

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	1
		ILLINOIS	CONTRACT NO. 72K83	

DEPARTMENT OF TRANSPORTATION

**HIGHWAY CLASSIFICATION**

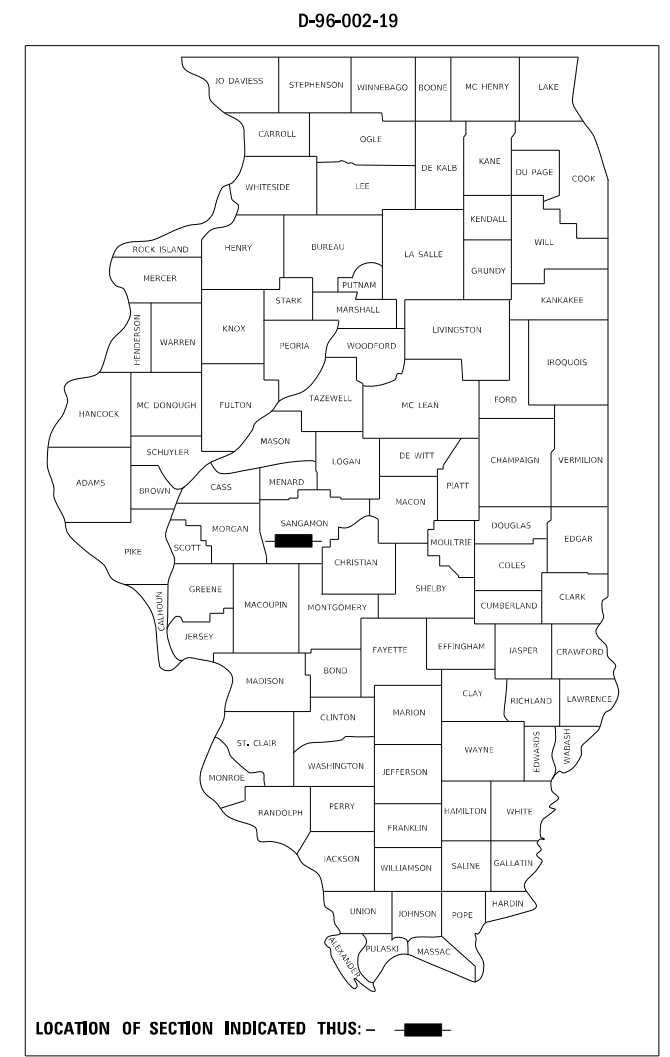
ADT (2021) = 2,800 MU = 7.14%  
 DESIGN SPEED = 60 MPH SU = 3.93%  
 POSTED SPEED = 55 MPH PV = 88.93%  
 CLASSIFICATION: MINOR ARTERIAL

**PROPOSED  
HIGHWAY PLANS**

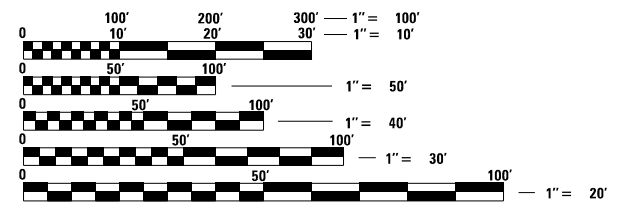
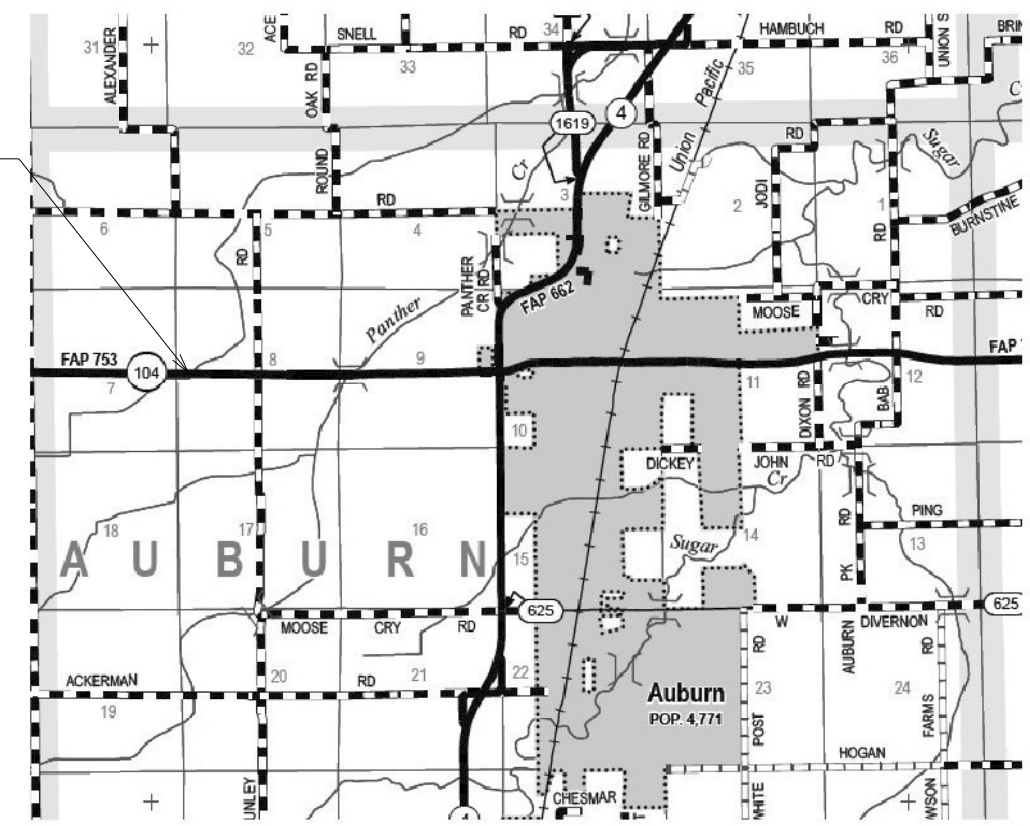
FOR INDEX OF SHEETS, SEE SHEET NO. 2

**FAP ROUTE 753 (IL 104)  
SECTION 139C  
PROJECT HBFP-XN7I(656)  
CULVERT REPLACEMENT  
SANGAMON COUNTY**

C-96-003-19



EXISTING SN 084-7061  
 PROPOSED SN 084-2061  
 STA 354+50 - STA 359+50



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS  
 1-800-892-0123  
 OR 811

PROJECT ENGINEER: JAY EDWARDS (217) 785-0597  
 PROJECT MANAGER: ROBERT MILES (217) 524-8911  
 CONTRACT NO. 72K83

GROSS LENGTH = 500.00 FT. = 0.095 MILE  
 NET LENGTH = 500.00 FT. = 0.095 MILE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 SUBMITTED June 30 20 23  
 [Signature] REGIONAL ENGINEER  
 August 18, 2023  
 [Signature] ENGINEER OF DESIGN AND ENVIRONMENT  
 August 18, 2023  
 [Signature] DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

**GENERAL NOTES**

1. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS AT (217) 785-5306 THREE WEEKS PRIOR TO IMPLEMENTING ANY TRAFFIC CONTROL.
2. THE DISTRICT 6 BUREAU OF OPERATIONS SHALL BE NOTIFIED AT LEAST 14 DAYS PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS (PH: 217-785-5306).
3. ALL TEMPORARY PAVEMENT MARKING TAPE THAT IS TO REMAIN IN PLACE LONGER THAN 14 DAYS SHALL BE TYPE III OR TYPE IV TAPE. TYPE I TEMPORARY PAVEMENT MARKING TAPE MAY BE USED FOR APPLICATIONS OF 14 DAYS OR LESS.

**THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED TO CALCULATE THE PLAN QUANTITIES:**

BITUMINOUS MATERIALS (TACK COAT)	0.025 LB/SQ. FT. (BETWEEN HMA LIFTS, IL 4.75, BRICK)
BITUMINOUS MATERIALS (TACK COAT)	0.05 LB/SQ. FT. (EXISTING HMA, MILLED SURFACE, CONCRETE, MILLED/TINED CONCRETE)
PRIME COAT FOR AGGREGATE BASES	0.25 LB/SQ. FT. +/-0.01.
HMA SURFACE/BINDER (112 lbs)	0.056 TONS/(SQ. YD.*IN.)
SUBBASE GRANULAR MATERIAL - TYPE A	1.8 TONS/CU. YD
ROCK FILL - FOUNDATION	1.8 TONS/CU. YD
ALL OTHER AGGREGATE APPLICATIONS	1.6 TONS/CU. YD. (AGGREGATES-TYPE B & TYPE C, AGGREGATE WEDGE SHOULDERS, ETC.)
STONE DUMPED RIPRAP	1.50 TONS/CU. YD.
NITROGEN FERTILIZER NUTRIENT	90 LB/AC
PHOSPHOROUS FERTILIZER NUTRIENT	90 LB/AC
POTASSIUM FERTILIZER NUTRIENT	90 LB/AC
AGRICULTURE GROUND LIMESTONE	2 TONS/AC

**COMMITMENTS**

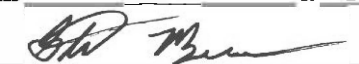


NONE

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 GENERAL NOTES, LIST OF STANDARDS, INDEX OF SHEETS
- 3-5 SUMMARY OF QUANTITIES
- 6 TYPICAL SECTIONS
- 7-8 SCHEDULES OF QUANTITIES
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- 10 PLAN SHEETS
- 11-12 STAGING PLANS
- 13 WIDTH RESTRICTION SIGNING DETAIL
- 14-20 BOX CULVERT SHEETS
- 21-22 MISCELLANEOUS DETAIL SHEETS
- 23-27 CROSS SECTIONS

**STANDARDS**

000001-08	701201-05
001001-02	701301-04
001006	701311-03
280001-07	701321-18
420001-10	701326-04
442201-03	701901-08
483001-06	704001-08
515001-04	780001-05
666001-01	782006-01
701001-02	
701006-05	

<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6</b>	
EXAMINED	June, 13 20 23
	
ENGINEER OF OPERATIONS	
EXAMINED	June, 13 20 23
	
ENGINEER OF PROJECT IMPLEMENTATION	
EXAMINED	June, 21 20 23
	
ENGINEER OF PROGRAM DEVELOPMENT	

REV. - MS

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PLOT DATE = 6/28/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>GENERAL NOTES, LIST OF STANDARDS, INDEX OF SHEETS</b>			
SCALE: N/A	SHEET 1	OF 1 SHEETS	STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	2
			CONTRACT NO. 72K83	
ILLINOIS FED. AID PROJECT				

				6-00856-0000
				80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BOX CULVERT
				0004 S.N. 084-2061
20200100	EARTH EXCAVATION	CU YD	933	933
25000200	SEEDING, CLASS 2	ACRE	0.5	0.5
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1	1
25100115	MULCH, METHOD 2	ACRE	0.5	0.5
28000305	TEMPORARY DITCH CHECKS	FOOT	133	133
28000400	PERIMETER EROSION BARRIER	FOOT	202	202
28100105	STONE RIPRAP, CLASS A3	SQ YD	392	392
28200200	FILTER FABRIC	SQ YD	392	392
44000100	PAVEMENT REMOVAL	SQ YD	413	413
44004250	PAVED SHOULDER REMOVAL	SQ YD	339	339
44201383	CLASS C PATCHES, TYPE IV, 12 INCH	SQ YD	413	413

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PLOT DATE = 6/28/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: N/A      SHEET 1 OF 3 SHEETS      STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	3
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				

				6-00856-0000
				80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BOX CULVERT 0004 S.N. 084-2061
48300300	PORTLAND CEMENT CONCRETE SHOULDERS 8"	SQ YD	678	678
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1
51500100	NAME PLATES	EACH	1	1
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	584	584
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2	2
54011007	PRECAST CONCRETE BOX CULVERTS 10' X 7'	FOOT	120	120
63200310	GUARDRAIL REMOVAL	FOOT	459	459
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	12	12
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1

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PLOT DATE = 6/29/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>SUMMARY OF QUANTITIES</b>			
SCALE: N/A	SHEET 2	OF 3 SHEETS	STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	4
				CONTRACT NO. 72K83
		ILLINOIS	FED. AID PROJECT	

				6-00856-0000
				80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BOX CULVERT 0004 S.N. 084-2061
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	30	30
70300100	SHORT TERM PAVEMENT MARKING	FOOT	96	96
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	32	32
70400100	TEMPORARY CONCRETE BARRIER	FOOT	347	347
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	347	347
70600251	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
70600352	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	963	963
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	1	1
78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	215	215
X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	257	257
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
Z0023602	GRANULAR CULVERT BACKFILL	CU YD	166	166
∅ Z0076600	TRAINEES	HOUR	500	500
* Z0054517	ROCK FILL - FOUNDATION	TON	189	189
∅ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500
Z0073500	TEMPORARY SUPPORT SYSTEM	L SUM	1	1

\* SPECIALTY ITEM ∅ 0042

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 SHEET: 27 OF 50

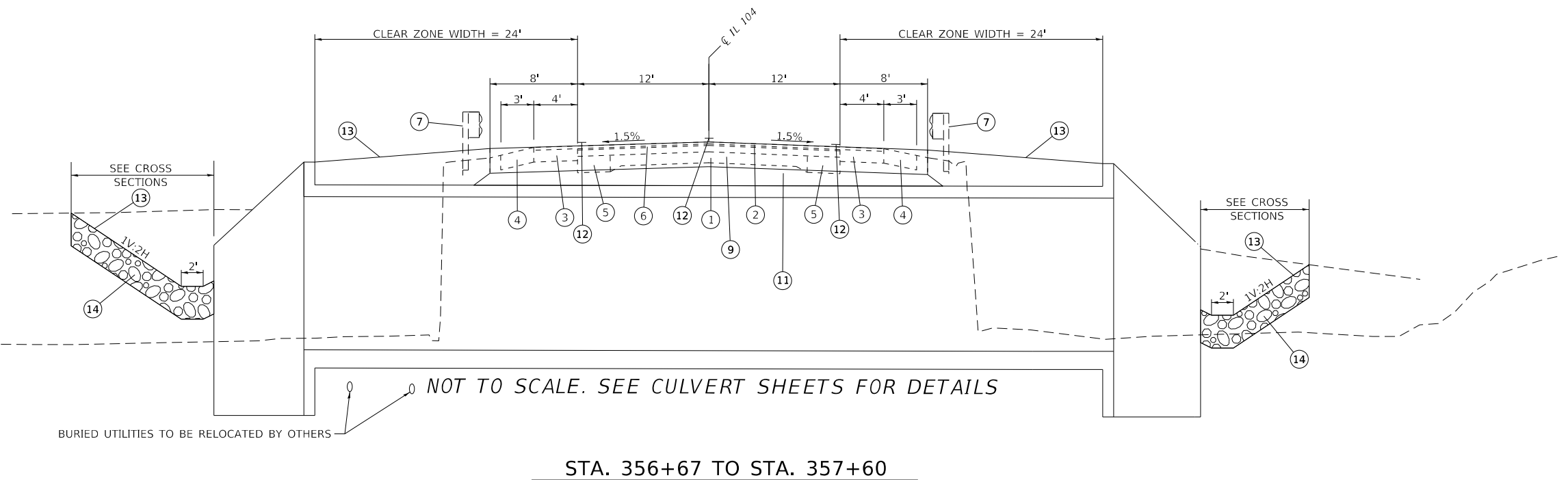
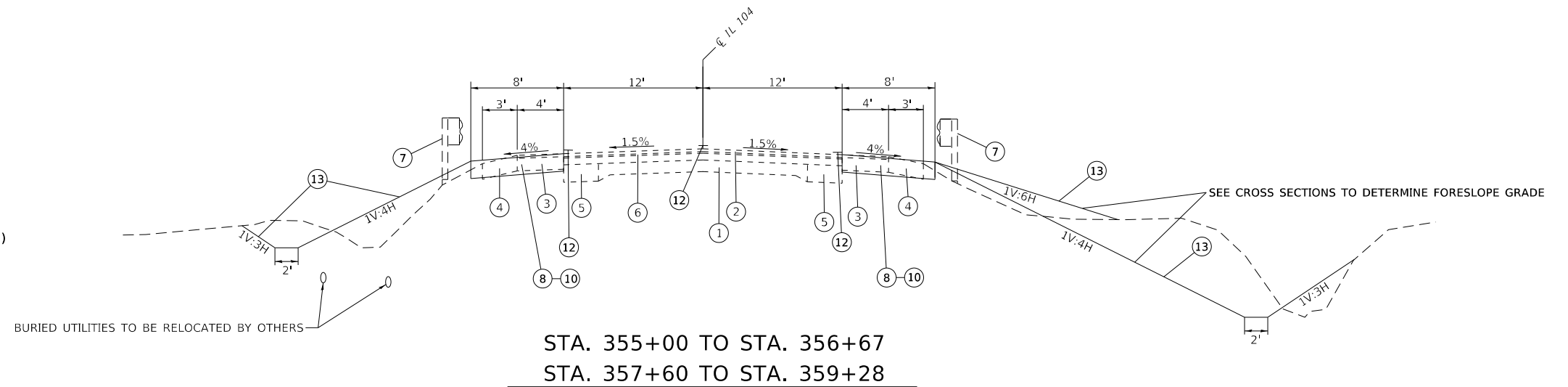
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DRAWN -	REVISD -	REVISD -							753	139C	SANGAMON	27	5	
PLOT SCALE = 2.0000' / in.	CHECKED -	REVISD -			SCALE: N/A				SHEET 3 OF 3 SHEETS STA. N/A TO STA. N/A				CONTRACT NO. 72K83	
PLOT DATE = 6/29/2023	DATE -	REVISD -			ILLINOIS FED. AID PROJECT									

**EXISTING LEGEND**

- ① EXISTING 9"-6"-9" PCC PAVEMENT
- ② EXISTING HMA SURFACE, THICKNESS VARIES
- ③ EXISTING HMA SHOULDERS 8"
- ④ EXISTING AGGREGATE SHOULDERS, TYPE A
- ⑤ EXISTING HMA BASE COURSE WIDENING 9"
- ⑥ EXISTING LEVELING BINDER 3/4"

**PROPOSED LEGEND**

- ⑦ PROPOSED GUARDRAIL REMOVAL
- ⑧ PROPOSED PAVED SHOULDER REMOVAL
- ⑨ PROPOSED CLASS C PATCH, TYPE IV (12")
- ⑩ PROPOSED PCC SHOULDERS, 8"
- ⑪ PROPOSED POROUS GRANULAR MATERIAL, (6 IN. MIN.)
- ⑫ PROPOSED PAVEMENT MARKING PAINT - LINE 5"
- ⑬ PROPOSED EARTH EXCAVATION
- ⑭ PROPOSED STONE RIPRAP, A3



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PLOT DATE = 6/20/2023	DATE - _____	REVISOR - _____

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

SCALE: N/A	SHEET 1	OF 1	SHEETS	STA. N/A	TO STA. N/A
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**TYPICAL SECTIONS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	6
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				

**20200100 EARTH EXCAVATION**

						EARTH EXCAVATION	SHRINK FACTOR 25%	EMBANKMENT	BALANCE WASTE + SHORT ( )
IL 104	DESCRIPTION					CU YD	CU YD	CU YD	CU YD
LT/RT	354+50.00	TO	LT/RT	359+50.00	DITCHES	732.00	549.00	436.00	113.00
LT/RT	356+76.00	TO	LT/RT	356+97.85	CULVERT	101.00	75.75	101.00	-25.25
LT/RT	357+29.00	TO	LT/RT	357+51.00	CULVERT	100.00	75.00	100.00	-25.00
<b>TOTAL</b>						<b>933</b>	<b>700</b>	<b>637</b>	<b>62.75</b>

**25000200 SEEDING, CLASS 2**

IL 104					ACRE
LT	354+50.00	TO	LT	359+50.00	0.25
RT	354+50.00	TO	RT	359+50.00	0.25
<b>TOTAL</b>					<b>0.5</b>

**25000400 NITROGEN FERTILIZER NUTRIENT**

IL 104					POUND
LT	354+50.00	TO	LT	359+50.00	22.5
RT	354+50.00	TO	RT	359+50.00	22.5
<b>TOTAL</b>					<b>45</b>

**25000500 PHOSPHORUS FERTILIZER NUTRIENT**

IL 104					POUND
LT	354+50.00	TO	LT	359+50.00	22.5
RT	354+50.00	TO	RT	359+50.00	22.5
<b>TOTAL</b>					<b>45</b>

**25000600 POTASSIUM FERTILIZER NUTRIENT**

IL 104					POUND
LT	354+50.00	TO	LT	359+50.00	22.5
RT	354+50.00	TO	RT	359+50.00	22.5
<b>TOTAL</b>					<b>45</b>

**25000700 AGRICULTURAL GROUND LIMESTONE**

IL 104					TONS
LT	354+50.00	TO	LT	359+50.00	0.5
RT	354+50.00	TO	RT	359+50.00	0.5
<b>TOTAL</b>					<b>1</b>

**25100115 MULCH, METHOD 2**

IL 104					ACRE
LT	354+50.00	TO	LT	359+50.00	0.25
RT	354+50.00	TO	RT	359+50.00	0.25
<b>TOTAL</b>					<b>0.5</b>

**28000305 TEMPORARY DITCH CHECKS**

IL 104					FOOT
LT	355+55.00				9
LT	356+50.00				9
LT	356+80.00				9
LT	357+10.00				13
RT	357+09.00				12
RT	357+59.00				13
LT	357+65.00				14
LT	357+83.00				14
LT	358+04.00				11
RT	358+09.00				10
LT	358+80.00				9
RT	358+80.00				10
<b>TOTAL</b>					<b>133</b>

**28000400 PERIMETER EROSION BARRIER**

IL 104					FOOT
RT	354+50.00	TO	RT	356+50.00	202
<b>TOTAL</b>					<b>202</b>

**28100105 STONE RIPRAP, CLASS A3**

IL 104					SQ YD
RT	356+65.00	TO	RT	357+50.00	173
LT	356+80.00	TO	LT	358+00.00	219
<b>TOTAL</b>					<b>392</b>

**28200200 FILTER FABRIC**

IL 104					SQ YD
RT	356+65.18	TO	RT	357+20.00	173
LT	357+05.70	TO	LT	357+72.28	219
<b>TOTAL</b>					<b>392</b>

**44000100 PAVEMENT REMOVAL**

IL 104					SQ YD
STAGE 1					
CL	356+67.00	TO	CL	357+60.00	155
STAGE 2					
CL	356+67.00	TO	CL	357+60.00	258
<b>TOTAL</b>					<b>413</b>

**44004250 PAVED SHOULDER REMOVAL**

IL 104					SQ YD
PRE STAGE					
RT	355+00.00	TO	RT	359+28.00	190
LT	355+00.00	TO	LT	356+67.00	74
LT	357+60.00	TO	RT	359+28.00	75
<b>TOTAL</b>					<b>339</b>

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	DRAWN -	REVISED -
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PLOT DATE = 6/23/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>SCHEDULES</b>			
SCALE: N/A	SHEET 1	OF 2 SHEETS	STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	7
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				

**44201383 CLASS C PATCHES, TYPE IV, 12 INCH**

IL 104					SQ YD
STAGE 1					
CL	356+67.00	TO	CL	357+60.00	155
STAGE 2					
CL	356+67.00	TO	CL	357+60.00	258
TOTAL					413

**48300300 PORTLAND CEMENT CONCRETE SHOULDERS, 8"**

IL 104					SQ YD
PRE STAGE					
RT	355+00.00	TO	RT	359+28.00	380
LT	355+00.00	TO	LT	356+67.00	148
LT	357+60.00	TO	RT	359+28.00	149
TOTAL					678

**63200310 GUARDRAIL REMOVAL**

IL 104					FOOT
RT	355+71.80	TO	RT	358+01.30	230
LT	356+24.50	TO	LT	358+54.07	230
TOTAL					459

**66600105 FURNISHING AND ERECTING RIGHT OF WAY MARKERS**

IL 104					EACH
LT	355+00.00	OFF	40'		1
LT	355+50.00	OFF	45'		1
LT	356+50.00	OFF	45'		1
LT	357+00.00	OFF	60'		1
LT	357+75.00	OFF	60'		1
LT	358+25.00	OFF	45'		1
LT	358+80.00	OFF	45'		1
LT	359+30.00	OFF	40'		1
RT	355+50.00	OFF	40'		1
RT	356+50.00	OFF	70'		1
RT	357+00.00	OFF	70'		1
RT	359+30.00	OFF	40'		1
TOTAL					12

**70300100 SHORT TERM PAVEMENT MARKING**

IL 104					TYPE	FOOT
CL	353+55.00	TO	CL	360+73.00	4" DASHED YELLOW	72
LT	355+00.00	TO	LT	359+28.00	4" SOLID WHITE AT 45 DEG	12
RT	355+00.00	TO	RT	359+28.00	4" SOLID WHITE AT 45 DEG	12
TOTAL						96

**70300150 SHORT TERM PAVEMENT MARKING REMOVAL**

IL 104					TYPE	SQ FT
CL	353+55.00	TO	CL	360+73.00	4" DASHED YELLOW	24
LT	355+00.00	TO	LT	359+28.00	4" SOLID WHITE AT 45 DEG	4
RT	355+00.00	TO	RT	359+28.00	4" SOLID WHITE AT 45 DEG	4
TOTAL						32

**70400100 TEMPORARY CONCRETE BARRIER**

IL 104					FOOT
STAGE 1					
LT	355+42.00	TO	LT	355+85.00	347
TOTAL					347

**70400200 RELOCATE TEMPORARY CONCRETE BARRIER**

IL 104					FOOT
STAGE 2					
RT	355+42.00	TO	RT	355+85.00	347
TOTAL					347

**70600251 IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3**

IL 104					EACH
STAGE 1					
LT	355+21.75				1
LT	359+05.40				1
TOTAL					2

**70600352 IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE, NARROW), TEST LEVEL 3**

IL 104					EACH
STAGE 2					
RT	355+21.75				1
RT	359+05.40				1
TOTAL					2

**78001120 PAINT PAVEMENT MARKING - LINE 5"**

IL 104					TYPE	FOOT
LT	355+00.00	TO	LT	359+28.00	5" SOLID WHITE	428
RT	355+00.00	TO	RT	359+28.00	5" SOLID WHITE	428
CL	355+00.00	TO	CL	359+28.00	5" DASHED YELLOW	107
TOTAL						963

**78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL**

IL 104					EACH
CL	355+00.00	TO	CL	359+28.00	1
TOTAL					1

**78300201 PAVEMENT MARKING REMOVAL - GRINDING**

IL 104					SQ FT	
CL	353+55.00	TO	CL	360+73.00	4" DASHED YELLOW	215
TOTAL						215

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PLOT DATE = 6/28/2023	DATE -	REVISED -

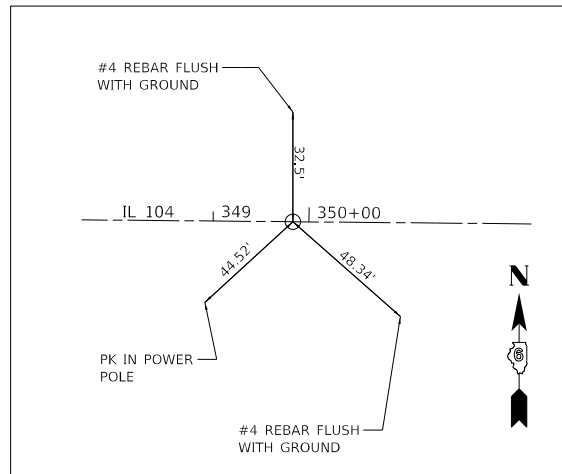
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCHEDULES			
SCALE: N/A	SHEET 2	OF 2 SHEETS	STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	8
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



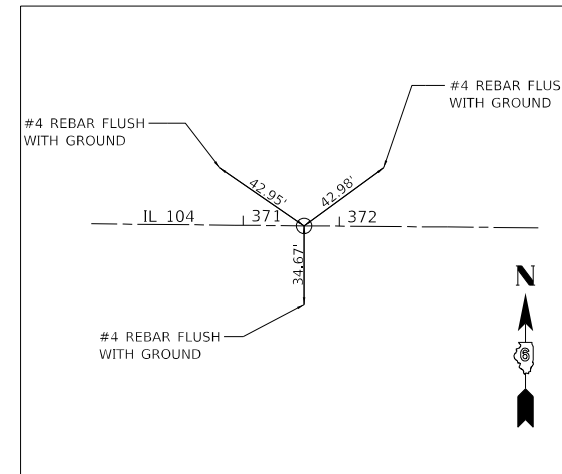
(IL WEST ZONE) NAD83 - 2007 ADJ			
ALIGNMENT COORDINATES - IL 104			
IL 104	STATION	N	E
PI	349+83.27	1064149.7700	2400693.3510
POT	354+50.00	1064145.3990	2401160.0626
POT	359+50.00	1064140.7164	2401660.0407
PI	371+63.41	1064129.3527	2402873.3973



**CONTROL POINT #2414**

**PI STA. 349 + 83.27**

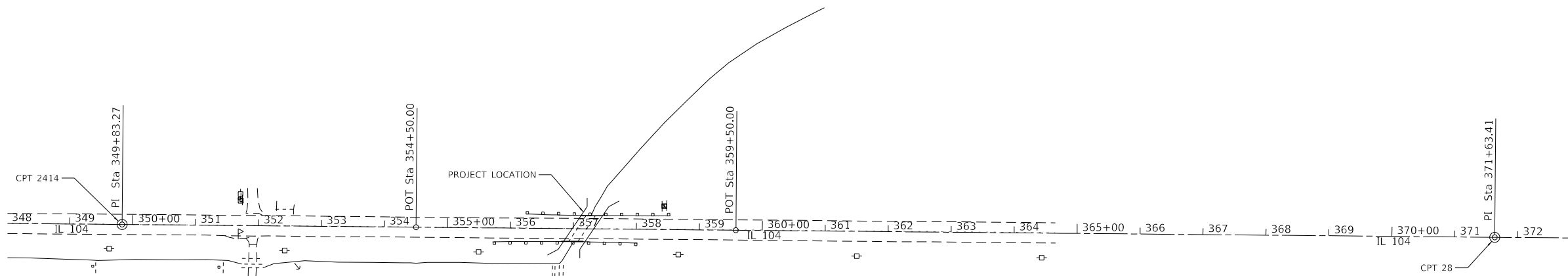
SET PK IN CHSLD 'X'  
N: 1064149.7700  
E: 2400693.3510



**CONTROL POINT #28**

**PI STA. 371 + 63.41**

SET PK IN CHSLD 'X'  
N: 1064129.3527  
E: 2402873.3973



**D672K83 Benchmarks**

Benchmark	NAVD88 Elevation	Description
BM CB-2	634.638	Chsld [] on Center Conc Hdwl in SW Quad IL104 & Hunley Rd (TR7.5W) @ Sta 378+39.48 ; 23.44' Rt
BM IL104-1	634.682	Chsld [] on Top Center of Conc Box Culvert just S from N End of Hdwl, 0.40 Mi W of Hunley Rd @ Sta 357+29.30 ; 20.224' Lt
BM IL104-2	633.837	Chsld [] on Top Center of Old Conc Hdwl w/ new Culvert Ext. on N Side of IL104, 0.60 Mi W of Hunley Rd @ Sta 347+31.94 ; 20.566' Lt

**D672K83 Traverse Stations NAD83/2007 adj State Plane IL West Zone**

POINT	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION	ALIGNMENT
ADJ100	1064143.501	2406198.499	404+89.17	32.327 LT	REBAR W CAP	IL104A
ADJ101	1064092.634	2407069.617	413+59.12	37.421 RT	REBAR W CAP	IL104A

MODEL: Default  
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PLOT SCALE = 200.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 6/20/2023	CHECKED -	REVISED -
	DATE -	REVISED -







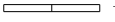


**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

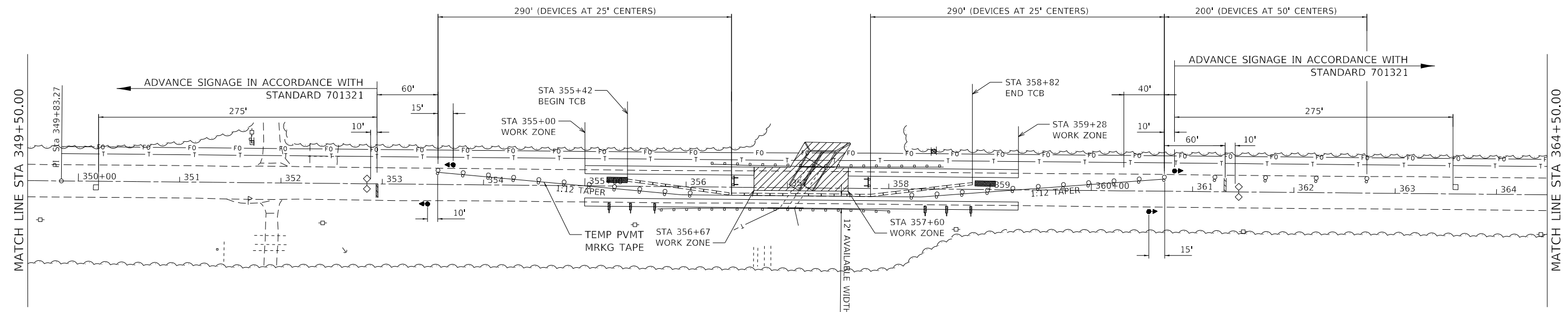
**ALIGNMENTS, BENCHMARKS, AND TIES**

SCALE: 1"=100' SHEET 1 OF 1 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	9
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



SYMBOLS	
	Work area
	Sign
	Type III barricade
	Traffic signal
	Impact attenuator
	Drum with steady burning bi-directional light
	Temporary concrete barrier
	Double vertical panel (see detail)
	Crystal, bidirectional barrier wall/guardrail marker



NOTE:

- PRIOR TO STAGE 1 CONSTRUCTION, INSTALL PROPOSED 8' WIDE HMA SHOULDER ON SOUTHERN PORTION FROM STA. 355+00 RT TO STA. 359+28 RT. INSTALL PROPOSED 8' WIDE HMA SHOULDER ON NORTHERN PORTION FROM STA. 355+00 LT TO 356+67 LT AND 357+60 LT TO 359+28.
- STD 701326 SHALL BE UTILIZED TO FACILITATE TRAFFIC THROUGH WORK AREA DURING PROPOSED SHOULDER CONSTRUCTION.

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	DRAWN -	REVISED -
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PLOT DATE = 6/20/2023	DATE -	REVISED -










**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

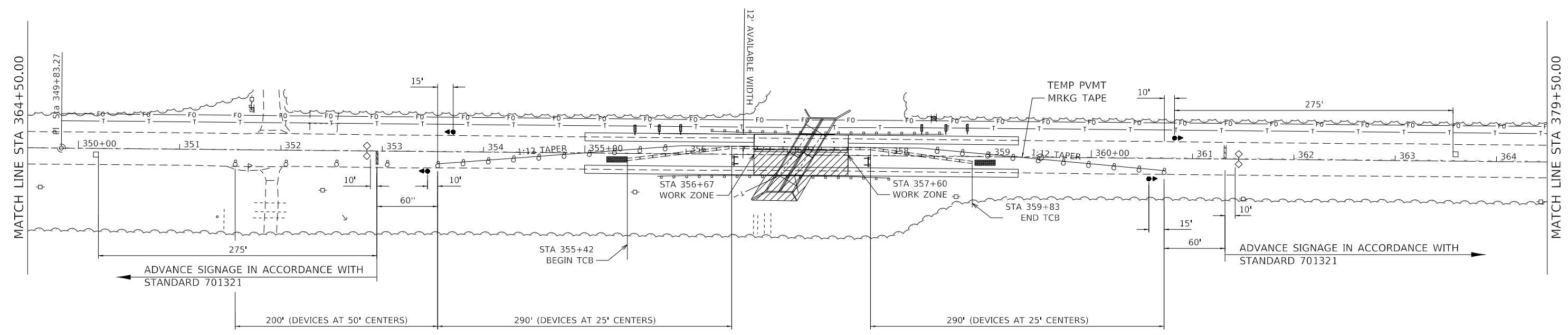
**STAGE 1 MAINTENANCE OF TRAFFIC  
EX SN 084-7061 PR SN 084-2061**

SCALE: 50 SHEET 1 OF 2 SHEETS STA. 364+50.00 TO STA. 379+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	11
CONTRACT NO. 72K83				
ILLINOIS		FED. AID PROJECT		

**SYMBOLS**

	Work area		Drum with steady burning bi-directional light
	Sign		Temporary concrete barrier
	Type III barricade		Double vertical panel (see detail)
	Traffic signal		Crystal, bidirectional barrier wall/guardrail marker
	Impact attenuator		



NOTE:  
TRAFFIC SIGNALS, STOP BARS, ADVANCE SIGNING, AND TEMPORARY RUMBLE STRIPS TO REMAIN IN STAGE 1 LOCATION

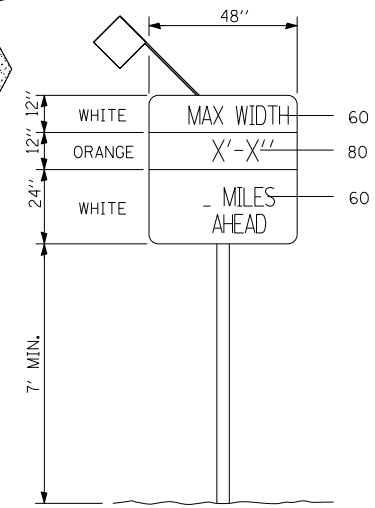
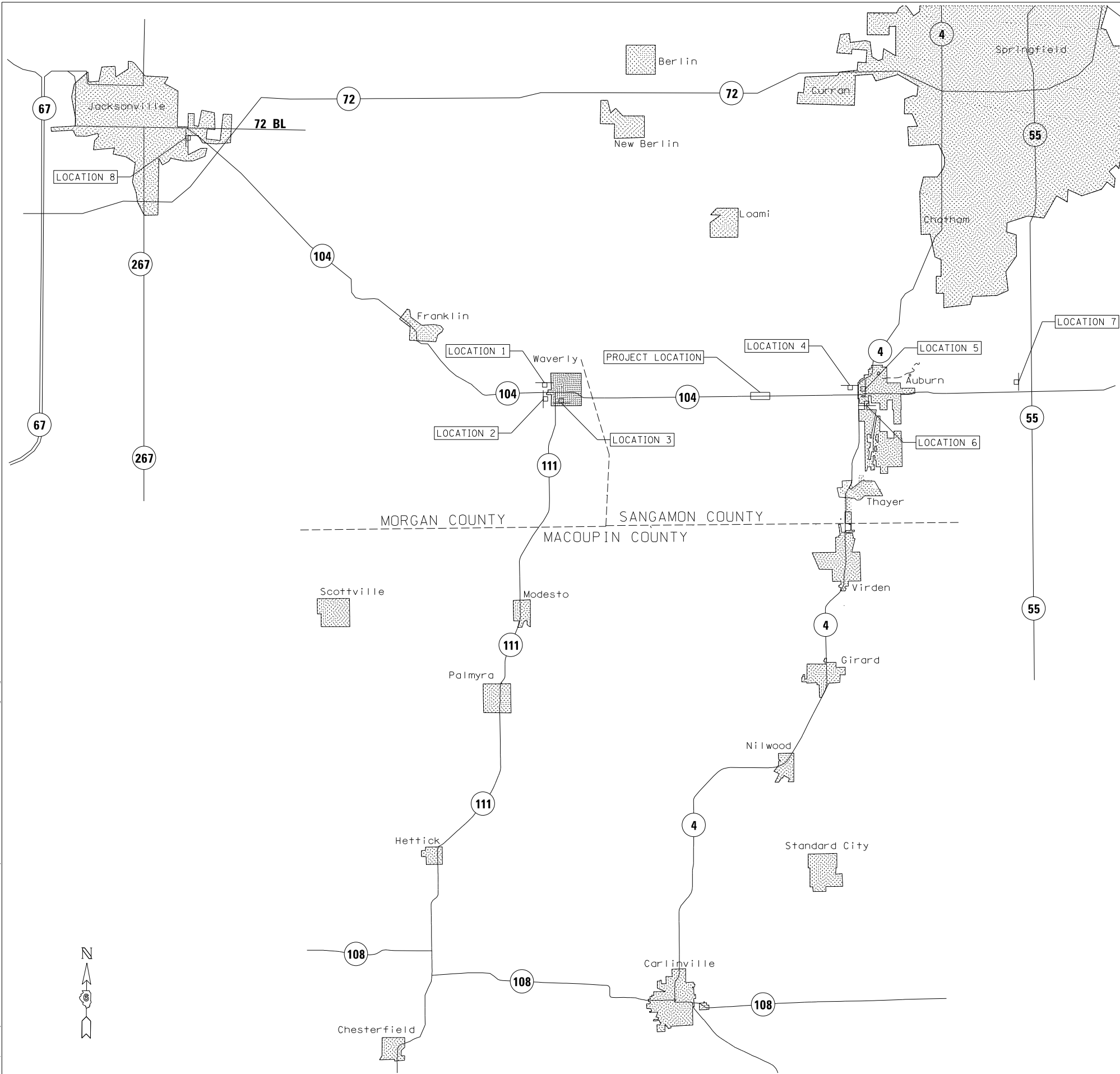
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	DRAWN -	REVISED -
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PLOT DATE = 6/20/2023	DATE -	REVISED -

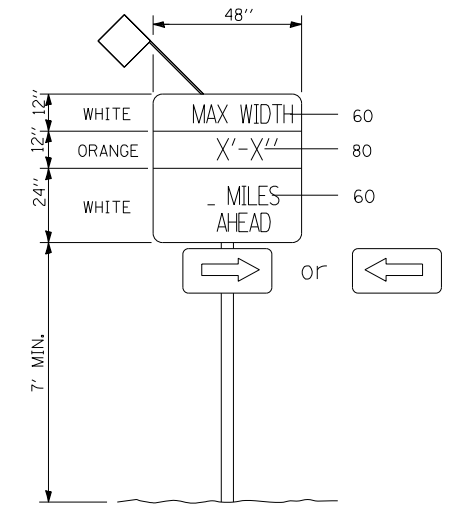
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>STAGE 2 MAINTENANCE OF TRAFFIC</b>			
<b>EX SN 084-7061 PR SN 084-2061</b>			
SCALE: 50	SHEET 2	OF 2 SHEETS	STA. 364+50.00 TO STA. 379+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	12
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



SIGN A  
(WIDTH RESTRICTION SIGN)



SIGN B  
(WIDTH RESTRICTION SIGN)

SIGN		
LOCATION	SIGN	DISTANCE
1 S. MILLER STREET SB AT IL 104	B	8.8 MILES
2 IL 104 EB AT IL 111	A	8.8 MILES
3 IL 111 NB AT IL 104	B	8.8 MILES
4 IL 4 SB AT IL 104	B	1.9 MILES
5 IL 104 WB AT IL 4	A	1.9 MILES
6 IL 4 NB AT IL 104	B	1.9 MILES
7 IL 104 WB, WEST OF I-55	A	8.6 MILES
8 IL 104 EB, SOUTH OF 72BL	A	24.8 MILES

GENERAL NOTES:

MAXIMUM WIDTH SIGNS SHALL BE PAID FOR AS ONE LUMP SUM ITEM "WIDTH RESTRICTION SIGNING".

ALL SIGNS SHALL BE POST MOUNTED IN ACCORDANCE WITH ARTICLE 701.14 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

MODEL: Default  
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USER NAME = Robert.Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 6/20/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WIDTH RESTRICTION SIGNING**

SCALE: N/A SHEET 1 OF 1 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	13
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				

Bench Mark: Chiseled square on top center of concrete box culvert just south from the north headwall, 0.40 miles west of Hunley Road @ Sta. 357+29.30, 20.22' Lt., Elevation 634.68

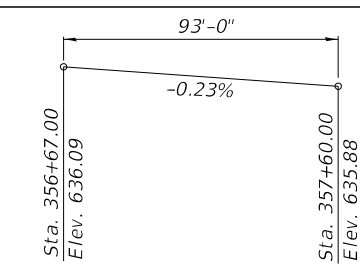
Existing Structure: S.N. 084-7061 was built at an unknown time under SBI Route 104, Section 139. In 1931 the culvert was extended on its north end and later was made deeper. The existing structure is a 12' x 7'-6" x 52'-6" single box culvert. The existing structure shall be removed and replaced.

Traffic Control: Traffic to be maintained utilizing Stage Construction.

Salvage: None

**INDEX OF SHEETS**

- 1 General Plan and Elevation
- 2 General Details
- 3 Stage Removal and Construction
- 4 Culvert Plan
- 5-6 Culvert Details
- 7 Boring Logs



**PROFILE GRADE**  
(Along  $\bar{C}$  Roadway IL Rte. 104)

$\nabla$  D.H.W.(50) Elev. 633.7  
 $\nabla$  E.W.S.E. Elev. 628.6  
U.S. Flow Line Elev. 627.1

**GENERAL NOTES**

The design fill height for this structure is 1.1 ft. The precast box culvert sections shall conform to the requirements of ASTM C 1577. Drain holes shall be provided on exterior culvert walls for each precast box segment and one drain hole shall be provided in each wingwall for end sections of box culverts with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. Precast option for Box Culvert End Sections is not allowed. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

Box section dimensions, materials, and reinforcement details for Precast Box Culverts shall be according to the requirements for ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Reinforcement (circumferential and longitudinal) in the precast concrete box culvert segments immediately adjacent to the box culvert end sections that is being lapped with the end section reinforcement shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

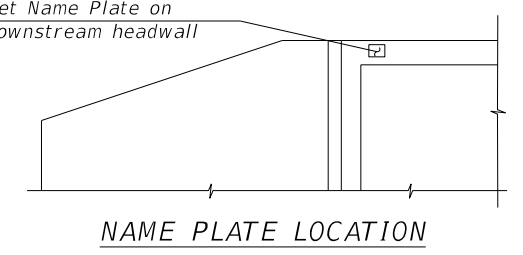
The joints between precast box sections shall be sealed, all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13" wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

See Roadway Plans for Class A3 Riprap details and quantity.

Set Name Plate on downstream headwall

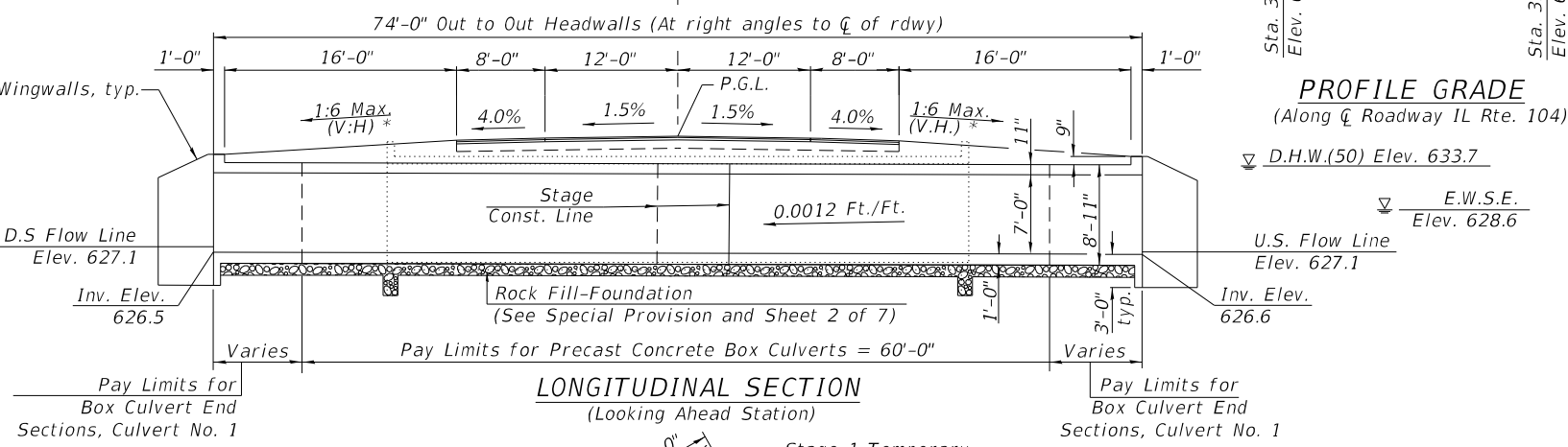
**PRECAST OPTION FOR END SECTIONS IS NOT ALLOWED**



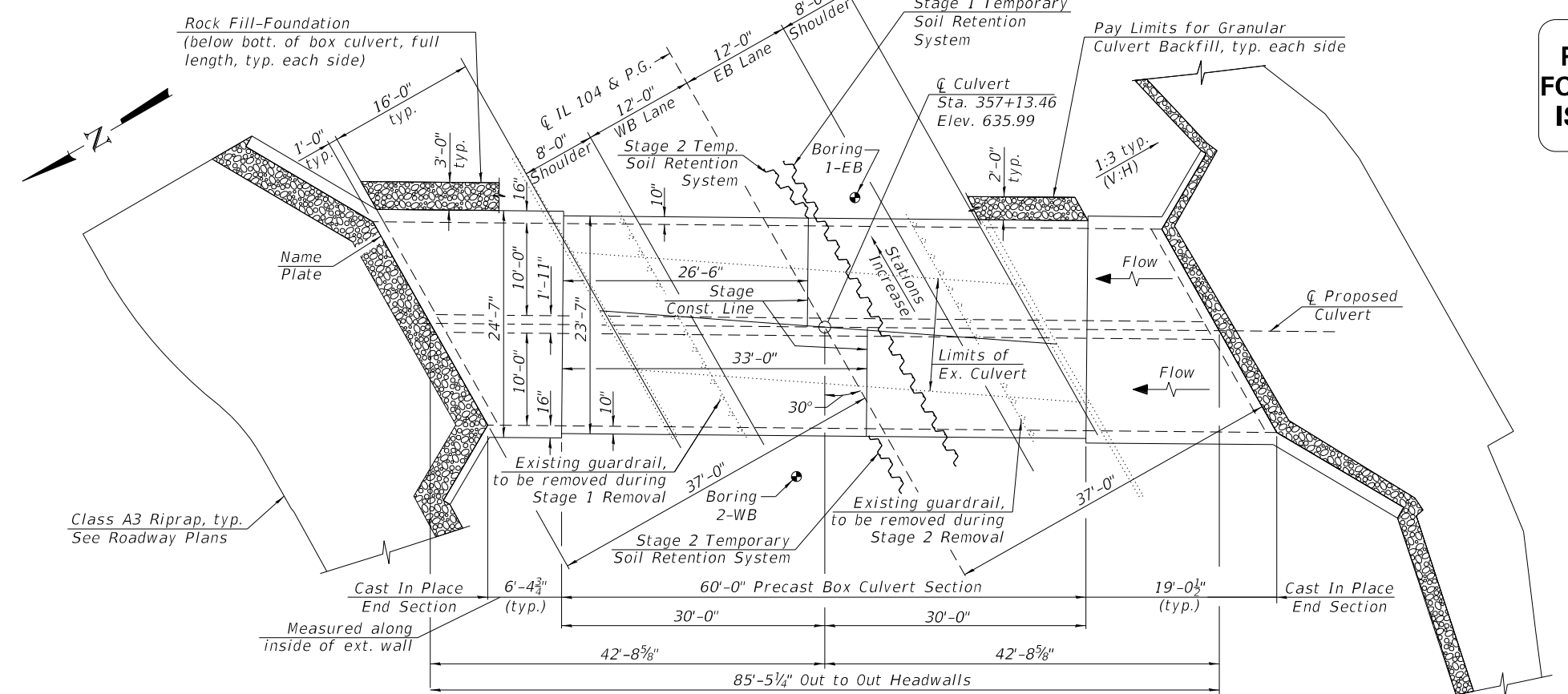
Notes:  
\* If any part of the barrel is exposed, the roadway fill shall be warped to provide 6 inches minimum cover.

Class C concrete patch, 12 inches thick and 40 feet wide, is not shown in plan view for clarity.

See Sheet 3 of 7 for Stage Construction details not shown.



**LONGITUDINAL SECTION**  
(Looking Ahead Station)



**PLAN**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 1	Each	1
Name Plates	Each	1
Temporary Soil Retention System	Sq. Ft.	584
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts 10' X 7'	Foot	120
Geocompostive Wall Drain	Sq. Yd.	257
Membrane Waterproofing System for Buried Structures	Sq. Yd.	257
Granular Culvert Backfill	Cu. Yd.	166
Rock Fill - Foundation	Ton	189
Temporary Support System	L.S.	1

**LOADING HL-93**

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

**DESIGN SPECIFICATIONS**

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi (Concrete)  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST UNITS**

$f'_c = 5,000$  psi (Concrete)  
 $f_y = 65,000$  psi (Welded Wire Fabric)

**GENERAL PLAN & ELEVATION**

IL 104 OVER LITTLE PANTHER CREEK

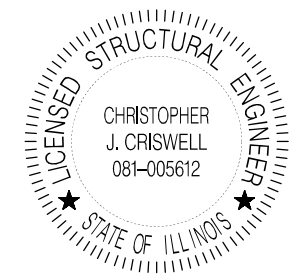
FAP ROUTE 753

SECTION 139C

SANGAMON COUNTY

STATION 357+13.46

STRUCTURE NO. 084-2061



DATE: 08-21-2023  
LICENSE EXPIRES: 11-30-2024

*Christopher J. Criswell*  
Christopher J. Criswell  
Licensed Structural Engineer  
State of Illinois No. 081-005612

Sheets covered by this seal: Culvert Sheets 14-20

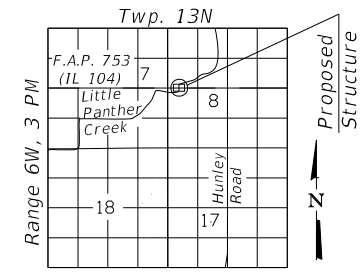
**WATERWAY INFORMATION**

Drainage Area = 1.3 mi <sup>2</sup>		Exist. Overtopping Elev. 634.0 @ Sta. 363+12		Prop. Overtopping Elev. 634.0 @ Sta. 363+12		
Flood Event	Freq. Yr.	Discharge C.F.S.	Opening Sq. Ft. Exist. Prop.	Nat. H.W.E. Exist. Prop.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Ex. Overtop	10	244	61 124	633.3 0.8	0.6	634.1 633.9
Pr. Overtop	15	274	62 125	633.4 0.9	0.6	634.3 634.0
Design	50	399	65 128	633.7 1.1	0.7	634.8 634.4
Base	100	466	66 128	633.8 1.2	0.7	634.9 634.5
Max Calc	500	690	66 128	633.8 1.1	0.7	634.9 634.5

10 year velocity through existing structure = 3.7 fps  
10 year velocity through prop. structure = 1.9 fps

STATION 357+13.46  
BUILT 202\_ BY  
STATE OF ILLINOIS  
F.A.P. RT. 753 SECTION 139C  
LOADING HL-93  
STRUCTURE NO. 084-2061

**NAME PLATE**  
See Std. 515001-04



**LOCATION SKETCH**



USER NAME	DESIGNED	REVISIONS
Robert.Miles	RAM	-
	TAA	-
	CJC	-
		-






STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

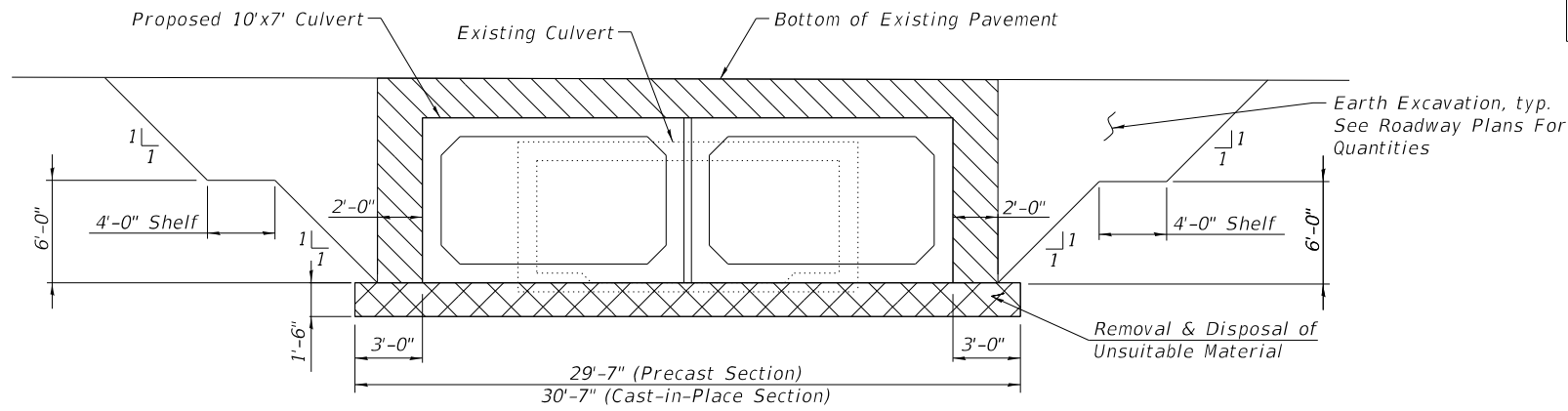
GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 084-2061

SCALE: N/A SHEET 1 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	14
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				

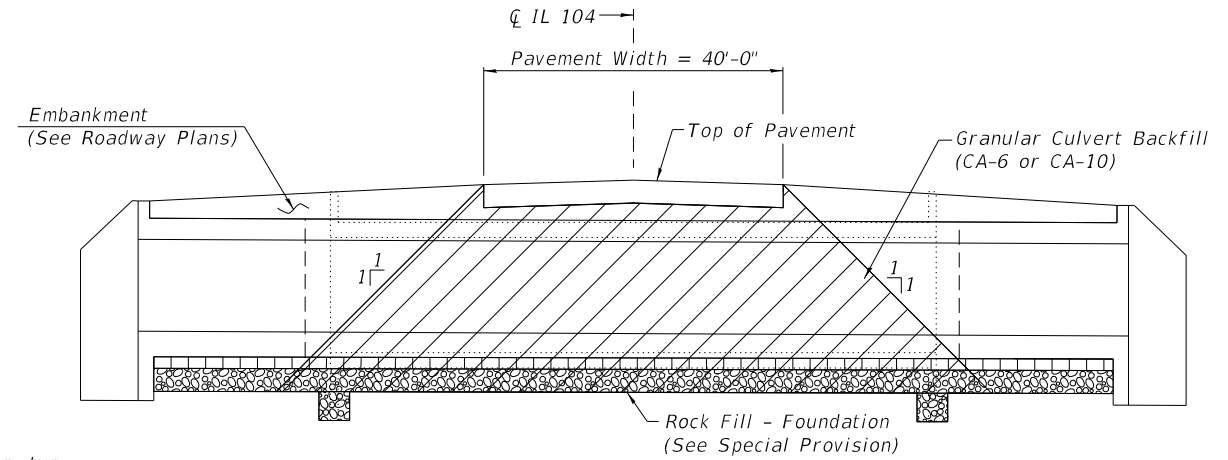
**LEGEND**

-  Excavation for Rock Fill - Foundation
-  Granular Culvert Backfill
-  Structure Excavation
-  Rock Fill
-  Bedding Material



**EXCAVATION LIMITS - ALONG ROADWAY**

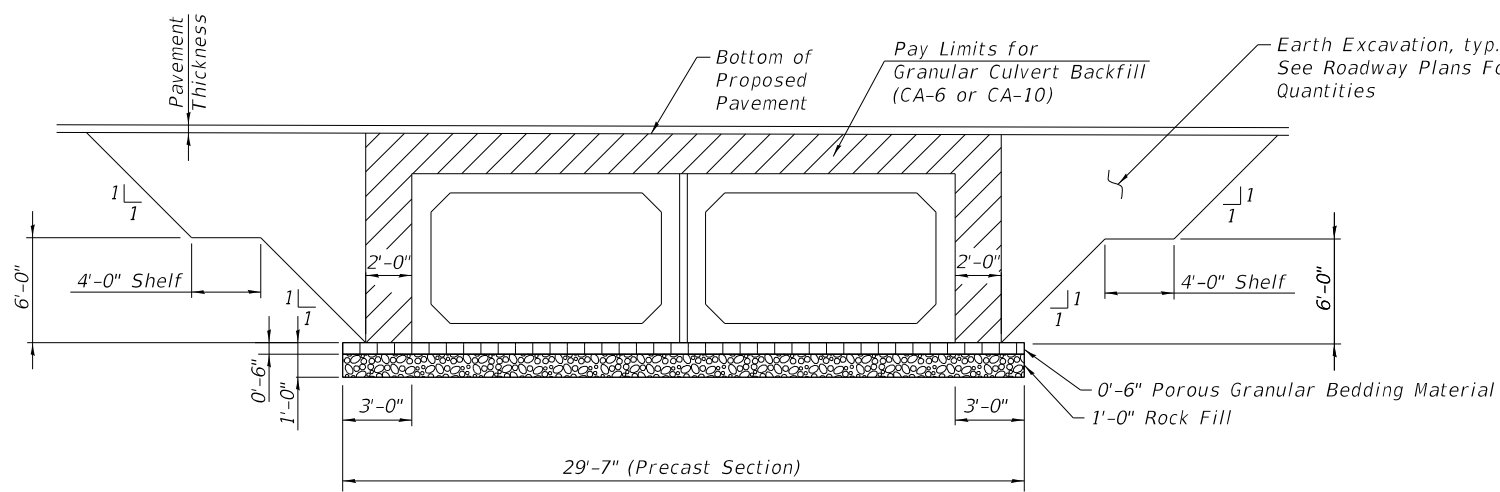
Note:  
The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.



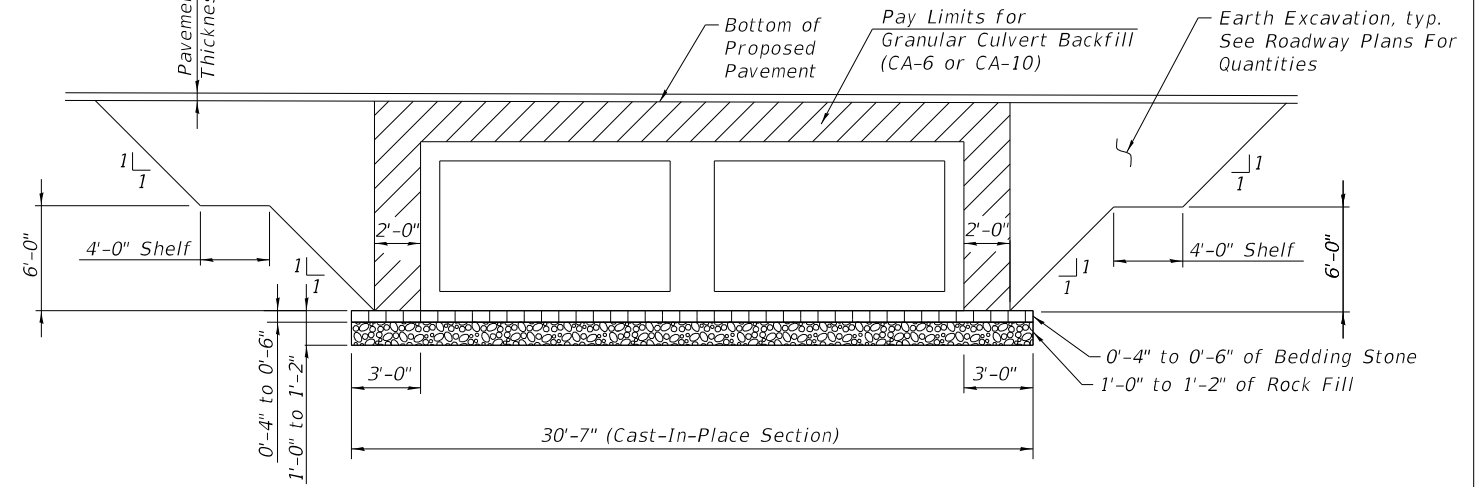
**CROSS SECTION GRANULAR CULVERT BACKFILL DETAIL**

**Notes:**

- The Rock Fill under the Cast-In-Place Box Culvert End Sections shall be capped with 4 to 6 inches of CA-7 or CA-11 Bedding Stone. Cost of Rock Fill and Bedding Stone material included with unit cost of Rock Fill-Foundation.
- The Rock Fill under the Precast Sections of culvert shall be capped with 6 inches of Porous Granular Bedding Material. Cost of Rock Fill included with unit cost of Rock Fill-Foundation. Cost of Porous Granular Bedding Material included with unit cost of Precast Concrete Box Culverts 10' x 7'.
- The limits and quantities of Rock Fill-Foundation shown may be modified by the Engineer following excavation to plan grade.
- The limits of Removal and Disposal of Unsuitable Material shown may be modified by the Engineer following excavation to plan grade. Cost included in Rock Fill-Foundation.
- The cost of structure excavation shall be included in the unit cost of Precast Concrete Box Culverts 10' X 7'.



**PROFILE GRANULAR CULVERT BACKFILL LIMITS (Precast Section)**



**PROFILE GRANULAR CULVERT BACKFILL LIMITS (Cast-In-Place Section)**

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 ILLINOIS DESIGN FIRM NO 18400586-0002  
 WWW.BARTLETTWEST.COM

**Bartlett & West**  
 1207 SINCLAIR DRIVE, SUITE 2 • JERSEYVILLE, IL 62052  
 PHONE 513-434-0001  
 ILLINOIS DESIGN FIRM NO 18400586-0002  
 WWW.BARTLETTWEST.COM

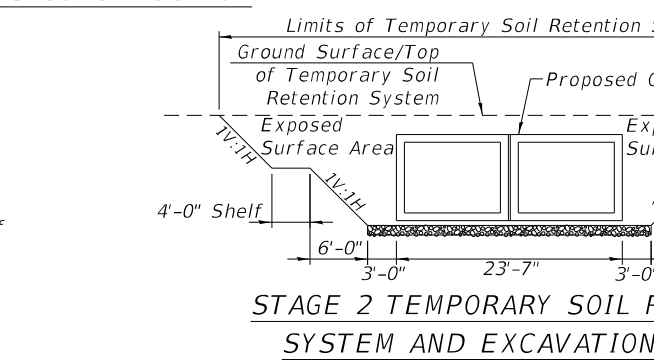
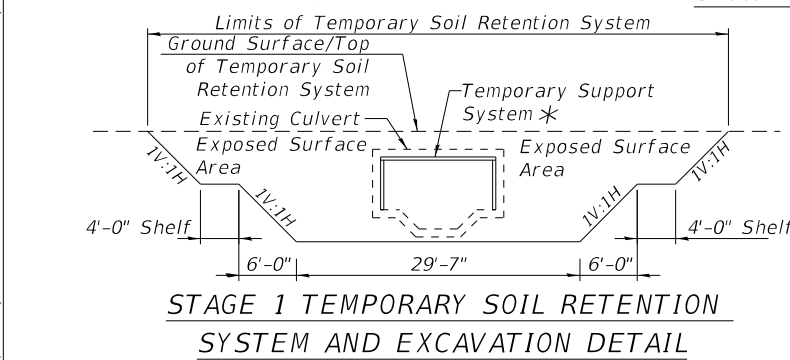
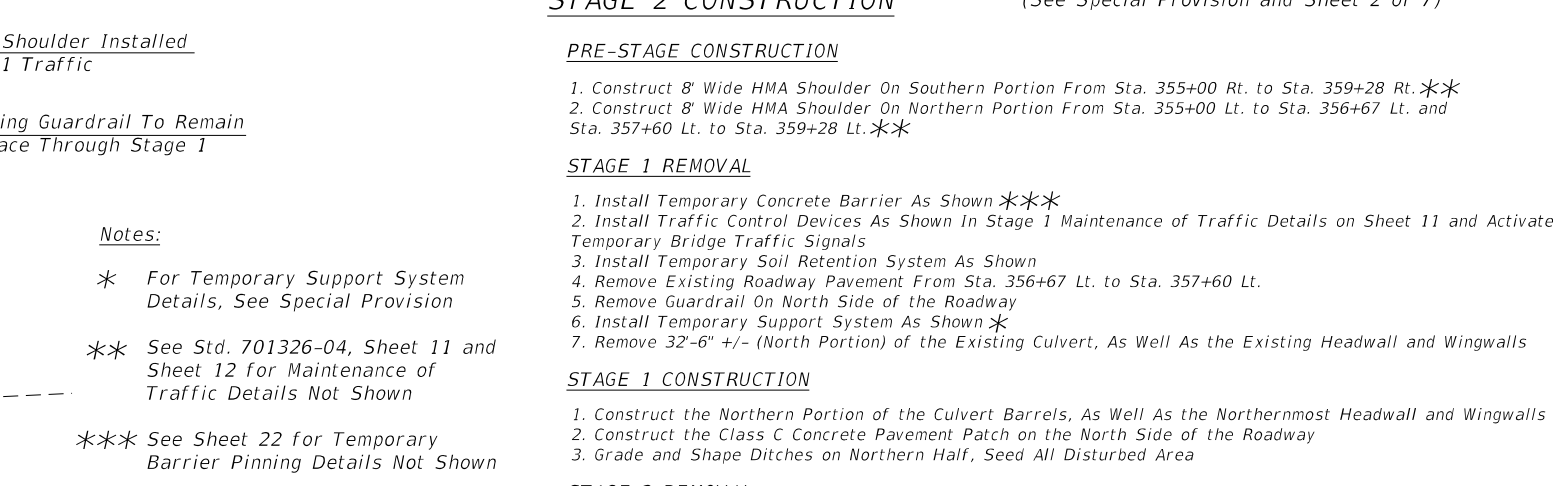
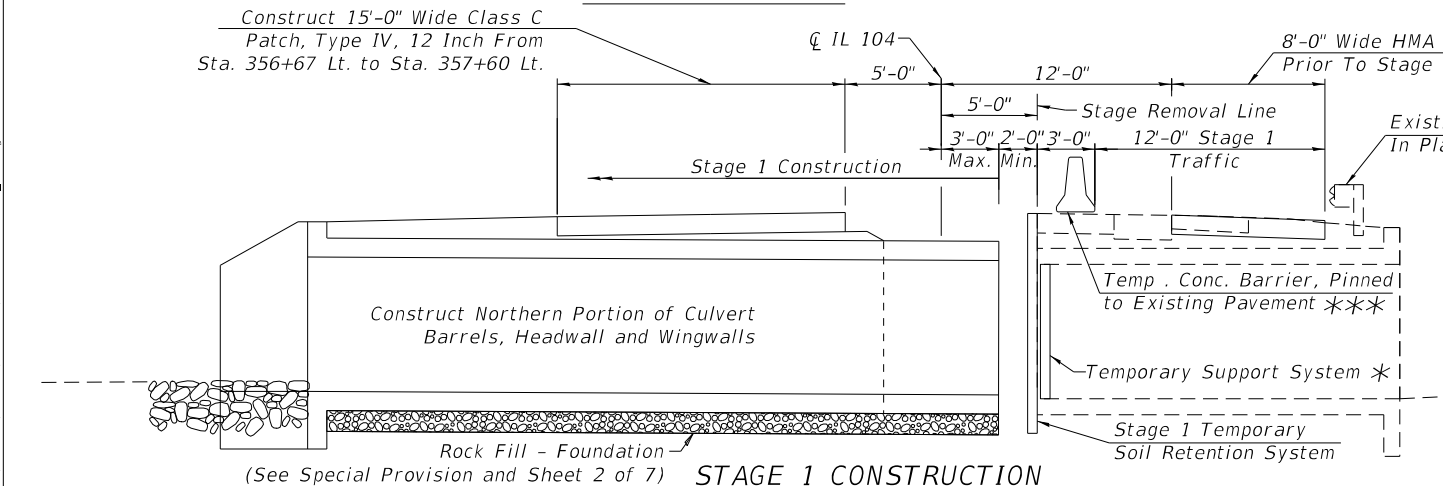
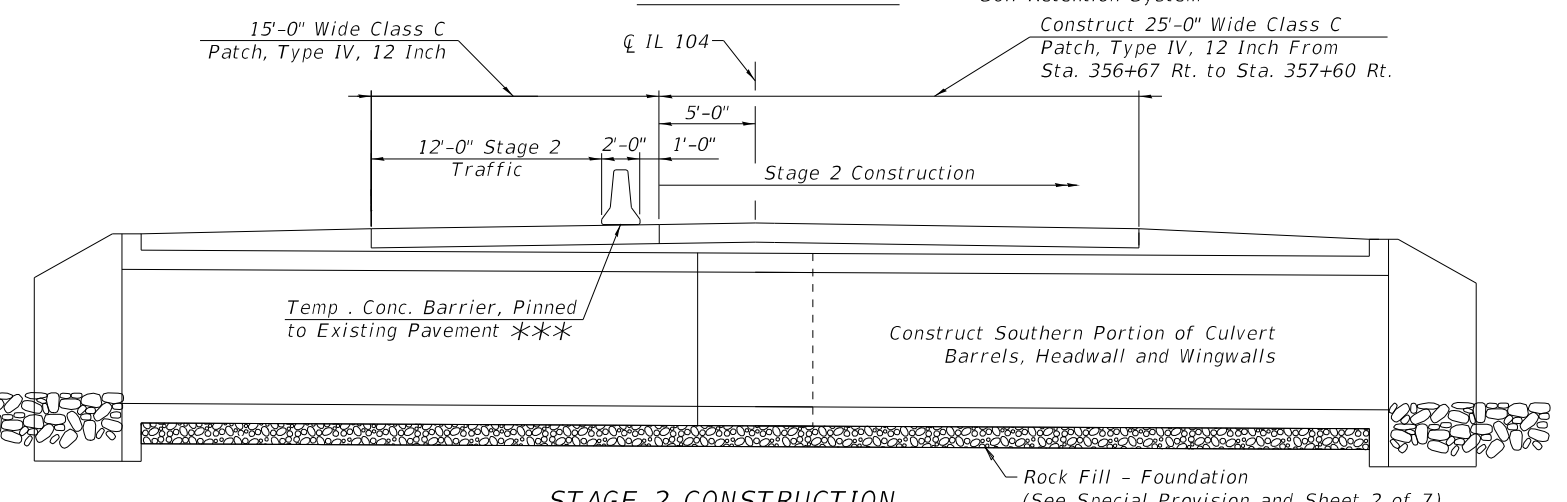
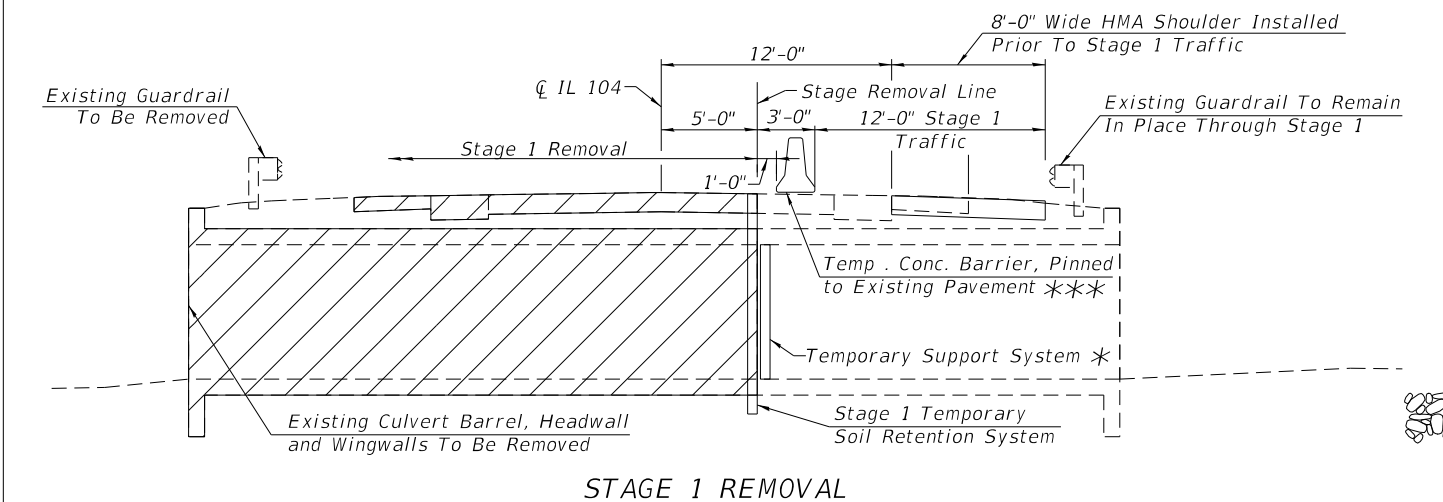
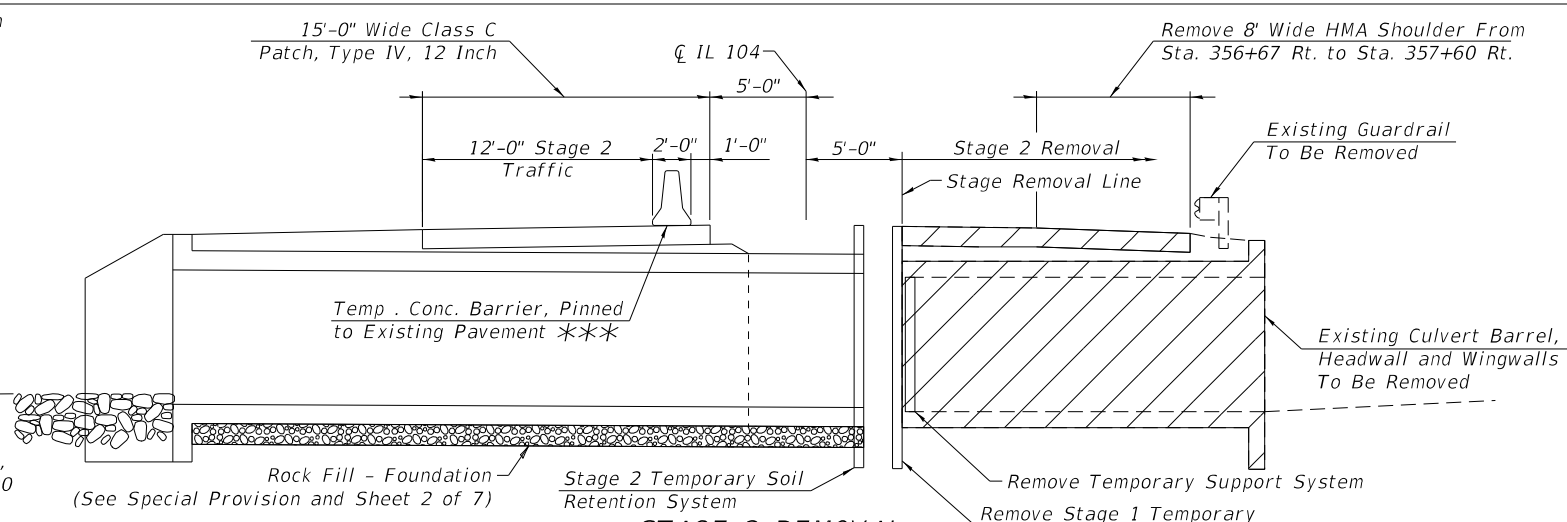
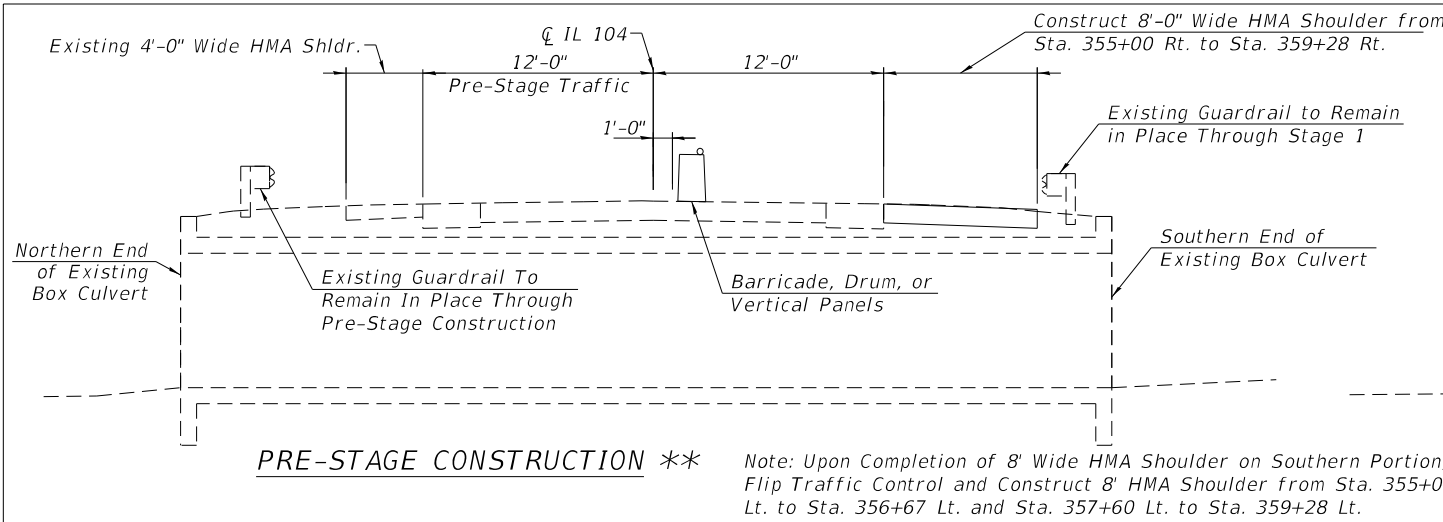
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	DRAWN - TAA	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - CJC	REVISED -
PLOT DATE = 6/30/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DETAILS  
 STRUCTURE NO. 084-2061**

SCALE: N/A SHEET 2 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	15
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



- Notes:**
- \* For Temporary Support System Details, See Special Provision
  - \*\* See Std. 701326-04, Sheet 11 and Sheet 12 for Maintenance of Traffic Details Not Shown
  - \*\*\* See Sheet 22 for Temporary Barrier Pinning Details Not Shown

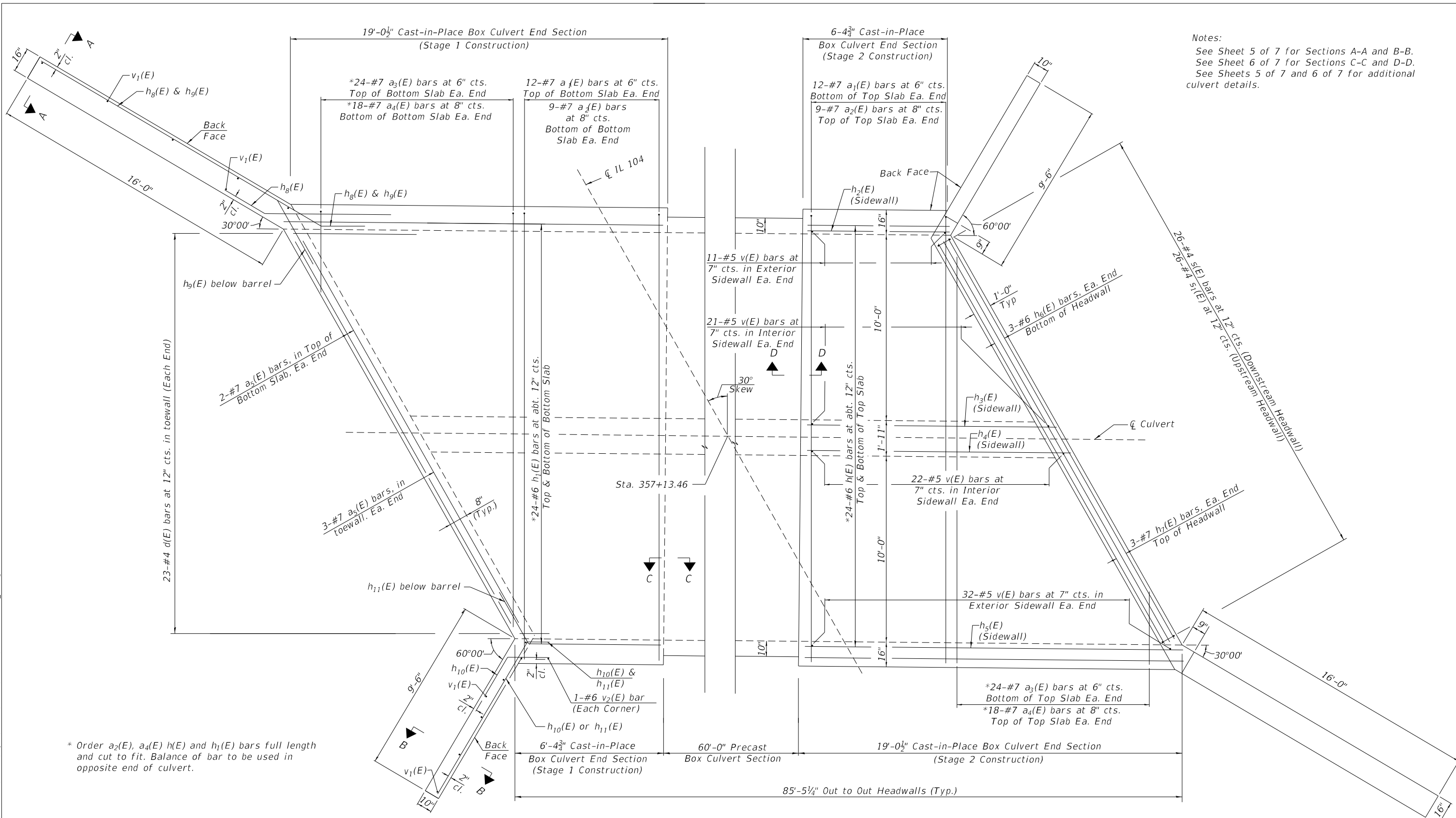
- PRE-STAGE CONSTRUCTION**
1. Construct 8' Wide HMA Shoulder On Southern Portion From Sta. 355+00 Rt. to Sta. 359+28 Lt. \*\*
  2. Construct 8' Wide HMA Shoulder On Northern Portion From Sta. 355+00 Lt. to Sta. 356+67 Lt. and Sta. 357+60 Lt. to Sta. 359+28 Lt. \*\*
- STAGE 1 REMOVAL**
1. Install Temporary Concrete Barrier As Shown \*\*\*
  2. Install Traffic Control Devices As Shown In Stage 1 Maintenance of Traffic Details on Sheet 11 and Activate Temporary Bridge Traffic Signals
  3. Install Temporary Soil Retention System As Shown
  4. Remove Existing Roadway Pavement From Sta. 356+67 Lt. to Sta. 357+60 Lt.
  5. Remove Guardrail On North Side of the Roadway
  6. Install Temporary Support System As Shown \*
  7. Remove 32'-6" +/- (North Portion) of the Existing Culvert, As Well As the Existing Headwall and Wingwalls
- STAGE 1 CONSTRUCTION**
1. Construct the Northern Portion of the Culvert Barrels, As Well As the Northernmost Headwall and Wingwalls
  2. Construct the Class C Concrete Pavement Patch on the North Side of the Roadway
  3. Grade and Shape Ditches on Northern Half, Seed All Disturbed Area
- STAGE 2 REMOVAL**
1. Install Temporary Concrete Barrier As Shown \*\*\*
  2. Adjust Traffic Control Devices and Temporary Bridge Traffic Signals As Shown On Stage 2 Maintenance of Traffic Details on Sheet 12
  3. Install Temporary Soil Retention System As Shown
  4. Remove Existing Roadways and Shoulder Pavement From Sta. 356+67 Rt. to Sta. 357+60 Rt.
  5. Remove Guardrail On South Side of the Roadway
  6. Remove Temporary Support System and Stage 1 Temporary Soil Retention System
  7. Remove 20'-0" +/- (South Portion) of the Existing Culvert, As Well As the Existing Headwall and Wingwalls
- STAGE 2 CONSTRUCTION**
1. Construct the Southern Portion of the Culvert Barrels, As Well As the Southernmost Headwall and Wingwalls
  2. Construct the Class C Concrete Pavement Patch On the South Side of the Roadway
  3. Grade and Shape Ditches On Southern Half, Seed All Disturbed Area
  4. Install Pavement Marking

USER NAME = Robert.Miles	DESIGNED - RAM	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN - TAA	REVISED -
PLOT DATE = 6/30/2023	CHECKED - CJC	REVISED -
	DATE -	REVISED -

<b>STAGE REMOVAL AND CONSTRUCTION    STRUCTURE NO. 084-2061</b>			
SCALE: N/A	SHEET 3	OF 7 SHEETS	STA. N/A TO STA. N/A

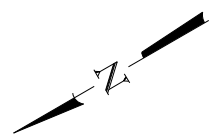
F.A.P. RTE. 753	SECTION 139C	COUNTY SANGAMON	TOTAL SHEETS 27	SHEET NO. 16
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				





Notes:  
 See Sheet 5 of 7 for Sections A-A and B-B.  
 See Sheet 6 of 7 for Sections C-C and D-D.  
 See Sheets 5 of 7 and 6 of 7 for additional culvert details.

\* Order  $a_2(E)$ ,  $a_4(E)$   $h(E)$  and  $h_1(E)$  bars full length and cut to fit. Balance of bar to be used in opposite end of culvert.



SHOWING TOEWALL

SHOWING HEADWALL

PLAN

MODEL: Defaul  
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 ILLINOIS DESIGN FIRM NO 18400586-0002  
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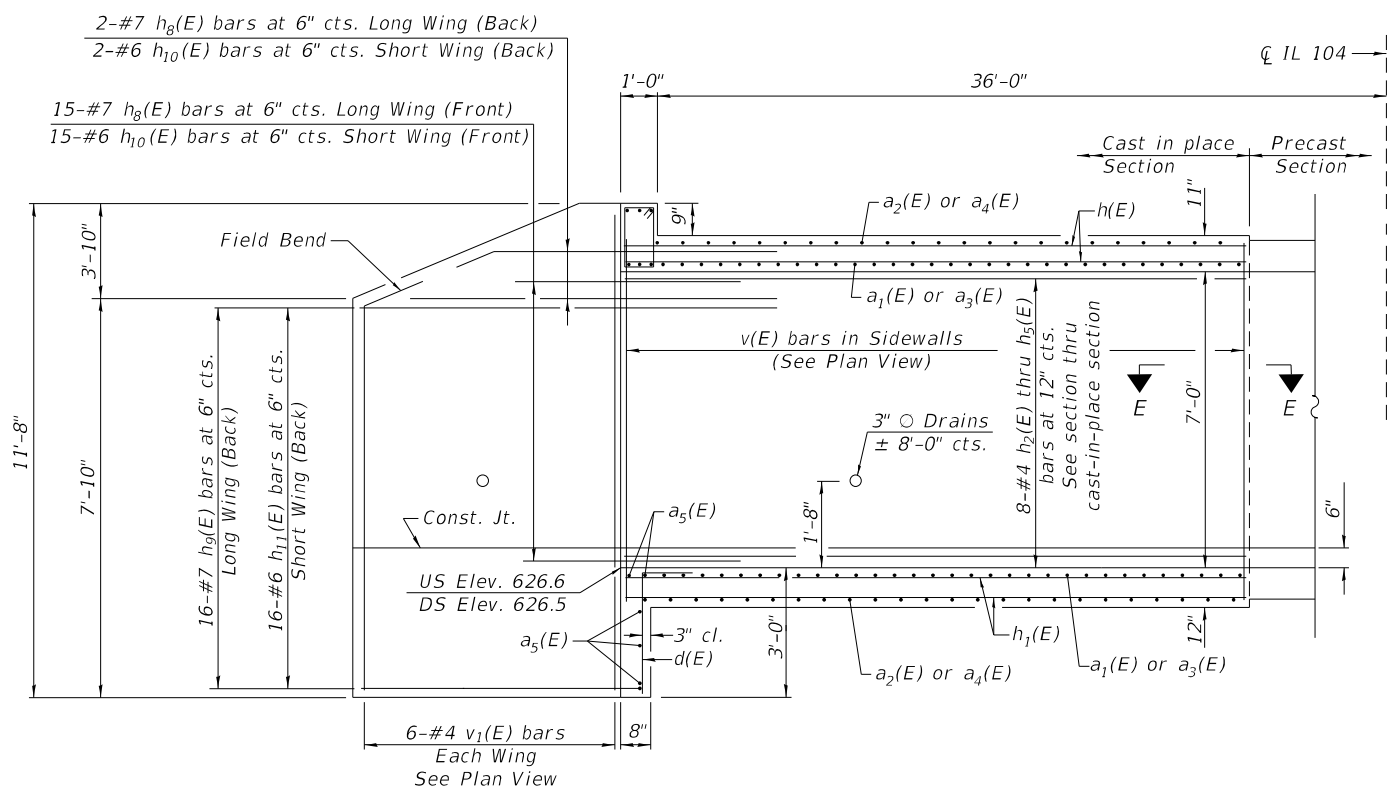
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PLOT SCALE = 100.0000' / in.	DRAWN - TAA	REVISED -
PLOT DATE = 6/30/2023	CHECKED - CJC	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS  
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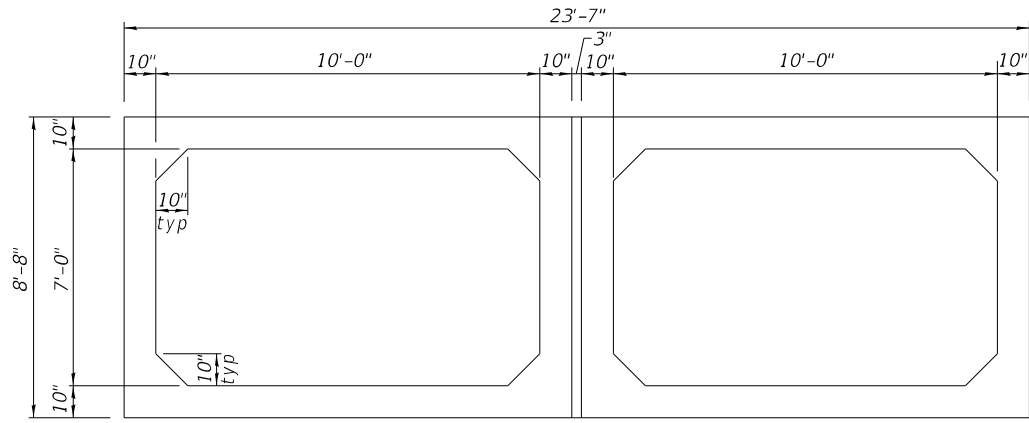
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CULVERT PLAN  
 STRUCTURE NO. 084-2061

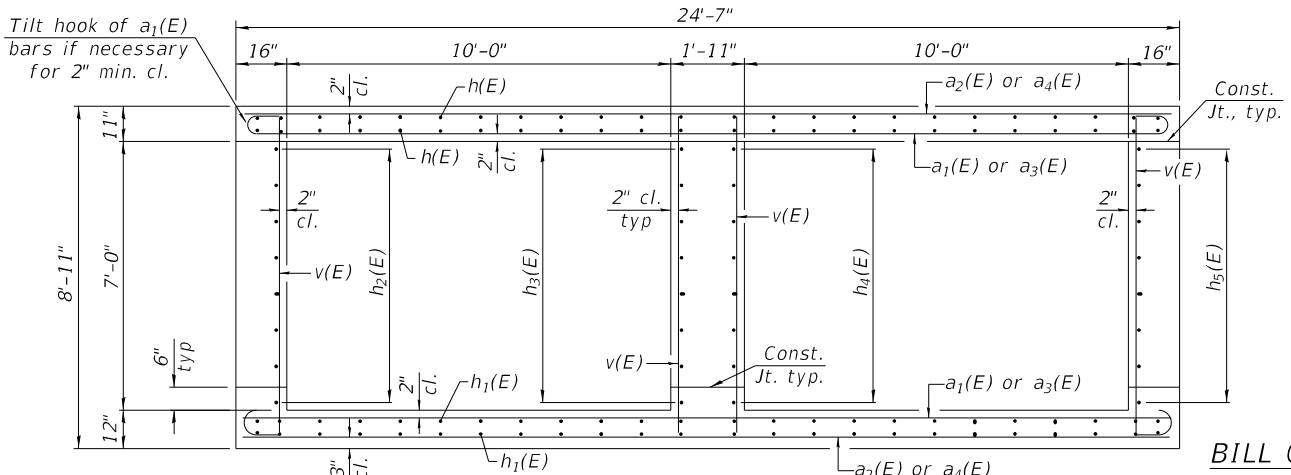
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	17
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



**LONGITUDINAL SECTION**  
Dimensions at Rt. L's to  $\bar{C}$  Roadway



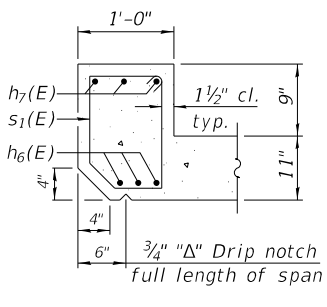
**SECTION THRU PRECAST SECTION**



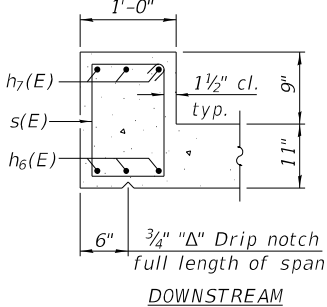
**SECTION THRU CAST-IN-PLACE SECTION**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
a <sub>1</sub> (E)	48	#7	25'-11"	C	
a <sub>2</sub> (E)	36	#7	24'-3"	—	
a <sub>3</sub> (E)	48	#7	26'-1"	—	
a <sub>4</sub> (E)	36	#7	26'-1"	—	
a <sub>5</sub> (E)	10	#7	28'-0"	—	
d(E)	46	#4	4'-5"	L	
h(E)	48	#6	24'-8"	—	
h <sub>1</sub> (E)	48	#6	24'-8"	—	
h <sub>2</sub> (E)	16	#4	5'-10"	—	
h <sub>3</sub> (E)	16	#4	11'-10"	—	
h <sub>4</sub> (E)	16	#4	12'-8"	—	
h <sub>5</sub> (E)	16	#4	18'-8"	—	
h <sub>6</sub> (E)	6	#6	26'-10"	—	
h <sub>7</sub> (E)	6	#7	26'-10"	—	
h <sub>8</sub> (E)	34	#7	8'-0"	—	
h <sub>9</sub> (E)	32	#7	20'-4"	—	
h <sub>10</sub> (E)	34	#6	8'-0"	—	
h <sub>11</sub> (E)	32	#6	12'-5"	—	
s(E)	26	#4	5'-1"	L	
s <sub>1</sub> (E)	26	#4	4'-11"	L	
v(E)	172	#5	8'-6"	—	
v <sub>1</sub> (E)	24	#4	11'-4"	—	
v <sub>2</sub> (E)	4	#6	8'-6"	—	
* Reinforcement Bars, Epoxy Coated				Pound	18,990
** Box Culvert End Sections, Culvert No. 1				Each	2
Precast Concrete Box Culverts, 10' X 7'				Foot	120

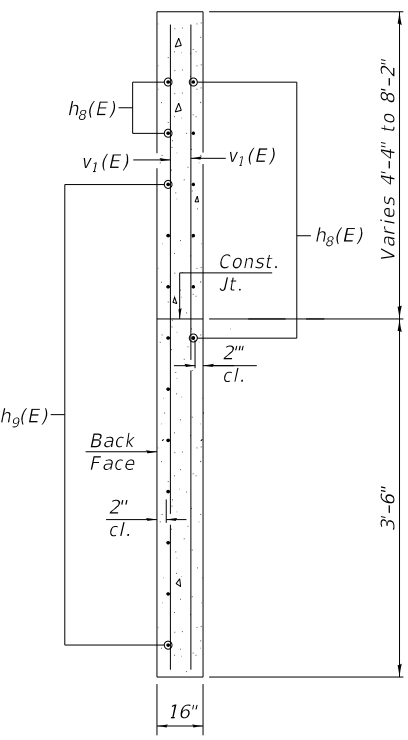


**UPSTREAM**

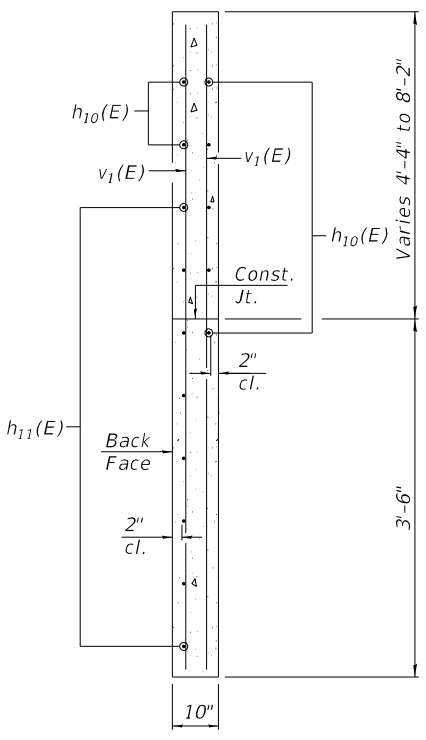


**DOWNSTREAM**

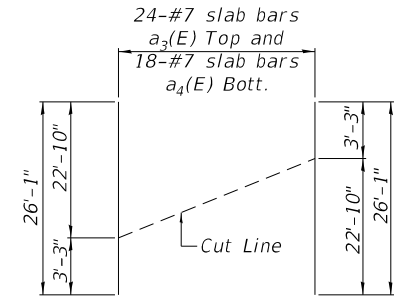
**SECTION THRU HEADWALL**  
(Reinforcement in top slab omitted for clarity)



**SECTION A-A**

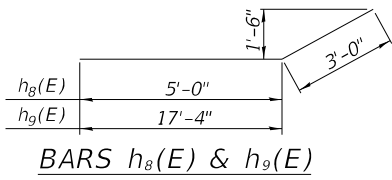


**SECTION B-B**

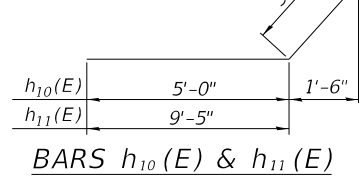


**FIELD CUTTING DIAGRAM**

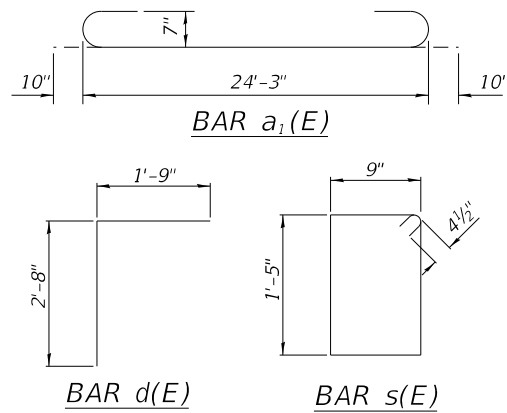
Note:  
Order bars full length. Cut as shown and use remainder of bars in opposite end.



**BARS h<sub>8</sub>(E) & h<sub>9</sub>(E)**

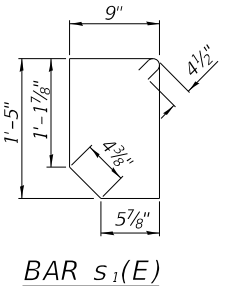


**BARS h<sub>10</sub>(E) & h<sub>11</sub>(E)**



**BAR d(E)**

**BAR s(E)**



**BAR s<sub>1</sub>(E)**

Notes:  
See Sheet 4 of 7 for culvert plan.  
See Sheet 6 of 7 for Section E-E.  
See Sheet 6 of 7 for additional culvert details.

Note: Reinforcement bars designated (E) shall be epoxy coated.



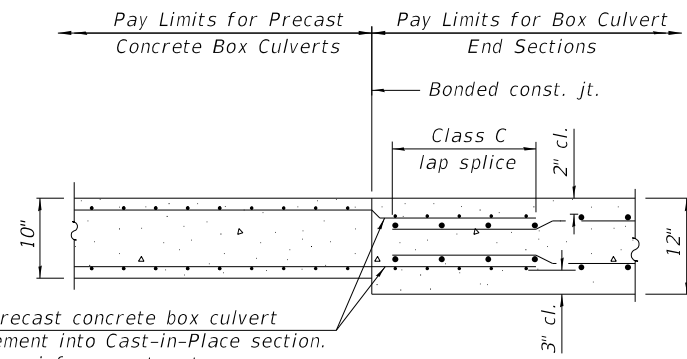
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PLOT SCALE = 100.0000' / in.	DRAWN - TAA	REVISED -
PLOT DATE = 8/7/2023	CHECKED - CJC	REVISED -
	DATE -	REVISED -

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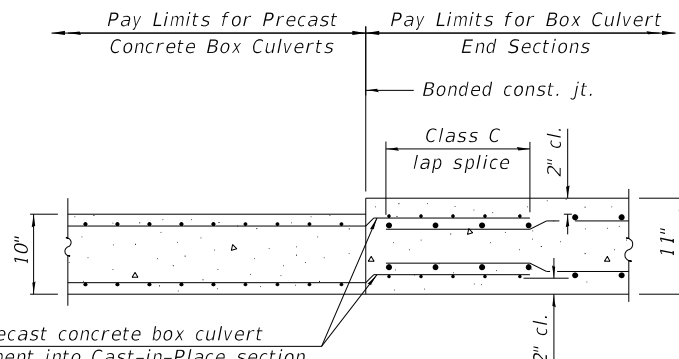
**CULVERT DETAILS  
STRUCTURE NO. 084-2061**

SCALE: N/A SHEET 5 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	18
				CONTRACT NO. 72K83
ILLINOIS FED. AID PROJECT				



**SECTION C-C**  
(Bottom slab)



**SECTION D-D**  
(Top slab)

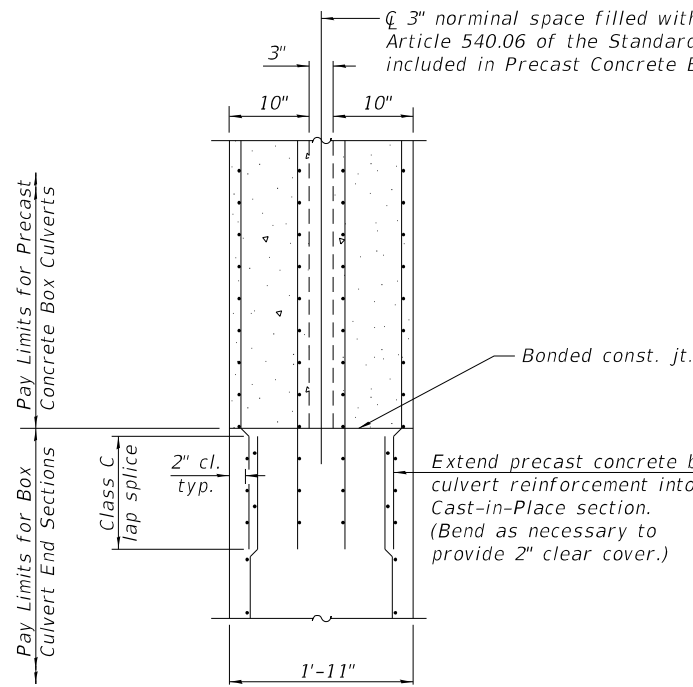
Extend precast concrete box culvert reinforcement into Cast-in-Place section. (Bend top reinforcement mat as necessary to provide required clear cover.)

Extend precast concrete box culvert reinforcement into Cast-in-Place section. (Bend reinforcement mat as necessary to provide 2" clear cover.)

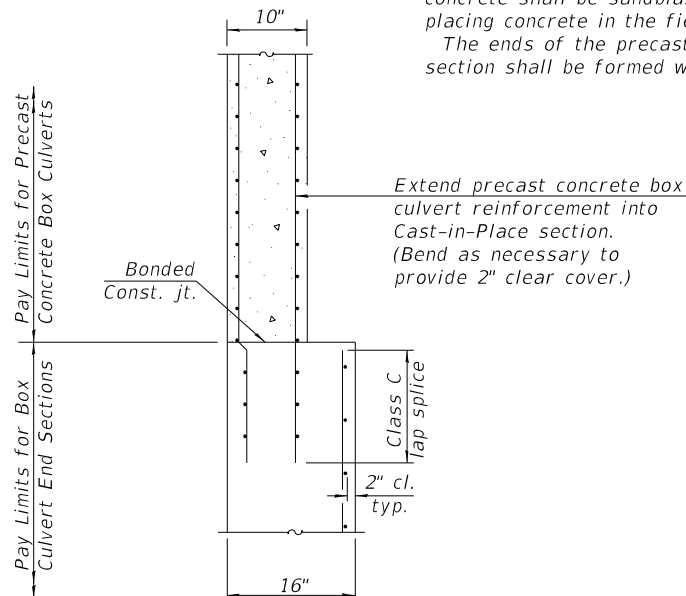
3" nominal space filled with Class SI Concrete per Article 540.06 of the Standard Specifications. Cost included in Precast Concrete Box Culverts 10' X 7'.

**Notes:**

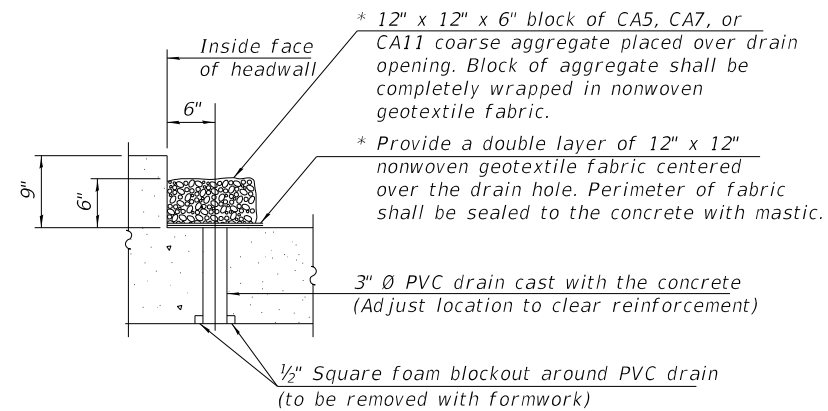
Areas of the precast box culvert in contact with cast-in-place concrete shall be sandblasted, cleaned and wetted prior to placing concrete in the field according to Article 503.09(b). The ends of the precast box sections adjacent to the end section shall be formed without male and female shapes.



**INTERIOR WALL**



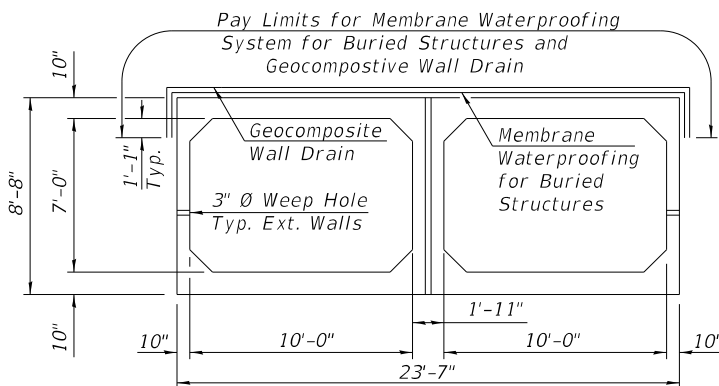
**EXTERIOR SIDEWALLS**



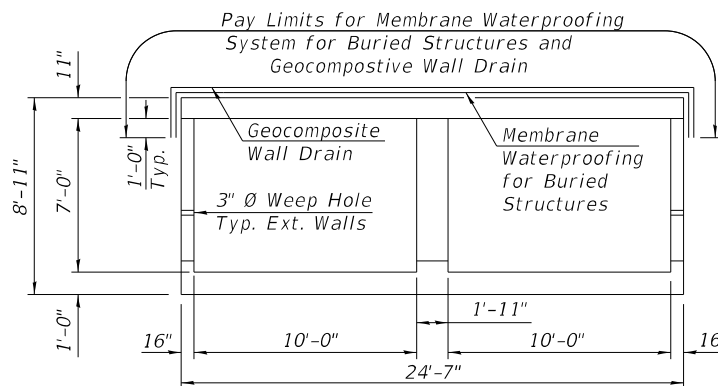
**DRAIN DETAIL**

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections, Culvert No. 1)

\*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



**SECTION THRU PRECAST SECTION**



**SECTION THRU CAST-IN-PLACE SECTION**

**MEMBRANE WATERPROOFING DETAILS**

Note: Geocomposite Wall Drain shall be according to Section 591 of the Standard Specifications, except that concrete nails shall not be used in areas where it overlaps Membrane Waterproofing System for Buried Structures.

MODEL: Default  
 FILE NAME: p:\blades-2w-bentley.com\PROJECTS\DOT\Documents\DOT\Office\Director\6\Projects\DOT\CAD\Drawings\67283-11-Culvert\_Plan.dgn  
 ILLINOIS DESIGN FIRM NO 18406586-0002  
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 1207 SINCLAIR DRIVE, SUITE 2 - JERSEYVILLE, IL 62052  
 PHONE 513-456-0001  
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USER NAME = Robert.Miles	DESIGNED - RAM	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN - TAA	REVISED -
PLOT DATE = 8/2/2023	CHECKED - CJC	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS  
STRUCTURE NO. 084-2061**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	19
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation  
Division of Highways  
District 6

# SOIL BORING LOG

Page 1 of 1

Date 5/11/22

ROUTE IL 104 DESCRIPTION Box Culvert over Little Panther Creek LOGGED BY S. Burke

SECTION LOCATION W1/2, SEC. 8, TWP. 13N, RNG. 6W, 3 PM

COUNTY Sangamon DRILLING METHOD FSA HAMMER TYPE 140# Auto

STRUCT. NO. 084-7061prop  
Station  
BORING NO. 1-EB  
Station  
Offset  
Ground Surface Elev. ft 635.66 ft

DEPTH TH (ft)	BLOW S (ft)	UCS Qu (tsf)	MOIST S (%)	Soil Description			
				Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	Notes
0				628.8	628.0		drill thru pavement 9" Dk Gray Moist SILTY CLAY
2	1.8	41					
3	P						Auger Refusal Rock Chips in Auger FREE WATER
				614.2			
							Upon Completion Plugged ft After Hrs. Plugged ft
				613.16			Boring Complete
0							poor recovery rock jammed in barrel
3	1.5	23					
5	P						
1							
2	0.7	29					
3	B						
0							
1	0.7	31					
3	B						
				624.66			Dk Gray Moist SILTY CLAY LOAM
0							
2	0.8	25					
2	B						
				622.66			Dk Gray V. Moist SILTY CLAY
0							
0	0.4	36					
0	B						
15							
				620.16			Gray Moist SILTY CLAY LOAM (TILL)
0							
0	1.3	23					
3	B						
0							
0	0.5	27					soft from 19.25' to 19.5'
2	B						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)  
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

BORING 1-EB



Illinois Department of Transportation  
Division of Highways  
District 6

# SOIL BORING LOG

Page 1 of 1

Date 5/11/22

ROUTE IL 104 DESCRIPTION Box Culvert over Little Panther Creek LOGGED BY S. Burke

SECTION LOCATION W1/2, SEC. 8, TWP. 13N, RNG. 6W, 3 PM

COUNTY Sangamon DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 084-7061prop  
Station  
BORING NO. 2-WB  
Station  
Offset  
Ground Surface Elev. ft 635.77 ft

DEPTH TH (ft)	BLOW S (ft)	UCS Qu (tsf)	MOIST S (%)	Soil Description			
				Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	Notes
0				628.8	628.0		drilled thru pavement 9" Gray Moist SILTY CLAY
0							
2	1.5	24					Med Gray Moist SILTY CLAY LOAM TILL FREE WATER (continued)
1	P						Moist
1							
2	1.5	26					poor recovery Gray
2	P						
5							
				629.77			Gray Fine to Med Grained SAND
0							
2	1.2	27					Med Gray Moist CLAY w/ Iron oxide nodules sample broken
2	P						
				627.27			Boring Complete
1							
2	0.2	32					Lt Gray and Tan V. Moist SILT
3	B						
10							
				624.77			Med Gray V. Moist SILT LOAM
0							
0	0.7	24					
1	B						
				622.77			Med Gray Moist SILTY CLAY LOAM TILL FREE WATER
0							
0	0.6	26					
1	B						
15							
0							
0	1.2	24					Lt Gray
2	B						
0							
0	0.2	18					V. Moist
0	B						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)  
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

BORING 2-WB

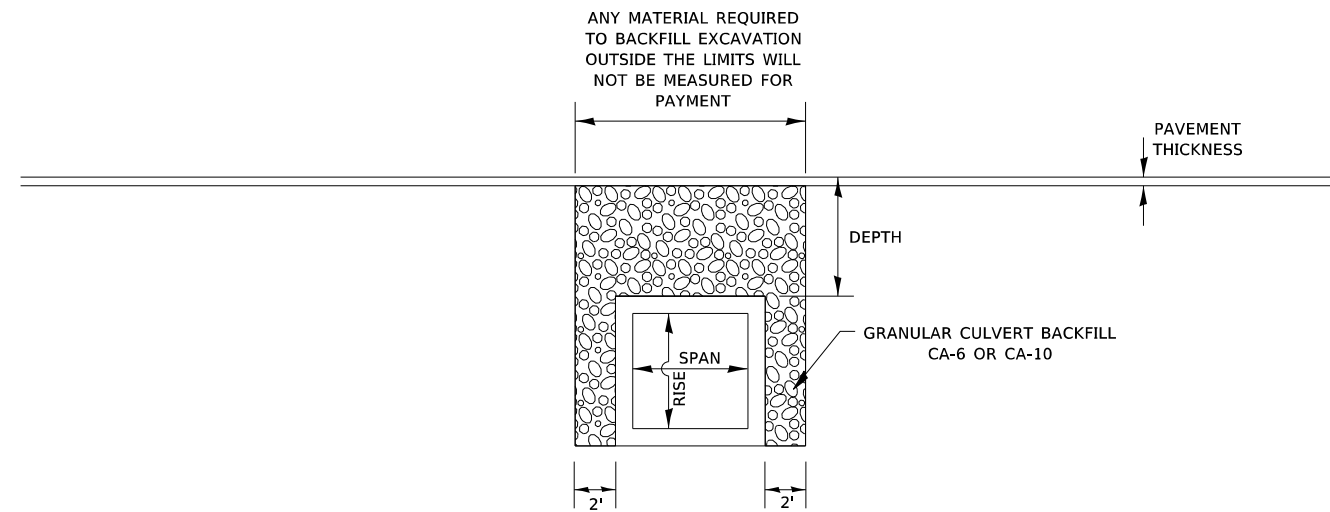
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PHONE 513-434-001  
ILLINOIS DESIGN FIRM NO 18400586-0002  
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USER NAME = Robert.Miles	DESIGNED - RAM	REVISED -
	DRAWN - TAA	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED - CJC	REVISED -
PLOT DATE = 6/30/2023	DATE -	REVISED -

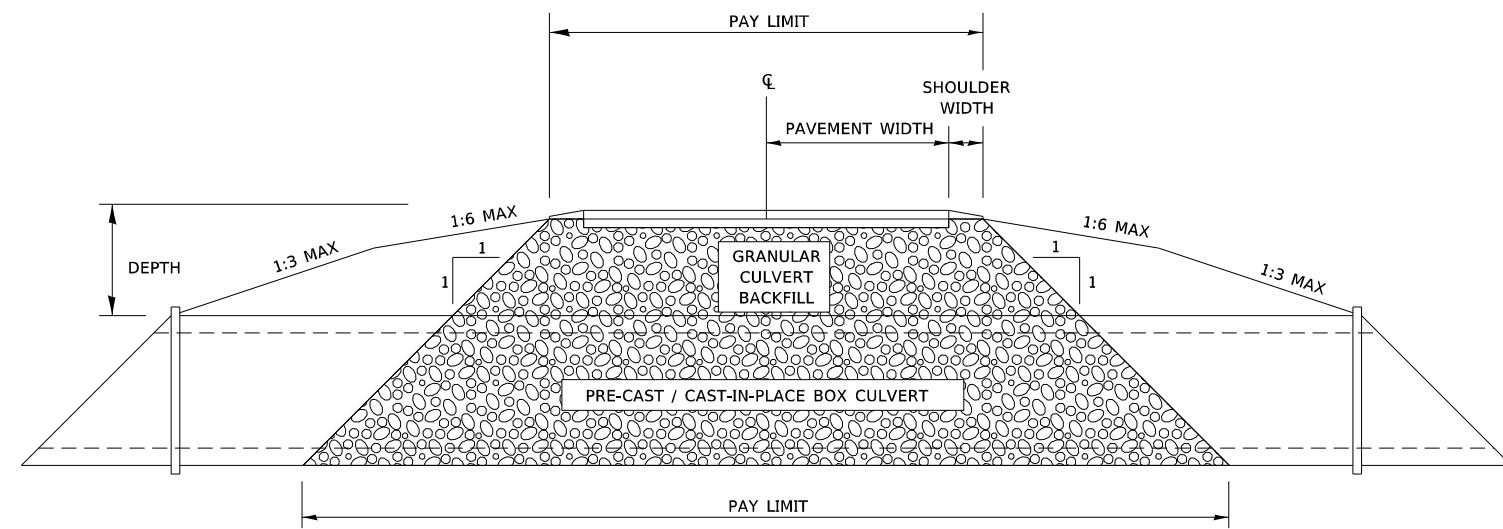
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 084-2061		753	139C	SANGAMON	27	20
SCALE: N/A		SHEET 7 OF 7 SHEETS		CONTRACT NO. 72K83		
STA. N/A TO STA. N/A		ILLINOIS FED. AID PROJECT				



- DEPTH OF FILL > 2' & < 8'
- DEPTH OF FILL < SPAN OF LARGEST BOX CONFIGURATION

**PROFILE GRANULAR BACKFILL DETAIL  
FOR EXISTING ALIGNMENTS & CONSTRUCTION**



**CROSS SECTION GRANULAR BACKFILL DETAIL  
FOR EXISTING ALIGNMENTS & CONSTRUCTION**

MODEL: Default  
 FILE: MainE\_Pix\\ludac-296.bentley.com:PHWDOT\Documents\DOT Offices\District 6\Projects\0672683\CADD\AutoCAD\Notes\0672683-21-Details.dgn

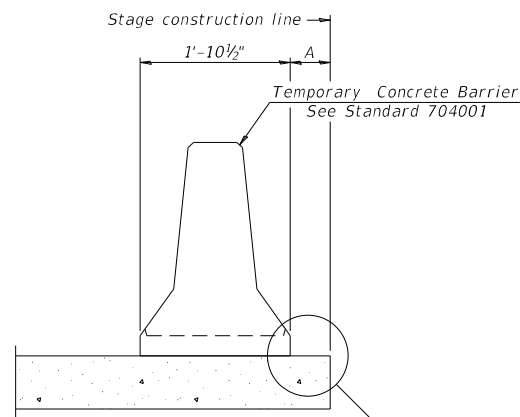
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	DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/22/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MISCELLANEOUS DETAILS  
GRANULAR CULVERT BACKFILL**

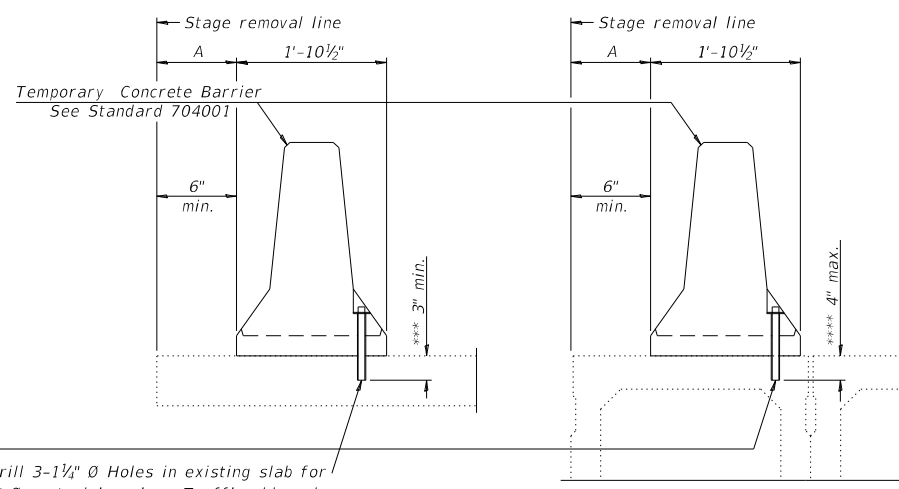
SCALE: N/A    SHEET 1 OF 2 SHEETS    STA. N/A    TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	21
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



When "A" is 3'-6" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II. No anchorage is required when "A" is greater than 3'-6". See Detail I or Detail II

NEW SLAB OR NEW DECK BEAM



Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier.

EXISTING SLAB

EXISTING DECK BEAM

**NOTES**

Detail I - With Bar Splicers or Couplers:

- Connect one (1) 1" x 7" x "W" steel plate to the top layer of couplers with 2-3/8" Dia bolts screwed to coupler at approximate CL of each barrier panel.

Detail II - With Extended Reinforcement Bars:

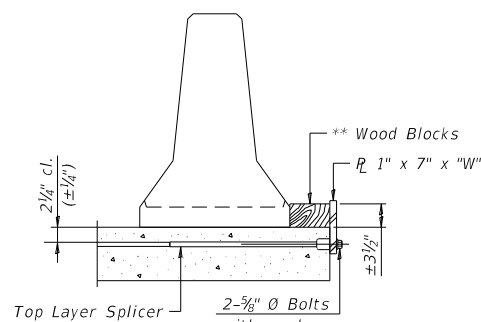
- Connect one (1) 1" x 7" x "W" steel plate to the concrete slab or concrete wearing surface with 2-3/8" Dia Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate centerline of each barrier panel.

Cost of anchorage is included with "Temporary Concrete Barrier". the 1" x 7" x "W" plate shall not be removed until Stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

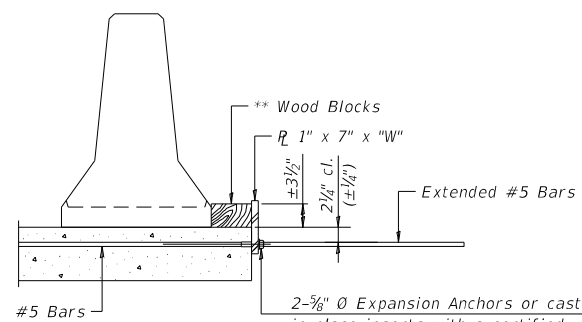
\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

**SECTIONS THRU SLAB OR DECK BEAM**



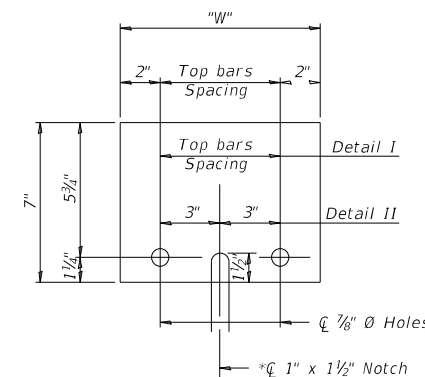
DETAIL I



DETAIL II

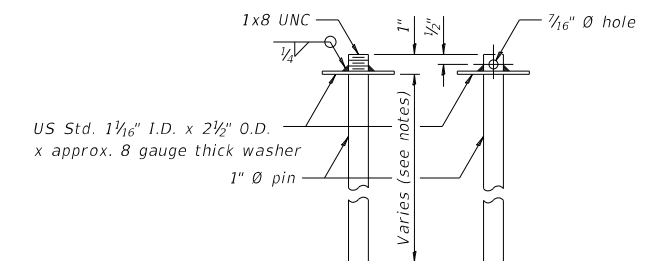
\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



STEEL RETAINER 1" x 7" x "W"

\* Required only with Detail II



RESTRAINING PIN

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	DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/28/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MISCELLANEOUS DETAILS  
TEMPORARY CONCRETE BARRIER FOR STAGED CONSTRUCTION**

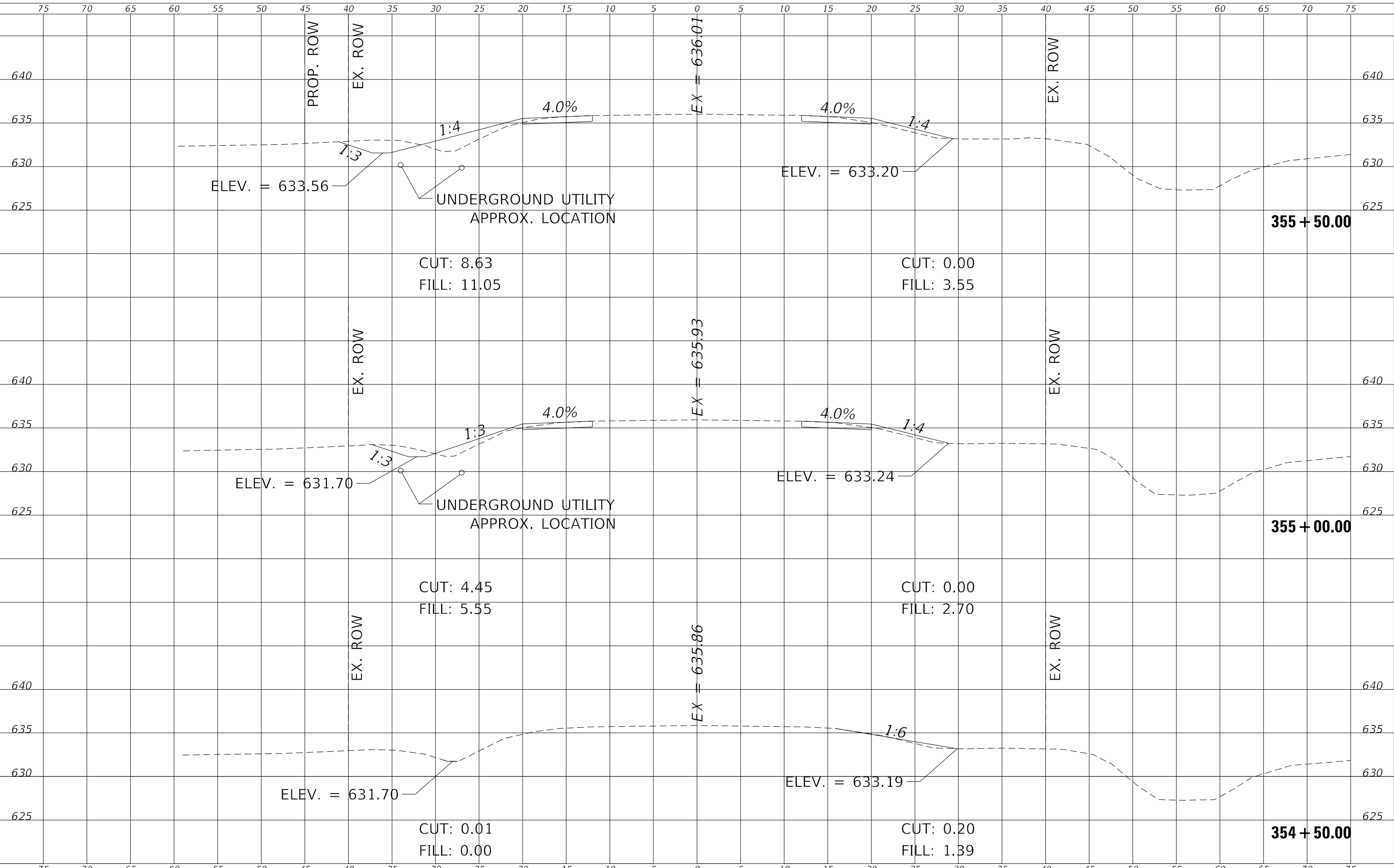
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	22
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	

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USER NAME = Robert.Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 6/23/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

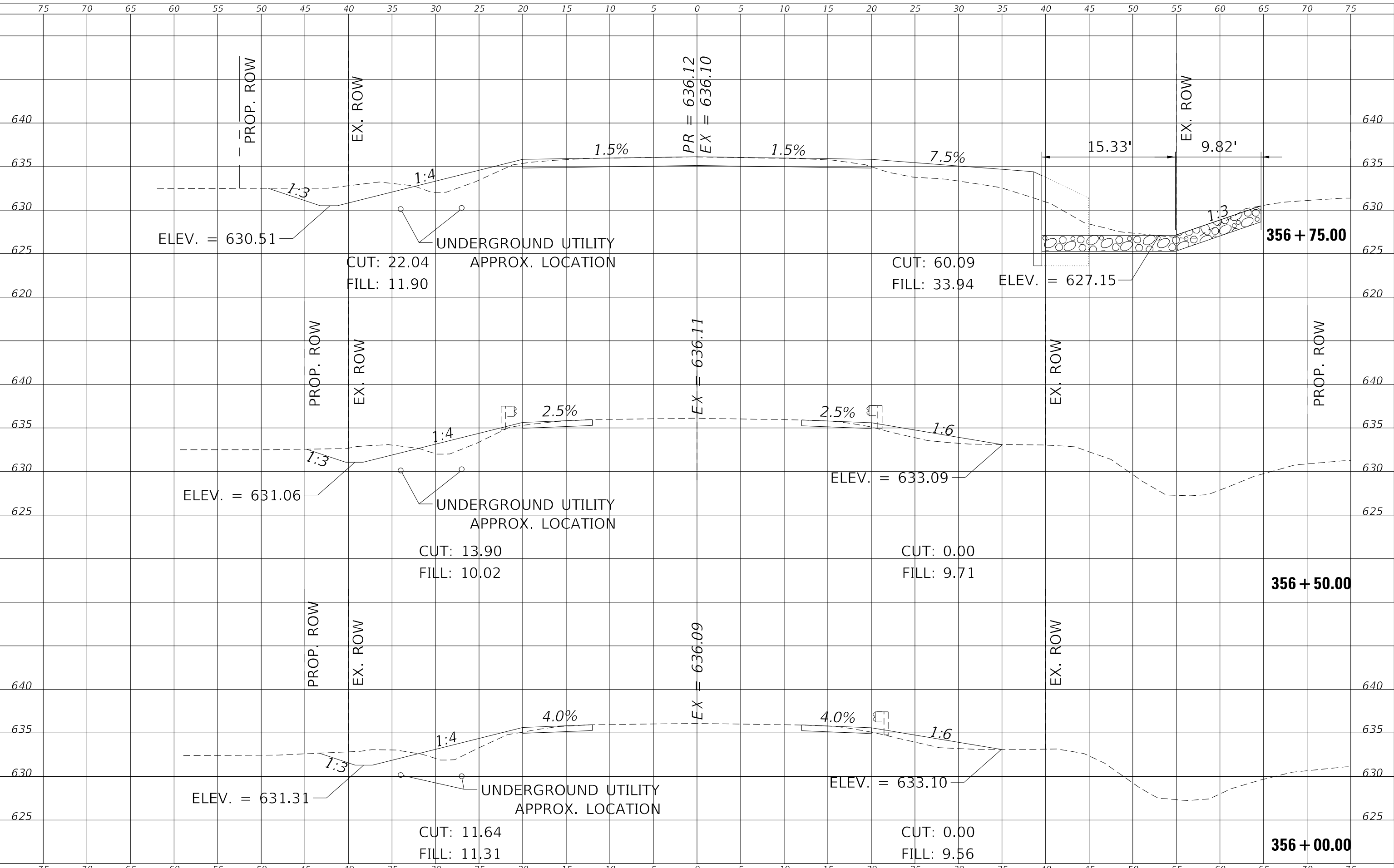
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<b>IL 104</b>			
SCALE: N/A	SHEET 1	OF 5 SHEETS	STA. 354+50.00 TO STA. 355+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	23
				CONTRACT NO. 72K83
				ILLINOIS FED. AID PROJECT

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

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

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USER NAME = Robert.Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 6/28/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS</b>			
<b>IL 104</b>			
SCALE: N/A	SHEET 2	OF 5 SHEETS	STA. 356+00.00 TO STA. 356+75.00

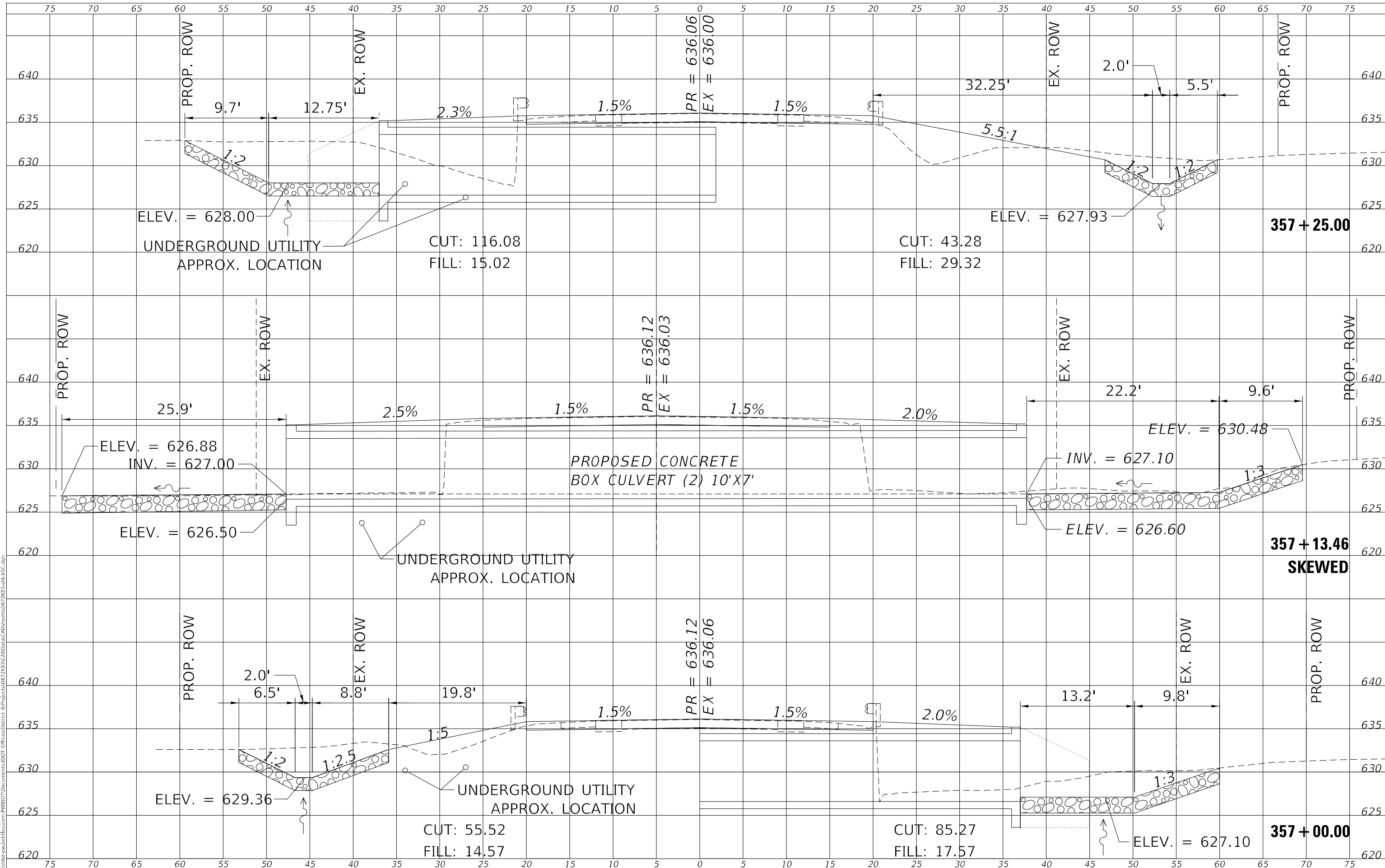
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753	139C	SANGAMON	27	24
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

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 CHECKED: 11111111  
 DATE: 6/23/2023



USER NAME = Robert.Miles	DESIGNED -	REVISD -
	DRAWN -	REVISD -
PLOT SCALE = 10.0000' / in.	CHECKED -	REVISD -
PLOT DATE = 6/23/2023	DATE -	REVISD -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

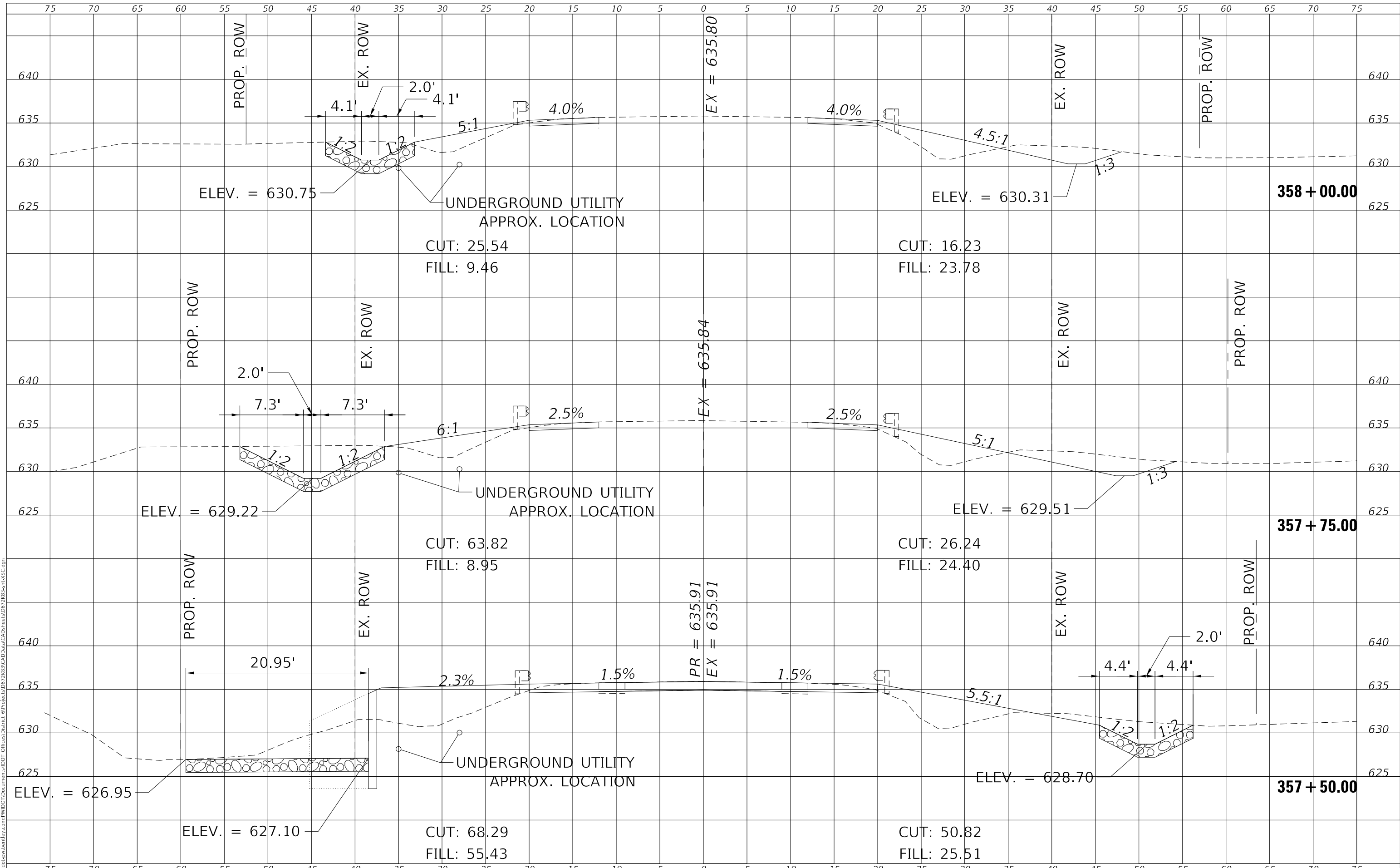
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<b>IL 104</b>			
SCALE: N/A	SHEET 3	OF 5 SHEETS	STA. 357+00 TO STA. 357+25

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	25
				CONTRACT NO. 72K83
				ILLINOIS FED. AID PROJECT

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

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

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USER NAME = Robert.Miles	DESIGNED -	REVISD -
	DRAWN -	REVISD -
PLOT SCALE = 10.0000' / in.	CHECKED -	REVISD -
PLOT DATE = 6/30/2023	DATE -	REVISD -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

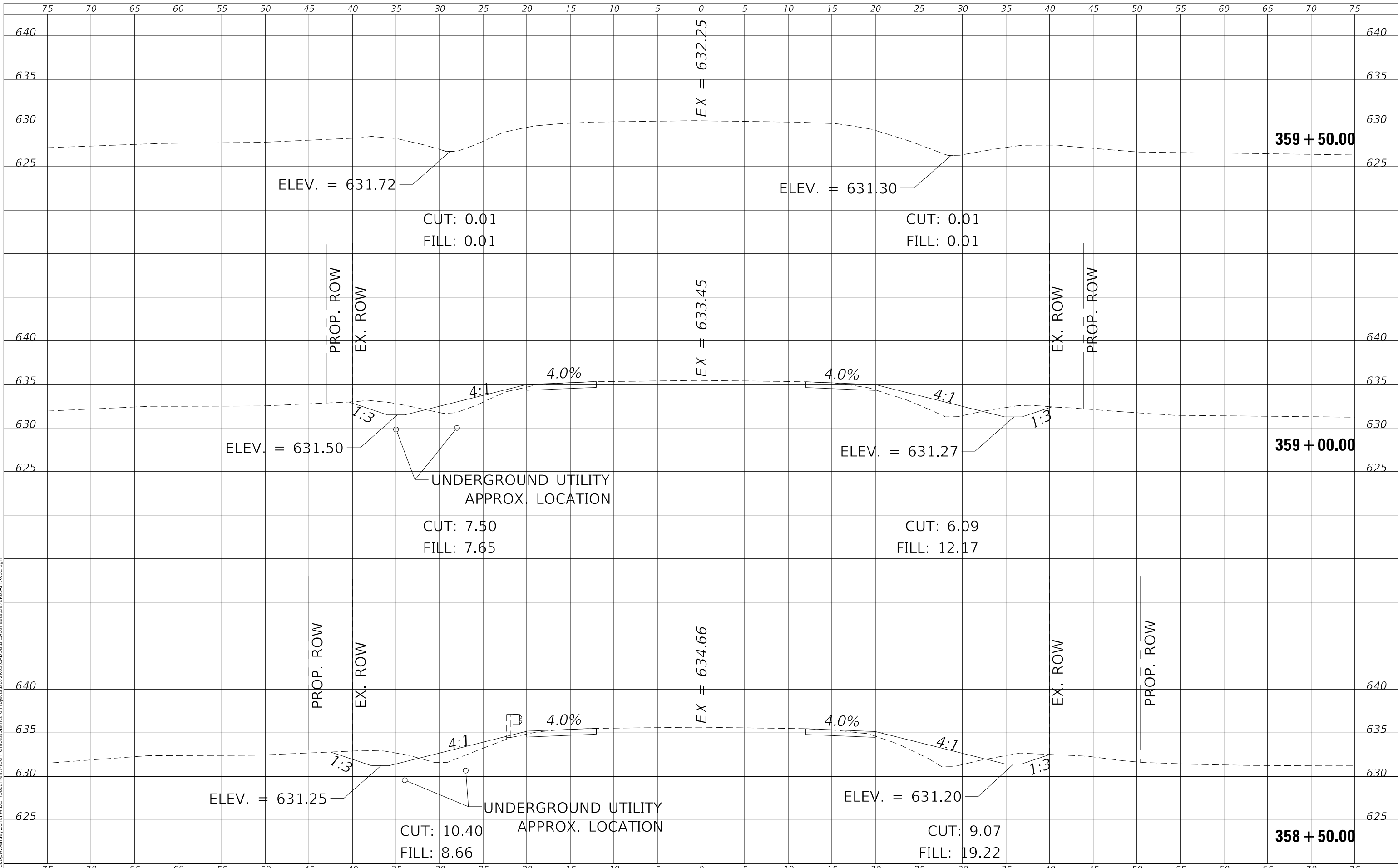
<b>CROSS SECTIONS</b>			
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SCALE: N/A	SHEET 4	OF 5 SHEETS	STA. 357+50.00 TO STA. 358+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	26
				CONTRACT NO. 72K83
ILLINOIS				FED. AID PROJECT

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

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

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USER NAME = Robert.Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 6/30/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS</b>			
<b>IL 104</b>			
SCALE: N/A	SHEET 5	OF 5 SHEETS	STA. 358+50.00 TO STA. 359+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	139C	SANGAMON	27	27
CONTRACT NO. 72K83				
ILLINOIS FED. AID PROJECT				