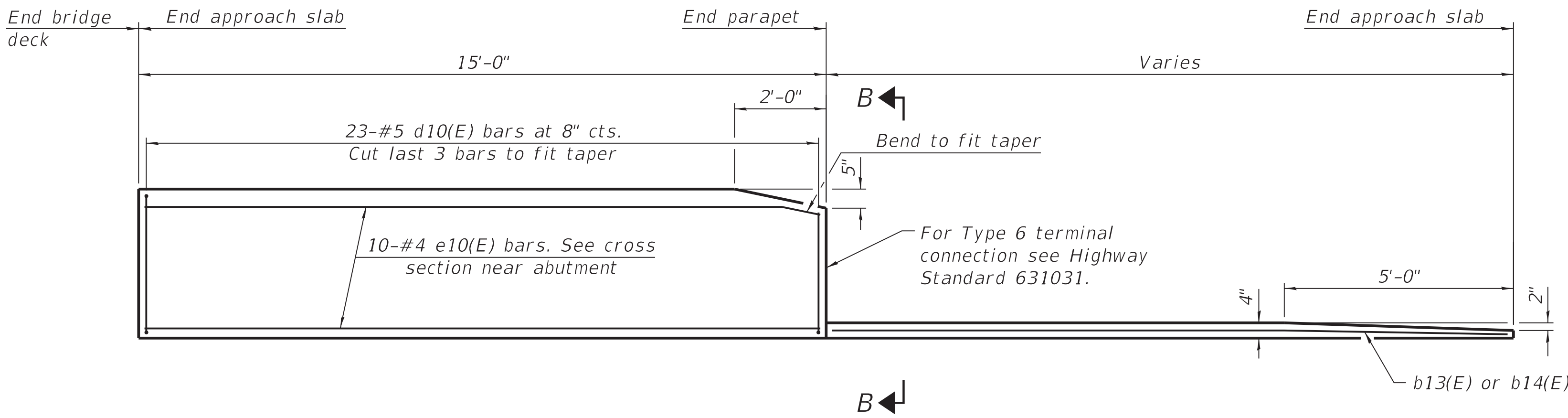
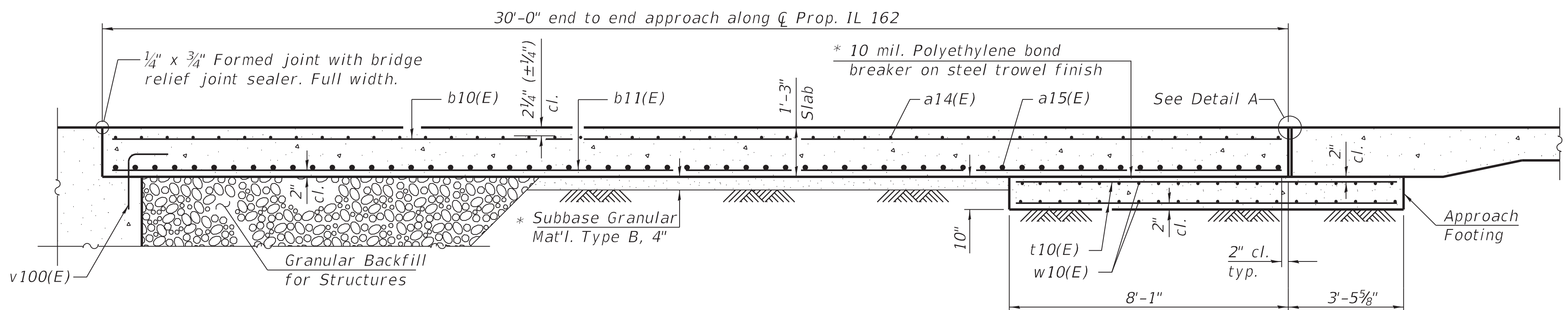
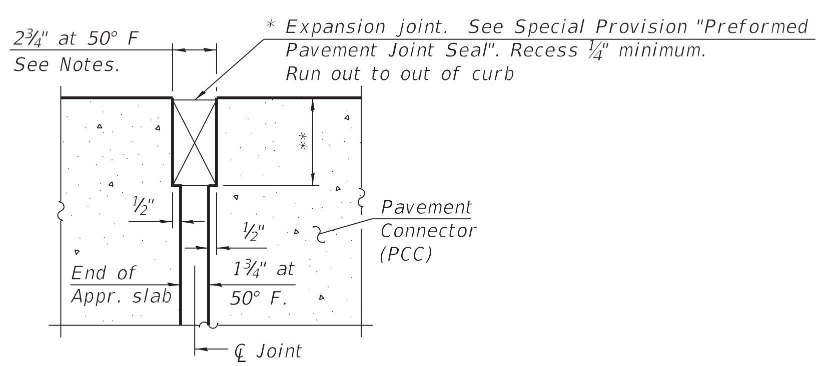


INSIDE ELEVATION OF PARAPET AND CURB



SECTION A-A

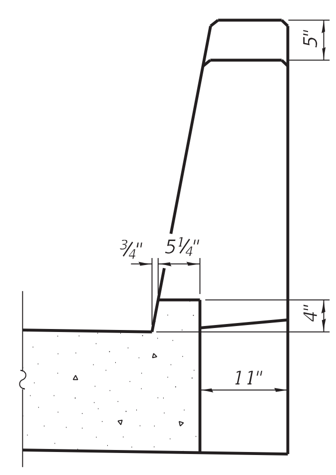


DETAIL A

(at Rt. ∠'s)

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations



VIEW B-B

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Superstructure.

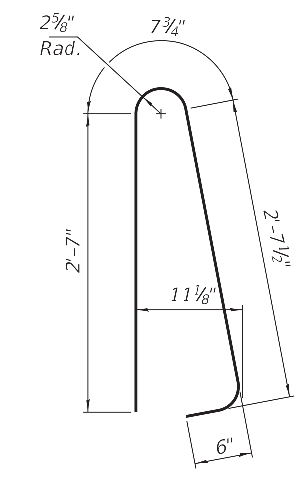
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

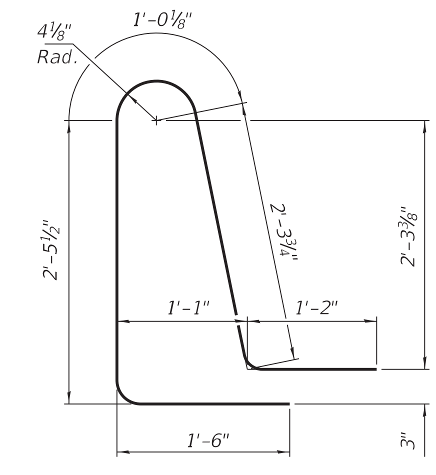
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

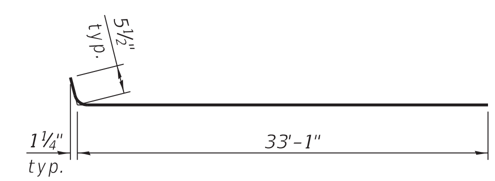
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 31.



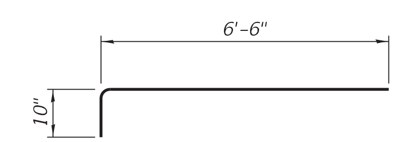
BAR d10(E)



BAR d11(E)



BAR a14(E)



BAR a16(E)

WEST APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a14(E)	92	#5	33'-7"	
a15(E)	120	#8	33'-10"	
a16(E)	46	#5	7'-4"	
b10(E)	83	#5	29'-8"	
b11(E)	132	#9	29'-8"	
b12(E)	8	#5	14'-8"	
b13(E)	1	#4	14'-9"	
b14(E)	1	#4	14'-3"	
d10(E)	46	#5	6'-5"	
d11(E)	46	#5	8'-6"	
e10(E)	20	#4	14'-8"	
t10(E)	110	#4	10'-11"	
w10(E)	80	#5	32'-7"	
Concrete Structures		Cu. Yd.	19.2	
Concrete Superstructure		Cu. Yd.	3.8	
Concrete Superstructure (Approach Slab)		Cu. Yd.	76.8	
Reinforcement Bars, Epoxy Coated		Pound	33,260	

\\Lochmueller\Root\Production\Files\2020\420-0018\CAD\Bridge\Final Design\060024l-76A46-018-Bridge_Approach_Slab_Details_West_Abut_2.dgn

LOCHMUELLER GROUP
1928 SR Bradley R. Smith Drive
Troy, IL 62294
PHONE: 618.667.1400

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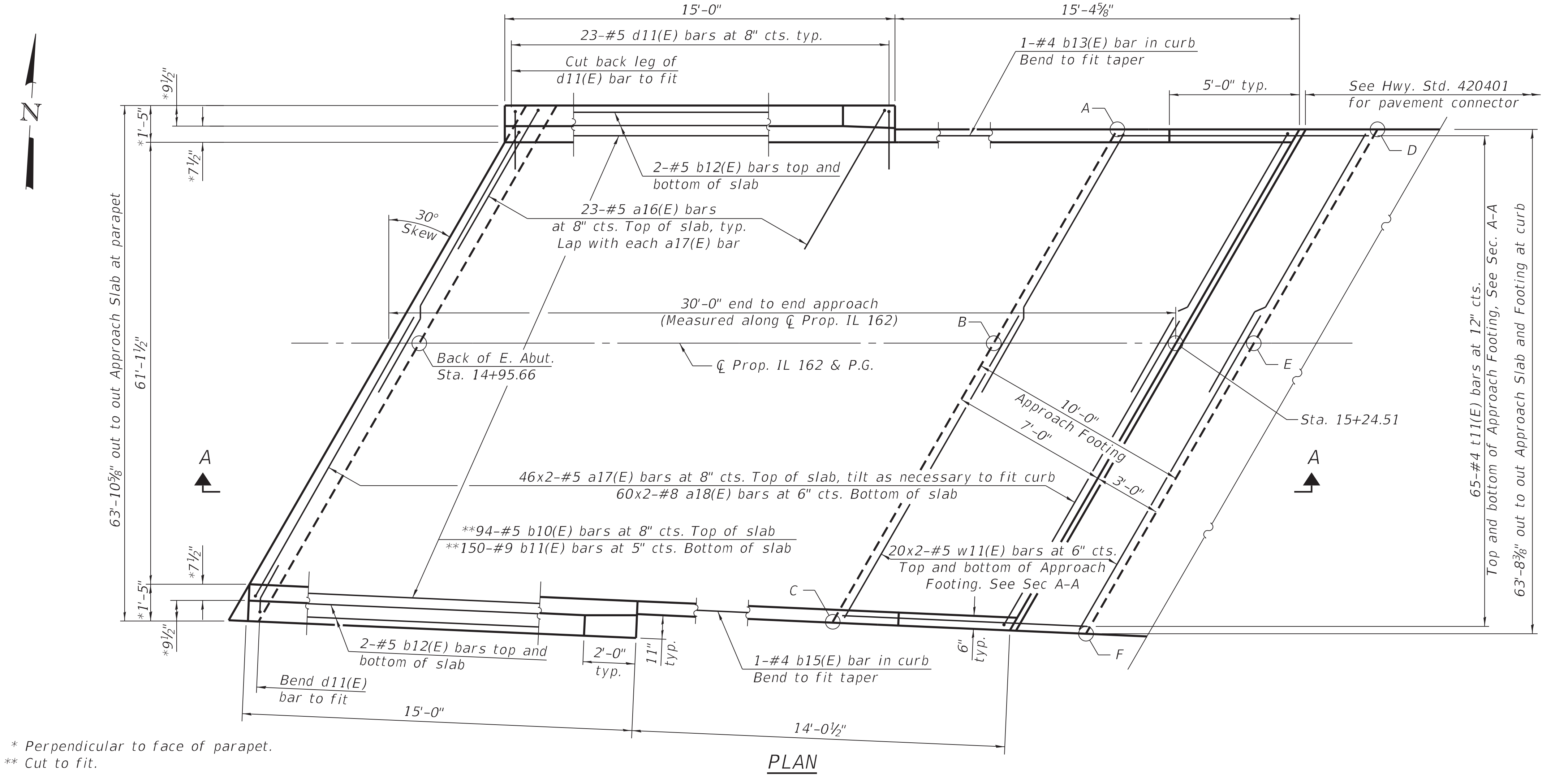
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 060-0241

SHEET NO. 18 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	201
SN 060-0241		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		



* Perpendicular to face of parapet.
** Cut to fit.

PLAN

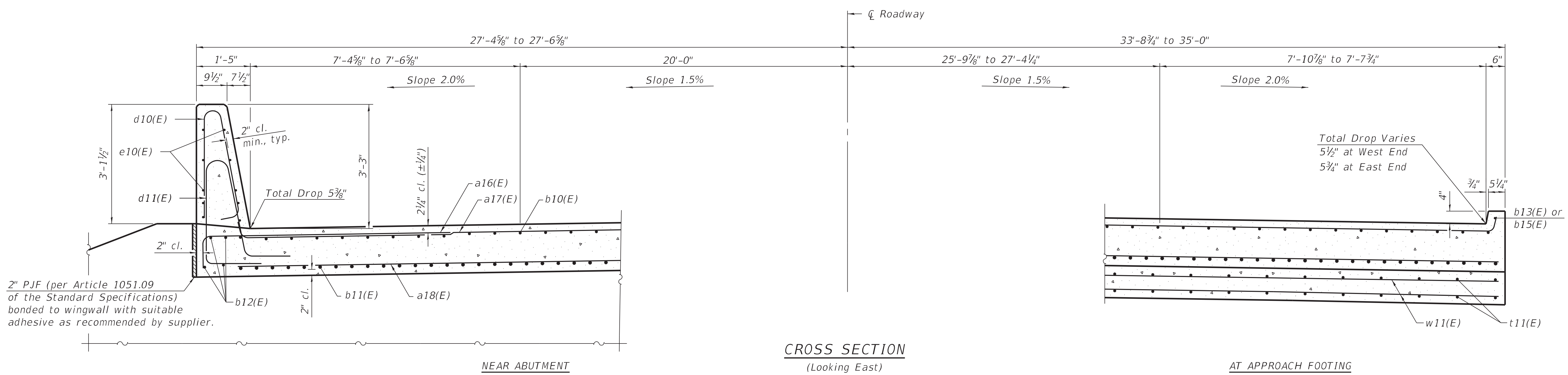
Notes:
Flare b10(E), b11(E) & t11(E) bars as required.
Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.
For additional stations and offsets, see sheet 11 of 31.

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point/Location	Approach Top	Approach Bottom
A - North Edge of Slab	444.57	443.74
B - ℄ Prop. IL 162	445.11	444.28
C - South Edge of Slab	444.64	443.81
D - North Edge of Slab	444.51	444.68
E - ℄ Prop. IL 162	445.06	444.23
F - South Edge of Slab	444.58	443.75

MINIMUM BAR LAP

#5 bar = 3'-4"
#8 bar = 4'-9"



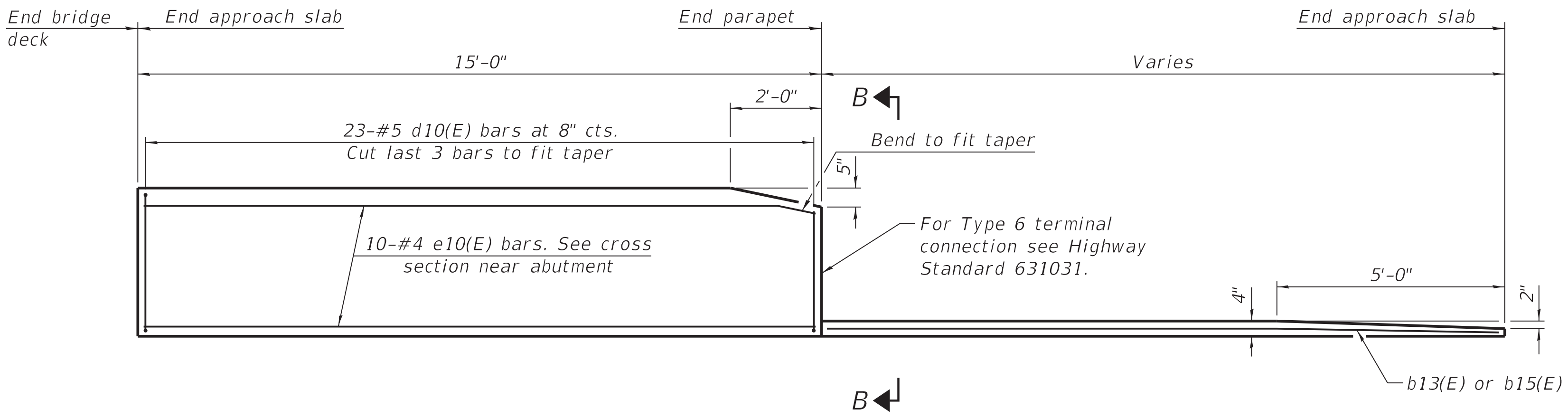
CROSS SECTION
(Looking East)

\\loch\Root\Production\Files\2020\420-001B\CAD\Bridge\Final Design\060241-76A46-019-Bridge_Approach_Slab_Details_East_Abut_.dgn

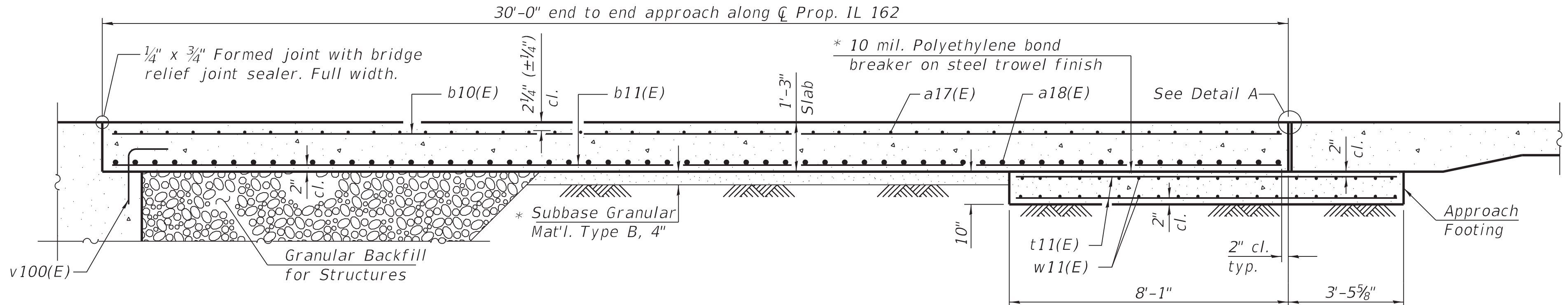
LOCHMUELLER GROUP 1928 SrA Bradley R. Smith Drive Troy, IL 62294 PHONE: 618.667.1400	USER NAME =	DESIGNED - ACS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - LDG	REVISED	
	PLOT SCALE =	DRAWN - WJS	REVISED	
	PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED	

EAST BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 060-0241
SHEET NO. 19 OF 31 SHEETS

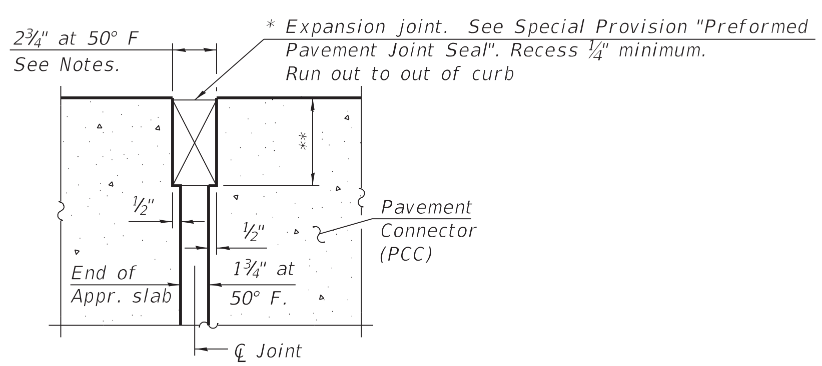
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	202
	SN 060-0241	CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		



INSIDE ELEVATION OF PARAPET AND CURB



SECTION A-A

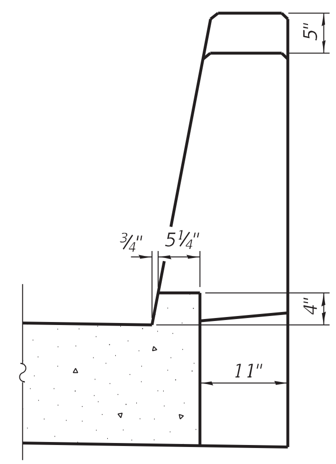


DETAIL A

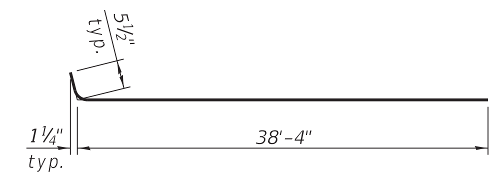
(at Rt. ∠'s)

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations



VIEW B-B



BAR a17(E)

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Superstructure.

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 31.

For a16(E), d10(E) and d11(E) bar details, see sheet 18 of 31.

EAST APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a16(E)	46	#5	7'-4"	
a17(E)	92	#5	38'-10"	
a18(E)	120	#8	39'-1"	
b10(E)	94	#5	29'-8"	
b11(E)	150	#9	29'-8"	
b12(E)	8	#5	14'-8"	
b13(E)	1	#4	14'-9"	
b15(E)	1	#4	13'-9"	
d10(E)	46	#5	6'-5"	
d11(E)	46	#5	8'-6"	
e10(E)	20	#4	14'-8"	
t11(E)	130	#4	11'-0"	
w11(E)	80	#5	38'-3"	
Concrete Structures		Cu. Yd.	22.7	
Concrete Superstructure		Cu. Yd.	3.8	
Concrete Superstructure (Approach Slab)		Cu. Yd.	88.8	
Reinforcement Bars, Epoxy Coated		Pound	39,850	

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Troy, IL 62294
PHONE: 618.667.1400

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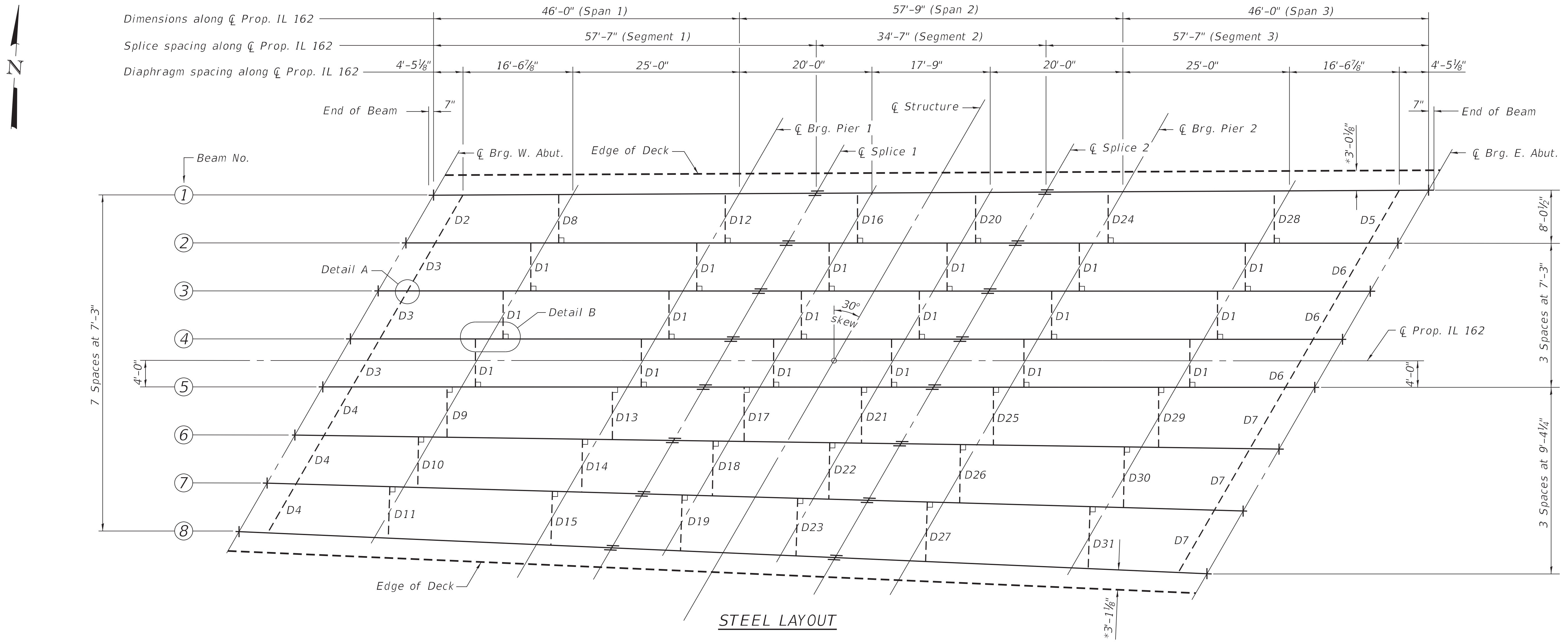
DEPARTMENT OF TRANSPORTATION

EAST BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 060-0241

SHEET NO. 20 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	203
SN 060-0241		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		



STEEL LAYOUT

*Perpendicular to fascia beam

**TOP OF BEAM ELEVATIONS

Location	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Splice 2	℄ Brg. Pier 2	℄ Brg. E. Abut.
Beam 1	445.48	445.54	445.56	445.47	445.41	445.20
Beam 2	445.60	445.68	445.70	445.64	445.58	445.37
Beam 3	445.70	445.79	445.82	445.77	445.71	445.50
Beam 4	445.79	445.88	445.91	445.90	445.84	445.63
Beam 5	445.76	445.88	445.91	445.88	445.83	445.64
Beam 6	445.63	445.76	445.80	445.76	445.71	445.53
Beam 7	445.50	445.63	445.67	445.64	445.59	445.41
Beam 8	445.33	445.46	445.50	445.49	445.44	445.27

** "For Fabrication Only"

Notes:

All diaphragms between beams shall be installed with erection pins and bolts in accordance with erection plan approved by the Engineer. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.

For Beam Dimension Tables, see sheet 22 of 31.

For diaphragm details and dimensions, see sheet 23 of 31.

For Detail A and B, see sheet 23 of 31.

***DIAPHRAGM LENGTHS

Diaphragm	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16
No. of Locations	18	1	3	3	1	3	3	1	1	1	1	1	1	1	1	1
Length	7'-3"	8'-4¾"	8'-4½"	8'-5⅜"	9'-3⅛"	8'-4½"	10'-8¾"	7'-4¼"	7'-6⅞"	7'-7⅝"	7'-8⅜"	7'-5¾"	7'-11⅛"	7'-11⅞"	8'-0⅝"	7'-7⅛"
Diaphragm	D17	D18	D19	D20	D21	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	
No. of Locations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Length	8'-2½"	8'-3¼"	8'-4⅛"	7'-8¼"	8'-5½"	8'-6⅜"	8'-7⅛"	7'-9½"	8'-8⅞"	8'-9¾"	8'-10⅝"	7'-11"	9'-1⅛"	9'-2"	9'-2⅞"	

***Dimensions are taken along diaphragm from ℄ to ℄ beam.

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STATE OF ILLINOIS
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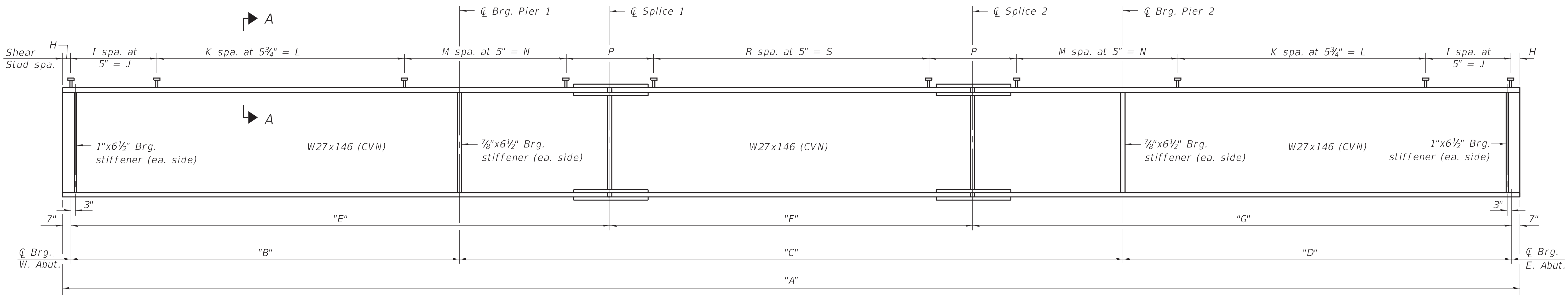
FRAMING PLAN
STRUCTURE NO. 060-0241

SHEET NO. 21 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	204
SN 060-0241		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

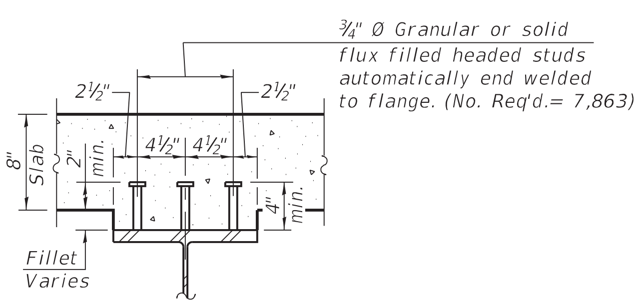


BEAM ELEVATION

"CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.

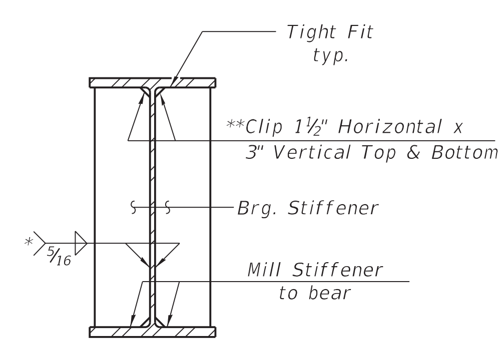
BEAM DIMENSION TABLE

Beam	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S
1	151'-4⅝"	46'-1¾"	57'-11⅛"	46'-1¾"	57'-9⅛"	34'-8⅜"	57'-9⅛"	0'-3¾"	13	5'-5"	71	34'-0¼"	41	17'-1"	3'-0¼"	76	31-8"
2	150'-11"	46'-0"	57'-9"	46'-0"	57'-7"	34'-7"	57'-7"	0'-4¾"	12	5'-0"	71	34'-0¼"	41	17'-1"	3'-4"	75	31-3"
3	150'-11"	46'-0"	57'-9"	46'-0"	57'-7"	34'-7"	57'-7"	0'-4¾"	12	5'-0"	71	34'-0¼"	41	17'-1"	3'-4"	75	31-3"
4	150'-11"	46'-0"	57'-9"	46'-0"	57'-7"	34'-7"	57'-7"	0'-4¾"	12	5'-0"	71	34'-0¼"	41	17'-1"	3'-4"	75	31-3"
5	150'-11"	46'-0"	57'-9"	46'-0"	57'-7"	34'-7"	57'-7"	0'-4¾"	12	5'-0"	71	34'-0¼"	41	17'-1"	3'-4"	75	31-3"
6	149'-8⅝"	45'-7⅝"	57'-3½"	45'-7⅝"	57'-1½"	34'-3¾"	57'-1½"	0'-4⅛"	12	5'-0"	70	33'-6½"	41	17'-1"	3'-5¾"	74	30'-10"
7	148'-6⅝"	45'-3¼"	56'-10"	45'-3¼"	56'-8"	34'-0½"	56'-8"	0'-2¾"	16	6'-8"	60	28'-9"	48	20'-0"	3'-2½"	74	30'-10"
8	147'-4⅞"	44'-11⅛"	56'-4¾"	44'-11⅛"	56'-2⅞"	33'-9¼"	56'-2⅞"	0'-2½"	16	6'-8"	59	28'-3¼"	48	20'-0"	3'-4¼"	73	30'-5"



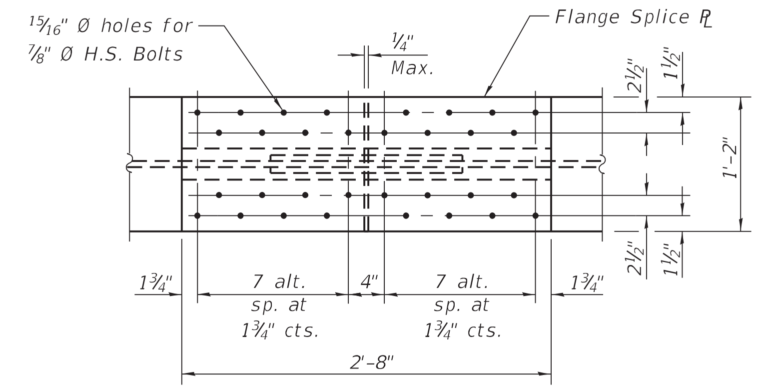
SECTION A-A

Notes:
Structural steel for beams and splices shall be AASHTO M270 Grade 50.

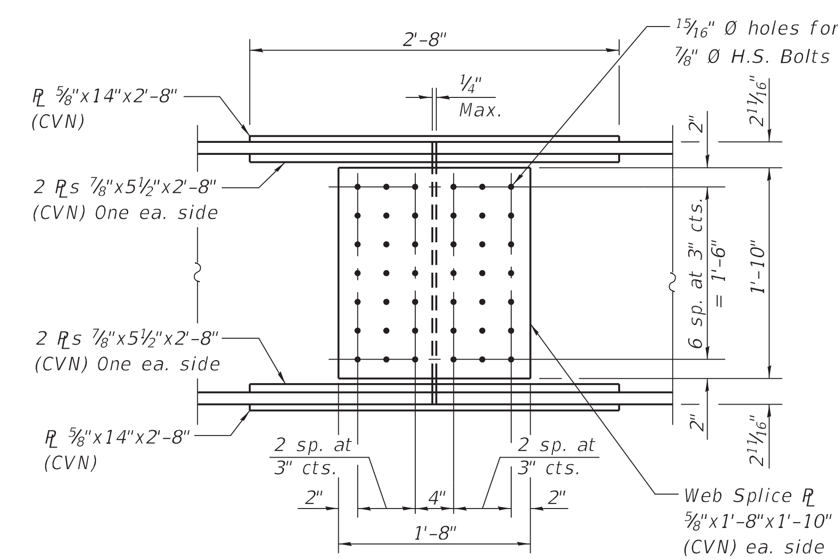


BEAM SECTION AT STIFFENER

* Terminate ¼" (±⅛") from the end of plate intersects.
** Clip may be rounded for ease of shop painting.



TOP & BOTTOM



ELEVATION FIELD SPLICE DETAIL

(16 Required)

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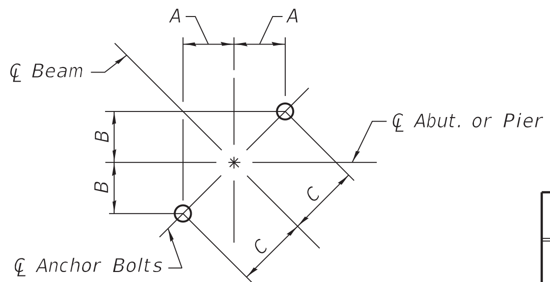
		CHECKED - LDG	REVISED		
	PLOT SCALE =	DRAWN - WJS	REVISED		
	PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED		SHEET NO. 22 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	205
SN 060-0241		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		



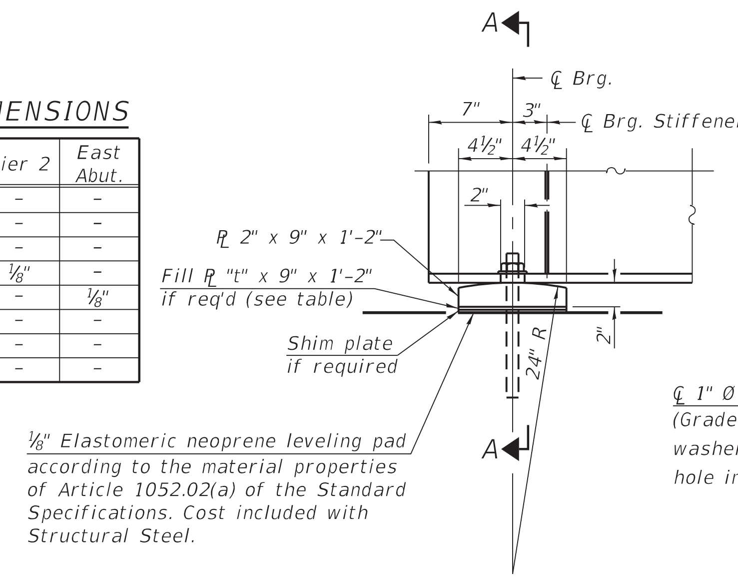
ANCHOR BOLT LAYOUT FOR FIXED BEARINGS AT ABUTMENTS AND PIERS

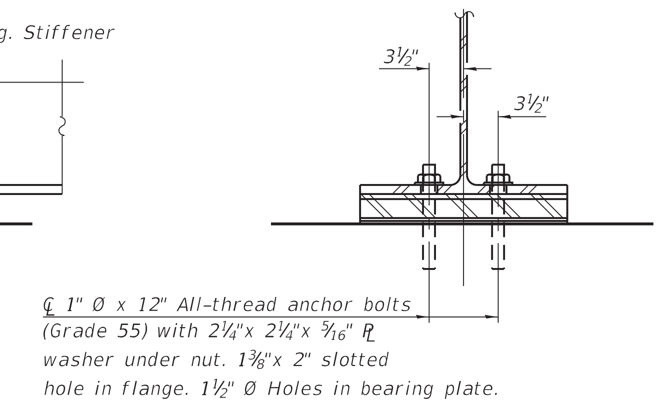
ANCHOR BOLT DIMENSIONS

Location	Beam No.	A	B	C
West & East Abutments	1-8	3"	1¾"	3½"
Piers 1 & 2	1-5	7¾"	4½"	9"
	6	7⅞"	4⅜"	9"
	7	7⅞"	4¼"	9"
	8	8"	4⅛"	9"

TABLE OF "t" DIMENSIONS

Beam No.	West Abut.	Pier 1	Pier 2	East Abut.
1	–	–	–	–
2	–	–	–	–
3	–	–	–	–
4	1 1/16"	–	⅛"	–
5	11/16"	–	–	⅛"
6	–	–	–	–
7	–	–	–	–
8	–	–	–	–

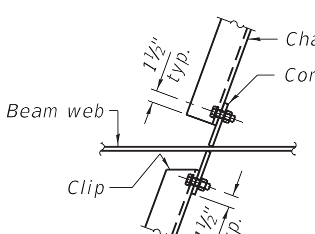




SECTION A-A

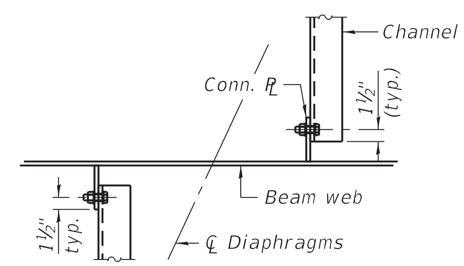
ELEVATION AT ABUTMENT

(16 Required)



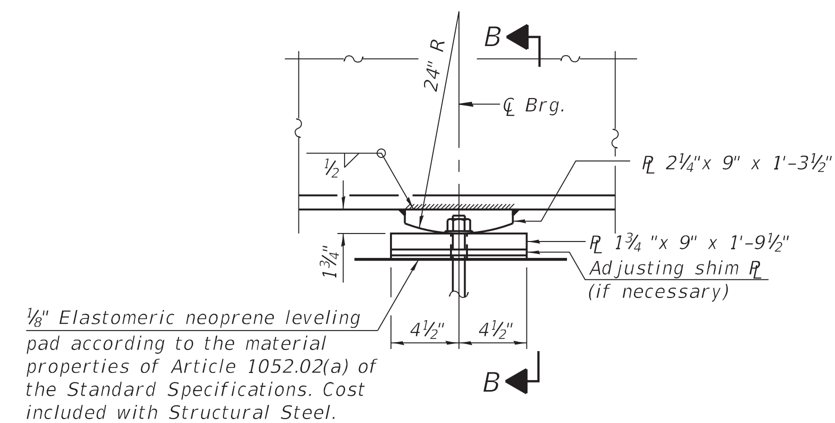
DETAIL A

(14 required on skew)



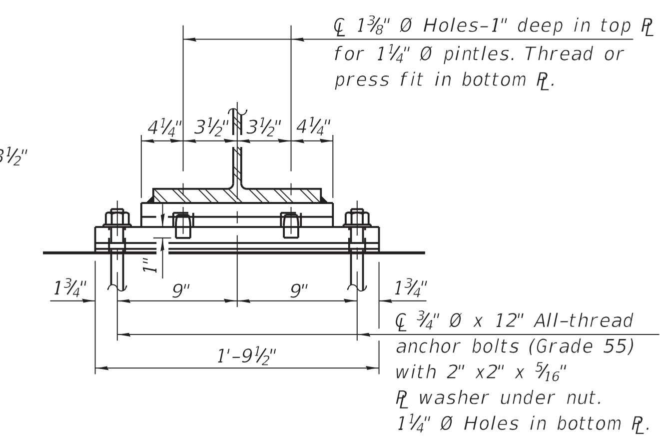
DETAIL B

(42 required perpendicular to beam)



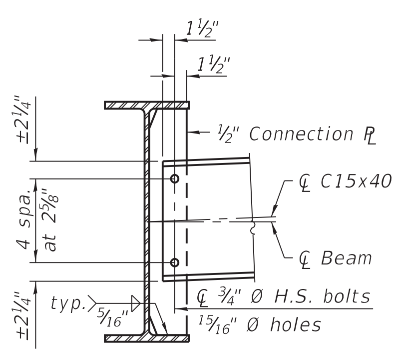
ELEVATION AT PIER

(16 Required)

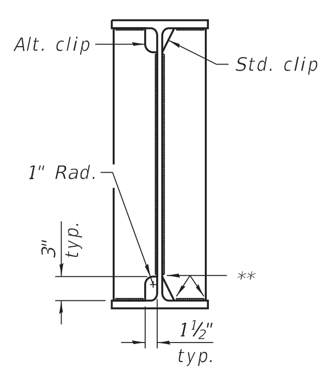


SECTION B-B

FIXED BEARING

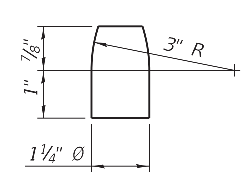


INTERIOR DIAPHRAGM



WELD LIMITS AND CLIP DETAILS

** Stop welds ¼" (±⅛") from edges as shown. Typical.



PINTLE

Notes:

Two ⅛ in. adjustment 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. Substitutions of higher diameter and/or grade anchor bolts will not be allowed.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, ¾"	Each	32
Anchor Bolts, 1"	Each	32

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INTERIOR BEAM MOMENT TABLE (For Beam Line 6)						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
I_s	(in^4)	5,660	5,660	5,660	5,660	5,660
$I_c(n)$	(in^4)	17,108	17,108	17,463	17,463	17,750
$I_c(3n)$	(in^4)	12,680	12,680	13,062	13,062	13,380
$I_c(cr)$	(in^4)	——	8,203	——	8,360	——
S_s	(in^3)	414	414	414	414	414
$S_c(n)$	(in^3)	633	633	638	638	641
$S_c(3n)$	(in^3)	575	575	581	581	585
$S_c(cr)$	(in^3)	——	492	——	496	——
S_x	(in^3)	——	——	——	——	——
DC1	(k/')	0.943	1.020	1.020	1.089	1.089
M_{DC1}	('k)	137	274.3	151	298	164.6
DC2	(k/')	0.131	0.131	0.131	0.131	0.131
M_{DC2}	('k)	18.9	35.8	18.8	35.8	18.9
DW	(k/')	0.39	0.43	0.43	0.46	0.46
M_{DW}	('k)	54.2	110.3	61.4	122.1	68
LLDF		0.707	0.717	0.727	0.764	0.801
M_{LL+IM}	('k)	518.9	498.5	558.5	531.2	587.9
f_ℓ (Strength I)	(ksi)	0	0	0	0	0
$M_u + \frac{1}{3} f_\ell S_x$	('k)	1,184	1,425	1,282	1,530	1,360
$\phi_f M_n$	('k)	3,298	——	3,307	——	3,325
f_s DC1	(ksi)	4.0	8.0	4.4	8.6	4.8
f_s DC2	(ksi)	0.4	0.9	0.4	0.9	0.4
f_s DW	(ksi)	1.1	2.7	1.3	3.0	1.4
f_s (LL+IM)	(ksi)	9.8	12.2	10.5	12.9	11.0
f_ℓ (Service II)	(ksi)	0	0	0	0	0
$f_s + f_\ell/2$ (Service II)	(ksi)	18.3	27.3	19.7	29.2	20.9
Service II Resistance	(ksi)	47.5	47.5	47.5	47.5	47.5
$f_s + f_\ell/3$ (Strength I)	(ksi)	24.4	36.3	26.3	38.8	27.8
$\phi_f F_n$	(ksi)	——	50.0	——	47.8	——
V_f	(k)	26.9	32.0	32.0	32.0	28.0

BEAM REACTION TABLE (For Beam Line 6)					
		W. Abut.	Pier 1	Pier 2	E. Abut.
LLDF		0.888	0.948	0.948	1.001
OCF		1.12	1.12	1.12	1.12
R_{DC1}	(k)	16.4	58.2	62.9	19.2
R_{DC2}	(k)	2.2	7.6	7.6	2.2
R_{DW}	(k)	6.5	23.4	25.7	7.9
R_{LL}	(k)	60.3	115.3	122.4	68.0
R_{IM}	(k)	15.98	26.15	27.75	18.0
R_{Total} (Strength I)(Impact)	(k)	166.6	364.9	389.4	189.2
R_{Total} (Strength I)(No Impact)	(k)	138.6	319.1	340.9	157.6

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).

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

M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).

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

M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

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

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

M_{LL+IM} : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u : Strength I load combination of factored design moments (kip-ft.). $1.25 (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{LL+IM}$

f_ℓ : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).

$\phi_f M_n$: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi). M_{DC1} / S_s

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi). $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi). $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (LL + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi). $M_{LL+IM} / S_c(n)$ or $M_{LL+IM} / S_c(cr)$ as applicable.

$f_s + f_\ell/2$ (Service II): Sum of stresses as computed below (ksi). f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (LL + IM) + $f_\ell/2$

Service II Resistance: Composite ($0.95R_hF_{yf}$) or noncomposite ($0.80R_hF_{yf}$) stress capacity according to Article 6.10.4.2 (ksi).

$f_s + f_\ell/3$ (Strength I): Sum of stresses as computed below on non-compact sections (ksi). 1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (LL + IM) + $f_\ell/3$

$\phi_f F_n$: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.

R_{DC1} : Un-factored reaction due to non-composite dead load (kip).

R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

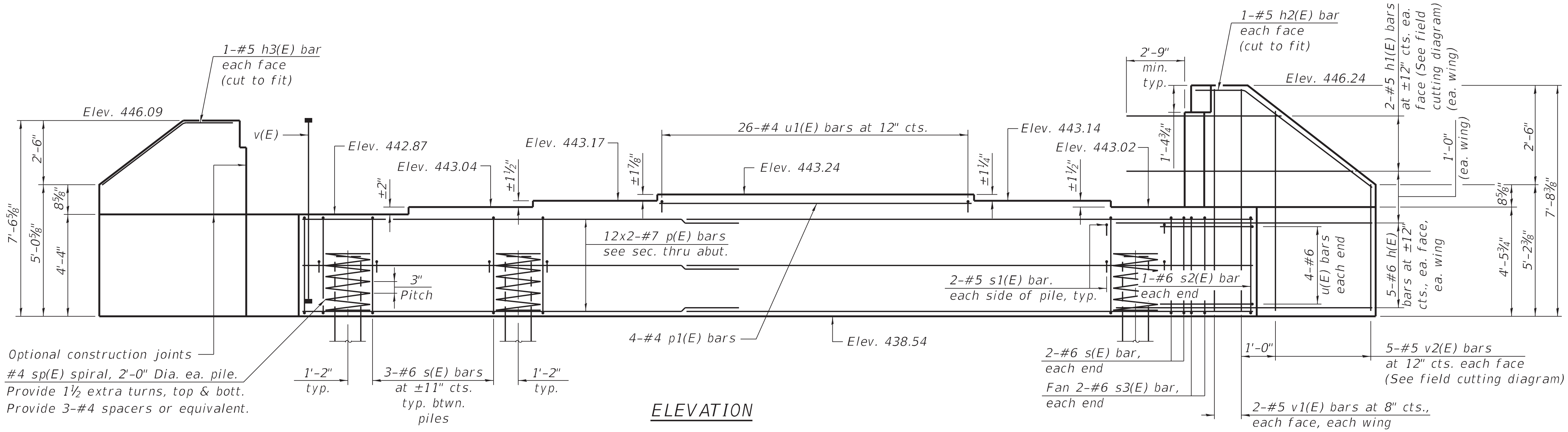
R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

R_{LL} : Un-factored live load reaction (kip).

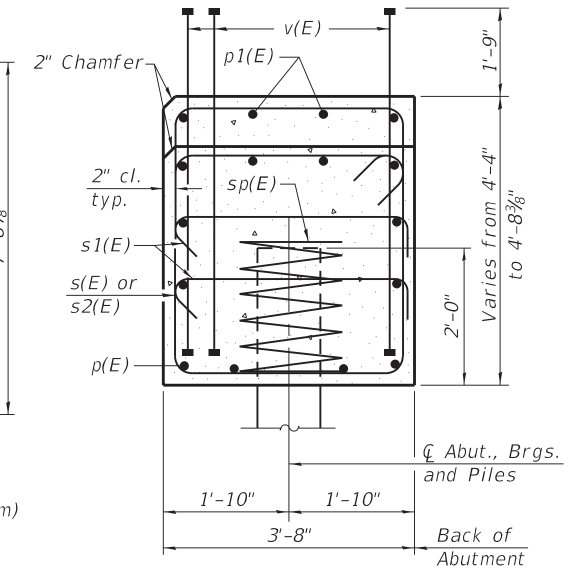
R_{IM} : Un-factored dynamic load allowance (impact) (kip).

R_{Total} (Strength I)(Impact): Strength I load combination of factored design reactions (kip). $1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_{LL} + R_{IM})$

R_{Total} (Strength I)(No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip). $1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_{LL})$

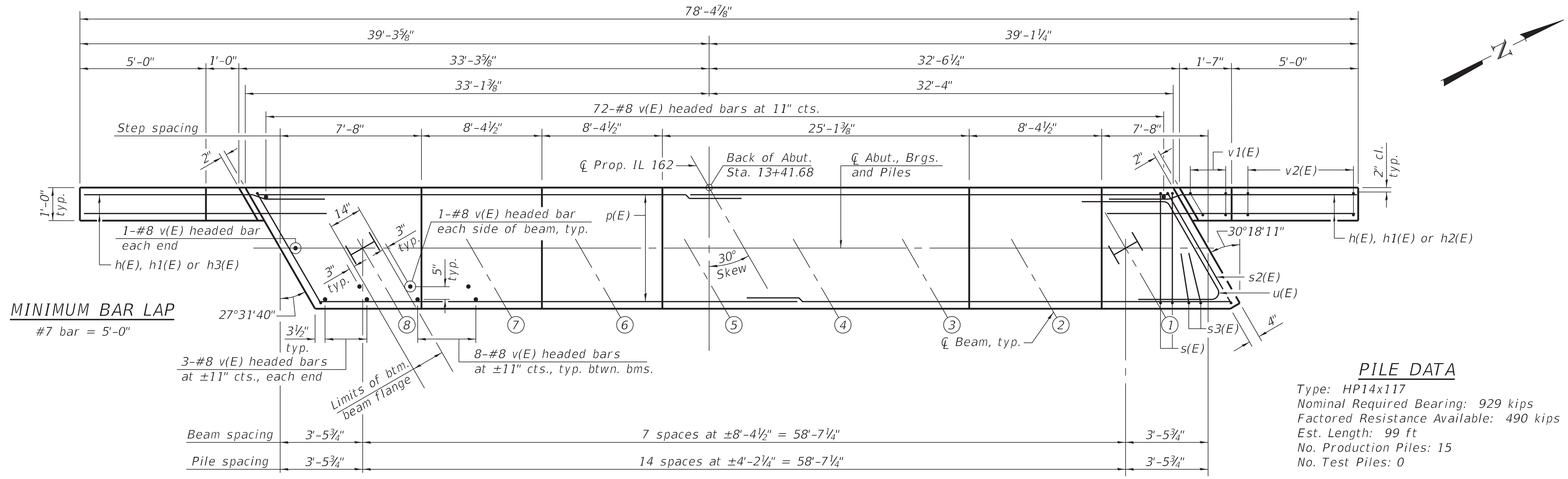


ELEVATION



SEC. THRU ABUT.

Dimensions at right angles to abutment.



MINIMUM BAR LAP

#7 bar = 5'-0"

PLAN

BILL OF MATERIAL

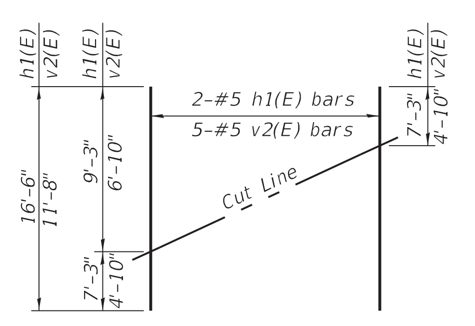
Bar	No.	Size	Length	Shape
h(E)	20	#6	9'-4"	
h1(E)	4	#5	16'-6"	
h2(E)	2	#5	6'-10"	
h3(E)	2	#5	6'-10"	
p(E)	24	#7	35'-2"	
p1(E)	4	#4	24'-9"	
s(E)	46	#6	16'-0"	
s1(E)	60	#5	4'-4"	
s2(E)	2	#6	16'-11"	
s3(E)	4	#6	9'-4"	
* sp(E)	15	#4	2'-0"	
u(E)	8	#6	12'-6"	
u1(E)	26	#4	7'-4"	
v(E)	152	#8	6'-3"	
v1(E)	8	#5	7'-3"	
v2(E)	10	#5	11'-8"	

Structure Excavation	Cu. Yd.	210
Concrete Structures	Cu. Yd.	44.4
Reinforcement Bars, Epoxy Coated	Pound	7,360
Furnishing Steel Piles HP14x117	Foot	1,485
Driving Piles	Foot	1,485

*Length is height of spiral

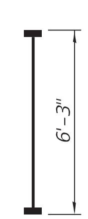
PILE DATA

Type: HP14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 490 kips
Est. Length: 99 ft
No. Production Piles: 15
No. Test Piles: 0



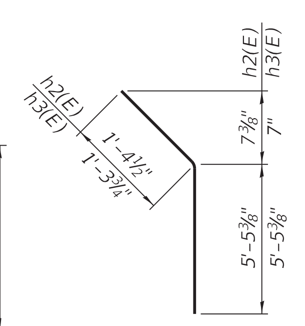
FIELD CUTTING DIAGRAM

Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing face.

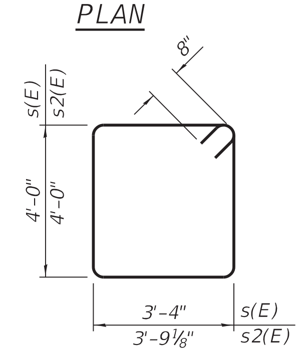


BAR v(E)

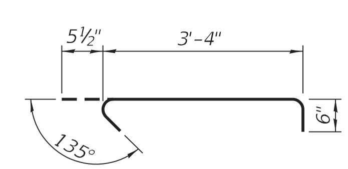
(Headed)



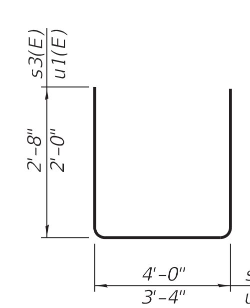
BARS h2(E) & h3(E)



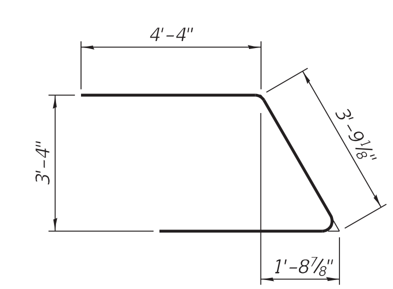
BARS s(E) & s2(E)



BAR s1(E)

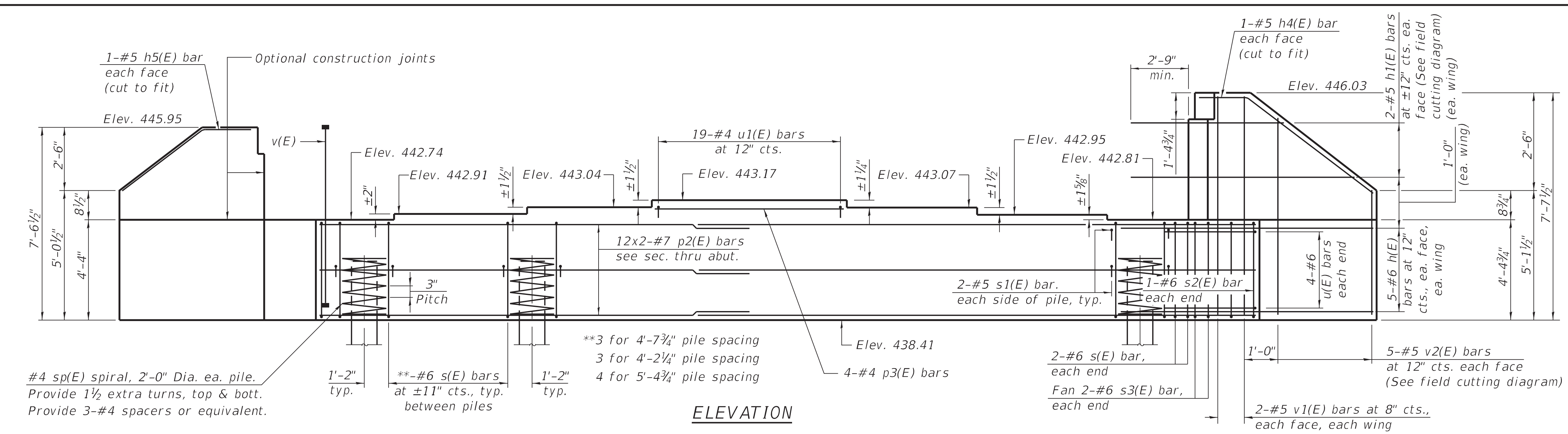


BARS s3(E) & u1(E)

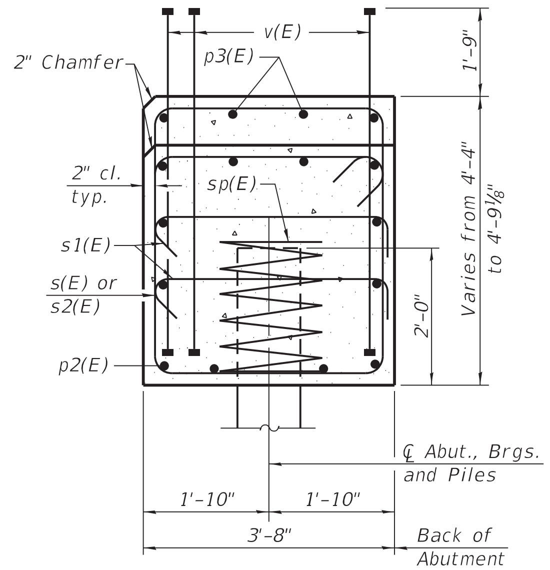


BAR u(E)

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet 29 of 31.
For anchor bolt detail, see sheet 23 of 31.

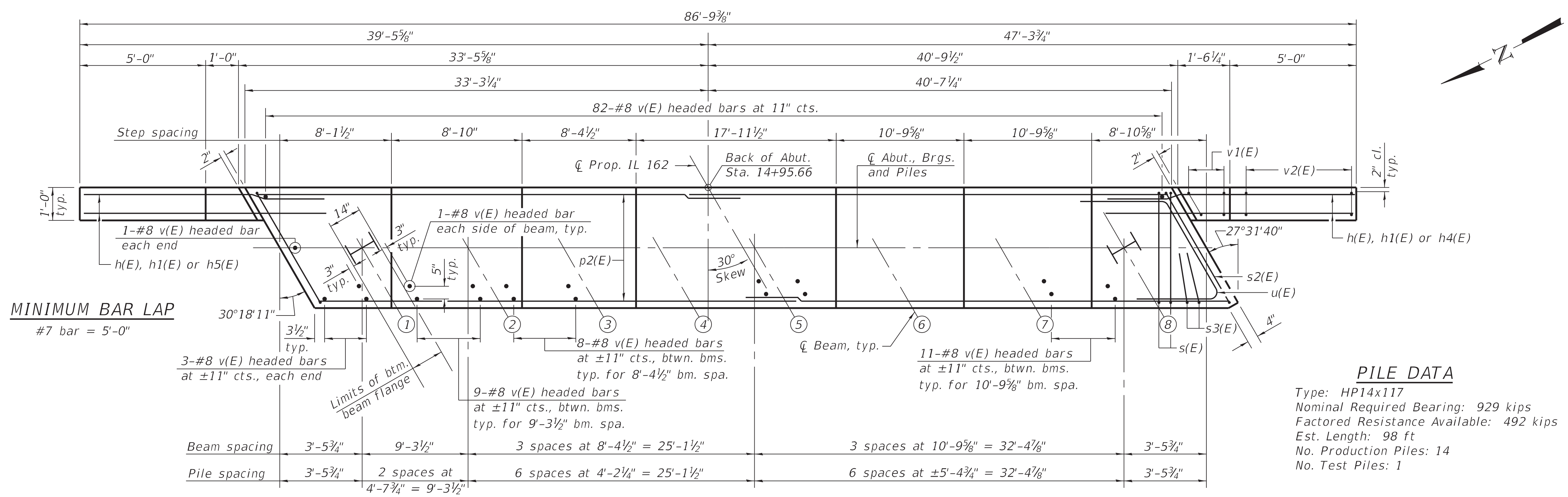


ELEVATION



SEC. THRU ABUT.

Dimensions at right angles to abutment.



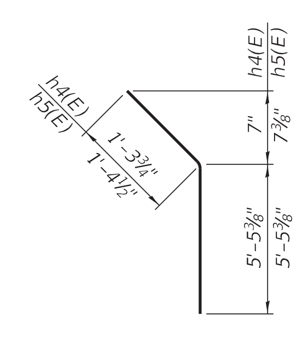
MINIMUM BAR LAP

#7 bar = 5'-0"

PLAN

PILE DATA

Type: HP14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 492 kips
Est. Length: 98 ft
No. Production Piles: 14
No. Test Piles: 1



BARS h4(E) & h5(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#6	9'-4"	
h1(E)	4	#5	16'-6"	
h4(E)	2	#5	6'-10"	
h5(E)	2	#5	6'-10"	
p2(E)	24	#7	39'-3"	
p3(E)	4	#4	17'-8"	
s(E)	52	#6	16'-0"	
s1(E)	60	#5	4'-4"	
s2(E)	2	#6	16'-11"	
s3(E)	4	#6	9'-4"	
* sp(E)	15	#4	2'-0"	
u(E)	8	#6	12'-6"	
u1(E)	19	#4	7'-4"	
v(E)	172	#8	6'-3"	
v1(E)	8	#5	7'-3"	
v2(E)	10	#5	11'-8"	
Structure Excavation		Cu. Yd.	231	
Concrete Structures		Cu. Yd.	49.3	
Reinforcement Bars, Epoxy Coated		Pound	7,980	
Furnishing Steel Piles HP14x117		Foot	1,372	
Driving Piles		Foot	1,372	
Test Pile Steel HP14x117		Each	1	

*Length is height of spiral

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet 29 of 31.
For anchor bolt detail, see sheet 23 of 31.
For s(E), s1(E), s2(E) u(E) and u1(E) bar details, see sheet 25 of 31.
For h1(E) and v2(E) filed cutting diagram, see sheet 25 of 31.

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LOCHMUELLER GROUP
1928 SrA Bradley R. Smith Drive
Troy, IL 62294
PHONE: 618.667.1400

USER NAME =	DESIGNED - ACS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT STRUCTURE NO. 060-0241	F.A.P. RTE. 586	SECTION 51-1R	COUNTY MADISON
	CHECKED - LDG	REVISED				TOTAL SHEETS 296	SHEET NO. 209
PLOT SCALE =	DRAWN - WJS	REVISED			SN 060-0241	CONTRACT NO. 76A46	
PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED		SHEET NO. 26 OF 31 SHEETS	ILLINOIS	FED. AID PROJECT	

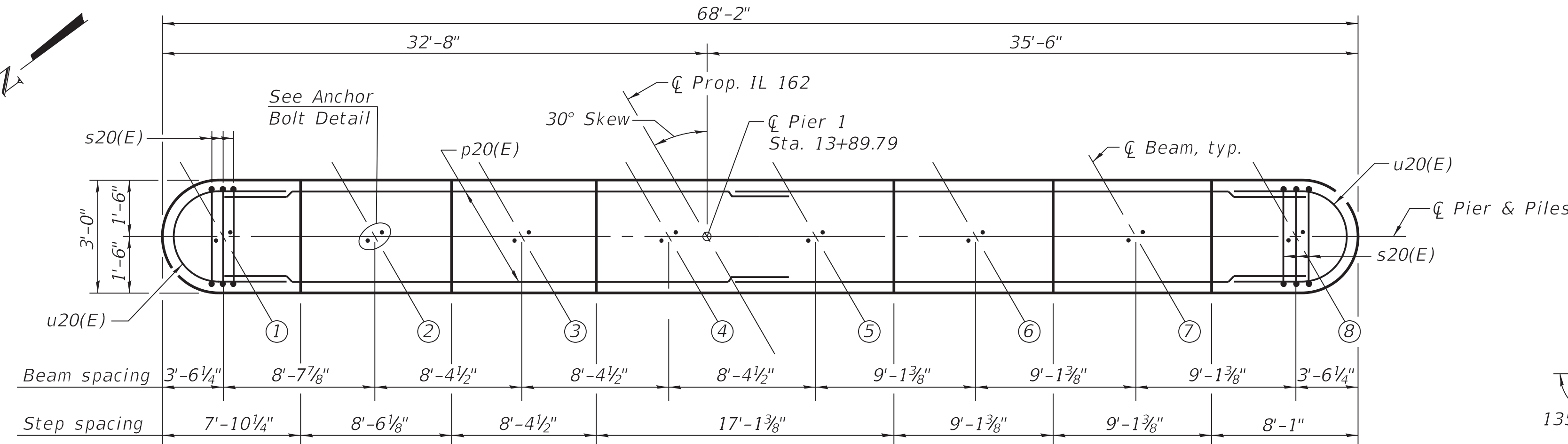
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 29 of 31.
For anchor bolt detail, see sheet 23 of 31.

PILE DATA

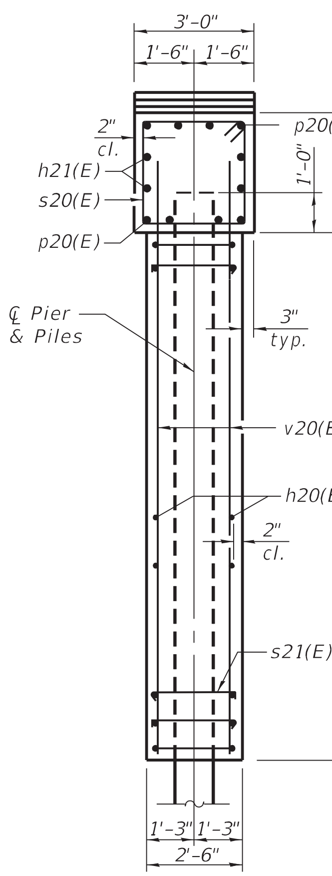
Type: HP14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 508 kips
Est. Length: 99 ft.
No. Production Piles: 13
No. Test Piles: 0

MINIMUM BAR LAP

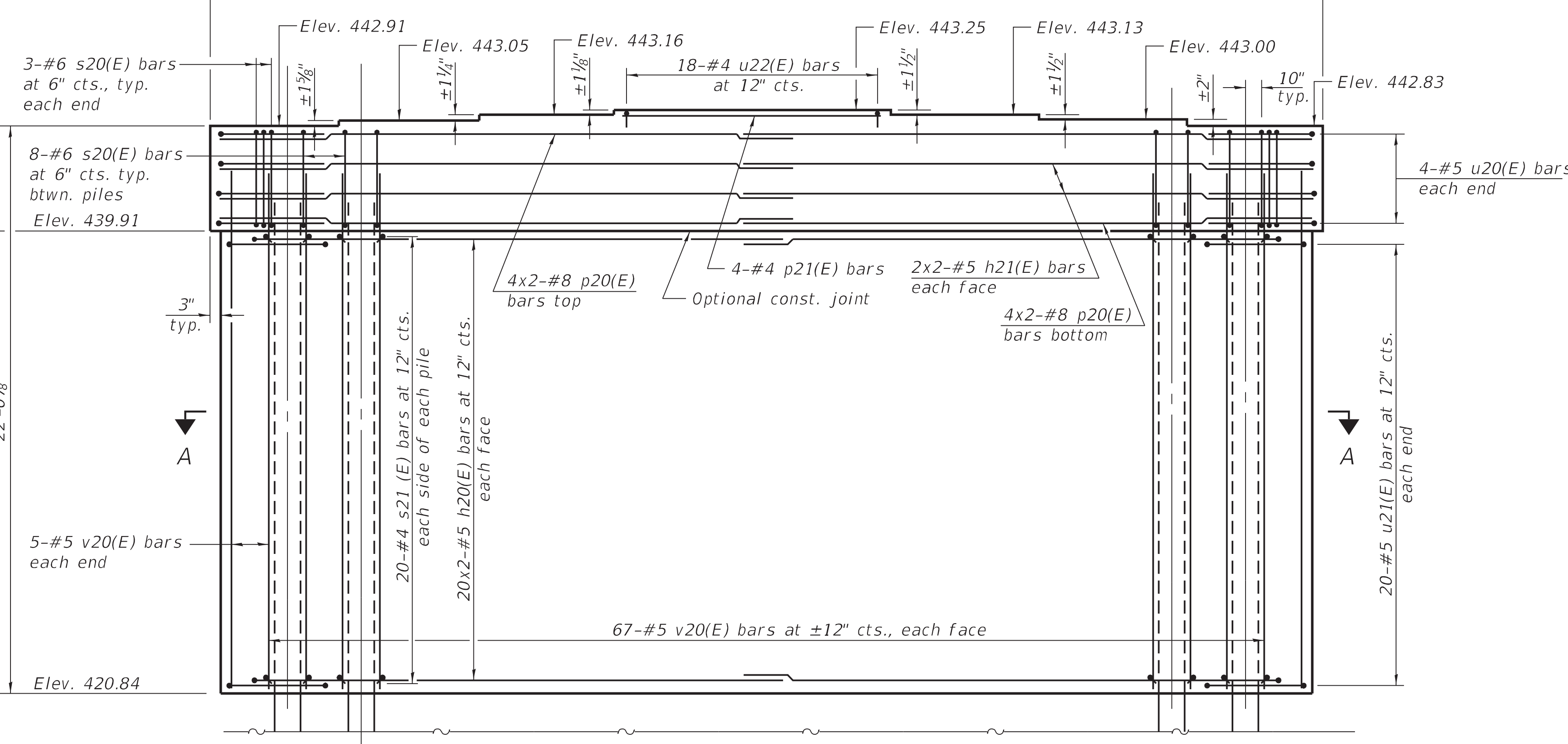
#5 bar = 3'-9" lap
#8 bar = 5'-9" lap



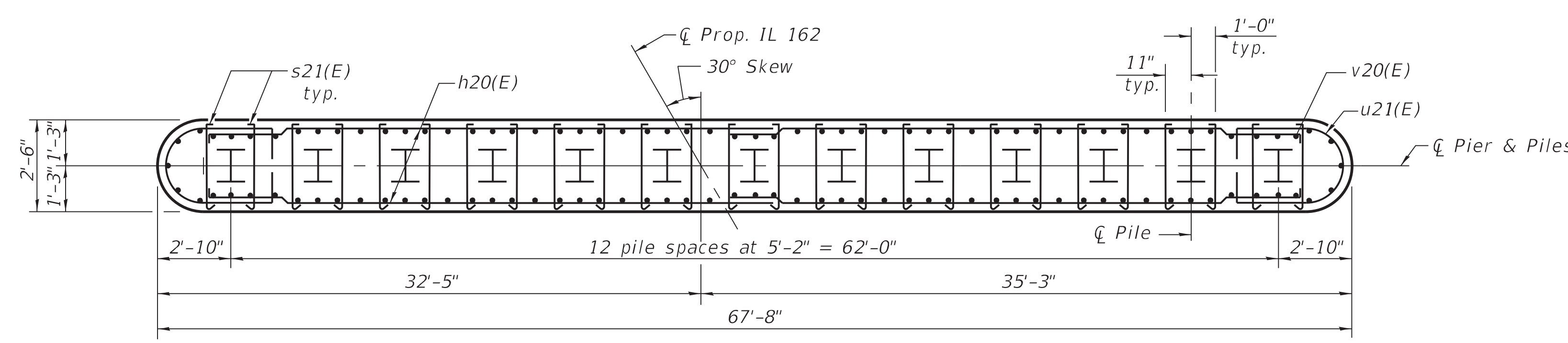
TOP PLAN



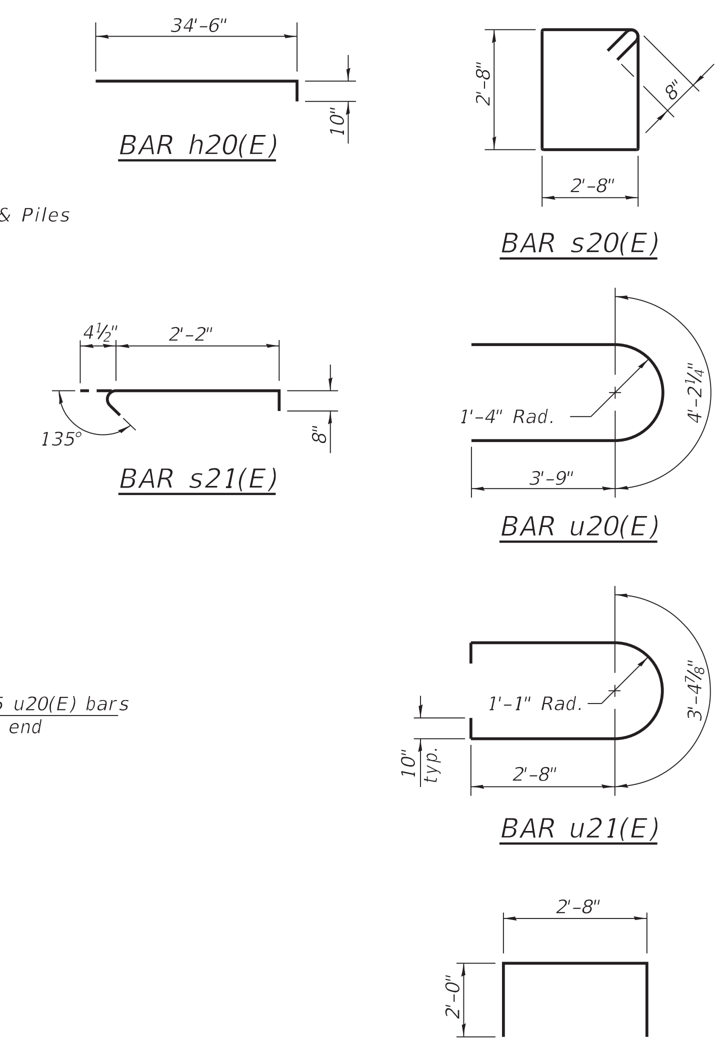
END VIEW



ELEVATION
(Looking East)



SECTION A-A



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	80	#4	35'-4"	
h21(E)	8	#5	34'-6"	
p20(E)	16	#8	35'-6"	
p21(E)	4	#4	16'-9"	
s20(E)	102	#6	12'-0"	
s21(E)	520	#4	3'-3"	
u20(E)	8	#5	11'-9"	
u21(E)	40	#5	10'-5"	
u22(E)	18	#4	6'-8"	
v20(E)	144	#5	21'-3"	
Cofferdam Excavation		Cu. Yd.	468	
Cofferdam (Type 2) (Location-3)		Each	1	
Concrete Structures		Cu. Yd.	142.2	
Reinforcement Bars, Epoxy Coated		Pound	10,520	
Furnishing Steel Piles, HP14x117		Foot	1,287	
Driving Piles		Foot	1,287	

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LOCHMUELLER GROUP
1928 SrA Bradley R. Smith Drive
Troy, IL 62294
PHONE: 618.667.1400

USER NAME =	DESIGNED - ACS	REVISED	
	CHECKED - LDG	REVISED	
PLOT SCALE =	DRAWN - WJS	REVISED	
PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 DETAILS
STRUCTURE NO. 060-0241

SHEET NO. 27 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	210
SN 060-0241		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

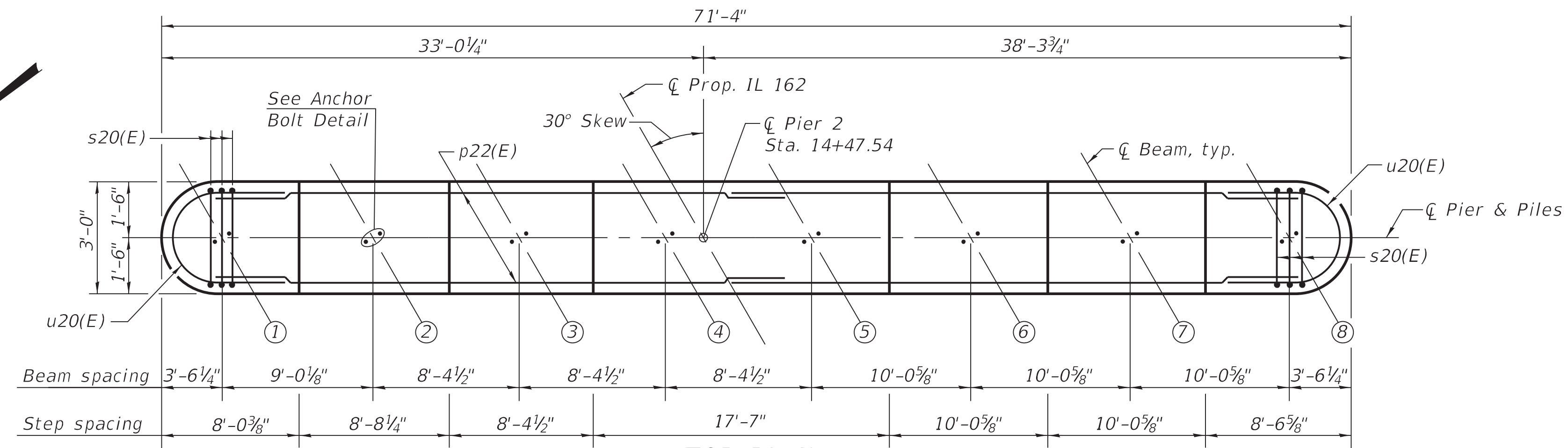
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 29 of 31.
For anchor bolt detail, see sheet 23 of 31.
For s20(E), s21(E), u20(E), u21(E) and u22(E) bar details, see sheet 27 of 31.

PILE DATA

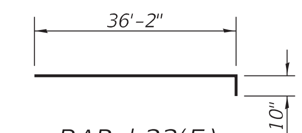
Type: HP14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 505 kips
Est. Length: 98 ft.
No. Production Piles: 13
No. Test Piles: 0

MINIMUM BAR LAP

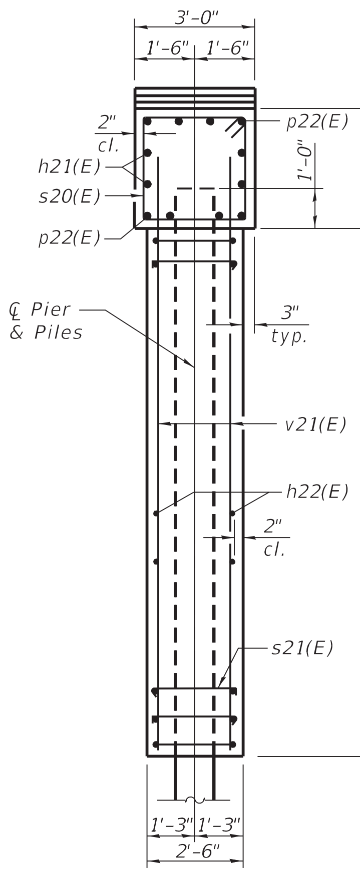
#5 bar = 3'-9" lap
#8 bar = 5'-9" lap



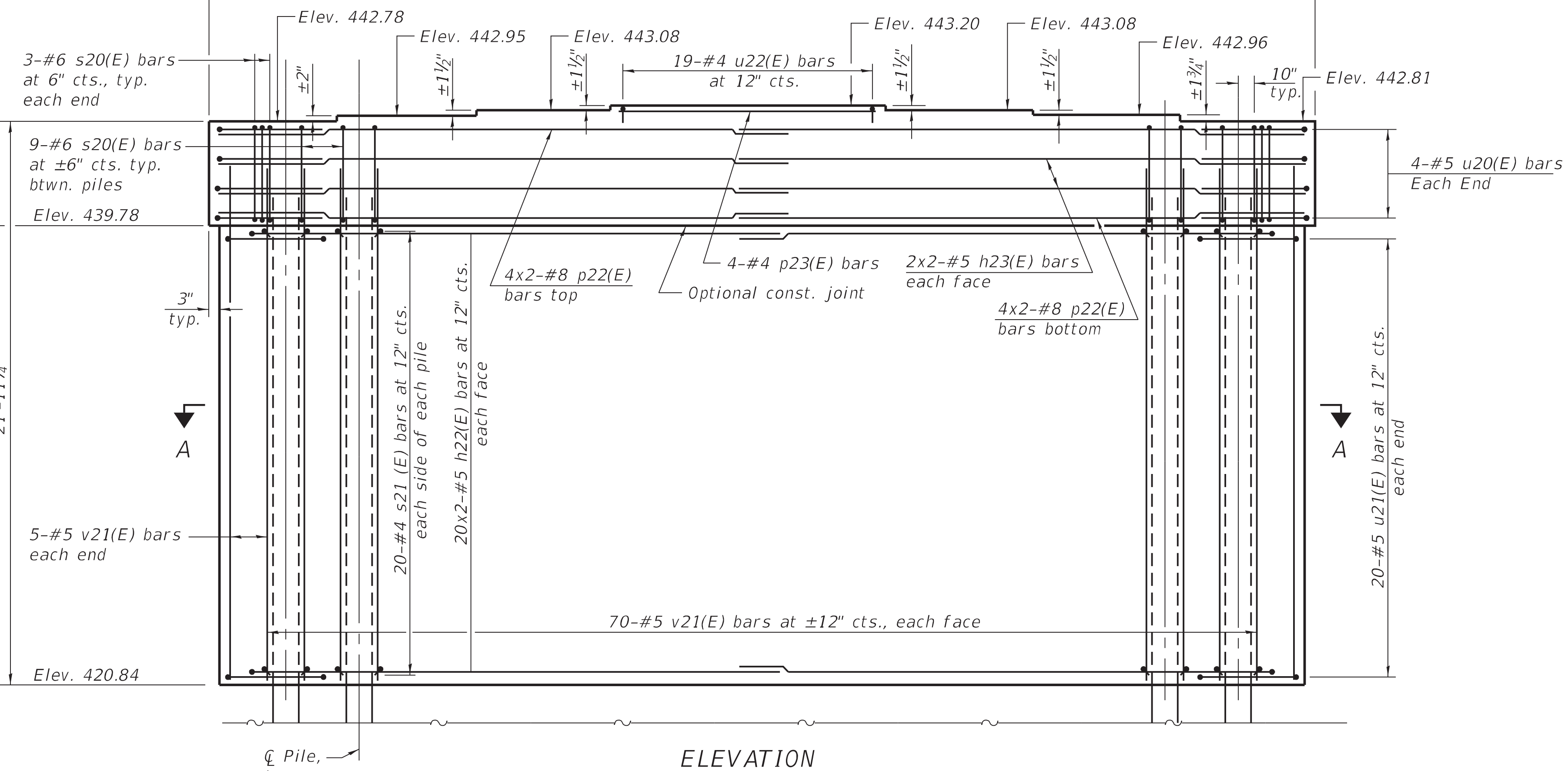
TOP PLAN



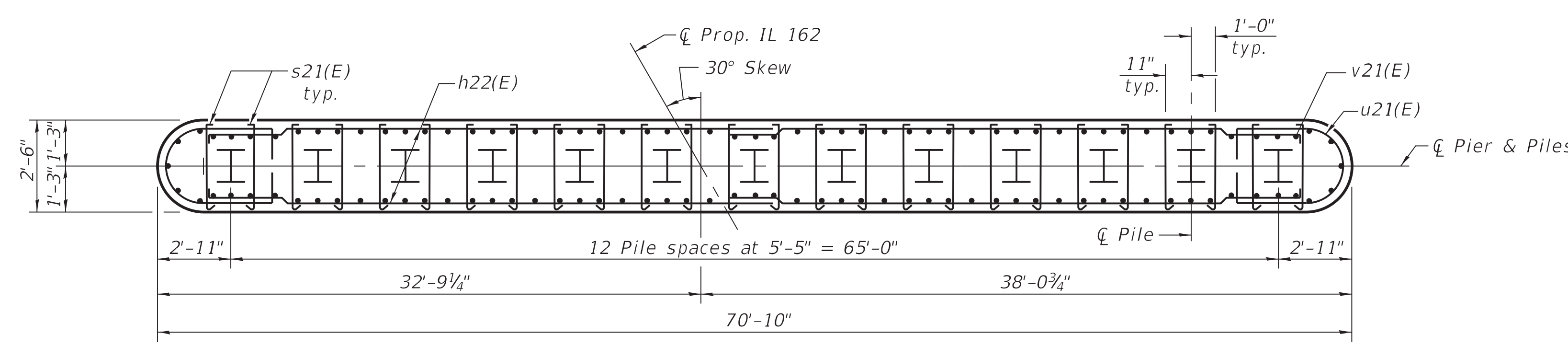
BAR h22(E)



END VIEW



ELEVATION
(Looking East)



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h22(E)	80	#5	37'-0"	
h23(E)	8	#5	36'-2"	
p22(E)	16	#8	37'-1"	
p23(E)	4	#4	17'-3"	
s20(E)	114	#6	12'-0"	
s21(E)	520	#4	3'-3"	
u20(E)	8	#5	11'-9"	
u21(E)	40	#5	10'-5"	
u22(E)	19	#4	6'-8"	
v21(E)	150	#5	21'-2"	
Cofferdam Excavation			Cu. Yd.	452
Cofferdam (Type 2) (Location-4)			Each	1
Concrete Structures			Cu. Yd.	153.8
Reinforcement Bars, Epoxy Coated			Pound	12,140
Furnishing Steel Piles, HP14x117			Foot	1,274
Driving Piles			Foot	1,274

LOCHMUELLER GROUP
1928 SrA Bradley R. Smith Drive
Troy, IL 62294
PHONE: 618.667.1400

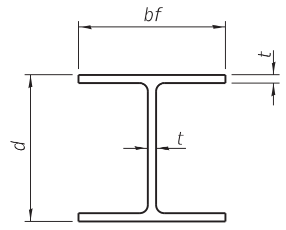
USER NAME =	DESIGNED - ACS	REVISED
	CHECKED - LDG	REVISED
PLOT SCALE =	DRAWN - WJS	REVISED
PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 DETAILS
STRUCTURE NO. 060-0241

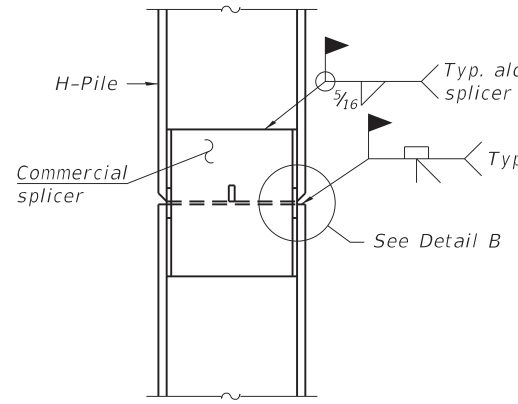
SHEET NO. 28 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	211
	SN 060-0241	CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

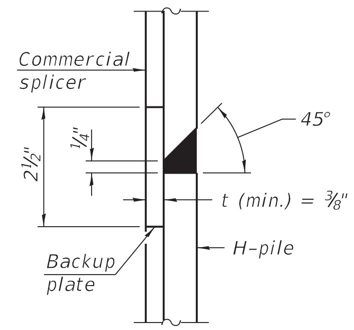


STEEL PILE TABLE

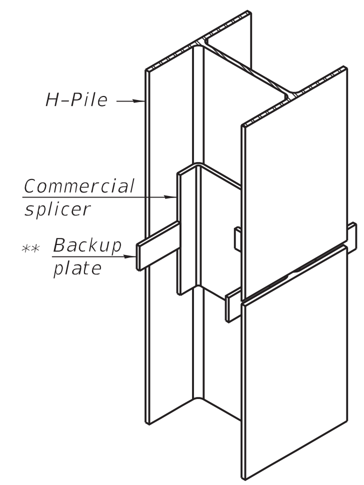
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}$"	$14\frac{7}{8}$"	$\frac{13}{16}$"	30"
x102	14"	$14\frac{3}{4}$"	$\frac{11}{16}$"	30"
x89	$13\frac{7}{8}$"	$14\frac{3}{4}$"	$\frac{5}{8}$"	30"
x73	$13\frac{5}{8}$"	$14\frac{5}{8}$"	$\frac{1}{2}$"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



ELEVATION

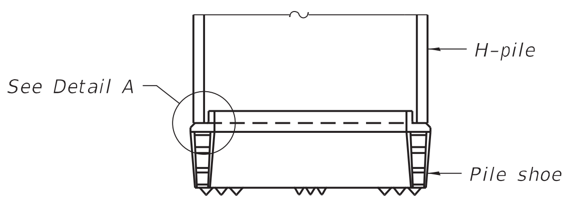


DETAIL "B"

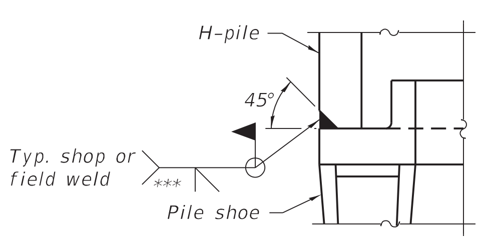


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



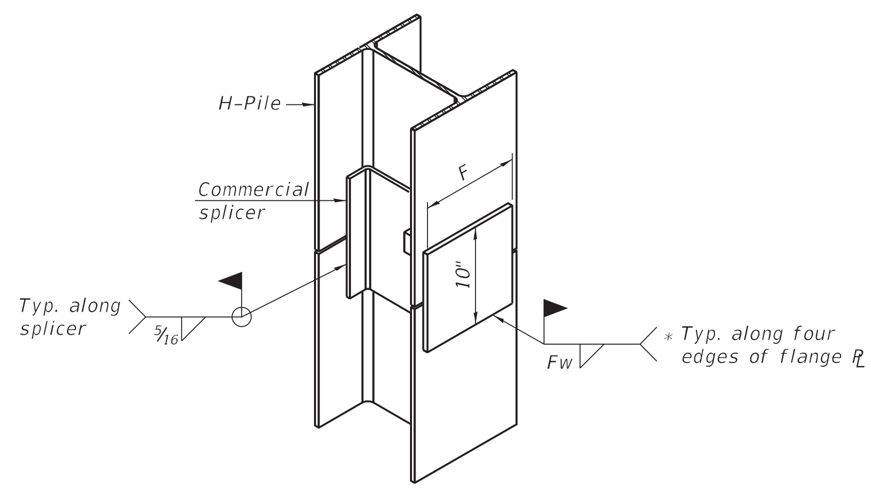
ELEVATION



DETAIL A

SHOE ATTACHMENT

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



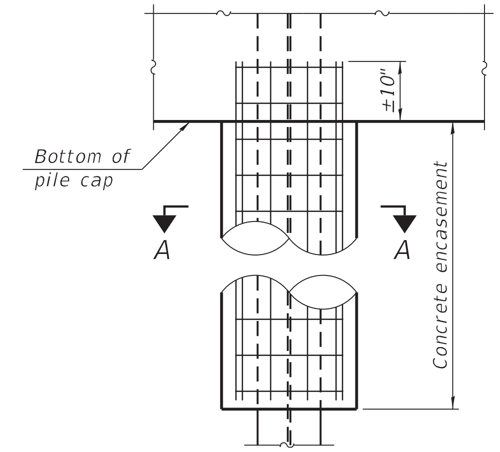
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds $\frac{1}{4}$" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}$" min.).



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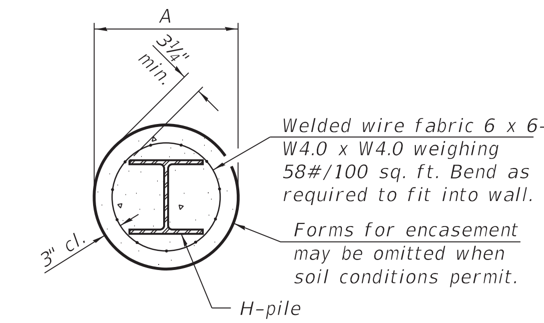
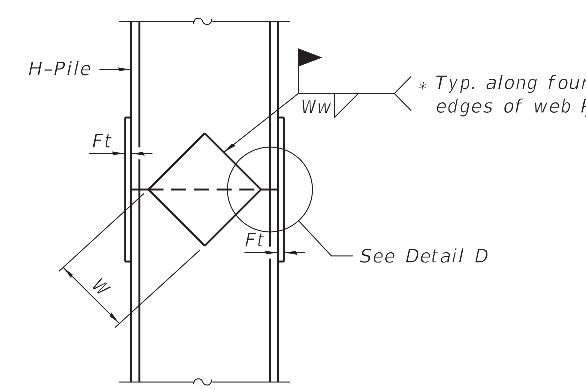


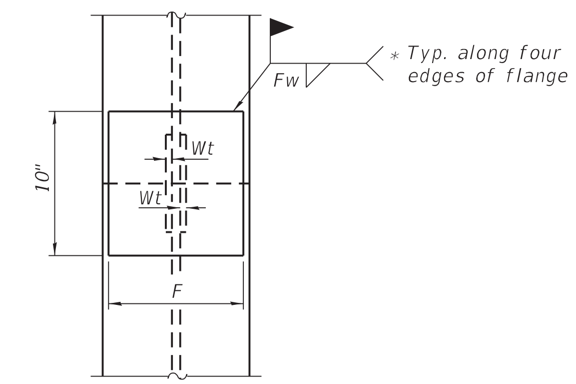
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

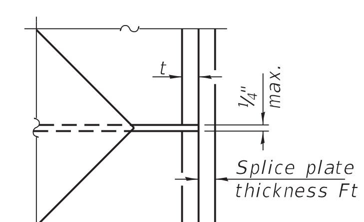
(when specified)



ELEVATION



END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	$12\frac{1}{2}$"	1"	$\frac{7}{8}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x102	$12\frac{1}{2}$"	$\frac{7}{8}$"	$\frac{3}{4}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x89	$12\frac{1}{2}$"	$\frac{3}{4}$"	$\frac{11}{16}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x73	$12\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{9}{16}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
HP 12x84	10"	$\frac{7}{8}$"	$\frac{11}{16}$"	$6\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x74	10"	$\frac{7}{8}$"	$\frac{11}{16}$"	$6\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x63	10"	$\frac{5}{8}$"	$\frac{1}{2}$"	$6\frac{1}{2}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
x53	10"	$\frac{5}{8}$"	$\frac{1}{2}$"	$6\frac{1}{2}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
HP 10x57	8"	$\frac{3}{4}$"	$\frac{9}{16}$"	$5\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
x42	8"	$\frac{5}{8}$"	$\frac{9}{16}$"	$5\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
HP 8x36	7"	$\frac{5}{8}$"	$\frac{7}{16}$"	$4\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{8}$"

WELDED PLATE FIELD SPLICE

F-HP 5-15-2023

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LOCHMUELLER GROUP
1928 SrA Bradley R. Smith Drive
Troy, IL 62294
PHONE: 618.667.1400

USER NAME =	DESIGNED - ACS	REVISED
	CHECKED - LDG	REVISED
PLOT SCALE =	DRAWN - WJS	REVISED
PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 060-0241

SHEET NO. 29 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	212
	SN 060-0241	CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

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

SOIL BORING LOG

Page 1 of 3

Date 2/25,28/2022

ROUTE Route 157/162 **DESCRIPTION** PTB 195, Item 57 IL-162 over Judy's Branch **LOGGED BY** SCI

SECTION 51-1R **LOCATION** Madison County, Illinois, **SEC.** 4, **TWP.** 3N, **RNG.** 8W
Lat 38.740588 **Long** -90.003715

COUNTY Madison **DRILLING METHOD** CME 550 w/HSA and Mud Rotary **HAMMER TYPE** Automatic

STRUCT. NO. SN 060-0241
Station 14+18.67

BORING NO. B-3
Station 13+20
Offset 13 ft RT
Ground Surface Elev. 437.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 423.5 ft ▼
Upon Completion N/A ft
After N/A **Hrs.** N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL: Brown SILTY LOAM (A-4), trace rocks and cinders, moist, stiff			2 3 8	2.5 P	17
	434.0				
FILL: Brown CINDERS w/ layers of Silty Loam (A-2), medium dense		-5	6 8 6	3.8 P	17
	431.5				
FILL: Brown SAND w/ Silty Loam (A-2), moist			3 5 5	2.3 P	18
	429.0				
FILL: Brown CINDERS w/ layers of Silty Loam (A-2), medium dense		-10	2 2 2	NC	24
	426.5				
Gray and Brown LOAM (A-4) w/ sand deposits, moist, soft *Percentage finer than #200 test performed (22.5% finer)*			WOH 1 2	0.3 B/20%	30
	424.0	▼			
Brown SAND (A-2), loose, fine to coarse, trace coal, organics and fine gravel *Percentage finer than #200 test performed (20.6% finer)*		-15	2 1 1	NC	NC
			2 4 3	NC	NC
	419.0				
Gray SILTY CLAY LOAM (A-6), very moist, soft *Percentage finer than #200 test performed (19.1% finer)*	418.0	-20	2 5 7	NC	25

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown SAND (A-3), fine, wet, medium dense *Percentage finer than #200 test performed (26.4% finer) (continued)* Becomes very loose			WOH WOH WOH	NC	NC
Becomes medium dense		-25	5 5 5	NC	NC
			5 7 9	NC	NC
	409.0				
Brown and Gray SILTY LOAM (A-4), very moist, stiff		-30	4 6 4	3.6 S/15%	26
			5 3 10	NC	26
	404.5				
Gray SAND (A-3), fine, moist, medium dense		-35	11 12 12	NC	NC
		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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

SOIL BORING LOG

Page 2 of 3

Date 2/25,28/2022

ROUTE Route 157/162 **DESCRIPTION** PTB 195, Item 57 IL-162 over Judy's Branch **LOGGED BY** SCI

SECTION 51-1R **LOCATION** Madison County, Illinois, **SEC.** 4, **TWP.** 3N, **RNG.** 8W
Lat 38.740588 **Long** -90.003715

COUNTY Madison **DRILLING METHOD** CME 550 w/HSA and Mud Rotary **HAMMER TYPE** Automatic

STRUCT. NO. SN 060-0241
Station 14+18.67

BORING NO. B-3
Station 13+20
Offset 13 ft RT
Ground Surface Elev. 437.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 423.5 ft ▼
Upon Completion N/A ft
After N/A **Hrs.** N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray SAND (A-3), fine, moist, medium dense *(continued)*					
Becomes very dense		-45	13 14 17	NC	NC
	390.0				
Gray SAND (A-2), fine to coarse, moist, medium dense, trace fine gravel			14 6 5	1.5 B/20%	20
	387.5	-50			
Gray SANDY CLAY LOAM (A-6), moist, stiff					
	385.0				
Gray SILTY CLAY (A-6), moist, stiff		-55	5 5 8	2.6 B/20%	23
Becomes brown, trace gravel		-60	4 4 6	1.2 B/20%	22

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray SILTY CLAY (A-6), moist, stiff *(continued)*					
	375.0				
Brown SILTY CLAY LOAM (A-6), moist, stiff, w/ sand deposits		-65	3 5 4	0.8 B/20%	22
	370.0				
Gray CLAY (A-7), moist, very stiff		-70	4 7 8	2.7 B/20%	27
		-75	4 5 7	2.2 B/20%	25
		-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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

SOIL BORING LOG

Page 3 of 3

Date 2/25,28/2022

ROUTE Route 157/162 **DESCRIPTION** PTB 195, Item 57 IL-162 over Judy's Branch **LOGGED BY** SCI

SECTION 51-1R **LOCATION** Madison County, Illinois, **SEC.** 4, **TWP.** 3N, **RNG.** 8W
Lat 38.740588 **Long** -90.003715

COUNTY Madison **DRILLING METHOD** CME 550 w/HSA and Mud Rotary **HAMMER TYPE** Automatic

STRUCT. NO. SN 060-0241
Station 14+18.67

BORING NO. B-3
Station 13+20
Offset 13 ft RT
Ground Surface Elev. 437.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 423.5 ft ▼
Upon Completion N/A ft
After N/A **Hrs.** N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY (A-7), moist, very stiff *(continued)*					
	355.0				
Gray CLAY LOAM (A-7), moist, hard w/ weathered clayey shale		-85	12 14 19	2.6 S/15%	27
	351.2				
Gray CLAYEY SHALE			50/5.5" 50/2.5"		13
	350.0				
Sampler Refusal at 87 feet. Borehole grouted upon completion.			50/4.5" 50/1.5"		13
		-90			
		-95			
		-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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LOCHMUELLER GROUP
1928 SrA Bradley R. Smith Drive
Troy, IL 62294
PHONE: 618.667.1400

USER NAME =	DESIGNED - ACS	REVISED
	CHECKED - LDG	REVISED
PLOT SCALE =	DRAWN - WJS	REVISED
PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS
STRUCTURE NO. 060–0241
SHEET NO. 30 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
586	51-1R	MADISON	296	213
SN 060-0241		CONTRACT NO. 76A46		
ILLINOIS	FED. AID PROJECT			

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

SOIL BORING LOG

Page 1 of 3

Date 03/03/22

ROUTE Route 157/162 DESCRIPTION PTB 195, Item 57 IL-162 over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, **SEC.** 4, **TWP.** 3N, **RNG.** 8W
Lat 38.740693 Long -90.003037

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-0241
Station 14+18.67

BORING NO. B-4
Station 15+14
Offset 14 ft LT
Ground Surface Elev. 438.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 419.5 ft ▼
Upon Completion N/A ft
After N/A Hrs. N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown SILTY CLAY LOAM (A-6), trace roots, medium stiff					
Brown SILTY LOAM (A-4), moist, medium stiff	436.5		2 4 3	1.5 P	27
		-5	2 1 2	0.2 S/10%	20
Becomes soft					
Brown SILTY CLAY LOAM (A-6), moist, soft	432.5		1 2 1	0.3 S/10%	28
Brown SILTY LOAM (A-4), moist, soft *Percentage finer than #200 test performed (22.6% finer)*	430.0	-10	1 2 1	0.2 S/10%	29
Brown with Gray SILTY CLAY LOAM (A-6), very moist, very soft *Percentage finer than #200 test performed (24.7% finer)*	427.5		WOH 1 1	<0.25 P	27
Atterberg Limits and Percentage finer than #200 test performed (25.1% passing #200, LL=35, PI=31)		-15	WOH 2 2	0.3 B/20%	31
Becomes gray with brown, moist and soft					
Becomes grayish brown			WOH WOH 1	0.2 B/20%	33
▼	418.0	-20	1 1 2	0.5 B/20%	36

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown fine SAND (A-3), loose					
Grayish Brown SILTY CLAY LOAM (A-6), moist, soft	416.5		3 1 3	0.5 P	34
Brown fine SAND (A-3), wet, medium dense	415.0	-25	5 7 11	NC	NC
Gray SILTY LOAM (A-4) w/ clay deposits, moist, stiff	412.5		7 5 8	2.0 P	23
		-30	5 6 5	1.5 P	26
Gray fine SAND (A-3), wet, medium dense	406.0				
		-35	8 10 13	NC	20
Brown SILTY CLAY LOAM (A-6), moist, stiff	401.0				
		-40	6 4 6	1.3 S/15%	23

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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SOIL BORING LOG

Page 2 of 3

Date 03/03/22

ROUTE Route 157/162 DESCRIPTION PTB 195, Item 57 IL-162 over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, **SEC.** 4, **TWP.** 3N, **RNG.** 8W
Lat 38.740693 Long -90.003037

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-0241
Station 14+18.67

BORING NO. B-4
Station 15+14
Offset 14 ft LT
Ground Surface Elev. 438.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 419.5 ft ▼
Upon Completion N/A ft
After N/A Hrs. N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown SILTY CLAY LOAM (A-6), moist, stiff *(continued)*					
w/ fine sand and clay deposits		-45	3 4 6	1.8 P	25
w/ fine sand deposit, no clay deposit		-50	4 3 4	1.5 P	27
Becomes gray		-55	2 4 5	0.9 S/15%	23
Gray CLAY (A-7), moist, stiff	381.0				
		-60	5 4 7	1.9 B/20%	23

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY (A-7), moist, stiff *(continued)*					
Gray SILTY CLAY LOAM (A-6), moist, stiff	376.0				
		-65	4 4 4	0.3 B/20%	23
		-70	2 4 5	1.3 B/20%	26
Becomes very stiff, w/ trace gravel		-75	5 12 16	1.0 S/10%	26
Gray CLAY (A-7), moist, stiff	361.0				
		-80	WOH 4 4	0.9 B/20%	24

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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SOIL BORING LOG

Page 3 of 3

Date 03/03/22

ROUTE Route 157/162 DESCRIPTION PTB 195, Item 57 IL-162 over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, **SEC.** 4, **TWP.** 3N, **RNG.** 8W
Lat 38.740693 Long -90.003037

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-0241
Station 14+18.67

BORING NO. B-4
Station 15+14
Offset 14 ft LT
Ground Surface Elev. 438.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 419.5 ft ▼
Upon Completion N/A ft
After N/A Hrs. N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY (A-7), moist, stiff *(continued)*					
		-85	5 6 6	1.0 B/20%	22
					13
Gray CLAYEY SHALE, hard	350.5		35 50/3"		13
Sampler Refusal at 89 feet. Borehole grouted upon completion.	349.0	-90	50/1" 50/4"		
		-95			
		-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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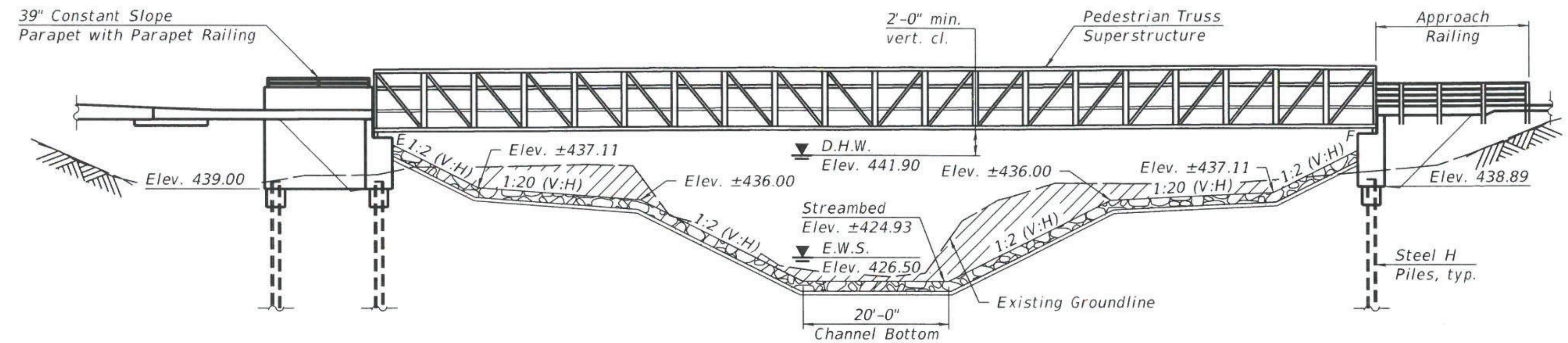
LOCHMUELLER GROUP 1928 SrA Bradley R. Smith Drive Troy, IL 62294 PHONE: 618.667.1400	USER NAME =	DESIGNED - ACS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORINGS STRUCTURE NO. 060–0241	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - LDG	REVISED			586	51-1R	MADISON	296	214
	PLOT SCALE =	DRAWN - WJS	REVISED				SN 060-0241	CONTRACT NO. 76A46		
	PLOT DATE = 3/4/2024	CHECKED - LDG	REVISED		SHEET NO. 31 OF 31 SHEETS		ILLINOIS	FED. AID PROJECT		

Benchmark: Cut "□", with +, on top of parapet wall at Northwest corner of IL-157 Bridge over Judys Branch (S.N. 060-0087). Elev. 449.226.

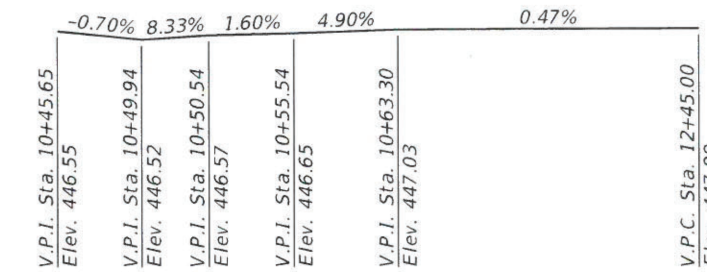
Existing Structure: None.



ELEVATION

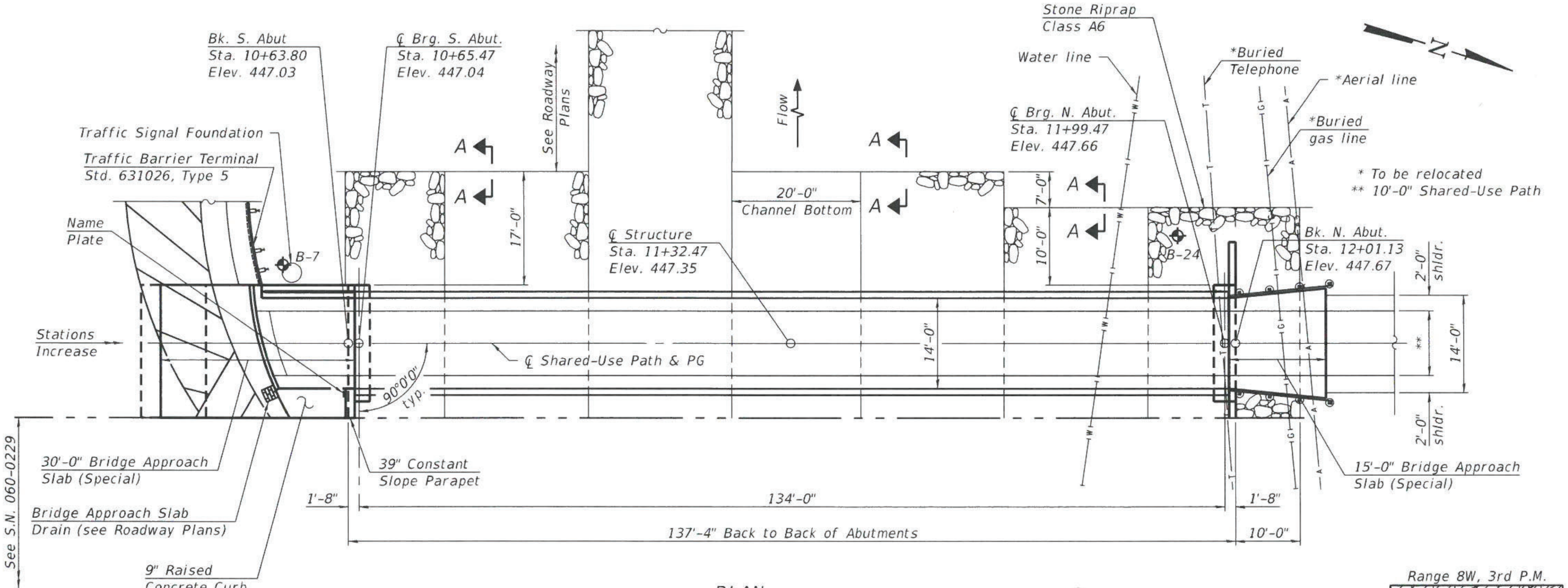
KEY

Denotes Channel Excavation (See Roadway Plans)



PROFILE GRADE
(Along ℄ Shared-Use Path)

INDEX OF SHEETS



PLAN

Note:
For Section A-A, see sheet 2 of 19.

LOADING H-10

Live Load = 90 psf uniform load

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th. Edition.

2009 AASHTO LRFD Guide Specifications For Design of Pedestrian Bridges

DESIGN STRESSES

FIELD UNITS

f'c = 4,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)

PRE-ENGINEERED BRIDGE UNITS

fy = 50,000 psi (M270 Grade50W)

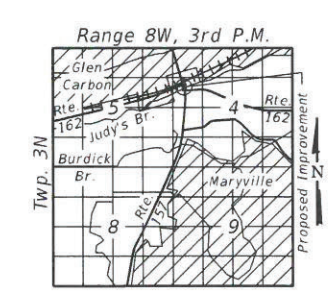
SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.23g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.53g
Soil Site Class = D

STATE OF ILLINOIS
ERIC M. LAGEMANN
LICENSE NO. 081-006124
LICENSED STRUCTURAL ENGINEER

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

Eric Lagemann 4/17/24
License Expires 11/30/24 Date



LOCATION SKETCH

GENERAL PLAN & ELEVATION
SHARED-USE PATH OVER JUDYS BRANCH
F.A.P. ROUTE 586
SECTION 51-1R
MADISON COUNTY
STATION 11+32.47
STRUCTURE NO. 060-7003

FUHRMANN ENGINEERING WWW.FUHRMANN-ENG.COM	USER NAME =	DESIGNED - A.H. Morinaga Mansilla	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - E.M. Lagemann	REVISED -	
	PLOT SCALE =	DRAWN - A.H. Morinaga Mansilla	REVISED -	
	PLOT DATE =	CHECKED - E.M. Lagemann	REVISED -	

SHEET 1 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	215
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

*586/592

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GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Slipforming of the parapets is not allowed.

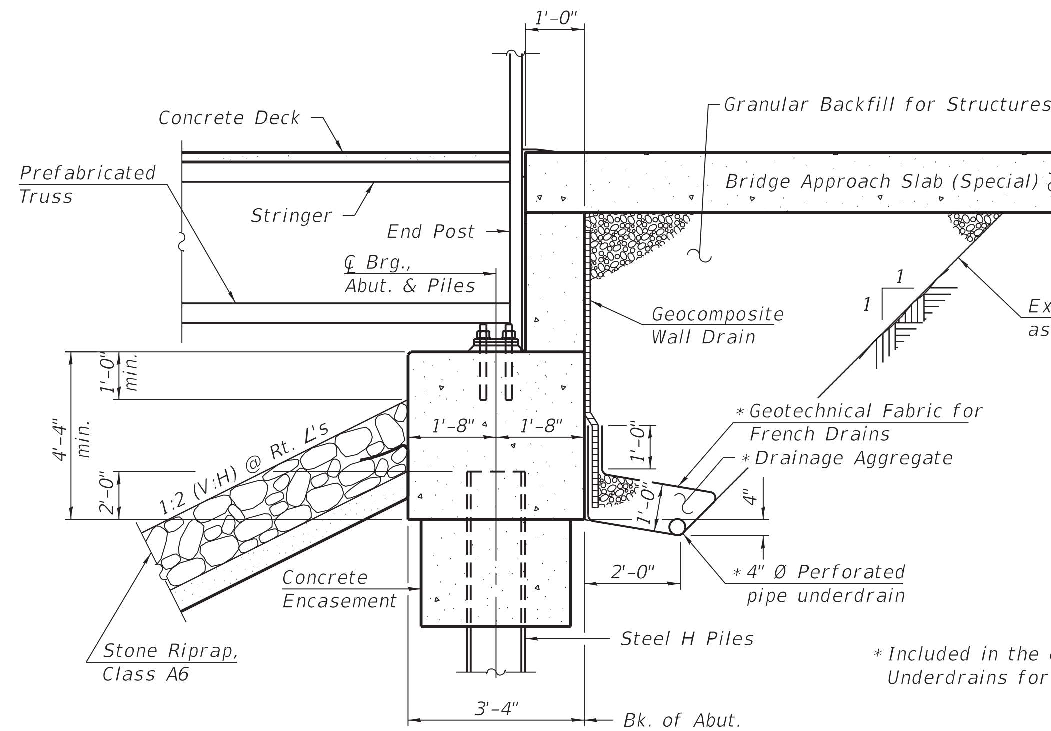
A film forming Concrete Sealer shall be applied to the horizontal surfaces of the bridge seats of both Abutments. A penetrating Concrete Sealer shall be applied to the exposed vertical surfaces of both abutments, including the backwall and front face of abutments. Concrete Sealers at the abutments shall be applied prior to setting bearings and beams.

Granular Backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.

Bridge Deck Grooving shall be applied only to the roadway portion of the South Bridge Approach Slab.

TOTAL BILL OF MATERIAL

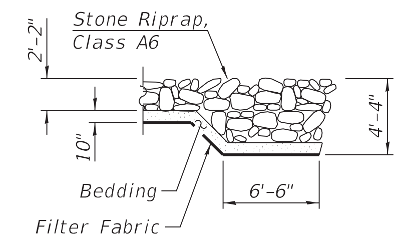
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A6	Sq. Yd.			532
Filter Fabric	Sq. Yd.			563
Structure Excavation	Cu. Yd.		42	42
Concrete Structures	Cu. Yd.		39.6	39.6
Concrete Superstructure	Cu. Yd.	43.4		43.4
Bridge Deck Grooving	Sq. Yd.	34		34
Concrete Encasement	Cu. Yd.		8.6	8.6
Protective Coat	Sq. Yd.	317		317
Concrete Superstructure (Approach Slab)	Cu. Yd.	35.0		35.0
Reinforcement Bars, Epoxy Coated	Pound	12,980	5,270	18,250
Parapet Railing	Foot	13.3		13.3
Furnishing Steel Piles HP14x117	Foot		935	935
Driving Piles	Foot		935	935
Name Plates	Each			1
Granular Backfill For Structures	Cu. Yd.		91	91
Concrete Sealer	Sq. Ft.		127.3	127.3
Geocomposite Wall Drain	Sq. Yd.		44	44
Pipe Underdrains For Structures 4"	Foot		95	95
Pedestrian Truss Superstructure	Sq. Ft.	1,920.7		1,920.7
Wood Rail	Foot	32.0		32.0



* Included in the cost of Pipe Underdrains for Structures.

SECTION THRU ABUTMENT

Notes:
Section Thru North Abutment shown, South Abutment similar.
All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION A-A

Note:
For location of section A-A, see sheet 1 of 19.

STA. 11+32.47
BUILT 202X BY
STATE OF ILLINOIS
F.A.P. Rt. 586 Sec. 51-1R
LOADING H-10
STR. NO. 060-7003

NAME PLATE

See Std. 515001

DESIGN SCOUR ELEVATION TABLE

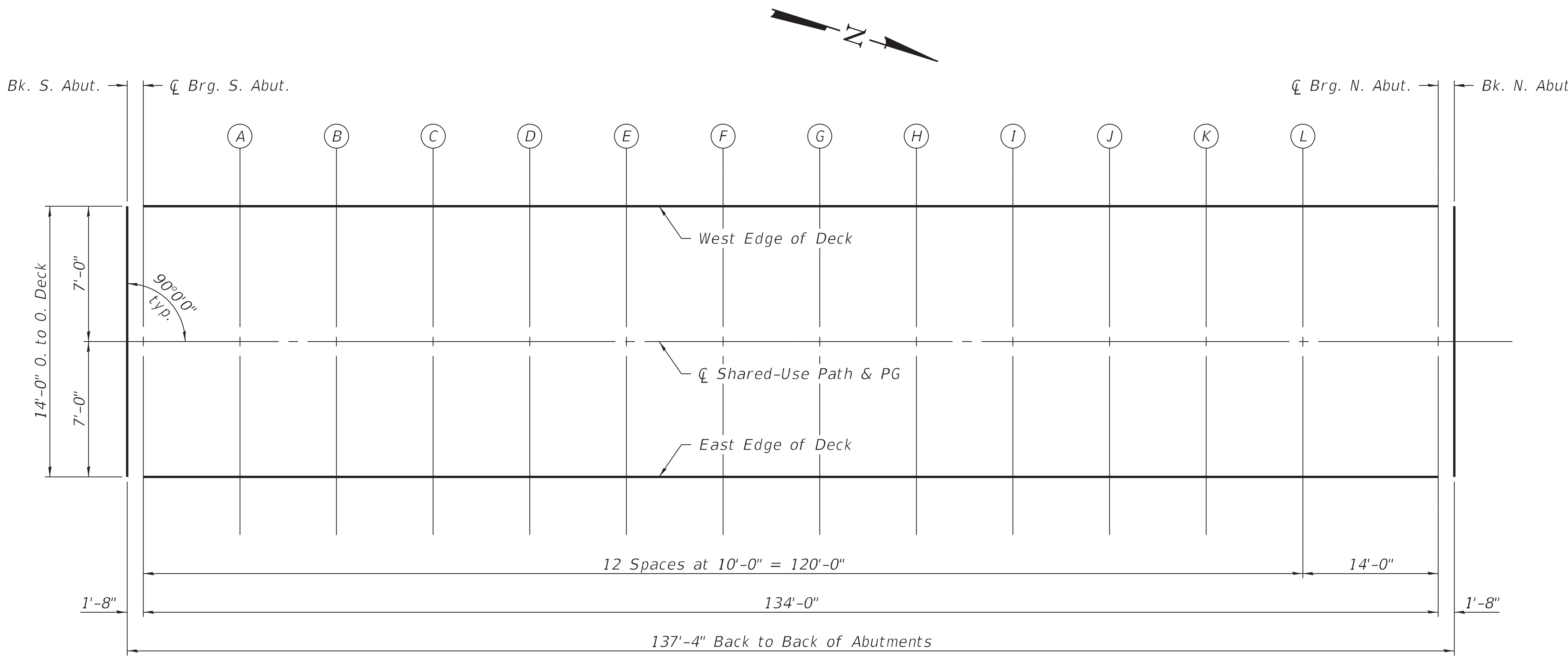
Event / Limit State	Design Scour Elevations (ft.) S. Abut.	N. Abut.	Item 113
Q100	439.00	438.92	8
Q200	439.00	438.92	
Design	439.00	438.92	
Check	439.00	438.92	

WATERWAY INFORMATION

Drainage Area = 8.6 sq. mi.
Existing Overtopping Elev. = 445.83 at Sta. 582+50.00
Proposed Overtopping Elev. = 446.42 at Sta. 581+42.36

Flood Event	Freq. Yr.	Discharge, Q C.F.S.	Waterway Opening - Ft² Existing	Waterway Opening - Ft² Proposed	Natural H.W.E. - Ft.	Head - Ft. Existing	Head - Ft. Proposed	Headwater Elevation - Ft. Existing	Headwater Elevation - Ft. Proposed
Design	50	5750	883	1146	441.9	0.5	0.3	442.4	442.2
Base	100	6590	941	1214	442.4	1.5	0.4	443.9	442.8
Scour Design Check	200	7600	987	1287	443.0	1.3	0.6	444.3	443.7
Overtop Existing	N/A	---	---	---	---	---	---	---	---
Overtop Proposed	N/A	---	---	---	---	---	---	---	---
Max. Calc.	500	8920	998	1367	443.7	1.3	1.6	445.0	445.3

10 Year Velocity Through Existing Bridge = N/A
10 Year Velocity Through Proposed Bridge = 4.46 ft/s



PLAN

Note:
Prefabricated pedestrian truss manufacturer shall determine Theoretical Deck Elevations Adjusted for Dead Load Deflection and take into account the concrete deck when determining bridge camber.

WEST EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	10+63.80	-7.00	446.93
℄ Brg. S. Abut.	10+65.47	-7.00	446.94
A	10+75.47	-7.00	446.98
B	10+85.47	-7.00	447.03
C	10+95.47	-7.00	447.08
D	11+05.47	-7.00	447.12
E	11+15.47	-7.00	447.17
F	11+25.47	-7.00	447.22
G	11+35.47	-7.00	447.26
H	11+45.47	-7.00	447.31
I	11+55.47	-7.00	447.36
J	11+65.47	-7.00	447.40
K	11+75.47	-7.00	447.45
L	11+85.47	-7.00	447.50
℄ Brg. N. Abut.	11+99.47	-7.00	447.56
Bk. N. Abut.	12+01.13	-7.00	447.57

℄ SHARED-USE PATH & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	10+63.80	0.00	447.03
℄ Brg. S. Abut.	10+65.47	0.00	447.04
A	10+75.47	0.00	447.09
B	10+85.47	0.00	447.13
C	10+95.47	0.00	447.18
D	11+05.47	0.00	447.23
E	11+15.47	0.00	447.27
F	11+25.47	0.00	447.32
G	11+35.47	0.00	447.37
H	11+45.47	0.00	447.42
I	11+55.47	0.00	447.46
J	11+65.47	0.00	447.51
K	11+75.47	0.00	447.56
L	11+85.47	0.00	447.60
℄ Brg. N. Abut.	11+99.47	0.00	447.67
Bk. N. Abut.	12+01.13	0.00	447.68

EAST EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	10+63.80	7.00	447.14
℄ Brg. S. Abut.	10+65.47	7.00	447.15
A	10+75.47	7.00	447.19
B	10+85.47	7.00	447.24
C	10+95.47	7.00	447.29
D	11+05.47	7.00	447.33
E	11+15.47	7.00	447.38
F	11+25.47	7.00	447.43
G	11+35.47	7.00	447.47
H	11+45.47	7.00	447.52
I	11+55.47	7.00	447.57
J	11+65.47	7.00	447.61
K	11+75.47	7.00	447.66
L	11+85.47	7.00	447.71
℄ Brg. N. Abut.	11+99.47	7.00	447.77
Bk. N. Abut.	12+01.13	7.00	447.78

WEST EDGE OF APPROACH SLAB

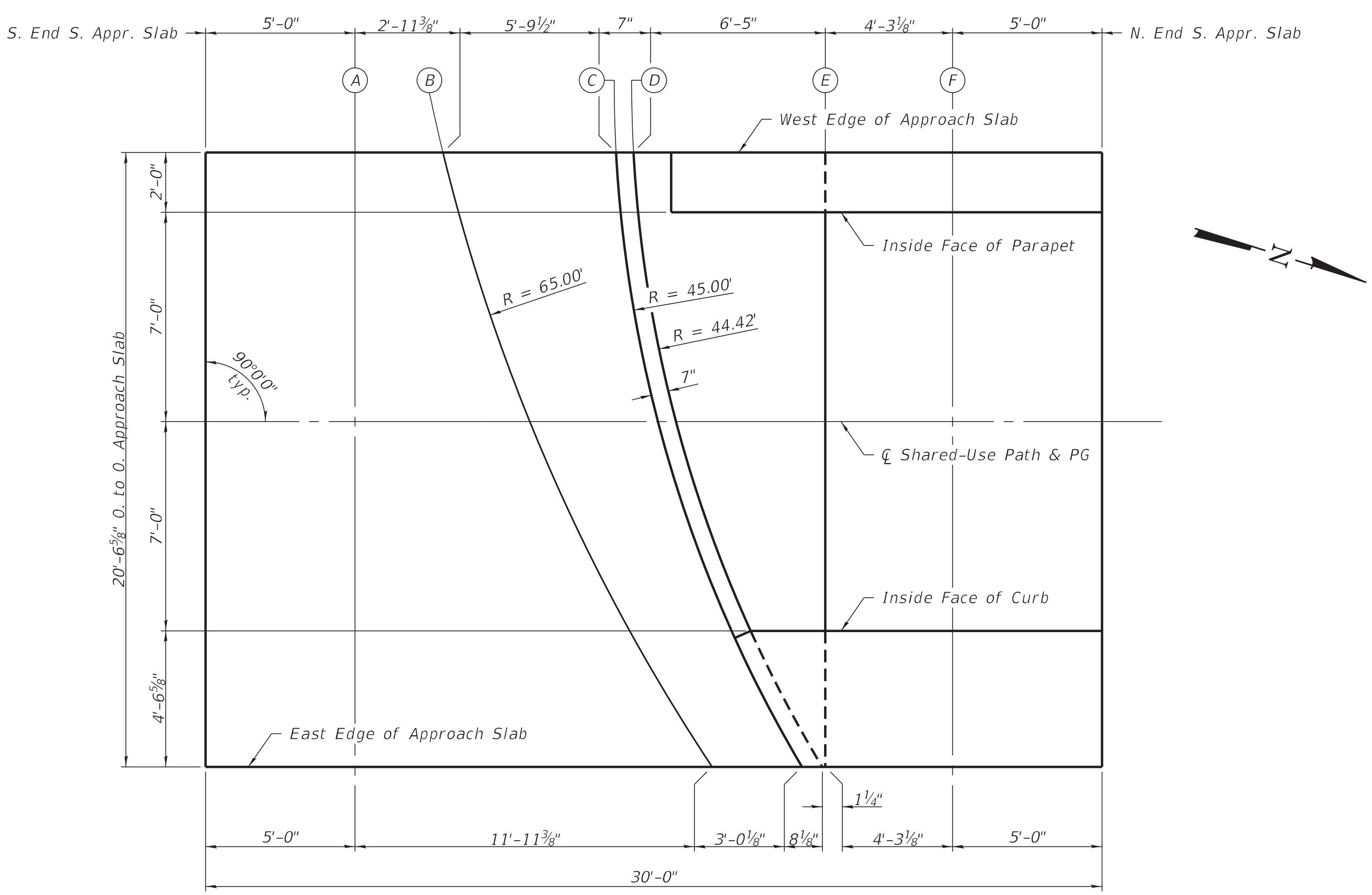
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	10+34.80	-9.00	446.35
A	10+39.80	-9.00	446.38
B	10+42.75	-9.00	446.39
C	10+48.54	-9.00	446.42
D	10+49.12	-9.00	446.46
E	10+55.54	-9.00	446.52
F	10+59.80	-9.00	446.72
N. End S. Appr. Slab	10+64.80	-9.00	446.90

INSIDE FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	10+34.80	-7.00	446.39
A	10+39.80	-7.00	446.41
B	10+43.27	-7.00	446.43
C	10+48.69	-7.00	446.45
D	10+49.27	-7.00	446.49
E	10+55.54	-7.00	446.55
F	10+59.80	-7.00	446.75
N. End S. Appr. Slab	10+64.80	-7.00	446.93

℄ SHARED-USE PATH & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	10+34.80	0.00	446.47
A	10+39.80	0.00	446.51
B	10+45.65	0.00	446.55
C	10+49.94	0.00	446.52
D	10+50.54	0.00	446.57
E	10+55.54	0.00	446.65
F	10+59.80	0.00	446.86
N. End S. Appr. Slab	10+64.80	0.00	447.04



PLAN

INSIDE FACE OF CURB

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	10+34.80	7.00	446.51
A	10+39.80	7.00	446.53
B	10+48.99	7.00	446.58
C	10+52.40	7.00	446.54
D	10+53.04	7.00	446.58
E	10+55.54	7.00	446.76
F	10+59.80	7.00	446.96
N. End S. Appr. Slab	10+64.80	7.00	447.14

EAST EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	10+34.80	11.55	446.53
A	10+39.80	11.55	446.55
B	10+51.75	11.55	446.59
C	10+54.76	11.55	446.55
D	10+55.44	11.55	446.59
E	10+55.54	11.55	446.76
F	10+59.80	11.55	446.96
N. End S. Appr. Slab	10+64.80	11.55	447.14

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PLOT SCALE =	DRAWN - E.M. Lagemann	REVISED -	
PLOT DATE =	CHECKED - T.S. Friederich	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH BRIDGE APPROACH SLAB ELEVATIONS
STRUCTURE NO. 060-7003

SHEET 4 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	218
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

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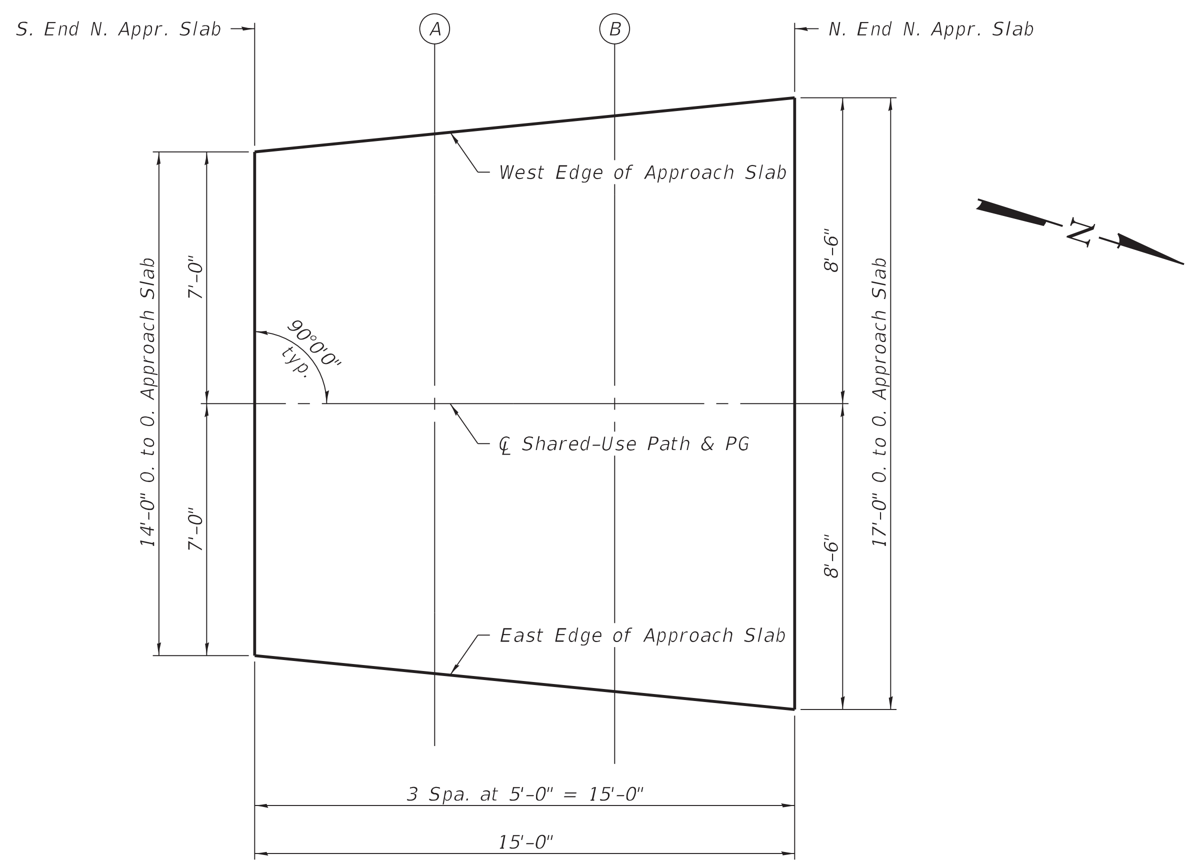

PLAN

WEST EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	12+00.13	-7.00	447.57
A	12+05.13	-7.50	447.58
B	12+10.13	-8.00	447.60
N. End N. Appr. Slab	12+15.13	-8.50	447.62

℄ SHARED-USE PATH & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	12+00.13	0.00	447.67
A	12+05.13	0.00	447.70
B	12+10.13	0.00	447.72
N. End N. Appr. Slab	12+15.13	0.00	447.74

EAST EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	12+00.13	7.00	447.78
A	12+05.13	7.50	447.81
B	12+10.13	8.00	447.84
N. End N. Appr. Slab	12+15.13	8.50	447.87

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PLOT DATE =	CHECKED - T.S. Friederich	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH BRIDGE APPROACH SLAB ELEVATIONS
STRUCTURE NO. 060-7003

SHEET 5 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	219
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

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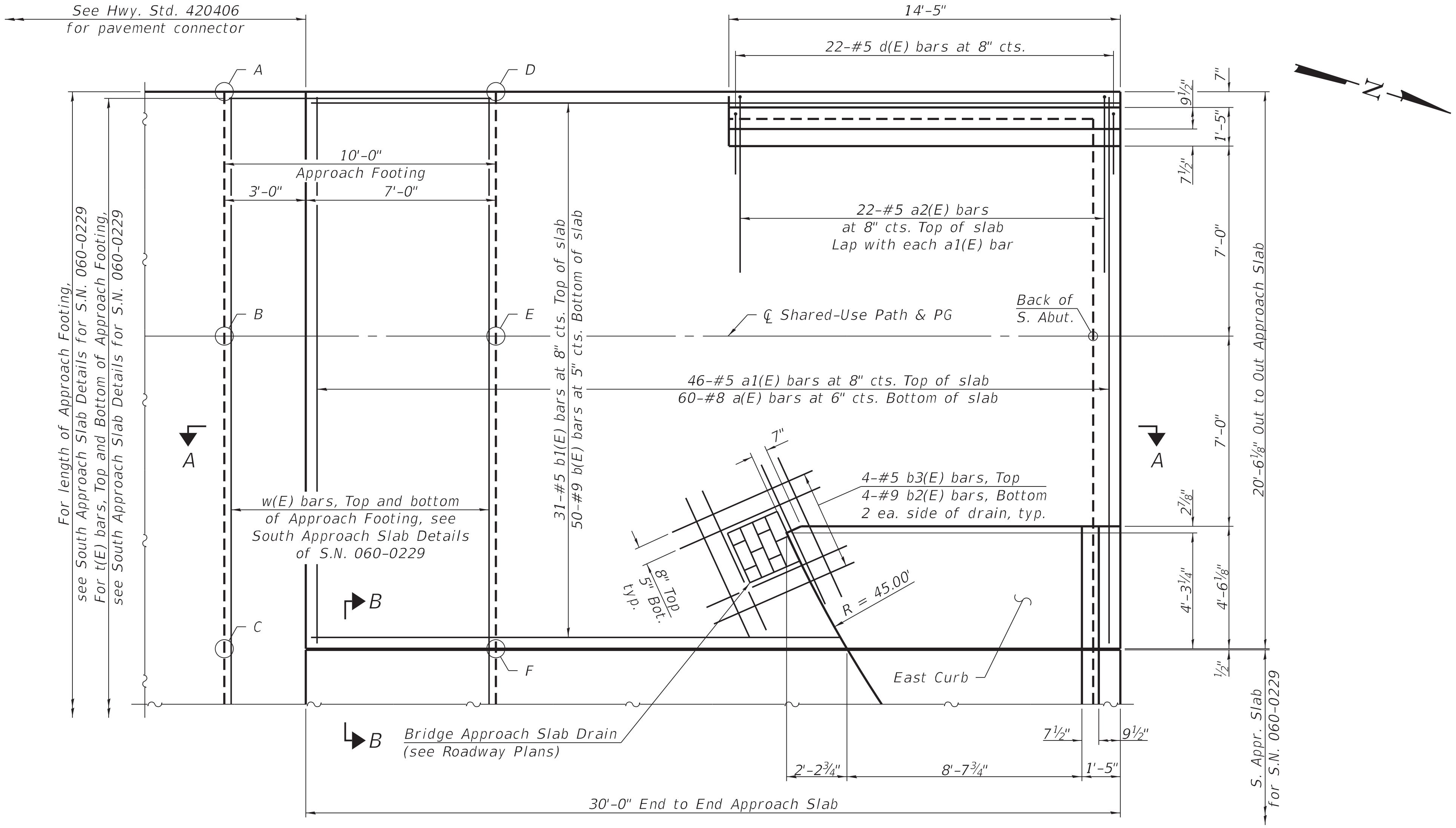
*586/592



PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point/ Location	Station	Offset	Top	Bottom
A	10+31.80	-9.00 ft.	445.09	444.26
B	10+31.80	0.00 ft.	445.20	444.37
C	10+31.80	11.55 ft.	445.27	444.44
D	10+41.80	-9.00 ft.	445.14	444.31
E	10+41.80	0.00 ft.	445.27	444.44
F	10+41.80	11.55 ft.	445.30	444.47

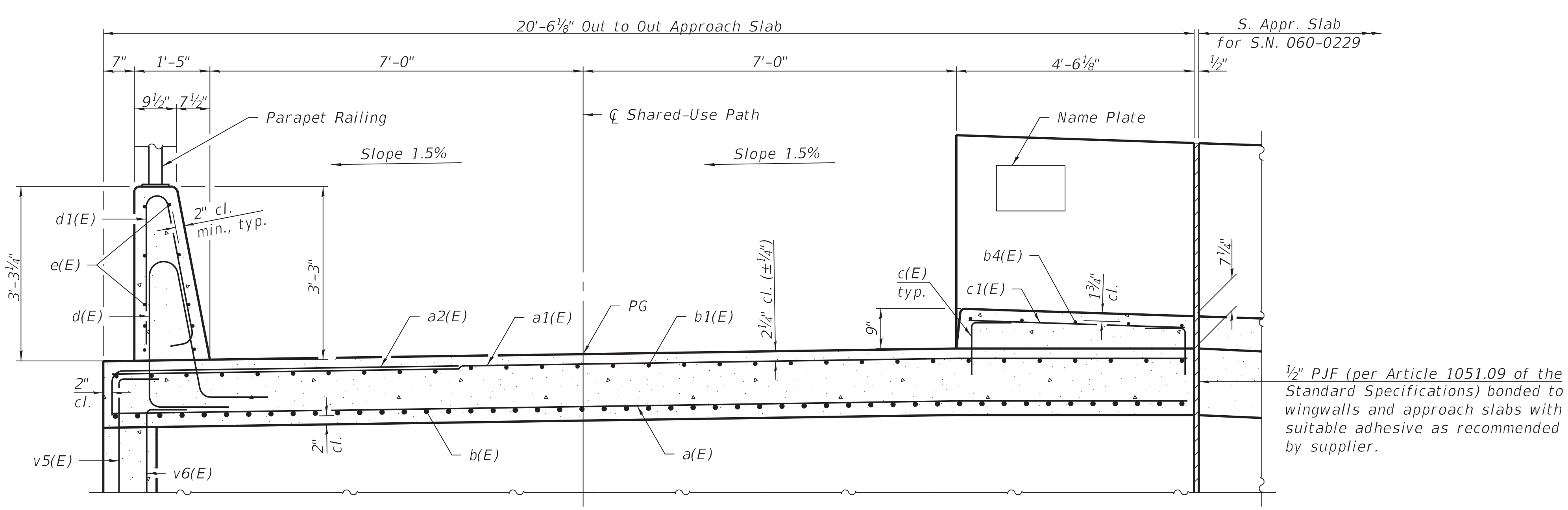
Notes:

Longitudinal and Transverse reinforcement shall be field cut around the Bridge Approach Slab Drain. A minimum clearance of 2" shall be provided.

The Approach Footing is a continuous footing supporting the South Approach Slabs of both this structure and S.N. 060-0229. See S.N. 060-0229 plans for reinforcement and concrete quantities, and Approach Footing dimensions.

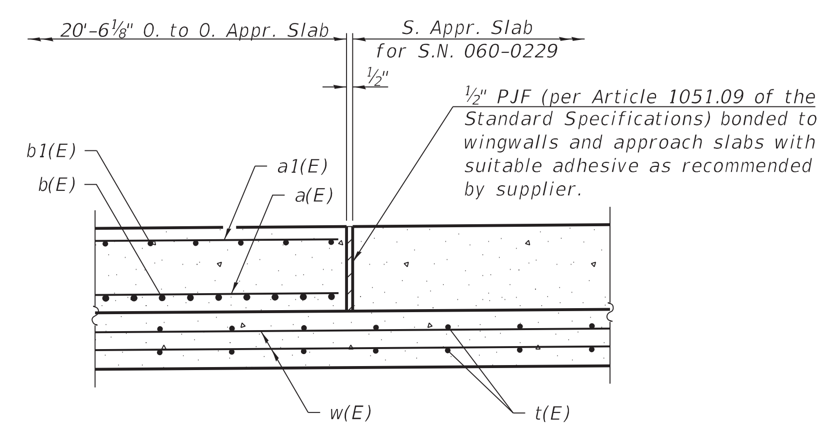
Reinforcement details for the East Curb and Parapet not shown for clarity. For Plan of East Curb, see sheet 7 of 19.

For Section A-A, see sheet 7 of 19.



CROSS SECTION - NEAR ABUTMENT

(Looking North)



SECTION B-B

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		CHECKED - A.H. Morinaga Mansilla	REVISED -		
	PLOT SCALE =	DRAWN - E.M. Lagemann	REVISED -		
	PLOT DATE =	CHECKED - A.H. Morinaga Mansilla	REVISED -		SHEET 6 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	220
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

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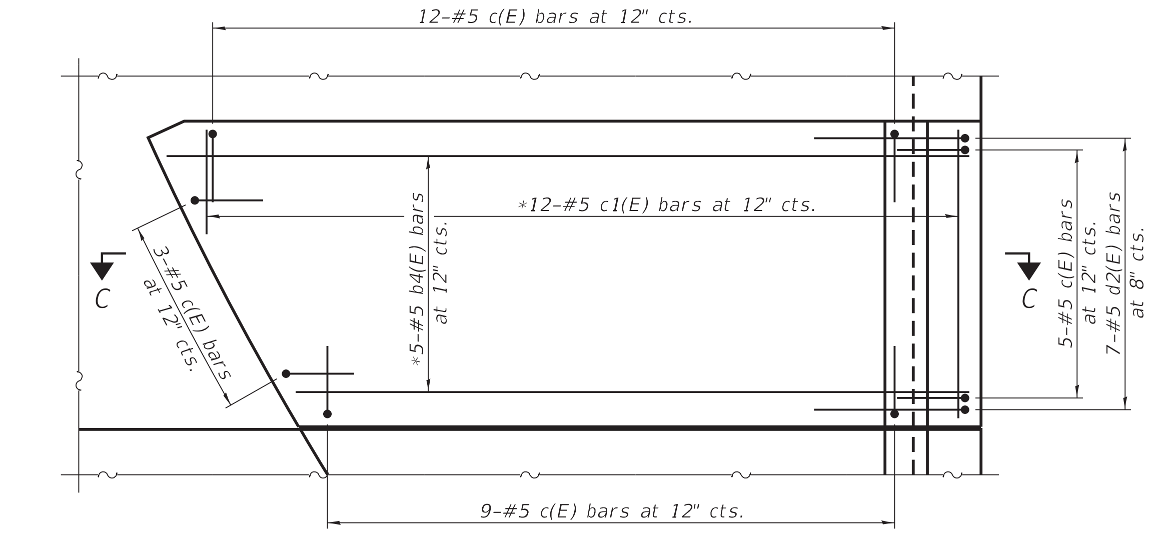
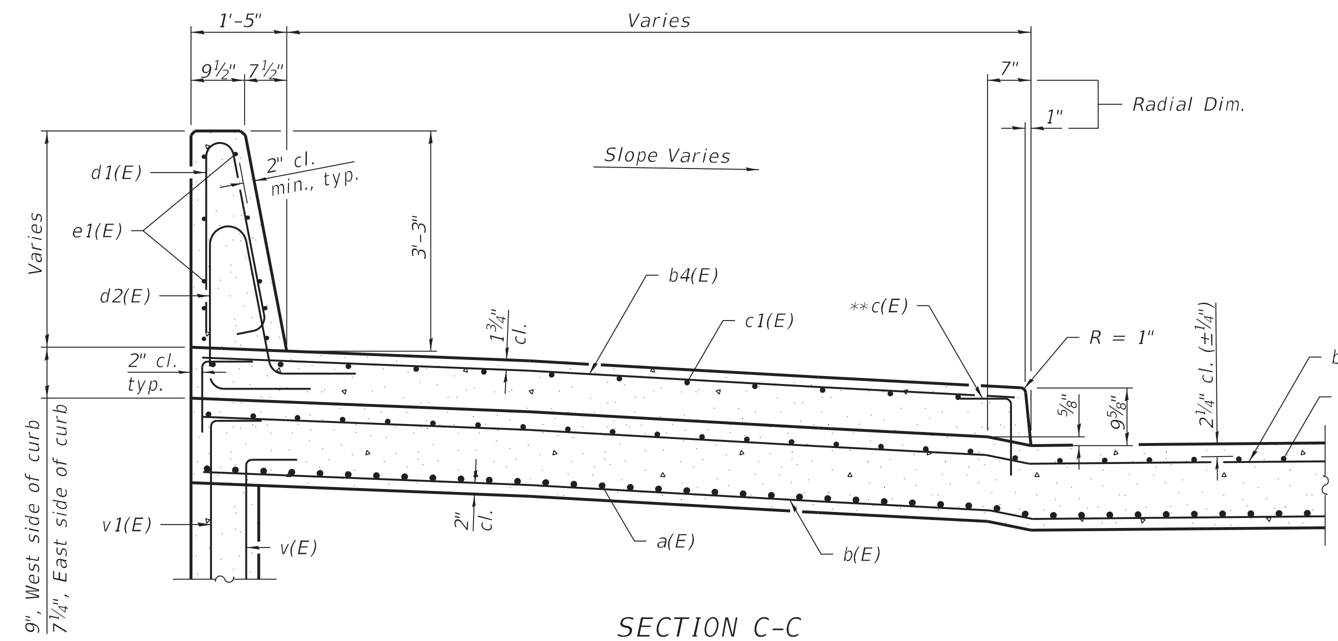
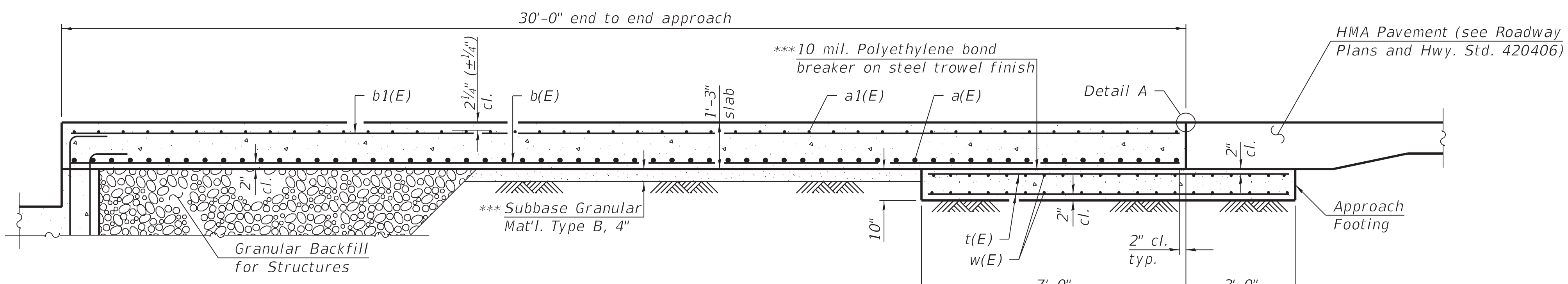


PLAN OF EAST CURB

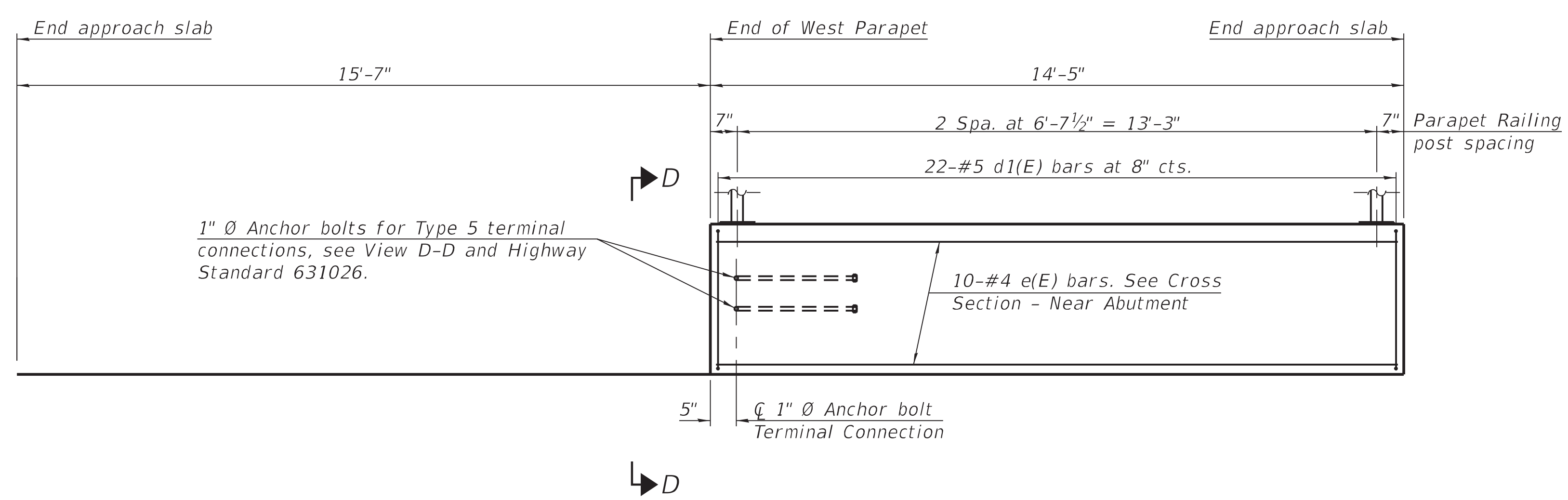


SECTION C-C

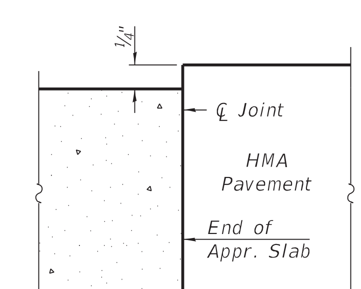


SECTION A-A

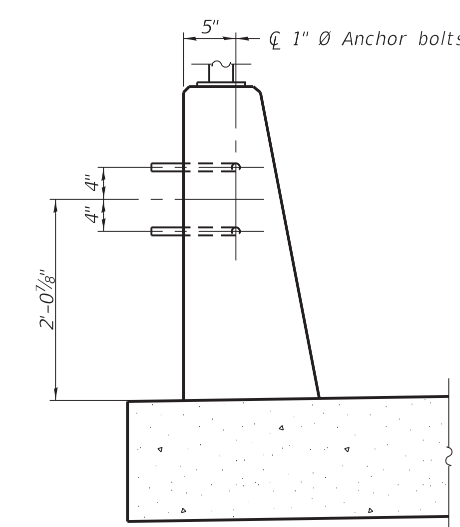
* Field cut b4(E) bars and c1(E) bars to fit curve of curb.
** Drill and set #5 c(E) bar according to Article 509.06 of the Standard Specifications. Drilled holes shall be roughened or scored per manufacturer's recommendation. Hole depth shall be deep enough to provide 1¾" clearance to top of c(E) bar and top of curb, with a minimum hole depth of 6". Locate Longitudinal bars to miss drilled holes. Locate drilled holes to miss Transverse bars in appr. slab.
*** Cost included with Concrete Superstructure (Approach Slab).



INSIDE ELEVATION OF WEST PARAPET



DETAIL A



VIEW D-D

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		CHECKED - A.H. Morinaga Mansilla	REVISED -		
	PLOT SCALE =	DRAWN - E.M. Lagemann	REVISED -		
	PLOT DATE =	CHECKED - A.H. Morinaga Mansilla	REVISED -		SHEET 7 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	221
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

*586/592

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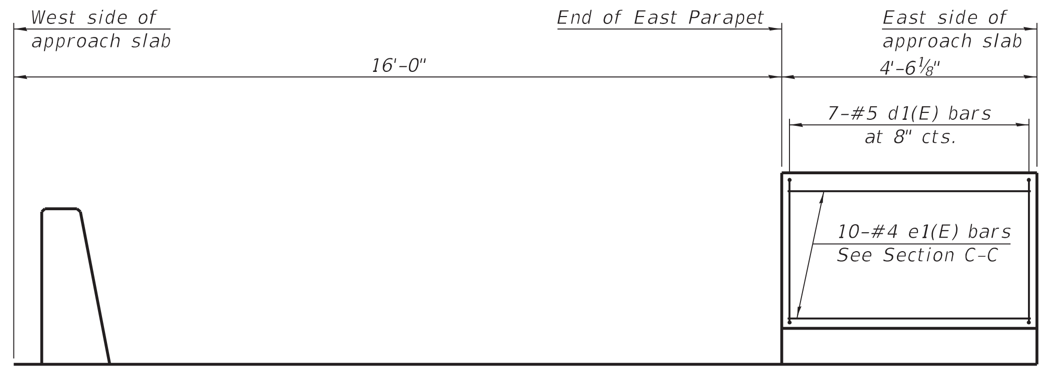
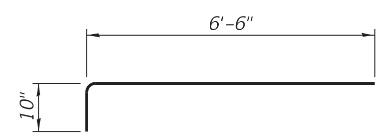
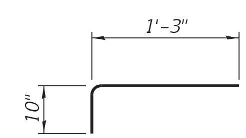


INSIDE ELEVATION OF EAST PARAPET

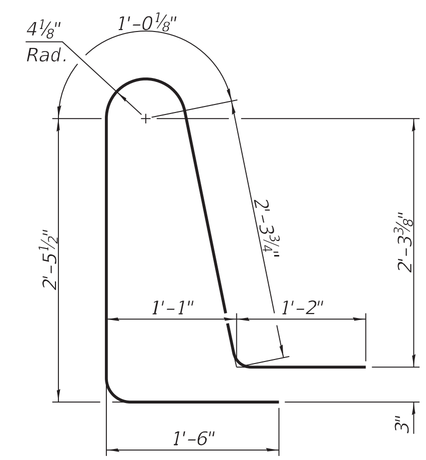
Notes:
Parapet and curb concrete shall be paid for as Concrete Superstructure.
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
Approach footing concrete shall be paid for as Concrete Structures. Quantity is included in S.N. 060-0229 plans.
Approach footing reinforcement quantity is included in S.N. 060-0229 plans.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures. Quantity is included in S.N. 060-0229 plans.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 19.



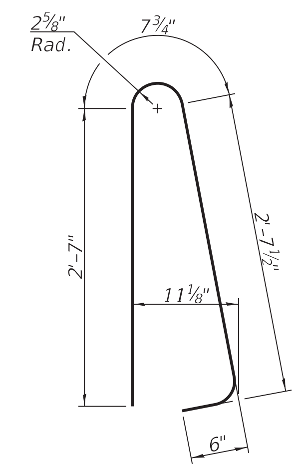
BAR a2(E)



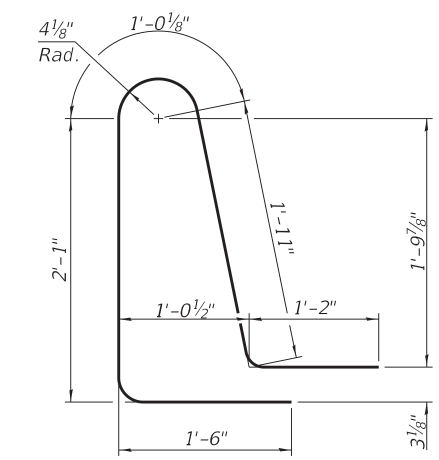
BAR c(E)



BAR d(E)



BAR d1(E)

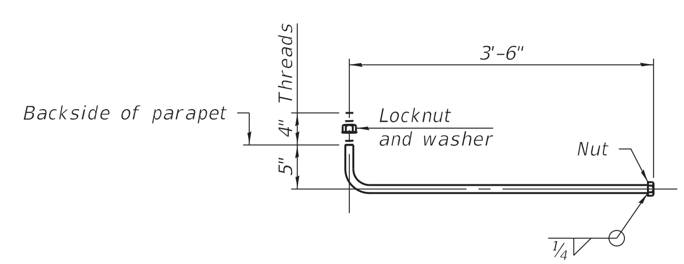


BAR d2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	60	#8	20'-2"	
a1(E)	46	#5	20'-2"	
a2(E)	22	#5	7'-4"	
b(E)	50	#9	29'-8"	
b1(E)	31	#5	29'-8"	
b2(E)	8	#9	5'-8"	
b3(E)	8	#5	5'-8"	
b4(E)	5	#5	12'-0"	
c(E)	29	#5	2'-1"	
c1(E)	12	#5	4'-2"	
d(E)	22	#5	8'-6"	
d1(E)	29	#5	6'-5"	
d2(E)	7	#5	7'-8"	
e(E)	10	#4	14'-1"	
e1(E)	10	#4	4'-2"	
Concrete Superstructure			Cu. Yd.	5.8
Bridge Deck Grooving			Sq. Yd.	34
Concrete Superstructure (Approach Slab)			Cu. Yd.	28.5
Reinforcement Bars, Epoxy Coated			Pound	11,320

* Cost included with Concrete Superstructure (Approach Slab).



*1" Ø ANCHOR BOLT

(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH BRIDGE APPROACH SLAB DETAILS III
STRUCTURE NO. 060-7003

SHEET 8 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	222

CONTRACT NO. 76A46
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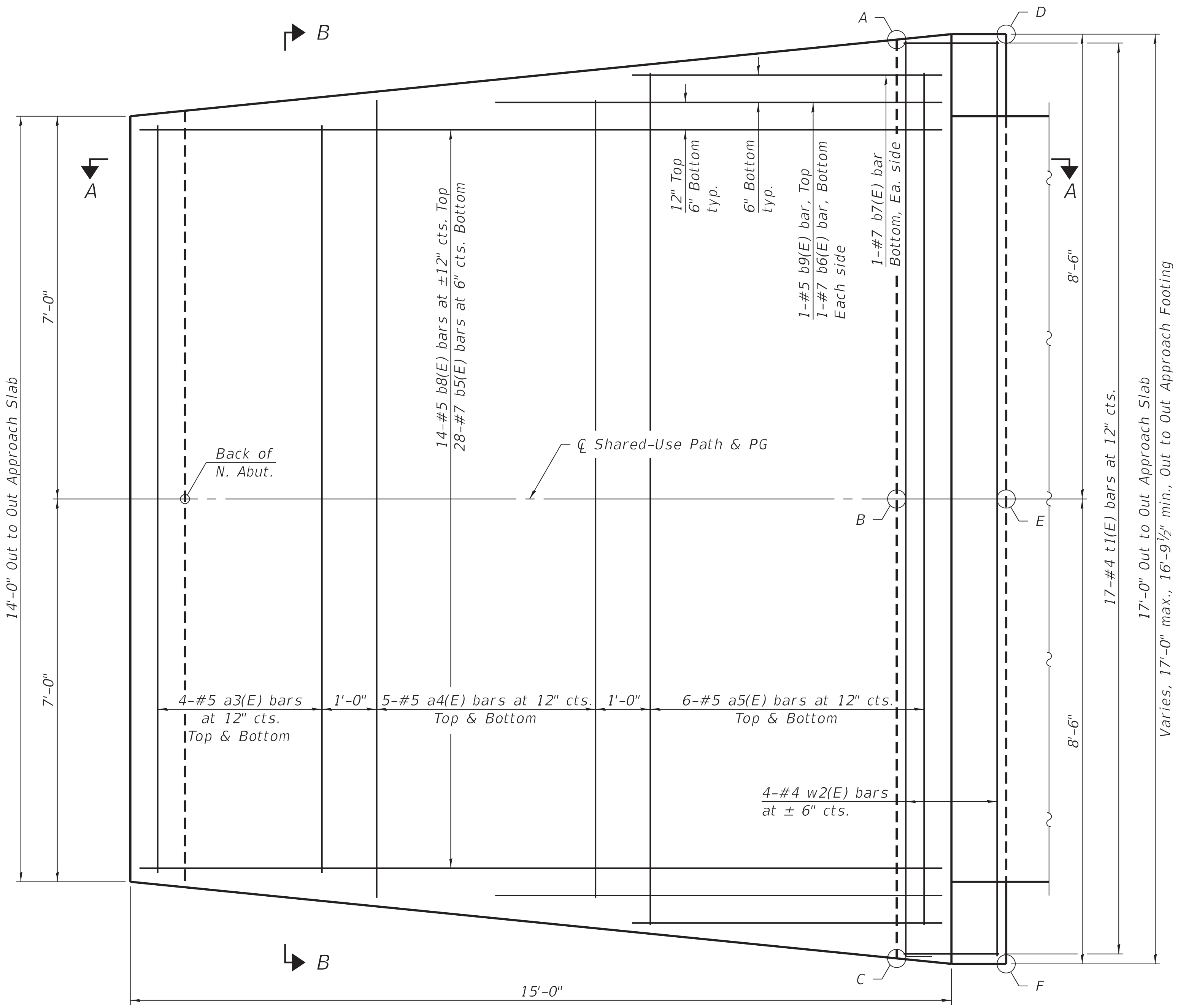
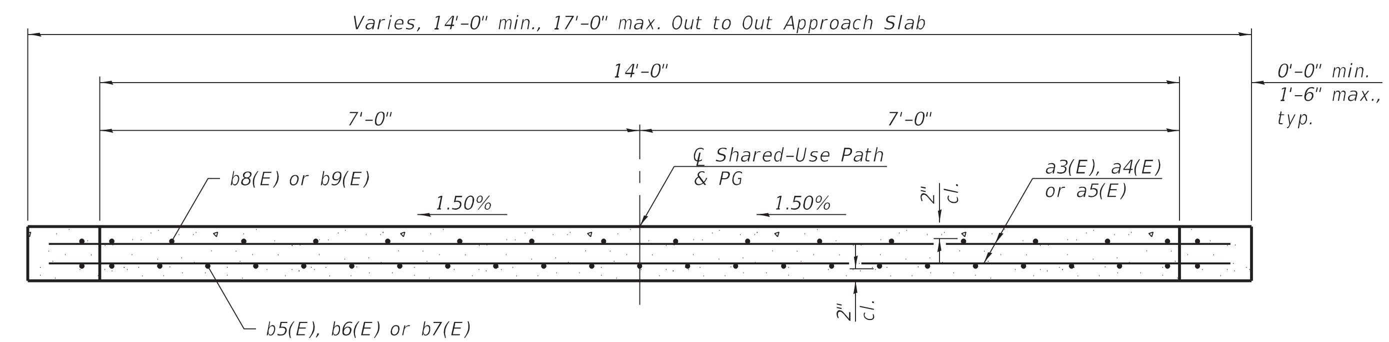
*586/592



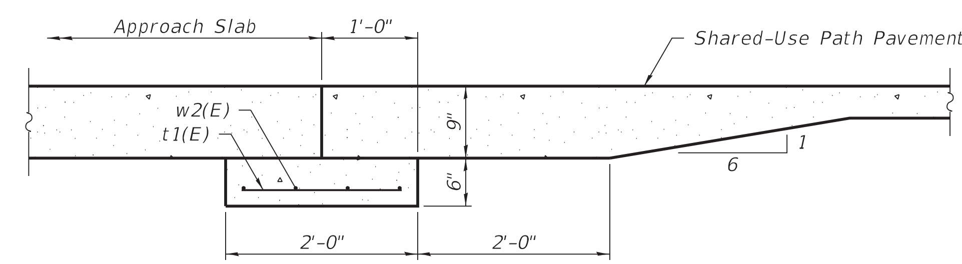
PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point/ Location	Station	Offset	Top	Bottom
A	12+14.13	-8.40 ft.	446.86	446.36
B	12+14.13	0.00 ft.	446.99	446.49
C	12+14.13	8.40 ft.	447.11	446.61
D	12+16.13	-8.50 ft.	446.87	446.37
E	12+16.13	0.00 ft.	447.00	446.50
F	12+16.13	8.50 ft.	447.13	446.63



SECTION B-B

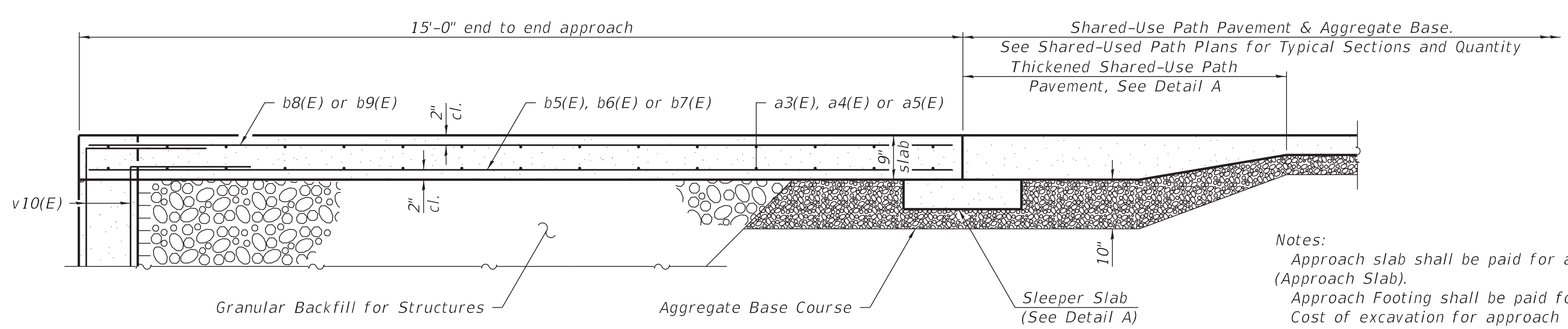


N

DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a3(E)	8	#5	13'-8"	———
a4(E)	10	#5	14'-7"	———
a5(E)	12	#5	15'-7"	———
b5(E)	28	#7	14'-8"	———
b6(E)	2	#7	10'-8"	———
b7(E)	2	#7	5'-8"	———
b8(E)	14	#5	14'-8"	———
b9(E)	2	#5	8'-2"	———
t1(E)	17	#4	1'-8"	———
w2(E)	4	#4	16'-6"	———
Concrete Structures		Cu. Yd.	0.6	
Concrete Superstructure (Approach Slab)		Cu. Yd.	6.5	
Reinforcement Bars, Epoxy Coated		Pound	1,660	



SECTION A-A

Notes:
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
Approach Footing shall be paid for as Concrete Structures.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 19.

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	PLOT DATE =	CHECKED - E.M. Lagemann	REVISED -	

NORTH BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 060-7003
SHEET 9 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	223
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

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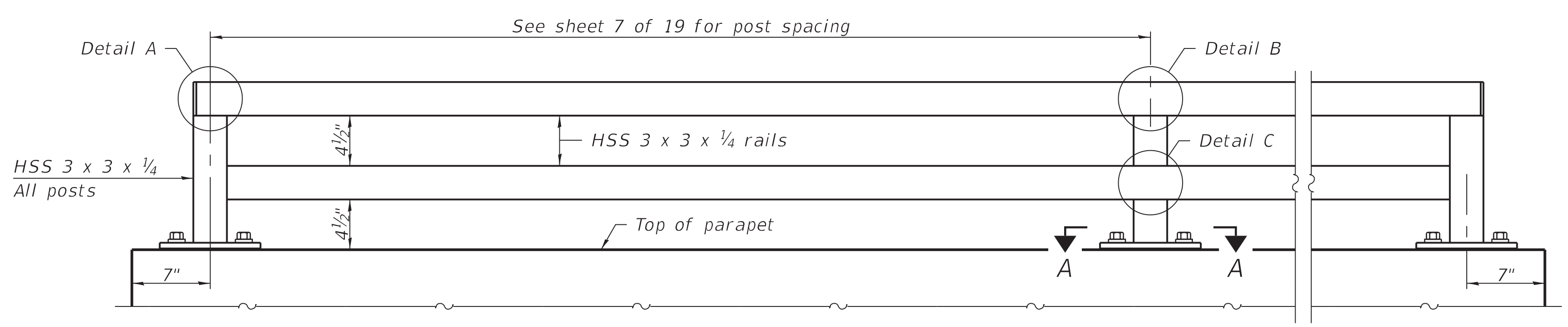
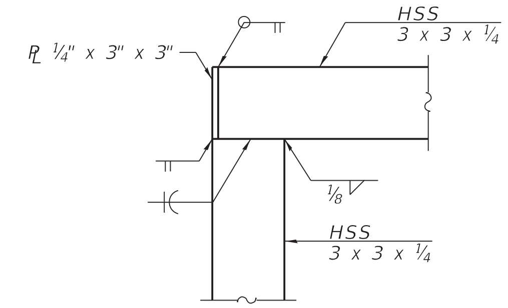
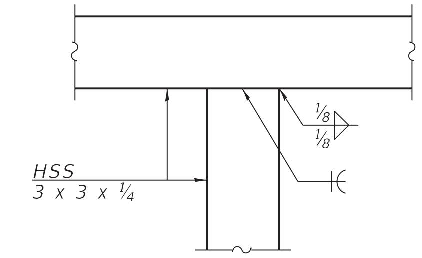


ELEVATION PARAPET RAILING

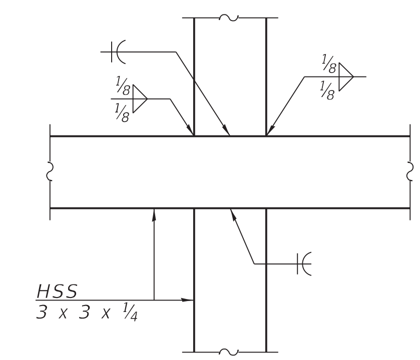
(Inside face)



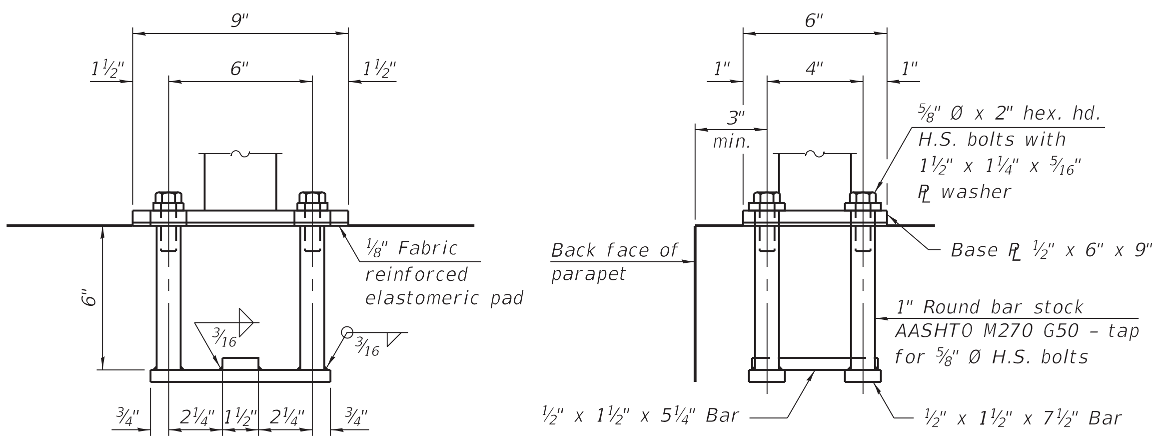
DETAIL A



DETAIL B

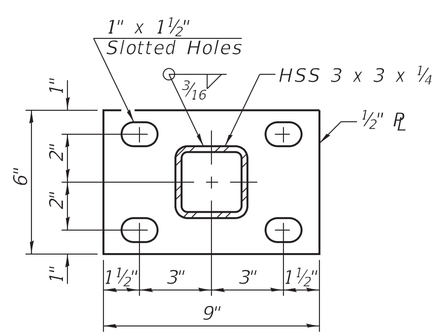


DETAIL C

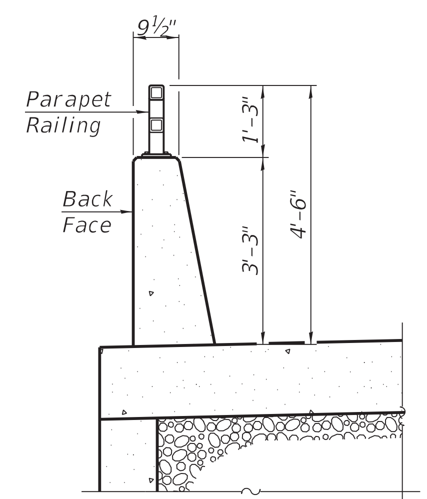


ANCHORAGE ASSEMBLY

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" Ø fully threaded anchor rods with the same plate washers as specified above and heavy hex lock nuts according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



SECTION A-A



SECTION THRU APPROACH SLAB

Notes:

Place reinforcement bars to miss anchor rod locations.

All HSS tubing used for the Parapet Railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.

All HSS tubing used for the Parapet Railing shall be ASTM A500 grade C.

All base plates used for the Parapet Railing shall be AASHTO M270 grade 50.

All heavy hex nuts shall be according to ASTM A 563 grade DH.

All fully threaded anchor rods shall be ASTM F1554 grade 105.

The post base plate shall be fastened to the parapet snug tight and given an additional ⅛" turn.

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

RAILING CRITERIA

MASH 2016 Test Level	4
Parapet Railing Weight (plf)	25
Max Post Spacing	10'-0"

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	13.3

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F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	224
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

*586/592

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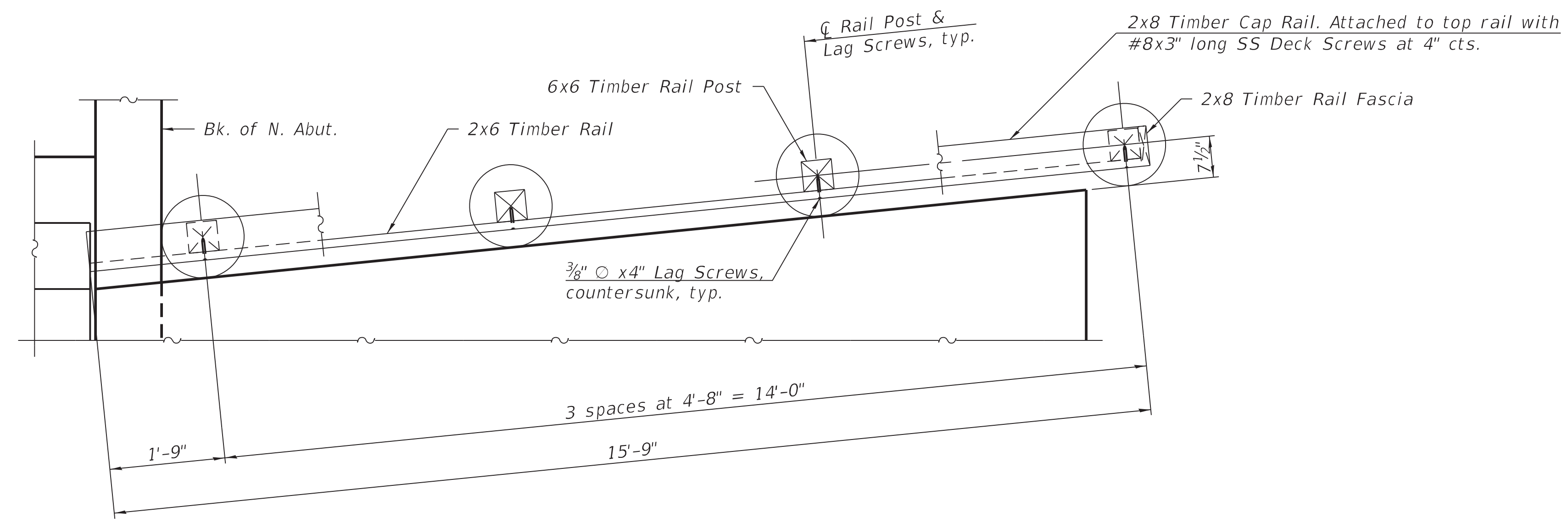
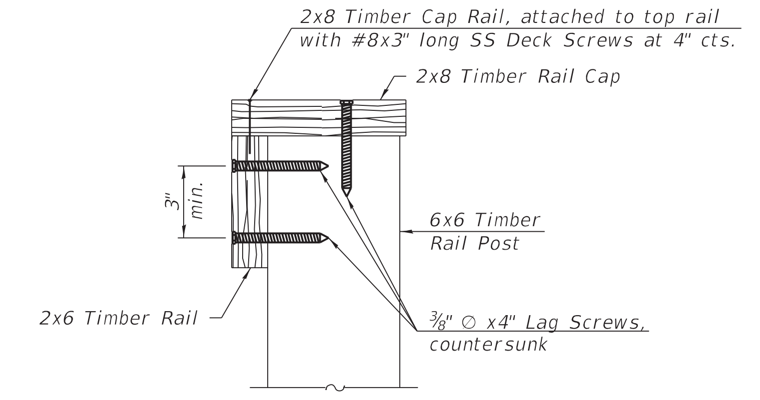
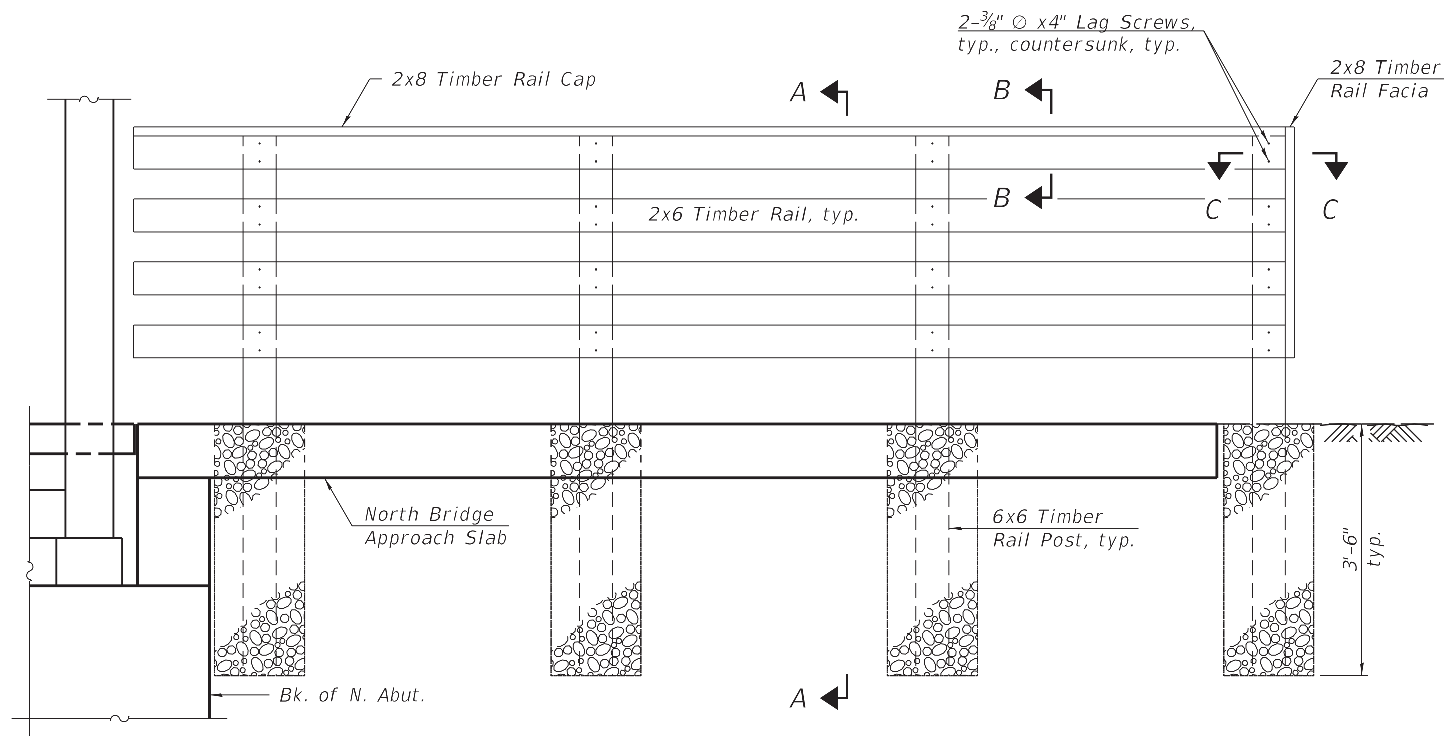


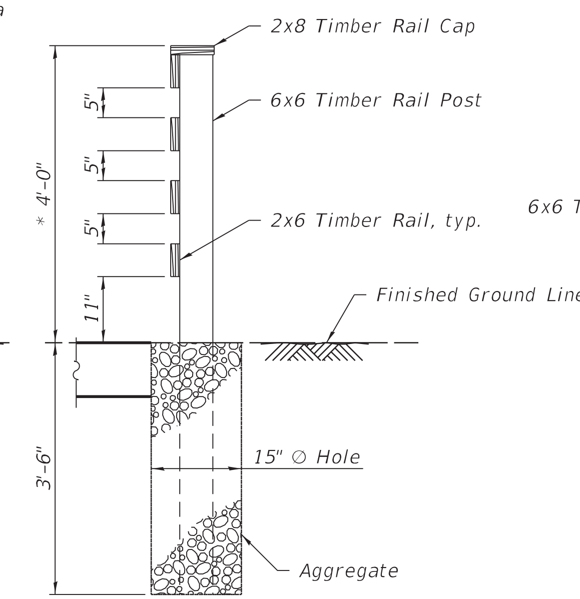
PART PLAN



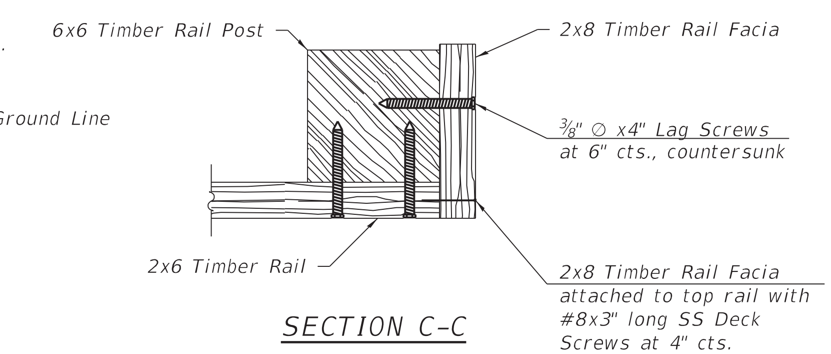
SECTION B-B



ELEVATION



SECTION A-A



SECTION C-C

* Top of top timber rail shall be installed a minimum 4'-0" above the finished ground line. Adjust post length accordingly in field.

TIMBER FENCE RAIL DETAIL

Note:
No splices allowed on end railing.

BILL OF MATERIAL

Item	Unit	Quantity
Wood Rail	Foot	32.0

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROACH RAILING DETAILS
STRUCTURE NO. 060-7003

SHEET 11 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	225

CONTRACT NO. 76A46

ILLINOIS FED. AID PROJECT

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PEDESTRIAN TRUSS GENERAL NOTES

The substructure is designed per AASHTO LRFD, and based on the assumed truss loads (including deck) as shown on this sheet.

Truss Manufacturer shall camber the truss as necessary to provide allowance for dead load deflection.

Bridge bearing seat elevations are subject to revision based on the approved pedestrian truss superstructure shop drawings.

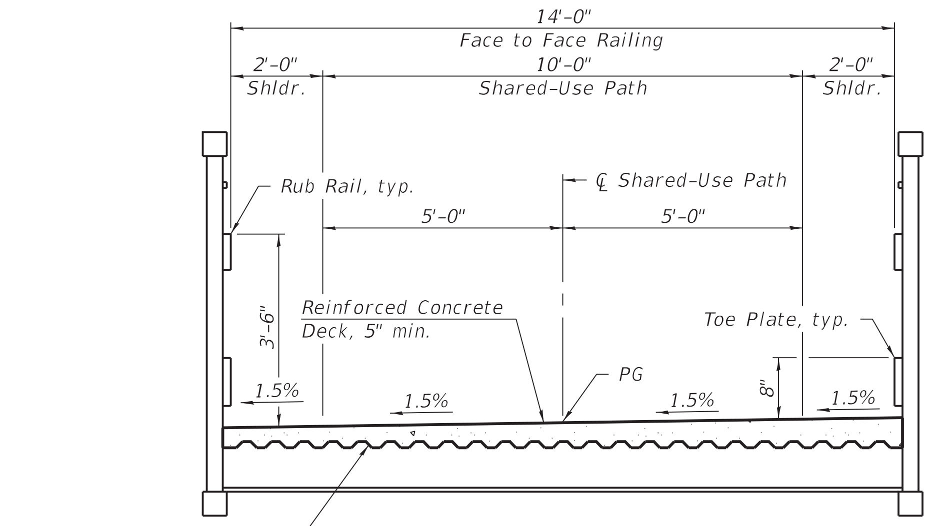
Design of pedestrian bridge shall accommodate anticipated dead and live load deflections so that no sag occurs within the bridge span. Pedestrian bridge profile must be either flat (when fully loaded), or have a slight upward camber.

Truss Manufacturer shall provide the reinforced concrete deck design. Concrete deck to utilize galvanized stay-in-place forms. Reinforcement shall be epoxy coated. Contractor shall place the concrete deck after truss is set. Cost included with Pedestrian Truss Superstructure.

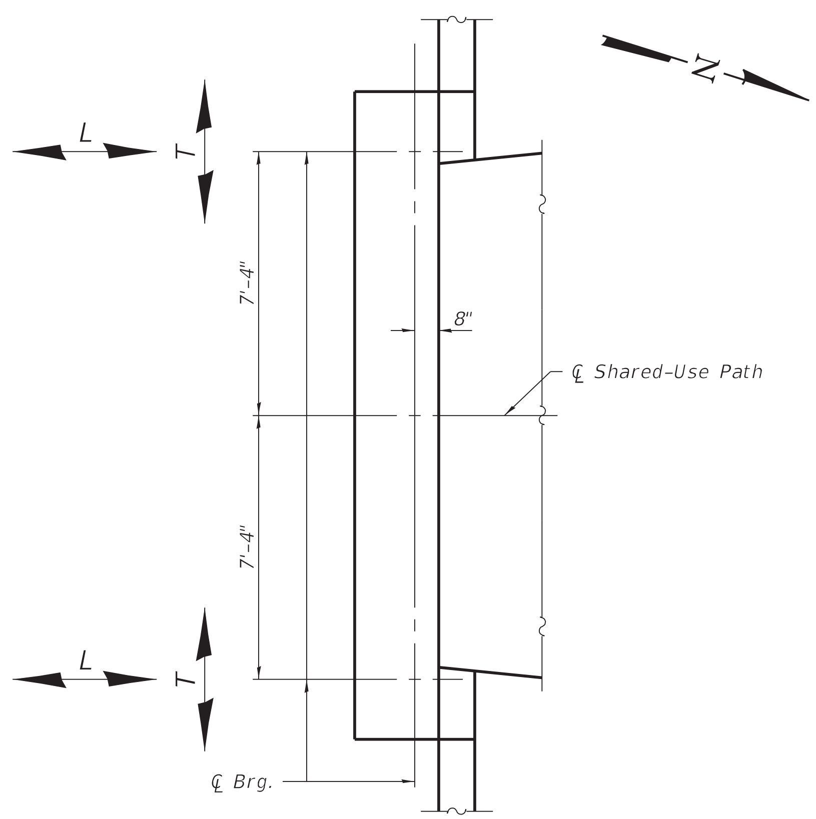
Truss Manufacturer shall provide ADA compliant joint covers for joints between abutment backwall and steel truss.

Depth of pedestrian bridge from top of deck to bottom of bottom chord shall provide a minimum of 2'-0" vertical clearance above "Design Highwater Elevation".

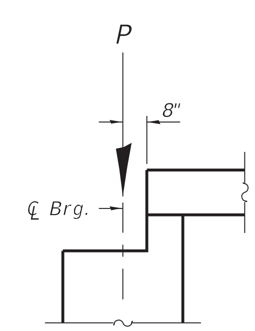
Quantity of Concrete Superstructure is estimated for the aid of bidding. Actual quantity to be determined by Contractor based off of design provided by Truss Manufacturer.



TYPICAL SECTION
(Looking North)



PLAN



SECTION

TRUSS LOAD LOCATIONS

Notes:
Details provided to indicate to Truss Manufacturer where loads are applied for abutment design. Truss Manufacturer and Contractor shall coordinate with Engineer if approved truss design differs from what is shown.
North Abutment shown, South Abutment similar.

UNFACTORED TRUSS REACTIONS

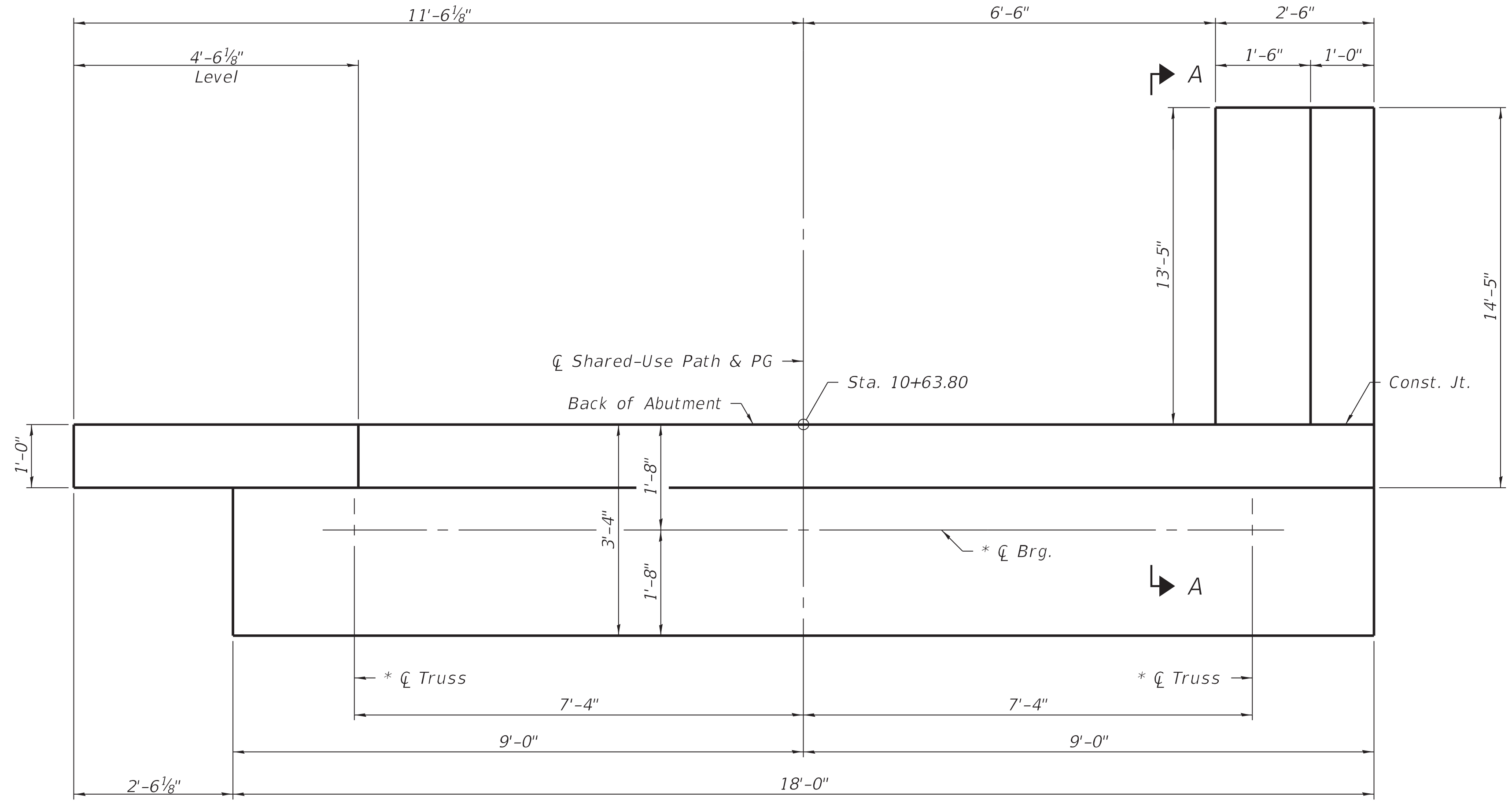
LOAD TYPE		P (kips)	T (kips)	L (kips)
Dead Load, DC		78.42		
Vehicular Live Load, LL		9.79		
Pedestrian Live Load, PL		42.71		
Uniform Temperature, TU				7.75
Wind Load, WS	Windward	-15.66	24.18	0.80
	Leeward	5.22		
Seismic, EQ			15.68	

"P" = Vertical load, each bearing
"T" = Transverse load, each bearing
"L" = Longitudinal load, each bearing

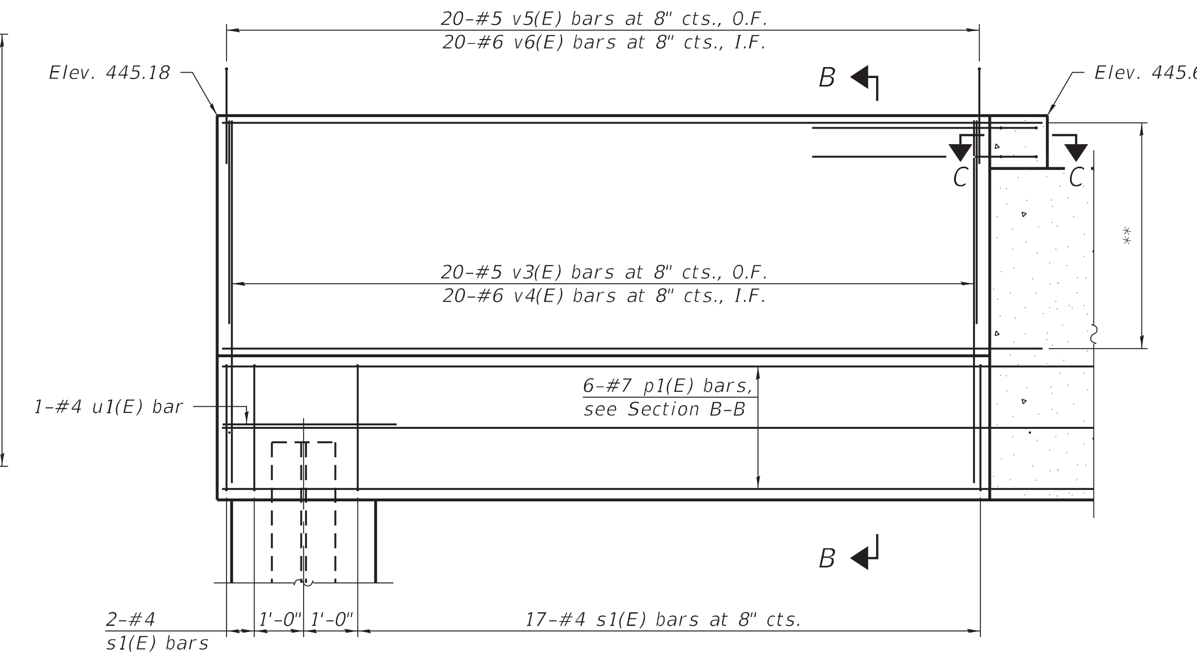
Notes:
Dead load reaction includes estimated weight of truss and concrete deck. Truss Manufacturer to verify reactions.
"+" values indicate downward load.
"–" values indicate upward load.

BILL OF MATERIAL

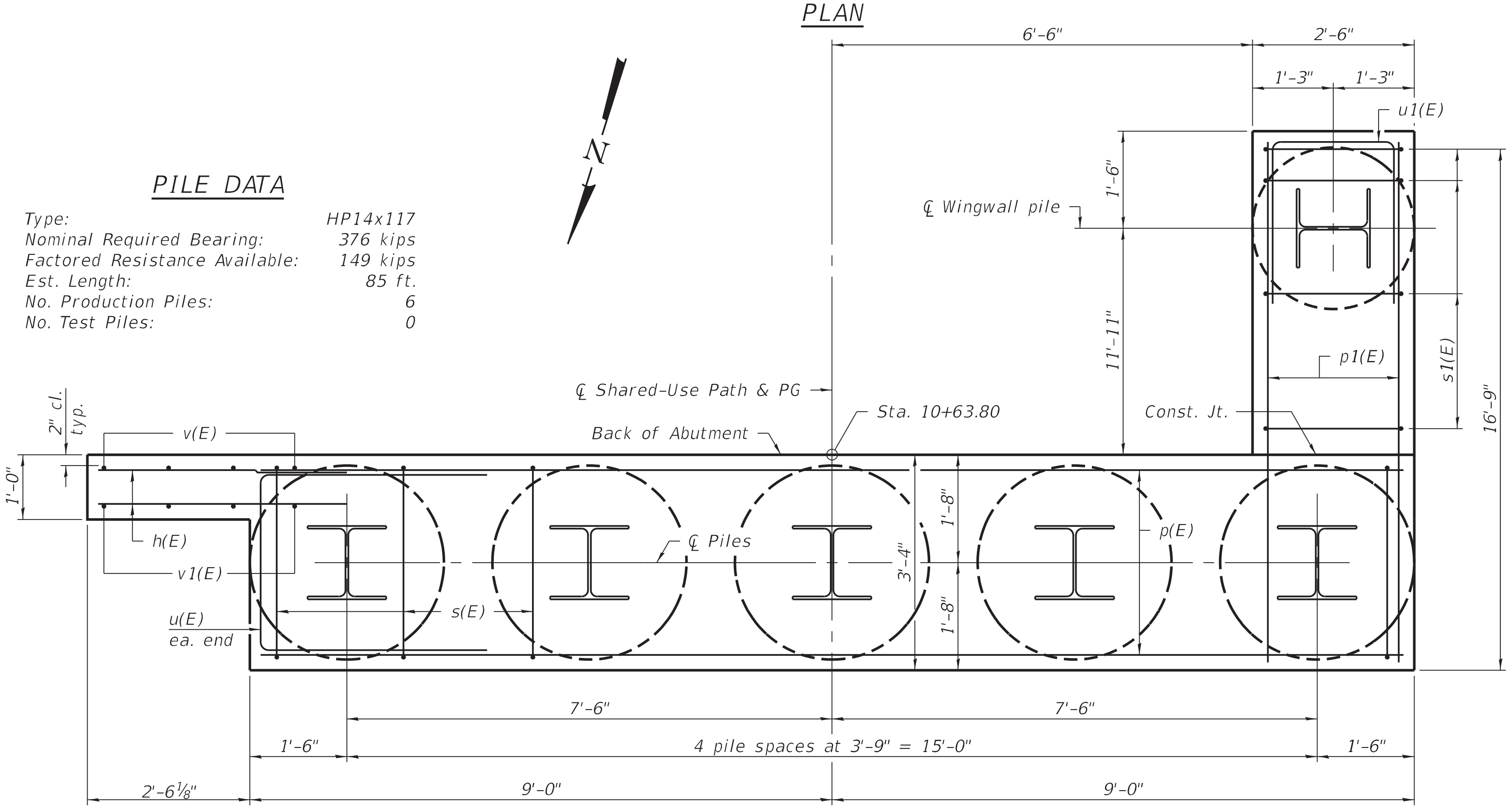
Item	Unit	Quantity
Concrete Superstructure	Cu. Yd.	37.6
Pedestrian Truss Superstructure	Sq. Ft.	1,920.7



PLAN



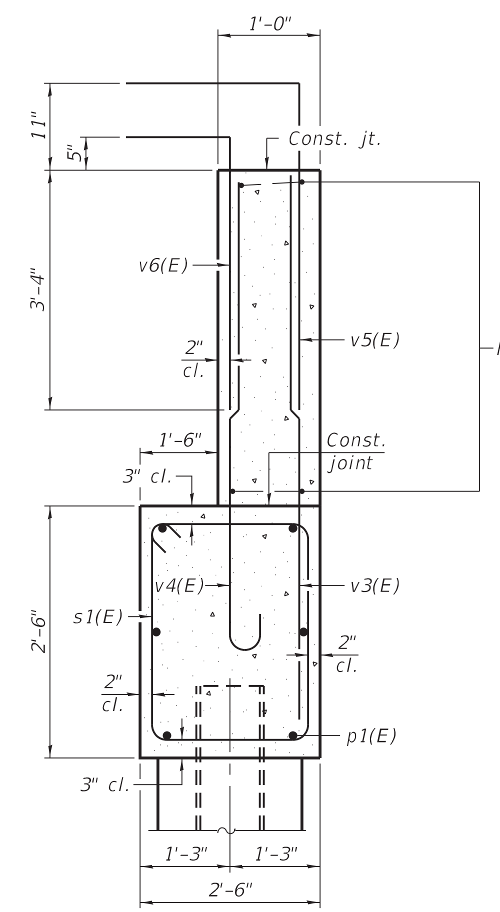
SECTION A-A



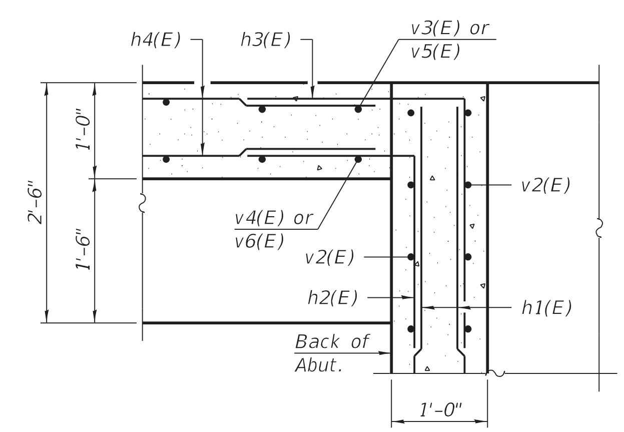
PILE DATA

Type:	HP14x117
Nominal Required Bearing:	376 kips
Factored Resistance Available:	149 kips
Est. Length:	85 ft.
No. Production Piles:	6
No. Test Piles:	0

PILE CAP PLAN



SECTION B-B



SECTION C-C

* Dimensions used in design of abutment. Truss Manufacturer and Conctractor shall coordinate with Engineer if approved truss design differs from what is shown.

** 4-#4 h2(E) bars at ±12" cts.
4-#4 h3(E) bars at ±12" cts.
4-#4 h4(E) bars at ±12" cts., E.F.

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SOUTH ABUTMENT DETAILS I
STRUCTURE NO. 060-7003

SHEET 13 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	227
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

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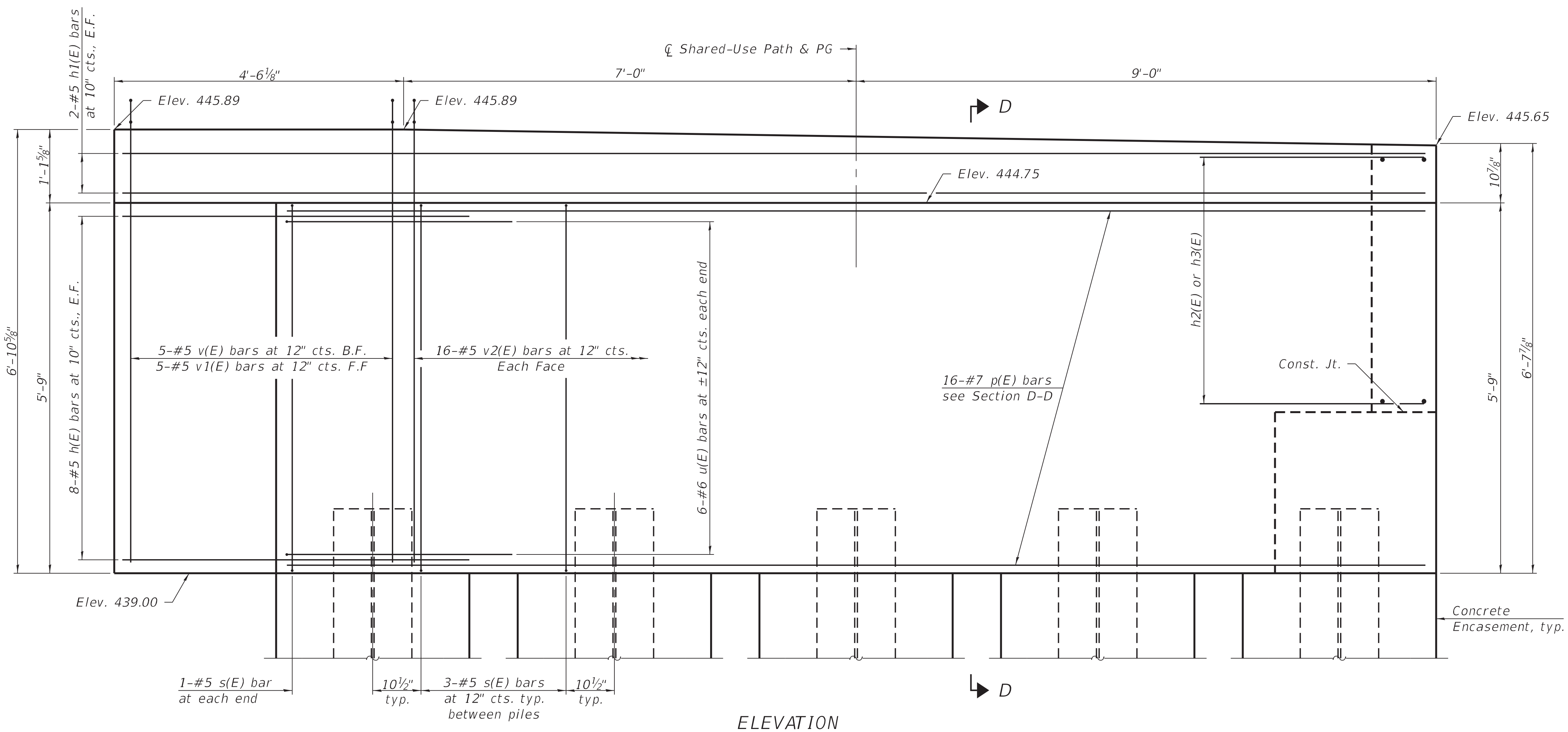
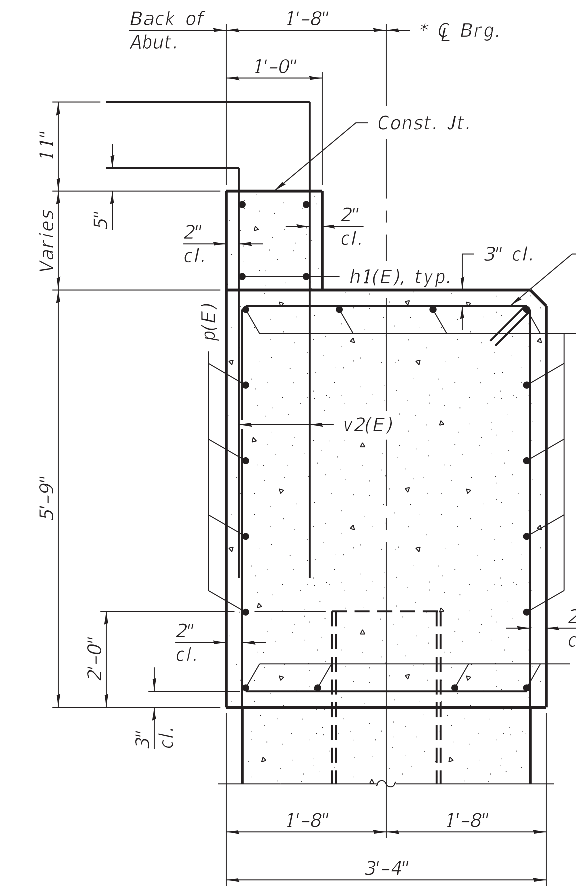
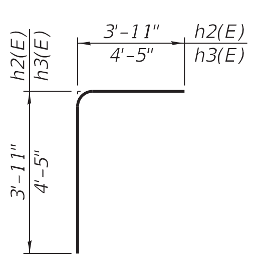


ELEVATION
(Looking South)

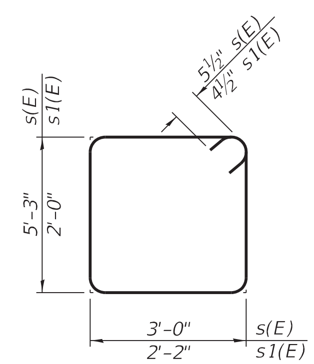


SECTION D-D

* Dimensions used in design of abutment. Truss Manufacturer and Conctractor shall coordinate with Engineer if approved truss design differs from what is shown.



BARS h2(E) & h3(E)



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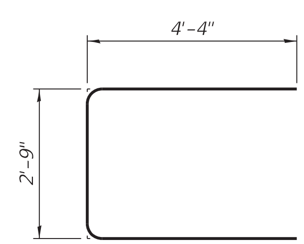
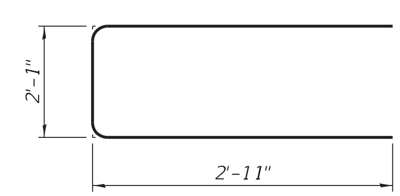
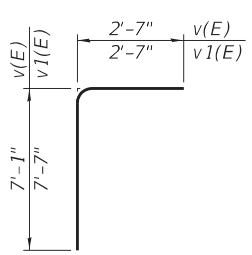


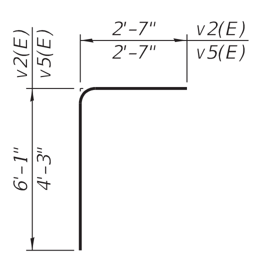
BAR u(E)



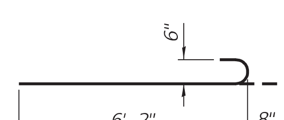
BAR u1(E)



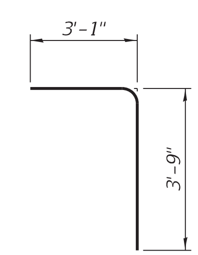
BARS v(E) & v1(E)



BARS v2(E) & v5(E)



BAR v4(E)



BAR v6(E)

Notes:
Space reinforcement in cap to miss anchor bolts.
For details of piles and Concrete Encasement, see sheet 16 of 19.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	16	#5	7'-4"	
h1(E)	4	#5	20'-2"	
h2(E)	4	#4	7'-10"	
h3(E)	4	#4	8'-10"	
h4(E)	8	#4	13'-1"	
p(E)	16	#7	17'-8"	
p1(E)	6	#7	13'-1"	
s(E)	14	#5	17'-5"	
s1(E)	19	#4	9'-1"	
u(E)	12	#6	11'-5"	
u1(E)	1	#4	7'-11"	
v(E)	5	#5	9'-8"	
v1(E)	5	#5	10'-2"	
v2(E)	32	#5	8'-8"	
v3(E)	20	#5	5'-10"	
v4(E)	20	#6	6'-10"	
v5(E)	20	#5	6'-10"	
v6(E)	20	#6	6'-10"	
Structure Excavation		Cu. Yd.	20	
Concrete Structures		Cu. Yd.	19.3	
Concrete Encasement		Cu. Yd.	4.7	
Reinforcement Bars, Epoxy Coated		Pound	2,710	
Furnishing Steel Piles HP14x117		Foot	510	
Driving Piles		Foot	510	
Concrete Sealer		Sq. Ft.	63.5	

MODEL: Default
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USER NAME =	DESIGNED - A.H. Morinaga Mansilla	REVISED -
	CHECKED - E.M. Lagemann	REVISED -
PLOT SCALE =	DRAWN - A.H. Morinaga Mansilla	REVISED -
PLOT DATE =	CHECKED - E.M. Lagemann	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

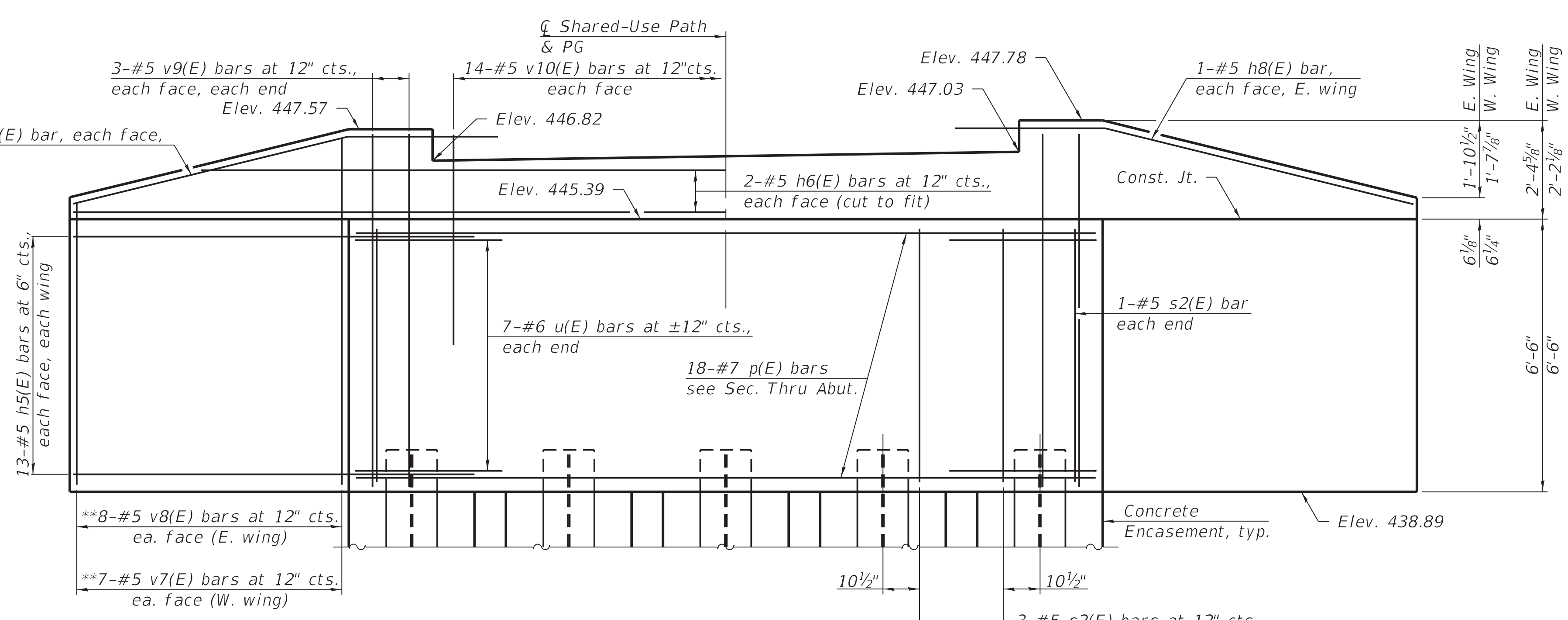
SOUTH ABUTMENT DETAILS II
STRUCTURE NO. 060-7003

SHEET 14 OF 19 SHEETS

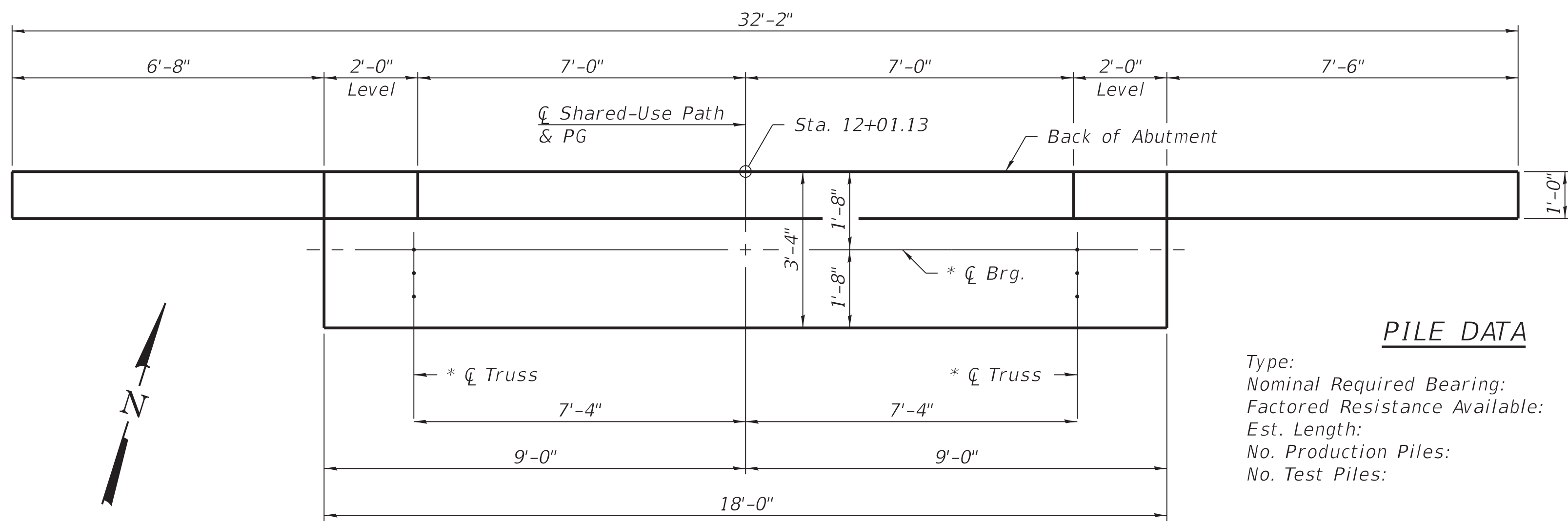
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	228
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

3/5/2024 8:00:45 AM

*586/592



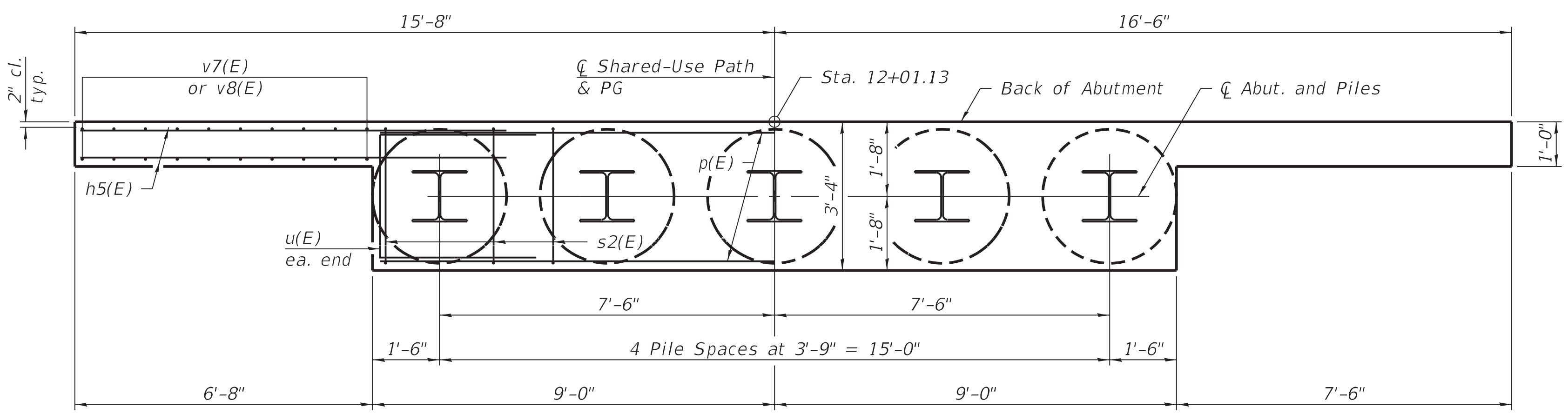
ELEVATION
(Looking North)



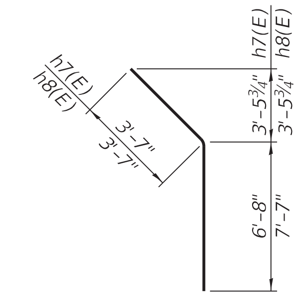
PLAN

PILE DATA

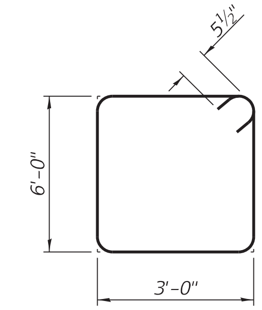
Type:	HP14x117
Nominal Required Bearing:	346 kips
Factored Resistance Available:	155 kips
Est. Length:	85 ft.
No. Production Piles:	5
No. Test Piles:	0



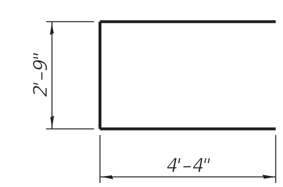
PILE CAP PLAN



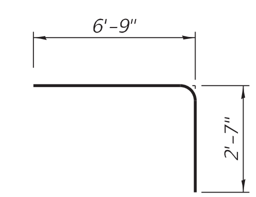
BARS h7(E) & h8(E)



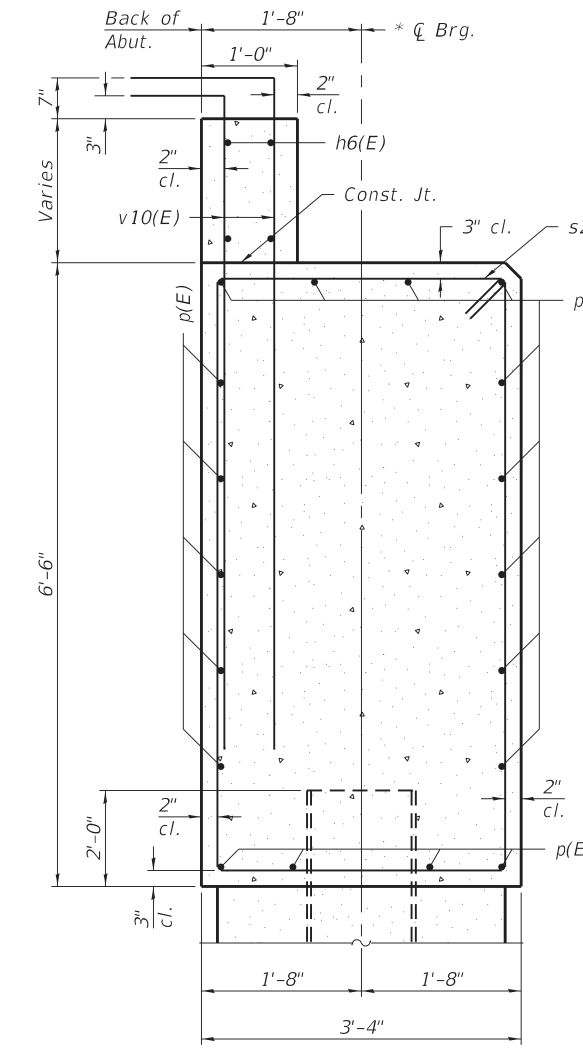
BAR s2(E)



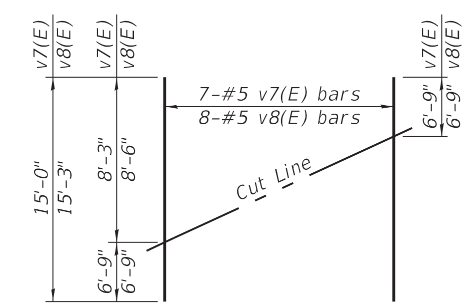
BAR u(E)



BAR v10(E)



SEC. THRU ABUT.



FIELD CUTTING DIAGRAM

Order v7(E) and v8(E) full length. Cut as shown and use remainder of bars in opposite face.

*Dimensions used in design of abutment. Truss Manufacturer and Contractor shall coordinate with Engineer if approved truss design differs from what is shown.
**See field cutting diagram.

Notes:
Space reinforcement in cap to miss anchors bolts.
For details of piles and Concrete Encasement, see sheet 16 of 19.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5(E)	52	#5	11'-1"	
h6(E)	4	#5	31'-10"	
h7(E)	2	#5	10'-3"	
h8(E)	2	#5	11'-2"	
p(E)	18	#7	17'-8"	
s2(E)	14	#5	18'-11"	
u(E)	14	#6	11'-5"	
v7(E)	7	#5	15'-0"	
v8(E)	8	#5	15'-3"	
v9(E)	12	#5	8'-4"	
v10(E)	28	#5	9'-4"	
Structure Excavation		Cu. Yd.	22	
Concrete Structures		Cu. Yd.	19.7	
Concrete Encasement		Cu. Yd.	3.9	
Reinforcement Bars, Epoxy Bars		Pound	2,560	
Furnishing Steel Piles HP14x117		Foot	425	
Driving Piles		Foot	425	
Concrete Sealer		Sq. Ft.	63.8	

MODEL: Default
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USER NAME =	DESIGNED -	A.H. Morinaga Mansilla	REVISED -	
	CHECKED -	E.M. Lagemann	REVISED -	
PLOT SCALE =	DRAWN -	A.H. Morinaga Mansilla	REVISED -	
PLOT DATE =	CHECKED -	E.M. Lagemann	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

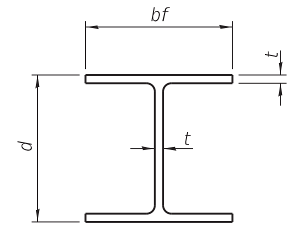
NORTH ABUTMENT DETAILS
STRUCTURE NO. 060-7003

SHEET 15 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	229
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

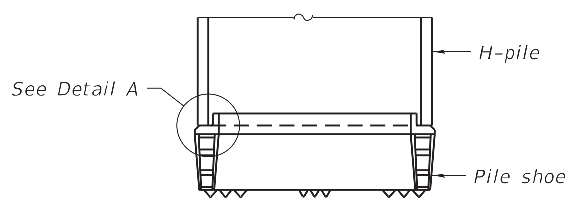
3/8/2024 11:25:56 AM

*586/592



STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅝"	14⅝"	½"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



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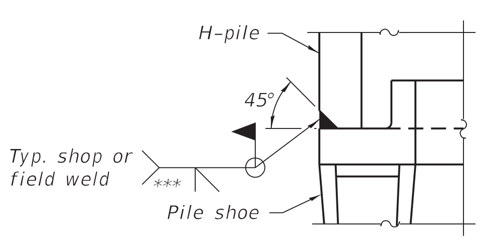
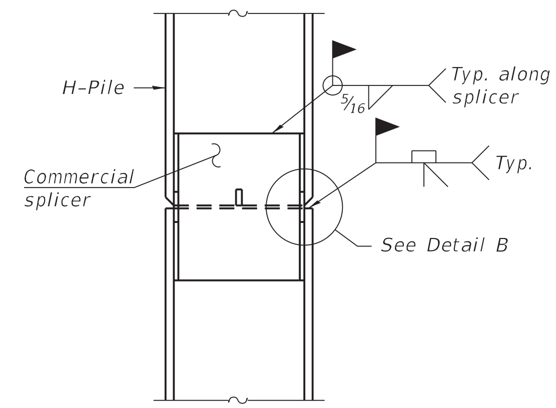


DETAIL A

SHOE ATTACHMENT

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



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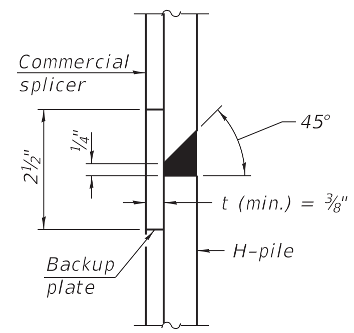
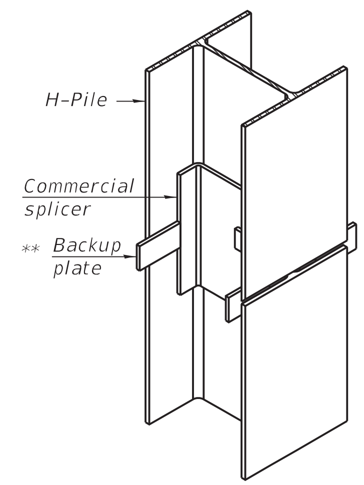
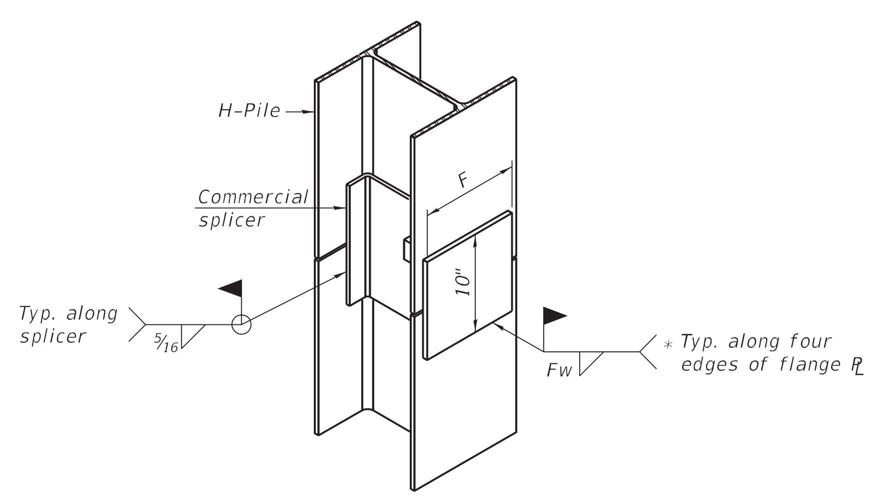


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



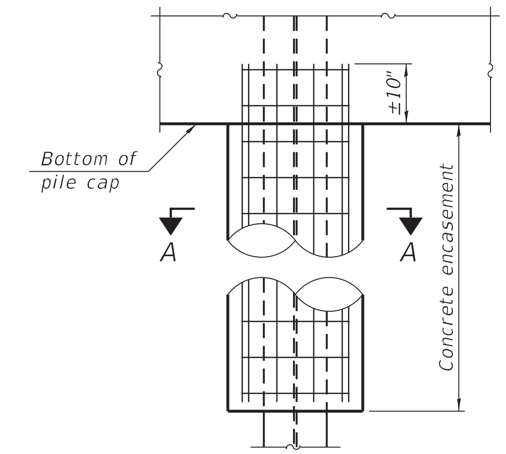
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

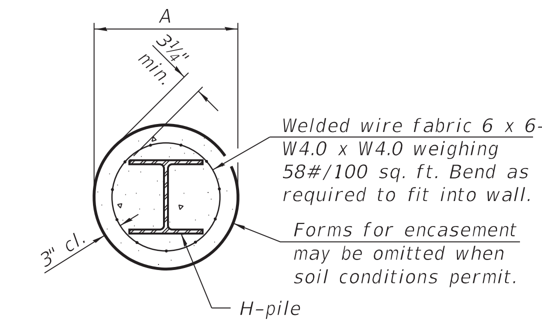
* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



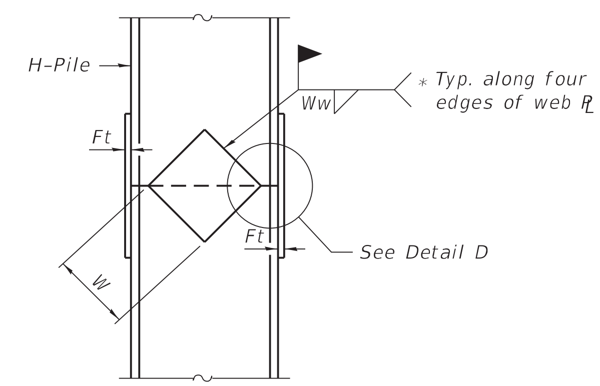
ELEVATION



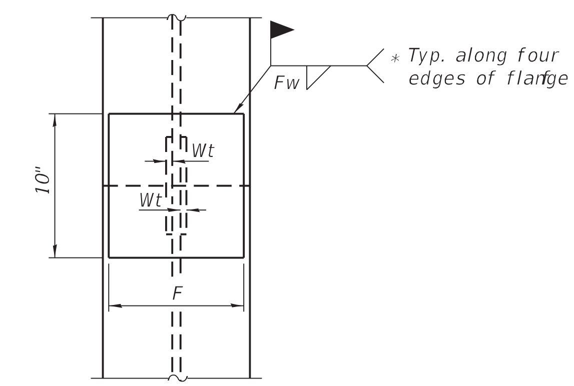
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

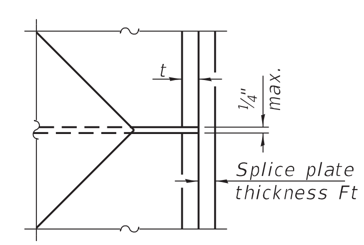
(when specified)



ELEVATION



END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12½"	1"	⅞"	7¾"	⅝"	½"
x102	12½"	⅞"	¾"	7¾"	⅝"	½"
x89	12½"	¾"	11/16"	7¾"	⅝"	½"
x73	12½"	⅝"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	⅞"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	⅝"	½"	6½"	½"	⅜"
x53	10"	⅝"	½"	6½"	½"	⅜"
HP 10x57	8"	¾"	9/16"	5¼"	½"	⅜"
x42	8"	⅝"	9/16"	5¼"	½"	⅜"
HP 8x36	7"	⅝"	7/16"	4¼"	½"	⅜"

WELDED PLATE FIELD SPLICE

F-HP 2-1-2023

USER NAME =	DESIGNED - A.H. Morinaga Mansilla	REVISED -	
	CHECKED - E.M. Lagemann	REVISED -	
PLOT SCALE =	DRAWN - E.M. Lagemann	REVISED -	
PLOT DATE =	CHECKED - A.H. Morinaga Mansilla	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 060-7003

SHEET 16 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	230
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

*586/592

MODEL: Default
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3/5/2024 8:13:02 AM

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

SOIL BORING LOG

Date 3/1,2/2022

ROUTE Route 157/162 DESCRIPTION Shared Use Path over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, SEC. 4, TWP. 3N, RNG. 8W
Lat 38.740837 Long -90.002113

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-0229/ SN 060-7003
Station 584+70.00 and 11+32.26

BORING NO. B-7
Station 17+86
Offset 50 ft LT
Ground Surface Elev. 438.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 425.0 ft ▼
Upon Completion N/A ft
After N/A Hrs. N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL: CINDERS (A-1)	436.5				
FILL: Dark brown to brown SILTY LOAM (A-4), stiff			5 6 9	3.0 P	16
		-5	4 6 7	0.9 S/10%	18
Brown SILTY LOAM (A-4), very moist, very soft *Percentage finer than #200 test performed (21.6% passing)*	432.5		WOH WOH WOH	<0.25 P	29
Percentage finer than #200 test performed (19.9% passing)	429.0				
Brown to reddish brown SANDY LOAM (A-3) w/ silt, very moist, very loose		-10	WOH WOH 1	NC	26
Percentage finer than #200 test performed (19.2% passing)			WOH WOH 1	NC	23
▼					
Percentage finer than #200 test performed (20.3% passing)	423.0	-15	1 1 1	<0.25 P	31
Gray and Brown SILTY CLAY (A-6), moist, very soft	420.0		WOH 1 2	0.5 S/15%	30
Gray CLAY (A-7), moist, soft *Atterberg Limits test performed (LL=34, PI=18)*	418.0	-20	1 1 2	0.6 B/20%	23
Gray fine SAND (A-3), wet, medium dense			4 7 9	NC	23
	414.0				
Gray SILTY LOAM (A-4), moist, stiff		-25	5 5 5	1.5 P	21
	412.5				
Gray fine SAND (A-3), wet, medium dense			8 12 13	NC	NC
		-30	6 6 7	NC	24
	406.0				
Gray CLAY (A-7), moist, stiff		-35	5 4 6	2.0 B/20%	23
		-40	4 4 7	2.5 B/20%	21

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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

SOIL BORING LOG

Date 3/1,2/2022

ROUTE Route 157/162 DESCRIPTION Shared Use Path over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, SEC. 4, TWP. 3N, RNG. 8W
Lat 38.740837 Long -90.002113

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-0229/ SN 060-7003
Station 584+70.00 and 11+32.26

BORING NO. B-7
Station 17+86
Offset 50 ft LT
Ground Surface Elev. 438.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 425.0 ft ▼
Upon Completion N/A ft
After N/A Hrs. N/A ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY (A-7), moist, stiff *(continued)*	396.0				
Gray SANDY CLAY LOAM (A-6), moist, stiff (fill)		-45	3 4 7	2.0 B/20%	18
		-50	3 4 6	1.6 B/20%	17
	384.5				
Gray CLAY LOAM (A-7), moist, stiff		-55	5 6 8	2.8 B/20%	22
		-60	3 4 4	1.4 B/20%	28
Gray CLAY LOAM (A-7), moist, stiff *(continued)*	376.0				
Gray CLAY (A-7), moist, very stiff		-65	6 6 9	3.0 B/20%	22
Becomes brown and stiff		-70	6 4 5	2.7 B/20%	32
Becomes very stiff		-75	4 7 9	2.1 B/20%	28
Becomes gray	358.5	-80	4 5 7	1.4 B/20%	28

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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

SOIL BORING LOG

Date 3/1,2/2022

ROUTE Route 157/162 DESCRIPTION Shared Use Path over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, SEC. 4, TWP. 3N, RNG. 8W
Lat 38.740837 Long -90.002113

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-0229/ SN 060-7003
Station 584+70.00 and 11+32.26

BORING NO. B-7
Station 17+86
Offset 50 ft LT
Ground Surface Elev. 438.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 425.0 ft ▼
Upon Completion N/A ft
After N/A Hrs. N/A ft

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray weathered CLAYEY SHALE, hard *(continued)*	-85	6 11 20	1.7 S/10%	21
		50/5.5" 50/2"		11
350.5 Sampler Refusal at 87.5 feet. Borehole grouted upon completion.		50/5" 50/1"		11
	-90			
	-95			
	-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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

SOIL BORING LOG

Date 2/22,23/2022

ROUTE Route 157/162 DESCRIPTION Shared Use Path Over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, SEC. 4, TWP. 3N, RNG. 8W
Lat 38.741190 Long -90.002303

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-7003
Station 11+32.26

BORING NO. B-24
Station 585+27
Offset 95 ft LT
Ground Surface Elev. 437.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After 24 Hrs. 427.6 ft ▽

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL: Gray CLAY (A-7), moist, medium stiff		4 3 4	0.4 S/10%	28
434.0 Gray SILTY CLAY (A-6), moist, soft	-5	2 2 2	0.2 S/15%	18
		1 2 1	0.2 S/15%	21
429.0 Gray SILTY CLAY (A-7), trace brown, moist, soft	▽ -10	1 1 1	0.1 S/20%	20
Becomes gray and brown		WOH WOH 2	NC	25
424.0 Brown SANDY CLAY (A-6), wet, soft, sand is fine *Atterberg Limits Test Performed (LL=32, PI=10)* 422.0	-15	WOH 2 2	NC	28 30
Brown and gray SILTY CLAY (A-6), soft, moist		1 1 3	2.3 P	24 48
419.0 Gray SILTY CLAY LOAM (A-6) w/ clay deposits, moist, medium stiff	-20	3 2 3	0.5 B/20%	28
416.5 Gray CLAY (A-7) w/ sand deposits, moist, medium stiff		WOH 2 6	0.5 P	26
415.0 Gray fine SAND (A-3), moist, loose				
Becomes medium dense	-25	8 9 10	NC	
w/ sandy loam deposits		7 6 11	NC	20
No loam, trace coal fragments	-30	5 6 13	NC	32
403.0 Brown CLAY (A-7), moist, stiff	-35	8 5 6	1.6 B/20%	32
Becomes medium stiff, w/ silty loam deposits	-40	3 2 5	1.0 B/20%	26

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation

Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Page 2 of 3

Date 2/22,23/2022

ROUTE Route 157/162 DESCRIPTION Shared Use Path over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, SEC. 4, TWP. 3N, RNG. 8W
Lat 38.741190 Long -90.002303

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-7003
Station 11+32.26

BORING NO. B-24
Station 585+27
Offset 95 ft LT
Ground Surface Elev. 437.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After 24 Hrs. 427.6 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown CLAY (A-7), moist, stiff *(continued)*					
Becomes gray and stiff		-45	4 5 7	3.7 B/20%	20
Gray SILTY CLAY LOAM (A-6), moist, stiff	390.0	-50	5 6 7	1.7 B/20%	24
Gray and brown SANDY CLAY LOAM (A-6), trace gravel, moist, very stiff (glacial till)	385.0	-55	7 7 11	2.7 B/20%	15
Brown and gray CLAY LOAM (A-7), moist, stiff (till)	380.0	-60	6 5 7	3.3 B/20%	33

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown and gray CLAY LOAM (A-7), moist, stiff (till) *(continued)*					
Brown CLAY (A-7), moist, very stiff	375.0	-65	5 8 13	3.1 B/20%	20
Grayish brown SILTY CLAY (A-6), trace organics, moist, medium stiff	368.0	-70	3 3 4	0.7 B/20%	37
Grayish brown CLAY (A-7), trace organics, moist, medium stiff	365.0	-75	3 3 4	1.4 B/20%	29
Grayish brown CLAY LOAM (A-7), trace gravel, moist, very stiff	358.0	-80	4 5 13	1.6 B/20%	22

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation

Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Page 3 of 3

Date 2/22,23/2022

ROUTE Route 157/162 DESCRIPTION Shared Use Path over Judy's Branch LOGGED BY SCI

SECTION 51-1R LOCATION Madison County, Illinois, SEC. 4, TWP. 3N, RNG. 8W
Lat 38.741190 Long -90.002303

COUNTY Madison DRILLING METHOD CME 550 w/HSA and Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. SN 060-7003
Station 11+32.26

BORING NO. B-24
Station 585+27
Offset 95 ft LT
Ground Surface Elev. 437.0 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After 24 Hrs. 427.6 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grayish brown CLAY LOAM (A-7), trace gravel, moist, very stiff *(continued)*					
Brown CLAY (A-7), moist, very stiff	354.5	-85	20 12 11	5.0 S/20%	26 26
Grayish brown SANDY CLAY LOAM (A-6), trace gravel, moist, very stiff	352.5				
Gray CLAYEY SHALE, hard	348.5	-90	50/2" 50/1"		
Sampler Refusal at 90.25 feet. Borehole grouted upon completion.	346.8		50/2" 50/1"		
		-95			
		-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME =	DESIGNED - A.H. Morinaga Mansilla	REVISED -
	CHECKED - E.M. Lagemann	REVISED -
PLOT SCALE =	DRAWN - A.H. Morinaga Mansilla	REVISED -
PLOT DATE =	CHECKED - E.M. Lagemann	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 060-7003
SHEET 19 OF 19 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	233
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

3/5/2024 8:15:20 AM

*586/592

PROPOSED IL ROUTE 157
CURVES C50 AND C51

STATION	LEFT EDGE	SLOPE %	CENTERLINE	SLOPE %	RIGHT EDGE
572+24.35	452.13	-1.33	452.29	-0.92	452.18
572+50.00	452.26	-0.23	452.29	-1.15	452.15
572+75.00	452.39	0.84	452.29	-1.36	452.13
572+90.35	452.47	1.50	452.29	-1.50	452.11
573+00.00	452.53	1.94	452.30	-1.94	452.06
573+01.35	452.54	2.00	452.30	-2.00	452.06
573+50.00	452.51	2.00	452.27	-2.00	452.03
574+00.00	452.32	2.00	452.08	-2.00	451.84
574+50.00	451.96	2.00	451.71	-2.00	451.46
FULL SUPERELEVATION					
576+50.00	450.05	2.00	449.72	-2.00	449.39
577+00.00	449.57	2.00	449.22	-2.00	448.87
577+50.00	449.09	2.00	448.72	-2.00	448.35
577+75.11	448.85	2.00	448.47	-2.00	448.09
577+93.11	448.59	1.50	448.30	-1.50	447.99
578+00.00	448.48	1.32	448.23	-1.50	447.91
578+25.00	448.11	0.65	447.98	-1.50	447.65
578+50.00	447.74	-0.02	447.75	-1.50	447.39
578+75.00	447.40	-0.69	447.53	-1.50	447.16
579+00.00	447.07	-1.36	447.34	-1.50	446.94
579+05.11	447.00	-1.50	447.30	-1.50	446.90
579+50.00	446.71	-1.50	447.01	-1.50	446.57
580+00.00	446.45	-1.50	446.75	-1.50	446.28
580+50.00	446.27	-1.50	446.57	-1.50	446.09
NORMAL CROWN					
591+50.00	450.51	-1.50	450.78	-1.50	450.33
592+00.00	451.03	-1.50	451.30	-1.50	450.85
592+50.00	451.50	-1.64	451.79	-1.04	451.41
592+80.47	451.70	-1.72	452.01	-0.76	451.86

PROPOSED IL ROUTE 162
CURVES J12 AND J2

STATION	LEFT EDGE	SLOPE %	CENTERLINE	SLOPE %	RIGHT EDGE
6+91.56	438.26	-1.66	438.46	-1.25	438.31
7+00.00	438.27	-1.63	438.47	-1.29	438.31
7+42.06	438.34	-1.50	438.52	-1.50	438.34
7+50.00	438.39	-1.19	438.54	-1.50	438.36
7+75.00	438.60	-0.22	438.62	-1.50	438.44
8+00.00	438.84	0.76	438.75	-1.50	438.57
8+19.06	439.06	1.50	438.88	-1.50	438.70
8+25.00	439.13	1.73	438.92	-1.73	438.71
8+50.00	439.45	2.71	439.13	-2.71	438.80
8+75.00	439.82	3.68	439.38	-3.68	438.93
9+00.00	440.22	4.65	439.66	-4.65	439.11
9+25.00	440.67	5.63	439.99	-5.63	439.32
9+34.56	440.85	6.00	440.13	-6.00	439.41
9+50.00	441.08	6.00	440.36	-6.00	439.64
10+00.00	441.96	6.00	441.21	-6.00	440.47
10+50.00	443.03	6.00	442.23	-6.00	441.42
10+56.48	443.18	6.00	442.37	-6.00	441.56
10+75.00	443.54	5.44	442.79	-5.44	442.03
11+00.00	444.03	4.68	443.35	-4.68	442.68
11+25.00	444.47	3.92	443.89	-3.92	443.30
11+50.00	444.86	3.17	444.38	-3.17	443.89
11+75.00	445.20	2.41	444.82	-2.41	444.44
12+00.00	445.49	1.65	445.22	-1.65	444.95
12+04.98	445.54	1.50	445.29	-1.50	445.05
12+25.00	445.72	0.89	445.57	-1.50	445.32
12+50.00	445.90	0.14	445.88	-1.50	445.62
12+75.00	446.03	-0.62	446.14	-1.50	445.87
13+00.00	446.10	-1.38	446.35	-1.50	446.08
13+03.98	446.11	-1.50	446.38	-1.50	446.11
13+50.00	446.35	-1.50	446.64	-1.50	446.35
14+00.00	446.45	-1.50	446.75	-1.50	446.42
14+50.00	446.38	-1.50	446.68	-1.50	446.31
NORMAL CROWN					
20+50.00	445.95	-1.50	446.43	-1.50	446.09
21+00.00	446.20	-1.50	446.68	-1.50	446.38
21+50.00	446.50	-1.50	446.98	-1.50	446.68
21+95.74	446.75	-1.50	447.23	-1.50	446.93
22+00.00	446.81	-1.39	447.25	-1.50	446.95
22+50.00	447.45	-0.08	447.47	-1.50	447.18
23+00.00	447.97	1.22	447.65	-1.50	447.37
23+10.74	448.06	1.50	447.69	-1.50	447.41
23+50.00	448.36	2.47	447.81	-2.47	447.36
24+00.00	448.67	3.71	447.96	-3.71	447.31
24+50.00	448.95	4.95	448.13	-4.95	447.32
24+68.24	449.10	5.40	448.23	-5.40	447.36
25+00.00	449.29	5.40	448.45	-5.40	447.61
25+50.00	449.71	5.40	448.93	-5.40	448.14
26+00.00	450.29	5.40	449.56	-5.40	448.83
26+49.12	451.01	5.40	450.33	-5.40	449.66
26+50.00	451.02	5.37	450.35	-5.42	449.67
26+74.52	451.34	4.56	450.79	-6.08	450.06

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LOCHMUELLER GROUP
1928 SrA Bradley R. Smith Drive
Troy, IL 62294
PHONE: 618.667.1400

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PLOT DATE	= 3/5/2024	DATE	-	10/8/2021	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERELEVATION TABLES
IL ROUTE 157 AND IL ROUTE 162

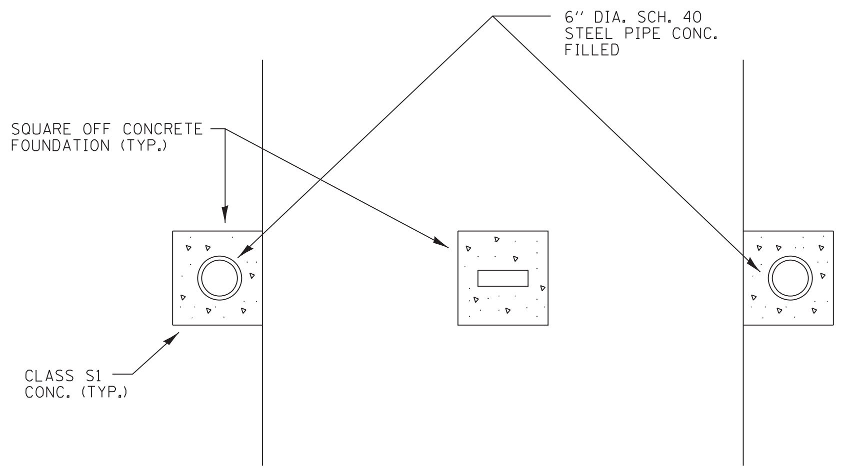
SCALE: NONE | SHEET 1 OF 1 SHEETS | Superelevation Tables-01

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	234

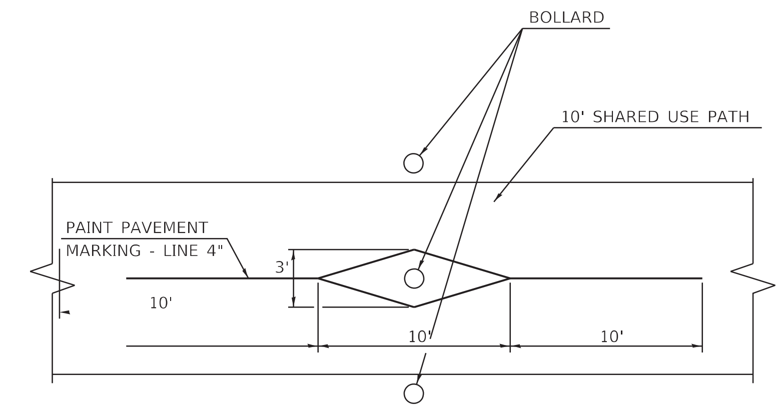
CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

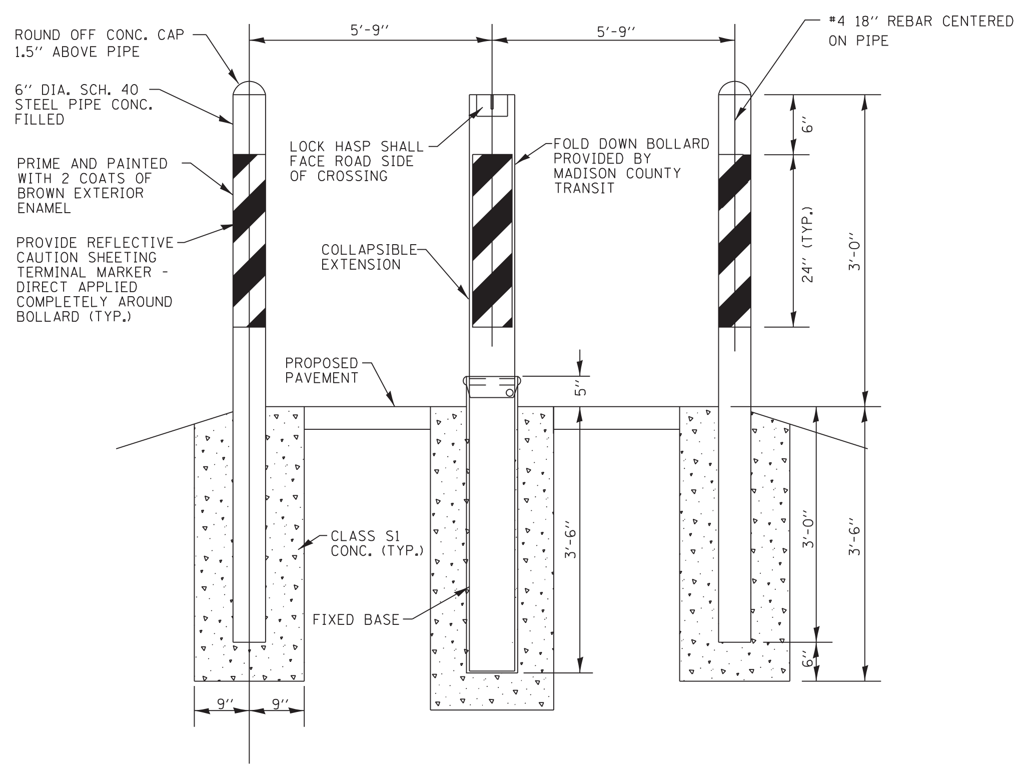
*586/592



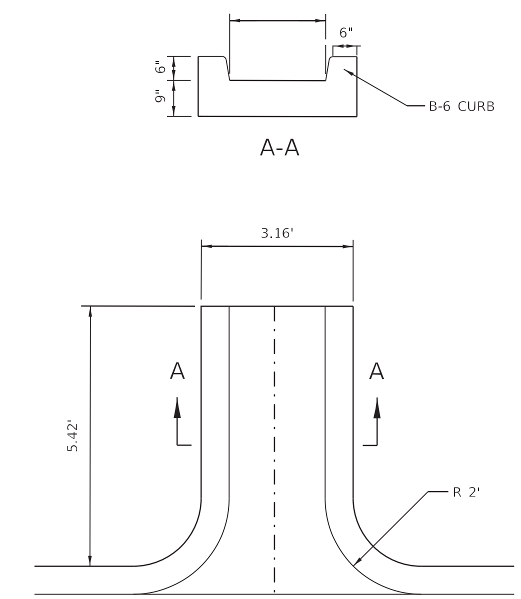
BOLLARD GATE PLAN VIEW



TYPICAL PAVEMENT MARKINGS AT BOLLARDS



BOLLARD GATE DETAIL



OUTLET DETAIL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

SCALE: NTS | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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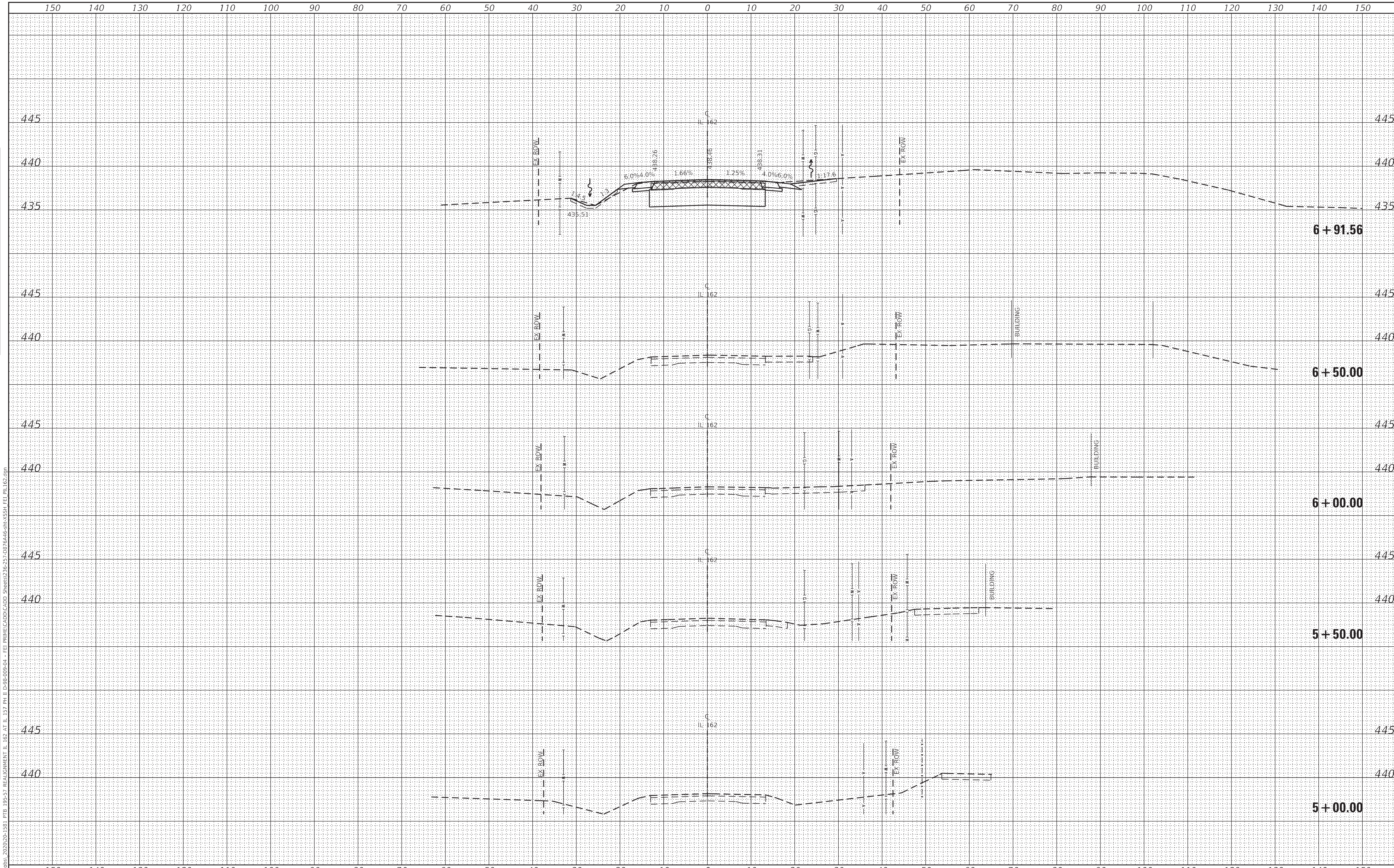
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	236
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592

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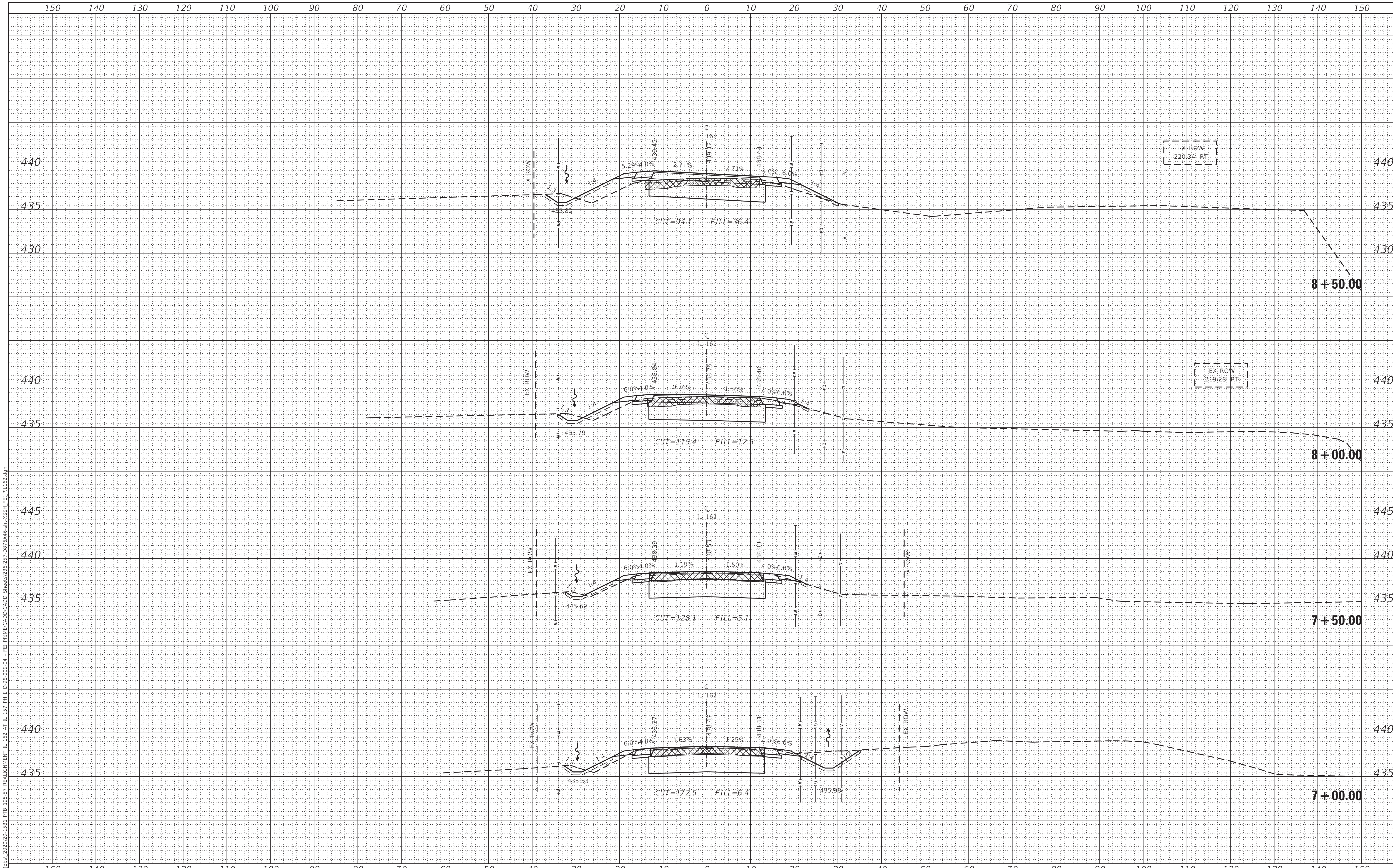

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ORIGINAL SURVEY	NOTE BOOK NO.	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

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FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

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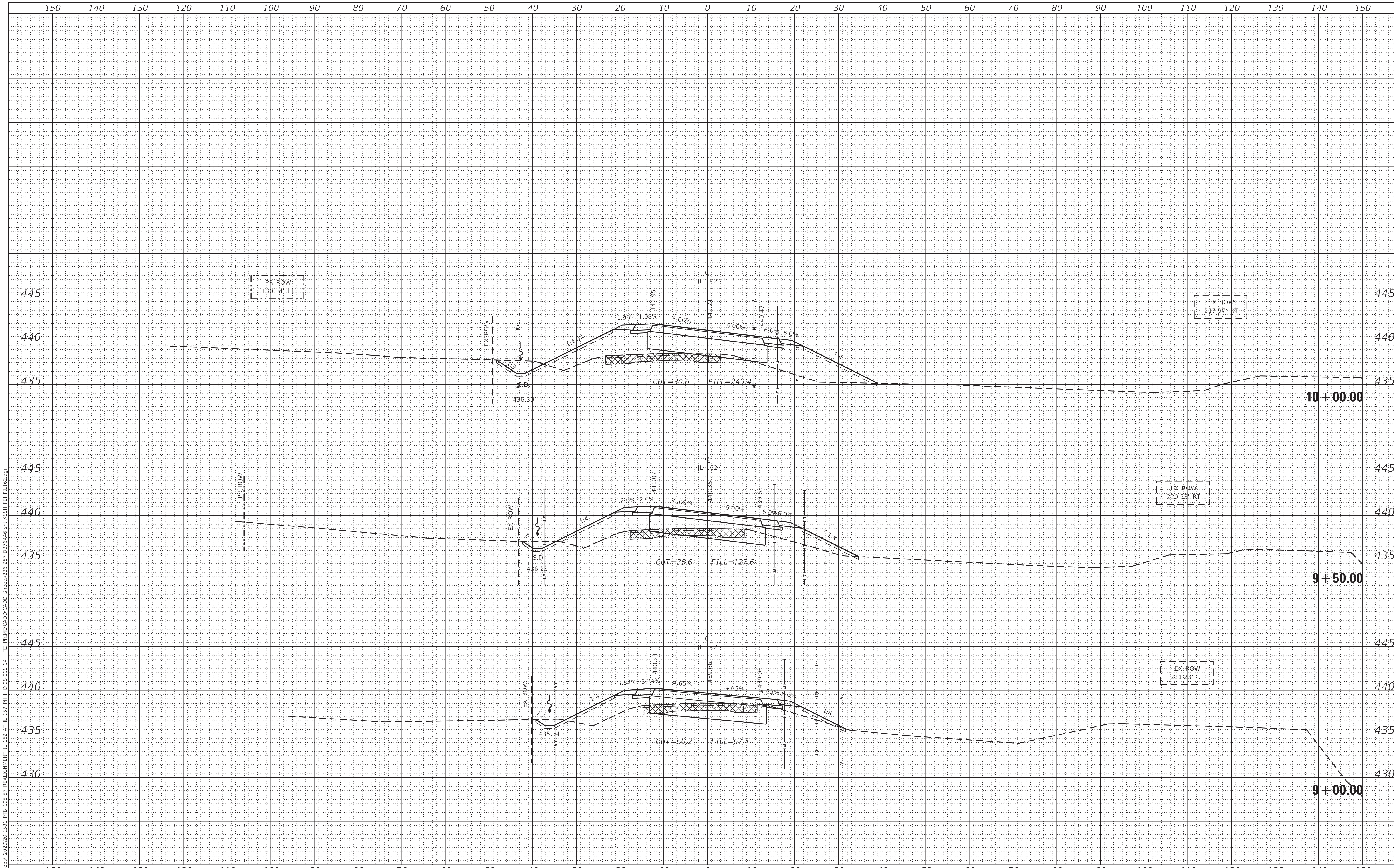
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 2 OF 22 SHEETS | STA. 7+00.00 TO STA. 8+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	237
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

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PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

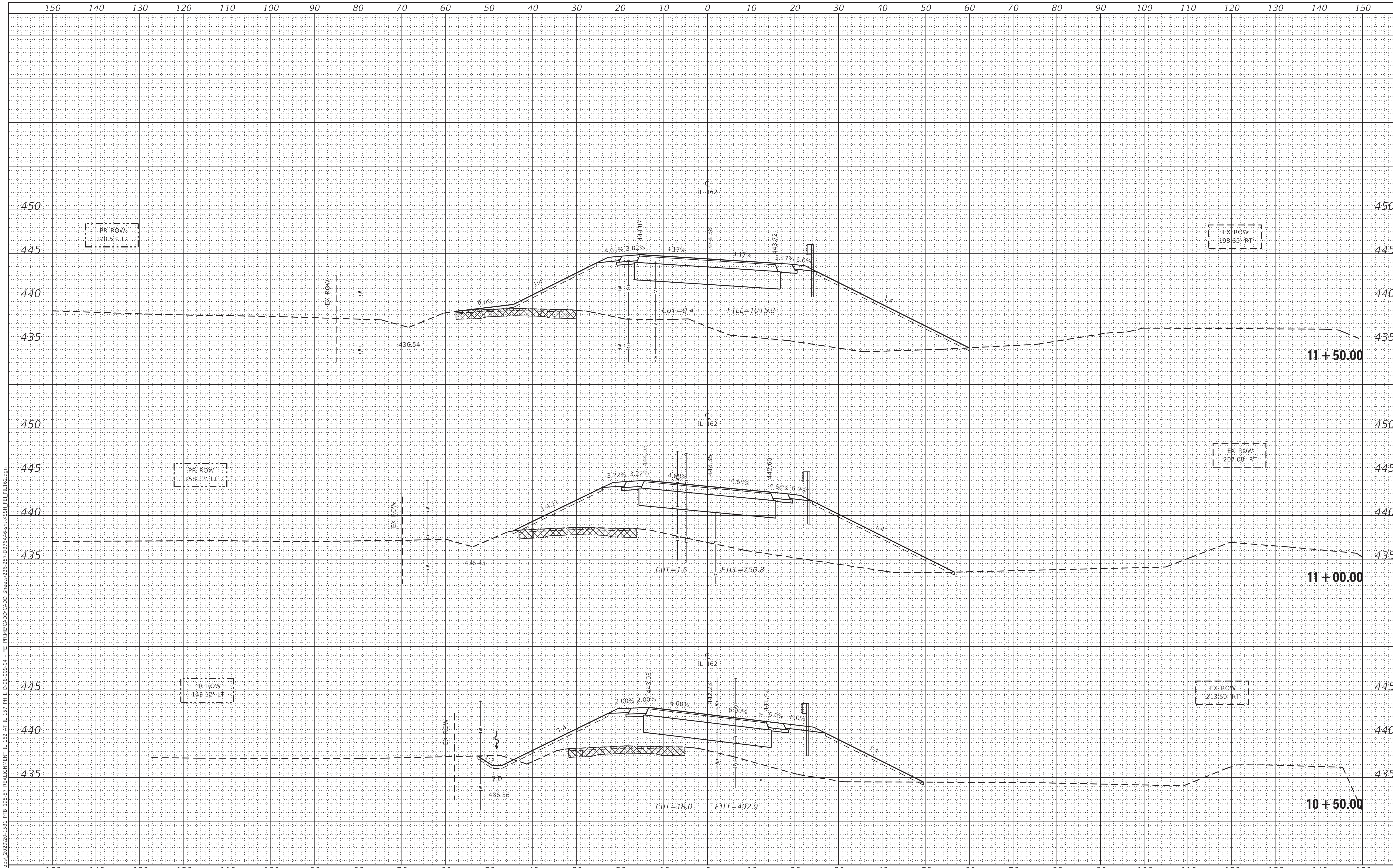
SCALE: 1"=10' | SHEET 3 OF 22 SHEETS | STA. 9+00.00 TO STA. 10+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	238

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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FUHRMANN ENGINEERING
WWW.FUHRMANN-ENG.COM

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PLOT DATE = 10/15/2024	DATE -	REVISED -	

ILLINOIS ROUTE 162 CROSS SECTIONS

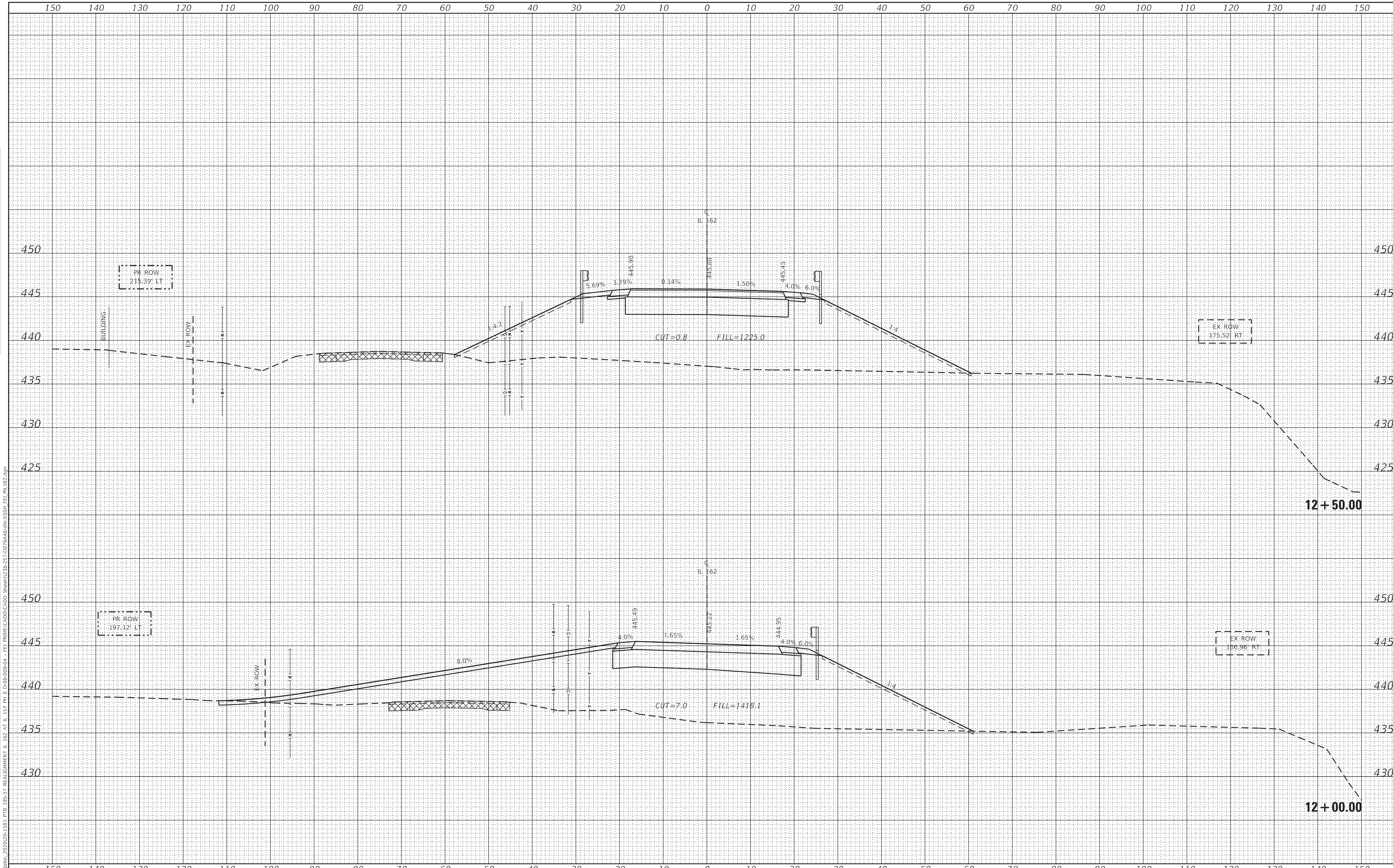
SCALE: 1"=10' | SHEET 4 OF 22 SHEETS | STA. 10+50.00 TO STA. 11+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	239

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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

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FUHRMANN ENGINEERING
WWW.FUHRMANN-ENG.COM

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PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 5 OF 22 SHEETS | STA. 12+00.00 TO STA. 12+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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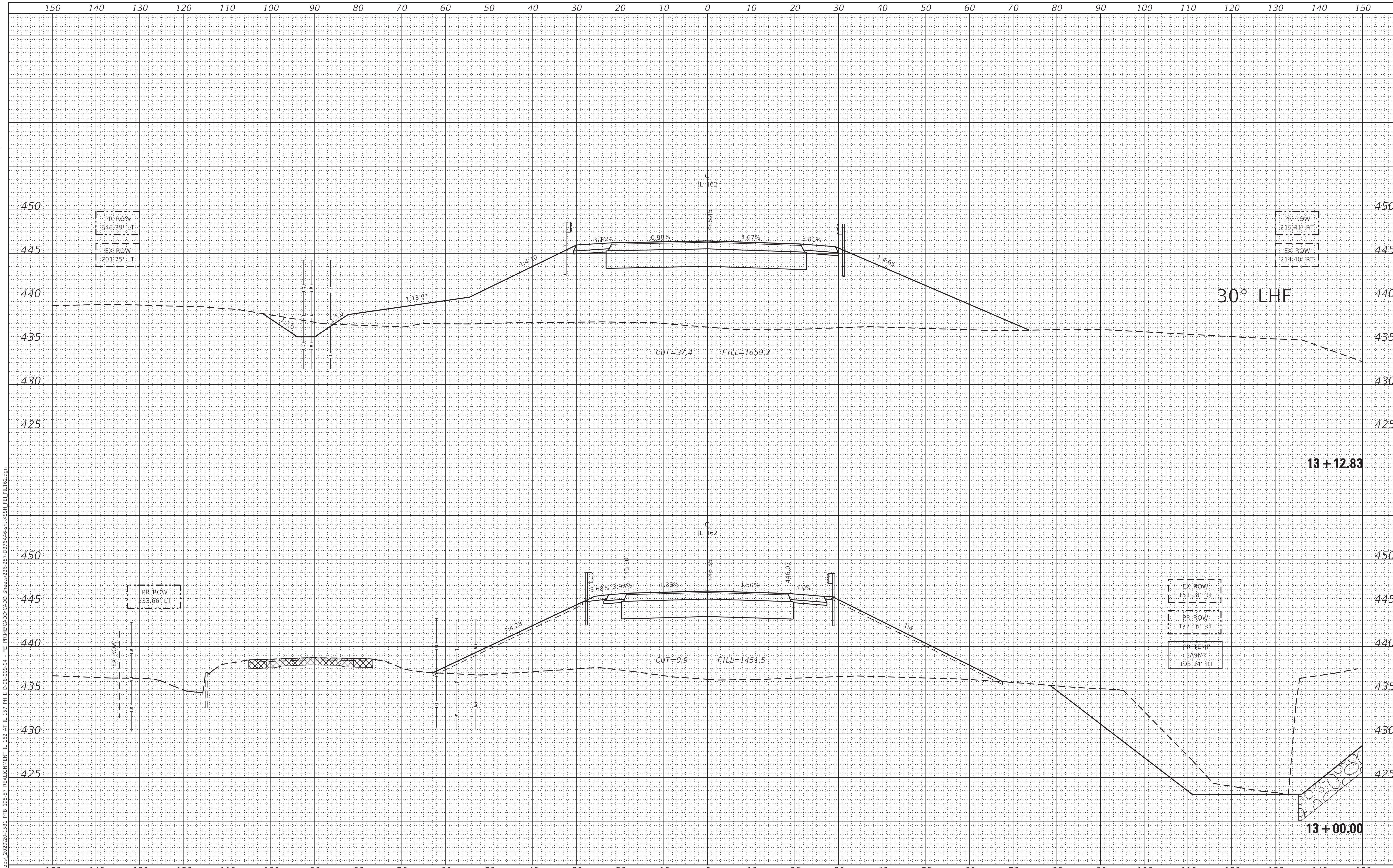
CONTRACT NO. 76A46				
	ILLINOIS	FED. AID PROJECT		

* 586/592



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	PLOT DATE = 10/15/2024	DATE -	REVISED -	

ILLINOIS ROUTE 162 CROSS SECTIONS

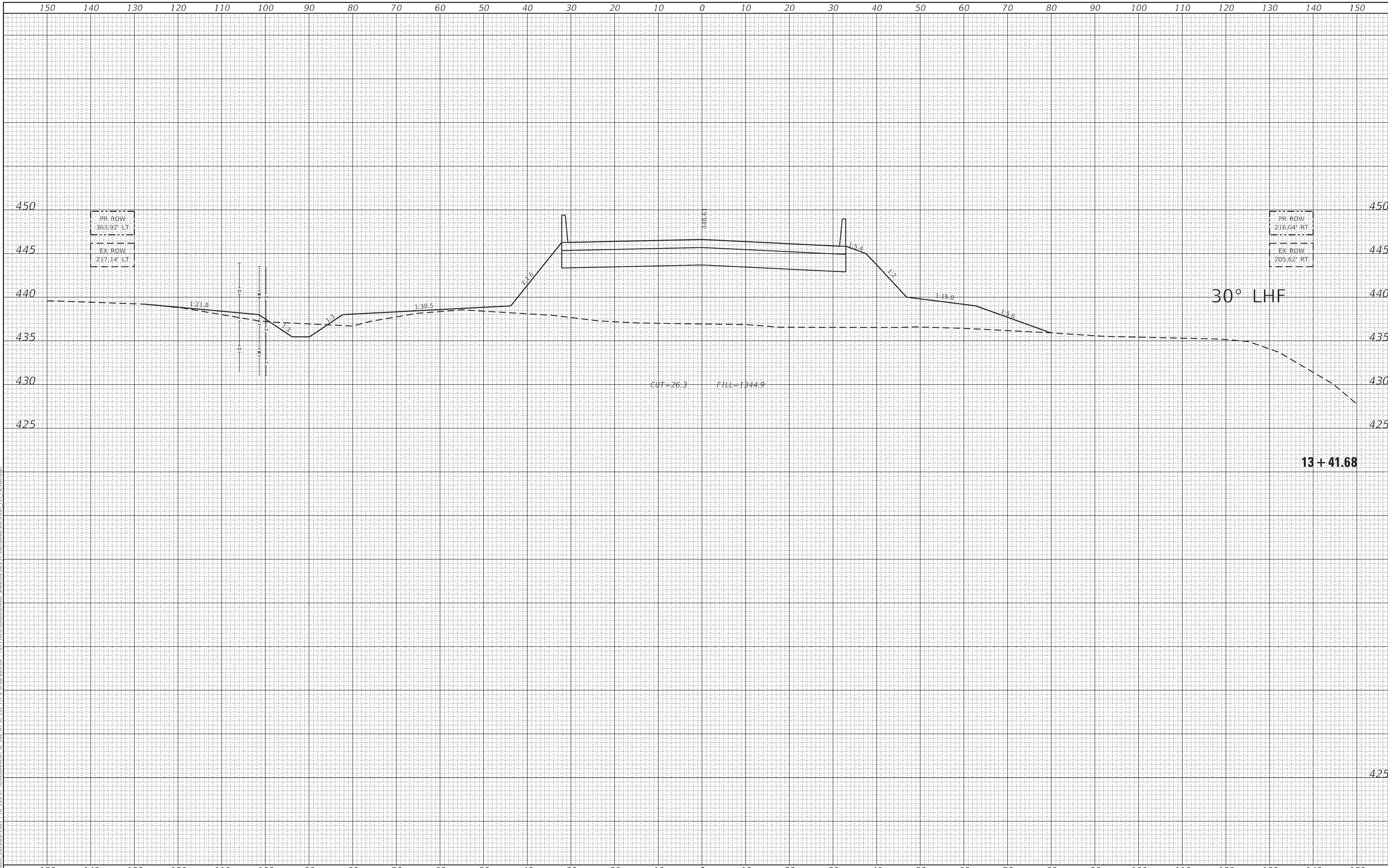
SCALE: 1"=10' | SHEET 6 OF 22 SHEETS | STA. 13+00.00 TO STA. 13+12.83

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	241

CONTRACT NO. 76A46

ILLINOIS FED. AID PROJECT

* 586/592



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

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

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PLOT DATE = 10/15/2024	DATE -	REVISED -

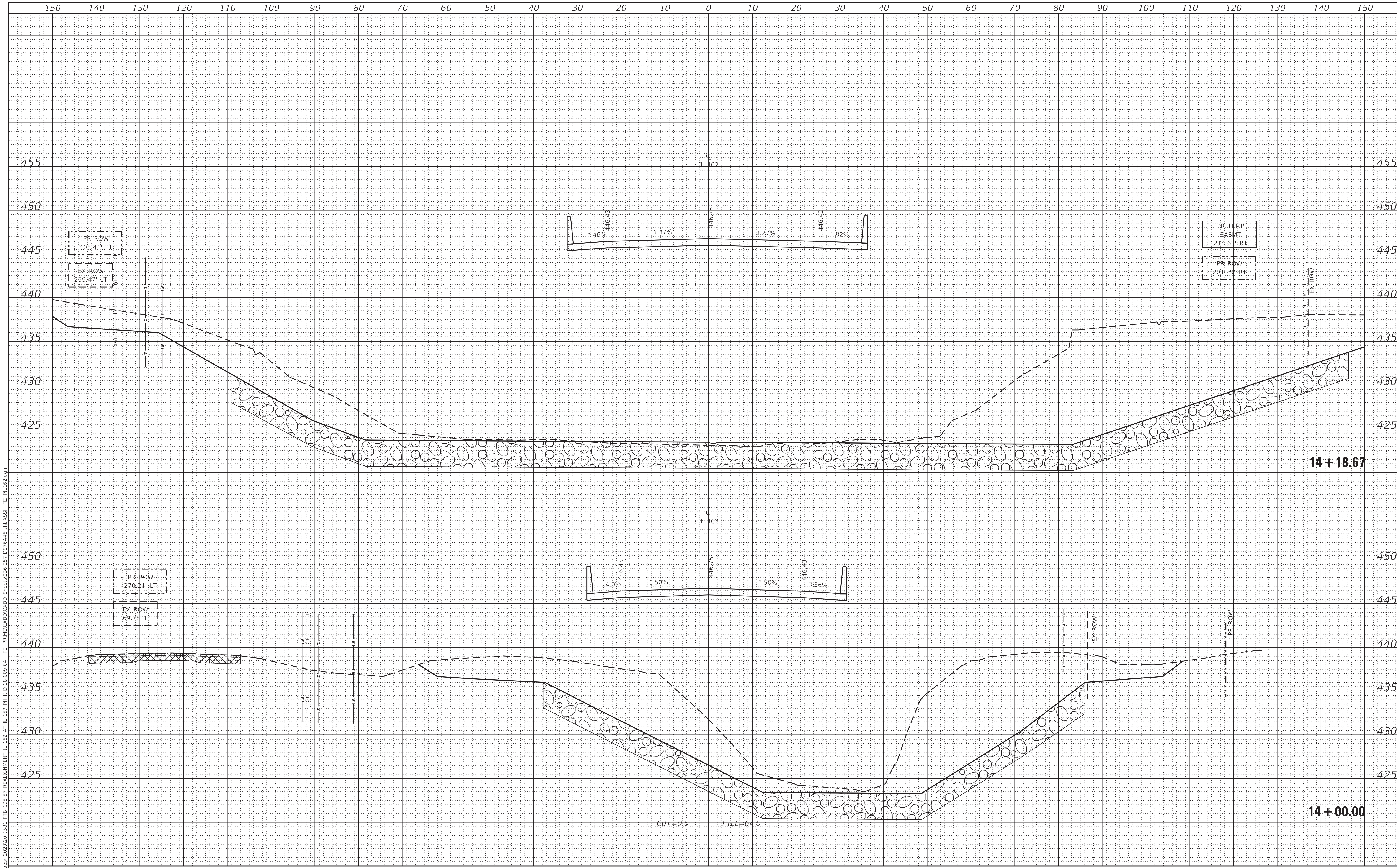
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 7 OF 22 SHEETS | STA. 13+41.68 TO STA. 13+41.68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	242
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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PLOT DATE = 10/15/2024	DATE -	REVISED -	

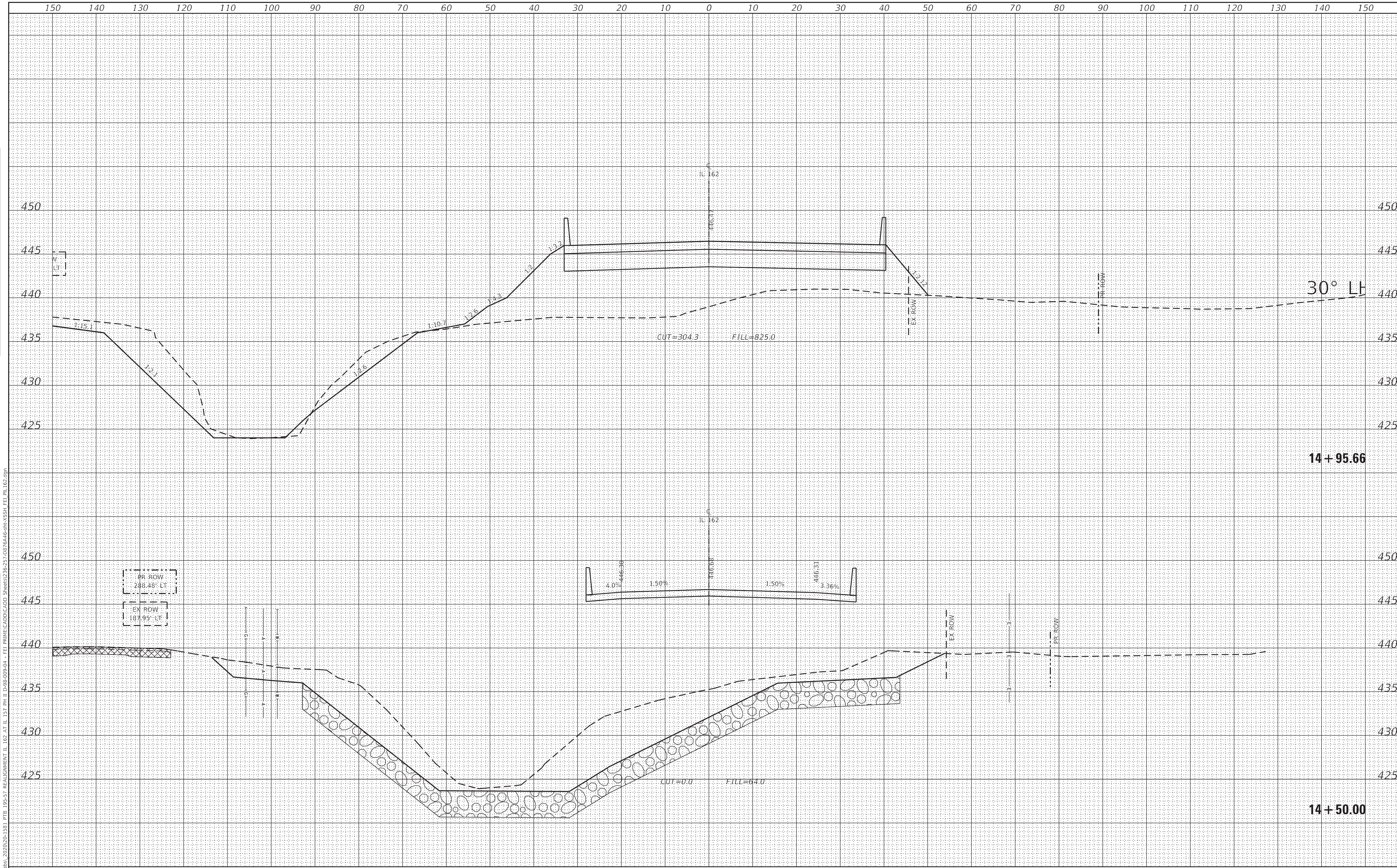
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 8 OF 22 SHEETS | STA. 14+00.00 TO STA. 14+18.67

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	243
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



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PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

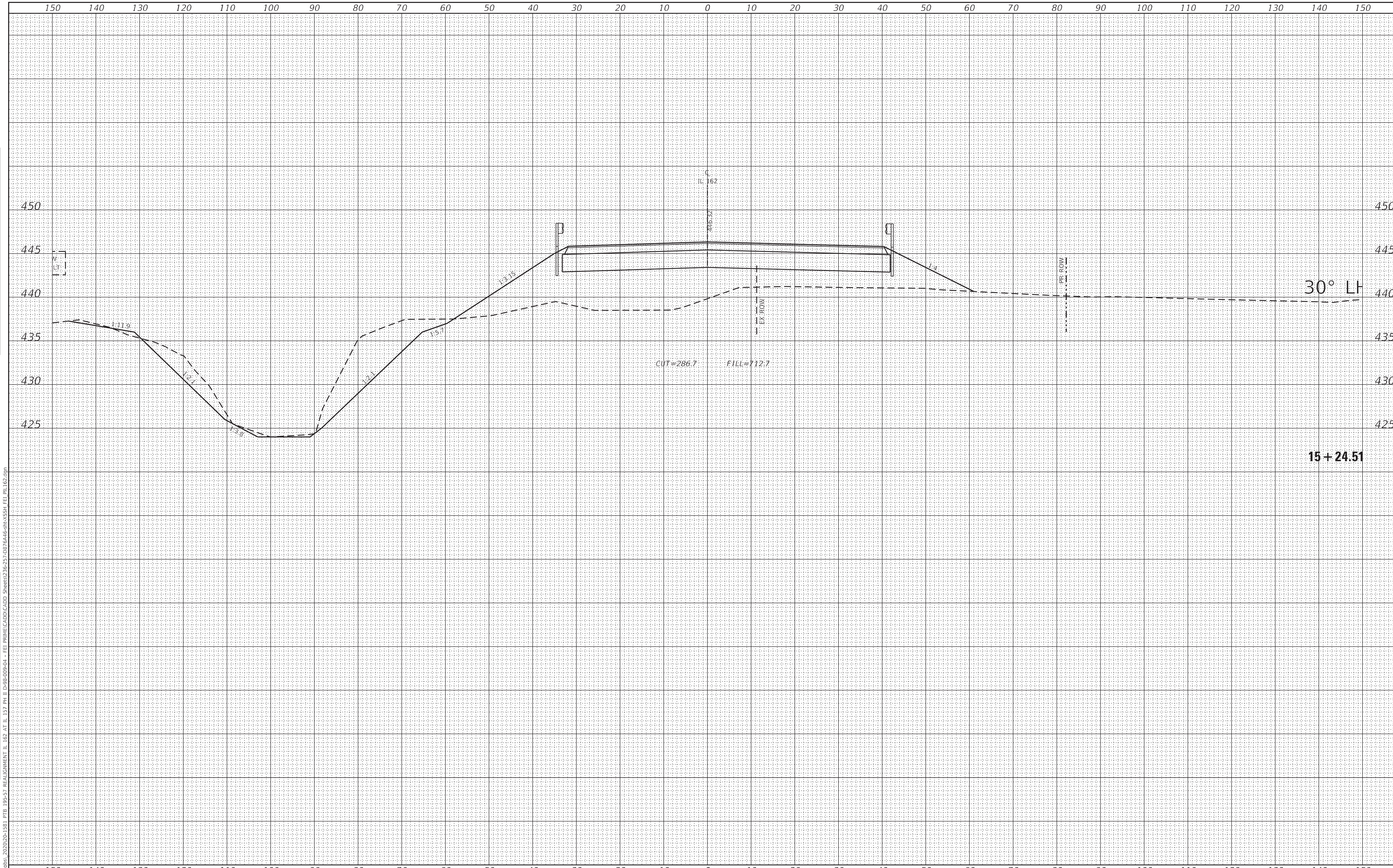
SCALE: 1"=10' | SHEET 9 OF 22 SHEETS | STA. 14+50.00 TO STA. 14+95.66

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	244

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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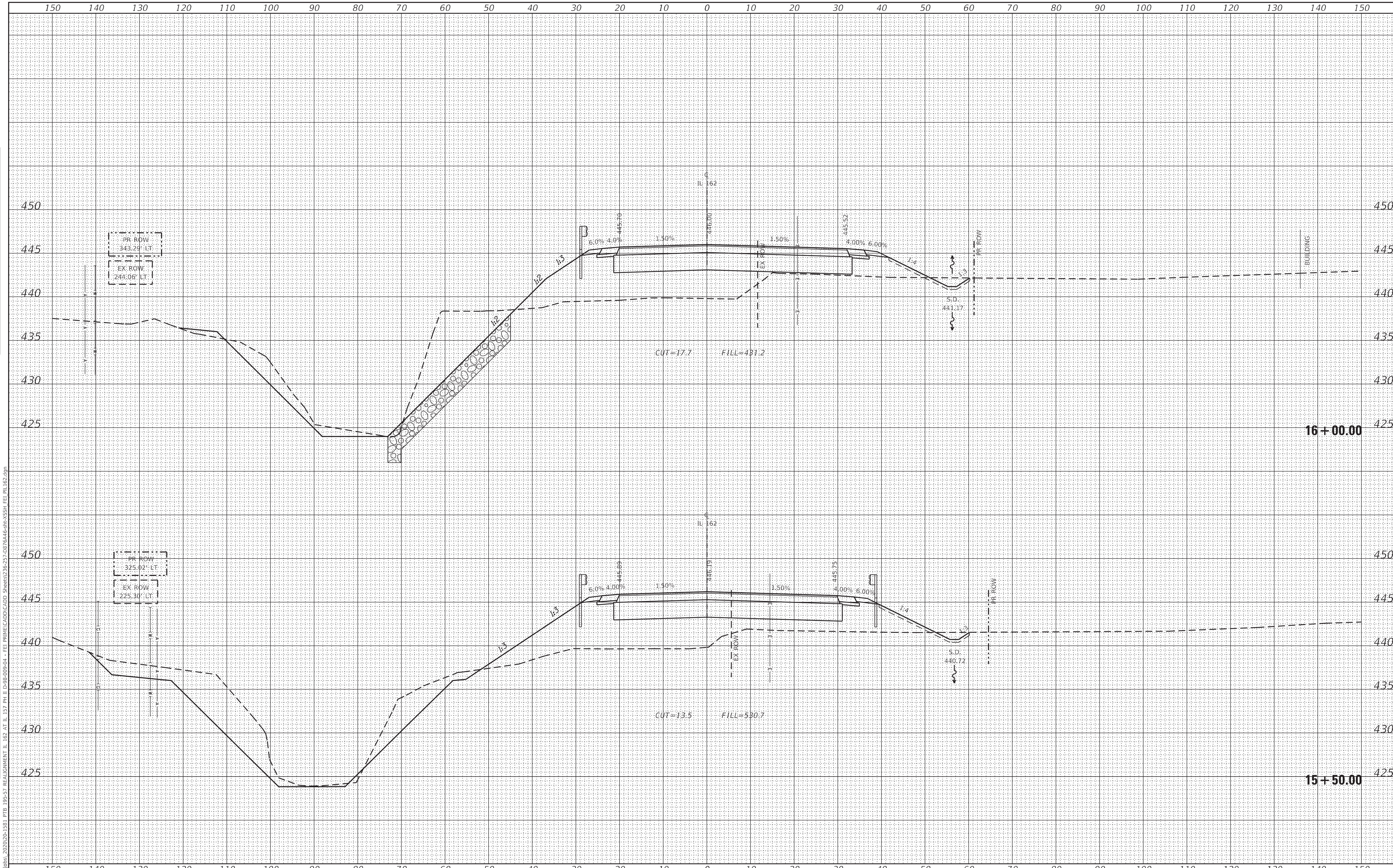
	PLOT DATE = 10/15/2024	DATE -	REVISED -	

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 10 OF 22 SHEETS | STA. 15+24.51 TO STA. 15+24.51

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	245
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



FINAL SURVEY	NOTE BOOK NO. / SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED / BY / DATE
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PLOT DATE = 10/15/2024	DATE -	REVISED -	

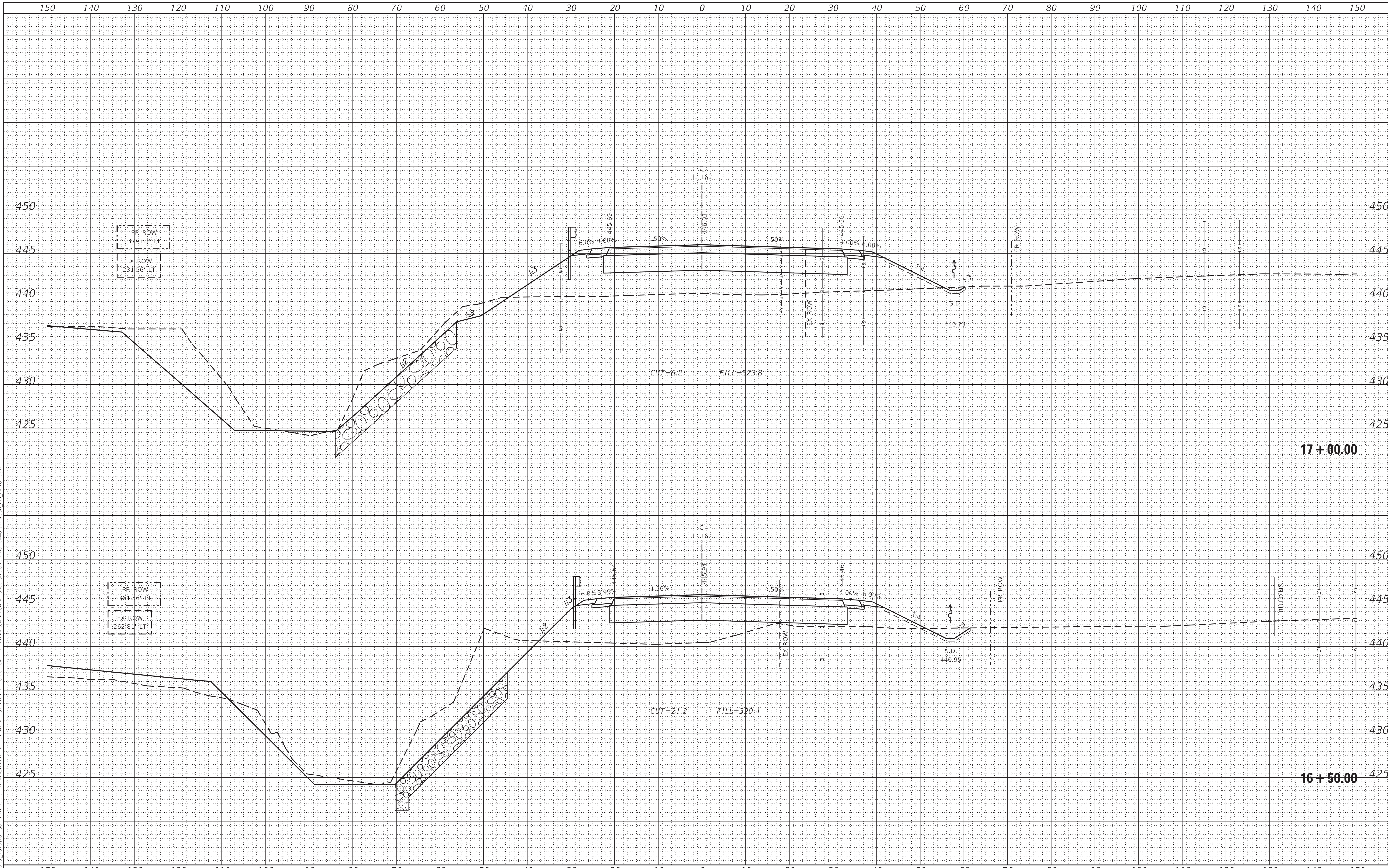
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 11 OF 22 SHEETS | STA. 15+50.00 TO STA. 16+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	246
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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

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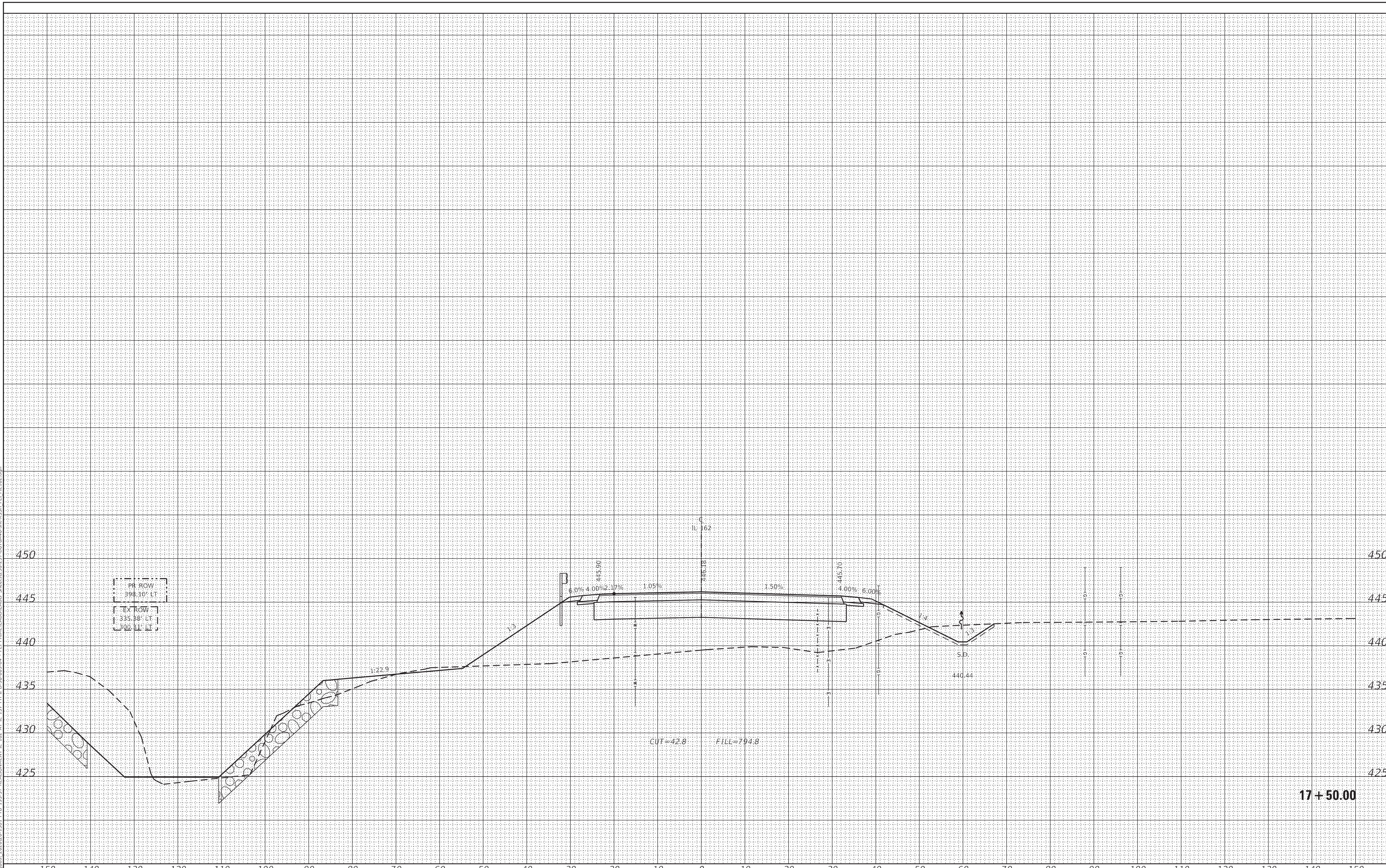
PLOT DATE = 10/15/2024	DATE -	REVISED -	

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 12 OF 22 SHEETS | STA. 16+50.00 TO STA. 17+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	247
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

* 586/592



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

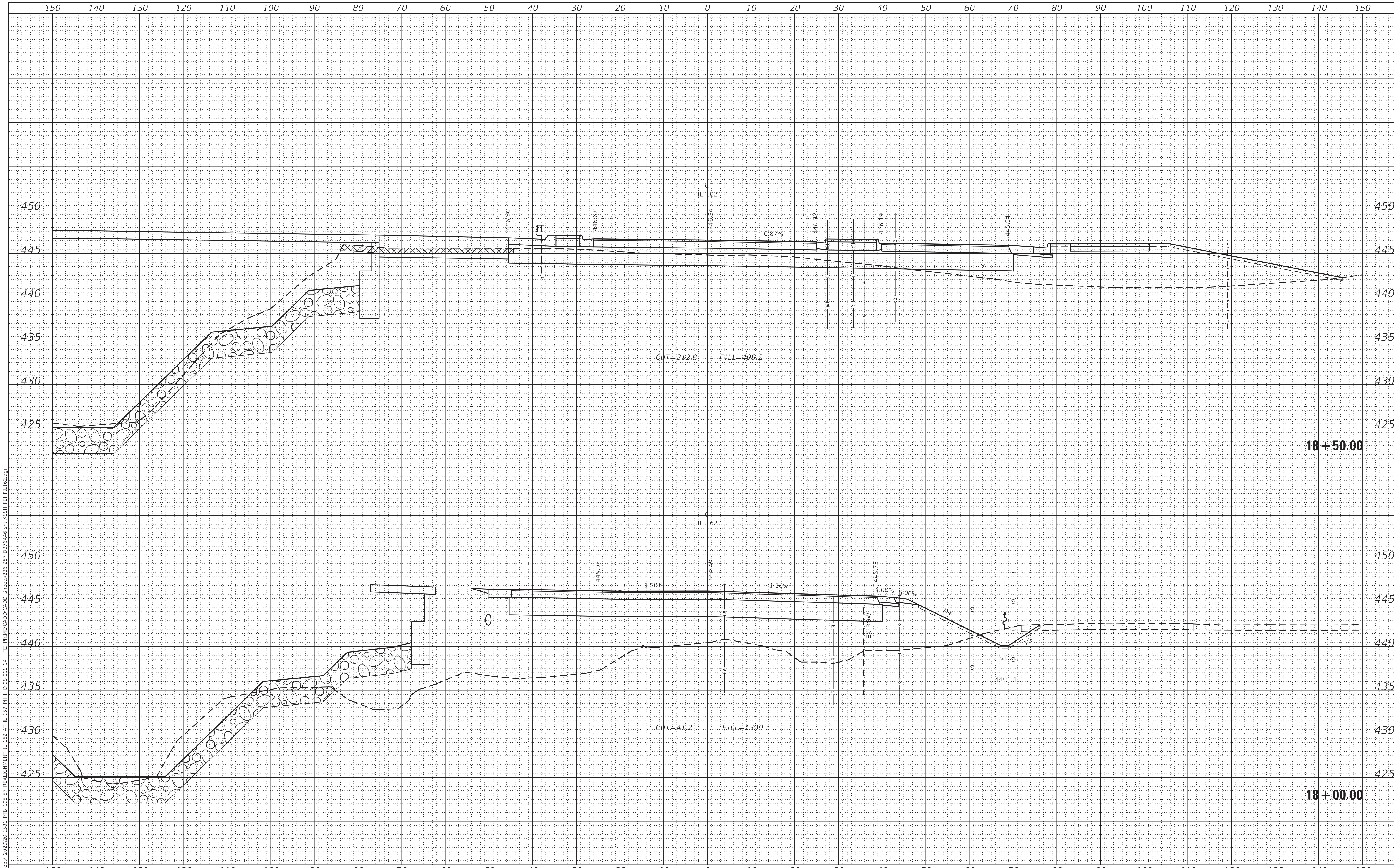
SCALE: 1"=10' | SHEET 13 OF 22 SHEETS | STA. 17+50.00 TO STA. 17+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	248

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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

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PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 14 OF 22 SHEETS | STA. 18+00.00 TO STA. 18+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	249

CONTRACT NO. 76A46

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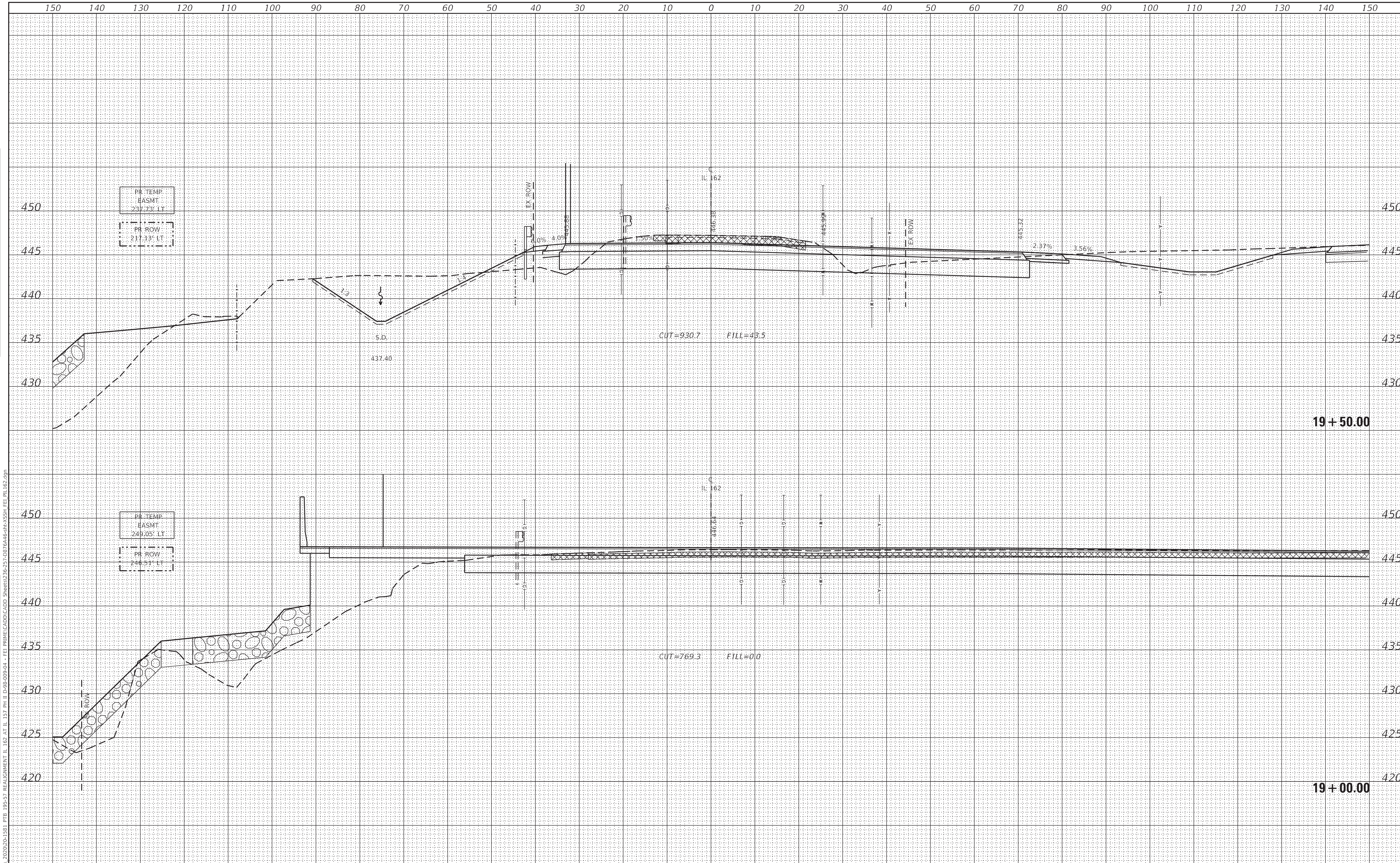

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
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ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 15 OF 22 SHEETS | STA. 19+00.00 TO STA. 19+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	250
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

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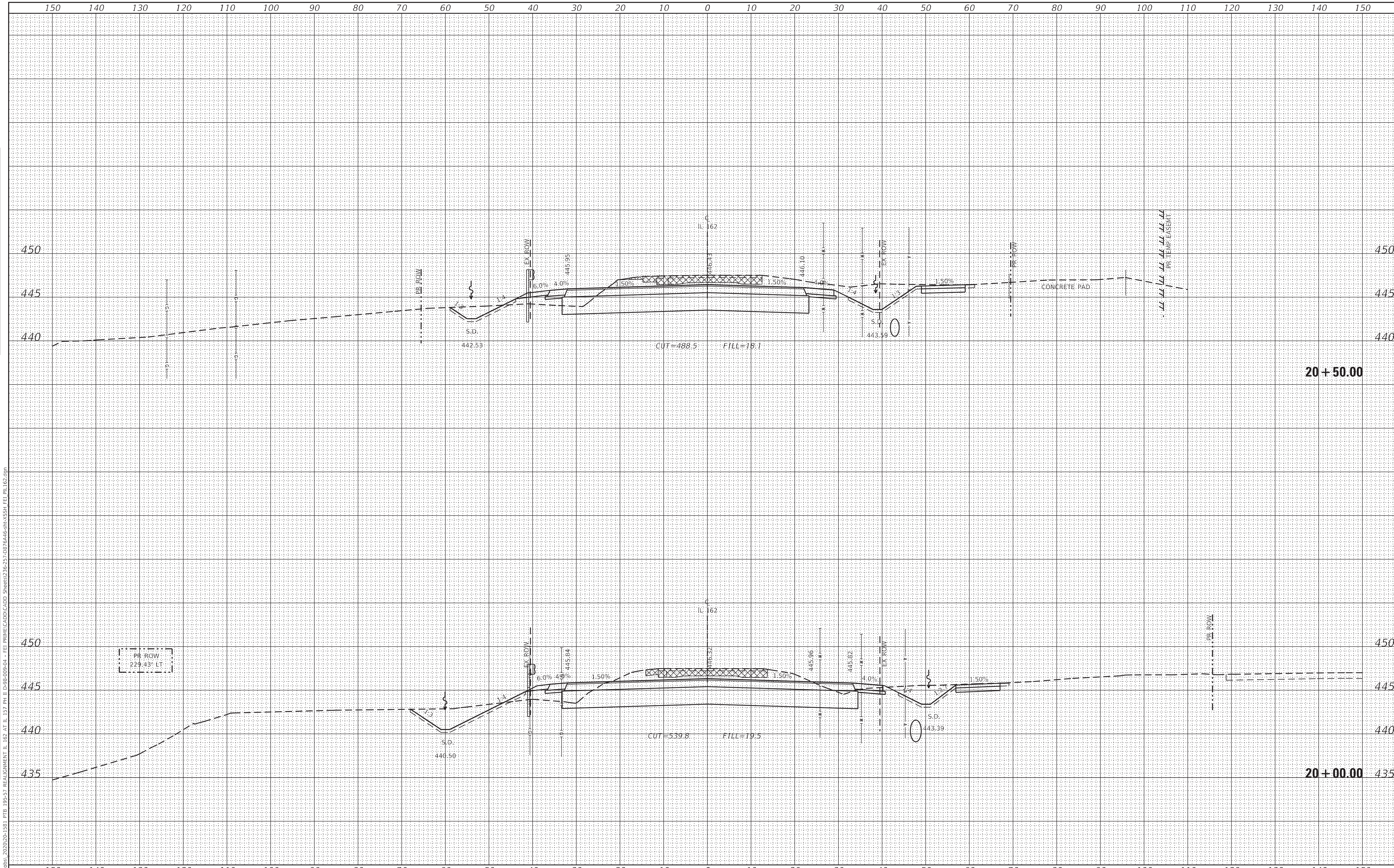

FINAL SURVEY	NO.	NOTE BOOK	SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED	BY	DATE

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ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 16 OF 22 SHEETS | STA. 20+00.00 TO STA. 20+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	251

CONTRACT NO. 76A46

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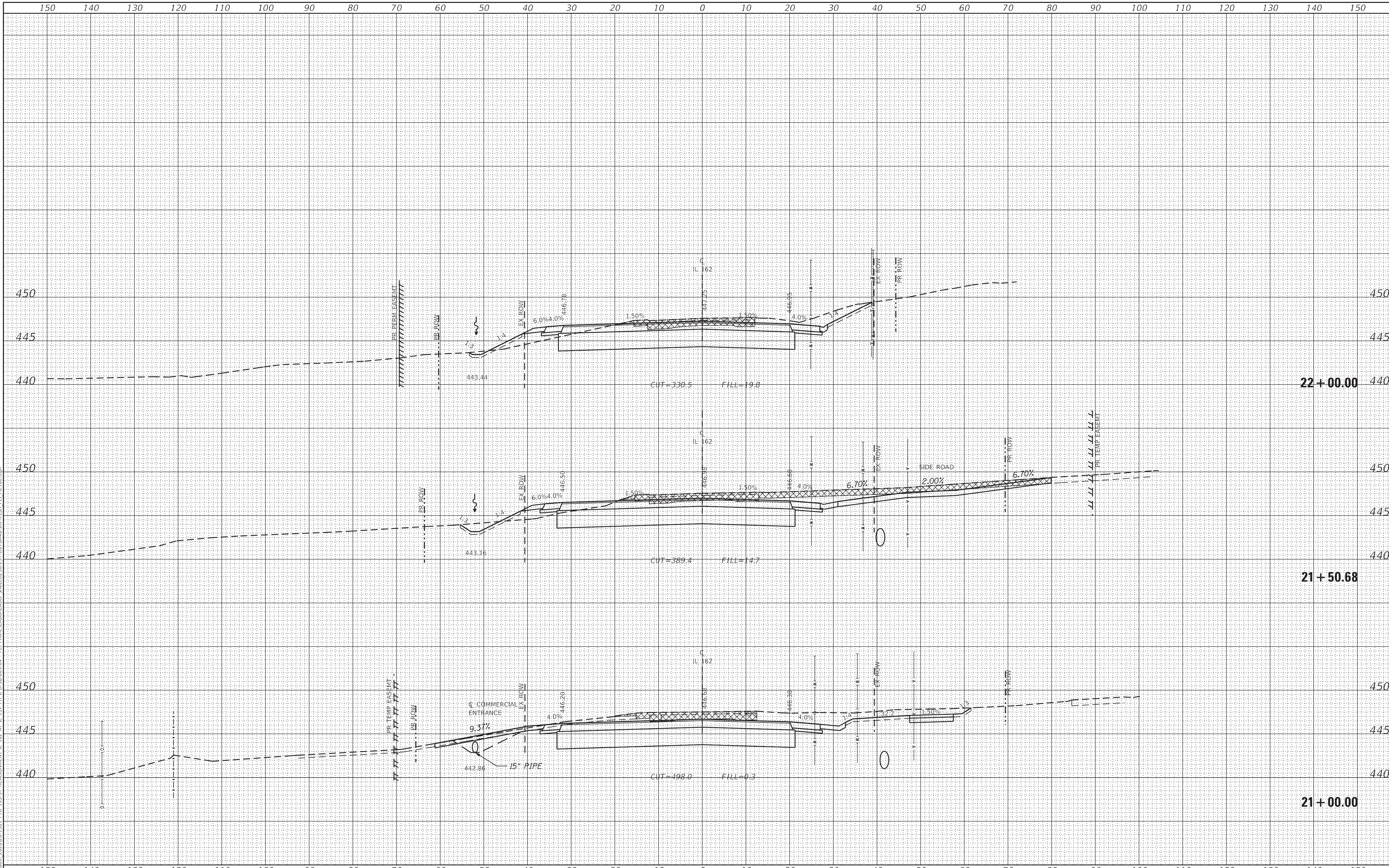

FINAL SURVEY	
NOTE BOOK NO.	
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TEMPLATE	
AREAS	
AREAS CHECKED	
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NOTE BOOK NO.	
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TEMPLATE	
AREAS	
AREAS CHECKED	
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PLOT DATE = 10/15/2024	DATE -	REVISED -	

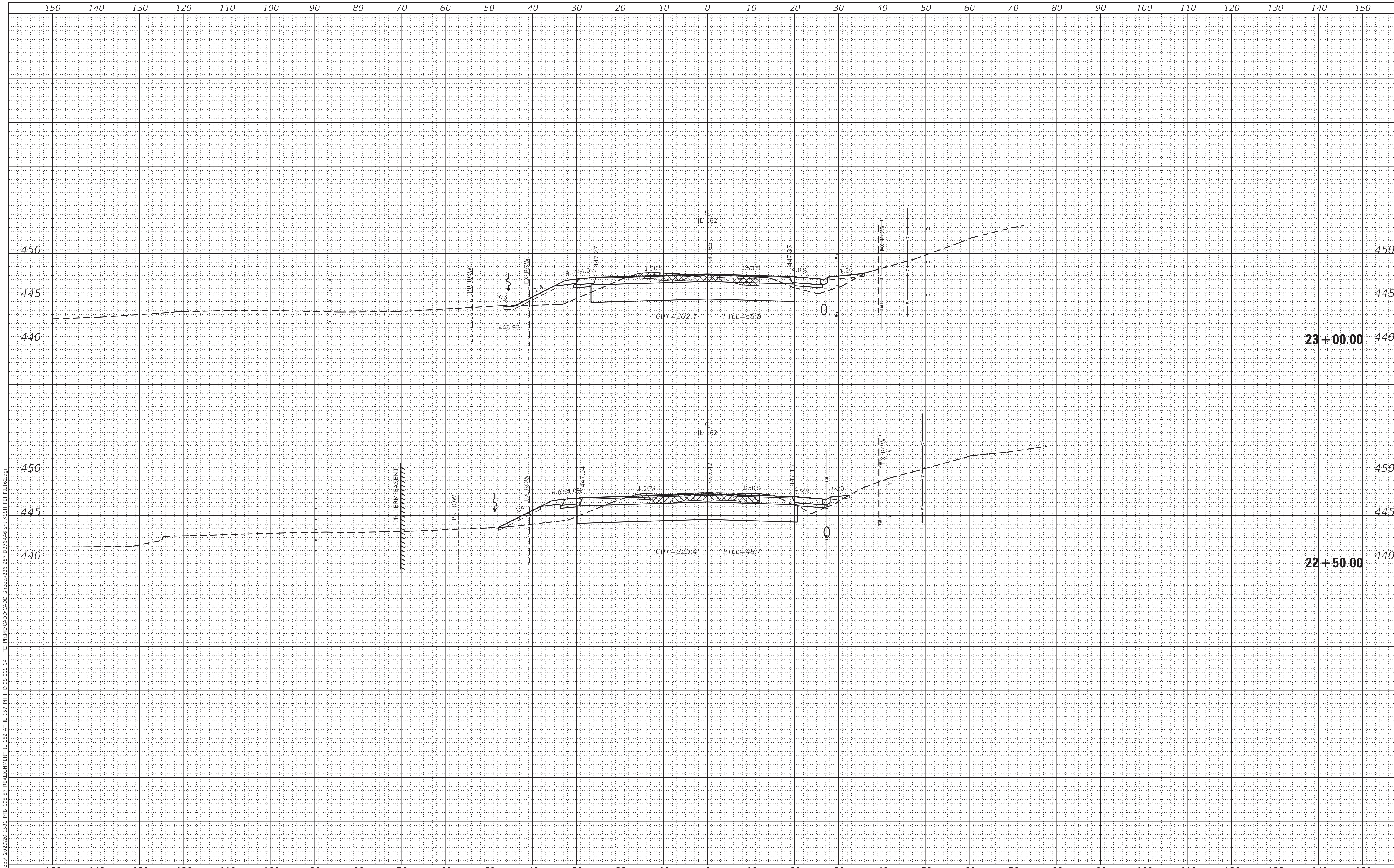
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 17 OF 22 SHEETS | STA. 21+00.00 TO STA. 22+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	252
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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

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	PLOT DATE = 10/15/2024	DATE -	REVISED -	

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 18 OF 22 SHEETS | STA. 22+50.00 TO STA. 23+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	253

CONTRACT NO. 76A46

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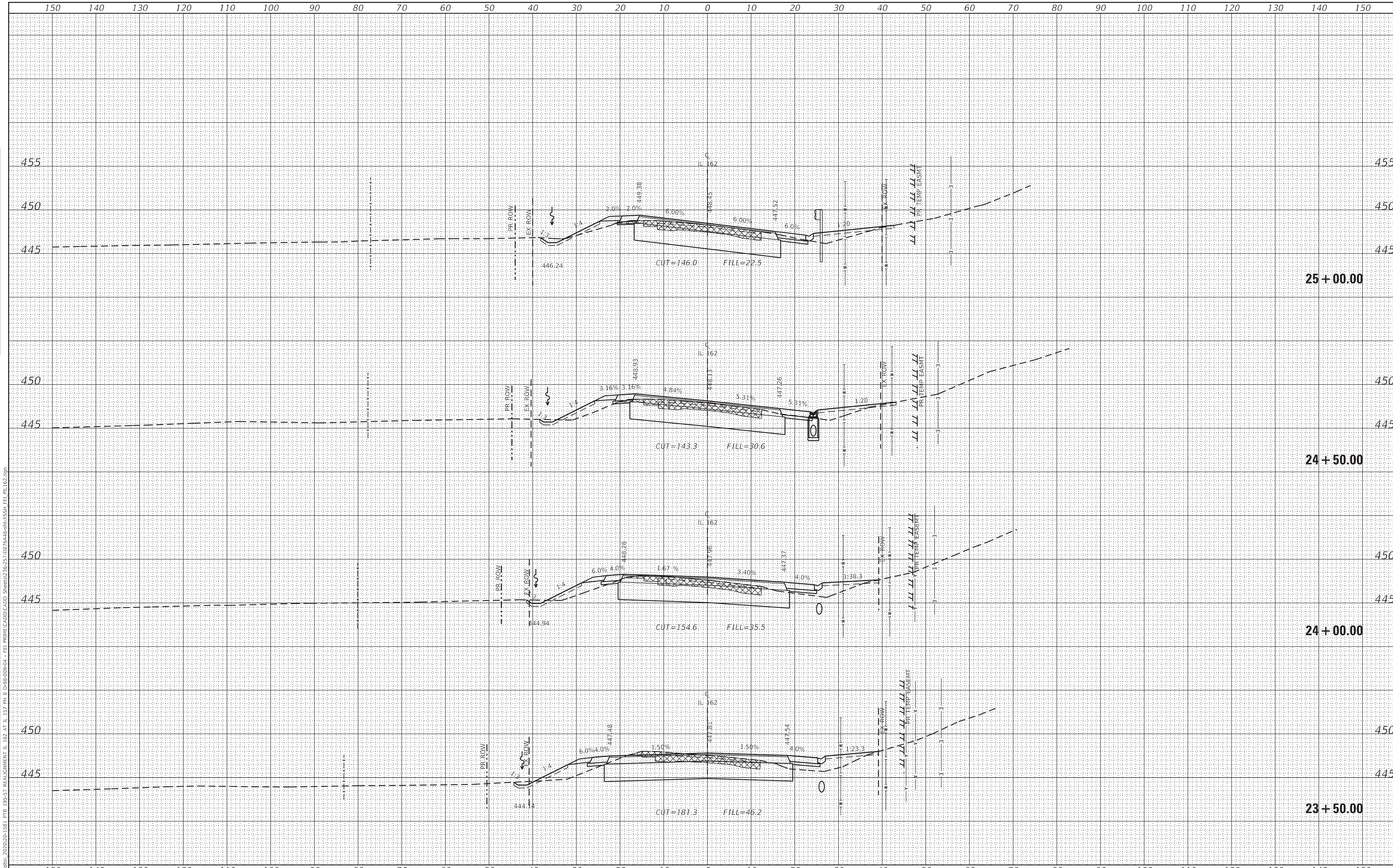

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ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 19 OF 22 SHEETS | STA. 23+50.00 TO STA. 25+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	254

CONTRACT NO. 76A46

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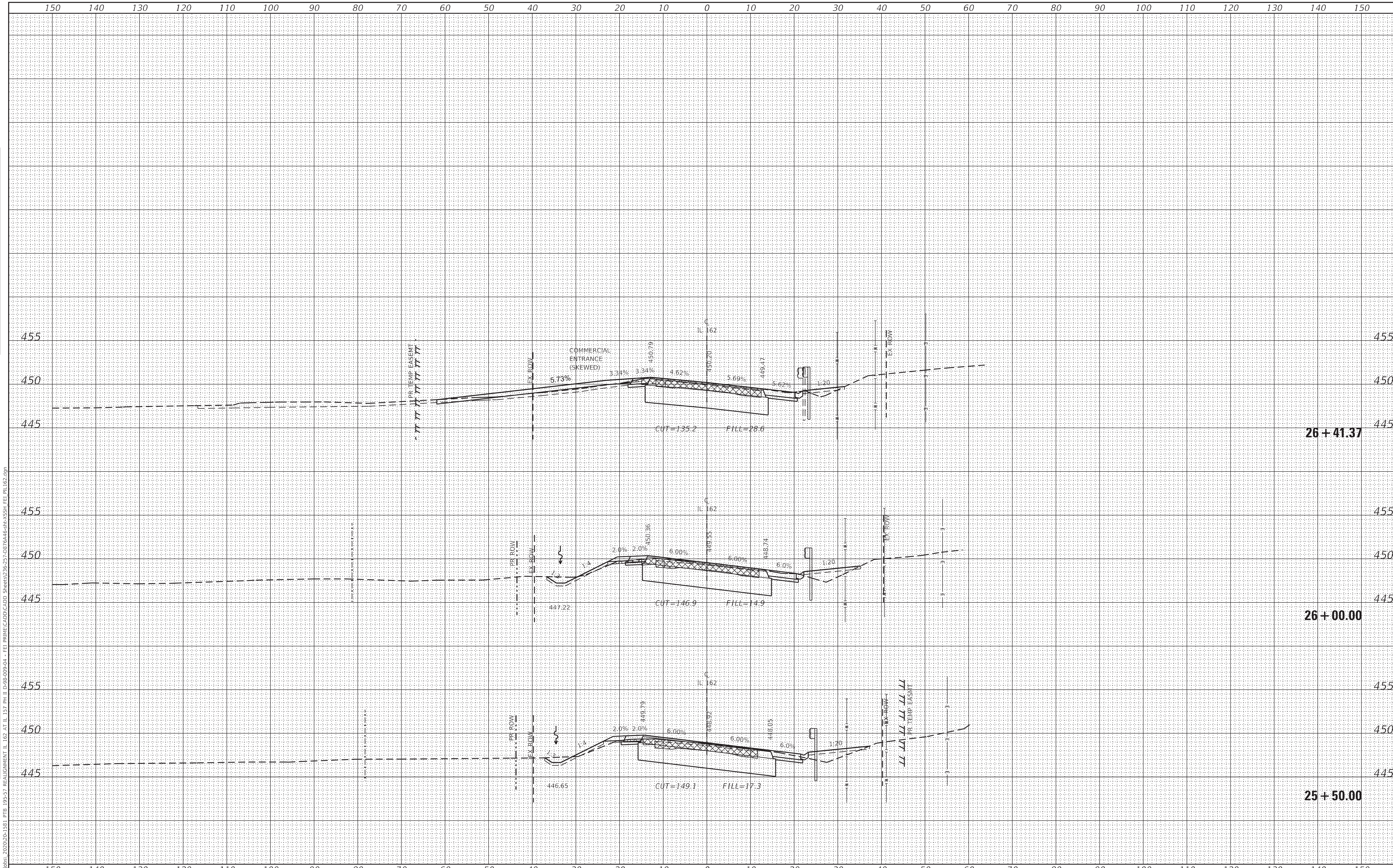

FINAL SURVEY | NOTE BOOK NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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

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PLOT DATE = 10/15/2024	DATE -	REVISED -	

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 20 OF 22 SHEETS | STA. 25+50.00 TO STA. 26+41.37

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	255
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

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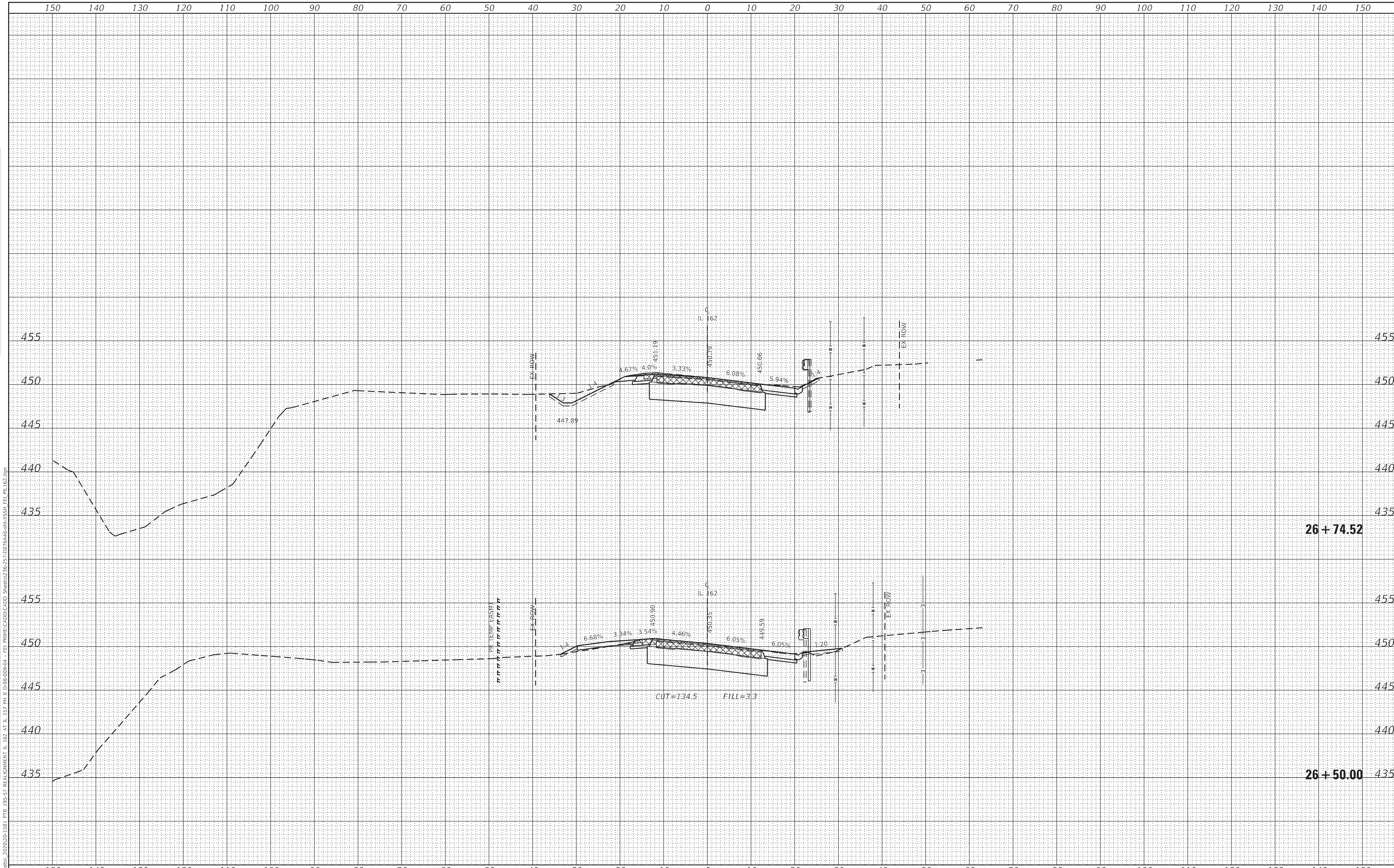

FINAL SURVEY / ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

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PLOT DATE = 10/15/2024	DATE -	REVISED -

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DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' SHEET 21 OF 22 SHEETS STA. 26+50.00 TO STA. 26+74.52

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	256

CONTRACT NO. 76A46

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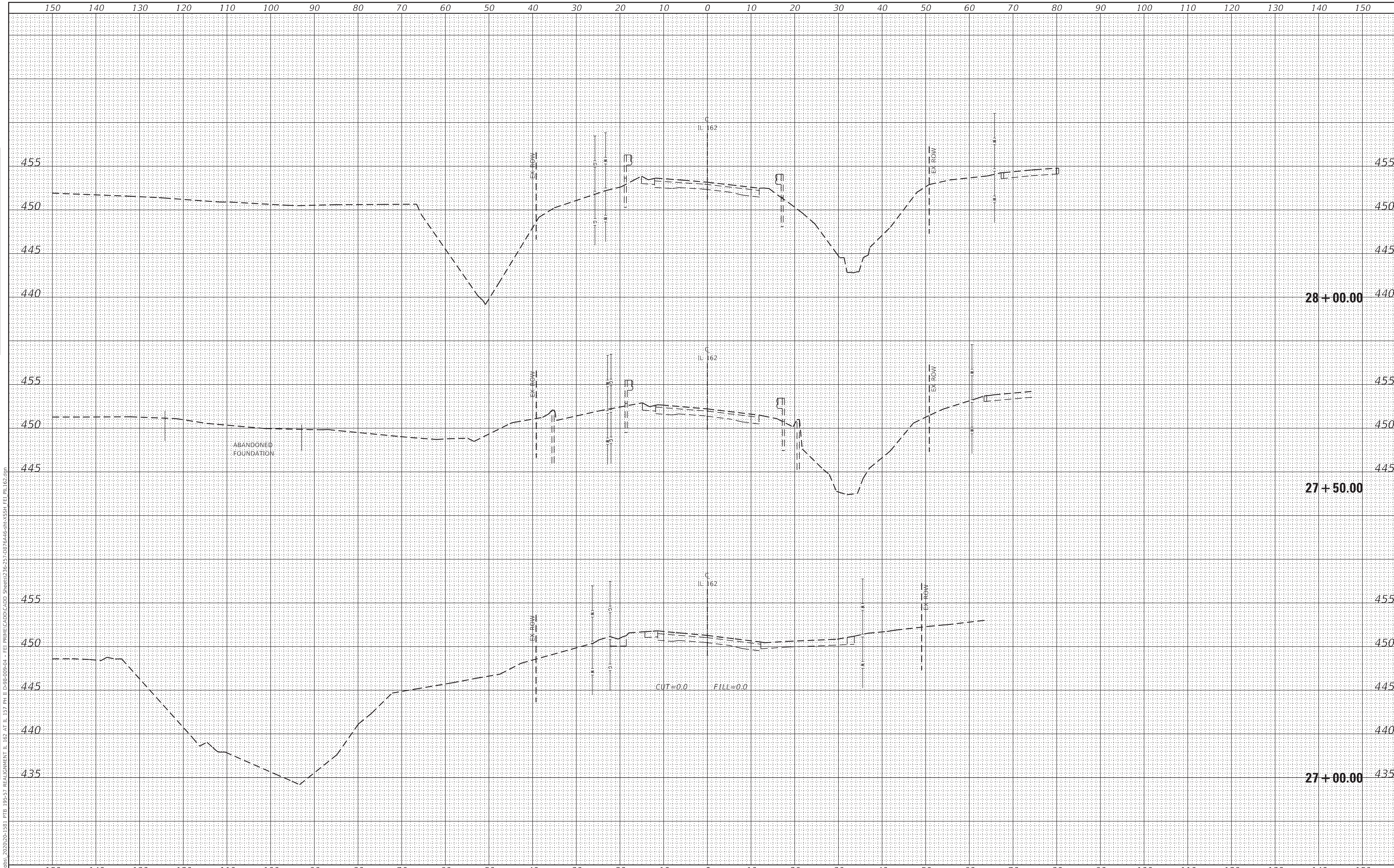

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
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	AREAS		
	AREAS CHECKED		

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PLOT DATE = 10/15/2024	DATE -	REVISED -

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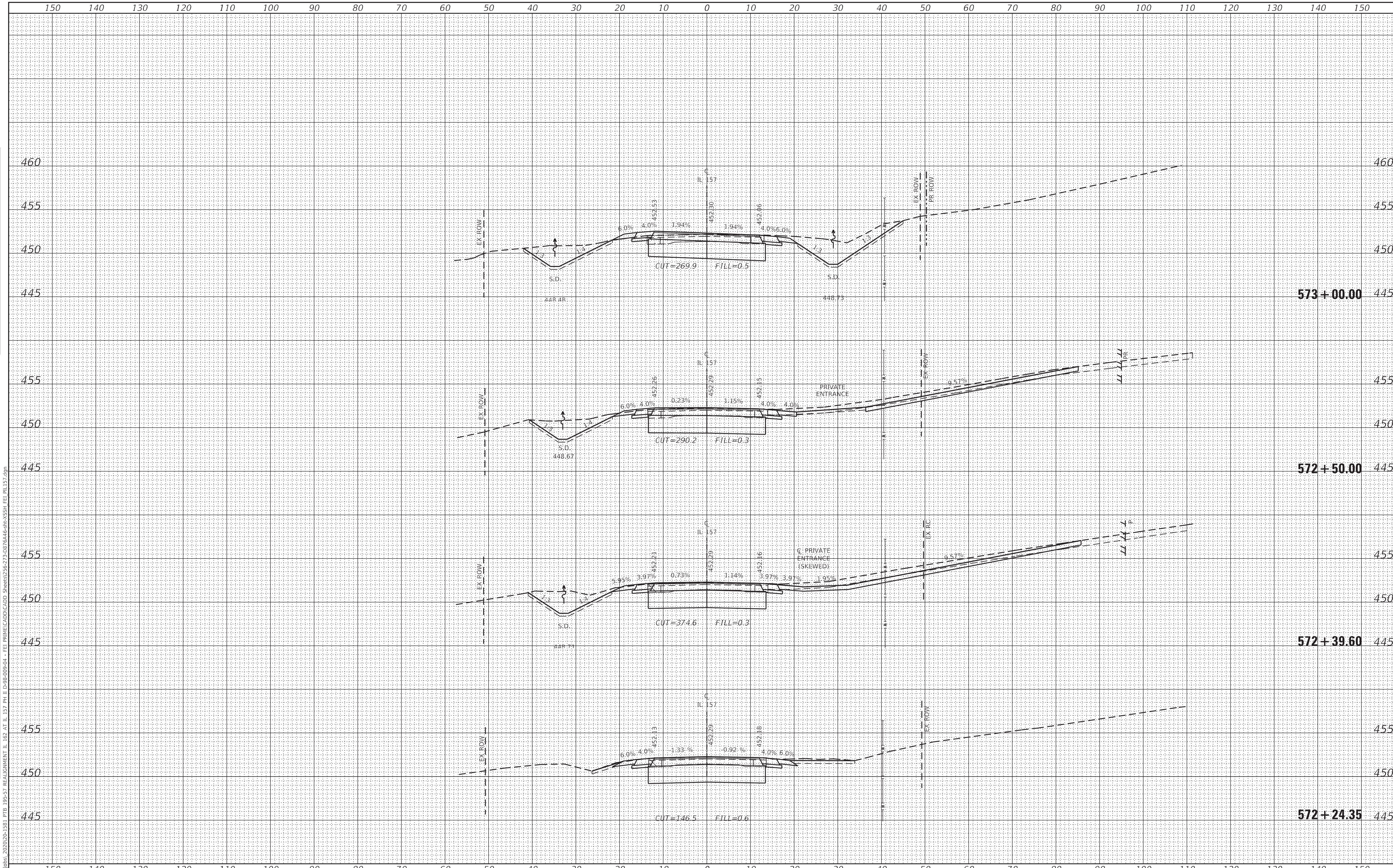
ILLINOIS ROUTE 162 CROSS SECTIONS

SCALE: 1"=10' | SHEET 22 OF 22 SHEETS | STA. 27+00.00 TO STA. 28+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	257
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

* 586/592



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ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 1 OF 18 SHEETS | STA. 572+24.35 TO STA. 573+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	258
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592

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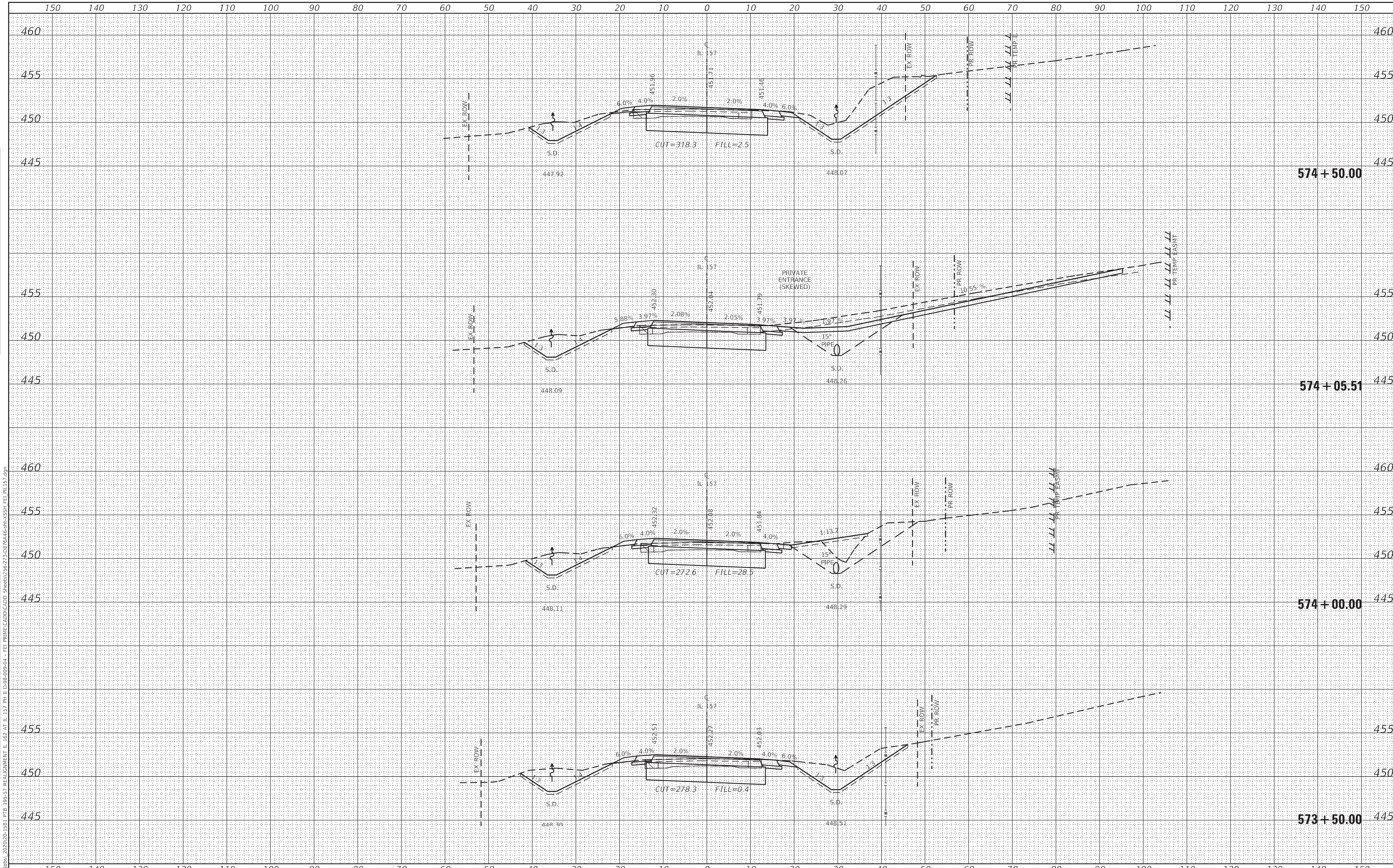

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ORIGINAL SURVEY | NOTE BOOK NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

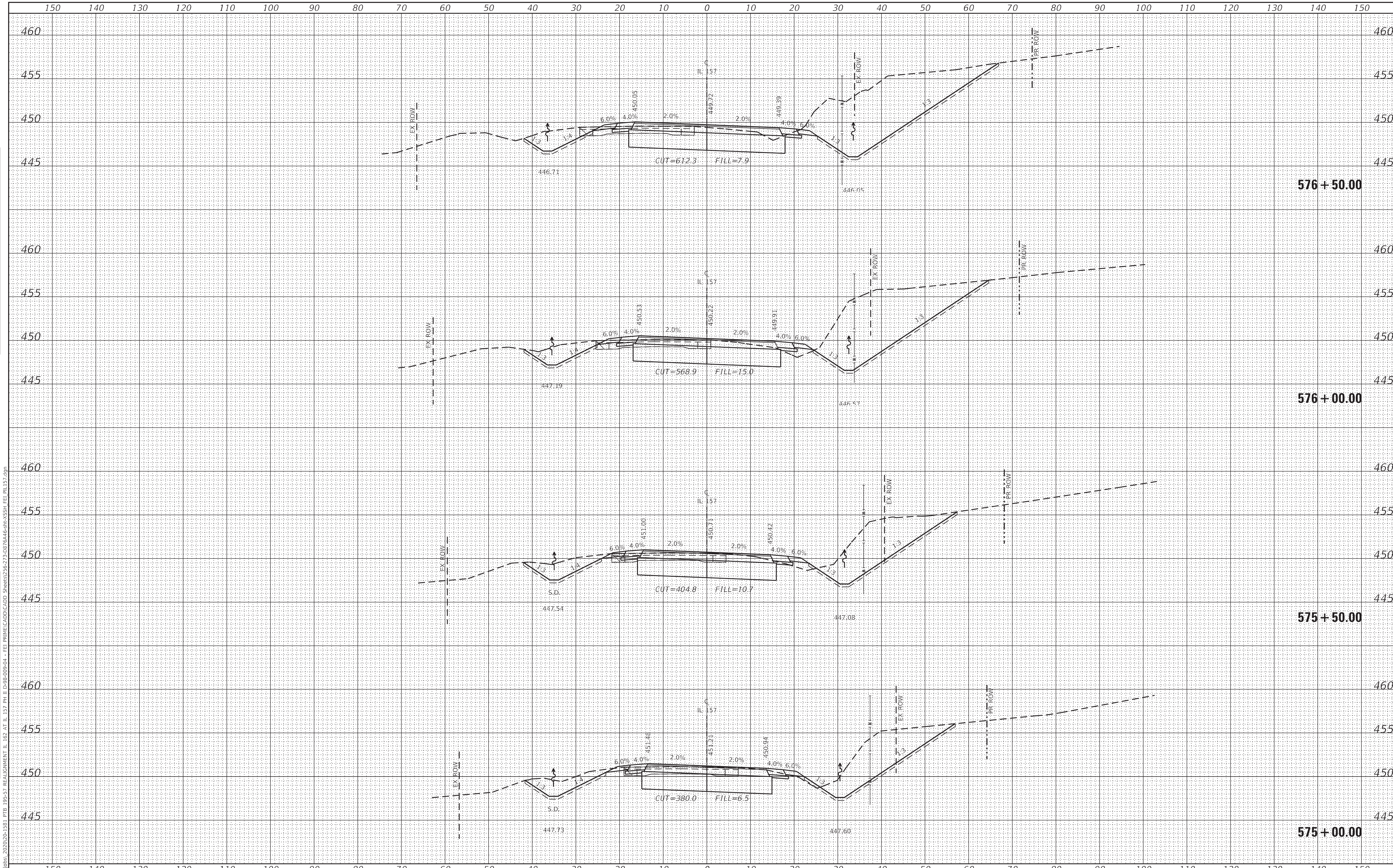
SCALE: 1"=10' | SHEET 2 OF 18 SHEETS | STA. 573+50.00 TO STA. 574+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	259

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 3 OF 18 SHEETS | STA. 575+00.00 TO STA. 576+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	260

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592

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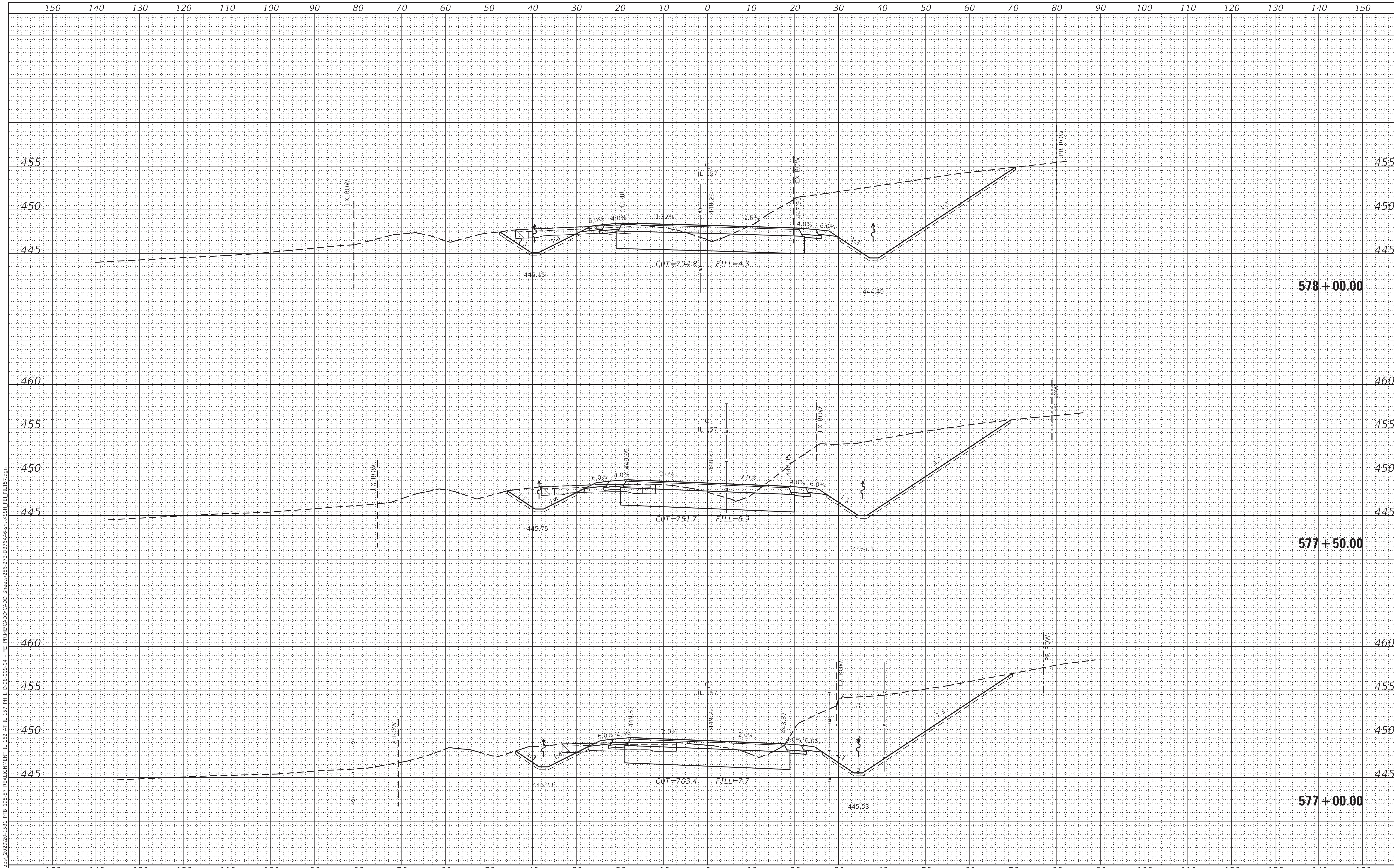

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PLOT DATE = 10/15/2024	DATE -	REVISED -	

ILLINOIS ROUTE 157 CROSS SECTIONS

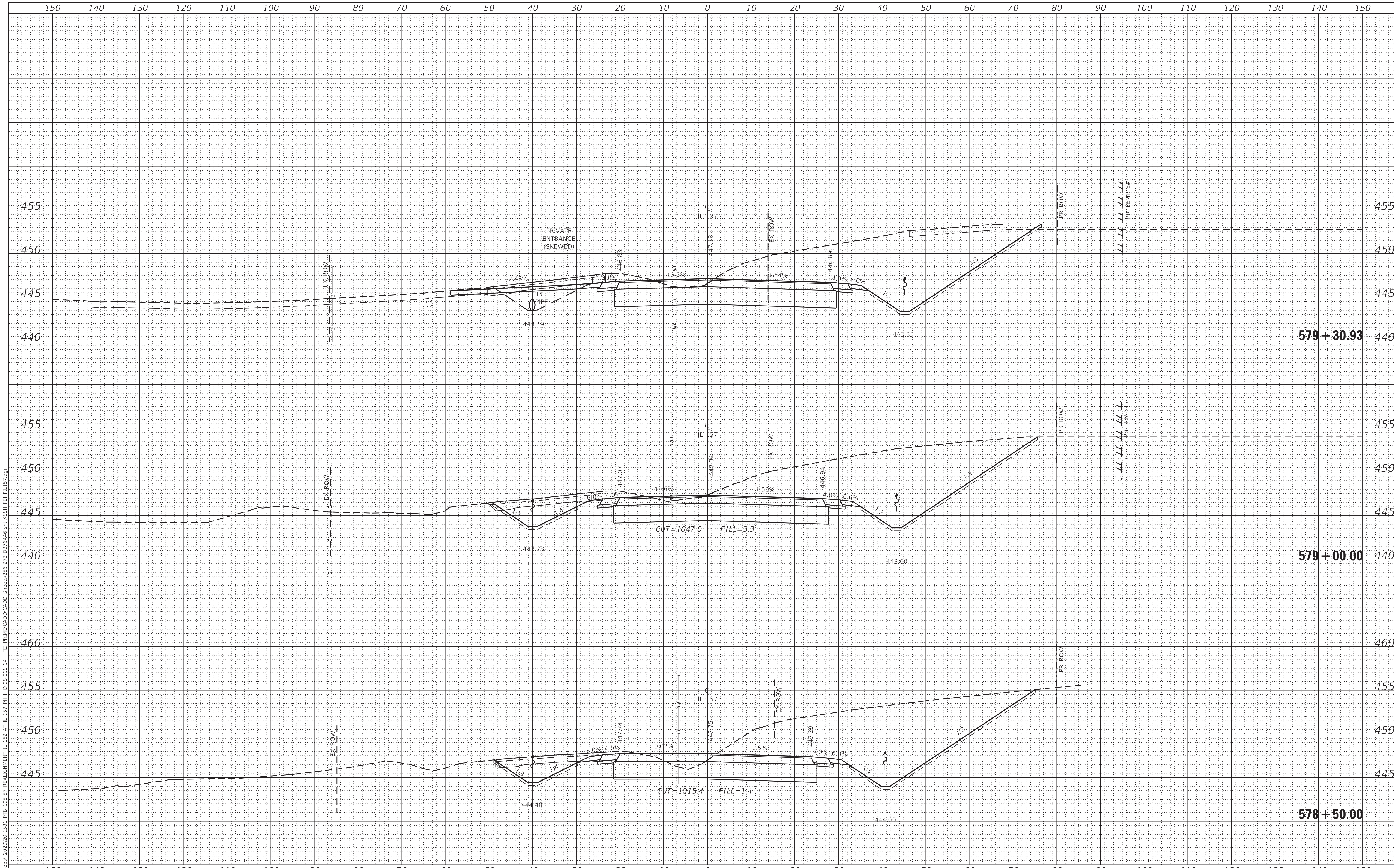
SCALE: 1"=10' | SHEET 4 OF 18 SHEETS | STA. 577+00.00 TO STA. 578+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	261

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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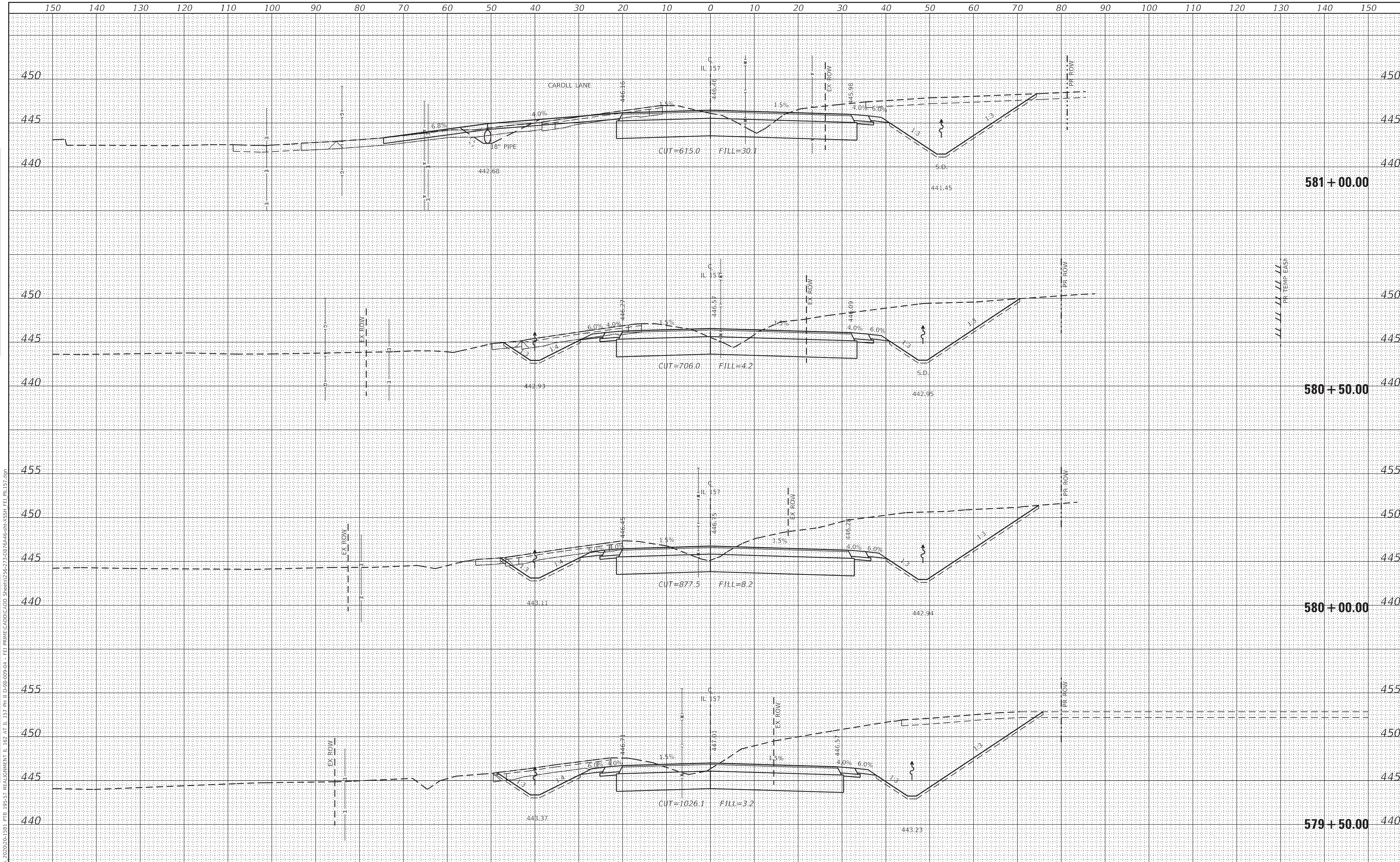
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 5 OF 18 SHEETS | STA. 578+50.00 TO STA. 579+30.93

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	262
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



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	PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

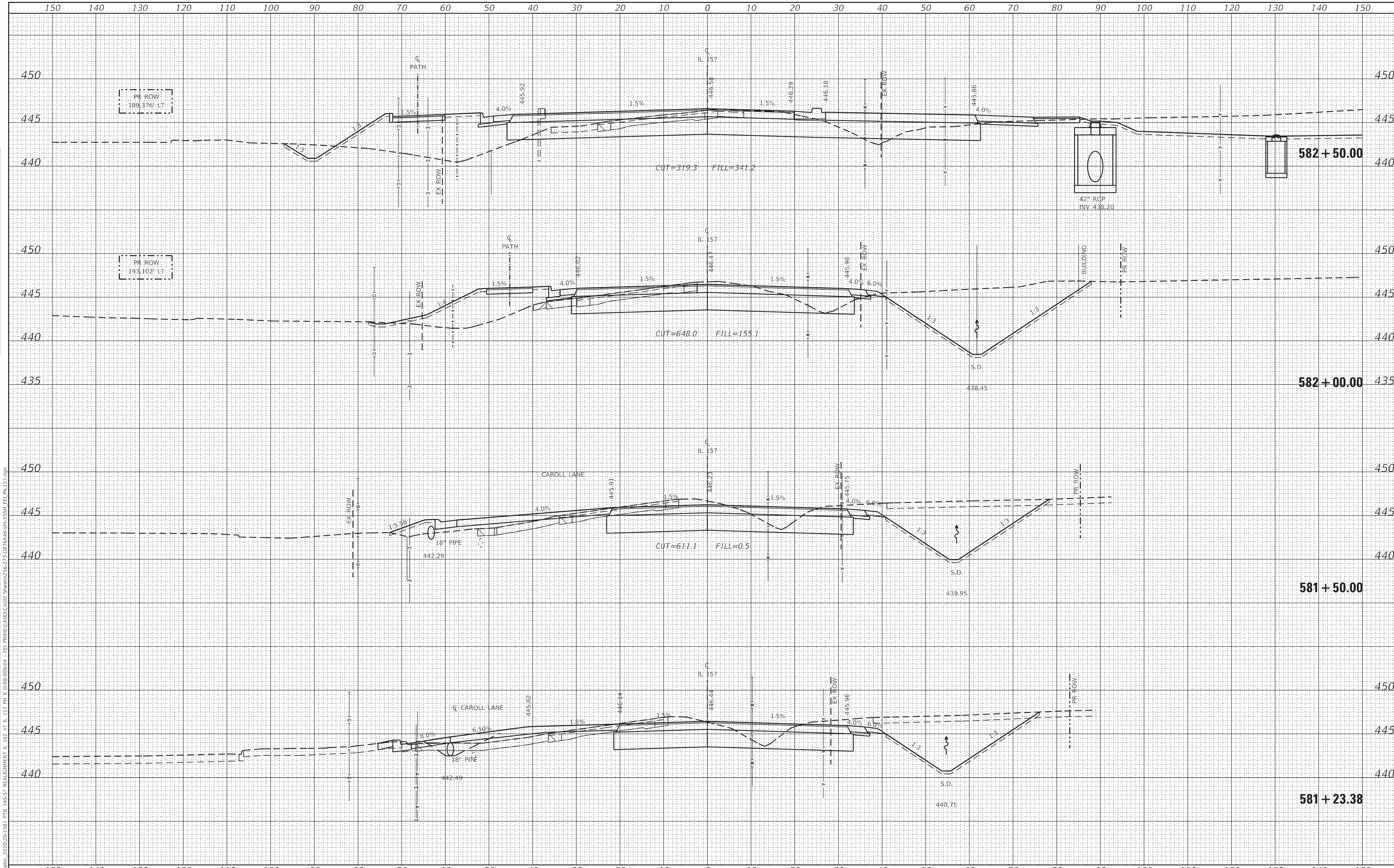
SCALE: 1"=10' SHEET 6 OF 18 SHEETS STA. 579+50.00 TO STA. 581+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	263

CONTRACT NO. 76A46

ILLINOIS FED. AID PROJECT

* 586/592



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PLOT DATE = 10/15/2024	DATE -	REVISED -

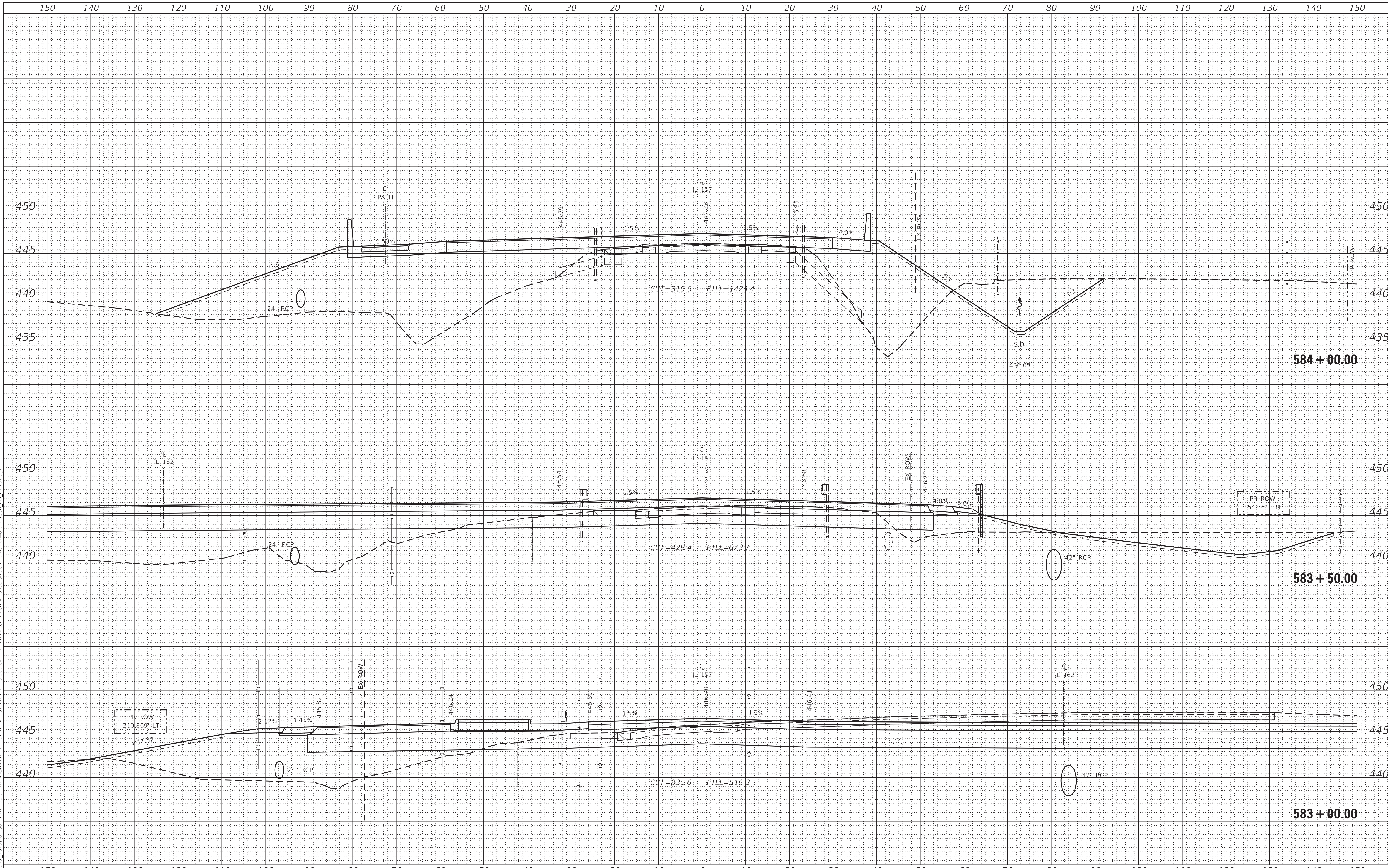
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 7 OF 18 SHEETS | STA. 581+23.38 TO STA. 582+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	264
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 8 OF 18 SHEETS | STA. 583+00.00 TO STA. 584+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	265

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

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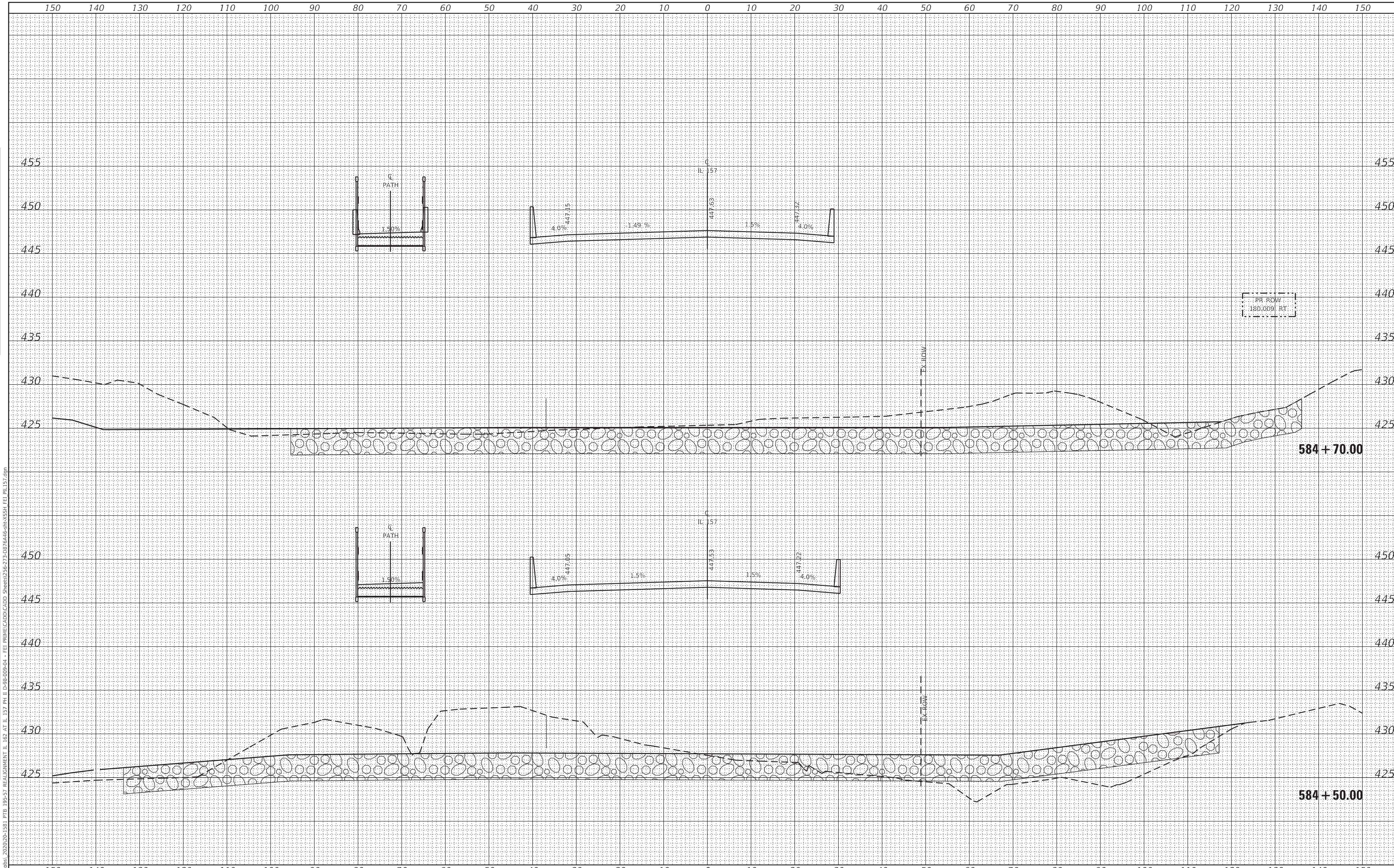

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PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

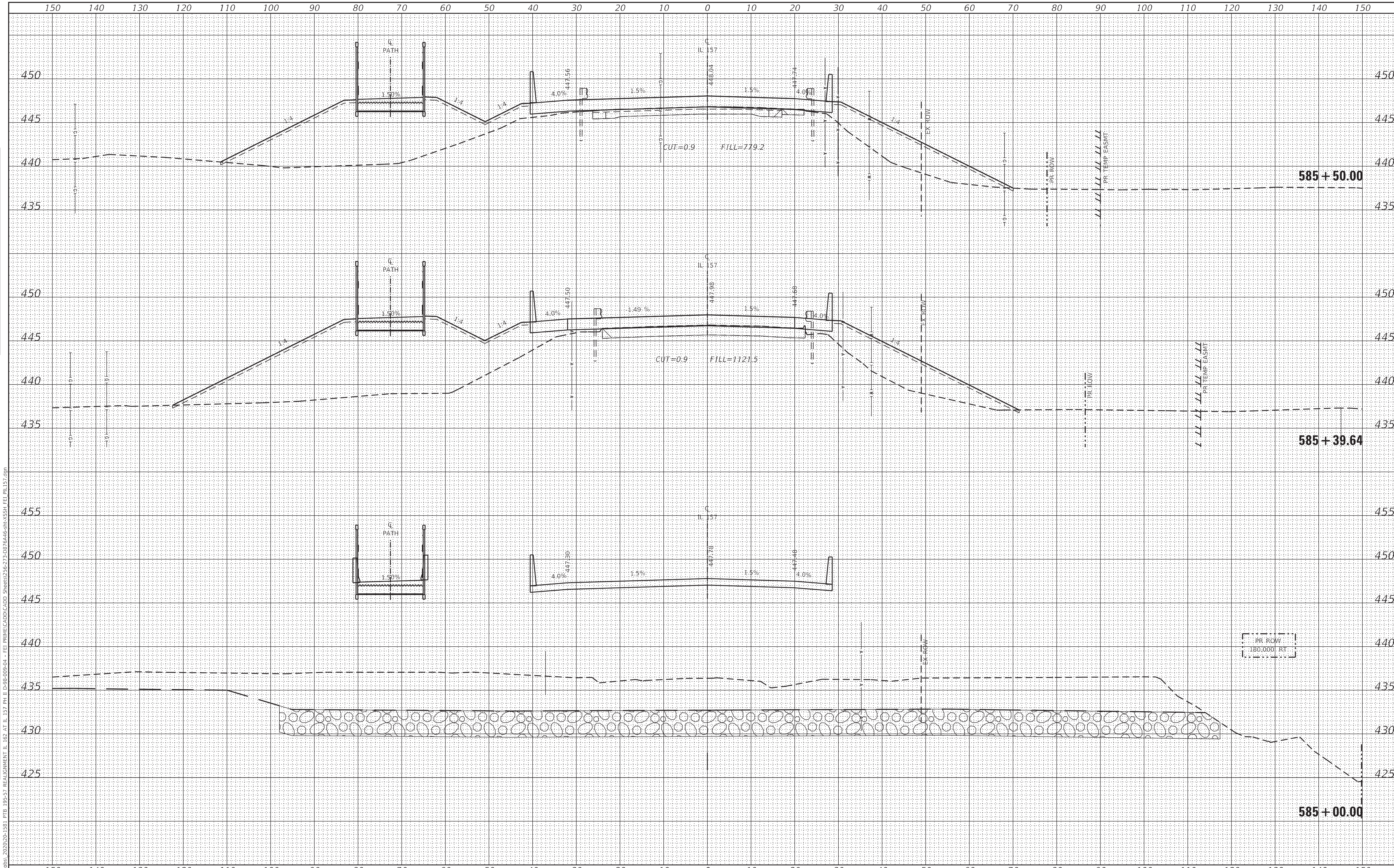
SCALE: 1"=10' | SHEET 9 OF 18 SHEETS | STA. 584+50.00 TO STA. 584+70.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	266

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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PLOT DATE = 10/15/2024	DATE -	REVISED -	

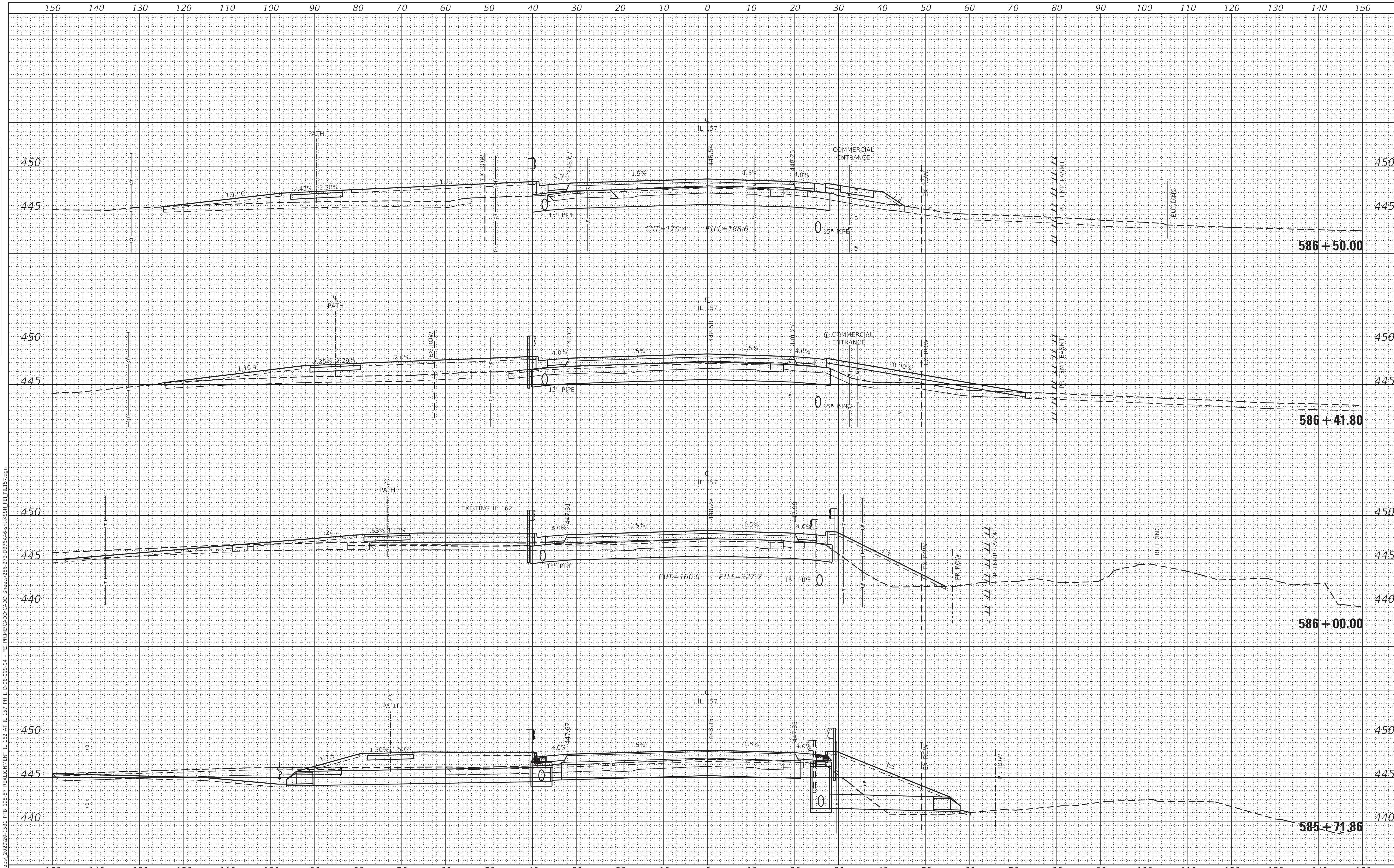
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 10 OF 18 SHEETS | STA. 585+00.00 TO STA. 585+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	267
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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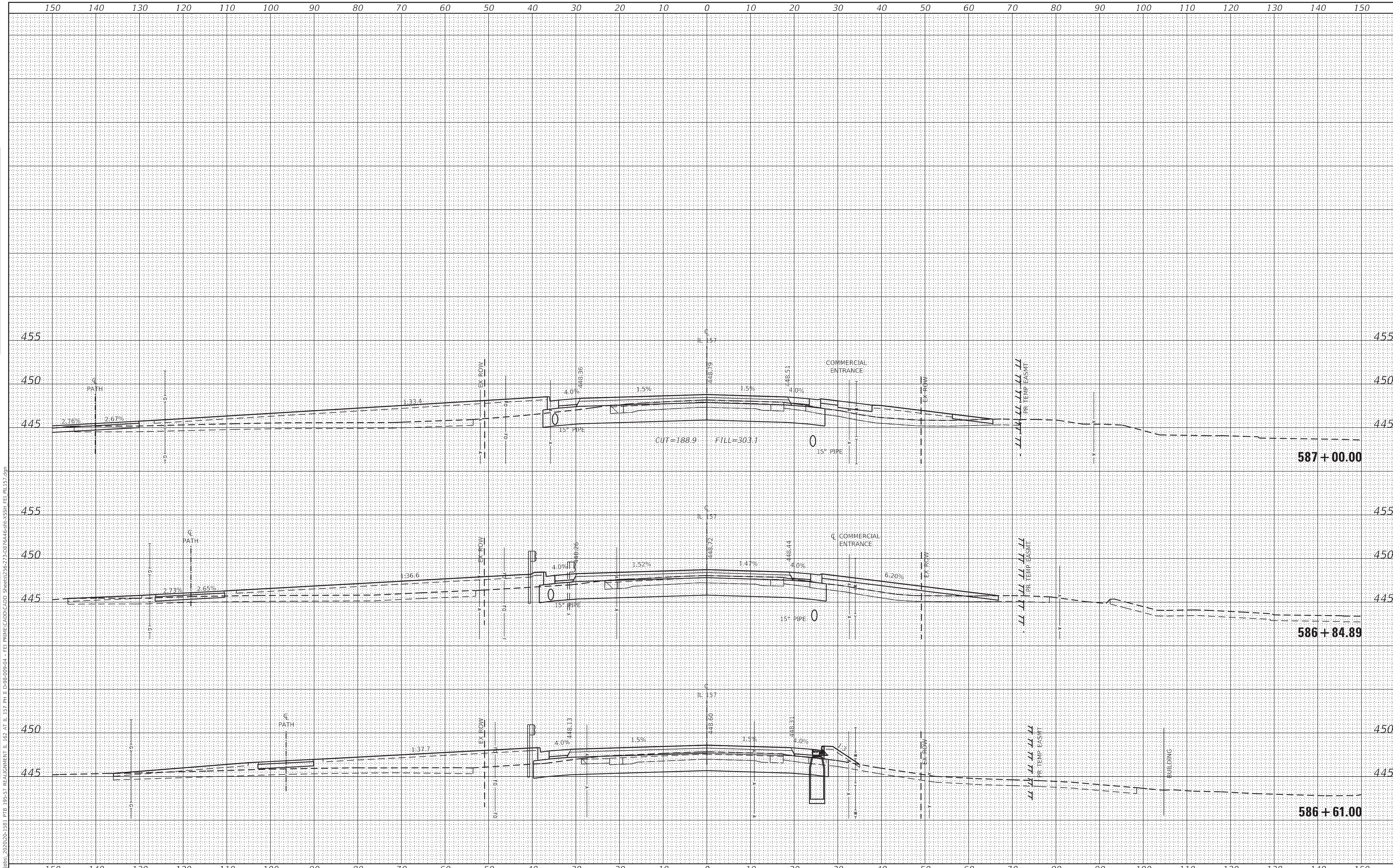
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 11 OF 18 SHEETS | STA. 585+71.86 TO STA. 586+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	268
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

* 586/592



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NOTE BOOK NO.		
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

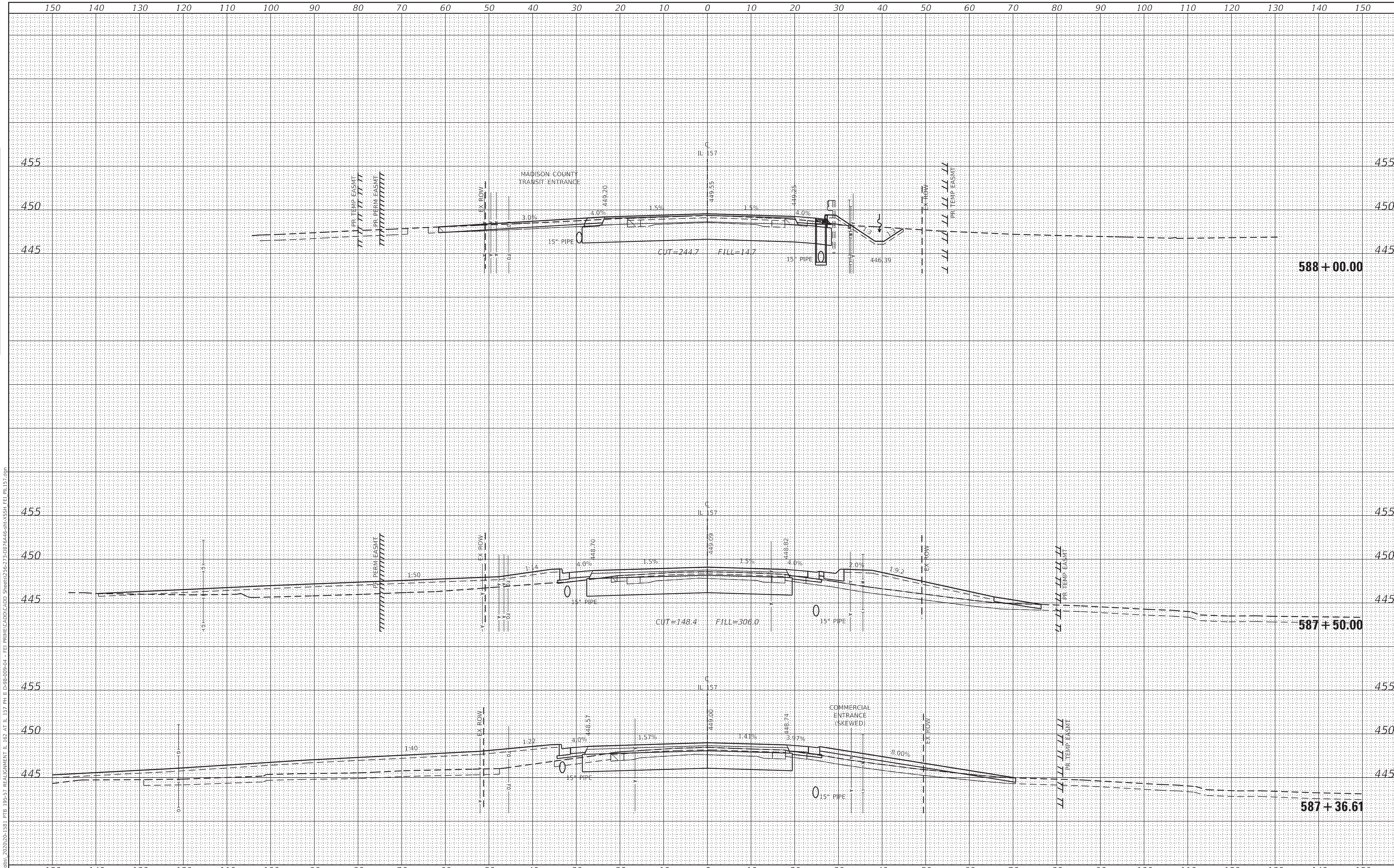
SCALE: 1"=10' | SHEET 12 OF 18 SHEETS | STA. 586+61.00 TO STA. 587+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	269

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

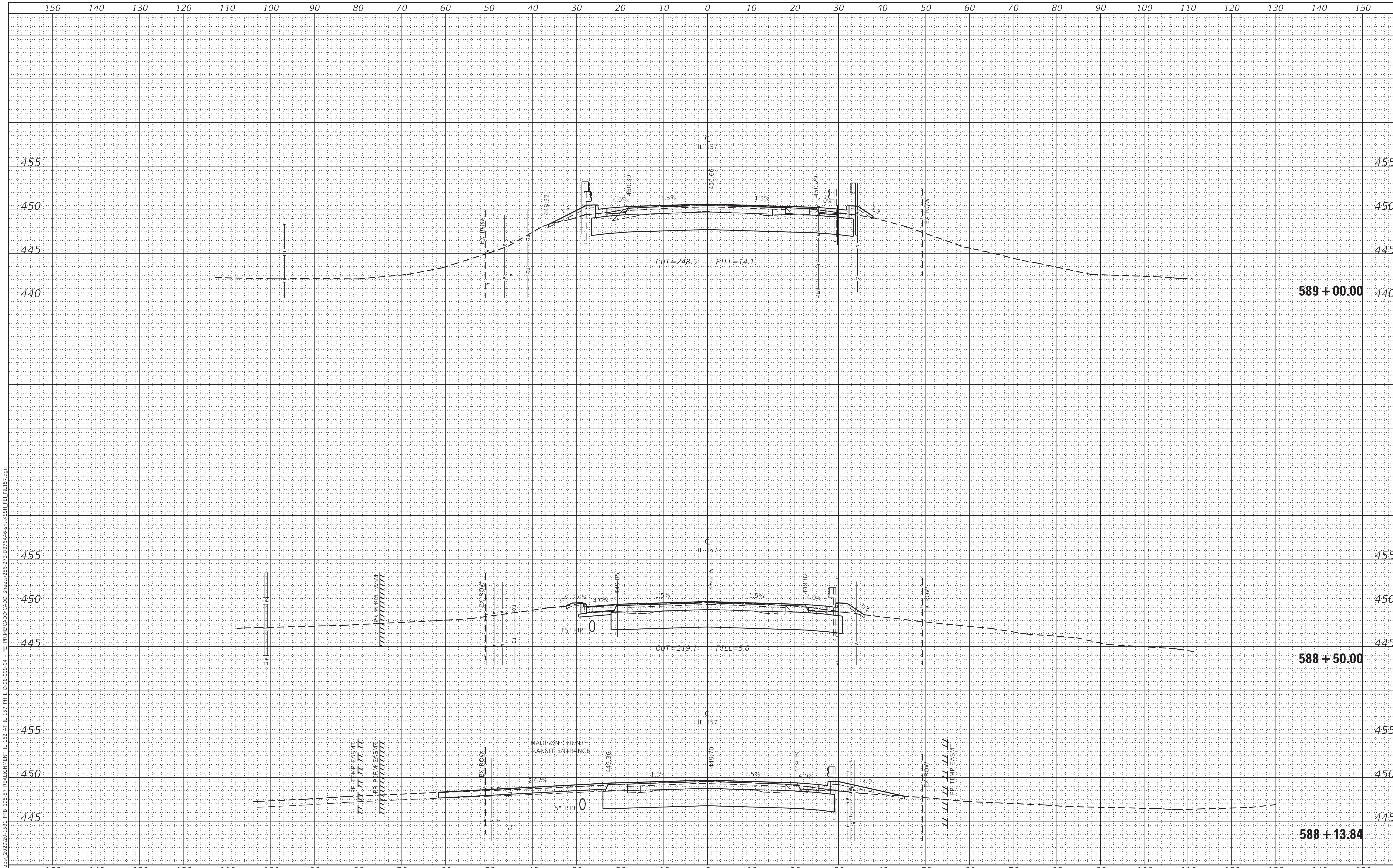
SCALE: 1"=10' | SHEET 13 OF 18 SHEETS | STA. 587+36.61 TO STA. 588+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	270

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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STATE OF ILLINOIS
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ILLINOIS ROUTE 157 CROSS SECTIONS

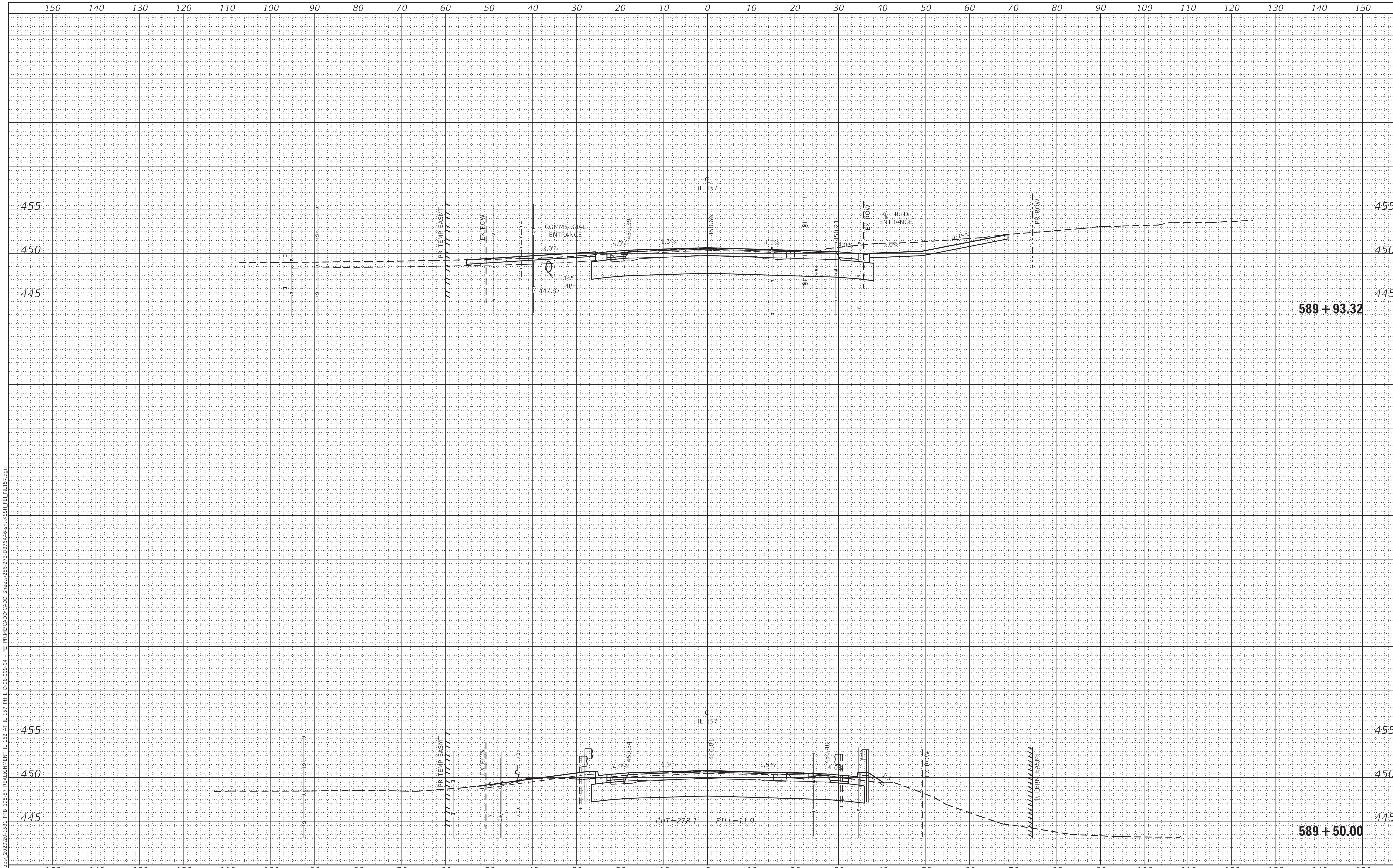
SCALE: 1"=10' | SHEET 14 OF 18 SHEETS | STA. 588+13.84 TO STA. 589+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	271

CONTRACT NO. 76A46

ILLINOIS FED. AID PROJECT

* 586/592



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ORIGINAL SURVEY	BY	DATE
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STATE OF ILLINOIS
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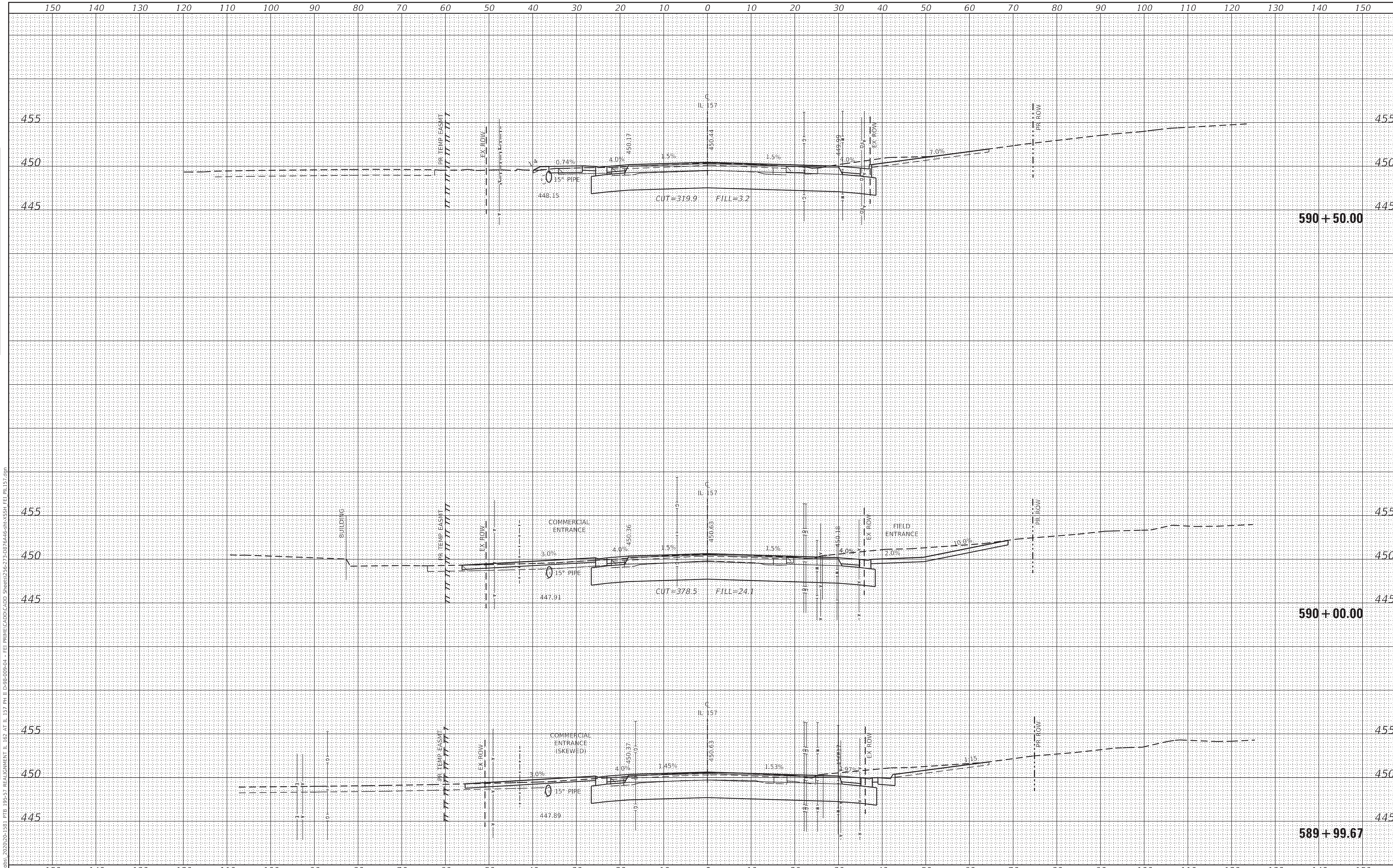
ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 15 OF 18 SHEETS | STA. 589+50.00 TO STA. 589+93.32

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	272
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

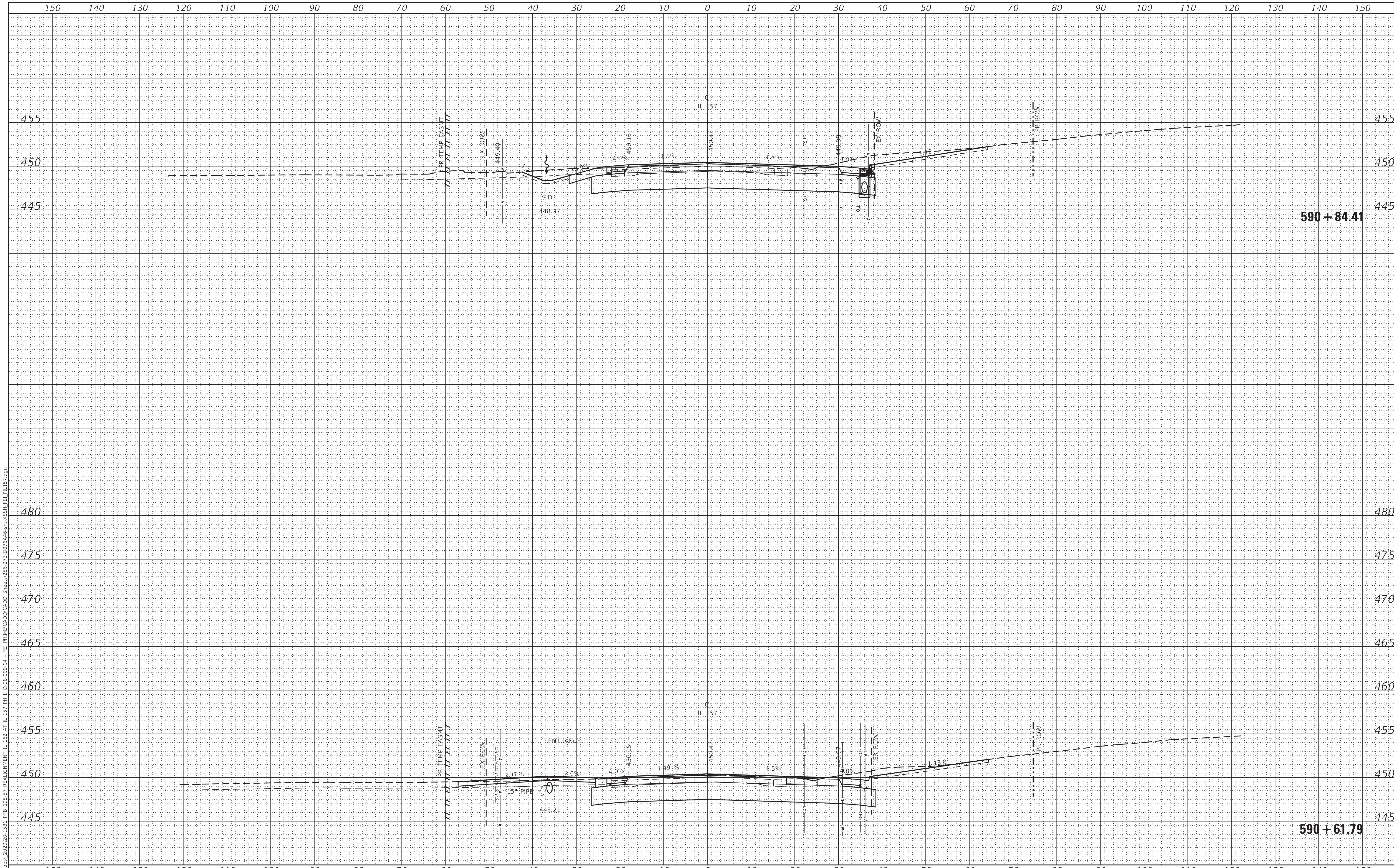
SCALE: 1"=10' | SHEET 16 OF 18 SHEETS | STA. 589+99.67 TO STA. 590+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	273

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 17 OF 18 SHEETS | STA. 590+61.79 TO STA. 590+84.41

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	274
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592

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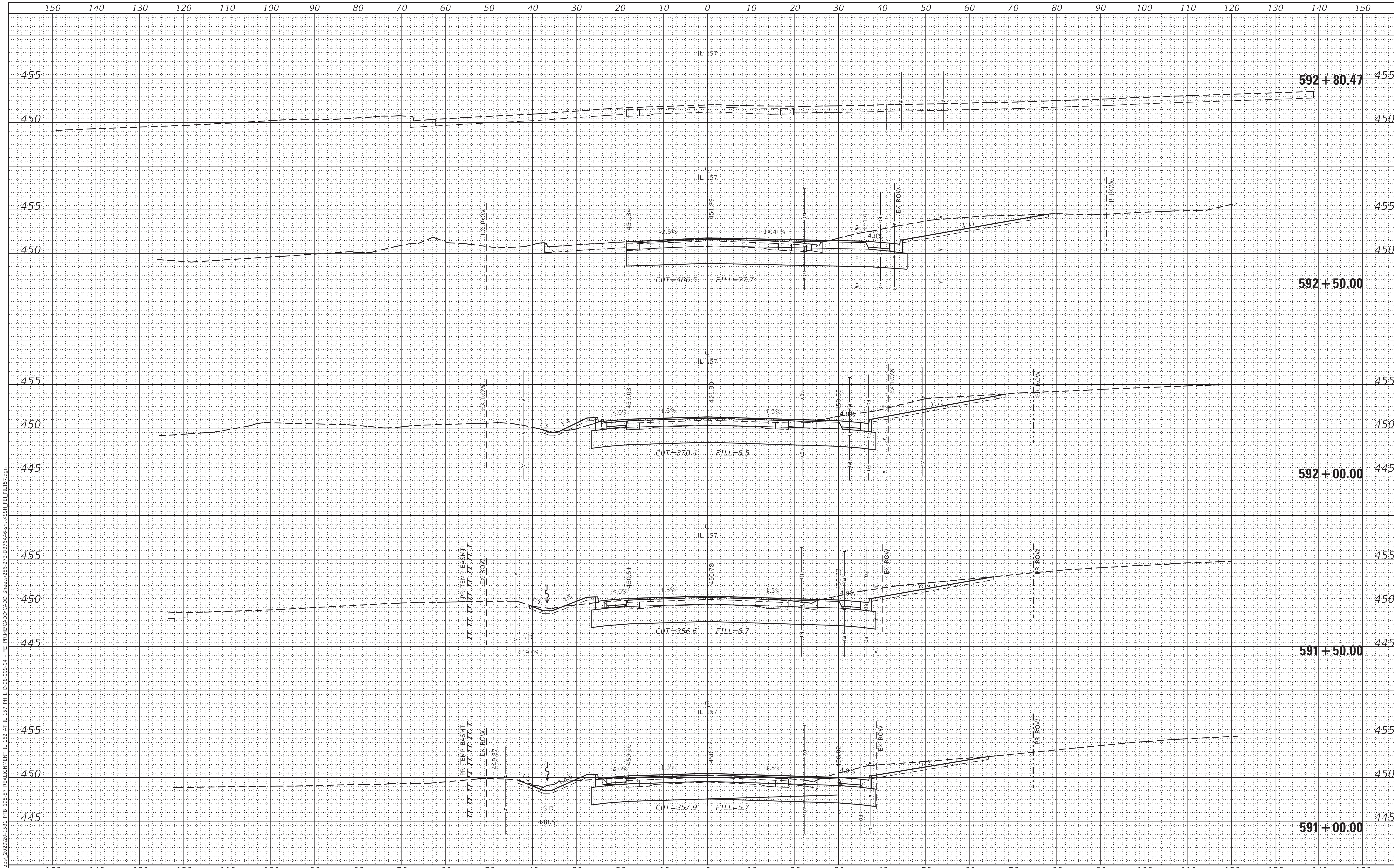

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PLOT DATE = 10/15/2024		DATE -	REVISED -

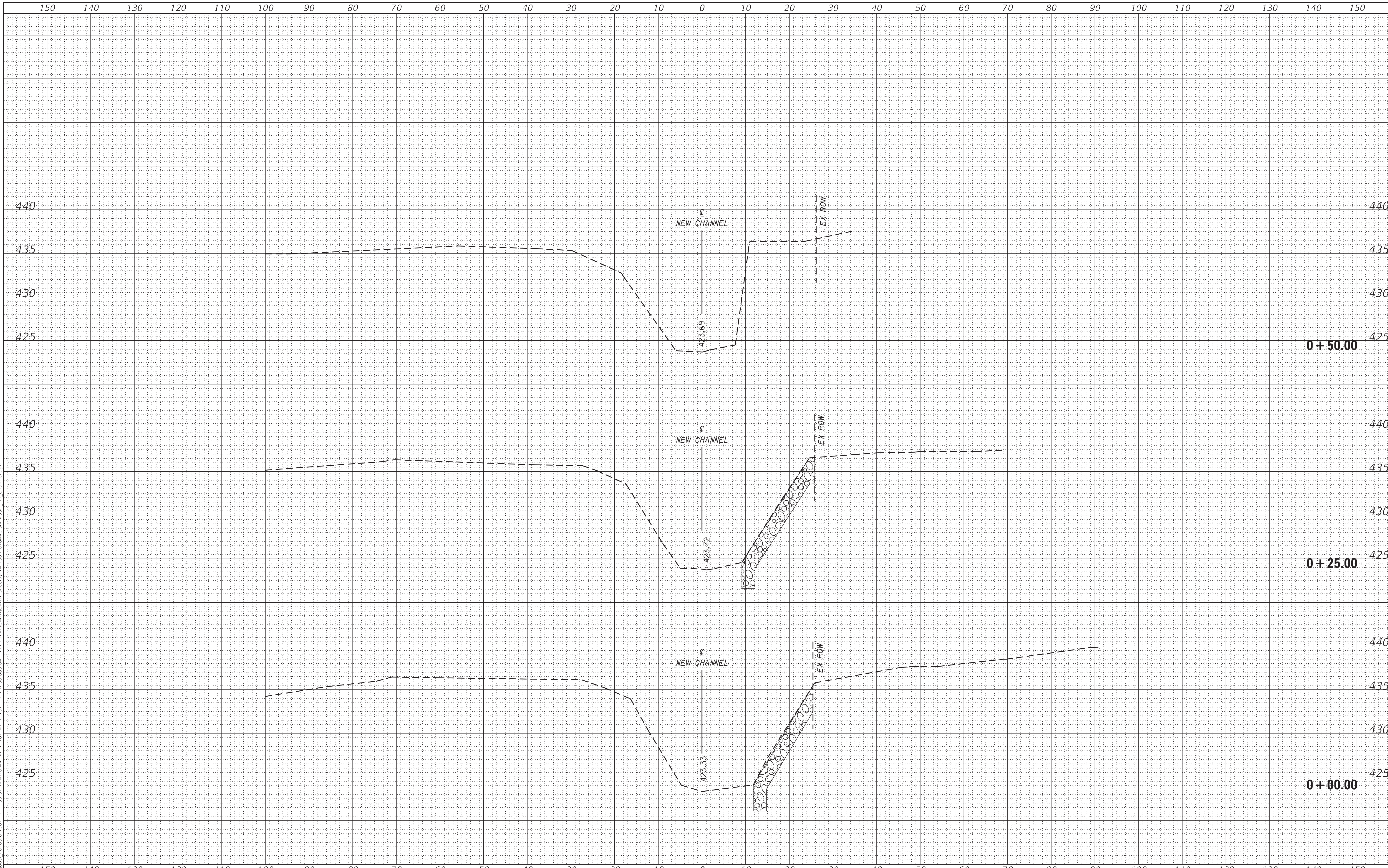
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 157 CROSS SECTIONS

SCALE: 1"=10' | SHEET 18 OF 18 SHEETS | STA. 591+00.00 TO STA. 592+80.47

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	275
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592

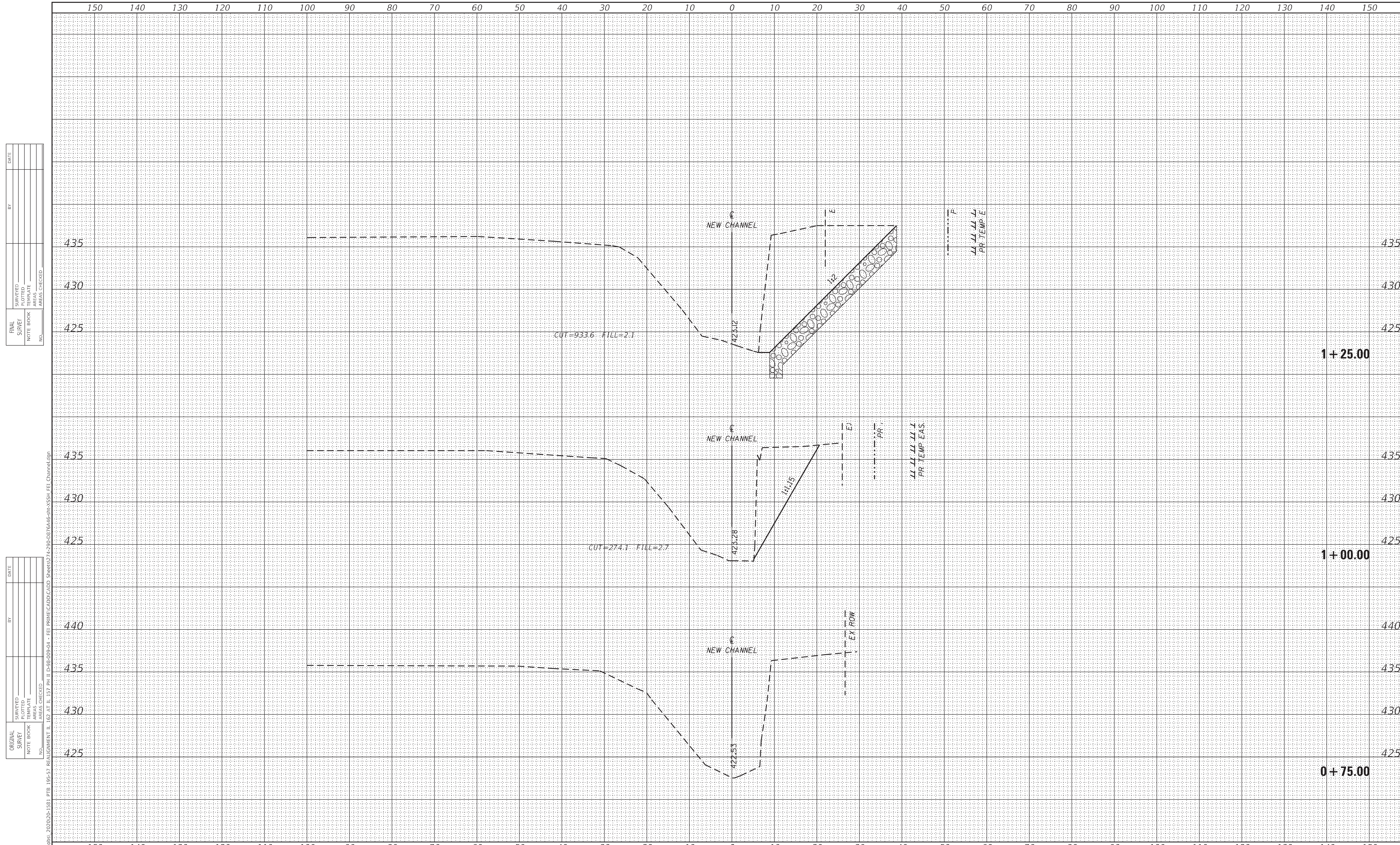


FUHRMANN ENGINEERING WWW. FUHRMANN-ENG .COM	USER NAME = untitled	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CHANNEL CROSS SECTIONS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			*	51-1R	MADISON	296	276
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 76A46				
	PLOT DATE = 10/15/2024	DATE -	REVISED -		SCALE: 1"=10' SHEET 1 OF 17 SHEETS STA. +00.00 TO STA. +50.00			ILLINOIS	FED. AID PROJECT	

* 586/592

MODEL:
FILE NAME: G:\FE\Jobs_2020\20-1581_PTB_195-57_REALIGNMENT_IL_162_AT_IL_157_PH_II_D-98-009-04 - FEI_PRIME\CADD\CADD_Sheets\274-290-D8276A46-sht-XSSH_FEI_Channel.dgn

FINAL SURVEY / ORIGINAL SURVEY: NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE



FUHRMANN ENGINEERING WWW. FUHRMANN-ENG .COM	USER NAME = untitled	DESIGNED -	REVISED -
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	PLOT DATE = 10/15/2024	DATE -	REVISED -

MODEL:
FILE NAME: G:\FEIjobs_2020\20-1581

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

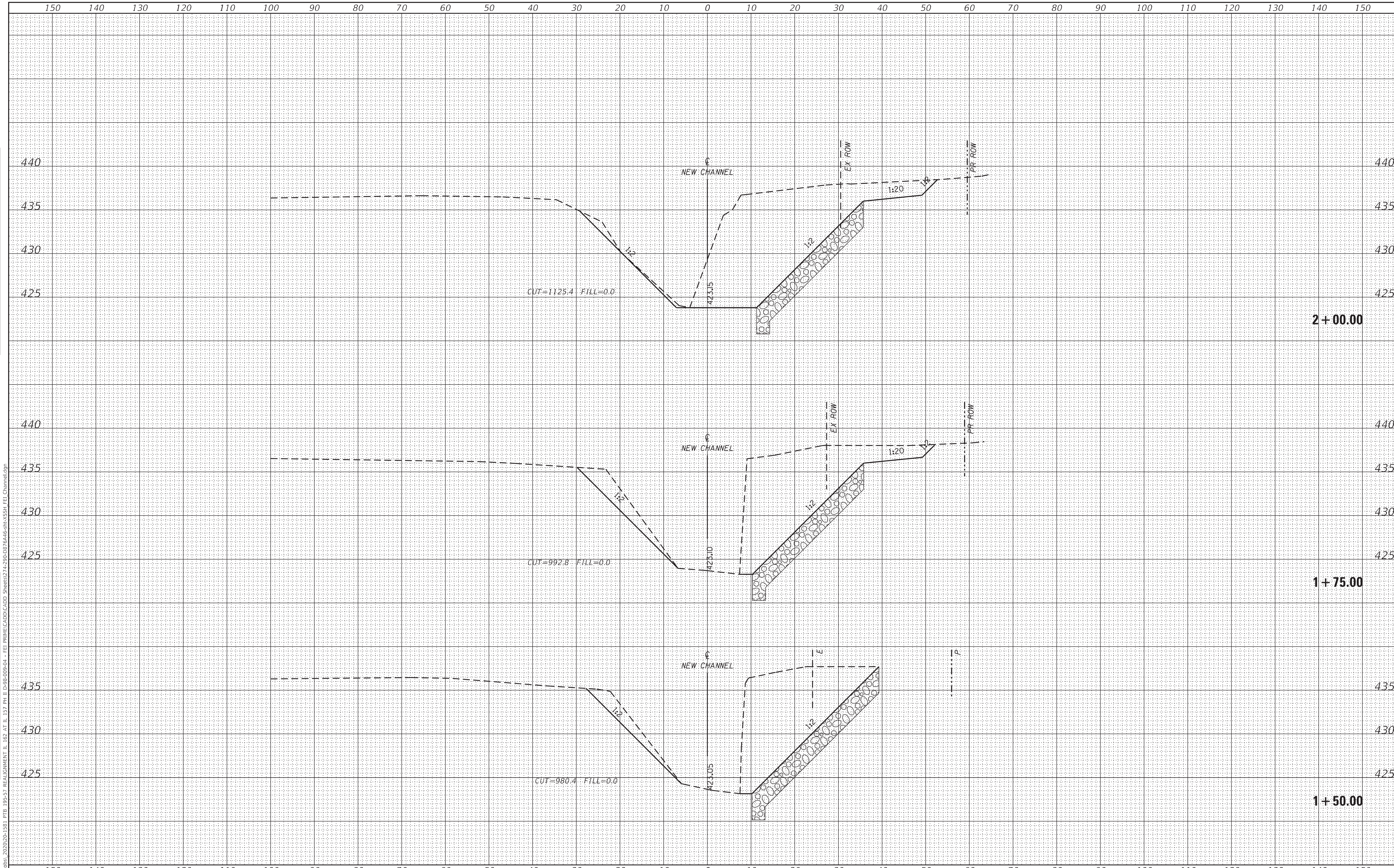
SCALE: 1"=10' | SHEET 2 OF 17 SHEETS | STA. +75.00 TO STA. 1+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	277

CONTRACT NO. 76A46

ILLINOIS FED. AID PROJECT

* 586/592



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

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

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FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -	
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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

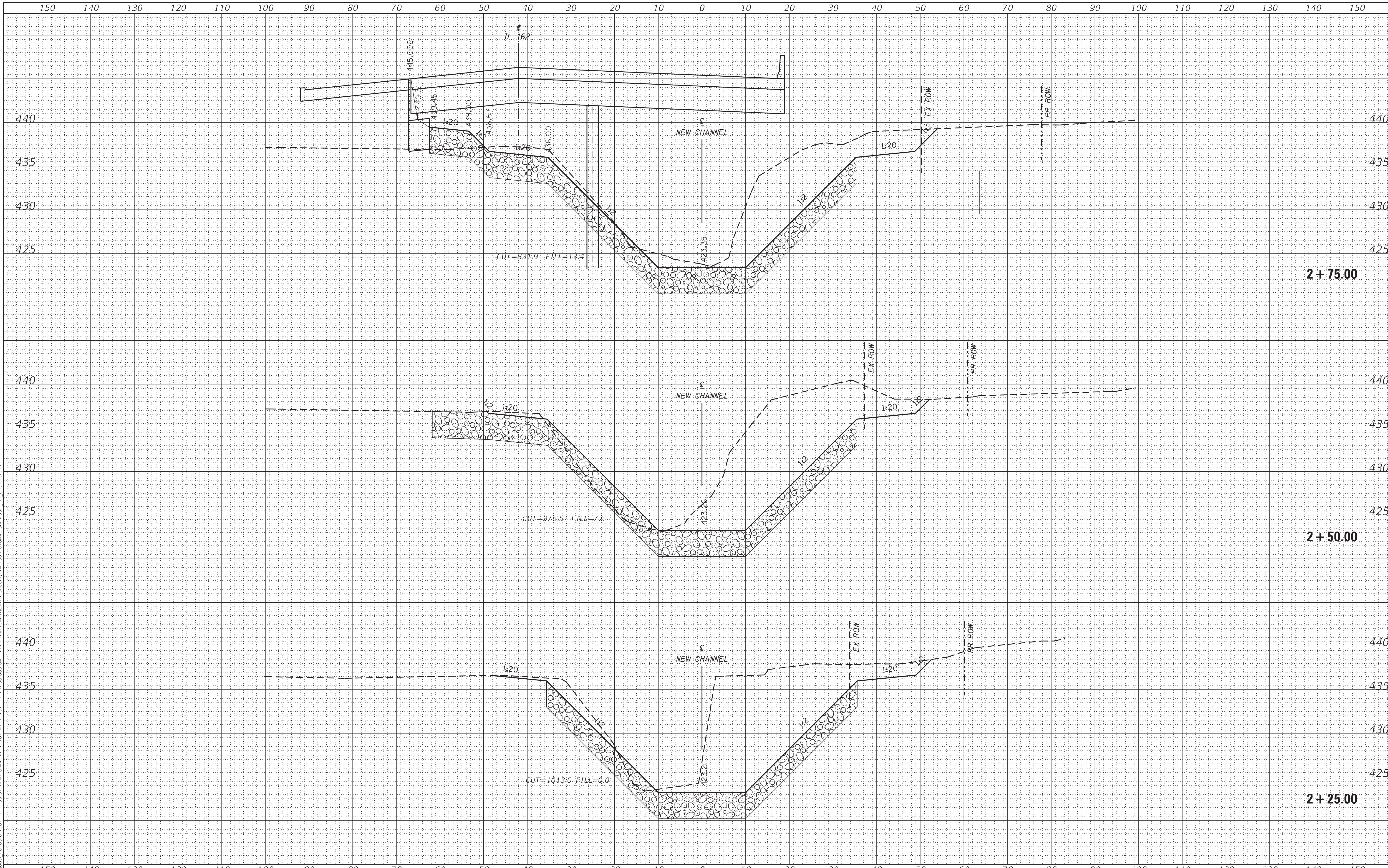
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

SCALE: 1"=10' | SHEET 3 OF 17 SHEETS | STA. 1+50.00 TO STA. 2+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	278
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -	
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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

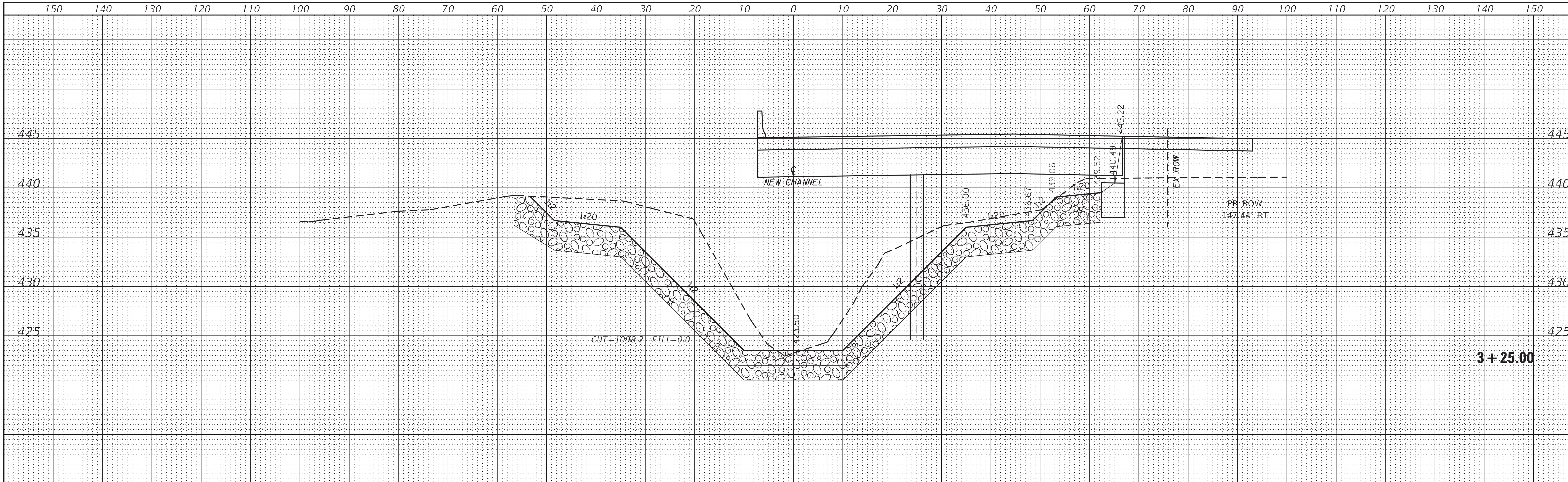
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

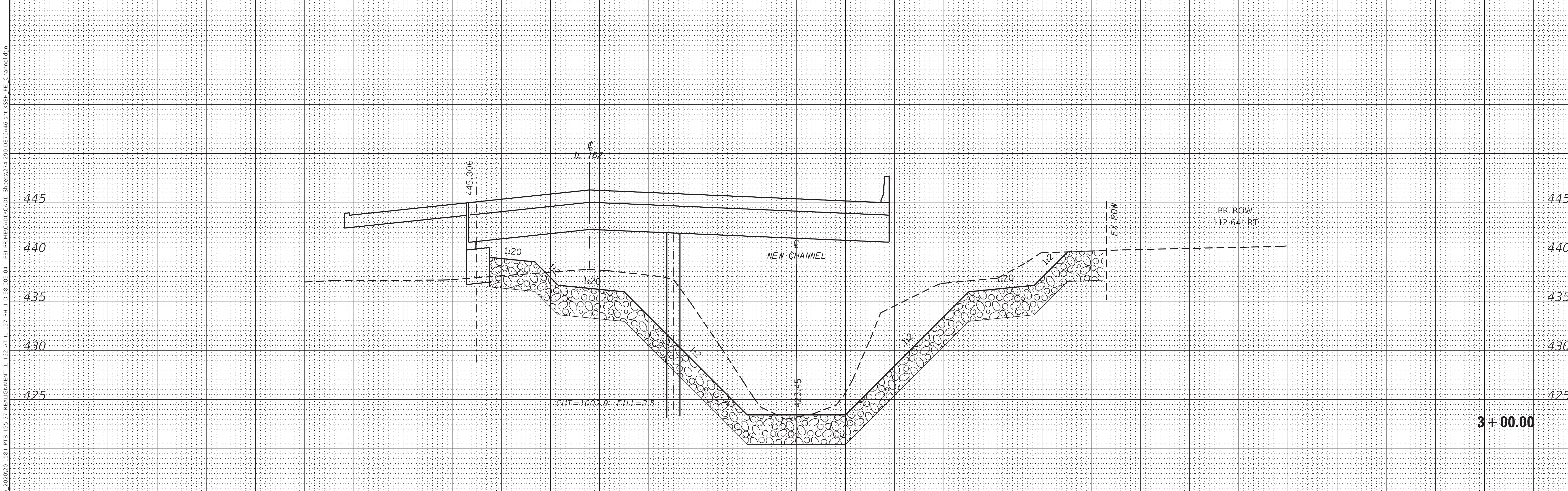
CHANNEL CROSS SECTIONS

SCALE: 1"=10' | SHEET 4 OF 17 SHEETS | STA. 2+25.00 TO STA. 2+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	279
		CONTRACT NO. 76A46		
		ILLINOIS	FED. AID PROJECT	

* 586/592





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

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

MODEL:
FILE NAME:

FUHRMANN ENGINEERING
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PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

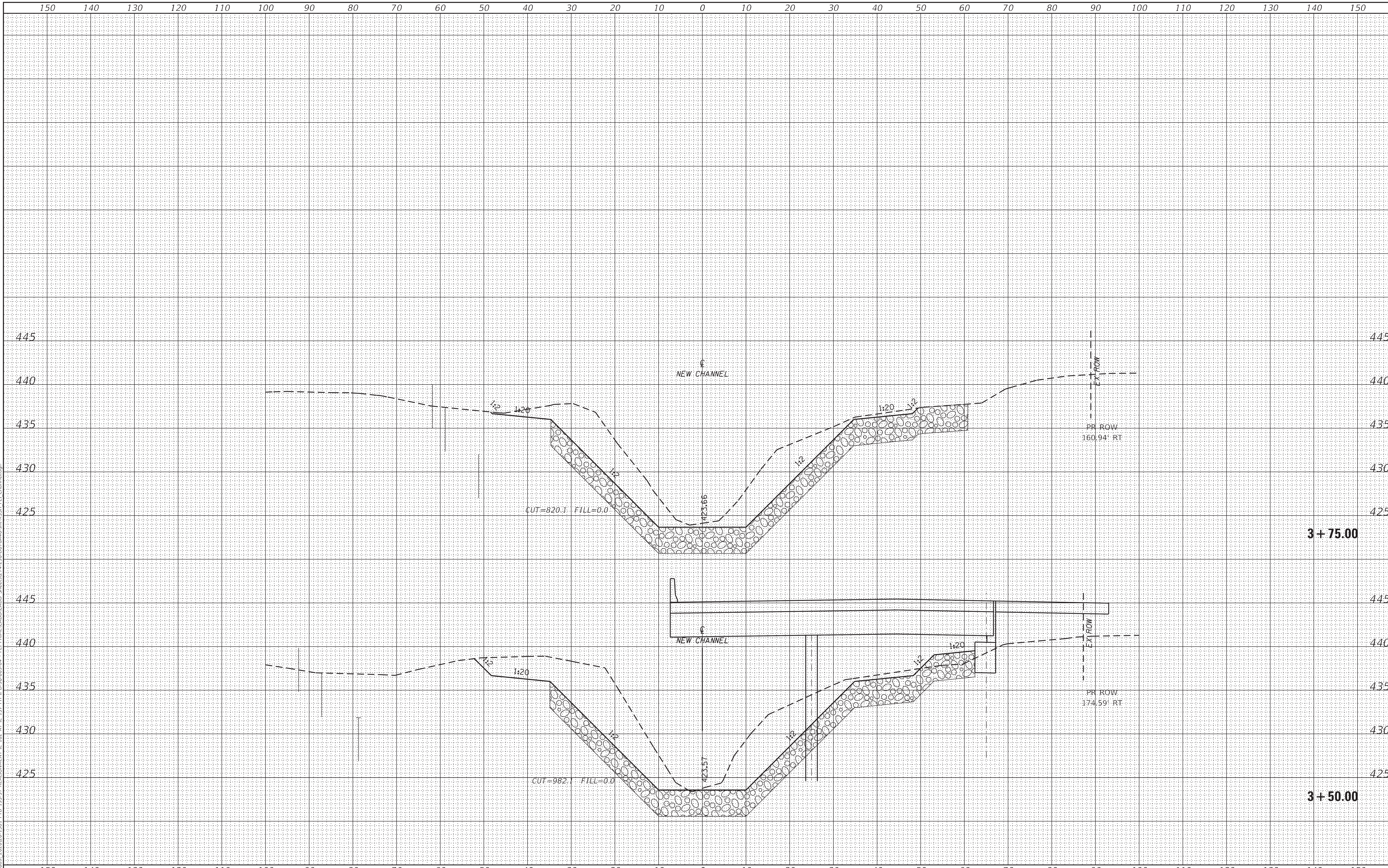
SCALE: 1"=10' | SHEET 5 OF 17 SHEETS | STA. 3+00.00 TO STA. 3+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	280

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



FUHRMANN ENGINEERING WWW. FUHRMANN-ENG .COM	USER NAME = untitled	DESIGNED -	REVISED -
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	PLOT DATE = 10/15/2024	DATE -	REVISED -

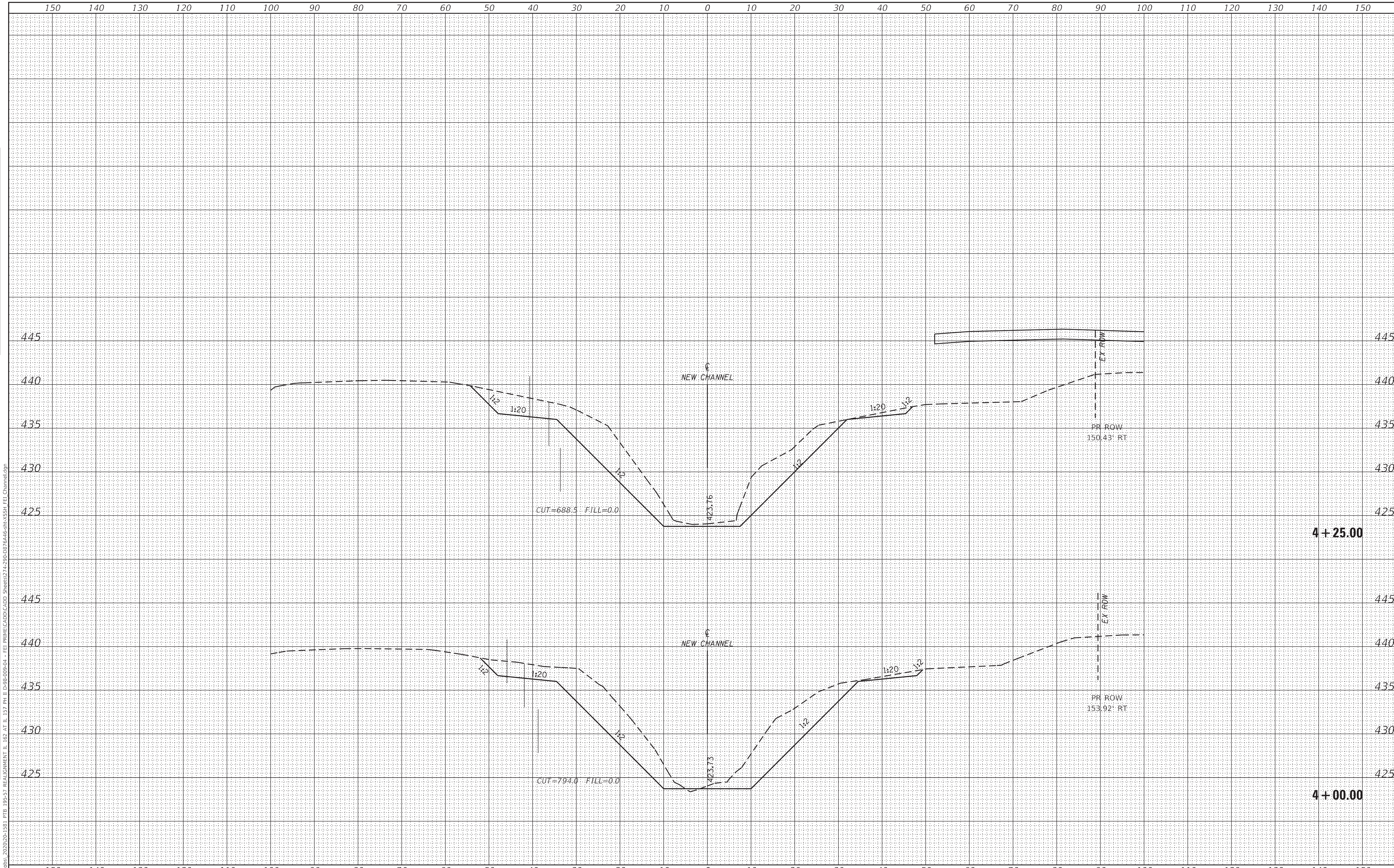
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

SCALE: 1"=10' | SHEET 6 OF 17 SHEETS | STA. 3+50.00 TO STA. 3+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	281
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



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

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

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MODEL:

FUHRMANN ENGINEERING

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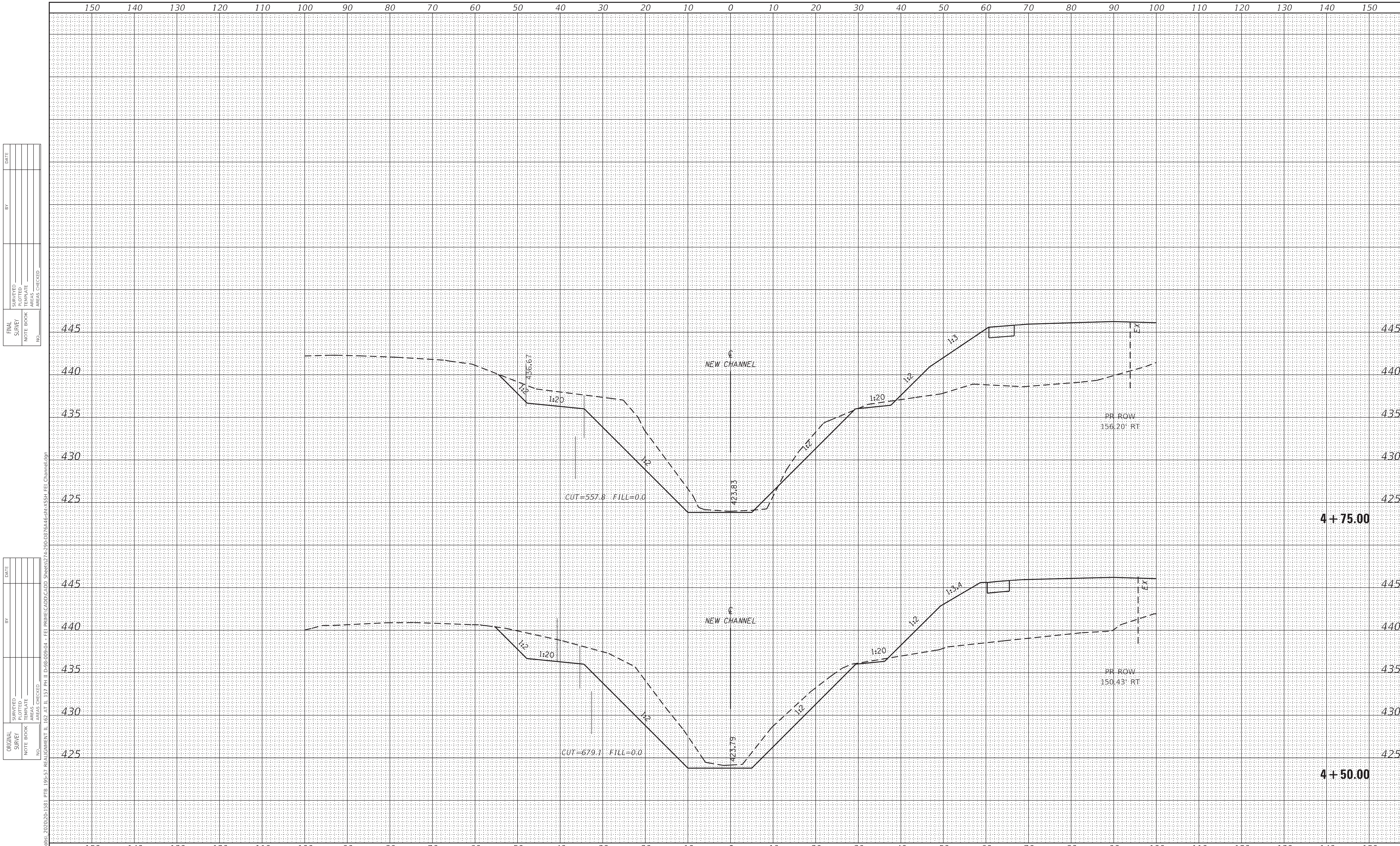
	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

CHANNEL CROSS SECTIONS

SCALE: 1"=10' | SHEET 7 OF 17 SHEETS | STA. 4+00.00 TO STA. 4+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	282
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

* 586/592



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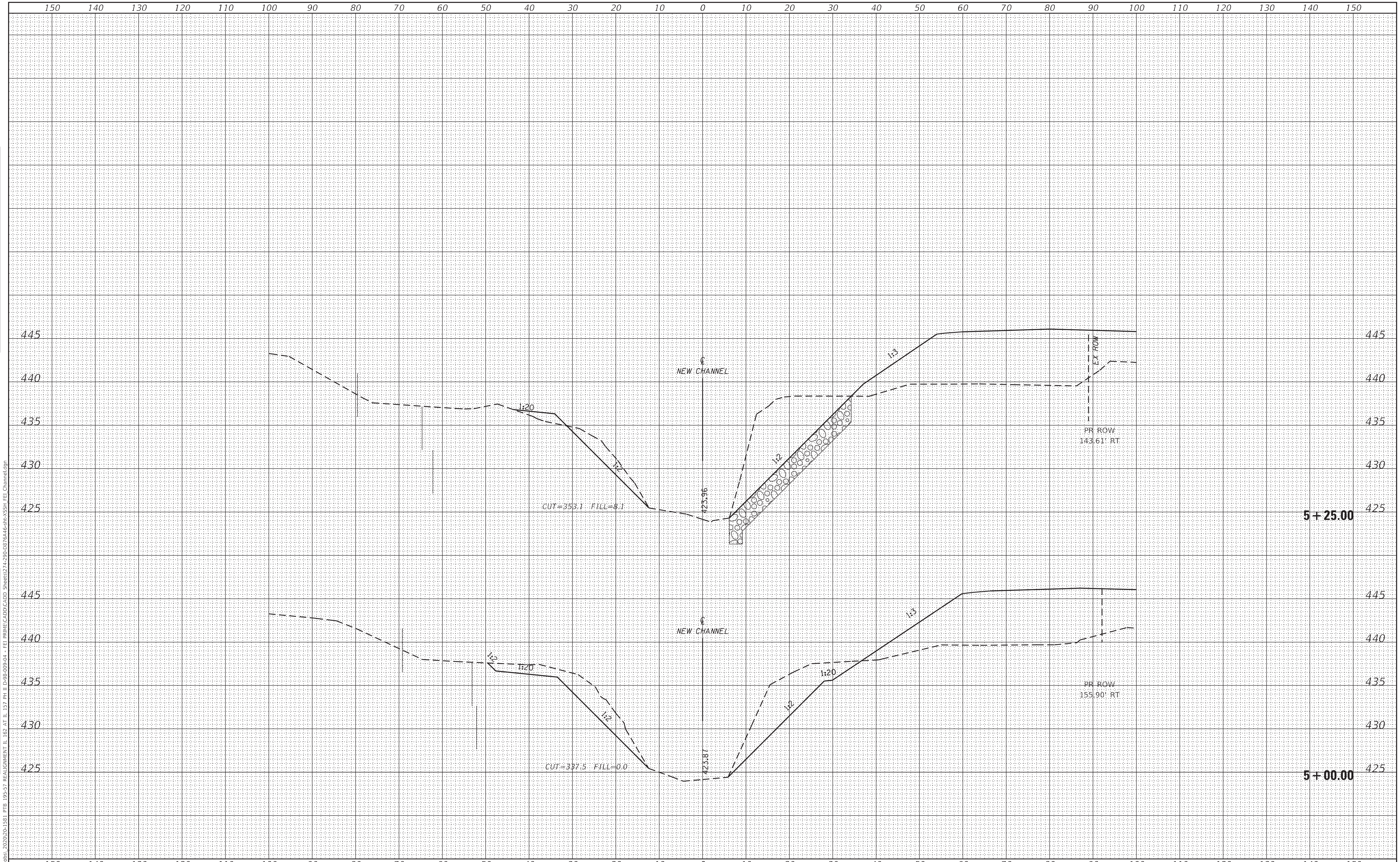
FUHRMANN ENGINEERING WWW. FUHRMANN-ENG .COM	USER NAME = untitled	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CHANNEL CROSS SECTIONS
		DRAWN -	REVISED -		
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -		
	PLOT DATE = 10/15/2024	DATE -	REVISED -		SCALE: 1"=10' SHEET 8 OF 17 SHEETS STA. 4+50.00 TO STA. 4+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	283
		CONTRACT NO. 76A46		
		ILLINOIS FED. AID PROJECT		

* 586/592



FUHRMANN ENGINEERING WWW. FUHRMANN-ENG .COM	USER NAME = untitled	DESIGNED -	REVISED -
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	PLOT DATE = 10/15/2024	DATE -	REVISED -

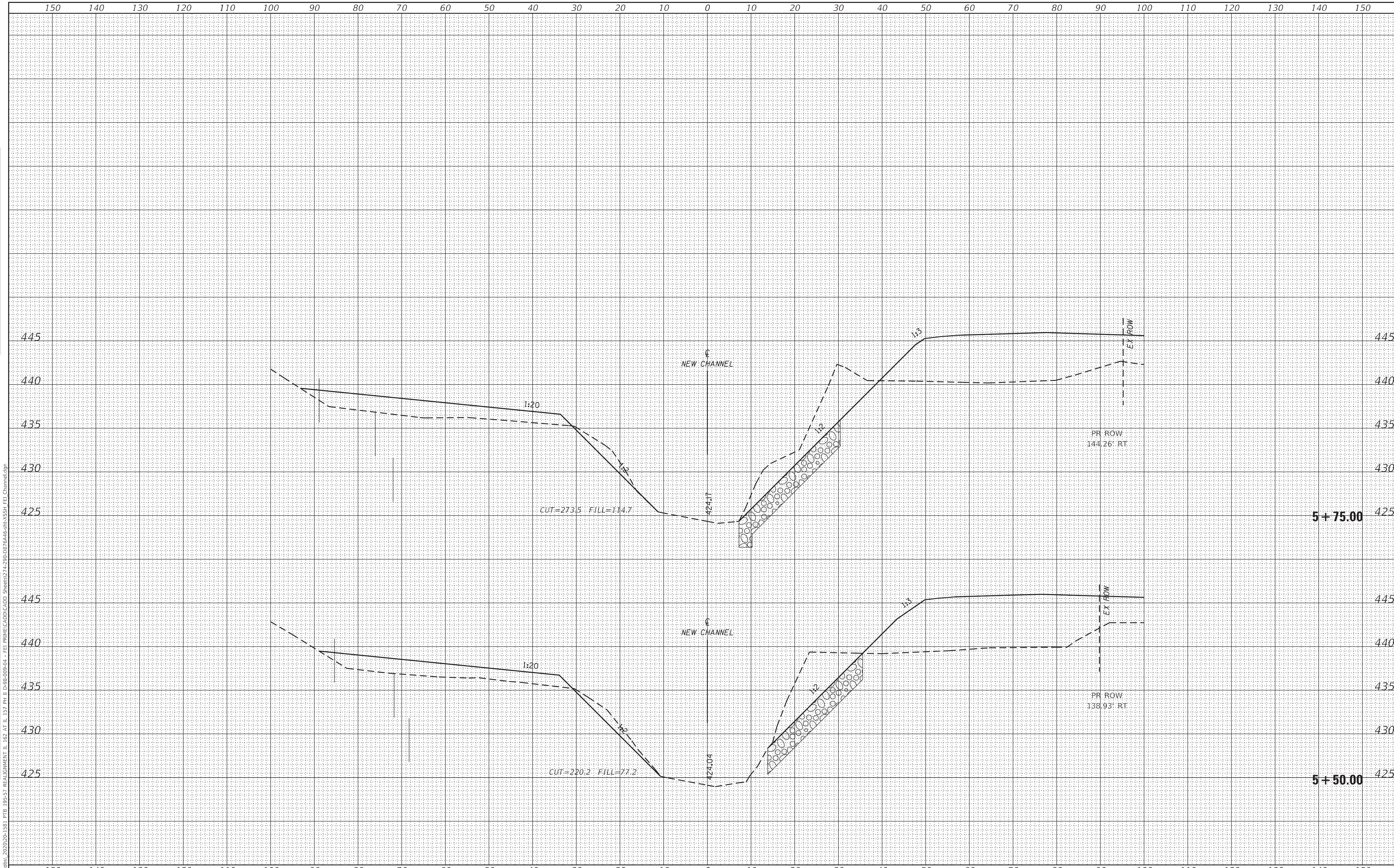
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

SCALE: 1"=10' | SHEET 9 OF 17 SHEETS | STA. 5+00.00 TO STA. 5+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	284
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



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

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

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FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -
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PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

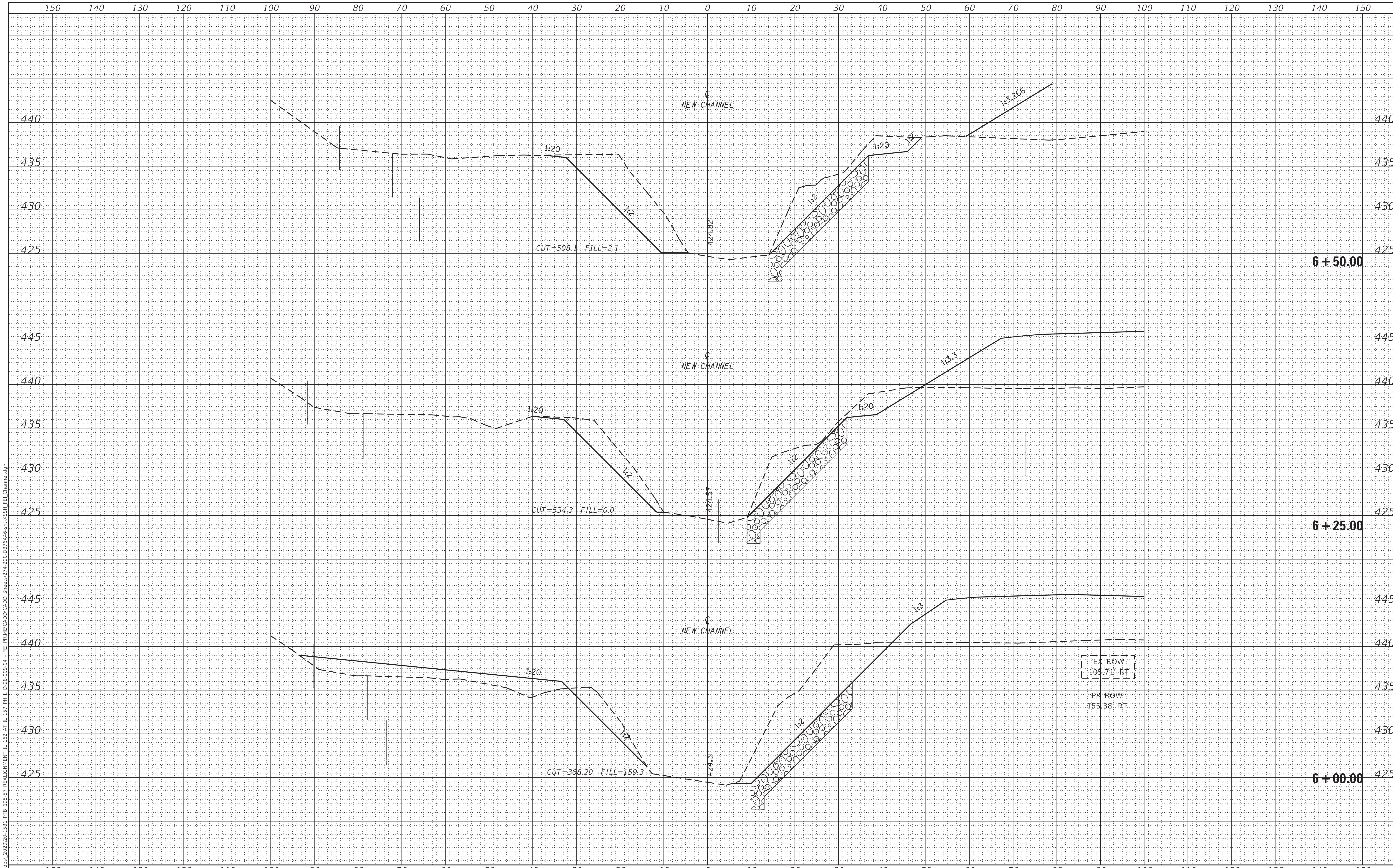
SCALE: 1"=10' | SHEET 10 OF 17 SHEETS | STA. 5+50.00 TO STA. 5+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	285

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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	PLOT DATE = 10/15/2024	DATE -	REVISED -

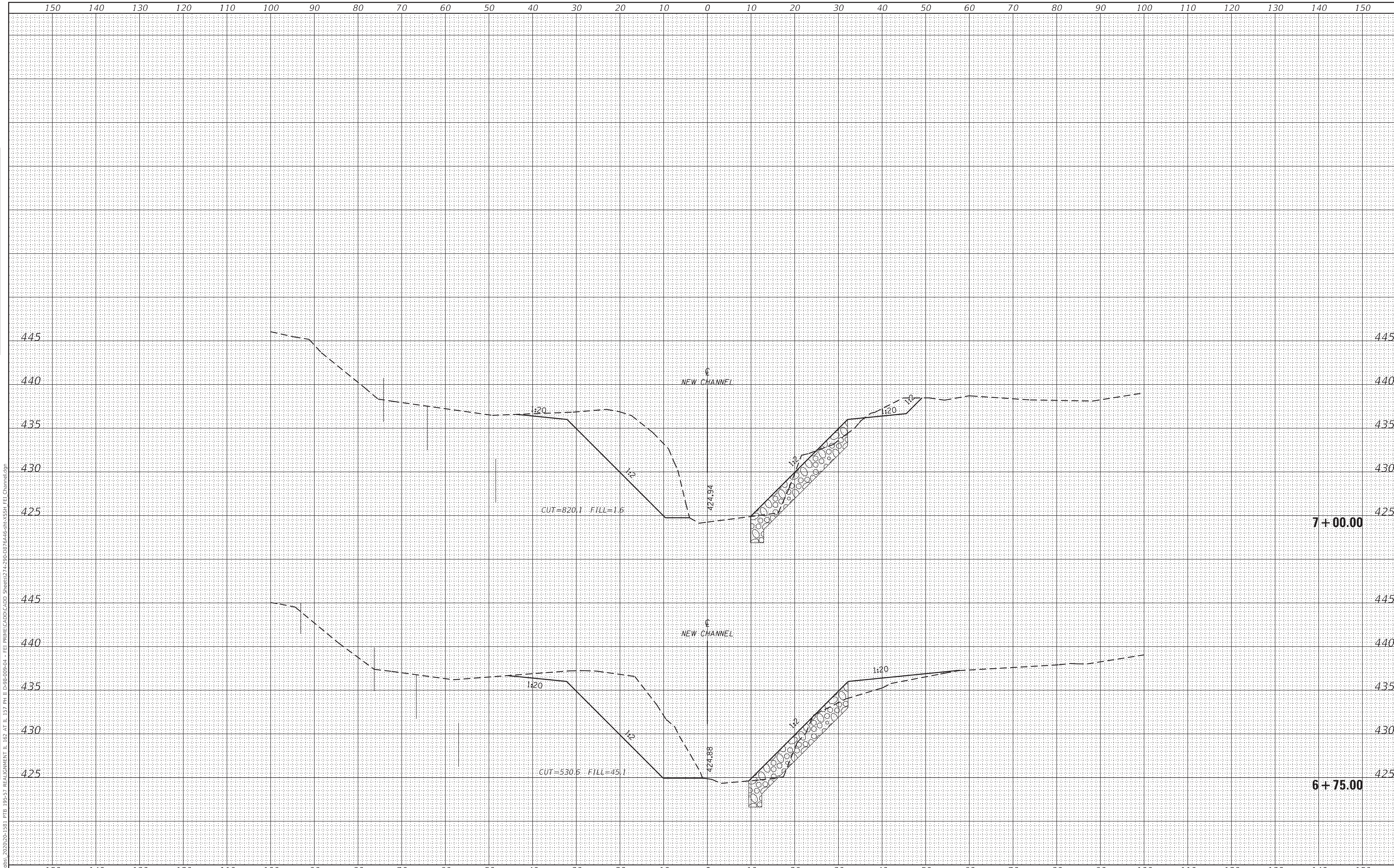
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

SCALE: 1"=10' | SHEET 11 OF 17 SHEETS | STA. 6+00.00 TO STA. 6+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	286
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



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

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

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WWW. FUHRMANN-ENG .COM

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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

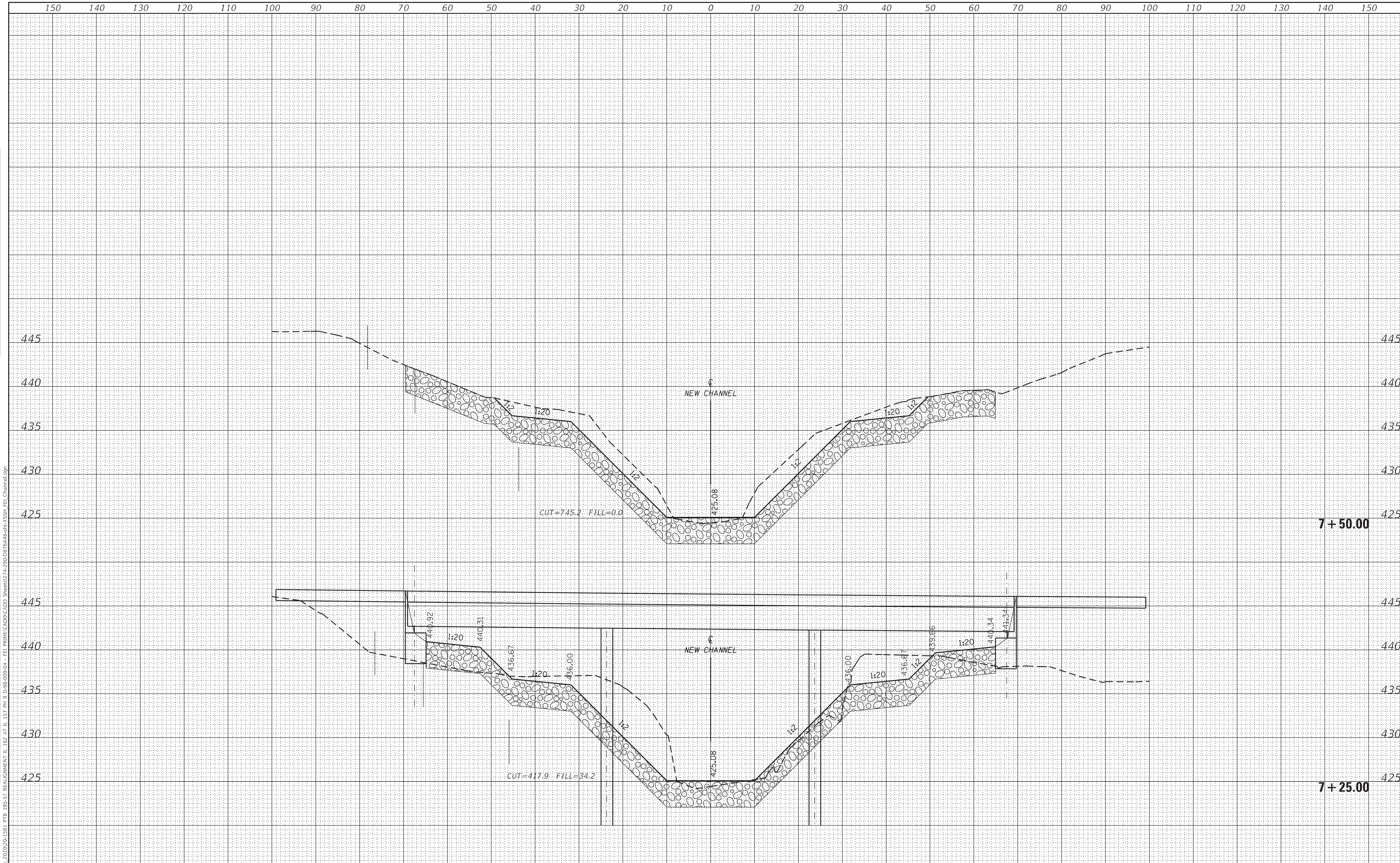
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

SCALE: 1"=10' | SHEET 12 OF 17 SHEETS | STA. 6+75.00 TO STA. 7+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	287
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

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PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

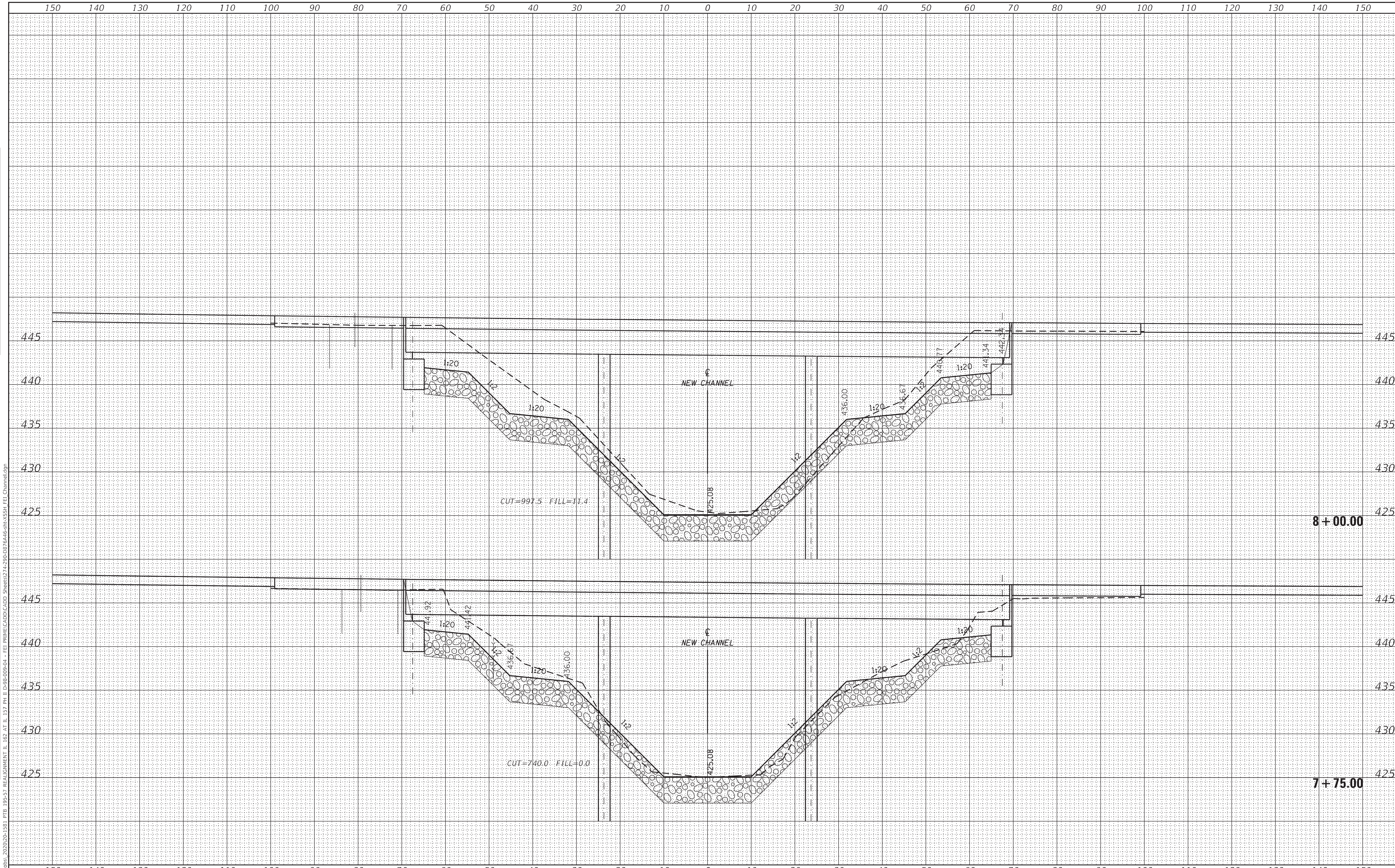
SCALE: 1"=10' | SHEET 13 OF 17 SHEETS | STA. 7+25.00 TO STA. 7+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	288

CONTRACT NO. 76A46

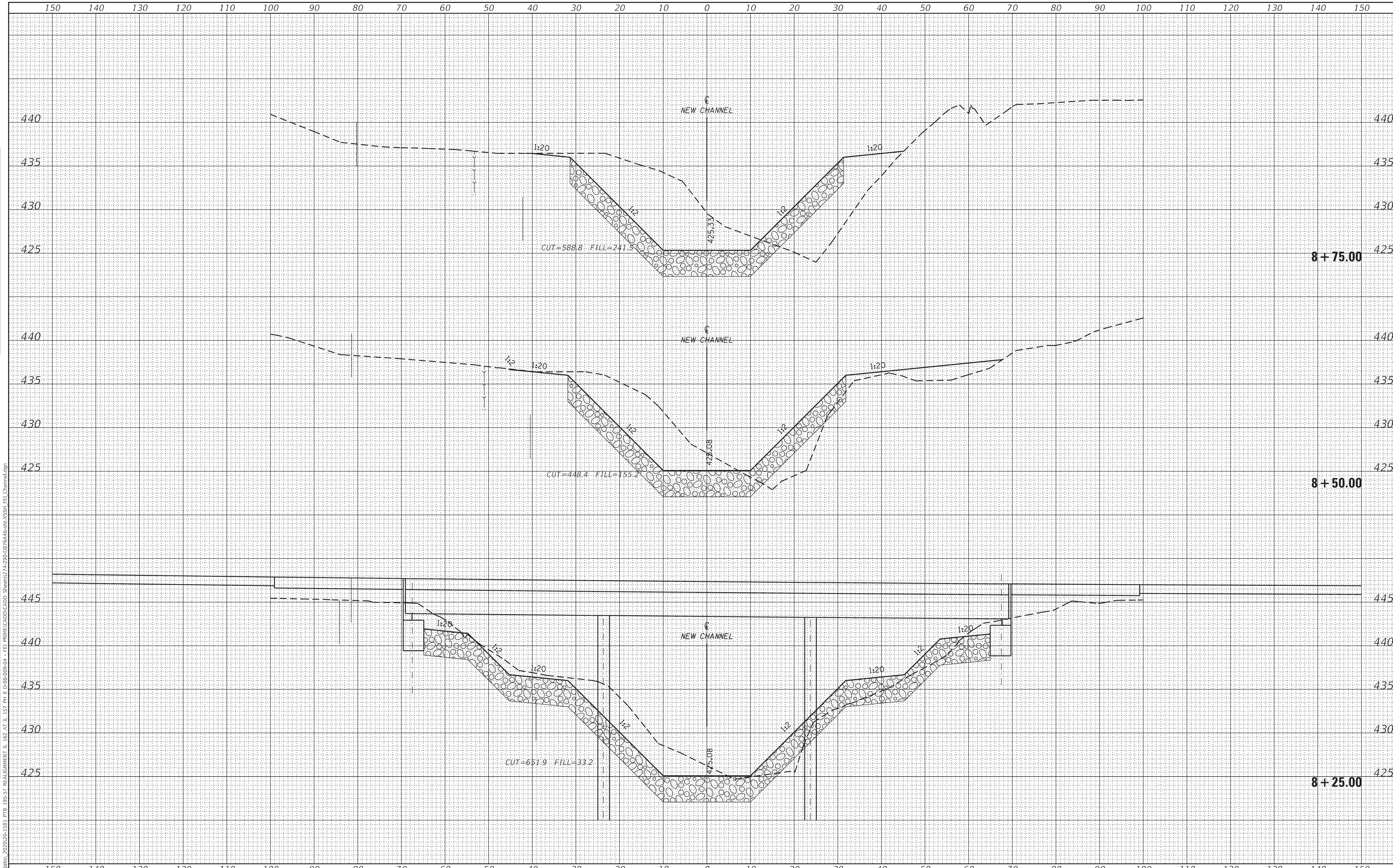
ILLINOIS | FED. AID PROJECT

* 586/592



FUHRMANN ENGINEERING WWW. FUHRMANN-ENG .COM	USER NAME = untitled	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CHANNEL CROSS SECTIONS	F.A.P. RTE. *	SECTION 51-1R	COUNTY MADISON	TOTAL SHEETS 296	SHEET NO. 289
	PLOT SCALE = 20.0000 ' / in.	DRAWN -	REVISED -		SCALE: 1"=10' SHEET 14 OF 17 SHEETS STA. 7+75.00 TO STA. 8+00.00	CONTRACT NO. 76A46				
	PLOT DATE = 10/15/2024	CHECKED -	REVISED -			ILLINOIS FED. AID PROJECT				
		DATE -	REVISED -							

* 586/592



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FUHRMANN ENGINEERING
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USER NAME = untitled	DESIGNED -	REVISED -
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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

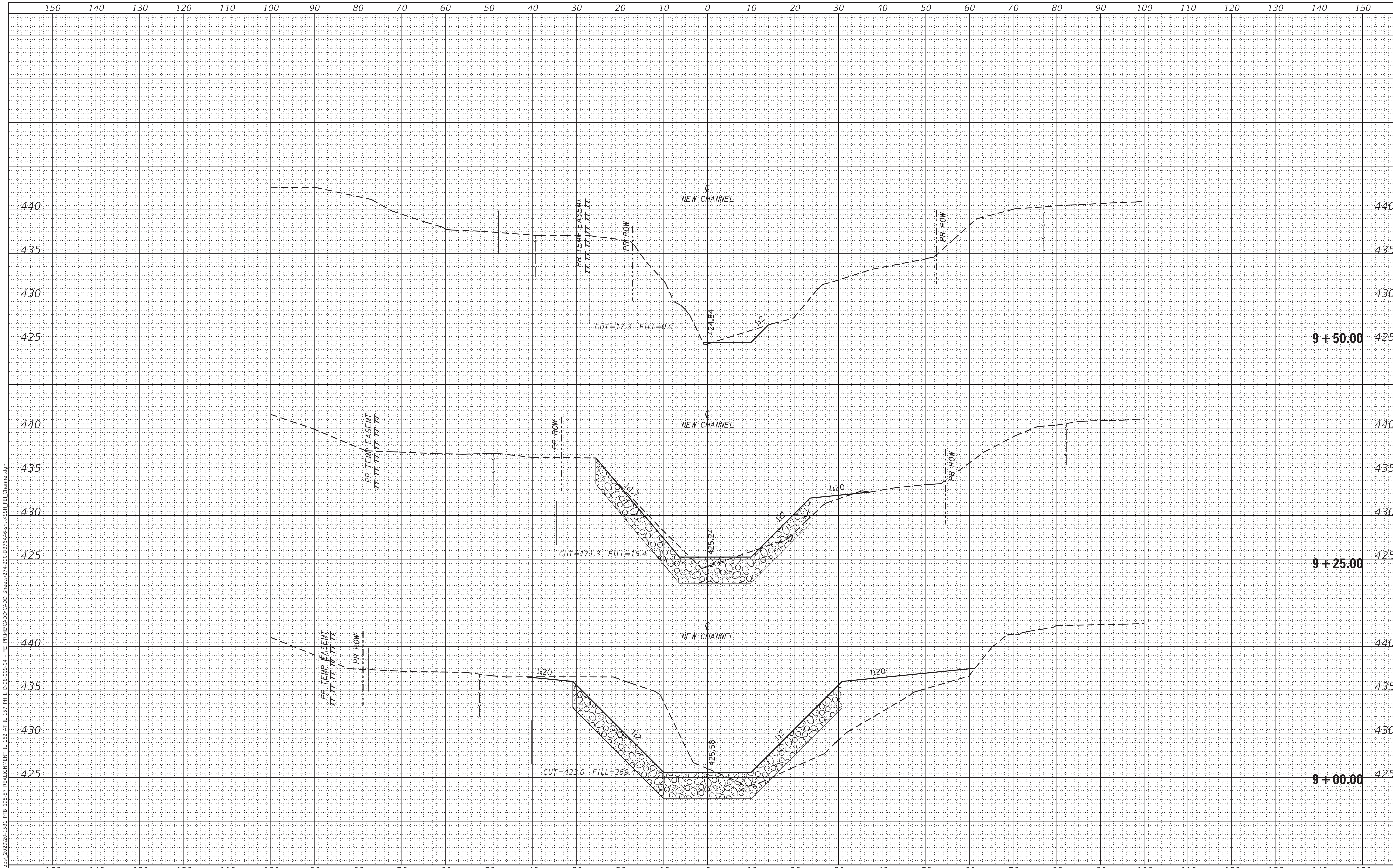
SCALE: 1"=10' | SHEET 15 OF 17 SHEETS | STA. 8+25.00 TO STA. 8+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	290

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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

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

MODEL:

FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -
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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

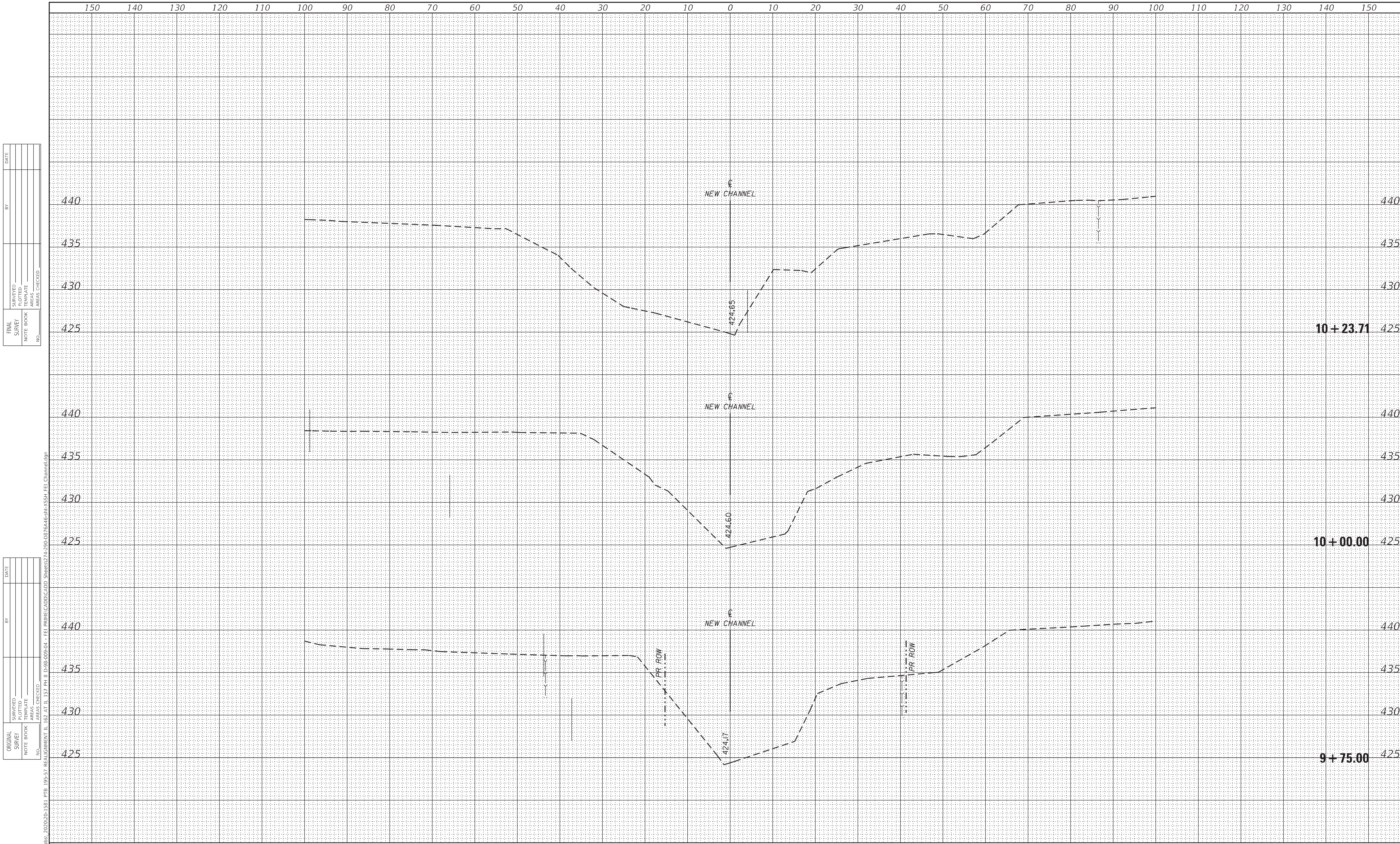
SCALE: 1"=10' | SHEET 16 OF 17 SHEETS | STA. 9+00.00 TO STA. 9+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
"	51-1R	MADISON	296	291

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

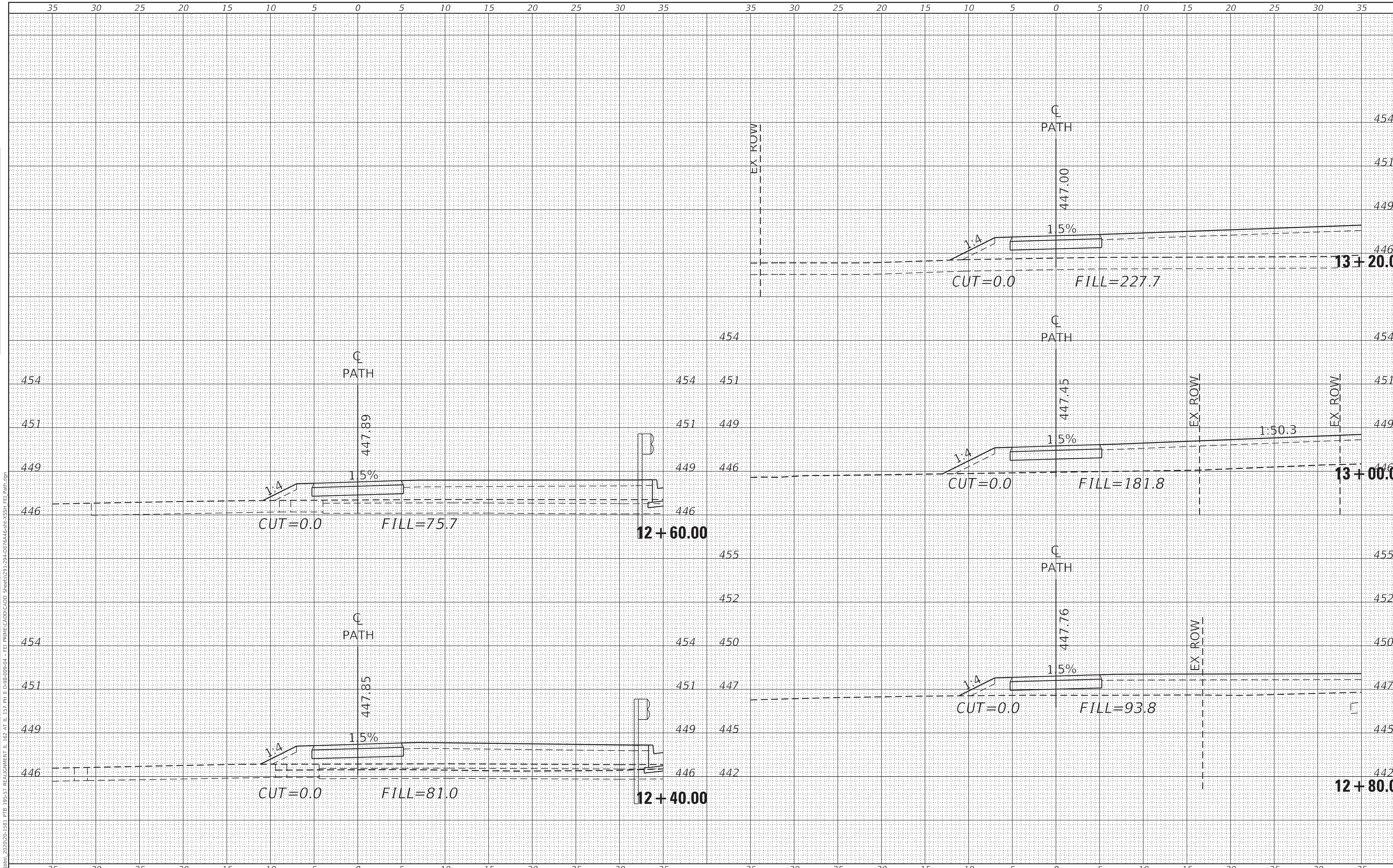
SCALE: 1"=10' | SHEET 17 OF 17 SHEETS | STA. 9+75.00 TO STA. 10+23.71

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	292

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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

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

FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -	
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PLOT SCALE = 10.0000 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PATH CROSS SECTION

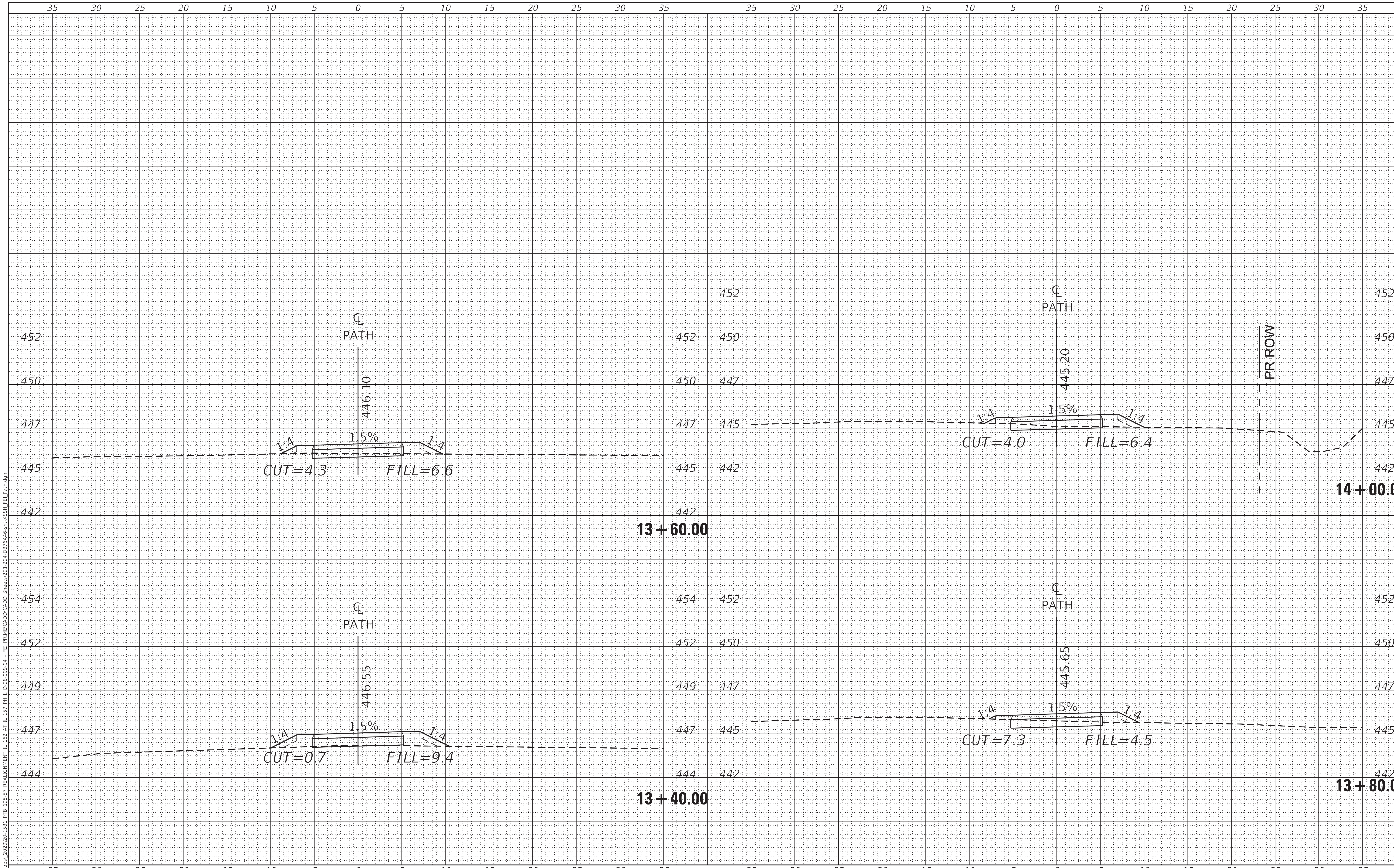
SCALE: 1"=5' | SHEET 1 OF 4 SHEETS | STA. 12+40.00 TO STA. 13+20.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	293

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



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

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

MODEL:

FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PATH CROSS SECTION

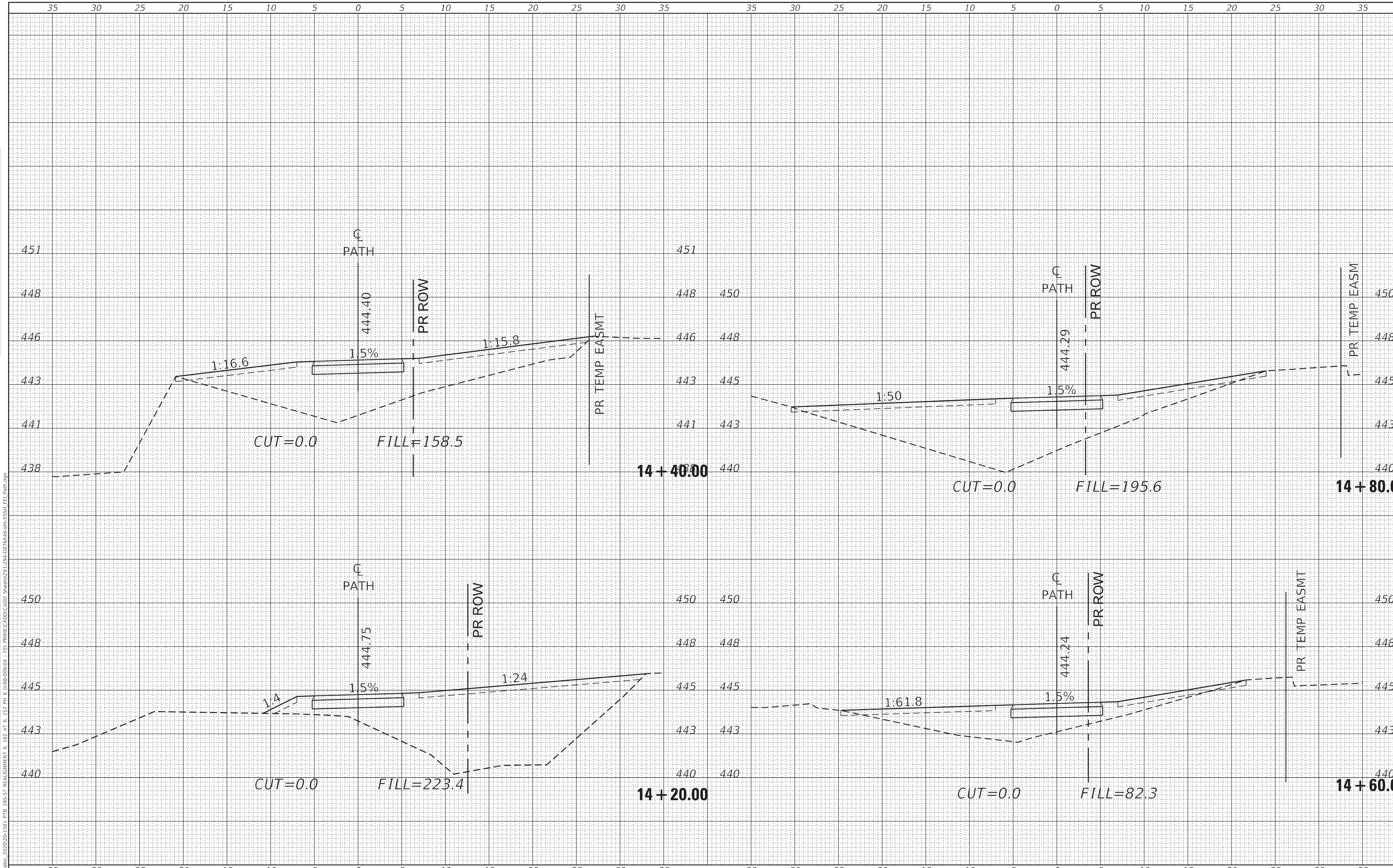
SCALE: 1"=5' | SHEET 2 OF 4 SHEETS | STA. 13+40.00 TO STA. 14+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	294

CONTRACT NO. 76A46

ILLINOIS | FED. AID PROJECT

* 586/592



FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -
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PLOT DATE = 10/15/2024	DATE -	REVISED -

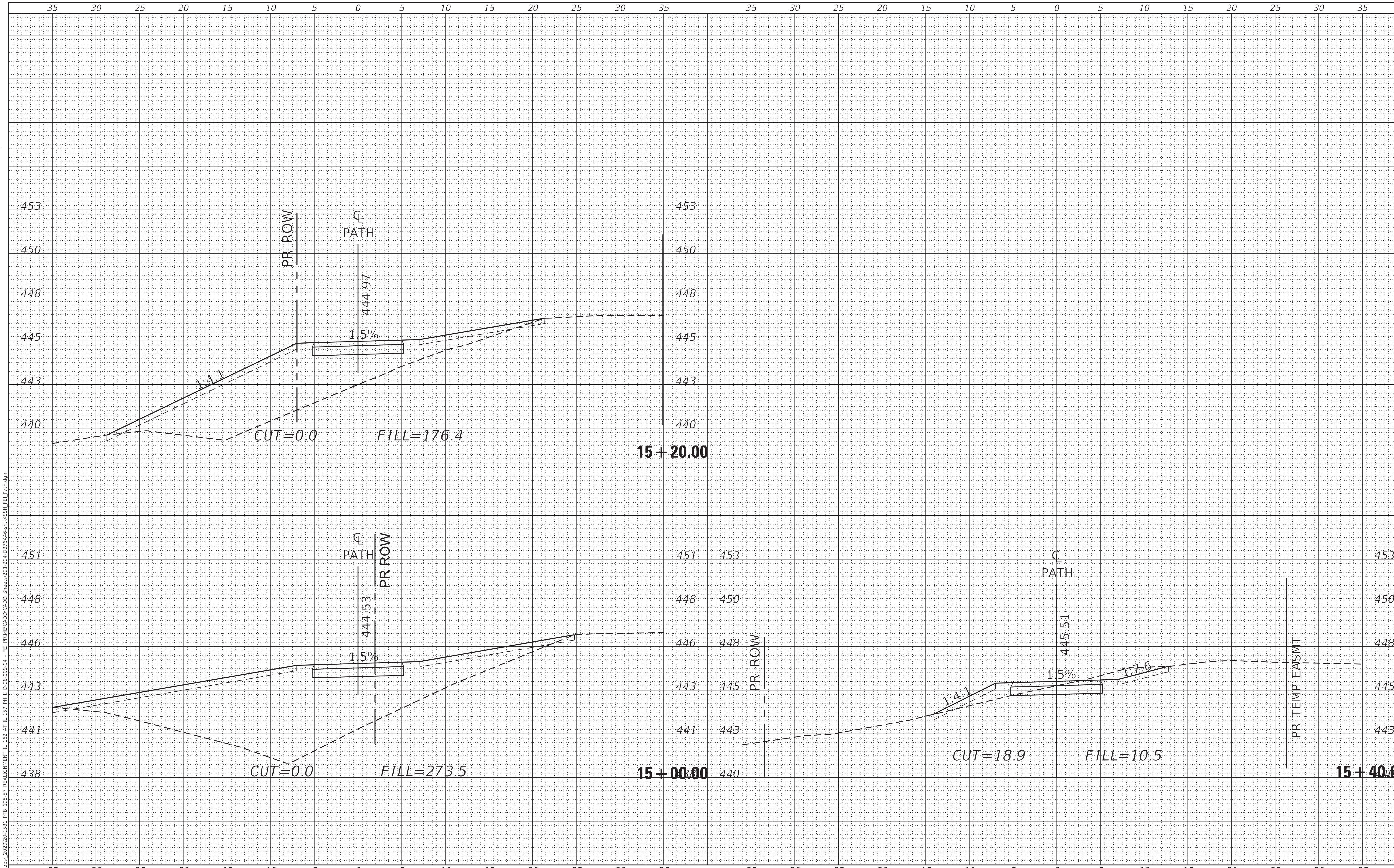
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PATH CROSS SECTION

SCALE: 1"=5' | SHEET 3 OF 4 SHEETS | STA. 14+20.00 TO STA. 14+80.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	295
		CONTRACT NO. 76A46		
	ILLINOIS	FED. AID PROJECT		

* 586/592



FUHRMANN ENGINEERING
WWW. FUHRMANN-ENG .COM

USER NAME = untitled	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/15/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PATH CROSS SECTION

SCALE: 1"=5' | SHEET 4 OF 4 SHEETS | STA. 15+00.00 TO STA. 15+80.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	51-1R	MADISON	296	296

CONTRACT NO. 76A46

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