

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 9 & ☐ Exp. Jt.	62+96.72	-10.88	634.36	634.39
☐ N. Brg. Pier 9	62+97.97	-10.88	634.36	634.39
A4	63+07.97	-10.88	634.40	634.46
B4	63+17.97	-10.88	634.43	634.52
C4	63+27.97	-10.88	634.46	634.57
D4	63+37.97	-10.88	634.49	634.61
E4	63+47.97	-10.88	634.52	634.63
F4	63+57.97	-10.88	634.55	634.65
G4	63+67.97	-10.88	634.58	634.65
H4	63+77.97	-10.88	634.61	634.66
☐ Brg. Pier 10	63+88.06	-10.88	634.64	634.67
I4	63+98.06	-10.88	634.67	634.70
J4	64+08.06	-10.88	634.70	634.74
K4	64+18.06	-10.88	634.73	634.78
L4	64+28.06	-10.88	634.76	634.81
M4	64+38.06	-10.88	634.79	634.84
N4	64+48.06	-10.88	634.82	634.87
O4	64+58.06	-10.88	634.85	634.89
P4	64+68.06	-10.88	634.88	634.91
Q4	64+78.06	-10.88	634.91	634.94
☐ Brg. Pier 11	64+84.06	-10.88	634.93	634.96
R4	64+94.06	-10.88	634.96	635.01
S4	65+04.06	-10.88	634.99	635.06
T4	65+14.06	-10.88	635.02	635.12
U4	65+24.06	-10.88	635.05	635.16
V4	65+34.06	-10.88	635.08	635.20
W4	65+44.06	-10.88	635.11	635.22
X4	65+54.06	-10.88	635.14	635.24
Y4	65+64.06	-10.88	635.17	635.24
☐ S. Brg. Pier 12	65+74.64	-10.88	635.20	635.23
☐ Pier 12 & ☐ Exp. Jt.	65+75.89	-10.88	635.21	635.23

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 9 & ☐ Exp. Jt.	62+96.72	-3.63	634.47	634.49
☐ N. Brg. Pier 9	62+97.97	-3.63	634.47	634.49
A4	63+07.97	-3.63	634.51	634.56
B4	63+17.97	-3.63	634.54	634.62
C4	63+27.97	-3.63	634.57	634.67
D4	63+37.97	-3.63	634.60	634.71
E4	63+47.97	-3.63	634.63	634.73
F4	63+57.97	-3.63	634.66	634.74
G4	63+67.97	-3.63	634.69	634.75
H4	63+77.97	-3.63	634.72	634.76
☐ Brg. Pier 10	63+88.06	-3.63	634.75	634.77
I4	63+98.06	-3.63	634.78	634.80
J4	64+08.06	-3.63	634.81	634.83
K4	64+18.06	-3.63	634.84	634.87
L4	64+28.06	-3.63	634.87	634.91
M4	64+38.06	-3.63	634.90	634.94
N4	64+48.06	-3.63	634.93	634.97
O4	64+58.06	-3.63	634.96	634.99
P4	64+68.06	-3.63	634.99	635.01
Q4	64+78.06	-3.63	635.02	635.04
☐ Brg. Pier 11	64+84.06	-3.63	635.04	635.06
R4	64+94.06	-3.63	635.07	635.10
S4	65+04.06	-3.63	635.10	635.16
T4	65+14.06	-3.63	635.13	635.21
U4	65+24.06	-3.63	635.16	635.26
V4	65+34.06	-3.63	635.19	635.30
W4	65+44.06	-3.63	635.22	635.32
X4	65+54.06	-3.63	635.25	635.34
Y4	65+64.06	-3.63	635.28	635.34
☐ S. Brg. Pier 12	65+74.64	-3.63	635.31	635.33
☐ Pier 12 & ☐ Exp. Jt.	65+75.89	-3.63	635.31	635.33

**PGL AND CROWN**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 9 & ☐ Exp. Jt.	62+96.72	0.00	634.52	634.54
☐ N. Brg. Pier 9	62+97.97	0.00	634.53	634.55
A4	63+07.97	0.00	634.56	634.62
B4	63+17.97	0.00	634.59	634.68
C4	63+27.97	0.00	634.62	634.73
D4	63+37.97	0.00	634.65	634.76
E4	63+47.97	0.00	634.68	634.78
F4	63+57.97	0.00	634.71	634.80
G4	63+67.97	0.00	634.74	634.80
H4	63+77.97	0.00	634.77	634.81
☐ Brg. Pier 10	63+88.06	0.00	634.81	634.82
I4	63+98.06	0.00	634.84	634.85
J4	64+08.06	0.00	634.87	634.88
K4	64+18.06	0.00	634.90	634.92
L4	64+28.06	0.00	634.93	634.96
M4	64+38.06	0.00	634.96	634.99
N4	64+48.06	0.00	634.99	635.02
O4	64+58.06	0.00	635.02	635.04
P4	64+68.06	0.00	635.05	635.06
Q4	64+78.06	0.00	635.08	635.09
☐ Brg. Pier 11	64+84.06	0.00	635.09	635.11
R4	64+94.06	0.00	635.12	635.16
S4	65+04.06	0.00	635.15	635.21
T4	65+14.06	0.00	635.18	635.27
U4	65+24.06	0.00	635.21	635.31
V4	65+34.06	0.00	635.24	635.35
W4	65+44.06	0.00	635.27	635.38
X4	65+54.06	0.00	635.30	635.39
Y4	65+64.06	0.00	635.33	635.39
☐ S. Brg. Pier 12	65+74.64	0.00	635.36	635.38
☐ Pier 12 & ☐ Exp. Jt.	65+75.89	0.00	635.37	635.39

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 9 & ☐ Exp. Jt.	62+96.72	3.63	634.47	634.49
☐ N. Brg. Pier 9	62+97.97	3.63	634.47	634.49
A4	63+07.97	3.63	634.51	634.56
B4	63+17.97	3.63	634.54	634.62
C4	63+27.97	3.63	634.57	634.67
D4	63+37.97	3.63	634.60	634.71
E4	63+47.97	3.63	634.63	634.73
F4	63+57.97	3.63	634.66	634.74
G4	63+67.97	3.63	634.69	634.75
H4	63+77.97	3.63	634.72	634.76
☐ Brg. Pier 10	63+88.06	3.63	634.75	634.77
I4	63+98.06	3.63	634.78	634.80
J4	64+08.06	3.63	634.81	634.83
K4	64+18.06	3.63	634.84	634.87
L4	64+28.06	3.63	634.87	634.91
M4	64+38.06	3.63	634.90	634.94
N4	64+48.06	3.63	634.93	634.97
O4	64+58.06	3.63	634.96	634.99
P4	64+68.06	3.63	634.99	635.01
Q4	64+78.06	3.63	635.02	635.04
☐ Brg. Pier 11	64+84.06	3.63	635.04	635.06
R4	64+94.06	3.63	635.07	635.10
S4	65+04.06	3.63	635.10	635.16
T4	65+14.06	3.63	635.13	635.21
U4	65+24.06	3.63	635.16	635.26
V4	65+34.06	3.63	635.19	635.30
W4	65+44.06	3.63	635.22	635.32
X4	65+54.06	3.63	635.25	635.34
Y4	65+64.06	3.63	635.28	635.34
☐ S. Brg. Pier 12	65+74.64	3.63	635.31	635.33
☐ Pier 12 & ☐ Exp. Jt.	65+75.89	3.63	635.31	635.33

**GIRDER 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 9 & ☐ Exp. Jt.	62+96.72	10.88	634.36	634.39
☐ N. Brg. Pier 9	62+97.97	10.88	634.36	634.39
A4	63+07.97	10.88	634.40	634.46
B4	63+17.97	10.88	634.43	634.52
C4	63+27.97	10.88	634.46	634.57
D4	63+37.97	10.88	634.49	634.61
E4	63+47.97	10.88	634.52	634.63
F4	63+57.97	10.88	634.55	634.65
G4	63+67.97	10.88	634.58	634.65
H4	63+77.97	10.88	634.61	634.66
☐ Brg. Pier 10	63+88.06	10.88	634.64	634.67
I4	63+98.06	10.88	634.67	634.70
J4	64+08.06	10.88	634.70	634.74
K4	64+18.06	10.88	634.73	634.78
L4	64+28.06	10.88	634.76	634.81
M4	64+38.06	10.88	634.79	634.84
N4	64+48.06	10.88	634.82	634.87
O4	64+58.06	10.88	634.85	634.89
P4	64+68.06	10.88	634.88	634.91
Q4	64+78.06	10.88	634.91	634.94
☐ Brg. Pier 11	64+84.06	10.88	634.93	634.96
R4	64+94.06	10.88	634.96	635.01
S4	65+04.06	10.88	634.99	635.06
T4	65+14.06	10.88	635.02	635.12
U4	65+24.06	10.88	635.05	635.16
V4	65+34.06	10.88	635.08	635.20
W4	65+44.06	10.88	635.11	635.22
X4	65+54.06	10.88	635.14	635.24
Y4	65+64.06	10.88	635.17	635.24
☐ S. Brg. Pier 12	65+74.64	10.88	635.20	635.23
☐ Pier 12 & ☐ Exp. Jt.	65+75.89	10.88	635.21	635.23

**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 9 & ☐ Exp. Jt.	62+96.72	18.13	634.24	634.28
☐ N. Brg. Pier 9	62+97.97	18.13	634.25	634.29
A4	63+07.97	18.13	634.28	634.36
B4	63+17.97	18.13	634.31	634.43
C4	63+27.97	18.13	634.34	634.48
D4	63+37.97	18.13	634.37	634.52
E4	63+47.97	18.13	634.40	634.54
F4	63+57.97	18.13	634.43	634.55
G4	63+67.97	18.13	634.46	634.56
H4	63+77.97	18.13	634.49	634.56
☐ Brg. Pier 10	63+88.06	18.13	634.53	634.57
I4	63+98.06	18.13	634.56	634.60
J4	64+08.06	18.13	634.59	634.64
K4	64+18.06	18.13	634.62	634.68
L4	64+28.06	18.13	634.65	634.72
M4	64+38.06	18.13	634.68	634.75
N4	64+48.06	18.13	634.71	634.77
O4	64+58.06	18.13	634.74	634.79
P4	64+68.06	18.13	634.77	634.81
Q4	64+78.06	18.13	634.80	634.84
☐ Brg. Pier 11	64+84.06	18.13	634.81	634.86
R4	64+94.06	18.13	634.84	634.91
S4	65+04.06	18.13	634.87	634.97
T4	65+14.06	18.13	634.90	635.02
U4	65+24.06	18.13	634.93	635.07
V4	65+34.06	18.13	634.96	635.11
W4	65+44.06	18.13	634.99	635.13
X4	65+54.06	18.13	635.02	635.14
Y4	65+64.06	18.13	635.05	635.13
☐ S. Brg. Pier 12	65+74.64	18.13	635.08	635.12
☐ Pier 12 & ☐ Exp. Jt.	65+75.89	18.13	635.09	635.13

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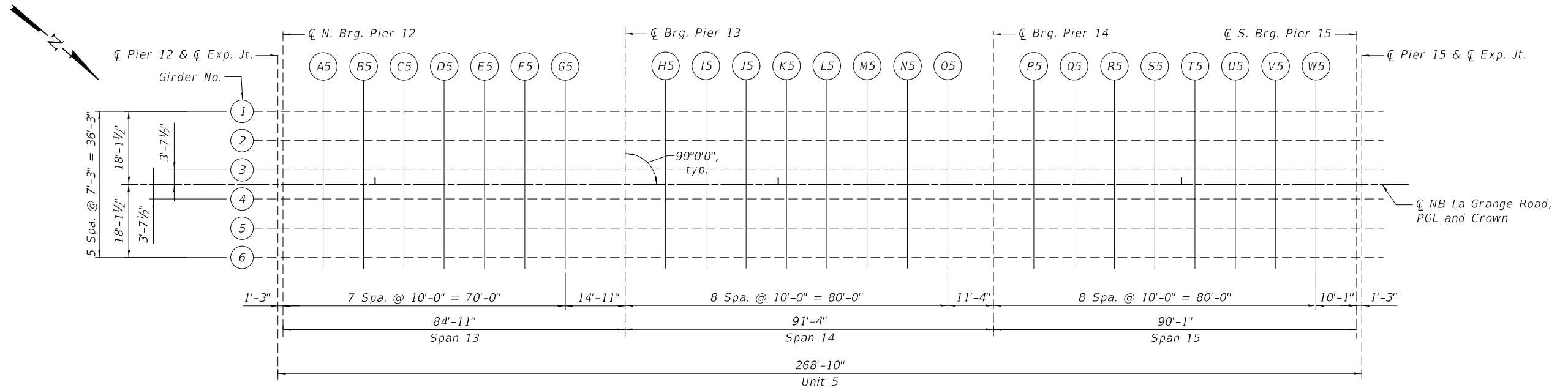
USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 9 (UNIT 4)  
 STRUCTURE NO. 016-2467**

SHEET SB-14 OF SB-104 SHEETS

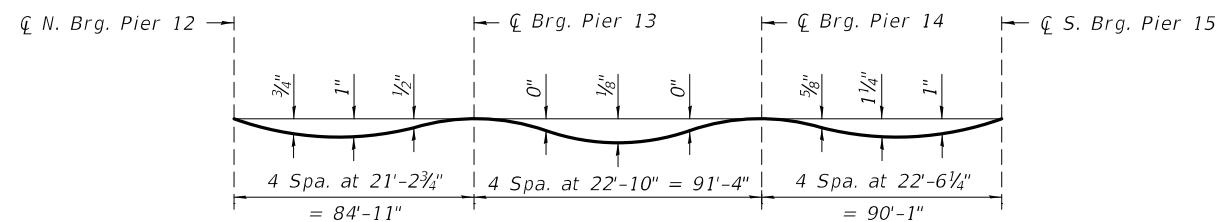
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	201
ILLINOIS			CONTRACT NO.	



PLAN - UNIT 5

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 12 & Exp. Jt.	65+75.89	-18.13	635.09	635.13
☐ N. Brg. Pier 12	65+77.14	-18.13	635.09	635.13
A5	65+87.14	-18.13	635.12	635.20
B5	65+97.14	-18.13	635.15	635.25
C5	66+07.14	-18.13	635.18	635.30
D5	66+17.14	-18.13	635.21	635.34
E5	66+27.14	-18.13	635.24	635.36
F5	66+37.14	-18.13	635.27	635.37
G5	66+47.14	-18.13	635.30	635.38
☐ Brg. Pier 13	66+62.06	-18.13	635.35	635.39
H5	66+72.06	-18.13	635.38	635.42
I5	66+82.06	-18.13	635.41	635.46
J5	66+92.06	-18.13	635.44	635.50
K5	67+02.06	-18.13	635.47	635.53
L5	67+12.06	-18.13	635.50	635.56
M5	67+22.06	-18.13	635.53	635.58
N5	67+32.06	-18.13	635.56	635.61
O5	67+42.06	-18.13	635.59	635.63
☐ Brg. Pier 14	67+53.39	-18.13	635.62	635.67
P5	67+63.39	-18.13	635.65	635.72
Q5	67+73.39	-18.13	635.68	635.77
R5	67+83.39	-18.13	635.71	635.83
S5	67+93.39	-18.13	635.74	635.87
T5	68+03.39	-18.13	635.76	635.90
U5	68+13.39	-18.13	635.78	635.92
V5	68+23.39	-18.13	635.81	635.92
W5	68+33.39	-18.13	635.83	635.91
☐ S. Brg. Pier 15	68+43.47	-18.13	635.85	635.89
☐ Pier 15 & Exp. Jt.	68+44.72	-18.13	635.85	635.89

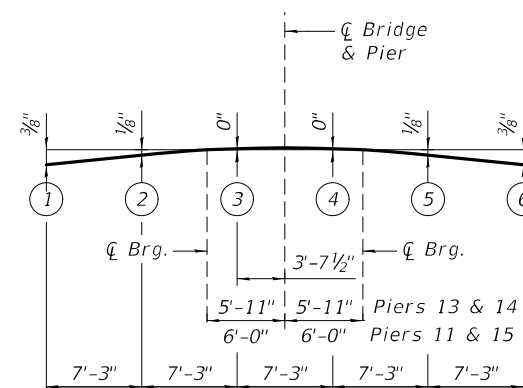


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only. Use these deflections in combination with cross girder deflections.)

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 and grinding as shown on this sheet and sheet SB-16.



CROSS GIRDER DEAD LOAD DEFLECTION DIAGRAM

OVER PIERS 12 THRU 15

(Includes weight of concrete only)

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS 10 (UNIT 5)  
STRUCTURE NO. 016-2467

SHEET SB-15 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	202
ILLINOIS			CONTRACT NO. 62H49	



**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 12 & Exp. Jt.	65+75.89	-10.88	635.21	635.23
☐ N. Brg. Pier 12	65+77.14	-10.88	635.21	635.24
A5	65+87.14	-10.88	635.24	635.30
B5	65+97.14	-10.88	635.27	635.35
C5	66+07.14	-10.88	635.30	635.40
D5	66+17.14	-10.88	635.33	635.43
E5	66+27.14	-10.88	635.36	635.45
F5	66+37.14	-10.88	635.39	635.47
G5	66+47.14	-10.88	635.42	635.47
☐ Brg. Pier 13	66+62.06	-10.88	635.46	635.49
H5	66+72.06	-10.88	635.49	635.52
I5	66+82.06	-10.88	635.52	635.56
J5	66+92.06	-10.88	635.55	635.59
K5	67+02.06	-10.88	635.58	635.63
L5	67+12.06	-10.88	635.61	635.66
M5	67+22.06	-10.88	635.64	635.68
N5	67+32.06	-10.88	635.67	635.70
O5	67+42.06	-10.88	635.70	635.73
☐ Brg. Pier 14	67+53.39	-10.88	635.74	635.77
P5	67+63.39	-10.88	635.77	635.82
Q5	67+73.39	-10.88	635.80	635.87
R5	67+83.39	-10.88	635.83	635.92
S5	67+93.39	-10.88	635.85	635.97
T5	68+03.39	-10.88	635.88	636.00
U5	68+13.39	-10.88	635.90	636.02
V5	68+23.39	-10.88	635.92	636.02
W5	68+33.39	-10.88	635.94	636.01
☐ S. Brg. Pier 15	68+43.47	-10.88	635.96	635.99
☐ Pier 15 & Exp. Jt.	68+44.72	-10.88	635.97	635.99

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 12 & Exp. Jt.	65+75.89	-3.63	635.31	635.33
☐ N. Brg. Pier 12	65+77.14	-3.63	635.32	635.34
A5	65+87.14	-3.63	635.35	635.40
B5	65+97.14	-3.63	635.38	635.45
C5	66+07.14	-3.63	635.41	635.50
D5	66+17.14	-3.63	635.44	635.53
E5	66+27.14	-3.63	635.47	635.55
F5	66+37.14	-3.63	635.50	635.56
G5	66+47.14	-3.63	635.53	635.57
☐ Brg. Pier 13	66+62.06	-3.63	635.57	635.59
H5	66+72.06	-3.63	635.60	635.62
I5	66+82.06	-3.63	635.63	635.65
J5	66+92.06	-3.63	635.66	635.69
K5	67+02.06	-3.63	635.69	635.73
L5	67+12.06	-3.63	635.72	635.75
M5	67+22.06	-3.63	635.75	635.78
N5	67+32.06	-3.63	635.78	635.80
O5	67+42.06	-3.63	635.81	635.83
☐ Brg. Pier 14	67+53.39	-3.63	635.85	635.87
P5	67+63.39	-3.63	635.88	635.91
Q5	67+73.39	-3.63	635.91	635.97
R5	67+83.39	-3.63	635.93	636.02
S5	67+93.39	-3.63	635.96	636.07
T5	68+03.39	-3.63	635.99	636.10
U5	68+13.39	-3.63	636.01	636.11
V5	68+23.39	-3.63	636.03	636.12
W5	68+33.39	-3.63	636.05	636.11
☐ S. Brg. Pier 15	68+43.47	-3.63	636.07	636.09
☐ Pier 15 & Exp. Jt.	68+44.72	-3.63	636.08	636.09

**PGL AND CROWN**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 12 & Exp. Jt.	65+75.89	0.00	635.37	635.39
☐ N. Brg. Pier 12	65+77.14	0.00	635.37	635.39
A5	65+87.14	0.00	635.40	635.45
B5	65+97.14	0.00	635.43	635.51
C5	66+07.14	0.00	635.46	635.55
D5	66+17.14	0.00	635.49	635.58
E5	66+27.14	0.00	635.52	635.61
F5	66+37.14	0.00	635.55	635.62
G5	66+47.14	0.00	635.58	635.63
☐ Brg. Pier 13	66+62.06	0.00	635.63	635.64
H5	66+72.06	0.00	635.66	635.67
I5	66+82.06	0.00	635.69	635.71
J5	66+92.06	0.00	635.72	635.74
K5	67+02.06	0.00	635.75	635.78
L5	67+12.06	0.00	635.78	635.81
M5	67+22.06	0.00	635.81	635.83
N5	67+32.06	0.00	635.84	635.85
O5	67+42.06	0.00	635.87	635.88
☐ Brg. Pier 14	67+53.39	0.00	635.90	635.92
P5	67+63.39	0.00	635.93	635.97
Q5	67+73.39	0.00	635.96	636.02
R5	67+83.39	0.00	635.99	636.07
S5	67+93.39	0.00	636.02	636.12
T5	68+03.39	0.00	636.04	636.15
U5	68+13.39	0.00	636.06	636.17
V5	68+23.39	0.00	636.09	636.17
W5	68+33.39	0.00	636.11	636.16
☐ S. Brg. Pier 15	68+43.47	0.00	636.13	636.15
☐ Pier 15 & Exp. Jt.	68+44.72	0.00	636.13	636.15

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 12 & Exp. Jt.	65+75.89	3.63	635.31	635.33
☐ N. Brg. Pier 12	65+77.14	3.63	635.32	635.34
A5	65+87.14	3.63	635.35	635.40
B5	65+97.14	3.63	635.38	635.45
C5	66+07.14	3.63	635.41	635.50
D5	66+17.14	3.63	635.44	635.53
E5	66+27.14	3.63	635.47	635.55
F5	66+37.14	3.63	635.50	635.56
G5	66+47.14	3.63	635.53	635.57
☐ Brg. Pier 13	66+62.06	3.63	635.57	635.59
H5	66+72.06	3.63	635.60	635.62
I5	66+82.06	3.63	635.63	635.65
J5	66+92.06	3.63	635.66	635.69
K5	67+02.06	3.63	635.69	635.73
L5	67+12.06	3.63	635.72	635.75
M5	67+22.06	3.63	635.75	635.78
N5	67+32.06	3.63	635.78	635.80
O5	67+42.06	3.63	635.81	635.83
☐ Brg. Pier 14	67+53.39	3.63	635.85	635.87
P5	67+63.39	3.63	635.88	635.91
Q5	67+73.39	3.63	635.91	635.97
R5	67+83.39	3.63	635.93	636.02
S5	67+93.39	3.63	635.96	636.07
T5	68+03.39	3.63	635.99	636.10
U5	68+13.39	3.63	636.01	636.11
V5	68+23.39	3.63	636.03	636.12
W5	68+33.39	3.63	636.05	636.11
☐ S. Brg. Pier 15	68+43.47	3.63	636.07	636.09
☐ Pier 15 & Exp. Jt.	68+44.72	3.63	636.08	636.09

**GIRDER 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 12 & Exp. Jt.	65+75.89	10.88	635.21	635.23
☐ N. Brg. Pier 12	65+77.14	10.88	635.21	635.24
A5	65+87.14	10.88	635.24	635.30
B5	65+97.14	10.88	635.27	635.35
C5	66+07.14	10.88	635.30	635.40
D5	66+17.14	10.88	635.33	635.43
E5	66+27.14	10.88	635.36	635.45
F5	66+37.14	10.88	635.39	635.47
G5	66+47.14	10.88	635.42	635.47
☐ Brg. Pier 13	66+62.06	10.88	635.46	635.49
H5	66+72.06	10.88	635.49	635.52
I5	66+82.06	10.88	635.52	635.56
J5	66+92.06	10.88	635.55	635.59
K5	67+02.06	10.88	635.58	635.63
L5	67+12.06	10.88	635.61	635.66
M5	67+22.06	10.88	635.64	635.68
N5	67+32.06	10.88	635.67	635.70
O5	67+42.06	10.88	635.70	635.73
☐ Brg. Pier 14	67+53.39	10.88	635.74	635.77
P5	67+63.39	10.88	635.77	635.82
Q5	67+73.39	10.88	635.80	635.87
R5	67+83.39	10.88	635.83	635.92
S5	67+93.39	10.88	635.85	635.97
T5	68+03.39	10.88	635.88	636.00
U5	68+13.39	10.88	635.90	636.02
V5	68+23.39	10.88	635.92	636.02
W5	68+33.39	10.88	635.94	636.01
☐ S. Brg. Pier 15	68+43.47	10.88	635.96	635.99
☐ Pier 15 & Exp. Jt.	68+44.72	10.88	635.97	635.99

**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 12 & Exp. Jt.	65+75.89	18.13	635.09	635.13
☐ N. Brg. Pier 12	65+77.14	18.13	635.09	635.13
A5	65+87.14	18.13	635.12	635.20
B5	65+97.14	18.13	635.15	635.25
C5	66+07.14	18.13	635.18	635.30
D5	66+17.14	18.13	635.21	635.34
E5	66+27.14	18.13	635.24	635.36
F5	66+37.14	18.13	635.27	635.37
G5	66+47.14	18.13	635.30	635.38
☐ Brg. Pier 13	66+62.06	18.13	635.35	635.39
H5	66+72.06	18.13	635.38	635.42
I5	66+82.06	18.13	635.41	635.46
J5	66+92.06	18.13	635.44	635.50
K5	67+02.06	18.13	635.47	635.53
L5	67+12.06	18.13	635.50	635.56
M5	67+22.06	18.13	635.53	635.58
N5	67+32.06	18.13	635.56	635.61
O5	67+42.06	18.13	635.59	635.63
☐ Brg. Pier 14	67+53.39	18.13	635.62	635.67
P5	67+63.39	18.13	635.65	635.72
Q5	67+73.39	18.13	635.68	635.77
R5	67+83.39	18.13	635.71	635.83
S5	67+93.39	18.13	635.74	635.87
T5	68+03.39	18.13	635.76	635.90
U5	68+13.39	18.13	635.78	635.92
V5	68+23.39	18.13	635.81	635.92
W5	68+33.39	18.13	635.83	635.91
☐ S. Brg. Pier 15	68+43.47	18.13	635.85	635.89
☐ Pier 15 & Exp. Jt.	68+44.72	18.13	635.85	635.89

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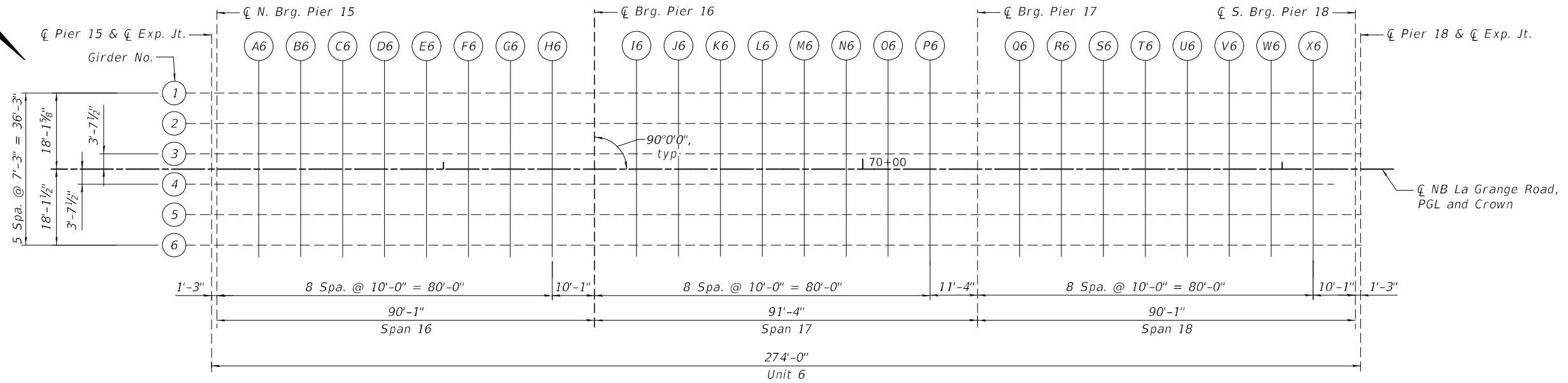
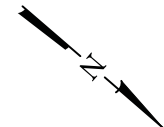
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PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

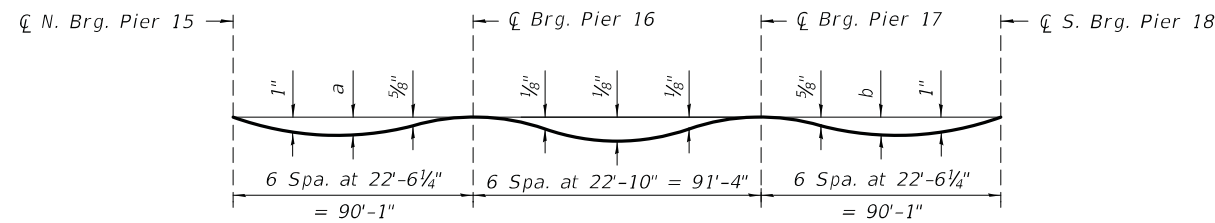
**TOP OF DECK ELEVATIONS 11 (UNIT 5)  
STRUCTURE NO. 016-2467**

SHEET SB-16 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	203
ILLINOIS			CONTRACT NO. 62H49	



PLAN - UNIT 6



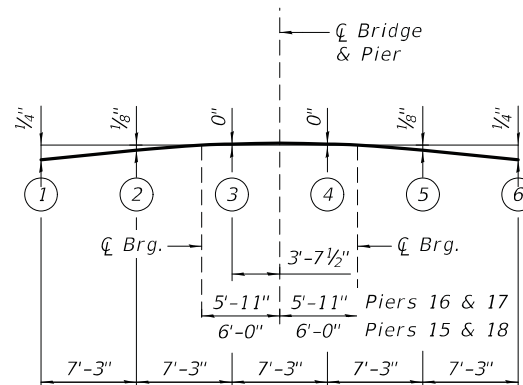
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only. Use these deflections in combination with cross girder deflections.)

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 and grinding as shown on this sheet and sheet SB-18.

DEFLECTION TABLE

Girder	a	b
1	1 1/4"	1 1/4"
2	1 1/8"	1 1/8"
3	1 1/8"	1 1/8"
4	1 1/8"	1 1/8"
5	1"	1"
6	1 1/8"	1 1/8"



CROSS GIRDER DEAD LOAD DEFLECTION DIAGRAM

OVER PIERS 15 THRU 18

(Includes weight of concrete only)

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 15 & Exp. Jt.	68+44.72	-18.13	635.85	635.89
☐ N. Brg. Pier 15	68+45.97	-18.13	635.85	635.89
A6	68+55.97	-18.13	635.87	635.95
B6	68+65.97	-18.13	635.88	636.00
C6	68+75.97	-18.13	635.90	636.03
D6	68+85.97	-18.13	635.91	636.05
E6	68+95.97	-18.13	635.92	636.06
F6	69+05.97	-18.13	635.93	636.05
G6	69+15.97	-18.13	635.94	636.03
H6	69+25.97	-18.13	635.95	636.01
☐ Brg. Pier 16	69+36.06	-18.13	635.95	636.00
I6	69+46.06	-18.13	635.96	635.99
J6	69+56.06	-18.13	635.96	636.00
K6	69+66.06	-18.13	635.96	636.01
L6	69+76.06	-18.13	635.96	636.01
M6	69+86.06	-18.13	635.96	636.01
N6	69+96.06	-18.13	635.95	636.00
O6	70+06.06	-18.13	635.95	635.99
P6	70+16.06	-18.13	635.94	635.98
☐ Brg. Pier 17	70+27.39	-18.13	635.93	635.98
Q6	70+37.39	-18.13	635.92	635.99
R6	70+47.39	-18.13	635.91	636.00
S6	70+57.39	-18.13	635.90	636.02
T6	70+67.39	-18.13	635.89	636.02
U6	70+77.39	-18.13	635.87	636.01
V6	70+87.39	-18.13	635.85	635.99
W6	70+97.39	-18.13	635.83	635.94
X6	71+07.39	-18.13	635.81	635.89
☐ S. Brg. Pier 18	71+17.47	-18.13	635.79	635.83
☐ Pier 18 & Exp. Jt.	71+18.72	-18.13	635.79	635.82

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS 12 (UNIT 6)  
STRUCTURE NO. 016-2467

SHEET SB-17 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	204
ILLINOIS			CONTRACT NO. 62H49	

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 15 & Exp. Jt.	68+44.72	-10.88	635.97	635.99
☐ N. Brg. Pier 15	68+45.97	-10.88	635.97	635.99
A6	68+55.97	-10.88	635.99	636.05
B6	68+65.97	-10.88	636.00	636.10
C6	68+75.97	-10.88	636.02	636.13
D6	68+85.97	-10.88	636.03	636.15
E6	68+95.97	-10.88	636.04	636.15
F6	69+05.97	-10.88	636.05	636.15
G6	69+15.97	-10.88	636.06	636.13
H6	69+25.97	-10.88	636.07	636.11
☐ Brg. Pier 16	69+36.06	-10.88	636.07	636.10
I6	69+46.06	-10.88	636.07	636.10
J6	69+56.06	-10.88	636.08	636.10
K6	69+66.06	-10.88	636.08	636.11
L6	69+76.06	-10.88	636.08	636.11
M6	69+86.06	-10.88	636.08	636.11
N6	69+96.06	-10.88	636.07	636.10
O6	70+06.06	-10.88	636.07	636.09
P6	70+16.06	-10.88	636.06	636.08
☐ Brg. Pier 17	70+27.39	-10.88	636.05	636.08
Q6	70+37.39	-10.88	636.04	636.09
R6	70+47.39	-10.88	636.03	636.10
S6	70+57.39	-10.88	636.02	636.11
T6	70+67.39	-10.88	636.00	636.12
U6	70+77.39	-10.88	635.99	636.11
V6	70+87.39	-10.88	635.97	636.08
W6	70+97.39	-10.88	635.95	636.04
X6	71+07.39	-10.88	635.93	635.99
☐ S. Brg. Pier 18	71+17.47	-10.88	635.91	635.93
☐ Pier 18 & Exp. Jt.	71+18.72	-10.88	635.90	635.93

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 15 & Exp. Jt.	68+44.72	-3.63	636.08	636.09
☐ N. Brg. Pier 15	68+45.97	-3.63	636.08	636.10
A6	68+55.97	-3.63	636.09	636.15
B6	68+65.97	-3.63	636.11	636.20
C6	68+75.97	-3.63	636.12	636.23
D6	68+85.97	-3.63	636.14	636.25
E6	68+95.97	-3.63	636.15	636.26
F6	69+05.97	-3.63	636.16	636.25
G6	69+15.97	-3.63	636.17	636.23
H6	69+25.97	-3.63	636.17	636.21
☐ Brg. Pier 16	69+36.06	-3.63	636.18	636.20
I6	69+46.06	-3.63	636.18	636.20
J6	69+56.06	-3.63	636.19	636.20
K6	69+66.06	-3.63	636.19	636.21
L6	69+76.06	-3.63	636.19	636.21
M6	69+86.06	-3.63	636.18	636.21
N6	69+96.06	-3.63	636.18	636.20
O6	70+06.06	-3.63	636.18	636.19
P6	70+16.06	-3.63	636.17	636.18
☐ Brg. Pier 17	70+27.39	-3.63	636.16	636.18
Q6	70+37.39	-3.63	636.15	636.19
R6	70+47.39	-3.63	636.14	636.20
S6	70+57.39	-3.63	636.13	636.21
T6	70+67.39	-3.63	636.11	636.22
U6	70+77.39	-3.63	636.09	636.21
V6	70+87.39	-3.63	636.08	636.18
W6	70+97.39	-3.63	636.06	636.15
X6	71+07.39	-3.63	636.04	636.10
☐ S. Brg. Pier 18	71+17.47	-3.63	636.02	636.04
☐ Pier 18 & Exp. Jt.	71+18.72	-3.63	636.01	636.03

**PGL AND CROWN**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 15 & Exp. Jt.	68+44.72	0.00	636.13	636.15
☐ N. Brg. Pier 15	68+45.97	0.00	636.13	636.15
A6	68+55.97	0.00	636.15	636.21
B6	68+65.97	0.00	636.16	636.25
C6	68+75.97	0.00	636.18	636.29
D6	68+85.97	0.00	636.19	636.30
E6	68+95.97	0.00	636.20	636.31
F6	69+05.97	0.00	636.21	636.30
G6	69+15.97	0.00	636.22	636.28
H6	69+25.97	0.00	636.23	636.27
☐ Brg. Pier 16	69+36.06	0.00	636.23	636.25
I6	69+46.06	0.00	636.24	636.25
J6	69+56.06	0.00	636.24	636.25
K6	69+66.06	0.00	636.24	636.26
L6	69+76.06	0.00	636.24	636.27
M6	69+86.06	0.00	636.24	636.26
N6	69+96.06	0.00	636.23	636.26
O6	70+06.06	0.00	636.23	636.24
P6	70+16.06	0.00	636.22	636.23
☐ Brg. Pier 17	70+27.39	0.00	636.21	636.23
Q6	70+37.39	0.00	636.20	636.24
R6	70+47.39	0.00	636.19	636.26
S6	70+57.39	0.00	636.18	636.27
T6	70+67.39	0.00	636.17	636.27
U6	70+77.39	0.00	636.15	636.26
V6	70+87.39	0.00	636.13	636.24
W6	70+97.39	0.00	636.11	636.20
X6	71+07.39	0.00	636.09	636.15
☐ S. Brg. Pier 18	71+17.47	0.00	636.07	636.09
☐ Pier 18 & Exp. Jt.	71+18.72	0.00	636.07	636.09

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 15 & Exp. Jt.	68+44.72	3.63	636.08	636.09
☐ N. Brg. Pier 15	68+45.97	3.63	636.08	636.10
A6	68+55.97	3.63	636.09	636.15
B6	68+65.97	3.63	636.11	636.20
C6	68+75.97	3.63	636.12	636.23
D6	68+85.97	3.63	636.14	636.25
E6	68+95.97	3.63	636.15	636.26
F6	69+05.97	3.63	636.16	636.25
G6	69+15.97	3.63	636.17	636.23
H6	69+25.97	3.63	636.17	636.21
☐ Brg. Pier 16	69+36.06	3.63	636.18	636.20
I6	69+46.06	3.63	636.18	636.20
J6	69+56.06	3.63	636.19	636.20
K6	69+66.06	3.63	636.19	636.21
L6	69+76.06	3.63	636.19	636.21
M6	69+86.06	3.63	636.18	636.21
N6	69+96.06	3.63	636.18	636.20
O6	70+06.06	3.63	636.18	636.19
P6	70+16.06	3.63	636.17	636.18
☐ Brg. Pier 17	70+27.39	3.63	636.16	636.18
Q6	70+37.39	3.63	636.15	636.19
R6	70+47.39	3.63	636.14	636.20
S6	70+57.39	3.63	636.13	636.21
T6	70+67.39	3.63	636.11	636.22
U6	70+77.39	3.63	636.09	636.21
V6	70+87.39	3.63	636.08	636.18
W6	70+97.39	3.63	636.06	636.15
X6	71+07.39	3.63	636.04	636.10
☐ S. Brg. Pier 18	71+17.47	3.63	636.02	636.04
☐ Pier 18 & Exp. Jt.	71+18.72	3.63	636.01	636.03

**GIRDER 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 15 & Exp. Jt.	68+44.72	10.88	635.97	635.99
☐ N. Brg. Pier 15	68+45.97	10.88	635.97	635.99
A6	68+55.97	10.88	635.99	636.05
B6	68+65.97	10.88	636.00	636.09
C6	68+75.97	10.88	636.02	636.13
D6	68+85.97	10.88	636.03	636.14
E6	68+95.97	10.88	636.04	636.15
F6	69+05.97	10.88	636.05	636.14
G6	69+15.97	10.88	636.06	636.13
H6	69+25.97	10.88	636.07	636.11
☐ Brg. Pier 16	69+36.06	10.88	636.07	636.10
I6	69+46.06	10.88	636.07	636.10
J6	69+56.06	10.88	636.08	636.10
K6	69+66.06	10.88	636.08	636.10
L6	69+76.06	10.88	636.08	636.11
M6	69+86.06	10.88	636.08	636.10
N6	69+96.06	10.88	636.07	636.10
O6	70+06.06	10.88	636.07	636.09
P6	70+16.06	10.88	636.06	636.08
☐ Brg. Pier 17	70+27.39	10.88	636.05	636.08
Q6	70+37.39	10.88	636.04	636.09
R6	70+47.39	10.88	636.03	636.10
S6	70+57.39	10.88	636.02	636.11
T6	70+67.39	10.88	636.00	636.11
U6	70+77.39	10.88	635.99	636.10
V6	70+87.39	10.88	635.97	636.08
W6	70+97.39	10.88	635.95	636.04
X6	71+07.39	10.88	635.93	635.99
☐ S. Brg. Pier 18	71+17.47	10.88	635.91	635.93
☐ Pier 18 & Exp. Jt.	71+18.72	10.88	635.90	635.93

**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 15 & Exp. Jt.	68+44.72	18.13	635.85	635.89
☐ N. Brg. Pier 15	68+45.97	18.13	635.85	635.89
A6	68+55.97	18.13	635.87	635.94
B6	68+65.97	18.13	635.88	635.99
C6	68+75.97	18.13	635.90	636.02
D6	68+85.97	18.13	635.91	636.04
E6	68+95.97	18.13	635.92	636.05
F6	69+05.97	18.13	635.93	636.04
G6	69+15.97	18.13	635.94	636.03
H6	69+25.97	18.13	635.95	636.01
☐ Brg. Pier 16	69+36.06	18.13	635.95	636.00
I6	69+46.06	18.13	635.96	635.99
J6	69+56.06	18.13	635.96	635.99
K6	69+66.06	18.13	635.96	636.00
L6	69+76.06	18.13	635.96	636.00
M6	69+86.06	18.13	635.96	635.99
N6	69+96.06	18.13	635.95	635.99
O6	70+06.06	18.13	635.95	635.98
P6	70+16.06	18.13	635.94	635.98
☐ Brg. Pier 17	70+27.39	18.13	635.93	635.98
Q6	70+37.39	18.13	635.92	635.98
R6	70+47.39	18.13	635.91	636.00
S6	70+57.39	18.13	635.90	636.01
T6	70+67.39	18.13	635.89	636.01
U6	70+77.39	18.13	635.87	636.00
V6	70+87.39	18.13	635.85	635.97
W6	70+97.39	18.13	635.83	635.94
X6	71+07.39	18.13	635.81	635.89
☐ S. Brg. Pier 18	71+17.47	18.13	635.79	635.83
☐ Pier 18 & Exp. Jt.	71+18.72	18.13	635.79	635.82

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

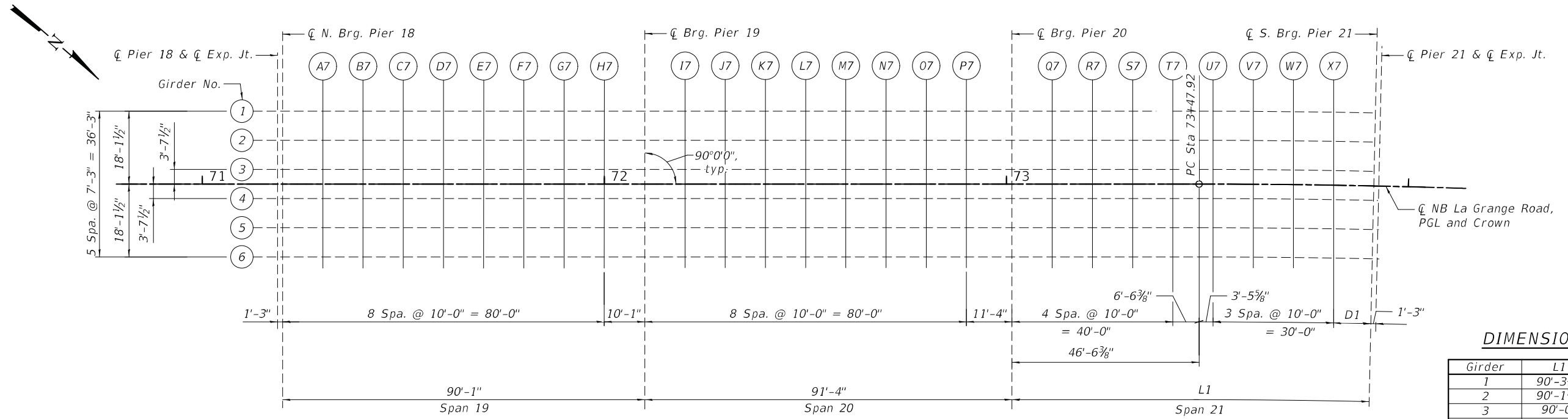
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 13 (UNIT 6)  
STRUCTURE NO. 016-2467**

SHEET SB-18 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	205
ILLINOIS			CONTRACT NO. 62H49	





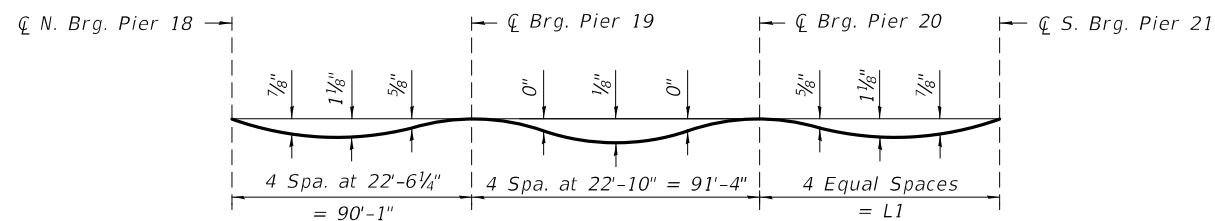
**DIMENSION TABLE**

Girder	L1	D1
1	90'-3 3/4"	10'-3 3/4"
2	90'-1 7/8"	10'-1 7/8"
3	90'-0"	10'-0"
☉ & PGL	89'-11 1/8"	9'-11 1/8"
4	89'-10 1/8"	9'-10 1/8"
5	89'-8 1/4"	9'-8 1/4"
6	89'-6 1/2"	9'-6 1/2"

**PLAN - UNIT 7**

**GIRDER 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☉ Pier 18 Exp. Jt.	71+18.72	-18.13	635.79	635.83
☉ N. Brg. Pier 18	71+19.97	-18.13	635.78	635.82
A7	71+29.97	-18.13	635.76	635.84
B7	71+39.97	-18.13	635.74	635.84
C7	71+49.97	-18.13	635.71	635.83
D7	71+59.97	-18.13	635.68	635.81
E7	71+69.97	-18.13	635.65	635.78
F7	71+79.97	-18.13	635.62	635.73
G7	71+89.97	-18.13	635.59	635.68
H7	71+99.97	-18.13	635.56	635.63
☉ Brg. Pier 19	72+10.05	-18.13	635.53	635.58
I7	72+20.05	-18.13	635.50	635.54
J7	72+30.05	-18.13	635.47	635.52
K7	72+40.05	-18.13	635.44	635.49
L7	72+50.05	-18.13	635.41	635.47
M7	72+60.05	-18.13	635.39	635.44
N7	72+70.05	-18.13	635.44	635.49
O7	72+80.05	-18.13	635.48	635.53
P7	72+90.05	-18.13	635.53	635.57
☉ Brg. Pier 20	73+01.39	-18.13	635.58	635.63
Q7	73+11.39	-18.13	635.63	635.69
R7	73+21.39	-18.13	635.67	635.76
S7	73+31.39	-18.13	635.72	635.83
T7	73+41.39	-18.13	635.76	635.89
U7	73+51.47	-18.13	635.81	635.94
V7	73+61.56	-18.13	635.86	635.98
W7	73+71.65	-18.13	635.90	636.01
X7	73+81.74	-18.13	635.95	636.03
☉ S. Brg. Pier 21	73+91.32	-18.13	635.99	636.03
☉ Pier 21 Exp. Jt.	73+92.56	-18.13	636.00	636.04

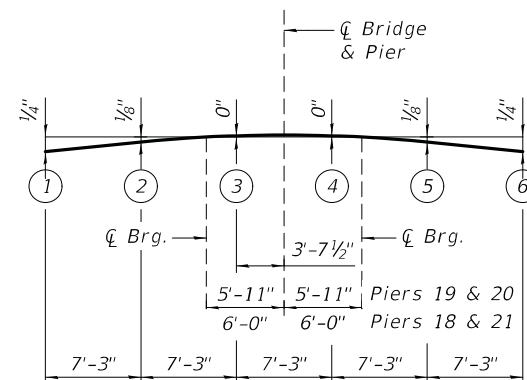


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only. Use these deflections in combination with cross girder deflections.)

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 and grinding as shown on this sheet and sheet SB-20.



**CROSS GIRDER DEAD LOAD DEFLECTION DIAGRAM OVER PIERS 18 THRU 21**

(Includes weight of concrete only)

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 18 & ☐ Exp. Jt.	71+18.72	-10.88	635.90	635.93
☐ N. Brg. Pier 18	71+19.97	-10.88	635.90	635.93
A7	71+29.97	-10.88	635.88	635.94
B7	71+39.97	-10.88	635.85	635.95
C7	71+49.97	-10.88	635.83	635.94
D7	71+59.97	-10.88	635.80	635.92
E7	71+69.97	-10.88	635.77	635.88
F7	71+79.97	-10.88	635.74	635.84
G7	71+89.97	-10.88	635.71	635.78
H7	71+99.97	-10.88	635.68	635.73
☐ Brg. Pier 19	72+10.05	-10.88	635.65	635.68
I7	72+20.05	-10.88	635.62	635.64
J7	72+30.05	-10.88	635.59	635.62
K7	72+40.05	-10.88	635.56	635.59
L7	72+50.05	-10.88	635.53	635.56
M7	72+60.05	-10.88	635.50	635.54
N7	72+70.05	-10.88	635.51	635.55
O7	72+80.05	-10.88	635.53	635.56
P7	72+90.05	-10.88	635.55	635.57
☐ Brg. Pier 20	73+01.39	-10.88	635.56	635.59
Q7	73+11.39	-10.88	635.58	635.63
R7	73+21.39	-10.88	635.59	635.67
S7	73+31.39	-10.88	635.61	635.71
T7	73+41.39	-10.88	635.63	635.74
U7	73+51.44	-10.88	635.64	635.76
V7	73+61.49	-10.88	635.66	635.77
W7	73+71.55	-10.88	635.67	635.76
X7	73+81.82	-10.88	635.69	635.75
☐ S. Brg. Pier 21	73+91.31	-10.88	635.70	635.73
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	-10.88	635.70	635.73

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 18 & ☐ Exp. Jt.	71+18.72	-3.63	636.01	636.03
☐ N. Brg. Pier 18	71+19.97	-3.63	636.01	636.03
A7	71+29.97	-3.63	635.99	636.04
B7	71+39.97	-3.63	635.96	636.05
C7	71+49.97	-3.63	635.93	636.04
D7	71+59.97	-3.63	635.91	636.02
E7	71+69.97	-3.63	635.88	635.98
F7	71+79.97	-3.63	635.85	635.93
G7	71+89.97	-3.63	635.82	635.88
H7	71+99.97	-3.63	635.79	635.83
☐ Brg. Pier 19	72+10.05	-3.63	635.76	635.78
I7	72+20.05	-3.63	635.73	635.74
J7	72+30.05	-3.63	635.70	635.71
K7	72+40.05	-3.63	635.67	635.69
L7	72+50.05	-3.63	635.64	635.66
M7	72+60.05	-3.63	635.61	635.63
N7	72+70.05	-3.63	635.59	635.62
O7	72+80.05	-3.63	635.58	635.60
P7	72+90.05	-3.63	635.56	635.58
☐ Brg. Pier 20	73+01.39	-3.63	635.55	635.56
Q7	73+11.39	-3.63	635.53	635.57
R7	73+21.39	-3.63	635.52	635.58
S7	73+31.39	-3.63	635.50	635.59
T7	73+41.39	-3.63	635.49	635.59
U7	73+51.44	-3.63	635.47	635.58
V7	73+61.42	-3.63	635.46	635.56
W7	73+71.44	-3.63	635.44	635.53
X7	73+81.46	-3.63	635.43	635.48
☐ S. Brg. Pier 21	73+91.31	-3.63	635.41	635.43
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	-3.63	635.41	635.43

**PGL AND CROWN**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 18 & ☐ Exp. Jt.	71+18.72	0.00	636.07	636.09
☐ N. Brg. Pier 18	71+19.97	0.00	636.06	636.08
A7	71+29.97	0.00	636.04	636.10
B7	71+39.97	0.00	636.02	636.10
C7	71+49.97	0.00	635.99	636.09
D7	71+59.97	0.00	635.96	636.07
E7	71+69.97	0.00	635.93	636.03
F7	71+79.97	0.00	635.90	635.99
G7	71+89.97	0.00	635.87	635.93
H7	71+99.97	0.00	635.84	635.88
☐ Brg. Pier 19	72+10.05	0.00	635.81	635.83
I7	72+20.05	0.00	635.78	635.79
J7	72+30.05	0.00	635.75	635.77
K7	72+40.05	0.00	635.72	635.74
L7	72+50.05	0.00	635.69	635.72
M7	72+60.05	0.00	635.66	635.69
N7	72+70.05	0.00	635.63	635.65
O7	72+80.05	0.00	635.60	635.62
P7	72+90.05	0.00	635.57	635.58
☐ Brg. Pier 20	73+01.39	0.00	635.54	635.55
Q7	73+11.39	0.00	635.51	635.54
R7	73+21.39	0.00	635.48	635.54
S7	73+31.39	0.00	635.45	635.53
T7	73+41.39	0.00	635.42	635.52
U7	73+51.39	0.00	635.39	635.49
V7	73+61.39	0.00	635.36	635.46
W7	73+71.39	0.00	635.33	635.41
X7	73+81.39	0.00	635.30	635.35
☐ S. Brg. Pier 21	73+91.31	0.00	635.27	635.29
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	0.00	635.26	635.28

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 18 & ☐ Exp. Jt.	71+18.72	3.63	636.01	636.03
☐ N. Brg. Pier 18	71+19.97	3.63	636.01	636.03
A7	71+29.97	3.63	635.99	636.04
B7	71+39.97	3.63	635.96	636.05
C7	71+49.97	3.63	635.93	636.04
D7	71+59.97	3.63	635.91	636.02
E7	71+69.97	3.63	635.88	635.98
F7	71+79.97	3.63	635.85	635.93
G7	71+89.97	3.63	635.82	635.88
H7	71+99.97	3.63	635.79	635.83
☐ Brg. Pier 19	72+10.05	3.63	635.76	635.78
I7	72+20.05	3.63	635.73	635.74
J7	72+30.05	3.63	635.70	635.71
K7	72+40.05	3.63	635.67	635.69
L7	72+50.05	3.63	635.64	635.66
M7	72+60.05	3.63	635.61	635.63
N7	72+70.05	3.63	635.58	635.60
O7	72+80.05	3.63	635.55	635.57
P7	72+90.05	3.63	635.52	635.53
☐ Brg. Pier 20	73+01.39	3.63	635.48	635.50
Q7	73+11.39	3.63	635.45	635.49
R7	73+21.39	3.63	635.42	635.49
S7	73+31.39	3.63	635.39	635.48
T7	73+41.39	3.63	635.35	635.45
U7	73+51.37	3.63	635.30	635.41
V7	73+61.35	3.63	635.26	635.36
W7	73+71.33	3.63	635.21	635.30
X7	73+81.32	3.63	635.17	635.22
☐ S. Brg. Pier 21	73+91.30	3.63	635.12	635.14
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	3.63	635.12	635.14

**GIRDER 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 18 & ☐ Exp. Jt.	71+18.72	10.88	635.90	635.93
☐ N. Brg. Pier 18	71+19.97	10.88	635.90	635.93
A7	71+29.97	10.88	635.88	635.94
B7	71+39.97	10.88	635.85	635.95
C7	71+49.97	10.88	635.83	635.94
D7	71+59.97	10.88	635.80	635.92
E7	71+69.97	10.88	635.77	635.88
F7	71+79.97	10.88	635.74	635.84
G7	71+89.97	10.88	635.71	635.78
H7	71+99.97	10.88	635.68	635.73
☐ Brg. Pier 19	72+10.05	10.88	635.65	635.68
I7	72+20.05	10.88	635.62	635.64
J7	72+30.05	10.88	635.59	635.62
K7	72+40.05	10.88	635.56	635.59
L7	72+50.05	10.88	635.53	635.57
M7	72+60.05	10.88	635.50	635.54
N7	72+70.05	10.88	635.47	635.50
O7	72+80.05	10.88	635.44	635.47
P7	72+90.05	10.88	635.41	635.43
☐ Brg. Pier 20	73+01.39	10.88	635.37	635.40
Q7	73+11.39	10.88	635.34	635.39
R7	73+21.39	10.88	635.31	635.39
S7	73+31.39	10.88	635.28	635.38
T7	73+41.39	10.88	635.21	635.32
U7	73+51.33	10.88	635.13	635.25
V7	73+61.28	10.88	635.06	635.17
W7	73+71.23	10.88	634.98	635.07
X7	73+81.17	10.88	634.91	634.97
☐ S. Brg. Pier 21	73+91.30	10.88	634.83	634.86
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	10.88	634.82	634.85

**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 18 & ☐ Exp. Jt.	71+18.72	18.13	635.79	635.83
☐ N. Brg. Pier 18	71+19.97	18.13	635.78	635.82
A7	71+29.97	18.13	635.76	635.84
B7	71+39.97	18.13	635.74	635.84
C7	71+49.97	18.13	635.71	635.83
D7	71+59.97	18.13	635.68	635.81
E7	71+69.97	18.13	635.65	635.78
F7	71+79.97	18.13	635.62	635.73
G7	71+89.97	18.13	635.59	635.68
H7	71+99.97	18.13	635.56	635.63
☐ Brg. Pier 19	72+10.05	18.13	635.53	635.58
I7	72+20.05	18.13	635.50	635.54
J7	72+30.05	18.13	635.47	635.52
K7	72+40.05	18.13	635.44	635.49
L7	72+50.05	18.13	635.41	635.47
M7	72+60.05	18.13	635.38	635.44
N7	72+70.05	18.13	635.35	635.40
O7	72+80.05	18.13	635.32	635.37
P7	72+90.05	18.13	635.29	635.33
☐ Brg. Pier 20	73+01.39	18.13	635.26	635.30
Q7	73+11.39	18.13	635.23	635.29
R7	73+21.39	18.13	635.20	635.28
S7	73+31.39	18.13	635.17	635.27
T7	73+41.39	18.13	635.07	635.19
U7	73+51.30	18.13	634.96	635.09
V7	73+61.21	18.13	634.86	634.98
W7	73+71.12	18.13	634.76	634.85
X7	73+81.03	18.13	634.65	634.72
☐ S. Brg. Pier 21	73+91.30	18.13	634.54	634.58
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	18.13	634.53	634.57

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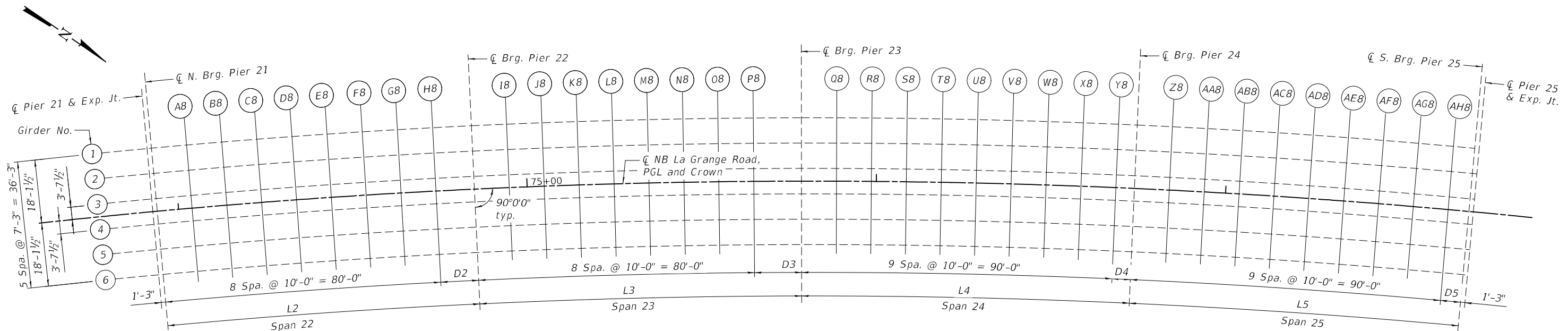
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PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 15 (UNIT 7)  
 STRUCTURE NO. 016-2467**

SHEET SB-20 OF SB-104 SHEETS

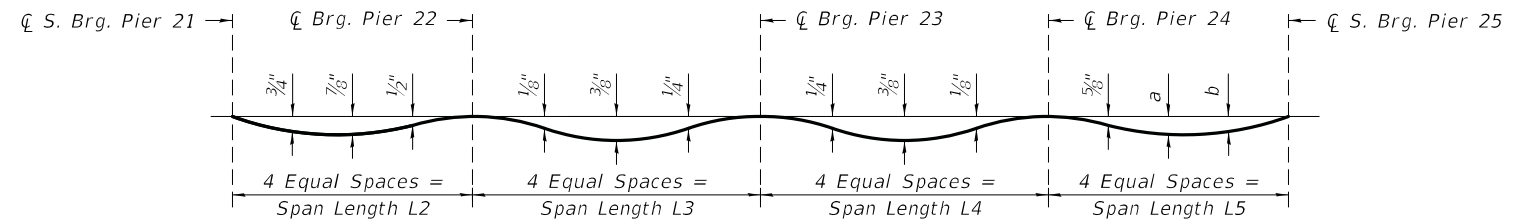
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330	2018-133-BR	COOK	308	207
ILLINOIS			CONTRACT NO. 62H49	



PLAN - UNIT 8

DIMENSION TABLE

Girder	L2	D2	L3	D3	L4	D4	L5	D5
1	91'-10 <sup>3</sup> / <sub>4</sub> "	11'-10 <sup>3</sup> / <sub>4</sub> "	94'-6"	14'-6"	96'-1 <sup>3</sup> / <sub>4</sub> "	6'-1 <sup>3</sup> / <sub>4</sub> "	96'-10"	6'-10"
2	91'-6 <sup>7</sup> / <sub>8</sub> "	11'-6 <sup>7</sup> / <sub>8</sub> "	94'-2"	14'-2"	95'-9 <sup>5</sup> / <sub>8</sub> "	5'-9 <sup>5</sup> / <sub>8</sub> "	96'-5 <sup>7</sup> / <sub>8</sub> "	6'-5 <sup>7</sup> / <sub>8</sub> "
3	91'-2 <sup>7</sup> / <sub>8</sub> "	11'-2 <sup>7</sup> / <sub>8</sub> "	93'-10"	13'-10"	95'-5 <sup>5</sup> / <sub>8</sub> "	5'-5 <sup>5</sup> / <sub>8</sub> "	96'-1 <sup>3</sup> / <sub>4</sub> "	6'-1 <sup>3</sup> / <sub>4</sub> "
CL & PGL	91'-1"	11'-1"	93'-8 <sup>1</sup> / <sub>8</sub> "	13'-8 <sup>1</sup> / <sub>8</sub> "	95'-3 <sup>5</sup> / <sub>8</sub> "	5'-3 <sup>5</sup> / <sub>8</sub> "	95'-11 <sup>3</sup> / <sub>8</sub> "	5'-11 <sup>3</sup> / <sub>8</sub> "
4	90'-11"	10'-11"	93'-6"	13'-6"	95'-1 <sup>1</sup> / <sub>2</sub> "	5'-1 <sup>1</sup> / <sub>2</sub> "	95'-9 <sup>5</sup> / <sub>8</sub> "	5'-9 <sup>5</sup> / <sub>8</sub> "
5	90'-7"	10'-7"	93'-2 <sup>1</sup> / <sub>8</sub> "	13'-2 <sup>1</sup> / <sub>8</sub> "	94'-9 <sup>1</sup> / <sub>2</sub> "	4'-9 <sup>1</sup> / <sub>2</sub> "	95'-5 <sup>3</sup> / <sub>8</sub> "	5'-5 <sup>3</sup> / <sub>8</sub> "
6	90'-3 <sup>1</sup> / <sub>8</sub> "	10'-3 <sup>1</sup> / <sub>8</sub> "	92'-10 <sup>1</sup> / <sub>8</sub> "	12'-10 <sup>1</sup> / <sub>8</sub> "	94'-5 <sup>3</sup> / <sub>8</sub> "	4'-5 <sup>3</sup> / <sub>8</sub> "	95'-1 <sup>1</sup> / <sub>4</sub> "	5'-1 <sup>1</sup> / <sub>4</sub> "



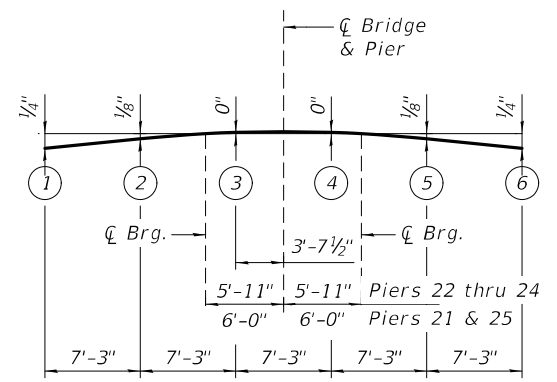
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only. Use these deflections in combination with cross girder deflections.)

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 and grinding as shown on sheets SB-22 thru SB-24.

DEFLECTION TABLE

Girder	a	b
1	1 <sup>1</sup> / <sub>8</sub> "	1"
2	1 <sup>1</sup> / <sub>8</sub> "	7/8"
3	1 <sup>1</sup> / <sub>8</sub> "	7/8"
4	1"	7/8"
5	1"	7/8"
6	1"	3/4"



CROSS GIRDER DEAD LOAD DEFLECTION DIAGRAM

OVER PIERS 21 THRU 25

(Includes weight of concrete only)

MODEL: Default  
FILE NAME: p:\civiltech-pw-bentley.com\civiltech-pw\Documents\Projects\3393\CADD\CADD Sheets\Structures\Structure SN 016-2467\0162467-62H49-021-DECKELEV16.dgn



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS 16 (UNIT 8)  
STRUCTURE NO. 016-2467

SHEET SB-21 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 208
CONTRACT NO. 62H49			ILLINOIS	



**GIRDER 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☉ Pier 21 & ☉ Exp. Jt.	73+92.56	-18.13	636.00	636.04
☉ N. Brg. Pier 21	73+93.81	-18.13	636.00	636.04
A8	74+03.90	-18.13	635.99	636.06
B8	74+13.99	-18.13	635.96	636.06
C8	74+24.08	-18.13	635.93	636.04
D8	74+34.16	-18.13	635.90	636.02
E8	74+44.25	-18.13	635.87	635.98
F8	74+54.34	-18.13	635.84	635.94
G8	74+64.43	-18.13	635.81	635.89
H8	74+74.52	-18.13	635.78	635.84
☉ Brg. Pier 22	74+84.89	-18.13	635.75	635.79
I8	74+94.98	-18.13	635.72	635.76
J8	75+05.07	-18.13	635.69	635.74
K8	75+15.16	-18.13	635.66	635.72
L8	75+25.24	-18.13	635.63	635.70
M8	75+35.33	-18.13	635.60	635.67
N8	75+45.42	-18.13	635.57	635.64
O8	75+55.51	-18.13	635.54	635.60
P8	75+65.60	-18.13	635.51	635.56
☉ Brg. Pier 23	75+78.56	-18.13	635.47	635.51
Q8	75+88.65	-18.13	635.44	635.48
R8	75+98.74	-18.13	635.41	635.47
S8	76+08.83	-18.13	635.38	635.44
T8	76+18.91	-18.13	635.35	635.42
U8	76+29.00	-18.13	635.32	635.39
V8	76+39.09	-18.13	635.29	635.35
W8	76+49.18	-18.13	635.25	635.31
X8	76+59.27	-18.13	635.22	635.27
Y8	76+69.36	-18.13	635.19	635.24
☉ Brg. Pier 24	76+73.86	-18.13	635.18	635.22
Z8	76+83.95	-18.13	635.15	635.21
AA8	76+94.04	-18.13	635.12	635.21
AB8	77+04.13	-18.13	635.09	635.20
AC8	77+14.21	-18.13	635.06	635.19
AD8	77+24.30	-18.13	635.03	635.17
AE8	77+34.39	-18.13	635.00	635.14
AF8	77+44.48	-18.13	634.97	635.09
AG8	77+54.57	-18.13	634.93	635.03
AH8	77+64.66	-18.13	634.90	634.97
☉ S. Brg. Pier 25	77+69.83	-18.13	634.89	634.92
☉ Pier 25 & ☉ Exp. Jt.	77+71.08	-18.13	634.88	634.92

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☉ Pier 21 & ☉ Exp. Jt.	73+92.56	-10.88	635.70	635.73
☉ N. Brg. Pier 21	73+93.81	-10.88	635.71	635.73
A8	74+03.86	-10.88	635.69	635.74
B8	74+13.92	-10.88	635.66	635.74
C8	74+23.97	-10.88	635.63	635.72
D8	74+34.02	-10.88	635.60	635.70
E8	74+44.08	-10.88	635.57	635.66
F8	74+54.13	-10.88	635.54	635.62
G8	74+64.18	-10.88	635.51	635.57
H8	74+74.24	-10.88	635.48	635.52
☉ Brg. Pier 22	74+84.89	-10.88	635.44	635.47
I8	74+94.94	-10.88	635.41	635.44
J8	75+05.00	-10.88	635.38	635.42
K8	75+15.05	-10.88	635.35	635.40
L8	75+25.10	-10.88	635.32	635.38
M8	75+35.16	-10.88	635.29	635.35
N8	75+45.21	-10.88	635.26	635.32
O8	75+55.26	-10.88	635.23	635.28
P8	75+65.32	-10.88	635.20	635.24
☉ Brg. Pier 23	75+78.56	-10.88	635.16	635.19
Q8	75+88.61	-10.88	635.13	635.17
R8	75+98.67	-10.88	635.10	635.15
S8	76+08.72	-10.88	635.07	635.13
T8	76+18.77	-10.88	635.04	635.10
U8	76+28.83	-10.88	635.01	635.07
V8	76+38.88	-10.88	634.98	635.03
W8	76+48.93	-10.88	634.95	634.99
X8	76+58.99	-10.88	634.92	634.95
Y8	76+69.04	-10.88	634.89	634.92
☉ Brg. Pier 24	76+73.86	-10.88	634.88	634.91
Z8	76+83.91	-10.88	634.85	634.89
AA8	76+93.97	-10.88	634.82	634.89
AB8	77+04.02	-10.88	634.79	634.88
AC8	77+14.07	-10.88	634.76	634.86
AD8	77+24.13	-10.88	634.73	634.85
AE8	77+34.18	-10.88	634.69	634.81
AF8	77+44.23	-10.88	634.66	634.77
AG8	77+54.29	-10.88	634.63	634.71
AH8	77+64.34	-10.88	634.60	634.65
☉ S. Brg. Pier 25	77+69.83	-10.88	634.58	634.61
☉ Pier 25 & ☉ Exp. Jt.	77+71.08	-10.88	634.58	634.60

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☉ Pier 21 & ☉ Exp. Jt.	73+92.56	-3.63	635.41	635.43
☉ N. Brg. Pier 21	73+93.81	-3.63	635.41	635.43
A8	74+03.83	-3.63	635.38	635.43
B8	74+13.85	-3.63	635.35	635.42
C8	74+23.86	-3.63	635.32	635.41
D8	74+33.88	-3.63	635.29	635.38
E8	74+43.90	-3.63	635.26	635.35
F8	74+53.92	-3.63	635.23	635.30
G8	74+63.93	-3.63	635.20	635.26
H8	74+73.95	-3.63	635.17	635.21
☉ Brg. Pier 22	74+84.89	-3.63	635.14	635.16
I8	74+94.91	-3.63	635.11	635.13
J8	75+04.93	-3.63	635.08	635.11
K8	75+14.94	-3.63	635.05	635.09
L8	75+24.96	-3.63	635.02	635.06
M8	75+34.98	-3.63	634.99	635.04
N8	75+45.00	-3.63	634.96	635.00
O8	75+55.01	-3.63	634.93	634.97
P8	75+65.03	-3.63	634.90	634.93
☉ Brg. Pier 23	75+78.56	-3.63	634.86	634.88
Q8	75+88.58	-3.63	634.83	634.85
R8	75+98.60	-3.63	634.80	634.83
S8	76+08.61	-3.63	634.77	634.81
T8	76+18.63	-3.63	634.74	634.79
U8	76+28.65	-3.63	634.71	634.75
V8	76+38.67	-3.63	634.68	634.72
W8	76+48.68	-3.63	634.65	634.68
X8	76+58.70	-3.63	634.62	634.64
Y8	76+68.72	-3.63	634.59	634.60
☉ Brg. Pier 24	76+73.86	-3.63	634.57	634.59
Z8	76+83.88	-3.63	634.54	634.58
AA8	76+93.90	-3.63	634.51	634.57
AB8	77+03.91	-3.63	634.48	634.56
AC8	77+13.93	-3.63	634.45	634.55
AD8	77+23.95	-3.63	634.42	634.53
AE8	77+33.97	-3.63	634.39	634.50
AF8	77+43.98	-3.63	634.36	634.46
AG8	77+54.00	-3.63	634.33	634.40
AH8	77+64.02	-3.63	634.30	634.34
☉ S. Brg. Pier 25	77+69.83	-3.63	634.28	634.30
☉ Pier 25 & ☉ Exp. Jt.	77+71.08	-3.63	634.27	634.29

MODEL: Default  
FILE NAME: p:\civiltch-pw-bentley.com\civiltch-pw\Documents\Projects\3393\CADD Sheets\Structures\Structure SN 016-2467\0162467-62H49-022-DECKELEV17.dgn



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 17 (UNIT 8)  
STRUCTURE NO. 016-2467**

SHEET SB-22 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	209
ILLINOIS			CONTRACT NO. 62H49	

PGL AND CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	0.00	635.26	635.28
☐ N. Brg. Pier 21	73+93.81	0.00	635.26	635.28
A8	74+03.81	0.00	635.23	635.28
B8	74+13.81	0.00	635.20	635.27
C8	74+23.81	0.00	635.17	635.26
D8	74+33.81	0.00	635.14	635.23
E8	74+43.81	0.00	635.11	635.19
F8	74+53.81	0.00	635.08	635.15
G8	74+63.81	0.00	635.05	635.10
H8	74+73.81	0.00	635.02	635.05
☐ Brg. Pier 22	74+84.89	0.00	634.99	635.00
I8	74+94.89	0.00	634.96	634.97
J8	75+04.89	0.00	634.93	634.95
K8	75+14.89	0.00	634.90	634.93
L8	75+24.89	0.00	634.87	634.91
M8	75+34.89	0.00	634.84	634.88
N8	75+44.89	0.00	634.81	634.85
O8	75+54.89	0.00	634.78	634.81
P8	75+64.89	0.00	634.75	634.77
☐ Brg. Pier 23	75+78.56	0.00	634.71	634.72
Q8	75+88.56	0.00	634.68	634.70
R8	75+98.56	0.00	634.65	634.68
S8	76+08.56	0.00	634.62	634.66
T8	76+18.56	0.00	634.59	634.63
U8	73+48.89	0.00	635.39	635.44
V8	73+48.89	0.00	635.39	635.43
W8	73+51.69	0.00	635.39	635.41
X8	73+54.50	0.00	635.38	635.40
Y8	73+57.30	0.00	635.37	635.39
☐ Brg. Pier 24	76+73.86	0.00	634.42	634.44
Z8	76+83.86	0.00	634.39	634.42
AA8	76+93.86	0.00	634.36	634.42
AB8	77+03.86	0.00	634.33	634.41
AC8	77+13.86	0.00	634.30	634.40
AD8	77+23.86	0.00	634.27	634.38
AE8	77+33.86	0.00	634.24	634.35
AF8	77+43.86	0.00	634.21	634.30
AG8	77+53.86	0.00	634.18	634.25
AH8	77+63.86	0.00	634.14	634.18
☐ S. Brg. Pier 25	77+69.83	0.00	634.12	634.14
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	0.00	634.12	634.14

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	3.63	635.12	635.14
☐ N. Brg. Pier 21	73+93.81	3.63	635.11	635.13
A8	74+03.79	3.63	635.08	635.13
B8	74+13.77	3.63	635.05	635.12
C8	74+23.76	3.63	635.02	635.10
D8	74+33.74	3.63	634.99	635.08
E8	74+43.72	3.63	634.96	635.04
F8	74+53.70	3.63	634.93	635.00
G8	74+63.69	3.63	634.90	634.95
H8	74+73.67	3.63	634.87	634.90
☐ Brg. Pier 22	74+84.89	3.63	634.83	634.85
I8	74+94.87	3.63	634.80	634.82
J8	75+04.85	3.63	634.77	634.80
K8	75+14.84	3.63	634.74	634.78
L8	75+24.82	3.63	634.71	634.76
M8	75+34.80	3.63	634.68	634.73
N8	75+44.78	3.63	634.65	634.70
O8	75+54.77	3.63	634.62	634.66
P8	75+64.75	3.63	634.59	634.62
☐ Brg. Pier 23	75+78.56	3.63	634.55	634.57
Q8	75+88.54	3.63	634.52	634.55
R8	75+98.52	3.63	634.49	634.53
S8	76+08.51	3.63	634.46	634.51
T8	76+18.49	3.63	634.43	634.48
U8	76+28.47	3.63	634.40	634.45
V8	76+38.45	3.63	634.37	634.41
W8	76+48.44	3.63	634.34	634.37
X8	76+58.42	3.63	634.31	634.33
Y8	76+68.40	3.63	634.28	634.30
☐ Brg. Pier 24	76+73.86	3.63	634.27	634.29
Z8	76+83.84	3.63	634.24	634.27
AA8	76+93.82	3.63	634.21	634.27
AB8	77+03.81	3.63	634.18	634.26
AC8	77+13.79	3.63	634.15	634.24
AD8	77+23.77	3.63	634.12	634.23
AE8	77+33.75	3.63	634.09	634.19
AF8	77+43.74	3.63	634.06	634.15
AG8	77+53.72	3.63	634.02	634.10
AH8	77+63.70	3.63	633.99	634.03
☐ S. Brg. Pier 25	77+69.83	3.63	633.97	633.99
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	3.63	633.97	633.99

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 21 & ☐ Exp. Jt.	73+92.56	10.88	634.82	634.85
☐ N. Brg. Pier 21	73+93.81	10.88	634.81	634.84
A8	74+03.76	10.88	634.77	634.83
B8	74+13.70	10.88	634.74	634.82
C8	74+23.65	10.88	634.71	634.81
D8	74+33.60	10.88	634.68	634.78
E8	74+43.54	10.88	634.65	634.75
F8	74+53.49	10.88	634.62	634.70
G8	74+63.44	10.88	634.59	634.65
H8	74+73.38	10.88	634.56	634.61
☐ Brg. Pier 22	74+84.89	10.88	634.53	634.56
I8	74+94.84	10.88	634.50	634.53
J8	75+04.78	10.88	634.47	634.51
K8	75+14.73	10.88	634.44	634.49
L8	75+24.68	10.88	634.41	634.46
M8	75+34.62	10.88	634.38	634.44
N8	75+44.57	10.88	634.35	634.41
O8	75+54.52	10.88	634.32	634.37
P8	75+64.46	10.88	634.29	634.33
☐ Brg. Pier 23	75+78.56	10.88	634.25	634.28
Q8	75+88.51	10.88	634.22	634.25
R8	75+98.45	10.88	634.19	634.23
S8	76+08.40	10.88	634.16	634.21
T8	76+18.35	10.88	634.13	634.19
U8	76+28.29	10.88	634.10	634.16
V8	76+38.24	10.88	634.07	634.12
W8	76+48.19	10.88	634.04	634.08
X8	76+58.13	10.88	634.01	634.04
Y8	76+68.08	10.88	633.98	634.01
☐ Brg. Pier 24	76+73.86	10.88	633.96	633.99
Z8	76+83.81	10.88	633.93	633.98
AA8	76+93.75	10.88	633.90	633.97
AB8	77+03.70	10.88	633.87	633.96
AC8	77+13.65	10.88	633.84	633.95
AD8	77+23.59	10.88	633.81	633.93
AE8	77+33.54	10.88	633.78	633.90
AF8	77+43.49	10.88	633.75	633.85
AG8	77+53.43	10.88	633.72	633.80
AH8	77+63.38	10.88	633.69	633.73
☐ S. Brg. Pier 25	77+69.83	10.88	633.67	633.69
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	10.88	633.66	633.69

MODEL: Default  
FILE NAME: p:\civiltch-pw-bentley.com\Documents\Projects\3393\CADD\_Sheets\Structures\Structure\_S1\_016-2467\0162467-62H49-023-DECKELEV18.dgn



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS 18 (UNIT 8)  
STRUCTURE NO. 016-2467

SHEET SB-23 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	210
ILLINOIS			CONTRACT NO. 62H49	

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☉ Pier 21 & ☉ Exp. Jt.	73+92.56	18.13	634.53	634.56
☉ N. Brg. Pier 21	73+93.81	18.13	634.51	634.55
A8	74+03.72	18.13	634.47	634.53
B8	74+13.63	18.13	634.44	634.53
C8	74+23.54	18.13	634.41	634.51
D8	74+33.46	18.13	634.38	634.49
E8	74+43.37	18.13	634.35	634.45
F8	74+53.28	18.13	634.32	634.41
G8	74+63.19	18.13	634.29	634.36
H8	74+73.10	18.13	634.26	634.32
☉ Brg. Pier 22	74+84.89	18.13	634.23	634.27
I8	74+94.80	18.13	634.20	634.24
J8	75+04.71	18.13	634.17	634.22
K8	75+14.62	18.13	634.14	634.20
L8	75+24.54	18.13	634.11	634.18
M8	75+34.45	18.13	634.08	634.15
N8	75+44.36	18.13	634.05	634.12
O8	75+54.27	18.13	634.02	634.08
P8	75+64.18	18.13	633.99	634.04
☉ Brg. Pier 23	75+78.56	18.13	633.94	633.99
Q8	75+88.47	18.13	633.91	633.96
R8	75+98.38	18.13	633.88	633.94
S8	76+08.29	18.13	633.86	633.92
T8	76+18.21	18.13	633.83	633.90
U8	76+28.12	18.13	633.80	633.87
V8	76+38.03	18.13	633.77	633.83
W8	76+47.94	18.13	633.74	633.79
X8	76+57.85	18.13	633.71	633.75
Y8	76+67.76	18.13	633.68	633.72
☉ Brg. Pier 24	76+73.86	18.13	633.66	633.70
Z8	76+83.77	18.13	633.63	633.69
AA8	76+93.68	18.13	633.60	633.68
AB8	77+03.59	18.13	633.57	633.67
AC8	77+13.51	18.13	633.54	633.65
AD8	77+23.42	18.13	633.51	633.63
AE8	77+33.33	18.13	633.48	633.60
AF8	77+43.24	18.13	633.45	633.56
AG8	77+53.15	18.13	633.42	633.50
AH8	77+63.06	18.13	633.38	633.44
☉ S. Brg. Pier 25	77+69.83	18.13	633.36	633.40
☉ Pier 25 & ☉ Exp. Jt.	77+71.08	18.13	633.36	633.39

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USER NAME	= mc
PLOT SCALE	= N/A
PLOT DATE	= 10/21/2021

DESIGNED	- E. VAYSMAN
CHECKED	- G. HATLESTAD
DRAWN	- E. VAYSMAN
DATE	- 06/18/2021

REVISED	-
REVISED	-
REVISED	-
REVISED	-

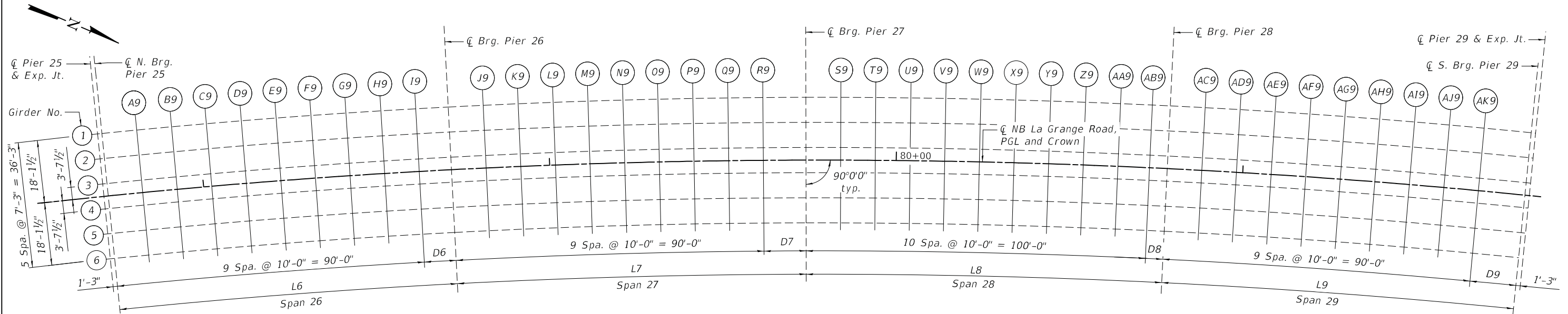
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 19 (UNIT 8)  
STRUCTURE NO. 016-2467**

SHEET SB-24 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	211
ILLINOIS			CONTRACT NO. 62H49	

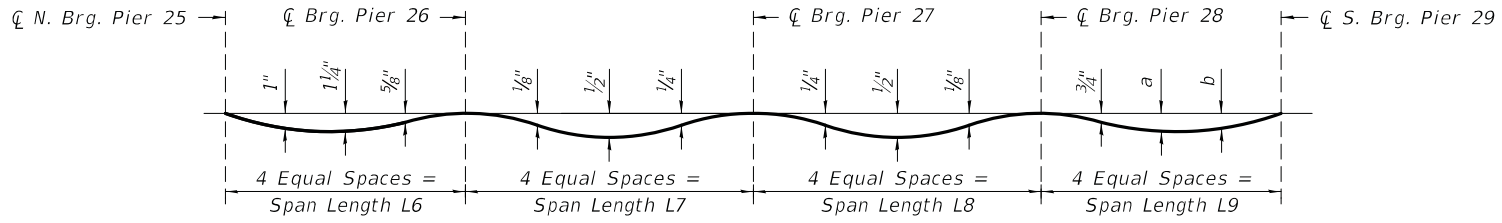




PLAN - UNIT 9

DIMENSION TABLE

Girder	L6	D6	L7	D7	L8	D8	L9	D9
1	100'-2 <sup>3</sup> / <sub>4</sub> "	10'-2 <sup>3</sup> / <sub>4</sub> "	103'-2 <sup>3</sup> / <sub>4</sub> "	13'-2 <sup>3</sup> / <sub>4</sub> "	105'-1 <sup>7</sup> / <sub>8</sub> "	5'-1 <sup>7</sup> / <sub>8</sub> "	104'-4 <sup>3</sup> / <sub>4</sub> "	14'-4 <sup>3</sup> / <sub>4</sub> "
2	99'-10 <sup>1</sup> / <sub>2</sub> "	9'-10 <sup>1</sup> / <sub>2</sub> "	102'-10 <sup>3</sup> / <sub>8</sub> "	12'-10 <sup>3</sup> / <sub>8</sub> "	104'-9 <sup>1</sup> / <sub>2</sub> "	4'-9 <sup>1</sup> / <sub>2</sub> "	104'-0 <sup>1</sup> / <sub>4</sub> "	14'-0 <sup>1</sup> / <sub>4</sub> "
3	99'-6 <sup>1</sup> / <sub>4</sub> "	9'-6 <sup>1</sup> / <sub>4</sub> "	102'-6"	12'-6"	104'-5"	4'-5"	103'-7 <sup>7</sup> / <sub>8</sub> "	13'-7 <sup>7</sup> / <sub>8</sub> "
CL & PGL	99'-4 <sup>1</sup> / <sub>8</sub> "	9'-4 <sup>1</sup> / <sub>8</sub> "	102'-3 <sup>3</sup> / <sub>8</sub> "	12'-3 <sup>3</sup> / <sub>8</sub> "	104'-2 <sup>3</sup> / <sub>4</sub> "	4'-2 <sup>3</sup> / <sub>4</sub> "	103'-5 <sup>1</sup> / <sub>2</sub> "	13'-5 <sup>1</sup> / <sub>2</sub> "
4	99'-1 <sup>1</sup> / <sub>8</sub> "	9'-1 <sup>1</sup> / <sub>8</sub> "	102'-1 <sup>5</sup> / <sub>8</sub> "	12'-1 <sup>5</sup> / <sub>8</sub> "	104'-0 <sup>5</sup> / <sub>8</sub> "	4'-0 <sup>5</sup> / <sub>8</sub> "	103'-3 <sup>3</sup> / <sub>8</sub> "	13'-3 <sup>3</sup> / <sub>8</sub> "
5	98'-9 <sup>5</sup> / <sub>8</sub> "	8'-9 <sup>5</sup> / <sub>8</sub> "	101'-9 <sup>1</sup> / <sub>4</sub> "	11'-9 <sup>1</sup> / <sub>4</sub> "	103'-8 <sup>1</sup> / <sub>8</sub> "	3'-8 <sup>1</sup> / <sub>8</sub> "	102'-10 <sup>7</sup> / <sub>8</sub> "	12'-10 <sup>7</sup> / <sub>8</sub> "
6	98'-5 <sup>3</sup> / <sub>8</sub> "	8'-5 <sup>3</sup> / <sub>8</sub> "	101'-5"	11'-5"	103'-3 <sup>3</sup> / <sub>4</sub> "	3'-3 <sup>3</sup> / <sub>4</sub> "	102'-6 <sup>1</sup> / <sub>2</sub> "	12'-6 <sup>1</sup> / <sub>2</sub> "



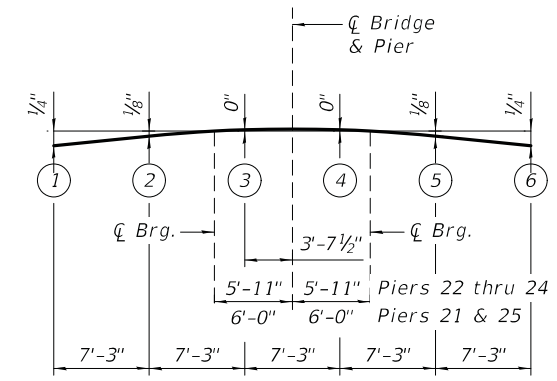
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only. Use these deflections in combination with cross girder deflections.)

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 and grinding as shown on sheets SB-26 thru SB-28.

DEFLECTION TABLE

Girder	a	b
1	1 <sup>3</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>8</sub> "
2	1 <sup>3</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>8</sub> "
3	1 <sup>1</sup> / <sub>4</sub> "	1"
4	1 <sup>1</sup> / <sub>4</sub> "	1"
5	1 <sup>1</sup> / <sub>4</sub> "	1"
6	1 <sup>1</sup> / <sub>8</sub> "	1"



CROSS GIRDER DEAD LOAD DEFLECTION DIAGRAM

OVER PIERS 25 THRU 29

(Includes weight of concrete only)

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS 20 (UNIT 9)  
STRUCTURE NO. 016-2467

SHEET SB-25 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	212
CONTRACT NO. 62H49			ILLINOIS	

**GIRDER 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	-18.13	634.88	634.92
☐ N. Brg. Pier 25	77+72.33	-18.13	634.88	634.91
A9	77+82.42	-18.13	634.84	634.92
B9	77+92.51	-18.13	634.81	634.92
C9	78+02.60	-18.13	634.77	634.91
D9	78+12.68	-18.13	634.74	634.88
E9	78+22.77	-18.13	634.70	634.85
F9	78+32.86	-18.13	634.67	634.80
G9	78+42.95	-18.13	634.63	634.74
H9	78+53.04	-18.13	634.59	634.68
I9	78+63.13	-18.13	634.56	634.62
☐ Brg. Pier 26	78+71.67	-18.13	634.52	634.57
J9	78+81.76	-18.13	634.49	634.53
K9	78+91.85	-18.13	634.45	634.50
L9	79+01.94	-18.13	634.41	634.47
M9	79+12.02	-18.13	634.37	634.44
N9	79+22.11	-18.13	634.33	634.41
O9	79+32.20	-18.13	634.28	634.36
P9	79+42.29	-18.13	634.24	634.32
Q9	79+52.38	-18.13	634.20	634.26
R9	79+62.47	-18.13	634.16	634.21
☐ Brg. Pier 27	79+73.99	-18.13	634.11	634.15
S9	79+84.08	-18.13	634.06	634.11
T9	79+94.17	-18.13	634.02	634.01
U9	80+04.26	-18.13	633.97	634.05
V9	80+14.34	-18.13	633.93	634.01
W9	80+24.43	-18.13	633.88	633.96
X9	80+34.52	-18.13	633.84	633.91
Y9	80+44.61	-18.13	633.79	633.85
Z9	80+54.70	-18.13	633.74	633.79
AA9	80+64.79	-18.13	633.69	633.74
AB9	80+74.88	-18.13	633.64	633.69
☐ Brg. Pier 28	80+78.22	-18.13	633.63	633.67
AC9	80+88.31	-18.13	633.58	633.62
AD9	80+98.40	-18.13	633.53	633.59
AE9	81+08.49	-18.13	633.48	633.56
AF9	81+18.57	-18.13	633.43	633.54
AG9	81+28.66	-18.13	633.38	633.51
AH9	81+38.75	-18.13	633.32	633.48
AI9	81+48.84	-18.13	633.27	633.43
AJ9	81+58.93	-18.13	633.22	633.37
AK9	81+69.02	-18.13	633.17	633.30
☐ S. Brg. Pier 29	81+81.68	-18.13	633.11	633.21
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	-18.13	633.10	633.14

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	-10.88	634.58	634.60
☐ N. Brg. Pier 25	77+72.33	-10.88	634.57	634.60
A9	77+82.38	-10.88	634.54	634.60
B9	77+92.44	-10.88	634.51	634.60
C9	78+02.49	-10.88	634.47	634.59
D9	78+12.54	-10.88	634.44	634.56
E9	78+22.60	-10.88	634.40	634.53
F9	78+32.65	-10.88	634.36	634.48
G9	78+42.70	-10.88	634.33	634.42
H9	78+52.76	-10.88	634.29	634.36
I9	78+62.81	-10.88	634.25	634.30
☐ Brg. Pier 26	78+71.67	-10.88	634.22	634.25
J9	78+81.72	-10.88	634.18	634.21
K9	78+91.78	-10.88	634.14	634.18
L9	79+01.83	-10.88	634.10	634.15
M9	79+11.88	-10.88	634.06	634.12
N9	79+21.94	-10.88	634.02	634.09
O9	79+31.99	-10.88	633.98	634.05
P9	79+42.04	-10.88	633.94	634.00
Q9	79+52.10	-10.88	633.90	633.95
R9	79+62.15	-10.88	633.85	633.89
☐ Brg. Pier 27	79+73.99	-10.88	633.80	633.83
S9	79+84.04	-10.88	633.76	633.79
T9	79+94.10	-10.88	633.71	633.76
U9	80+04.15	-10.88	633.67	633.73
V9	80+14.20	-10.88	633.62	633.69
W9	80+24.26	-10.88	633.58	633.64
X9	80+34.31	-10.88	633.53	633.59
Y9	80+44.36	-10.88	633.49	633.53
Z9	80+54.42	-10.88	633.44	633.47
AA9	80+64.47	-10.88	633.39	633.41
AB9	80+74.52	-10.88	633.34	633.36
☐ Brg. Pier 28	80+78.22	-10.88	633.32	633.34
AC9	80+88.27	-10.88	633.27	633.30
AD9	80+98.33	-10.88	633.22	633.27
AE9	81+08.38	-10.88	633.17	633.24
AF9	81+18.43	-10.88	633.12	633.22
AG9	81+28.49	-10.88	633.07	633.19
AH9	81+38.54	-10.88	633.02	633.16
AI9	81+48.59	-10.88	632.97	633.11
AJ9	81+58.65	-10.88	632.92	633.05
AK9	81+68.70	-10.88	632.87	632.98
☐ S. Brg. Pier 29	81+81.68	-10.88	632.80	632.89
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	-10.88	632.80	632.82

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	-3.63	634.27	634.29
☐ N. Brg. Pier 25	77+72.33	-3.63	634.27	634.29
A9	77+82.35	-3.63	634.23	634.29
B9	77+92.37	-3.63	634.20	634.29
C9	78+02.38	-3.63	634.17	634.27
D9	78+12.40	-3.63	634.13	634.25
E9	78+22.42	-3.63	634.10	634.21
F9	78+32.44	-3.63	634.06	634.16
G9	78+42.45	-3.63	634.02	634.11
H9	78+52.47	-3.63	633.99	634.04
I9	78+62.49	-3.63	633.95	633.98
☐ Brg. Pier 26	78+71.67	-3.63	633.92	633.93
J9	78+81.69	-3.63	633.88	633.89
K9	78+91.71	-3.63	633.84	633.86
L9	79+01.72	-3.63	633.80	633.83
M9	79+11.74	-3.63	633.76	633.81
N9	79+21.76	-3.63	633.72	633.77
O9	79+31.78	-3.63	633.68	633.73
P9	79+41.79	-3.63	633.64	633.68
Q9	79+51.81	-3.63	633.59	633.63
R9	79+61.83	-3.63	633.55	633.58
☐ Brg. Pier 27	79+73.99	-3.63	633.50	633.52
S9	79+84.01	-3.63	633.45	633.48
T9	79+94.03	-3.63	633.41	633.45
U9	80+04.04	-3.63	633.37	633.41
V9	80+14.06	-3.63	633.32	633.37
W9	80+24.08	-3.63	633.27	633.33
X9	80+34.10	-3.63	633.23	633.28
Y9	80+44.11	-3.63	633.18	633.22
Z9	80+54.13	-3.63	633.13	633.16
AA9	80+64.15	-3.63	633.09	633.10
AB9	80+74.17	-3.63	633.04	633.06
☐ Brg. Pier 28	80+78.22	-3.63	633.02	633.04
AC9	80+88.24	-3.63	632.97	632.99
AD9	80+98.26	-3.63	632.92	632.96
AE9	81+08.27	-3.63	632.87	632.93
AF9	81+18.29	-3.63	632.82	632.91
AG9	81+28.31	-3.63	632.77	632.88
AH9	81+38.33	-3.63	632.72	632.84
AI9	81+48.34	-3.63	632.67	632.80
AJ9	81+58.36	-3.63	632.62	632.74
AK9	81+68.38	-3.63	632.57	632.67
☐ S. Brg. Pier 29	81+81.68	-3.63	632.50	632.57
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	-3.63	632.49	632.51

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 21 (UNIT 9)  
 STRUCTURE NO. 016-2467**

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 213
SHEET SB-26 OF SB-104 SHEETS			CONTRACT NO. 62H49	
ILLINOIS				

PGL AND CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	0.00	634.12	634.14
☐ N. Brg. Pier 25	77+72.33	0.00	634.12	634.13
A9	77+82.33	0.00	634.08	634.14
B9	77+92.33	0.00	634.05	634.13
C9	78+02.33	0.00	634.01	634.12
D9	78+12.33	0.00	633.98	634.10
E9	78+22.33	0.00	633.94	634.06
F9	78+32.33	0.00	633.91	634.01
G9	78+42.33	0.00	633.87	633.95
H9	78+52.33	0.00	633.84	633.89
I9	78+62.33	0.00	633.80	633.83
☐ Brg. Pier 26	78+71.67	0.00	633.76	633.78
J9	78+81.67	0.00	633.72	633.74
K9	78+91.67	0.00	633.69	633.71
L9	79+01.67	0.00	633.65	633.68
M9	79+11.67	0.00	633.61	633.65
N9	79+21.67	0.00	633.57	633.62
O9	79+31.67	0.00	633.53	633.58
P9	79+41.67	0.00	633.48	633.53
Q9	79+51.67	0.00	633.44	633.48
R9	79+61.67	0.00	633.40	633.43
☐ Brg. Pier 27	79+73.99	0.00	633.35	633.36
S9	79+83.99	0.00	633.30	633.33
T9	79+93.99	0.00	633.26	633.30
U9	80+03.99	0.00	633.21	633.26
V9	80+13.99	0.00	633.17	633.22
W9	80+23.99	0.00	633.12	633.17
X9	80+33.99	0.00	633.08	633.12
Y9	80+43.99	0.00	633.03	633.06
Z9	80+53.99	0.00	632.98	633.00
AA9	80+63.99	0.00	632.94	632.95
AB9	80+73.99	0.00	632.89	632.91
☐ Brg. Pier 28	80+78.22	0.00	632.87	632.89
AC9	80+88.22	0.00	632.82	632.84
AD9	80+98.22	0.00	632.77	632.80
AE9	81+08.22	0.00	632.72	632.77
AF9	81+18.22	0.00	632.67	632.75
AG9	81+28.22	0.00	632.62	632.72
AH9	81+38.22	0.00	632.57	632.69
AI9	81+48.22	0.00	632.52	632.64
AJ9	81+58.22	0.00	632.47	632.59
AK9	81+68.22	0.00	632.41	632.52
☐ S. Brg. Pier 29	81+81.68	0.00	632.35	632.43
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	0.00	632.34	632.36

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	3.63	633.97	633.99
☐ N. Brg. Pier 25	77+72.33	3.63	633.96	633.98
A9	77+82.31	3.63	633.93	633.99
B9	77+92.29	3.63	633.90	633.98
C9	78+02.28	3.63	633.86	633.97
D9	78+12.26	3.63	633.83	633.94
E9	78+22.24	3.63	633.79	633.91
F9	78+32.22	3.63	633.76	633.86
G9	78+42.21	3.63	633.72	633.80
H9	78+52.19	3.63	633.68	633.74
I9	78+62.17	3.63	633.65	633.68
☐ Brg. Pier 26	78+71.67	3.63	633.61	633.63
J9	78+81.65	3.63	633.57	633.59
K9	78+91.63	3.63	633.53	633.56
L9	79+01.62	3.63	633.49	633.53
M9	79+11.60	3.63	633.45	633.50
N9	79+21.58	3.63	633.41	633.47
O9	79+31.56	3.63	633.37	633.43
P9	79+41.55	3.63	633.33	633.38
Q9	79+51.53	3.63	633.29	633.33
R9	79+61.51	3.63	633.25	633.27
☐ Brg. Pier 27	79+73.99	3.63	633.19	633.21
S9	79+83.97	3.63	633.15	633.18
T9	79+93.95	3.63	633.11	633.15
U9	80+03.94	3.63	633.06	633.11
V9	80+13.92	3.63	633.02	633.07
W9	80+23.90	3.63	632.97	633.02
X9	80+33.88	3.63	632.93	632.97
Y9	80+43.87	3.63	632.88	632.91
Z9	80+53.85	3.63	632.83	632.85
AA9	80+63.83	3.63	632.78	632.80
AB9	80+73.81	3.63	632.74	632.76
☐ Brg. Pier 28	80+78.22	3.63	632.71	632.74
AC9	80+88.20	3.63	632.67	632.68
AD9	80+98.18	3.63	632.62	632.65
AE9	81+08.17	3.63	632.57	632.63
AF9	81+18.15	3.63	632.52	632.60
AG9	81+28.13	3.63	632.47	632.57
AH9	81+38.11	3.63	632.41	632.54
AI9	81+48.10	3.63	632.36	632.49
AJ9	81+58.08	3.63	632.31	632.43
AK9	81+68.06	3.63	632.26	632.36
☐ S. Brg. Pier 29	81+81.68	3.63	632.19	632.27
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	3.63	632.19	632.21

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	10.88	633.66	633.69
☐ N. Brg. Pier 25	77+72.33	10.88	633.66	633.68
A9	77+82.28	10.88	633.63	633.69
B9	77+92.22	10.88	633.59	633.68
C9	78+02.17	10.88	633.56	633.67
D9	78+12.12	10.88	633.52	633.65
E9	78+22.06	10.88	633.49	633.61
F9	78+32.01	10.88	633.45	633.56
G9	78+41.96	10.88	633.42	633.50
H9	78+51.90	10.88	633.38	633.44
I9	78+61.85	10.88	633.34	633.38
☐ Brg. Pier 26	78+71.67	10.88	633.31	633.34
J9	78+81.62	10.88	633.27	633.29
K9	78+91.56	10.88	633.23	633.26
L9	79+01.51	10.88	633.19	633.24
M9	79+11.46	10.88	633.15	633.21
N9	79+21.40	10.88	633.11	633.17
O9	79+31.35	10.88	633.07	633.13
P9	79+41.30	10.88	633.03	633.09
Q9	79+51.24	10.88	632.99	633.03
R9	79+61.19	10.88	632.94	632.98
☐ Brg. Pier 27	79+73.99	10.88	632.89	632.92
S9	79+83.94	10.88	632.85	632.88
T9	79+93.88	10.88	632.80	632.85
U9	80+03.83	10.88	632.76	632.81
V9	80+13.78	10.88	632.71	632.77
W9	80+23.72	10.88	632.67	632.73
X9	80+33.67	10.88	632.62	632.68
Y9	80+43.62	10.88	632.58	632.62
Z9	80+53.56	10.88	632.53	632.56
AA9	80+63.51	10.88	632.48	632.51
AB9	80+73.46	10.88	632.43	632.46
☐ Brg. Pier 28	80+78.22	10.88	632.41	632.44
AC9	80+88.17	10.88	632.36	632.39
AD9	80+98.11	10.88	632.31	632.36
AE9	81+08.06	10.88	632.26	632.33
AF9	81+18.01	10.88	632.21	632.31
AG9	81+27.95	10.88	632.16	632.28
AH9	81+37.90	10.88	632.11	632.24
AI9	81+47.85	10.88	632.06	632.19
AJ9	81+57.79	10.88	632.01	632.14
AK9	81+67.74	10.88	631.96	632.06
☐ S. Brg. Pier 29	81+81.68	10.88	631.89	631.97
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	10.88	631.88	631.91

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 22 (UNIT 9)  
 STRUCTURE NO. 016-2467**

SHEET SB-27 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	214
ILLINOIS			CONTRACT NO. 62H49	



GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 25 & ☐ Exp. Jt.	77+71.08	18.13	633.36	633.40
☐ N. Brg. Pier 25	77+72.33	18.13	633.35	633.39
A9	77+82.24	18.13	633.32	633.39
B9	77+92.15	18.13	633.29	633.39
C9	78+02.06	18.13	633.25	633.38
D9	78+11.98	18.13	633.22	633.35
E9	78+21.89	18.13	633.18	633.31
F9	78+31.80	18.13	633.15	633.27
G9	78+41.71	18.13	633.11	633.21
H9	78+51.62	18.13	633.08	633.15
I9	78+61.53	18.13	633.04	633.10
☐ Brg. Pier 26	78+71.67	18.13	633.00	633.05
J9	78+81.58	18.13	632.96	633.01
K9	78+91.49	18.13	632.93	632.98
L9	79+01.40	18.13	632.89	632.95
M9	79+11.32	18.13	632.85	632.92
N9	79+21.23	18.13	632.81	632.88
O9	79+31.14	18.13	632.77	632.84
P9	79+41.05	18.13	632.73	632.80
Q9	79+50.96	18.13	632.68	632.74
R9	79+60.87	18.13	632.64	632.69
☐ Brg. Pier 27	79+73.99	18.13	632.59	632.63
S9	79+83.90	18.13	632.54	632.59
T9	79+93.81	18.13	632.50	632.56
U9	80+03.72	18.13	632.45	632.52
V9	80+13.64	18.13	632.41	632.48
W9	80+23.55	18.13	632.36	632.44
X9	80+33.46	18.13	632.32	632.39
Y9	80+43.37	18.13	632.27	632.33
Z9	80+53.28	18.13	632.23	632.28
AA9	80+63.19	18.13	632.18	632.22
AB9	80+73.10	18.13	632.13	632.17
☐ Brg. Pier 28	80+78.22	18.13	632.11	632.15
AC9	80+88.13	18.13	632.06	632.10
AD9	80+98.04	18.13	632.01	632.07
AE9	81+07.95	18.13	631.96	632.04
AF9	81+17.87	18.13	631.91	632.01
AG9	81+27.78	18.13	631.86	631.98
AH9	81+37.69	18.13	631.81	631.95
AI9	81+47.60	18.13	631.76	631.90
AJ9	81+57.51	18.13	631.71	631.84
AK9	81+67.42	18.13	631.66	631.77
☐ S. Brg. Pier 29	81+81.68	18.13	631.59	631.67
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	18.13	631.58	631.62

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USER NAME	= mc
PLOT SCALE	= N/A
PLOT DATE	= 10/21/2021

DESIGNED	- E. VAYSMAN
CHECKED	- G. HATLESTAD
DRAWN	- E. VAYSMAN
DATE	- 06/18/2021

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 23 (UNIT 9)  
STRUCTURE NO. 016-2467**

SHEET SB-28 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	215
ILLINOIS			CONTRACT NO. 62H49	

**GIRDER 1**

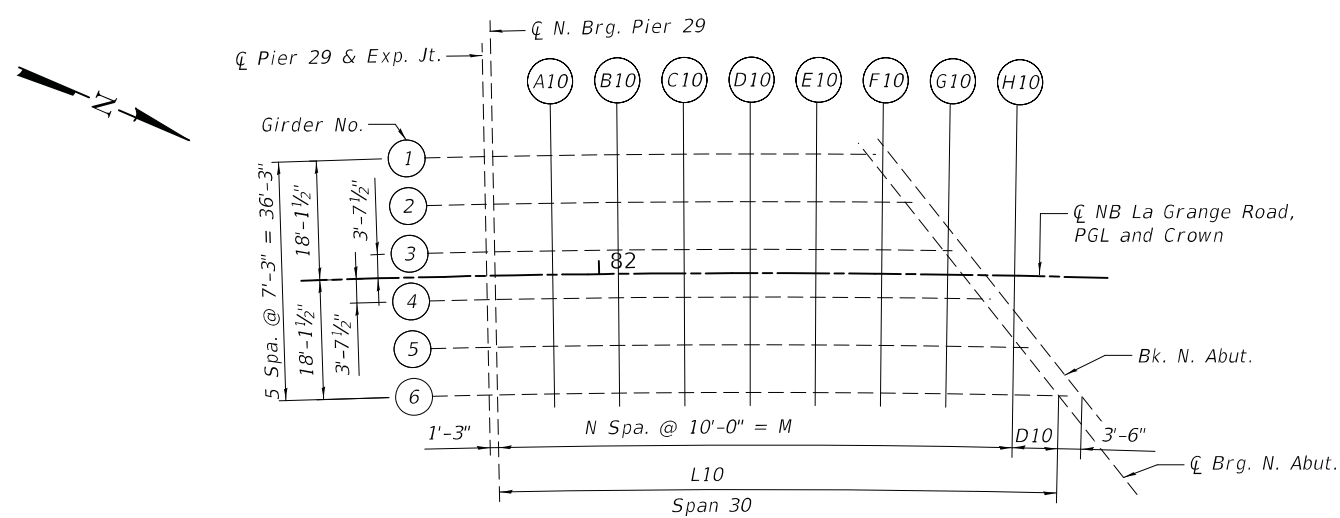
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	-18.13	633.10	633.14
☐ N. Brg. Pier 29	81+84.27	-18.13	633.09	633.13
A10	81+94.36	-18.13	633.04	633.09
B10	82+04.45	-18.13	632.99	633.05
C10	82+14.53	-18.13	632.94	633.00
D10	82+24.62	-18.13	632.89	632.94
E10	82+34.71	-18.13	632.84	632.88
☐ Brg. N. Abut.	82+40.44	-18.13	632.81	632.83
Bk. N. Abut.	82+44.03	-18.13	632.79	632.81

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	-10.88	632.80	632.82
☐ N. Brg. Pier 29	81+84.27	-10.88	632.79	632.82
A10	81+94.36	-10.88	632.74	632.79
B10	82+04.45	-10.88	632.69	632.75
C10	82+14.53	-10.88	632.64	632.71
D10	82+24.62	-10.88	632.59	632.65
E10	82+34.71	-10.88	632.54	632.59
☐ Brg. N. Abut.	82+46.40	-10.88	632.48	632.50
Bk. N. Abut.	82+49.99	-10.88	632.46	632.48

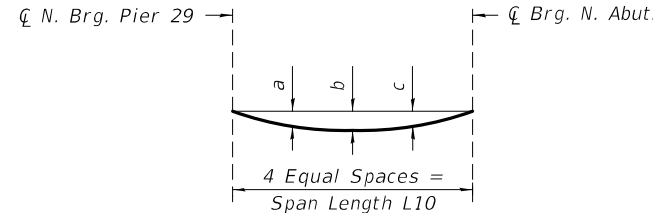
**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 29 & ☐ Exp. Jt.	81+82.93	-3.63	632.49	632.51
☐ N. Brg. Pier 29	81+84.27	-3.63	632.49	632.51
A10	81+94.36	-3.63	632.43	632.48
B10	82+04.45	-3.63	632.38	632.45
C10	82+14.53	-3.63	632.33	632.41
D10	82+24.62	-3.63	632.28	632.36
E10	82+34.71	-3.63	632.23	632.30
F10	82+44.80	-3.63	632.18	632.22
☐ Brg. N. Abut.	82+52.35	-3.63	632.14	632.16
Bk. N. Abut.	82+55.94	-3.63	632.12	632.14



**DIMENSION TABLE**

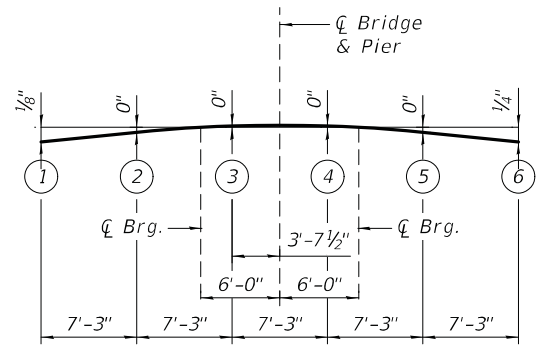
Girder	L10	N	M	D10
1	56'-10 <sup>7</sup> / <sub>8</sub> "	5	50'-0"	6'-10 <sup>7</sup> / <sub>8</sub> "
2	62'-6 <sup>3</sup> / <sub>4</sub> "	5	50'-0"	12'-6 <sup>3</sup> / <sub>4</sub> "
3	68'-2 <sup>5</sup> / <sub>8</sub> "	6	60'-0"	8'-2 <sup>5</sup> / <sub>8</sub> "
☐ & PGL	71'-0 <sup>3</sup> / <sub>4</sub> "	6	60'-0"	11'-0 <sup>3</sup> / <sub>4</sub> "
4	73'-10 <sup>7</sup> / <sub>8</sub> "	6	60'-0"	13'-10 <sup>7</sup> / <sub>8</sub> "
5	79'-7 <sup>1</sup> / <sub>8</sub> "	7	70'-0"	9'-7 <sup>1</sup> / <sub>8</sub> "
6	85'-3 <sup>5</sup> / <sub>8</sub> "	8	80'-0"	5'-3 <sup>5</sup> / <sub>8</sub> "



**DEAD LOAD DEFLECTION DIAGRAM**  
 (Includes weight of concrete only. Use these deflections in combination with cross girder deflections.)  
 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 and grinding as shown on this sheet and sheet SB-30.

**DEFLECTION TABLE**

Girder	a	b	c
1	1/4"	3/8"	1/4"
2	3/8"	5/8"	3/8"
3	1/2"	3/4"	1/2"
4	5/8"	7/8"	5/8"
5	3/4"	1 1/8"	3/4"
6	7/8"	1 1/8"	7/8"



**CROSS GIRDER DEAD LOAD DEFLECTION DIAGRAM OVER PIER 29**  
 (Includes weight of concrete only)

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS 24 (UNIT 10)  
 STRUCTURE NO. 016-2467**

SHEET SB-29 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	216
ILLINOIS			CONTRACT NO. 62H49	

PGL AND CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 29	81+82.93	0.00	632.34	632.36
☐ N. Brg. Pier 29	81+84.18	0.00	632.33	632.35
A10	81+94.18	0.00	632.28	632.33
B10	82+04.18	0.00	632.23	632.31
C10	82+14.18	0.00	632.18	632.27
D10	82+24.18	0.00	632.13	632.22
E10	82+34.18	0.00	632.08	632.16
F10	82+44.18	0.00	632.03	632.08
☐ Brg. N.Abut.	82+55.24	0.00	631.97	632.00
Bk. N. Abut.	82+58.74	0.00	631.96	631.98

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 29	81+82.93	3.63	632.19	632.21
☐ N. Brg. Pier 29	81+84.27	3.63	632.18	632.20
A10	81+94.36	3.63	632.13	632.18
B10	82+04.45	3.63	632.08	632.16
C10	82+14.53	3.63	632.03	632.12
D10	82+24.62	3.63	631.98	632.07
E10	82+34.71	3.63	631.93	632.01
F10	82+44.80	3.63	631.87	631.94
☐ Brg. N.Abut.	82+58.31	3.63	631.81	631.83
Bk. N. Abut.	82+61.89	3.63	631.79	631.81

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 29	81+82.93	10.88	631.88	631.91
☐ N. Brg. Pier 29	81+84.27	10.88	631.88	631.90
A10	81+94.36	10.88	631.83	631.89
B10	82+04.45	10.88	631.77	631.86
C10	82+14.53	10.88	631.72	631.83
D10	82+24.62	10.88	631.67	631.79
E10	82+34.71	10.88	631.62	631.73
F10	82+44.80	10.88	631.57	631.65
G10	82+54.89	10.88	631.52	631.57
☐ Brg. N.Abut.	82+64.26	10.88	631.47	631.49
Bk. N. Abut.	82+67.85	10.88	631.45	631.47

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
☐ Pier 29	81+82.93	18.13	631.58	631.62
☐ N. Brg. Pier 29	81+84.27	18.13	631.57	631.61
A10	81+94.36	18.13	631.52	631.59
B10	82+04.45	18.13	631.47	631.57
C10	82+14.53	18.13	631.42	631.54
D10	82+24.62	18.13	631.37	631.49
E10	82+34.71	18.13	631.32	631.44
F10	82+44.80	18.13	631.27	631.37
G10	82+54.89	18.13	631.21	631.29
H10	82+64.98	18.13	631.16	631.20
☐ Brg. N.Abut.	82+70.21	18.13	631.14	631.16
Bk. N. Abut.	82+73.80	18.13	631.12	631.14

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 PLOT SCALE = N/A  
 PLOT DATE = 10/21/2021

DESIGNED - E. VAYSMAN  
 CHECKED - G. HATLESTAD  
 DRAWN - E. VAYSMAN  
 DATE - 06/18/2021

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

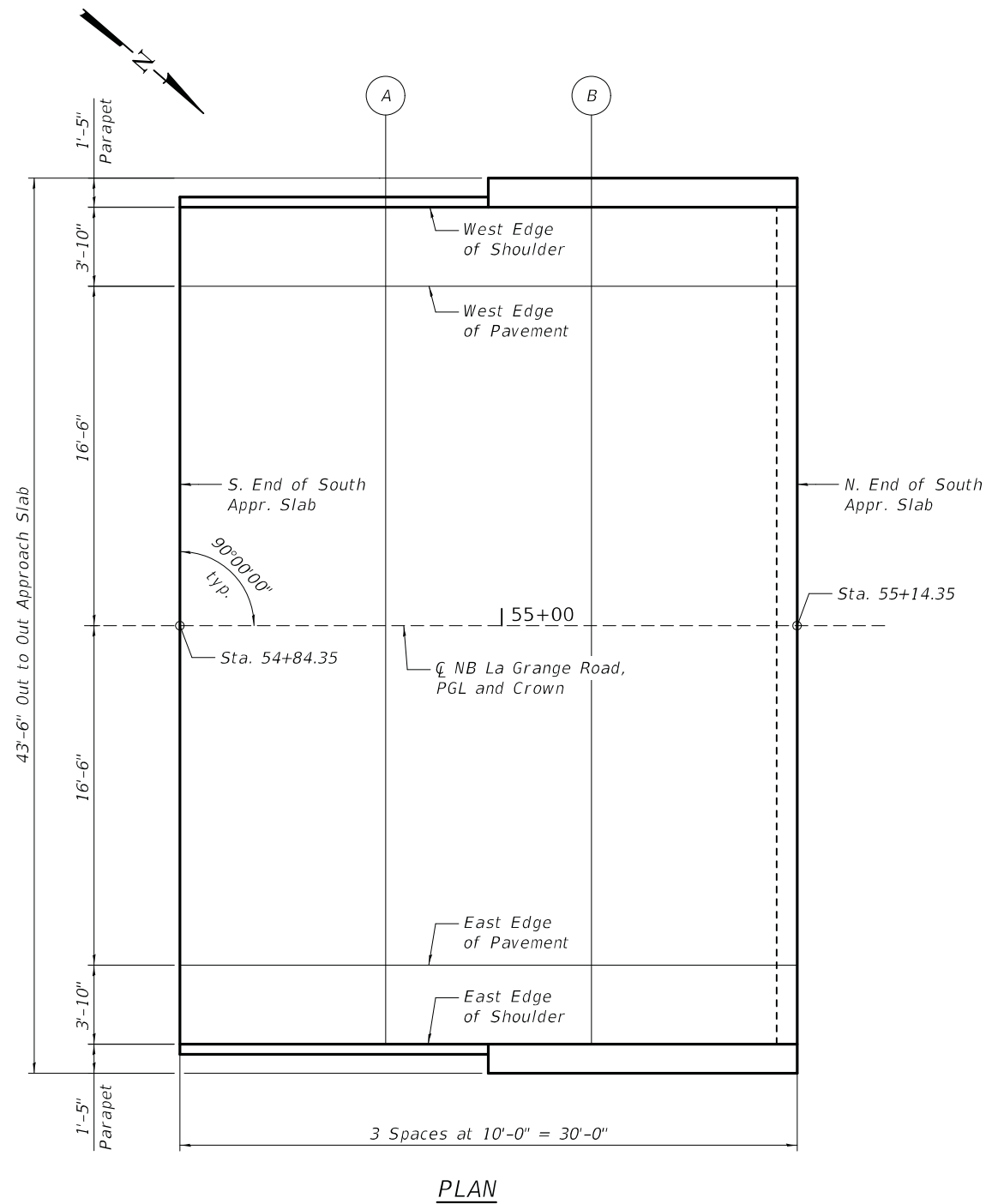
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS 25 (UNIT 10)  
 STRUCTURE NO. 016-2467

SHEET SB-30 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	217
ILLINOIS			CONTRACT NO. 62H49	

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PLAN

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	54+84.35	-20.33	612.39
A	54+94.35	-20.33	612.70
B	55+04.35	-20.33	613.02
N. End South Appr. Slab	55+14.35	-20.33	613.36

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	54+84.35	-16.50	612.47
A	54+94.35	-16.50	612.78
B	55+04.35	-16.50	613.10
N. End South Appr. Slab	55+14.35	-16.50	613.44

CL, PGL AND CROWN

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	54+84.35	0.00	612.72
A	54+94.35	0.00	613.02
B	55+04.35	0.00	613.35
N. End South Appr. Slab	55+14.35	0.00	613.69

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	54+84.35	16.50	612.47
A	54+94.35	16.50	612.78
B	55+04.35	16.50	613.10
N. End South Appr. Slab	55+14.35	16.50	613.44

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	54+84.35	20.33	612.39
A	54+94.35	20.33	612.70
B	55+04.35	20.33	613.02
N. End South Appr. Slab	55+14.35	20.33	613.36



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

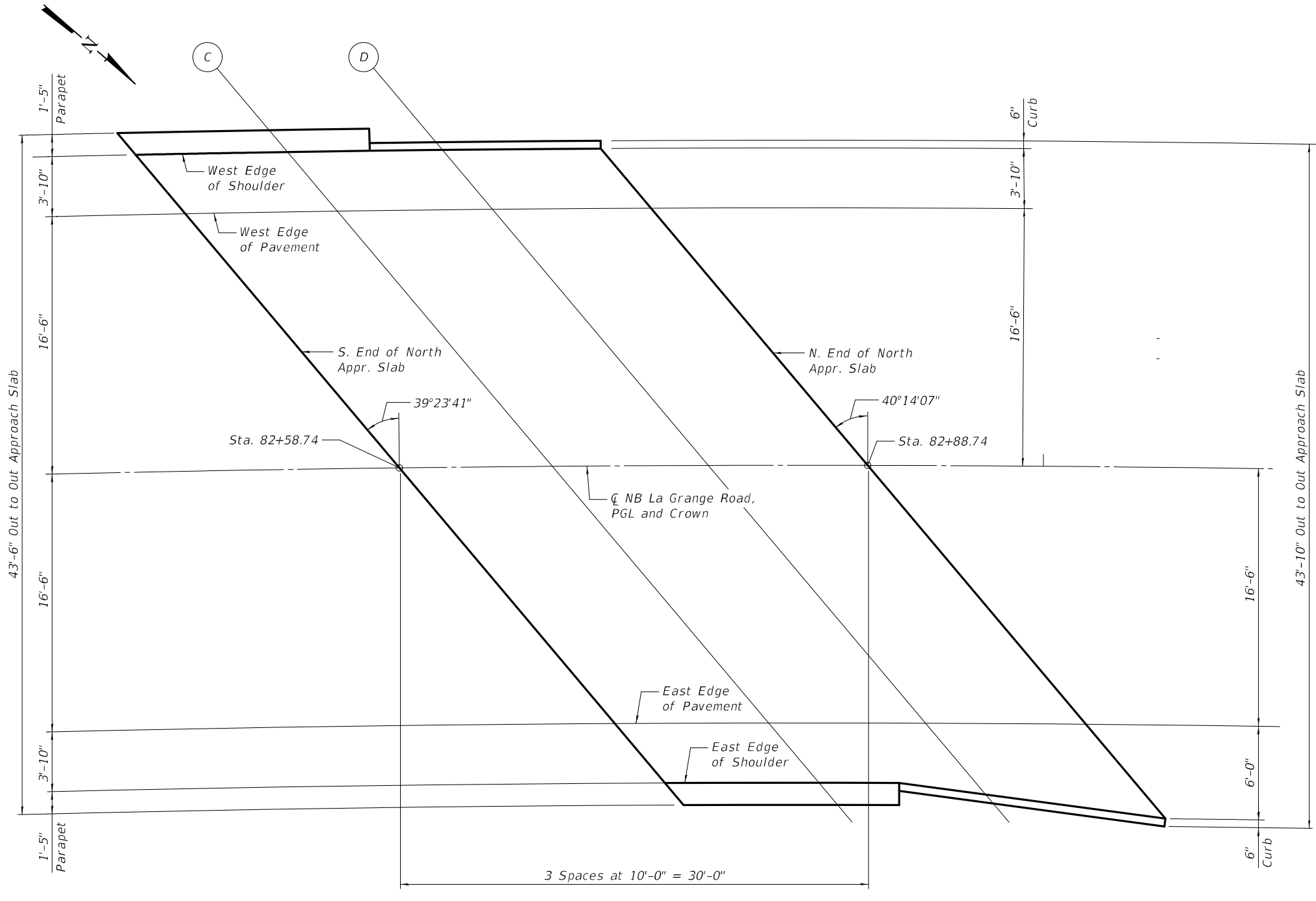
TOP OF SOUTH APPROACH SLAB ELEVATIONS  
 STRUCTURE NO. 016-2467

SHEET SB-31 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	218
ILLINOIS			CONTRACT NO. 62H49	



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**PLAN**

**CL, PGL AND CROWN**

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	82+56.38	0.00	631.99
C	82+66.38	0.00	631.94
D	82+76.38	0.00	631.89
N. End North Appr. Slab	82+86.38	0.00	631.84

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	82+69.93	16.50	631.23
C	82+79.85	16.50	631.18
D	82+89.77	16.50	631.13
N. End North Appr. Slab	82+99.69	16.50	631.08

**WEST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	82+39.68	-20.33	632.93
C	82+49.78	-20.33	632.88
D	82+59.88	-20.33	632.83
N. End North Appr. Slab	82+69.98	-20.33	632.77

**WEST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	82+42.83	-16.50	632.75
C	82+52.91	-16.50	632.70
D	82+62.99	-16.50	632.65
N. End North Appr. Slab	82+73.07	-16.50	632.60

**EAST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	82+73.08	20.33	631.05
C	82+82.98	20.33	631.00
D	82+92.87	21.05	630.92
N. End North Appr. Slab	83+02.76	23.22	630.78



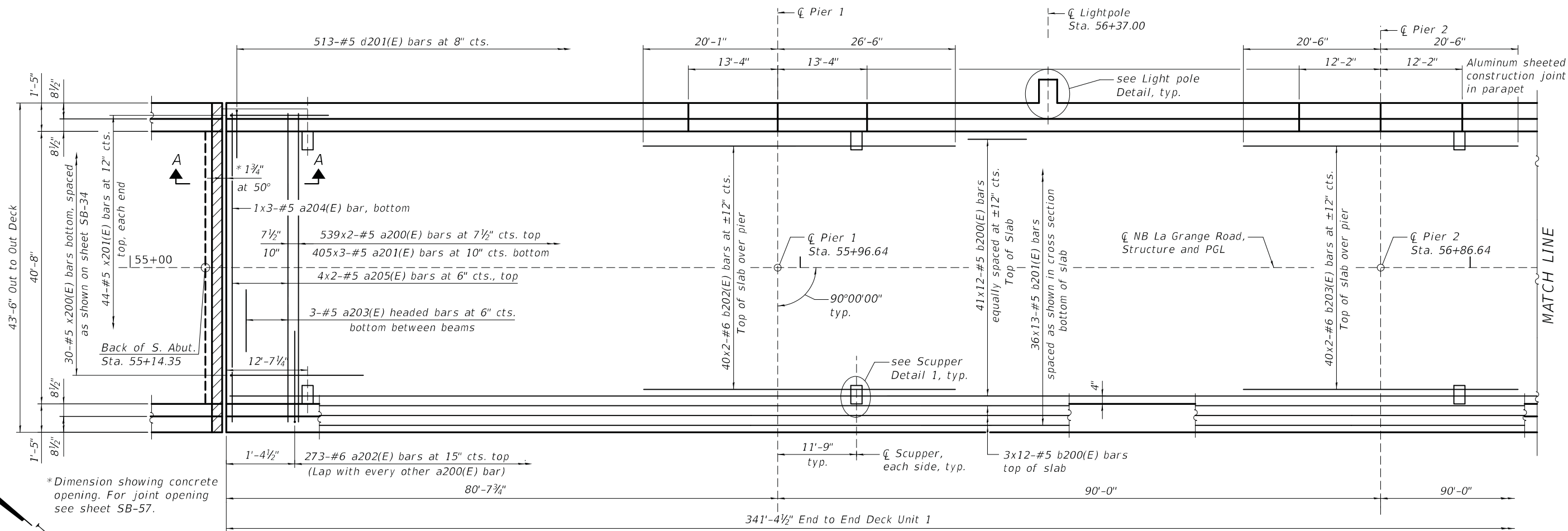
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PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF NORTH APPROACH SLAB ELEVATIONS  
 STRUCTURE NO. 016-2467**

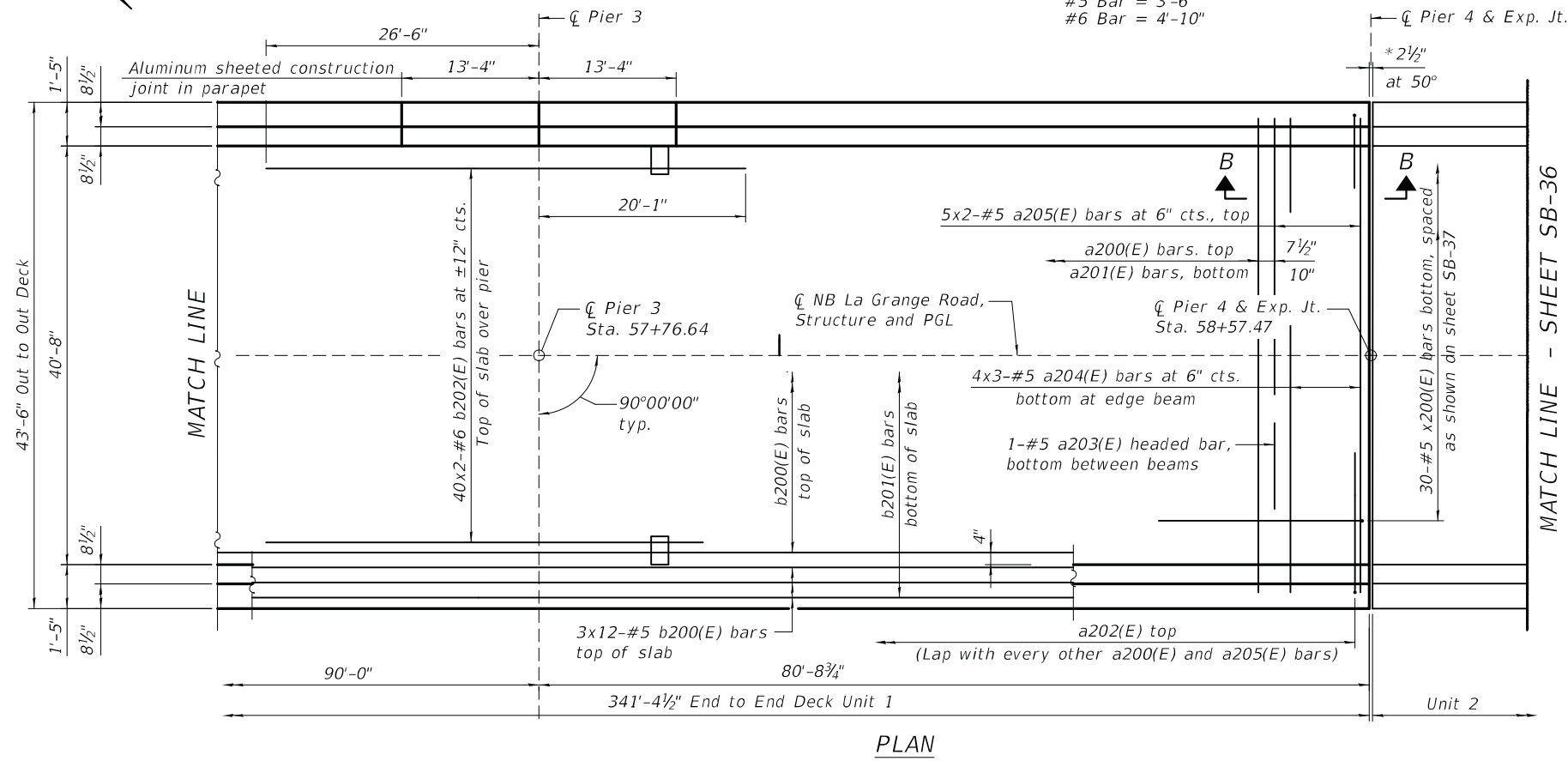
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				CONTRACT NO. 62H49
ILLINOIS				

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\* Dimension showing concrete opening. For joint opening see sheet SB-57.

**MINIMUM BAR LAP PLAN**  
 #5 Bar = 3'-6"  
 #6 Bar = 4'-10"



PLAN

- Notes:
1. See Sheet SB-34 for Cross Section and Section A-A.
  2. See Sheet SB-37 for Section B-B.
  3. See Sheet SB-35 for parapet reinforcement, superstructure details, and Bill of Material.
  4. See Sheet SB-39 for Scupper Detail 1 and Light Pole Detail.
  5. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



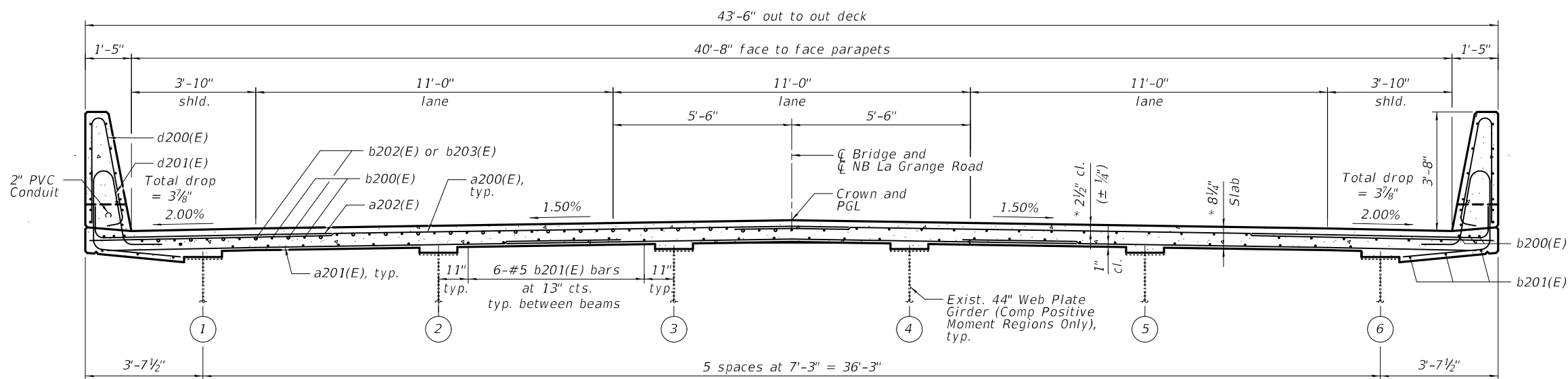
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PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

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SUPERSTRUCTURE PLAN UNIT 1  
 STRUCTURE NO. 016-2467

SHEET SB-33 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 220
ILLINOIS			CONTRACT NO. 62H49	



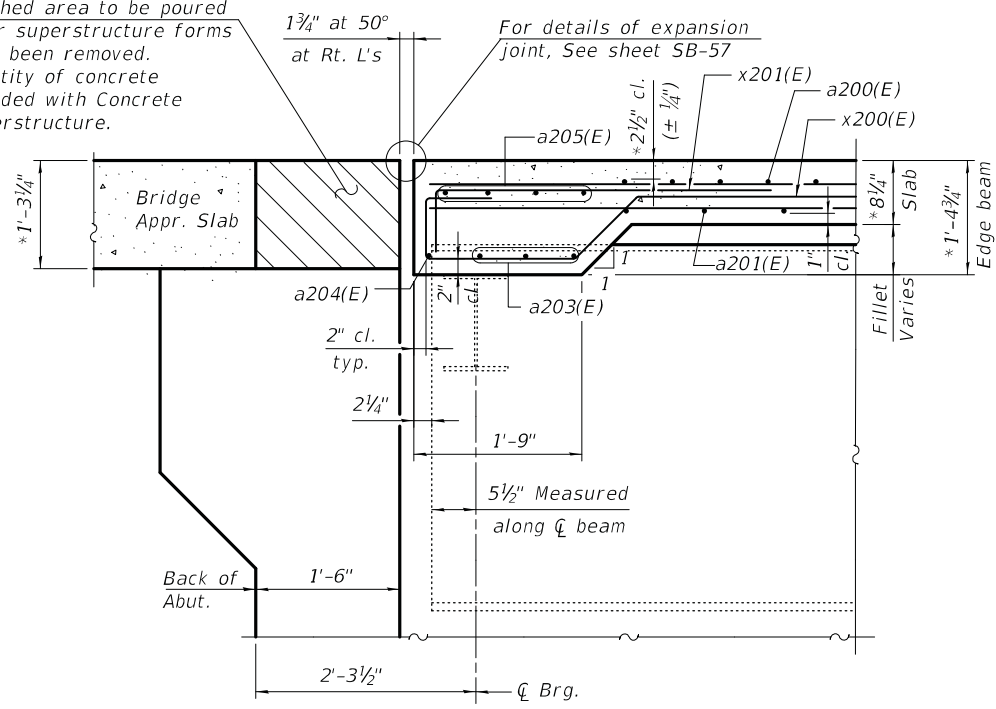
NEAR PIER

**CROSS SECTION**

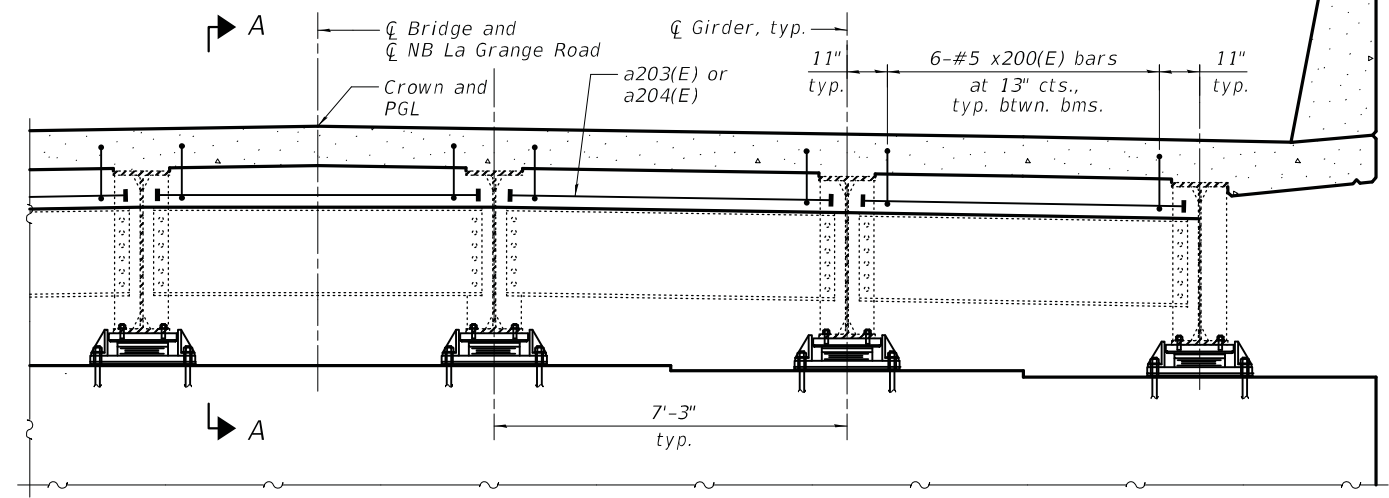
(Looking North)  
\* Prior to grinding

NEAR MIDSPAN

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



**SECTION A-A**



**DIAPHRAGM AT SOUTH ABUTMENT**

- Notes:
- See Sheet SB-33 for location of Section A-A.
  - See Sheet SB-35 for parapet reinforcement, superstructure details and Bill of Material.

MODEL: Default  
FILE NAME: p:\civiltch-pw-bentley.com\civiltch-pw\Documents\Projects\3393\CADD\CADD Sheets\Structures\Structure SN 016-2467\0162467-62H49-034-Super Unit 1 Details 1.dgn



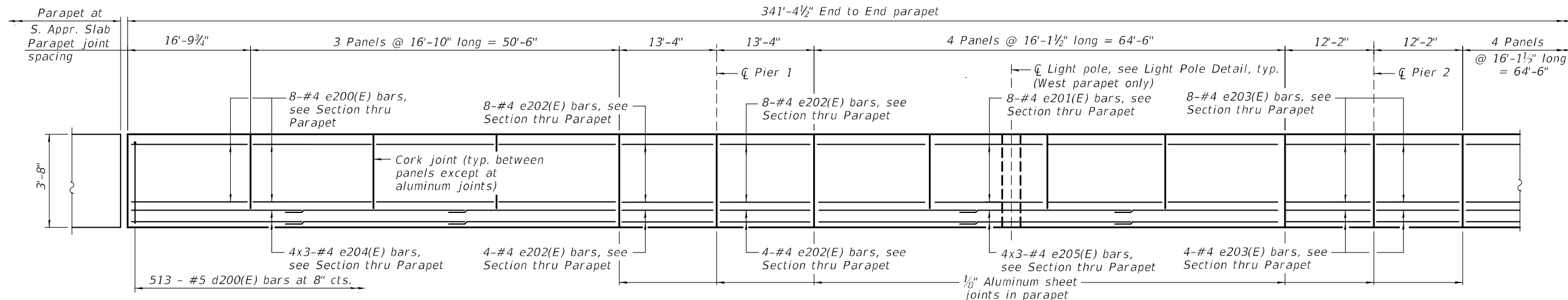
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	DATE - 06/18/2021	REVISED -

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DEPARTMENT OF TRANSPORTATION

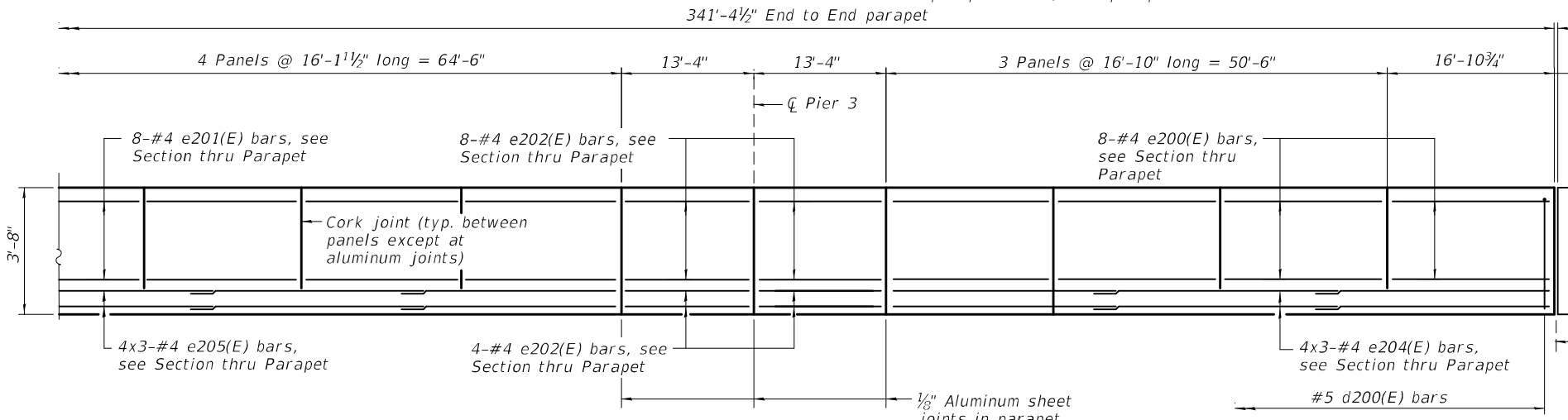
**SUPERSTRUCTURE UNIT 1 DETAILS 1**  
**STRUCTURE NO. 016-2467**

SHEET SB-34 OF SB-104 SHEETS

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ILLINOIS			CONTRACT NO. 62H49	

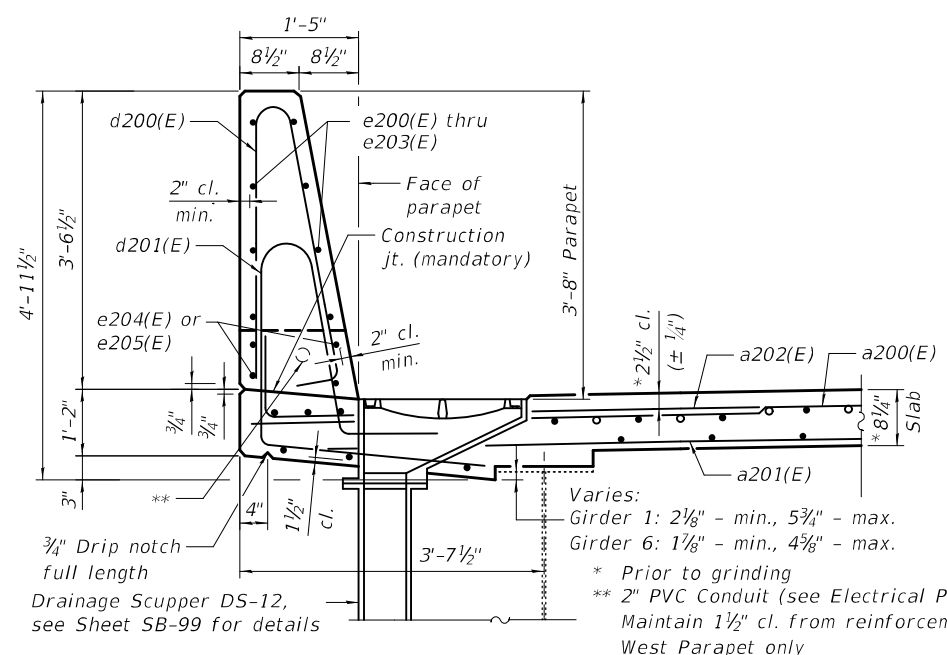


**INSIDE ELEVATION OF PARAPET UNIT 1**  
West parapet shown, East parapet similar

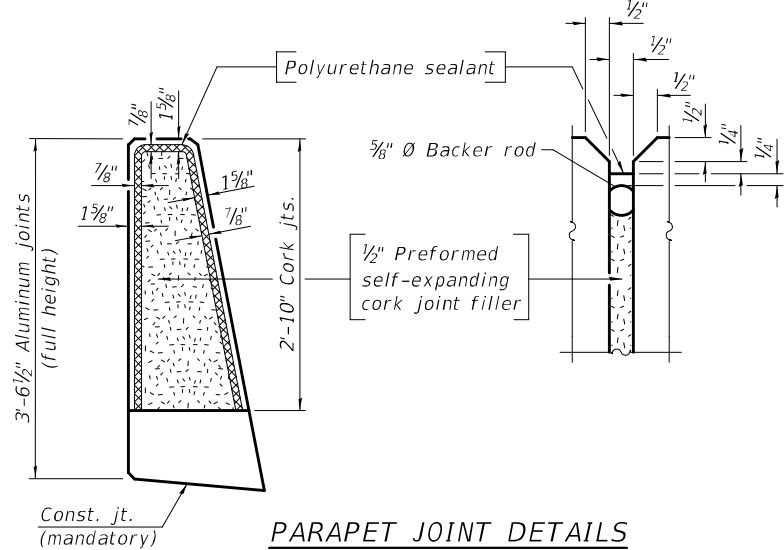


**INSIDE ELEVATION OF PARAPET UNIT 1**  
West parapet shown, East parapet similar

**MINIMUM BAR LAP**  
#4 bar = 2'-5"



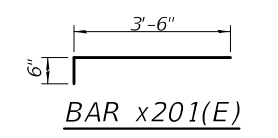
**SECTION THRU PARAPET**



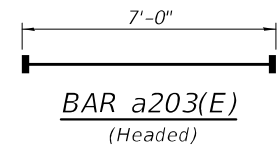
**PARAPET JOINT DETAILS**

The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

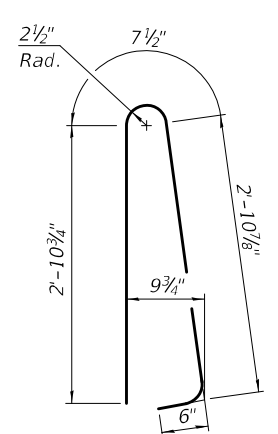
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.



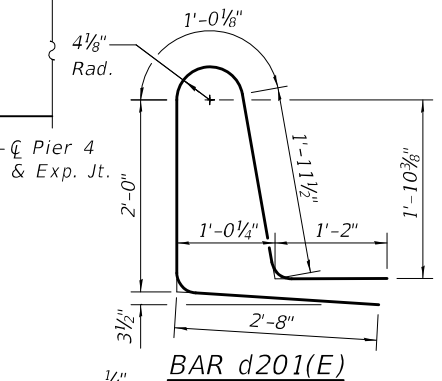
**BAR x201(E)**



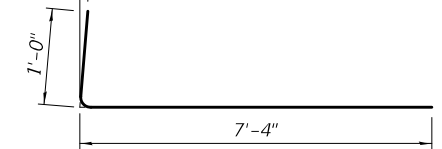
**BAR a203(E)**  
(Headed)



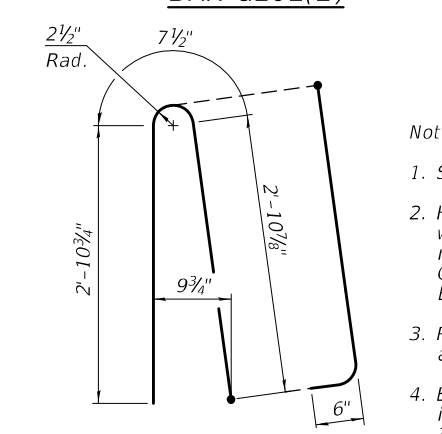
**BAR d200(E)**



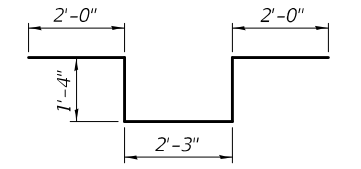
**BAR x200(E)**



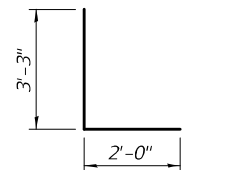
**BAR d201(E)**



**ALTERNATE BAR d200(E)**  
When conduit is present. West Parapet only



**BAR d203(E)**



**BAR d202(E)**

**SUPERSTRUCTURE UNIT 1**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	1078	#5	23'-6"	—
a201(E)	1215	#5	16'-4"	—
a202(E)	546	#6	8'-4"	—
a203(E)	20	#5	7'-0"	—
a204(E)	15	#5	16'-6"	—
a205(E)	18	#5	23'-9"	—
a206(E)	64	#5	2'-0"	—
b200(E)	564	#5	31'-8"	—
b201(E)	468	#5	29'-6"	—
b202(E)	160	#6	25'-9"	—
b203(E)	80	#6	22'-11"	—
d200(E)	1026	#5	7'-0"	—
d201(E)	1026	#5	8'-10"	—
d202(E)	3	#6	5'-3"	—
d203(E)	7	#6	8'-11"	—
e200(E)	128	#4	16'-6"	—
e201(E)	128	#4	15'-9"	—
e202(E)	96	#4	13'-0"	—
e203(E)	48	#4	11'-10"	—
e204(E)	48	#4	24'-1"	—
e205(E)	48	#4	23'-2"	—
x200(E)	60	#5	6'-3"	—
x201(E)	44	#5	4'-0"	—
Concrete Superstructure		Cu. Yd.	555.1	
Protective Coat		Sq. Yd.	1,875	
Reinforcement Bars, Epoxy Coated		Pound	120,030	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	1,252	
Diamond Grinding (Bridge Section)		Sq. Yd.	1,391	

- Notes:
- See Sheet SB-39 for Light pole Detail.
  - Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
  - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

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PLOT DATE = 11/29/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 10/21/2021	REVISED -

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

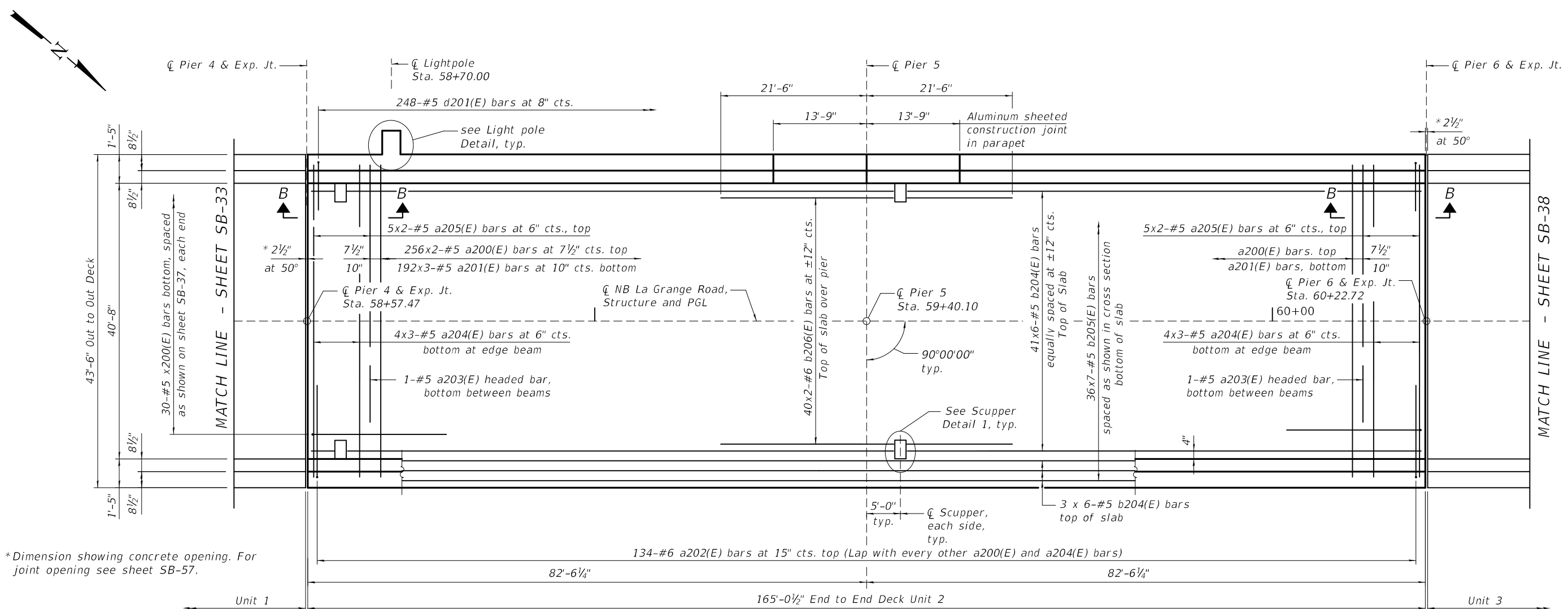
**SUPERSTRUCTURE UNIT 1 DETAILS 2**  
**STRUCTURE NO. 016-2467**

SHEET SB-35 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 222
ILLINOIS			CONTRACT NO. 62H49	

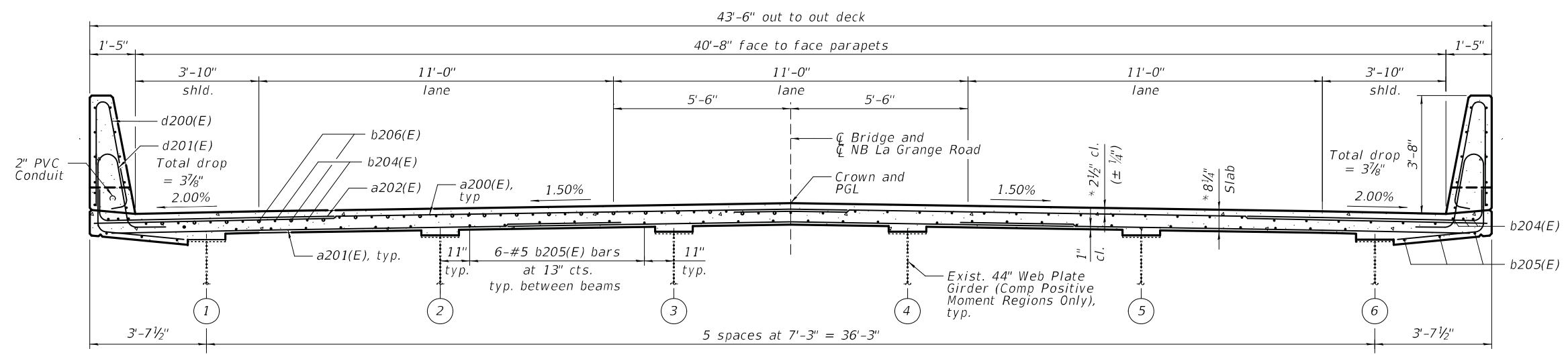


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\*Dimension showing concrete opening. For joint opening see sheet SB-57.

**MINIMUM BAR LAP**  
 #5 Bar = 3'-6"  
 #6 Bar = 4'-10"



- Notes:
1. See Sheet SB-37 for parapet reinforcement, superstructure details, Section B-B and Bill of Material.
  2. See Sheet SB-39 for Scupper Detail 1.
  3. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



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PLOT DATE	= 10/21/2021

DESIGNED	- E. VAYSMAN
CHECKED	- G. HATLESTAD
DRAWN	- E. VAYSMAN
DATE	- 06/18/2021

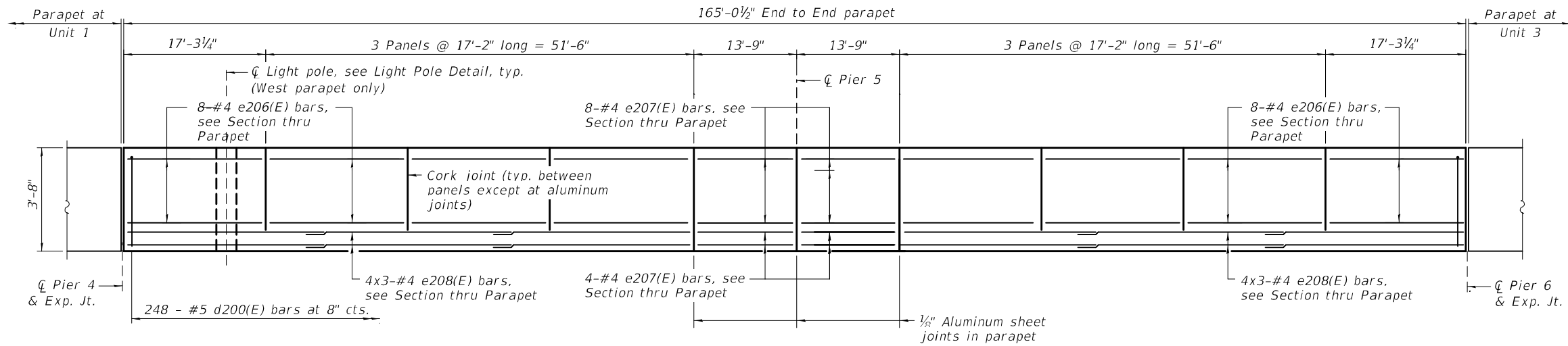
REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE PLAN & CROSS SECTION UNIT 2  
 STRUCTURE NO. 016-2467**

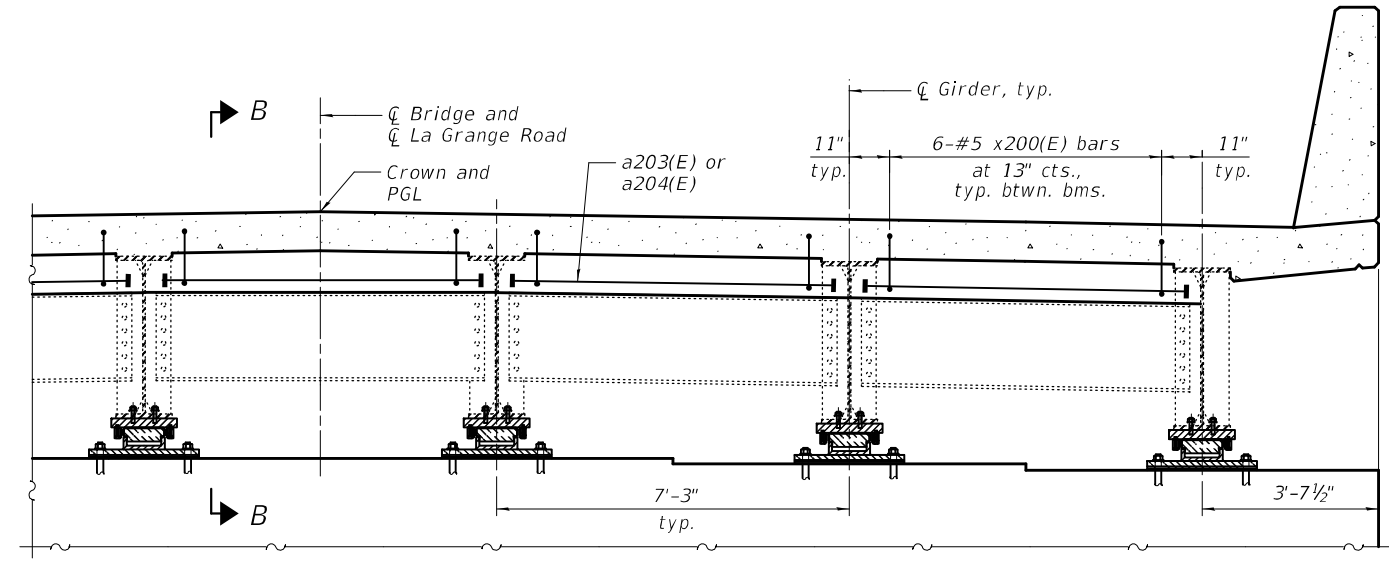
SHEET SB-36 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	223
CONTRACT NO. 62H49			ILLINOIS	



**INSIDE ELEVATION OF PARAPET UNIT 2**  
West parapet shown, East parapet similar

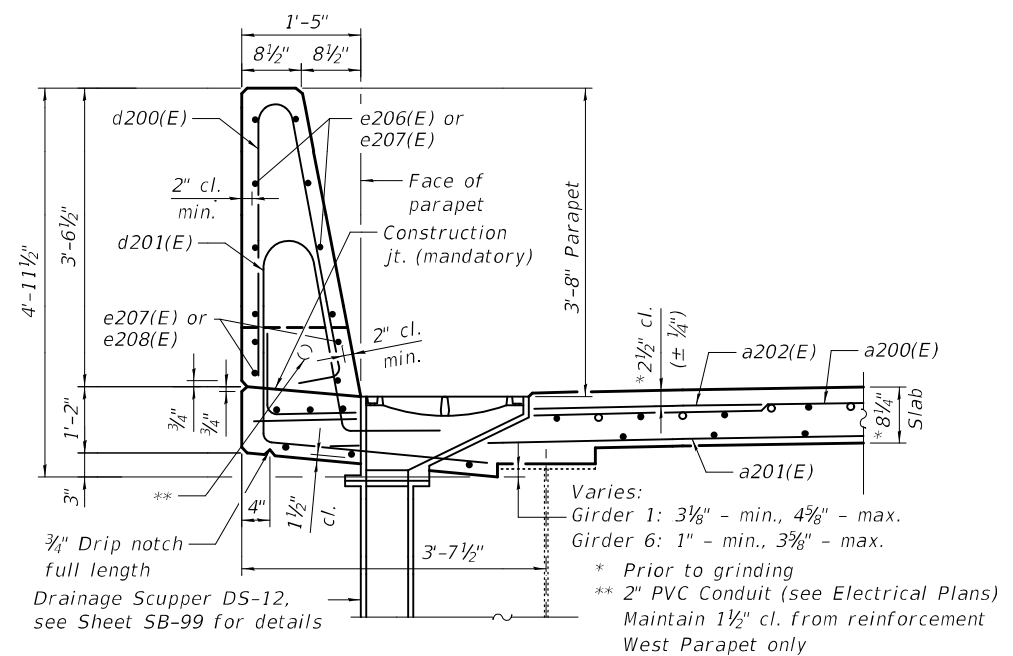
**MINIMUM BAR LAP**  
#4 bar = 2'-5"



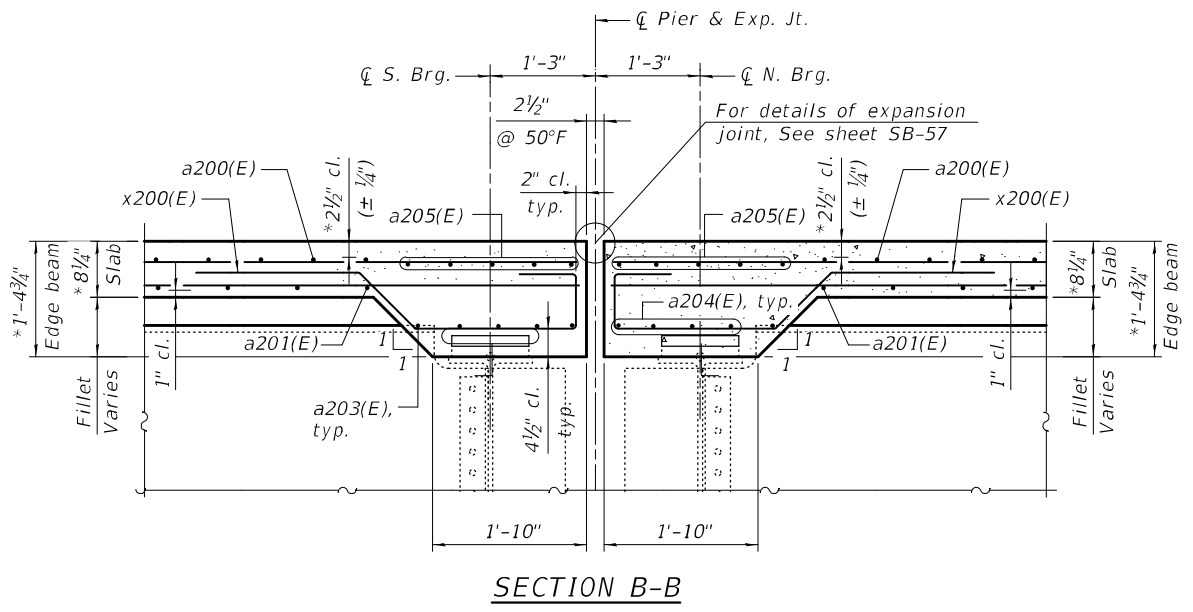
**DIAPHRAGM AT PIERS 4, 6, 9, 12, 15, 18, 21 AND 29**  
(Looking North)

**SUPERSTRUCTURE UNIT 2**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	512	#5	23'-6"	—
a201(E)	579	#5	16'-4"	—
a202(E)	268	#6	8'-4"	—
a203(E)	10	#5	7'-0"	—
a204(E)	24	#5	16'-6"	—
a205(E)	20	#5	23'-9"	—
a206(E)	32	#5	2'-0"	—
b204(E)	282	#5	30'-5"	—
b205(E)	252	#5	26'-7"	—
b206(E)	80	#6	23'-11"	—
d200(E)	496	#5	7'-0"	—
d201(E)	496	#5	8'-10"	—
d202(E)	3	#6	5'-3"	—
d203(E)	7	#6	8'-11"	—
e206(E)	128	#4	16'-10"	—
e207(E)	48	#4	13'-5"	—
e208(E)	48	#4	24'-7"	—
x200(E)	60	#5	6'-3"	—
Concrete Superstructure		Cu. Yd.	271.8	
Protective Coat		Sq. Yd.	906	
Reinforcement Bars, Epoxy Coated		Pound	56,990	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	605	
Diamond Grinding (Bridge Section)		Sq. Yd.	673	



**SECTION THRU PARAPET**



**SECTION B-B**

- Notes:
- See Sheet SB-35 for Parapet joint details and Bars bending diagrams.
  - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  - See Sheet SB-39 for Light Pole Detail.

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	DATE - 10/21/2021	REVISED -

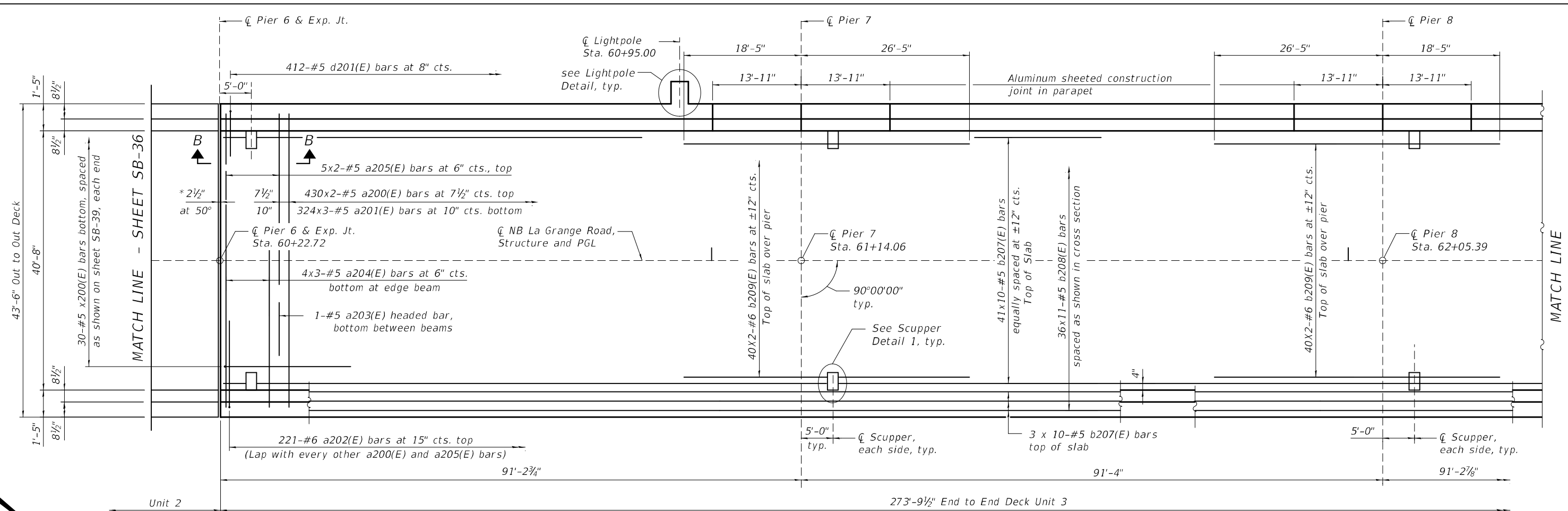
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE UNIT 2 DETAILS 1**  
**STRUCTURE NO. 016-2467**

SHEET SB-37 OF SB-104 SHEETS

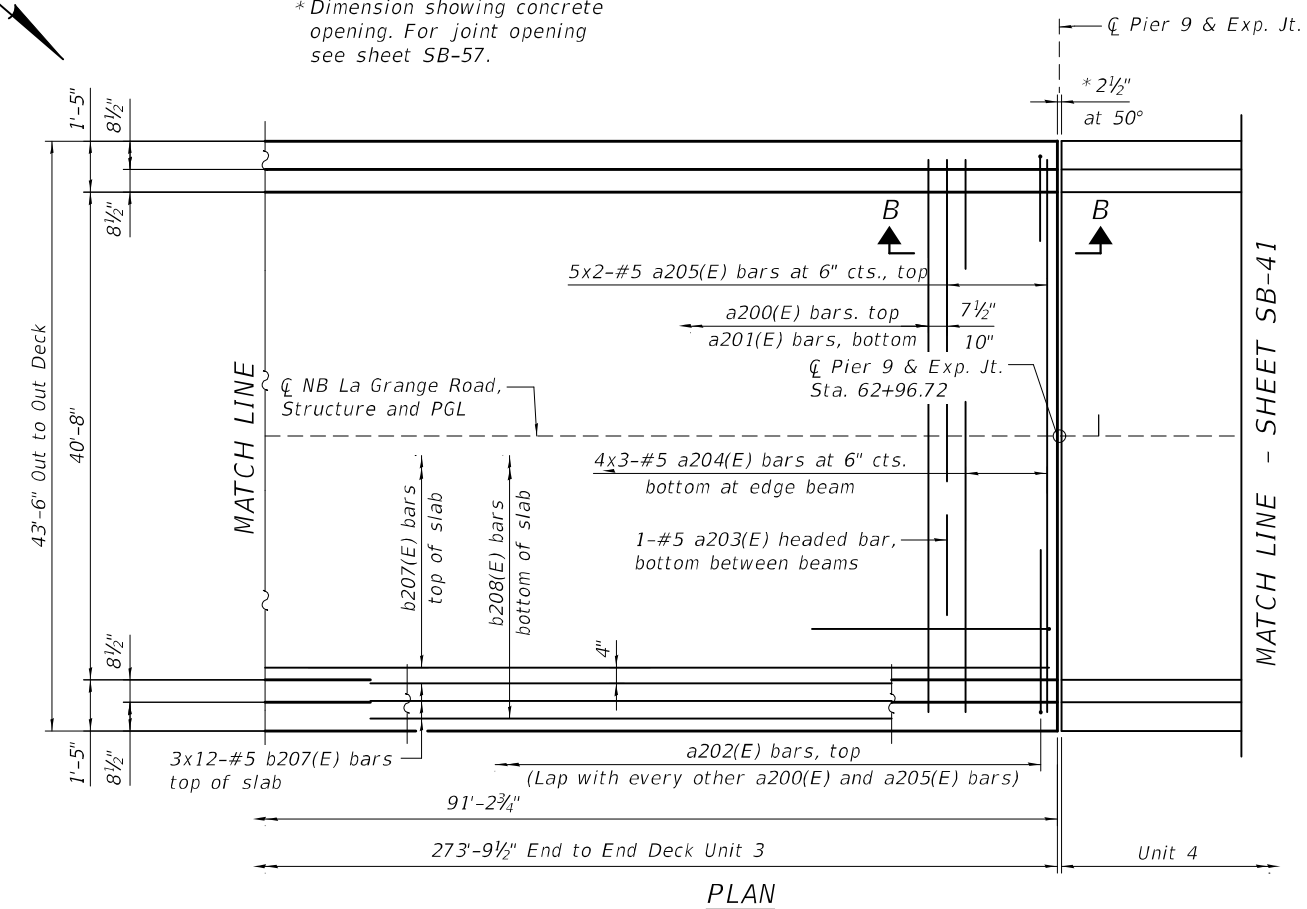
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ILLINOIS			CONTRACT NO. 62H49	

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\* Dimension showing concrete opening. For joint opening see sheet SB-57.

**MINIMUM BAR LAP**  
 #5 Bar = 3'-6"  
 #6 Bar = 4'-10"



- Notes:
1. See Sheet SB-39 for Cross Section, Scupper Detail 1 and Light Pole Detail.
  2. See Sheet SB-40 for parapet reinforcement, superstructure details and Bill of Material.
  3. See Sheet SB-37 for Section B-B.
  4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



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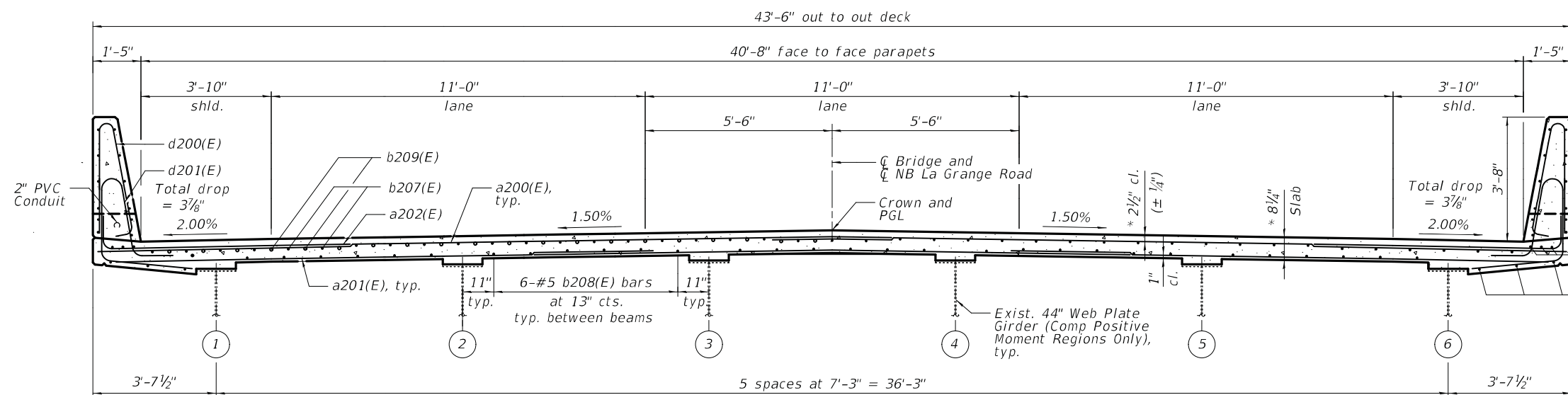
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN UNIT 3  
 STRUCTURE NO. 016-2467

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 225
ILLINOIS			CONTRACT NO. 62H49	

SHEET SB-38 OF SB-104 SHEETS

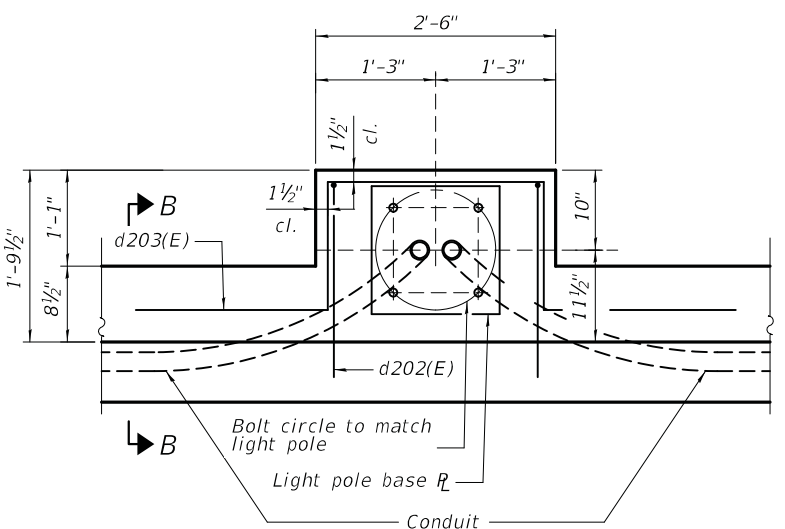
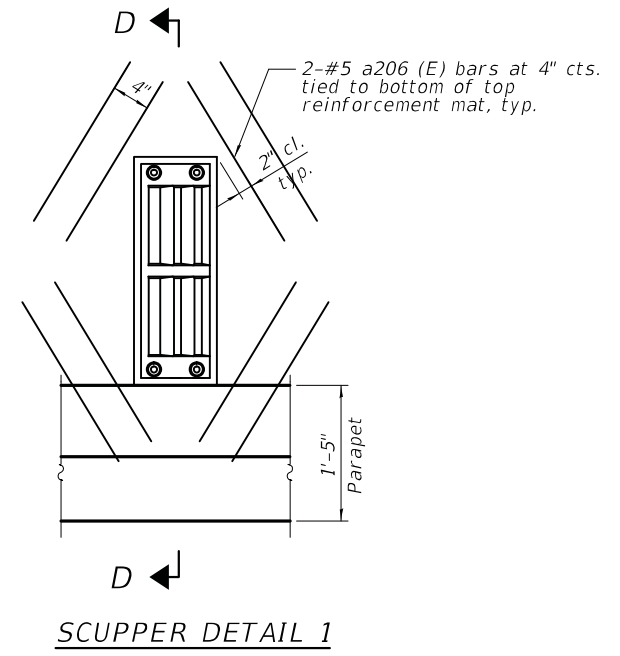




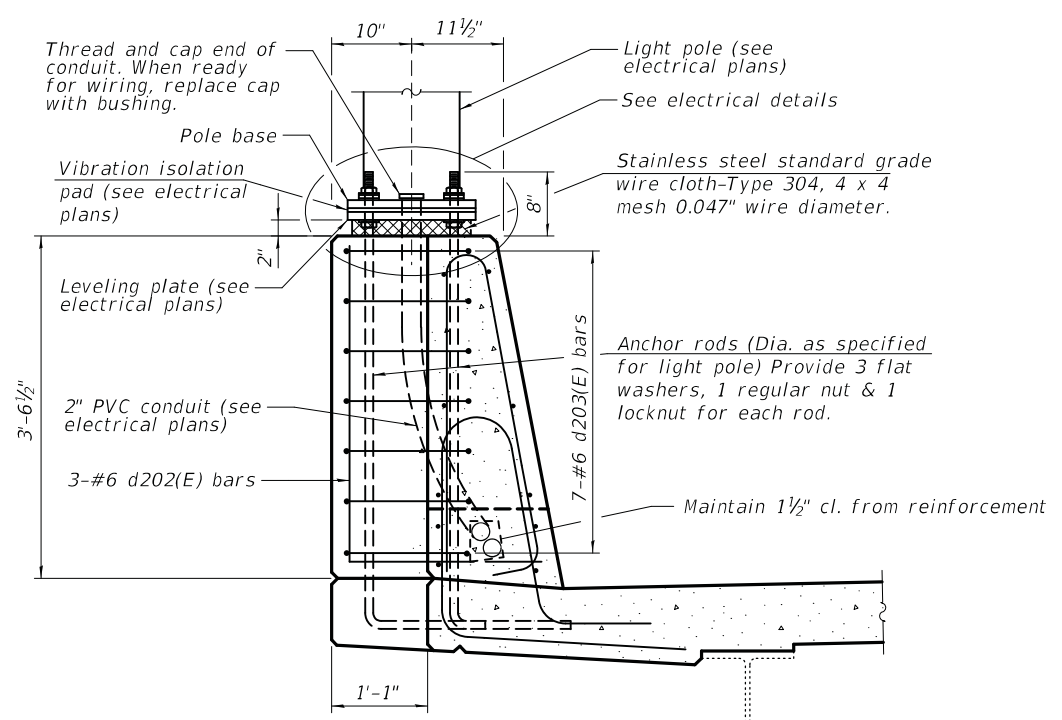
NEAR PIER

CROSS SECTION  
(Looking North)  
\* Prior to grinding

NEAR MIDSPAN



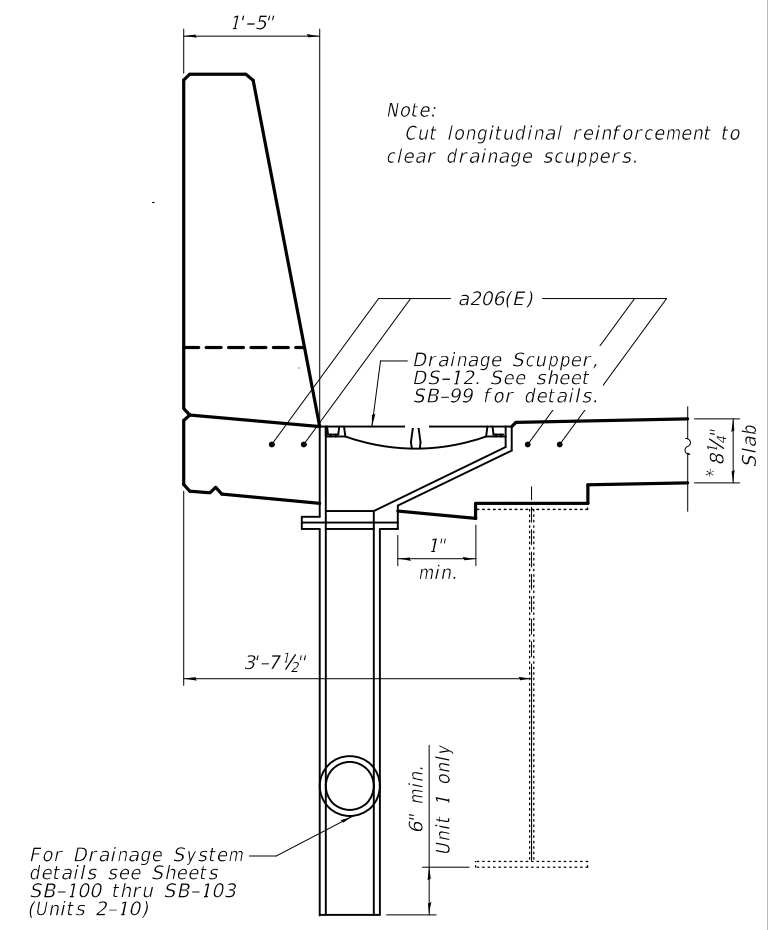
PLAN



SECTION B-B

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

LIGHT POLE DETAILS



SECTION D-D

For Drainage System details see Sheets SB-100 thru SB-103 (Units 2-10)

Notes:  
1. See Sheet SB-40 for parapet reinforcement, superstructure details and Bill of Material.

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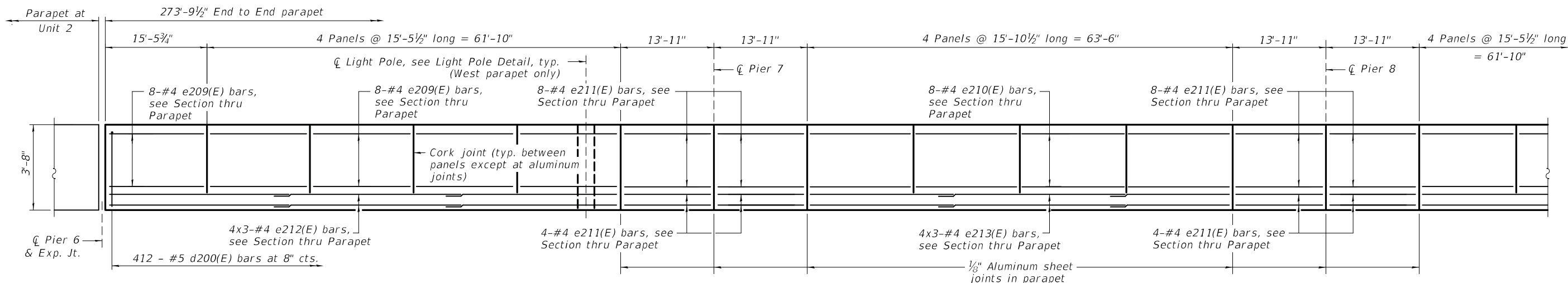
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

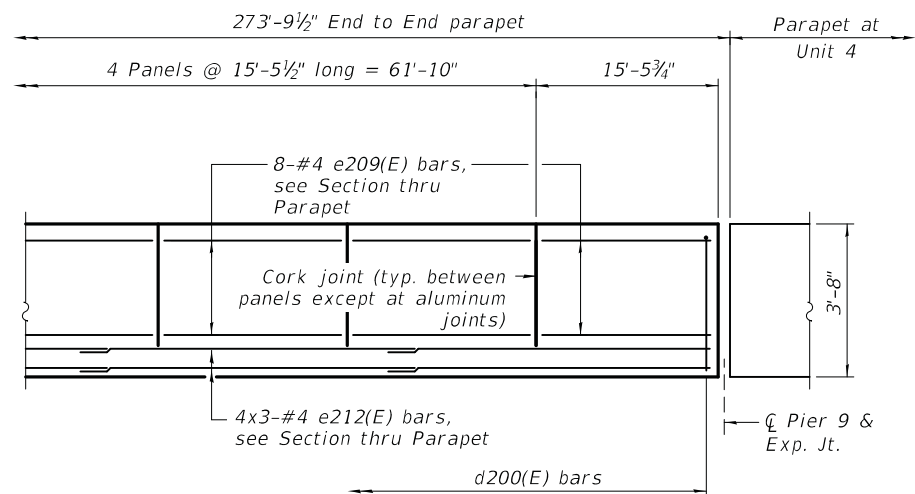
SUPERSTRUCTURE UNIT 3 DETAILS 1  
STRUCTURE NO. 016-2467

SHEET SB-39 OF SB-104 SHEETS

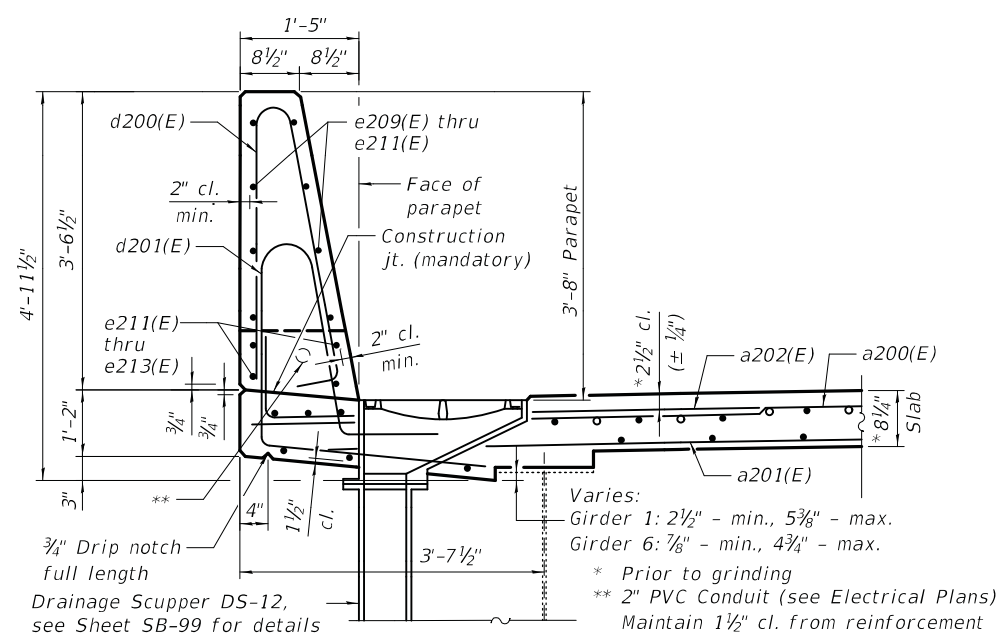
F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 226
ILLINOIS			CONTRACT NO. 62H49	



**INSIDE ELEVATION OF PARAPET UNIT 3**  
West parapet shown, East parapet similar



**INSIDE ELEVATION OF PARAPET UNIT 3**  
West parapet shown, East parapet similar



**SECTION THRU PARAPET**

**MINIMUM BAR LAP**  
#4 bar = 2'-5"

**SUPERSTRUCTURE UNIT 3**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	860	#5	23'-6"	—
a201(E)	972	#5	16'-4"	—
a202(E)	442	#6	8'-4"	└
a203(E)	10	#5	7'-0"	└
a204(E)	24	#5	16'-6"	—
a205(E)	20	#5	23'-9"	—
a206(E)	48	#5	2'-0"	—
b207(E)	470	#5	30'-7"	—
b208(E)	396	#5	28'-1"	—
b209(E)	160	#6	24'-10"	—
d200(E)	824	#5	7'-0"	└
d201(E)	824	#5	8'-10"	└
d202(E)	3	#6	5'-3"	└
d203(E)	7	#6	8'-11"	└
e209(E)	160	#4	15'-1"	—
e210(E)	64	#4	15'-6"	—
e211(E)	96	#4	13'-7"	—
e212(E)	48	#4	27'-5"	—
e213(E)	24	#4	22'-10"	—
x200(E)	60	#5	6'-3"	└
Concrete Superstructure			Cu. Yd.	446.4
Protective Coat			Sq. Yd.	1,504
Reinforcement Bars, Epoxy Coated			Pound	95,320
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	1,004
Diamond Grinding (Bridge Section)			Sq. Yd.	1,115

- Notes:
- See Sheet SB-39 for Light Pole details.
  - See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
  - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

MODEL: Default  
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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

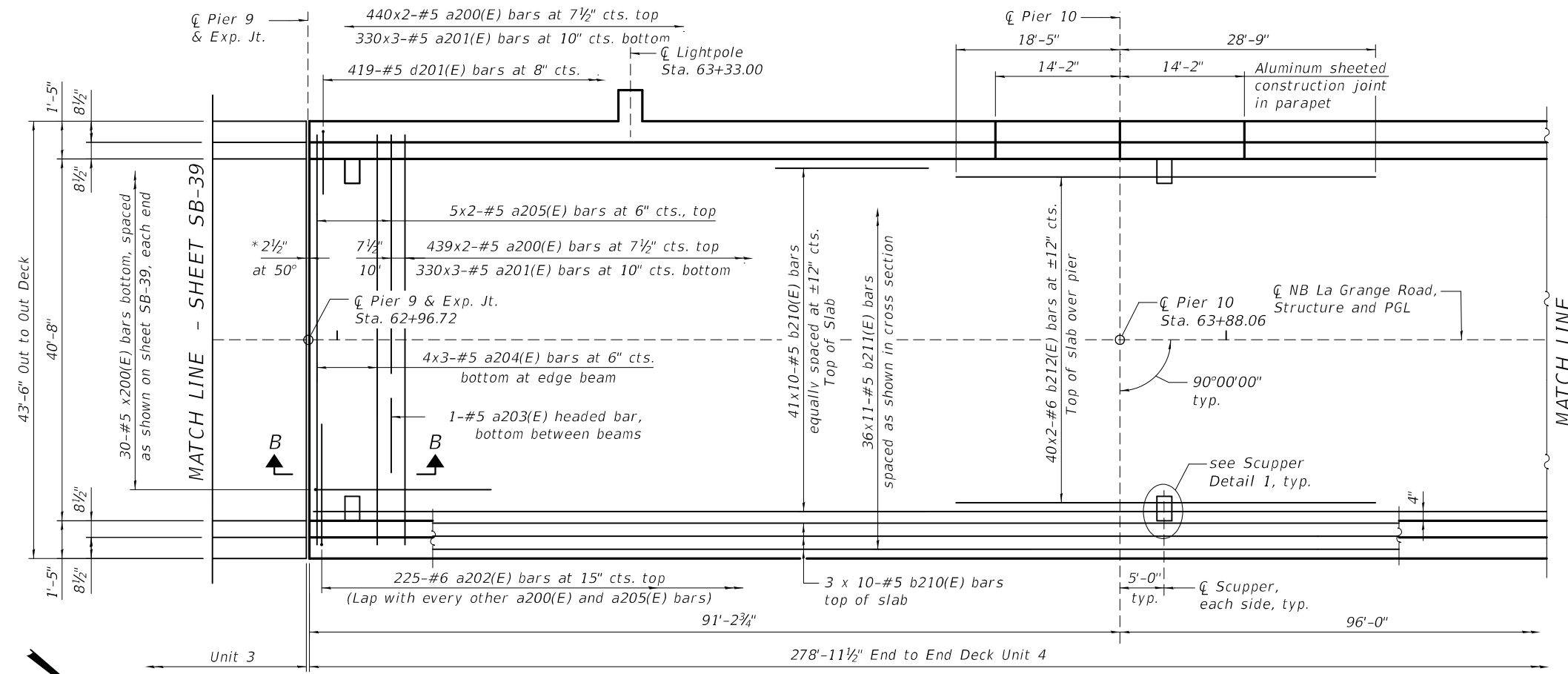
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE UNIT 3 DETAILS 2**  
**STRUCTURE NO. 016-2467**

SHEET SB-40 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	227
			CONTRACT NO. 62H49	
ILLINOIS				

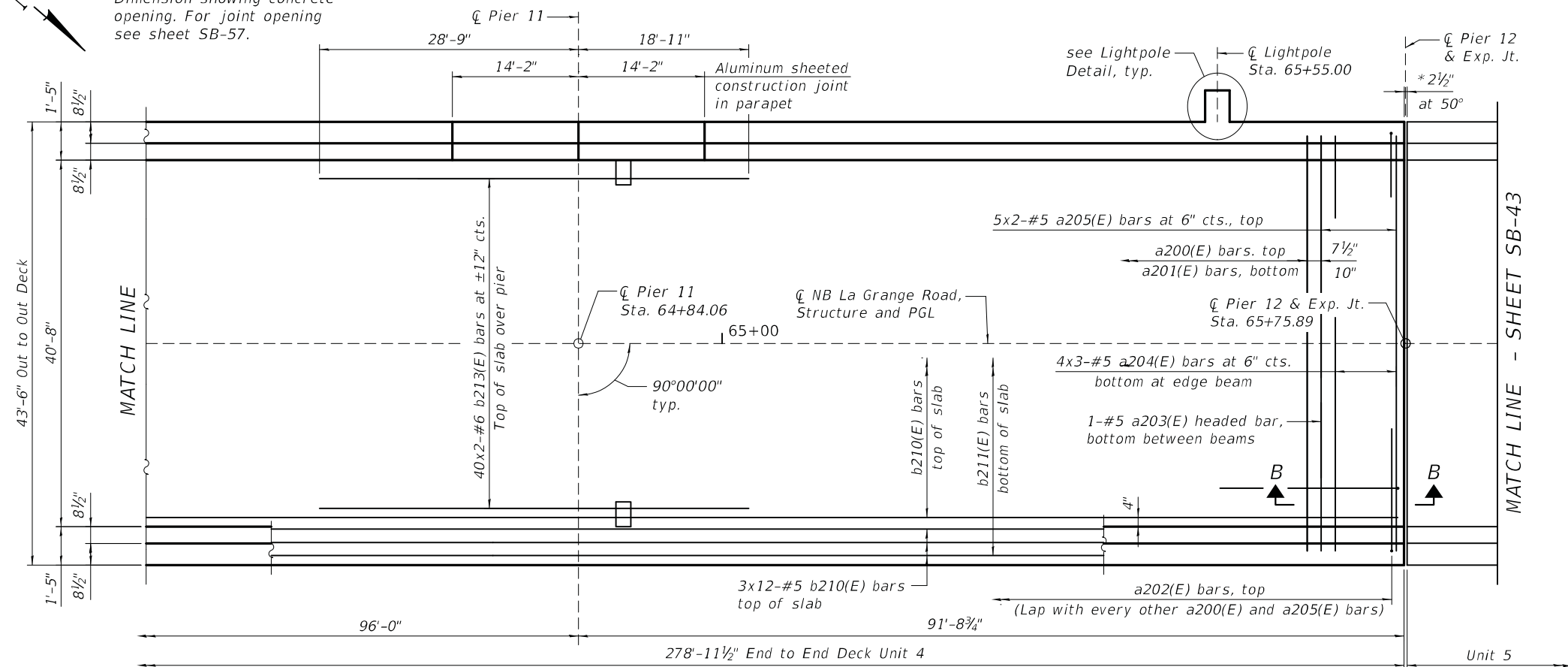
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PLAN

**MINIMUM BAR LAP**  
 #5 Bar = 3'-6"  
 #6 Bar = 4'-10"

\* Dimension showing concrete opening. For joint opening see sheet SB-57.



PLAN

**Notes:**

1. See Sheet SB-40 for Cross Section, parapet reinforcement, superstructure details and Bill of Material.
2. See Sheet SB-37 for Section B-B.
3. See Sheet SB-39 for Scupper Detail 1 and Light Pole Detail.
4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

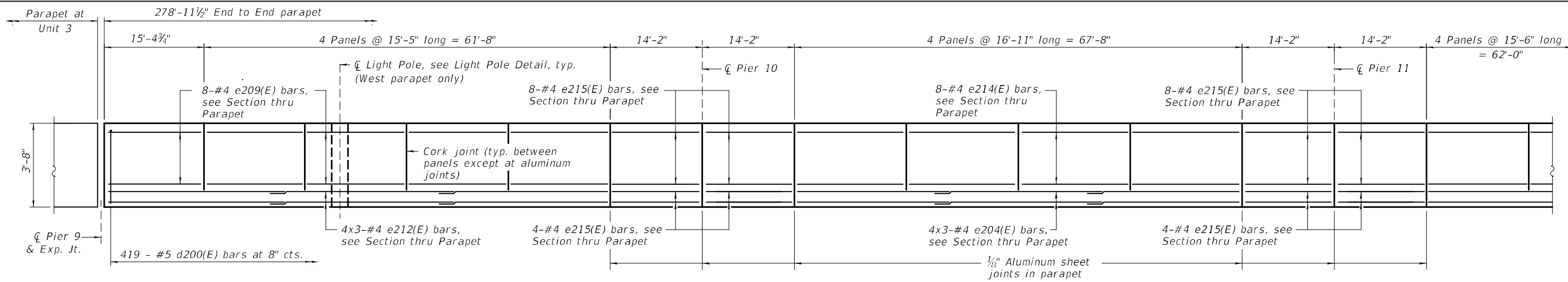
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE PLAN UNIT 4  
 STRUCTURE NO. 016-2467**

SHEET SB-41 OF SB-104 SHEETS

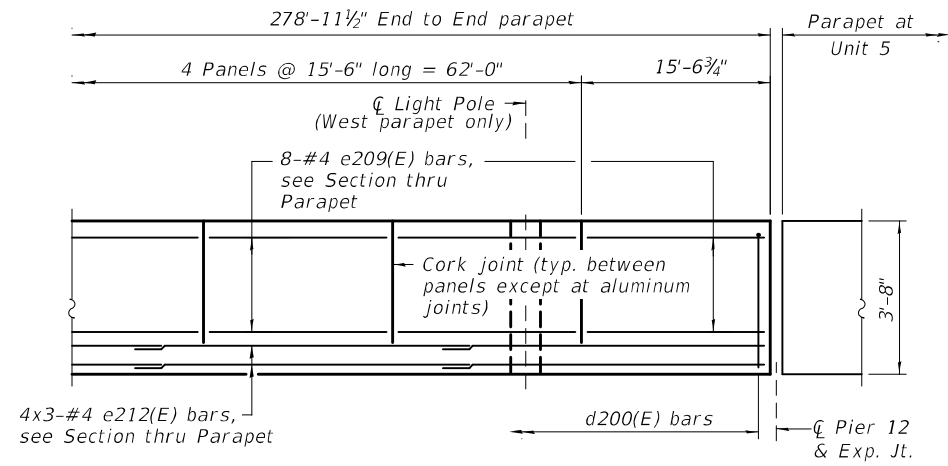
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ILLINOIS			CONTRACT NO. 62H49	



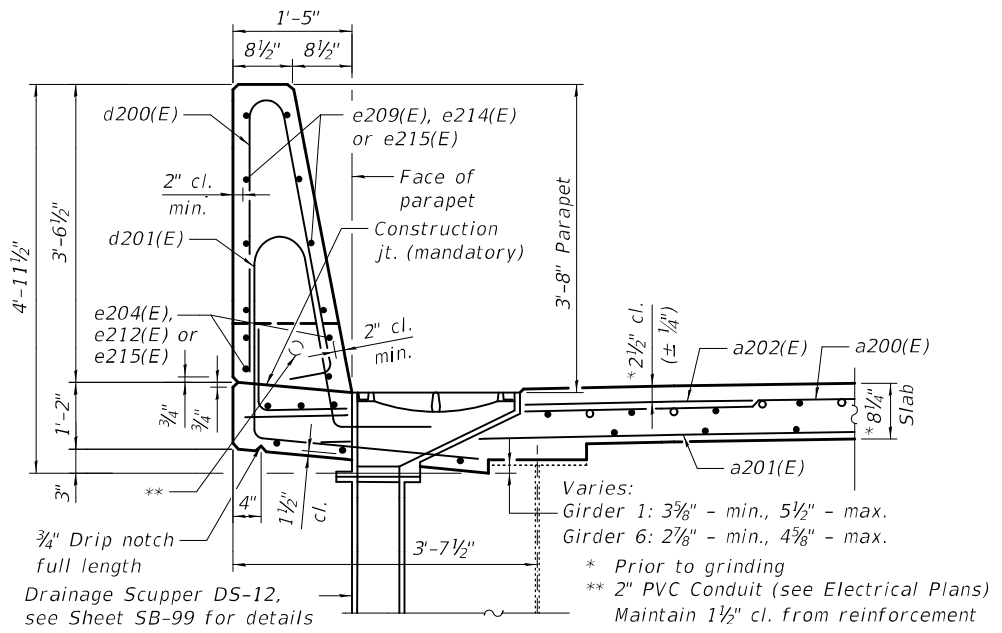


**INSIDE ELEVATION OF PARAPET UNIT 4**  
West parapet shown, East parapet similar

**MINIMUM BAR LAP**  
#4 bar = 2'-5"



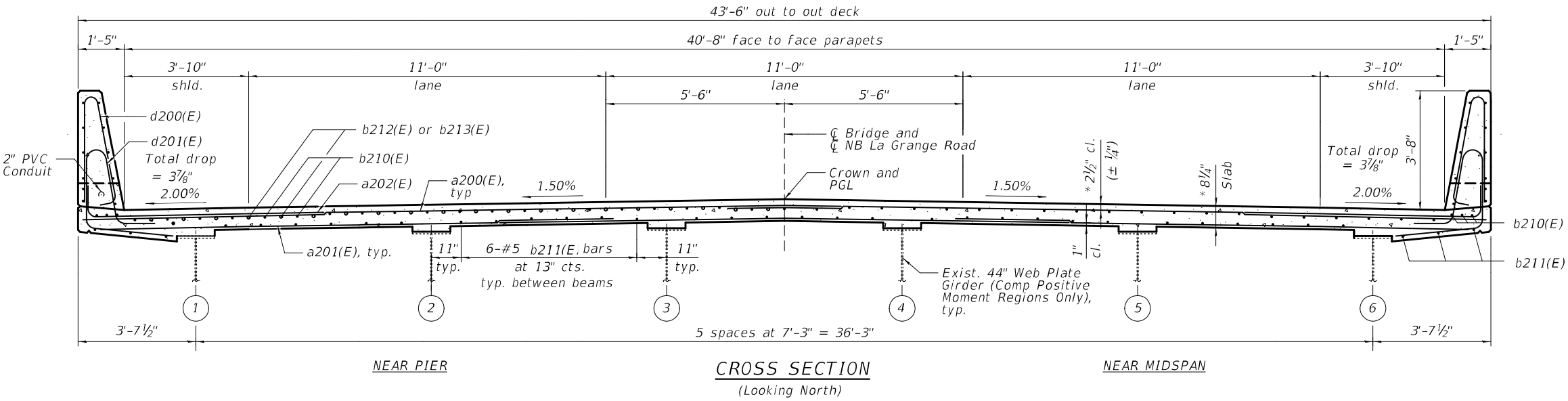
**INSIDE ELEVATION OF PARAPET UNIT 4**  
West parapet shown, East parapet similar



**SECTION THRU PARAPET**

**SUPERSTRUCTURE UNIT 4**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	878	#5	23'-6"	—
a201(E)	990	#5	16'-4"	—
a202(E)	450	#6	8'-4"	—
a203(E)	10	#5	7'-0"	—
a204(E)	24	#5	16'-6"	—
a205(E)	20	#5	23'-9"	—
a206(E)	48	#5	2'-0"	—
b210(E)	470	#5	31'-1"	—
b211(E)	396	#5	28'-7"	—
b212(E)	80	#6	26'-0"	—
b213(E)	80	#6	26'-3"	—
d200(E)	838	#5	7'-0"	—
d201(E)	838	#5	8'-10"	—
d202(E)	6	#6	5'-3"	—
d203(E)	14	#6	8'-11"	—
e204(E)	24	#4	24'-1"	—
e209(E)	160	#4	16'-1"	—
e212(E)	48	#4	27'-5"	—
e214(E)	80	#4	16'-7"	—
e215(E)	96	#4	13'-10"	—
x200(E)	60	#5	6'-3"	—
Concrete Superstructure		Cu. Yd.	448.7	
Protective Coat		Sq. Yd.	1,532	
Reinforcement Bars, Epoxy Coated		Pound	97,650	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	1,023	
Diamond Grinding (Bridge Section)		Sq. Yd.	1,137	



**CROSS SECTION**  
(Looking North)

- Notes:
1. See Sheet SB-39 for Light Pole details.
  2. See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
  3. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 11/29/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 10/21/2021	REVISED -

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

**SUPERSTRUCTURE UNIT 4 DETAILS 1**  
**STRUCTURE NO. 016-2467**

SHEET SB-42 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	229
ILLINOIS			CONTRACT NO. 62H49	

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DESIGNED	- E. VAYSMAN
CHECKED	- G. HATLESTAD
PLOT SCALE	= N/A
PLOT DATE	= 10/21/2021

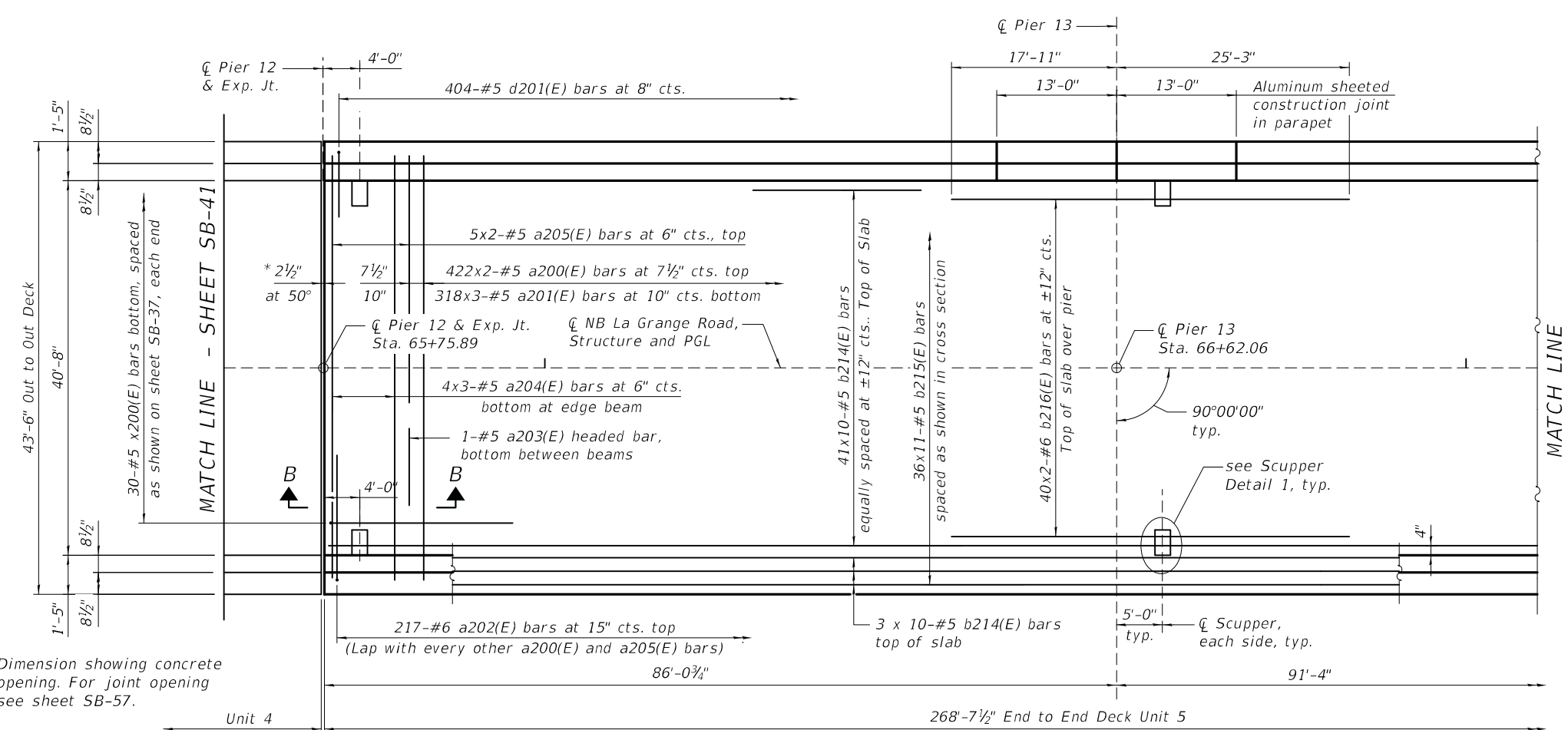
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CHECKED	- G. HATLESTAD	REVISED	-
DRAWN	- E. VAYSMAN	REVISED	-
DATE	- 06/18/2021	REVISED	-

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

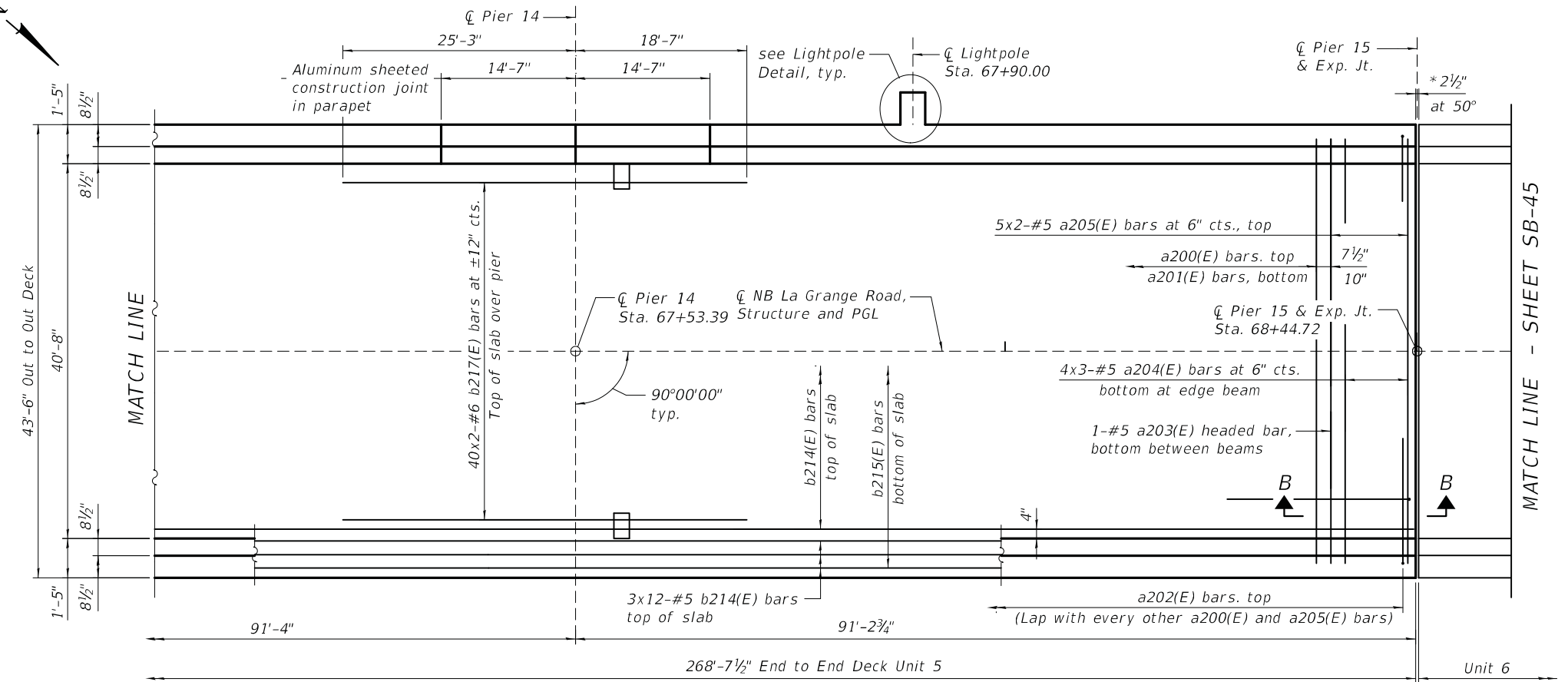
**SUPERSTRUCTURE PLAN UNIT 5  
 STRUCTURE NO. 016-2467**

SHEET SB-43 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	230
CONTRACT NO. 62H49			ILLINOIS	



\* Dimension showing concrete opening. For joint opening see sheet SB-57.



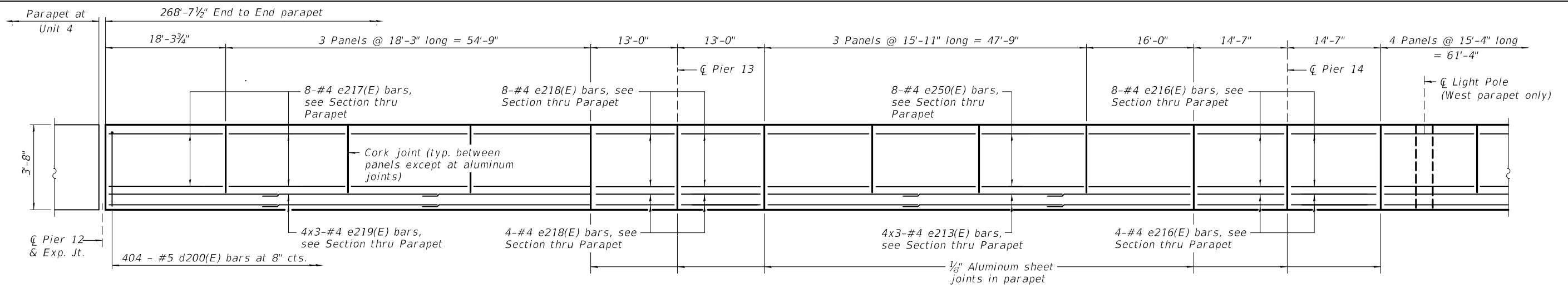
**MINIMUM BAR LAP**

#5 Bar = 3'-6"  
 #6 Bar = 4'-10"

**Notes:**

1. See Sheet SB-44 for Cross Section, parapet reinforcement, superstructure details and Bill of Material.
2. See Sheet SB-37 for Section B-B.
3. See Sheet SB-39 for Scupper Detail 1 and Light Pole Detail.
4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

PLAN



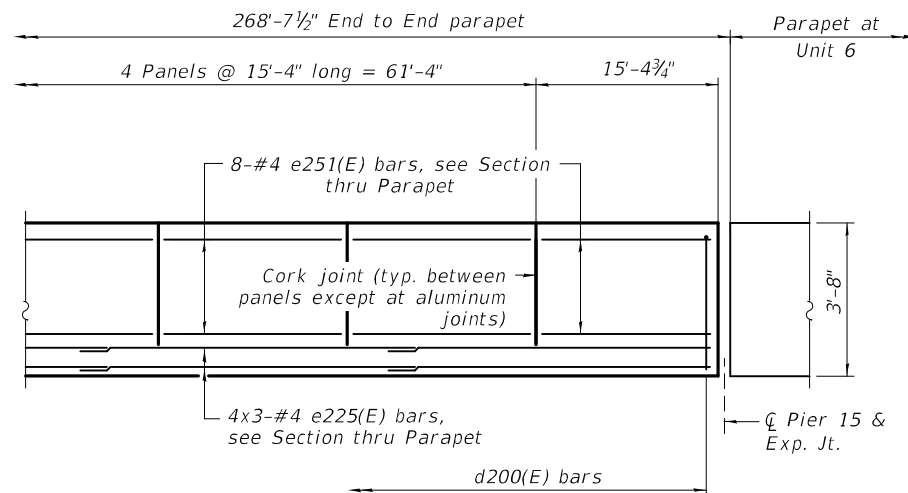
**INSIDE ELEVATION OF PARAPET UNIT 5**  
West parapet shown, East parapet similar

**MINIMUM BAR LAP**

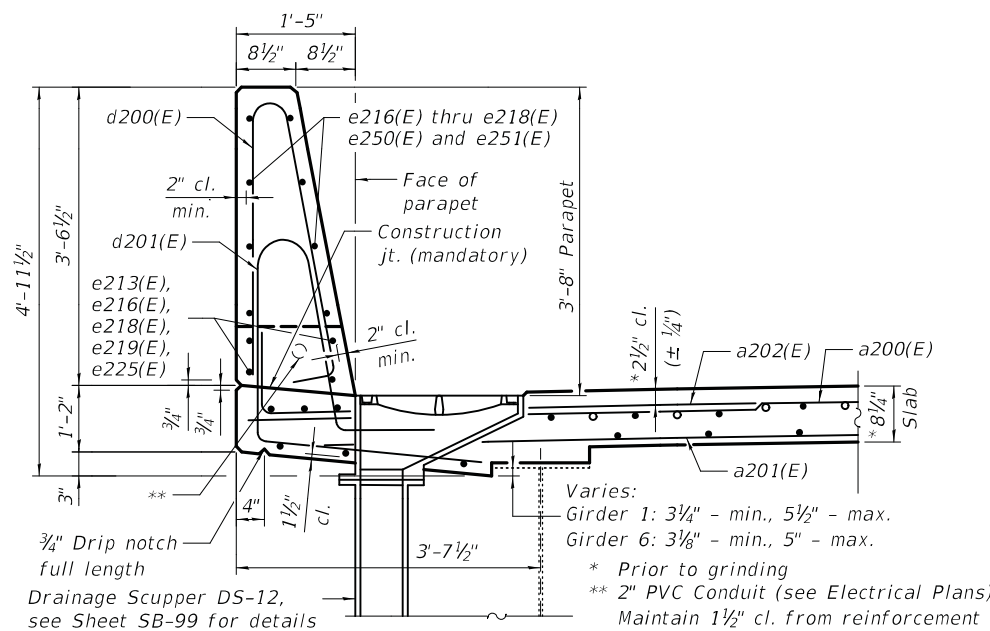
#4 bar = 2'-5"

**SUPERSTRUCTURE UNIT 5**  
**BILL OF MATERIAL**

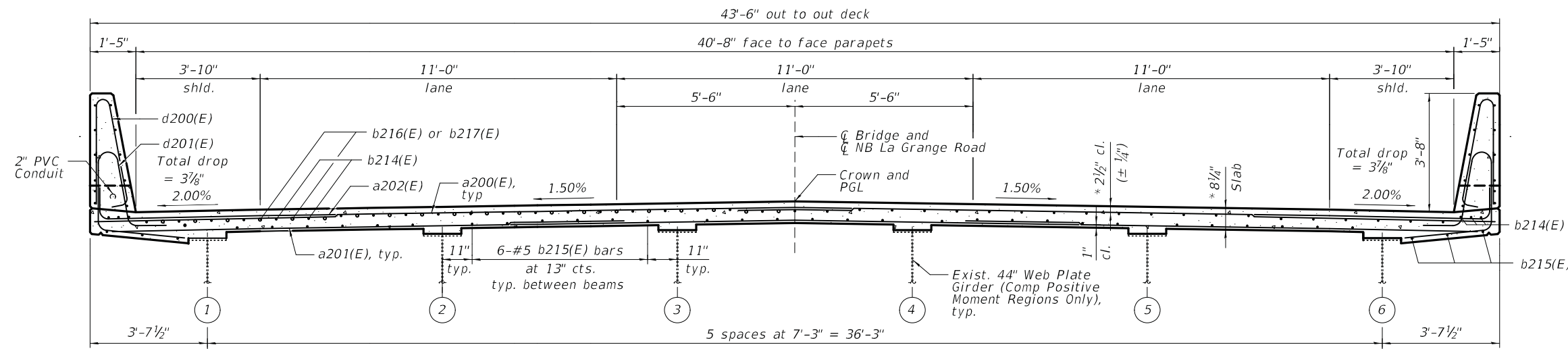
Bar	No.	Size	Length	Shape
a200(E)	844	#5	23'-6"	—
a201(E)	951	#5	16'-4"	—
a202(E)	434	#6	8'-4"	—
a203(E)	10	#5	7'-0"	—
a204(E)	24	#5	16'-6"	—
a205(E)	20	#5	23'-9"	—
a206(E)	48	#5	2'-0"	—
b214(E)	470	#5	30'-1"	—
b215(E)	396	#5	27'-8"	—
b216(E)	80	#6	24'-0"	—
b217(E)	80	#6	24'-4"	—
d200(E)	808	#5	7'-0"	—
d201(E)	808	#5	8'-10"	—
d202(E)	3	#6	5'-3"	—
d203(E)	7	#6	8'-11"	—
e213(E)	24	#4	22'-10"	—
e216(E)	48	#4	14'-3"	—
e217(E)	64	#4	17'-11"	—
e218(E)	48	#4	12'-8"	—
e219(E)	24	#4	26'-0"	—
e225(E)	24	#4	27'-2"	—
e250(E)	64	#4	15'-7"	—
e251(E)	80	#4	15'-0"	—
x200(E)	60	#5	6'-3"	—
Concrete Superstructure		Cu. Yd.	432.8	
Protective Coat		Sq. Yd.	1,475	
Reinforcement Bars, Epoxy Coated		Pound	93,560	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	985	
Diamond Grinding (Bridge Section)		Sq. Yd.	1,095	



**INSIDE ELEVATION OF PARAPET UNIT 5**  
West parapet shown, East parapet similar



**SECTION THRU PARAPET**



NEAR PIER

**CROSS SECTION**  
(Looking North)

NEAR MIDSPAN

Notes:

1. See Sheet SB-39 for Light Pole details.
2. See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
3. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

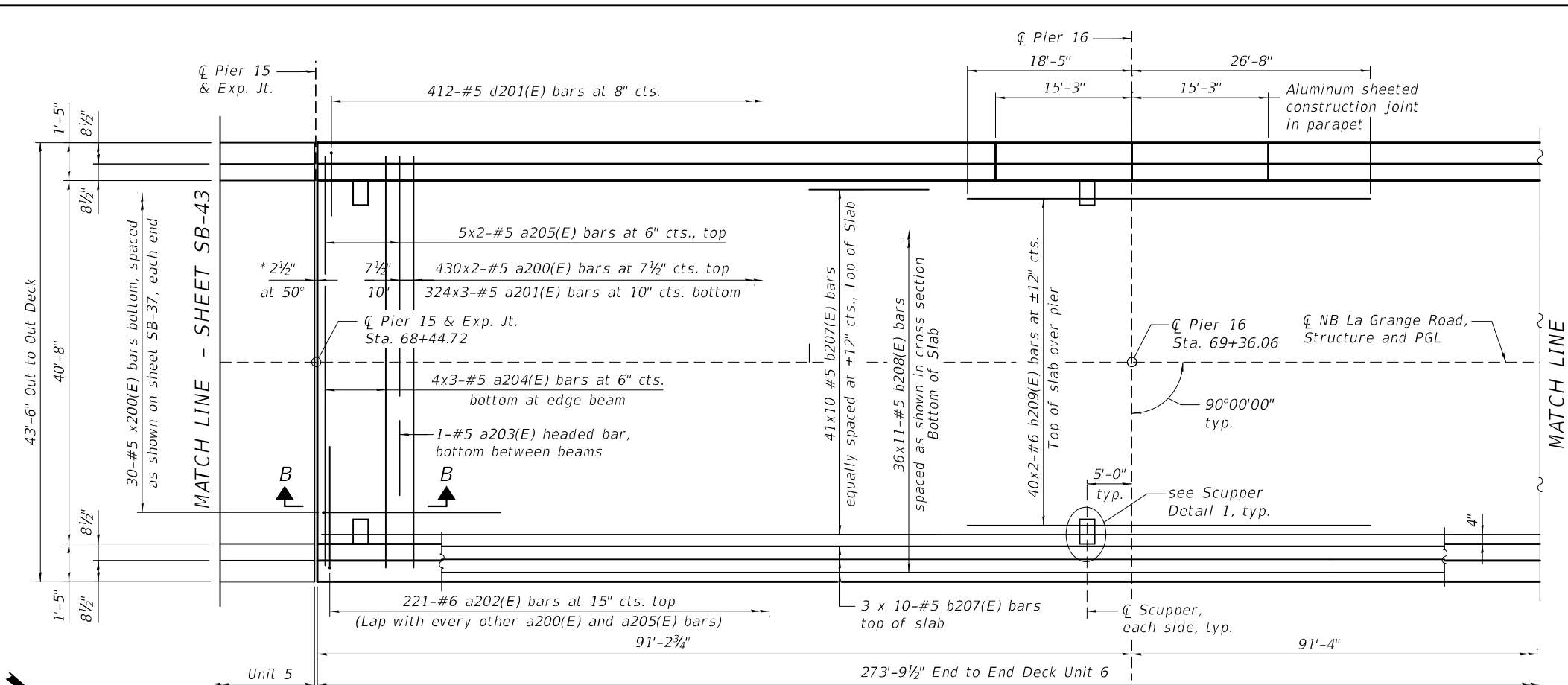
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE UNIT 5 DETAILS 1**  
**STRUCTURE NO. 016-2467**

SHEET SB-44 OF SB-104 SHEETS

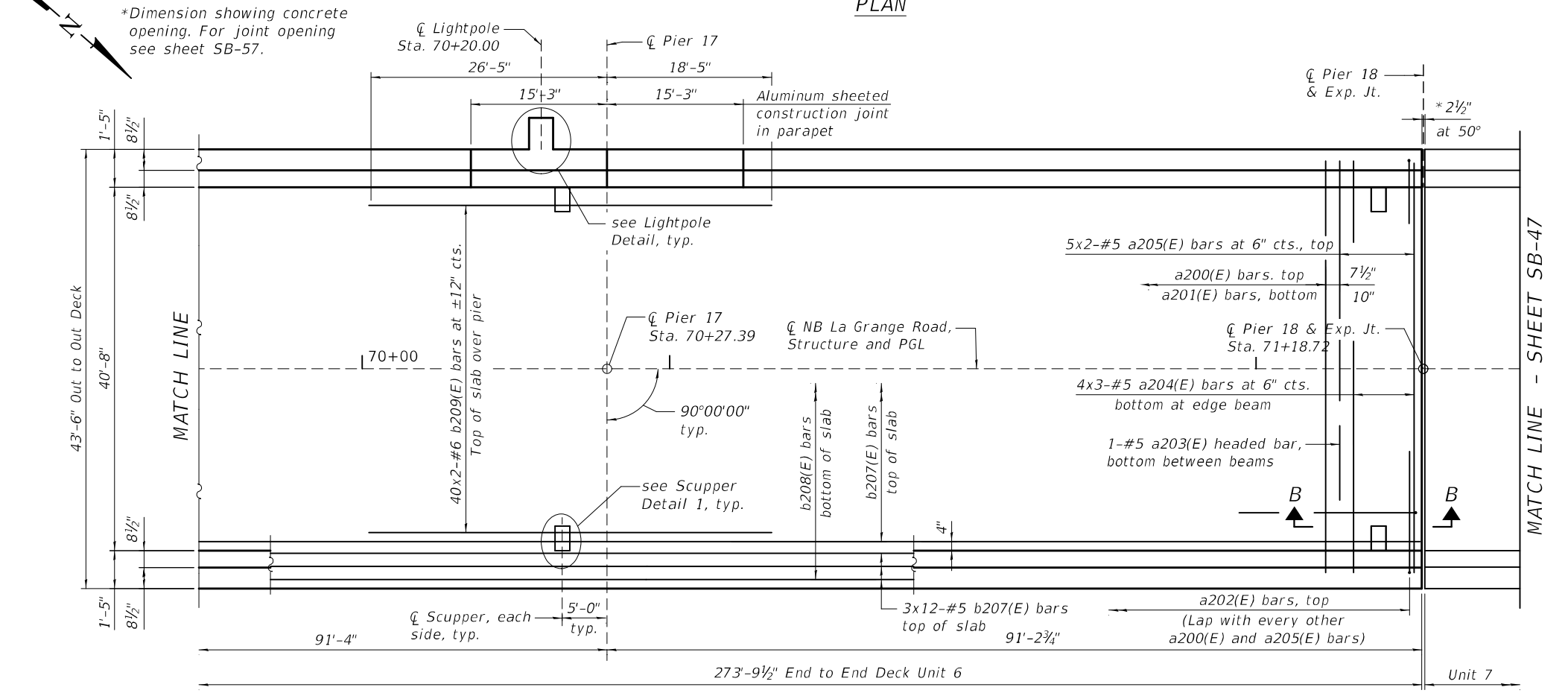
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ILLINOIS			CONTRACT NO. 62H49	

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PLAN

**MINIMUM BAR LAP**  
 #5 Bar = 3'-6"  
 #6 Bar = 4'-10"



PLAN

Notes:

1. See Sheet SB-46 for Cross Section, parapet reinforcement, superstructure details and Bill of Material.
2. See Sheet SB-37 for Section B-B.
3. See Sheet SB-39 for Scupper Detail 1 and Light Pole Detail.
4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 11/29/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 10/21/2021	REVISED -

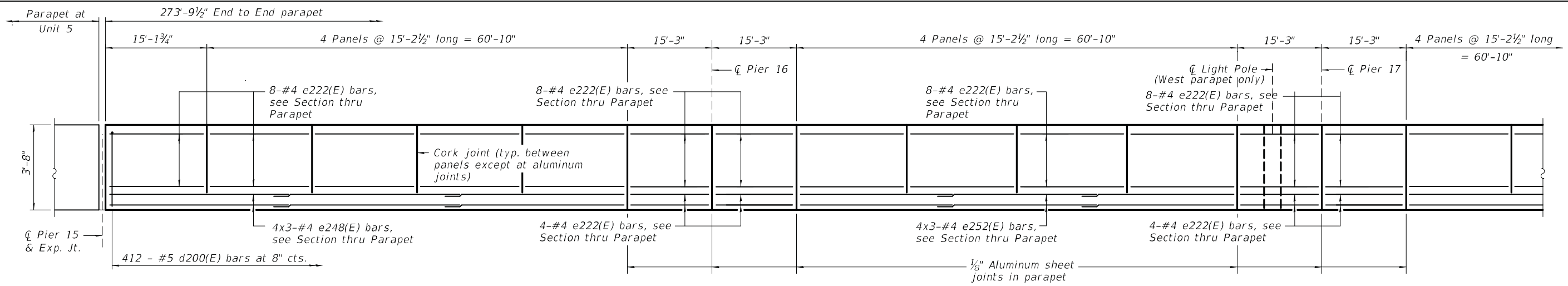
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN UNIT 6  
 STRUCTURE NO. 016-2467

SHEET SB-45 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	232
ILLINOIS			CONTRACT NO. 62H49	



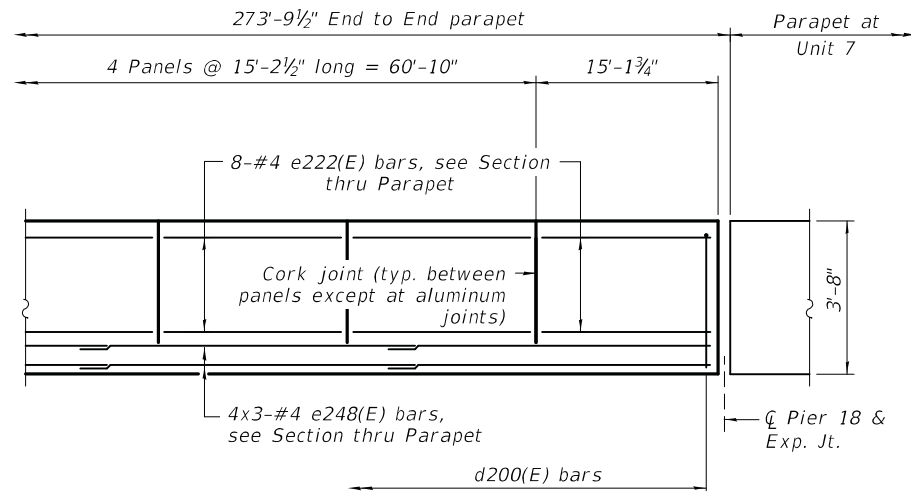


**INSIDE ELEVATION OF PARAPET UNIT 6**

West parapet shown, East parapet similar

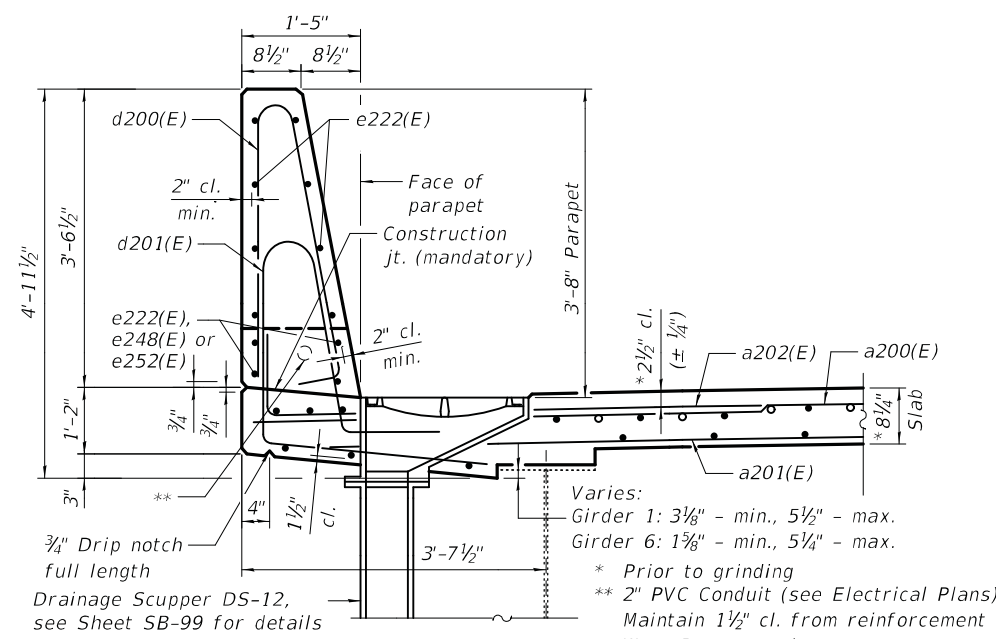
**MINIMUM BAR LAP**

#4 bar = 2'-5"

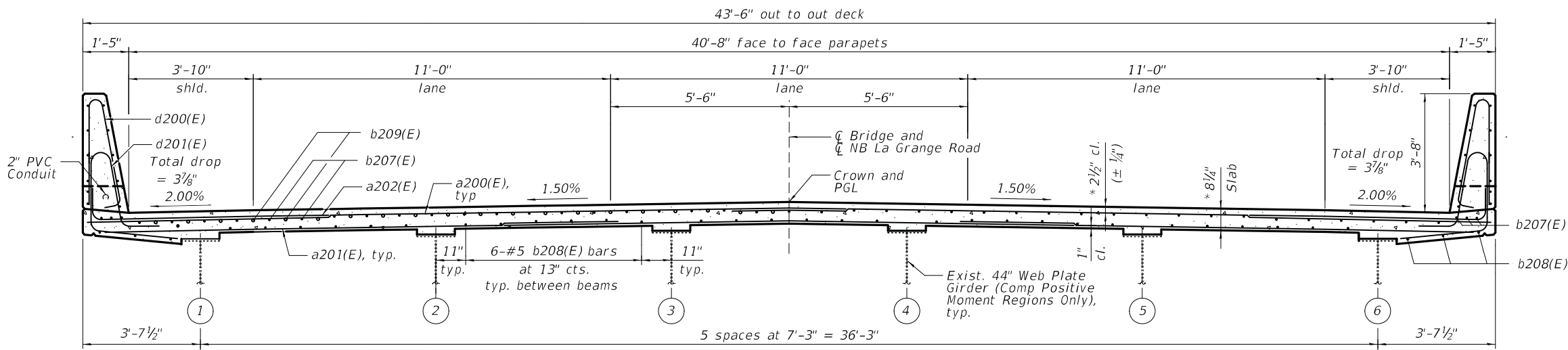


**INSIDE ELEVATION OF PARAPET UNIT 6**

West parapet shown, East parapet similar



**SECTION THRU PARAPET**



**CROSS SECTION**

(Looking North)

**SUPERSTRUCTURE UNIT 6**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	860	#5	23'-6"	—
a201(E)	972	#5	16'-4"	—
a202(E)	442	#6	8'-4"	└
a203(E)	10	#5	7'-0"	└
a204(E)	24	#5	16'-6"	—
a205(E)	20	#5	23'-9"	—
a206(E)	48	#5	2'-0"	—
b207(E)	470	#5	30'-7"	—
b208(E)	396	#5	28'-1"	—
b209(E)	160	#6	24'-10"	—
d200(E)	824	#5	7'-0"	└
d201(E)	824	#5	8'-10"	└
d202(E)	3	#6	5'-3"	└
d203(E)	7	#6	8'-11"	└
e222(E)	384	#4	14'-10"	—
e248(E)	48	#4	26'-10"	—
e252(E)	24	#4	21'-11"	—
x200(E)	60	#5	6'-3"	└
Concrete Superstructure		Cu. Yd.	444.4	
Protective Coat		Sq. Yd.	1,504	
Reinforcement Bars, Epoxy Coated		Pound	95,950	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	1,004	
Diamond Grinding (Bridge Section)		Sq. Yd.	1,116	

**Notes:**

1. See Sheet SB-39 for Light Pole details.
2. See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
3. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

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USER NAME = mc  
DESIGNED - E. VAYSMAN  
CHECKED - G. HATLESTAD  
PLOT SCALE = N/A  
DRAWN - E. VAYSMAN  
PLOT DATE = 10/21/2021  
DATE - 06/18/2021

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DEPARTMENT OF TRANSPORTATION

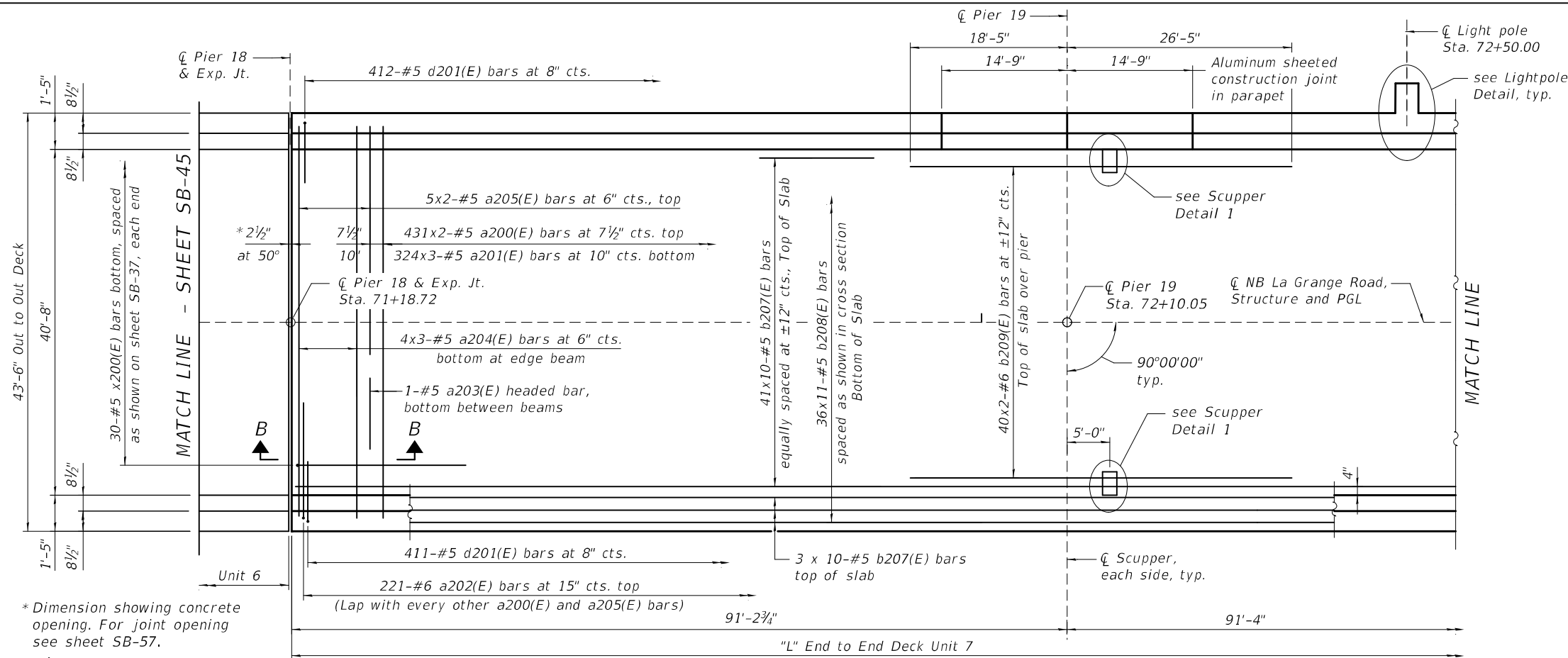
SUPERSTRUCTURE UNIT 6 DETAILS 1  
STRUCTURE NO. 016-2467

SHEET SB-46 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	233
			CONTRACT NO. 62H49	

ILLINOIS

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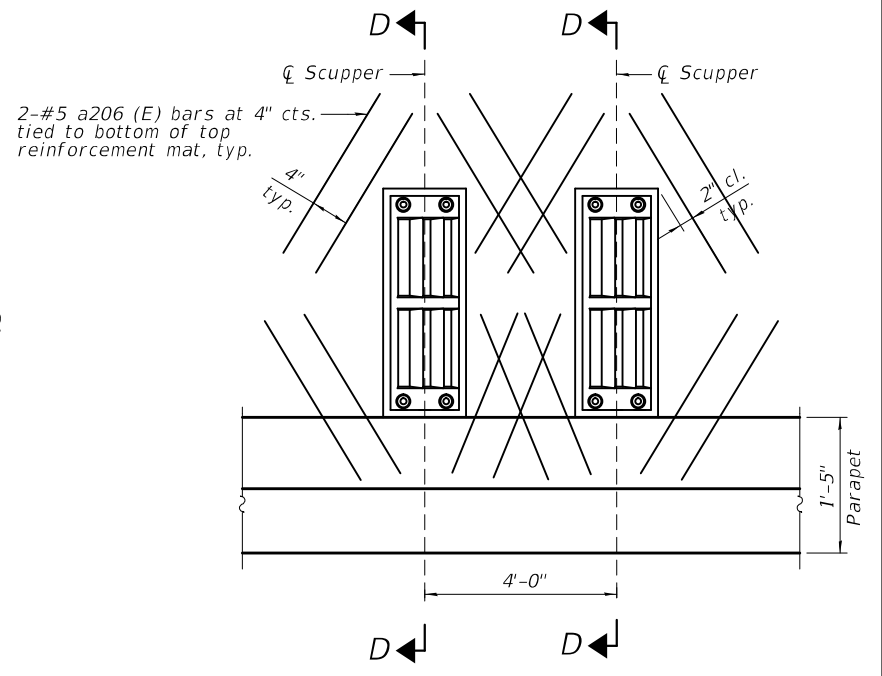
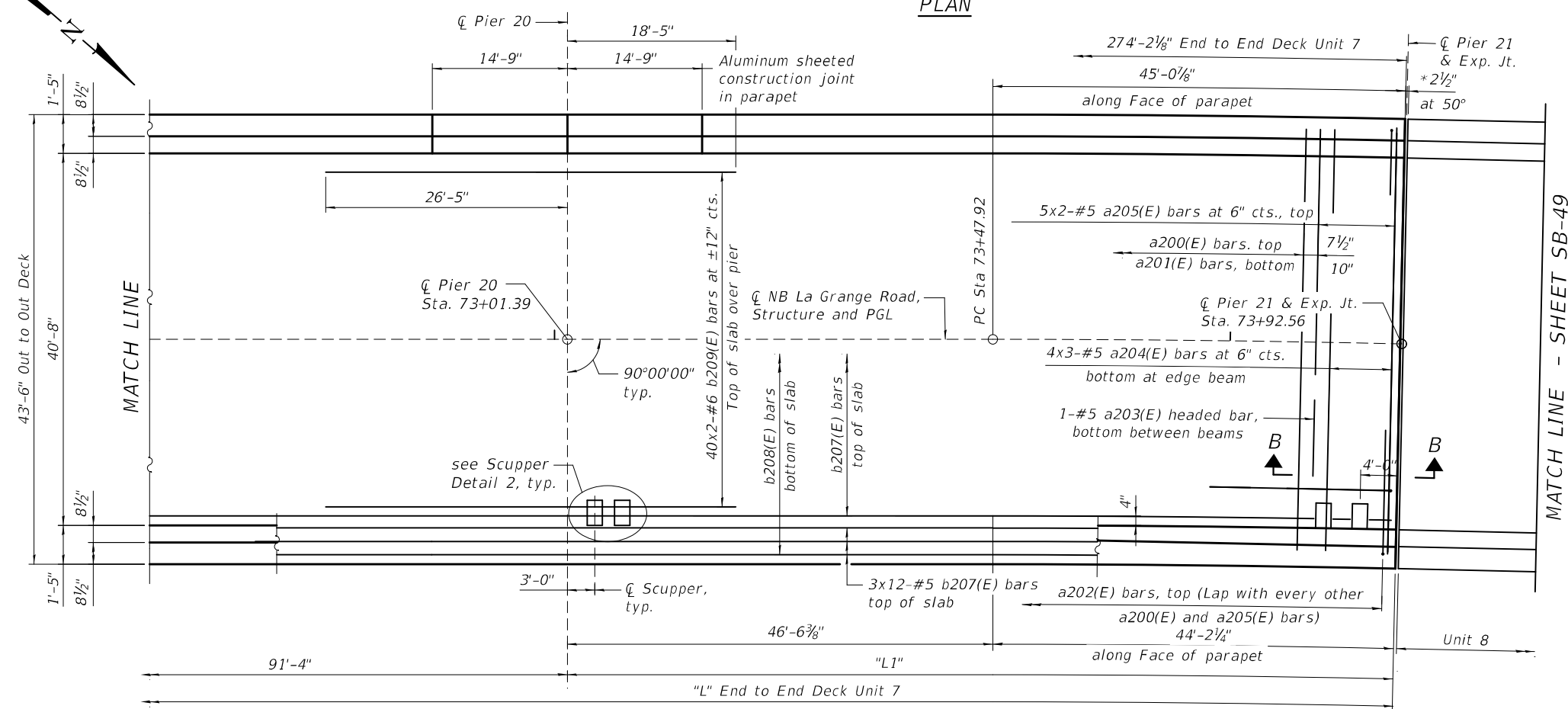
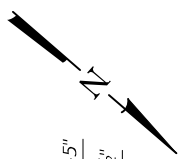


**MINIMUM BAR LAP**  
 #5 Bar = 3'-6"  
 #6 Bar = 4'-10"

**DIMENSION TABLE**

Measured along	L	L1
Face of West Parapet	274'-1 3/4"	91'-7"
CL NB La Grange Road	273'-7 1/2"	91'-0 3/4"
Face of East Parapet	273'-3 1/4"	90'-8 1/2"

\* Dimension showing concrete opening. For joint opening see sheet SB-57.



- Notes:
- See Sheet SB-48 for Cross Section, parapet reinforcement, superstructure details and Bill of Material.
  - See Sheet SB-37 for Section B-B.
  - See Sheet SB-39 for Scupper Detail 1, Section D-D and Light Pole Detail.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



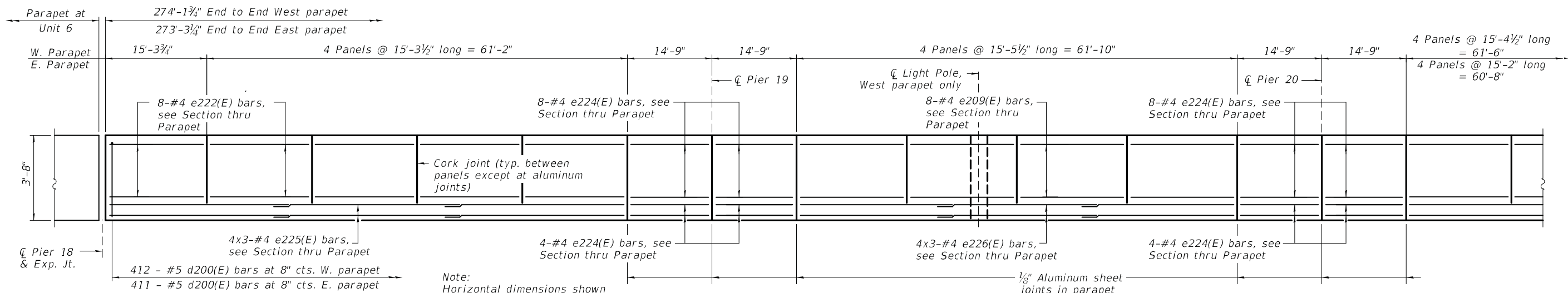
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PLOT DATE = 11/29/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 10/21/2021	REVISED -

STATE OF ILLINOIS  
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SUPERSTRUCTURE PLAN UNIT 7  
 STRUCTURE NO. 016-2467

SHEET SB-47 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	234
ILLINOIS			CONTRACT NO. 62H49	



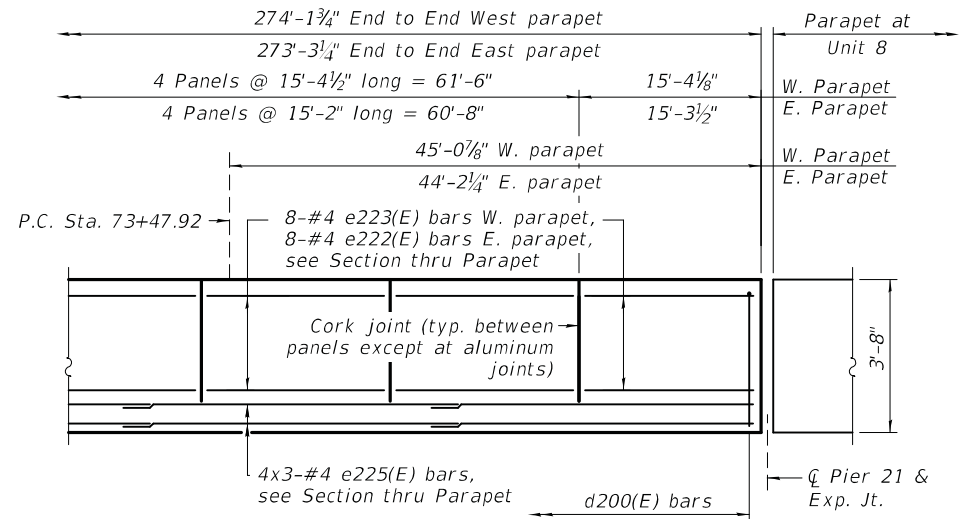
Note:  
Horizontal dimensions shown  
along inside face of parapet.

**INSIDE ELEVATION OF PARAPET UNIT 7**  
West parapet shown, East parapet similar

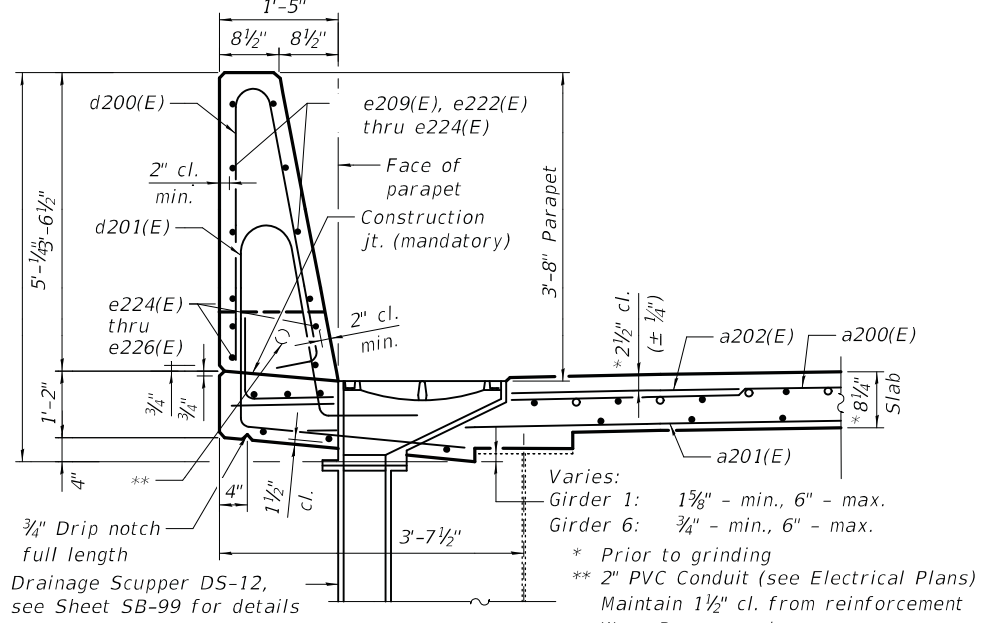
**MINIMUM BAR LAP**  
#4 bar = 2'-5"

**SUPERSTRUCTURE UNIT 7**  
**BILL OF MATERIAL**

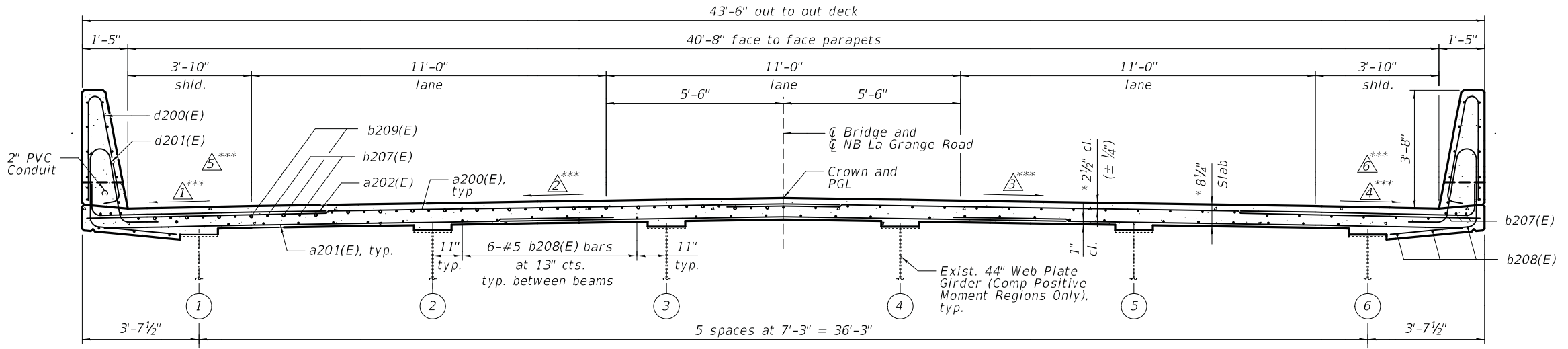
Bar	No.	Size	Length	Shape
a200(E)	862	#5	23'-6"	—
a201(E)	972	#5	16'-4"	—
a202(E)	442	#6	8'-4"	—
a203(E)	10	#5	7'-0"	—
a204(E)	24	#5	16'-6"	—
a205(E)	20	#5	23'-9"	—
a206(E)	48	#5	2'-0"	—
b207(E)	470	#5	30'-7"	—
b208(E)	396	#5	28'-1"	—
b209(E)	160	#6	24'-10"	—
d200(E)	823	#5	7'-0"	—
d201(E)	823	#5	8'-10"	—
d202(E)	3	#6	5'-3"	—
d203(E)	7	#6	8'-11"	—
e209(E)	64	#4	15'-1"	—
e222(E)	120	#4	14'-10"	—
e223(E)	40	#4	15'-0"	—
e224(E)	96	#4	14'-5"	—
e225(E)	48	#4	27'-3"	—
e226(E)	24	#4	22'-3"	—
x200(E)	60	#5	6'-3"	—
Concrete Superstructure		Cu. Yd.	447.4	
Protective Coat		Sq. Yd.	1,503	
Reinforcement Bars, Epoxy Coated		Pound	95,350	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	1,003	
Diamond Grinding (Bridge Section)		Sq. Yd.	1,115	



**INSIDE ELEVATION OF PARAPET UNIT 7**  
West parapet shown, East parapet similar



**SECTION THRU PARAPET**



**CROSS SECTION**  
(Looking North)

Horizontal dimensions measured radial to the  $\phi$  NB La Grange Road

- Notes:
1. See Sheet SB-39 for Light Pole details.
  2. See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
  3. Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

\*\*\* see sheet SB-50

MODEL: Default  
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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

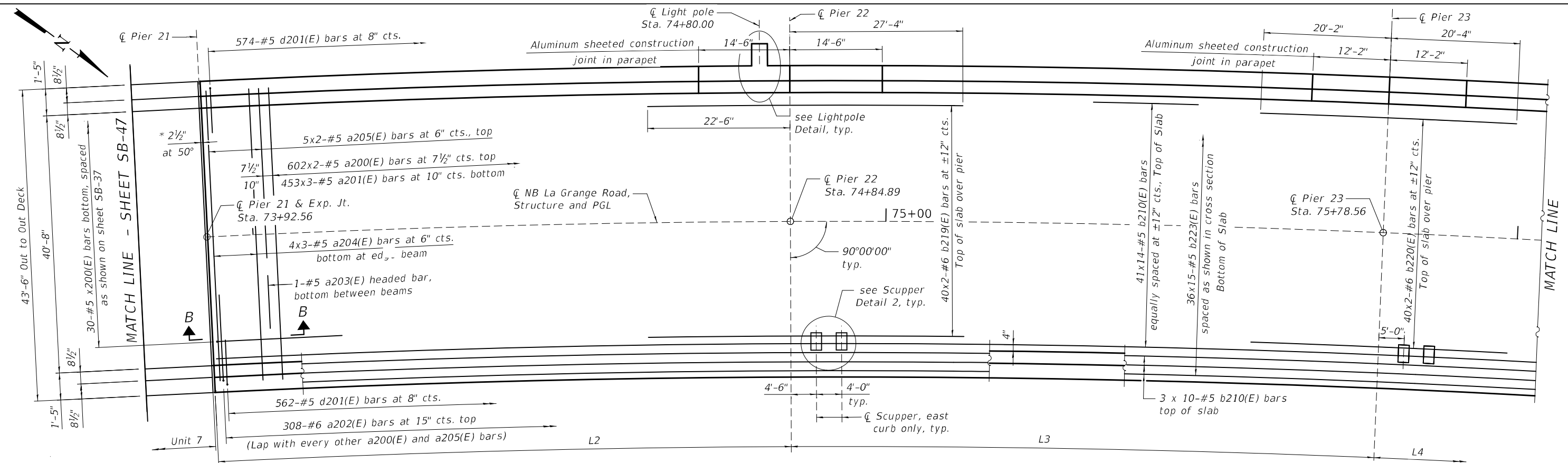
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE UNIT 7 DETAILS 1**  
**STRUCTURE NO. 016-2467**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	235
			CONTRACT NO. 62H49	
ILLINOIS				

SHEET SB-48 OF SB-104 SHEETS

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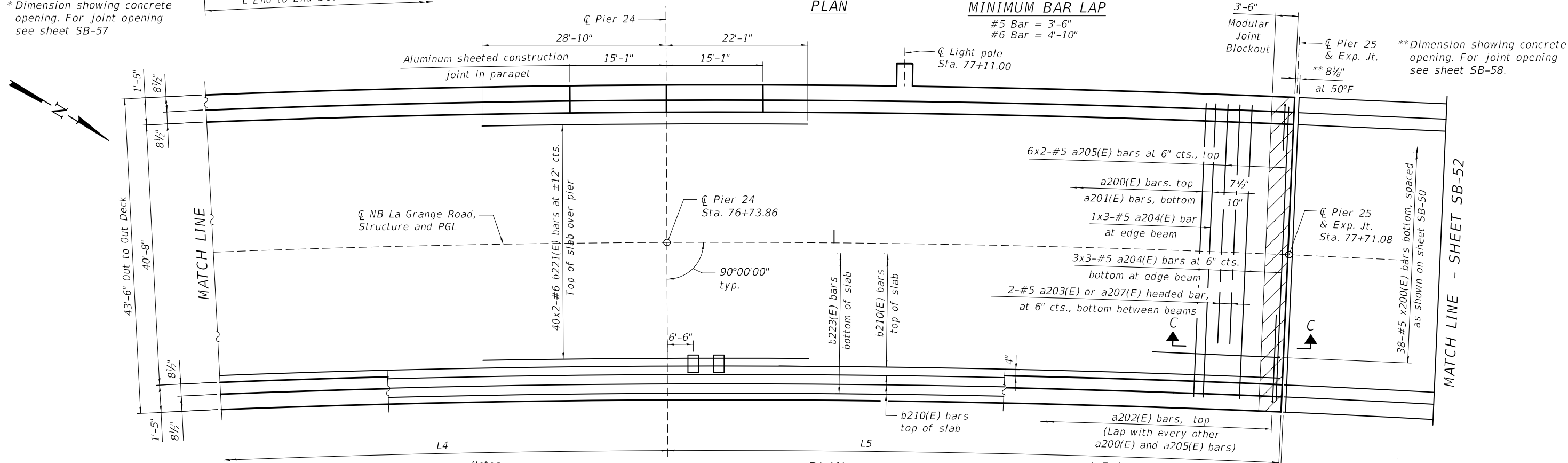


\* Dimension showing concrete opening. For joint opening see sheet SB-57

PLAN

MINIMUM BAR LAP

#5 Bar = 3'-6"  
 #6 Bar = 4'-10"



\*\* Dimension showing concrete opening. For joint opening see sheet SB-58.

PLAN

DIMENSION TABLE

Measured along	L	L2	L3	L4	L5
Face of West Parapet	381'-10 <sup>1</sup> / <sub>8</sub> "	93'-1 <sup>3</sup> / <sub>8</sub> "	94'-7 <sup>1</sup> / <sub>4</sub> "	96'-3"	97'-10 <sup>1</sup> / <sub>4</sub> "
☐ La Grange Road	378'-1"	92'-2 <sup>3</sup> / <sub>4</sub> "	93'-8 <sup>1</sup> / <sub>8</sub> "	95'-3 <sup>3</sup> / <sub>8</sub> "	96'-10 <sup>3</sup> / <sub>8</sub> "
Face of East Parapet	374'-3 <sup>1</sup> / <sub>8</sub> "	91'-3 <sup>3</sup> / <sub>4</sub> "	92'-8 <sup>1</sup> / <sub>8</sub> "	94'-4 <sup>1</sup> / <sub>4</sub> "	95'-11"

Notes:

- See Sheet SB-50 for Cross Section and Section C-C.
- See Sheet SB-51 for parapet reinforcement, superstructure details and Bill of Material
- See Sheet SB-37 for Section B-B.
- See Sheet SB-39 for Light pole details.
- See Sheet SB-47 for Scupper Details 2.
- Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



USER NAME = mc  
 PLOT SCALE = N/A  
 PLOT DATE = 11/29/2021

DESIGNED - E. VAYSMAN  
 CHECKED - G. HATLESTAD  
 DRAWN - E. VAYSMAN  
 DATE - 10/21/2021

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

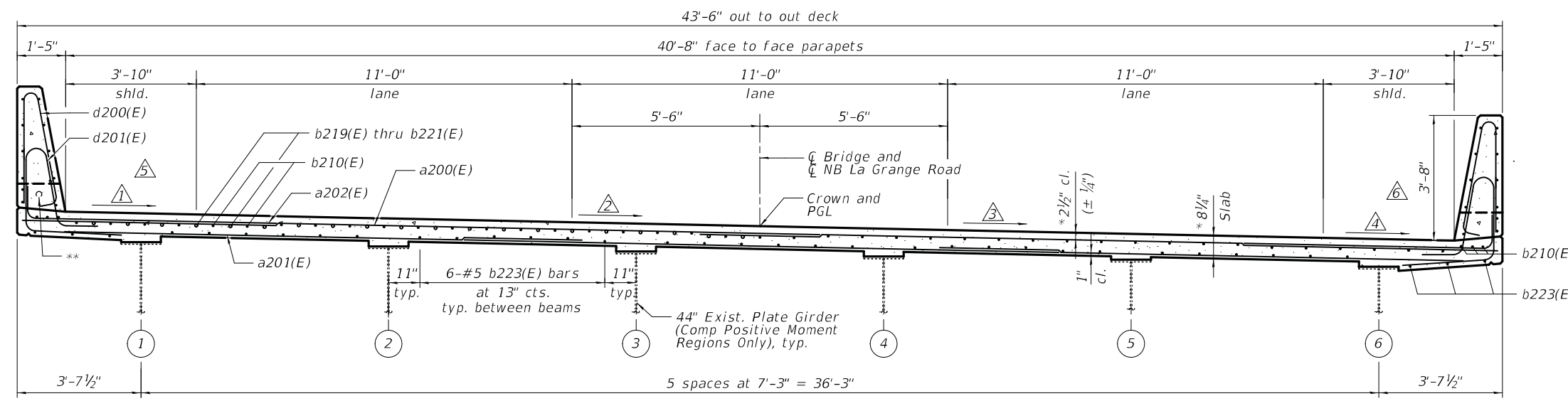
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN UNIT 8  
 STRUCTURE NO. 016-2467

SHEET SB-49 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	236
ILLINOIS			CONTRACT NO. 62H49	





\* Prior to grinding  
 \*\* 2" PVC Conduit (see Electrical Plans)  
 Maintain 1 1/2" cl. from reinforcement  
 West parapet only

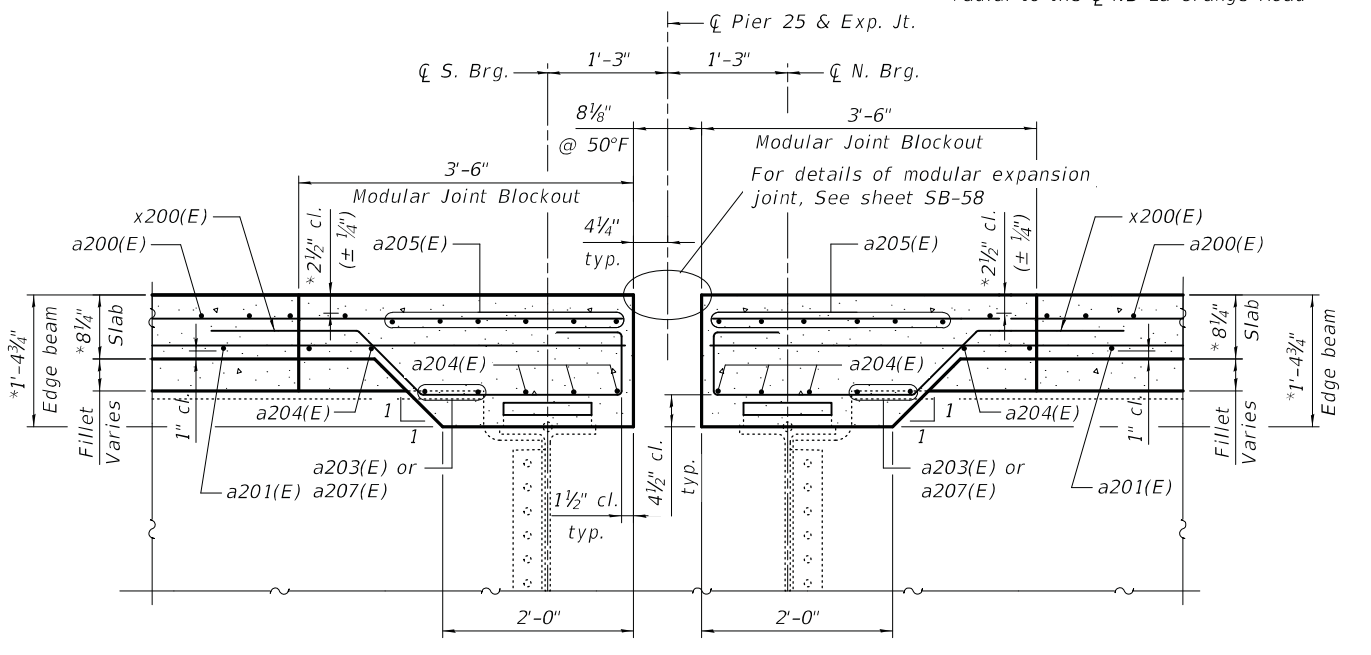
NEAR PIER

**CROSS SECTION**  
 (Looking North)

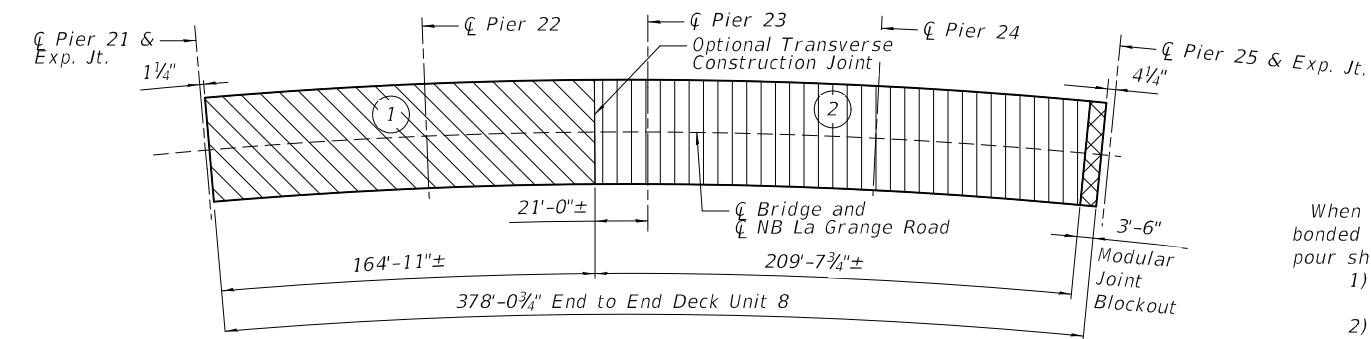
Horizontal dimensions measured radial to the centerline of NB La Grange Road

NEAR MIDSPAN

Stationing: Sta. 71+18.72 - Sta. 72+47.02	Stationing: Sta. 71+18.72 - Sta. 72+60.35
Grade: 2.00%	Grade: 1.50%
Varies from 2.00% to 1.50% Sta. 72+47.02 - Sta. 72+60.35	Varies from 1.50% to 0.00% Sta. 72+60.35 - Sta. 72+97.65
Varies from 1.50% to 0.00% Sta. 72+60.35 - Sta. 72+97.65	Varies from 0.00% to -1.50% Sta. 72+97.65 - Sta. 73+34.96
Varies from 0.00% to -1.50% Sta. 72+97.65 - Sta. 73+34.96	Varies from -1.50% to -2.00% Sta. 73+34.96 - Sta. 73+47.39
Varies from -1.50% to -2.00% Sta. 73+34.96 - Sta. 73+47.39	Varies from -2.00% to -4.20% Sta. 73+47.39 - Sta. 73+97.92
Varies from -2.00% to -4.20% Sta. 73+47.39 - Sta. 73+97.92	-4.20% Sta. 73+97.92 - Sta. 77+71.08
-4.20% Sta. 73+97.92 - Sta. 77+71.08	
-1.50% Sta. 71+18.72 - Sta. 73+34.96	-2.00% Sta. 71+18.72 - Sta. 73+47.39
Varies from -1.50% to -2.00% Sta. 73+34.96 - Sta. 73+47.39	Varies from -2.00% to -4.20% Sta. 73+47.39 - Sta. 73+97.92
Varies from -2.00% to -4.20% Sta. 73+47.39 - Sta. 73+97.92	-4.20% Sta. 73+97.92 - Sta. 77+71.08
-4.20% Sta. 73+97.92 - Sta. 77+71.08	

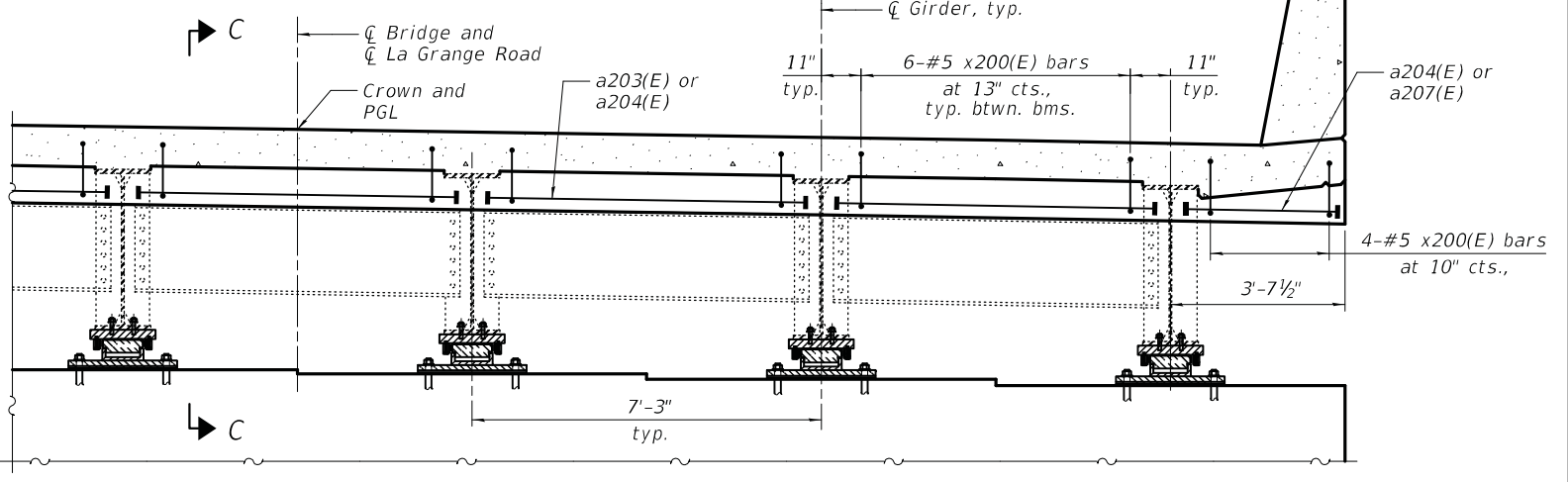


**SECTION C-C**



All dimensions measured along centerline of NB La Grange Road

**OPTIONAL DECK POURING SEQUENCE**



**DIAPHRAGM AT PIER 25**

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

- 1) At least 72 hours shall have elapsed from the end of the previous pour.
- 2) The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compressive strength of 4,000 psi.

- Notes:
1. See Sheets SB-49 and SB-52 for location of Section C-C.
  2. See Sheet SB-51 for parapet reinforcement, superstructure details and Bill of Material.

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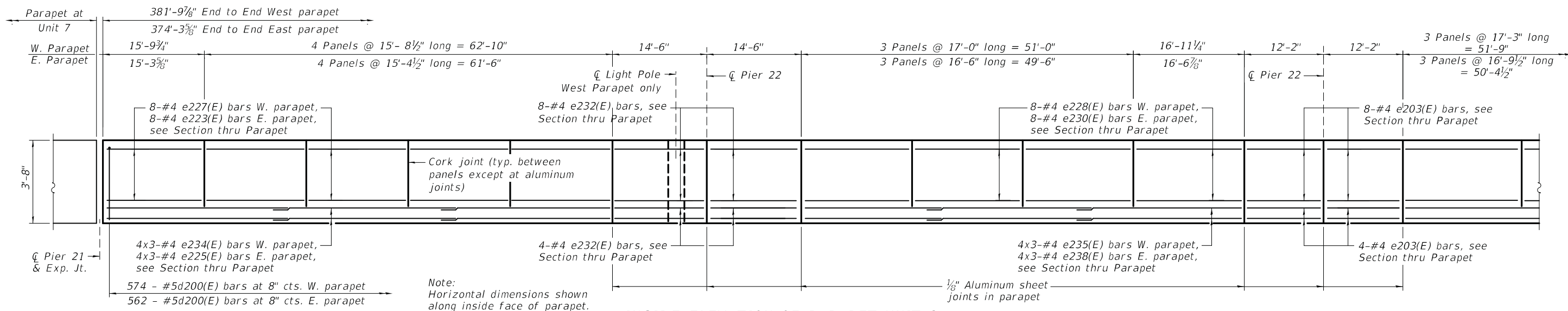
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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE UNIT 8 DETAILS 1  
 STRUCTURE NO. 016-2467**

SHEET SB-50 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 237
CONTRACT NO. 62H49			ILLINOIS	



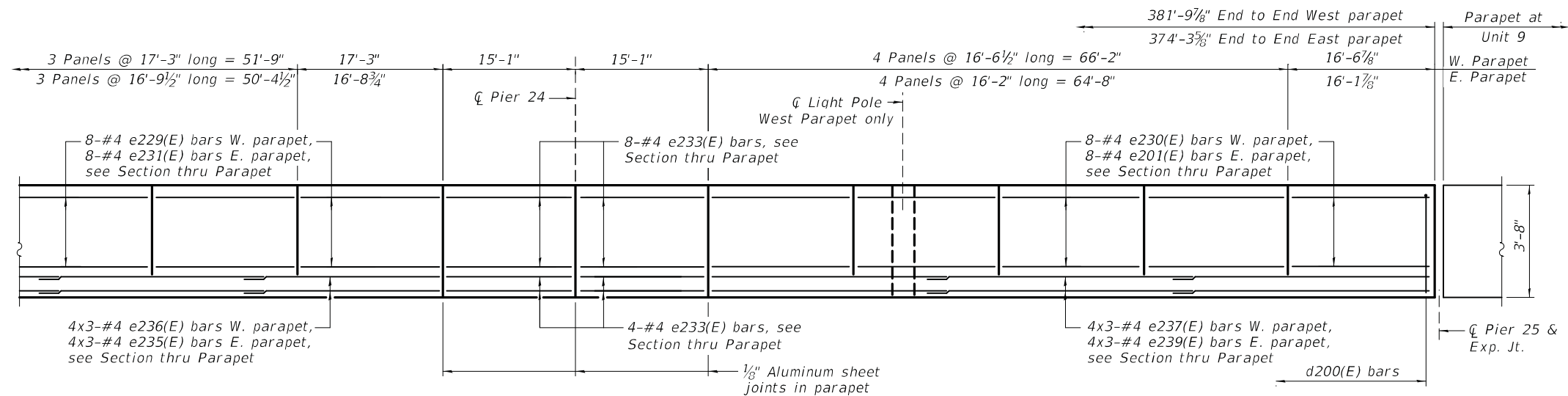
**INSIDE ELEVATION OF PARAPET UNIT 8**

West parapet shown, East parapet similar

**SUPERSTRUCTURE UNIT 8**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	1204	#5	23'-6"	—
a201(E)	1359	#5	16'-4"	—
a202(E)	616	#6	8'-4"	—
a203(E)	15	#5	7'-0"	—
a204(E)	24	#5	16'-6"	—
a205(E)	22	#5	23'-9"	—
a206(E)	48	#5	2'-0"	—
a207(E)	4	#5	3'-3"	—
b210(E)	658	#5	31'-1"	—
b219(E)	80	#6	27'-4"	—
b220(E)	80	#6	22'-8"	—
b221(E)	80	#6	27'-11"	—
b223(E)	540	#5	29'-3"	—
d200(E)	1136	#5	7'-0"	—
d201(E)	1136	#5	8'-10"	—
d202(E)	6	#6	5'-3"	—
d203(E)	14	#6	8'-11"	—
e201(E)	32	#4	15'-9"	—
e203(E)	48	#4	11'-10"	—
e223(E)	40	#4	15'-0"	—
e225(E)	12	#4	27'-3"	—
e227(E)	40	#4	15'-4"	—
e228(E)	32	#4	16'-8"	—
e229(E)	32	#4	16'-11"	—
e230(E)	72	#4	16'-1"	—
e231(E)	32	#4	16'-5"	—
e232(E)	48	#4	14'-2"	—
e233(E)	48	#4	14'-9"	—
e234(E)	12	#4	27'-10"	—
e235(E)	24	#4	24'-3"	—
e236(E)	12	#4	24'-9"	—
e237(E)	12	#4	29'-2"	—
e238(E)	12	#4	23'-8"	—
e239(E)	12	#4	28'-7"	—
x200(E)	68	#5	6'-3"	—
Concrete Superstructure		Cu. Yd.	617.5	
Protective Coat		Sq. Yd.	2,076	
Reinforcement Bars, Epoxy Coated		Pound	134,140	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	1,386	
Diamond Grinding (Bridge Section)		Sq. Yd.	1,541	

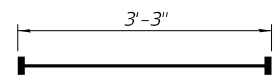


**INSIDE ELEVATION OF PARAPET UNIT 8**

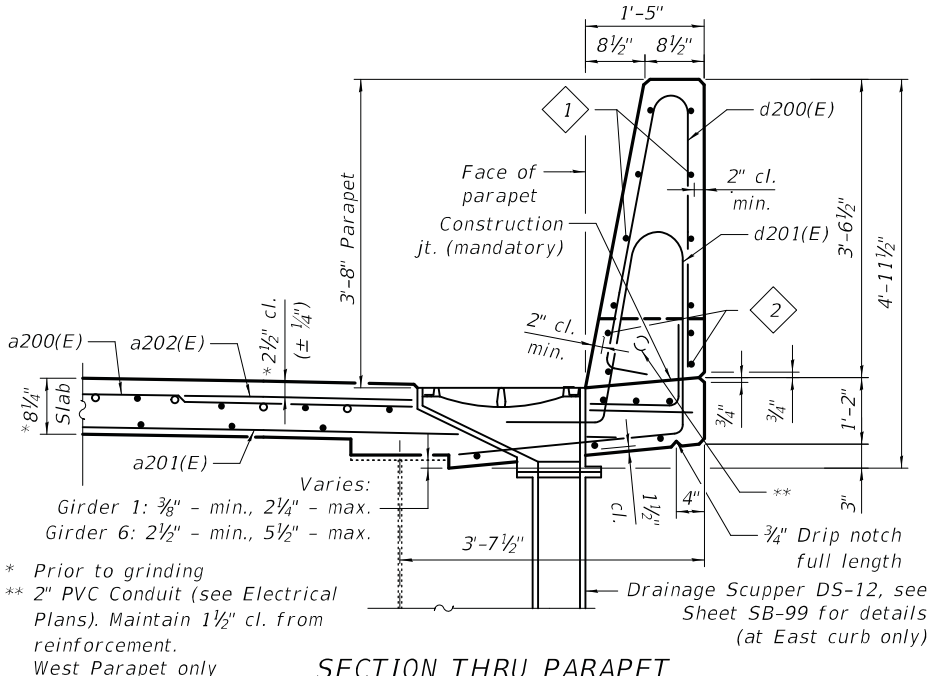
West parapet shown, East parapet similar

**MINIMUM BAR LAP**

#4 bar = 2'-5"



**BAR a207(E)**  
(Headed)



**SECTION THRU PARAPET**

- 1 e203(E), e227(E) thru e230(E), e232(E) and e233(E) bars W. parapet
- e201(E), e203(E), e223(E), e230(E) thru e233(E) bars E. parapet
- 2 e203(E), e232(E) thru e237(E) bars W. parapet
- e203(E), e225(E), e232(E), e233(E), e235(E), e238(E) and e239(E) bars E. parapet

- Notes:
- See Sheet SB-39 for Light Pole details.
  - See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
  - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

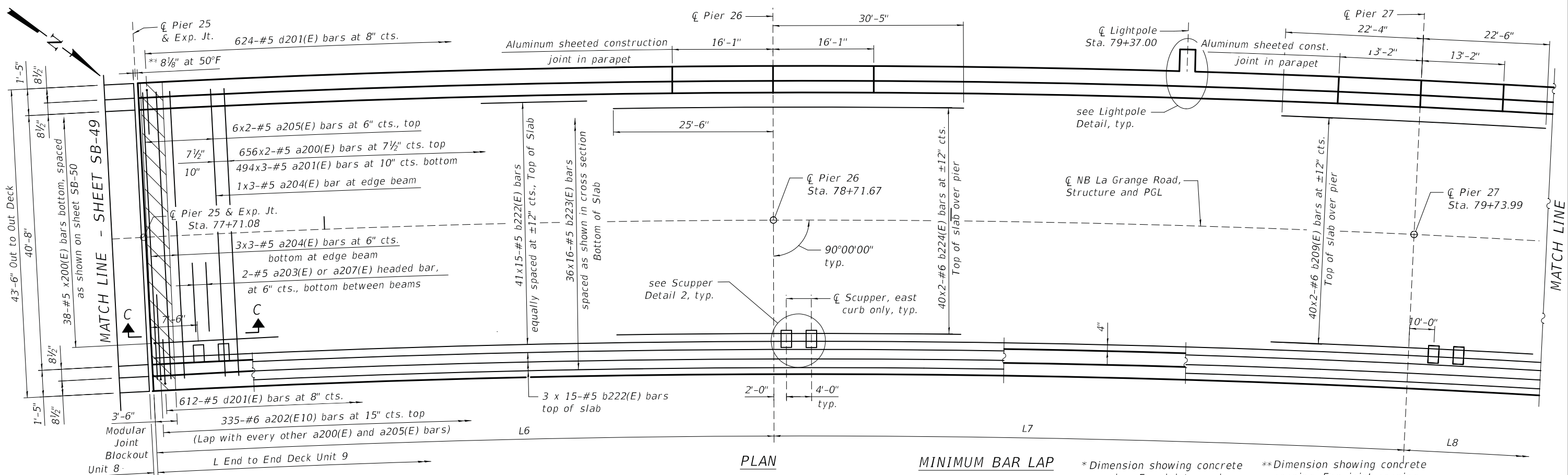
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE UNIT 8 DETAILS 2**  
**STRUCTURE NO. 016-2467**

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 238
			CONTRACT NO. 62H49	
ILLINOIS				

SHEET SB-51 OF SB-104 SHEETS

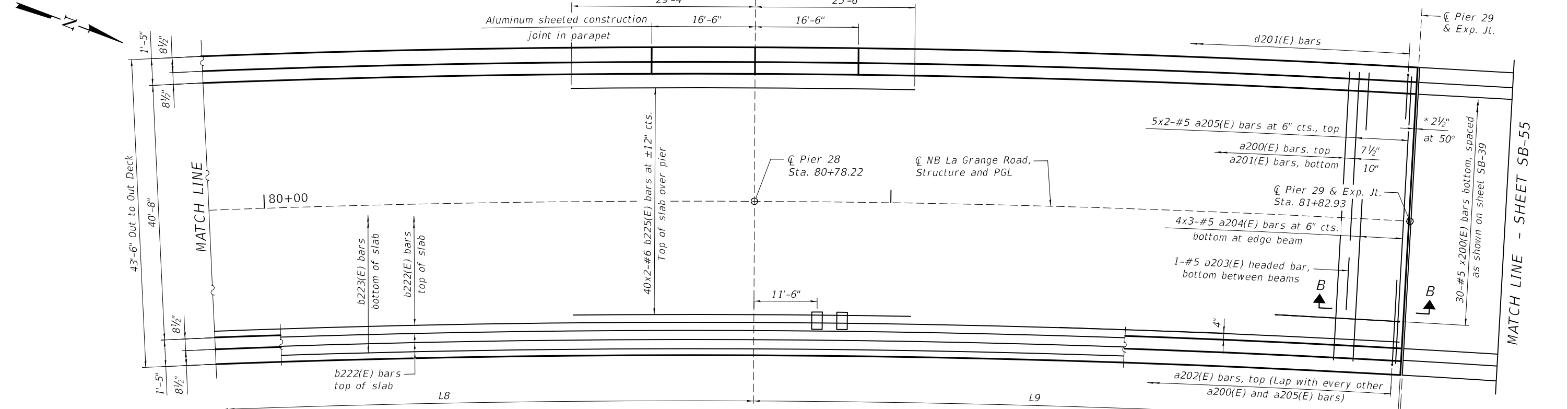
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PLAN

MINIMUM BAR LAP

#5 Bar = 3'-6"  
 #6 Bar = 4'-10"  
 \*Dimension showing concrete opening. For joint opening see sheet SB-57.  
 \*\*Dimension showing concrete opening. For joint opening see sheet SB-58.



PLAN

DIMENSION TABLE

Measured along	L	L6	L7	L8	L9
Face of West Parapet	415'-6"	101'-3"	103'-4"	105'-3 1/4"	105'-7 3/4"
☐ La Grange Road	411'-5 1/8"	100'-3"	102'-3 3/8"	104'-2 3/4"	104'-7 1/2"
Face of East Parapet	407'-3 3/4"	99'-3"	101'-3 3/8"	103'-2 1/4"	103'-6 1/4"

- Notes:
- See Sheet SB-53 for Cross Section and Section C-C.
  - See Sheet SB-54 for parapet reinforcement, superstructure details and Bill of Material
  - See Sheet SB-37 for Section B-B.
  - See Sheet SB-50 for Section C-C.
  - See Sheet SB-39 for Light pole details.
  - See Sheet SB-47 for Scupper Details 2.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



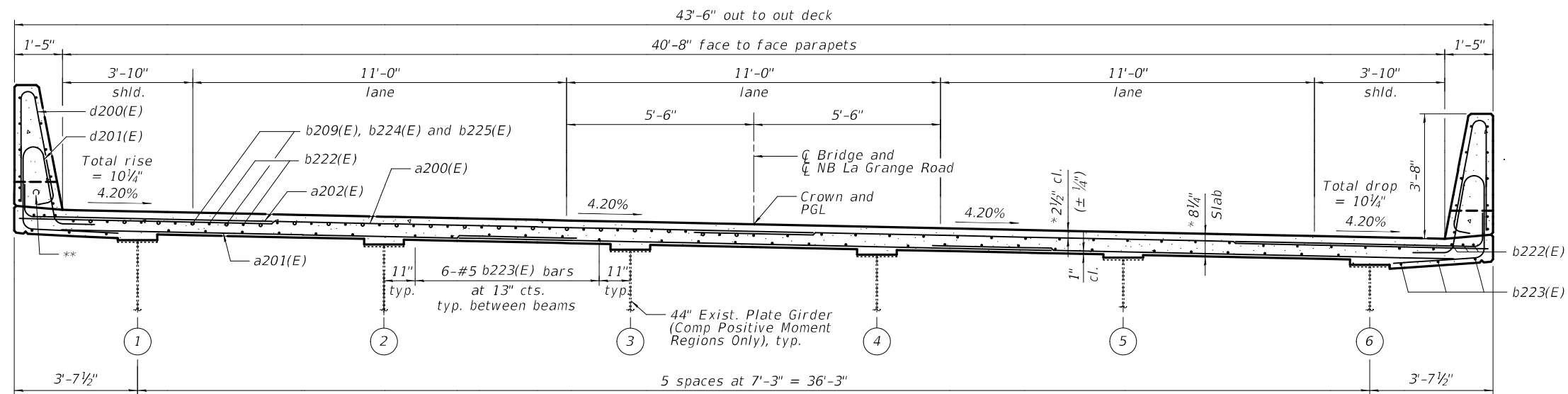
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PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN UNIT 9  
 STRUCTURE NO. 016-2467

SHEET SB-52 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 239
ILLINOIS			CONTRACT NO. 62H49	



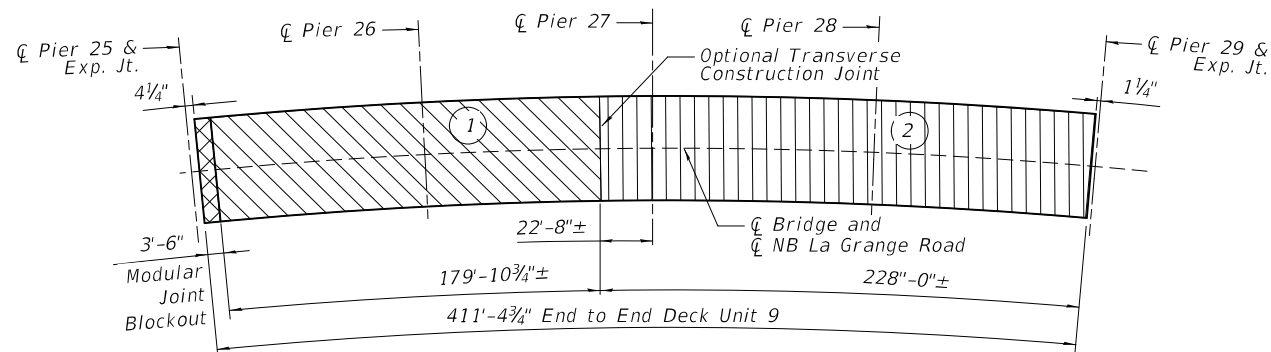
\* Prior to grinding  
 \*\* 2" PVC Conduit (see Electrical Plans)  
 Maintain 1 1/2" cl. from reinforcement  
 West parapet only

NEAR PIER

**CROSS SECTION**

(Looking North)  
 Horizontal dimensions measured  
 radial to the  $\text{CL}$  NB La Grange Road

NEAR MIDSPAN



All dimensions measured along  $\text{CL}$  NB La Grange Road

**OPTIONAL DECK POURING SEQUENCE**

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

- 1) At least 72 hours shall have elapsed from the end of the previous pour.
- 2) The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compressive strength of 4,000 psi.

Notes:

1. See Sheet SB-54 for parapet reinforcement, superstructure details and Bill of Material.

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	DATE - 06/18/2021	REVISED -

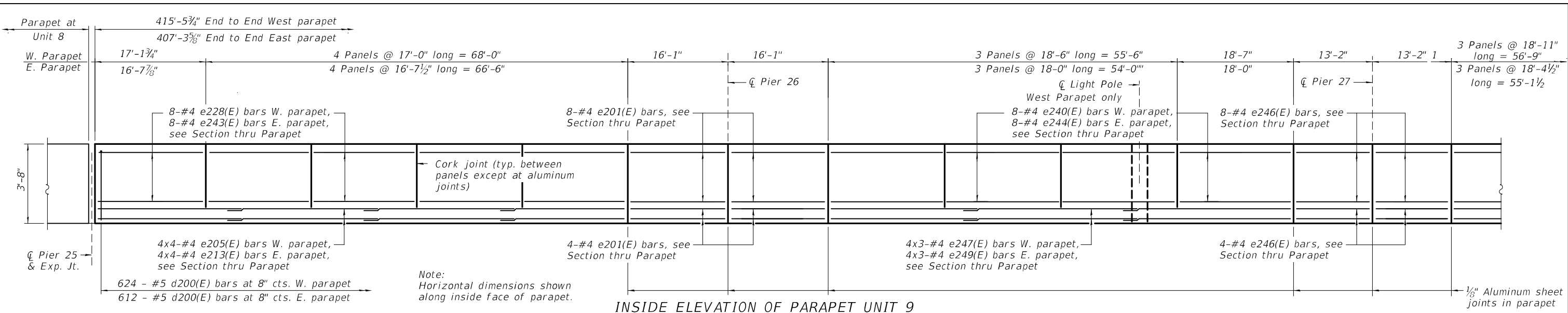
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE UNIT 9 DETAILS 1**  
**STRUCTURE NO. 016-2467**

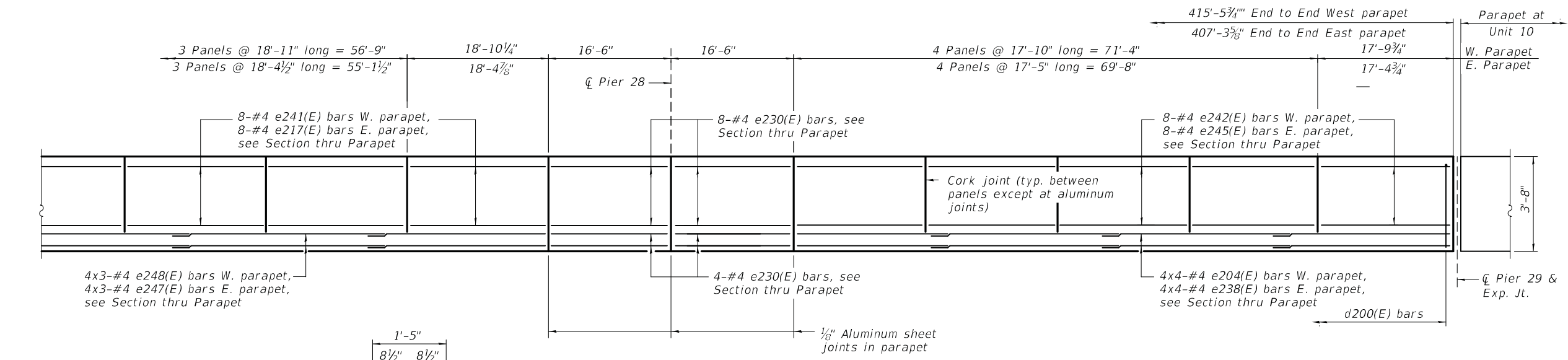
SHEET SB-53 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 62H49	
ILLINOIS				

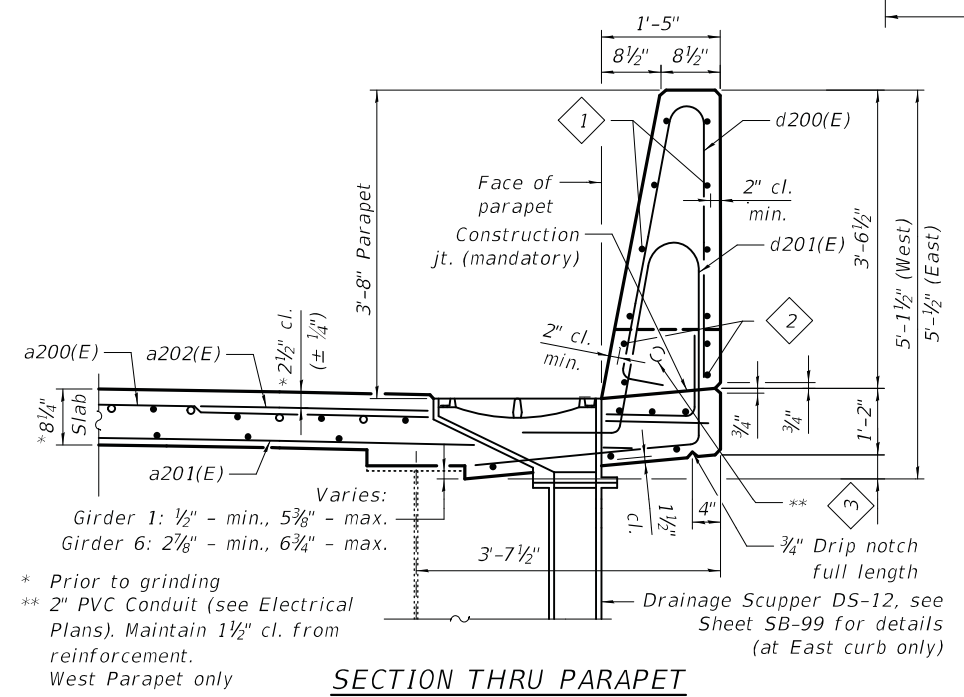




**INSIDE ELEVATION OF PARAPET UNIT 9**  
West parapet shown, East parapet similar



**INSIDE ELEVATION OF PARAPET UNIT 9**  
West parapet shown, East parapet similar

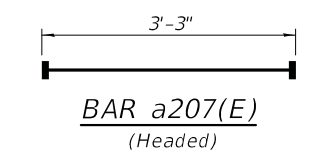


**SECTION THRU PARAPET**

\* Prior to grinding  
\*\* 2" PVC Conduit (see Electrical Plans). Maintain 1 1/2" cl. from reinforcement.  
West Parapet only

- 1 e201(E), e228(E), e230(E), e240(E) thru e242(E) and e246(E) bars W. parapet
- e201(E), e217(E), e230(E), e243(E) thru e246(E) bars E. parapet
- 2 e201(E), e204(E), e205(E), e230(E), e246(E) thru e248(E) bars W. parapet
- e201(E), e213(E), e230(E), e238(E), e246(E), e247(E) and e249(E) bars E. parapet
- 3 5" (West)  
4" (East)

**MINIMUM BAR LAP**  
#4 bar = 2'-5"



- Notes:
- See Sheet SB-39 for Light Pole details.
  - See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
  - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

**SUPERSTRUCTURE UNIT 9**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	1312	#5	23'-6"	—
a201(E)	1482	#5	16'-4"	—
a202(E)	670	#6	8'-4"	—
a203(E)	15	#5	7'-0"	—
a204(E)	24	#5	16'-6"	—
a205(E)	22	#5	23'-9"	—
a206(E)	64	#5	2'-0"	—
a207(E)	4	#5	3'-3"	—
b209(E)	88	#6	24'-10"	—
b222(E)	705	#5	31'-0"	—
b223(E)	576	#5	29'-3"	—
b224(E)	80	#6	30'-5"	—
b225(E)	80	#6	29'-10"	—
d200(E)	1236	#5	7'-0"	—
d201(E)	1236	#5	8'-10"	—
d202(E)	3	#6	5'-3"	—
d203(E)	7	#6	8'-11"	—
e201(E)	48	#4	15'-9"	—
e204(E)	16	#4	24'-1"	—
e205(E)	16	#4	23'-2"	—
e213(E)	16	#4	22'-10"	—
e217(E)	32	#4	17'-11"	—
e228(E)	40	#4	16'-8"	—
e230(E)	48	#4	16'-1"	—
e238(E)	16	#4	23'-8"	—
e240(E)	32	#4	18'-2"	—
e241(E)	32	#4	18'-6"	—
e242(E)	40	#4	17'-5"	—
e243(E)	40	#4	16'-3"	—
e244(E)	32	#4	17'-8"	—
e245(E)	40	#4	17'-0"	—
e246(E)	48	#4	12'-10"	—
e247(E)	24	#4	26'-4"	—
e248(E)	12	#4	26'-10"	—
e249(E)	12	#4	25'-8"	—
x200(E)	68	#5	6'-3"	—
Concrete Superstructure		Cu. Yd.	657.5	
Protective Coat		Sq. Yd.	2,259	
Reinforcement Bars, Epoxy Coated		Pound	145,490	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	1,508	
Diamond Grinding (Bridge Section)		Sq. Yd.	1,677	

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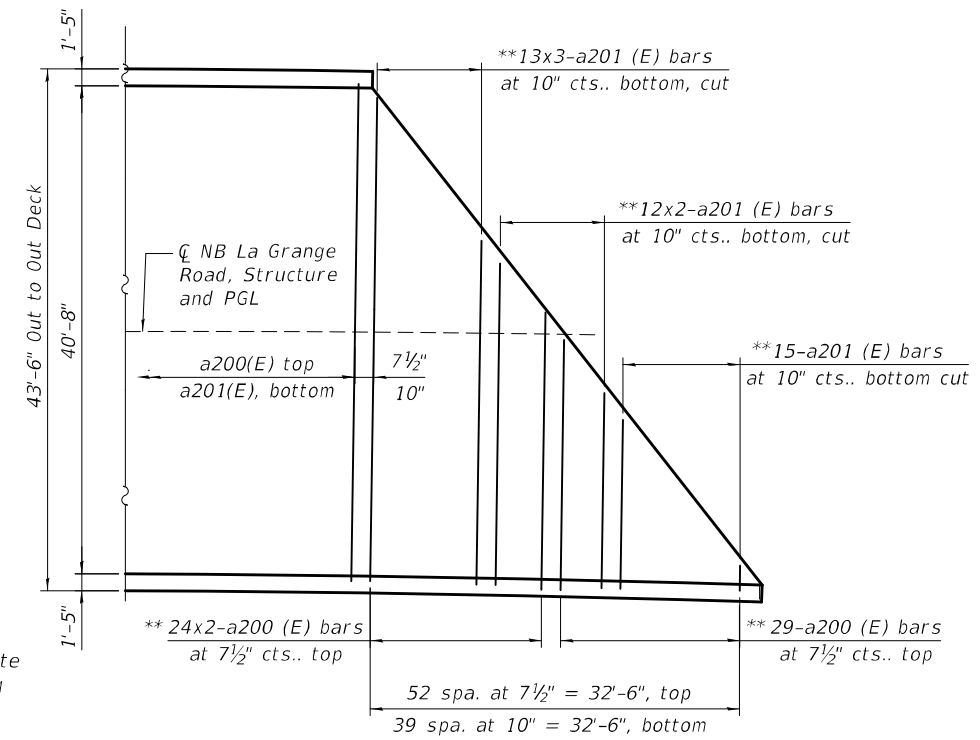
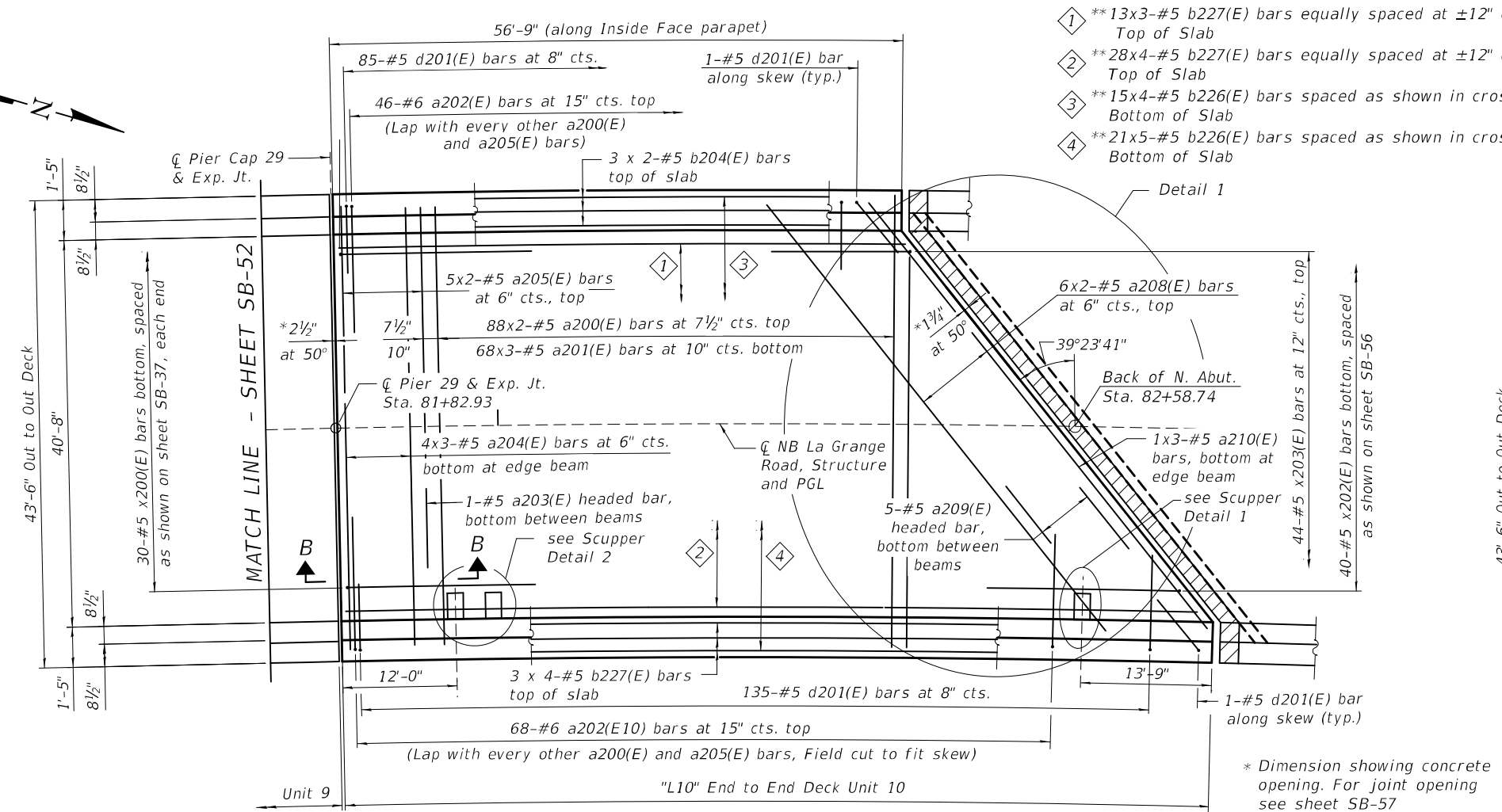
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**DIMENSION TABLE**

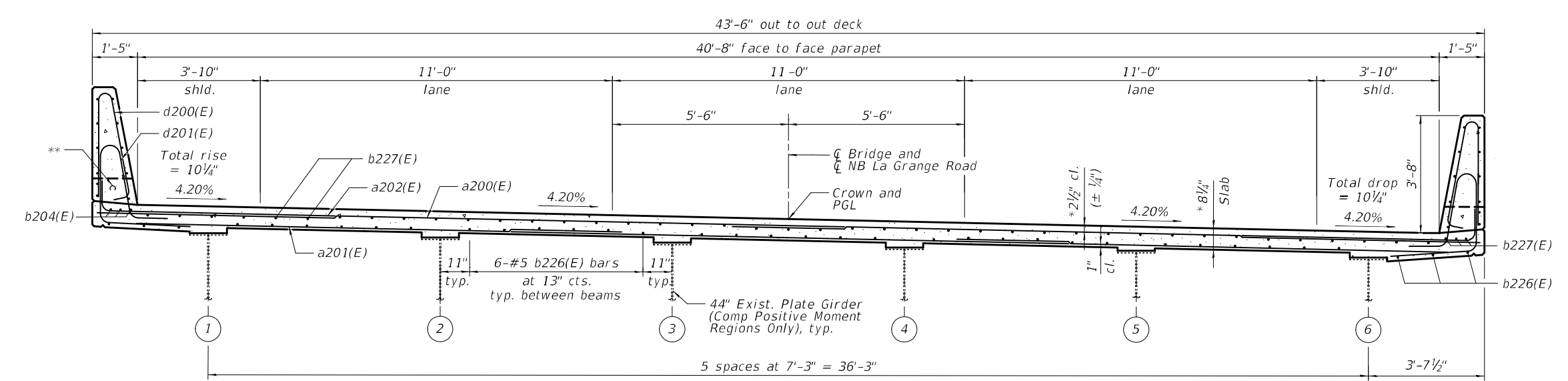
Measured along	L10
Face of West Parapet	57'-0 1/2"
CL NB La Grange Road	73'-7 1/2"
Face of East Parapet	90'-2 3/8"

**MINIMUM BAR LAP**

#5 Bar = 3'-6"



**DETAIL 1**  
a208(E) thru a 210(E), b226(E) and b227(E) bars not shown for clarity



\* Prior to grinding  
\*\* 2" PVC Conduit (see Electrical Plans) Maintain 1 1/2" cl. from reinforcement West parapet only

- Notes:
1. See Sheet SB-56 for parapet reinforcement, superstructure details and Bill of Material.
  2. See Sheet SB-37 for Section B-B.
  3. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  4. See Sheet SB-39 for Scupper Detail 1.
  5. See Sheet SB-47 for Scupper Detail 2.

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11/29/2021 8:00:07 AM



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISIONS -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISIONS -
PLOT DATE = 11/29/2021	DRAWN - E. VAYSMAN	REVISIONS -
	DATE - 10/21/2021	REVISIONS -

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

**SUPERSTRUCTURE PLAN & CROSS SECTION UNIT 10**  
**STRUCTURE NO. 016-2467**

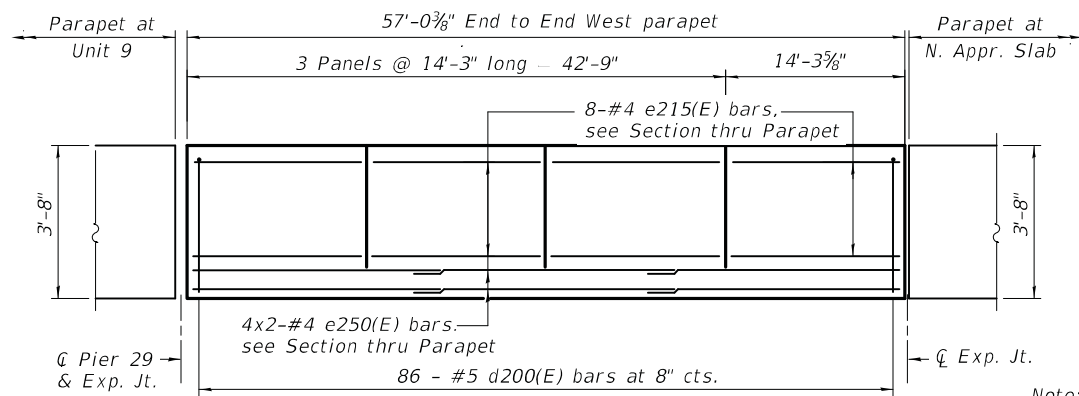
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	242
ILLINOIS			CONTRACT NO. 62H49	

SHEET SB-55 OF SB-104 SHEETS

**SUPERSTRUCTURE UNIT 10**

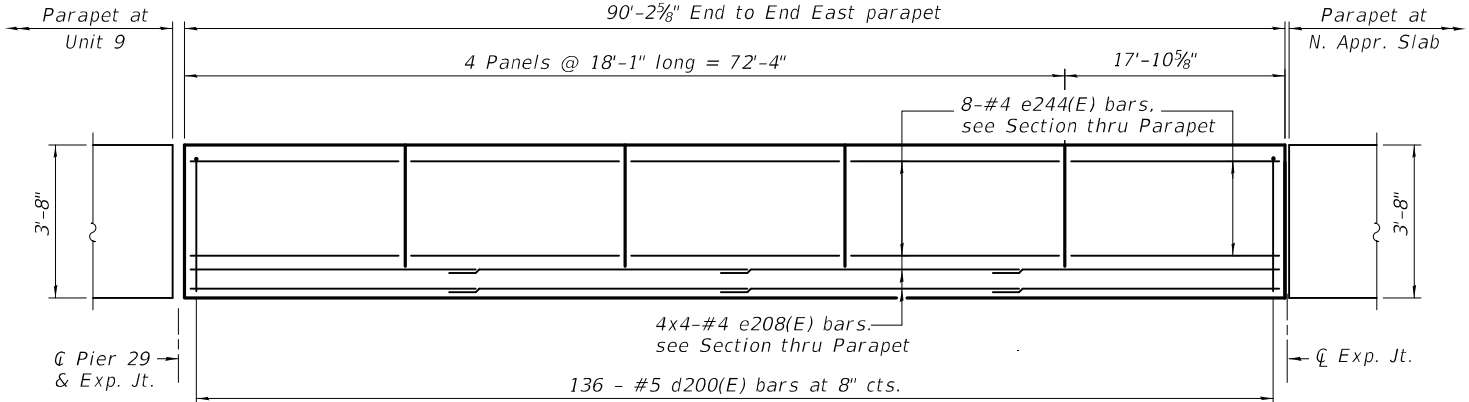
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	253	#5	23'-6"	—
a201(E)	276	#5	16'-4"	—
a202(E)	114	#6	8'-4"	—
a203(E)	5	#5	7'-0"	—
a204(E)	12	#5	16'-6"	—
a205(E)	10	#5	23'-9"	—
a206(E)	24	#5	2'-0"	—
a208(E)	12	#5	29'-10"	—
a209(E)	25	#5	9'-0"	—
a210(E)	3	#5	21'-1"	—
b204(E)	6	#5	30'-5"	—
b226(E)	165	#5	20'-10"	—
b227(E)	163	#5	25'-3"	—
d200(E)	222	#5	7'-0"	—
d201(E)	222	#5	8'-10"	—
e208(E)	16	#4	24'-7"	—
e215(E)	32	#4	13'-10"	—
e244(E)	40	#4	17'-8"	—
e250(E)	8	#4	30'-2"	—
x200(E)	30	#5	6'-2"	—
x202(E)	40	#6	7'-3"	—
x203(E)	44	#5	5'-1"	—
Concrete Superstructure		Cu. Yd.	123.4	
Protective Coat		Sq. Yd.	404	
Reinforcement Bars, Epoxy Coated		Pound	27,340	
Bridge Deck Grooving (Longitudinal)		Sq. Yd.	270	
Diamond Grinding (Bridge Section)		Sq. Yd.	300	

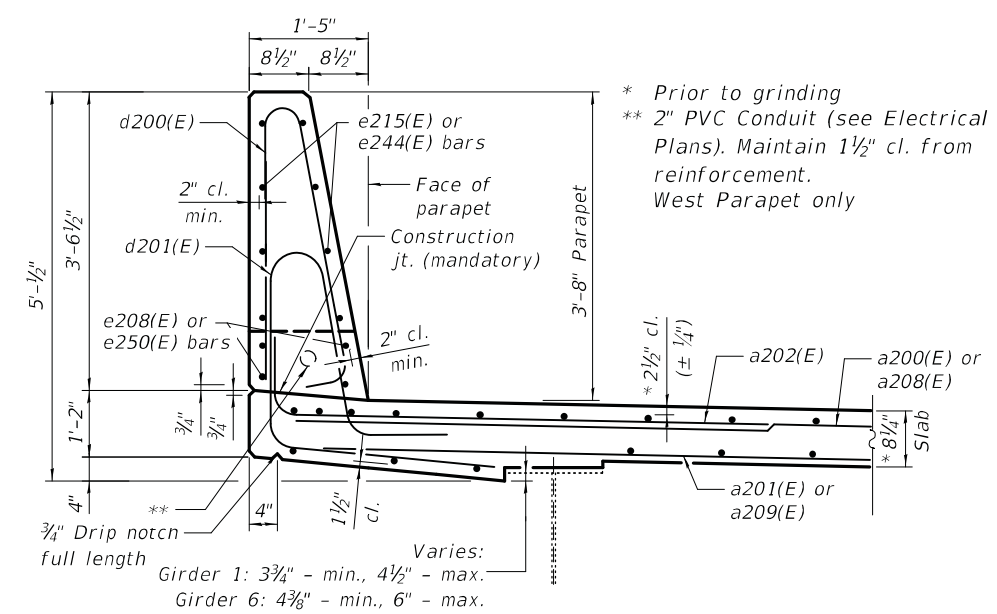


**INSIDE ELEVATION OF WEST PARAPET UNIT 10**

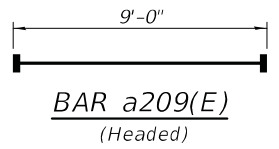
Note: Horizontal dimensions shown along inside face of parapet.



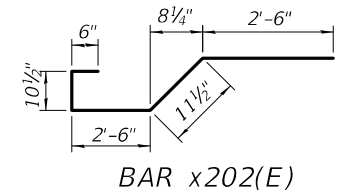
**INSIDE ELEVATION OF EAST PARAPET UNIT 10**



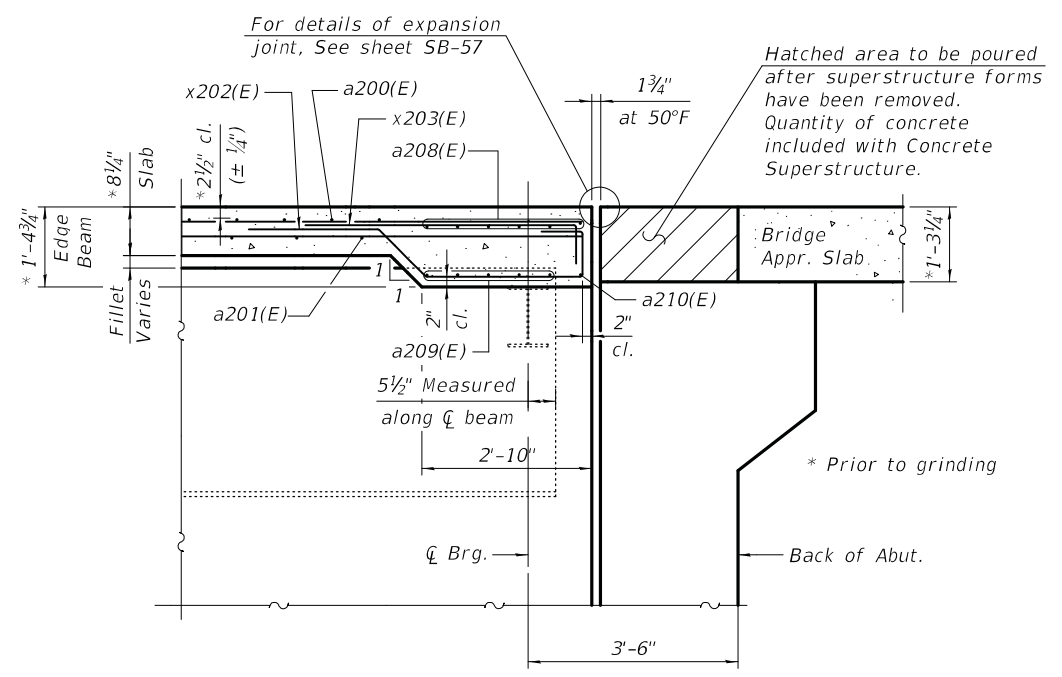
**SECTION THRU PARAPET (Looking North)**



**BAR x203(E)**

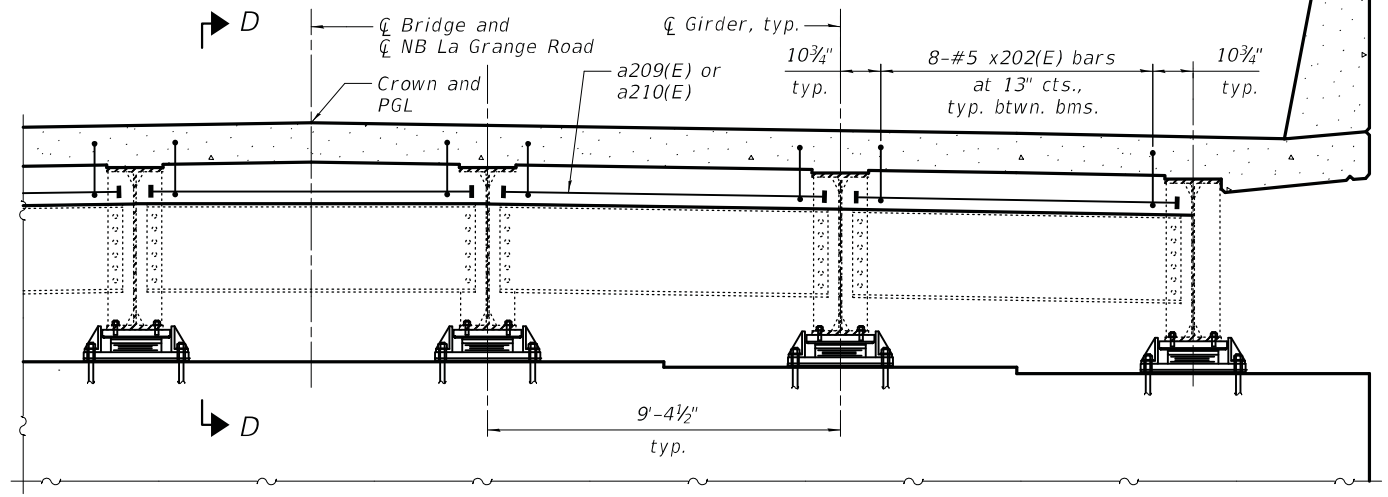


**BAR x202(E)**



**SECTION D-D at Rt. L's to Back of Abut.**

**MINIMUM BAR LAP #4 bar = 2'-5"**



**DIAPHRAGM AT NORTH ABUTMENT**

- Notes:
- See Sheet SB-35 for Parapet joint detail and Bars bending diagrams.
  - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
  - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

MODEL: Default  
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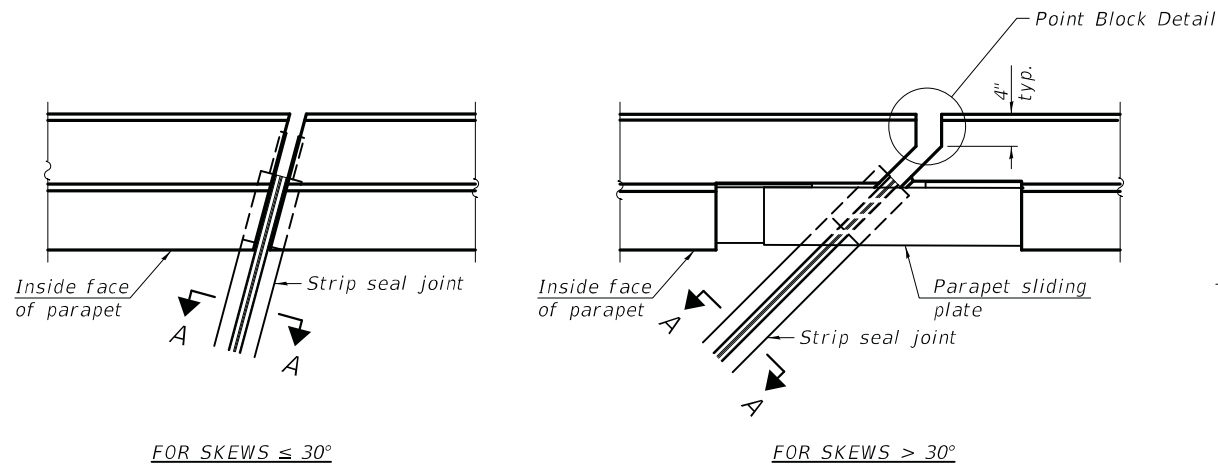
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PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

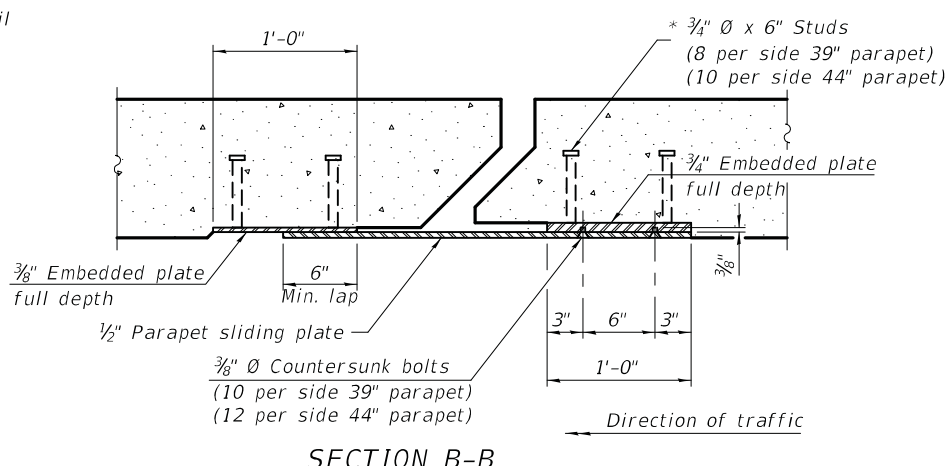
**SUPERSTRUCTURE UNIT 10 DETAILS 1  
STRUCTURE NO. 016-2467**

SHEET SB-56 OF SB-104 SHEETS

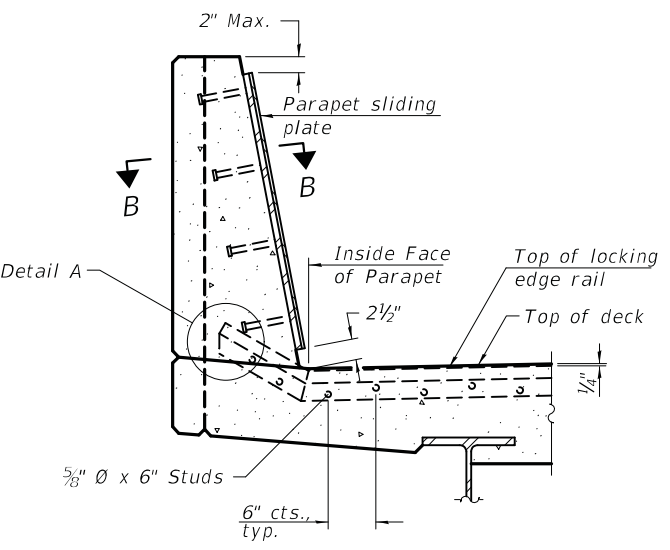
F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 243
ILLINOIS			CONTRACT NO. 62H49	



PLAN AT PARAPET

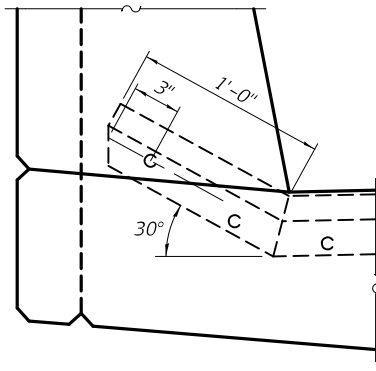


SECTION B-B

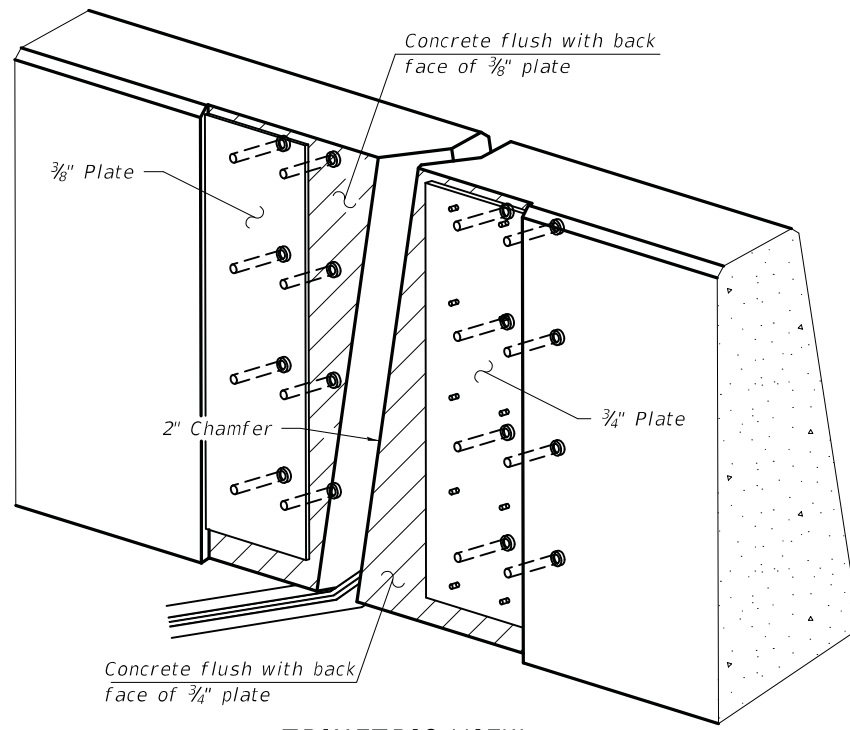


SECTION A-A

(Skews  $> 30^\circ$  shown. Skews  $\leq 30^\circ$  similar except as shown in plan view.)

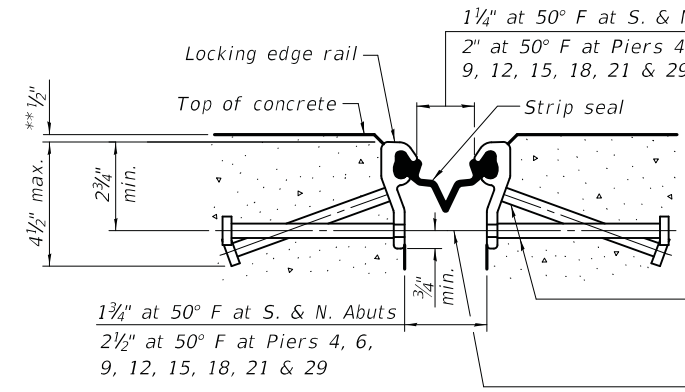


DETAIL A



TRIMETRIC VIEW

(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

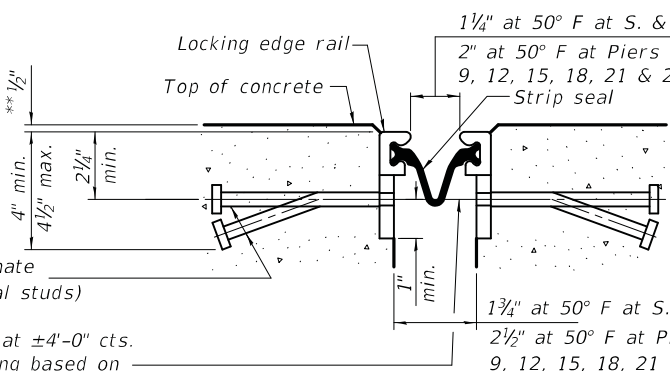
\* 3/8"  $\phi$  x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

3/8"  $\phi$  threaded rods in 7/16"  $\phi$  holes at  $\pm 4'-0"$  cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

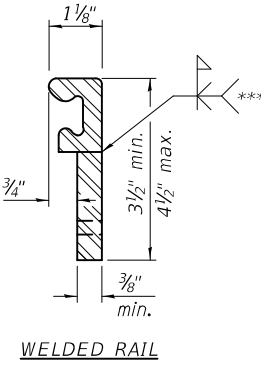
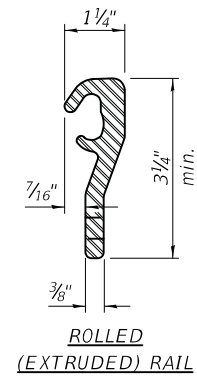
SECTION A-A

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

\*\* Prior to grinding

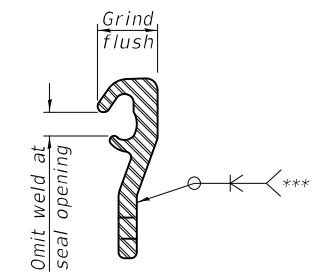


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	442

MODEL: Default  
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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

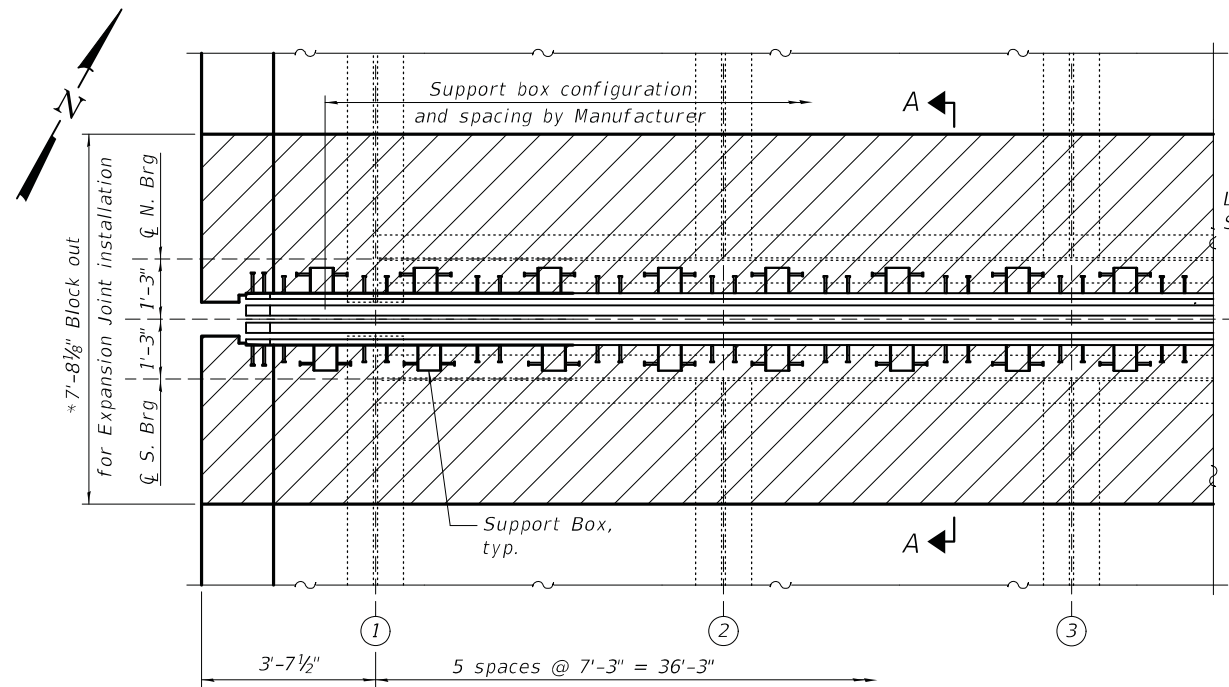
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL  
STRUCTURE NO. 016-2467

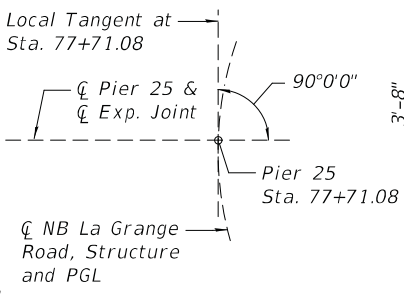
SHEET SB-57 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 62H49	
ILLINOIS				

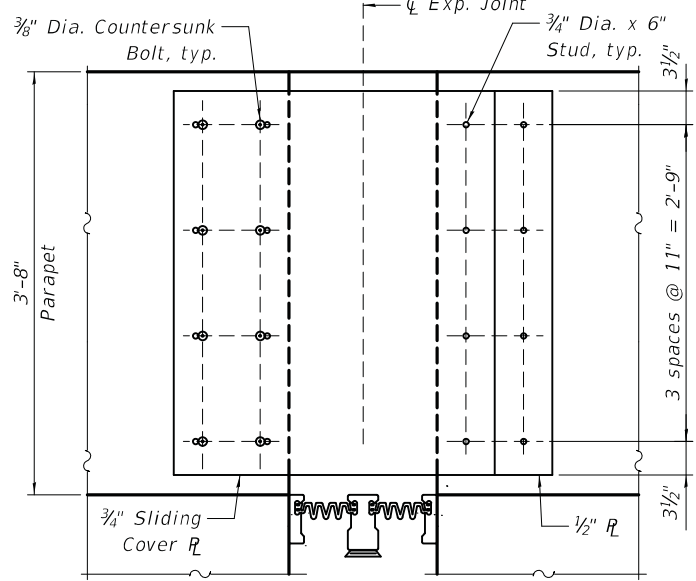




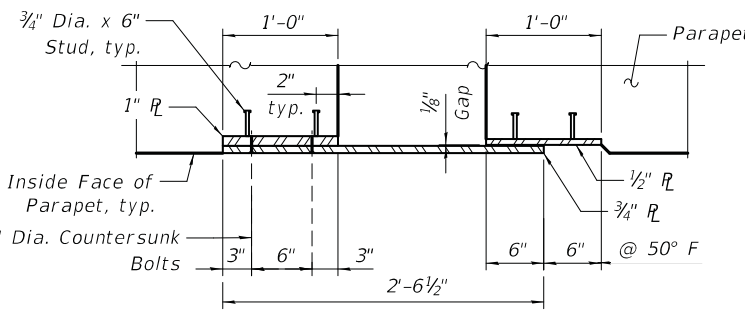
**PARTIAL PLAN**



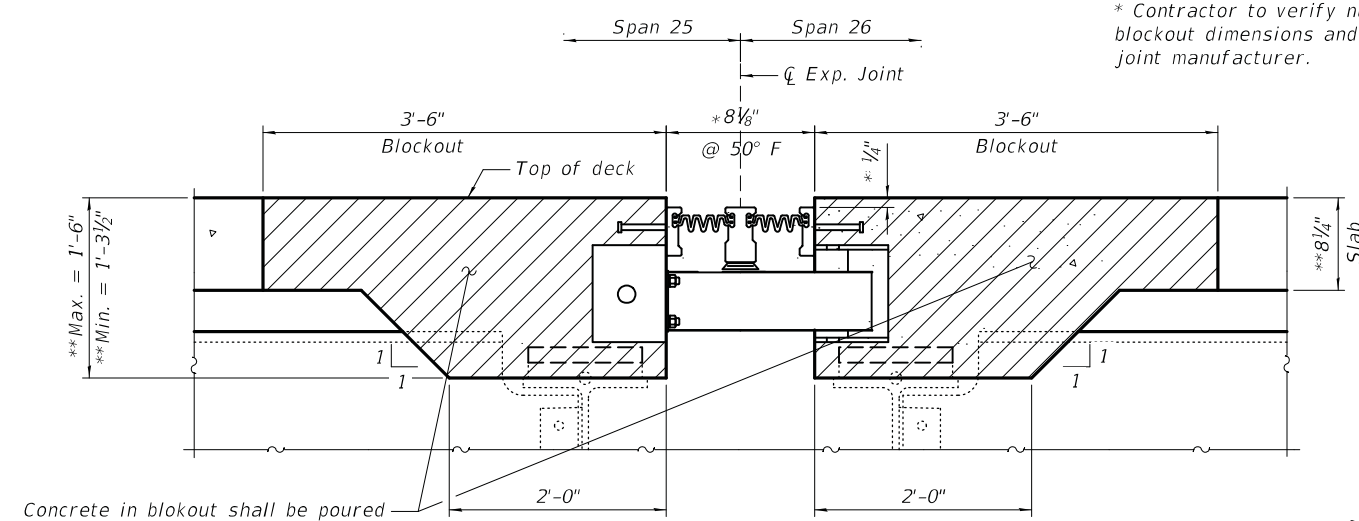
**SECTION AT PARAPET**



**VIEW B-B**



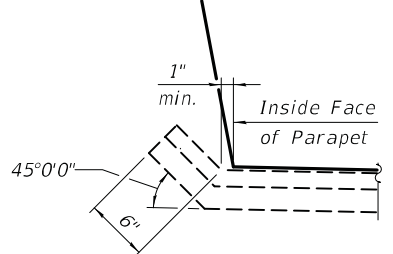
**VIEW C-C**



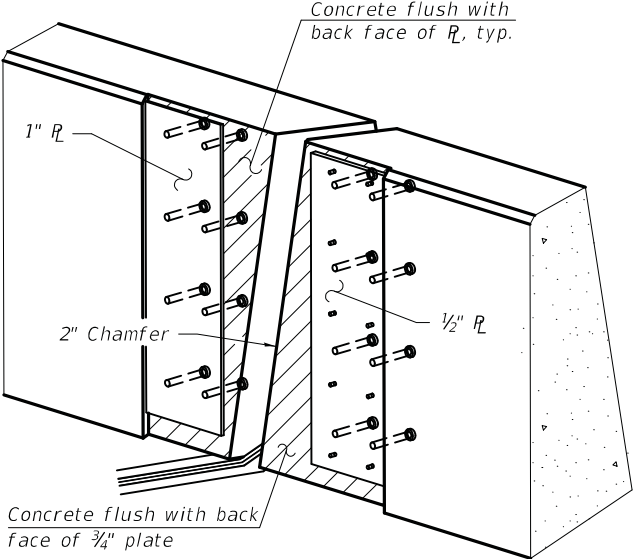
**SECTION A-A**

Concrete in blockout shall be poured after the joint assembly has been positioned and adjusted. Quantity of concrete is included with Concrete Superstructure

\*\* Prior to grinding



**DETAIL 1**



**TRIMETRIC VIEW**  
(Showing embedded plates only)

**Notes:**

1. The manufacturer's recommended installation methods shall be followed.
2. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
3. Parapet plates and anchorage studs included in the cost of "Modular Expansion Joint 6".
4. Support boxes shall be rigidly attached to cross frames, and girders by adjustable brackets, stools or shims. Cost of attachment included in "Modular Expansion Joint 6".
5. The number, location and orientation of support boxes shall be determined by the manufacturer. No boxes shall be located outside of the exterior girders. All boxes shall be located to miss the top flange of the girders.
6. Modular expansion joint shall be assembled in its final relative position with the ends in place for shop inspection and acceptance.
7. Joint opening shall be adjusted according to Article 520.04 of the Standard Specifications when the concrete blockout is cast at an ambient temperature other than 50° F.
8. Countersunk bolts shall be in accordance with ASTM A307, Grade A.
9. Countersunk bolts and concrete inserts shall be hot-dipped galvanized according to AASHTO M232.
10. 3/4" Dia. x 6" Studs shall be granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications.
11. Scissor spacer type joints are not allowed.
12. Prior to the placement of the joint block-out, the Contractor shall coordinate with the Modular Joint Manufacturer to ensure that the joint will be properly supported and that the reinforcement bars will not interfere with the joint components. Any necessary adjustments to the reinforcement layout shall be submitted to the Engineer for approval.

**REQUIRED MOVEMENT**

Total Longitudinal (Open/Close)

Location	Amount
Pier 25	4 3/8"

**BILL OF MATERIAL**

Item	Unit	Total
Modular Expansion Joint, 6"	Foot	41

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	DATE - 06/18/2021	REVISED -

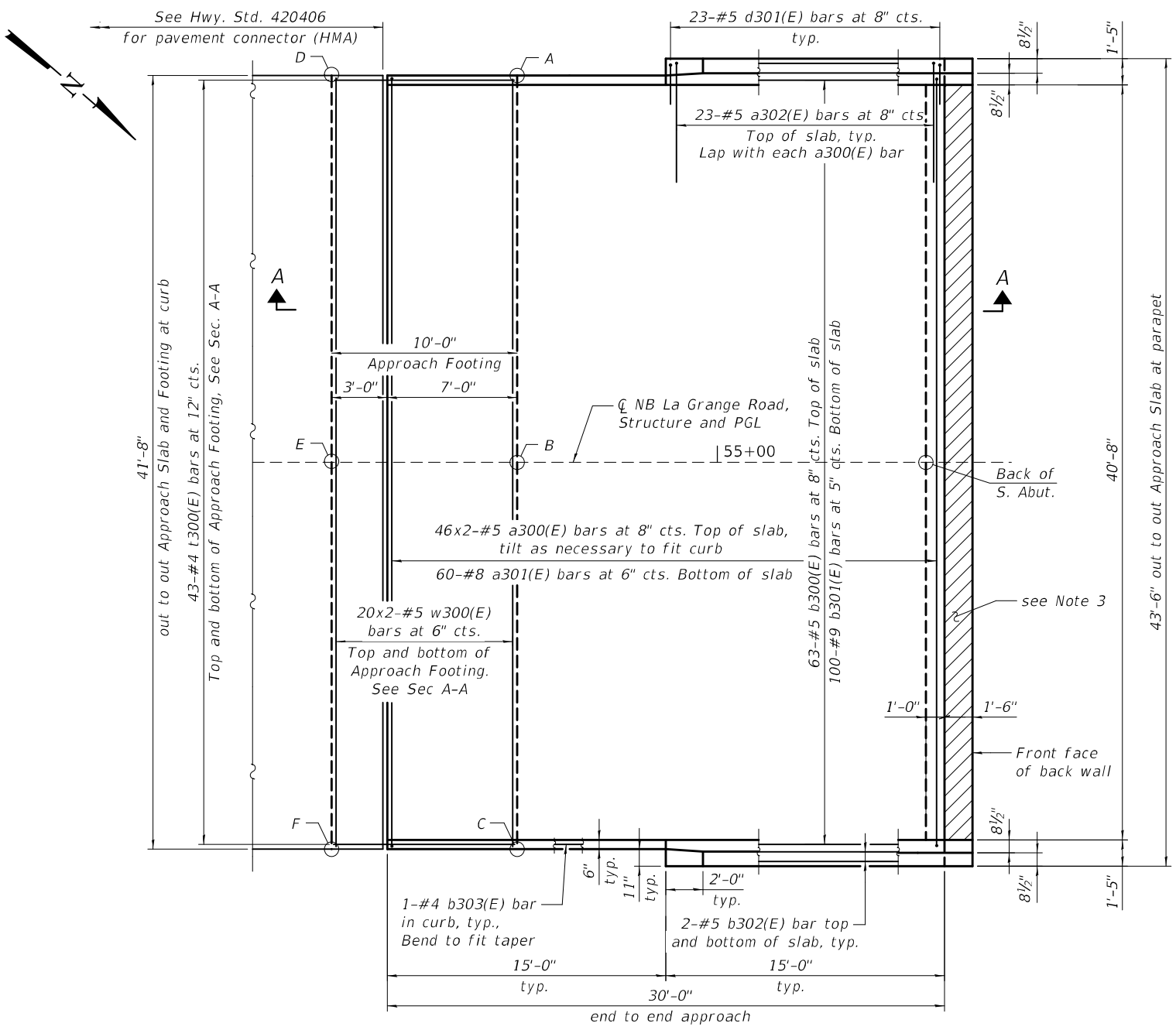
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MODULAR EXPANSION JOINT DETAILS  
STRUCTURE NO. 016-2467**

SHEET SB-58 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	245
ILLINOIS			CONTRACT NO. 62H49	



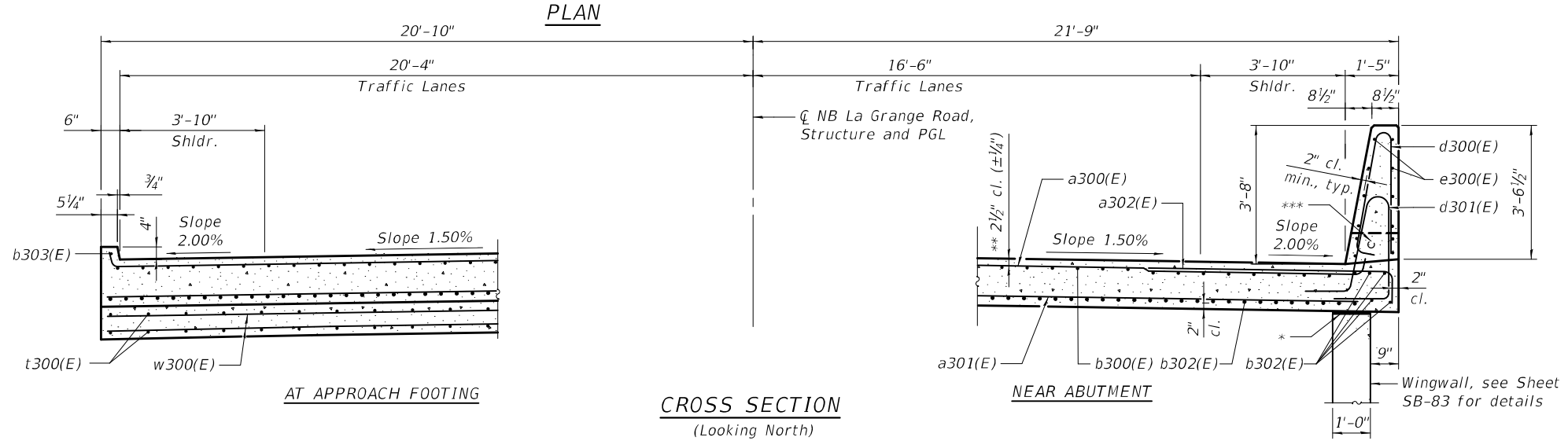


**TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING**

South Approach		
Point	Top	Bottom
A	611.27	610.43
B	611.27	610.43
C	611.27	610.43
D	610.76	609.93
E	610.93	610.09
F	610.76	609.93

**MINIMUM BAR LAP**  
#5 bar = 3'-6"

- Notes:
1. See Sheet SB-60 for Section A-A, Section at Parapet, Parapet Elevation and Bill of Materials.
  2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  3. Hatched area to be poured after superstructure forms have been removed. See Sheet SB-82 for details.



- \* 2" Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full width and full length of wingwall. Typ. each wingwall. Cost included with Concrete Superstructure (Approach Slab)
- \*\* Prior to grinding
- \*\*\* 2" PVC Conduit (see Electrical Plans). Maintain 1 1/2" cl. from reinforcement. West Parapet only

MODEL: Default  
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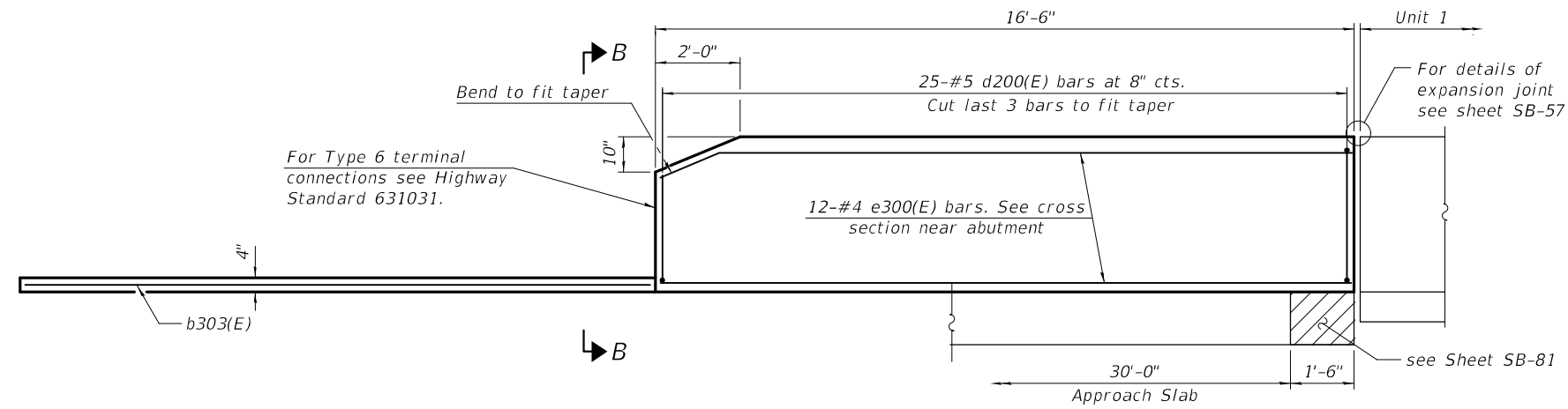
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PLOT DATE = 11/29/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 10/21/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOUTH BRIDGE APPROACH SLAB  
STRUCTURE NO. 016-2467**

SHEET SB-59 OF SB-104 SHEETS

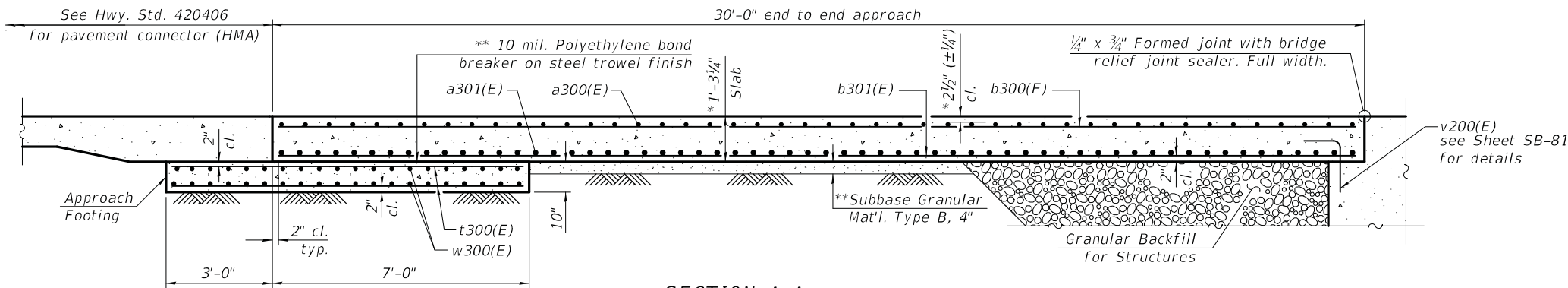
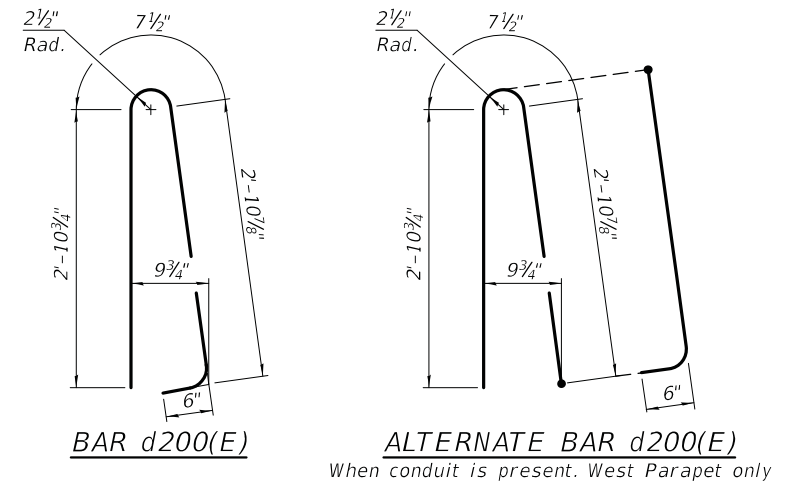
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	246
ILLINOIS			CONTRACT NO. 62H49	



**INSIDE ELEVATION OF PARAPET AND CURB**  
(West Elevation shown, East Elevation similar)

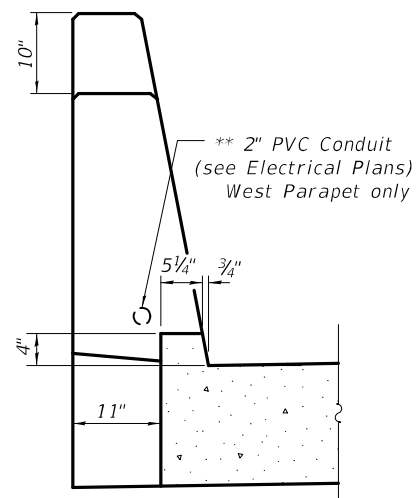
Notes:

1. Parapet concrete shall be paid for as Concrete Superstructure.
2. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
3. Approach footing concrete shall be paid for as Concrete Structures.  
The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.  
Cost of excavation for approach footing included with Concrete Structures.
4. For Granular Backfill for Structures and drainage treatment details, see sheet SB-5.



**SECTION A-A**  
\* Prior to grinding

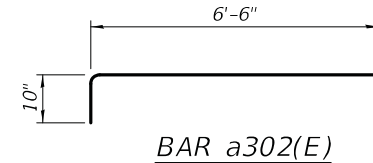
\*\* Cost included with Concrete Superstructure (Approach Slab).



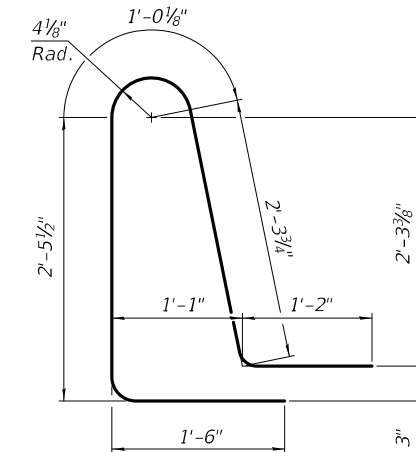
**VIEW B-B**



**BAR a300(E)**



**BAR a302(E)**



**BAR d301(E)**

**SOUTH APPROACH  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a300(E)	92	#5	22'-10"	
a301(E)	60	#8	41'-4"	
a302(E)	46	#5	7'-4"	
b300(E)	63	#5	29'-8"	
b301(E)	100	#9	29'-8"	
b302(E)	8	#5	14'-8"	
b303(E)	2	#4	14'-8"	
d200(E)	50	#5	7'-0"	
d301(E)	46	#5	8'-6"	
e300(E)	24	#4	16'-2"	
t300(E)	86	#4	9'-8"	
w300(E)	80	#5	22'-6"	
Concrete Structures			Cu. Yd.	12.9
Concrete Superstructure			Cu. Yd.	8.0
Protective Coat			Sq. Yd.	153
Concrete Superstructure (Approach Slab)			Cu. Yd.	60.3
Reinforcement Bars, Epoxy Coated			Pound	24,810
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	110
Diamond Grinding (Bridge Section)			Sq. Yd.	123

MODEL: Default  
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PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

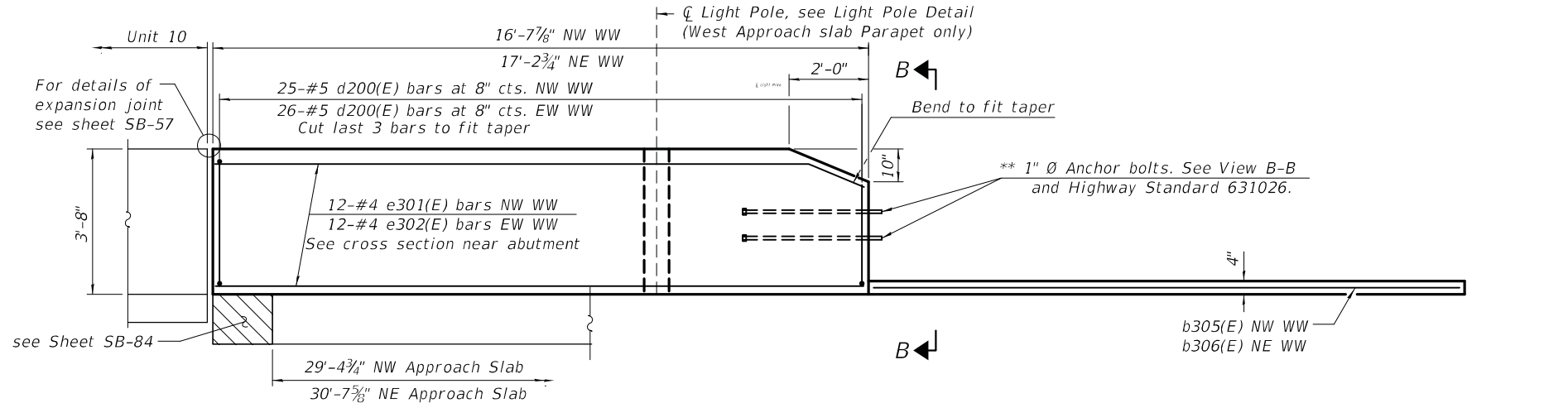
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOUTH BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 016-2467**

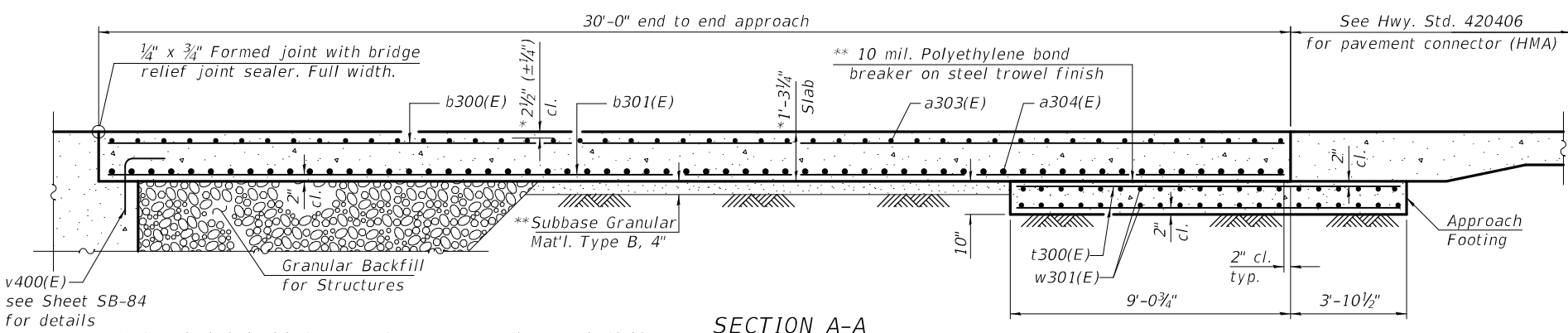
SHEET SB-60 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62H49			ILLINOIS	

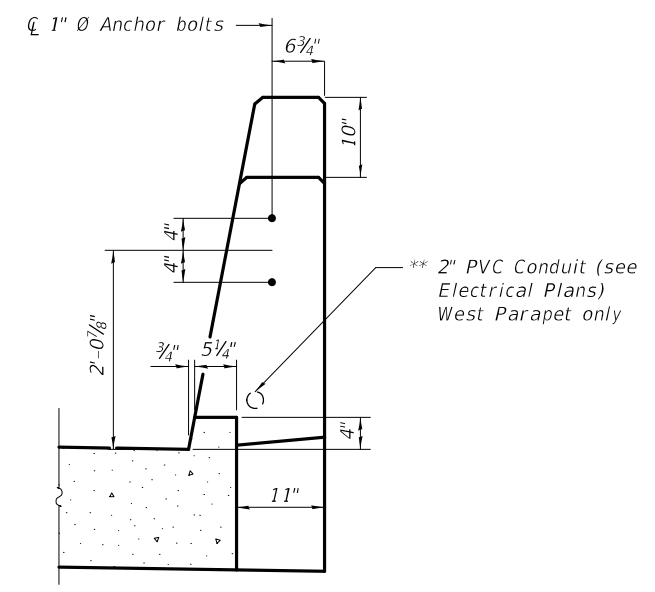




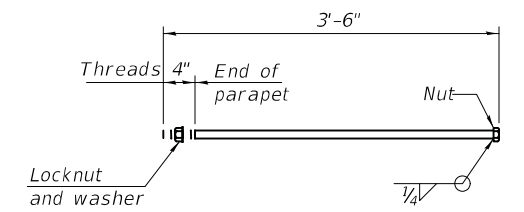
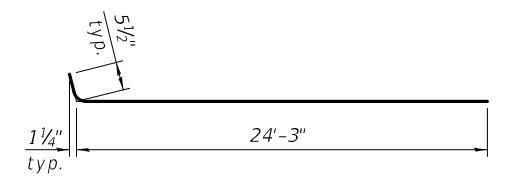
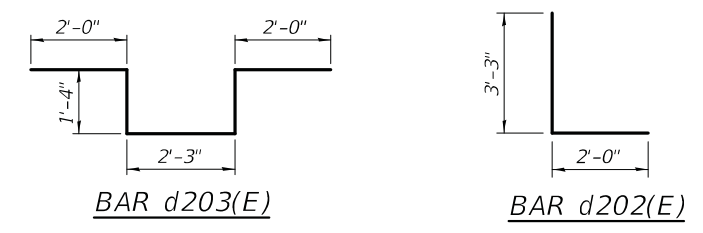
**INSIDE ELEVATION OF PARAPET AND CURB**  
(West Elevation shown, East Elevation similar)



**SECTION A-A**  
\* Prior to grinding



**VIEW B-B**



**\*\* 1" Ø ANCHOR BOLT**  
(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

**NORTH APPROACH  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a302(E)	46	#5	7'-4"	┌───┐
a303(E)	138	#5	24'-9"	┌───┐
a304(E)	120	#8	36'-4"	┌───┐
b300(E)	63	#5	29'-8"	┌───┐
b301(E)	100	#9	29'-8"	┌───┐
b302(E)	8	#5	14'-8"	┌───┐
b305(E)	1	#4	14'-0"	┌───┐
b306(E)	1	#4	15'-3"	┌───┐
d200(E)	46	#5	7'-0"	┌───┐
d202(E)	3	#6	5'-3"	┌───┐
d203(E)	7	#6	8'-11"	┌───┐
d301(E)	51	#5	8'-6"	┌───┐
e301(E)	12	#4	16'-3"	┌───┐
e302(E)	12	#4	16'-10"	┌───┐
t300(E)	90	#4	9'-8"	┌───┐
t301(E)	2	#4	14'-6"	┌───┐
w301(E)	120	#5	24'-11"	┌───┐
Concrete Structures			Cu. Yd.	17.4
Concrete Superstructure			Cu. Yd.	9.0
Protective Coat			Sq. Yd.	155
Concrete Superstructure (Approach Slab)			Cu. Yd.	63.0
Reinforcement Bars, Epoxy Coated			Pound	32,630
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	110
Diamond Grinding (Bridge Section)			Sq. Yd.	126

**Notes:**

1. Parapet concrete shall be paid for as Concrete Superstructure.
2. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
3. Approach footing concrete shall be paid for as Concrete Structures. The approach footing maximum applied service bearing pressure (Q<sub>max</sub>) = 2.0 ksf. Cost of excavation for approach footing included with Concrete Structures.
4. For Granular Backfill for Structures and drainage treatment details, see Sheet SB-5.
5. See Sheet SB-39 for Light Pole Detail.
6. See Sheet SB-60 for bars a302(E), d200(E) and d301(E) bending diagrams.

MODEL: Default  
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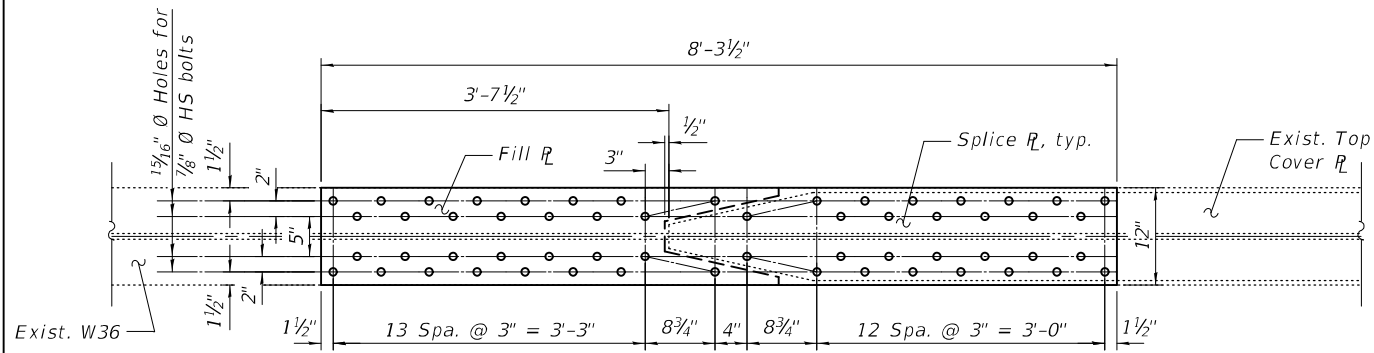
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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

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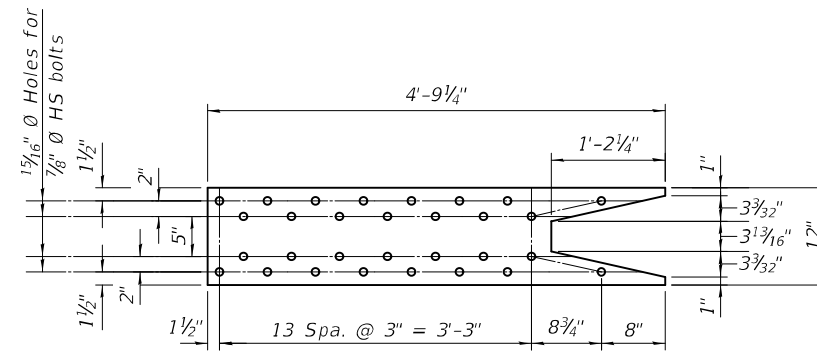
**NORTH BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 016-2467**

SHEET SB-62 OF SB-104 SHEETS

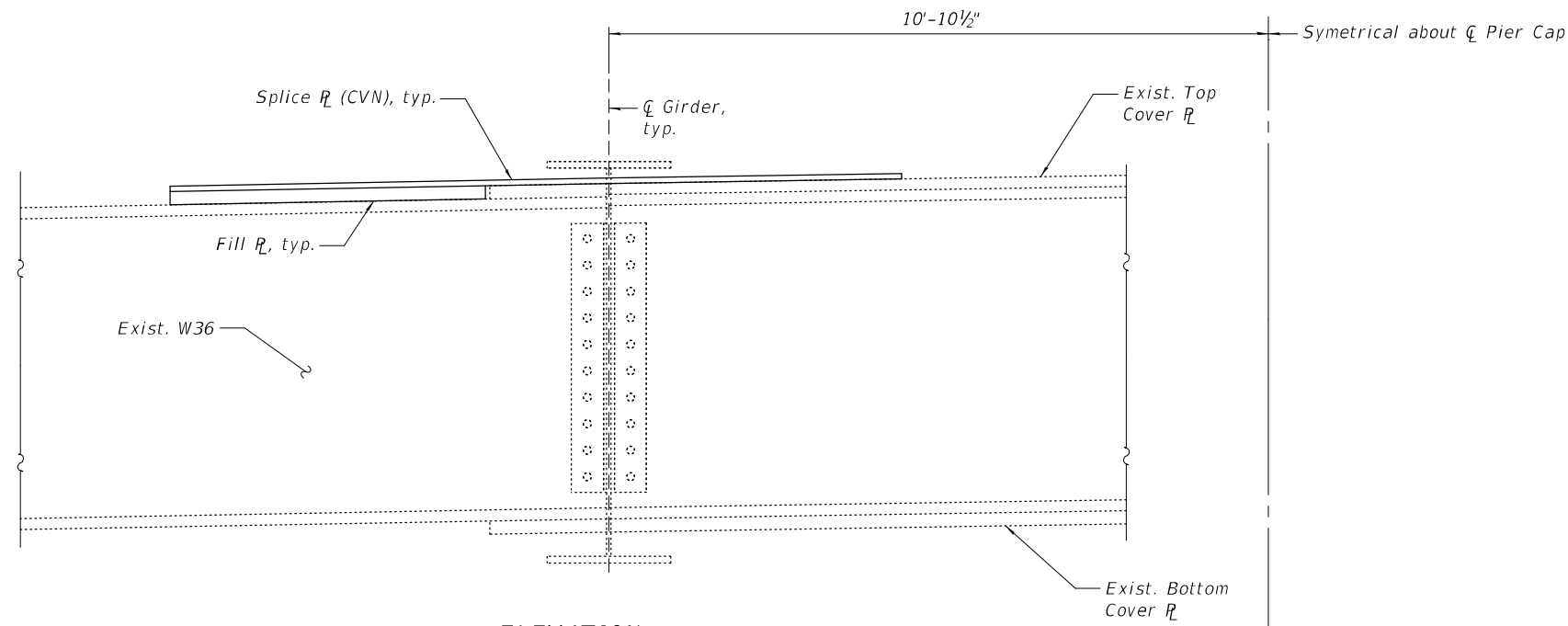
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	249
ILLINOIS			CONTRACT NO. 62H49	



**SPlice PLATE PLAN**



**FILL PLATE PLAN**



**COVER PLATE REPAIR DETAIL**  
(18 Locations)

**PLATE THICKNESS TABLE**

Location	Splice Plate Thickness	Fill Plate Thickness
N. & S. Brgs. At. Pier 4, Pier 6, Pier 9, Pier 12, S. Brg Pier 15 & Pier 21, N. Brg Pier 18	1 1/4"	1 1/4"
N. Brg. Pier 21	1 3/8"	1 3/8"
N. Brg. Pier 15, S. Brg. Pier 18	1 5/8"	1 5/8"
N. & S. Brgs Pier 25 & Pier 29	1 1/2"	1 1/2"

**Notes:**

1. Splice Plates and Fill Plates to be included in the cost of Structural Steel Repair.
2. Cost of drilling holes in existing steel members is included with Structural Steel Repair.
3. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures." All contact surfaces on this sheet shall be treated as primary connections.
4. CVN denotes Charpy-V-Notch impact energy requirements, Zone 2.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Steel Repair	Pound	25,073

MODEL: Default  
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	DATE - 10/21/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS GIRDER COVER PLATE RETROFIT DETAILS  
STRUCTURE NO. 016-2467**

SHEET SB-63 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	250
ILLINOIS			CONTRACT NO. 62H49	



MODEL: Default  
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UNIT 1 INTERIOR GIRDER MOMENT TABLE					
		0.4 Sp. 1 or 0.6 Sp. 4	Piers 1 & 3	0.5 Spans 2 & 3	Pier 2
Is	(in <sup>4</sup> )	15,757	25,295	14,064	23,372
Ic(n)	(in <sup>4</sup> )	40,787	-	35,119	-
Ic(3n)	(in <sup>4</sup> )	30,391	-	26,612	-
Ss	(in <sup>3</sup> )	741	1,076	618	1,000
Sc(n)	(in <sup>3</sup> )	1,024	-	864	-
Sc(3n)	(in <sup>3</sup> )	943	-	794	-
Z	(in <sup>3</sup> )	-	1,198	-	1,115
ϕ	(k/')	0.99	1.36	0.99	1.36
M <sub>ϕ</sub>	('k)	434.8	1,082.2	262.1	896.3
s <sub>ϕ</sub>	(k/')	0.37	-	0.37	-
Ms <sub>ϕ</sub>	('k)	178.6	-	126.9	-
M <sub>ϕ</sub>	('k)	648.2	480.9	595.0	477.8
M <sub>I</sub>	('k)	158.1	114.5	138.4	111.1
<sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	('k)	1,343.9	992.3	1,222.2	981.5
Ma	('k)	2,544.6	2,696.9	2,094.6	2,441.2
Mu	('k)	4,135.1	3,592.5	3,629.2	3,346.4
fs ϕ non-comp	(ksi)	7.05	12.07	5.09	10.76
fs ϕ (comp)	(ksi)	2.27	-	1.92	-
fs <sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	(ksi)	15.75	11.06	16.98	11.78
fs (Overload)	(ksi)	25.07	23.13	23.98	22.54
fs (Total)	(ksi)	-	-	-	-
VR	(k)	62	-	65	-

UNIT 2 INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 5 or 0.6 Sp. 6	Pier 5	
Is	(in <sup>4</sup> )	15,757	25,295	
Ic(n)	(in <sup>4</sup> )	40,787	-	
Ic(3n)	(in <sup>4</sup> )	30,391	-	
Ss	(in <sup>3</sup> )	741	1,076	
Sc(n)	(in <sup>3</sup> )	1,024	-	
Sc(3n)	(in <sup>3</sup> )	943	-	
Z	(in <sup>3</sup> )	-	1,198	
ϕ	(k/')	0.99	1.36	
M <sub>ϕ</sub>	('k)	419.8	1,209.7	
s <sub>ϕ</sub>	(k/')	0.37	-	
Ms <sub>ϕ</sub>	('k)	178.8	-	
M <sub>ϕ</sub>	('k)	654.7	461.9	
M <sub>I</sub>	('k)	158.6	111.9	
<sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	('k)	1,355.6	956.3	
Ma	('k)	2,540.5	2,815.8	
Mu	('k)	4,135.1	3,592.5	
fs ϕ non-comp	(ksi)	6.80	13.49	
fs ϕ (comp)	(ksi)	2.27	-	
fs <sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	(ksi)	15.89	10.66	
fs (Overload)	(ksi)	24.96	24.15	
fs (Total)	(ksi)	-	-	
VR	(k)	61	-	

UNIT 3 INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 7 or 0.6 Sp. 9	Pier 7 or Pier 8	0.5 Sp. 8
Is	(in <sup>4</sup> )	20,516	27,238	15,885
Ic(n)	(in <sup>4</sup> )	54,412	-	38,236
Ic(3n)	(in <sup>4</sup> )	39,331	-	28,940
Ss	(in <sup>3</sup> )	1,061	1,153	694
Sc(n)	(in <sup>3</sup> )	1,426	-	947
Sc(3n)	(in <sup>3</sup> )	1,318	-	872
Z	(in <sup>3</sup> )	-	1,280	-
ϕ	(k/')	1.03	1.40	1.00
M <sub>ϕ</sub>	('k)	649.9	1,161.8	167.6
s <sub>ϕ</sub>	(k/')	0.37	-	0.37
Ms <sub>ϕ</sub>	('k)	247.5	-	103.6
M <sub>ϕ</sub>	('k)	763.5	509.1	574.4
M <sub>I</sub>	('k)	177.5	118.0	132.8
<sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	('k)	1,568.4	1,045.2	1,178.5
Ma	('k)	3,205.5	2,869.2	1,884.7
Mu	('k)	5,390.2	3,839.9	3,912.3
fs ϕ non-comp	(ksi)	7.35	12.09	2.90
fs ϕ (comp)	(ksi)	2.25	-	1.43
fs <sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	(ksi)	13.20	10.88	14.94
fs (Overload)	(ksi)	22.81	22.97	19.26
fs (Total)	(ksi)	-	-	-
VR	(k)	62	-	65

UNIT 4 INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 10 or 0.6 Sp. 12	Pier 10 or Pier 11	0.5 Sp. 11
Is	(in <sup>4</sup> )	20,516	27,238	15,885
Ic(n)	(in <sup>4</sup> )	54,412	-	38,236
Ic(3n)	(in <sup>4</sup> )	39,331	-	28,940
Ss	(in <sup>3</sup> )	1,061	1,153	694
Sc(n)	(in <sup>3</sup> )	1,426	-	947
Sc(3n)	(in <sup>3</sup> )	1,318	-	872
Z	(in <sup>3</sup> )	-	1,280	-
ϕ	(k/')	1.03	1.40	1.00
M <sub>ϕ</sub>	('k)	639.8	1,233.6	227.5
s <sub>ϕ</sub>	(k/')	0.37	-	0.37
Ms <sub>ϕ</sub>	('k)	244.9	-	127.6
M <sub>ϕ</sub>	('k)	769.2	530.2	617.2
M <sub>I</sub>	('k)	178.8	121.6	139.6
<sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	('k)	1,580.1	1,086.4	1,261.5
Ma	('k)	3,204.3	3,016.0	2,101.5
Mu	('k)	5,390.2	3,839.9	3,912.3
fs ϕ non-comp	(ksi)	7.24	12.84	3.93
fs ϕ (comp)	(ksi)	2.23	-	1.76
fs <sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	(ksi)	13.30	11.31	15.99
fs (Overload)	(ksi)	22.77	24.15	21.68
fs (Total)	(ksi)	-	-	-
VR	(k)	62	-	64

UNIT 1 INTERIOR GIRDER REACTION TABLE			
	S. Abut. or Pier 4	Pier 1 or Pier 3	Pier 2
R <sub>ϕ</sub>	(k)	40.97	131.23
R <sub>ϕ</sub>	(k)	49.92	59.52
R <sub>I</sub>	(k)	12.17	14.17
R <sub>Total</sub>	(k)	103.06	204.92

UNIT 2 INTERIOR GIRDER REACTION TABLE		
	Pier 4 or Pier 6	Pier 5
R <sub>ϕ</sub>	(k)	40.56
R <sub>ϕ</sub>	(k)	50.33
R <sub>I</sub>	(k)	12.19
R <sub>Total</sub>	(k)	103.08

UNIT 3 INTERIOR GIRDER REACTION TABLE		
	Pier 6 or Pier 9	Pier 7 or Pier 8
R <sub>ϕ</sub>	(k)	50.10
R <sub>ϕ</sub>	(k)	51.22
R <sub>I</sub>	(k)	11.91
R <sub>Total</sub>	(k)	113.23

UNIT 4 INTERIOR GIRDER REACTION TABLE		
	Pier 9 or Pier 12	Pier 10 or Pier 11
R <sub>ϕ</sub>	(k)	49.78
R <sub>ϕ</sub>	(k)	51.25
R <sub>I</sub>	(k)	11.89
R <sub>Total</sub>	(k)	112.91

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

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).  
 Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).  
 Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).  
 Z: Plastic Section Modulus of the steel section in non-composite areas (in<sup>3</sup>).  
 ϕ: Un-factored non-composite dead load (kips/ft.).  
 M<sub>ϕ</sub>: Un-factored moment due to non-composite dead load (kip-ft.).  
 s<sub>ϕ</sub>: Un-factored long-term composite (superimposed) dead load (kips/ft.).  
 Ms<sub>ϕ</sub>: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
 M<sub>ϕ</sub>: Un-factored live load moment (kip-ft.).  
 M<sub>I</sub>: Un-factored moment due to impact (kip-ft.).  
 Ma: Factored design moment (kip-ft.).  
 1.3 [M<sub>ϕ</sub> + Ms<sub>ϕ</sub> + <sup>5</sup>/<sub>3</sub> (M<sub>ϕ</sub> + M<sub>I</sub>)]  
 Mu: 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.).  
 fs (Overload): Sum of stresses as computed from the moments below (ksi).  
 M<sub>ϕ</sub> + Ms<sub>ϕ</sub> + <sup>5</sup>/<sub>3</sub> (M<sub>ϕ</sub> + M<sub>I</sub>)  
 fs (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 1.3 [M<sub>ϕ</sub> + Ms<sub>ϕ</sub> + <sup>5</sup>/<sub>3</sub> (M<sub>ϕ</sub> + M<sub>I</sub>)]  
 VR: Maximum live load shear range within the composite portion of the span for stud shear connector design (kips).

UNIT 5 INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 13	Pier 13	0.5 Sp. 14	Pier 14	0.6 Sp. 15
Is	(in <sup>4</sup> )	19,845	25,295	15,885	27,238	20,516
Ic(n)	(in <sup>4</sup> )	51,840	-	38,236	-	54,412
Ic(3n)	(in <sup>4</sup> )	37,746	-	28,940	-	39,331
Ss	(in <sup>3</sup> )	1,001	1,076	694	1,153	1,061
Sc(n)	(in <sup>3</sup> )	1,346	-	947	-	1,426
Sc(3n)	(in <sup>3</sup> )	1,244	-	872	-	1,318
Z	(in <sup>3</sup> )	-	1,198	-	1,280	-
ϕ	(k/')	1.02	1.39	1.00	1.40	1.03
M <sub>ϕ</sub>	('k)	563.2	1,061.8	193.5	1,190.2	640.8
s <sub>ϕ</sub>	(k/')	0.37	-	0.37	-	0.37
Ms <sub>ϕ</sub>	('k)	216.0	-	111.6	-	245.2
M <sub>ϕ</sub>	('k)	711.1	477.8	582.4	508.3	762.9
M <sub>I</sub>	('k)	169.4	112.1	134.6	117.8	177.3
<sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	('k)	1,467.5	983.2	1,195.1	1,043.6	1,567.0
Ma	('k)	2,920.6	2,658.5	1,950.3	2,904.0	3,188.9
Mu	('k)	5,154.4	3,592.5	3,912.3	3,839.9	5,390.2
fs ϕ non-comp	(ksi)	6.75	11.84	3.34	12.39	7.25
fs ϕ (comp)	(ksi)	2.08	-	1.54	-	2.23
fs <sup>5</sup> <sub>3</sub> [M <sub>ϕ</sub> + M <sub>I</sub> ]	(ksi)	13.08	10.96	15.15	10.86	13.19
fs (Overload)	(ksi)	21.92	22.80	20.03	23.25	22.67
fs (Total)	(ksi)	-	-	-	-	-
VR	(k)	62	-	65	-	62

UNIT 5 INTERIOR GIRDER REACTION TABLE					
		Pier 12	Pier 13	Pier 14	Pier 15
R <sub>ϕ</sub>	(k)	46.60	132.94	140.40	49.82
R <sub>ϕ</sub>	(k)	50.83	60.08	61.42	51.23
R <sub>I</sub>	(k)	11.82	13.89	14.20	11.84
R <sub>Total</sub>	(k)	109.25	206.91	216.02	112.89



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MOMENT & REACTION TABLES - UNITS 1 TO 5  
 STRUCTURE NO. 016-2467

SHEET SB-64 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	251
CONTRACT NO. 62H49			ILLINOIS	

MODEL: Default  
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UNIT 6 - INTERIOR GIRDERS MOMENT TABLE				
	0.4 Sp. 16 or 0.6 Sp. 18	Pier 16 or Pier 17	0.5 Sp. 17	
Is	(in <sup>4</sup> )	20,516	27,238	15,885
Ic(n)	(in <sup>4</sup> )	54,412	-	38,236
Ic(3n)	(in <sup>4</sup> )	39,331	-	28,940
Ss	(in <sup>3</sup> )	1,061	1,153	694
Sc(n)	(in <sup>3</sup> )	1,426	-	947
Sc(3n)	(in <sup>3</sup> )	1,318	-	872
Z	(in <sup>3</sup> )	-	1,280	-
ϕ	(k/')	1.03	1.40	1.00
Mϕ	('k)	649.9	1,161.8	167.6
sϕ	(k/')	0.37	-	0.37
Msϕ	('k)	247.5	-	103.6
M <sub>l</sub>	('k)	763.5	509.1	574.4
M <sub>i</sub>	('k)	177.5	118.0	132.8
<sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	('k)	1,568.4	1,045.2	1,178.5
Ma	('k)	3,205.5	2,869.2	1,884.7
Mu	('k)	5,390.2	3,839.9	3,912.3
fsϕ non-comp	(ksi)	7.35	12.09	2.90
fsϕ (comp)	(ksi)	2.25	-	1.43
fs <sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(ksi)	13.20	10.88	14.94
fs (Overload)	(ksi)	22.81	22.97	19.26
fs (Total)	(ksi)	-	-	-
VR	(k)	62	-	65

UNIT 6 - INTERIOR GIRDERS REACTION TABLE			
		Pier 15 or Pier 18	Pier 16 or Pier 17
R <sub>ϕ</sub>	(k)	50.14	138.77
R <sub>l</sub>	(k)	51.22	61.34
R <sub>i</sub>	(k)	11.91	14.22
R <sub>Total</sub>	(k)	113.27	214.33

UNIT 6 GIRDER 5 INTERIOR GIRDER REACTION TABLE			
		Pier 15 or Pier 18	Pier 16 or Pier 17
R <sub>ϕ</sub>	(k)	50.03	141.91
R <sub>l</sub>	(k)	51.21	61.67
R <sub>i</sub>	(k)	11.90	14.30
R <sub>Total</sub>	(k)	113.14	217.88

UNIT 6 - GIRDER 5 INTERIOR GIRDER MOMENT TABLE				
	0.4 Sp. 16 or 0.6 Sp. 18	Pier 16 or Pier 17	0.5 Sp. 17	
Is	(in <sup>4</sup> )	21,155	33,192	19,845
Ic(n)	(in <sup>4</sup> )	56,939	-	51,840
Ic(3n)	(in <sup>4</sup> )	40,865	-	37,746
Ss	(in <sup>3</sup> )	1,120	1,383	1,001
Sc(n)	(in <sup>3</sup> )	1,505	-	1,346
Sc(3n)	(in <sup>3</sup> )	1,391	-	1,244
Z	(in <sup>3</sup> )	-	1,530	-
ϕ	(k/')	1.04	1.42	1.05
Mϕ	('k)	640.5	1,224.7	155.2
sϕ	(k/')	0.37	-	0.37
Msϕ	('k)	244.5	-	95.8
M <sub>l</sub>	('k)	750.5	522.4	590.7
M <sub>i</sub>	('k)	174.5	121.1	136.5
<sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	('k)	1,541.5	1,072.5	1,212.1
Ma	('k)	3,154.6	2,986.4	1,901.9
Mu	('k)	5,624.8	4,590.0	5,151.4
fsϕ non-comp	(ksi)	6.86	10.63	1.86
fsϕ (comp)	(ksi)	2.11	-	0.92
fs <sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(ksi)	12.29	9.31	10.80
fs (Overload)	(ksi)	21.26	19.93	13.59
fs (Total)	(ksi)	-	-	-
VR	(k)	62	-	65

UNIT 6 - GIRDER 6 EXTERIOR GIRDER MOMENT TABLE				
	0.4 Sp. 16 or 0.6 Sp. 18	Pier 16 or Pier 17	0.5 Sp. 17	
Is	(in <sup>4</sup> )	21,766	41,110	24,462
Ic(n)	(in <sup>4</sup> )	59,423	-	71,238
Ic(3n)	(in <sup>4</sup> )	42,352	-	49,167
Ss	(in <sup>3</sup> )	1,179	1,687	1,463
Sc(n)	(in <sup>3</sup> )	1,584	-	1,978
Sc(3n)	(in <sup>3</sup> )	1,464	-	1,825
Z	(in <sup>3</sup> )	-	1,905	-
ϕ	(k/')	1.14	1.53	1.19
Mϕ	('k)	677.8	1,365.5	153.6
sϕ	(k/')	0.34	-	0.34
Msϕ	('k)	220.5	-	78.1
M <sub>l</sub>	('k)	696.5	512.6	570.1
M <sub>i</sub>	('k)	161.9	118.8	131.8
<sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	('k)	1,430.6	1,052.4	1,169.8
Ma	('k)	3,027.7	3,143.2	1,822.0
Mu	('k)	5,858.3	5,714.9	7,045.4
fsϕ non-comp	(ksi)	6.90	9.72	1.26
fsϕ (comp)	(ksi)	1.81	-	0.51
fs <sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(ksi)	10.84	7.49	7.10
fs (Overload)	(ksi)	19.54	17.20	8.87
fs (Total)	(ksi)	-	-	-
VR	(k)	53	-	56

UNIT 6 - GIRDER 6 INTERIOR GIRDER REACTION TABLE			
		Pier 15 or Pier 18	Pier 16 or Pier 17
R <sub>ϕ</sub>	(k)	51.51	151.52
R <sub>l</sub>	(k)	41.99	58.74
R <sub>i</sub>	(k)	9.76	13.61
R <sub>Total</sub>	(k)	103.26	223.87

UNIT 7 INTERIOR GIRDER REACTION TABLE			
		Pier 18 or Pier 21	Pier 19 or Pier 20
R <sub>ϕ</sub>	(k)	50.10	138.67
R <sub>l</sub>	(k)	51.27	61.34
R <sub>i</sub>	(k)	11.93	14.22
R <sub>Total</sub>	(k)	113.30	214.23

UNIT 7 INTERIOR GIRDERS MOMENT TABLE				
	0.4 Sp. 19 or 0.6 Sp. 21	Pier 19 or Pier 20	0.5 Sp. 20	
Is	(in <sup>4</sup> )	20,516	27,238	15,885
Ic(n)	(in <sup>4</sup> )	54,412	-	38,236
Ic(3n)	(in <sup>4</sup> )	39,331	-	28,940
Ss	(in <sup>3</sup> )	1,061	1,153	694
Sc(n)	(in <sup>3</sup> )	1,426	-	947
Sc(3n)	(in <sup>3</sup> )	1,318	-	872
Z	(in <sup>3</sup> )	-	1,280	-
ϕ	(k/')	1.03	1.40	1.00
Mϕ	('k)	653.1	1,161.8	167.6
sϕ	(k/')	0.37	-	0.37
Msϕ	('k)	248.5	-	95.8
M <sub>l</sub>	('k)	765.3	522.4	590.7
M <sub>i</sub>	('k)	178.1	121.1	136.5
<sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	('k)	1,572.3	1,072.5	1,212.1
Ma	('k)	3,216.0	2,904.7	1,918.1
Mb <sub>l</sub>	('k)	17.6	-	-
fsϕ (non-comp)	(ksi)	7.39	12.09	2.90
fsϕ (comp)	(ksi)	2.26	-	1.32
fs <sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(ksi)	13.23	11.16	15.36
fl	(ksi)	3.98	-	-
fs(Overload)	(ksi)	22.89	23.26	19.58
fs(Total)	(ksi)	-	-	-
Fcr(Overload)	(ksi)	34.2	34.2	34.2
VR	(k)	62	-	65
Fcr	(ksi)	36.0	35.0	36.0

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

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).  
 Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).  
 Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).  
 Z: Plastic Section Modulus of the steel section in non-composite areas (in.<sup>3</sup>).  
 S<sub>l</sub>: Section modulus of one flange plate for lateral flange bending (in.<sup>3</sup>).  
 ϕ: Un-factored non-composite dead load (kips/ft.).  
 M<sub>ϕ</sub>: Un-factored moment due to non-composite dead load (kip-ft).  
 s<sub>ϕ</sub>: Un-factored long-term composite (superimposed) dead load (kips/ft.).  
 Ms<sub>ϕ</sub>: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
 M<sub>l</sub>: Un-factored live load moment (kip-ft.).  
 M<sub>i</sub>: Un-factored moment due to impact (kip-ft).  
 Ma: Factored design moment (kip-ft.).  
 1.3 [M<sub>ϕ</sub> + Ms<sub>ϕ</sub> + <sup>5</sup>/<sub>3</sub> (M<sub>l</sub> + M<sub>i</sub>)]  
 Mu: 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.).  
 Mb<sub>l</sub>: Factored lateral bending moment for flange plate (kip-ft.).  
 fl: Factored calculated normal stress at the edge of flange due to lateral bending (ksi).  
 fs (Overload): Sum of stresses as computed from the moments below (ksi).  
 M<sub>ϕ</sub> + Ms<sub>ϕ</sub> + <sup>5</sup>/<sub>3</sub> (M<sub>l</sub> + M<sub>i</sub>)  
 fs (Total): Sum of stresses as computed from the moments below (ksi).  
 1.3 [M<sub>ϕ</sub> + Ms<sub>ϕ</sub> + <sup>5</sup>/<sub>3</sub> (M<sub>l</sub> + M<sub>i</sub>)]  
 Fcr (Overload): Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5 (ksi).  
 Fcr: Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and F for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4) (ksi).  
 VR: Maximum<sub>l</sub> + impact shear range within span for stud shear connector design (kips).

UNIT 8 - GIRDER 2 INTERIOR GIRDER MOMENT TABLE								
		0.4 Sp. 22	Pier 22	0.5 Sp. 23	Pier 23	0.5 Sp. 24	Pier 24	0.6 Sp. 25
Is	(in <sup>4</sup> )	23,768	33,192	17,727	25,295	17,727	33,192	23,768
Ic(n)	(in <sup>4</sup> )	62,324	-	41,338	-	41,338	-	62,324
Ic(3n)	(in <sup>4</sup> )	44,539	-	31,262	-	31,262	-	44,539
Ss	(in <sup>3</sup> )	1,260	1,383	771	1,076	771	1,383	1,260
Sc(n)	(in <sup>3</sup> )	1,667	-	1,030	-	1,030	-	1,667
Sc(3n)	(in <sup>3</sup> )	1,542	-	950	-	950	-	1,542
Sf	(in <sup>3</sup> )	65	65	33	49	33	65	65
ϕ	(k/')	1.04	1.41	0.99	1.36	0.99	1.41	1.04
Mϕ	(k)	650.6	1345.0	286.8	890.1	283.8	1454.9	734.9
sϕ	(k/')	0.37	-	0.37	-	0.37	-	0.37
Msϕ	(k)	243.5	-	135.2	-	137.5	-	275.0
M <sub>l</sub>	(k)	797.4	543.7	640.1	498.9	654.8	579.9	853.5
M <sub>i</sub>	(k)	184.5	125.1	146.4	113.7	148.6	131.4	193.1
<sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(k)	1,636.6	1,114.6	1,310.7	1,020.9	1,339.1	1,185.6	1,744.5
Ma	(k)	3,290.0	3,197.5	2,252.5	2,484.3	2,288.5	3,432.7	3,580.7
Mbl	(k)	18.2	7.7	8.7	4.6	11.8	7.9	19.7
fsϕ (non-comp)	(ksi)	6.19	11.67	4.46	9.92	4.42	12.62	7.00
fsϕ (comp)	(ksi)	1.90	-	1.71	-	1.74	-	2.14
fs <sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(ksi)	11.78	9.67	15.27	11.38	15.61	10.29	12.55
fl	(ksi)	3.34	1.41	3.20	1.13	4.33	1.45	3.62
fs (Overload)	(ksi)	19.87	21.34	21.45	21.30	21.76	22.91	21.69
fs (Total)	(ksi)	25.83	27.74	27.88	27.70	28.29	29.78	28.20
Fcr (Overload)	(ksi)	34.20	34.20	34.20	34.20	34.20	34.20	34.20
VR	(k)	60	-	60	-	60	-	57
Fcr	(ksi)	35.11	35.00	35.18	35.00	35.13	35.00	34.91

UNIT 8 - GIRDER 2 INTERIOR GIRDER REACTION TABLE						
		Pier 21	Pier 22	Pier 23	Pier 24	Pier 25
Rϕ	(k)	49.92	149.00	118.46	155.23	53.08
R <sub>l</sub>	(k)	51.31	64.52	62.00	66.23	51.64
R <sub>i</sub>	(k)	11.87	14.84	14.12	15.01	11.69
R <sub>Total</sub>	(k)	113.11	228.35	194.59	236.48	116.41

UNIT 8 - GIRDER 1 EXTERIOR GIRDER REACTION TABLE						
		Pier 21	Pier 22	Pier 23	Pier 24	Pier 25
Rϕ	(k)	51.40	153.32	123.19	159.51	54.31
R <sub>l</sub>	(k)	42.39	61.56	59.08	63.05	42.67
R <sub>i</sub>	(k)	9.81	14.16	13.59	14.50	9.72
R <sub>Total</sub>	(k)	103.60	229.04	195.86	237.07	106.70

UNIT 8 - GIRDER 1 EXTERIOR GIRDER MOMENT TABLE								
		0.4 Sp. 22	Pier 22	0.5 Sp. 23	Pier 23	0.5 Sp. 24	Pier 24	0.6 Sp. 25
Is	(in <sup>4</sup> )	23,768	33,192	17,727	25,295	17,727	33,192	23,768
Ic(n)	(in <sup>4</sup> )	62,324	-	41,338	-	41,338	-	62,324
Ic(3n)	(in <sup>4</sup> )	44,539	-	31,262	-	31,262	-	44,539
Ss	(in <sup>3</sup> )	1,260	1,383	771	1,076	771	1,383	1,260
Sc(n)	(in <sup>3</sup> )	1,667	-	1,030	-	1,030	-	1,667
Sc(3n)	(in <sup>3</sup> )	1,542	-	950	-	950	-	1,542
Sf	(in <sup>3</sup> )	65	65	33	49	33	65	65
ϕ	(k/')	1.04	1.40	0.99	1.35	0.99	1.40	1.04
Mϕ	(k)	688.7	1393.8	296.3	920.4	292.6	1506.9	776.5
sϕ	(k/')	0.36	-	0.36	-	0.36	-	0.36
Msϕ	(k)	246.8	-	133.0	-	134.7	-	278.0
M <sub>l</sub>	(k)	804.5	570.2	643.6	525.9	655.6	616.1	855.6
M <sub>i</sub>	(k)	186.2	131.2	147.2	119.8	148.8	139.6	193.6
<sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(k)	1,651.2	1,168.9	1,318.0	1,076.2	1,340.7	1,259.6	1,748.6
Ma	(k)	3,362.8	3,331.5	2,271.4	2,595.7	2,298.4	3,596.4	3,643.9
Mbl	(k)	17.1	7.4	12.1	4.8	12.5	7.9	18.3
fsϕ (non-comp)	(ksi)	6.56	12.09	4.61	10.26	4.56	13.07	7.39
fsϕ (comp)	(ksi)	1.92	-	1.68	-	1.70	-	2.16
fs <sup>5</sup> / <sub>3</sub> [M <sub>l</sub> + M <sub>i</sub> ]	(ksi)	11.88	10.14	15.36	12.00	15.62	10.93	12.58
fl	(ksi)	3.14	1.36	4.44	1.18	4.59	1.45	3.36
fs (Overload)	(ksi)	20.36	22.24	21.65	22.26	21.88	24.00	22.14
fs (Total)	(ksi)	26.47	28.91	28.15	28.94	28.45	31.21	28.78
Fcr (Overload)	(ksi)	34.20	34.20	34.20	34.20	34.20	34.20	34.20
VR	(k)	56	-	56	-	56	-	56
Fcr	(ksi)	35.08	35.00	35.16	35.00	35.11	35.00	34.86

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.<sup>3</sup>).

Sf: Section modulus of one flange plate for lateral flange bending (in.<sup>3</sup>).

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

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

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

Msϕ: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M<sub>l</sub>: Un-factored live load moment (kip-ft.).

M<sub>i</sub>: Un-factored moment due to impact (kip-ft.).

Ma: Factored design moment (kip-ft.).  
1.3 [Mϕ + Msϕ + <sup>5</sup>/<sub>3</sub> (M<sub>l</sub> + M<sub>i</sub>)]

Mu: 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.).

Mbl: Factored lateral bending moment for flange plate (kip-ft.).

fl: Factored calculated normal stress at the edge of flange due to lateral bending (ksi).

fs (Overload): Sum of stresses as computed from the moments below (ksi).  
Mϕ + Msϕ + <sup>5</sup>/<sub>3</sub> (M<sub>l</sub> + M<sub>i</sub>)

fs (Total): Sum of stresses as computed from the moments below (ksi).  
1.3 [Mϕ + Msϕ + <sup>5</sup>/<sub>3</sub> (M<sub>l</sub> + M<sub>i</sub>)]

Fcr (Overload): Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5 (ksi).

Fcr: Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and F for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4) (ksi).

VR: Maximum  $\phi$  + impact shear range within span for stud shear connector design (kips).

Note:  
M<sub>l</sub> and R<sub>l</sub> include the effects of centrifugal force and superelevation.

MODEL: Default  
FILE NAME: p:\v\civiltech-pw-bentley.com\civiltech-pw\Documents\Projects\3393\CADD Sheets\Structures\Structure SN 0162467\0162467-62145-066- M&R Unit 8.dgn



USER NAME = mc  
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PLOT DATE = 11/24/2021  
DATE - 10/21/2021

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REVISOR -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

MOMENT & REACTION TABLES - UNIT 8  
STRUCTURE NO. 016-2467

SHEET SB-66 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	253
ILLINOIS			CONTRACT NO. 62H49	

UNIT 9 - GIRDER 2 INTERIOR GIRDER MOMENT TABLE								
		0.4 Sp. 26	Piers 26	0.5 Sp. 27	Pier 27	0.5 Sp. 28	Pier 28	0.6 Sp. 29
Is	(in <sup>4</sup> )	24,964	37,266	21,470	29,202	21,470	41,425	26,072
Ic(n)	(in <sup>4</sup> )	67,135	-	47,506	-	47,506	-	71,796
Ic(3n)	(in <sup>4</sup> )	47,377	-	35,897	-	35,897	-	50,064
Ss	(in <sup>3</sup> )	1,377	1,537	923	1,230	923	1,691	1,492
Sc(n)	(in <sup>3</sup> )	1,825	-	1,196	-	1,196	-	1,983
Sc(3n)	(in <sup>3</sup> )	1,687	-	1,107	-	1,107	-	1,831
S <sub>l</sub>	(in <sup>3</sup> )	74	74	41	57	41	82	82
ϕ	(k/')	1.06	1.42	1.03	1.39	1.03	1.43	1.07
M <sub>ϕ</sub>	('k)	779.5	1625.7	358.7	1059.4	353.2	1777.0	861.2
s <sub>ϕ</sub>	(k/')	0.36	-	0.36	-	0.36	-	0.36
M <sub>sϕ</sub>	('k)	289.8	-	162.2	-	165.2	-	314.9
M <sub>ϕ</sub>	('k)	885.4	635.9	729.3	586.4	739.7	679.1	934.3
M <sub>l</sub>	('k)	197.3	140.8	160.4	128.4	161.3	148.4	204.5
<sup>5</sup> / <sub>3</sub> [M <sub>ϕ</sub> + M <sub>l</sub> ]	('k)	1,804.5	1,294.5	1,482.8	1,191.5	1,501.8	1,379.1	1,898.0
Ma	('k)	3,735.9	3,796.3	2,604.7	2,926.1	2,626.2	4,103.0	3,996.3
Mbl	('k)	19.8	9.8	10.7	5.7	13.8	10.0	20.9
fs <sub>ϕ</sub> (non-comp)	(ksi)	6.79	12.69	4.66	10.34	4.59	12.61	6.93
fs <sub>ϕ</sub> (comp)	(ksi)	2.06	-	1.76	-	1.79	-	2.06
fs <sup>5</sup> / <sub>3</sub> [M <sub>ϕ</sub> + M <sub>l</sub> ]	(ksi)	11.86	10.11	14.87	11.63	15.07	9.79	11.49
fl	(ksi)	3.23	1.60	3.14	1.20	4.06	1.47	3.07
fs (Overload)	(ksi)	20.71	22.80	21.29	21.97	21.45	22.40	20.48
fs (Total)	(ksi)	26.93	29.64	27.68	28.56	27.88	29.12	26.62
Fcr (Overload)	(ksi)	34.20	34.20	34.20	34.20	34.20	34.20	34.20
VR	(k)	61	-	60	-	61	-	58
Fcr	(ksi)	34.84	35.00	34.96	35.00	34.90	35.00	34.74

UNIT 9 - GIRDER 2 INTERIOR GIRDER REACTION TABLE						
		Pier 25	Pier 26	Pier 27	Pier 28	Pier 29
R <sub>ϕ</sub>	(k)	55.69	166.85	132.31	174.85	58.77
R <sub>ϕ</sub>	(k)	51.85	69.27	66.87	71.14	52.11
R <sub>l</sub>	(k)	11.56	15.34	14.65	15.54	11.40
R <sub>Total</sub>	(k)	119.09	251.45	213.83	261.53	122.28

UNIT 9 - GIRDER 1 EXTERIOR GIRDER REACTION TABLE						
		Pier 25	Pier 26	Pier 27	Pier 28	Pier 29
R <sub>ϕ</sub>	(k)	55.69	166.85	132.31	174.85	58.77
R <sub>ϕ</sub>	(k)	51.85	69.27	66.87	71.14	52.11
R <sub>l</sub>	(k)	11.56	15.34	14.65	15.54	11.40
R <sub>Total</sub>	(k)	119.09	251.45	213.83	261.53	122.28

UNIT 9 - GIRDER 1 EXTERIOR GIRDER MOMENT TABLE								
		0.4 Sp. 26	Piers 26	0.5 Sp. 27	Pier 27	0.5 Sp. 28	Pier 28	0.6 Sp. 29
Is	(in <sup>4</sup> )	24,964	37,266	21,470	29,202	21,470	41,425	26,072
Ic(n)	(in <sup>4</sup> )	67,135	-	47,506	-	47,506	-	71,796
Ic(3n)	(in <sup>4</sup> )	47,377	-	35,897	-	35,897	-	50,064
Ss	(in <sup>3</sup> )	1,377	1,537	923	1,230	923	1,691	1,492
Sc(n)	(in <sup>3</sup> )	1,825	-	1,196	-	1,196	-	1,983
Sc(3n)	(in <sup>3</sup> )	1,687	-	1,107	-	1,107	-	1,831
S <sub>l</sub>	(in <sup>3</sup> )	74	74	41	57	41	82	82
ϕ	(k/')	1.06	1.42	1.03	1.39	1.03	1.43	1.07
M <sub>ϕ</sub>	('k)	779.5	1625.7	358.7	1059.4	353.2	1777.0	861.2
s <sub>ϕ</sub>	(k/')	0.36	-	0.36	-	0.36	-	0.36
M <sub>sϕ</sub>	('k)	289.8	-	162.2	-	165.2	-	314.9
M <sub>ϕ</sub>	('k)	885.4	635.9	729.3	586.4	739.7	679.1	934.3
M <sub>l</sub>	('k)	197.3	140.8	160.4	128.4	161.3	148.4	204.5
<sup>5</sup> / <sub>3</sub> [M <sub>ϕ</sub> + M <sub>l</sub> ]	('k)	1,804.5	1,294.5	1,482.8	1,191.5	1,501.8	1,379.1	1,898.0
Ma	('k)	3,735.9	3,796.3	2,604.7	2,926.1	2,626.2	4,103.0	3,996.3
Mbl	('k)	19.8	9.8	10.7	5.7	13.8	10.0	20.9
fs <sub>ϕ</sub> (non-comp)	(ksi)	6.79	12.69	4.66	10.34	4.59	12.61	6.93
fs <sub>ϕ</sub> (comp)	(ksi)	2.06	-	1.76	-	1.79	-	2.06
fs <sup>5</sup> / <sub>3</sub> [M <sub>ϕ</sub> + M <sub>l</sub> ]	(ksi)	11.86	10.11	14.87	11.63	15.07	9.79	11.49
fl	(ksi)	3.23	1.60	3.14	1.20	4.06	1.47	3.07
fs (Overload)	(ksi)	20.71	22.80	21.29	21.97	21.45	22.40	20.48
fs (Total)	(ksi)	26.93	29.64	27.68	28.56	27.88	29.12	26.62
Fcr (Overload)	(ksi)	34.20	34.20	34.20	34.20	34.20	34.20	34.20
VR	(k)	61	-	60	-	61	-	58
Fcr	(ksi)	34.84	35.00	34.96	35.00	34.90	35.00	34.74

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.<sup>3</sup>).

S<sub>l</sub>: Section modulus of one flange plate for lateral flange bending (in.<sup>3</sup>).

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

M<sub>ϕ</sub>: Un-factored moment due to non-composite dead load (kip-ft.).

s<sub>ϕ</sub>: Un-factored long-term composite (superimposed) dead load (kips/ft.).

M<sub>sϕ</sub>: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M<sub>ϕ</sub>: Un-factored live load moment (kip-ft.).

M<sub>l</sub>: Un-factored moment due to impact (kip-ft.).

Ma: Factored design moment (kip-ft.).  
1.3 [M<sub>ϕ</sub> + M<sub>sϕ</sub> + <sup>5</sup>/<sub>3</sub>(M<sub>ϕ</sub> + M<sub>l</sub>)]

Mu: 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.).

Mbl: Factored lateral bending moment for flange plate (kip-ft.).

fl: Factored calculated normal stress at the edge of flange due to lateral bending (ksi).

fs (Overload): Sum of stresses as computed from the moments below (ksi).  
M<sub>ϕ</sub> + M<sub>sϕ</sub> + <sup>5</sup>/<sub>3</sub>(M<sub>ϕ</sub> + M<sub>l</sub>)

fs (Total): Sum of stresses as computed from the moments below (ksi).  
1.3 [M<sub>ϕ</sub> + M<sub>sϕ</sub> + <sup>5</sup>/<sub>3</sub>(M<sub>ϕ</sub> + M<sub>l</sub>)]

Fcr (Overload): Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5 (ksi).

Fcr: Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and F for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4) (ksi).

VR: Maximum ϕ + impact shear range within span for stud shear connector design (kips).

Note:  
M<sub>ϕ</sub> and R<sub>ϕ</sub> include the effects of centrifugal force and superelevation.

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FILE NAME: p:\civiltch-pw-bentley.com\civiltch-pw\Documents\Projects\3393\CADD Sheets\Structures\Structure SN 016-2467\0162467-62H49-067-M&R Units 9.dgn



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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

MOMENT & REACTION TABLES - UNIT 9  
STRUCTURE NO. 016-2467

SHEET SB-87 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	254
ILLINOIS			CONTRACT NO. 62H49	



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UNIT 10 GIRDER MOMENT AT 0.5 SPAN 30 TABLE						
	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
$I_s$	(in <sup>4</sup> ) 16,525	16,525	20,330	20,330	21,371	29,852
$I_c(n)$	(in <sup>4</sup> ) 43,536	43,536	58,984	58,984	63,777	89,128
$I_c(3n)$	(in <sup>4</sup> ) 32,173	32,173	41,629	41,629	44,393	59,585
$S_s$	(in <sup>3</sup> ) 801	801	1,153	1,153	1,266	1,924
$S_c(n)$	(in <sup>3</sup> ) 1,104	1,104	1,580	1,580	1,738	2,604
$S_c(3n)$	(in <sup>3</sup> ) 1,018	1,018	1,459	1,459	1,604	2,391
$S_l$	(in <sup>3</sup> ) 37	37	61	61	69	114
$\bar{Q}$	(k/ft) 0.95	0.95	0.99	0.99	1.01	1.09
$M\bar{Q}$	(k) 405.6	462.8	620.8	663.8	741.3	980.8
$s\bar{Q}$	(k/ft) 0.36	0.36	0.36	0.36	0.36	0.36
$M_s\bar{Q}$	(k) 154.7	168.5	226.5	239.2	266.4	322.9
$M_l$	(k) 513.8	517.5	663.0	680.8	710.5	822.7
$M_i$	(k) 141.2	137.9	171.6	171.1	173.6	195.6
$^5_3[M_l + M_i]$	(k) 1091.6	1092.4	1390.9	1419.8	1473.6	1697.2
$M_a$	(k) 2,147.5	2,240.8	2,909.7	3,019.8	3,225.7	3,901.2
$M_{bl}$	(k) 4.0	8.9	16.2	27.4	21.6	9.9
$f_{s\bar{Q}}$ (non-comp)	(ksi) 6.08	6.93	6.46	6.91	7.03	6.12
$f_{s\bar{Q}}$ (comp)	(ksi) 1.82	1.99	1.86	1.97	1.99	1.62
$f_{s^5_3} [M_l + M_i]$	(ksi) 11.87	11.88	10.56	10.78	10.17	7.82
$f_l$	(ksi) 1.31	2.91	3.17	5.37	3.73	1.04
$f_s$ (Overload)	(ksi) 19.77	20.80	18.88	19.66	19.19	15.56
$f_s$ (Total)	(ksi) 25.70	27.03	24.55	25.55	24.95	20.23
$F_{cr}$ (Overload)	(ksi) 34.20	34.20	34.20	34.20	34.20	34.20
$VR$	(k) 52	53	55	55	54	53
$F_{cr}$	(ksi) 35.25	35.20	35.28	35.25	25.20	35.42

UNIT 10 REACTION AT PIER 29 AND N. ABUT. TABLE						
	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
$R\bar{Q}$	(k) 38.38	41.92	49.23	51.62	50.69	62.38
$R_l$	(k) 40.30	49.64	50.36	50.98	51.50	42.93
$R_i$	(k) 11.08	13.64	13.84	14.01	14.16	11.80
$R_{Total}$	(k) 89.76	105.21	113.44	116.60	116.35	117.11

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

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

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

$Z$ : Plastic Section Modulus of the steel section in non-composite areas (in.<sup>3</sup>).

$S_l$ : Section modulus of one flange plate for lateral flange bending (in.<sup>3</sup>).

$\bar{Q}$ : Un-factored non-composite dead load (kips/ft.).

$M\bar{Q}$ : Un-factored moment due to non-composite dead load (kip-ft.).

$s\bar{Q}$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\bar{Q}$ : 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.).  
 $1.3 [M\bar{Q} + M_s\bar{Q} + \frac{5}{8} (M_l + M_i)]$

$M_u$ : 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.).

$M_{bl}$ : Factored lateral bending moment for flange plate (kip-ft.).

$f_l$ : Factored calculated normal stress at the edge of flange due to lateral bending (ksi).

$f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).  
 $M\bar{Q} + M_s\bar{Q} + \frac{5}{8} (M_l + M_i)$

$f_s$  (Total): Sum of stresses as computed from the moments below (ksi).  
 $1.3 [M\bar{Q} + M_s\bar{Q} + \frac{5}{8} (M_l + M_i)]$

$F_{cr}$  (Overload): Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5 (ksi).

$F_{cr}$ : Critical average flange stress (smaller of  $F_{cr1}$  or  $F_{cr2}$  for partially braced flanges and  $F$  for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4) (ksi).

$VR$ : Maximum  $\bar{Q}$  + impact shear range within span for stud shear connector design (kips).

Note:  
 $M_l$  and  $R_l$  include the effects of centrifugal force and superelevation.



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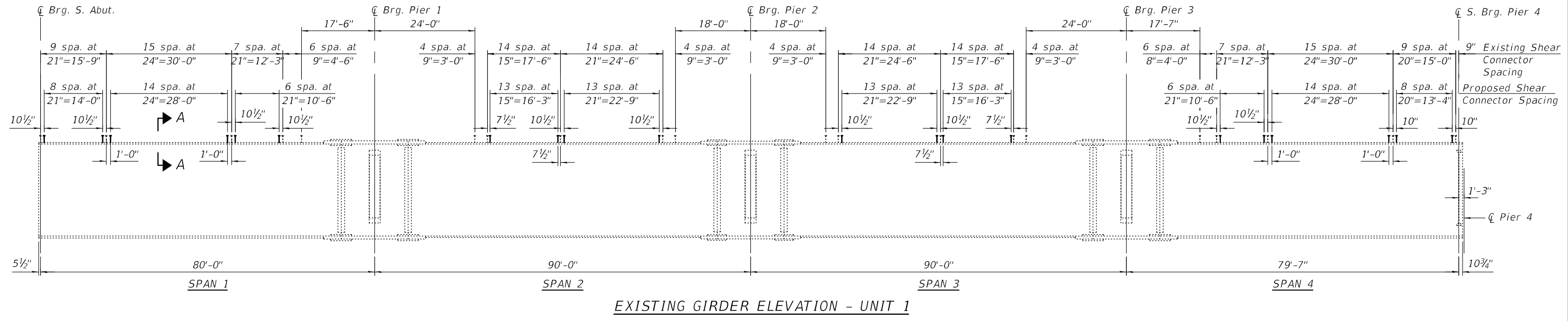
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MOMENT & REACTION TABLES - UNIT 10  
 STRUCTURE NO. 016-2467

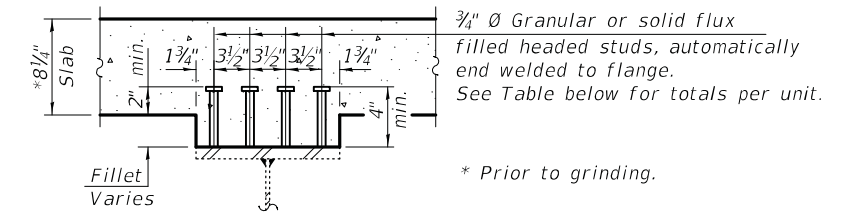
SHEET SB-68 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		ILLINOIS		



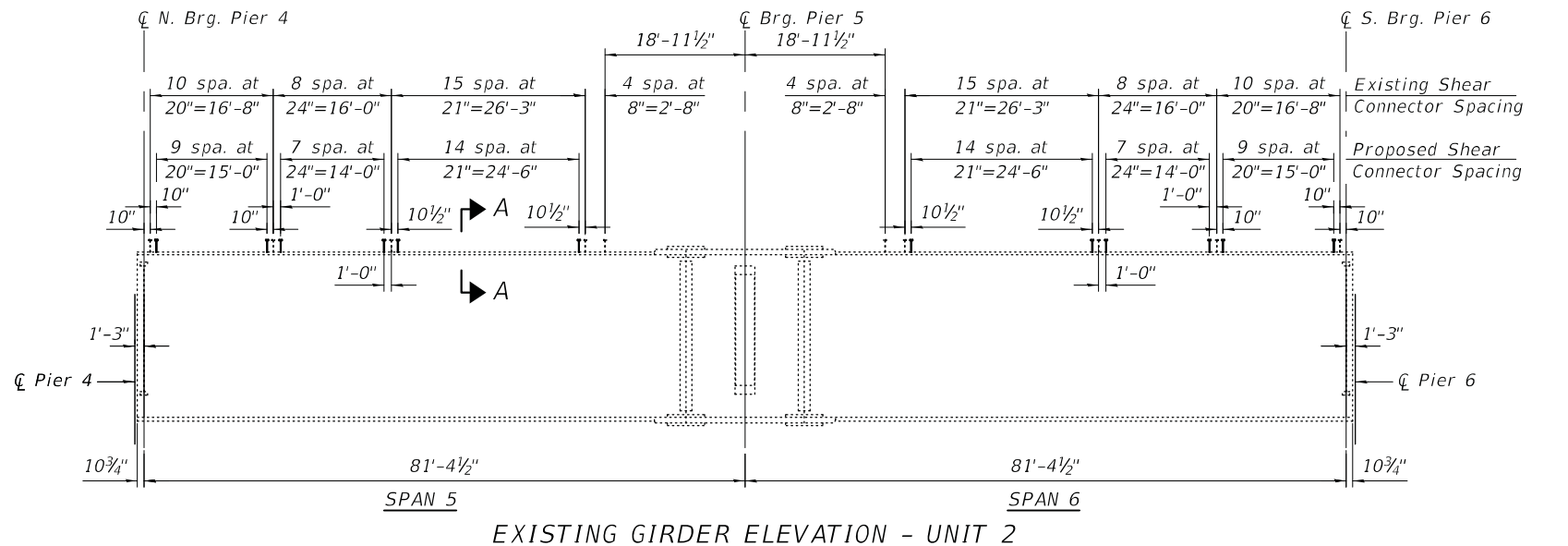


EXISTING GIRDER ELEVATION - UNIT 1

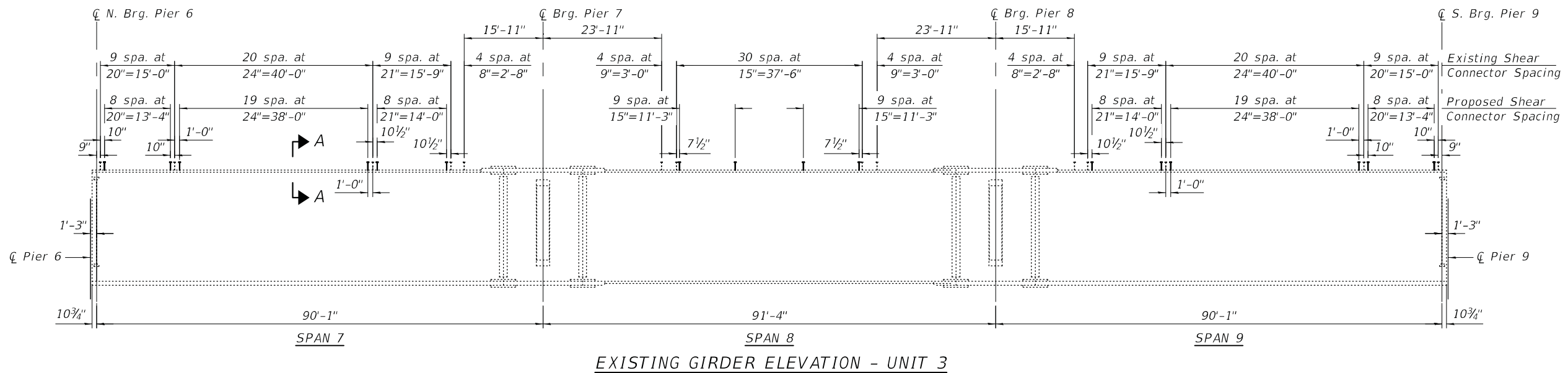


SECTION A-A

SUMMARY OF STUD SHEAR CONNECTORS		
Unit	Per Girder	Total
1	472	2,832
2	264	1,584
3	384	2,304



EXISTING GIRDER ELEVATION - UNIT 2



EXISTING GIRDER ELEVATION - UNIT 3

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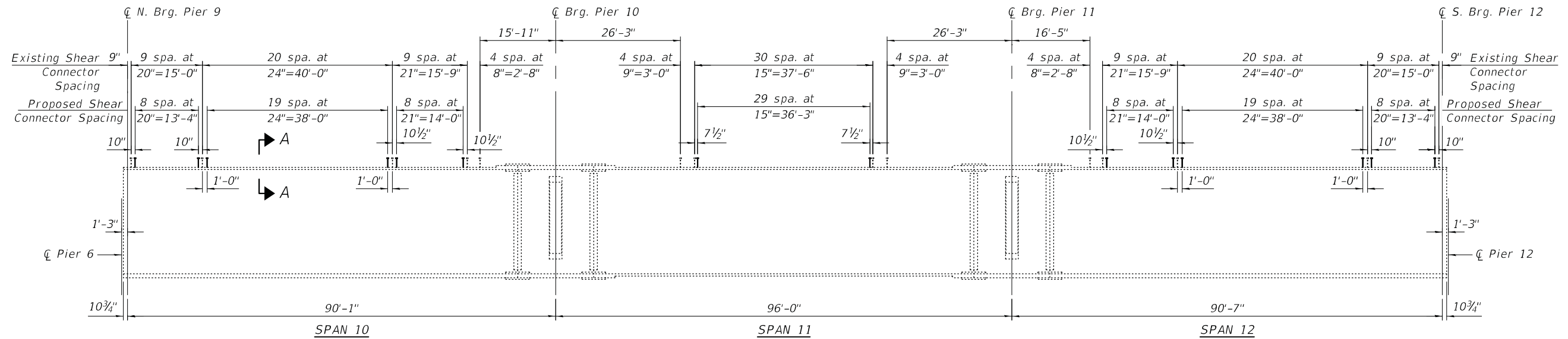
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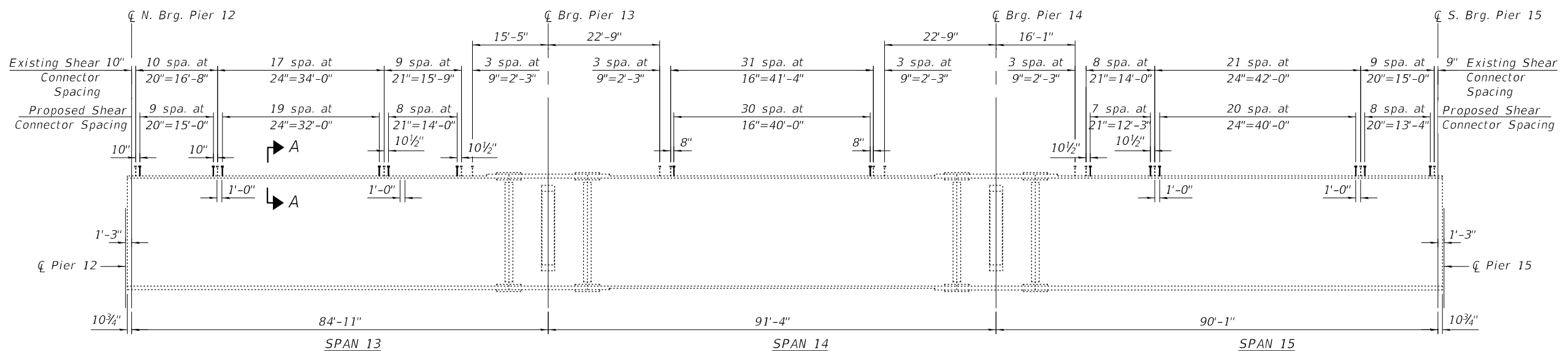
GIRDER DETAILS - UNITS 1 TO 3  
STRUCTURE NO. 016-2467

SHEET SB-69 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	256
CONTRACT NO. 62H49			ILLINOIS	



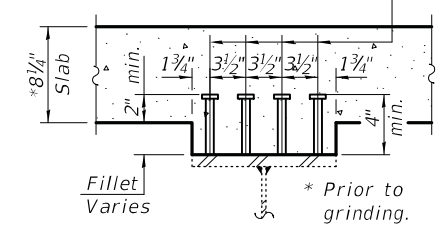
**EXISTING GIRDER ELEVATION - UNIT 4**  
(Girders 1-6)



**EXISTING GIRDER ELEVATION - UNIT 5**  
(Girders 1-6)

SUMMARY OF STUD SHEAR CONNECTORS		
Unit	Per Girder	Total
4	424	2,544
5	432	2,592

3/4" Ø Granular or solid flux filled headed studs, automatically end welded to flange.  
See table below for totals per unit.



**SECTION A-A**

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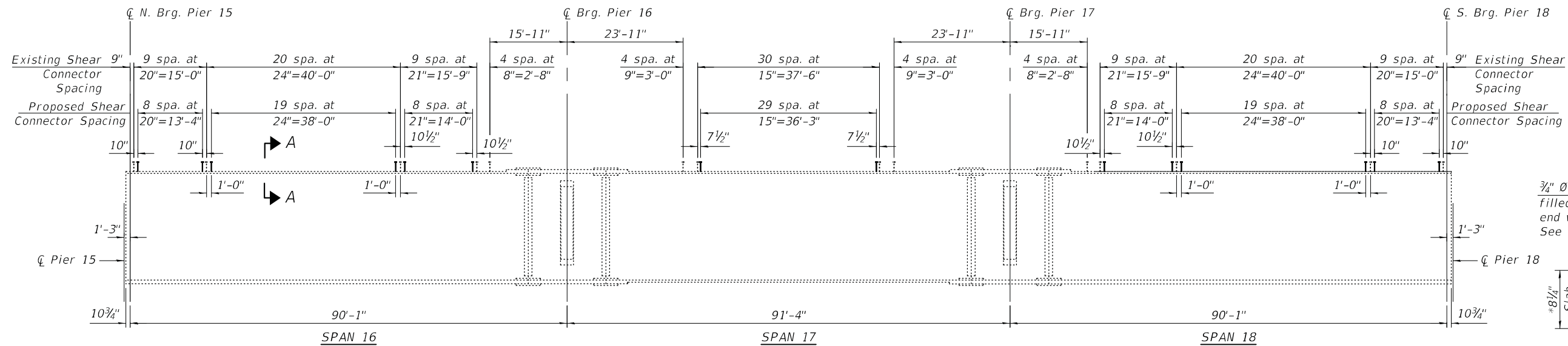
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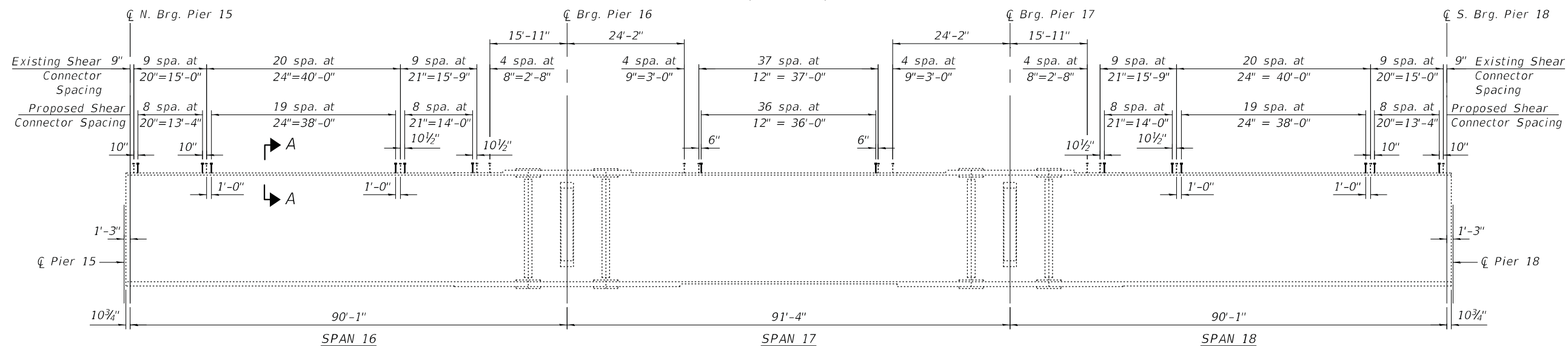
**GIRDER DETAILS - UNITS 4 & 5  
STRUCTURE NO. 016-2467**

SHEET SB-70 OF SB-104 SHEETS

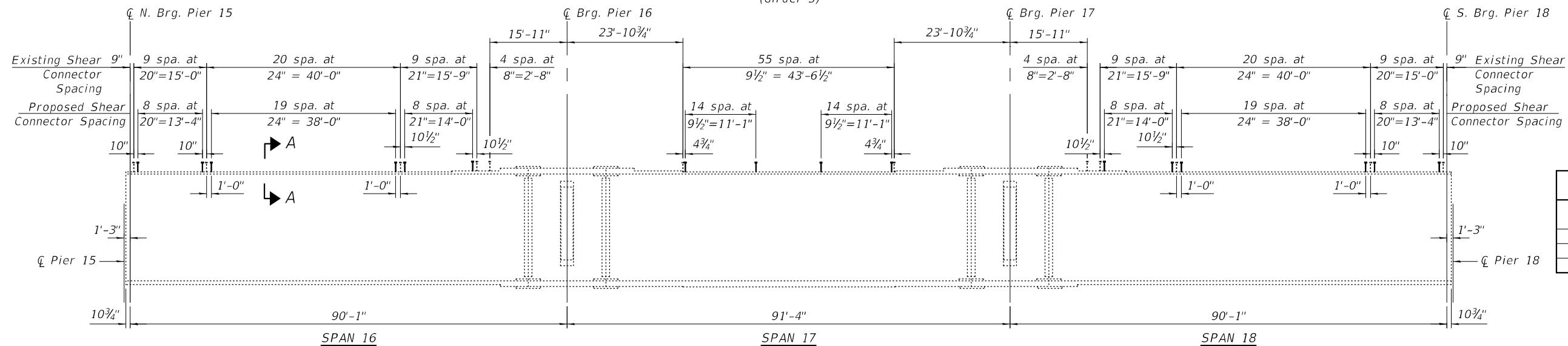
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS			CONTRACT NO. 62H49	



EXISTING GIRDER ELEVATION - UNIT 6  
(Girders 1-4)

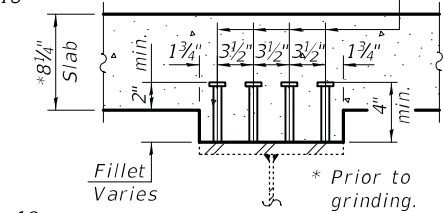


EXISTING GIRDER ELEVATION - UNIT 6  
(Girder 5)



EXISTING GIRDER ELEVATION - UNIT 6  
(Girder 6)

3/4" Ø Granular or solid flux filled headed studs, automatically end welded to flange. See table below for totals per unit.



SECTION A-A

SUMMARY OF UNIT 6 STUD SHEAR CONNECTORS		
Girder	Per Girder	Total
1-4	424	1,696
5	452	452
6	424	424

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DATE - 06/18/2021

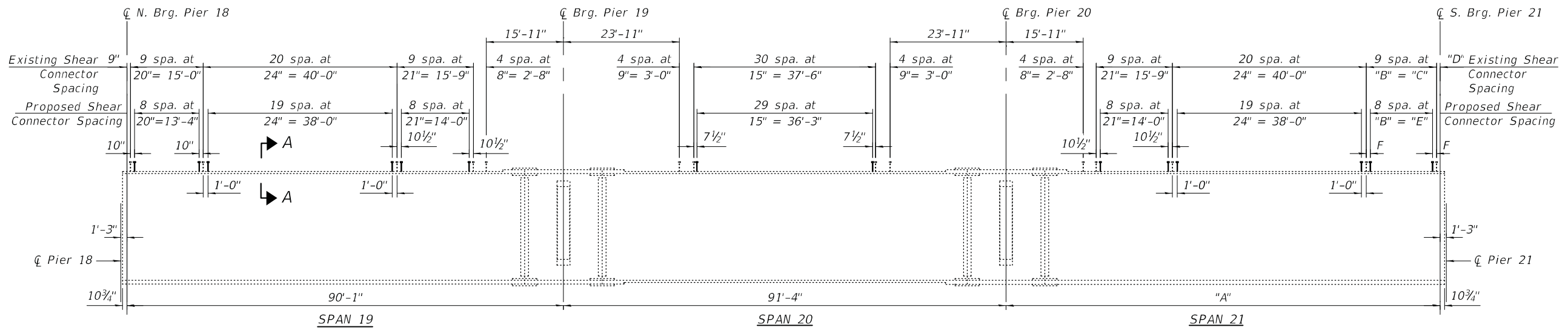
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DEPARTMENT OF TRANSPORTATION

GIRDER DETAILS - UNIT 6  
STRUCTURE NO. 016-2467

SHEET SB-71 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	258
ILLINOIS			CONTRACT NO. 62H49	

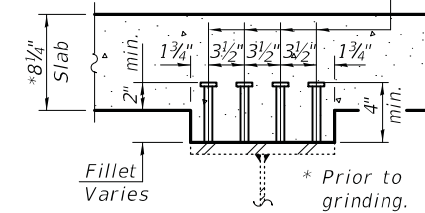


EXISTING GIRDER ELEVATION - UNIT 7

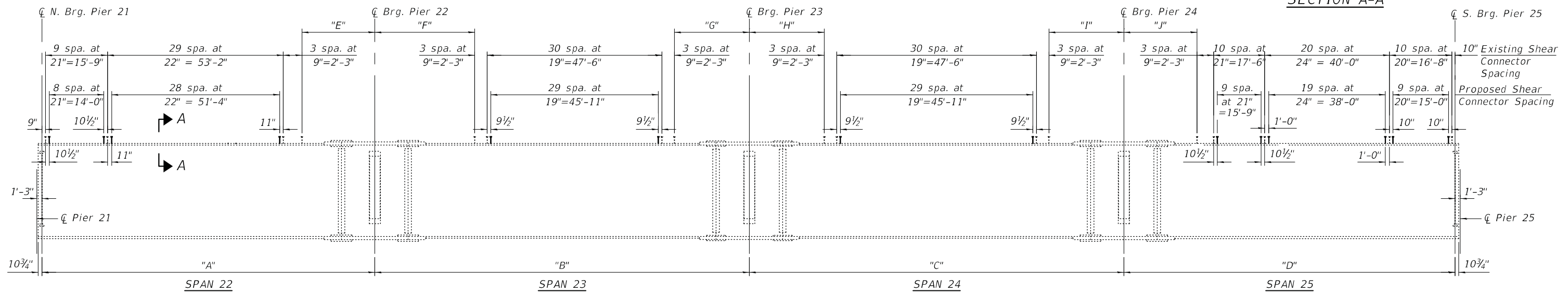
Girder No.	A	B	C	D	E	F
1	90'-3 <sup>3</sup> / <sub>4</sub> "	20"	15'-0"	11 <sup>3</sup> / <sub>4</sub> "	13'-4"	10"
2	90'-1 <sup>7</sup> / <sub>8</sub> "	20"	15'-0"	9 <sup>7</sup> / <sub>8</sub> "	13'-4"	10"
3	90'-0 <sup>1</sup> / <sub>16</sub> "	20"	15'-0"	8 <sup>1</sup> / <sub>16</sub> "	13'-4"	10"
4	89'-10 <sup>3</sup> / <sub>16</sub> "	19"	14'-3"	1'-3 <sup>3</sup> / <sub>16</sub> "	12'-8"	9 <sup>1</sup> / <sub>2</sub> "
5	89'-8 <sup>3</sup> / <sub>8</sub> "	19"	14'-3"	1'-1 <sup>3</sup> / <sub>8</sub> "	12'-8"	9 <sup>1</sup> / <sub>2</sub> "
6	89'-6 <sup>1</sup> / <sub>2</sub> "	19"	14'-3"	11 <sup>1</sup> / <sub>2</sub> "	12'-8"	9 <sup>1</sup> / <sub>2</sub> "

Unit	Per Girder	Total
7	424	2,544
8	552	3,312

3/4" Ø Granular or solid flux  
filled headed studs, automatically  
end welded to flange.  
See table below for totals per unit.



SECTION A-A



EXISTING GIRDER ELEVATION - UNIT 8

Girder No.	A	B	C	D	E	F	G	H	I	J
1	91'-10 <sup>3</sup> / <sub>4</sub> "	94'-6"	96'-1 <sup>5</sup> / <sub>8</sub> "	96'-9 <sup>1</sup> / <sub>16</sub> "	19'-11 <sup>3</sup> / <sub>4</sub> "	24'-10"	17'-8"	17'-10"	26'-3 <sup>5</sup> / <sub>8</sub> "	19'-6 <sup>1</sup> / <sub>16</sub> "
2	91'-6 <sup>1</sup> / <sub>16</sub> "	94'-2"	95'-9 <sup>3</sup> / <sub>8</sub> "	96'-5 <sup>1</sup> / <sub>16</sub> "	19'-7 <sup>3</sup> / <sub>16</sub> "	24'-8"	17'-6"	17'-8"	26'-1 <sup>3</sup> / <sub>8</sub> "	19'-2 <sup>1</sup> / <sub>16</sub> "
3	91'-2 <sup>7</sup> / <sub>8</sub> "	93'-10"	95'-5 <sup>1</sup> / <sub>16</sub> "	96'-1 <sup>5</sup> / <sub>8</sub> "	19'-3 <sup>7</sup> / <sub>8</sub> "	24'-6"	17'-4"	17'-6"	25'-11 <sup>9</sup> / <sub>16</sub> "	18'-10 <sup>5</sup> / <sub>8</sub> "
4	90'-10 <sup>1</sup> / <sub>16</sub> "	93'-6"	95'-1 <sup>1</sup> / <sub>2</sub> "	95'-9 <sup>1</sup> / <sub>2</sub> "	18'-11 <sup>1</sup> / <sub>16</sub> "	24'-4"	17'-2"	17'-4"	25'-9 <sup>1</sup> / <sub>2</sub> "	18'-6 <sup>1</sup> / <sub>2</sub> "
5	90'-7"	93'-2"	94'-9 <sup>1</sup> / <sub>16</sub> "	95'-5 <sup>3</sup> / <sub>8</sub> "	18'-8"	24'-2"	17'-0"	17'-2"	25'-7 <sup>1</sup> / <sub>16</sub> "	18'-2 <sup>7</sup> / <sub>8</sub> "
6	90'-3 <sup>1</sup> / <sub>16</sub> "	92'-10"	94'-5 <sup>3</sup> / <sub>8</sub> "	95'-1 <sup>1</sup> / <sub>4</sub> "	18'-4 <sup>1</sup> / <sub>16</sub> "	24'-0"	16'-10"	17'-0"	25'-5 <sup>3</sup> / <sub>8</sub> "	17'-10 <sup>1</sup> / <sub>4</sub> "

MODEL: Default  
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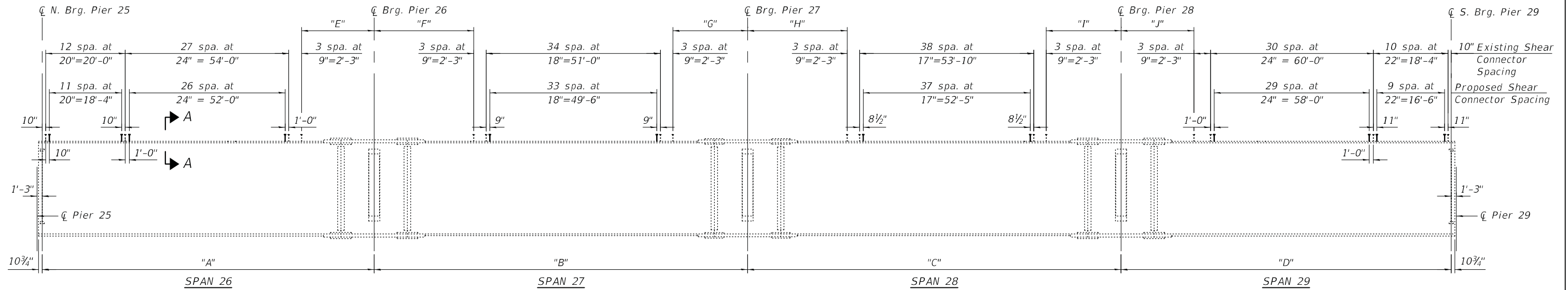
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PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GIRDER DETAILS - UNITS 7 & 8  
STRUCTURE NO. 016-2467

SHEET SB-72 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	259
ILLINOIS			CONTRACT NO. 62H49	

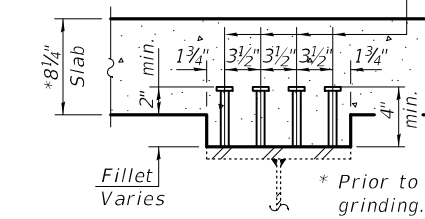


EXISTING GIRDER ELEVATION - UNIT 9

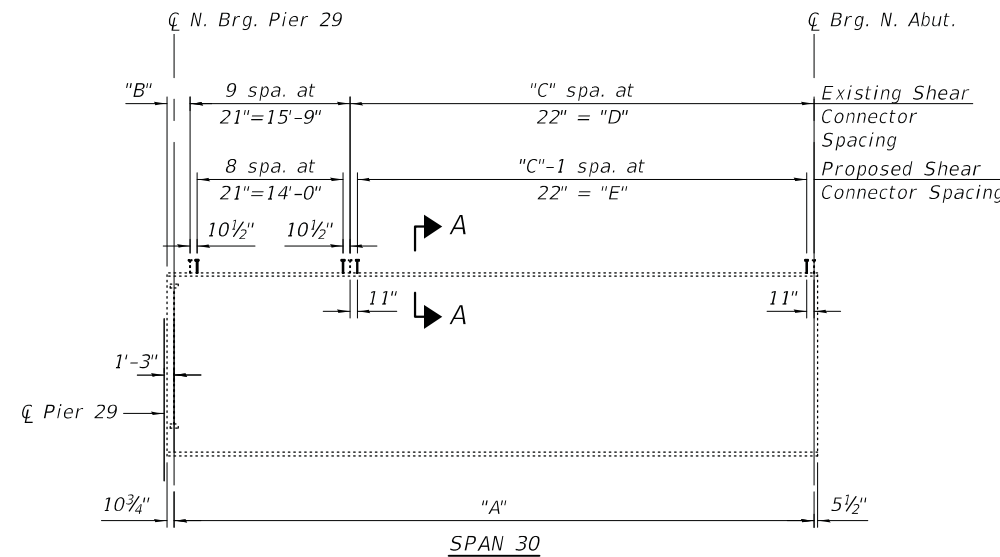
DIMENSION TABLE UNIT 9										
Girder No.	A	B	C	D	E	F	G	H	I	J
1	100'-2 <sup>3</sup> / <sub>4</sub> "	103'-2 <sup>1</sup> / <sub>16</sub> "	105'-1 <sup>7</sup> / <sub>8</sub> "	104'-4 <sup>1</sup> / <sub>16</sub> "	22'-11 <sup>3</sup> / <sub>4</sub> "	27'-10 <sup>1</sup> / <sub>16</sub> "	19'-10"	20'-0"	26'-9 <sup>7</sup> / <sub>8</sub> "	22'-11 <sup>1</sup> / <sub>16</sub> "
2	99'-10 <sup>1</sup> / <sub>2</sub> "	102'-10 <sup>3</sup> / <sub>16</sub> "	104'-9 <sup>7</sup> / <sub>16</sub> "	104'-0 <sup>3</sup> / <sub>16</sub> "	22'-7 <sup>1</sup> / <sub>2</sub> "	27'-8 <sup>3</sup> / <sub>16</sub> "	19'-8"	19'-9 <sup>3</sup> / <sub>4</sub> "	26'-8 <sup>1</sup> / <sub>16</sub> "	22'-7 <sup>3</sup> / <sub>16</sub> "
3	99'-6 <sup>3</sup> / <sub>16</sub> "	102'-6"	104'-5"	103'-7 <sup>3</sup> / <sub>4</sub> "	22'-3 <sup>3</sup> / <sub>16</sub> "	27'-6"	19'-6"	19'-7 <sup>1</sup> / <sub>2</sub> "	26'-5 <sup>1</sup> / <sub>2</sub> "	22'-2 <sup>3</sup> / <sub>4</sub> "
4	99'-1 <sup>1</sup> / <sub>16</sub> "	102'-1 <sup>7</sup> / <sub>8</sub> "	104'-0 <sup>9</sup> / <sub>16</sub> "	103'-3 <sup>7</sup> / <sub>16</sub> "	21'-10 <sup>1</sup> / <sub>16</sub> "	27'-3 <sup>3</sup> / <sub>8</sub> "	19'-4"	19'-5 <sup>1</sup> / <sub>4</sub> "	26'-3 <sup>7</sup> / <sub>16</sub> "	21'-10 <sup>3</sup> / <sub>16</sub> "
5	98'-9 <sup>5</sup> / <sub>8</sub> "	101'-9 <sup>1</sup> / <sub>4</sub> "	103'-8 <sup>1</sup> / <sub>8</sub> "	102'-10 <sup>3</sup> / <sub>16</sub> "	21'-6 <sup>5</sup> / <sub>8</sub> "	27'-1 <sup>1</sup> / <sub>4</sub> "	19'-2"	19'-3"	26'-1 <sup>1</sup> / <sub>8</sub> "	21'-5 <sup>1</sup> / <sub>16</sub> "
6	98'-5 <sup>3</sup> / <sub>8</sub> "	101'-4 <sup>1</sup> / <sub>16</sub> "	103'-3 <sup>1</sup> / <sub>16</sub> "	102'-6 <sup>3</sup> / <sub>8</sub> "	21'-2 <sup>3</sup> / <sub>8</sub> "	26'-10 <sup>1</sup> / <sub>16</sub> "	19'-0"	19'-0 <sup>3</sup> / <sub>4</sub> "	25'-11 <sup>1</sup> / <sub>16</sub> "	21'-1 <sup>3</sup> / <sub>8</sub> "

SUMMARY OF UNIT 9 STUD SHEAR CONNECTORS		
Unit	Per Girder	Total
9	604	3,624

3/4" Ø Granular or solid flux filled headed studs, automatically end welded to flange. See table below for totals per unit.



SECTION A-A



EXISTING GIRDER ELEVATION - UNIT 10

SUMMARY OF UNIT 10 STUD SHEAR CONNECTORS	
Girder	Per Girder
1	124
2	136
3	148
4	160
5	172
6	184
Total	924

DIMENSION TABLE UNIT 10					
Girder No.	A	B	C	D	E
1	56'-11"	1'-8 <sup>3</sup> / <sub>4</sub> "	22	40'-4"	38'-6"
2	62'-6 <sup>1</sup> / <sub>16</sub> "	1'-10 <sup>3</sup> / <sub>16</sub> "	25	45'-10"	44'-0"
3	68'-2 <sup>3</sup> / <sub>4</sub> "	2'-0 <sup>1</sup> / <sub>2</sub> "	28	51'-4"	49'-6"
4	73'-10 <sup>1</sup> / <sub>8</sub> "	2'-2 <sup>3</sup> / <sub>8</sub> "	31	56'-10"	55'-0"
5	79'-7 <sup>1</sup> / <sub>16</sub> "	2'-4 <sup>1</sup> / <sub>16</sub> "	34	62'-4"	60'-6"
6	85'-3 <sup>3</sup> / <sub>8</sub> "	2'-7 <sup>3</sup> / <sub>8</sub> "	37	67'-10"	66'-0"

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

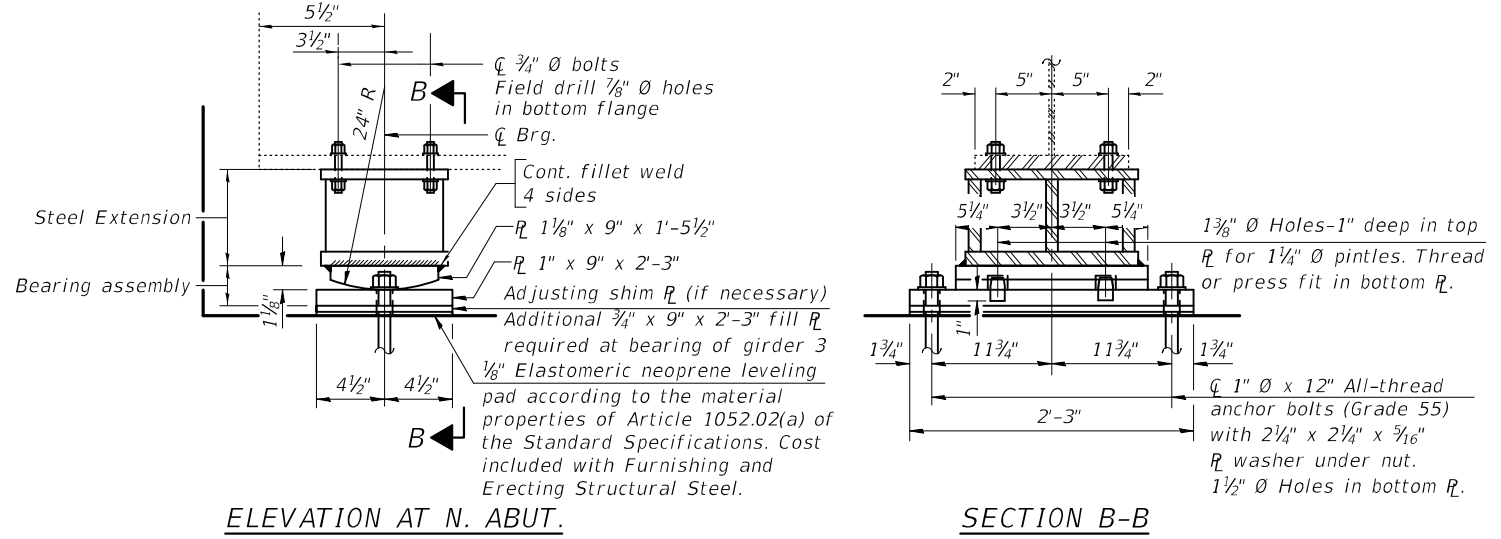
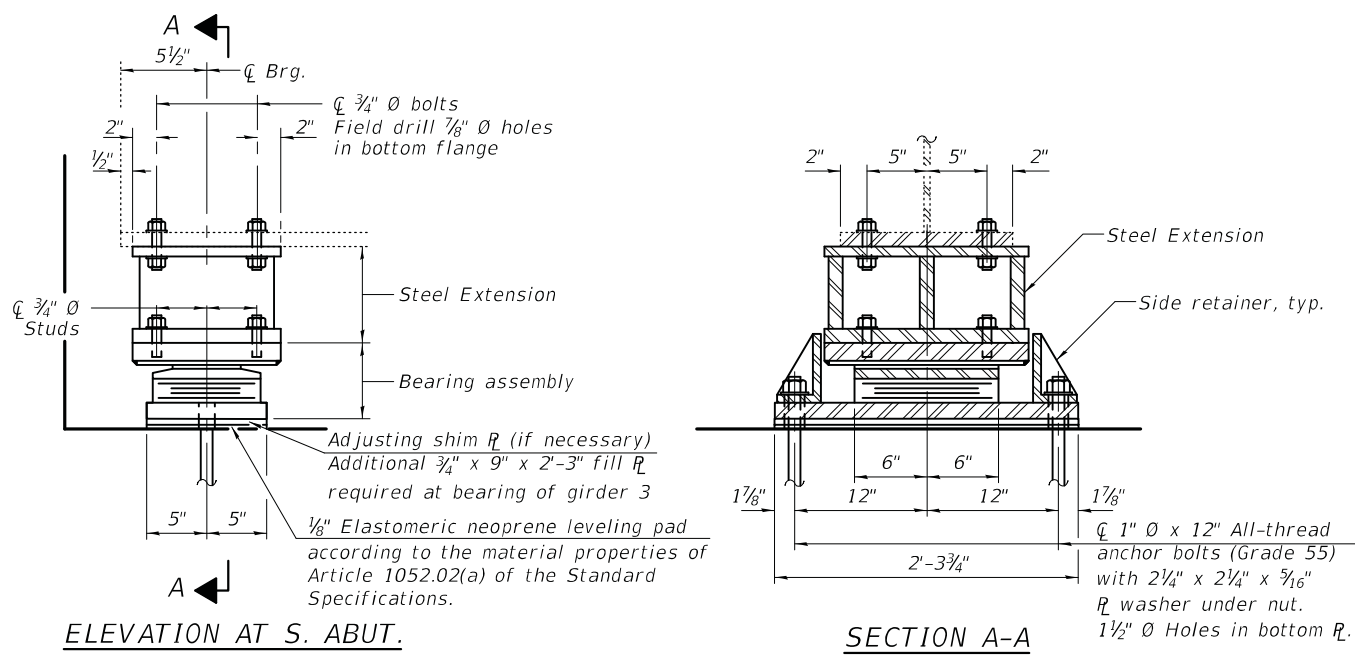
GIRDER DETAILS - UNITS 9 & 10  
STRUCTURE NO. 016-2467

SHEET SB-73 OF SB-104 SHEETS

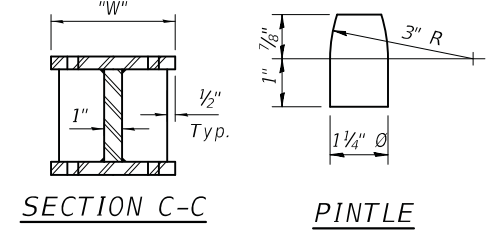
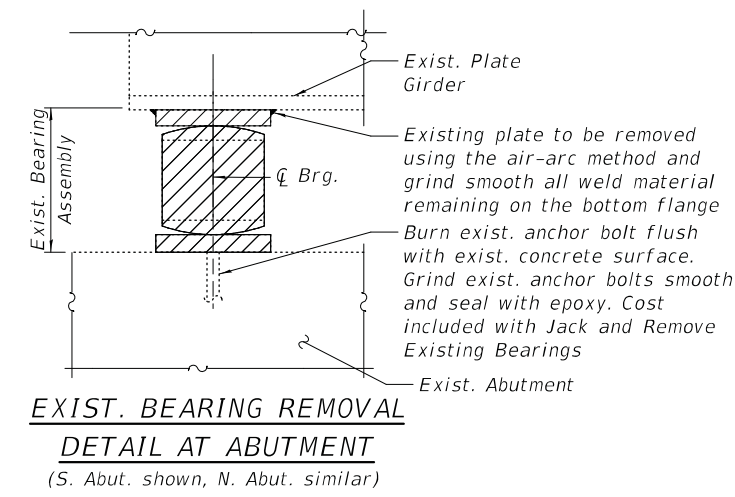
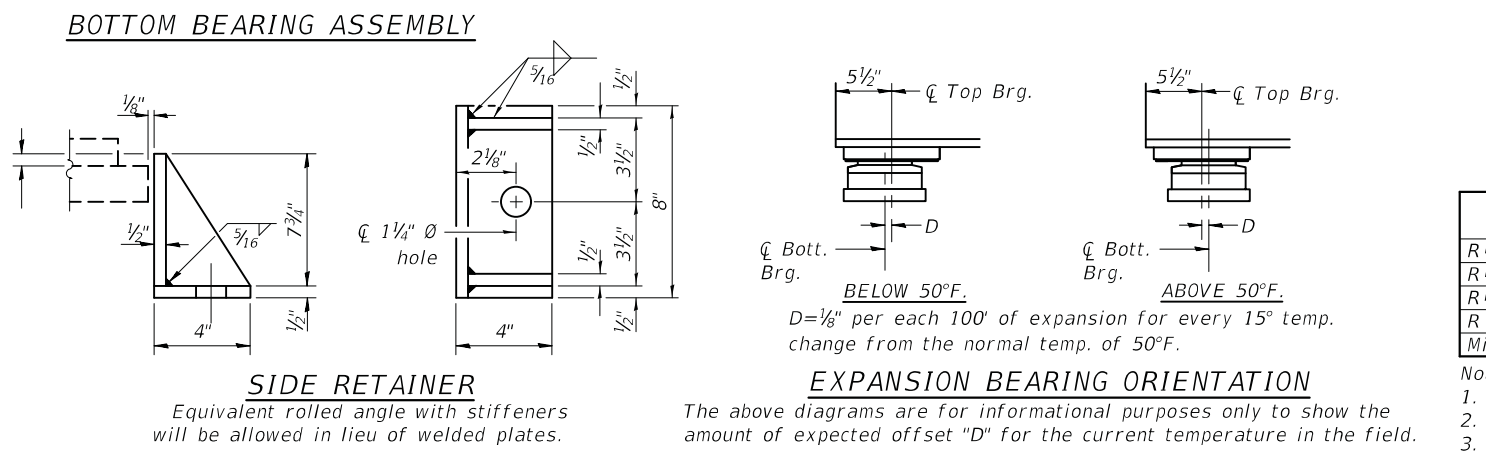
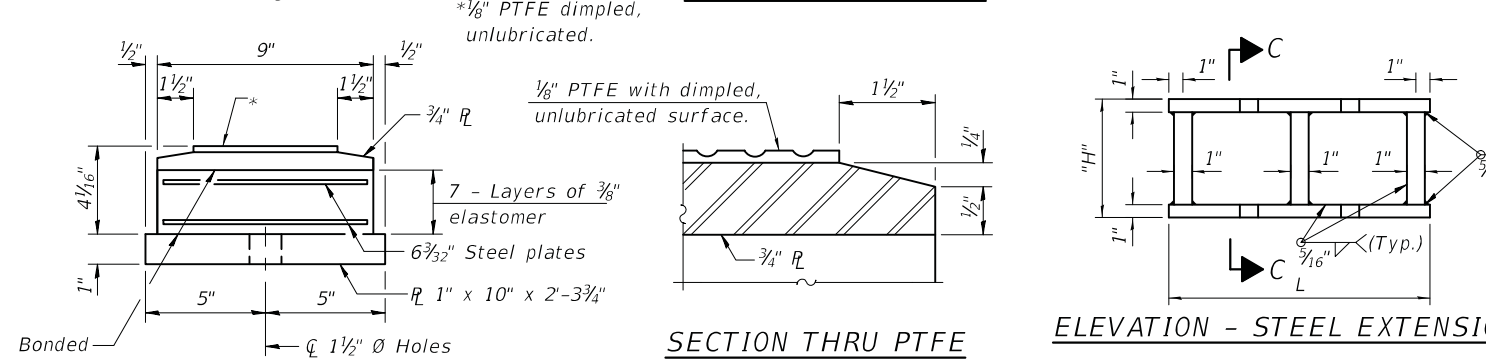
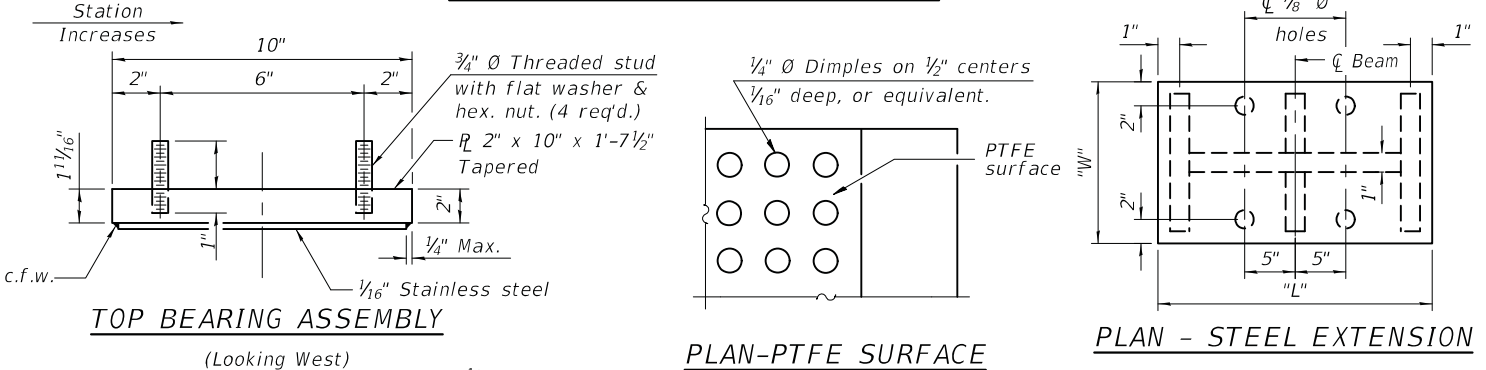
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	260
ILLINOIS			CONTRACT NO. 62H49	



MODEL: Default  
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 PLOT DATE: 10/21/2021  
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 SN: 06-2467-0162467-02149-074-AbutBearingDetails.dgn  
 FILE: 1018-133-Br.dwg  
 PLOT DATE: 10/21/2021



**TYPE II ELASTOMERIC EXP. BRG.**



**STEEL EXTENSION TABLE**

Dimension	S. Abut.	N. Abut.
"W"	10"	11"
"L"	1'-7 1/2"	1'-4"
"H"	6 1 3/16"	11 1/4"

**BEAM REACTIONS FOR JACKING AND REMOVAL OF EXISTING BEARINGS**

	S. Abut.	N. Abut.					
		Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
R <sub>p</sub> (Steel only) (k)	5.8	4.7	6.5	8.1	9.0	10.1	13.2
R <sub>p</sub> (Const.) (k)	4.3	4.1	4.5	4.9	5.4	5.8	6.2
R <sub>t</sub> (Const.) (k)	5.3	4.1	4.5	4.9	5.4	5.8	6.2
R (Total) (k)	15.3	13.0	15.6	18.0	19.7	21.6	25.6
Min. Jacking Capacity (k)	30.6	25.9	31.1	36.0	39.4	43.3	51.1

Note:  
 1. Both dead and live construction loads are 20 psf.  
 2. The reaction loads shown above are service loads.  
 3. The reaction loads shown above are for each beam.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6
Anchor Bolts, 1"	Each	24
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	2,585



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ABUTMENT BEARINGS DETAILS  
 STRUCTURE NO. 016-2467**

SHEET SB-74 OF SB-104 SHEETS

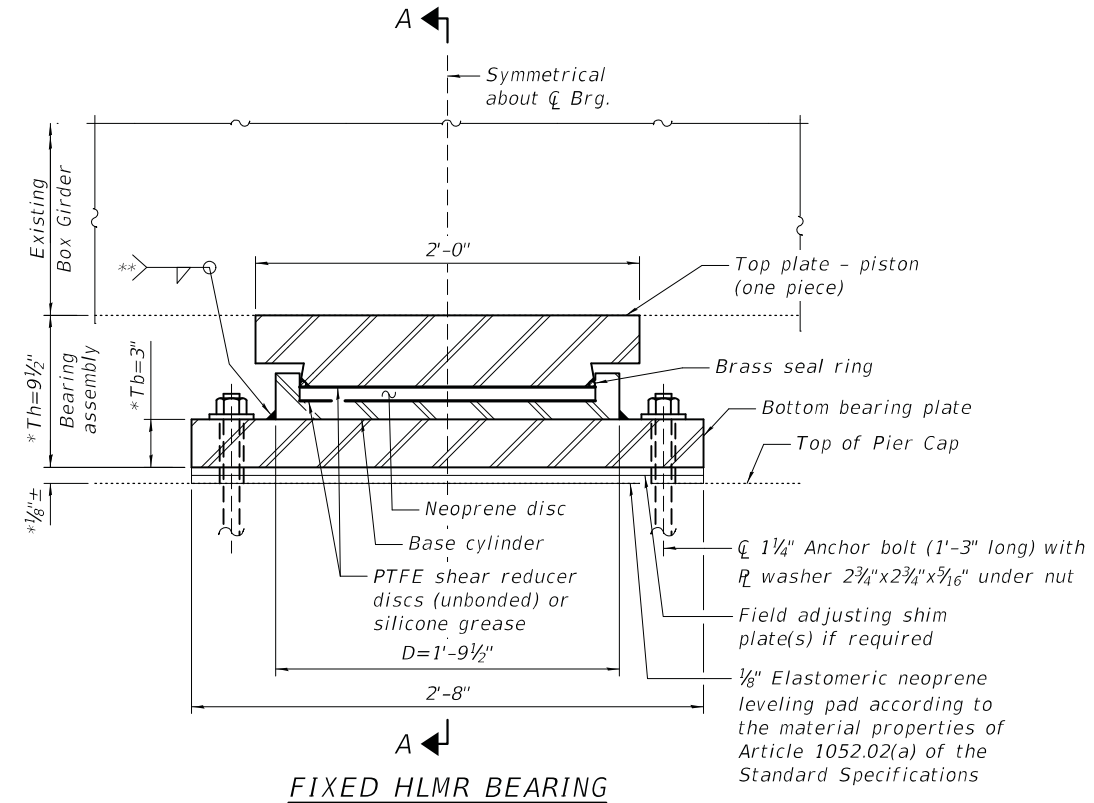
F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 261
ILLINOIS			CONTRACT NO. 62H49	

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**BEARING DESIGN INFORMATION**

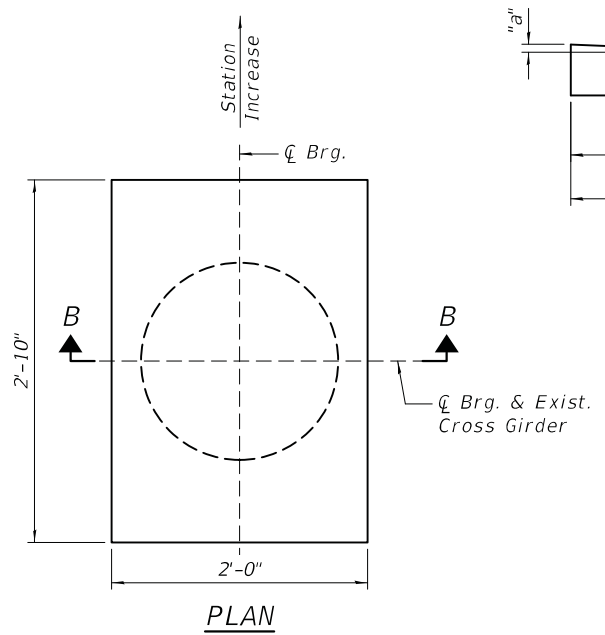
Location	Vert. Design Loads (†) (kips)	Hs, Horiz. Design Loads (†) (kips)	θs, Maximum Design Rotation (††) (radians)
Pier 5	683	137	0.001
Pier 8	689	138	0.003
Pier 11	708	142	0.003
Pier 14	695	139	0.003
Pier 17	698	140	0.003
Pier 20	676	135	0.003
Pier 23	622	124	0.001
Pier 27	682	136	0.001

(†) Design loads are the governing service loads with no dynamic load allowance.  
 (††) Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.



**FIXED HLMR BEARING**

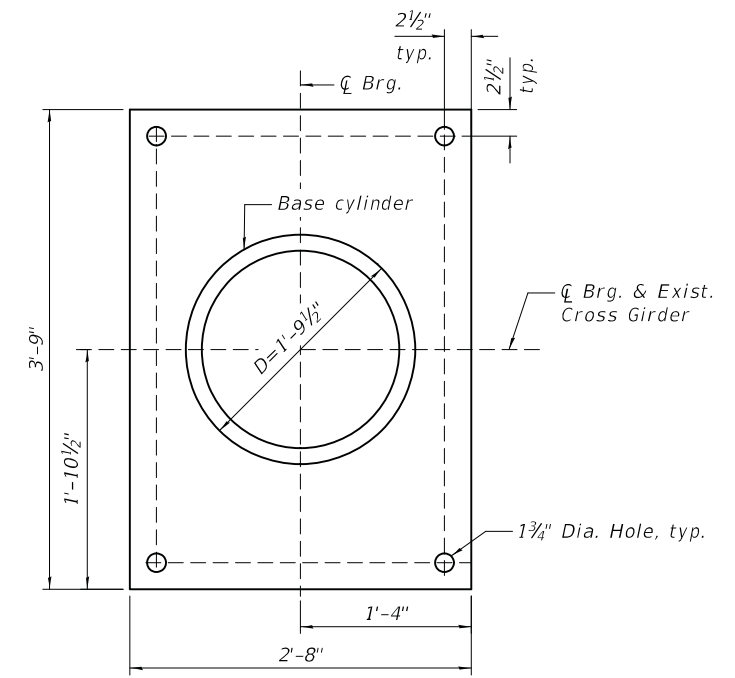
\* Measured at  $\bar{C}$  Brg.  
 \*\* Weld may be omitted if base cylinder is recessed into bottom bearing plate



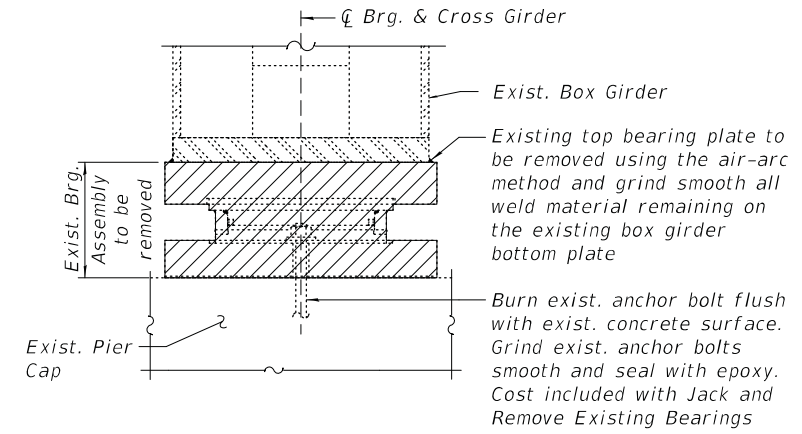
**TOP BEARING PLATE AND PISTON**

**SECTION B-B**  
(Looking Upstation)

Location	"a" (in)
Pier 5	1/16"
Pier 8	1/16"
Pier 11	1/16"
Pier 14	1/16"
Pier 17	1/16"
Pier 20	1/4"
Pier 23	1/2"
Pier 27	1/2"



**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**



**EXIST. BEARING REMOVAL DETAIL AT PIERS - CROSS GIRDER**

- Notes:
- All dimensions are in feet and inches unless otherwise noted.
  - The structural steel for the top bearing plate/ piston and bottom bearing plate shall be AASHTO M270, Grade 50.
  - Cost of top and bottom bearing plates, and 1/8" elastomeric neoprene shall be included in the cost of High Load Multi-Rotational Bearing Pay Items.
  - Anchor Bolts shall be ASTM F1554, Grade 55.
  - 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.
  - Total Bearing Height (Th) is estimated based on manufacturer data. Actual Bearing Height may differ from the contract plans. The Contractor shall be responsible for verifying bearing height. Proposed changes shall be submitted for approval to the Engineer.
  - Jacking of existing girders and replacement of bearings shall be done after the existing deck has been removed and prior to placing the new deck.
  - The Contractor shall submit, for approval by the Engineer, plans for jacking existing beams and removing the existing bearings prior to commencing any related work. See Special Provision.
  - Drilled and set Anchor Bolts shall be installed according to article 521.06 of the Standard Specifications.

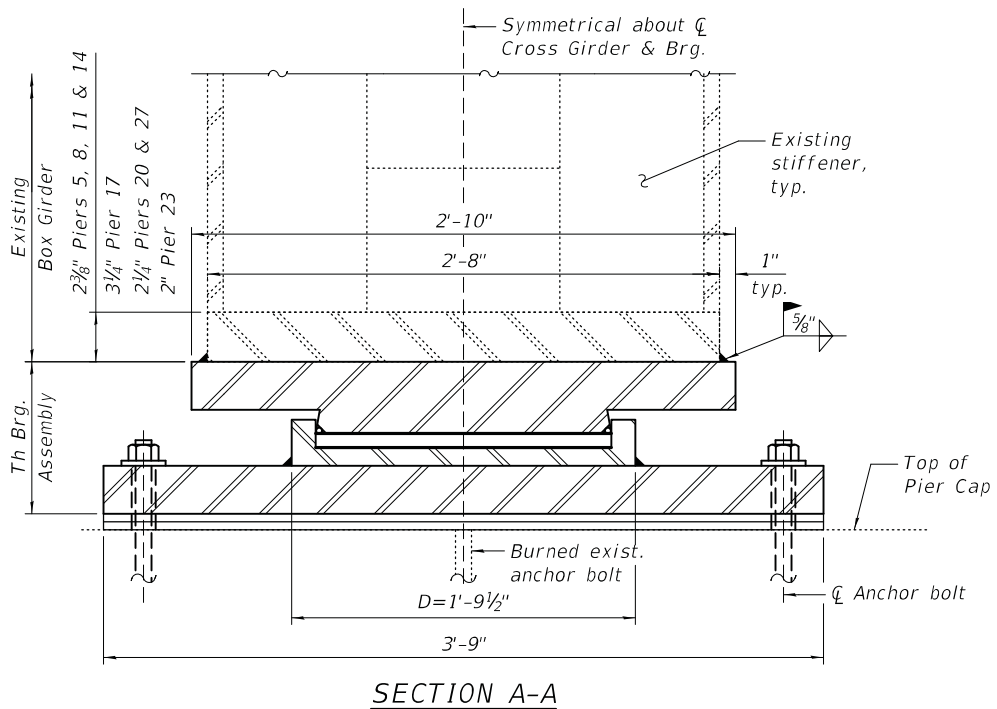
**BILL OF MATERIAL**

Item	Unit	Total
High Load Multi-Rotational Bearings, Fixed, 750k	Each	16
Anchor Bolts, 1 1/4" Dia.	Each	64
Jack and Remove Existing Bearings	Each	16

**BEARING REACTIONS FOR JACKING AND REMOVAL OF EXISTING BEARINGS**

	Pier 5	Pier 8	Pier 11	Pier 14	Pier 17	Pier 20	Pier 23	Pier 27
R <sub>p</sub> (Steel only) (k)	74.6	78.2	80.0	79.2	83.6	77.7	57.3	76.8
R <sub>p</sub> (Const.) (k)	45.3	43.7	45.0	44.2	43.7	43.7	37.7	41.1
R <sub>t</sub> (Const.) (k)	45.3	43.7	49.0	47.8	47.8	43.7	46.7	51.2
R (Total) (k)	165.2	165.5	174.0	171.2	175.1	165.0	141.7	169.1
Min. Jacking Capacity (k)	330.5	331.0	348.1	342.5	350.2	330.1	283.3	338.1

- Note:
- Both dead and live construction loads are 20 psf.
  - The reaction loads shown above are service loads.
  - The reaction loads shown above are for each bearing.



**SECTION A-A**

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**HLMR BEARING DETAILS 1 - FIXED  
 STRUCTURE NO. 016-2467**

SHEET SB-75 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	262
			CONTRACT NO. 62H49	
ILLINOIS				



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**BEARING DESIGN INFORMATION**

Location	Vert. Design Loads (†) (kips)	Hs, Horiz. Design Loads (†) (kips)	θs, Maximum Design Rotation (††) (radians)
Pier 2	618	124	0.001

(†) Design loads are the governing service loads with no dynamic load allowance.  
 (††) Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.

**BEARING REACTIONS FOR JACKING AND REMOVAL OF EXISTING BEARINGS**

		Pier 2
R <sub>ϕ</sub> (Steel only)	(k)	60.7
R <sub>ϕ</sub> (Const.)	(k)	37.7
R <sub>ϕ</sub> (Const.)	(k)	44.9
R (Total)	(k)	143.4
Min. Jacking Capacity	(k)	286.7

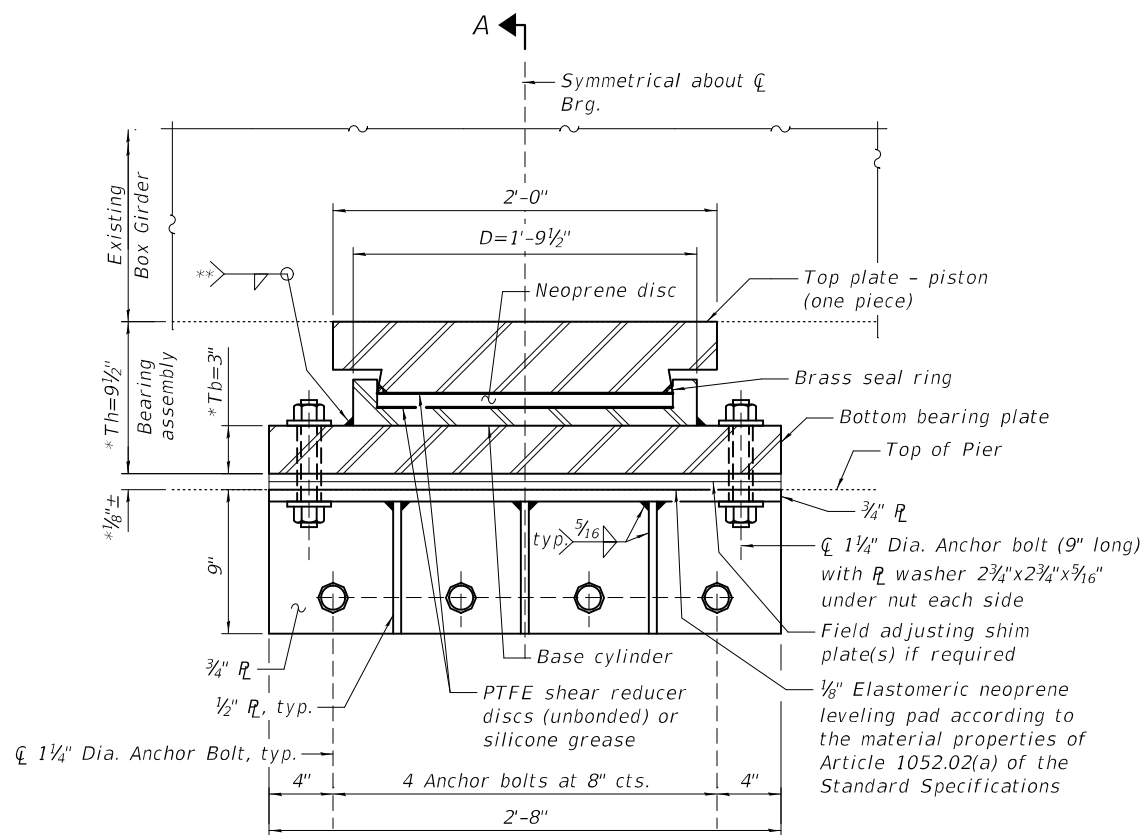
Note:  
 1. Both dead and live construction loads are 20 psf.  
 2. The reaction loads shown above are service loads.  
 3. The reaction loads shown above are for each bearing.

Notes:

- All dimensions are in feet and inches unless otherwise noted.
- The structural steel for the top bearing plate/ piston and bottom bearing plate shall be AASHTO M270, Grade 50.
- Cost of top and bottom bearing plates, 1/8" elastomeric neoprene and steel plates shall be included in the cost of High Load Multi-Rotational Bearing Pay Items.
- Anchor Bolts shall be ASTM F1554, Grade 55.
- 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.
- Total Bearing Height (Th) is estimated based on manufacturer data. Actual Bearing Height may differ from the contract plans. The Contractor shall be responsible for verifying bearing height. Proposed changes shall be submitted for approval to the Engineer.
- For existing bearing removal detail at piers - cross girder, see sheet SB-75.
- Jacking of existing girders and replacement of bearings shall be done after the existing deck has been removed and prior to placing the new deck.
- The Contractor shall submit, for approval by the Engineer, plans for jacking existing beams and removing the existing bearings prior to commencing any related work. See Special Provision.
- Drilled and set Anchor Bolts shall be installed according to article 521.06 of the Standard Specifications.

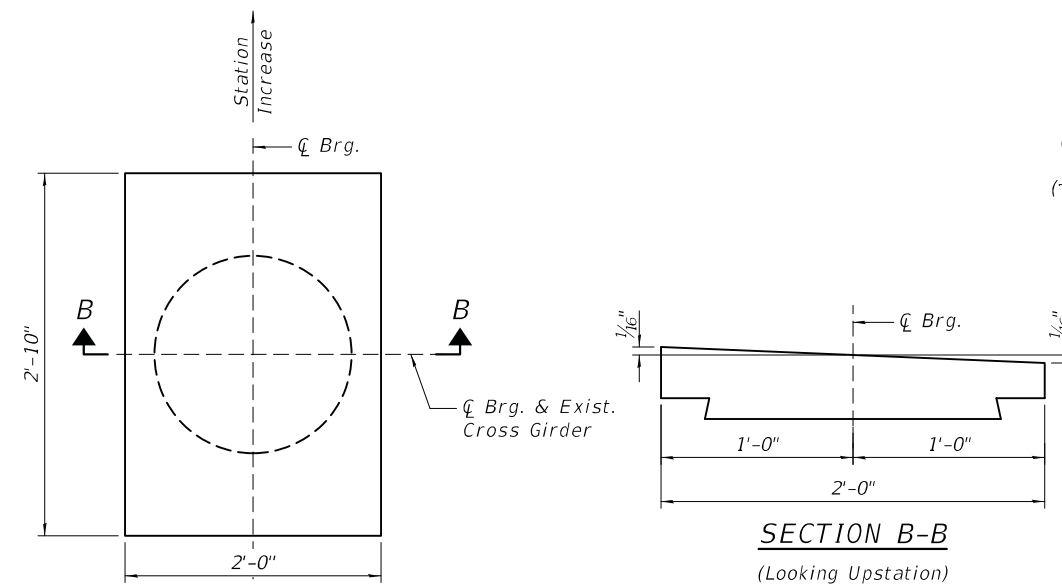
**BILL OF MATERIAL**

Item	Unit	Total
High Load Multi-Rotational Bearings, Fixed, 750k	Each	2
Anchor Bolts, 1 1/4" Dia.	Each	32
Jack and Remove Existing Bearings	Each	2

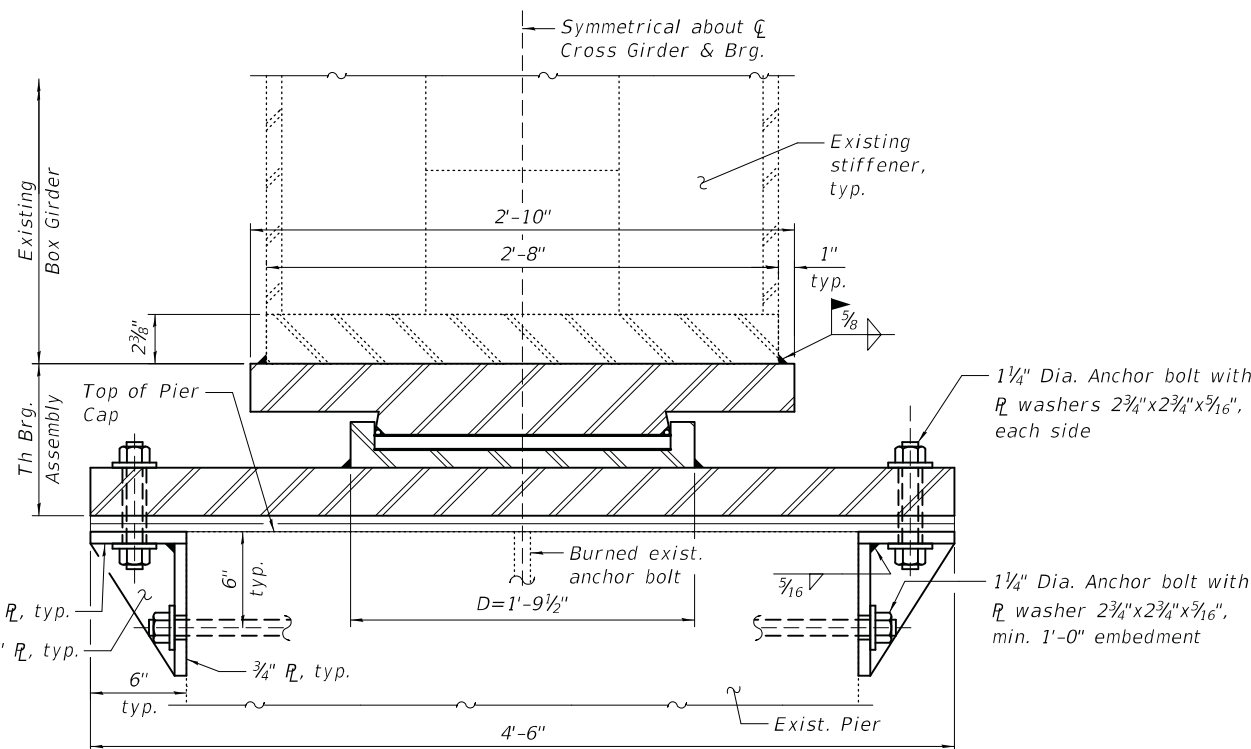


**FIXED HLMR BEARING**

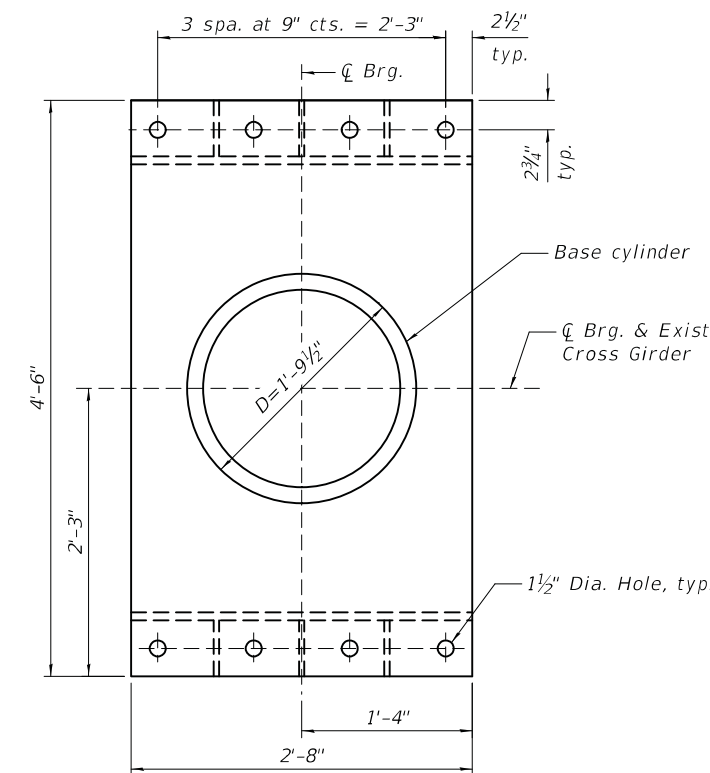
\* Measured at  $\bar{C}$  Brg.  
 \*\* Weld may be omitted if base cylinder is recessed into bottom bearing plate



**TOP BEARING PLATE AND PISTON**



**SECTION A-A**



**BOTTOM BEARING PLATE ASSEMBLY AND BASE CYLINDER PLAN**

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

HLMR BEARING DETAILS 2 - FIXED  
 STRUCTURE NO. 016-2467

SHEET SB-76 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	263
			CONTRACT NO. 62H49	
ILLINOIS				

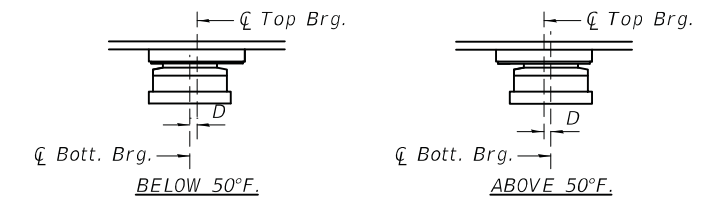
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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -



**BEARING DESIGN INFORMATION**  $\frac{1}{8}$

Location	Vert. Design Loads (†) (kips)	Hs, Horiz. Design Loads (†) (kips)	θs, Maximum Design Rotation (††) (radians)	Total Required Movement (†††) (in)	Bearing Assembly Size
Pier 7	689	138	0.003	$\frac{5}{8}$	750k
Pier 10	708	142	0.003	$\frac{5}{8}$	750k
Pier 13	666	133	0.003	$\frac{5}{8}$	750k
Pier 16	698	140	0.003	$\frac{5}{8}$	750k
Pier 19	676	135	0.003	$\frac{5}{8}$	750k
Pier 22	712	142	0.002	$\frac{5}{8}$	750k
Pier 24	737	147	0.003	$\frac{5}{8}$	750k
Pier 26	784	157	0.003	$\frac{3}{4}$	900k
Pier 28	814	163	0.003	$\frac{3}{4}$	900k

(†) Design loads are the governing service loads with no dynamic load allowance.  
 (††) Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.  
 (†††) Total required movement is based on one way expansion (or contraction) of the superstructure along the centerline of girder when bearings are set at 50°F. Bearing movement tolerances are excluded.



$D = \frac{1}{8}$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

**EXPANSION BEARING ORIENTATION**

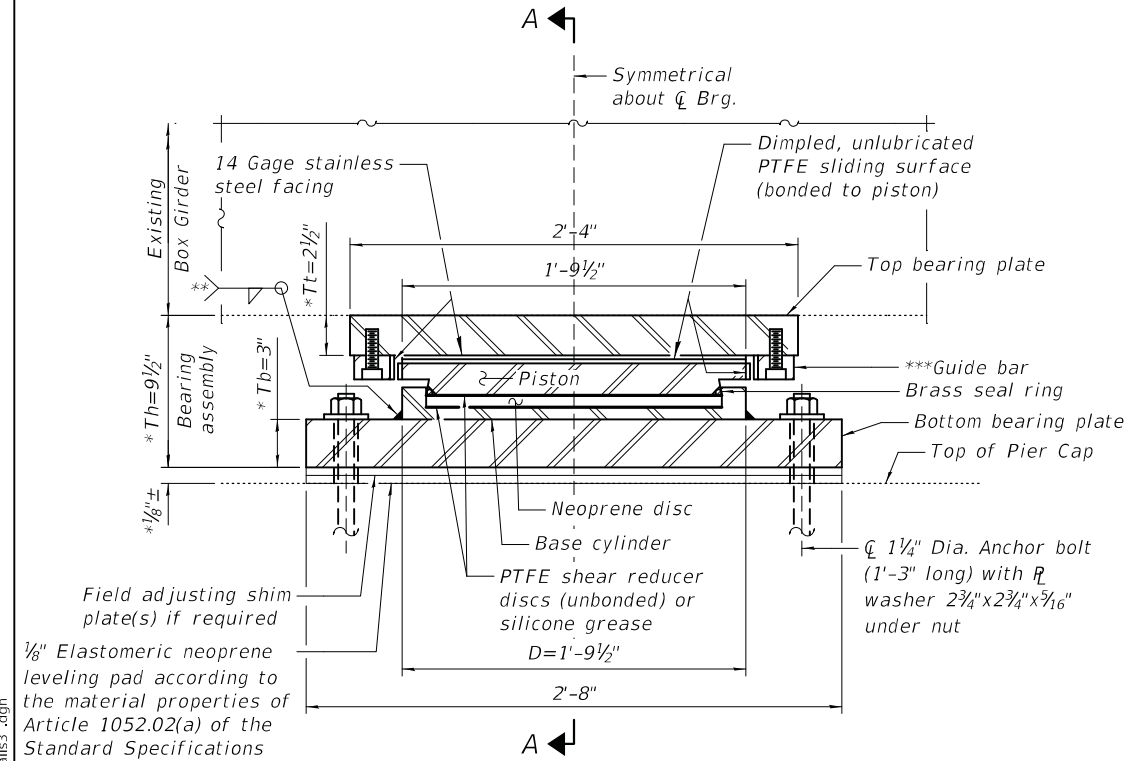
The above diagrams are for informational purposes only to show the amount of expected offset "D" for the current temperature in the field.

Notes:

- All dimensions are in feet and inches unless otherwise noted.
- The structural steel for the top bearing plate/ piston and bottom bearing plate shall be AASHTO M270, Grade 50.
- Cost of top and bottom bearing plates, and  $\frac{1}{8}$ " elastomeric neoprene shall be included in the cost of High Load Multi-Rotational Bearing Pay Items.
- Anchor Bolts shall be ASTM F1554, Grade 55.
- Two  $\frac{1}{8}$ " adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Total Bearing Height (Th) is estimated based on manufacturer data. Actual Bearing Height may differ from the contract plans. The Contractor shall be responsible for verifying bearing height. Proposed changes shall be submitted for approval to the Engineer.
- For existing bearing removal detail at piers - cross girder, see sheet SB-75.
- Jacking of existing girders and replacement of bearings shall be done after the existing deck has been removed and prior to placing the new deck.
- The Contractor shall submit, for approval by the Engineer, plans for jacking existing beams and removing the existing bearings prior to commencing any related work. See Special Provision.
- Drilled and set Anchor Bolts shall be installed according to article 521.06 of the Standard Specifications.

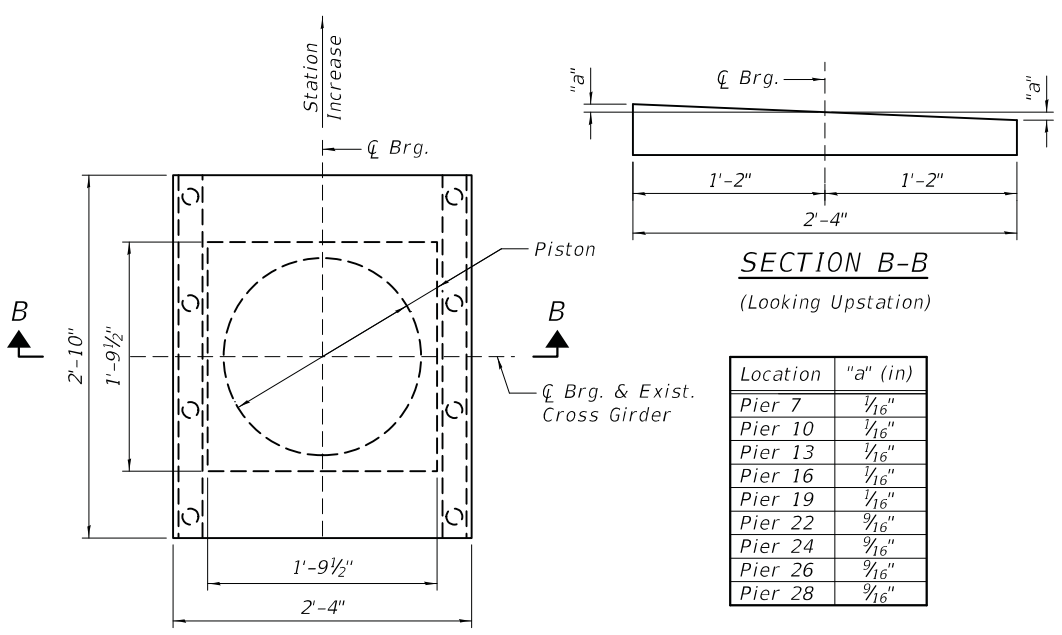
**BILL OF MATERIAL**

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 750k	Each	14
High Load Multi-Rotational Bearings, Guided Expansion, 900k	Each	4
Anchor Bolts, 1 1/4" Dia.	Each	72
Jack and Remove Existing Bearings	Each	18

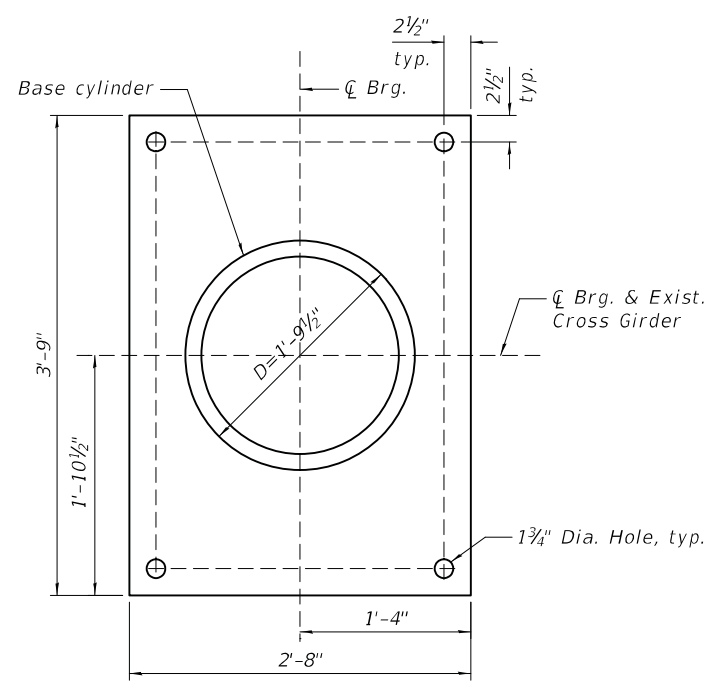


**GUIDED EXPANSION HLMR BEARING**

\* Measured at  $\bar{C}$  Brg.  
 \*\* Weld may be omitted if base cylinder is recessed into bottom bearing plate  
 \*\*\* As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds on the guide bars and top bearing plate may be fabricated as a single piece.



**TOP BEARING PLATE AND PISTON DETAILS**

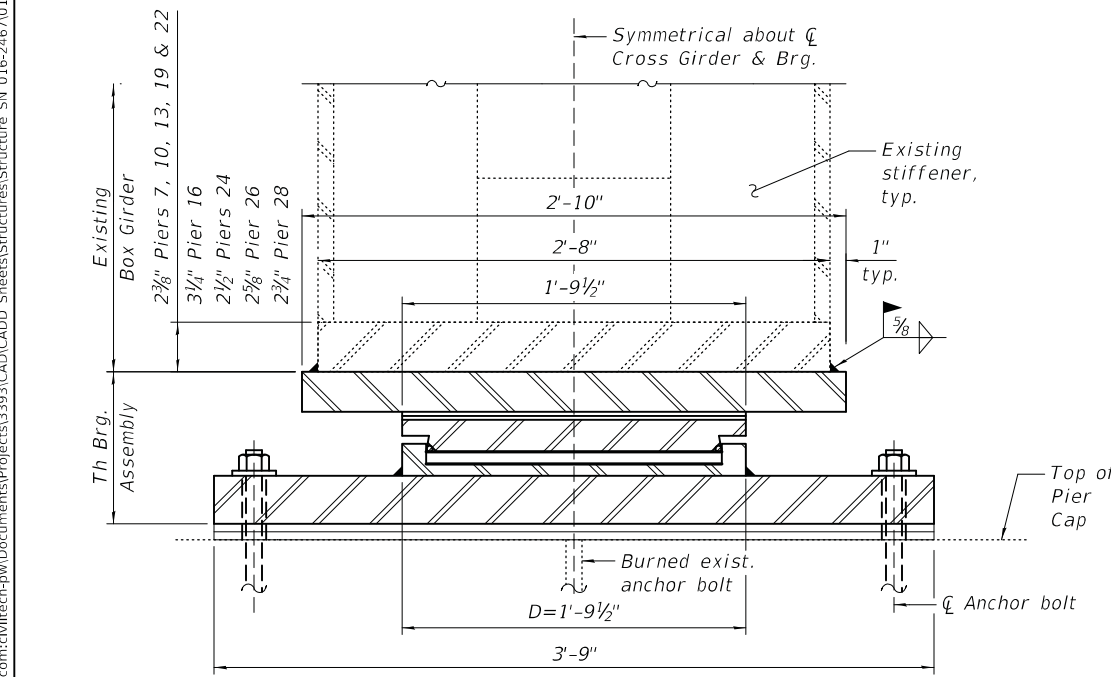


**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**

**BEARING REACTIONS FOR JACKING AND REMOVAL OF EXISTING BEARINGS**

	Pier 7	Pier 10	Pier 13	Pier 16	Pier 19	Pier 22	Pier 24	Pier 26	Pier 28
R $\bar{P}$ (Steel only) (k)	78.2	79.7	73.7	83.6	77.9	91.6	94.7	106.6	114.3
R $\bar{P}$ (Const.) (k)	43.7	44.9	42.0	43.7	43.7	46.4	48.3	50.8	52.6
R $\bar{L}$ (Const.) (k)	43.7	48.8	46.2	47.8	43.7	49.0	50.7	55.0	56.6
R (Total) (k)	165.5	173.4	161.8	175.1	165.2	187.0	193.7	212.5	223.5
Min. Jacking Capacity (k)	331.0	346.7	323.7	350.2	330.4	374.0	387.4	425.0	446.9

Note:  
 1. Both dead and live construction loads are 20 psf.  
 2. The reaction loads shown above are service loads.  
 3. The reaction loads shown above are for each bearing.



**SECTION A-A**

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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**HLMR BEARING DETAILS 3 - GUIDED EXPANSION  
 STRUCTURE NO. 016-2467**

SHEET SB-77 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 264
ILLINOIS			CONTRACT NO. 62H49	

**BEARING DESIGN INFORMATION**

Location	Vert. Design Loads (†) (kips)	Hs, Horiz. Design Loads (†) (kips)	θs, Maximum Design Rotation (††) (radians)	Total Required Movement (†††) (in)
Pier 1	659	132	0.002	5/8
Pier 3	659	132	0.002	5/8

- (†) Design loads are the governing service loads with no dynamic load allowance.
- (††) Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.
- (†††) Total required movement is based on one way expansion (or contraction) of the superstructure along the centerline of girder when bearings are set at 50°F. Bearing movement tolerances are excluded.

**BEARING REACTIONS FOR JACKING AND REMOVAL OF EXISTING BEARINGS**

	Pier 1	Pier 3
R <sub>p</sub> (Steel only) (k)	69.4	69.3
R <sub>p</sub> (Const.) (k)	42.2	42.1
R <sub>t</sub> (Const.) (k)	44.9	44.8
R (Total) (k)	156.6	156.2
Min. Jacking Capacity (k)	313.1	312.4

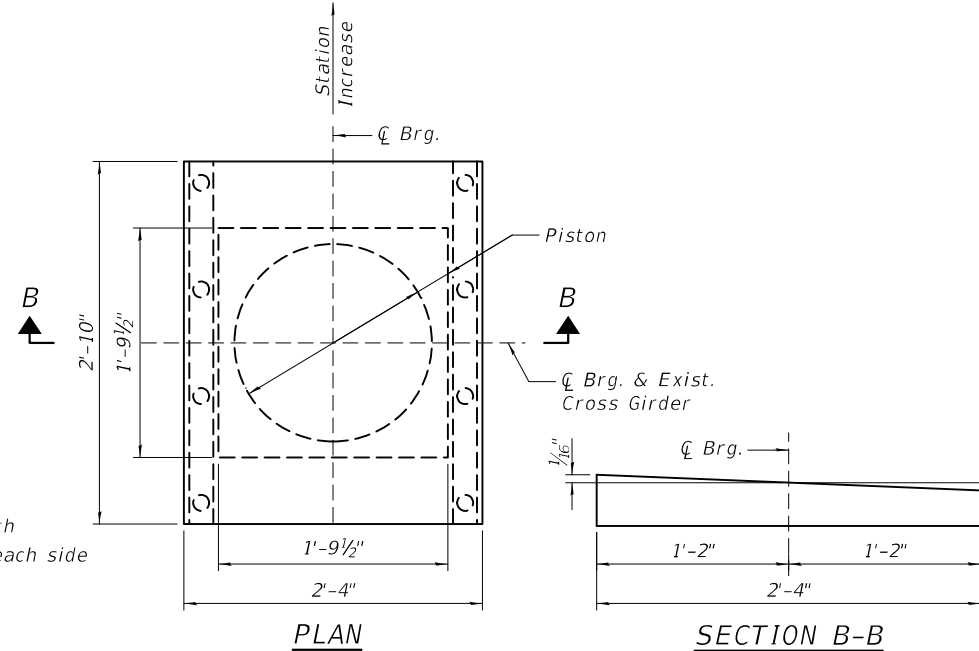
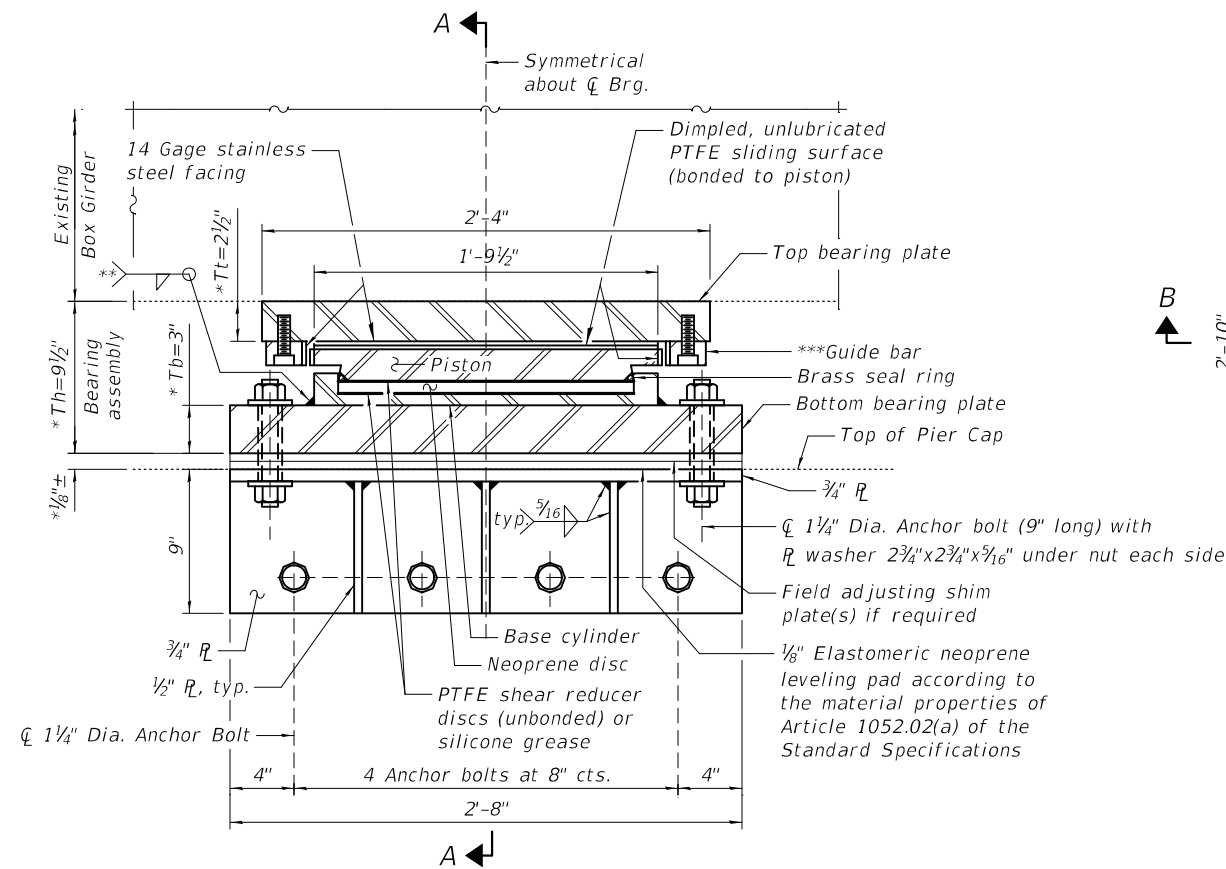
- Note:
- Both dead and live construction loads are 20 psf.
  - The reaction loads shown above are service loads.
  - The reaction loads shown above are for each bearing.

Notes:

- All dimensions are in feet and inches unless otherwise noted.
- The structural steel for the top bearing plate/ piston and bottom bearing plate shall be AASHTO M270, Grade 50.
- Cost of top and bottom bearing plates, 1/8" elastomeric neoprene and steel plates shall be included in the cost of High Load Multi-Rotational Bearing Pay Items.
- Anchor Bolts shall be ASTM F1554, Grade 55.
- 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.
- Total Bearing Height (Th) is estimated based on manufacturer data. Actual Bearing Height may differ from the contract plans. The Contractor shall be responsible for verifying bearing height. Proposed changes shall be submitted for approval to the Engineer.
- For existing bearing removal detail at piers - cross girder, see sheet SB-75.
- Jacking of existing girders and replacement of bearings shall be done after the existing deck has been removed and prior to placing the new deck.
- The Contractor shall submit, for approval by the Engineer, plans for jacking existing beams and removing the existing bearings prior to commencing any related work. See Special Provision.
- Drilled and set Anchor Bolts shall be installed according to article 521.06 of the Standard Specifications.
- For Expansion Bearing Orientation detail see sheet SB-77.

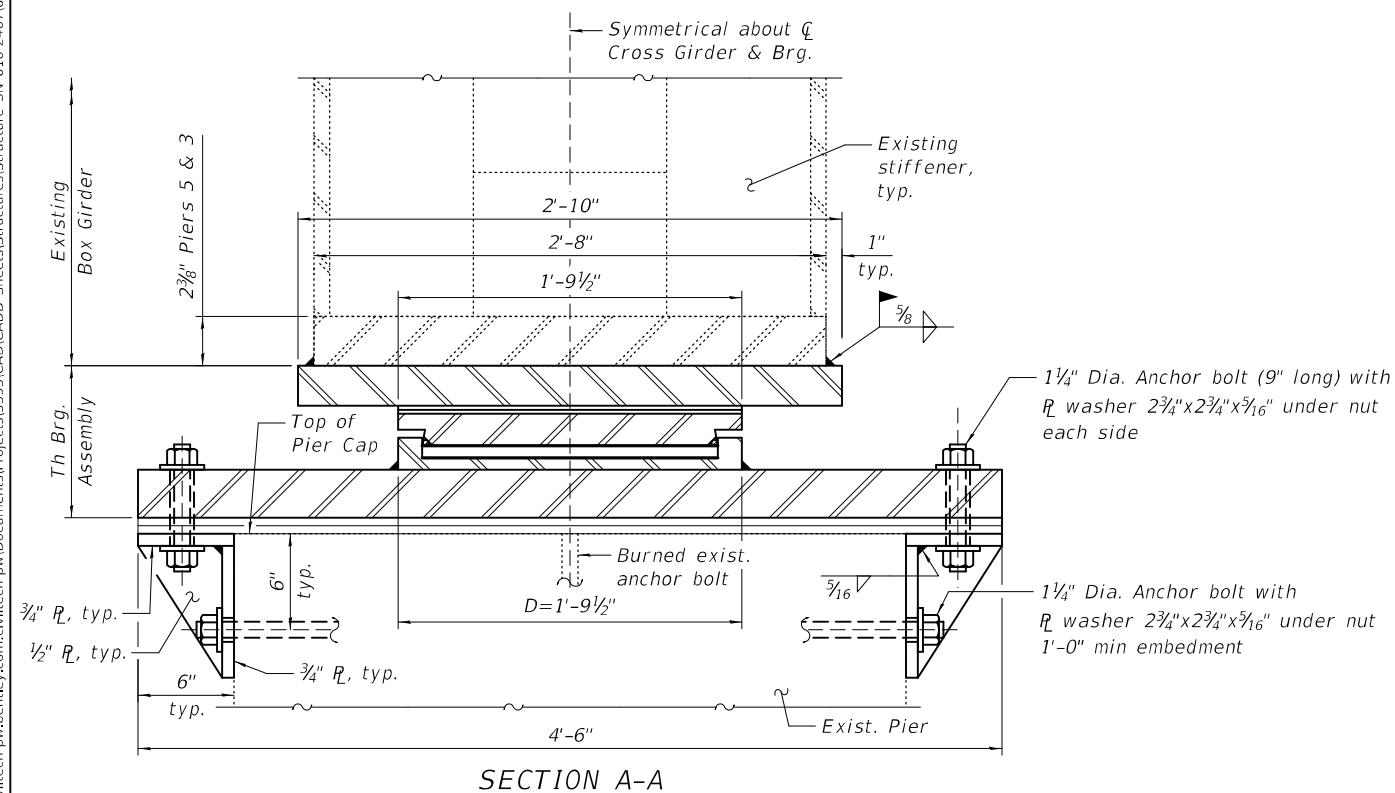
**BILL OF MATERIAL**

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 750k	Each	4
Anchor Bolts, 1 1/4" Dia.	Each	64
Jack and Remove Existing Bearings	Each	4



**TOP BEARING PLATE AND PISTON DETAILS**

- \* Measured at  $\bar{C}$  Brg.
- \*\* Weld may be omitted if base cylinder is recessed into bottom bearing plate
- \*\*\* As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds on the guide bars and top bearing plate may be fabricated as a single piece.



**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**

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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HLMR BEARING DETAILS 4 - GUIDED EXPANSION  
STRUCTURE NO. 016-2467**

SHEET SB-78 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	265
ILLINOIS			CONTRACT NO. 62H49	



**BEARING DESIGN INFORMATION**

Location	Vert. Design Loads (†) (kips)	Hs, Horiz. Design Loads (†) (kips)	θs, Maximum Design Rotation (††) (radians)	Total Required Movement (†††) (in)	
Pier 4	S. Brg.	297	59	0.006	1 1/8
	N. Brg.	298	60	0.006	5/8
Pier 6	S. Brg.	298	60	0.006	5/8
	N. Brg.	329	66	0.007	1 1/4
Pier 9	S. Brg.	329	66	0.007	5/8
	N. Brg.	329	66	0.007	1 1/4
Pier 12	S. Brg.	329	66	0.007	5/8
	N. Brg.	317	63	0.006	1 1/8
Pier 15	S. Brg.	329	66	0.007	5/8
	N. Brg.	329	66	0.007	1 1/4
Pier 18	S. Brg.	329	66	0.007	5/8
	N. Brg.	324	65	0.007	1 1/4
Pier 21	S. Brg.	324	65	0.007	5/8
	N. Brg.	326	65	0.006	1 1/4
Pier 25	S. Brg.	336	67	0.007	1 1/4
	N. Brg.	342	68	0.007	1 1/4
Pier 29	S. Brg.	349	70	0.008	1 1/4
	N. Brg.	322	64	0.007	1/2

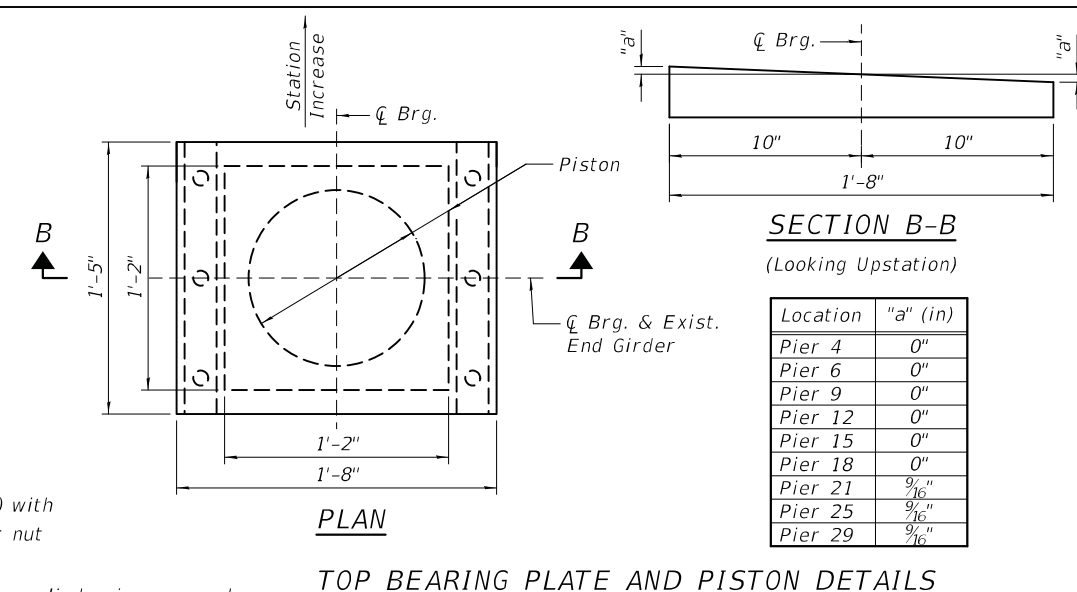
(†) Design loads are the governing service loads with no dynamic load allowance.  
 (††) Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.  
 (†††) Total required movement is based on one way expansion (or contraction) of the superstructure along the centerline of girder when bearings are set at 50°F. Bearing movement tolerances are excluded.

Notes:

- All dimensions are in feet and inches unless otherwise noted.
- The structural steel for the top bearing plate/piston and bottom bearing plate shall be AASHTO M270, Grade 50.
- Cost of top and bottom bearing plates, and 1/8" elastomeric neoprene shall be included in the cost of High Load Multi-Rotational Bearing Pay Items.
- Anchor Bolts shall be ASTM F1554, Grade 55.
- 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.
- Total Bearing Height (Th) is estimated based on manufacturer data. Actual Bearing Height may differ from the contract plans. The Contractor shall be responsible for verifying bearing height. Proposed changes shall be submitted for approval to the Engineer.
- Jacking of existing girders and replacement of bearings shall be done after the existing deck has been removed and prior to placing the new deck.
- The Contractor shall submit, for approval by the Engineer, plans for jacking existing beams and removing the existing bearings prior to commencing any related work. See Special Provision.
- Temporary Shoring and Cribbing is required at Piers 4, 9, 15, 21, 25 & 29 for the proposed pier cap reconstructions and therefore the removal of the existing bearings at these locations will be paid for as Removal of Existing Bearing. See Sheet SB-4 for Temporary Shoring and Cribbing Reactions.
- Drilled and set Anchor Bolts shall be installed according to article 521.06 of the Standard Specifications.

**BILL OF MATERIAL**

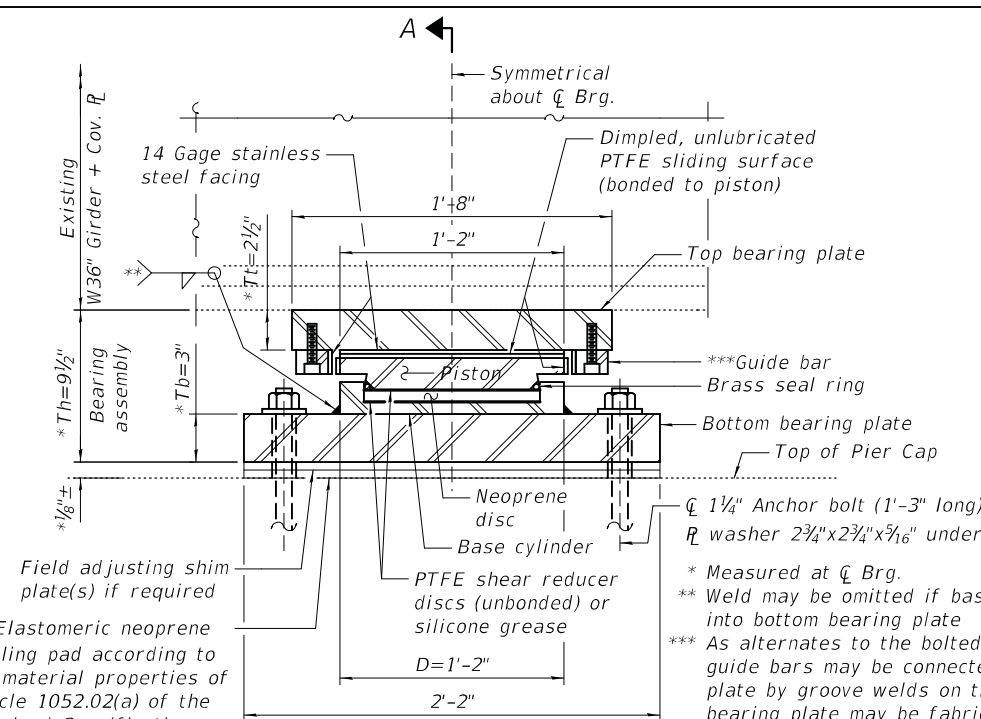
Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 350k	Each	36
Anchor Bolts, 1 1/4" Dia.	Each	144
Jack and Remove Existing Bearings	Each	12
Removal of Existing Bearings	Each	24



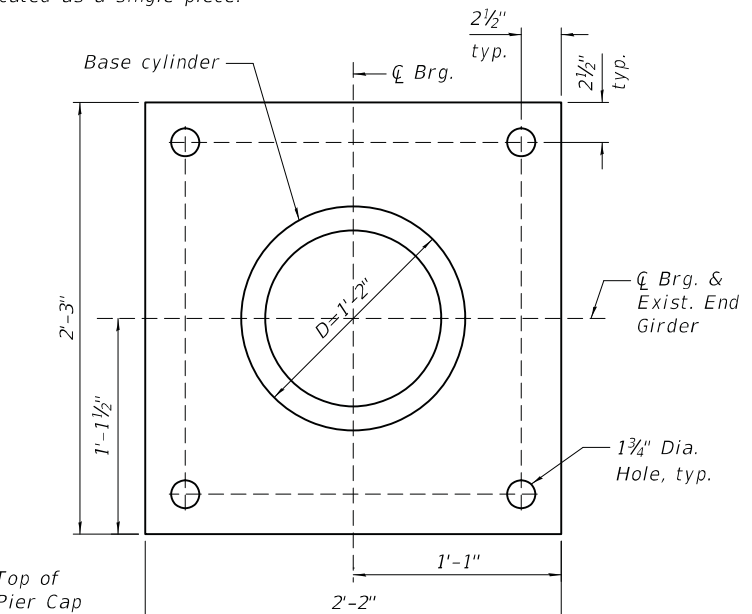
**SECTION B-B**  
(Looking Upstation)

Location	"a" (in)
Pier 4	0"
Pier 6	0"
Pier 9	0"
Pier 12	0"
Pier 15	0"
Pier 18	0"
Pier 21	9/16"
Pier 25	9/16"
Pier 29	9/16"

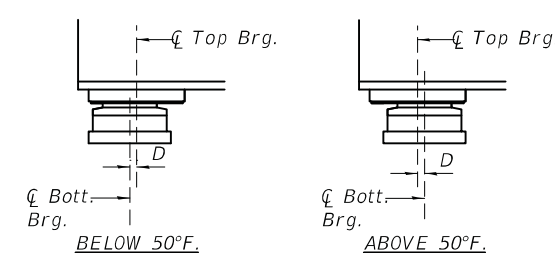
**TOP BEARING PLATE AND PISTON DETAILS**



**GUIDED EXPANSION HLMR BEARING**

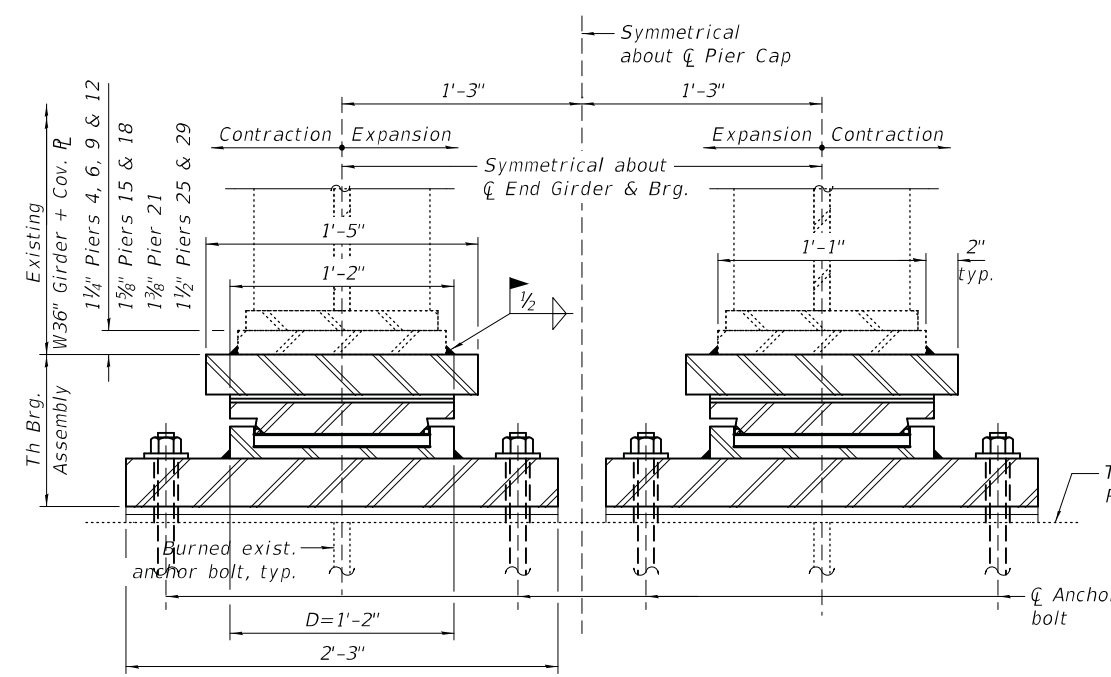


**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**



**EXPANSION BEARING ORIENTATION**

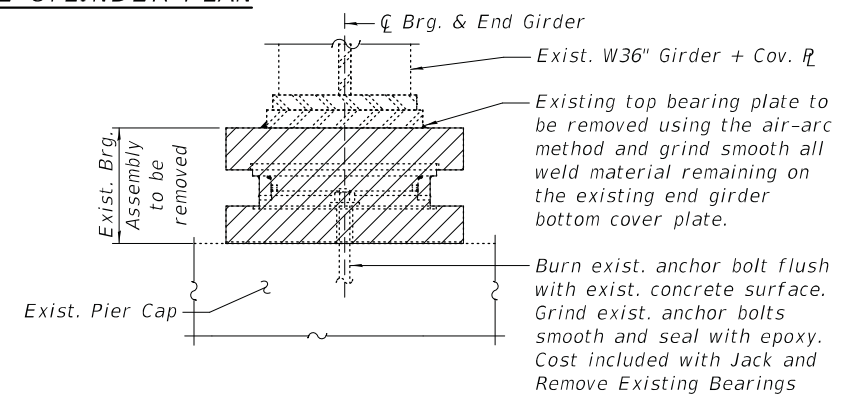
The above diagrams are for informational purposes only to show the amount of expected offset "D" for the current temperature in the field.



**BEARING REACTIONS FOR JACKING AND REMOVAL OF EXISTING BEARINGS**

		Pier 6		Pier 12		Pier 18	
		S. Brg.	N. Brg.	S. Brg.	N. Brg.	S. Brg.	N. Brg.
R <sub>p</sub> (Steel only)	(k)	21.4	29.8	29.6	27.5	29.8	29.7
R <sub>p</sub> (Const.)	(k)	12.7	15.4	15.3	14.4	15.4	15.4
R <sub>s</sub> (Const.)	(k)	15.2	17.8	17.9	16.9	17.8	17.8
R (Total)	(k)	49.4	63.0	62.9	58.8	63.0	62.9
Min. Jacking Capacity	(k)	98.7	126.0	125.7	117.6	125.9	125.9

- Note:
- Both dead and live construction loads are 20 psf.
  - The reaction loads shown above are service loads.
  - The reaction loads shown above are for each bearing.



**EXIST. BEARING REMOVAL DETAIL AT PIERS - END GIRDER**

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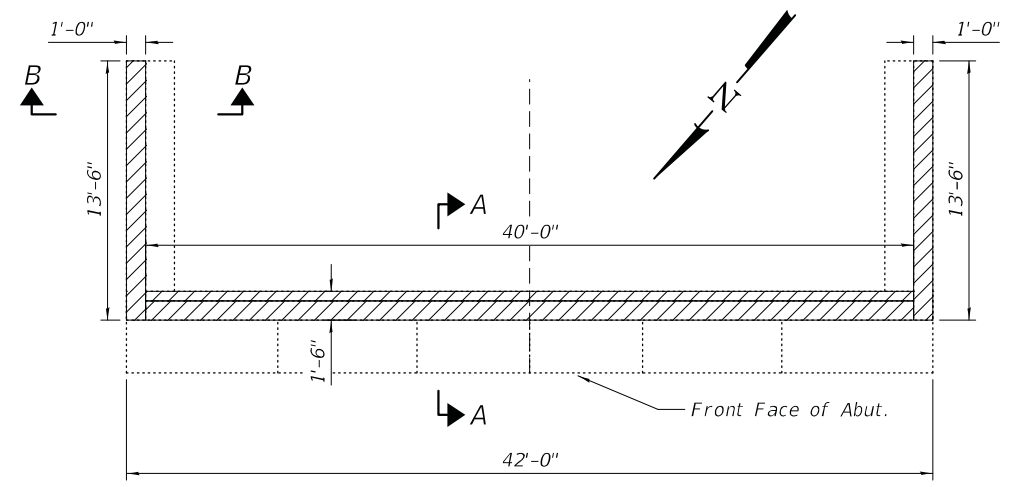
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

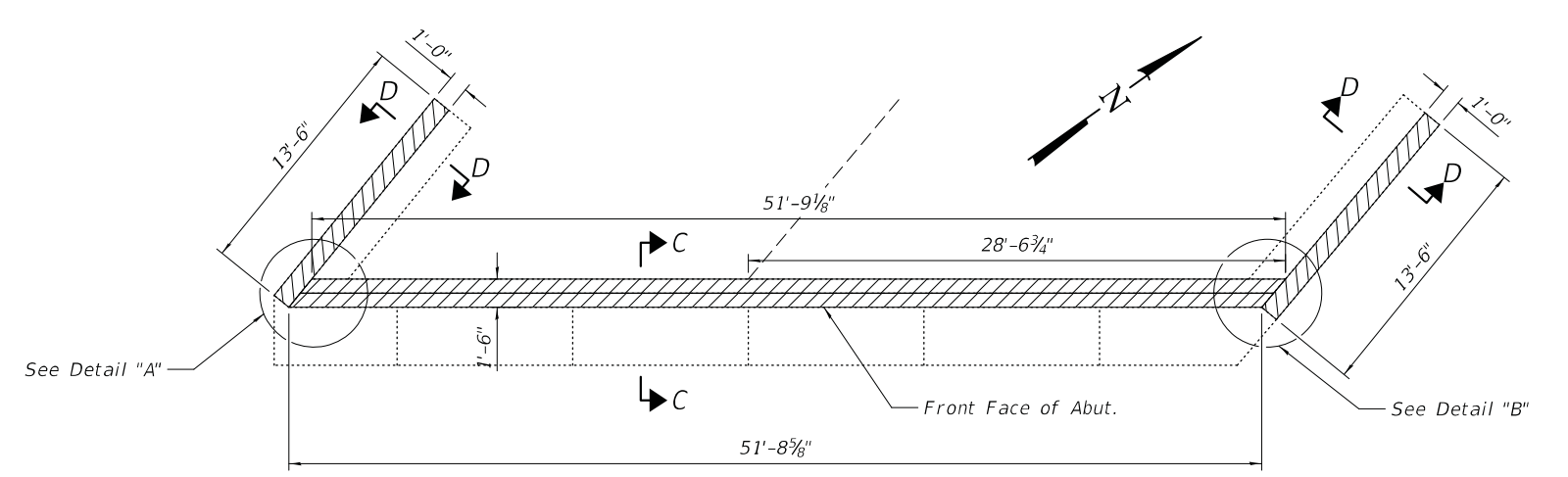
**HLMR BEARING DETAILS 5 - GUIDED EXPANSION  
STRUCTURE NO. 016-2467**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	266
ILLINOIS			CONTRACT NO. 62H49	

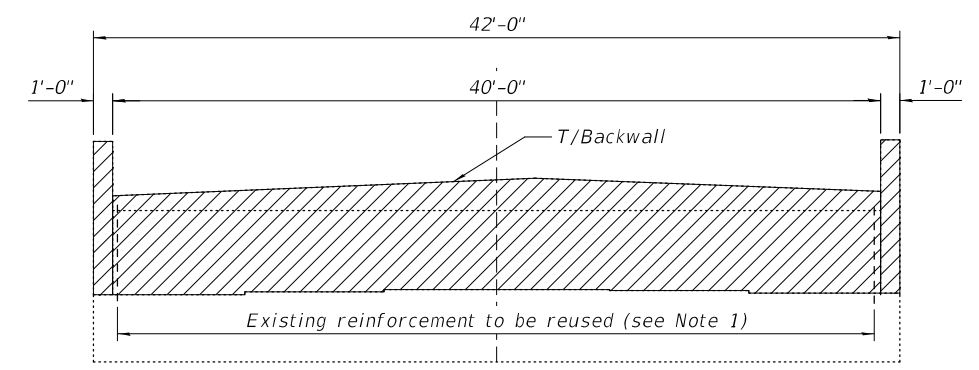
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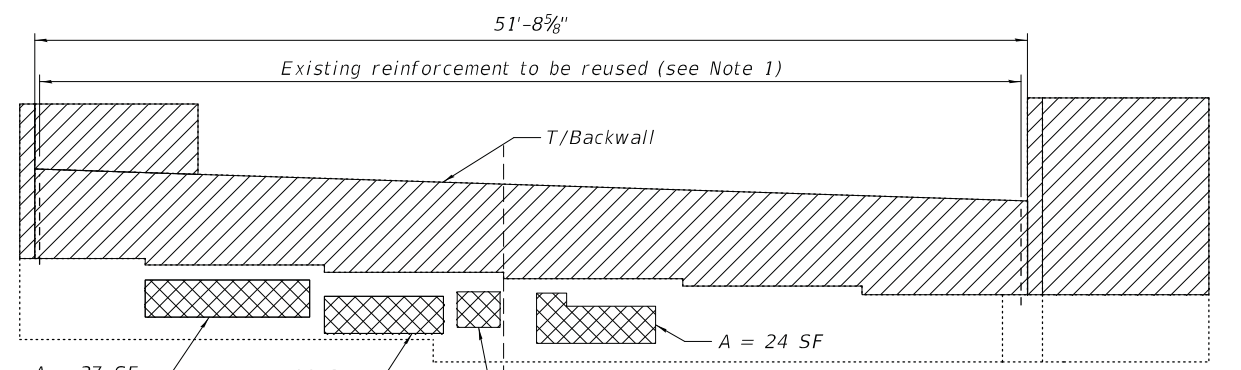
PLAN - SOUTH ABUTMENT



PLAN - NORTH ABUTMENT

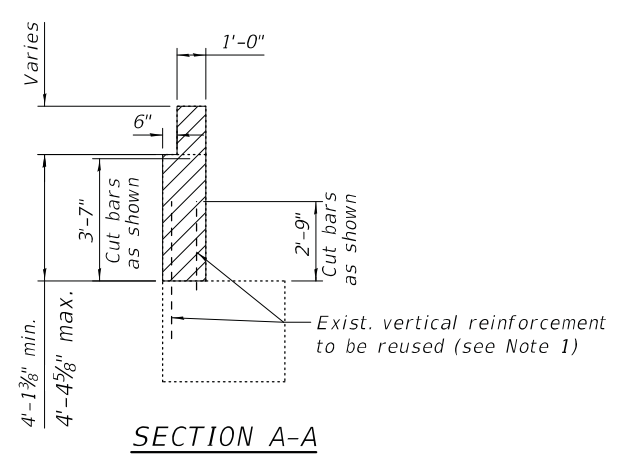


ELEVATION - SOUTH ABUTMENT

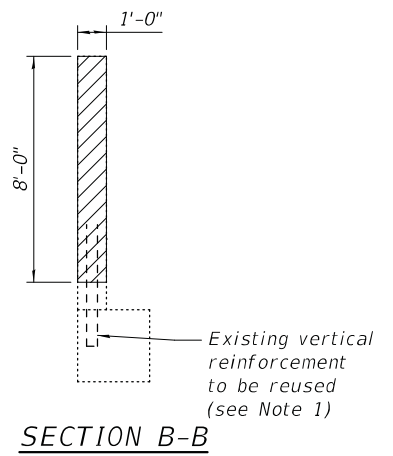


ELEVATION - NORTH ABUTMENT

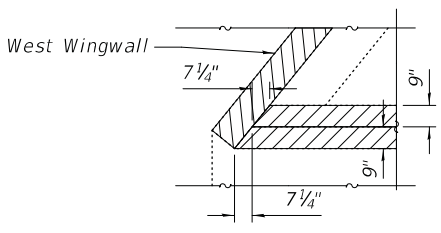
Concrete Removal  
 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)  
 SF Square Feet



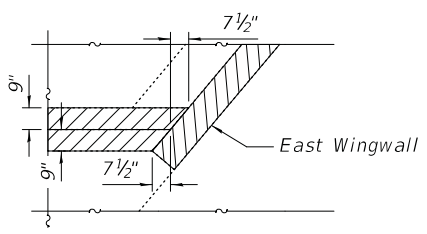
SECTION A-A



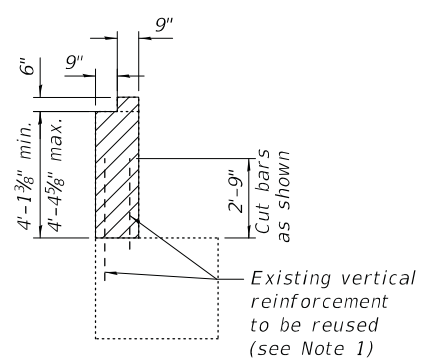
SECTION B-B



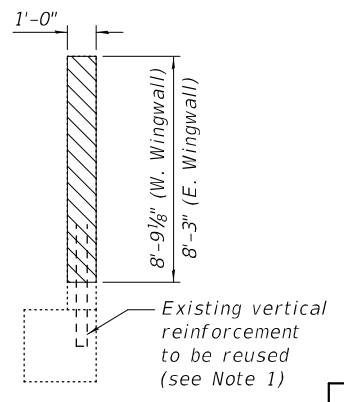
DETAIL "A"



DETAIL "B"



SECTION C-C



SECTION D-D

- Notes:
- Existing vertical reinforcement bars projecting from the abutment cap into the backwall and from the wingwall cap into the wingwalls shall remain in place and be cut as shown.
  - Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  - Repairs on the existing abutments shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the ENGINEER at the time of construction. The quantities shown are for estimating purposes only. Actual repair locations shall be shown on the as-built plans.

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	41.4
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	107



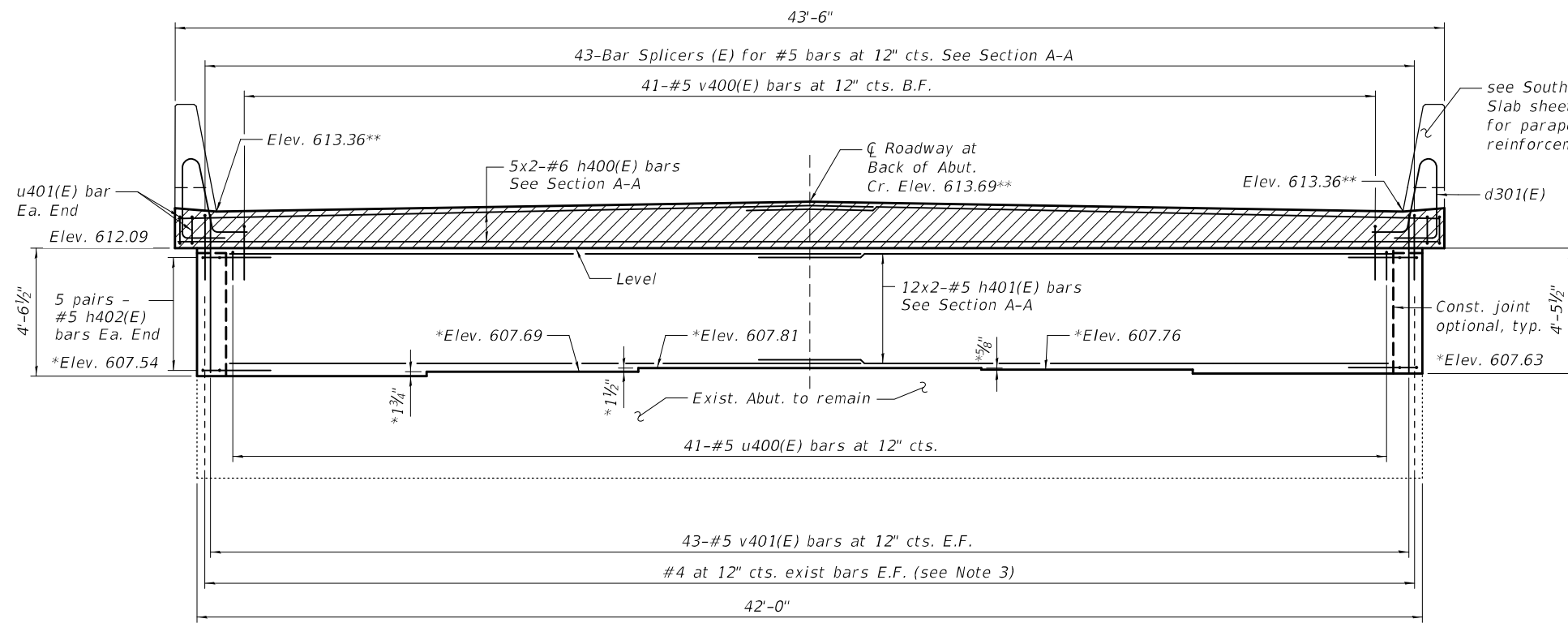
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	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

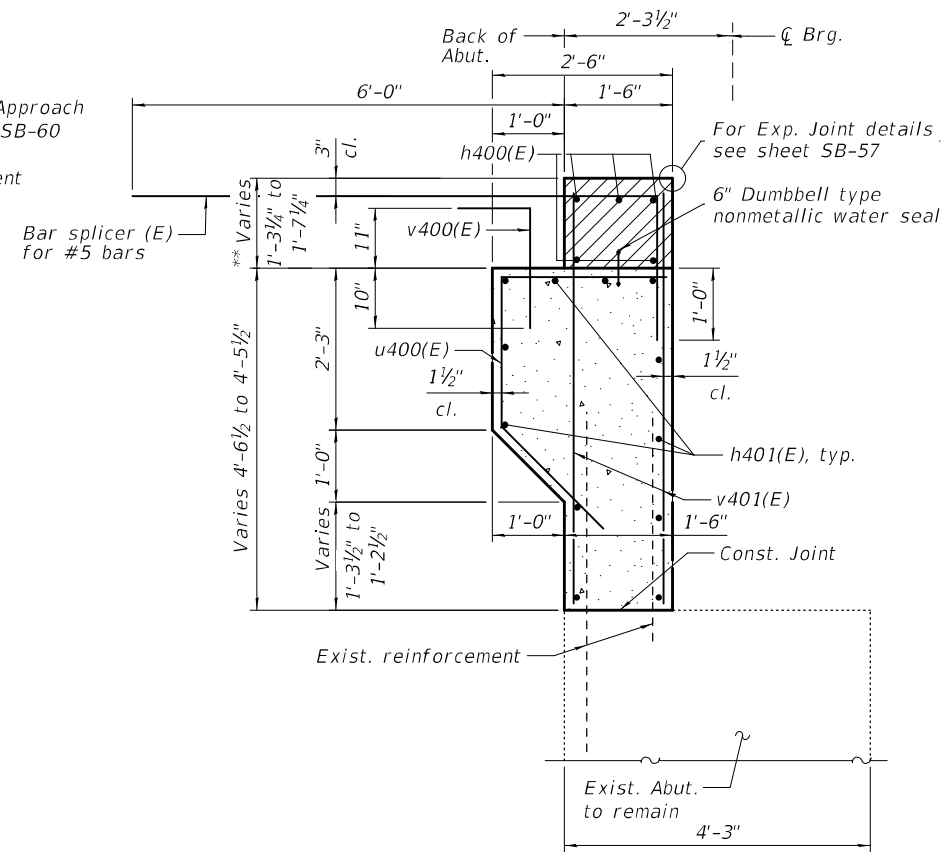
ABUTMENT REMOVAL & REPAIR DETAILS  
 STRUCTURE NO. 016-2467

SHEET SB-80 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	267
CONTRACT NO. 62H49			ILLINOIS	

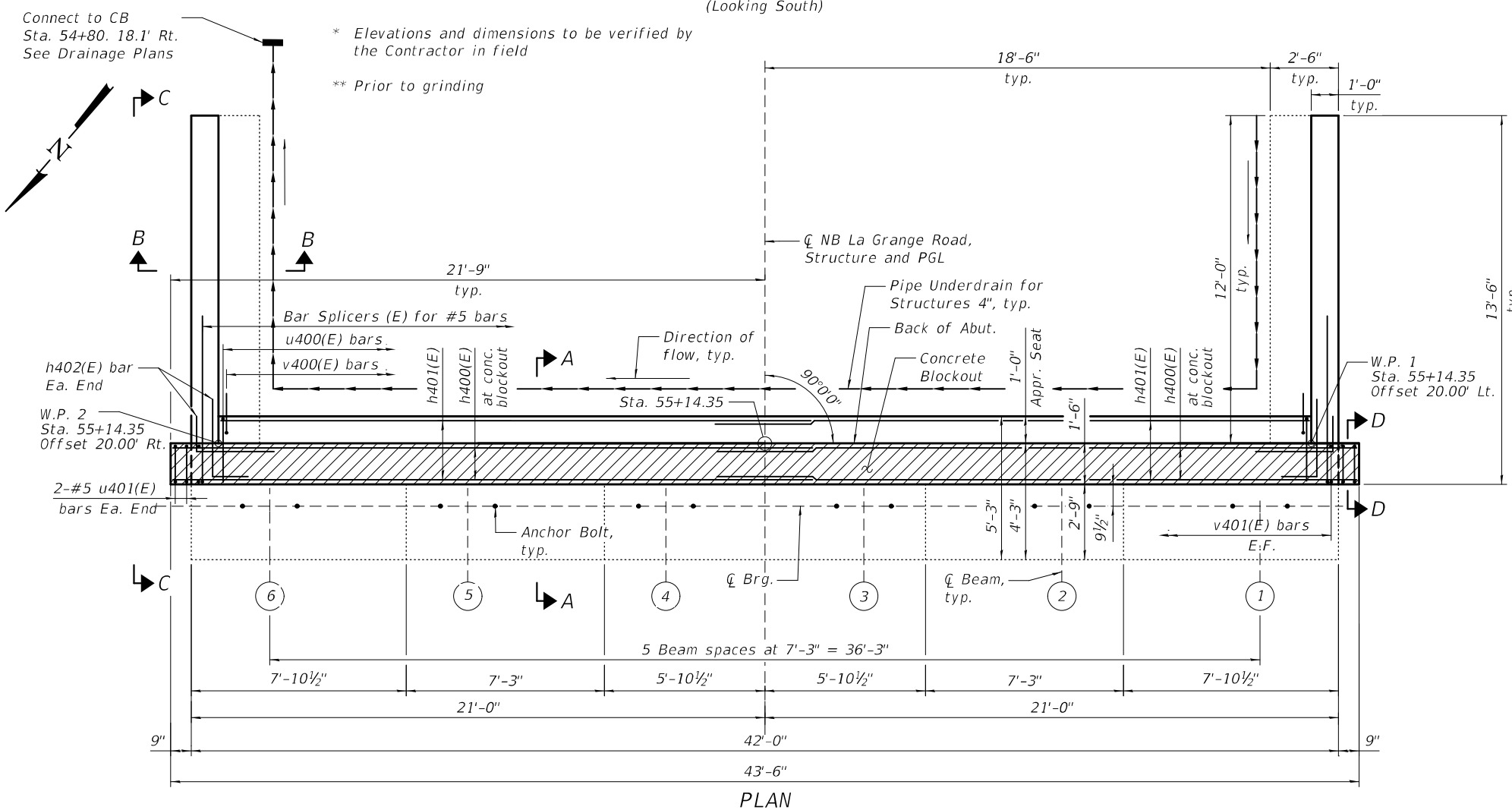


**ELEVATION**  
(Looking South)

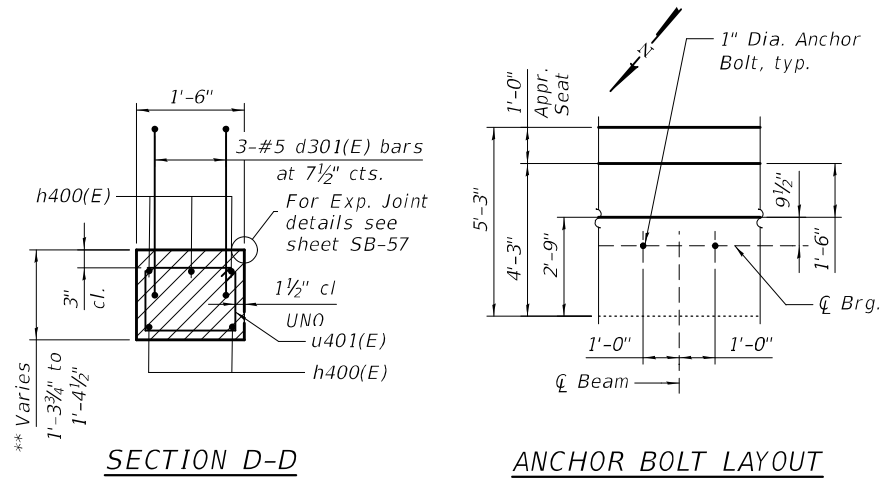


**SECTION A-A**  
(Horiz. dim. at Rt. L's)

**MINIMUM BAR LAP**  
#5 bar = 3'-7"  
#6 bar = 4'-4"



**PLAN**



**SECTION D-D**

**ANCHOR BOLT LAYOUT**

- Notes:
1. See sheet SB-82 for Section B-B, view C-C, bar bending diagrams and Bill of Material.
  2. Hatched area to be poured after the superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure and billed with South Approach Slab on sheet SB-60.
  3. Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  4. For details of Bar Splicer see sheet SB-103.

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

**SOUTH ABUTMENT**  
**STRUCTURE NO. 016-2467**

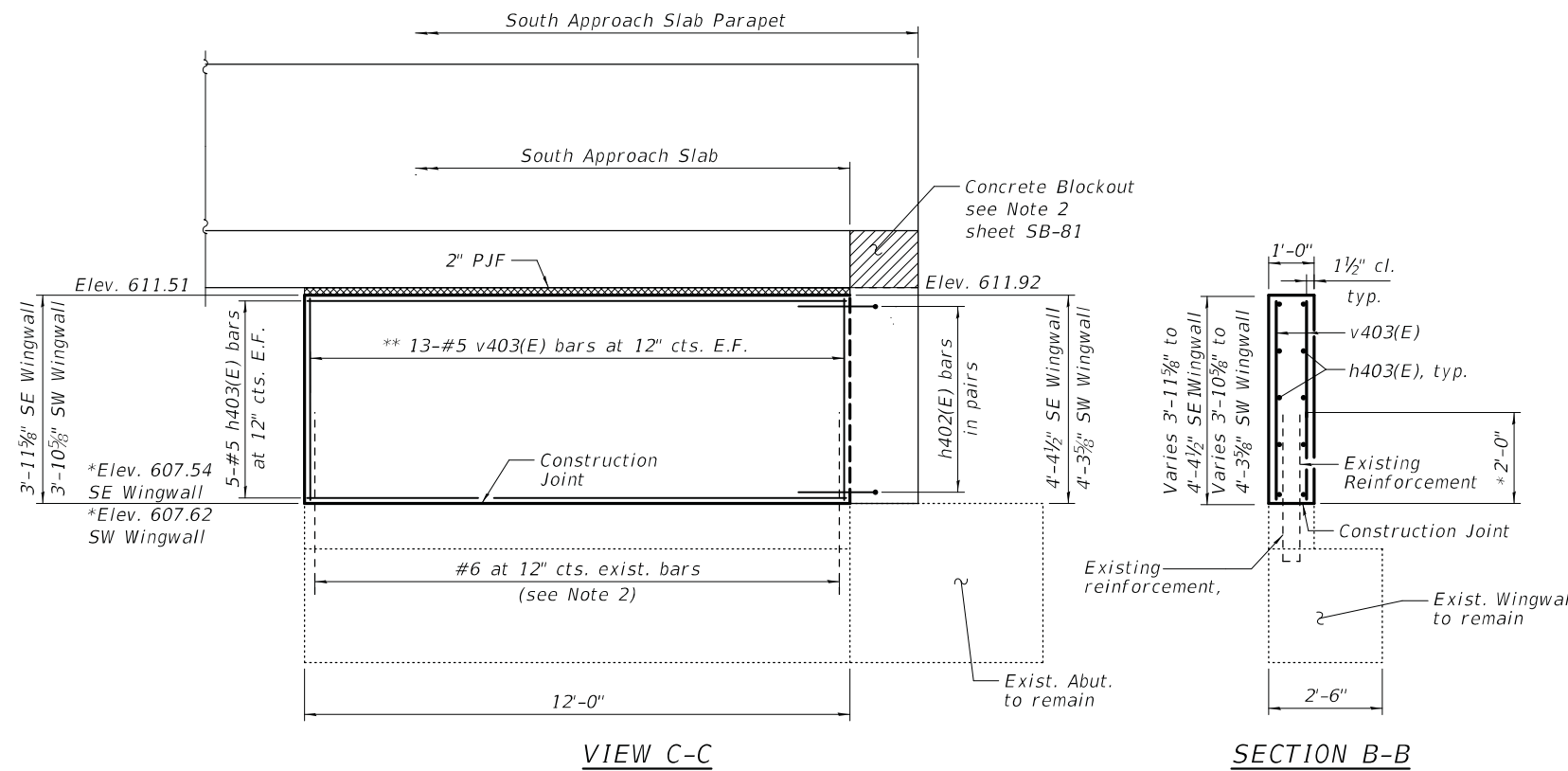
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330	2018-133-BR	COOK	308	268
CONTRACT NO. 62H49			ILLINOIS	

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	DATE - 10/21/2021	REVISED -

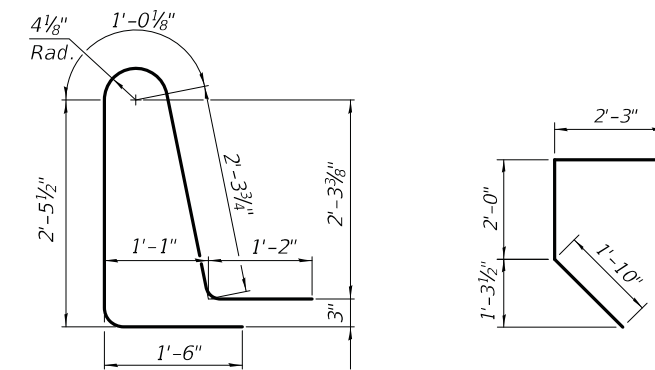
SHEET SB-81 OF SB-104 SHEETS



VIEW C-C

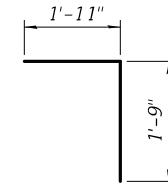
SECTION B-B

\* Verify in field  
 \*\* See Field Cutting Diagram. Cut bars as needed in field

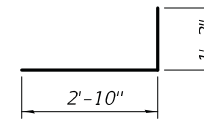


BAR d301(E)

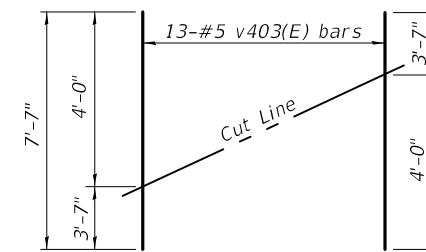
BAR u400E



BAR v400(E)

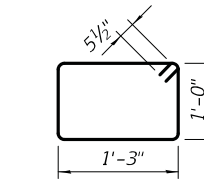


BAR h402(E)



FIELD CUTTING DIAGRAM

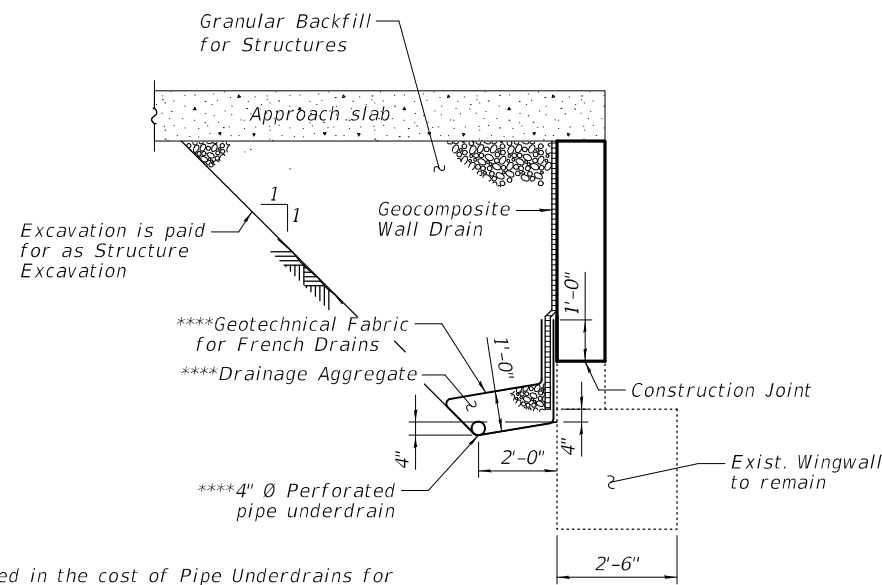
Order v403(E) bar full length.  
 Cut as shown and use remainder of bars in opposite face



BAR u401(E)

SOUTH ABUTMENT  
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d301(E)	6	#5	8'-6"	
h400(E)	10	#6	23'-11"	
h401(E)	24	#5	22'-9"	
h402(E)	20	#5	4'-1"	
h403(E)	20	#5	11'-9"	
v400(E)	41	#5	3'-8"	
v401(E)	86	#5	5'-4"	
v403(E)	26	#5	7'-7"	
u400(E)	41	#5	6'-1"	
u401(E)	4	#5	5'-5"	
Structure Excavation			Cu. Yd.	65
Concrete Structures			Cu. Yd.	18.1
Reinforcement Bars, Epoxy Coated			Pound	2,440
Granular Backfill for Structures			Cu. Yd.	52
Concrete Sealer			Sq. Ft.	186
Geocomposite Wall Drain			Sq. Yd.	34
Pipe Underdrains for Structures 4"			Feet	89



SECTION THRU WINGWALL  
 (Horiz. dim. @ Rt. L's)

Notes:

- See sheet SB-81 for location of Section B-B and view C-C.
- Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".

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	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS  
 STRUCTURE NO. 016-2467

SHEET SB-82 OF SB-104 SHEETS

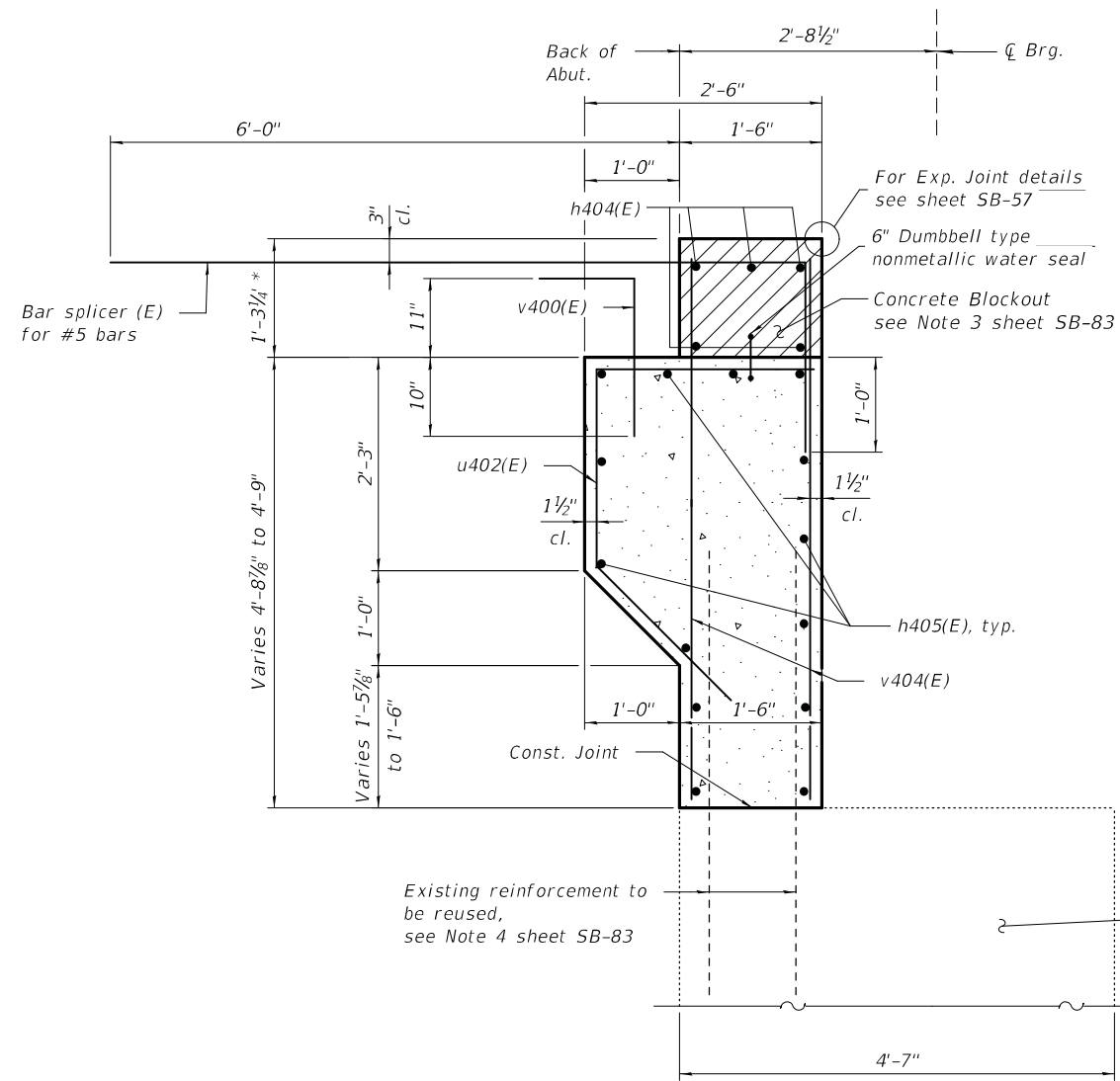
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	269
CONTRACT NO. 62H49			ILLINOIS	







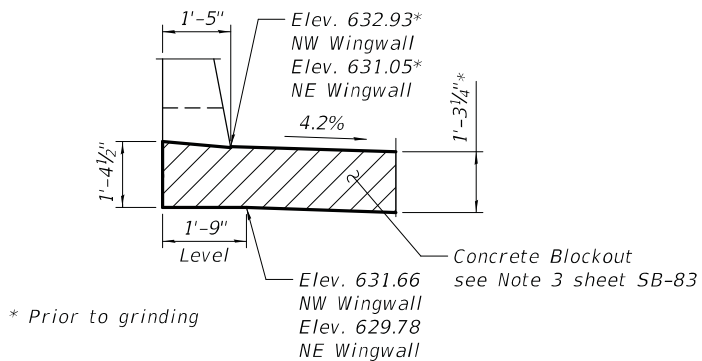
MODEL: Default  
 FILE NAME: p:\civiltch-pw-bentley.com\civiltch-pw\Documents\Projects\3393\CAD\CADD Sheets\Structures\NorthAbutDetails1.dgn



**SECTION A-A**  
 (Horiz. dim. at Rt. L's)

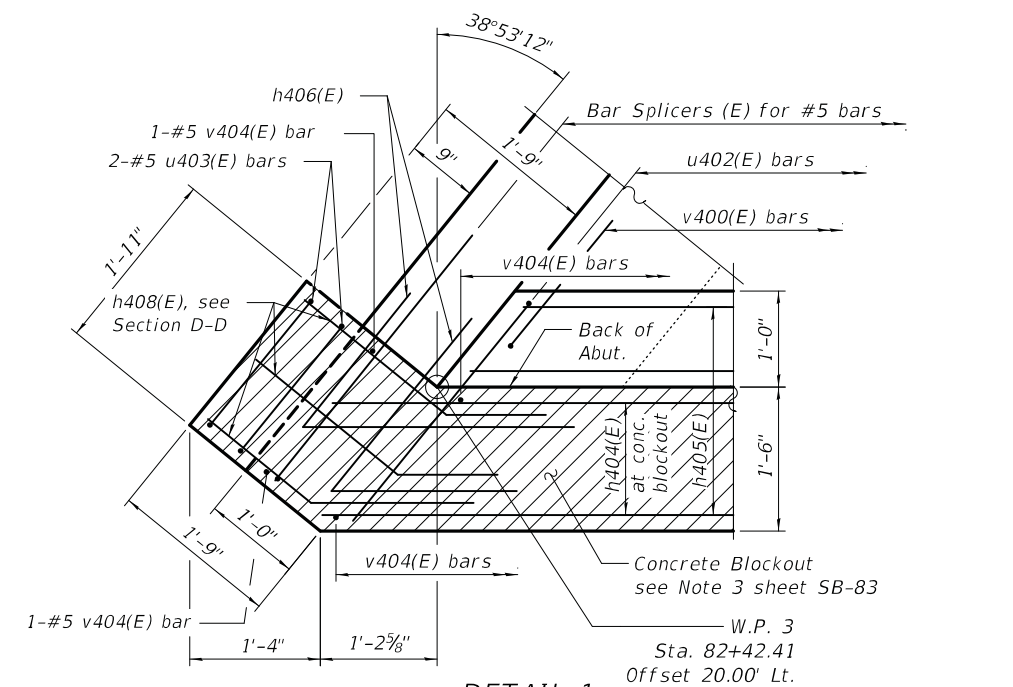
Existing reinforcement to be reused, see Note 4 sheet SB-83

Exist. Abut. to remain

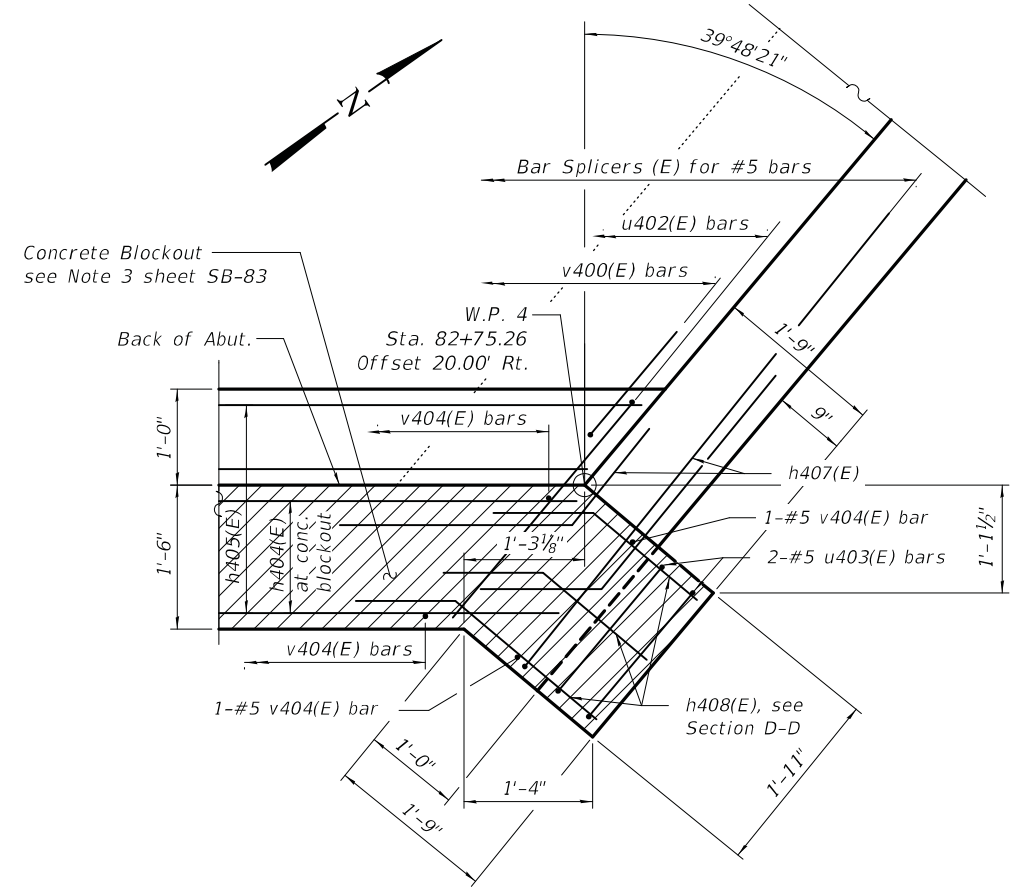


**VIEW F-F**  
 (NW Wingwall shown  
 NE Wingwall similar)

\* Prior to grinding



**DETAIL 1**



**DETAIL 2**

Notes:

1. See sheet SB-83 for location of Section A-A, View F-F and Details 1 and 2.



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

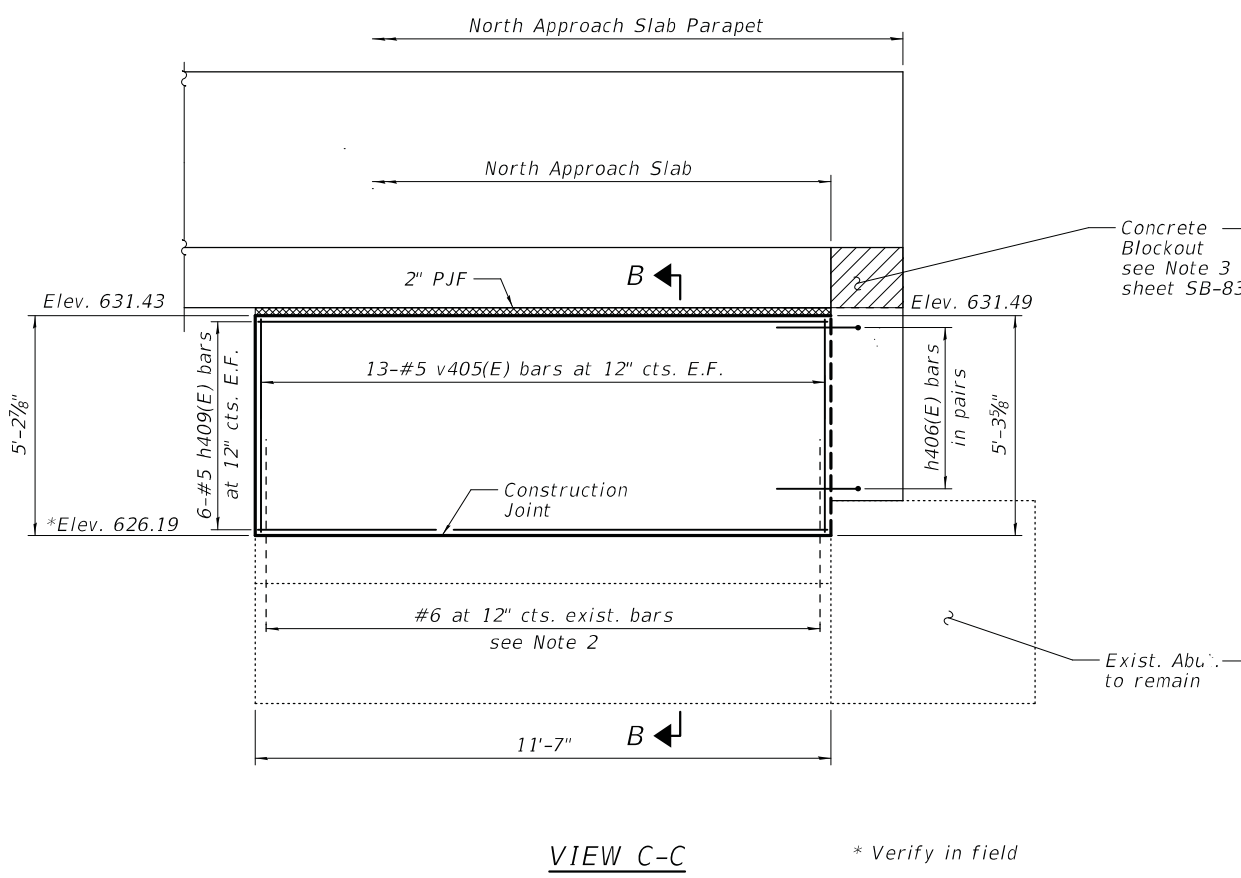
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT DETAILS 1  
 STRUCTURE NO. 016-2467**

SHEET SB-84 OF SB-104 SHEETS

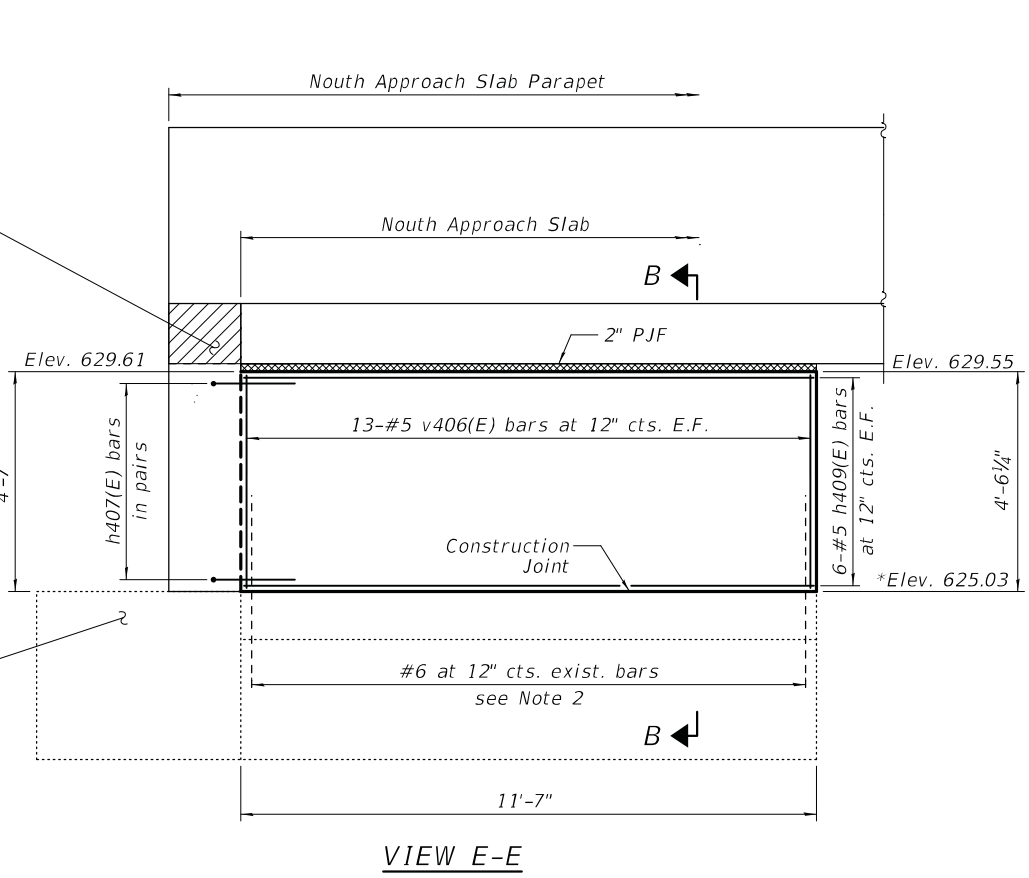
F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 271
ILLINOIS			CONTRACT NO. 62H49	

MODEL: Default  
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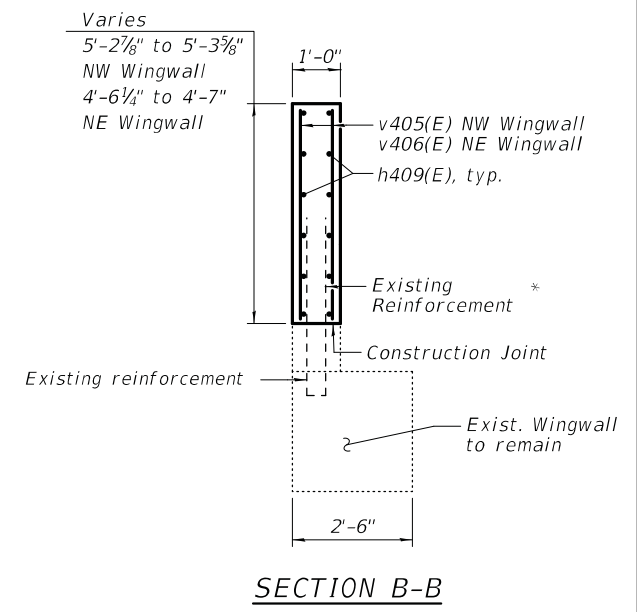


VIEW C-C

\* Verify in field



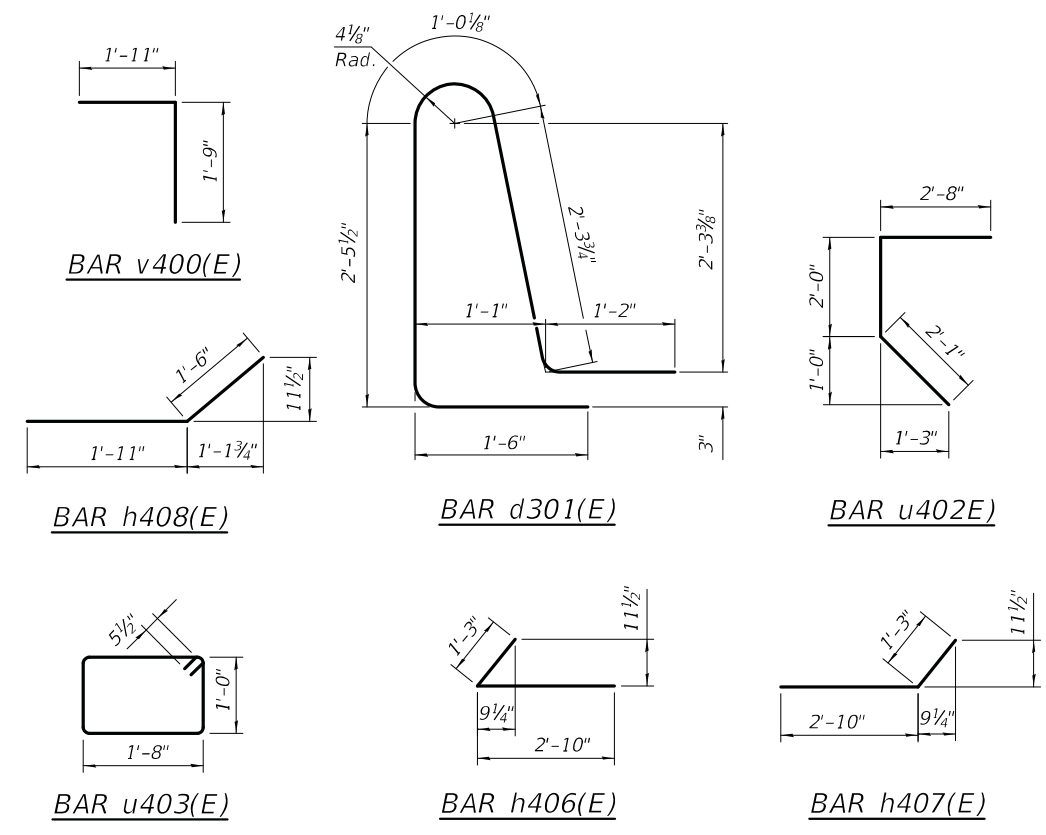
VIEW E-E



SECTION B-B

**NORTH ABUTMENT  
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d301(E)	6	#5	8'-6"	
h404(E)	10	#6	29'-3"	
h405(E)	28	#5	28'-2"	
h406(E)	10	#5	4'-1"	
h407(E)	10	#5	4'-1"	
h408(E)	10	#5	3'-5"	
h409(E)	20	#5	11'-4"	
v400(E)	53	#5	3'-8"	
v404(E)	110	#5	5'-7"	
v405(E)	26	#5	4'-11"	
v406(E)	26	#5	4'-3"	
u402(E)	53	#5	6'-9"	
u403(E)	4	#5	6'-3"	
Structure Excavation		Cu. Yd.	82	
Concrete Structures		Cu. Yd.	23.7	
Reinforcement Bars, Epoxy Coated		Pound	3,170	
Granular Backfill for Structures		Cu. Yd.	67	
Concrete Sealer		Sq. Ft.	254	
Geocomposite Wall Drain		Sq. Yd.	45	
Pipe Underdrains for Structures 4"		Feet	78	



- Notes:
- See sheet SB-83 for location of Views C-C and E-E.
  - Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".



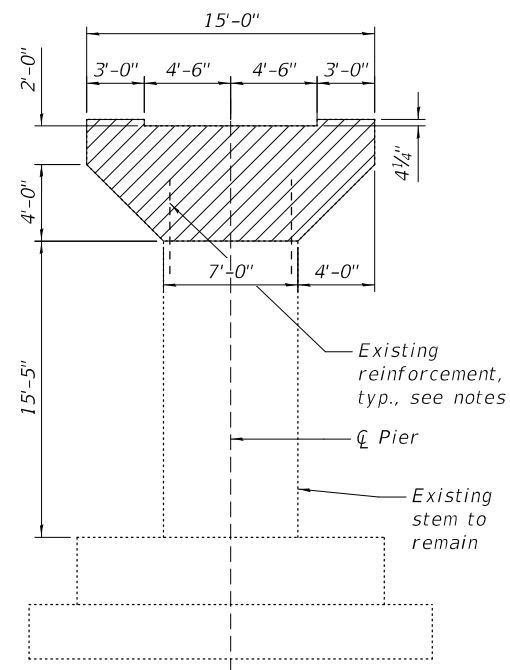
USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

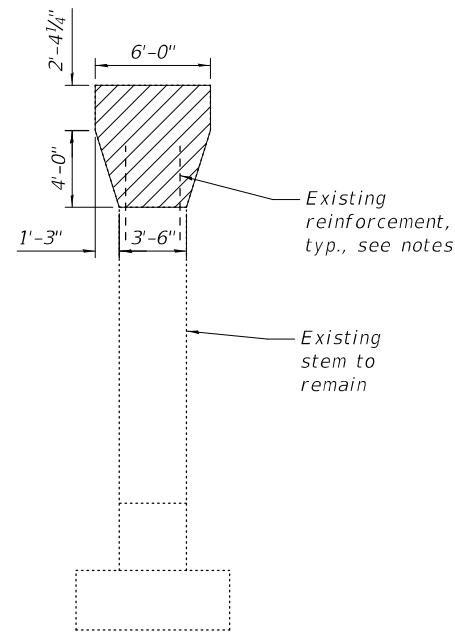
**NORTH ABUTMENT DETAILS 2  
 STRUCTURE NO. 016-2467**

SHEET SB-85 OF SB-104 SHEETS

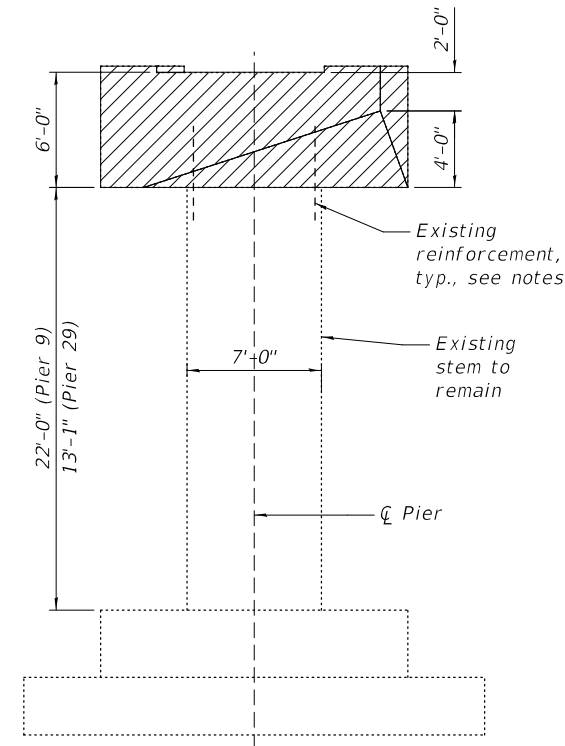
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	272
CONTRACT NO. 62H49			ILLINOIS	



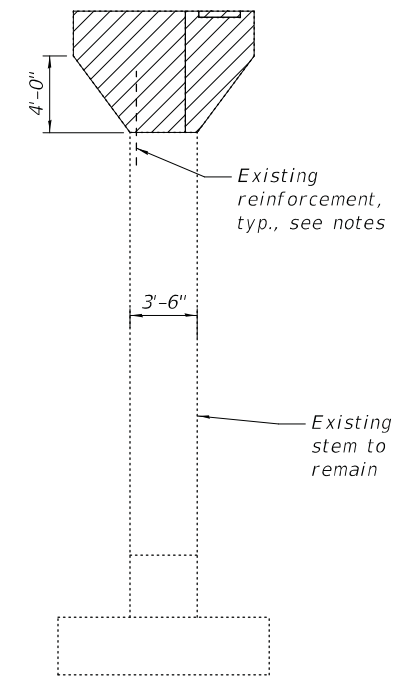
**ELEVATION - PIER 4**



**END VIEW - PIER 4**



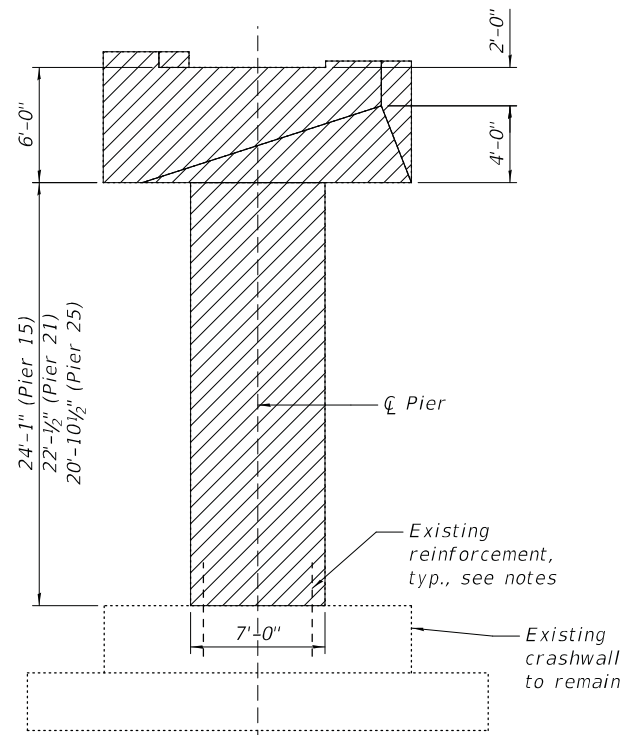
**ELEVATION - PIER 9 & 29**



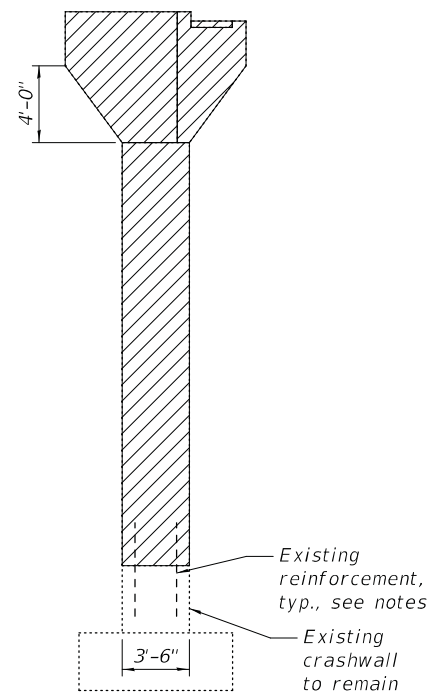
**END VIEW - PIER 9 & 29**

See Pier Cap Isometric for balance of information

Concrete Removal

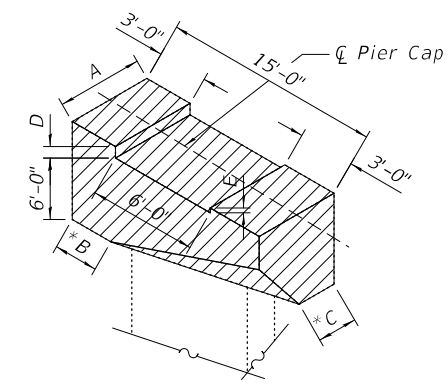


**ELEVATION - 15, 21 & 25**



**END VIEW - PIER 15, 21 & 25**

See Pier Cap Isometric for balance of information



**PIER CAP ISOMETRIC**

\*One corner shown, opposite corner similar (Pier 9, 15, 21, 25, & 29)

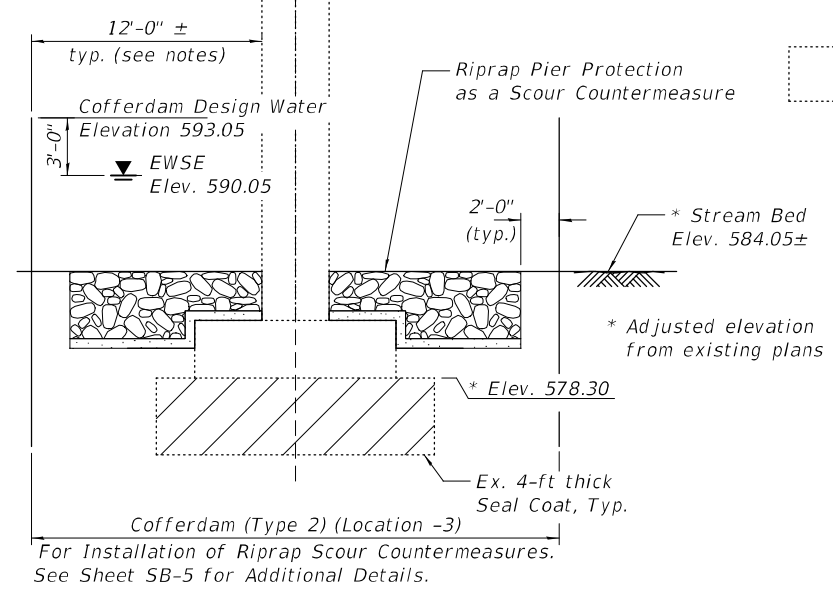
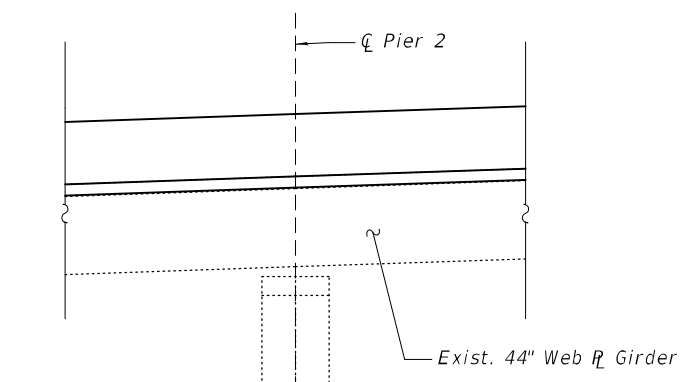
Pier No.	A	B	C	D	E
Pier 9	6'-0"	2'-7 3/4"	2'-11 1/2"	4"	4"
Pier 15	6'-0"	2'-7 3/4"	2'-11 1/2"	4 1/8"	4 1/8"
Pier 21	6'-0"	3'-1 1/4"	2'-9 1/2"	9 5/8"	9 5/8"
Pier 25	7'-0"	4'-3 1/4"	1'-10"	9 3/4"	3 3/4"
Pier 29	7'-0"	5'-9 1/2"	0'-0"	8"	2"

**Notes:**

Existing vertical reinforcement bars projecting from the pier stem into the pier cap or projecting from the crashwall into the pier stem are to remain in place. The existing reinforcement shall be sandblasted clean, straightened, and incorporated into the new construction. Cost included with Concrete Removal.

**BILL OF MATERIAL**

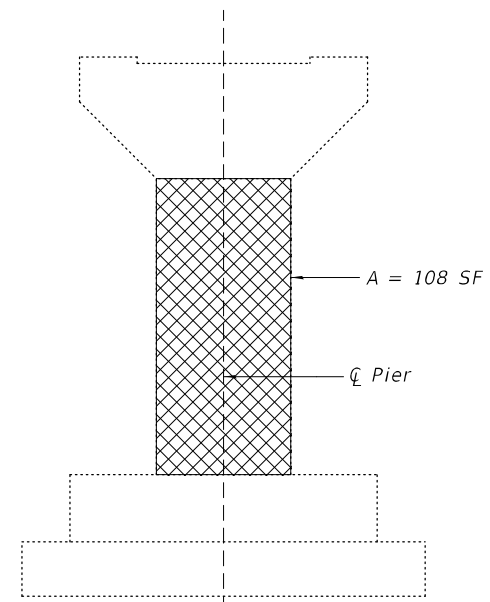
Item	Unit	Total
Concrete Removal	Cu. Yd.	180.2



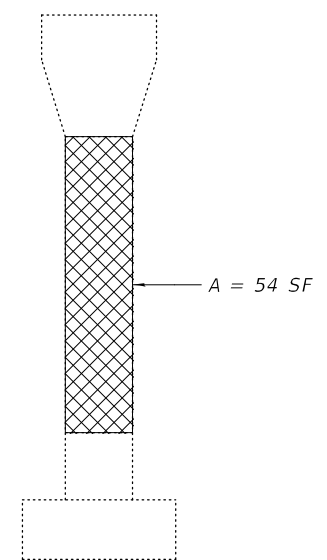
**COFFERDAM DETAIL**  
(at Pier 2)

**LEGEND**

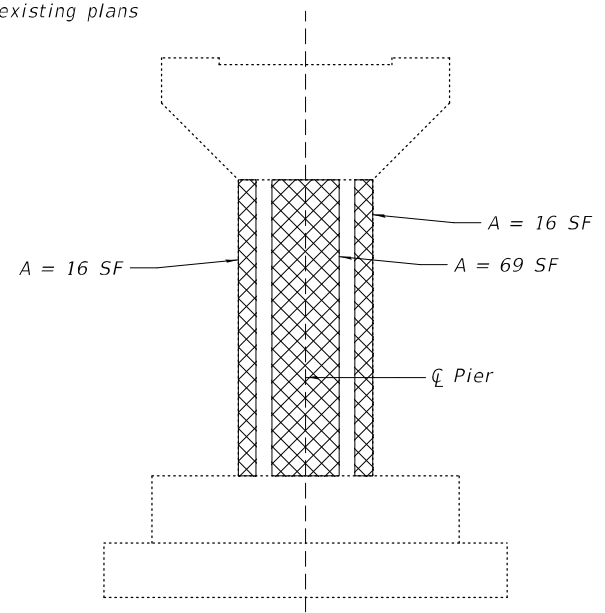
- Structural Repair of Concrete  
(Depth Equal to or Less Than 5  
Inches)
- SF Square Feet



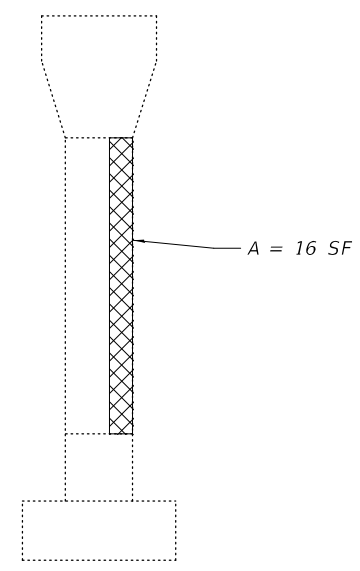
**ELEVATION - PIER 4**  
(Looking North)



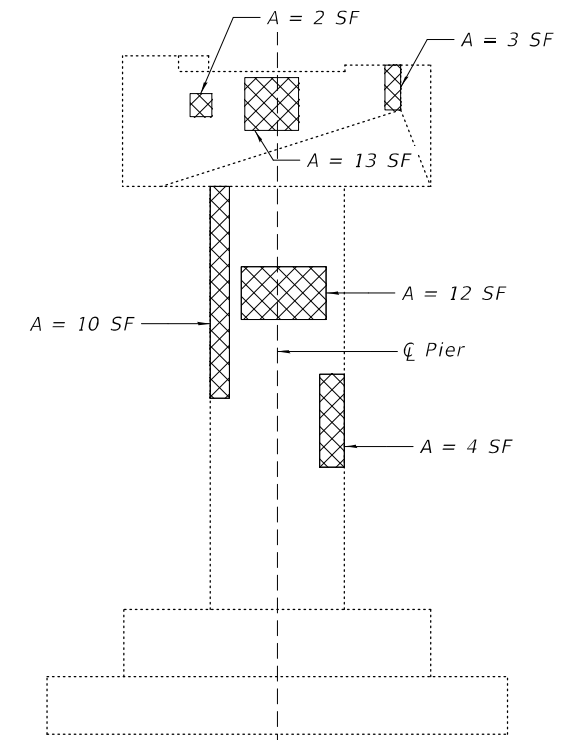
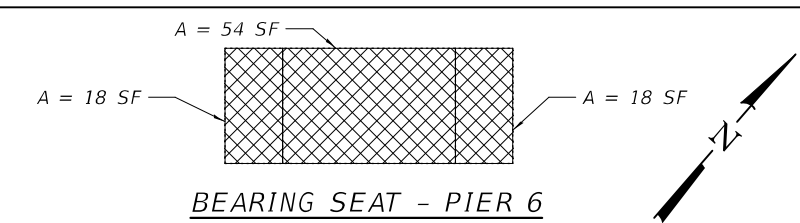
**END VIEW - PIER 4**  
(Looking East)



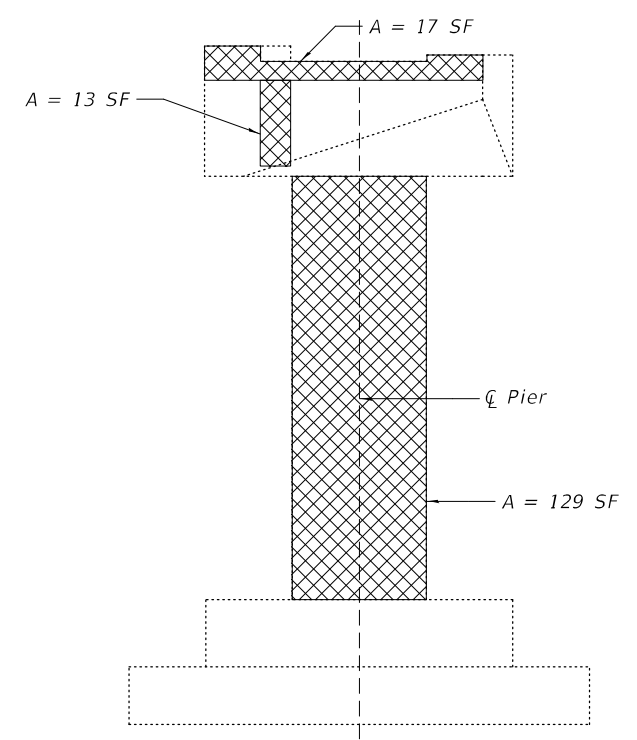
**ELEVATION - PIER 4**  
(Looking South)



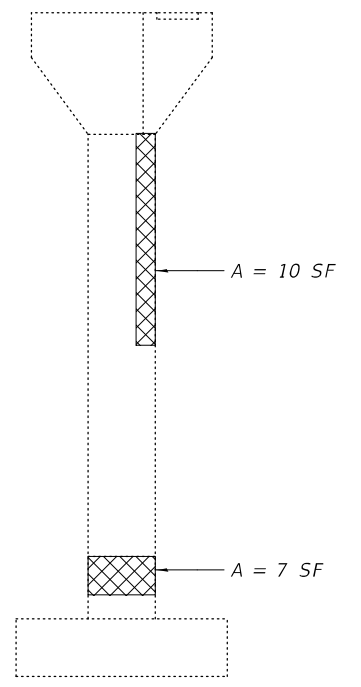
**END VIEW - PIER 4**  
(Looking West)



**ELEVATION - PIER 6**  
(Looking North)



**ELEVATION - PIER 6**  
(Looking South)



**END VIEW - PIER 6**  
(Looking East)



Note:

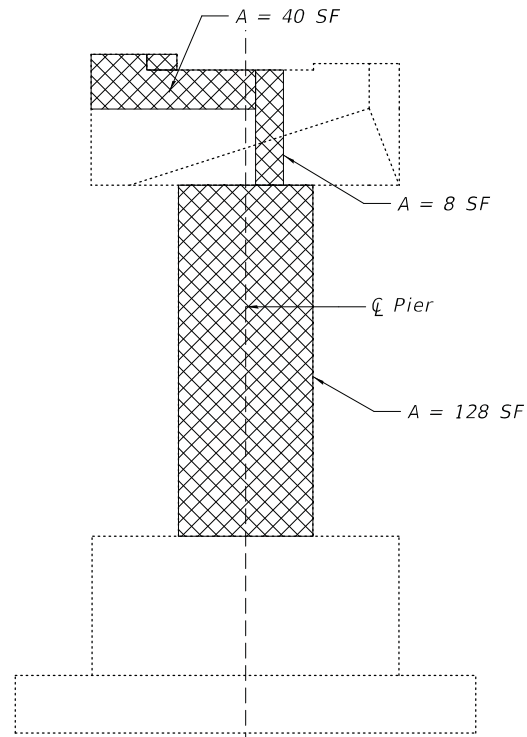
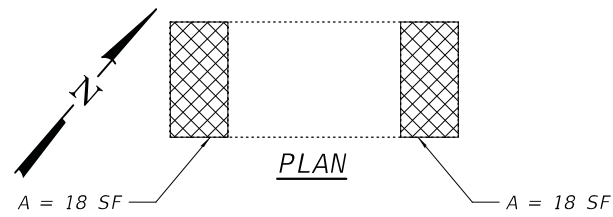
Repairs to the existing pier shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the ENGINEER at the time of construction. The quantities shown are for estimating purposes only. Actual repair locations shall be shown on the as-built plans.

Additional repair quantity has been included to account for any repair areas not shown.

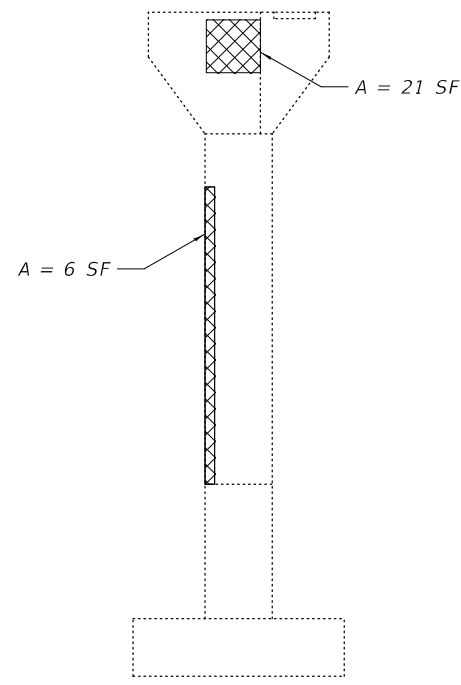
Cofferdam limits shown are estimated. Actual limits shall be determined by the Contractor and shown on the cofferdam plan.

**BILL OF MATERIAL**

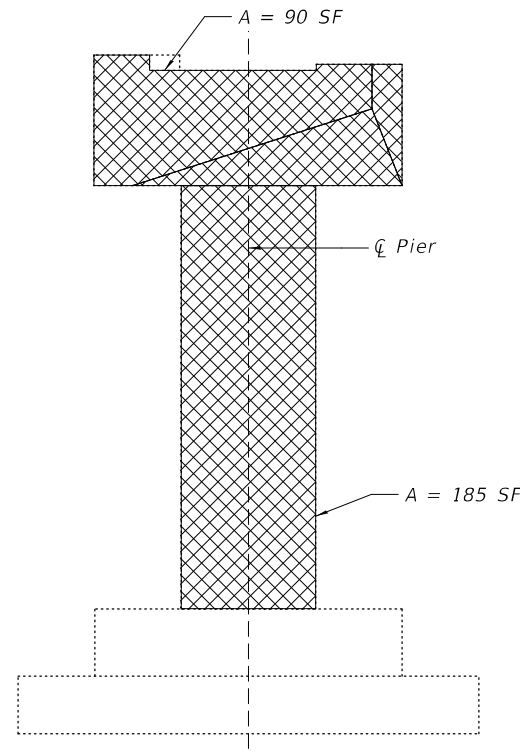
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	680
Cofferdam (Type 2) (Location -3)	Each	1



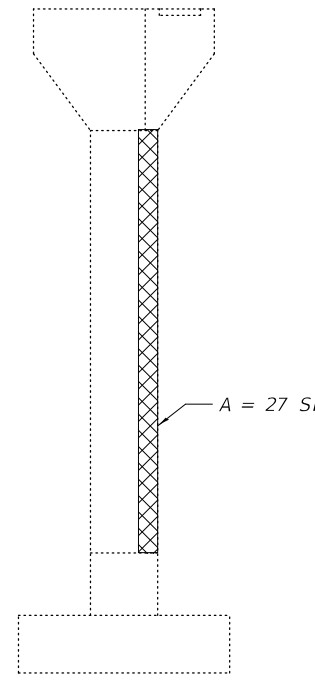
**ELEVATION - PIER 12**  
(Looking North)



**END VIEW - PIER 12**  
(Looking East)



**ELEVATION - PIER 18**  
(Looking North)



**END VIEW - PIER 18**  
(Looking East)

**LEGEND**

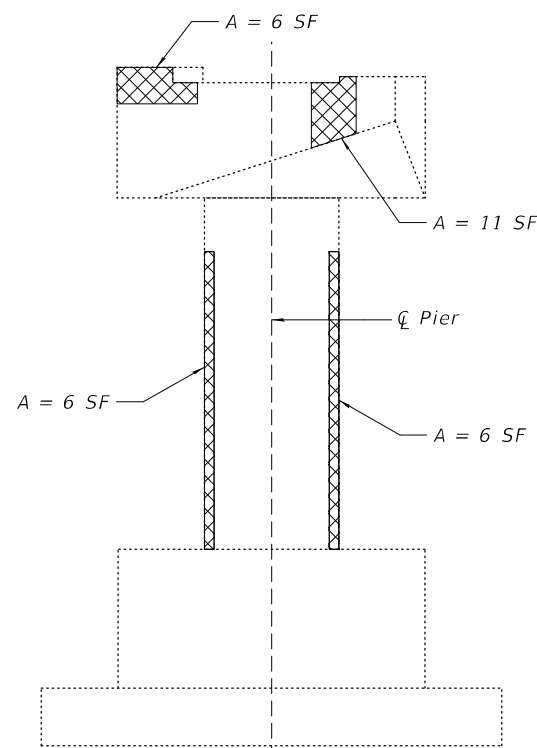
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- SF Square Feet

**Note:**

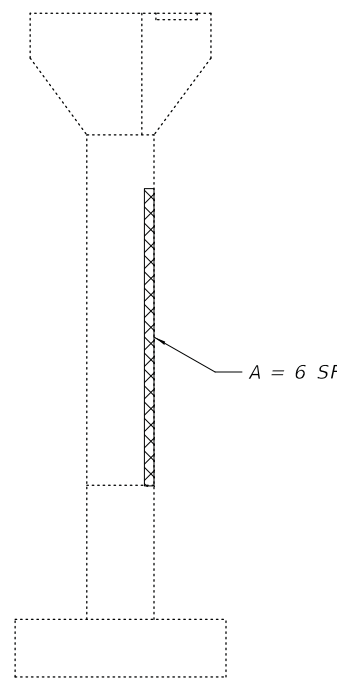
Repairs to the existing pier shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the ENGINEER at the time of construction. The quantities shown are for estimating purposes only. Actual repair locations shall be shown on the as-built plans.

**BILL OF MATERIAL**

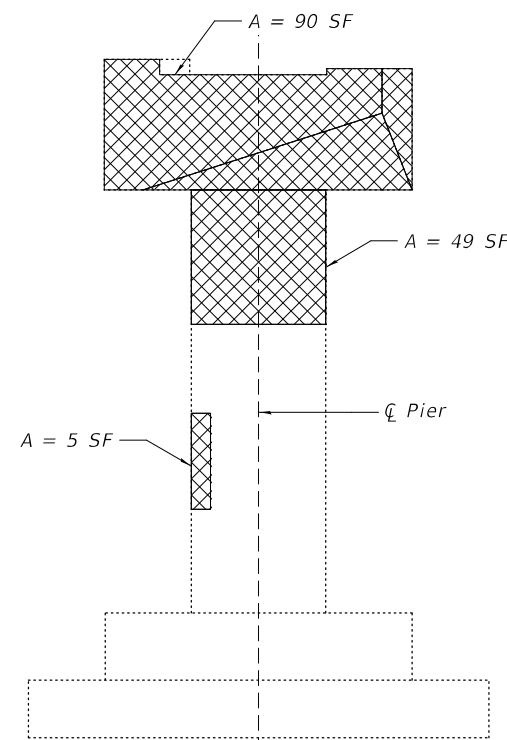
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	838



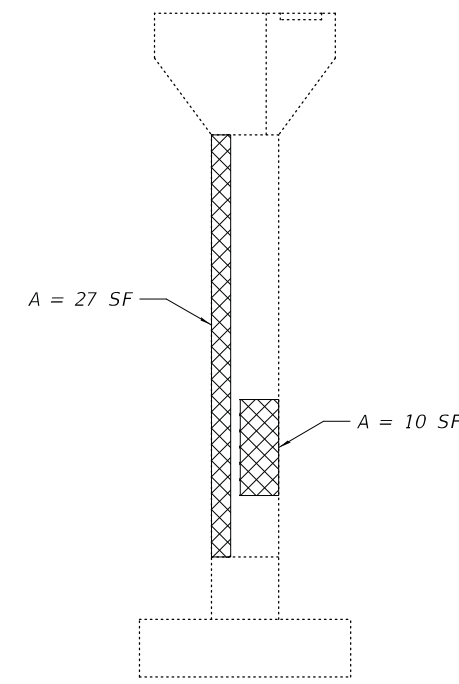
**ELEVATION - PIER 12**  
(Looking South)



**END VIEW - PIER 12**  
(Looking West)



**ELEVATION - PIER 18**  
(Looking South)



**END VIEW - PIER 18**  
(Looking West)

FILE NAME:



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

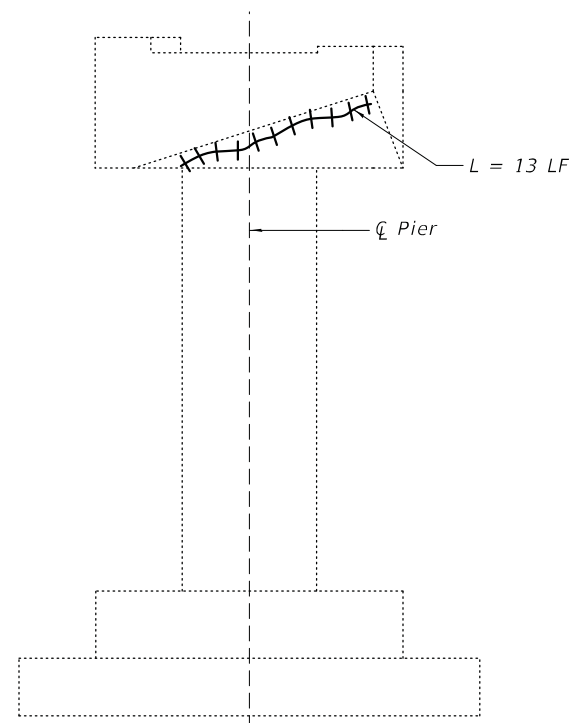
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER REPAIR DETAILS 2 - PIERS 12 & 18  
STRUCTURE NO. 016-2467**

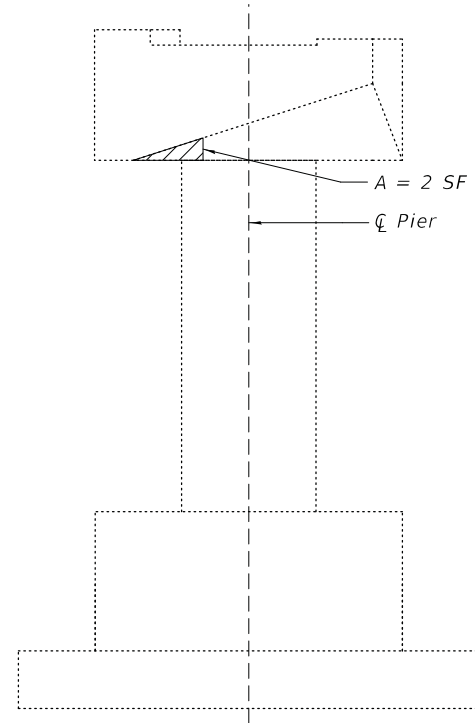
SHEET SB-88 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	275
			CONTRACT NO. 62H49	
ILLINOIS				

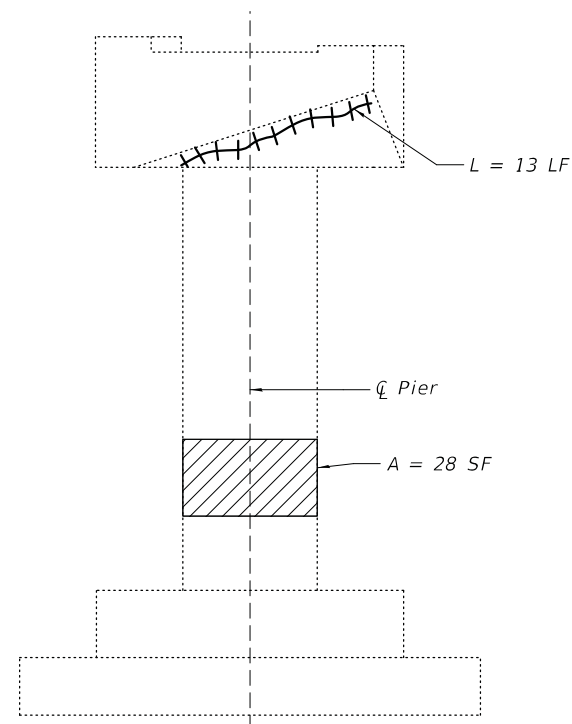




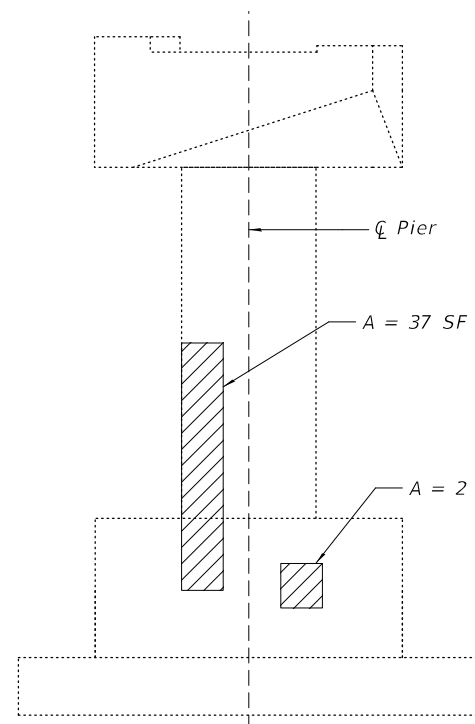
**ELEVATION - PIER 19**  
(Looking North)



**ELEVATION - PIER 23**  
(Looking North)



**ELEVATION - PIER 19**  
(Looking South)



**ELEVATION - PIER 23**  
(Looking South)

**LEGEND**

- Structural Repair of Concrete  
(Depth Equal to or Less Than 5 Inches)
- Epoxy Crack Injection
- SF Square Feet
- LF Linear Feet

**Note:**

Repairs to the existing pier shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the ENGINEER at the time of construction. The quantities shown are for estimating purposes only. Actual repair locations shall be shown on the as-built plans.

**BILL OF MATERIAL**

Item	Unit	Total
Epoxy Crack Injection	Foot.	26
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	80

FILE NAME:



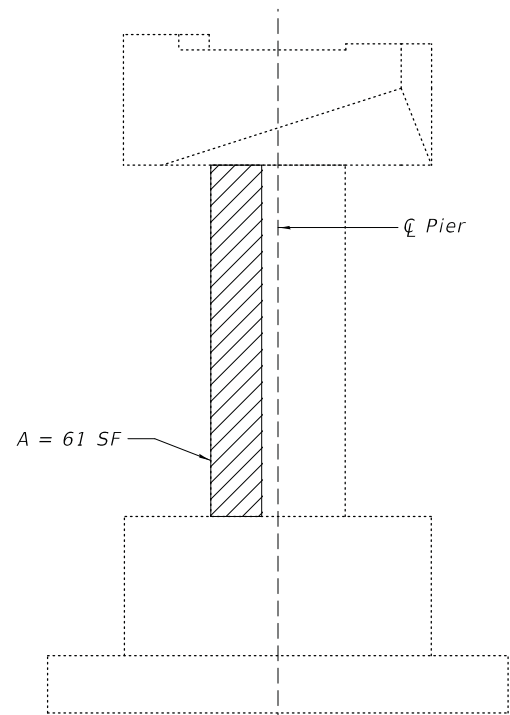
USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

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

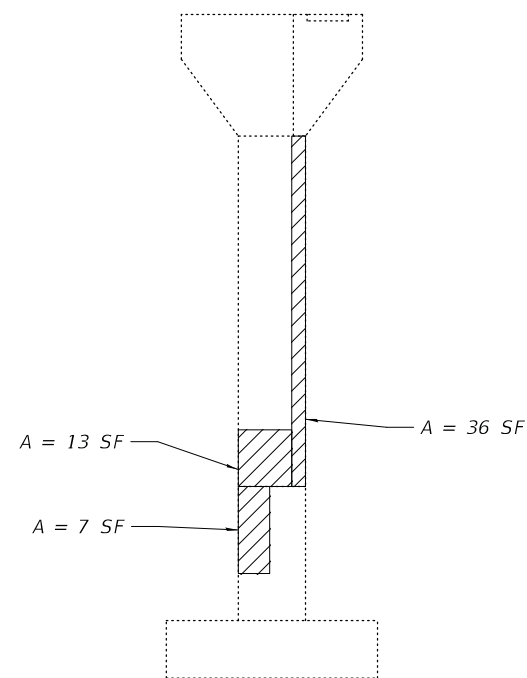
**PIER REPAIR DETAILS 3 - PIERS 19 & 23**  
**STRUCTURE NO. 016-2467**

SHEET SB-89 OF SB-104 SHEETS

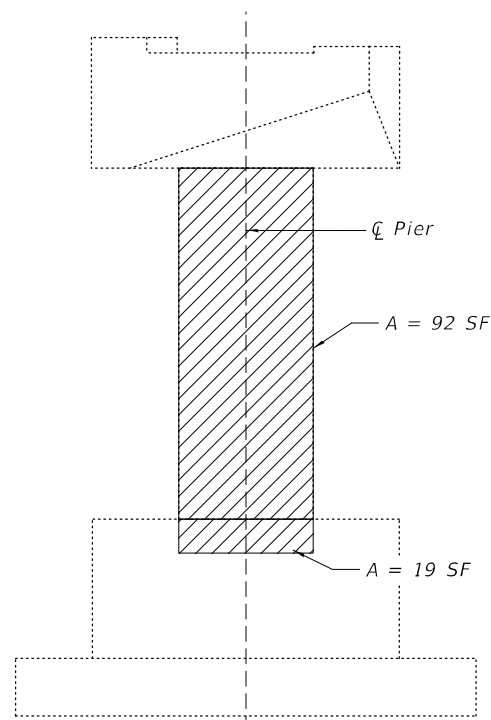
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	276
			CONTRACT NO. 62H49	
		ILLINOIS		



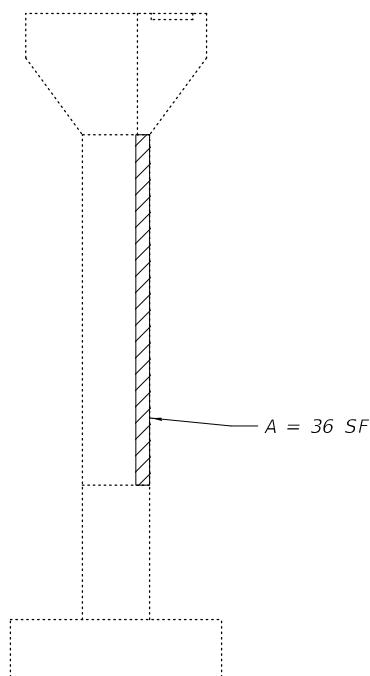
**ELEVATION - PIER 29**  
(Looking North)



**ELEVATION - PIER 29**  
(Looking East)



**ELEVATION - PIER 29**  
(Looking South)



**ELEVATION - PIER 29**  
(Looking West)

**LEGEND**

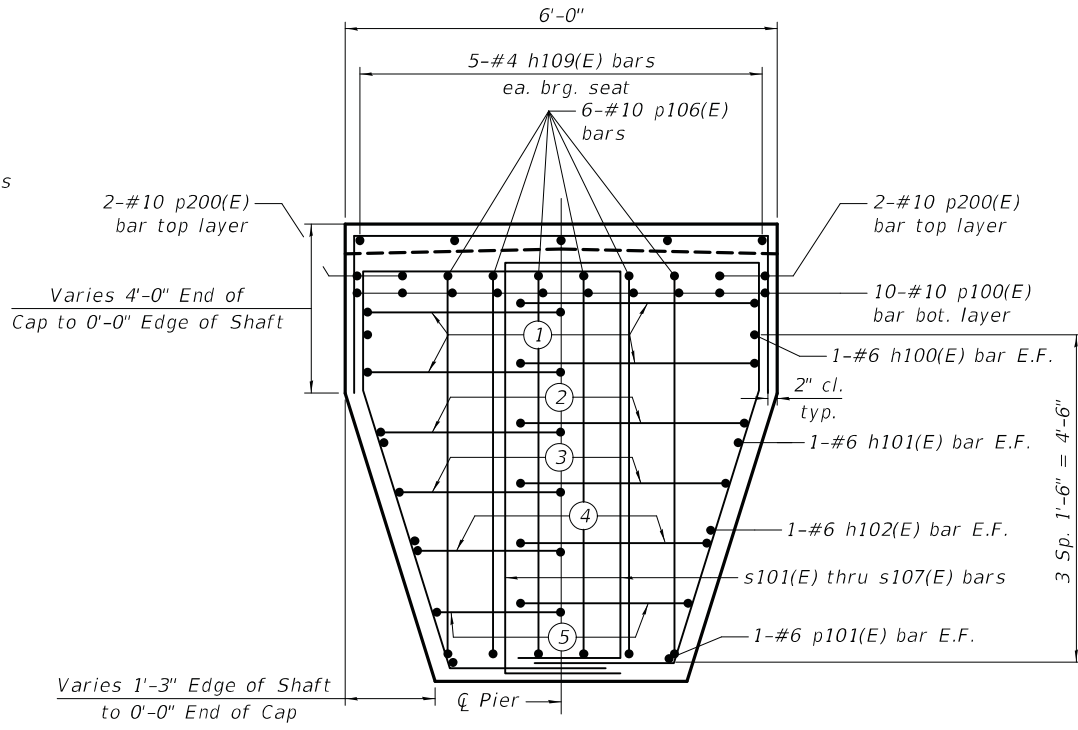
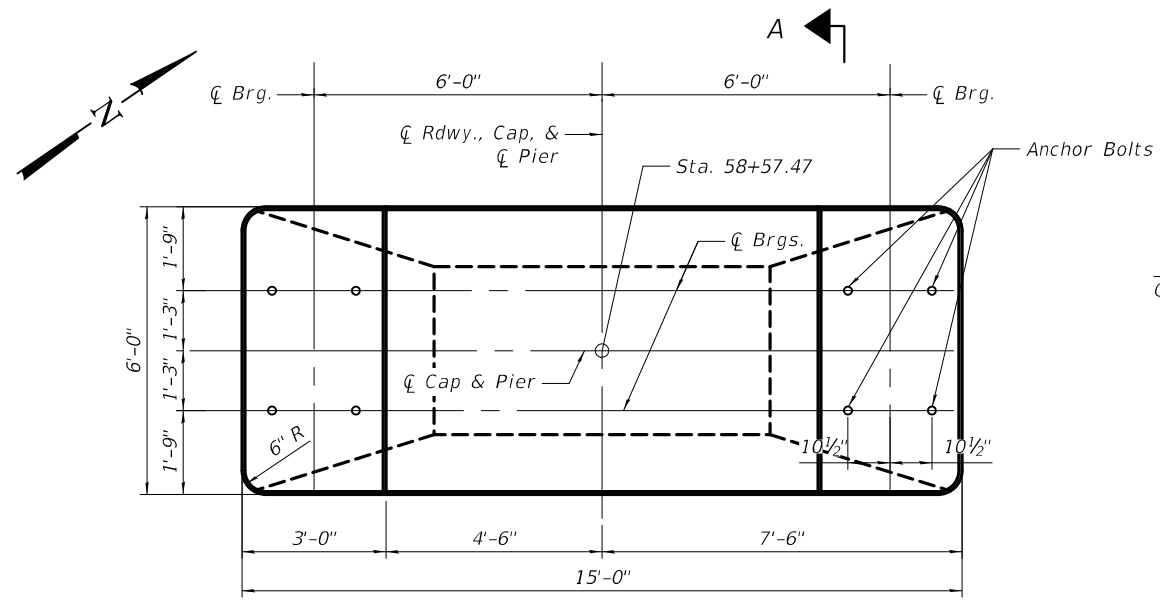
- Structural Repair of Concrete  
(Depth Equal to or Less Than 5  
Inches)
- SF Square Feet

**Note:**

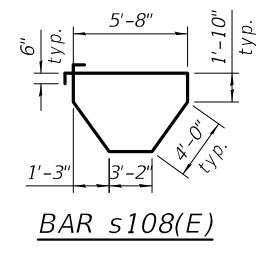
Repairs to the existing pier shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the ENGINEER at the time of construction. The quantities shown are for estimating purposes only. Actual repair locations shall be shown on the as-built plans.

**BILL OF MATERIAL**

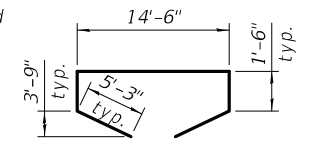
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	305



- ① 4-#9 u100(E) bars each end
- ② 2-#9 u101(E) bars each end
- ③ 2-#9 u102(E) bars each end
- ④ 2-#9 u103(E) bars each end
- ⑤ 2-#9 u104(E) bars each end



BAR s108(E)

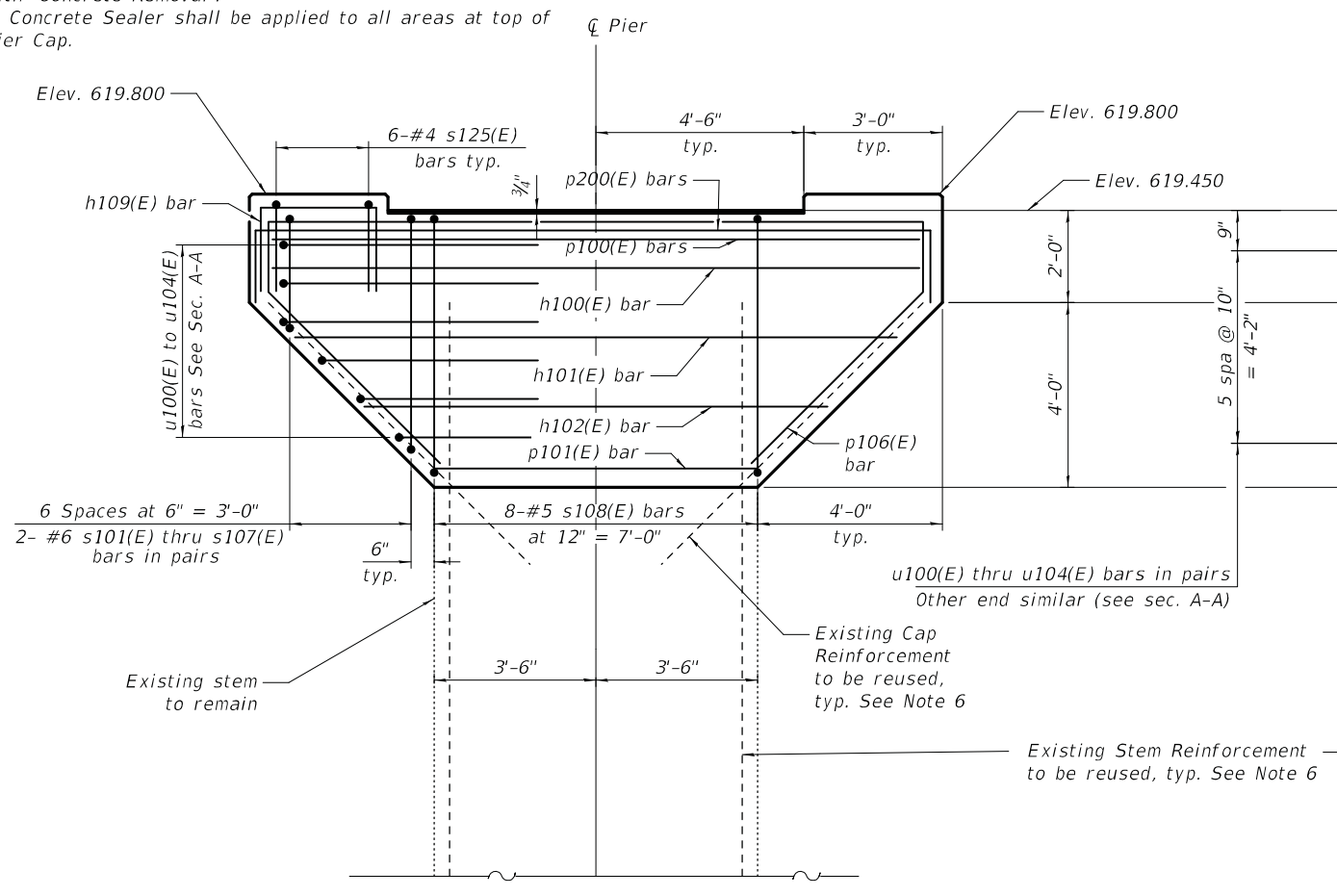


BAR p106(E)

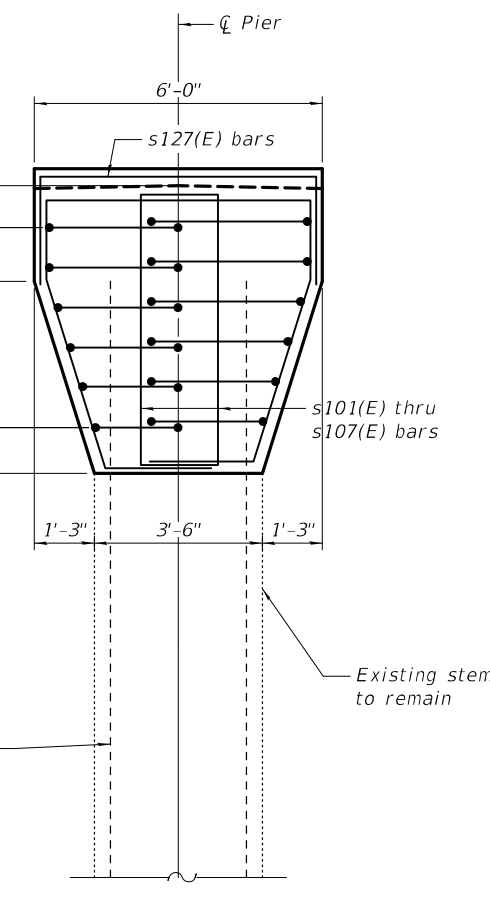
- Note:
1. Space reinforcement in Pier Cap to miss anchor bolts.
  2. Minimum bar lap = 24 x bar diameter.
  3. Wedges shall have std.  $\frac{3}{4}$ " chamfers.
  4. Use 2" clear cover on all reinf.
  5. Pour steps monolithically with Pier Cap.
  6. Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  7. Concrete Sealer shall be applied to all areas at top of Pier Cap.

TOP PLAN

SECTION A-A

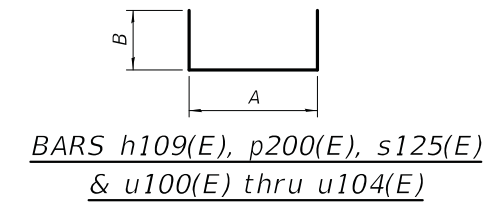


ELEVATION

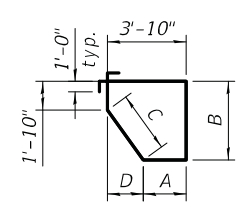


END VIEW

See Section A-A for pier cap reinforcement information



Bar	A	B
h109(E)	2'-6"	2'-3"
p200(E)	14'-6"	1'-8"
s125(E)	5'-4"	2'-3"
u100(E)	3'-6"	6'-0"
u101(E)	3'-4"	5'-6"
u102(E)	3'-1"	4'-7"
u103(E)	2'-10"	4'-7"
u104(E)	2'-6"	4'-7"



BARS s101(E) thru s107(E)

Bar	A	B	C	D
s101(E)	3'-8 1/2"	2'-2 1/2"	0'-5"	0'-1/8"
s102(E)	3'-7"	2'-8 1/2"	0'-11 1/2"	0'-3"
s103(E)	3'-5"	3'-2 1/2"	1'-5 1/2"	0'-5"
s104(E)	3'-3"	3'-9"	2'-0"	0'-7"
s105(E)	3'-1"	4'-3"	2'-6"	0'-9"
s106(E)	2'-11"	4'-8 1/2"	3'-0 1/2"	0'-11"
s107(E)	2'-9 1/2"	5'-2 1/2"	3'-7"	1'-0 1/2"

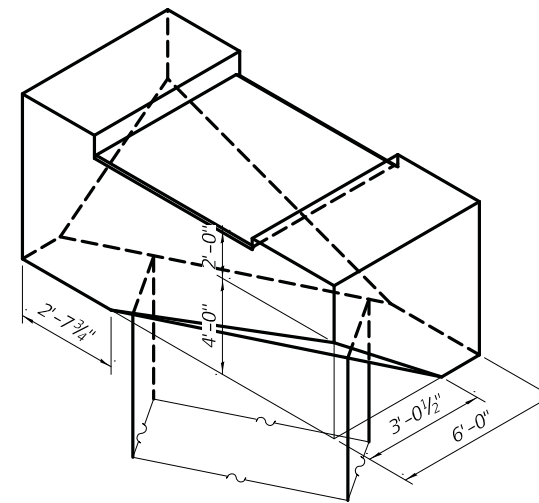
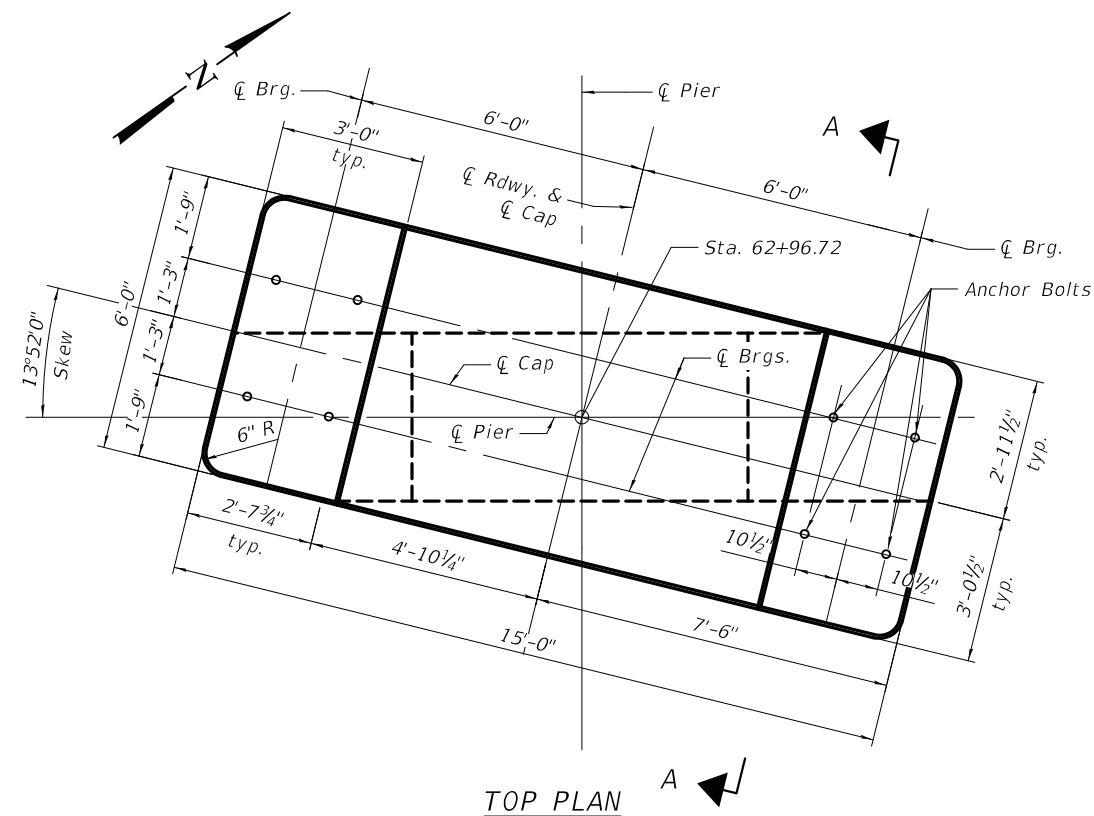
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	2	#6	14'-6"	—
h101(E)	2	#6	11'-6"	—
h102(E)	2	#6	8'-6"	—
h109(E)	10	#4	7'-0"	—
p100(E)	10	#10	14'-6"	—
p101(E)	2	#6	8'-0"	—
p106(E)	6	#10	28'-0"	—
p200(E)	4	#10	17'-10"	—
s101(E)	4	#6	14'-0"	—
s102(E)	4	#6	14'-11"	—
s103(E)	4	#6	15'-9"	—
s104(E)	4	#6	16'-8"	—
s105(E)	4	#6	17'-6"	—
s106(E)	4	#6	18'-4"	—
s107(E)	4	#6	19'-3"	—
s108(E)	8	#5	21'-6"	—
s125(E)	12	#4	9'-10"	—
u100(E)	8	#9	15'-6"	—
u101(E)	4	#9	14'-4"	—
u102(E)	4	#9	12'-3"	—
u103(E)	4	#9	12'-0"	—
u104(E)	4	#9	11'-8"	—
Concrete Structures		Cu. Yd.	15.6	
Reinforcement Bars, Epoxy Coated		Pound	3,900	
Concrete Sealer		Sq. Ft.	94	

**BILL OF MATERIAL**

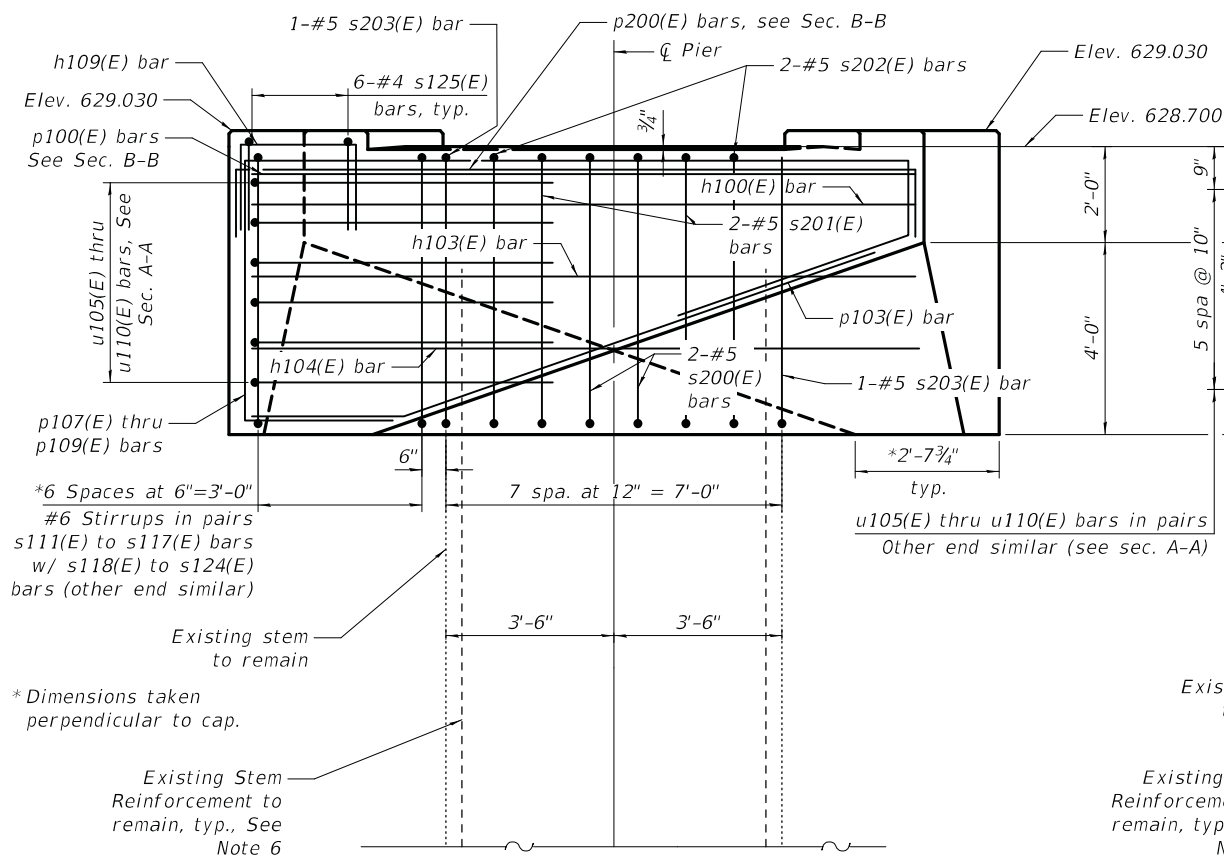
Bar	No.	Size	Length	Shape
h100(E)	2	#6	14'-6"	
h103(E)	2	#6	14'-7"	
h104(E)	2	#6	14'-9"	
h109(E)	10	#4	7'-0"	
h110(E)	2	#6	12'-0"	
p100(E)	10	#10	14'-6"	
p103(E)	4	#6	14'-10"	
p107(E)	2	#10	30'-10"	
p108(E)	2	#10	31'-7"	
p109(E)	2	#10	33'-0"	
p200(E)	4	#10	17'-10"	
s111(E)	2	#6	20'-4"	
s112(E)	2	#6	20'-4"	
s113(E)	2	#6	20'-6"	
s114(E)	2	#6	20'-6"	
s115(E)	2	#6	20'-8"	
s116(E)	2	#6	20'-9"	
s117(E)	2	#6	20'-9"	
s118(E)	2	#6	19'-3"	
s119(E)	2	#6	19'-8"	
s120(E)	2	#6	20'-1"	
s121(E)	2	#6	20'-7"	
s122(E)	2	#6	20'-11"	
s123(E)	2	#6	21'-4"	
s124(E)	2	#6	21'-9"	
s125(E)	12	#4	9'-10"	
s200(E)	2	#5	22'-2"	
s201(E)	2	#5	22'-2"	
s202(E)	2	#5	22'-2"	
s203(E)	2	#5	22'-2"	
u105(E)	14	#9	16'-6"	
u106(E)	2	#9	16'-0"	
u107(E)	2	#9	15'-5"	
u108(E)	2	#9	14'-9"	
u109(E)	2	#9	14'-3"	
u110(E)	2	#9	15'-10"	
Concrete Structures		Cu. Yd.	19.5	
Reinforcement Bars, Epoxy Coated		Pound	4,490	
Concrete Sealer		Sq. Ft.	94	

- ① 4-#9 u105(E) bars each end
- ② 1-#9 u106(E) bars each end
- ③ 1-#9 u107(E) bars each end
- ④ 3-#9 u105(E) bars each end
- ⑤ 1-#9 u108(E) bars each end
- ⑥ 1-#9 u109(E) bars each end
- ⑦ 1-#9 u110(E) bars each end

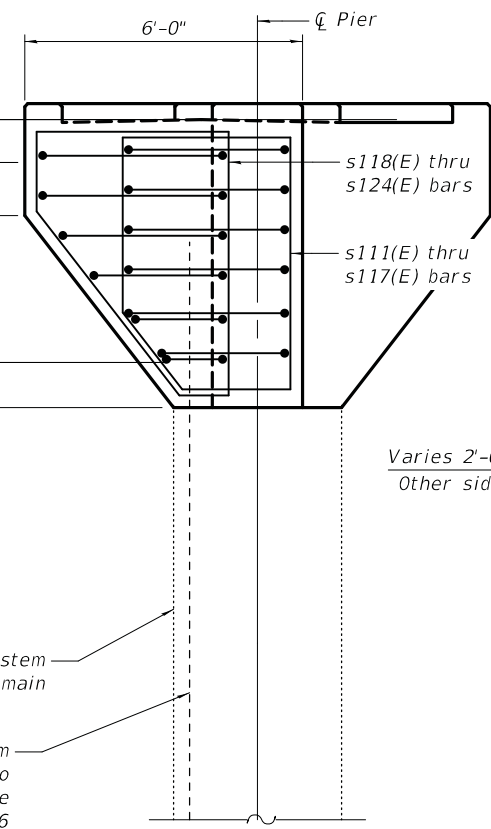


**PIER CAP ISOMETRIC**

- Note:
1. Space reinforcement in Pier Cap to miss anchor bolts.
  2. Minimum bar lap = 24 x bar diameter.
  3. Wedges shall have std. 3/4" chamfers.
  4. Use 2" clear cover on all reinf.
  5. Pour steps monolithically with Pier Cap.
  6. Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  7. Concrete Sealer shall be applied to all areas at top of Pier Cap.
  8. See Sheet SB-97 for bar bend diagrams.

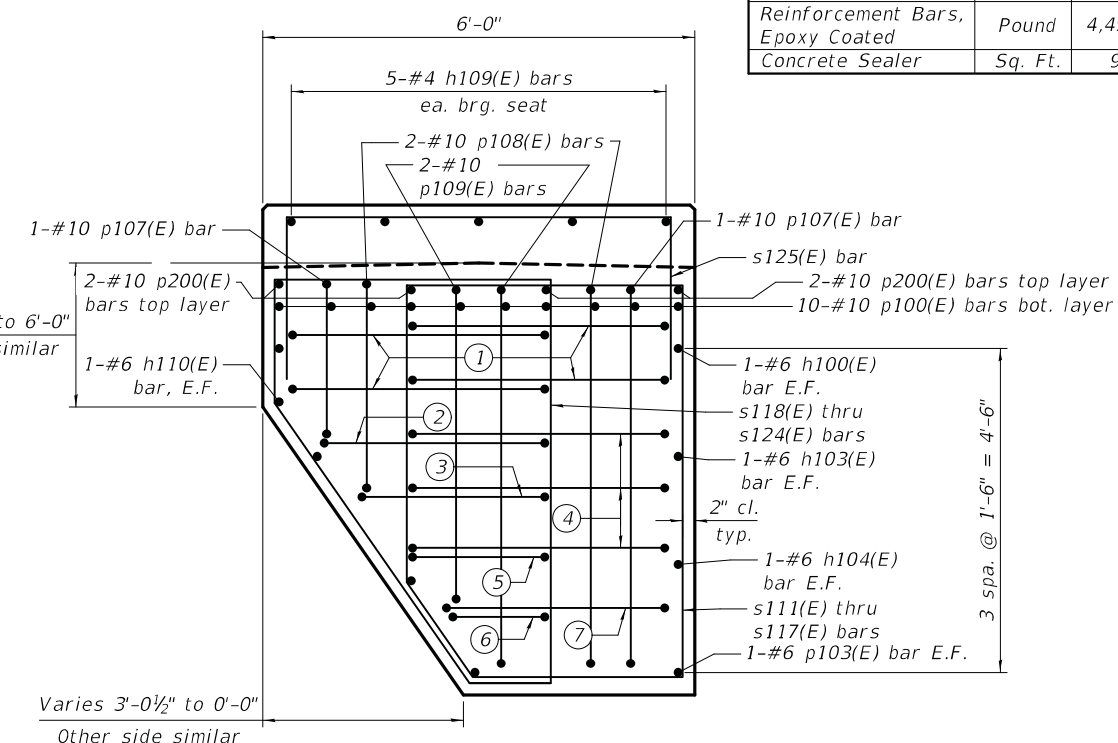


**ELEVATION**



**END VIEW**

See Section A-A for pier cap reinforcement information



**SECTION A-A**



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

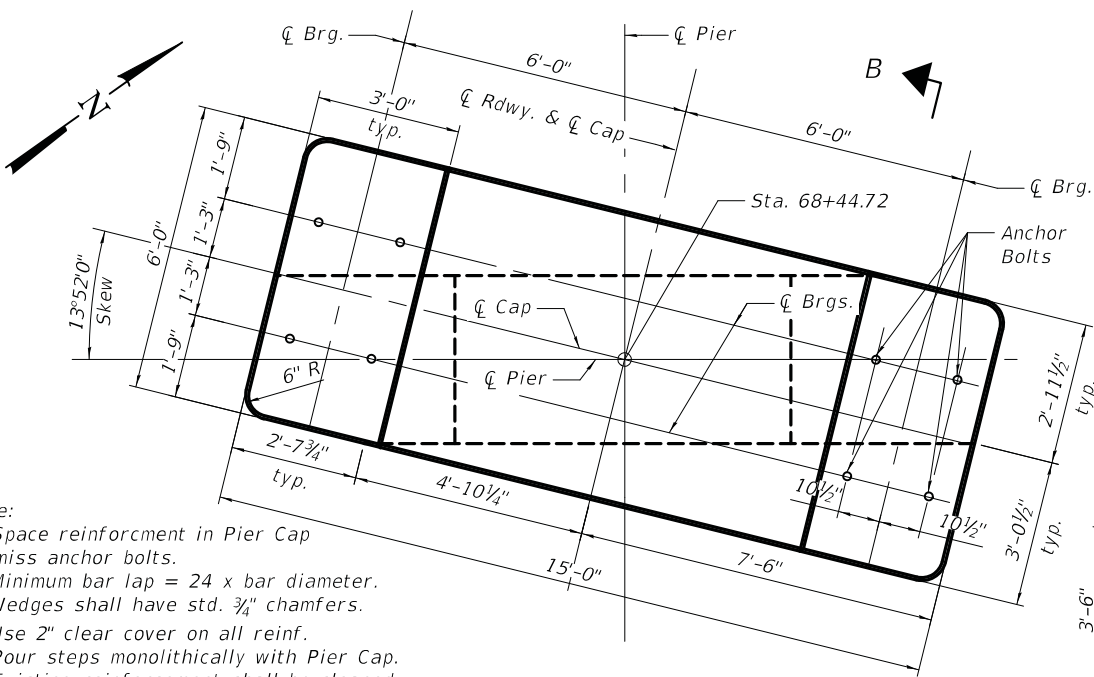
**PIER 9  
STRUCTURE NO. 016-2467**

SHEET SB-92 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 279
CONTRACT NO. 62H49			ILLINOIS	

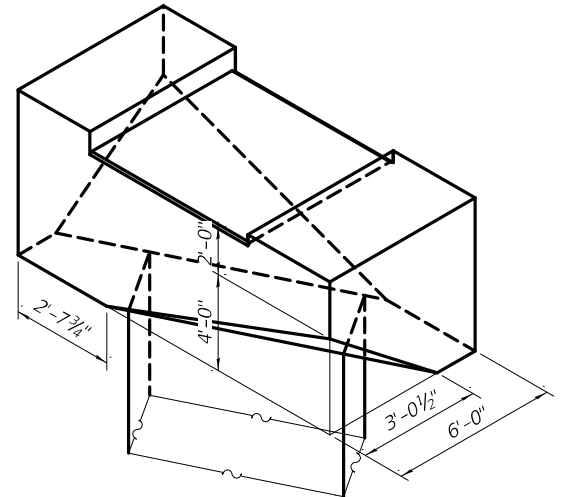
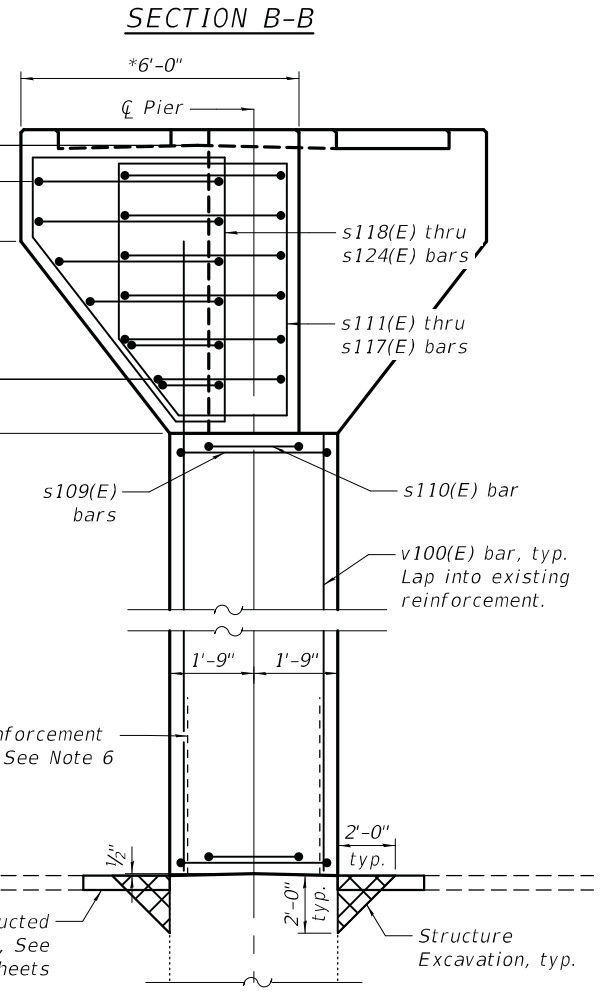
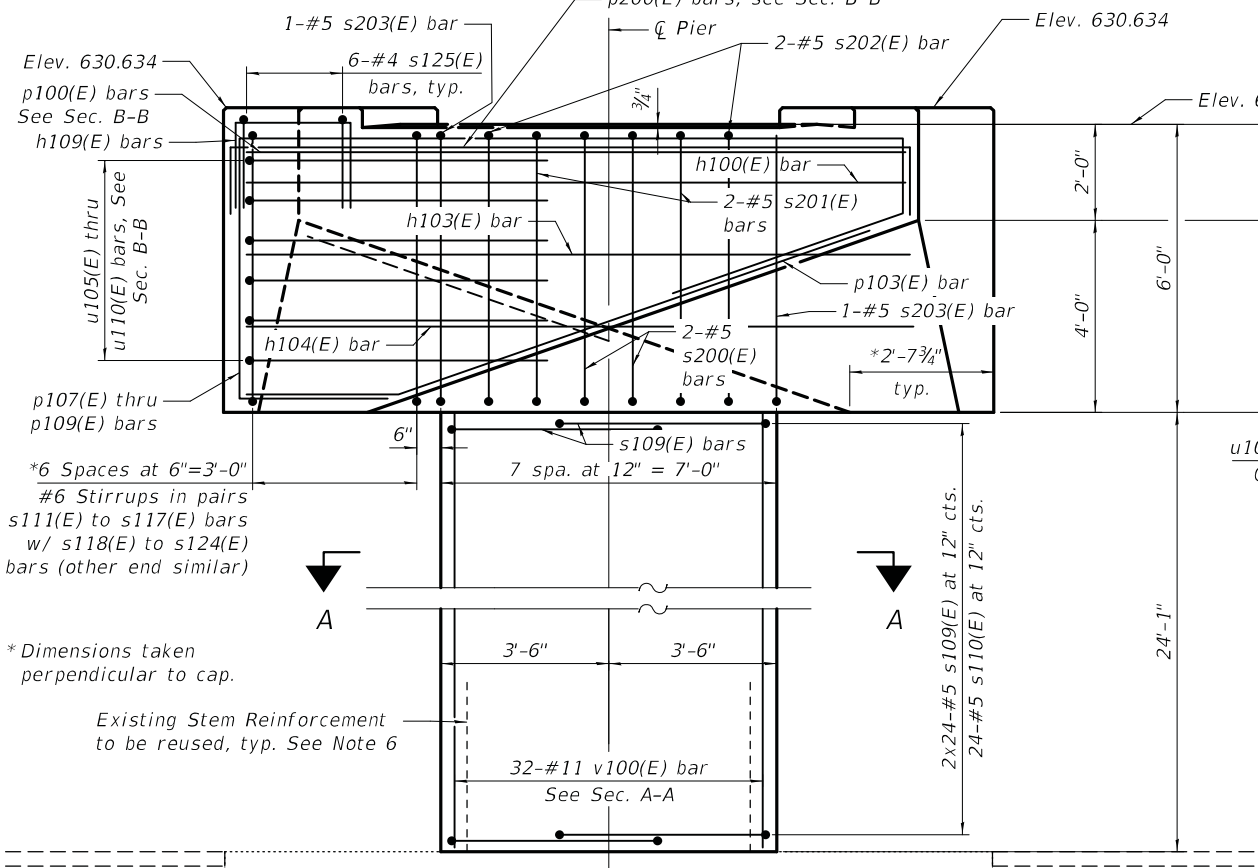
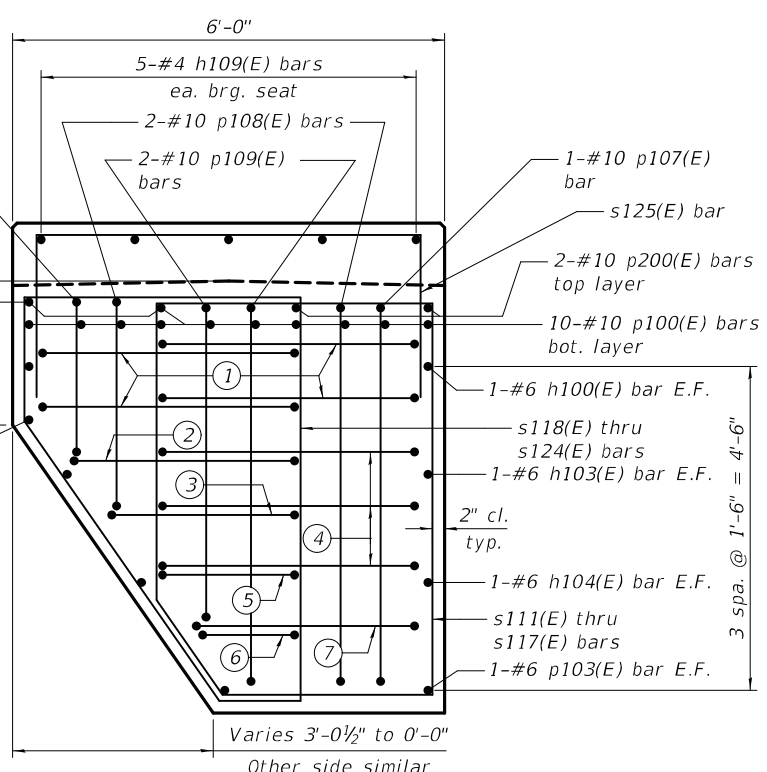
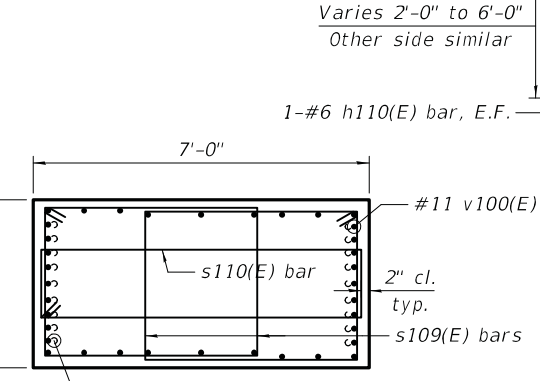
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h100(E)	2	#6	14'-6"	
h103(E)	2	#6	14'-7"	
h104(E)	2	#6	14'-9"	
h109(E)	12	#4	7'-0"	
h110(E)	2	#6	12'-0"	
p100(E)	10	#10	14'-6"	
p103(E)	2	#6	14'-10"	
p107(E)	2	#10	30'-10"	
p108(E)	2	#10	31'-7"	
p109(E)	2	#10	33'-0"	
p200(E)	4	#10	17'-10"	
s109(E)	48	#5	16'-0"	
s110(E)	24	#5	18'-4"	
s111(E)	2	#6	20'-4"	
s112(E)	2	#6	20'-4"	
s113(E)	2	#6	20'-6"	
s114(E)	2	#6	20'-6"	
s115(E)	2	#6	20'-8"	
s116(E)	2	#6	20'-9"	
s117(E)	2	#6	20'-9"	
s118(E)	2	#6	19'-3"	
s119(E)	2	#6	19'-8"	
s120(E)	2	#6	20'-1"	
s121(E)	2	#6	20'-7"	
s122(E)	2	#6	20'-11"	
s123(E)	2	#6	21'-4"	
s124(E)	2	#6	21'-9"	
s125(E)	12	#4	9'-10"	
s200(E)	2	#5	22'-2"	
s201(E)	2	#5	22'-2"	
s202(E)	2	#5	22'-2"	
s203(E)	2	#5	22'-2"	
u105(E)	14	#9	16'-6"	
u106(E)	2	#9	16'-0"	
u107(E)	2	#9	15'-5"	
u108(E)	2	#9	14'-9"	
u109(E)	2	#9	14'-3"	
u110(E)	2	#9	15'-10"	
v100(E)	32	#11	28'-1"	
Structure Excavation		Cu. Yd.		3
Concrete Structures		Cu. Yd.		41.4
Reinforcement Bars, Epoxy Coated		Pound		10,490
Concrete Sealer		Sq. Ft.		94



- Note:
1. Space reinforcement in Pier Cap to miss anchor bolts.
  2. Minimum bar lap = 24 x bar diameter.
  3. Wedges shall have std. 3/4" chamfers.
  4. Use 2" clear cover on all reinf.
  5. Pour steps monolithically with Pier Cap.
  6. Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  7. Concrete Sealer shall be applied to all areas at top of Pier Cap.
  8. See Sheet SB-97 for bar bend diagrams.

- ① 4-#9 u105(E) bars each end
- ② 1-#9 u106(E) bars each end
- ③ 1-#9 u107(E) bars each end
- ④ 3-#9 u105(E) bars each end
- ⑤ 1-#9 u108(E) bars each end
- ⑥ 1-#9 u109(E) bars each end
- ⑦ 1-#9 u110(E) bars each end



**ELEVATION**

**END VIEW**

**PIER CAP ISOMETRIC**



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

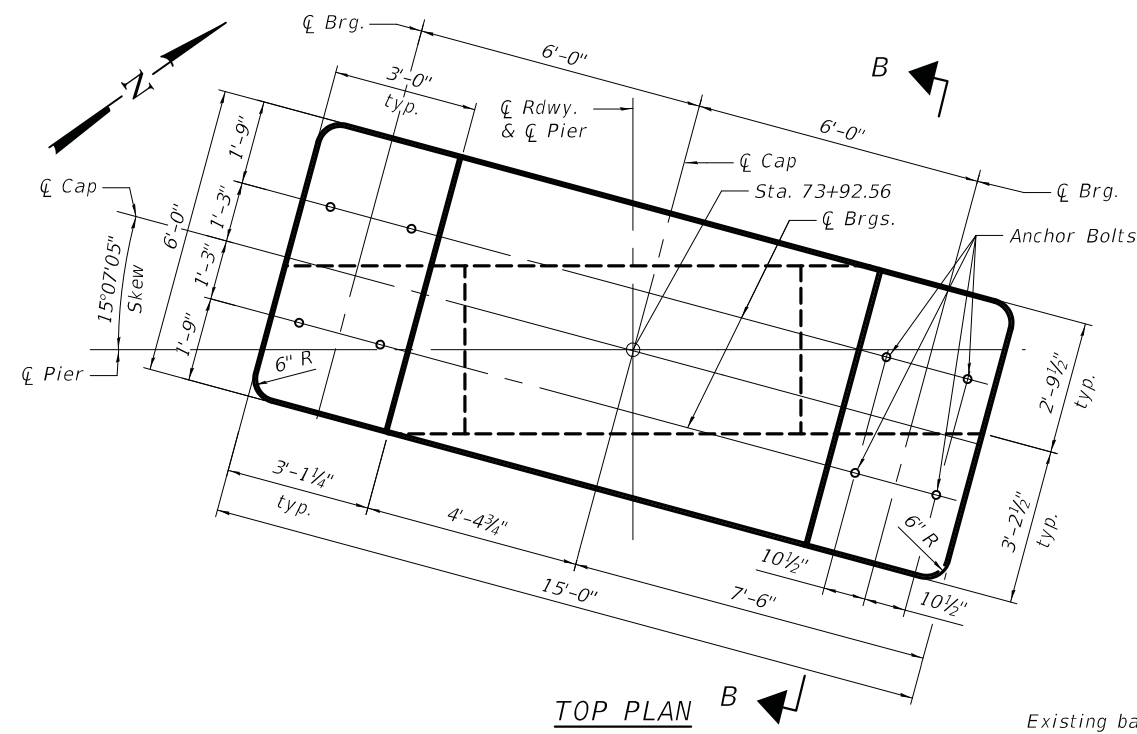
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER 15  
STRUCTURE NO. 016-2467**

SHEET SB-93 OF SB-104 SHEETS

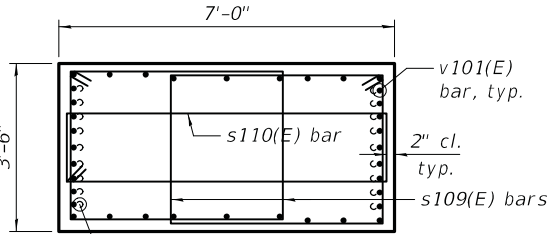
F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 280
CONTRACT NO. 62H49			ILLINOIS	





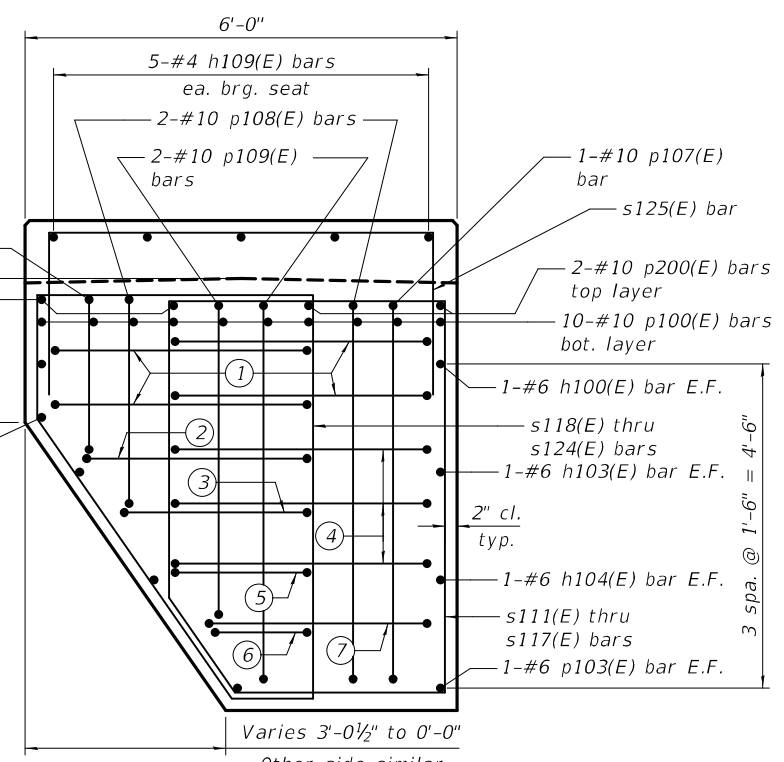
TOP PLAN

- ① 4-#9 u105(E) bars each end
- ② 1-#9 u106(E) bars each end
- ③ 1-#9 u107(E) bars each end
- ④ 3-#9 u105(E) bars each end
- ⑤ 1-#9 u108(E) bars each end
- ⑥ 1-#9 u109(E) bars each end
- ⑦ 1-#9 u110(E) bars each end

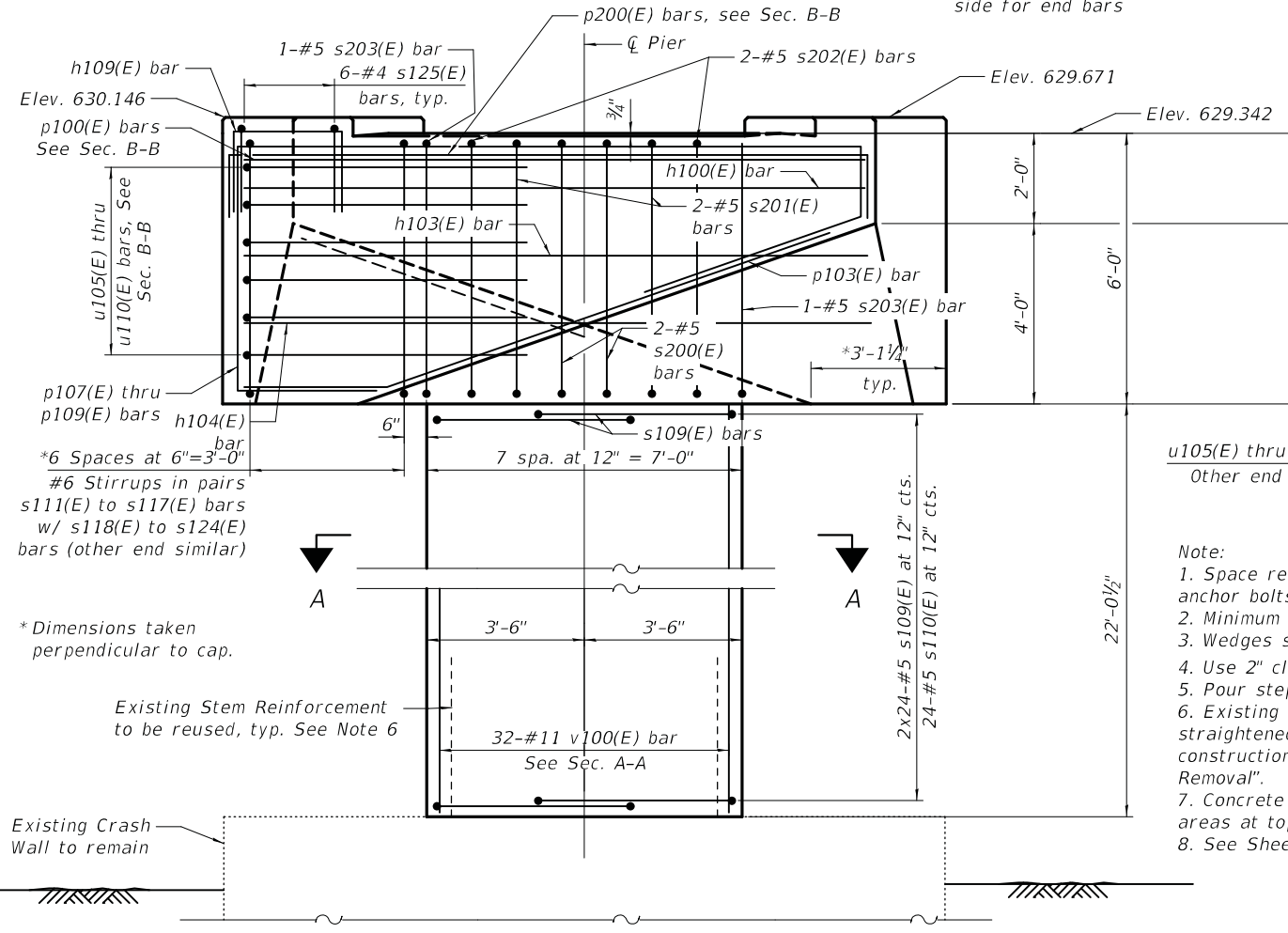


SECTION A-A

Existing bars shall be lapped inside rather than on the side for end bars



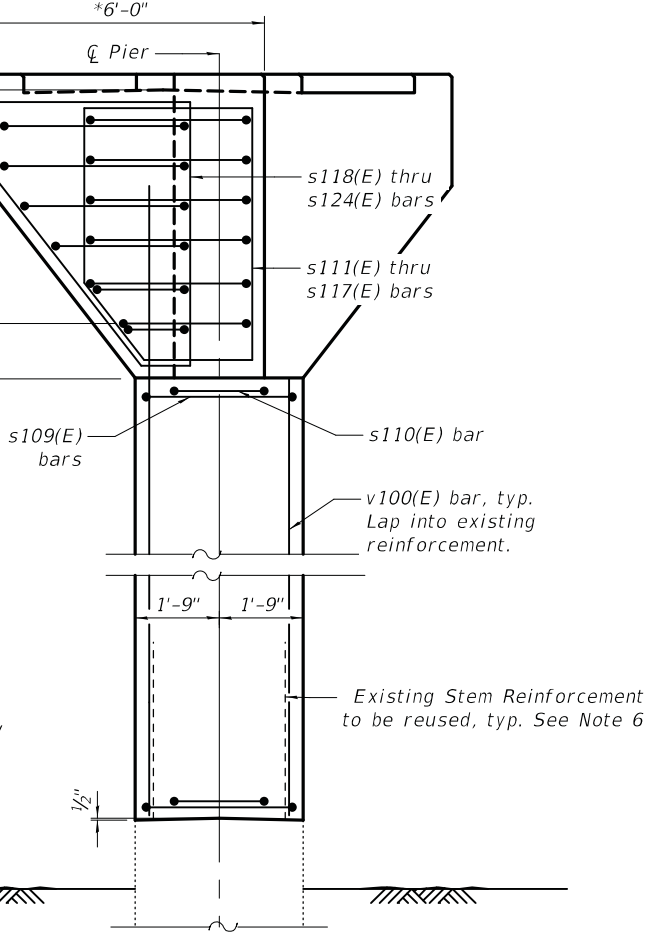
SECTION B-B



ELEVATION

u105(E) thru u110(E) bars in pairs  
Other end similar (see sec. B-B)

- Note:
1. Space reinforcement in Pier Cap to miss anchor bolts.
  2. Minimum bar lap = 24 x bar diameter.
  3. Wedges shall have std. 3/4" chamfers.
  4. Use 2" clear cover on all reinf.
  5. Pour steps monolithically with Pier Cap.
  6. Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  7. Concrete Sealer shall be applied to all areas at top of Pier Cap.
  8. See Sheet SB-97 for bar bend diagrams.

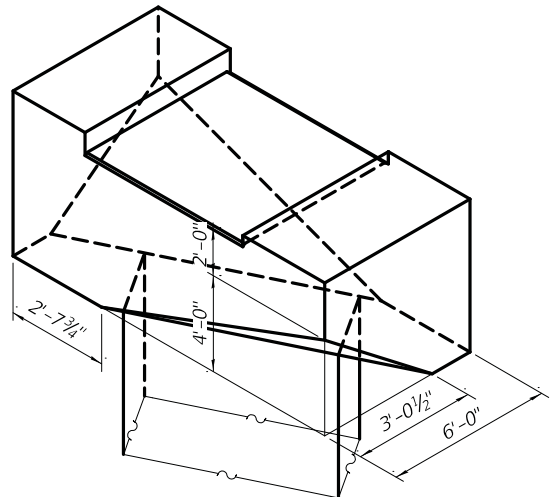


END VIEW

See Section B-B for pier cap reinforcement information

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	2	#6	14'-6"	
h103(E)	2	#6	14'-7"	
h104(E)	2	#6	14'-9"	
h109(E)	12	#4	7'-0"	
h110(E)	2	#6	12'-0"	
p100(E)	10	#10	14'-6"	
p103(E)	2	#6	14'-10"	
p107(E)	2	#10	30'-10"	
p108(E)	2	#10	31'-7"	
p109(E)	2	#10	33'-0"	
p200(E)	4	#10	17'-10"	
s109(E)	46	#5	16'-0"	
s110(E)	23	#5	18'-4"	
s111(E)	2	#6	20'-4"	
s112(E)	2	#6	20'-4"	
s113(E)	2	#6	20'-6"	
s114(E)	2	#6	20'-6"	
s115(E)	2	#6	20'-8"	
s116(E)	2	#6	20'-9"	
s117(E)	2	#6	20'-9"	
s118(E)	2	#6	19'-3"	
s119(E)	2	#6	19'-8"	
s120(E)	2	#6	20'-1"	
s121(E)	2	#6	20'-7"	
s122(E)	2	#6	20'-11"	
s123(E)	2	#6	21'-4"	
s124(E)	2	#6	21'-9"	
s125(E)	12	#4	9'-10"	
s200(E)	2	#5	22'-2"	
s201(E)	2	#5	22'-2"	
s202(E)	2	#5	22'-2"	
s203(E)	2	#5	22'-2"	
u105(E)	14	#9	16'-6"	
u106(E)	2	#9	16'-0"	
u107(E)	2	#9	15'-5"	
u108(E)	2	#9	14'-9"	
u109(E)	2	#9	14'-3"	
u110(E)	2	#9	15'-10"	
v101(E)	32	#11	26'-0"	
Concrete Structures		Cu. Yd.	40.1	
Reinforcement Bars, Epoxy Coated		Pound	10,080	
Concrete Sealer		Sq. Ft.	97	



PIER CAP ISOMETRIC



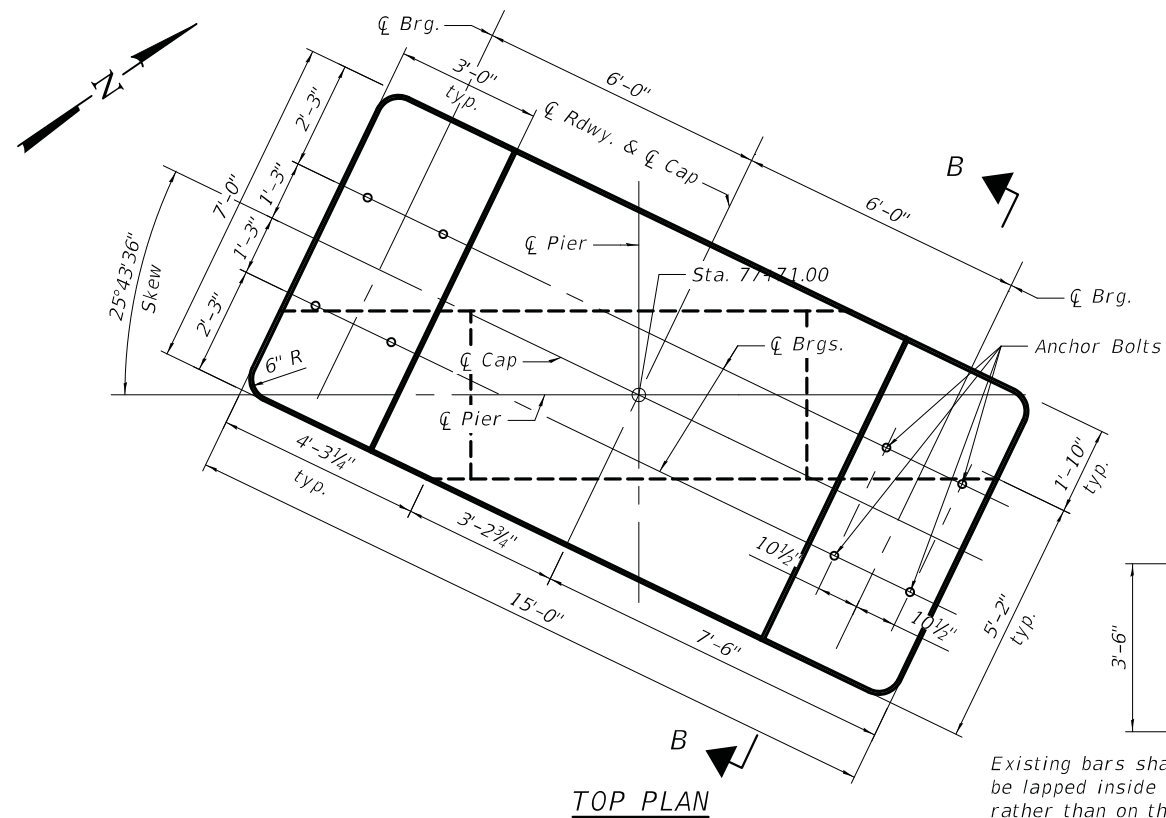
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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PIER 21  
STRUCTURE NO. 016-2467

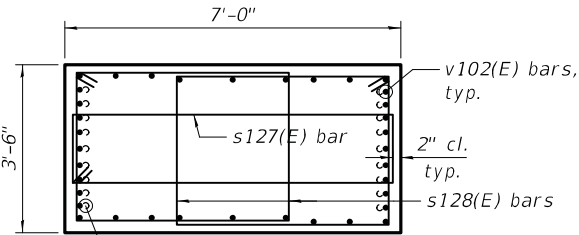
SHEET SB-94 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 281
CONTRACT NO. 62H49			ILLINOIS	

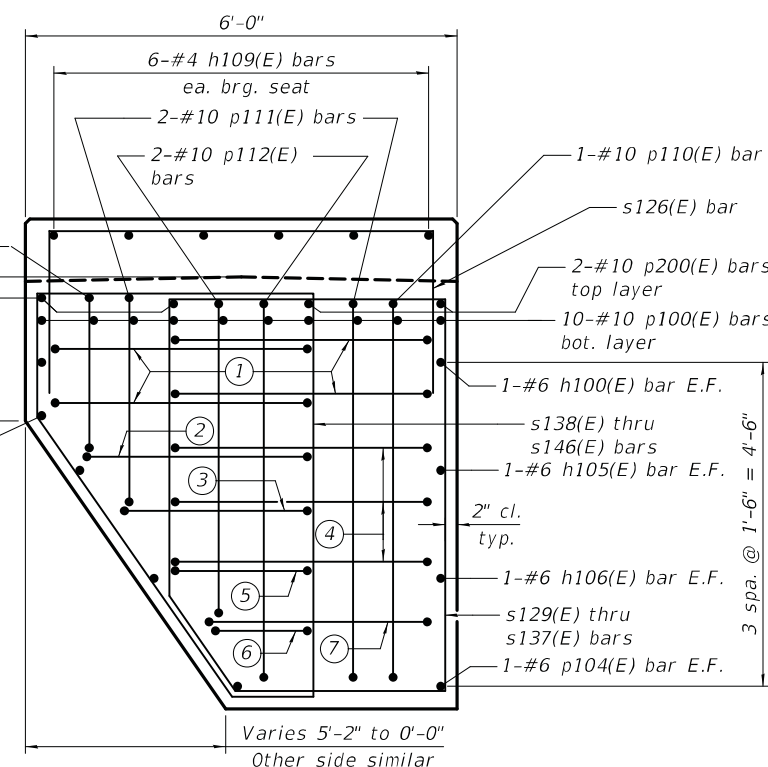


TOP PLAN

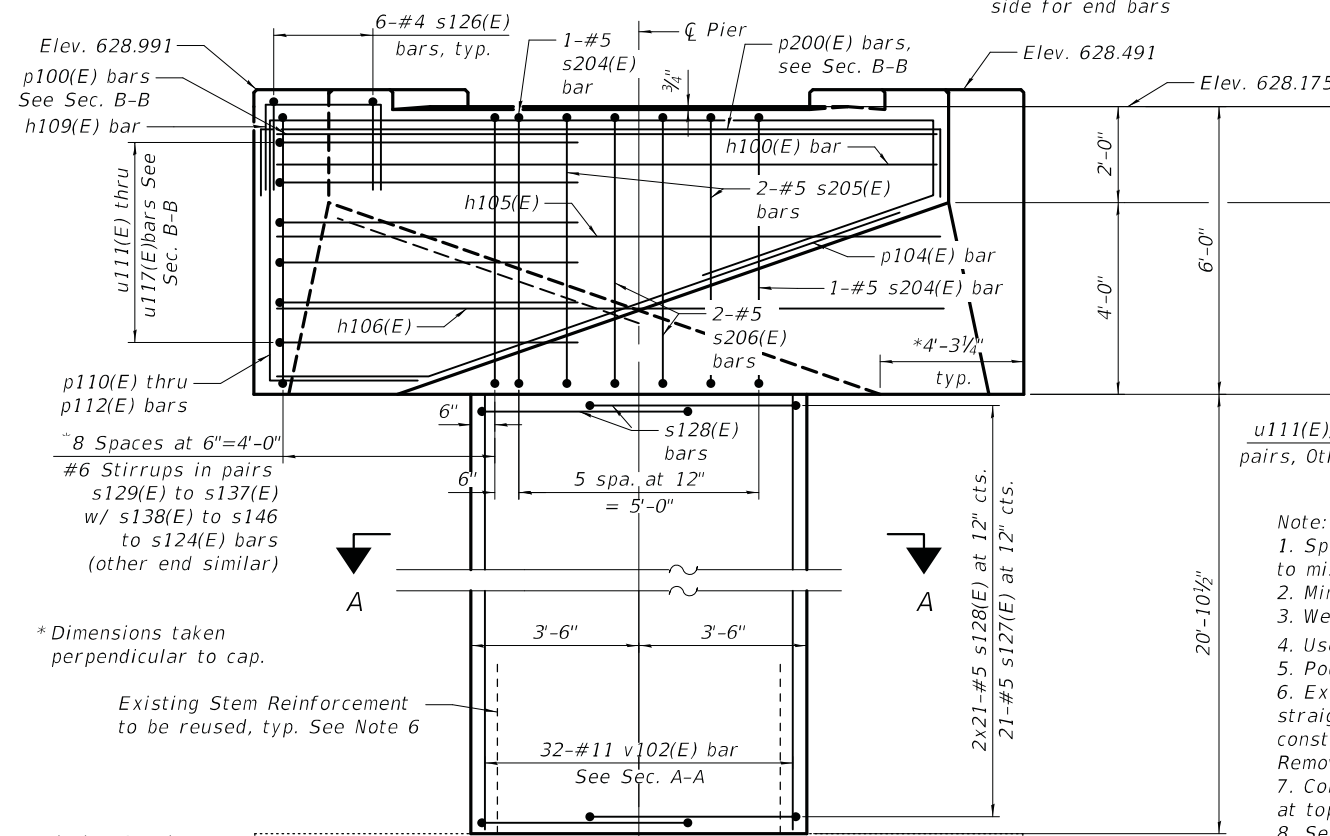
- ① 6-#9 u111(E) bars each end
- ② 1-#9 u112(E) bars each end
- ③ 1-#9 u113(E) bars each end
- ④ 1-#9 u114(E) bars each end
- ⑤ 1-#9 u115(E) bars each end
- ⑥ 1-#9 u116(E) bars each end
- ⑦ 1-#9 u117(E) bars each end



SECTION A-A



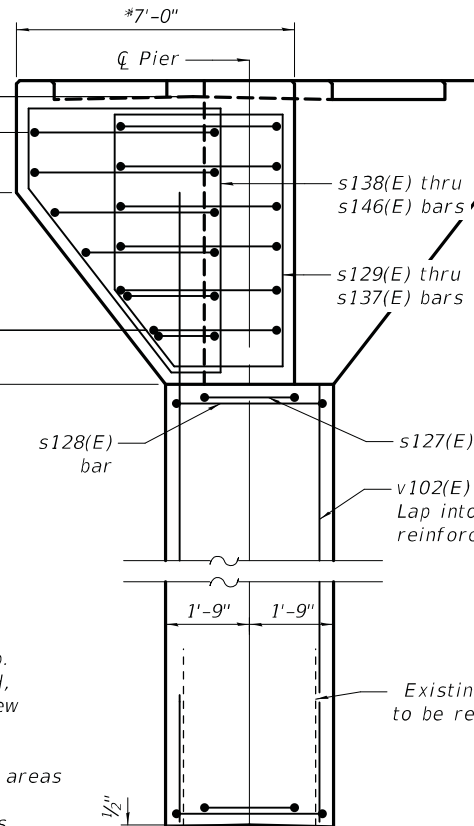
SECTION B-B



ELEVATION

u111(E), u112(E) thru u117(E) bars in pairs, Other end similar (see sec. B-B)

- Note:
1. Space reinforcement in Pier Cap to miss anchor bolts.
  2. Minimum bar lap = 24 x bar diameter.
  3. Wedges shall have std. 3/4" chamfers.
  4. Use 2" clear cover on all reinf.
  5. Pour steps monolithically with Pier Cap.
  6. Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  7. Concrete Sealer shall be applied to all areas at top of Pier Cap.
  8. See Sheet SB-97 for bar bend diagrams.

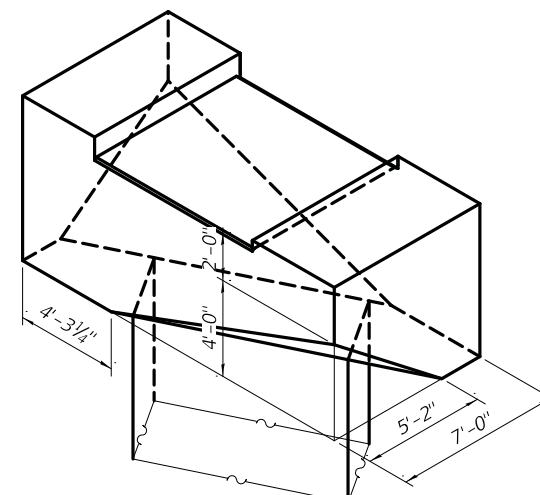


END VIEW

See Section B-B for pier cap reinforcement information

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	2	#6	14'-6"	
h105(E)	2	#6	14'-10"	
h106(E)	2	#6	15'-3"	
h109(E)	12	#4	7'-0"	
h110(E)	2	#6	12'-0"	
p100(E)	10	#10	14'-6"	
p104(E)	2	#6	15'-7"	
p110(E)	2	#10	30'-7"	
p111(E)	2	#10	31'-1"	
p112(E)	2	#10	31'-9"	
p200(E)	4	#10	17'-10"	
s126(E)	12	#4	10'-10"	
s127(E)	21	#5	17'-2"	
s128(E)	42	#5	16'-4"	
s129(E)	2	#6	21'-0"	
s130(E)	2	#6	21'-1"	
s131(E)	2	#6	21'-2"	
s132(E)	2	#6	21'-4"	
s133(E)	2	#6	21'-6"	
s134(E)	2	#6	21'-7"	
s135(E)	2	#6	21'-9"	
s136(E)	2	#6	21'-10"	
s137(E)	2	#6	22'-0"	
s138(E)	2	#6	19'-10"	
s139(E)	2	#6	20'-2"	
s140(E)	2	#6	20'-3"	
s141(E)	2	#6	20'-4"	
s142(E)	2	#6	20'-5"	
s143(E)	2	#6	20'-7"	
s144(E)	2	#6	20'-9"	
s145(E)	2	#6	20'-11"	
s146(E)	2	#6	21'-0"	
s204(E)	2	#5	24'-2"	
s205(E)	2	#5	24'-2"	
s206(E)	2	#5	24'-2"	
u111(E)	12	#9	18'-3"	
u112(E)	2	#9	17'-8"	
u113(E)	2	#9	16'-11"	
u114(E)	2	#9	16'-3"	
u115(E)	2	#9	15'-4"	
u116(E)	2	#9	17'-8"	
u117(E)	2	#9	17'-0"	
v102(E)	50	#11	24'-10"	
Concrete Structures			Cu. Yd.	41.6
Reinforcement Bars, Epoxy Coated			Pound	12,500
Concrete Sealer			Sq. Ft.	113



PIER CAP ISOMETRIC



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

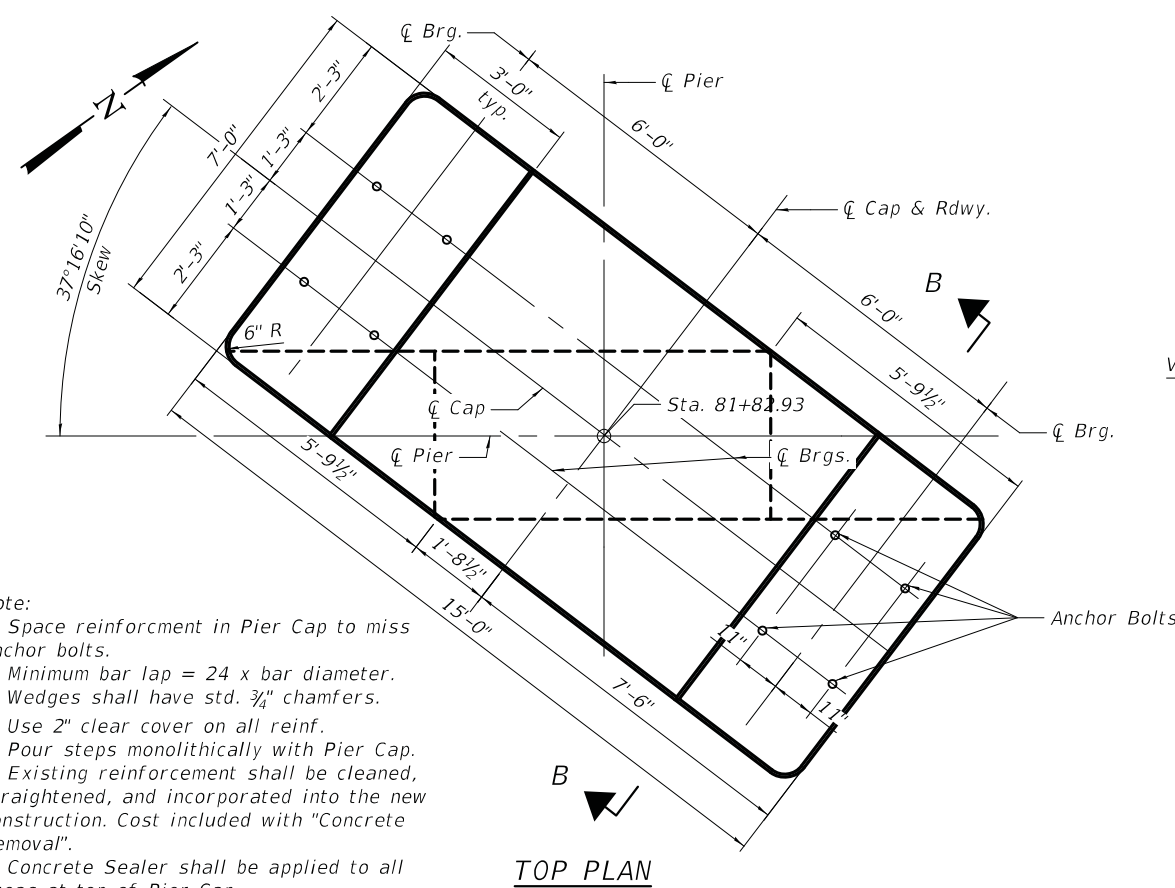
PIER 25  
STRUCTURE NO. 016-2467

SHEET SB-95 OF SB-104 SHEETS

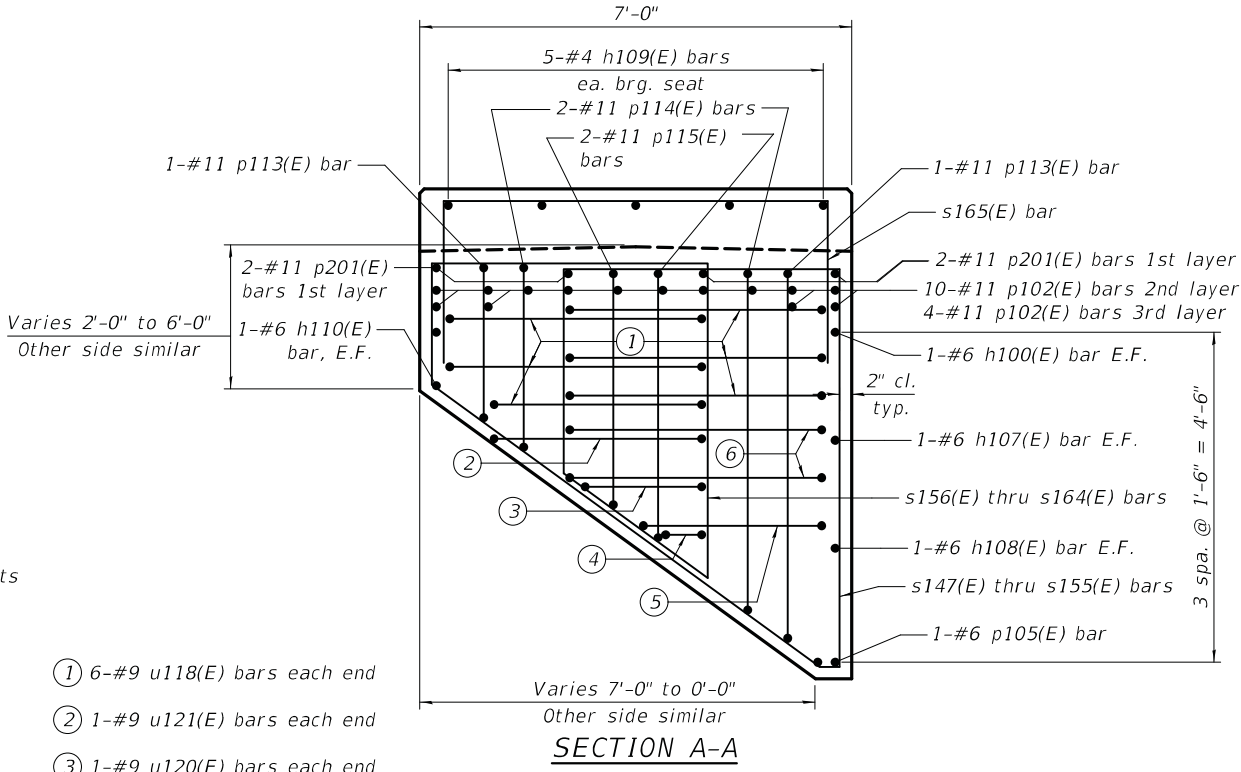
F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 282
CONTRACT NO. 62H49			ILLINOIS	

**BILL OF MATERIAL**

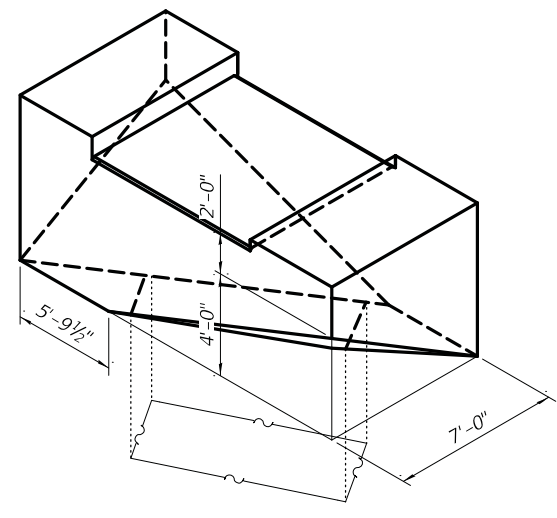
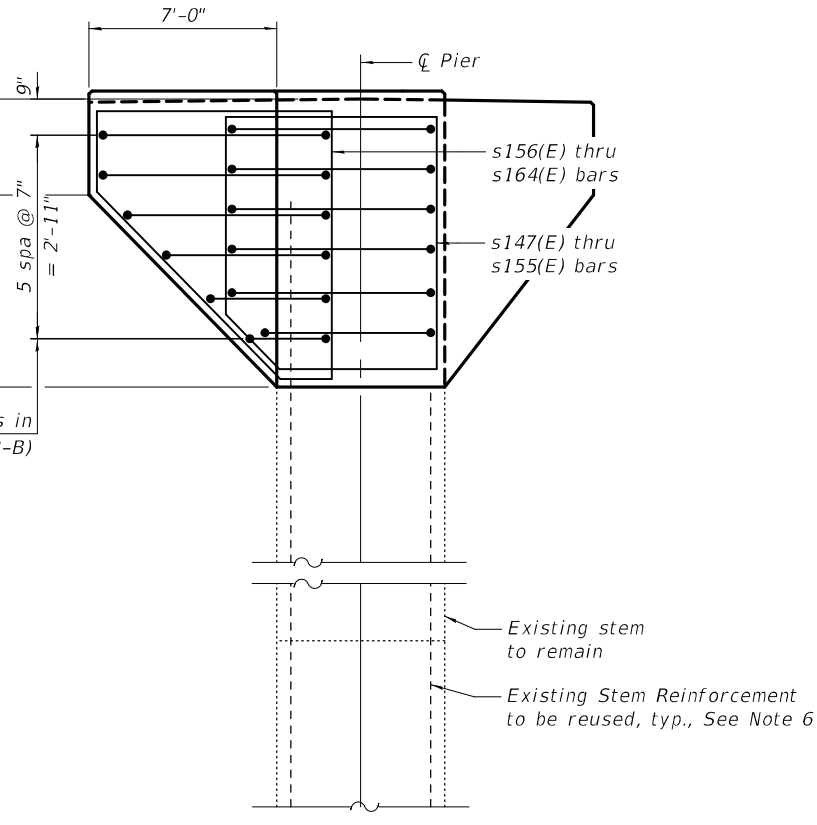
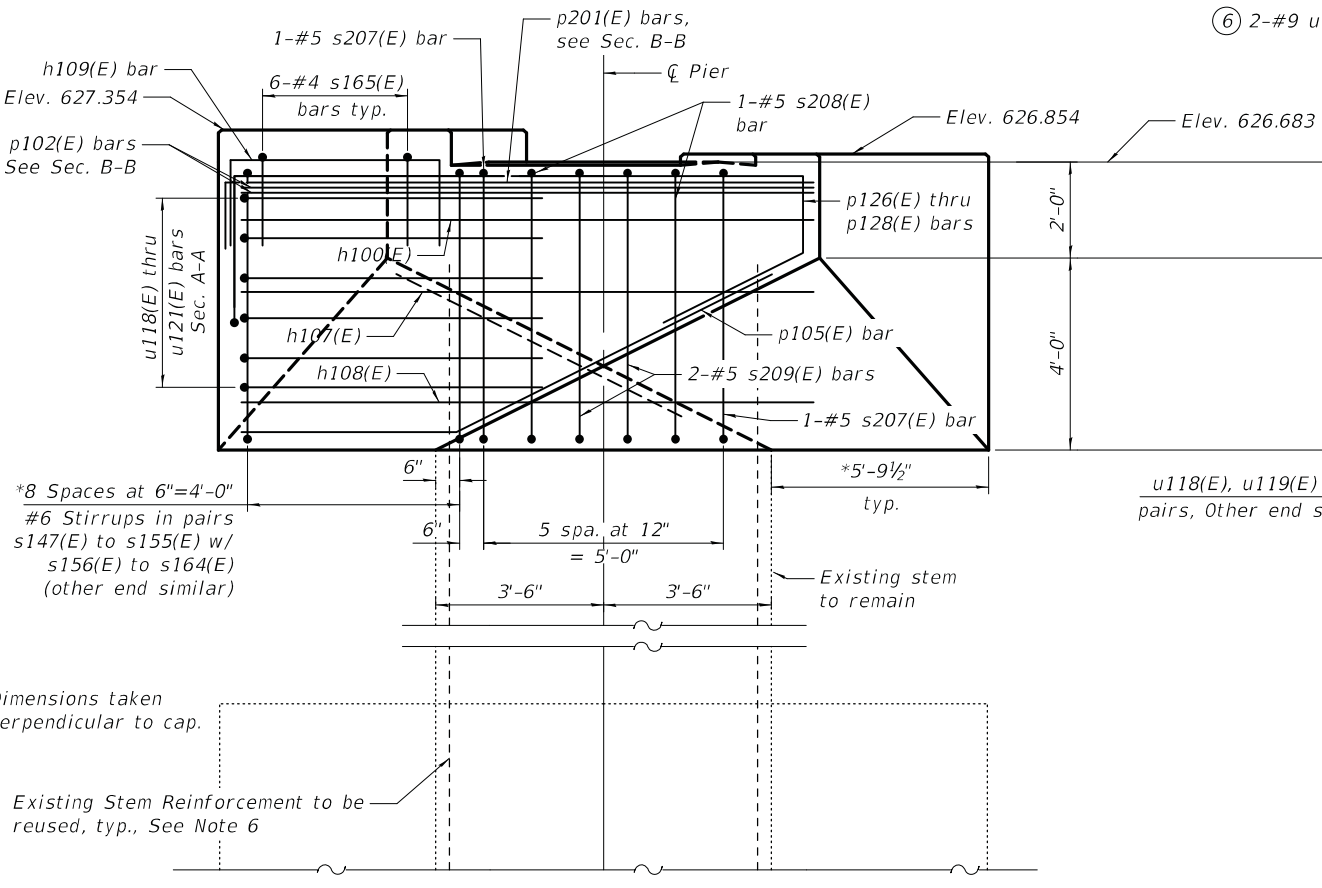
Bar	No.	Size	Length	Shape
h100(E)	2	#6	14'-6"	
h107(E)	2	#6	15'-1"	
h108(E)	2	#6	15'-10"	
h109(E)	12	#4	7'-0"	
h110(E)	2	#6	12'-0"	
p102(E)	14	#11	14'-6"	
p105(E)	2	#6	16'-6"	
p113(E)	2	#11	29'-10"	
p114(E)	2	#11	29'-10"	
p115(E)	2	#11	30'-2"	
p201(E)	4	#11	17'-10"	
s147(E)	2	#6	20'-6"	
s148(E)	2	#6	20'-8"	
s149(E)	2	#6	17'-4"	
s150(E)	2	#6	21'-0"	
s151(E)	2	#6	21'-2"	
s152(E)	2	#6	21'-4"	
s153(E)	2	#6	21'-6"	
s154(E)	2	#6	21'-8"	
s155(E)	2	#6	21'-9"	
s156(E)	2	#6	18'-2"	
s157(E)	2	#6	18'-7"	
s158(E)	2	#6	19'-0"	
s159(E)	2	#6	19'-5"	
s160(E)	2	#6	19'-10"	
s161(E)	2	#6	20'-3"	
s162(E)	2	#6	20'-7"	
s163(E)	2	#6	20'-7"	
s164(E)	2	#6	20'-10"	
s165(E)	12	#4	10'-10"	
s207(E)	2	#5	24'-4"	
s208(E)	2	#5	24'-7"	
s209(E)	2	#5	24'-8"	
u118(E)	16	#9	19'-3"	
u119(E)	2	#9	17'-5"	
u120(E)	2	#9	18'-0"	
u121(E)	4	#9	18'-9"	
Concrete Structures	Cu. Yd.		21.9	
Reinforcement Bars, Epoxy Coated	Pound		5,570	
Concrete Sealer	Sq. Ft.		111	



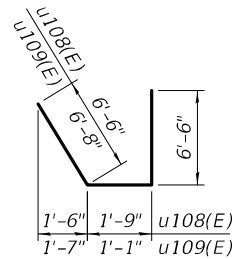
- Note:
1. Space reinforcement in Pier Cap to miss anchor bolts.
  2. Minimum bar lap = 24 x bar diameter.
  3. Wedges shall have std. 3/4" chamfers.
  4. Use 2" clear cover on all reinf.
  5. Pour steps monolithically with Pier Cap.
  6. Existing reinforcement shall be cleaned, straightened, and incorporated into the new construction. Cost included with "Concrete Removal".
  7. Concrete Sealer shall be applied to all areas at top of Pier Cap.
  8. See Sheet SB-97 for bar bend diagrams.



- ① 6-#9 u118(E) bars each end
- ② 1-#9 u121(E) bars each end
- ③ 1-#9 u120(E) bars each end
- ④ 1-#9 u119(E) bars each end
- ⑤ 1-#9 u121(E) bars each end
- ⑥ 2-#9 u118(E) bars each end



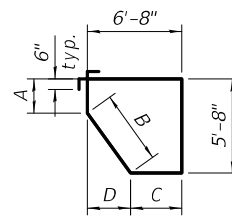




**BARS u108(E) & u109(E)**

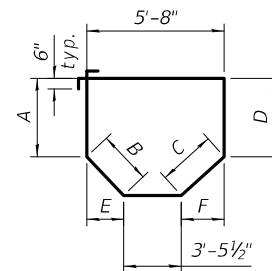
**BARS s204(E), s207(E) & s208(E)**

Bar	A	B	C	D
s204(E)	3'-6"	3'-6½"	3'-10½"	2'-9½"
s207(E)	3'-10"	3'-9"	3'-5"	3'-3"
s208(E)	4'-2½"	2'-10½"	4'-2"	2'-6"



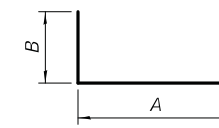
**BARS s200(E) thru s203(E)**

Bar	A	B	C	D	E	F
s200(E)	3'-1"	3'-3"	0'-5"	5'-4"	1'-11½"	0'-3"
s201(E)	3'-5"	2'-10"	0'-10"	5'-0"	1'-8¾"	0'-6"
s202(E)	3'-9"	2'-5"	1'-3"	4'-8"	1'-5½"	0'-9"
s203(E)	4'-1"	2'-0"	1'-8"	4'-4"	1'-2¾"	1'-0"



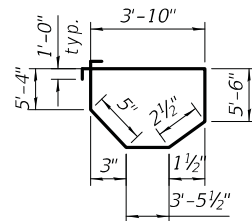
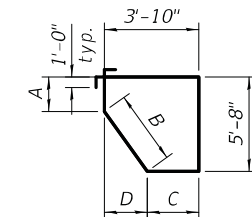
**BARS p201(E), s126(E), s165(E), u105(E), u111(E) & u118(E)**

Bar	A	B
p201(E)	14'-6"	1'-8"
s126(E)	6'-4"	2'-3"
s165(E)	6'-4"	1'-9"
u105(E)	3'-6"	6'-6"
u111(E)	4'-3"	7'-0"
u118(E)	4'-3"	7'-6"

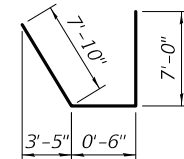


**BARS s111(E) thru s116(E) & s118(E) thru s124(E)**

Bar	A	B	C	D
s111(E)	4'-3"	1'-9½"	2'-9½"	1'-0½"
s112(E)	4'-5"	1'-6"	2'-11"	0'-11"
s113(E)	4'-7"	1'-4"	3'-1"	0'-9"
s114(E)	4'-9"	1'-1½"	3'-1½"	0'-8½"
s115(E)	4'-11"	0'-11"	3'-4"	0'-6"
s116(E)	5'-1"	0'-9"	3'-5"	0'-5"
s118(E)	1'-11"	4'-8"	1'-0"	2'-10"
s119(E)	2'-1"	4'-5½"	1'-1½"	2'-8½"
s120(E)	2'-3"	4'-3"	1'-3"	2'-7"
s121(E)	2'-5"	4'-1"	1'-5"	2'-5"
s122(E)	2'-7"	3'-10"	1'-6"	2'-4"
s123(E)	2'-9"	3'-7½"	1'-7½"	2'-2½"
s124(E)	2'-11"	3'-5"	1'-9"	2'-1"



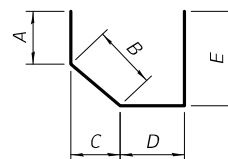
**BAR s117(E)**



**BAR u115(E)**

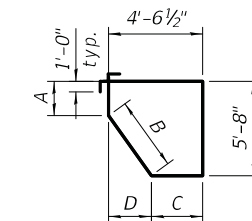
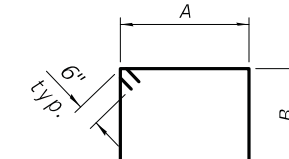
**BARS u106(E), u107(E), u112(E) thru u114(E), u116(E) & u119(E) thru u121(E)**

Bar	A	B	C	D	E
u106(E)	5'-5"	1'-1"	0'-3"	3'-0"	6'-6"
u107(E)	2'-8"	3'-11"	0'-11"	2'-4"	6'-6"
u112(E)	5'-6"	1'-8"	0'-9"	3'-6"	7'-0"
u113(E)	3'-6"	3'-10"	1'-8"	2'-7"	7'-0"
u114(E)	1'-6"	5'-1"	2'-7"	1'-8"	7'-0"
u116(E)	5'-8"	1'-5"	0'-5"	2'-7"	7'-0"
u119(E)	3'-9"	4'-9"	2'-10"	1'-5"	7'-6"
u120(E)	5'-1"	3'-0"	1'-10"	2'-5"	7'-6"
u121(E)	6'-5"	1'-5"	0'-10"	3'-5"	7'-6"



**BARS s109(E), s110(E), s127(E), & s128(E)**

Bar	A	B
s109(E)	4'-4"	3'-2"
s110(E)	6'-8"	2'-0"
s127(E)	6'-8"	1'-5"
s128(E)	4'-6"	3'-2"



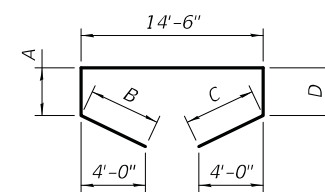
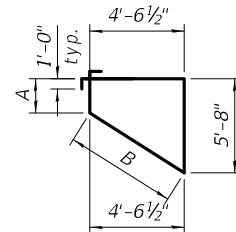
**BARS s129(E) thru s137(E), s140(E) thru s155(E), & s162(E) thru s164(E)**

**BARS p107(E) thru p111(E)**

Bar	A	B
p107(E)	2'-8"	4'-2"
p108(E)	3'-5"	4'-2"
p109(E)	5'-0"	4'-0"
p110(E)	2'-4"	4'-3"
p111(E)	2'-10"	4'-3"

**BARS s140(E), s147(E) & s162(E)**

Bar	A	B
s140(E)	2'-3½"	5'-8"
s147(E)	3'-1"	5'-2½"
s162(E)	3'-1½"	5'-3"

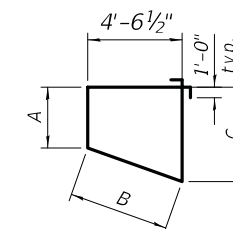
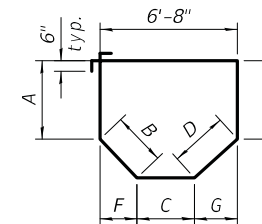


**BARS p112(E) thru p115(E)**

Bar	A	B	C	D
p112(E)	3'-11"	4'-3½"	4'-0"	5'-0"
p113(E)	2'-2"	4'-4½"	4'-0½"	4'-9"
p114(E)	2'-6"	4'-4"	4'-4½"	4'-4½"
p115(E)	3'-4"	4'-4½"	4'-4½"	3'-7"

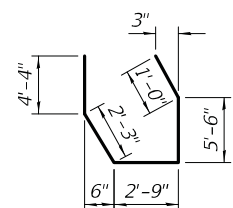
**BARS s205(E), s206(E) & s209(E)**

Bar	A	B	C	D	E	F	G
s205(E)	3'-10½"	2'-11"	3'-9"	0'-9"	5'-2½"	2'-3⅝"	0'-7"
s206(E)	4'-3"	2'-3½"	3'-9"	1'-4½"	4'-10"	1'-9⅝"	1'-1"
s209(E)	4'-8"	2'-0"	4'-3½"	0'-9"	5'-3½"	1'-8⅝"	0'-7⅝"

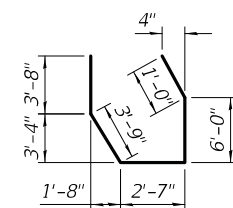


**BARS s139(E) & s156(E) thru s161(E)**

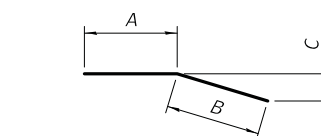
Bar	A	B	C
s138(E)	1'-11¼"	5'-9"	5'-7¼"
s139(E)	2'-1¼"	5'-9"	5'-9¼"
s156(E)	1'-10½"	5'-3"	4'-6"
s157(E)	2'-1"	5'-3"	4'-8½"
s158(E)	2'-3½"	5'-3"	4'-11"
s159(E)	2'-6"	5'-3"	5'-1½"
s160(E)	2'-8½"	5'-3"	5'-4"
s161(E)	2'-11½"	5'-3"	5'-6"



**BAR u110(E)**

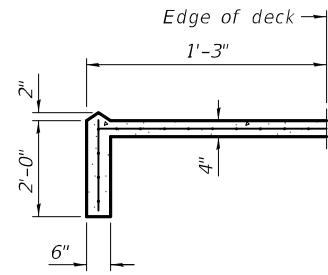


**BAR u117(E)**

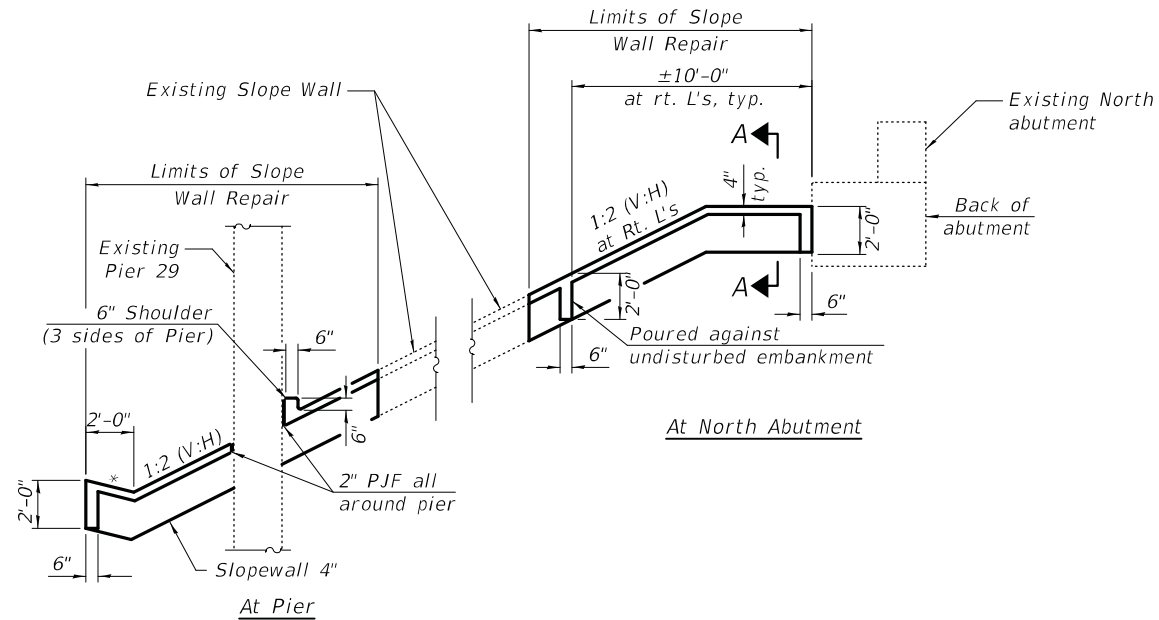


**BARS h103(E) thru h108(E) & p103(E) thru p105(E)**

Bar	A	B	C
h103(E)	11'-4"	3'-3"	0'-10"
h104(E)	7'-3"	7'-6"	1'-10"
h105(E)	11'-6"	3'-4"	1'-6"
h106(E)	7'-9"	7'-6"	3'-3"
h107(E)	11'-8"	3'-5"	0'-2"
h108(E)	8'-8"	7'-2"	0'-4"
p103(E)	2'-7"	12'-3"	2'-11"
p104(E)	4'-3"	11'-4"	4'-11"
p105(E)	5'-6"	11'-0"	6'-8"



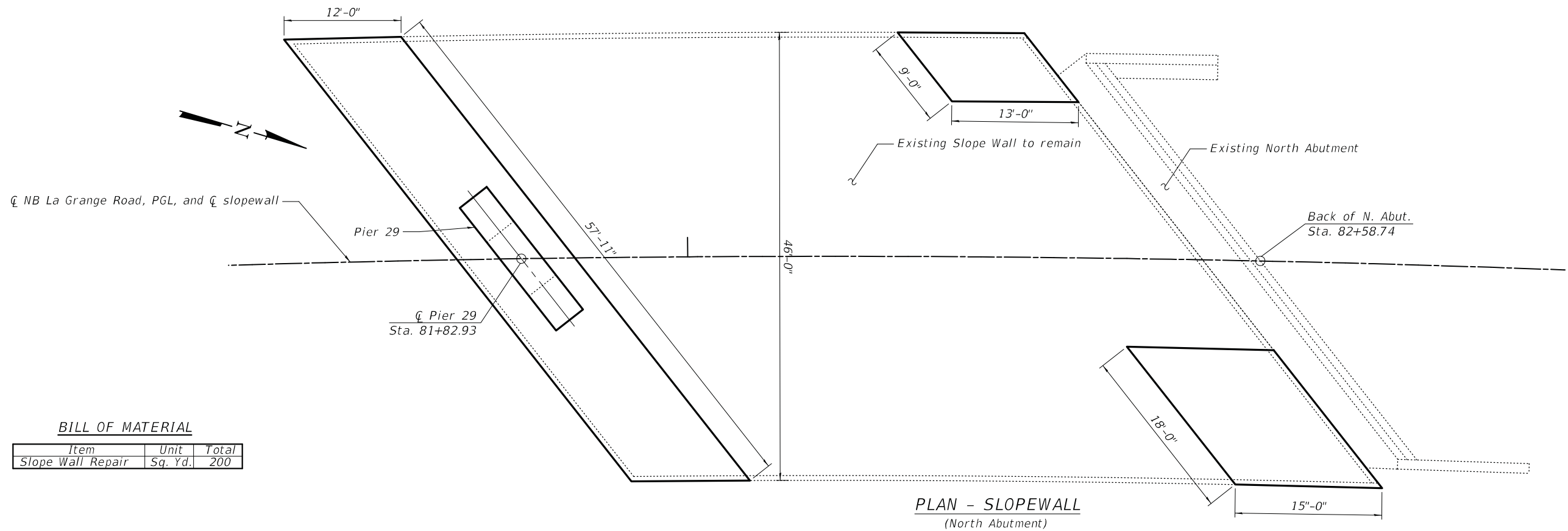
SECTION A-A



SECTION THRU  
CONCRETE SLOPEWALL  
\*1:4 (V:H)

Notes:

1. Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
2. Repairs shall include, but not be limited to the areas shown. The actual areas of repair shall be determined by the Engineer at the time of construction. The quantities shown are for estimating purposes only. Actual repair locations shall be shown on the as-built plans.
3. Slope wall repair area shall be rectangular in shape. The cost of welded wire fabric, dowel bars, supports, saw cuts, and all labor, equipment, and material for slope wall repair are included in the cost of Slope Wall Repair measured in place in square yards.



BILL OF MATERIAL

Item	Unit	Total
Slope Wall Repair	Sq. Yd.	200



USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
	CHECKED - G. HATLESTAD	REVISED -
PLOT SCALE = N/A	DRAWN - E. VAYSMAN	REVISED -
PLOT DATE = 10/21/2021	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

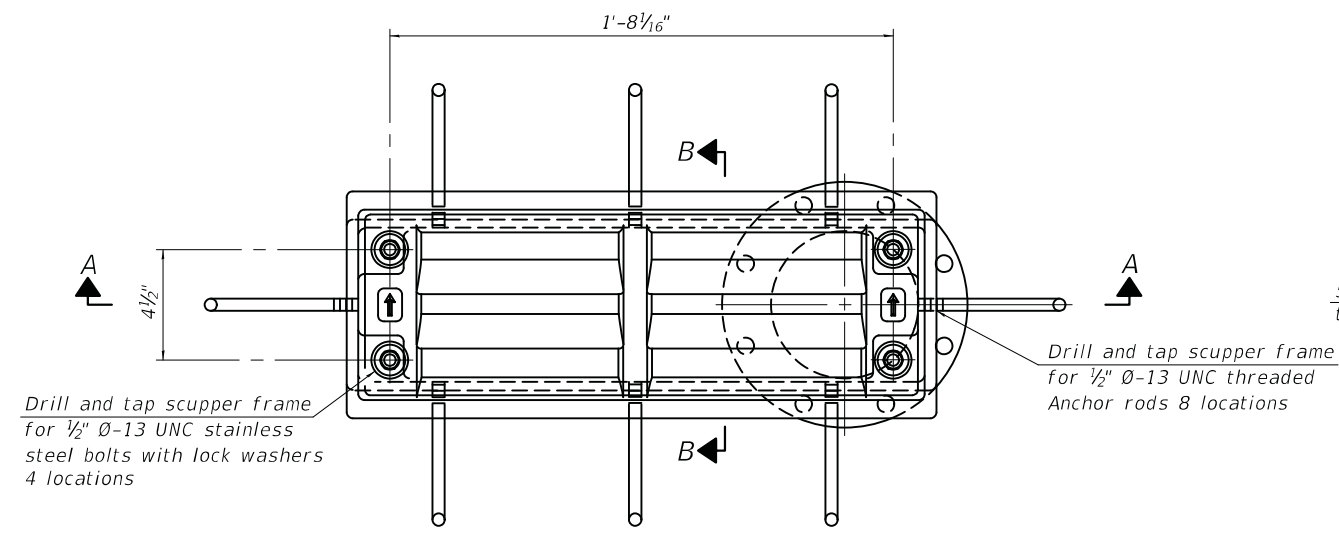
SLOPE WALL REPAIR  
STRUCTURE NO. 016-2467

SHEET SB-98 OF SB-104 SHEETS

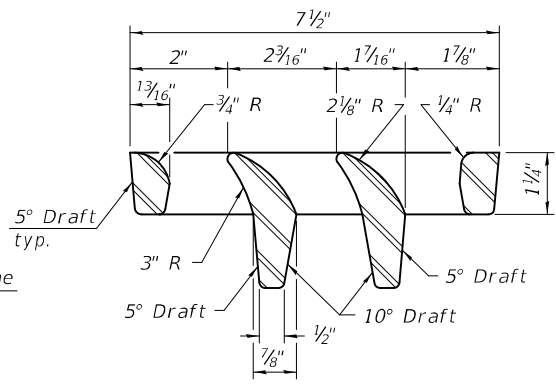
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	285
ILLINOIS			CONTRACT NO. 62H49	



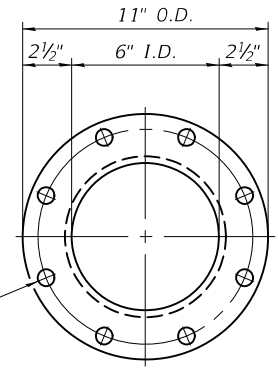
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PLAN



VANE GRATE DETAIL



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.

Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.

Stainless steel hardware shall be 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 frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

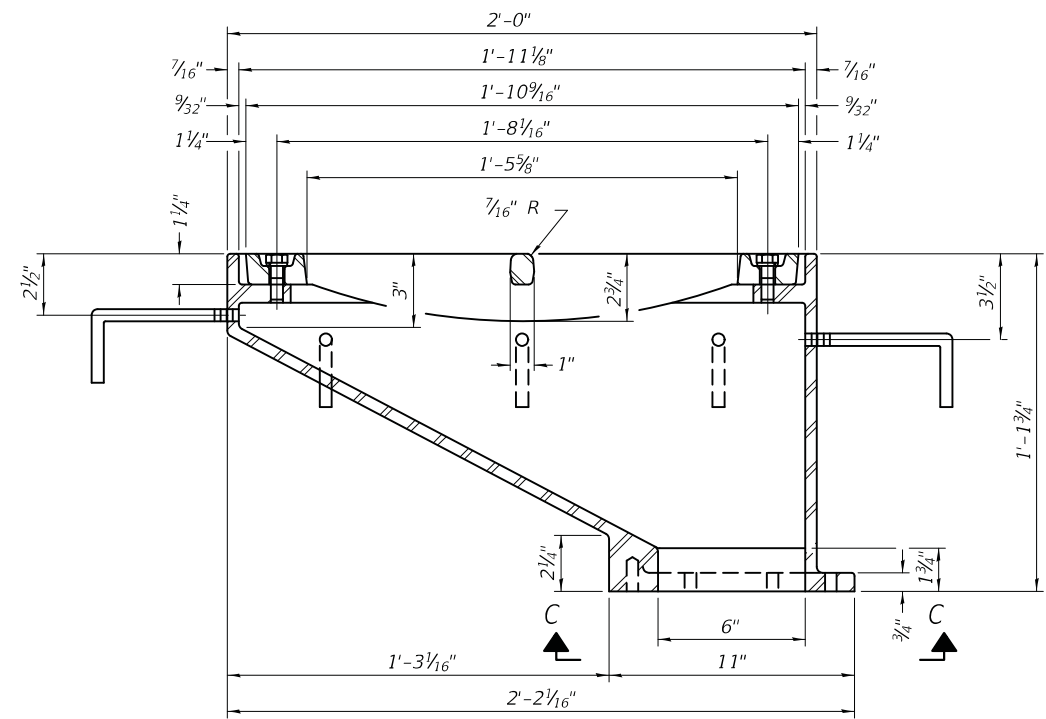
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.

As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.

Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be treated as specified in Note 13 on sheet SB-100.

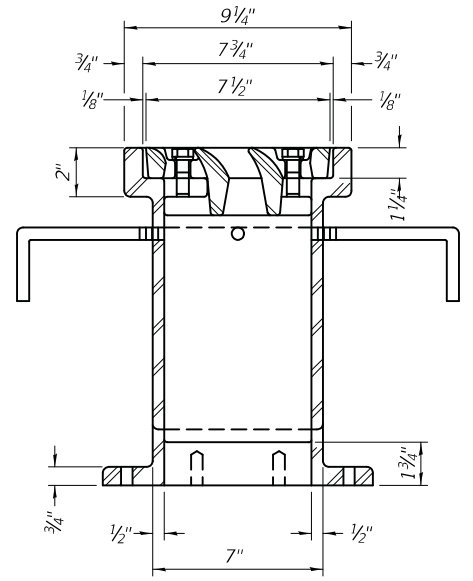
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper, DS-12.

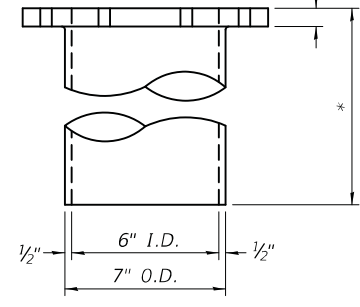


SECTION A-A

See sheets SB-35, SB-37, SB-39, SB-40, SB-42, SB-44, SB-46, SB-48, SB-51 and SB-54 for scupper location relative to parapet.

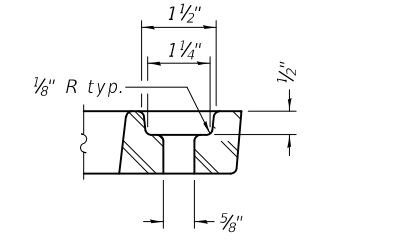


SECTION B-B

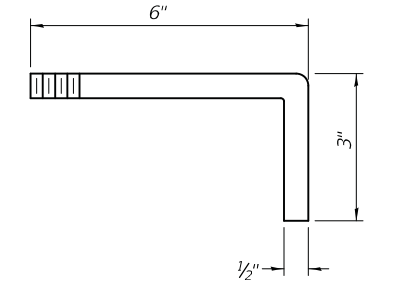


DOWNSPOUT

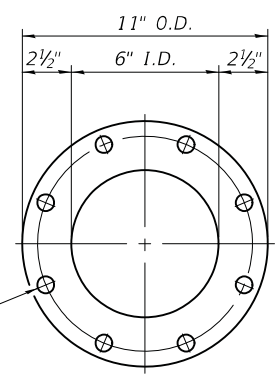
\* 4'-4" at Piers 1, 2 and 3 only  
 Work with Drainage System Details sheets SB-100 and SB-101



GRATE BOLT HOLE DETAIL



ANCHOR ROD DETAIL



VIEW C-C

BILL OF MATERIAL

Item	Unit	Quantity
Drainage Scupper, DS-12	Each	61



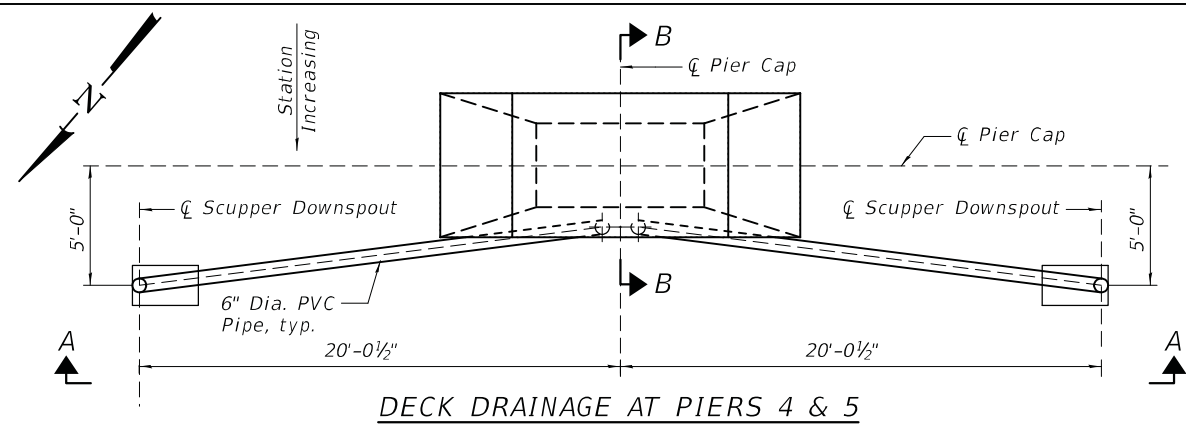
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PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

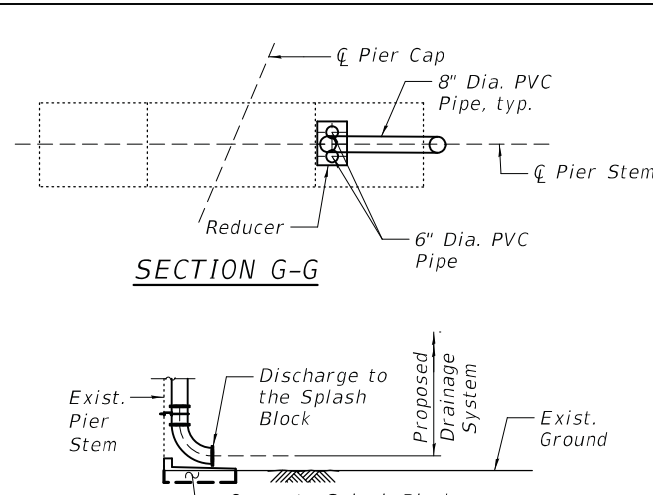
DRAINAGE SCUPPER, DS-12  
 STRUCTURE NO. 016-2467

SHEET SB-99 OF SB-104 SHEETS

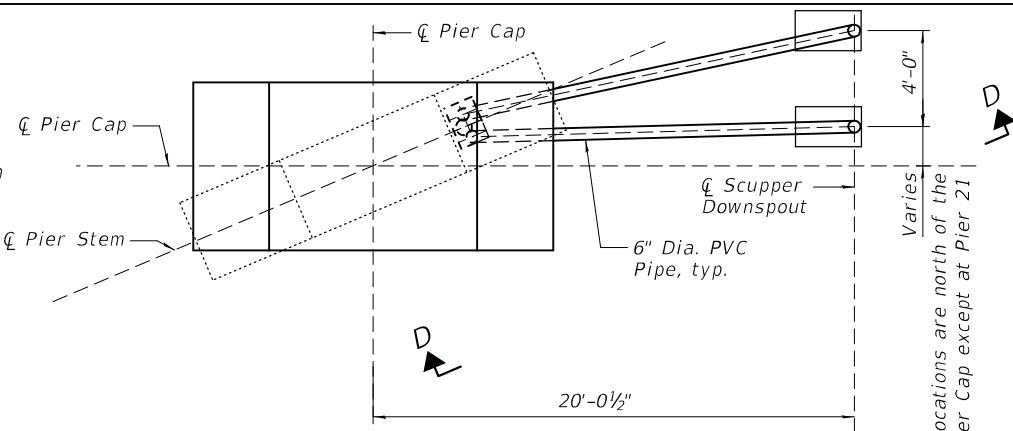
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	286
ILLINOIS			CONTRACT NO. 62H49	



DECK DRAINAGE AT PIERS 4 & 5

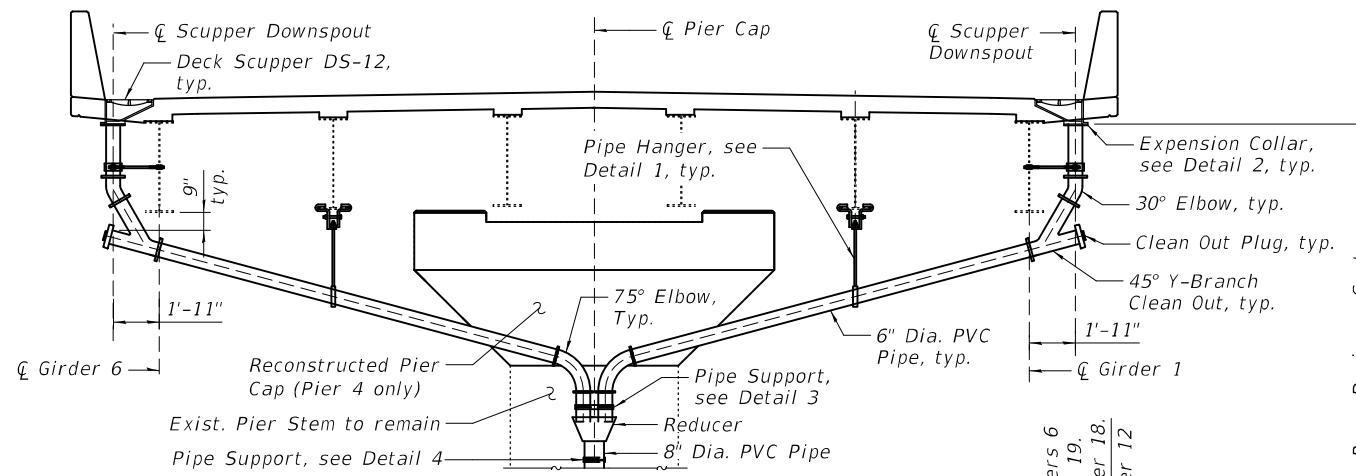


SECTION G-G

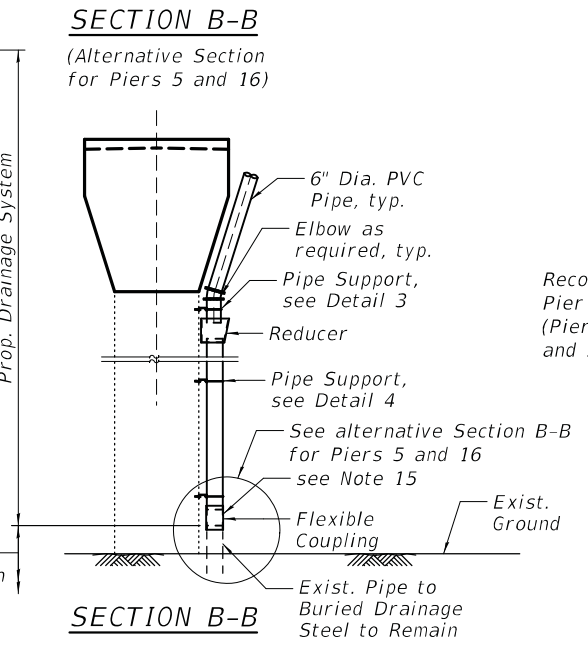


DECK DRAINAGE AT PIERS 20 THRU 29

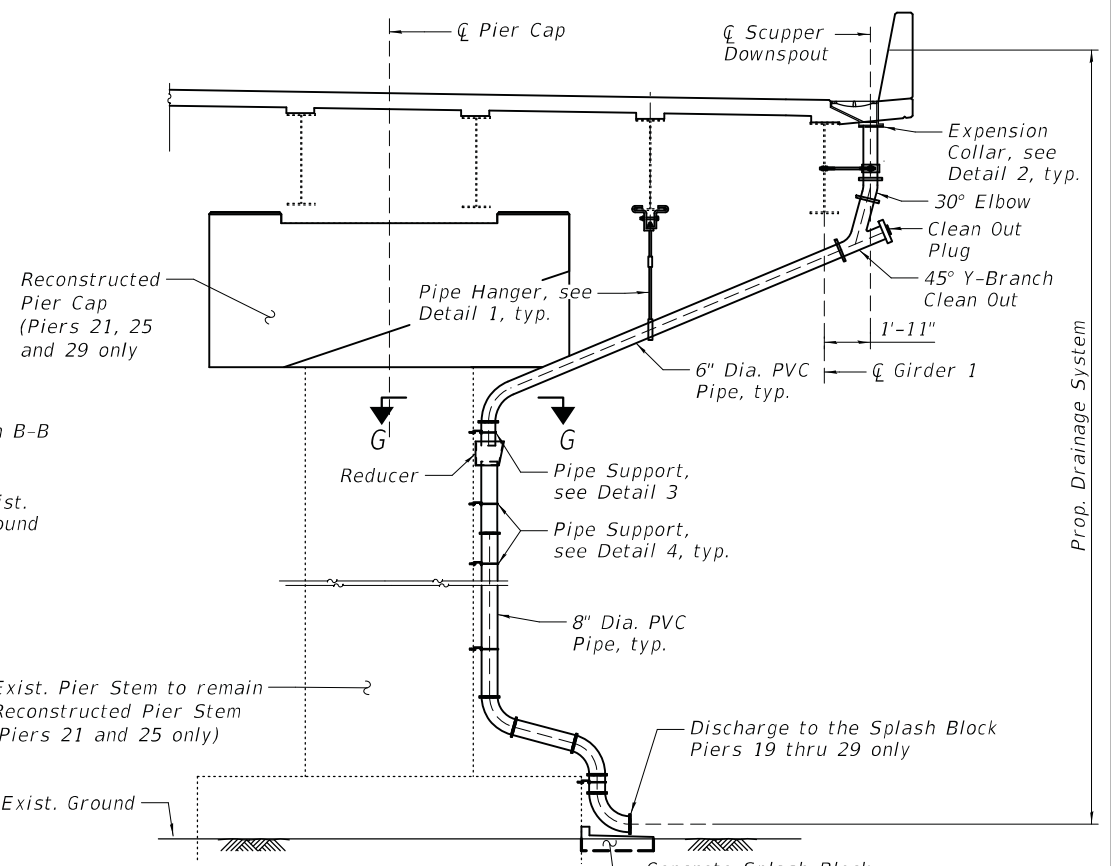
All locations are north of the Pier Cap except at Pier 21



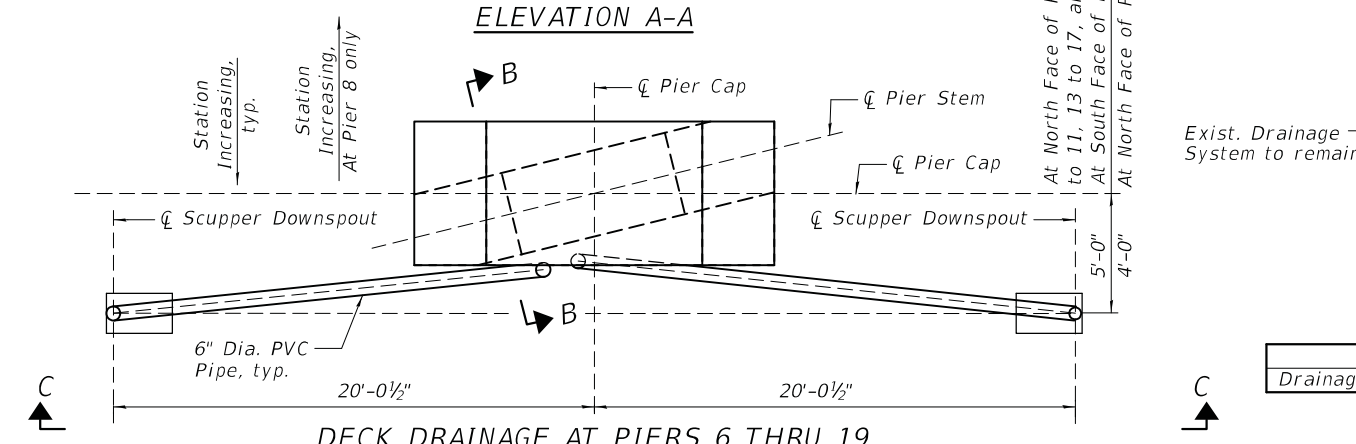
ELEVATION A-A



SECTION B-B (Alternative Section for Piers 5 and 16)



ELEVATION D-D



DECK DRAINAGE AT PIERS 6 THRU 19

BILL OF MATERIAL

Item	Unit	Total
Drainage System	L. Sum	1

Notes:

- See Superstructure Units plans sheets SB-33 thru SB-55 for drainage scupper location and spacing.
- See sheet SB-99 for Drainage Scupper details.
- See sheet SB-101 for Details 1 and 2.
- See sheet SB-102 for Details 3 and 4.
- Bolt pattern and size in drain pipe flange to match scupper flange.
- Pipe hangers and supports shall be provided at each tee, elbow or change of direction per manufacturer recommendation. Cost included with Drainage System.
- All pipe hangers, supports and hardware shall be hot-dipped galvanized after fabrication in accordance with AASHTO M232 (ASTM A153). All bolts nuts and washers shall be stainless steel according to Std. Spec. Art. 1006.29(d).
- All steel straps, bars and plates of pipe support hanger shall meet the requirements of AASHTO M270, Gr. 36 or 50.
- Structural steel shapes used in support of vertical drain pipes shall meet the requirements of AASHTO M270, Gr. 36.
- All pipes, pipe fittings and brackets needed shall be included with cost of Drainage System.
- Connect prop. 8" Dia. drainage pipe to existing underground drainage system. Piers 4 thru Piers 18 only.
- Reducer should be sized to accommodate a longitudinal movement of the superstructure between the abutment or pier and the scupper.
- The PVC pipe and fittings located outside of the fascia beam shall be colored to match the beam, the remainder shall be grey.
- For Splash Block details see Sheet SB-102. Cost of Splash Block included with the cost for Drainage System.
- Removal of existing drainage system items and connection of proposed drainage element to existing drainage elements included with the cost for Drainage System.

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USER NAME = mc	DESIGNED - E. VAYSMAN	REVISED -
PLOT SCALE = N/A	CHECKED - G. HATLESTAD	REVISED -
PLOT DATE = 10/21/2021	DRAWN - E. VAYSMAN	REVISED -
	DATE - 06/18/2021	REVISED -

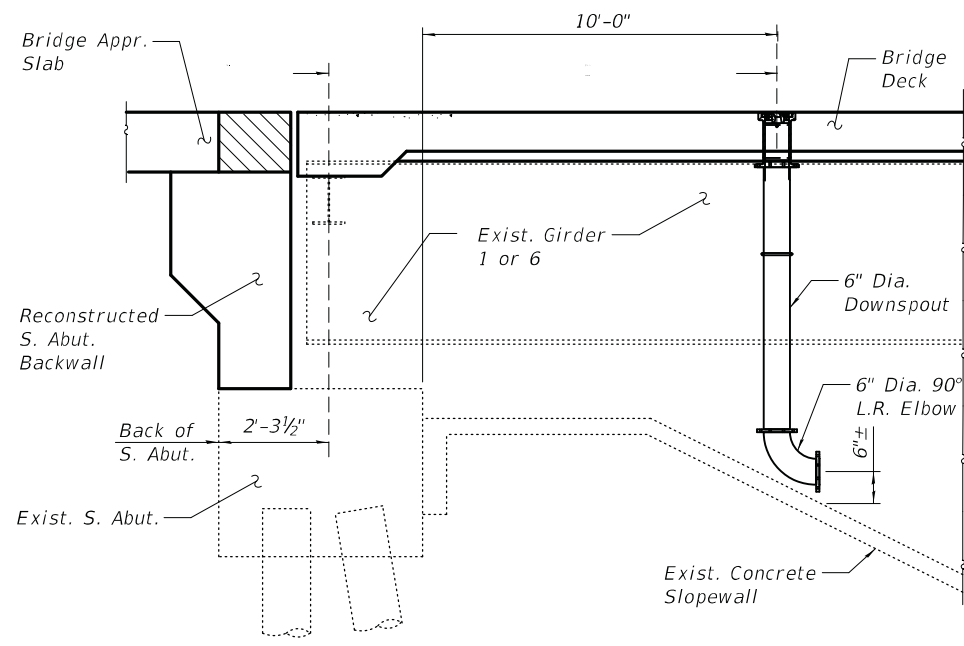
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DRAINAGE SYSTEM DETAILS 1  
STRUCTURE NO. 016-2467

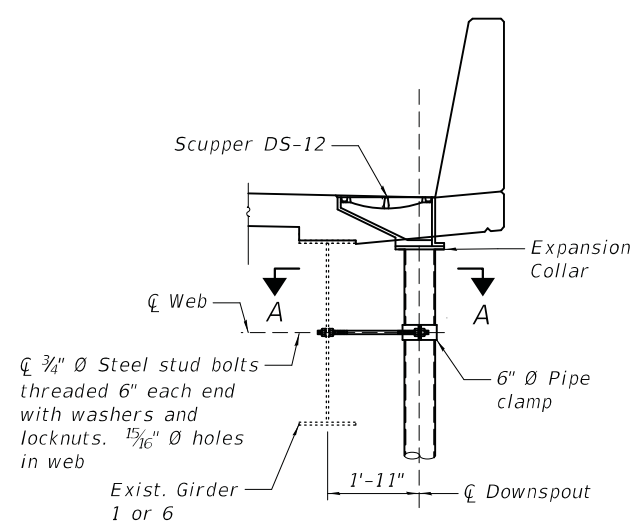
SHEET SB-100 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 287
CONTRACT NO. 62H49			ILLINOIS	

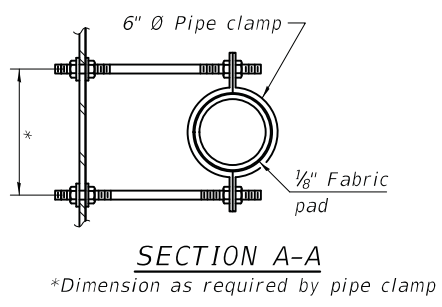
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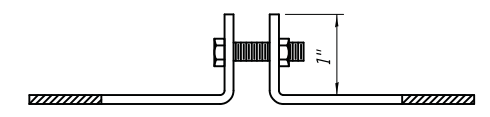
**DECK DRAINAGE AT ABUTMENTS**  
 (South Abutment shown, North Abutment similar)



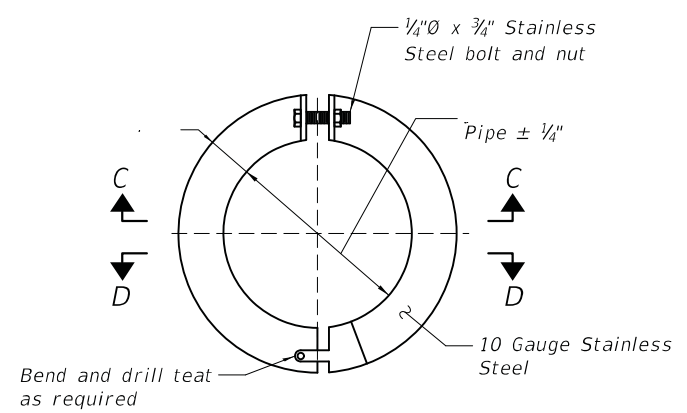
**SECTION AT PARAPET**



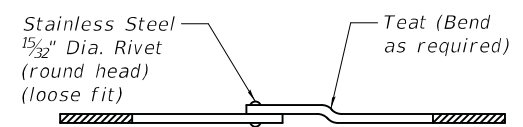
**SECTION A-A**  
 \*Dimension as required by pipe clamp



**SECTION C-C**

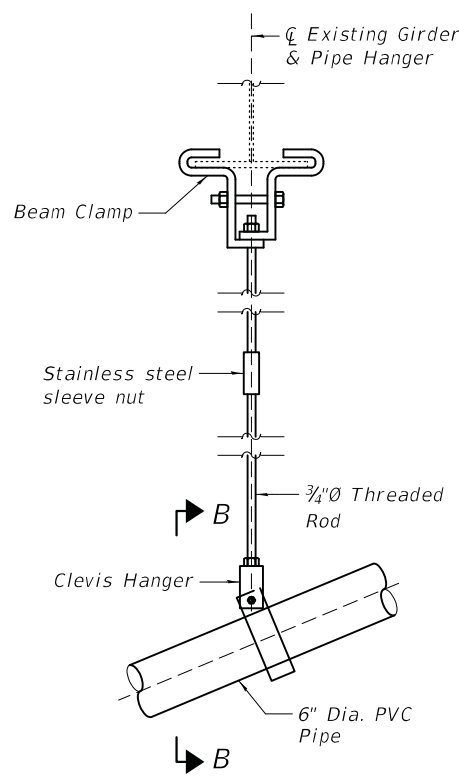


**PLAN**

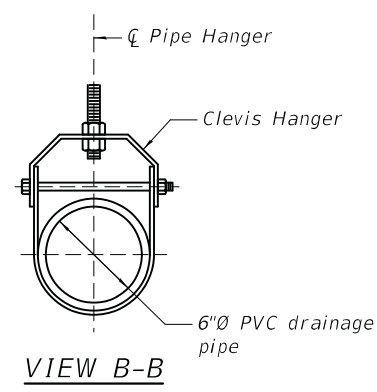


**SECTION D-D**

**EXPANSION COLLAR DETAILS  
 DETAIL 2**



**PIPE HANGER  
 DETAIL 1**



**VIEW B-B**

**Notes:**

1. See sheet SB-33 for drainage scupper locations at the South Abutment and sheet SB-55 for the drainage scupper location at the North Abutment.
2. See sheet SB-99 for Drainage Scupper details.
3. See sheet SB-100 for location of Details 1 and 2.
4. Bolt pattern and size in drain pipe flange to match scupper flange.
5. All pipe hangers, supports and hardware shall be hot -dipped galvanized after fabrication in accordance with AASHTO M232 (ASTM A153). All bolts nuts and washers shall be stainless steel according to Std. Spec. Art. 1006.29(d).
6. All steel straps, bars and plates of pipe support hanger shall meet the requirements of AASHTO M270, Gr. 36 or 50.
7. All pipes, pipe fittings and brackets needed shall be included with cost of Drainage System.
8. The PVC pipe and fittings shall be colored to match the adjacent beam and/or wall.



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	DATE - 06/18/2021	REVISED -

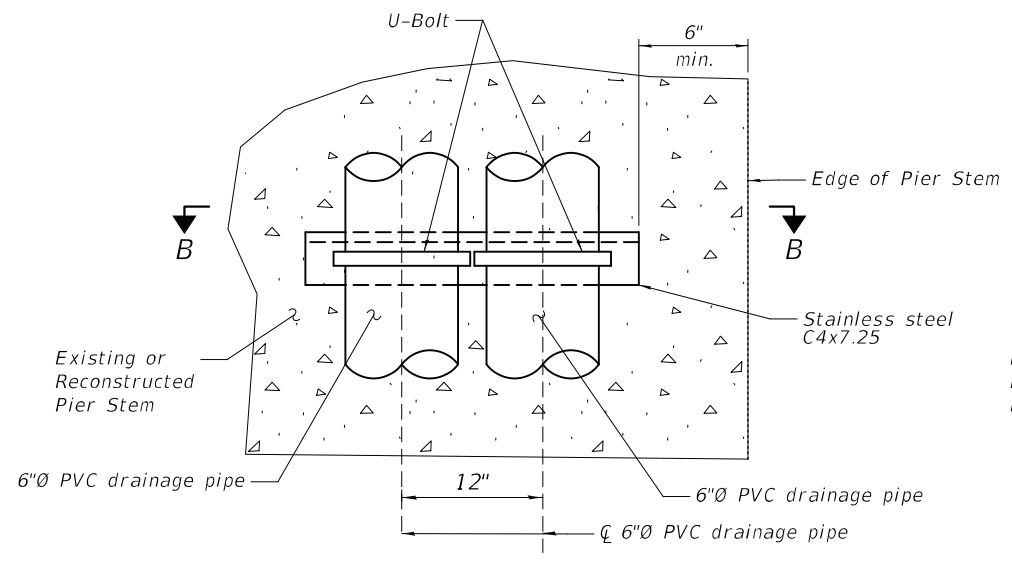
**STATE OF ILLINOIS  
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**DRAINAGE SYSTEM DETAILS 2  
 STRUCTURE NO. 016-2467**

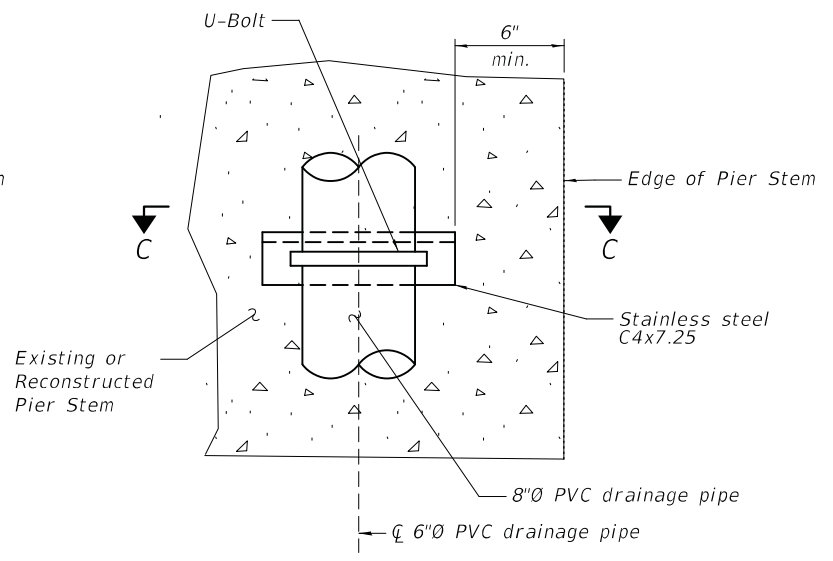
SHEET SB-101 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	288
CONTRACT NO. 62H49			ILLINOIS	

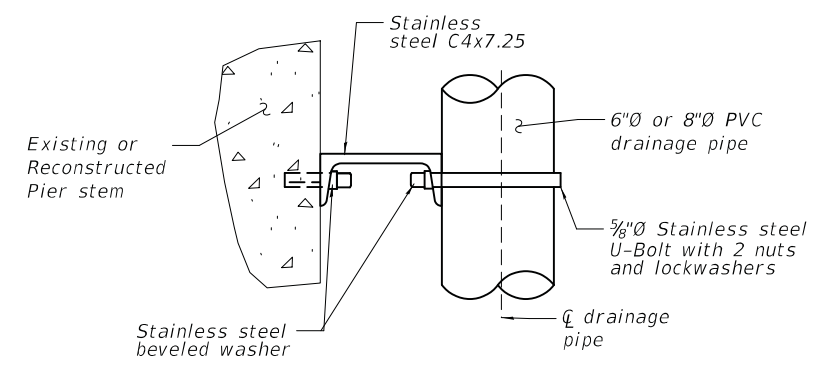
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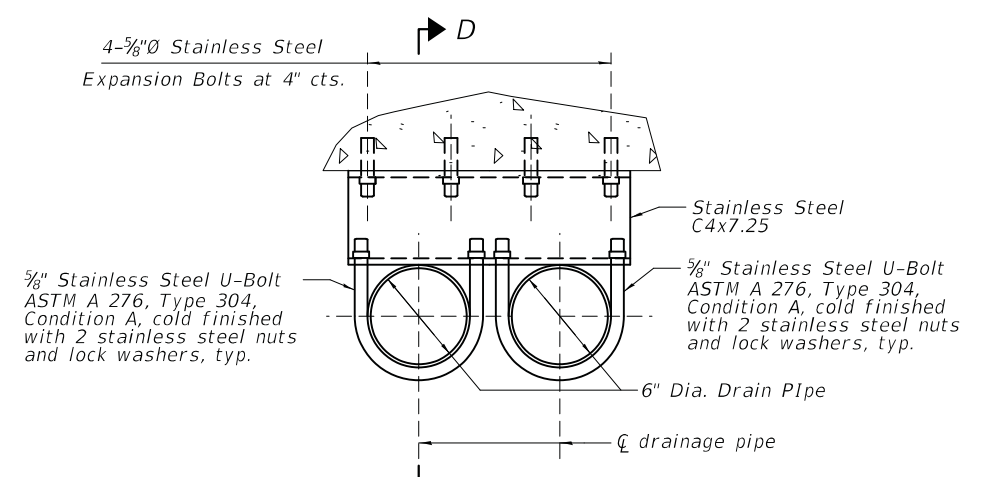
**PIPE SUPPORT  
 DETAIL 3**



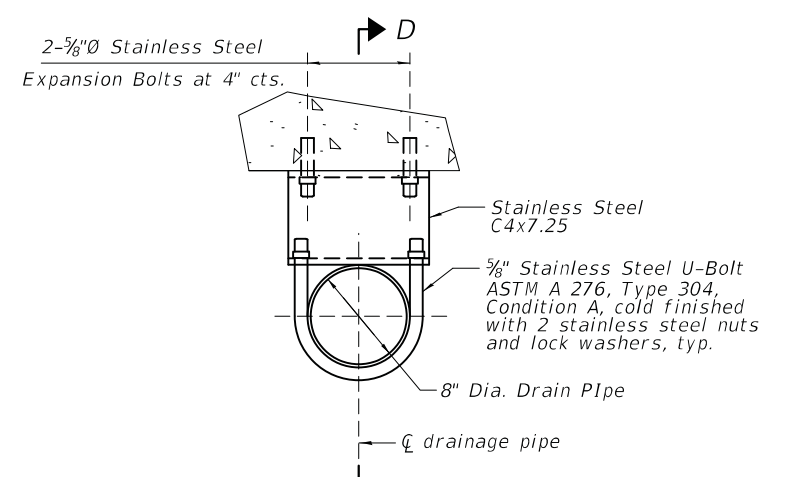
**PIPE SUPPORT  
 DETAIL 4**



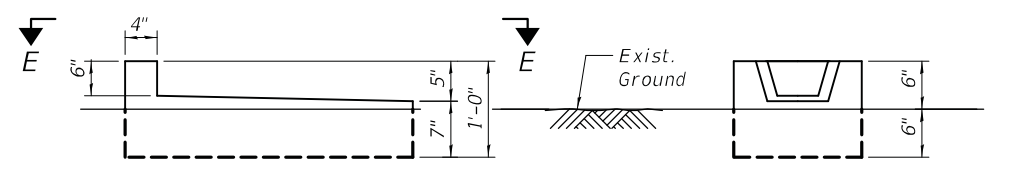
**SECTION D-D**



**SECTION B-B**

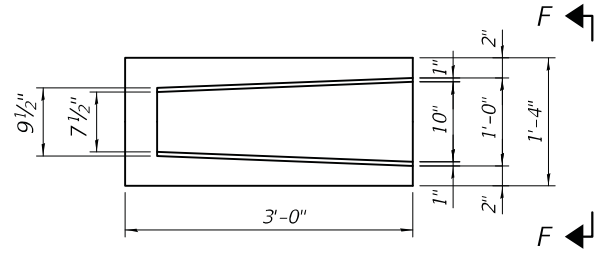


**SECTION C-C**



**SPLASH BLOCK DETAIL**

**VIEW F-F**



**VIEW E-E**

Notes:  
 1. See sheet SB-100 for location of Details 3, 4 and Splash Block.



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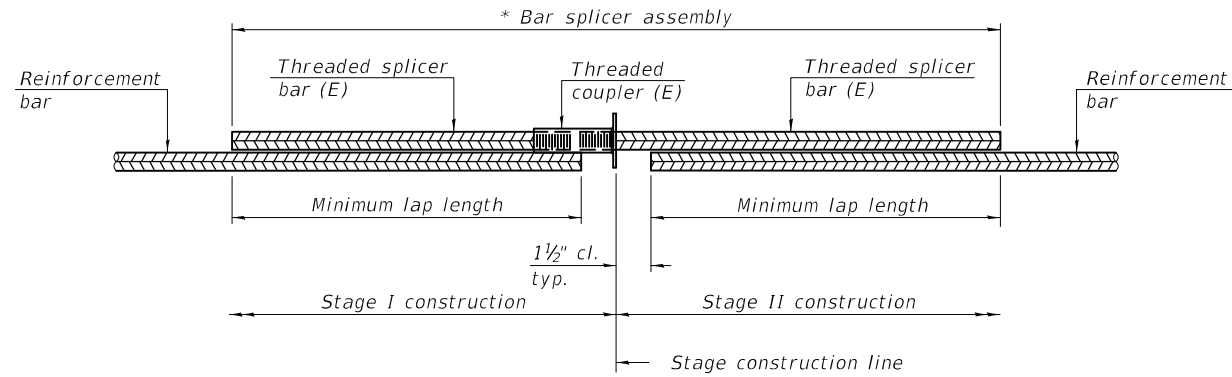
**DRAINAGE SYSTEM DETAILS 3  
 STRUCTURE NO. 016-2467**

SHEET SB-102 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	289
			CONTRACT NO. 62H49	
			ILLINOIS	



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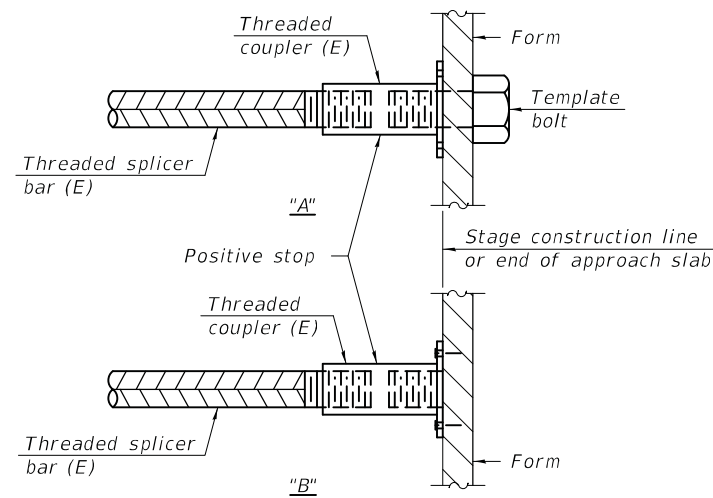


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

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

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

Location	Bar size	No. assemblies required	Minimum lap length

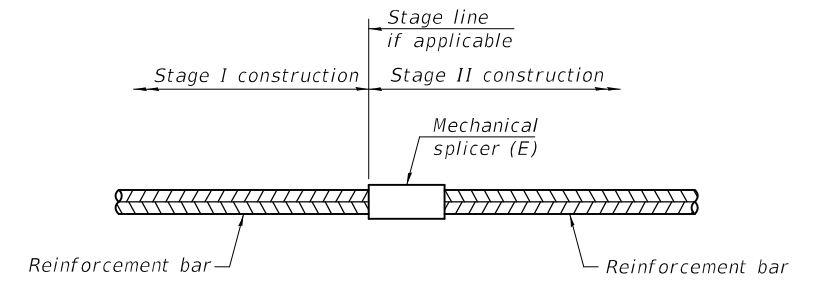


**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

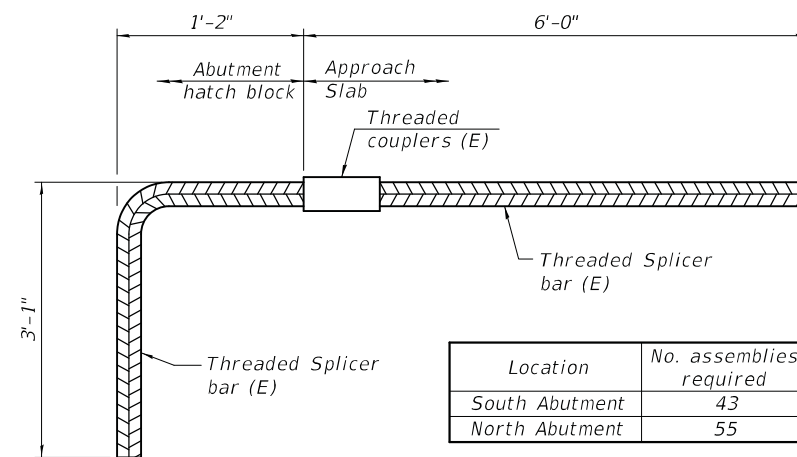
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

**Notes:**

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

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

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

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



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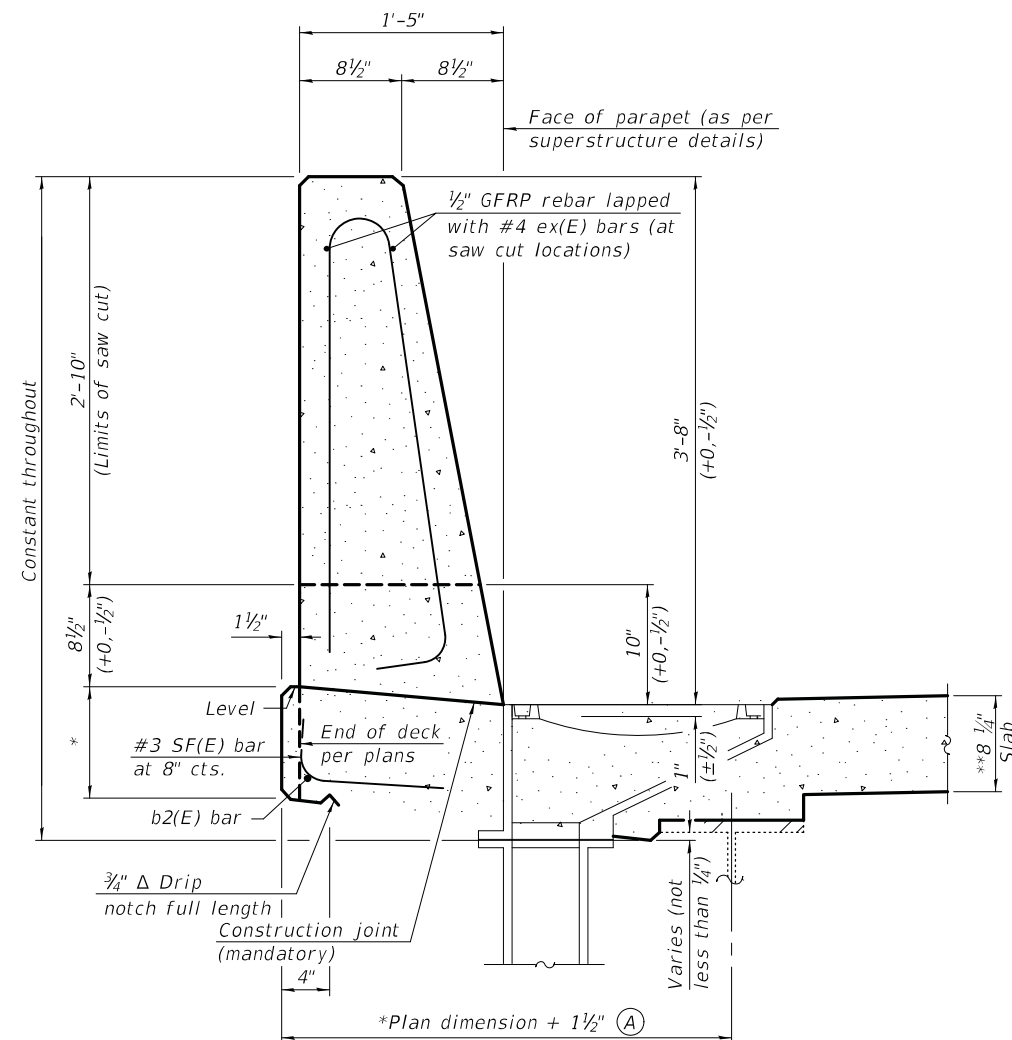
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**BAR SPLICER ASSEMBLY  
 STRUCTURE NO. 016-2467**

SHEET SB-103 OF SB-104 SHEETS

F.A.I. RTE. 330	SECTION 2018-133-BR	COUNTY COOK	TOTAL SHEETS 308	SHEET NO. 290
CONTRACT NO. 62H49			ILLINOIS	

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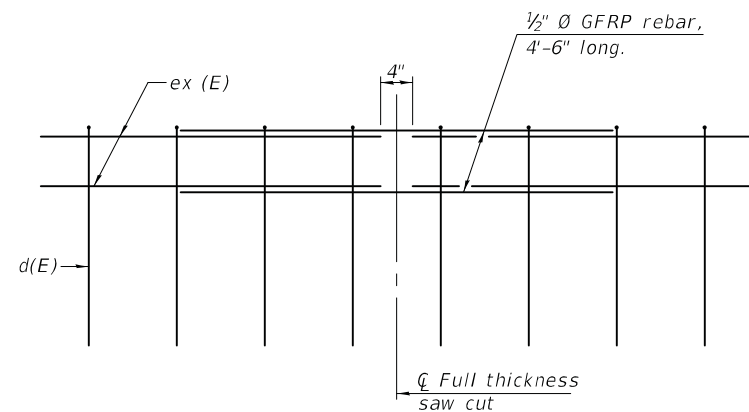


\* See Superstructure Details.

\*\* Prior to grinding

**44" CONSTANT-SLOPE  
 PARAPET SECTION**

(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)

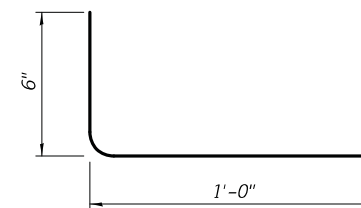


**GFRP REBAR STIFFENING DETAIL**

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

**Notes:**

1. All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 44" parapet.
2. Place full depth aluminum sheets as shown on superstructure details.
3. Replace all cork joint filler locations with a full thickness saw cut.



**#3 SF (E) BAR**



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**CONCRETE PARAPET SLIPFORMING OPTION  
 STRUCTURE NO. 016-2467**

SHEET SB-104 OF SB-104 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS			CONTRACT NO. 62H49	







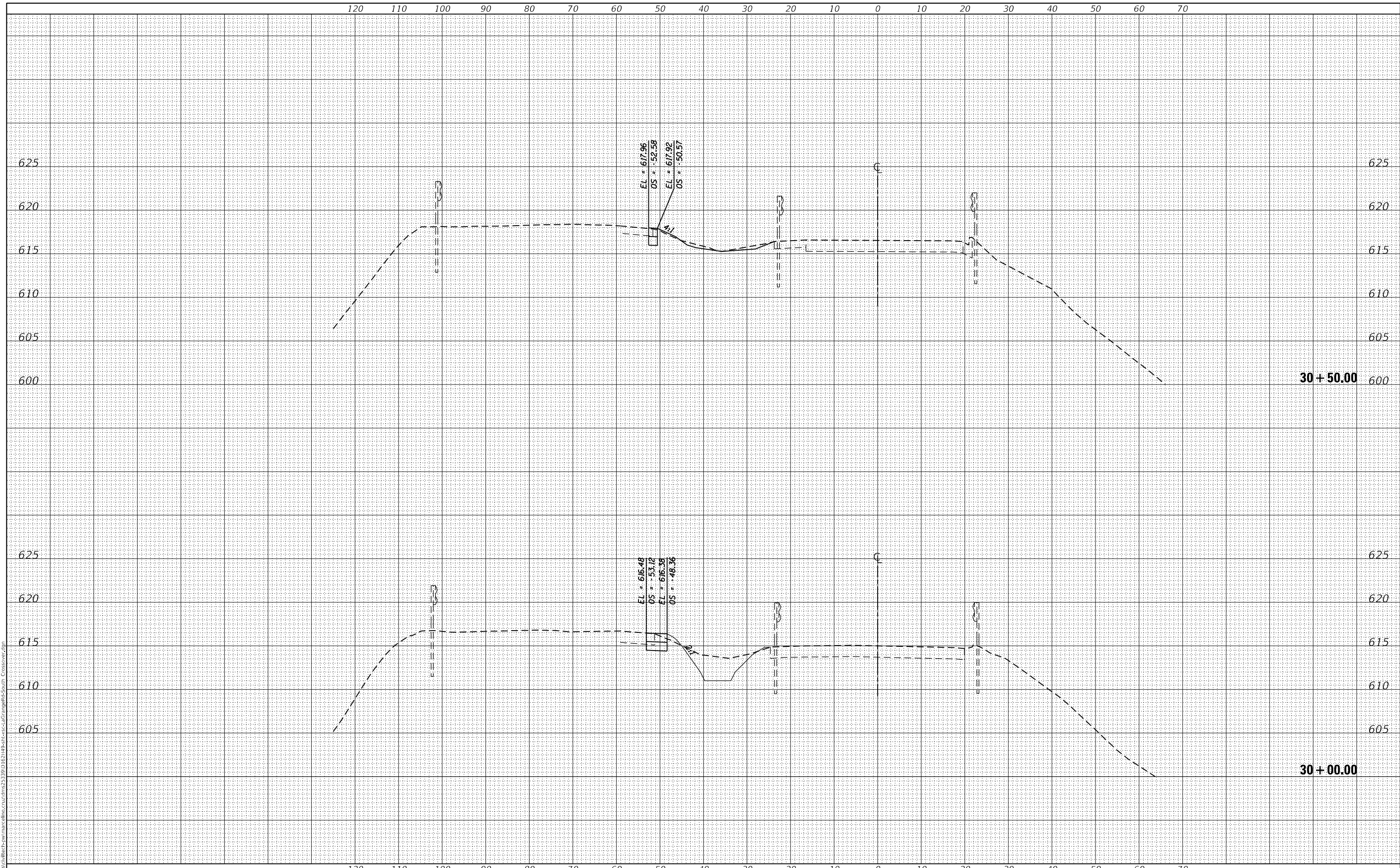




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DATE	= 10/21/2021
REVISIED	-

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**US ROUTE 1220/45 (LA GRANGE ROAD)  
 SOUTH CROSSOVER CROSS SECTIONS**

SCALE: SHEET 5 OF 6 SHEETS STA. 30+00.00 TO STA. 30+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				

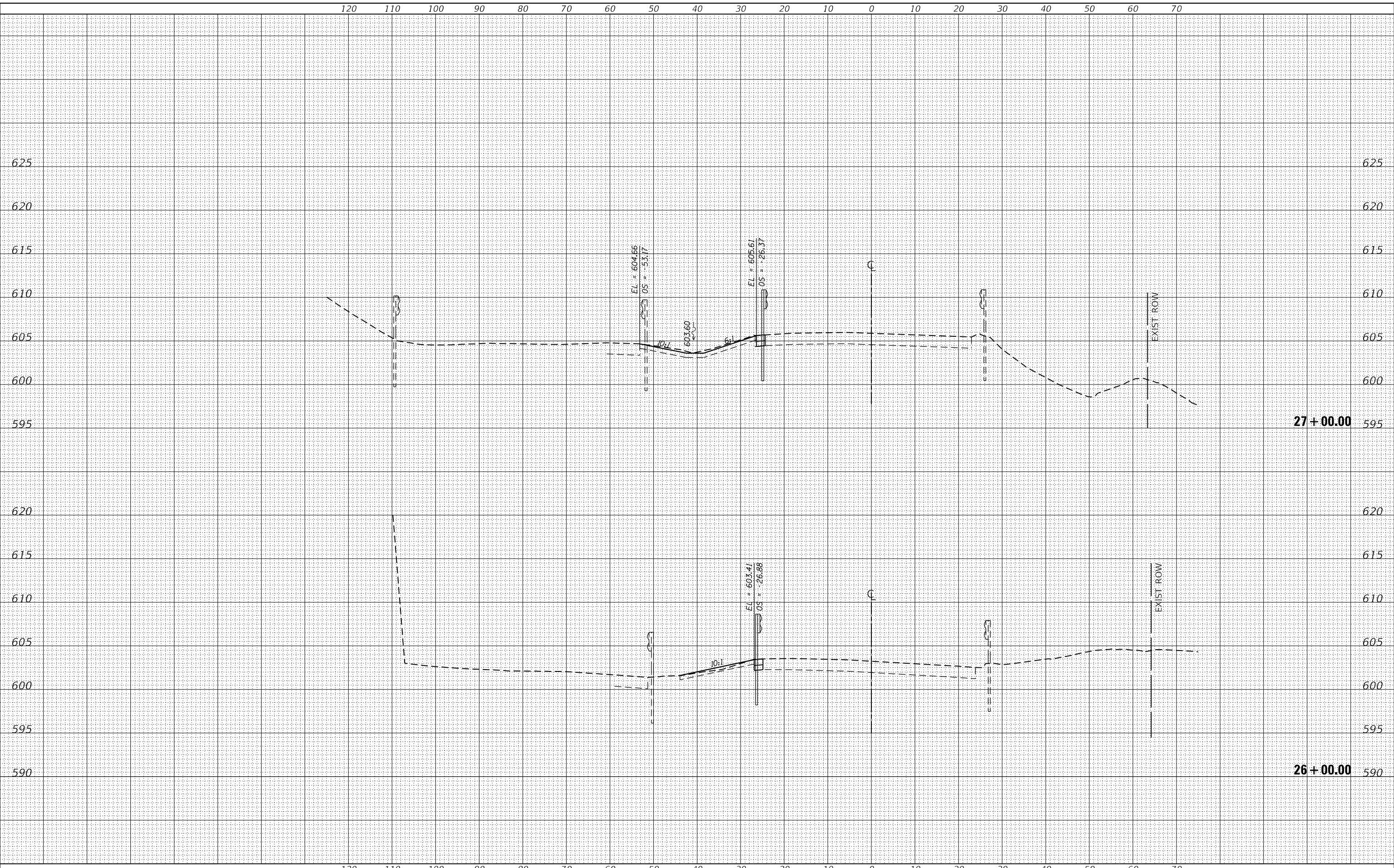




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**US ROUTE 1220/45 (LA GRANGE ROAD) - CROSS SECTIONS**

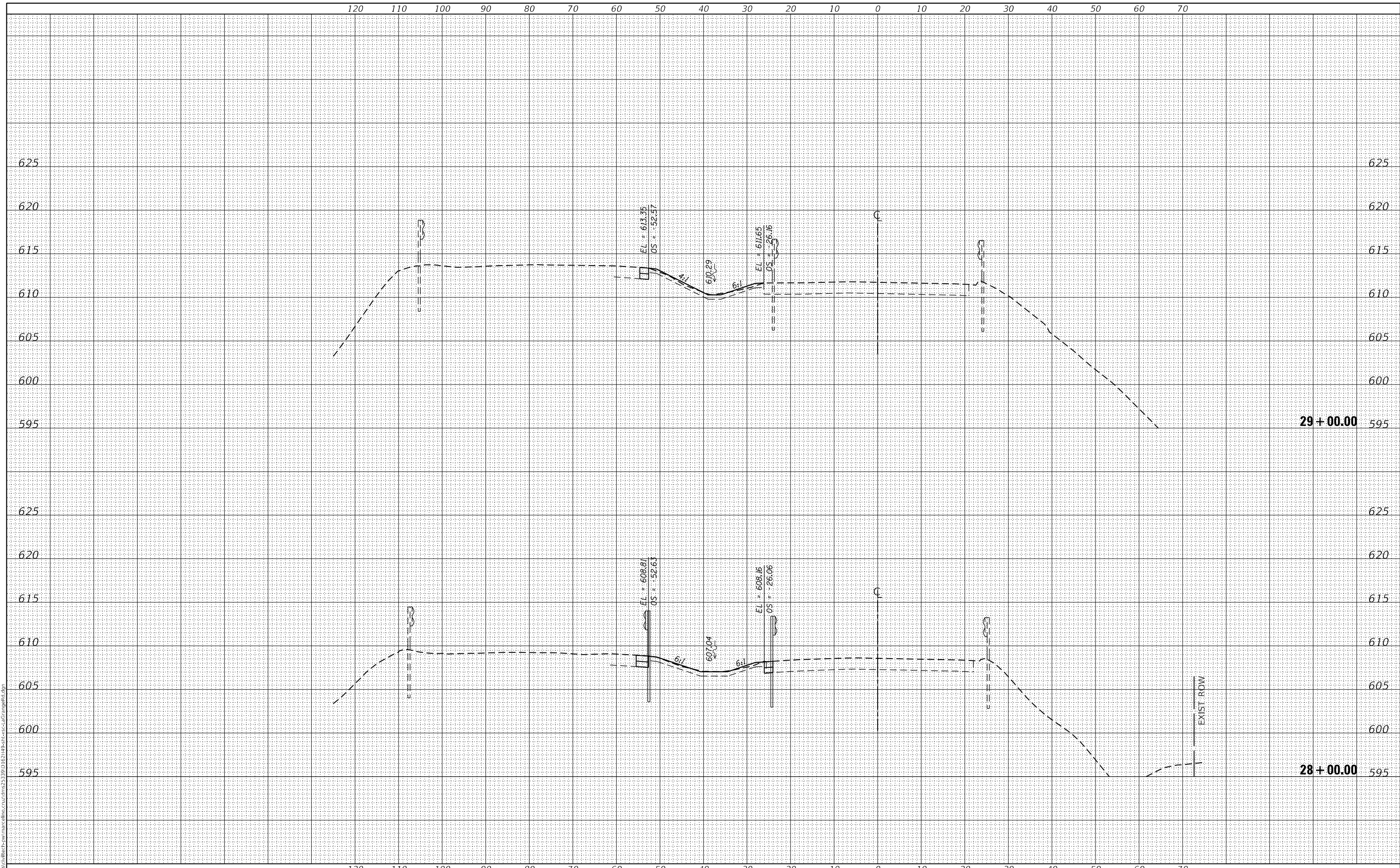
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	298
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				



DATE	
BY	
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NOTED SURVEY	
NO. OF SHEETS	
DATE CHECKED	

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ORIGINAL SURVEY	
NOTED SURVEY	
NO. OF SHEETS	
DATE CHECKED	



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**STATE OF ILLINOIS  
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**US ROUTE 1220/45 (LA GRANGE ROAD) - CROSS SECTIONS**

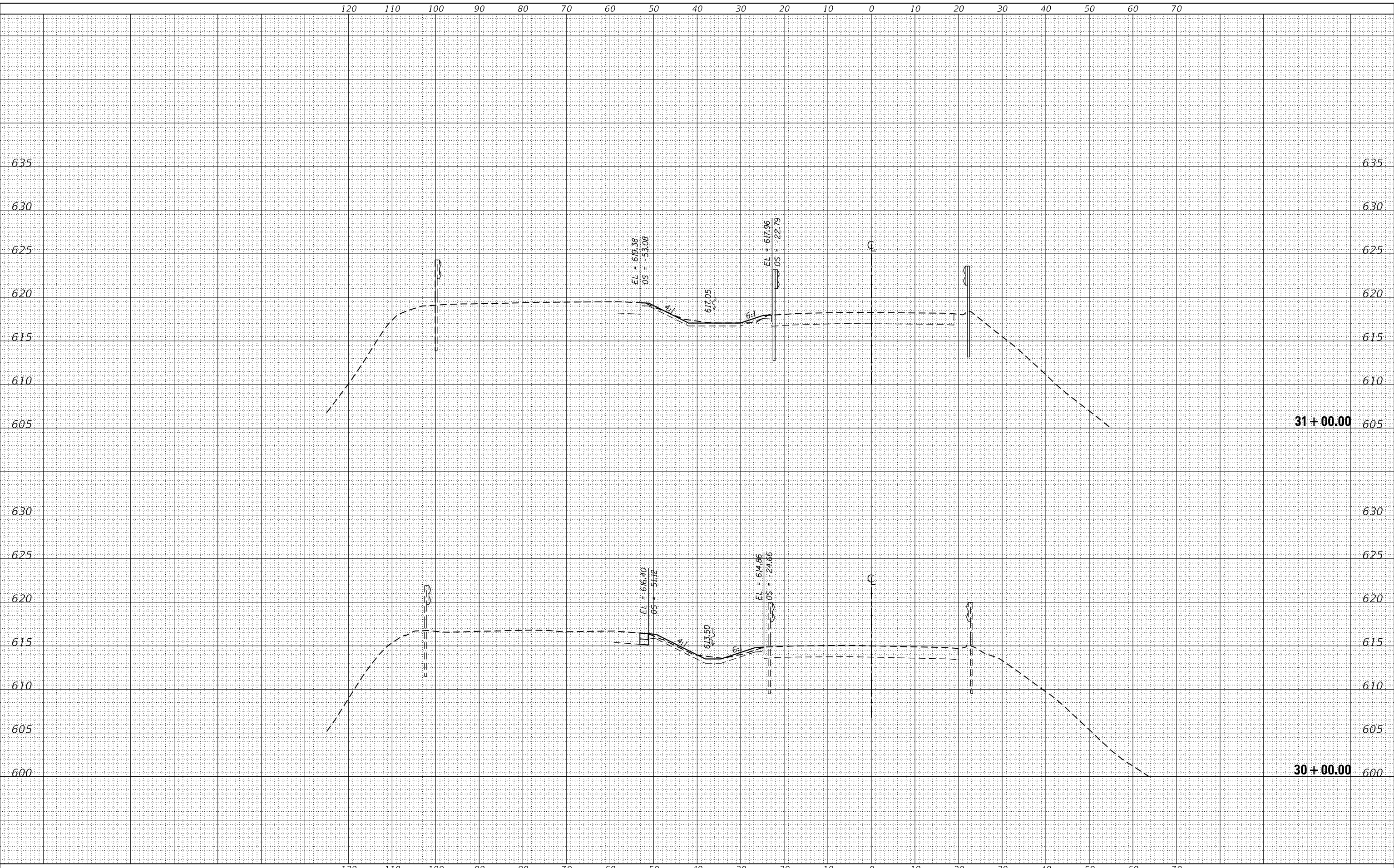
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	299
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				

DATE	
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**US ROUTE 122045 (LA GRANGE ROAD) - CROSS SECTIONS**

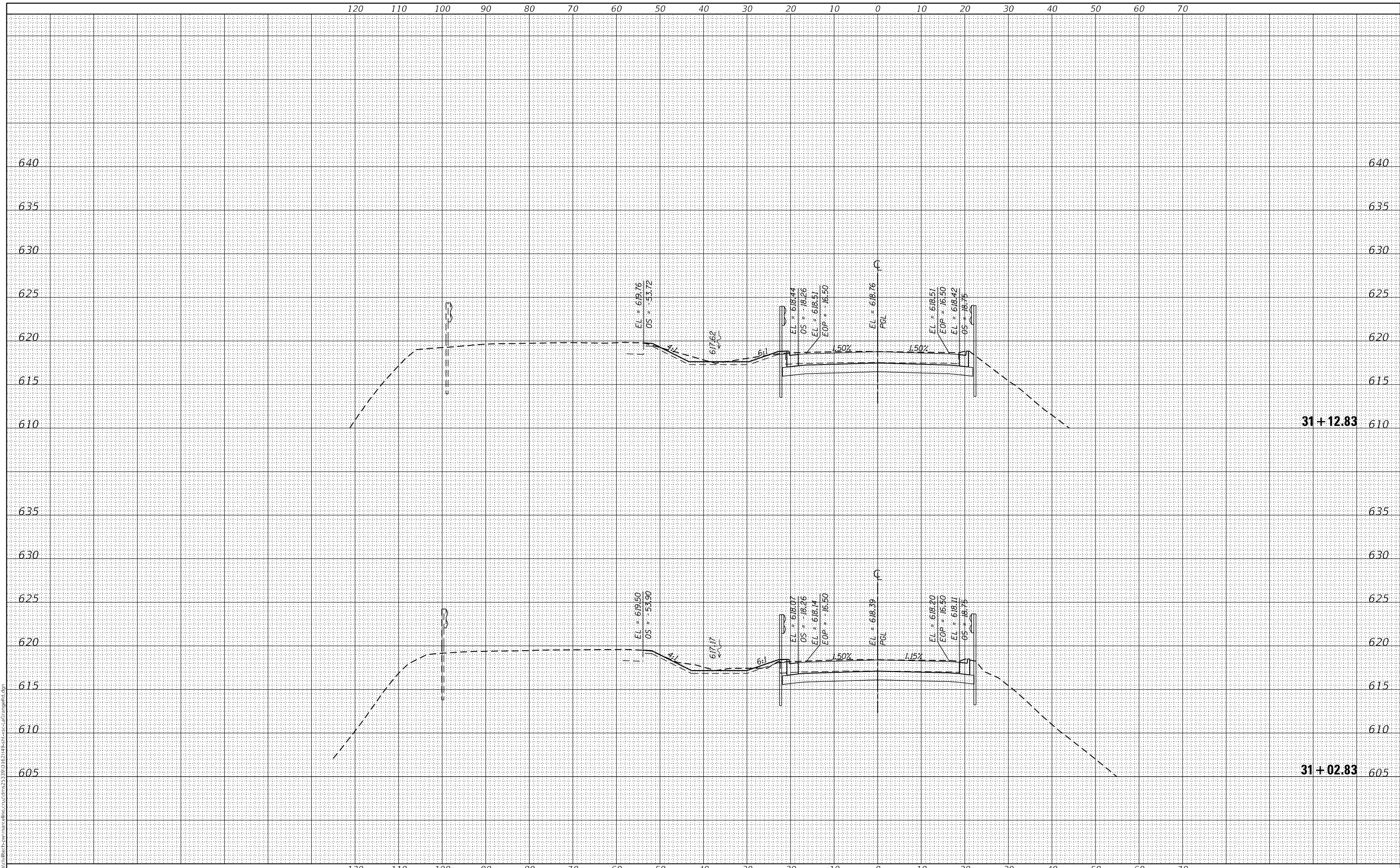
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				

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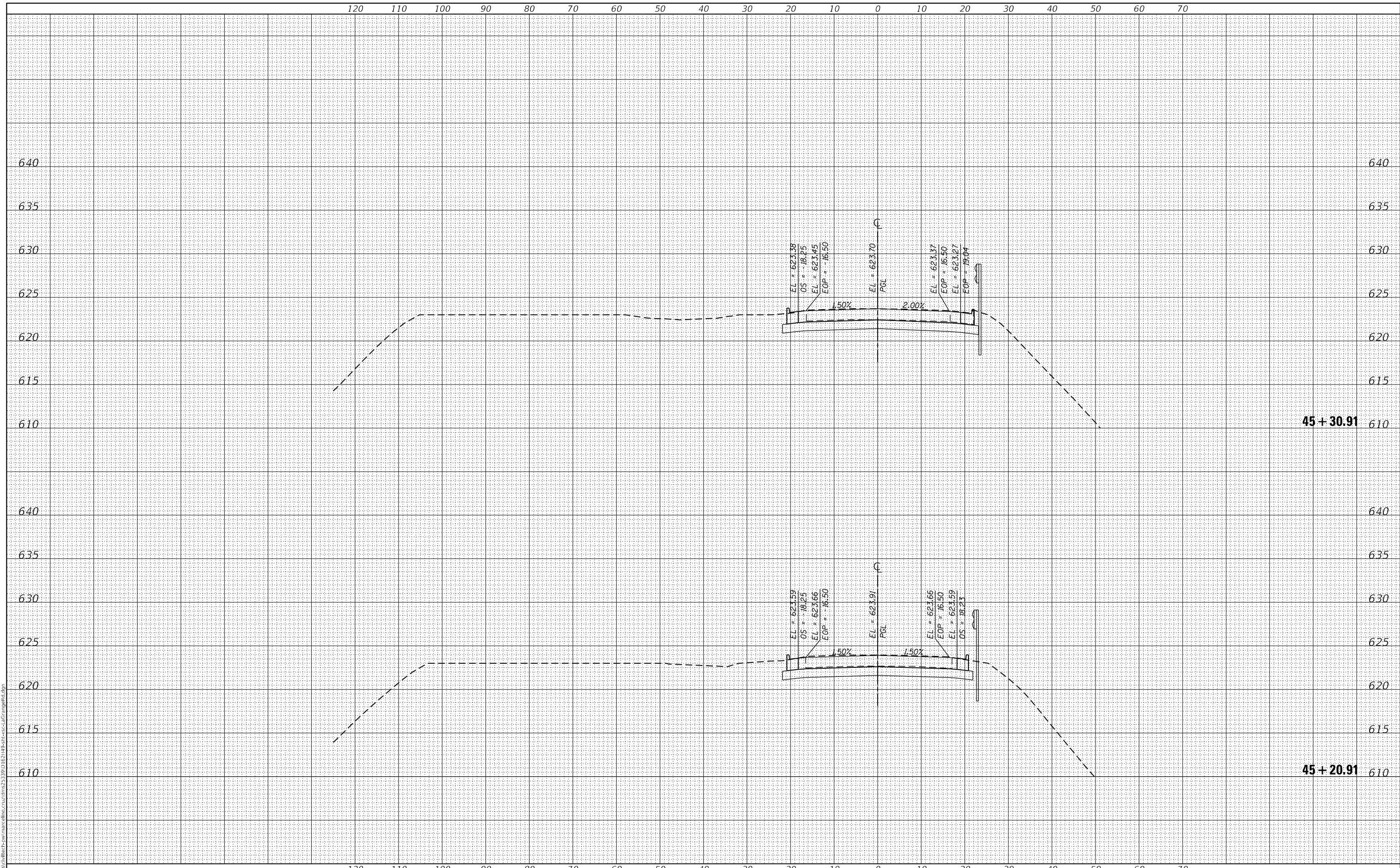
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SCALE: SHEET 4 OF 11 SHEETS STA. 31+03.93 TO STA. 31+13.93

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	301
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				

DATE	
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PLLOT DATE	= 10/21/2021	DATE	= 10/21/2021	REVISED	-

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**US ROUTE 1220/45 (LA GRANGE ROAD) - CROSS SECTIONS**

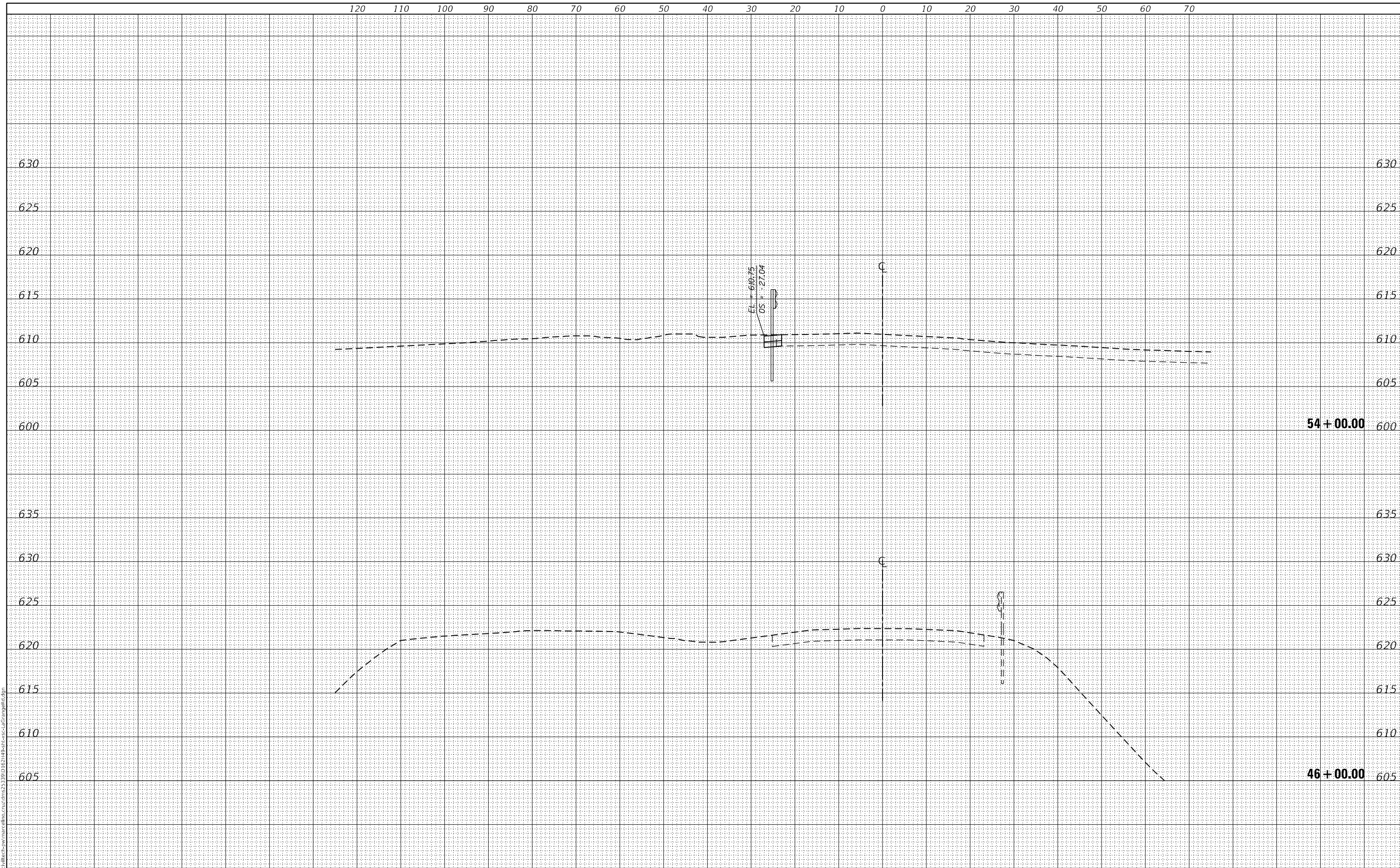
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	302
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				



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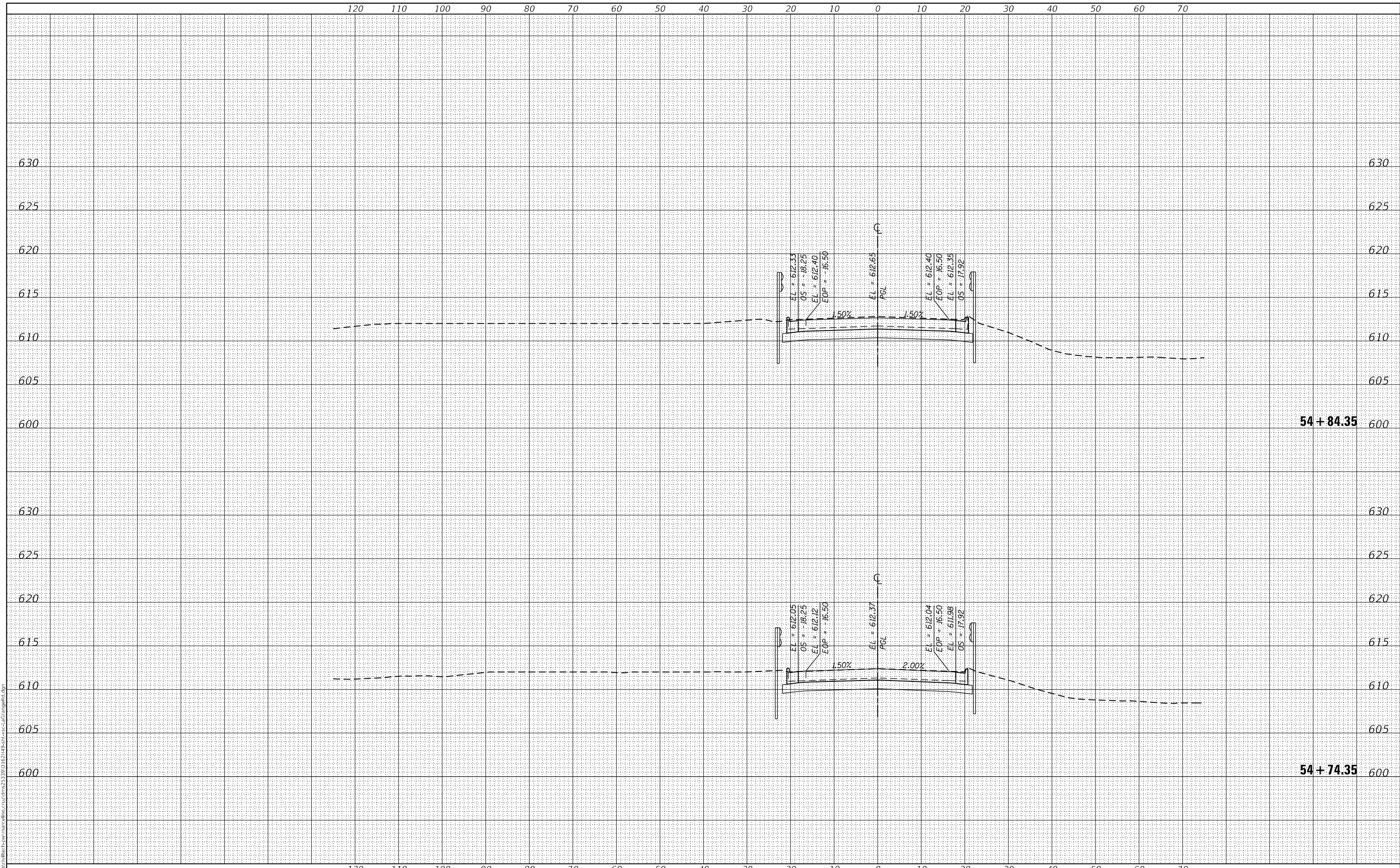
**US ROUTE 122045 (LA GRANGE ROAD) - CROSS SECTIONS**  
 SCALE: SHEET 6 OF 11 SHEETS STA. 46+00.00 TO STA. 54+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	303
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				



DATE	
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FINL SURVEY NO.	
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AREAS	
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ORIGINAL SURVEY NO.	
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PLOT DATE	= 10/21/2021	DATE	= 10/21/2021	REVISED	-

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**US ROUTE 1220/45 (LA GRANGE ROAD) - CROSS SECTIONS**

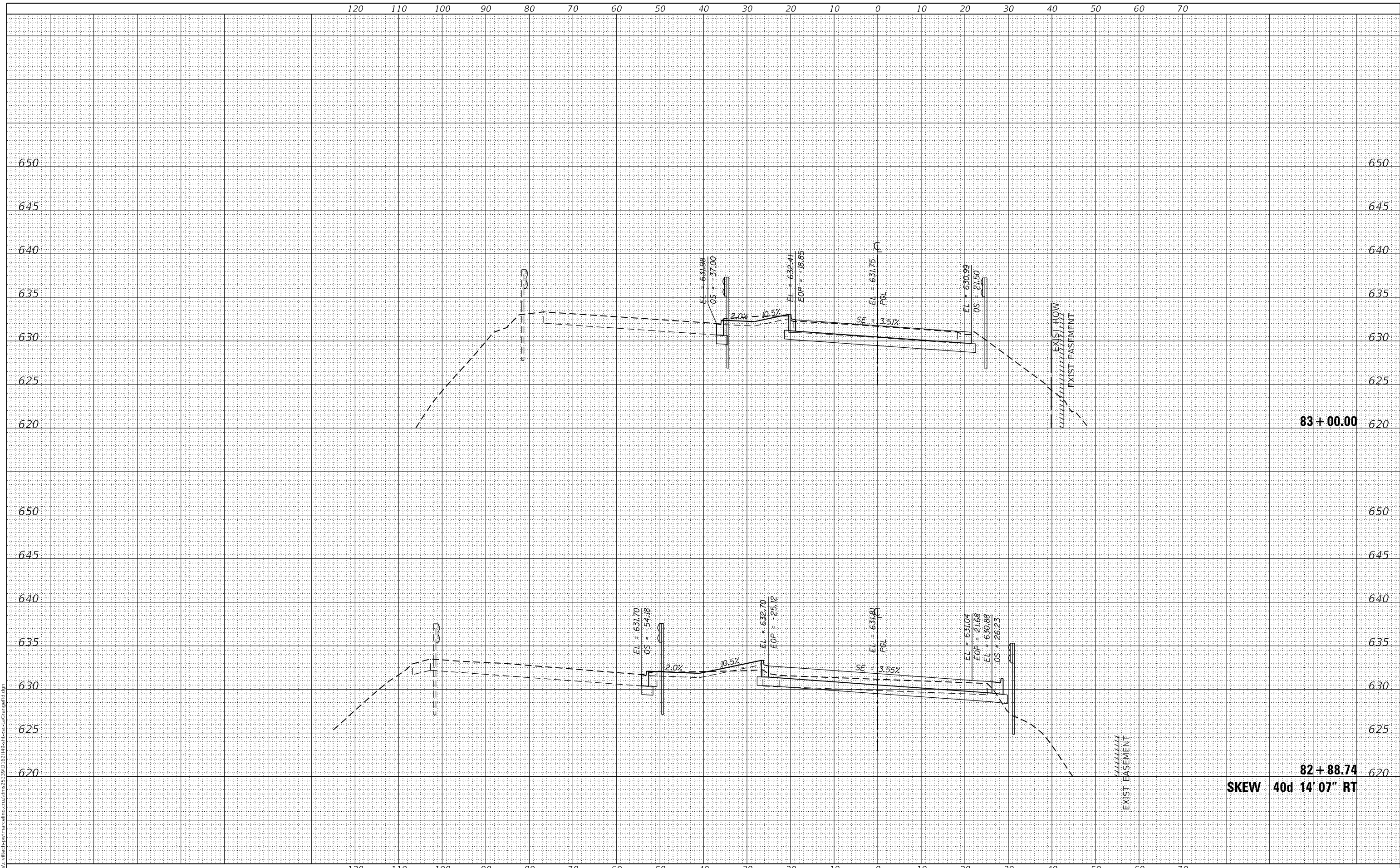
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	304
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				

DATE	
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83 + 00.00  
 82 + 88.74  
 SKEW 40d 14' 07" RT

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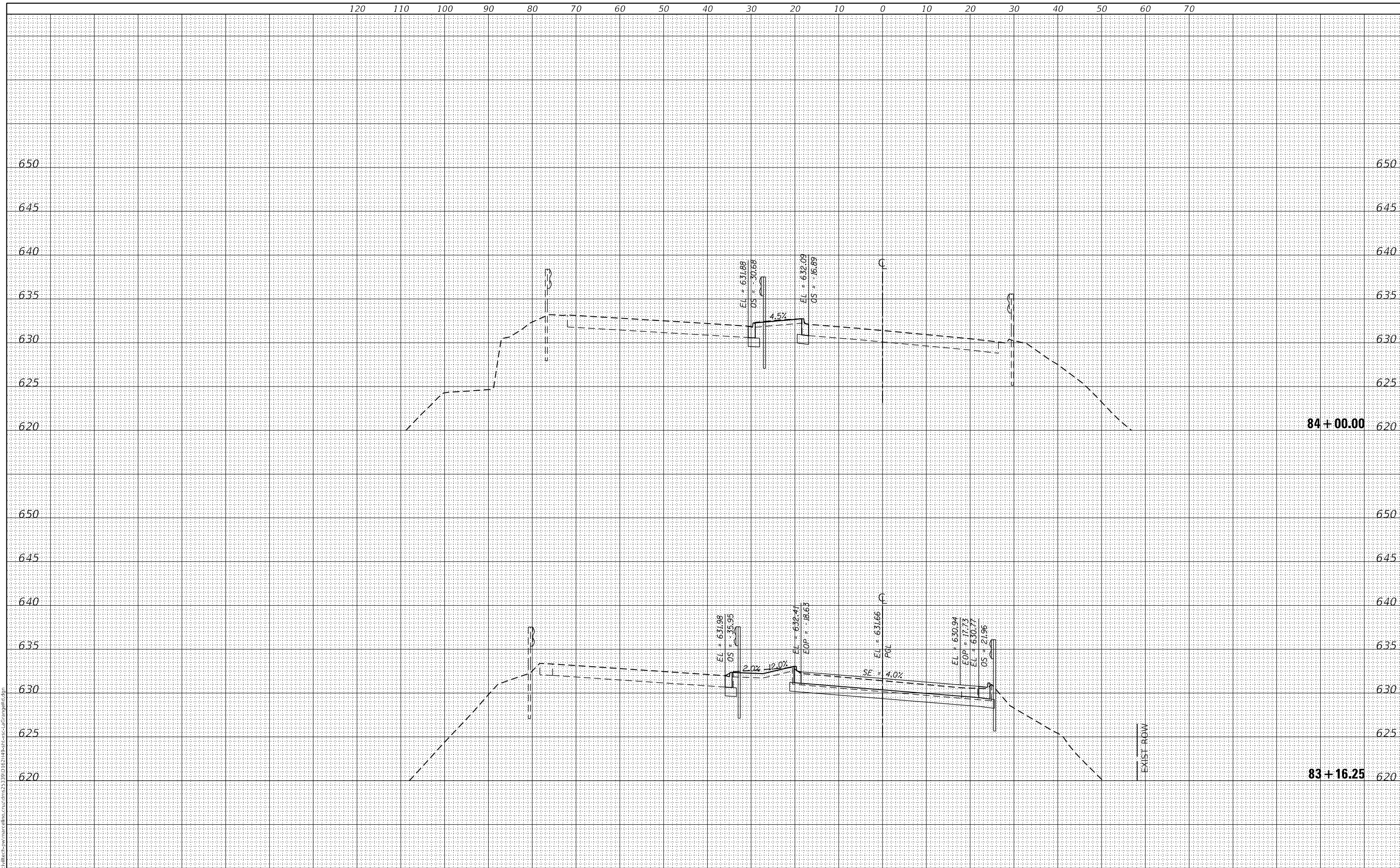
**US ROUTE 122045 (LA GRANGE ROAD) - CROSS SECTIONS**

SCALE: SHEET 8 OF 11 SHEETS STA. 82+88.74 TO STA. 83+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	305
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINISHED SURVEY	
NOTED SURVEY	
NO. OF SHEETS	
DATE CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTED SURVEY	
NO. OF SHEETS	
DATE CHECKED	



MODEL: Default  
FILE: M:\11111111\11111111\11111111.dwg

**CIVILTECH**  
Two Pierce Place, Suite 1400  
Itasca, Illinois 60143  
Tel: 630.773.3900  
Fax: 630.773.3975  
www.civiltechinc.com

USER NAME	= mc
PLOT SCALE	= 20,0000' / in.
PLOT DATE	= 10/21/2021

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE - 10/21/2021	REVISD -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**US ROUTE 122045 (LA GRANGE ROAD) - CROSS SECTIONS**

SCALE: SHEET 9 OF 11 SHEETS STA. 83+16.27 TO STA. 84+00.00

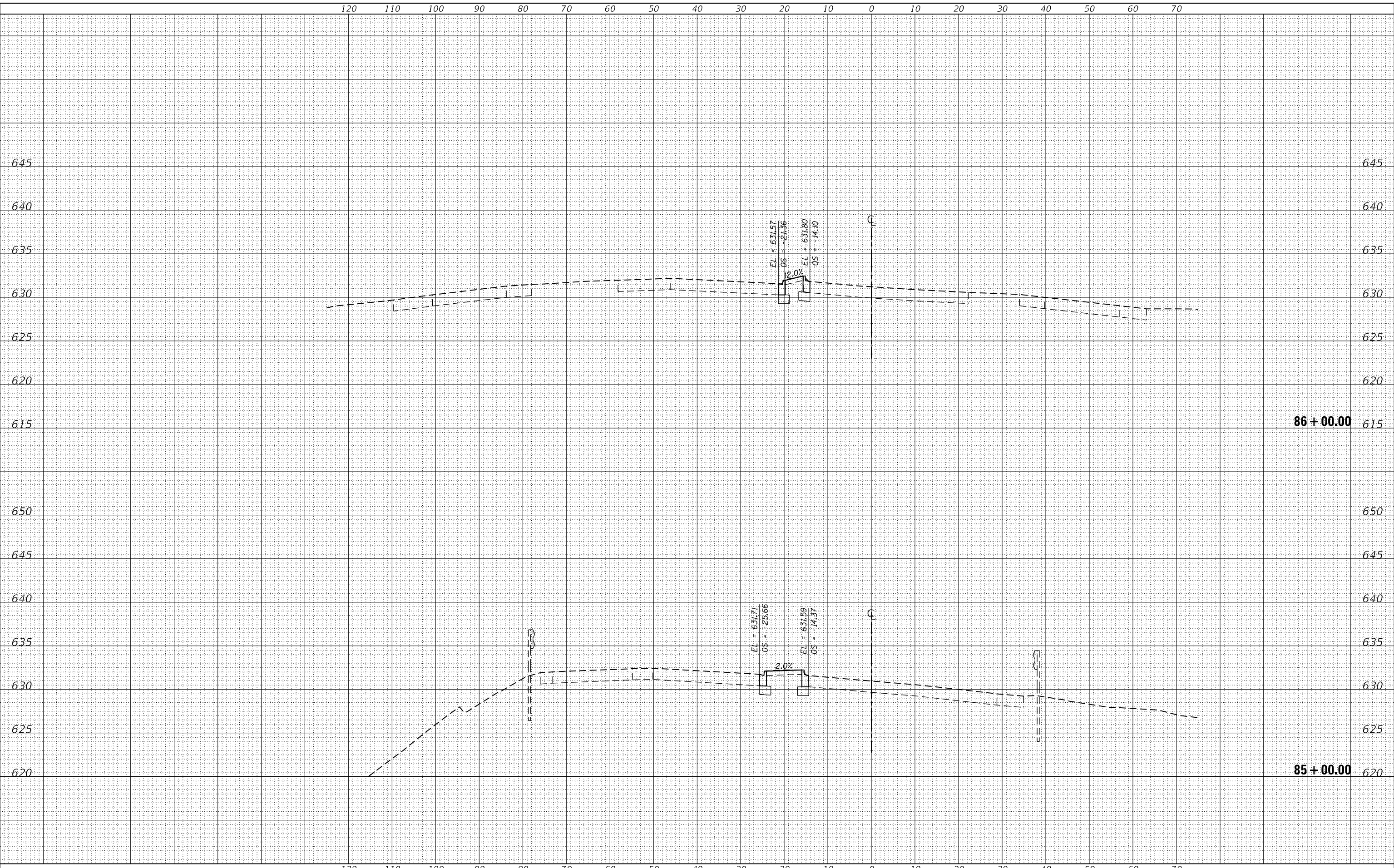
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	306
CONTRACT NO. 62H49				

ILLINOIS FED. AID PROJECT

DATE	
BY	
FINISHED SURVEY	
NOTED SURVEY	
NO. OF AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTED SURVEY	
NO. OF AREAS CHECKED	

MODEL: Default  
 FILE NAME: C:\msdcs\civiltch\howmarcelino.cru\msh2\339\0162\189-ent\csc-la-grange.rvt



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USER NAME = mc	DESIGNED -	REVISED -
PLOT SCALE = 20,000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/21/2021	CHECKED -	REVISED -
	DATE - 10/21/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**US ROUTE 1220/45 (LA GRANGE ROAD) - CROSS SECTIONS**

SCALE: SHEET 10 OF 11 SHEETS STA. 85+00.00 TO STA. 86+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	2018-133-BR	COOK	308	307
CONTRACT NO. 62H49				
ILLINOIS FED. AID PROJECT				



