

**GIRDER 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	11+26.50	10.75	437.32	437.32
☉ Brg. S. Abut.	11+28.17	10.75	437.33	437.33
C	11+38.17	10.75	437.38	437.43
D	11+48.17	10.75	437.43	437.53
E	11+58.17	10.75	437.48	437.63
F	11+68.17	10.75	437.53	437.71
G	11+78.17	10.75	437.59	437.79
H	11+88.17	10.75	437.64	437.85
I	11+98.17	10.75	437.69	437.90
J	12+08.17	10.75	437.74	437.95
K	12+18.17	10.75	437.79	437.98
L	12+28.17	10.75	437.84	438.00
M	12+38.17	10.75	437.89	438.02
N	12+48.17	10.75	437.94	438.04
O	12+58.17	10.75	437.99	438.06
P	12+68.17	10.75	438.04	438.08
Q	12+78.17	10.75	438.10	438.11
☉ Brg. Pier 1	12+88.50	10.75	438.15	438.15
R	12+98.50	10.75	438.20	438.20
S	13+08.50	10.75	438.25	438.26
T	13+18.50	10.75	438.30	438.33
U	13+28.50	10.75	438.35	438.40
V	13+38.50	10.75	438.40	438.47
W	13+48.50	10.75	438.45	438.54
X	13+58.50	10.75	438.51	438.61
Y	13+68.50	10.75	438.56	438.68
Z	13+78.50	10.75	438.60	438.73
A1	13+88.50	10.75	438.65	438.78
B1	13+98.50	10.75	438.68	438.81
C1	14+08.50	10.75	438.71	438.82
D1	14+18.50	10.75	438.73	438.83
E1	14+28.50	10.75	438.75	438.82
F1	14+38.50	10.75	438.76	438.81
G1	14+48.50	10.75	438.76	438.80
H1	14+58.50	10.75	438.76	438.77
I1	14+68.50	10.75	438.75	438.75
☉ Brg. Pier 2	14+83.50	10.75	438.72	438.72
J1	14+93.50	10.75	438.69	438.71
K1	15+03.50	10.75	438.66	438.70
L1	15+13.50	10.75	438.62	438.68
M1	15+23.50	10.75	438.57	438.67
N1	15+33.50	10.75	438.52	438.65
O1	15+43.50	10.75	438.46	438.62
P1	15+53.50	10.75	438.39	438.58
Q1	15+63.50	10.75	438.32	438.53
R1	15+73.50	10.75	438.25	438.47
S1	15+83.50	10.75	438.18	438.40
T1	15+93.50	10.75	438.11	438.32
U1	16+03.50	10.75	438.04	438.22
V1	16+13.50	10.75	437.97	438.12
W1	16+23.50	10.75	437.90	438.00
X1	16+33.50	10.75	437.83	437.88
☉ Brg. N. Abut.	16+43.83	10.75	437.76	437.76
Bk. N. Abut.	16+45.50	10.75	437.75	437.75

**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	11+26.50	17.92	437.18	437.18
☉ Brg. S. Abut.	11+28.17	17.92	437.19	437.19
C	11+38.17	17.92	437.24	437.29
D	11+48.17	17.92	437.29	437.39
E	11+58.17	17.92	437.34	437.49
F	11+68.17	17.92	437.39	437.57
G	11+78.17	17.92	437.44	437.65
H	11+88.17	17.92	437.49	437.71
I	11+98.17	17.92	437.54	437.76
J	12+08.17	17.92	437.60	437.81
K	12+18.17	17.92	437.65	437.84
L	12+28.17	17.92	437.70	437.86
M	12+38.17	17.92	437.75	437.88
N	12+48.17	17.92	437.80	437.90
O	12+58.17	17.92	437.85	437.92
P	12+68.17	17.92	437.90	437.94
Q	12+78.17	17.92	437.95	437.97
☉ Brg. Pier 1	12+88.50	17.92	438.01	438.01
R	12+98.50	17.92	438.06	438.06
S	13+08.50	17.92	438.11	438.11
T	13+18.50	17.92	438.16	438.18
U	13+28.50	17.92	438.21	438.26
V	13+38.50	17.92	438.26	438.33
W	13+48.50	17.92	438.31	438.40
X	13+58.50	17.92	438.36	438.47
Y	13+68.50	17.92	438.41	438.54
Z	13+78.50	17.92	438.46	438.59
A1	13+88.50	17.92	438.50	438.64
B1	13+98.50	17.92	438.54	438.66
C1	14+08.50	17.92	438.57	438.68
D1	14+18.50	17.92	438.59	438.69
E1	14+28.50	17.92	438.61	438.68
F1	14+38.50	17.92	438.62	438.67
G1	14+48.50	17.92	438.62	438.65
H1	14+58.50	17.92	438.61	438.63
I1	14+68.50	17.92	438.60	438.61
☉ Brg. Pier 2	14+83.50	17.92	438.58	438.58
J1	14+93.50	17.92	438.55	438.56
K1	15+03.50	17.92	438.52	438.55
L1	15+13.50	17.92	438.48	438.54
M1	15+23.50	17.92	438.43	438.53
N1	15+33.50	17.92	438.38	438.51
O1	15+43.50	17.92	438.32	438.48
P1	15+53.50	17.92	438.25	438.44
Q1	15+63.50	17.92	438.18	438.39
R1	15+73.50	17.92	438.11	438.33
S1	15+83.50	17.92	438.04	438.26
T1	15+93.50	17.92	437.97	438.18
U1	16+03.50	17.92	437.90	438.08
V1	16+13.50	17.92	437.83	437.98
W1	16+23.50	17.92	437.76	437.86
X1	16+33.50	17.92	437.69	437.74
☉ Brg. N. Abut.	16+43.83	17.92	437.62	437.62
Bk. N. Abut.	16+45.50	17.92	437.61	437.61

5/9/2017 9:07:57 AM

DESIGNED - FRANK W. SHARPE  
 CHECKED - PAUL S. JOHNSON  
 DRAWN - h.t. duong  
 CHECKED - F.W.S. / P.S.J.

EXAMINED *Joey F. [Signature]*  
 ENGINEER OF BRIDGE DESIGN  
 PASSED *Carl [Signature]*  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 5, 2017  
 REVISED  
 REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 051-0064**

SHEET NO. 6 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	101
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				

WEST EDGE OF SHOULDER

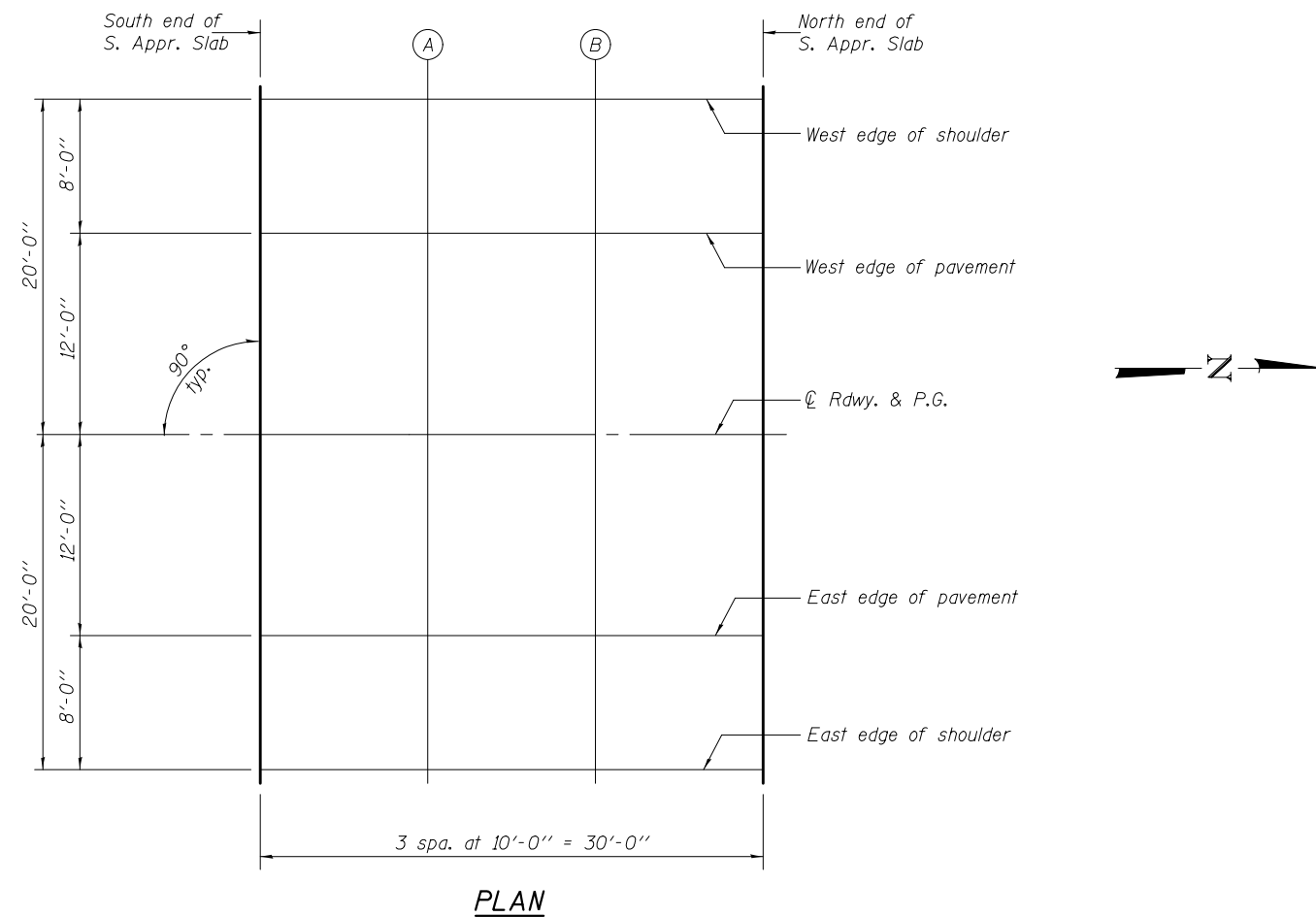
Location	Station	Offset	Theoretical Grade Elevations
South end of S. Appr. Slab	10+97.50	-20.00	437.27
A	11+07.50	-20.00	437.26
B	11+17.50	-20.00	437.26
North end of S. Appr. Slab	11+27.50	-20.00	437.25

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
South end of S. Appr. Slab	10+97.50	-12.00	437.43
A	11+07.50	-12.00	437.42
B	11+17.50	-12.00	437.42
North end of S. Appr. Slab	11+27.50	-12.00	437.41

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
South end of S. Appr. Slab	10+97.50	0.00	437.34
A	11+07.50	0.00	437.39
B	11+17.50	0.00	437.44
North end of S. Appr. Slab	11+27.50	0.00	437.50



EAST EDGE OF PAVEMENT

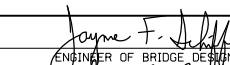

Location	Station	Offset	Theoretical Grade Elevations
South end of S. Appr. Slab	10+97.50	12.00	437.15
A	11+07.50	12.00	437.21
B	11+17.50	12.00	437.26
North end of S. Appr. Slab	11+27.50	12.00	437.31

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
South end of S. Appr. Slab	10+97.50	20.00	436.99
A	11+07.50	20.00	437.04
B	11+17.50	20.00	437.09
North end of S. Appr. Slab	11+27.50	20.00	437.14

5/9/2017 9:07:57 AM

DESIGNED - FRANK W. SHARPE	EXAMINED	DATE - MAY 5, 2017
CHECKED - PAUL S. JOHNSON	PASSED	REVISOR
DRAWN - h.t. duong		REVISOR
CHECKED - F.W.S. / P.S.J.		

  
 ENGINEER OF BRIDGE DESIGN  
  
 ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 051-0064

SHEET NO. 7 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	102
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				

WEST EDGE OF SHOULDER

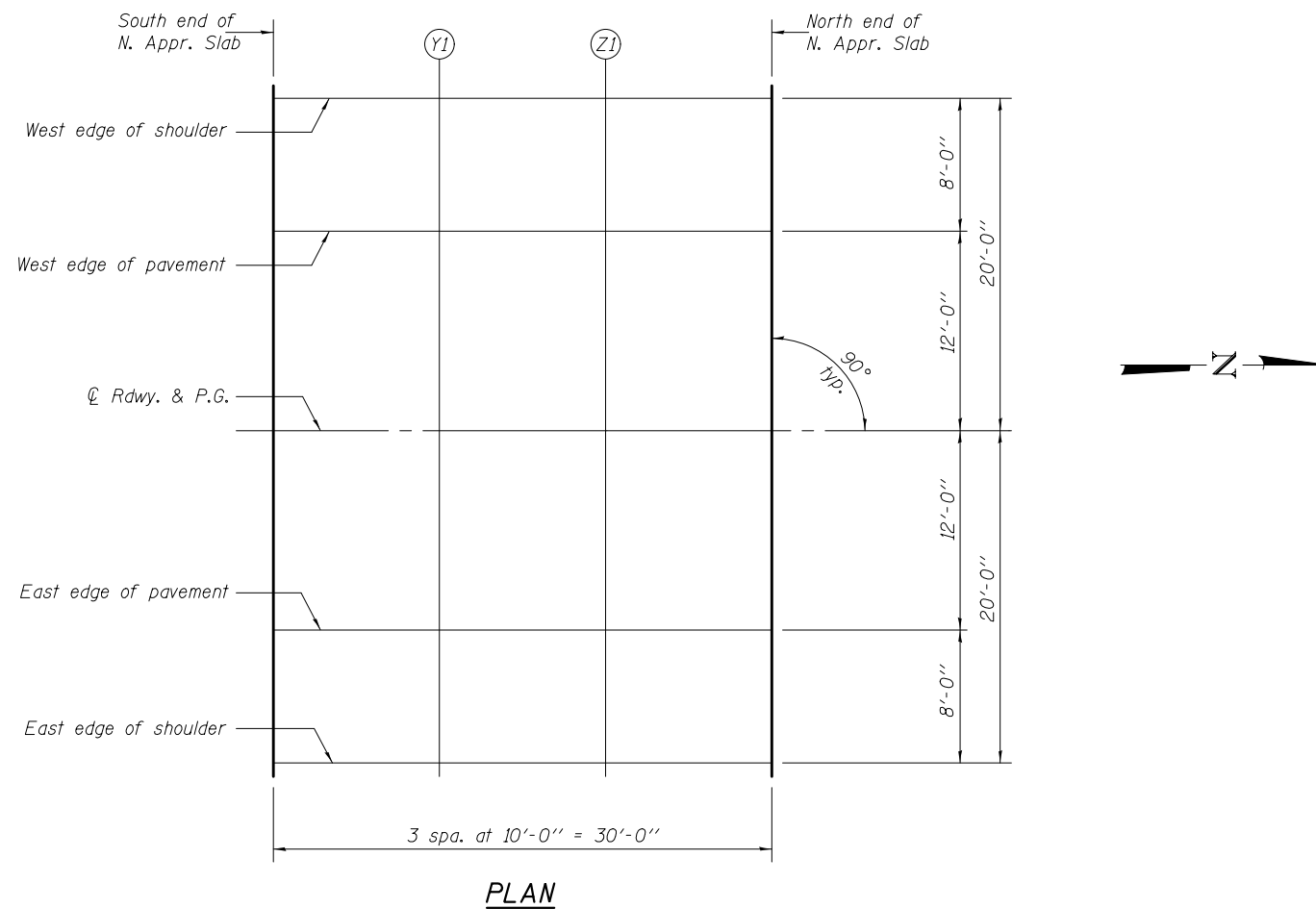
Location	Station	Offset	Theoretical Grade Elevations
South end of N. Appr. Slab	16+44.50	-20.00	437.57
Y1	16+54.50	-20.00	437.50
Z1	16+64.50	-20.00	437.43
North end of N. Appr. Slab	16+74.50	-20.00	437.36

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
South end of N. Appr. Slab	16+44.50	-12.00	437.74
Y1	16+54.50	-12.00	437.67
Z1	16+64.50	-12.00	437.60
North end of N. Appr. Slab	16+74.50	-12.00	437.53

☉ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
South end of N. Appr. Slab	16+44.50	0.00	437.92
Y1	16+54.50	0.00	437.85
Z1	16+64.50	0.00	437.78
North end of N. Appr. Slab	16+74.50	0.00	437.71



EAST EDGE OF PAVEMENT

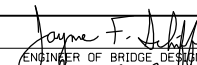

Location	Station	Offset	Theoretical Grade Elevations
South end of N. Appr. Slab	16+44.50	12.00	437.74
Y1	16+54.50	12.00	437.67
Z1	16+64.50	12.00	437.60
North end of N. Appr. Slab	16+74.50	12.00	437.53

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
South end of N. Appr. Slab	16+44.50	20.00	437.57
Y1	16+54.50	20.00	437.50
Z1	16+64.50	20.00	437.43
North end of N. Appr. Slab	16+74.50	20.00	437.36

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DESIGNED - FRANK W. SHARPE	EXAMINED	DATE - MAY 5, 2017
CHECKED - PAUL S. JOHNSON	PASSED	
DRAWN - h.t. duong		REVISOR
CHECKED - F.W.S. / P.S.J.		REVISOR

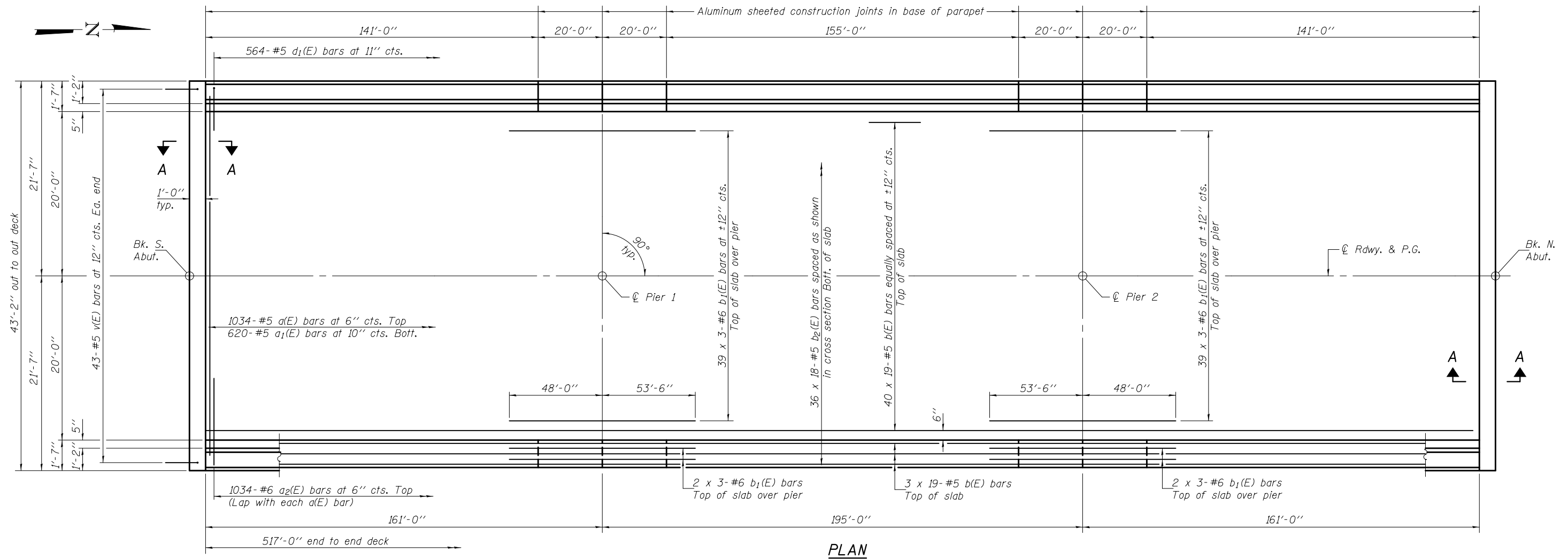
  
 ENGINEER OF BRIDGE DESIGN  
  
 ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF NORTH APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 051-0064**

SHEET NO. 8 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	103
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				



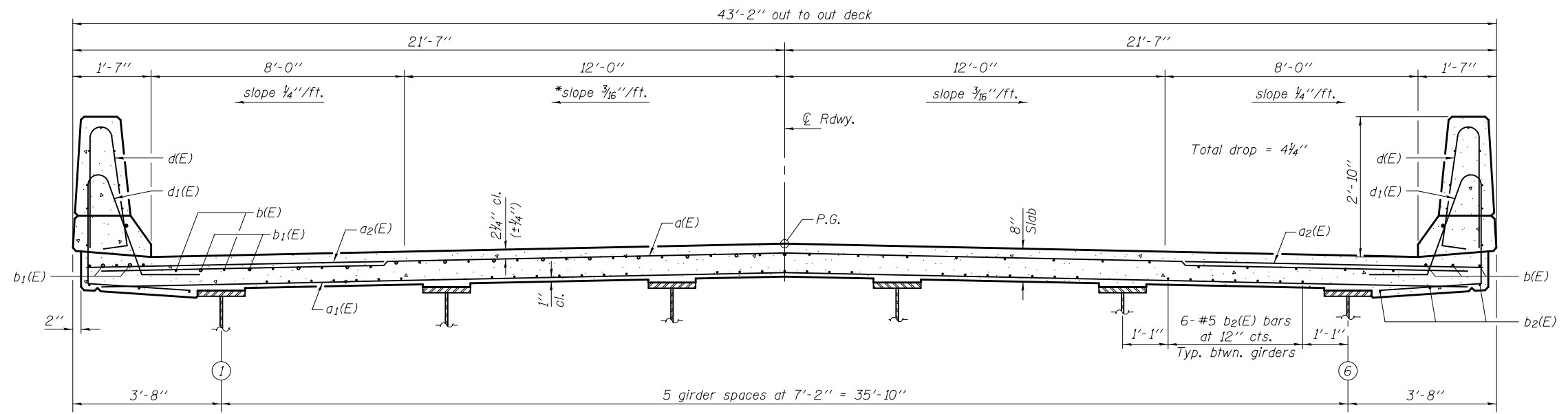
PLAN

**MIN. BAR LAPS**

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

Notes:  
 See sheet 10 of 30 for superstructure details and Bill of Material.  
 Bars indicated thus 40 x 3-#5 etc. indicates 40 lines of bars with 3 lengths per line.  
 See sheet 10 of 30 for parapet reinforcement.  
 For Section A-A, see sheet 11 of 30.

\* Slope varies from -0.65% at Sta. 11+27.50 to -1.56% at Sta. 11+48.00.



NEAR PIER

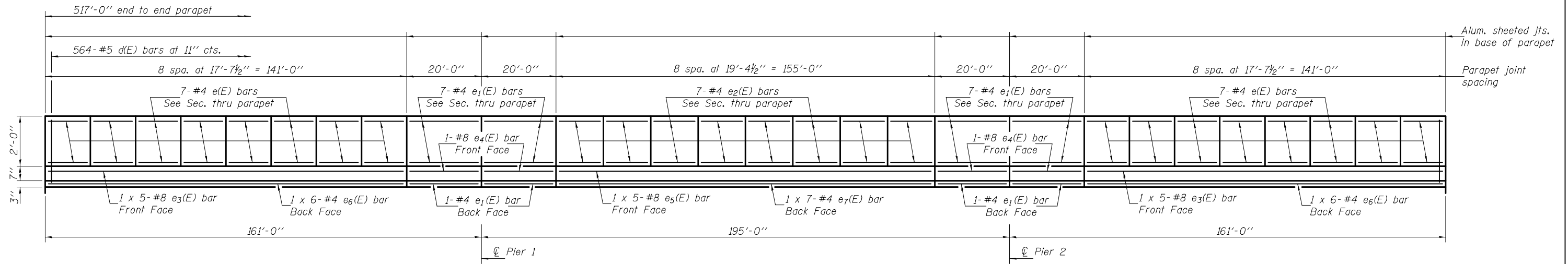
CROSS SECTION  
(Looking North)

NEAR MIDSPAN

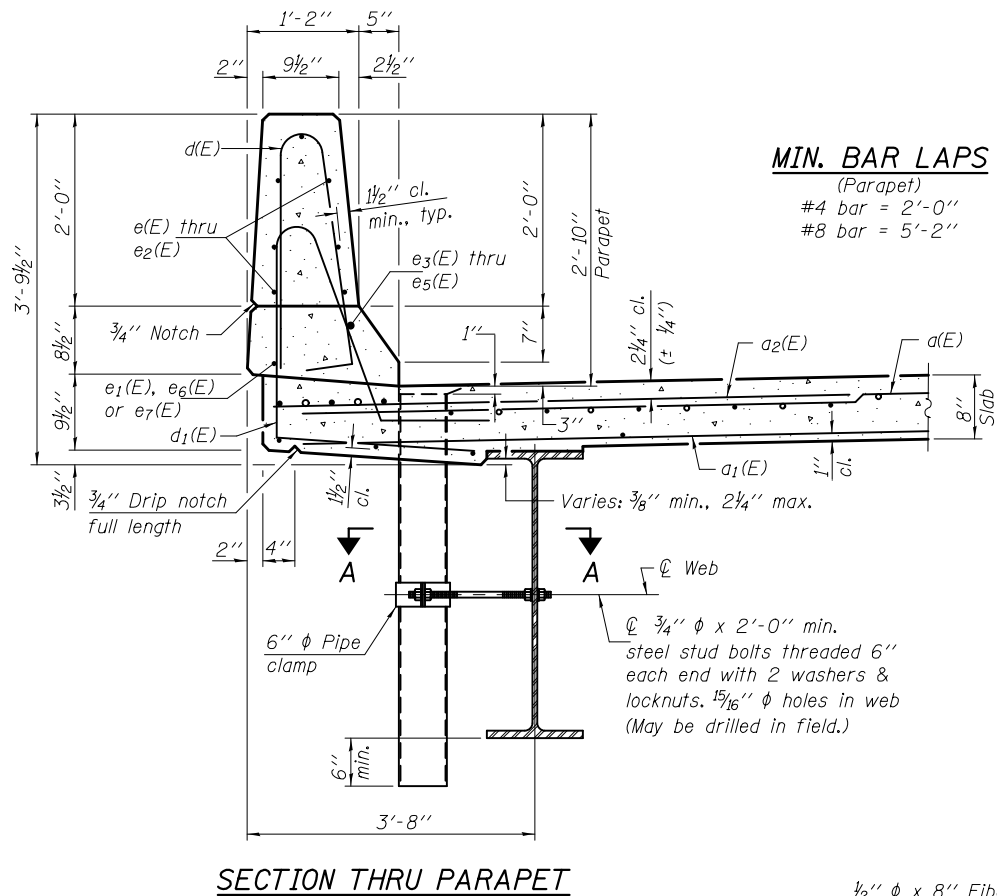
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DESIGNED - FRANK W. SHARPE	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - MAY 5, 2017	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE STRUCTURE NO. 051-0064</b>	F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - PAUL S. JOHNSON	PASSED - <i>Carl [Signature]</i>	REVISER -			332	(16 BR) B-1	LAWRENCE	167	104	
DRAWN - h.t. duong	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -			CONTRACT NO. 74180					
CHECKED - F.W.S. / P.S.J.					SHEET NO. 9 OF 30 SHEETS					



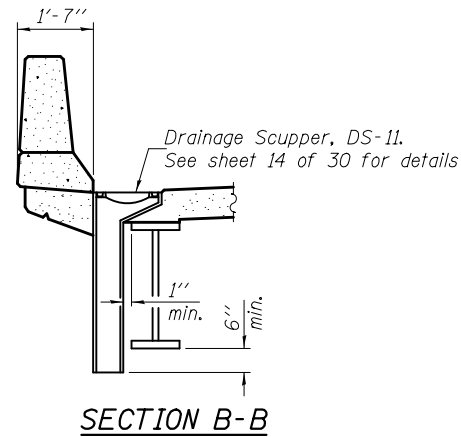


**INSIDE ELEVATION OF WEST PARAPET**  
(Looking West; East parapet similar)

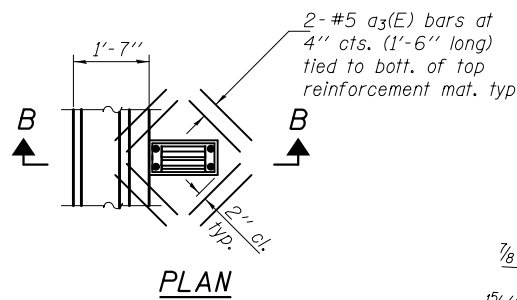


**SECTION THRU PARAPET**

**MIN. BAR LAPS**  
(Parapet)  
#4 bar = 2'-0"  
#8 bar = 5'-2"

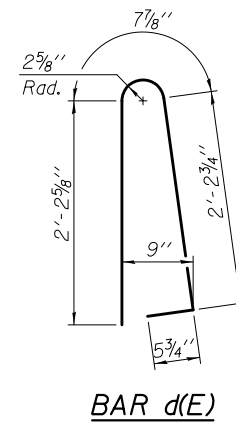


**SECTION B-B**

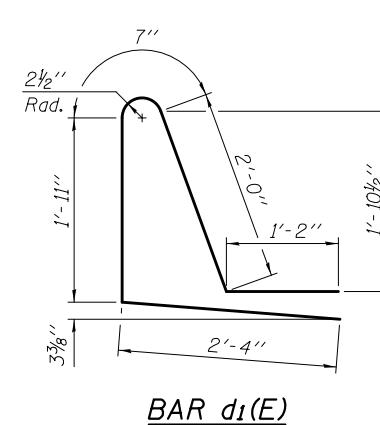


**PLAN**

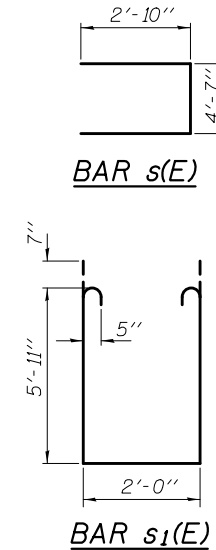
Note: Cut longitudinal reinforcement to clear drainage scuppers.



**BAR d(E)**

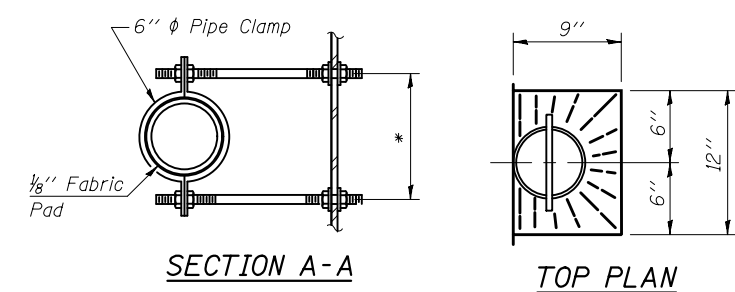


**BAR d1(E)**



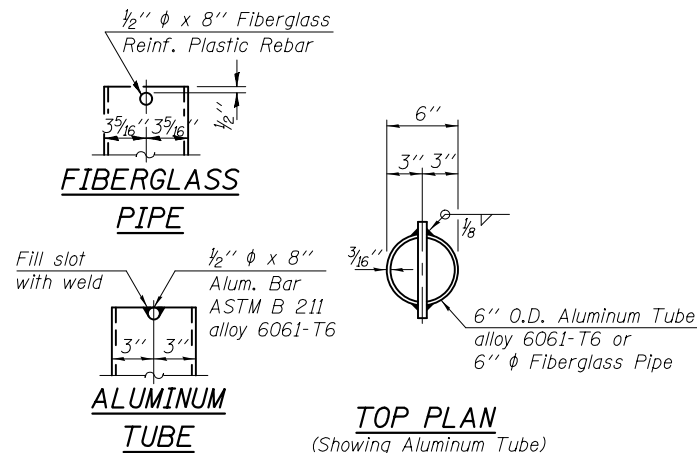
**BAR s(E)**

**BAR s1(E)**



**SECTION A-A**

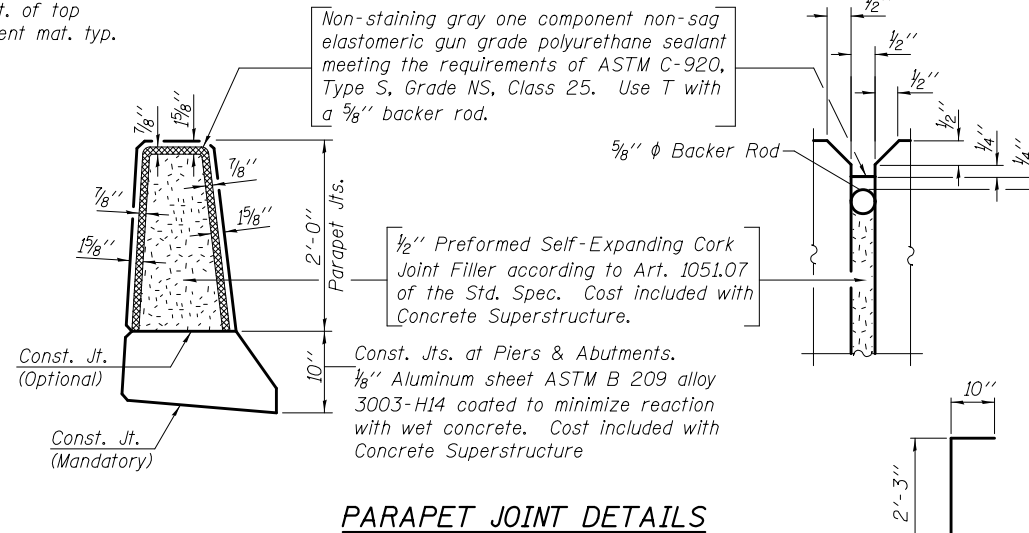
**TOP PLAN**



**FIBERGLASS PIPE**

**ALUMINUM TUBE**

TOP PLAN  
(Showing Aluminum Tube)



**PARAPET JOINT DETAILS**

Notes:  
The exterior surfaces of the floor drains shall be painted according to Article 506 with the finish coat as specified. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SP1 prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

**BAR v(E)**

**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	1034	#5	42'-6"	—
a1(E)	620	#5	40'-0"	—
a2(E)	2068	#6	6'-6"	—
a3(E)	32	#5	1'-6"	—
b(E)	874	#5	29'-9"	—
b1(E)	258	#6	35'-11"	—
b2(E)	648	#5	31'-4"	—
d(E)	1128	#5	5'-7"	⏏
d1(E)	1128	#5	8'-0"	⏏
e(E)	224	#4	17'-4"	—
e1(E)	64	#4	19'-9"	—
e2(E)	112	#4	19'-1"	—
e3(E)	20	#8	32'-4"	—
e4(E)	8	#8	19'-9"	—
e5(E)	10	#8	35'-1"	—
e6(E)	24	#4	25'-0"	—
e7(E)	14	#4	23'-8"	—
m(E)	14	#6	42'-10"	—
m1(E)	60	#6	6'-10"	—
m2(E)	24	#6	3'-4"	—
m3(E)	72	#5	4'-0"	—
s(E)	82	#5	10'-3"	⏏
s1(E)	72	#5	15'-0"	⏏
v(E)	86	#5	3'-1"	⏏
Reinforcement Bars, Epoxy Coated		Pound	182,930	
Concrete Superstructure		Cu. Yds.	758.7	

Bars indicated thus 1 x 6-#5 etc. indicates 1 line of bars with 6 lengths per line.

5/9/2017 9:07:58 AM

DESIGNED - FRANK W. SHARPE  
CHECKED - PAUL S. JOHNSON  
DRAWN - h.t. duong  
CHECKED - F.W.S. / P.S.J.

EXAMINED  
PASSED  
ENGINEER OF BRIDGES AND STRUCTURES

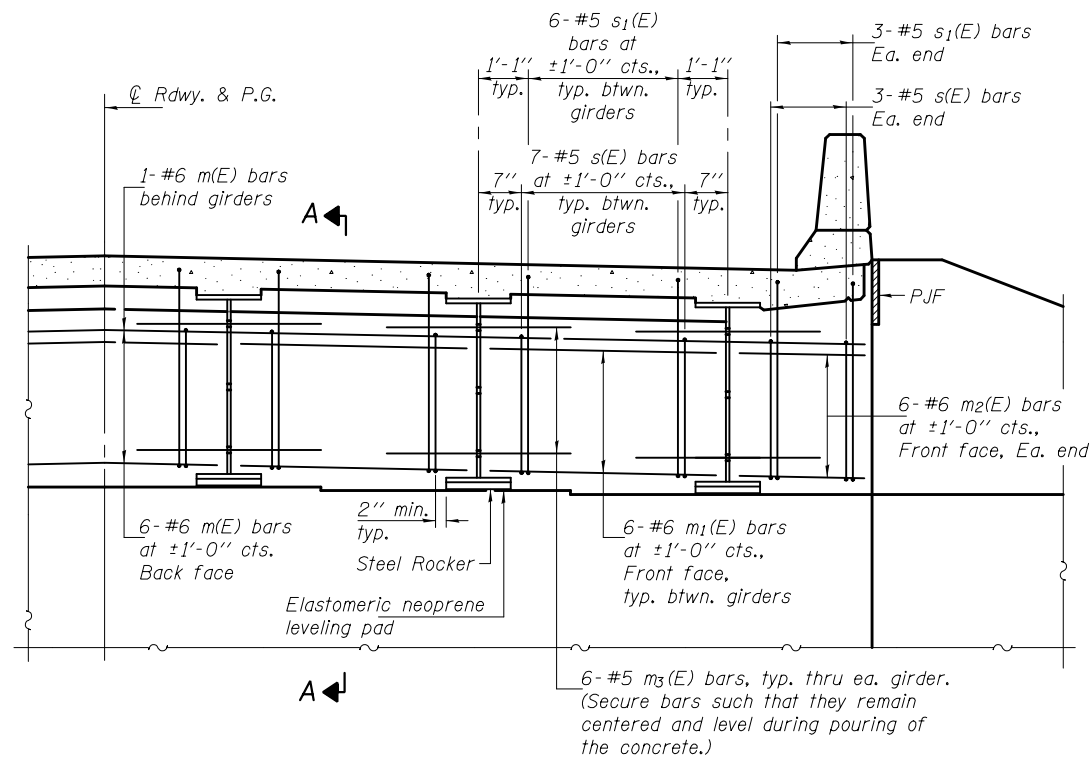
DATE - MAY 5, 2017  
REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

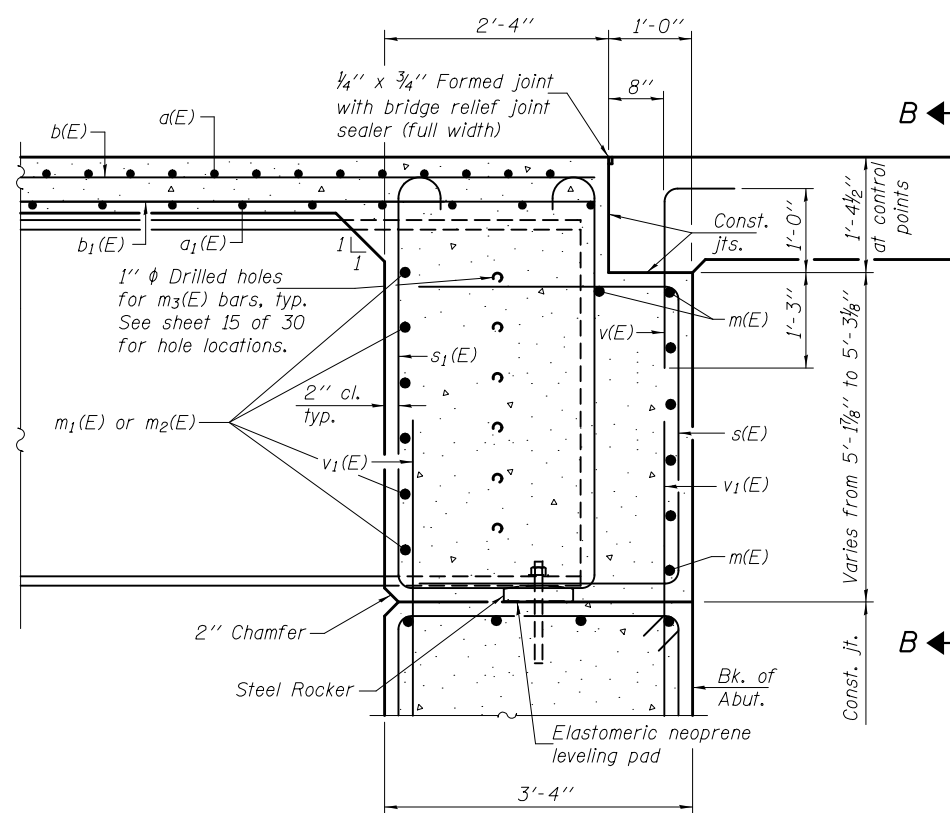
SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 051-0064

SHEET NO. 10 OF 30 SHEETS

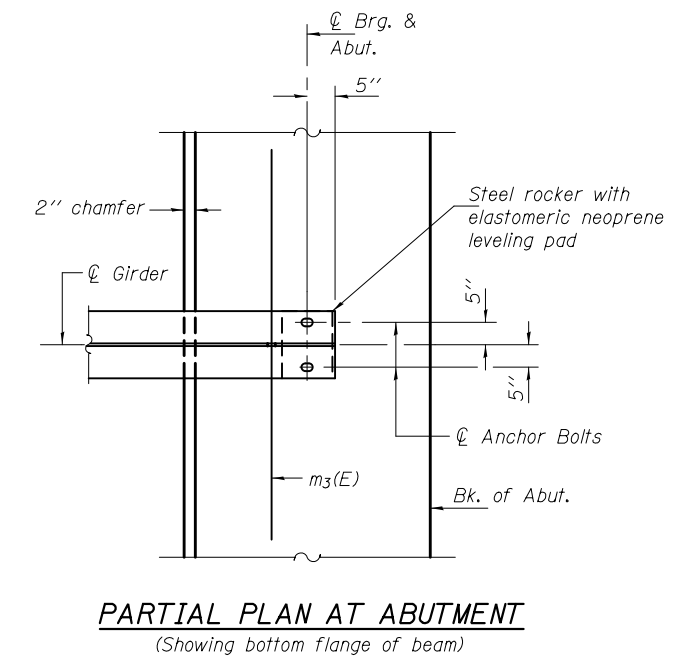
F.A.P. RT. SECTION COUNTY TOTAL SHEETS SHEET NO.  
332 (16 BR) B-1 LAWRENCE 167 105  
CONTRACT NO. 74180  
ILLINOIS FED. AID PROJECT



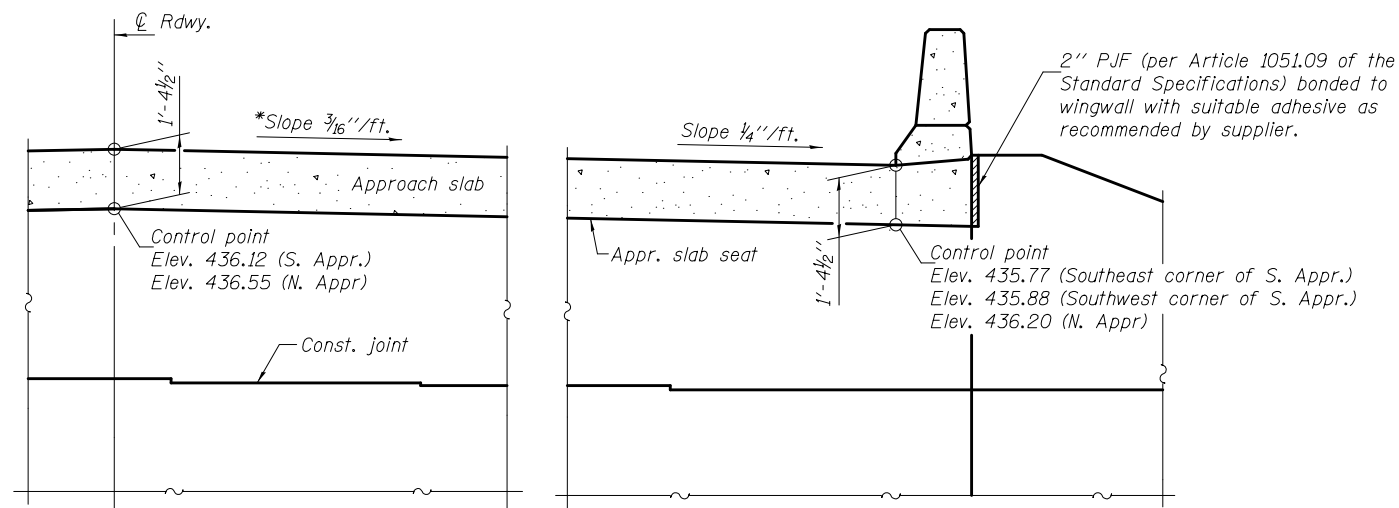
**DIAPHRAGM ELEVATION AT NORTH ABUTMENT**  
(Looking North - South Abut. similar)



**SECTION A-A**



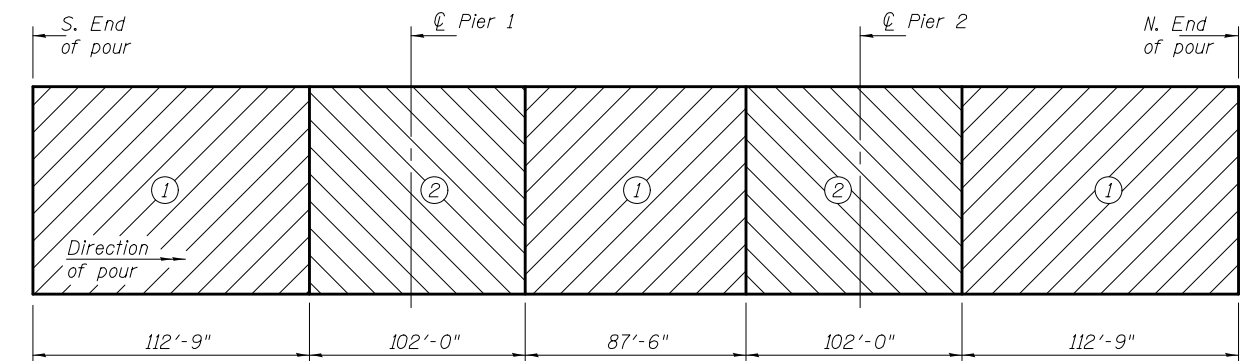
**PARTIAL PLAN AT ABUTMENT**  
(Showing bottom flange of beam)



**SECTION B-B**

\* Slope = -0.65% for Southbound lane at S. Abut. due to superelevation transition. Use -1.56% elsewhere.

**Notes:**  
Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 30.  
Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 30.  
For details of bars s(E), s1(E) and v(E), see sheet 10 of 30.  
The approach slab seat shall have a constant slope determined from the control points shown.  
For bearing details, see sheet 17 of 30.



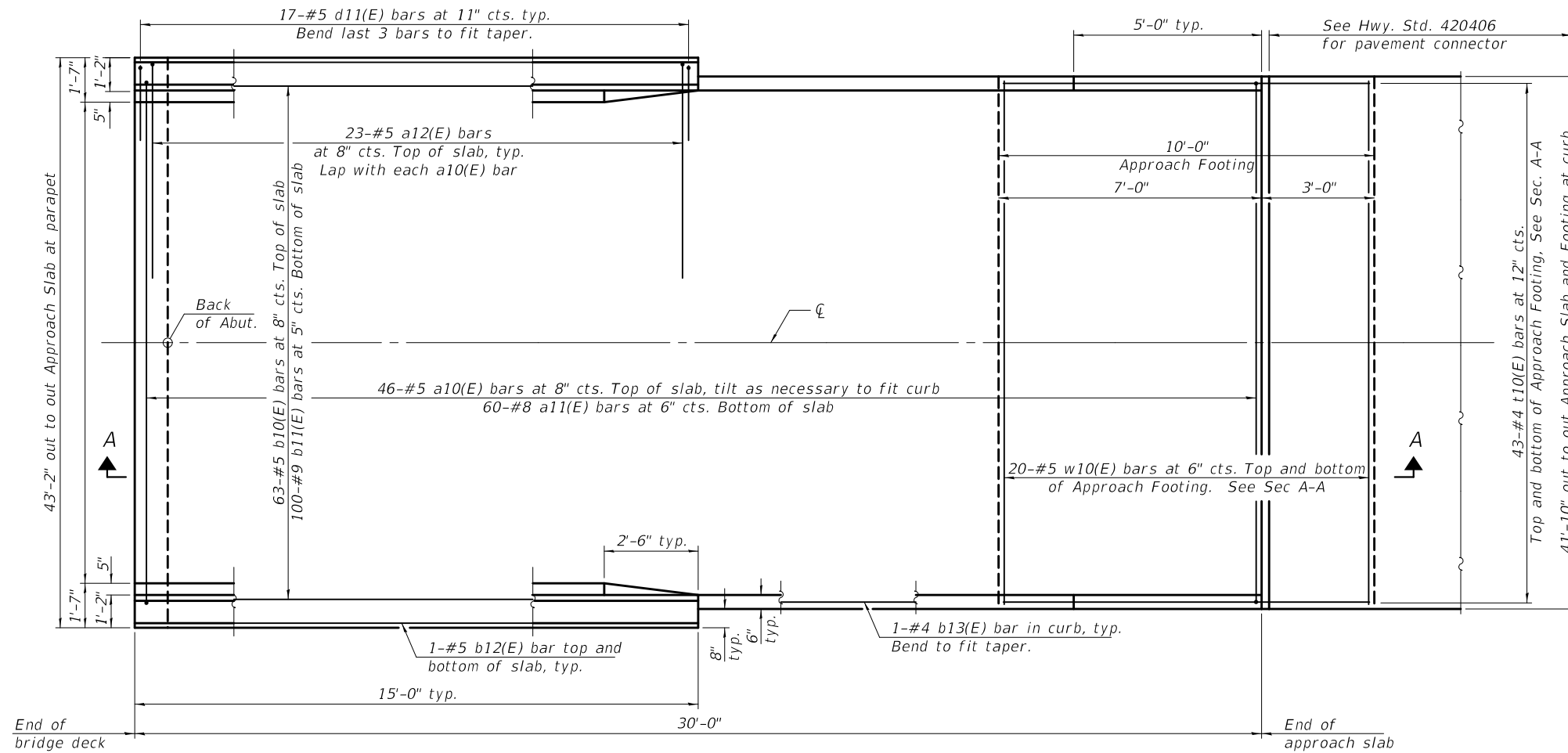
**DECK POURING SEQUENCE**

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

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

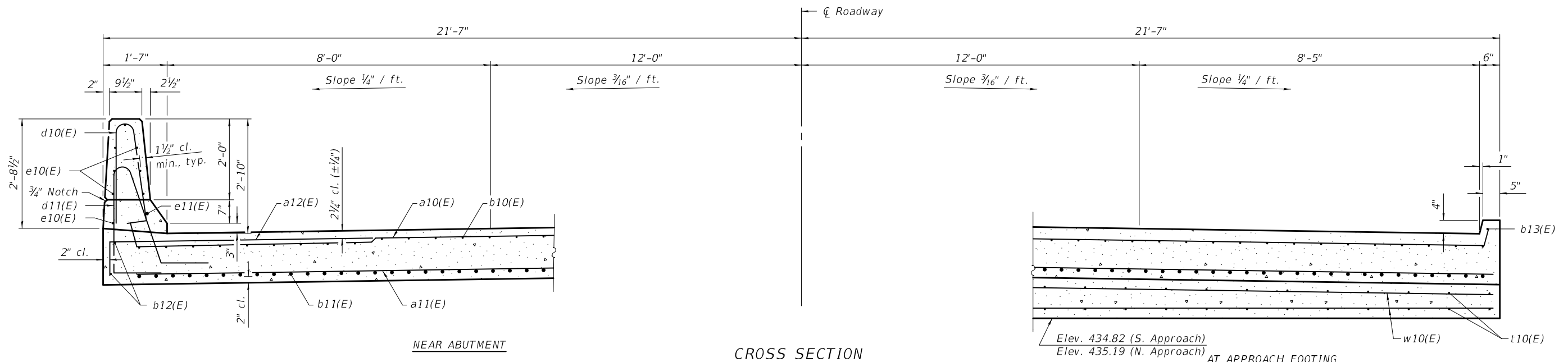
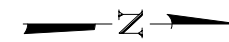
5/9/2017 9:07:58 AM

DESIGNED - FRANK W. SHARPE	EXAMINED - <i>Joanne F. Duff</i>	DATE - MAY 5, 2017	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INTEGRAL ABUTMENT DIAPHRAGM DETAILS &amp; POURING SEQUENCE STRUCTURE NO. 051-0064</b>	F.A.P. RTE. 332	SECTION (16 BR) B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 106	
CHECKED - PAUL S. JOHNSON	PASSED - <i>Carl Beyer</i>	REVISOR			CONTRACT NO. 74180					
DRAWN - h.t. duong	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR			SHEET NO. 11 OF 30 SHEETS					
CHECKED - F.W.S. / P.S.J.					ILLINOIS FED. AID PROJECT					



**PLAN**

(North approach shown - South approach similar)



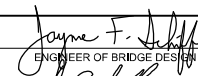
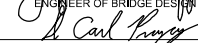
**CROSS SECTION**

AT APPROACH FOOTING

5/9/2017 9:07:59 AM

BAIA-CIP-34FS-0 2-17-2017

DESIGNED - FRANK W. SHARPE	EXAMINED
CHECKED - PAUL S. JOHNSON	PASSED
DRAWN - H.T. DUONG	
CHECKED - F.W.S./P.S.J.	

  
 ENGINEER OF BRIDGE DESIGN  
  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 5, 2017
REVISED -
REVISED -

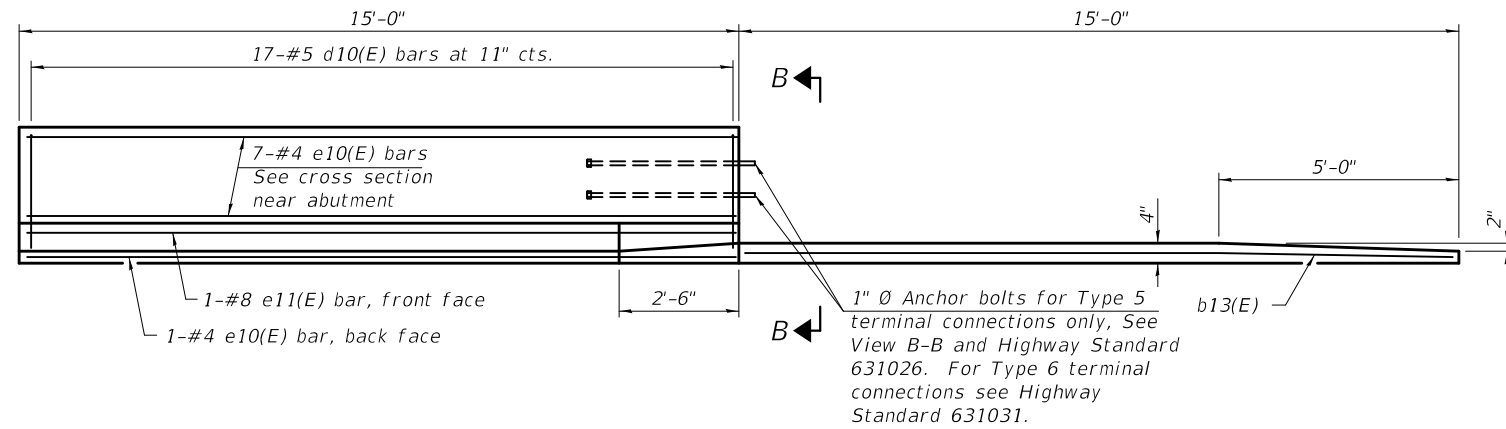
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

(Sheet 1 of 2)

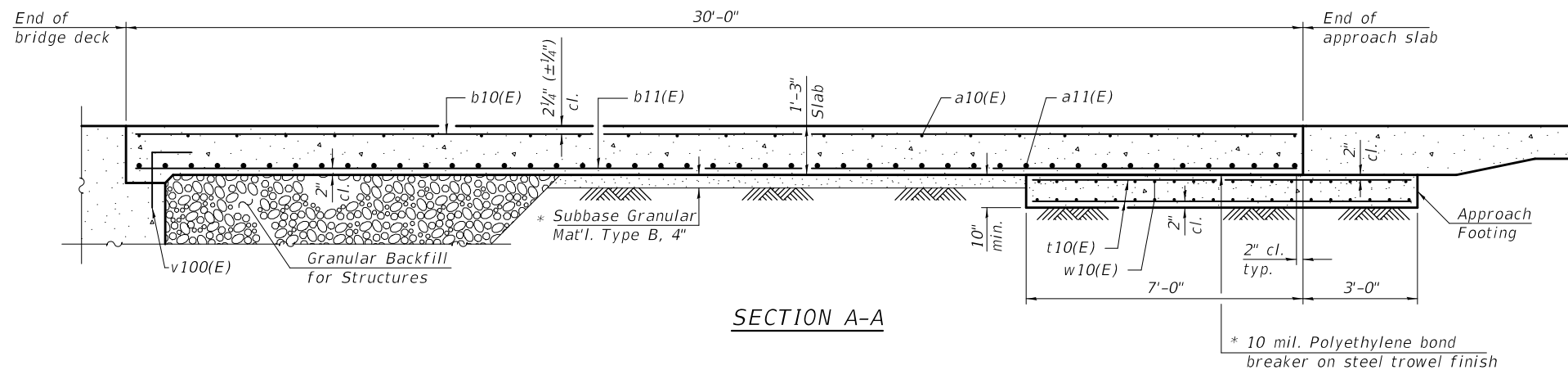
**BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 051 - 0064**

SHEET 12 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	107
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				

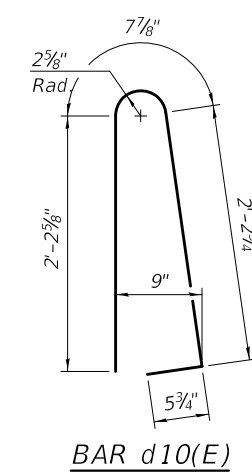


INSIDE ELEVATION OF PARAPET AND CURB

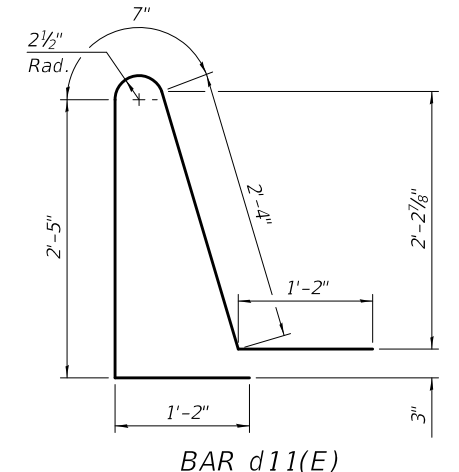


SECTION A-A

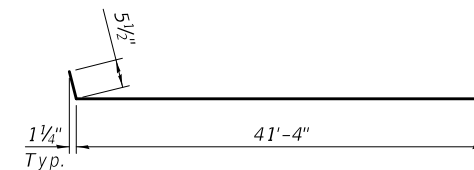
Notes:  
 Parapet concrete shall be paid for as Concrete Superstructure.  
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).  
 Approach footing concrete shall be paid for as Concrete Structures.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 30.



BAR d10(E)



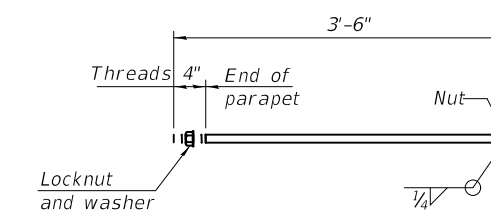
BAR d11(E)



BAR a10(E)



BAR a12(E)

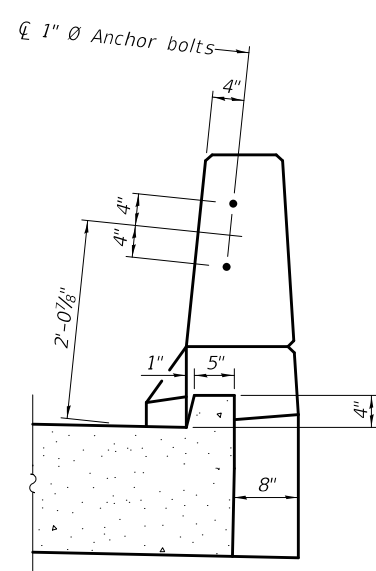


\* 1" Ø ANCHOR BOLT  
 (Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

TWO APPROACHES  
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	92	#5	42'-3"	┌───┐
a11(E)	120	#8	41'-6"	┌───┐
a12(E)	92	#5	7'-4"	┌───┐
b10(E)	126	#5	29'-8"	┌───┐
b11(E)	200	#9	29'-8"	┌───┐
b12(E)	8	#5	14'-8"	┌───┐
b13(E)	4	#4	14'-8"	┌───┐
d10(E)	68	#5	5'-7"	┌───┐
d11(E)	68	#5	7'-8"	┌───┐
e10(E)	32	#4	14'-8"	┌───┐
e11(E)	4	#8	14'-8"	┌───┐
t10(E)	172	#4	9'-8"	┌───┐
w10(E)	80	#5	41'-6"	┌───┐
Concrete Superstructure			Cu. Yd.	6.7
Concrete Superstructure (Approach Slab)			Cu. Yd.	120
Concrete Structures			Cu. Yd.	32.0
Reinforcement Bars, Epoxy Coated			Pound	48,270

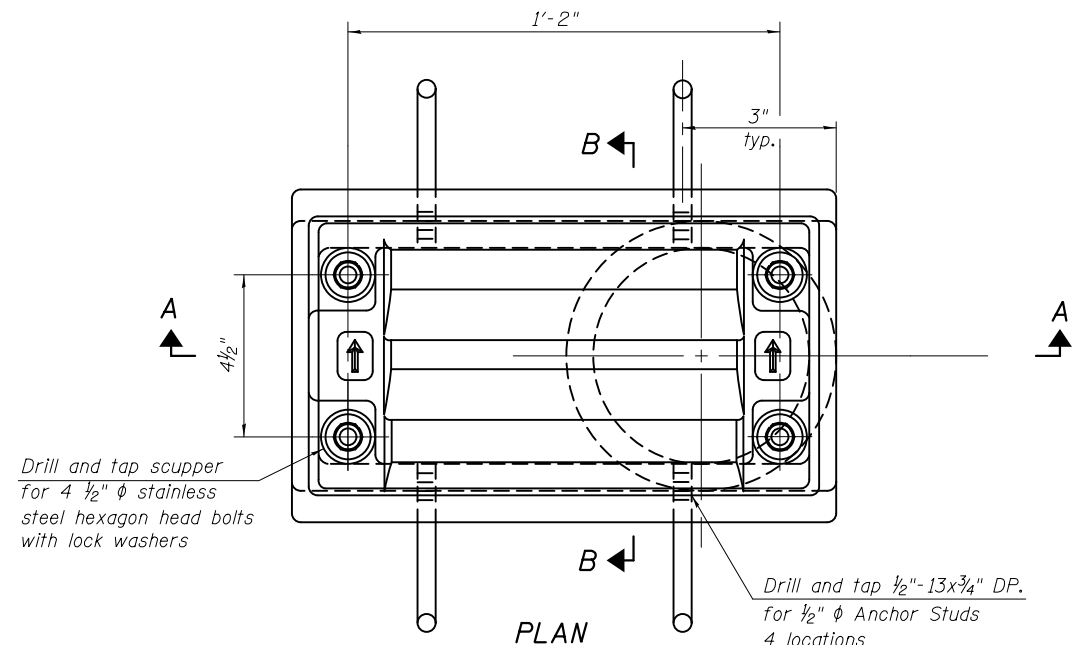
\* Cost included with Concrete Superstructure (Approach Slab).



VIEW B-B

(Sheet 2 of 2)

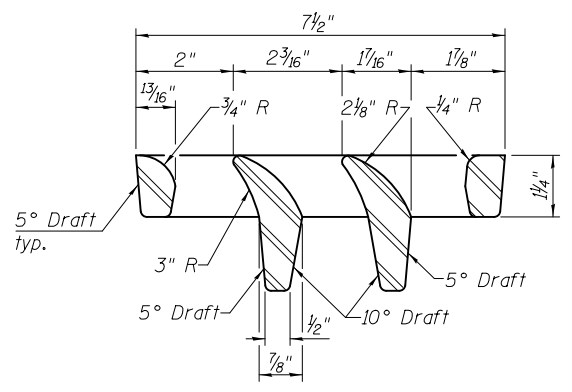
5/9/2017 9:07:59 AM



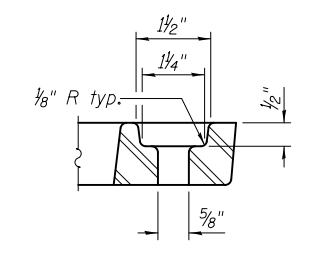
Drill and tap scupper for 4 1/2" φ stainless steel hexagon head bolts with lock washers

**PLAN**

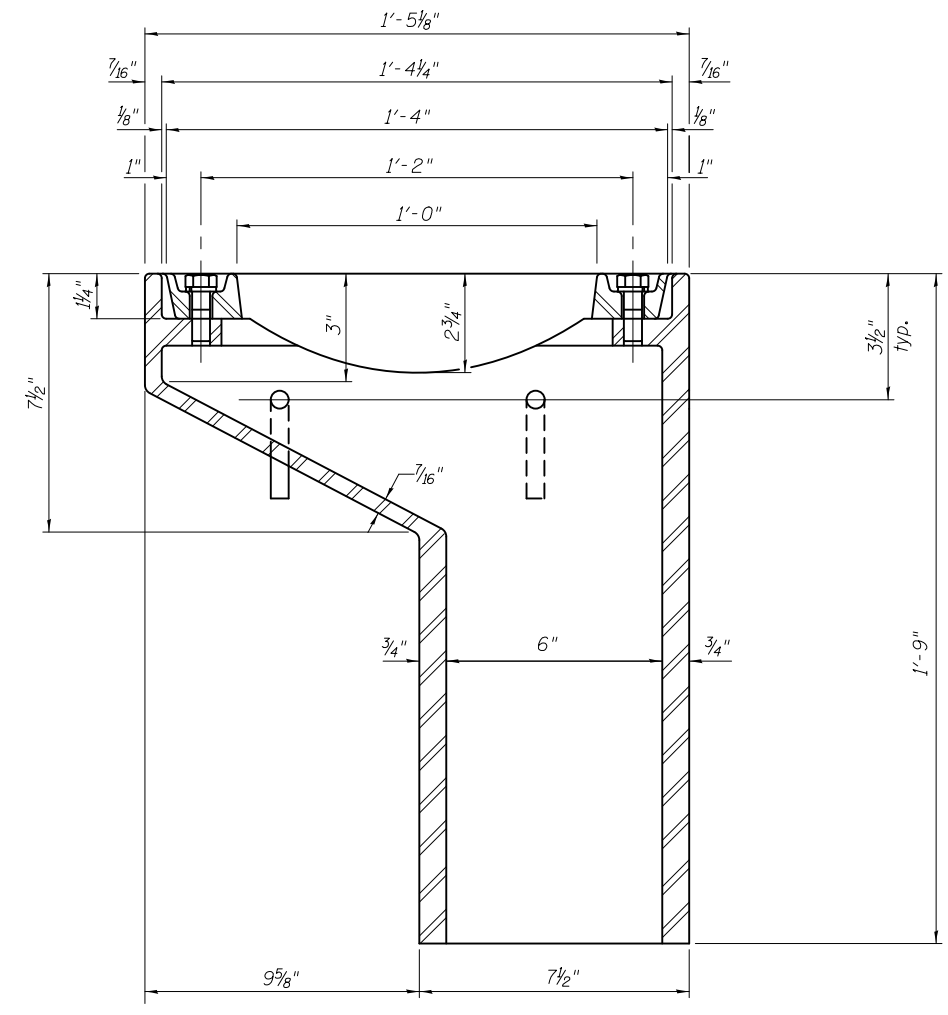
Drill and tap 1/2"-13x3/4" DP. for 1/2" φ Anchor Studs 4 locations



**VANE GRATE DETAIL**

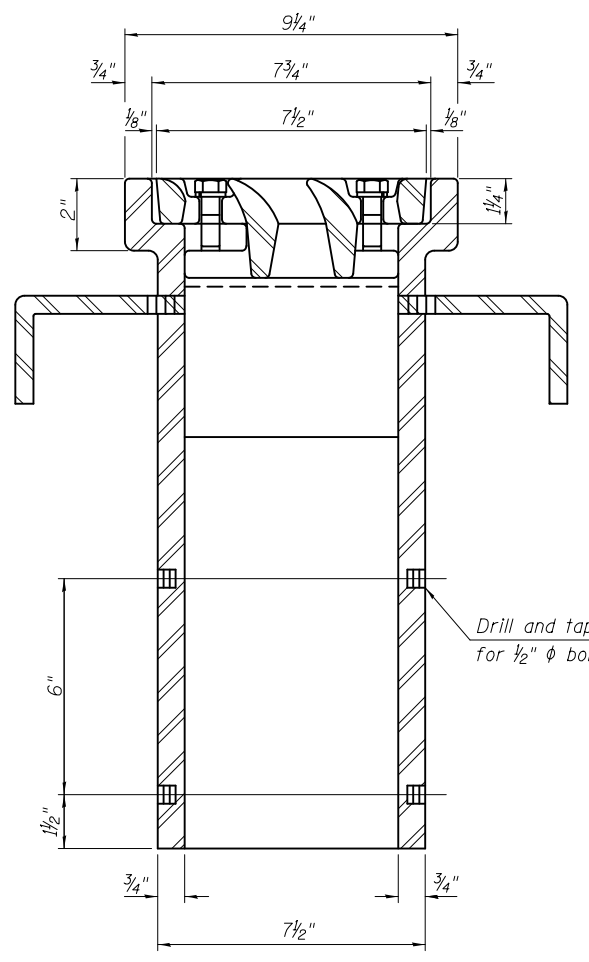


**BOLT HOLE DETAIL**



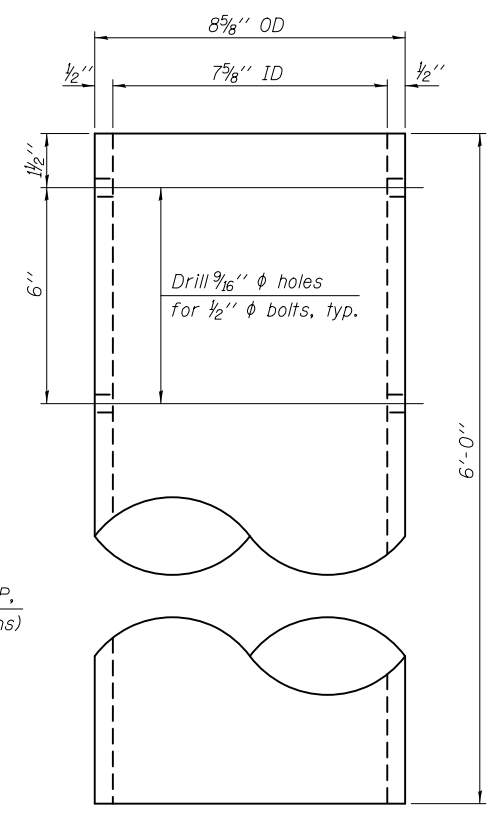
**SECTION A-A**

See sheet 10 of 30 for scupper location relative to parapet.

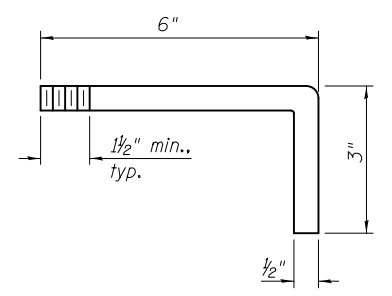


**SECTION B-B**

Drill and tap 1/2"-13x1/2" DP. for 1/2" φ bolts. (4 locations)



**DOWNSPOUT**



**ANCHOR STUD DETAIL**

**Notes:**  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.  
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.  
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.  
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.  
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.  
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.  
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.  
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

5/9/2017 9:07:59 AM

DS-11

7-1-10

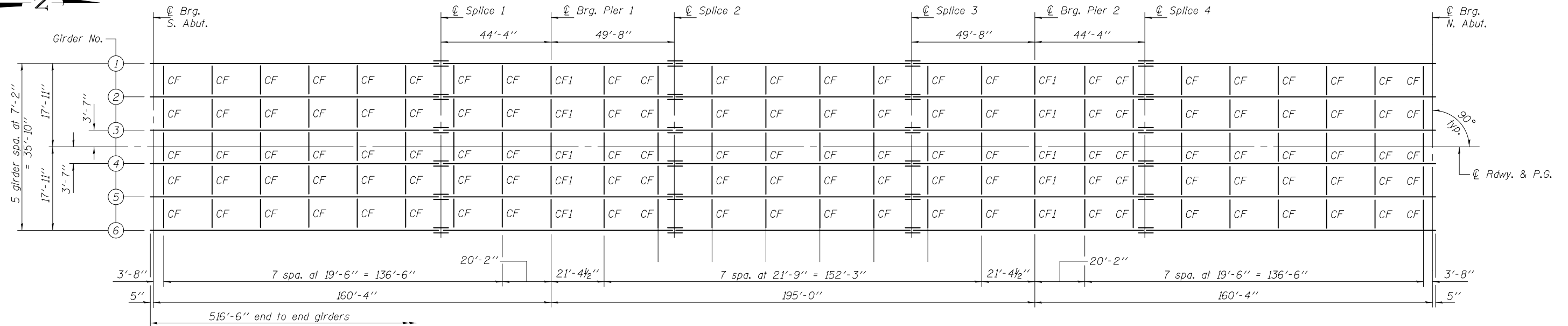
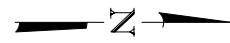
DESIGNED - FRANK W. SHARPE	EXAMINED - <i>Joanne F. J...</i>	DATE - MAY 5, 2017
CHECKED - PAUL S. JOHNSON	PASSED - <i>Carl...</i>	REVISOR
DRAWN - h.t. duong	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR
CHECKED - F.W.S. / P.S.J.		

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

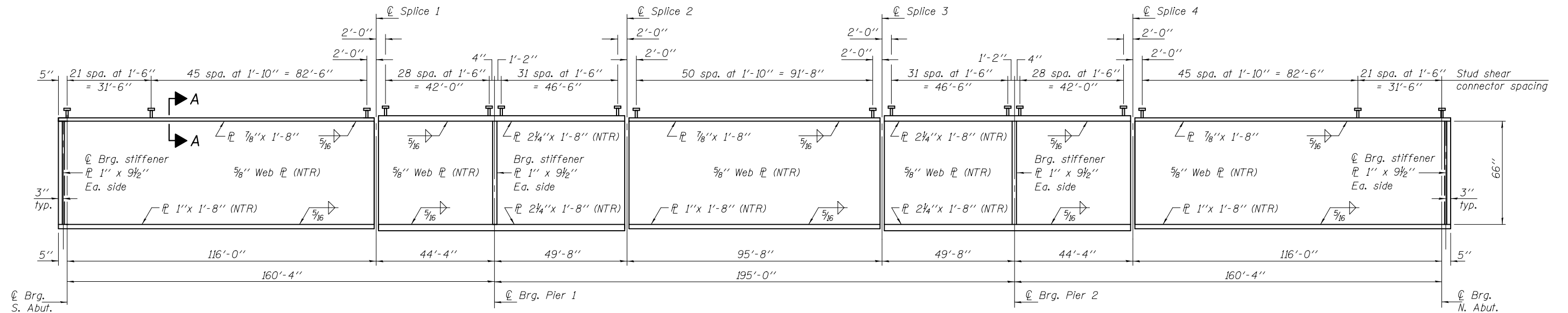
**DRAINAGE SCUPPER, DS-11  
 STRUCTURE NO. 051-0064**

SHEET NO. 14 OF 30 SHEETS

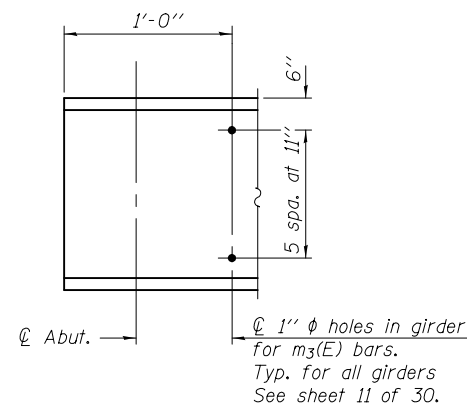
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	109
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				



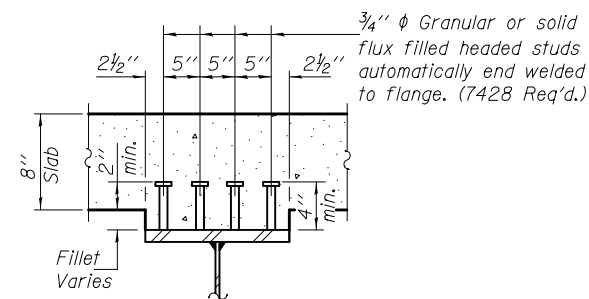
**FRAMING PLAN**



**GIRDER ELEVATION**



**END OF GIRDER ELEVATION**

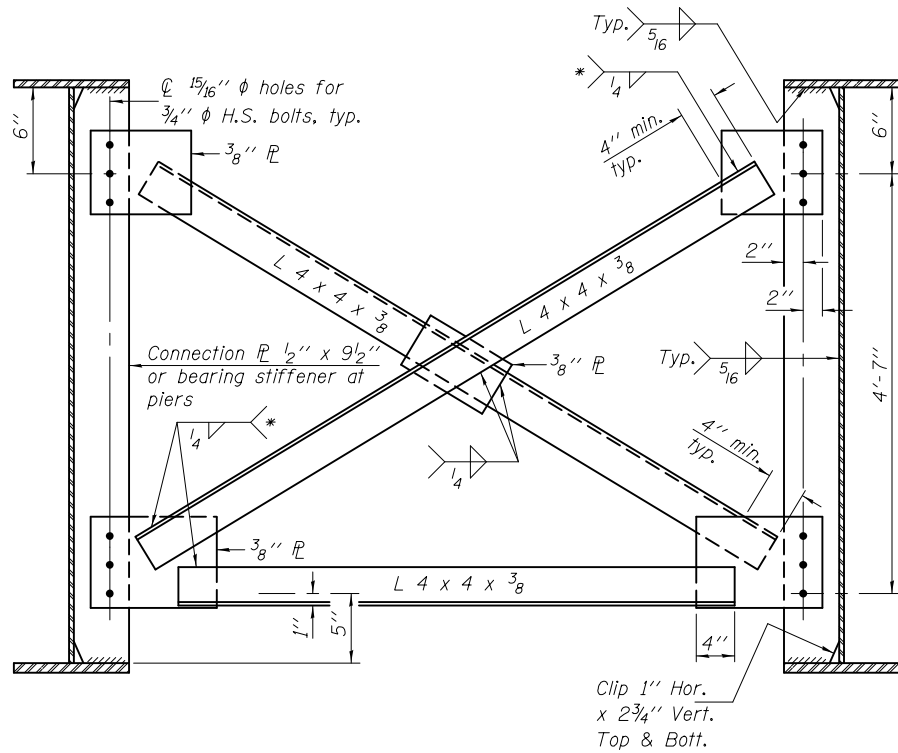


**SECTION A-A**

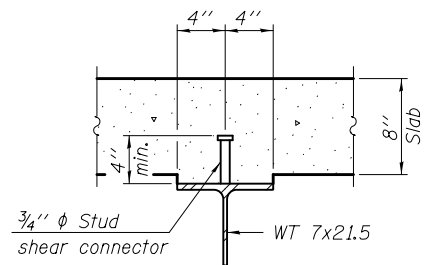
Notes:  
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.  
 All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.  
 All girder web, flange, and bearing stiffener plates shall be AASHTO M 270 Grade 50.

5/9/2017 9:08:00 AM

DESIGNED - FRANK W. SHARPE	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - MAY 5, 2017	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STRUCTURAL STEEL STRUCTURE NO. 051-0064</b>	F.A.P. RTE. 332	SECTION (16 BR) B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 110	
CHECKED - PAUL S. JOHNSON	PASSED - <i>Carl [Signature]</i>	REVISOR			CONTRACT NO. 74180					
DRAWN - h.t. duong	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR			SHEET NO. 15 OF 30 SHEETS					
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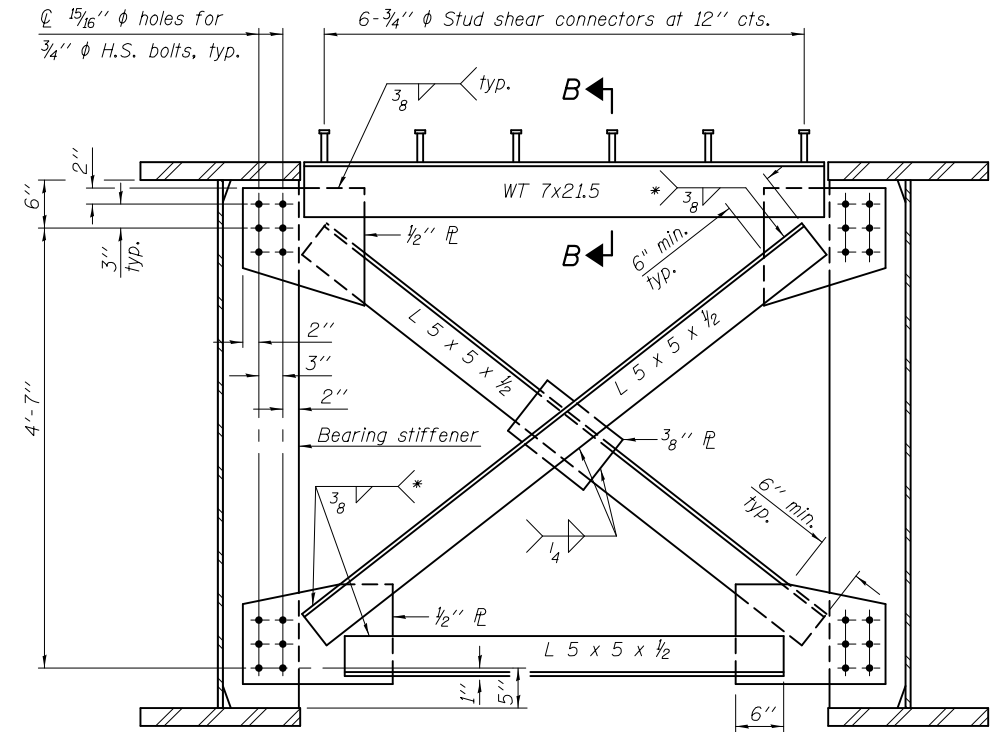
**CROSS FRAME, CF**  
(120 Required)



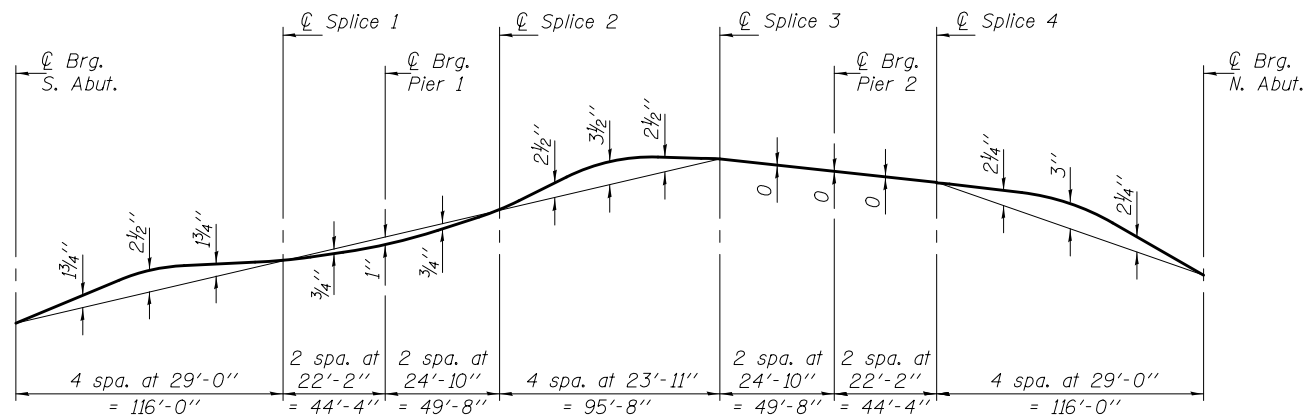
**SECTION B-B**

\*Fillet weld angles along 3 sides on one face of gusset plate.

Notes:  
Two hardened washers shall be required for all oversized holes in cross frames.  
All splice plates except fill plates shall be AASHTO M 270 Grade 50.



**CROSS FRAME, CF1**  
(10 Required)

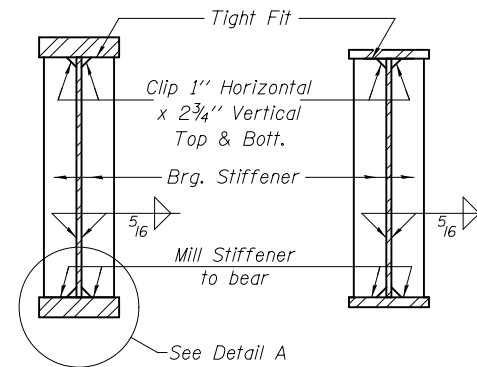


**CAMBER DIAGRAM**

**\*\*TOP OF WEB ELEVATIONS**

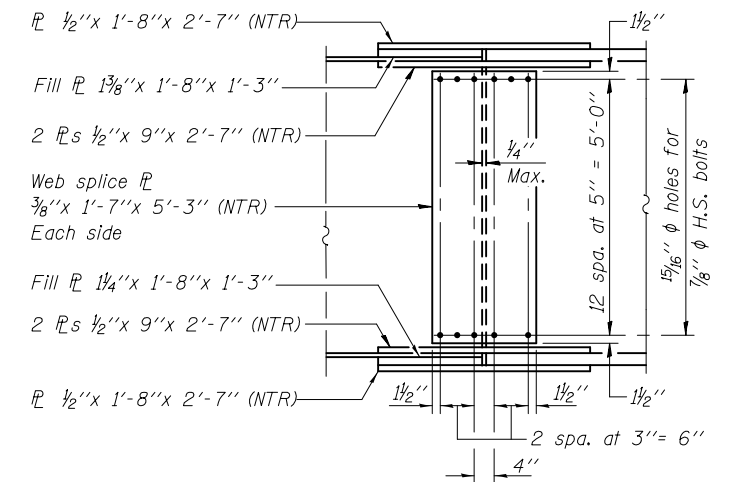
Location	☐ Brg. S. Abut.	☐ Splice 1	☐ Brg. Pier 1	☐ Splice 2	☐ Splice 3	☐ Brg. Pier 2	☐ Splice 4	☐ Brg. N. Abut.
Girder 1	436.38	436.96	437.08	437.39	437.74	437.66	437.58	436.81
Girder 2	436.52	437.10	437.22	437.53	437.88	437.80	437.73	436.96
Girder 3	436.64	437.21	437.33	437.64	438.00	437.91	437.84	437.07
Girder 4	436.64	437.21	437.33	437.64	438.00	437.91	437.84	437.07
Girder 5	436.52	437.10	437.22	437.53	437.88	437.80	437.73	436.96
Girder 6	436.38	436.96	437.08	437.39	437.74	437.66	437.58	436.81

\*\*For fabrication use only.

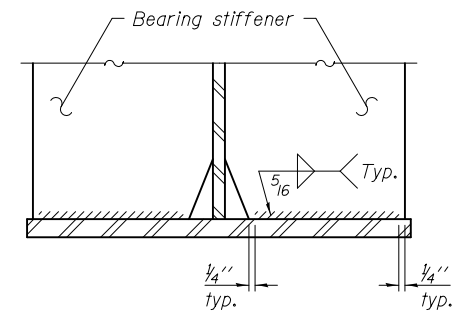


**SECTION AT PIER**

**SECTION AT ABUTMENT**

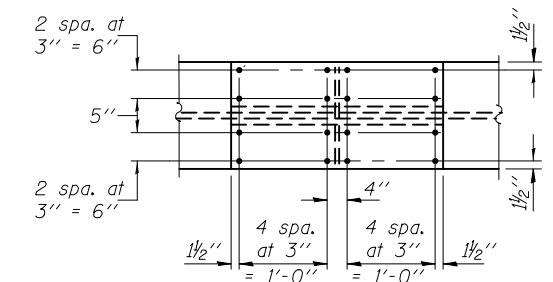


**ELEVATION**



**DETAIL A**

(Bottom flange shown, top flange similar)



**PLAN - TOP & BOTT. FLANGES**

**SPLICES**

5/9/2017 9:08:00 AM

DESIGNED - FRANK W. SHARPE  
CHECKED - PAUL S. JOHNSON  
DRAWN - h.t. duong  
CHECKED - F.W.S. / P.S.J.

EXAMINED  
PASSED  
ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 5, 2017  
REVISED  
REVISED

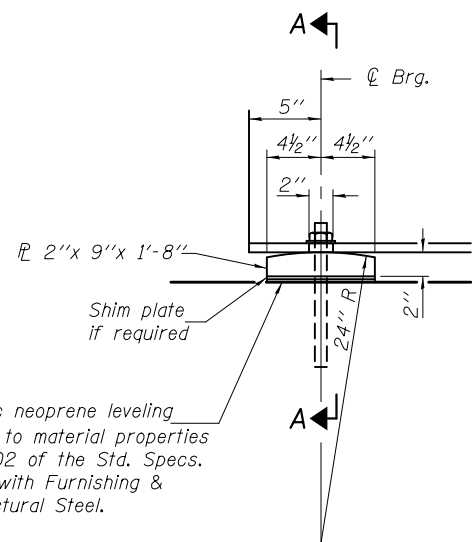
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS  
STRUCTURE NO. 051-0064

SHEET NO. 16 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	111
CONTRACT NO. 74180				

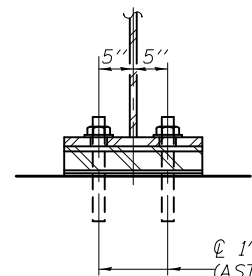
ILLINOIS FED. AID PROJECT



1/8" elastomeric neoprene leveling pad according to material properties of Art. 1052.02 of the Std. Specs. Cost included with Furnishing & Erecting Structural Steel.

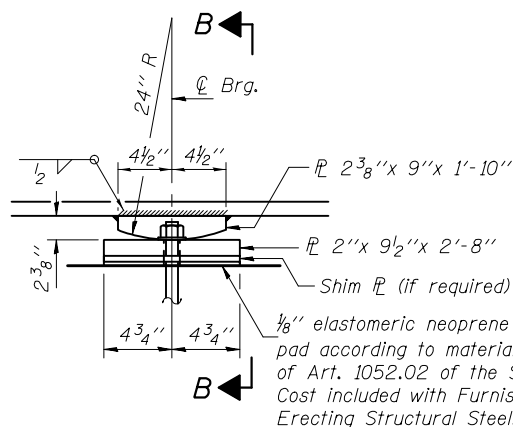
**ELEVATION AT ABUTMENTS**

**FIXED BEARING**  
(12 Required)



1"  $\phi$  x 1'-0" Anchor bolts (ASTM F1554 Grade 36) with 2 1/4" x 2 1/4" x 5/16"  $\bar{P}$  washer under nut. 1 3/8" x 2" slotted hole in flange. 1/2"  $\phi$  holes in bearing plate.

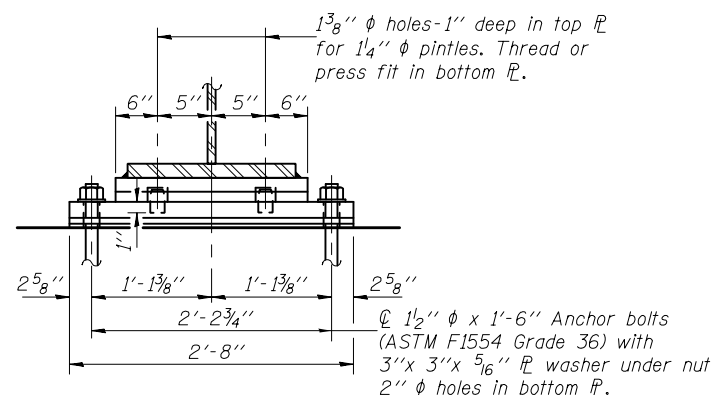
**SECTION A-A**



1/8" elastomeric neoprene leveling pad according to material properties of Art. 1052.02 of the Std. Specs. Cost included with Furnishing & Erecting Structural Steel.

**ELEVATION AT PIERS**

**FIXED BEARING**  
(12 Required)



1 3/8"  $\phi$  holes-1" deep in top  $\bar{P}$  for 1 1/4"  $\phi$  pintles. Thread or press fit in bottom  $\bar{P}$ .

**SECTION B-B**

EXTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1 0.6 Sp. 3	Pier 1 Pier 2	0.5 Sp. 2
$I_s$	(in <sup>4</sup> ) 56896	119818	56896
$I_c(n)$	(in <sup>4</sup> ) 121450		121450
$I_c(3n)$	(in <sup>4</sup> ) 89634		89634
$I_c(cr)$	(in <sup>4</sup> )	131625	
$S_s$	(in <sup>3</sup> ) 1728	3399	1728
$S_c(n)$	(in <sup>3</sup> ) 2273		2273
$S_c(3n)$	(in <sup>3</sup> ) 2068		2068
$S_c(cr)$	(in <sup>3</sup> )	3507	
DC1	(k/ft.) 1.081	1.260	1.081
M <sub>DC1</sub>	(k) 1677	4044	1180
DC2	(k/ft.) 0.150	0.150	0.150
M <sub>DC2</sub>	(k) 248	538	175
DW	(k/ft.) 0.358	0.358	0.358
M <sub>DW</sub>	(k) 591	1284	417
$M_{\bar{L}} + IM$	(k) 3110	3920	2995
$M_u$ (Strength I)	(k) 8375	14514	7561
$\phi_r M_n$	(k) 11307	15394	11605
$f_s$ DC1	(ksi) 11.6	14.3	8.2
$f_s$ DC2	(ksi) 1.4	1.8	1.0
$f_s$ DW	(ksi) 3.4	4.4	2.4
$f_s$ ( $\bar{L} + IM$ )	(ksi) 16.4	13.4	15.8
$f_s$ (Service II)	(ksi) 37.9	37.9	32.2
0.95R <sub>h</sub> F <sub>yr</sub>	(ksi) 47.5	47.5	47.5
V <sub>f</sub>	(k) 35.0		37.6

INTERIOR GIRDER REACTION TABLE		
	Abutts.	Piers
R <sub>DC1</sub>	(k) 61.1	230.6
R <sub>DC2</sub>	(k) 8.7	30.0
R <sub>DW</sub>	(k) 19.3	66.6
R $\bar{L} + IM$	(k) 101.8	214.3
R <sub>Total</sub>	(k) 190.8	541.5

**Notes:**

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

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

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

All bearing plates and pintles shall conform to the requirements of AASHTO M270 Grade 50.

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

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

- $I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(cr), S_c(cr)$ : Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing  $f_s$  (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M<sub>DC1</sub>: 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<sub>DC2</sub>: 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<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_{\bar{L}} + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- $M_u$  (Strength I): Factored design moment (kip-ft.).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75  $M_{\bar{L}} + IM$
- $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
- $f_s$  DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).  
M<sub>DC1</sub> / S<sub>nc</sub>
- $f_s$  DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).  
M<sub>DC2</sub> / S<sub>c(3n)</sub> or M<sub>DC2</sub> / S<sub>c(cr)</sub> as applicable.
- $f_s$  DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).  
M<sub>DW</sub> / S<sub>c(3n)</sub> or M<sub>DW</sub> / S<sub>c(cr)</sub> as applicable.
- $f_s$  ( $\bar{L} + IM$ ): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).  
M $\bar{L} + IM$  / S<sub>c(n)</sub> or M $\bar{L} + IM$  / S<sub>c(cr)</sub> as applicable.
- $f_s$  (Service II): Sum of stresses as computed below (ksi).  
f<sub>sDC1</sub> + f<sub>sDC2</sub> + f<sub>sDW</sub> + 1.3 f<sub>s</sub> ( $\bar{L} + IM$ )
- 0.95R<sub>h</sub>F<sub>yr</sub>: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
- V<sub>f</sub>: Maximum factored shear range in span computed according to Article 6.10.10.

5/9/2017 9:08:00 AM

DESIGNED - FRANK W. SHARPE	EXAMINED - <i>Joanne F. Duff</i>	DATE - MAY 5, 2017
CHECKED - PAUL S. JOHNSON	PASSED - <i>Carl Ruyter</i>	
DRAWN - h.t. duong		
CHECKED - F.W.S. / P.S.J.		

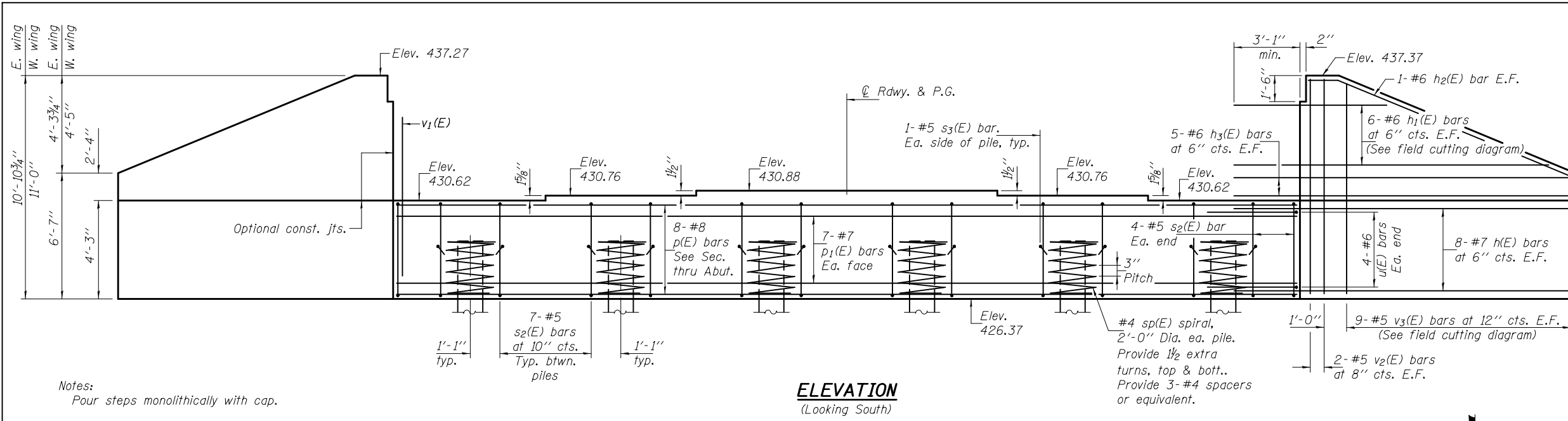
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS**  
**STRUCTURE NO. 051-0064**

SHEET NO. 17 OF 30 SHEETS

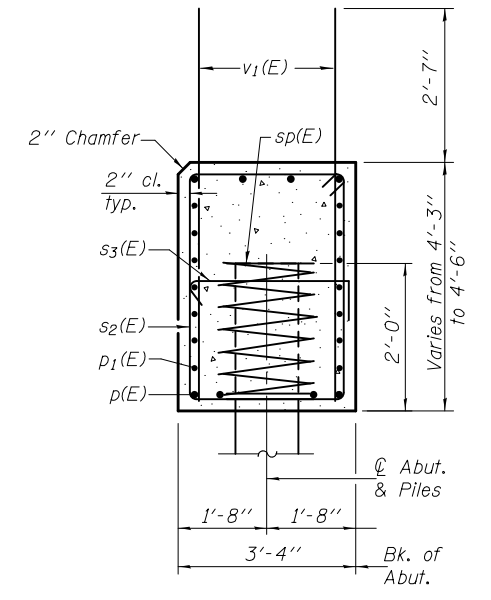
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	112
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				



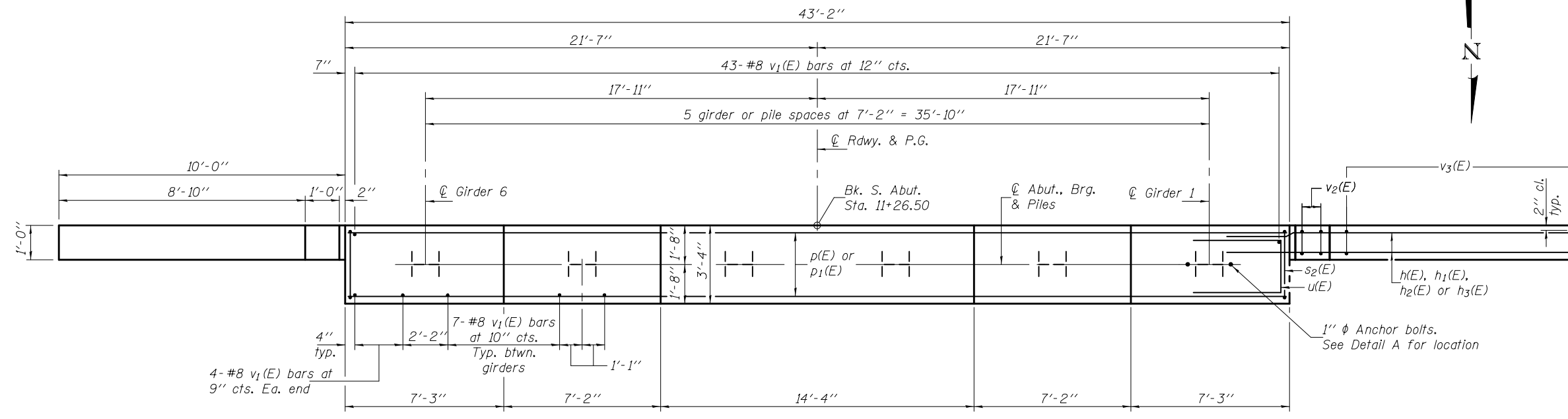


Notes:  
Pour steps monolithically with cap.

**ELEVATION**  
(Looking South)



**SEC. THRU ABUT.**



**PLAN**

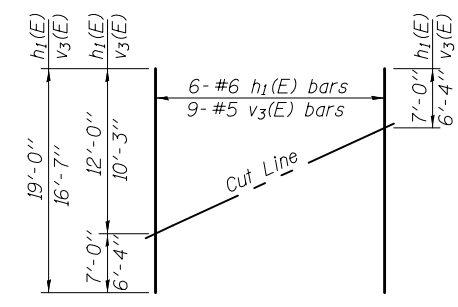
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	32	#7	12'-11"	—
h <sub>1</sub> (E)	12	#6	19'-0"	—
h <sub>2</sub> (E)	4	#6	10'-6"	—
h <sub>3</sub> (E)	20	#6	12'-11"	—
p(E)	8	#8	42'-10"	—
p <sub>1</sub> (E)	14	#7	42'-10"	—
s <sub>2</sub> (E)	43	#5	14'-9"	□
s <sub>3</sub> (E)	12	#5	4'-0"	◁
* sp(E)	6	#4	2'-0"	≡≡≡
u(E)	8	#6	10'-7"	▭
v <sub>1</sub> (E)	86	#8	5'-11"	—
v <sub>2</sub> (E)	8	#5	10'-8"	—
v <sub>3</sub> (E)	18	#5	16'-7"	—
Structure Excavation		Cu. Yd.	150	
Concrete Structures		Cu. Yd.	30.0	
Reinforcement Bars, Epoxy Coated		Pound	6,650	
Furnishing Steel Piles, HP14x117		Foot	195	
Driving Piles		Foot	195	
Test Pile Steel HP14x117		Each	1	

\*Length is height of spiral.  
For details of piles see sheet 23 of 30.

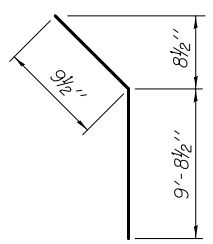
**PILE DATA**

Type: Steel Piles HP14x117  
Nominal Required Bearing: 929 Kips  
Factored Resistance Available: 511 Kips  
Est. Length: 39'  
No. Production Piles: 5  
No. Test Piles: 1

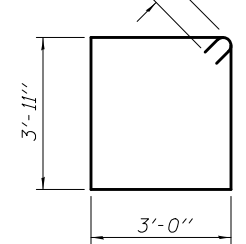


**FIELD CUTTING DIAGRAM**

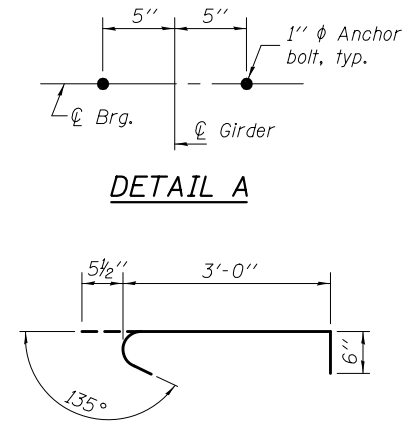
Order h<sub>1</sub>(E) and v<sub>3</sub>(E) full length.  
Cut as shown and use remainder of bars in opposite face.



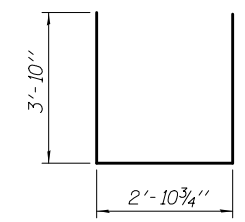
**BAR h<sub>2</sub>(E)**



**BAR s<sub>2</sub>(E)**

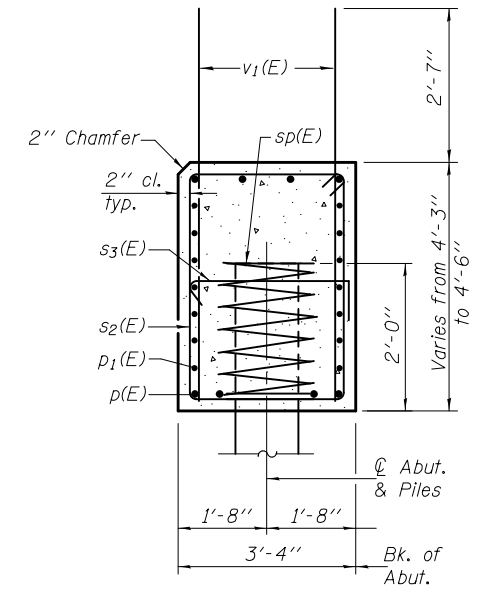
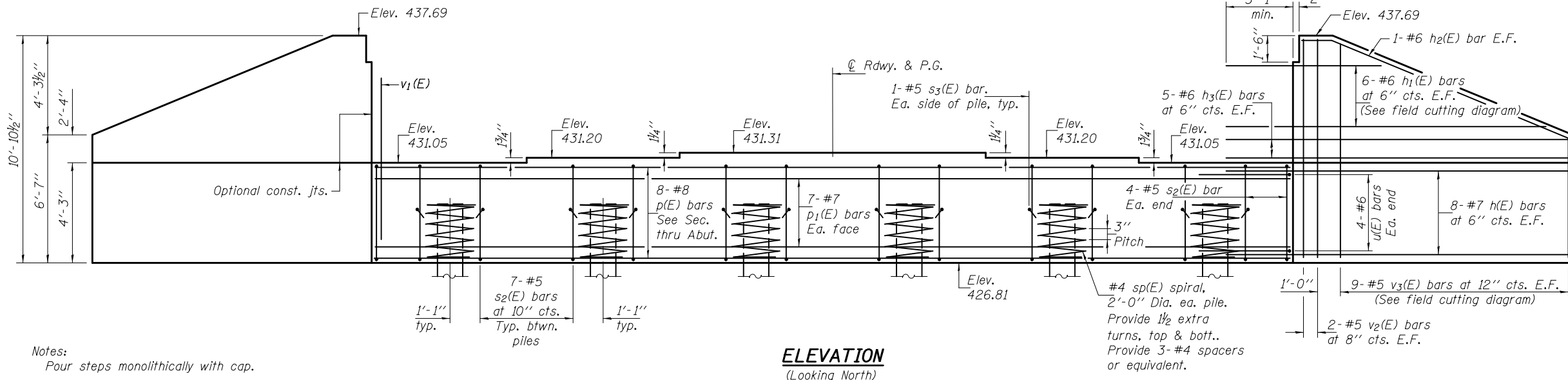


**BAR s<sub>3</sub>(E)**



**BAR u(E)**

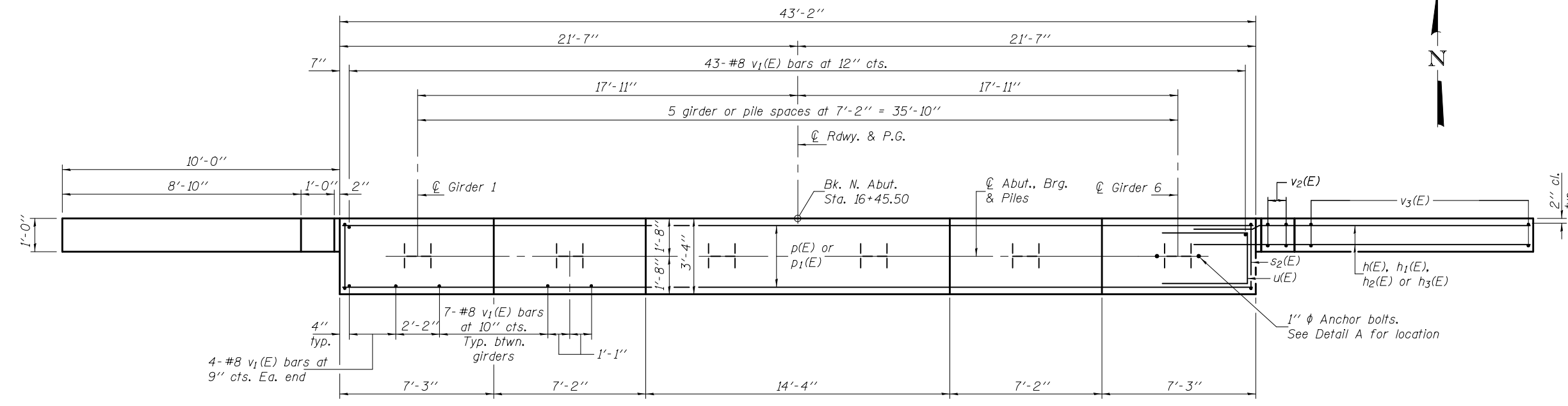
5/9/2017 9:08:01 AM



Notes:  
Pour steps monolithically with cap.

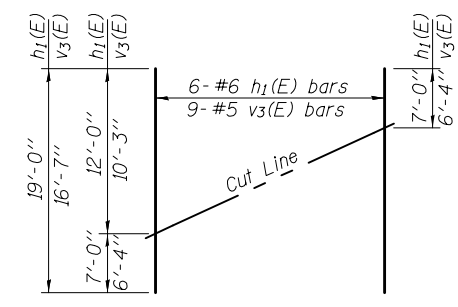
**ELEVATION**  
(Looking North)

**SEC. THRU ABUT.**



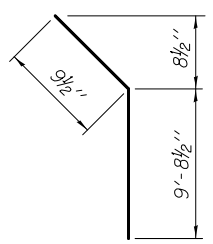
**PLAN**

**PILE DATA**  
Type: Steel Piles HP14x117  
Nominal Required Bearing: 929 Kips  
Factored Resistance Available: 511 Kips  
Est. Length: 59'  
No. Production Piles: 5  
No. Test Piles: 1

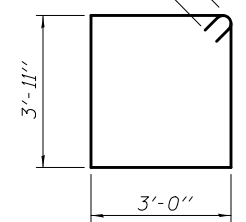


**FIELD CUTTING DIAGRAM**

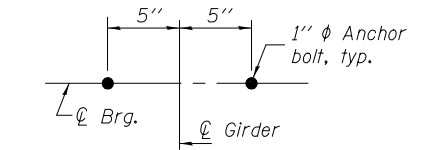
Order h1(E) and v3(E) full length.  
Cut as shown and use remainder  
of bars in opposite face.



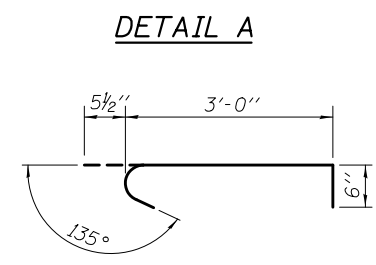
**BAR h2(E)**



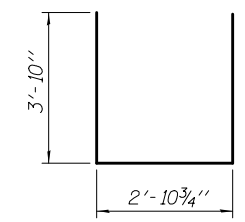
**BAR s2(E)**



**DETAIL A**



**BAR s3(E)**



**BAR u(E)**

**BILL OF MATERIAL**

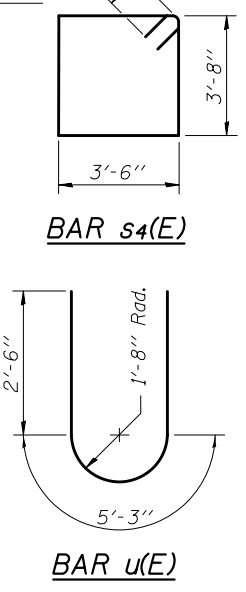
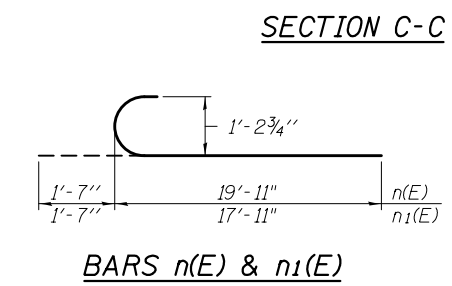
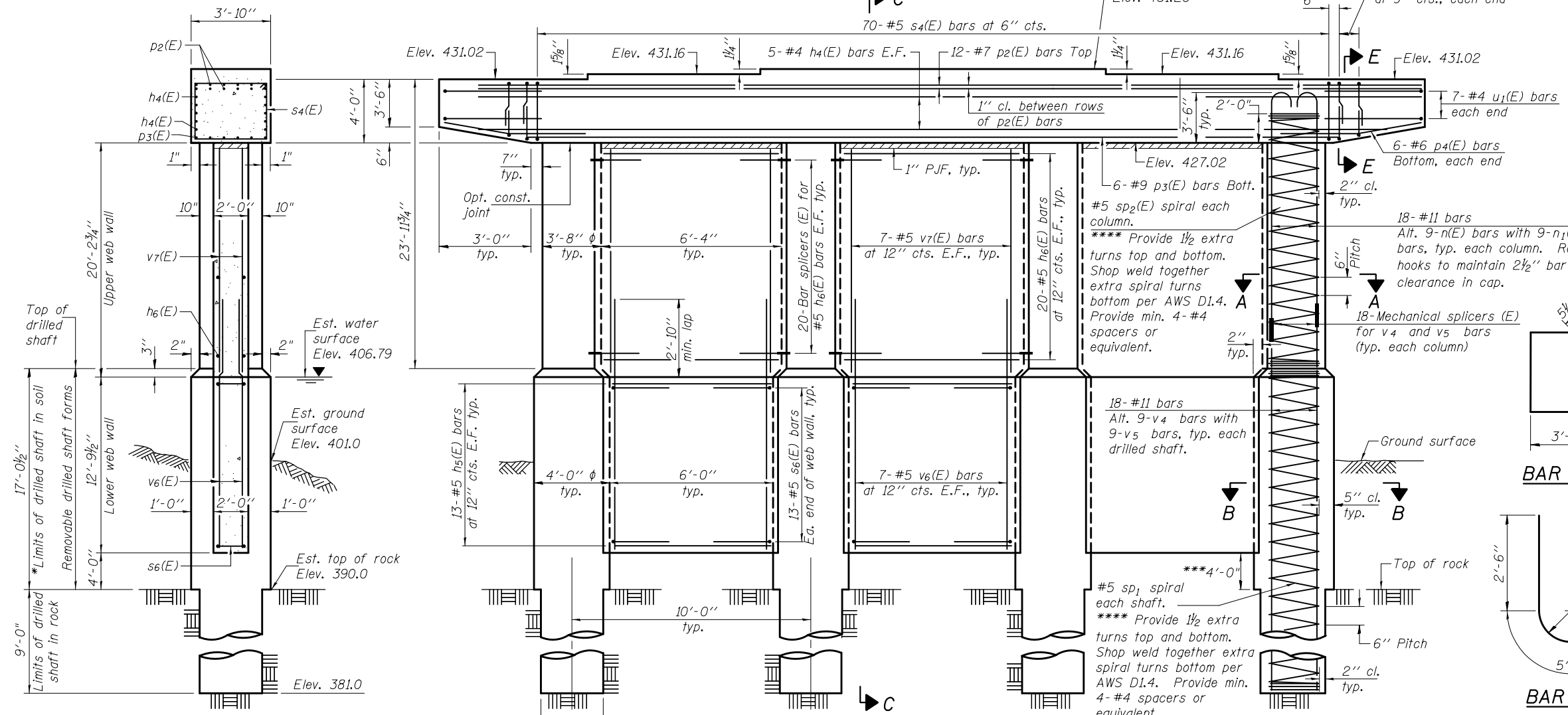
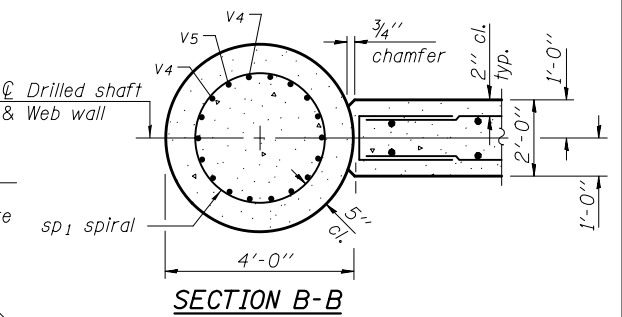
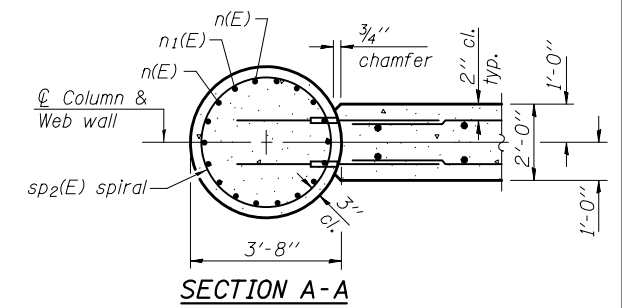
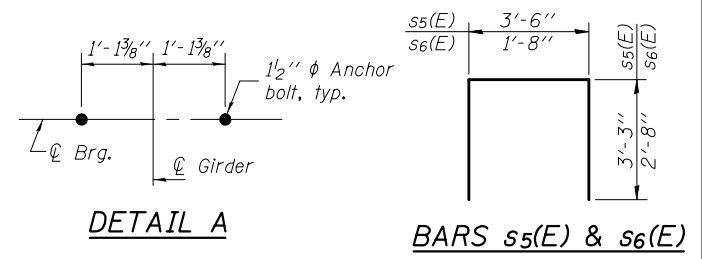
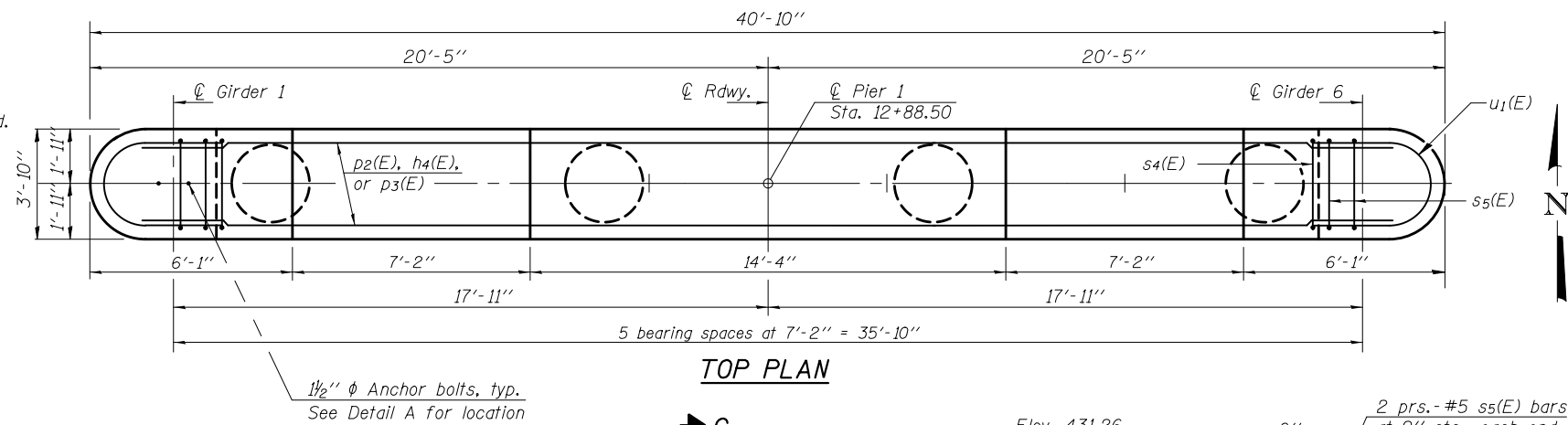
Bar	No.	Size	Length	Shape
h(E)	32	#7	12'-11"	—
h1(E)	12	#6	19'-0"	—
h2(E)	4	#6	10'-6"	—
h3(E)	20	#6	12'-11"	—
p(E)	8	#8	42'-10"	—
p1(E)	14	#7	42'-10"	—
s2(E)	43	#5	14'-9"	□
s3(E)	12	#5	4'-0"	◁
* sp(E)	6	#4	2'-0"	≡≡≡
u(E)	8	#6	10'-7"	□
v1(E)	86	#8	5'-11"	—
v2(E)	8	#5	10'-8"	—
v3(E)	18	#5	16'-7"	—
Structure Excavation		Cu. Yd.	150	
Concrete Structures		Cu. Yd.	30.0	
Reinforcement Bars, Epoxy Coated		Pound	6,650	
Furnishing Steel Piles, HP14x117		Foot	295	
Driving Piles		Foot	295	
Test Pile Steel HP14x117		Each	1	

\*Length is height of spiral.  
For details of piles see sheet 23 of 30.

5/9/2017 9:08:01 AM

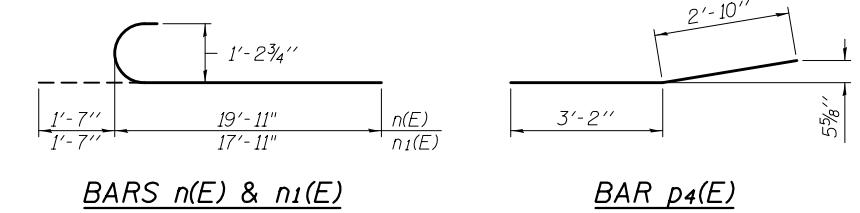
**Construction Sequence for Web Wall:**

1. Excavate between shafts to elevation of web wall base and set lower web wall forms through water to bear on the circular edge of drilled shafts. Secure in place with fill, struts or tie forms together as required.
2. Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
3. If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
4. Construct columns.
5. Construct upper web walls.



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h4(E)	10	#4	37'-0"	—
h5(E)	78	#5	5'-8"	—
h6(E)	120	#5	6'-2"	—
n(E)	36	#11	21'-6"	U
n1(E)	36	#11	19'-6"	U
p2(E)	12	#7	37'-0"	—
p3(E)	6	#9	34'-6"	—
p4(E)	12	#6	6'-0"	—
s4(E)	70	#5	15'-3"	□
s5(E)	8	#5	10'-0"	L
s6(E)	78	#5	7'-0"	L
sp	4	#5	25'-9"	~
sp2(E)	4	#5	22'-6"	~
u1(E)	14	#4	10'-3"	U
v4	36	#11	27'-10"	—
v5	36	#11	29'-10"	—
v6(E)	42	#5	15'-9"	—
v7(E)	42	#5	19'-9"	—
Concrete Structures		Cu. Yd.	100.8	
Reinforcement Bars		Pound	13,290	
Reinforcement Bars, Epoxy Coated		Pound	16,450	
Drilled Shaft in Soil		Cu. Yd.	31.7	
Drilled Shaft in Rock		Cu. Yd.	12.8	
Thermal Integrity Profile Data Collection		Foot	104	
Thermal Integrity Profile Testing		Each	1	



\* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.

\*\* Length is height of spiral.

\*\*\* Splicing of reinforcement is not allowed in this region.

\*\*\*\* Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.

Note: When splicing spiral reinforcement is necessary, the spiral shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

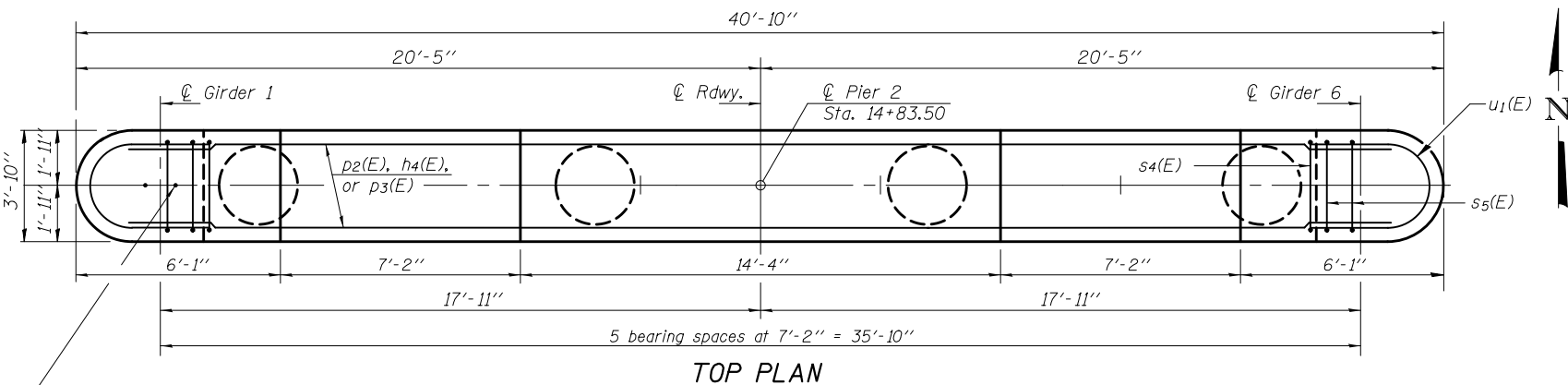
5/9/2017 9:08:01 AM

DESIGNED - FRANK W. SHARPE	EXAMINED - <i>Joyce F. J. [Signature]</i>	DATE - MAY 5, 2017	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 1 STRUCTURE NO. 051-0064	SHEET NO. 20 OF 30 SHEETS
CHECKED - PAUL S. JOHNSON	PASSED - <i>Carl [Signature]</i>	REVISOR			
DRAWN - h.t. duong		REVISOR			
CHECKED - F.W.S. / P.S.J.		REVISOR			

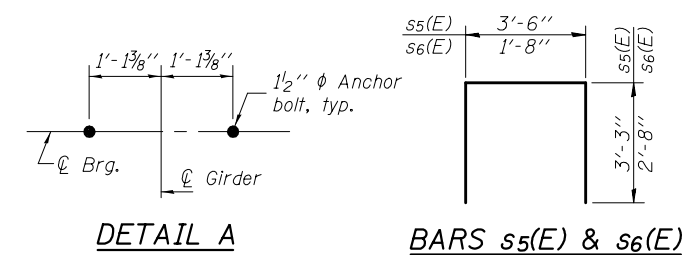
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	115
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				

**Construction Sequence for Web Wall:**

1. Excavate between shafts to elevation of web wall base and set lower web wall forms through water to bear on the circular edge of drilled shafts. Secure in place with fill, struts or tie forms together as required.
2. Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
3. If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
4. Construct columns.
5. Construct upper web walls.

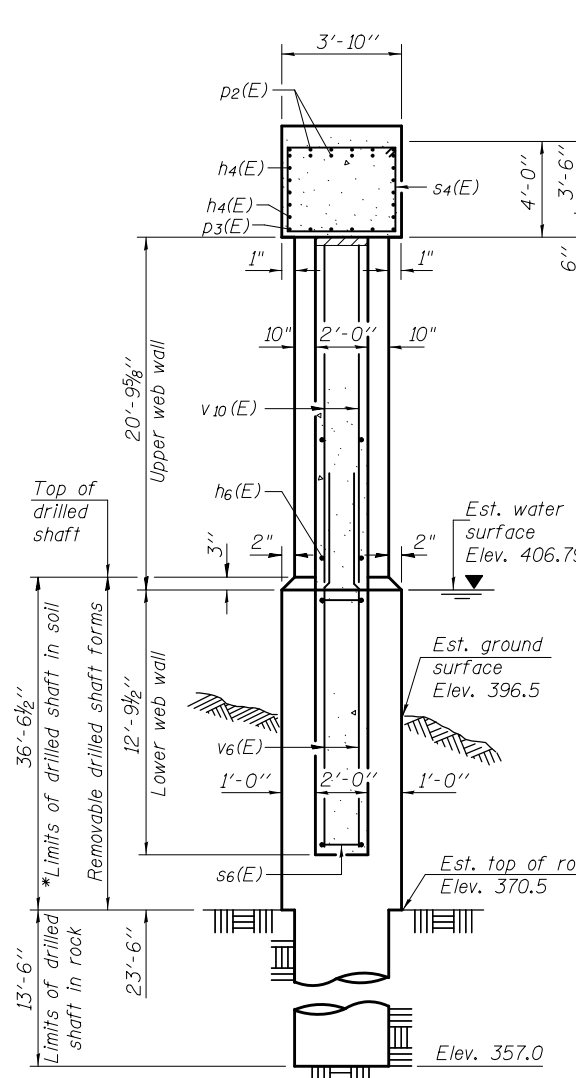


**TOP PLAN**

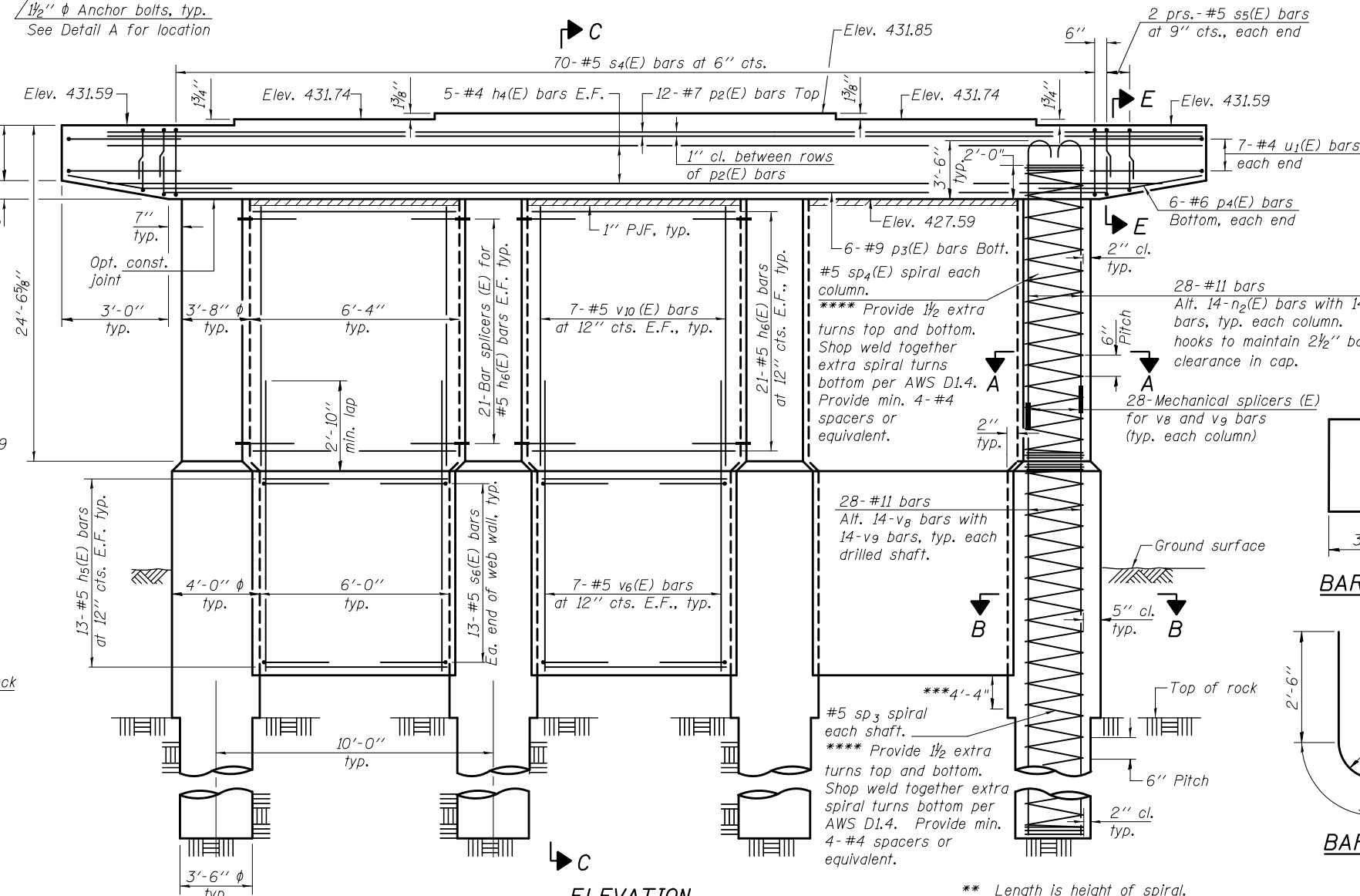


**DETAIL A**

**BARS s5(E) & s6(E)**

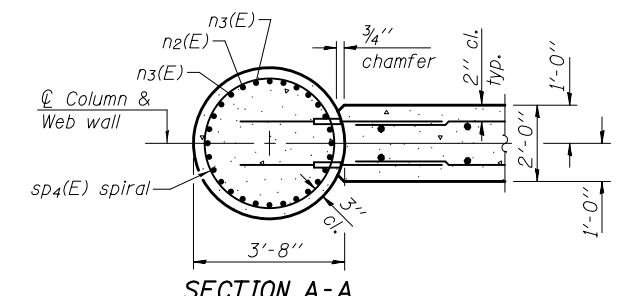


**SECTION C-C**

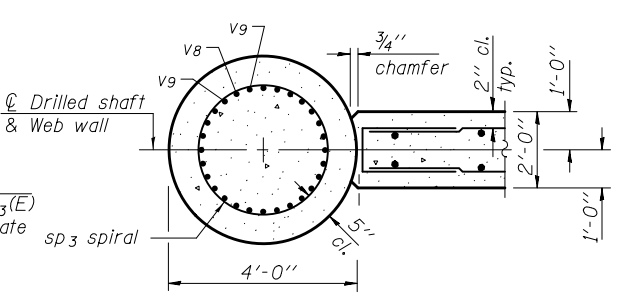


**ELEVATION**

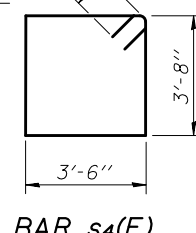
(Looking North)



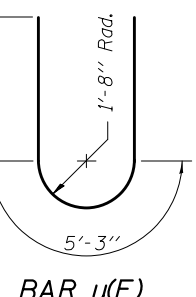
**SECTION A-A**



**SECTION B-B**



**BAR s4(E)**



**BAR u(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h4(E)	10	#4	37'-0"	—
h5(E)	78	#5	5'-8"	—
h6(E)	126	#5	6'-2"	—
n2(E)	56	#11	23'-6"	U
n3(E)	56	#11	21'-6"	U
p2(E)	12	#7	37'-0"	—
p3(E)	6	#9	34'-6"	—
p4(E)	12	#6	6'-0"	—
s4(E)	70	#5	15'-3"	U
s5(E)	8	#5	10'-0"	U
s6(E)	78	#5	7'-0"	U
sp3	4	#5	49'-7"	W
sp4(E)	4	#5	23'-0"	W
u1(E)	14	#4	10'-3"	U
v6(E)	42	#5	15'-9"	—
v8	56	#11	54'-0"	—
v9	56	#11	52'-0"	—
v10(E)	42	#5	20'-1"	—
Concrete Structures		Cu. Yd.	102.4	
Reinforcement Bars		Pound	35,780	
Reinforcement Bars, Epoxy Coated		Pound	22,090	
Drilled Shaft in Soil		Cu. Yd.	68.0	
Drilled Shaft in Rock		Cu. Yd.	19.2	
Thermal Integrity Profile Data Collection		Foot	200	
Thermal Integrity Profile Testing		Each	1	

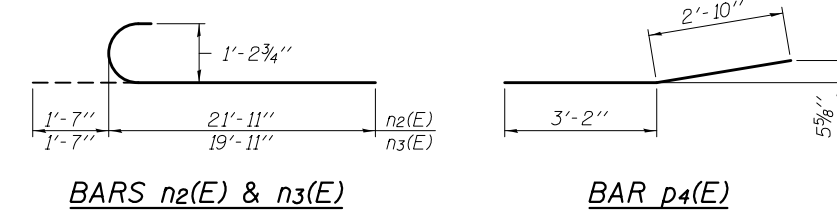
\*\* Length is height of spiral.

\*\*\* Splicing of reinforcement is not allowed in this region.

\*\*\*\* Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.

Note: When splicing spiral reinforcement is necessary, the spiral shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

\* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.



**BARS n2(E) & n3(E)**

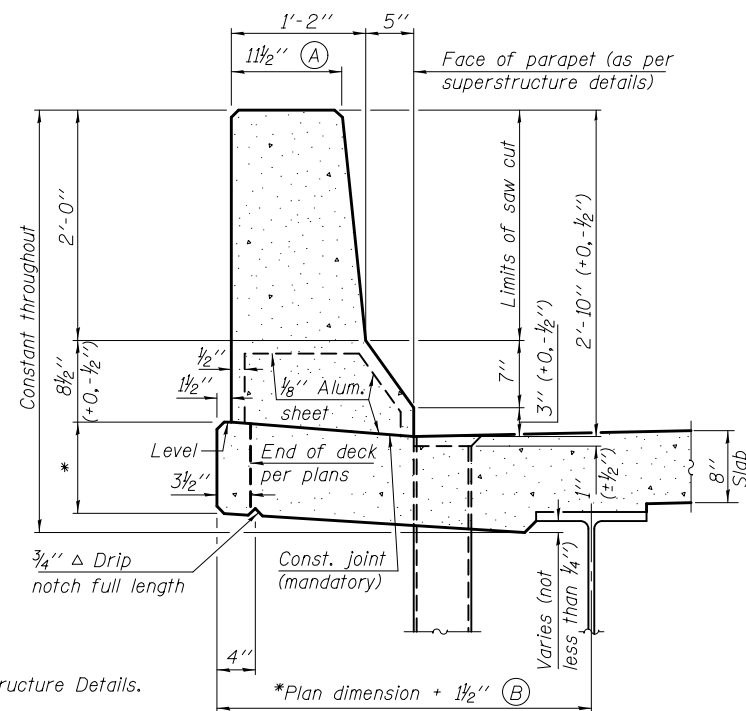
**BAR p4(E)**

5/9/2017 9:08:02 AM

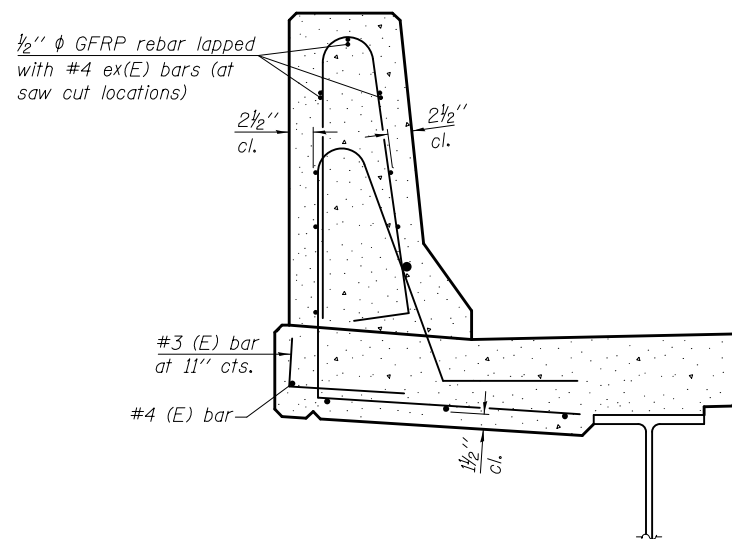
DESIGNED - FRANK W. SHARPE	EXAMINED - <i>Joanne F. Duff</i>	DATE - MAY 5, 2017	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PIER 2 STRUCTURE NO. 051-0064</b>	F.A.P. RTE. 332	SECTION (16 BR) B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 116	
CHECKED - PAUL S. JOHNSON	PASSED - <i>Carl Beyer</i>	REVISOR			<b>CONTRACT NO. 74180</b>					
DRAWN - h.t. duong	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR			SHEET NO. 21 OF 30 SHEETS					
CHECKED - F.W.S. / P.S.J.					ILLINOIS FED. AID PROJECT					

**GENERAL NOTES**

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler. Steel superstructure shown. Other superstructure types similar.

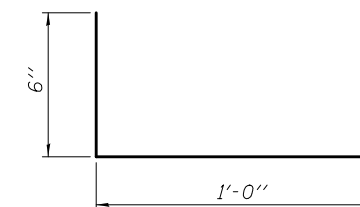


**34" F SHAPE PARAPET SECTION**  
(Showing dimensions)

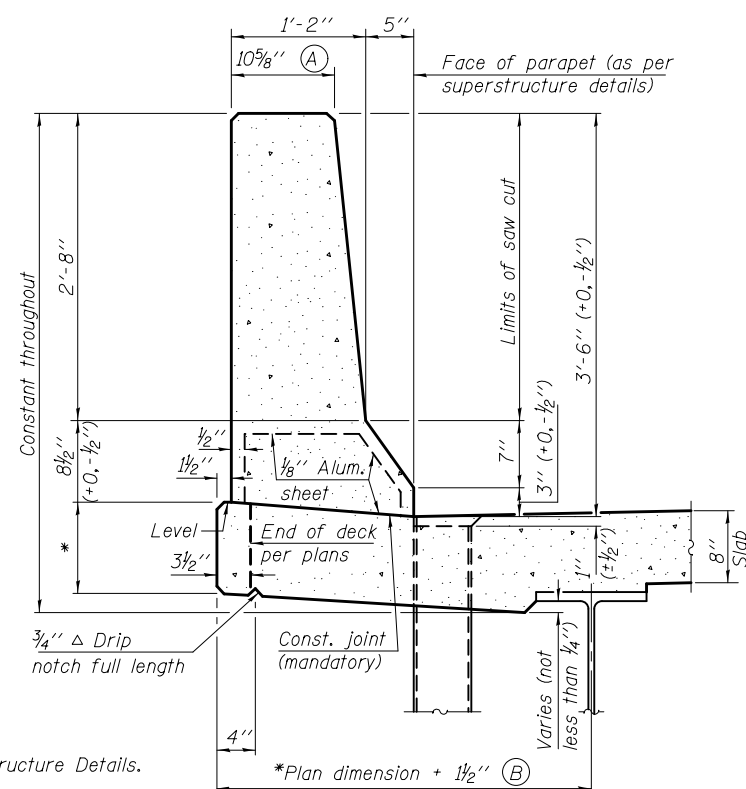


**SECTION**

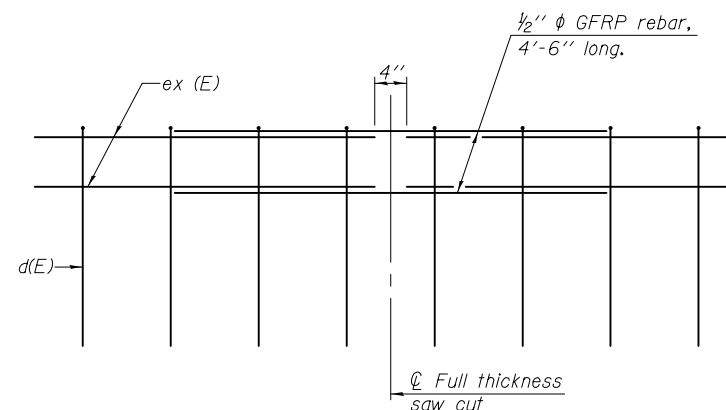
(34" parapet shown - 42" parapet similar)  
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



**#3 (E) BAR**

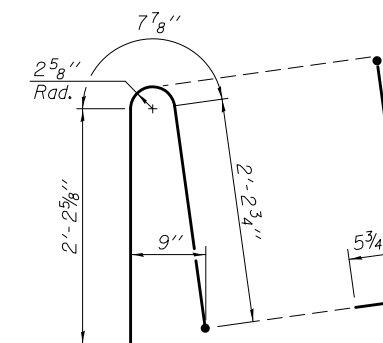


**42" F SHAPE PARAPET SECTION**  
(Showing dimensions)

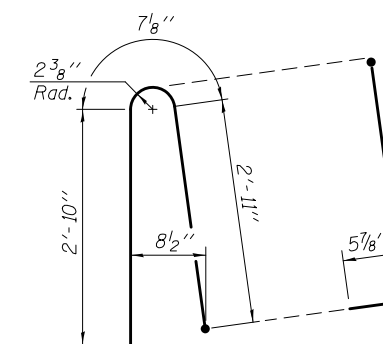


**GFRP REBAR STIFFENING DETAIL**

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



**ALTERNATE BAR d(E)**  
(For 34" parapet when conduit is present)



**ALTERNATE BAR d(E)**  
(For 42" parapet when conduit is present)

SFP 34-42

8-16-12

5/9/2017 9:08:02 AM

DESIGNED - FRANK W. SHARPE	EXAMINED
CHECKED - PAUL S. JOHNSON	PASSED
DRAWN - h.t. duong	
CHECKED - F.W.S. / P.S.J.	

DATE - MAY 5, 2017	REVISOR
	REVISOR

DATE - MAY 5, 2017	REVISOR
	REVISOR

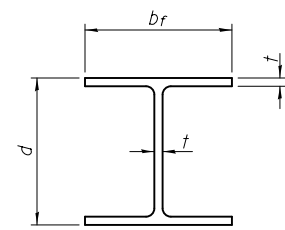
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION  
STRUCTURE NO. 051-0064

SHEET NO. 22 OF 30 SHEETS

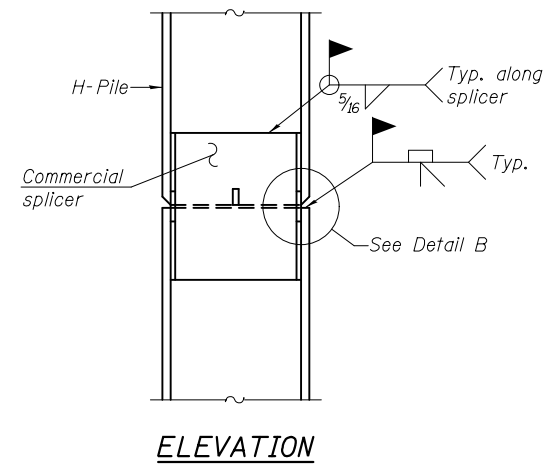
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	117
CONTRACT NO. 74180				

ILLINOIS FED. AID PROJECT

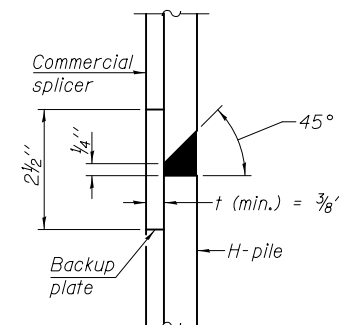


**STEEL PILE TABLE**

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

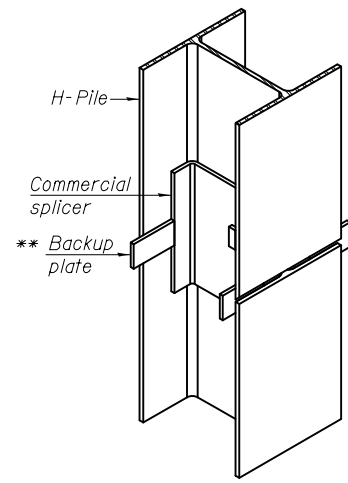


**ELEVATION**

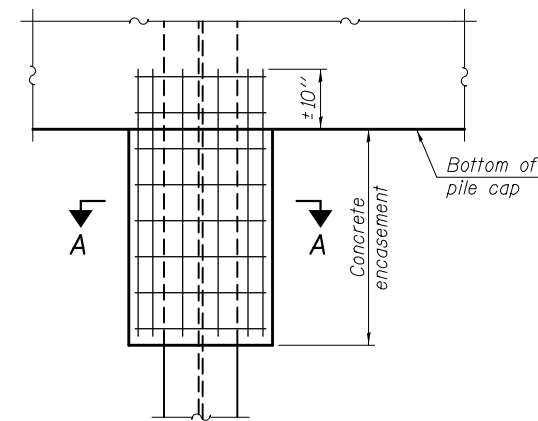


**DETAIL "B"**

**WELDED COMMERCIAL SPLICE**

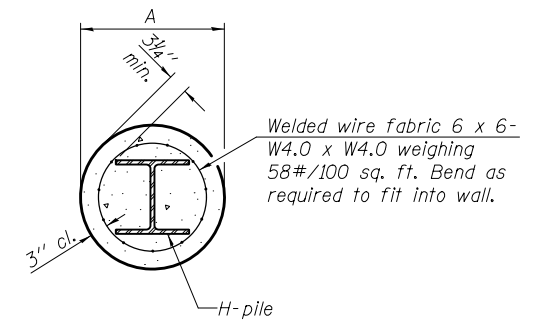


**ISOMETRIC VIEW**



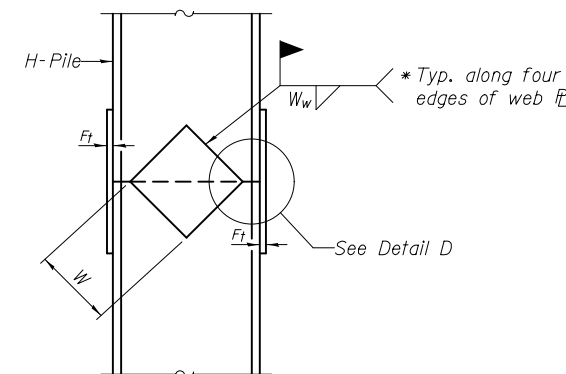
**ELEVATION**

**PILE ENCASEMENT**

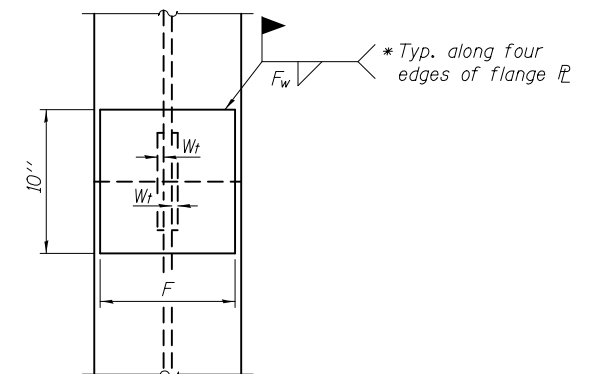


**SECTION A-A**

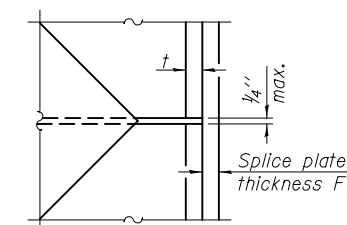
Note:  
Forms for encasement may be omitted when soil conditions permit.



**ELEVATION**



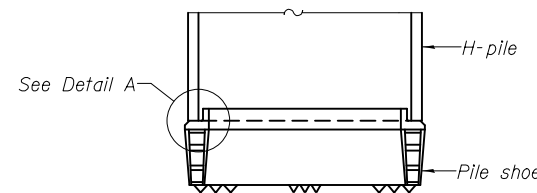
**END VIEW**



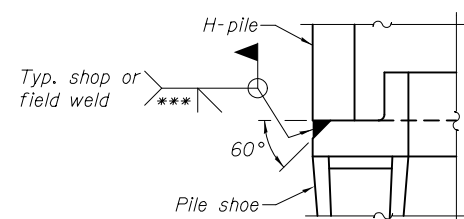
**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

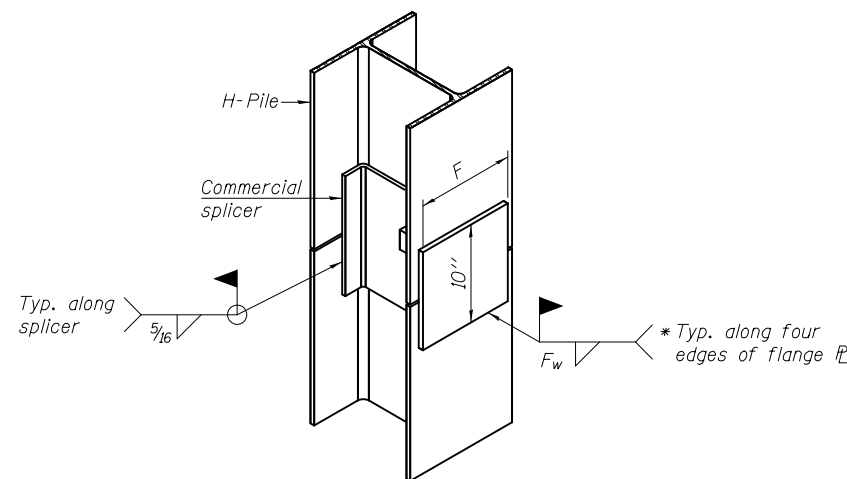


**ELEVATION**



**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

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

5/9/2017 9:08:02 AM

F-HP 1-27-12

DESIGNED - FRANK W. SHARPE	EXAMINED	DATE - MAY 5, 2017
CHECKED - PAUL S. JOHNSON	PASSED	
DRAWN - h.t. duong		
CHECKED - F.W.S. / P.S.J.		

REVISOR	REVISION

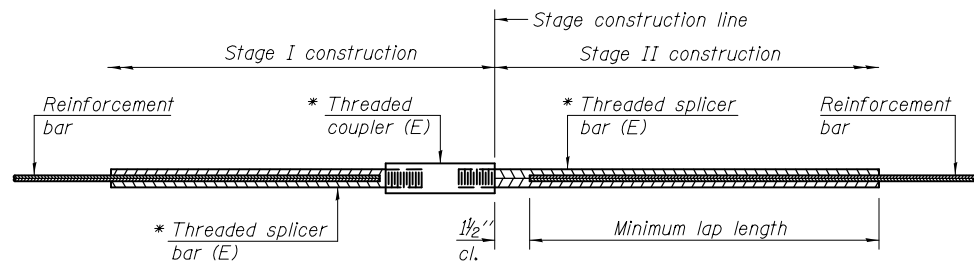
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS  
STRUCTURE NO. 051-0064**

SHEET NO. 23 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	118
CONTRACT NO. 74180				

ILLINOIS FED. AID PROJECT



**STANDARD BAR SPLICER ASSEMBLY**

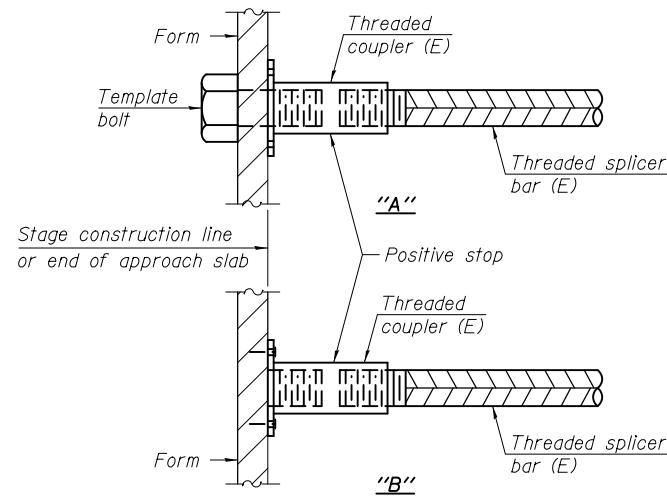
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

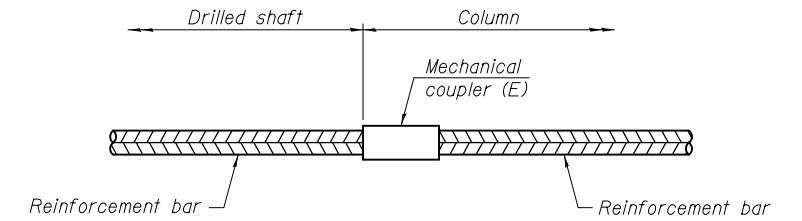
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Pier 1	5	240	4
Pier 2	5	252	4



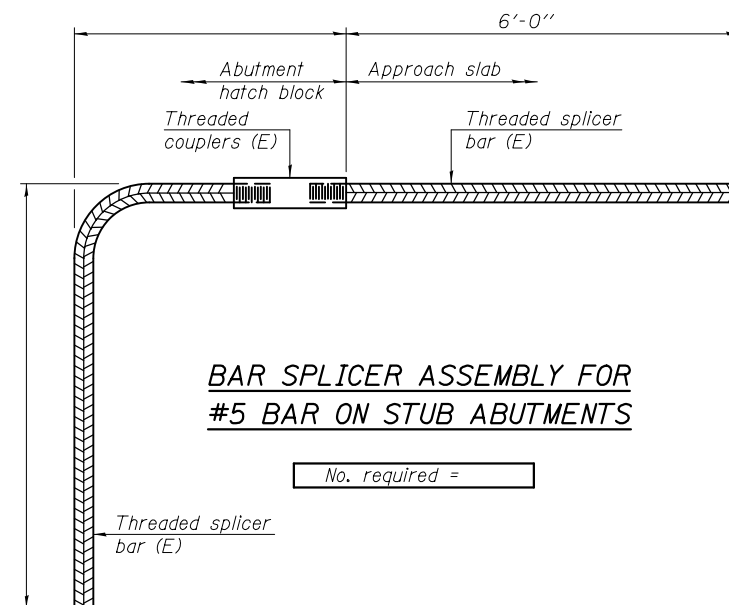
**INSTALLATION AND SETTING METHODS**

"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
Piers	#11	184



**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.

5/9/2017 9:08:03 AM

BSD-1

8-31-12

DESIGNED - FRANK W. SHARPE	EXAMINED	DATE - MAY 5, 2017
CHECKED - PAUL S. JOHNSON	PASSED	REVISOR
DRAWN - h.t. duong		REVISOR
CHECKED - F.W.S. / P.S.J.		

ENGINEER OF BRIDGE DESIGN  
  
 ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 051-0064**

SHEET NO. 24 OF 30 SHEETS


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	119
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				










**Illinois Department of Transportation**  
 Division of Highways  
 SCI Engineering, Inc.

## ROCK CORE LOG


Page 3 of 4  
Date 6/8,9/2010

ROUTE FAP 322 (IL 1) DESCRIPTION Embarrass River LOGGED BY SCI  
 SECTION (16BR)B-1 LOCATION SE 1/4 - Sec.36, NE 1/4 - Sec.1, TWP. 4 N/ 3 N, RNG. 12 W, 2 PM  
 COUNTY Lawrence CORING METHOD Rotary, Surf Set Diamond Bit

STRUCT. NO. 051-0006 CORING BARREL TYPE & SIZE NX, Conv Dbl Bbl, Split Inner  
 Station 13+85 Core Diameter 2 in  
 BORING NO. B-201 (New Pier 1) Top of Rock Elev. 395.4 ft  
 Station 12+53 Begin Core Elev. 391.9 ft  
 Offset 32 ft Lt  
 Ground Surface Elev. 416.4 ft

DEPTH (ft)	CORRECTION (#)	RECOVERY (%)	R.Q. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)
-45						
SILTSTONE: Light gray to gray, medium to thick bedded, slightly weathered (continued)						
6		156	128			
-50					248	4
7		114	75			
361.4						
SANDSTONE: Gray, thick bedded, slightly weathered						
8		99	60			
-60					203	4
352.7						
SILTSTONE: Light gray to gray, with sandstone, thick bedded, slightly weathered						
9		106	73		284	

Color pictures of the cores Available upon request  
 Cores will be stored for examination until \_\_\_\_\_  
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
 BBS, form 138 (Rev. 11-11)


**Illinois Department of Transportation**  
 Division of Highways  
 SCI Engineering, Inc.

## ROCK CORE LOG

Page 4 of 4  
Date 6/8,9/2010

ROUTE FAP 322 (IL 1) DESCRIPTION Embarrass River LOGGED BY SCI  
 SECTION (16BR)B-1 LOCATION SE 1/4 - Sec.36, NE 1/4 - Sec.1, TWP. 4 N/ 3 N, RNG. 12 W, 2 PM  
 COUNTY Lawrence CORING METHOD Rotary, Surf Set Diamond Bit

STRUCT. NO. 051-0006 CORING BARREL TYPE & SIZE NX, Conv Dbl Bbl, Split Inner  
 Station 13+85 Core Diameter 2 in  
 BORING NO. B-201 (New Pier 1) Top of Rock Elev. 395.4 ft  
 Station 12+53 Begin Core Elev. 391.9 ft  
 Offset 32 ft Lt  
 Ground Surface Elev. 416.4 ft

DEPTH (ft)	CORRECTION (#)	RECOVERY (%)	R.Q. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)
-65						2
SILTSTONE: Light gray to gray, with sandstone, thick bedded, slightly weathered (continued)						
347.7						
CLAYEY SHALE: Gray, moderately weathered						
347.2						
SANDSTONE: Gray, thick bedded, slightly weathered						
346.4						
-75						
-80						

Color pictures of the cores Available upon request  
 Cores will be stored for examination until \_\_\_\_\_  
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
 BBS, form 138 (Rev. 11-11)

5/9/2017 9:08:04 AM

DESIGNED - FRANK W. SHARPE	EXAMINED - <u>Joanne F. DeWitt</u> ENGINEER OF BRIDGE DESIGN	DATE - MAY 5, 2017	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SOIL BORING LOGS STRUCTURE NO. 051-0064</b>	F.A.P. RTE. 332	SECTION (16 BR) B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 123	
CHECKED - PAUL S. JOHNSON	PASSED - <u>Carl Burger</u> ENGINEER OF BRIDGES AND STRUCTURES	REVISED			CONTRACT NO. 74180					
DRAWN - MICHAEL B. MOSSMAN		REVISED			SHEET NO. 28 OF 30 SHEETS					
CHECKED - F.W.S. / P.S.J.					ILLINOIS FED. AID PROJECT					



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 5

Date 6/7/10

ROUTE FAP 322 (IL 1) DESCRIPTION Embarrass River LOGGED BY SCI  
SECTION (16BR)B-1 LOCATION SE 1/4 - Sec 36, NE 1/4 - Sec 1, TWP. 4 N/ 3 N, RNG. 12 W, 2 PM  
COUNTY Lawrence DRILLING METHOD CME 750 w/HSA HAMMER TYPE Automatic

STRUCT. NO. 051-0006  
Station 13+85  
BORING NO. B-202 (New Pier 2)  
Station 16+00  
Offset 40 ft Rt  
Ground Surface Elev. 414.5 ft

DEPTH (ft)	BLOW COUNT (/6")	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)	SURFACE WATER ELEV. (ft)	STREAM BED ELEV. (ft)	GROUNDWATER ELEV. (ft)	FIRST ENCOUNTER UPON COMPLETION (ft)	AFTER (ft)	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)
-	-	-	-	-	-	-	-	-	-	-
-5	-	-	-	-	-	-	-	-	-	-
-10	-	-	-	-	-	-	-	-	-	-
-15	-	-	-	-	-	-	-	-	-	-
-20	-	-	-	-	-	-	-	-	-	-
-25	-	-	-	-	-	-	-	-	-	-
-30	-	-	-	-	-	-	-	-	-	-
-35	-	-	-	-	-	-	-	-	-	-
-40	-	-	-	-	-	-	-	-	-	-

Sampling not performed in the upper 44 feet.

Sampling not performed in the upper 44 feet. (continued)

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, form 137 (Rev. 11-11)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 2 of 5

Date 6/7/10

ROUTE FAP 322 (IL 1) DESCRIPTION Embarrass River LOGGED BY SCI  
SECTION (16BR)B-1 LOCATION SE 1/4 - Sec 36, NE 1/4 - Sec 1, TWP. 4 N/ 3 N, RNG. 12 W, 2 PM  
COUNTY Lawrence DRILLING METHOD CME 750 w/HSA HAMMER TYPE Automatic

STRUCT. NO. 051-0006  
Station 13+85  
BORING NO. B-202 (New Pier 2)  
Station 16+00  
Offset 40 ft Rt  
Ground Surface Elev. 414.5 ft

DEPTH (ft)	BLOW COUNT (/6")	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)	SURFACE WATER ELEV. (ft)	STREAM BED ELEV. (ft)	GROUNDWATER ELEV. (ft)	FIRST ENCOUNTER UPON COMPLETION (ft)	AFTER (ft)	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)
-	-	-	-	-	-	-	-	-	-	-
-5	-	-	-	-	-	-	-	-	-	-
-10	-	-	-	-	-	-	-	-	-	-
-15	-	-	-	-	-	-	-	-	-	-
-20	-	-	-	-	-	-	-	-	-	-
-25	-	-	-	-	-	-	-	-	-	-
-30	-	-	-	-	-	-	-	-	-	-
-35	-	-	-	-	-	-	-	-	-	-
-40	-	-	-	-	-	-	-	-	-	-
-45	50/5"	-	-	-	-	-	-	-	-	-
-50	-	-	-	-	-	-	-	-	-	-
-55	-	-	-	-	-	-	-	-	-	-
-60	-	-	-	-	-	-	-	-	-	-

Sampling not performed in the upper 44 feet. (continued)

370.5  
CLAYEY SHALE: Gray and dark gray, interbedded with coal fragments, highly weathered  
Borehole continued with rock coring.

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, form 137 (Rev. 11-11)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### ROCK CORE LOG

Page 3 of 5

Date 6/7/10

ROUTE FAP 322 (IL 1) DESCRIPTION Embarrass River LOGGED BY SCI  
SECTION (16BR)B-1 LOCATION SE 1/4 - Sec 36, NE 1/4 - Sec 1, TWP. 4 N/ 3 N, RNG. 12 W, 2 PM  
COUNTY Lawrence CORING METHOD Rotary, Surf Set Diamond Bit

STRUCT. NO. 051-0006  
Station 13+85  
BORING NO. B-202 (New Pier 2)  
Station 16+00  
Offset 40 ft Rt  
Ground Surface Elev. 414.5 ft

DEPTH (ft)	CORING METHOD	RECOVERY (%)	ROCK QUALITY (%)	CORE TYPE	STRENGTH (tsf)	MOISTURE (%)
-	-	-	-	-	-	-
-1	94	49	-	-	-	-
-2	71	44	-	-	-	-
-3	99	70	-	-	-	-
-4	102	58	-	-	-	-

CLAYEY SHALE: Gray and dark gray, interbedded with coal fragments, highly weathered (continued)  
Coal fragments not observed

SHALE: Gray, thin to medium bedding, slightly weathered

SILTSTONE: Gray with shale, thick bedded, slightly weathered

SANDSTONE: Gray, thick bedded, slightly weathered

SILTSTONE: Gray, thick bedded, slightly weathered

Color pictures of the cores Available upon request  
Cores will be stored for examination until  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
BBS, form 138 (Rev. 11-11)

5/9/2017 9:08:05 AM

DESIGNED - FRANK W. SHARPE	EXAMINED	DATE - MAY 5, 2017
CHECKED - PAUL S. JOHNSON	PASSED	REVISOR
DRAWN - MICHAEL B. MOSSMAN		REVISOR
CHECKED - F.W.S. / P.S.J.		

*Joanne F. Duff*  
ENGINEER OF BRIDGE DESIGN  
*Carl Beyer*  
ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS  
STRUCTURE NO. 051-0064**  
SHEET NO. 29 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	124
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				

**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### ROCK CORE LOG

Page 4 of 5  
Date 6/7/10

ROUTE FAP 322 (IL 1) DESCRIPTION Embarrass River LOGGED BY SCI

SECTION (16BR)B-1 LOCATION SE 1/4 - Sec 36, NE 1/4 - Sec 1, TWP. 4 N/ 3 N, RNG. 12 W, 2 PM

COUNTY Lawrence CORING METHOD Rotary, Surf Set Diamond Bit

STRUCT. NO. 051-0006 CORING BARREL TYPE & SIZE NX, Conv Dbl Bbl, Split Inner  
Station 13+85

BORING NO. B-202 (New Pier 2) Core Diameter 2 in  
Station 16+00 Top of Rock Elev. 370.5 ft  
Offset 40 ft Rt Begin Core Elev. 369.5 ft  
Ground Surface Elev. 414.5 ft

DEPTH (ft)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)
SILTSTONE: Gray, thick bedded, slightly weathered (continued)								
346.0								
SANDSTONE: Gray, thick bedded, slightly weathered								
-70								
343.3								
SILTSTONE: Gray, with sandstone, medium to thick bedded, slightly weathered								
-75	5	99	35				267	
SANDSTONE: Gray, thick bedded, slightly weathered								
-80	6	94	24				186	5
332.0								
-85	7	92	59				237	7

Color pictures of the cores Available upon request  
Cores will be stored for examination until \_\_\_\_\_  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
BBS, form 138 (Rev. 11-11)

**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### ROCK CORE LOG

Page 5 of 5  
Date 6/7/10

ROUTE FAP 322 (IL 1) DESCRIPTION Embarrass River LOGGED BY SCI

SECTION (16BR)B-1 LOCATION SE 1/4 - Sec 36, NE 1/4 - Sec 1, TWP. 4 N/ 3 N, RNG. 12 W, 2 PM

COUNTY Lawrence CORING METHOD Rotary, Surf Set Diamond Bit

STRUCT. NO. 051-0006 CORING BARREL TYPE & SIZE NX, Conv Dbl Bbl, Split Inner  
Station 13+85

BORING NO. B-202 (New Pier 2) Core Diameter 2 in  
Station 16+00 Top of Rock Elev. 370.5 ft  
Offset 40 ft Rt Begin Core Elev. 369.5 ft  
Ground Surface Elev. 414.5 ft

DEPTH (ft)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)	RECOVERY (%)
SANDSTONE: Gray, thick bedded, slightly weathered (continued)								
324.5								
-90								
-95								
-100								
-105								

Color pictures of the cores Available upon request  
Cores will be stored for examination until \_\_\_\_\_  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
BBS, form 138 (Rev. 11-11)

5/9/2017 9:08:05 AM

DESIGNED - FRANK W. SHARPE  
CHECKED - PAUL S. JOHNSON  
DRAWN - MICHAEL B. MOSSMAN  
CHECKED - F.W.S. / P.S.J.

EXAMINED Joanne F. [Signature]  
ENGINEER OF BRIDGE DESIGN  
PASSED Carl [Signature]  
ENGINEER OF BRIDGES AND STRUCTURES

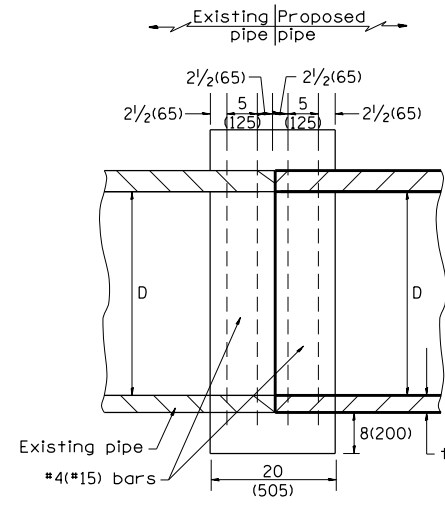
DATE - MAY 5, 2017  
REVISED  
REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

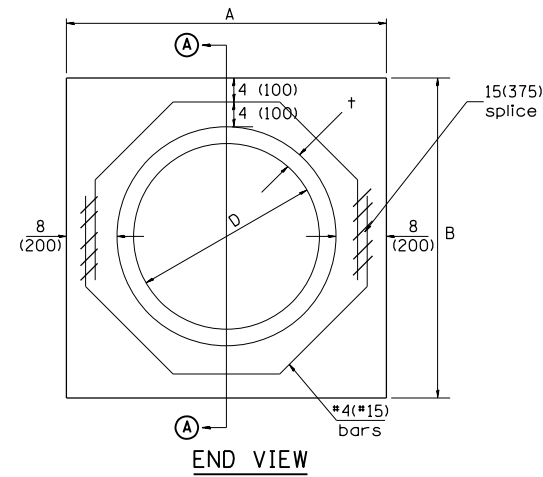
**SOIL BORING LOGS  
STRUCTURE NO. 051-0064**  
SHEET NO. 30 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16 BR) B-1	LAWRENCE	167	125
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				

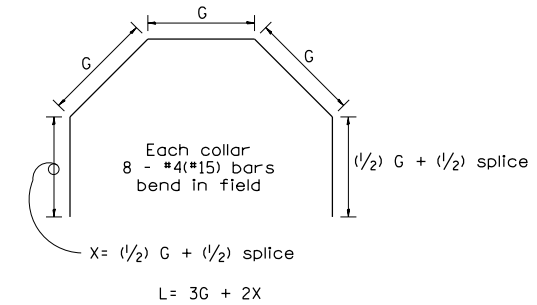




SECTION A - A



END VIEW

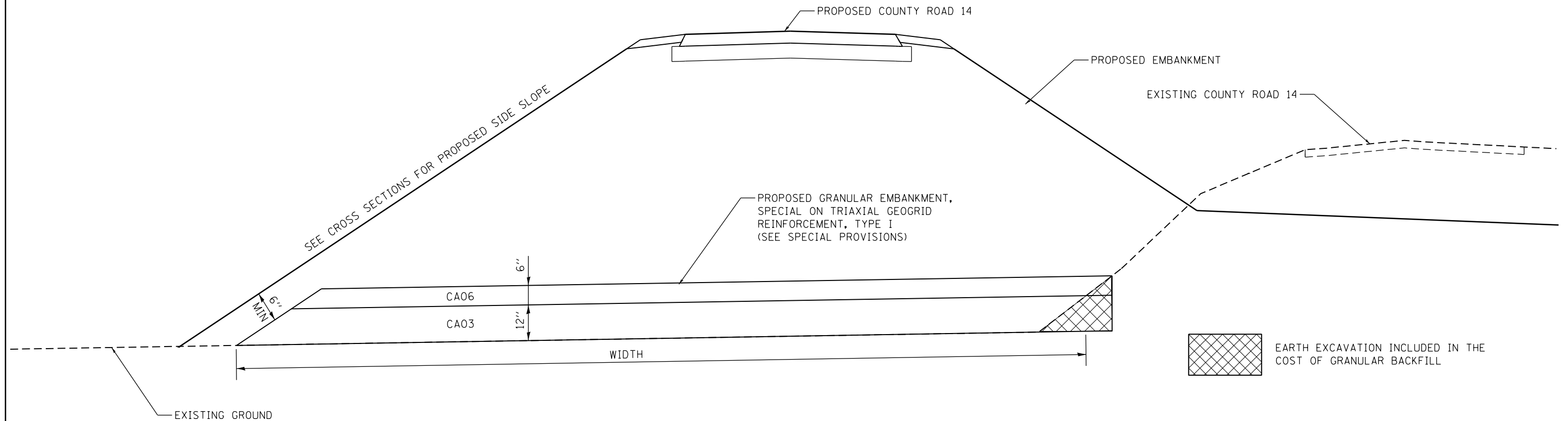


D		t		A		B		Each Collar Reinforcement Bars				
in	(mm)	in	(mm)	ft	(m)	ft	(m)	CL. SI CONC.	G	X	L	Weight
								cu. yd. (m <sup>3</sup> )	in (mm)	in (mm)	ft (m)	lb (kg)
12	(300)	2.00	(51)	2.67	(0.814)	2.67	(0.814)	0.4 (0.270)	9 <sup>15</sup> / <sub>16</sub> (253)	12 <sup>7</sup> / <sub>16</sub> (317)	4.57 (1.393)	24 (11)
15	(375)	2.25	(57)	2.96	(0.902)	2.96	(0.902)	0.4 (0.315)	11 <sup>3</sup> / <sub>8</sub> (290)	13 <sup>3</sup> / <sub>16</sub> (335)	5.05 (1.541)	27 (12)
18	(450)	2.50	(64)	3.25	(0.991)	3.25	(0.991)	0.5 (0.362)	12 <sup>13</sup> / <sub>16</sub> (327)	13 <sup>7</sup> / <sub>8</sub> (354)	5.54 (1.689)	30 (14)
21	(525)	2.75	(70)	3.54	(1.079)	3.54	(1.079)	0.5 (0.411)	14 <sup>1</sup> / <sub>4</sub> (364)	14 <sup>5</sup> / <sub>8</sub> (372)	6.02 (1.836)	32 (15)
24	(600)	3.00	(76)	3.83	(1.167)	3.84	(1.167)	0.6 (0.460)	15 <sup>11</sup> / <sub>16</sub> (401)	15 <sup>5</sup> / <sub>16</sub> (391)	6.51 (1.984)	35 (16)
27	(675)	3.25	(83)	4.13	(1.259)	4.13	(1.259)	0.7 (0.516)	17 <sup>1</sup> / <sub>4</sub> (438)	16 <sup>1</sup> / <sub>16</sub> (409)	6.99 (2.131)	37 (17)
30	(750)	3.50	(89)	4.42	(1.347)	4.42	(1.347)	0.7 (0.570)	18 <sup>11</sup> / <sub>16</sub> (475)	16 <sup>3</sup> / <sub>4</sub> (428)	7.48 (2.279)	40 (18)
33	(825)	3.75	(95)	4.71	(1.436)	4.71	(1.436)	0.8 (0.624)	20 <sup>1</sup> / <sub>8</sub> (512)	17 <sup>1</sup> / <sub>2</sub> (446)	7.96 (2.426)	43 (19)
36	(900)	4.00	(102)	5.00	(1.524)	5.00	(1.524)	0.9 (0.682)	21 <sup>9</sup> / <sub>16</sub> (549)	18 <sup>3</sup> / <sub>16</sub> (465)	8.44 (2.574)	45 (20)
42	(1050)	4.50	(114)	5.58	(1.701)	5.58	(1.701)	1.0 (.800)	24 <sup>7</sup> / <sub>16</sub> (622)	19 <sup>3</sup> / <sub>4</sub> (501)	9.41 (2.869)	50 (23)
48	(1200)	5.00	(127)	6.17	(1.881)	6.17	(1.881)	1.2 (0.930)	27 <sup>5</sup> / <sub>16</sub> (696)	21 <sup>3</sup> / <sub>16</sub> (538)	10.38 (3.164)	55 (25)

GENERAL NOTES

1. THE COLLAR SHALL BE CONSTRUCTED ENTIRELY OF CLASS SI CONCRETE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 503 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL CONFORM TO SECTION 508.

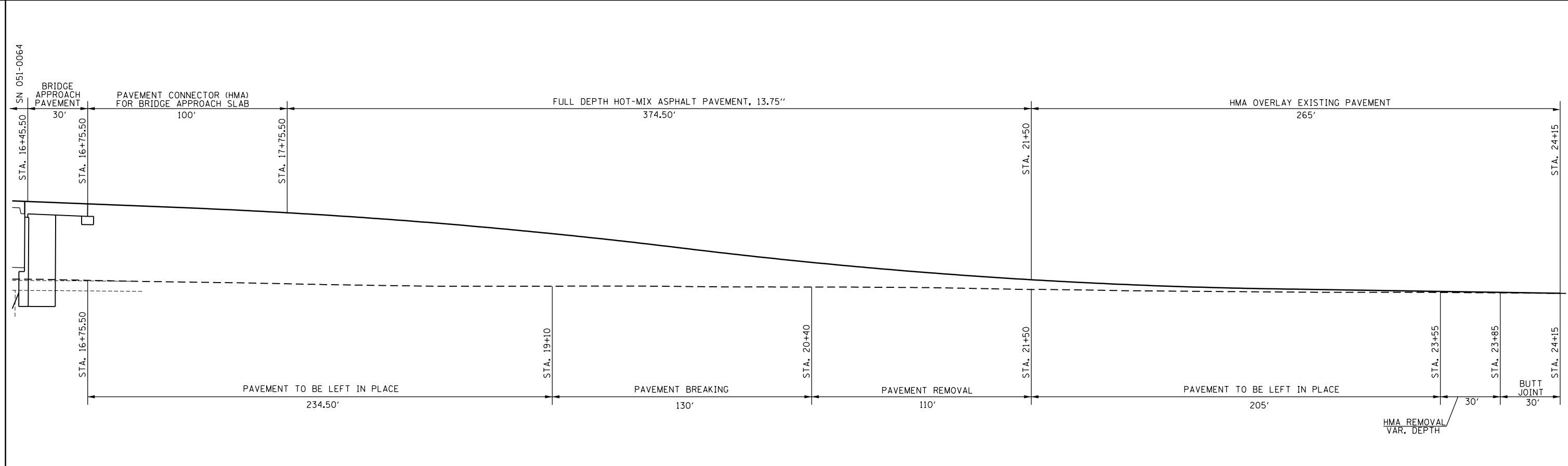
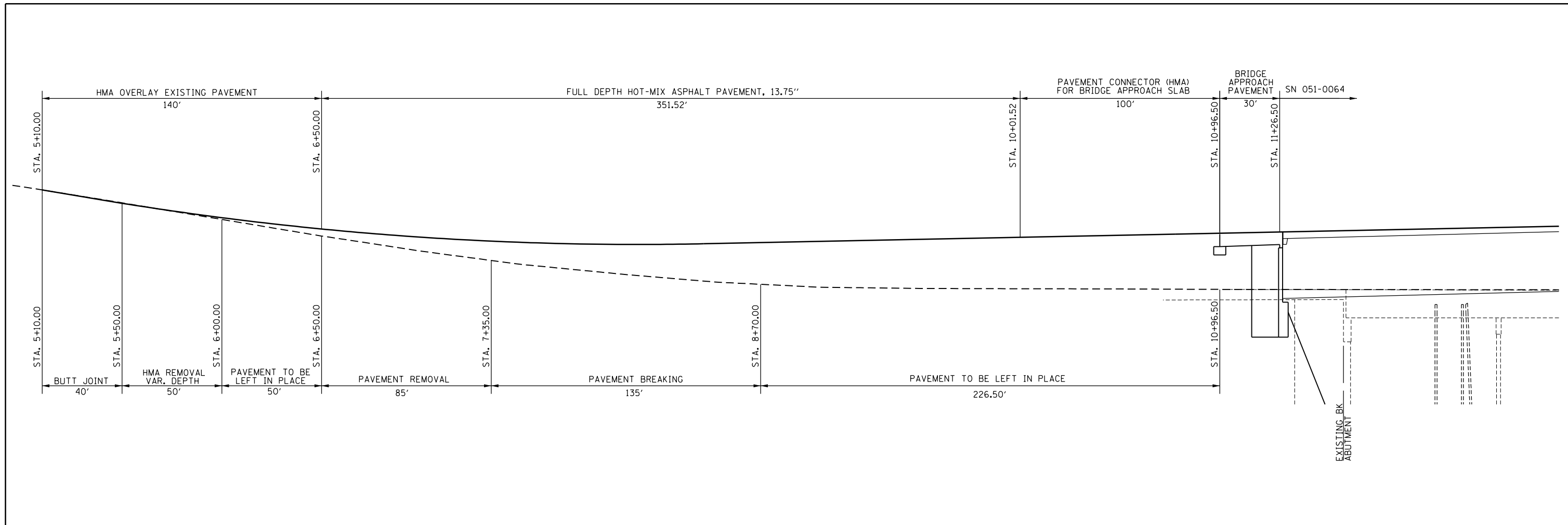
All dimensions are in inches (millimeters) unless otherwise noted.



COUNTY ROAD 14 GEOGRID REINFORCEMENT SCHEDULE			
STATION	WIDTH	TRIAxIAL GEOGRID REINFORCEMENT, TYPE I	GRANULAR EMBANKMENT, SPECIAL
	FOOT	SQ YD	CU YD
5+75.00	0	183.33	91.67
6+00.00	132	694.44	347.22
6+50.00	118	622.22	311.11
7+00.00	106	541.67	270.83
7+50.00	89	405.56	202.78
8+00.00	57	250.00	125.00
8+50.00	33	45.83	22.92
8+75.00	0		
TOTAL:		2743	1372

NOTE:  
SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS





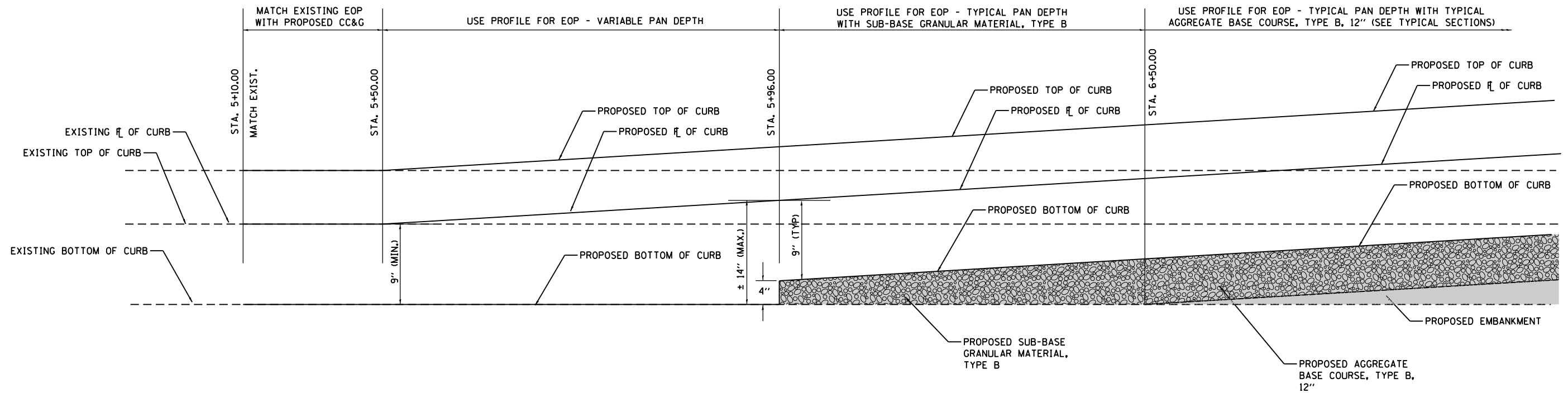
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Default	PLOT SCALE = 50.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/5/2016	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

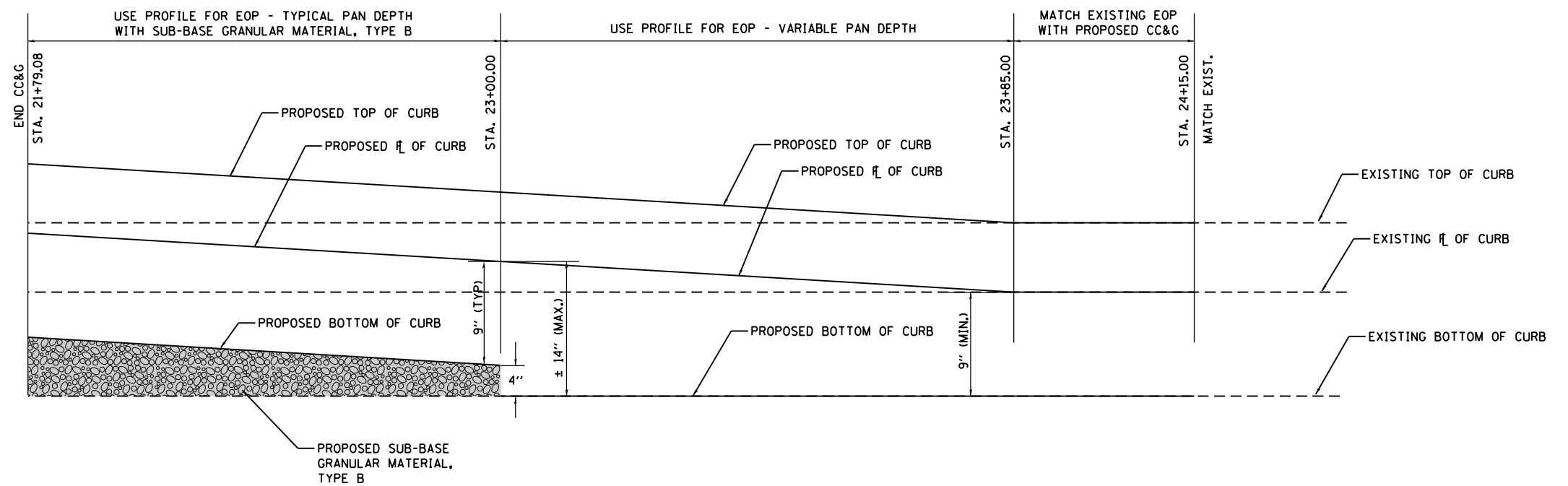
**MISCELLANEOUS DETAIL - PAVEMENT REMOVALS AND PLACEMENT**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR)B-1	Lawrence	167	129
CONTRACT NO. 74180			ILLINOIS FED. AID PROJECT	

SCALE: N/A SHEET 4 OF 7 SHEETS STA. TO STA.



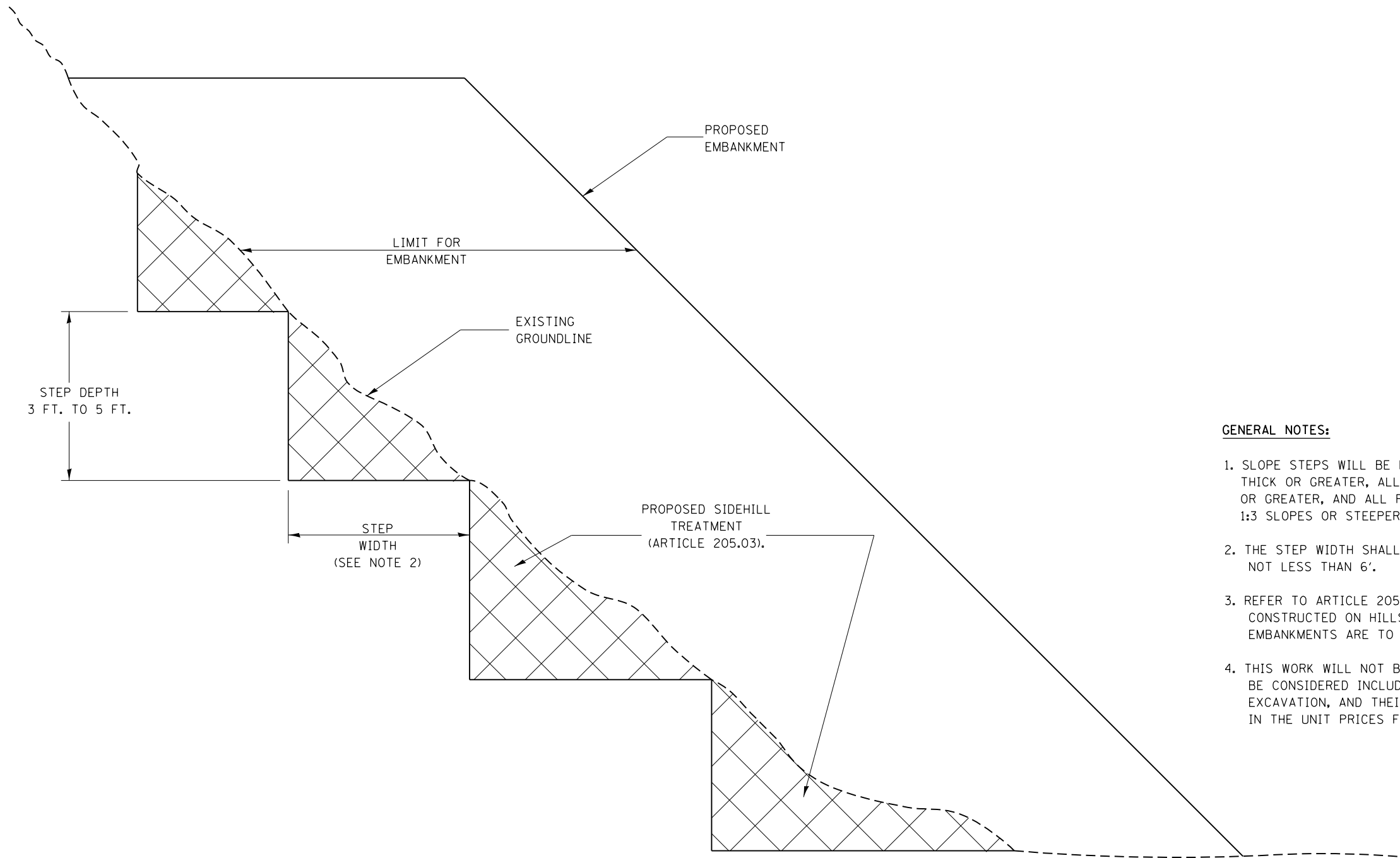
COMBINATION CURB AND GUTTER, TYPE B-6.24



COMBINATION CURB AND GUTTER, TYPE M-4.06

FILE NAME =	USER NAME = steffenk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MISCELLANEOUS DETAIL - COMBINATION CURB AND GUTTER DETAILS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 7\Projects\74180\Drawings\CADsheets\0774180-shd-dtl-pave\0774180-shd-dtl-pave.dwg	DATE = 8/5/2016	CHECKED -	REVISED -					332	(16BR)B-1	Lawrence	167	130
Default		DATE -	REVISED -		CONTRACT NO. 74180			ILLINOIS FED. AID PROJECT				
					SCALE: N/A	SHEET 5 OF 7 SHEETS	STA.	TO STA.				

**SLOPE STEPS DETAIL**  
TYPICAL CROSS-SECTION EMBANKMENT  
CONSTRUCTION ON SIDEHILL



**GENERAL NOTES:**

1. SLOPE STEPS WILL BE REQUIRED FOR ALL FILLS 12" THICK OR GREATER, ALL FILLS WITH A HEIGHT OF 10' OR GREATER, AND ALL FILLS CONSTRUCTED ON EXISTING 1:3 SLOPES OR STEEPER.
2. THE STEP WIDTH SHALL BE TWICE THE STEP DEPTH BUT NOT LESS THAN 6'.
3. REFER TO ARTICLE 205.3 FOR EMBANKMENT TO BE CONSTRUCTED ON HILLSIDE OR SLOPES, OR IF EXISTING EMBANKMENTS ARE TO BE WIDENED.
4. THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION, AND THEIR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICES FOR THEIR ITEMS.

**REPLACEMENT MATERIAL:**



STANDARD EMBANKMENT  
(IN ACCORDANCE WITH  
205 OF THE STANDARD SPECIFICATION.

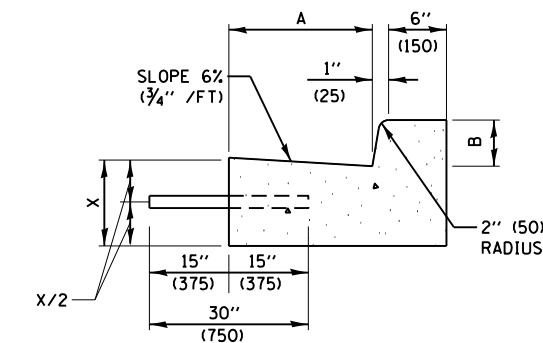
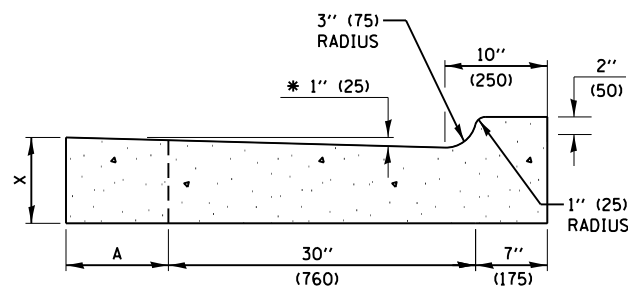
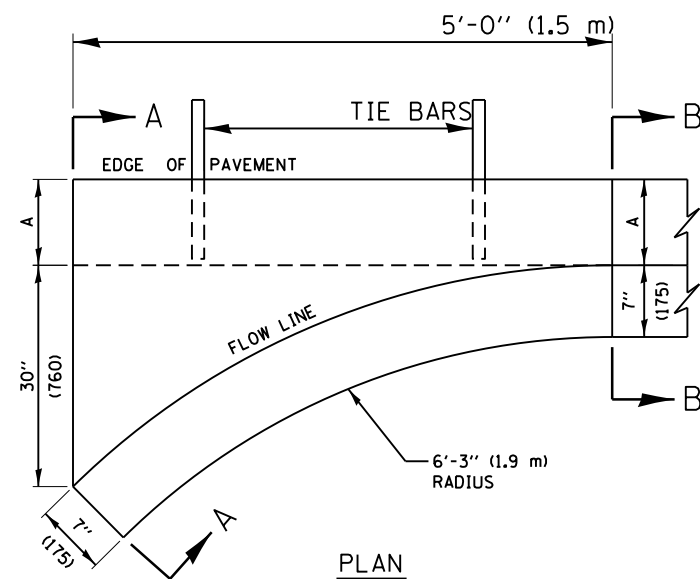
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Default	PLOT DATE = 8/5/2016	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MISCELLANEOUS DETAILS - SLOPE STEPS DETAIL**

SCALE: N/A SHEET 6 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR)B-1	Lawrence	167	131
CONTRACT NO. 74180			ILLINOIS FED. AID PROJECT	



SECTION A-A

SECTION B-B

\* INCREASE TO 2" (50 mm) WHERE IN THE PLANS IT IS SPECIFIED THAT THESE SPECIAL INLETS ARE TO BE CONSTRUCTED AS OUTLETS. ALL OUTLET LOCATIONS WILL BE CONFIRMED BY THE ENGINEER.

GENERAL NOTES

1. CLASS SI CONCRETE SHALL BE USED THROUGHOUT.
2. TIE BARS SHALL BE NO. 6 (NO. 20) AT 24" (600 mm) CENTERS UNLESS OTHERWISE SHOWN. SPECIAL INLETS AND OUTLETS SHALL BE TIED TO THE PAVEMENT IN ACCORDANCE WITH DETAILS FOR LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001.
3. TIE BARS SHOWN ABOVE WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS INCIDENTAL TO CLASS SI CONCRETE (OUTLET).
4. WHEN SPECIAL INLET IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, THE TIE BARS SHALL BE OMITTED AND ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH A DOWEL BAR CONFORMING TO ARTICLE 1006.11(b).
5. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CU. YD. (m<sup>3</sup>) FOR CLASS SI CONCRETE (OUTLET) WHICH PRICE SHALL INCLUDE ALL LABOR AND MATERIAL AS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

NOTE: ALL DIMENSIONS ARE IN INCHES (millimeters) UNLESS OTHERWISE SHOWN.

	B-6.12 (B-15.30)		B-9.12 (B-22.30)		B-6.18 (B-15.45)		B-9.18 (B-22.45)		B-6.24 (B-15.60)		B-9.24 (B-22.60)	
A	12" (300)	12" (300)	12" (300)	12" (300)	18" (450)	18" (450)	18" (450)	18" (450)	24" (600)	24" (600)	24" (600)	24" (600)
B	6" (150)	6" (150)	9" (225)	9" (225)	6" (150)	6" (150)	9" (225)	9" (225)	6" (150)	6" (150)	9" (225)	9" (225)
X	9" (225)	10" (250)	9" (225)	10" (250)	9" (225)	10" (250)	9" (225)	10" (250)	9" (225)	10" (250)	9" (225)	10" (250)
CU. YD. (m <sup>3</sup> ) CLASS SI CONCRETE (OUTLET)	0.37 (0.28)	0.42 (0.32)	0.38 (0.29)	0.42 (0.32)	0.44 (0.34)	0.49 (0.37)	0.45 (0.34)	0.50 (0.38)	0.51 (0.39)	0.56 (0.43)	0.52 (0.40)	0.57 (0.44)

FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISED -
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	PLOT DATE = 8/5/2016	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS - CLASS SI CONCRETE (OUTLET)

SCALE: N/A SHEET 7 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR)B-1	Lawrence	167	132
CONTRACT NO. 74180			ILLINOIS FED. AID PROJECT	

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

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

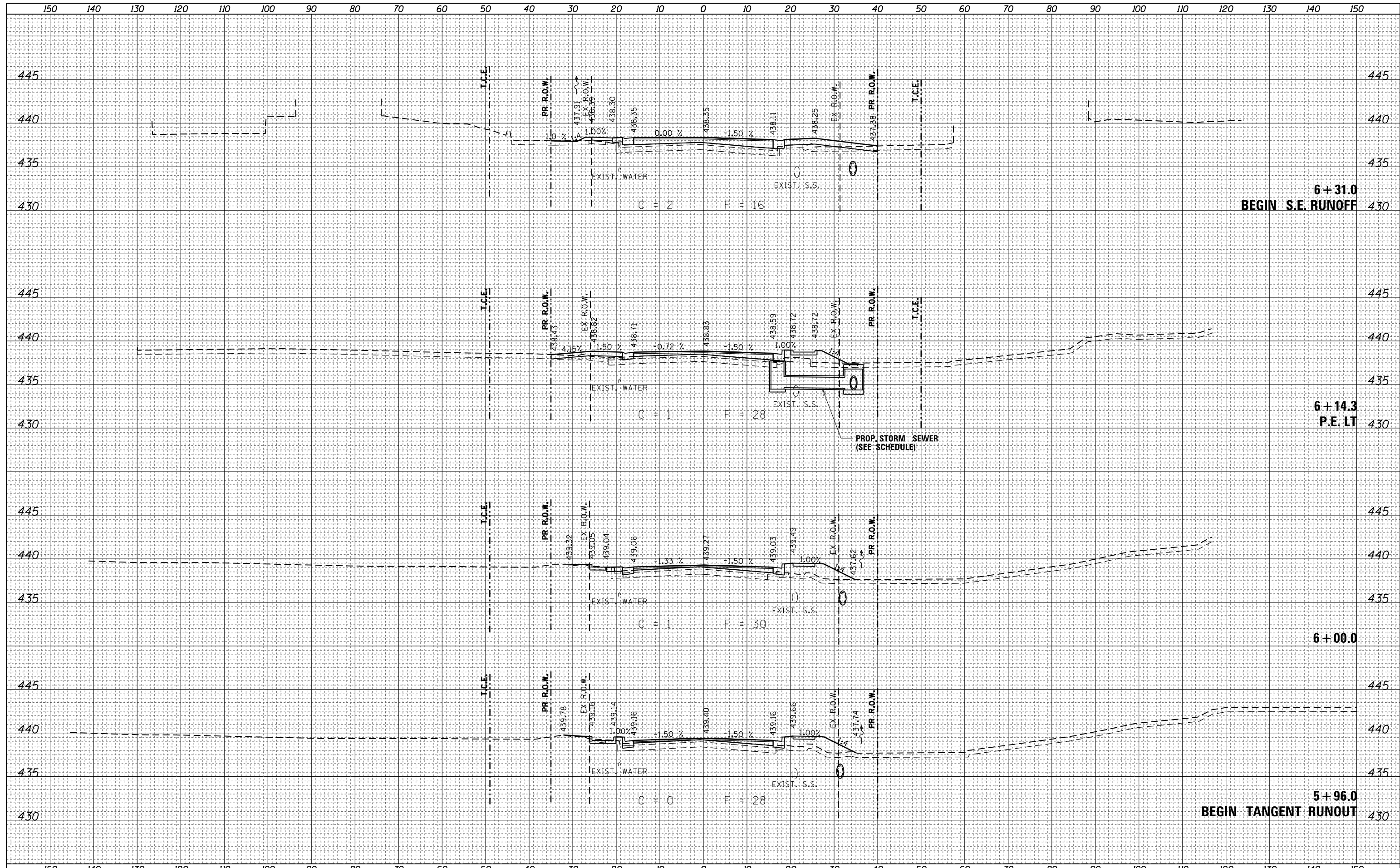


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Default	DOT Offices\District 7\Projects\74180\CADD\Drawings\Drawings\74180-sht-XSC-ILL.dgn	CHECKED -	REVISOR -			332	(16BR)B-1	Lawrence	167	133
	PLOT SCALE = 20.0000' / in.	DATE -	REVISOR -			CONTRACT NO. 74180				
	PLOT DATE = 8/5/2016		REVISOR -			ILLINOIS FED. AID PROJECT				

SCALE: 1" = 10' SHEET 1 OF 22 SHEETS STA. 5+00.0 TO STA. 5+87.0

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

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



**6 + 31.0**  
**BEGIN S.E. RUNOFF**

**6 + 14.3**  
**P.E. LT**

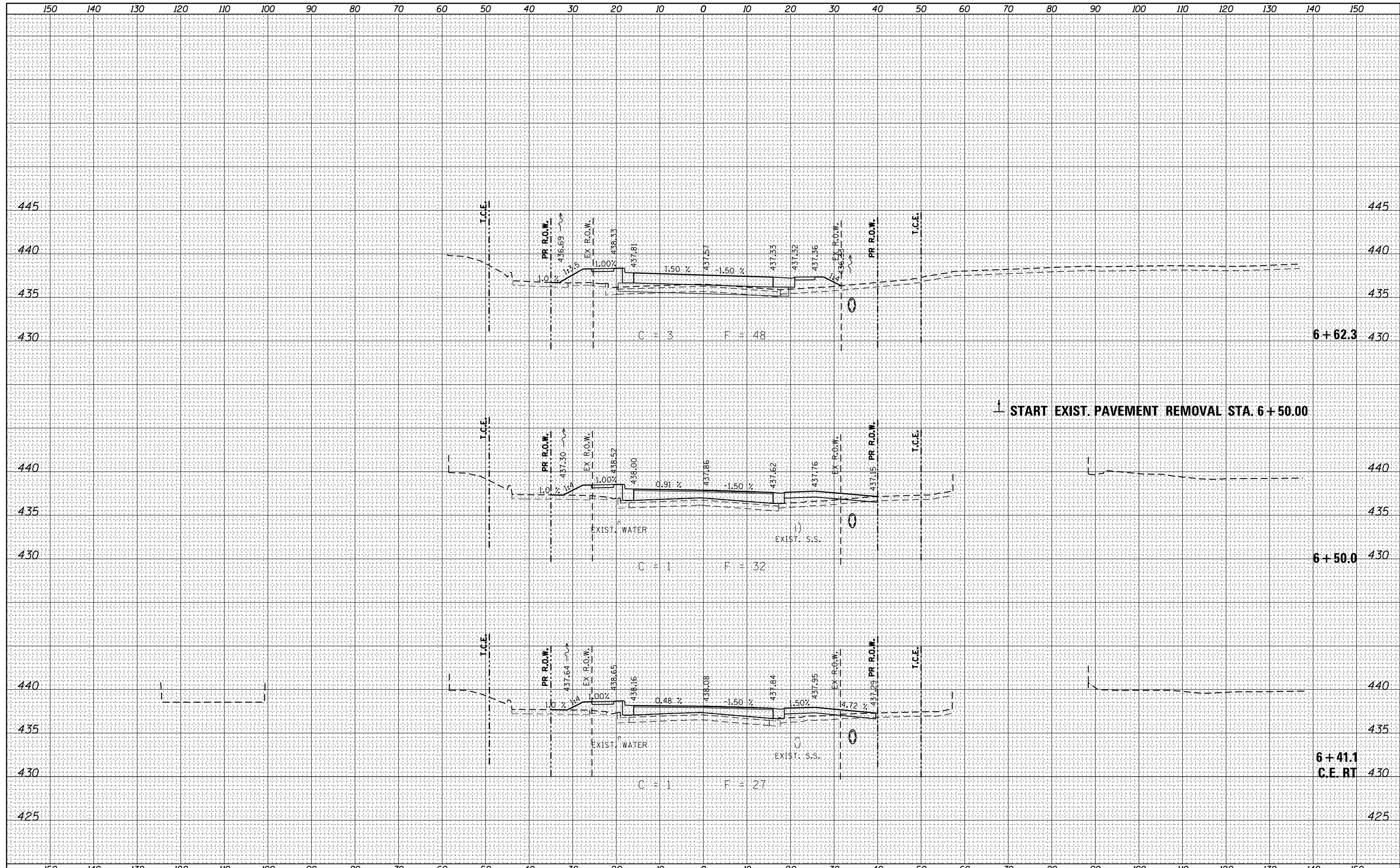
**6 + 00.0**

**5 + 96.0**  
**BEGIN TANGENT RUNOUT**

FILE NAME =	USER NAME = steffenk	DESIGNED -	REVISOR -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>ILLINOIS ROUTE 1</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	DOT Offices\District 7\Projects\74180\CADD\Drawings\Drawings\74180-sht-XSC-ILL.dgn	REVISOR -	REVISOR -			332	(16BR)B-1	Lawrence	167	134	
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	PLOT DATE = 8/5/2016	DATE -	REVISOR -			SCALE: 1" = 10'	SHEET 2 OF 22 SHEETS	STA. 5+96.0	TO STA. 6+31.0		

DATE	
BY	
FINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
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PLOTTED	
TEMPLATE	
AREAS CHECKED	



↑ START EXIST. PAVEMENT REMOVAL STA. 6+50.00

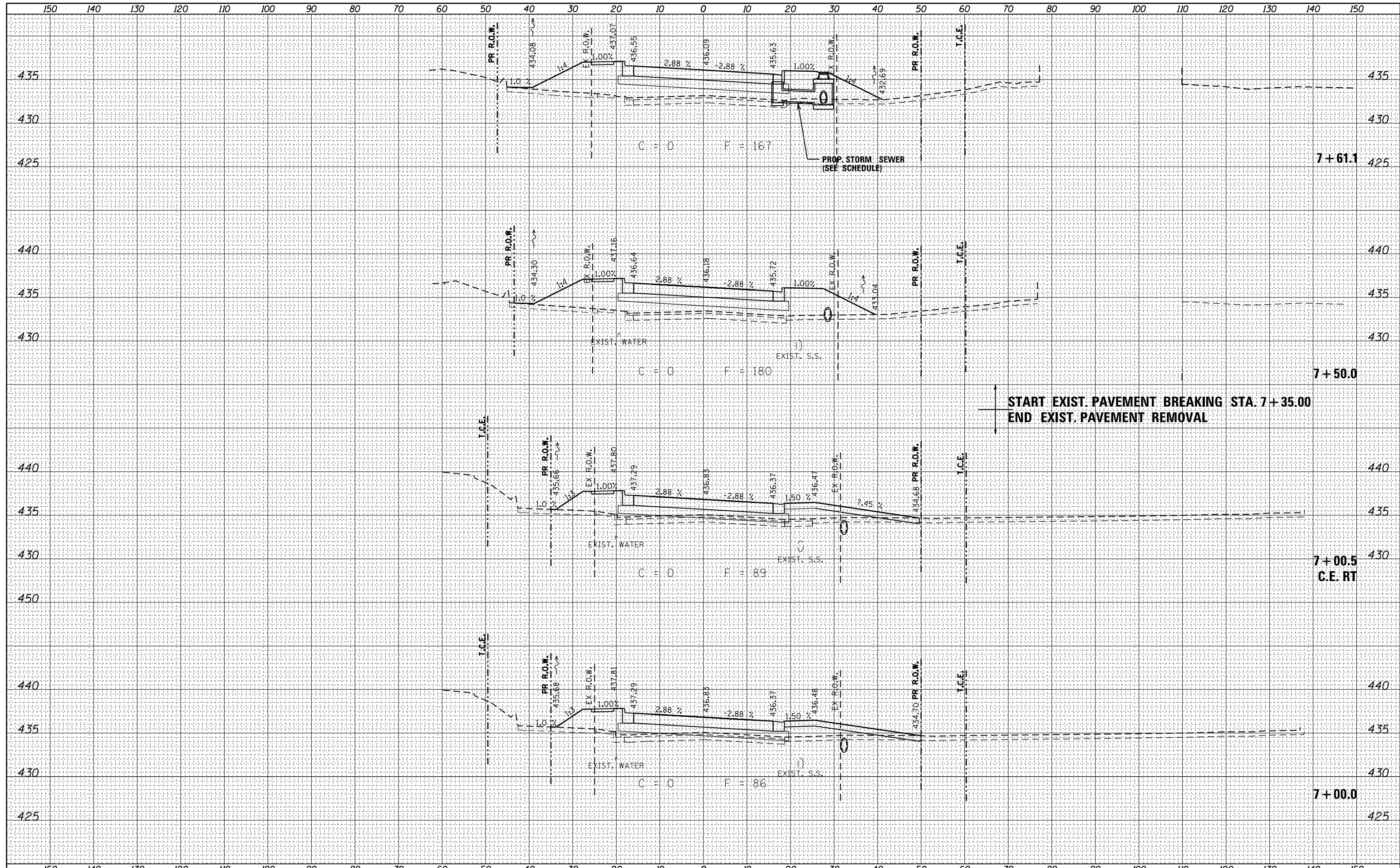
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Default	DOT Offices\District 7\Projects\74180\CADD\Drawings\74180-sht-XSC-ILL.dgn	CHECKED -	REVISOR -			SCALE: 1" = 10'	SHEET 3	OF 22 SHEETS	STA. 6+41.1	TO STA. 6+62.3	CONTRACT NO. 74180
	PLOT SCALE = 20.0000' / in.	DATE -	REVISOR -			ILLINOIS FED. AID PROJECT					
	PLOT DATE = 8/5/2016										





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

DATE	
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ORIGINAL SURVEY	SURVEYED
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	AREAS CHECKED

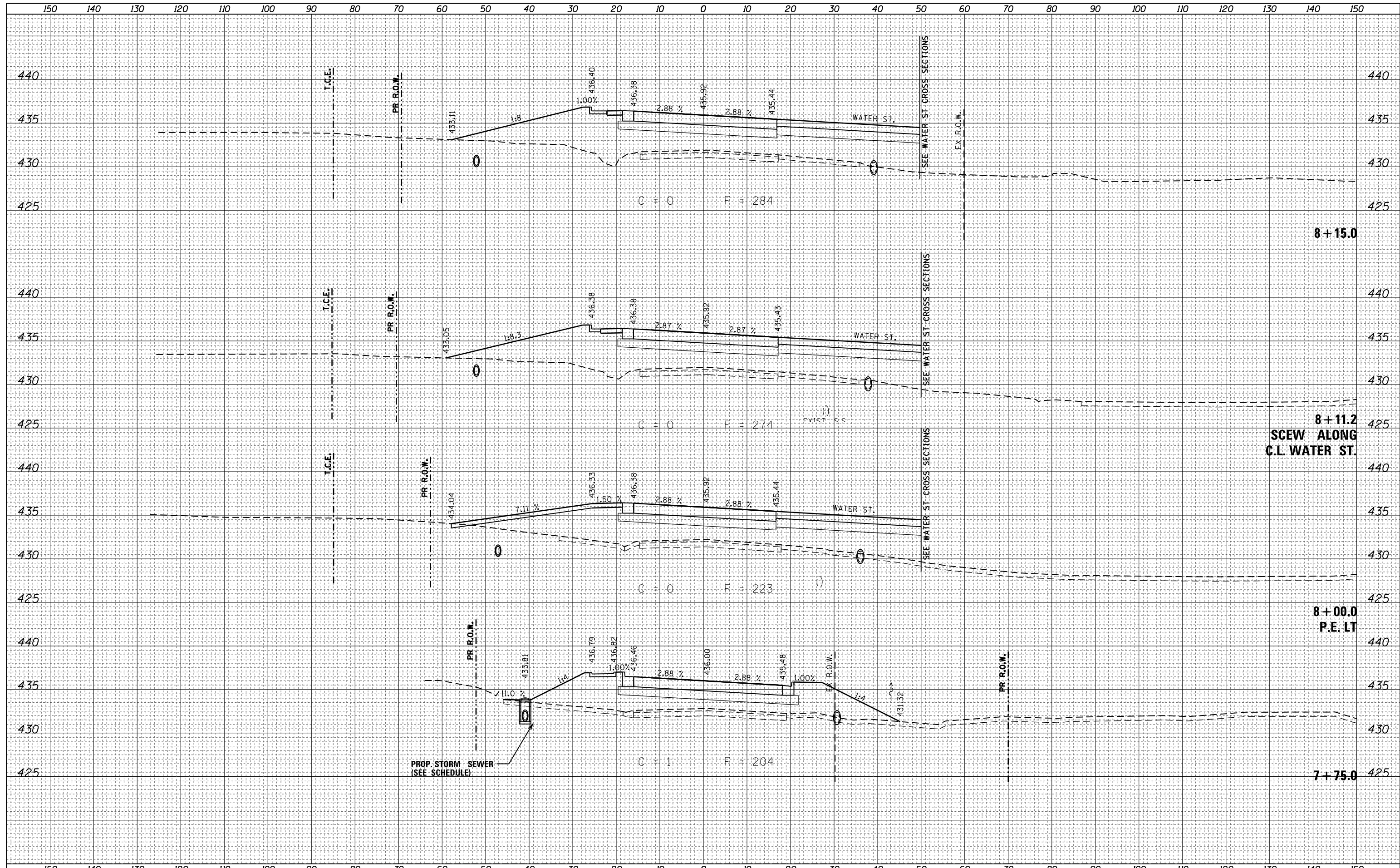


START EXIST. PAVEMENT BREAKING STA. 7+35.00  
END EXIST. PAVEMENT REMOVAL

FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISOR -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>ILLINOIS ROUTE 1</b>	F.A.P. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
\\IL084EBIDINTEG.illinois.gov\PIWDOT\Documents\DOT Offices\District 7\Projects\74180\CADD\Drawings\74180-sht-XSC-ILL.dgn	DRWN	REVISOR -	REVISOR -			332	(16BR)B-1	Lawrence	167	137
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISOR -	REVISOR -			CONTRACT NO. 74180		ILLINOIS FED. AID PROJECT		
PLOT DATE = 8/5/2016	DATE -	REVISOR -	REVISOR -			SCALE: 1" = 10'	SHEET 5	OF 22 SHEETS	STA. 7+00.0	TO STA. 7+61.1

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

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



FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISOR -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>		F.A.P. RTE. = 332	SECTION (16BR)B-1	COUNTY	TOTAL SHEETS = 167	SHEET NO. = 138
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	PLOT DATE = 8/5/2016		REVISOR -								

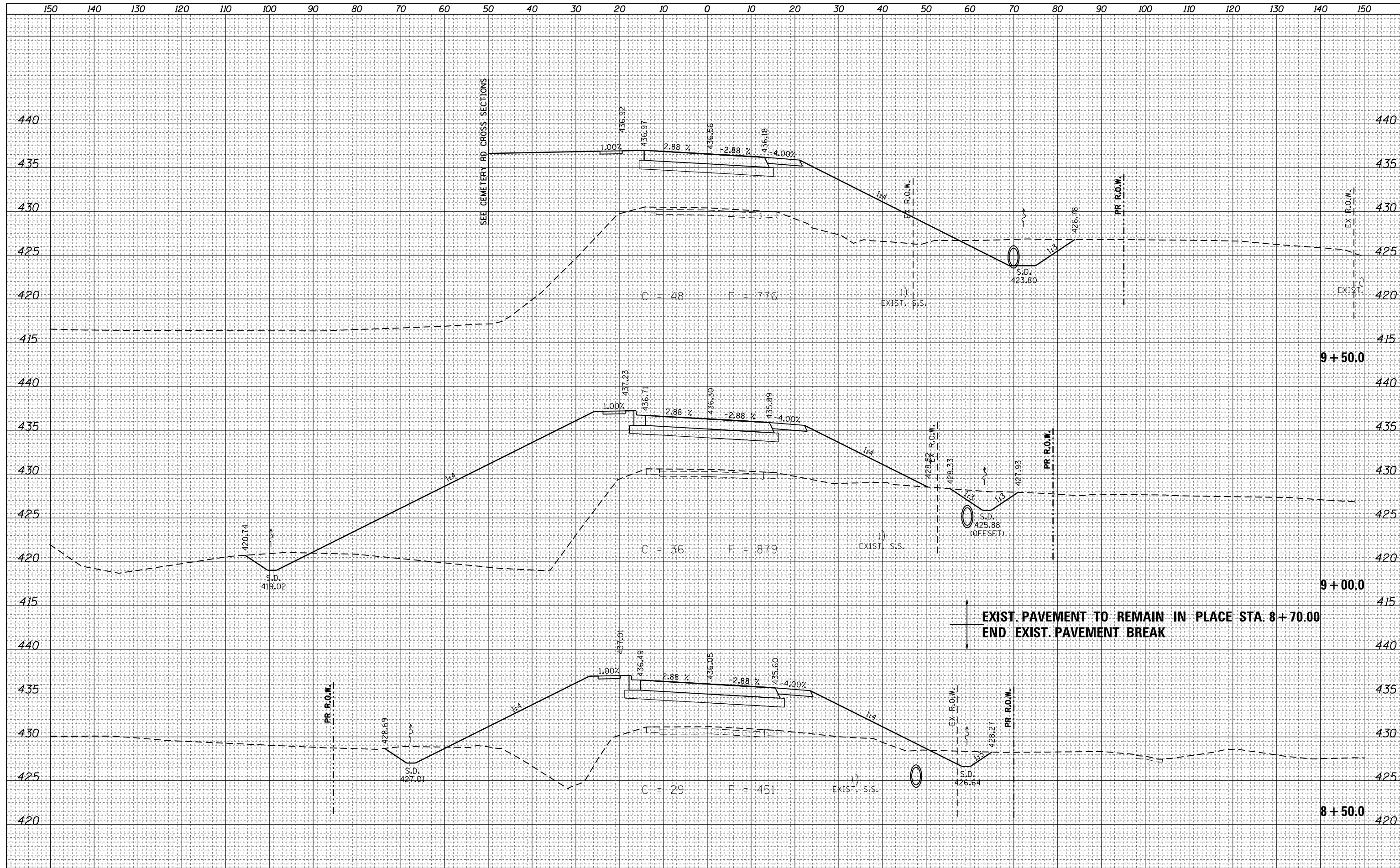
**8+11.2**  
**SCEW ALONG**  
**C.L. WATER ST.**

**8+00.0**  
**P.E. LT**

**7+75.0**

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

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



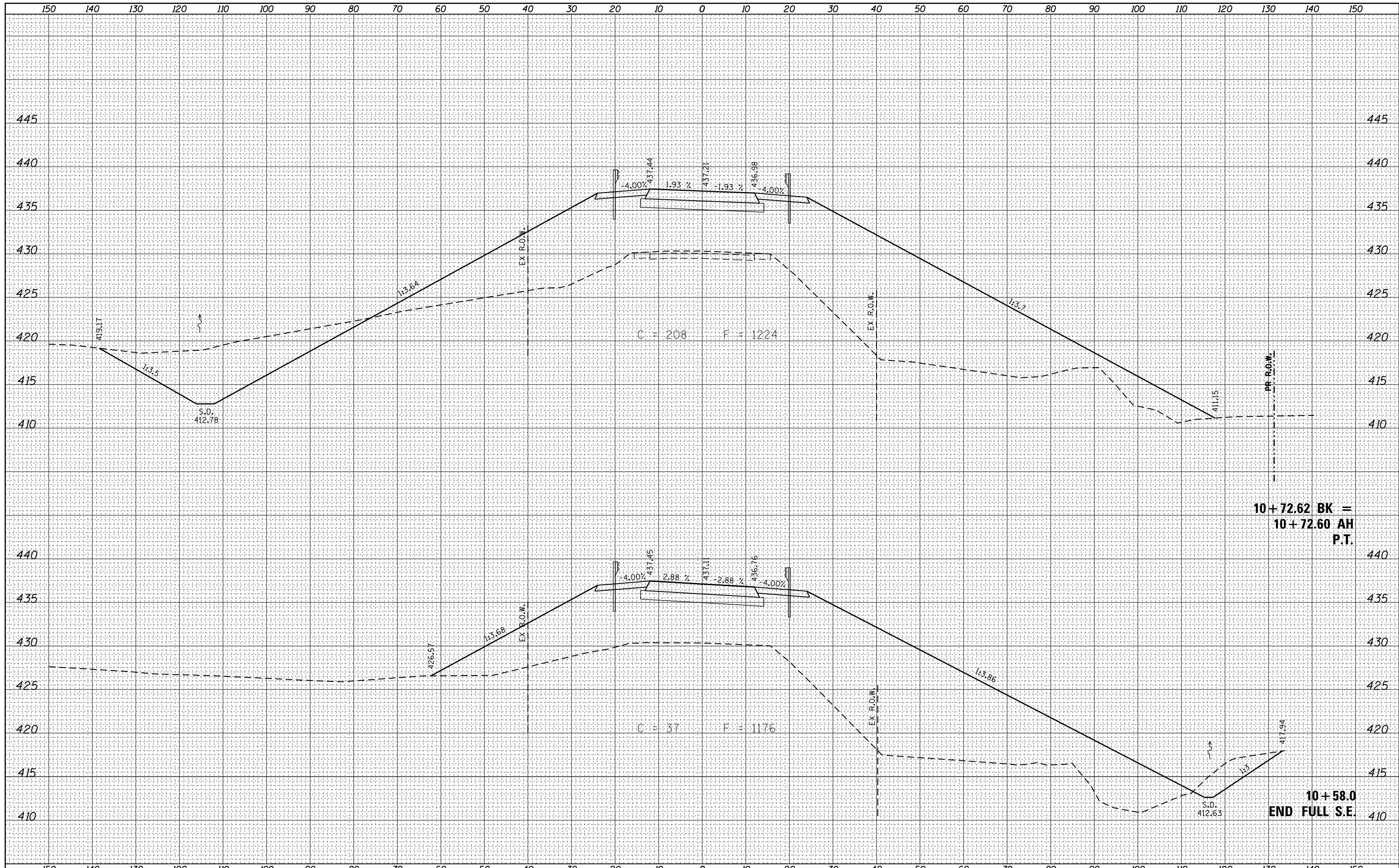
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Default	DOT Offices\District 7\Projects\74180\CADD\Drawings\Drawings\74180-sht-XSC-ILL.dgn	CHECKED -	REVISIED -					332	(16BR)B-1	Lawrence	167	139
	PLOT SCALE = 20.0000' / in.	DATE -	REVISIED -					CONTRACT NO. 74180				
	PLOT DATE = 8/5/2016		REVISIED -					ILLINOIS FED. AID PROJECT				
				SCALE: 1" = 10'			SHEET 7	OF 22 SHEETS	STA. 8+50.0	TO STA. 9+50.0		





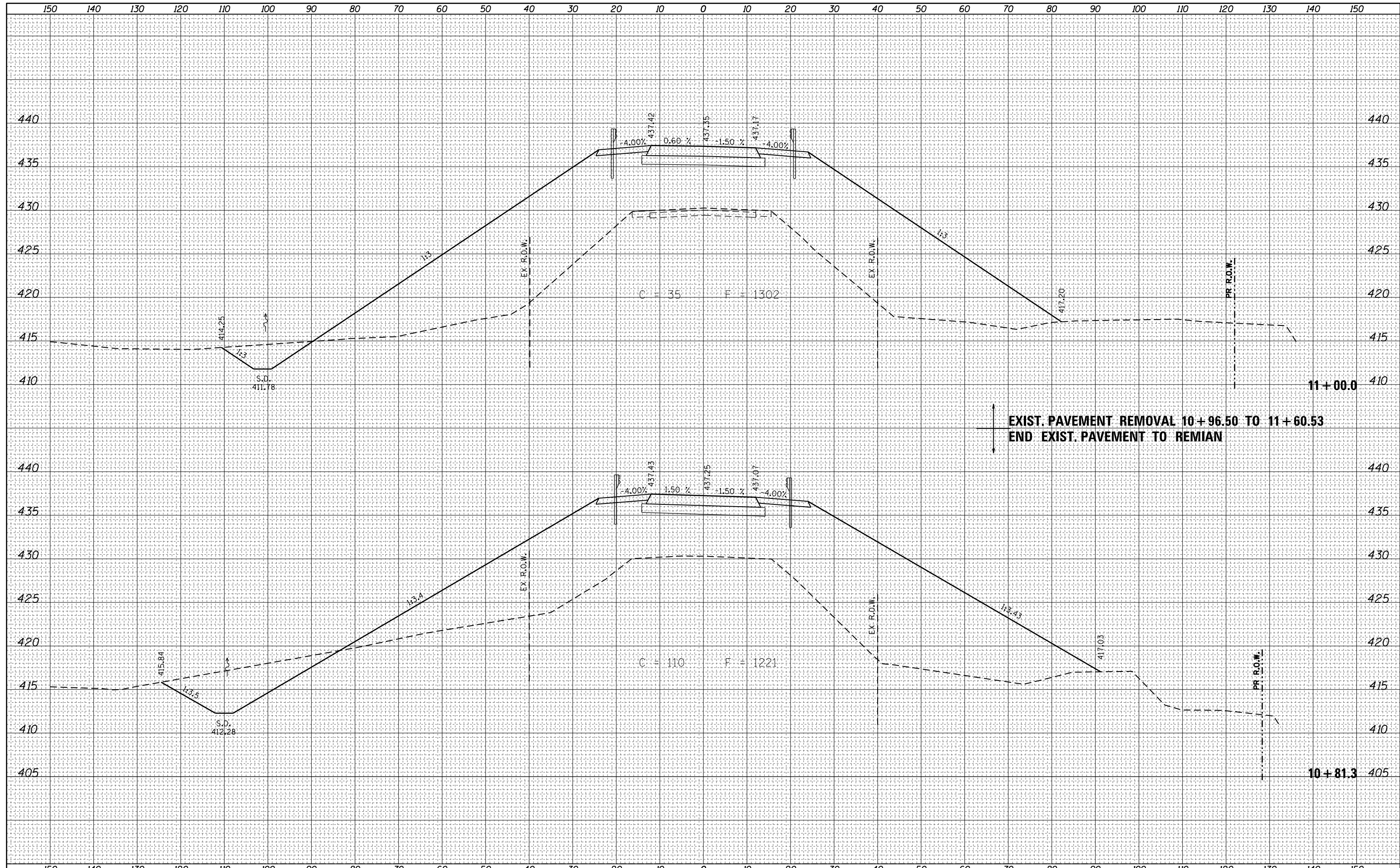
BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

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

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

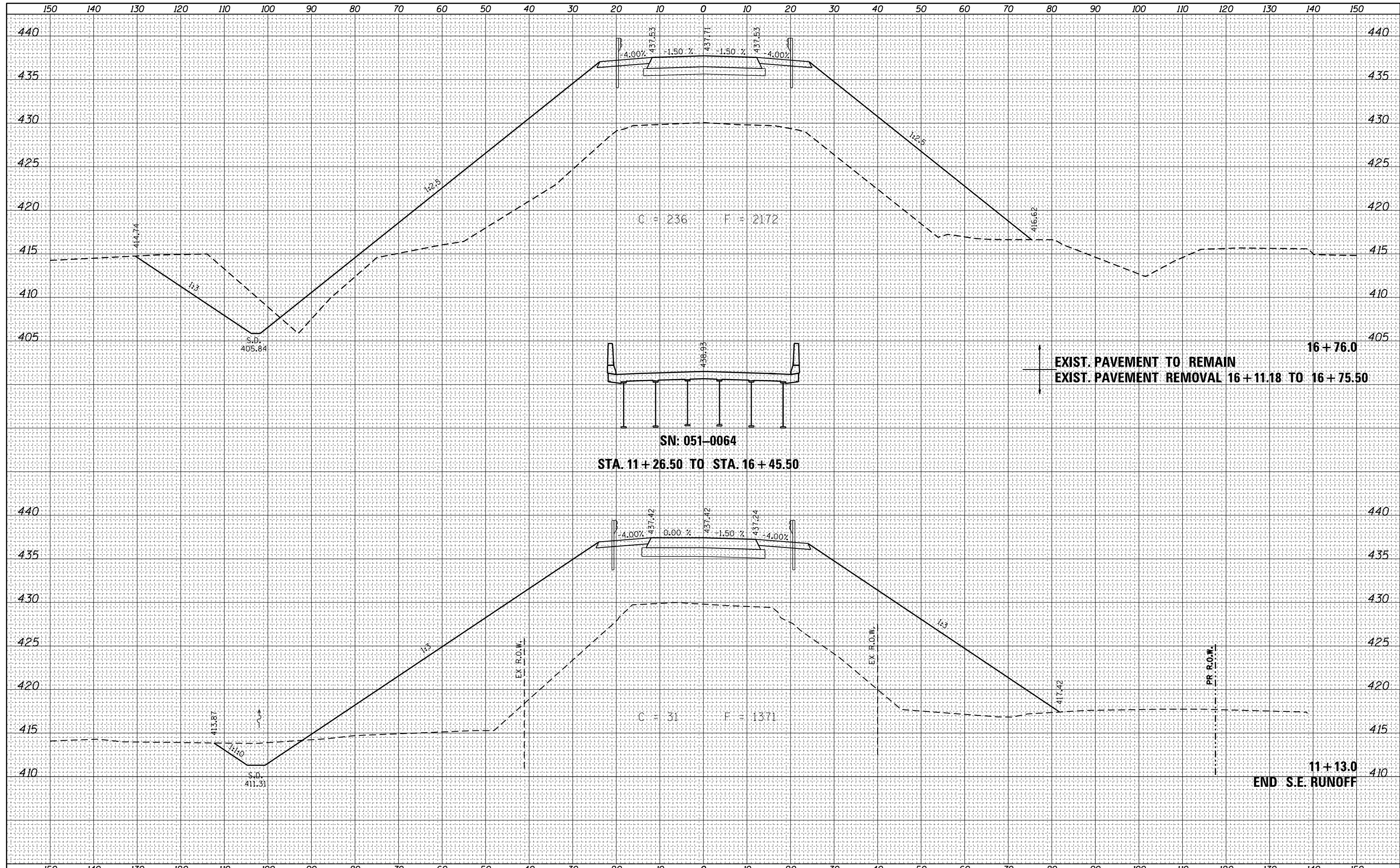


EXIST. PAVEMENT REMOVAL 10+96.50 TO 11+60.53  
 END EXIST. PAVEMENT TO REMIAN



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

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



EXIST. PAVEMENT TO REMAIN  
 EXIST. PAVEMENT REMOVAL 16+11.18 TO 16+75.50

SN: 051-0064  
 STA. 11+26.50 TO STA. 16+45.50

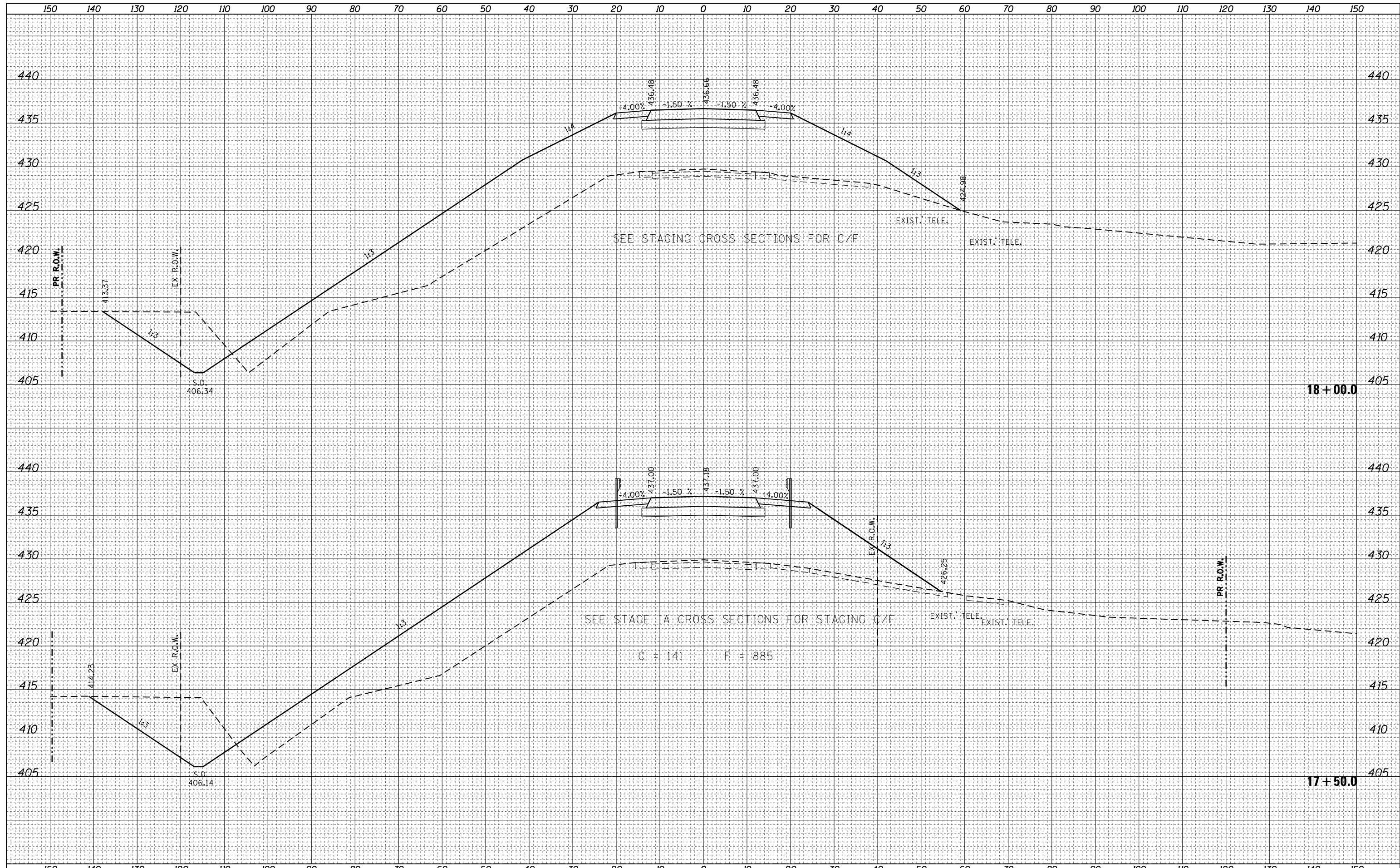
11+13.0  
 END S.E. RUNOFF





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

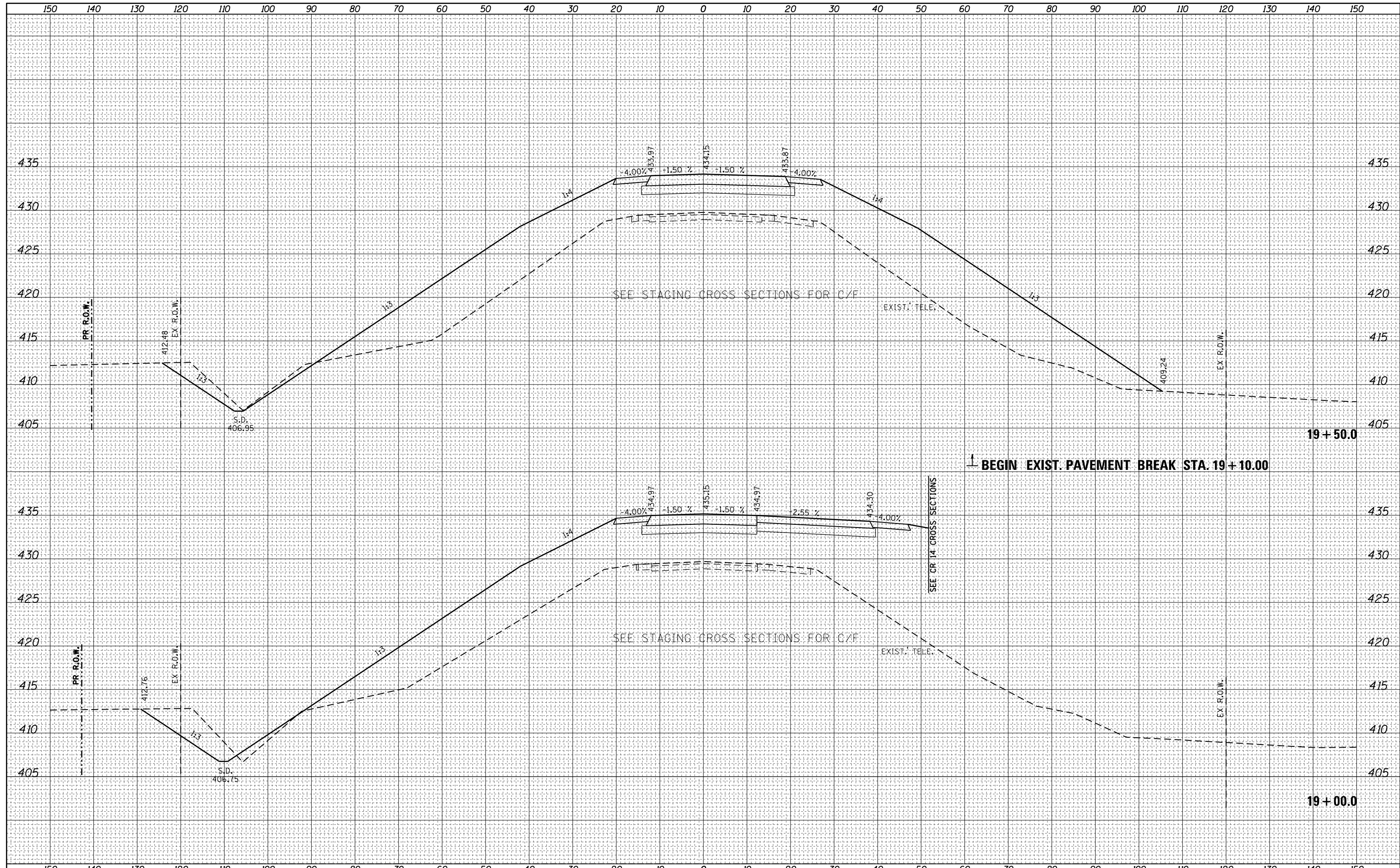
DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED PLOTTED	
NOTE BOOK AREAS CHECKED	
TEMPLATE AREAS CHECKED	





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

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



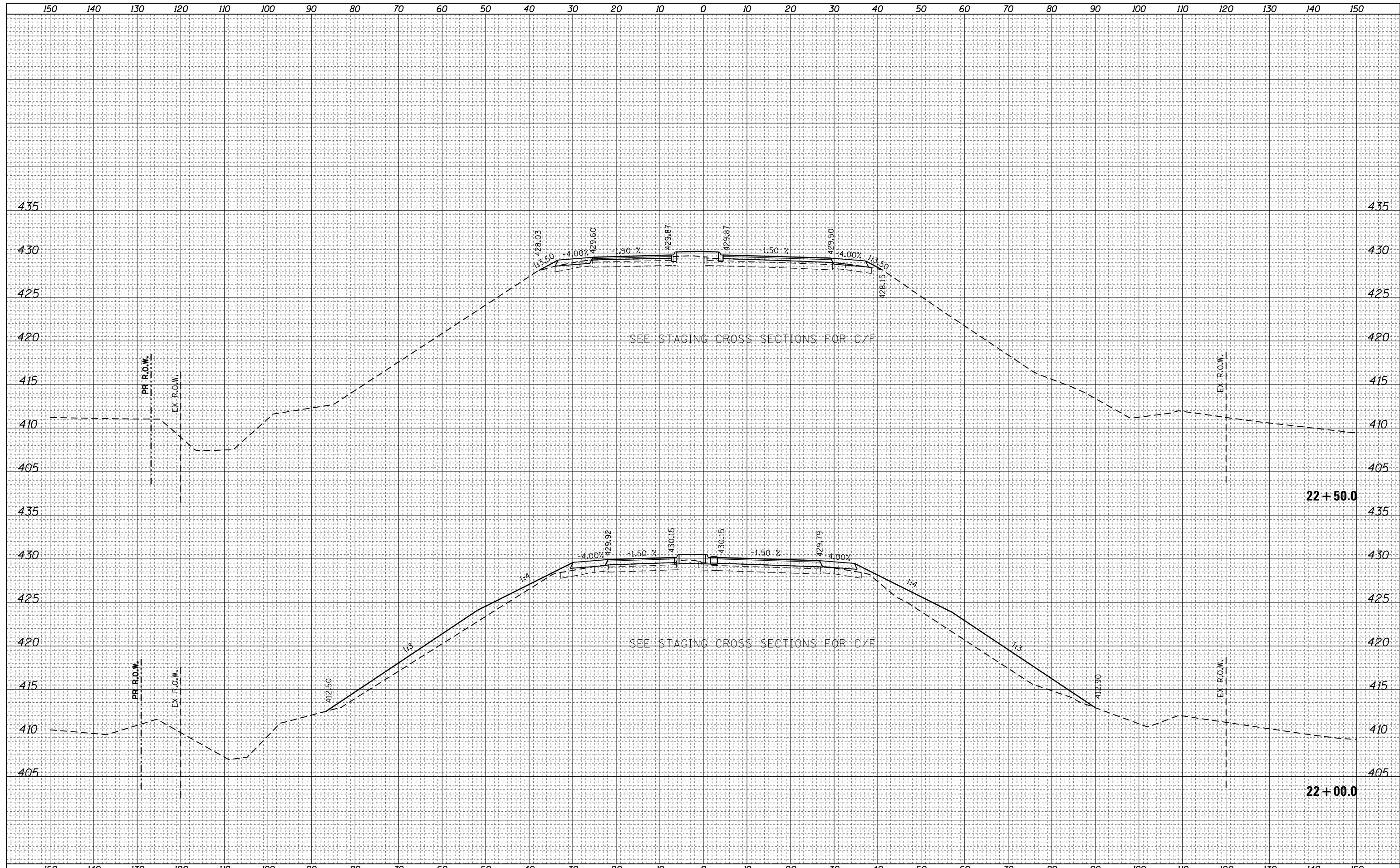
FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISOR -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>ILLINOIS ROUTE 1</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	DOT Offices\District 7\Projects\74180\CADD\Drawings\Drawings\74180-sht-XSC-ILL.dgn	CR 14	REVISOR -					332	(16BR)B-1	Lawrence	167	148
	PLOT SCALE = 20.0000' / in.	CHECKED -	REVISOR -					CONTRACT NO. 74180				
	PLOT DATE = 8/5/2016	DATE -	REVISOR -					ILLINOIS FED. AID PROJECT				
				SCALE: 1" = 10'	SHEET 16	OF 22 SHEETS	STA. 19+00.0	TO STA. 19+50.0				





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

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

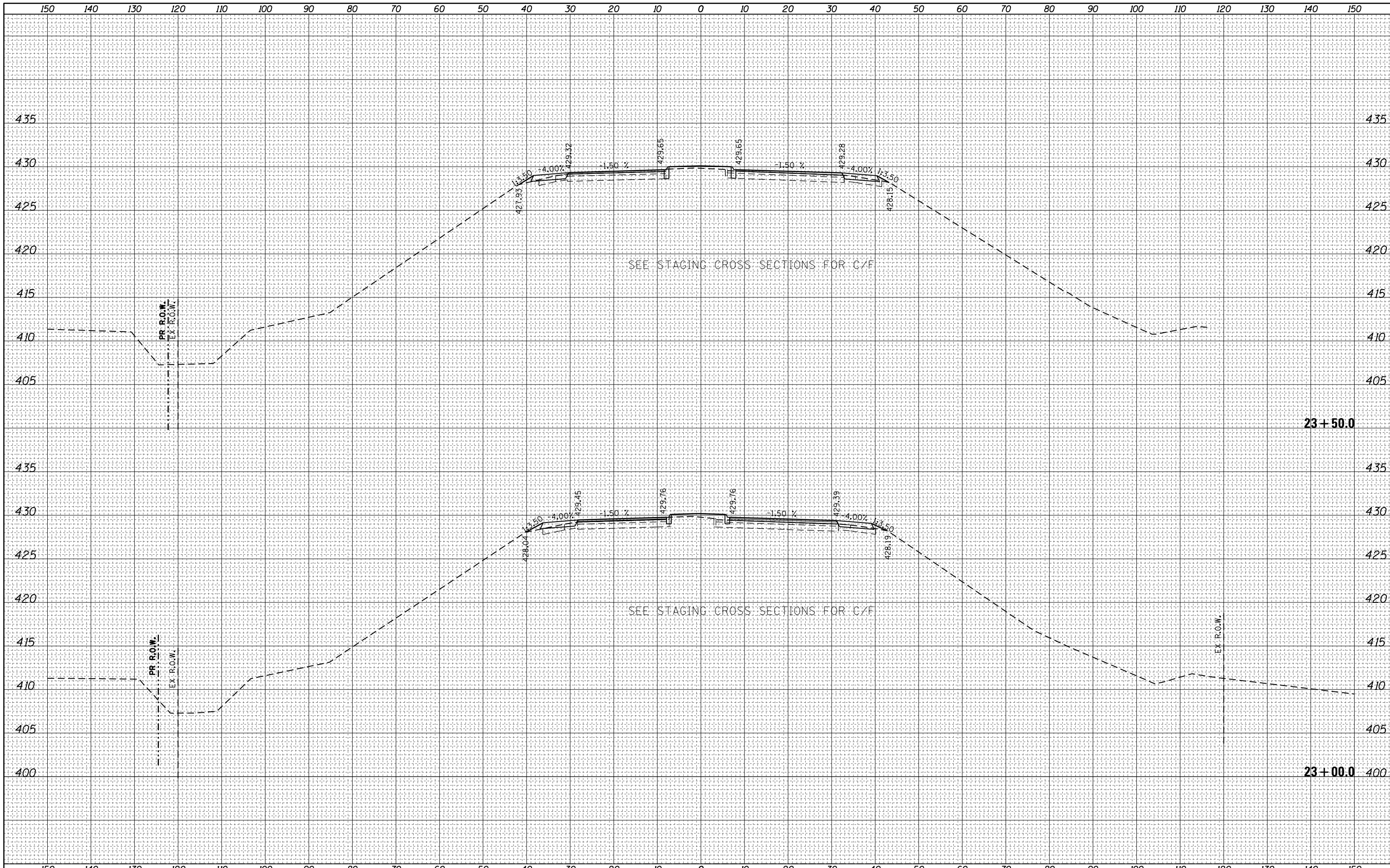


FILE NAME =	USER NAME = steffenmk	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS ILLINOIS ROUTE 1</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
p:\11084EBIDINTEG\Illinois.gov\PWIDOT\Documents\DOT Offices\District 7\Projects\74180\CADD\Drawings\Sheets\0774180-sht-XSC-ILL.dgn	DRAWN	REVISIED -	REVISIED -			332	(16BR)B-1	Lawrence	167	151
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISIED -	REVISIED -			CONTRACT NO. 74180		ILLINOIS FED. AID PROJECT		
PLOT DATE = 8/5/2016	DATE -	REVISIED -	REVISIED -			SCALE: 1" = 10'	SHEET 19	OF 22 SHEETS	STA. 22+00.0	TO STA. 22+50.0



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

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



FILE NAME =	USER NAME = steffenk	DESIGNED -	REVISOR -
p:\11084EBIDINTEG\Illinois.gov\PWIDOT\Documents\DOT Offices\District 7\Projects\74180\CADD\Drawings\Drawings\74180-sht-XSC-ILL.dgn		CHECKED -	REVISOR -
Default		DATE -	REVISOR -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS ILLINOIS ROUTE 1</b>			
SCALE: 1" = 10'	SHEET 20	OF 22 SHEETS	STA. 23+00.0 TO STA. 23+50.0

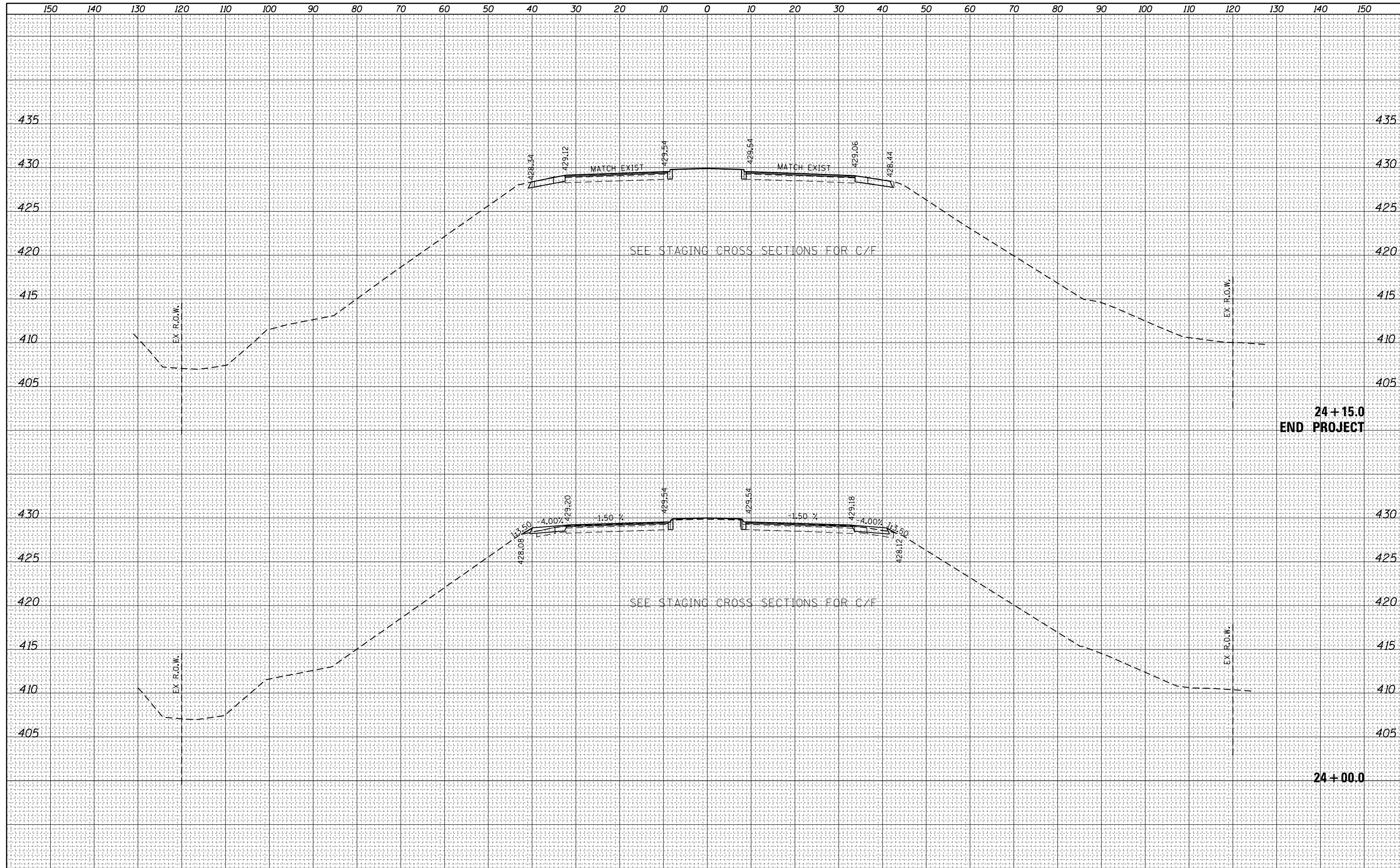
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR)B-1	Lawrence	167	152
CONTRACT NO. 74180			ILLINOIS FED. AID PROJECT	





DATE	
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FINAL SURVEY NO.	
SURVEYED	
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TEMPLATE	
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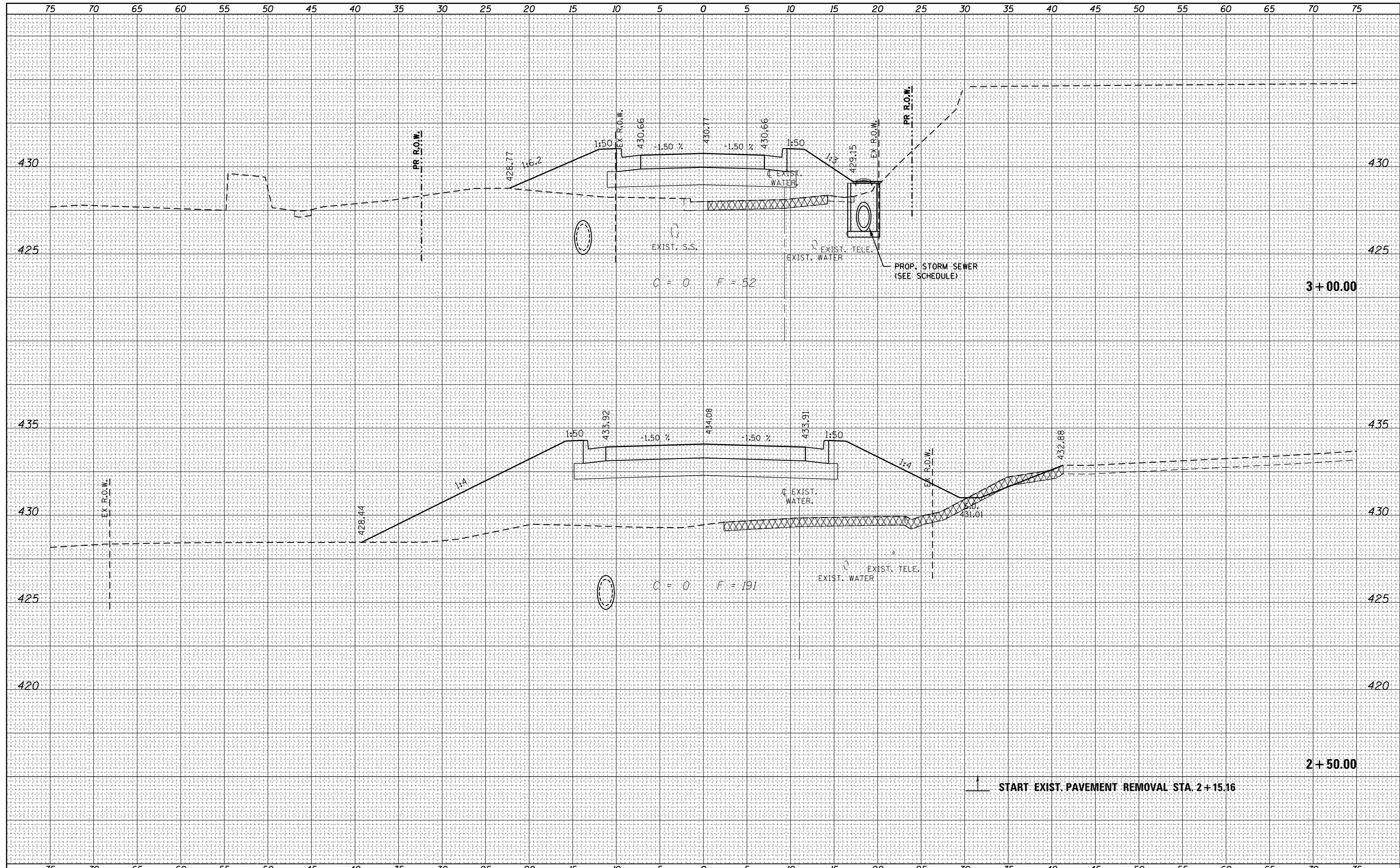
DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
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FILE NAME =	USER NAME = steffenk	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>ILLINOIS ROUTE 1</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	LOT Offices\District 7\Projects\74180\CADD\Drawings\Drawings\74180\sh-XSC-ILL.dgn	CHECKED -	REVISIED -					332	(16BR)B-1	Lawrence	167	154
	PLOT SCALE = 20.0000' / in.	DATE -	REVISIED -		CONTRACT NO. 74180							
	PLOT DATE = 8/5/2016				SCALE: 1" = 10'			SHEET 22	OF 22 SHEETS	STA. 24+00.0	TO STA. 24+15.0	ILLINOIS FED. AID PROJECT

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

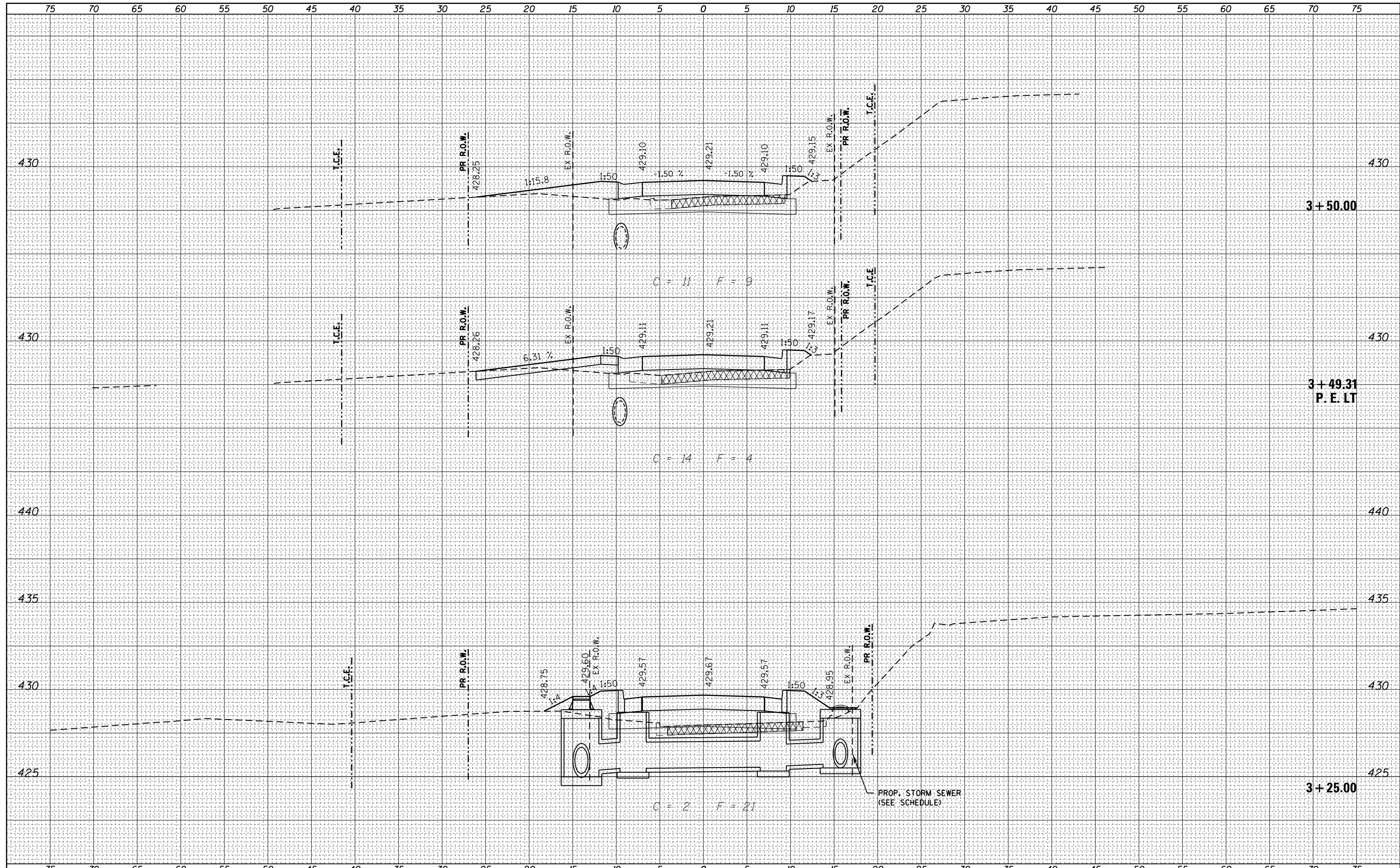
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BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



FILE NAME =	USER NAME = steffennik	DESIGNED - JWS	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>WATER STREET</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D774180-sht-XSC-WTR.dgn		DRAWN - JWS/KMO	REVISED -			332	(16BR)B-1	LAWRENCE	167	155	
		CHECKED - SJK	REVISED -			CONTRACT NO. 74180					
		DATE - 04-2012	REVISED -			ILLINOIS FED. AID PROJECT					
		PLOT SCALE = 10.0000' / in.		SCALE: 1" = 5'		SHEET NO. 1 OF 4 SHEETS		STA. 2+50.00 TO STA. 3+00.00			

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

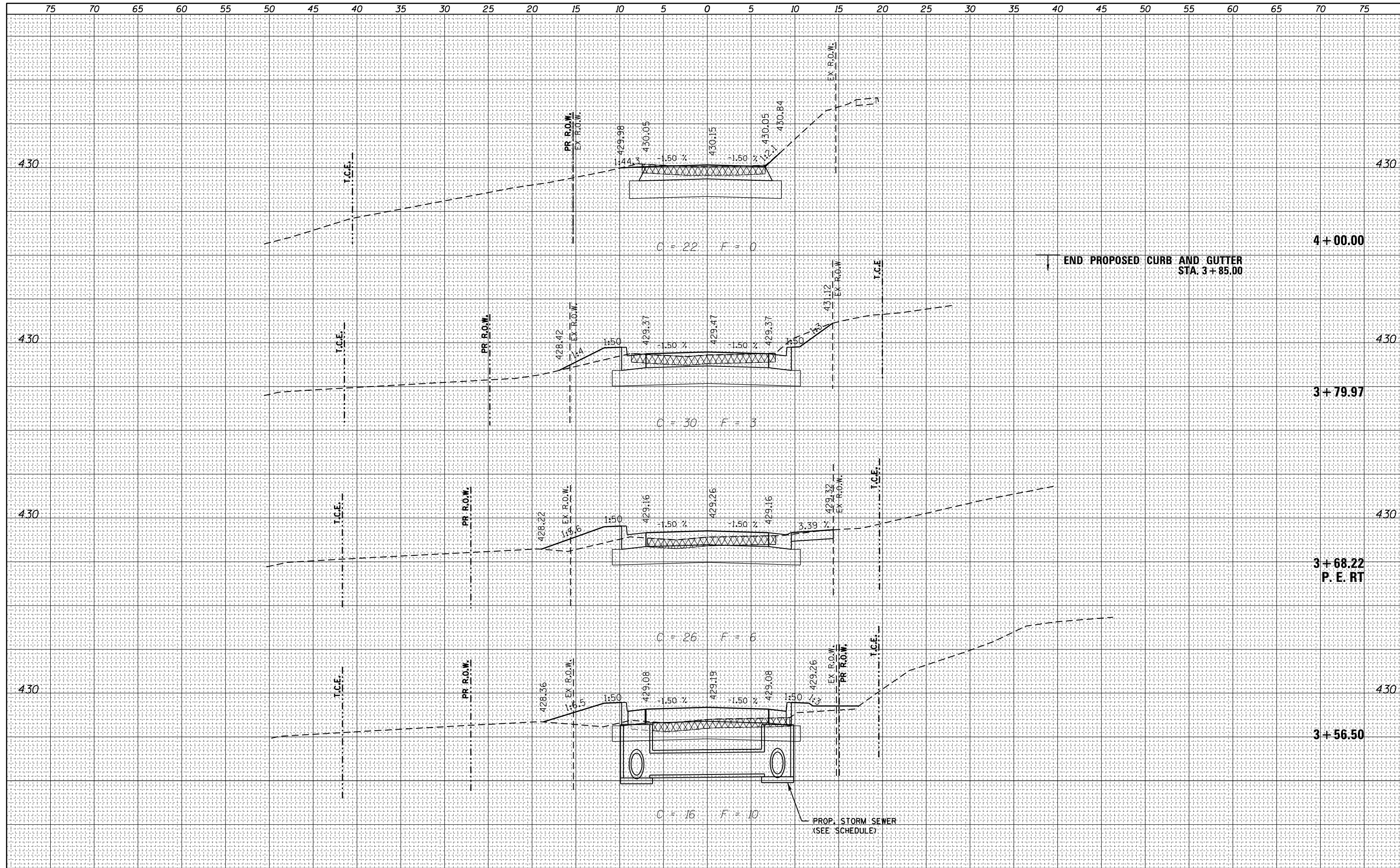
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



FILE NAME = D774180-sht-XSC-WTR.dgn	USER NAME = steffennik	DESIGNED - JWS	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>WATER STREET</b>	F.A.P. RTE. 332	SECTION (16BR)B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 156		
	PLOT SCALE = 10.0000' / in.	CHECKED - SJK	REVISED -			SCALE: 1" = 5'	SHEET NO. 2 OF 4 SHEETS	STA. 3+25.00	TO STA. 3+50.00	CONTRACT NO. 74180		
	PLOT DATE = 8/5/2016	DATE - 04-2012	REVISED -			ILLINOIS FED. AID PROJECT						

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

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



FILE NAME = D774180-sht-XSC-WTR.dgn

USER NAME = steffenmk	DESIGNED - JWS	REVISED -
	DRAWN - JWS/KMO	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - SJK	REVISED -
PLOT DATE = 8/5/2016	DATE - 04-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
WATER STREET**

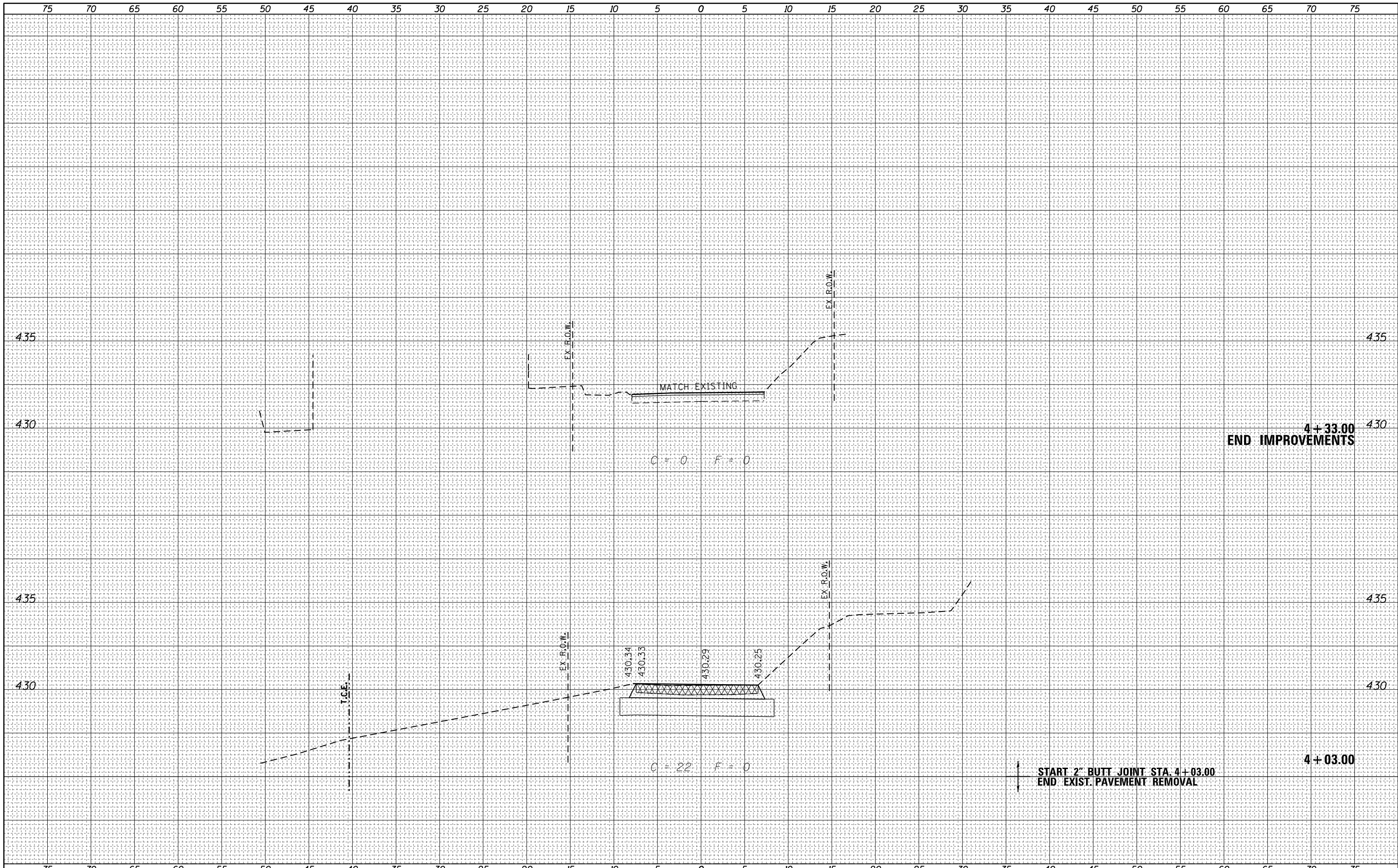
SCALE: 1" = 5' SHEET NO. 3 OF 4 SHEETS STA. 3+56.50 TO STA. 4+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR)B-1	LAWRENCE	167	157
CONTRACT NO. 74180				

ILLINOIS FED. AID PROJECT

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

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



FILE NAME = D774180-sht-XSC-WTR.dgn

USER NAME = steffennk	DESIGNED - JWS	REVISED -
PLOT SCALE = 10.0000' / in.	DRAWN - JWS/KMO	REVISED -
PLOT DATE = 8/5/2016	CHECKED - SJK	REVISED -
	DATE - 04-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

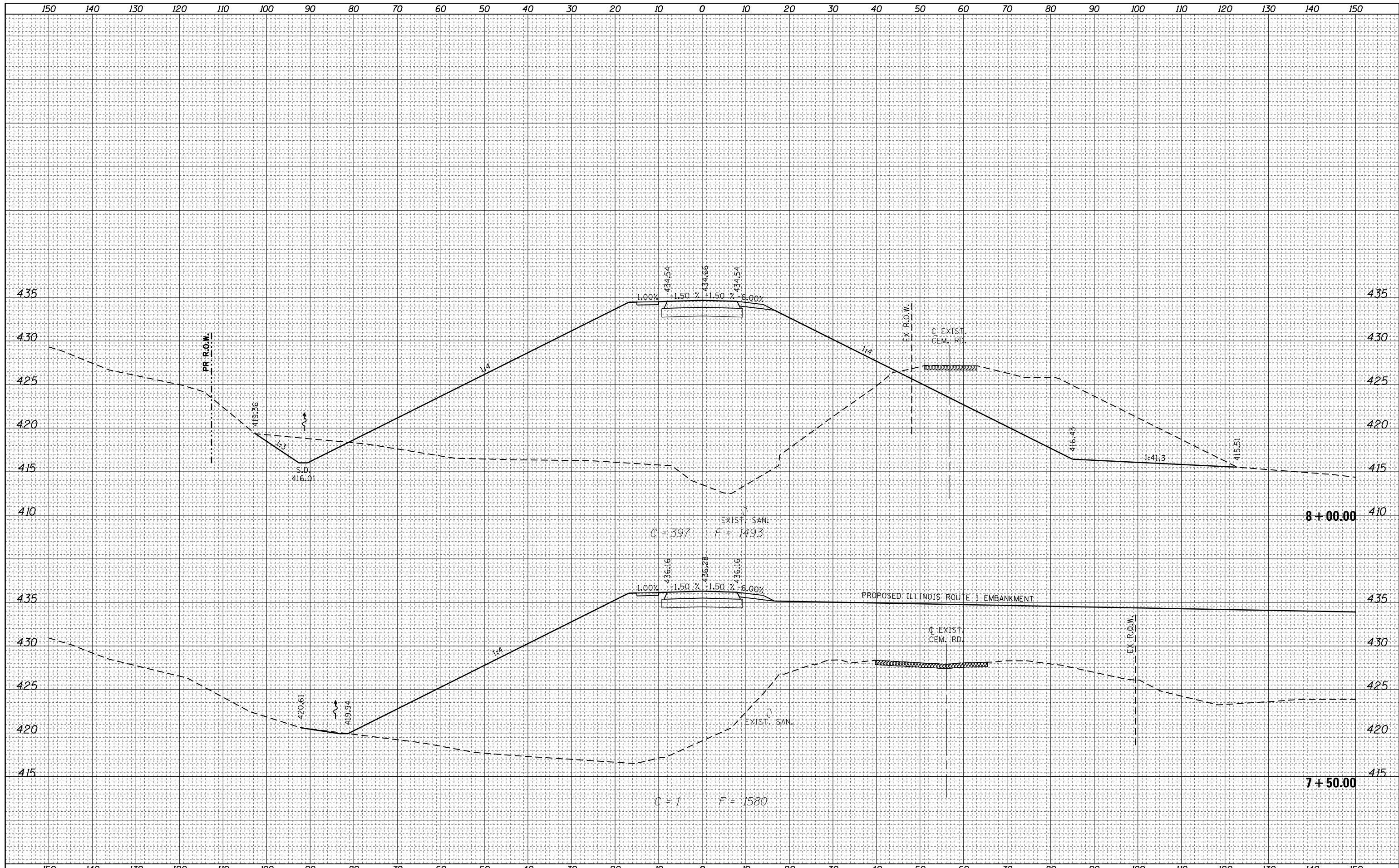
**CROSS SECTIONS  
WATER STREET**

SCALE: 1" = 5'     SHEET NO. 4 OF 4 SHEETS     STA. 4+03.00     TO STA. 4+33.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR)B-1	LAWRENCE	167	158
CONTRACT NO. 74180				
ILLINOIS FED. AID PROJECT				

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

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



FILE NAME = D774180-sht-XSC-CEM.dgn

USER NAME = steffennik	DESIGNED - JWS	REVISED -
	DRAWN - JWS/KMO	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - SJK	REVISED -
PLOT DATE = 8/5/2016	DATE - 04-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
CEMETERY ROAD**

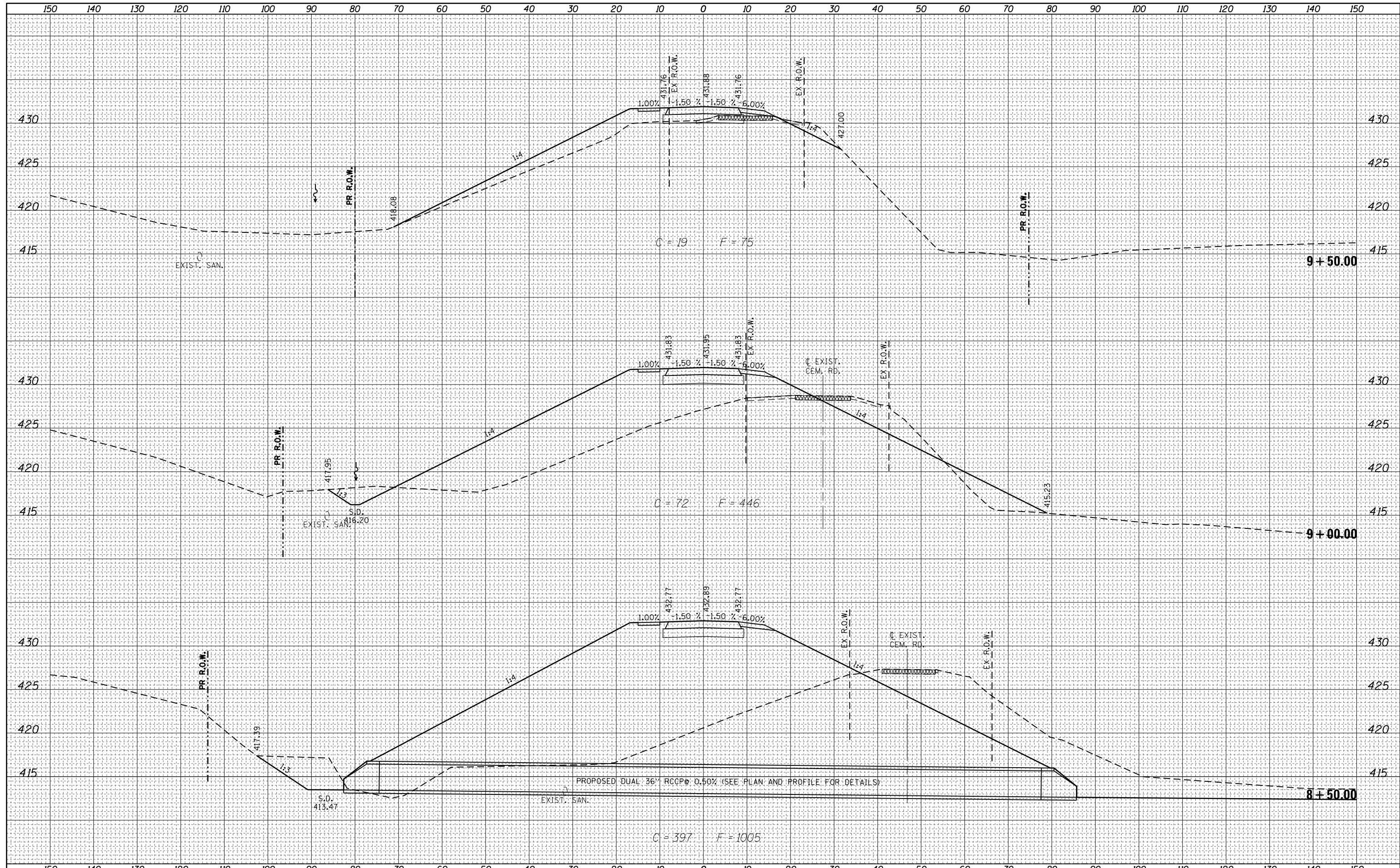
SCALE: 1" = 10'    SHEET NO. 1 OF 3 SHEETS    STA. 7+50.00    TO STA. 8+00.00

F.A.P. RTE. 332	SECTION (16BR)B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 159
CONTRACT NO. 74180				ILLINOIS FED. AID PROJECT



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

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



FILE NAME = D774180-sht-XSC-CEM.dgn

USER NAME = steffennik	DESIGNED - JWS	REVISED -
	DRAWN - JWS/KMO	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - SJK	REVISED -
PLOT DATE = 8/5/2016	DATE - 04-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
CEMETERY ROAD**

SCALE: 1" = 10'    SHEET NO. 2 OF 3 SHEETS    STA. 8+50.00 TO STA. 9+50.00

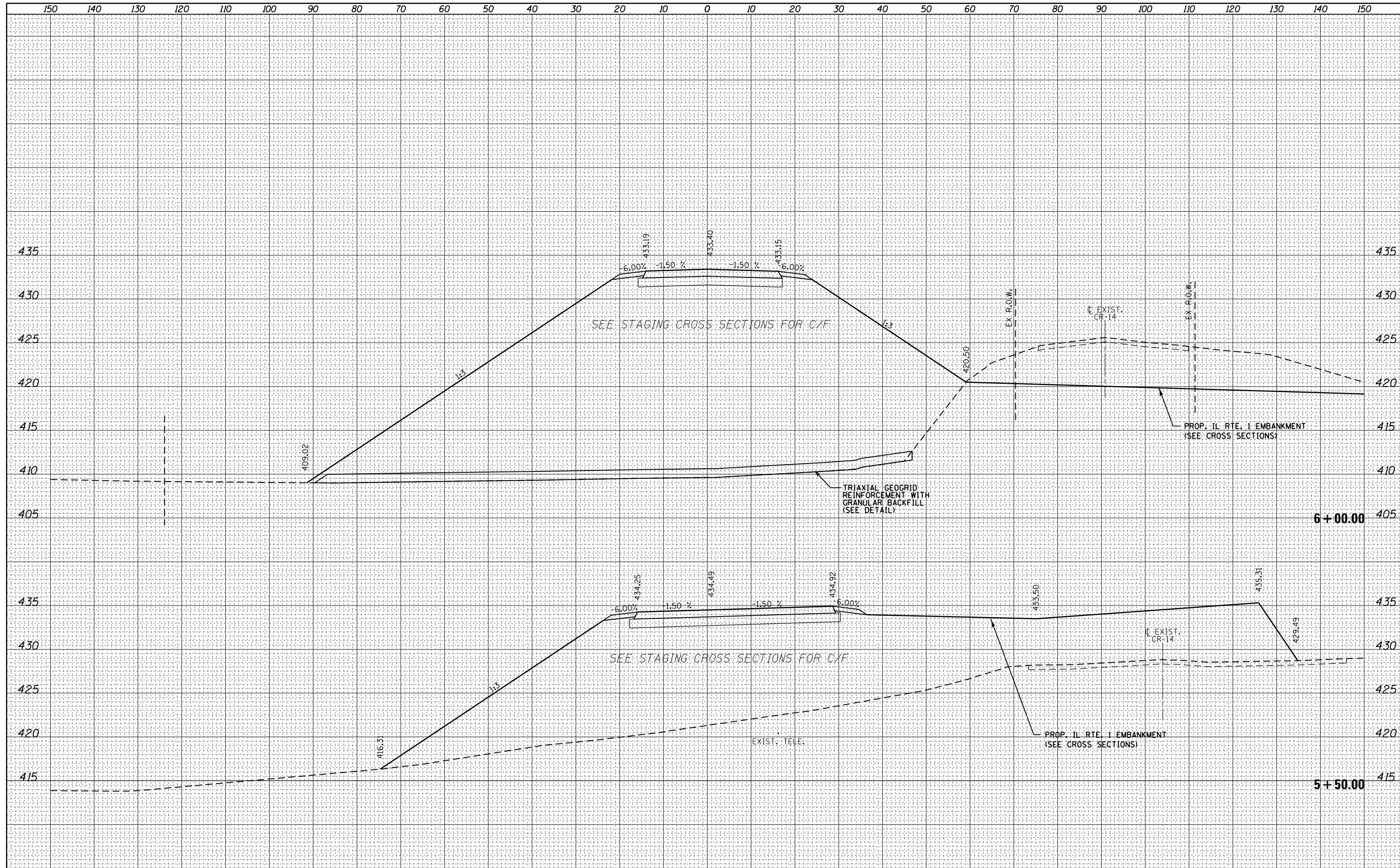
F.A.P. RTE. 332	SECTION (16BR)B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 160
CONTRACT NO. 74180				ILLINOIS FED. AID PROJECT





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

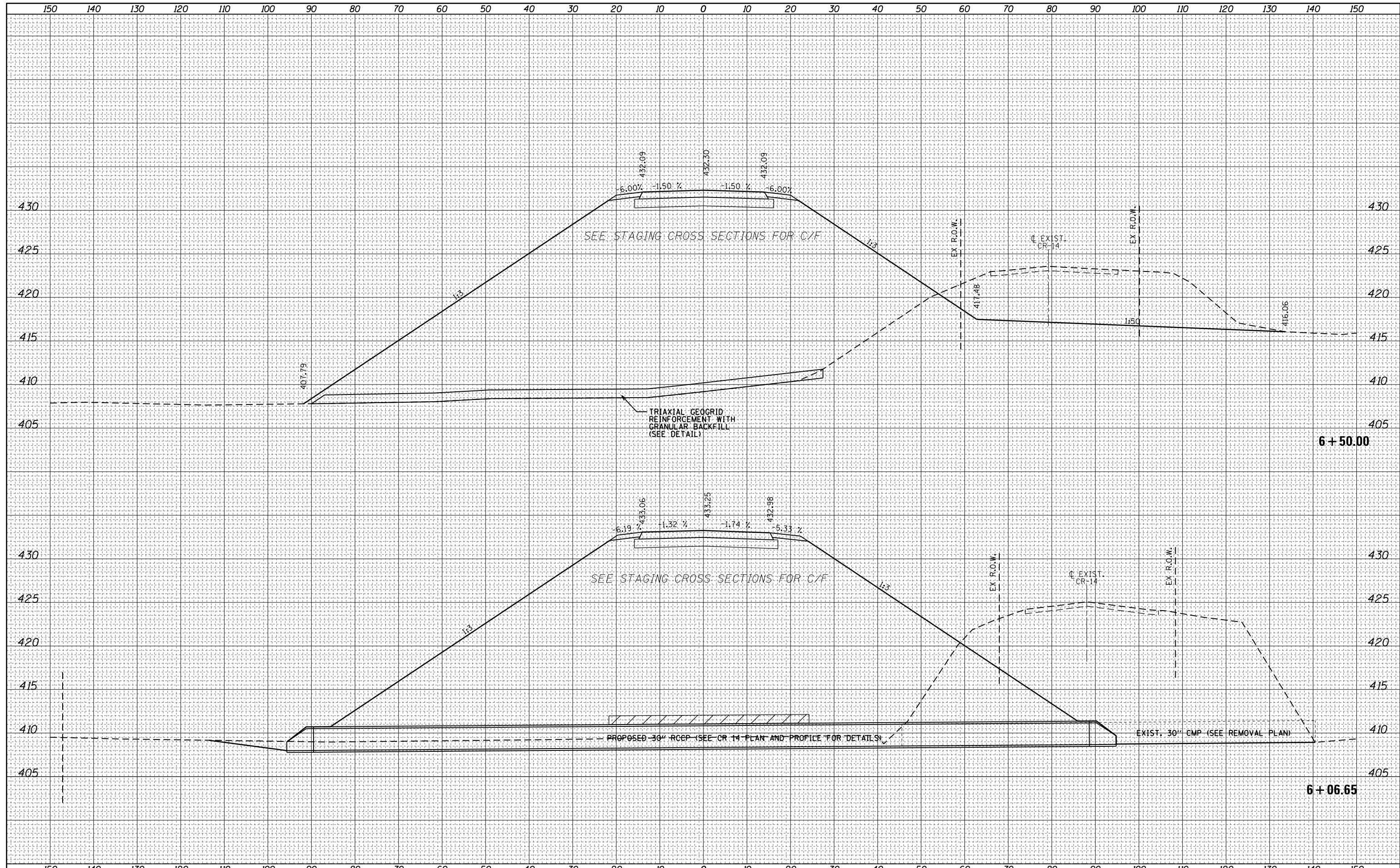
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



FILE NAME = D774180-sht-XSC-CR14.dgn	USER NAME = steffennik	DESIGNED - JWS	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS COUNTY ROAD 14</b>	F.A.P. RTE. 332	SECTION (16BR1B-1)	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 162
	PLOT SCALE = 20.0000' / in.	CHECKED - SJK	REVISED -			CONTRACT NO. 74180				
	PLOT DATE = 8/5/2016	DATE - 04-2012	REVISED -			SCALE: 1" = 10'	SHEET NO. 1 OF 6 SHEETS	STA. 5+50.00 TO STA. 6+00.00	ILLINOIS FED. AID PROJECT	

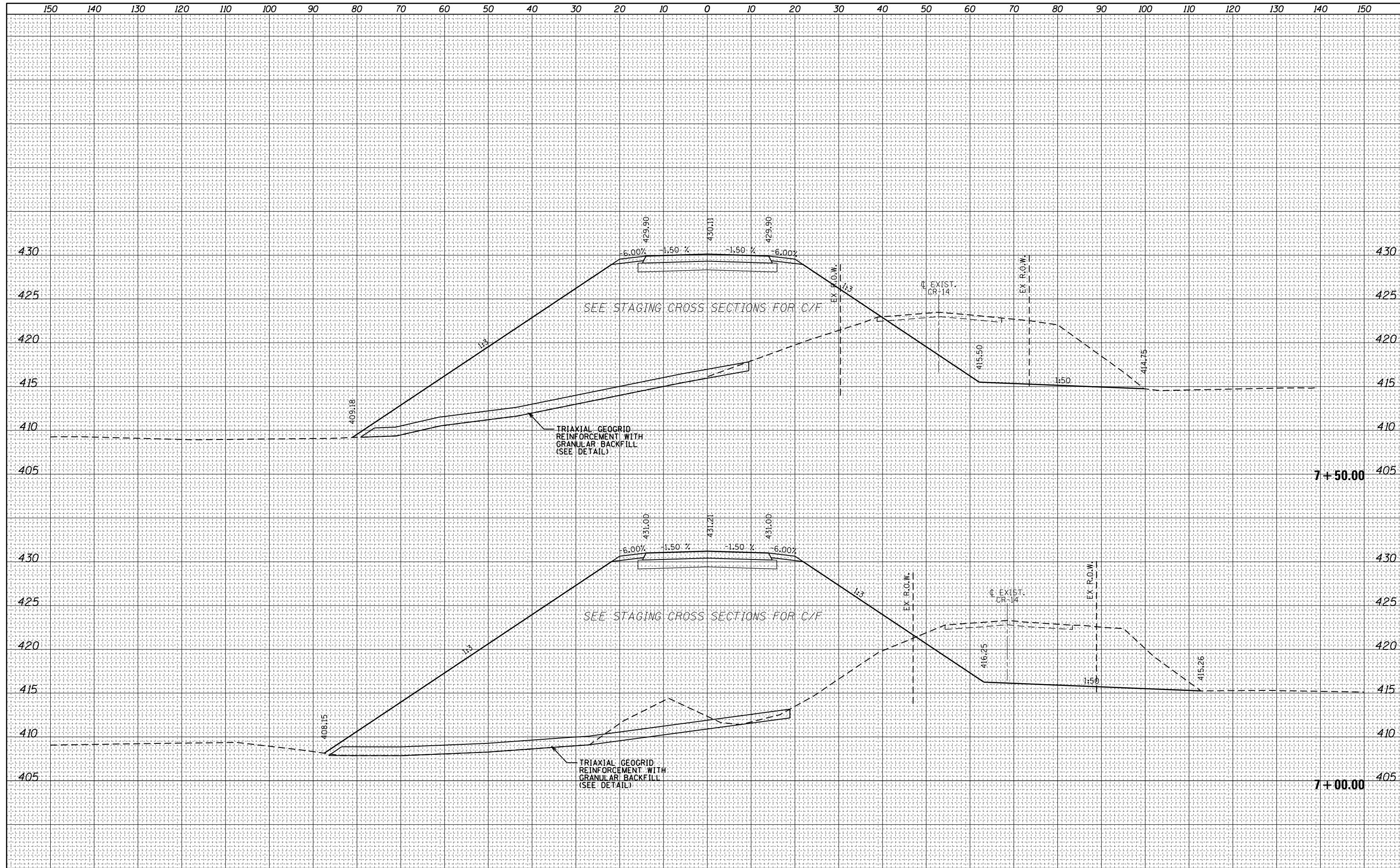
DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



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

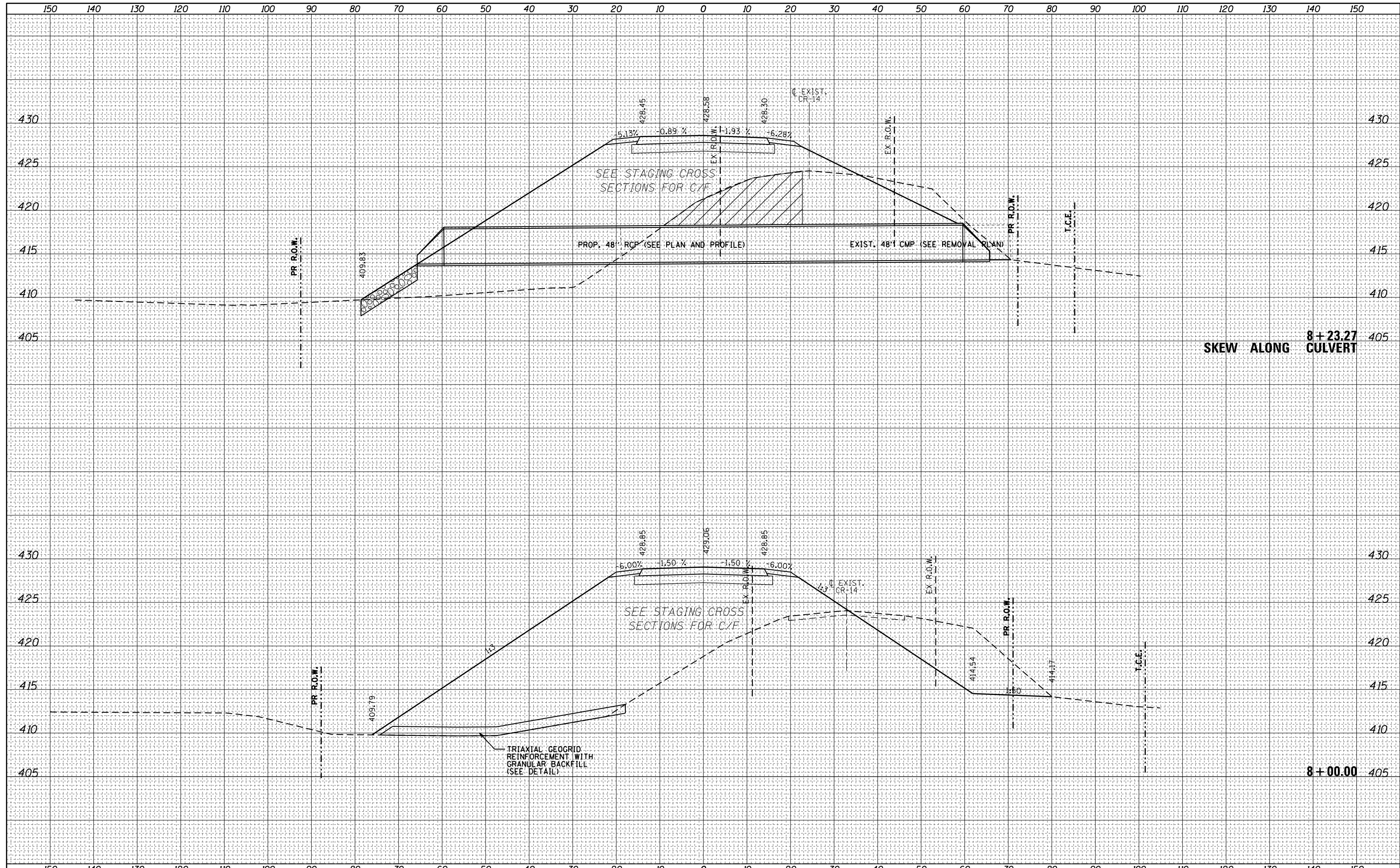
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



FILE NAME = D774180-sht-XSC-CR14.dgn	USER NAME = steffernik	DESIGNED - JWS	REVISIED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS COUNTY ROAD 14</b>			F.A.P. RTE. 332	SECTION (16BR)B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 164	
	PLOT SCALE = 20.0000' / in.	CHECKED - SJK	REVISIED -		SCALE: 1" = 10'	SHEET NO. 3	OF 6 SHEETS	STA. 7+50.00	TO STA. 8+00.00	CONTRACT NO. 74180			
	PLOT DATE = 8/5/2016	DATE - 04-2012	REVISIED -		ILLINOIS FED. AID PROJECT								

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

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



FILE NAME = D774180-sht-XSC-CR14.dgn

USER NAME = steffennk	DESIGNED - JWS	REVISED -
	DRAWN - JWS/KMO	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - SJK	REVISED -
PLOT DATE = 8/5/2016	DATE - 04-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

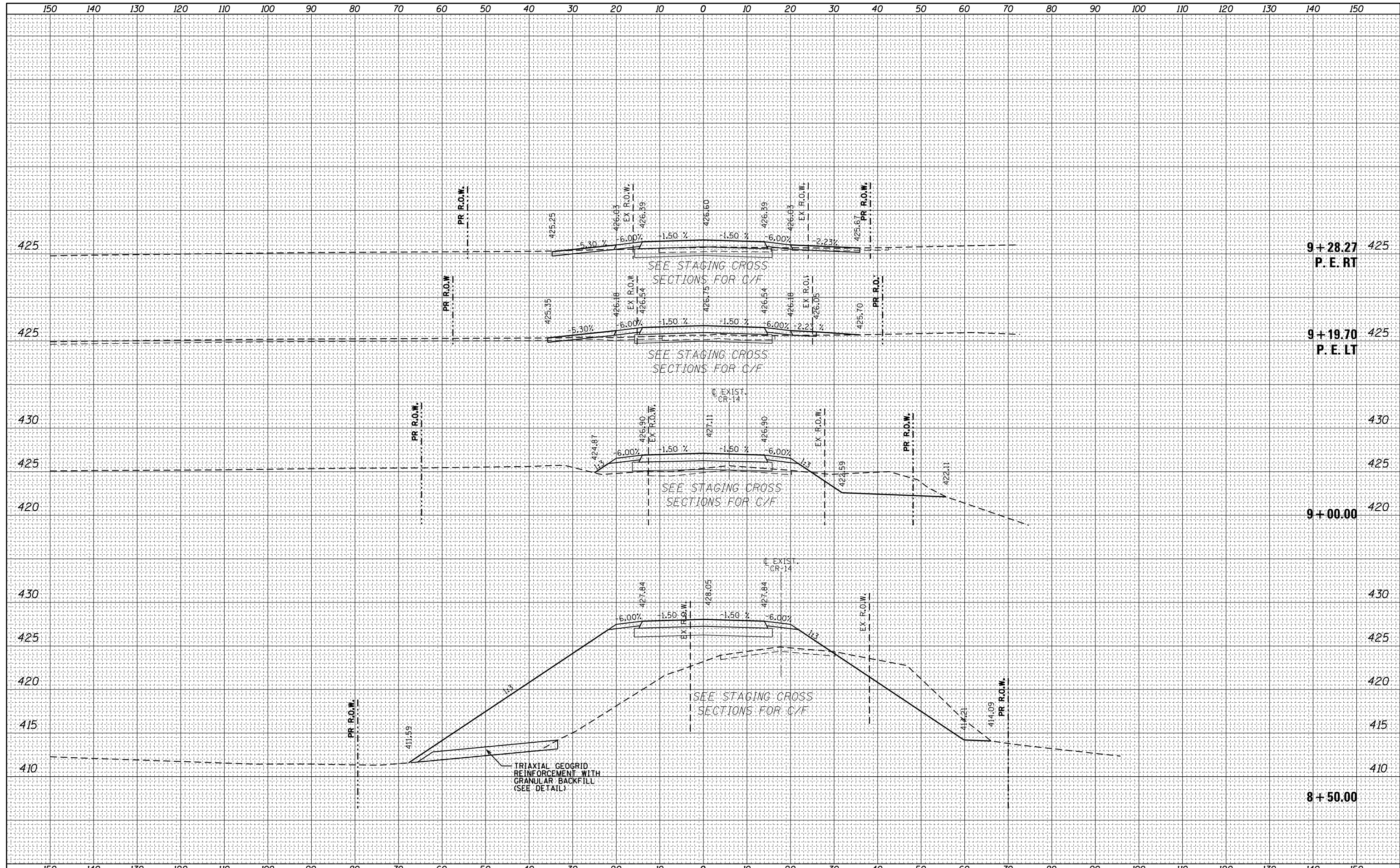
**CROSS SECTIONS  
COUNTY ROAD 14**

SCALE: 1" = 10'    SHEET NO. 4 OF 6 SHEETS    STA.    TO STA.

F.A.P. RTE. 332	SECTION (16BR)B-1	COUNTY LAWRENCE	TOTAL SHEETS 167	SHEET NO. 165
CONTRACT NO. 74180				ILLINOIS FED. AID PROJECT

DATE	
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ORIGINAL SURVEY	
SURVEYED	
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TEMPLATE	
NOTE BOOK	
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DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS	
CHECKED	
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FILE NAME =	USER NAME = steffennk	DESIGNED - JWS	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>COUNTY ROAD 14</b>	F.A.P. RTE. = 332	SECTION = (16BR)B-1	COUNTY = LAWRENCE	TOTAL SHEETS = 167	SHEET NO. = 166	
D774180-sht-XSC-CR14.dgn	PLOT SCALE = 20.0000' / in.	DRAWN - JWS/KMO	REVISED -			SCALE: 1" = 10'	SHEET NO. 5 OF 6 SHEETS	STA. 8+50.00 TO STA. 9+28.27	CONTRACT NO. 74180		
	PLOT DATE = 8/5/2016	CHECKED - SJK	REVISED -			ILLINOIS FED. AID PROJECT					
		DATE - 04-2012	REVISED -								

