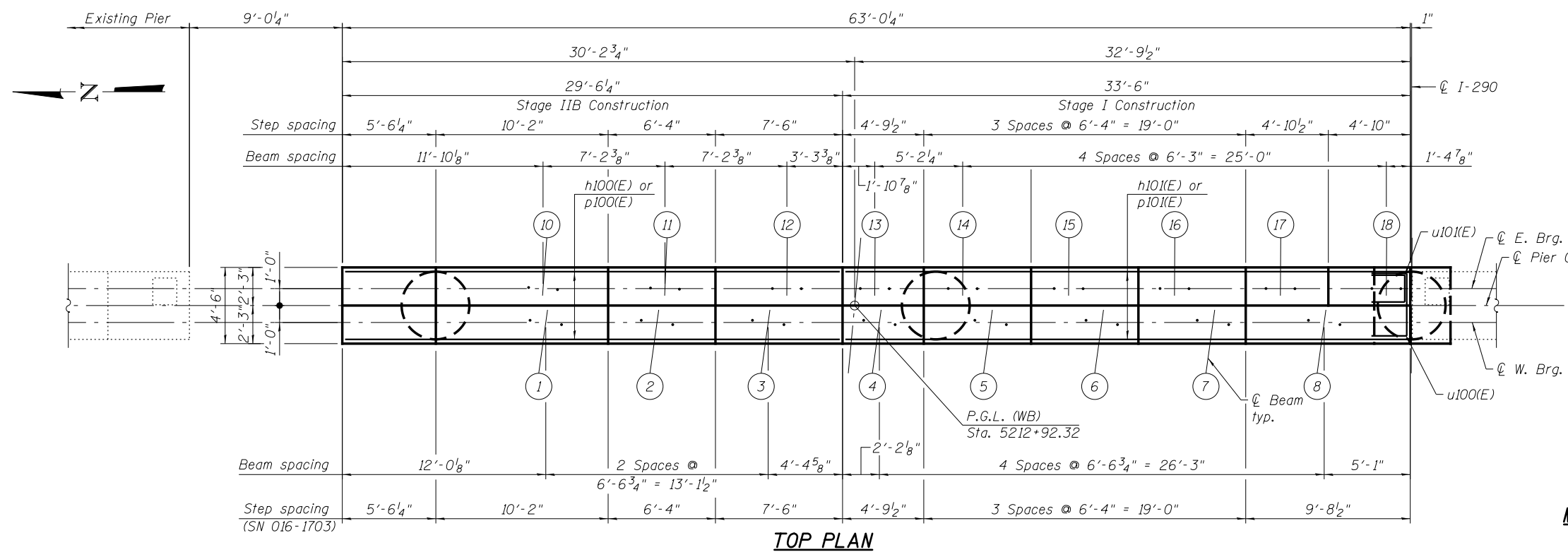
PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - IJL	REVISED -
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PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

COLUMN BEARING DETAILS I
STRUCTURE NO. 016-0461
SHEET NO. S2-104 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	381
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



TOP PLAN

BEARING SEAT STEP HEIGHTS

E. Seat Step	"A"
Lt. to 10	1'-6 3/4"
10 to 11	3 7/8"
11 to 12	4"
12 to 13	2 3/4"
13 to 14	2 1/8"
14 to 15	3 3/8"
15 to 16	3 3/8"
16 to 17	3 3/8"
17 to 18	3 3/8"

W. Seat Step	"B"
Lt. to 1	10 1/2"
1 to 2	3 5/8"
2 to 3	3 1/2"
3 to 4	3 5/8"
4 to 5	3 1/2"
5 to 6	3 5/8"
6 to 7	3 1/2"
7 to 8	3 5/8"

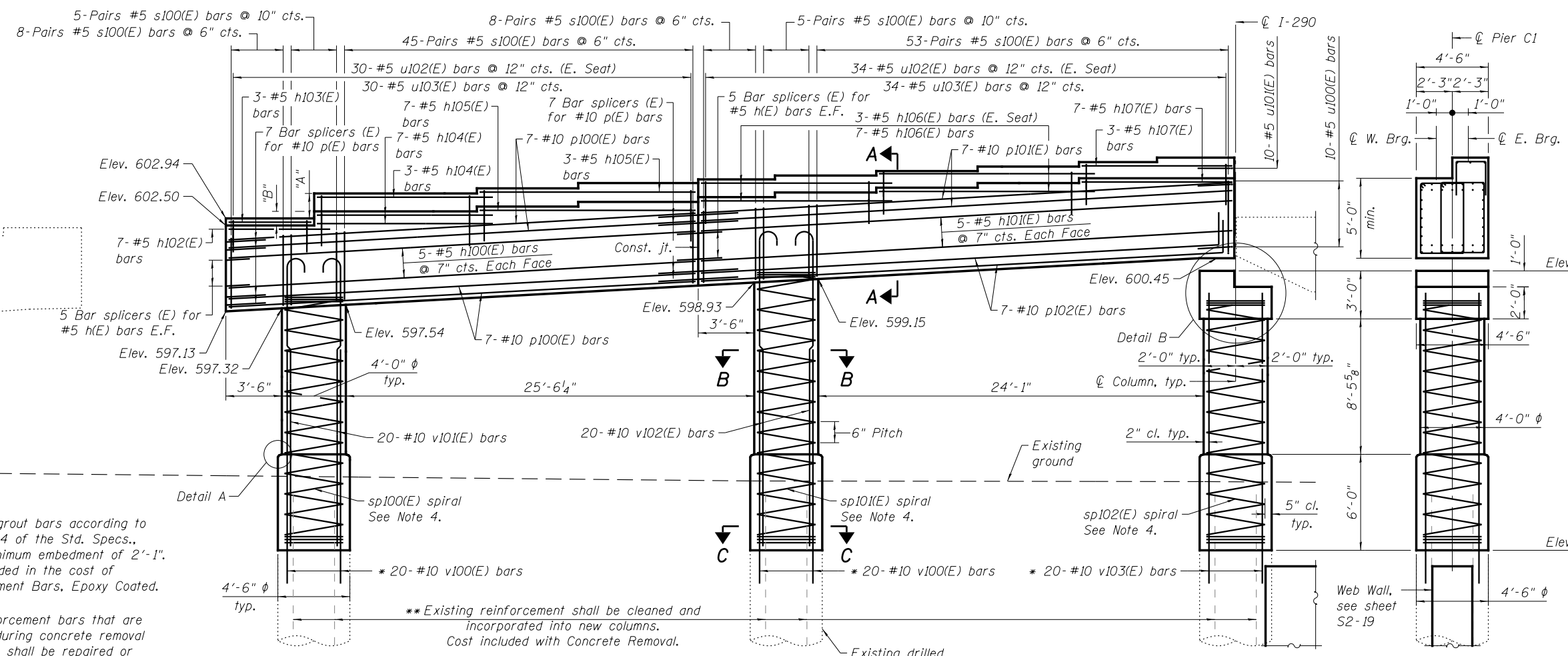
TOP OF SEAT ELEVATION

Beam No.	E. Seat Elevation	Beam No.	W. Seat Elevation
10	604.50	1	603.38
11	604.82	2	603.68
12	605.15	3	603.97
13	605.38	4	604.27
14	605.62	5	604.56
15	605.90	6	604.86
16	606.18	7	605.15
17	606.46	8	605.45
18	606.74		

- Notes:
- Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For Sections A-A, B-B & C-C, and Details A & B, see sheet S2-107.
 - sp100(E), sp101(E) & sp102(E) spiral,
 - Provide 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap or column cap. Provide 4-#4 spacers or equivalent.
 - When splicing spiral reinforcement is necessary, the spiral shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

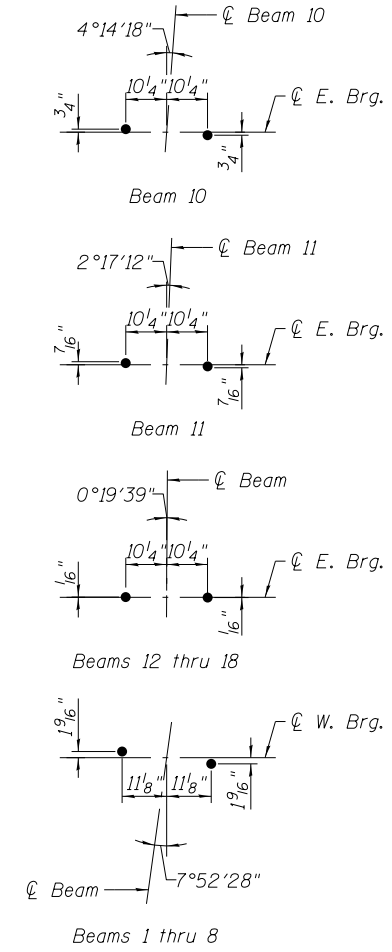
MINIMUM BAR LAP

#5 bar = 3'-3"
 #10 bar = 10'-10"



ELEVATION
(Looking East)

END VIEW



ANCHOR BOLT LAYOUT

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 2'-1". Cost included in the cost of Reinforcement Bars, Epoxy Coated.

** 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.

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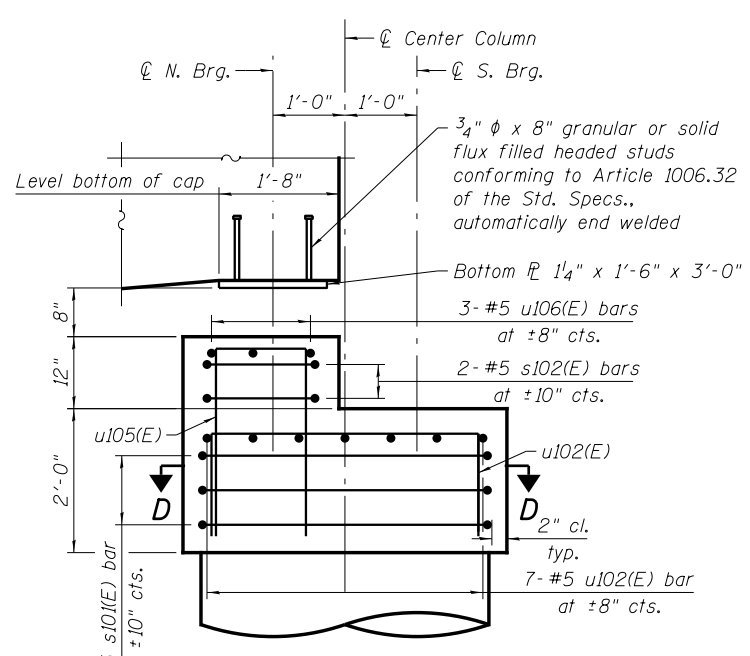
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	CHECKED - JIG	REVISED -

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PIER C1
STRUCTURE NO. 016-0461

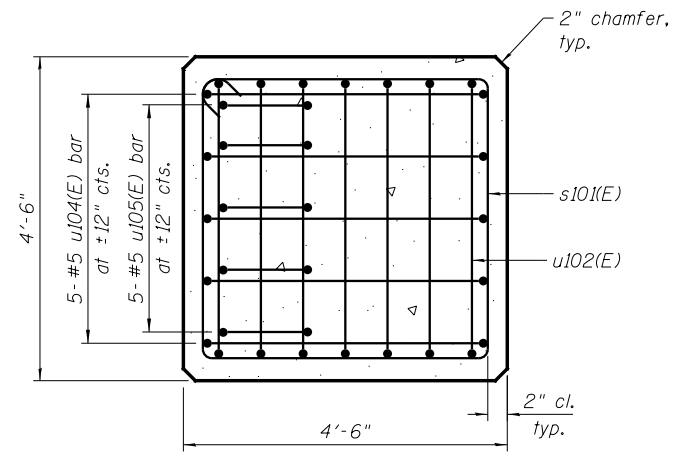
SHEET NO. S2-106 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

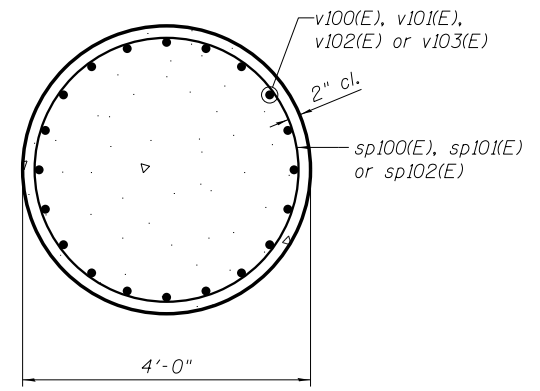


DETAIL B

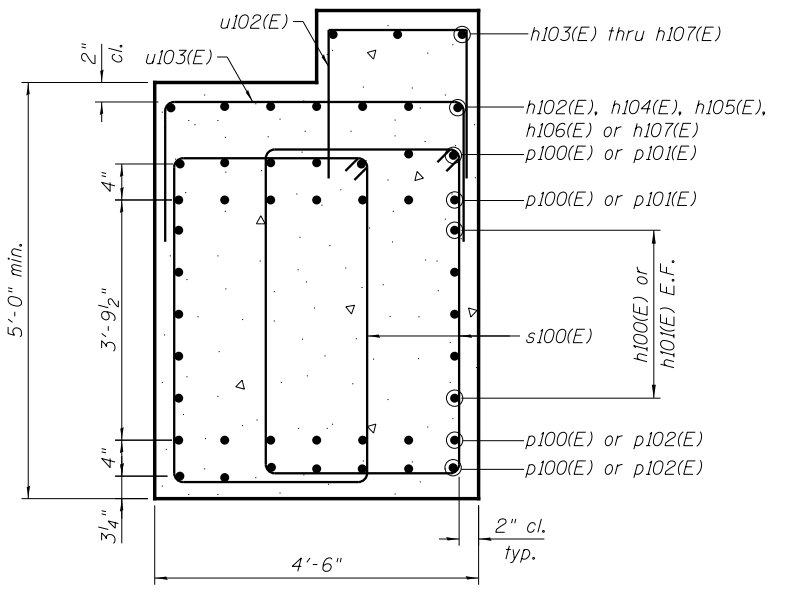
Pier cap and column reinforcement not shown for clarity



SECTION D-D

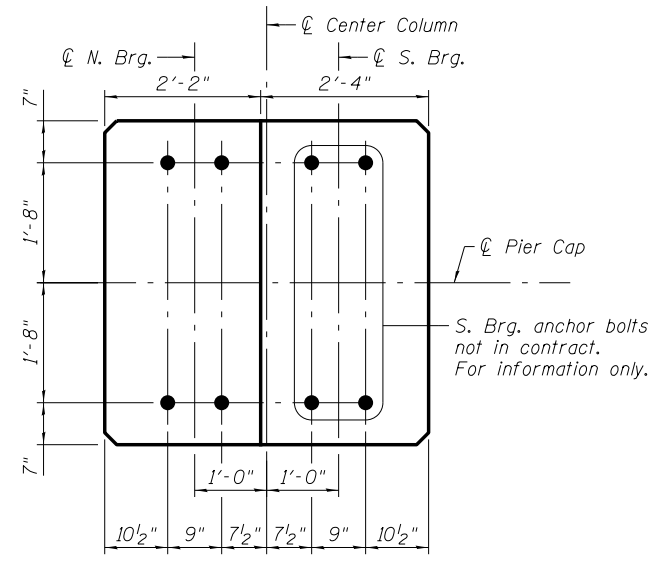


SECTION B-B

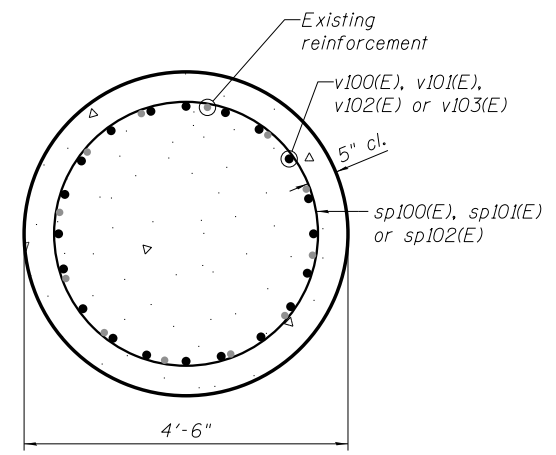


SECTION A-A

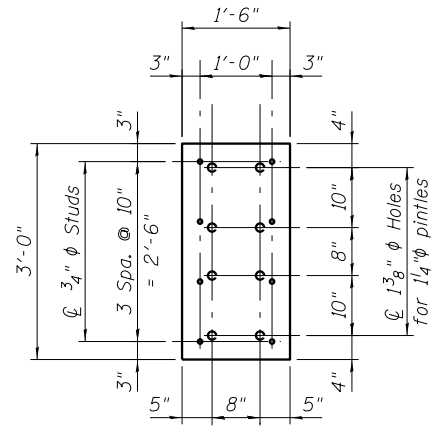
Middle of Pier Cap



ANCHOR BOLT LAYOUT AT NESTED BEARING

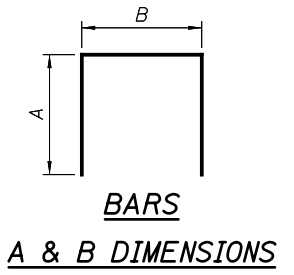


SECTION C-C

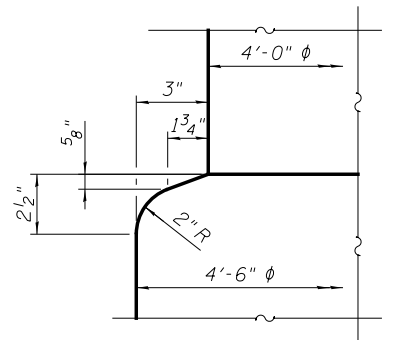


BOTTOM PLATE

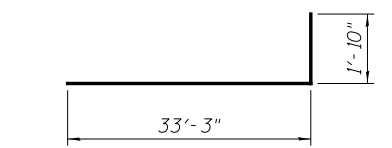
Cost included with Concrete Structures.



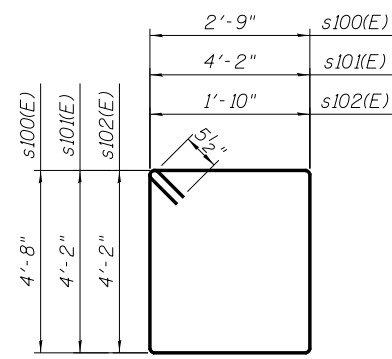
Bar	A	B
u100(E)	3'-6"	4'-2"
u101(E)	3'-6"	4'-2"
u102(E)	2'-9"	1'-11"
u103(E)	2'-2"	4'-2"
u104(E)	1'-8"	4'-2"
u105(E)	2'-8"	1'-10"
u106(E)	2'-8"	4'-2"



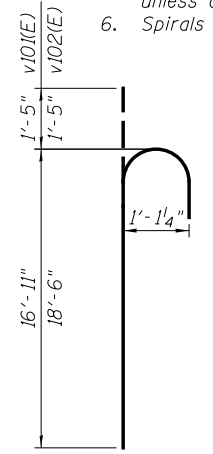
DETAIL A



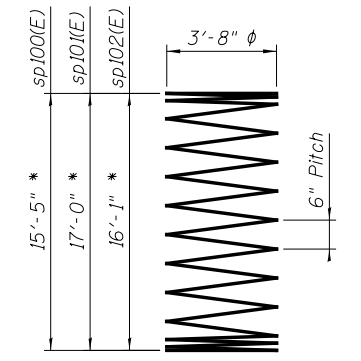
BAR p102(E)



BARS s100(E) THRU s102(E)



BARS v101(E) & v102(E)



BARS sp100(E) THRU sp102(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	10	#5	29'-3"	—
h101(E)	10	#5	33'-3"	—
h102(E)	7	#5	6'-4"	—
h103(E)	3	#5	5'-4"	—
h104(E)	17	#5	11'-0"	—
h105(E)	10	#5	13'-6"	—
h106(E)	20	#5	13'-10"	—
h107(E)	10	#5	11'-3"	—
p100(E)	28	#10	29'-3"	—
p101(E)	14	#10	33'-3"	—
p102(E)	14	#10	35'-1"	—
s100(E)	248	#5	15'-9"	□
s101(E)	3	#5	17'-7"	□
s102(E)	2	#5	12'-11"	□
sp100(E)	1	#5	15'-5"	≡
sp101(E)	1	#5	17'-0"	≡
sp102(E)	1	#5	16'-1"	≡
u100(E)	10	#5	11'-2"	□
u101(E)	1	#5	8'-11"	□
u102(E)	64	#5	7'-5"	□
u103(E)	64	#5	8'-6"	□
u104(E)	12	#5	7'-6"	□
u105(E)	5	#5	7'-2"	□
u106(E)	3	#5	9'-6"	□
v100(E)	40	#10	13'-3"	—
v101(E)	20	#10	18'-4"	—
v102(E)	20	#10	19'-11"	—
v103(E)	20	#10	18'-4"	—
Structure Excavation	Cu. Yd.		28	
Concrete Structures	Cu. Yd.		88.6	
Reinforcement Bars, Epoxy Coated	Pound		23,030	
Concrete Sealer	Sq. Ft.		2,033	

* Length is height of spiral

Notes:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Space reinforcement in column cap to miss anchor bolts.
3. Bars equally spaced, unless otherwise noted.
4. Apply concrete sealer to all exposed concrete surfaces of the pier.
5. All edges shall have standard 3/4" chamfer, unless otherwise noted.
6. Spirals are measured vertically.

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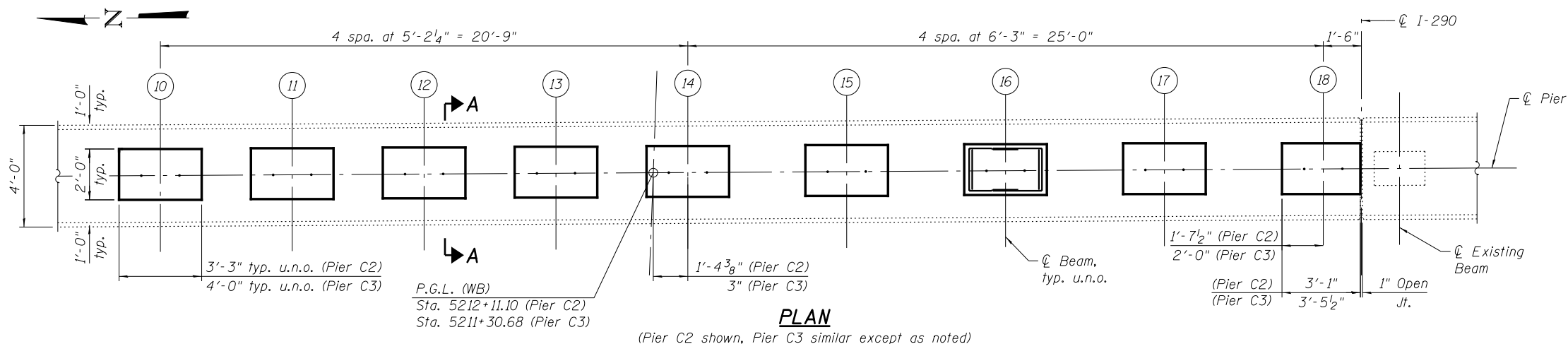
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PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

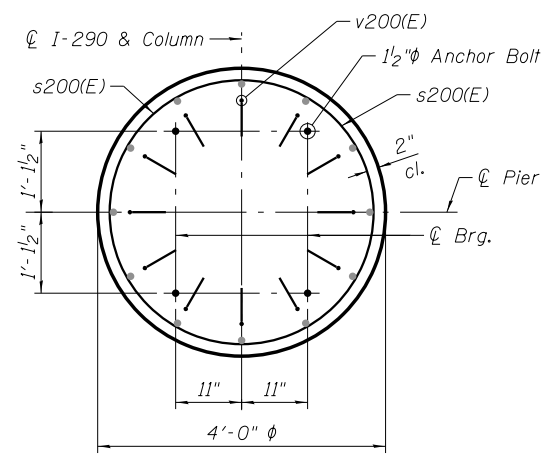
PIER C1 DETAILS STRUCTURE NO. 016-0461

SHEET NO. S2-107 OF S2-145 SHEETS

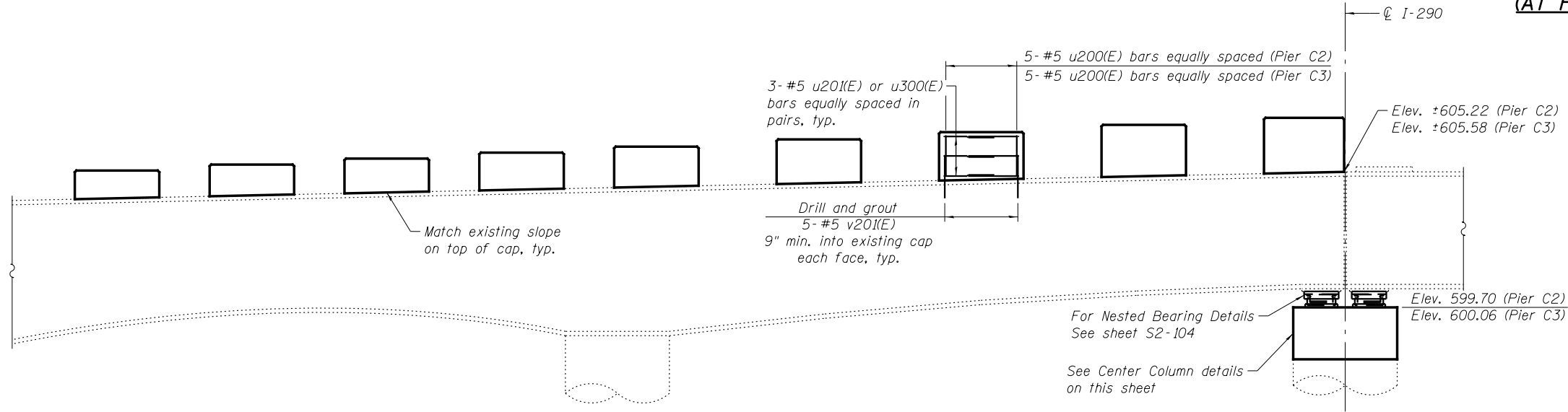
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	384
CONTRACT NO. 60X78			ILLINOIS FED. AID PROJECT	



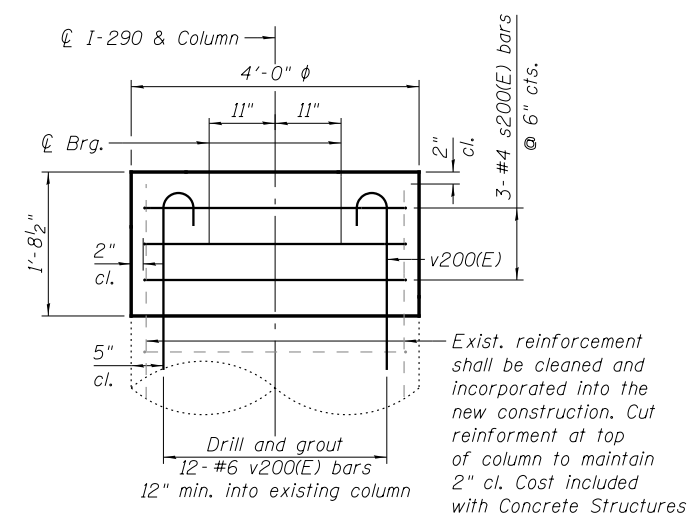
PLAN
(Pier C2 shown, Pier C3 similar except as noted)



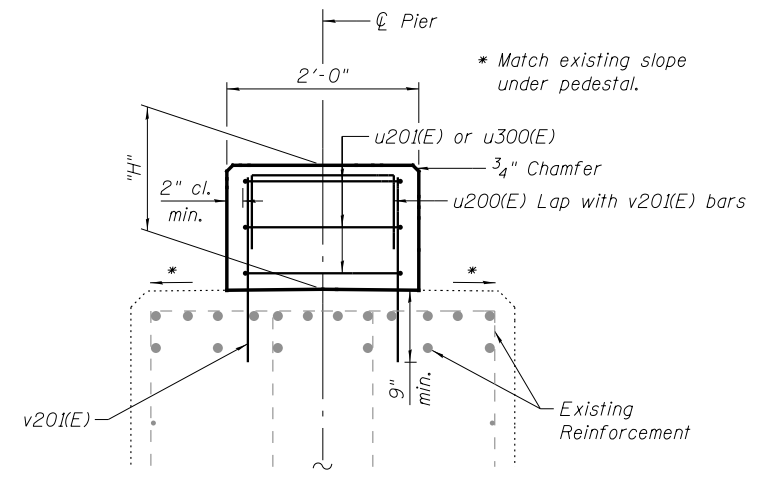
PLAN - CENTER COLUMN
(AT PIERS C2, C3, C5, C6, C7, C8, C10, C11, C13 & C14)



ELEVATION
(Looking East, Pier C2 shown, Pier C3 similar except as noted)



ELEVATION - CENTER COLUMN
(AT PIERS C2, C3, C5, C6, C7, C8, C10, C11, C13 & C14)



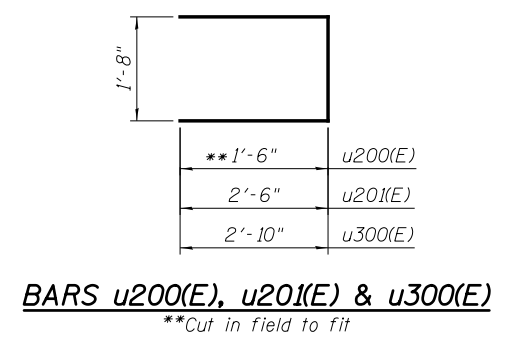
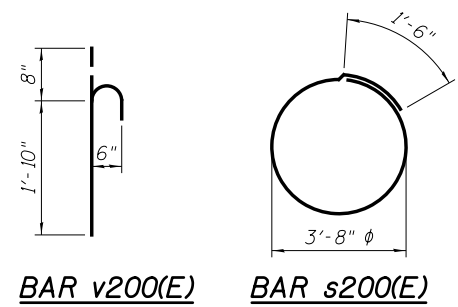
SECTION A-A
(Anchor bolts not shown for clarity)

BEAM SEAT ELEVATION

Beam	Pier C2	Pier C3
10	605.23	606.31
11	605.46	606.43
12	605.69	606.55
13	605.92	606.67
14	606.15	606.79
15	606.43	606.94
16	606.71	607.09
17	606.99	607.23
18	607.26	607.38

PEDESTAL HEIGHT, "H"

Beam	Pier C2	Pier C3
10	1'-0 1/4"	1'-8"
11	1'-1 3/4"	1'-8 1/4"
12	1'-3 1/8"	1'-8 1/2"
13	1'-4 1/2"	1'-8 5/8"
14	1'-6"	1'-8 7/8"
15	1'-7 3/4"	1'-9 1/8"
16	1'-9 1/2"	1'-9 5/8"
17	1'-11 1/4"	1'-9 5/2"
18	2'-0 7/8"	1'-9 7/8"



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
s200(E)	30	#4	13'-0"	○
u200(E)	90	#5	4'-8"	U
u201(E)	54	#5	6'-8"	U
u300(E)	54	#5	7'-4"	U
v200(E)	120	#6	2'-6"	U
v201(E)	180	#5	2'-7"	U
Reinforcement Bars, Epoxy Coated			Pound	2,300
Concrete Structures			Cu. Yd.	15.9

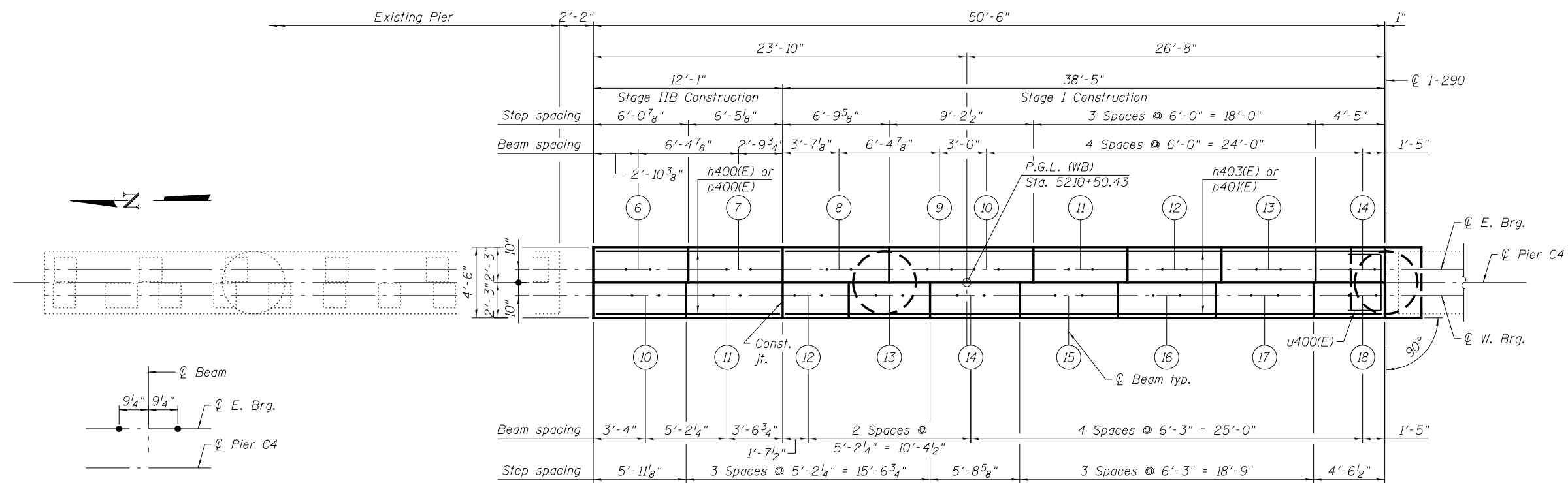
- Notes:
- Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
 - Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.

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TOP OF SEAT ELEVATION

Beam No.	E. Seat Elevation	Beam No.	W. Seat Elevation
6	607.29	10	607.06
7	607.42	11	607.17
8	607.55	12	607.27
9	607.66	13	607.38
10	607.66	14	607.49
11	607.80	15	607.56
12	607.87	16	607.64
13	607.95	17	607.73
14	608.03	18	607.82

- Notes:
- Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For Sections A-A, B-B, C-C & D-D and Details A & B, see sheet S2-110.
 - sp400(E) & sp401(E) spiral,
 - Provide 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap or column cap. Provide 4-#4 spacers or equivalent.
 - When splicing spiral reinforcement is necessary, the spiral shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

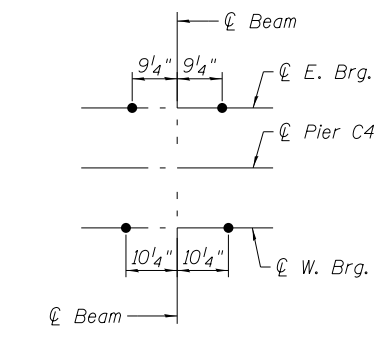


TOP PLAN

MINIMUM BAR LAP

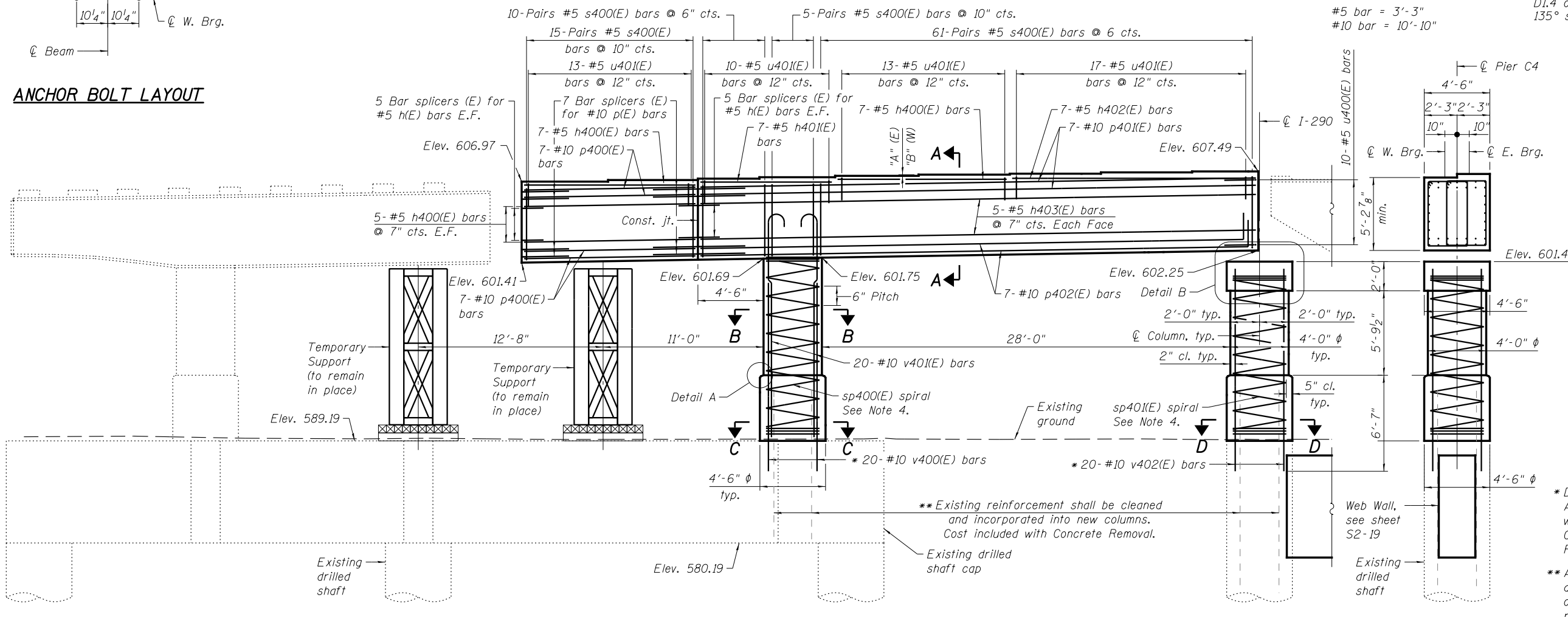
- #5 bar = 3'-3"
- #10 bar = 10'-10"

ANCHOR BOLT LAYOUT



BEARING SEAT STEP HEIGHTS

E. Seat Step	"A"
6 to 7	1 1/2"
7 to 8	1 1/2"
8 to 9/10	1 3/8"
9/10 to 11	1 5/8"
11 to 12	1"
12 to 13	1"
13 to 14	1"
W. Seat Step	"B"
10 to 11	1 1/4"
11 to 12	1 1/4"
12 to 13	1 1/4"
13 to 14	1 1/4"
14 to 15	1 3/8"
15 to 16	1"
16 to 17	1 1/8"
17 to 18	1 1/8"



ELEVATION (Looking East)

END VIEW

- ** Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 2'-1". Cost included in the cost of Reinforcement Bars, Epoxy Coated.
- ** 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.

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PARSONS BRINCKERHOFF

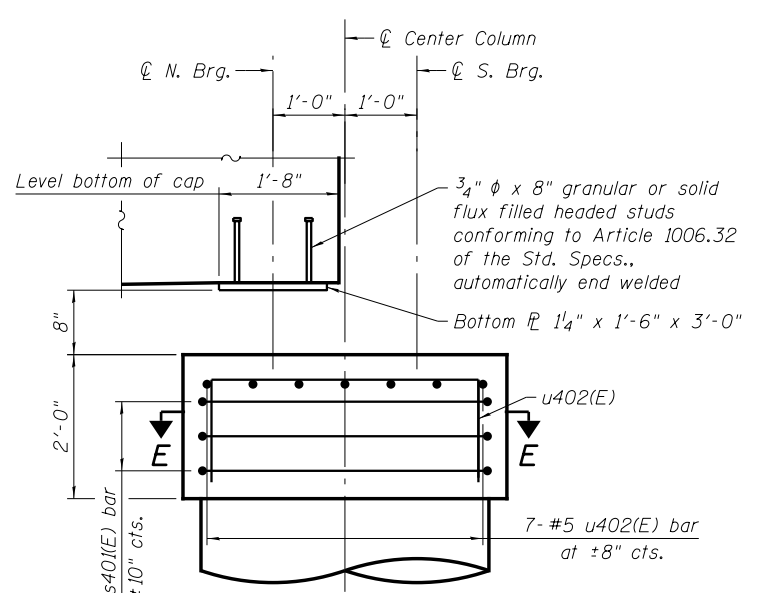
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PLLOT SCALE = N.T.S.	CHECKED - DS	REVISED -
PLLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

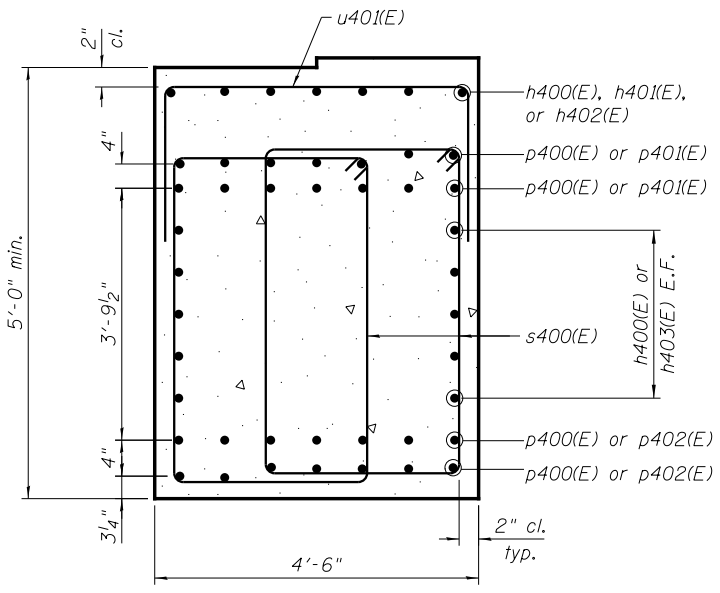
PIER C4 STRUCTURE NO. 016-0461

SHEET NO. S2-109 OF S2-145 SHEETS

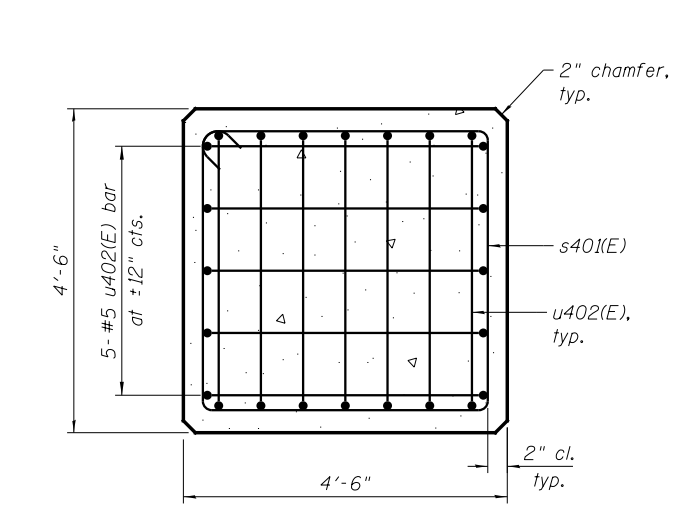
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	386
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



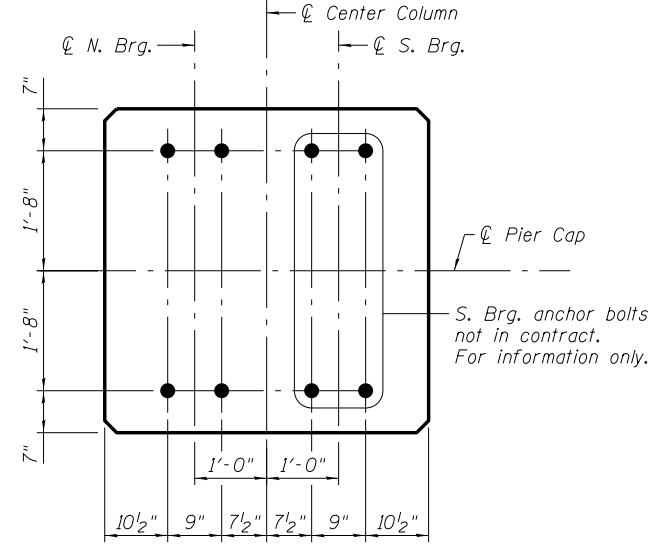
DETAIL B
Pier cap and column reinforcement
not shown for clarity



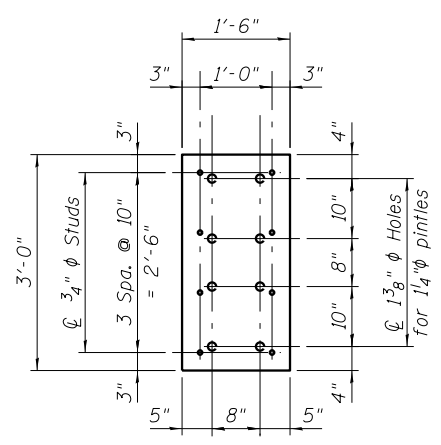
SECTION A-A
Middle of Pier Cap



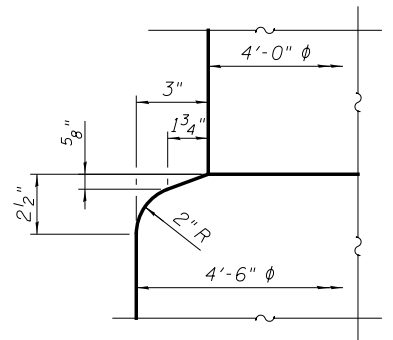
SECTION E-E



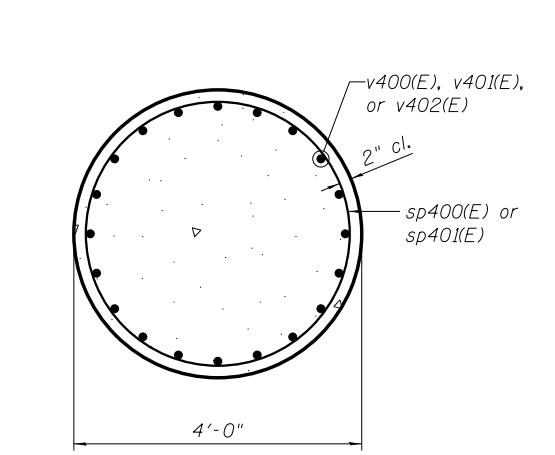
ANCHOR BOLT LAYOUT AT NESTED BEARING



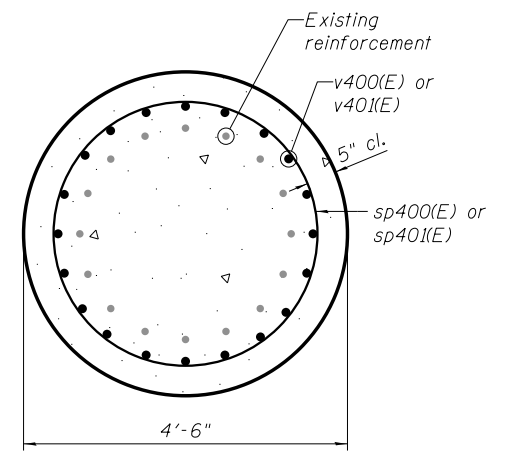
BOTTOM PLATE
Cost included with Concrete Structures.



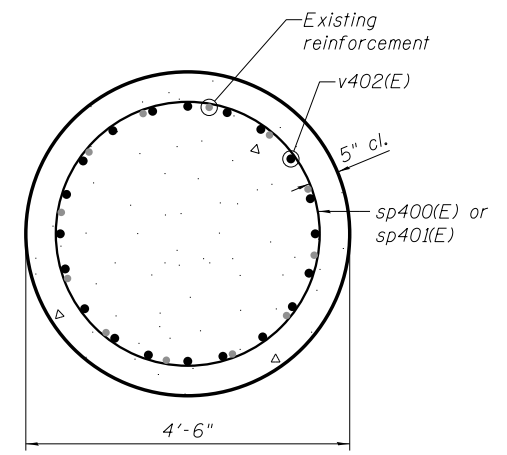
DETAIL A



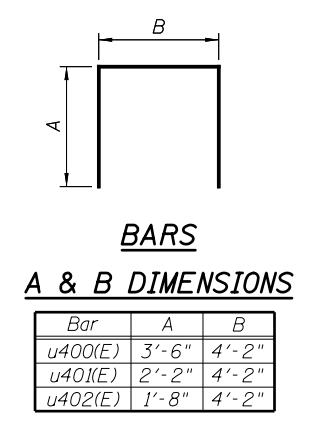
SECTION B-B



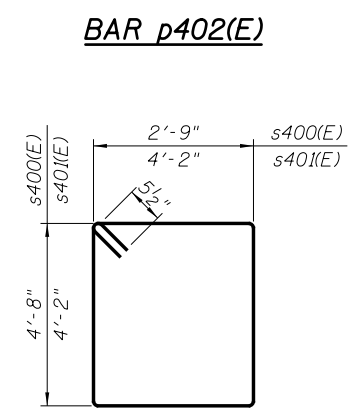
SECTION C-C



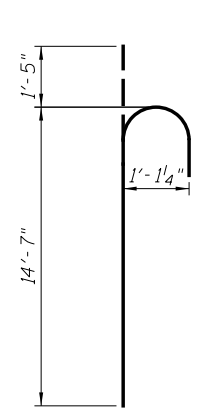
SECTION D-D



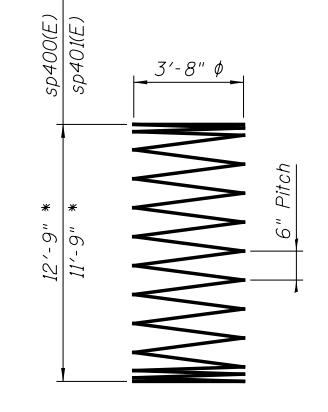
BARS A & B DIMENSIONS



BARS s400(E) & s401(E)



BAR v401(E)



BARS sp400(E) & sp401(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h400(E)	24	#5	11'-10"	—
h401(E)	7	#5	9'-0"	—
h402(E)	7	#5	16'-0"	—
h403(E)	10	#5	38'-2"	—
p400(E)	28	#10	11'-10"	—
p401(E)	14	#10	38'-2"	—
p402(E)	14	#10	40'-0"	—
s400(E)	182	#5	15'-9"	□
s401(E)	3	#5	17'-7"	□
sp400(E)	1	#5	12'-9"	⌘
sp401(E)	1	#5	11'-9"	⌘
u400(E)	10	#5	11'-2"	□
u401(E)	53	#5	8'-6"	□
u402(E)	12	#5	7'-6"	□
v400(E)	20	#10	13'-3"	—
v401(E)	20	#10	16'-0"	—
v402(E)	20	#10	14'-1"	—
Concrete Structures		Cu. Yd.	59.1	
Reinforcement Bars, Epoxy Coated		Pound	15,130	
Concrete Sealer		Sq. Ft.	1,406	

* Length is height of spiral

- Note:
1. Reinforcement bars designated (E) shall be epoxy coated.
 2. Space reinforcement in column cap to miss anchor bolts.
 3. Bars equally spaced, unless otherwise noted.
 4. Apply concrete sealer to all exposed concrete surfaces of the pier.
 5. All edges shall have standard 3/4" chamfer, unless otherwise noted.
 6. Spirals are measured vertically.

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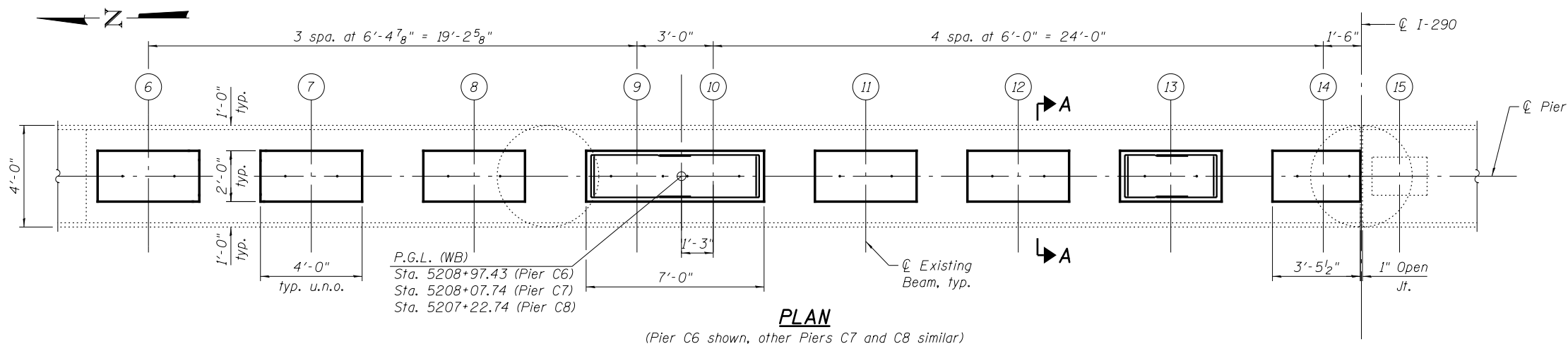
PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - P.J.L.	REVISED -
PLOT SCALE = N.T.S.	CHECKED - D.S.	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER C4 DETAILS
STRUCTURE NO. 016-0461**
SHEET NO. S2-110 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	387
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



PLAN
(Pier C6 shown, other Piers C7 and C8 similar)

PEDESTAL HEIGHT, "H"

Beam	Pier C6	Pier C7	Pier C8
6	1'-1 ³ / ₈ "	11 ³ / ₄ "	10 ¹ / ₈ "
7	1'-3"	1'-1 ³ / ₈ "	11 ⁵ / ₈ "
8	1'-4 ¹ / ₂ "	1'-2 ⁷ / ₈ "	1'-1 ¹ / ₈ "
9	1'-5 ¹ / ₈ "	1'-3 ¹ / ₂ "	1'-1 ¹ / ₈ "
10	1'-5 ⁵ / ₈ "	1'-3 ¹ / ₂ "	1'-1 ¹ / ₈ "
11	1'-4 ³ / ₄ "	1'-3 ¹ / ₈ "	1'-1 ³ / ₈ "
12	1'-3 ³ / ₈ "	1'-1 ³ / ₄ "	1'-0"
13	1'-1 ⁷ / ₈ "	1'-0 ³ / ₄ "	10 ¹ / ₂ "
14	1'-0 ³ / ₈ "	10 ³ / ₄ "	9"

BEAM SEAT ELEVATION

Beam	Pier C6	Pier C7	Pier C8
6	608.12	608.01	607.70
7	608.25	608.15	607.83
8	608.37	608.27	607.95
9	608.43	608.33	608.01
10	608.43	608.33	608.01
11	608.39	608.29	607.97
12	608.28	608.18	607.86
13	608.15	608.05	607.74
14	608.03	607.93	607.61

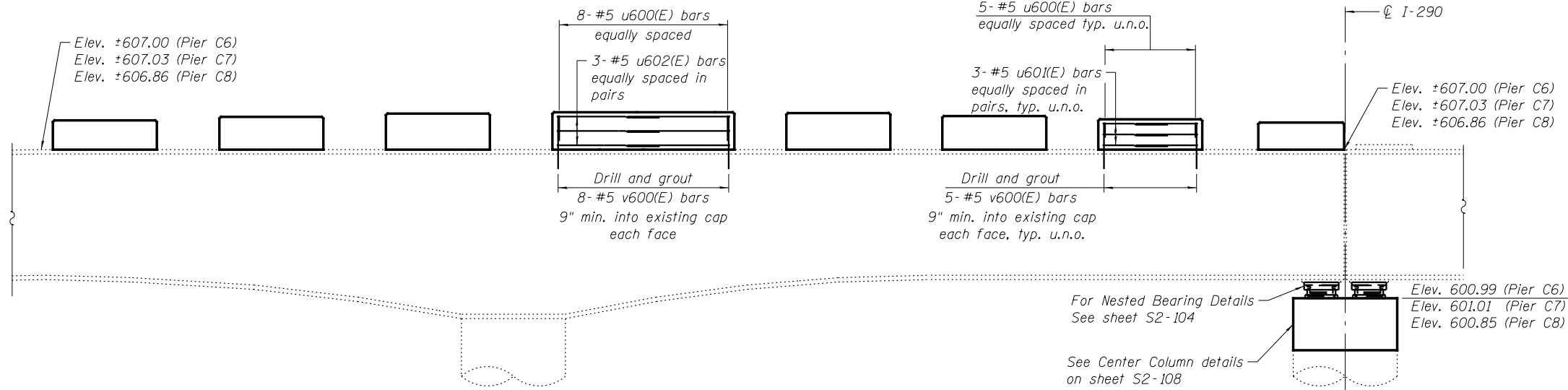
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u600(E)	129	#5	3'-4"	U
u601(E)	126	#5	7'-4"	U
u602(E)	18	#5	10'-4"	U
*** v600(E)	258	#5	2'-0"	—
Reinforcement Bars, Epoxy Coated			Pound	2,150
Concrete Structures			Cu. Yd.	8.9

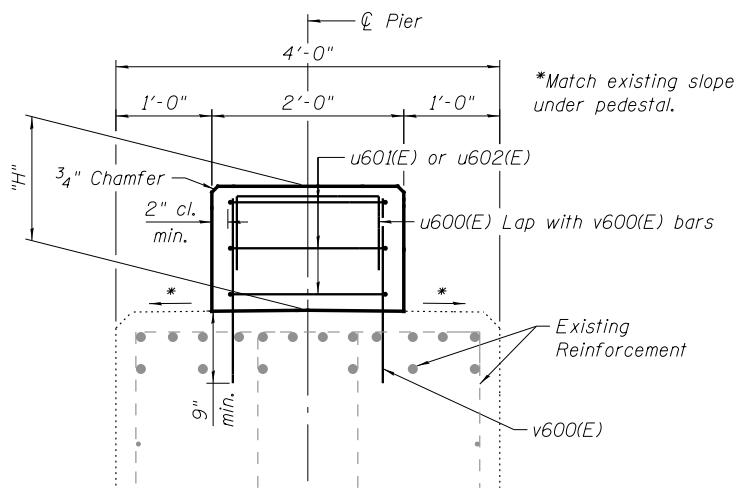
*** Cut bar in field to fit.

Notes:

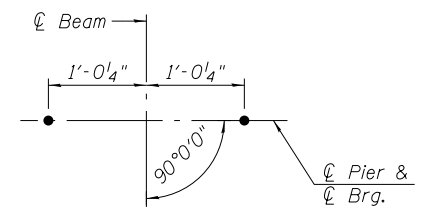
- Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
- Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.



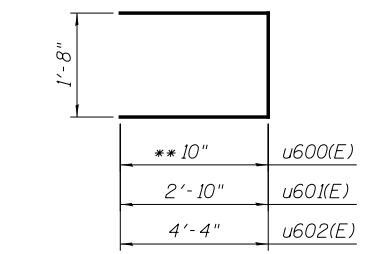
ELEVATION
(Looking East, Pier C6 shown, other Piers C7 and C8 similar)



SECTION A-A
(Anchor bolts not shown for clarity)



ANCHOR BOLT LAYOUT



BARS u600(E) TO u603(E)
**Cut bar in field to fit.

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PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIERS C6 TO C8 DETAILS
STRUCTURE NO. 016-0461**

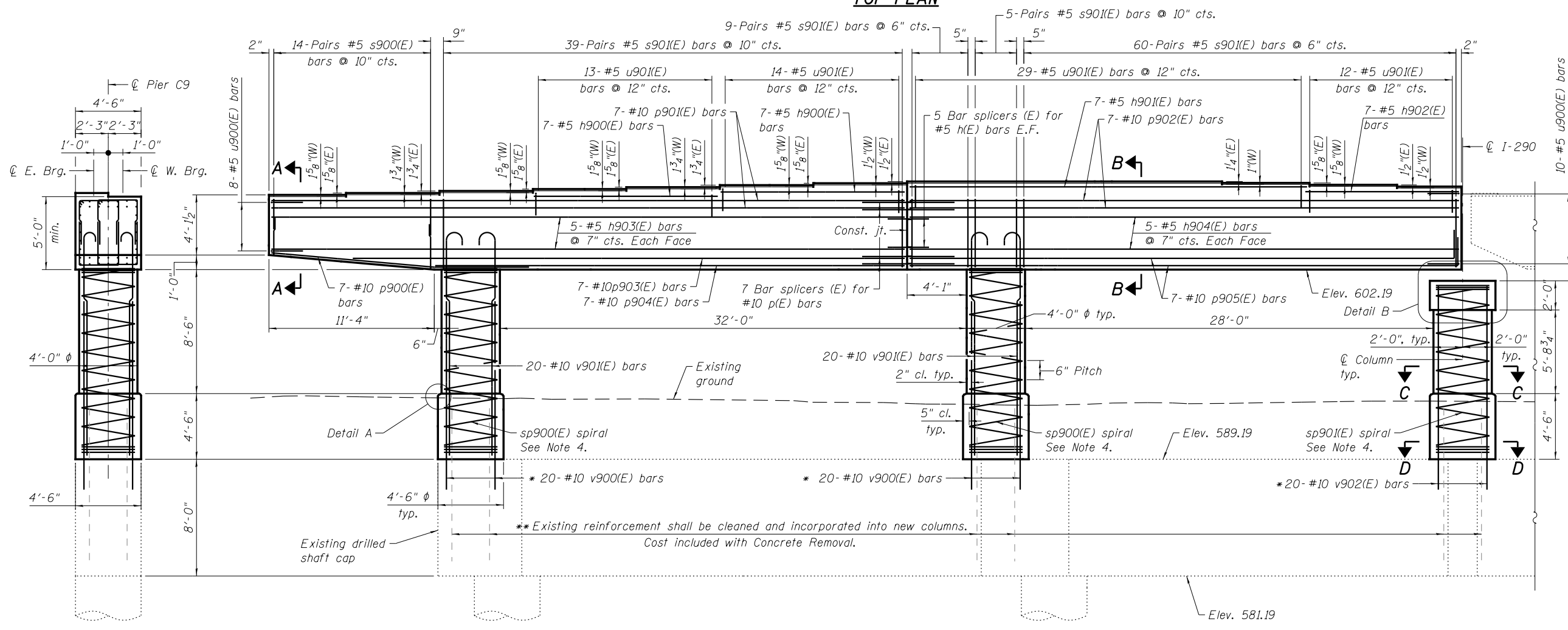
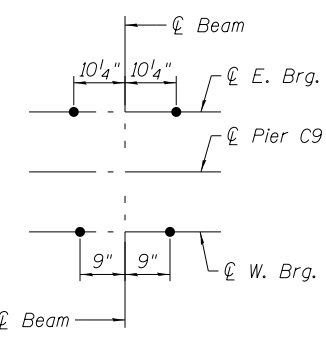
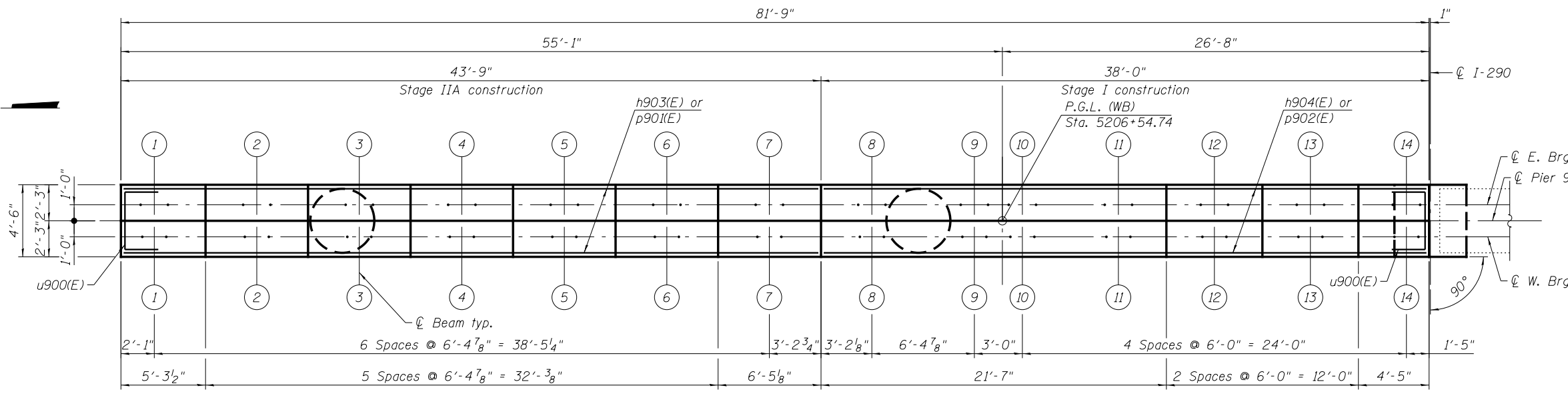
SHEET NO. S2-111 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	388
CONTRACT NO. 60X78				

ILLINOIS FED. AID PROJECT

TOP OF SEAT ELEVATION

Beam No.	E. Seat Elevation	W. Seat Elevation
1	607.31	607.19
2	607.44	607.32
3	607.58	607.46
4	607.71	607.59
5	607.84	607.72
6	607.98	607.86
7	608.11	607.99
8	608.23	608.11
9	608.23	608.11
10	608.23	608.11
11	608.23	608.11
12	608.13	608.03
13	608.00	607.90
14	607.88	607.78



- Notes:**
- Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For Sections A-A, B-B, C-C & D-D and Details A & B, see sheet S2-113.
 - sp900(E) & sp901(E) spiral,
 - Provide 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap or column cap. Provide 4-#4 spacers or equivalent.
 - When splicing spiral reinforcement is necessary, the spiral shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

END VIEW

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 2'-1". Cost included in the cost of Reinforcement Bars, Epoxy Coated.

** 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.

ELEVATION (Looking East)

MINIMUM BAR LAP
 #5 bar = 3'-3"
 #10 bar = 10'-10"

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PARSONS BRINCKERHOFF

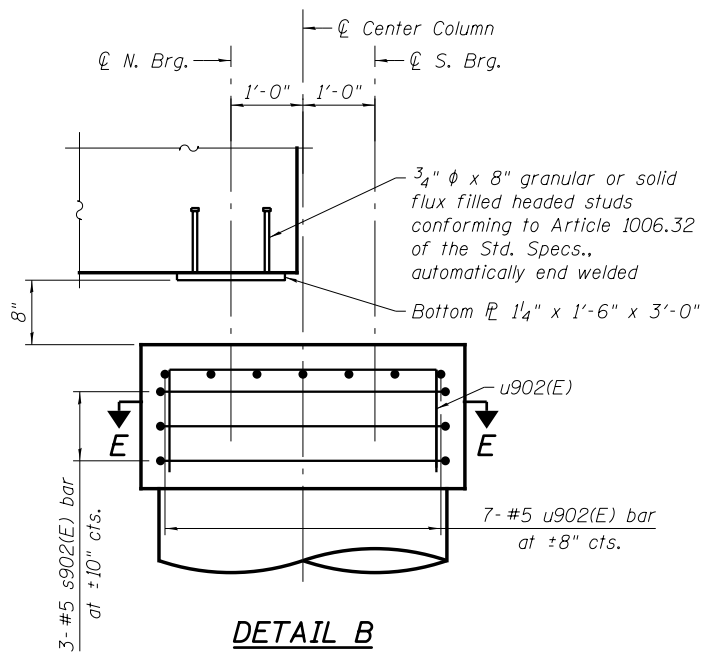
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PLLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PIER C9 STRUCTURE NO. 016-0461

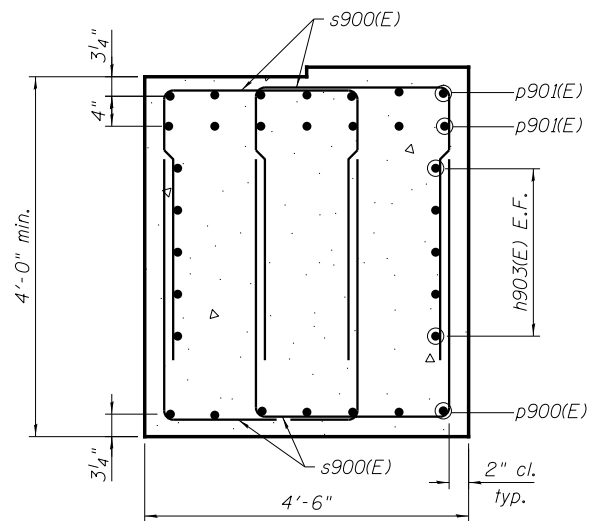
SHEET NO. S2-112 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	389
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

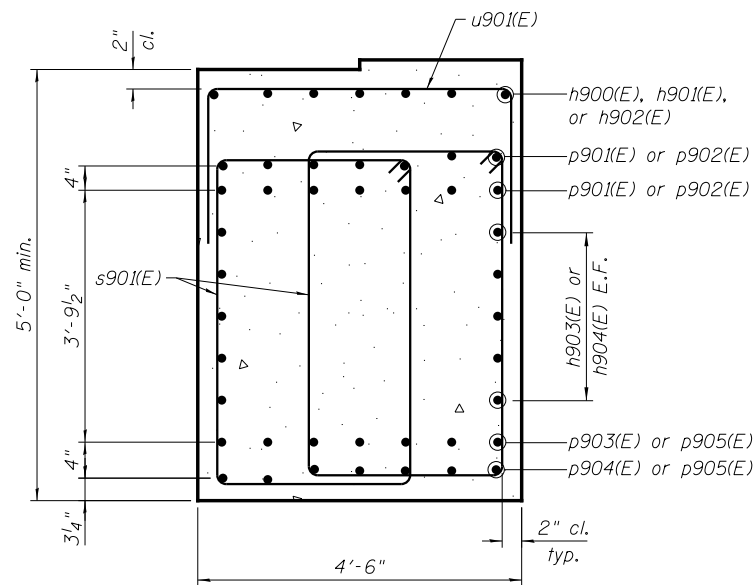


DETAIL B

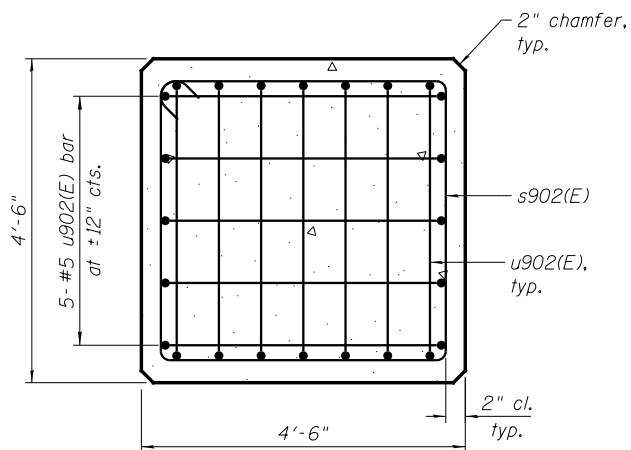
Pier cap and column reinforcement not shown for clarity



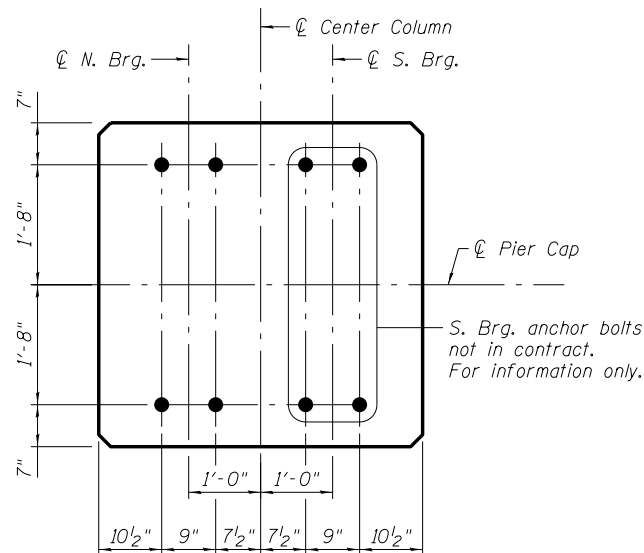
SECTION A-A



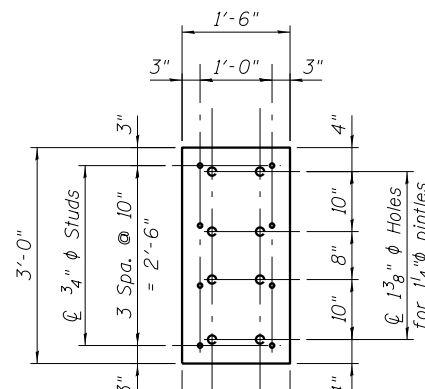
SECTION B-B



SECTION E-E

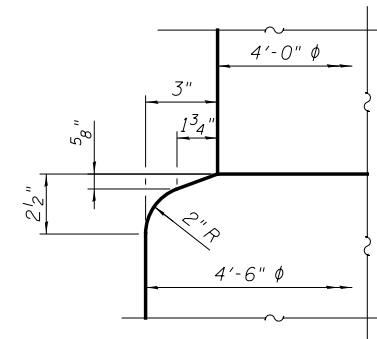


ANCHOR BOLT LAYOUT AT NESTED BEARING

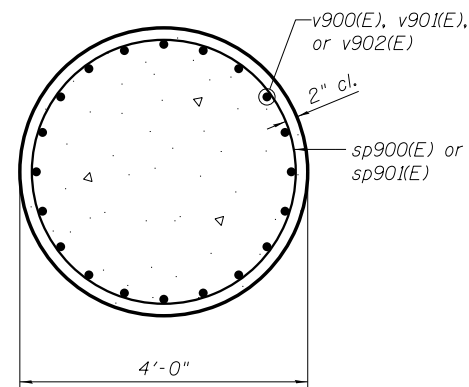


BOTTOM PLATE

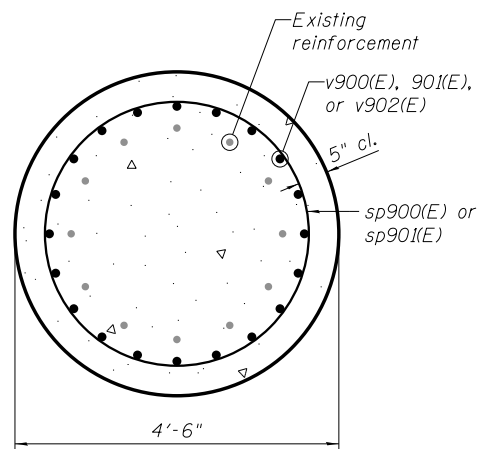
Cost included with Concrete Structures.



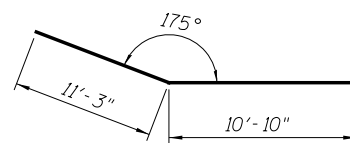
DETAIL A



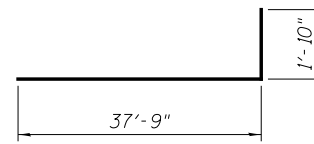
SECTION C-C



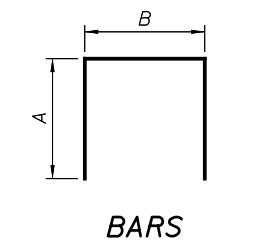
SECTION D-D



BAR p900(E)

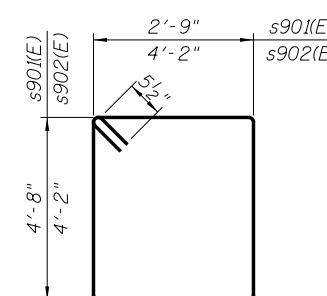


BAR p905(E)

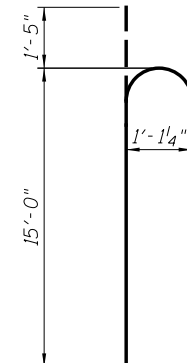


BARS A & B DIMENSIONS

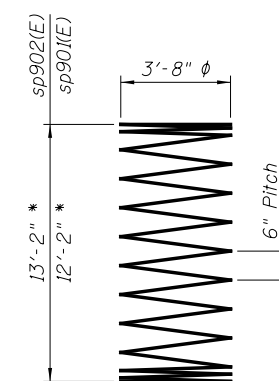
Bar	A	B
s900(E)	3'-5"	2'-9"
u900(E)	3'-6"	4'-2"
u901(E)	2'-2"	4'-2"
u902(E)	1'-8"	4'-2"



BARS s901(E) & s902(E)



BAR v901(E)



BARS sp900(E) & sp901(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h900(E)	14	#5	12'-6"	—
h901(E)	7	#5	27'-3"	—
h902(E)	7	#5	10'-1"	—
h903(E)	10	#5	43'-5"	—
h904(E)	10	#5	37'-8"	—
p900(E)	7	#10	22'-1"	—
p901(E)	14	#10	43'-5"	—
p902(E)	14	#10	37'-9"	—
p903(E)	7	#10	38'-0"	—
p904(E)	7	#10	32'-6"	—
p905(E)	14	#10	39'-7"	—
s900(E)	56	#5	9'-7"	—
s901(E)	226	#5	15'-9"	—
s902(E)	3	#5	17'-7"	—
sp900(E)	2	#5	13'-2"	—
sp901(E)	1	#5	11'-10"	—
u900(E)	18	#5	11'-2"	—
u901(E)	68	#5	8'-6"	—
u902(E)	12	#5	7'-6"	—
v900(E)	40	#10	13'-3"	—
v901(E)	40	#10	16'-5"	—
v902(E)	20	#10	14'-3"	—
Structure Excavation			Cu. Yd.	21
Concrete Structures			Cu. Yd.	91.9
Reinforcement Bars, Epoxy Coated			Pound	23,610
Concrete Sealer			Sq. Ft.	2,104

* Length is height of spiral

Note:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Space reinforcement in column cap to miss anchor bolts.
3. Bars equally spaced, unless otherwise noted.
4. Apply concrete sealer to all exposed concrete surfaces of the pier.
5. All edges shall have standard 3/4 inch chamfer, unless otherwise noted.
6. Spirals are measured vertically.

0160461-60X78-5113-PC9.dgn

PARSONS BRINCKERHOFF

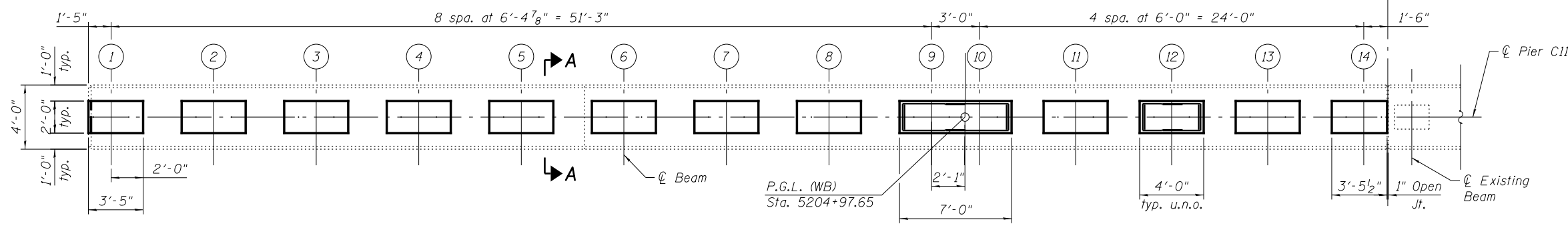
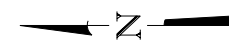
USER NAME = pateld	DESIGNED - P.J.L.	REVISED -
PLOT SCALE = N.T.S.	CHECKED - WAH	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

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DEPARTMENT OF TRANSPORTATION**

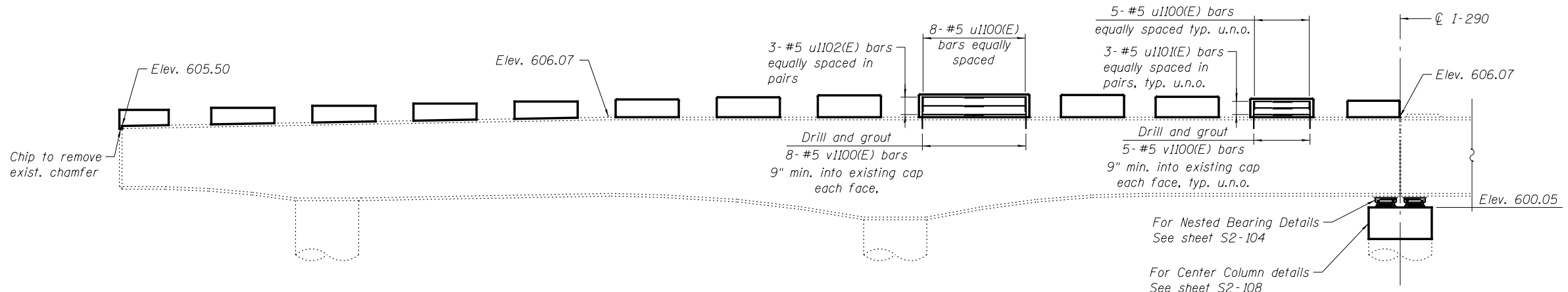
**PIER C9 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-113 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	390
CONTRACT NO. 60X78			ILLINOIS FED. AID PROJECT	



PLAN



ELEVATION
(Looking East)

PEDESTAL HEIGHT, "H"

Beam	Pier C11
1	1'-0"
2	1'-0 1/4"
3	1'-0 3/8"
4	1'-0 5/8"
5	1'-0 3/4"
6	1'-1 1/2"
7	1'-3 1/8"
8	1'-4 5/8"
9	1'-5 1/4"
10	1'-5 1/4"
11	1'-4 5/8"
12	1'-3 1/4"
13	1'-3 3/4"
14	1'-0 1/4"

BEAM SEAT ELEVATION

Beam	Pier C11
1	606.53
2	606.66
3	606.79
4	606.93
5	607.06
6	607.19
7	607.33
8	607.45
9	607.51
10	607.51
11	607.46
12	607.34
13	607.22
14	607.09

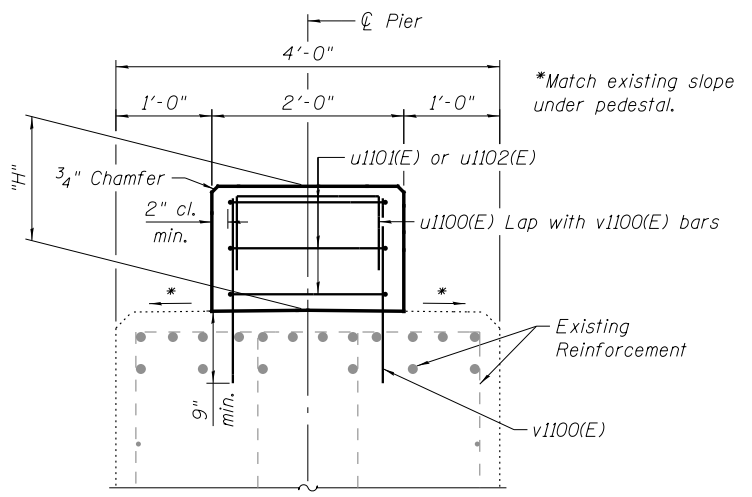
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u1100(E)	68	#5	3'-4"	U
u1101(E)	72	#5	7'-4"	U
u1102(E)	6	#5	10'-4"	U
v1100(E)	136	#5	2'-0"	V
Reinforcement Bars, Epoxy Coated		Pound	1,140	
Concrete Structures		Cu. Yds.	4.8	

*** Cut bar in field to fit.

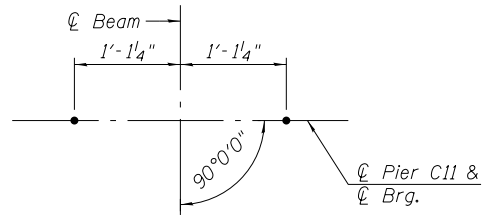
Notes:

- Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
- Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.

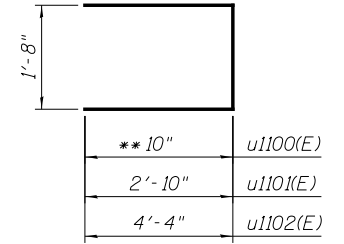


SECTION A-A

(Anchor bolts not shown for clarity)



ANCHOR BOLT LAYOUT



BARS u1100(E) TO u1102(E)

**Cut bar in field to fit.

0160461-60X78-5114-PC11.dgn

PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

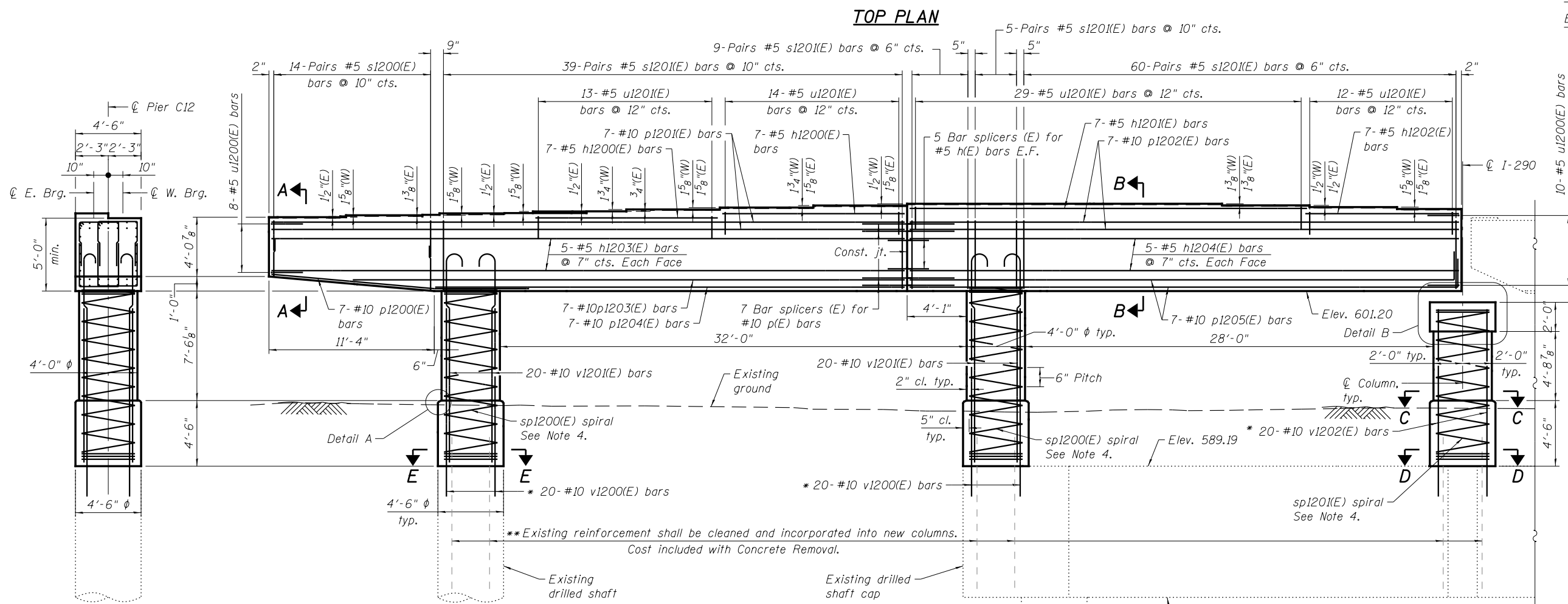
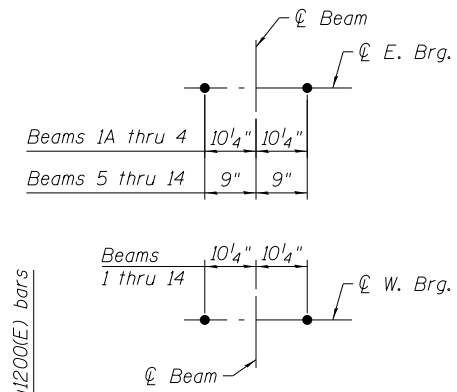
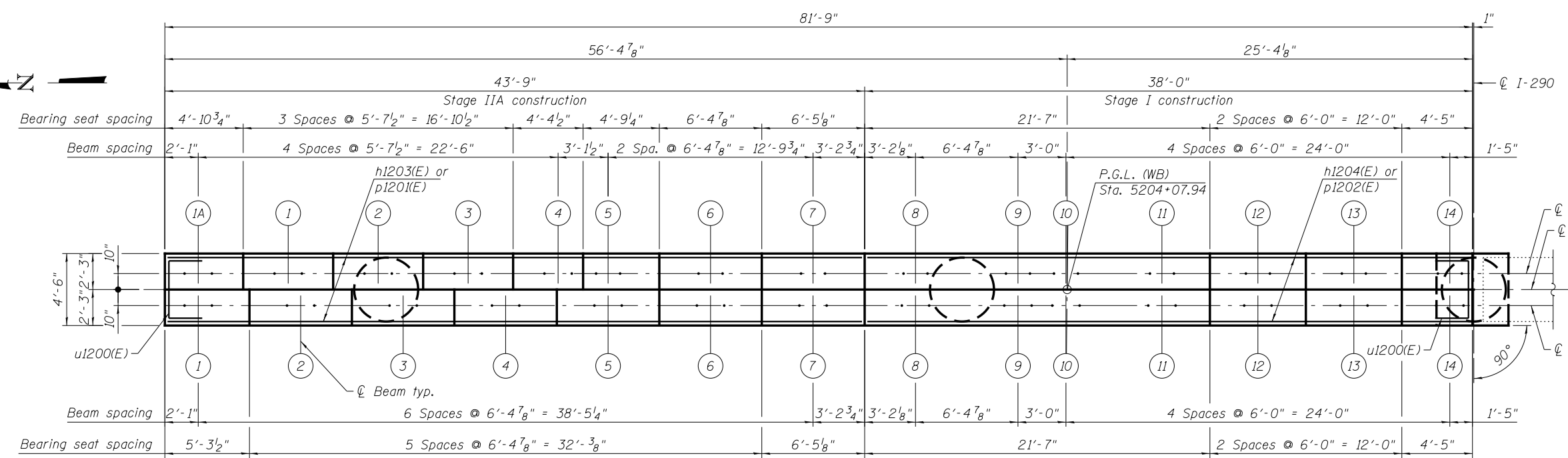
**PIER C11 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-114 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	391
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

TOP OF SEAT ELEVATION

Beam No.	E. Seat Elevation	W. Seat Elevation
1A	606.20	
1	606.32	606.27
2	606.43	606.40
3	606.55	606.53
4	606.67	606.66
5	606.73	606.80
6	606.86	606.93
7	606.99	607.07
8	607.12	607.19
9	607.12	607.19
10	607.12	607.19
11	607.12	607.19
12	607.01	607.08
13	606.89	606.96
14	606.76	606.83



- Notes:**
- Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For Sections A-A, B-B, C-C, D-D & E-E and Details A & B, see sheet S2-116.
 - sp1200(E) & sp1201(E) spiral,
 - Provide 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap or column cap. Provide 4-#4 spacers or equivalent.
 - When splicing spiral reinforcement is necessary, the spiral shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

END VIEW

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 2'-1". Cost included in the cost of Reinforcement Bars, Epoxy Coated.

** 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.

MINIMUM BAR LAP

#5 bar = 3'-3"
 #10 bar = 10'-10"

0160461-60X78-5115-P012.dgn



USER NAME = pateld	DESIGNED - P.JL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - WAH	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

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PIER C12
STRUCTURE NO. 016-0461

SHEET NO. S2-115 OF S2-145 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	392
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

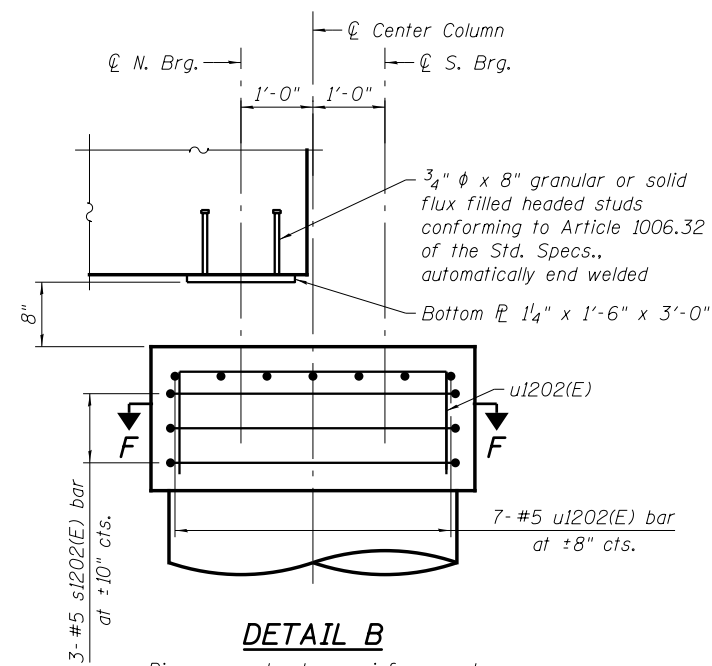
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1200(E)	14	#5	12'-6"	—
h1201(E)	7	#5	27'-3"	—
h1202(E)	7	#5	10'-1"	—
h1203(E)	10	#5	43'-5"	—
h1204(E)	10	#5	37'-8"	—
p1200(E)	7	#10	22'-1"	—
p1201(E)	14	#10	43'-5"	—
p1202(E)	14	#10	37'-9"	—
p1203(E)	7	#10	38'-0"	—
p1204(E)	7	#10	32'-6"	—
p1205(E)	14	#10	39'-7"	—
s1200(E)	56	#5	9'-7"	□
s1201(E)	226	#5	15'-9"	□
s1202(E)	3	#5	17'-7"	□
sp1200(E)	2	#5	12'-2"	⋈
sp1201(E)	1	#5	11'-0"	⋈
u1200(E)	18	#5	11'-2"	□
u1201(E)	68	#5	8'-6"	□
u1202(E)	12	#5	7'-6"	□
v1200(E)	40	#10	13'-3"	—
v1201(E)	40	#10	15'-5"	—
v1202(E)	20	#10	13'-0"	—
Structure Excavation		Cu. Yd.	21	
Concrete Structures		Cu. Yd.	89.5	
Reinforcement Bars, Epoxy Coated		Pound	23,290	
Concrete Sealer		Sq. Ft.	2,053	

* Length is height of spiral

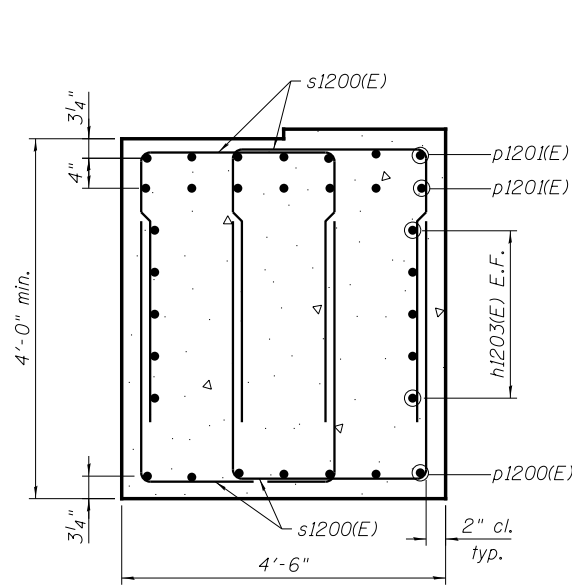
Note:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Space reinforcement in column cap to miss anchor bolts.
3. Bars equally spaced, unless otherwise noted.
4. Apply concrete sealer to all exposed concrete surfaces of the pier.
5. All edges shall have standard 3/4" chamfer, unless otherwise noted.
6. Spirals are measured vertically.

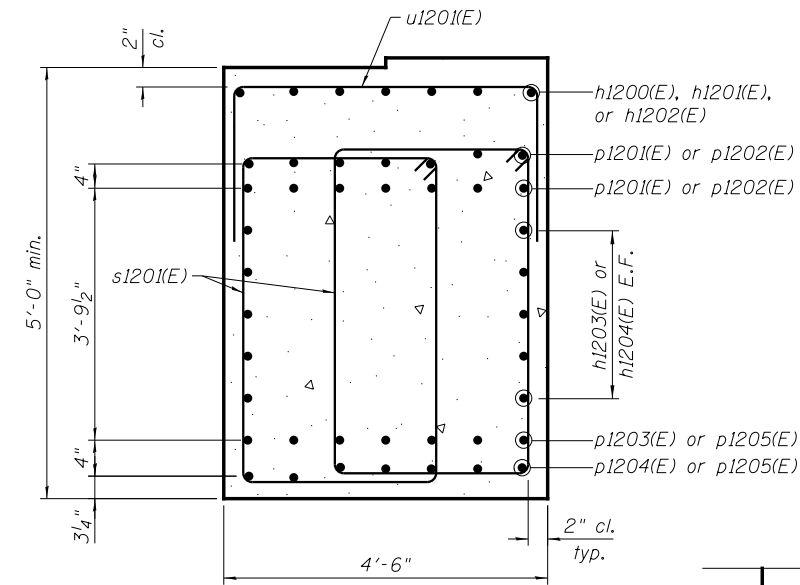


DETAIL B

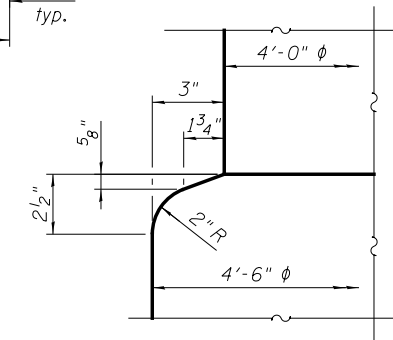
Pier cap and column reinforcement not shown for clarity



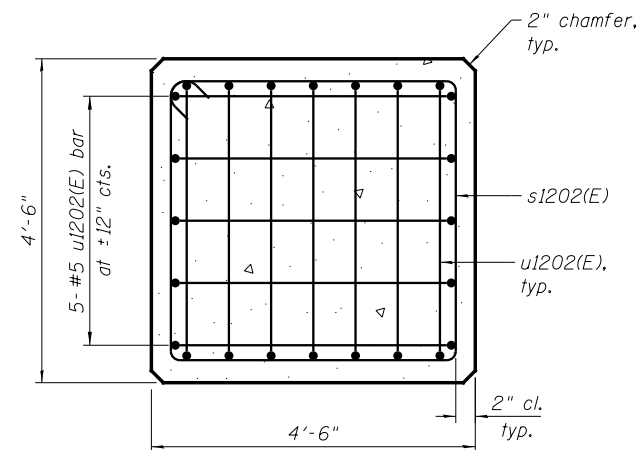
SECTION A-A



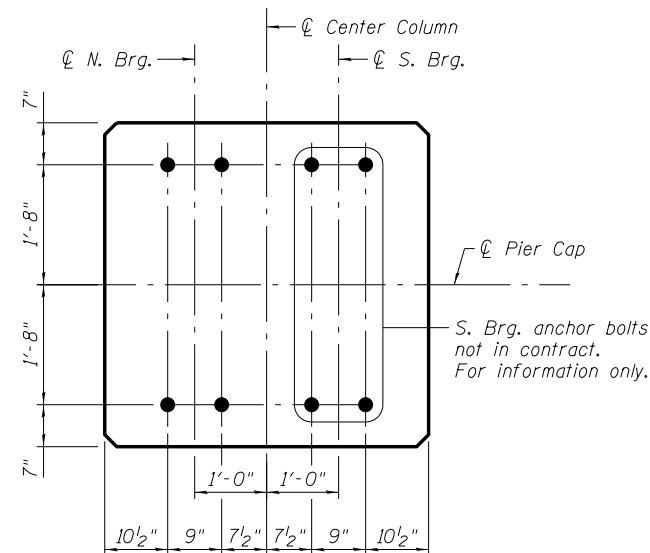
SECTION B-B



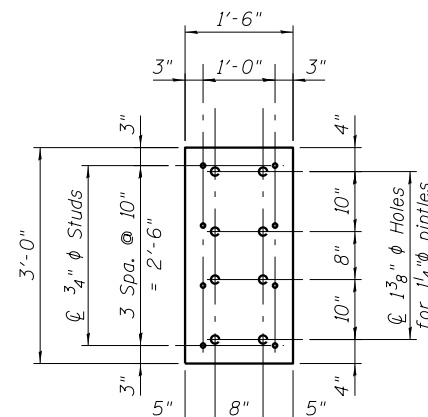
DETAIL A



SECTION F-F

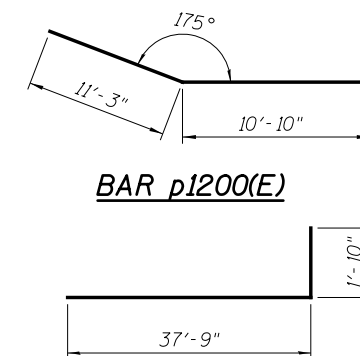


ANCHOR BOLT LAYOUT AT NESTED BEARING



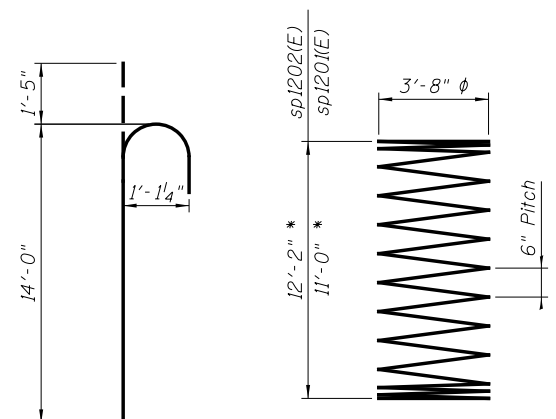
BOTTOM PLATE

Cost included with Concrete Structures.



BAR p1200(E)

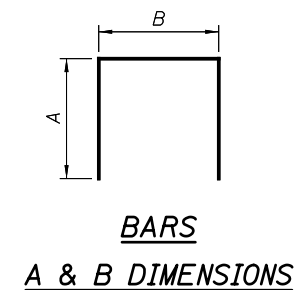
BAR p1205(E)



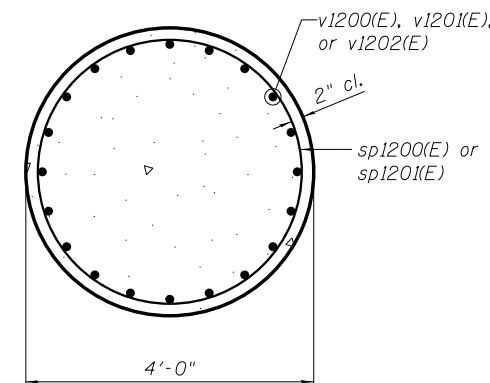
BARS s1201(E) & s1202(E)

BAR v1201(E)

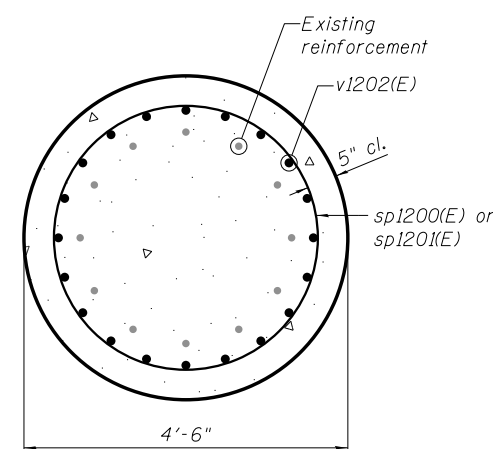
BARS sp1200(E) & sp1201(E)



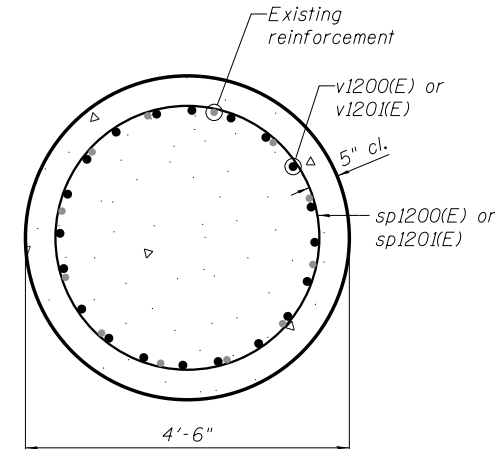
Bar	A	B
s1200(E)	3'-5"	2'-9"
u1200(E)	3'-6"	4'-2"
u1201(E)	2'-2"	4'-2"
u1202(E)	1'-8"	4'-2"



SECTION C-C



SECTION D-D



SECTION E-E

0160461-60X78-5116-PC12.dgn

PARSONS BRINCKERHOFF

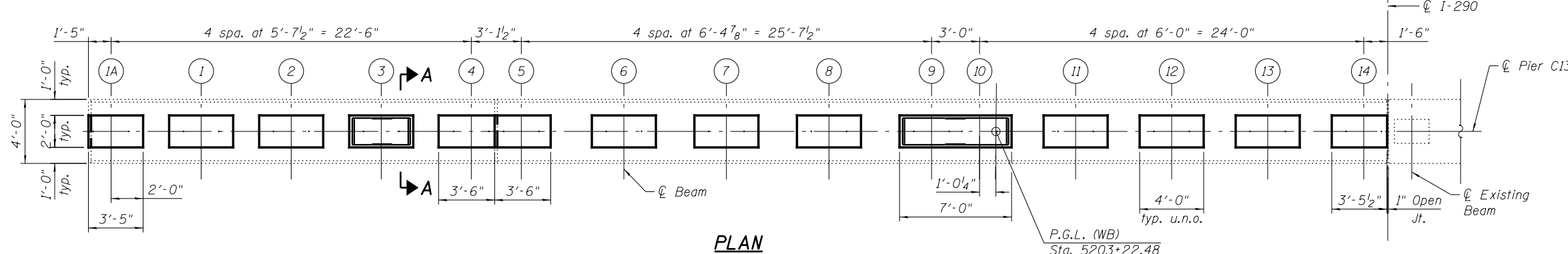
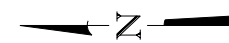
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PLOT SCALE = N.T.S.	CHECKED - WAH	REVISED -
PLOT DATE = 3/23/2016	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

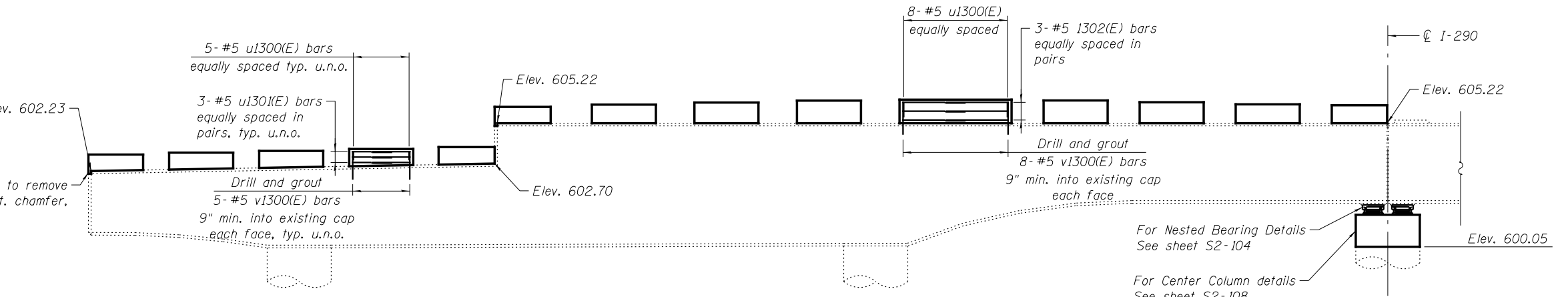
**PIER C12 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-116 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	393
CONTRACT NO. 60X78			ILLINOIS FED. AID PROJECT	

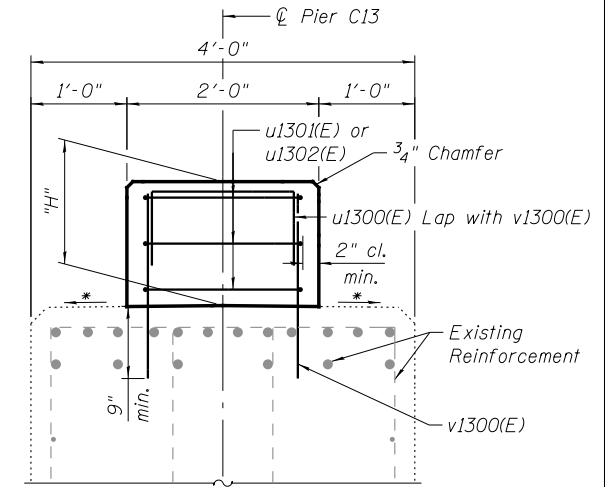


PLAN



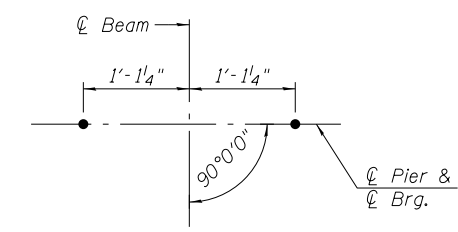
ELEVATION
(Looking East)

*Match existing slope under pedestal.



SECTION A-A

(Anchor bolts not shown for clarity)



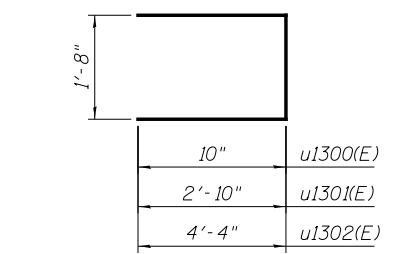
ANCHOR BOLT LAYOUT

PEDESTAL HEIGHT, "H"

Beam	Pier C13
1A	1'-0"
1	1'-0 1/4"
2	1'-0 3/8"
3	1'-0 1/2"
4	1'-0 5/8"
5	1'-0 3/4"
6	1'-1 1/8"
7	1'-3 1/2"
8	1'-4 7/8"
9	1'-5 3/8"
10	1'-5 5/8"
11	1'-5"
12	1'-3 5/8"
13	1'-2 1/8"
14	1'-1 3/8"

BEARING SEAT ELEVATION

Beam	Pier C13
1A	603.26
1	603.38
2	603.49
3	603.61
4	603.73
5	606.24
6	606.38
7	606.51
8	606.63
9	606.69
10	606.69
11	606.64
12	606.53
13	606.40
14	606.34



BARS u1300(E) TO u1303(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u1300(E)	73	#5	3'-4"	U
u130(E)	72	#5	7'-4"	U
u1302(E)	6	#5	10'-4"	U
v1100(E)	146	#5	2'-0"	—
Reinforcement Bars, Epoxy Coated		Pound		1,310
Concrete Structures		Cu. Yd.		5.2

*** Cut bar in field to fit.

Notes:

- Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
- Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.

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PARSONS BRINCKERHOFF

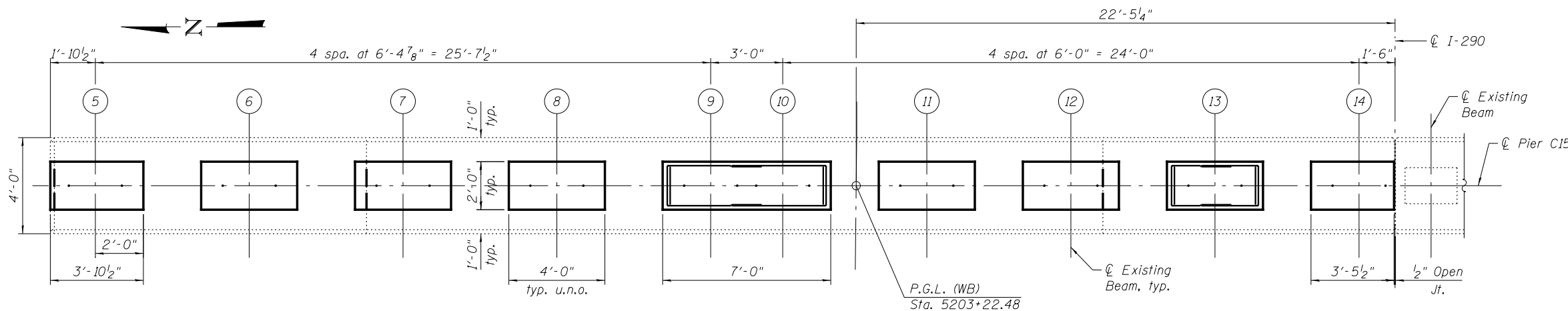
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PLOT SCALE = N.T.S.	CHECKED - CL	REVISED -
PLOT DATE = 3/23/2016	DRAWN - IJL	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
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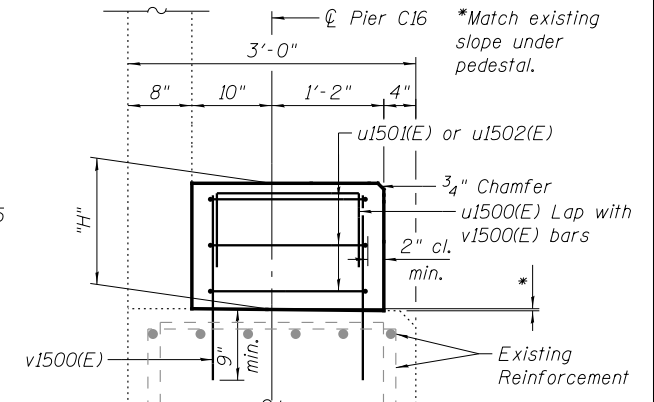
**PIER C13 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-117 OF S2-145 SHEETS

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	394
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				

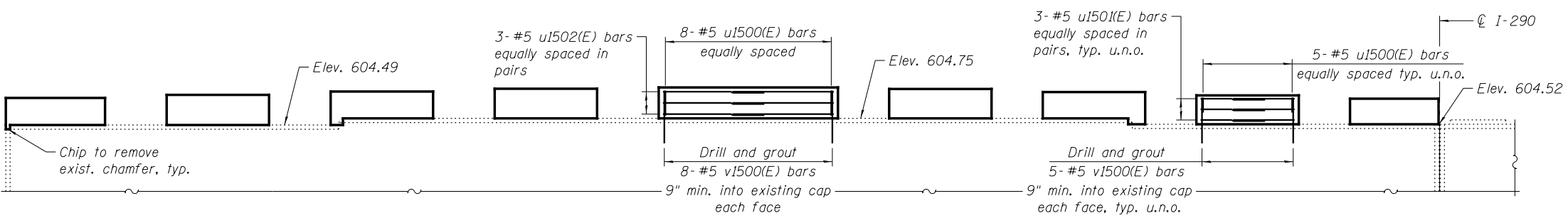


PLAN - PIER C15



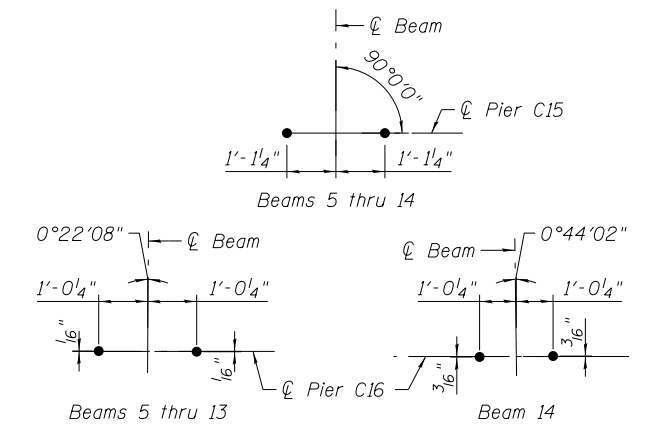
SECTION A-A

(Anchor bolts not shown for clarity)

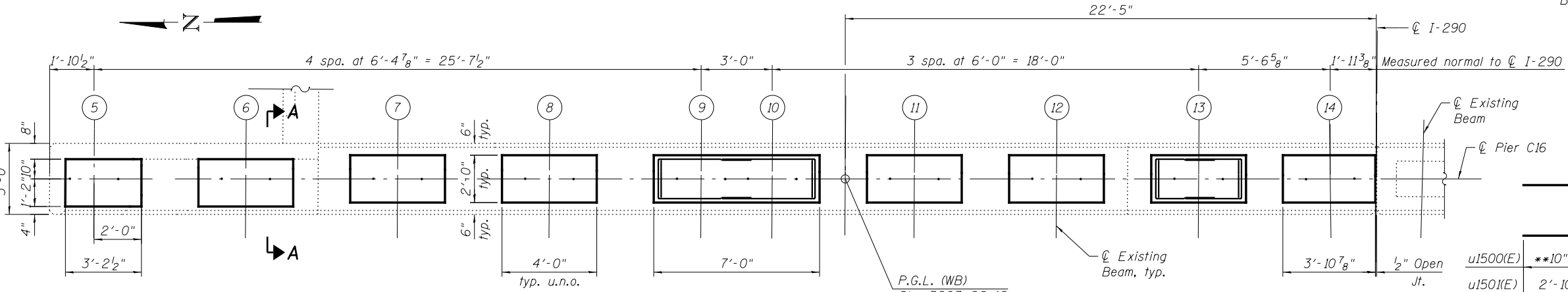


ELEVATION - PIER C15

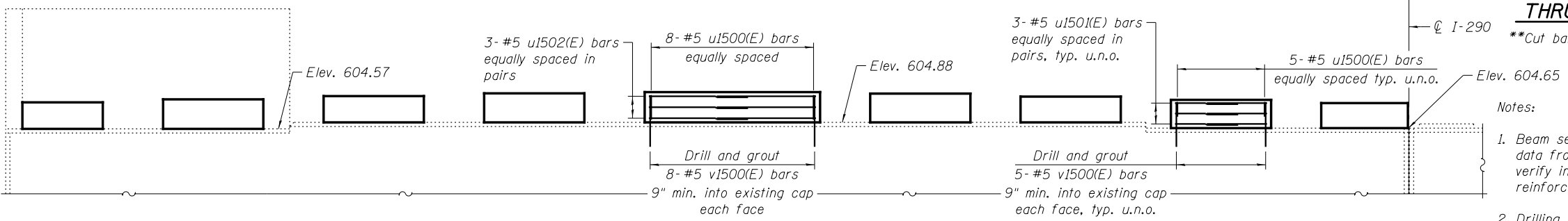
(Looking East)



ANCHOR BOLT LAYOUT



PLAN - PIER C16



ELEVATION - PIER C16

(Looking East)

PEDESTAL HEIGHT, "H"

Beam	Pier C15	Pier C16
5	1'-0 1/8"	10 5/8"
6	1'-1 7/8"	11 3/4"
7	1'-0 3/8"	10 5/8"
8	1'-1 7/8"	11 5/8"
9	1'-2 1/2"	1'-1"
10	1'-2 1/2"	1'-1"
11	1'-1 7/8"	11 3/4"
12	1'-0 5/8"	10 3/8"
13	1'-1 7/8"	11 5/8"
14	1'-0 3/8"	10 5/8"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
u1500(E)	96	#5	3'-4"	U	
u1501(E)	96	#5	7'-4"	U	
u1502(E)	12	#5	10'-3"	U	
v1500(E)	192	#5	1'-9"	—	
Reinforcement Bars, Epoxy Coated				Pound	1,550
Concrete Structures				Cu. Yd.	5.9

BARS u1500(E) THRU u1502(E)

Cut bar in field to fit. *

Notes:

1. Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
2. Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.

0160461-60X78-5118-PC.dgn

PARSONS BRINCKERHOFF

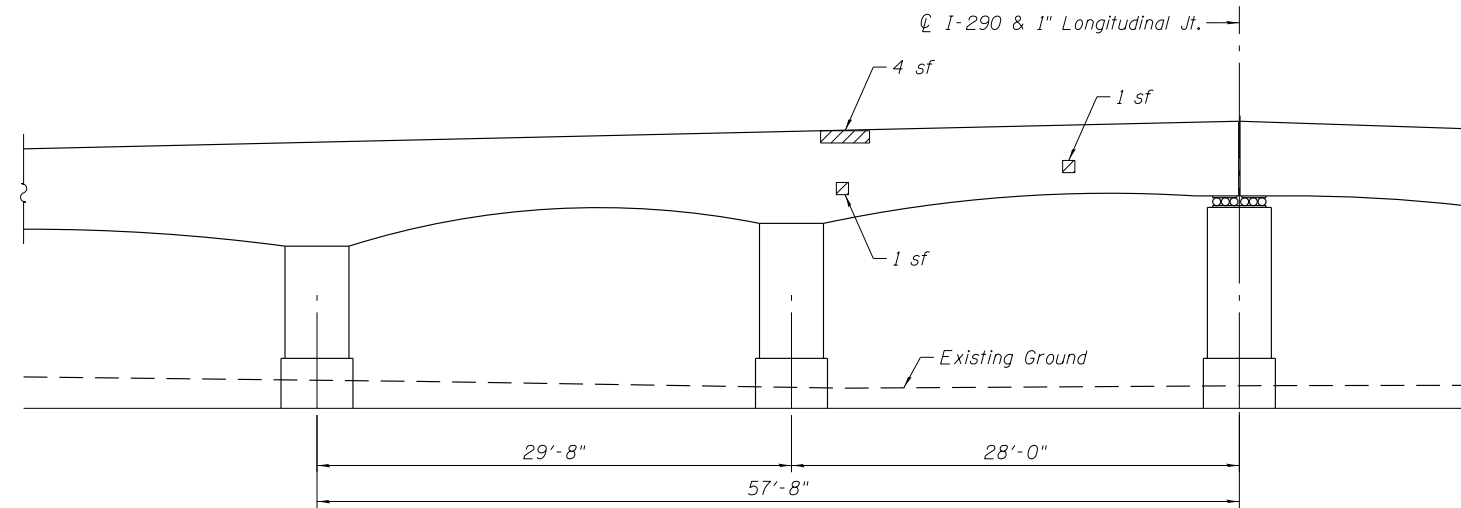
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

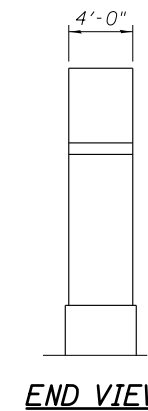
**PIERS C15 & C16 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-118 OF S2-145 SHEETS

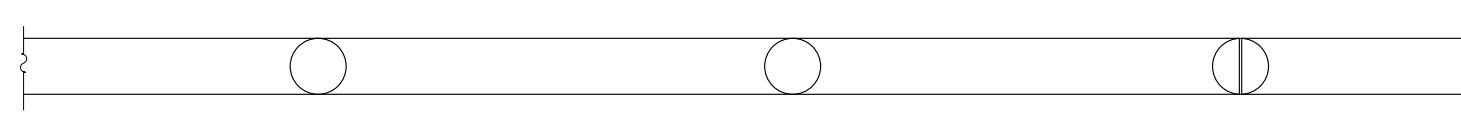
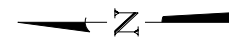
F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	395
CONTRACT NO. 60X78			ILLINOIS FED. AID PROJECT	



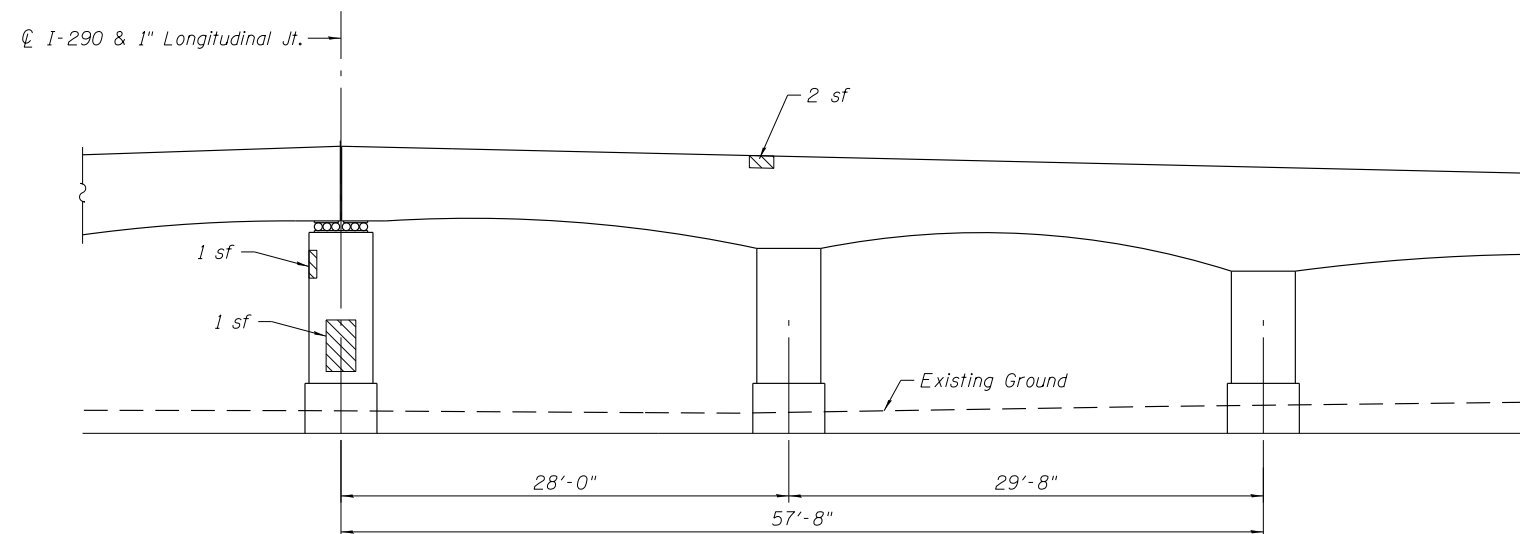
ELEVATION - PIER C2
(Looking East)



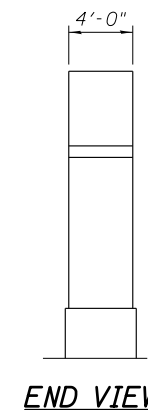
END VIEW



UNDERSIDE PLAN



ELEVATION - PIER C2
(Looking West)



END VIEW

Note:
Area of pier repairs shown are estimated based on inspections performed in July 2012. The Engineer shall record the actual pier repair areas in the "As Built" plans. Changes in repair areas shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity furnished at the unit bid price for the work.

LEGEND

Structural Repair of Concrete
(Depth equal to or less than 5 Inches)

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	10

0160461-60X78-5119-PRR.dgn

**PARSONS
BRINCKERHOFF**

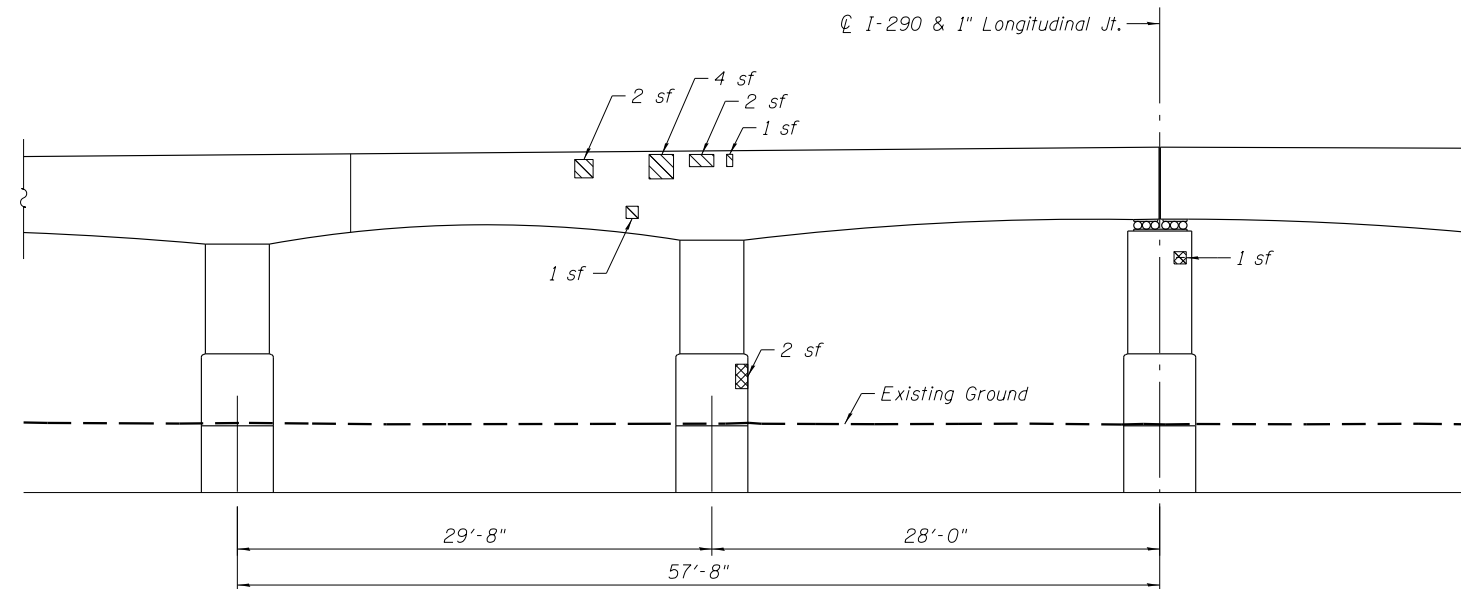
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

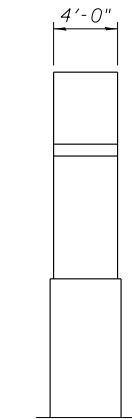
**PIER C2 REPAIR
STRUCTURE NO. 016-0461**

SHEET NO. S2-119 OF S2-145 SHEETS

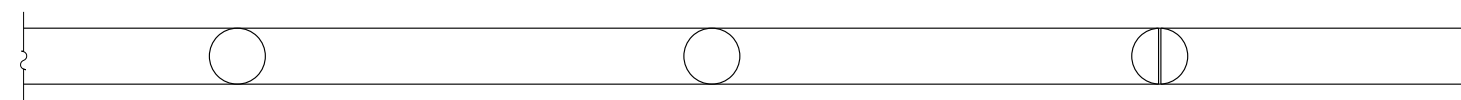
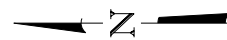
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90/94/290	2014-004 R&B (WB)	COOK	706	396
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



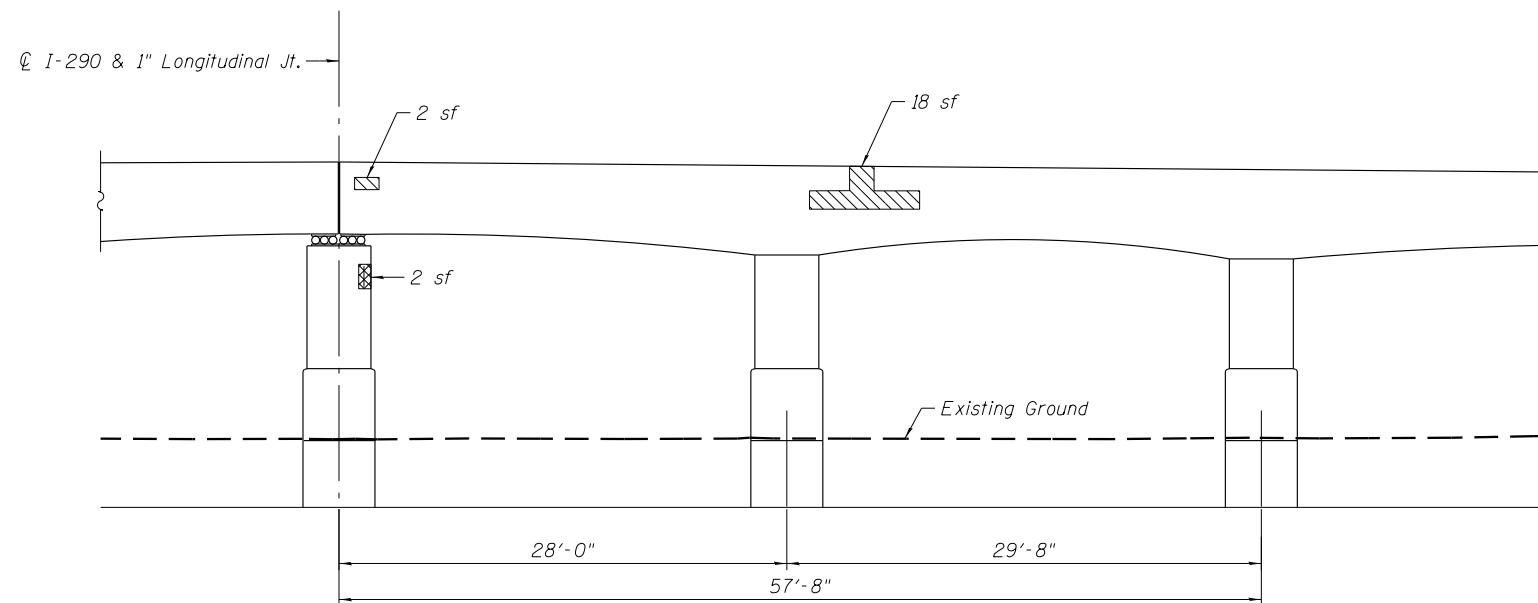
ELEVATION - PIER C3
(Looking East)



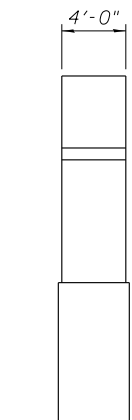
END VIEW



UNDERSIDE PLAN



ELEVATION - PIER C3
(Looking West)



END VIEW

Note:
Area of pier repairs shown are estimated based on inspections performed in July 2012. The Engineer shall record the actual pier repair areas in the "As Built" plans. Changes in repair areas shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity furnished at the unit bid price for the work.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- Structural Repair of Concrete (Depth greater than 5 Inches)

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	30
Structural Repair of Concrete (Depth greater than 5 Inches)	Sq Ft	5

0160461-60X78-5120-PRR.dgn

**PARSONS
BRINCKERHOFF**

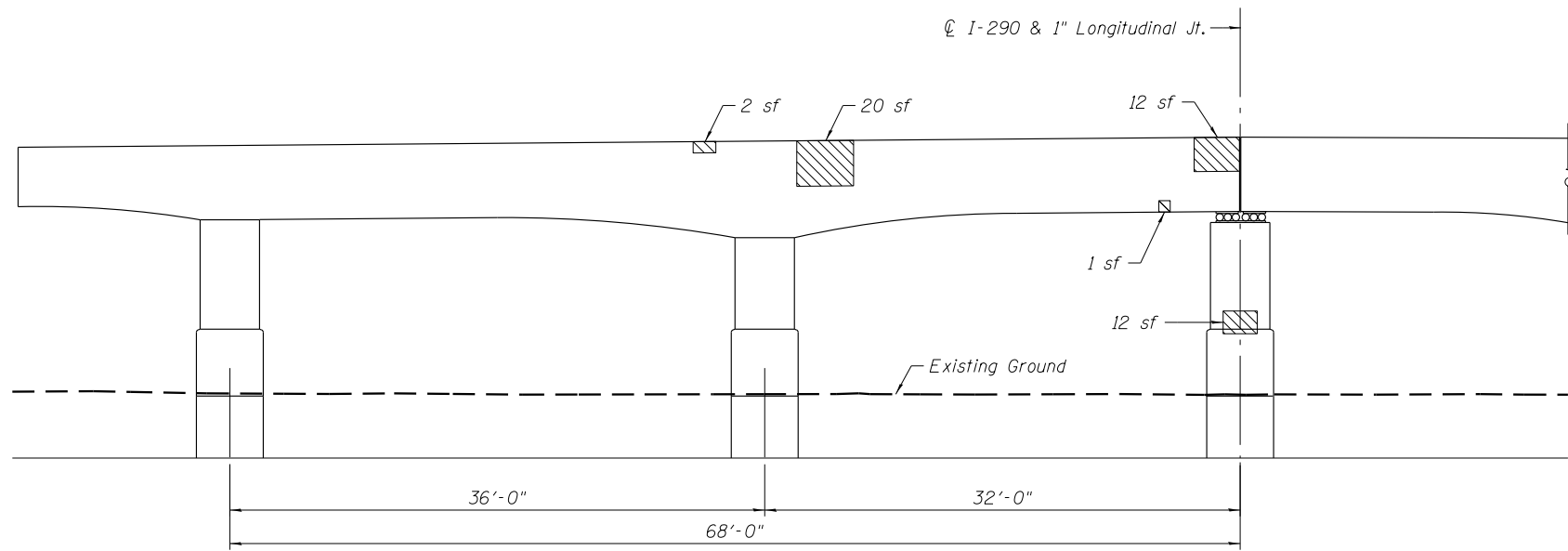
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

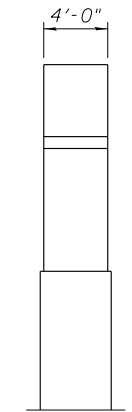
**PIER C3 REPAIR
STRUCTURE NO. 016-0461**

SHEET NO. S2-120 OF S2-145 SHEETS

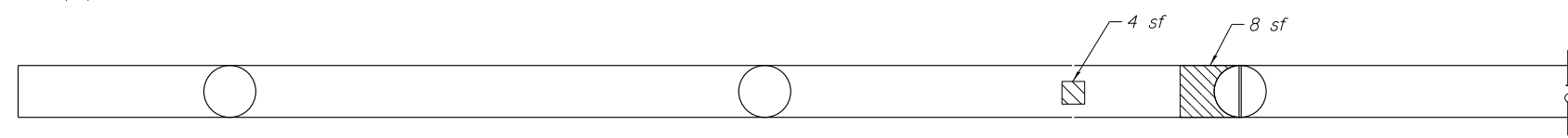
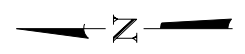
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	397
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



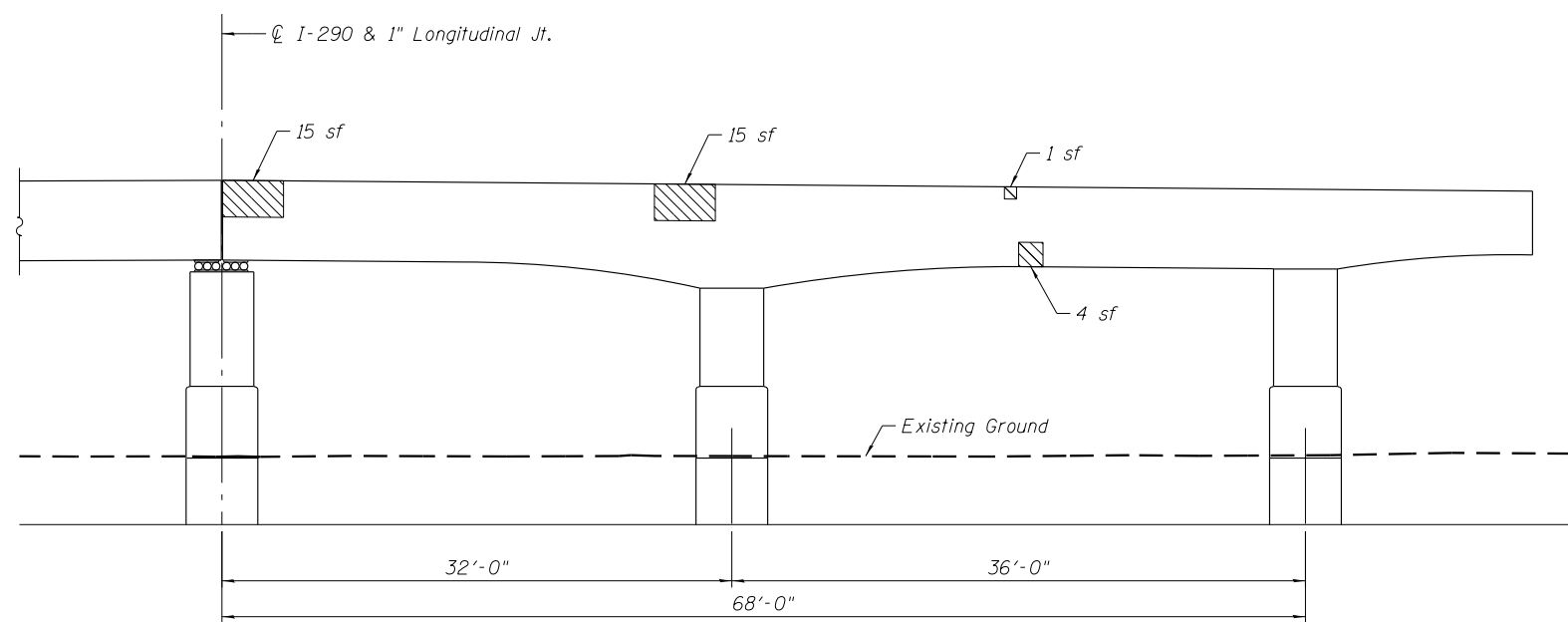
ELEVATION - PIER C5
(Looking East)



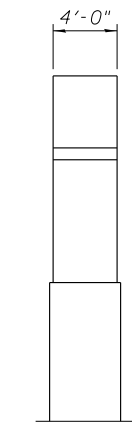
END VIEW



UNDERSIDE PLAN



ELEVATION - PIER C5
(Looking West)



END VIEW

Note:
Area of pier repairs shown are estimated based on inspections performed in July 2012. The Engineer shall record the actual pier repair areas in the "As Built" plans. Changes in repair areas shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity furnished at the unit bid price for the work.

LEGEND

Structural Repair of Concrete
(Depth equal to or less than 5 Inches)

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	94

0160461-60X78-5121-PRR.dgn

**PARSONS
BRINCKERHOFF**

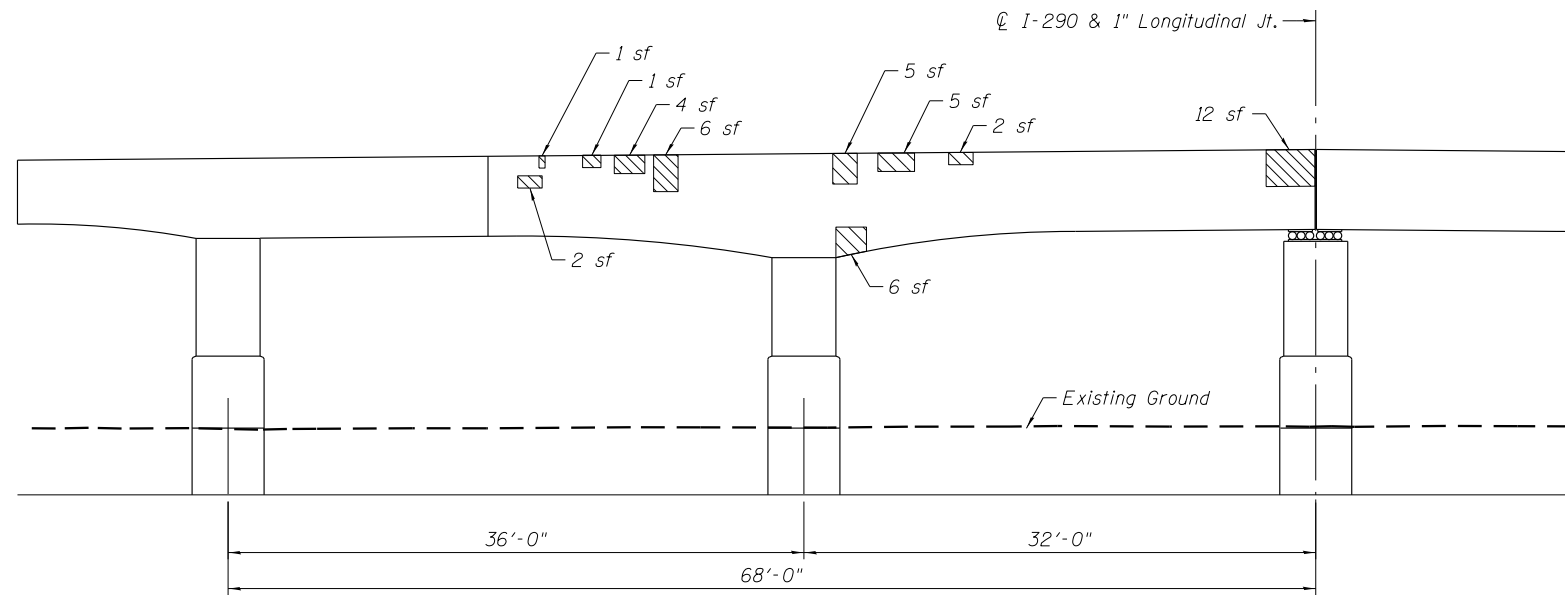
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

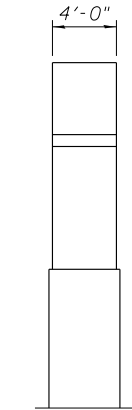
**PIER C5 REPAIR
STRUCTURE NO. 016-0461**

SHEET NO. S2-121 OF S2-145 SHEETS

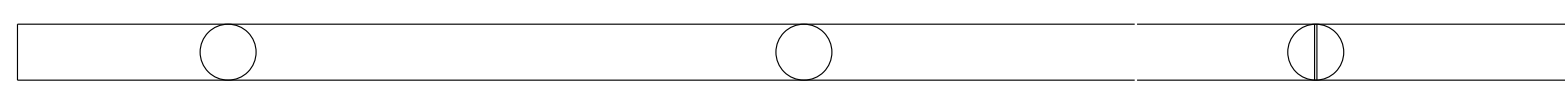
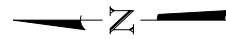
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	398
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



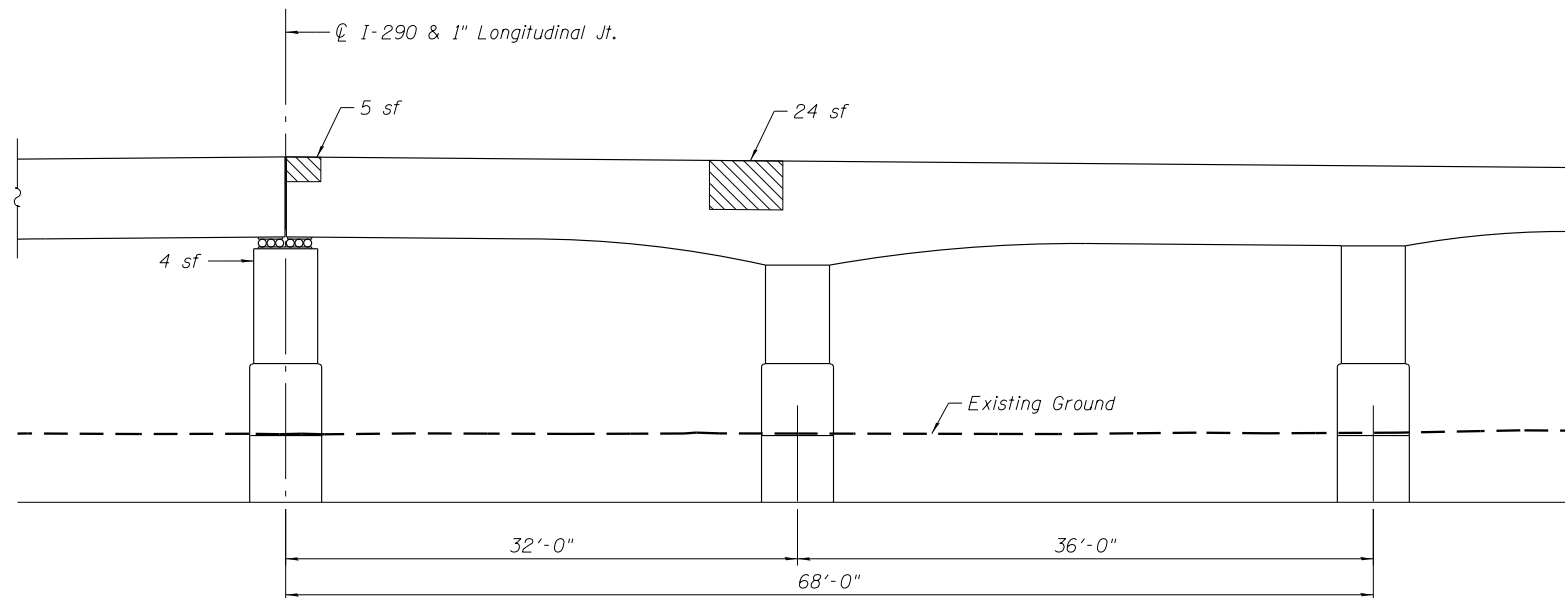
ELEVATION - PIER C6
(Looking East)



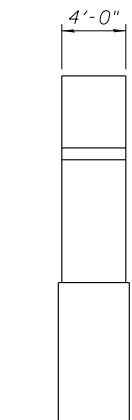
END VIEW



UNDERSIDE PLAN



ELEVATION - PIER C6
(Looking West)



END VIEW

Note:
 Area of pier repairs shown are estimated based on inspections performed in July 2012. The Engineer shall record the actual pier repair areas in the "As Built" plans. Changes in repair areas shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity furnished at the unit bid price for the work.

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	73

0160461-60X78-5122-PRR.dgn

**PARSONS
BRINCKERHOFF**

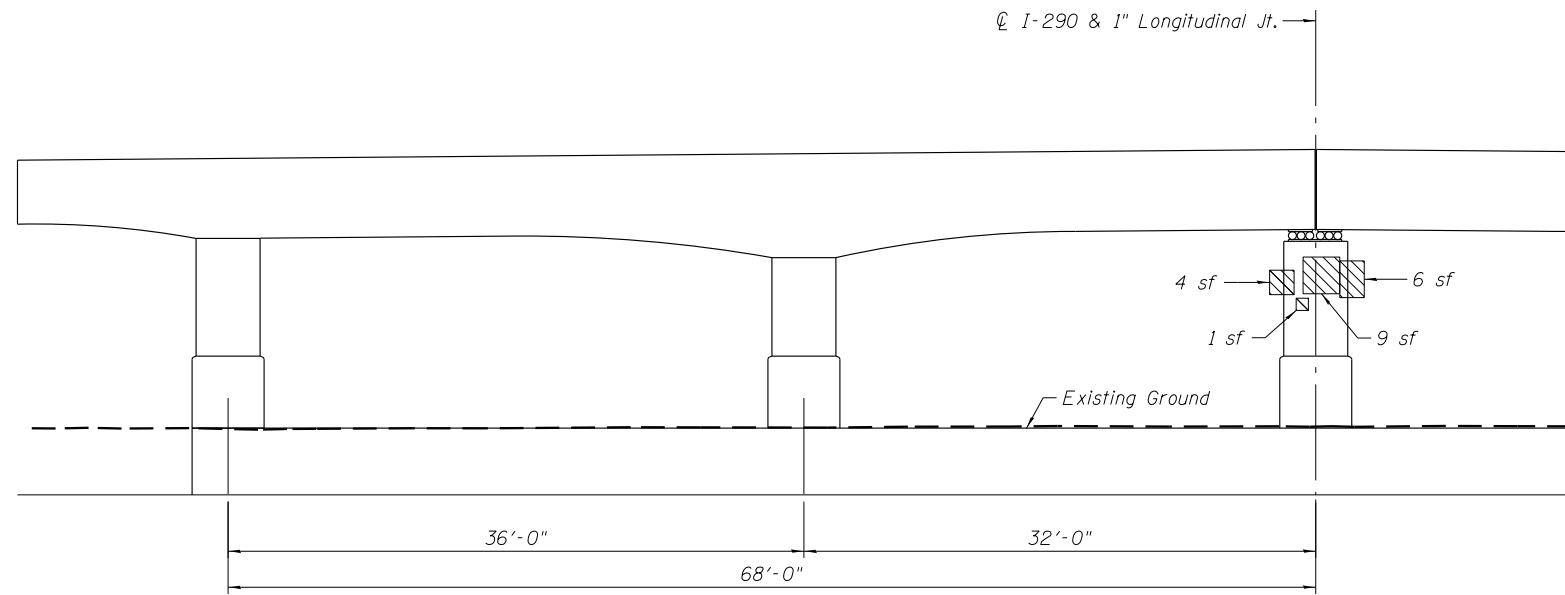
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

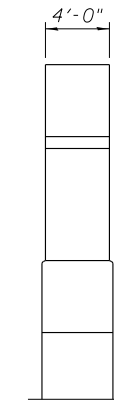
**PIER C6 REPAIR
STRUCTURE NO. 016-0461**

SHEET NO. S2-122 OF S2-145 SHEETS

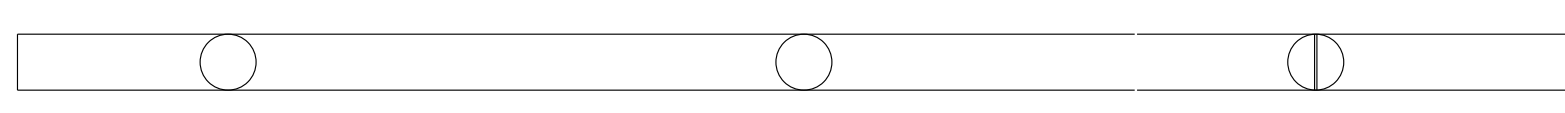
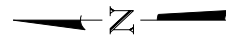
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	399
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				



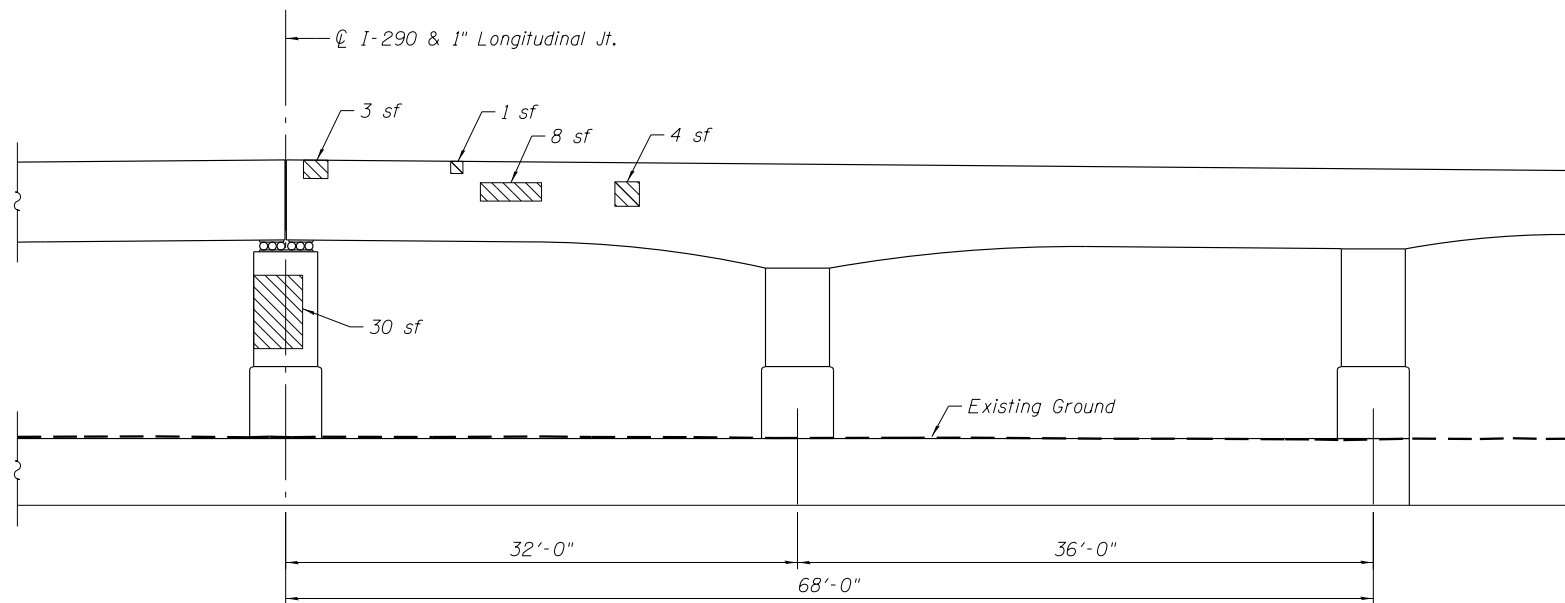
ELEVATION - PIER C7
(Looking East)



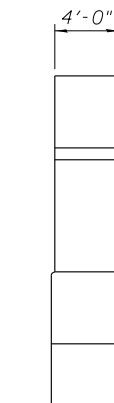
END VIEW



UNDERSIDE PLAN



PIER C7 - ELEVATION
(Looking West)



END VIEW

Note:
Area of pier repairs shown are estimated based on inspections performed in July 2012. The Engineer shall record the actual pier repair areas in the "As Built" plans. Changes in repair areas shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity furnished at the unit bid price for the work.

LEGEND

Structural Repair of Concrete
(Depth equal to or less than 5 Inches)

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	66

0160461-60X78-5123-PRR.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - HA	REVISED -
	CHECKED - PJL	REVISED -
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PLOT DATE = 3/23/2016	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER C7 REPAIR
STRUCTURE NO. 016-0461**

SHEET NO. S2-123 OF S2-145 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004 R&B (WB)	COOK	706	400
CONTRACT NO. 60X78				
ILLINOIS FED. AID PROJECT				