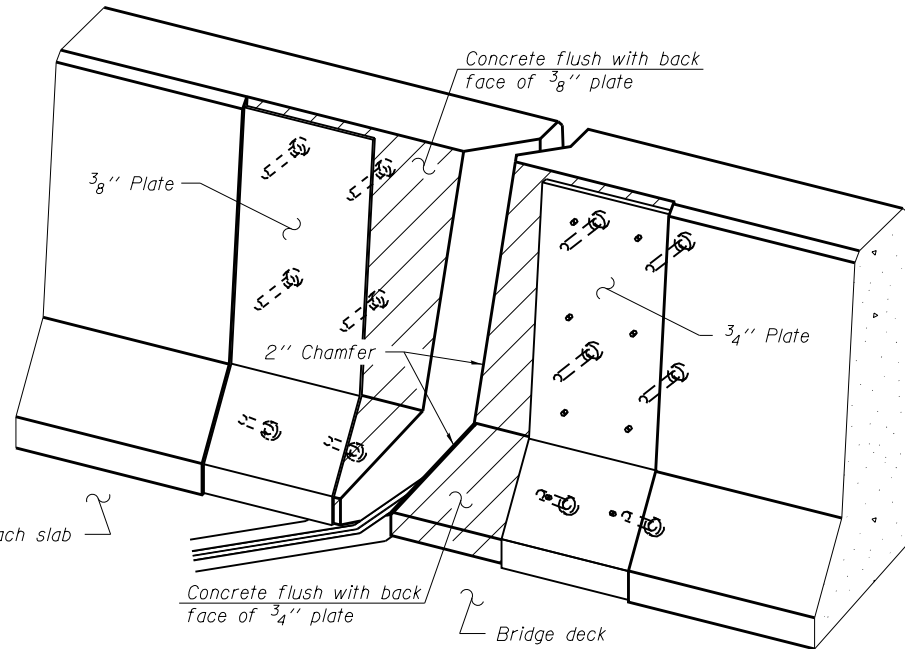
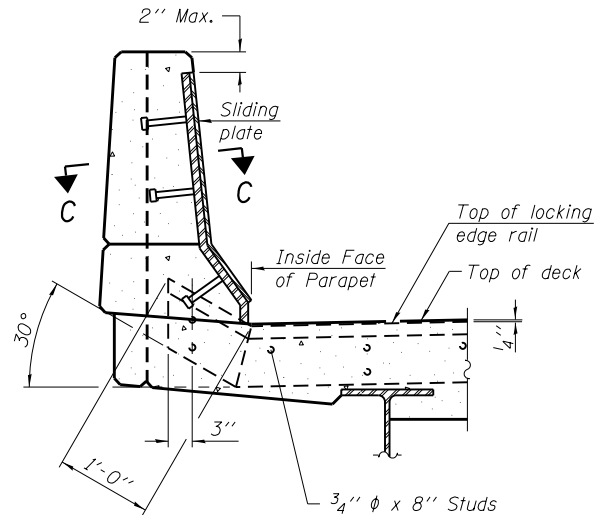
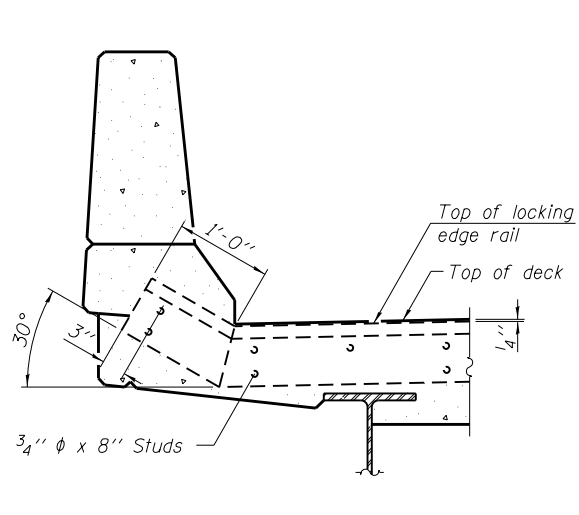
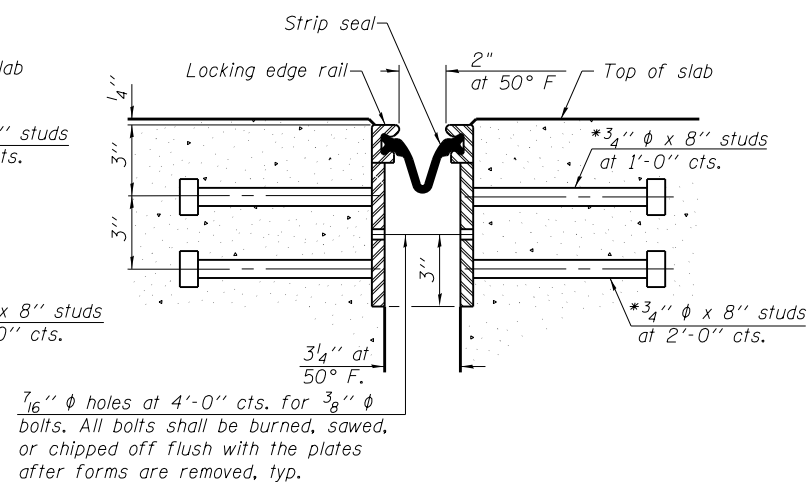
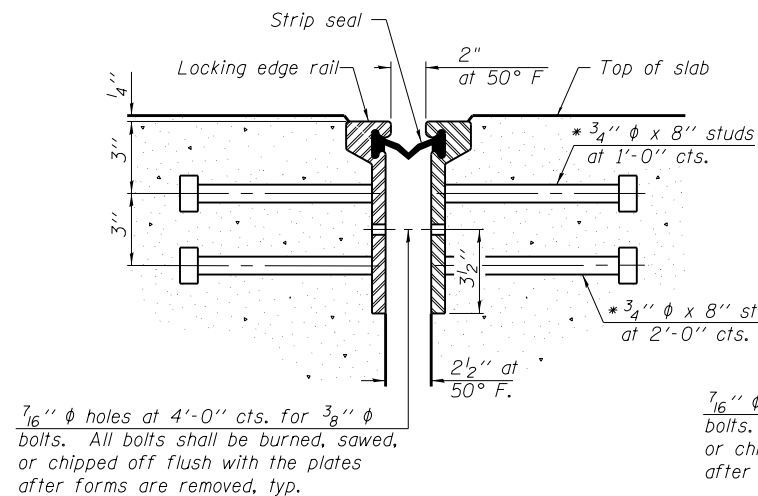


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



**Notes:**  
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.  
The manufacturer's recommended installation methods shall be followed.  
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.  
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.  
Parapet plates and anchorage studs for skews  $> 30^\circ$  included in the cost of Preformed Joint Strip Seal.



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

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

**ROLLED EXTRUDED RAIL WELDED RAIL**

**LOCKING EDGE RAIL SPLICE**

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

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	84

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

**LOCKING EDGE RAILS**

EJ-SSJ

1-27-12



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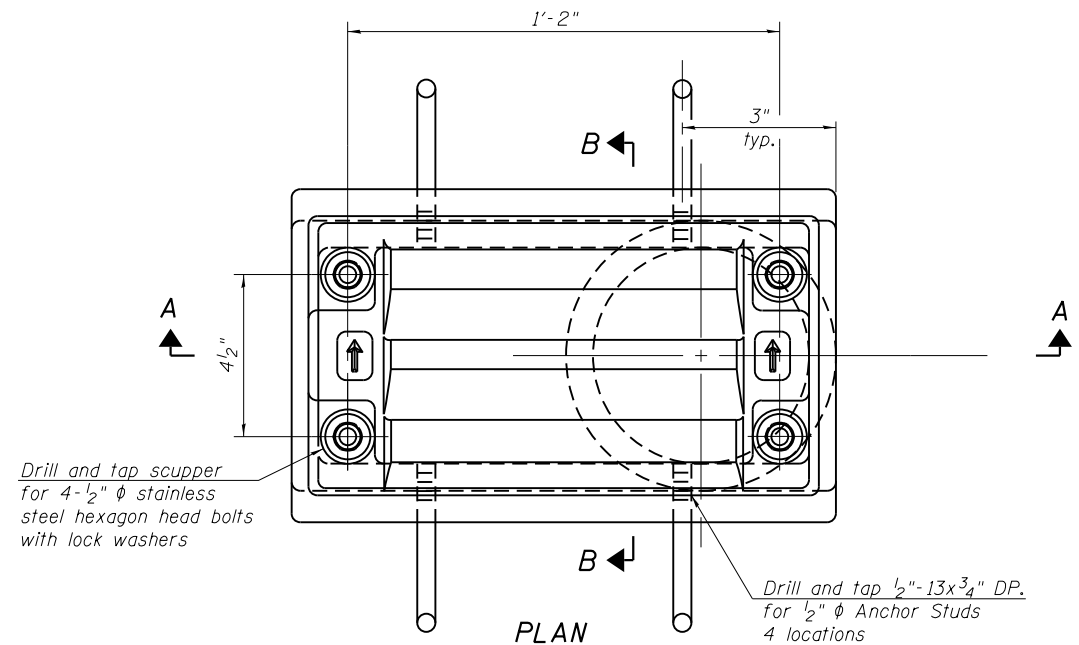
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL  
STRUCTURE NO. 051-0066

SHEET NO. 18 OF 41 SHEETS

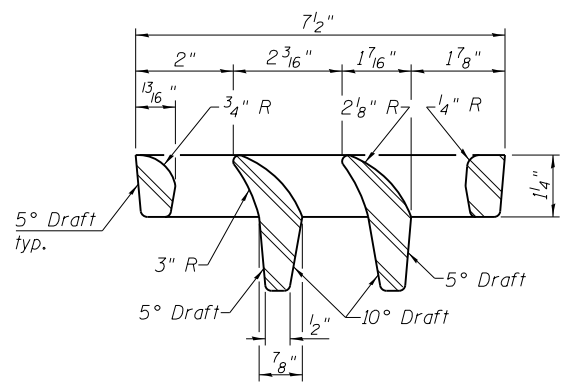
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	201
				CONTRACT NO. 74177
ILLINOIS FED. AID PROJECT				



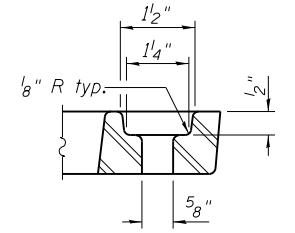
Drill and tap scupper for 4-1/2" φ stainless steel hexagon head bolts with lock washers

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

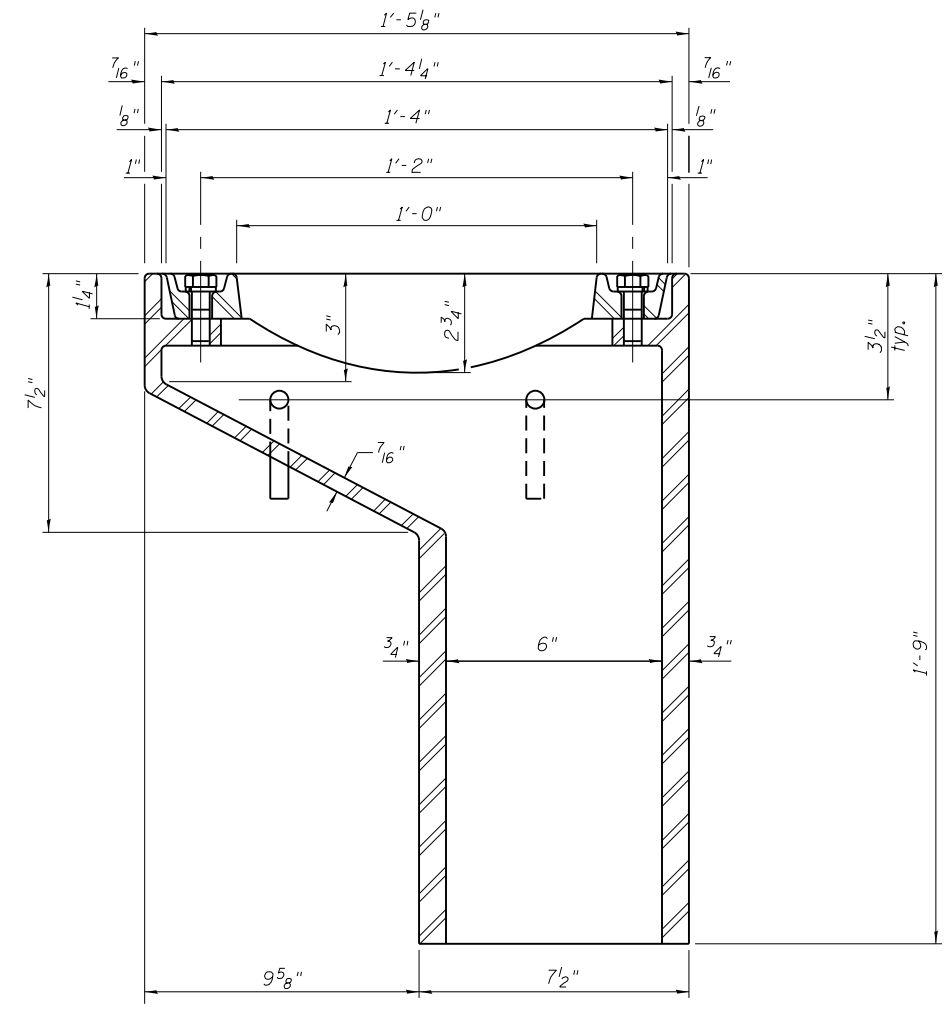
**PLAN**



**VANE GRATE DETAIL**

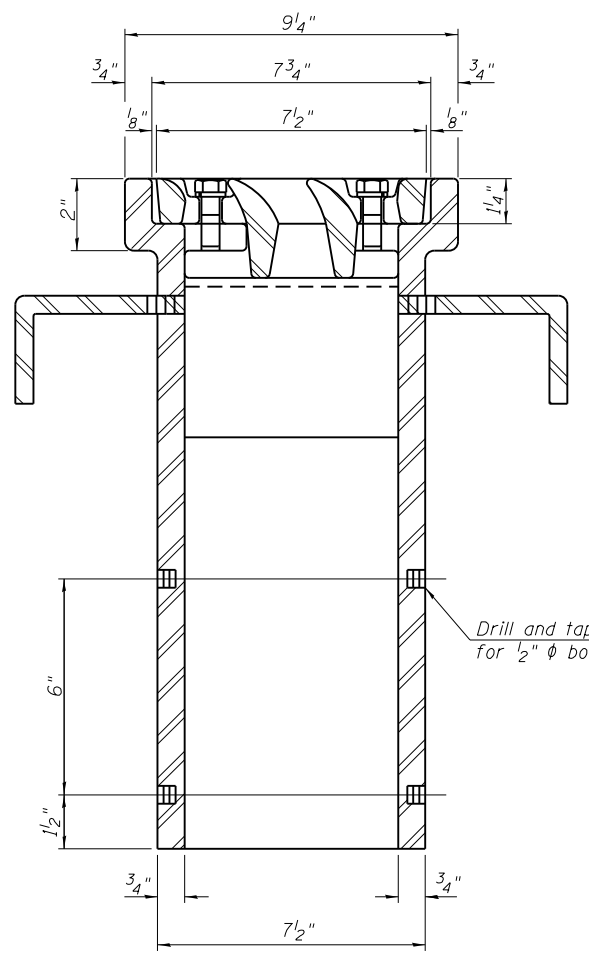


**BOLT HOLE DETAIL**



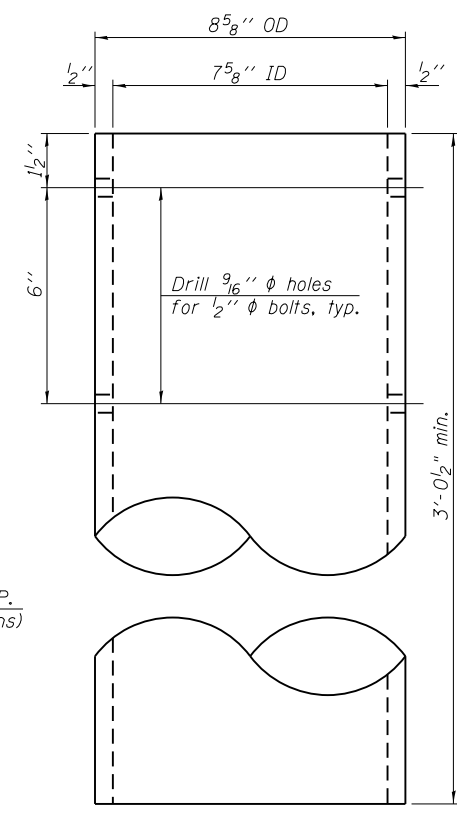
**SECTION A-A**

See sheet 12 of 41 for scupper location relative to parapet.

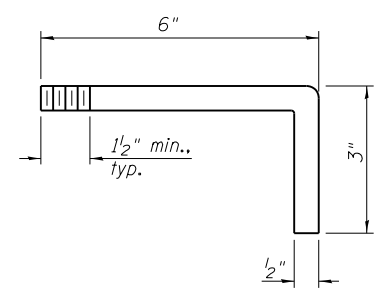


**SECTION B-B**

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



**DOWNSPOUT**



**ANCHOR STUD DETAIL**

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

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DS-11

7-1-10



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 CHECKED - MTD 08/15

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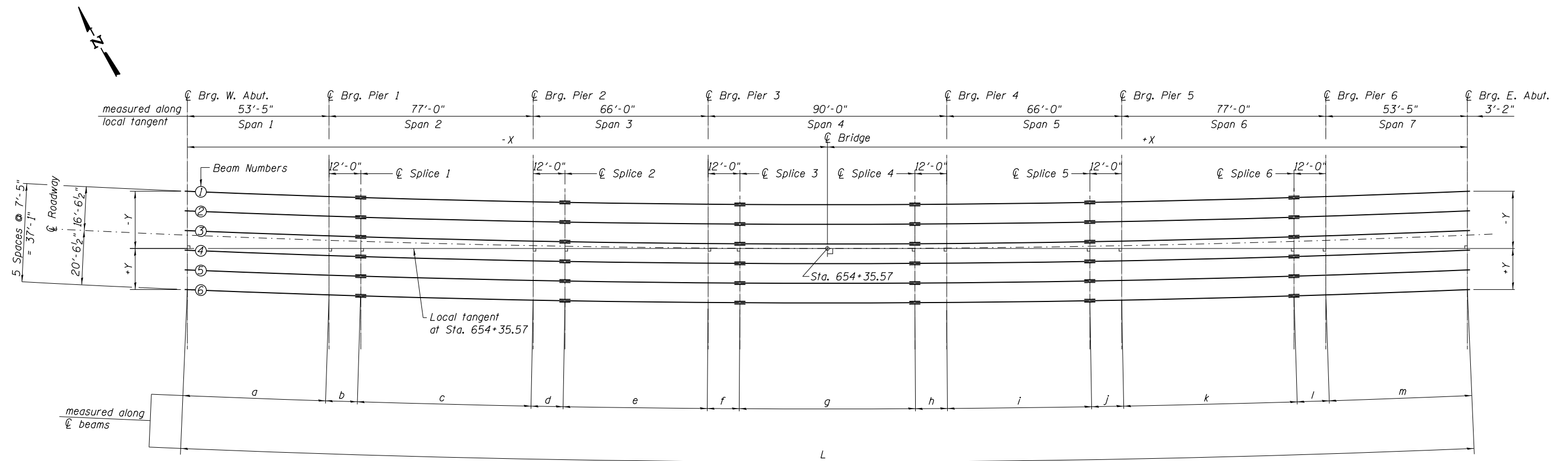
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11  
 STRUCTURE NO. 051-0066

SHEET NO. 19 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	202
				CONTRACT NO. 74177

ILLINOIS FED. AID PROJECT



LAYOUT PLAN

BEAM DIMENSIONS (in feet)

Beam	Radius	a	b	c	d	e	f	g	h	i	j	k	l	m	L
1	5,755.128	53.454	12.006	65.021	12.002	54.004	12.000	66.000	12.000	54.004	12.002	65.021	12.006	53.454	482.975
2	5,762.545	53.454	12.006	65.021	12.002	54.004	12.000	66.000	12.000	54.004	12.002	65.021	12.006	53.454	482.975
3	5,769.962	53.454	12.006	65.020	12.002	54.004	12.000	66.000	12.000	54.004	12.002	65.020	12.006	53.454	482.974
4	5,777.378	53.454	12.006	65.020	12.002	54.004	12.000	66.000	12.000	54.004	12.002	65.020	12.006	53.454	482.974
5	5,784.795	53.454	12.006	65.020	12.002	54.004	12.000	66.000	12.000	54.004	12.002	65.020	12.006	53.454	482.974
6	5,792.212	53.454	12.006	65.020	12.002	54.004	12.000	66.000	12.000	54.004	12.002	65.020	12.006	53.454	482.973

Note:  
L does not equal the sum of a to m due to roundoff in a to m values.

LAYOUT DIMENSIONS (in feet)

Beam	C Brg. W. Abut.		C Brg. Pier 1		C Splice 1		C Brg. Pier 2		C Splice 2		C Brg. Pier 3		C Splice 3		C Splice 4		C Brg. Pier 4		C Splice 5		C Brg. Pier 5		C Splice 6		C Brg. Pier 6		C Brg. E. Abut.	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	-241.417	-21.607	-188.000	-19.613	-176.000	-19.233	-111.000	-17.612	-99.000	-17.393	-45.000	-16.718	-33.000	-16.636	33.000	-16.636	45.000	-16.718	99.000	-17.393	111.000	-17.612	176.000	-19.233	188.000	-19.613	241.417	-21.607
2	-241.417	-14.184	-188.000	-12.193	-176.000	-11.813	-111.000	-10.194	-99.000	-9.975	-45.000	-9.301	-33.000	-9.219	33.000	-9.219	45.000	-9.301	99.000	-9.975	111.000	-10.194	176.000	-11.813	188.000	-12.193	241.417	-14.184
3	-241.417	-6.761	-188.000	-4.772	-176.000	-4.393	-111.000	-2.776	-99.000	-2.558	-45.000	-1.884	-33.000	-1.803	33.000	-1.803	45.000	-1.884	99.000	-2.558	111.000	-2.776	176.000	-4.393	188.000	-4.772	241.417	-6.761
4	-241.417	0.662	-188.000	2.649	-176.000	3.027	-111.000	4.642	-99.000	4.860	-45.000	5.533	-33.000	5.614	33.000	5.614	45.000	5.533	99.000	4.860	111.000	4.642	176.000	3.027	188.000	2.649	241.417	0.662
5	-241.417	8.085	-188.000	10.069	-176.000	10.447	-111.000	12.060	-99.000	12.278	-45.000	12.950	-33.000	13.031	33.000	13.031	45.000	12.950	99.000	12.278	111.000	12.060	176.000	10.447	188.000	10.069	241.417	8.085
6	-241.417	15.508	-188.000	17.490	-176.000	17.867	-111.000	19.478	-99.000	19.696	-45.000	20.367	-33.000	20.448	33.000	20.448	45.000	20.367	99.000	19.696	111.000	19.478	176.000	17.867	188.000	17.490	241.417	15.508



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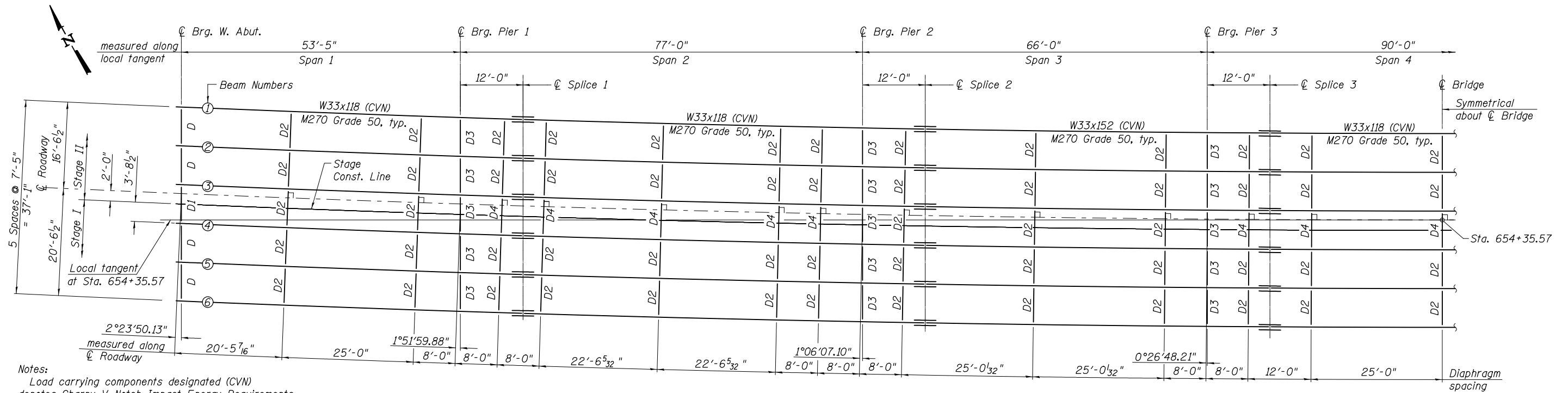
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STEEL LAYOUT PLAN  
 STRUCTURE NO. 051-0066

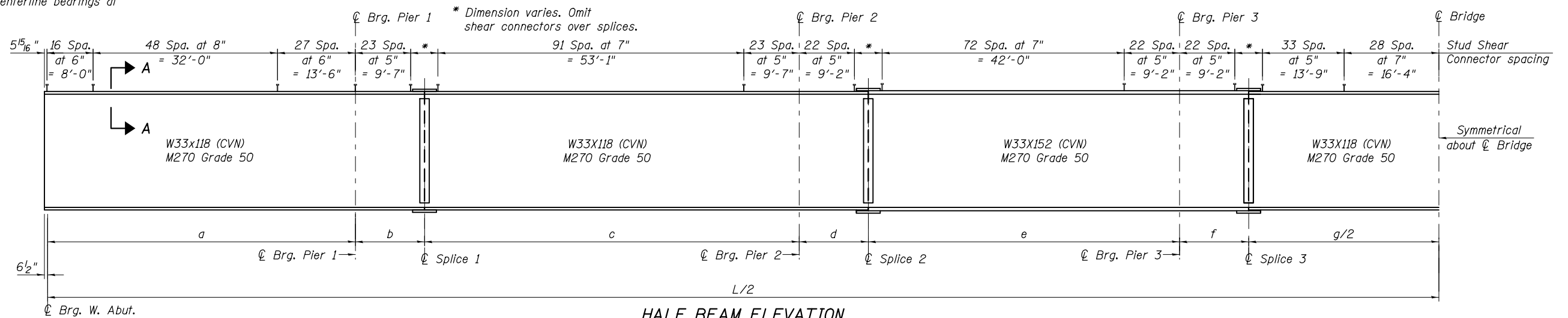
SHEET NO. 20 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	206	203
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	



Notes:  
 Load carrying components designated (CVN) denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.  
 See sheet 20 of 41 for dimensions a-g and L.  
 Diaphragms D2 and D4 are radial. All other diaphragms are along centerline bearings at substructure units.

HALF FRAMING PLAN



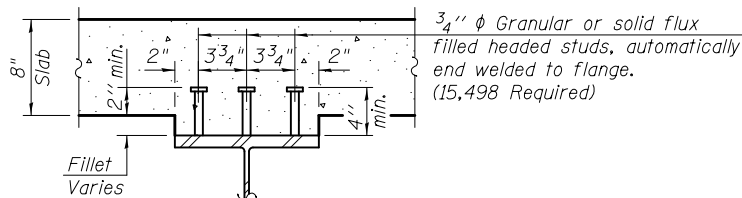
HALF BEAM ELEVATION

TOP OF BEAM ELEVATIONS

(For fabrication only)

Beam	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Brg. Pier 2	℄ Splice 2	℄ Brg. Pier 3	℄ Splice 3	℄ Splice 4	℄ Brg. Pier 4	℄ Splice 5	℄ Brg. Pier 5	℄ Splice 6	℄ Brg. Pier 6	℄ Brg. E. Abut.
1	432.64	432.79	432.83	432.96	433.01	433.22	433.27	433.47	433.50	433.60	433.64	433.89	433.92	434.10
2	432.90	433.05	433.08	433.21	433.26	433.48	433.52	433.72	433.75	433.85	433.89	434.14	434.18	434.35
3	433.15	433.30	433.33	433.46	433.51	433.73	433.78	433.97	434.00	434.11	434.15	434.39	434.43	434.60
4	433.40	433.55	433.59	433.72	433.76	433.98	434.03	434.23	434.25	434.36	434.40	434.64	434.68	434.85
5	433.66	433.81	433.84	433.97	434.02	434.23	434.28	434.48	434.50	434.61	434.65	434.89	434.93	435.10
6	433.91	434.06	434.09	434.22	434.27	434.49	434.53	434.73	434.75	434.86	434.90	435.14	435.18	435.35

Notes:  
 Elevations at splice locations are top of flange (not splice plate).  
 Elevations at Splices 2-5 are top of W33x152.  
 See sheet 20 of 41 for locations of Splices 4, 5 and 6.



SECTION A-A



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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STEEL FRAMING PLAN  
 STRUCTURE NO. 051-0066

SHEET NO. 21 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	204
CONTRACT NO. 74177				
ILLINOIS FED. AID PROJECT				



INTERIOR BEAM REACTION TABLE					
	Abut.	Pier 1 or 6	Pier 2 or 5	Pier 3 or 4	
R <sub>DC1</sub>	(k)	18.1	67.4	61.2	74.9
R <sub>DC2</sub>	(k)	2.7	11.3	10.1	12.2
R <sub>DW</sub>	(k)	6.7	27.9	25.0	30.1
R <sub>ℓ + IM</sub>	(k)	71.7	112.2	113.6	123.4
R <sub>Total</sub>	(k)	99.2	218.8	209.9	240.6

Notes:  
 Load carrying components designated (CVN)  
 denotes Charpy-V-Notch Impact Energy Requirements,  
 Zone 2.  
 Splice plates, excluding fill plates, shall be M270  
 Grade 50.

INTERIOR BEAM MOMENT TABLE								
		0.4 Sp. 1 or 0.6 Sp. 7	Pier 1 or 6	0.5 Sp. 2 or 0.5 Sp. 6	Pier 2 or 5	0.5 Sp. 3 or 0.5 Sp. 5	Pier 3 or 4	0.5 Sp. 4
I <sub>s</sub>	(in <sup>4</sup> )	5,900	5,900	5,900	5,900	8,160	8,160	5,900
I <sub>c(n)</sub>	(in <sup>4</sup> )	16,908	16,908	16,908	16,908	21,498	21,498	16,908
I <sub>c(3n)</sub>	(in <sup>4</sup> )	12,617	-	12,617	-	15,796	-	12,617
I <sub>c(cr)</sub>	(in <sup>4</sup> )	-	8,561	-	8,561	-	11,011	-
S <sub>s</sub>	(in <sup>3</sup> )	359	359	359	359	487	487	359
S <sub>c(n)</sub>	(in <sup>3</sup> )	545	545	545	545	709	709	545
S <sub>c(3n)</sub>	(in <sup>3</sup> )	495	-	495	-	642	-	495
S <sub>c(cr)</sub>	(in <sup>3</sup> )	-	426	-	426	-	558	-
DC1	(k/ft)	0.897	0.903	0.909	0.903	0.933	0.940	0.913
M <sub>DC1</sub>	(k-ft)	134.6	421.0	282.0	353.7	50.9	556.6	363.6
DC2	(k/ft)	0.150	0.150	0.150	0.150	0.150	0.150	0.150
M <sub>DC2</sub>	(k-ft)	23.3	70.4	46.9	58.3	8.2	89.8	62.1
DW	(k/ft)	0.371	0.371	0.371	0.371	0.371	0.371	0.371
M <sub>DW</sub>	(k-ft)	57.5	174.2	116.0	144.2	20.4	222.1	153.5
M <sub>ℓ + IM</sub>	(k-ft)	635.9	702.1	740.0	742.8	702.6	940.0	830.9
M <sub>u</sub> (Strength I)	(k-ft)	1,396.3	2,104.2	1,880.3	2,031.2	1,334.0	2,786.1	2,216.5
* ϕ <sub>f</sub> M <sub>n</sub>	(k-ft)	2,824.5	2,158.6	2,684.6	2,167.1	3,771.9	2,794.1	2,595.5
f <sub>s</sub> DC1	(ksi)	4.50	14.07	9.43	11.82	1.25	13.71	12.15
f <sub>s</sub> DC2	(ksi)	0.56	1.99	1.14	1.64	0.15	1.93	1.51
f <sub>s</sub> DW	(ksi)	1.40	4.91	2.81	4.07	0.38	4.78	3.72
f <sub>s</sub> (ℓ + IM)	(ksi)	14.00	19.79	16.29	20.94	11.89	20.23	18.29
f <sub>s</sub> (Service II)	(ksi)	24.65	46.70	34.55	44.76	17.25	46.73	41.16
0.95R <sub>h</sub> F <sub>yr</sub>	(ksi)	47.50	47.50	47.50	47.50	47.50	47.50	47.50
ϕ <sub>f</sub> F <sub>n</sub>	(ksi)	-	-	-	-	-	-	-
V <sub>r</sub>	(k)	49.8	56.9	50.7	60.0	53.5	58.9	53.2

\* Compact sections

I<sub>s</sub>, S<sub>s</sub>: Non-composite moment of inertia and section modulus of the steel section used for computing f<sub>s</sub> (Service II) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

I<sub>c(n)</sub>, S<sub>c(n)</sub>: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f<sub>s</sub> (Service II) in uncracked sections due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).

I<sub>c(3n)</sub>, S<sub>c(3n)</sub>: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f<sub>s</sub> (Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

I<sub>c(cr)</sub>, S<sub>c(cr)</sub>: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f<sub>s</sub> (Service II) in cracked sections, due to both short-term composite live loads and long-term composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

DC1: Un-factored non-composite dead load (kips/ft.).

M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M<sub>ℓ + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).  
 1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>ℓ + IM</sub>

ϕ<sub>f</sub>M<sub>n</sub>: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

f<sub>s</sub> DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).  
 M<sub>DC1</sub> / S<sub>nc</sub>

f<sub>s</sub> DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).  
 M<sub>DC2</sub> / S<sub>c(3n)</sub> or M<sub>DC2</sub> / S<sub>c(cr)</sub> as applicable.

f<sub>s</sub> DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).  
 M<sub>DW</sub> / S<sub>c(3n)</sub> or M<sub>DW</sub> / S<sub>c(cr)</sub> as applicable.

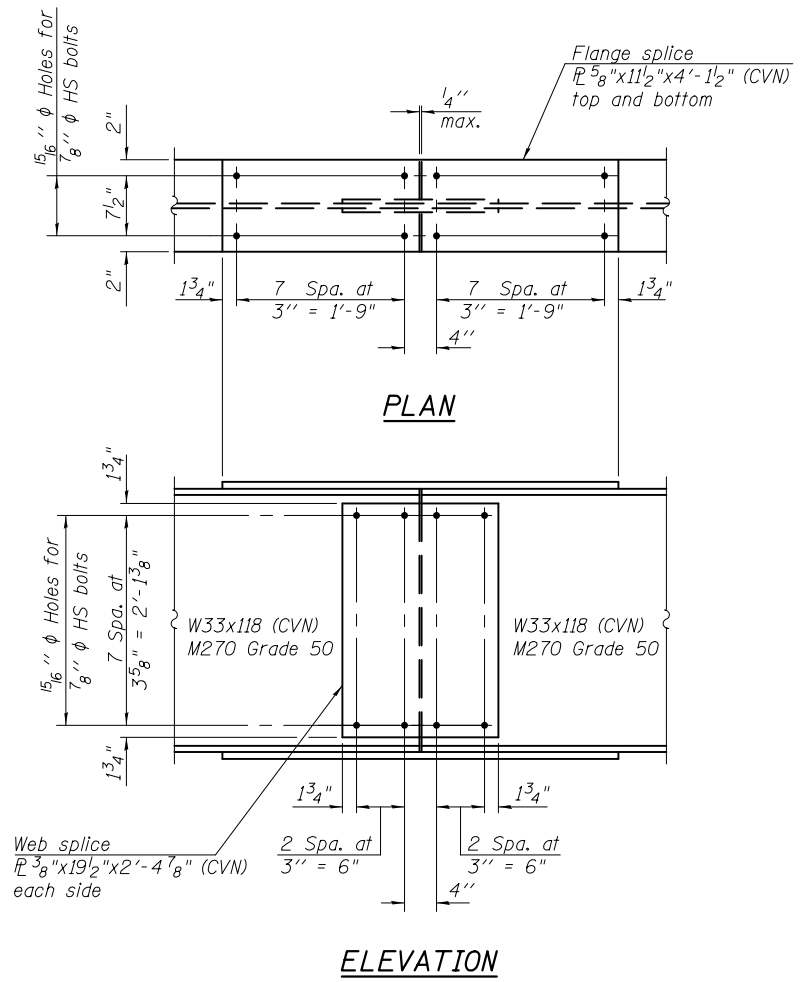
f<sub>s</sub> (ℓ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).  
 M<sub>ℓ + IM</sub> / S<sub>c(n)</sub> or M<sub>ℓ + IM</sub> / S<sub>c(cr)</sub> as applicable.

f<sub>s</sub> (Service II): Sum of stresses as computed below (ksi).  
 f<sub>sDC1</sub> + f<sub>sDC2</sub> + f<sub>sDW</sub> + 1.3 f<sub>s</sub> (ℓ + IM)

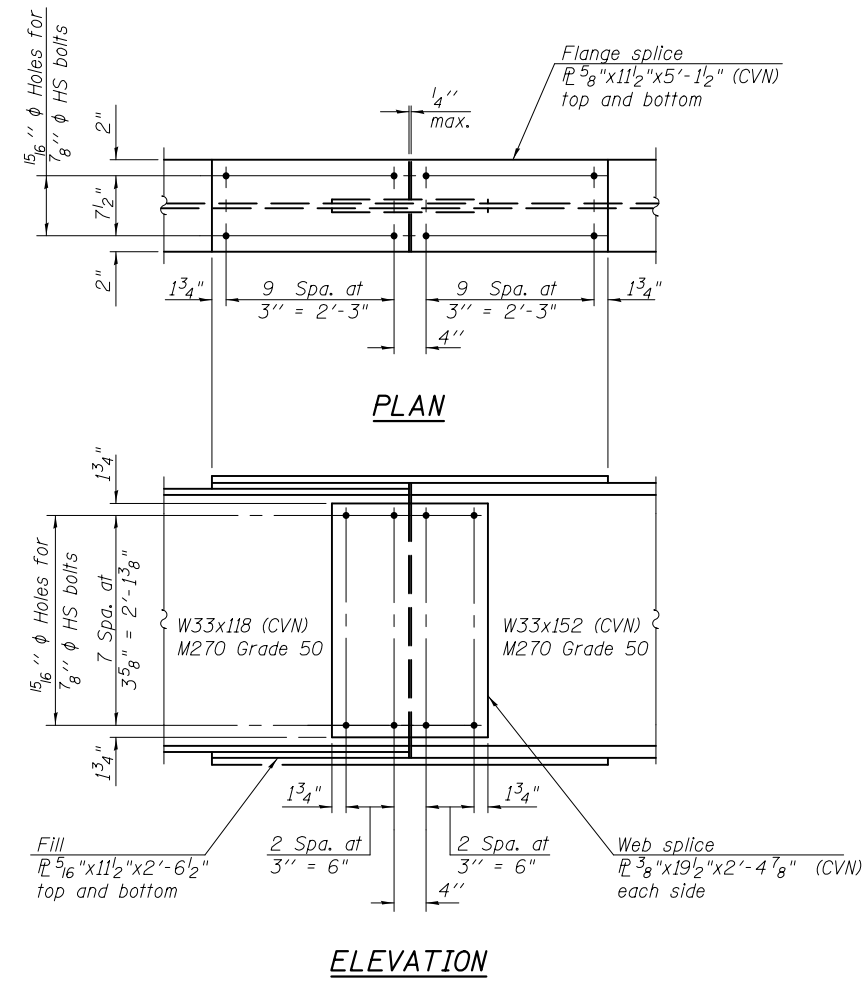
0.95R<sub>h</sub>F<sub>yr</sub>: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

ϕ<sub>f</sub>F<sub>n</sub>: Non-compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V<sub>r</sub>: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



SPLICE 1 & 6 DETAIL  
(12 Required)



SPLICE 2-5 DETAIL  
(24 Required)



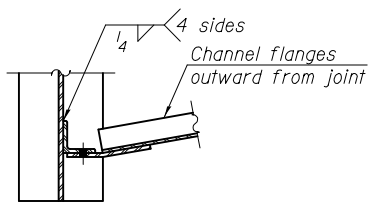
USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0.2' / 1"	DRAWN - DWH 03/11	REVISED -
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STATE OF ILLINOIS  
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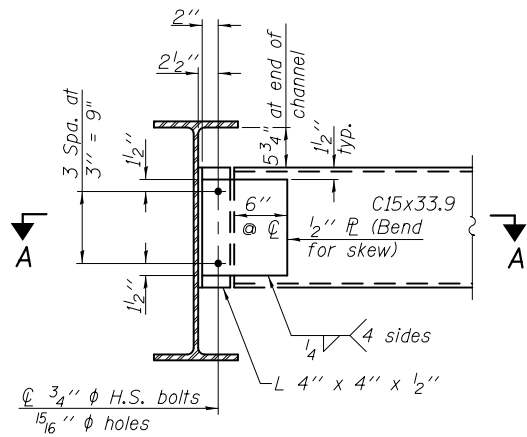
STEEL FRAMING DETAILS  
 STRUCTURE NO. 051-0066

SHEET NO. 22 OF 41 SHEETS

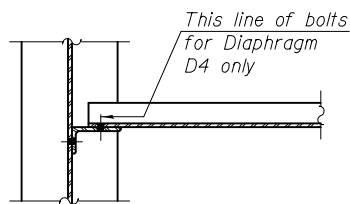
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-21B-1)	LAWRENCE	260	205
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	



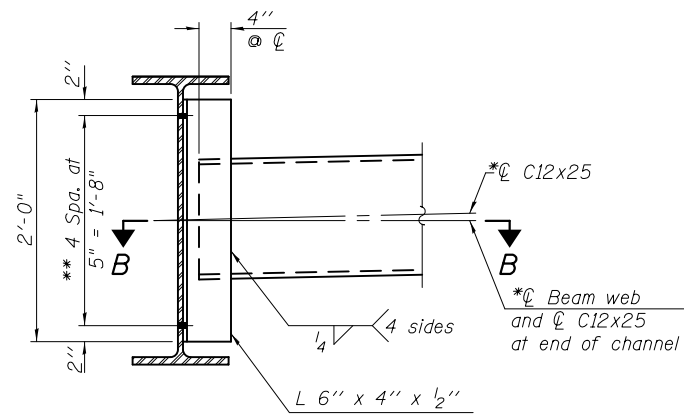
SECTION A-A



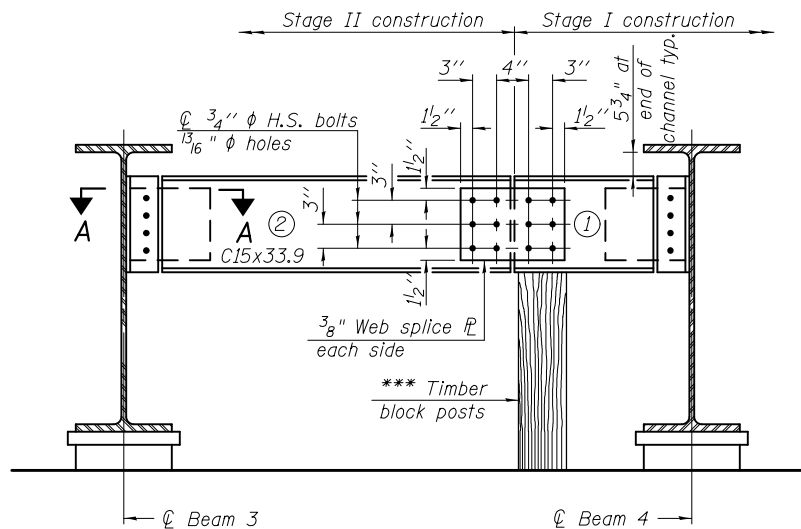
END DIAPHRAGM-D  
(8 Required)



SECTION B-B



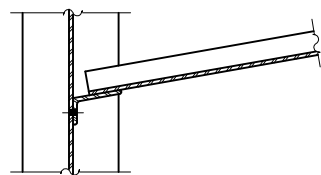
INTERIOR DIAPHRAGM - D2  
(110 Required)



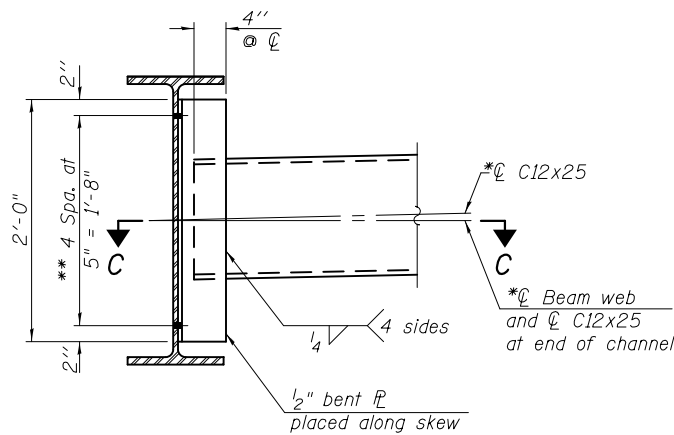
END DIAPHRAGM - D1  
(2 Required)

END DIAPHRAGM D1 STAGE  
CONSTRUCTION SEQUENCE

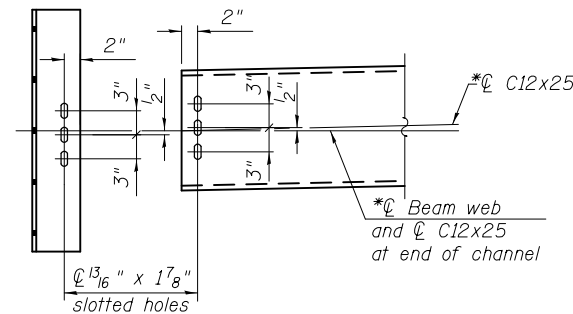
- 1.) Order diaphragm in two sections.
- 2.) Attach section ① of diaphragm to beam 4.
- 3.) Place timber block posts between section ① of diaphragm and abutment bearing seat.
- 4.) Attach section ② of diaphragm to both beam 3 and section ① of diaphragm during Stage II construction with splice plates.
- 5.) Remove timber block posts.



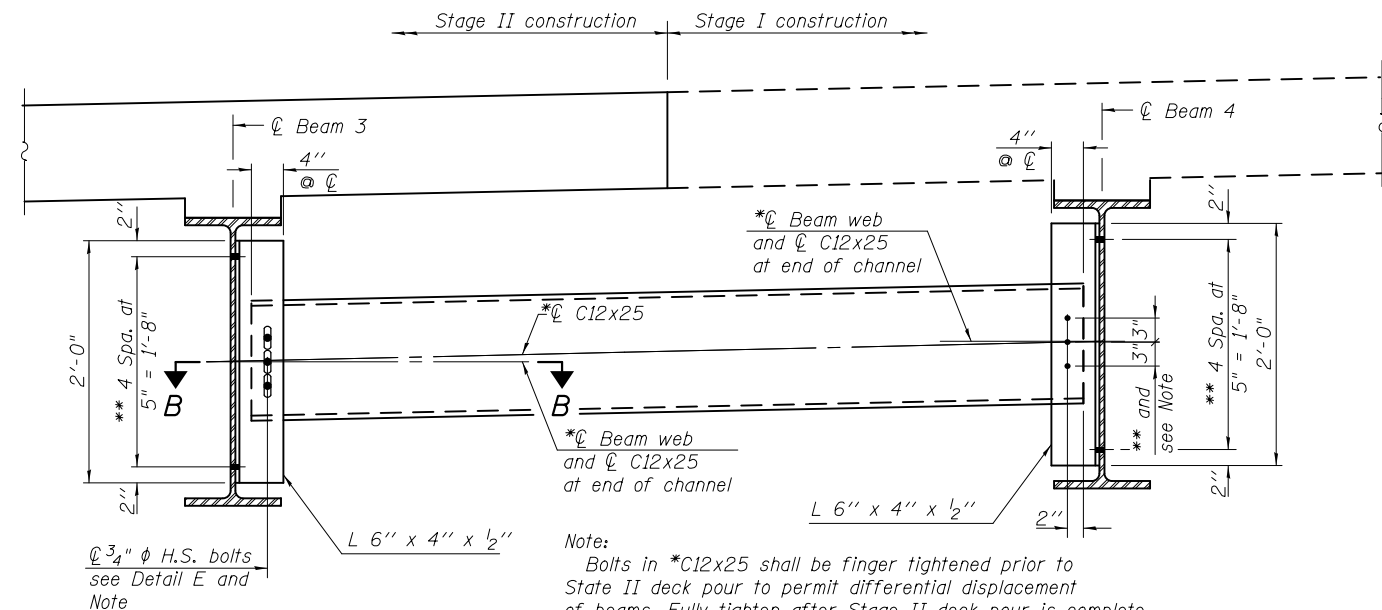
SECTION C-C



INTERIOR DIAPHRAGM - D3  
(30 Required)

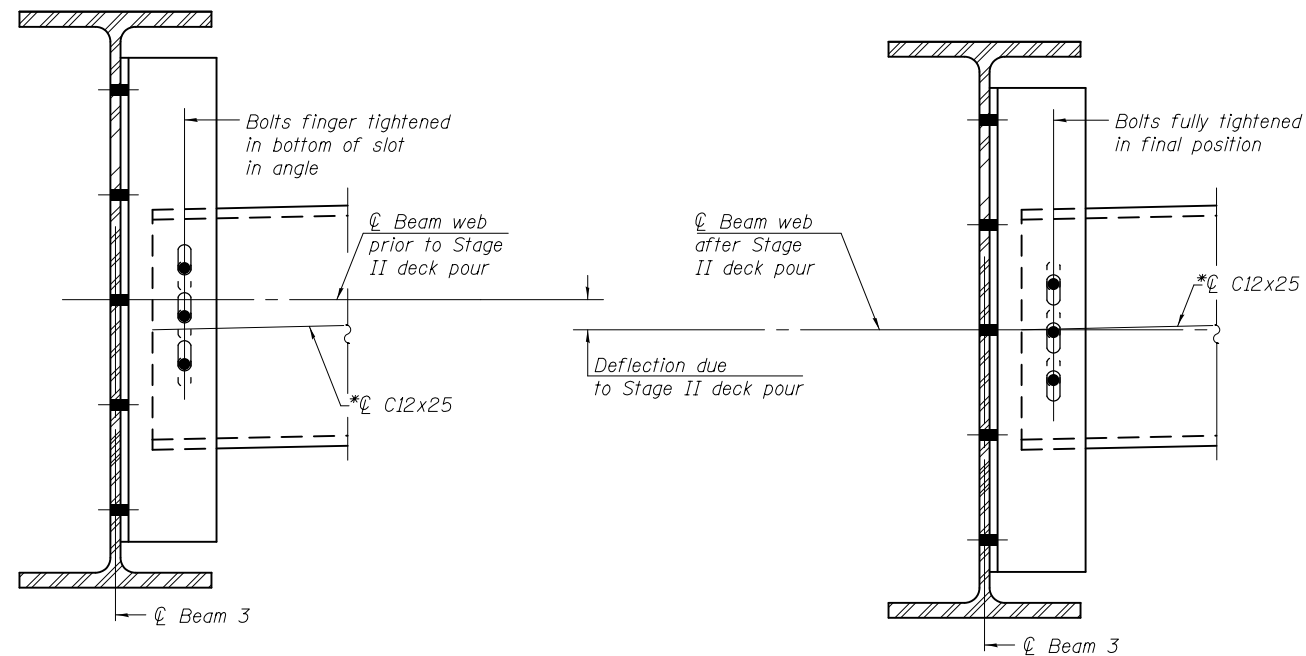


DETAIL E



INTERIOR DIAPHRAGM - D4  
(15 Required)

Note:  
Bolts in \*C12x25 shall be finger tightened prior to State II deck pour to permit differential displacement of beams. Fully tighten after Stage II deck pour is complete. See D4 Connection to Beam 3 detail.



D4 CONNECTION TO BEAM 3

Notes:  
Two hardened washers required for each set of oversized or slotted holes.  
\*Alternate channels (C12x30) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.  
\*\*3/4" φ HS bolts, 15/16" φ holes.  
All diaphragms between beams shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.  
\*\*\* Cost of timber block posts is included with Structural Steel.



USER NAME = rtm  
ESCA PROJECT NO. 1000.02  
PLOT SCALE = 0.2' / in.  
PLOT DATE = 12/4/2018 3:01:13 PM

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DRAWN - DWH 03/11  
CHECKED - MTD 12/18

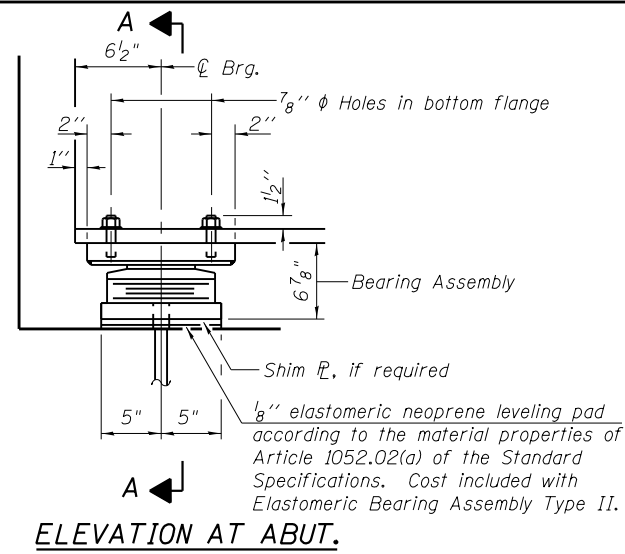
REVISED -  
REVISED -  
REVISED -  
REVISED -

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DEPARTMENT OF TRANSPORTATION

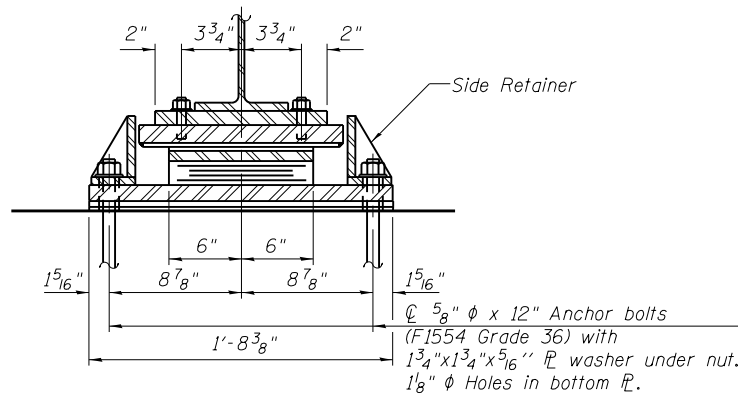
STEEL FRAMING DETAILS  
STRUCTURE NO. 051-0066

SHEET NO. 23 OF 41 SHEETS

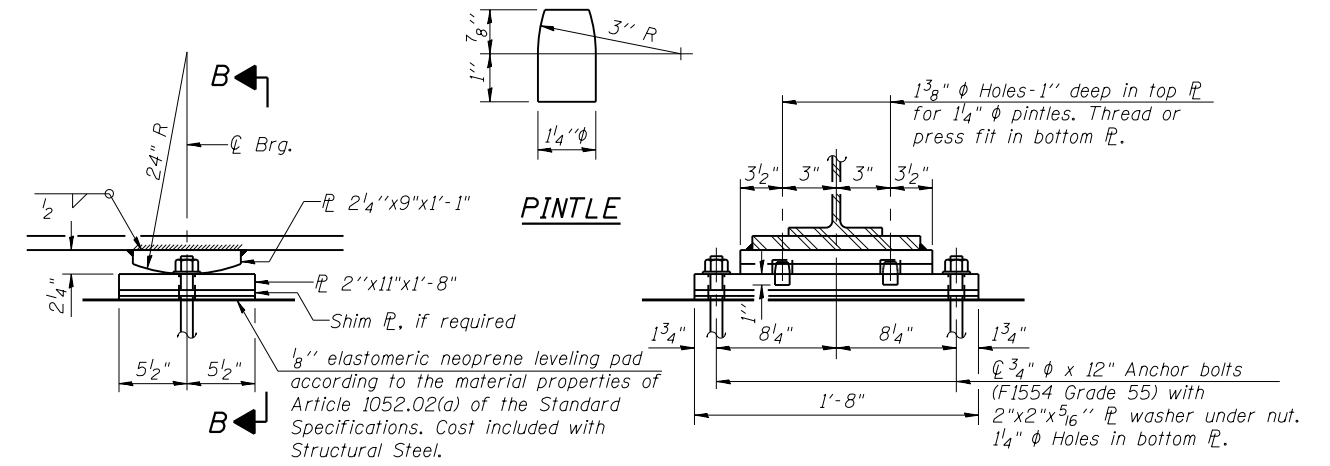
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	206
CONTRACT NO. 74177				
ILLINOIS FED. AID PROJECT				



ELEVATION AT ABUT.



SECTION A-A

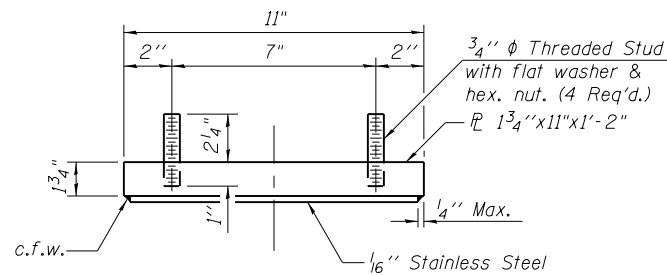


ELEVATION

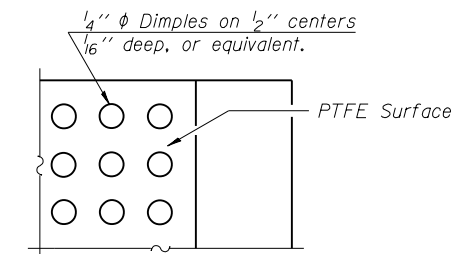
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG.

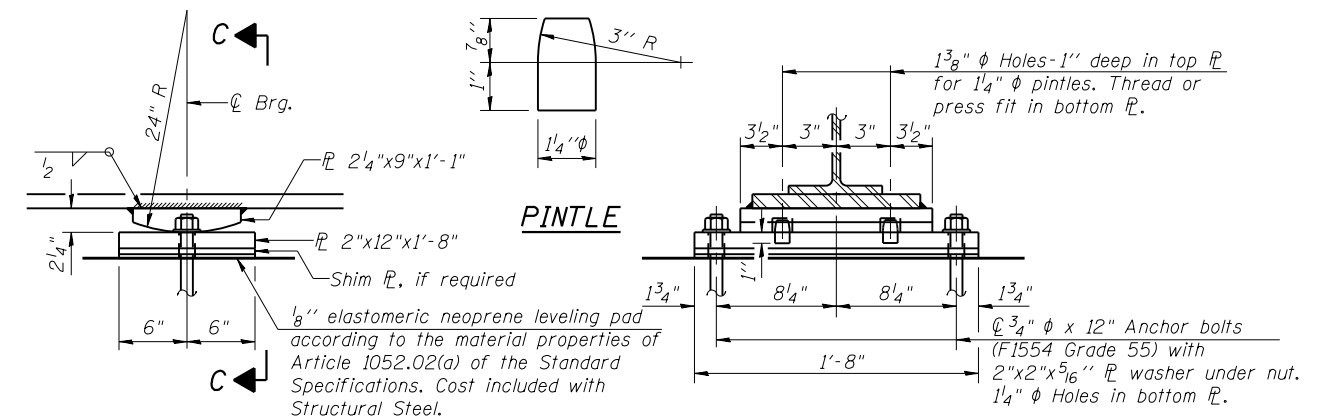
FIXED BEARING - PIERS 1, 2, 5 & 6



TOP BEARING ASSEMBLY



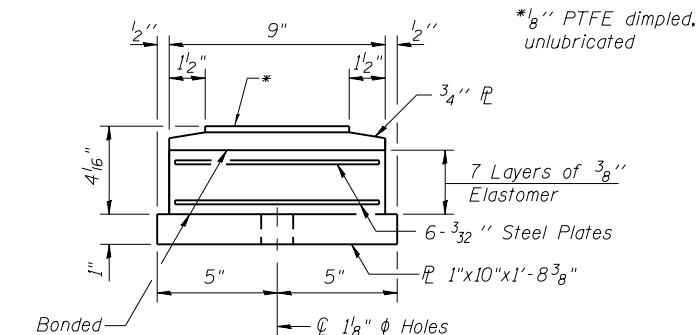
PLAN-PTFE SURFACE



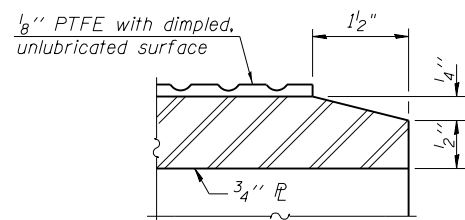
ELEVATION

SECTION C-C

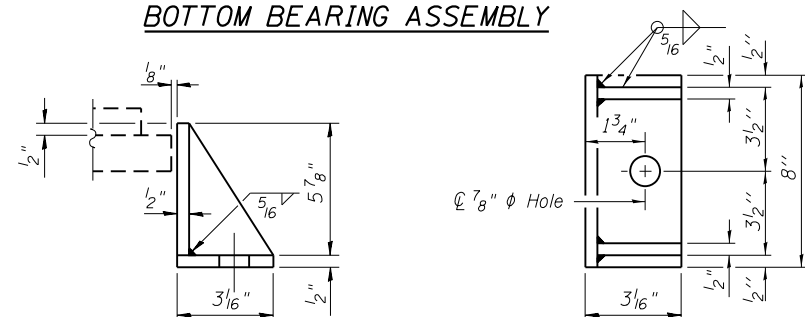
FIXED BEARING - PIERS 3 & 4



BOTTOM BEARING ASSEMBLY

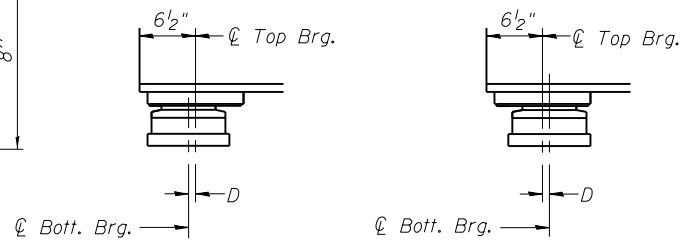


SECTION THRU PTFE



SIDE RETAINER

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



BELOW 50°F. ABOVE 50°F.  
(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

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

Notes:  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.  
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.  
Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts, 3/8"	Each	24
Anchor Bolts, 3/4"	Each	72

I-2E-2

1-27-12



USER NAME = kah  
ESCA PROJECT NO. 1000.02  
PLOT SCALE = 0:2 '1" / in.  
PLOT DATE = 10/19/2018 1:51:22 PM

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CHECKED - RDP 04/11  
DRAWN - DWH 03/11  
CHECKED - MTD 08/15

REVISED -  
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REVISED -

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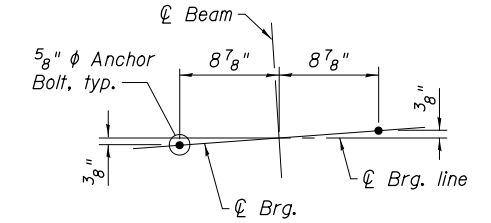
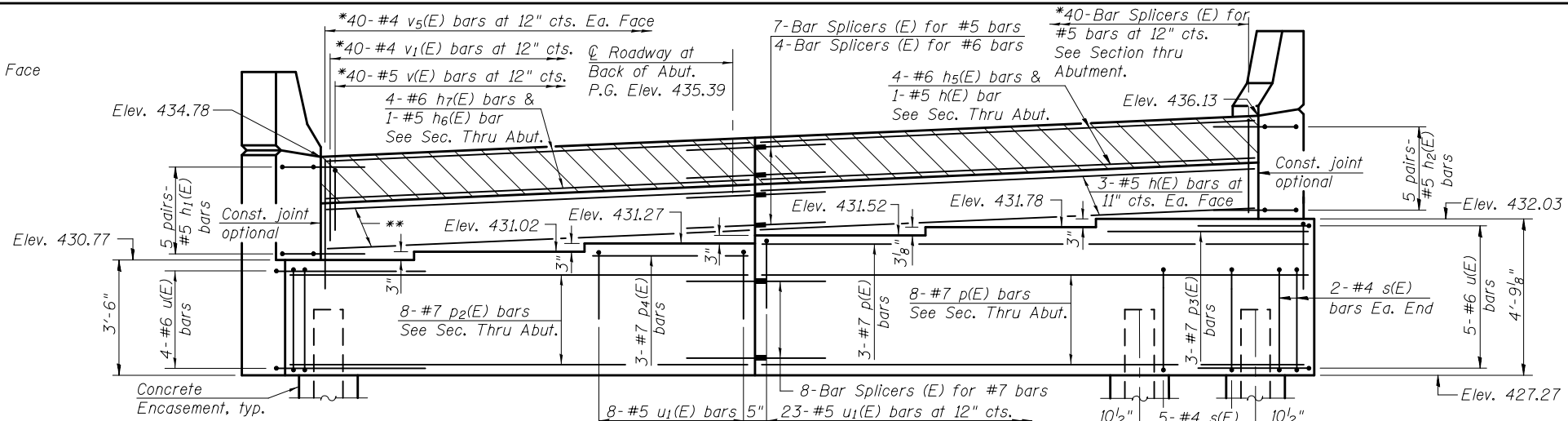
BEARING DETAILS  
STRUCTURE NO. 051-0066

SHEET NO. 24 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	207
CONTRACT NO. 74177				
ILLINOIS FED. AID PROJECT				



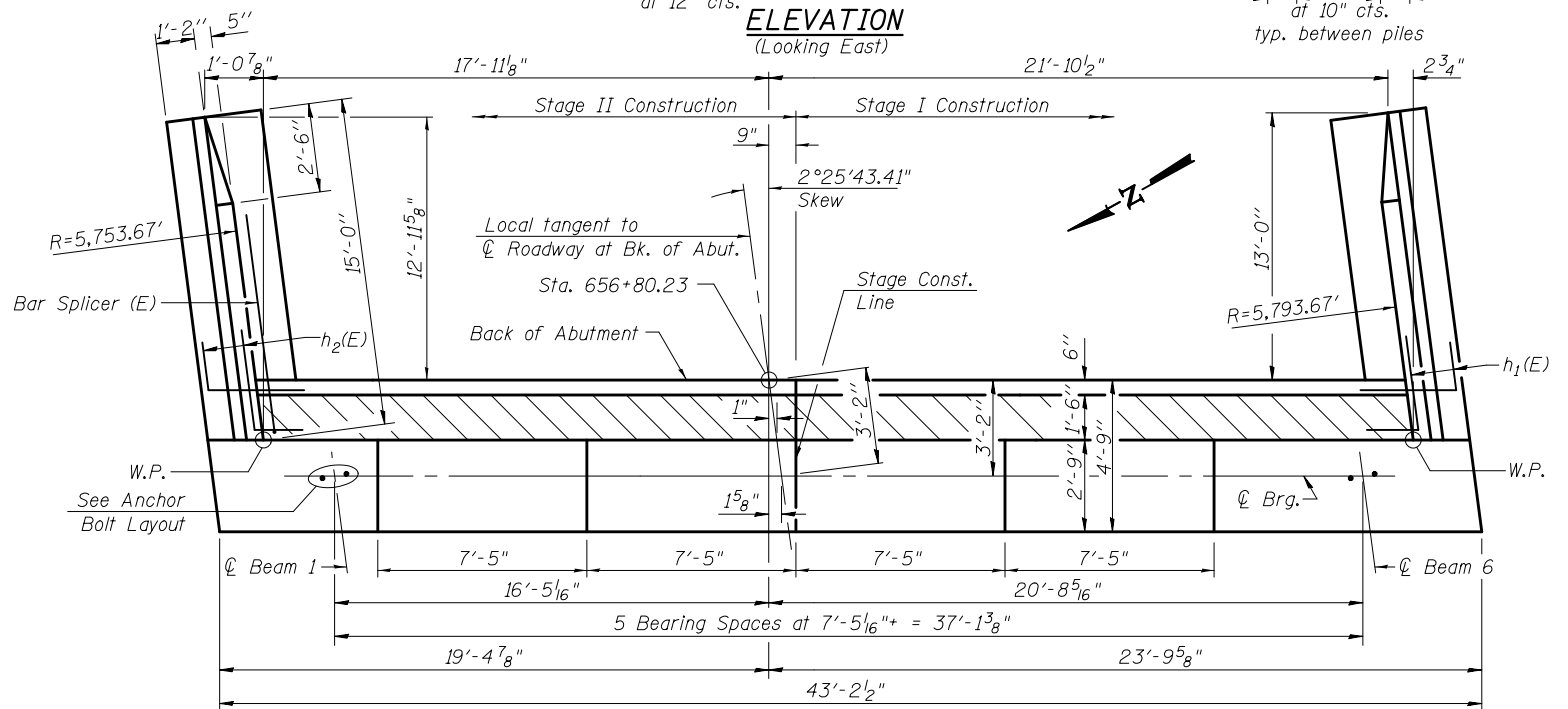
\*21-Stage I, 19-Stage II  
 \*\*3-#5 h<sub>6</sub>(E) bars at 11" cts. Ea. Face



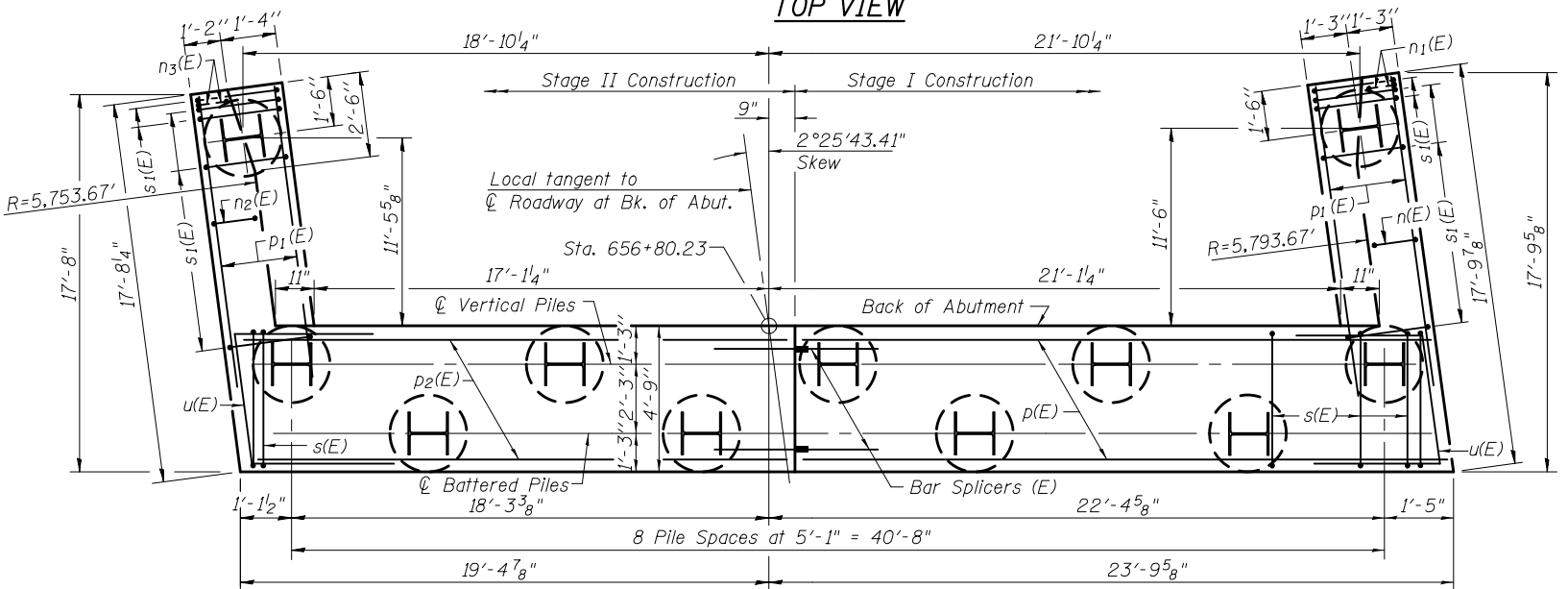
ANCHOR BOLT LAYOUT

EAST ABUTMENT  
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	7	#5	20'-11"	—
h1(E)	10	#5	3'-9"	└
h2(E)	10	#5	3'-9"	└
h3(E)	22	#4	14'-8"	—
h4(E)	14	#4	14'-8"	—
h5(E)	4	#6	20'-11"	—
h6(E)	7	#5	18'-5"	—
h7(E)	4	#6	18'-5"	—
n(E)	12	#6	13'-6"	└
n1(E)	6	#6	6'-9"	└
n2(E)	12	#6	11'-0"	└
n3(E)	6	#6	5'-6"	└
p(E)	11	#7	22'-6"	—
p1(E)	12	#7	15'-6"	—
p2(E)	8	#7	19'-10"	—
p3(E)	3	#7	7'-8"	—
p4(E)	3	#7	7'-1"	—
s(E)	44	#4	15'-11"	└
s1(E)	30	#4	9'-5"	└
u(E)	9	#6	9'-6"	└
u1(E)	31	#5	8'-11"	└
v(E)	40	#5	3'-9"	└
v1(E)	40	#4	3'-0"	└
v2(E)	30	#6	6'-7"	—
v3(E)	6	#6	6'-7"	—
v4(E)	24	#6	6'-9"	└
v5(E)	80	#4	5'-0"	—
Structure Excavation		Cu. Yd.	115	
Concrete Structures		Cu. Yd.	55.2	
Reinforcement Bars, Epoxy Coated		Pound	4,985	
Furnishing Steel Piles HP14x89		Foot	297	
Driving Piles		Foot	297	
Concrete Encasement		Cu. Yd.	6.0	
Concrete Sealer		Sq. Ft.	440	



ELEVATION  
 (Looking East)



PLAN-PILE CAP

PILE DATA

Type: HP14x89  
 Nominal Required Bearing: 705 kips  
 Factored Resistance Available: 388 kips  
 Est. Length: 27 feet  
 No. Production Piles: 11  
 No. Test Piles: 0

For details of Bar Splicers, see sheet 35 of 41.  
 For details of piles and Concrete Encasement, see sheet 34 of 41.  
 For Sec. Thru Abut. and Wing Wall details, see sheet 27 of 41.  
 Concrete Sealer shall be applied to all exposed surfaces of the backwall, bridge seats, and pile cap.  
 For bar bending details, see sheet 25 of 41.

A-1-L (<30°)

7-1-10



USER NAME = rtm  
 ESCA PROJECT NO. 1000.02  
 PLOT SCALE = 0/2" = 1' / in.  
 PLOT DATE = 12/4/2018 1:36:27 PM

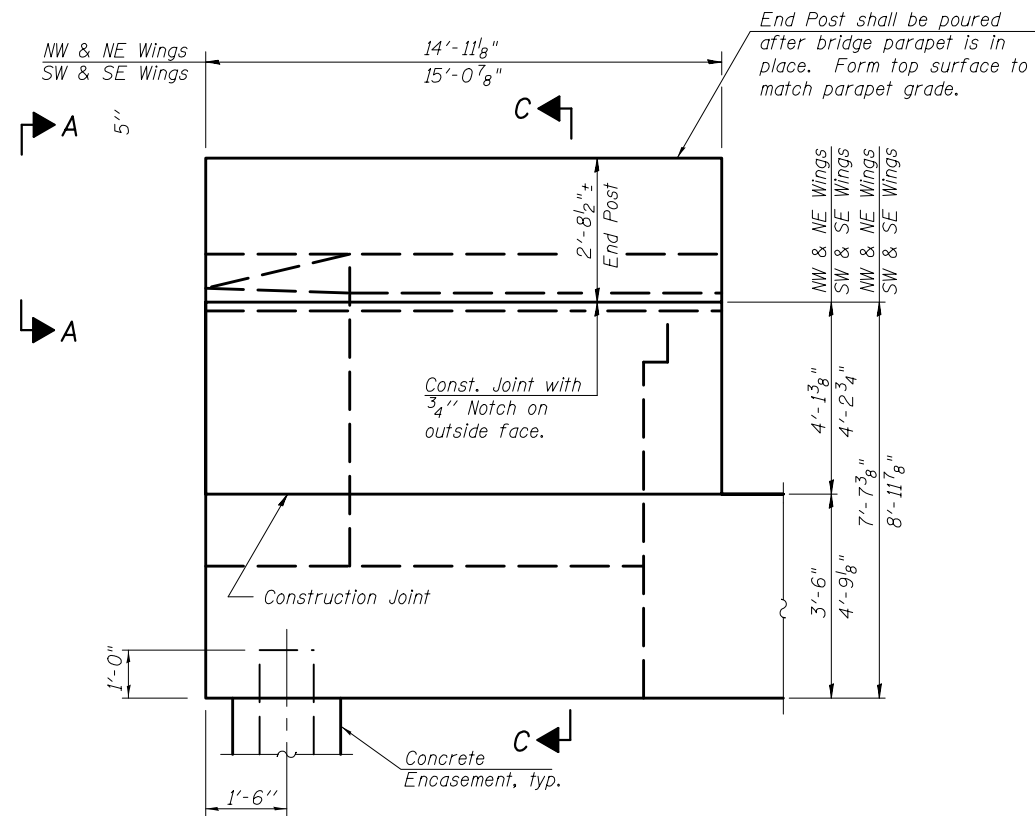
DESIGNED - MTD 03/11  
 CHECKED - RDP 04/11  
 DRAWN - DWH 03/11  
 CHECKED - MTD 11/18

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

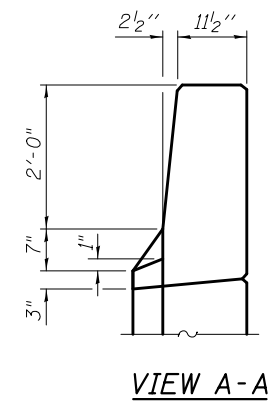
EAST ABUTMENT  
 STRUCTURE NO. 051-0066

SHEET NO. 26 OF 41 SHEETS

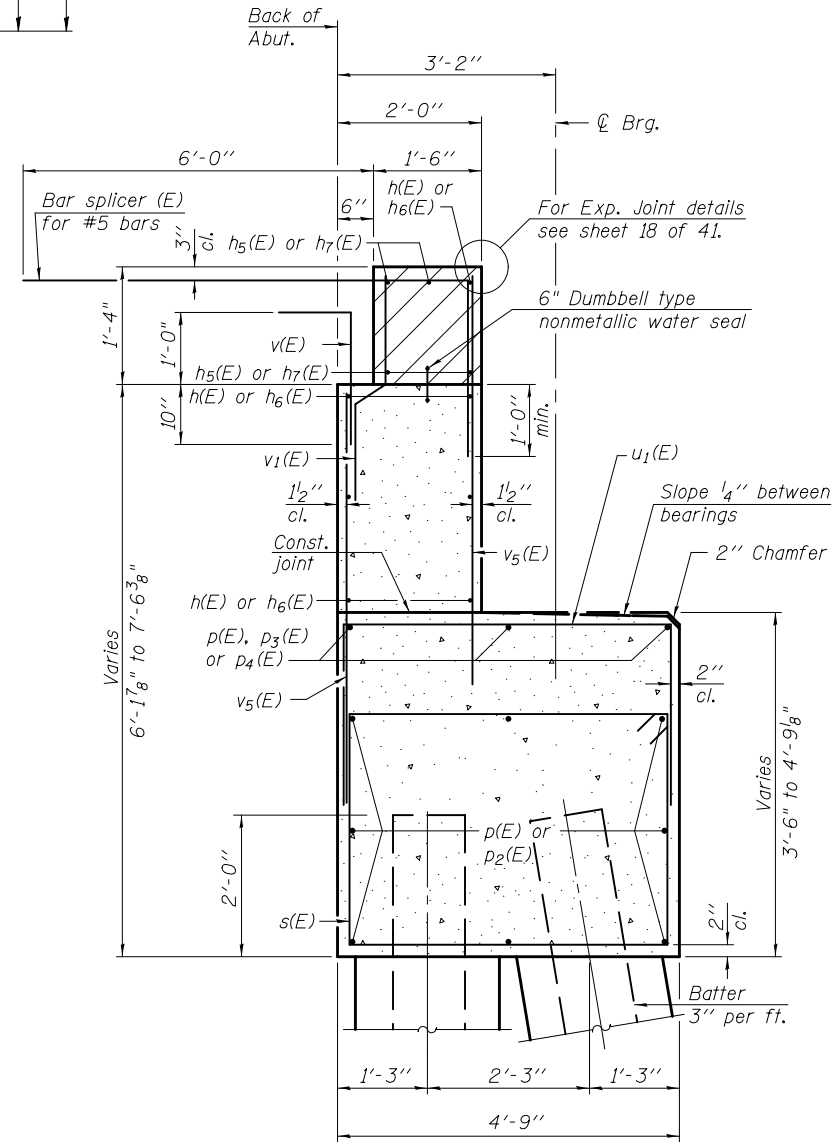
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	209
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	



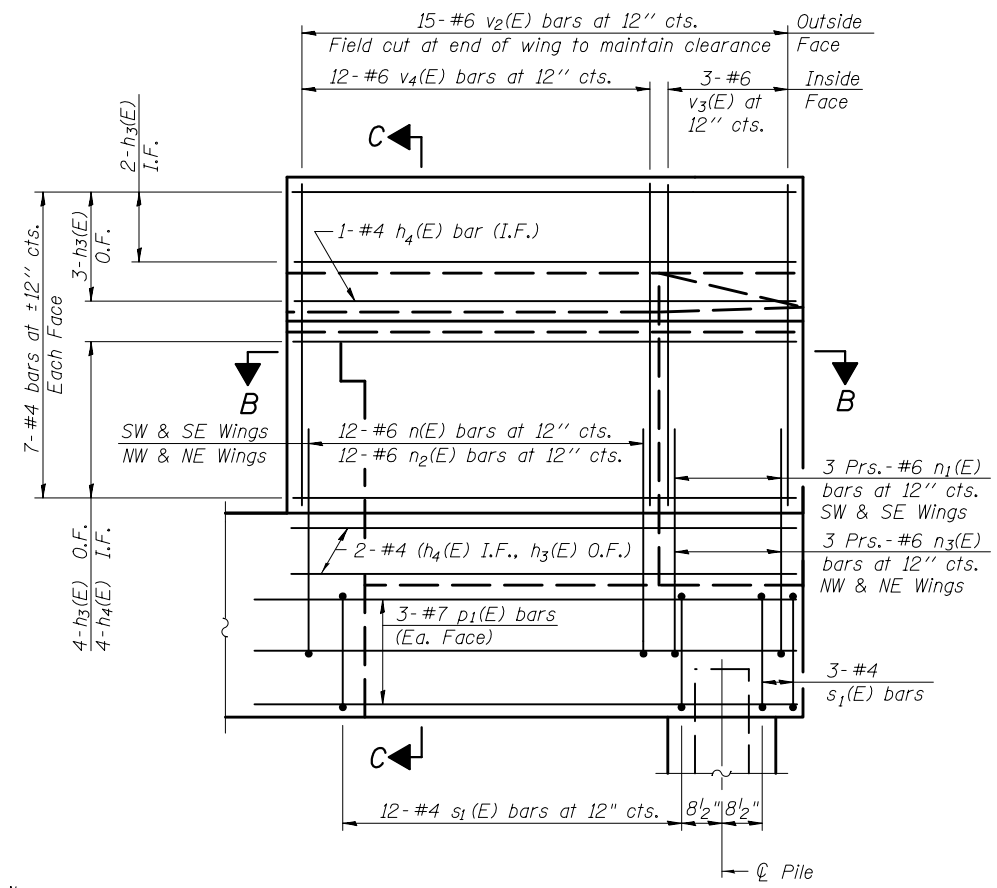
**WING WALL ELEVATION**  
Showing Dimensions



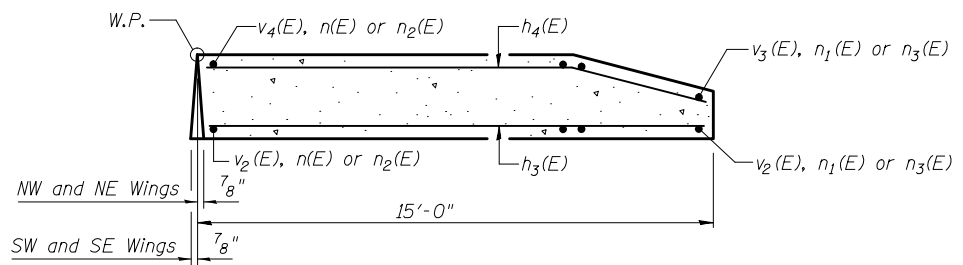
**VIEW A-A**



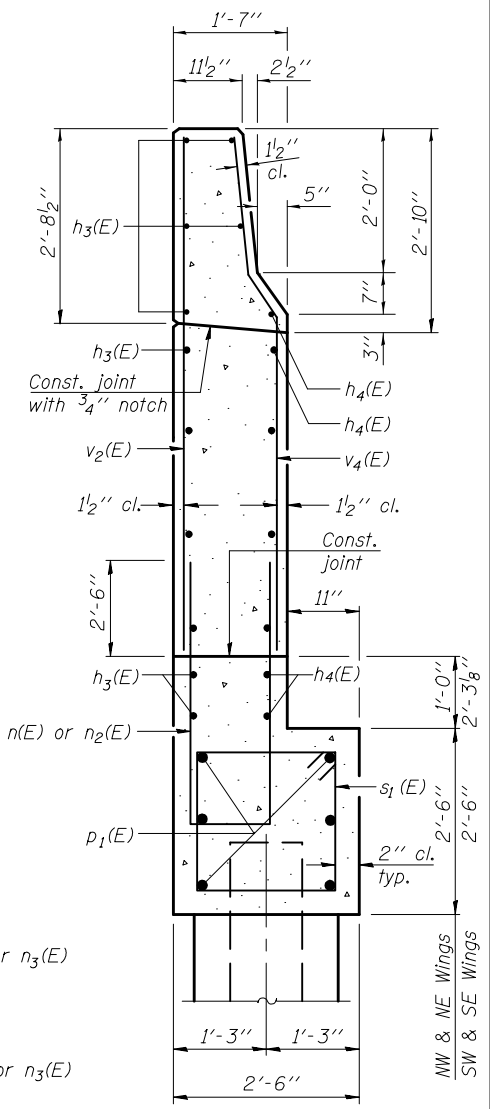
**SEC. THRU ABUT.**



**WING WALL ELEVATION**  
Showing Reinforcement



**SECTION B-B**



**SECTION C-C**

**Notes:**  
 Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 Quantity of concrete in end post included with Concrete Superstructure on sheet 13 of 41.  
 For Concrete Encasement details, see sheet 34 of 41.  
 For details of drainage system behind abutments, see sheet 2 of 41.

A-1-D

1-27-12



USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0:2 '1' / 1"	DRAWN - DWH 03/11	REVISED -
PLOT DATE = 12/4/2018 1:36:00 PM	CHECKED - MTD 11/18	REVISED -

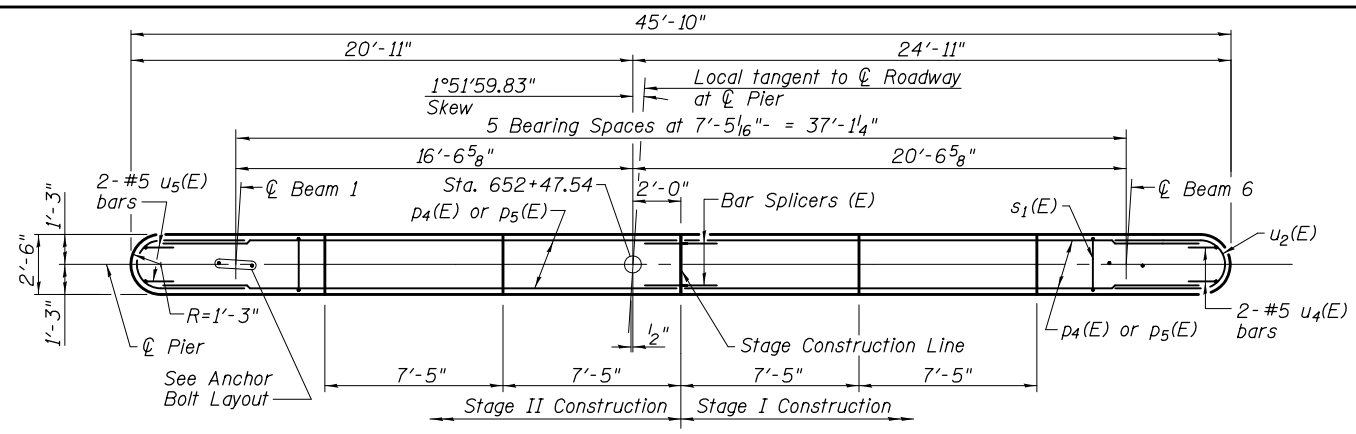
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ABUTMENT DETAILS**  
**STRUCTURE NO. 051-0066**

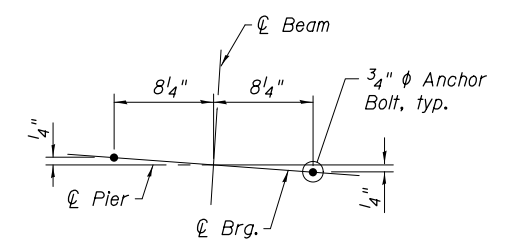
SHEET NO. 27 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	210
CONTRACT NO. 74177				

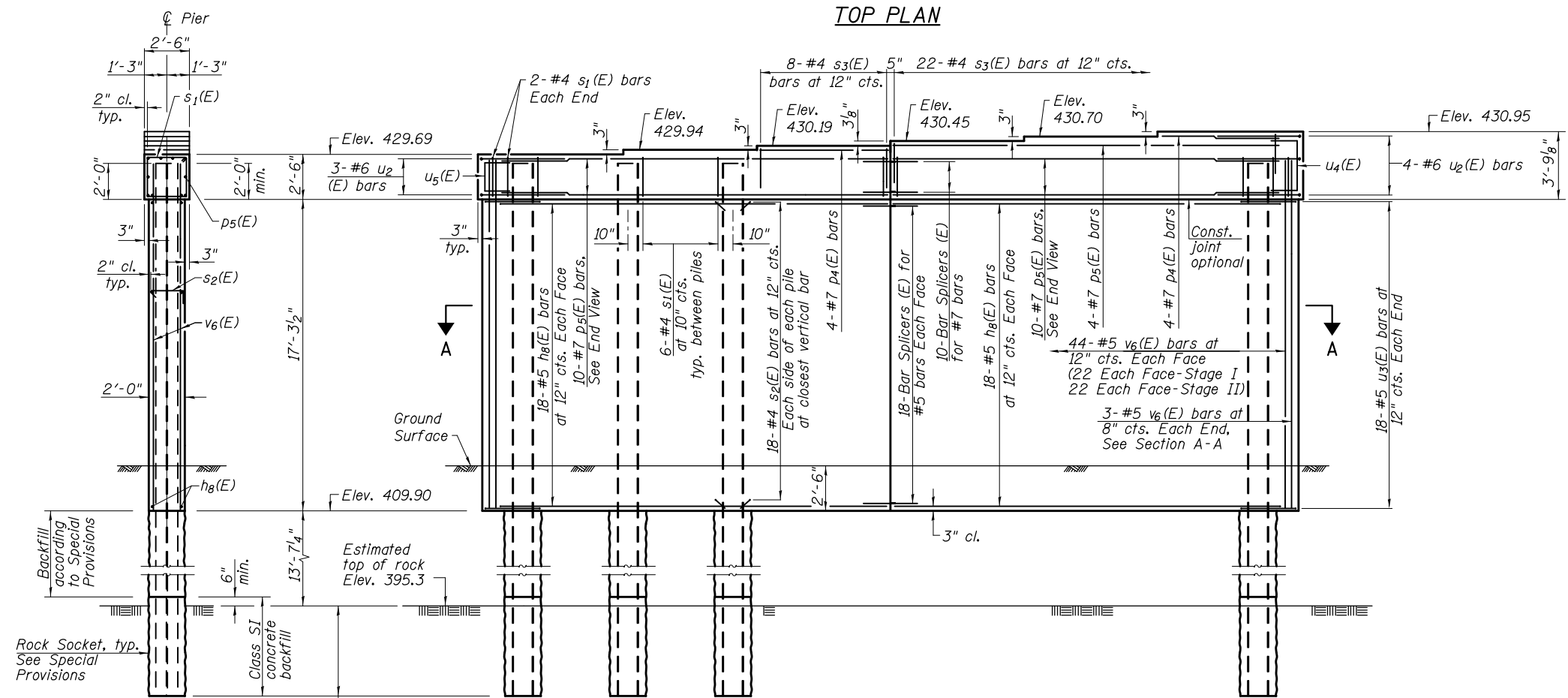
ILLINOIS FED. AID PROJECT



**TOP PLAN**

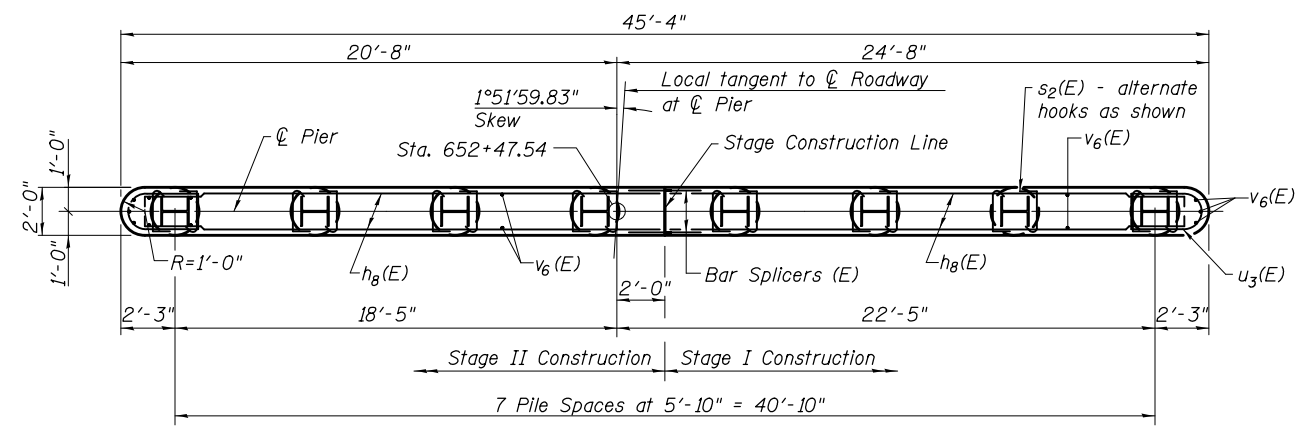


**ANCHOR BOLT LAYOUT**



**ELEVATION**  
(Looking East)

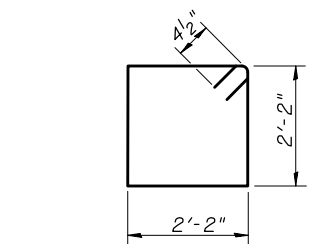
**END VIEW**



**SECTION A-A**

**PILE DATA**

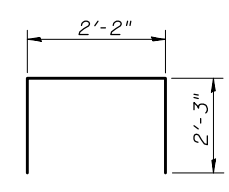
Type: HP14x89  
 Nominal Required Bearing: Set in Rock  
 Factored Resistance Available: 388 kips  
 Est. Length: 45'  
 No. Production Piles: 8  
 No. Test Piles: 0



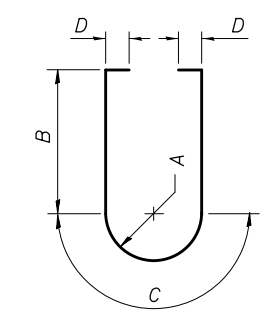
**BAR s1(E)**



**BAR s2(E)**



**BAR s3(E)**



**BARS u2(E) & u3(E)**

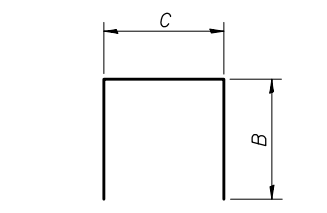
**A, B & C DIMENSIONS**

Bar	A	B	C	D
u2(E)	1'-0 1/2"	2'-7"	3'-3 1/4"	
u3(E)	9 1/2"	2'-4 1/2"	2'-5 7/8"	9"
u4(E)		1'-5 1/2"	3'-4"	
u5(E)		1'-5 1/2"	2'-1"	

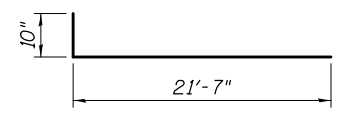
**PIER 1**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
hb(E)	72	#5	22'-5"	┌
p4(E)	8	#7	7'-1"	—
p5(E)	24	#7	21'-10"	—
s1(E)	48	#4	9'-5"	└
s2(E)	288	#4	2'-9"	└
s3(E)	30	#4	6'-8"	└
u2(E)	7	#6	8'-5"	U
u3(E)	36	#6	8'-9"	U
u4(E)	2	#5	6'-3"	U
u5(E)	2	#5	5'-0"	U
v6(E)	94	#5	19'-4"	—
Structure Excavation			Cu. Yd.	27
Concrete Structures			Cu. Yd.	70.7
Reinforcement Bars, Epoxy Coated			Pound	6,315
Furnishing Steel Piles HP14x89			Foot	360
Setting Piles in Rock			Each	8

For details of Bar Splicers, see sheet 35 of 41.  
 For details of piles, see sheet 34 of 41.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.



**BARS u4(E) & u5(E)**



**BAR hb(E)**



USER NAME = rtm  
 ESCA PROJECT NO. 1000.02  
 PLOT SCALE = 0:2 '1' / in.  
 PLOT DATE = 12/4/2018 1:35:34 PM

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 DRAWN - DWH 03/11  
 CHECKED - MTD 11/18

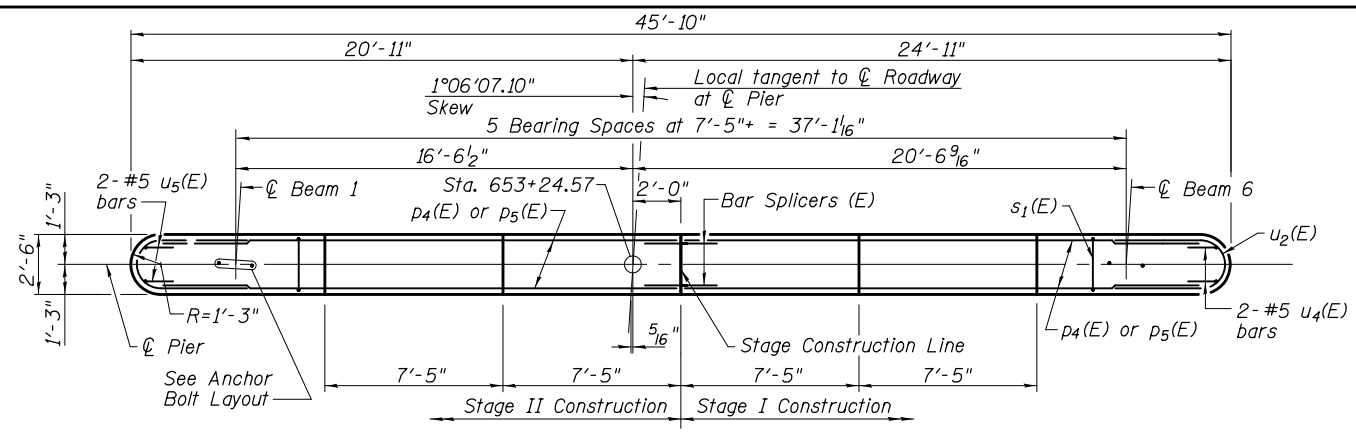
REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

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

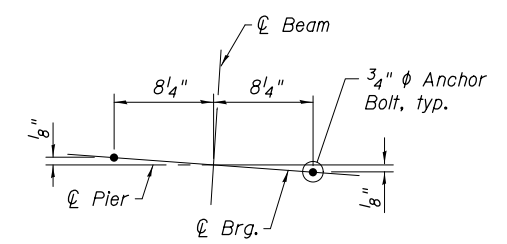
**PIER 1**  
**STRUCTURE NO. 051-0066**

SHEET NO. 28 OF 41 SHEETS

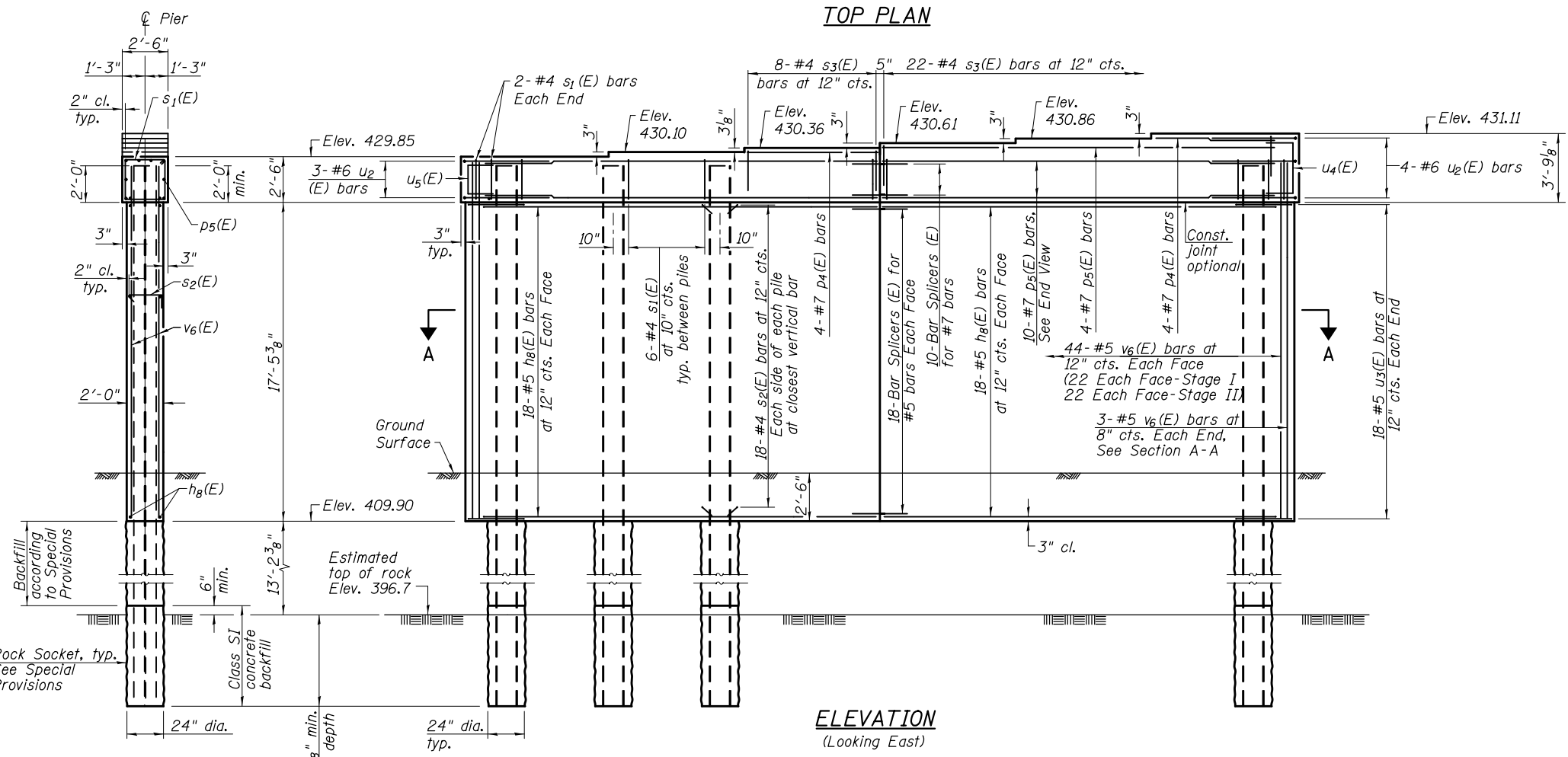
F.A.P. RTE. 327 SECTION (51-23B-2)B-1 COUNTY LAWRENCE TOTAL SHEETS 260 SHEET NO. 211 CONTRACT NO. 74177 ILLINOIS FED. AID PROJECT



**TOP PLAN**

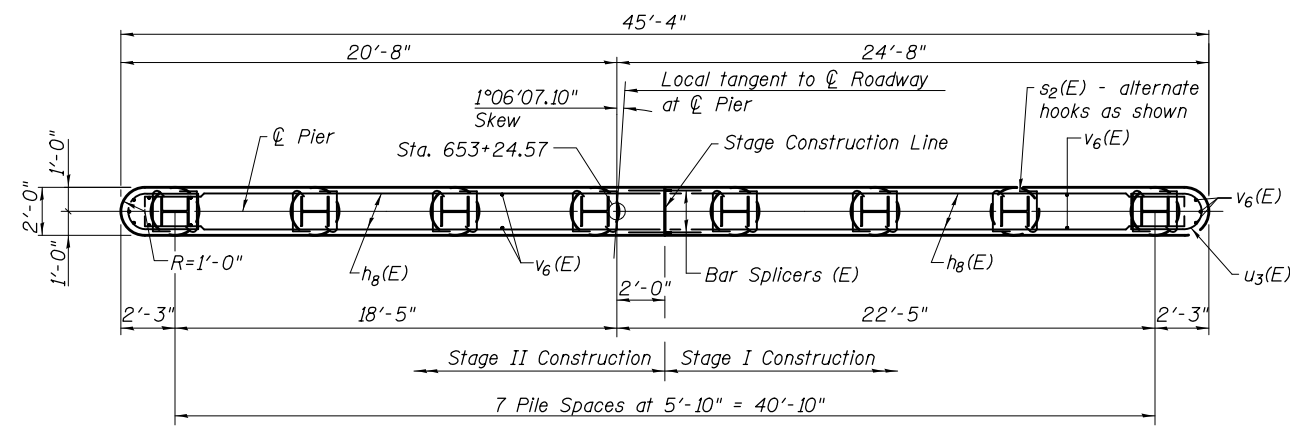


**ANCHOR BOLT LAYOUT**



**ELEVATION  
(Looking East)**

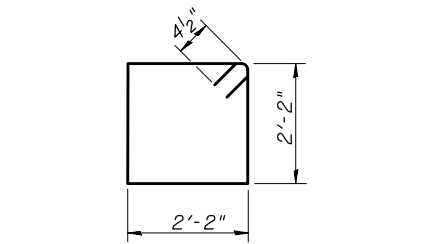
**END VIEW**



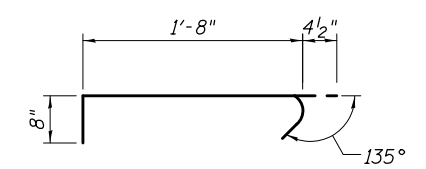
**SECTION A-A**

**PILE DATA**

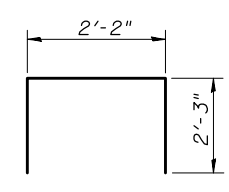
Type: HP14x89  
 Nominal Required Bearing: Set in Rock  
 Factored Resistance Available: 388 kips  
 Est. Length: 42'  
 No. Production Piles: 8  
 No. Test Piles: 0



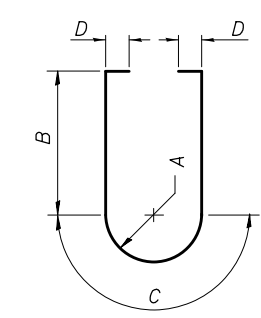
**BAR s1(E)**



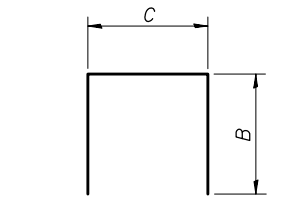
**BAR s2(E)**



**BAR s3(E)**



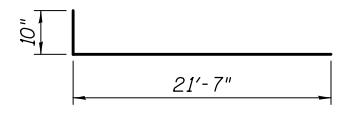
**BARS u2(E) & u3(E)**



**BARS u4(E) & u5(E)**

**A, B & C DIMENSIONS**

Bar	A	B	C	D
u2(E)	1'-0 1/2"	2'-7"	3'-3 1/4"	
u3(E)	9 1/2"	2'-4 1/2"	2'-5 7/8"	9"
u4(E)		1'-5 1/2"	3'-4"	
u5(E)		1'-5 1/2"	2'-1"	



**BAR h8(E)**

**PIER 2  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h8(E)	72	#5	22'-5"	┌
p4(E)	8	#7	7'-1"	—
p5(E)	24	#7	21'-10"	—
s1(E)	48	#4	9'-5"	┌
s2(E)	288	#4	2'-9"	┌
s3(E)	30	#4	6'-8"	┌
u2(E)	7	#6	8'-5"	┌
u3(E)	36	#6	8'-9"	┌
u4(E)	2	#5	6'-3"	┌
u5(E)	2	#5	5'-0"	┌
v6(E)	94	#5	19'-4"	—
Structure Excavation		Cu. Yd.	27	
Concrete Structures		Cu. Yd.	71.2	
Reinforcement Bars, Epoxy Coated		Pound	6,315	
Furnishing Steel Piles HP14x89		Foot	336	
Setting Piles in Rock		Each	8	

For details of Bar Splicers, see sheet 35 of 41.  
 For details of piles, see sheet 34 of 41.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.



USER NAME = rtm  
 ESCA PROJECT NO. 1000.02  
 PLOT SCALE = 0.2" = 1' / in.  
 PLOT DATE = 12/4/2018 1:35:06 PM

DESIGNED - MTD 03/11  
 CHECKED - RDP 04/11  
 DRAWN - DWH 03/11  
 CHECKED - MTD 11/18

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

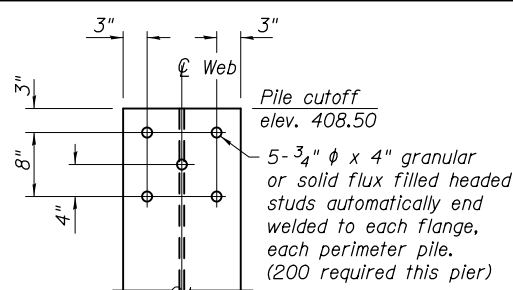
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER 2  
STRUCTURE NO. 051-0066**

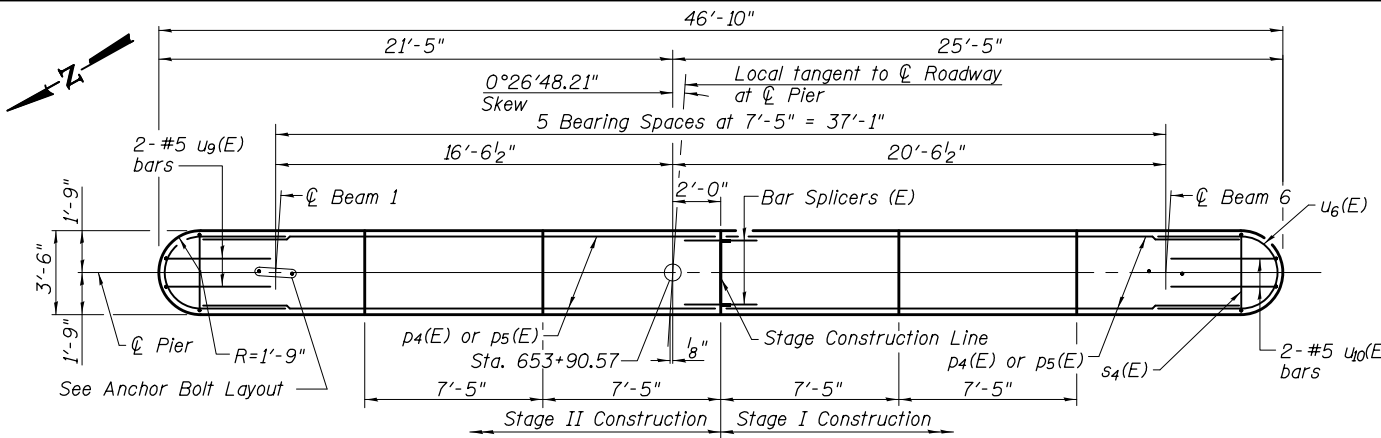
SHEET NO. 29 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	212
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	

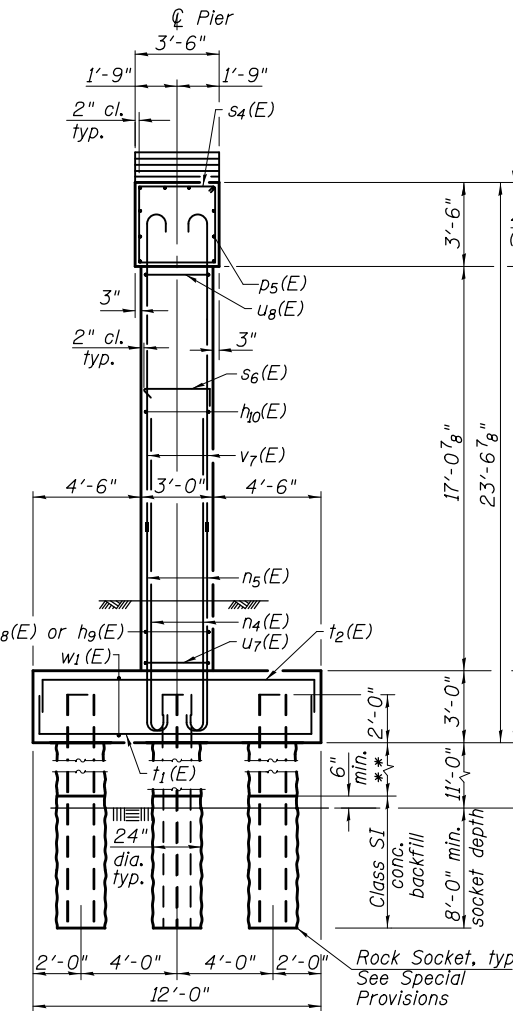




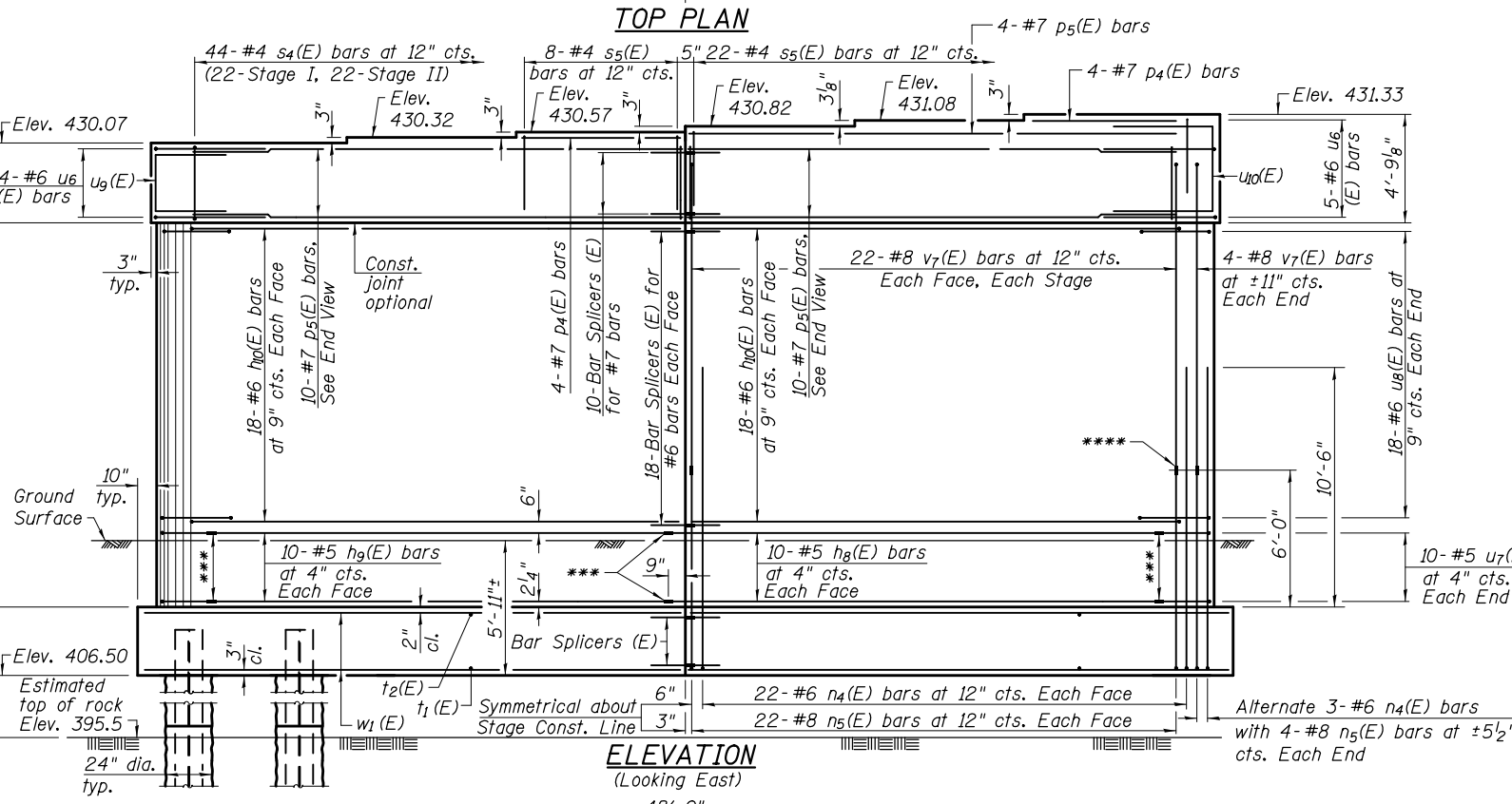
**TOP OF PERIMETER PILE DETAIL**



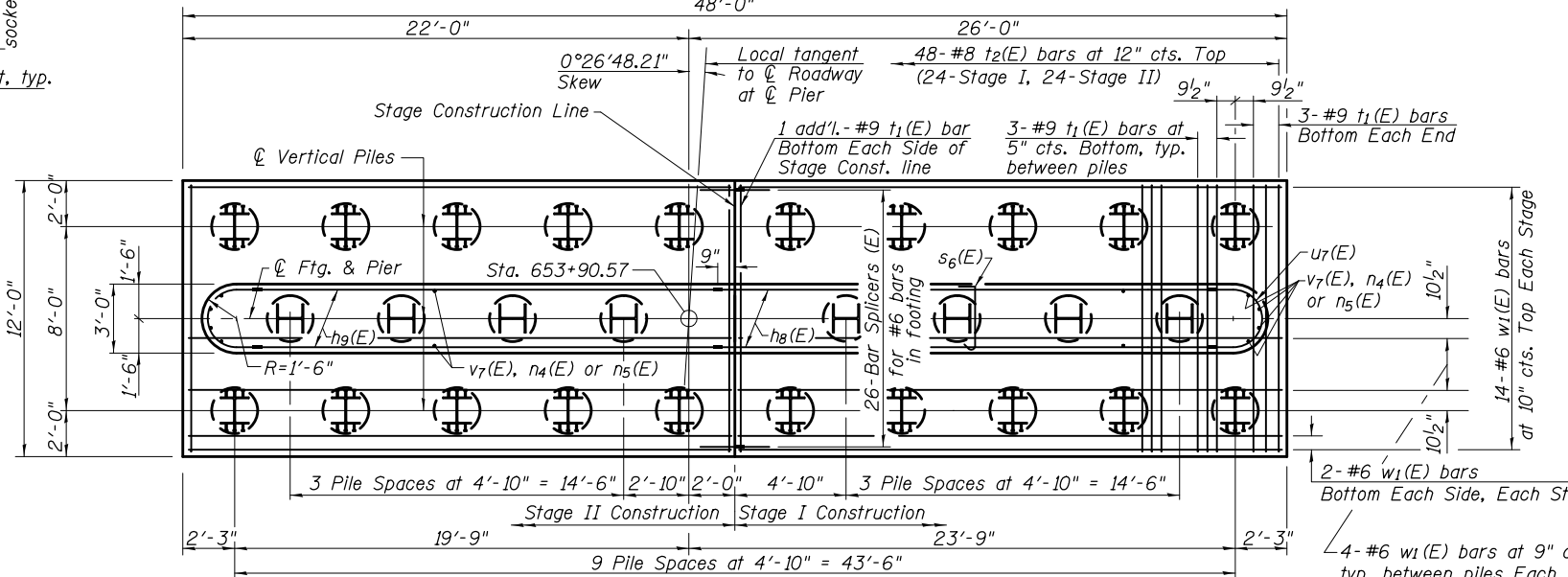
**TOP PLAN**



**END VIEW**



**ELEVATION (Looking East)**

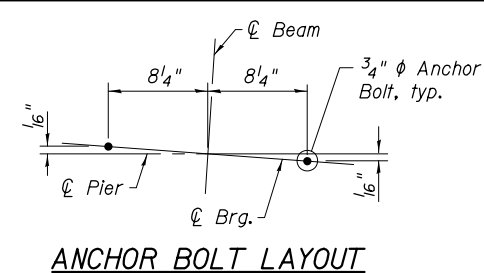


**FOOTING PLAN**

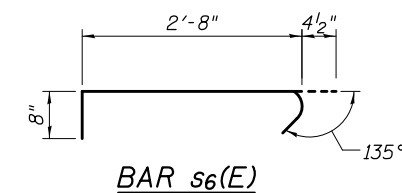
\*\*\*Backfill according to Special Provisions  
 \*\*\*Mechanical splice or shop welded splice per AWS D1.4 on horizontal bars  
 \*\*\*\*Mechanical splice on vertical bars

**PILE DATA**

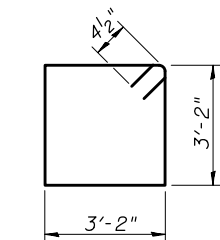
Type: HP14x89  
 Nominal Required Bearing: Set in Rock  
 Factored Resistance Available: 388 kips  
 Est. Length: 21'  
 No. Production Piles: 28  
 No. Test Piles: 0



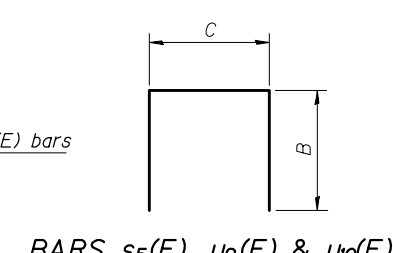
**ANCHOR BOLT LAYOUT**



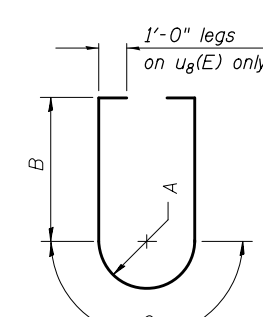
**BAR s6(E)**



**BAR s4(E)**



**BARS s5(E), u9(E) & u10(E)**



**BARS u6(E) thru u8(E)**

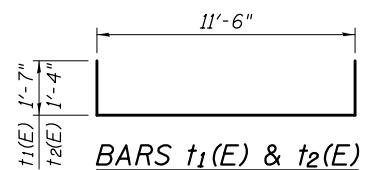
**A, B & C DIMENSIONS**

Bar	A	B	C
s5(E)	2'-3"	3'-2"	
u6(E)	1'-6 1/2"	2'-7"	4'-10 1/8"
u7(E)	1'-3 1/2"	1 1/2"	4'-0 5/8"
u8(E)	1'-3 1/2"	1'-9"	4'-0 5/8"
u9(E)	2'-5"	3'-1"	
u10(E)	2'-5"	4'-4"	

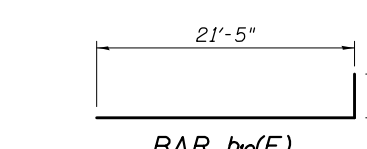
**PIER 3  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h8(E)	20	#5	21'-6"	—
h9(E)	20	#5	20'-0"	—
h10(E)	72	#6	22'-5"	—
n4(E)	94	#6	13'-10"	—
n5(E)	96	#8	9'-7"	—
p4(E)	8	#7	7'-1"	—
p5(E)	24	#7	21'-10"	—
s4(E)	44	#4	13'-5"	—
s5(E)	30	#4	7'-8"	—
s6(E)	458	#4	3'-9"	—
t1(E)	62	#9	14'-8"	—
t2(E)	48	#8	14'-2"	—
u6(E)	9	#6	10'-0"	—
u7(E)	20	#5	6'-0"	—
u8(E)	36	#6	9'-7"	—
u9(E)	2	#5	7'-11"	—
u10(E)	2	#5	9'-2"	—
v7(E)	96	#8	14'-3"	—
w1(E)	52	#6	23'-8"	—
Structure Excavation		Cu. Yd.	182	
Concrete Structures		Cu. Yd.	175.3	
Reinforcement Bars, Epoxy Coated		Pound	21,805	
Furnishing Steel Piles HP14x89		Foot	588	
Setting Piles in Rock		Each	28	
Stud Shear Connectors		Each	200	

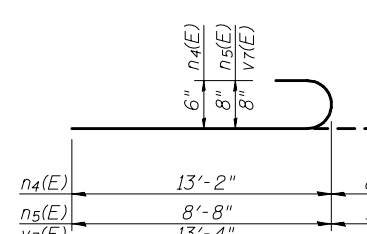
For details of Bar Splicers, see sheet 35 of 41.  
 For details of piles, see sheet 34 of 41.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 For spacing of s6(E) bars, see sheet 31 of 41.



**BARS t1(E) & t2(E)**



**BAR h10(E)**



**BARS n4(E), n5(E) & v7(E)**



USER NAME	DESIGNED	REVISION
r-tm	MTD 03/11	-
ESCA PROJECT NO. 1000.02	RDP 04/11	-
PLOT SCALE = 0.2" = 1' or in.	DWH 03/11	-
PLOT DATE = 12/4/2018	MTD 11/18	-

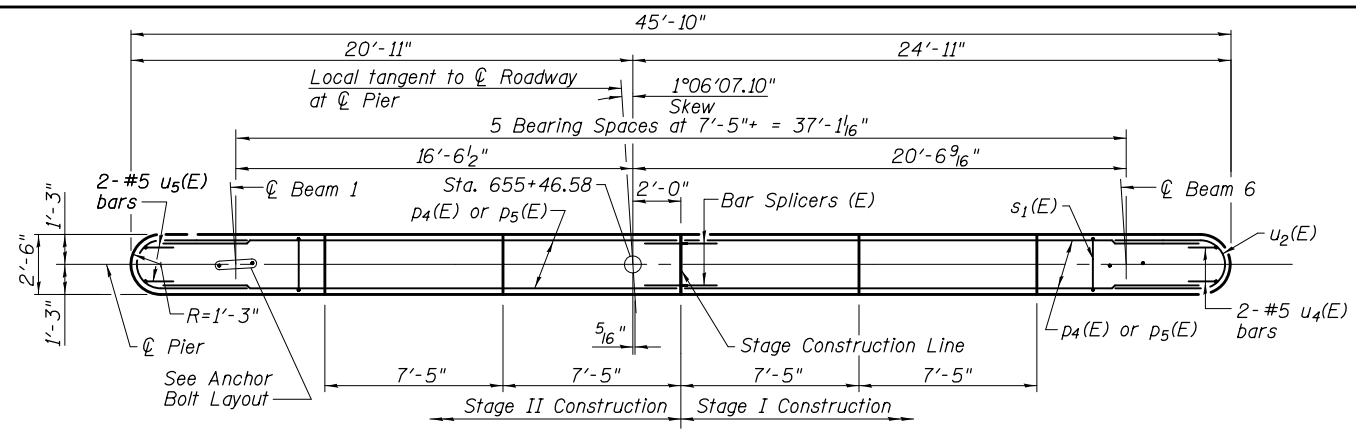
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER 3  
STRUCTURE NO. 051-0066**

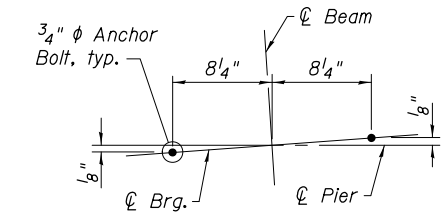
SHEET NO. 30 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	213
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	

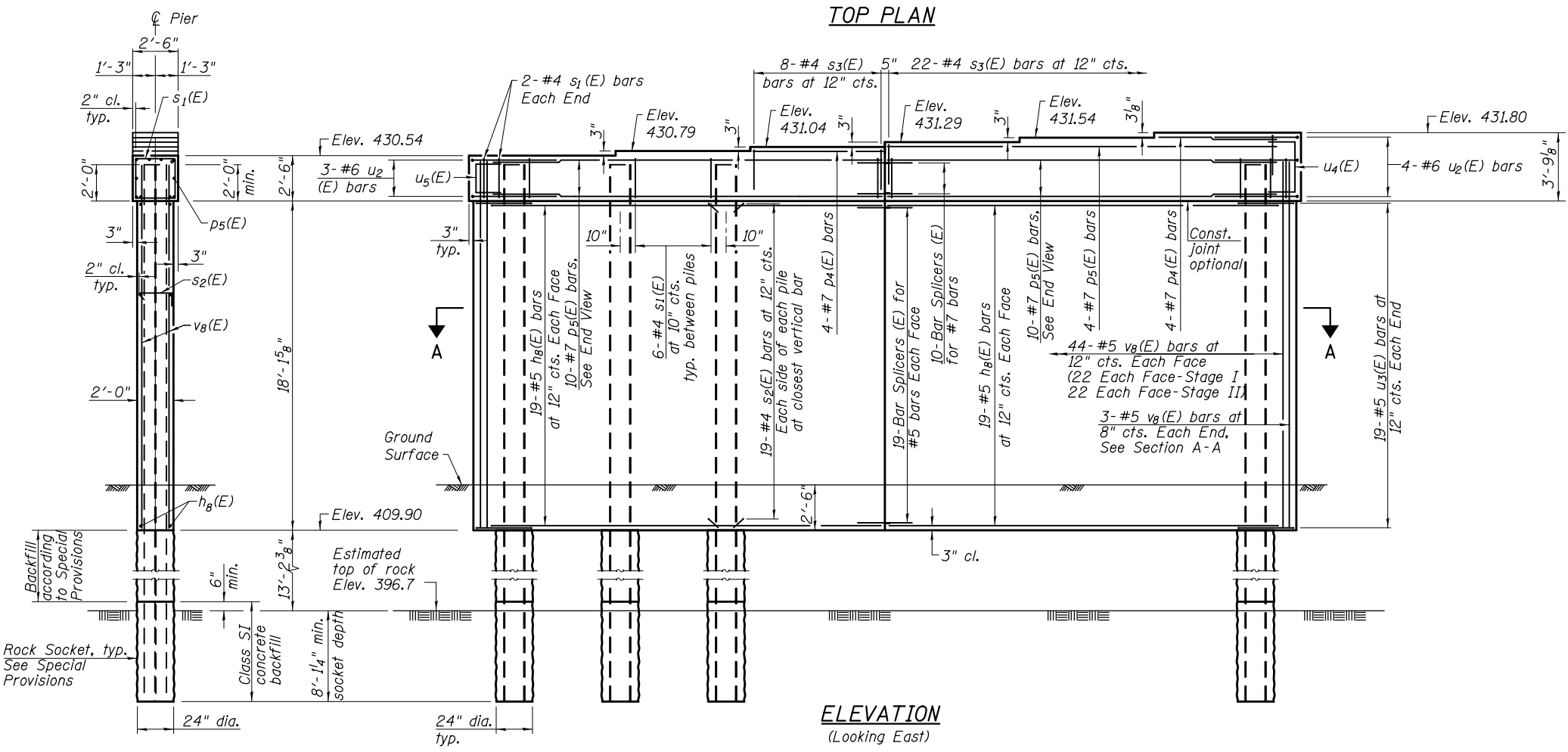




**TOP PLAN**

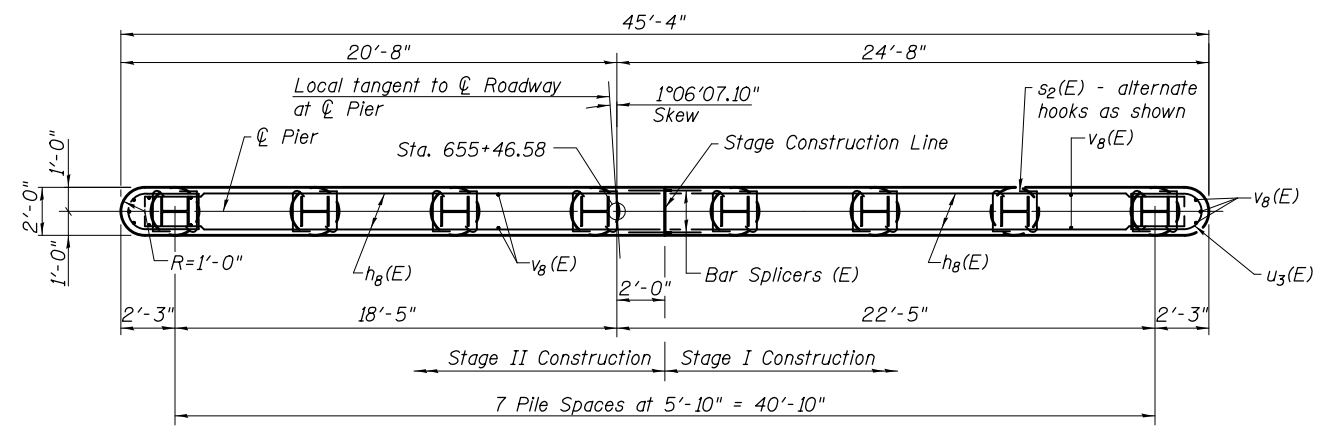


**ANCHOR BOLT LAYOUT**

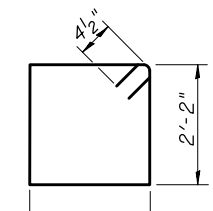


**ELEVATION**  
(Looking East)

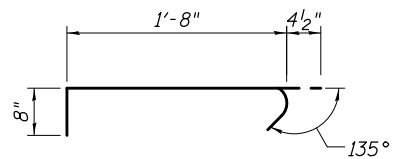
**END VIEW**



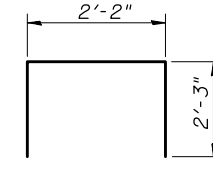
**SECTION A-A**



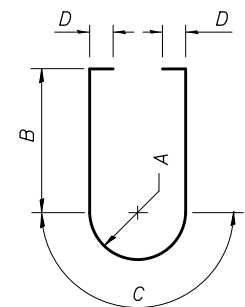
**BAR s1(E)**



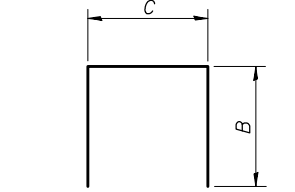
**BAR s2(E)**



**BAR s3(E)**



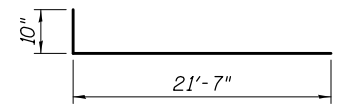
**BARS u2(E) & u3(E)**



**BARS u4(E) & u5(E)**

**A, B & C DIMENSIONS**

Bar	A	B	C	D
u2(E)	1'-0 1/2"	2'-7"	3'-3 1/4"	
u3(E)	9 1/2"	2'-4 1/2"	2'-5 7/8"	9"
u4(E)	1'-5 1/2"	3'-4"		
u5(E)		1'-5 1/2"	2'-1"	



**BAR h8(E)**

**PIER 5  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
hb(E)	76	#5	22'-5"	□
p4(E)	8	#7	7'-1"	—
p5(E)	24	#7	21'-10"	—
s1(E)	48	#4	9'-5"	□
s2(E)	304	#4	2'-9"	□
s3(E)	30	#4	6'-8"	□
u2(E)	7	#6	8'-5"	U
u3(E)	38	#6	8'-9"	U
u4(E)	2	#5	6'-3"	□
u5(E)	2	#5	5'-0"	□
vs(E)	94	#5	20'-2"	—
Structure Excavation		Cu. Yd.	27	
Concrete Structures		Cu. Yd.	73.5	
Reinforcement Bars, Epoxy Coated		Pound	6,550	
Furnishing Steel Piles HP14x89		Foot	336	
Setting Piles in Rock		Each	8	

For details of Bar Splicers, see sheet 35 of 41.  
For details of piles, see sheet 34 of 41.  
Space reinforcement in cap to miss anchor bolts.  
Pour steps monolithically with cap.

**PILE DATA**

Type: HP14x89  
Nominal Required Bearing: Set in Rock  
Factored Resistance Available: 388 kips  
Est. Length: 42'  
No. Production Piles: 8  
No. Test Piles: 0



USER NAME = rtm  
ESCA PROJECT NO. 1000.02  
PLOT SCALE = 0.2' / in.  
PLOT DATE = 12/4/2018 1:33:47 PM

DESIGNED - MTD 03/11  
CHECKED - RDP 04/11  
DRAWN - DWH 03/11  
CHECKED - MTD 11/18

REVISED -  
REVISED -  
REVISED -  
REVISED -

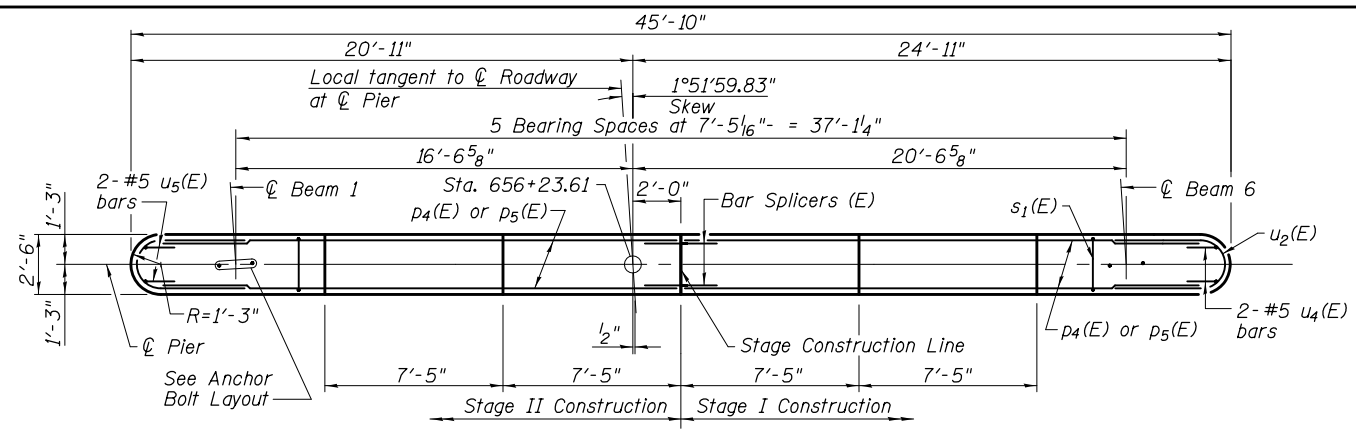
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER 5  
STRUCTURE NO. 051-0066**

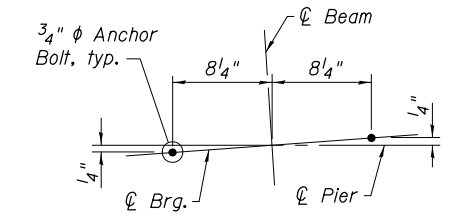
SHEET NO. 32 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	215
CONTRACT NO. 74177				

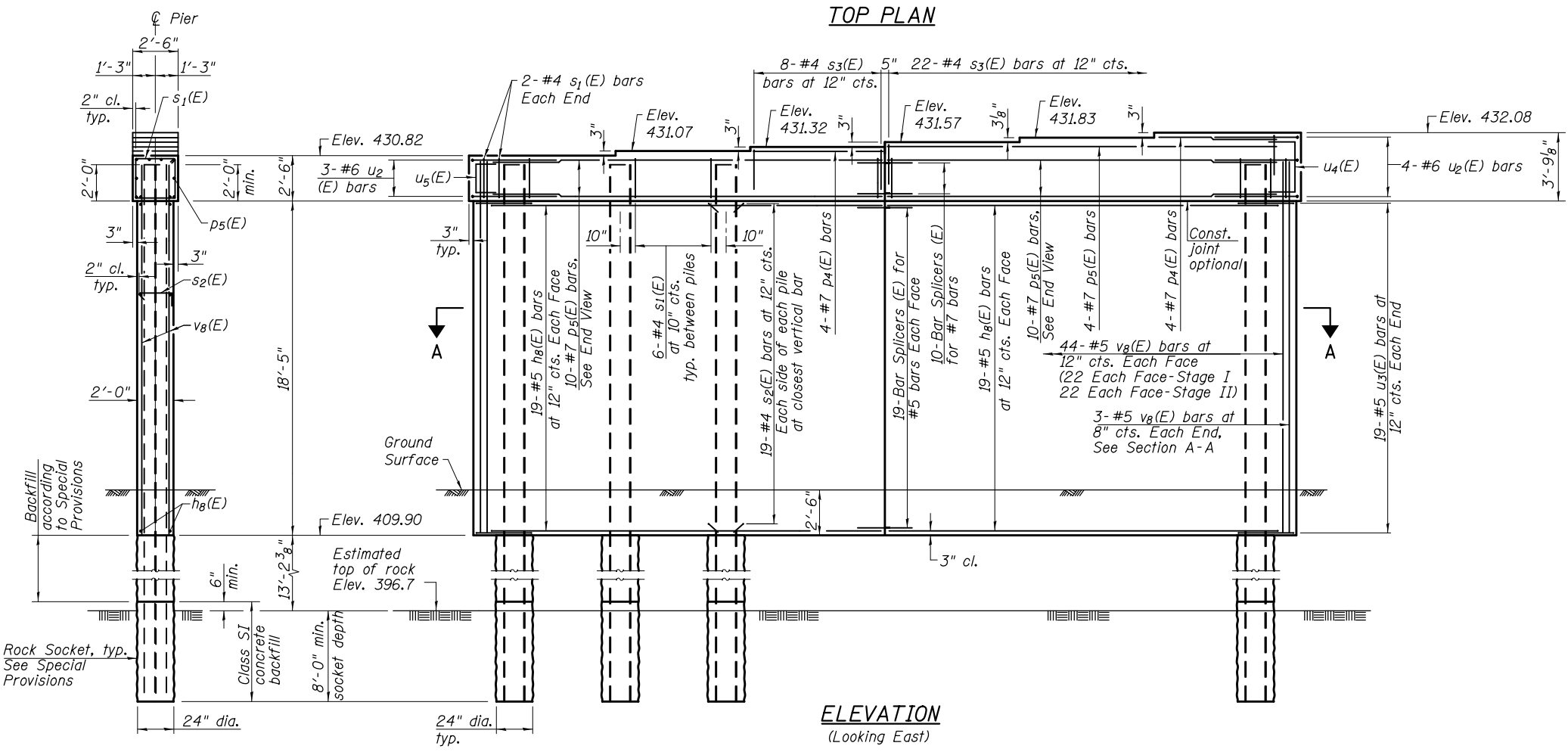
ILLINOIS FED. AID PROJECT



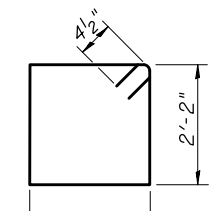
**TOP PLAN**



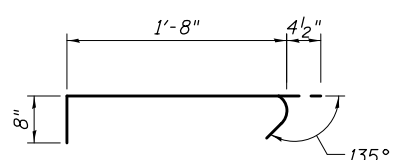
**ANCHOR BOLT LAYOUT**



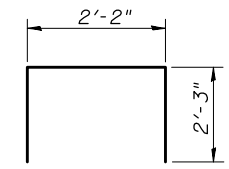
**ELEVATION  
(Looking East)**



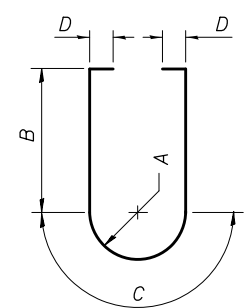
**BAR s1(E)**



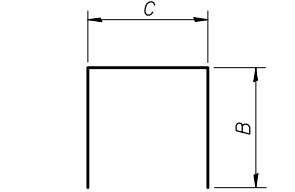
**BAR s2(E)**



**BAR s3(E)**



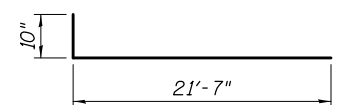
**BARS u2(E) & u3(E)**



**BARS u4(E) & u5(E)**

**A, B & C DIMENSIONS**

Bar	A	B	C	D
u2(E)	1'-0 1/2"	2'-7"	3'-3 1/4"	
u3(E)	9 1/2"	2'-4 1/2"	2'-5 7/8"	9"
u4(E)		1'-5 1/2"	3'-4"	
u5(E)		1'-5 1/2"	2'-1"	

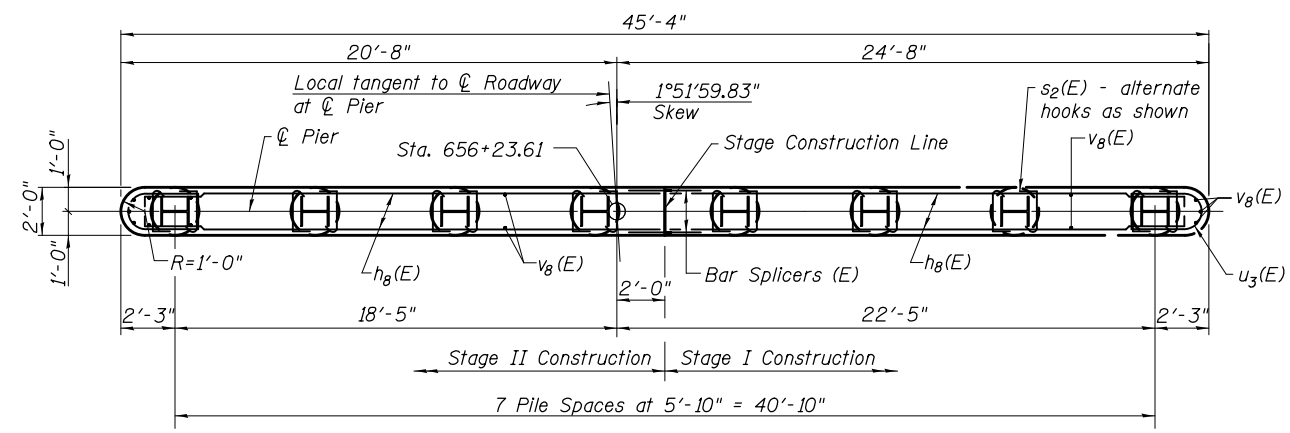


**BAR hb(E)**

**END VIEW**

**PILE DATA**

Type: HP14x89  
 Nominal Required Bearing: Set in Rock  
 Factored Resistance Available: 388 kips  
 Est. Length: 42'  
 No. Production Piles: 8  
 No. Test Piles: 0



**SECTION A-A**

**PIER 6  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
hb(E)	76	#5	22'-5"	□
p4(E)	8	#7	7'-1"	—
p5(E)	24	#7	21'-10"	—
s1(E)	48	#4	9'-5"	□
s2(E)	304	#4	2'-9"	□
s3(E)	30	#4	6'-8"	□
u2(E)	7	#6	8'-5"	U
u3(E)	38	#6	8'-9"	U
u4(E)	2	#5	6'-3"	□
u5(E)	2	#5	5'-0"	□
v8(E)	94	#5	20'-2"	—
Structure Excavation		Cu. Yd.	27	
Concrete Structures		Cu. Yd.	74.4	
Reinforcement Bars, Epoxy Coated		Pound	6,550	
Furnishing Steel Piles HP14x89		Foot	336	
Setting Piles in Rock		Each	8	

For details of Bar Splicers, see sheet 35 of 41.  
 For details of piles, see sheet 34 of 41.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.



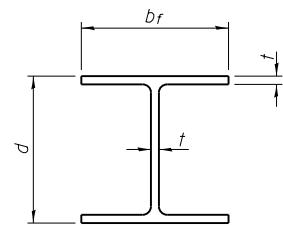
USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0.2' / in.	DRAWN - DWH 03/11	REVISED -
PLOT DATE = 12/4/2018 1:32:44 PM	CHECKED - MTD 11/18	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER 6  
STRUCTURE NO. 051-0066**

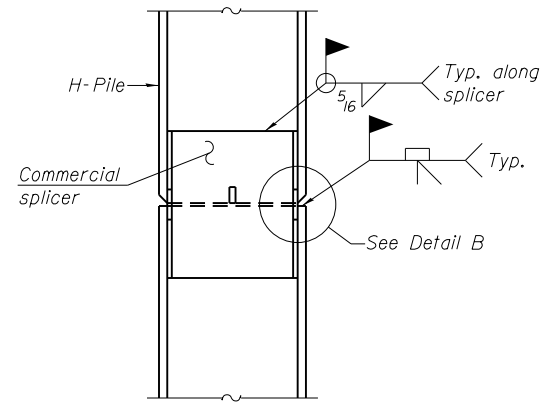
SHEET NO. 33 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	216
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	

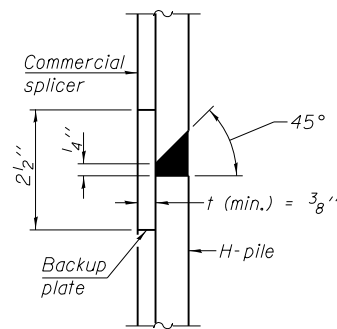


**STEEL PILE TABLE**

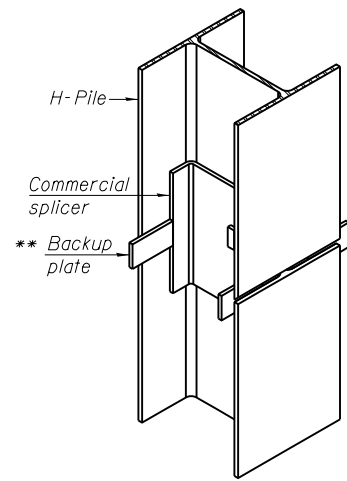
Designation	Depth <i>d</i>	Flange width <i>b<sub>f</sub></i>	Web and Flange thickness <i>t</i>	Encasement diameter <i>A</i>
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	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**

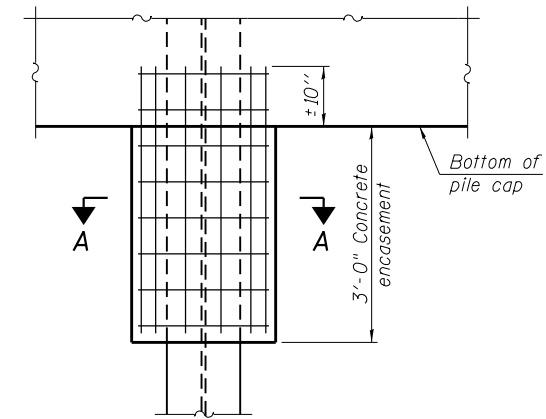


**DETAIL "B"**



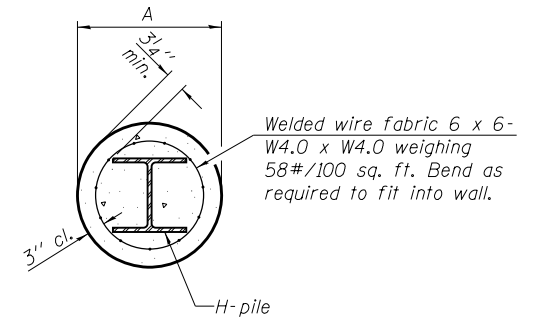
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



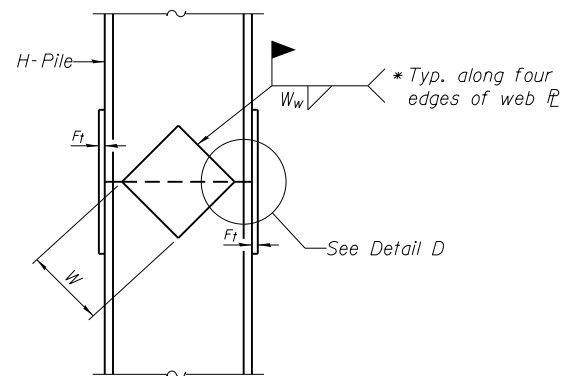
**ELEVATION**

**PILE ENCASEMENT**



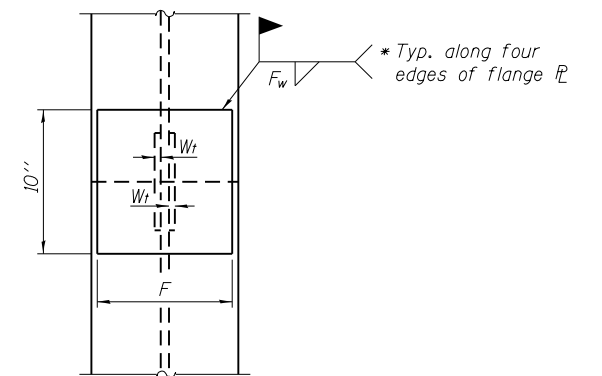
**SECTION A-A**

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



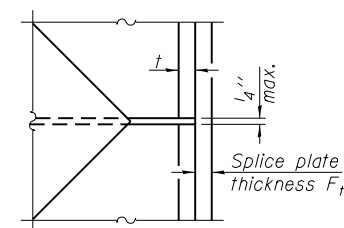
**ELEVATION**

**WELDED PLATE FIELD SPLICE**

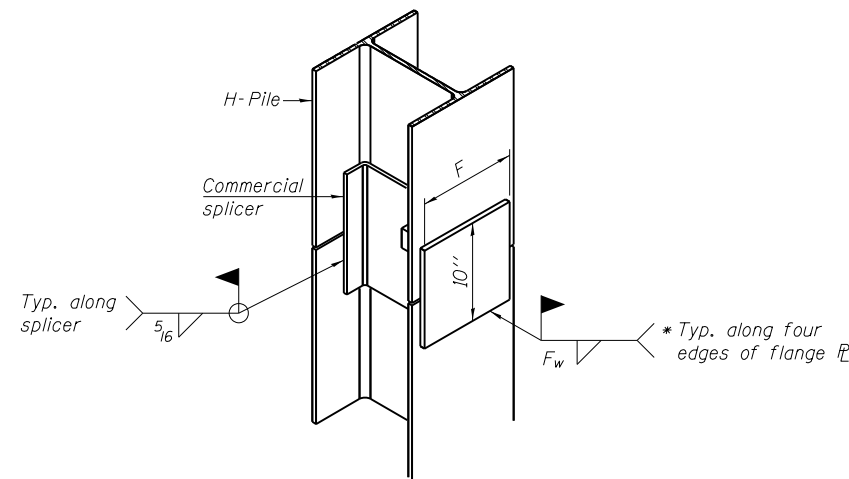


**END VIEW**

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
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"	11/16"	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"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	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"



**DETAIL D**

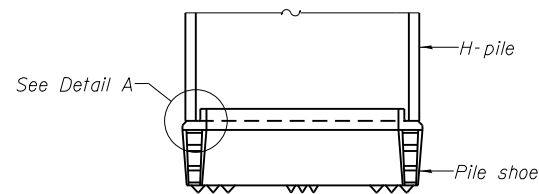


**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE ALTERNATE**

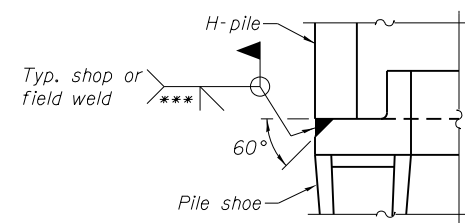
- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

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



**ELEVATION**

**H-PILE SHOE ATTACHMENT**



**DETAIL A**

F-HP 1-27-12



USER NAME = kah  
 ESCA PROJECT NO. 1000.02  
 PLOT SCALE = 0:2 '1" / 1"  
 PLOT DATE = 10/19/2018 1:51:30 PM

DESIGNED - MTD 03/11  
 CHECKED - RDP 04/11  
 DRAWN - DWH 03/11  
 CHECKED - MTD 08/15

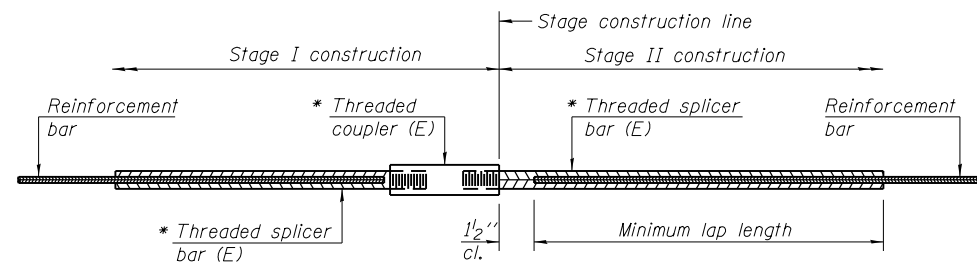
REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS  
 STRUCTURE NO. 051-0066

SHEET NO. 34 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	217
CONTRACT NO. 74177				
ILLINOIS FED. AID PROJECT				



**STANDARD BAR SPLICER ASSEMBLY**

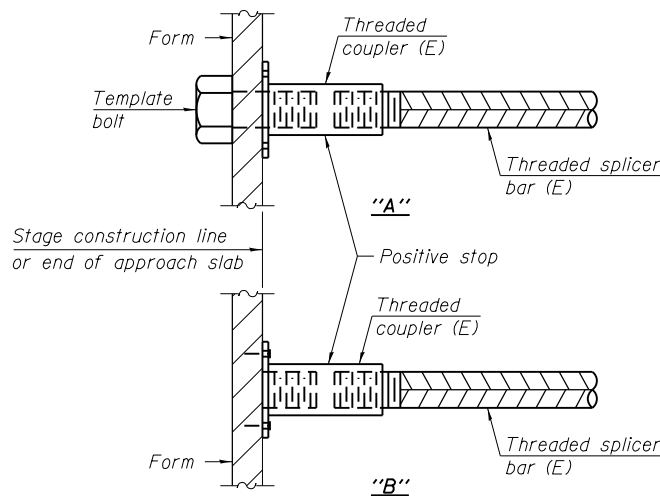
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

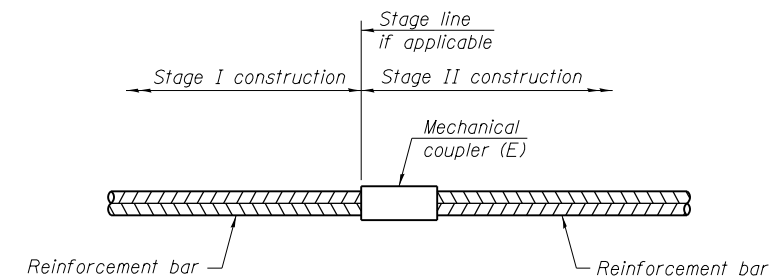
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	1,712	3
Approach slabs	#5	90	3
Approach slabs	#4	48	4
Approach footings	#5	80	3
Abutment backwalls	#5	14	6
Abutment backwalls	#6	8	6
Abutment caps	#7	16	4
Piers 1 & 2 walls	#5	72	3
Piers 1 & 2 caps	#7	20	4
Piers 3 & 4 footings	#6	52	4
Piers 3 & 4 walls	#6	74	3
Piers 3 & 4 caps	#7	20	4
Piers 5 & 6 walls	#5	76	3
Piers 5 & 6 caps	#7	20	4



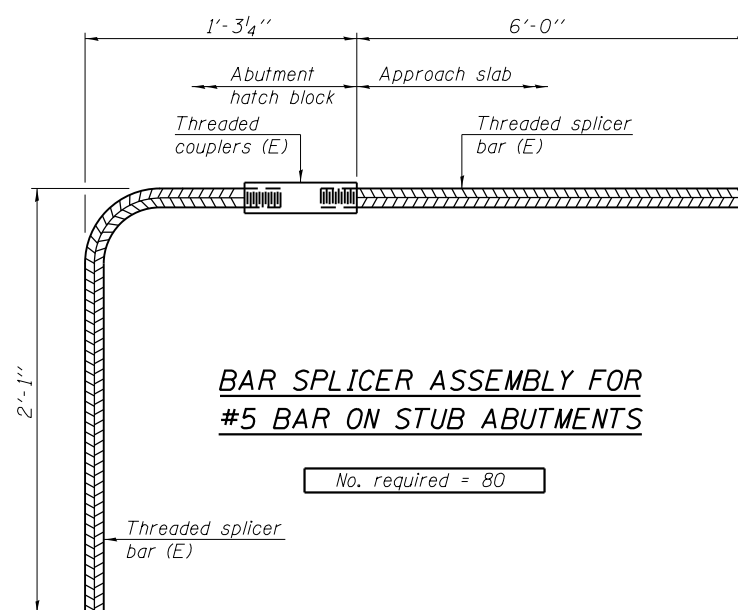
**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
Piers 3 & 4 walls	#5	120
Piers 3 & 4 walls	#8	192



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

No. required = 80

**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

8-31-12



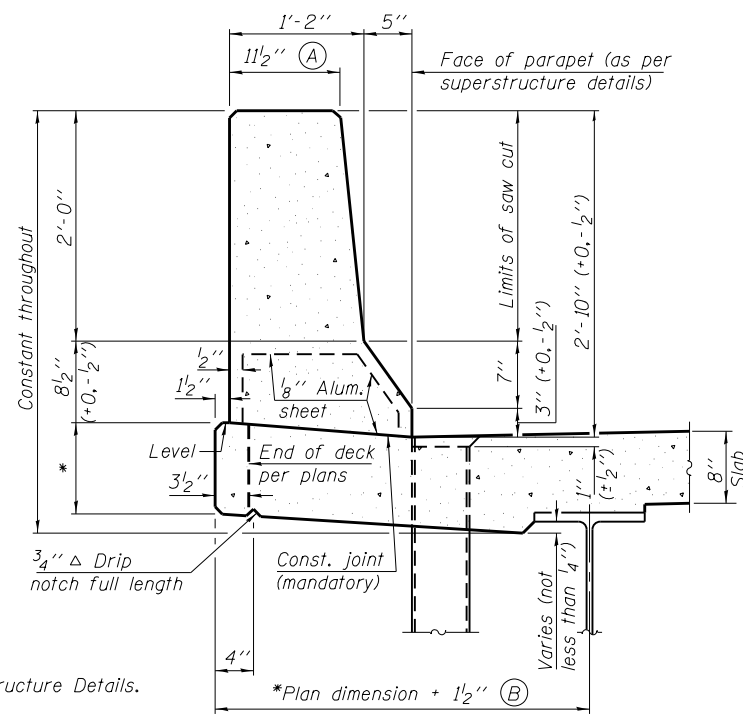
USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0.2" = 1' on	DRAWN - DWH 03/11	REVISED -
PLOT DATE = 10/19/2018 1:51:31 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 051-0066

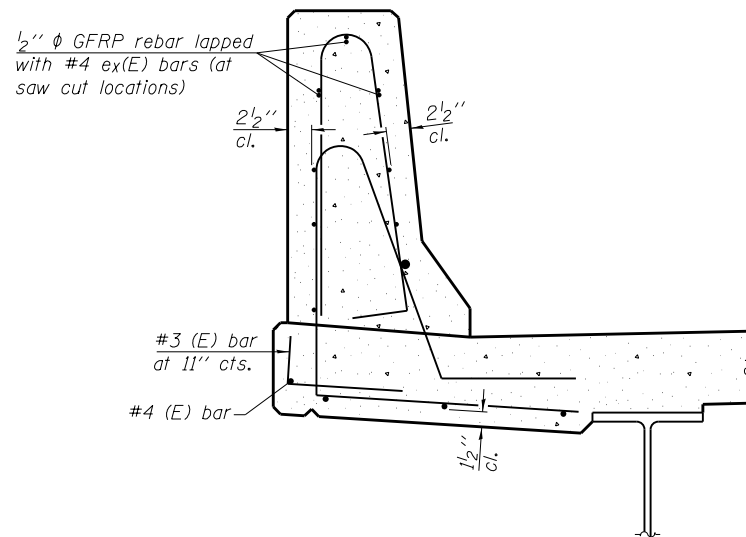
SHEET NO. 35 OF 41 SHEETS

F.A.P. RTE. 327	SECTION (51-23B-2)B-1	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 218
			CONTRACT NO. 74177	
ILLINOIS FED. AID PROJECT				



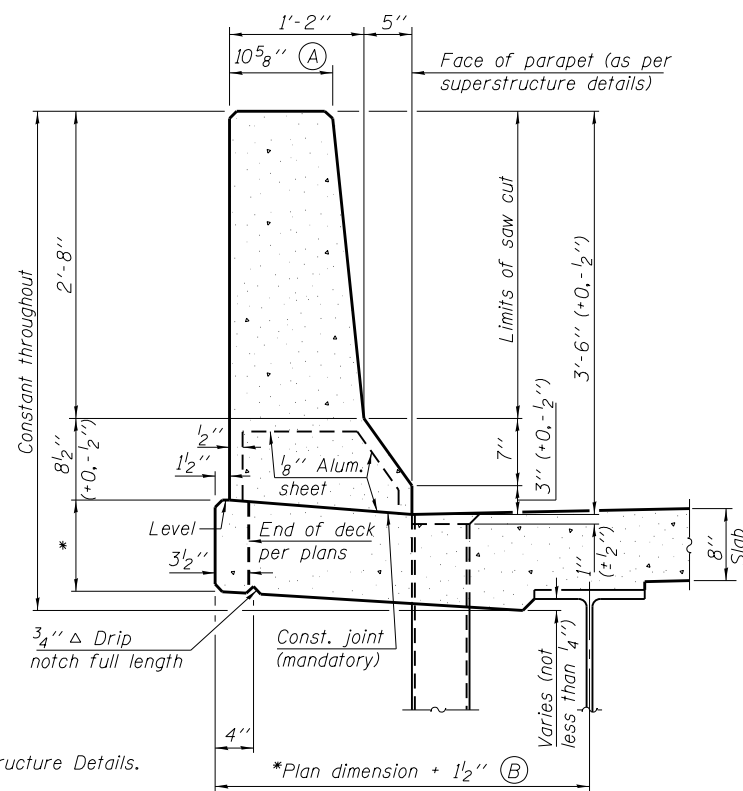
**34" F SHAPE PARAPET SECTION**  
(Showing dimensions)

\*See Superstructure Details.



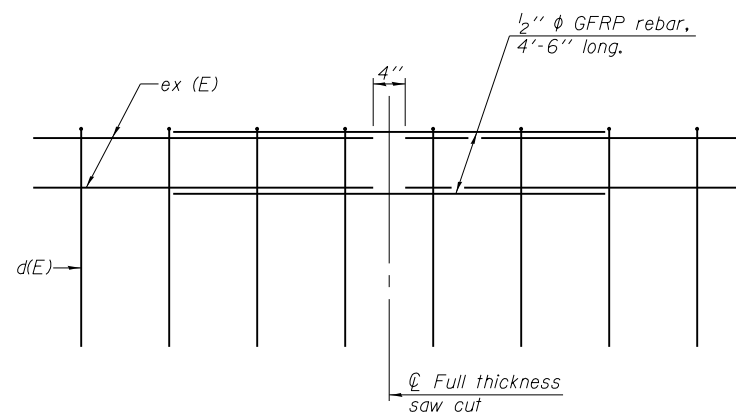
**SECTION**

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



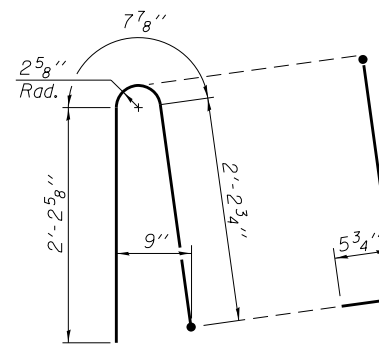
**42" F SHAPE PARAPET SECTION**  
(Showing dimensions)

\*See Superstructure Details.



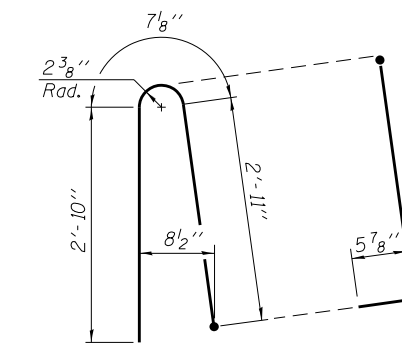
**GFRP REBAR STIFFENING DETAIL**

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



**ALTERNATE BAR d(E)**

(For 34" parapet when conduit is present)



**ALTERNATE BAR d(E)**

(For 42" parapet when conduit is present)

**GENERAL NOTES**

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

SFP 34-42

8-16-12



USER NAME = kah  
ESCA PROJECT NO. 1000.02  
PLOT SCALE = 0.2" = 1' / in.  
PLOT DATE = 10/19/2018 1:51:32 PM

DESIGNED - MTD 03/11  
CHECKED - RDP 04/11  
DRAWN - HAS 03/11  
CHECKED - MTD 08/15

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION  
STRUCTURE NO. 051-0066

SHEET NO. 36 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-21B-1)	LAWRENCE	260	219
				CONTRACT NO. 74177
ILLINOIS FED. AID PROJECT				



**SOIL BORING LOG**

Date 6/17/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer  
 SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM  
 COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. Station	BORING NO. Station	Offset	Ground Surface Elev.	D E L T H				B U L D I N G				Surface Water Elev.	Stream Bed Elev.	D E L T H				Groundwater Elev.: First Encounter Upon Completion After 1032 Hrs.				
				(ft)	(/6")	(tsf)	(%)	(ft)	(/6")	(tsf)	(%)			(ft)	(/6")	(tsf)	(%)					
051-0015 654+30	1 West Abut 651+57	6.00ft Rt	432.22									401.58	400.48					397.7	411.2	428.2		
5 3/4" asphalt on 9 3/4" concrete pavement.																						
430.92																						
Stiff, damp, gray to brown, CLAY LOAM.																						
410.22																						
Medium to stiff, damp, gray, SILTY CLAY w/ wood chunks.																						
425.22																						
Soft brown, SANDY LOAM.																						
424.22																						
Hard, damp, gray, CLAY.																						
422.72																						
Stiff, damp, gray, CLAY LOAM.																						
417.72																						
Medium, damp, gray, SANDY CLAY LOAM.																						
415.22																						
Stiff, damp, gray, CLAY LOAM.																						
392.72																						
Very loose, wet, brown, SAND.																						
50/3"																						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, from 137 (Rev. 8-99)



**SOIL BORING LOG**

Date 6/17/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer  
 SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM  
 COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. Station	BORING NO. Station	Offset	Ground Surface Elev.	D E L T H				B U L D I N G				Surface Water Elev.	Stream Bed Elev.	D E L T H				Groundwater Elev.: First Encounter Upon Completion After 1032 Hrs.				
				(ft)	(/6")	(tsf)	(%)	(ft)	(/6")	(tsf)	(%)			(ft)	(/6")	(tsf)	(%)					
051-0015 654+30	1 West Abut 651+57	6.00ft Rt	432.22									401.58	400.48					397.7	411.2	428.2		
Stiff to very stiff, moist, gray, SANDY CLAY SHALE. (continued)																						
50/2"																						
50/1"																						
387.22																						
Borehole continued with rock coring.																						
50/4"																						
50/1"																						
50/1"																						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, from 137 (Rev. 8-99)



USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0.2" = 1' / in.	DRAWN - DWH 03/11	REVISED -
PLOT DATE = 10/19/2018 1:51:32 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS  
 STRUCTURE NO. 051-0066

SHEET NO. 37 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	220
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	





# ROCK CORE LOG

Date 8/17/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer

SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0015 CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner  
 Station 654+30  
 BORING NO. 1 West Abut Core Diameter 2.06 in  
 Station 651+57 Top of Rock Elev. 392.72 ft  
 Offset 6.00ft Rt Begin Core Elev. 387.22 ft  
 Ground Surface Elev. 432.22 ft

DEPTH (ft)	CORING METHOD	RECOVERY (%)	R.Q. (%)	CORE TIME (min/ft)	SPT (tsf)	REMARKS
387.22	B1C1	84	71	1.1		Gray, slightly weathered, SANDY CLAY SHALE.
Rock core B1C1 from depth 47.5' to 48.0', Qu = 117 tsf.						
50	B1C2	98	73	1		
Rock core B1C2 from depth 52.6' to 53.1', Qu = 148 tsf.						
377.22						Extent of exploration.
Benchmark: BM 807 Chiseled square on NW corner of existing structure 051-0015 ovr Otter Pond Ditch = 432.70' elevation. Provided by Program Development.						

Color pictures of the cores Available on request  
 Cores will be stored for examination until 08/17/2014  
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
 BBS, form 138 (Rev. 8-99)



# SOIL BORING LOG

Date 8/17/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer

SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0015  
 Station 654+30  
 BORING NO. 2  
 Station 653+19  
 Offset 7.50ft Lt  
 Ground Surface Elev. 432.24 ft

DEPTH (ft)	DRILLING METHOD	U.C.S. (tsf)	M.O.S.T. (%)	SURFACE WATER ELEV. (ft)	STREAM BED ELEV. (ft)	GROUNDWATER ELEV. (ft)	FIRST ENCOUNTER (ft)	UPON COMPLETION (ft)	AFTER 1032 HRS. (ft)	D.P.T.H. (ft)	BULGE (ft)	SHEAR (ft)	PENETROMETER (ft)	REMARKS
431.34														2" asphalt on 8 1/4" bridge deck.
410.54														Air.
407.74														Gray, SILTY LOAM.
405.24														Medium, damp, gray, SILTY CLAY.
401.44														Very soft, very damp, gray, SILTY LOAM.
400.24														Red, SANDY LOAM.
399.94														Gray, SILTY LOAM.
397.24														Very soft, wet, gray, SANDY LOAM.
394.64														Very stiff, moist, gray, SANDY CLAY SHALE.
Extent of exploration.														

Benchmark: BM 807 Chiseled square on NW corner of existing structure 051-0015 ovr Otter Pond Ditch = 432.70' elevation. Provided by Program Development.  
 The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, form 137 (Rev. 8-99)



USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0:2' = 1"	DRAWN - DWH 03/11	REVISED -
PLOT DATE = 10/19/2018 1:51:38 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS  
 STRUCTURE NO. 051-0066

SHEET NO. 38 OF 41 SHEETS

F.A.P. RTE. 327	SECTION (51-23B-2)B-1	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 221
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	





# ROCK CORE LOG

Date 7/28/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer

SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0015 CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner  
 Station 654+30  
 BORING NO. 4 Core Diameter 2.06 in  
 Station 654+68 Top of Rock Elev. 394.89 ft  
 Offset 6.00ft Lt Begin Core Elev. 392.49 ft  
 Ground Surface Elev. 432.39 ft

DEPTH (ft)	CORING METHOD	RECOVERY (%)	R-Q-D (%)	CORE TIME (min/ft)	STRENGTH (tsf)	DESCRIPTION
392.49	B4C1	85	80	1		Gray, slightly weathered, SANDY CLAY SHALE.
Rock core B4C1 from 42.9' to 43.4' depth Qu = 72 tsf.						
408.03	B4C2	97	96	0.8		
Rock core B4C2 from 49.3' to 49.8' depth Qu = 87.4 tsf.						
412.53	B4C3	95	95	0.9		
Rock core B4C3 from 52.9' to 53.5' depth Qu = 104 tsf.						
377.49						Extent of exploration.
Benchmark: BM 807 Chiseled square on NW corner of existing structure 051-0015 ovr Otter Pond Ditch = 432.70' elevation. Provided by Program Development.						

Color pictures of the cores Available on request  
 Cores will be stored for examination until 07/28/2014  
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
 BBS, form 138 (Rev. 8-99)



# SOIL BORING LOG

Date 7/29/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer

SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0015 SURFACE WATER ELEV. 401.58 ft  
 Station 654+30 STREAM BED ELEV. 400.48 ft  
 BORING NO. 5 GROUNDWATER ELEV.:  
 Station 655+39 First Encounter 398.0 ft  
 Offset 6.00ft Rt Upon Completion 401.5 ft  
 Ground Surface Elev. 432.53 ft After 24 Hrs. 412.5 ft

DEPTH (ft)	DRILLING METHOD	UCS (tsf)	BULGE (in)	SHEAR (tsf)	PENETROMETER (blows)	DESCRIPTION	SURFACE WATER ELEV. (ft)	STREAM BED ELEV. (ft)	GROUNDWATER ELEV. (ft)
431.73						1 3/4" asphalt on 7 1/2" concrete bridge deck.			
Air.									
408.03						Medium to soft, damp, gray, SILTY LOAM.			
398.03						Very soft, damp, gray, SANDY LOAM.			
396.73						Very loose, wet, gray, fine grained, SAND. 10% passing #200 sieve.			
394.63						Very dense, moist, gray, SANDY CLAY SHALE.			
Extent of exploration.									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, from 137 (Rev. 8-99)

Latitude W 87 deg 39.878 min, Longitude N 38 deg 43.876 min, Map Datum NAD83



USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0.2" = 1' in.	DRAWN - DWH 03/11	REVISED -
PLOT DATE = 10/19/2018 1:51:47 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS  
 STRUCTURE NO. 051-0066

SHEET NO. 40 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	223
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	



# SOIL BORING LOG

Date 6/9/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer

SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0015  
Station 654+30

BORING NO. 6 East Abut  
Station 656+87  
Offset 9.00ft Lt  
Ground Surface Elev. 432.34 ft

Description	DEPTH (ft)	BLOW COUNT (SPT)	UNSATURATED WATER CONTENT (%)	MOISTURE RATIO (%)	Soils	D	L	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After 1224 Hrs.
										ft	ft	ft	ft	ft	ft
3" asphalt on 13" concrete pavement.										401.58	400.48				
Very soft, damp, gray, SANDY LOAM.	431.04	2													
		3	0.2	12											
		6	S												
		4													
		6	0.1	12											
		10	S												
		3													
		6	0.1	13											
		8	S												
		2													
		2	0.1	17											
Gray, CLAY LOAM.	421.54	3	S												
		2													
Soft to medium, damp, gray, SANDY LOAM.	420.34	4	0.8	15											
		8	S												
		2													
		3	0.5	13											
		2	S												
		0													
Soft, damp, gray, SILTY LOAM w/ some Shale fragments.	415.34	0													
		0	0.4	20											
		1	B												
		0													

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)



# ROCK CORE LOG

Date 6/9/09

ROUTE FAP 327 (US 50) DESCRIPTION Otter Pond Ditch LOGGED BY E. Sandschafer

SECTION (51-23B-2)B-1 LOCATION NW 1/4, SEC. 5, TWP. 3 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0015  
Station 654+30

BORING NO. 6 East Abut  
Station 656+87  
Offset 9.00ft Lt  
Ground Surface Elev. 432.34 ft

Description	DEPTH (ft)	CORING METHOD	RECOVERED (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Soils	D	L	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After 1224 Hrs.
												ft	ft	ft	ft	ft	ft
Gray, slight to moderate weathered, SANDY CLAY SHALE.	402.64	B6C1	88	76	1.4												
Rock core B6C1 from 31.6' to 32.1' depth Qu = 104 tsf.																	
		B6C2	94	71	2.1												
Black, light weight, very smooth, hard, Estimated COAL.																	
		B6C3	99	87	1.2												
Rock core B6C2 from 38.8' to 39.4' depth Qu = 68 tsf.																	
Rock core B6C3 from 42.0' to 42.5' depth Qu = 206 tsf.																	
Extent of exploration.																	
Benchmark: BM 807 Chiseled square on NW corner of existing structure 051-0015 ove Otter Pond Ditch = 432.70' elevation. Provided by Program Development																	

Color pictures of the cores Available on request  
Cores will be stored for examination until 06/09/2014  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
BBS, form 138 (Rev. 8-99)



USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
PLOT SCALE = 0.2" = 1' in.	DRAWN - DWH 03/11	REVISED -
PLOT DATE = 10/19/2018 1:51:52 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS  
STRUCTURE NO. 051-0066

SHEET NO. 41 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	224
CONTRACT NO. 74177			ILLINOIS FED. AID PROJECT	

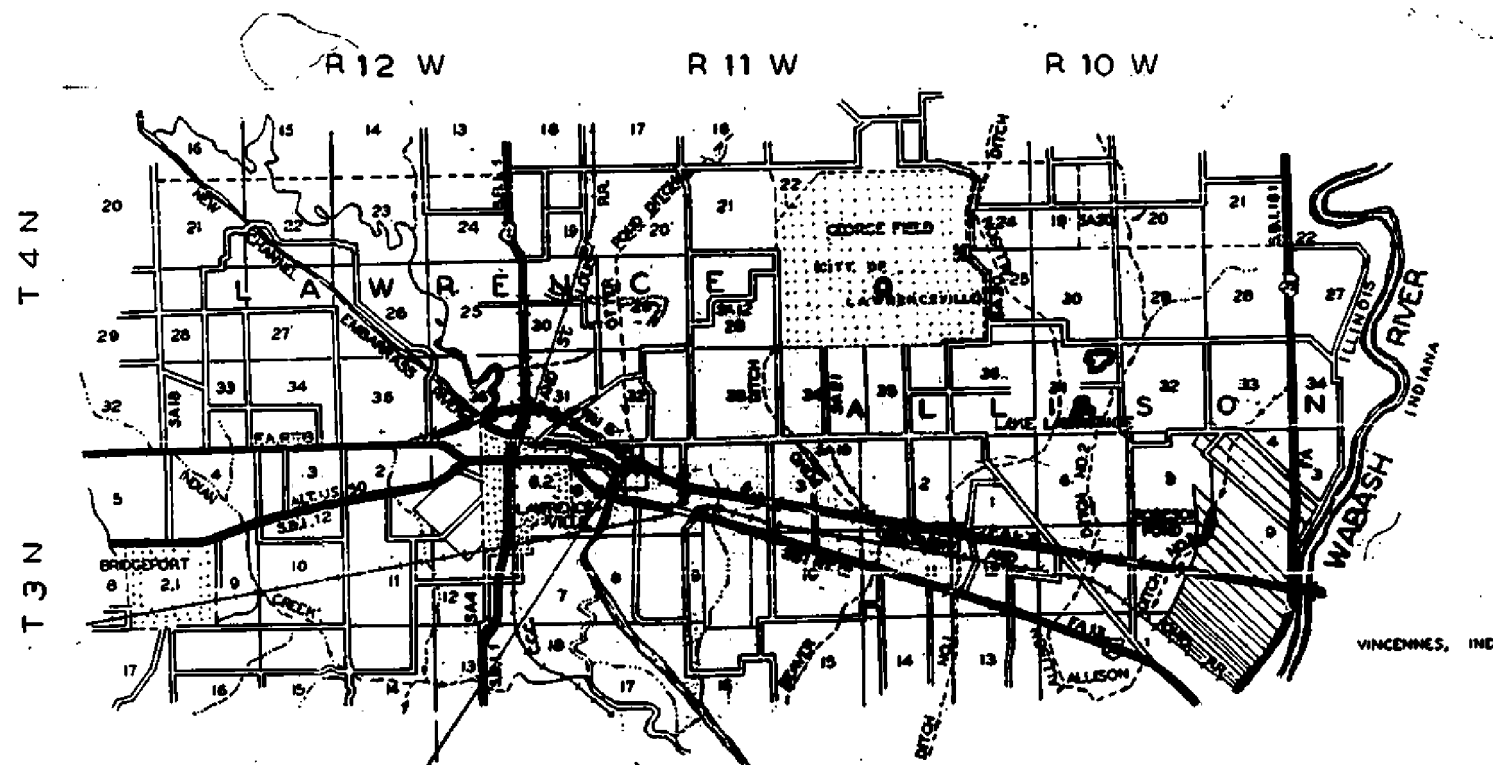
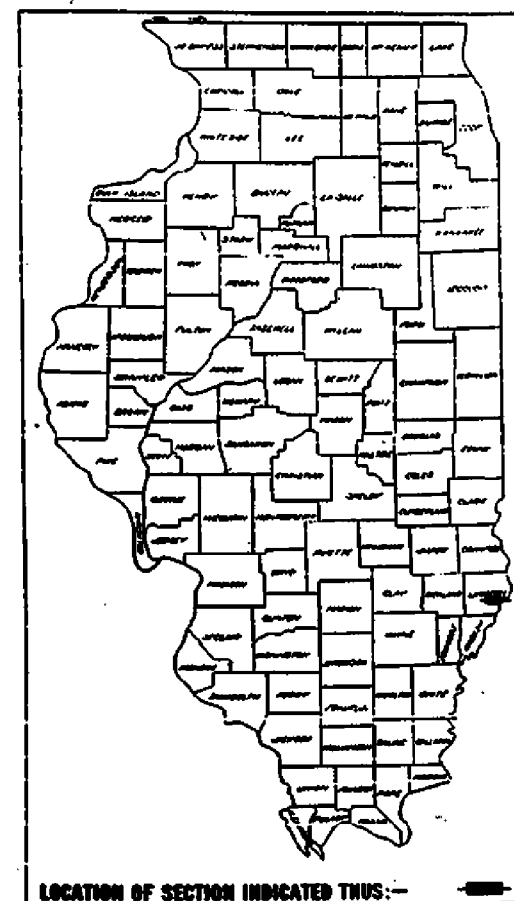
# STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
8	51-23 B-2	LAWRENCE	21	1

PLAN 1 INCH = 100 FT.  
 PROFILE, HOR. 1 INCH = 100 FT.  
 PROFILE, VERT. 1 INCH = 10 FT.  
 CROSS-SECTIONS 1 INCH = 5 FT.

FAI-64

FAI ROUTE 8 SECTION 51-23 B-2  
 PROJECT FI-08-4(16)  
 LAWRENCE COUNTY



PROJECT FI-08-4(16)  
 PROPOSED IMPROVEMENT FAI ROUTE 8  
 SECTION 51-23 B-2 INCLUDES THE CONSTRUCTION  
 OF: A 9 SPAN CONTINUOUS R.C. DECK  
 GIRDER BRIDGE OVER OTTER POND DITCH. SPANS  
 3 AT 38'-2" & 6 AT 44'-9"  
 30'-0" ROADWAY AT STA. 52+13.0.

LAYOUT  
 APPROXIMATE SCALE 1 INCH = 1 MILE  
 NET LENGTH TO BE IMPROVED 450.12 = 0.085 MILE  
 OF PROJECT FI-08-4(16) = 450.12 FEET = 0.085 MILE

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
DIVISION OF HIGHWAYS

DESIGNED: *11-2-57*  
 DRAWN: *11-2-57*  
 CHECKED: *11-2-57*  
 APPROVED: *11-2-57*

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS

APPROVED: \_\_\_\_\_  
 DIVISION ENGINEER      DATE

PRINT DRIVER: W. LUTHERS  
 SCALE: 1/4" = 100 FT.  
 PLOT DATE: 10/19/2018



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667" / 1"	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:51:57 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
 SN051-0015(OLD) / SN051-0066(NEW)

SCALE:      SHEET NO. 1 OF 22 SHEETS      STA.      TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	225

CONTRACT NO. 74177

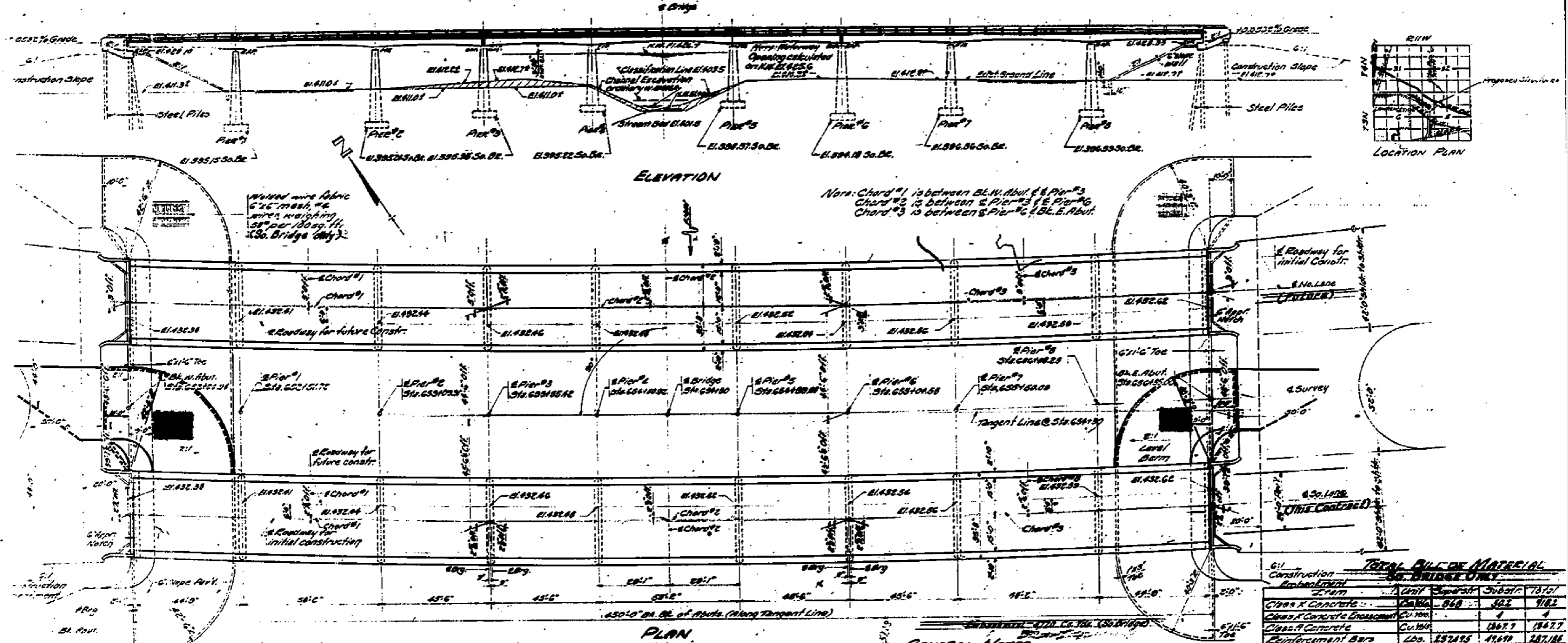
FED. ROAD DIST. NO.      ILLINOIS      FED. AID PROJECT

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

DATE	BY	CHKD	APP'D	SHEET NO.
10/19/2018	MTD	DWH	RD	2

16 SHEETS

1/4" = 30' Scale, 190' RA, STA. 654+30  
EXIST. STRUCTURE LOCATED 100' SOUTH OF  
PROPOSED STRUCTURE TO REMAIN IN PLACE.



STATION 654+30  
COUNTY LAWRENCE  
F.A.I. DIST. SEC. 5-23B-2  
LAWRENCE COUNTY  
LOADING PCD 316 (RIVER)

**HORIZ. CURVE DATA**  
R.C. STA. 654+20.25  
D = 275.44'  
D = 17.0'  
T = 119.84'  
E = 5729.65'  
L = 2775.33'  
S.E. = 0.0511/11

**LETTERING FOR NAME PLATE**  
213

**DESIGN STRESSES**  
F<sub>c</sub> = 4000 p.s.i. (CONCRETE)  
F<sub>s</sub> = 800 p.s.i. (STEEL)  
F<sub>s</sub> = 20,000 p.s.i. (PILES)

EXAMINED: [Signature]  
DRAWN: [Signature]  
CHECKED: [Signature]  
DATE: 08/15

**WATERWAY INFORMATION**  
Drainage Area: 1,446,407 ACRES  
Character: land, rolling, wooded, cultivated  
Required Opening (This Bridge): 5400 ft.  
Present Opening: 1577 ft.  
Proposed Opening (This Bridge): 5400 ft.  
Proposed Opening (Emb. on River): 5400 ft. (50 ft. head)  
Proposed Total Opening: 10800 ft.

**GENERAL NOTES**  
Class A Concrete shall be used throughout except in piers.  
Class B Concrete shall be used in piers.  
The concrete floor slab shall be finished in accordance with Article 51.18 of the Standard Specifications.  
The concrete floor slab shall be poured continuously within limits of construction joints shown.  
All rollers, rollers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.14 of the Standard Specifications and are included for payment as Structural Steel.  
Except as otherwise provided, all Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 51.1 to 51.5 inclusive of the Standard Specifications.  
All paint shall be furnished and applied by the contractor.  
The contractor shall drive test piles in permanent locations, one at each abutment as shown on the plans and as directed by the Engineer before ordering remainder of piles.  
Layout of slope walls may be varied to suit ground conditions in the field, as directed by the Engineer.

**TOTAL BILL OF MATERIAL**

Item	Unit	Quantity	Subtotal	Total
Class A Concrete	Cu.Yds.	868	362	912
Class B Concrete	Cu.Yds.	4	4	4
Class A Concrete (Embankment)	Cu.Yds.	1867.7	1867.7	1867.7
Reinforcement Bars	Lbs.	25725	4160	28712
Structural Steel	Lbs.	33850	33850	33850
Alternate A Metal Handrail	Lin.Ft.	928	928	928
Alternate B Aluminum Handrail	Lin.Ft.	928	928	928
Steel Piles (10 BR42)	Lin.Ft.	300	300	300
Steel Piles (8 BR36)	Lin.Ft.	180	180	180
Rock Riprap Structure	Cu.Yds.	136	136	136
Embankment	Cu.Yds.	18210	18210	18210
Class A Excavator Struct.	Cu.Yds.	1809	1809	1809
Class B Excavator Struct.	Cu.Yds.	423	423	423
Slope Wall	Sq.Yds.	140	140	140
Name Plates	EACH	1	1	1

PROJECT: E-1-08-406  
GENERAL PLAN & ELEVATION  
OTTER POND DITCH  
F.A.I. DIST. SEC. 5-23B-2  
LAWRENCE COUNTY  
STA. 654+30



USER NAME = kah  
ESCA PROJECT NO. 1000.02  
PLOT SCALE = 0.1667 / 1 in.  
PLOT DATE = 10/19/2018 1:52:07 PM

DESIGNED - MTD  
DRAWN - DWH  
CHECKED - RDP  
DATE - 08/15

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

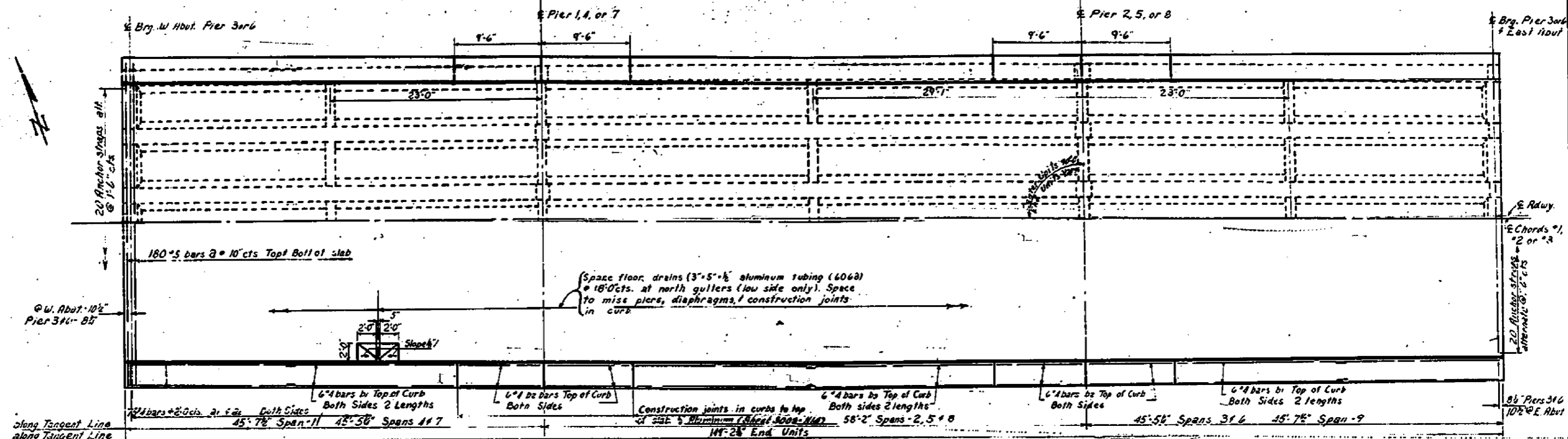
EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)

SCALE: SHEET NO. 2 OF 22 SHEETS STA. TO STA.

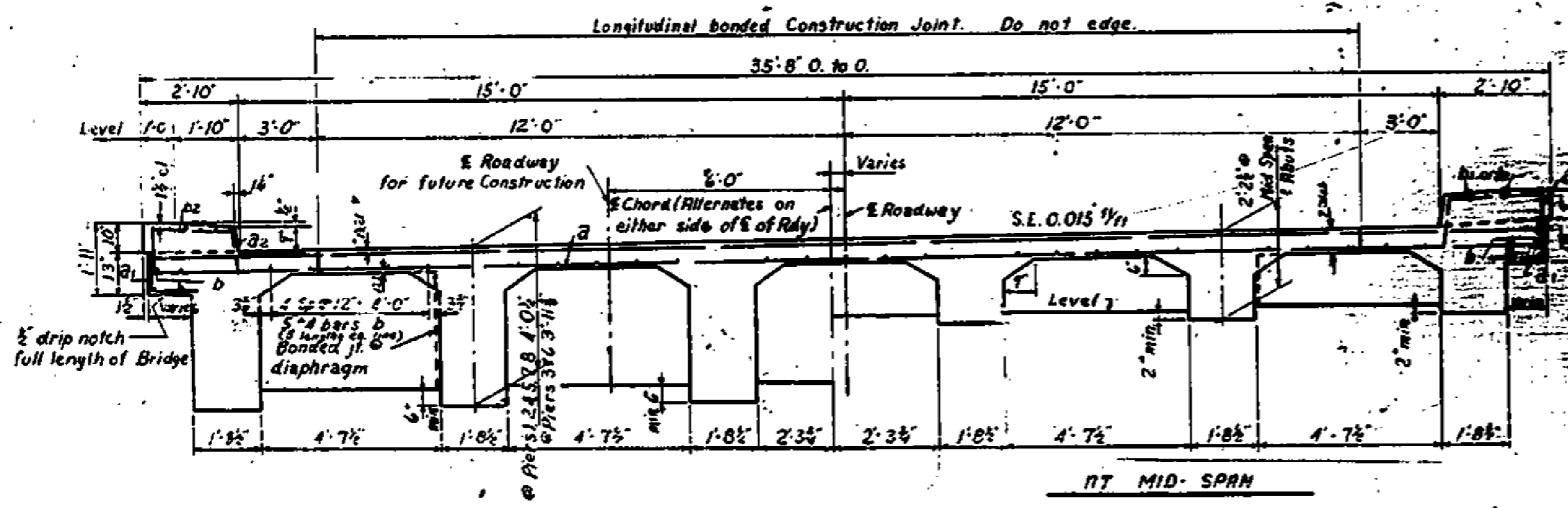
F.A.P. RTE. 327 SECTION (51-23B) COUNTY LAWRENCE TOTAL SHEETS 260 SHEET NO. 226  
CONTRACT NO. 74177  
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

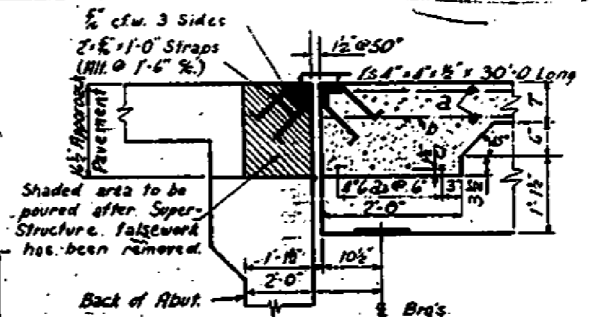
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10-118	2-2	Lawrence	21	5
SHEET NO. 2 16 SHEETS				



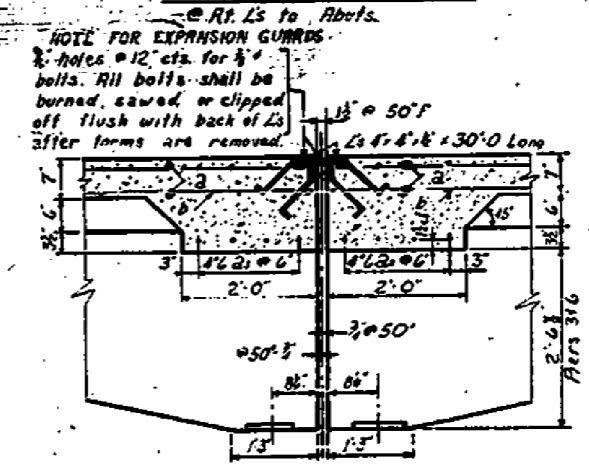
TYPICAL 3 SPAN UNIT



CROSS SECTION



SECTION - ABUTS.



SECTION - PIERS 3 & 6

STRAP DETAIL

BILL OF MATERIAL - SUPER

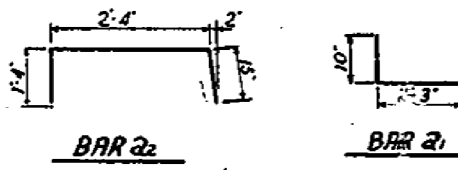
Bar	No	Size	Length	Shape
a	1000	#5	36'-2"	
a1	400	#4	4'-11"	
a2	400	#4	3'-1"	
a3	200	#4	3'-6"	
b	400	#4	30'-0"	
b1	100	#4	18'-6"	
b2	100	#4	9'-3"	
b3	70	#4	20'-0"	
Class X Concrete		Cu. Yd.	888.0	
Reinforcement Bars		Lbs.	23700	
Structural Steel		Lbs.	34800	

\* Includes Weight of Girder Reinforcement Shown on Sheet 3  
\* Includes Weight of Structural Steel Shown on Sheet 4

SLAB DETAILS - SOUTH BRIDGE

OTTER POND DITCH  
F.R.I. RT. 8 SECT. 51-23B-2  
LAWRENCE COUNTY  
STA. 654+30

DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: [Signature]  
APPROVED: [Signature]



DETAIL OF DRAIN



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667 1/16"	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:52:17 PM	DATE - 08/15	REVISED -

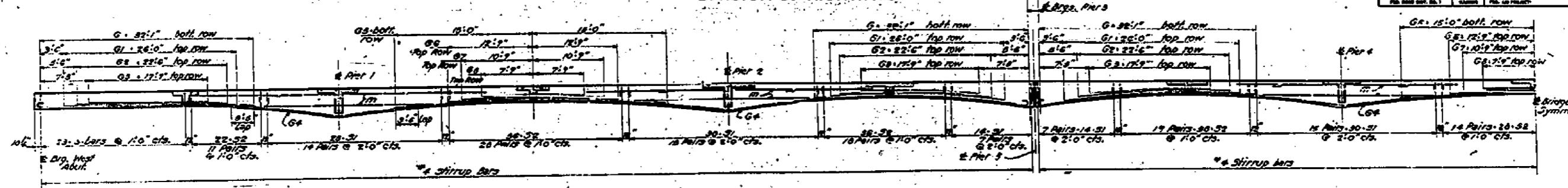
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)

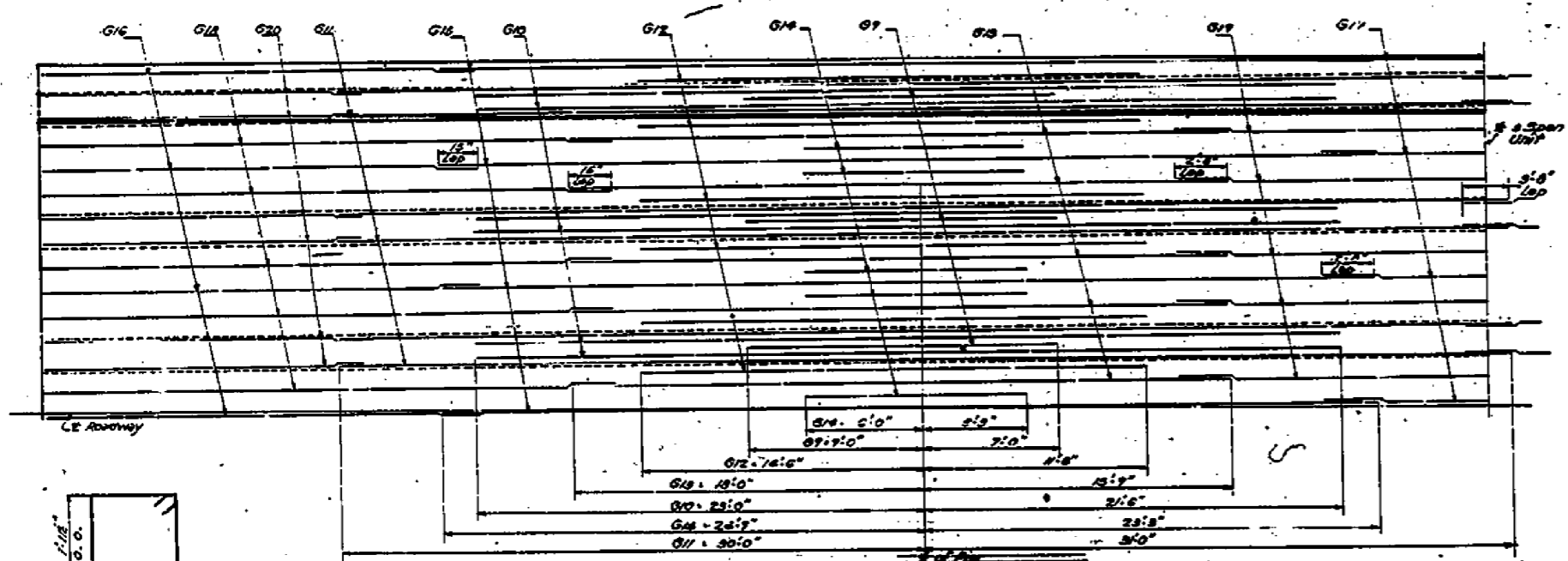
SCALE: SHEET NO. 3 OF 22 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B)	LAWRENCE	260	227
CONTRACT NO. 74177			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

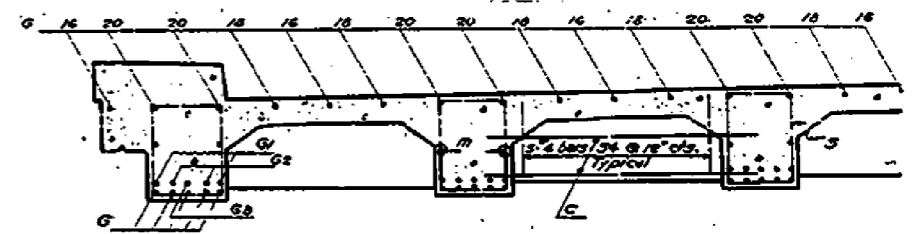




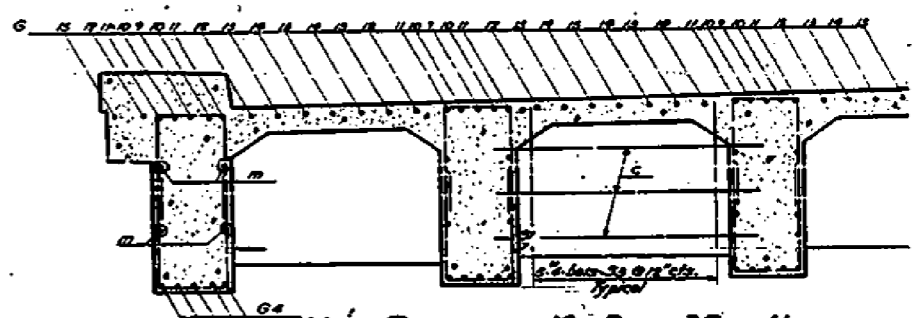
HALF ELEVATION ALL GIRDERS



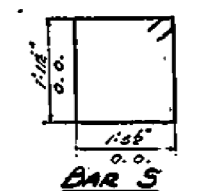
QUARTER PLAN 3 SPAN UNIT  
Reinforcement in Top of Spans



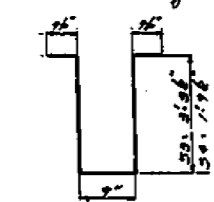
HALF SECTION NEAR ABUT. SPANS & PIERS 3&6



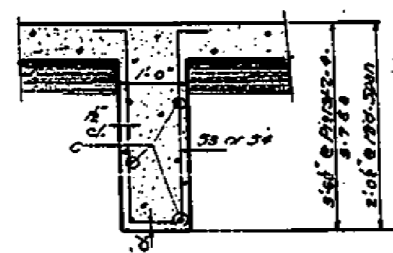
HALF SECTION AT MID-PIERS 3 SPAN UNIT



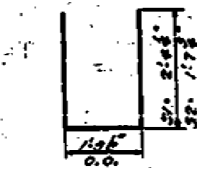
BAR S



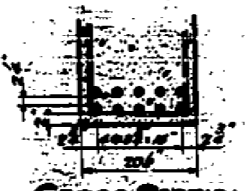
BARS 53-54



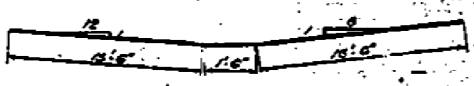
SECTION THRU DIAPHRAGM



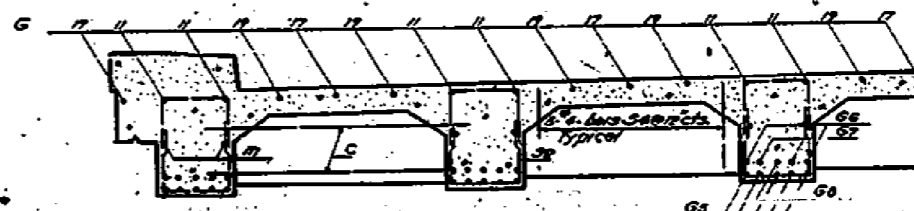
BARS 51-52



CROSS SECTION  
Showing spacing of #5 bars



BAR G4



HALF CROSS SECTION @ 6 3 SPAN UNIT

BILL OF MATERIALS BRIDGE

BAR NO.	SIZE	LENGTH	SHAPE
G7	36	10	16'-0"
G10	72	10	14'-0"
G11	72	10	8'-0"
G12	72	10	26'-0"
G13	60	8	33'-9"
G14	60	8	15'-0"
G15	42	6	18'-0"
G16	42	6	22'-0"
G17	21	7	17'-0"
G18	60	6	20'-9"
G19	30	6	32'-0"
G20	72	7	17'-0"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
G	180	#	34'-9"	C
G1	72	#10	26'-0"	5
G2	72	#10	28'-6"	31
G3	36	#10	17'-9"	52
G4	180	#	33'-6"	53
G5	90	#11	30'-0"	54
G6	36	#10	25'-6"	55
G7	36	#10	24'-6"	57
G8	18	#10	15'-6"	58
G	360	#	6'-7"	C

DESIGNED: *James J. Rydberg*  
 CHECKED: *James J. Rydberg*  
 DRAWN: *James J. Rydberg*  
 EXAMINED: *John J. Miller*  
 PASSED: *John J. Miller*  
 APPROVED: *John J. Miller*



USER NAME = kah  
 ESCA PROJECT NO. 1000.02  
 PLOT SCALE = 0.1667 / in.  
 PLOT DATE = 10/19/2018 1:52:27 PM

DESIGNED - MTD  
 DRAWN - DWH  
 CHECKED - RDP  
 DATE - 08/15

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)

SCALE: SHEET NO. 4 OF 22 SHEETS STA. TO STA.

F.A.P. RT. 327 SECTION (51-23B) COUNTY LAWRENCE TOTAL SHEETS 260 SHEET NO. 228  
 CONTRACT NO. 74177  
 ILLINOIS FED. AID PROJECT

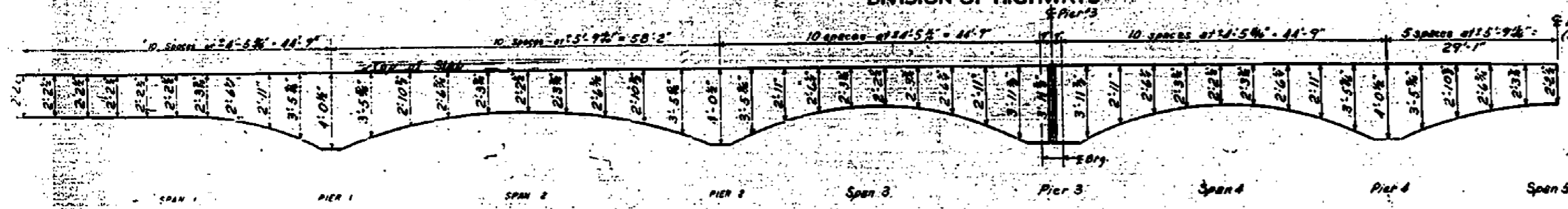
GIRDER DETAILS So. BRIDGE  
OTTER POND DITCH  
F.A.I.R. 8-SECTION 51-23B-2  
LAWRENCE COUNTY  
STATION 654+30



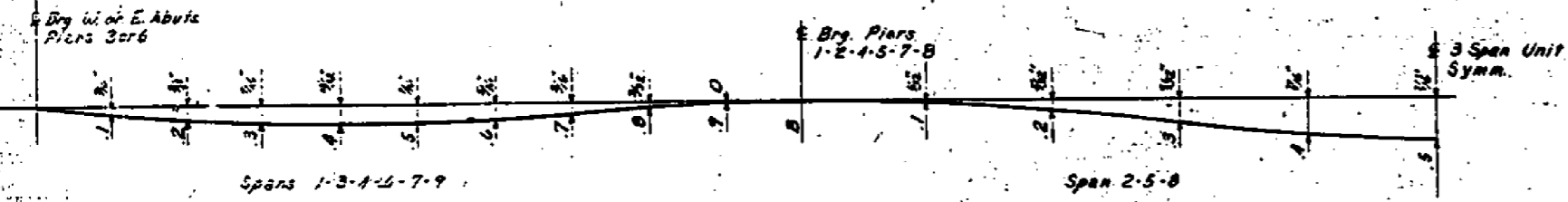
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
101-1-10	51-23B	LAWRENCE	260	7

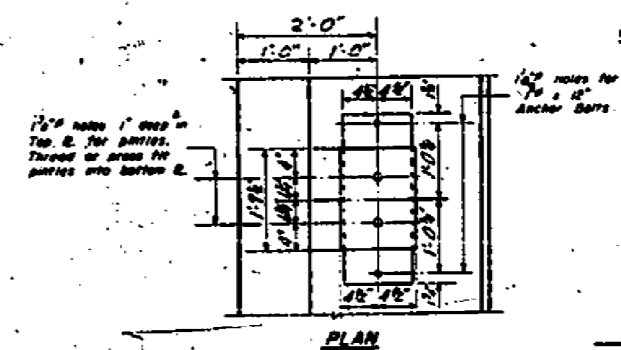
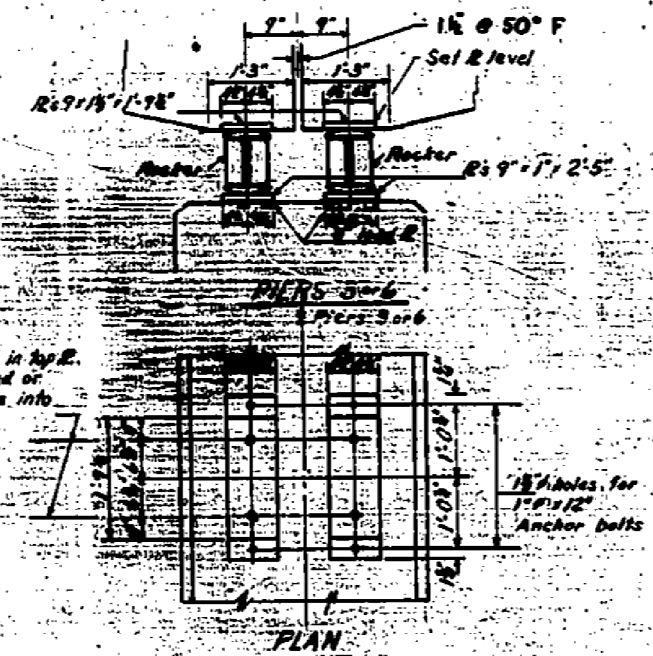
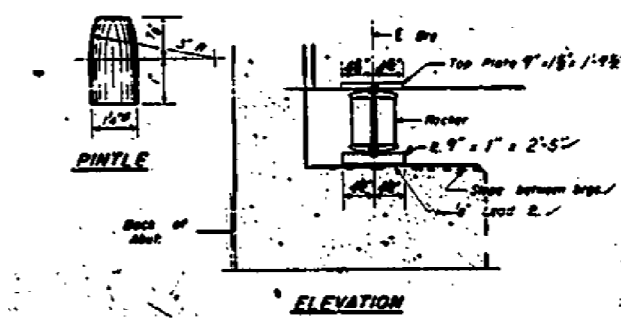
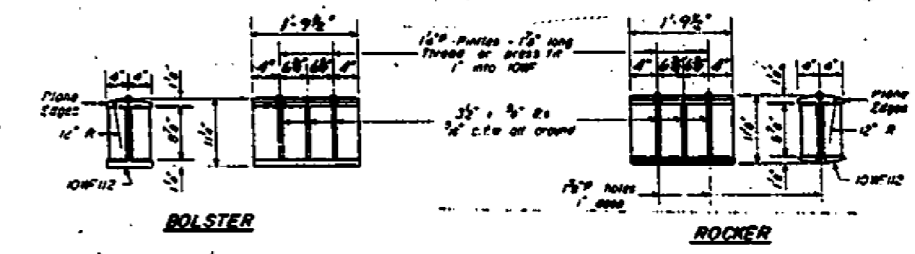
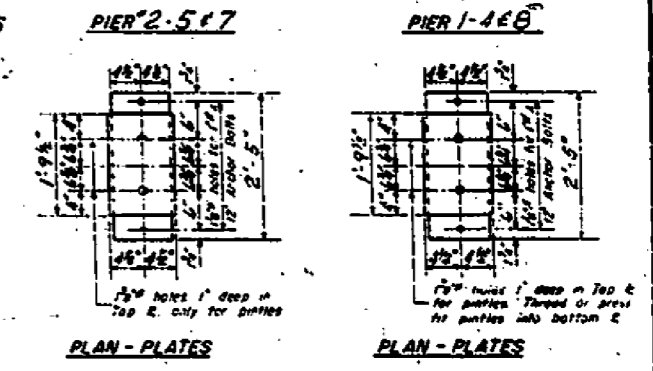
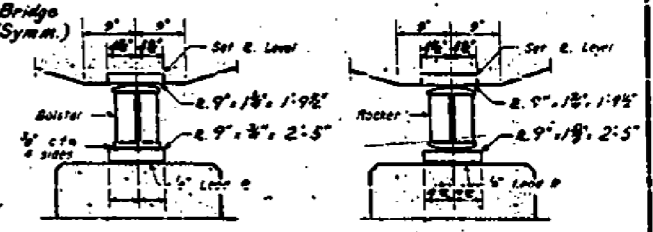
16 SHEETS



**GIRDER DIMENSIONS (ALL GIRDERS)**  
IN ACCORDANCE TO: 1930 Load Deflection, Camber, and Shrinkage  
also for settlement of Piers and Abutments



**DEAD LOAD DEFLECTION 3 SPAN UNIT**

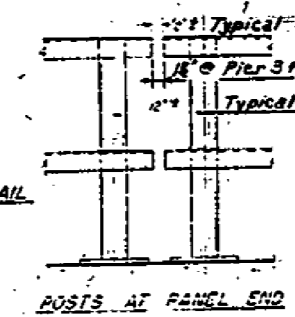
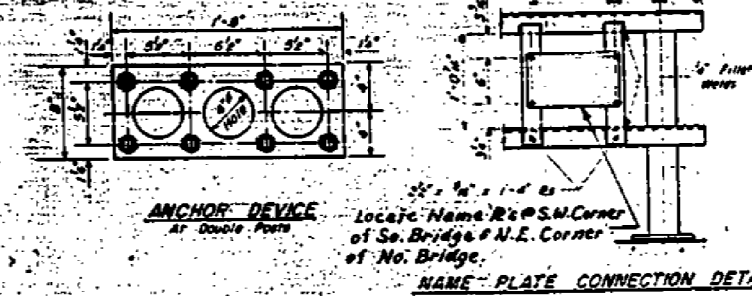
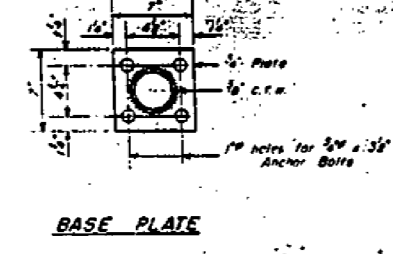
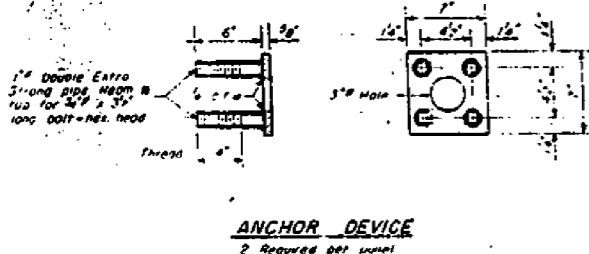
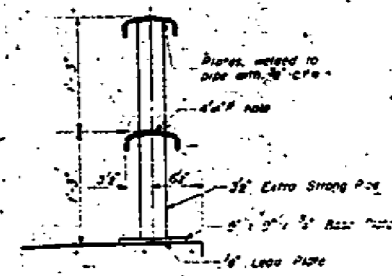
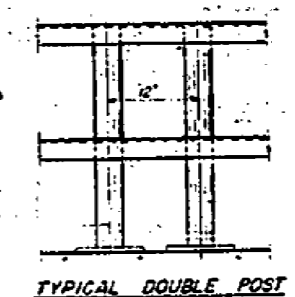
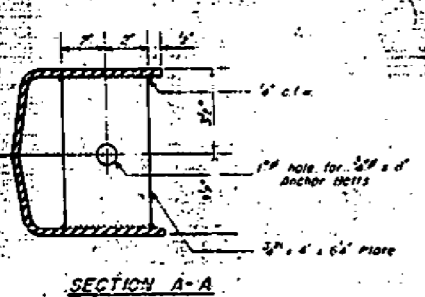
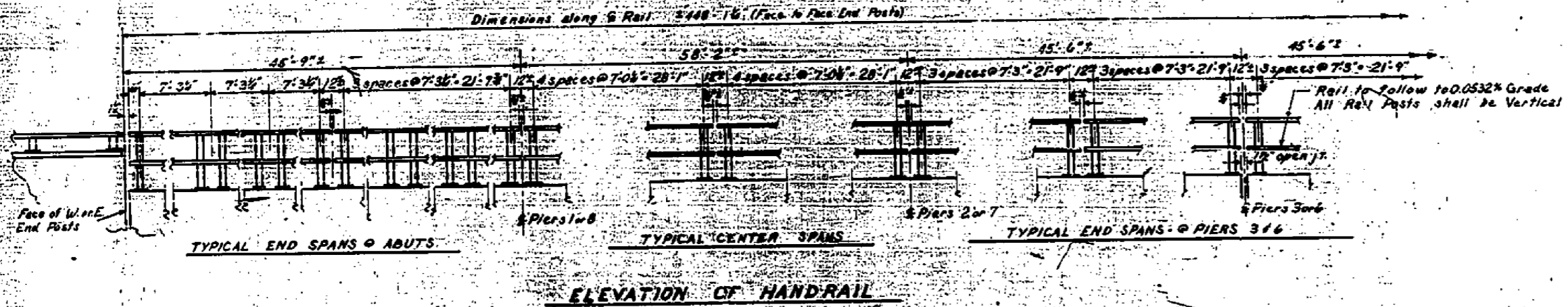


DESIGNED: *[Signature]*  
CHECKED: *[Signature]*  
DRAWN: *[Signature]*  
DATE: SEPT 26 1937

**SO BRIDGE**  
GIRDER ORDINATE & BRG. DETAILS  
OTTER POND DITCH  
F.A.I.-RT. 8 SECT. 51-23B-2  
LAWRENCE COUNTY  
STA. 654 + 30

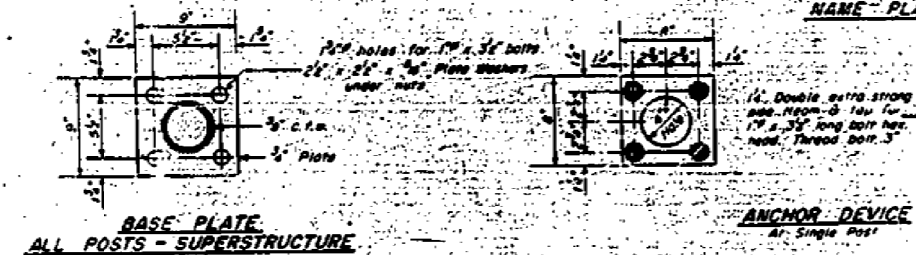
**F.A.I. 64**

DATE	BY	REVISION	DATE	BY
11.8	D.E.	1	11.8	D
SHEET NO. 5				
16 SHEETS				



DESIGNED: *[Signature]*  
CHECKED: *[Signature]*  
APPROVED: *[Signature]*

END POST PANEL  
SEPT. 26 '58



BILL OF MATERIAL

ALTERNATE "A" HANDRAIL  
F.A.I. RT. B - SECT. 51-23B-2  
LAWRENCE COUNTY  
STA. 654 + 30



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667 / in.	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:52:47 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)

SCALE: SHEET NO. 6 OF 22 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	230
CONTRACT NO. 74177				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				





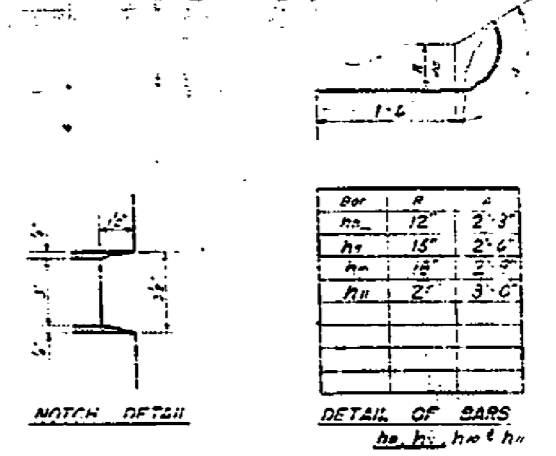
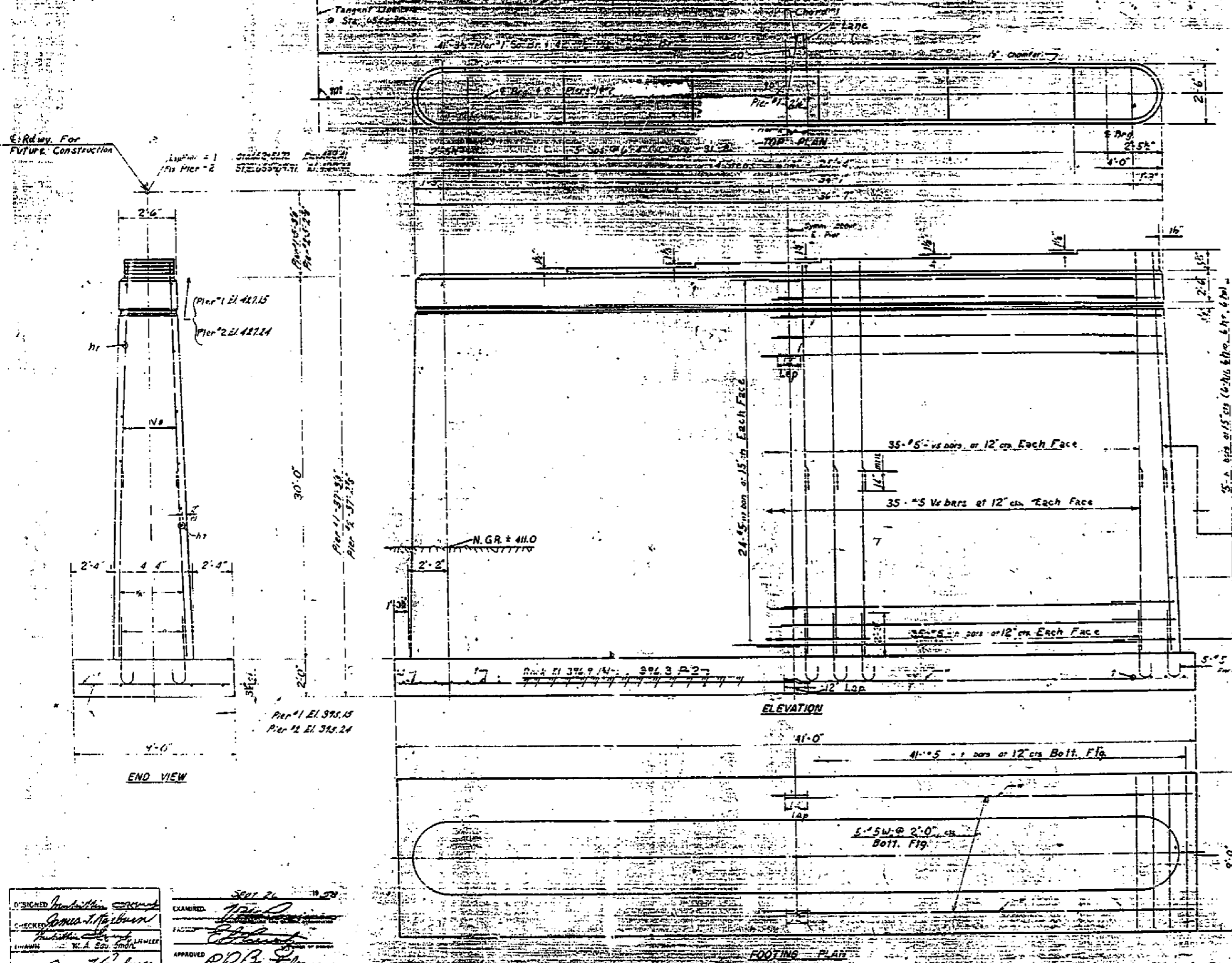


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

**FAI-64**

DATE	REVISION	BY	NO.

SHEET NO. 8  
14 SHEETS



**2 PIERS #1 & #2 SO BR**  
**BILL OF MATERIAL**

NO.	SIZE	LENGTH	QTY
hr	1/2" x 5"	17'-6"	
hb	1/2" x 5"	3'-8"	
hc	1/2" x 5"	4'-0"	
hd	1/2" x 5"	2'-3"	
he	1/2" x 5"	8'-6"	
hf	1/2" x 5"	4'-3"	
g	1/2" x 5"	8'-9"	
h	3/2" x 1/2"	15'-9"	
i	2" x 4"	20'-11"	

Class A Concrete      4270    533.6  
Reinforcement Bars      Lb    11460  
Class A Excav. for Street Curb      925  
Class B Excav. for Street Curb      300  
Rock Excav. for Street Curb      35

DESIGNED: *James J. Huber*  
CHECKED: *James J. Huber*  
IN CHARGE: *W. A. G. Smith*  
APPROVED: *R. B. ...*

**PIERS #1 & #2 OF SOUTH BRIDGE**  
**F.A.I. RT 8 - SECT. 51-23B-2**  
**LAWRENCE COUNTY**  
**STA. 654+30**



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667" / 1"	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:53:17 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

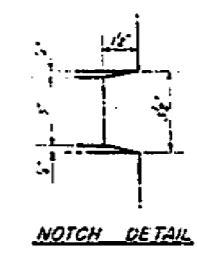
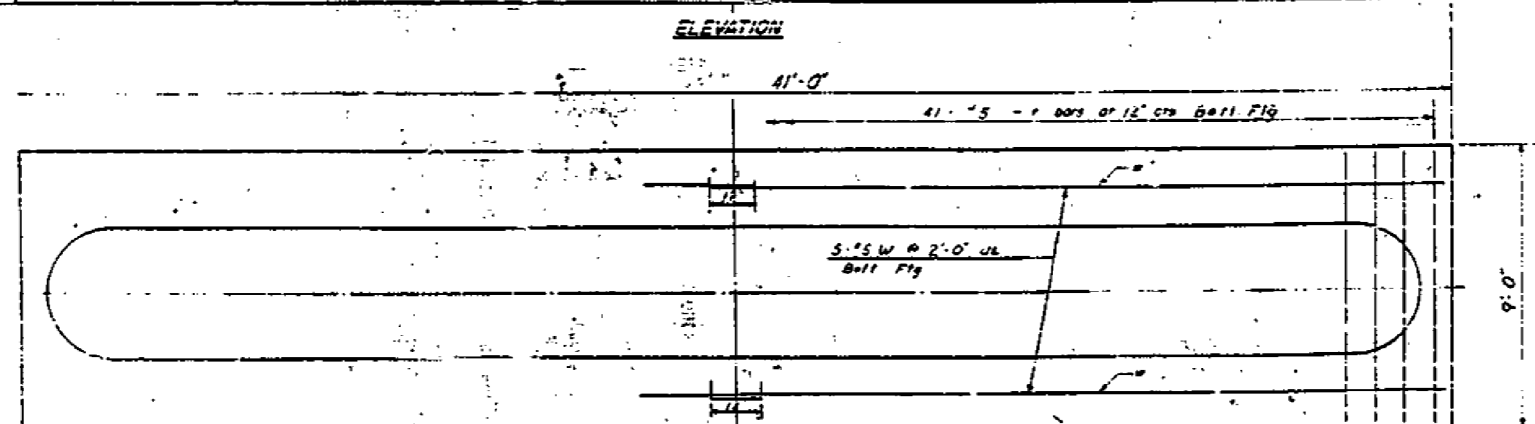
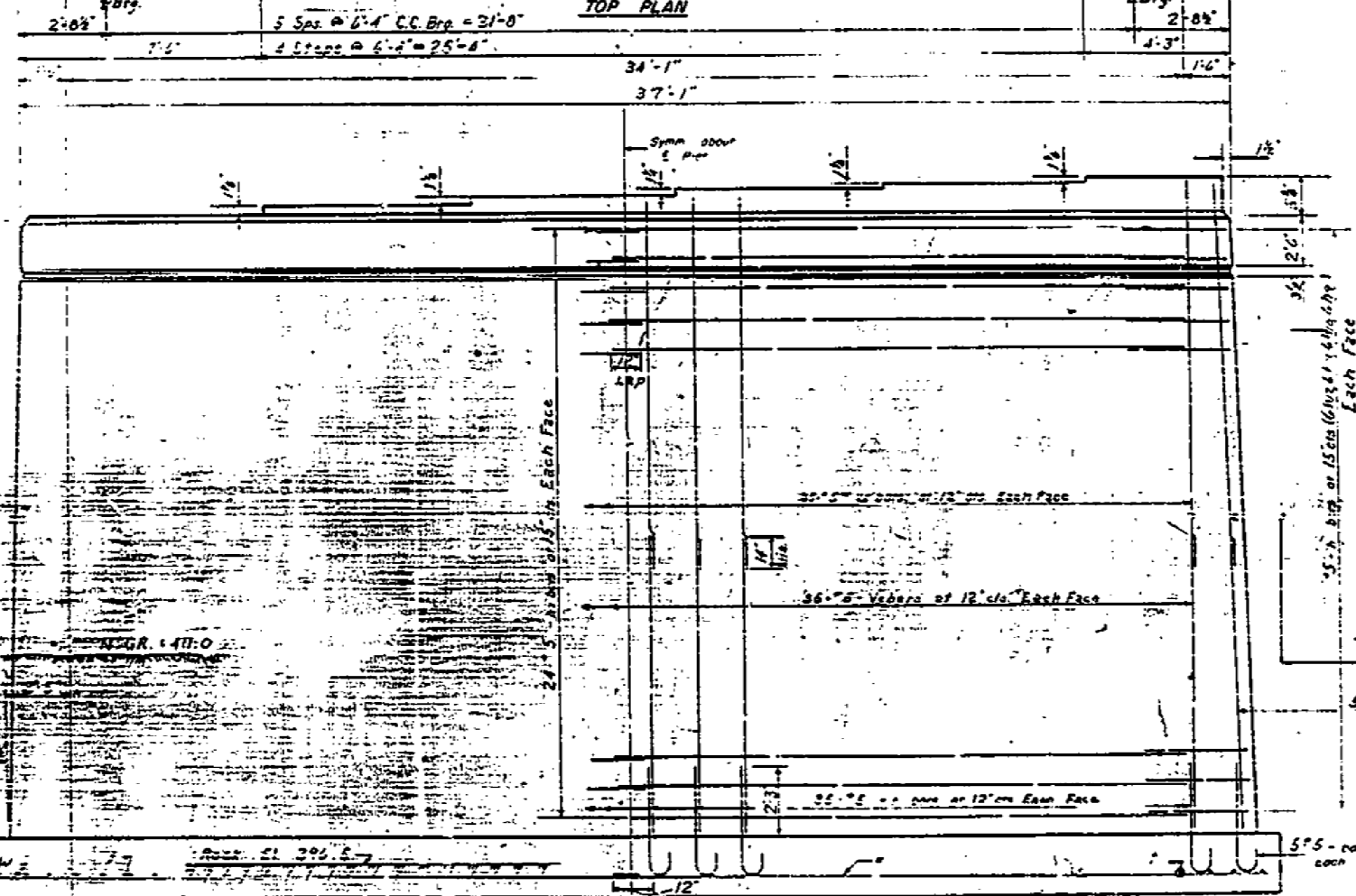
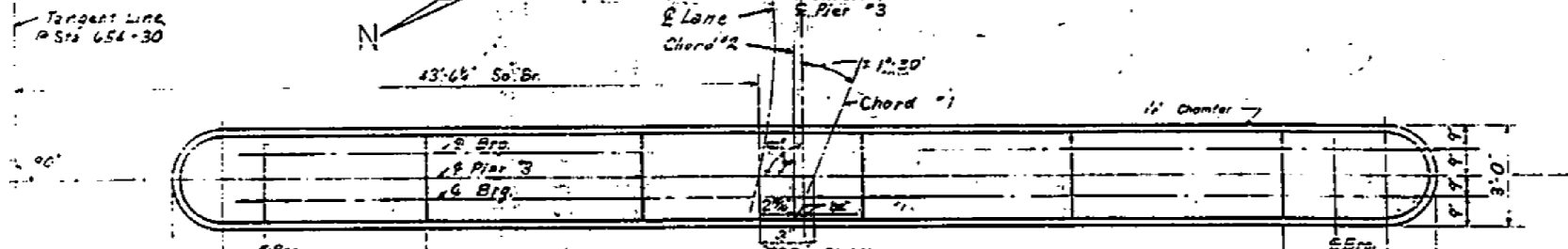
EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)  
SCALE: SHEET NO. 9 OF 22 SHEETS STA. TO STA.

F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 233
CONTRACT NO. 74177			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

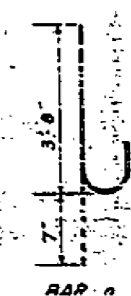
**FRI-64**

PROJECT NO.	DATE	PROJECT	SCALE	SHEET NO.
51-23B	10-19-2018	Lawrence Co	AS SHOWN	10



DETAIL OF BARS

ht	15"	2'-6"
ht	18"	2'-9"
ht	20"	3'-0"
ht	22"	3'-3"

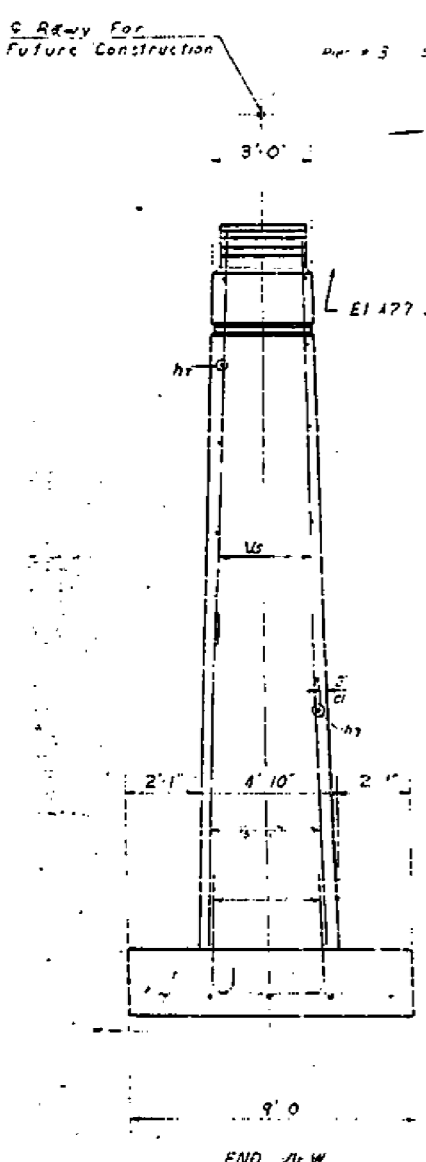


PIER #3 SO. BR.  
BILL OF MATERIALS

Qty.	No.	Size	Length	Weight
96	5	5"	17'-6"	
24	5	5"	4'-0"	
24	5	5"	4'-0"	
24	5	5"	4'-6"	
24	5	5"	4'-0"	
80	5	5"	4'-3"	
21	5	5"	6'-0"	
100	5	5"	15'-9"	
12	5	5"	20'-8"	

Class A Concrete Cu. Yd. 770  
Reinforcement Bars Lb. 5705  
Class A Excav. for Street Cu. Yd. 102  
Class B Excav. for Street Cu. Yd. 152  
Rock Excav. for Street Cu. Yd. 16

PIER #3 OF SOUTH BRIDGE  
F.R.I. RT. 8 - SECT. 51-23B-2  
LAWRENCE COUNTY  
STA. 654+30



DESIGNED: *Michael MTD*  
CHECKED: *W.A. Soudjik*  
DRAWN: *W.A. Soudjik*  
DATE: 08/15



USER NAME = kah  
ESCA PROJECT NO. 1000.02  
PLOT SCALE = 0.1667 1/4" = 1'-0"  
PLOT DATE = 10/19/2018 1:53:27 PM

DESIGNED - MTD  
DRAWN - DWH  
CHECKED - RDP  
DATE - 08/15

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)

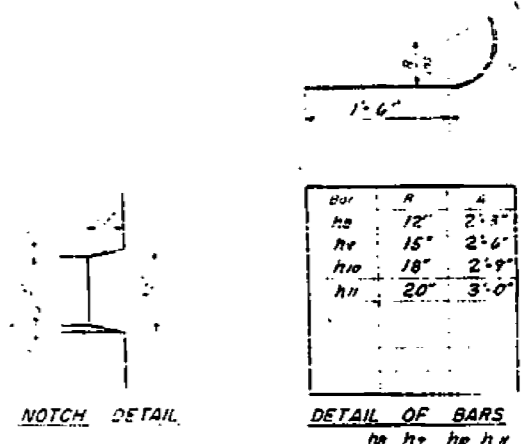
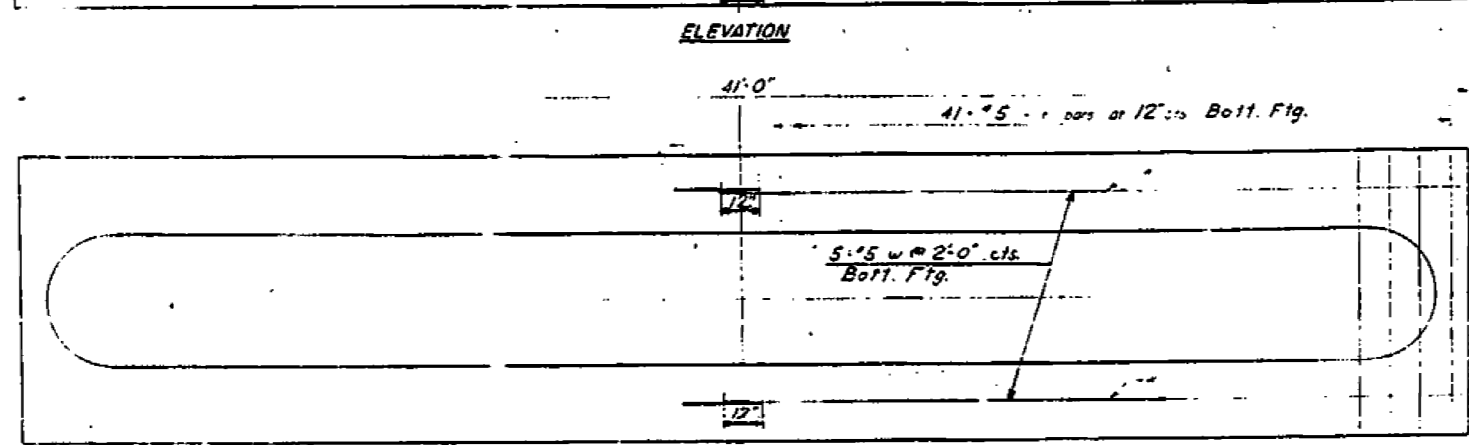
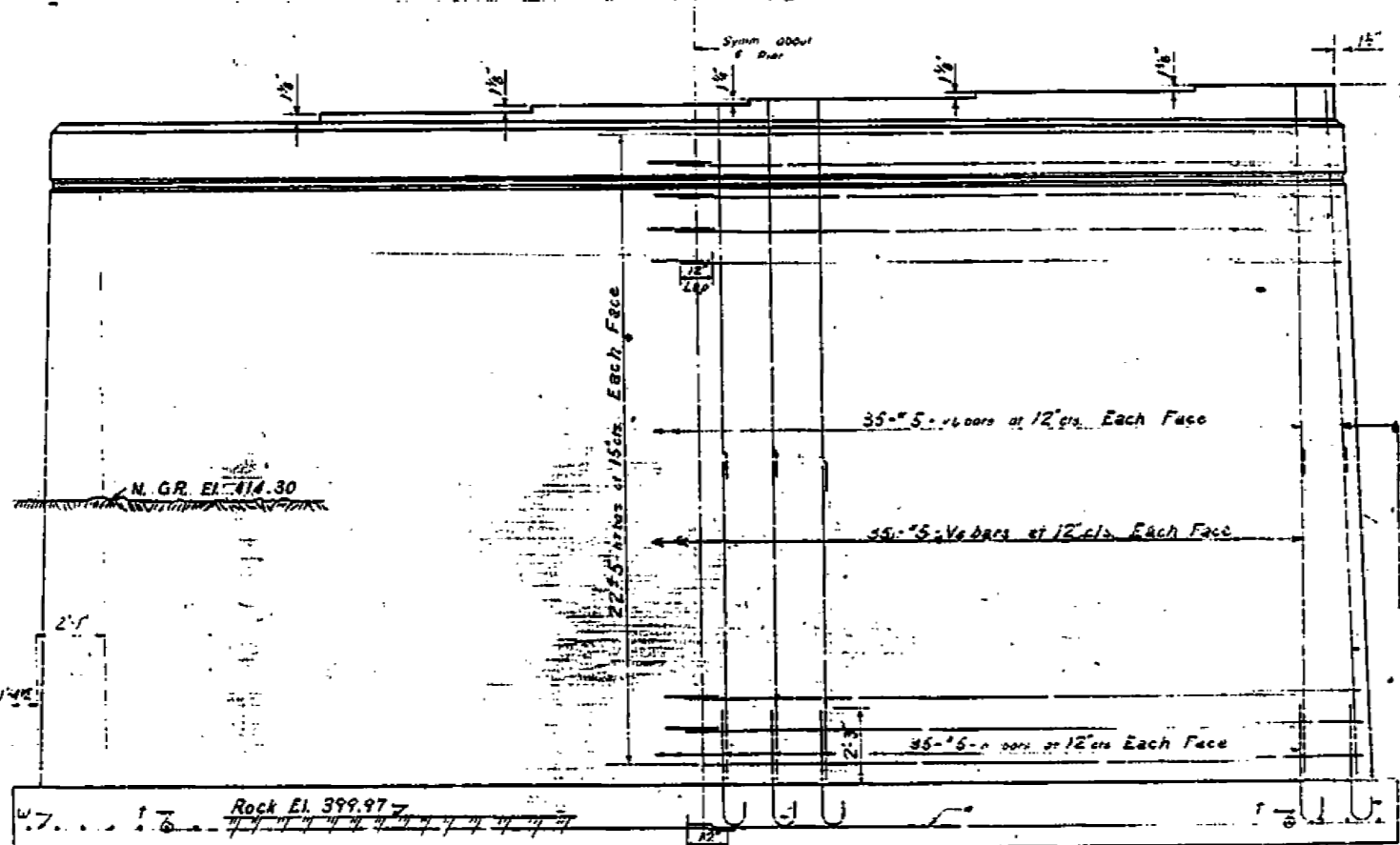
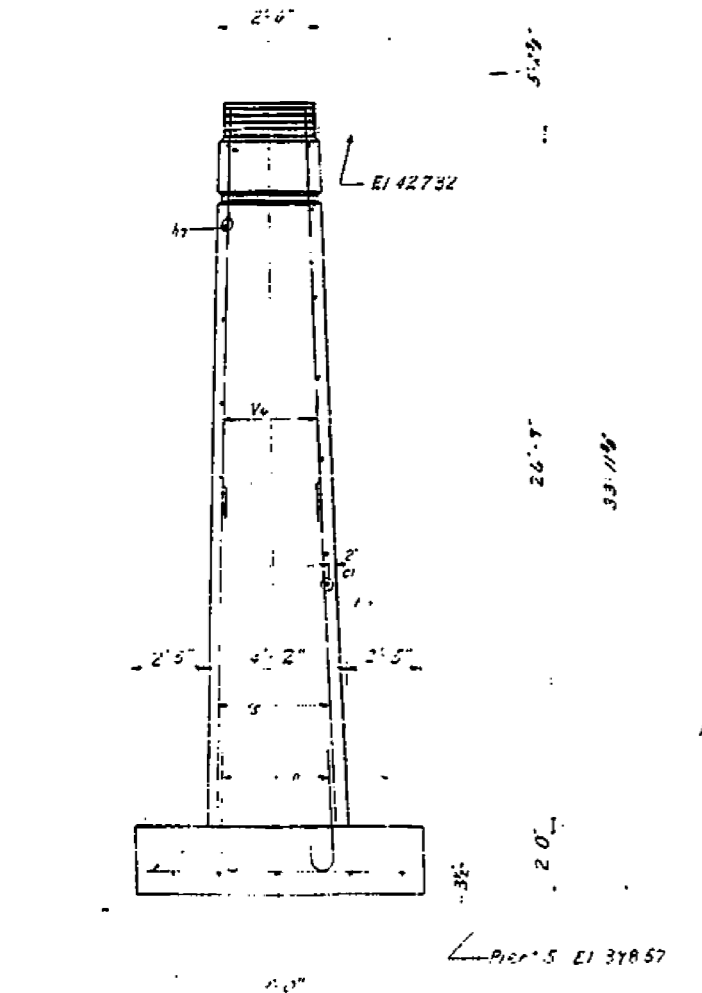
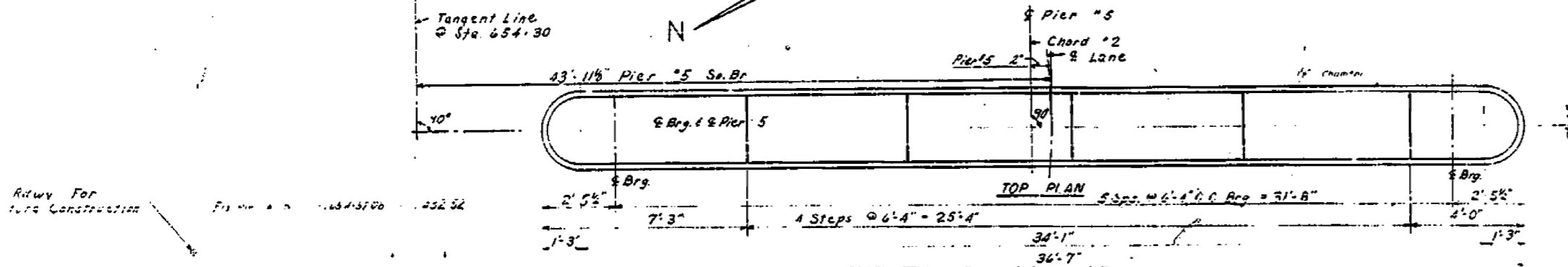
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B)	LAWRENCE	260	234
CONTRACT NO. 74177				

PRINT DRIVER = BILLY WILSON  
SCALE: 1/4" = 1'-0"  
DATE: 10/19/2018 1:53:27 PM



STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
118	51-23B-2	Lawrence	21	16



**PIER #5 S.O.B.R.**  
**BILL OF MATERIAL**

Bar No.	Size	Length	Shape
96	#5	17'-6"	
24	#5	3'-0"	
24	#5	4'-0"	
20	#5	4'-3"	
20	#5	4'-0"	
80	#5	4'-3"	
41	#5	8'-4"	
80	#5	15'-9"	
60	#5	12'-3"	
10	#5	20'-11"	

340 R Concrete      149.8  
 225 Class A Excav for Struct. Cu Yd.      255  
 77 Class B Excav for Struct. Cu Yd.      77  
 19 Rock Excav. for Struct. Cu Yd.      19

**PIER #5 OF SOUTH BRIDGE**  
F.R.I. RT. 8-SECT. 51-23B-2  
LAWRENCE COUNTY  
STA. 654+30

SEP 26 1958  
 James T. Ryburn  
 Robert B. Bartelmeign

PRINT DRIVER: B. WILSON  
SCALE: 1/4" = 1'-0"  
DATE: 10/19/2018



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667 / 1"	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:53:47 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

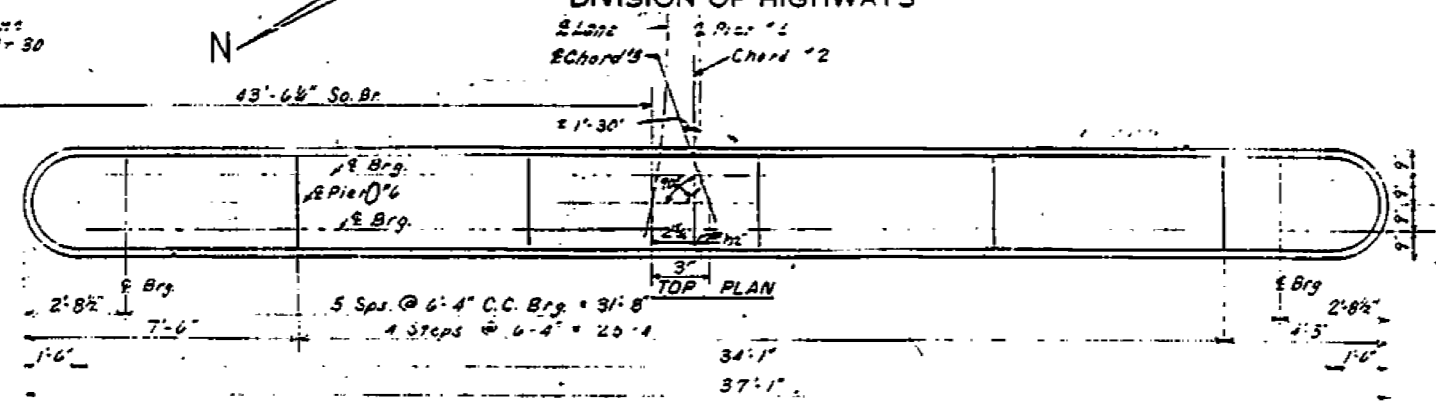
EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD)/SN051-0066(NEW)  
SCALE: SHEET NO. 12 OF 22 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	236
CONTRACT NO. 74177			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

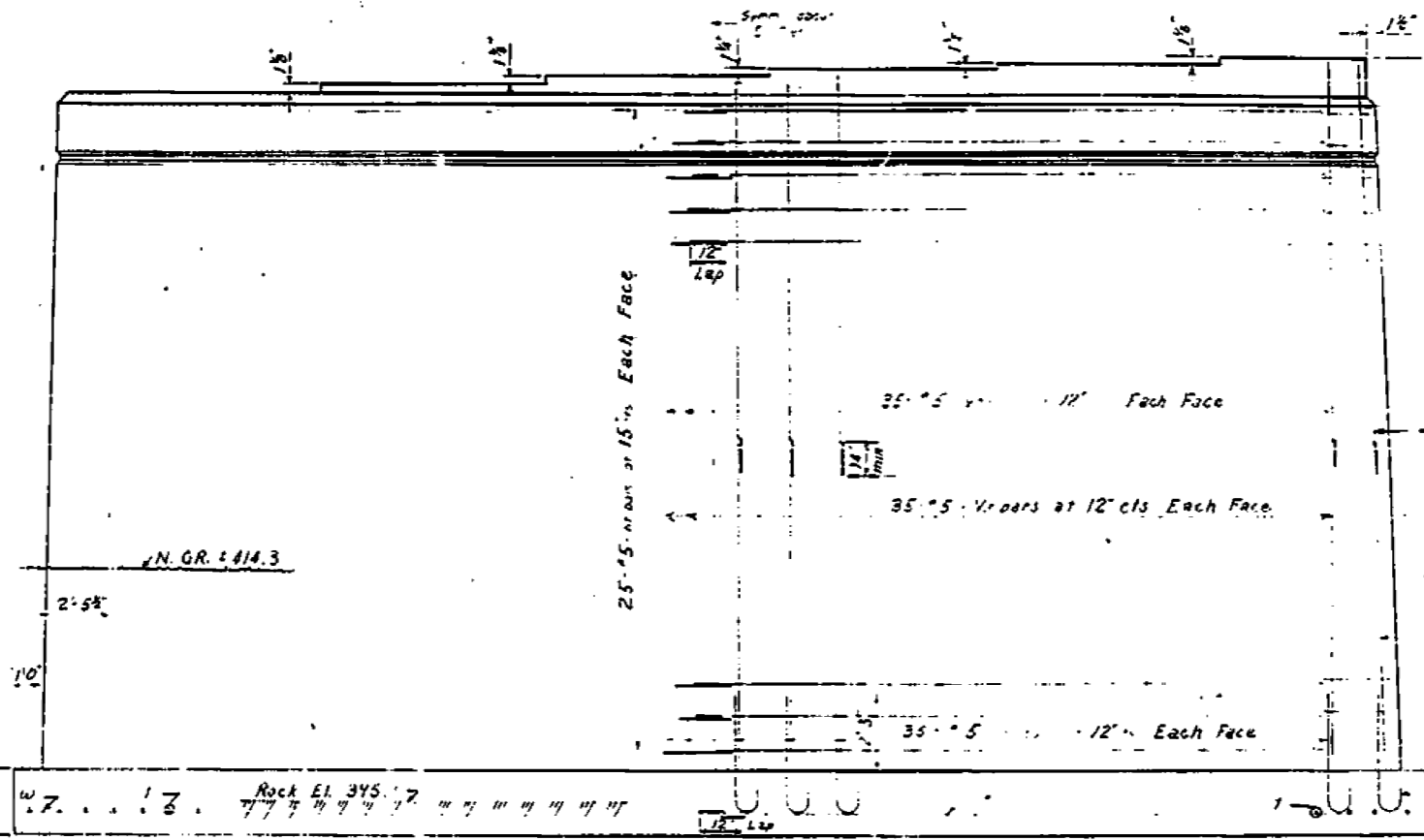
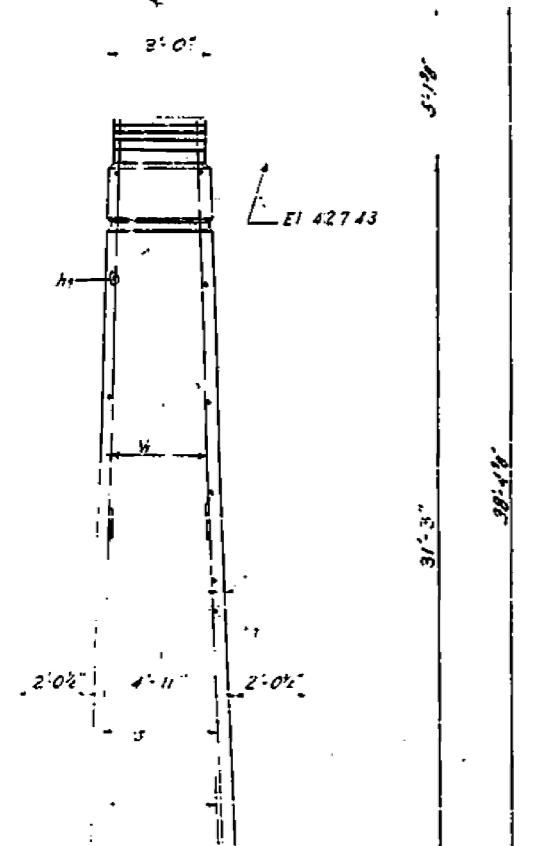


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

DATE	12
BY	12
PROJECT	12



± Rdwy For Future Construction  
Fig. No. 6 655-045B 432.54



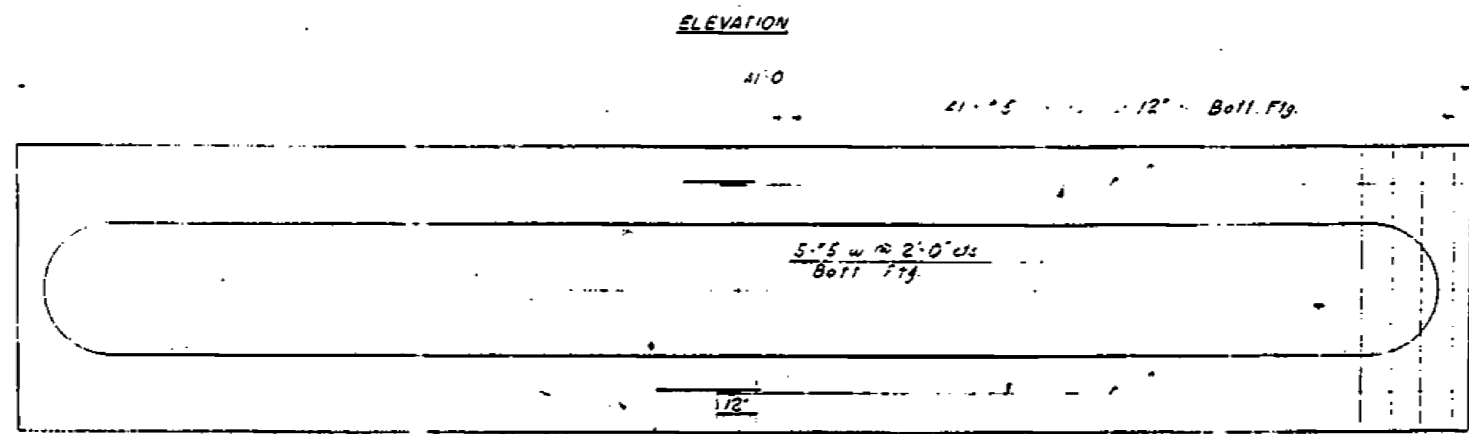
DETAIL OF BARS

h1	15"	2'-0"
h2	18"	2'-0"
h3	20"	2'-0"
h4	22"	3'-0"

PIER #6 SO. BR.

h1	100"	5"	17'-6"
h2	24"	5"	4'-0"
h3	24"	5"	4'-3"
h4	24"	5"	5'-5"
h5	20"	5"	4'-0"
h6	80"	5"	4'-3"
h7	41"	5"	5'-9"
h8	80"	5"	15'-9"
h9	80"	5"	17'-0"
h10	10"	5"	20'-11"

Class A Excer for Street Cu. Yd. 235  
Class B Excer for Street Cu. Yd. 182  
Class C Excer for Street Cu. Yd. 12

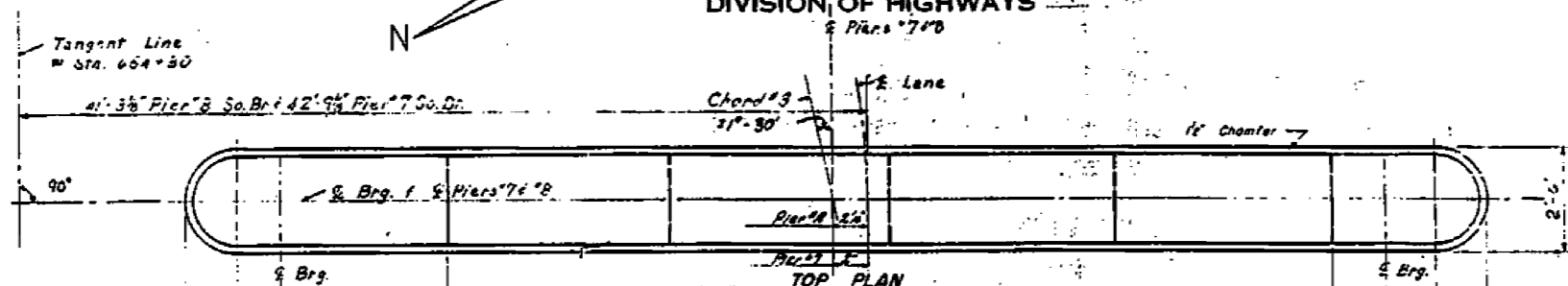


SEP 26 1958  
James H. Rayburn  
James H. Rayburn

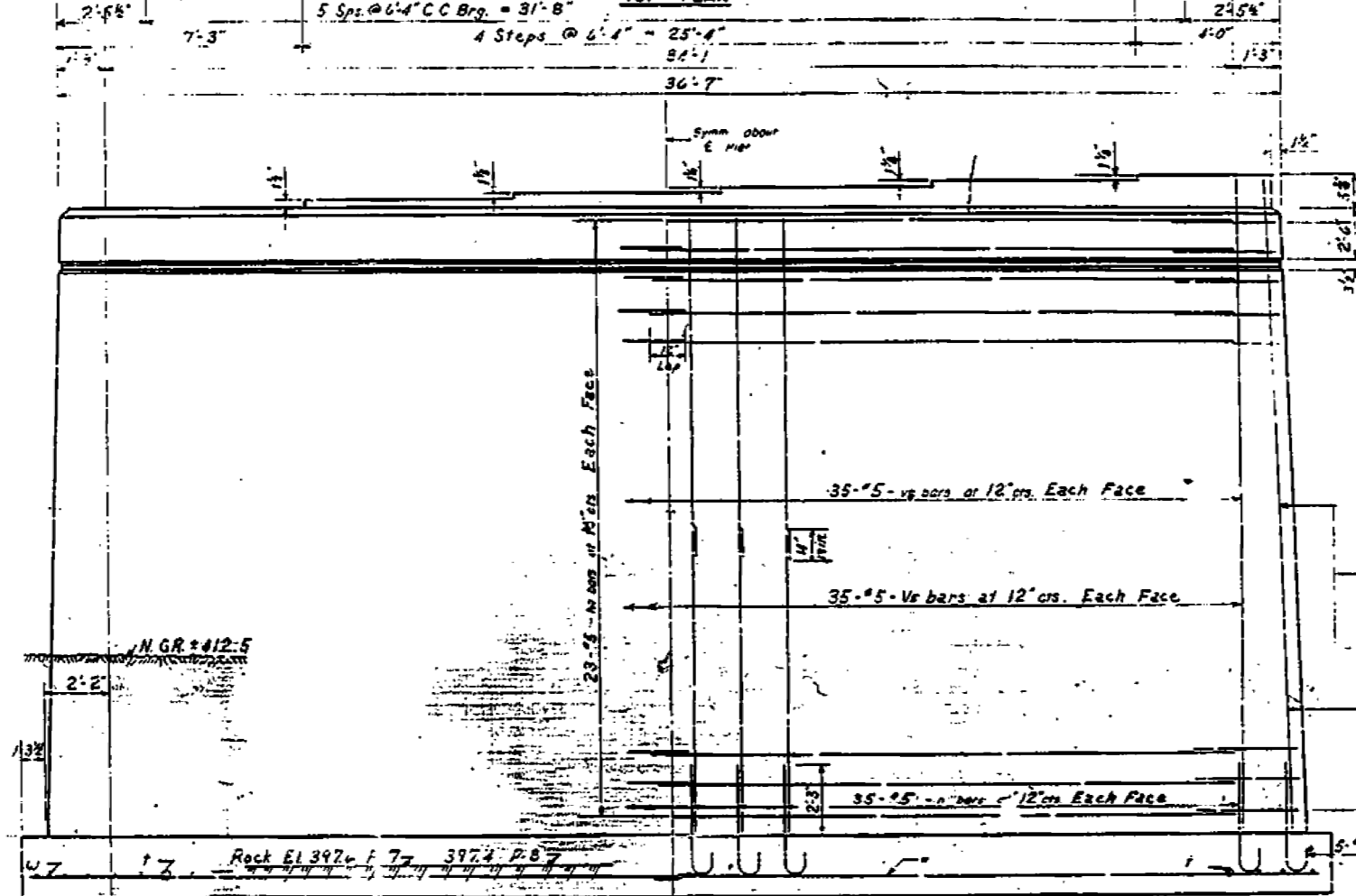
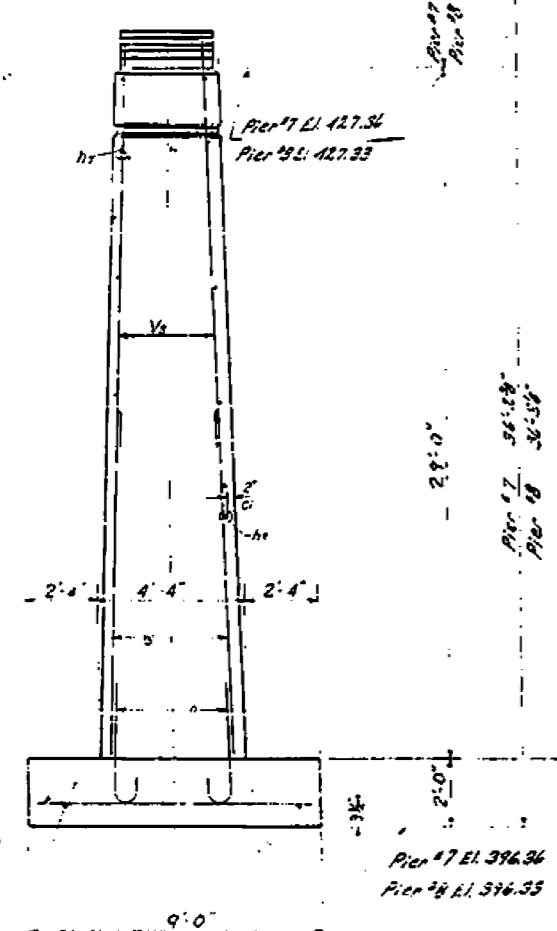
PIER #6 SOUTH BRIDGE  
F.A.I. RT. 8 - SECT. 51-23B-2  
LAWRENCE COUNTY  
STA. 654+30

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	DATE	TOTAL SHEETS	SHEET NO.
51-23B	LAURENCE	8-1	16	16



9. Rdwy For Future Construction  
Sta. 654+30  
Exp. Pier 7 Sta. 658-08.28 El. 482.57  
Exp. Pier 8 Sta. 658-08.28 El. 482.57



NOTCH DETAIL

DETAIL OF BARS

Bar	R	A
h <sub>1</sub>	12"	2'-3"
h <sub>2</sub>	15"	2'-6"
h <sub>3</sub>	18"	2'-9"
h <sub>4</sub>	20"	3'-0"

Do not show

2 PIERS 7'11" SO. BR  
BILL OF MATERIAL

Bar	Qty	Size	Length	Notes
h <sub>1</sub>	184	#5	17'-6"	
h <sub>2</sub>	48	#5	3'-9"	
h <sub>3</sub>	48	#5	4'-0"	
h <sub>4</sub>	48	#5	4'-3"	
h <sub>5</sub>	40	#5	4'-6"	
n	160	#5	4'-3"	
	82	#5	8'-9"	
u <sub>1</sub>	160	#5	15'-9"	
u <sub>2</sub>	160	#5	14'-1"	
	20	#5	20'-11"	

C. Yds. R. Concrete Cu. Yd. 326.2  
Reinforcement bars Lb. 11130  
Class A Excav. for Struct. Cu. Yd. 390  
Class B Excav. for Struct. Cu. Yd. 260  
Rock Excav. for Struct. Cu. Yd. 92

PIERS 7 & 8 OF SOUTH BRIDGE  
P.A. 1. RT. 8 - SECT. 51-23B-2  
LAURENCE COUNTY  
STA. 654+30

SEPT 26 1958  
DESIGNED BY: MTD  
DRAWN BY: DWH  
CHECKED BY: RDP  
DATE: 08/15



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667 1/4"	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:54:08 PM	DATE - 08/15	REVISED -

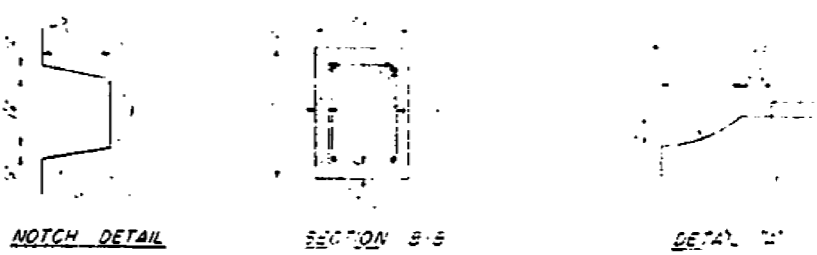
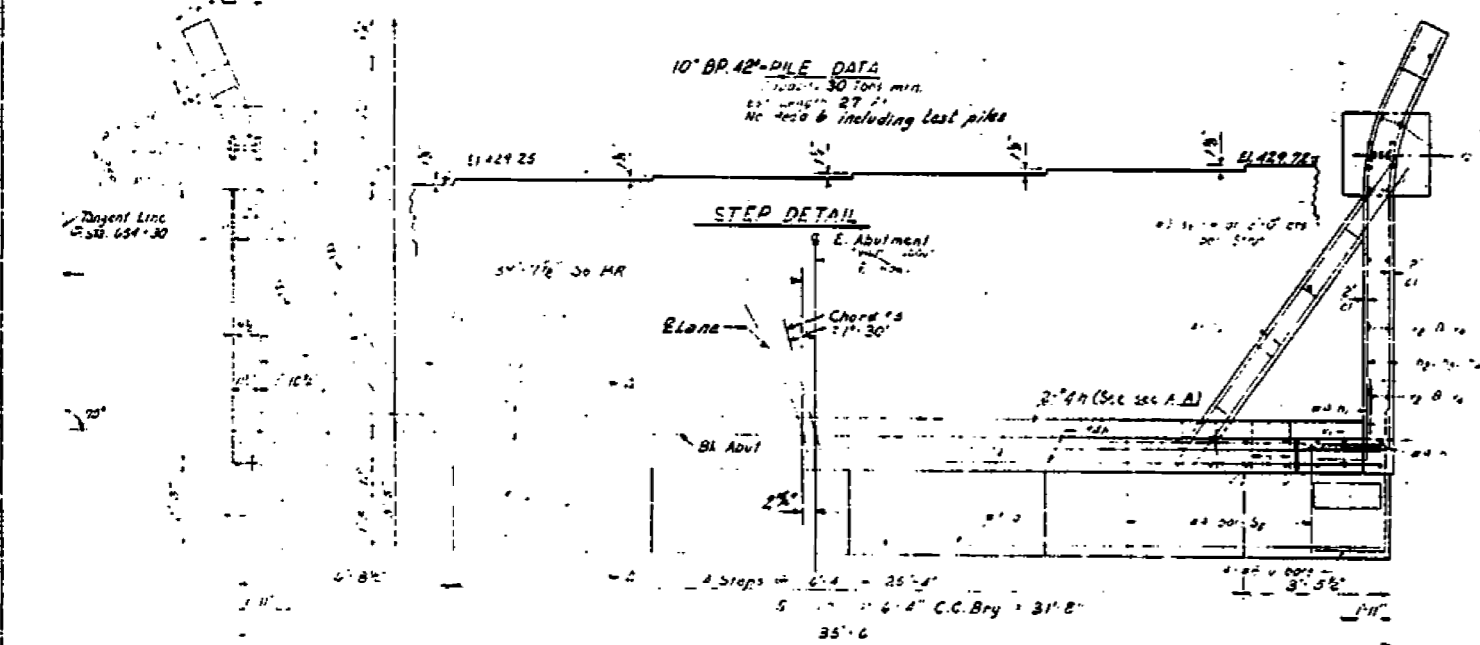
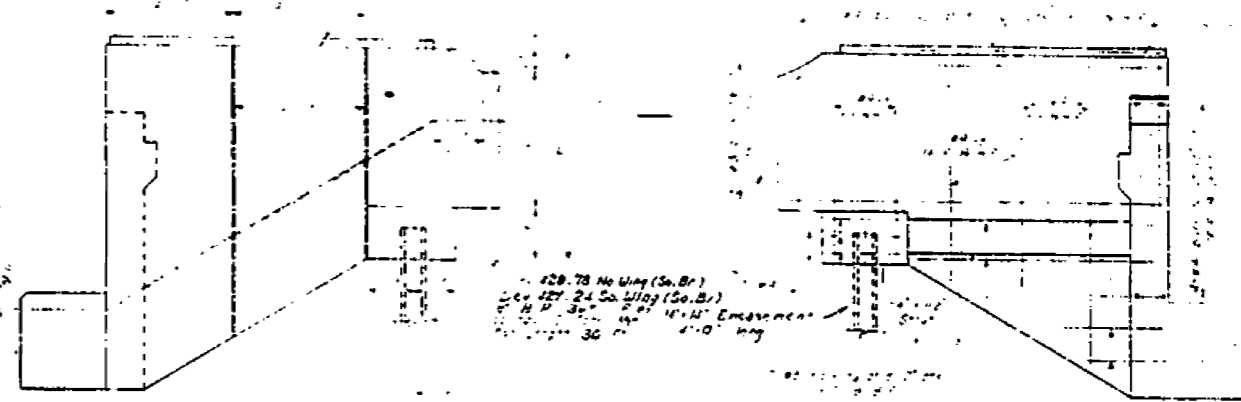
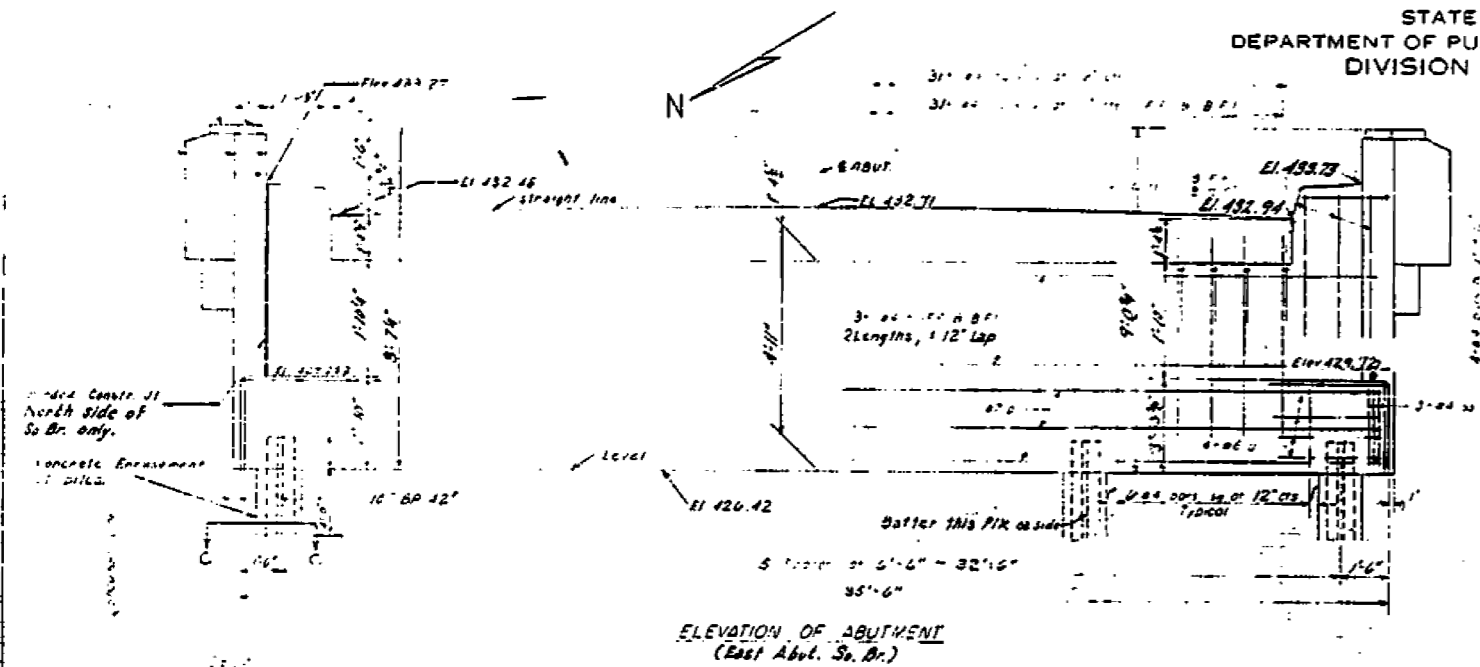
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)  
SCALE: SHEET NO. 14 OF 22 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B)	LAURENCE	260	238
CONTRACT NO. 74177			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

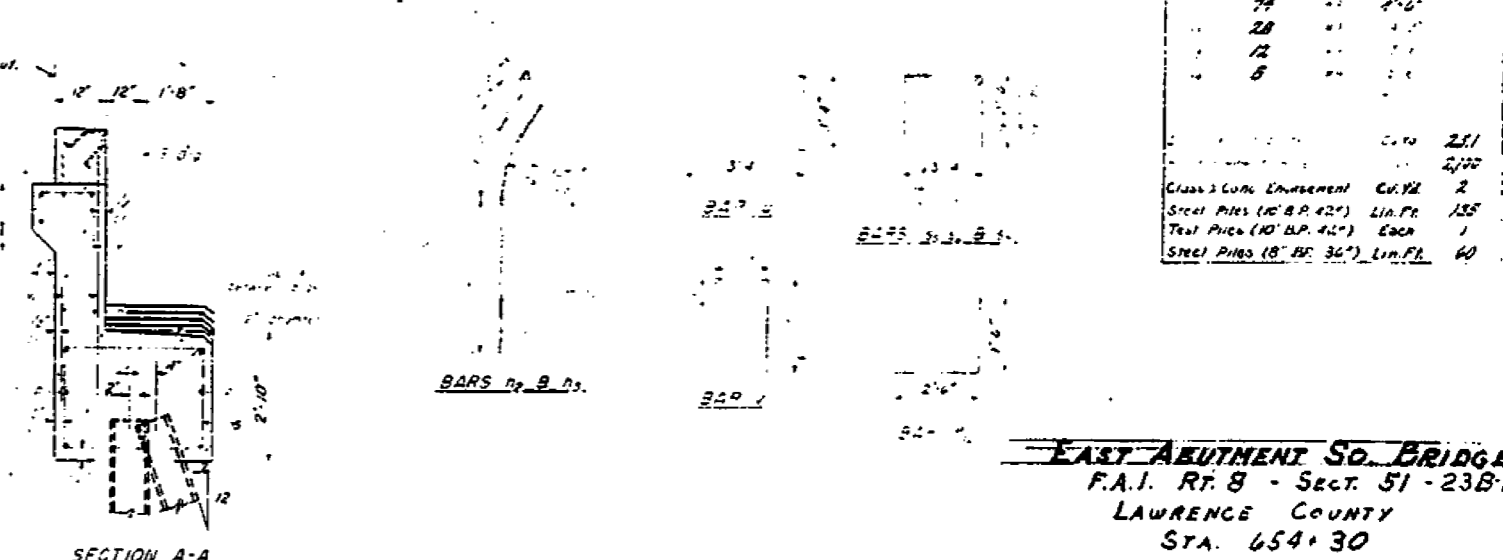
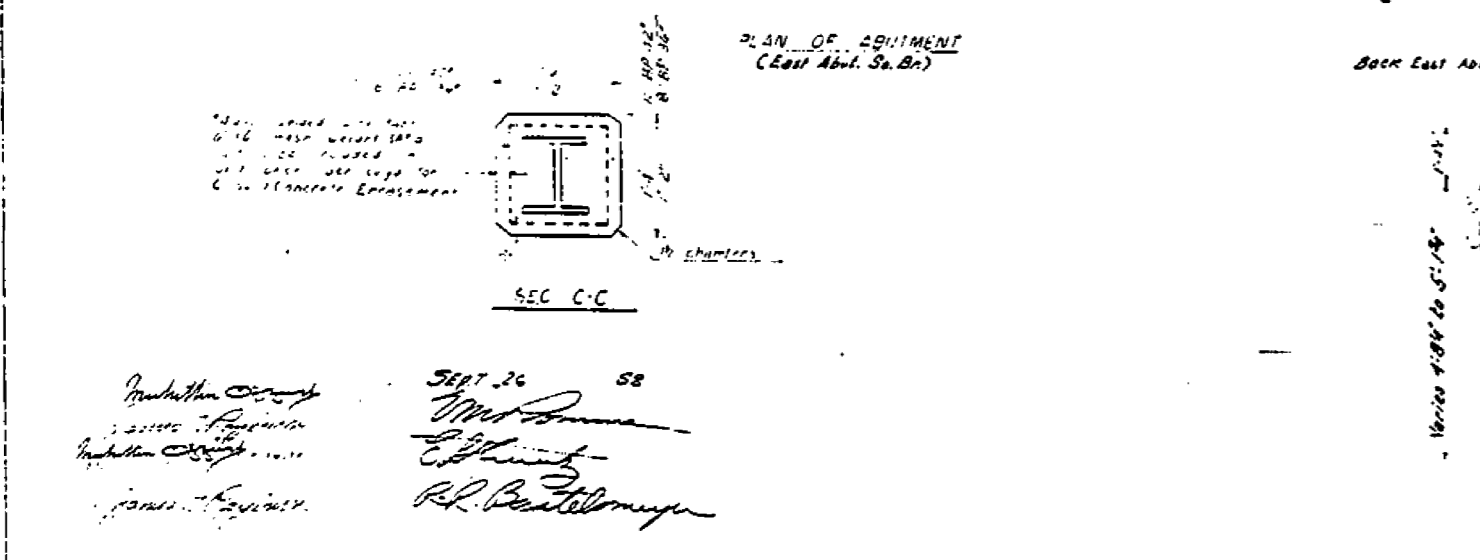
**FAI-64**

DATE	NO.	BY
10/19/2018	15	MTD



**BILL OF MATERIAL EAST ABUTMENT**

16	18'-0"
16	5'-0"
20	
8	
8	12'-0"
6	38'-0"
36	12'-4"
6	
8	
8	10'-0"
31	
74	4'-6"
28	
12	
8	
Total	
	251
Class 3 Conc. Engr. C&V2	
	2
Steel Piles (10" BP 42") Lin. Ft.	
	155
Test Piles (10" BP 42") Each	
	1
Steel Piles (18" BF 36") Lin. Ft.	
	60

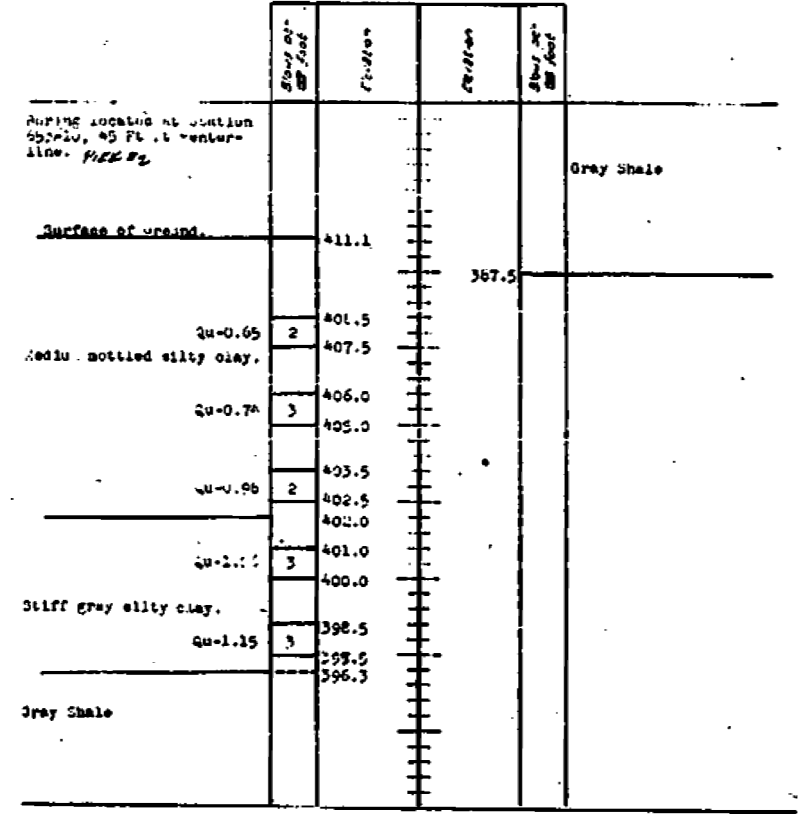
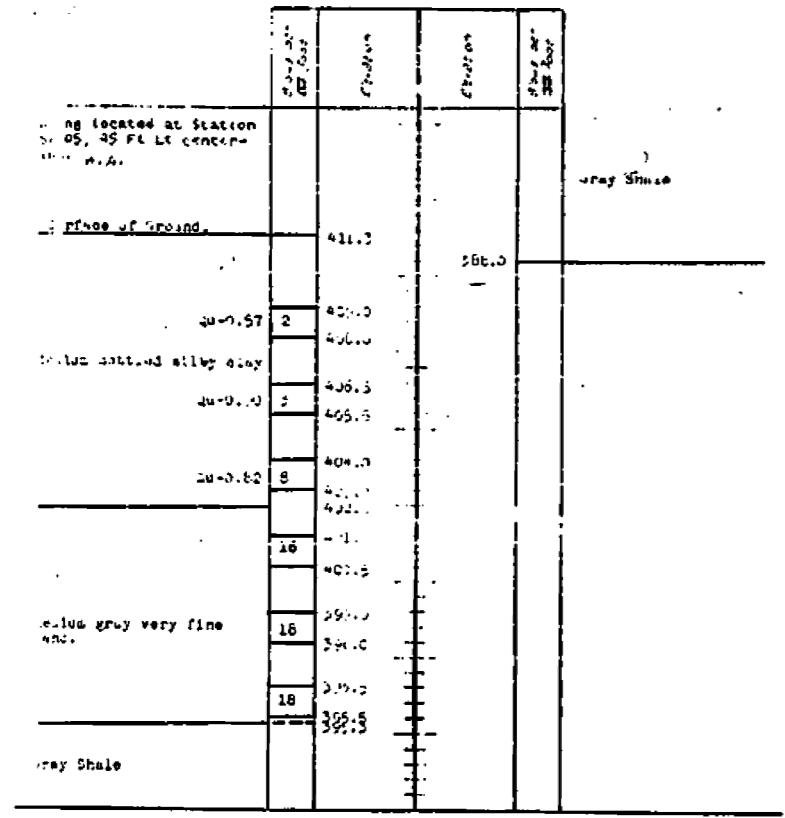


**EAST ABUTMENT SO. BRIDGE**  
F.A.I. RT. 8 - Sect. 51-23B-2  
LAWRENCE COUNTY  
STA. 654+30

Production Copy  
2/21/18  
Production Copy  
10/19/18  
JAMES KEVIN  
SEPT 26 58  
M. J. ...  
R.L. Beutelmeyer

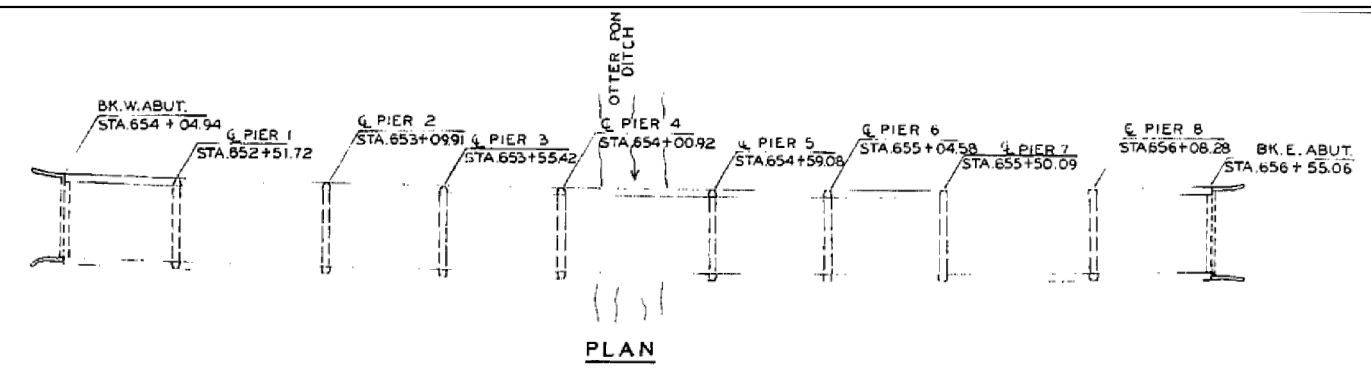
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

DATE	2/25/18	PROJECT	LAURENCE	SHEET NO.	16
BY	A.E.	DESIGNED BY		TOTAL SHEETS	22

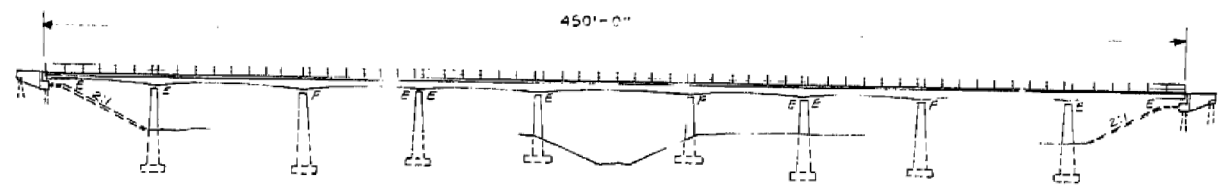




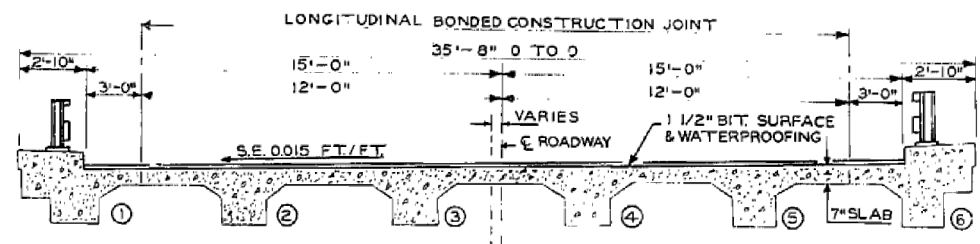
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.99	*	LAWRENCE	21	1
*DISTRICT 7 BRIDGE REPAIRS 1986-1 STRUCTURE NO. 051-0015				



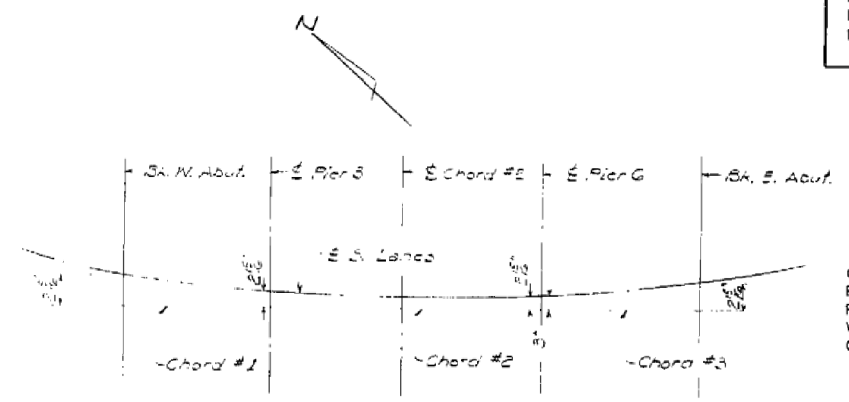
PLAN



ELEVATION



CROSS SECTION  
(LOOKING EAST)



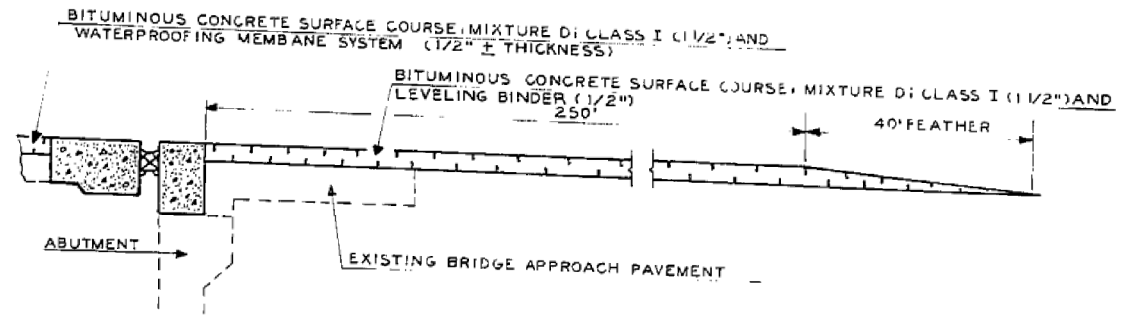
HORIZONTAL CURVE DATA  
(PI Sta. 661+20.25)

$\Delta = 27^{\circ} 34'$   
 $D = 1^{\circ} 00'$   
 $T = 1414.4'$   
 $R = 5720.65'$   
 $L = 2773.33'$   
 $SE = .015 \%$

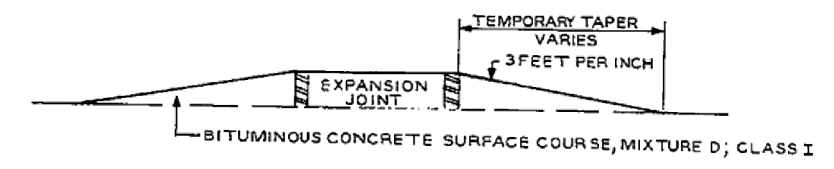
SCHEDULE OF QUANTITIES STRUCTURE NO.051-0015		
ITEM	UNIT	QUAN.
PAINT PAVEMENT MARKING LINE 4"	LIN. FT.	2320
DOWEL BARS	EACH	74
TEMPORARY PAVEMENT MARKING	LIN. FT.	228
NAME PLATES, SPECIAL	EACH	1
MOBILIZATION	L. SUM	0.2
STEEL RAIL RETROFIT	LIN. FT.	900
STEEL PLATE BEAM GUARD RAIL, TYPE A	LIN. FT.	250
TRAFFIC BARRIER TERMINAL, TYPE SA	EACH	4
EARTH EXCAVATION (WIDENING)	CU. YD.	184
DECK SLAB REPAIR (FULL DEPTH)	SQ. YD.	2.7
DECK SLAB REPAIR (PARTIAL DEPTH)	SQ. YD.	72.7
PREFORMED JOINT SEAL 2 1/2"	LIN. FT.	72
PREFORMED JOINT SEAL 4"	LIN. FT.	72
WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	1493
AGGREGATE (PRIME COAT)	TON	31
BITUMINOUS MATERIALS (PRIME COAT)	GALLON	155
BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D; CLASS I	TON	250
LEVELING BINDER (MACHINE METHOD)	TON	38
CONCRETE REMOVAL	CU. YD.	318
BRIDGE HANDRAIL REMOVAL	LIN. FT.	896
CLASS X CONCRETE	CU. YD.	29.5
REINFORCEMENT BARS	POUND	1420
EPOXY MORTAR REPAIR	EACH	26
SEEDING, CLASS II (SPECIAL)	ACRE	0.3
TRAFFIC BARRIER TERMINAL, TYPE I	EACH	4
STEEL PLATE BEAM GUARD RAIL, REMOVAL AND SALVAGE	LIN. FT.	224
REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	LIN. FT.	300
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	2235
TRAFFIC CONTROL AND PROTECTION, STANDARD 2309	EACH	1
AGGREGATE SHOULDERS, TYPE A 6"	SQ. YD.	644
BITUMINOUS SHOULDERS 8"	SQ. YD.	387
PAVEMENT REMOVAL AND BITUMINOUS REPLACEMENT, TYPE II 10"	SQ. YD.	22
PAVEMENT REMOVAL AND PORTLAND CEMENT CONCRETE REPLACEMENT, TYPE II 10"	SQ. YD.	69

GENERAL NOTES

THE WORK INCLUDED ON STRUCTURE NO.051-0015 CONSISTS OF BRIDGE DECK REPAIRS ON A 9 SPAN STRUCTURE CARRYING F.A. ROUTE 99 OVER OTTER POND DITCH AT LAWRENVILLE; PARTIAL AND FULL DEPTH PATCHING; REPLACING EXPANSION JOINTS; REMOVING AND RECONSTRUCTING ABUTMENT BACKWALLS; REPAIRING SAFETY WALKS; CONSTRUCTING WATERPROOFING MEMBRANE SYSTEM; CONSTRUCTING BITUMINOUS RESURFACING; AND ALL OTHER INCIDENTAL WORK NECESSARY TO COMPLETE THIS SECTION.



DETAIL OF RESURFACING AND FEATHERS AT ABUTMENTS



TEMPORARY BITUMINOUS TAPERS AT EXPANSION JOINTS

Added Horiz. Curve Data and F & E  
Struct. Steel to quantities: KPS 10-24-85



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667" / 1"	CHECKED - RDP	REVISED -
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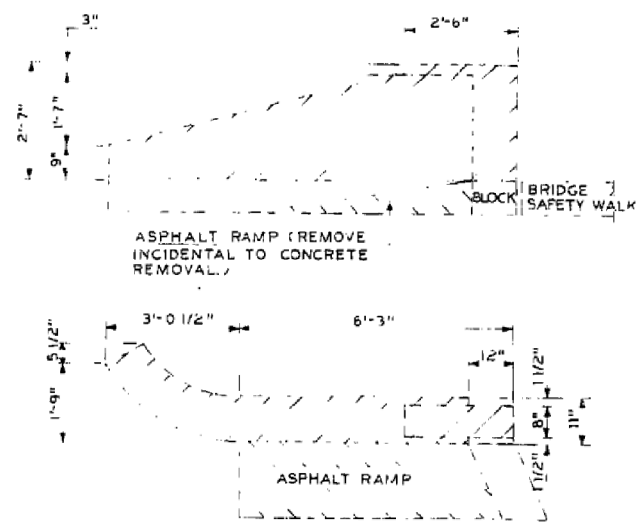
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)

SCALE: SHEET NO. 18 OF 22 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	242
CONTRACT NO. 74177				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

END POST REMOVAL DETAIL



SCHEDULE OF END POST REMOVAL	
CONCRETE REMOVAL	2.3 CU.YD.

REMOVE EXISTING BRIDGE HANDRAIL, BOLTS AND SHIM PLATES

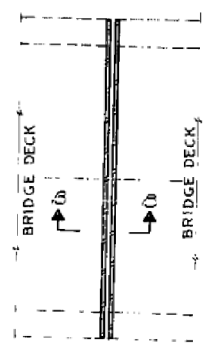
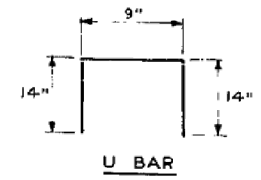


FILL BOLT HOLES IN HANDRAIL ANCHOR DEVICES WITH NON-SHRINK, NON-METALLIC, NON-CORROSIVE CONCRETE GROUT. (COST INCIDENTAL TO BRIDGE HANDRAIL REMOVAL.)

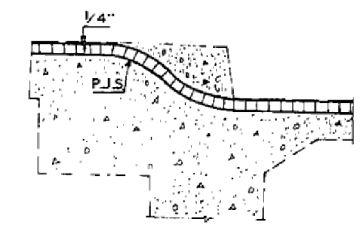
QUANTITY  
 BRIDGE HANDRAIL REMOVAL-896LINF.T

BRIDGE HANDRAIL REMOVAL DETAIL

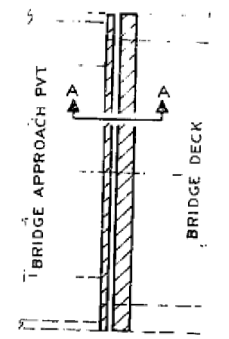
BAR LIST				
BAR	SIZE	NO.	LENGTH	SHAPE
h	# 5	8	36'-6"	—
u	# 5	74	3'-1"	—



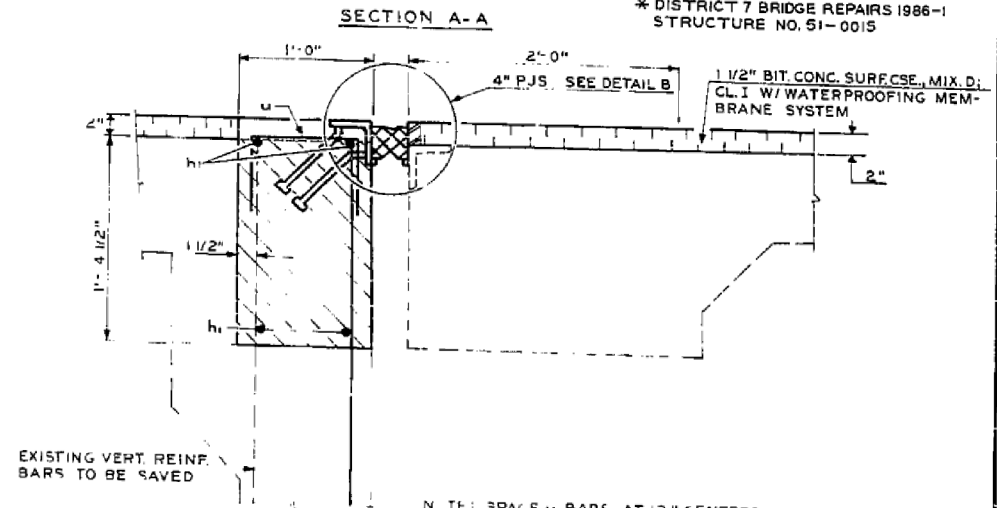
LOCATION OF EXPANSION JOINTS AT PIERS 3 & 6



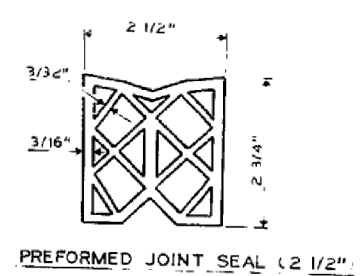
CURB SEALER TREATMENT



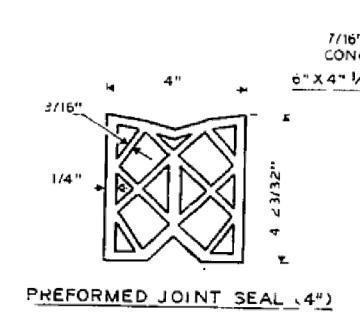
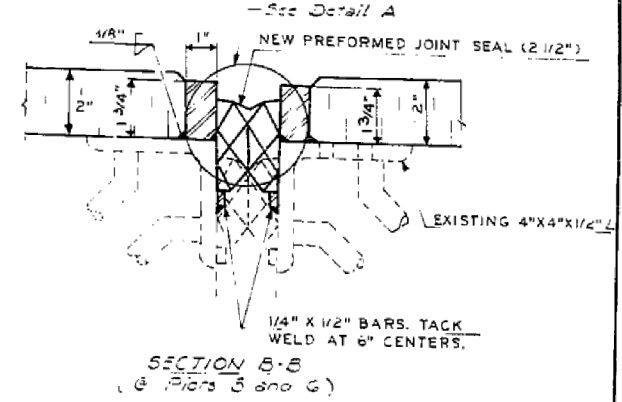
LOCATION OF EXPANSION JOINTS OF ABUTMENTS



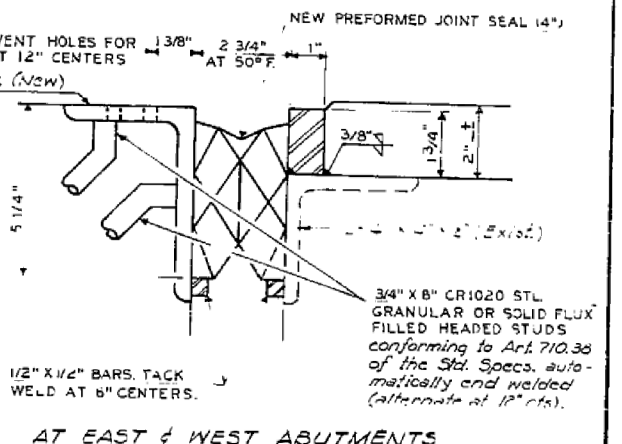
NOTE: SPACE U BARS AT 12" CENTERS  
 LAP BARS h, A MINIMUM OF 1'-6"



DETAIL A  
 EXPANSION JOINTS AT PIERS 3 AND 6



DETAIL B  
 EXPANSION JOINTS AT EAST AND WEST ABUTMENTS



AT EAST & WEST ABUTMENTS

ABUTMENT & PIER QUANTITIES	
CLASS X CONCRETE	29.5 CU.YD.
CONCRETE REMOVAL	31.8 CU.YD.
REINFORCEMENT BARS	1420 LBS.
PREFORMED JOINT SEAL 2 1/2"	72 LINF.T.
PREFORMED JOINT SEAL 4"	72 LINF.T.
FURNISHING AND ERECTING STRUCTURAL STEEL	2235 LBS.

Added Sec. B-B and revised notes to filled headed studs: KPS 10.24.85

PRINT DRIVER: W:\LAWRENCE\PROJECTS\1000\02\100002.dwg  
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USER NAME = kah	DESIGNED - MTD	REVISED -
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

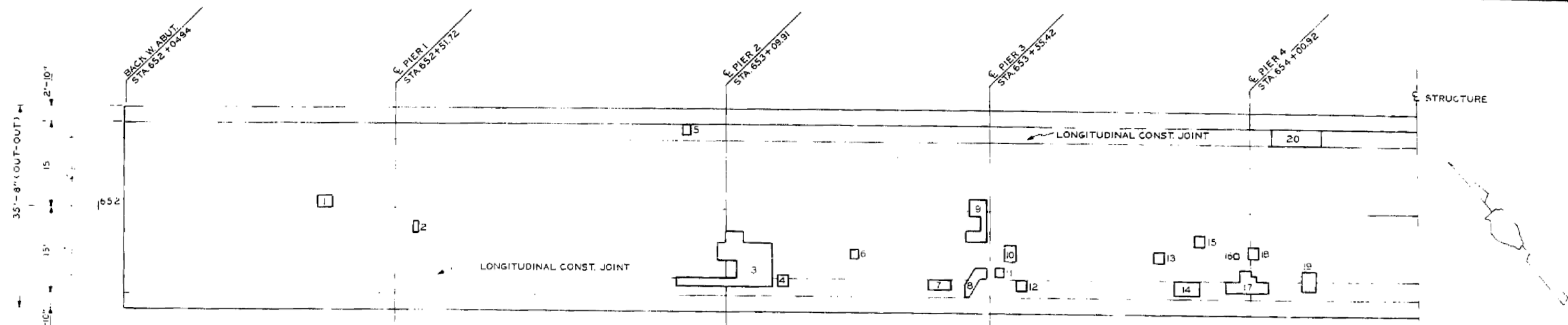
EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
 SN051-0015(OLD) / SN051-0066(NEW)

SCALE: SHEET NO. 19 OF 22 SHEETS STA. TO STA.

F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 243
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	CONTRACT NO. 74177	

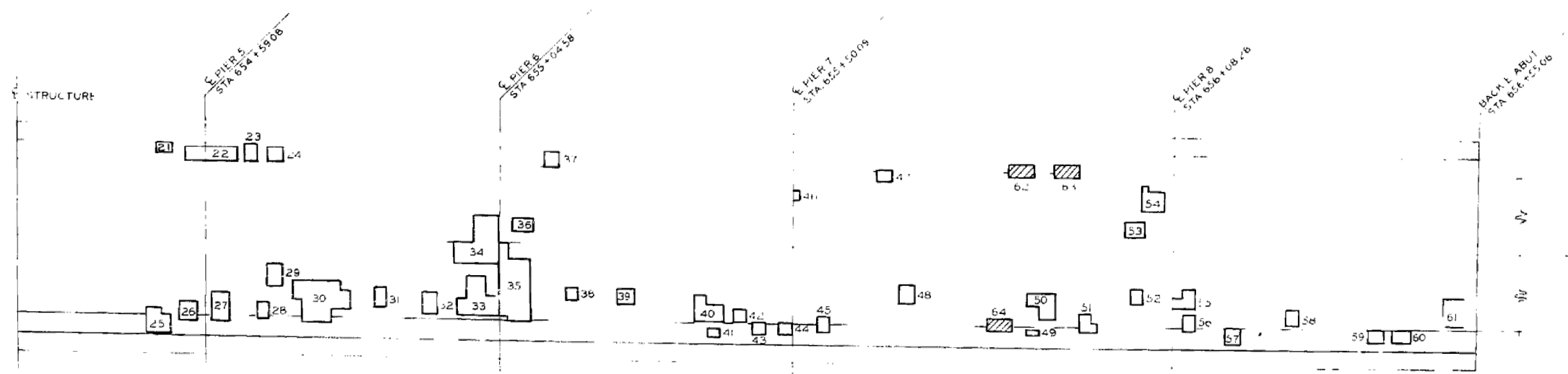






□ - PARTIAL DEPTH PATCH  
 ▨ - FULL DEPTH PATCH

NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.	NO	SIZE	SQ.FT.
1	2.5x2	5	8	VAR	11.5	15	2x2	4	22	2x8	16	29	2.5x3.5	8.75	36	3.5x2	7	43	2x2	4	50	VAR	14	57	2.5x2.5	6.25	64	2x4	8
2	1x2	2	9	VAR	18.5	16	1x1	1	23	2.5x2	5	30	VAR.	44.75	37	2.5x2.5	6.25	44	2x2	4	51	VAR	15	58	2.5x2	5			
3	VAR	78	10	2x3	6	17	VAR	20	24	2.5x2	5	31	2x3	6	38	2x2	4	45	2.5x2	5	52	2.5x2	5	59	2.5x2	5			
4	2x2	4	11	1.5x1.5	2.25	18	2x2	4	25	VAR.	13.75	32	2.5x3.5	8.75	39	2.5x3	7.5	46	1.5x1	1.5	53	2.5x3	7.5	60	2x3	6			
5	1.5x2	3	12	2x2	4	19	2.5x3.5	8.75	26	3x3	9	33	VAR.	27.75	40	VAR	14.25	47	2x2	4	54	VAR	11.5	61	4.5x4	16			
6	1.5x1.5	2.25	13	2x2	4	20	2.5x3.5	8.75	27	4.5x3	13.5	34	VAR.	38.75	41	1.5x2	3	48	2.5x3	7.5	55	VAR	9.25	62	2x4	8			
7	2x4	8	14	2.5x4.5	11.25	21	2.5x2	5	28	2.5x2	5	35	VAR.	49	42	2x2	4	49	1x2	2	56	2.5x2	5	63	2x4	8			



PRINT DRIVER = BLOTTERS  
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USER NAME = kah	DESIGNED - MTD	REVISED -
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PLOT DATE = 10/19/2018 1:55:22 PM	DATE - 08/15	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: SHEET NO. 21 OF 22 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	245
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74177	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

Joint Size	"C" at 50°F	"D" at 50°F
2	2"	1½" min
2½	2½"	1¾" min
4	3"	2½" min

**INSTALLATION NOTES**

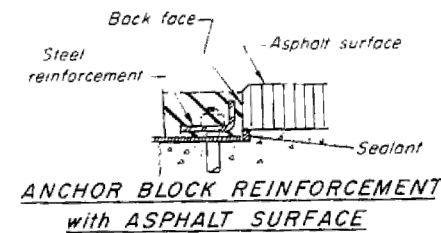
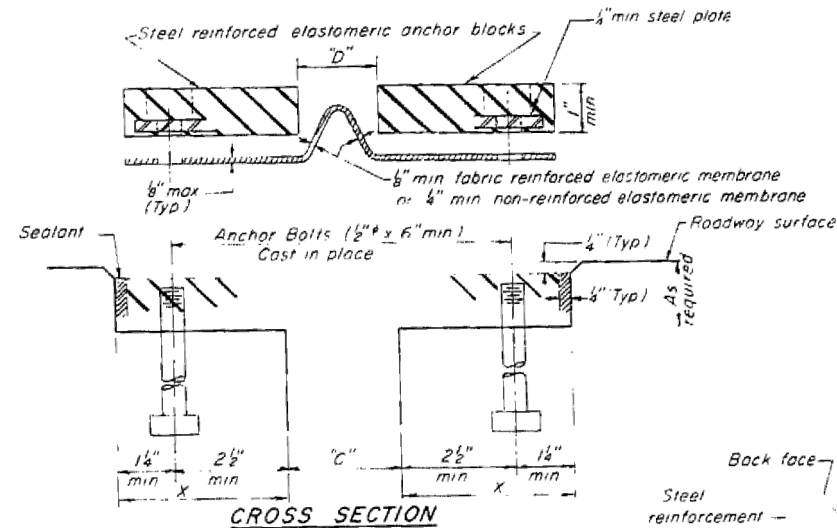
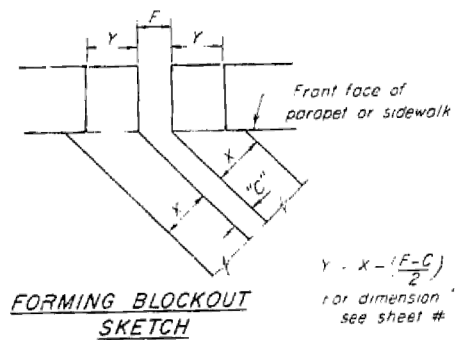
Use anchor blocks and continuous seal as anchor bolt location templates

1. Install sponge andrels into positions shown to form flap convolution
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy)
3. Install continuous seal in roadway
4. Install anchor blocks as indicated

NOTE A - Maximum spacing of anchor bolts shall be 12" centers

**SKEW LIMITATIONS**

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 30° skews. For skews greater than 30°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D" might require modification to insure a minimum clearance of 1½" from centerline anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



**GENERAL NOTES**

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be preformed with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

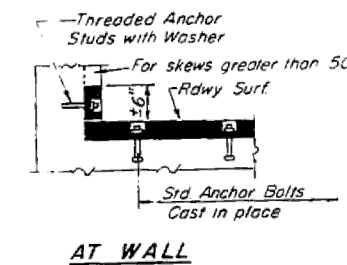
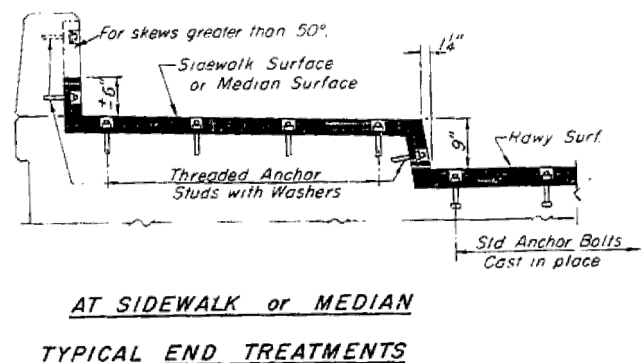
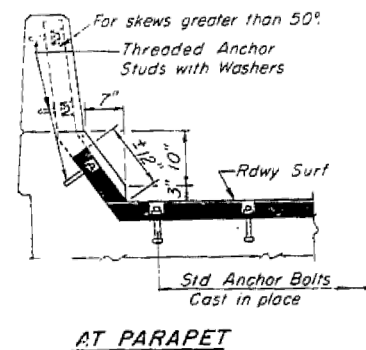
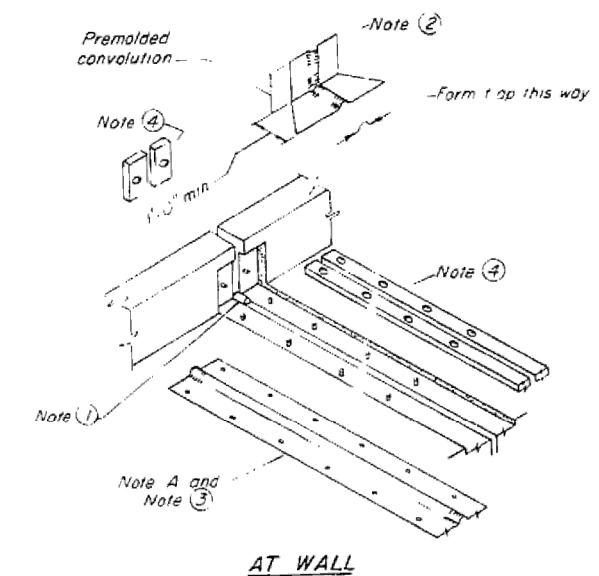
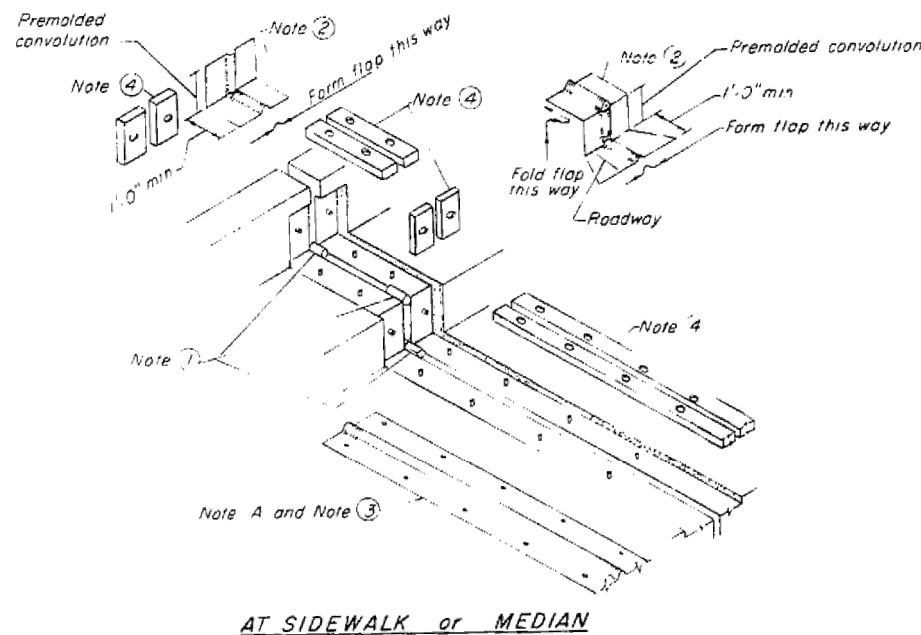
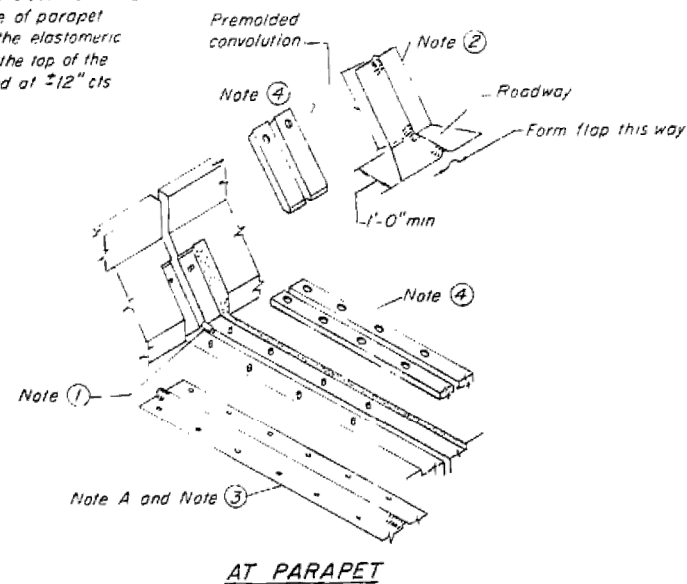
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 50307(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, class 50. Zinc-coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M294 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and testing.



**CONTINUOUS SEAL TYPE  
NEOPRENE EXPANSION JOINTS**  
For 2", 2½" and 4" Movement

**DISTRICT 7  
BRIDGE REPAIRS 1986-1**

DESIGNED	19
CHECKED	ENGINEER OF BRIDGE DESIGN
DRAWN	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	DIRECTOR OF HIGHWAYS

EJ-CS 2-1-83

PRINT DRIVER - B. LUTHERS  
SCALE NAME - 1:1  
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PLOT DATE = 10/19/2018 1:55:34 PM

DESIGNED - MTD  
DRAWN - DWH  
CHECKED - RDP  
DATE - 08/15

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
SN051-0015(OLD) / SN051-0066(NEW)**

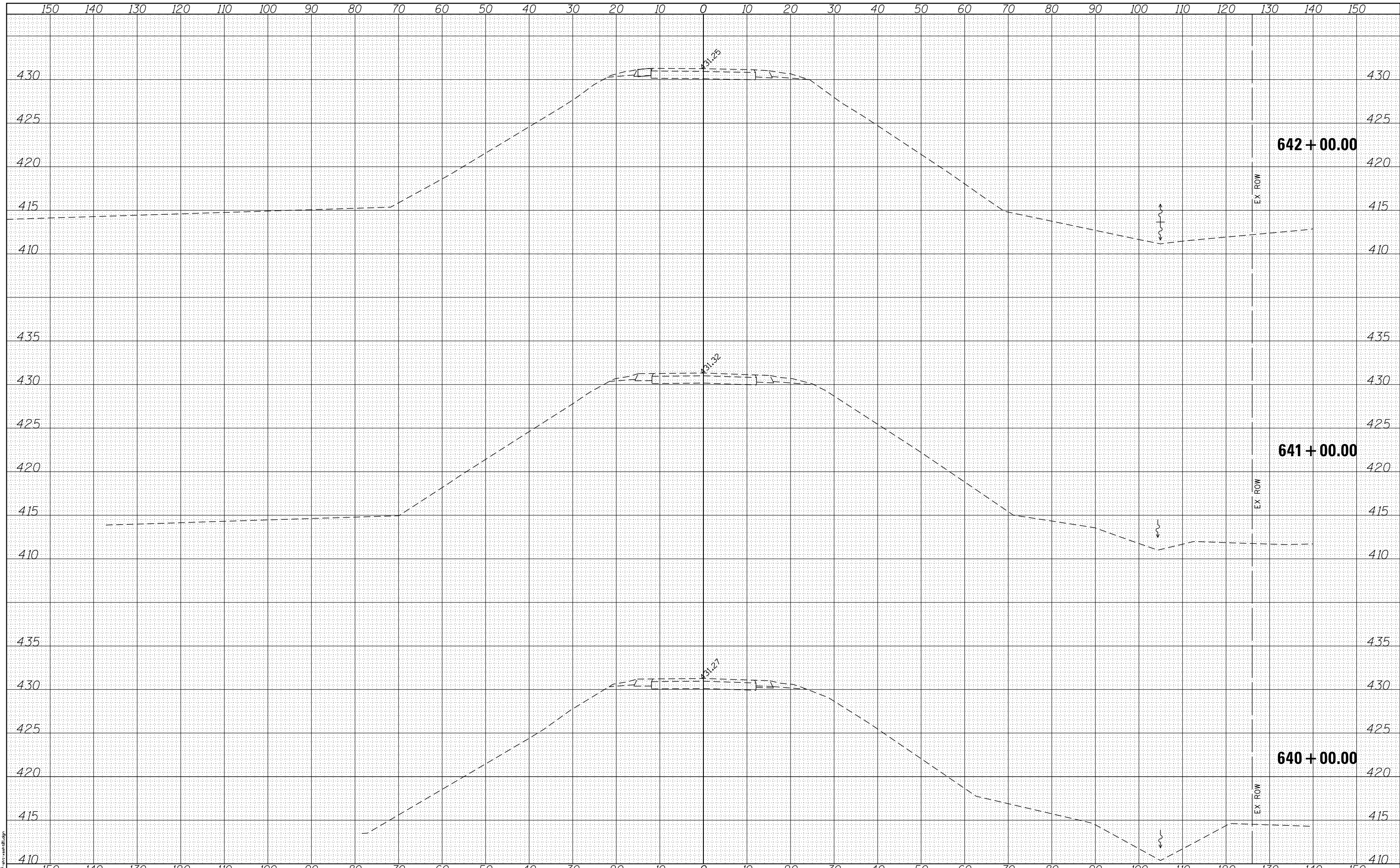
SCALE: SHEET NO. 22 OF 22 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	246
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74177	

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

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

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SCALES:	(HORIZ) 1"=20' (VERT) 1"=5'	CHECKED	- RDP	REVISED	-
PLOT DATE	10/19/2018	DATE	- 08/15	REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

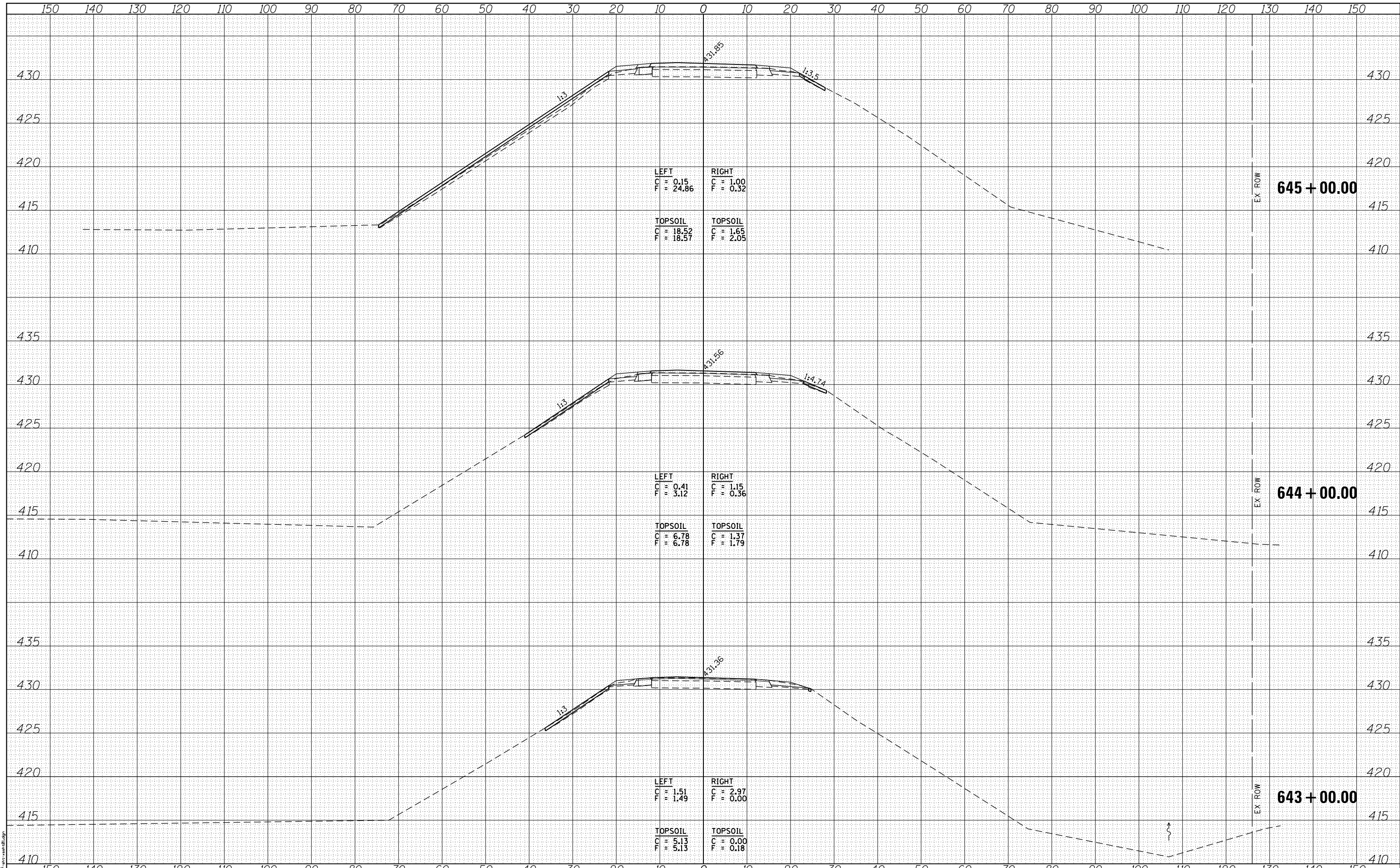
**FAP 327 (US 50) CROSS SECTIONS  
SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN    SHEET NO. 1 OF 14 SHEETS    STA. 640+05.00 TO STA. 642+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	247
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT AID			CONTRACT NO. 78177	

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

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



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SCALE: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

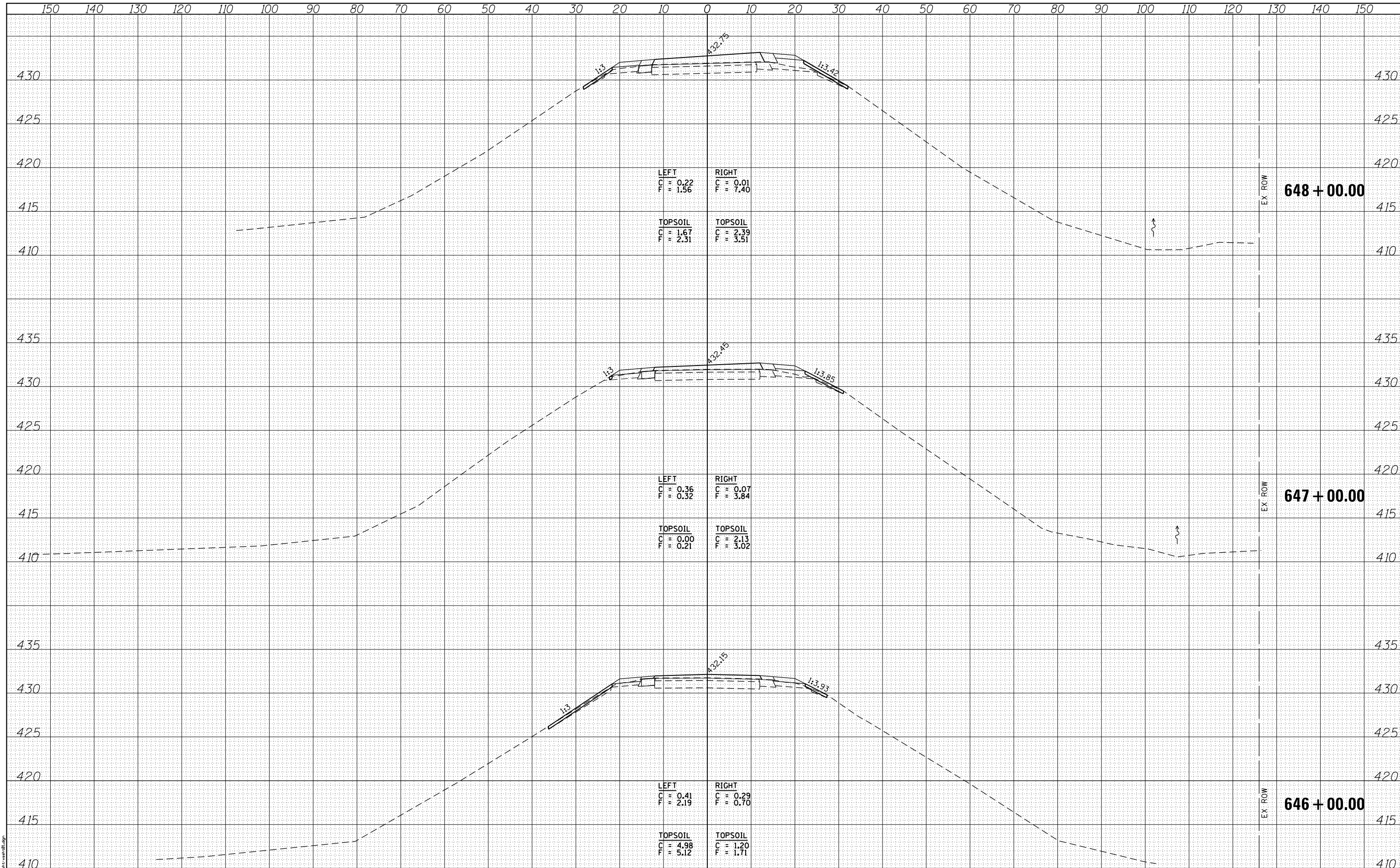
**FAP 327 (US 50) CROSS SECTIONS  
SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN	SHEET NO. 2 OF 14 SHEETS	STA. 643+00.00 TO STA. 645+00.00
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F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 248
FED. ROAD DIST. NO. 7 ILLINOIS				CONTRACT NO. 78177
FED. AID PROJECT AID				

DATE	
BY	
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NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

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



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 PLOT DATE: 10/19/2018 1:55:45 PM  
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USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -
SCALE: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE: 10/19/2018 1:55:45 PM	DATE - 08/15	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FAP 327 (US 50) CROSS SECTIONS  
 SN051-0015(OLD) / SN051-0066(NEW)**

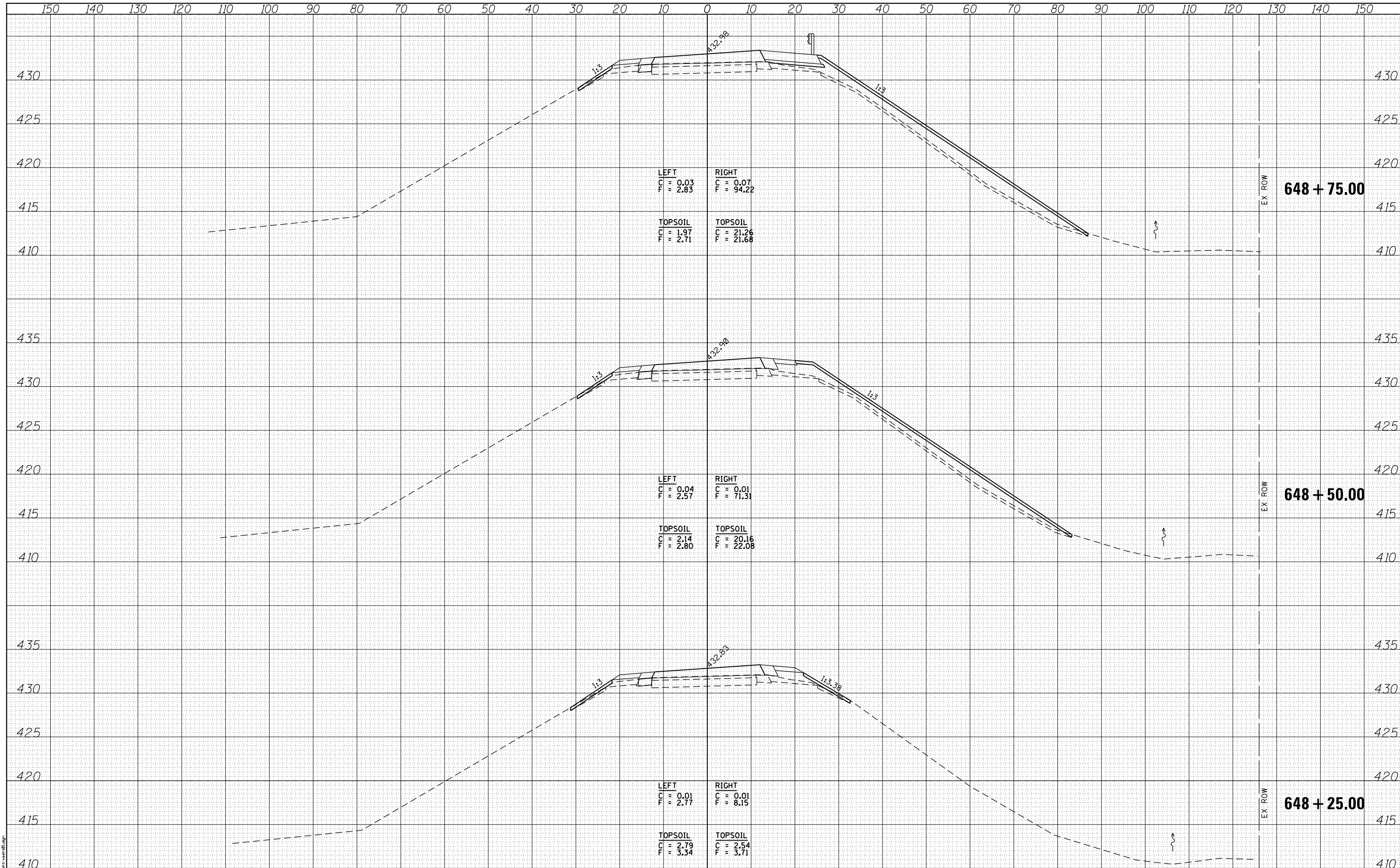
SCALE: AS SHOWN SHEET NO. 3 OF 14 SHEETS STA. 646+00.00 TO STA. 648+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	249
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT AID			CONTRACT NO. 78177	

DATE	
BY	
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NO.	AREAS CHECKED

DATE	
BY	
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NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

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 CHECKED - RDP  
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REVISED -  
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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FAP 327 (US 50) CROSS SECTIONS  
 SN051-0015(OLD) / SN051-0066(NEW)**

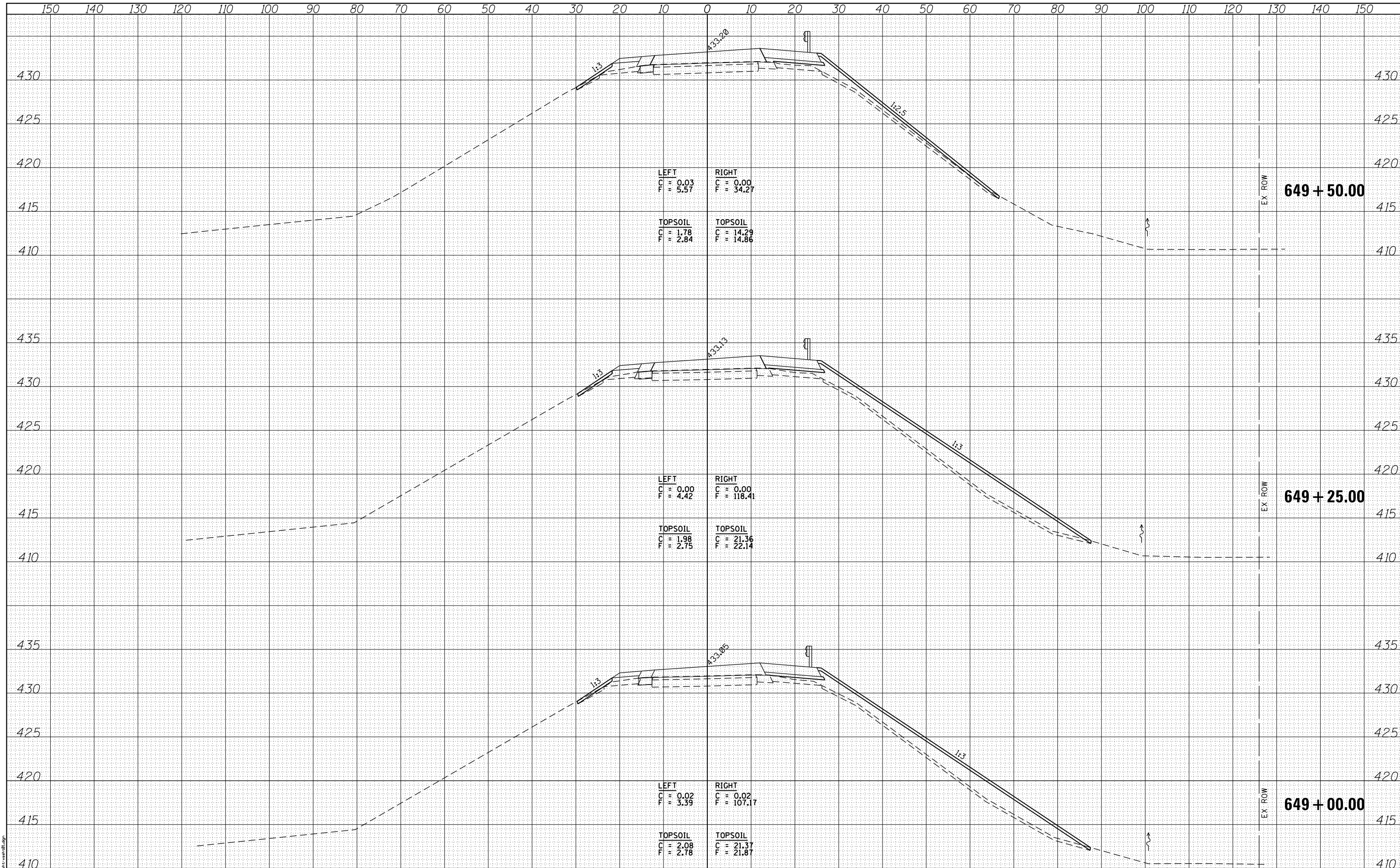
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	250
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 78177	
FED. AID PROJECT AID				



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

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



PRINT DRIVER: R. L. BRYAN  
 PLOT DATE: 10/19/2018 1:55:46 PM  
 PLOT FILE: I:\71777\101\101\101.dgn



USER NAME = kah	DESIGNED - MTD	REVISED -
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SCALE: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE: 10/19/2018 1:55:46 PM	DATE - 08/15	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

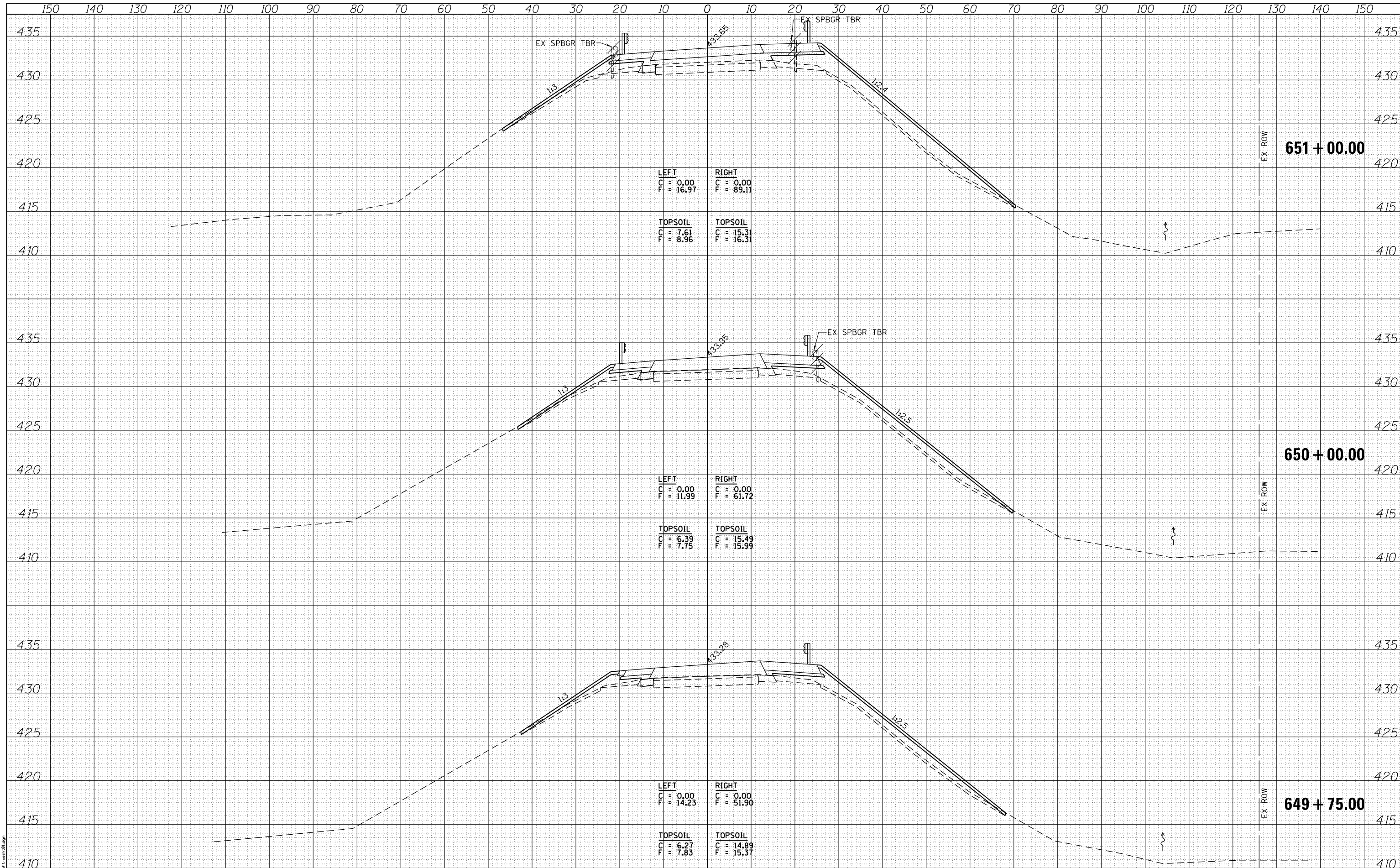
**FAP 327 (US 50) CROSS SECTIONS  
SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN SHEET NO. 5 OF 14 SHEETS STA. 649+00.00 TO STA. 649+50.00

F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 251
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 78177	
FED. AID PROJECT AID				

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

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



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 PLOT DATE: 10/19/2018 1:55:46 PM



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DESIGNED	- MTD
ESCA PROJECT NO.	1000.02
DRAWN	- RJT/HAS
SCALES: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP
REVISIONS	REVISED -
DATE	- 08/15
REVISIONS	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FAP 327 (US 50) CROSS SECTIONS  
 SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN SHEET NO. 6 OF 14 SHEETS STA. 649+75.00 TO STA. 651+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	252
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT AID			CONTRACT NO. 78177	

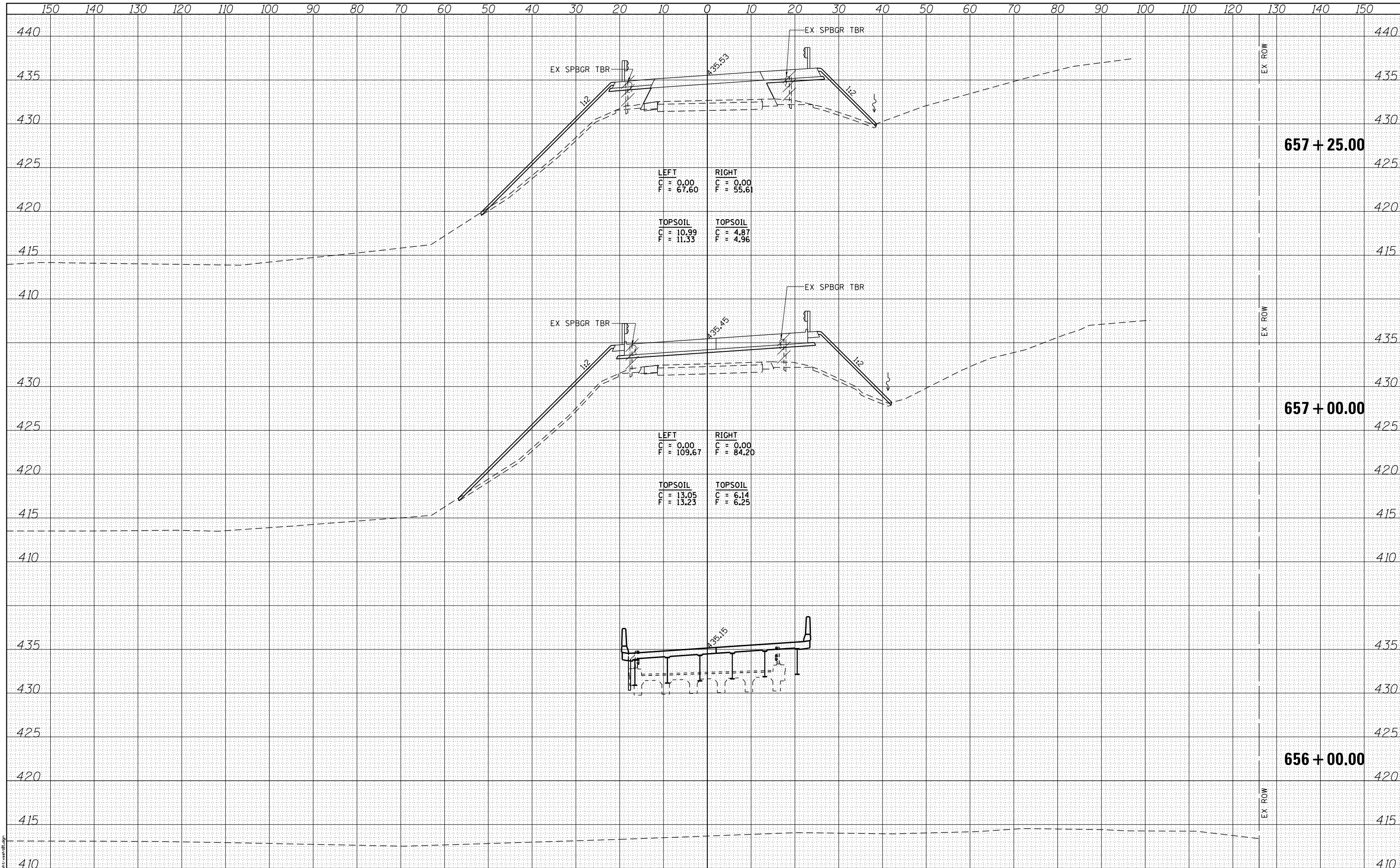






DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

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



PRINT DRIVER: J. L. BURKS  
 PLOT DATE: 10/19/2018 1:55:47 PM  
 PLOT FILE: I:\7177\101\cross09.dgn



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -
SCALE: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE: 10/19/2018 1:55:47 PM	DATE - 08/15	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

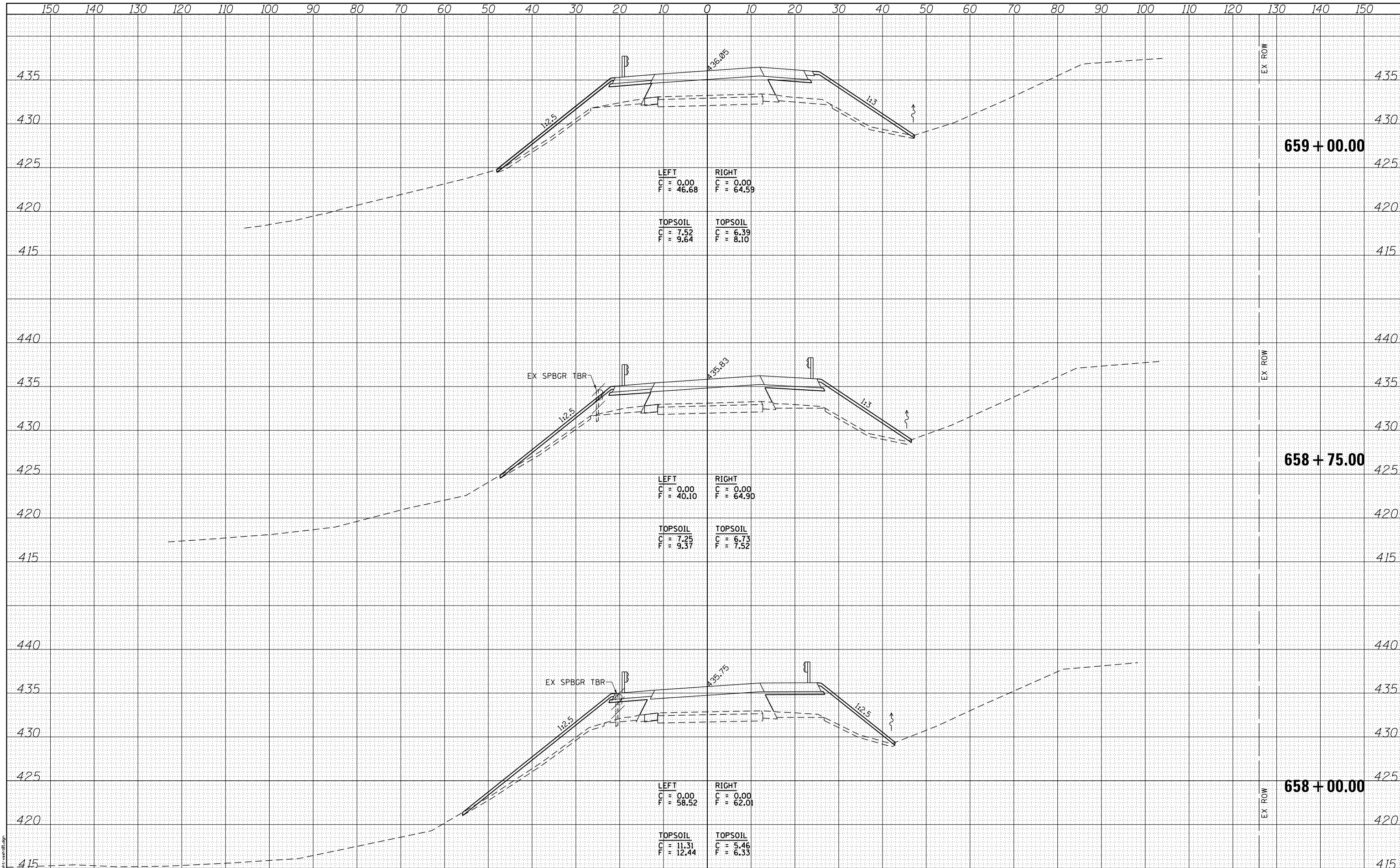
**FAP 327 (US 50) CROSS SECTIONS  
SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN SHEET NO. 9 OF 14 SHEETS STA. 656+00.00 TO STA. 657+25.00

F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 255
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT AID			CONTRACT NO. 78177	

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

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



PRINT DRIVER: J. L. BURTON  
 PLOT DATE: 10/19/2018 1:55:48 PM  
 PROJECT NAME: I-55/US 50  
 FILE NAME: I-55/US50.dwg



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -
SCALE: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE: 10/19/2018 1:55:48 PM	DATE - 08/15	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

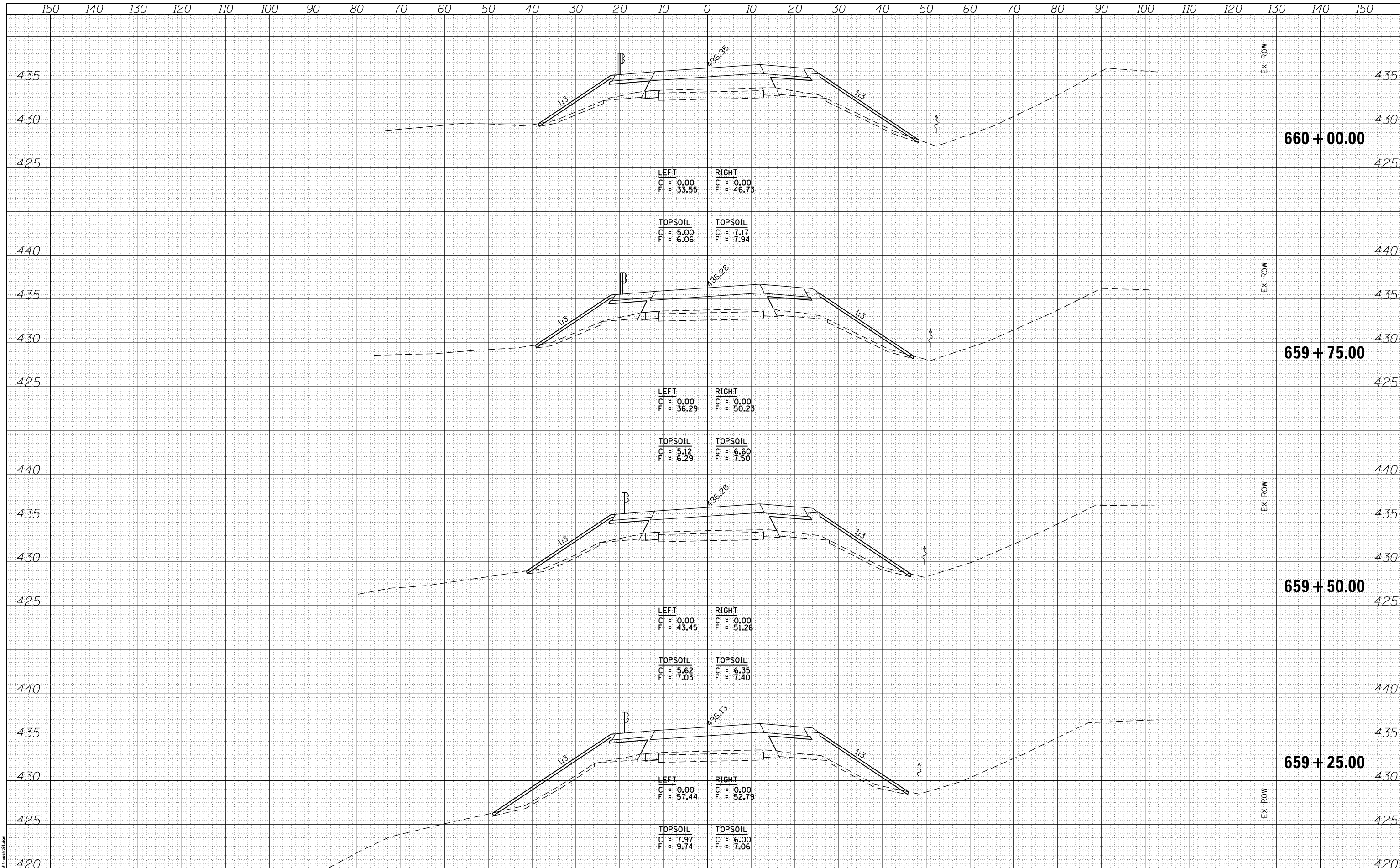
**FAP 327 (US 50) CROSS SECTIONS  
 SN051-0015(OLD) /SN051-0066(NEW)**

SCALE: AS SHOWN SHEET NO. 10 OF 14 SHEETS STA. 658+00.00 TO STA. 659+00.00

F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 256
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 78177	
FED. AID PROJECT AID				

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

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



PRINT DRIVER = HP...  
 PLOT FILE = ...



USER NAME = kah  
 ESCA PROJECT NO. 1000.02  
 SCALES: (HORIZ) 1"=20' (VERT) 1"=5'  
 PLOT DATE = 10/19/2018 1:55:48 PM

DESIGNED - MTD  
 DRAWN - RJT/HAS  
 CHECKED - RDP  
 DATE - 08/15

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

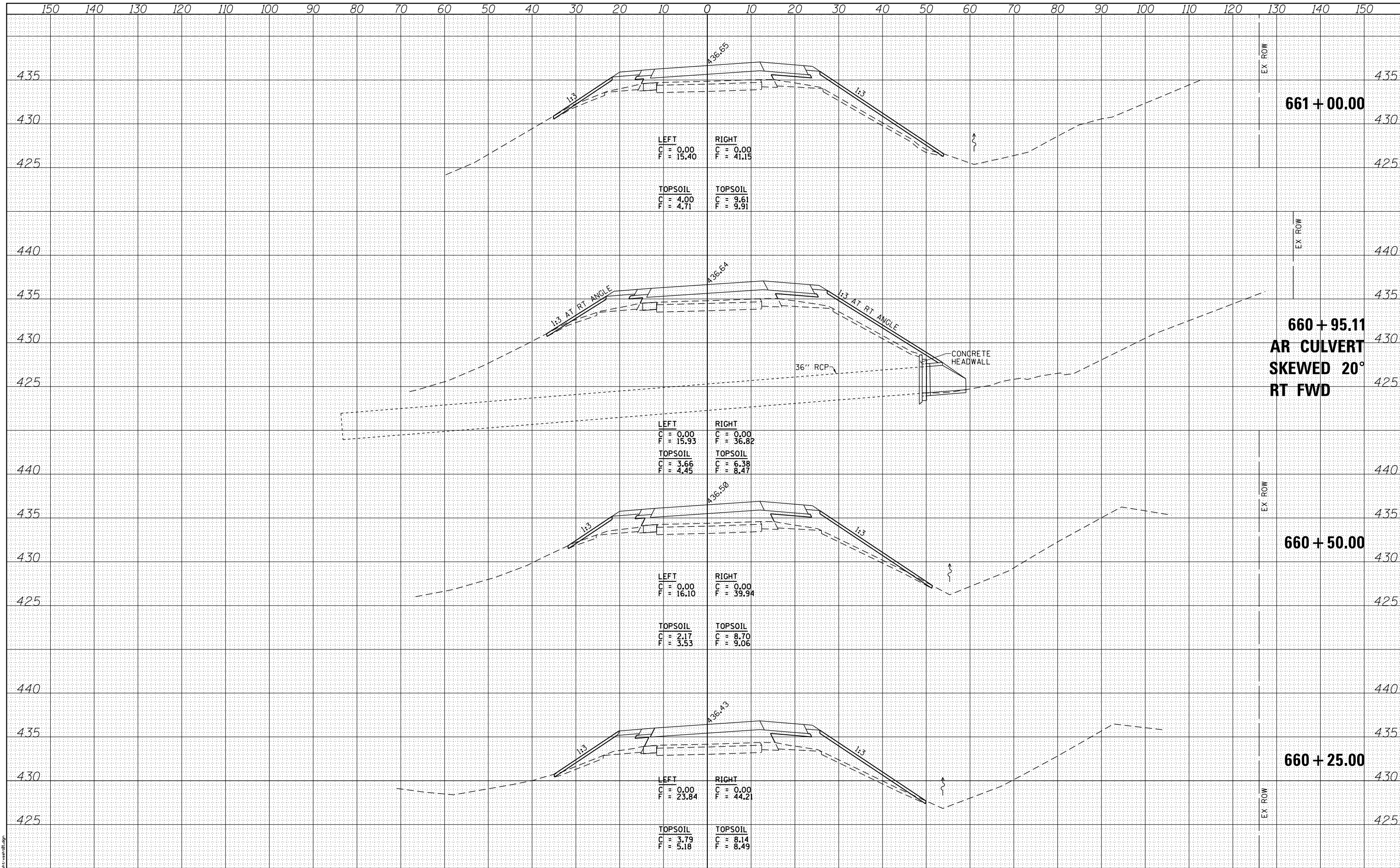
**FAP 327 (US 50) CROSS SECTIONS  
 SN051-0015(OLD) / SN051-0066(NEW)**  
 SCALE: AS SHOWN SHEET NO. 11 OF 14 SHEETS STA. 659+25.00 TO STA. 660+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	257
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT AID			CONTRACT NO. 78177	



DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



PRINT DRIVER: W:\L\W\28  
 MODEL NAME: 11/27/17  
 FILE NAME: 11/27/17



USER NAME = kah  
 ESCA PROJECT NO. 1000.02  
 SCALES: (HORIZ) 1"=20' (VERT) 1"=5'  
 PLOT DATE: 10/19/2018 1:55:48 PM

DESIGNED - MTD  
 DRAWN - RJT/HAS  
 CHECKED - RDP  
 DATE - 08/15

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

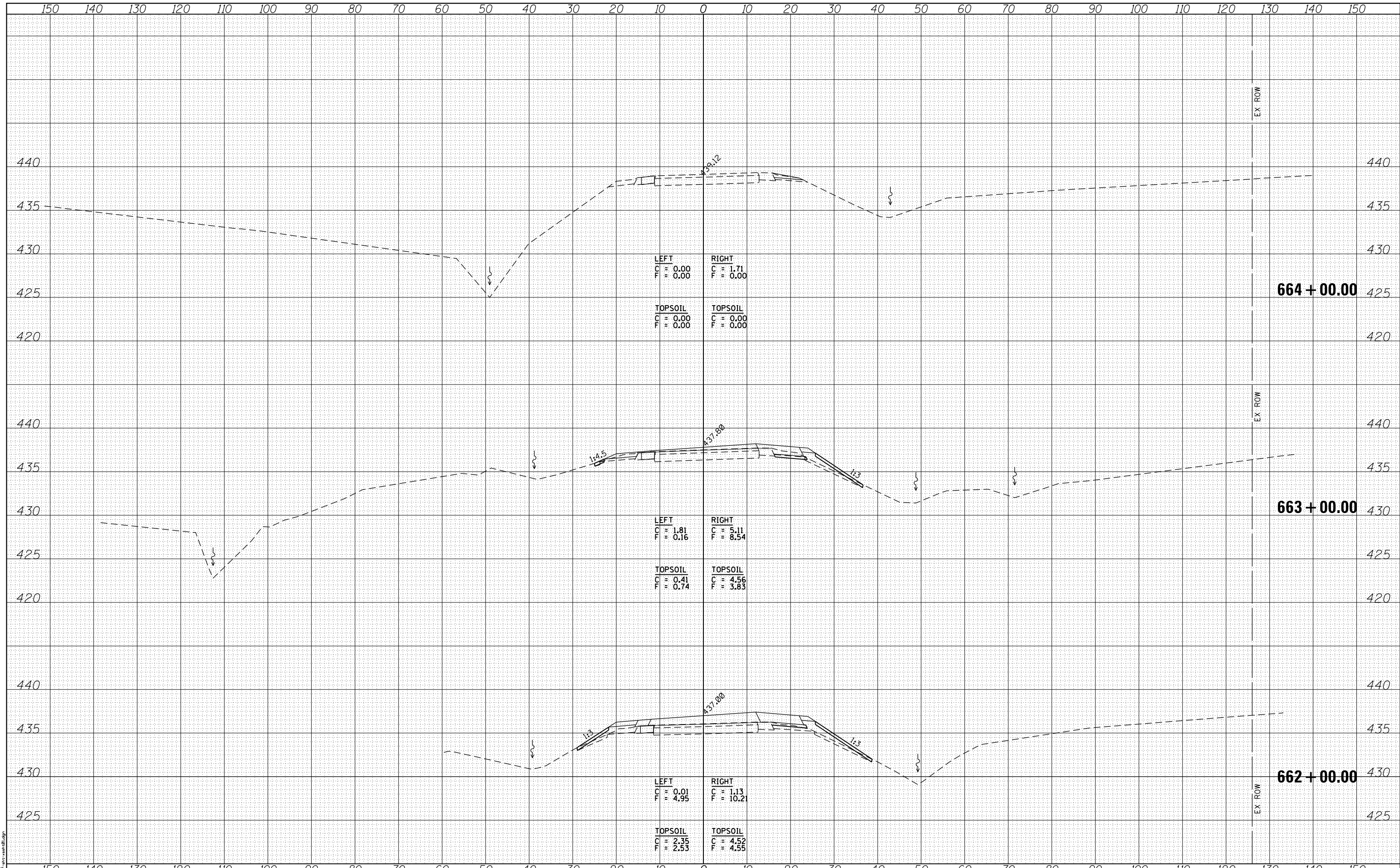
**FAP 327 (US 50) CROSS SECTIONS  
 SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN SHEET NO. 12 OF 14 SHEETS STA. 660+25.00 TO STA. 661+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	258
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT AID			CONTRACT NO. 78177	

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

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



PRINT DRIVER = R:\PROJECTS\1000\1000\1000.dgn  
 PLOT DATE = 10/19/2018 1:55:49 PM



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -
SCALE: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:55:49 PM	DATE - 08/15	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FAP 327 (US 50) CROSS SECTIONS  
SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN SHEET NO. 13 OF 14 SHEETS STA. 662+00.00 TO STA. 664+00.00

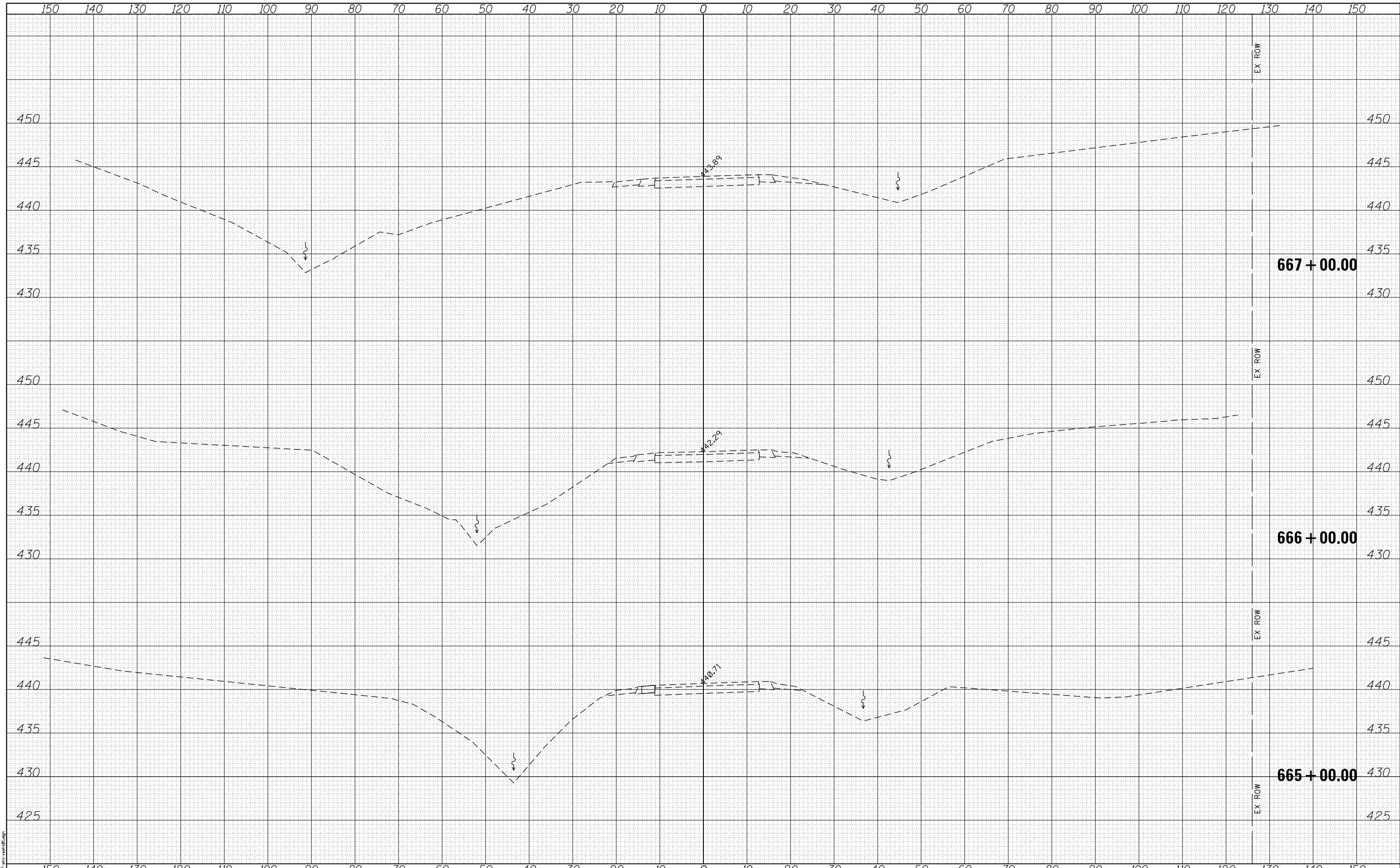
F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 259
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 78177	
FED. AID PROJECT AID				



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

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

PRINT DRIVER = HP\_LJ\_PRTS  
 PLOT FILE NAME = D:\74777\env\ssm06.dgn



USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -
SCALES: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:55:49 PM	DATE - 08/15	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FAP 327 (US 50) CROSS SECTIONS  
SN051-0015(OLD) / SN051-0066(NEW)**

SCALE: AS SHOWN    SHEET NO. 14 OF 14 SHEETS    STA. 665+00.00 TO STA. 667+00.00

F.A.P. RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 260
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT AID	
			CONTRACT NO. 78177	