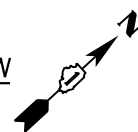


SOUTH APPROACH ELEVATION LOCATION PLAN



WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	8317.21	-40.00	652.03
A	8327.21	-40.00	652.14
B	8337.21	-40.00	652.26
N. End South Appr. Pav't.	8347.21	-40.00	652.37

SB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	8322.75	-20.00	652.49
A	8332.75	-20.00	652.60
B	8342.75	-20.00	652.72
N. End South Appr. Pav't.	8352.75	-20.00	652.83

CL ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	8328.30	0.00	652.85
A	8338.30	0.00	652.97
B	8348.30	0.00	653.08
N. End South Appr. Pav't.	8358.30	0.00	653.19

STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	8332.04	13.50	652.69
A	8342.04	13.50	652.81
B	8352.04	13.50	652.92
N. End South Appr. Pav't.	8362.04	13.50	653.03

NB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	8333.85	20.00	652.62
A	8343.85	20.00	652.73
B	8353.85	20.00	652.84
N. End South Appr. Pav't.	8363.85	20.00	652.95

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	8339.39	40.00	652.28
A	8349.39	40.00	652.39
B	8359.39	40.00	652.50
N. End South Appr. Pav't.	8369.39	40.00	652.60

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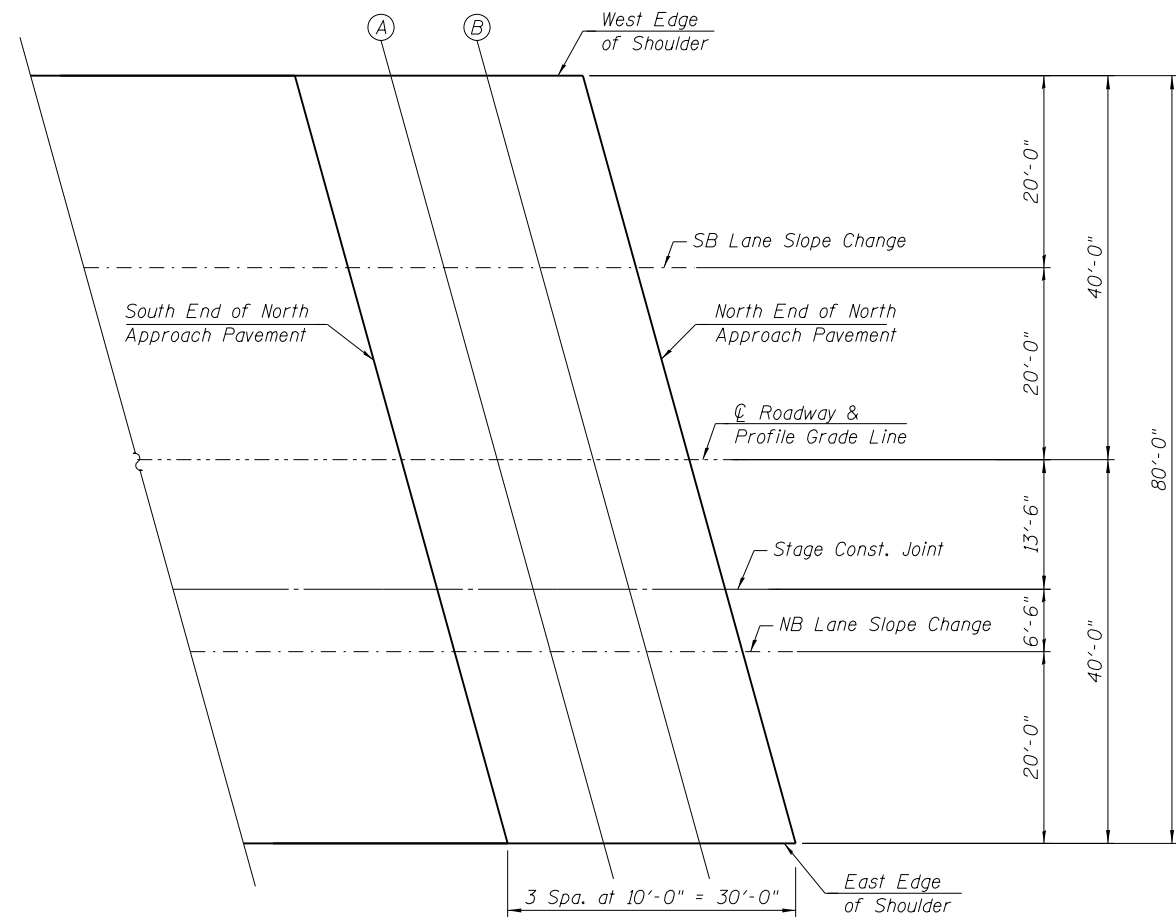
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DRAWN -	LAB	REVISED -	
CHECKED -	MI, MAF	REVISED -	
DATE -	03/18/2016	REVISED -	

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DEPARTMENT OF TRANSPORTATION**

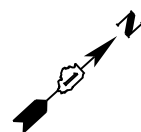
**TOP OF SOUTH APPROACH PAVEMENT ELEVATIONS
STRUCTURE NO. 099-0537**

SHEET NO. S1-12 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	101
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				



NORTH APPROACH ELEVATION LOCATION PLAN



WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	8591.44	-40.00	652.62
A	8601.44	-40.00	652.52
B	8611.44	-40.00	652.41
N. End North Appr. Pav't.	8621.44	-40.00	652.30

SB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	8596.98	-20.00	652.96
A	8606.98	-20.00	652.86
B	8616.98	-20.00	652.75
N. End North Appr. Pav't.	8626.98	-20.00	652.63

☉ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	8602.53	0.00	653.21
A	8612.53	0.00	653.10
B	8622.53	0.00	652.99
N. End North Appr. Pav't.	8632.53	0.00	652.86

STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	8606.27	13.50	652.97
A	8616.27	13.50	652.86
B	8626.27	13.50	652.74
N. End North Appr. Pav't.	8636.27	13.50	652.61

NB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	8608.08	20.00	652.85
A	8618.08	20.00	652.74
B	8628.08	20.00	652.62
N. End North Appr. Pav't.	8638.08	20.00	652.49

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	8613.62	40.00	652.39
A	8623.62	40.00	652.27
B	8633.62	40.00	652.15
N. End North Appr. Pav't.	8643.62	40.00	652.02

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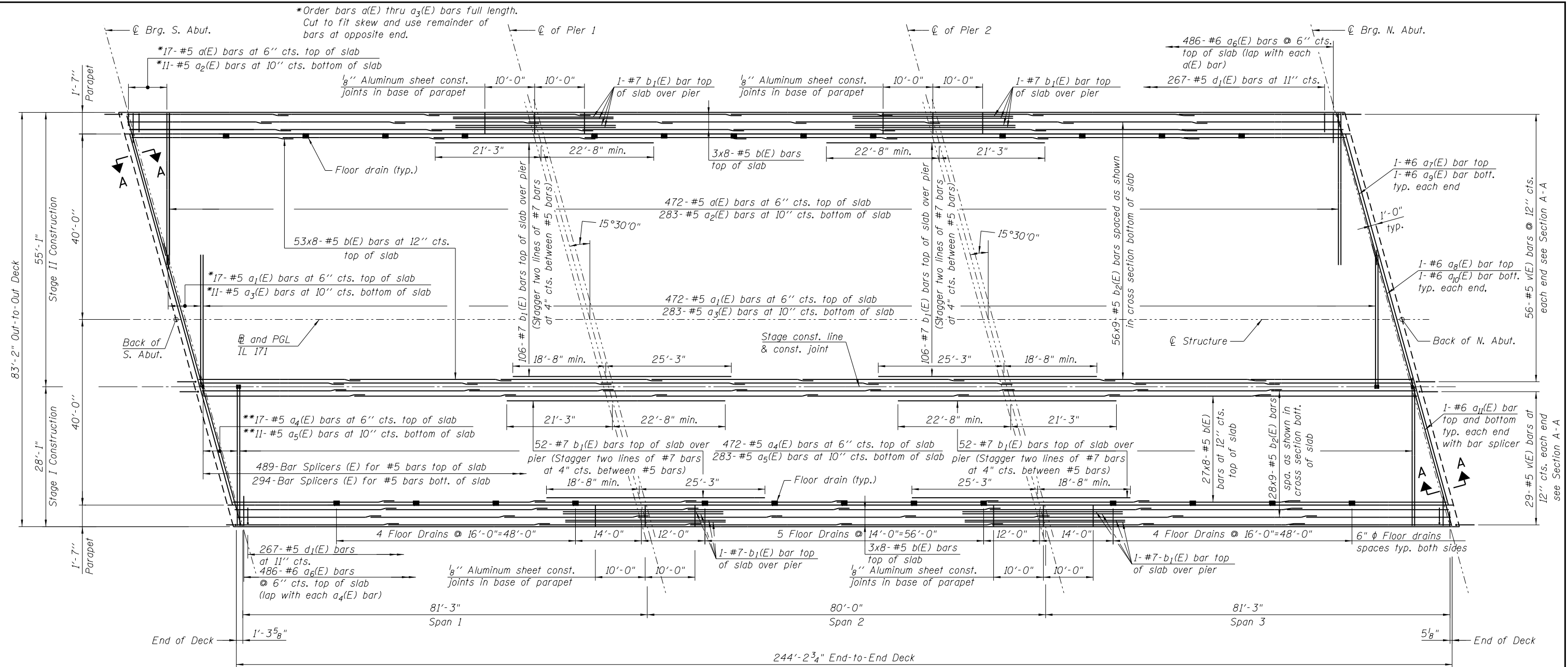
STATE OF ILLINOIS
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TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 099-0537

SHEET NO. S1-13 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	102

CONTRACT NO. 60H21
ILLINOIS FED. AID PROJECT

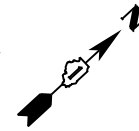


NOTES:

1. For superstructure details, floor drains, minimum bar laps and Bill of Material, see Sheet S1-19.
2. Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths per line.
3. For deck cross section, see Sheet S1-15.
4. For abutment diaphragm elevations and sections, see Sheet S1-16.
5. For pier diaphragm elevations and sections, see Sheet S1-17.
6. For Type F concrete parapet elevations, see Sheet S1-18.
7. Space reinforcement to avoid floor drains.
8. For Section A-A, see Sheet S1-16.
9. For bar splicer detail, see Sheet S1-38.
10. For Conduit Embedded in Structure quantities and details, see Roadway Plans.

**Order bars a₄(E) and a₅(E) bars full length. Cut to fit skew and use remainder of bars at opposite end.

DECK PLAN



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
STRUCTURE NO. 099-0537

SHEET NO. S1-14 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	103
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				

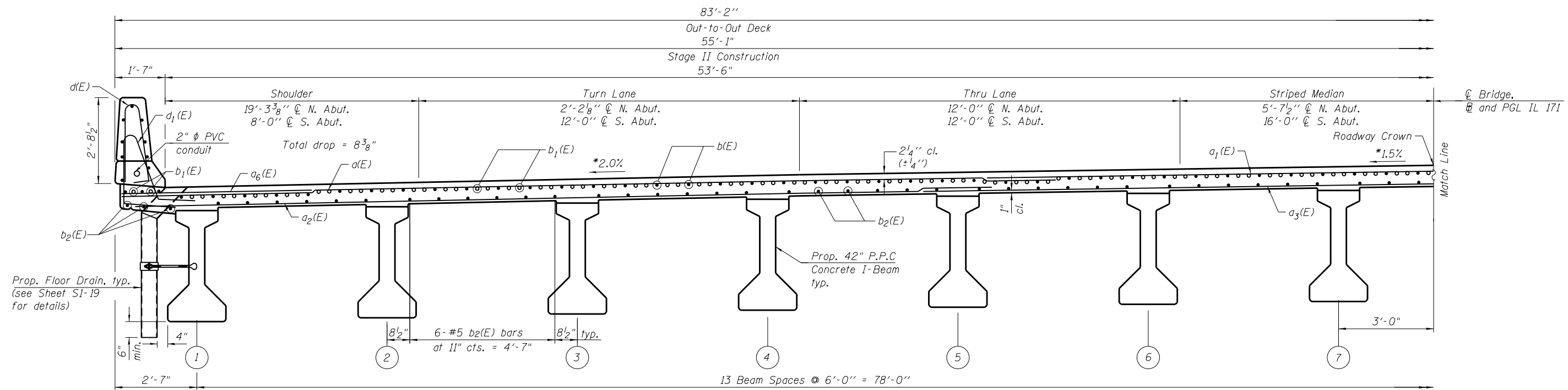
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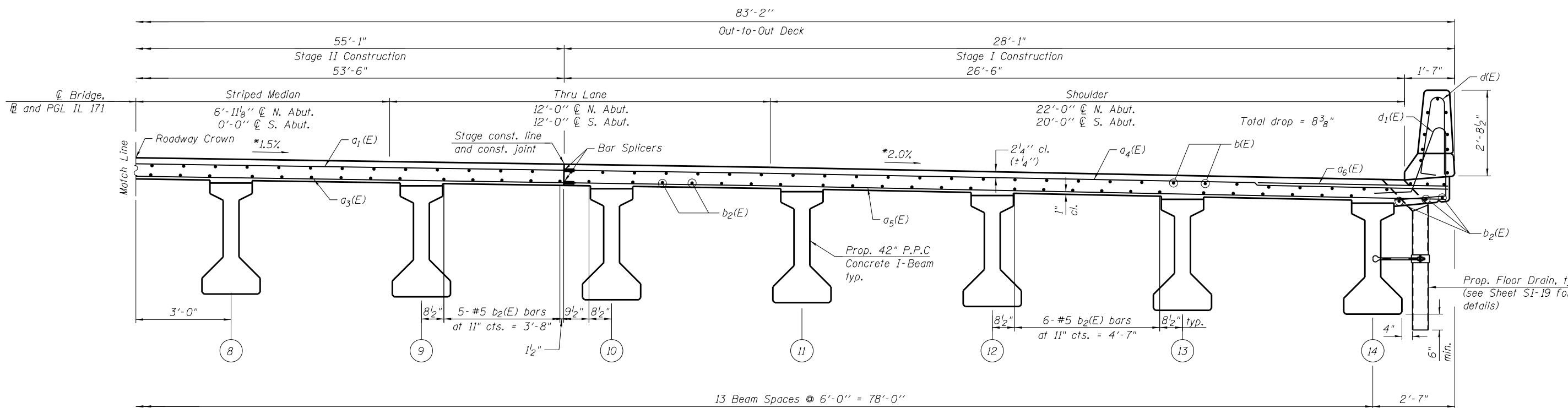
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PLOT DATE = 3/17/2016



CROSS SECTION (NEAR PIER)

Left of bridge centerline looking North



CROSS SECTION (NEAR MIDSPAN)

Right of bridge centerline looking North

NOTES:

- For notes, see Sheet S1-14.
 - For 42" P.P.C. Concrete I-beams details, see Sheets S1-24 thru S1-28.
- *1.5% cross slope will extend 20' left and right of proposed centerline. The cross slope of remaining portion of the deck will be 2%.

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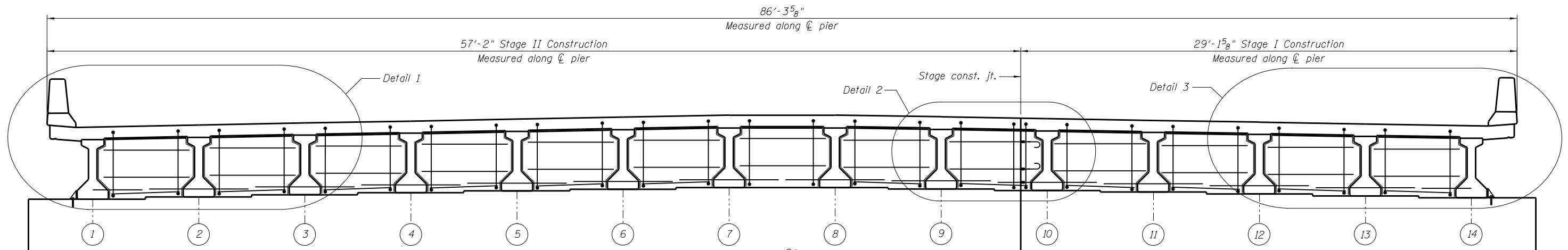
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DRAWN -	WM, LAB	REVISED -	
CHECKED -	MI, MAI	REVISED -	
DATE -	03/18/2016	REVISED -	

STATE OF ILLINOIS
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DECK CROSS SECTION
STRUCTURE NO. 099-0537

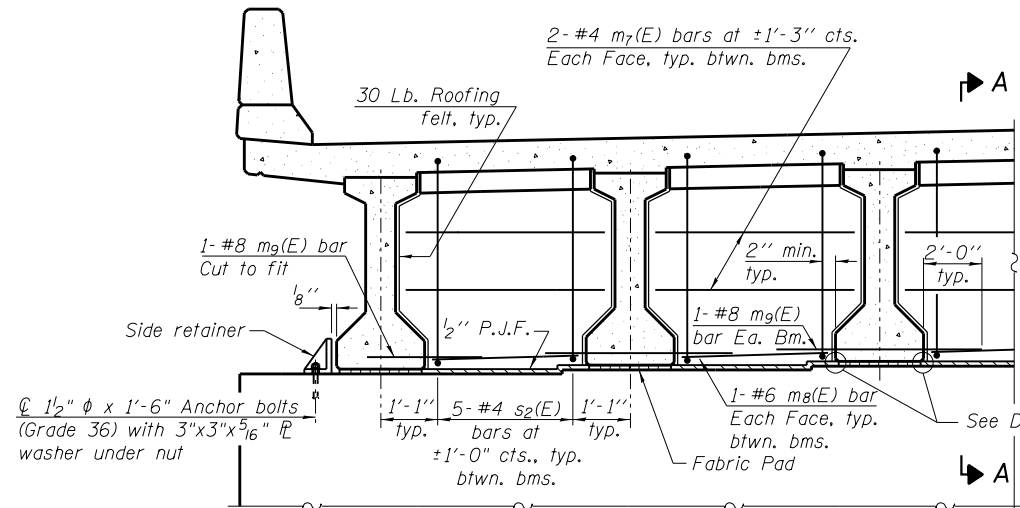
SHEET NO. S1-15 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	104
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	

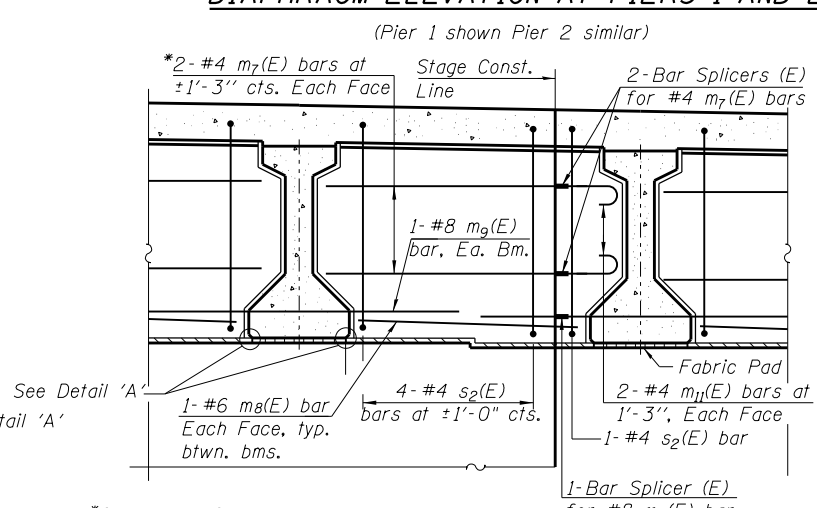


DIAPHRAGM ELEVATION AT PIERS 1 AND 2

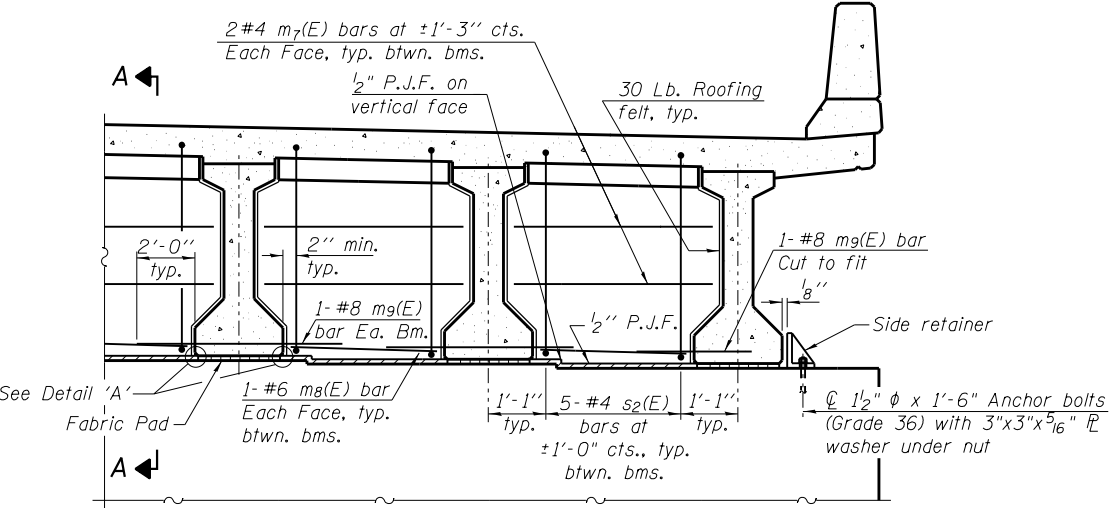
(Pier 1 shown Pier 2 similar)



DETAIL 1



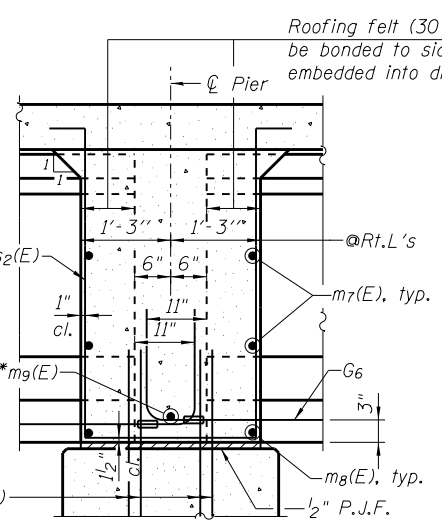
DETAIL 2



DETAIL 3

NOTES

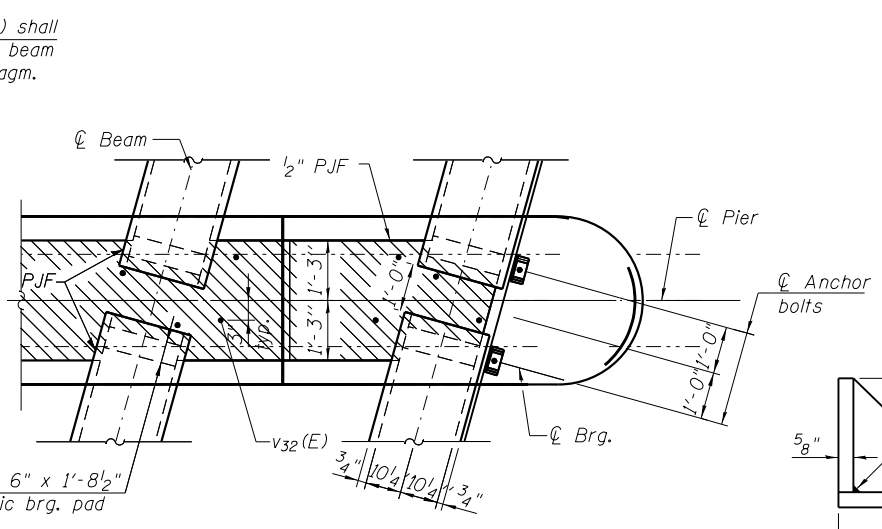
1. For minimum bar laps, bar diagrams and Bill of Material, see Sheet S1-19.
2. Reinforcement bars in diaphragms are included with Concrete Superstructure on Sheet S1-19.
3. Concrete in diaphragms are included with Concrete Superstructure on Sheet S1-19.
4. The s₂(E) bars shall be placed parallel to the beams.
5. Spacing for s₂(E) bars shall be at right angles to the beams.
6. Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
7. The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.
8. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
9. Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.
10. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified.
11. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
12. Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
13. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



SECTION A-A

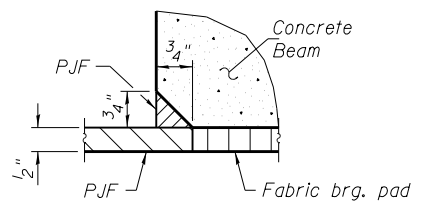
Dimensions along centerline of beam, except as shown.

*Tightly fasten the #8 bars together with No. 9 wire ties.

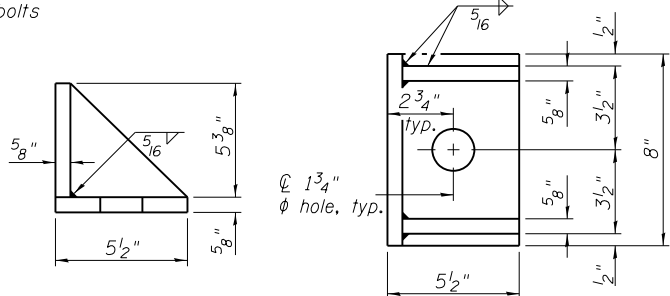


PLAN AT PIER

(Showing bearing pads and P.J.F. details)



DETAIL 'A'



SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

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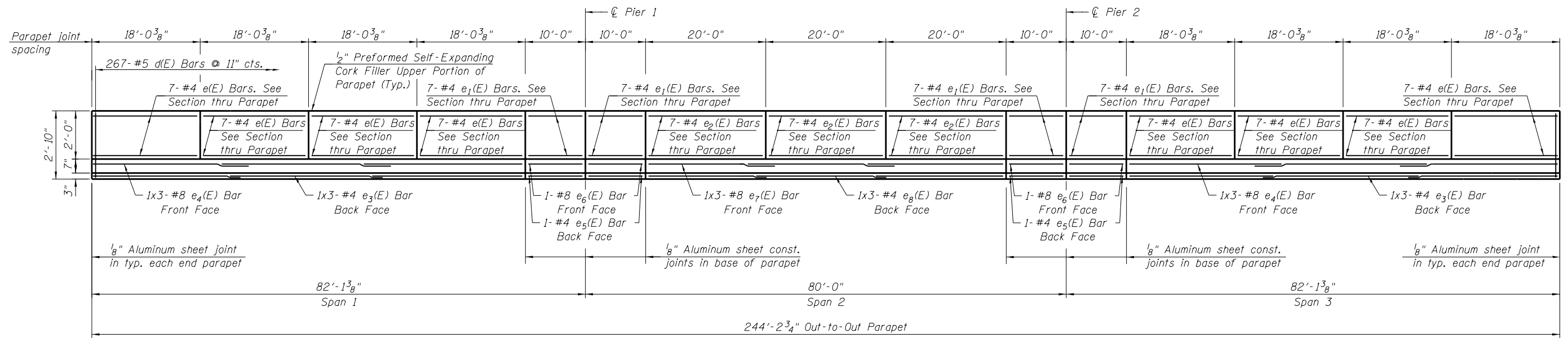
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PIER DIAPHRAGM ELEVATIONS AND SECTIONS
STRUCTURE NO. 099-0537

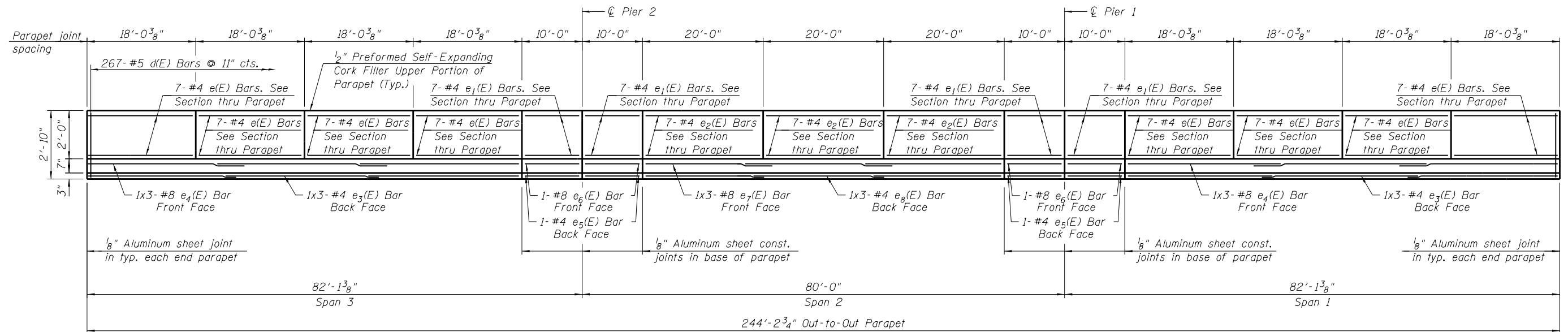
SHEET NO. S1-17 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	106
CONTRACT NO. 60H21				

ILLINOIS FED. AID PROJECT



INSIDE ELEVATION OF WEST PARAPET



INSIDE ELEVATION OF EAST PARAPET

NOTES

1. For notes, see Sheet S1-14.
2. For minimum bar laps, see Sheet S1-19.

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REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPE F CONCRETE PARAPET ELEVATIONS
STRUCTURE NO. 099-0537**

SHEET NO. S1-18 OF 41 SHEETS

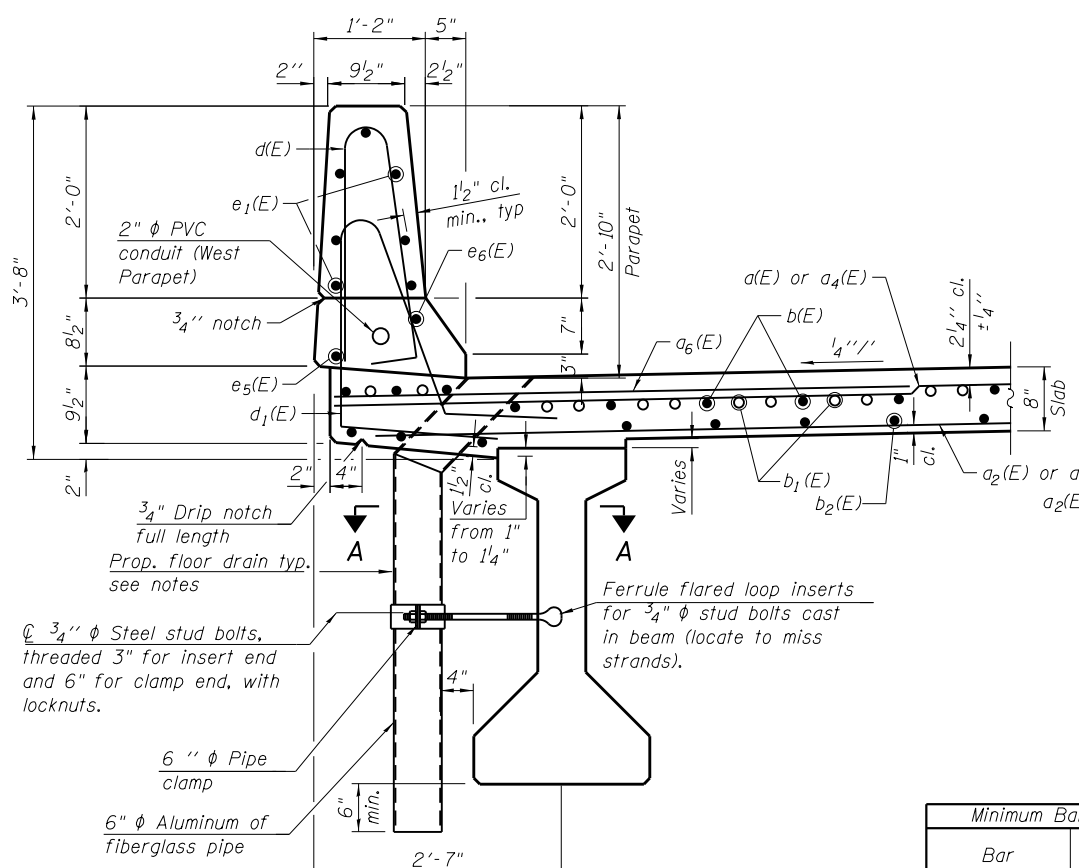
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	107
CONTRACT NO. 60H21				

ILLINOIS FED. AID PROJECT

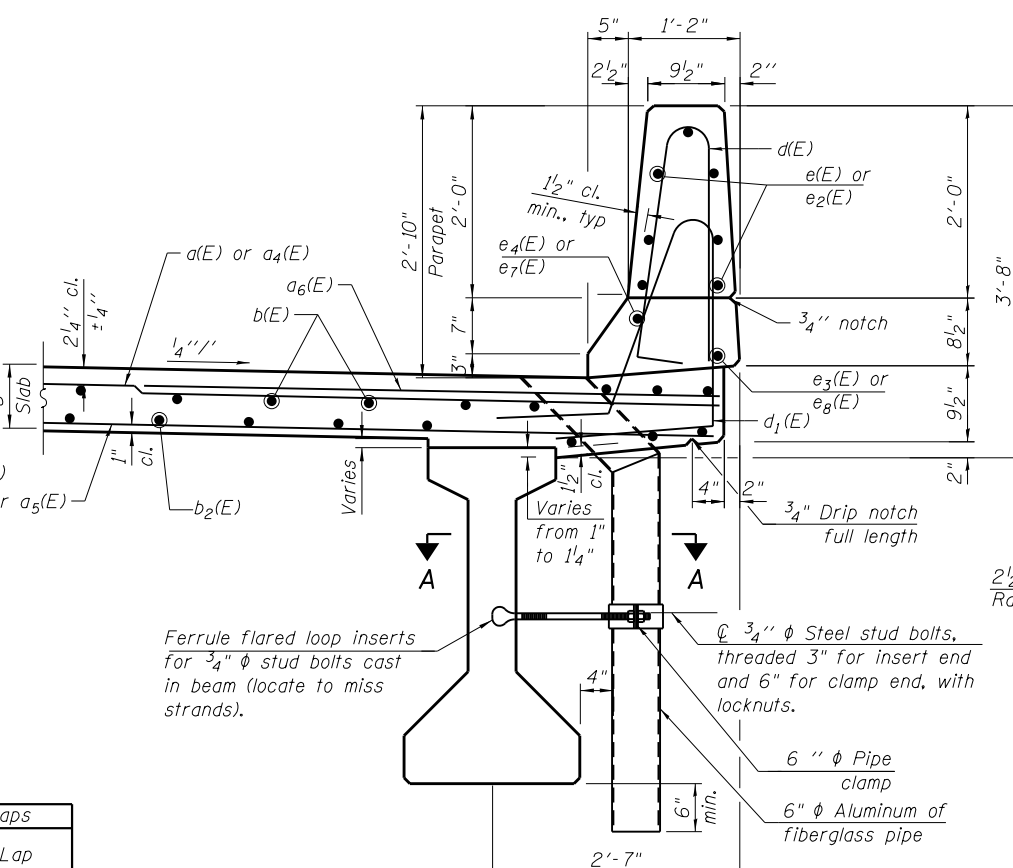
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	489	#5	30'-6"	—
a ₁ (E)	489	#5	27'-6"	—
a ₂ (E)	294	#5	29'-0"	—
a ₃ (E)	294	#5	29'-0"	—
a ₄ (E)	489	#5	27'-10"	—
a ₅ (E)	294	#5	27'-10"	—
a ₆ (E)	972	#6	6'-6"	—
a ₇ (E)	2	#6	32'-4"	—
a ₈ (E)	2	#6	28'-4"	—
a ₉ (E)	2	#6	30'-4"	—
a ₁₀ (E)	2	#6	30'-4"	—
a ₁₁ (E)	4	#6	28'-11"	—
b(E)	688	#5	33'-4"	—
b ₁ (E)	322	#7	43'-11"	—
b ₂ (E)	756	#5	30'-0"	—
d(E)	534	#5	5'-7"	⌋
d ₁ (E)	534	#5	7'-8"	⌋
e(E)	112	#4	17'-9"	—
e ₁ (E)	56	#4	9'-9"	—
e ₂ (E)	42	#4	19'-9"	—
e ₃ (E)	12	#4	25'-8"	—
e ₄ (E)	12	#8	28'-5"	—
e ₅ (E)	8	#4	9'-9"	—
e ₆ (E)	8	#8	9'-9"	—
e ₇ (E)	6	#8	24'-5"	—
e ₈ (E)	6	#4	21'-8"	—
m(E)	10	#6	28'-10"	—
m ₁ (E)	78	#6	5'-5"	—
m ₂ (E)	12	#6	2'-2"	—
m ₃ (E)	26	#6	4'-0"	—
m ₄ (E)	4	#6	1'-5"	—
m ₅ (E)	56	#5	4'-0"	—
m ₆ (E)	20	#6	30'-4"	—
m ₇ (E)	104	#4	5'-5"	—
m ₈ (E)	52	#6	4'-0"	—
m ₉ (E)	28	#8	5'-10"	—
m ₁₀ (E)	6	#6	1'-9"	⌋
m ₁₁ (E)	8	#4	1'-7"	⌋
s(E)	142	#5	9'-1"	⌋
s ₁ (E)	142	#5	11'-5"	⌋
s ₂ (E)	130	#4	11'-5"	⌋
v(E)	170	#5	4'-2"	⌋
Floor Drains	EACH		26	
Concrete Superstructure	CU YD		692.2	
Bridge Deck Grooving	SQ YD		2,117	
Protective Coat	SQ YD		2,389	
Reinforcement Bars,	POUND		177,320	
Epoxy Coated**				

** All reinforcement bars in the superstructure and approaches shall be textured epoxy coated reinforcement bars. See Special Provisions



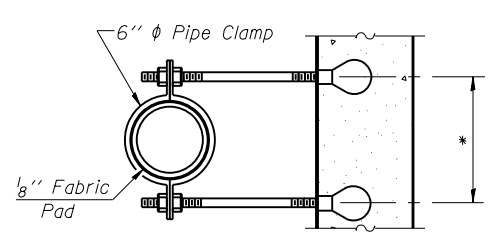
SECTION THRU PARAPET NEAR PIER



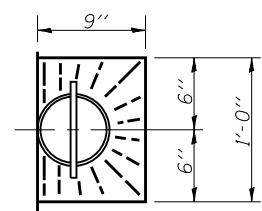
SECTION THRU PARAPET NEAR MIDSPAN

Minimum Bar Laps

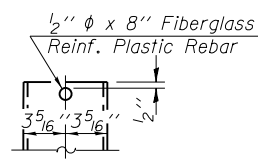
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"



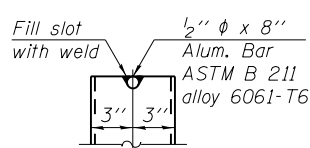
SECTION A-A
*Dimension as required by Pipe Clamp



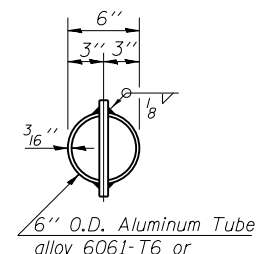
TOP PLAN



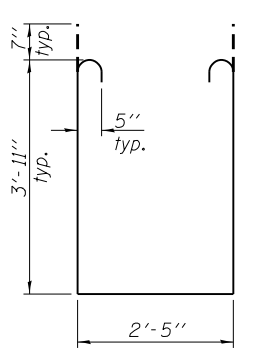
FIBERGLASS PIPE



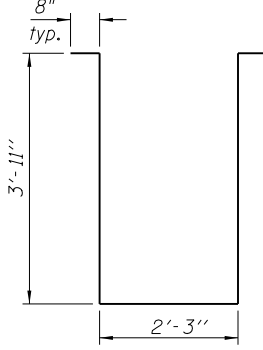
ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)

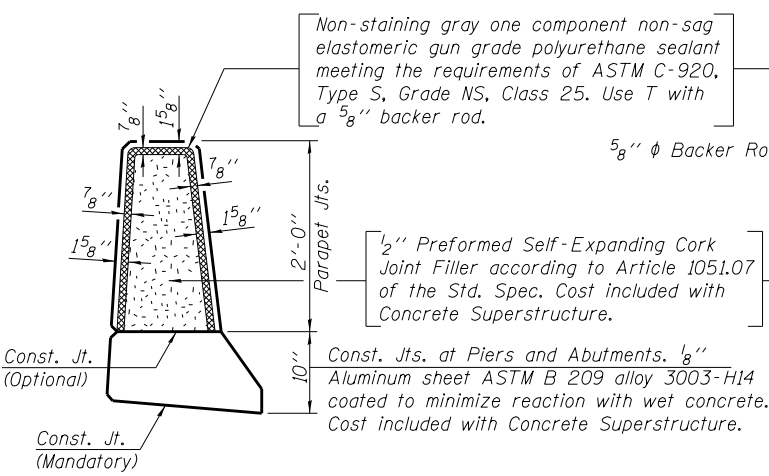


BAR s₁(E)

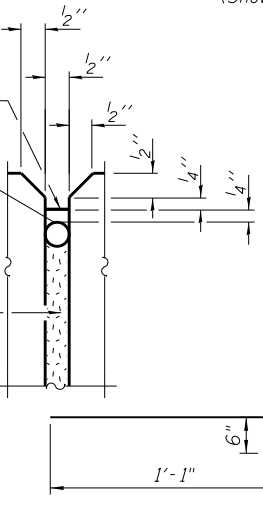


BAR s₂(E)

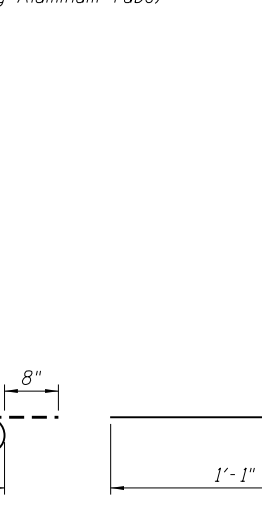
- NOTES:**
- Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
 - The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
 - The clamping device and inserts shall be galvanized according to AASHTO M 232. Cost of clamping device and inserts included with Floor Drains.



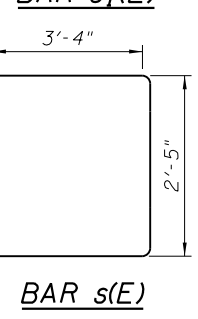
PARAPET JOINT DETAILS



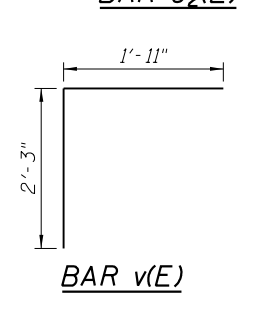
BAR m₁₀(E)



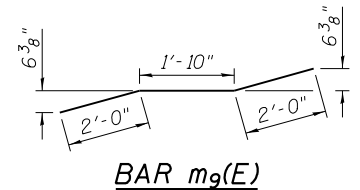
BAR m₁₁(E)



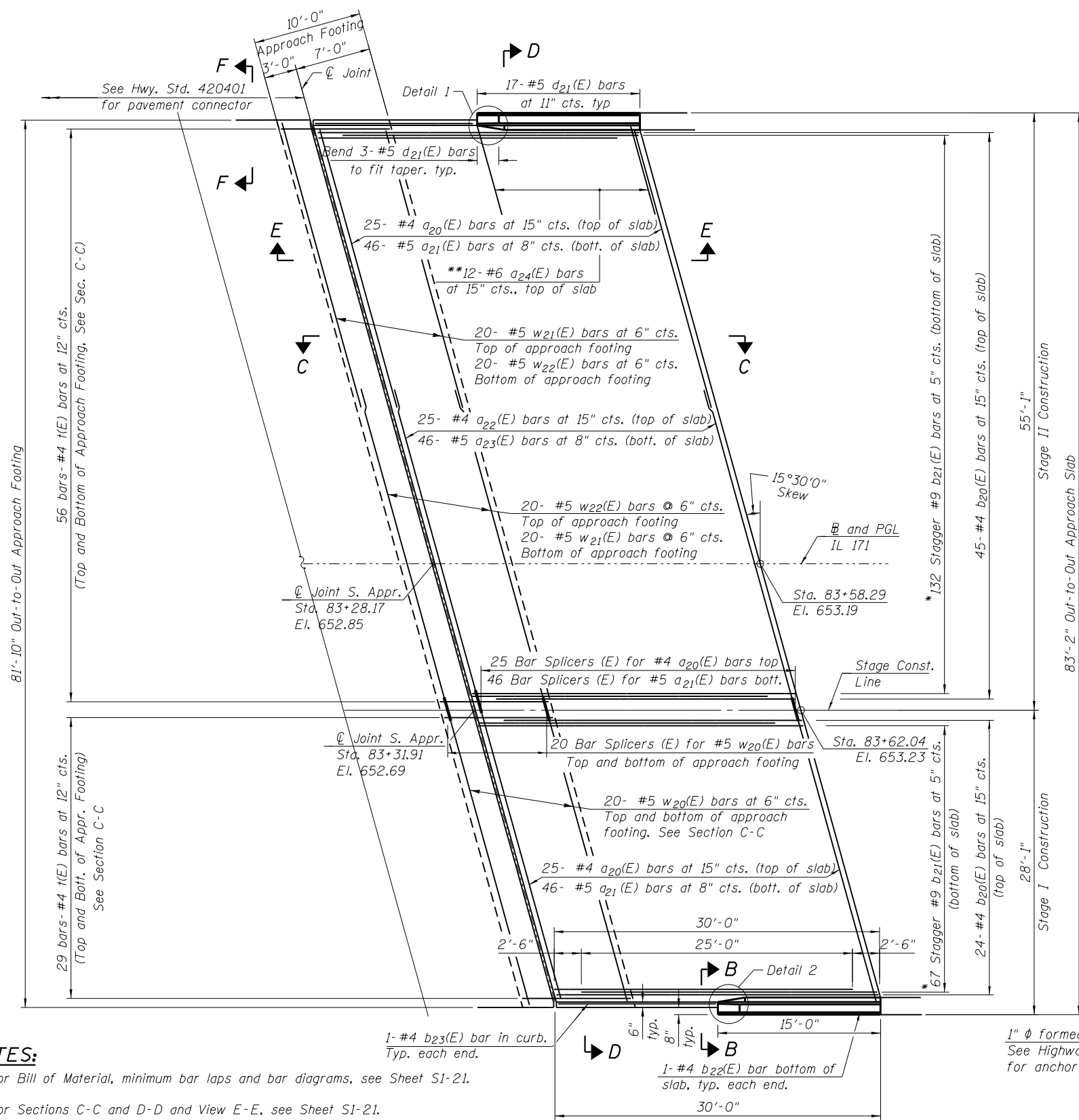
BAR s(E)



BAR v(E)



BAR m₉(E)



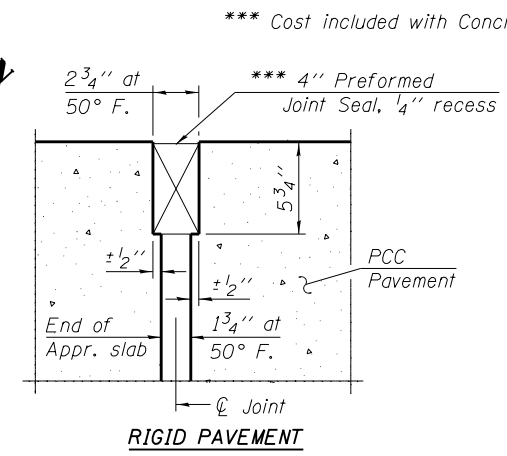
SOUTH APPROACH PLAN

NOTES:

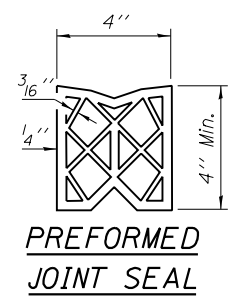
1. For Bill of Material, minimum bar laps and bar diagrams, see Sheet S1-21.
2. For Sections C-C and D-D and View E-E, see Sheet S1-21.
3. $a_{20}(E)$, $a_{21}(E)$, $a_{22}(E)$, $a_{23}(E)$ and $a_{24}(E)$ bar spacings measured along \varnothing Roadway.
4. The junction box shall only be installed when indicated on the plans or as directed by the Engineer to facilitate the installation of unit duct into the conduit embedded in the parapet.
5. The junction box shall be paid for at the unit price for junction box, stainless steel, embedded in structure, 12"x8"x6". See Roadway Plans.
6. The exact location of the junction box shall be determined by the Engineer.

* Tilt #9 $b_{21}(E)$ bars as required to maintain clearance.
 ** Space between $a_{20}(E)$ bars, typ. each parapet.

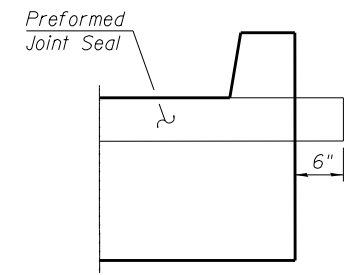
7. Adjust reinforcement bars to clear junction box.
8. For Conduit Embedded in Structure and Junction Box quantities, see Roadway Plans.



DETAIL A

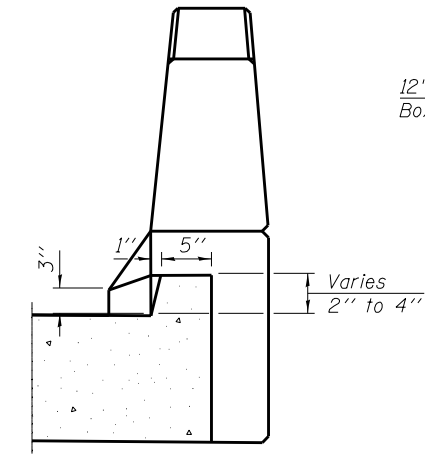


PREFORMED JOINT SEAL



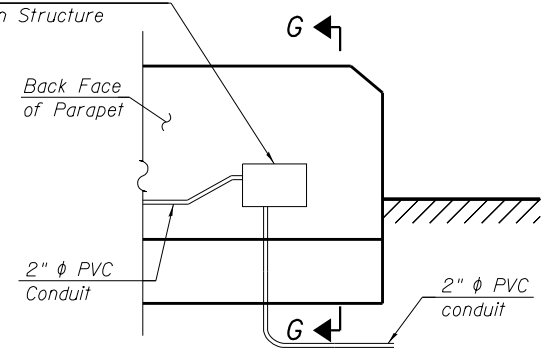
SECTION F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



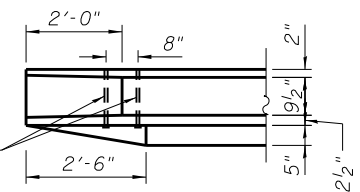
SECTION B-B

12"x8"x6" Stainless Steel Junction Box Embedded in Structure

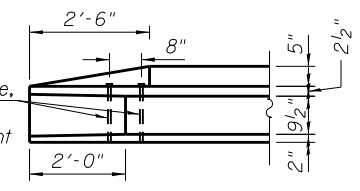


JUNCTION BOX EMBEDDED IN WEST PARAPET

(Looking at Back Face of Parapet)

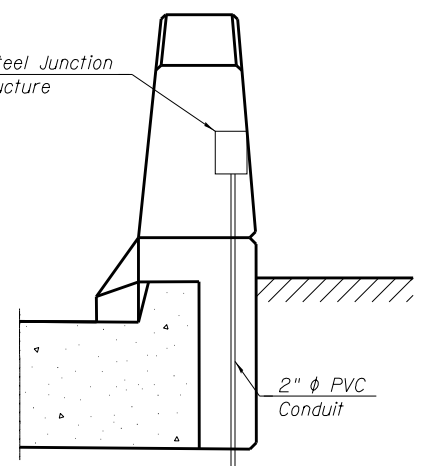


PARAPET DETAIL 1



PARAPET DETAIL 2

12"x8"x6" Stainless Steel Junction Box Embedded in Structure



SECTION G-G

3/28/2016

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DRAWN - HH, PH	REVISED -
CHECKED - MI, MAI	REVISED -
DATE - 03/22/2016	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOUTH APPROACH SLAB
 STRUCTURE NO. 099-0537**

SHEET NO. S1-20 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	109
CONTRACT NO. 60H21				

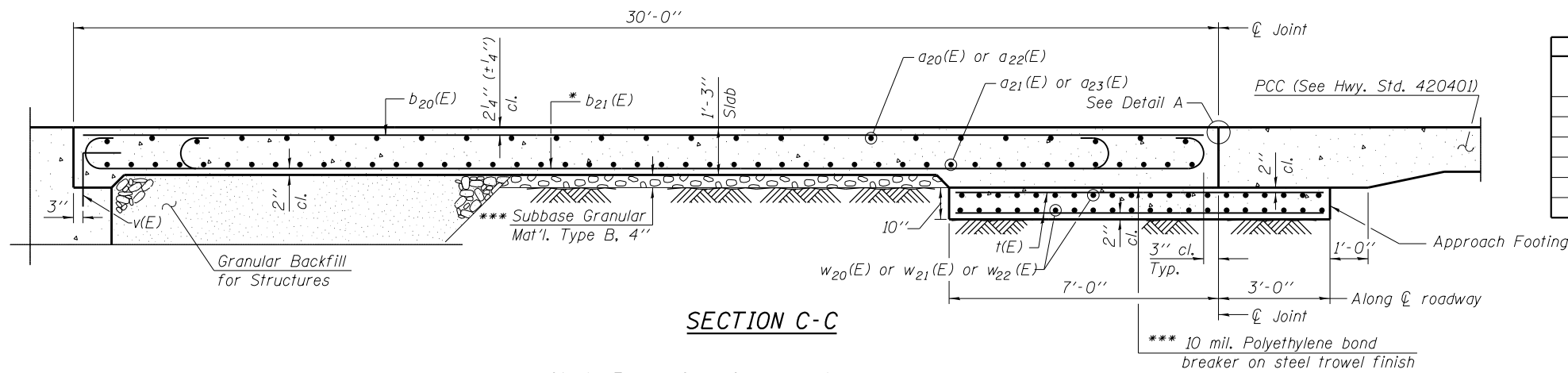
ILLINOIS FED. AID PROJECT

BILL OF MATERIAL

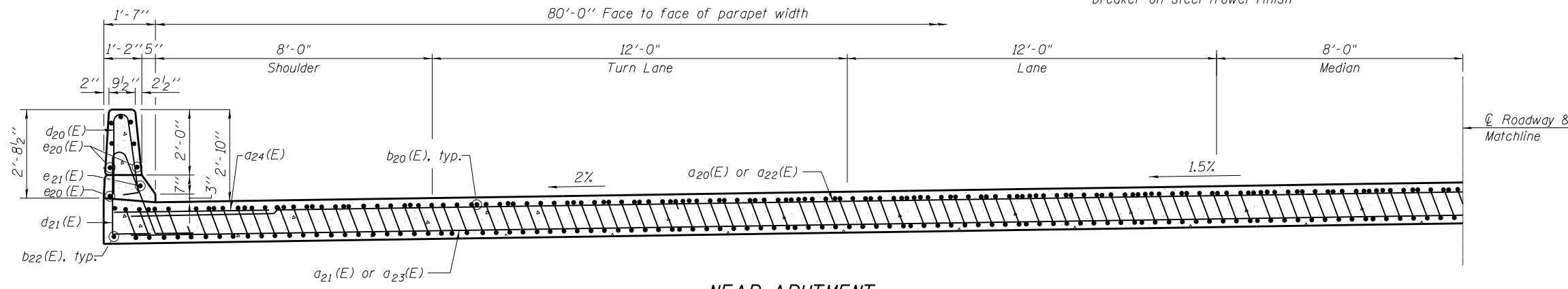
Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

Bar	No.	Size	Length	Shape
a ₂₀ (E)	50	#4	28'-7"	—
a ₂₁ (E)	92	#5	28'-3"	—
a ₂₂ (E)	25	#4	30'-7"	—
a ₂₃ (E)	46	#5	31'-6"	—
a ₂₄ (E)	24	#6	6'-6"	—
b ₂₀ (E)	69	#4	29'-8"	—
b ₂₁ (E)	199	#9	29'-9"	—
b ₂₂ (E)	2	#4	14'-8"	—
b ₂₃ (E)	2	#4	14'-8"	—
d ₂₀ (E)	34	#5	5'-7"	—
d ₂₁ (E)	34	#5	7'-11"	—
e ₂₀ (E)	16	#4	14'-8"	—
e ₂₁ (E)	2	#8	14'-8"	—
t(E)	170	#4	10'-0"	—
w ₂₀ (E)	40	#5	28'-3"	—
w ₂₁ (E)	40	#5	31'-6"	—
w ₂₂ (E)	40	#5	28'-2"	—
Concrete Superstructure (Approach Slab)			CU YD	117.8
Concrete Structures			CU YD	26.3
Concrete Superstructure			CU YD	3.4
Bridge Deck Grooving			SQ YD	264
Protective Coat			SQ YD	280
Reinforcement Bars, Epoxy Coated**			POUND	32,980

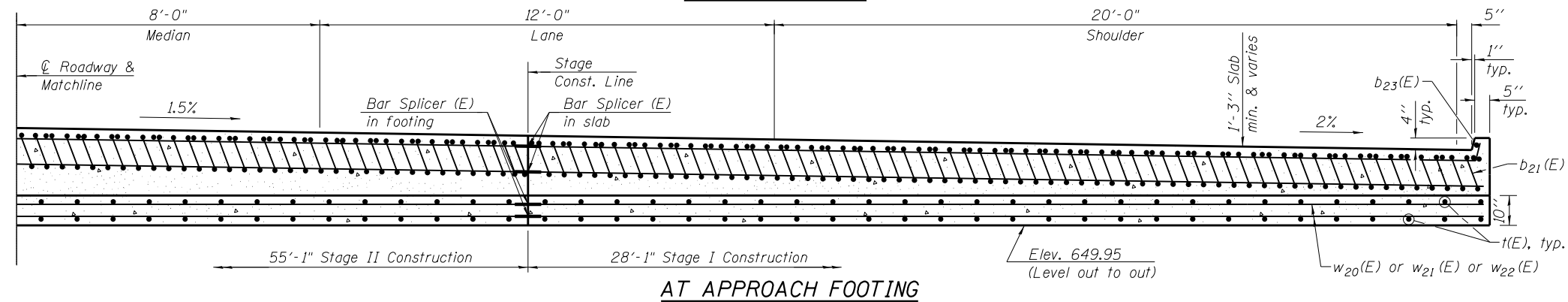
** All reinforcement bars in the superstructure and approaches shall be textured epoxy coated reinforcement bars. See Special Provisions



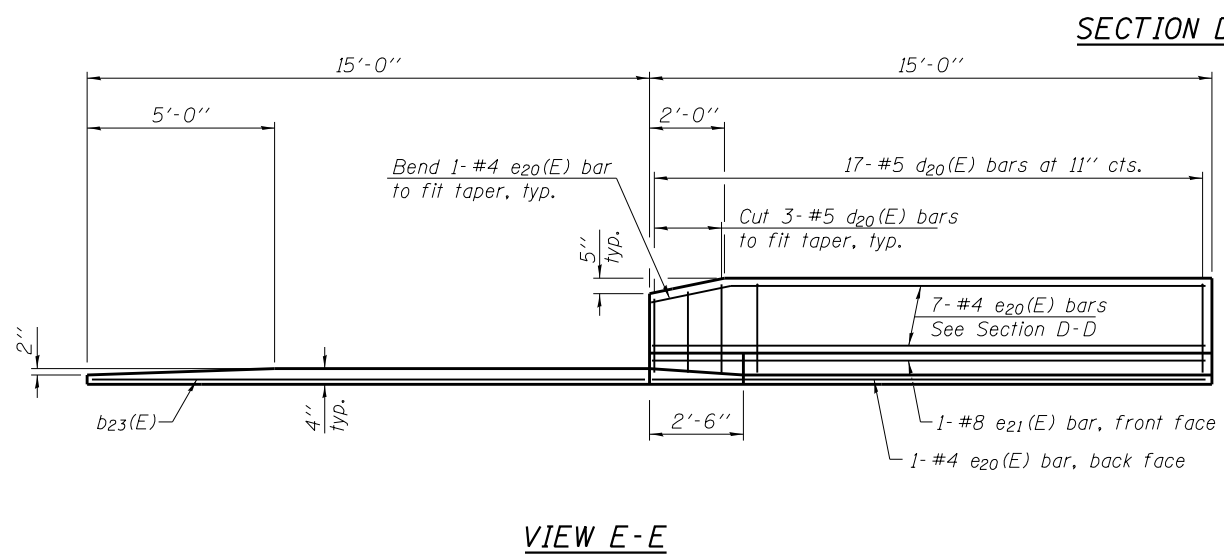
SECTION C-C



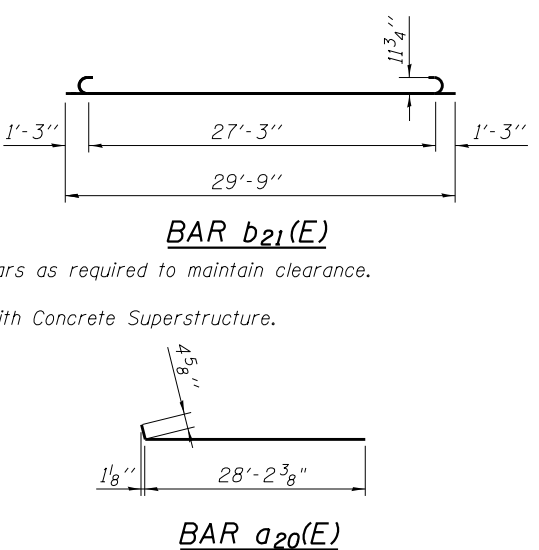
NEAR ABUTMENT



AT APPROACH FOOTING

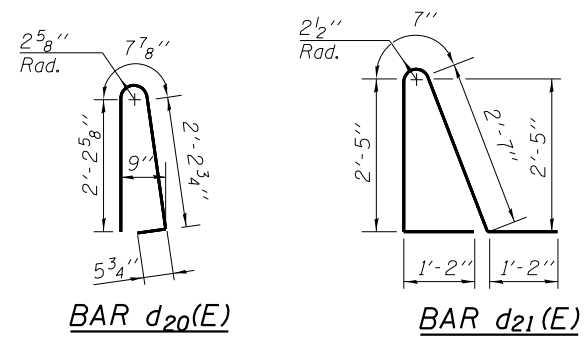


VIEW E-E



BAR b₂₁(E)

BAR a₂₀(E)



BAR d₂₀(E)

BAR d₂₁(E)

NOTES:

- For Detail A and View B-B, see Sheet S1-20.
- 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.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v(E) bar details, see Sheet S1-19.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- For bar splicer details, see Sheet S1-38.
- Cost of excavation for approach footing included with Concrete Structures.
- For Granular Backfill for Structures and drainage treatment details, see Sheet S1-02.
- For additional parapet details, see Sheet S1-18.

4/19/2016

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

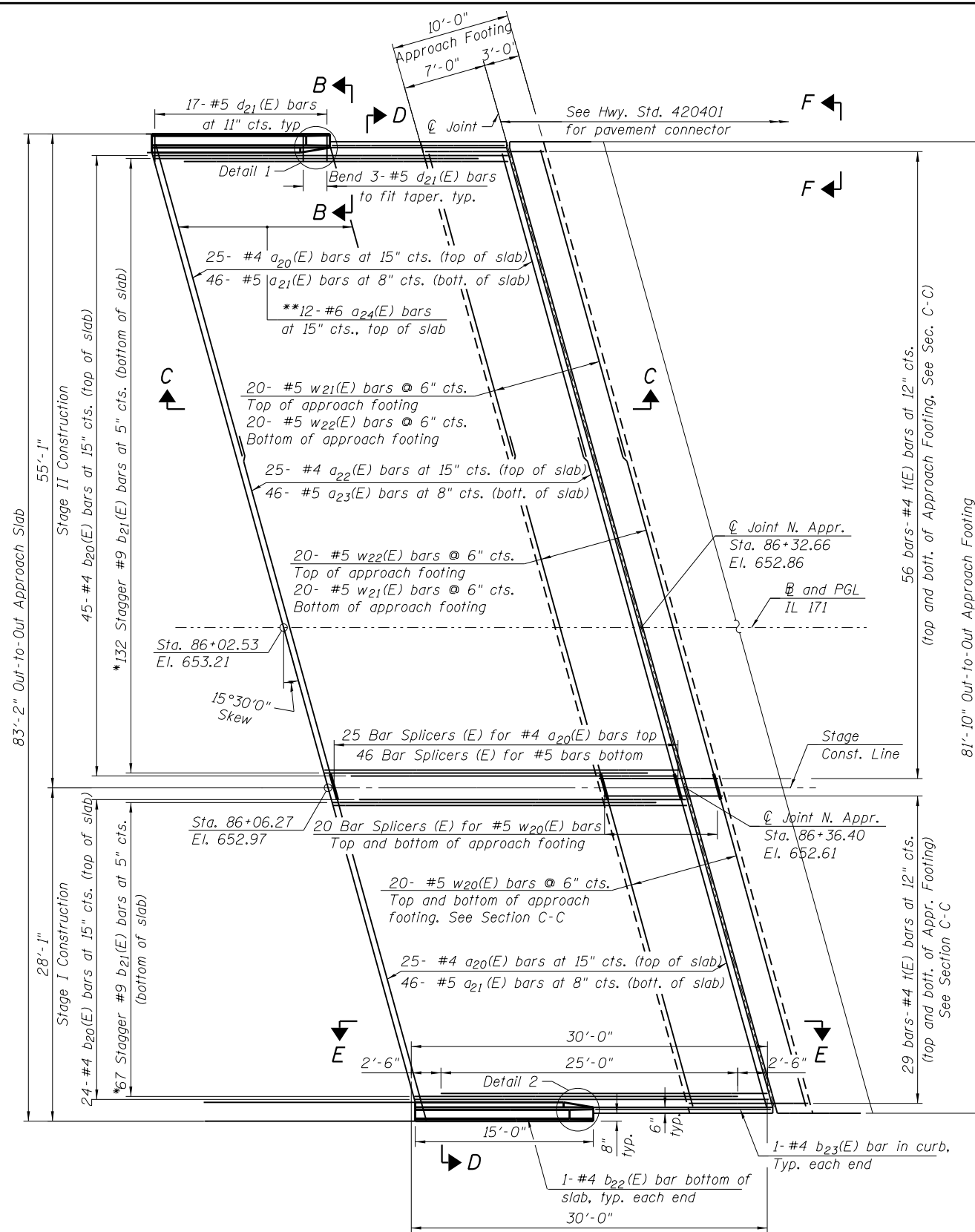
SOUTH APPROACH SLAB SECTIONS AND DETAILS
STRUCTURE NO. 099-0537

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	110
CONTRACT NO. 60H21				

SHEET NO. S1-21 OF 41 SHEETS

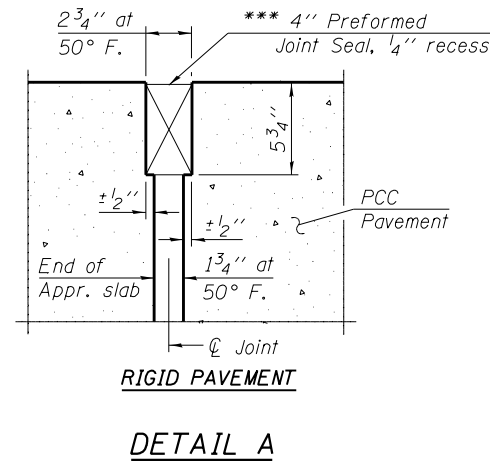
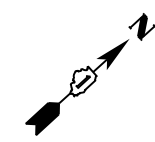
ILLINOIS FED. AID PROJECT

*** Cost included with Concrete Superstructure.

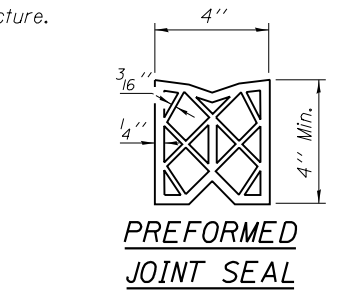


NORTH APPROACH PLAN

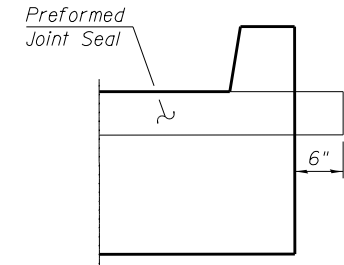
* Tilt #9 b₂₁(E) bars as required to maintain clearance.
 ** Space between a₂₀(E) bars, typ. each parapet.



DETAIL A

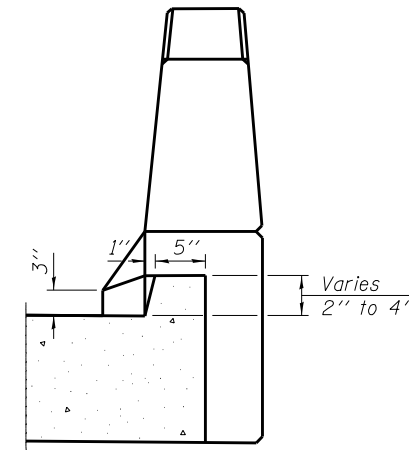


PREFORMED JOINT SEAL



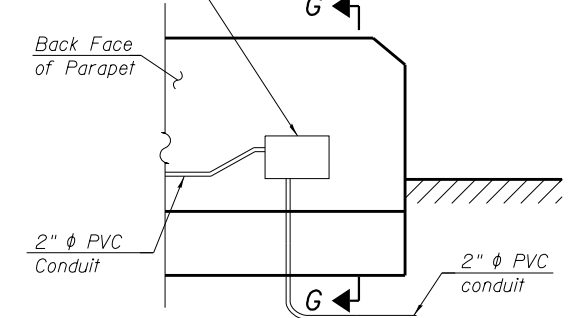
SECTION F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



SECTION B-B

12"x8"x6" Stainless Steel Junction Box Embedded in Structure

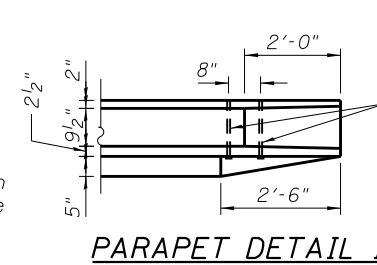


JUNCTION BOX EMBEDDED IN WEST PARAPET

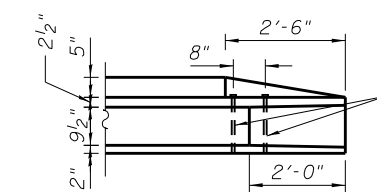
(Looking at Back Face of Parapet)

NOTES:

1. For Bill of Material, minimum bar laps and bar diagrams, see Sheet S1-23.
2. For Sections C-C and D-D and View E-E, see Sheet S1-23.
3. a₂₀(E), a₂₁(E), a₂₂(E), a₂₃(E) and a₂₄(E) bar spacings measured along \bar{C} Roadway.
4. The junction box shall only be installed when indicated on the plans or as directed by the Engineer to facilitate the installation of unit duct into the conduit embedded in the parapet.
5. The junction box shall be paid for at the unit price for junction box, stainless steel, embedded in structure, 12"x8"x6". See Roadway Plans.
6. The exact location of the junction box shall be determined by the Engineer.
7. Adjust reinforcement bars to clear junction box.
8. For conduit embedded in structure and junction box quantities, see Roadway Plans.

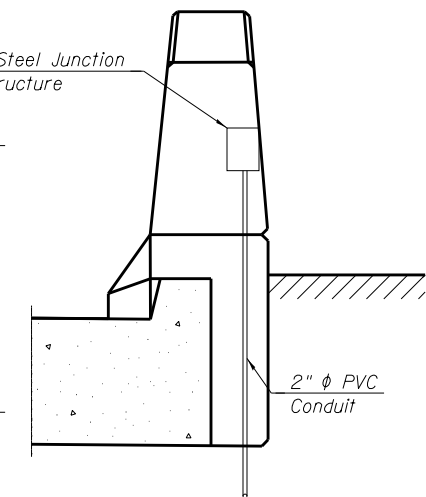


PARAPET DETAIL 1



PARAPET DETAIL 2

12"x8"x6" Stainless Steel Junction Box Embedded in Structure



SECTION G-G

3/28/2016

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CHECKED -	MI, MAI	REVISED -	
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**NORTH APPROACH SLAB
 STRUCTURE NO. 099-0537**

SHEET NO. S1-22 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	111
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60H21	

BILL OF MATERIAL

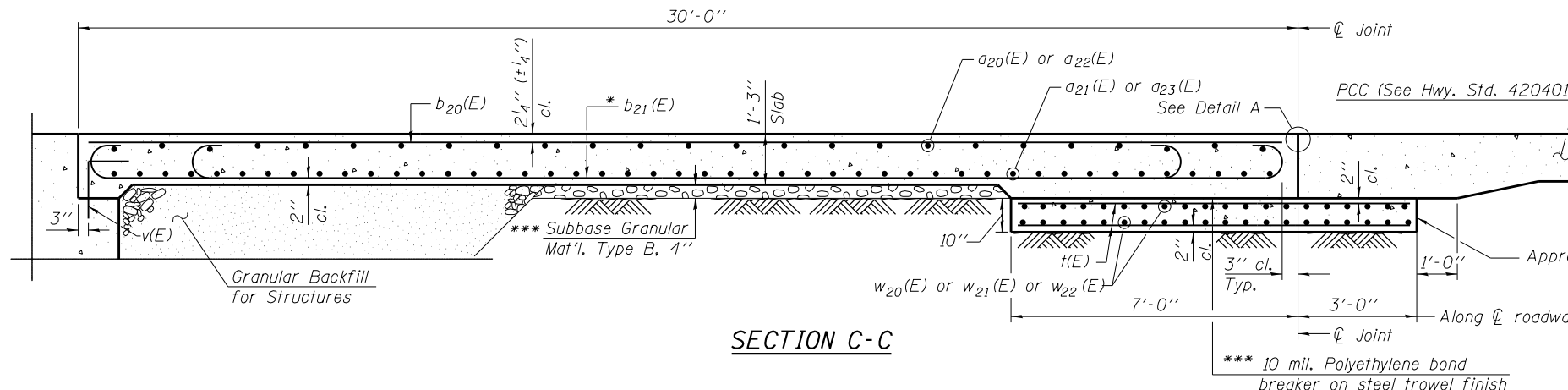
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

Bar	No.	Size	Length	Shape
a ₂₀ (E)	50	#4	28'-7"	
a ₂₁ (E)	92	#5	28'-3"	
a ₂₂ (E)	25	#4	30'-7"	
a ₂₃ (E)	46	#5	31'-6"	
a ₂₄ (E)	24	#6	6'-6"	
b ₂₀ (E)	69	#4	29'-8"	
b ₂₁ (E)	199	#9	29'-9"	
b ₂₂ (E)	2	#4	14'-8"	
b ₂₃ (E)	2	#4	14'-8"	
d ₂₀ (E)	34	#5	5'-7"	
d ₂₁ (E)	34	#5	7'-11"	
e ₂₀ (E)	16	#4	14'-8"	
e ₂₁ (E)	2	#8	14'-8"	
t(E)	170	#4	10'-0"	
w ₂₀ (E)	40	#5	28'-3"	
w ₂₁ (E)	40	#5	31'-6"	
w ₂₂ (E)	40	#5	28'-2"	
Concrete Superstructure (Approach Slab)	CU YD		117.8	
Concrete Structures	CU YD		26.3	
Concrete Superstructure	CU YD		3.4	
Bridge Deck Grooving	SQ YD		264	
Protective Coat	SQ YD		280	
Reinforcement Bars, Epoxy Coated**	POUND		32,980	

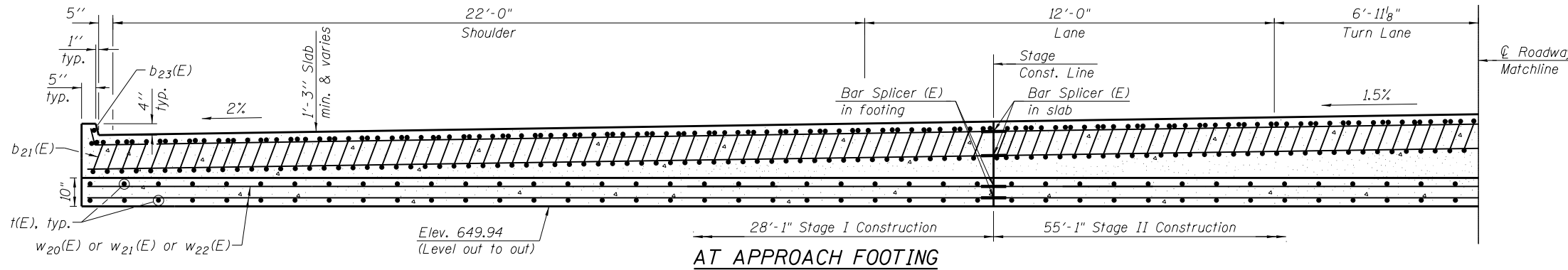
* Tilt #9 b₁(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

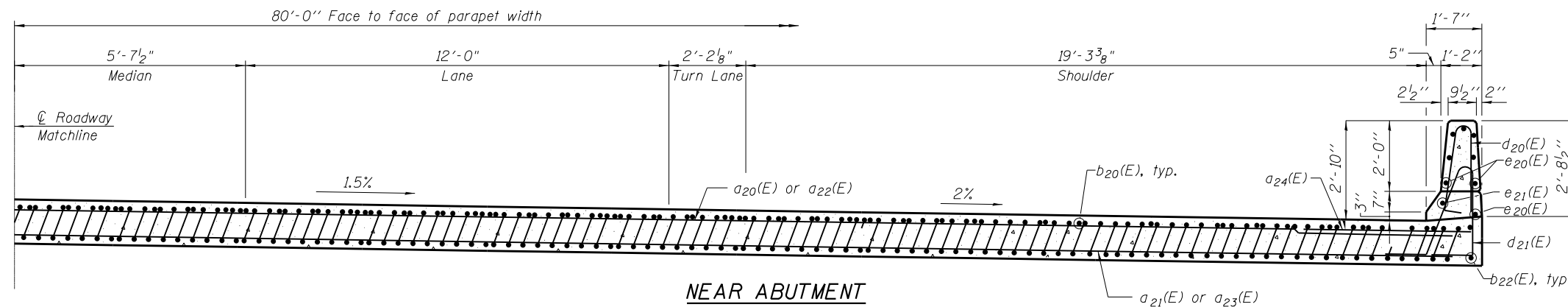
** All reinforcement bars in the superstructure and approaches shall be textured epoxy coated reinforcement bars. See Special Provisions



SECTION C-C

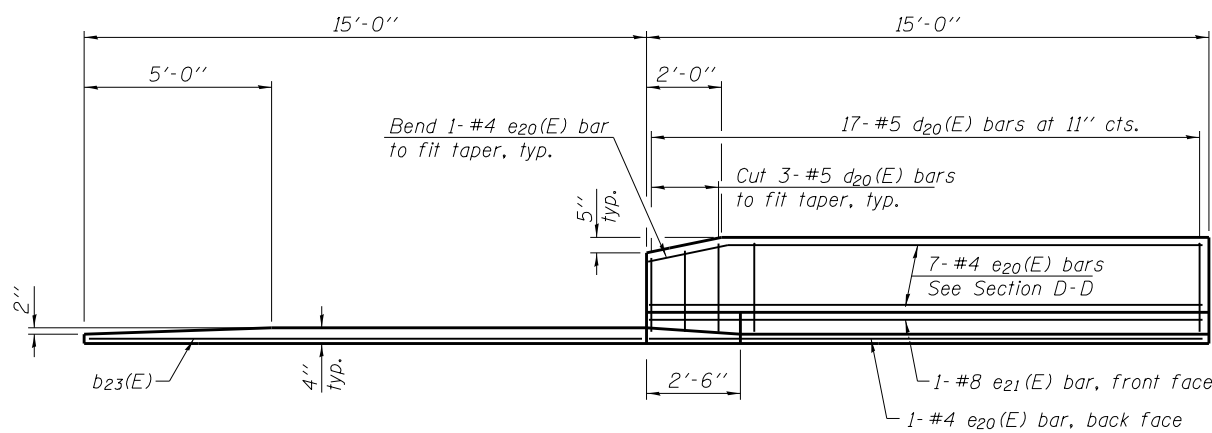


AT APPROACH FOOTING

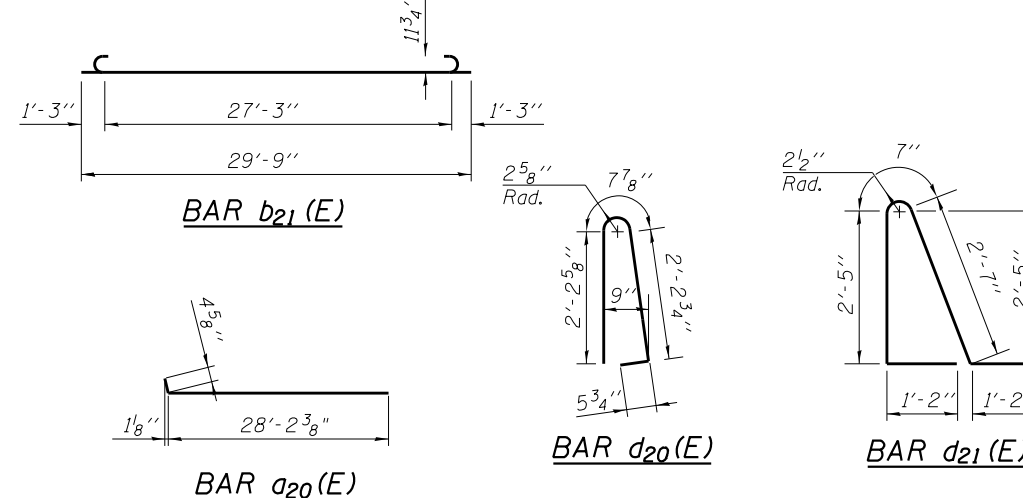


NEAR ABUTMENT

SECTION D-D



VIEW E-E



NOTES:

- For Detail A and View B-B, see Sheet S1-22.
- 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.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v(E) bar details, see Sheet S1-19.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- For bar splicer details, see Sheet S1-38.
- Cost of excavation for approach footing included with Concrete Structures.
- For Granular Backfill for Structures and drainage treatment details, see Sheet S1-02.
- For additional parapet details, see Sheet S1-18.

4/19/2016

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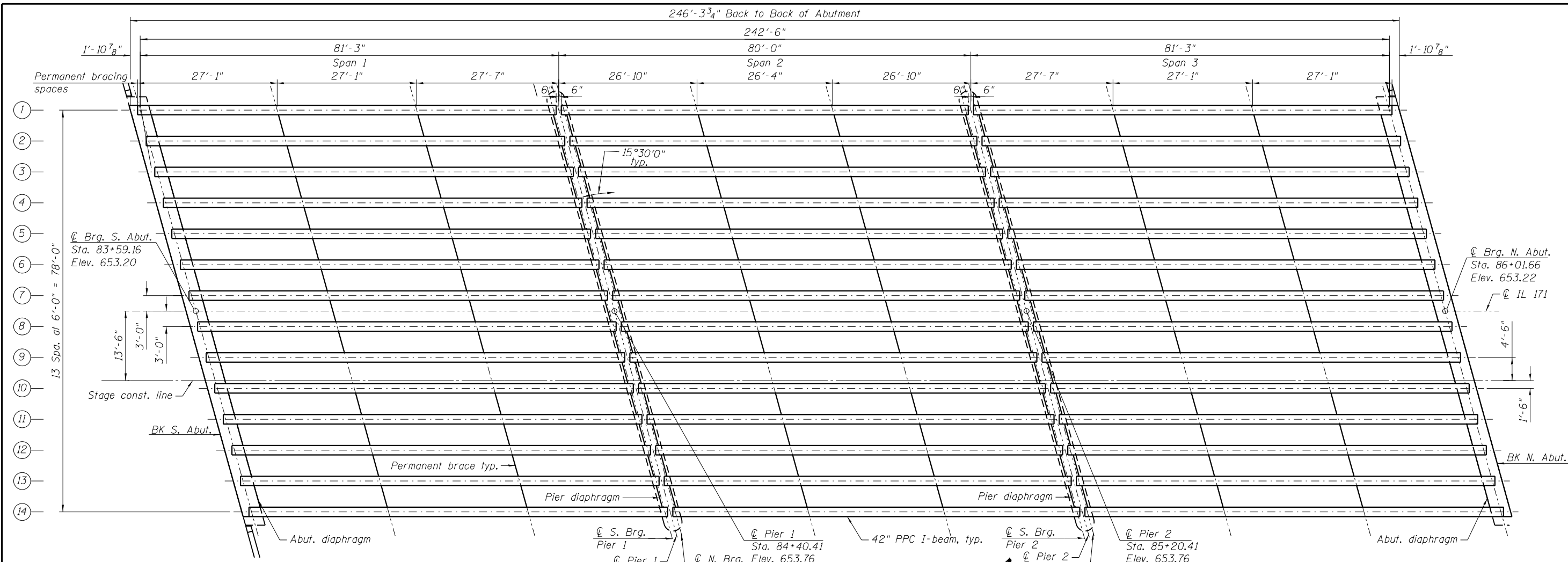
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH APPROACH SLAB SECTIONS AND DETAILS
STRUCTURE NO. 099-0537

SHEET NO. S1-23 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	112
ILLINOIS FED. AID PROJECT				

CONTRACT NO. 60H21



FRAMING PLAN

	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
<i>I</i>	(in ⁴) 90,956	-	90,956
<i>I'</i>	(in ⁴) 267,545	267,545	267,545
<i>S_b</i>	(in ³) 5,153	-	5,153
<i>S_b'</i>	(in ³) 8,660	8,660	8,660
<i>S_t</i>	(in ³) 3,736	-	3,736
<i>S_t'</i>	(in ³) 24,092	24,092	24,092
<i>DC1</i>	(k/ft) 1.09	1.09	1.09
<i>M_{DC1}</i>	(k) 844.6	-	879.87
<i>DC2</i>	(k/ft) 0.064	0.064	0.064
<i>M_{DC2}</i>	(k) 34	41.4	9.6
<i>DW</i>	(k/ft) 0.300	0.300	0.300
<i>M_{DW}</i>	(k) 159	193	45
<i>M_{½ · IM}</i>	(k) 902.56	866.6	616.45

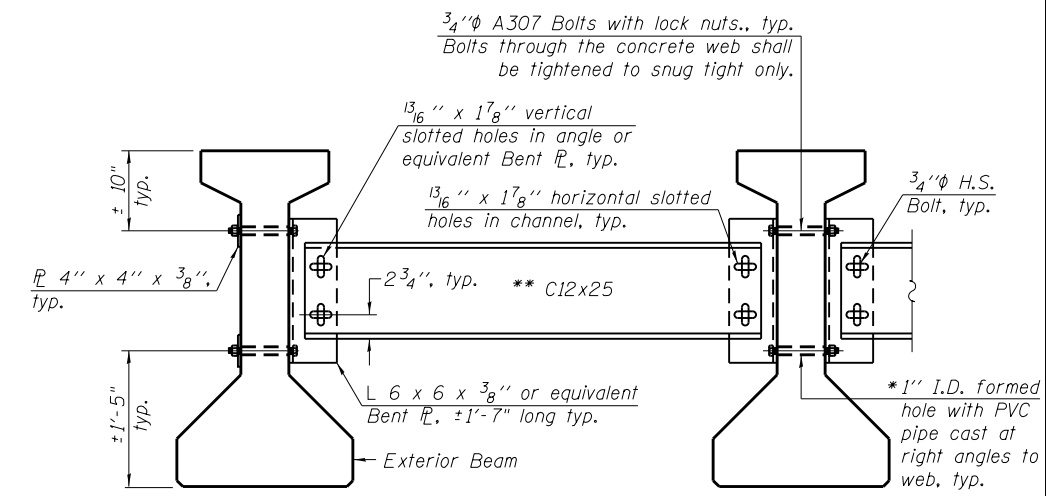
	Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
<i>R_{DC1}</i>	(k) 43.8	43.8	43.1
<i>R_{DC2}</i>	(k) 2.1	5.7	5.7
<i>R_{DW}</i>	(k) 9.8	26.5	26.5
<i>R_{½ · IM}</i>	(k) 53.8	96.6	96.6
<i>R_{Total}</i>	(k) 109.5	172.6	171.9

* The total *R_{DC2}*, *R_{DW}* and *R_{½ · IM}* are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

I: Non-composite moment of inertia of beam section (in.⁴).
I': Composite moment of inertia of beam section (in.⁴).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
S_b': Composite section modulus for the bottom fiber of the prestressed beam (in.³).
S_t: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
S_t': Composite section modulus for the top fiber of the prestressed beam (in.³).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_{½ · IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

NOTES:

- For PPC I-beam elevations, sections and details, see Sheets S1-25 thru S1-28.
- For abutments diaphragms elevation and details, see Sheet S1-16.
- For pier diaphragms elevations and details, see Sheet S1-17.
- All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
- Two hardened washers are required for each set of oversized holes.
- All holes shall be 1 5/16" φ unless otherwise noted.
- 5/16" x 3" x 3" plate washers are required over all slotted holes.
- All bolts shall be galvanized according to AASHTO M232.
- Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
- Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.



PERMANENT BRACING DETAILS FOR 42" PPC I-BEAMS

* Fabricator shall locate to miss strands within permissible tolerances.
 ** Alternate C12x30 channels are permitted to facilitate material acquisition.

3/17/2016

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DESIGNED - JJS
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 CHECKED - MI, MAI
 DATE - 03/18/2016

REVISD -
 REVISD -
 REVISD -
 REVISD -

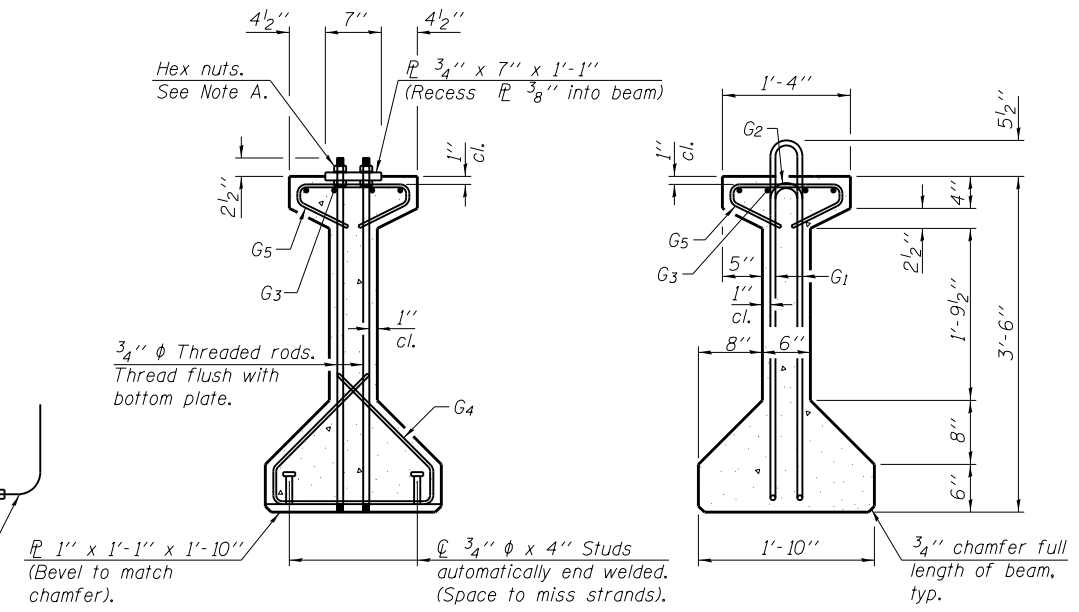
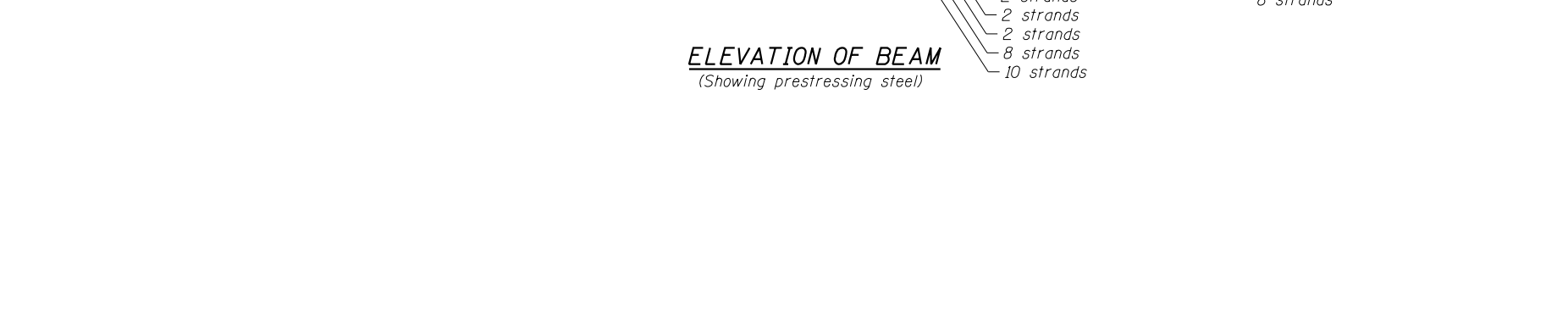
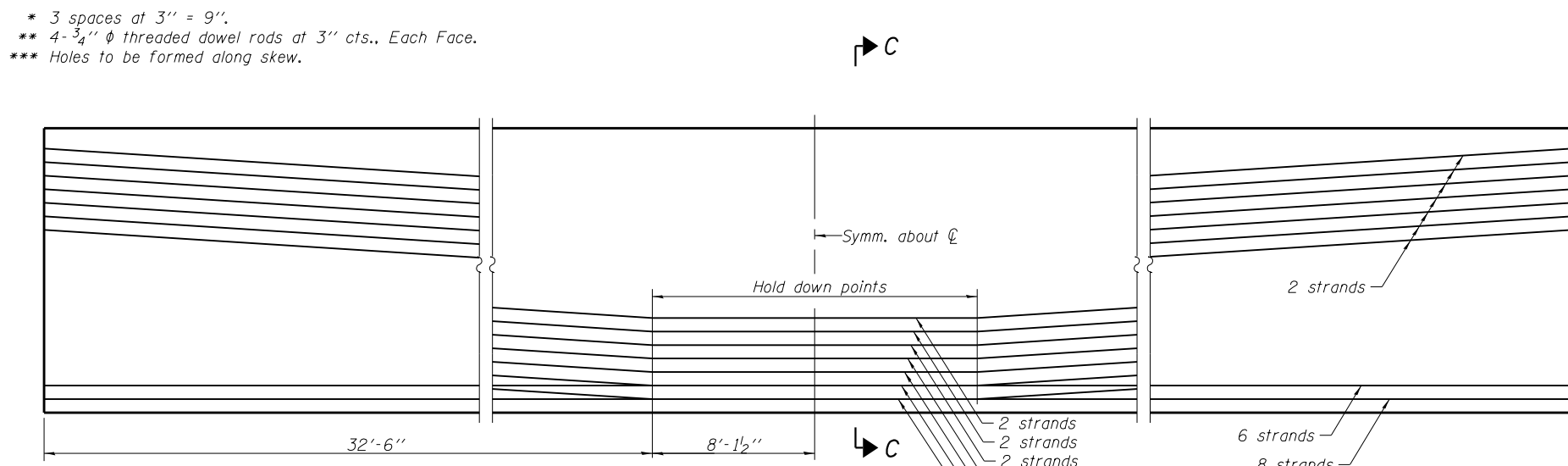
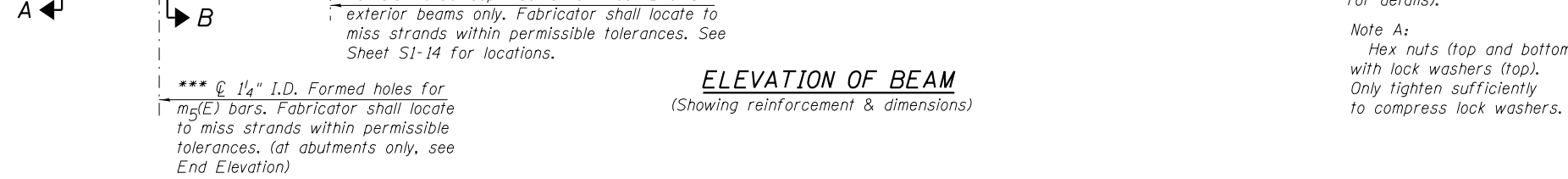
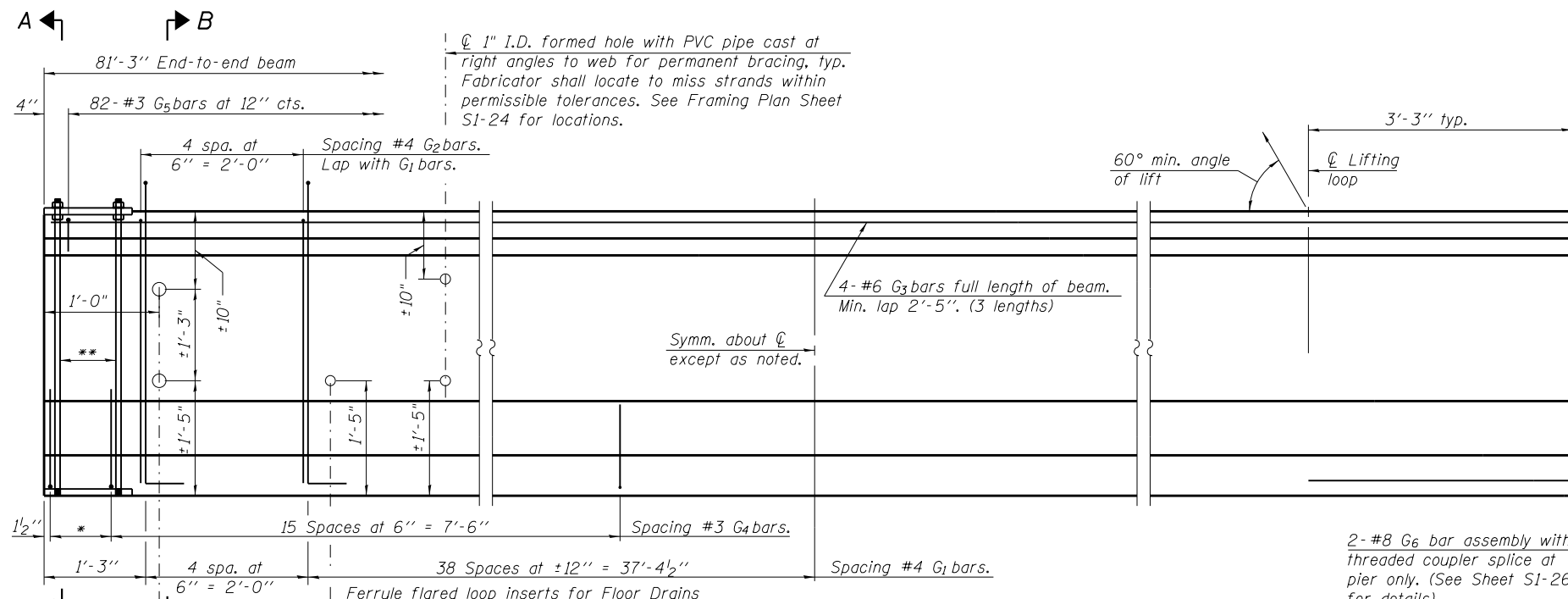
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN
 STRUCTURE NO. 099-0537**

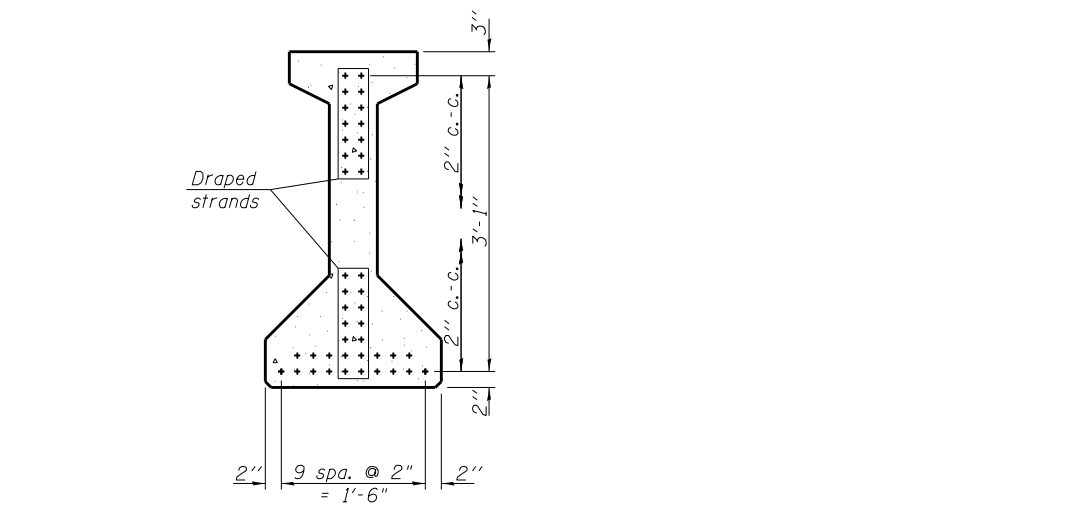
SHEET NO. S1-24 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	113

CONTRACT NO. 60H21
 ILLINOIS FED. AID PROJECT



SECTION A-A
SECTION B-B



SECTION C-C

ELEVATION OF BEAM
 (Showing reinforcement & dimensions)

ELEVATION OF BEAM
 (Showing prestressing steel)

*****BAR LIST**
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G ₁	86	#4	8'-7"	∩L
G ₂	10	#4	6'-8"	∩
G ₃	12	#6	28'-9"	∩
G ₄	38	#3	4'-11"	∩
G ₅	82	#3	2'-6"	∩
G ₆	2	#8	6'-6"	∩

- Notes:
 1. For additional details and Bill of Material, see Sheet S1-26.
 2. Required release strength, f'ci, shall be 6,000 psi.

***For information only

PI-4-42

6-8-15

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PLOT DATE = 3/17/2016

DESIGNED - JJS	REVISED -
DRAWN - JJS	REVISED -
CHECKED - MI, MAI	REVISED -
DATE - 03/18/2016	REVISED -

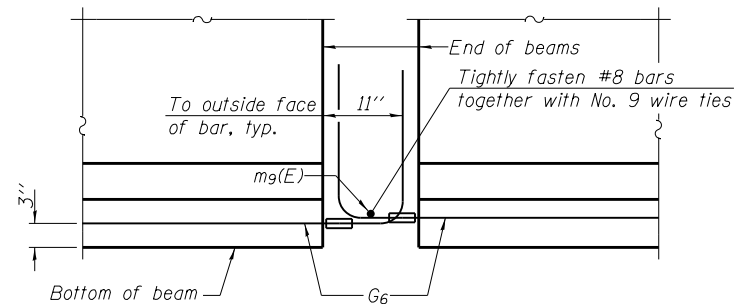
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

42" PPC I-BEAM SPANS 1 & 3
STRUCTURE NO. 099-0537

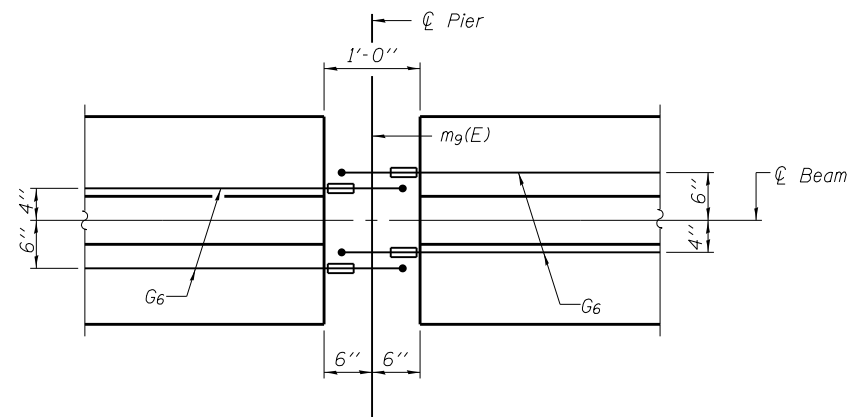
SHEET NO. S1-25 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	114
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	

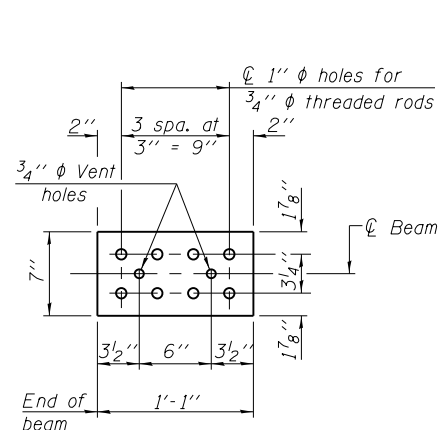
3/17/2016



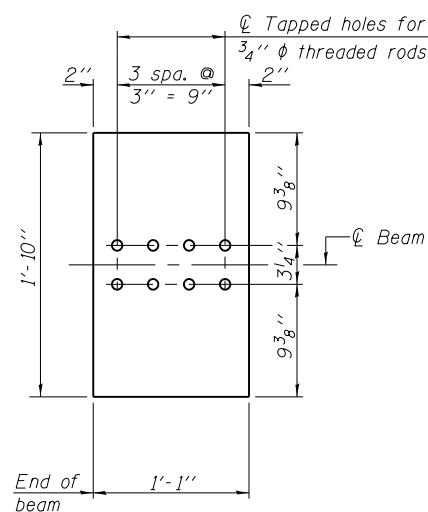
ELEVATION OF BEAM AT PIER



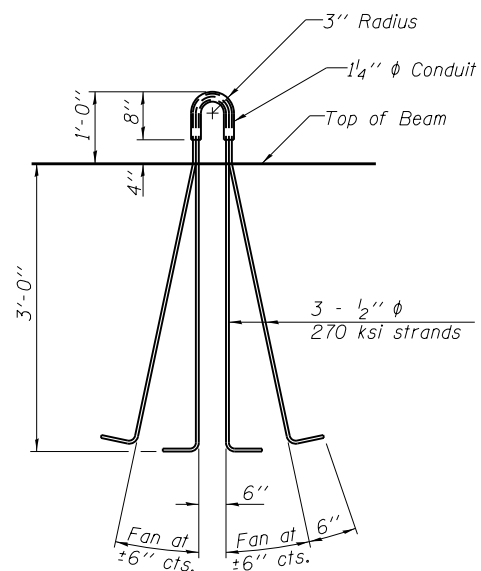
PLAN OF BEAM AT PIER



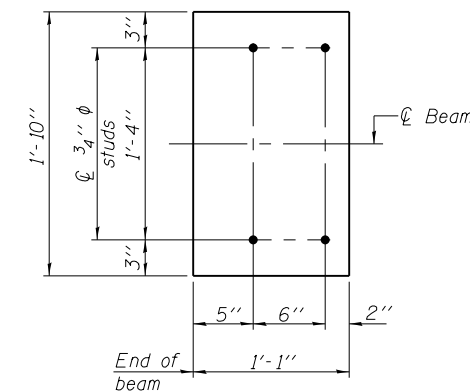
TOP PLATE



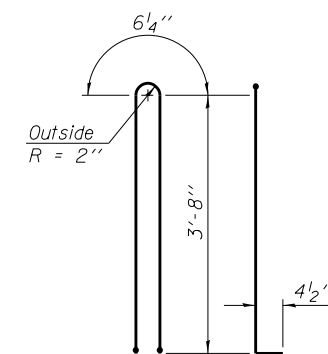
BOTTOM PLATE
(Showing threaded rods)



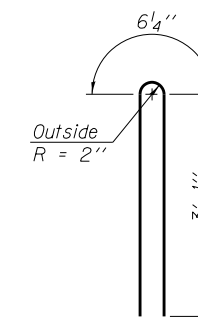
LIFTING LOOP DETAIL



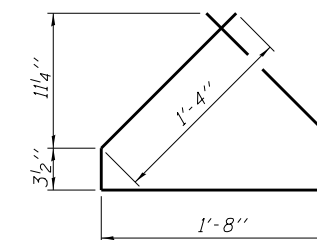
BOTTOM PLATE
(Showing studs)



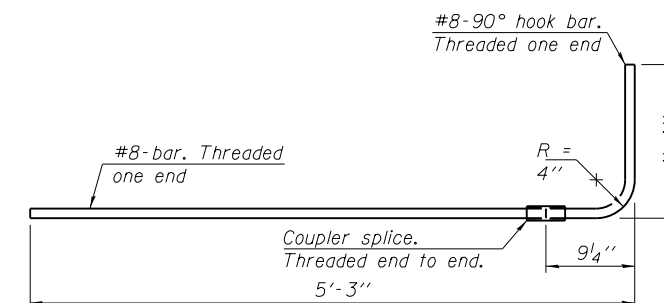
BAR G1



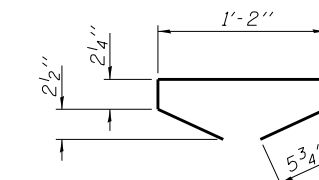
BAR G2



BAR G4



G6 BAR ASSEMBLY



BAR G5

NOTES

1. Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
2. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
3. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
4. A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.
5. Tilt G₆ bars when necessary to maintain 1/2" clearance.
6. The top and bottom plates shall be AASHTO M270 Grade 50.
7. The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.
8. Threaded rods shall be ASTM F 1554 Grade 55.
9. The G₆ bar assembly shall be capable of developing 125 percent of the yield strength of the grade 60 reinforcement bar components. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.
10. Beams requiring G₆ bar assemblies shall not be released from the fabricator until they have attained 45 days of age or older.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	FOOT	2,275

PI-4-42D

11-16-12

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PLOT DATE = 3/17/2016

DESIGNED - JJS
DRAWN - JJS
CHECKED - MI, MAI
DATE - 03/18/2016

REVISED -
REVISED -
REVISED -
REVISED -

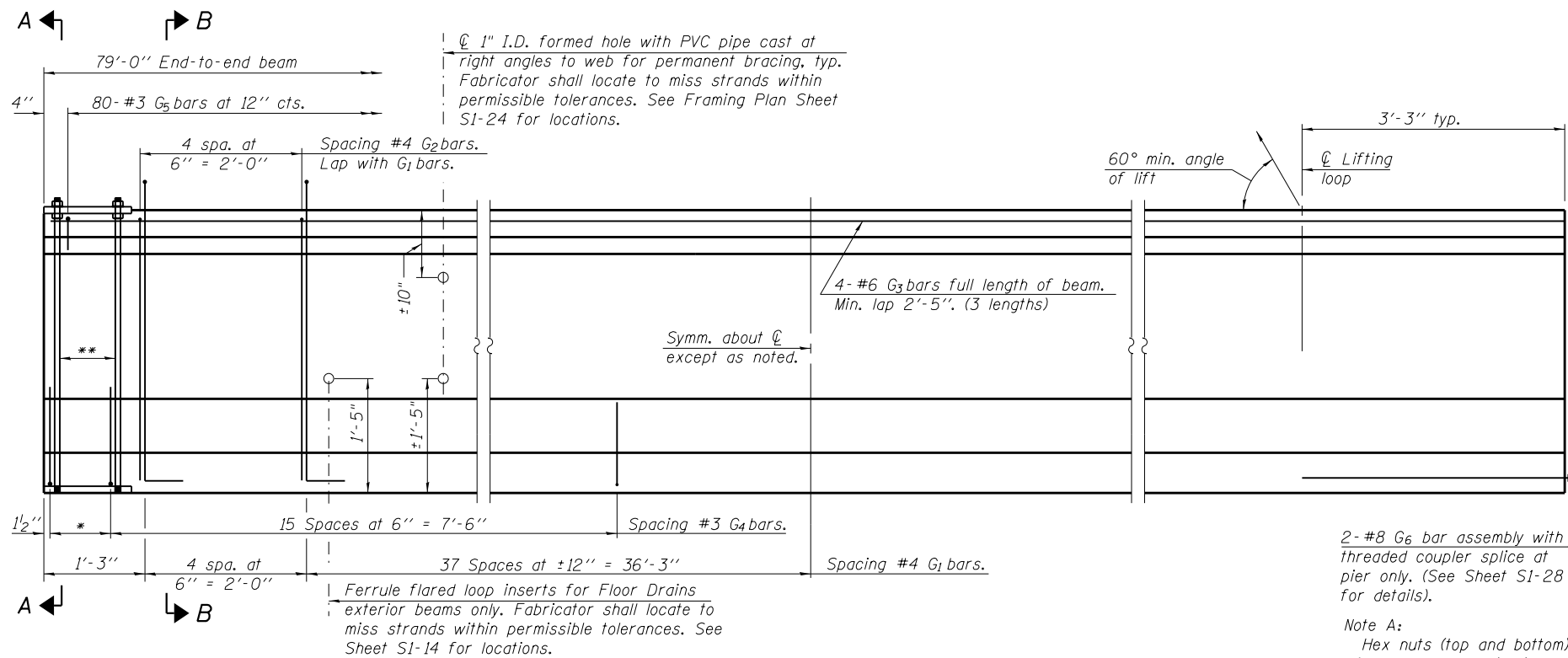
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

42" PPC I-BEAM DETAILS SPANS 1 & 3
STRUCTURE NO. 099-0537

SHEET NO. 51-26 OF 41 SHEETS

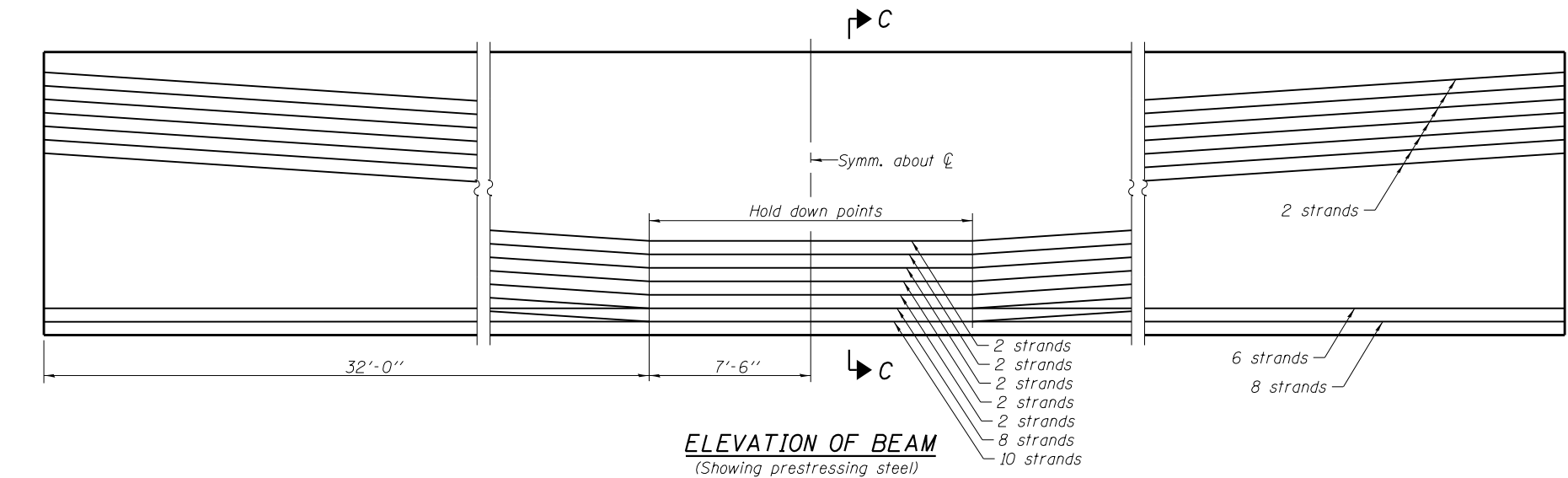
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	115
				CONTRACT NO. 60H21
ILLINOIS FED. AID PROJECT				

3/17/2016

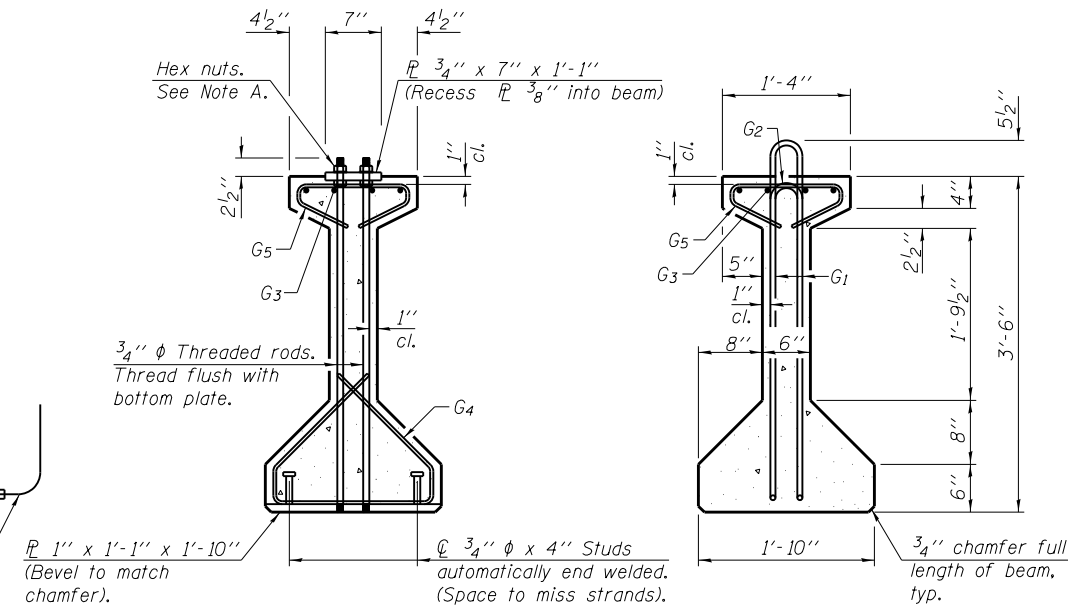


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

* 3 spaces at 3" = 9".
** 4- 3/4" ϕ threaded dowel rods at 3" cts., Each Face.



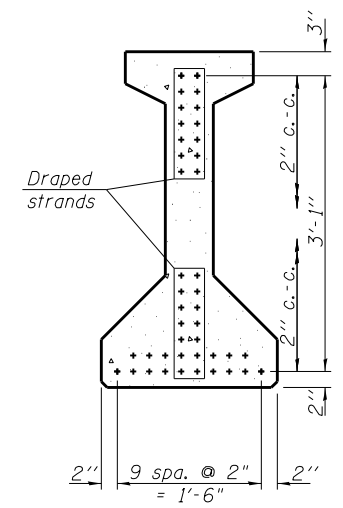
ELEVATION OF BEAM
(Showing prestressing steel)



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

2- #8 G₆ bar assembly with threaded coupler splice at pier only. (See Sheet S1-28 for details).

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



SECTION C-C

*****BAR LIST**
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G ₁	84	#4	8'-7"	∩ L
G ₂	10	#4	6'-8"	∩
G ₃	12	#6	28'-0"	—
G ₄	38	#3	4'-11"	∩
G ₅	80	#3	2'-6"	∩
G ₆	2	#8	6'-6"	J

Notes:
1. For additional details and Bill of Material, see Sheet S1-28.
2. Required release strength, f'_{ci} , shall be 6,000 psi.

***For information only

PI-4-42

6-8-15

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DESIGNED - JJS
DRAWN - JJS
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DATE - 03/18/2016

REVISED -
REVISED -
REVISED -
REVISED -

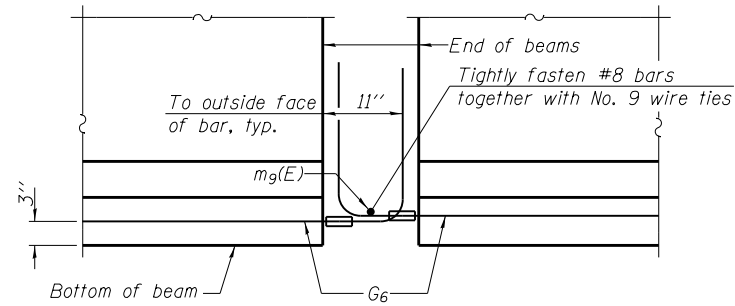
PLOT DATE = 3/17/2016

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

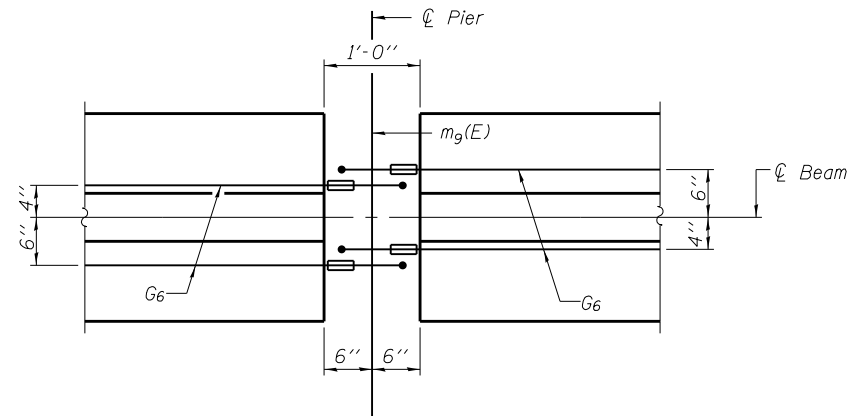
42" PPC I-BEAM SPAN 2
STRUCTURE NO. 099-0537
SHEET NO. S1-27 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	116
				CONTRACT NO. 60H21

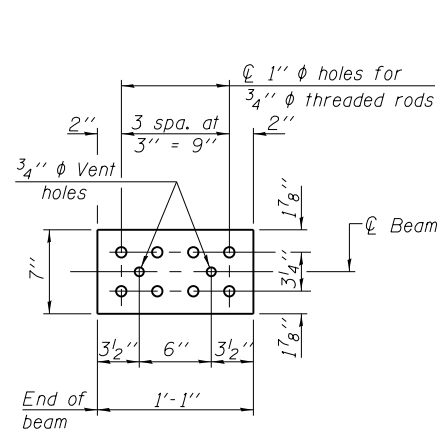
ILLINOIS FED. AID PROJECT



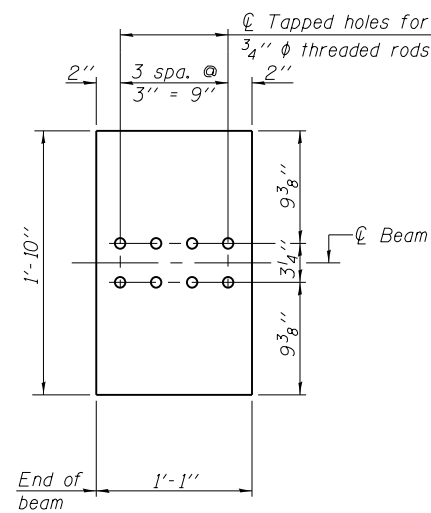
ELEVATION OF BEAM AT PIER



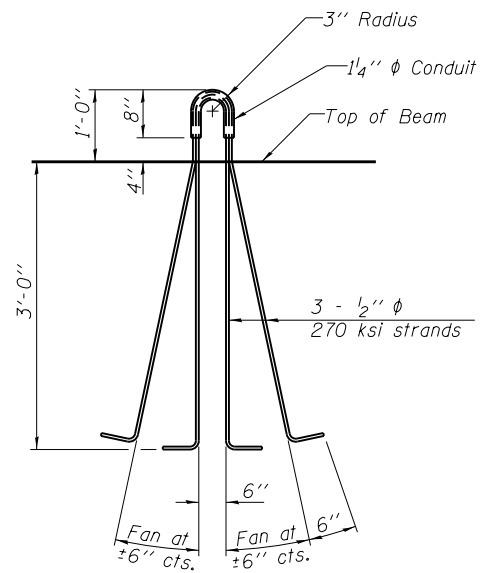
PLAN OF BEAM AT PIER



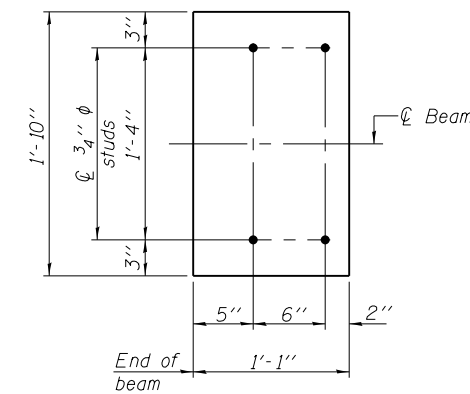
TOP PLATE



**BOTTOM PLATE
(Showing threaded rods)**



LIFTING LOOP DETAIL

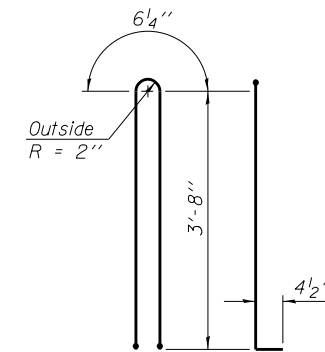


**BOTTOM PLATE
(Showing studs)**

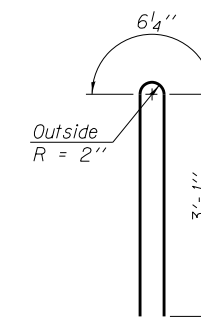
See bearing details for pintle hole locations when required.

NOTES

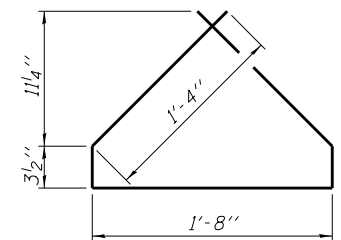
1. Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
2. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
3. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
4. A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.
5. Tilt G₆ bars when necessary to maintain 1/2" clearance.
6. The top and bottom plates shall be AASHTO M270 Grade 50.
7. The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.
8. Threaded rods shall be ASTM F 1554 Grade 55.
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10. Beams requiring G₆ bar assemblies shall not be released from the fabricator until they have attained 45 days of age or older.



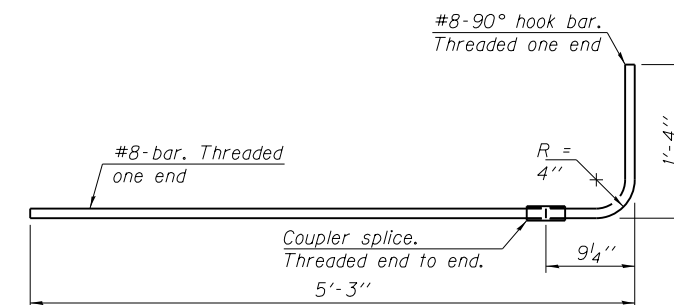
BAR G₁



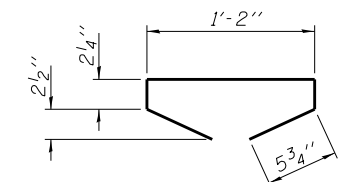
BAR G₂



BAR G₄



G₆ BAR ASSEMBLY



BAR G₅

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	FOOT	3091

PI-4-42D

11-16-12

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DESIGNED - JJS
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REVISED -

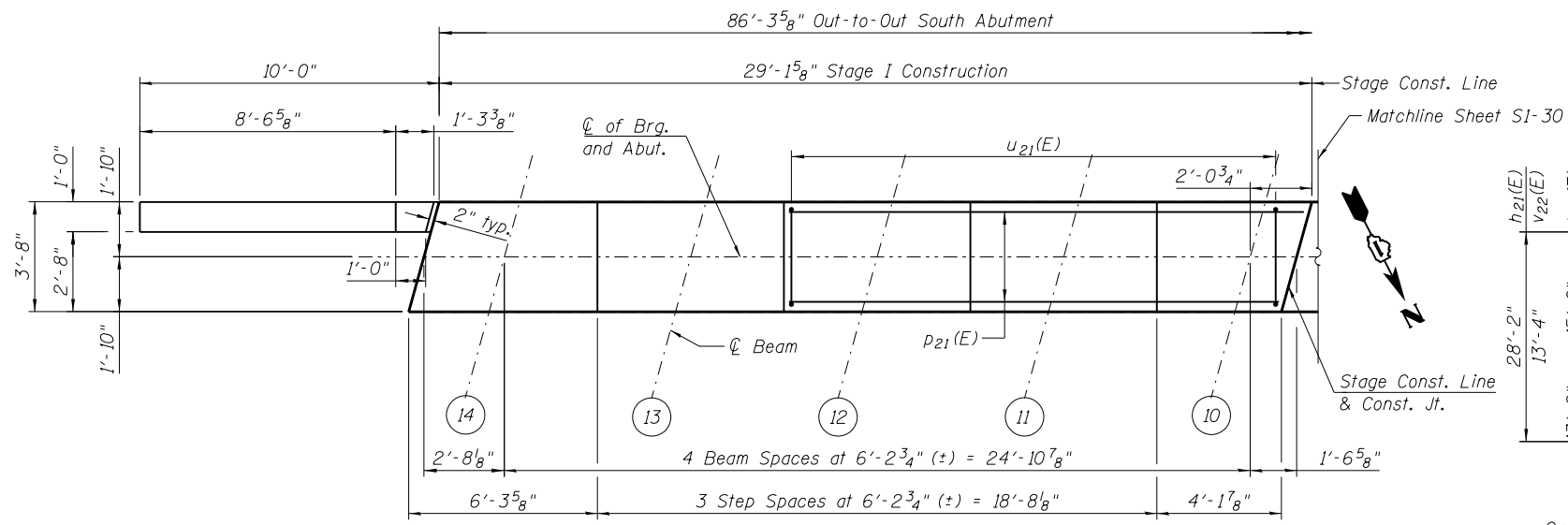
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**42" PPC I-BEAM DETAILS SPAN 2
STRUCTURE NO. 099-0537**

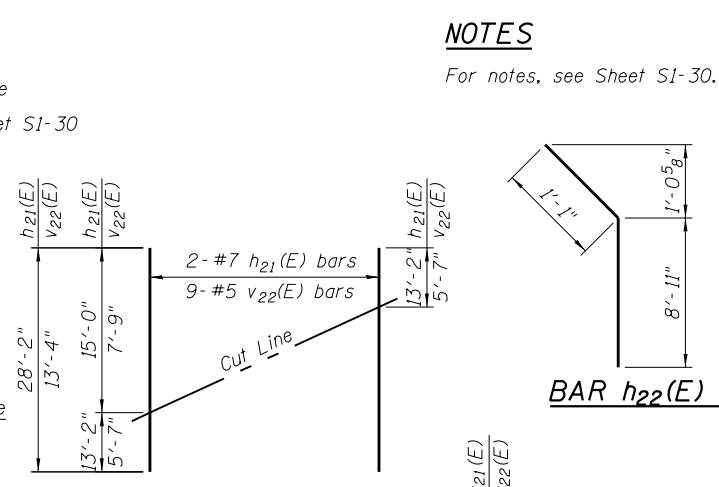
SHEET NO. S1-28 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	117
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	

3/17/2016

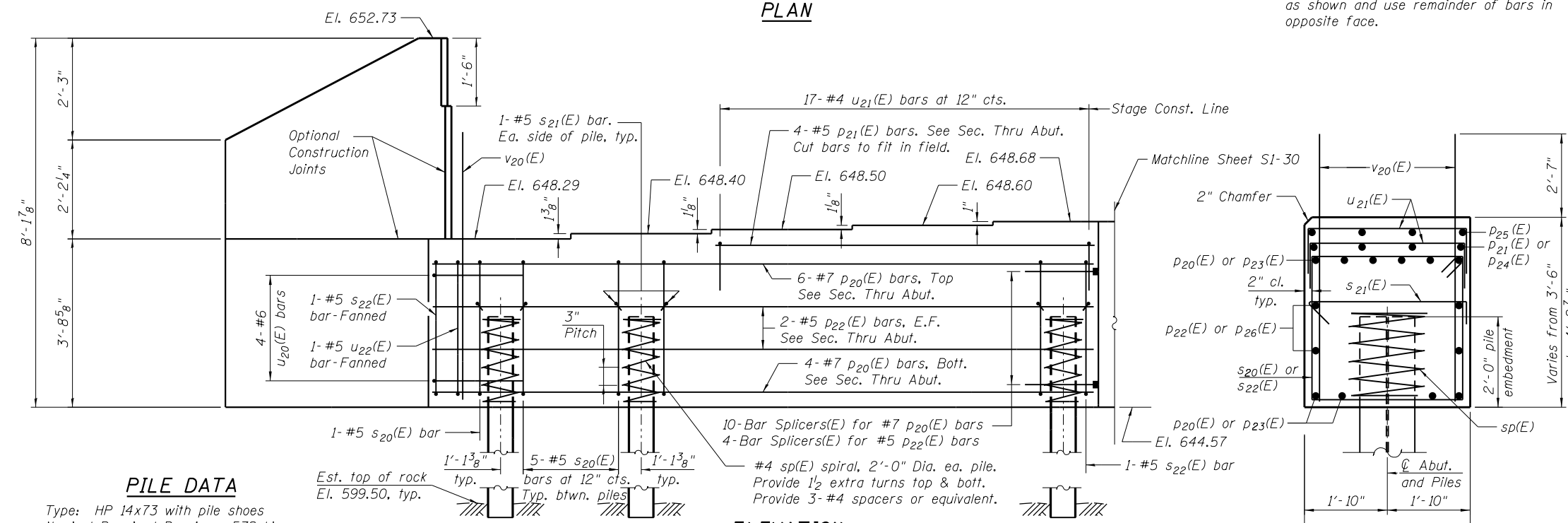


PLAN

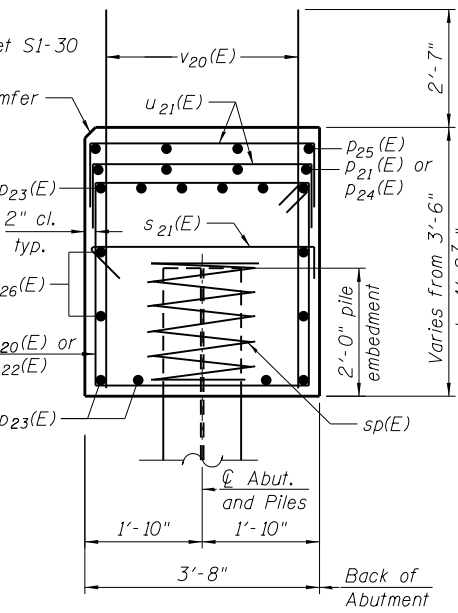


FIELD CUTTING DIAGRAM

Order h21(E) and v22(E) full length. Cut as shown and use remainder of bars in opposite face.



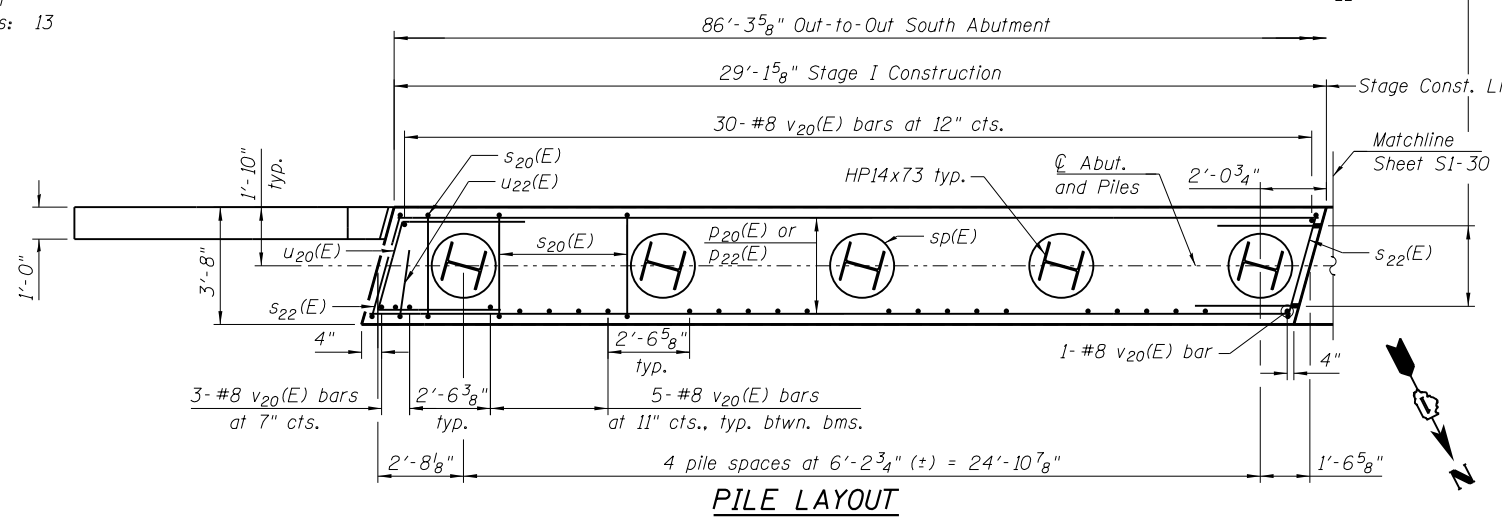
ELEVATION
(Looking South)



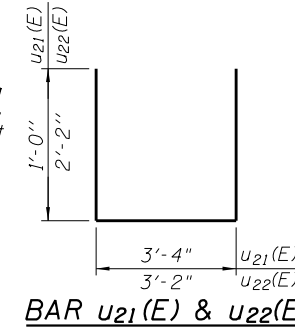
SEC. THRU ABUT.

Dimensions at right angles to abutment.

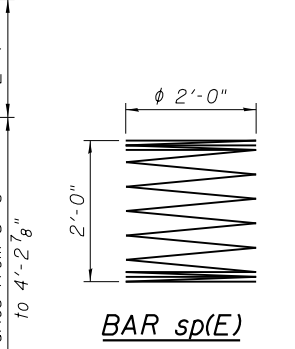
PILE DATA
 Type: HP 14x73 with pile shoes
 Nominal Required Bearing: 578 kips
 Factored Resistance Available: 289 kips
 Est. Length: 48 ft
 No. Production Piles: 13
 No. Test Piles: 1



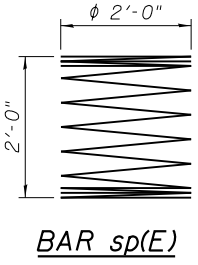
PILE LAYOUT



BAR h22(E)



BAR u21(E) & u22(E)

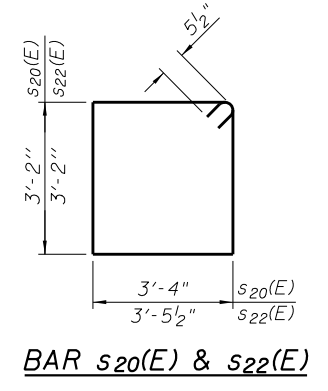


BAR sp(E)

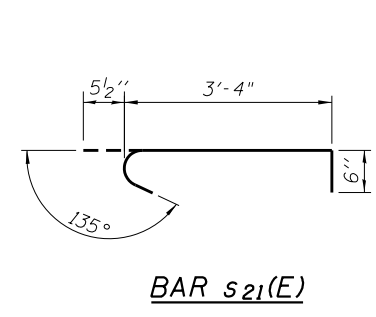
Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
h20(E)	52	#7	15'-0"	—
h21(E)	4	#7	28'-2"	—
h22(E)	4	#5	10'-0"	—
p20(E)	10	#7	28'-10"	—
p21(E)	4	#5	17'-3"	—
p22(E)	4	#5	28'-10"	—
p23(E)	20	#7	31'-0"	—
p24(E)	8	#5	21'-2"	—
p25(E)	4	#5	12'-1"	—
p26(E)	8	#5	30'-1"	—
s20(E)	65	#5	13'-11"	□
s21(E)	28	#5	4'-4"	┌
s22(E)	4	#5	14'-2"	□
sp(E)	14	#4	2'-0"	WWW
u20(E)	8	#6	11'-0"	┌
u21(E)	69	#4	5'-4"	┌
u22(E)	3	#5	7'-6"	┌
v20(E)	159	#8	5'-11"	—
v21(E)	8	#5	7'-9"	—
v22(E)	18	#5	13'-4"	—
Structure Excavation	CU YD		88	
Concrete Structures	CU YD		50.5	
Reinforcement Bars, Epoxy Coated	POUND		9,400	
Furnishing Steel Piles	FOOT		624	
HP 14x73				
Driving Piles	FOOT		624	
Test Pile Steel HP 14x73	EACH		1	
Pile Shoes	EACH		14	
Geocomposite Wall Drain	SQ YD		82	
Granular Backfill for Structures	CU YD		160	
Pipe Underdrains for Structures 4"	FOOT		127	

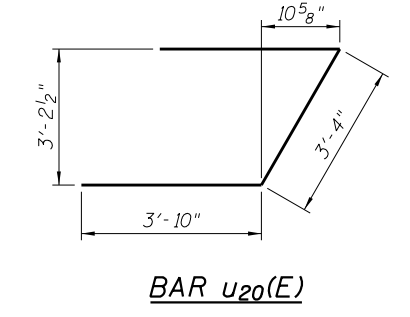
*Length is height of spiral.



BAR s20(E) & s22(E)



BAR s21(E)



BAR u20(E)

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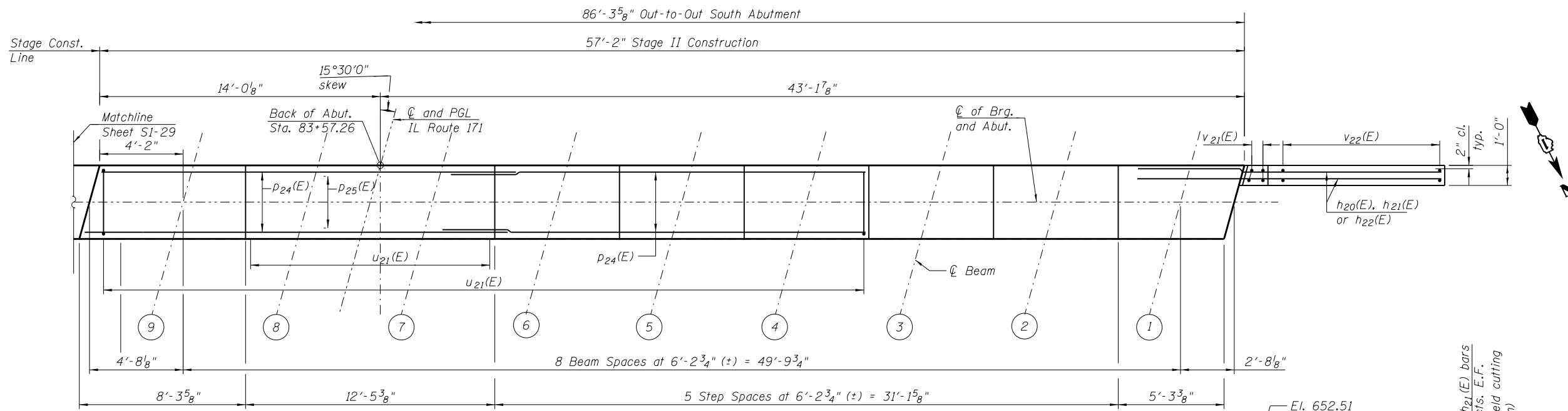
DESIGNED -	LAB, MAF	REVISED -	
DRAWN -	LAB, HH	REVISED -	
CHECKED -	MI, MAF	REVISED -	
DATE -	03/18/2016	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

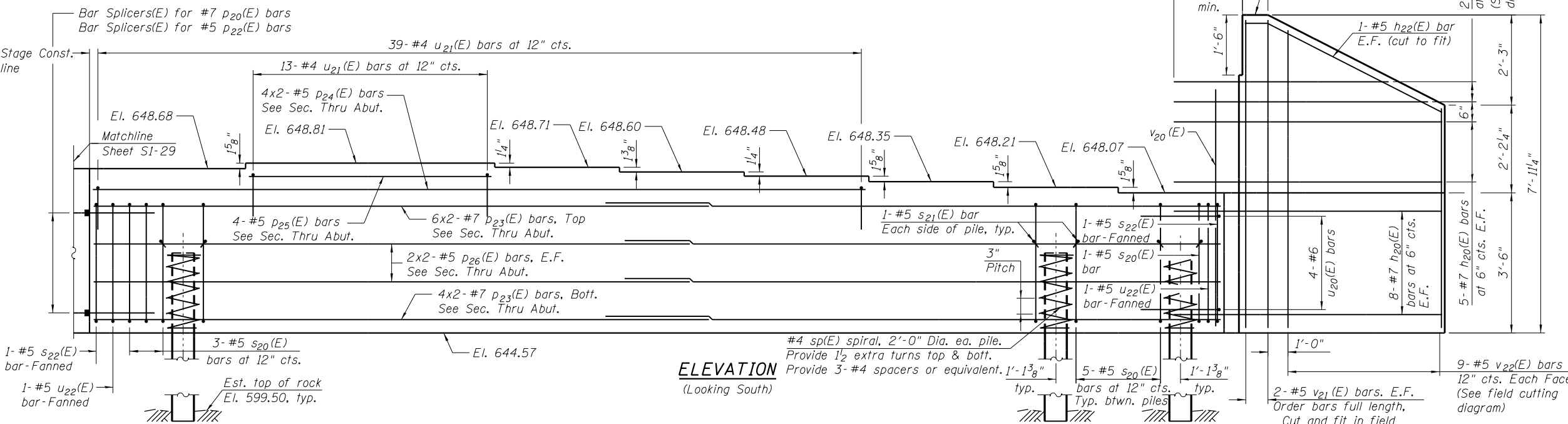
SOUTH ABUTMENT - STAGE I CONSTRUCTION
STRUCTURE NO. 099-0537
 SHEET NO. S1-29 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	118
CONTRACT NO. 60H21				

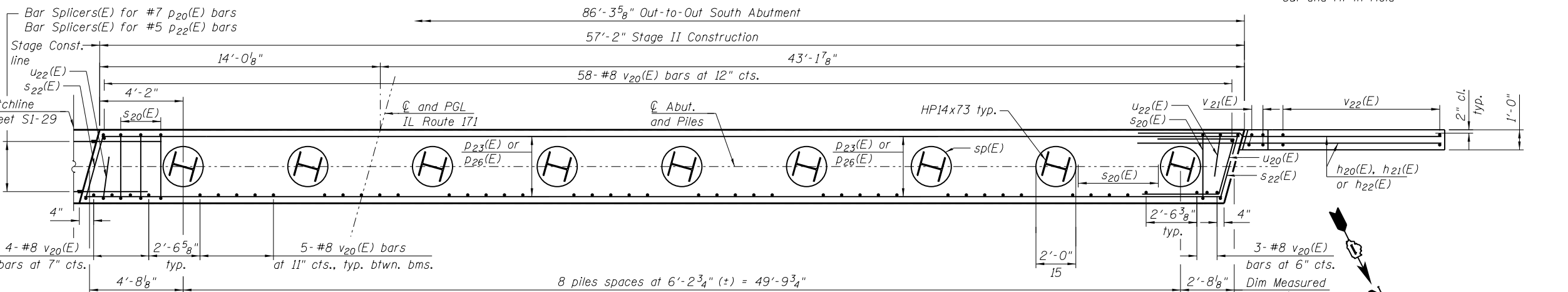
ILLINOIS FED. AID PROJECT



PLAN

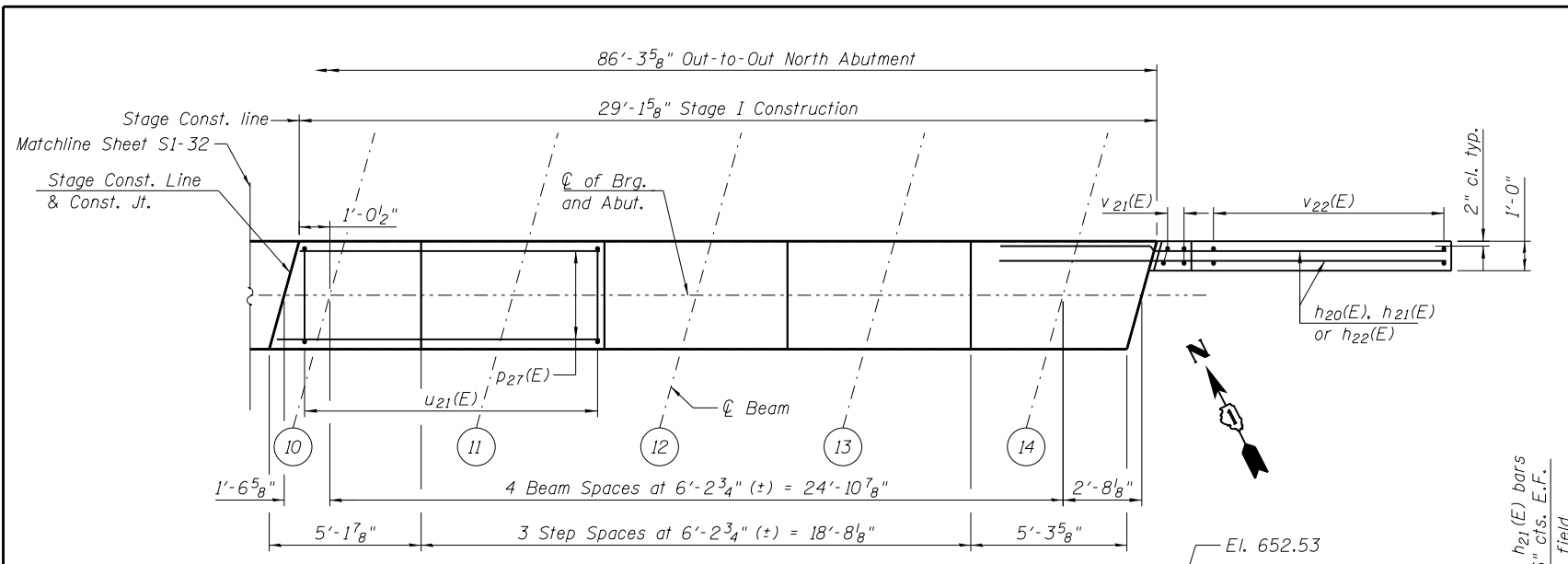


ELEVATION
(Looking South)

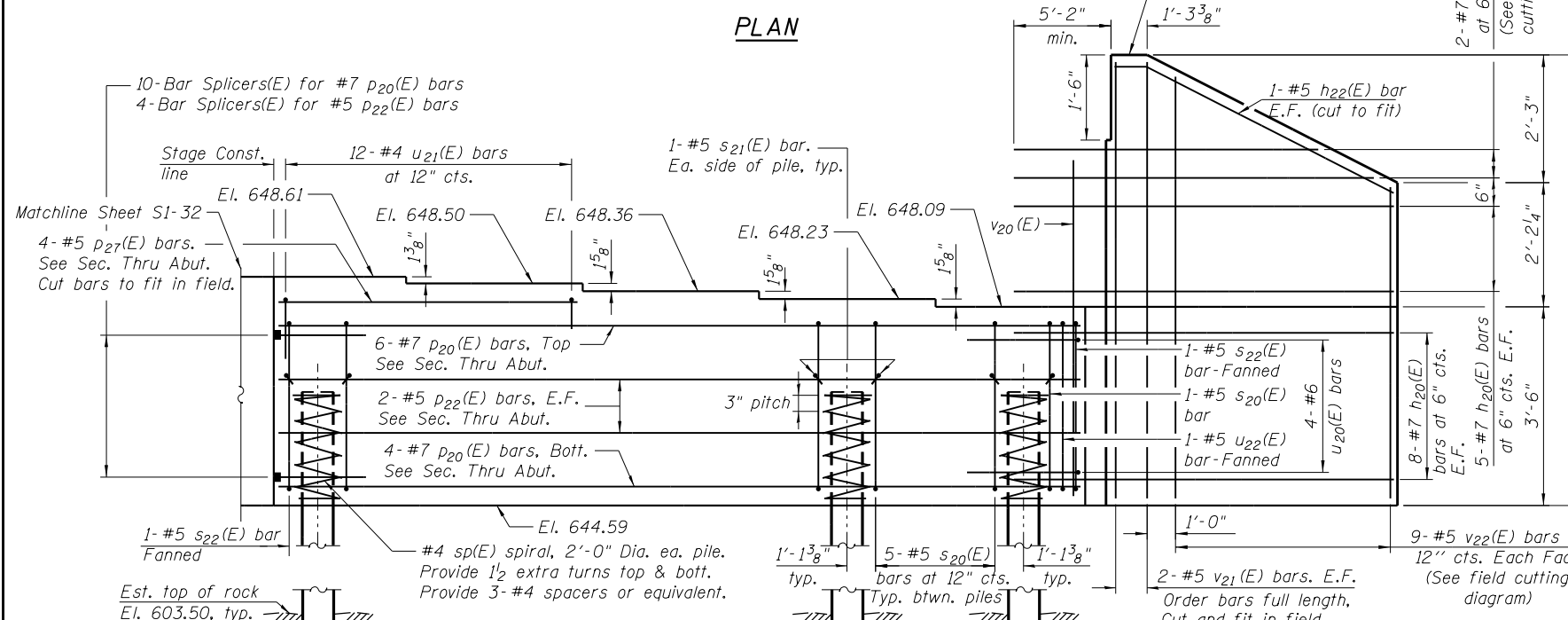


PILE LAYOUT

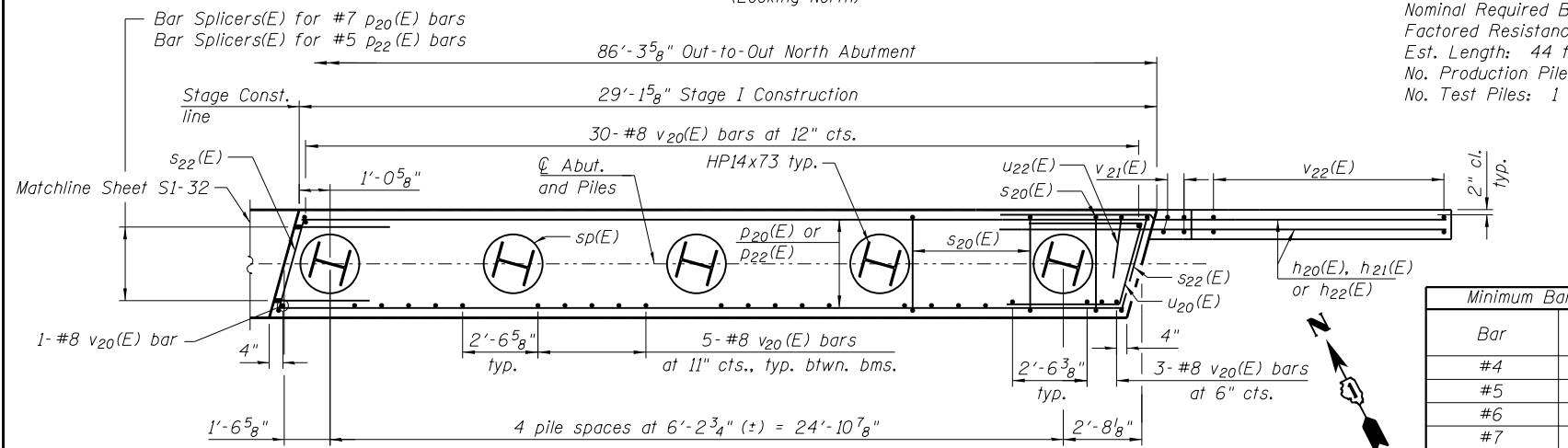
- NOTES**
1. For bar diagrams, minimum bar laps, and Bill of Material, see Sheet SI-29.
 2. For diaphragm details, see Sheet SI-16.
 3. For bar splicers, see Sheet SI-38.
 4. For section thru integral abutment, see Sheet SI-02.
 5. For details of piles, see Sheet SI-37.
 6. Bars noted thus, 2x2-#5 indicates 2 lines of bars with 2 lengths per line.
 7. For section thru abutment, see Sheet SI-29.
 8. Pour steps monolithically with cap.
 9. For Pipe Underdrain for Structures, see Sheets SI-02 and SI-04.



PLAN

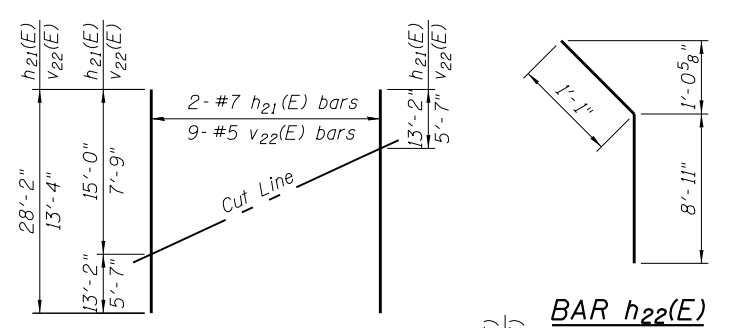


ELEVATION
(Looking North)



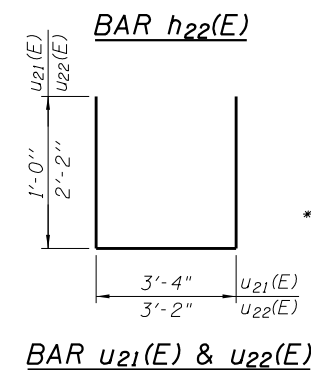
PILE LAYOUT

NOTE:
For notes, see Sheet S-32.

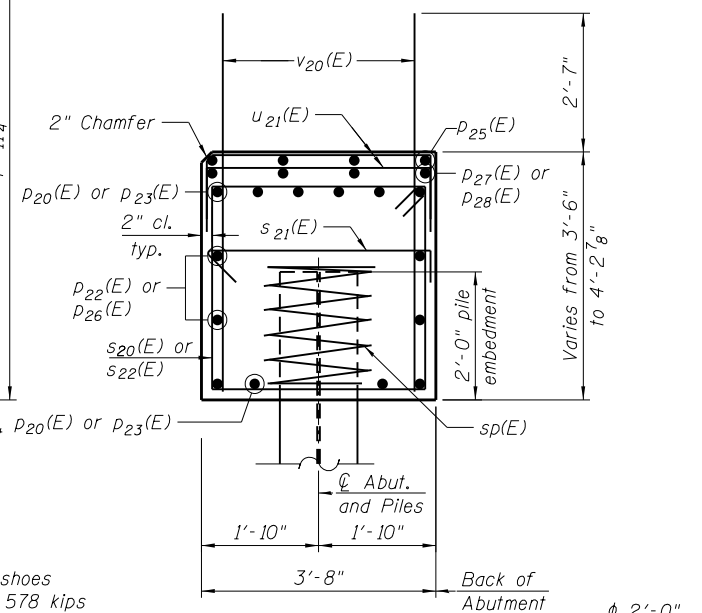


FIELD CUTTING DIAGRAM

Order $h_{21}(E)$ and $v_{22}(E)$ full length. Cut as shown and use remainder of bars in opposite face.

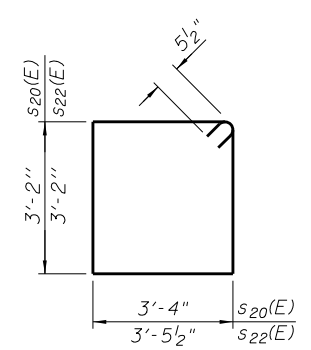


BAR $u_{21}(E)$ & $u_{22}(E)$

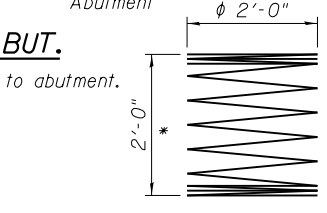


SEC. THRU ABUT.

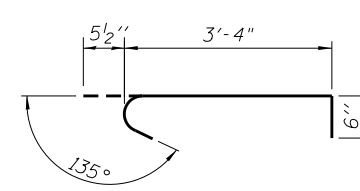
Dimensions at right angles to abutment.



BAR $s_{20}(E)$ & $s_{22}(E)$



BAR $sp(E)$

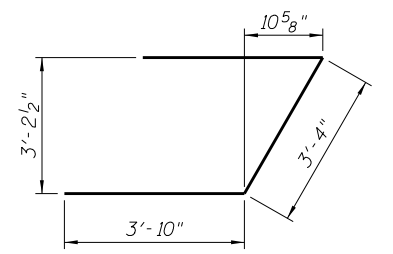


BAR $s_{21}(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{20}(E)$	52	#7	15'-0"	—
$h_{21}(E)$	4	#7	28'-2"	—
$h_{22}(E)$	4	#5	10'-0"	—
$p_{20}(E)$	10	#7	28'-10"	—
$p_{22}(E)$	4	#5	28'-10"	—
$p_{23}(E)$	20	#7	31'-0"	—
$p_{25}(E)$	4	#5	12'-1"	—
$p_{26}(E)$	8	#5	30'-1"	—
$p_{27}(E)$	4	#5	11'-0"	—
$p_{28}(E)$	8	#5	24'-4"	—
$s_{20}(E)$	65	#5	13'-11"	□
$s_{21}(E)$	28	#5	4'-4"	┌
$s_{22}(E)$	4	#5	14'-2"	□
$sp(E)$	14	#4	2'-0"	WWW
$u_{20}(E)$	8	#6	11'-0"	┌
$u_{21}(E)$	70	#4	5'-4"	┌
$u_{22}(E)$	3	#5	7'-6"	┌
$v_{20}(E)$	159	#8	5'-11"	—
$v_{21}(E)$	8	#5	7'-9"	—
$v_{22}(E)$	18	#5	13'-4"	—
Structure Excavation	CU YD		88	
Concrete Structures	CU YD		50.5	
Reinforcement Bars, Epoxy Coated	POUND		9,400	
Furnishing Steel Piles HP 14x73	FOOT		572	
Driving Piles	FOOT		572	
Test Pile Steel HP 14x73	EACH		1	
Pile Shoes	EACH		14	
Geocomposite Wall Drain	SQ YD		82	
Granular Backfill for Structures	CU YD		160	
Pipe Underdrains for Structures 4"	FOOT		127	

*Length is height of spiral.



BAR $u_{20}(E)$

4/27/2016

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DRAWN - LAB, HH
CHECKED - MI, MAF
DATE - 03/22/2016
PLOT DATE = 4/27/2016

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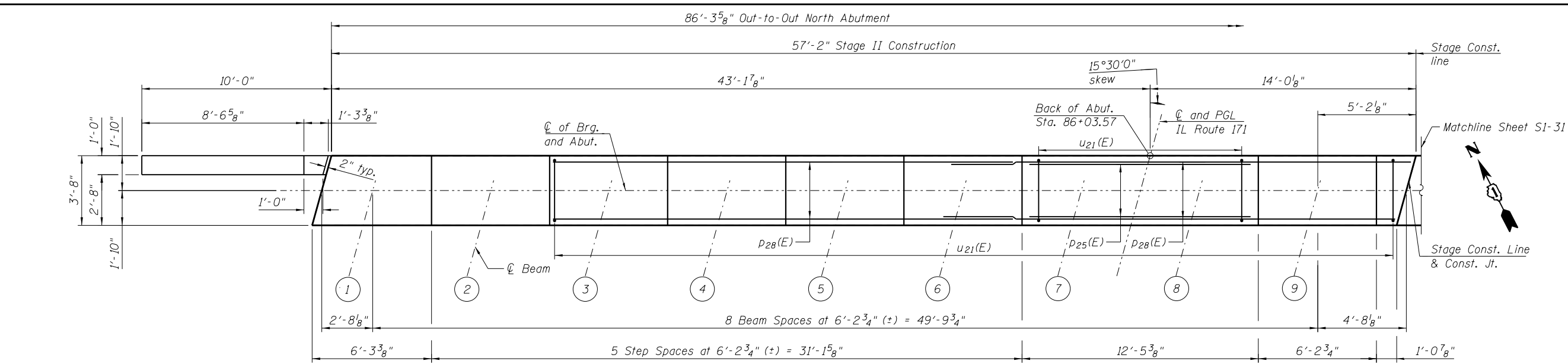
NORTH ABUTMENT - STAGE I CONSTRUCTION
STRUCTURE NO. 099-0537
SHEET NO. S1-31 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	120

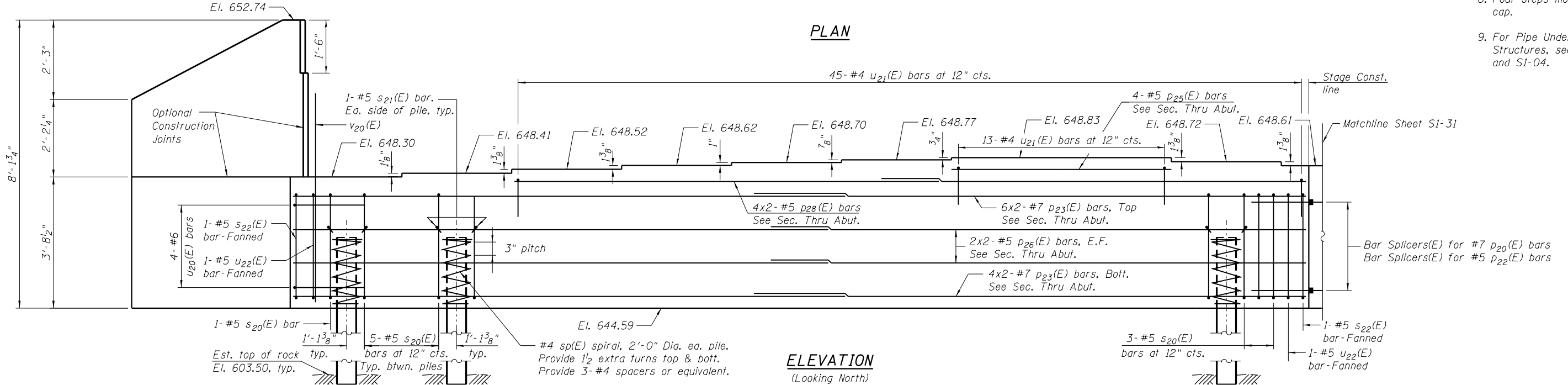
CONTRACT NO. 60H21
ILLINOIS FED. AID PROJECT

NOTES:

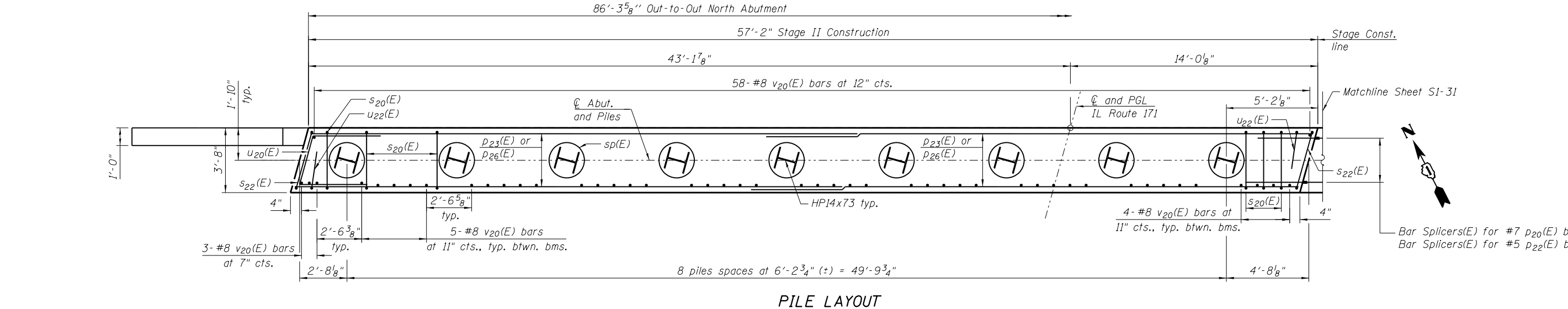
1. For bar diagrams, minimum bar laps, and Bill of Material, see Sheet S1-31.
2. For diaphragm details, see Sheet S1-16.
3. For bar splicers, see Sheet S1-38.
4. For section thru integral abutment, see Sheet S1-02.
5. For details of piles, see Sheet S1-37.
6. Bars noted thus, 2x2-#5 indicates 2 lines of bars with 2 lengths per line.
7. For section thru Abutment, see Sheet S1-31.
8. Pour steps monolithically with cap.
9. For Pipe Underdrain for Structures, see Sheets S1-02 and S1-04.



PLAN



ELEVATION
(Looking North)



PILE LAYOUT

3/17/2016

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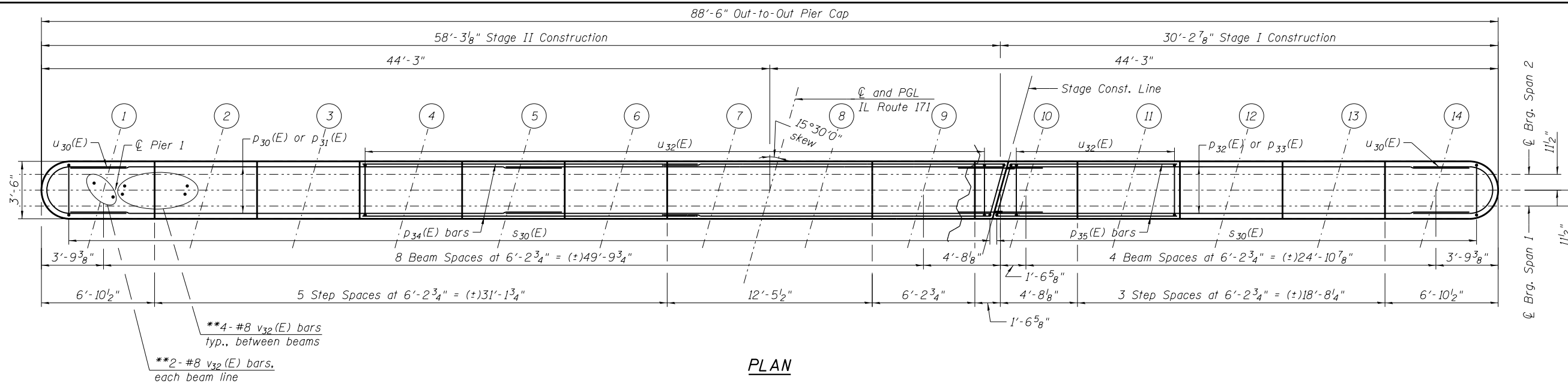
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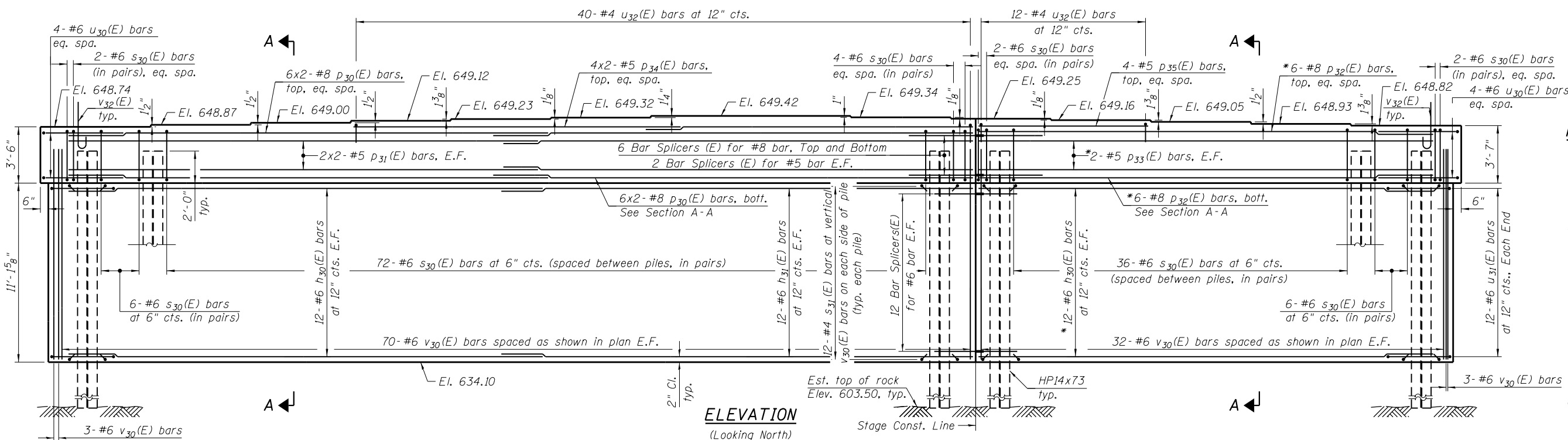
NORTH ABUTMENT - STAGE II CONSTRUCTION
STRUCTURE NO. 099-0537

SHEET NO. S1-32 OF 41 SHEETS

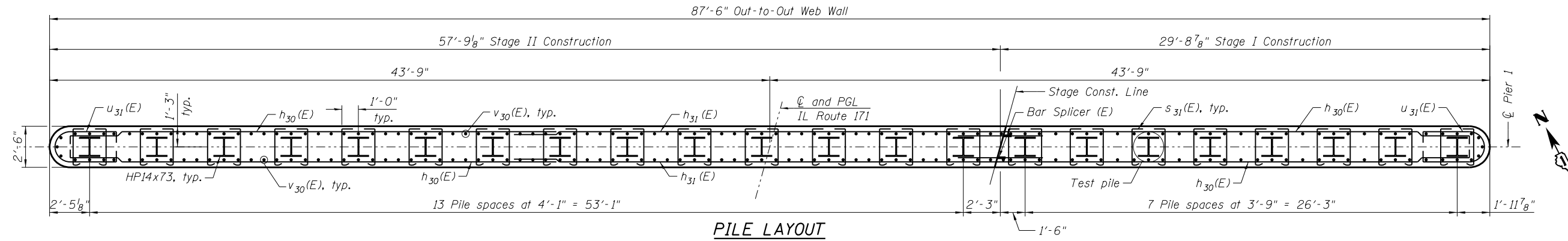
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	121
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				



PLAN



ELEVATION
(Looking North)



PILE LAYOUT

NOTES:

1. For section A-A, Bill of Material, minimum bar laps and Bar Bending Diagrams, see Sheet S1-34.
2. Pour steps monolithically with Cap.
3. Space reinforcement in Cap to miss anchor bolts.
4. Bars indicated thus, 4x2-#8 etc. indicates 4 lines of bars with 2 lengths per line.
5. For details of piles, see Sheet S1-37.
6. For pile data, see Sheet S1-34.
7. For diaphragms details, see Sheet S1-17.
8. For bar splicers, see Sheet S1-38.

* Order bar full length, and cut to fit in field.
 ** See Plan at Pier Sheet S1-17.

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DATE - 03/18/2016	REVISED -

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PIER 1 PLAN AND ELEVATION
STRUCTURE NO. 099-0537

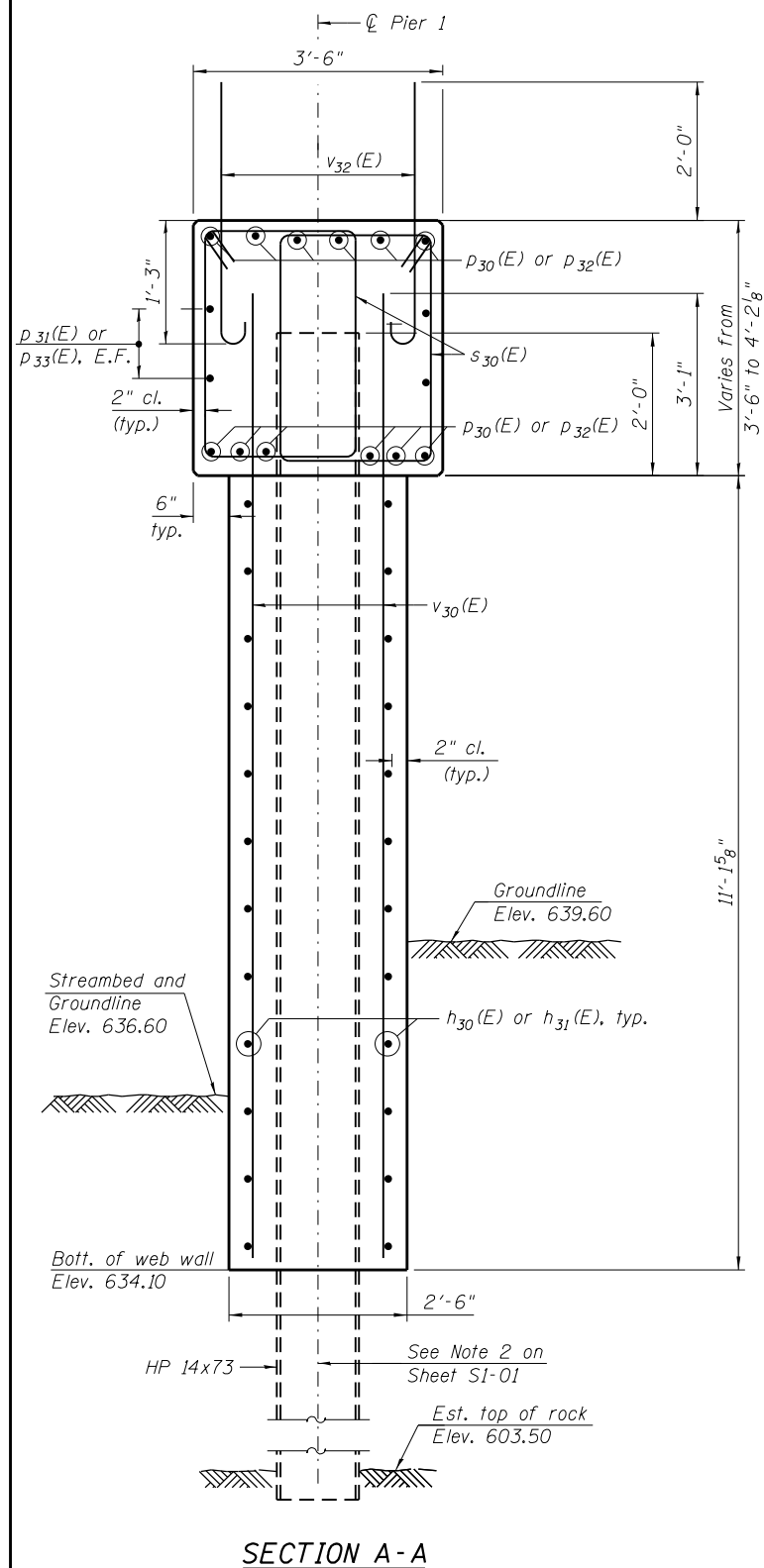
F.A.P. RTE. 577	SECTION C-1-B	COUNTY WILL/COOK	TOTAL SHEETS 186	SHEET NO. 122
CONTRACT NO. 60H21				

3/17/2016

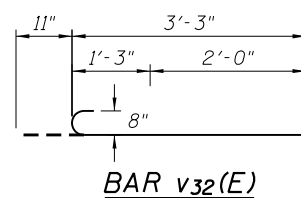
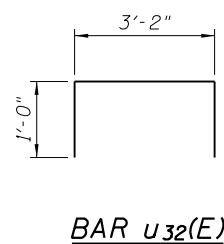
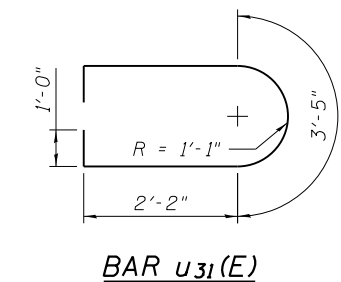
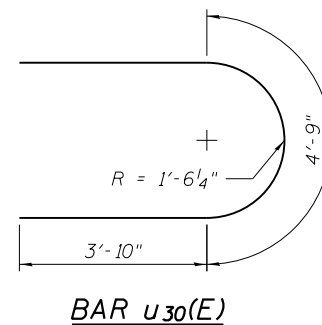
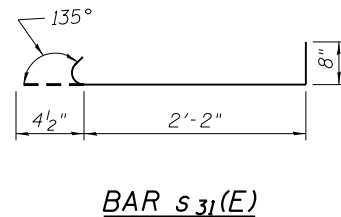
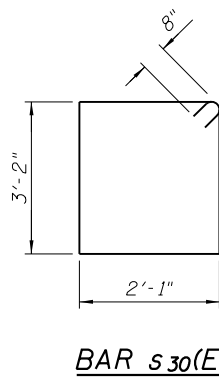
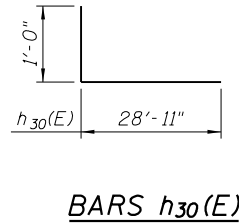
PLOT DATE = 3/17/2016

SHEET NO. S1-33 OF 41 SHEETS

ILLINOIS FED. AID PROJECT



SECTION A-A



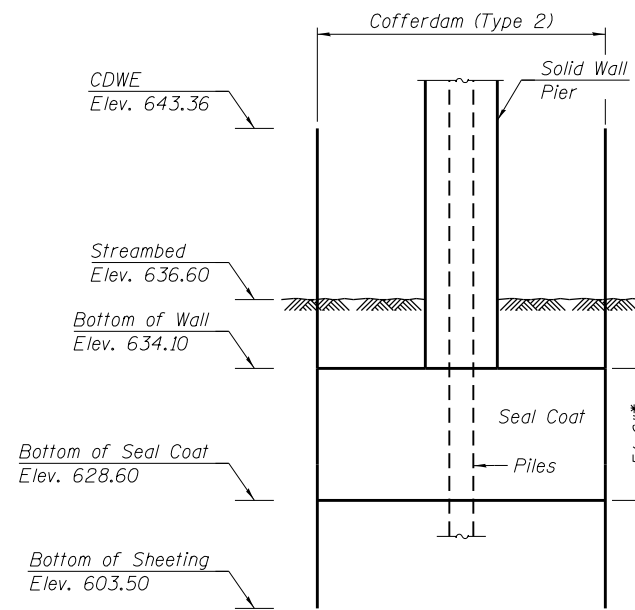
PILE DATA

Type: HP 14x73 with Pile Shoes
 Nominal Required Bearing: 578 kips
 Factored Resistance Available: 289 kips
 Est. Length: 45 ft
 No. Production Piles: 21
 No. Test Piles: 1

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₃₀ (E)	48	#6	29'-11"	┌
h ₃₁ (E)	24	#6	31'-6"	┌
p ₃₀ (E)	24	#8	31'-9"	┌
p ₃₁ (E)	8	#5	30'-2"	┌
p ₃₂ (E)	12	#8	28'-9"	┌
p ₃₃ (E)	4	#5	28'-9"	┌
p ₃₄ (E)	8	#5	21'-4"	┌
p ₃₅ (E)	4	#5	11'-1"	┌
s ₃₀ (E)	260	#6	11'-10"	┌
s ₃₁ (E)	528	#4	3'-3"	┌
u ₃₀ (E)	8	#6	12'-5"	┌
u ₃₁ (E)	24	#6	9'-9"	┌
u ₃₂ (E)	52	#4	5'-2"	┌
v ₃₀ (E)	210	#6	14'-0"	┌
v ₃₂ (E)	80	#8	4'-2"	┌
Concrete Structures	CU YD		135.4	
Reinforcement Bars, Epoxy Coated	POUND		18,600	
Furnishing Steel Piles HP 14x73	FOOT		945	
Driving Piles	FOOT		945	
Test Pile Steel HP 14x73	EACH		1	
Pile Shoes	EACH		22	



SEAL COAT SKETCH

* Thickness is only an estimate to establish seal coat quantities.

3/17/2016

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 REVISED -
 REVISED -
 REVISED -

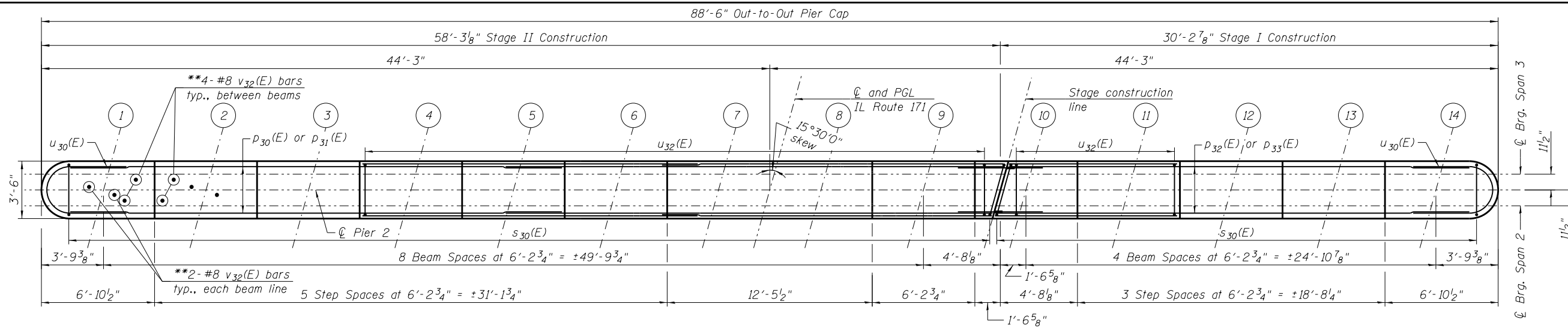
REVISIONS

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

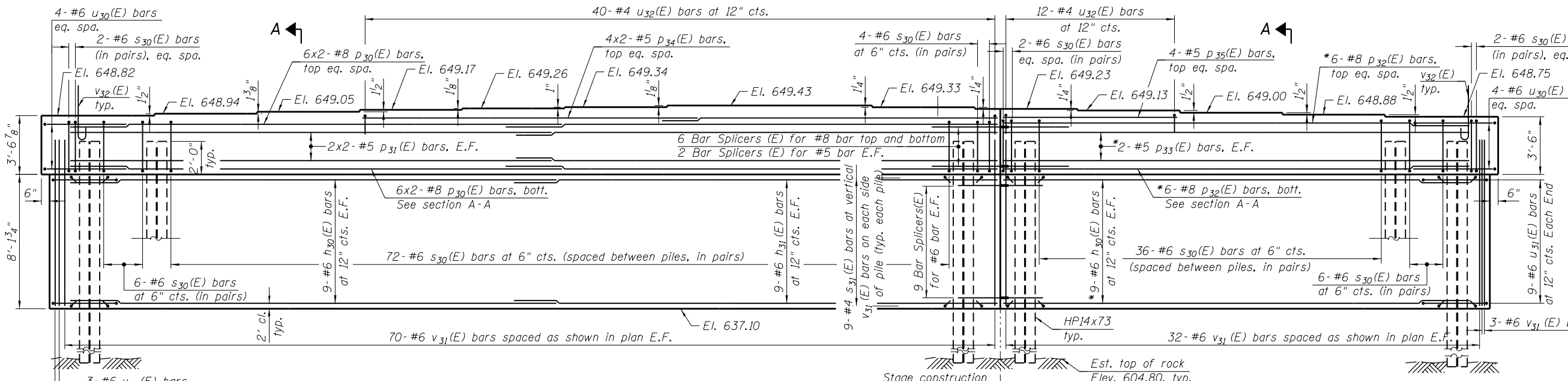
PIER 1 SECTIONS, DETAILS AND BILL OF MATERIAL
 STRUCTURE NO. 099-0537

SHEET NO. S1-34 OF 41 SHEETS

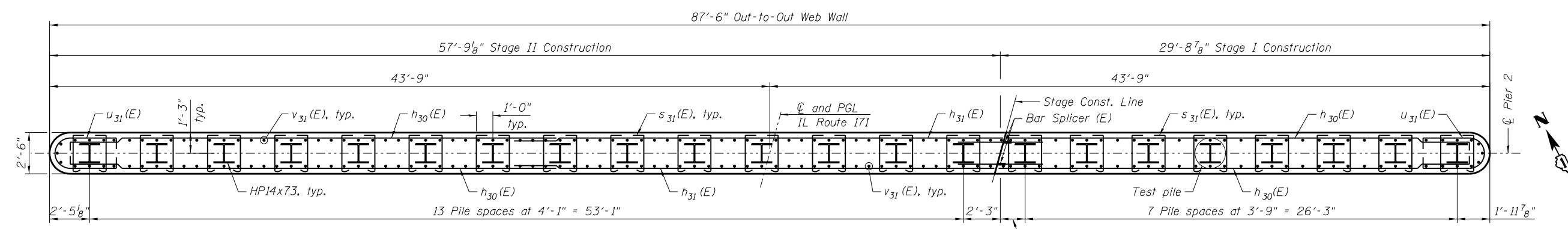
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	123
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	



TOP PLAN



ELEVATION
(Looking North)



PILE LAYOUT

- NOTES:**
1. For section A-A, Bill of Material, minimum bar laps and Bar Bending Diagrams, see Sheet SI-36.
 2. Pour steps monolithically with Cap.
 3. Space reinforcement in Cap to miss anchor bolts.
 4. Bars indicated thus, 4x2-#8 etc. indicates 4 lines of bars with 2 lengths per line.
 5. For details of piles, see Sheet SI-37.
 6. For pile data, see Sheet SI-36.
 7. For diaphragms details, see Sheet SI-17.
 8. For bar splicers, see Sheet SI-38.
- * Order bar full length, and cut to fit in field.
** See Plan at Pier, Sheet SI-17.

3/17/2016
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 CHECKED - MI, MAF
 DATE - 03/18/2016

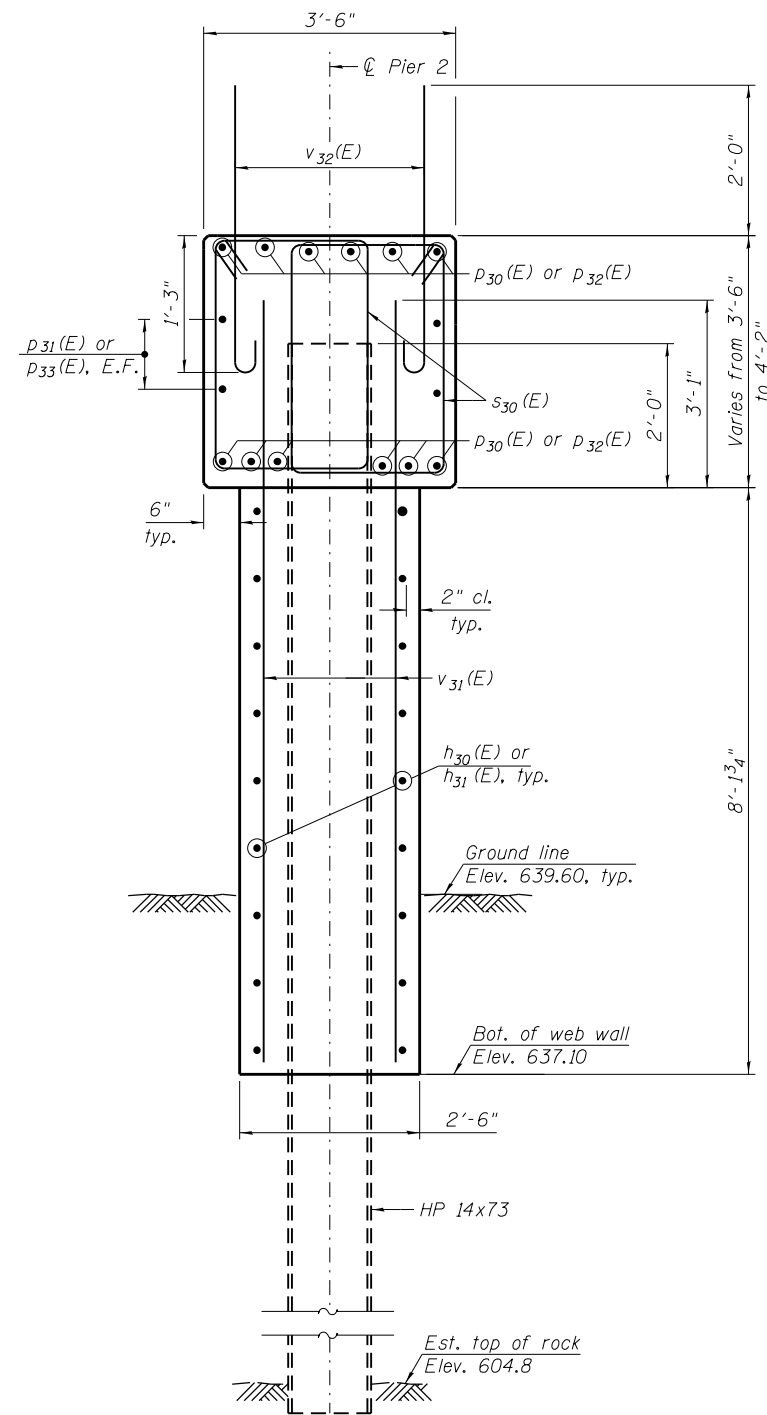
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 DEPARTMENT OF TRANSPORTATION

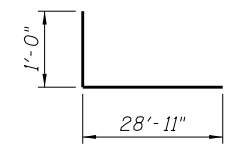
PIER 2 PLAN AND ELEVATION
 STRUCTURE NO. 099-0537
 SHEET NO. SI-35 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	124

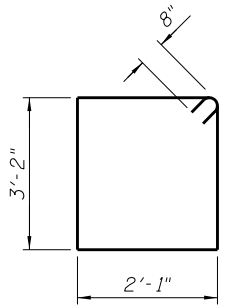
CONTRACT NO. 60H21
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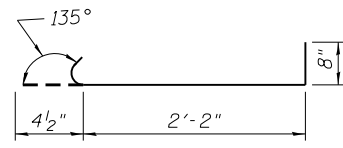
SECTION A - A



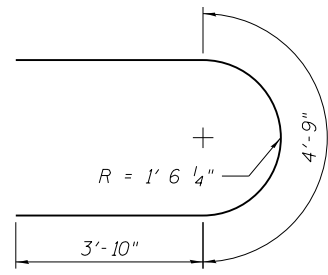
BARS h₃₀(E)



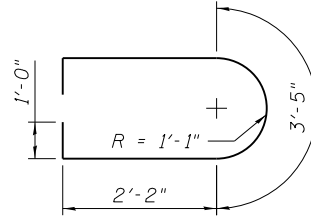
BAR s₃₀(E)



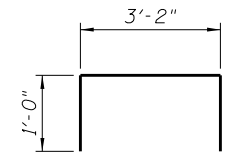
BAR s₃₁(E)



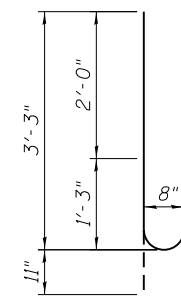
BAR u₃₀(E)



BAR u₃₁(E)



BAR u₃₂(E)



BAR v₃₂(E)

PILE DATA

Type: HP14x73 with Pile Shoes
 Nominal Required Bearing: 578 kips
 Factored Resistance Available: 289 kips
 Est. Length: 44 ft
 No. Production Piles: 21
 No. Test Piles: 1

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	36	#6	29'-11"	┌
h31(E)	18	#6	31'-6"	┌
p30(E)	24	#8	31'-9"	┌
p31(E)	8	#5	30'-2"	┌
p32(E)	12	#8	28'-9"	┌
p33(E)	4	#5	28'-9"	┌
p34(E)	8	#5	21'-4"	┌
p35(E)	4	#5	11'-1"	┌
s30(E)	260	#6	11'-10"	┌
s31(E)	396	#4	3'-3"	┌
u30(E)	8	#6	12'-5"	┌
u31(E)	18	#6	9'-9"	┌
u32(E)	52	#4	5'-2"	┌
v31(E)	210	#6	11'-0"	┌
v32(E)	80	#8	4'-2"	┌
Structure Excavation		CU YD	56	
Concrete Structures		CU YD	111.3	
Reinforcement Bars, Epoxy Coated		POUND	16,460	
Furnishing Steel Piles HP 14x73		FOOT	924	
Driving Piles		FOOT	924	
Test Pile Steel HP 14x73		EACH	1	
Pile Shoes		EACH	22	

3/17/2016

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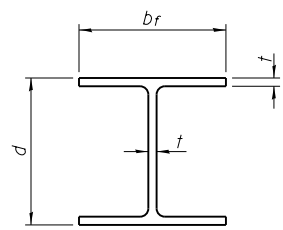
DESIGNED - JJS, LAB	REVISED -
DRAWN - JJS, LAB	REVISED -
CHECKED - MI, MAF	REVISED -
DATE - 03/18/2016	REVISED -

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DEPARTMENT OF TRANSPORTATION

PIER 2 SECTIONS, DETAILS AND BILL OF MATERIAL
STRUCTURE NO. 099-0537

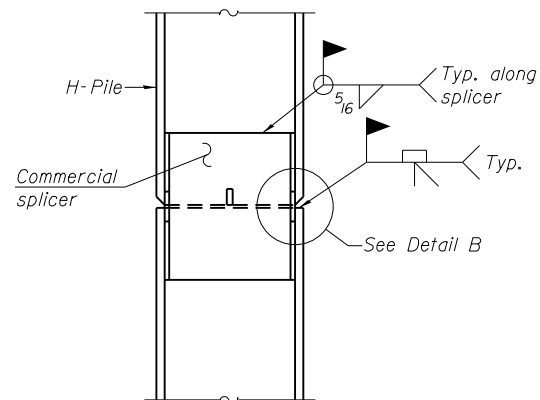
SHEET NO. S1-36 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	125
				CONTRACT NO. 60H21
ILLINOIS FED. AID PROJECT				

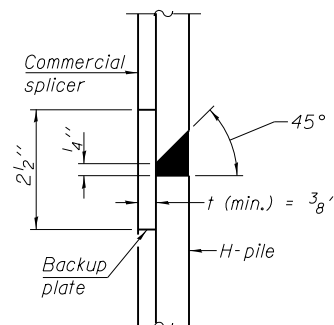


STEEL PILE TABLE

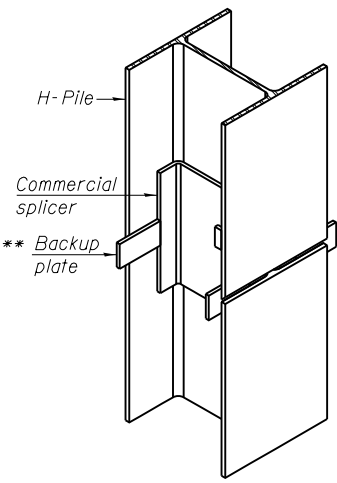
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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

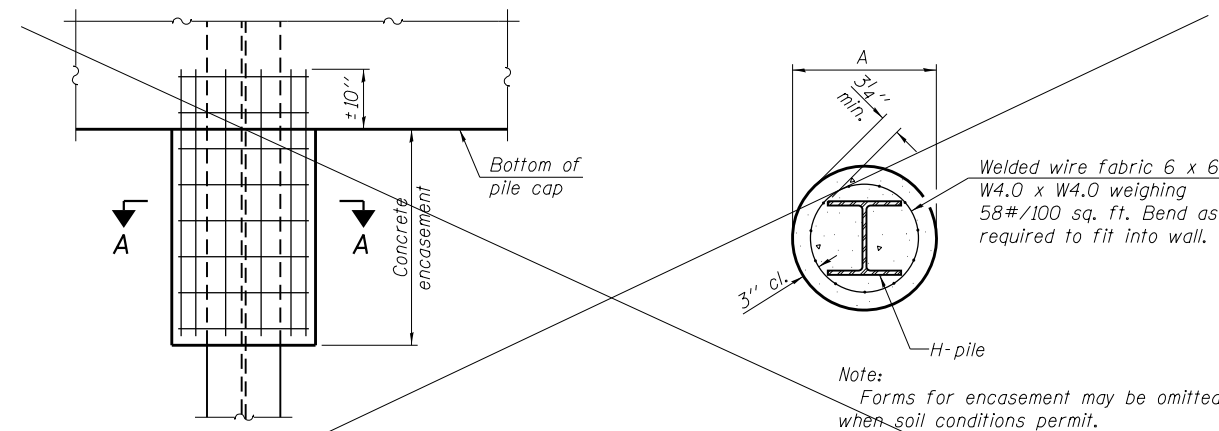


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

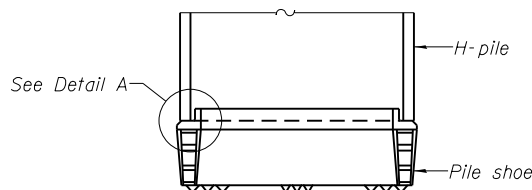


ELEVATION

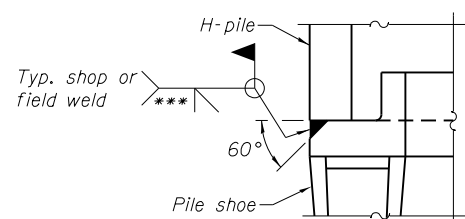
SECTION A-A

PILE ENCASEMENT

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

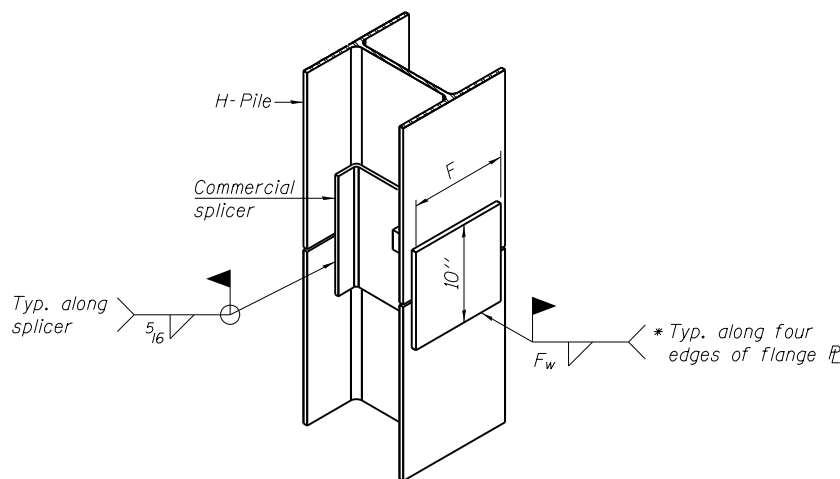


ELEVATION



DETAIL A

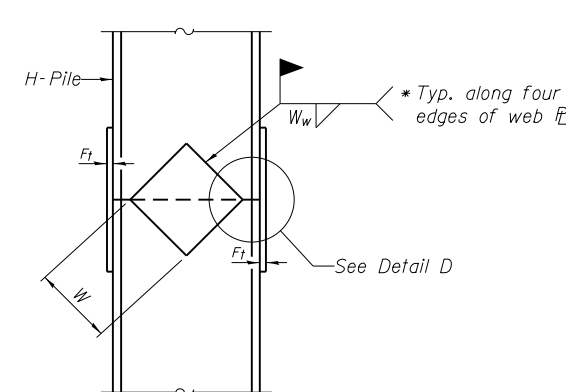
H-PILE SHOE ATTACHMENT



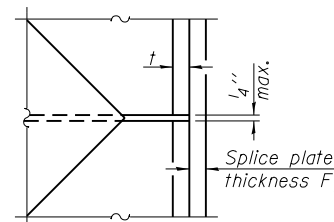
ISOMETRIC VIEW

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.).

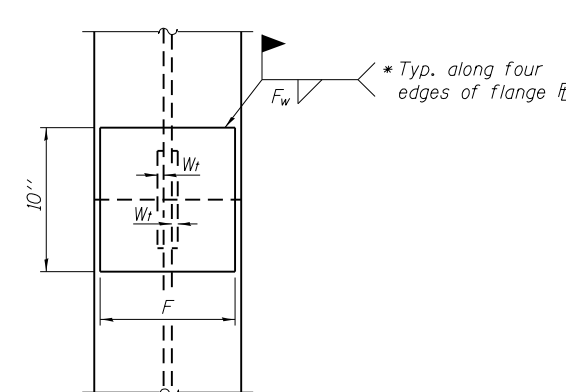


ELEVATION



DETAIL D

WELDED PLATE FIELD SPLICE



END VIEW

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"

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

F-HP 1-27-12

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DRAWN - WM
CHECKED - MI, MAI
DATE - 03/18/2016

REVISED -
REVISED -
REVISED -
REVISED -

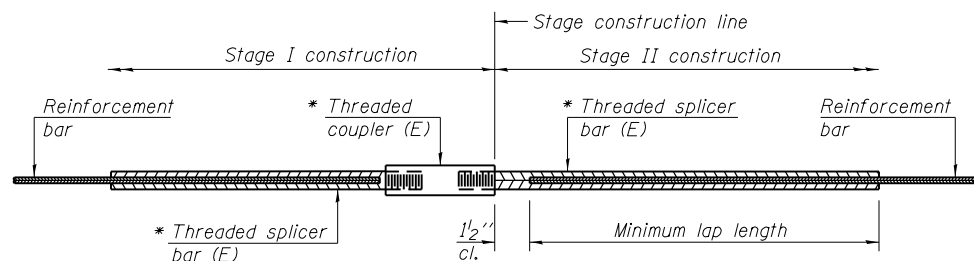
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS
STRUCTURE NO. 099-0537**

SHEET NO. S1-37 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	126
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	

3/17/2016

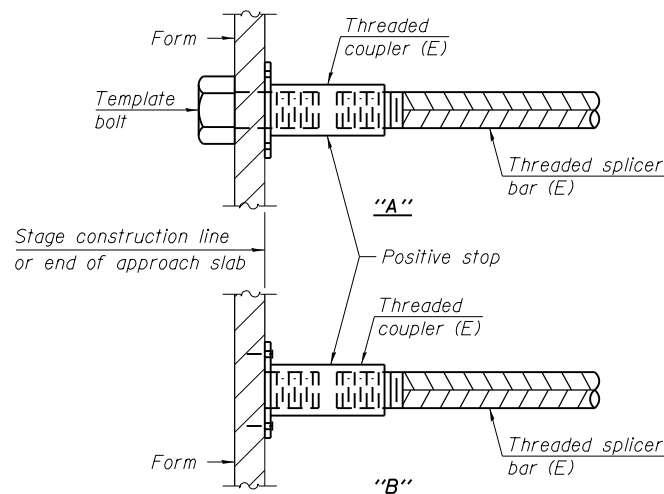


STANDARD BAR SPLICER ASSEMBLY

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

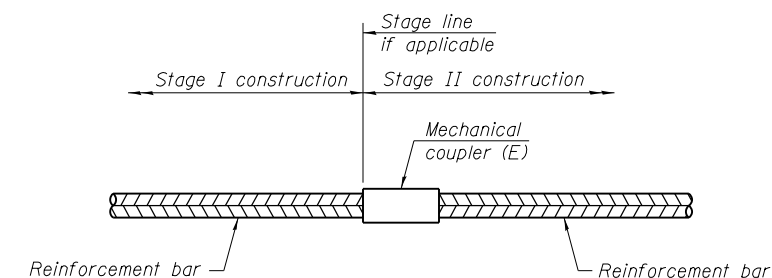
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck/stage const.	#5	783	3'-3"
Deck/stage const.	#6	4	3'-10"
Abut. Diaphragms	#6	16	3'-10"
Pier Diaphragms	#4	8	2'-7"
Pier Diaphragms	#8	2	6'-9"
S. App. Slab	#4	25	2'-7"
S. App. Slab	#5	86	3'-3"
N. App. Slab	#4	25	2'-7"
N. App. Slab	#5	86	3'-3"
S. Abutment	#5	4	3'-3"
S. Abutment	#7	10	5'-2"
N. Abutment	#5	4	3'-3"
N. Abutment	#7	10	5'-2"
Pier 1	#5	4	3'-3"
Pier 1	#6	24	3'-10"
Pier 1	#8	12	6'-9"
Pier 2	#5	4	3'-3"
Pier 2	#6	18	3'-10"
Pier 2	#8	12	6'-9"



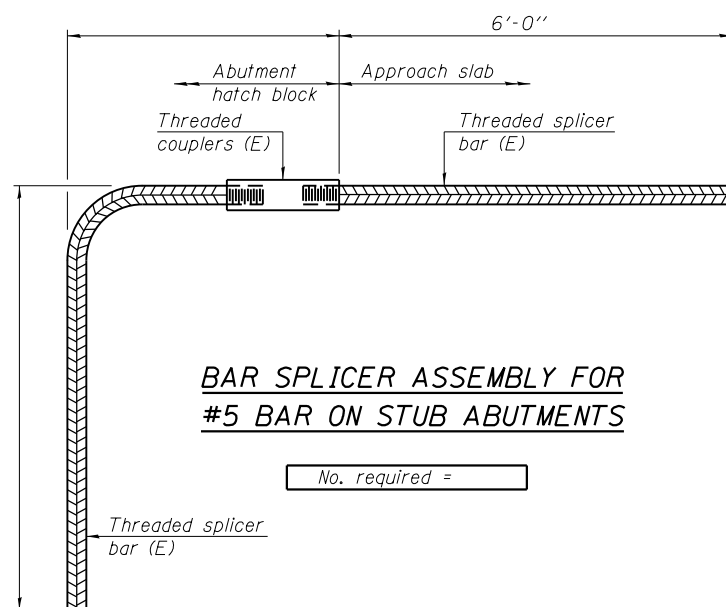
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

6-8-15

3/17/2016

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DATE -	03/18/2016	REVISED -	
PLOT DATE = 3/17/2016			

DESIGNED -	WM, LAB	REVISED -	
DRAWN -	WM, LAB	REVISED -	
CHECKED -	MI, MAI	REVISED -	
DATE -	03/18/2016	REVISED -	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 099-0537

SHEET NO. S1-38 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	127
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				



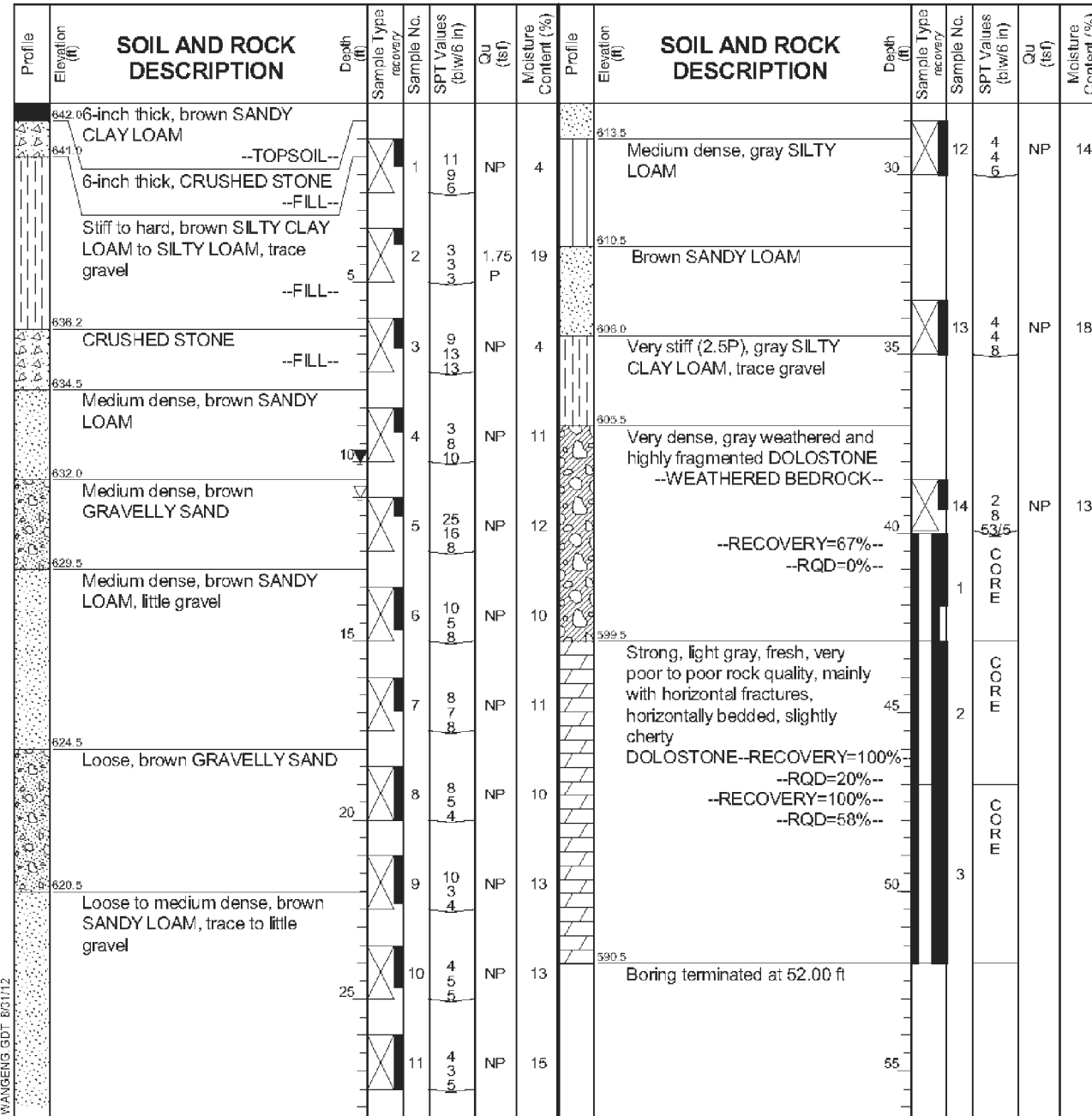
wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG B-01

WEI Job No.: 213-01-01

Client: **HBM ENGINEERING GROUP, INC**
Project: **IL 171 over Long Run Creek**
Location: **Homer Glen, IL**

Datum: NGVD
Elevation: 642.50 ft
North: 1812082.78 ft
East: 1074378.47 ft
Station: 83+47.42
Offset: 30.50 LT



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	08-20-2012	Complete Drilling	08-20-2012	While Drilling	▽	11.00 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	D-57 TMR	At Completion of Drilling	▽	10.00 ft	
Driller	R & J	Logger	A. Happel	Time After Drilling	NA		
Checked by	CLM			Depth to Water	▽	NA	
Drilling Method	3.25" IDA HSA to rock; grouted upon completion;			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			



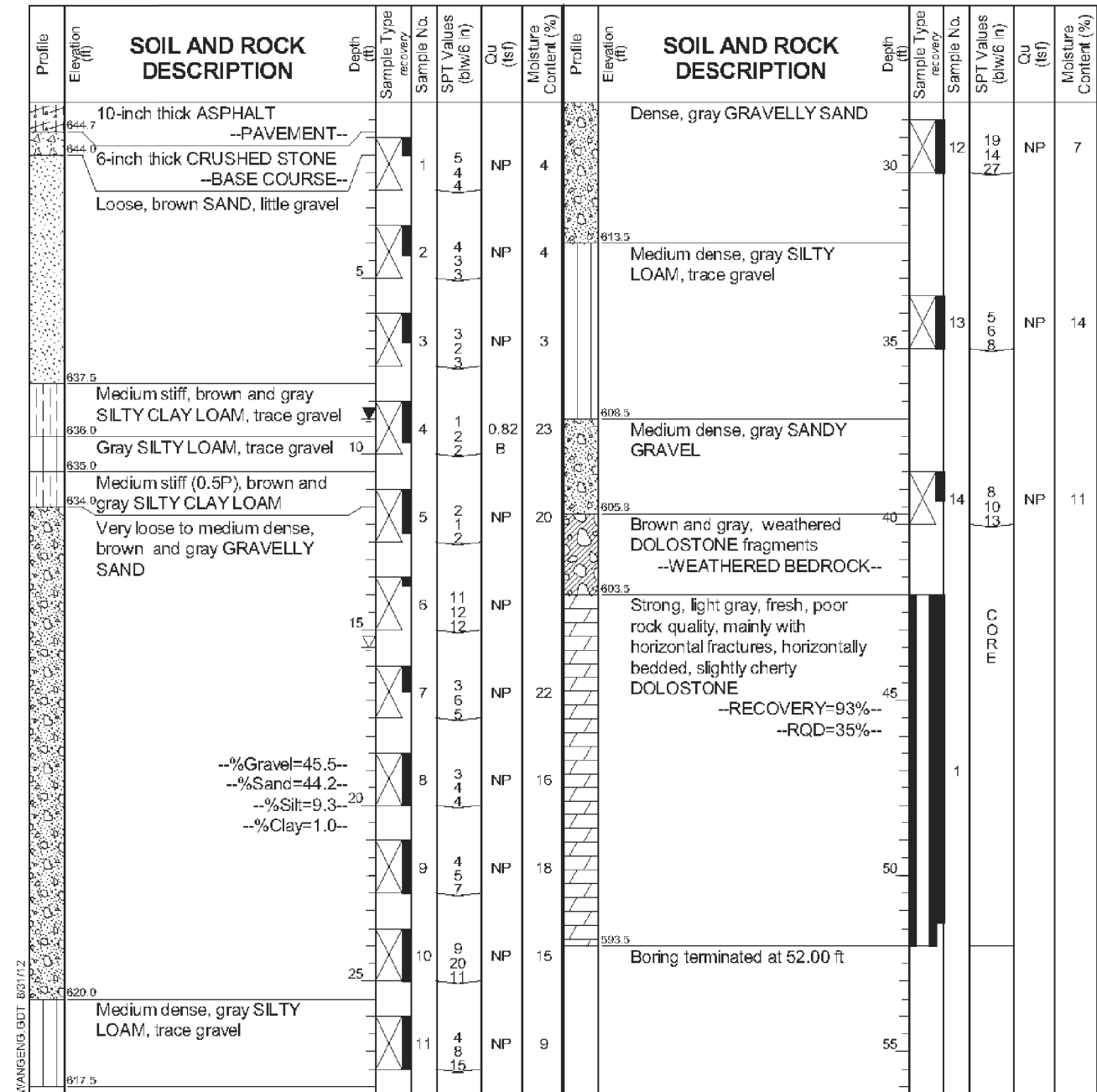
wangeng@wangeng.com
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Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG B-02

WEI Job No.: 213-01-01

Client: **HBM ENGINEERING GROUP, INC**
Project: **IL 171 over Long Run Creek**
Location: **Homer Glen, IL**

Datum: NGVD
Elevation: 645.48 ft
North: 1812141.80 ft
East: 1074468.83 ft
Station: 84+52.01
Offset: 03.90 LT



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	08-23-2012	Complete Drilling	08-23-2012	While Drilling	▽	15.50 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	D-57 TMR	At Completion of Drilling	▽	9.00 ft	
Driller	R & J	Logger	A. Happel	Time After Drilling	NA		
Checked by	CLM			Depth to Water	▽	NA	
Drilling Method	3.25" IDA HSA to rock; grouted upon completion;			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			



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BORING LOG B-03

WEI Job No.: 213-01-01

Client: **HBM ENGINEERING GROUP, INC**
Project: **IL 171 over Long Run Creek**
Location: **Homer Glen, IL**

Datum: NGVD
Elevation: 644.75 ft
North: 1812175.00 ft
East: 1074541.63 ft
Station: 85+26.46
Offset: 26.56 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
644.45	4-inch thick ASPHALT --PAVEMENT--												
641.8	Hard, brown and gray SILTY CLAY LOAM --FILL--	1	4	4.50	18		641.8		12	4	10	NP	12
639.3	Loose, black and gray SILTY LOAM --FILL--	2	2	NP	22		639.3		13	2	6	NP	20
635.3	Stiff, brown, black and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel --FILL--	3	3	1.75	24		635.3		14	2	1	NP	25
631.8	Very loose, black and gray SILTY LOAM	4	2	1.75	25		631.8	Very dense, light gray GRAVEL, some weathered DOLOSTONE fragments --WEATHERED BEDROCK--	14	8	35	NP	12
629.3	Stiff, brown and gray SILTY CLAY LOAM, trace seams of coarse sand	5	1	1.50	28		629.3	Strong, light gray, fresh, very poor to fair rock quality, mainly with horizontal fractures, horizontally bedded, with shaly partings DOLOSTONE --RECOVERY=81%-- --RQD=0%-- --RECOVERY=100%-- --RQD=63%--	1			PROC	
624.3	Very soft, gray SILTY CLAY --L _c (%)=37, P _c (%)=18-- --%Gravel=0.0-- --%Sand=1.1-- --%Silt=64.1-- --%Clay=34.8--	6	0	0.25	31		624.3		2			PROC	
621.8	Medium dense, brown, GRAVELLY SAND	7	0	0.25	36		621.8		1				
617.8	Loose to medium dense, brown SANDY LOAM, trace to some gravel	8	10	NP	12		617.8		1				
		9	8	NP	12		594.8	Boring terminated at 50.00 ft					
		10	4	NP	12								
		11	4	NP	12								

GENERAL NOTES

Begin Drilling: 08-27-2012 Complete Drilling: 08-27-2012
Drilling Contractor: Wang Testing Services Drill Rig: D-57 TMR
Driller: R & J Logger: A. Happel Checked by: CLM
Drilling Method: 3.25" IDA HSA to rock; grouted upon completion;

WATER LEVEL DATA

While Drilling: 20.50 ft
At Completion of Drilling: 8.00 ft
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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BORING LOG B-04

WEI Job No.: 213-01-01

Client: **HBM ENGINEERING GROUP, INC**
Project: **IL 171 over Long Run Creek**
Location: **Homer Glen, IL**

Datum: NGVD
Elevation: 644.53 ft
North: 1812259.20 ft
East: 1074540.64 ft
Station: 85+87.05
Offset: 30.44 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
643.8	9-inch thick ASPHALT --PAVEMENT--												
641.9	CRUSHED STONE --BASE COURSE--	1	32	NP	4		641.9		12	11	21	NP	9
639.3	Dense, brown and gray SILTY LOAM, little gravel --FILL--	2	3	4.25	20		639.3	Dense, gray SAND, little gravel					
635.3	Stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel --FILL--	3	2	2.00	21		635.3		13	32	19	NP	12
631.8		4	4	1.25	28		631.8	Very dense, light brown GRAVEL, some weathered DOLOSTONE fragments --WEATHERED BEDROCK--	35				
624.3	Loose to medium dense, brown GRAVELLY SAND	5	4	NP	12		624.3		14	14	21	NP	8
621.8		6	3	NP	19		621.8	Strong, light gray, fresh, poor rock quality, mainly with horizontal fractures, horizontally bedded, slightly cherty DOLOSTONE --RECOVERY=97%-- --RQD=45%--	1			PROC	
617.8	Gray SANDY LOAM, trace gravel	7	4	NP	13		617.8		1				
613.8	Dense, gray GRAVELLY SAND	8	2	NP	19		613.8		1				
609.8	Gray SILTY LOAM	9	4	NP	12		609.8		1				
605.8	Dense, gray GRAVELLY SAND	10	17	NP	8		605.8		1				
		11	5	NP	12		593.5	Boring terminated at 51.00 ft					

GENERAL NOTES

Begin Drilling: 08-24-2012 Complete Drilling: 08-24-2012
Drilling Contractor: Wang Testing Services Drill Rig: D-57 TMR
Driller: R & J Logger: A. Happel Checked by: CLM
Drilling Method: 3.25" IDA HSA to rock; grouted upon completion;

WATER LEVEL DATA

While Drilling: 10.50 ft
At Completion of Drilling: 7.50 ft
Time After Drilling: NA
Depth to Water: NA

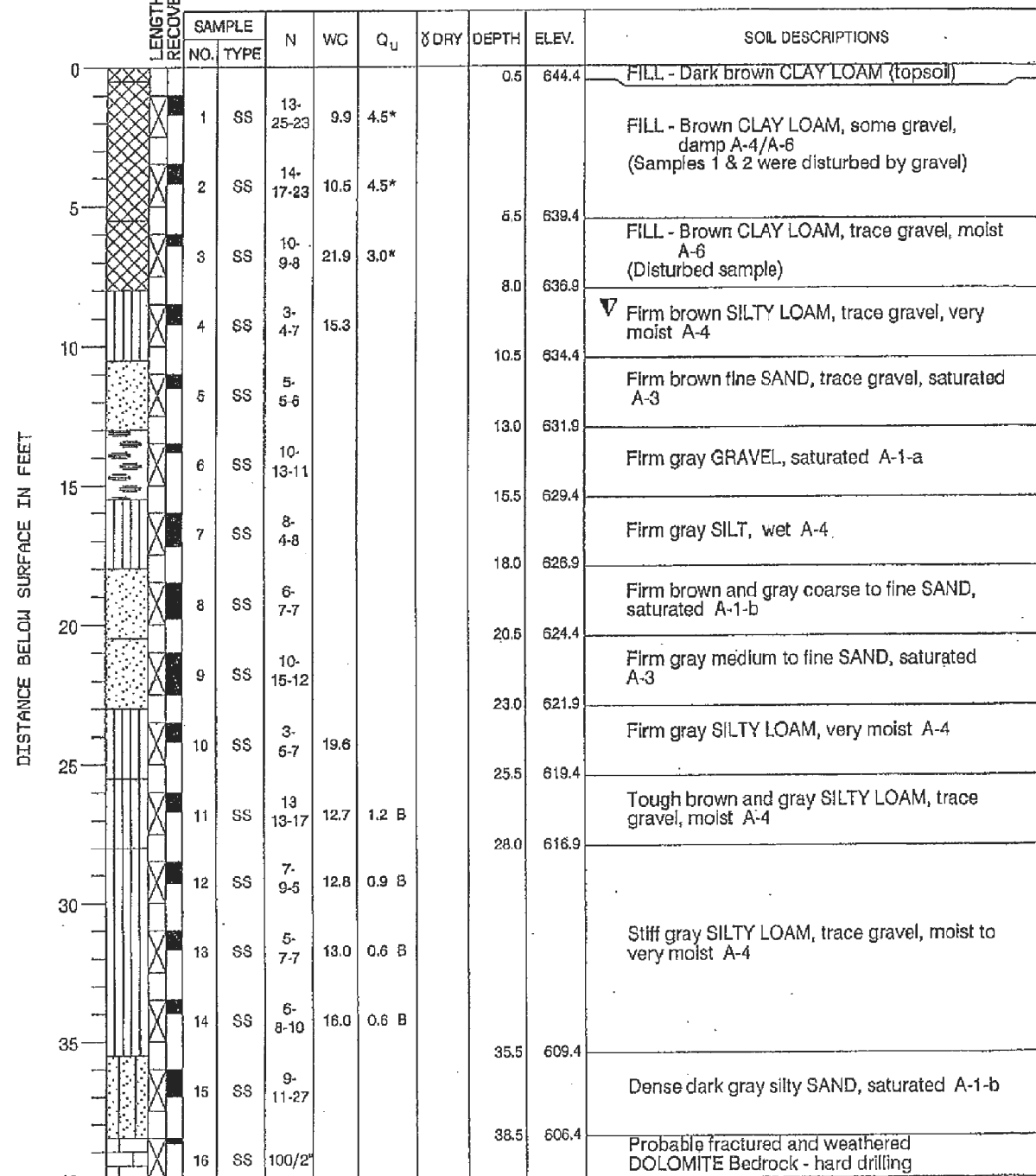
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

PROJECT Streambed Scour Study, 8 Bridge Locations, District 1, Illinois
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING IL 171 DATE STARTED 9-20-95 DATE COMPLETED 9-20-95 JOB L - 37,997



ELEVATIONS WATER TABLE
 GROUND SURFACE 644.9 WHILE DRILLING 9.0'
 END OF BORING 603.9 AT END OF BORING Rotary Wash
 24 HOURS Grouted

IL Route 171 over Long Run Creek
 Structure No. 099-0080



DRILL RIG NO. 91

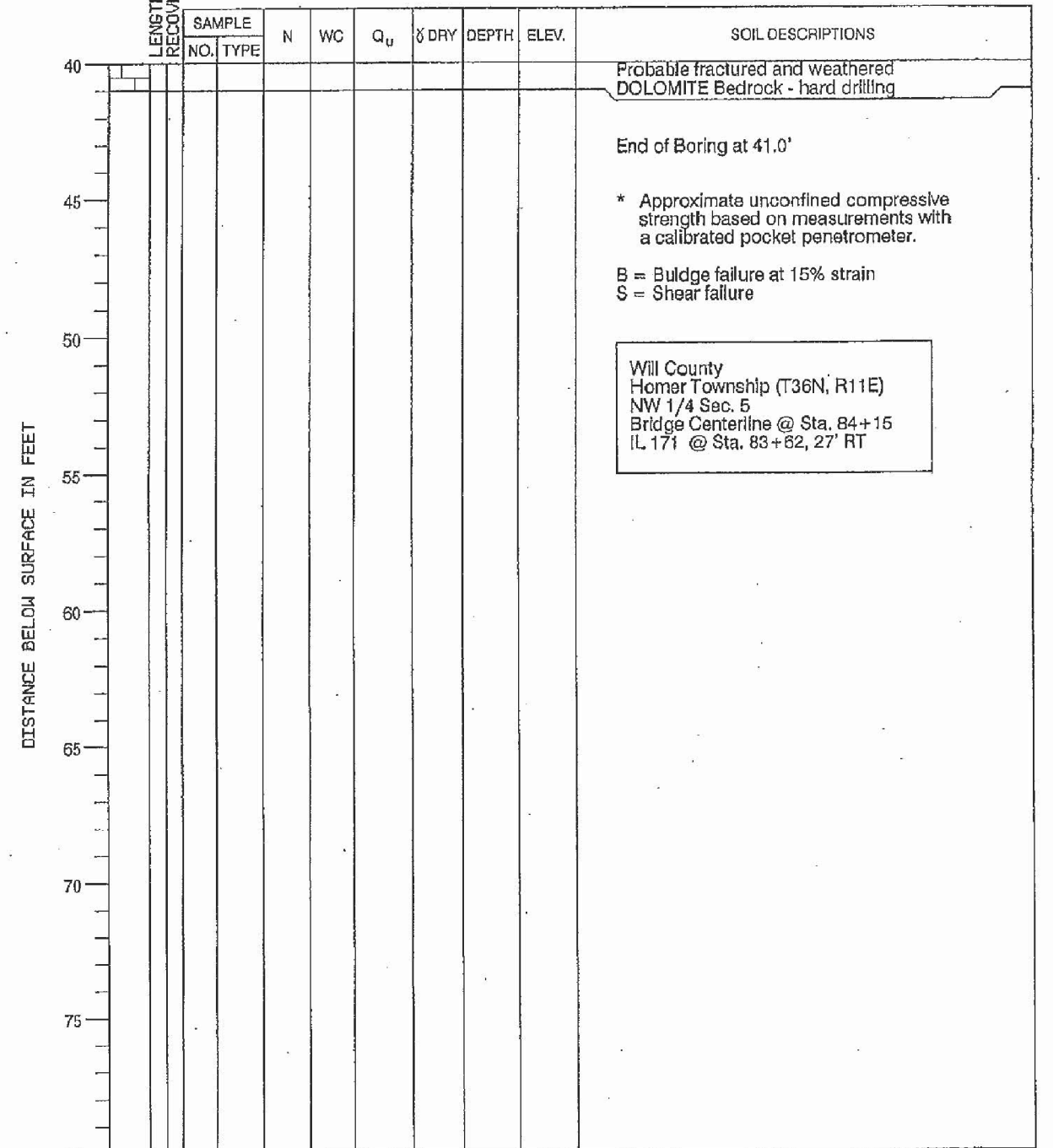
Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT Streambed Scour Study, 8 Bridge Locations, District 1, Illinois
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING IL 171 DATE STARTED 9-20-95 DATE COMPLETED 9-20-95 JOB L - 37,997



ELEVATIONS WATER TABLE
 GROUND SURFACE 644.9 WHILE DRILLING 9.0'
 END OF BORING 603.9 AT END OF BORING Rotary Wash
 24 HOURS Grouted

IL Route 171 over Long Run Creek
 Structure No. 099-0080



DRILL RIG NO. 91

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

3/17/2016

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DRAWN - WM	REVISED -
CHECKED - MI, MAI	REVISED -
DATE - 03/18/2016	REVISED -

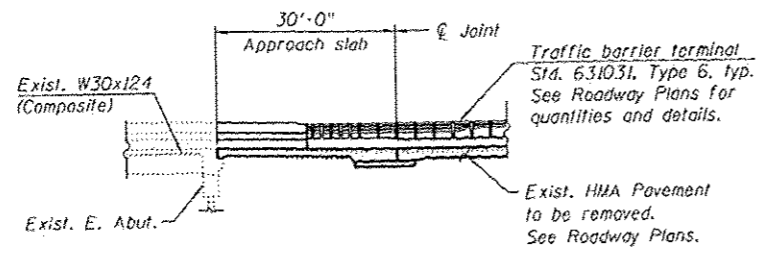
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - III
 STRUCTURE NO. 099-0537

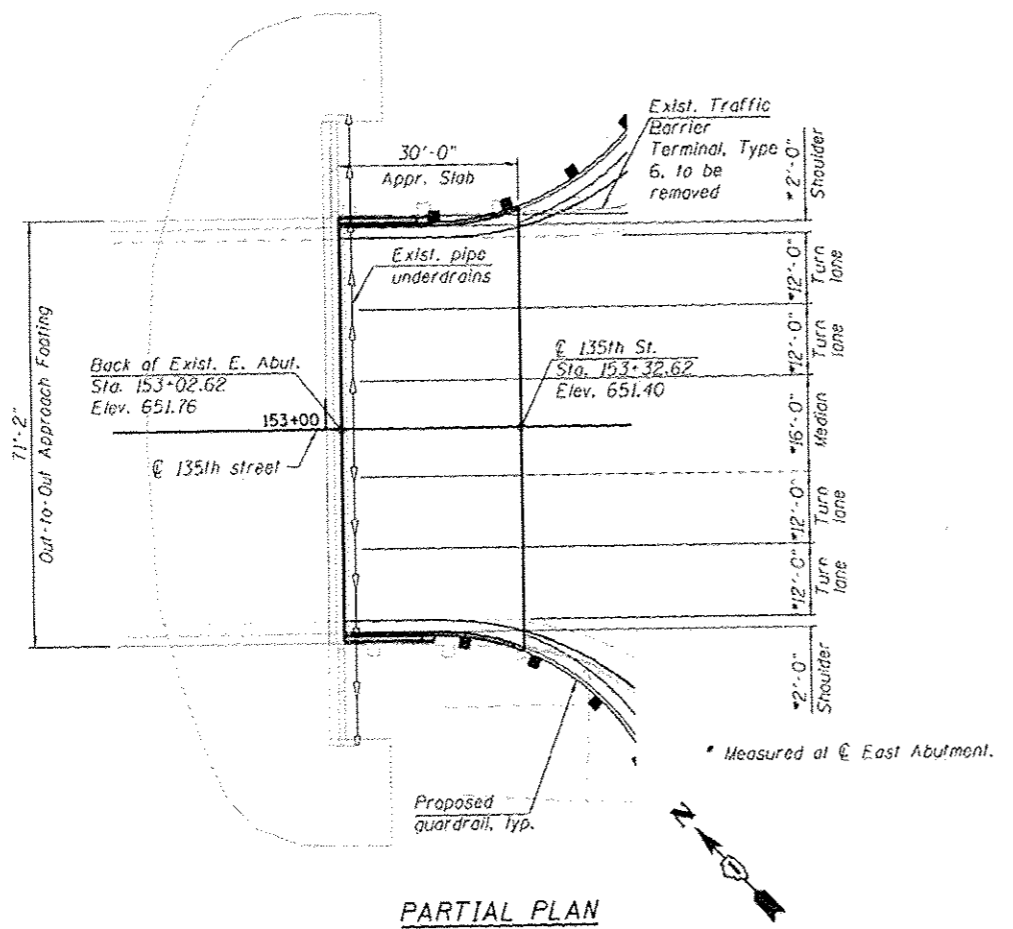
SHEET NO. S1-41 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	130
CONTRACT NO. 60H21				

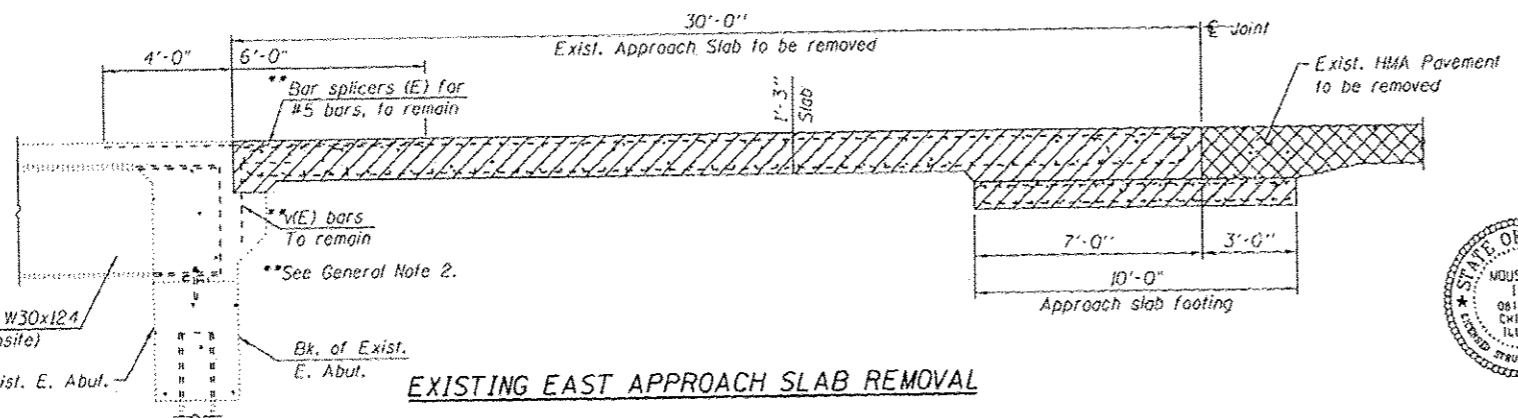
ILLINOIS FED. AID PROJECT



PARTIAL ELEVATION



PARTIAL PLAN



EXISTING EAST APPROACH SLAB REMOVAL

GENERAL NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Existing abutment reinforcement (Bar splicers (E) for #5 bars and v(E) bars) to remain shall be cleaned and incorporated into the new construction. Cost included with Concrete Structures.
3. See Alignment and Ties Sheet for vertical datum equation to relate between those elevations shown on plans for F.A.U. RTE. 0282 and plans for F.A.P. RTE. 577 (IL 171 Archer Bridge Replacement).
4. 135th street will be closed to vehicular traffic during construction. 135th street traffic will be detoured via local roads during E. approach slab construction. See Roadway Plans.
5. For existing profile, see Sheet EXS2-1.

INDEX OF SHEETS

- S2-1 Partial Plan & Elevation
- S2-2 Top of East Approach Slab Elevations
- S2-3 East Approach Slab
- S2-4 East Approach Slab Sections and Details
- EXS2-1 Existing General Plan and Elevation
- EXS2-2 Existing Bridge Approach Slab Details I
- EXS2-3 Existing Bridge Approach Slab Details II

APPROVED
For Structural Adequacy Only

Moussa A. Issa
Engineer of Bridges & Structures



LEGEND

- Approach Slab Removal See Roadway Plans for quantities
- Pavement Removal See Roadway Plans for quantities

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB.	TOTAL QUANTITY
Concrete Superstructure (Approach Slab)	CU YD	101.6	-	101.6
Concrete Structures	CU YD	-	22.8	22.8
Concrete Superstructure	CU YD	3.4	-	3.4
Bridge Deck Grooving	SQ YD	226	-	226
Protective Coat	SQ YD	249	-	249
Reinforcement Bars, Epoxy Coated	FOUND	28,790	-	28,790
Granular Backfill for Structures	CU YD	-	22	22

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interim Revisions.

LOADING HL-93

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

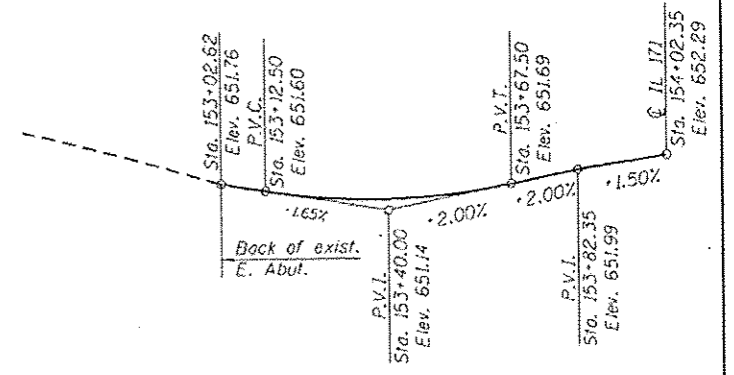
DESIGN STRESSES

FIELD UNITS

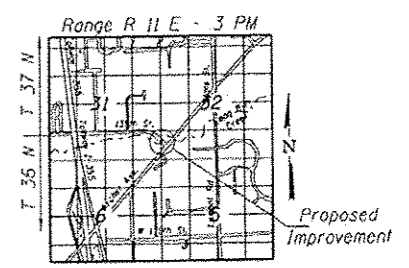
$f'_c = 3,500$ psi (Cast-In-place)
 $f_y = 60,000$ psi (reinforcement)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.09g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.16g
Soil Site Class = D



PROFILE GRADE



LOCATION SKETCH

PARTIAL PLAN & ELEVATION
135TH STREET OVER LONG RUN CREEK

F.A.P. RTE. 0282 - SEC. C-1-B

WILL COUNTY

STATION 153+45.12

STRUCTURE NO. 099-3028

PARTIAL PLAN & ELEVATION
STRUCTURE NO. 099-3028

SHEET NO. S2-1 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	C-1-B	WILL	186	131
			CONTRACT NO. 60H21	
ILLINOIS FED. AID PROJECT				

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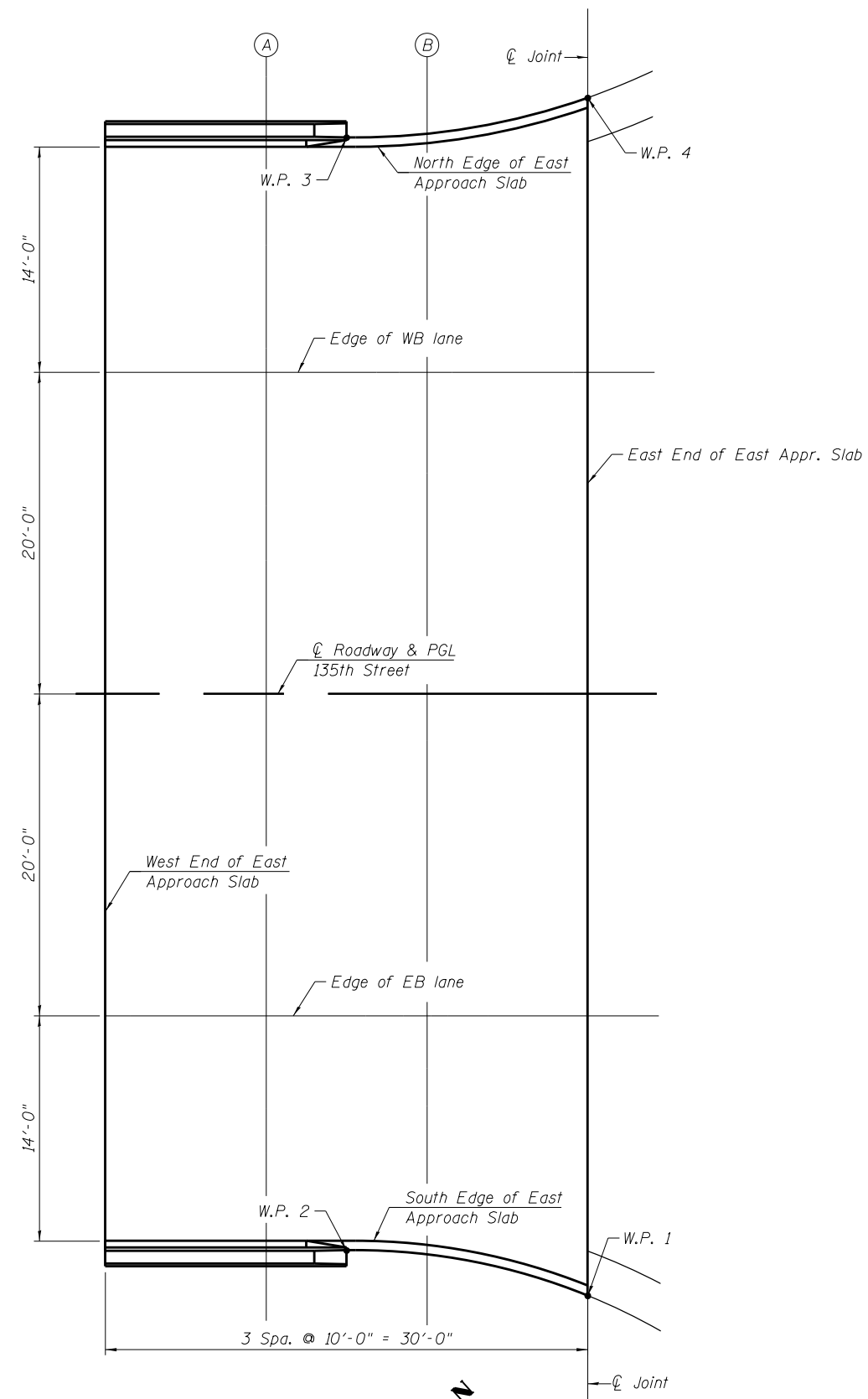
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DRAWN - PH	REVISIONS
CHECKED - MI, MAI	REVISIONS
DATE - 03/18/2016	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

3/17/2016

PLOT DATE = 3/17/2016



PLAN

NOTE:
1. For Working Points Stations and Offsets, see Sheet S2-03.

NORTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
West End of East Approach Slab	153+02.62	-34.00	651.08
A	153+12.62	-34.00	650.92
B	153+22.62	-34.22	650.76
East End of East Approach Slab	153+32.62	-36.43	650.56

EDGE OF WB LANE

Location	Station	Offset	Theoretical Grade Elevations
West End of East Approach Slab	153+02.62	-20.00	651.08
A	153+12.62	-20.00	650.92
B	153+22.62	-20.00	650.76
East End of East Approach Slab	153+32.62	-20.00	650.56

CL ROADWAY & PGL 135th STREET

Location	Station	Offset	Theoretical Grade Elevations
West End of East Approach Slab	153+02.62	0.00	651.76
A	153+12.62	0.00	651.59
B	153+22.62	0.00	651.46
East End of East Approach Slab	153+32.62	0.00	651.40

EDGE OF EB LANE

Location	Station	Offset	Theoretical Grade Elevations
West End of East Approach Slab	153+02.62	20.00	651.36
A	153+12.62	20.00	651.20
B	153+22.62	20.00	651.04
East End of East Approach Slab	153+32.62	20.00	650.89

SOUTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
West End of East Approach Slab	153+02.62	34.00	651.08
A	153+12.62	34.00	650.92
B	153+22.62	34.25	650.75
East End of East Approach Slab	153+32.62	36.77	650.56

3/17/2016

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DESIGNED - LAB
DRAWN - LAB, PH
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DATE - 03/18/2016

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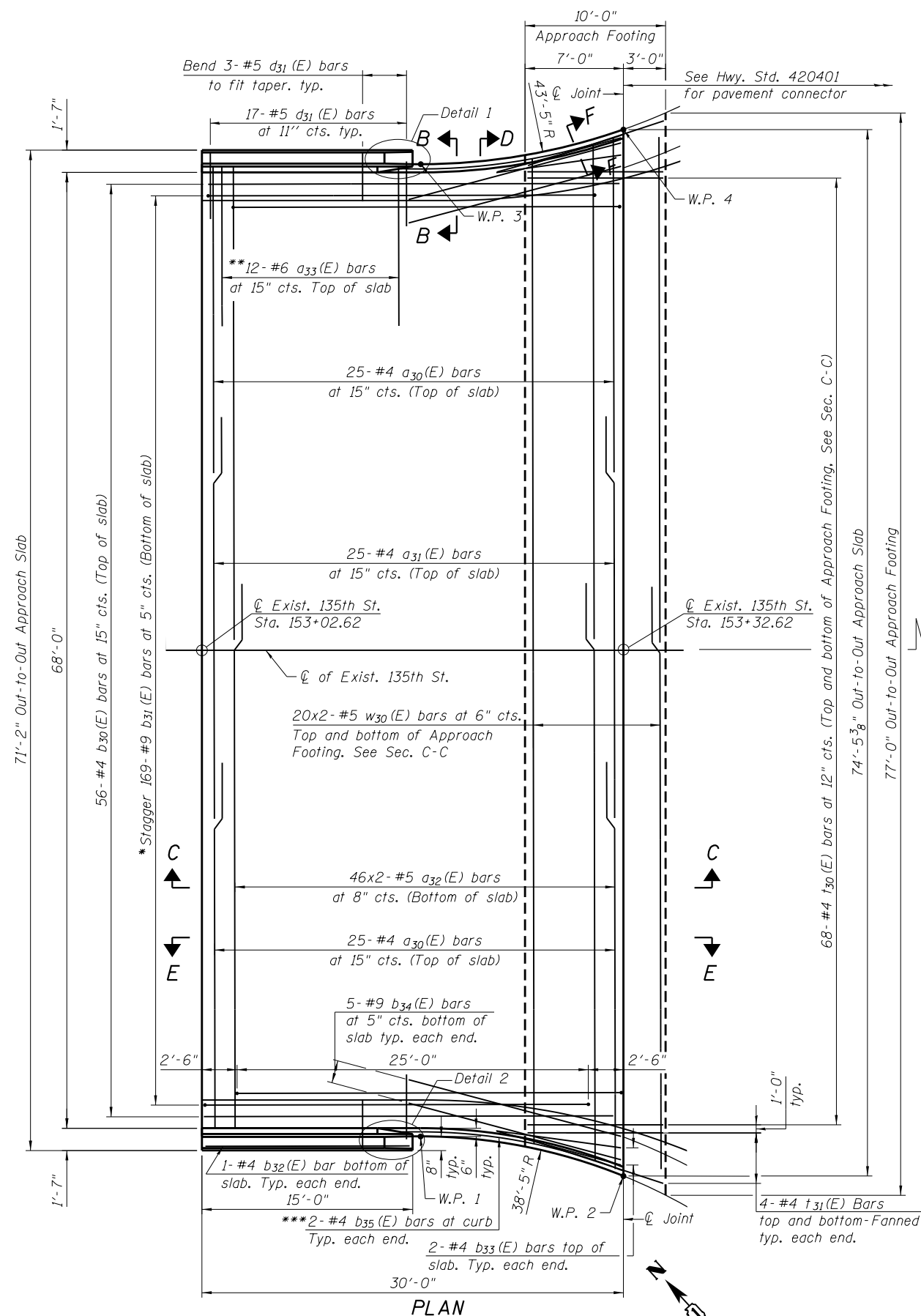
REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 099-3028

SHEET NO. S2-2 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	C-1-B	WILL	186	132
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				



* Tilt #9 b₃₁(E) bars as required to maintain clearance.
 ** Space between a₃₀(E) bars, typ. ea. parapet.
 *** Bend and cut in field to fit curvature of approach slab.

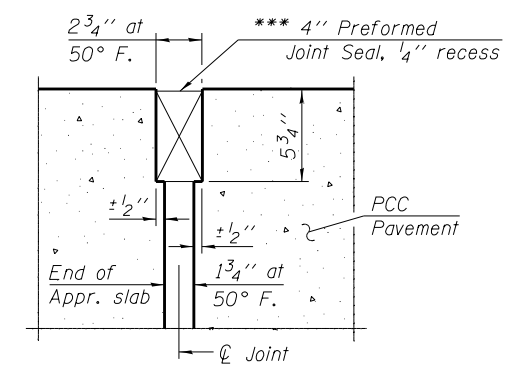
Sta. 81+08.40 @ IL 171 (Archer Ave.)
 Sta. 154+02.35 @ Exist. 135th St.

WORKING POINT TABLE
 (Station and offsets measured from proposed @ 135th St.)

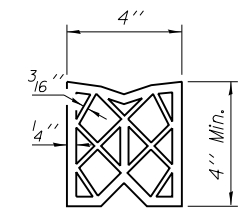
W.P.	Station	Offset
W.P. 1	153+18.18	34.58 RT
W.P. 2	153+32.62	37.40 RT
W.P. 3	153+18.20	34.58 LT
W.P. 4	153+32.62	37.05 LT

NOTES:

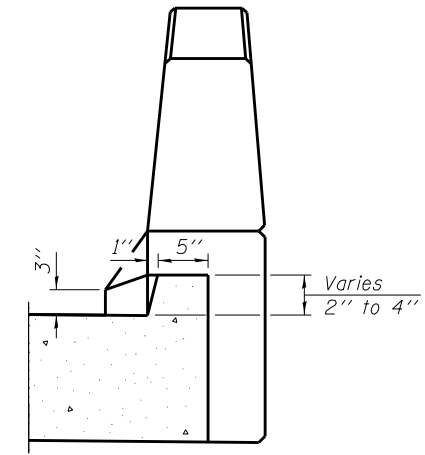
- For Bill of Material, minimum bar laps and bar diagrams, see Sheet S2-4.
- For Section C-C, D-D and view E-E, see Sheet S2-4.



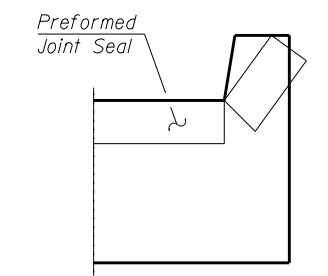
DETAIL A



PREFORMED JOINT SEAL

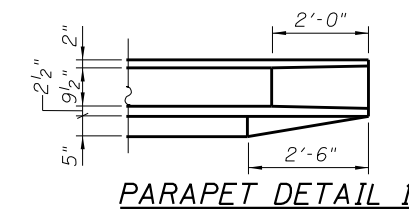


SECTION B-B

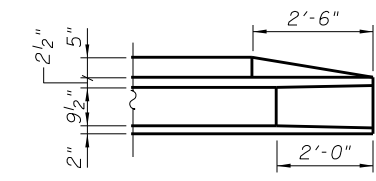


SECTION F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



PARAPET DETAIL 1



PARAPET DETAIL 2

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EAST APPROACH SLAB
 STRUCTURE NO. 099-3028**

SHEET NO. S2-3 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	C-1-B	WILL	186	133
CONTRACT NO. 60H21				

ILLINOIS FED. AID PROJECT

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

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

DESIGNED -	HH, PH	REVISED -	
DRAWN -	HH, PH	REVISED -	
CHECKED -	MI, MAI	REVISED -	
DATE -	03/18/2016	REVISED -	

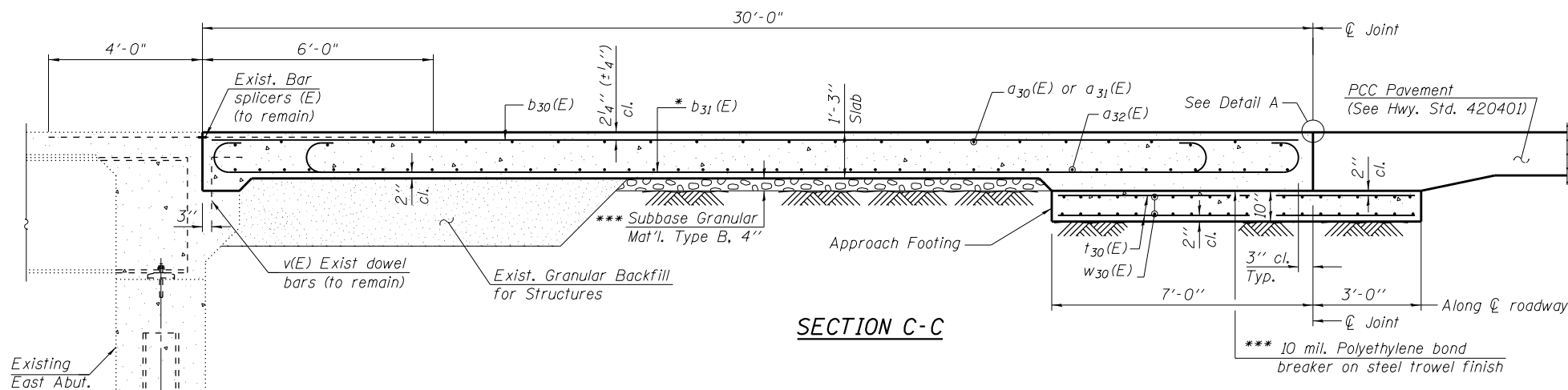
PLOT DATE = 3/17/2016

3/17/2016

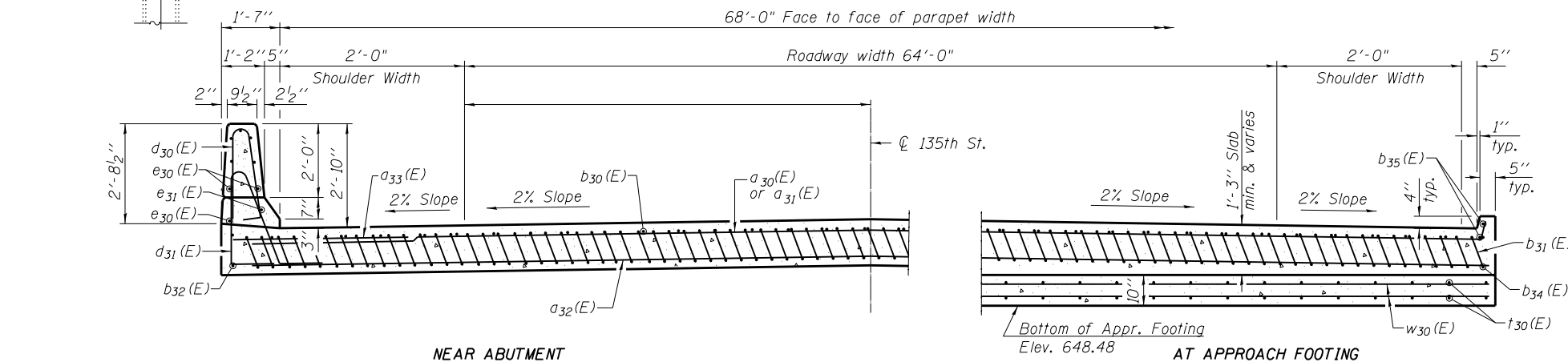
**APPROACH
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a ₃₀ (E)	50	#4	25'-6"	—
a ₃₁ (E)	25	#4	29'-0"	—
a ₃₂ (E)	92	#5	37'-6"	—
a ₃₃ (E)	24	#6	6'-6"	—
b ₃₀ (E)	56	#4	29'-8"	—
b ₃₁ (E)	169	#9	29'-9"	—
b ₃₂ (E)	2	#4	14'-8"	—
b ₃₃ (E)	4	#4	9'-2"	—
b ₃₄ (E)	10	#9	16'-11"	—
b ₃₅ (E)	4	#4	16'-1"	—
d ₃₀ (E)	34	#5	5'-7"	—
d ₃₁ (E)	34	#5	7'-11"	—
e ₃₀ (E)	16	#4	14'-8"	—
e ₃₁ (E)	2	#8	14'-8"	—
t ₃₀ (E)	136	#4	9'-8"	—
t ₃₁ (E)	16	#4	10'-2"	—
w ₃₀ (E)	80	#5	36'-6"	—
Concrete Superstructure (Approach Slab)		CU YD	101.6	
Concrete Structures		CU YD	22.8	
Concrete Superstructure		CU YD	3.4	
Bridge Deck Grooving		SQ YD	226	
Protective Coat		SQ YD	249	
Reinforcement Bars, Epoxy Coated		POUND	28,790	

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"



SECTION C-C

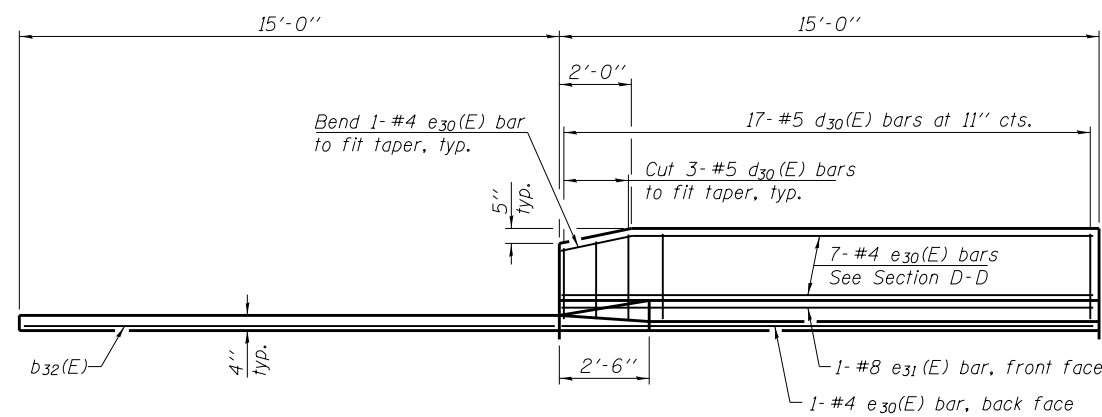


NEAR ABUTMENT

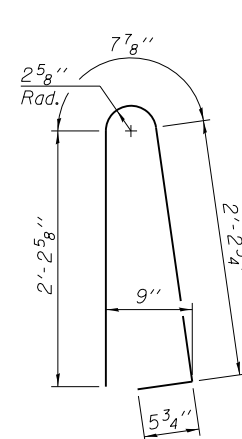
SECTION D-D

(See Plan for dimensions not shown)

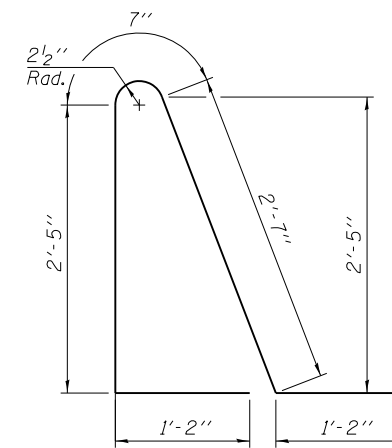
BAR b₃₅(E)



VIEW E-E



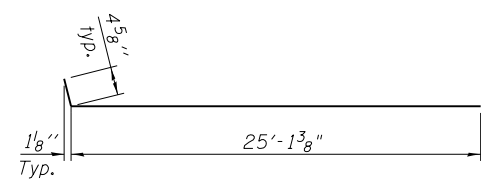
BAR d₃₀(E)



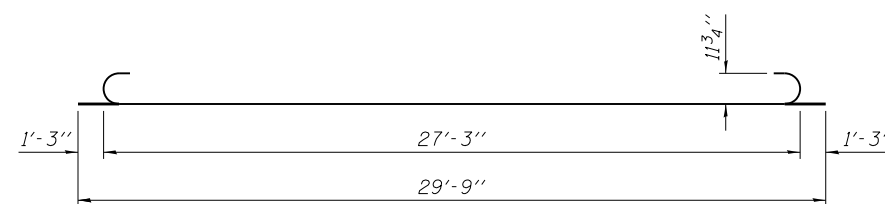
BAR d₃₁(E)

* Tilt #9 b₃₁(E) bars as required to maintain clearance.

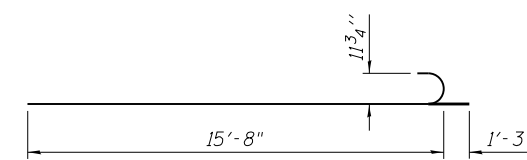
*** Cost included with Concrete Superstructure.



BAR a₃₀(E)



BAR b₃₁(E)



BAR b₃₄(E)

NOTES:

- For Detail A and View B-B, see Sheet S2-01.
- Parapet concrete shall be paid for as Concrete Superstructure. Approach slab concrete shall be paid for as Concrete Superstructure (Approach Slab).
- Approach footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
- Cost of excavation for approach footing included with Concrete Structures.

4/19/2016

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DATE - 03/18/2016

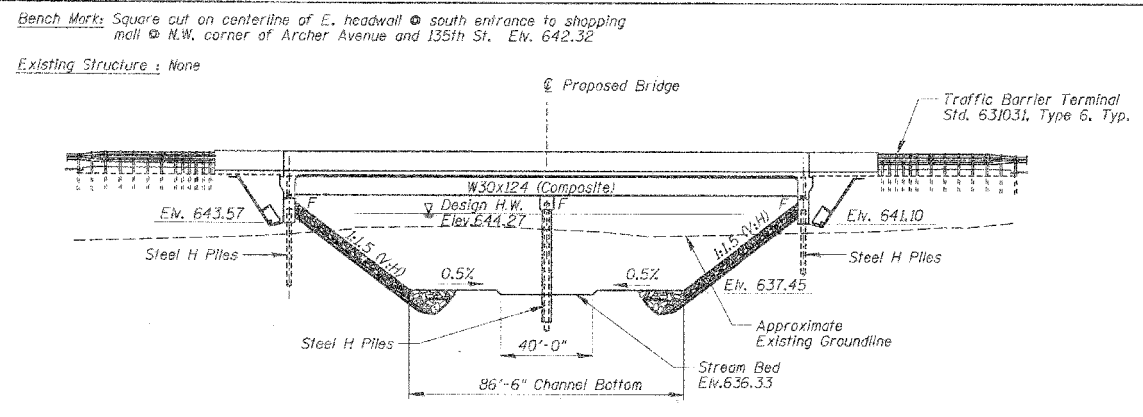
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

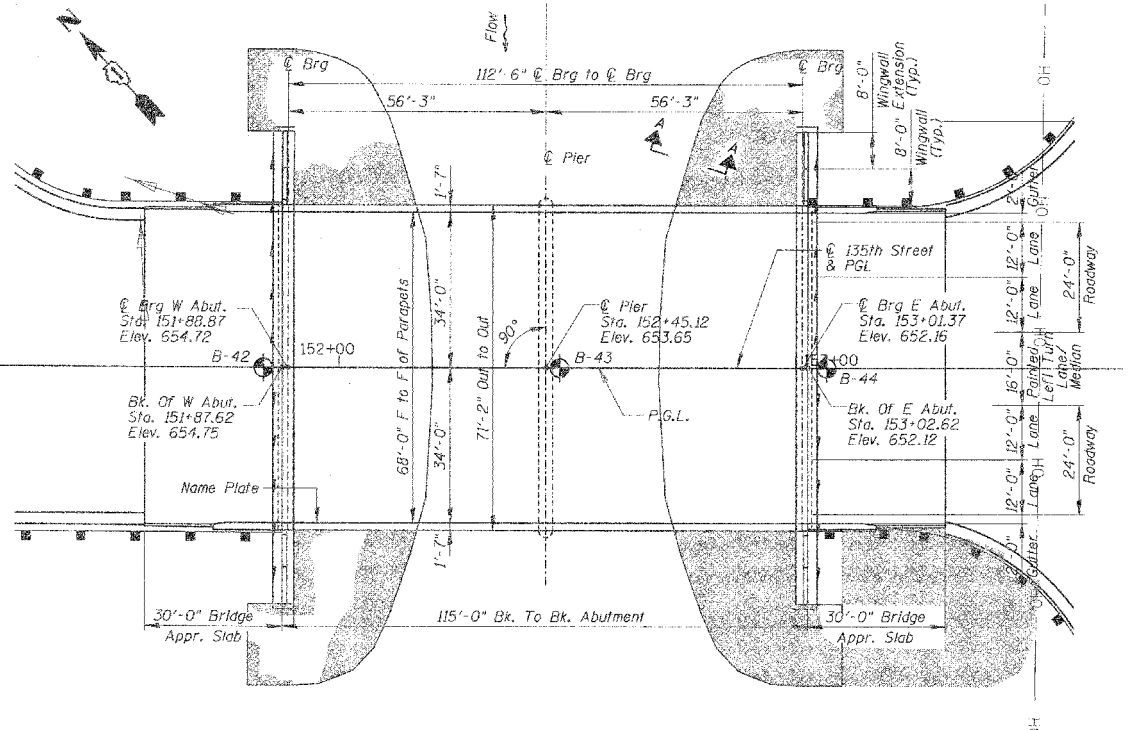
**EAST APPROACH SLAB SECTIONS AND DETAILS
STRUCTURE NO. 099-3028**

SHEET NO. S2-4 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	C-1-B	WILL	186	134
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				



ELEVATION



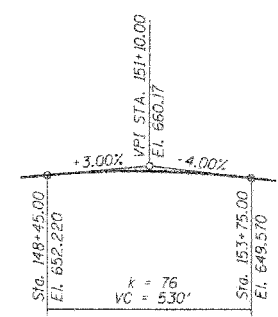
PLAN

WATERWAY INFORMATION

Flood	Freq. Yr.	Q cfs	Opening ft ²		Nat. H.W.E.	Head - ft		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Ex. Low Beam									
Prop. Low Beam									
Design	30	2035	727.9	644.21	644.21	0.06	644.27	643.63	644.27
Base	100	2660	750.0	644.43	644.43	0.06	644.49	643.63	644.49
Max. Calc.	500	3670	886.4	646.18	646.18	0.10	646.28	643.63	646.28

LONG RUN CREEK
 BUILT BY
 WILL COUNTY
 SEC. 10-00068-11-FP
 STA. 152+45.12
 LOADING HS20 & 120k PERMIT TRUCK
 STR. NO. 099-3028

NAME PLATE
 See Sid. 515001



PROFILE GRADE

I Certify That To The Best Of My Knowledge, Information And Belief, This Bridge Design Is Structurally Adequate For The Design Loading Shown On The Plans. The Design Is An Economical One For The Style Of Structure And Complies With Requirements Of The Current AASHTO Standard Specification For Highway And Bridges.



David Mobasser 4/15/2012
DAVID MOBASSER
 ILLINOIS REGISTRATION NO. 081-005058 STRUCTURAL ENGINEER
 EXPIRATION DATE: 11/30/12

DESIGN SCOUR ELEVATION TABLE

Flood Frequency/ Scour Elevation	West Abut.	Pier	East Abut.
100 year Scour Elevation (ft.)	619.28	625.13	619.20
500 year Scour Elevation (ft.)	615.76	623.23	615.65

INDEX OF SHEETS

- S-1 General Plan and Elevation
- S-2 General Notes
- S-3 Top Of Deck Elevations - 1
- S-4 Top Of Deck Elevations - 2
- S-5 Top Of Deck Elevations - 3
- S-6 Top Of Approach Slab Elevations
- S-7 Deck Plan And Cross Section
- S-8 Superstructure Details
- S-9 Diaphragm Details
- S-10 Framing Plan Details
- S-11 Steel Details
- S-12 East Abutment
- S-13 West Abutment Details
- S-14 Pier Details
- S-15 Bar Splice Assembly Details
- S-16 Bridge Approach Slab Details - 1
- S-17 Bridge Approach Slab Details - 2
- S-18 Pile Details
- S-19 Boring Logs - 1
- S-20 Boring Logs - 2

DESIGN SPECIFICATIONS

2002 AASHTO Bridge Design Specifications

LOADING HS20-44 & 120k PERMIT TRUCK

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

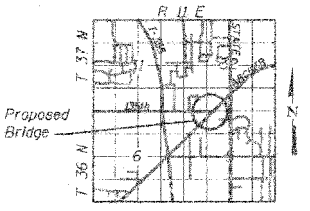
DESIGN STRESSES

FIELD UNITS

- $f_c = 3,500$ psi
- $f_y = 50,000$ psi (structural steel) (A270 Grade 50)
- $f_y = 60,000$ psi (Reinf.)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient = 0.04g
 Site Coefficient = 1.0



LOCATION SKETCH

CHRISTOPHER B. BURKE ENGINEERING, LTD.
 8074 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (815) 122-3500

DESIGNED - MM	REVISIONS -
DRAWN - POR	REVISIONS -
CHECKED - MM	REVISIONS -
DATE -	REVISIONS -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN AND ELEVATION

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	10-00068-11-FP	WILL	75	30
CONTRACT NO.				

FOR INFORMATION ONLY

See Alignment and Ties Sheet for vertical datum equation to relate elevations between those shown on plans for F.A.U. RTE. 0282 and plans for F.A.P. ROUTE 577 (IL 171 Archer Bridge Replacement).

3/17/2016

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CHECKED - MI, MAI	REVISIONS -
DATE - 03/18/2016	REVISIONS -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

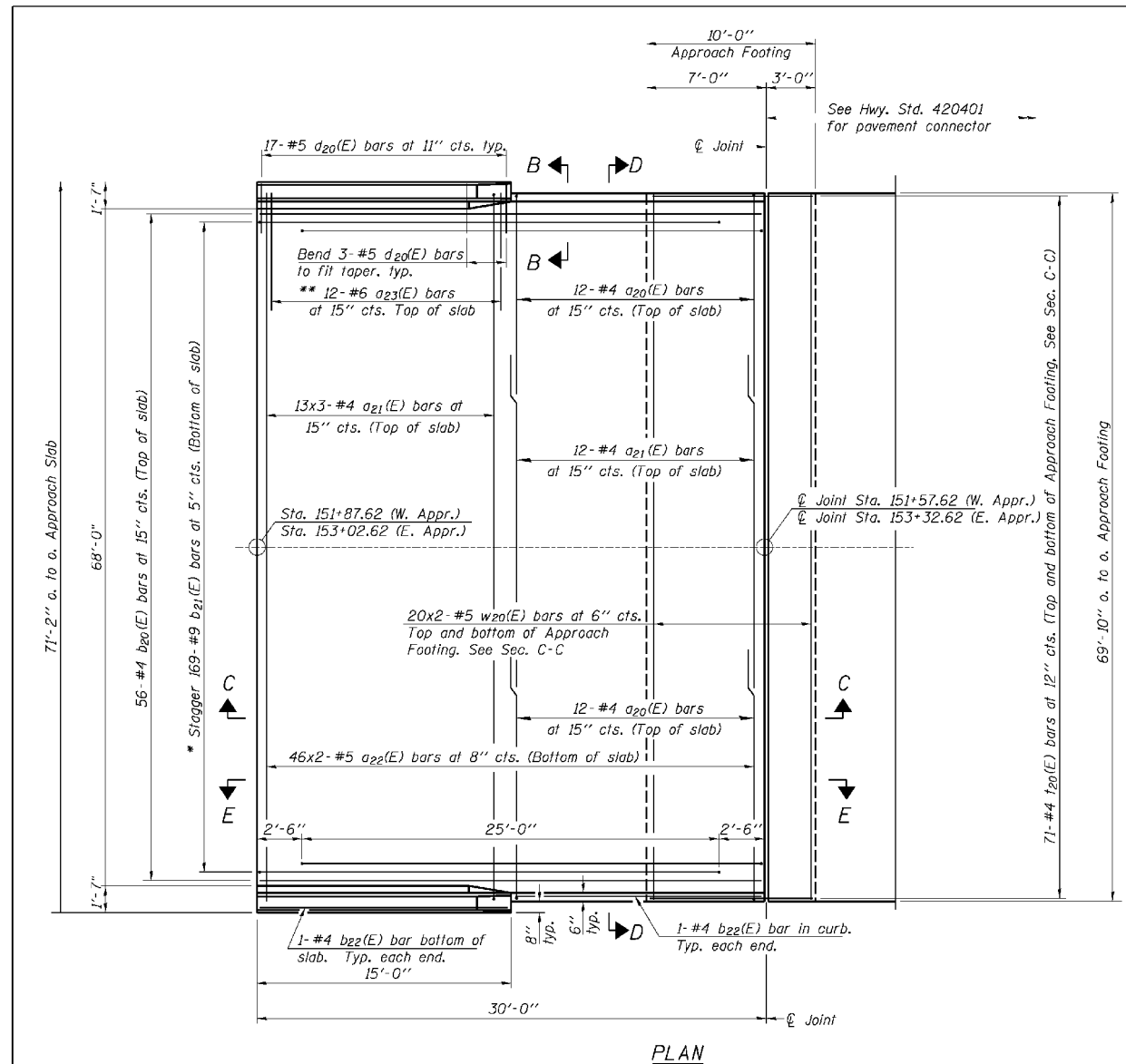
**EXISTING GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 099-3028**

SHEET NO. EXS2-1 OF 7 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	C-1-B	WILL	186	135
CONTRACT NO.			60H21	

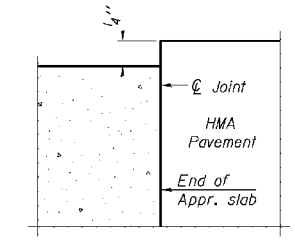
ILLINOIS FED. AID PROJECT

Notes:
See Sheet S-17 for Sections C-C & D-D and View E-E.
a₂₀(E), a₂₁(E) and a₂₂(E) bar spacings measured along ϕ Rdwy.

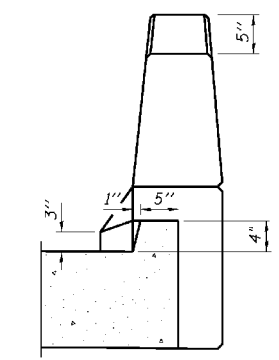


PLAN

- * Tilt #9 b₂₁(E) bars as required to maintain clearance.
- ** Space between a₂₁(E) bars, typ. ea. parapet.



FLEXIBLE PAVEMENT
DETAIL A



VIEW B-B

CHRISTOPHER B. BURKE ENGINEERING, LTD.
8775 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(647) 823-0500



FILE NAME =	USER NAME =	DESIGNED -	MM	REVISED -	
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	PLD DATE =	DATE -		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS

SHEET NO. S-16 OF S-20

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	10-00068-11-FP	WILL	75	45
CONTRACT NO.				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRW-8033043				

135th STREET OVER
LONG RUN CREEK
F.A.U. RTE. 0282
SECTION 10-00068-11-FP
WILL COUNTY
STA. 152+45.12
STRUCTURE NO. 099-3028

FOR INFORMATION ONLY

3/17/2016

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DRAWN -	PH	REVISED -	
CHECKED -	MI, MAI	REVISED -	
DATE -	03/18/2016	REVISED -	

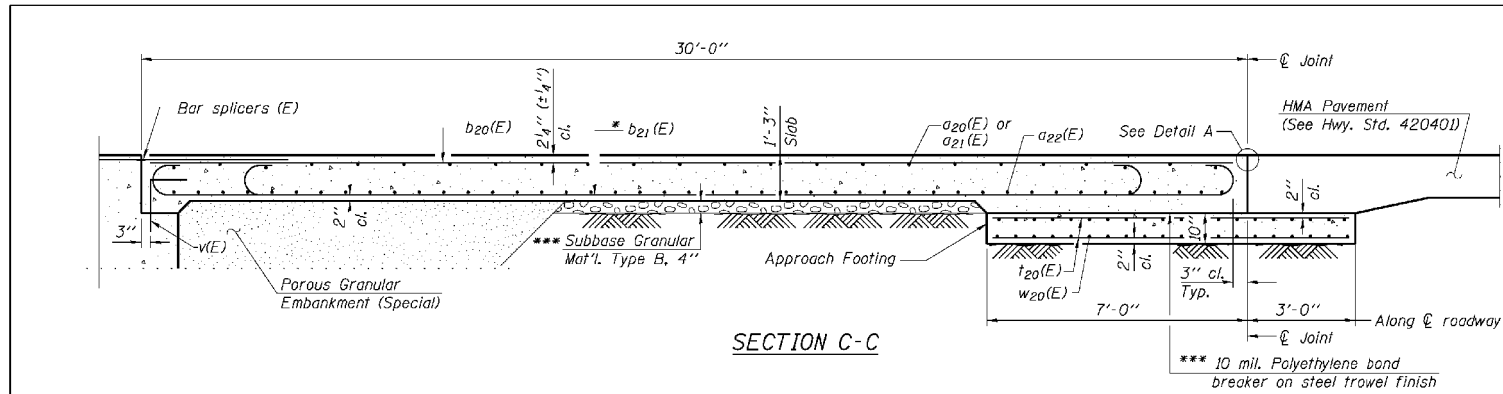
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE APPROACH SLAB DETAILS I
STRUCTURE NO. 099-3028

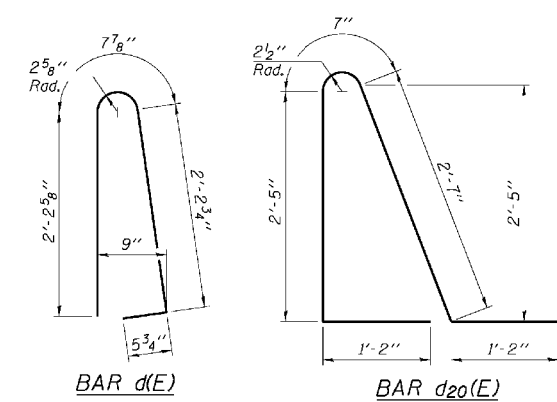
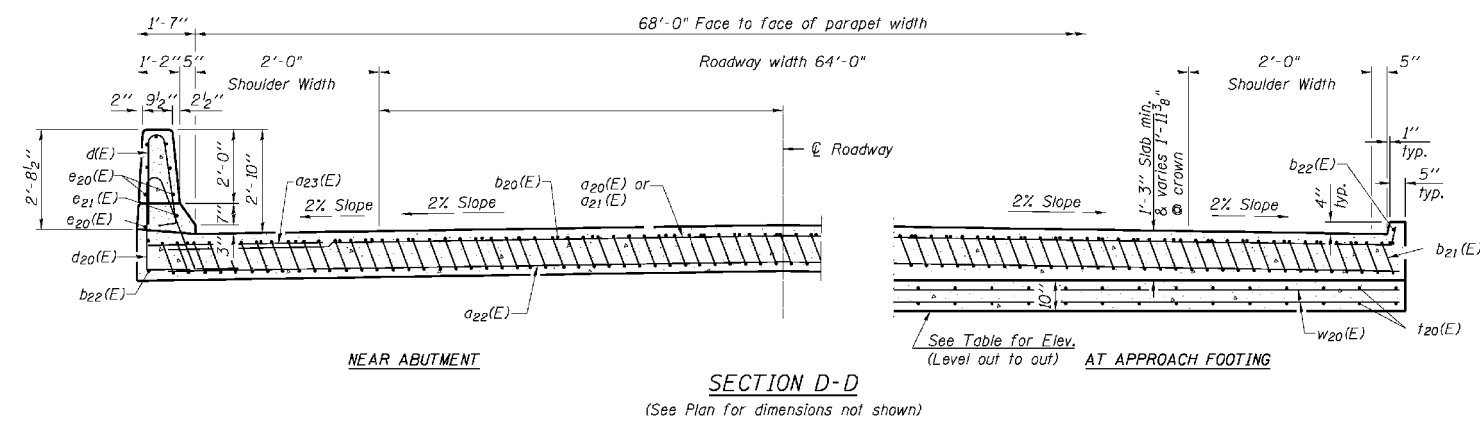
SHEET NO. EXS2-2 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0282	C-1-B	WILL	186	136
CONTRACT NO.			60H21	
ILLINOIS FED. AID PROJECT				

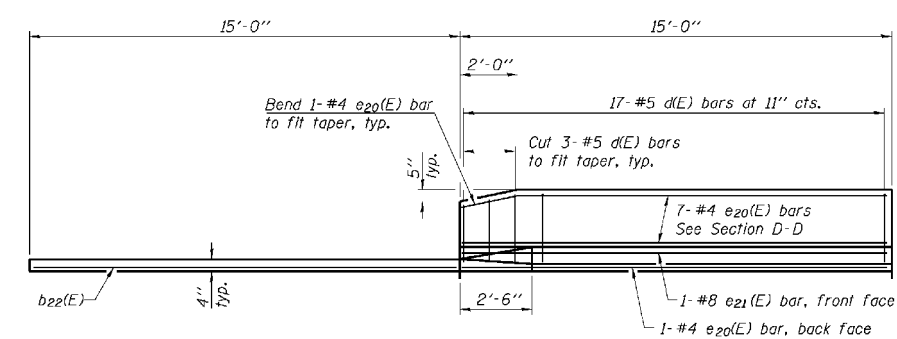
CHRISTOPHER B. BURKE ENGINEERING, LTD.
 8775 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



Notes:
 See sheet S-16 for Detail A and View B-B.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet S-9.
 The approach footing maximum applied service bearing pressure (0max) = 2.0 ksf.
 For bar splicer details, see sheet S-9 and S-15.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet S-2.
 For additional parapet details, see sheet S-8.



* Tilt #9 b21(E) bars as required to maintain clearance.
 *** Cost Included with Concrete Superstructure.

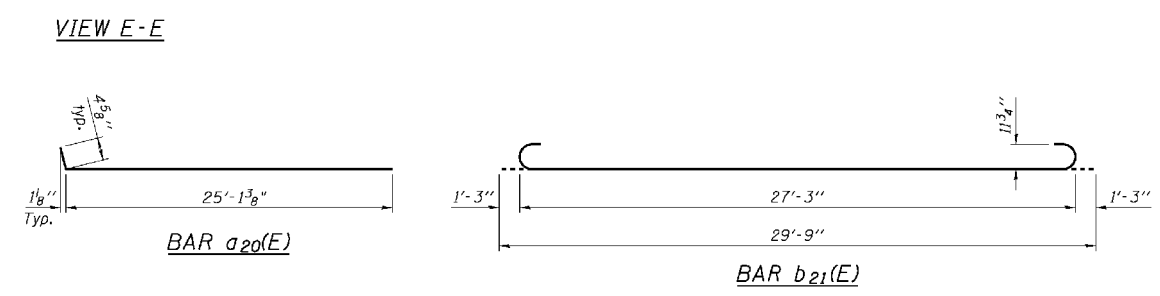


BOTTOM OF APPROACH FOOTING

	Station	Elevation
West Approach Footing	151+54.62	652.40
	151+64.62	652.28
East Approach Footing	153+25.62	648.60
	153+35.62	648.26

TWO APPROACHES
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d20(E)	48	#4	25'-6"	U
a21(E)	102	#4	25'-6"	—
a22(E)	184	#5	36'-6"	—
a23(E)	48	#6	6'-6"	—
b20(E)	112	#4	29'-8"	—
b21(E)	338	#9	29'-9"	U
b22(E)	8	#4	14'-8"	—
d(E)	68	#5	5'-7"	U
d20(E)	68	#5	7'-11"	U
e20(E)	32	#4	14'-8"	—
e21(E)	4	#8	14'-8"	—
t20(E)	284	#4	9'-8"	—
w20(E)	160	#5	36'-6"	—
Concrete Superstructure		Cu. Yd.	230.1	
Concrete Structures		Cu. Yd.	42.9	
Reinforcement Bars, Epoxy Coated		Pound	55,870	



FILE NAME = N:\WKDC\100-592\struct\592-S7.SHT	USER NAME = mwarren	DESIGNED - MM	REVISED -
PLOT SCALE = N.T.S.		DRAWN - PH	REVISED -
PLOT DATE = 4/23/2012		CHECKED - MI, MAI	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BRIDGE APPROACH SLAB DETAILS		F.A.U. RTE. 0282	SECTION 10-00068-11-FP	COUNTY WILL	TOTAL SHEETS 75	SHEET NO. 46
SHEET NO. S-17 OF S-20				CONTRACT NO.				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRN-80030431				

135th STREET OVER
 LONG RUN CREEK
 F.A.U. RTE. 0282
 SECTION 10-00068-11-FP
 WILL COUNTY
 STA. 152+45.12
 STRUCTURE NO. 099-3028

FOR INFORMATION ONLY
 See Alignment and Ties Sheet for vertical datum equation to relate elevations between those shown on plans for F.A.U. RTE. 0282 and plans for F.A.P. ROUTE 577 (IL 171 Archer Bridge Replacement).

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**PARSONS
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230 West Monroe St., Suite 900
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USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

DESIGNED -
DRAWN -
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DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.
AND FACE OF CURB & EDGE OF SHOULDER > = 15' (4.5 m)**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	138
BD0156-07 (BD-01)		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

\\168974-11-17-11-13516-0-01\PI\Pictures\171-sheet1.dwg

**PARSONS
BRINCKERHOFF**
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)**

SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.
--------	-------------------------	------	---------

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	139
BD400-02 (BD-02)		CONTRACT NO.	60H21	
ILLINOIS FED. AID PROJECT				

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**PARSONS
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230 West Monroe St., Suite 900
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USER NAME = clemons
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR CONCRETE MEDIAN TYPE SB (DOWELLED)
CORRUGATED MEDIAN (MODIFIED)**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	141
BD600-02 (BD-5)		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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**PARSONS
BRINCKERHOFF**
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	142
BD600-03 (BD-8)		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	143
BD600-10 (BD 34)		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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**PARSONS
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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FIRE HYDRANT TO BE MOVED

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	144
BD-36		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PCC PAVEMENT ROUNDOUTS AT
CURB AND GUTTER**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	145
BD-48		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAIL FOR CENTERLINE SAW CUT 16' (4.9 m) AND
VARIABLE JOINTED PCC PAVEMENT FOR RAMPS**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	146
BD-49		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BENCHING DETAIL
FOR EMBANKMENT WIDENING**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	147
BD-51		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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**PARSONS
BRINCKERHOFF**
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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAIL OF PAVEMENT SEPARATION
JOINT FOR JOINTED PCC PAVEMENTS AT INTERSECTIONS**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	148
BD52		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAIL OF VARIOUS TYPES OF LANE REDUCTION
FOR PCC PAVEMENT**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	149
BD53		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	150
TC-10		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)**
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	151
TC-11		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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BRINCKERHOFF**
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
TYPICAL PAVEMENT MARKINGS**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	152
TC-13		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING LETTERS AND SYMBOLS
FOR TRAFFIC STAGING**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	153
TC-16		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETOUR SIGNING
FOR CLOSING STATE HIGHWAYS**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	154
TC-21		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 26-MAR-2016

DESIGNED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD INFORMATION SIGN
& DRIVEWAY ENTRANCE SIGNING**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	155
TC-22 & TC-26			CONTRACT NO. 60H21	
ILLINOIS FED. AID PROJECT				

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**PARSONS
BRINCKERHOFF**
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: SHEET NO. 2 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	156
TS-05		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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**PARSONS
BRINCKERHOFF**
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: SHEET NO. 3 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	157
TS-05		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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**PARSONS
BRINCKERHOFF**
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
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PLOT SCALE =
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**
SCALE: SHEET NO. 5 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	159
TS-05		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
PLOT SCALE =
PLOT DATE = 17-MAR-2016

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: SHEET NO. 7 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	161
TS-05		CONTRACT NO.	60H21	
ILLINOIS FED. AID PROJECT				

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**PARSONS
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Chicago, IL 60606, (312) 782-8150

USER NAME = clemosc
DESIGNED -
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PLOT SCALE =
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

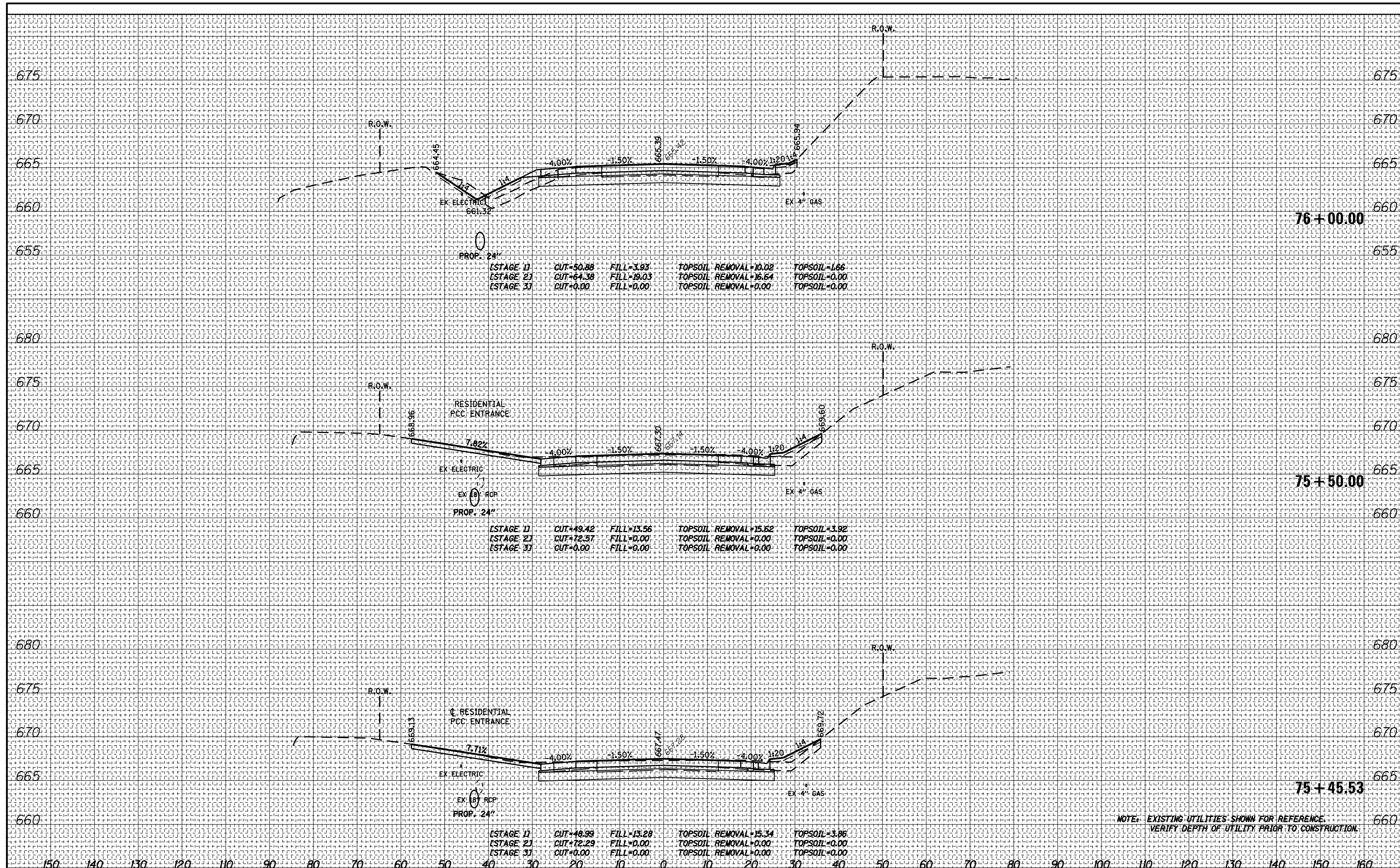
**DISTRICT 1
MAST ARM MOUNTED STREET NAME SIGNS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	162
TS-02		CONTRACT NO. 60H21		
ILLINOIS FED. AID PROJECT				

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DATE: _____
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 AREAS CHECKED _____



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
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 Chicago, IL 60606, (312) 782-8150

USER NAME = clemnsc	DESIGNED - CJC	REVISED -
PLOT SCALE =	DRAWN - CJC	REVISED -
PLOT DATE = 17-MAR-2016	CHECKED - RFT	REVISED -
	DATE - 3/18/2016	REVISED -

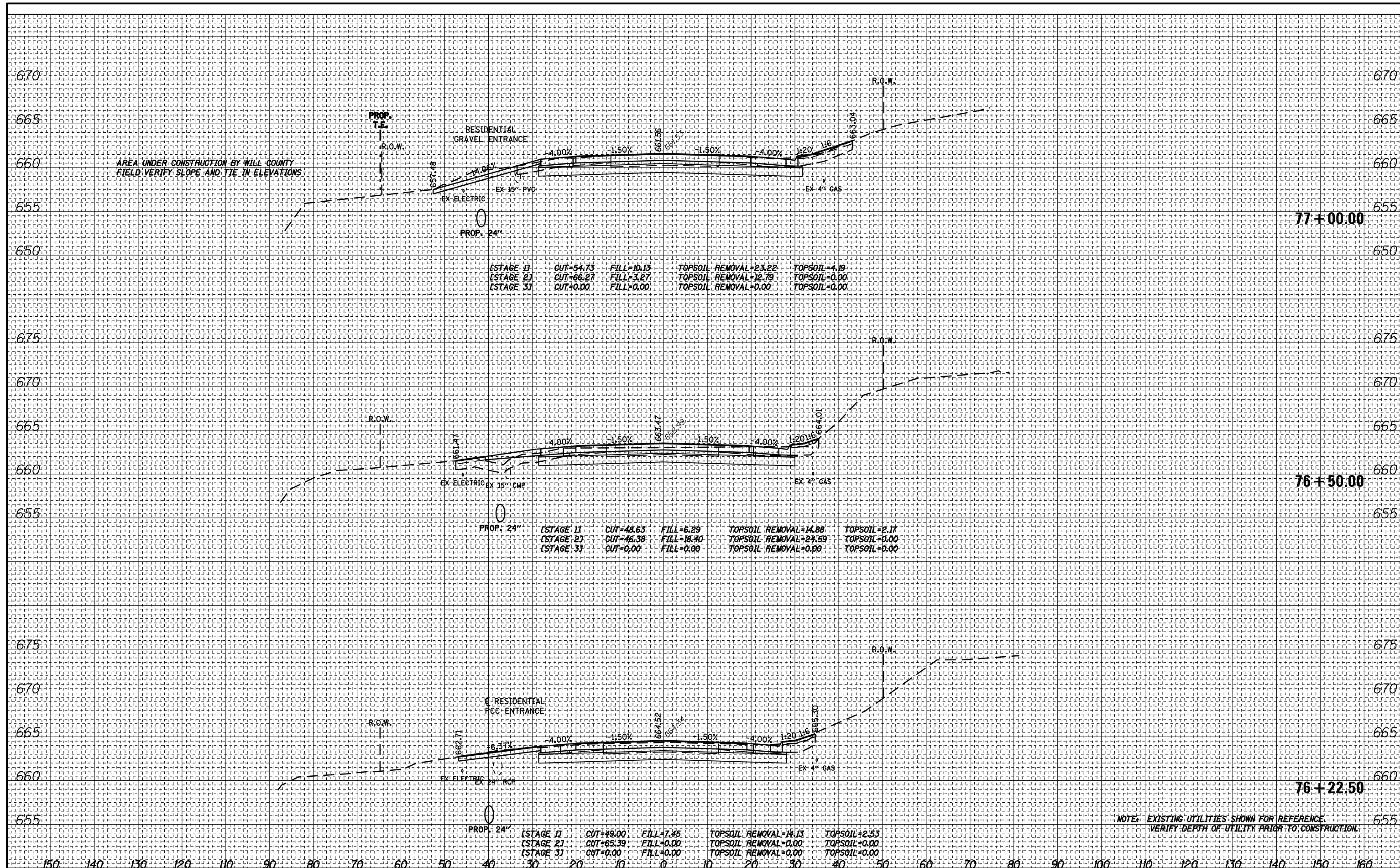
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171
 CROSS SECTIONS
 SCALE: 1" = 10'
 SHEET NO. 2 OF 24 SHEETS
 STA. 75+45.53 TO STA. 76+00.00

F.A. RTE. 577	SECTION C-1-B	COUNTY WILL/COOK	TOTAL SHEETS 186	SHEET NO. 164
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	

DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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DATE	
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	AREAS CHECKED



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USER NAME = clemansc	DESIGNED - CJC	REVISED -
PLOT SCALE =	DRAWN - CJC	REVISED -
PLOT DATE = 17-MAR-2016	CHECKED - RFT	REVISED -
	DATE - 3/18/2016	REVISED -

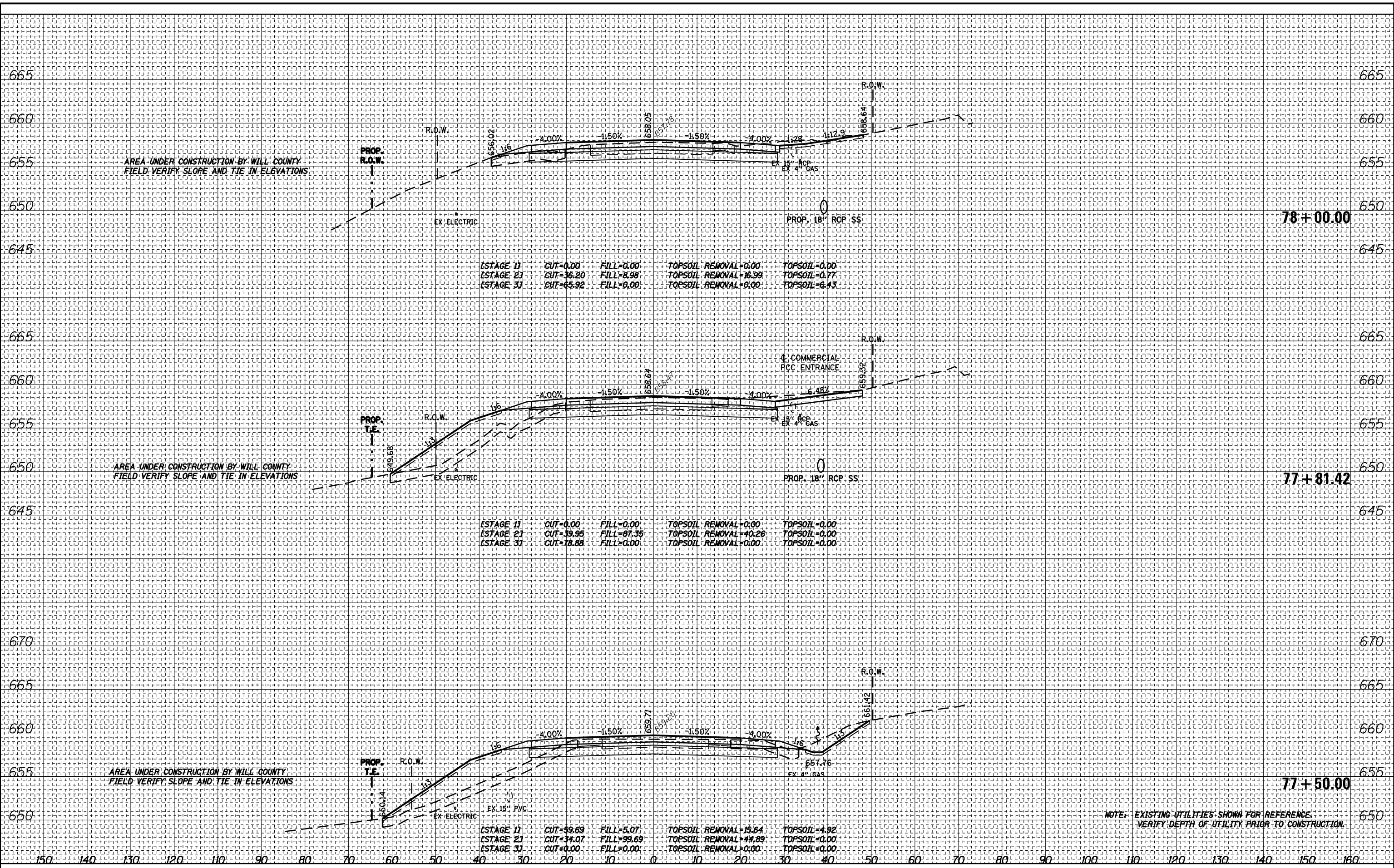
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171
 CROSS SECTIONS
 SCALE: 1" = 10'
 SHEET NO. 3 OF 24 SHEETS
 STA. 76+22.50 TO STA. 77+00.00

F.A. RTE. = 577	SECTION = C-1-B	COUNTY = WILL/COOK	TOTAL SHEETS = 186	SHEET NO. = 165
				CONTRACT NO. 60H21
ILLINOIS FED. AID PROJECT				

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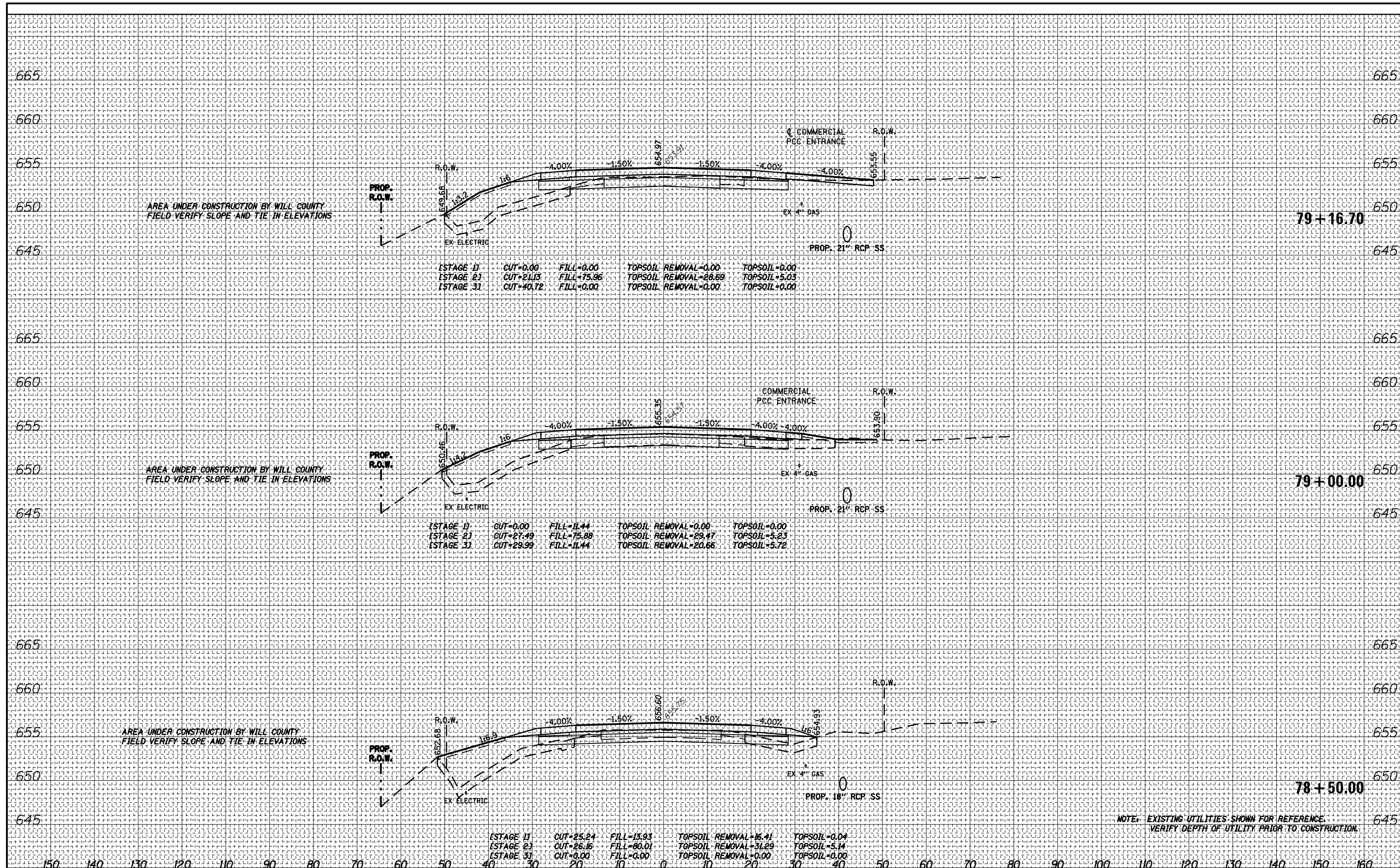
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NOTE BOOK	PLOTTED
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	AREAS CHECKED



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

DATE	
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FINAL SURVEY PLOTTED	
NOTE BOOK	
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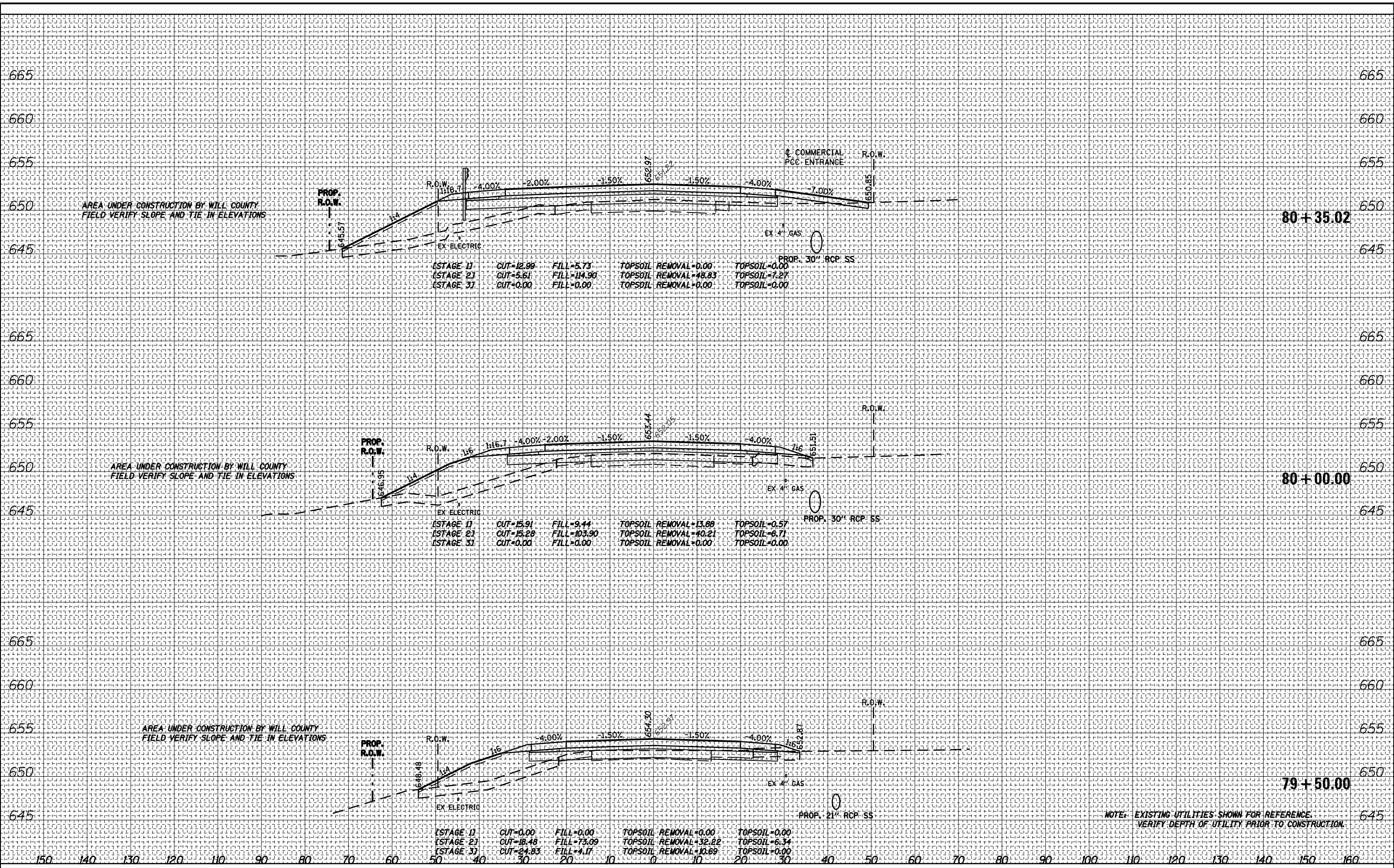


NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF 230 West Monroe St., Suite 900 Chicago, IL 60606, (312) 782-8150	USER NAME = clemasc	DESIGNED - CJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION IL 171 CROSS SECTIONS SCALE: 1" = 10' SHEET NO. 5 OF 24 SHEETS STA. 78+50.00 TO STA. 79+16.70	F.A. RTE. = 577	SECTION = C-1-B	COUNTY = WILL/COOK	TOTAL SHEETS = 186	SHEET NO. = 167
	PLOT SCALE =	CHECKED - RFT	REVISED -		ILLINOIS FED. AID PROJECT				
	PLOT DATE = 17-MAR-2016	DATE = 3/18/2016	REVISED -		CONTRACT NO. 60H21				

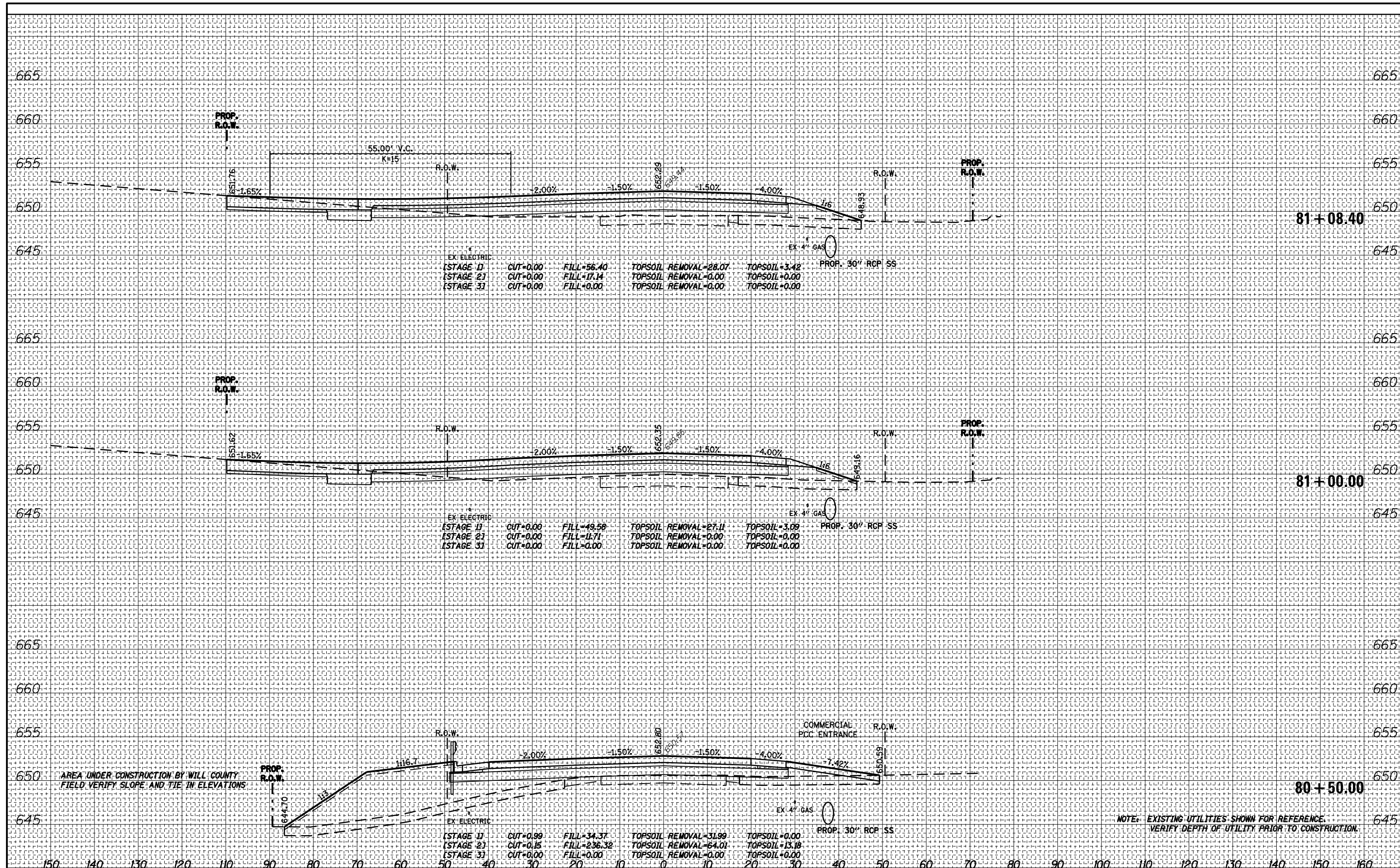
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ORIGINAL SURVEY	
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NOTE BOOK	PLOTTED
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

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USER NAME	= clemasc
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CHECKED	- RFT
DATE	- 3/18/2016
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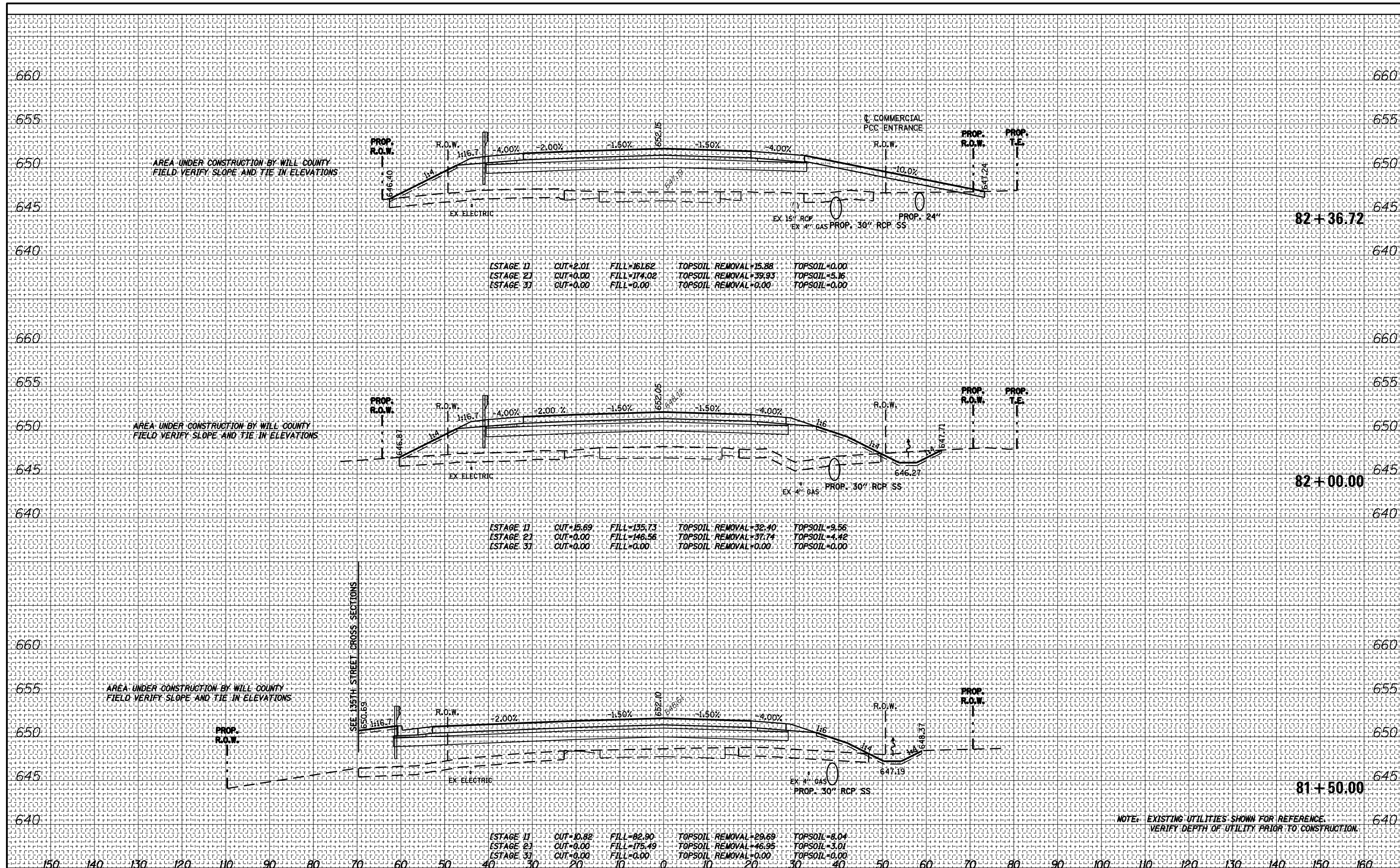
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171	
CROSS SECTIONS	
SCALE: 1" = 10'	SHEET NO. 7 OF 24 SHEETS
STA. 80+50.00	TO STA. 81+08.40

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	169
			CONTRACT NO. 60H21	
ILLINOIS FED. AID PROJECT				

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

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



PARSONS BRINCKERHOFF
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USER NAME = clemasc
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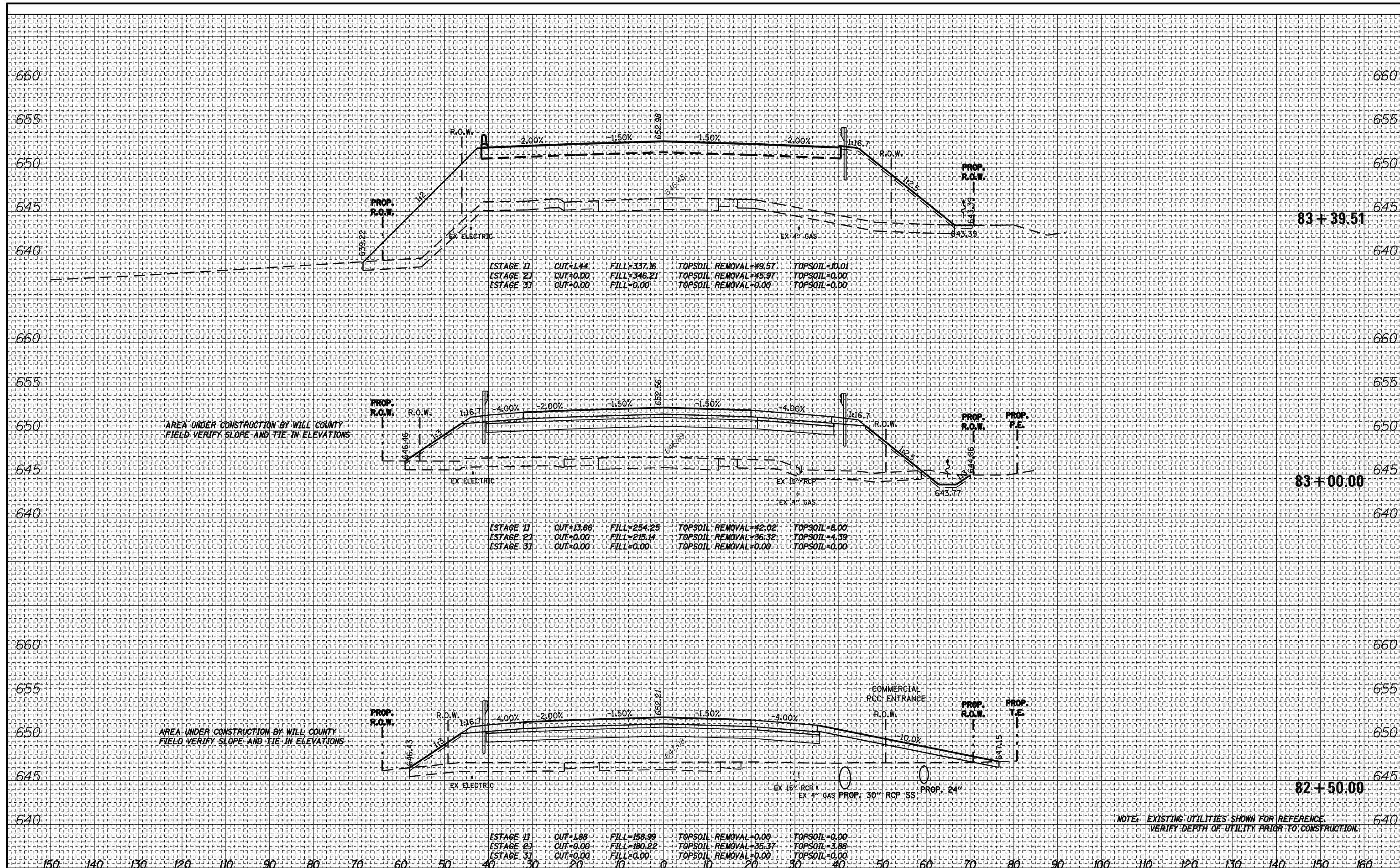
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171
 CROSS SECTIONS
 SCALE: 1" = 10'
 SHEET NO. 8 OF 24 SHEETS
 STA. 81+50.00 TO STA. 82+36.72

F.A. RTE. 577	SECTION C-1-B	COUNTY WILL/COOK	TOTAL SHEETS 186	SHEET NO. 170
CONTRACT NO. 60H21			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



AREA UNDER CONSTRUCTION BY WILL COUNTY
FIELD VERIFY SLOPE AND TIE IN ELEVATIONS

AREA UNDER CONSTRUCTION BY WILL COUNTY
FIELD VERIFY SLOPE AND TIE IN ELEVATIONS

NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE.
VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME = clemasc	DESIGNED - CJC	REVISED -
PLOT SCALE =	DRAWN - CJC	REVISED -
PLOT DATE = 17-MAR-2016	CHECKED - RFT	REVISED -
	DATE - 3/18/2016	REVISED -

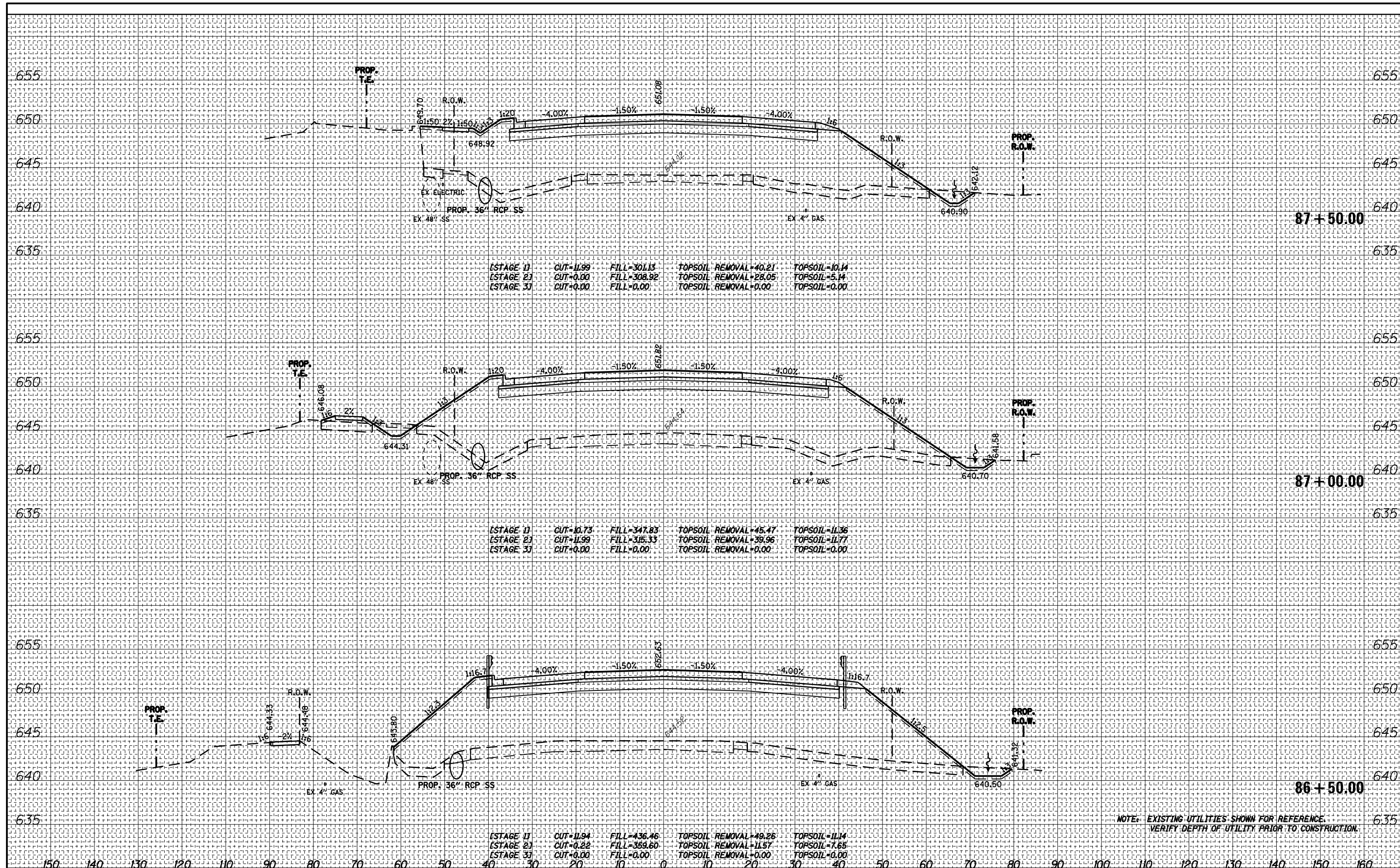
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 171
CROSS SECTIONS
SCALE: 1" = 10'
SHEET NO. 9 OF 24 SHEETS
STA. 82+50.00 TO STA. 83+39.51

F.A. RTE. 577	SECTION C-1-B	COUNTY WILL/COOK	TOTAL SHEETS 186	SHEET NO. 171
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60H21	

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

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



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
 230 West Monroe St., Suite 900
 Chicago, IL 60606, (312) 782-8150

USER NAME = clemasc
 DESIGNED - CJC
 DRAWN - CJC
 CHECKED - RFT
 DATE - 3/18/2016

REVISED - _____
 REVISED - _____
 REVISED - _____
 REVISED - _____

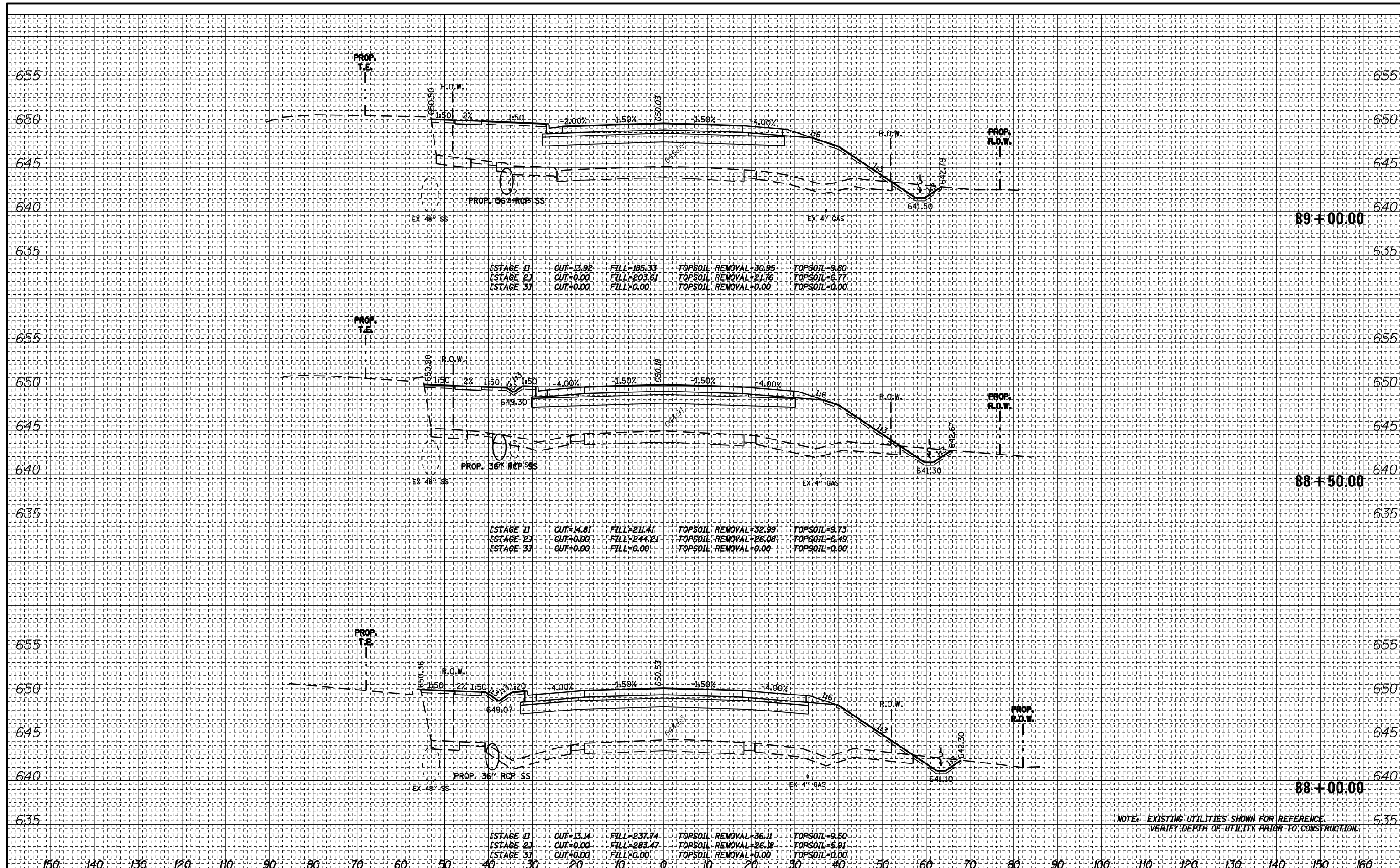
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171
 CROSS SECTIONS
 SCALE: 1" = 10'
 SHEET NO. 13 OF 24 SHEETS
 STA. 86+50.00 TO STA. 87+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	175
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE.
 VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
 230 West Monroe St., Suite 900
 Chicago, IL 60606, (312) 782-8150

USER NAME = clemasc	DESIGNED - CJC	REVISED -
PLOT SCALE =	DRAWN - CJC	REVISED -
PLOT DATE = 17-MAR-2016	CHECKED - RFT	REVISED -
	DATE - 3/18/2016	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

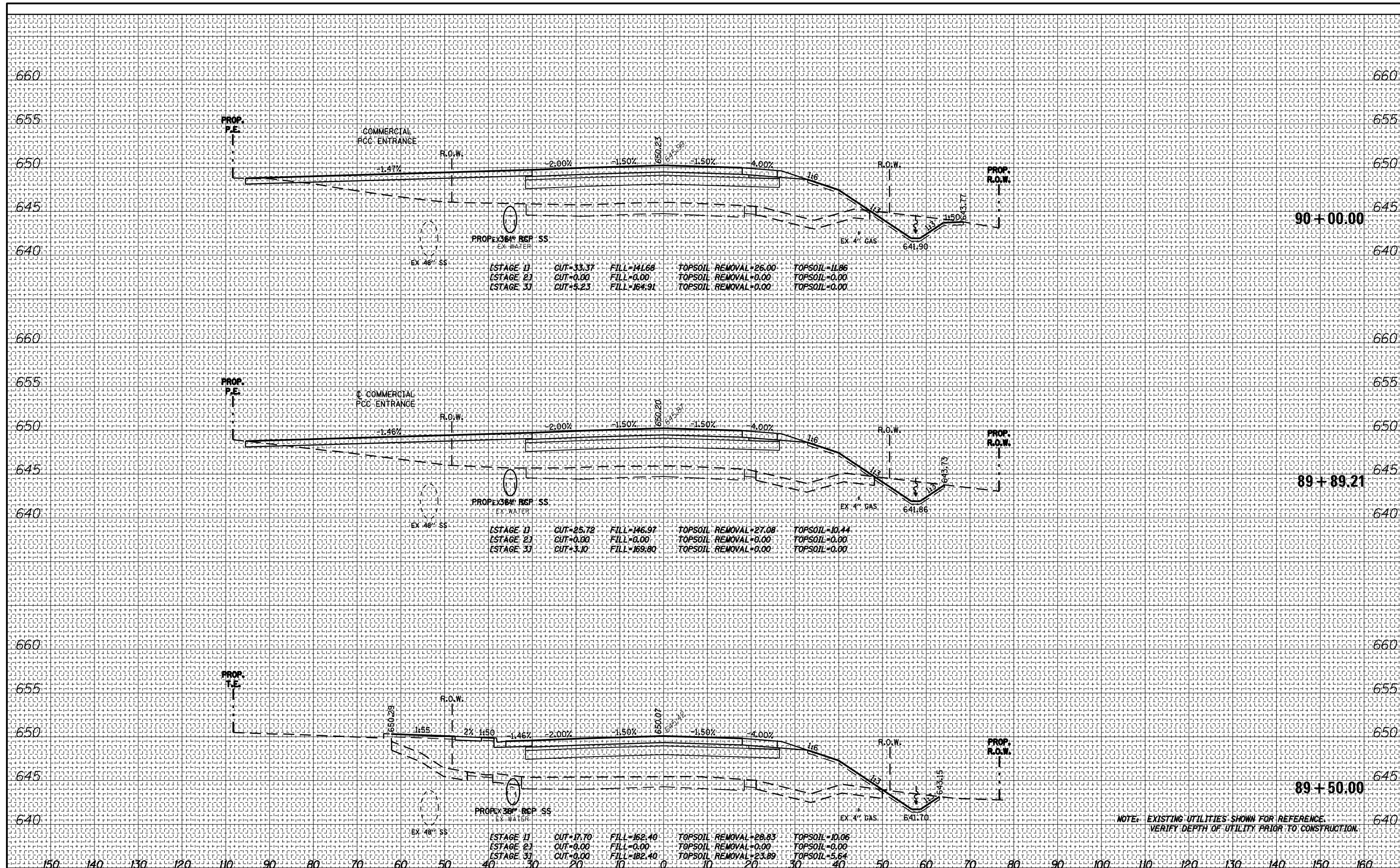
IL 171
 CROSS SECTIONS

SCALE: 1" = 10'
 SHEET NO. 14 OF 24 SHEETS
 STA. 88+00.00 TO STA. 89+00.00

F.A. RTE. 577	SECTION C-1-B	COUNTY WILL/COOK	TOTAL SHEETS 186	SHEET NO. 176
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	

DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE.
 VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
 230 West Monroe St., Suite 900
 Chicago, IL 60606, (312) 782-8150

USER NAME = clemasc	DESIGNED - CJC	REVISED -
PLOT SCALE =	DRAWN - CJC	REVISED -
PLOT DATE = 17-MAR-2016	CHECKED - RFT	REVISED -
	DATE - 3/18/2016	REVISED -

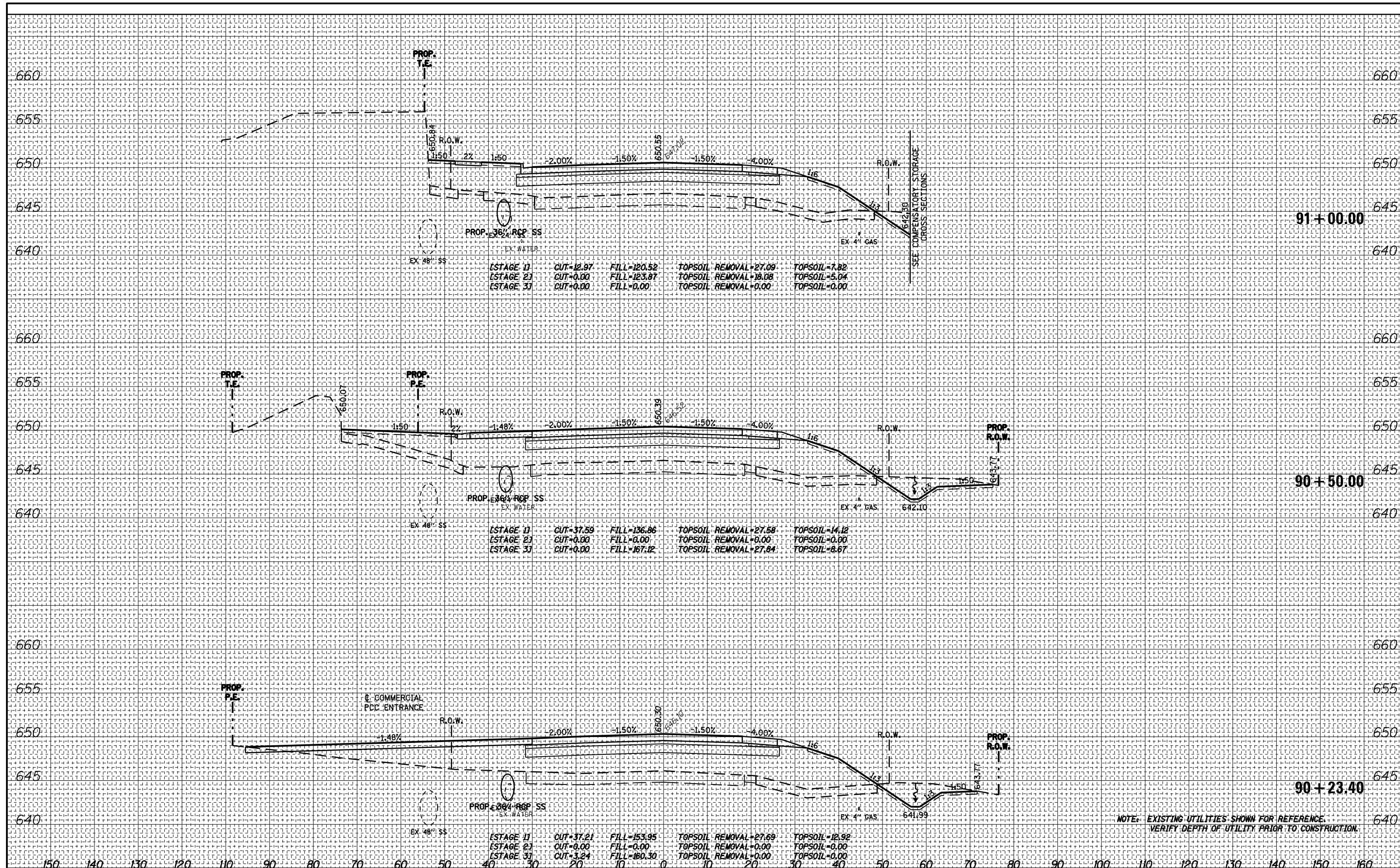
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171
 CROSS SECTIONS
 SCALE: 1" = 10'
 SHEET NO. 15 OF 24 SHEETS
 STA. 89+50.00 TO STA. 90+00.00

F.A. RTE. 577	SECTION C-1-B	COUNTY WILL/COOK	TOTAL SHEETS 186	SHEET NO. 177
CONTRACT NO. 60H21			ILLINOIS FED. AID PROJECT	

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
 230 West Monroe St., Suite 900
 Chicago, IL 60606, (312) 782-8150

USER NAME	= clemasc
DESIGNED	- CJC
DRAWN	- CJC
CHECKED	- RFT
DATE	- 3/18/2016
REVISIONS	
REVISION	-
REVISION	-
REVISION	-
REVISION	-

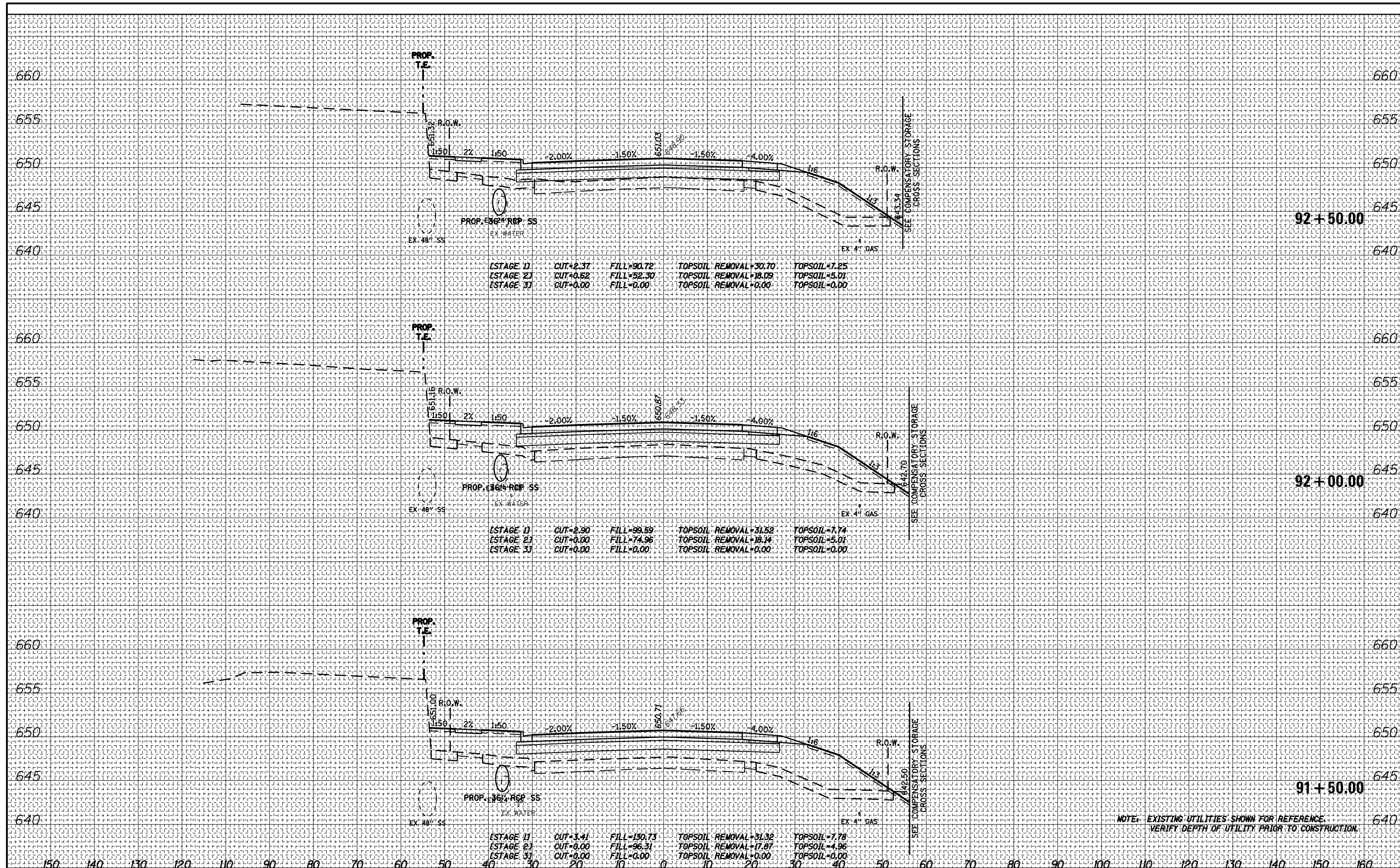
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171	CROSS SECTIONS
SCALE: 1" = 10'	SHEET NO. 16 OF 24 SHEETS
STA. 90+23.40	TO STA. 91+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	178
			CONTRACT NO. 60H21	
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



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
 230 West Monroe St., Suite 900
 Chicago, IL 60606, (312) 782-8150

USER NAME	= clemsonc
DESIGNED	- CJC
DRAWN	- CJC
CHECKED	- RFT
DATE	- 3/18/2016
REVISIONS	
REVISED	-
REVISED	-
REVISED	-
REVISED	-

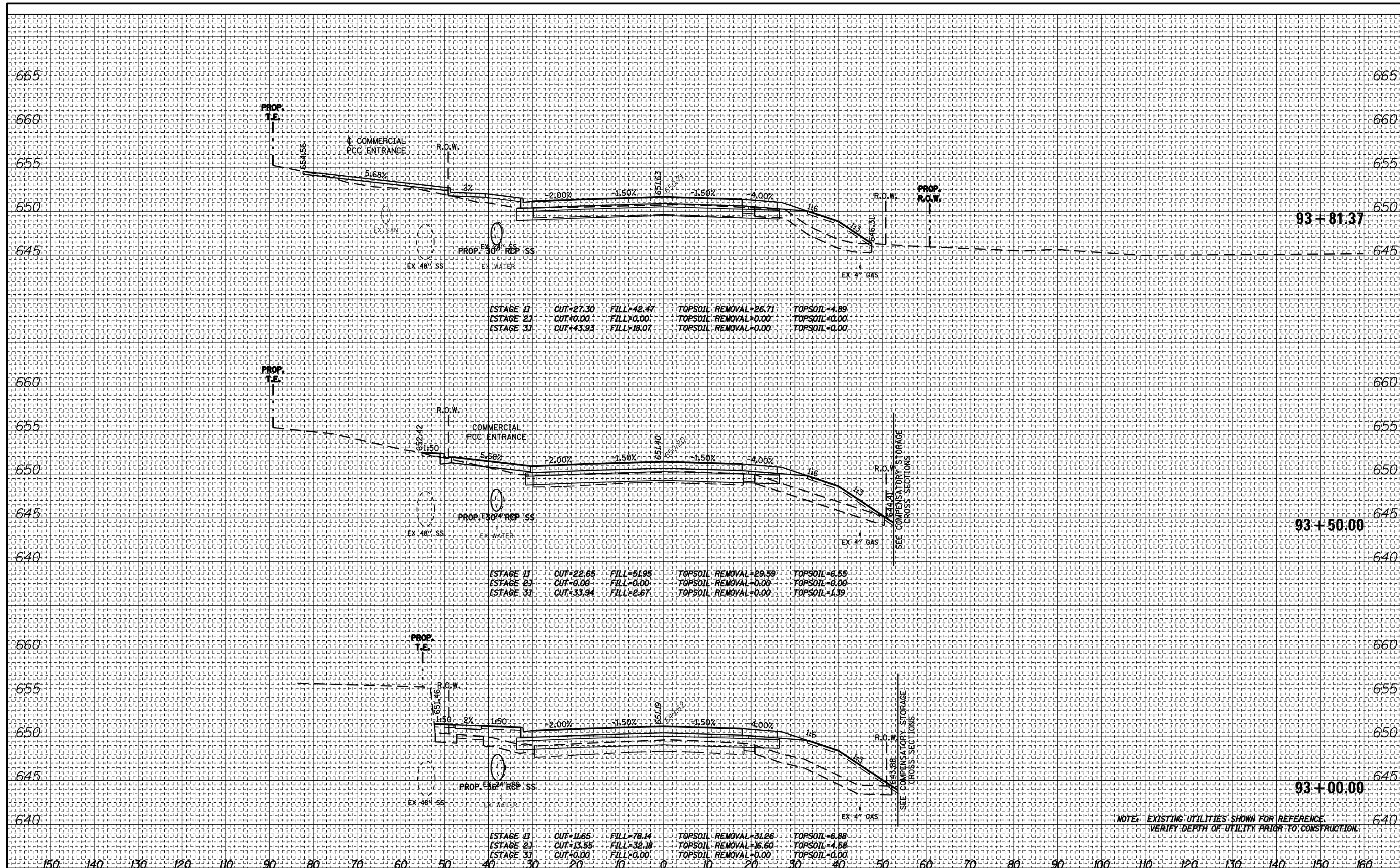
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 171
CROSS SECTIONS
SCALE: 1" = 10'
SHEET NO. 17 OF 24 SHEETS
STA. 91+50.00 TO STA. 92+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	179
CONTRACT NO. 60H21				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED	
NO.	

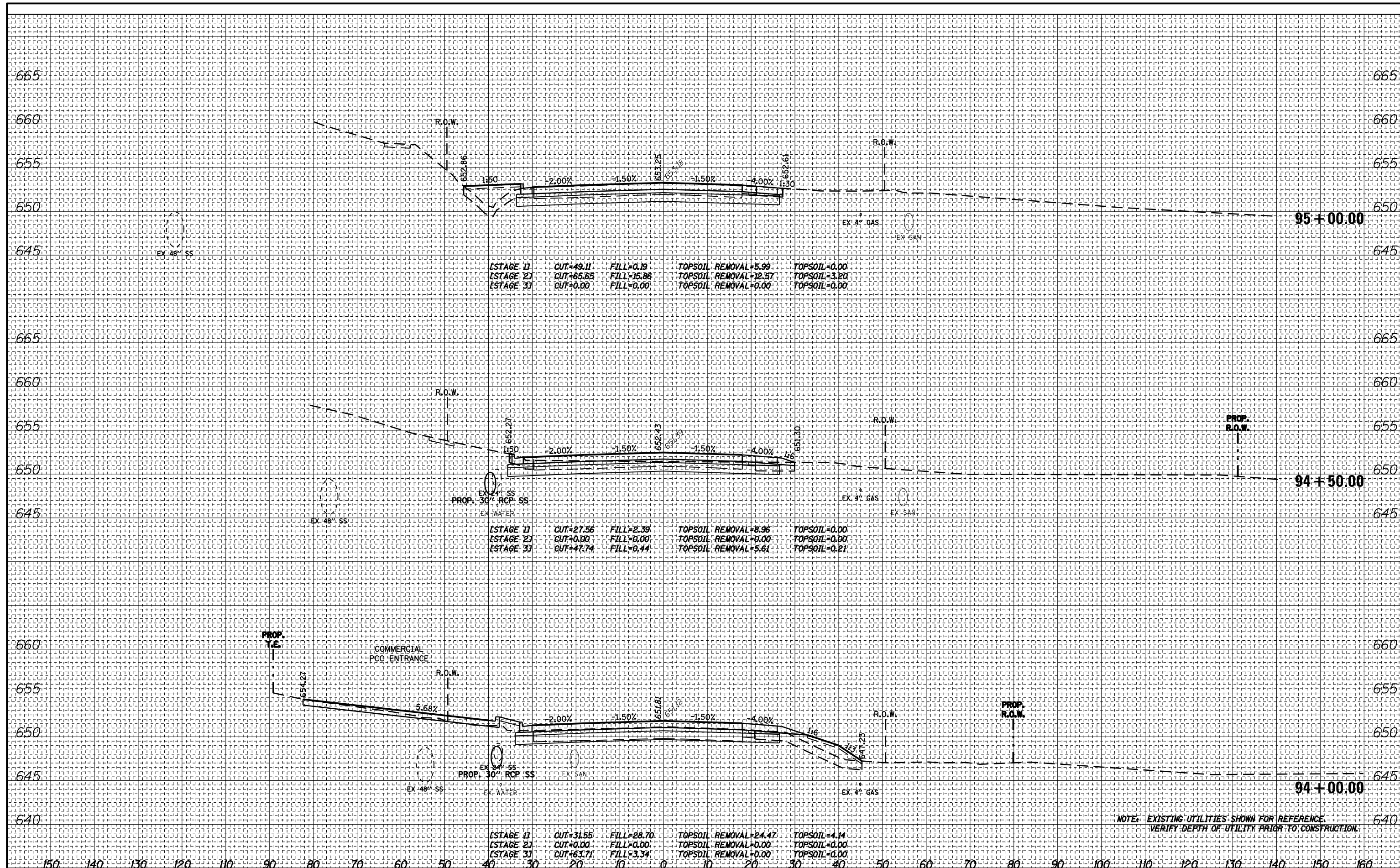
DATE	
BY	
ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED	
NO.	



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

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

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



[STAGE 1]	CUT=49.11	FILL=0.19	TOPSOIL REMOVAL=5.99	TOPSOIL=0.00
[STAGE 2]	CUT=65.85	FILL=15.86	TOPSOIL REMOVAL=12.57	TOPSOIL=3.20
[STAGE 3]	CUT=0.00	FILL=0.00	TOPSOIL REMOVAL=0.00	TOPSOIL=0.00

[STAGE 1]	CUT=27.56	FILL=2.39	TOPSOIL REMOVAL=8.96	TOPSOIL=0.00
[STAGE 2]	CUT=0.00	FILL=0.00	TOPSOIL REMOVAL=0.00	TOPSOIL=0.00
[STAGE 3]	CUT=47.74	FILL=0.44	TOPSOIL REMOVAL=5.61	TOPSOIL=0.21

[STAGE 1]	CUT=31.55	FILL=28.70	TOPSOIL REMOVAL=24.47	TOPSOIL=4.14
[STAGE 2]	CUT=0.00	FILL=0.00	TOPSOIL REMOVAL=0.00	TOPSOIL=0.00
[STAGE 3]	CUT=63.71	FILL=3.34	TOPSOIL REMOVAL=0.00	TOPSOIL=0.00

NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE. VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

PARSONS BRINCKERHOFF
230 West Monroe St., Suite 900
Chicago, IL 60606, (312) 782-8150

USER NAME	= clemsonc
DESIGNED	- CJC
DRAWN	- CJC
CHECKED	- RFT
DATE	- 3/18/2016

REVISED	-
REVISED	-
REVISED	-
REVISED	-

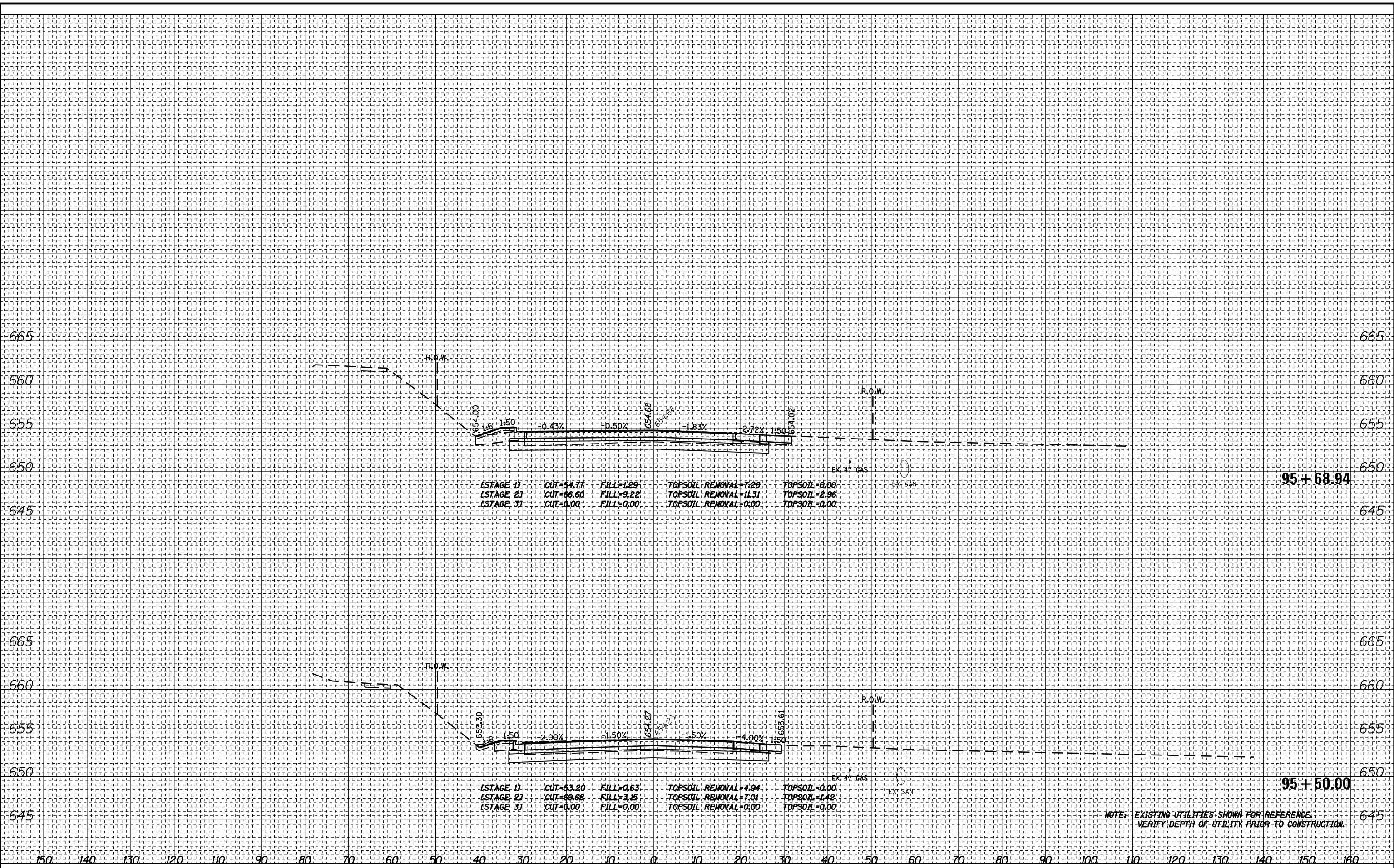
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 171	CROSS SECTIONS
SCALE: 1" = 10'	SHEET NO. 19 OF 24 SHEETS
STA. 94+00.00	TO STA. 95+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	C-1-B	WILL/COOK	186	181
			CONTRACT NO.	60H21
ILLINOIS FED. AID PROJECT				

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NO. _____
 AREAS CHECKED _____

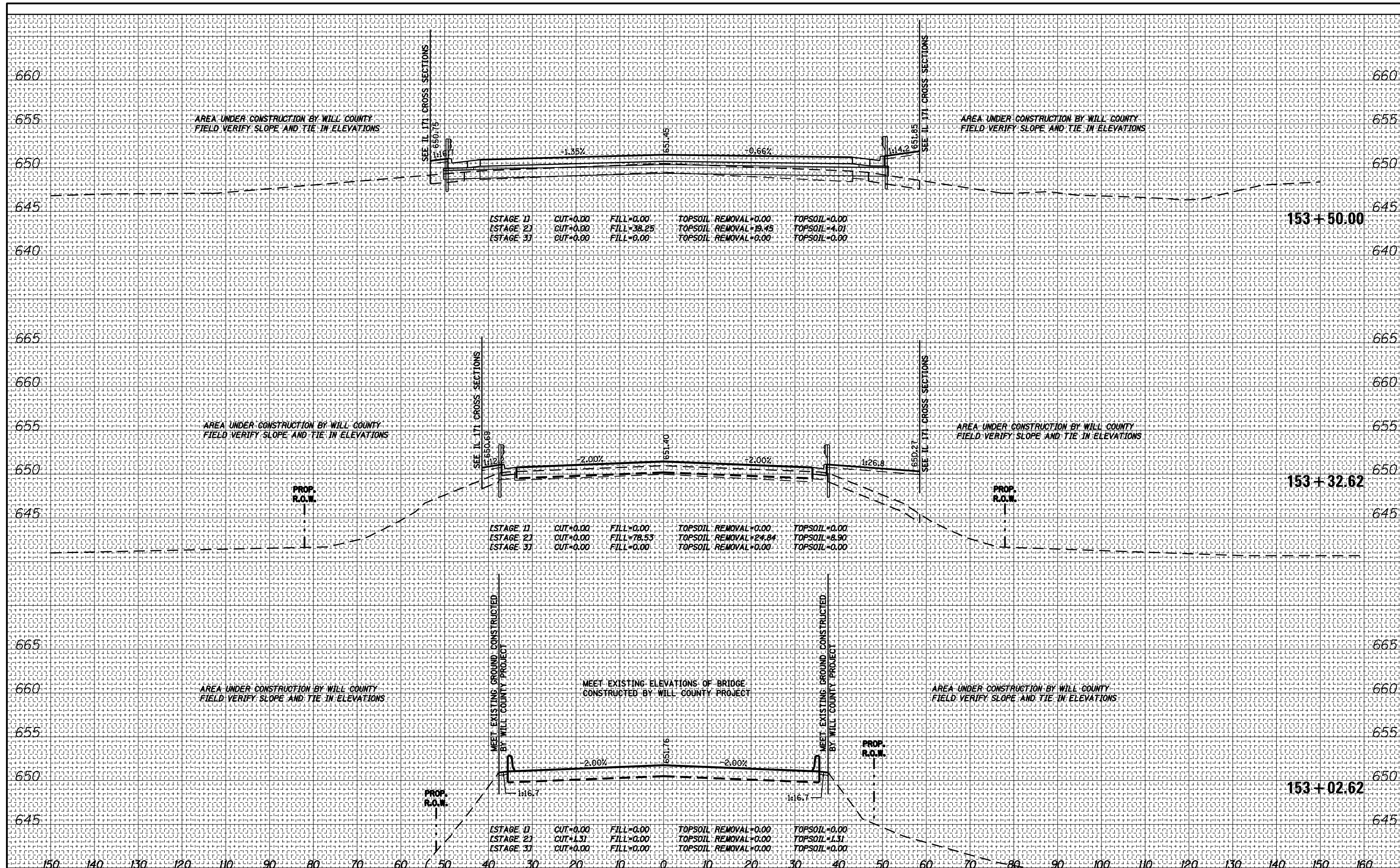
DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NO. _____
 AREAS CHECKED _____



NOTE: EXISTING UTILITIES SHOWN FOR REFERENCE.
 VERIFY DEPTH OF UTILITY PRIOR TO CONSTRUCTION.

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____



PARSONS BRINCKERHOFF
 230 West Monroe St., Suite 900
 Chicago, IL 60606, (312) 782-8150

USER NAME = clemasc
 DESIGNED - CJC
 DRAWN - CJC
 CHECKED - RFT
 DATE - 3/18/2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

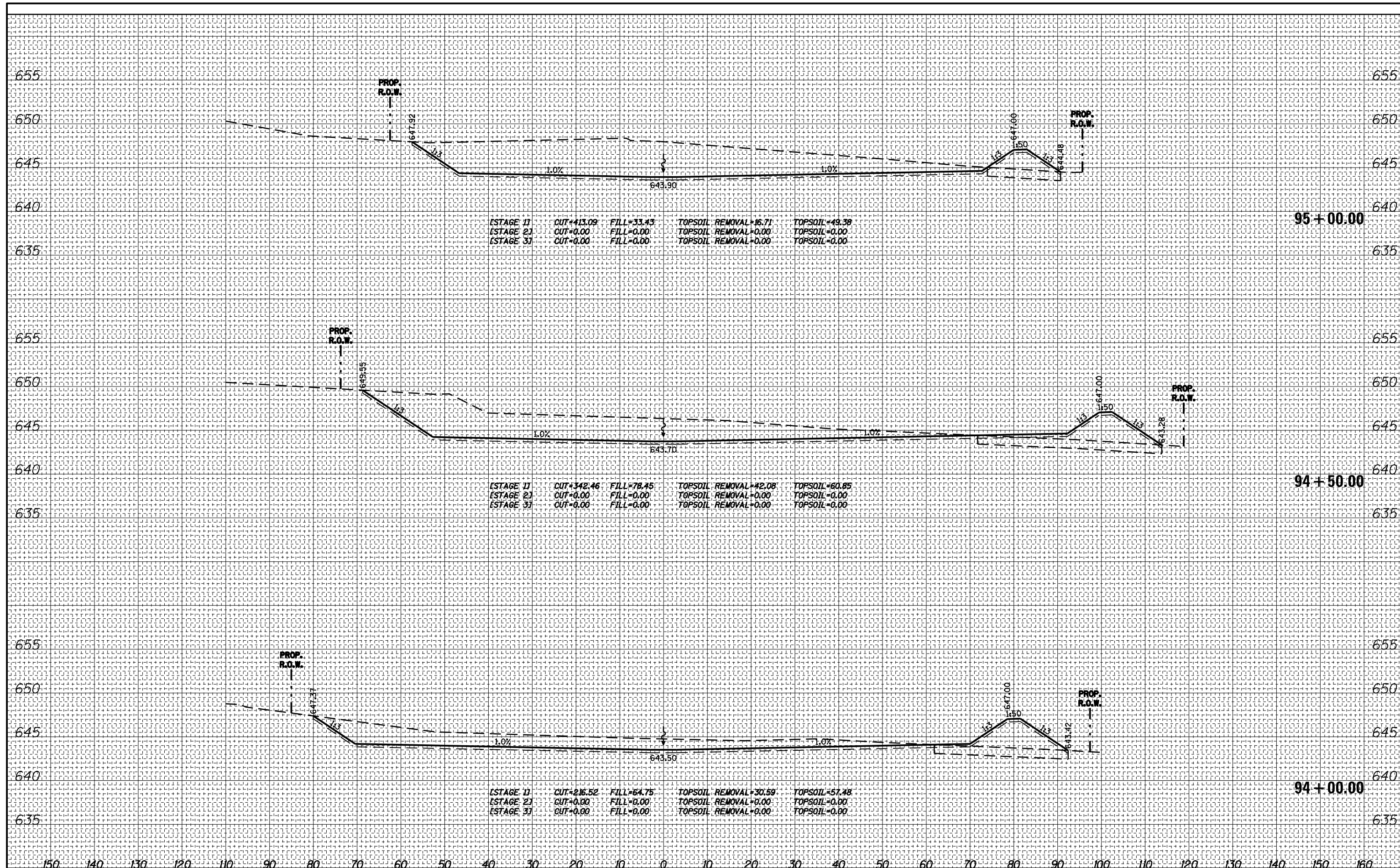
135TH STREET
 CROSS SECTIONS

SCALE: 1" = 10'
 SHEET NO. 21 OF 24 SHEETS
 STA. 153+02.62 TO STA. 153+50.00

F.A. RTE: 577	SECTION: C-1-B	COUNTY: WILL/COOK	TOTAL SHEETS: 186	SHEET NO.: 183
CONTRACT NO. 60H21			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



PARSONS BRINCKERHOFF
 230 West Monroe St., Suite 900
 Chicago, IL 60606, (312) 782-8150

USER NAME	= clemnsc
DESIGNED	- CJC
DRAWN	- CJC
CHECKED	- RFT
DATE	- 3/18/2016

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCALE:	1" = 10'
SHEET NO.	24 OF 24 SHEETS
STA.	94+00.00 TO STA. 95+00.00

COMPENSATORY STORAGE
 CROSS SECTIONS

F.A. RTE.	577
SECTION	C-1-B
COUNTY	WILL/COOK
TOTAL SHEETS	186
SHEET NO.	186
CONTRACT NO.	60H21
ILLINOIS FED. AID PROJECT	