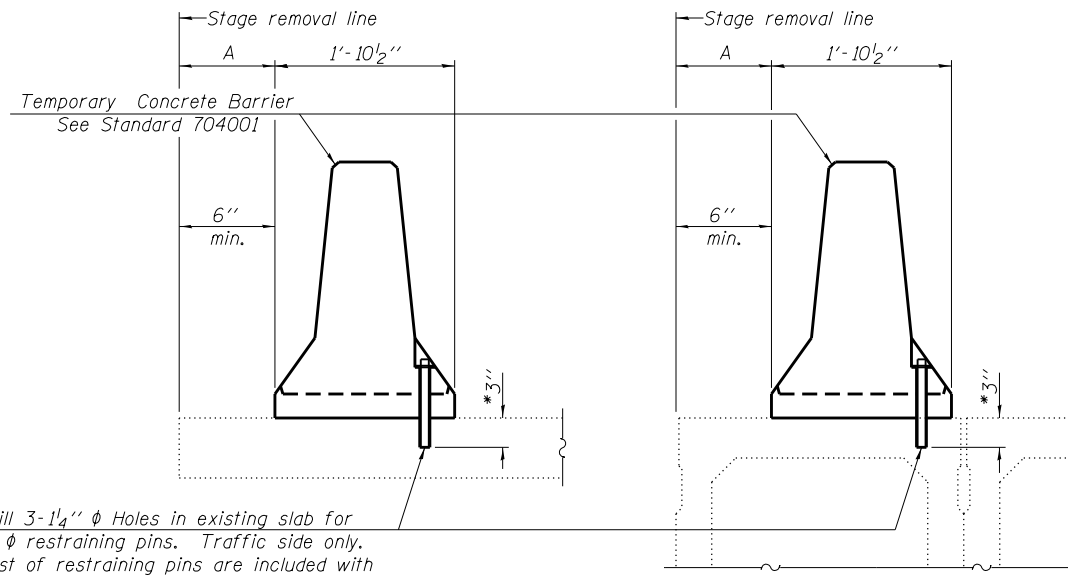


When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



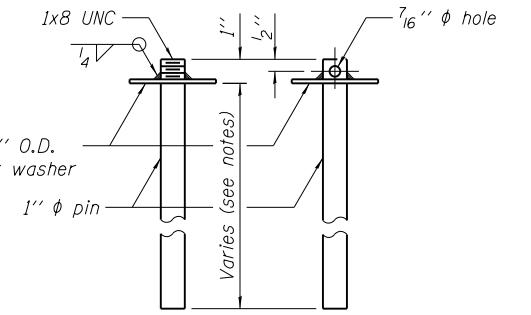
Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING SLAB

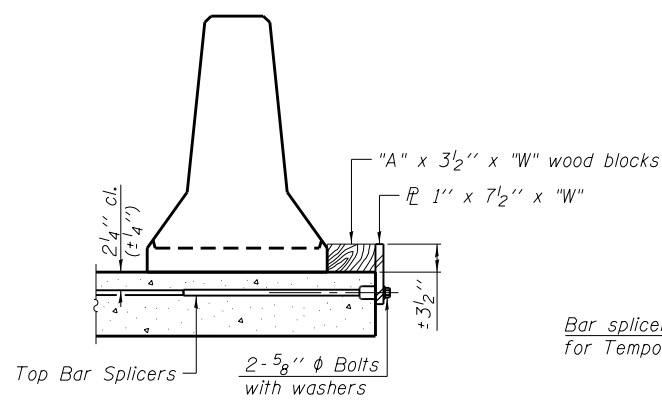
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

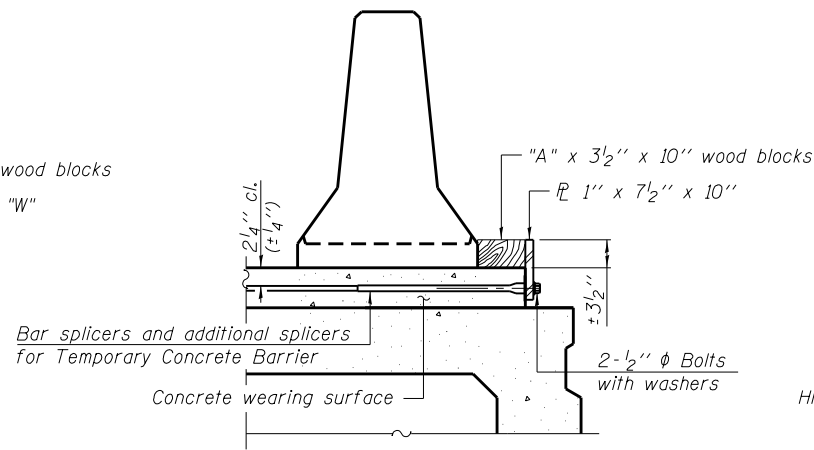


RESTRAINING PIN

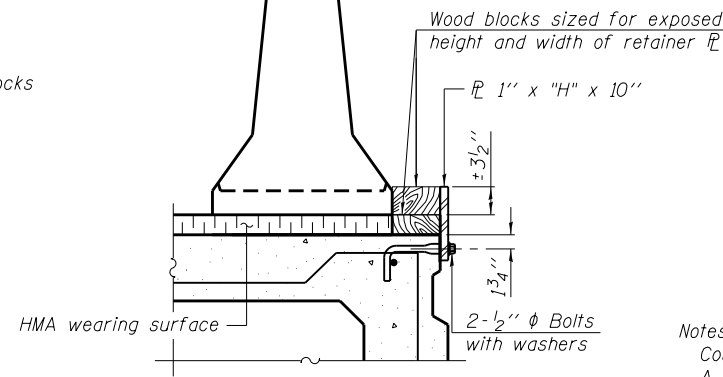
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer



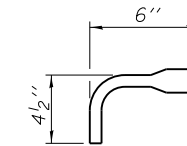
DETAIL I



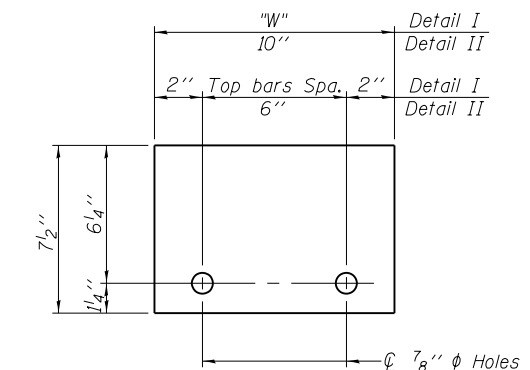
DETAIL II



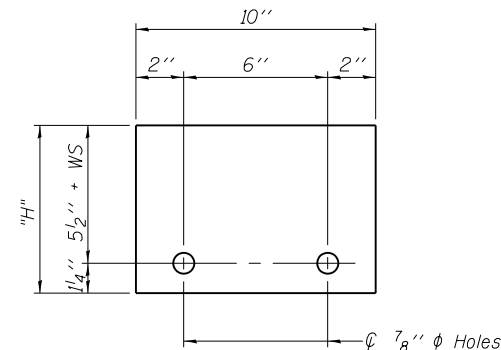
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 7 1/2" x "W"
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"
(Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate ϕ of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

R-27

07-22-16

HBM
 ENGINEERING GROUP, LLC
 CONSULTING & DESIGN
 INSPECTION & RATING
 RESEARCH & TESTING

4415 WEST HARRISON ST.
 SUITE 231
 HILLSIDE, IL 60162
 PHONE: (708) 236-0900
 FAX: (708) 236-0901

DESIGNED -	MAA	REVISED -	
DRAWN -	MAA	REVISED -	
CHECKED -	MI	REVISED -	
DATE -	6/15/2016	REVISED -	

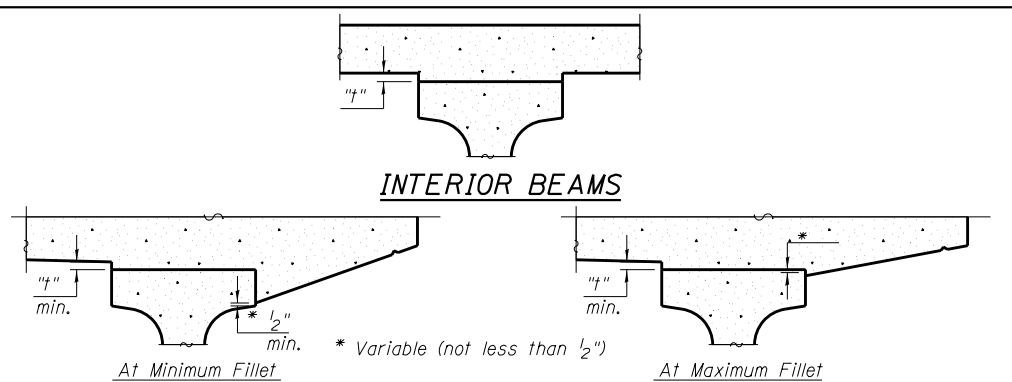
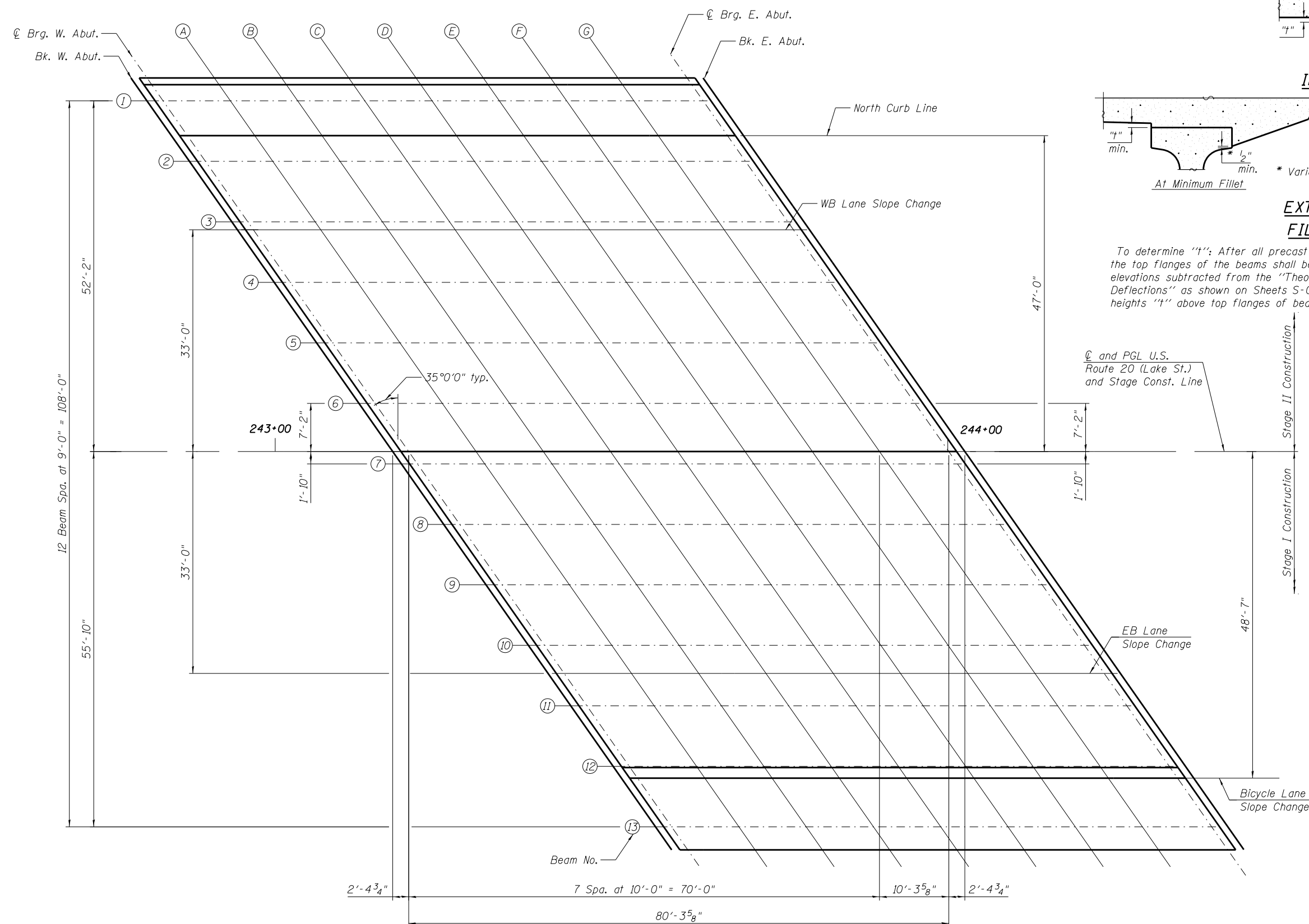
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
 STRUCTURE NO. 022-0548**

SCALE: SHEET S-07 OF S-35 SHEETS STA. TO STA.

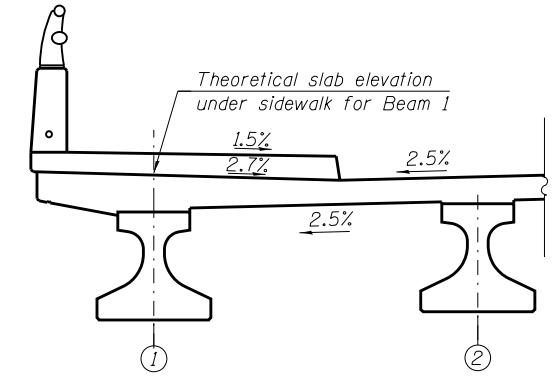
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	101
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

FILE PATH = P:\1605-677\1001_P16163\Item 9 - FerroWork Order #24 - U.S. Route 28 (Lake St.)\Over West Branch DupPage River\CADD Sheets\S07-TempConcreteBarrier.dgn

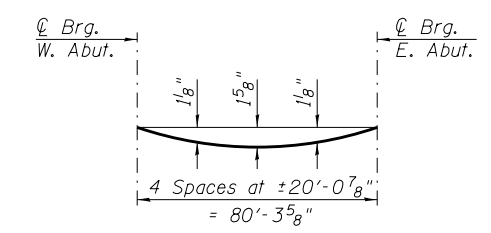


**EXTERIOR BEAMS
FILLET HEIGHTS**

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals as shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" as shown on Sheets S-09 and S-10, minus slab thickness, equals the fillet heights "t" above top flanges of beams.



PROJECTION OF DECK UNDER SIDEWALK



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete deck, sidewalk, parapet and railing).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets S-09 and S-10.



PLAN

FILE PATH = P:\1605-677\1001\PT16163\Item 9 - Ferro\Work Order #3a - U.S. Route 20 (Lake St.)\Draw - West Branch DupPage River\CAD\Drawings\S08-TSlabElevLayout.dgn

HBM
ENGINEERING GROUP, LLC.
CONSULTING & DESIGN
INSPECTION & RATING
RESEARCH & TESTING

4415 WEST HARRISON ST.
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HILLSIDE, IL 60162
PHONE: (708) 236-0900
FAX: (708) 236-0901

S08-TSlabElevLayout.dgn	DESIGNED - LAB	REVISED -
USER NAME = Stojanka,Katorakova	DRAWN - LAB	REVISED -
PLOT SCALE = 16.00' / in.	CHECKED - MI	REVISED -
PLOT DATE = 10/19/2016	DATE - 6/15/2016	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
---	--

TOP OF SLAB ELEVATION LAYOUT STRUCTURE NO. 022-0548	
SCALE:	SHEET S-08 OF S-35 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	102
CONTRACT NO. 62A60				

ILLINOIS FED. AID PROJECT	
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BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	242+80.93	-52.17'	779.67	779.67
☉ OF W. ABUT	242+83.32	-52.17'	779.72	779.72
A	242+93.32	-52.17'	779.92	779.97
B	243+03.32	-52.17'	780.10	780.20
C	243+13.32	-52.17'	780.27	780.39
D	243+23.32	-52.17'	780.42	780.56
E	243+33.32	-52.17'	780.56	780.68
F	243+43.32	-52.17'	780.68	780.78
G	243+53.32	-52.17'	780.79	780.84
☉ OF E. ABUT	243+63.62	-52.17'	780.88	780.88
BK. OF E. ABUT	243+66.01	-52.17'	780.90	780.90

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	242+84.55	-47.00'	779.60	779.60
☉ OF W. ABUT	242+86.94	-47.00'	779.65	779.65
A	242+96.94	-47.00'	779.84	779.89
B	243+06.94	-47.00'	780.02	780.12
C	243+16.94	-47.00'	780.19	780.31
D	243+26.94	-47.00'	780.33	780.47
E	243+36.94	-47.00'	780.47	780.59
F	243+46.94	-47.00'	780.58	780.68
G	243+56.94	-47.00'	780.68	780.73
☉ OF E. ABUT	243+67.24	-47.00'	780.77	780.77
BK. OF E. ABUT	243+69.63	-47.00'	780.78	780.78

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	242+87.23	-43.17'	779.75	779.75
☉ OF W. ABUT	242+89.63	-43.17'	779.80	779.80
A	242+99.63	-43.17'	779.99	780.04
B	243+09.63	-43.17'	780.16	780.26
C	243+19.63	-43.17'	780.32	780.45
D	243+29.63	-43.17'	780.47	780.60
E	243+39.63	-43.17'	780.59	780.72
F	243+49.63	-43.17'	780.70	780.80
G	243+59.63	-43.17'	780.80	780.85
☉ OF E. ABUT	243+69.92	-43.17'	780.88	780.88
BK. OF E. ABUT	243+72.31	-43.17'	780.90	780.90

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	242+93.54	-34.17'	780.10	780.10
☉ OF W. ABUT	242+95.93	-34.17'	780.15	780.15
A	243+05.93	-34.17'	780.33	780.38
B	243+15.93	-34.17'	780.49	780.58
C	243+25.93	-34.17'	780.64	780.76
D	243+35.93	-34.17'	780.77	780.91
E	243+45.93	-34.17'	780.89	781.01
F	243+55.93	-34.17'	780.99	781.09
G	243+65.93	-34.17'	781.08	781.13
☉ OF E. ABUT	243+76.23	-34.17'	781.15	781.15
BK. OF E. ABUT	243+78.62	-34.17'	781.16	781.16

WESTBOUND LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	242+94.35	-33.00'	780.15	780.15
☉ OF W. ABUT	242+96.74	-33.00'	780.19	780.19
A	243+06.74	-33.00'	780.37	780.42
B	243+16.74	-33.00'	780.53	780.63
C	243+26.74	-33.00'	780.68	780.80
D	243+36.74	-33.00'	780.81	780.94
E	243+46.74	-33.00'	780.93	781.05
F	243+56.74	-33.00'	781.03	781.12
G	243+66.74	-33.00'	781.11	781.16
☉ OF E. ABUT	243+77.04	-33.00'	781.18	781.18
BK. OF E. ABUT	243+79.43	-33.00'	781.20	781.20

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	242+99.84	-25.17'	780.40	780.40
☉ OF W. ABUT	243+02.23	-25.17'	780.45	780.45
A	243+12.23	-25.17'	780.62	780.67
B	243+22.23	-25.17'	780.77	780.87
C	243+32.23	-25.17'	780.91	781.03
D	243+42.23	-25.17'	781.03	781.17
E	243+52.23	-25.17'	781.14	781.26
F	243+62.23	-25.17'	781.23	781.33
G	243+72.23	-25.17'	781.31	781.36
☉ OF E. ABUT	243+82.53	-25.17'	781.37	781.37
BK. OF E. ABUT	243+84.92	-25.17'	781.38	781.38

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+06.14	-16.17'	780.70	780.70
☉ OF W. ABUT	243+08.53	-16.17'	780.74	780.74
A	243+18.53	-16.17'	780.90	780.95
B	243+28.53	-16.17'	781.04	781.14
C	243+38.53	-16.17'	781.17	781.29
D	243+48.53	-16.17'	781.28	781.42
E	243+58.53	-16.17'	781.38	781.50
F	243+68.53	-16.17'	781.46	781.56
G	243+78.53	-16.17'	781.53	781.58
☉ OF E. ABUT	243+88.83	-16.17'	781.58	781.58
BK. OF E. ABUT	243+91.22	-16.17'	781.59	781.59

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+12.44	-7.17'	780.98	780.98
☉ OF W. ABUT	243+14.83	-7.17'	781.02	781.02
A	243+24.83	-7.17'	781.17	781.22
B	243+34.83	-7.17'	781.31	781.40
C	243+44.83	-7.17'	781.42	781.55
D	243+54.83	-7.17'	781.53	781.66
E	243+64.83	-7.17'	781.61	781.74
F	243+74.83	-7.17'	781.69	781.78
G	243+84.83	-7.17'	781.74	781.79
☉ OF E. ABUT	243+95.13	-7.17'	781.78	781.78
BK. OF E. ABUT	243+97.52	-7.17'	781.79	781.79

**☉ AND PGL U.S. ROUTE 20 (LAKE ST.),
STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+17.46	0.00'	781.20	781.20
☉ OF W. ABUT	243+19.85	0.00'	781.24	781.24
A	243+29.85	0.00'	781.38	781.43
B	243+39.85	0.00'	781.51	781.60
C	243+49.85	0.00'	781.62	781.74
D	243+59.85	0.00'	781.72	781.85
E	243+69.85	0.00'	781.80	781.92
F	243+79.85	0.00'	781.86	781.95
G	243+89.85	0.00'	781.91	781.96
☉ OF E. ABUT	244+00.15	0.00'	781.94	781.94
BK. OF E. ABUT	244+02.54	0.00'	781.94	781.94

FILE PATH = P:\1605-677\1001\PIB163\Item 9 - Ferro-Via-Order #24 - U.S. Route 20 (Lake St.)\Over-West Branch DupPage River\000 Sheets\09-15\TabElev.dgn



4415 WEST HARRISON ST.
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FAX: (708) 236-0901

S09-TS1abElev1.dgn
USER NAME = Stojanika.Kotorakova
PLOT SCALE = 0:2.0000 '1' = 1"
PLOT DATE = 10/19/2016

DESIGNED - LAB
DRAWN - LAB
CHECKED - MI
DATE - 6/15/2016

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 1 OF 2)
STRUCTURE NO. 022-0548**

SCALE: SHEET S-09 OF S-35 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	103
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+18.74	1.83'	781.19	781.19
☉ OF W. ABUT	243+21.13	1.83'	781.22	781.22
A	243+31.13	1.83'	781.36	781.42
B	243+41.13	1.83'	781.49	781.58
C	243+51.13	1.83'	781.60	781.72
D	243+61.13	1.83'	781.69	781.82
E	243+71.13	1.83'	781.77	781.89
F	243+81.13	1.83'	781.83	781.92
G	243+91.13	1.83'	781.87	781.93
☉ OF E. ABUT	244+01.43	1.83'	781.90	781.90
BK. OF E. ABUT	244+03.82	1.83'	781.91	781.91

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+25.05	10.83'	781.10	781.10
☉ OF W. ABUT	243+27.44	10.83'	781.13	781.13
A	243+37.44	10.83'	781.26	781.32
B	243+47.44	10.83'	781.38	781.47
C	243+57.44	10.83'	781.48	781.60
D	243+67.44	10.83'	781.56	781.69
E	243+77.44	10.83'	781.63	781.75
F	243+87.44	10.83'	781.68	781.77
G	243+97.44	10.83'	781.71	781.77
☉ OF E. ABUT	244+07.73	10.83'	781.73	781.73
BK. OF E. ABUT	244+10.13	10.83'	781.74	781.74

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+31.35	19.83'	781.01	781.01
☉ OF W. ABUT	243+33.74	19.83'	781.04	781.04
A	243+43.74	19.83'	781.16	781.21
B	243+53.74	19.83'	781.26	781.36
C	243+63.74	19.83'	781.35	781.47
D	243+73.74	19.83'	781.43	781.56
E	243+83.74	19.83'	781.48	781.60
F	243+93.74	19.83'	781.52	781.62
G	244+03.74	19.83'	781.55	781.60
☉ OF E. ABUT	244+14.04	19.83'	781.56	781.56
BK. OF E. ABUT	244+16.43	19.83'	781.56	781.56

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+37.65	28.83'	780.91	780.91
☉ OF W. ABUT	243+40.04	28.83'	780.94	780.94
A	243+50.04	28.83'	781.05	781.10
B	243+60.04	28.83'	781.14	781.23
C	243+70.04	28.83'	781.22	781.34
D	243+80.04	28.83'	781.28	781.41
E	243+90.04	28.83'	781.33	781.45
F	244+00.04	28.83'	781.36	781.46
G	244+10.04	28.83'	781.38	781.43
☉ OF E. ABUT	244+20.34	28.83'	781.37	781.37
BK. OF E. ABUT	244+22.73	28.83'	781.37	781.37

EASTBOUND LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+40.57	33.00'	780.86	780.86
☉ OF W. ABUT	243+42.96	33.00'	780.89	780.89
A	243+52.96	33.00'	780.99	781.04
B	243+62.96	33.00'	781.08	781.18
C	243+72.96	33.00'	781.16	781.28
D	243+82.96	33.00'	781.21	781.35
E	243+92.96	33.00'	781.26	781.38
F	244+02.96	33.00'	781.28	781.38
G	244+12.96	33.00'	781.29	781.35
☉ OF E. ABUT	244+23.26	33.00'	781.29	781.29
BK. OF E. ABUT	244+25.65	33.00'	781.28	781.28

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+43.95	37.83'	780.78	780.78
☉ OF W. ABUT	243+46.34	37.83'	780.80	780.80
A	243+56.34	37.83'	780.90	780.95
B	243+66.34	37.83'	780.99	781.08
C	243+76.34	37.83'	781.06	781.18
D	243+86.34	37.83'	781.11	781.24
E	243+96.34	37.83'	781.15	781.27
F	244+06.34	37.83'	781.17	781.26
G	244+16.34	37.83'	781.17	781.23
☉ OF E. ABUT	244+26.64	37.83'	781.16	781.16
BK. OF E. ABUT	244+29.03	37.83'	781.16	781.16

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+50.25	46.83'	780.62	780.62
☉ OF W. ABUT	243+52.64	46.83'	780.64	780.64
A	243+62.64	46.83'	780.73	780.79
B	243+72.64	46.83'	780.81	780.90
C	243+82.64	46.83'	780.87	780.99
D	243+92.64	46.83'	780.91	781.04
E	244+02.64	46.83'	780.94	781.06
F	244+12.64	46.83'	780.95	781.04
G	244+22.64	46.83'	780.94	781.00
☉ OF E. ABUT	244+32.94	46.83'	780.92	780.92
BK. OF E. ABUT	244+35.33	46.83'	780.91	780.91

BICYCLE LANE SLOPE CHANGE (BK. OF S. PARAPET)

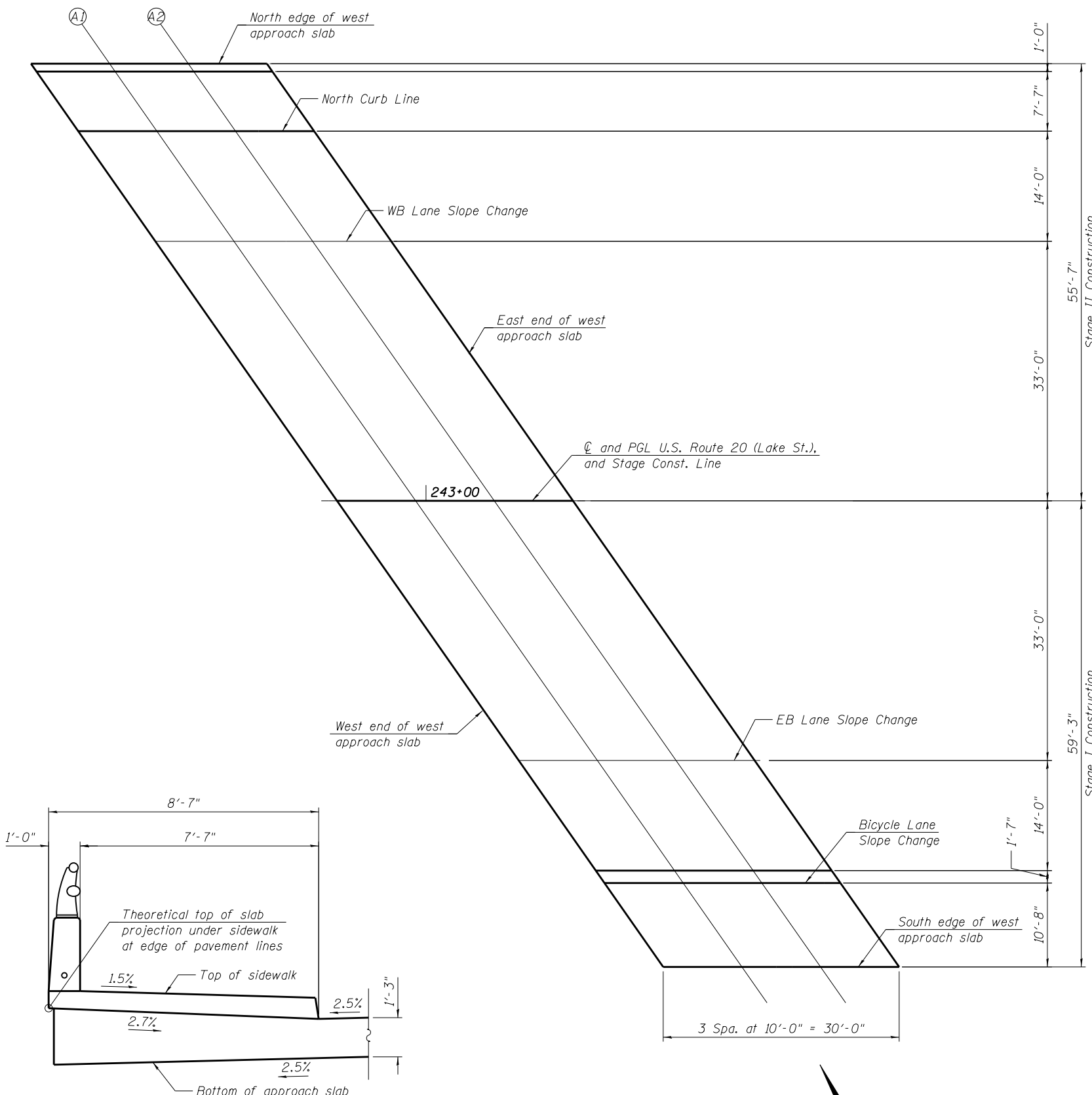
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+56.55	48.58'	780.59	780.59
☉ OF W. ABUT	243+58.95	48.58'	780.61	780.61
A	243+68.95	48.58'	780.70	780.75
B	243+78.95	48.58'	780.77	780.87
C	243+88.95	48.58'	780.83	780.95
D	243+98.95	48.58'	780.87	781.00
E	244+08.95	48.58'	780.90	781.02
F	244+18.95	48.58'	780.90	781.00
G	244+28.95	48.58'	780.90	780.95
☉ OF E. ABUT	244+39.24	48.58'	780.87	780.87
BK. OF E. ABUT	244+41.63	48.58'	780.87	780.87

BEAM 13

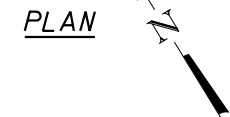
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF W. ABUT	243+56.55	55.83'	780.51	780.51
☉ OF W. ABUT	243+58.95	55.83'	780.54	780.54
A	243+68.95	55.83'	780.62	780.67
B	243+78.95	55.83'	780.68	780.77
C	243+88.95	55.83'	780.73	780.85
D	243+98.95	55.83'	780.76	780.89
E	244+08.95	55.83'	780.78	780.90
F	244+18.95	55.83'	780.78	780.87
G	244+28.95	55.83'	780.76	780.82
☉ OF E. ABUT	244+39.24	55.83'	780.73	780.73
BK. OF E. ABUT	244+41.63	55.83'	780.72	780.72

FILE PATH = P:\1605-677\1001\PIB163\Item 9 - Ferro-Vent-Order-24 - U.S.Route 28 (Lake St.)\Over-West Branch DupPage River\CAD Sheets\SI18-TS1abElev2.dgn

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LOCATION OF ELEVATION UNDER NORTH SIDEWALK
(Near Abutment)



NORTH EDGE OF WEST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	242+49.76	-55.58'	779.03
A1	242+59.76	-55.58'	779.27
A2	242+69.76	-55.58'	779.50
E. End West Appr. Slab	242+79.76	-55.58'	779.73

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	242+55.77	-47.00'	778.95
A1	242+65.77	-47.00'	779.18
A2	242+75.77	-47.00'	779.41
E. End West Appr. Slab	242+85.77	-47.00'	779.63

WB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	242+65.57	-33.00'	779.53
A1	242+75.57	-33.00'	779.76
A2	242+85.57	-33.00'	779.97
E. End West Appr. Slab	242+95.57	-33.00'	780.17

**☐ AND PGL U.S. ROUTE 20 (LAKE ST.),
STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	242+88.68	0.00'	780.69
A1	242+98.68	0.00'	780.89
A2	243+08.68	0.00'	781.06
E. End West Appr. Slab	243+18.68	0.00'	781.22

EB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	243+11.79	33.00'	780.45
A1	243+21.79	33.00'	780.61
A2	243+31.79	33.00'	780.75
E. End West Appr. Slab	243+41.79	33.00'	780.87

BICYCLE LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	243+22.70	48.58'	780.23
A1	243+32.70	48.58'	780.37
A2	243+42.70	48.58'	780.49
E. End East Appr. Slab	243+52.70	48.58'	780.60

SOUTH EDGE OF WEST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	243+30.17	59.25'	780.16
A1	243+40.17	59.25'	780.28
A2	243+50.17	59.25'	780.39
E. End West Appr. Slab	243+60.17	59.25'	780.49

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RESEARCH & TESTING

S11-TWestApprElev.dgn
USER NAME = Stojanka.Kotorakova
PLOT SCALE = 16.00' / in.
PLOT DATE = 10/19/2016

DESIGNED - LAB
DRAWN - LAB
CHECKED - MI
DATE - 6/15/2016

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 022-0548**

SCALE: SHEET S-11 OF S-35 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	105
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	243+62.40	-55.58'	780.96
A3	243+72.40	-55.58'	781.03
A4	243+82.40	-55.58'	781.09
E. End East Appr. Slab	243+92.40	-55.58'	781.13

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	243+68.41	-47.00'	780.77
A3	243+78.41	-47.00'	780.84
A4	243+88.41	-47.00'	780.89
E. End East Appr. Slab	243+98.41	-47.00'	780.92

WB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	243+78.21	-33.00'	781.19
A3	243+88.21	-33.00'	781.24
A4	243+98.21	-33.00'	781.27
E. End East Appr. Slab	244+08.21	-33.00'	781.29

**☐ AND PGL U.S. ROUTE 20 (LAKE ST.),
STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	244+01.32	0.00'	781.94
A3	244+11.32	0.00'	781.95
A4	244+21.32	0.00'	781.95
E. End East Appr. Slab	244+31.32	0.00'	781.93

EB LANE SLOPE CHANGE

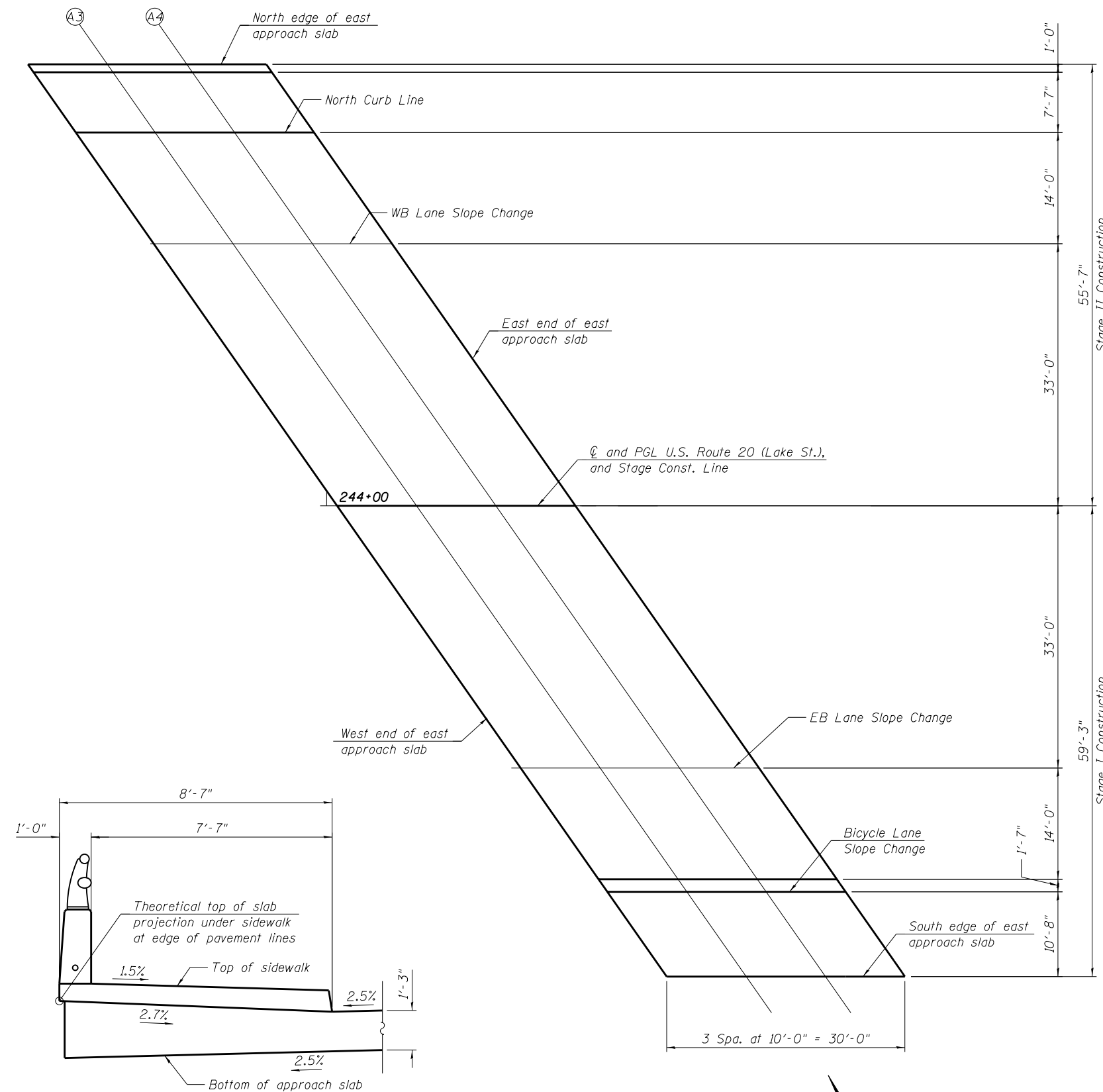
Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	244+24.43	33.00'	781.29
A3	244+34.43	33.00'	781.26
A4	244+44.43	33.00'	781.22
E. End East Appr. Slab	244+54.43	33.00'	781.17

BICYCLE LANE SLOPE CHANGE

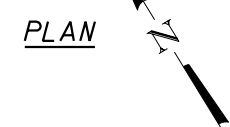
Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	244+35.34	48.58'	780.87
A3	244+45.34	48.58'	780.83
A4	244+55.34	48.58'	780.77
E. End East Appr. Slab	244+65.34	48.58'	780.70

SOUTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	244+42.81	59.25'	780.66
A3	244+52.81	59.25'	780.61
A4	244+62.81	59.25'	780.54
E. End East Appr. Slab	244+72.81	59.25'	780.45



LOCATION OF ELEVATION UNDER NORTH SIDEWALK
(Near Abutment)



FILE PATH = P:\1606-677\1001\PIB163\Item 9 - Ferro-Vent-Order #24 - U.S. Route 20 (Lake St.)\Over West Branch DupPage River\CADD Sheets\SI2-TEastApprElev.dgn

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ENGINEERING GROUP, LLC
CONSULTING & DESIGN
INSPECTION & RATING
RESEARCH & TESTING

4415 WEST HARRISON ST.
SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900
FAX: (708) 236-0901

SI2-TEastApprElev.dgn	DESIGNED - LAB	REVISED -
USER NAME = Stojanka,Kotorakova	DRAWN - LAB	REVISED -
PLOT SCALE = 16.00' / in.	CHECKED - MI	REVISED -
PLOT DATE = 10/19/2016	DATE - 6/15/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

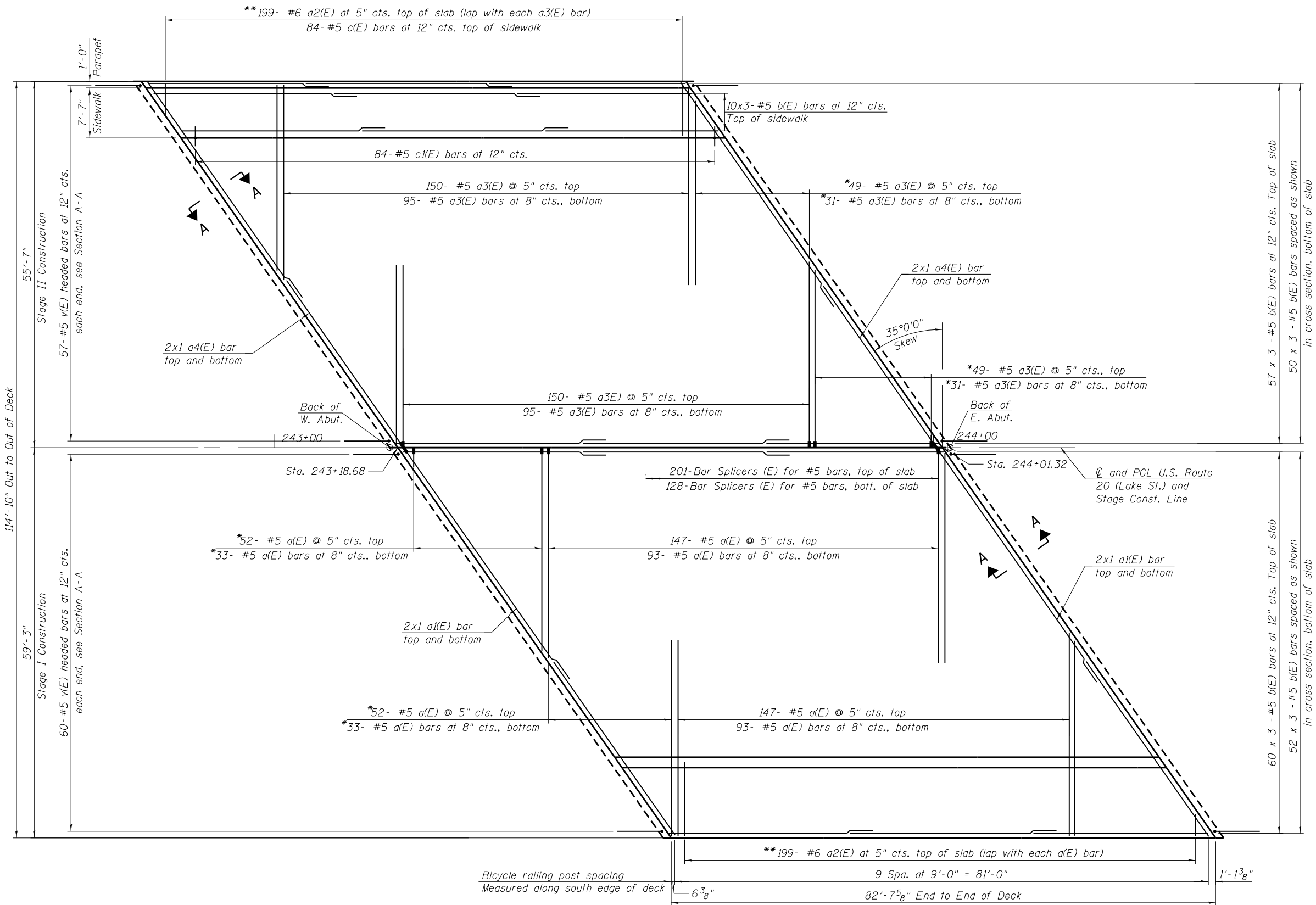
**TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 022-0548**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	106
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET S-12 OF S-35 SHEETS STA. TO STA.

* Order a(E) and a3(E) bars full length. Cut to fit Skew and use remainder of bars in opposite end

** Cut in field to fit



PLAN

NOTES:

1. Bars indicated thus 60 x 3 - #5 indicates 60 lines of bars with 3 length per line.
2. For Deck cross section, see Sheet S-14.
3. For parapet elevations and reinforcement, see Sheet S-15.
4. For abutment diaphragm elevations and section A-A, see Sheet S-16.
5. For deck details, bar diagrams, minimum bar laps and bill of material, see Sheet S-17.
6. For Bar Splicer Detail, see Sheet S-32.

FILE PATH = P:\1605-677\DDT\PTB163\Item 9 - Ferro\Work Order #24 - U.S. Route 20 (Lake St.)\Over West Branch DuPage River\CAD\Drawings\Sheet\13-Deck Plan.dgn

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RESEARCH & TESTING

4415 WEST HARRISON ST.
SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900
FAX: (708) 236-0901

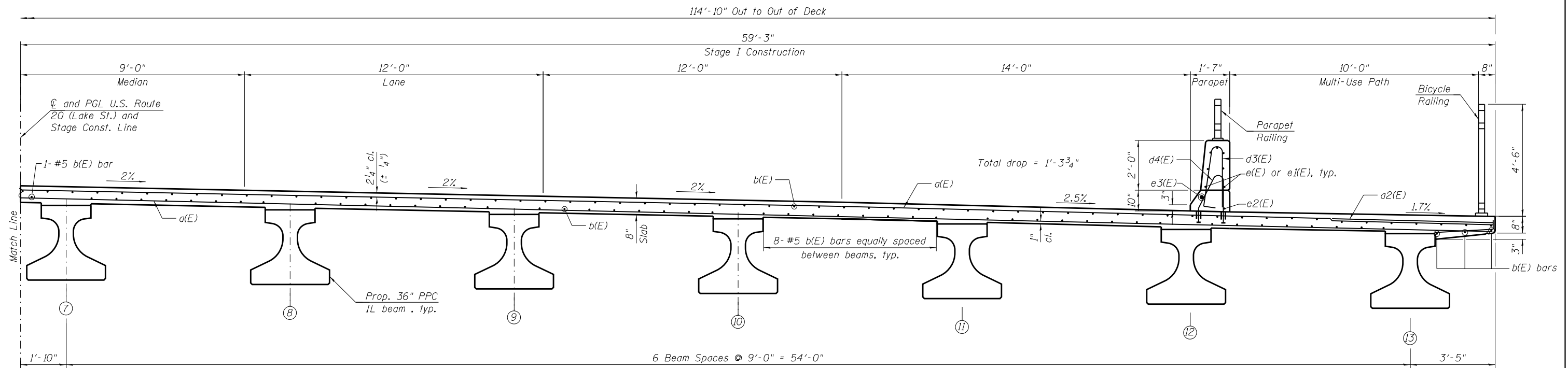
S13-Deck Plan.dgn	DESIGNED - MAA	REVISED -
USER NAME = Stojanka,Kotorokova	DRAWN - MAA	REVISED -
PLOT SCALE = 1/8" = 1' / in.	CHECKED - MI, SK	REVISED -
PLOT DATE = 10/19/2016	DATE - 6/15/2016	REVISED -

DESIGNED - MAA	REVISED -
DRAWN - MAA	REVISED -
CHECKED - MI, SK	REVISED -
DATE - 6/15/2016	REVISED -

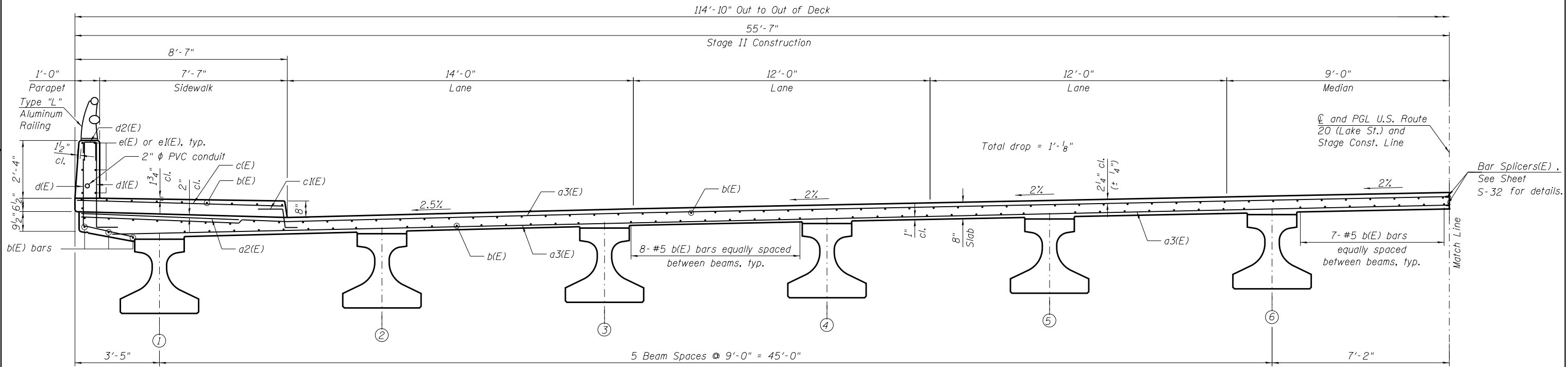
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN	
STRUCTURE NO. 022-0548	
SCALE:	SHEET S-13 OF S-35 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	107
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				



CROSS SECTION (STAGE I)
Right of bridge centerline Looking East



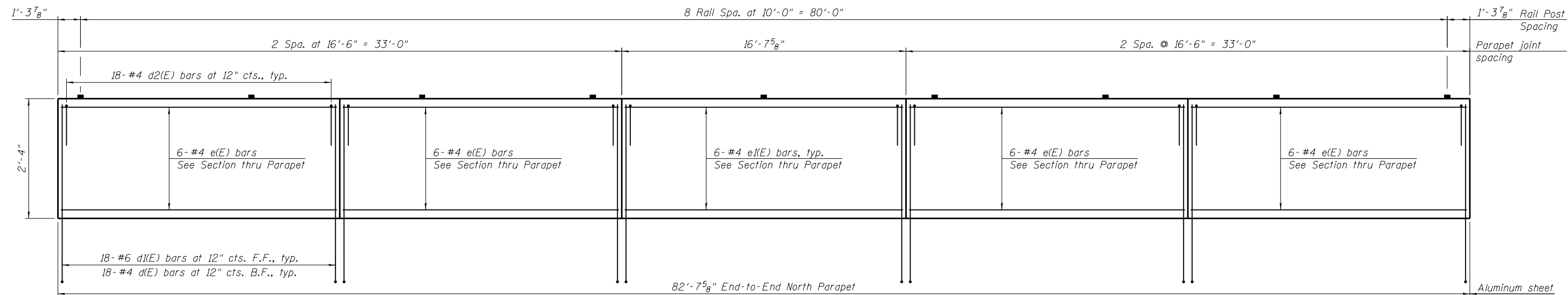
CROSS SECTION (STAGE II)
Left of bridge centerline Looking East

NOTES:

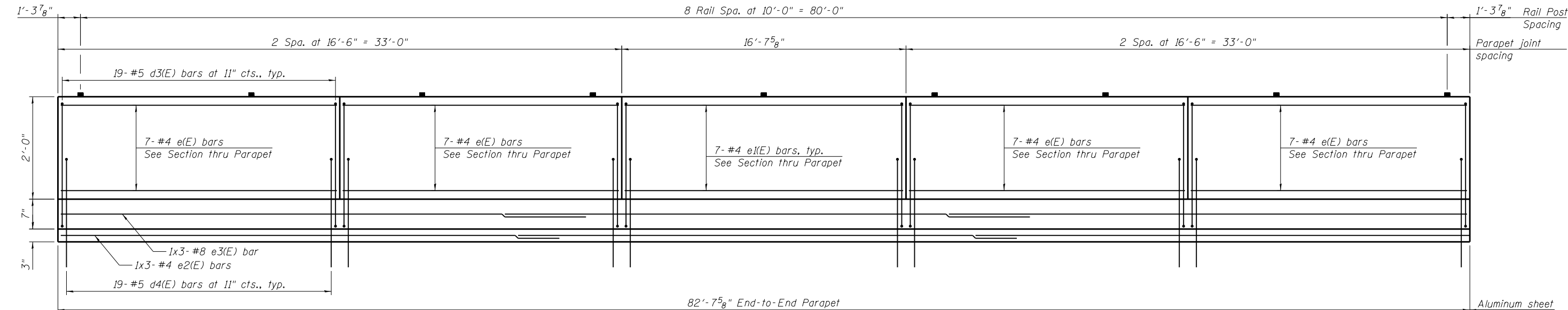
1. For notes, see Sheet S-13.
2. For IL36N PPC Concrete beam details, see Sheets S-25 and S-26.

FILE PATH = P:\1606-677\1001\PT16163\Item 9 - Ferro\Work Order #24 - U.S. Route 20 (Lake St.)\Draw - West Branch Dupage River\CAD\Drawings\SI14-DeckCrossSection.dgn

HBM ENGINEERING GROUP, LLC 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	S14-DeckCrossSection.dgn USER NAME = Stojanka.Kotorakova PLOT SCALE = 4:8.0000 '1' / in. PLOT DATE = 10/19/2016	DESIGNED - MAA DRAWN - MAA CHECKED - MI, SK DATE - 6/15/2016	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK CROSS SECTION STRUCTURE NO. 022-0548	SCALE:	SHEET S-14 OF S-35 SHEETS STA. TO STA.	F.A.P. RTE. 021/345	SECTION 2015-006B-R	COUNTY DUPAGE	TOTAL SHEETS 170	SHEET NO. 108
	CONTRACT NO. 62A60								ILLINOIS FED. AID PROJECT			



INSIDE ELEVATION OF NORTH PARAPET
(Looking North)



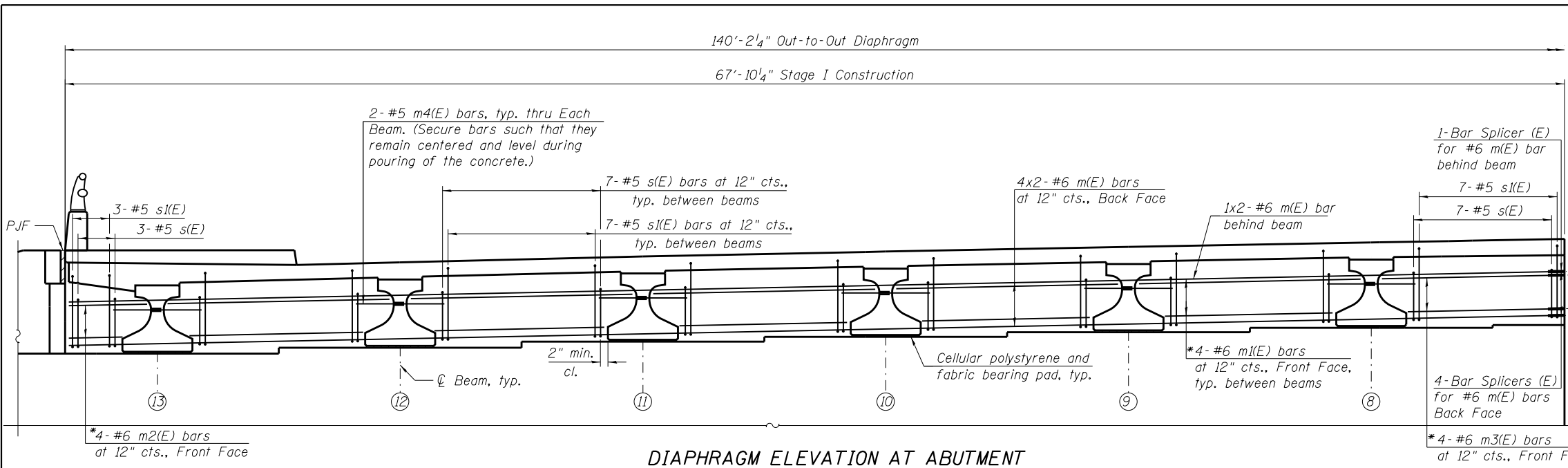
INSIDE ELEVATION OF SOUTH PARAPET
(Looking South)

NOTES:

1. For notes, see Sheet S-13 .
2. For Sections thru Parapets, bar diagrams and bill of material, see Sheet S-17 .

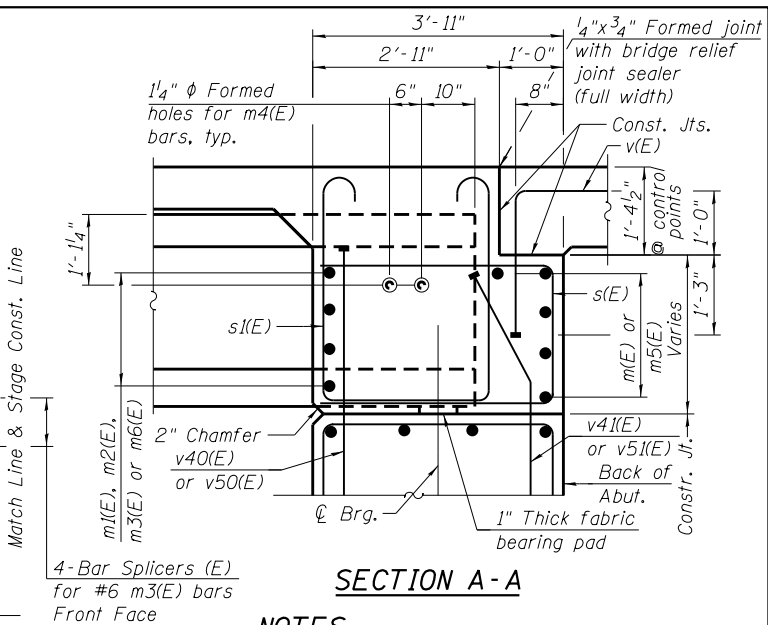
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HBM ENGINEERING GROUP, LLC CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	S15-Parapet.dgn	DESIGNED - KJD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PARAPET ELEVATIONS AND DETAILS STRUCTURE NO. 022-0548	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	USER NAME = Stoyanka.Kotorakova	DRAWN - KJD	REVISED -			021/345	2015-006B-R	DUPAGE	170	109	CONTRACT NO. 62A60
	PLOT SCALE = 6:0.0000 '1' = 1/16"	CHECKED - MI, SK	REVISED -			ILLINOIS FED. AID PROJECT					
	PLOT DATE = 10/19/2016	DATE - 6/15/2016	REVISED -	SCALE:	SHEET S-15 OF S-35 SHEETS	STA.	TO STA.				



DIAPHRAGM ELEVATION AT ABUTMENT

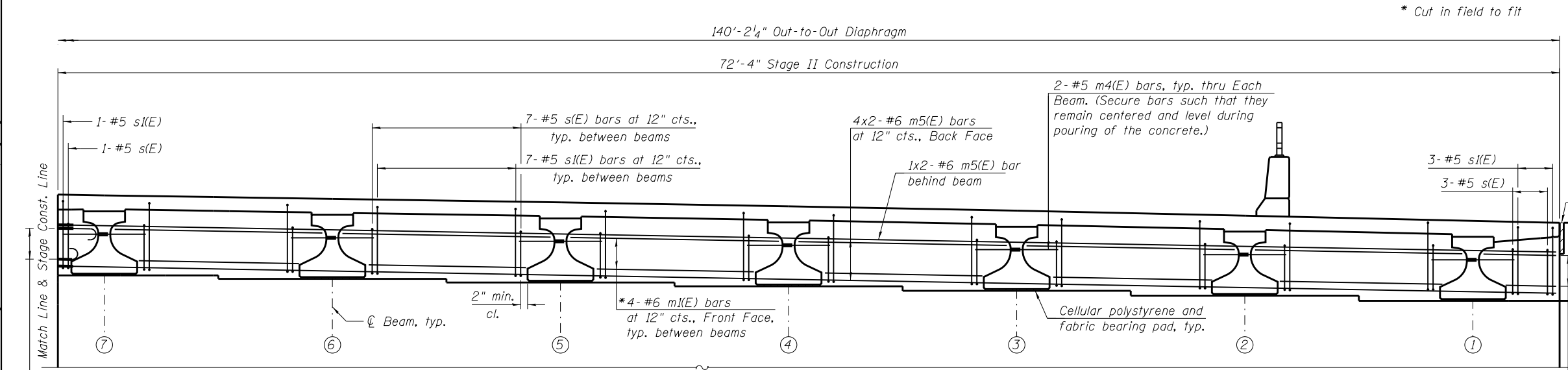
(East Abutment shown, West Abutment similar opposite hand)



SECTION A-A

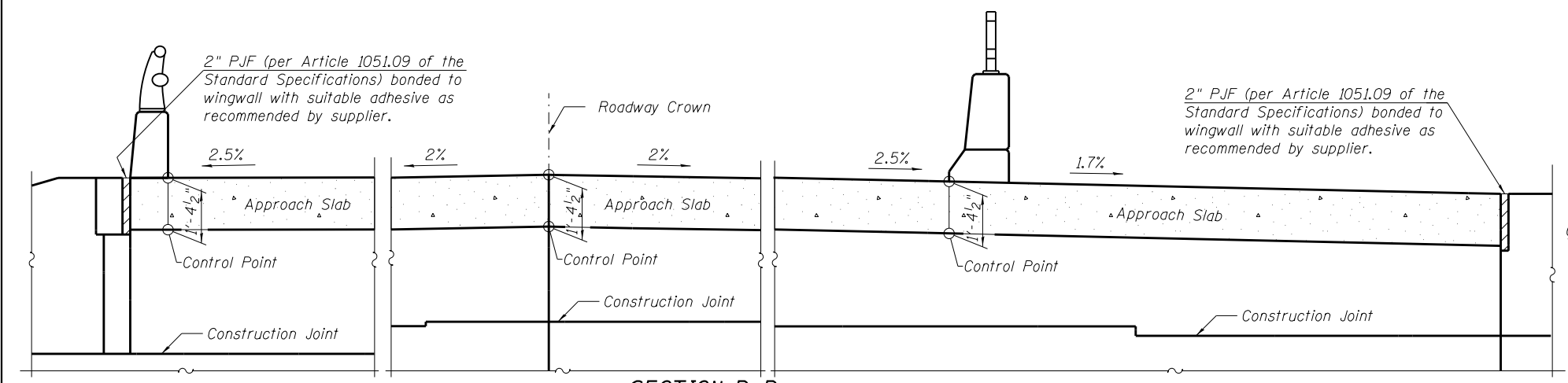
NOTES:

- For additional notes, see Sheet S-13.
- Reinforcement bars in diaphragm are billed with Superstructure on Sheet S-17.
- Concrete in diaphragm is included with Superstructure on Sheet S-17.
- The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
- The approach slab seat shall have a constant slope determined from the control points shown.
- Cost of cellular polystyrene is included with Concrete Superstructure.
- Cost of fabric bearing pad is included with Furnishing and Erecting Precast Prestressed Concrete Beams IL36N.

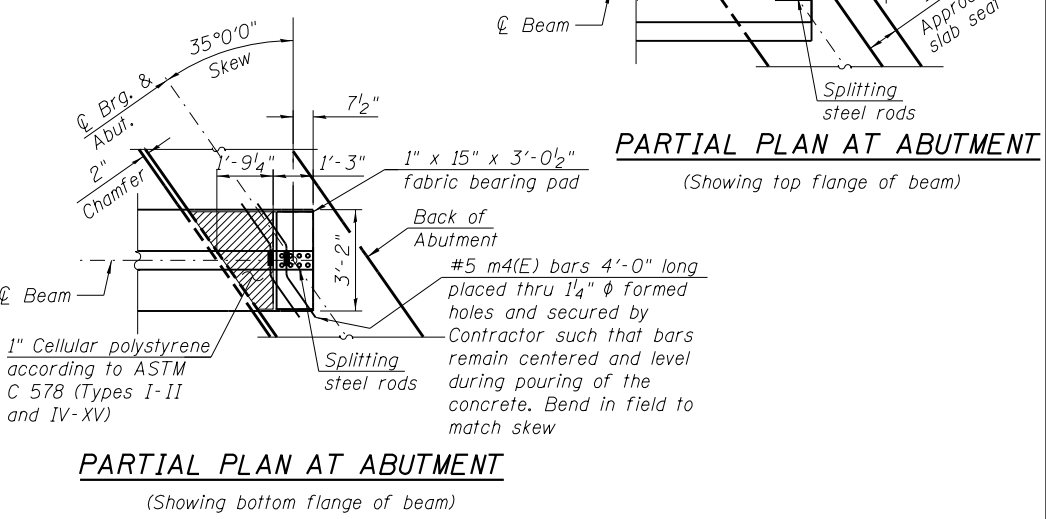


DIAPHRAGM ELEVATION AT ABUTMENT

(East Abutment shown, West Abutment similar opposite hand)



SECTION B-B



PARTIAL PLAN AT ABUTMENT

(Showing top flange of beam)

PARTIAL PLAN AT ABUTMENT

(Showing bottom flange of beam)

FILE PATH = P:\1605-677\1001\PT16163\Item 9 - FerroWork\Order #2h - U.S.Route 28 (Lake St.)\Over West Branch DupPage River\CADD Sheets\S16-AbutDiaphragms.dgn

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INSPECTION & TESTING
RESEARCH & TESTING

S16-AbutDiaphragms.dgn
USER NAME = Stoyanka,Kotorakova
PLOT SCALE = 640.0000 1" = 16'
PLOT DATE = 10/19/2016

DESIGNED - SK	REVISED -
DRAWN - SK	REVISED -
CHECKED - MI, SK	REVISED -
DATE - 6/15/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM ELEVATIONS AND SECTIONS
STRUCTURE NO. 022-0548

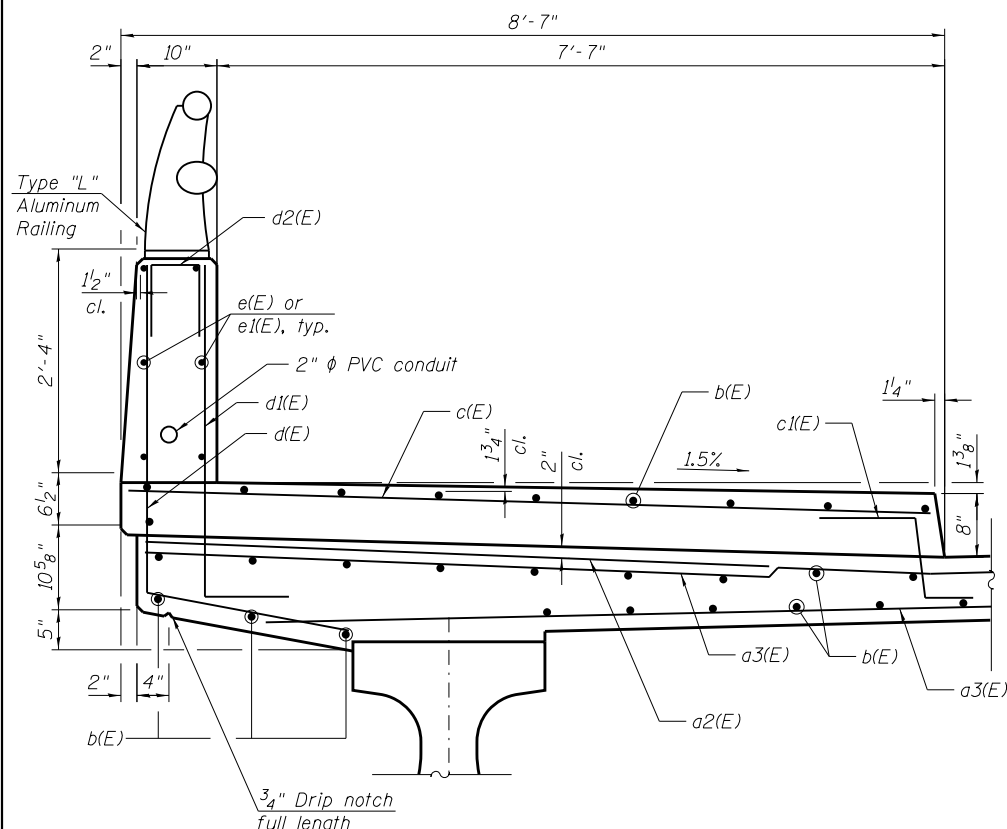
SCALE: SHEET S-16 OF S-35 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	110
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

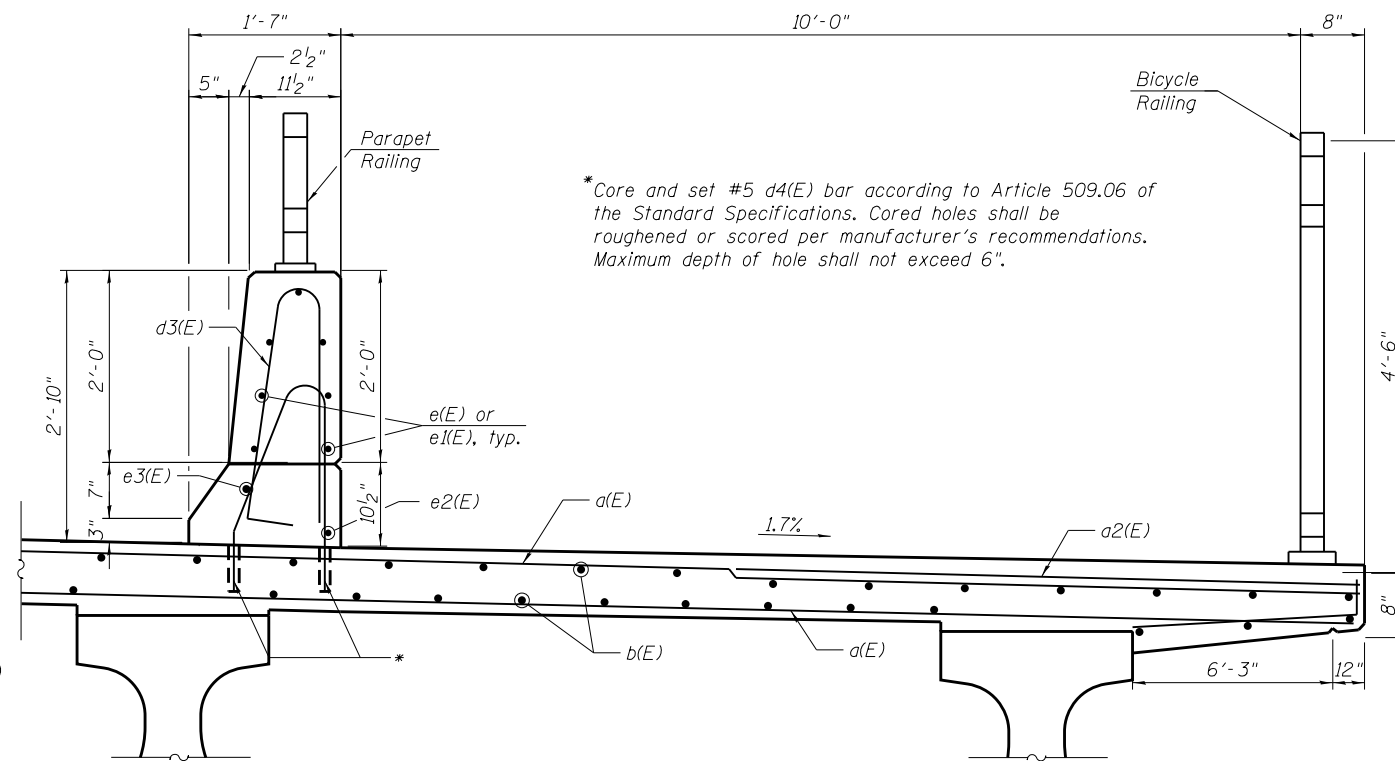
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	650	#5	31'-3"	—
a1(E)	8	#5	37'-9"	—
a2(E)	398	#6	6'-6"	—
a3(E)	650	#5	29'-5"	—
a4(E)	8	#5	35'-7"	—
b(E)	687	#5	29'-9"	—
c(E)	84	#5	8'-3"	—
c1(E)	84	#5	2'-4"	└
d(E)	90	#4	5'-7"	└
d1(E)	90	#6	4'-4"	└
d2(E)	90	#4	2'-0"	└
d3(E)	95	#5	5'-7"	└
d4(E)	95	#5	4'-8"	└
e(E)	52	#4	16'-2"	—
e1(E)	13	#4	16'-4"	—
e2(E)	3	#4	29'-1"	—
e3(E)	3	#8	31'-5"	—
m(E)	20	#6	36'-0"	—
m1(E)	88	#6	10'-0"	—
m2(E)	16	#6	3'-7"	—
m3(E)	8	#6	8'-2"	—
m4(E)	52	#5	4'-0"	—
m5(E)	20	#6	38'-3"	—
m6(E)	8	#6	2'-4"	—
s(E)	182	#5	9'-4"	└
s1(E)	182	#5	10'-5"	└
v(E)	234	#5	4'-2"	└
Concrete Superstructure		Cu. Yd.	375.1	
Bridge Deck Grooving		Sq. Yd.	958	
Protective Coat		Sq. Yd.	1,144	
Reinforcement Bars, Epoxy Coated		Pound	79,690	

Reinforcement bars designated (E) shall be epoxy coated.

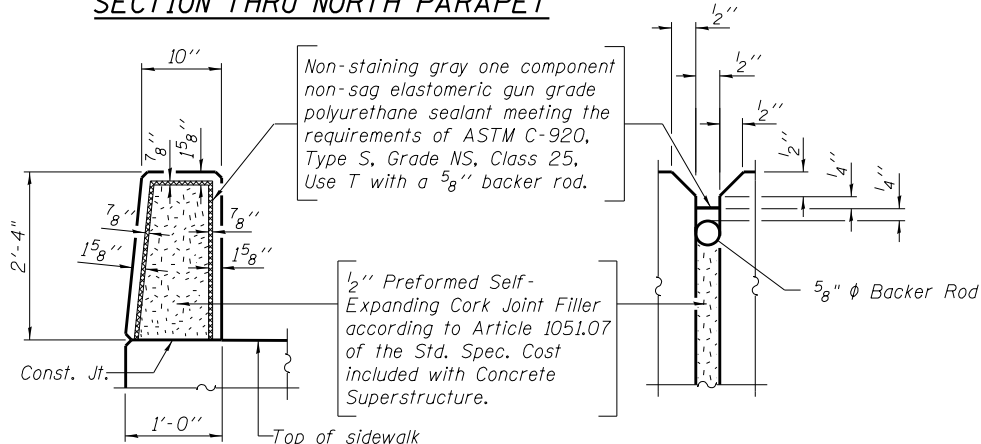


SECTION THRU NORTH PARAPET

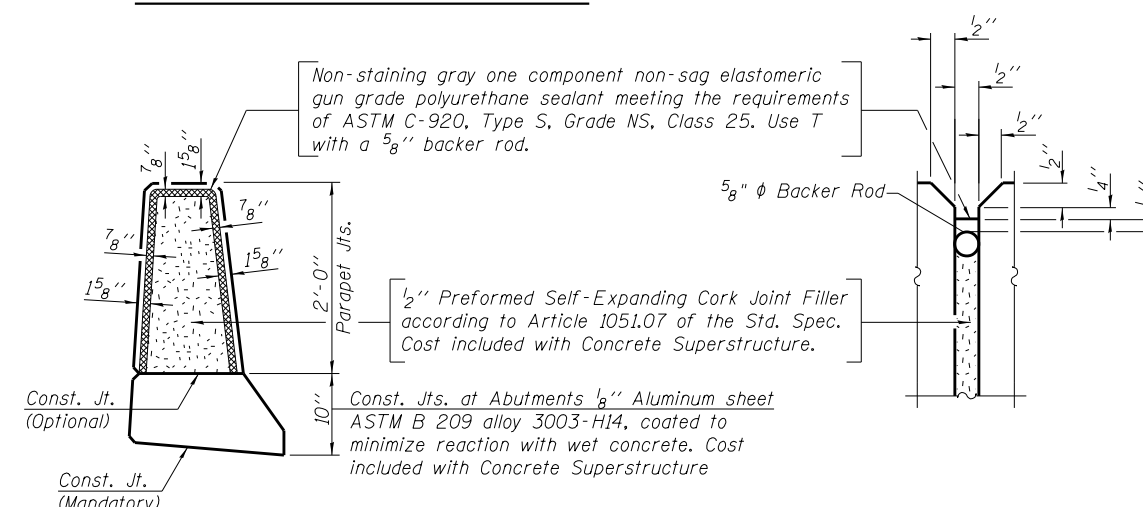


SECTION THRU SOUTH PARAPET

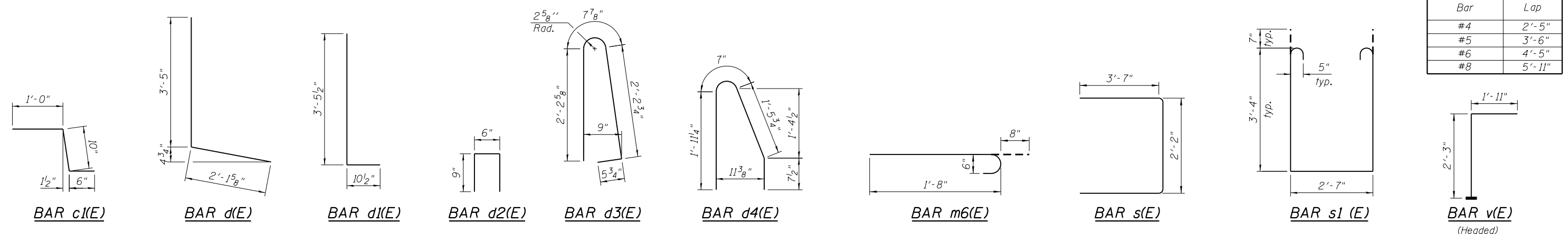
*Core and set #5 d4(E) bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6".



NORTH PARAPET JOINT DETAILS



SOUTH PARAPET JOINT DETAILS

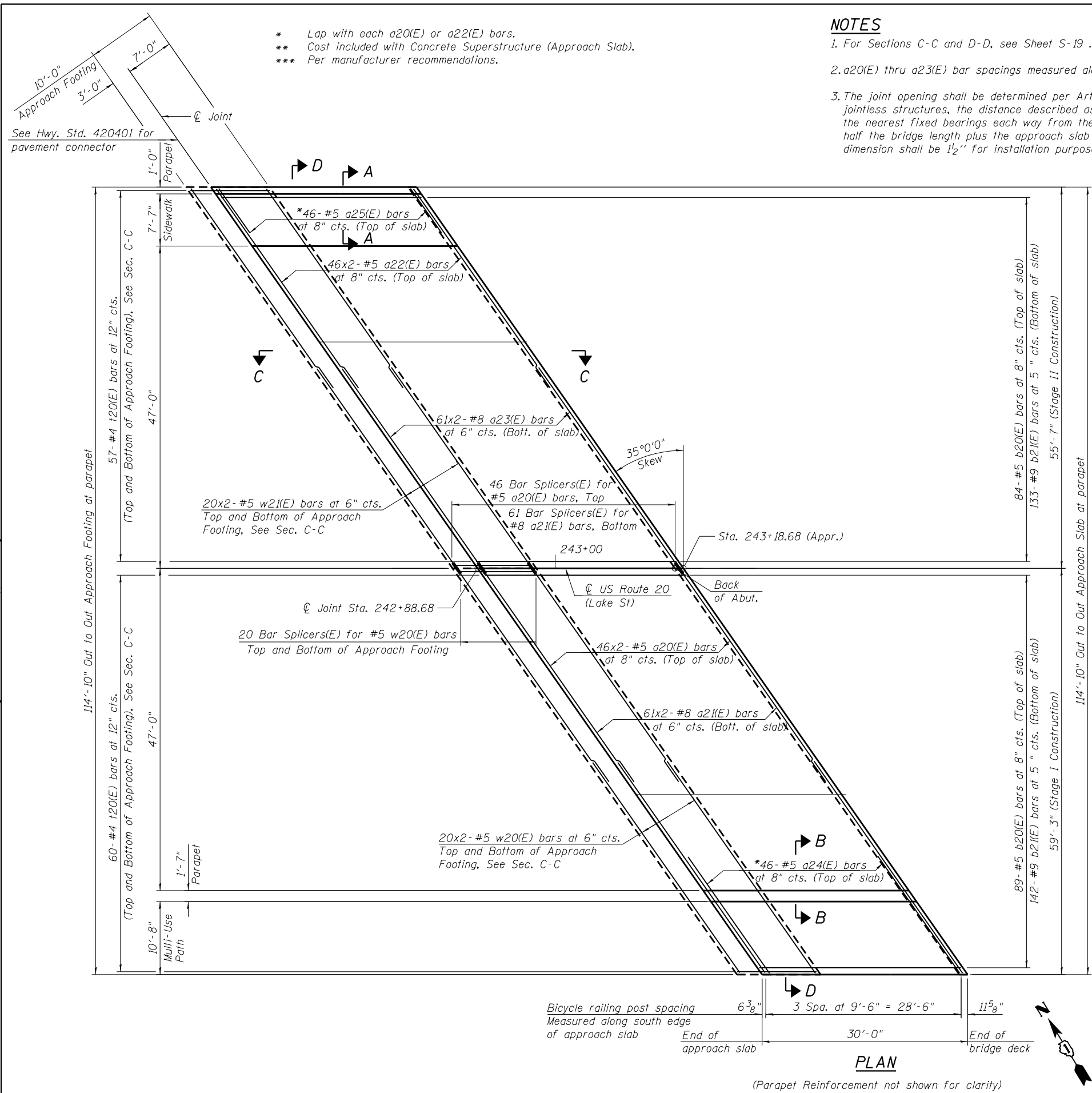


Minimum Bar Laps	
Bar	Lap
#4	2'-5"
#5	3'-6"
#6	4'-5"
#8	5'-11"

FILE PATH = P:\1605-677\1001_P16163_Item_9 - FerroWork_Order_#24 - U.S.Route 28 (Lake St.)\Over West Branch DupPage\Cardd Sheets\S17-DeckDetails.dgn

HBM ENGINEERING GROUP, LLC CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	S17-DeckDetails.dgn USER NAME = Stojanka,Kotorakova PLOT SCALE = 6:0.0000 1" = 10' PLOT DATE = 10/19/2016	DESIGNED - MAA, KJD DRAWN - MAA, KJD CHECKED - MI, SK DATE - 6/15/2016	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK DETAILS, BAR DIAGRAMS AND BILL OF MATERIAL STRUCTURE NO. 022-0548	SCALE: SHEET S-17 OF S-35 SHEETS STA. TO STA.	F.A.P. RTE. 021/345 SECTION 2015-006B-R COUNTY DUPAGE TOTAL SHEETS 170 SHEET NO. 111	CONTRACT NO. 62A60 ILLINOIS FED. AID PROJECT
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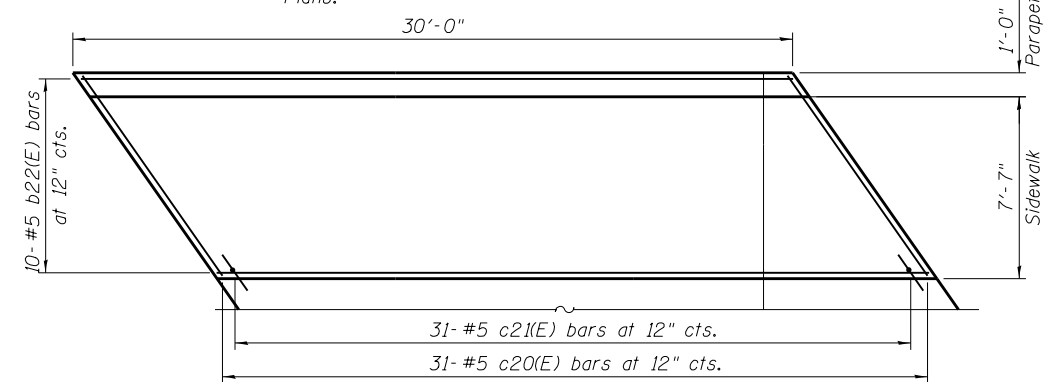


- * Lap with each a20(E) or a22(E) bars.
- ** Cost included with Concrete Superstructure (Approach Slab).
- *** Per manufacturer recommendations.

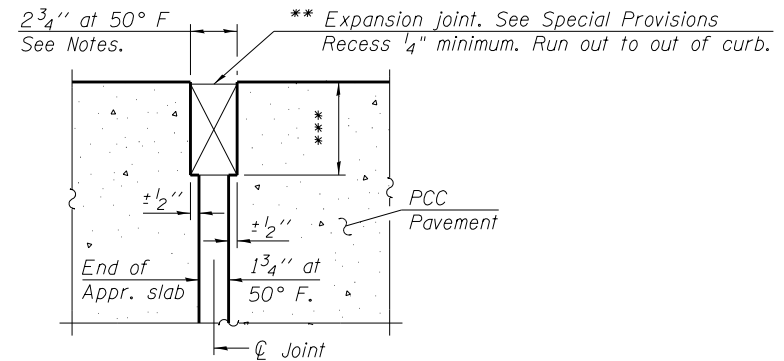
NOTES

1. For Sections C-C and D-D, see Sheet S-19 .
2. a20(E) thru a23(E) bar spacings measured along \perp Rdwy.
3. The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1 1/2' for installation purposes.

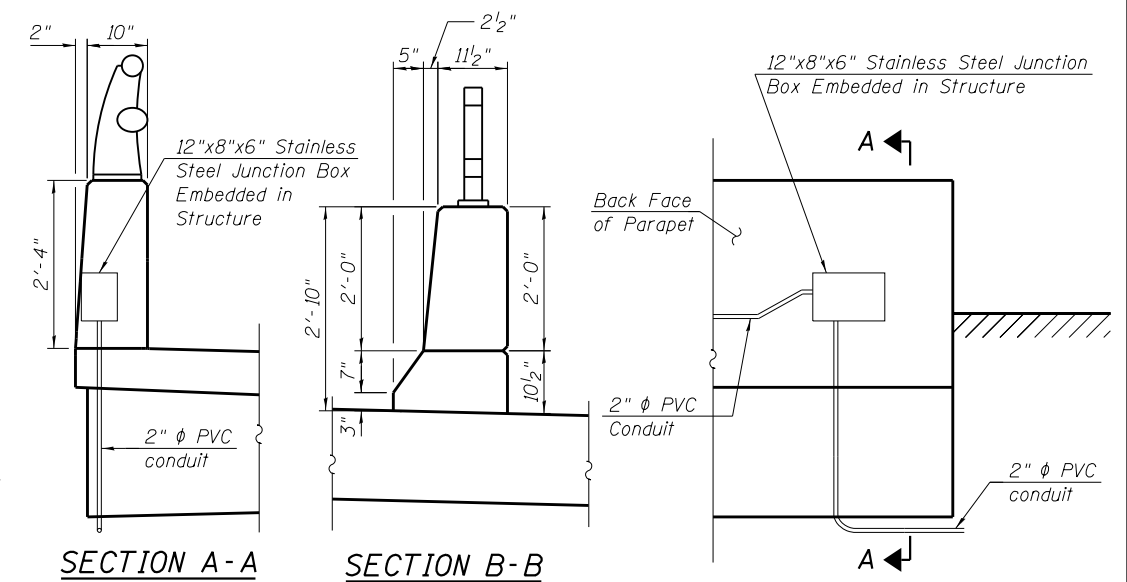
4. The junction box shall only be installed when indicated on the plans or as directed by the Engineer to facilitate the installation of unit duct into the conduit embedded in the parapet.
5. The junction box shall be paid for at the unit price for junction box, stainless steel, embedded in structure, 12"x8"x6". See Roadway Plans.
6. The exact location of the junction box shall be determined by the Engineer.
7. Adjust reinforcement bars to clear junction box.
8. For Conduit Embedded in Structure and Junction Box quantities, see Roadway Plans.



NW SIDEWALK PLAN
(Showing Sidewalk Reinforcement)



DETAIL A



JUNCTION BOX EMBEDDED IN NORTH PARAPET
(Looking at Back Face of Parapet)

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4415 WEST HARRISON ST.
SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900
FAX: (708) 236-0901

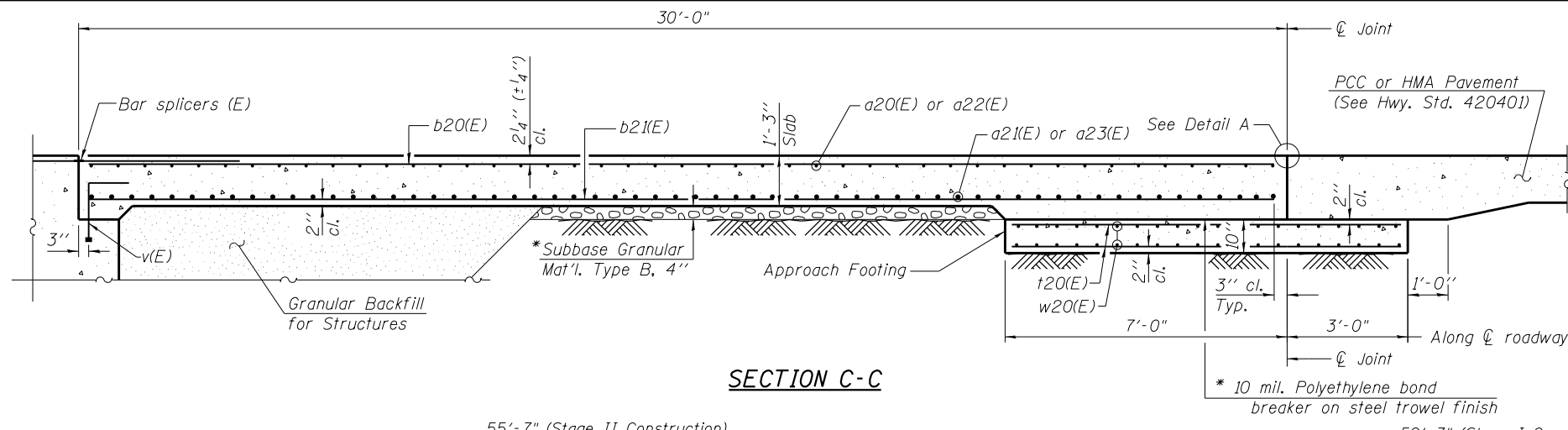
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PLOT DATE = 10/19/2016	DATE - 6/15/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

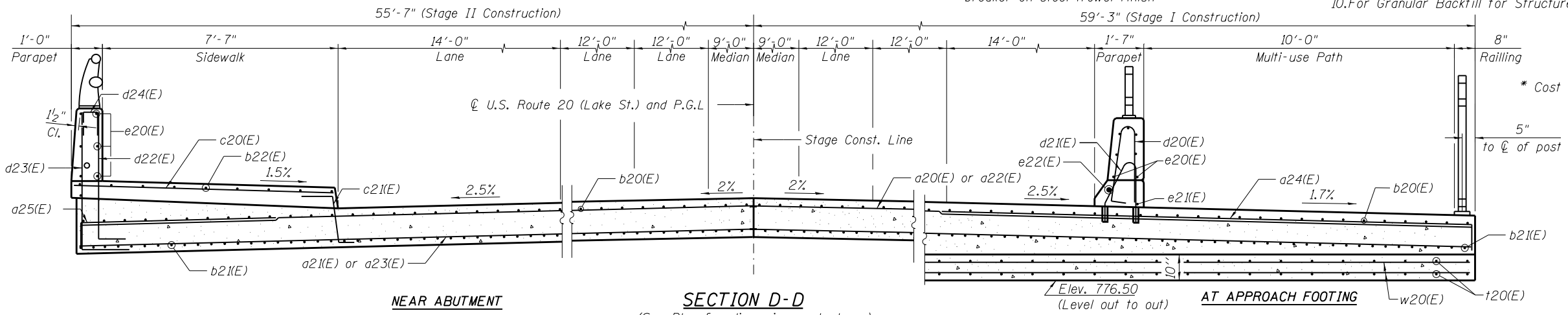
**WEST APPROACH SLAB PLAN
STRUCTURE NO. 022-0548**

SCALE: SHEET S-18 OF S-35 SHEETS STA. TO STA.

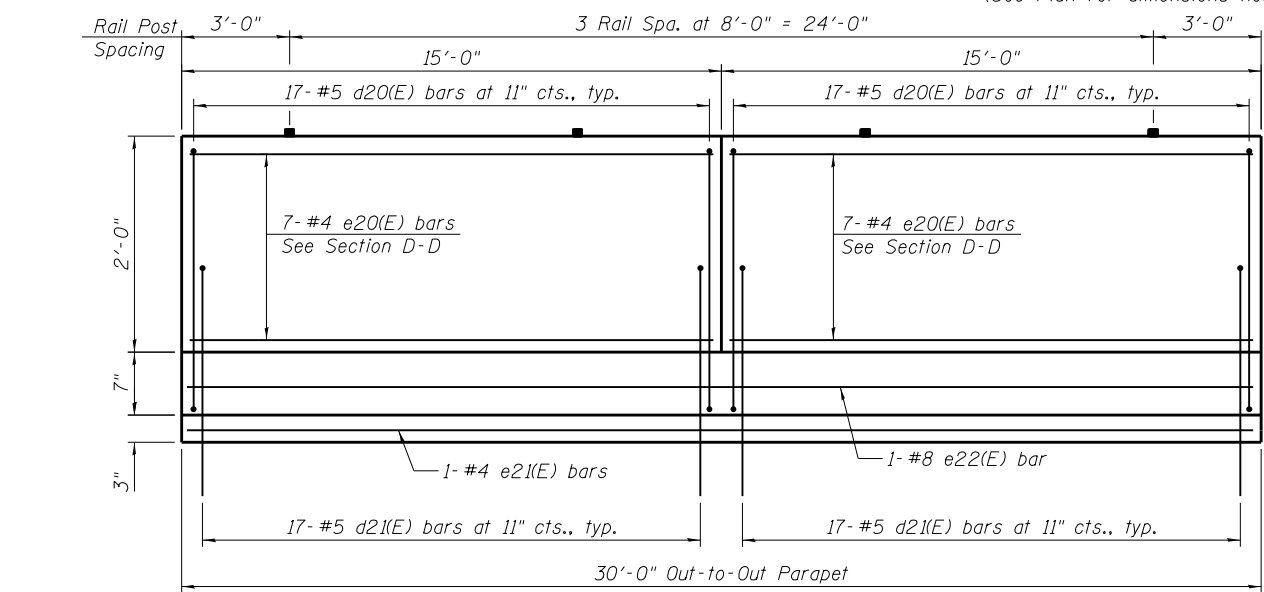
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021/345	2015-006B-R	DUPAGE	170	112
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				



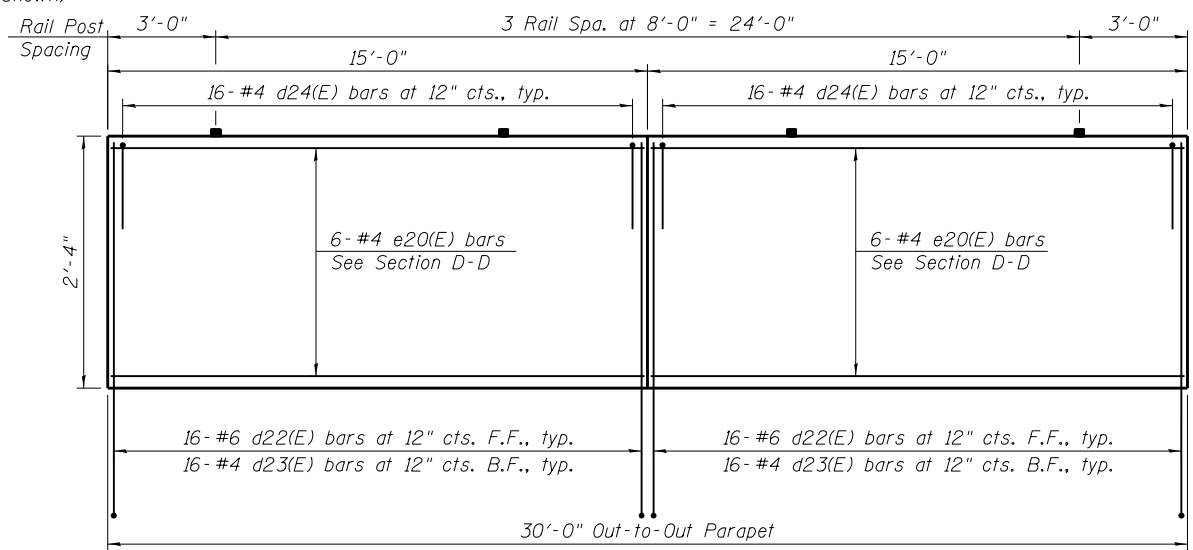
SECTION C-C



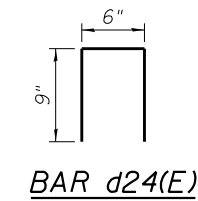
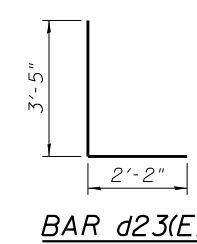
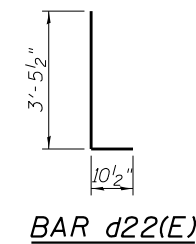
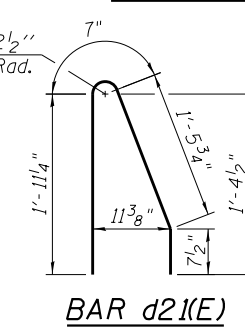
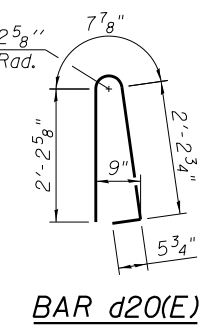
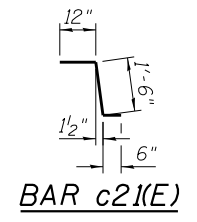
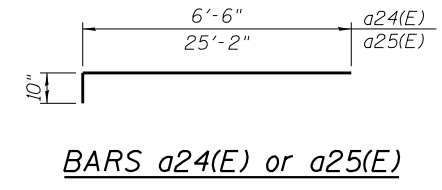
SECTION D-D
(See Plan for dimensions not shown)



INSIDE ELEVATION OF SOUTH PARAPET
(Looking South)



INSIDE ELEVATION OF NORTH PARAPET
(Looking North)



NOTES:

1. For Detail A and bicycle railing post spacing, see Sheet S-18 .
2. Parapet concrete shall be paid for as Concrete Superstructure.
3. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
4. Approach footing concrete shall be paid for as Concrete Structures.
5. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
6. For v(E) bar details, see Sheet S-17 .
7. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
8. For bar splicer details, see Sheet S-32 .
9. Cost of excavation for approach footing included with Concrete Structures.
10. For Granular Backfill for Structures and drainage treatment details, see Sheet S-02 .

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	92	#5	37'-10"	—
a21(E)	122	#8	39'-0"	—
a22(E)	92	#5	35'-7"	—
a23(E)	122	#8	36'-9"	—
a24(E)	46	#5	18'-0"	—
a25(E)	46	#5	7'-4"	—
b20(E)	173	#5	29'-8"	—
b21(E)	275	#9	29'-8"	—
b22(E)	10	#5	29'-8"	—
c20(E)	31	#5	10'-2"	—
c21(E)	31	#5	3'-0"	—
d20(E)	34	#5	5'-7"	—
d21(E)	34	#5	4'-8"	—
d22(E)	32	#6	4'-4"	—
d23(E)	32	#4	5'-7"	—
d24(E)	32	#4	2'-0"	—
e20(E)	26	#4	14'-8"	—
e21(E)	1	#4	29'-8"	—
e22(E)	1	#8	29'-8"	—
t20(E)	234	#4	9'-8"	—
w20(E)	80	#5	37'-10"	—
w21(E)	80	#5	35'-7"	—
Concrete Structures		Cu. Yd.	43.3	
Concrete Superstructure		Cu. Yd.	6.2	
Bridge Deck Grooving		Sq. Yd.	345	
Protective Coat		Sq. Yd.	33	
Concrete Superstructure (Approach Slab)		Cu. Yd.	183.1	
Reinforcement Bars, Epoxy Coated		Pound	75,490	

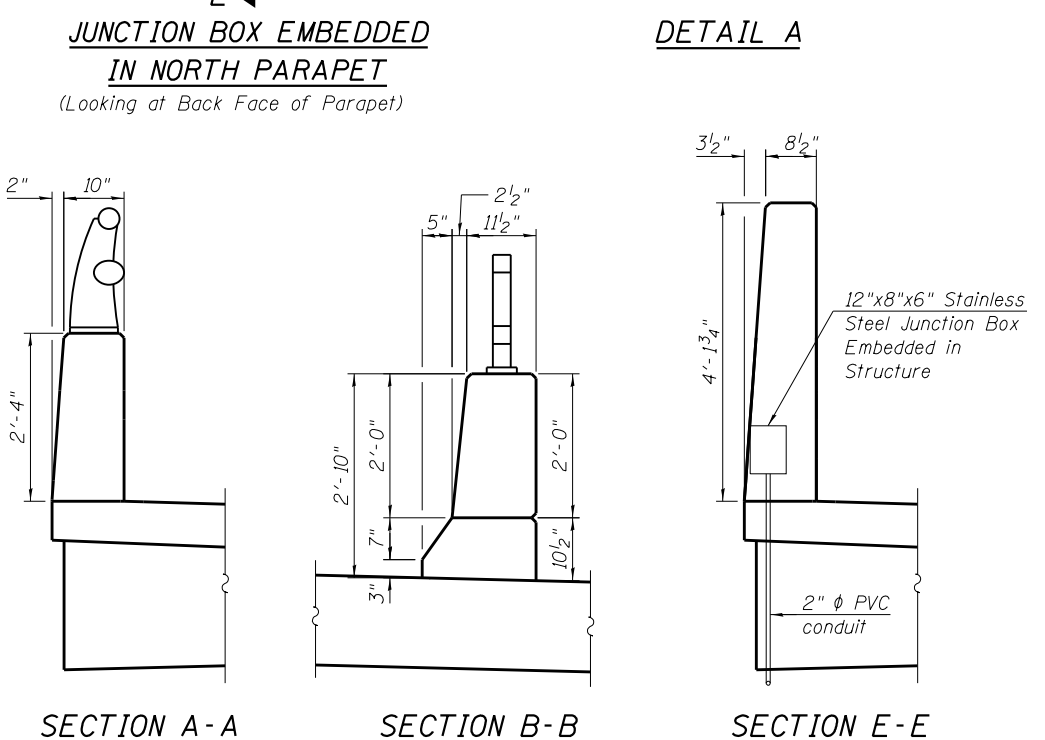
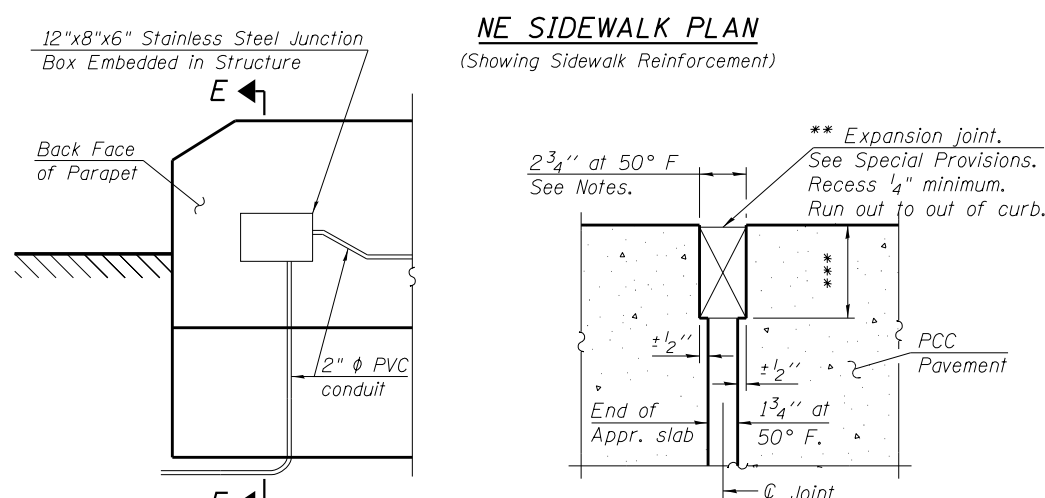
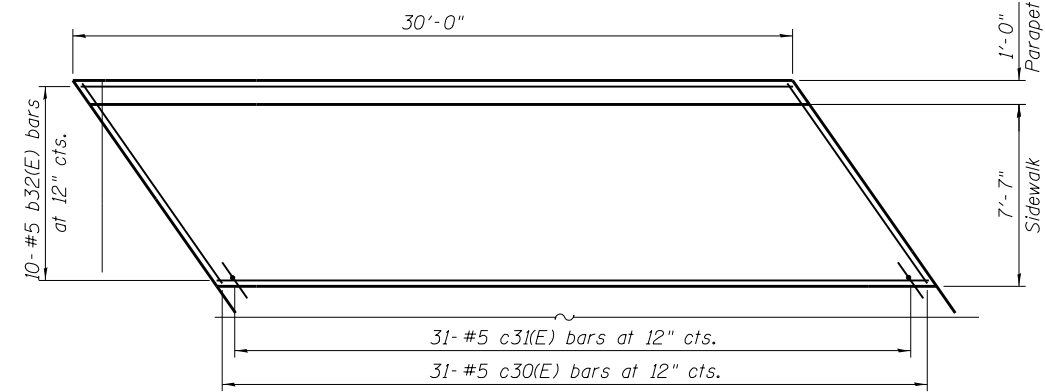
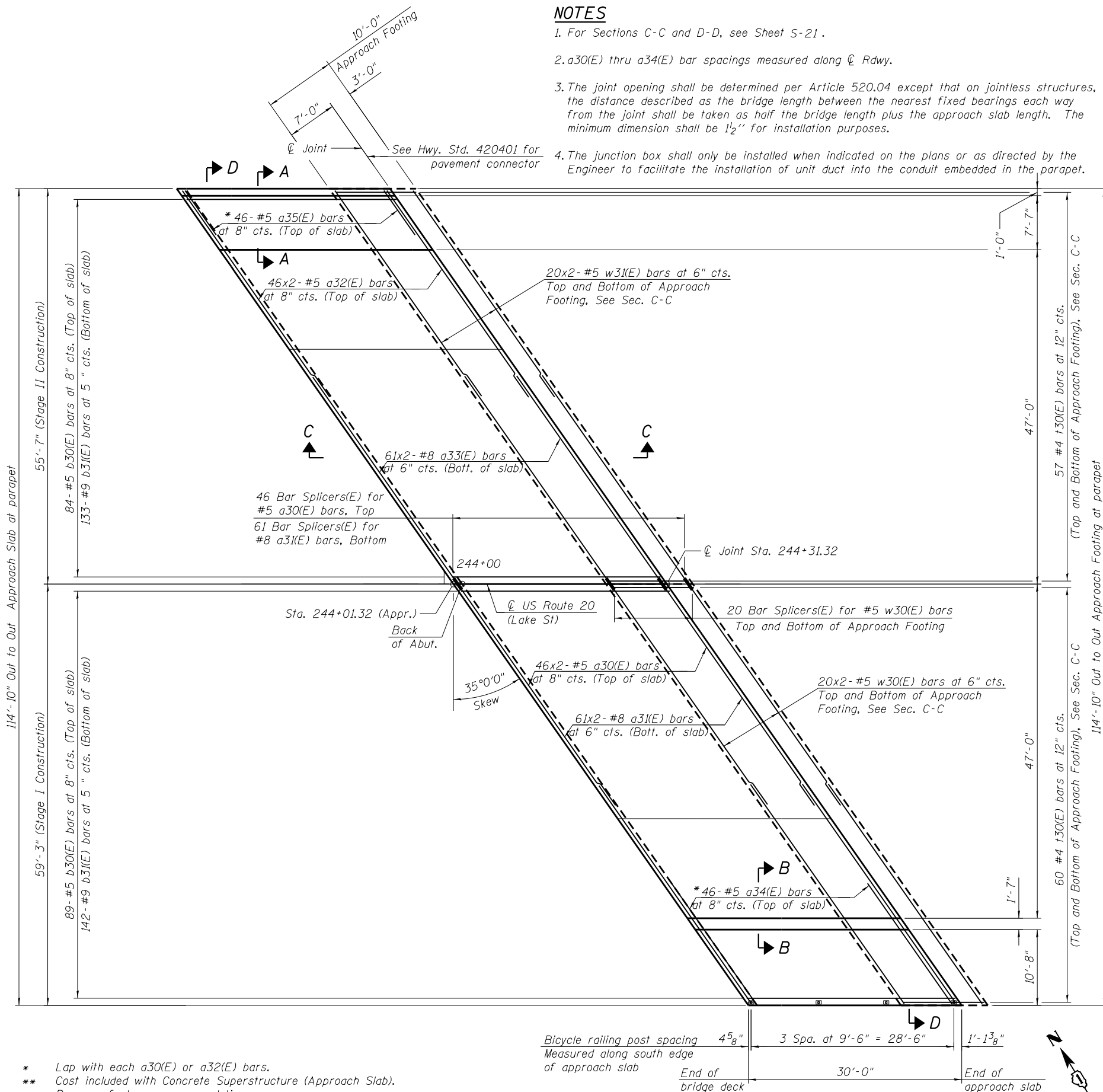
Minimum Bar Laps	
Bar	Lap
#4	2'-5"
#5	3'-6"
#8	5'-11"

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NOTES

1. For Sections C-C and D-D, see Sheet S-21.
2. a30(E) thru a34(E) bar spacings measured along \varnothing Rdwy.
3. The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be $1\frac{1}{2}$ " for installation purposes.
4. The junction box shall only be installed when indicated on the plans or as directed by the Engineer to facilitate the installation of unit duct into the conduit embedded in the parapet.

5. The junction box shall be paid for at the unit price for junction box, stainless steel, embedded in structure, 12"x8"x6". See Roadway Plans.
6. The exact location of the junction box shall be determined by the Engineer.
7. Adjust reinforcement bars to clear junction box.
8. For Conduit Embedded in Structure and Junction Box quantities, see Roadway Plans.



* Lap with each a30(E) or a32(E) bars.
 ** Cost included with Concrete Superstructure (Approach Slab).
 *** Per manufacturer recommendations.

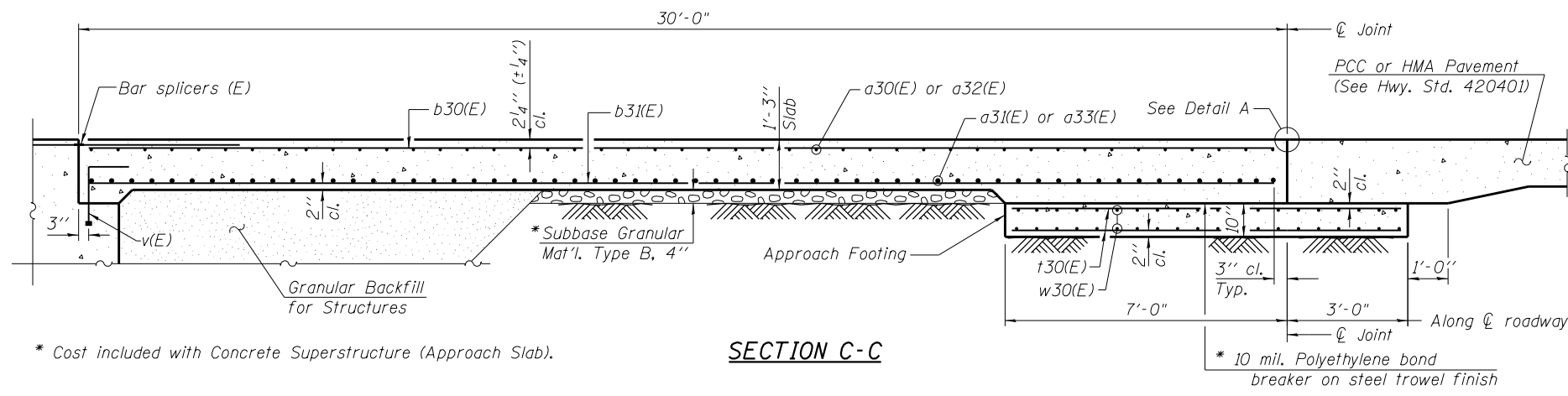
Bicycle railing post spacing $4\frac{5}{8}$ "
 Measured along south edge of approach slab
 End of bridge deck 30'-0"
 End of approach slab $1'-1\frac{3}{8}$ "

PLAN
 (Parapet Reinforcement not shown for clarity)

SECTION A-A **SECTION B-B** **SECTION E-E**

FILE PATH = P:\1605-677\DOT\PIB163\Item 9 - Ferro\Work Order #24 - U.S. Route 20 (Lake St.)\Over West Branch Dupage River\CADD Sheets\S20-ApprSlabPlan.dgn

HBM ENGINEERING GROUP, LLC CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	S20-ApprSlabPlan.dgn	DESIGNED - SK, MAA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST APPROACH SLAB PLAN STRUCTURE NO. 022-0548		F.A.P. RTE. 021/345	SECTION 2015-006B-R	COUNTY DUPAGE	TOTAL SHEETS 170	SHEET NO. 114
	USER NAME = Stojanka.Kotorakova PLOT SCALE = 16x0.0000 '1' / in. PLOT DATE = 10/19/2016	DRAWN - SK, MAA CHECKED - MI, SK DATE - 6/15/2016	REVISED - REVISED - REVISED -		SCALE: SHEET S-20 OF S-35 SHEETS STA. TO STA.	CONTRACT NO. 62A60 ILLINOIS FED. AID PROJECT					

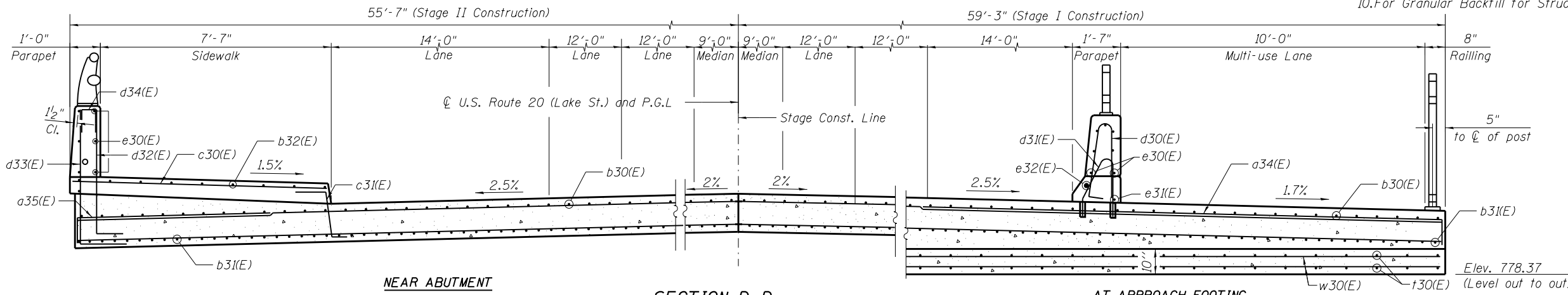


* Cost included with Concrete Superstructure (Approach Slab).

SECTION C-C

NOTES:

1. For Detail A and bicycle railing post spacing, see Sheet S-20.
2. Parapet concrete shall be paid for as Concrete Superstructure.
3. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
4. Approach footing concrete shall be paid for as Concrete Structures.
5. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
6. For v(E) bar details, see Sheet S-17.
7. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
8. For bar splicer details, see Sheet S-32.
9. Cost of excavation for approach footing included with Concrete Structures.
10. For Granular Backfill for Structures and drainage treatment details, see Sheet S-02.



NEAR ABUTMENT

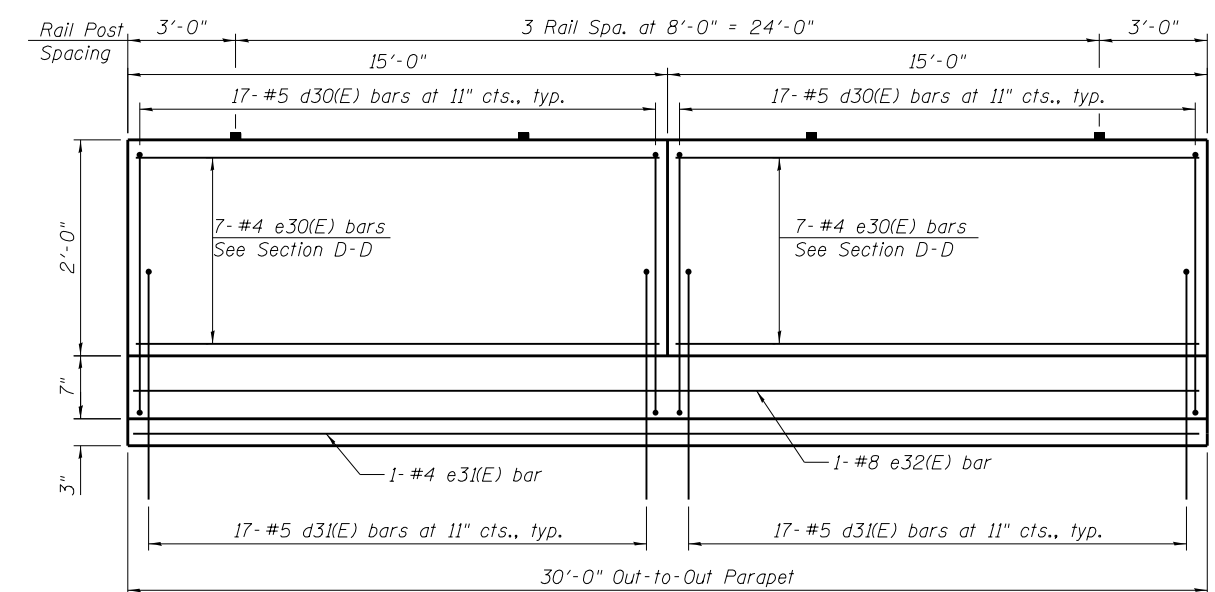
SECTION D-D

(See Plan for dimensions not shown)

AT APPROACH FOOTING

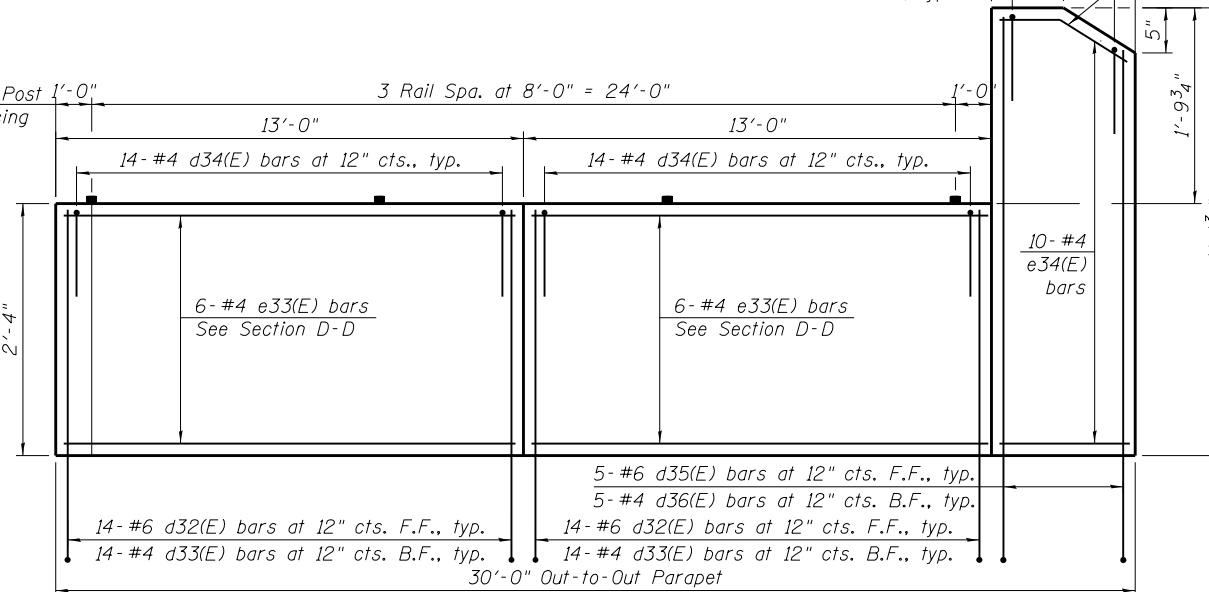
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a30(E)	92	#5	37'-10"	—
a31(E)	122	#8	39'-0"	—
a32(E)	92	#5	35'-7"	—
a33(E)	122	#8	36'-9"	—
a34(E)	46	#5	18'-0"	—
a35(E)	46	#5	7'-4"	—
b30(E)	173	#5	29'-8"	—
b31(E)	275	#9	29'-8"	—
b32(E)	10	#5	29'-8"	—
c30(E)	31	#5	10'-2"	—
c31(E)	31	#5	3'-0"	—
d30(E)	34	#5	5'-7"	—
d31(E)	34	#5	4'-8"	—
d32(E)	28	#6	4'-4"	—
d33(E)	28	#4	5'-7"	—
d34(E)	33	#4	2'-0"	—
d35(E)	5	#6	6'-2"	—
d36(E)	5	#4	7'-5"	—
e30(E)	14	#4	14'-8"	—
e31(E)	1	#4	29'-8"	—
e32(E)	1	#8	29'-8"	—
e33(E)	12	#4	12'-8"	—
e34(E)	10	#4	3'-8"	—
t30(E)	234	#4	9'-8"	—
w30(E)	80	#5	37'-10"	—
w31(E)	80	#5	35'-7"	—
Concrete Structures			Cu. Yd.	43.3
Concrete Superstructure			Cu. Yd.	6.4
Bridge Deck Grooving			Sq. Yd.	345
Protective Coat			Sq. Yd.	34
Concrete Superstructure (Approach Slab)			Cu. Yd.	183.1
Reinforcement Bars, Epoxy Coated			Pound	75,530



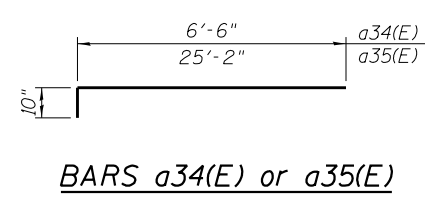
INSIDE ELEVATION OF SOUTH PARAPET

(Looking South)

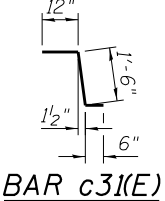


INSIDE ELEVATION OF NORTH PARAPET

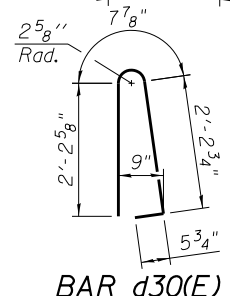
(Looking North)



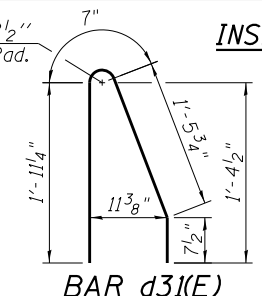
BARS a34(E) or a35(E)



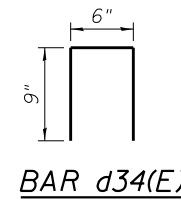
BAR c31(E)



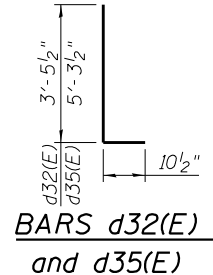
BAR d30(E)



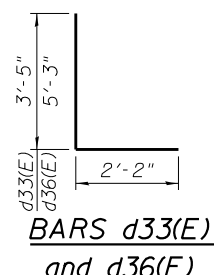
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BAR d34(E)



BARS d32(E) and d35(E)

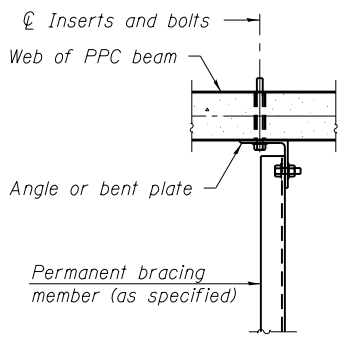
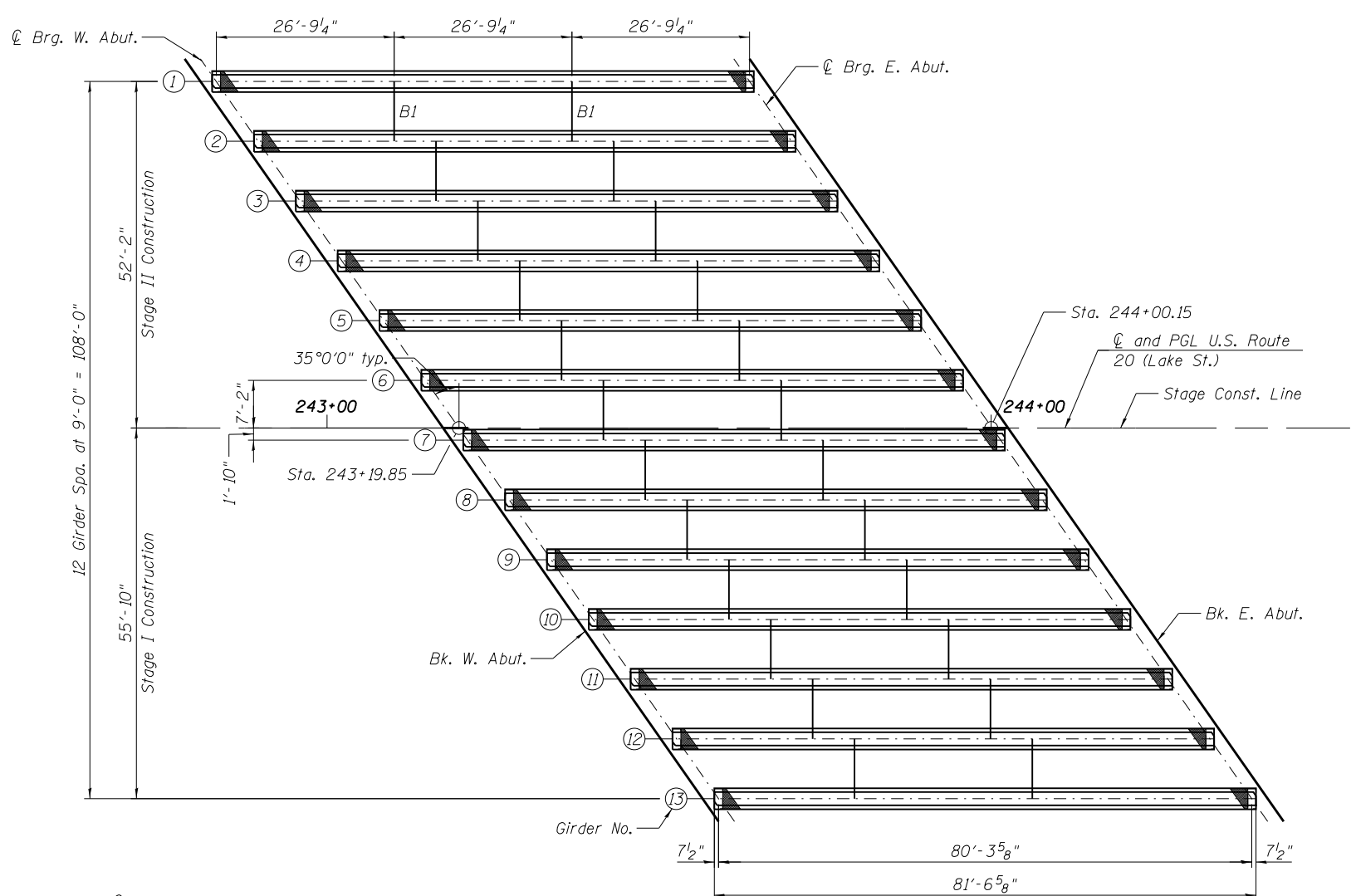


BARS d33(E) and d36(E)

Minimum Bar Laps	
Bar	Lap
#4	2'-5"
#5	3'-6"
#8	5'-11"

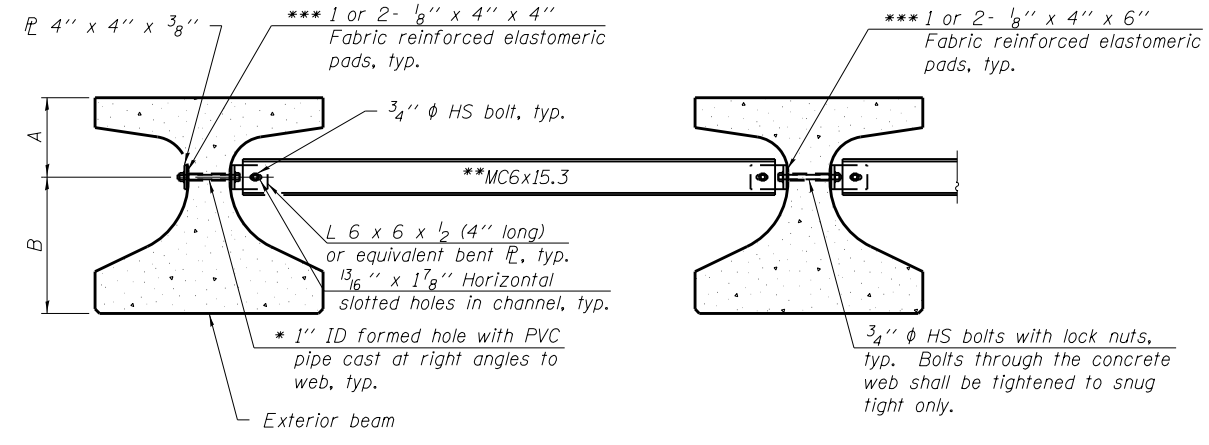
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PLAN

FRAMING PLAN



Notes:
 All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
 Two hardened washers are required for each set of oversized holes.
 All holes shall be 15/16" ϕ unless otherwise noted.
 5/16" x 3" x 3" plate washers are required over all slotted holes.
 All bolts shall be galvanized according to AASHTO M232.
 Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
 Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Beams.

- * Fabricator shall locate to miss strands within permissible tolerances.
- ** Alternate MC6x18 channels are permitted to facilitate material acquisition.
- *** Place pads as necessary to provide a flat mounting surface between the steel and concrete.

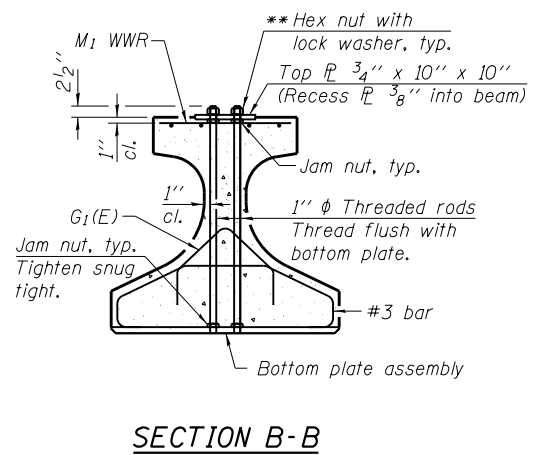
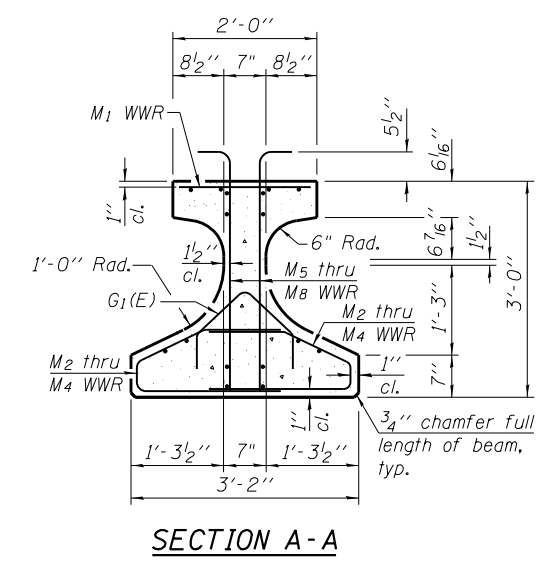
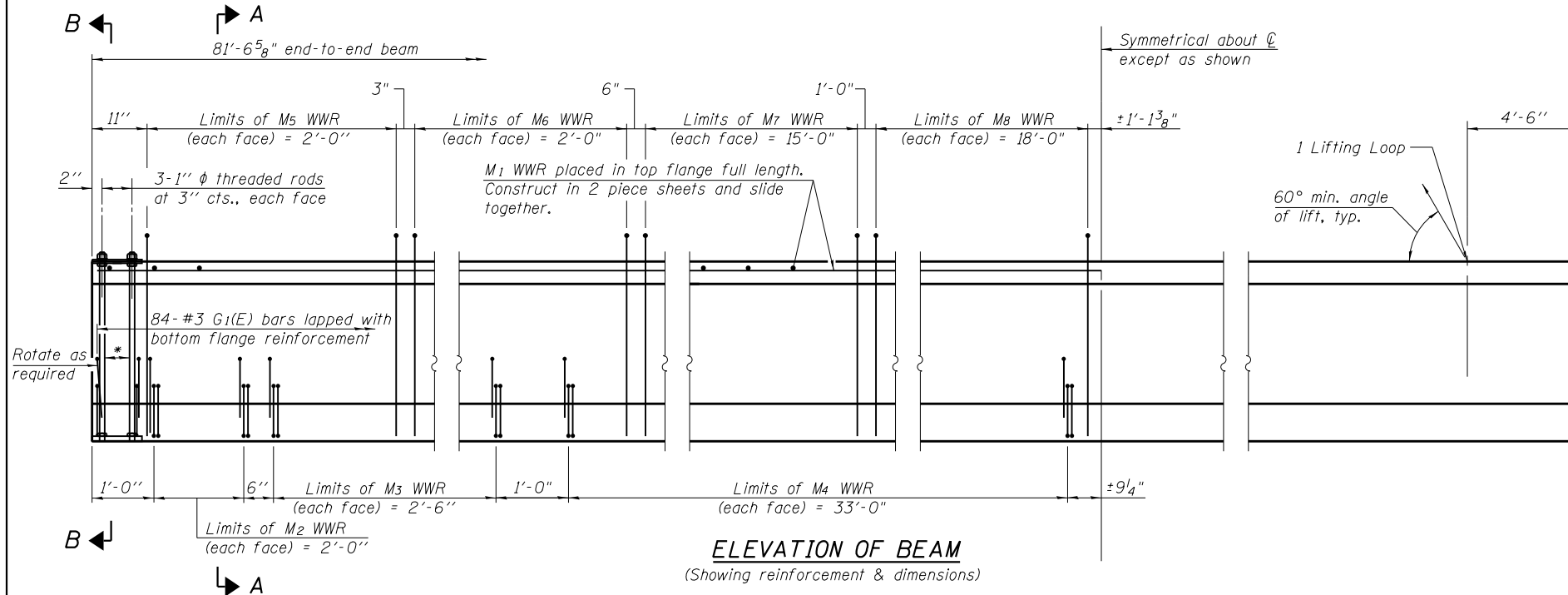
Beam	A	B
IL36	1'-1 1/4"	1'-10 3/4"

PERMANENT BRACING DETAILS FOR IL36 BEAMS

	0.5 Sp.
I	(in ⁴) 100,433
I'	(in ⁴) 312,718
S _b	(in ³) 6,832
S _b '	(in ³) 12,003
S _t	(in ³) 4,715
S _t '	(in ³) 31,442
DC1	(k/ft) 1.71
M _{DC1}	(k) 1,377.54
DC2	(k/ft) 0.19
M _{DC2}	(k) 154.39
DW	(k/ft) 0.45
M _{DW}	(k) 362.72
M _{L + IM}	(k) 1,513.64

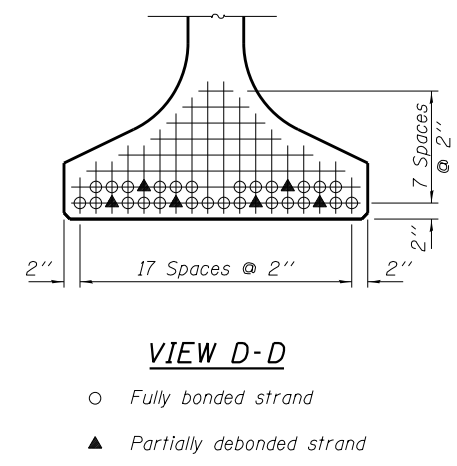
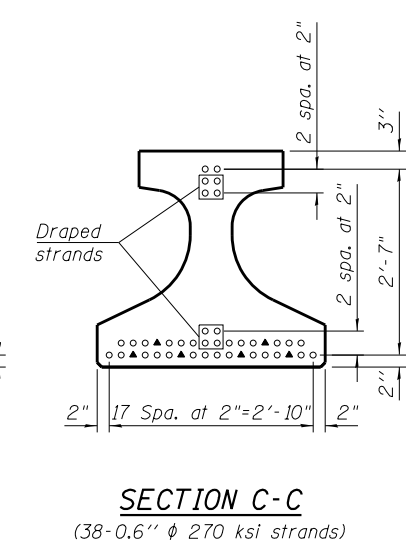
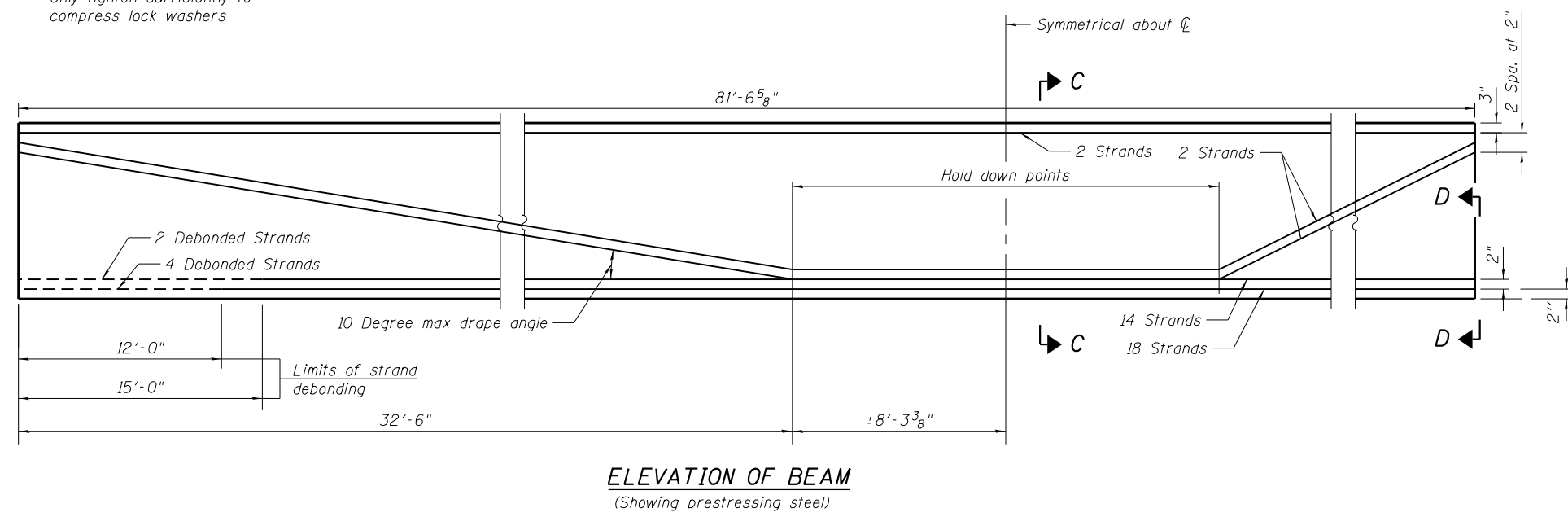
	W. Abut. & E. Abut.
R _{DC1}	(k) 68.6
R _{DC2}	(k) 7.7
R _{DW}	(k) 18.1
R _{L + IM}	(k) 97.0
R _{Total}	(k) 191.4

I: Non-composite moment of inertia of beam section (in.⁴).
 I': Composite moment of inertia of beam section (in.⁴).
 S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
 S_b': Composite section modulus for the bottom fiber of the prestressed beam (in.³).
 S_t: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
 S_t': Composite section modulus for the top fiber of the prestressed beam (in.³).
 DC1: Un-factored non-composite dead load (kips/ft.).
 M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
 DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
 M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
 DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
 M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
 M_{L + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).



* 4-3/4" ϕ threaded dowel rods at 3" cts., Each Face

** Only tighten sufficiently to compress lock washers



Note:
See sheet S-26 for additional details and Bill of Material.

IL 36-2438

1-28-16

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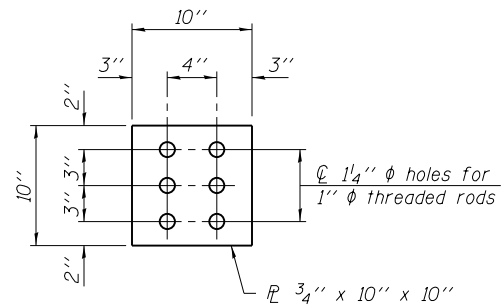
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

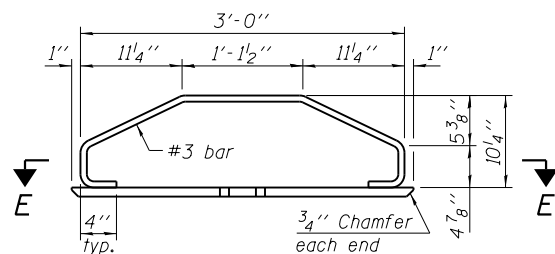
IL36N PPC BEAM
STRUCTURE NO. 022-0548

SCALE: SHEET S-25 OF S-35 SHEETS STA. TO STA.

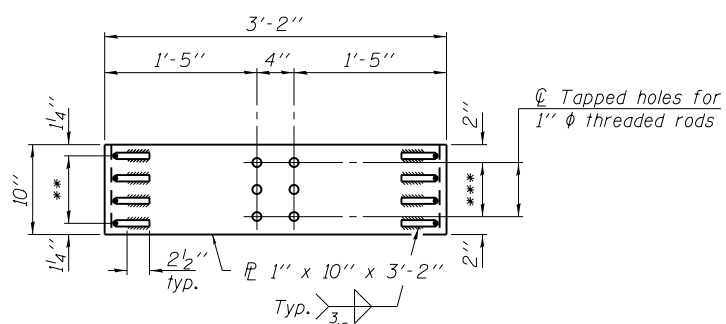
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021/345	2015-006B-R	DUPAGE	170	119
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE



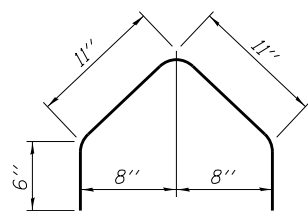
ELEVATION - BOTTOM PLATE ASSEMBLY



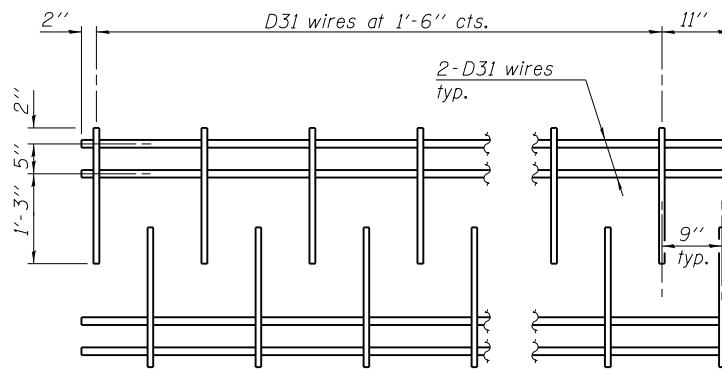
SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"

*** 2 Spaces at 3" = 6"

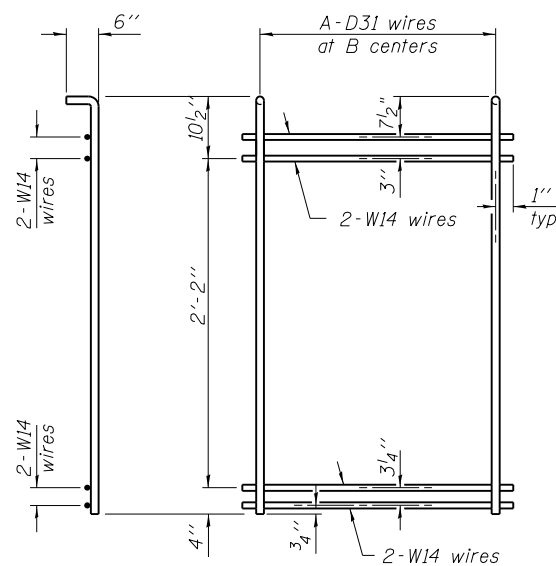


BAR G1(E)



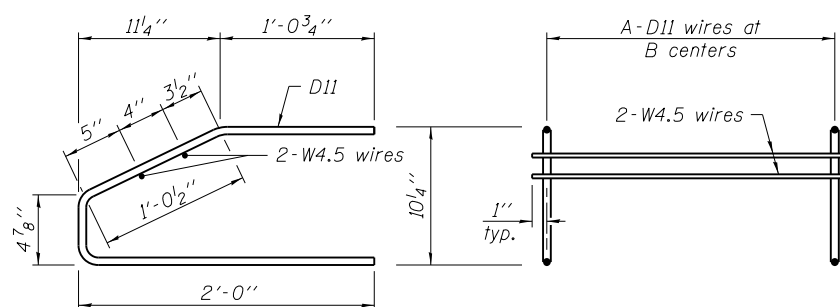
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN 1

WWR	A	B
M2	9	3"
M3	6	6"
M4	23	1'-6"
M5	9	3"
M6	5	6"
M7	16	1'-0"
M8	10	2'-0"

NOTES

Inserts for 3/4" diameter threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm.

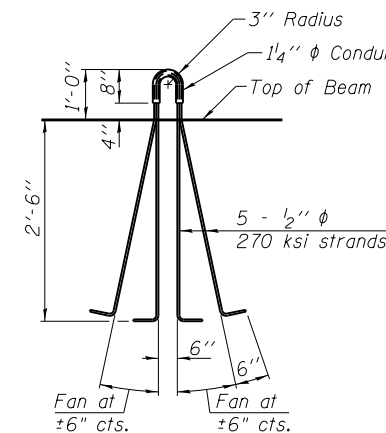
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL36N	Ft.	1061

IL 36-2438D

1-28-16

HBM ENGINEERING GROUP, LLC. 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901

S26-PPCBeamDetails.dgn
 USER NAME = Stojanka,Kotorakova
 PLOT SCALE = 0:2.0000 '1' / in.
 PLOT DATE = 10/19/2016

DESIGNED - LAB
 DRAWN - LAB
 CHECKED - MI
 DATE - 6/15/2016

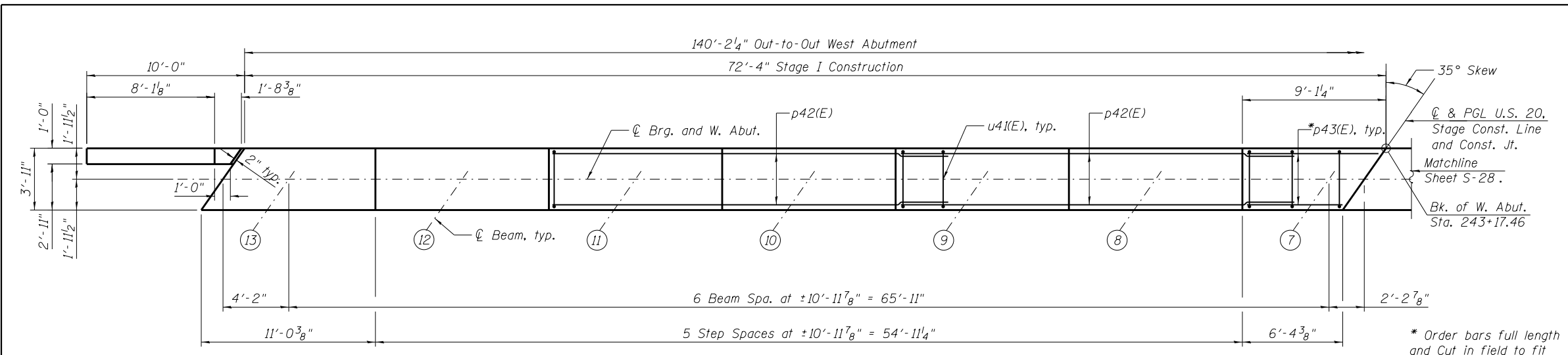
REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

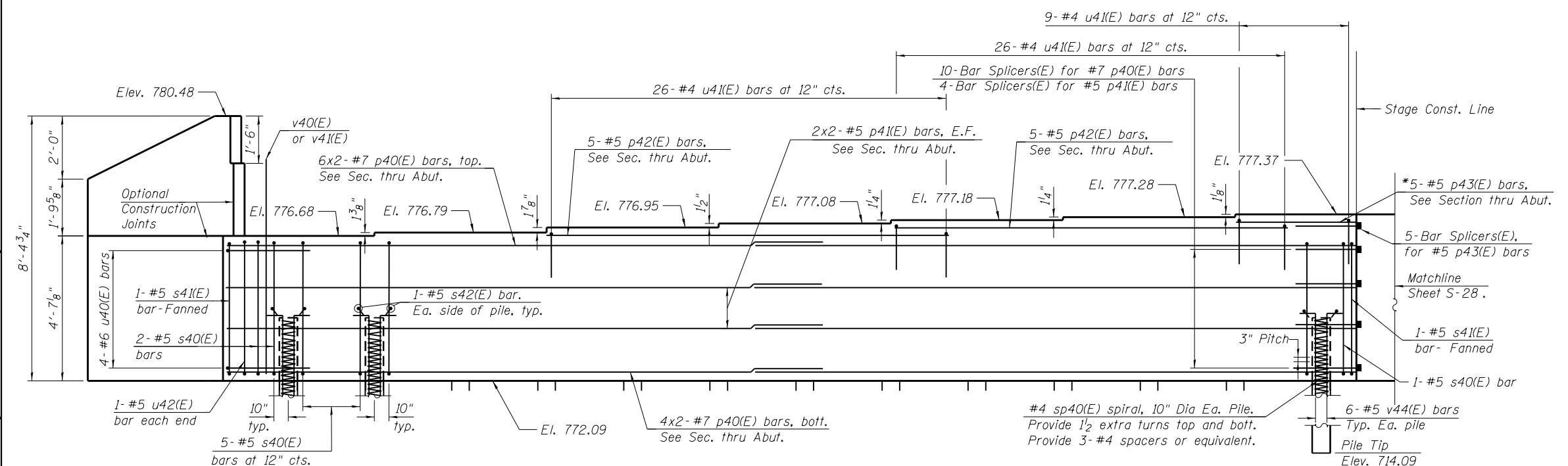
IL36N PPC BEAM DETAILS
 STRUCTURE NO. 022-0548

SCALE: SHEET S-26 OF S-35 SHEETS STA. TO STA.

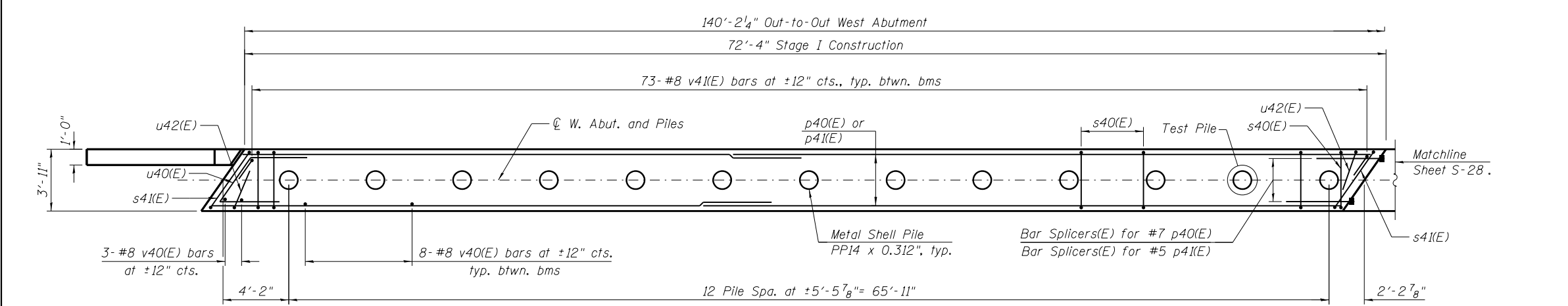
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	120
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				



PLAN



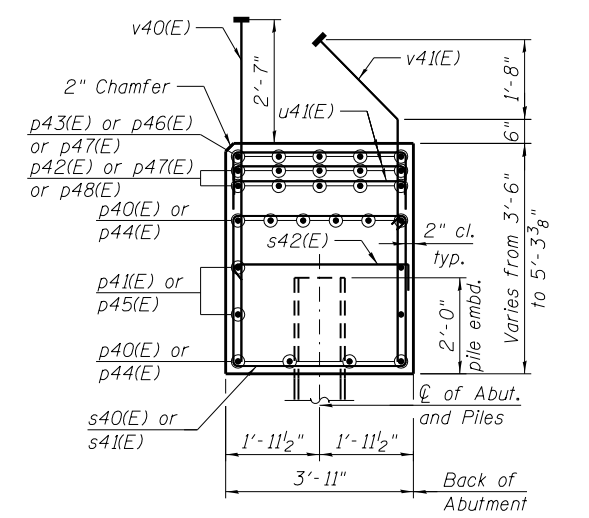
ELEVATION
(Looking West)



PILE LAYOUT

NOTES:

- For bar diagrams, minimum bar laps, and Bill of Material, see Sheet S-28.
- For diaphragm details, see Sheet S-16.
- For bar splicers, see Sheet S-32.
- For details of piles, see Sheet S-31.
- Bars noted thus, 2x2-#5 indicates 2 lines of bars with 2 lengths per line.
- Pour steps monolithically with cap.
- For Granular Backfill for Structures and Pipe Underdrain for Structures, see Sheet S-02.
- For Pile Data, see Sheet S-28.



SEC. THRU ABUT.

(Dimensions at right angles to abutment)

FILE PATH = P:\1605-677\DDT_PIB163\Item 9 - Ferro-Vent-Order #24 - U.S. Route 28 (Lake St.) Over West Branch DuPage River\CADD Sheets\S27-WestAbut1.dgn

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ENGINEERING GROUP, LLC
CONSULTING & DESIGN
INSPECTION & RATING
RESEARCH & TESTING

S27-WestAbut1.dgn
USER NAME = Stojanka,Kotorakova
PLOT SCALE = 8:8 1' / 1"
PLOT DATE = 10/19/2016

DESIGNED - SK, MAA
DRAWN - SK, MAA
CHECKED - MI, FA
DATE - 6/15/2016

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT - STAGE I CONSTRUCTION
STRUCTURE NO. 022-0548

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	121
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET S-27 OF S-35 SHEETS STA. TO STA.

*Order bars full length and cut to fit in field.

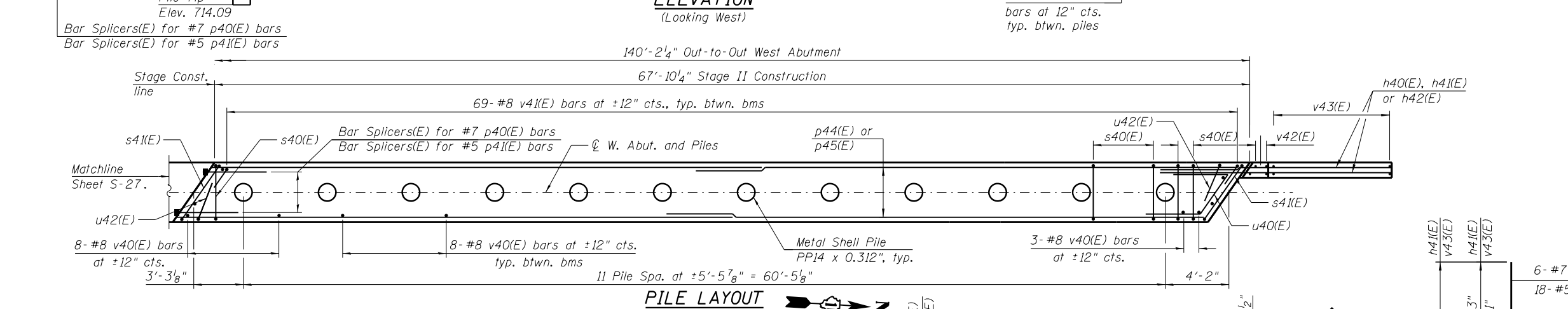
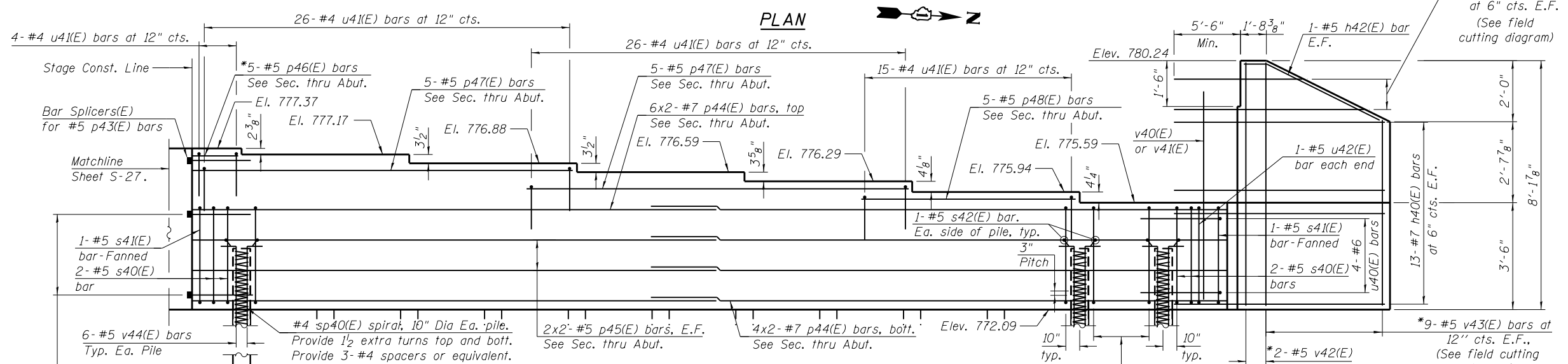
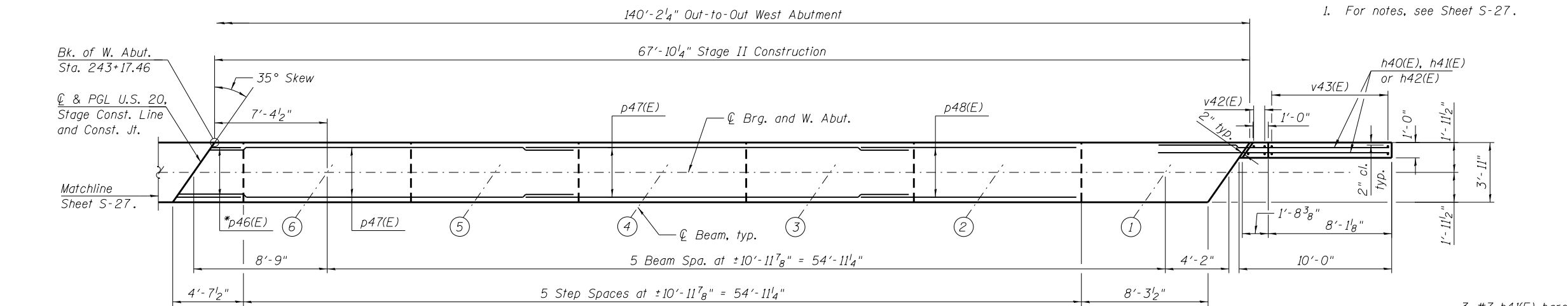
NOTE:

1. For notes, see Sheet S-27.

BILL OF MATERIAL

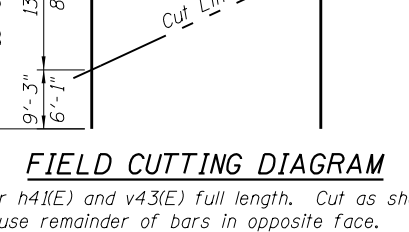
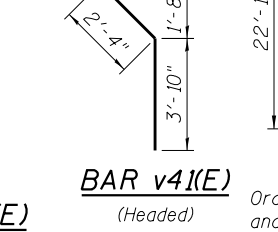
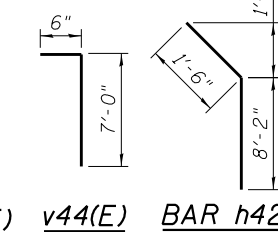
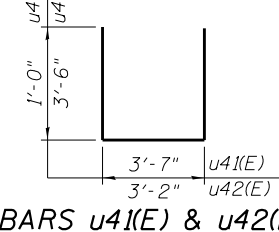
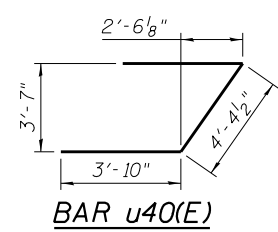
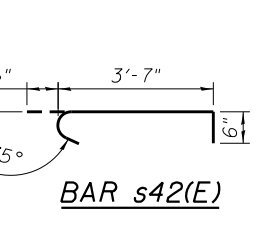
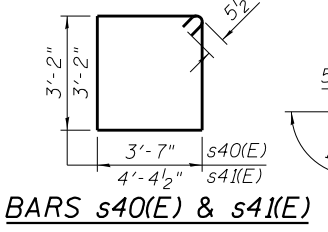
Bar	No.	Size	Length	Shape
h40(E)	52	#7	15'-4"	—
h41(E)	6	#7	22'-9"	—
h42(E)	4	#5	9'-8"	—
p40(E)	20	#7	38'-10"	—
p41(E)	8	#5	37'-8"	—
p42(E)	10	#5	25'-0"	—
p43(E)	5	#5	8'-10"	—
p44(E)	20	#7	36'-7"	—
p45(E)	8	#5	35'-6"	—
p46(E)	5	#5	4'-5"	—
p47(E)	10	#5	25'-2"	—
p48(E)	5	#5	14'-2"	—
s40(E)	122	#5	14'-5"	□
s41(E)	4	#5	16'-0"	□
s42(E)	50	#5	4'-7"	—
sp40(E)	25	#4	7'-0"	≡≡≡
u40(E)	8	#6	12'-1"	—
u41(E)	132	#4	5'-7"	—
u42(E)	4	#4	10'-2"	—
v40(E)	102	#8	5'-11"	—
v41(E)	142	#8	6'-2"	—
v42(E)	8	#5	8'-1"	—
v43(E)	18	#5	14'-2"	—
v44(E)	150	#5	7'-6"	—
Structure Excavation		Cu Yd	197.0	
Concrete Structures		Cu Yd	100.4	
Reinforcement Bars, Epoxy Coated		Pound	15,940	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	1,440	
Driving Piles		Foot	1,440	
Test Pile Metal Shells		Each	1	
Geocomposite Wall Drain		Sq Yd	133	
Granular Backfill for Structures		Cu Yd	232	
Pipe Underdrains for Structures 4"		Foot	181	

**Length is height of spiral.



PILE DATA

Type: MS Pile PP14 x 0.312" with pile shoes
 Nominal Required Bearing: 403 kips
 Factored Resistance Available: 168 kips
 Est. Length: 60 ft
 No. Production Piles: 24
 No. Test Piles: 1



BAR sp40(E)

Minimum Bar Laps

Bar	Lap
#4	2'-7"
#5	3'-4"
#6	4'-9"
#7	5'-6"
#8	7'-2"

FILE PATH = P:\1605-677\1001\PIB163\Item 9 - Ferro-Vent-Order #24 - U.S.Route 28 (Lake St.)\Dwg - West Branch DupPage River\CAD Sheets\28-WestAbut2.dgn

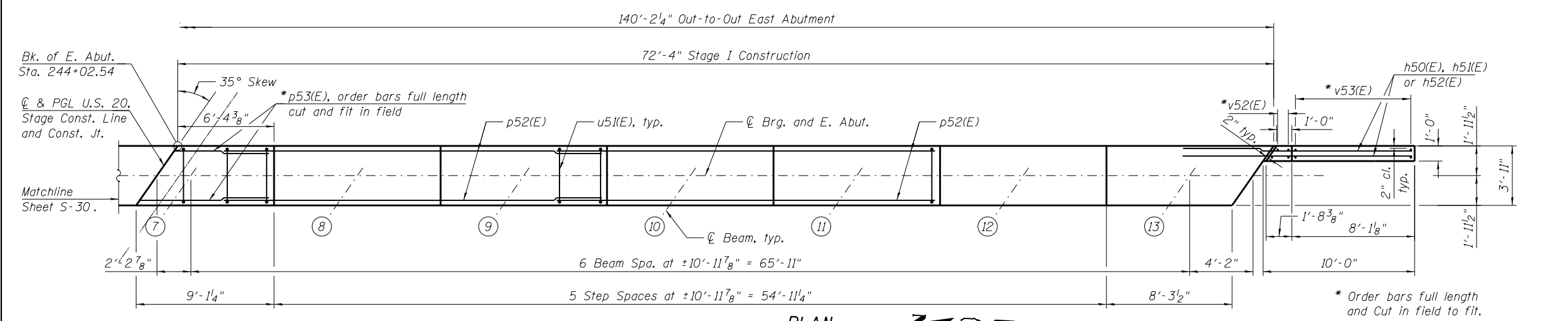
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h50(E)	52	#7	15'-4"	
h51(E)	6	#7	22'-9"	
h52(E)	4	#5	9'-8"	
p50(E)	20	#7	38'-10"	
p51(E)	8	#5	37'-8"	
p52(E)	10	#5	25'-0"	
p53(E)	5	#5	8'-10"	
p54(E)	20	#7	36'-7"	
p55(E)	8	#5	35'-6"	
p56(E)	5	#5	7'-10"	
p57(E)	5	#5	25'-2"	
p58(E)	5	#5	21'-8"	
s50(E)	122	#5	14'-5"	□
s51(E)	4	#5	16'-0"	□
s52(E)	50	#5	4'-7"	U
sp50(E)	25	#4	7'-0"	W
u50(E)	8	#6	12'-1"	U
u51(E)	116	#4	5'-7"	U
u52(E)	4	#4	10'-2"	U
v50(E)	102	#8	5'-11"	U
v51(E)	142	#8	6'-2"	U
v52(E)	8	#5	8'-1"	U
v53(E)	18	#5	14'-2"	U
v54(E)	150	#5	7'-6"	U
Structure Excavation		Cu Yd	145.9	
Concrete Structures		Cu Yd	90.3	
Reinforcement Bars, Epoxy Coated		Pound	15,800	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	1,344	
Driving Piles		Foot	1,344	
Test Pile Metal Shells		Each	1	
Geocomposite Wall Drain		Sq Yd	121	
Granular Backfill for Structures		Cu Yd	202	
Pipe Underdrains for Structures 4"		Foot	181	

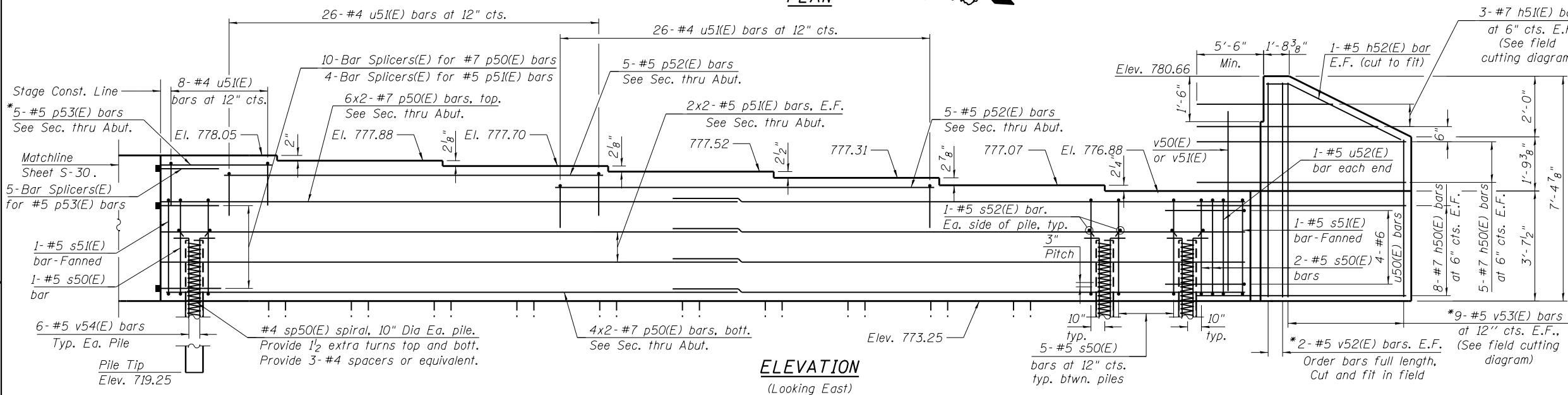
**Length is height of spiral.

Minimum Bar Laps

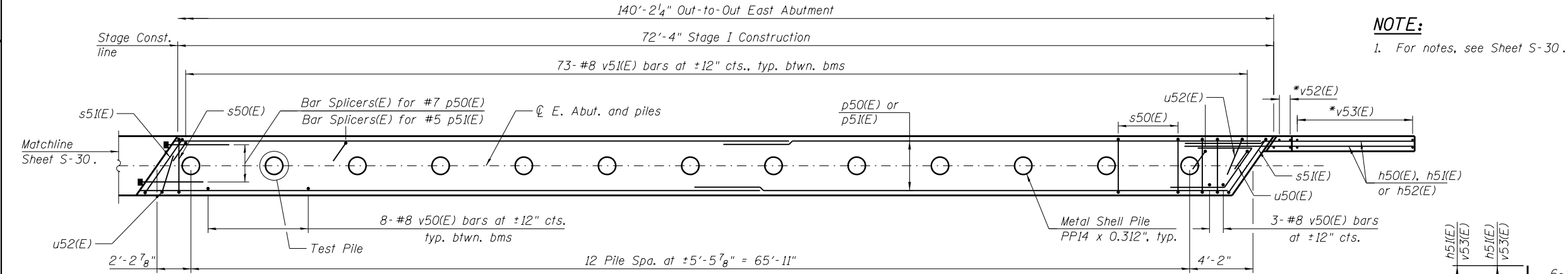
Bar	Lap
#4	2'-7"
#5	3'-4"
#6	4'-9"
#7	5'-6"
#8	7'-2"



PLAN



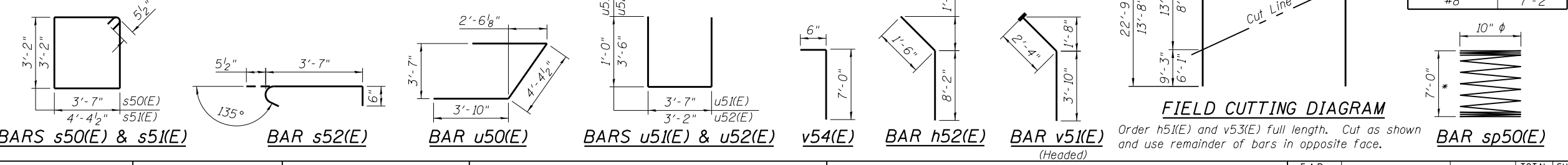
ELEVATION
(Looking East)



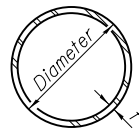
PILE LAYOUT

NOTE:
1. For notes, see Sheet S-30.

PILE DATA
Type: MS Pile PP14 x 0.312" with pile shoes
Nominal Required Bearing: 450 kips
Factored Resistance Available: 176 kips
Est. Length: 56 ft
No. Production Piles: 24
No. Test Piles: 1

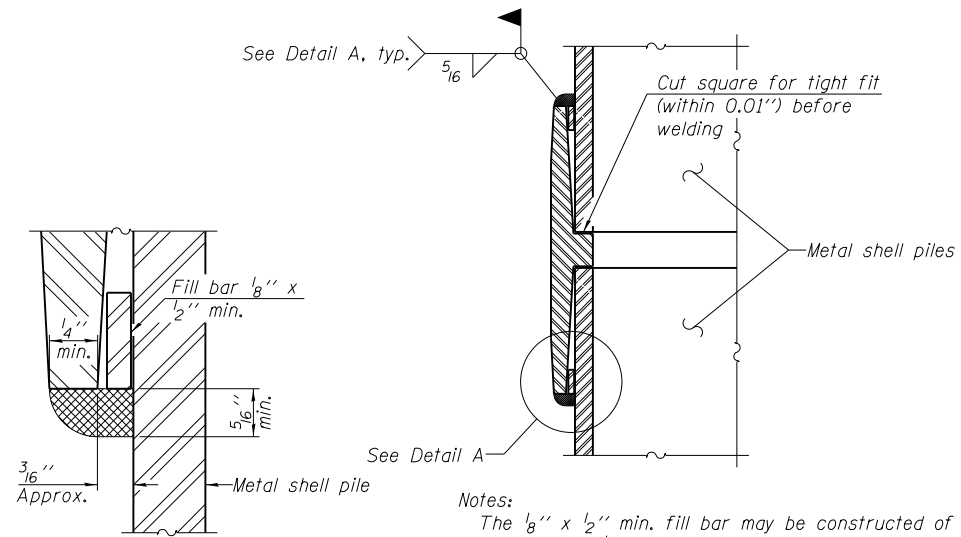


HBM ENGINEERING GROUP, LLC CONSULTING & DESIGN INSPECTION & TESTING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60152 PHONE: (708) 236-0900 FAX: (708) 236-0901	S29-EastAbut1.dgn	DESIGNED - FA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT - STAGE I CONSTRUCTION STRUCTURE NO. 022-0548		F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	USER NAME = Stoyanka.Kotorakova	DRAWN - FA	REVISED -		021/345	2015-006B-R	DUPAGE	170	123		
	PLOT SCALE = 8.00 "/>										



METAL SHELL PILE TABLE

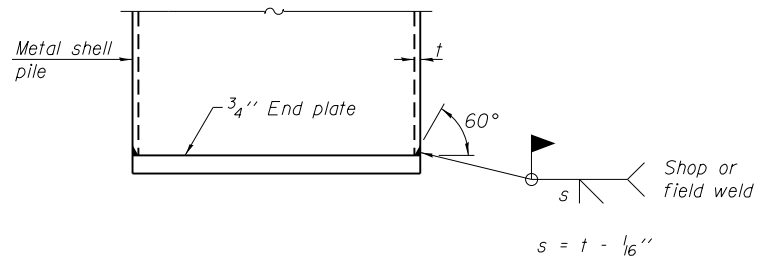
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



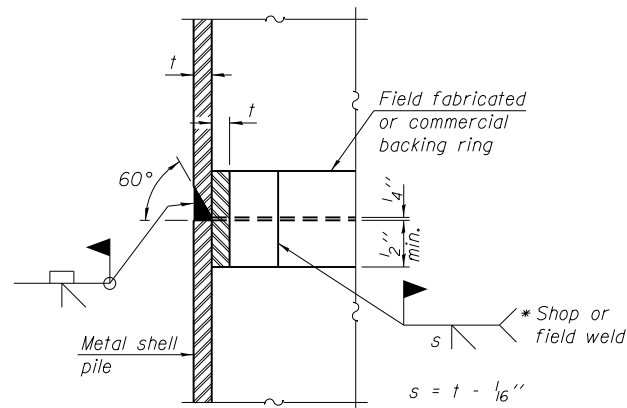
DETAIL A

Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE

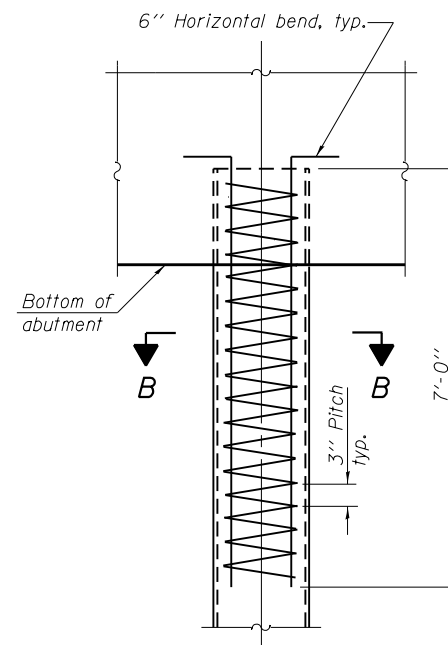


END PLATE ATTACHMENT

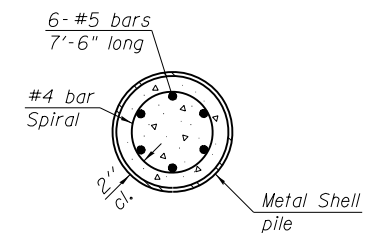


COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.

FILE PATH = F:\1605-677\DDT_P1B163\Item 9 - Ferro-Vent Order #24 - U.S. Route 28 (Lake St.)\Draw - West Branch DupPage River\CADD Sheets\SS1-PileDetails.dgn

F-MS

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 RESEARCH & TESTING

4415 WEST HARRISON ST.
 SUITE 231
 HILLSIDE, IL 60162
 PHONE: (708) 236-0900
 FAX: (708) 236-0901

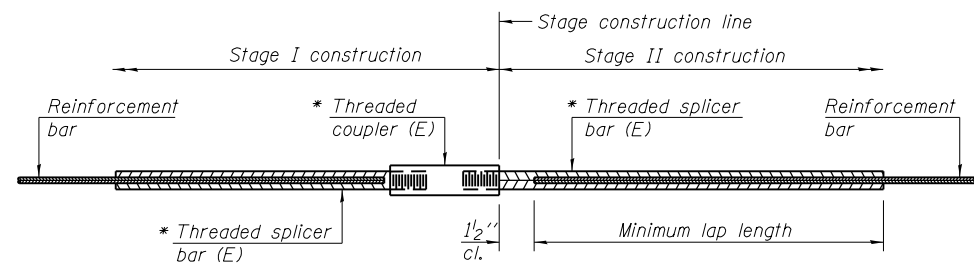
DESIGNED - FA	REVISED -
DRAWN - FA	REVISED -
CHECKED - MI	REVISED -
DATE - 6/15/2016	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS
 STRUCTURE NO. 022-0548**

SCALE: SHEET S-31 OF S-35 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	125
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

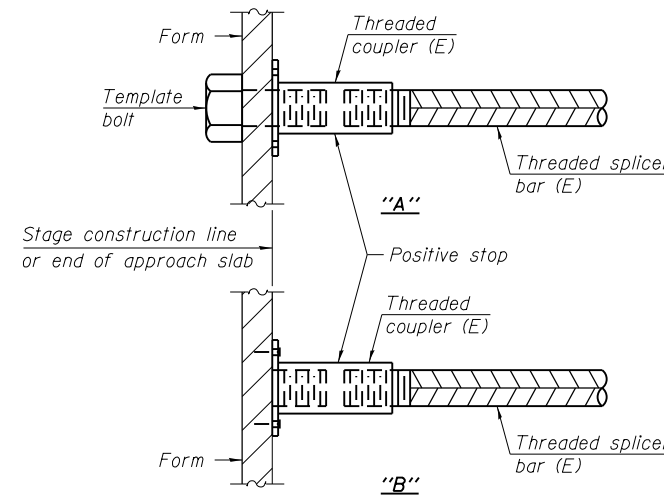


STANDARD BAR SPLICER ASSEMBLY

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

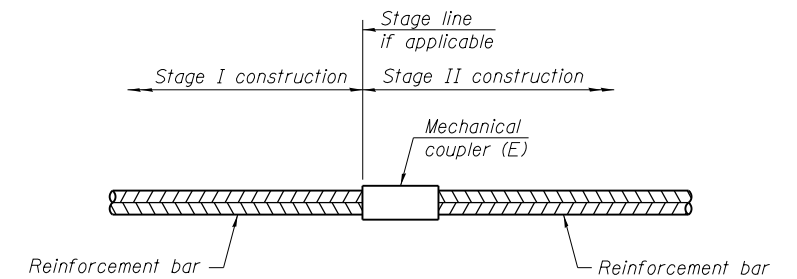
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	329	3'-1"
W. Abut Diaphragm	#6	9	4'-5"
E. Abut Diaphragm	#6	9	4'-5"
W. Approach Slab	#5	86	2'-5"
W. Approach Slab	#8	61	3'-0"
E. Approach Slab	#5	86	2'-5"
E. Approach Slab	#8	61	3'-0"
W. Abutment	#5	9	3'-4"
W. Abutment	#7	10	5'-6"
E. Abutment	#5	9	3'-4"
E. Abutment	#7	10	5'-6"



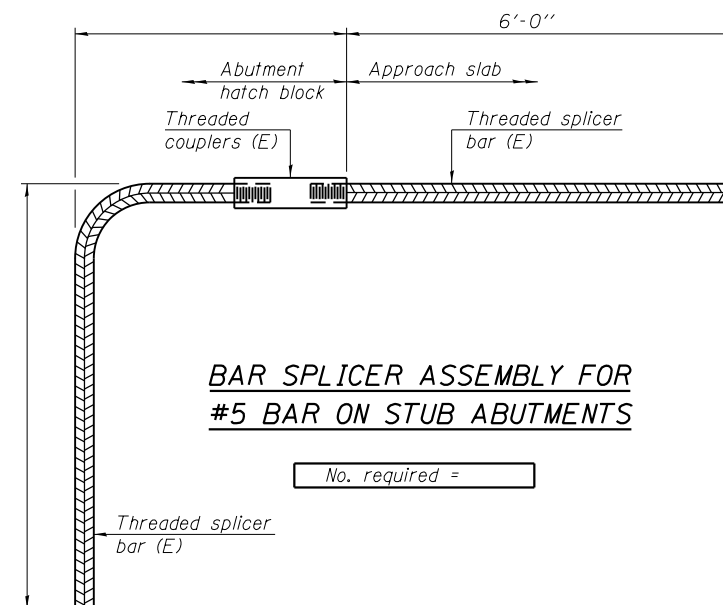
INSTALLATION AND SETTING METHODS

"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

No. required =

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.

BSD-1

FILE PATH = P:\1605-677\1001\PT16163\Item 9 - Ferro-Vent - Order #24 - U.S. Route 20 (Lake St.) Over West Branch DupPage River\CAD\ Sheets\S32-BarSplicer-Det.dgn

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S32-BarSplicerDet.dgn
 USER NAME = Stojanka,Kotorakova
 PLOT SCALE = 0:2.0000 '1' / in.
 PLOT DATE = 10/19/2016

DESIGNED - FA
 DRAWN - FA
 CHECKED - MI, SK
 DATE - 6/15/2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 022-0548

SCALE: SHEET S-32 OF S-35 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
021/345	2015-006B-R	DUPAGE	170	126
CONTRACT NO. 62A60				
ILLINOIS FED. AID PROJECT				

SOIL BORING LOG

Date 6/18/14

ROUTE U.S. ROUTE 20 (LAKE STREET) DESCRIPTION First Encounter Drilled at Location LOGGED BY MDM

SECTION 6Y-TS&N(13) LOCATION SEC. 6, TWP. 40N, RNG. 9E

COUNTY DUPAGE DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Station	DEPTH (ft)	BLOW (ft/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW (ft/6")	UCS (tsf)	MOIST (%)
BORING NO. B-01 Station 243+33.17 Offset 71.30ft South Ground Surface Elev. 775.71 ft					Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: 768.2 ft ▽ Upon Completion 771.7 ft ▽ After _____ Hrs. _____ ft				
					18" TOPSOIL, Black				
	774.21	2			GRAVELLY SAND, Gray, medium dense. GP (continued)		9		
	CLAY, Dark brown, medium stiff. CL	3	0.6	40.7			6		10.0
	773.21	3					6		
	CLAY with gravel, Brown and gray, medium stiff. CL						5		
	▽	3					7		13.0
	770.71	4	0.5	10.3			7		
	CLAY with embedded stone, Gray, medium stiff. CL						17		
	▽	2					15		27.9
	748.21	4	0.9	21.5			15		
	CLAY with stone embedded, Gray, medium stiff to very stiff. CL						3		
	3						5	0.6	16.8
	765.71	4					5		
	SILT, Gray, medium stiff. ML						-30		
	4								
	5	0.5	16.5						
	763.21	6							
	GRAVELLY SAND, Gray, medium dense. GP						3		
	1						3	0.6	18.7
	5						5		
	-15	7					-35		
	10								
	8			11.2					
	9								
	3						4		
	7			5.1			5	2.0	16.9
	-20	6					-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)
Page 25

SOIL BORING LOG

Date 6/18/14

ROUTE U.S. ROUTE 20 (LAKE STREET) DESCRIPTION First Encounter Drilled at Location LOGGED BY MDM

SECTION 6Y-TS&N(13) LOCATION SEC. 6, TWP. 40N, RNG. 9E

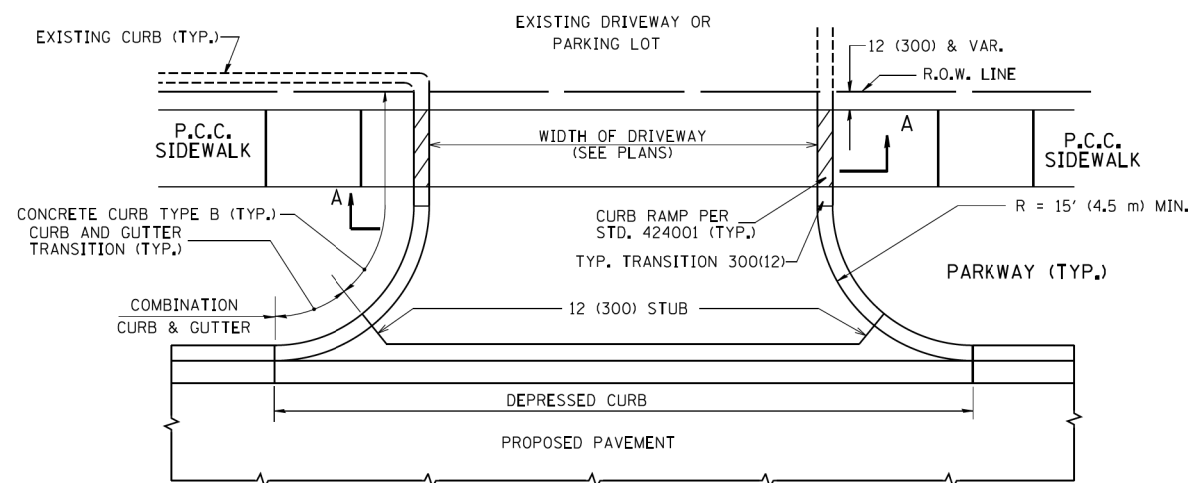
COUNTY DUPAGE DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Station	DEPTH (ft)	BLOW (ft/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW (ft/6")	UCS (tsf)	MOIST (%)
BORING NO. B-01 Station 243+33.17 Offset 71.30ft South Ground Surface Elev. 775.71 ft					Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: 768.2 ft ▽ Upon Completion 771.7 ft ▽ After _____ Hrs. _____ ft				
					CLAY with stone embedded, Gray, medium stiff to very stiff. CL (continued)				
					GRAVELLY SAND, Gray, medium dense. GP				
							7		
							11		14.3
							10		
	730.71	6	1.0	13.7					
	CLAY with trace of sand and gravel, Gray, medium stiff. CL						4		
	4						5	0.8	16.1
	-50	6	P				-70		
	5								
	720.71	4	0.8	15.8					
	CLAY embedded stone, Gray, medium stiff. CL						2		
	2						4	0.8	15.8
	-55	4	P				-75		
	10								
	14						14		7.5
	-75	14					-80		
	13								
	715.71	7	0.6	14.9			14		7.2
	-60	11					-80		

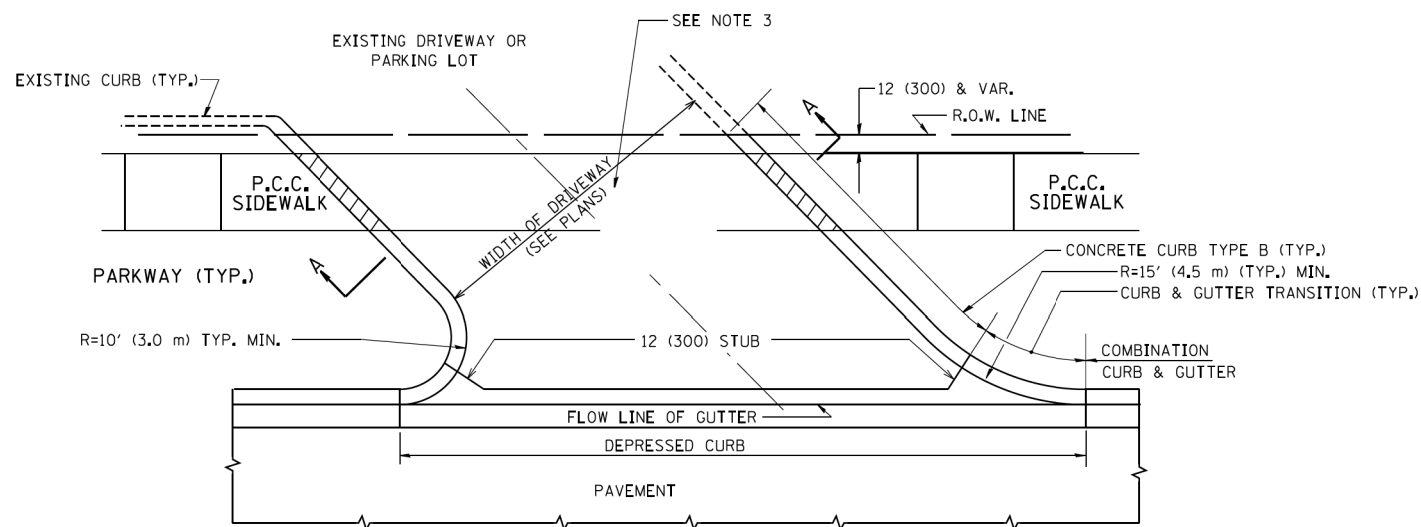
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)
Page 26

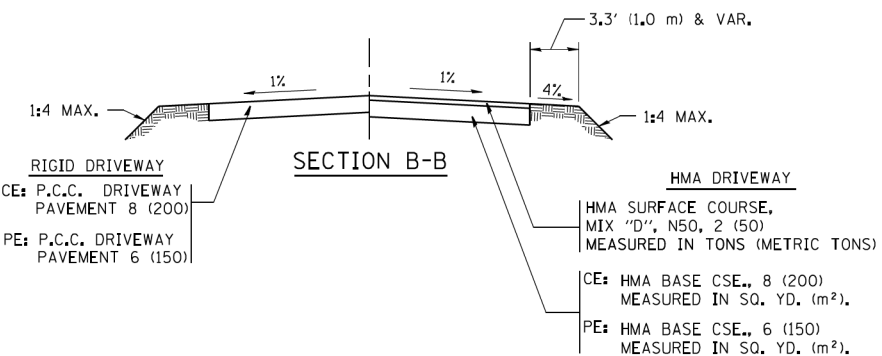
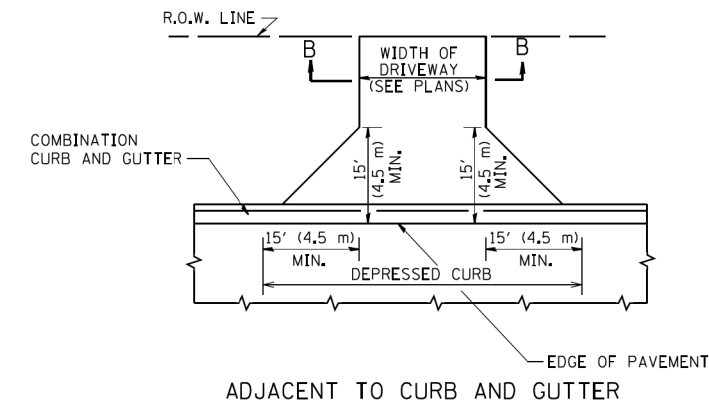
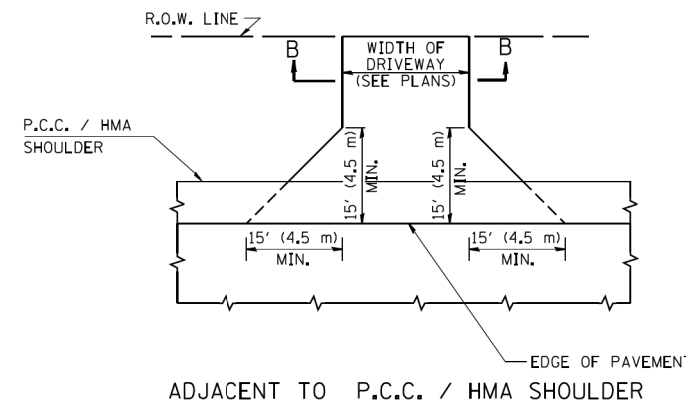
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WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B



RURAL FIELD ENTRANCE (FE)
HMA SURFACE COURSE,
MIX 'D', N50, 2 (50)
MEASURED IN TONS (METRIC TONS)
AGGREGATE BASE CSE., TYPE B, 8 (200)
MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE 'HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS'. FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

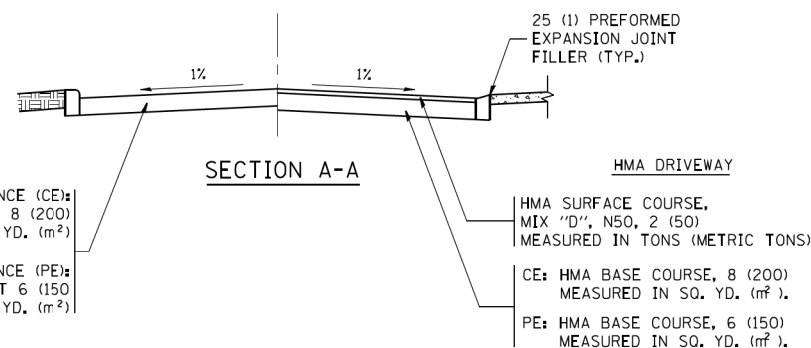
COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.



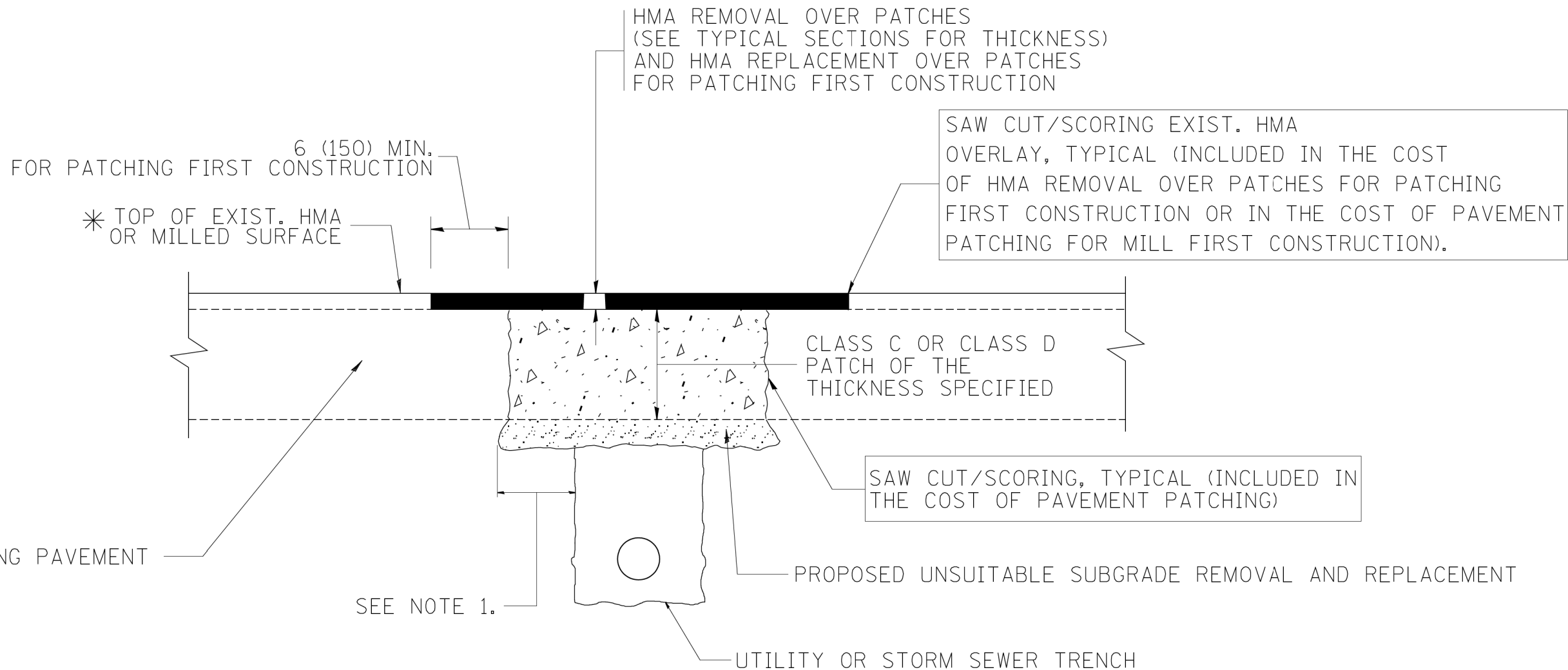
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		DATE - 11-04-95	REVISED - R. BORO 09-06-11

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	130
BD0156-07 (BD-01)		CONTRACT NO. 62A60		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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		DATE - 10-25-94	REVISED - K. ENG 10-27-08

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT PATCHING FOR
HMA SURFACED PAVEMENT**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	131
BD400-04 (BD-22)			CONTRACT NO. 62A60	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL PAY ITEM.

SEE STATE STANDARD 606001
EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)

18" (450) MAX.

1/4" (5) **

EXISTING SIDEWALK, DRIVEWAY, MEDIAN SURFACE, SOD OR GROUND.

PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SODDING SALT TOLERANT WITH TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

3" (75) MIN.

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

BASIS OF PAYMENT:
THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY,

② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑥ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑧ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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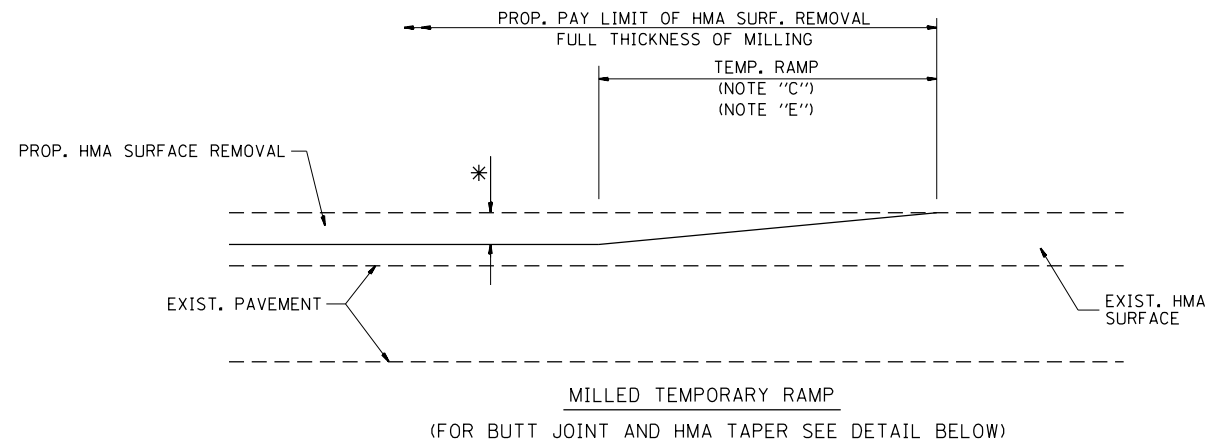
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

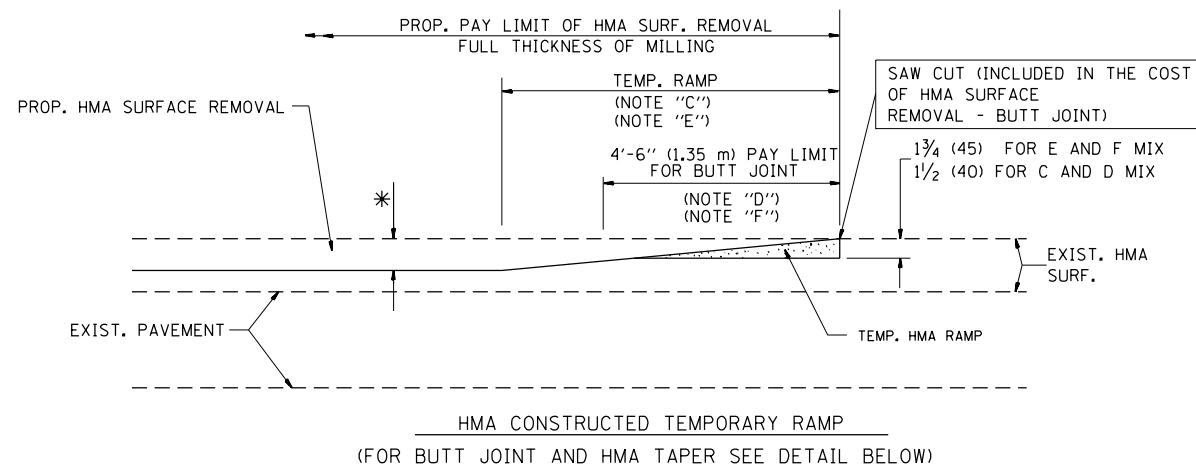
**CURB OR CURB AND GUTTER
REMOVAL AND REPLACEMENT**

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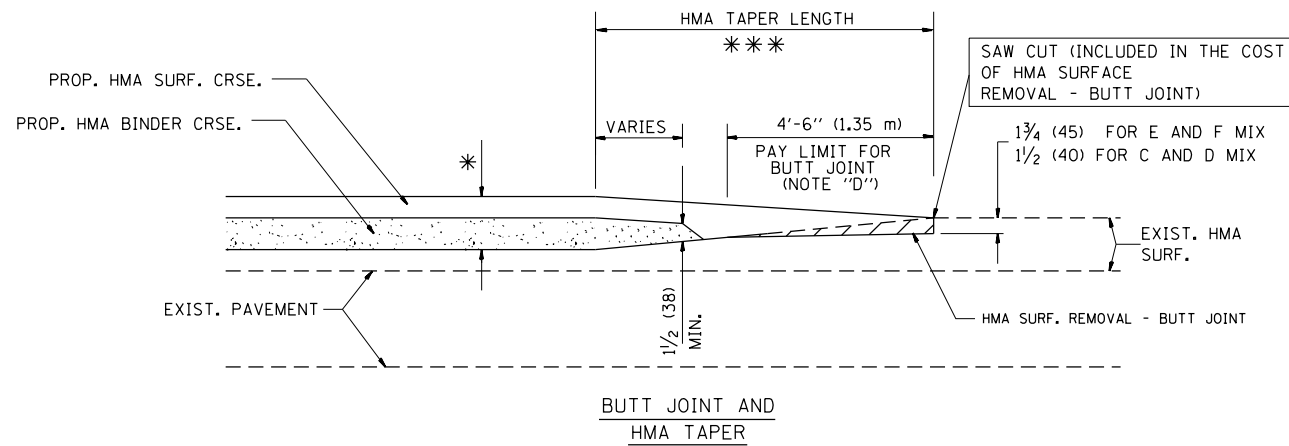
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345	2015-006B-R	DUPAGE	170	132
BD600-06 (BD-24)		CONTRACT NO. 62A60		
ILLINOIS FED. AID PROJECT				



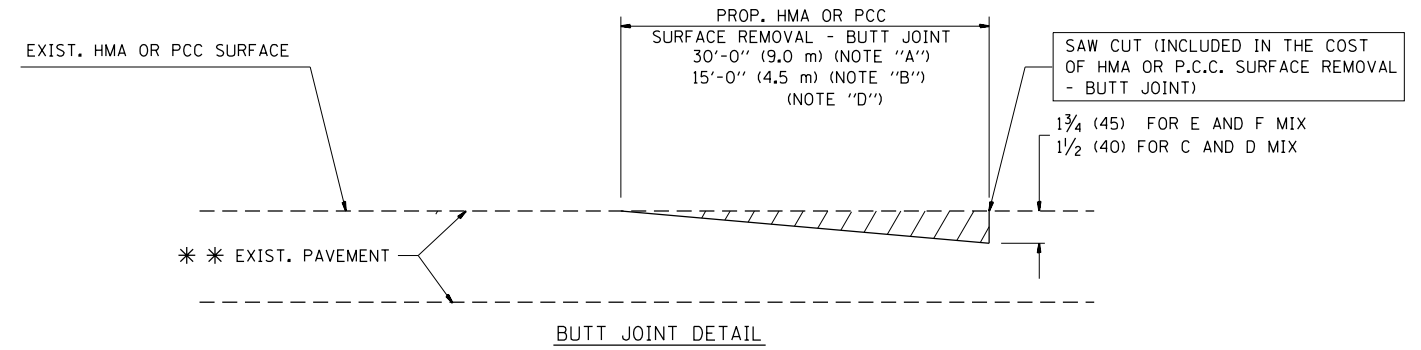
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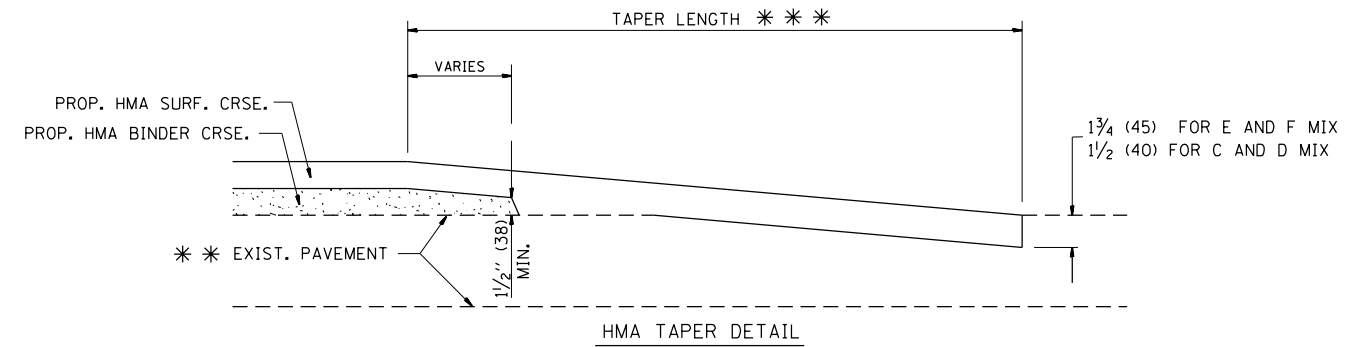
OPTION 2
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER
FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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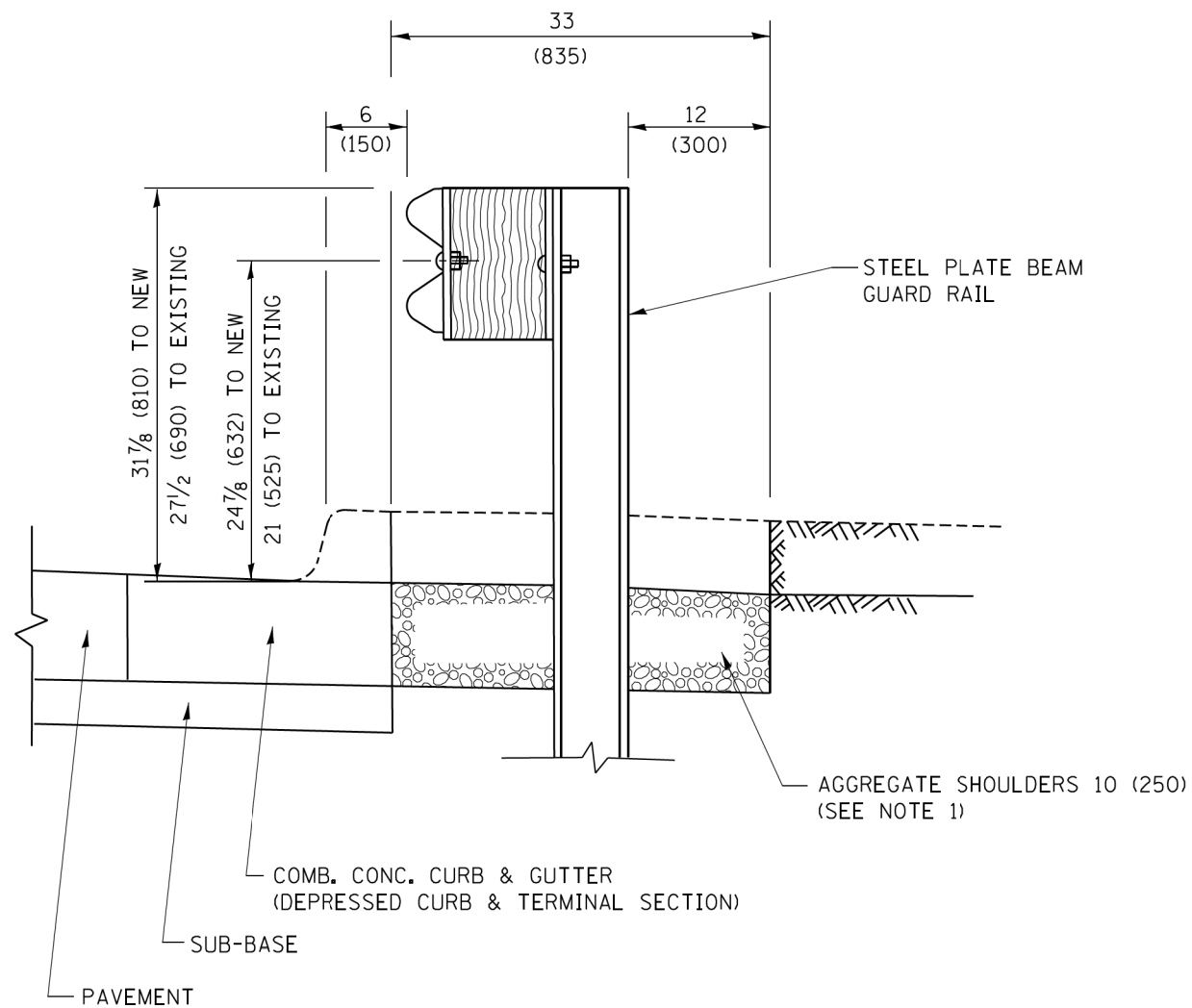
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS AND
HMA TAPER

SCALE: NTS SHEET OF SHEETS STA. TO STA.

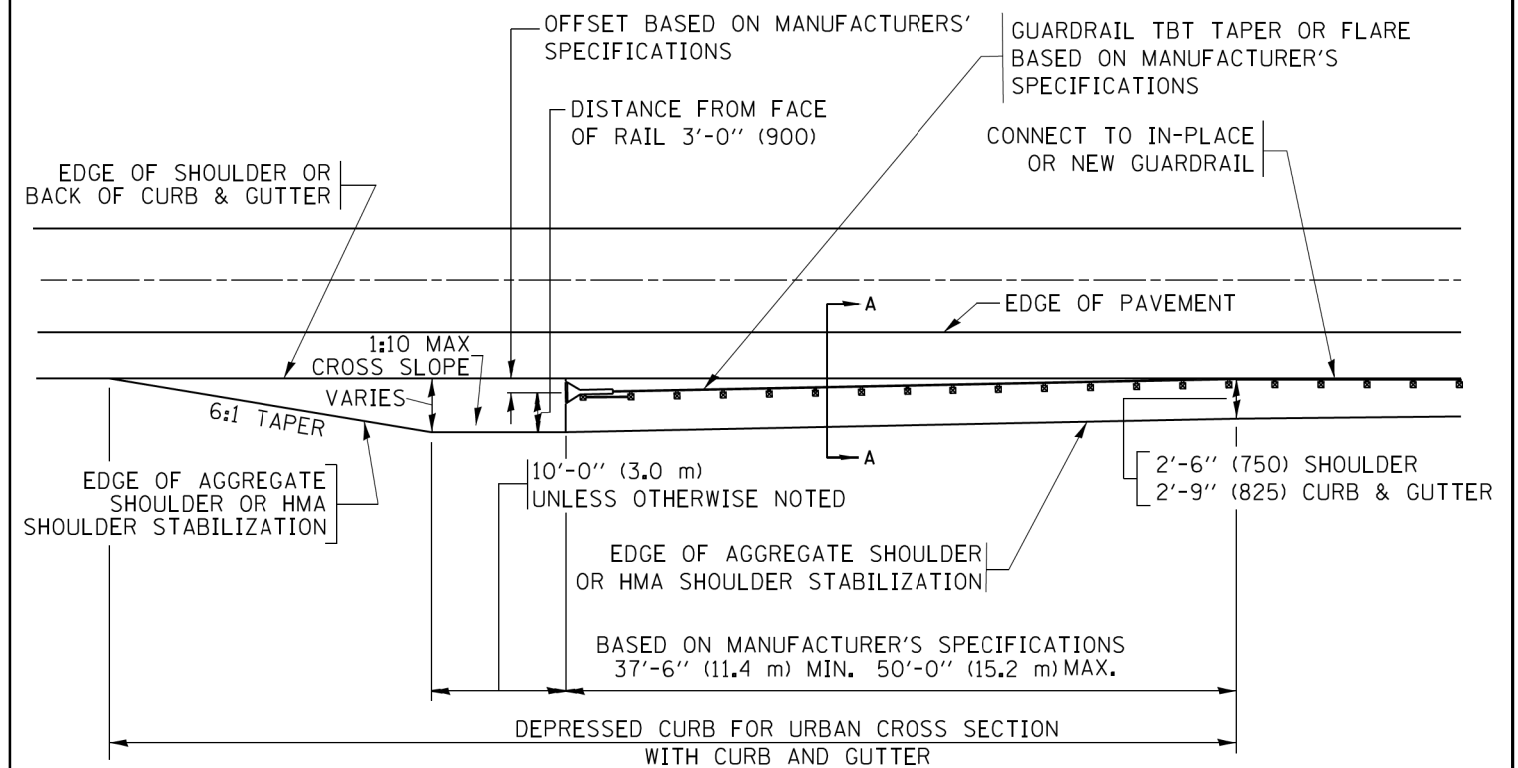
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345	2015-006B-R	DUPAGE	170	133
BD400-05 BD32		CONTRACT NO. 62A60		
ILLINOIS FED. AID PROJECT				



SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10 (250) OR HMA SHOULDER, 6 (150) (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
 2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
 3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

**DETAILS FOR STEEL PLATE BEAM
GUARD RAIL ADJACENT TO CURB AND GUTTER
[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]**



**DEPRESSED CURB AND GUTTER AND
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

AGGREGATE SHOULDER, 10 (250) WILL BE PAID ACCORDING TO SECTION 481.

HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID ACCORDING TO SECTION 482.

COMB. CONC. C&G, STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

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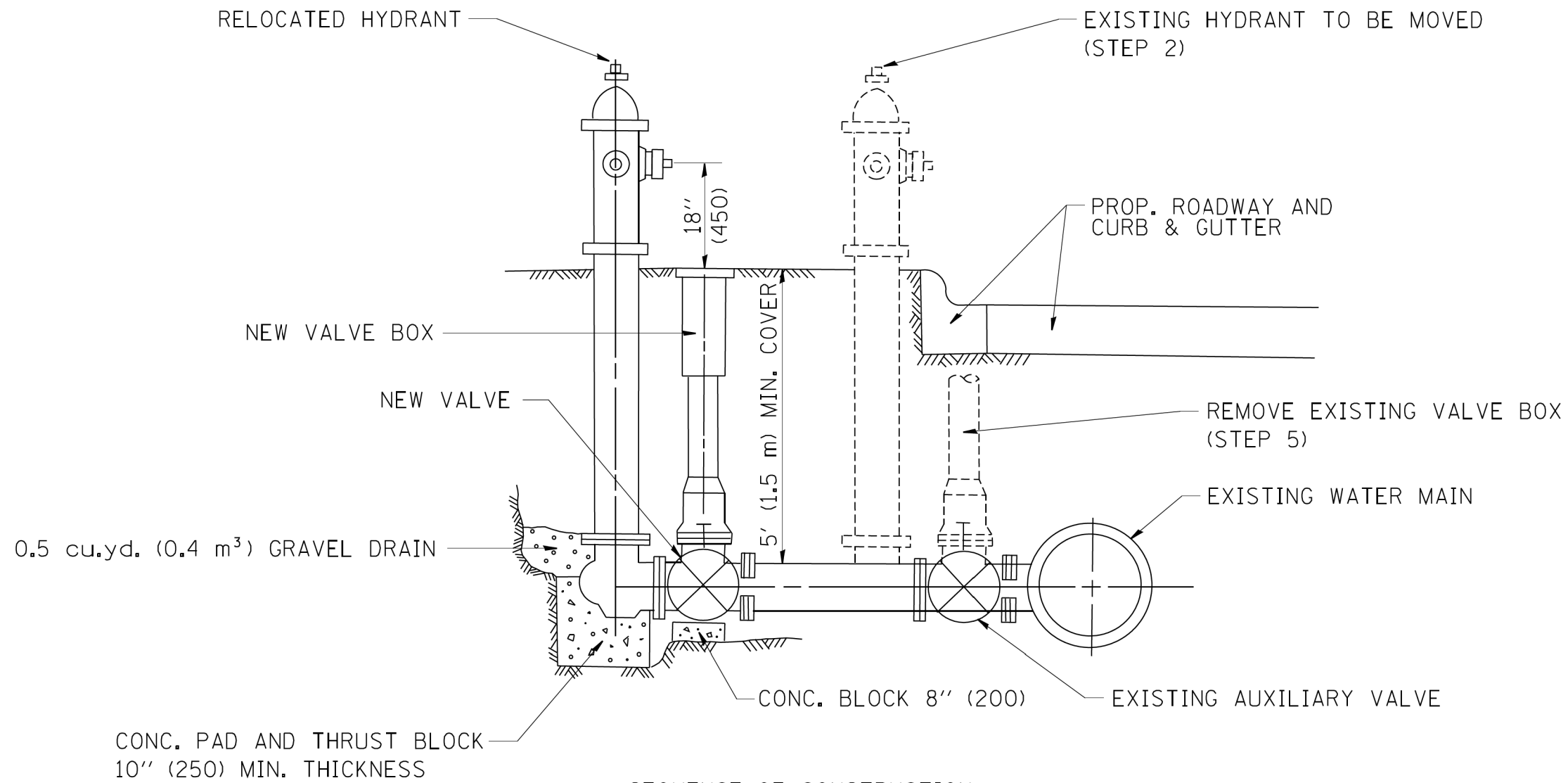
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR DEPRESSED CURB & GUTTER AND
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	134
BD600-10 (BD 34)			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				



SEQUENCE OF CONSTRUCTION:

1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING HYDRANT.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE MOVED

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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PLOT DATE = 1/4/2008	DATE -	REVISIED -	REVISIED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							

GENERAL NOTES

ALTERNATE MATERIAL FOR THE WALLS MAY BE CONCRETE MASONRY UNITS, PRECAST REINFORCED CONCRETE SECTIONS OR CAST-IN-PLACE CONCRETE. THE CAST IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN MAY BE USED WHEN APPROVED BY THE ENGINEER.

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14 OF THE STANDARD SPECIFICATIONS.

STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF THREE (3) INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.

STEPS SHALL BE OMITTED FOR WORK IN COOK COUNTY WHEN THE DEPTH OF THE MANHOLE IS TEN (10') OR LESS.

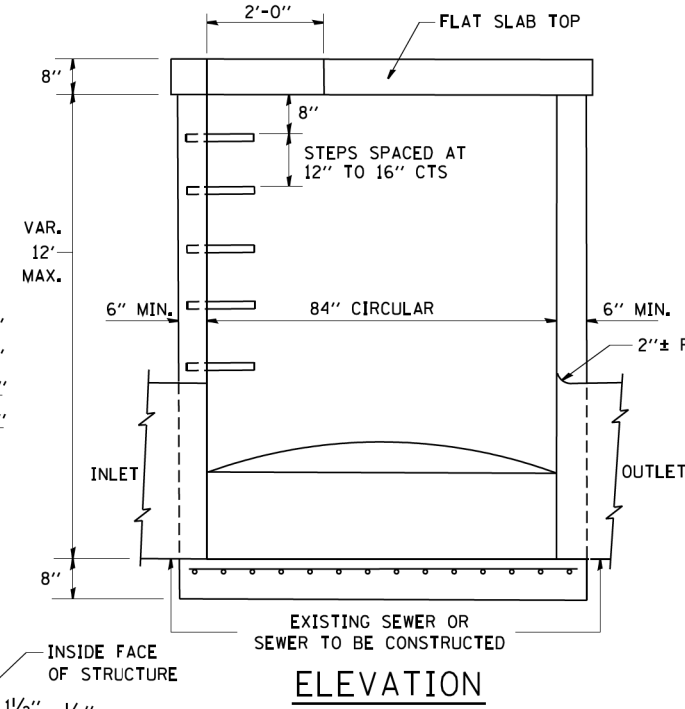
IN ADDITION TO THE REQUIREMENTS OF ARTICLE 612.13 OF THE STANDARD SPECIFICATIONS, THE CONTRACT UNIT PRICE FOR MANHOLES, TYPE A, 7'-DIAMETER SHALL INCLUDE THE SAND CUSHION WHEN REQUIRED, FURNISHING AND INSTALLING STEPS WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL, AND FURNISHING AND INSTALLING FLAT SLAB TOP.

PRECAST FLAT SLAB TOP SHALL CONFORM TO ARTICLES 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS. REINFORCEMENT BARS AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 1006.10. ONLY GRADE 60 REINFORCEMENT BARS WILL BE PERMITTED.

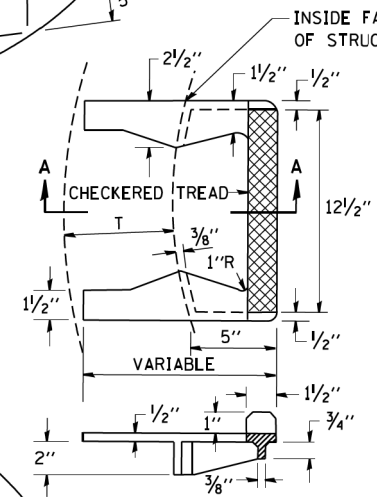
BOTTOM SLAB SHALL BE REINFORCED BY EITHER REINFORCEMENT BARS OR WELDED WIRE FABRIC. THE MINIMUM REINFORCEMENT SHALL BE 0.46 SQUARE INCH PER LINEAR FOOT IN BOTH DIRECTIONS.

JOINT CONFIGURATION AND DIMENSIONS OF FLAT SLAB TOP SHALL MATCH AND FIT THE RISER JOINT DETAIL.

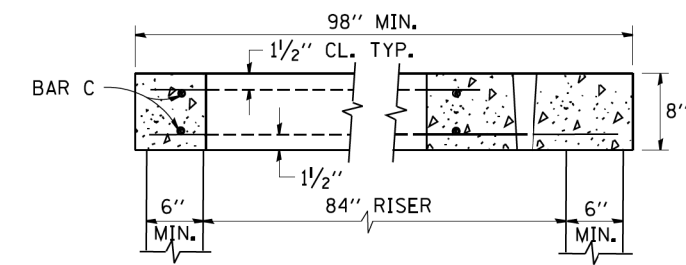
LIFTING DEVICES SHALL BE APPROVED BY THE ENGINEER.



ELEVATION

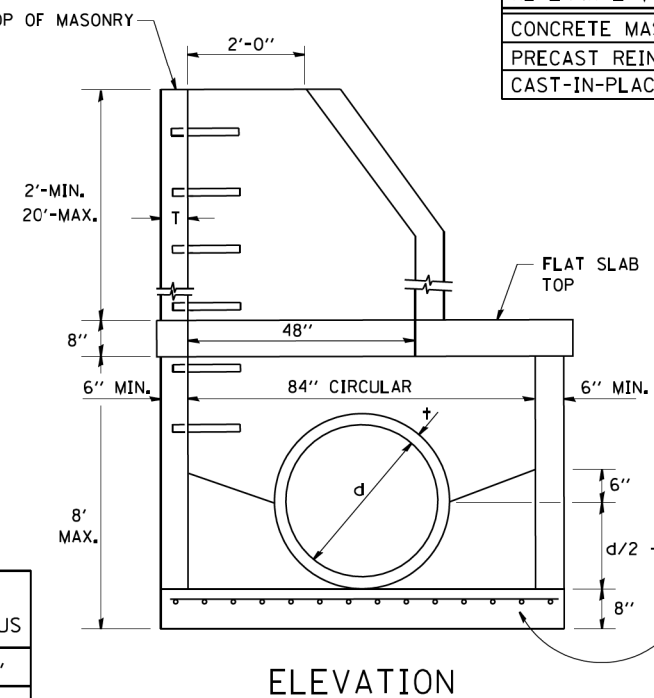


**SEC. A-A
CAST IRON STEPS**

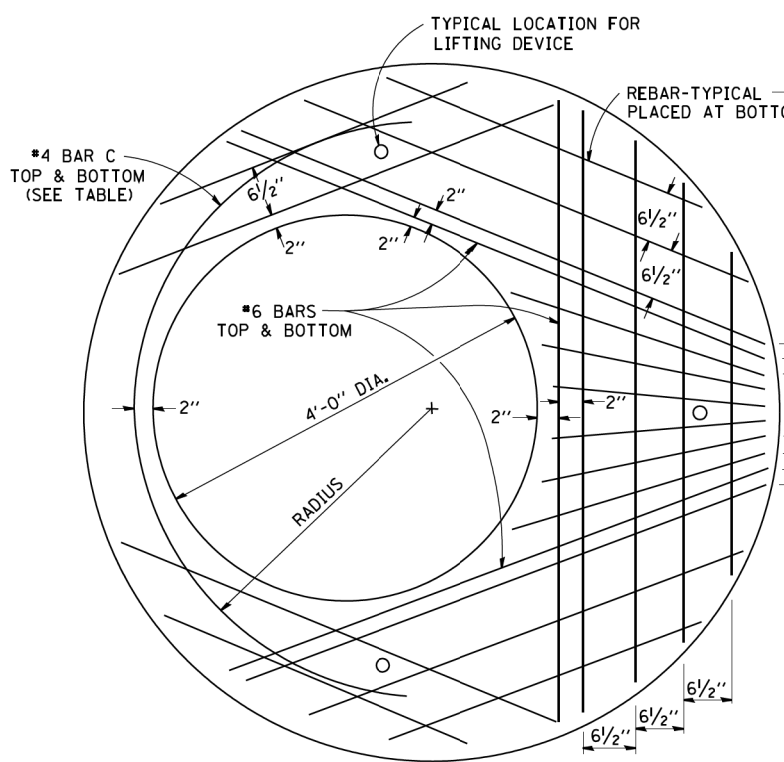
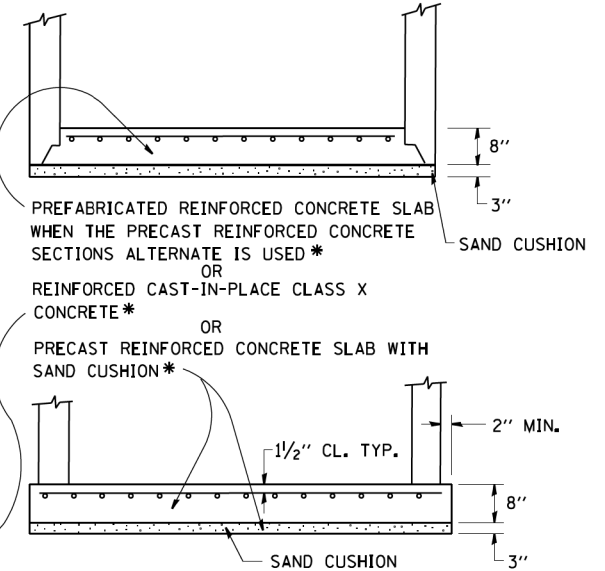


SECTION B-B

ALTERNATE MATERIALS FOR RISERS	T (MIN.)
CONCRETE MASONRY UNITS	5"
PRECAST REINFORCED CONCRETE SECTIONS	4"
CAST-IN-PLACE CONCRETE	6"

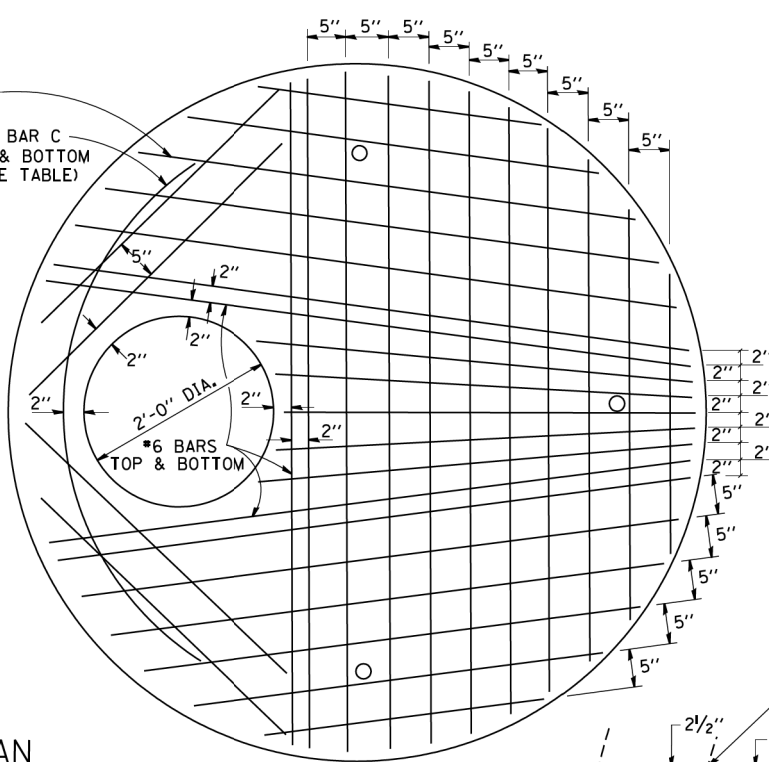


ELEVATION



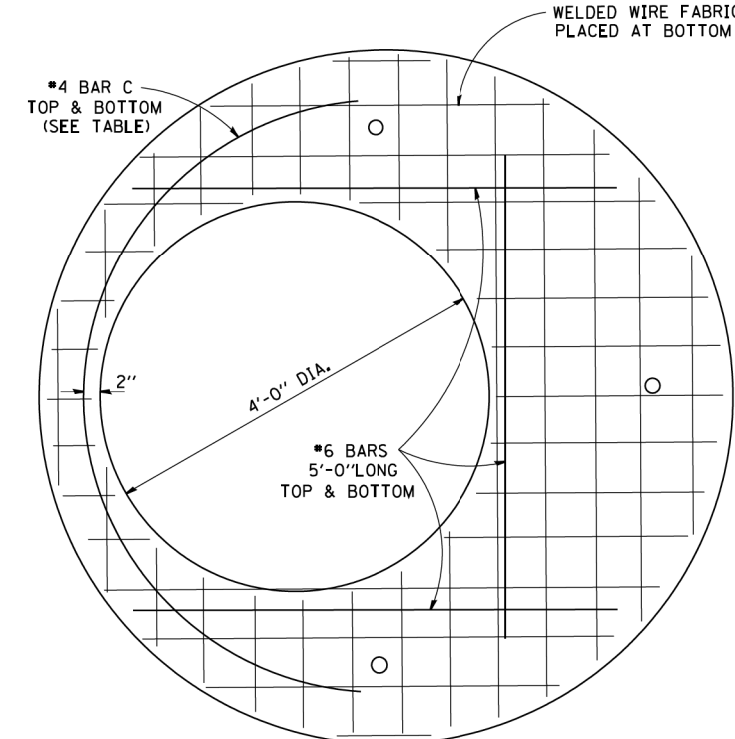
PLAN

SHOWING REBAR REINFORCEMENT



PLAN

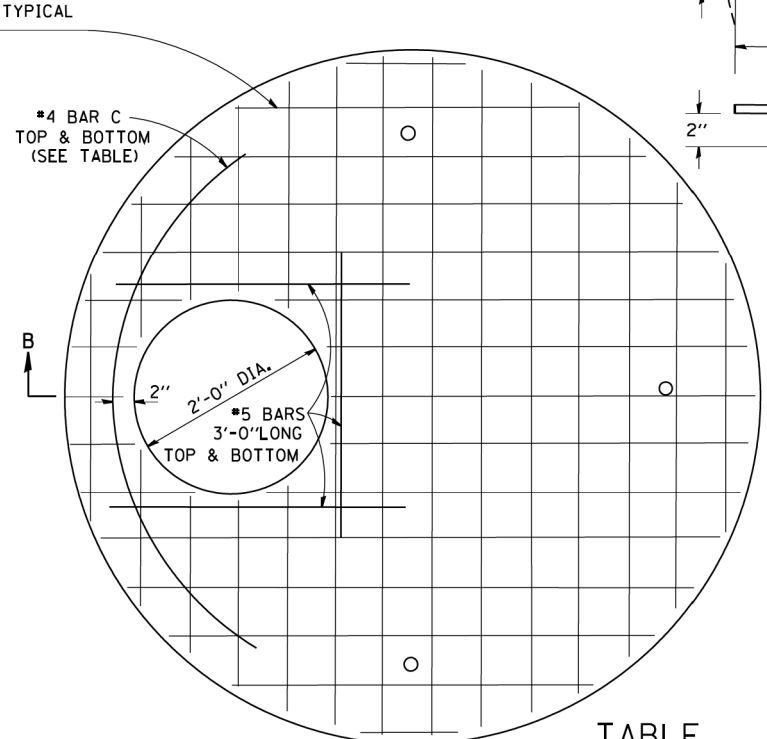
SHOWING REBAR REINFORCEMENT



PLAN

SHOWING WELDED WIRE FABRIC REINFORCEMENT

NOTE: THIS STRUCTURE SHOULD BE USED WITH PIPES SIZE 54" DIA. OR SMALLER.



TABLE

DIAMETER OF OPENING	REINFORCEMENT "A _c " WWF OR BAR SIZE EACH DIRECTION	BAR SIZE	BAR C		
			SIZE	LENGTH	RADIUS
2'-0"	1.06 SQ.IN./LIN.FT.	#6	#4	6'-0"	38"
4'-0"	0.82 SQ.IN./LIN.FT.	#6	#4	9'-0"	38"

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MANHOLE TYPE A
7 FOOT DIAMETER**

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USER NAME = gaglianobt
DESIGNED -
DRAWN -
CHECKED -
DATE - 10-18-02

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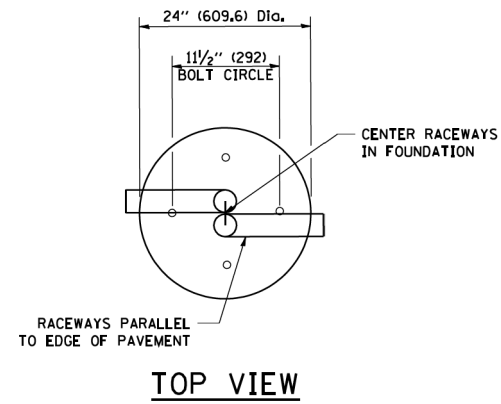
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BD600-11 (BD-37) CONTRACT NO. 62A60
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

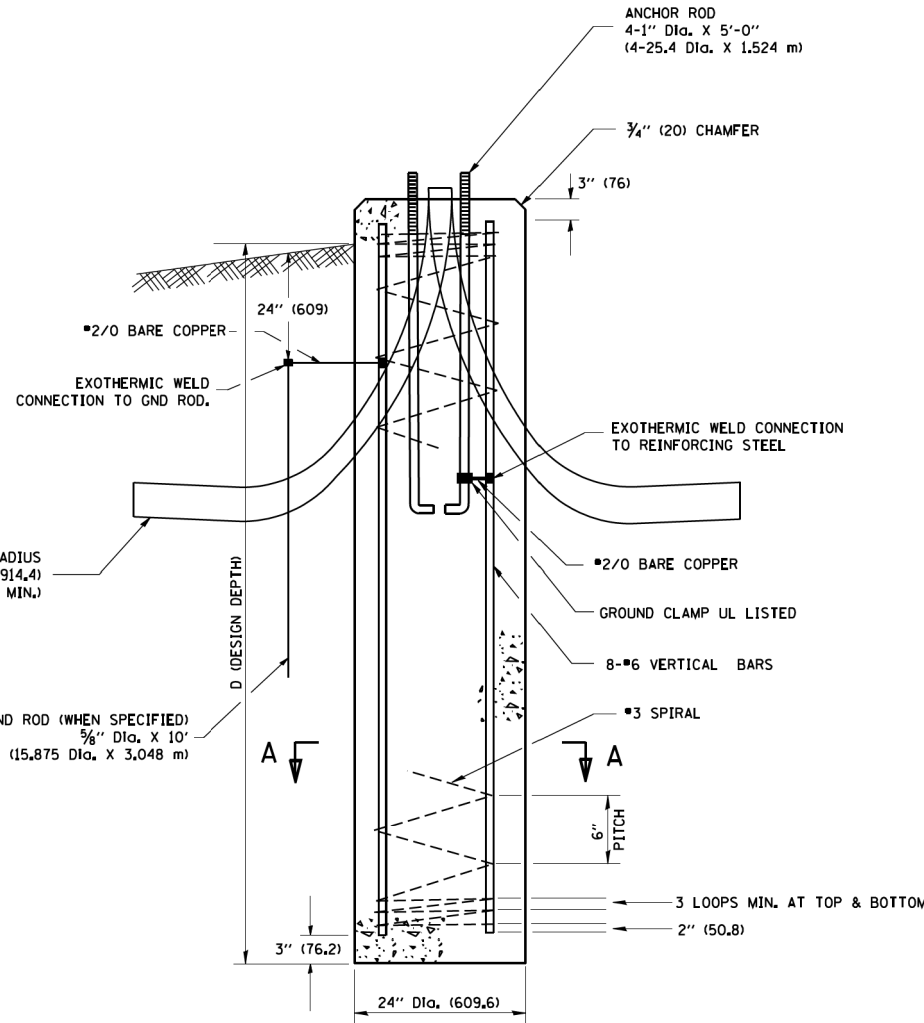
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LIGHT POLE FOUNDATION DEPTH TABLE
30 FT. (9.144 m) TO 35 FT. (10.668 m) MOUNTING HEIGHT

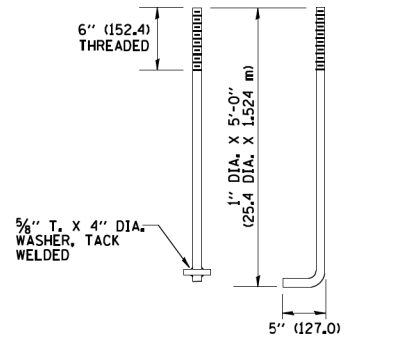
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY Qu = 1.50 TON/SO. FT.	7'-6" (2.29 m)	8'-7" (2.61 m)
LOOSE SAND φ = 34°	9'-6" (2.90 m)	10'-7" (3.22 m)
MEDIUM SAND φ = 37.5°	9'-0" (2.74 m)	9'-10" (2.99 m)
DENSE SAND φ = 40°	8'-3" (2.51 m)	9'-7" (2.91 m)



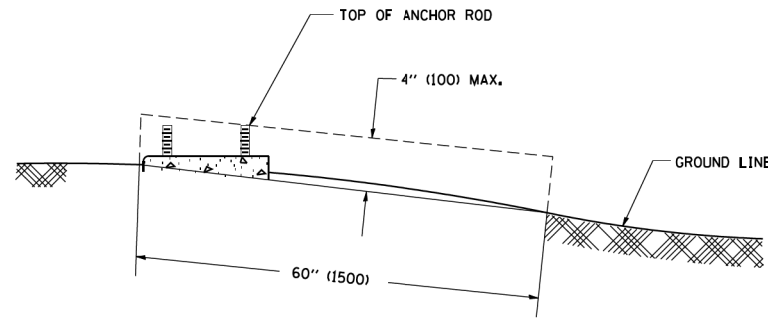
TOP VIEW



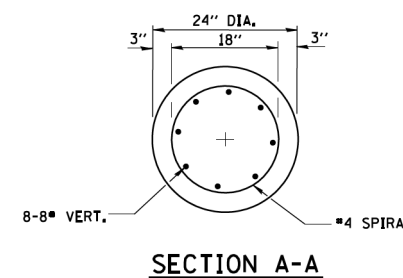
FOUNDATION DETAIL



ANCHOR BOLT DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A

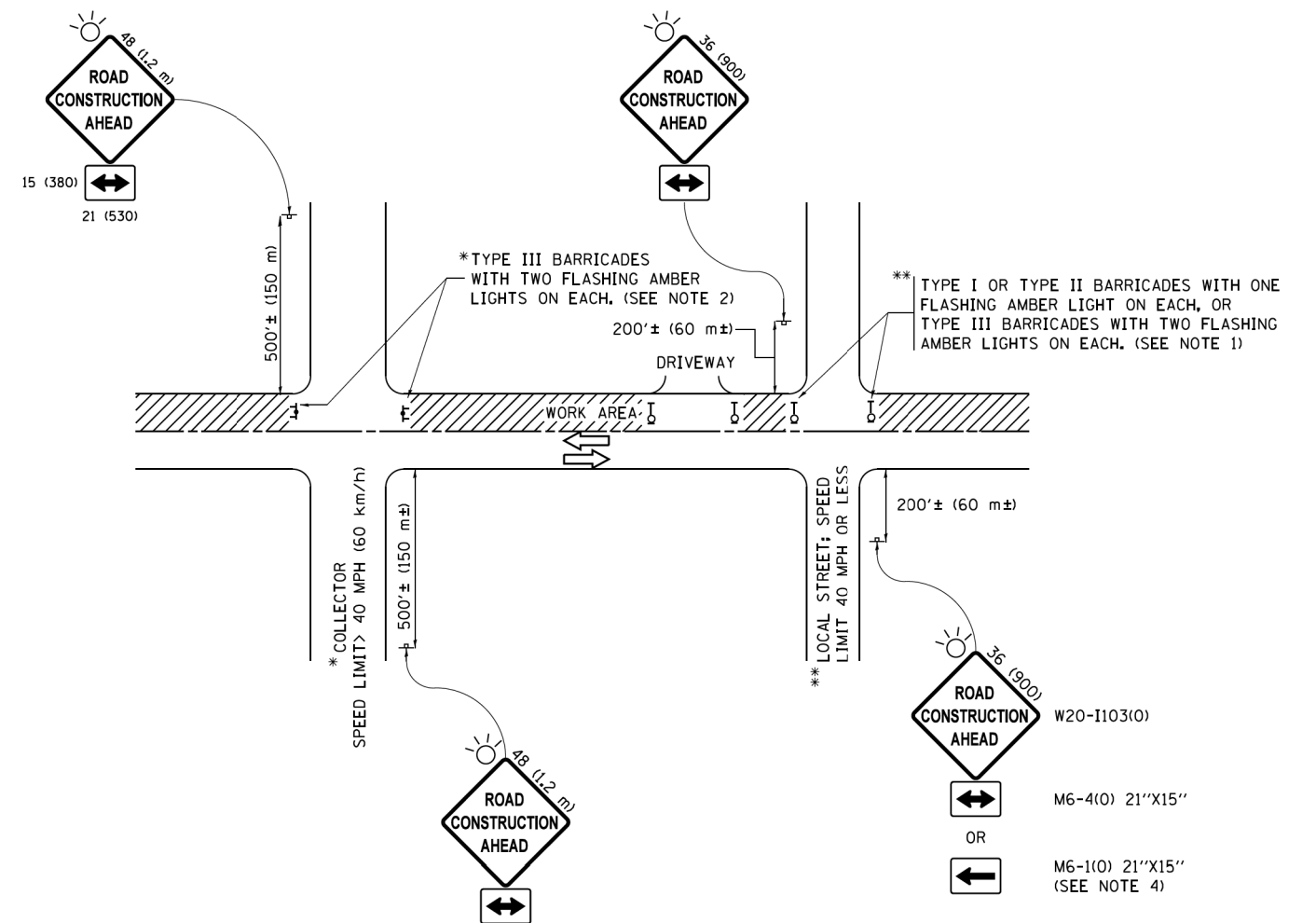
NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 4 IN. (100 mm) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105), NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

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PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	REVISED -		30' (9.144 m) TO 35' (10.668 m) M.H. 11 12" (292 mm) BOLT CIRCLE			BE-300		CONTRACT NO. 62A60			
PLOT DATE = 1/4/2008	DATE -	REVISED -	REVISED -		SCALE: NONE	SHEET NO. 1	OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

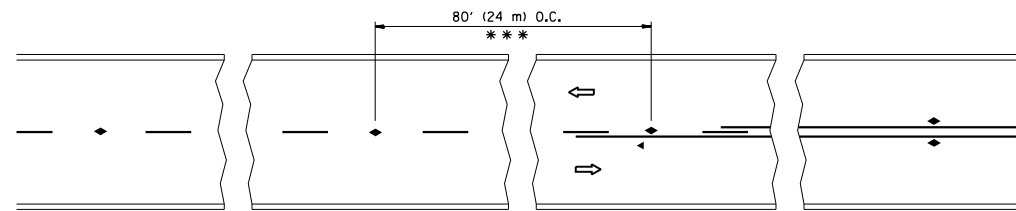
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

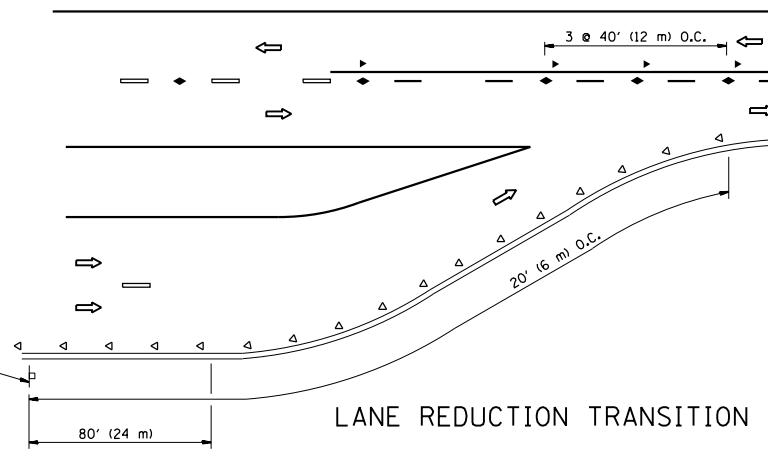
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-10			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				

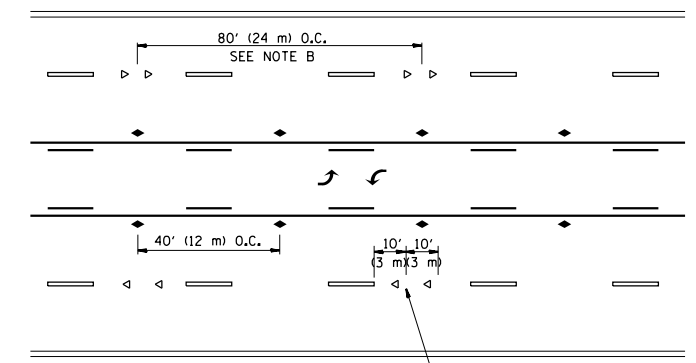


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

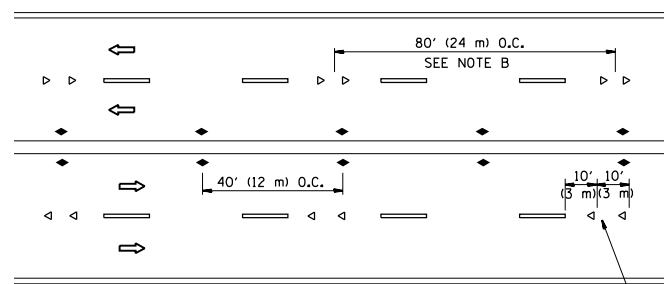
TWO-LANE/TWO-WAY



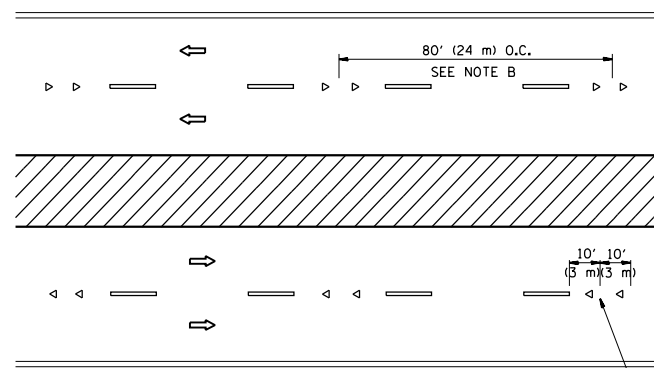
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

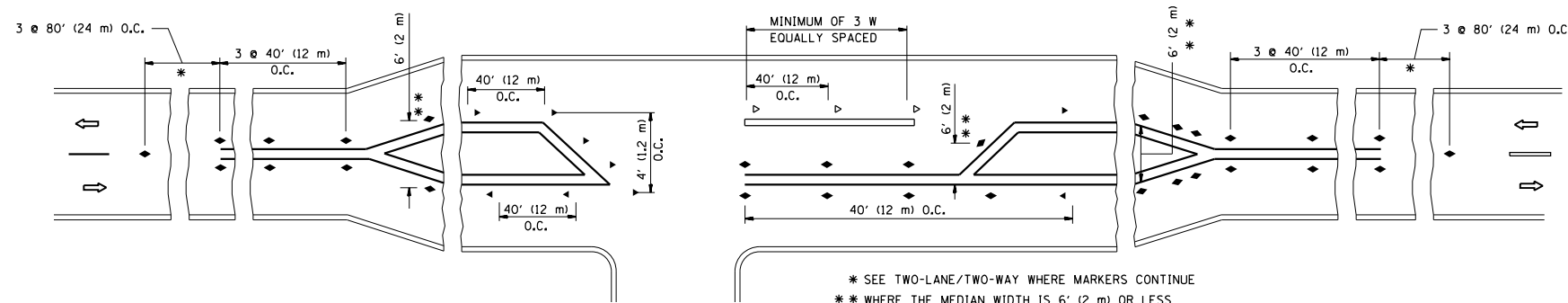
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

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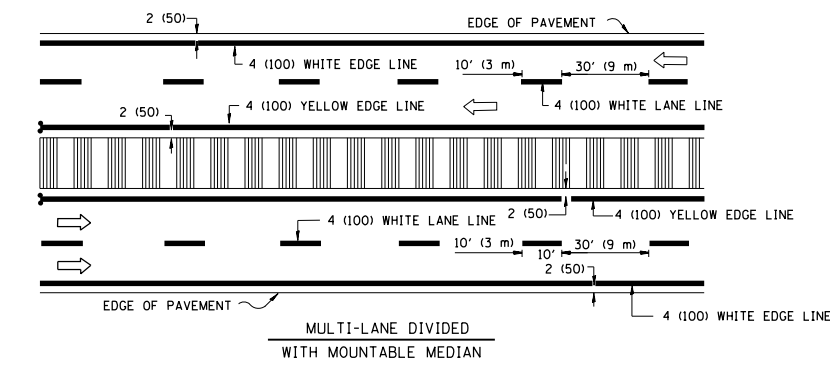
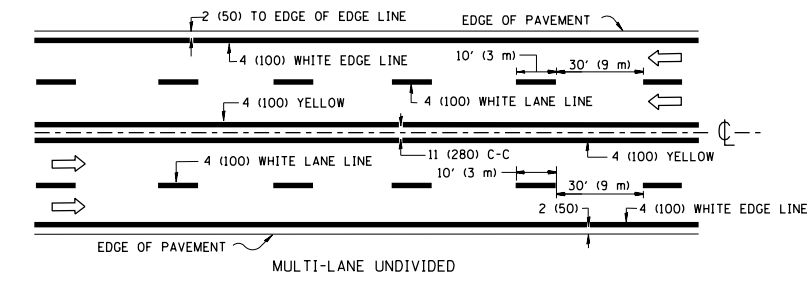
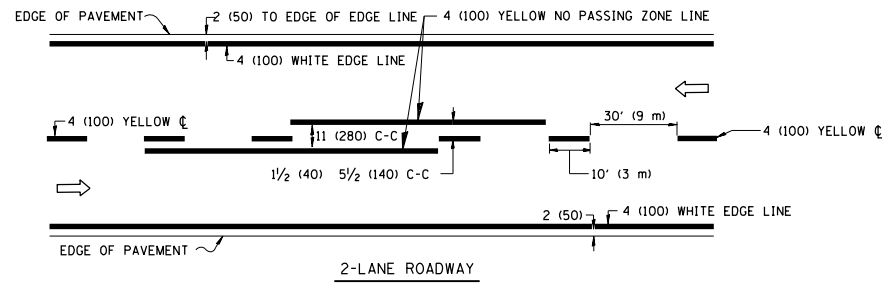
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

RAISED REFLECTIVE PAVEMENT MARKERS
 (SNOW PLOW RESISTANT)

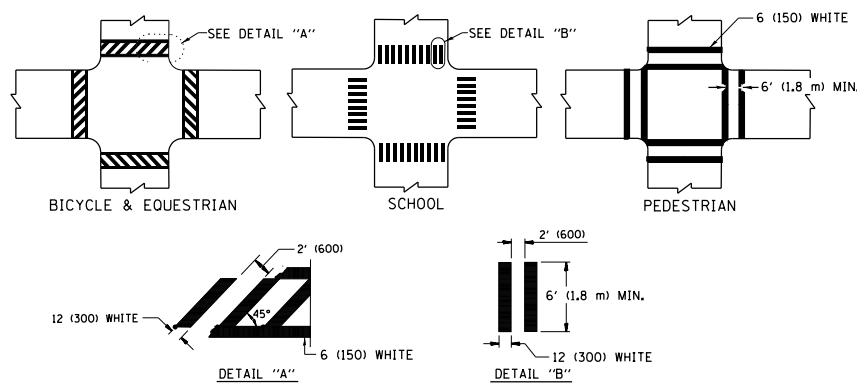
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-11			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				

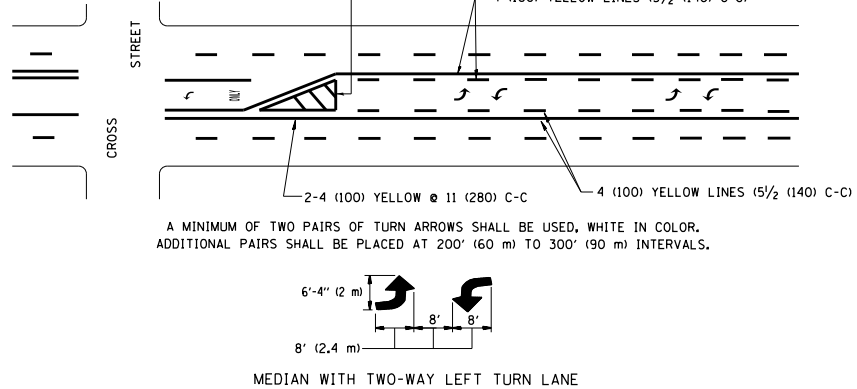
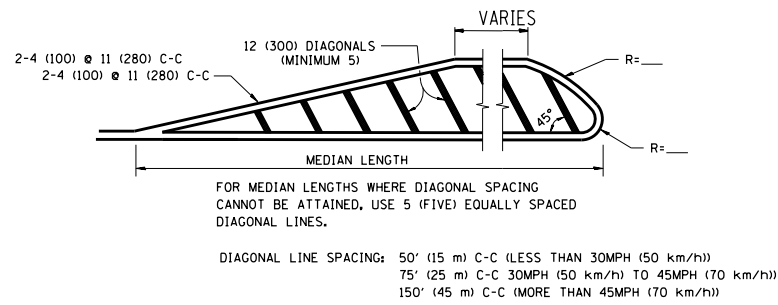
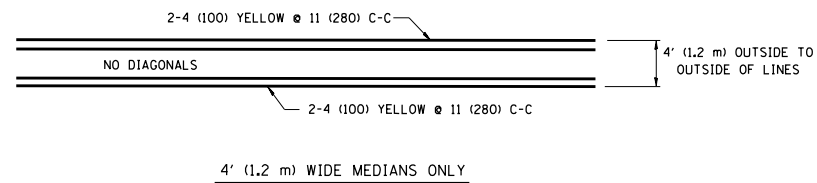


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

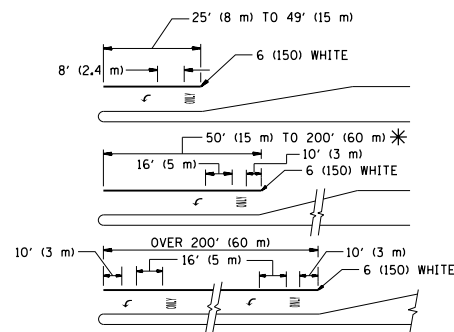
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



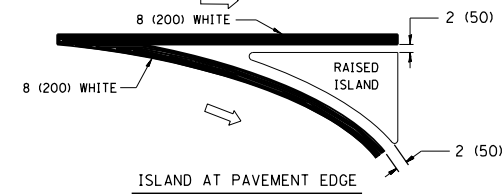
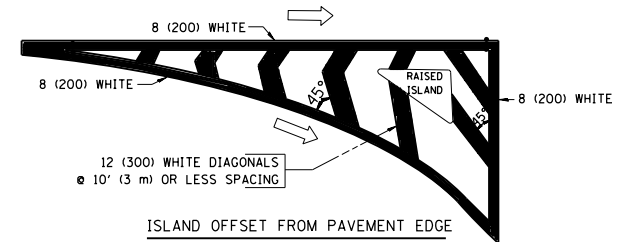
TYPICAL PAINTED MEDIAN MARKING



* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C (30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15' 6" (4.7 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R": 3.6 SQ. FT. (0.33 m²) EACH "X": 54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE TYPICAL
PAVEMENT MARKINGS

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 345	SECTION 2015-006B-R	COUNTY DUPAGE	TOTAL SHEETS 170	SHEET NO. 140
TC-13		CONTRACT NO. 62A60		
ILLINOIS FED. AID PROJECT				

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

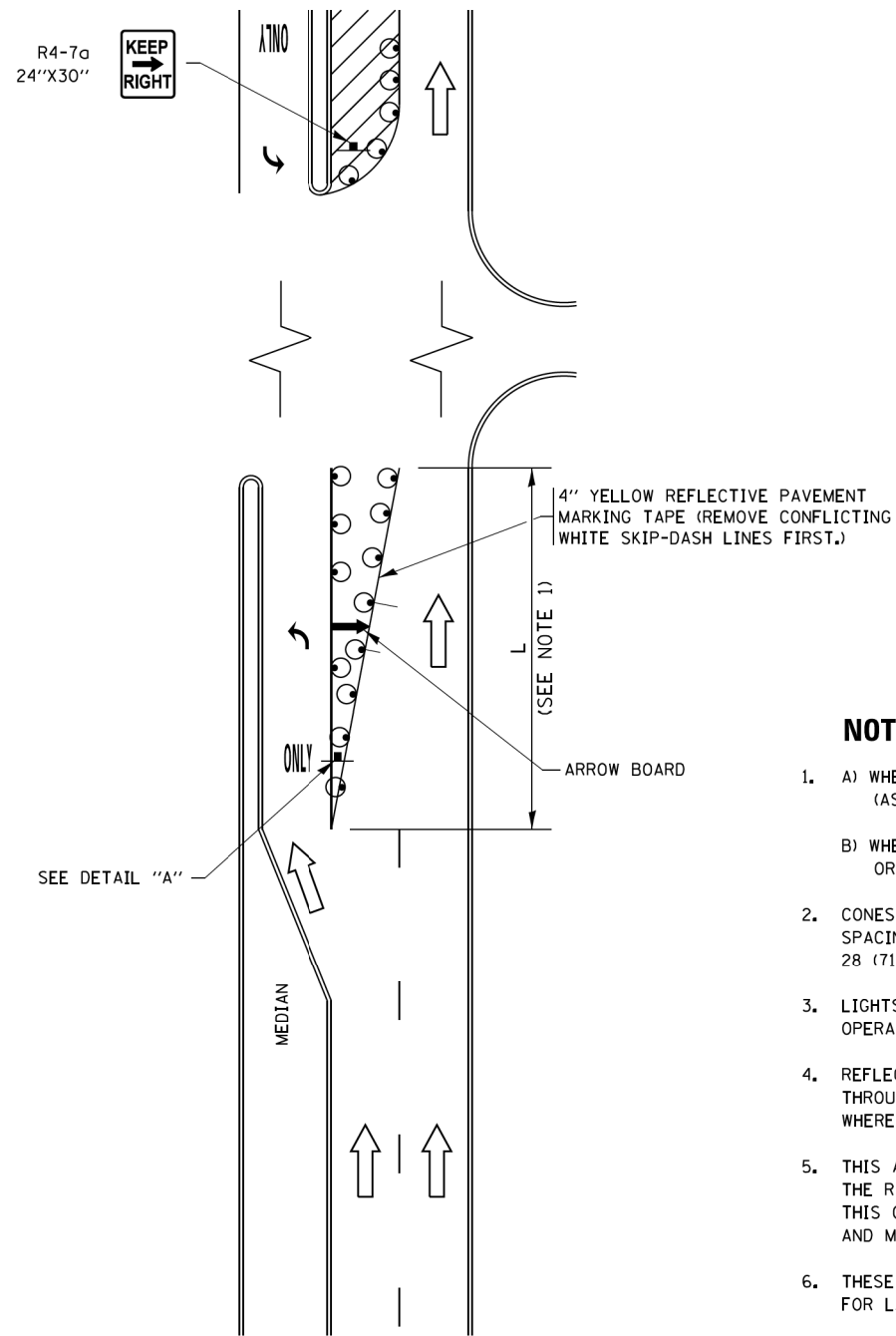


FIGURE 1

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

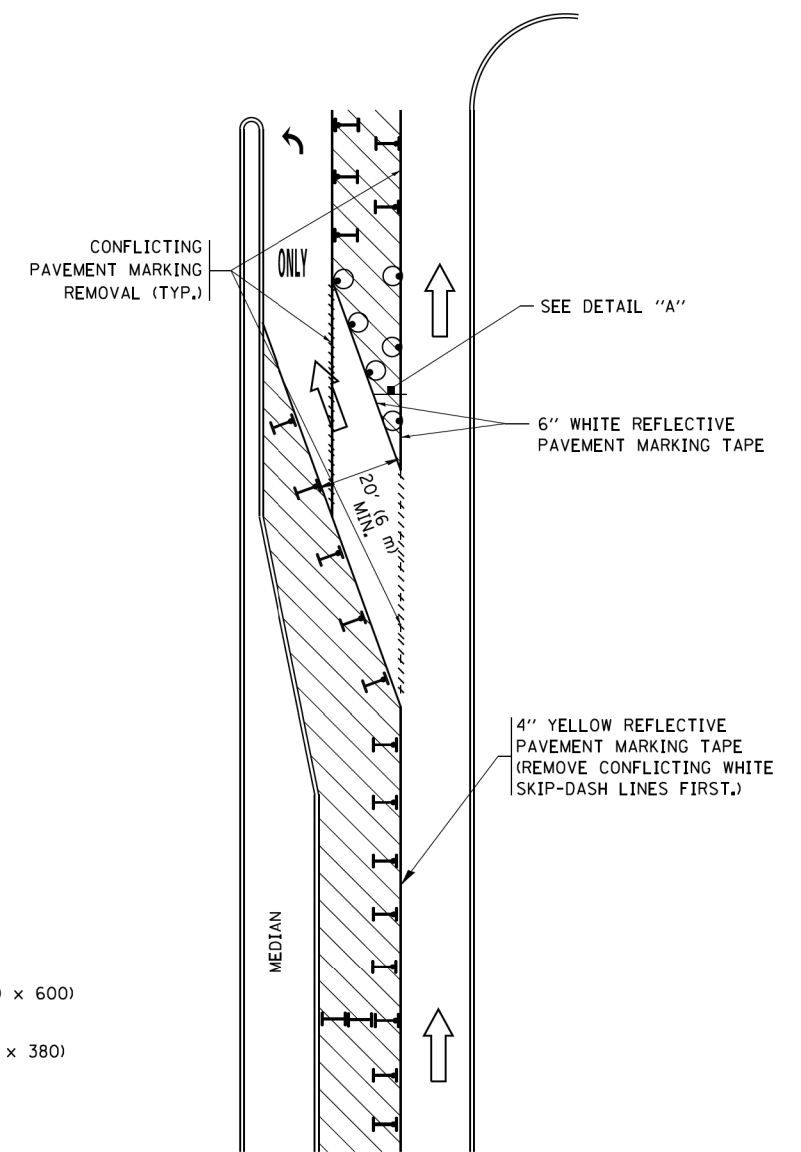


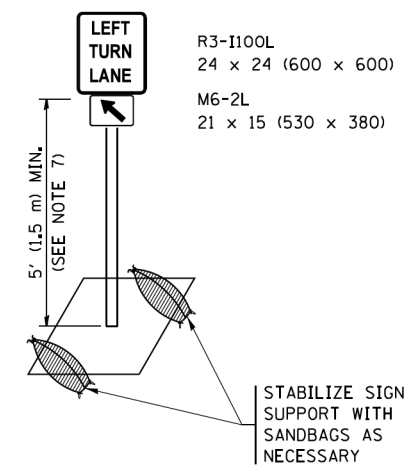
FIGURE 2

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

NOTES:

1. A) WHEN "L" IS \leq THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.
B) WHEN "L" IS $>$ THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-I100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PRE REQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



DETAIL A

All dimensions are in inches (millimeters) unless otherwise shown.

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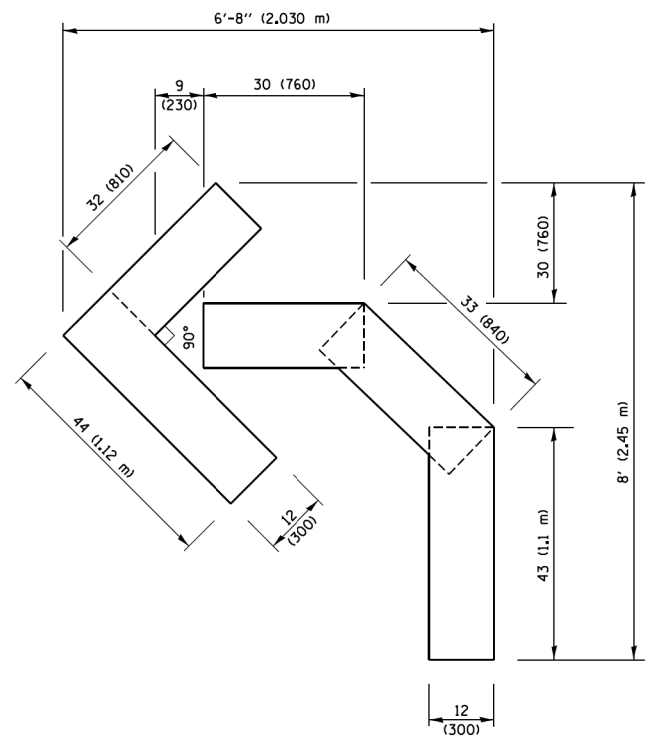
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

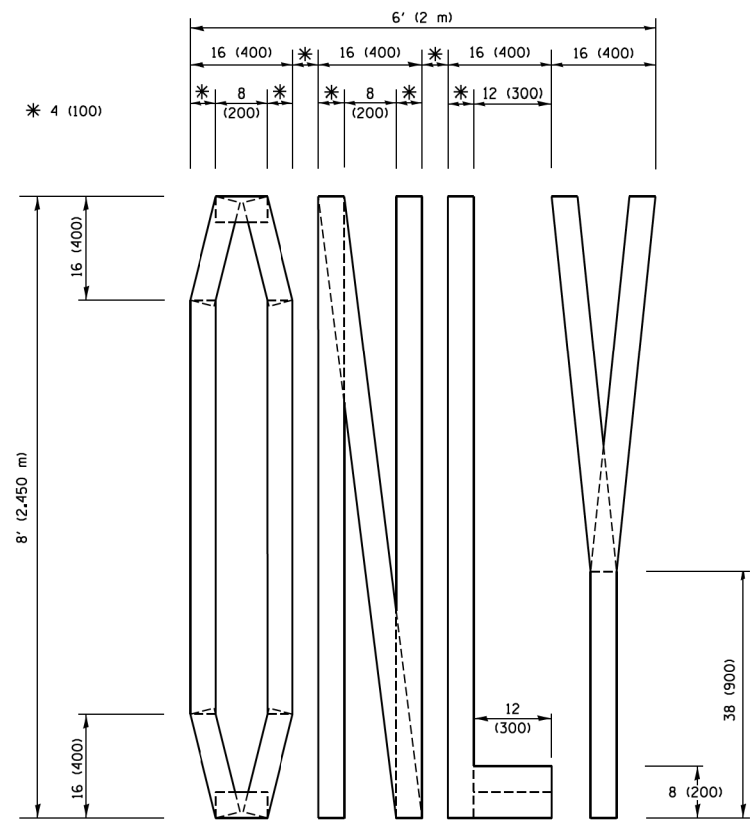
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

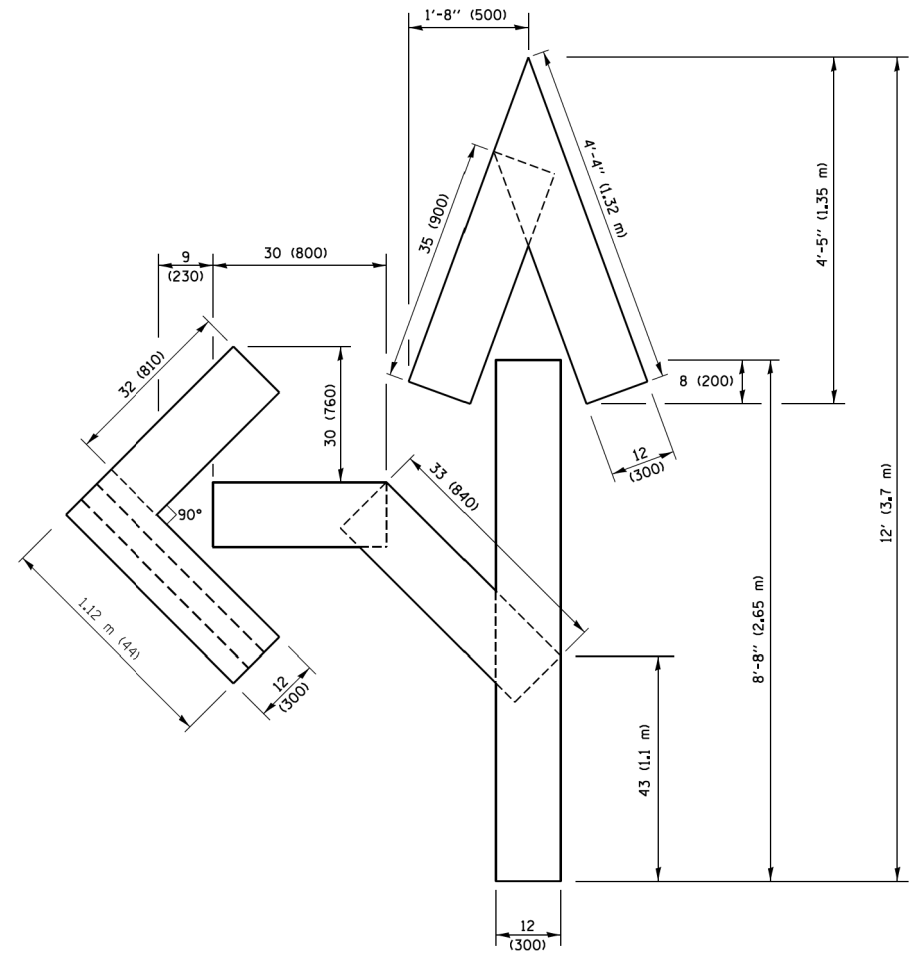
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	141
TC-14			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				



QUANTITY
 4 (100) LINE = 45.5 ft. (13.9 m)
 15.2 sq. ft. (1.41 sq. m)

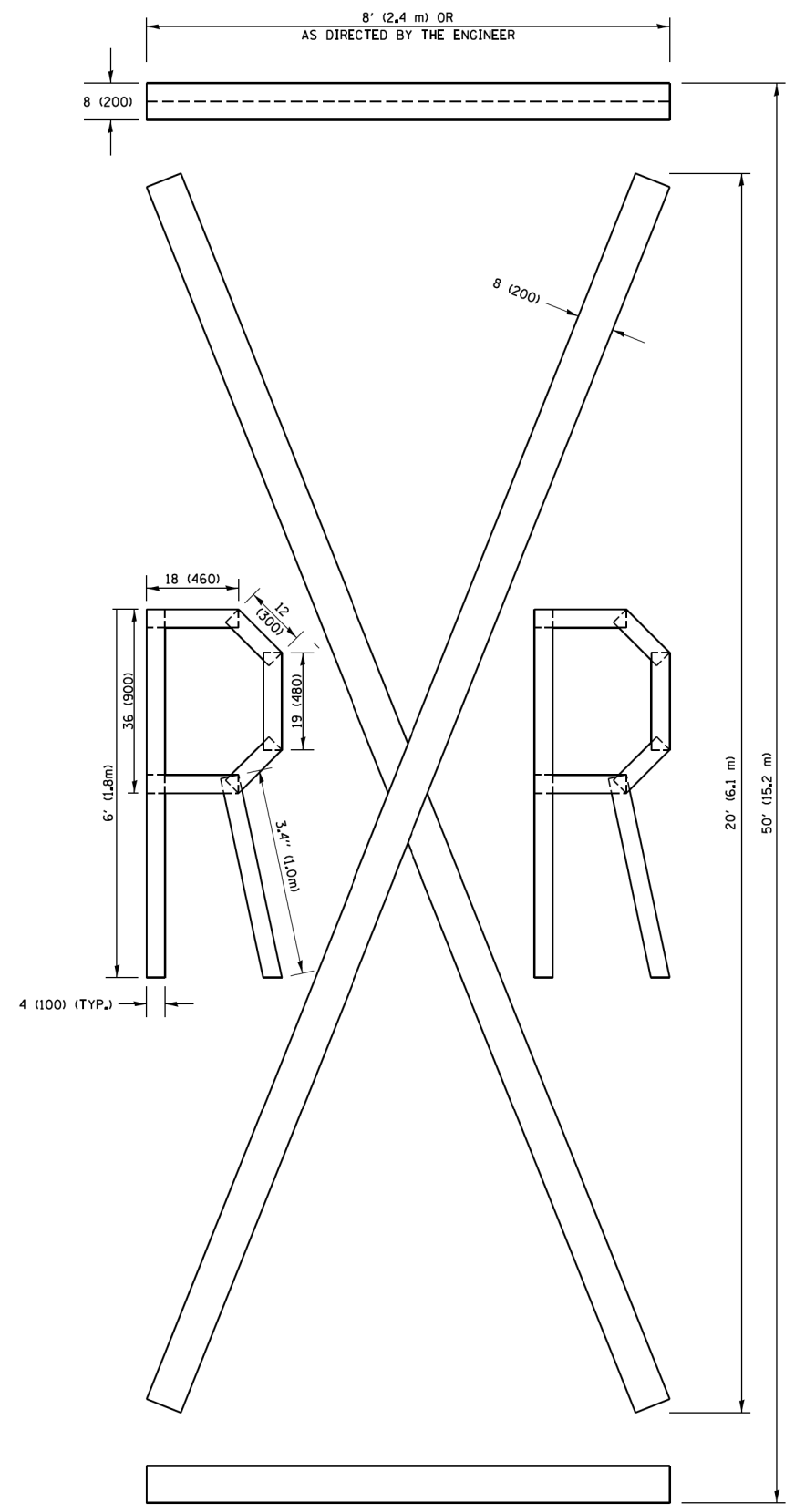


QUANTITY
 4 (100) LINE = 64.1 ft. (19.5 m)
 21.4 sq. ft. (1.99 sq. m)



QUANTITY
 4 (100) LINE = 82.5 ft. (25.1 m)
 27.5 sq. ft. (2.53 sq. m)

NOTE:
 ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY
 4 (100) LINE = 225.9 ft. (68.9 m)
 75.3 sq. ft. (6.99 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

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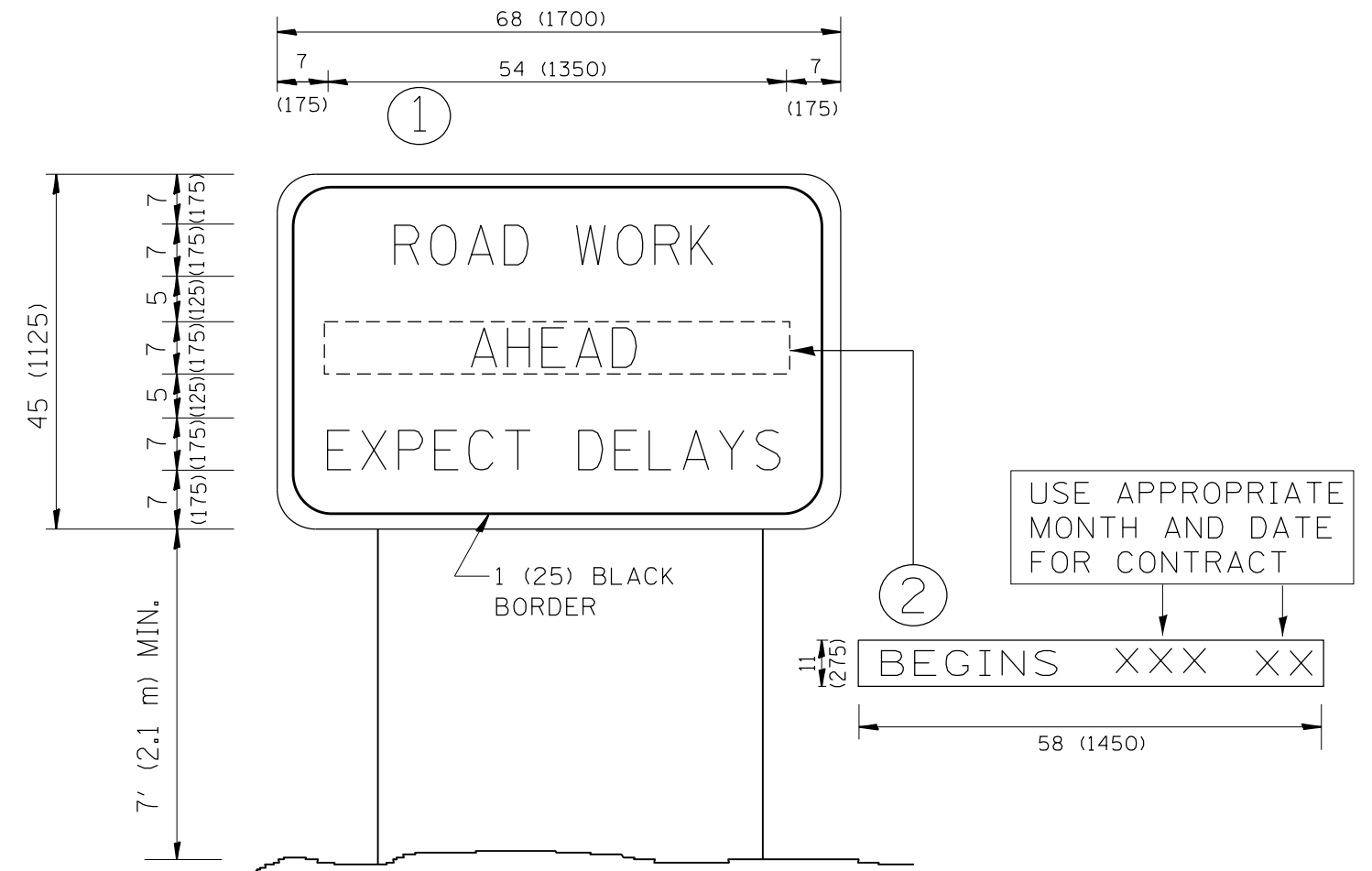
**STATE OF ILLINOIS
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**PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	142
TC-16		CONTRACT NO. 62A60		
ILLINOIS FED. AID PROJECT				

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NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

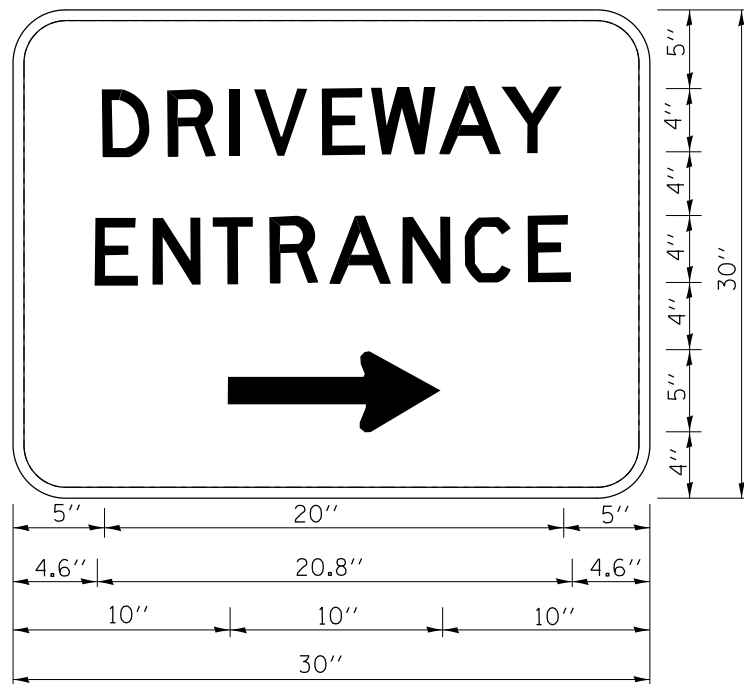
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	143
TC-22			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK; ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

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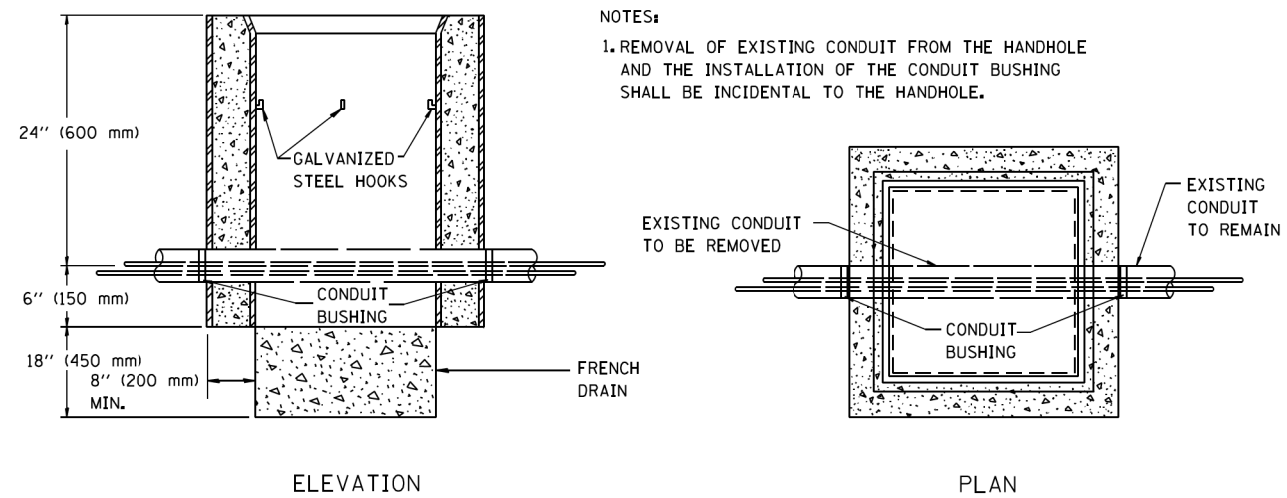
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

DRIVEWAY ENTRANCE SIGNING

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-26			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				

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NOTES:

1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.

**DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT**

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

HANDHOLE TO INTERCEPT EXISTING CONDUIT

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	145
TS-03		CONTRACT NO. 62A60		
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				QUEUE DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PREFORMED QUEUE DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				"RB" INDICATES REFLECTIVE BACKPLATE				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ILLUMINATED SIGN "NO LEFT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO INTERCONNECT							
DETECTOR LOOP, TYPE I				RADIO REPEATER							
PREFORMED DETECTOR LOOP				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
MICROWAVE VEHICLE SENSOR				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

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 Date: 1/13/2014

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

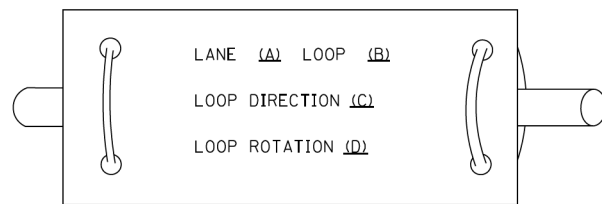
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TS-05		CONTRACT NO. 62A60		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

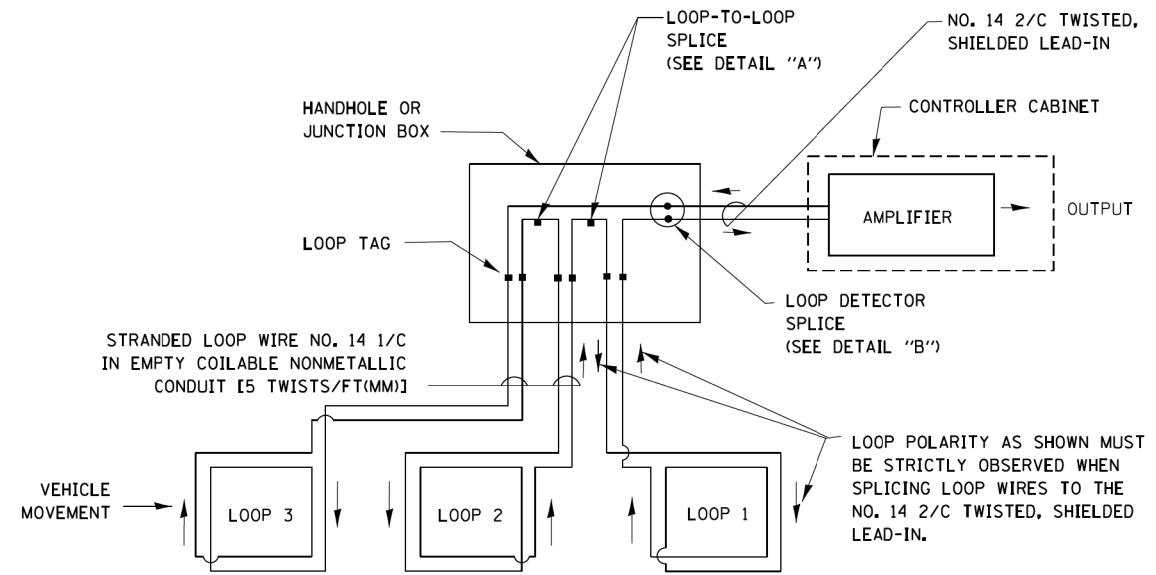
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

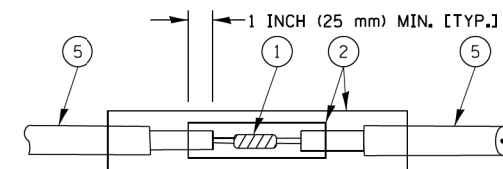


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

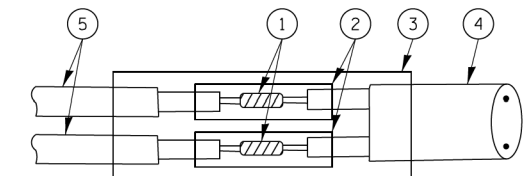


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

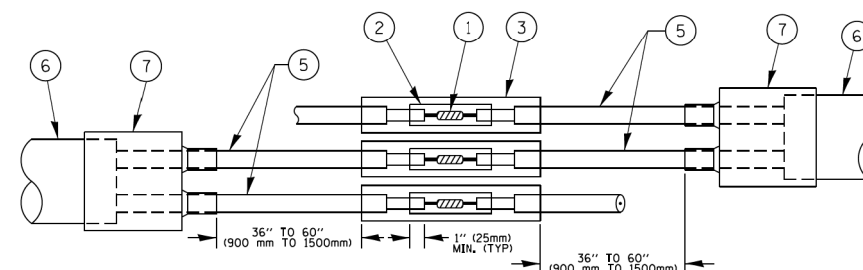


DETAIL "A"
LOOP-TO-LOOP SPLICE

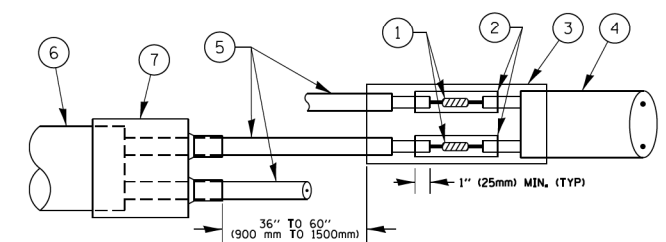


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PREFORMED LOOP

LOOP DETECTOR SPLICE

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

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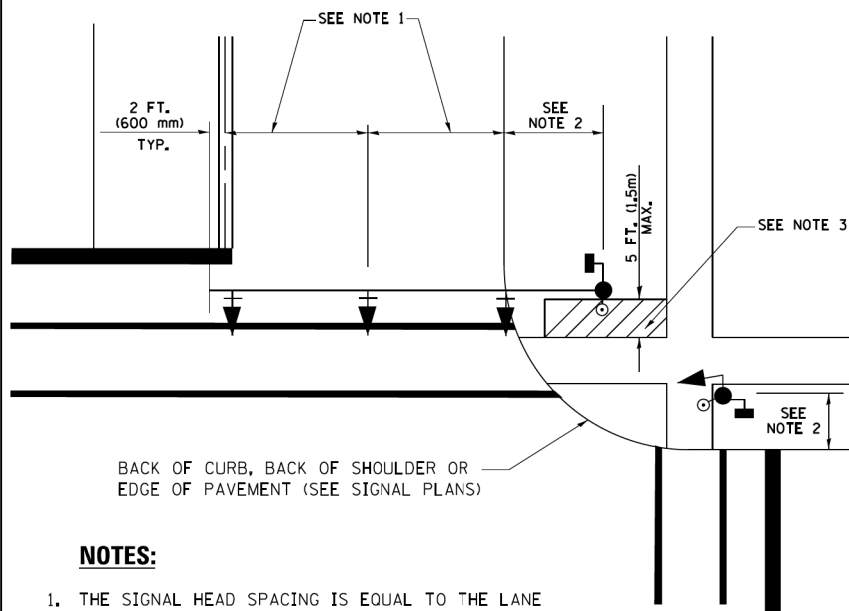
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 2 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TS-05		CONTRACT NO. 62A60		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

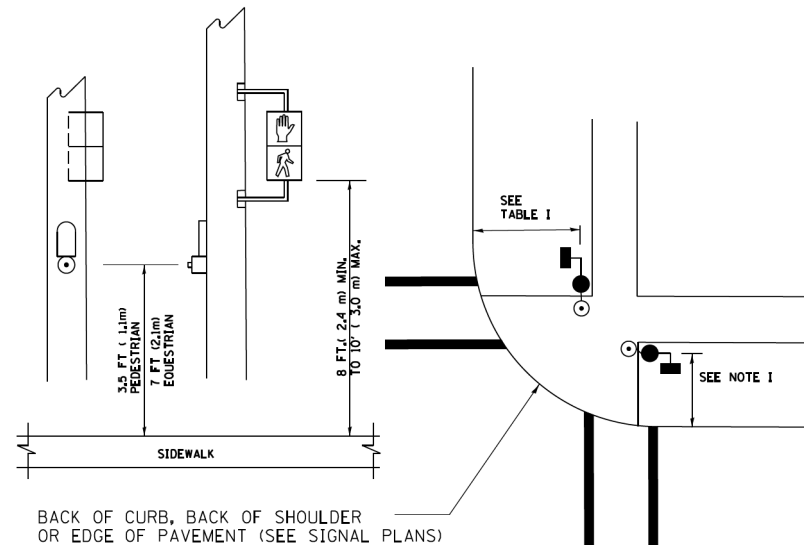
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

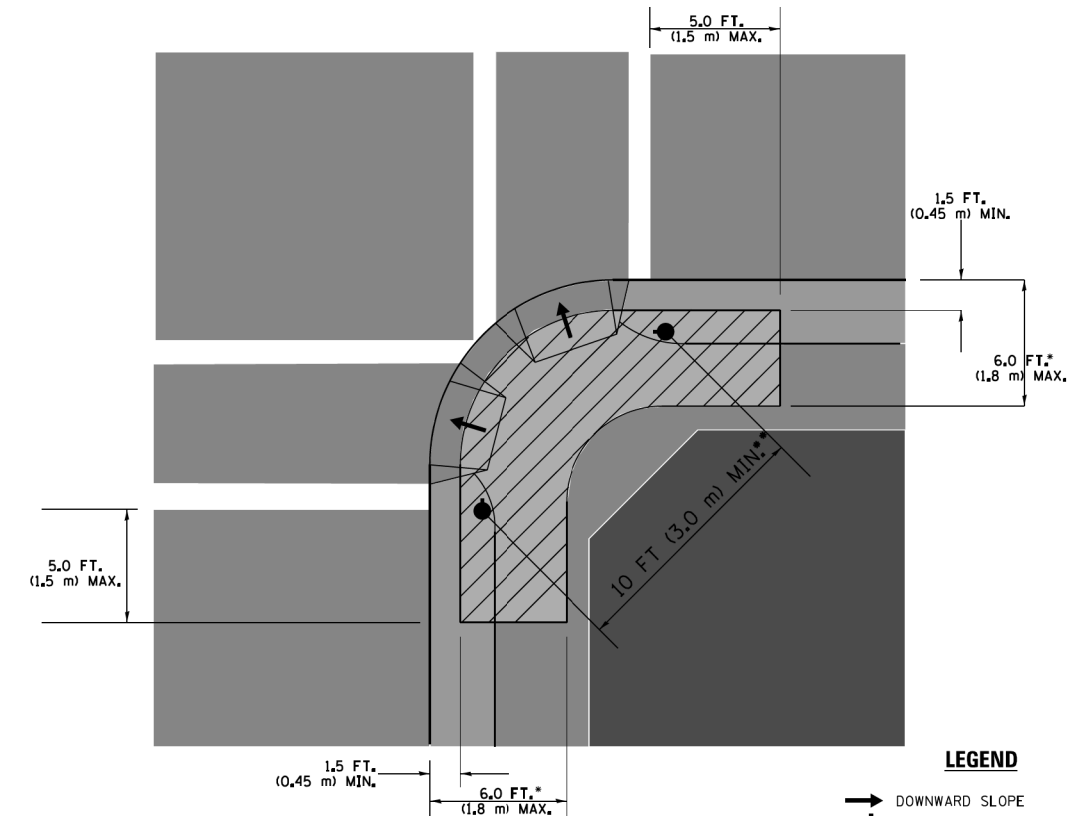
**PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST**



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ RECOMMENDED PUSHBUTTON LOCATIONS

- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

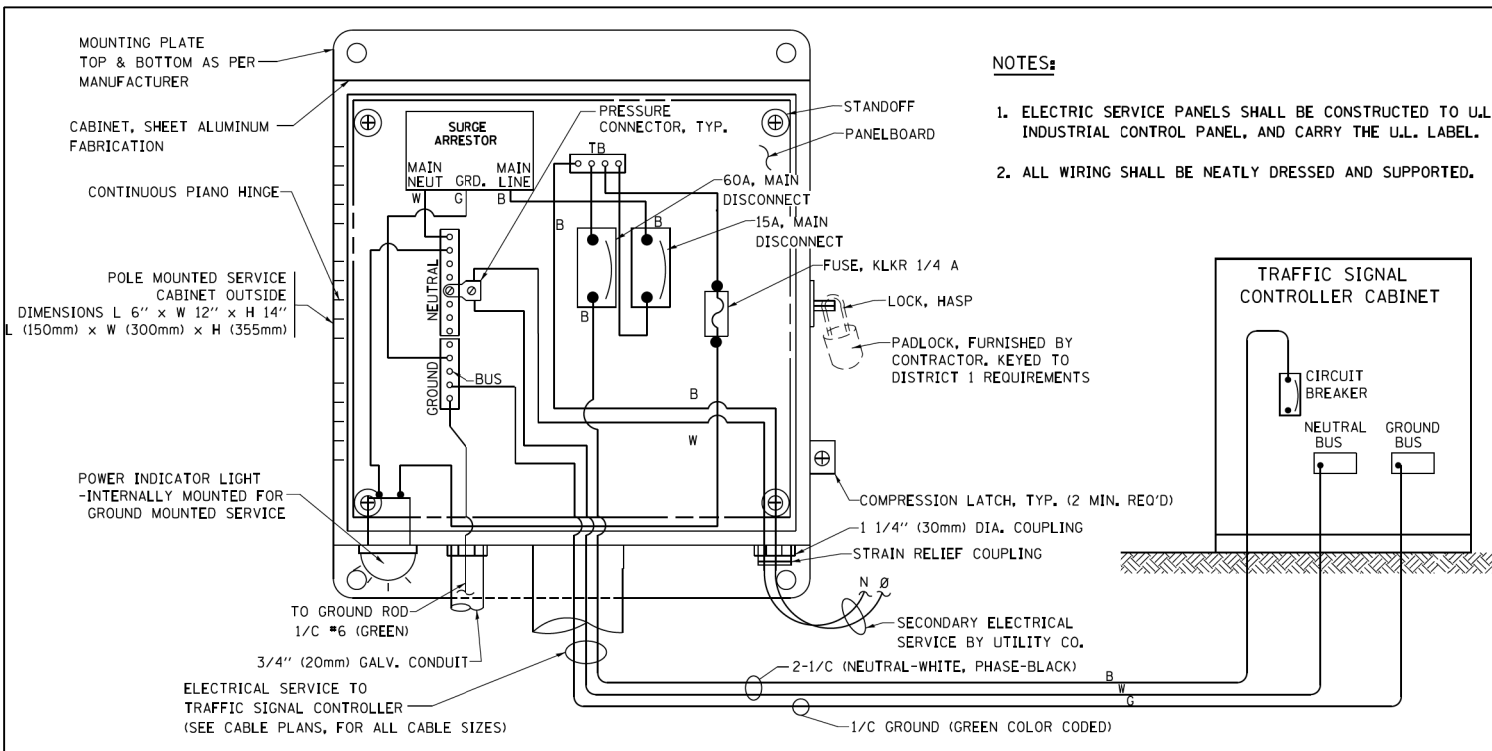
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

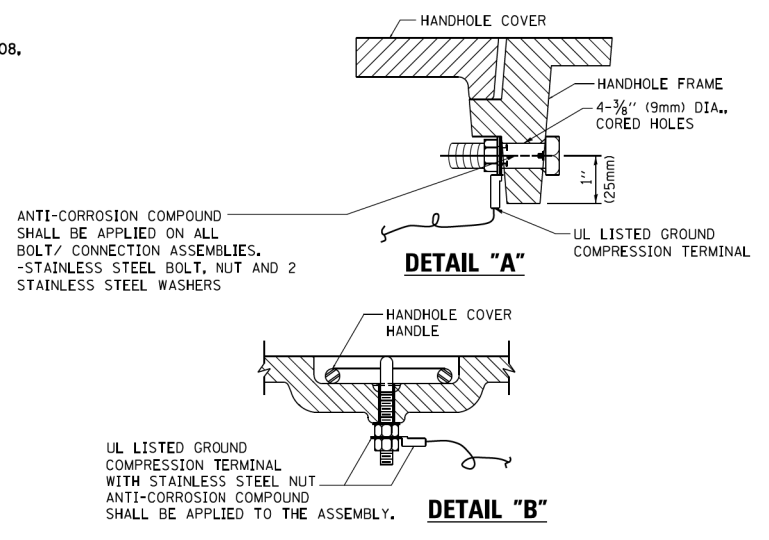
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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FILE NAME =	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\p\work\p\dot\footemj\d0108315\ts05.dgn	DRAWN - BCK	REVISED -	345			2015-006B-R	DUPAGE	170	148	
PLOT SCALE = 50.0000' / 1"	CHECKED - DAD	REVISED -	TS-05			CONTRACT NO. 62A60				
PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							

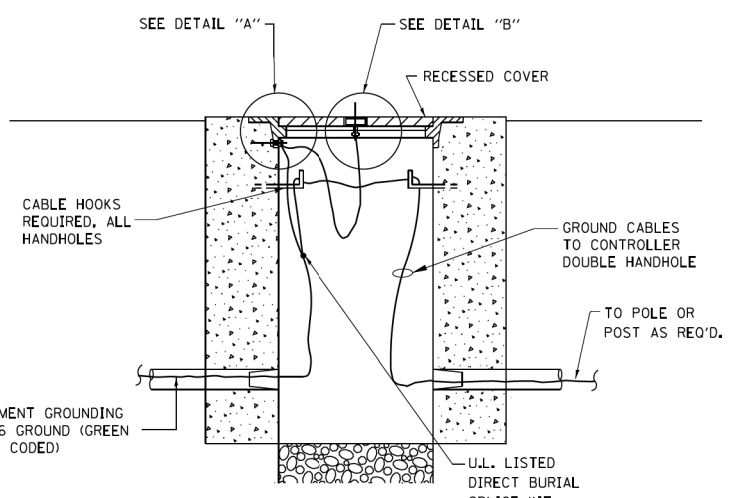


**ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)**

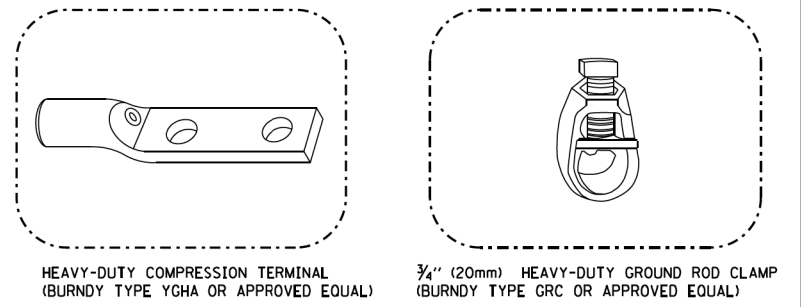


**NOTES:
GROUNDING SYSTEM**

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN ENCLOSED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD, ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

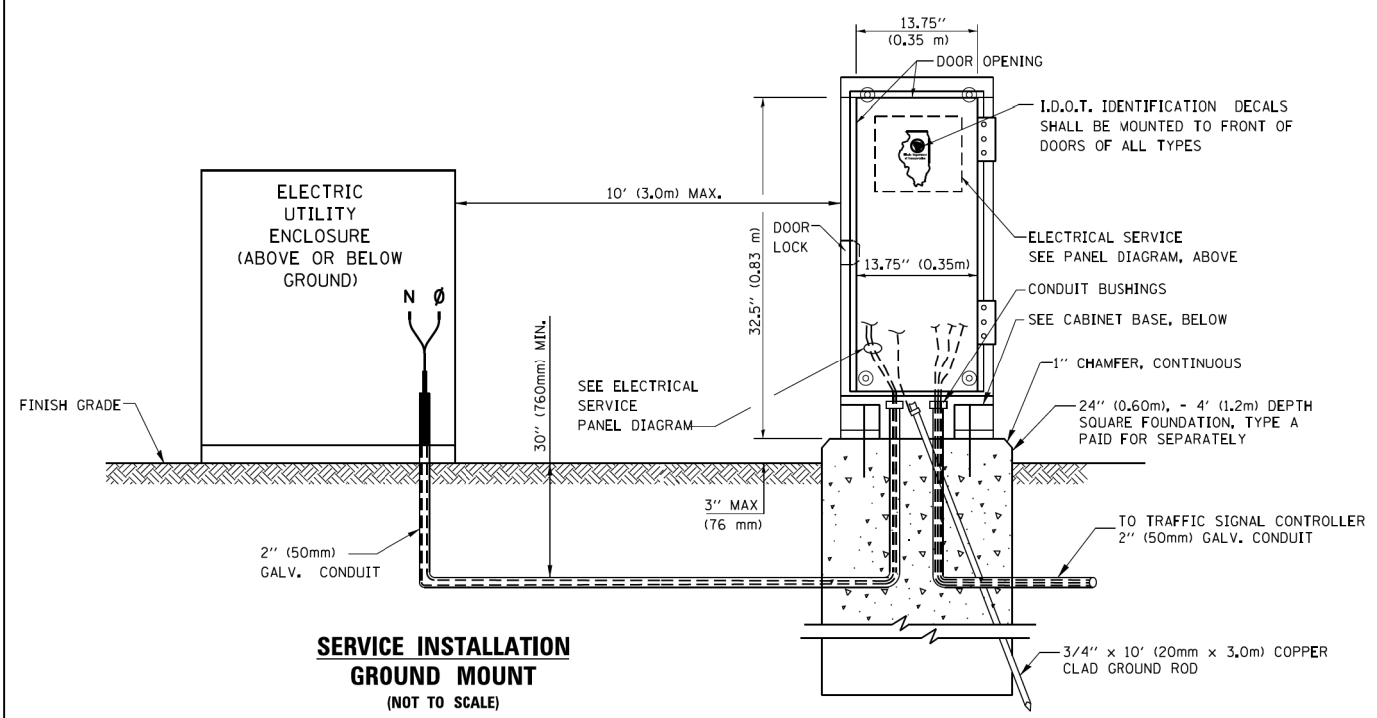


**HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)**

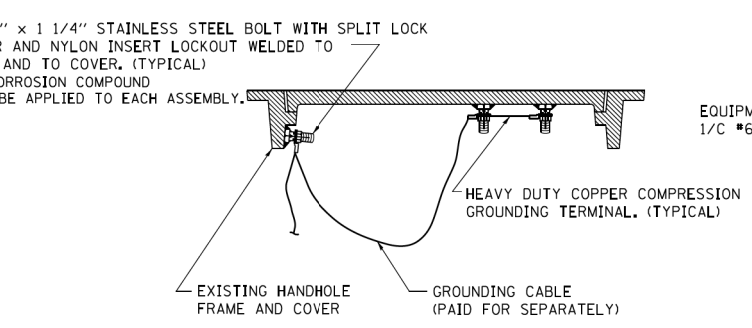


NOTES:

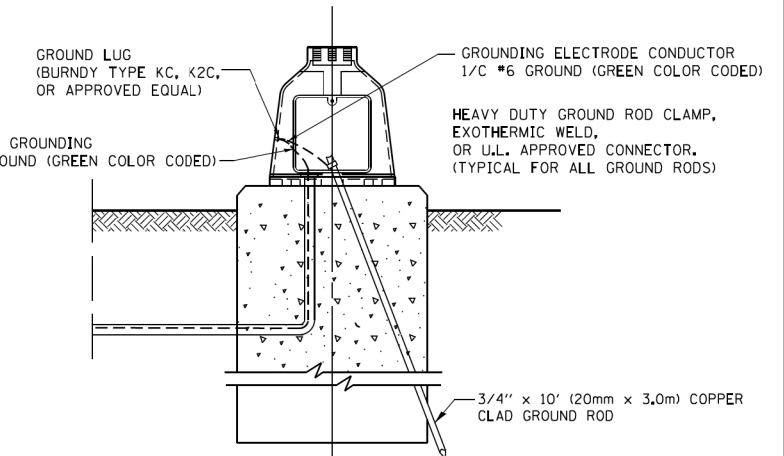
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



**SERVICE INSTALLATION
GROUND MOUNT
(NOT TO SCALE)**

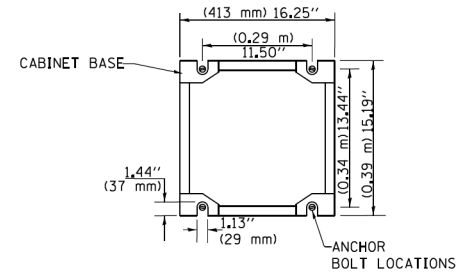


**EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)**



**MAST ARM POLE / POST-GROUNDING DETAIL
(NOT TO SCALE)**

**CABINET – BASE BOLT PATTERN
(NOT TO SCALE)**



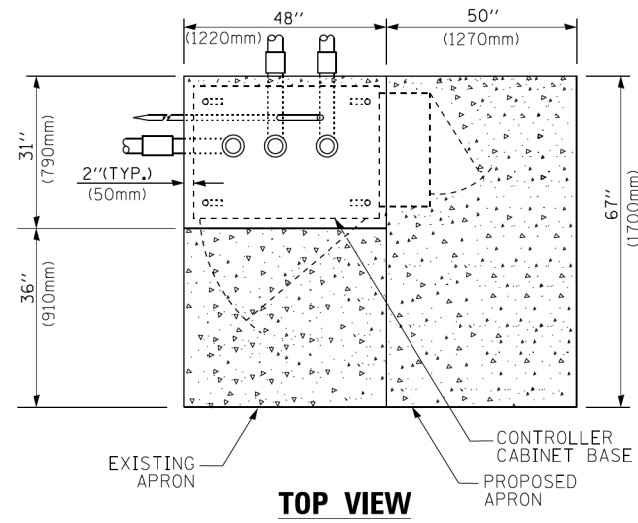
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 CHECKED - DAD
 DATE - 10-28-09
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

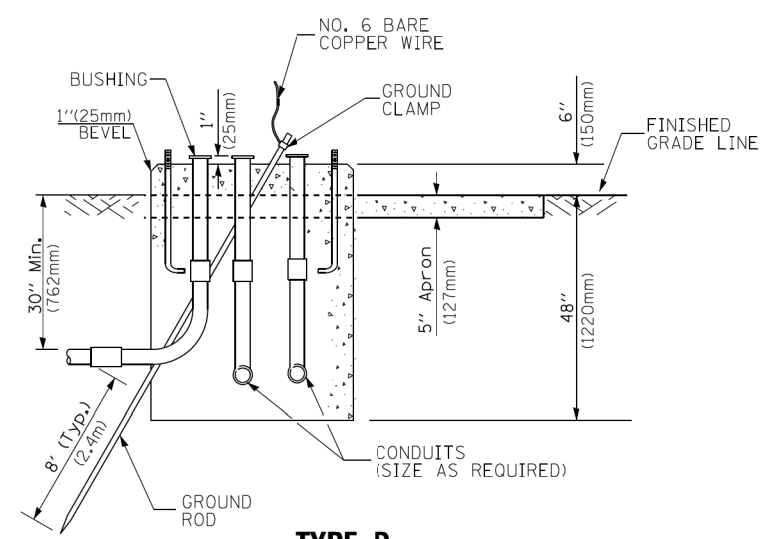
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TS-05		CONTRACT NO. 62A60		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

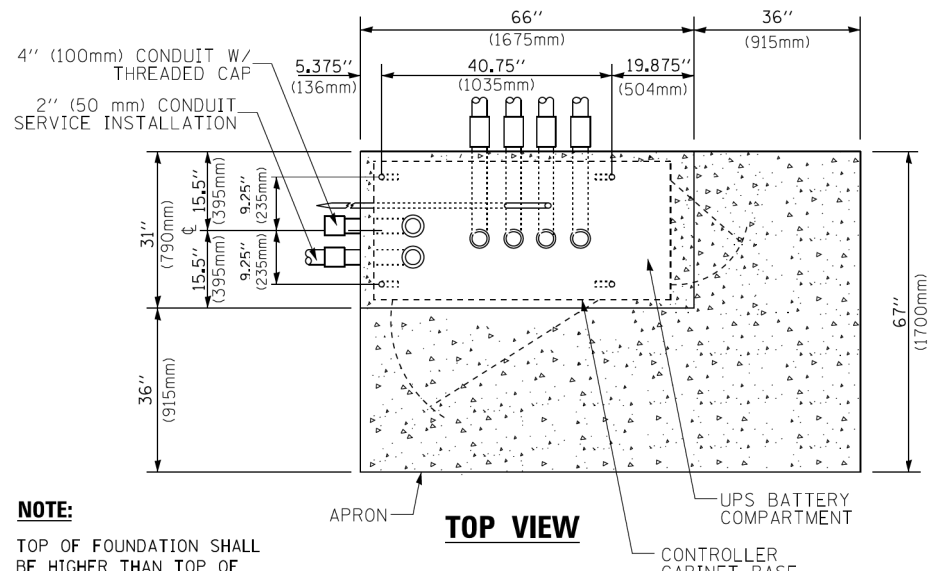
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TOP VIEW

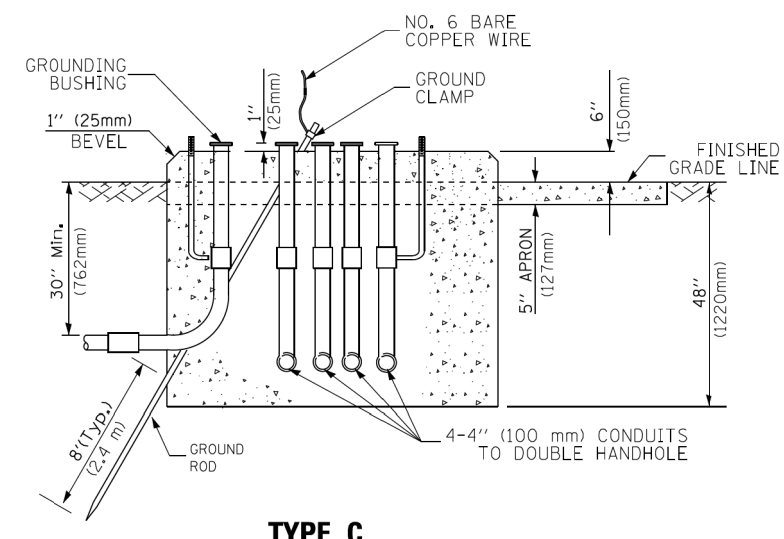


**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**

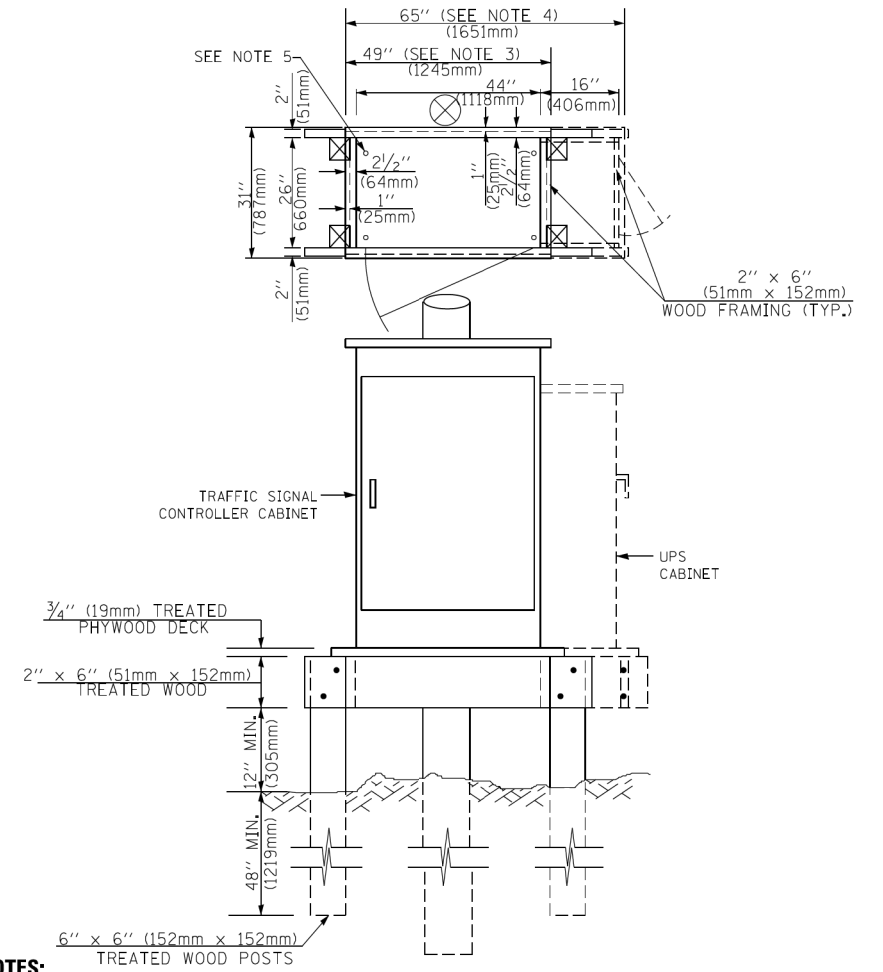


TOP VIEW

NOTE:
TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

- BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
- FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

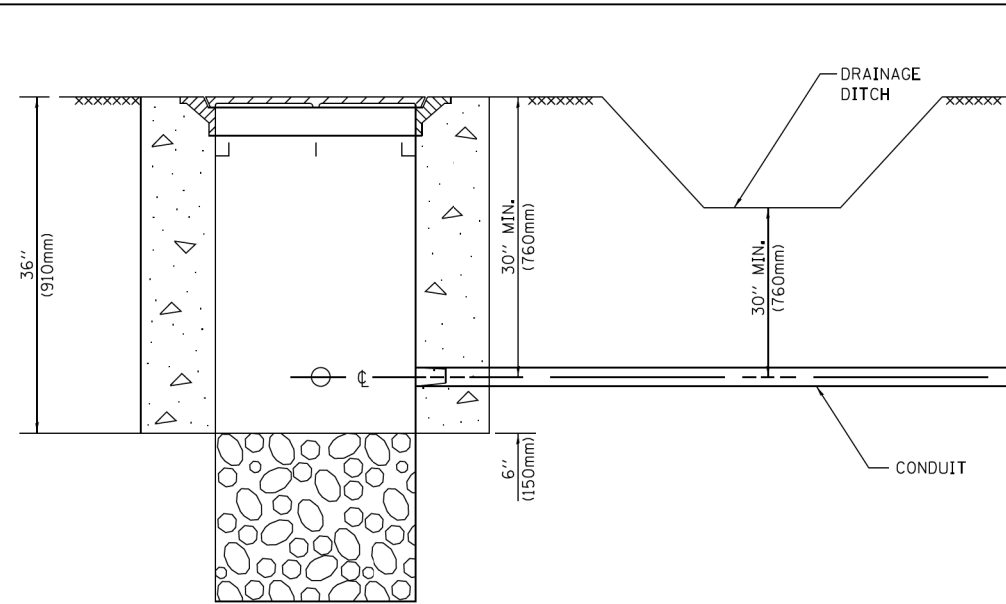
NOTES:

- These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average unconfined compressive strength (qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
- Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
- For mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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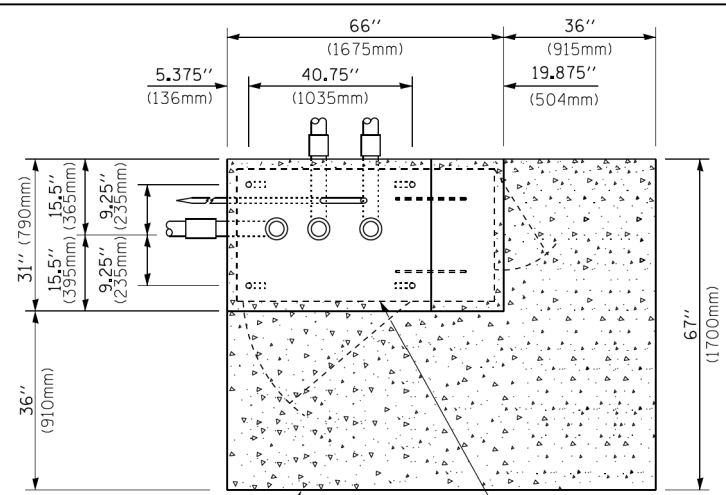
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		CHECKED - DAD	REVISED -			TS-05		CONTRACT NO. 62A60			
		DATE - 10-28-09	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



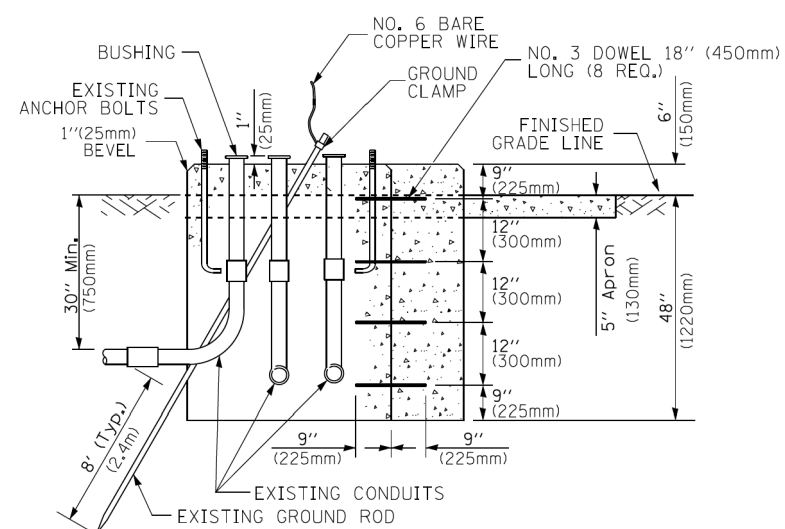
NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



TOP VIEW
(NOT TO SCALE)

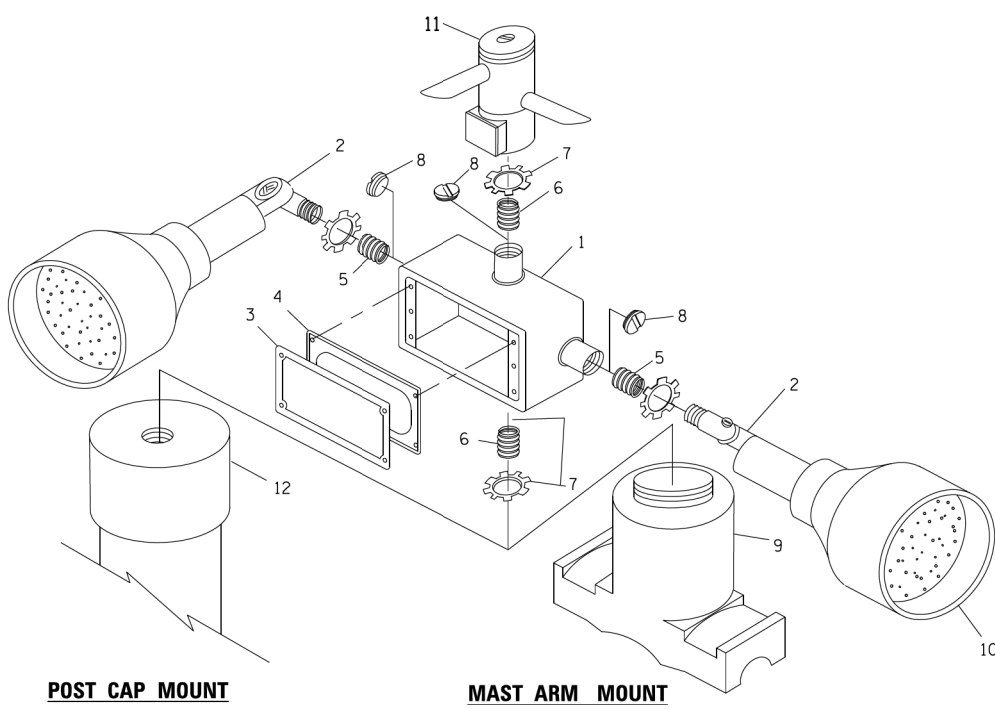


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

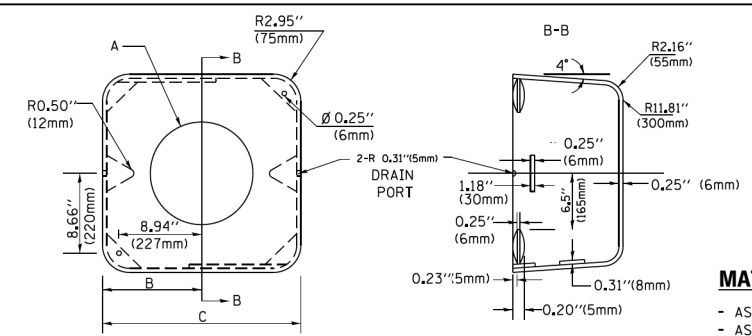
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0,000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5" (241mm)	19" (483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIABLES	10.75" (273mm)	21.5" (546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIABLES	13.0" (330mm)	26" (660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIABLES	18.5" (470mm)	37" (940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

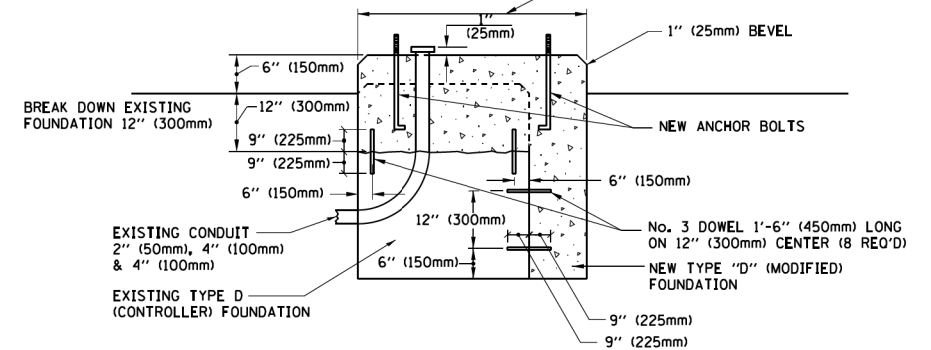
SHROUD

NOTES:

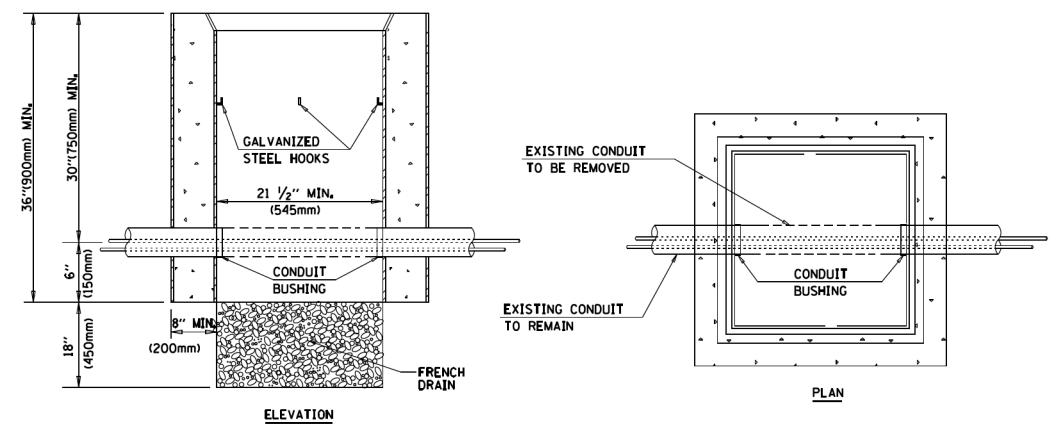
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



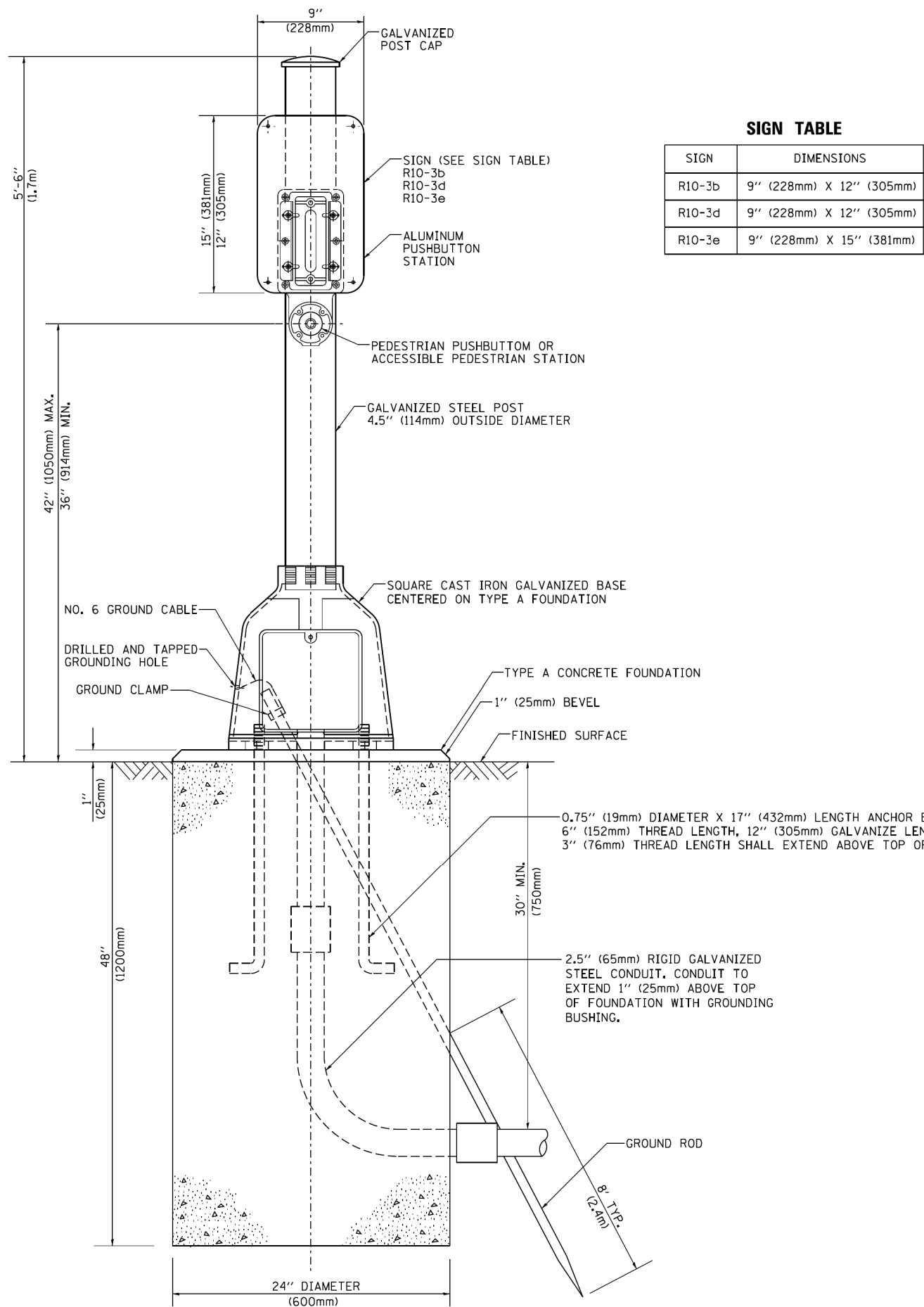
NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

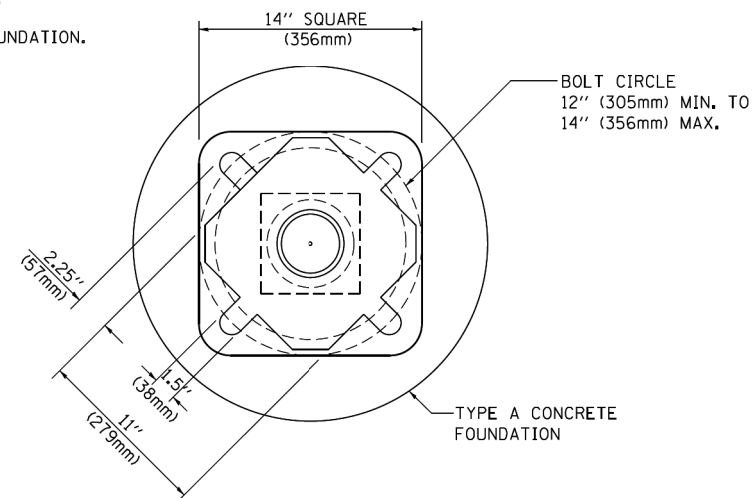
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PLOT SCALE = 50.0000' / 1"	CHECKED - DAD	REVISOR -	REVISOR -			TS-05		CONTRACT NO. 62A60			
PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISOR -	REVISOR -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
						SCALE: NONE		SHEET NO. 6 OF 7 SHEETS		STA. TO STA.	



SIGN TABLE

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



BOLT PATTERN

PEDESTRIAN PUSH BUTTON POST, TYPE A

Defaul1
 Mo., 2012\12-15\4-003a US 20 West Branch-Stage 2\Design\Transportation\CADD\CADD Sheets\US20_Design-1-a05.dgn

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

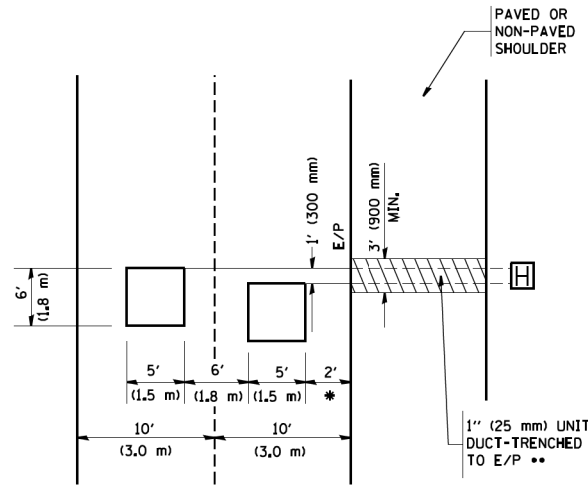
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 7 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	152
TS-05		CONTRACT NO. 62A60		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



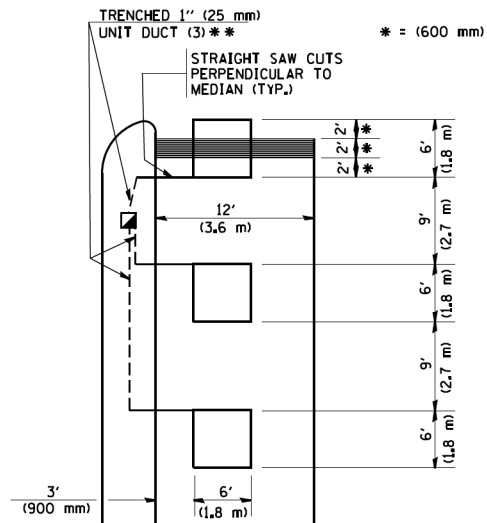
* = (600 mm)

** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**LEFT TURN LANES WITH MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH**

(PROTECTED / PERMITTED LEFT TURN PHASING)

HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.

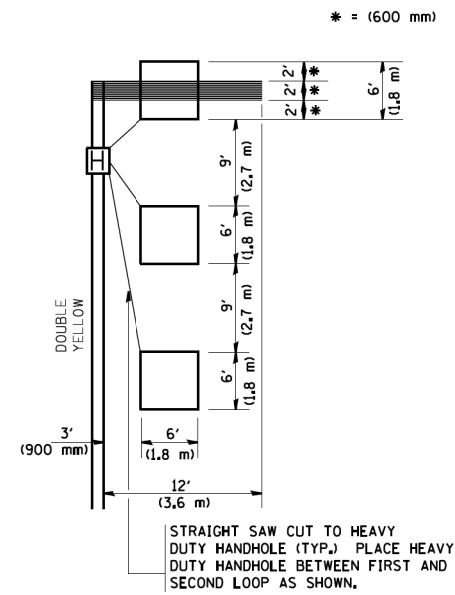


** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH**

(PROTECTED / PERMITTED LEFT TURN PHASING)



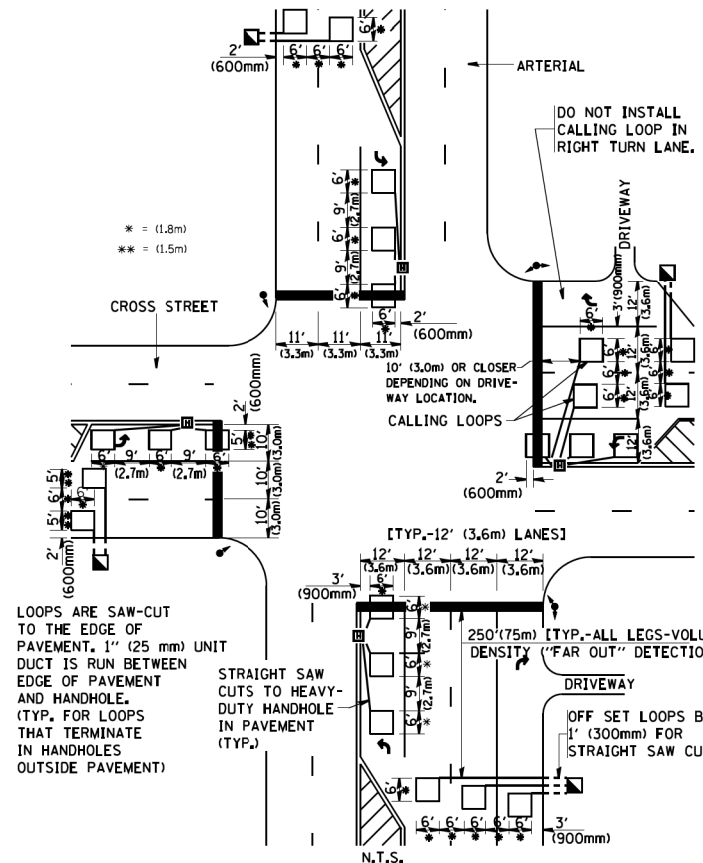
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

NOTES:

VEHICLES LOOP DETECTORS

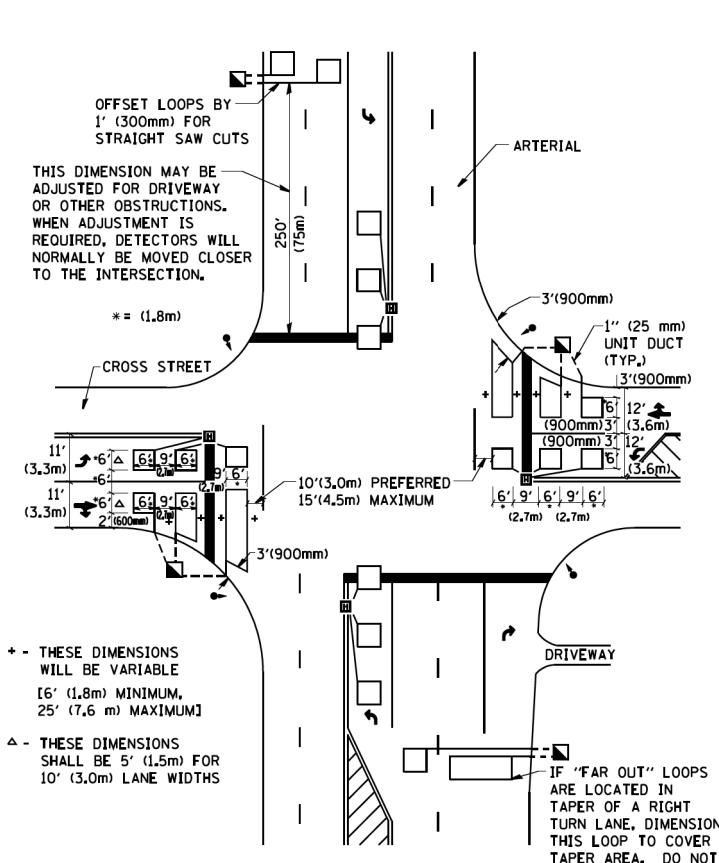
- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATELY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- * ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**



**DETAIL 1
N.T.S.**

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



**DETAIL 2
N.T.S.**

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:
ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

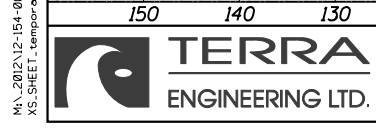
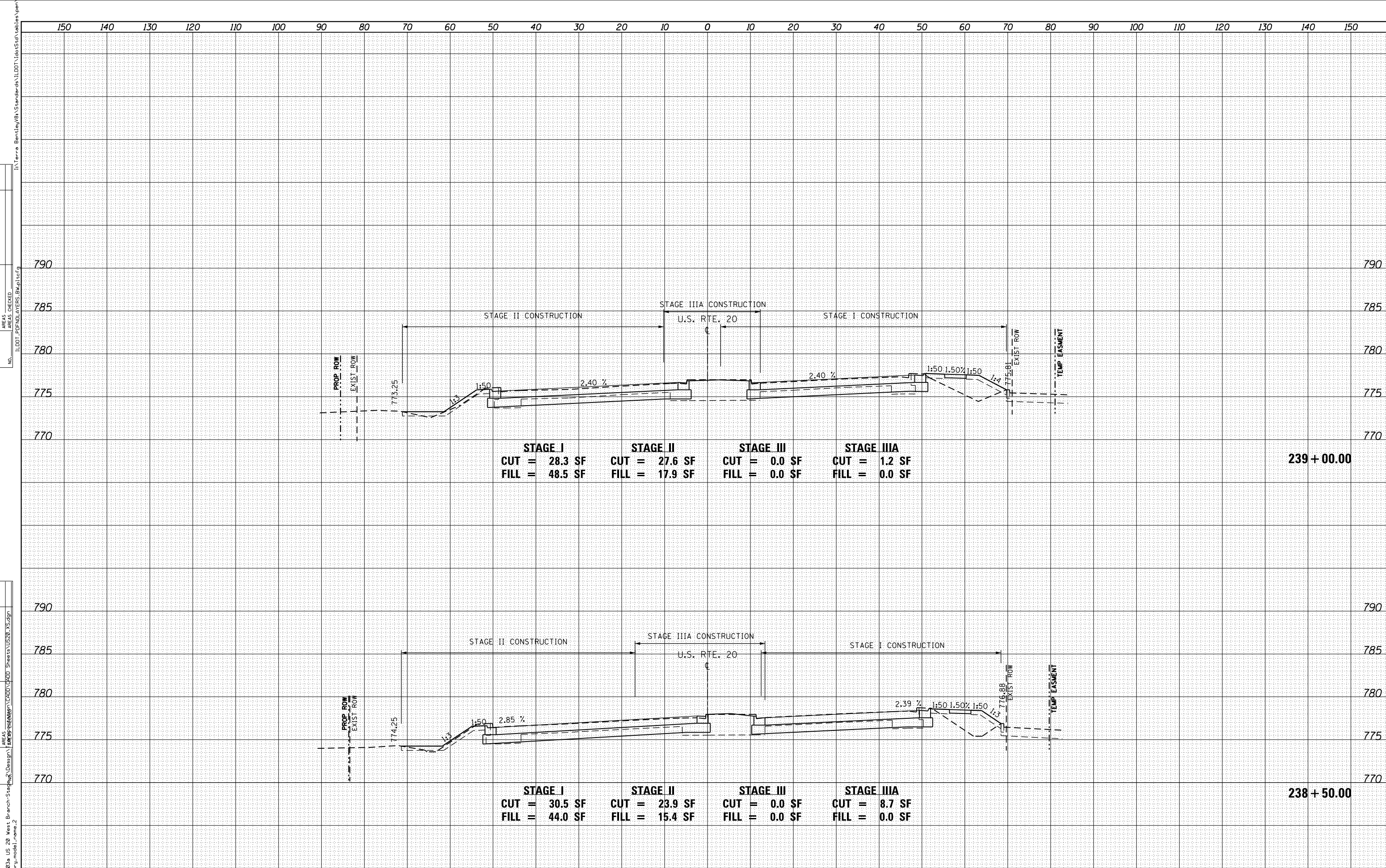
THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

Default: M:\2012\12-15-14-083a US 20 West Branch-Stage 2\Design-Transportation\CADD\CADD Sheets\US20_Design-1a07.dgn

FILE NAME = W:\diststa\22x34\ts07.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING	F.A. RTE. = 345	SECTION = 2015-006B-R	COUNTY = DUPAGE	TOTAL SHEETS = 170	SHEET NO. = 153	
PLOT SCALE = 50.0000' / IN.	CHECKED - R.K.F.	REVISED -	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	TS-07		CONTRACT NO. 62A60
PLOT DATE = 1/4/2008	DATE -	REVISED -	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

DATE	
BY	
FINISHED SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	ILLDOT_P01POLN1ATERS.BW.pltcf9

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	ILLDOT_P01POLN1ATERS.BW.pltcf9



USER NAME = LindseyB	DESIGNED - KJC	REVISED -
	DRAWN - KJC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DDL	REVISED -
PLOT DATE = 10/20/2016	DATE - 10/20/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**U.S. RTE 20 (LAKE ST.) AT WEST BRANCH DUPAGE RIVER
PROPOSED CROSS SECTIONS**

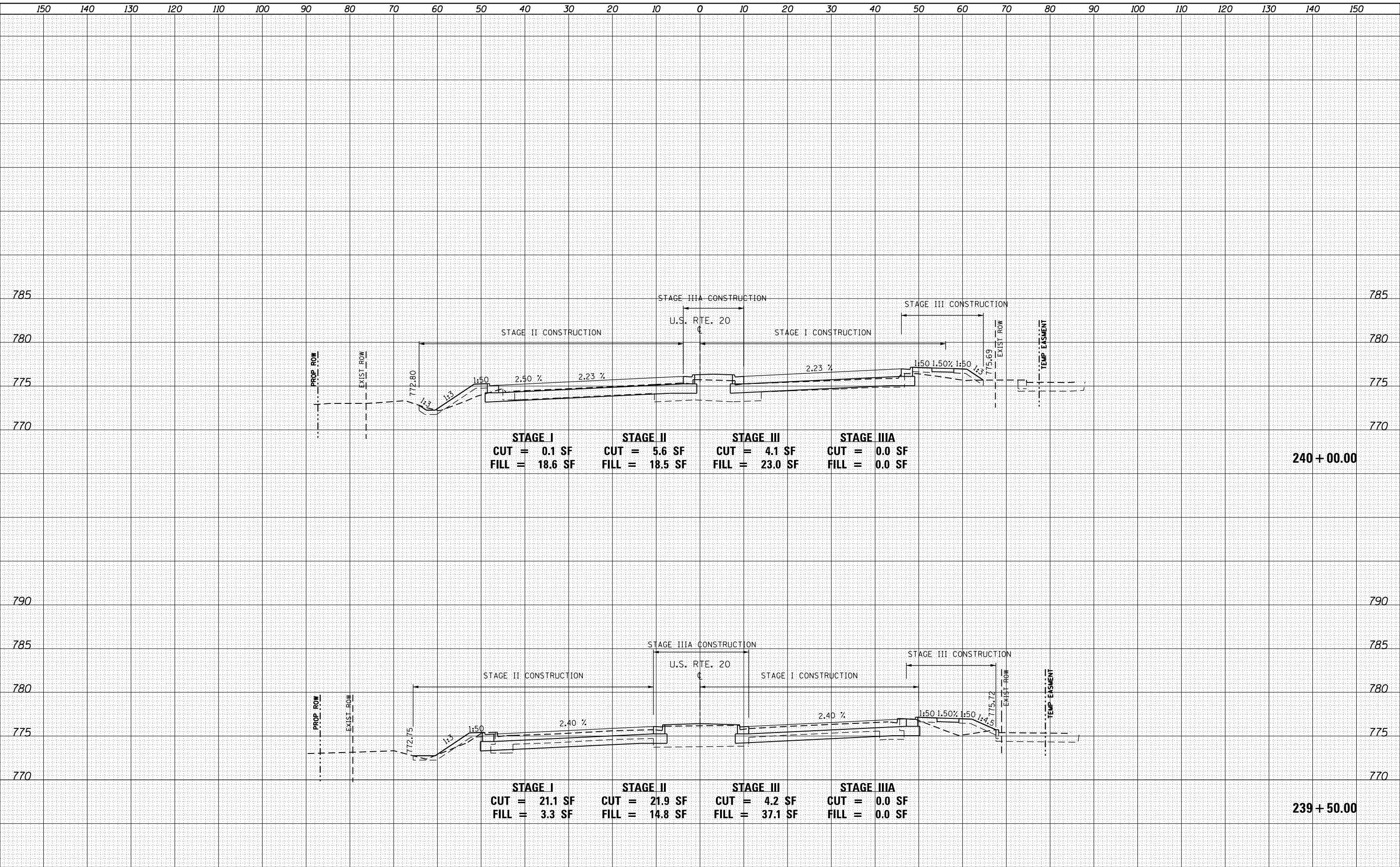
SCALE: 1"=10' SHEET 2 OF 17 SHEETS STA. 238+50.00 TO STA. 239+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	155
				CONTRACT NO. 62A60
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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USER NAME = LindseyB	DESIGNED - KJC	REVISED -
	DRAWN - KJC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DDL	REVISED -
PLOT DATE = 10/20/2016	DATE - 10/20/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**U.S. RTE 20 (LAKE ST.) AT WEST BRANCH DUPAGE RIVER
PROPOSED CROSS SECTIONS**

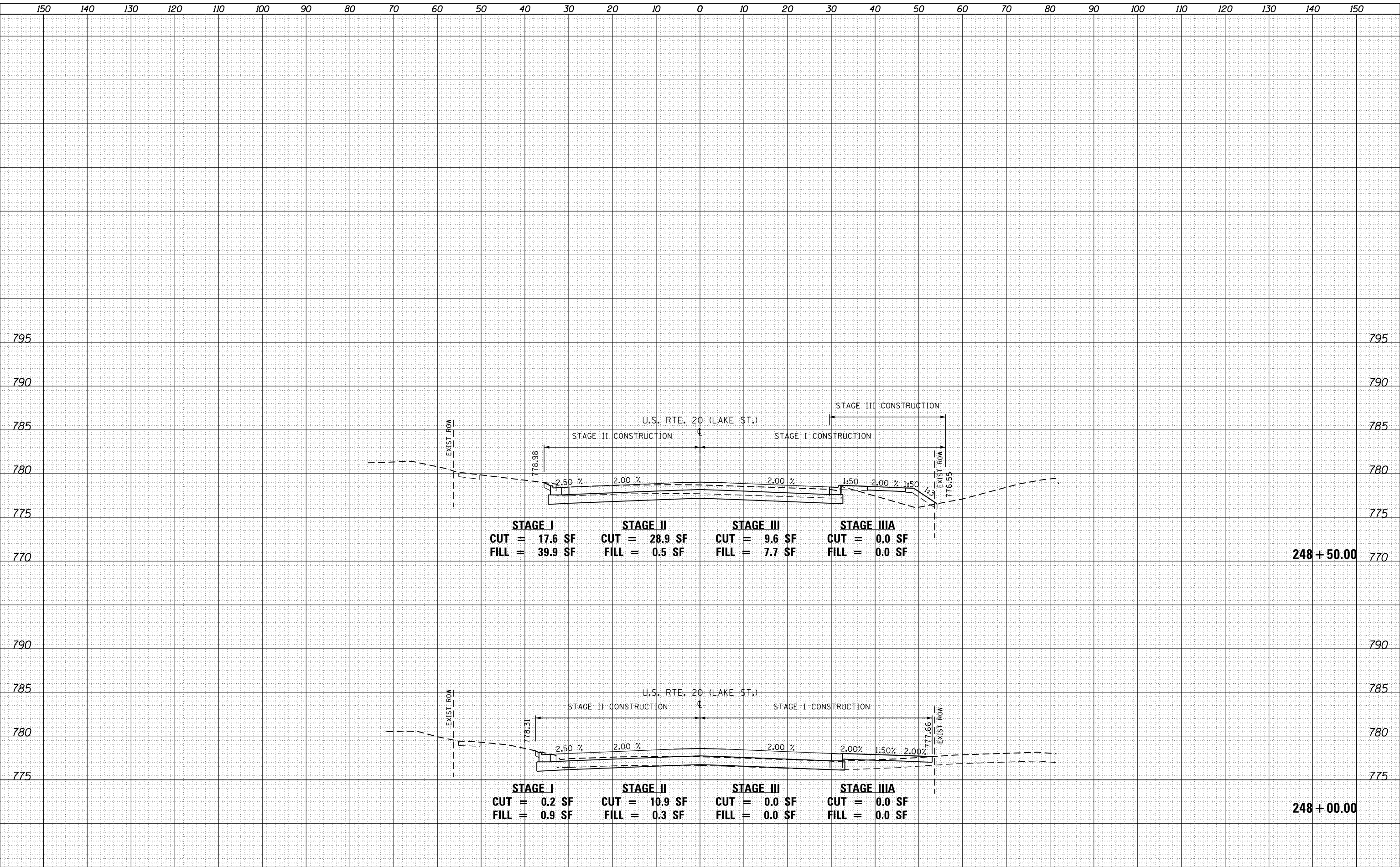
SCALE: 1"=10' SHEET 3 OF 17 SHEETS STA. 239+50.00 TO STA. 240+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	156
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62A60	

DATE	
BY	
FINISHED SURVEY	
NOTE BOOK	
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DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

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STAGE I	STAGE II	STAGE III	STAGE IIIA
CUT = 17.6 SF	CUT = 28.9 SF	CUT = 9.6 SF	CUT = 0.0 SF
FILL = 39.9 SF	FILL = 0.5 SF	FILL = 7.7 SF	FILL = 0.0 SF

STAGE I	STAGE II	STAGE III	STAGE IIIA
CUT = 0.2 SF	CUT = 10.9 SF	CUT = 0.0 SF	CUT = 0.0 SF
FILL = 0.9 SF	FILL = 0.3 SF	FILL = 0.0 SF	FILL = 0.0 SF



USER NAME = LindseyB	DESIGNED - KJC	REVISED -
	DRAWN - KJC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DDL	REVISED -
PLOT DATE = 10/20/2016	DATE - 10/20/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**U.S. RTE 20 (LAKE ST.) AT WEST BRANCH DUPAGE RIVER
PROPOSED CROSS SECTIONS**

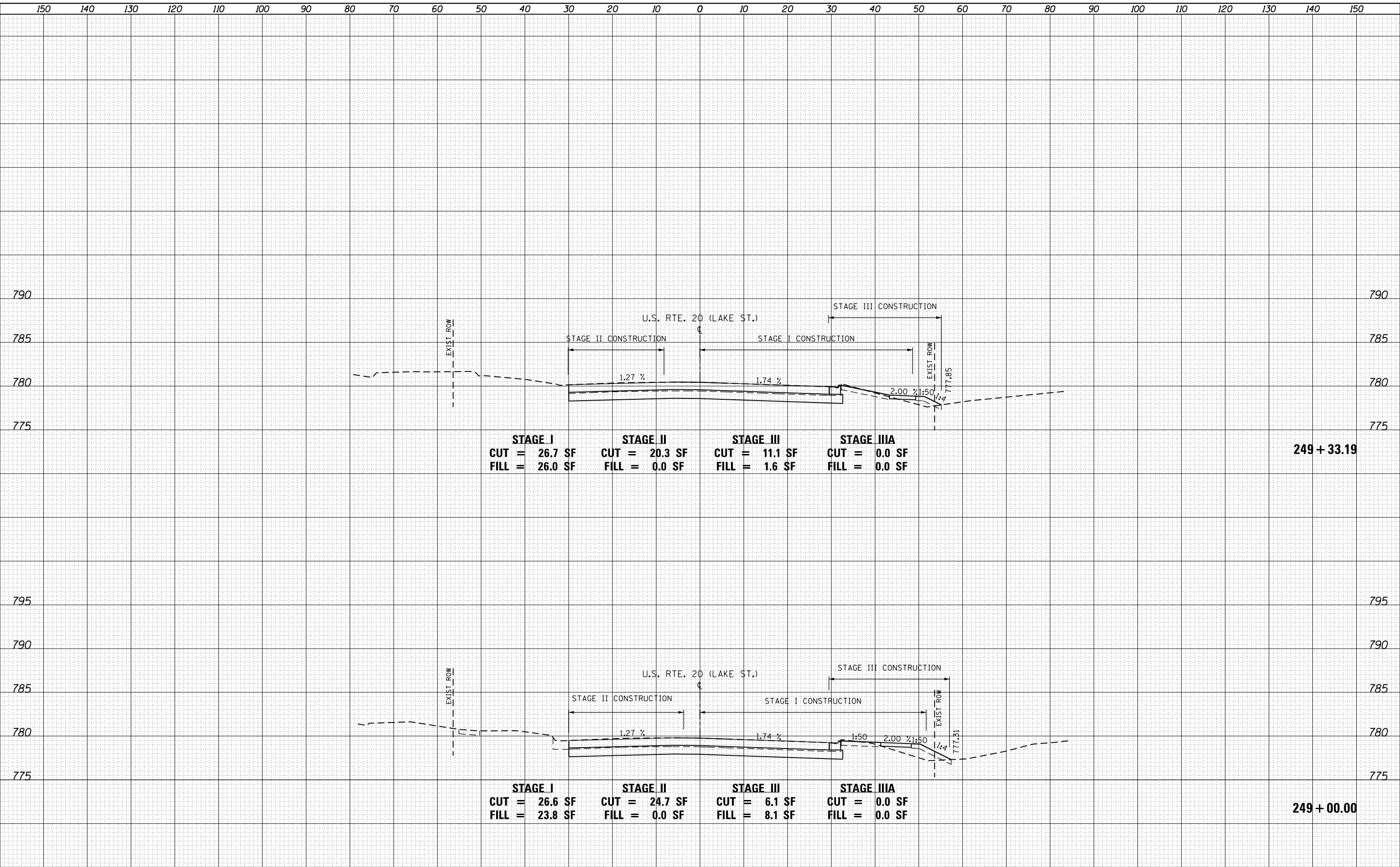
SCALE: 1"=10' SHEET 12 OF 17 SHEETS STA. 248+00.00 TO STA. 248+50.00

F.A.P. RTE. 345	SECTION 2015-006B-R	COUNTY DUPAGE	TOTAL SHEETS 170	SHEET NO. 165
			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINISHED SURVEY	
PLOTTED TEMPLATE	
AREAS CHECKED	
NO. ILLDOT PROJECT NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED TEMPLATE	
AREAS CHECKED	
NO. ILLDOT PROJECT NO.	

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STAGE I	STAGE II	STAGE III	STAGE IIIA
CUT = 26.7 SF	CUT = 20.3 SF	CUT = 11.1 SF	CUT = 0.0 SF
FILL = 26.0 SF	FILL = 0.0 SF	FILL = 1.6 SF	FILL = 0.0 SF

STAGE I	STAGE II	STAGE III	STAGE IIIA
CUT = 26.6 SF	CUT = 24.7 SF	CUT = 6.1 SF	CUT = 0.0 SF
FILL = 23.8 SF	FILL = 0.0 SF	FILL = 8.1 SF	FILL = 0.0 SF



USER NAME = LindseyB	DESIGNED - KJC	REVISED -
PLLOT SCALE = 20.0000' / in.	DRAWN - KJC	REVISED -
PLLOT DATE = 10/20/2016	CHECKED - DDL	REVISED -
	DATE - 10/20/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**U.S. RTE 20 (LAKE ST.) AT WEST BRANCH DUPAGE RIVER
PROPOSED CROSS SECTIONS**

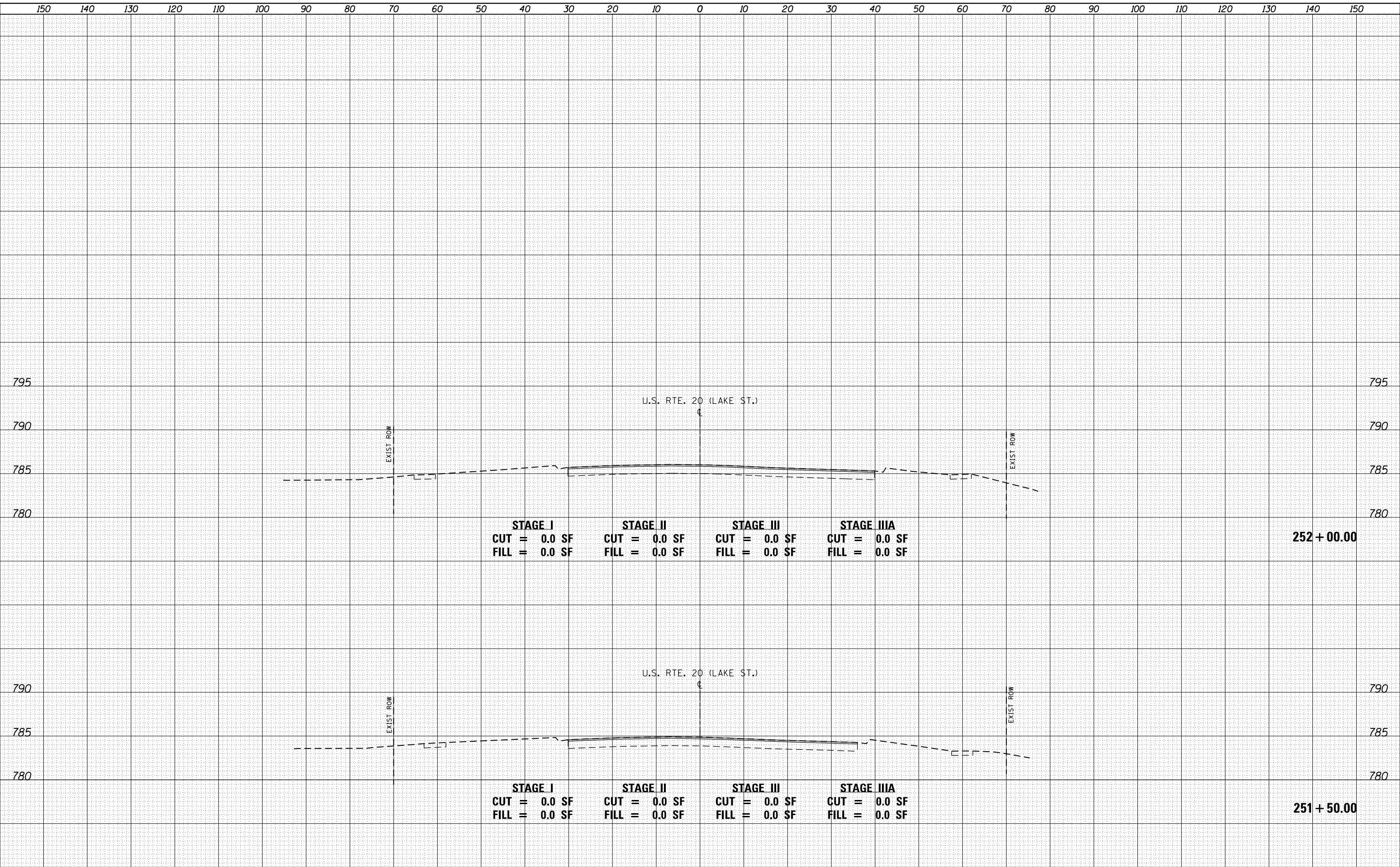
SCALE: 1"=10' SHEET 13 OF 17 SHEETS STA. 249+00.00 TO STA. 249+33.19

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	166
				CONTRACT NO. 62A60
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

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USER NAME = LindseyB	DESIGNED - KJC	REVISED -
	DRAWN - KJC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DDL	REVISED -
PLOT DATE = 10/20/2016	DATE - 10/20/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**U.S. RTE 20 (LAKE ST.) AT WEST BRANCH DUPAGE RIVER
PROPOSED CROSS SECTIONS**

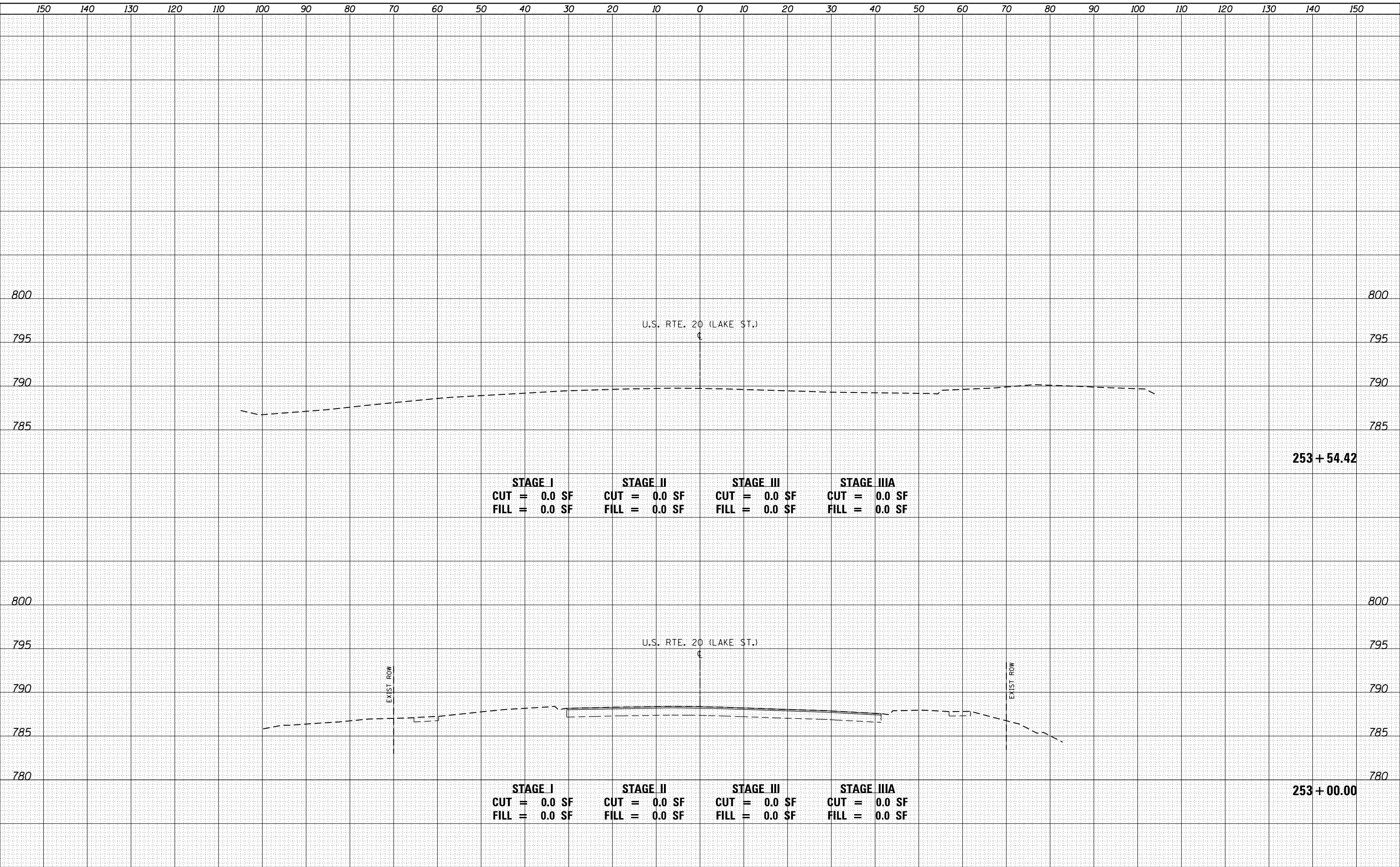
SCALE: 1"=10' SHEET 16 OF 17 SHEETS STA. 251+50.00 TO STA. 252+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	169
			CONTRACT NO. 62A60	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

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STAGE I **STAGE II** **STAGE III** **STAGE IIIA**
 CUT = 0.0 SF CUT = 0.0 SF CUT = 0.0 SF CUT = 0.0 SF
 FILL = 0.0 SF FILL = 0.0 SF FILL = 0.0 SF FILL = 0.0 SF

STAGE I **STAGE II** **STAGE III** **STAGE IIIA**
 CUT = 0.0 SF CUT = 0.0 SF CUT = 0.0 SF CUT = 0.0 SF
 FILL = 0.0 SF FILL = 0.0 SF FILL = 0.0 SF FILL = 0.0 SF



USER NAME = LindseyB	DESIGNED - KJC	REVISED - -
	DRAWN - KJC	REVISED - -
PLOT SCALE = 20.0000' / in.	CHECKED - DDL	REVISED - -
PLOT DATE = 10/20/2016	DATE - 10/20/2016	REVISED - -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

U.S. RTE 20 (LAKE ST.) AT WEST BRANCH DUPAGE RIVER
PROPOSED CROSS SECTIONS

SCALE: 1"=10' SHEET 17 OF 17 SHEETS STA. 253+00.00 TO STA. 253+54.42

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2015-006B-R	DUPAGE	170	170
			CONTRACT NO. 62A60	

ILLINOIS FED. AID PROJECT