

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	1	178
② HWY. 208-HWY. 65 (REHAB.) (SEL. SECS.) (PHASE II) (S)								

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

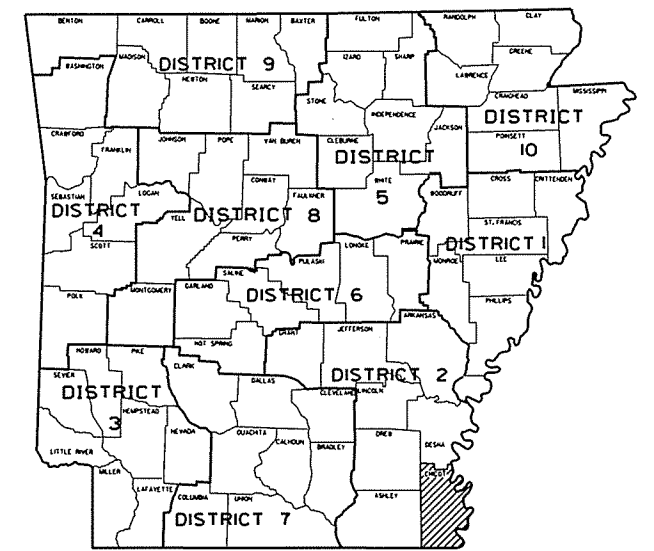
HWY. 208-HWY. 65 (REHAB.)
(SEL. SECS.) (PHASE II) (S)

CHICOT COUNTY
ROUTE 165 SECTION 3

FEDERAL AID PROJ. STPF-0009(32)

JOB 020576

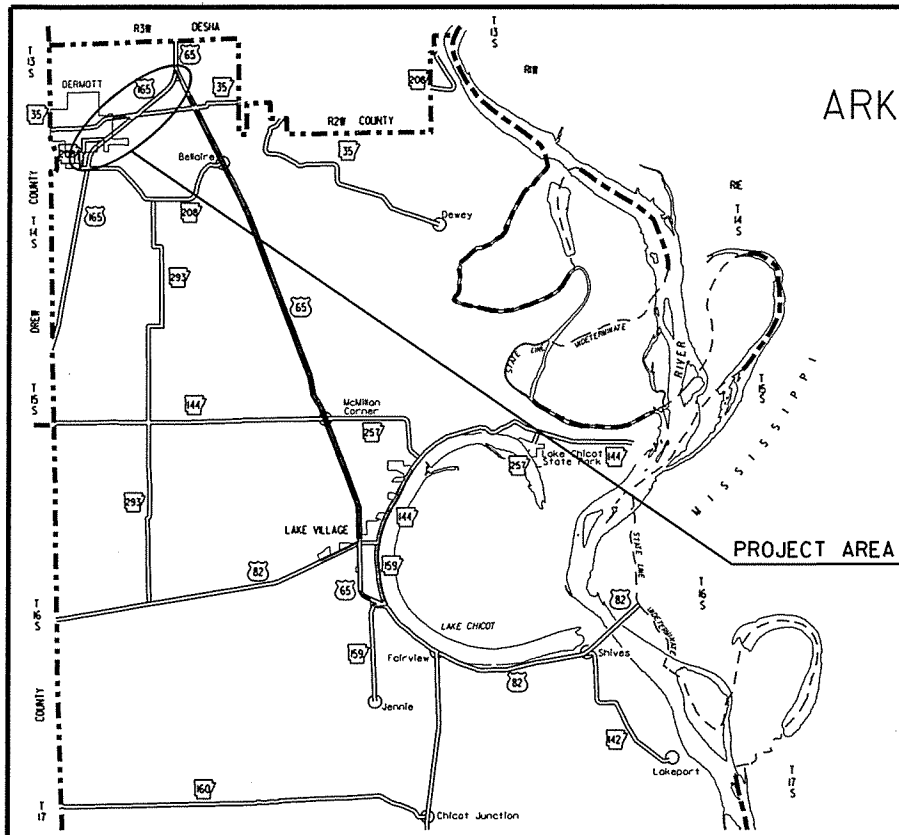
NOT TO SCALE



ARK. HWY. DIST. NO. 2

DESIGN TRAFFIC DATA

DESIGN YEAR	2015
2015 ADT	2100
2035 ADT	2500
2035 DHV	275
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	13%
DESIGN SPEED	55 MPH



VICINITY MAP

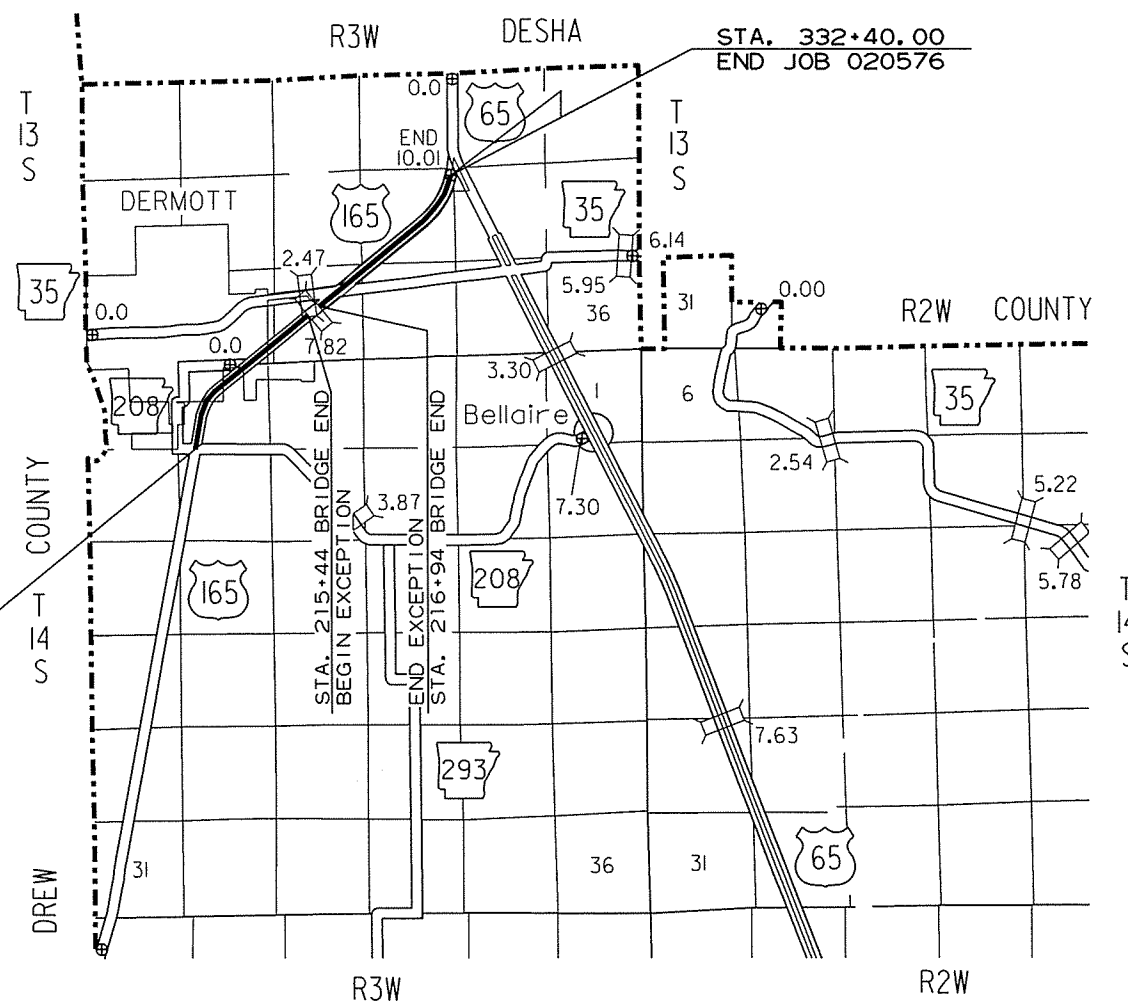
BRIDGE INFORMATION

JOB EXCEPTION:
STA. 215+44 - STA. 216+94 IN PLACE
150' X 24' CLEAR ROADWAY
BRIDGE CONSISTING OF WOOD AND CONCRETE
RETAIN

STRUCTURES OVER 20' -0" SPAN

STA. 240+04 IN PLACE
TR1, 6' X 4' X 72" R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
Q50 = 1352 CFS, D.A. = 965 ACRES
RETAIN
SPAN = 20' -4"

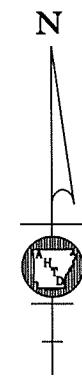
STA. 102+00.00
BEGIN JOB 020576
LOG MILE 5.68



LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF PROJECT	23040.00 FEET OR	4.364 MILES
NET ROADWAY	22890.00	4.335 MILES
NET BRIDGES	0000.00	0.000 MILES
NET PROJECT	22890.00	4.335 MILES

P.E. JOB 020535



APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7836
M.E. BANKS
9-10-15

DEPUTY DIRECTOR
AND CHIEF ENGINEER

4/24/2015

R020576.DGN

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 33°30' 23"	N 33°31' 43"	N 33°33' 02"
LONGITUDE	W 91°26' 04"	W 91°24' 34"	W 91°23' 02"

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2 INDEX OF SHEETS, GOV. SPECS., AND GEN. NOTES

INDEX OF SHEETS

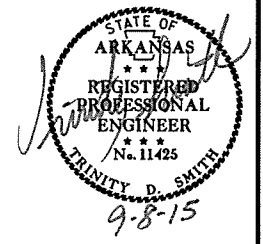
GOVERNING SPECIFICATIONS

SHEET NO.	TITLE	BRIDGE NO.	DRWG. NO.	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES			
3 - 4	TYPICAL SECTIONS OF IMPROVEMENT			
5 - 6	SPECIAL DETAILS			
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43	SUMMARY OF QUANTITIES AND REVISIONS			
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73	DETAILS OF DRIVEWAYS & ISLANDS		DR-1	2-27-14
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75	FLARED END SECTION		FES-2	10-18-96
76	GUARD RAIL DETAILS		GR-8	7-14-10
77	GUARD RAIL DETAILS		GR-8A	7-14-10
78	GUARD RAIL DETAILS		GR-9	4-17-08
79	GUARD RAIL DETAILS		GR-9A	4-17-08
80	GUARD RAIL DETAILS		GR-10	7-14-10
81	GUARD RAIL DETAILS		GR-10A	7-14-10
82	GUARD RAIL DETAILS		GRT-1	7-14-10
83	MAILBOX DETAILS		MB-1	11-18-04
84	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING		PCC-1	2-27-14
85	METAL PIPE CULVERT FILL HEIGHTS & BEDDING		PCM-1	2-27-14
86	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)		PCP-1	2-27-14
87	PLASTIC PIPE CULVERT (PVC F949)		PCP-2	2-27-14
88	PAVEMENT MARKING DETAILS		PM-1	9-12-13
89	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC		SE-2	10-18-96
90	DETAILS OF SPECIAL ITEMS		SI-1	9-12-13
91	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-1	9-02-15
92	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-2	9-02-15
93	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3	9-02-15
94	TEMPORARY EROSION CONTROL DEVICES		TEC-1	12-15-11
95	TEMPORARY EROSION CONTROL DEVICES		TEC-2	6-02-94
96	TEMPORARY EROSION CONTROL DEVICES		TEC-3	11-03-94
97 - 178	CROSS SECTIONS			

NOTE: CROSS SECTIONS NOT NORMALLY INCLUDED IN PLANS SOLD TO PROSPECTIVE BIDDERS, BUT MAY BE HAD UPON REQUEST.

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
108-1	LIQUIDATED DAMAGES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 020576	BIDDING REQUIREMENTS AND CONDITIONS
JOB 020576	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 020576	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 020576	COORDINATION OF WORK
JOB 020576	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 020576	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 020576	HIGH PERFORMANCE PAVEMENT MARKING
JOB 020576	MANDATORY ELECTRONIC CONTRACT
JOB 020576	PARTNERING REQUIREMENTS
JOB 020576	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB 020576	PLASTIC PIPE
JOB 020576	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB 020576	RUMBLE STRIPES
JOB 020576	SHORING FOR CULVERTS
JOB 020576	SOIL STABILIZATION
JOB 020576	STORM WATER POLLUTION PREVENTION PLAN
JOB 020576	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 020576	THERMOPLASTIC RUMBLE BAR
JOB 020576	UTILITY ADJUSTMENTS
JOB 020576	VALUE ENGINEERING
JOB 020576	WARM MIX ASPHALT



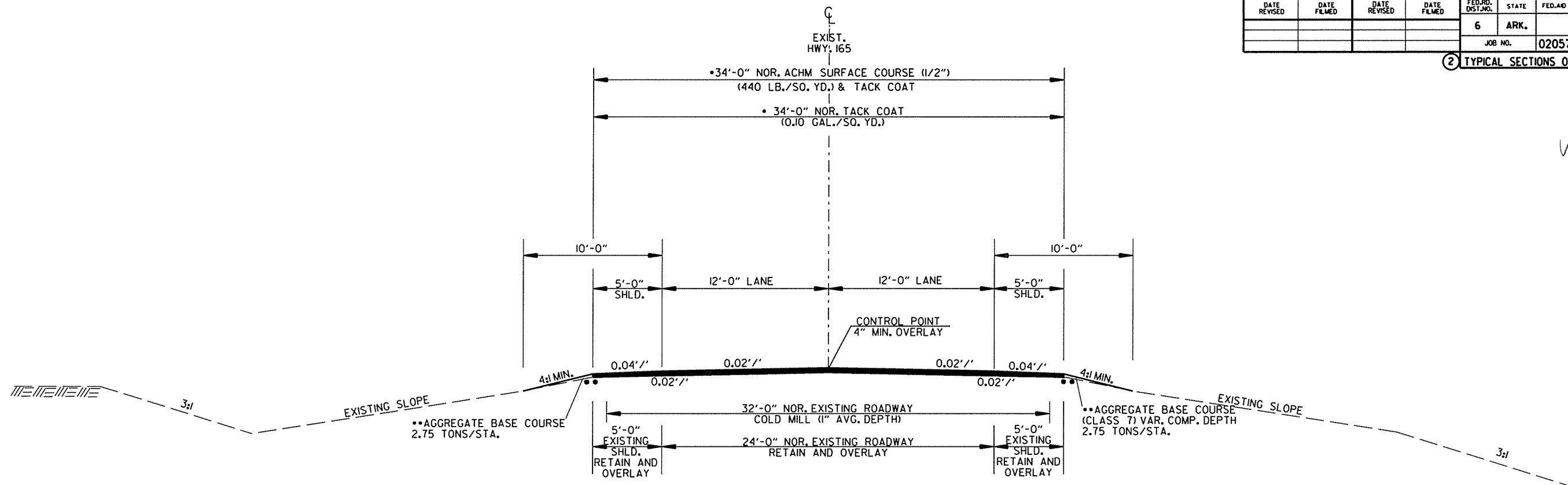
GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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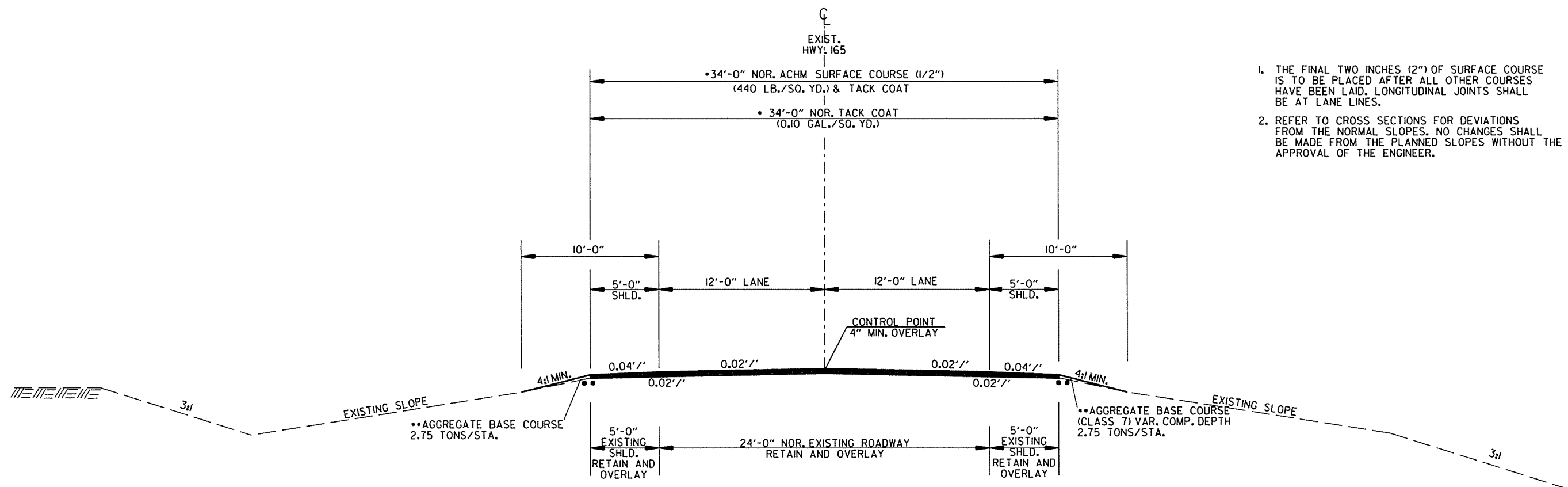
2 TYPICAL SECTIONS OF IMPROVEMENT



OVERLAY TANGENT SECTION

STA. 102+00.00 TO STA. 161+00.00

• WIDTH VARIES FROM 34'-0" TO 76'-0"



OVERLAY TANGENT SECTION

STA. 161+00.00 TO STA. 332+40.00

• WIDTH VARIES FROM 34'-0" TO 76'-0"

1. THE FINAL TWO INCHES (2") OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
2. REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

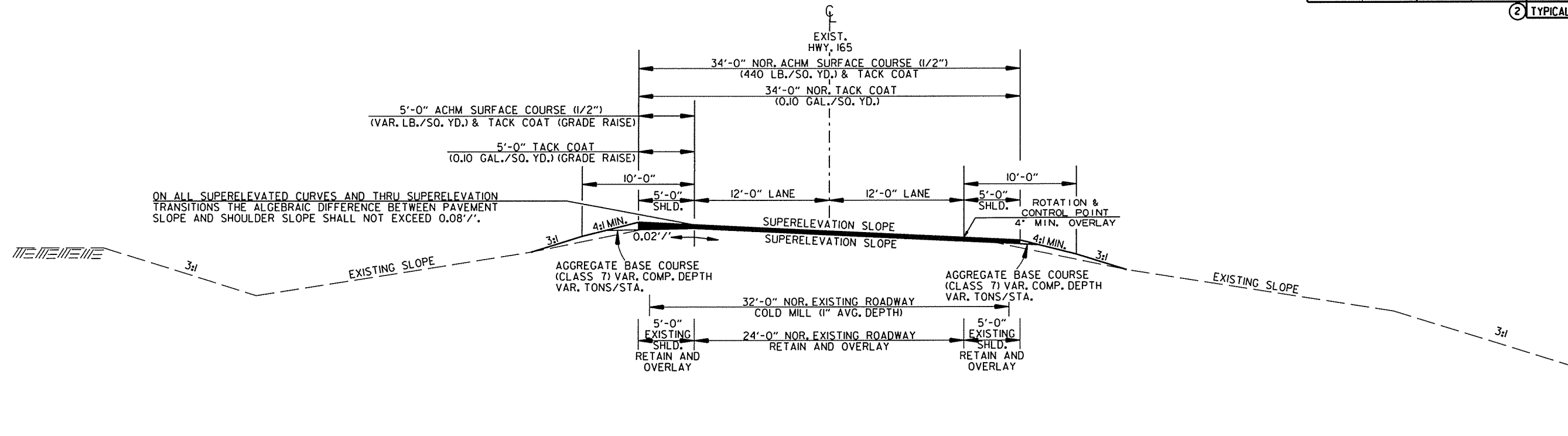
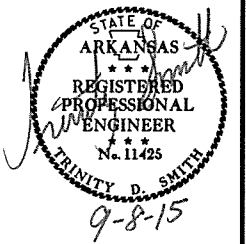
TYPICAL SECTIONS OF IMPROVEMENT

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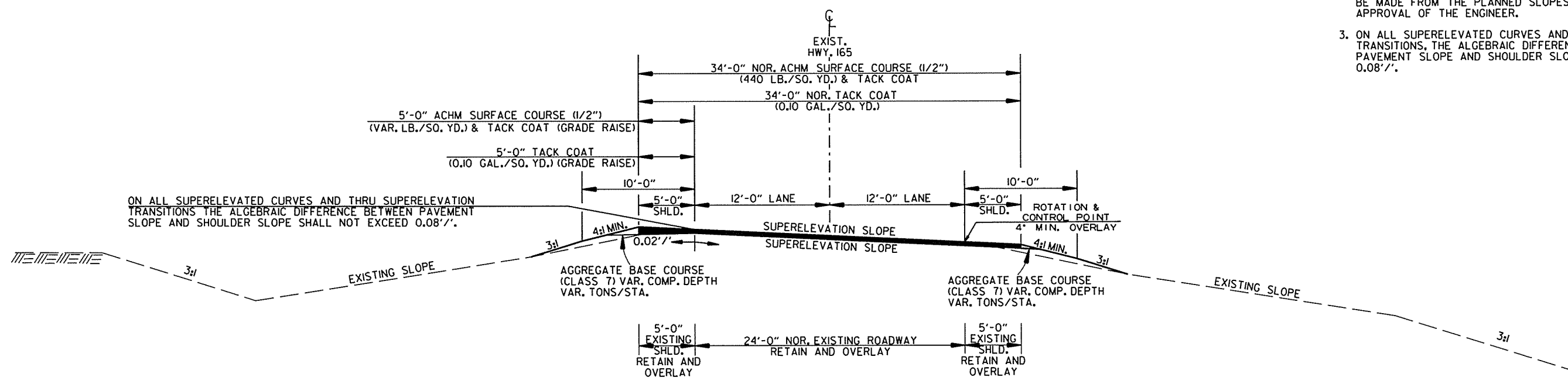
2 TYPICAL SECTIONS OF IMPROVEMENT



OVERLAY SUPERELEVATION SECTION

STA. 118+22.71 TO STA. 142+99.07

1. THE FINAL TWO INCHES (2") OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
2. REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
3. ON ALL SUPERELEVATED CURVES AND THRU SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN THE PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.



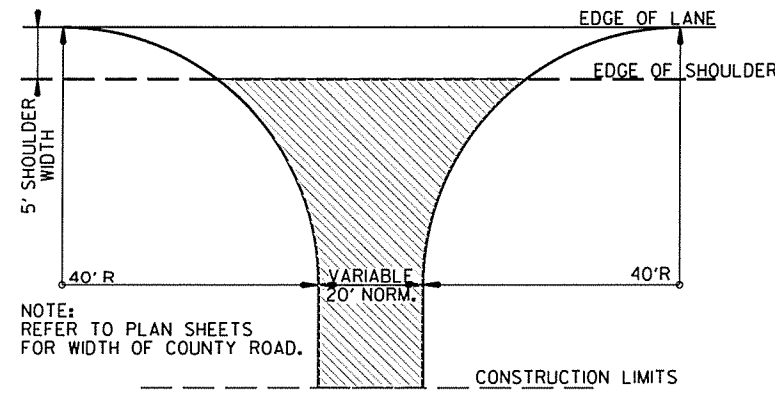
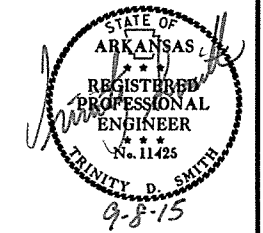
OVERLAY SUPERELEVATION SECTION

STA. 287+29.82 TO STA. 327+07.00

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2 SPECIAL DETAILS

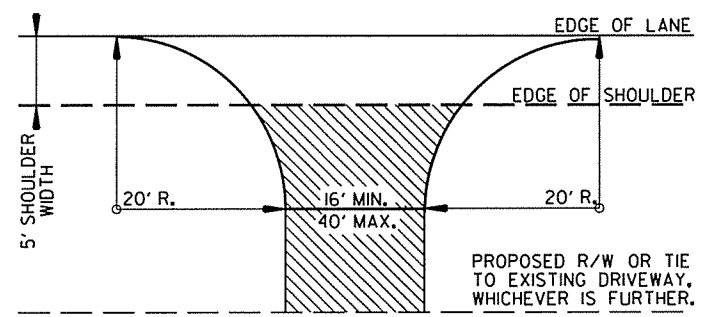


NOTE: REFER TO PLAN SHEETS FOR WIDTH OF COUNTY ROAD.

NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

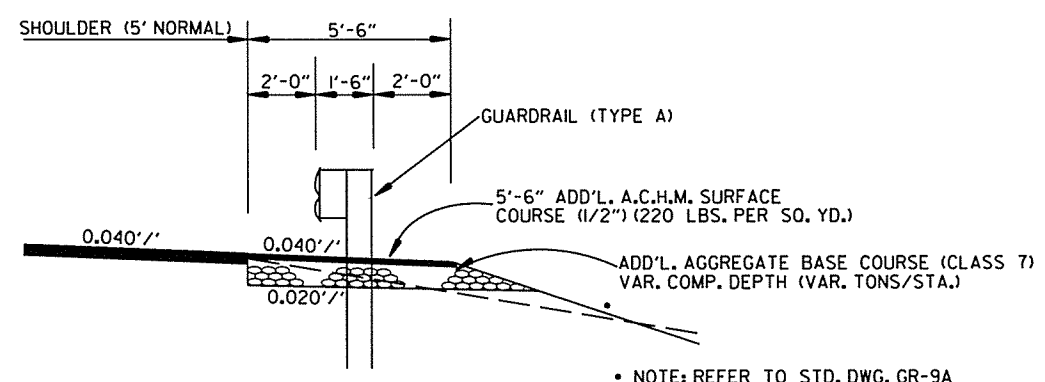
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION

A.C.H.M. SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH IF ASPHALT OR GRAVEL DRIVE EXISTING; OR 6" CONCRETE IF CONCRETE DRIVE EXISTING.



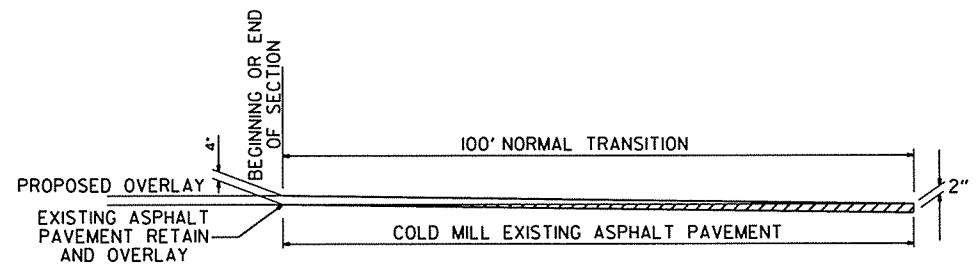
DETAIL FOR DRIVEWAY TURNOUTS OPEN SHOULDER SECTION

A.C.H.M. SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH IF ASPHALT OR GRAVEL DRIVE EXISTING; OR 6" CONCRETE IF CONCRETE DRIVE EXISTING.



WIDENING FOR GUARDRAIL

NOTE: REFER TO STD. DWG. GR-9A AND CROSS SECTIONS FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.

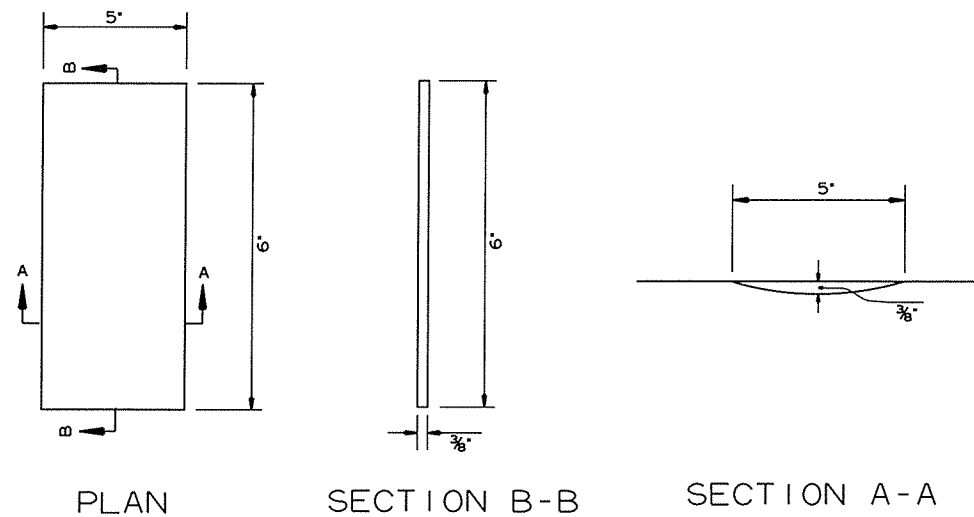


DETAIL FOR TRANSITIONS

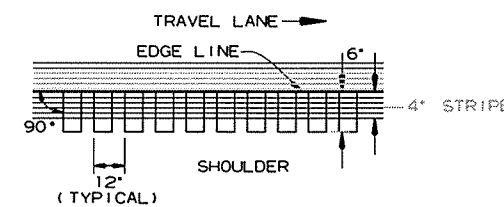
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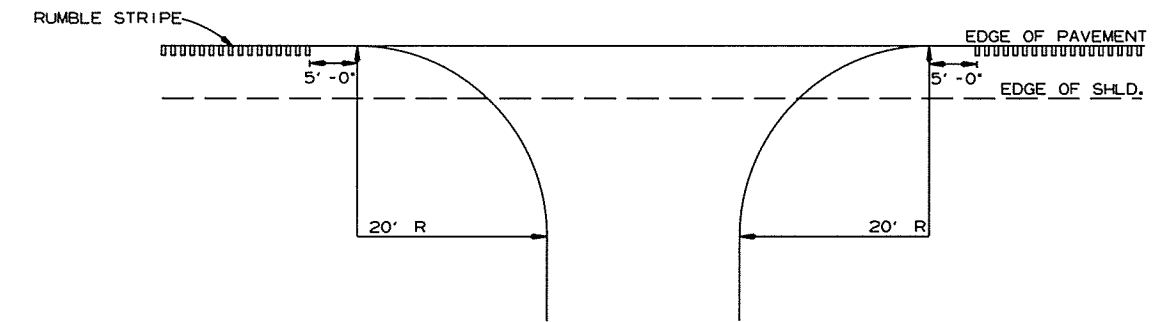
② SPECIAL DETAILS



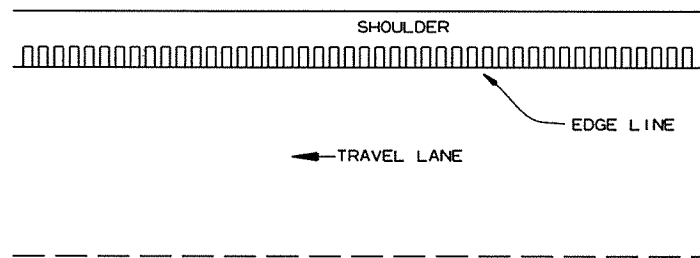
DETAILS OF RUMBLE STRIPE



LOCATION PLAN OF RUMBLE STRIPE
LEFT OR RIGHT SHOULDER



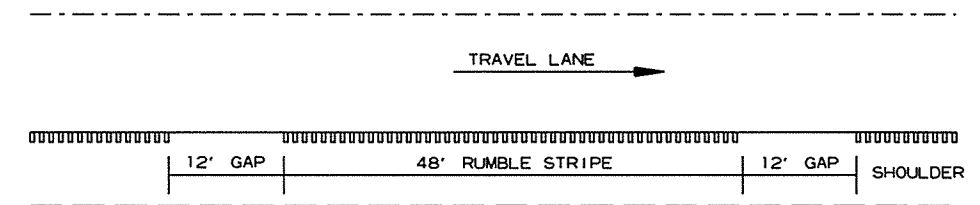
DETAIL FOR RUMBLE STRIPE GAP
AT DRIVEWAY TURNOUTS



PLAN VIEW

GENERAL NOTES

1. RUMBLE STRIPES SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPES SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. RUMBLE STRIPES SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPES HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPES HAVE NOT BEEN CONSTRUCTED.
4. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12' LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

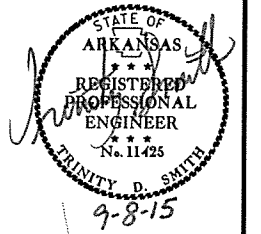
DETAIL FOR GAP PATTERN RUMBLE STRIPE

8/31/2015

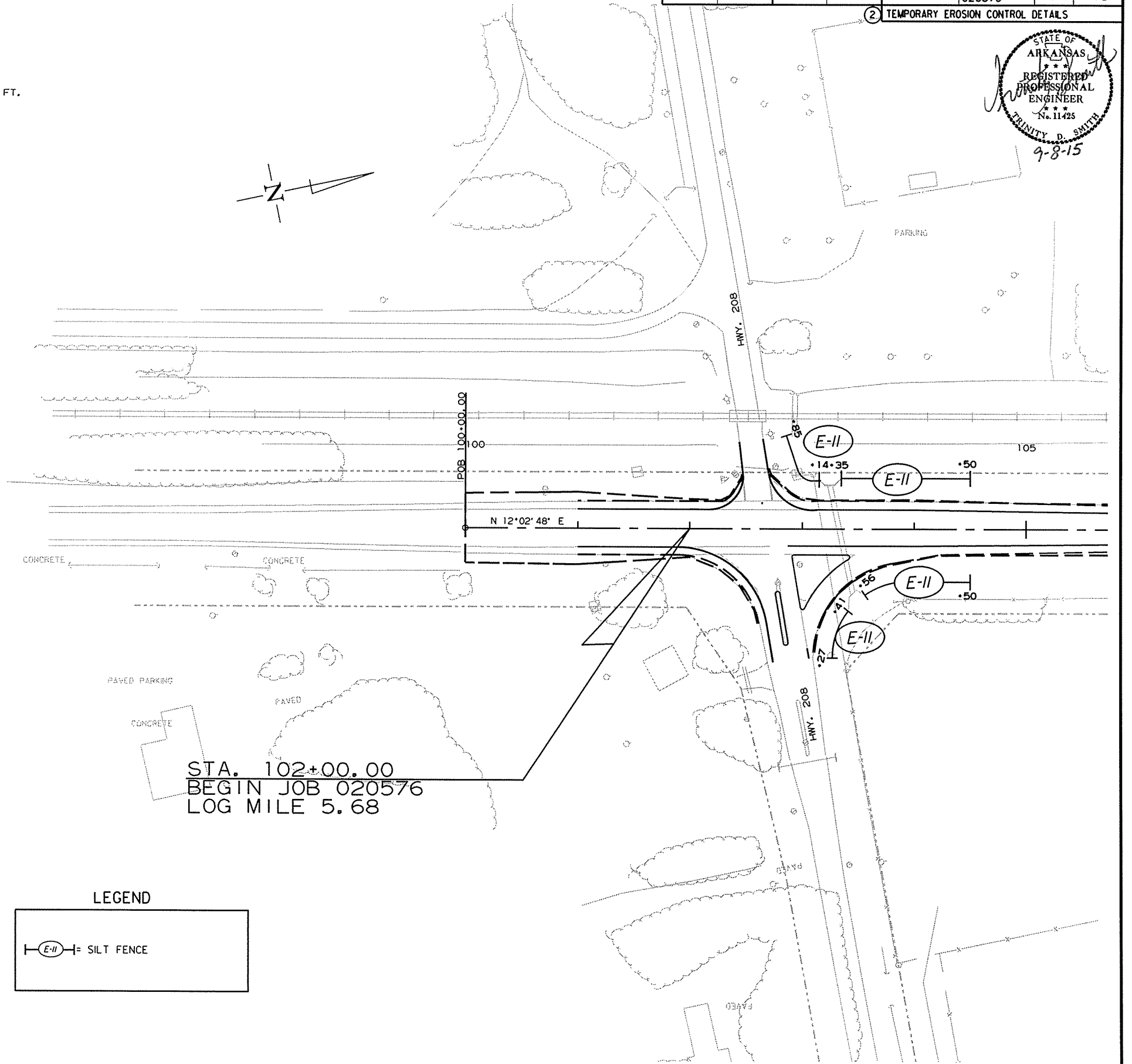
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2 TEMPORARY EROSION CONTROL DETAILS



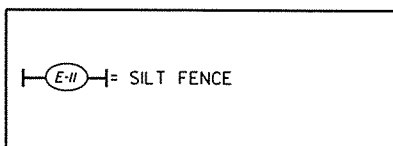
QUANTITIES:
E-11 SILT FENCE = 1140 LIN. FT.



REVISIONS

DATE OF REVISION	REVISION

LEGEND



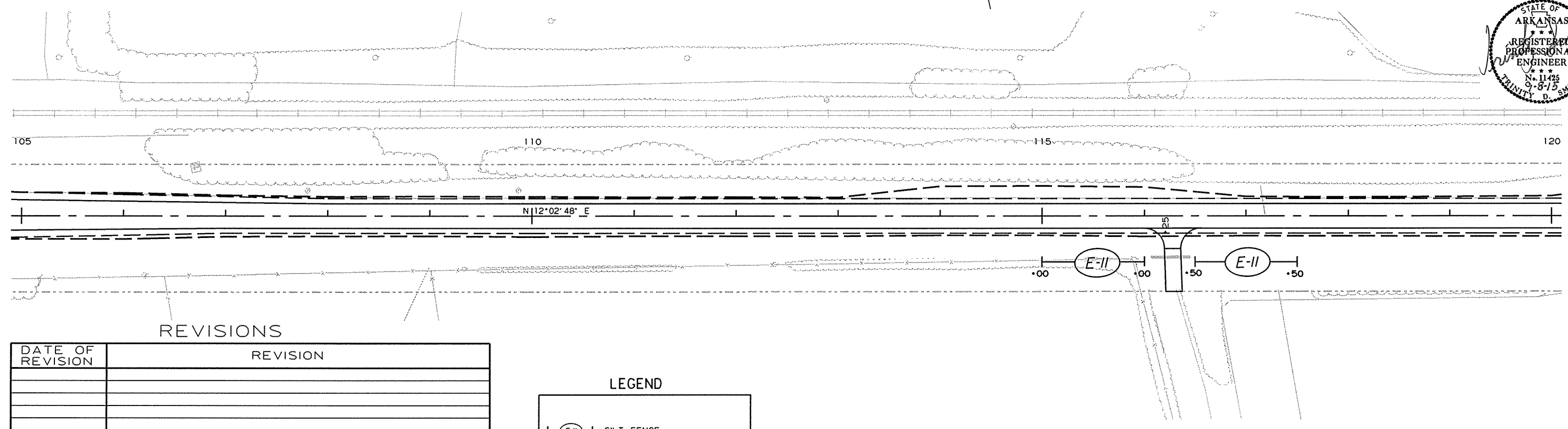
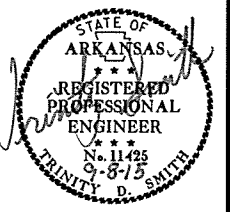
TEMPORARY EROSION CONTROL DETAILS

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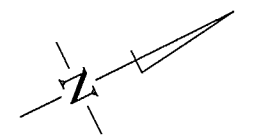
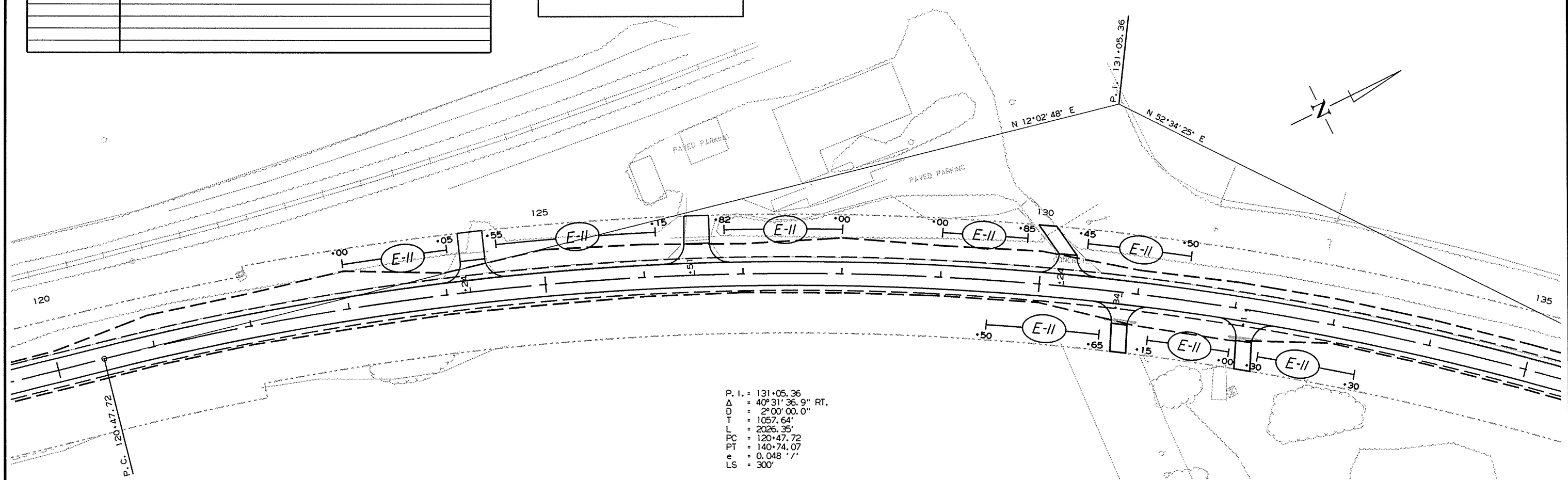
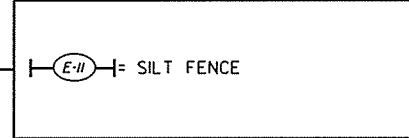
2 TEMPORARY EROSION CONTROL DETAILS



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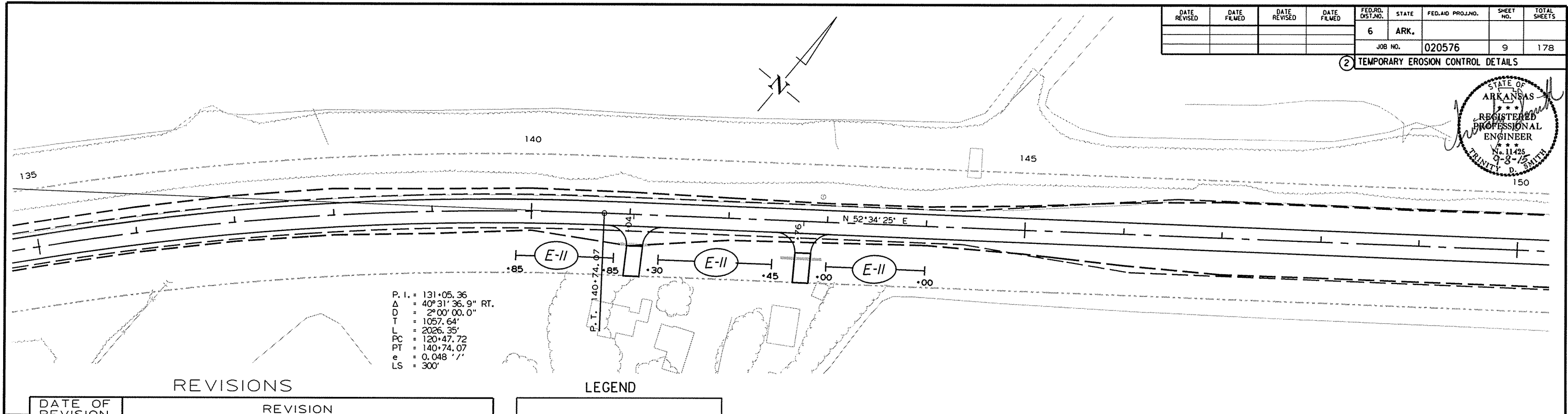
P. I. = 131+05.36
 Δ = 40° 31' 36.9" RT.
D = 2° 00' 00.0"
T = 1057.64'
L = 2026.35'
PC = 120+47.72
PT = 140+74.07
e = 0.048' / '
LS = 300'

TEMPORARY EROSION CONTROL DETAILS

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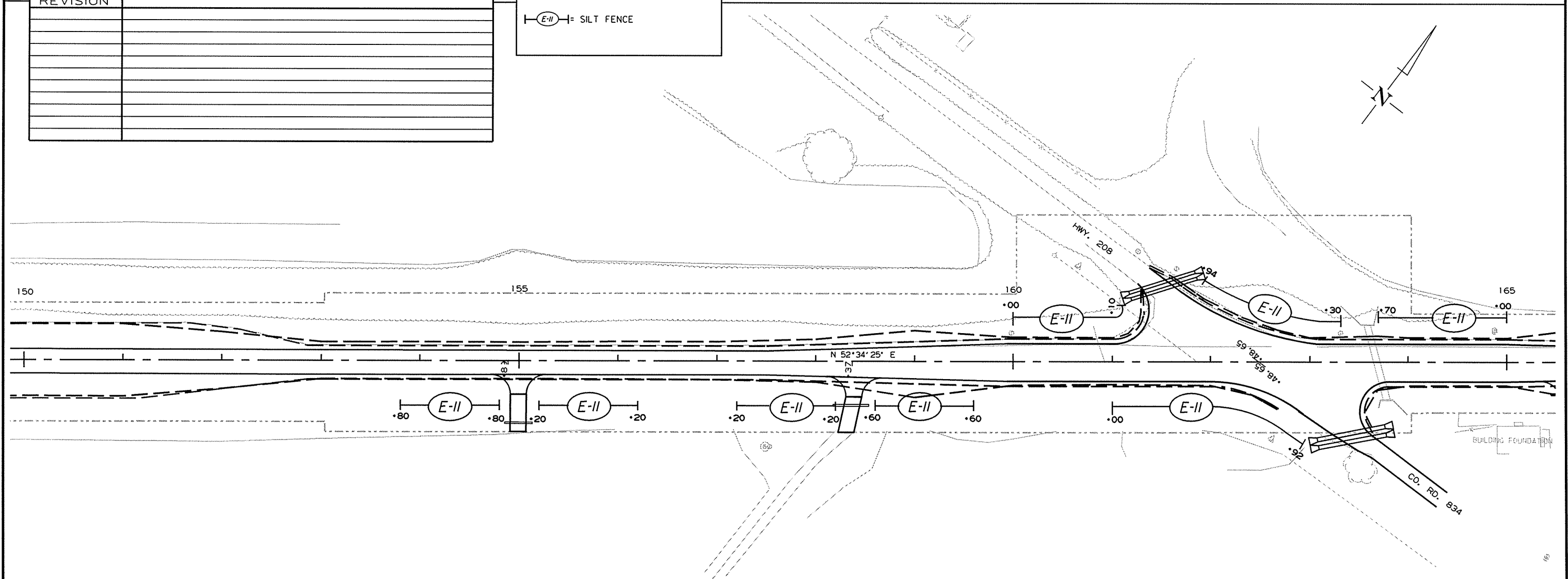
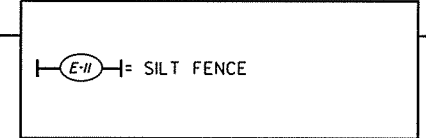
2 TEMPORARY EROSION CONTROL DETAILS



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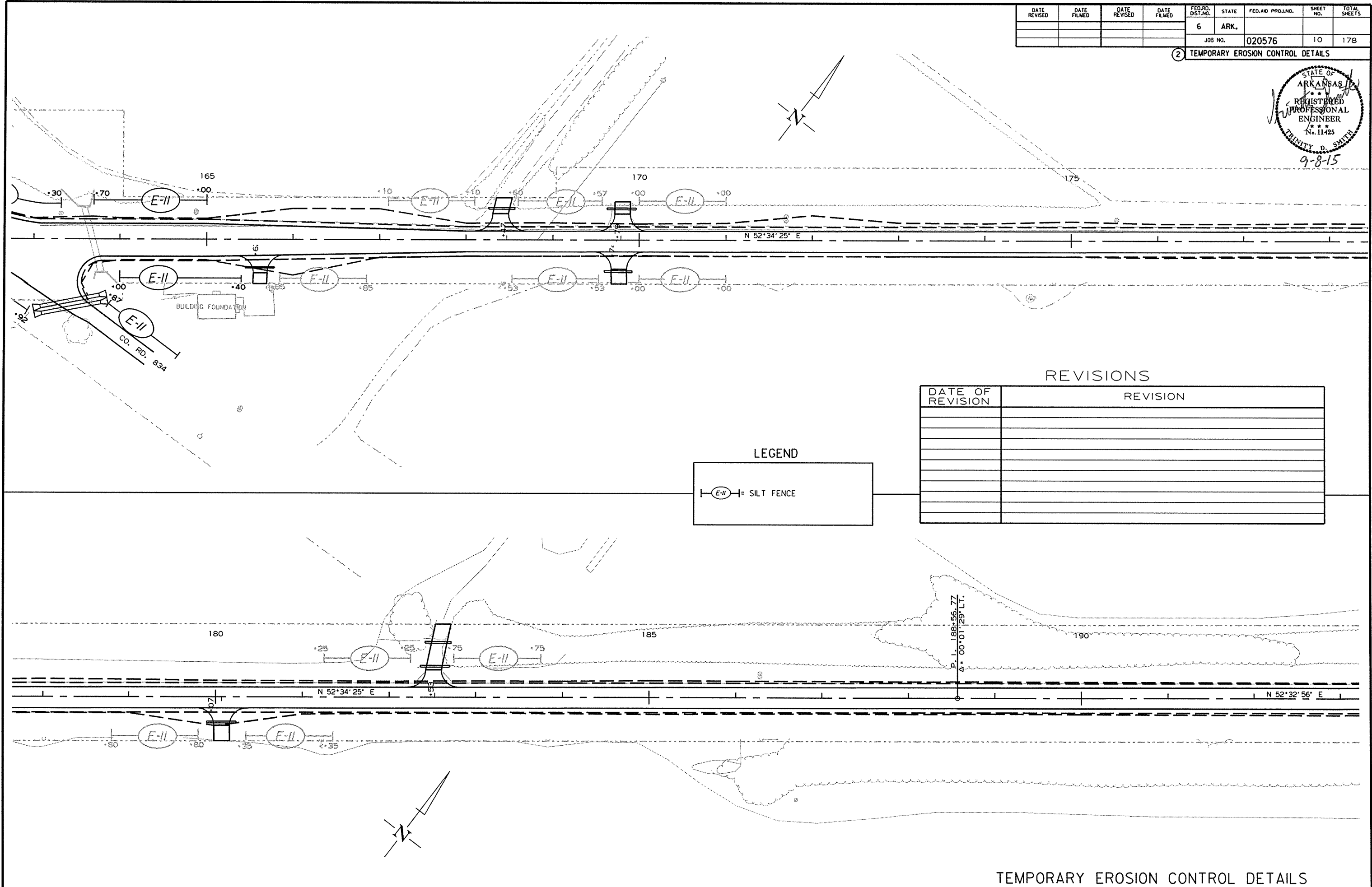
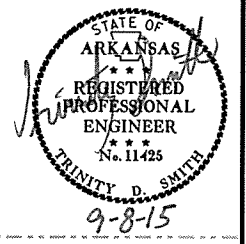


TEMPORARY EROSION CONTROL DETAILS

8/31/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		10	178
				JOB NO.		020576		

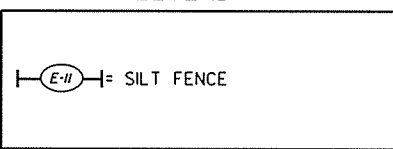
② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

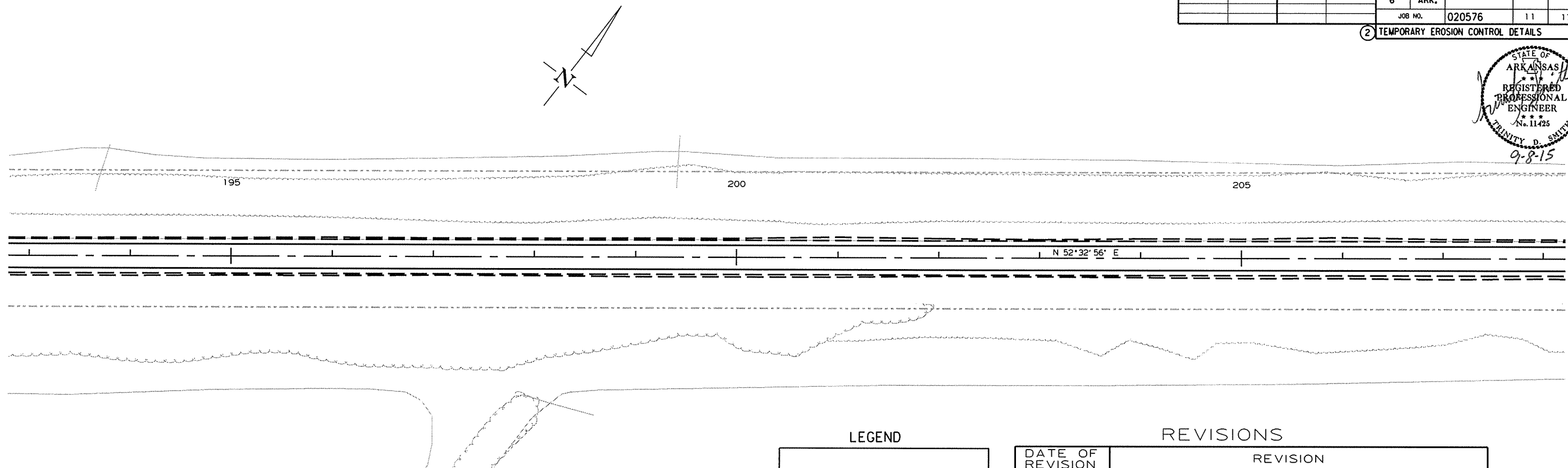
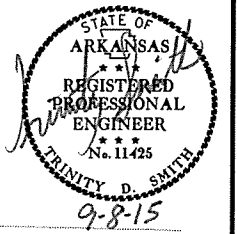
LEGEND



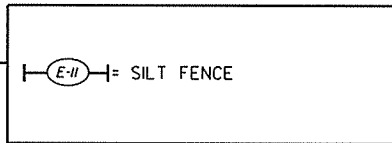
8/31/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020576	11	178

2 TEMPORARY EROSION CONTROL DETAILS

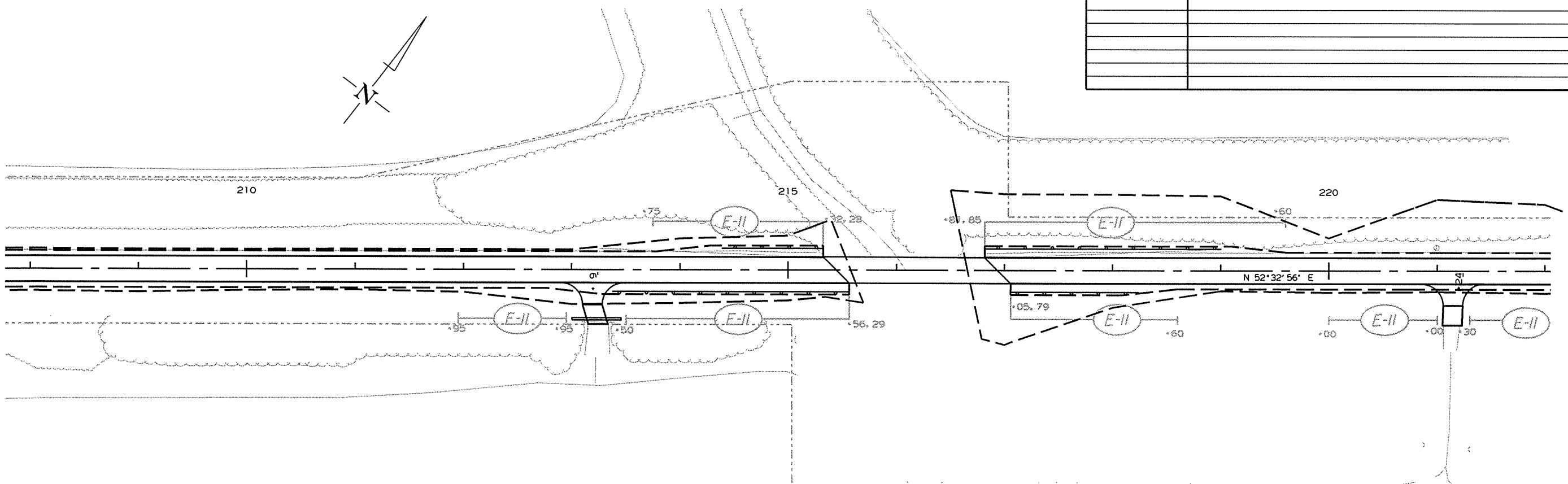


LEGEND



REVISIONS

DATE OF REVISION	REVISION



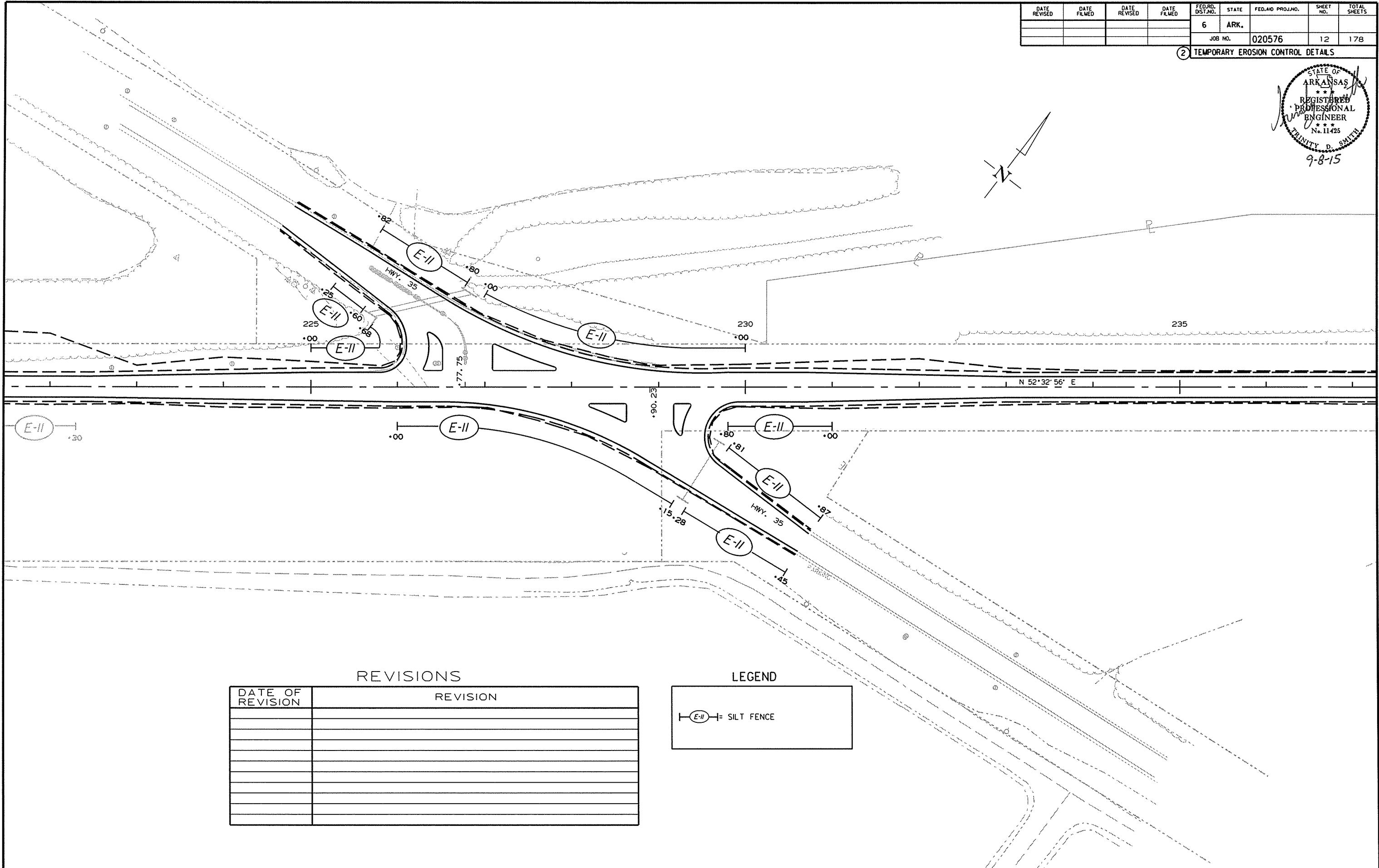
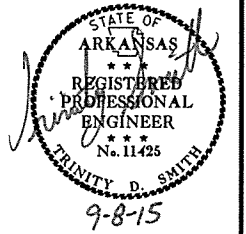
TEMPORARY EROSION CONTROL DETAILS

8/31/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							12	178

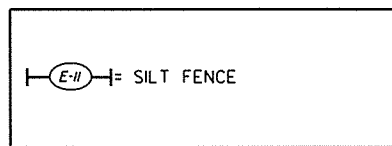
② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND



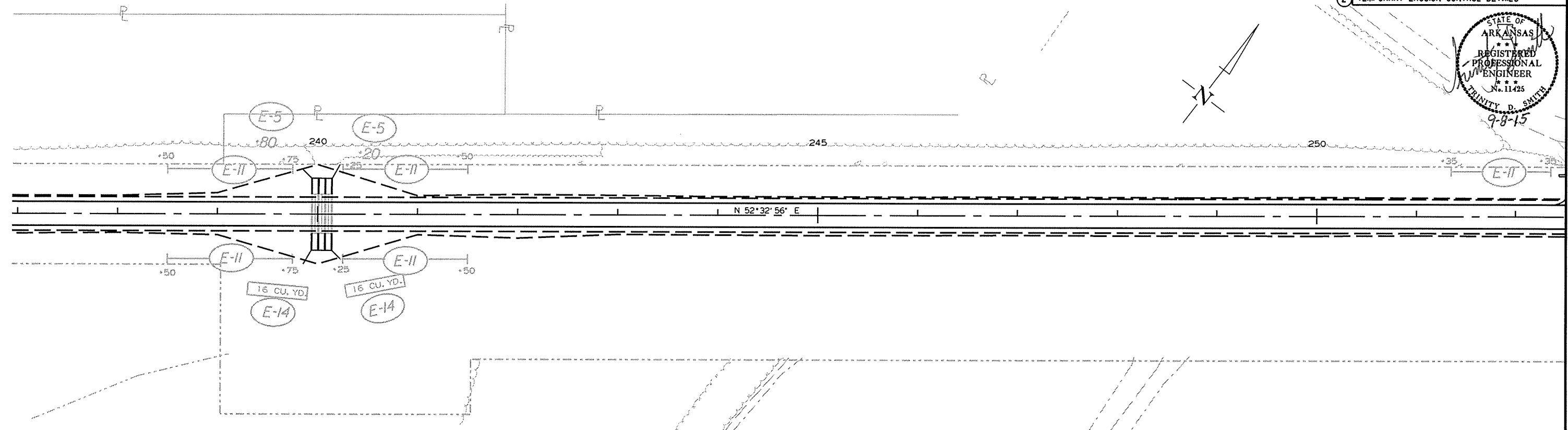
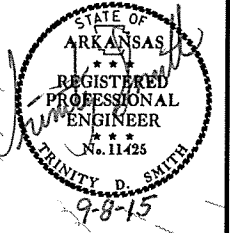
TEMPORARY EROSION CONTROL DETAILS

8/31/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		13	178

2 TEMPORARY EROSION CONTROL DETAILS

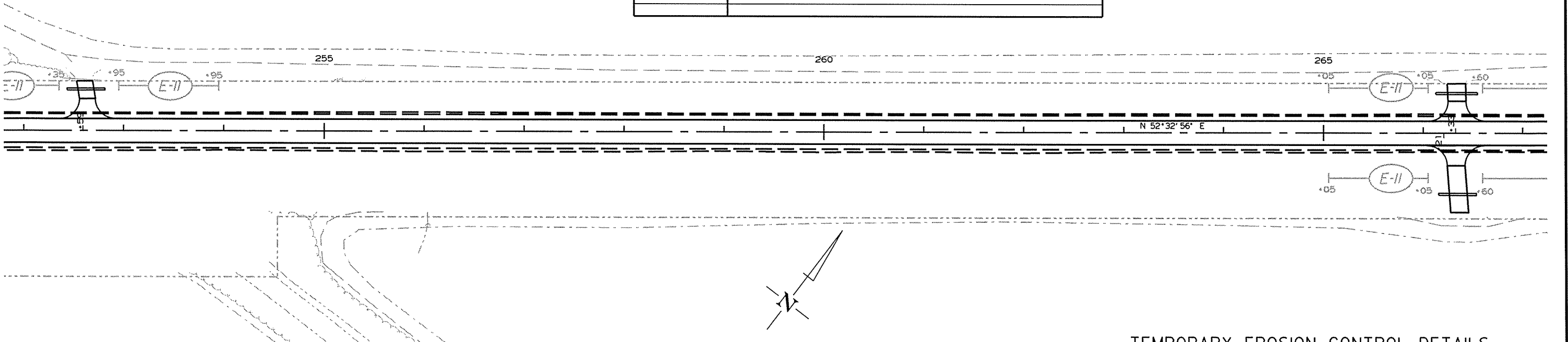


REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5) = SAND BAG DITCH CHECK
 (E-11) = SILT FENCE
 (E-14) = SEDIMENT BASIN
 XX CU. FT.

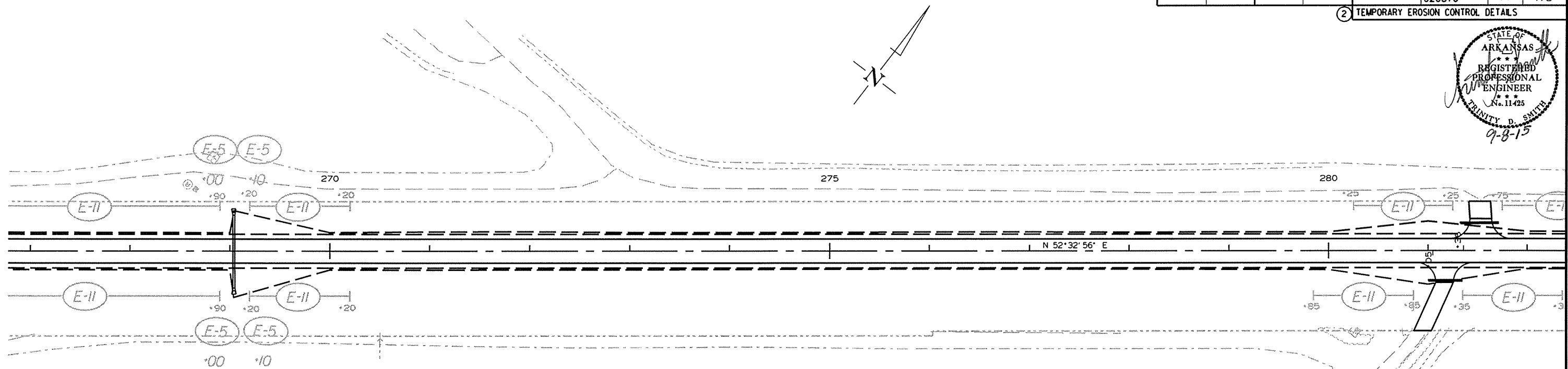
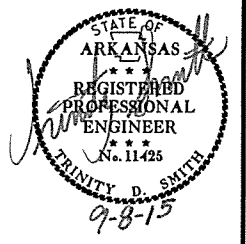


TEMPORARY EROSION CONTROL DETAILS

8/31/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		14	178

2 TEMPORARY EROSION CONTROL DETAILS

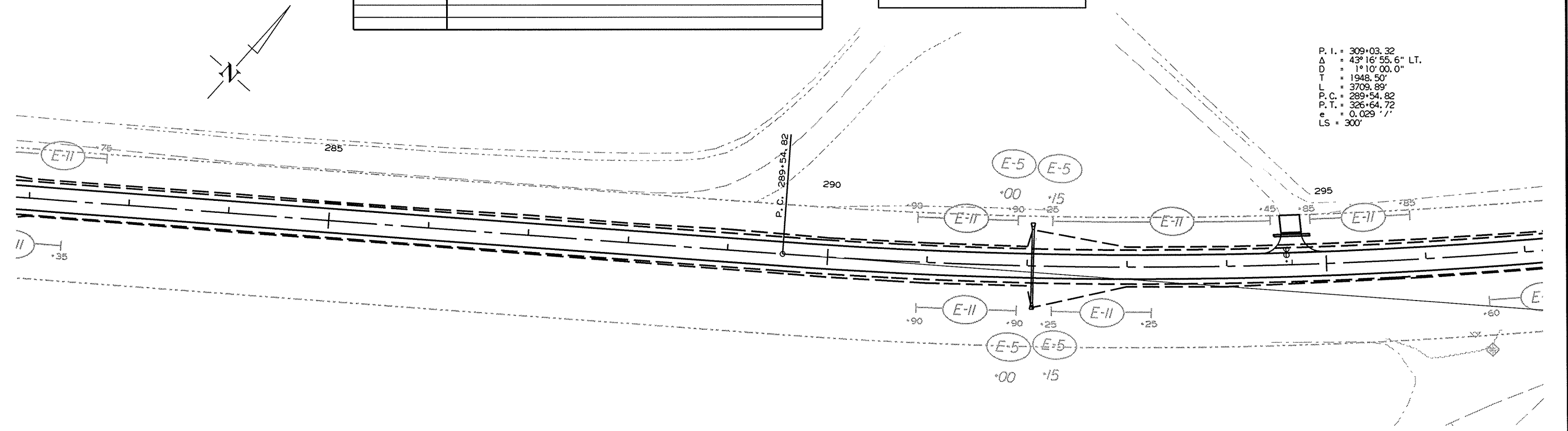


REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5) = SAND BAG DITCH CHECK
 (E-11) = SILT FENCE

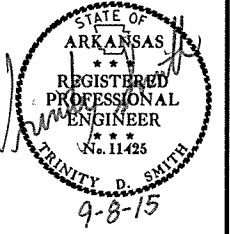


TEMPORARY EROSION CONTROL DETAILS

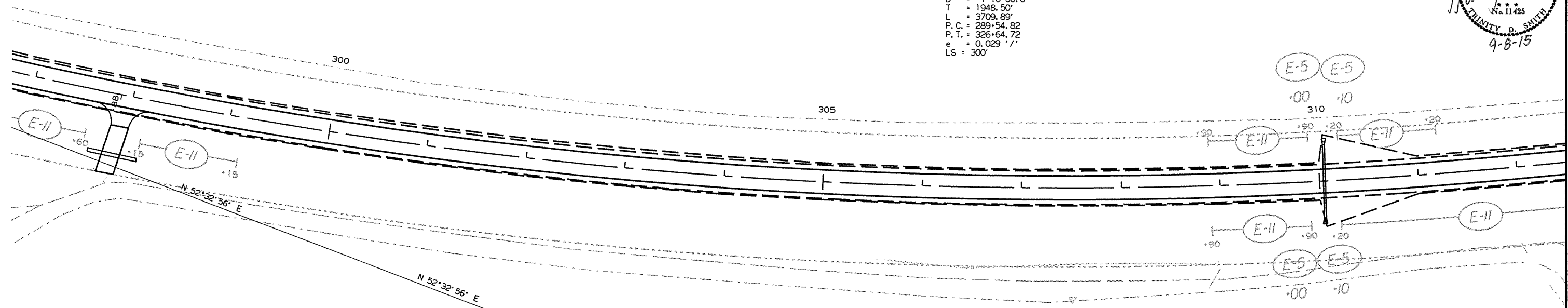
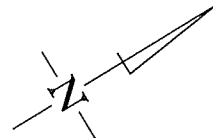
8/31/2015
 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		15	178
JOB NO. 020576								

② TEMPORARY EROSION CONTROL DETAILS



P. I. = 309+03.32
 Δ = 43° 16' 55.6" LT.
 D = 1° 10' 00.0"
 T = 1948.50'
 L = 3709.89'
 P. C. = 289+54.82
 P. T. = 326+64.72
 e = 0.029' /'
 LS = 300'



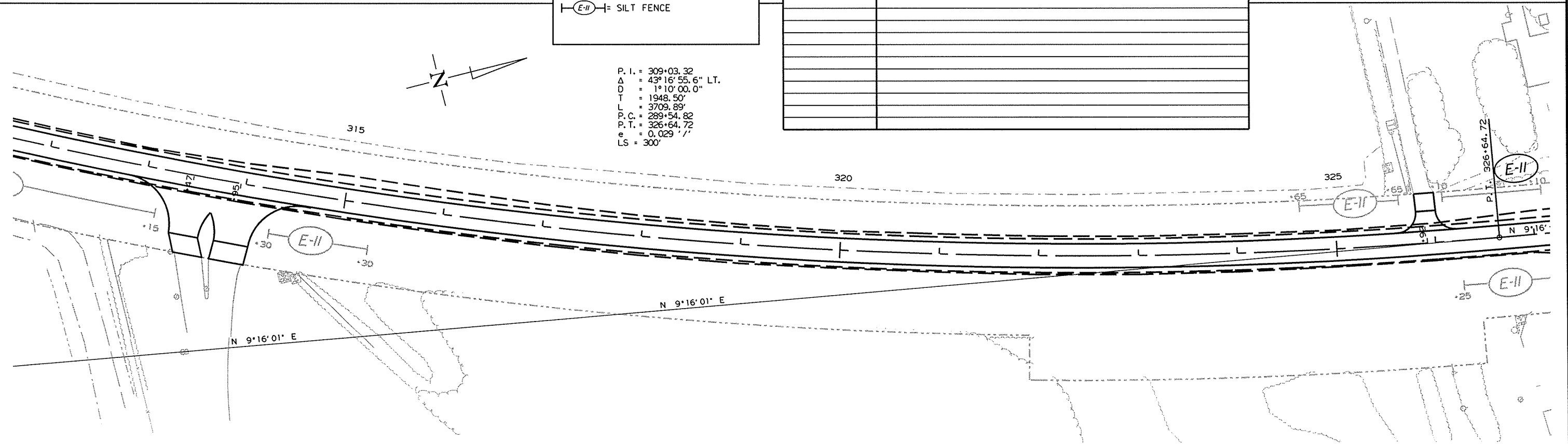
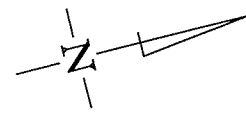
LEGEND

	= SAND BAG DITCH CHECK
	= SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

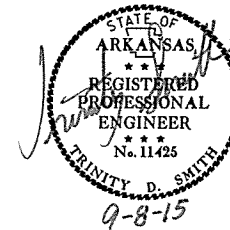
P. I. = 309+03.32
 Δ = 43° 16' 55.6" LT.
 D = 1° 10' 00.0"
 T = 1948.50'
 L = 3709.89'
 P. C. = 289+54.82
 P. T. = 326+64.72
 e = 0.029' /'
 LS = 300'



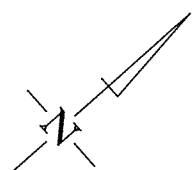
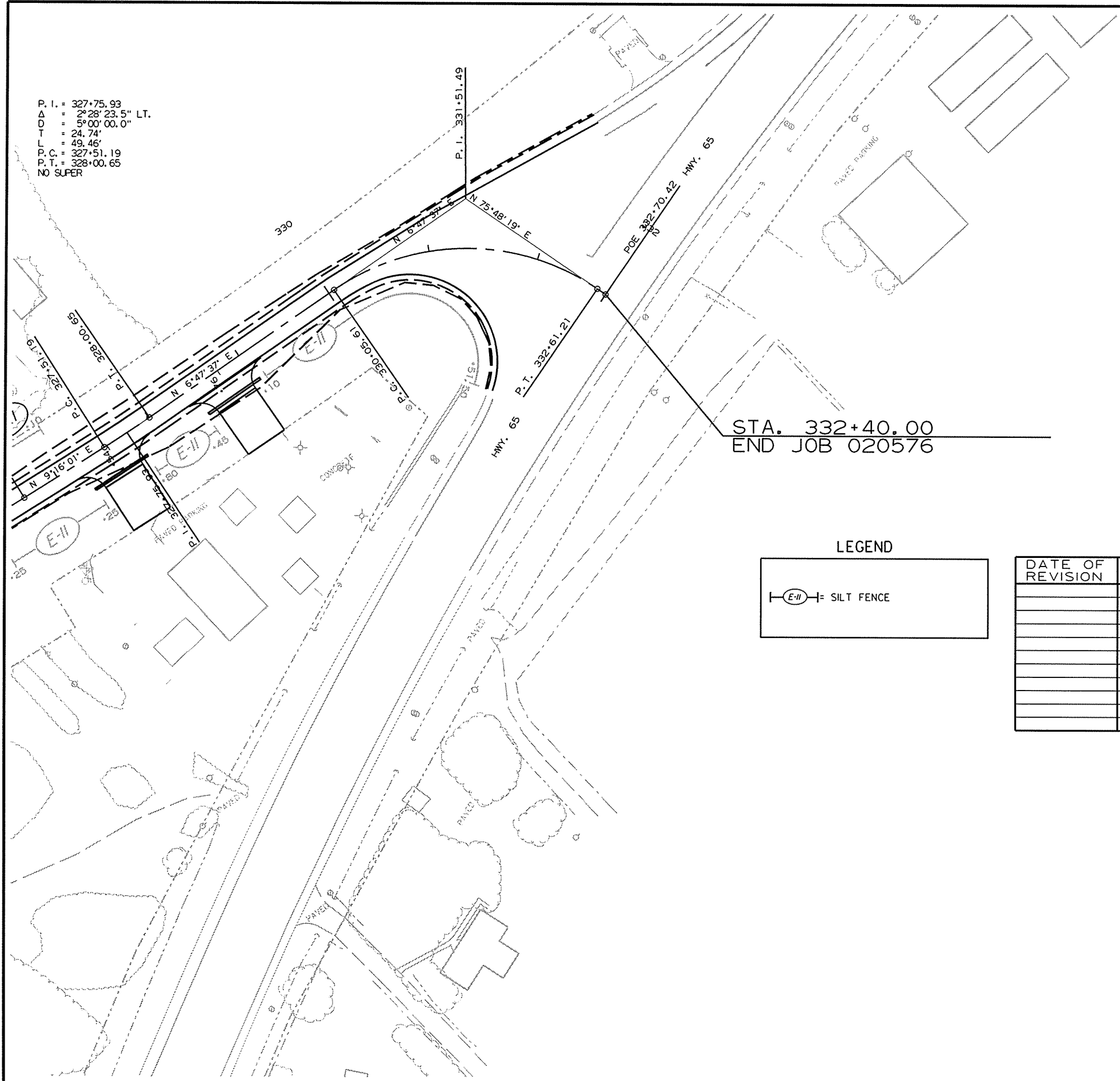
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020576	16	178

TEMPORARY EROSION CONTROL DETAILS

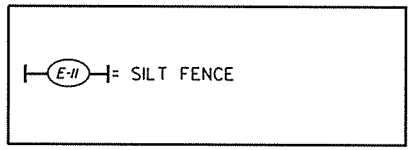


P. I. = 327+75.93
 Δ = 2° 28' 23.5" LT.
D = 5° 00' 00.0"
T = 24.74'
L = 49.46'
P.C. = 327+51.19
P.T. = 328+00.65
NO SUPER



STA. 332+40.00
END JOB 020576

LEGEND



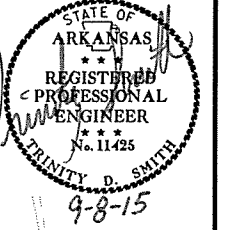
REVISIONS

DATE OF REVISION	REVISION

8/31/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		17	178
				JOB NO.	020576			

② MAINTENANCE OF TRAFFIC



DO NOT PASS

(12) R4-1 (24" x 30") EVERY 1/2 MILE

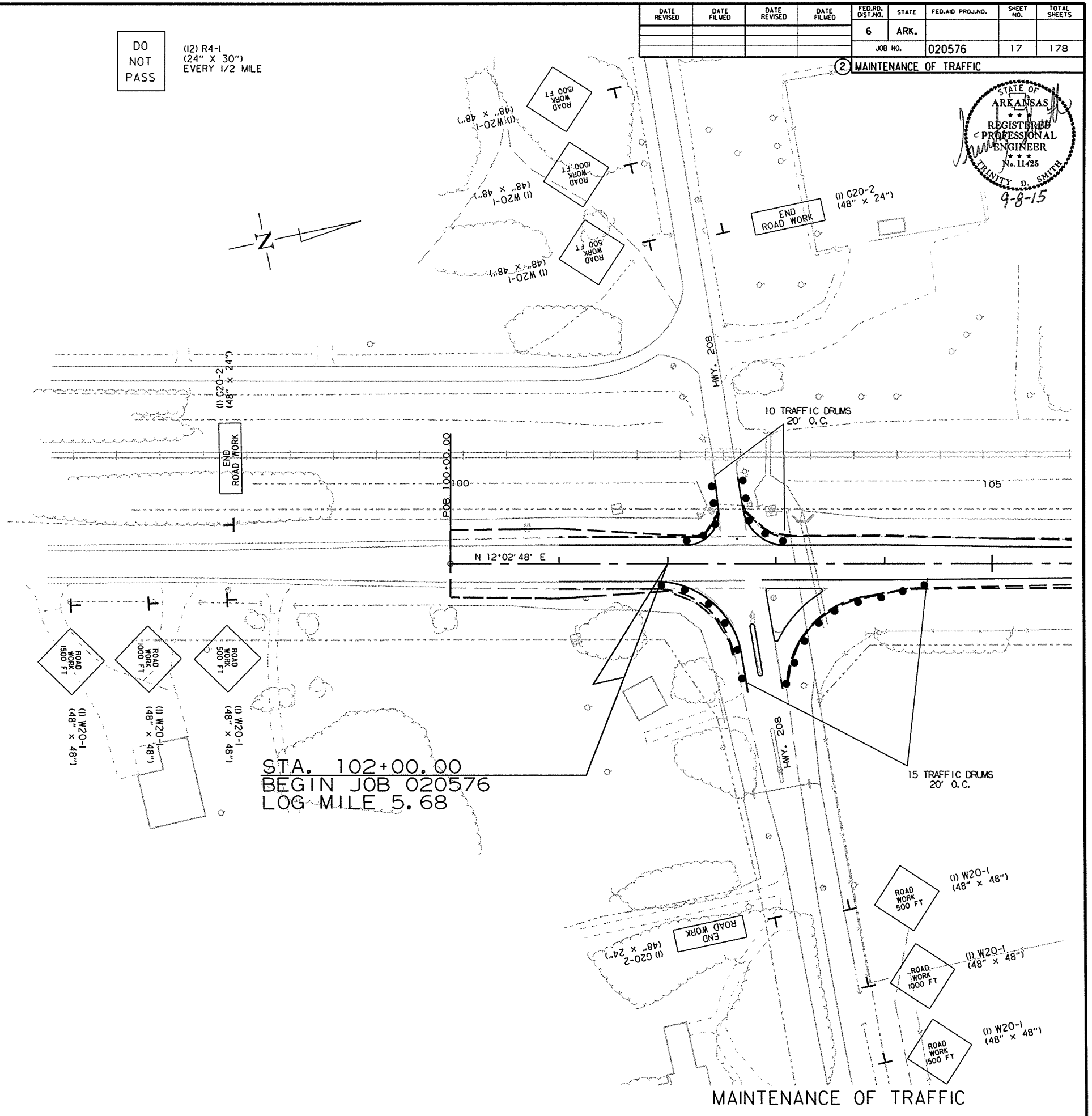
- SEQUENCE OF CONSTRUCTION
1. INSTALL ADVANCE WARNING SIGNS.
 2. EXTEND OR REPLACE CROSS DRAINS AS NOTED ON PLANS.
 3. CONSTRUCT DRIVEWAYS AND INSTALL PIPE CULVERTS.
 4. CONSTRUCT ISLANDS.

- END OF JOB:
1. COLD MILL AND PLACE FINAL SURFACE.
 2. PLACE FINAL STRIPING.

QUANTITIES:

SIGNS = 494.00 SQ. FT.

- TRAFFIC DRUMS = 112 EACH (10' O.C.)
- TRAFFIC DRUMS = 122 EACH (20' O.C.)
- TRAFFIC DRUMS = 21 EACH (50' O.C.)



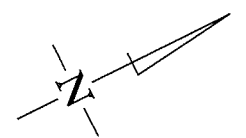
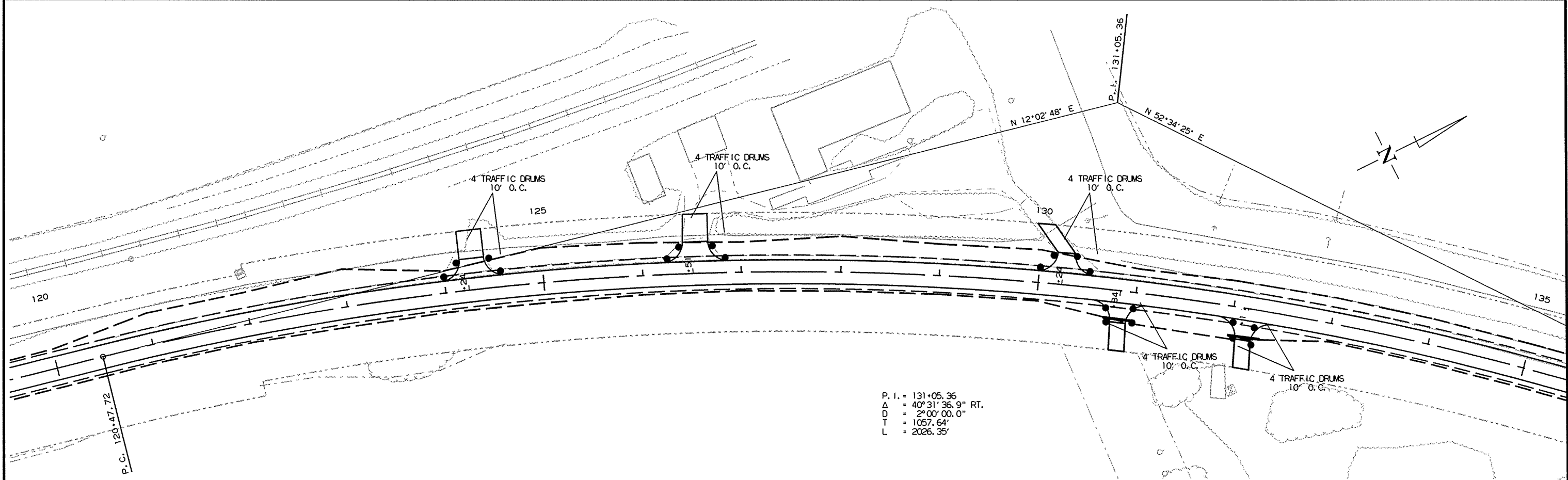
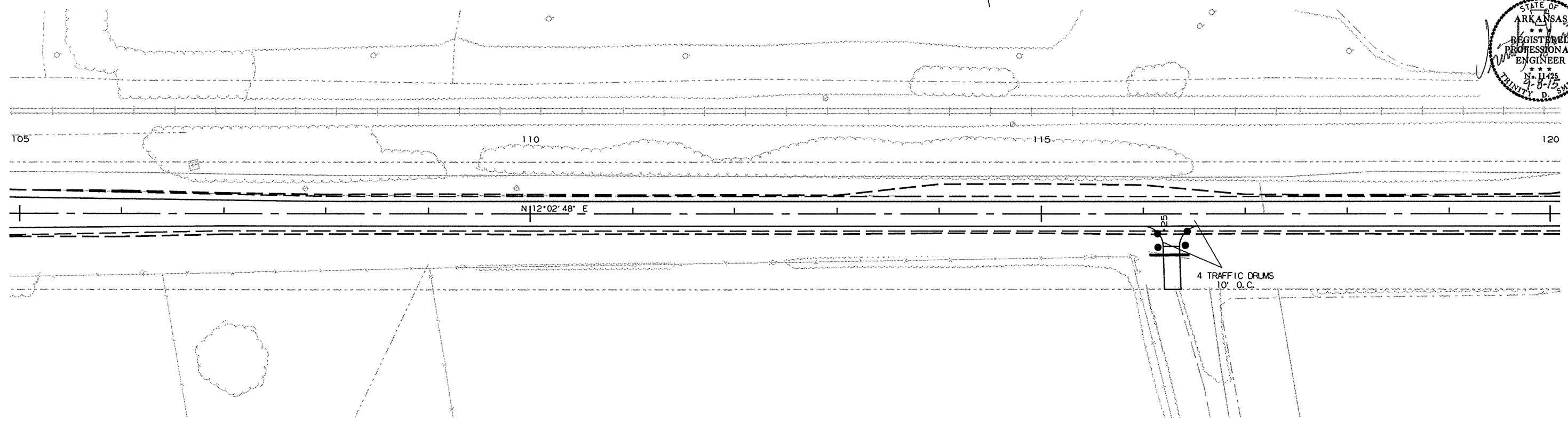
MAINTENANCE OF TRAFFIC

8/31/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	178
				JOB NO. 020576				

② MAINTENANCE OF TRAFFIC



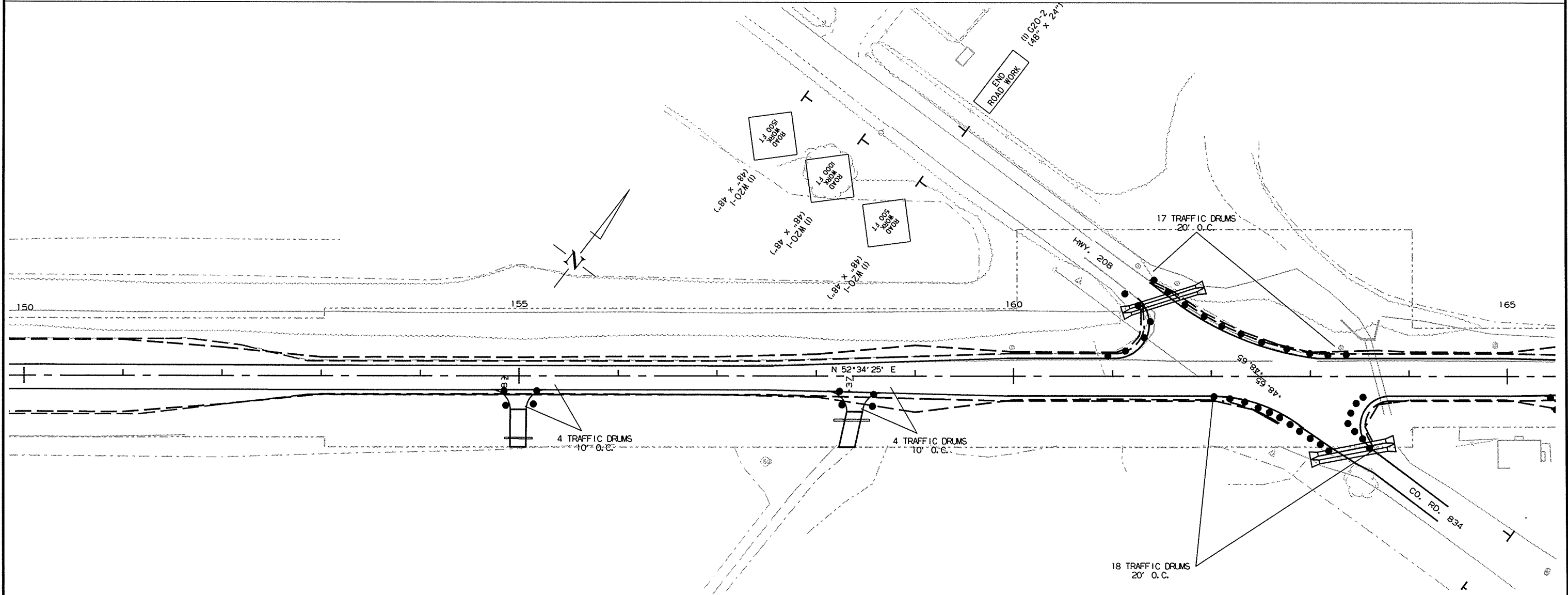
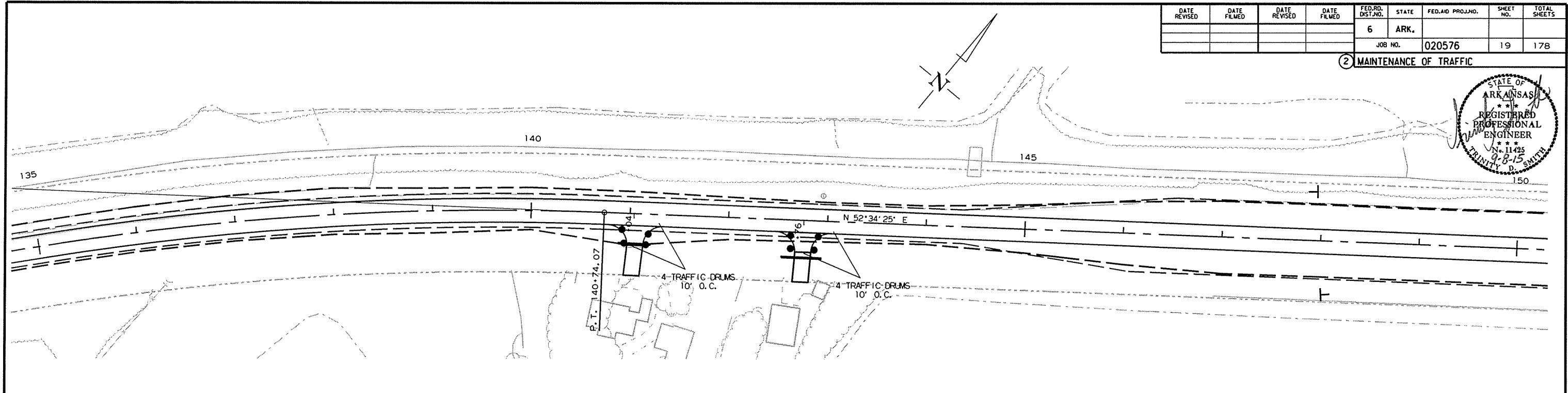
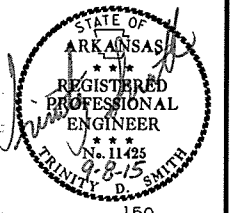
P. I. = 131+05.36
 Δ = 40° 31' 36.9" RT.
D = 2° 00' 00.0"
T = 1057.64'
L = 2026.35'

MAINTENANCE OF TRAFFIC

8/31/2015 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		19	178
				JOB NO.		020576		

② MAINTENANCE OF TRAFFIC



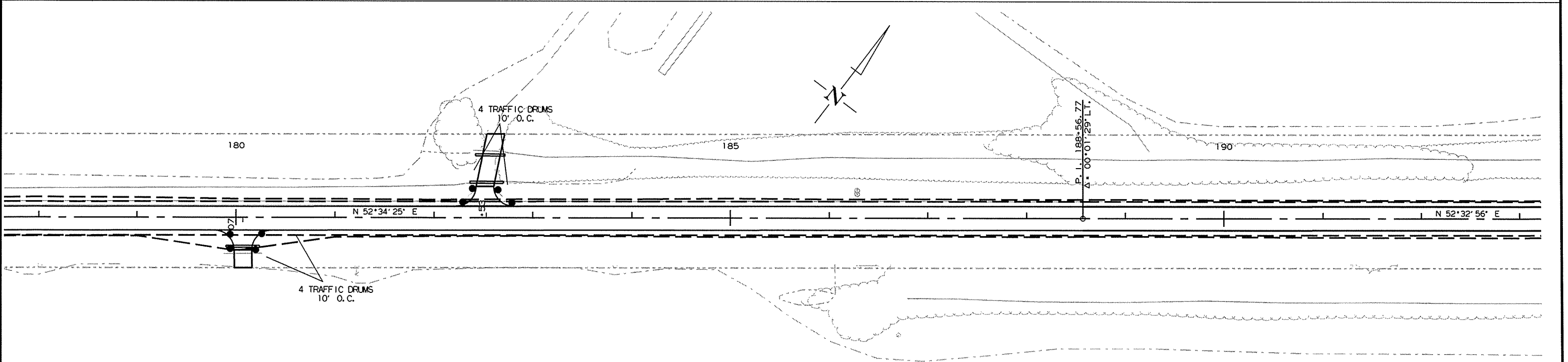
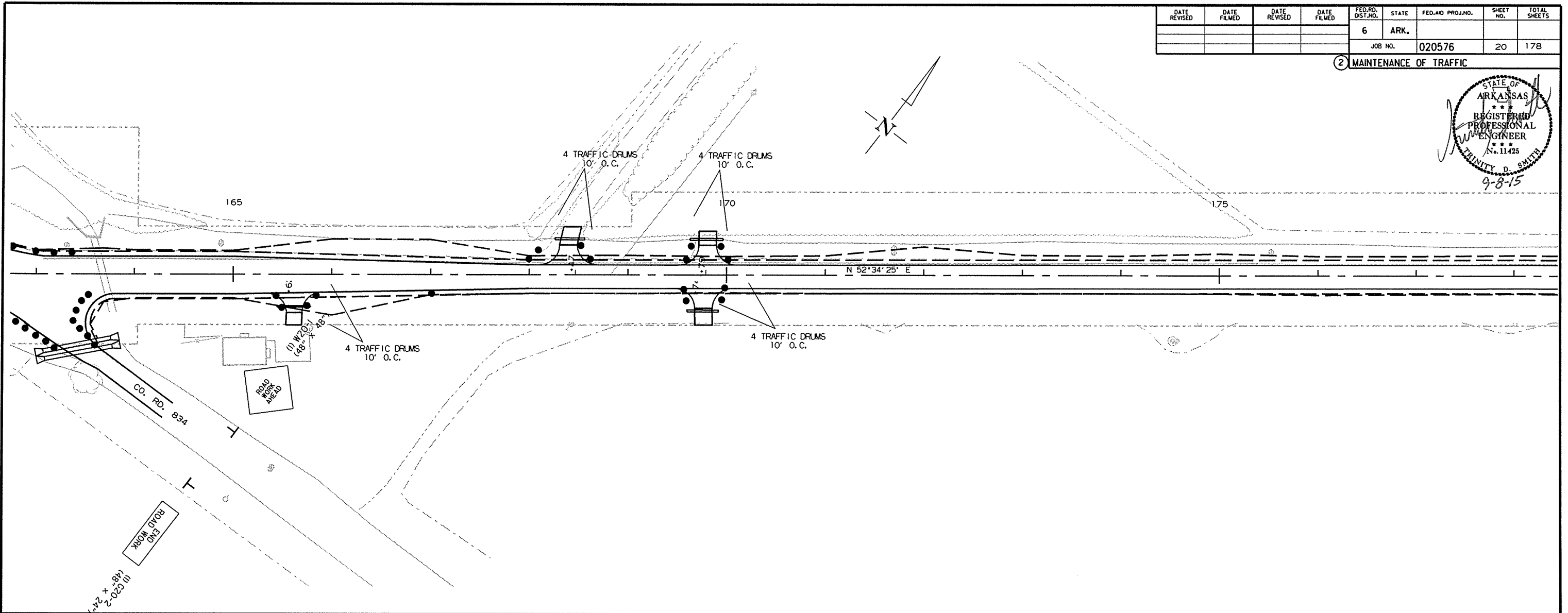
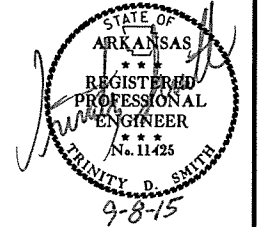
MAINTENANCE OF TRAFFIC

8/31/2015

R020576.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		20	178

② MAINTENANCE OF TRAFFIC



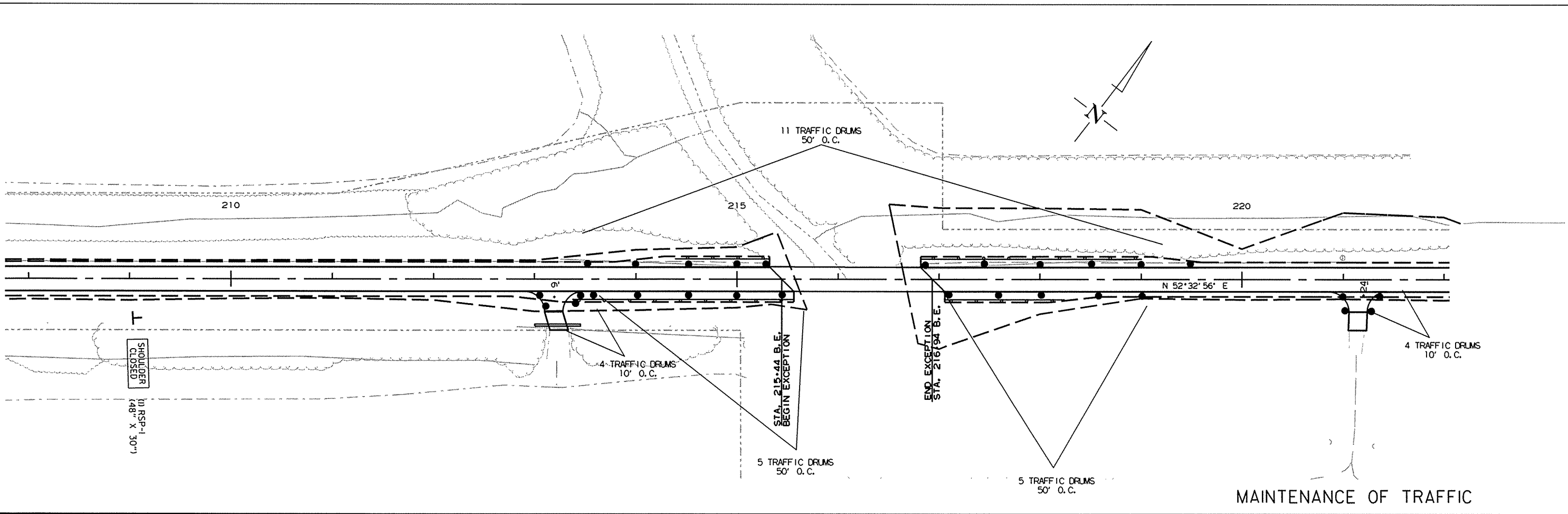
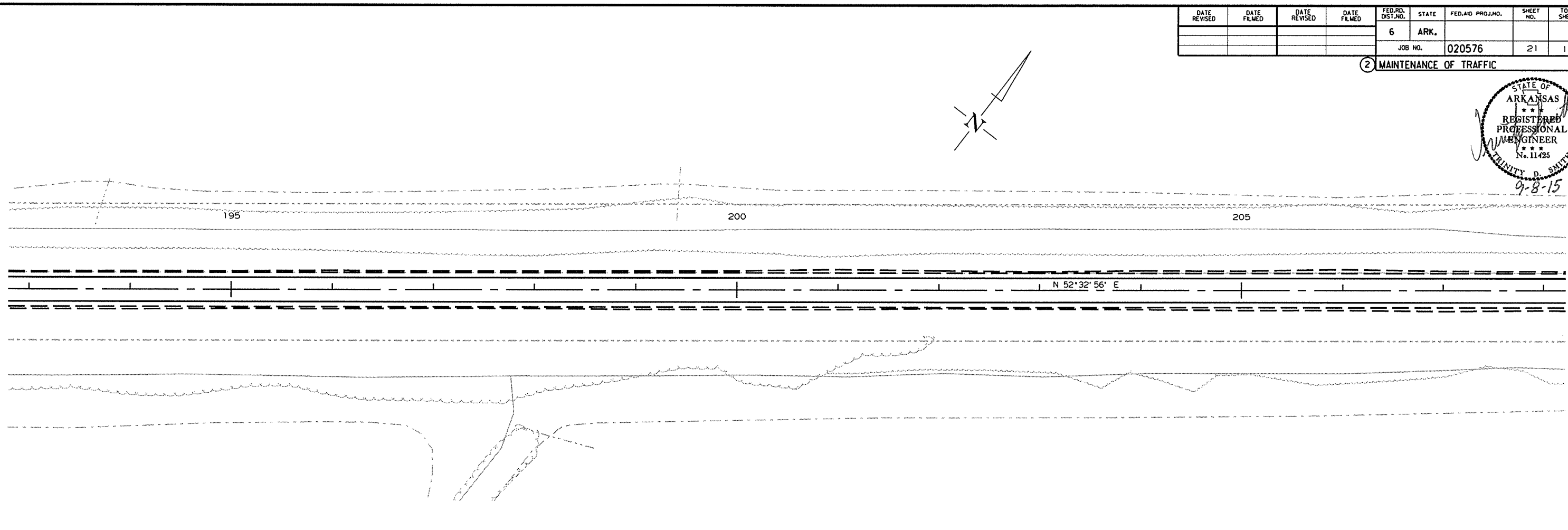
MAINTENANCE OF TRAFFIC

8/31/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		21	178

② MAINTENANCE OF TRAFFIC

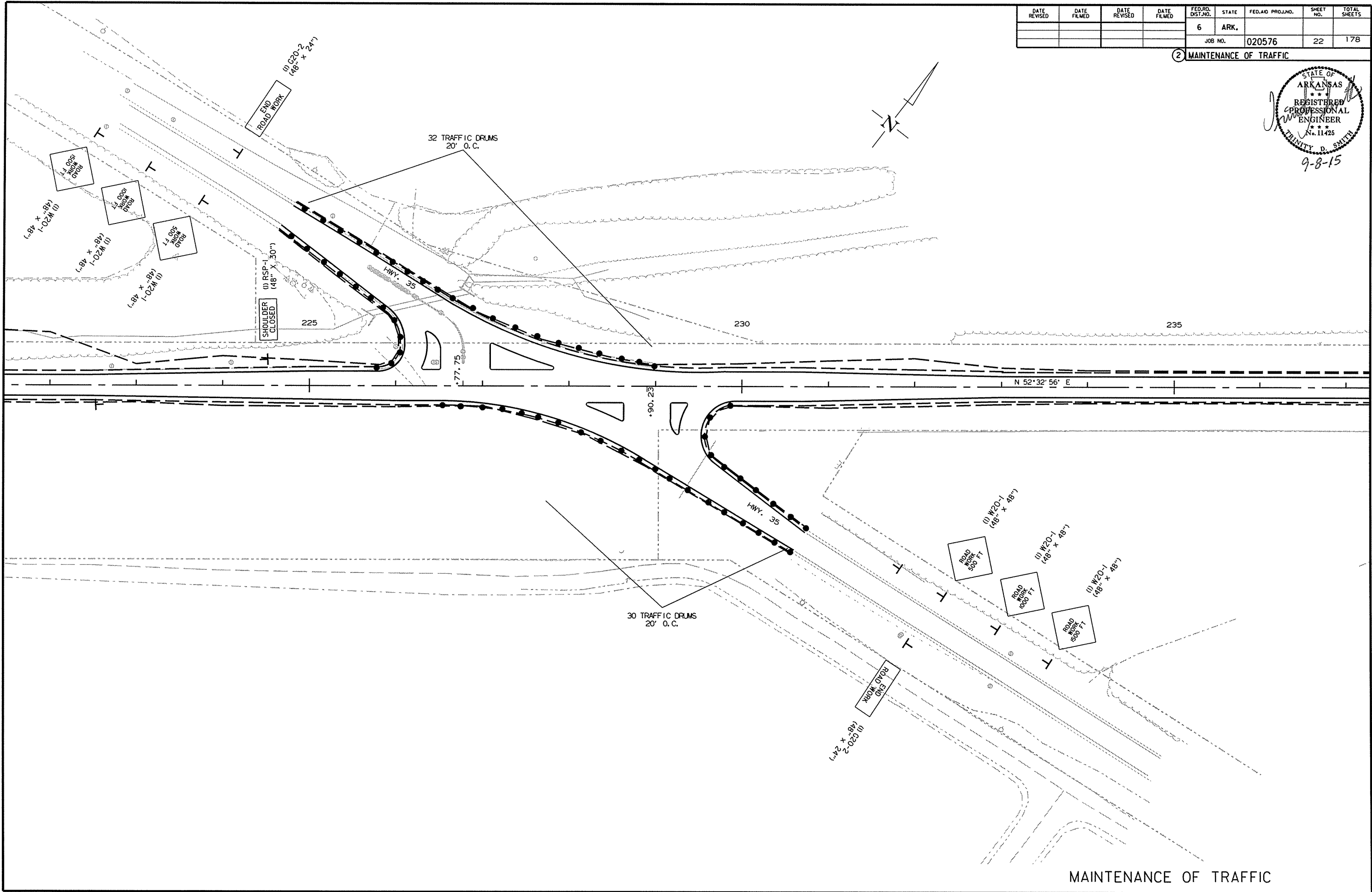
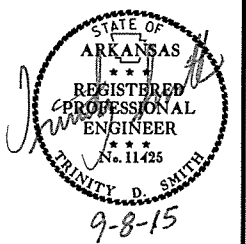


MAINTENANCE OF TRAFFIC

8/31/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		22	178

② MAINTENANCE OF TRAFFIC



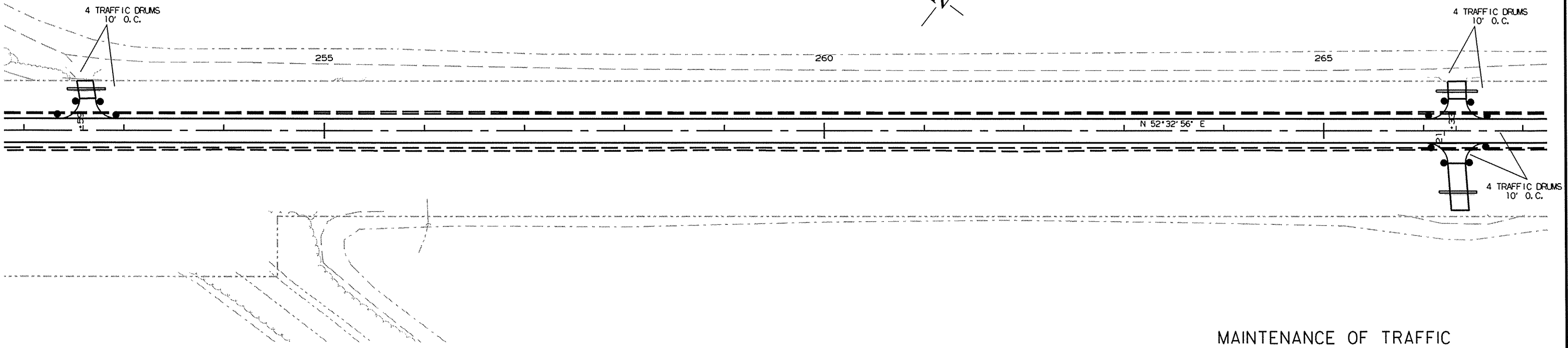
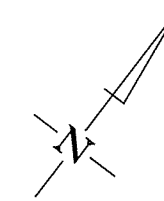
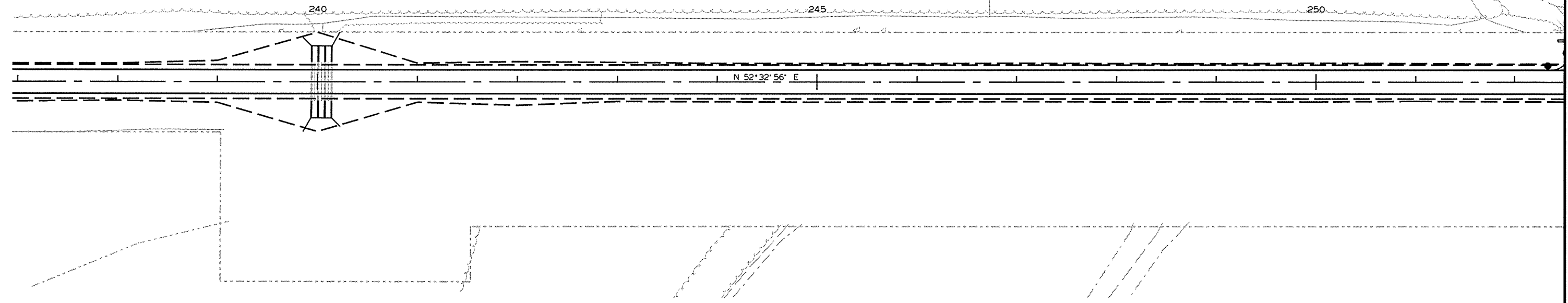
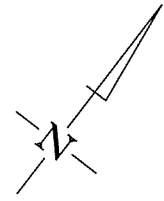
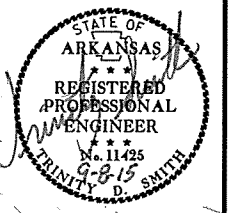
MAINTENANCE OF TRAFFIC

8/31/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		23	178
				JOB NO.		020576		

2 MAINTENANCE OF TRAFFIC

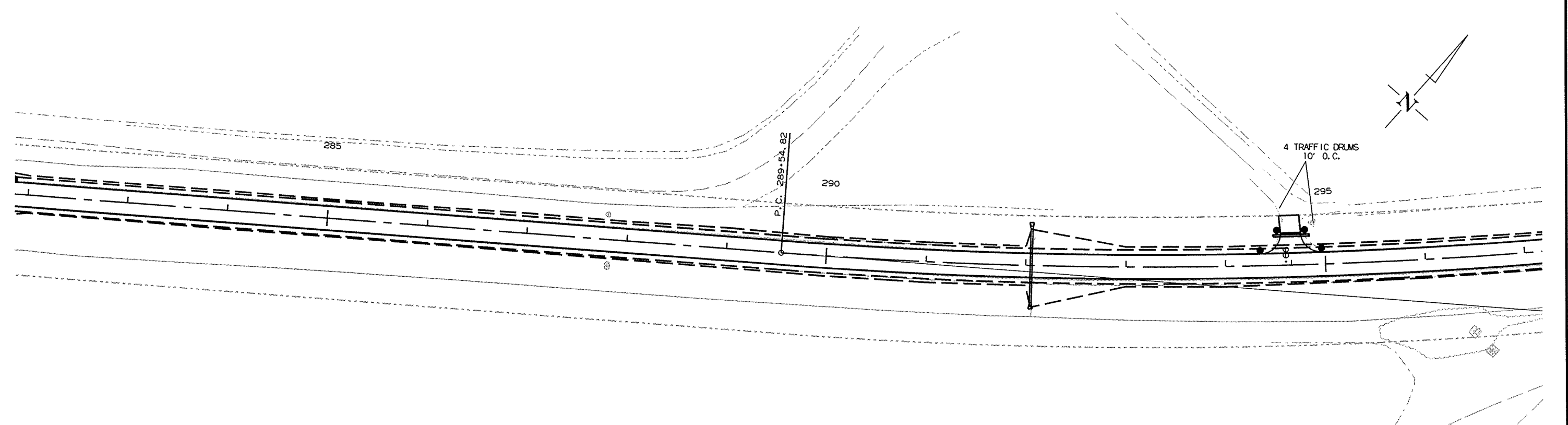
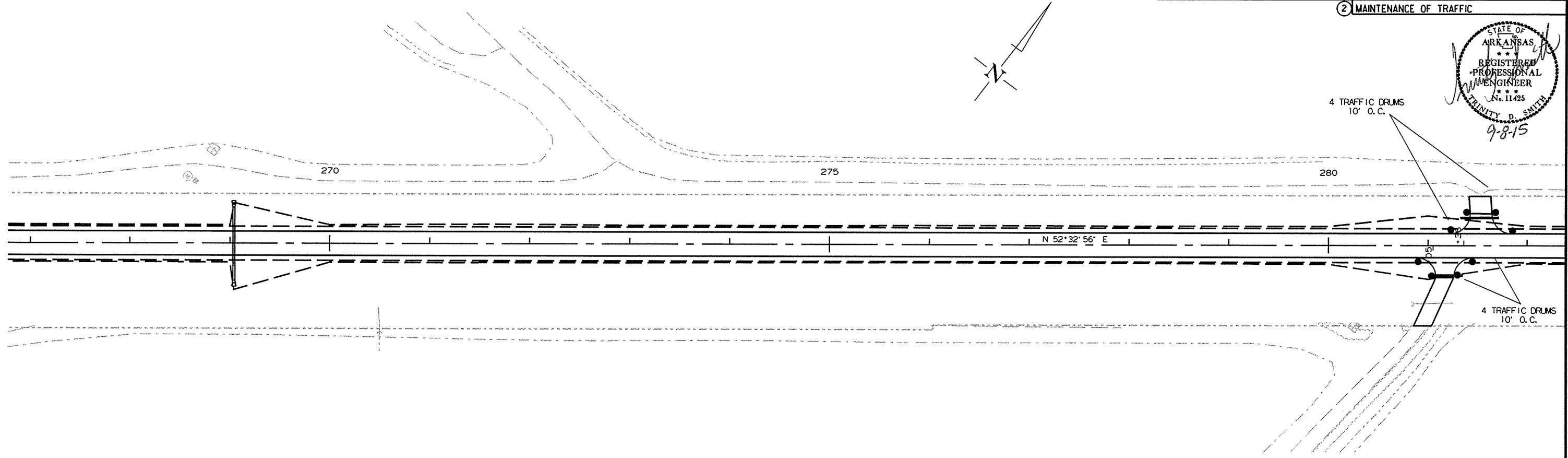


MAINTENANCE OF TRAFFIC

8/31/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		24	178

② MAINTENANCE OF TRAFFIC

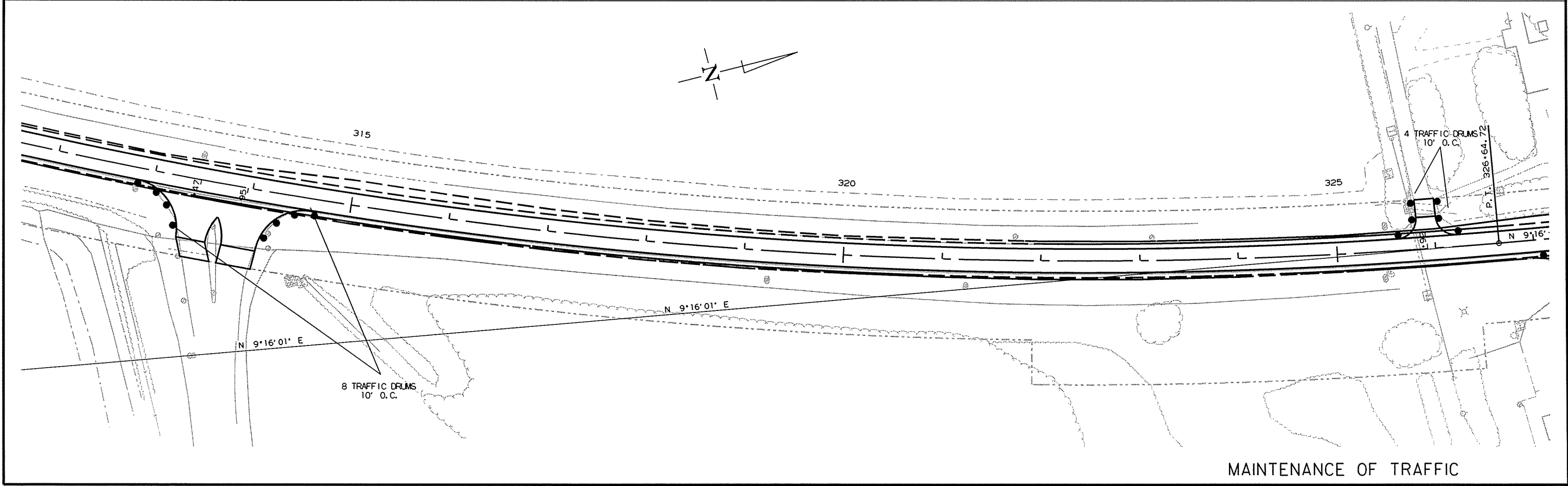
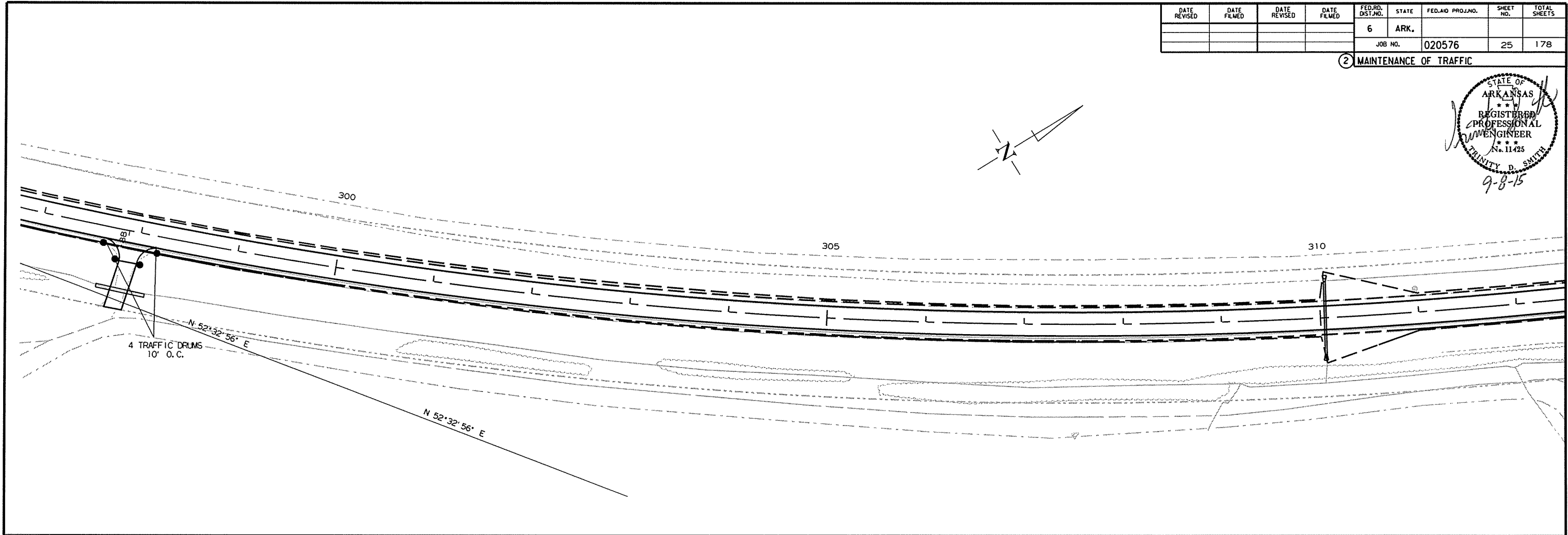
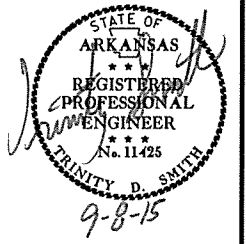


MAINTENANCE OF TRAFFIC

8/31/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		25	178
				JOB NO.		020576		

② MAINTENANCE OF TRAFFIC



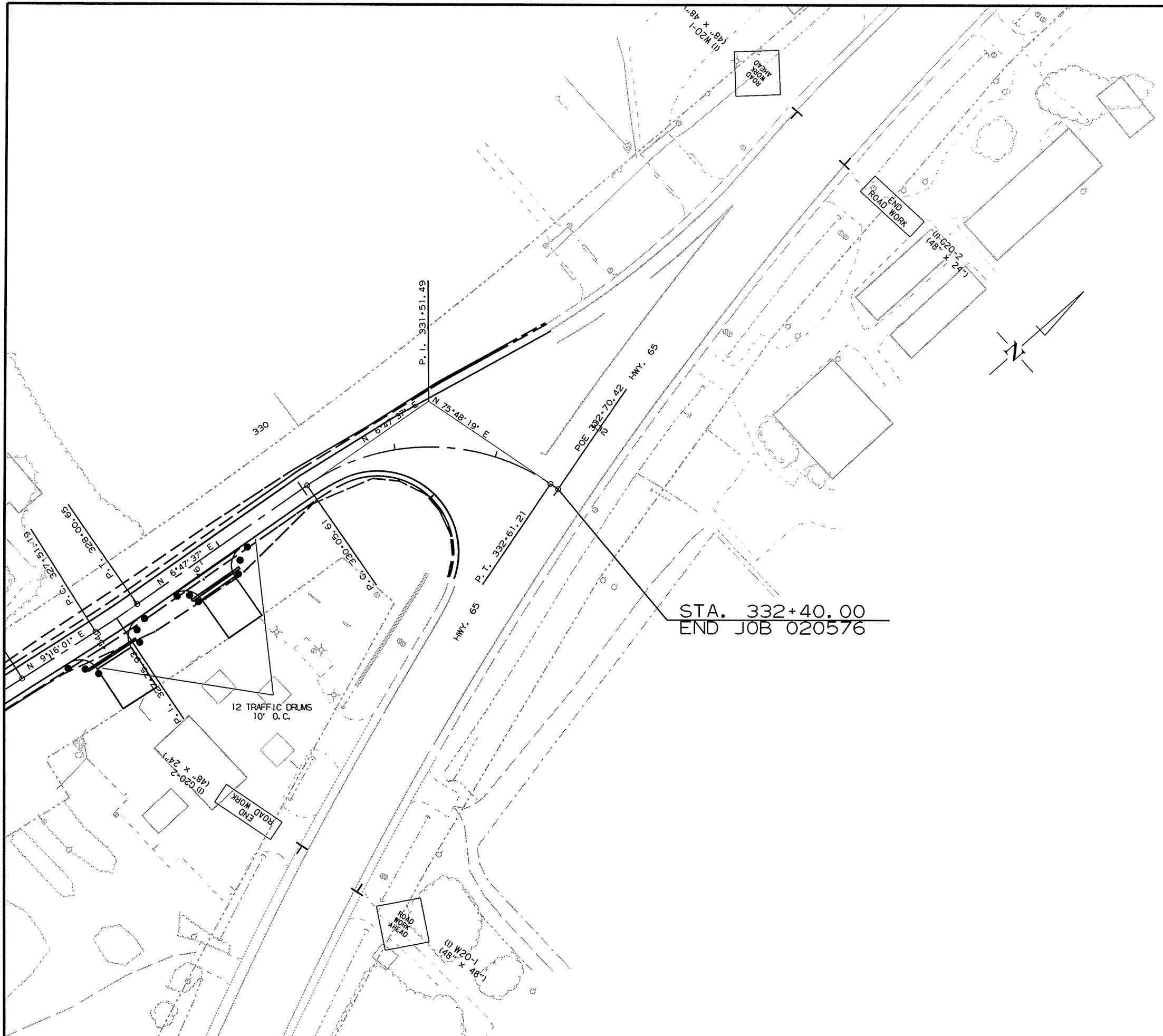
MAINTENANCE OF TRAFFIC

8/31/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020576	26	178

② MAINTENANCE OF TRAFFIC



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MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION

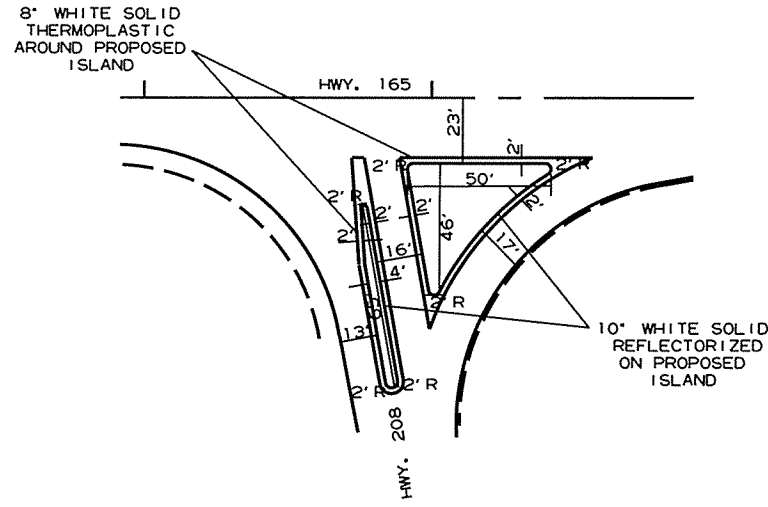
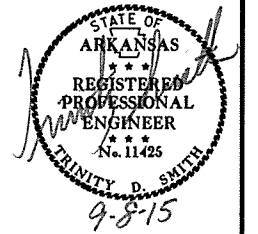
- STAGE 1:
 1. INSTALL ADVANCE WARNING SIGNS.
 2. EXTEND OR REPLACE CROSS DRAINS AS NOTED ON PLANS.
 3. CONSTRUCT DRIVEWAYS AND INSTALL PIPE CULVERTS ON RT.
 4. CONSTRUCT ISLANDS ON RT.
- STAGE 2:
 1. CONSTRUCT DRIVEWAYS AND INSTALL PIPE CULVERTS ON LT.
 2. CONSTRUCT ISLANDS ON LT.
 3. COLD MILL AND PLACE FINAL SURFACE.
- STAGE 3:
 PLACE FINAL STRIPING.

PERMANENT PAVEMENT MARKING QUANTITIES

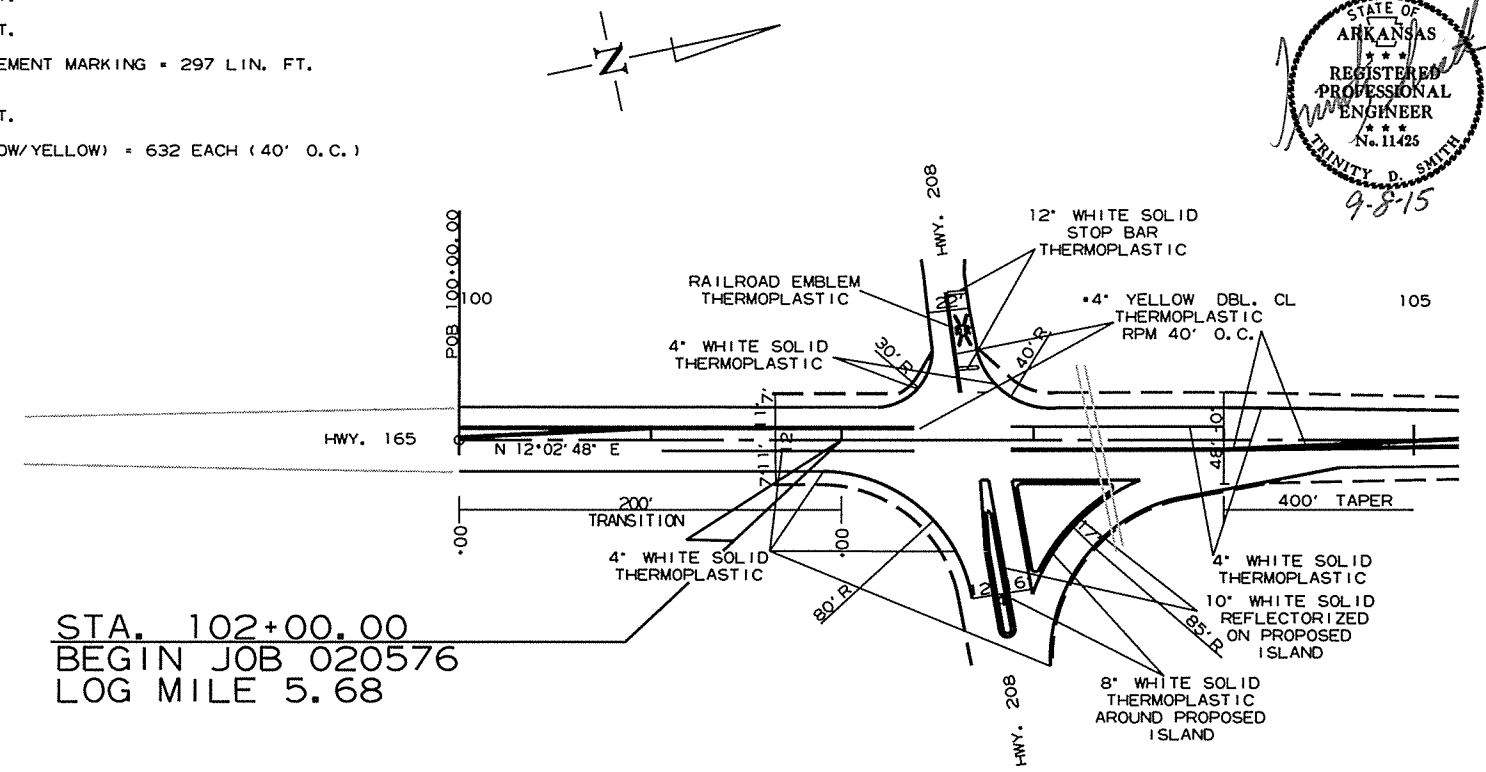
- THERMOPLASTIC PAVEMENT MARKING
 4" YELLOW (DBL.) = 50282 LIN. FT.
 4" WHITE (TURN LANE) = 694 LIN. FT.
 4" WHITE (EDGE LINE) = 48292 LIN. FT.
 8" WHITE (AROUND ISLAND) = 2642 LIN. FT.
 12" WHITE (STOP BARS) = 22 LIN. FT.
 RAILROAD EMBLEMS = 1 EACH
 RUMBLE BAR = 150 LIN. FT.
- 4" YELLOW HIGH PERFORMANCE CONTRAST PAVEMENT MARKING = 297 LIN. FT.
- REFLECTORIZED PAINT PAVEMENT MARKING
 10" WHITE (ON ISLAND) = 1963 LIN. FT.
- RAISED PAVEMENT MARKERS (TYPE 11) (YELLOW/YELLOW) = 632 EACH (40' O.C.)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	178
JOB NO. 020576								

PERMANENT PAVEMENT MARKING DETAILS

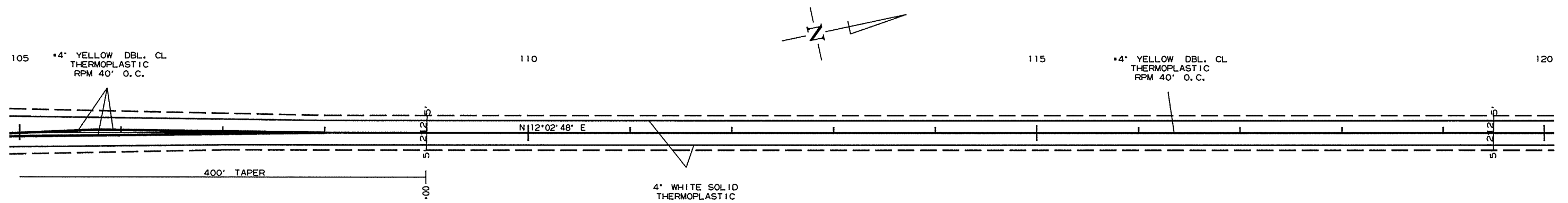


HWY. 165 & HWY. 208



STA. 102+00.00
 BEGIN JOB 020576
 LOG MILE 5.68

*THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

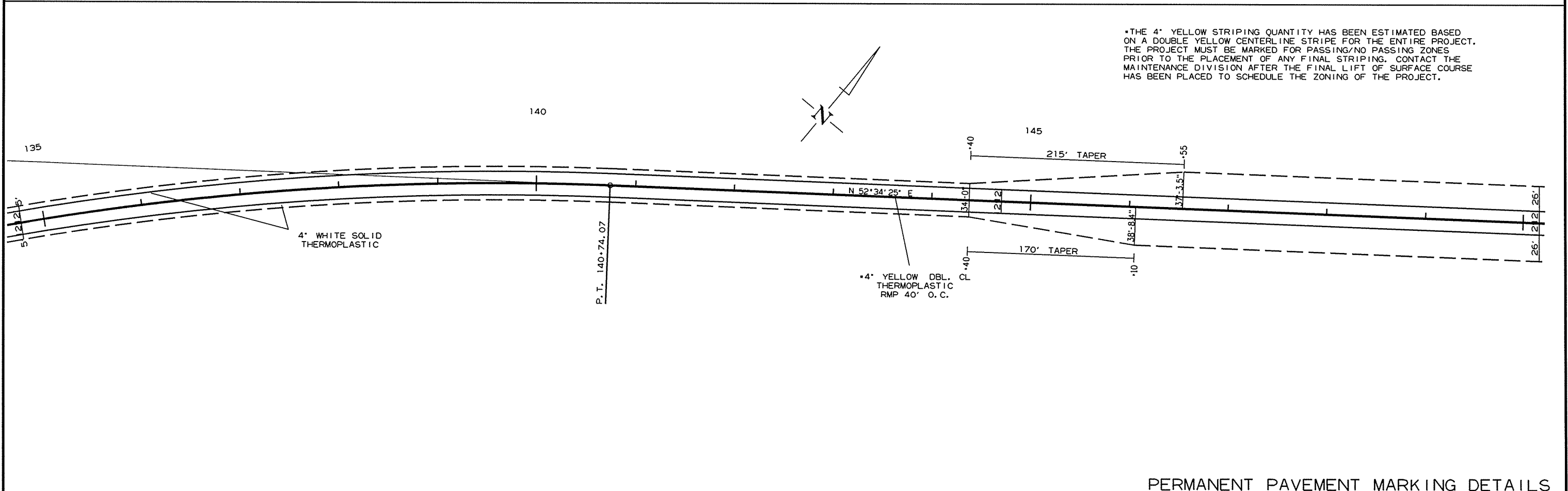
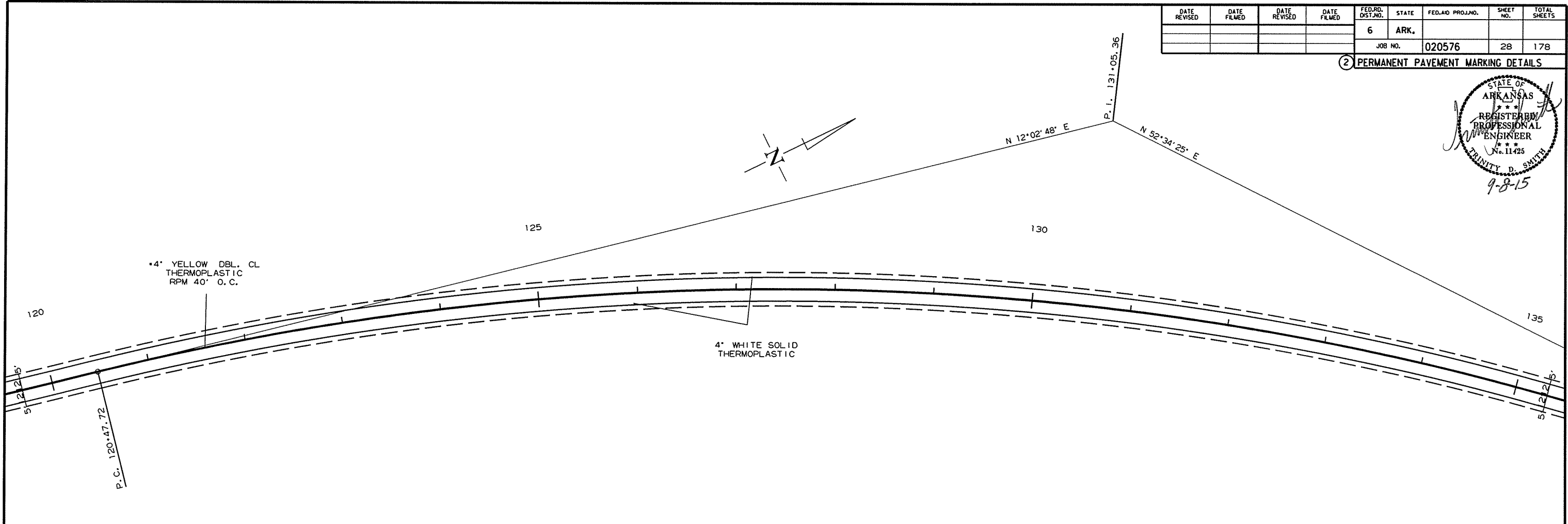


PERMANENT PAVEMENT MARKING DETAILS

4/24/2015
 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		28	178

2 PERMANENT PAVEMENT MARKING DETAILS

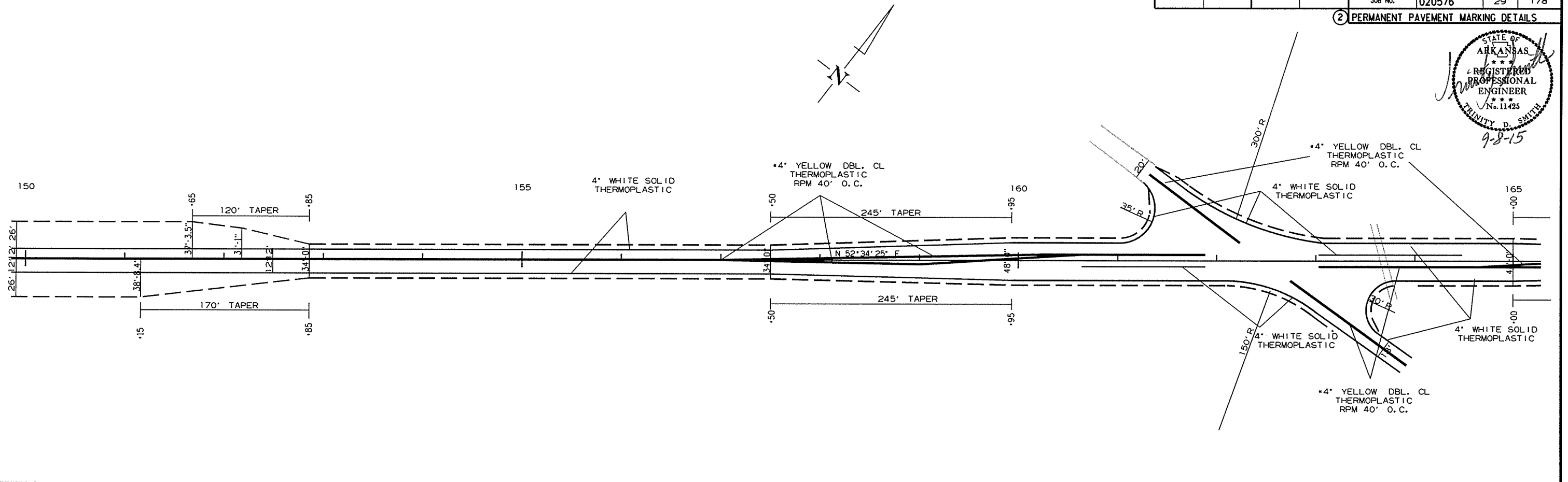
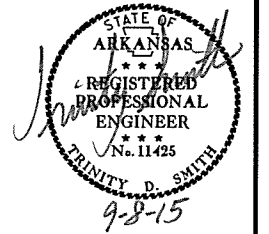


•THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

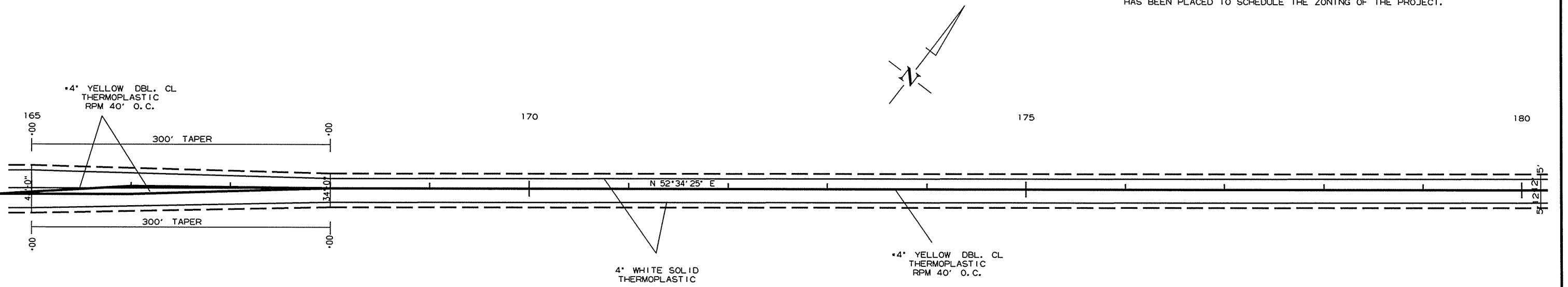
4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		29	178
				JOB NO.	020576			

2 PERMANENT PAVEMENT MARKING DETAILS



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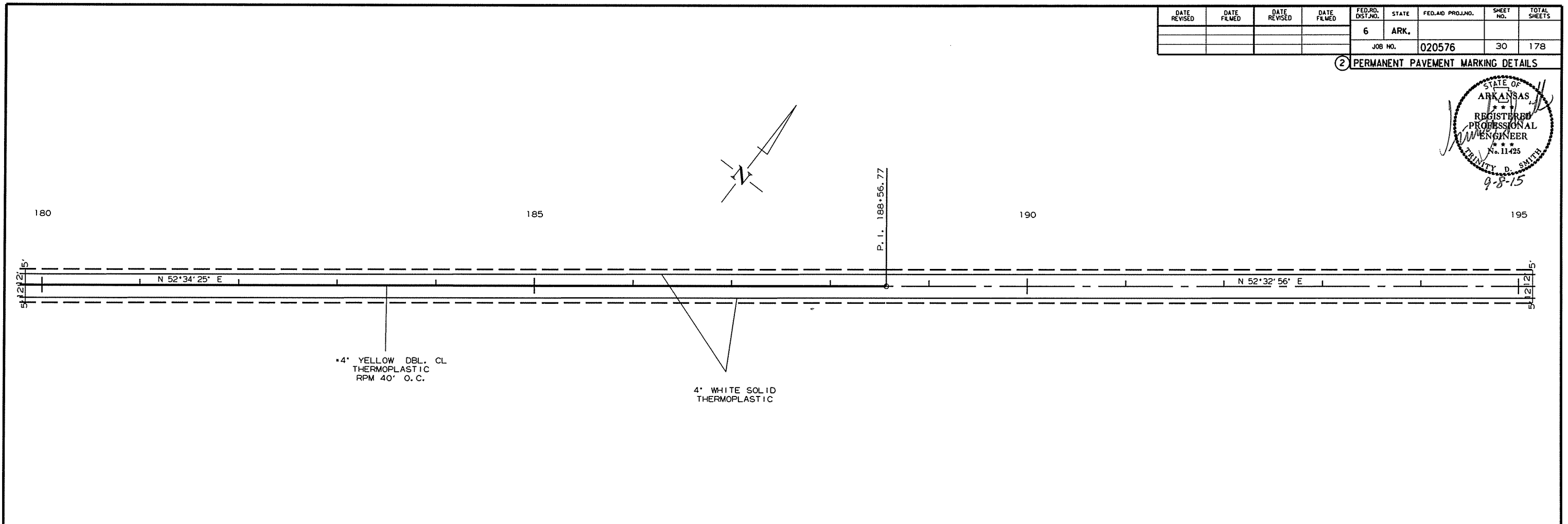
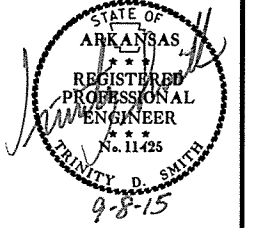


4/24/2015

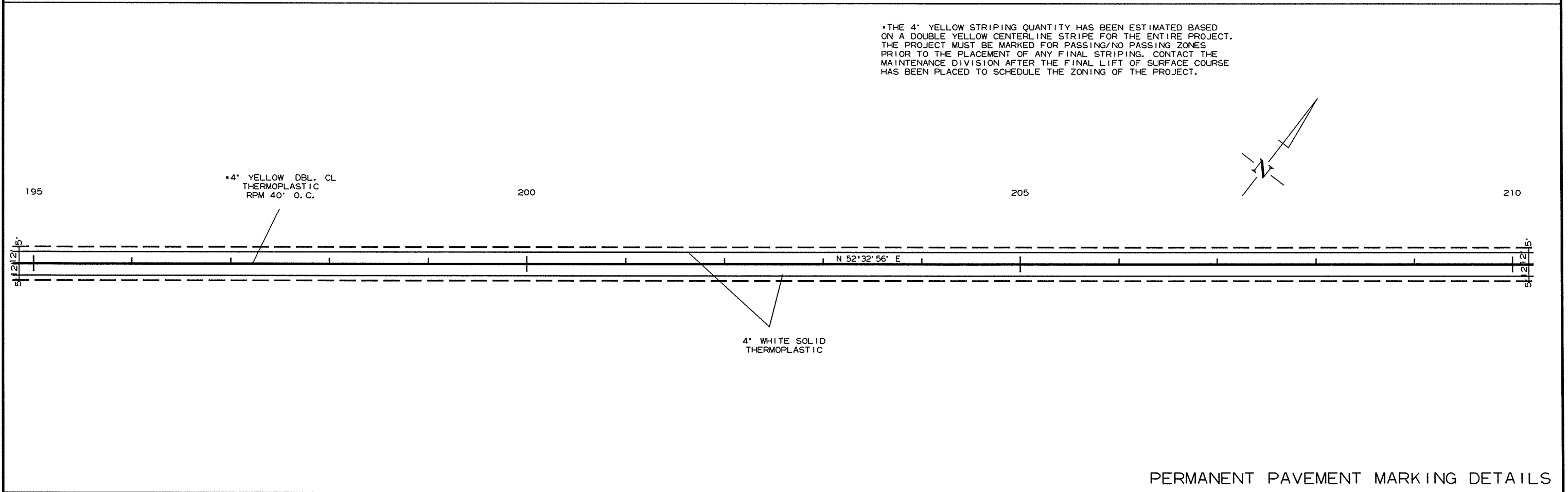
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							30	178

② PERMANENT PAVEMENT MARKING DETAILS



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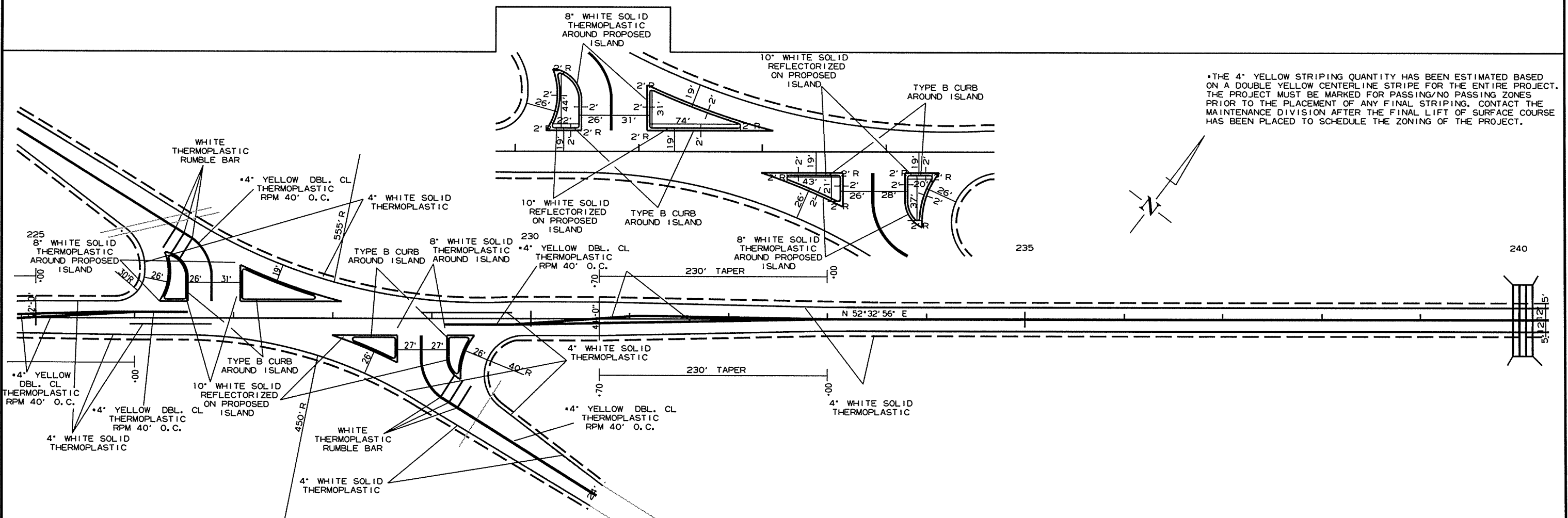
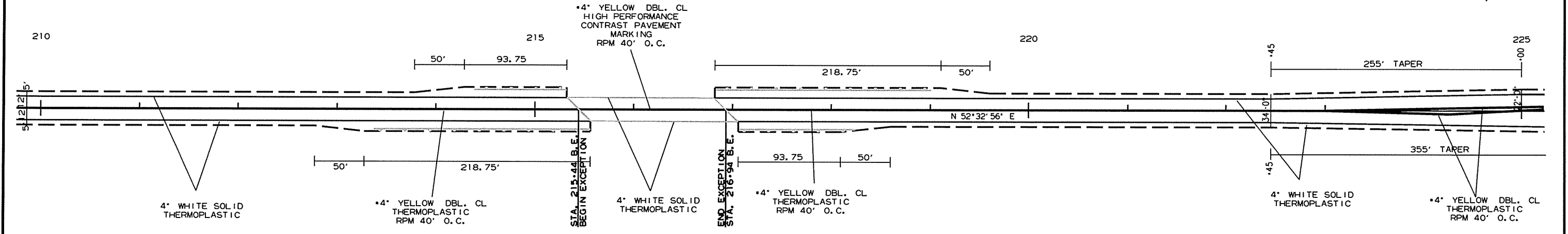
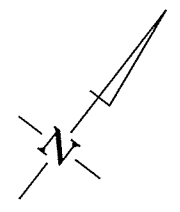
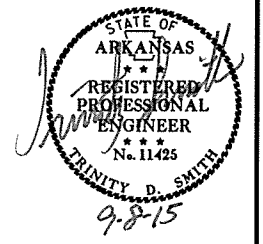


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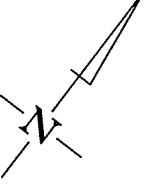
R020576.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		31	178

2 PERMANENT PAVEMENT MARKING DETAILS



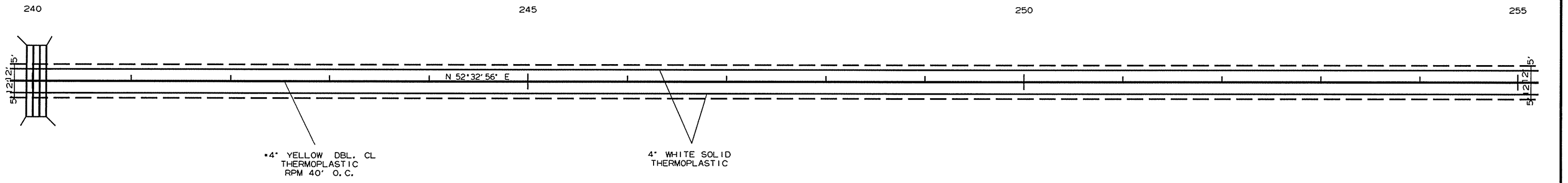
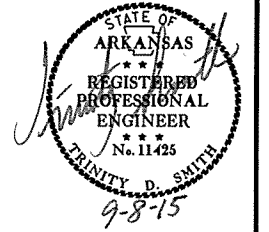
*THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.



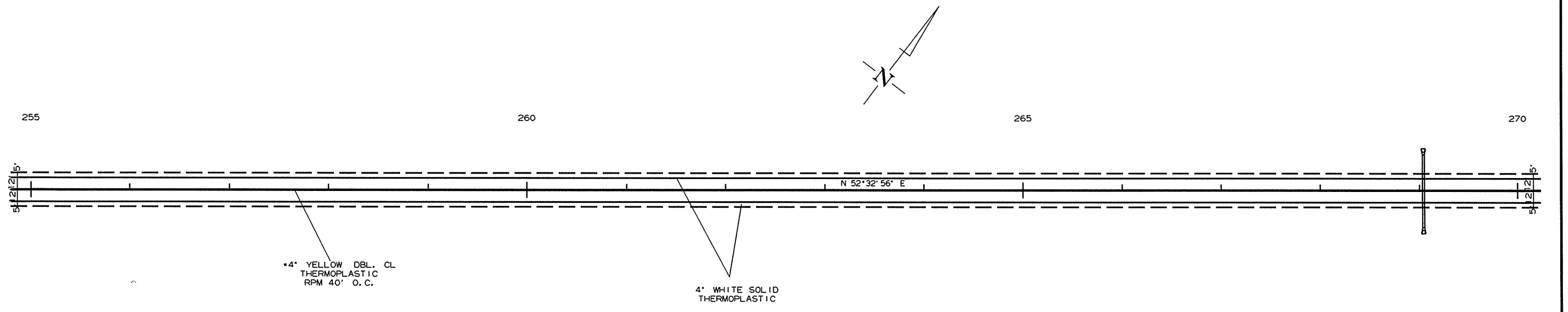
4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 020576	32 178

② PERMANENT PAVEMENT MARKING DETAILS



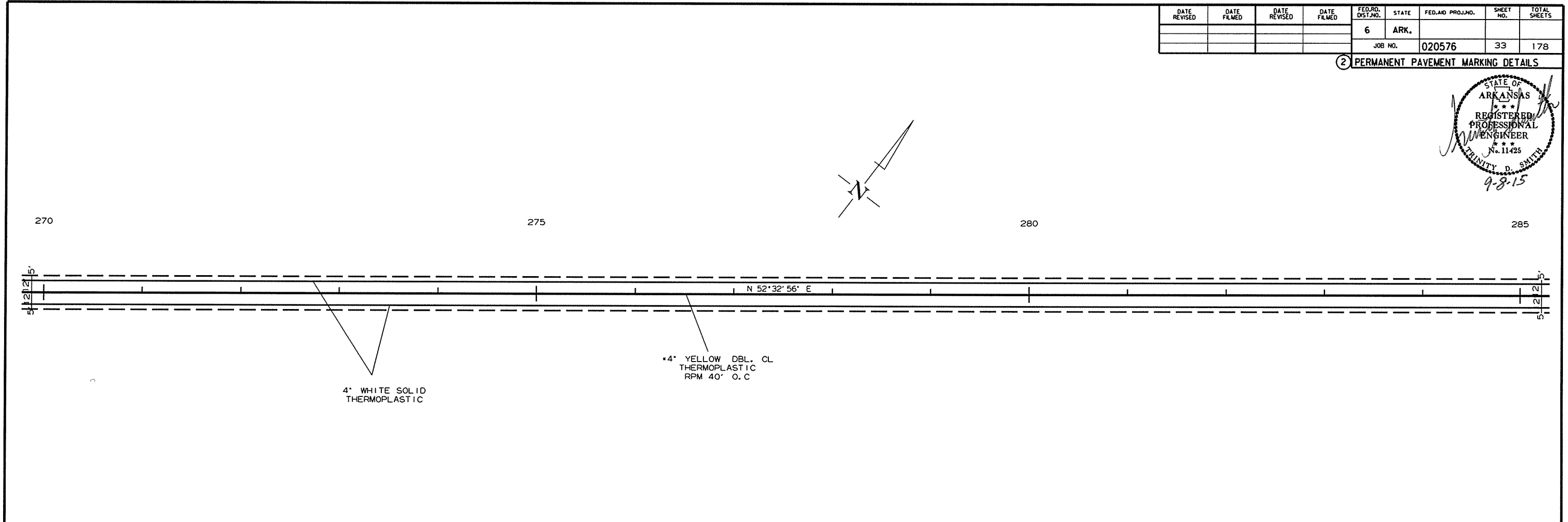
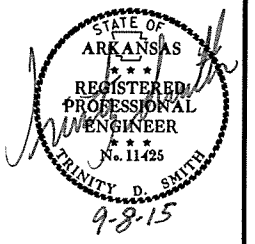
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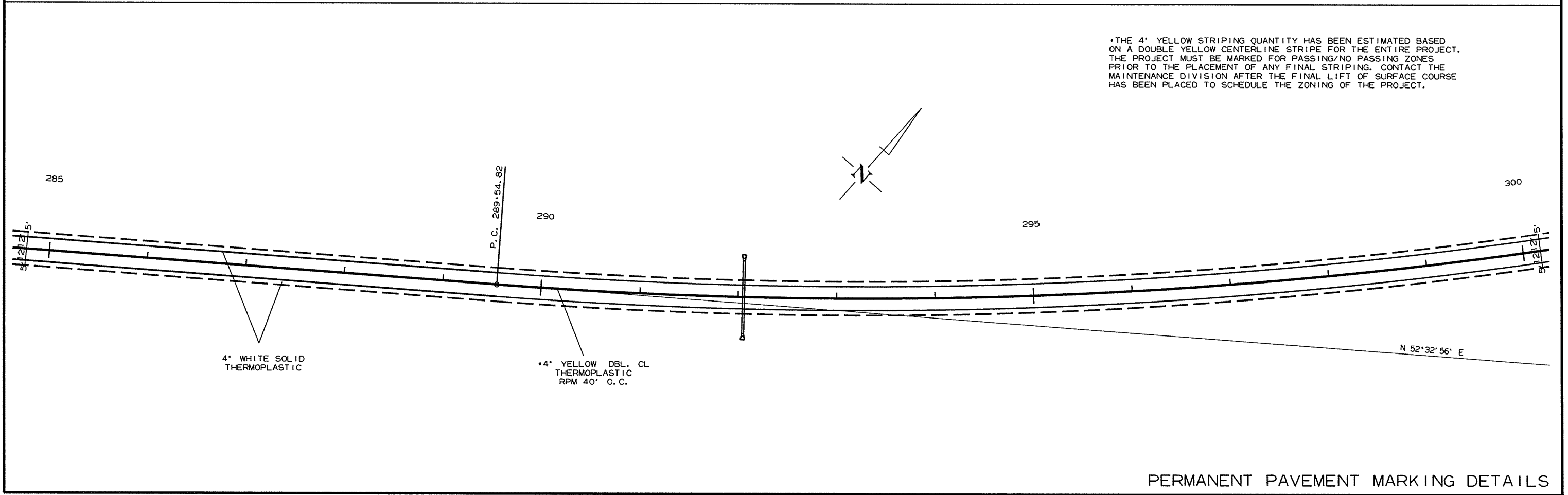
4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							33	178

② PERMANENT PAVEMENT MARKING DETAILS



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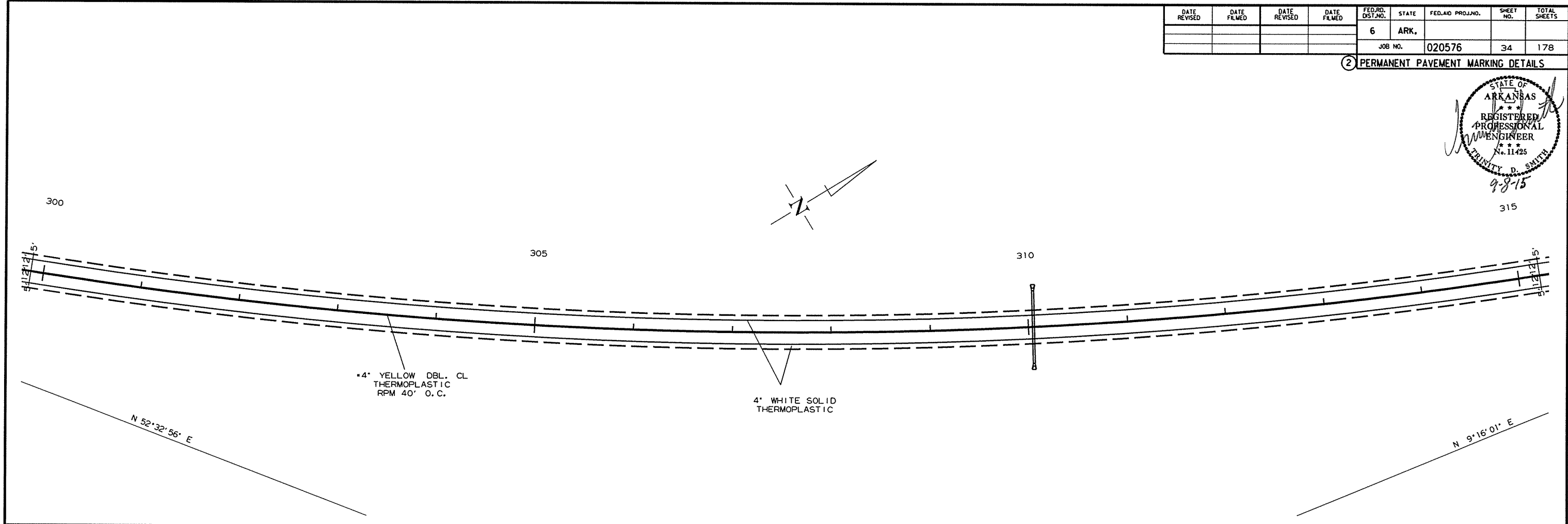


PERMANENT PAVEMENT MARKING DETAILS

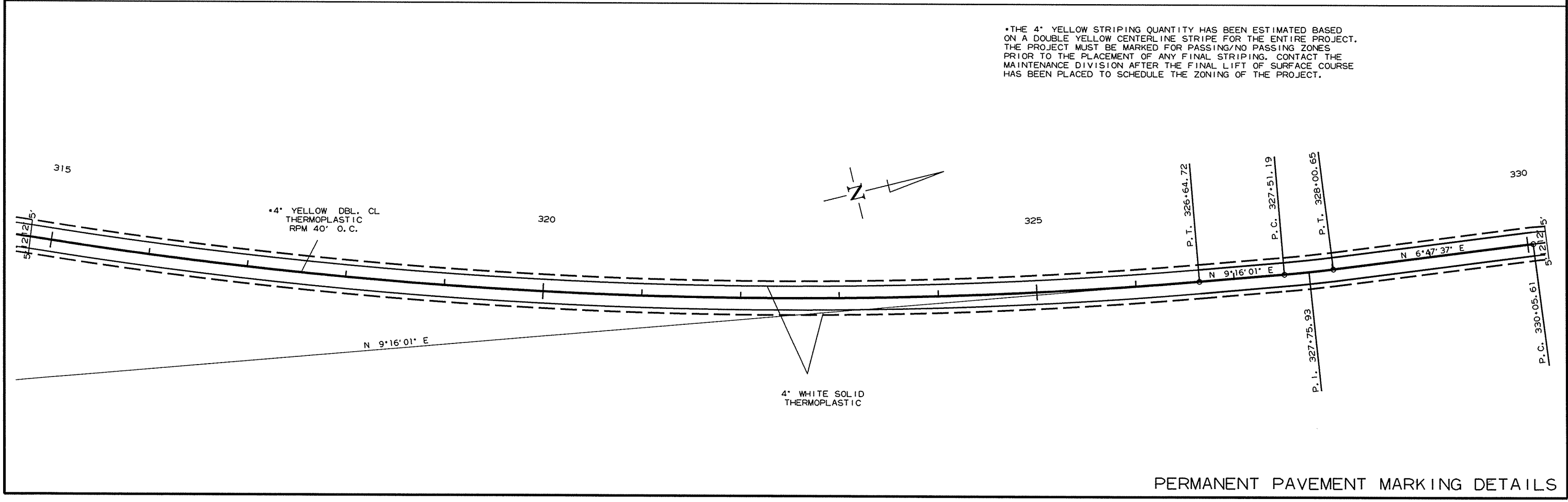
4/24/2015 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020576	34	178

② PERMANENT PAVEMENT MARKING DETAILS



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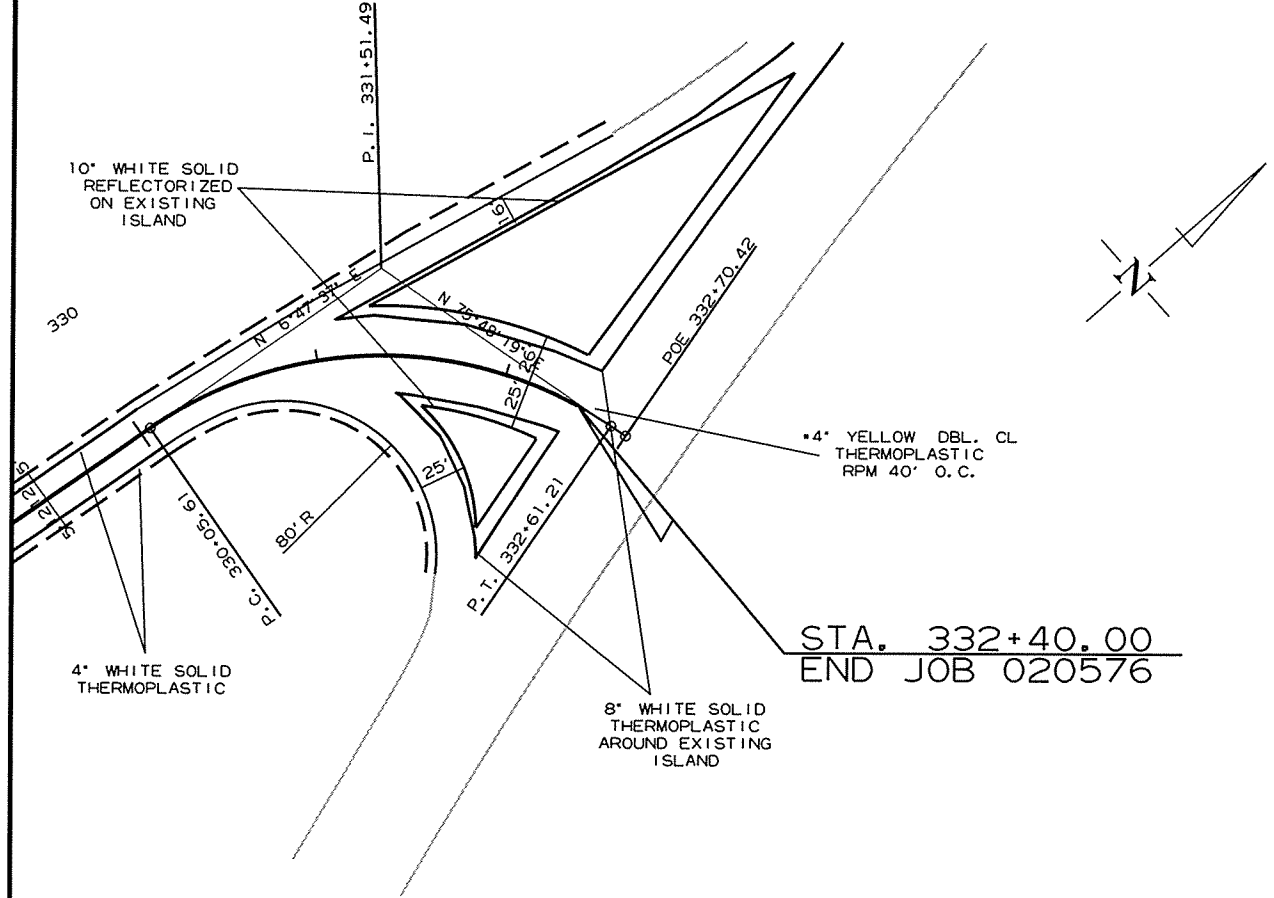
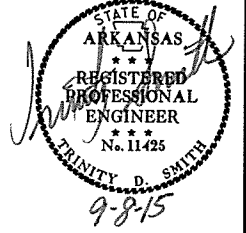


PERMANENT PAVEMENT MARKING DETAILS

4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	35	178

② PERMANENT PAVEMENT MARKING DETAILS

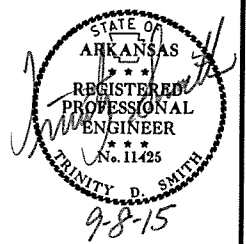


STA. 332+40.00
END JOB 020576

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		36	178

② QUANTITIES



CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	END OF JOB LIN. FT. - EACH	RAISED PAVEMENT MARKERS	THERMOPLASTIC PAVEMENT MARKING					REFLECTORIZED PAINT PAVEMENT MARKING	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	
		TYPE II (YEL/YEL) EACH	4"		8" WHITE	12" WHITE	RAILROAD EMBLEMS EACH	RUMBLE BAR LIN. FT.	10"	4"
			WHITE	YELLOW					WHITE	YELLOW
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)	632	632								
THERMOPLASTIC PAVEMENT MARKING WHITE (4")	48986		48986							
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	50282			50282						
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	2642				2642					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")	22					22				
THERMOPLASTIC PAVEMENT MARKING WHITE (RAILROAD EMBLEMS)	1					1				
THERMOPLASTIC PAVEMENT MARKING WHITE (RUMBLE BAR)	150						150			
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	1963							1963		
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	297								297	
TOTALS:		632	48986	50282	2642	22	1	150	1963	297

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.

NOTE: THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS
			LIN. FT. - EACH			NO.	SQ. FT.	EACH
W20-1	ROAD WORK 1500 FT.	48"x48"	6	6	6	6	96.00	
W20-1	ROAD WORK 1000 FT.	48"x48"	6	6	6	6	96.00	
W20-1	ROAD WORK 500 FT.	48"x48"	6	6	6	6	96.00	
W20-1	ROAD WORK AHEAD	48"x48"	3	3	3	3	48.00	
G20-2	END ROAD WORK	48"x24"	9	9	9	9	72.00	
R4-1	DO NOT PASS	24"x30"	12	12	12	12	60.00	
RSP-1	SHOULDER CLOSED	48"x30"	1		1	1	10.00	
	TRAFFIC DRUMS		255		255			255
TOTALS:							478.00	255

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.

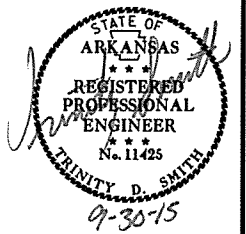
8/31/2015

R020576.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
09-29-2015				6	ARK.			
						JOB NO. 020576	37	178

② QUANTITIES



REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
116+25	18"X41' IRON PIPE CULVERT	1
141+04	18"X20' C.M. PIPE CULVERT	1
142+76	18"X23' C.M. PIPE CULVERT	1
154+89	18"X15' R.C. PIPE CULVERT	1
158+37	24"X22' R.C. PIPE CULVERT	1
168+47	24"X40' C.M. PIPE CULVERT	1
169+74	24"X28' C.M. PIPE CULVERT	1
169+79	24"X27' C.M. PIPE CULVERT	1
181+07	24"X39' C.M. PIPE CULVERT	1
182+52	24"X39' C.M. PIPE CULVERT	1
182+54	30"X28' C.M. PIPE CULVERT	1
213+24	24"X30' C.M. PIPE CULVERT	1
252+59	20"X27' IRON PIPE CULVERT	1
266+21	25"X33"X31' C.M.A. PIPE CULVERT	1
266+33	18"X29' C.M. PIPE CULVERT	1
281+05	17"X41' C.M. PIPE CULVERT	1
297+88	42"X21' C.M. PIPE CULVERT	1
328+81	24"X53' C.M. PIPE CULVERT	1
TOTAL:		18

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS, SAFETY END SECTIONS, AND FLARED END SECTIONS IF APPLICABLE.

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
116+00	124+00	MAIN LANES - LT. & RT.	8	8
138+00	139+00	MAIN LANES - LT. & RT.	1	1
158+00	162+00	MAIN LANES - LT. & RT.	4	4
212+00	213+00	MAIN LANES - LT. & RT.	1	1
213+24		MAIN LANES - RT.	1	1
TOTALS:			15	15

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
	EACH	
ENTIRE PROJECT	4	4
TOTALS:		
	4	4

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	*GUARDRAIL
			SQ. YD.	SQ. YD.	LIN. FT.
102+77.00	102+78.00	MAIN LANES ON RT.	24		
102+91.00	1003+42.00	MAIN LANES ON RT.	127		
213+25.81	215+54.56	MAIN LANES ON LT.			229
213+51.51	215+80.26	MAIN LANES ON RT.			229
216+57.45	218+86.20	MAIN LANES ON LT.			229
216+83.48	219+12.23	MAIN LANES ON LT.			229
238+63.10	240+67.10	MAIN LANES ON RT.			204
239+40.99	241+44.99	MAIN LANES ON LT.			204
130+24.00		MAIN LANES ON LT.		77	
327+54.00		MAIN LANES ON LT.		289	
328+76.00		MAIN LANES ON LT.		289	
226+80.00		MAIN LANES ON LT.	23		
226+41.00	226+51.00	MAIN LANES ON LT.	20		
229+16.00	229+25.00	MAIN LANES ON RT.	21		
229+16.00		MAIN LANES ON RT.	15		
TOTALS:			230	655	1324

* REFER TO SPECIAL PROVISION "REMOVAL AND DISPOSAL OF GUARDRAIL."

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		TON
ENTIRE	PROJECT	MAIN LANES	648	4016	
ENTIRE	PROJECT	APPROACHES	10	2025	
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			400
TOTALS:			658	6041	400

* QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.

8/31/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	38	178

SOIL LOG (BOX 1 OF 2)

STATION	LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
		FEET				
104+00	26'RT	0-5	20	5	A-4(1)	GRAY
104+00	18'RT	0-5	23	7	A-4(2)	GRAY
104+00	8'RT	0-5	19	5	A-4(1)	GRAY
112+00	24'LT	0-5	21	3	A-4(0)	BROWN
112+00	14'LT	0-5	22	4	A-4(1)	BROWN
112+00	6'LT	0-5	ND	NP	A-4(0)	BROWN
120+00	24'RT	0-5	22	5	A-4(2)	BR/GR
120+00	15'RT	0-5	24	7	A-4(3)	BROWN
120+00	5'RT	0-5	ND	NP	A-4(0)	BR/GR
128+00	25'LT	0-5	24	6	A-4(3)	BROWN
128+00	14'LT	0-5	23	5	A-4(2)	BROWN
128+00	5'LT	0-5	23	6	A-4(3)	BROWN
136+00	26'RT	0-5	24	5	A-4(3)	BROWN
136+00	15'RT	0-5	21	2	A-4(0)	BROWN
136+00	6'RT	0-5	22	4	A-4(1)	BROWN
136+00	26'RT	0-5	23	3	A-4(1)	BROWN
144+00	25'LT	0-5	24	8	A-4(5)	BROWN
144+00	15'LT	0-5	22	4	A-4(1)	BR/GR
144+00	6'LT	0-5	ND	NP	A-4(0)	BR/GR
152+00	24'RT	0-5	25	8	A-4(5)	GRAY
152+00	15'RT	0-5	26	9	A-4(5)	GRAY
152+00	5'RT	0-5	24	9	A-4(5)	GRAY
160+00	25'LT	0-5	23	4	A-4(2)	BROWN
160+00	17'LT	0-5	24	4	A-4(2)	BR/GR
160+00	9'LT	0-5	22	4	A-4(1)	BROWN
168+00	25'RT	0-5	25	4	A-4(3)	BROWN
168+00	15'RT	0-5	22	3	A-4(1)	BR/GR
168+00	6'RT	0-5	ND	NP	A-4(0)	BROWN
176+00	24'LT	0-5	28	7	A-4(6)	BROWN
176+00	14'LT	0-5	26	7	A-4(5)	BR/GR
176+00	6'LT	0-5	24	4	A-4(3)	BR/GR
176+00	24'LT	0-5	28	11	A-6(9)	BROWN
184+00	25'RT	0-5	31	14	A-6(12)	GRAY
184+00	15'RT	0-5	26	9	A-4(6)	BR/GR
184+00	5'RT	0-5	28	12	A-6(9)	GRAY
192+00	23'LT	0-5	34	19	A-6(17)	BROWN
192+00	15'LT	0-5	30	15	A-6(12)	BR/GR
192+00	5'LT	0-5	31	15	A-6(14)	BR/GR
200+00	25'RT	0-5	53	30	A-7-6(33)	BROWN
200+00	15'RT	0-5	54	37	A-7-6(36)	GRAY
200+00	6'RT	0-5	61	36	A-7-6(36)	GRAY
208+00	24'LT	0-5	42	26	A-7-6(23)	BROWN
208+00	15'LT	0-5	55	31	A-7-6(31)	BR/GR
208+00	6'LT	0-5	61	38	A-7-6(42)	GRAY
219+00	23'RT	0-5	48	28	A-7-6(28)	BROWN
219+00	14'RT	0-5	53	35	A-7-6(29)	GRAY
219+00	5'RT	0-5	58	31	A-7-6(40)	GRAY
224+00	27'LT	0-5	49	29	A-7-6(24)	BROWN
224+00	17'LT	0-5	65	43	A-7-6(38)	GRAY
224+00	10'LT	0-5	57	34	A-7-6(36)	GRAY
232+00	26'RT	0-5	50	33	A-7-6(31)	GRAY
232+00	17'RT	0-5	45	26	A-7-6(25)	GRAY
232+00	8'RT	0-5	69	45	A-7-6(50)	GRAY
232+00	26'RT	0-5	60	46	A-7-6(45)	GRAY
241+00	23'LT	0-5	55	33	A-7-6(33)	BR/GR
241+00	14'LT	0-5	51	32	A-7-6(33)	GRAY
241+00	5'LT	0-5	56	36	A-7-6(37)	GRAY
248+00	24'RT	0-5	44	30	A-7-6(30)	BROWN
248+00	15'RT	0-5	43	30	A-7-6(26)	GRAY
248+00	6'RT	0-5	45	31	A-7-6(29)	GRAY
256+00	24'LT	0-5	42	25	A-7-6(24)	GRAY
256+00	15'LT	0-5	53	34	A-7-6(34)	BR/GR
256+00	6'LT	0-5	63	43	A-7-6(48)	GRAY
264+00	26'RT	0-5	38	22	A-6(21)	BROWN
264+00	15'RT	0-5	39	23	A-6(21)	BROWN
264+00	6'RT	0-5	40	24	A-6(24)	BROWN

SOIL LOG (BOX 2 OF 2)

STATION	LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
		FEET				
272+00	25'LT	0-5	57	38	A-7-6(38)	BR/GR
272+00	15'LT	0-5	45	34	A-7-6(27)	BR/GR
272+00	5'LT	0-5	40	25	A-6(23)	BR/GR
272+00	25'LT	0-5	74	50	A-7-6(55)	BR/GR
280+00	24'RT	0-5	46	24	A-7-6(23)	BROWN
280+00	15'RT	0-5	47	27	A-7-6(23)	BR/GR
280+00	6'RT	0-5	44	28	A-7-6(28)	GRAY
288+00	25'LT	0-5	27	6	A-4(5)	BROWN
288+00	15'LT	0-5	29	10	A-4(9)	BROWN
288+00	5'LT	0-5	28	9	A-4(8)	BROWN
296+00	24'RT	0-5	28	10	A-4(7)	BROWN
296+00	15'RT	0-5	22	4	A-4(2)	BR/GR
296+00	5'RT	0-5	26	8	A-4(6)	BR/GR
304+00	25'LT	0-5	21	3	A-4(0)	BROWN
304+00	15'LT	0-5	22	3	A-4(1)	BROWN
304+00	7'LT	0-5	22	3	A-4(4)	BROWN
312+00	24'RT	0-5	24	4	A-4(2)	BROWN
312+00	15'RT	0-5	22	4	A-4(2)	BR/GR
312+00	6'RT	0-5	23	3	A-4(1)	BROWN
320+00	25'LT	0-5	22	3	A-4(1)	BROWN
320+00	15'LT	0-5	ND	NP	A-4(0)	BROWN
320+00	7'LT	0-5	ND	NP	A-4(0)	BROWN
328+00	24'RT	0-5	ND	NP	A-4(0)	BR/GR
328+00	15'RT	0-5	21	2	A-4(1)	BR/GR
328+00	6'RT	0-5	21	2	A-4(0)	BR/GR

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
 NP - NON-PLASTIC
 ND - NOT DETERMINABLE

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
102+77	MAIN LANES ON RT.	B	21
102+91	MAIN LANES ON RT.	B	134
226+41	MAIN LANES ON LT.	B	80
227+44	MAIN LANES ON LT.	B	155
228+43	MAIN LANES ON RT.	B	71
229+26	MAIN LANES ON RT.	B	56
TOTAL:			517

QUANTITIES



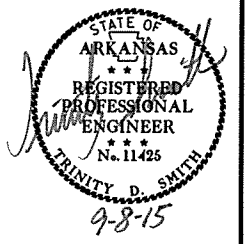
8/31/2015

R020576.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		39	178

② QUANTITIES



EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL					*SEDIMENT REMOVAL & DISPOSAL CU. YD.
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	SILT FENCE (E-11)	
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	LIN. FT.	
ENTIRE PROJECT		MAIN LANES	0.44	0.88	0.44	44.9	0.44	0.44	0.44	9.0		5760	219
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			1.20	2.40	1.20	122.4	1.20	1.20	1.20	24.5	110	600	27
TOTALS:			1.64	3.28	1.64	167.3	1.64	1.64	1.64	33.5	110	6360	246

BASIS OF ESTIMATE:

LIME2 TONS / ACRE OF SEEDING
 WATER.....102.0 M.G. / ACRE OF SEEDING.
 WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING.

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

NOTE: THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL DEVICES LEFT IN PLACE FROM PREVIOUS JOB. PAYMENT WILL BE CONSIDERED INCLUDED UNDER THE VARIOUS CONTRACT ITEMS.

*QUANTITIES ESTIMATED.
 SEE SECTION 104.03 OF THE STD. SPECS.

APPROACH GUTTERS

STATION	STATION	LOCATION	APPROACH GUTTERS (TYPE SPECIAL) CU.YD.	REINFORCING STEEL-ROADWAY (GR. 60) POUND
214+85.87	215+32.54	LT. SIDE	11.65	1080
215+09.87	215+56.54	RT. SIDE	11.65	1080
216+81.55	217+28.22	LT. SIDE	11.65	1080
217+05.55	217+52.22	RT. SIDE	11.65	1080
TOTALS:			46.60	4320

NOTE: USE T=14.5" FOR 5' SHOULDER.

GUARDRAIL

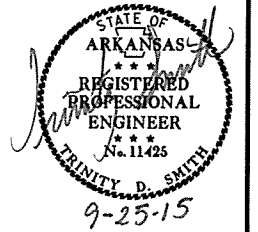
STATION	STATION	LOCATION	GUARDRAIL (TYPE A) LIN. FT.	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE 1)
			EACH		
213+28.39	215+47.14	RT. SIDE	200	1	1
214+29.39	215+23.14	LT. SIDE	75	1	1
216+90.95	219+09.70	LT. SIDE	200	1	1
217+14.95	218+08.70	RT. SIDE	75	1	1
TOTALS:			550	4	4

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
09-23-2015				6	ARK.			
						JOB NO. 020576	40	178

② QUANTITIES



STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III)		FLARED END SECTIONS FOR R.C. PIPE CULVERTS		SOLID SODDING	WATER	STD. DWG. NOS.
		36"	48"	36"	48"			
		LIN. FT.		EACH		SQ. YD.	M.GAL.	
161+54.00	CONSTRUCT DBL. R.C. PIPE CULVERT - HWY. 208		140		2	58	0.73	PCC-1, FES-1, FES-2
163+45.00	CONSTRUCT DBL. R.C. PIPE CULVERT - CO. RD. 834	140		2		34	0.43	PCC-1, FES-1, FES-2
TOTALS:		140	140	2	2	92	1.16	

BASIS OF ESTIMATE:

WATER..... 12.6 GAL. / SQ. YD. OF SOLID SODDING.

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
100+00	161+00	MAIN LANES	32	21689
161+00	330+06	MAIN LANES	32	60110
330+06	332+40	MAIN LANES	71.2	1851
ENTIRE PROJECT		CO. RDS. AND STATE HIGHWAY TURNOUTS	142	7228
TOTAL:				90878

NOTE: AVERAGE MILLING DEPTH 1".

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

STATION	LOCATION	WIDTH	LENGTH	CU.YD.
		FEET		
161+54	HWY. 208 LT. OF MAIN LANES	5.00	20	4.0
163+45	CO. RD. 834 RT. OF MAIN LANES	4.00	18	2.9
TOTAL:				6.9

AVG. DEPTH = 13"

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	125	250
TOTALS:	125	250

BASIS OF ESTIMATE:

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

NOTE: QUANTITY ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	80
TOTAL:	80

NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	250
TOTAL:	250

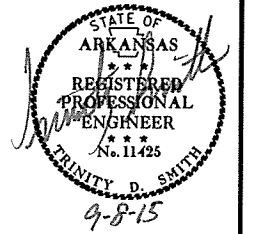
NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

8/31/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		41	178

2 QUANTITIES



DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	PORTLAND CEMENT CONCRETE DRIVEWAY		ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS				STANDARD DRAWINGS
			WIDTH	SQ. YD.	SQ. YD.	TON		TON	18"	24"	30"	
			FEET					LIN. FT.				
116+25	RT.	MAIN LANES	16		111.7	12.3	45.6	38				PCC-1, PCM-1, PCP-1, PCP-2
124+24	LT.	MAIN LANES	25		133.6	14.7	54.6					
126+51	LT.	MAIN LANES	25		130.8	14.4	53.4					
130+24	LT.	MAIN LANES	18	112.60								
130+84	RT.	MAIN LANES	16		86.8	9.5	35.4	32				PCC-1, PCM-1, PCP-1, PCP-2
132+15	RT.	MAIN LANES	16		86.8	9.5	35.4	32				PCC-1, PCM-1, PCP-1, PCP-2
141+04	RT.	MAIN LANES	16		92.1	10.1	37.6	32				PCC-1, PCM-1, PCP-1, PCP-2
142+76	RT.	MAIN LANES	16		90.3	9.9	36.9	40				PCC-1, PCM-1, PCP-1, PCP-2
154+89	RT.	MAIN LANES	16		104.6	11.5	42.7	28				PCC-1, PCM-1, PCP-1, PCP-2
158+37	RT.	MAIN LANES	16		101.0	11.1	41.2		36			PCC-1, PCM-1, PCP-1, PCP-2
165+62	RT.	MAIN LANES	16		60.1	6.6	24.5	34				PCC-1, PCM-1, PCP-1, PCP-2
168+47	LT.	MAIN LANES	18		76.6	8.4	31.3		30			PCC-1, PCM-1, PCP-1, PCP-2
169+74	RT.	MAIN LANES	18		74.6	8.2	30.5		32			PCC-1, PCM-1, PCP-1, PCP-2
169+79	LT.	MAIN LANES	18		68.6	7.5	28.0		34			PCC-1, PCM-1, PCP-1, PCP-2
180+07	RT.	MAIN LANES	18		76.6	8.4	31.3		34			PCC-1, PCM-1, PCP-1, PCP-2
182+53	LT.	MAIN LANES	18		146.6	16.1	59.9		34	30		PCC-1, PCM-1, PCP-1, PCP-2
213+19	RT.	MAIN LANES	18		76.6	8.4	31.3		40			PCC-1, PCM-1, PCP-1, PCP-2
221+24	RT.	MAIN LANES	16		69.0	7.6	28.2					
252+59	LT.	MAIN LANES	16		69.0	7.6	28.2		38			PCC-1, PCM-1, PCP-1, PCP-2
266+21	RT.	MAIN LANES	18		134.6	14.8	55.0			38		PCC-1, PCM-1, PCP-1, PCP-2
266+33	LT.	MAIN LANES	18		74.6	8.2	30.5	42				PCC-1, PCM-1, PCP-1, PCP-2
281+05	RT.	MAIN LANES	16		124.1	13.7	50.7	34				PCC-1, PCM-1, PCP-1, PCP-2
281+36	LT.	MAIN LANES	22		89.3	9.8	36.5	38				PCC-1, PCM-1, PCP-1, PCP-2
294+66	LT.	MAIN LANES	20		81.9	9.0	33.4		36			PCC-1, PCM-1, PCP-1, PCP-2
297+88	RT.	MAIN LANES	18		138.6	15.2	56.6			50		PCC-1, PCM-1, PCP-1, PCP-2
313+47	RT.	MAIN LANES	30		306.3	33.7	125.1					
313+95	RT.	MAIN LANES	35		342.9	37.7	140.0					
325+92	LT.	MAIN LANES	20		84.1	9.3	34.3					PCC-1, PCM-1, PCP-1, PCP-2
327+54	RT.	MAIN LANES	40	288.50					56			PCC-1, PCM-1, PCP-1, PCP-2
328+76	RT.	MAIN LANES	40	288.50					56			PCC-1, PCM-1, PCP-1, PCP-2
* ENTIRE PROJECT TEMPORARY DRIVES							100.0					
TOTALS:				689.60	3031.8	333.2	1338.1	350	426	68	50	

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

* QUANTITY ESTIMATED
 SEE SECTION 104.03 OF THE STD. SPECS.
 TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
 NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

RUMBLE STRIPES

STATION	STATION	LOCATION	* RUMBLE STRIPES
			LIN.FT.
102+00.00	332+40.00	MAIN LANES LT. & RT.	43550
TOTAL:			43550

* QUANTITY ESTIMATED.
 SEE SECTION 104.03 OF THE STD. SPECS.
 TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

8/31/2015

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SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	15	STATION
201	GRUBBING	15	STATION
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	230	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	655	SQ. YD.
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	18	EACH
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL	1324	LIN. FT.
210	UNCLASSIFIED EXCAVATION	658	CU. YD.
210	COMPACTED EMBANKMENT	6041	CU. YD.
SP & 210	SOIL STABILIZATION	400	TON
303	AGGREGATE BASE COURSE (CLASS 7)	3729	TON
401	TACK COAT	13157	GAL.
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	21866	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	1224	TON
412	COLD MILLING ASPHALT PAVEMENT	90878	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	125	TON
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	250	TON
504	APPROACH GUTTERS	46.60	CU. YD.
505	PORTLAND CEMENT CONCRETE DRIVEWAY	689.60	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	478	SQ. FT.
SS & 604	TRAFFIC DRUMS	255	EACH
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	140	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	140	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN	350	LIN. FT.
SP, SS, & 606	24" SIDE DRAIN	426	LIN. FT.
SP, SS, & 606	30" SIDE DRAIN	68	LIN. FT.
SP, SS, & 606	42" SIDE DRAIN	50	LIN. FT.
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	SELECTED PIPE BEDDING	80	CU. YD.
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)	6.9	CU. YD.
617	GUARDRAIL (TYPE A)	550	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)	4	EACH
617	THREE BEAM GUARDRAIL TERMINAL	4	EACH
620	LIME	3	TON
620	SEEDING	1.64	ACRE
SS & 620	MULCH COVER	3.28	ACRE
620	WATER	202.0	M.GAL.
621	TEMPORARY SEEDING	1.64	ACRE
621	SILT FENCE	6360	LIN. FT.
621	SAND BAG DITCH CHECKS	110	BAG
621	SEDIMENT REMOVAL AND DISPOSAL	246	CU. YD.
623	SECOND SEEDING APPLICATION	1.64	ACRE
624	SOLID SODDING	92	SQ. YD.
632	CONCRETE ISLAND	517	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	4	EACH
637	MAILBOX SUPPORTS (SINGLE)	4	EACH
SP	RUMBLE STRIPES	43550	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	1963	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	48986	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	2642	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	22	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	50282	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (RAILROAD EMBLEMS)	1	EACH
SP	THERMOPLASTIC RUMBLE BAR	150	LIN. FT.
SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4")	297	LIN. FT.
SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4")	297	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	632	EACH
804	REINFORCING STEEL-ROADWAY (GRADE 60)	4320	POUND

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
9/23/2015	REVISED COLD MILLING QUANTITIES	40,43
9/29/2015	REVISED REMOVAL AND DISPOSAL OF GUARDRAIL QUANTITIES	37,43

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
09-23-2015				6	ARK.			
09-29-2015						JOB NO. 020576	43	178

② SUMMARY OF QUANTITIES AND REVISIONS



8/31/2015 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							44	178

2 SURVEY CONTROL DETAILS



SURVEY CONTROL COORDINATES

Project Name: s020535
 Date: 4/5/2013
 Coordinate System: ARKANSAS STATE PLANE -SOUTH ZONE BASED ON GPS CONTROL,
 PROJECTED TO GROUND.
 Units: U.S. SURVEY FOOT

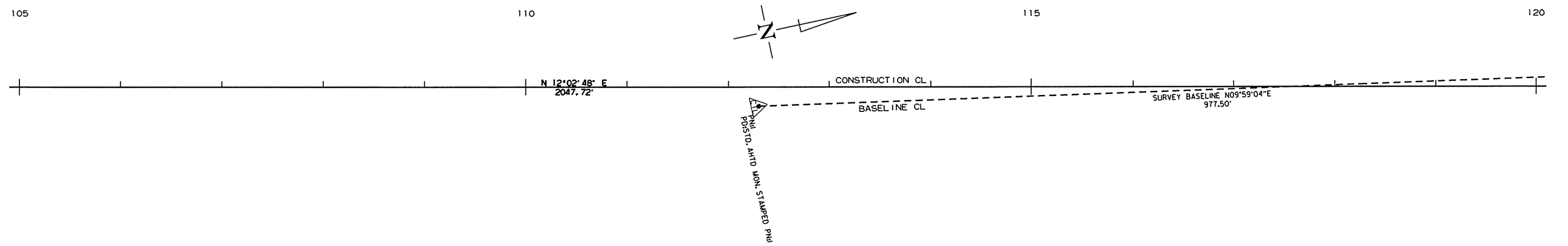
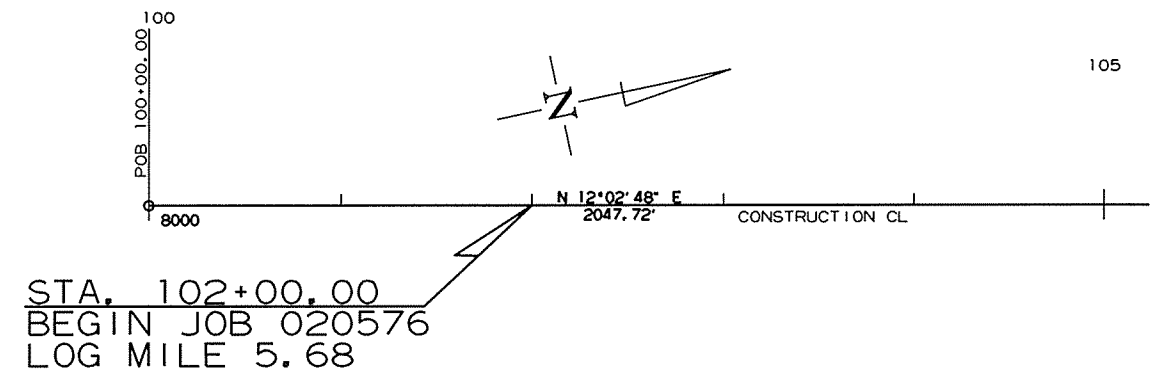
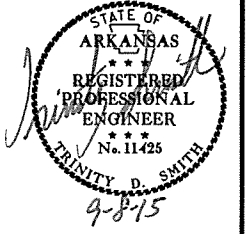
Point Name	Northing	Easting	Elev	Feature	Description
1	1619336.9161	1484978.6194	138.85	CTL	STD. AHTD MON. STAMPED PN: 1
2	1620299.6074	1485148.0997	139.18	CTL	STD. AHTD MON. STAMPED PN: 2
3	1621087.9601	1485496.3448	139.17	CTL	STD. AHTD MON. STAMPED PN: 3
4	1621755.1039	1486083.0647	138.82	CTL	STD. AHTD MON. STAMPED PN: 4
5	1622213.4295	1486775.6297	137.15	CTL	STD. AHTD MON. STAMPED PN: 5
6	1622801.4244	1487446.3277	137.93	CTL	STD. AHTD MON. STAMPED PN: 6
7	1623192.9226	1488096.2646	137.64	CTL	STD. AHTD MON. STAMPED PN: 7
8	1623676.7274	1488655.4571	136.20	CTL	STD. AHTD MON. STAMPED PN: 8
9	1624180.8912	1489317.1146	135.29	CTL	STD. AHTD MON. STAMPED PN: 9
10	1624892.6922	1490175.3578	134.82	CTL	STD. AHTD MON. STAMPED PN: 10
11	1625357.9760	1490851.8951	135.08	CTL	STD. AHTD MON. STAMPED PN: 11
12	1625872.2020	1491543.0950	135.71	CTL	STD. AHTD MON. STAMPED PN: 12
13	1626344.3135	1492137.1362	136.37	CTL	STD. AHTD MON. STAMPED PN: 13
14	1626787.0293	1492714.6926	135.82	CTL	STD. AHTD MON. STAMPED PN: 14
15	1627197.5594	1493270.0339	135.56	CTL	STD. AHTD MON. STAMPED PN: 15
16	1627827.2854	1494009.8713	135.22	CTL	STD. AHTD MON. STAMPED PN: 16
17	1628308.1780	1494703.2544	134.49	CTL	STD. AHTD MON. STAMPED PN: 17
18	1628790.2027	1495262.4989	133.88	CTL	STD. AHTD MON. STAMPED PN: 18
19	1629418.6216	1495956.2558	134.28	CTL	STD. AHTD MON. STAMPED PN: 19
20	1629824.5856	1496682.7407	133.97	CTL	STD. AHTD MON. STAMPED PN: 20
21	1630306.9753	1497332.2326	134.00	CTL	STD. AHTD MON. STAMPED PN: 21
22	1630780.6345	1497934.5542	136.45	CTL	STD. AHTD MON. STAMPED PN: 22
23	1631395.5428	1498631.1394	138.14	CTL	STD. AHTD MON. STAMPED PN: 23
24	1632027.4058	1499127.1538	139.62	CTL	STD. AHTD MON. STAMPED PN: 24
25	1632704.8351	1499569.7576	140.02	CTL	STD. AHTD MON. STAMPED PN: 25
26	1633411.3568	1499962.8290	139.76	CTL	STD. AHTD MON. STAMPED PN: 26
27	1634200.4466	1499938.6717	138.29	CTL	STD. AHTD MON. STAMPED PN: 27
28	1634754.5179	1500062.7288	136.58	CTL	STD. AHTD MON. STAMPED PN: 28
100	1633248.1948	1500413.1670	138.12	GPS	AHTD GPS 090005
101	1632642.8381	1499794.8076	137.95	GPS	AHTD GPS 090006
102	1618496.0298	1484742.0708	135.97	GPS	AHTD GPS 090022
103	1616856.8612	1484453.8676	135.91	GPS	AHTD GPS 090022A
900	1614408.9729	1483715.7563	136.42	TBM	CHISELED SQUARE IN CENTER OF WEST HEADWALL
901	1617590.9443	1484389.8355	136.28	TBM	CHISELED SQUARE IN CENTER OF SOUTH HEADWALL
902	1618463.2261	1484732.8183	136.43	CTL	A. H. T. D. BM CENTER OF WEST HEADWALL
903	1620931.4515	1485300.0362	141.78	CTL	BOLT IN EAST EDGE OF LOADING DOCK
904	1623187.5913	1488044.8241	136.02	CTL	A. H. T. D. BM CENTER OF EAST HEADWALL
905	1624919.7375	1490279.5039	134.60	CTL	4 FT RBR & ALUMINUM CAP
906	1626351.7529	1492141.5265	139.42	TBM	CHISELED SQUARE IN SOUTHEAST CORNER OF BRIDGE
907	1627853.8092	1494056.4106	135.28	TBM	CHISELED SQUARE IN SOUTHWEST END OF HEADWALL
908	1629415.8225	1496198.7939	134.88	TBM	4 FT RBR & ALUMINUM CAP
909	1631239.2901	1498357.5450	134.65	CTL	4 FT RBR & ALUMINUM CAP
910	1632716.2007	1499527.6815	140.28	CTL	CHISELED SQUARE IN WEST END OF REST AREA ISLAND
911	1634530.3508	1499985.9690	140.20	TBM	CHISELED SQUARE IN CENTER OF CONCRETE ISLAND
912	1627175.5444	1493295.3072	132.70	CTL	CHISELED SQUARE IN CENTER OF NORTH HEADWALL
913	1625579.1129	1476605.4099	140.11	CTL	CHISELED SQUARE IN "DERMOTT" SIGN
914	1625079.8343	1479191.7630	142.42	TBM	CHISELED SQUARE IN DROP INLET
915	1625132.6609	1481763.2194	142.44	TBM	CHISELED SQUARE IN DROP INLET
916	1626160.5815	1483218.7799	141.90	CTL	MW LOGO ON FIRE HYDRANT
917	1626516.0609	1487084.9139	141.77	CTL	METAL BOLT IN THE NORTH END OF
918	1626757.8398	1489218.5898	136.68	CTL	
919	-99999.0000	1477785.2749	137.23	CTL	CHISELED SQUARE IN SOUTHWEST CORNER OF BIG BAYOU CREEK BRIDGE
920	1624207.1985	1477785.2749	138.81	TBM	AHTD TBM DISK 220013
990	1612068.9099	1483237.5188	135.65	BM	NGS BM H 243
991	1625805.5340	1474428.7389	137.10	BM	NGS BM H 83
992	-99999.0000	-99999.0000	145.91	BM	NGS BM H 13 RESET

CONSTRUCTION CL			
POB 8000	100-00.00	1618137.77	1484703.40
P. C. 8001	120-47.72	1620140.40	1485130.77
P. I.	131-05.36	1621174.74	1485351.51
P. T. 8003	140-74.07	1621817.52	1486191.42
P. I. 8004	188-56.77	1624724.17	1489989.52
P. C. 8005	289-54.82	1630864.63	1498006.09
P. I.	309-03.32	1632049.48	1499552.95
P. T. 8007	326-64.72	1633972.55	1499866.73
P. C. 8008	327-51.19	1634057.90	1499880.65
P. I.	327-75.93	1634082.31	1499884.63
P. T. 8010	328-00.65	1634106.87	1499887.56
P. C. 8011	330-05.61	1634310.39	1499911.81
P. I.	331-51.49	1634455.24	1499929.06
P. T. 8013	332-61.21	1634491.02	1500070.49
POE 8014	332-70.42	1634493.27	1500079.41

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
 *(standard markings common to all caps), or as indicated
 (other markings indicated in the point description of the individual point).
 ALL DISTANCES ARE GROUND.
 USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
 A PROJECT CAF OF 0.9999508502 HAS BEEN USED TO COMPUTE THE ABOVE LISTED GROUND COORDINATES.
 THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
 GRID DISTANCE = GROUND DISTANCE X CAF.
 GROUND COORDINATES ARE PROJECTED FROM AR. STATE PLANE GRID COORDINATES BY SCALING ALL X,Y
 COORDINATE VALUES WITH THE INVERSE (1/X) OF THE COMBINED ADJUSTMENT FACTOR (CAF) ABOUT X+0,Y+0.
 GRID COORDINATES ARE STORED UNDER FILE NAME: s020535g1.ct1
 HORIZONTAL DATUM: NAD 83 (1997)
 VERTICAL DATUM: NAVD 88 ELEVATIONS FOR POINTS 1-28, 100-103, AND 900-920 & 990-992 WERE ESTABLISHED BY 3-WIRE LEVEL TECHNIQUES
 FROM NGS BENCHMARKS.
 POSITIONAL ACCURACY:
 HORIZONTAL-GPS (POINTS 100-103): 1.0 CM 10 PPM, PRIMARY CONTROL (POINTS 1-93): 2.0 CM 20 PPM
 VERTICAL-POSITIONAL ACCURACY IS THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT
 BASIS OF BEARING:
 ARKANSAS STATE PLANE GRID BEARINGS -0302-SOUTH ZONE
 DETERMINED FROM GPS CONTROL POINTS: 090006 - 090005, 090022 - 090022A, 020013
 CONVERGENCE ANGLE: 00 19 55 LEFT AT PN: 15
 GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.
 LT: 33-31-49.03 LG: 091-24-23.41
 GRID NORTHING: 1627117.5830 GRID EASTING: 1493196.6400
 GROUND NORTHING: 1627197.5594 GROUND EASTING: 1493270.0339

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 020576			45	178

2 SURVEY CONTROL DETAILS



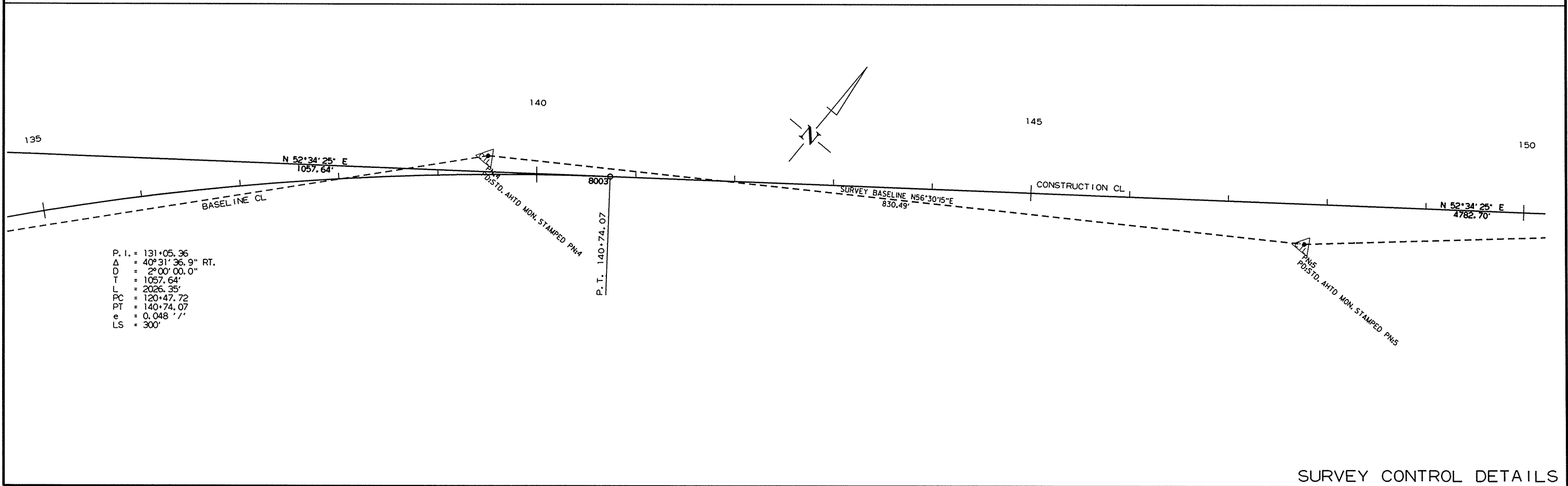
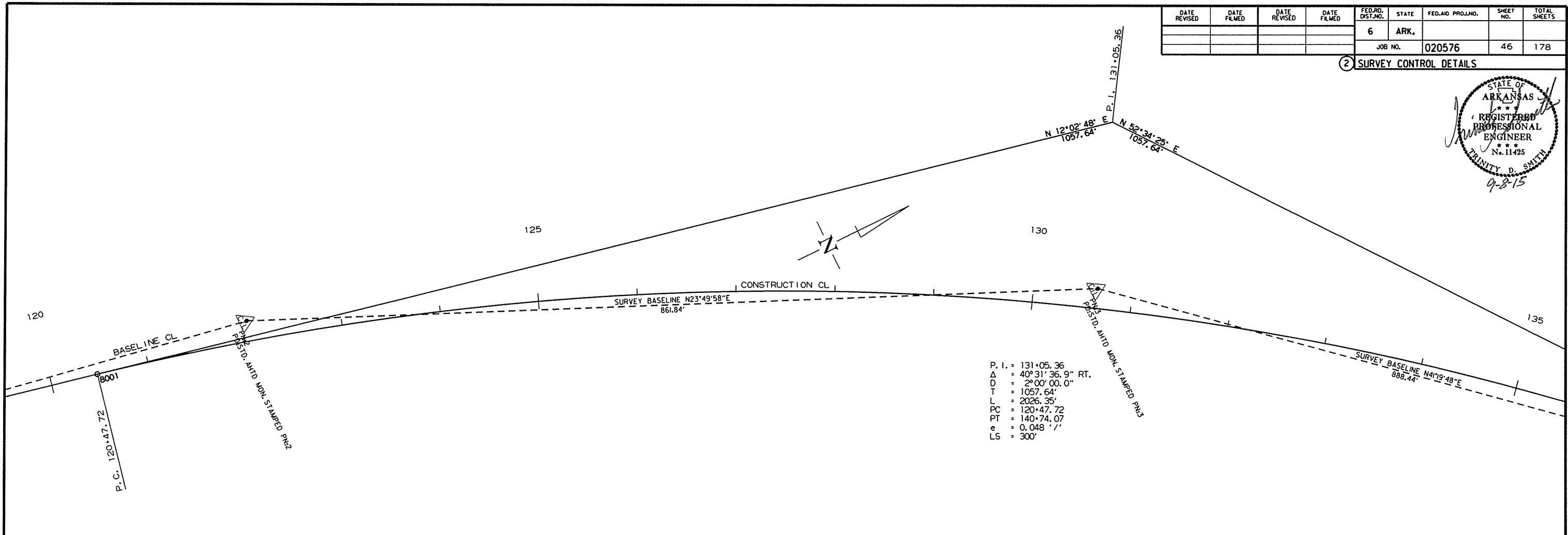
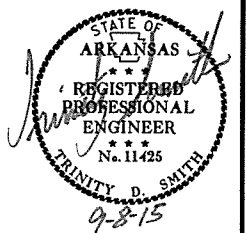
SURVEY CONTROL DETAILS

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							46	178

2 SURVEY CONTROL DETAILS

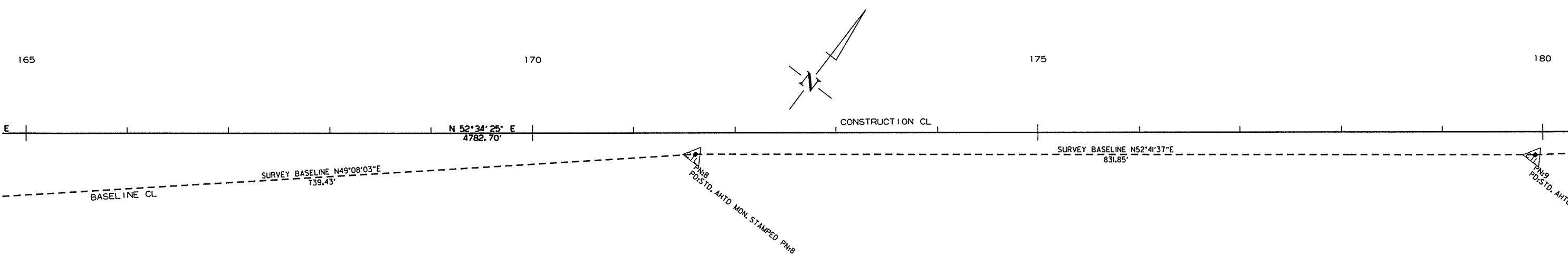
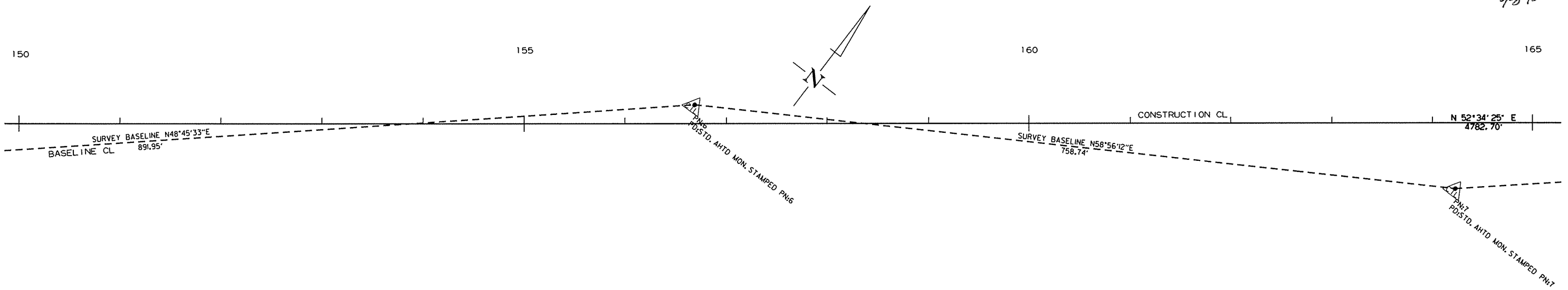


SURVEY CONTROL DETAILS

4/24/2015 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		47	178

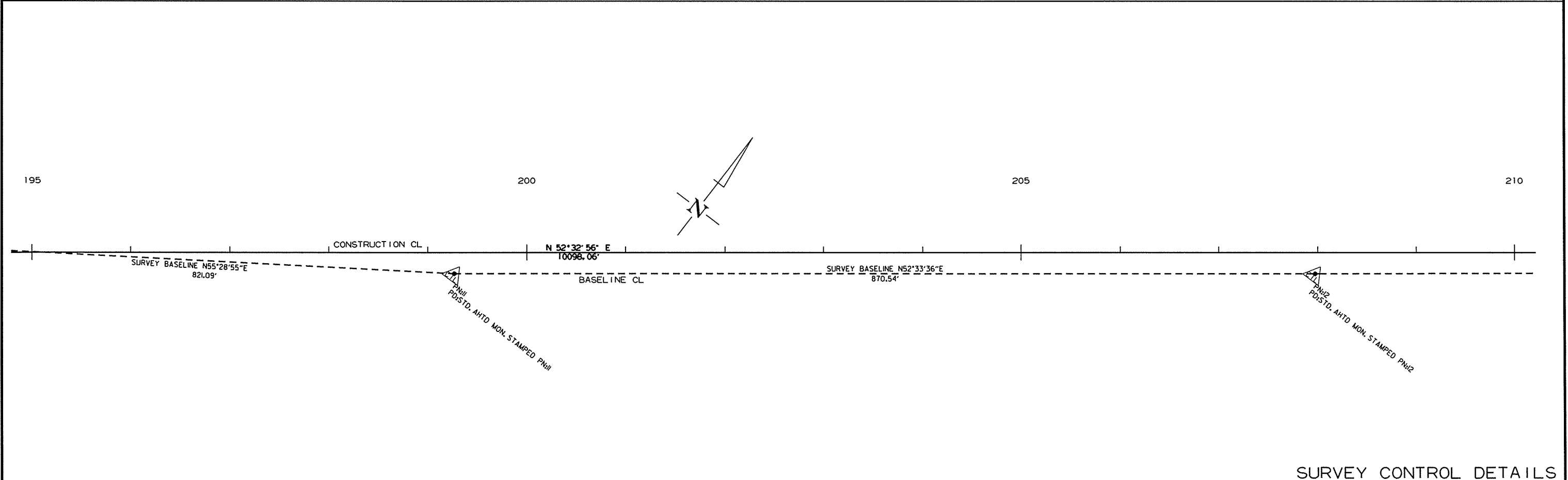
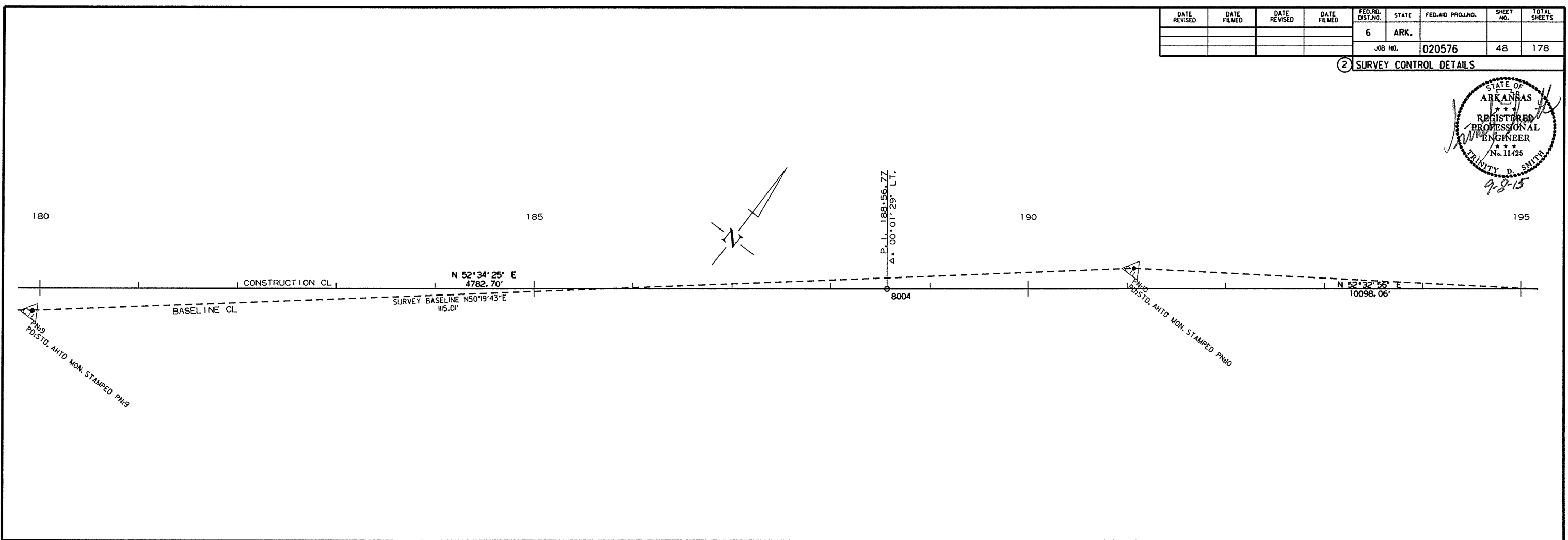
2 SURVEY CONTROL DETAILS



4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							48	178

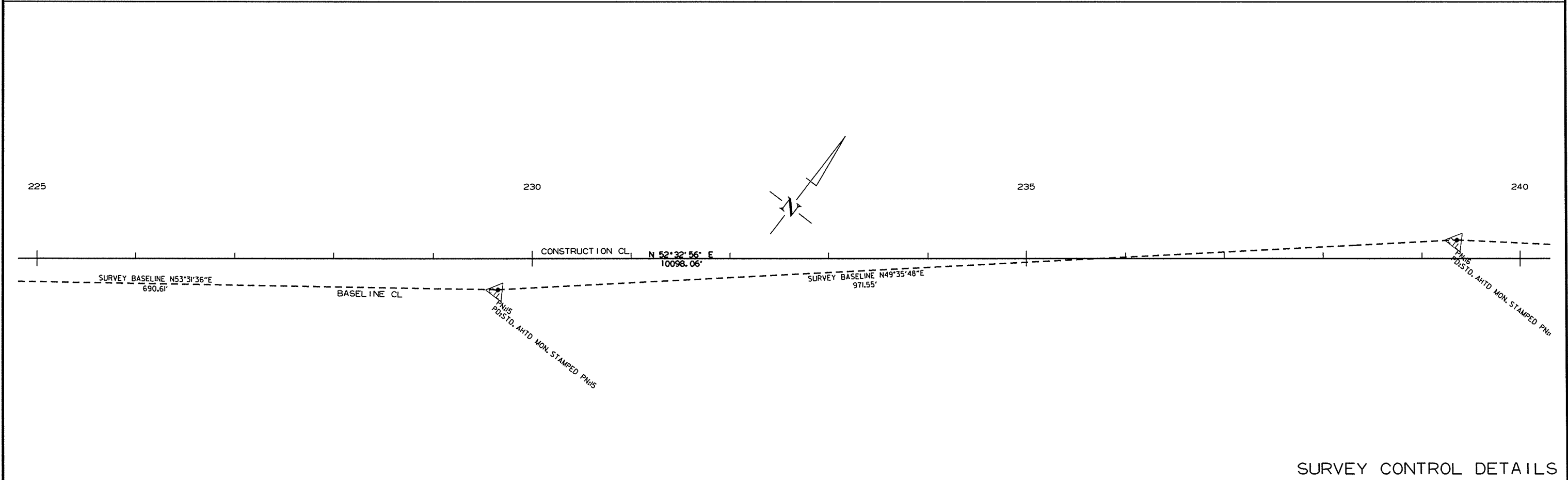
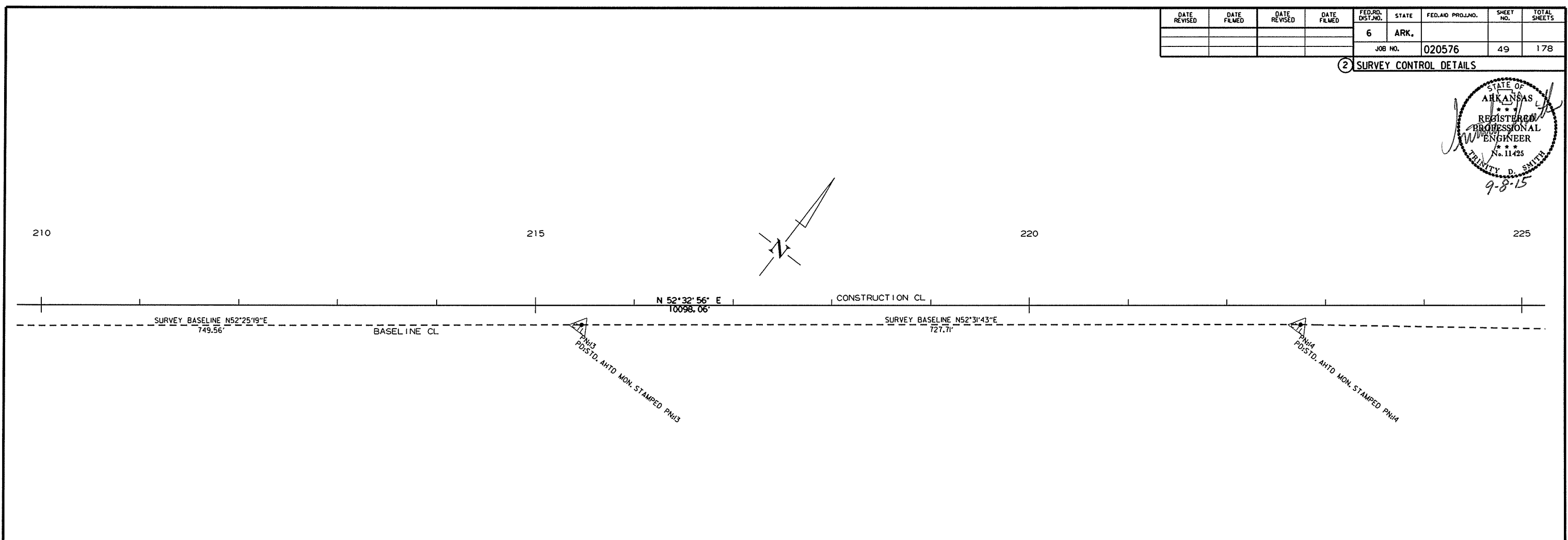
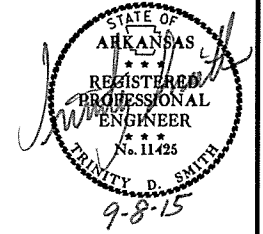
② SURVEY CONTROL DETAILS



4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		49	178

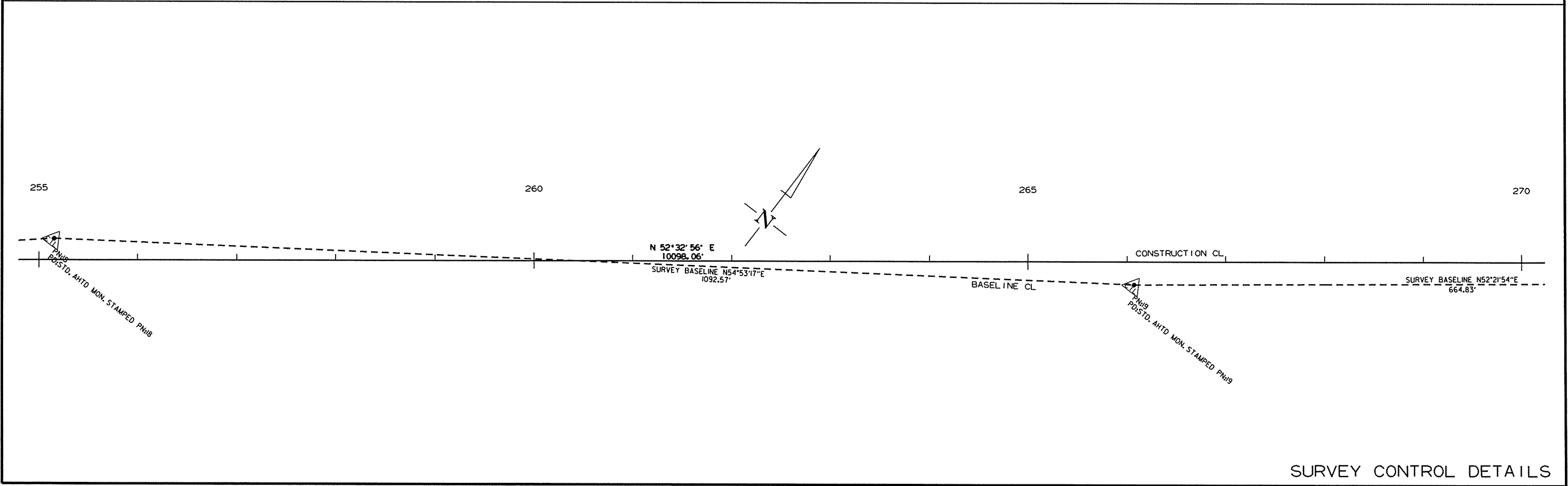
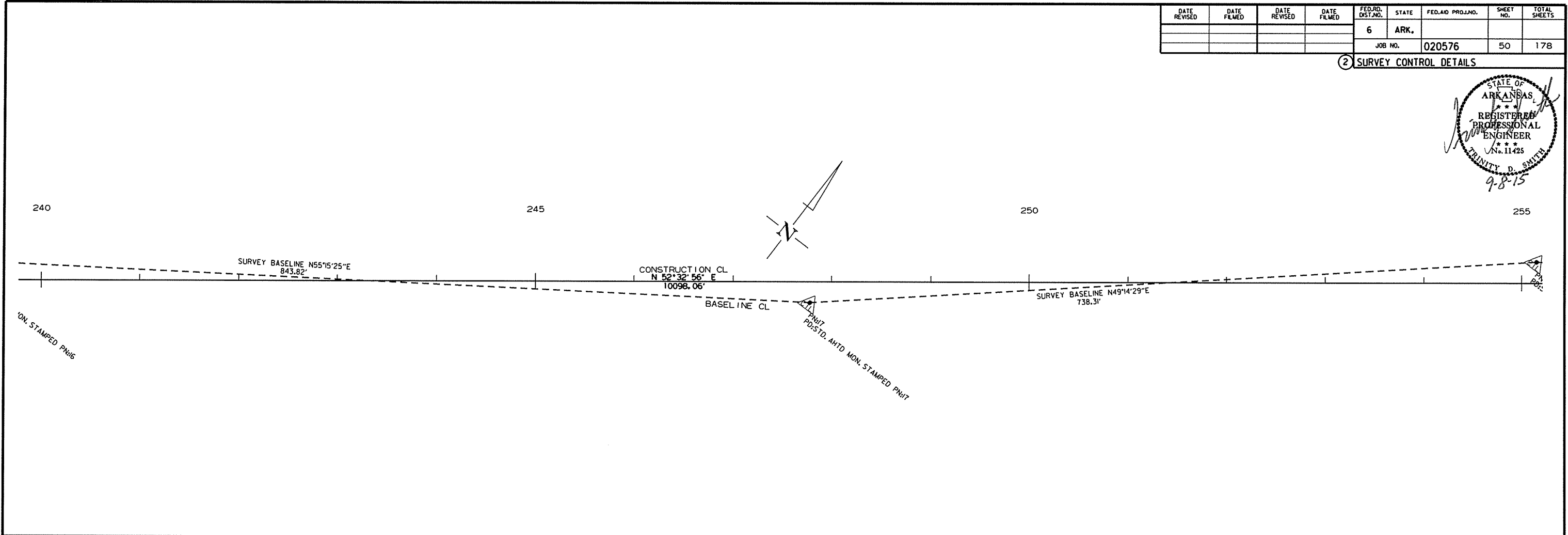
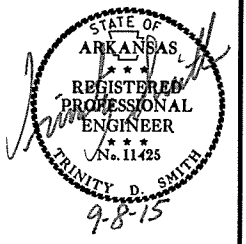
② SURVEY CONTROL DETAILS



4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 020576		50		178

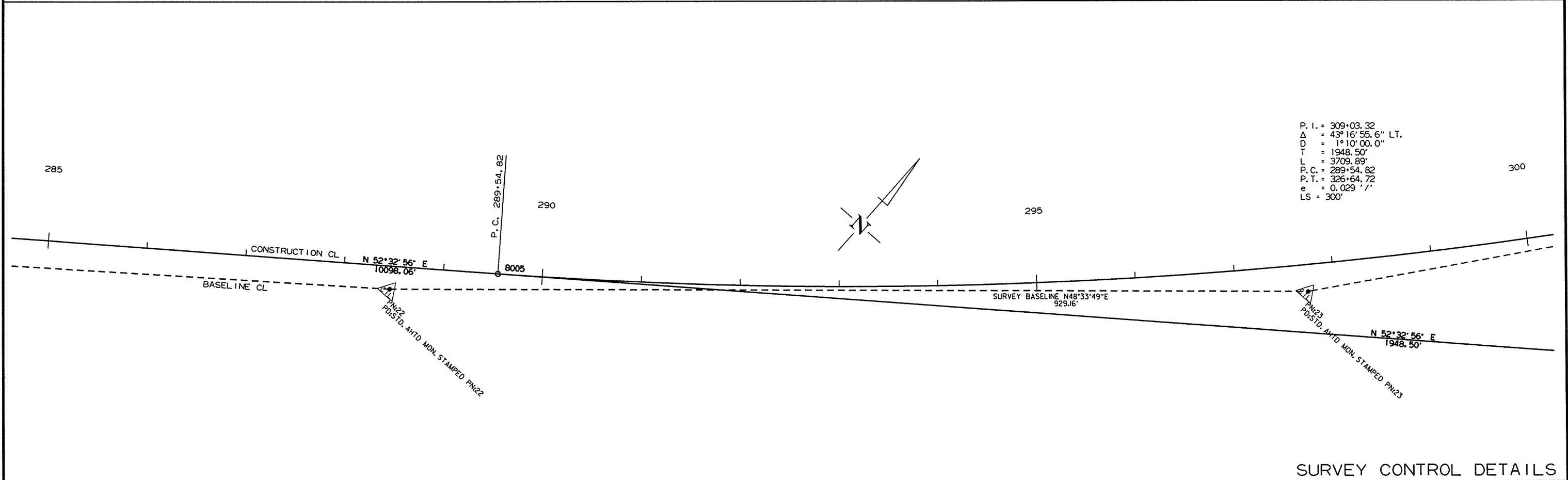
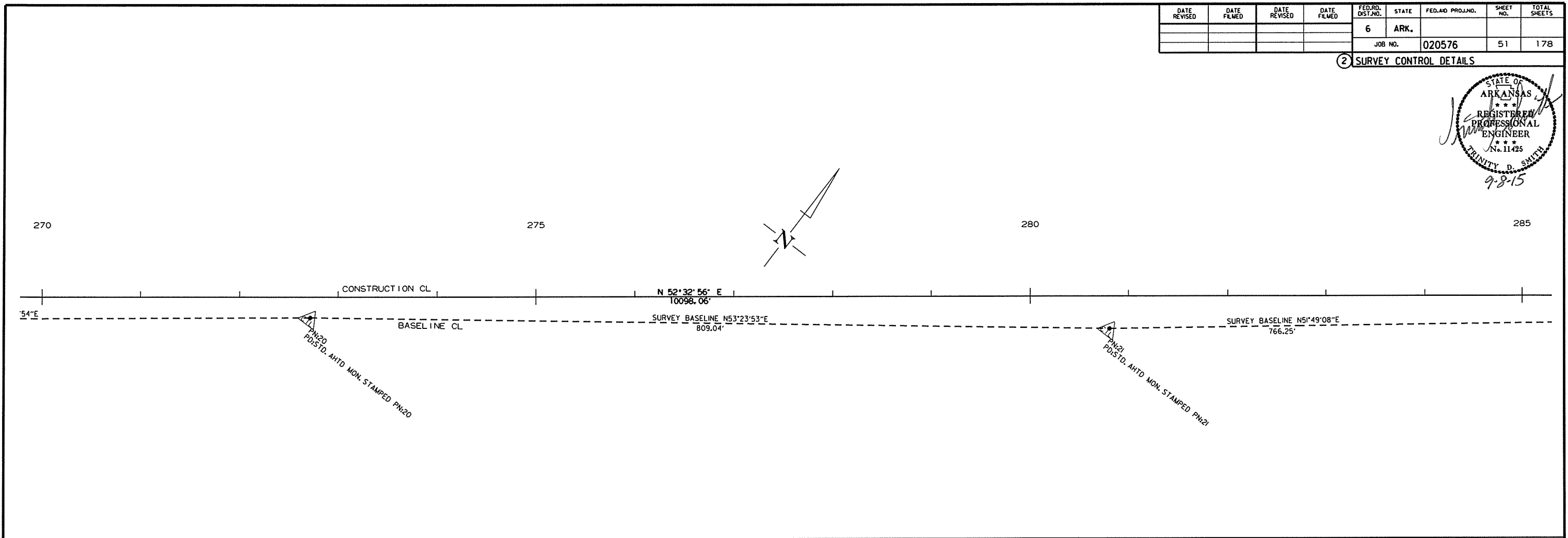
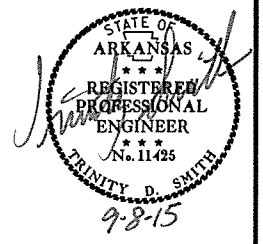
2 SURVEY CONTROL DETAILS



4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							020576	51	178

2 SURVEY CONTROL DETAILS



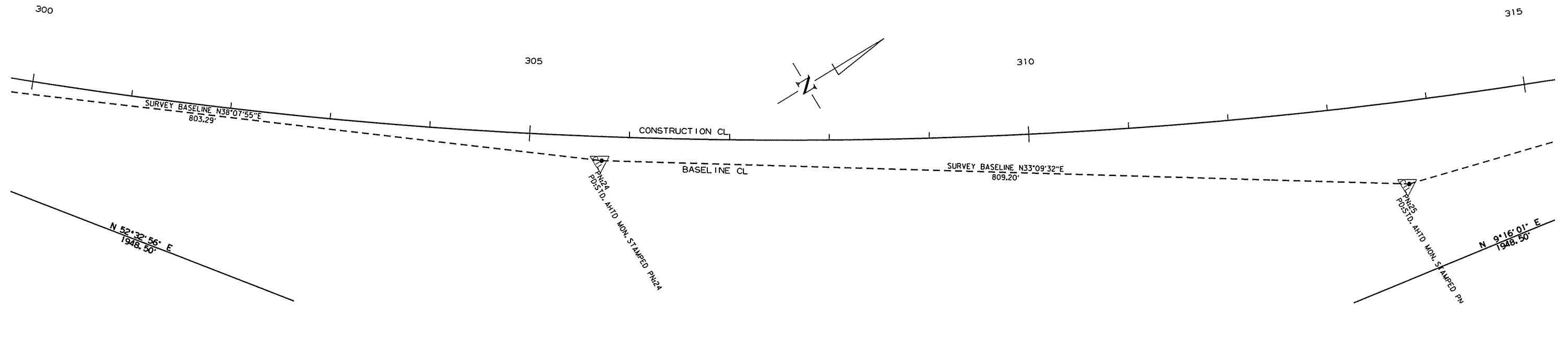
4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	52	178

2 SURVEY CONTROL DETAILS

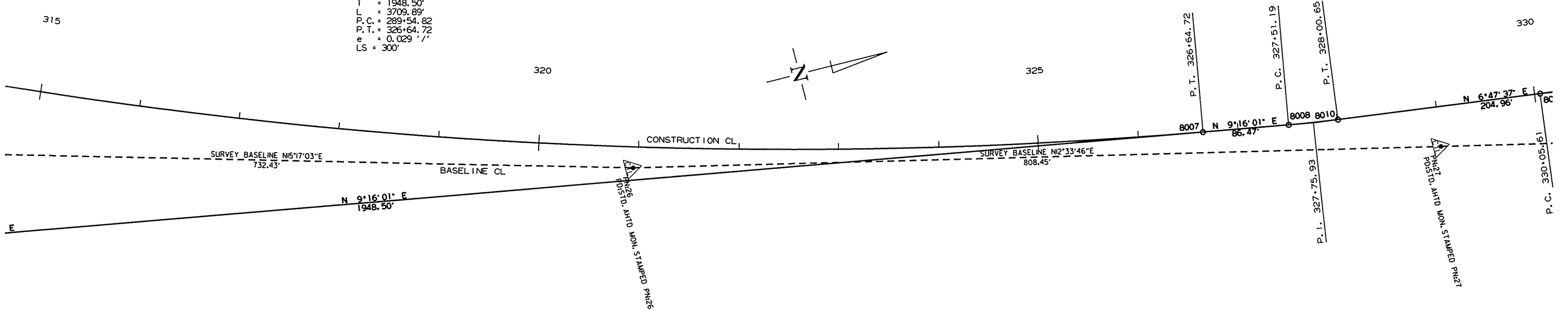


P. I. = 309+03.32
 Δ = 43° 16' 55.6" LT.
D = 1° 10' 00.0"
T = 1948.50'
L = 3709.89'
P. C. = 289+54.82
P. T. = 326+64.72
e = 0.029' / '
LS = 300'



P. I. = 309+03.32
 Δ = 43° 16' 55.6" LT.
D = 1° 10' 00.0"
T = 1948.50'
L = 3709.89'
P. C. = 289+54.82
P. T. = 326+64.72
e = 0.029' / '
LS = 300'

P. I. = 327+75.93
 Δ = 2° 28' 23.5" LT.
D = 5° 00' 00.0"
T = 24.74'
L = 49.46'
P. C. = 327+51.19
P. T. = 328+00.65
NO SUPER



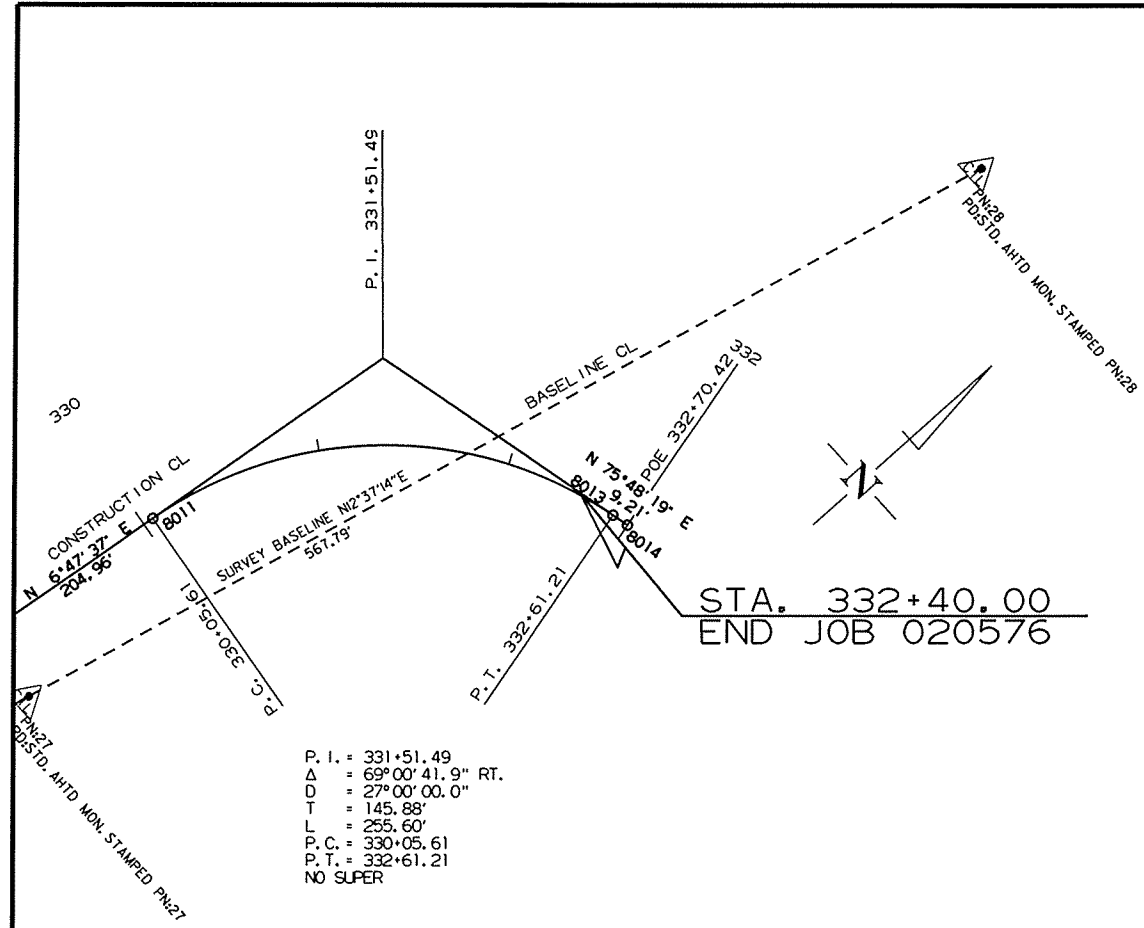
4/24/2015

R020576.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							53	178

2 SURVEY CONTROL DETAILS



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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		54	178
				JOB NO. 020576				

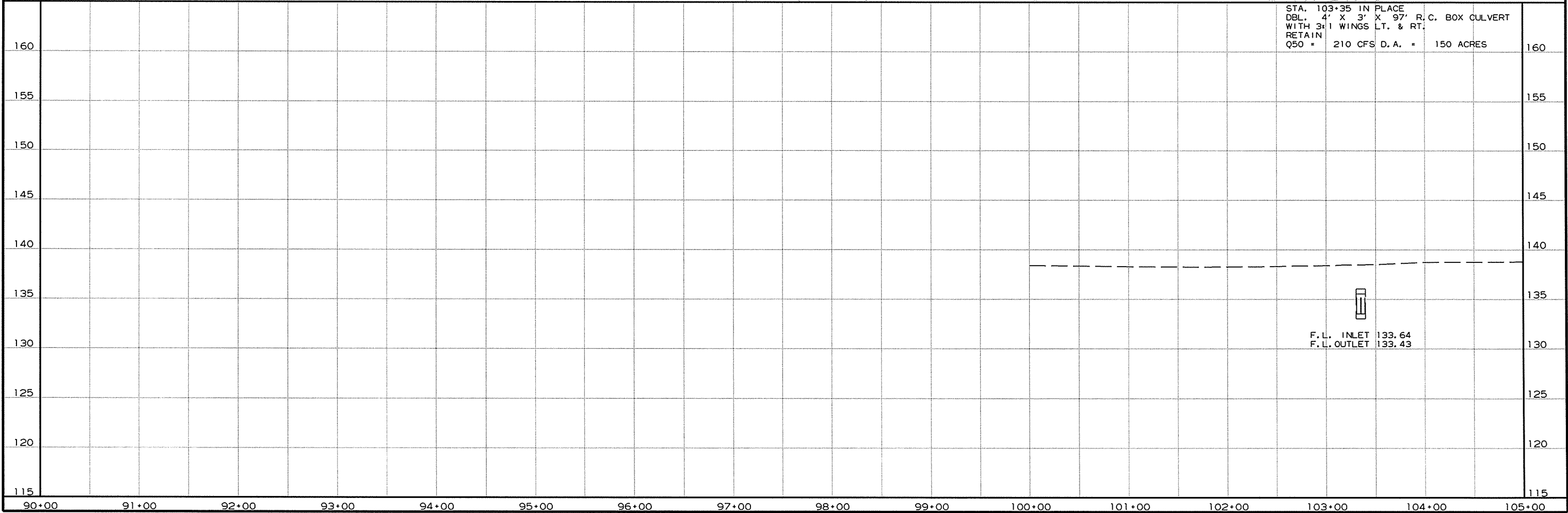
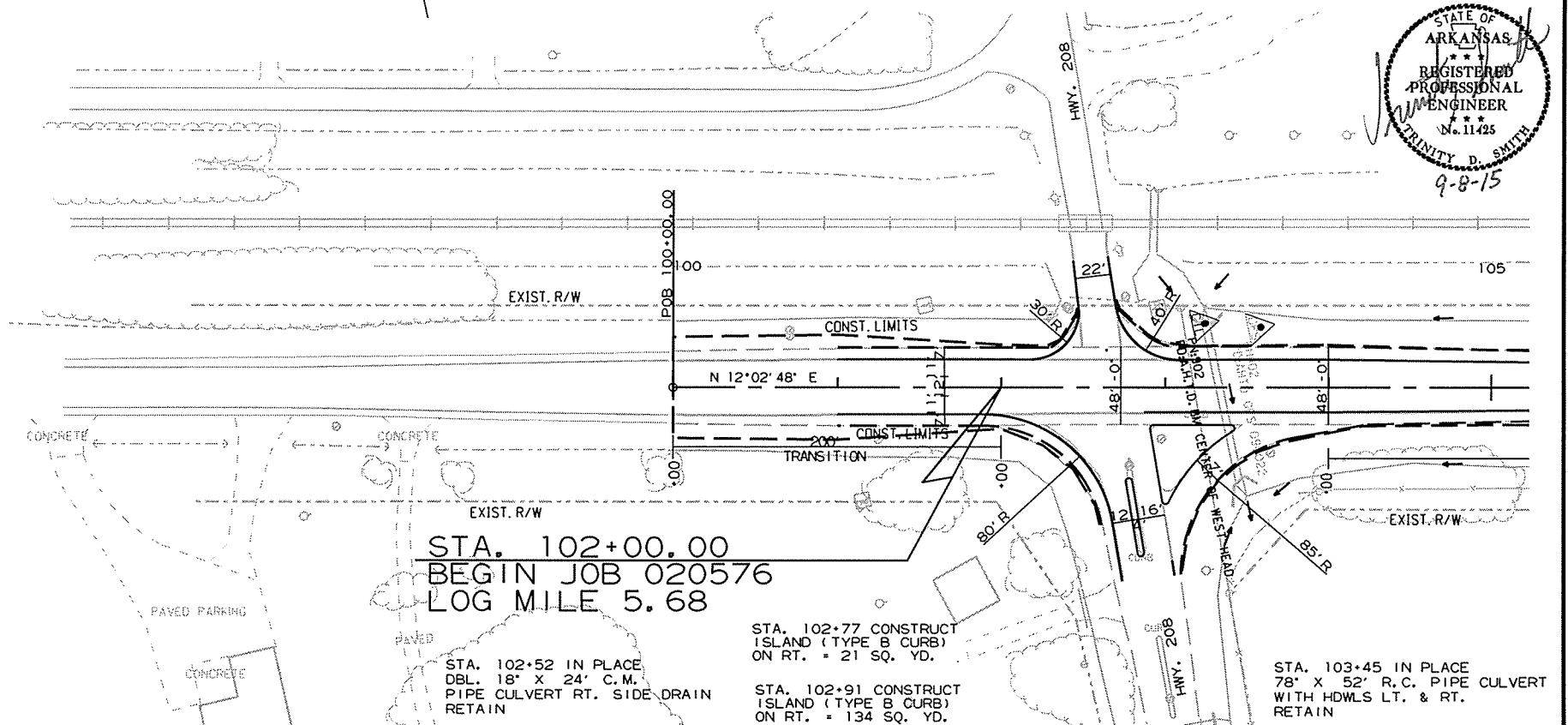
STA. 102+93 IN PLACE
 DBL. 30" X 36" C.M.
 PIPE CULVERT LT. SIDE DRAIN
 UNDER RAILROAD TRACKS
 RETAIN

2 PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 11425
 TRINITY D. SMITH
 9-8-15



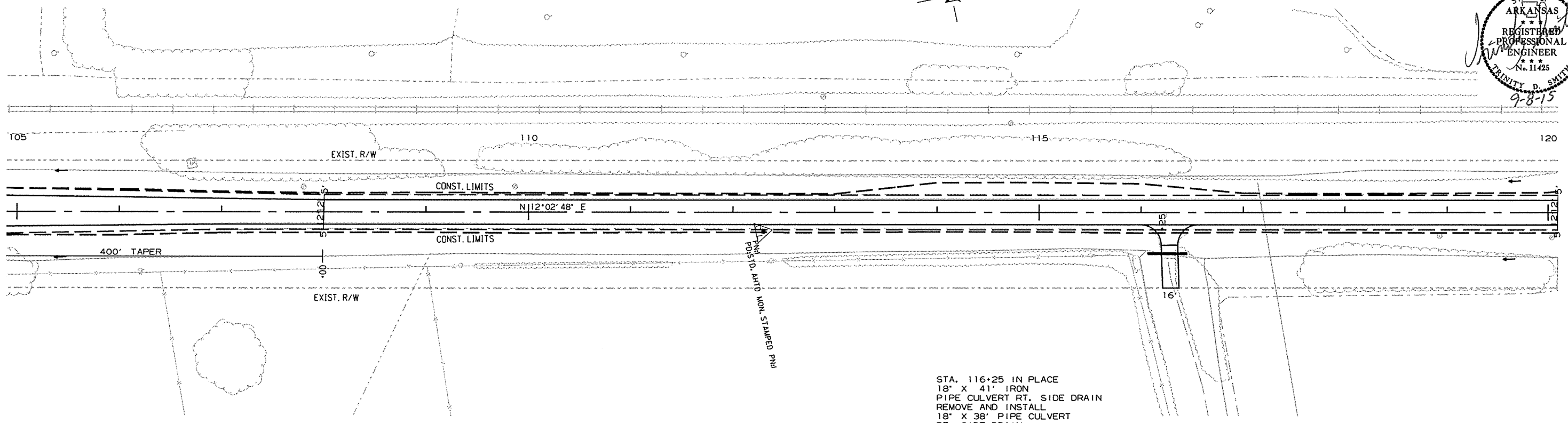
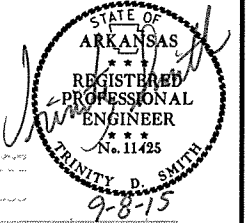
PROPOSED SQUARE PI CENTER OF 500'



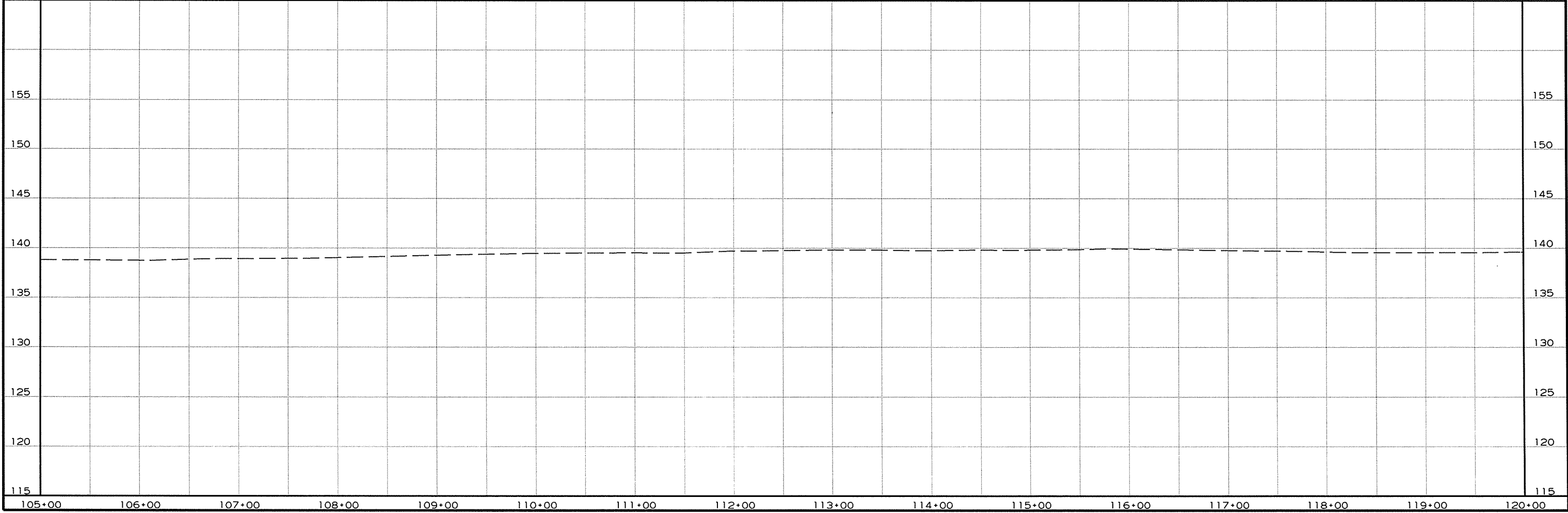
4/24/2015
 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		55	178
				JOB NO. 020576				

② PLAN AND PROFILE SHEETS



STA. 116+25 IN PLACE
 18" X 41" IRON
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 18" X 38" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH = 120 CU. YDS.



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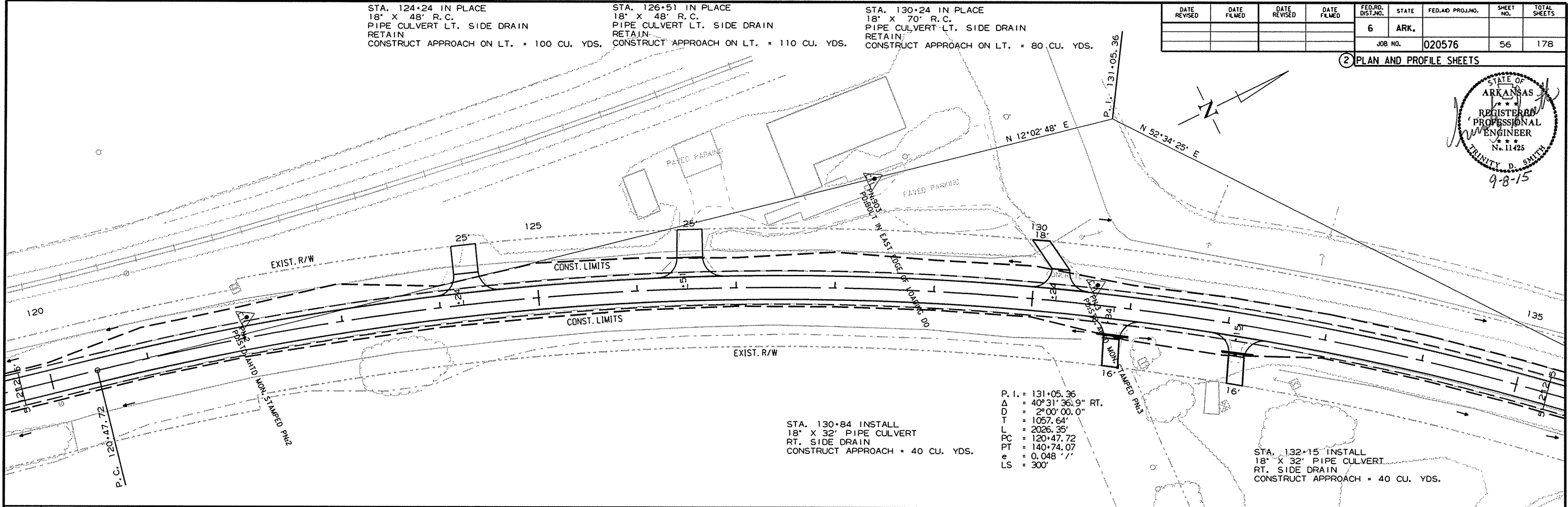
STA. 124+24 IN PLACE
 18" X 48" R.C.
 PIPE CULVERT LT. SIDE DRAIN
 RETAIN
 CONSTRUCT APPROACH ON LT. = 100 CU. YDS.

STA. 126+51 IN PLACE
 18" X 48" R.C.
 PIPE CULVERT LT. SIDE DRAIN
 RETAIN
 CONSTRUCT APPROACH ON LT. = 110 CU. YDS.

STA. 130+24 IN PLACE
 18" X 70" R.C.
 PIPE CULVERT-LT. SIDE DRAIN
 RETAIN
 CONSTRUCT APPROACH ON LT. = 80 CU. YDS.

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		56	178

2 PLAN AND PROFILE SHEETS

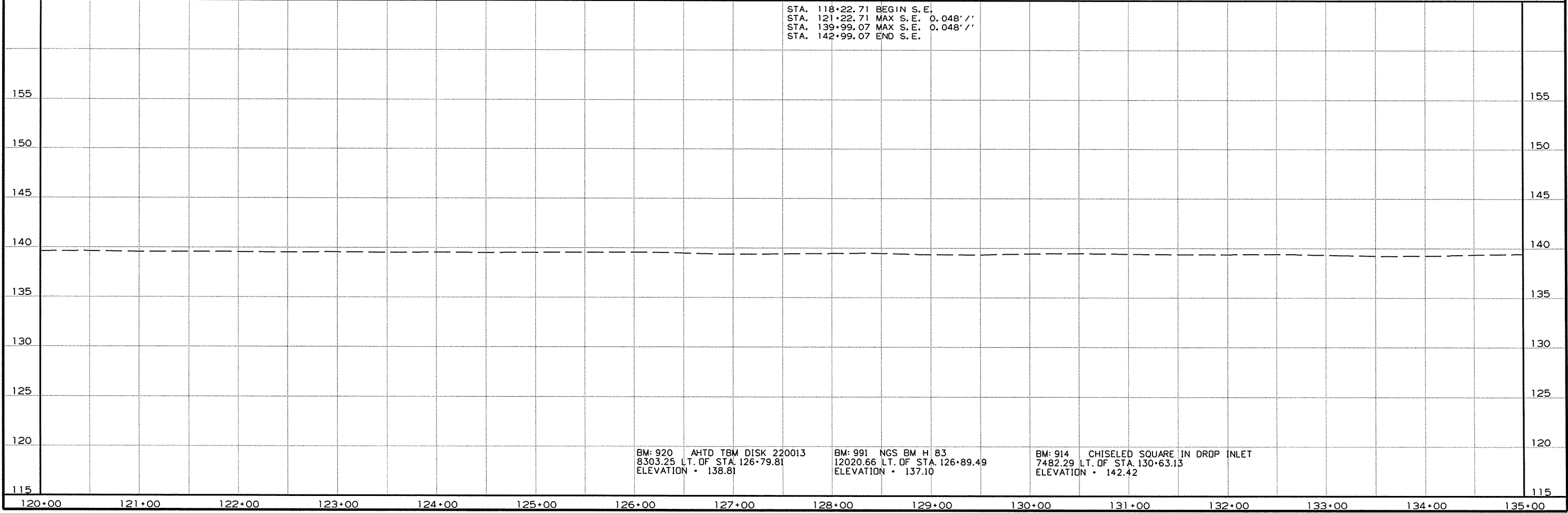


STA. 130+84 INSTALL
 18" X 32" PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 40 CU. YDS.

P. I. = 131+05.36
 Δ = 40°31'36.9" RT.
 D = 2°00'00.0"
 T = 1057.64'
 L = 2026.35'
 PC = 120+47.72
 PT = 140+74.07
 e = 0.048' /'
 LS = 300'

STA. 132+15 INSTALL
 18" X 32" PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 40 CU. YDS.

STA. 118+22.71 BEGIN S. E.
 STA. 121+22.71 MAX S. E. 0.048' /'
 STA. 139+99.07 MAX S. E. 0.048' /'
 STA. 142+99.07 END S. E.



BM: 920 AHTD TBM DISK 220013
 8303.25 LT. OF STA. 126+79.81
 ELEVATION = 138.81

BM: 991 NGS BM H 83
 12020.66 LT. OF STA. 126+89.49
 ELEVATION = 137.10

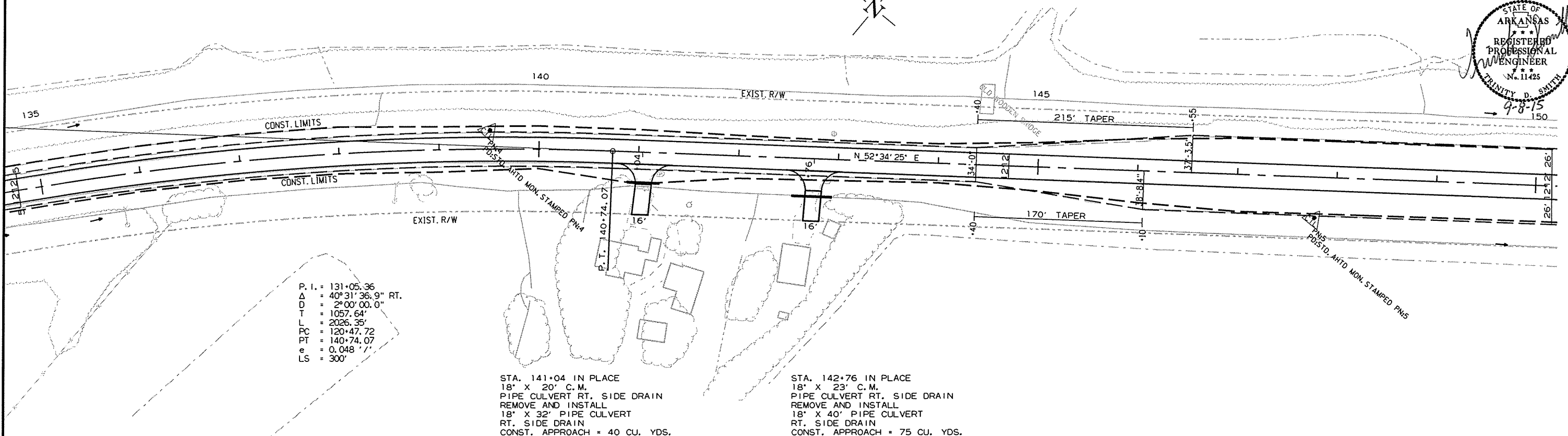
BM: 914 CHISELED SQUARE IN DROP INLET
 7482.29 LT. OF STA. 130+63.13
 ELEVATION = 142.42

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STA. 144+41 - STA. 144+54 IN PLACE
 30' X 13' CLEAR ROADWAY WIDTH
 BRIDGE CONSISTING OF WOOD DECK
 RETAIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							57	178

2 PLAN AND PROFILE SHEETS

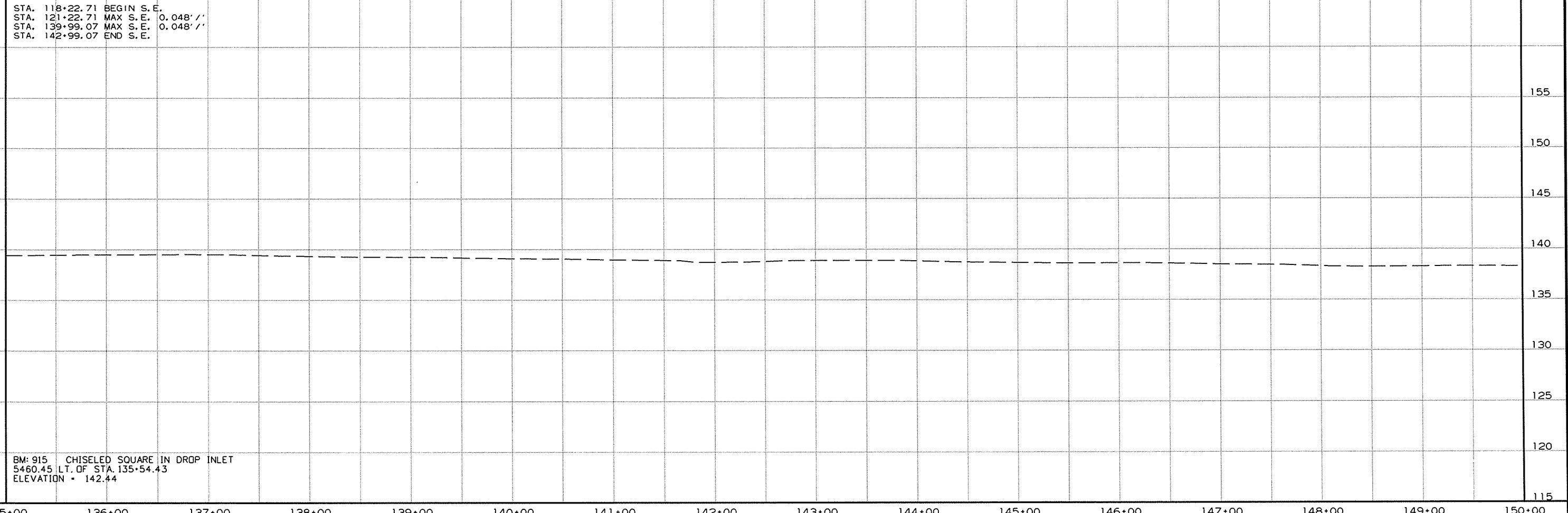


P. I. = 131+05.36
 Δ = 40° 31' 36.9" RT.
 D = 2° 00' 00.0"
 T = 1057.64'
 L = 2026.35'
 PC = 120+47.72
 PT = 140+74.07
 e = 0.048' /'
 LS = 300'

STA. 141+04 IN PLACE
 18' X 20' C.M.
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 18' X 32' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH = 40 CU. YDS.

STA. 142+76 IN PLACE
 18' X 23' C.M.
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 18' X 40' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH = 75 CU. YDS.

STA. 118+22.71 BEGIN S.E.
 STA. 121+22.71 MAX S.E. 0.048' /'
 STA. 139+99.07 MAX S.E. 0.048' /'
 STA. 142+99.07 END S.E.

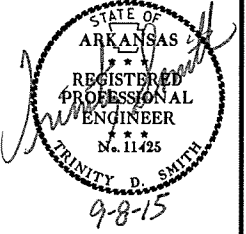


BM: 915 CHISELED SQUARE IN DROP INLET
 5460.45 LT. OF STA. 135+54.43
 ELEVATION = 142.44

4/24/2015
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		58	178
JOB NO. 020576								

2 PLAN AND PROFILE SHEETS



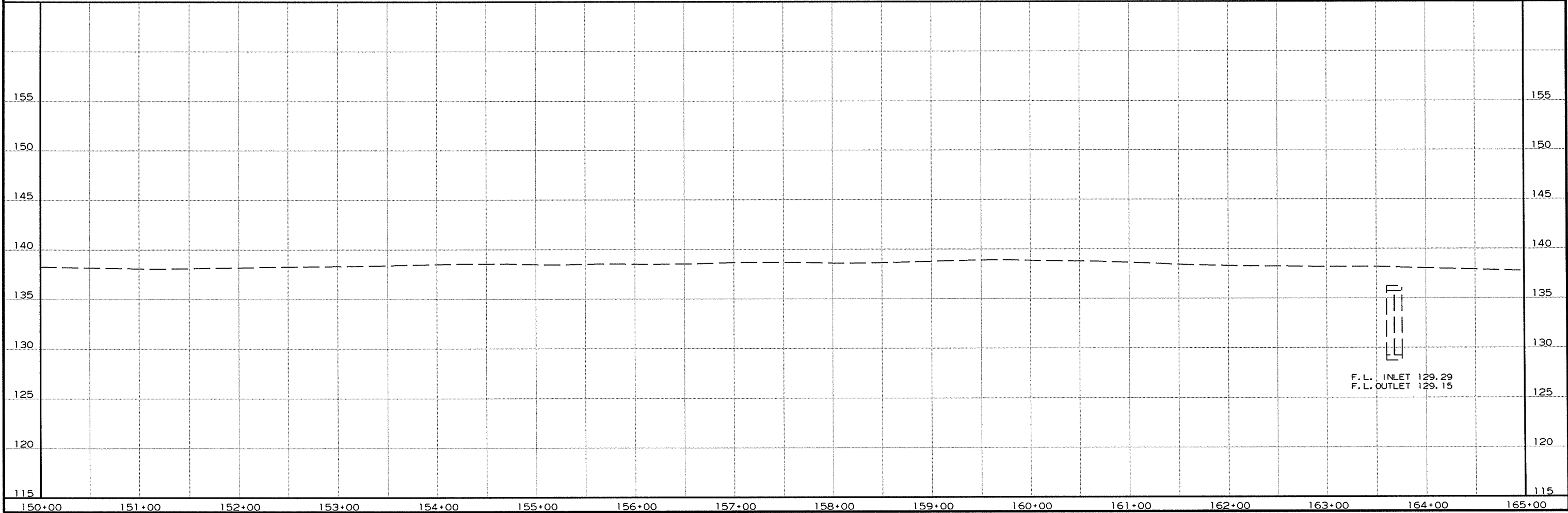
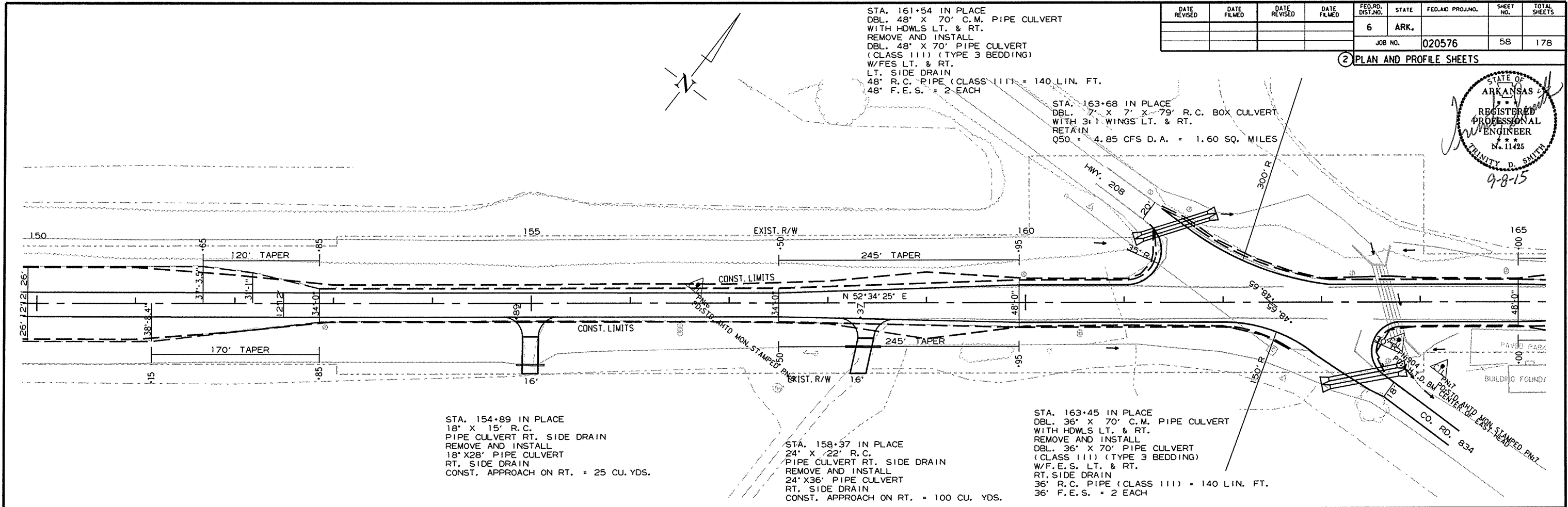
STA. 161+54 IN PLACE
 DBL. 48" X 70" C.M. PIPE CULVERT
 WITH HOWLS LT. & RT.
 REMOVE AND INSTALL
 DBL. 48" X 70" PIPE CULVERT
 (CLASS III) (TYPE 3 BEDDING)
 W/FES LT. & RT.
 LT. SIDE DRAIN
 48" R.C. PIPE (CLASS III) = 140 LIN. FT.
 48" F.E.S. = 2 EACH

STA. 163+68 IN PLACE
 DBL. 7' X 7' X 79' R.C. BOX CULVERT
 WITH 3:1 WINGS LT. & RT.
 RETAIN
 Q50 = 4.85 CFS D.A. = 1.60 SQ. MILES

STA. 154+89 IN PLACE
 18" X 15' R.C.
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 18" X 28' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH ON RT. = 25 CU. YDS.

STA. 158+37 IN PLACE
 24" X 22' R.C.
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 24" X 36' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH ON RT. = 100 CU. YDS.

STA. 163+45 IN PLACE
 DBL. 36" X 70" C.M. PIPE CULVERT
 WITH HOWLS LT. & RT.
 REMOVE AND INSTALL
 DBL. 36" X 70" PIPE CULVERT
 (CLASS III) (TYPE 3 BEDDING)
 W/F.E.S. LT. & RT.
 RT. SIDE DRAIN
 36" R.C. PIPE (CLASS III) = 140 LIN. FT.
 36" F.E.S. = 2 EACH



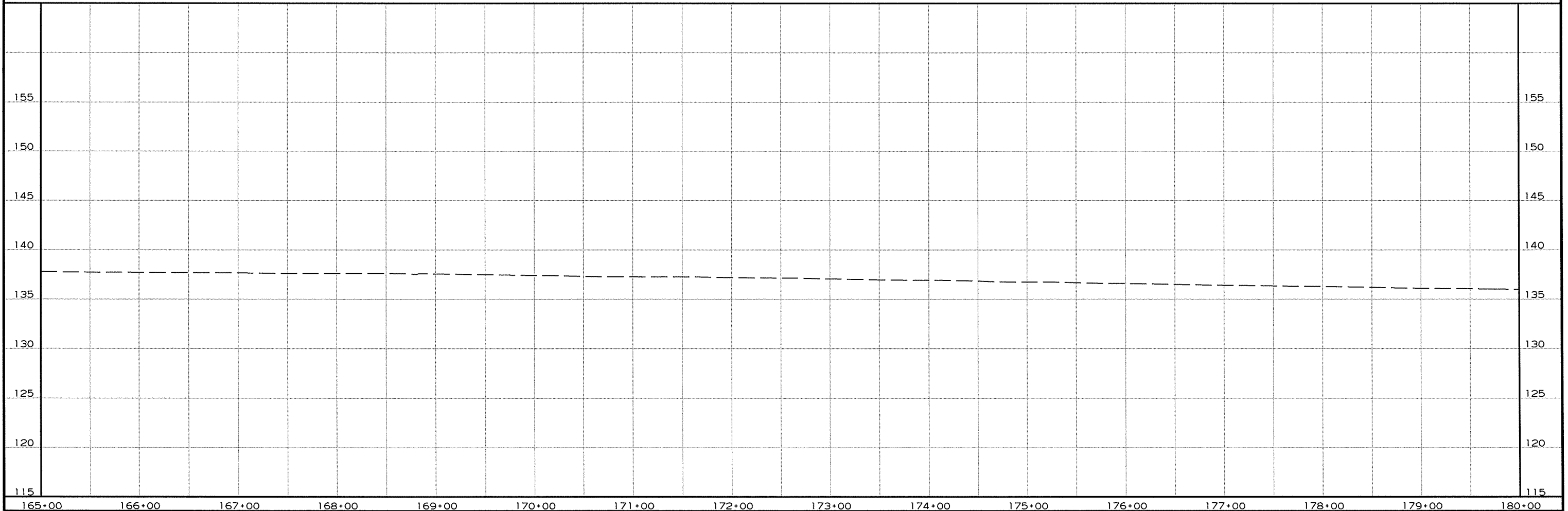
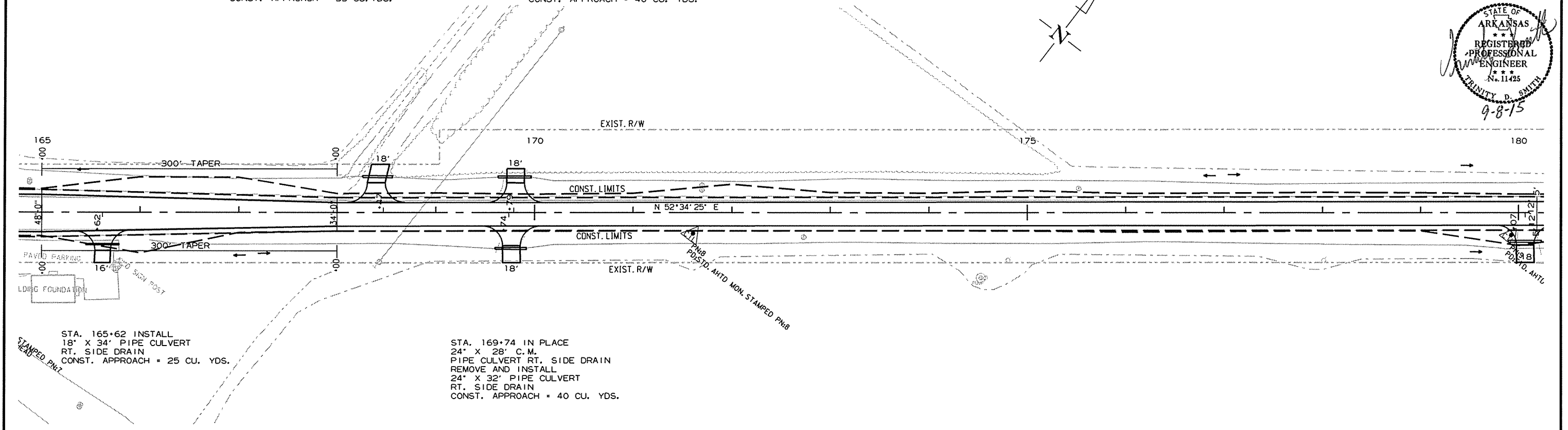
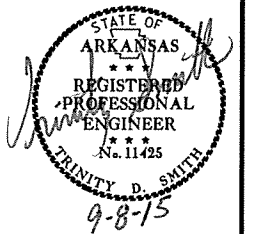
4/24/2015
R020576.DGN

STA. 168+47 IN PLACE
 24" X 40" C.M.
 PIPE CULVERT LT. SIDE DRAIN
 REMOVE AND INSTALL
 24" X 30" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 35 CU. YDS.

STA. 169+79 IN PLACE
 24" X 27" C.M.
 PIPE CULVERT LT. SIDE DRAIN
 REMOVE AND INSTALL
 24" X 34" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 40 CU. YDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		59	178
				JOB NO. 020576				

② PLAN AND PROFILE SHEETS



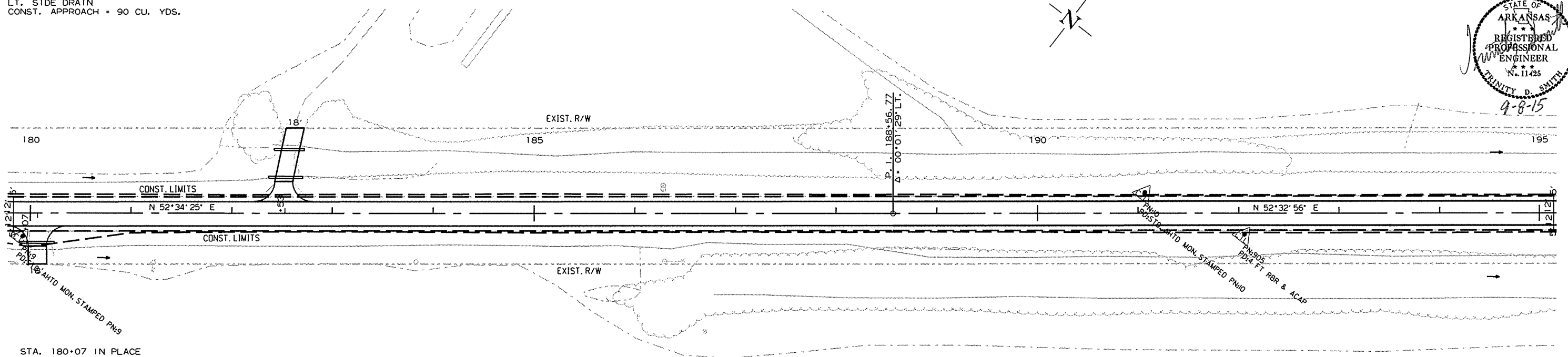
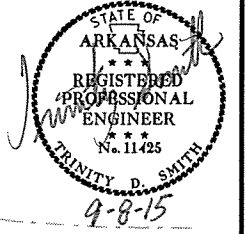
4/24/2015

R020576.DGN

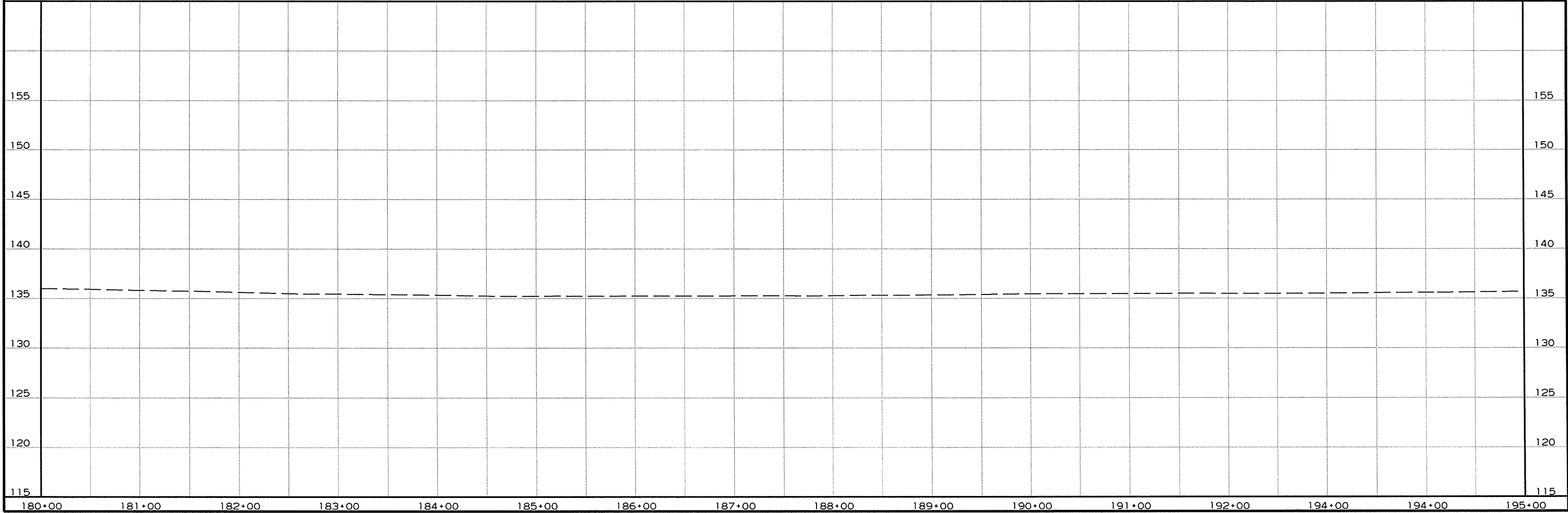
STA. 182+53 IN PLACE
 24" X 39" C.M. PIPE CULVERT
 30" X 28" C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 24" X 34" PIPE CULVERT
 30" X 30" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 90 CU. YDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							60	178

2 PLAN AND PROFILE SHEETS



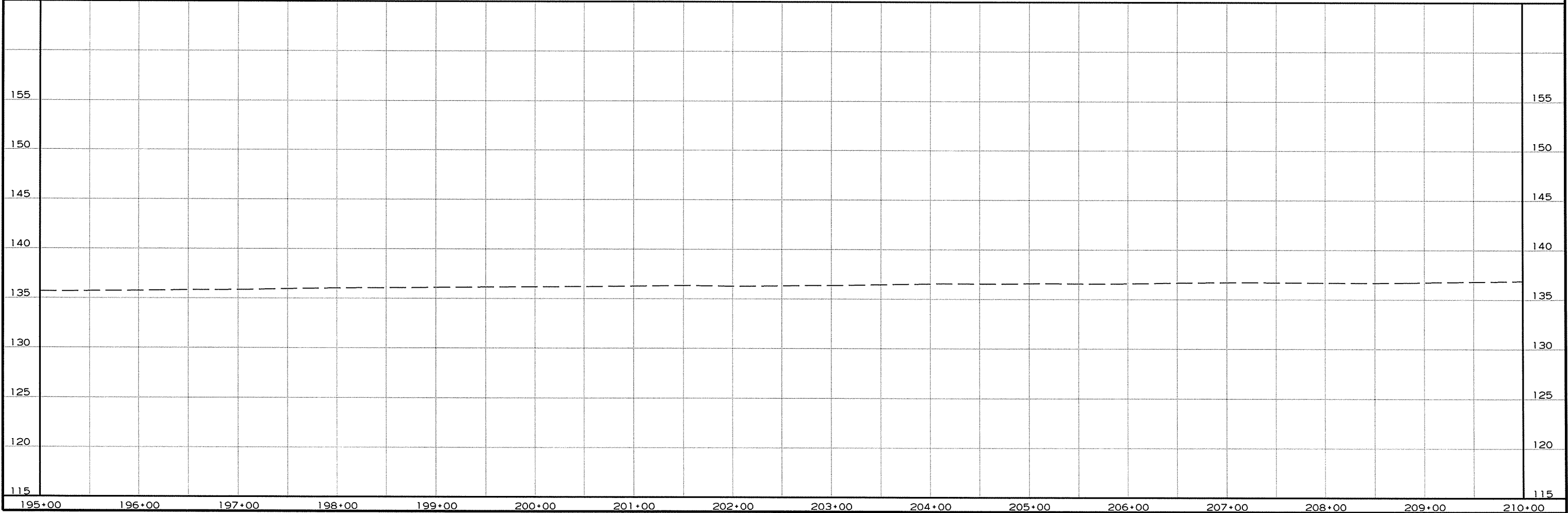
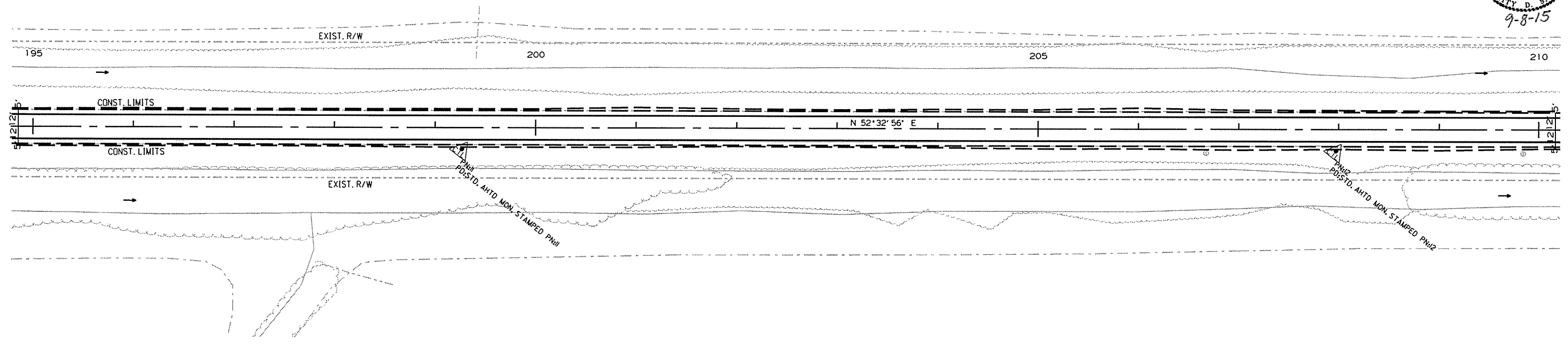
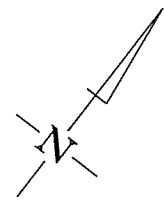
STA. 180+07 IN PLACE
 24" X 39" C.M.
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 24" X 34" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH = 30 CU. YDS.



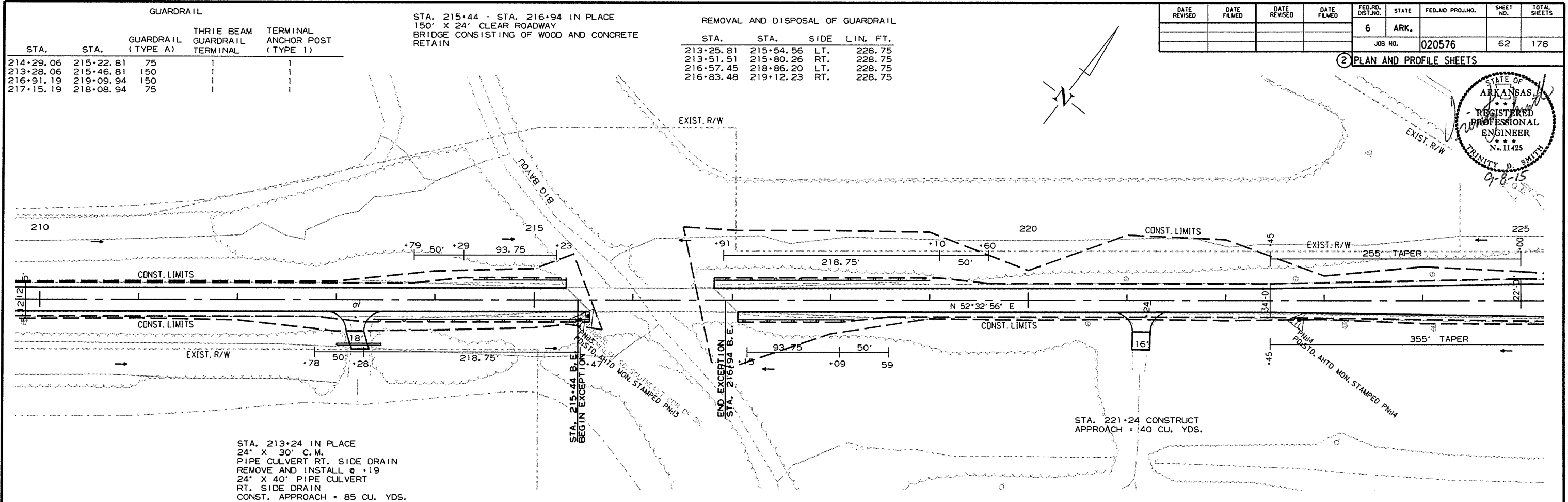
4/24/2015 R020576.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		61	178

② PLAN AND PROFILE SHEETS



R020576.DGN 4/24/2015

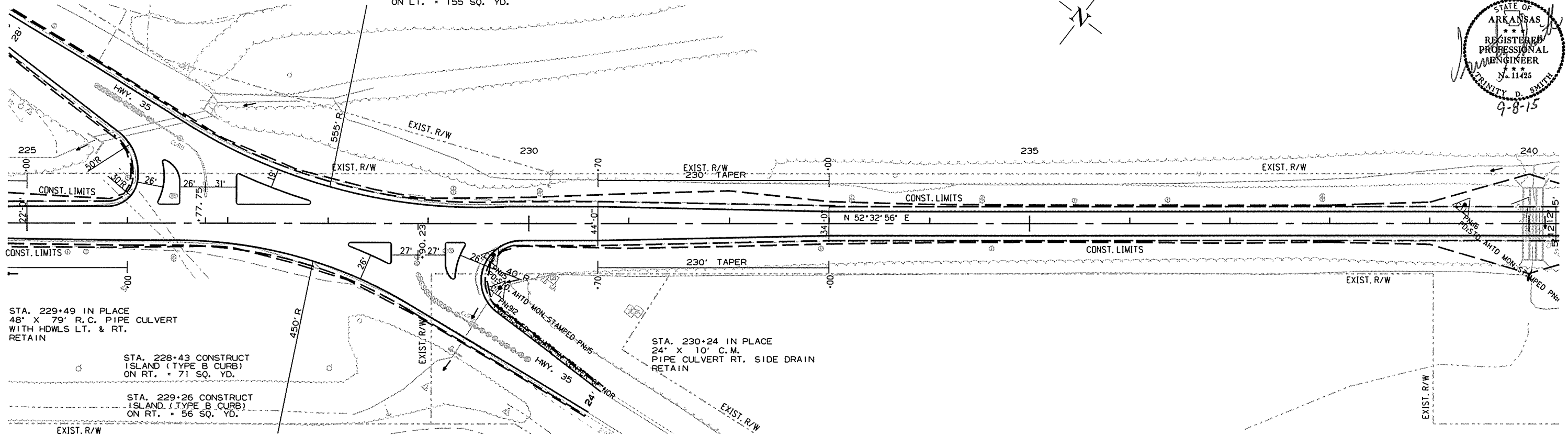


4/24/2015 R020576.DGN

STA. 226+25 IN PLACE
6' X 5' X 116' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
RETAIN

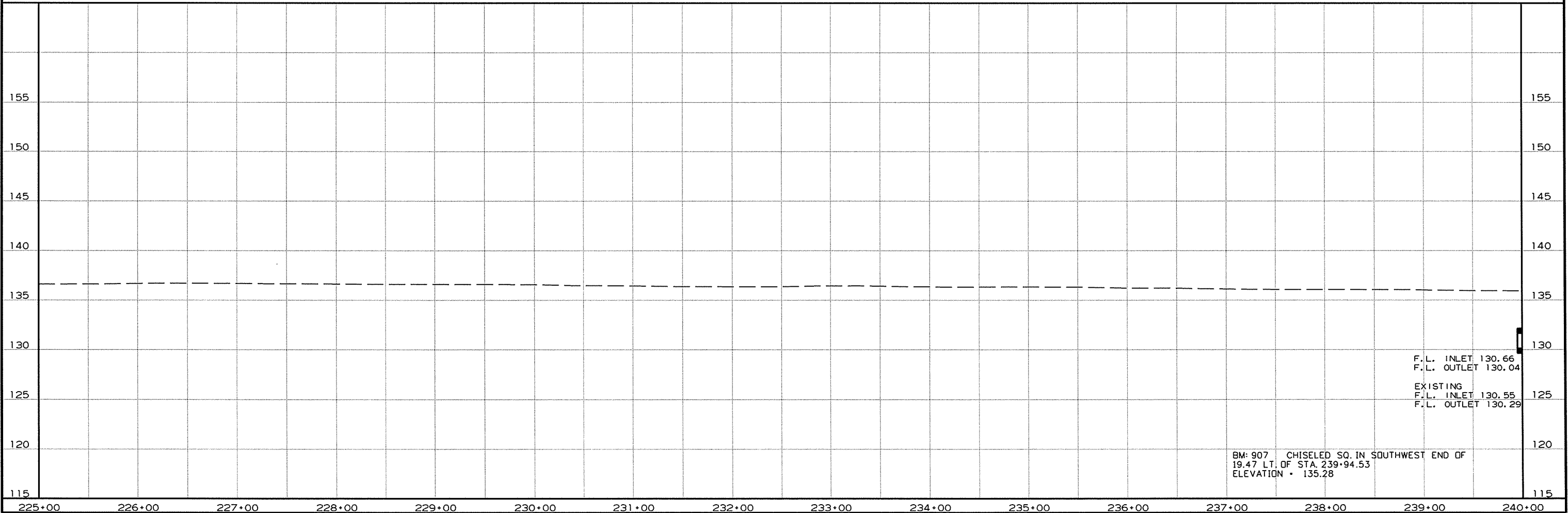
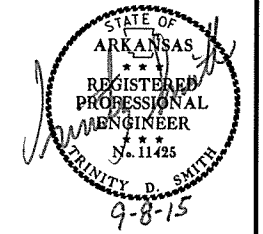
STA. 226+41 CONSTRUCT
ISLAND (TYPE B CURB)
ON LT. = 80 SQ. YD.

STA. 227+44 CONSTRUCT
ISLAND (TYPE B CURB)
ON LT. = 155 SQ. YD.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		63	178
				JOB NO. 020576				

2 PLAN AND PROFILE SHEETS

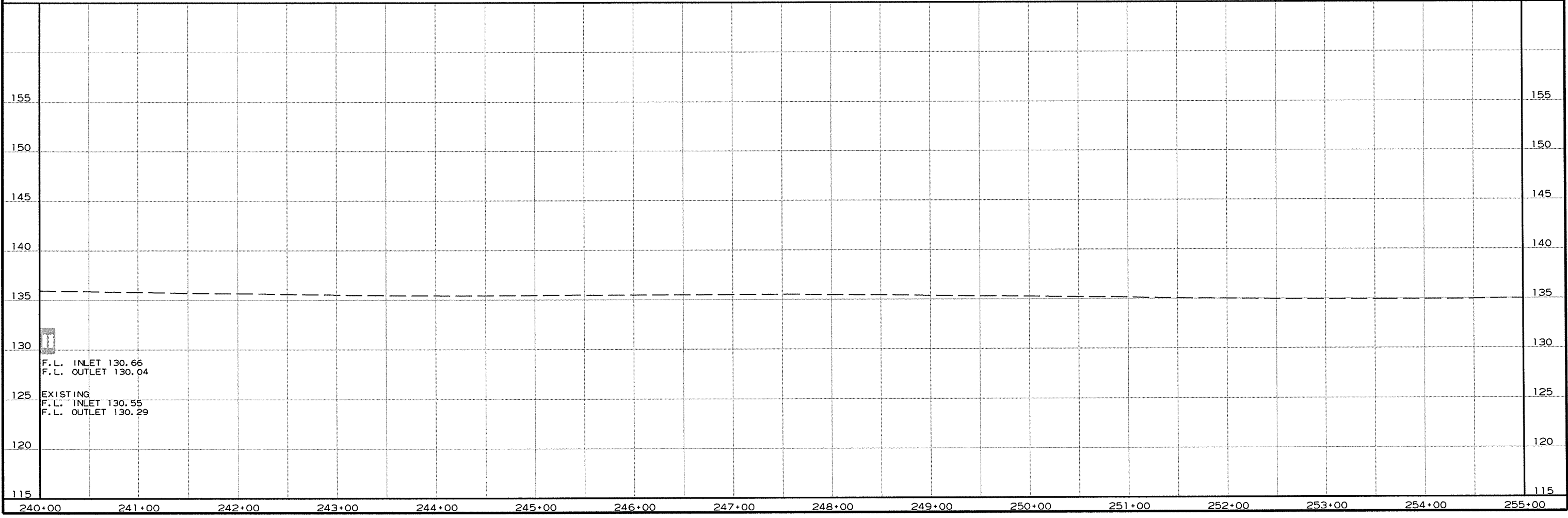
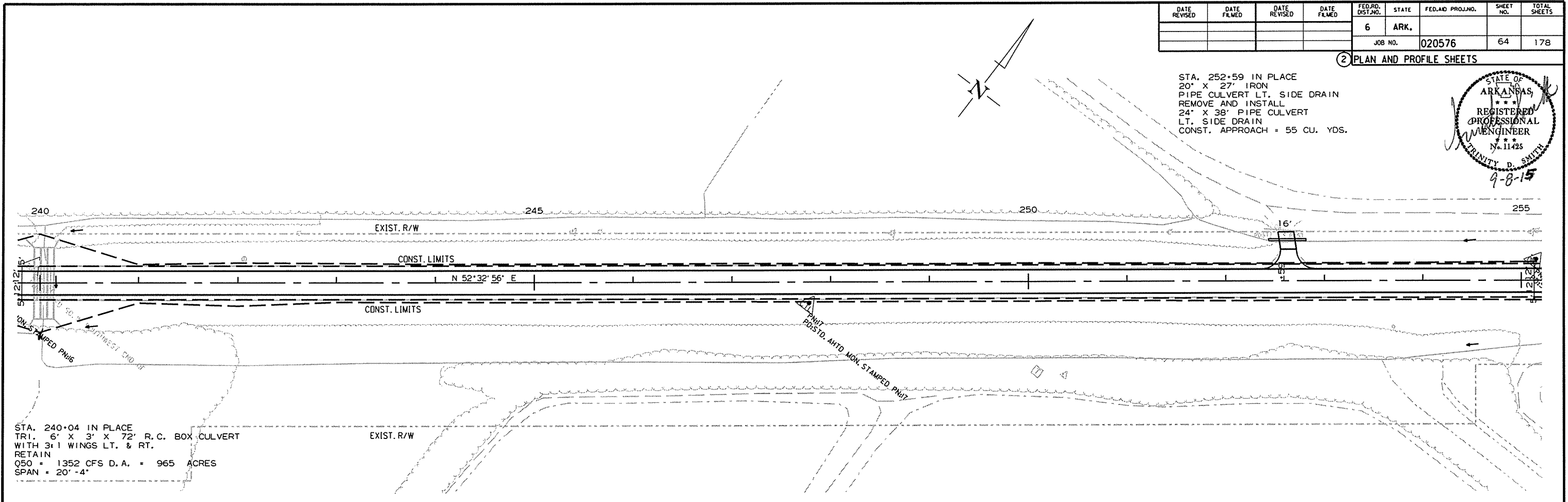
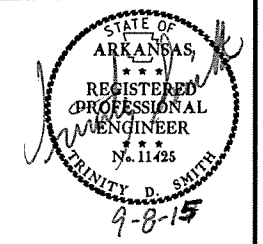


4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		64	178

② PLAN AND PROFILE SHEETS

STA. 252+59 IN PLACE
 20" X 27" IRON
 PIPE CULVERT LT. SIDE DRAIN
 REMOVE AND INSTALL
 24" X 38" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 55 CU. YDS.

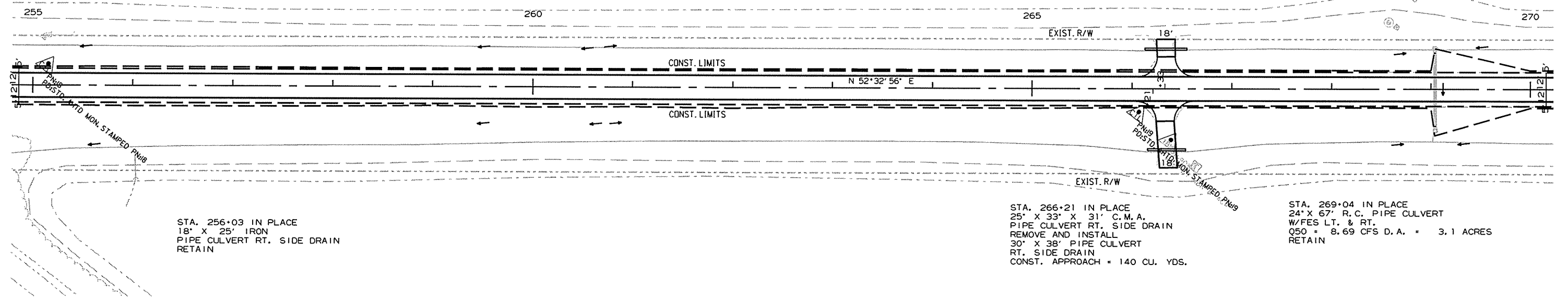
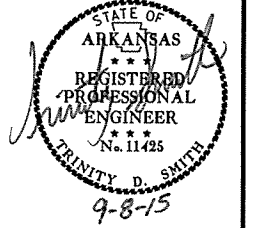


4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							65	178

② PLAN AND PROFILE SHEETS

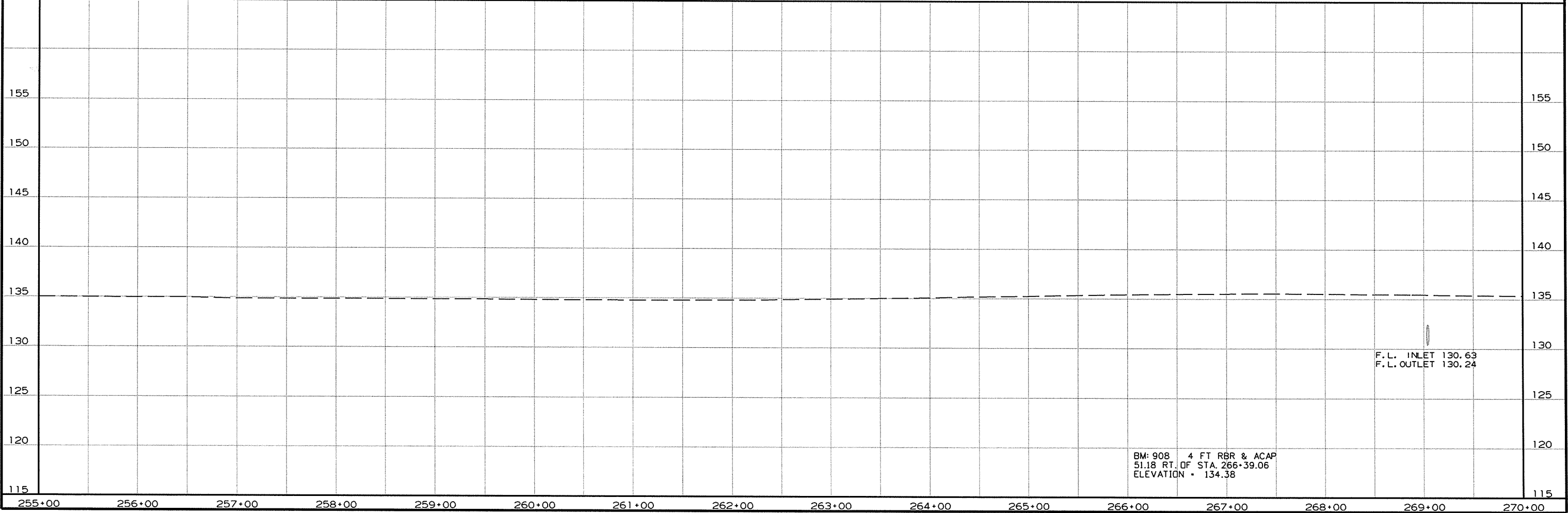
STA. 266+33 IN PLACE
 18" X 29' C.M.
 PIPE CULVERT LT. SIDE DRAIN
 REMOVE AND INSTALL
 18" X 42' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 80 CU. YDS.



STA. 256+03 IN PLACE
 18" X 25' IRON
 PIPE CULVERT RT. SIDE DRAIN
 RETAIN

STA. 266+21 IN PLACE
 25" X 33" X 31' C.M.A.
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 30" X 38' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH = 140 CU. YDS.

STA. 269+04 IN PLACE
 24" X 67' R.C. PIPE CULVERT
 W/FES LT. & RT.
 Q50 = 8.69 CFS D.A. = 3.1 ACRES
 RETAIN



F.L. INLET 130.63
 F.L. OUTLET 130.24

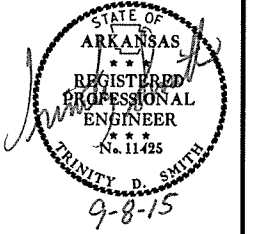
BM: 908 4 FT RBR & ACAP
 51.18 RT. OF STA. 266+39.06
 ELEVATION = 134.38

4/24/2015

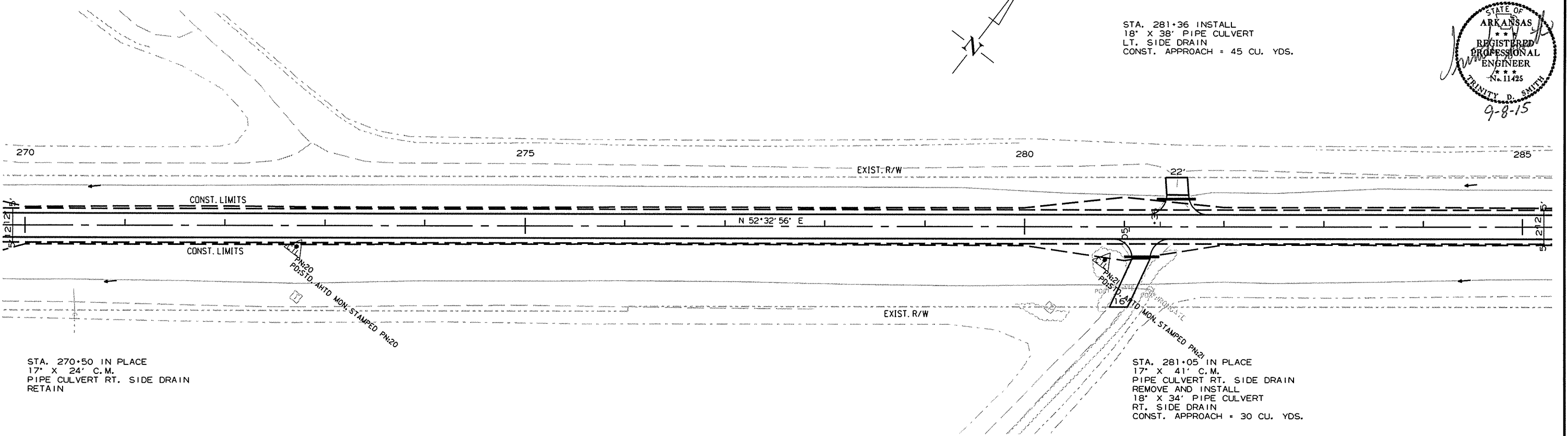
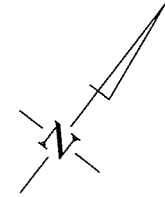
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		66	178

② PLAN AND PROFILE SHEETS

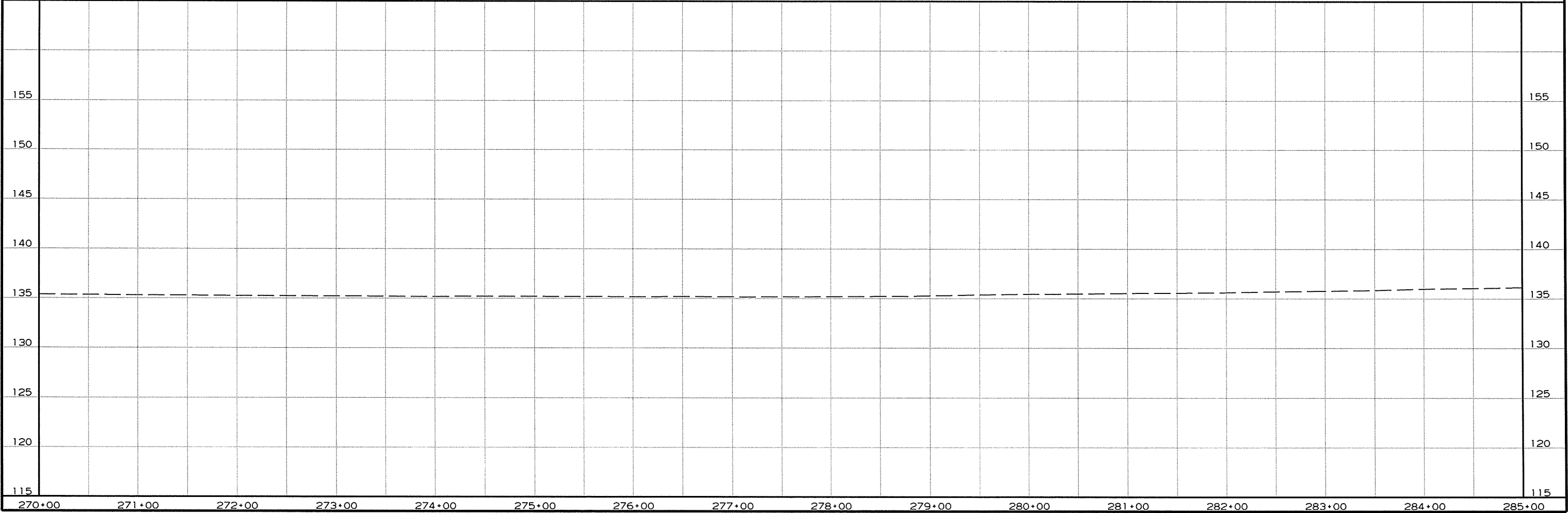


STA. 281+36 INSTALL
18" X 38" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 45 CU. YDS.



STA. 270+50 IN PLACE
17" X 24" C.M.
PIPE CULVERT RT. SIDE DRAIN
RETAIN

STA. 281+05 IN PLACE
17" X 41" C.M.
PIPE CULVERT RT. SIDE DRAIN
REMOVE AND INSTALL
18" X 34" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 30 CU. YDS.



4/24/2015

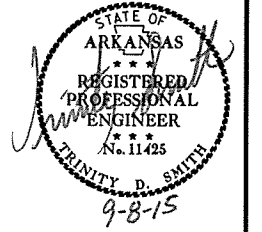
R020576.DGN

STA. 292+05 IN PLACE
 24" X 67' R.C. PIPE CULVERT
 WITH FES LT. & RT.
 Q50 = 6.68 CFS D.A. = 2.01 ACRES
 RETAIN

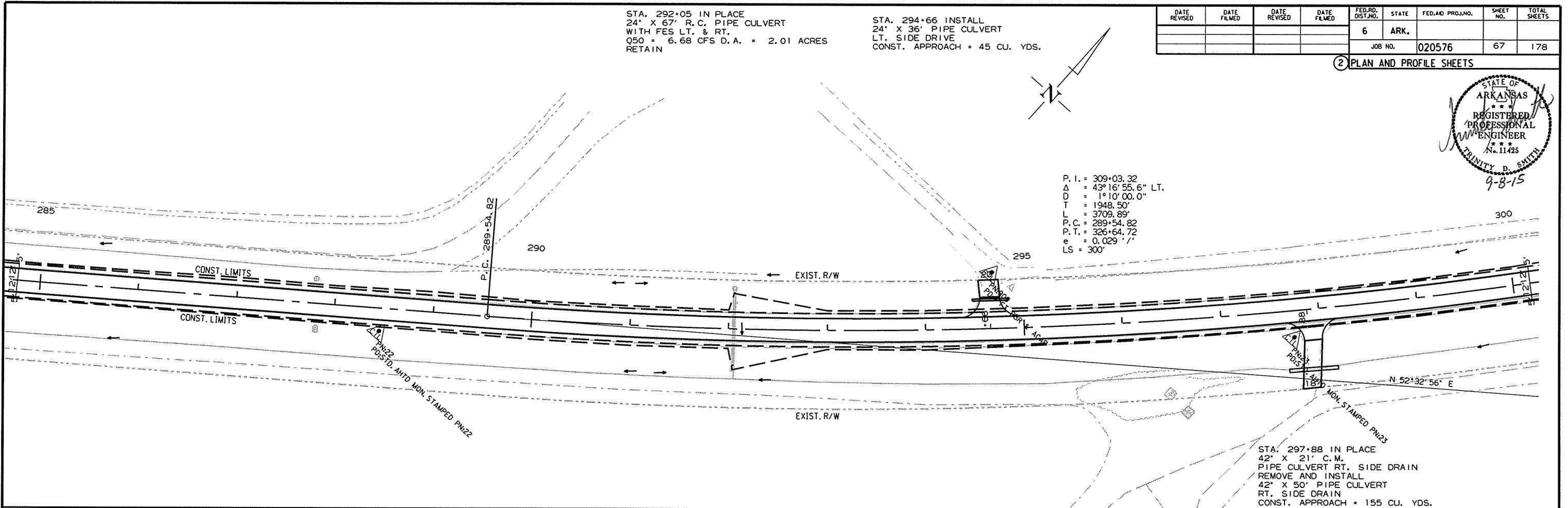
STA. 294+66 INSTALL
 24" X 36' PIPE CULVERT
 LT. SIDE DRIVE
 CONST. APPROACH = 45 CU. YDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		67	178

2 PLAN AND PROFILE SHEETS

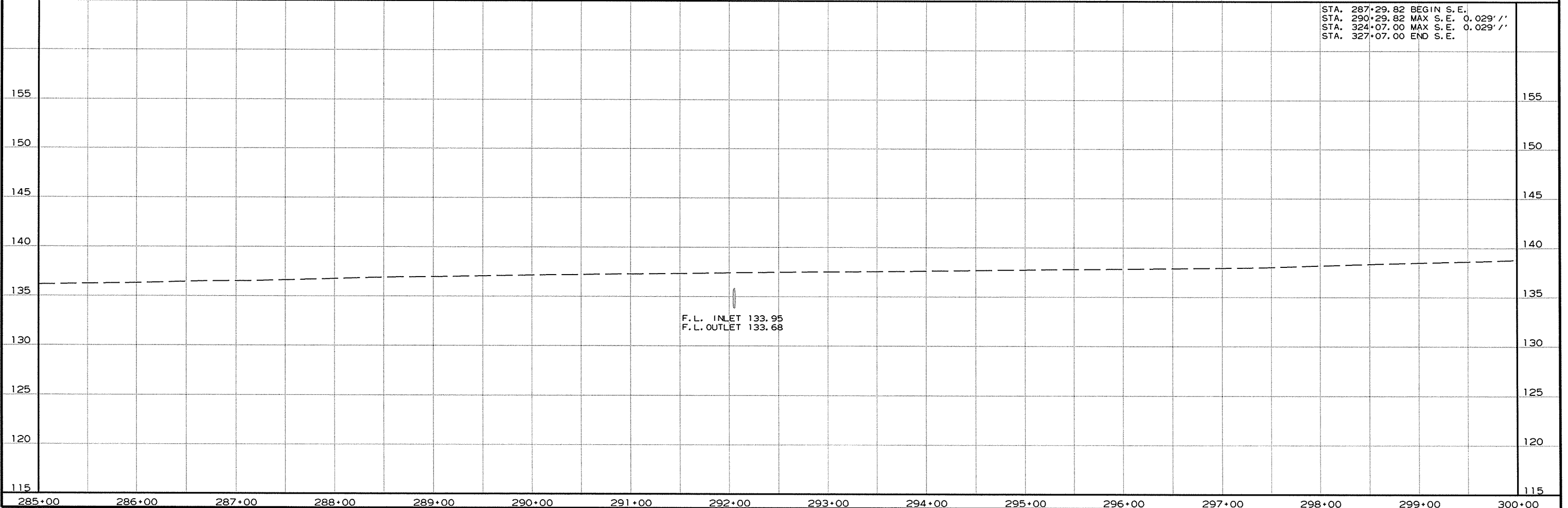


P. I. = 309+03.32
 Δ = 43° 16' 55.6" LT.
 D = 1° 10' 00.0"
 T = 1948.50'
 L = 3709.89'
 P.C. = 289+54.82
 P.T. = 326+64.72
 e = 0.029' /'
 LS = 300'



STA. 297+88 IN PLACE
 42" X 21' C.M.
 PIPE CULVERT RT. SIDE DRAIN
 REMOVE AND INSTALL
 42" X 50' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPROACH = 155 CU. YDS.

STA. 287+29.82 BEGIN S.E.
 STA. 290+29.82 MAX S.E. 0.029' /'
 STA. 324+07.00 MAX S.E. 0.029' /'
 STA. 327+07.00 END S.E.

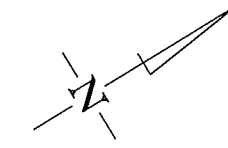
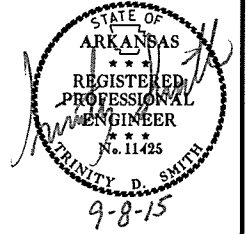


F.L. INLET 133.95
 F.L. OUTLET 133.68

4/24/2015 R020576.DGN

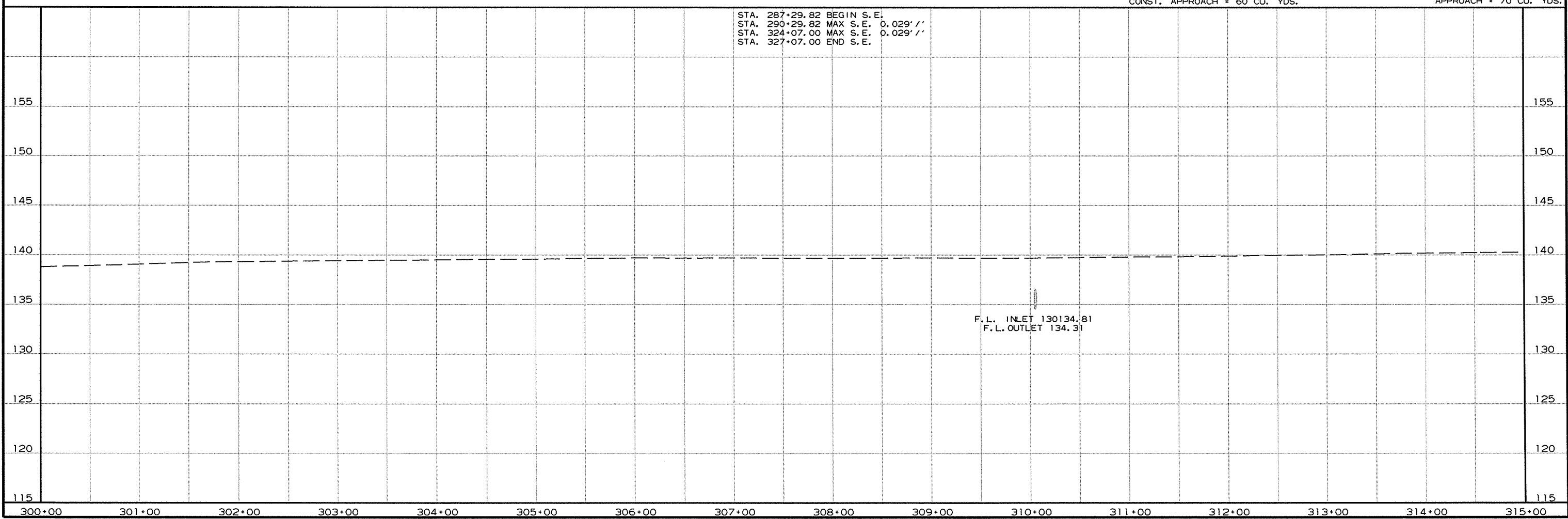
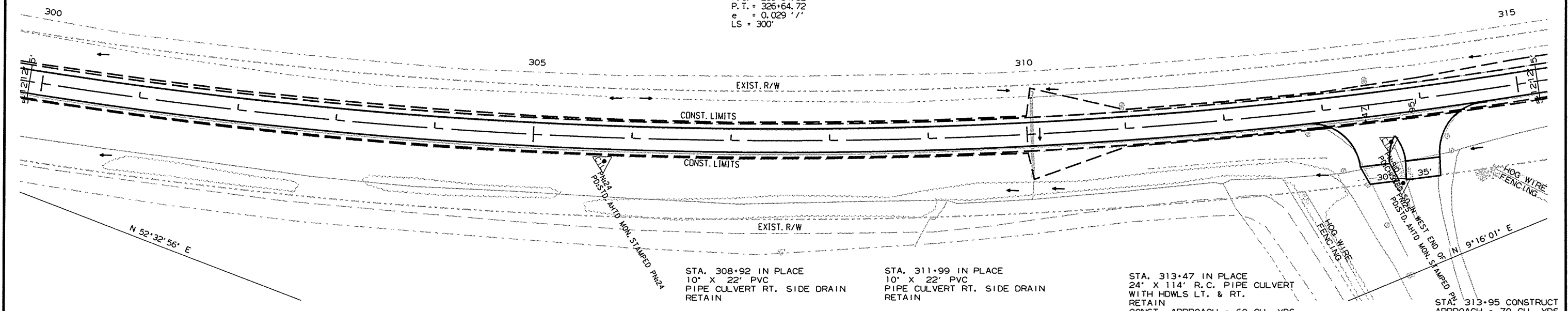
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							68	178

2 PLAN AND PROFILE SHEETS



STA. 310+05 IN PLACE
 24' X 67' R.C. PIPE CULVERT
 WITH FES LT. & RT.
 Q50 = 7.18 CFS D.A. = 1.87 ACRES
 RETAIN

P. I. = 309+03.32
 Δ = 43° 16' 55.6" LT.
 D = 1° 10' 00.0"
 L = 1948.50'
 L = 3709.89'
 P. C. = 289+54.82
 P. T. = 326+64.72
 e = 0.029' / '
 LS = 300'



R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		69	178
JOB NO. 020576							69	178

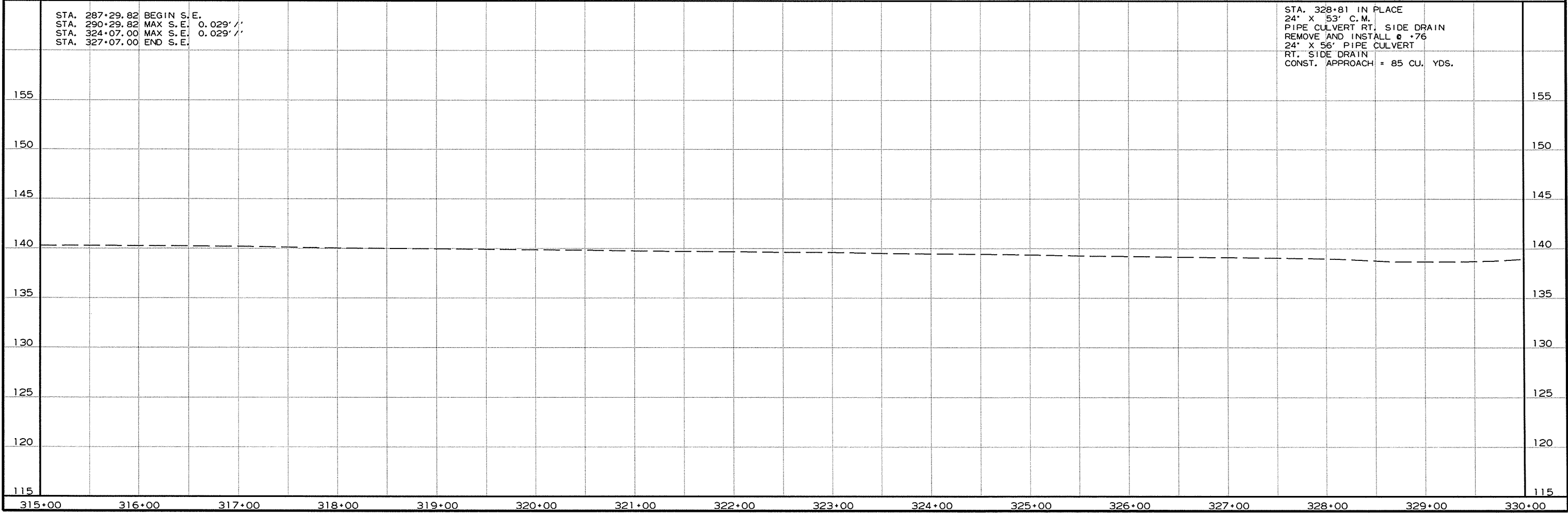
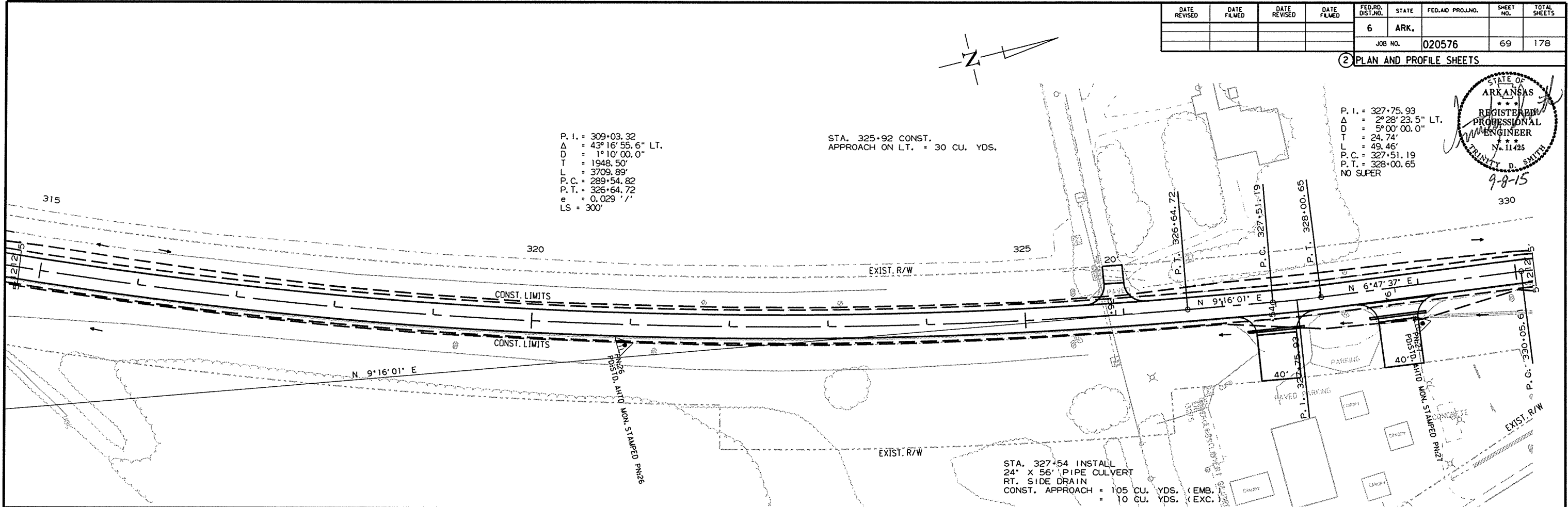
2 PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 11425
 TRINITY D. SMITH
 9-8-15
 330

P. I. = 309+03.32
 Δ = 43° 16' 55.6" LT.
 D = 1° 10' 00.0"
 T = 1948.50'
 L = 3709.89'
 P. C. = 289+54.82
 P. T. = 326+64.72
 e = 0.029' /'
 LS = 300'

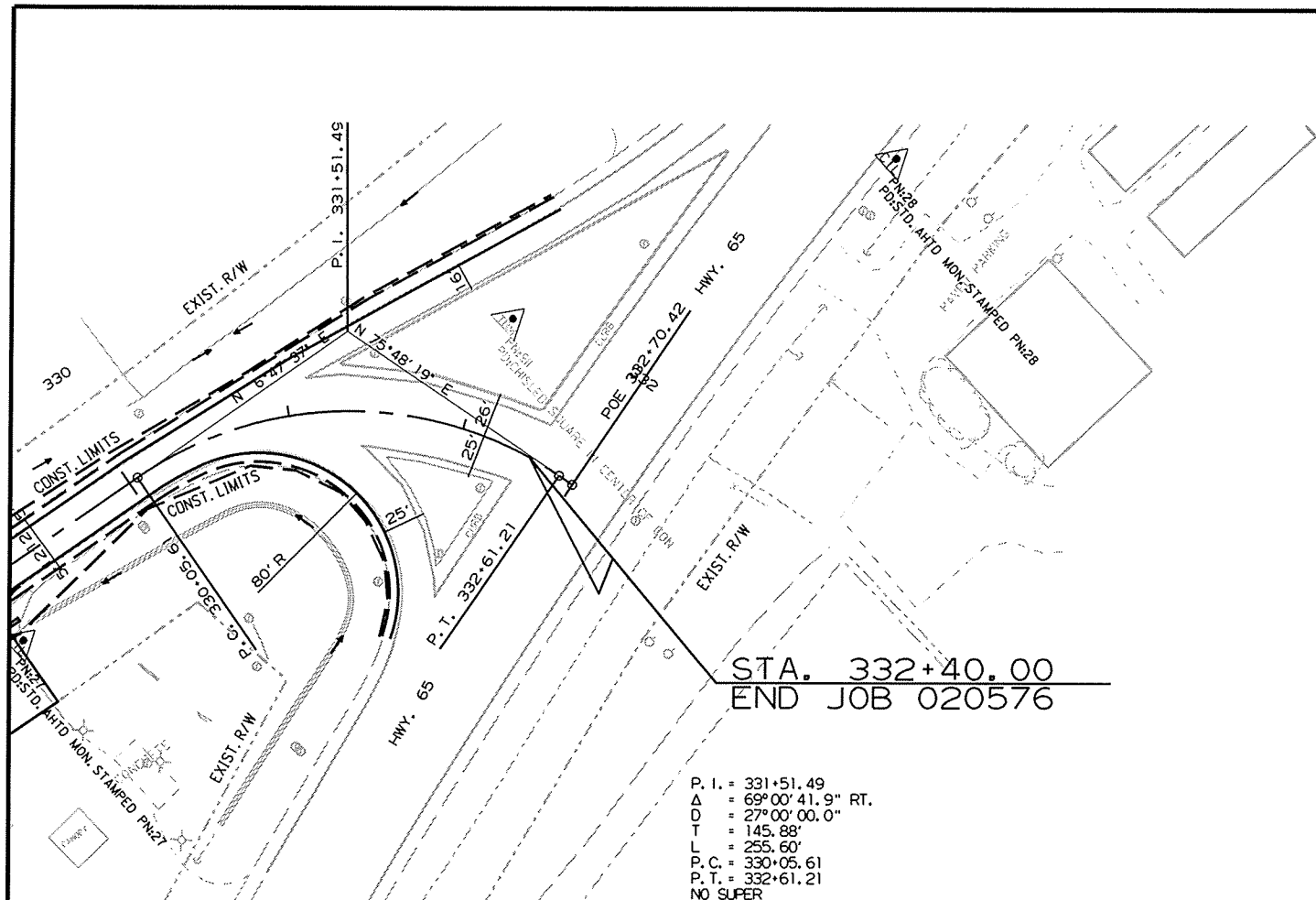
STA. 325+92 CONST.
 APPROACH ON LT. = 30 CU. YDS.

P. I. = 327+75.93
 Δ = 2° 28' 23.5" LT.
 D = 5° 00' 00.0"
 T = 24.74'
 L = 49.46'
 P. C. = 327+51.19
 P. T. = 328+00.65
 NO SUPER



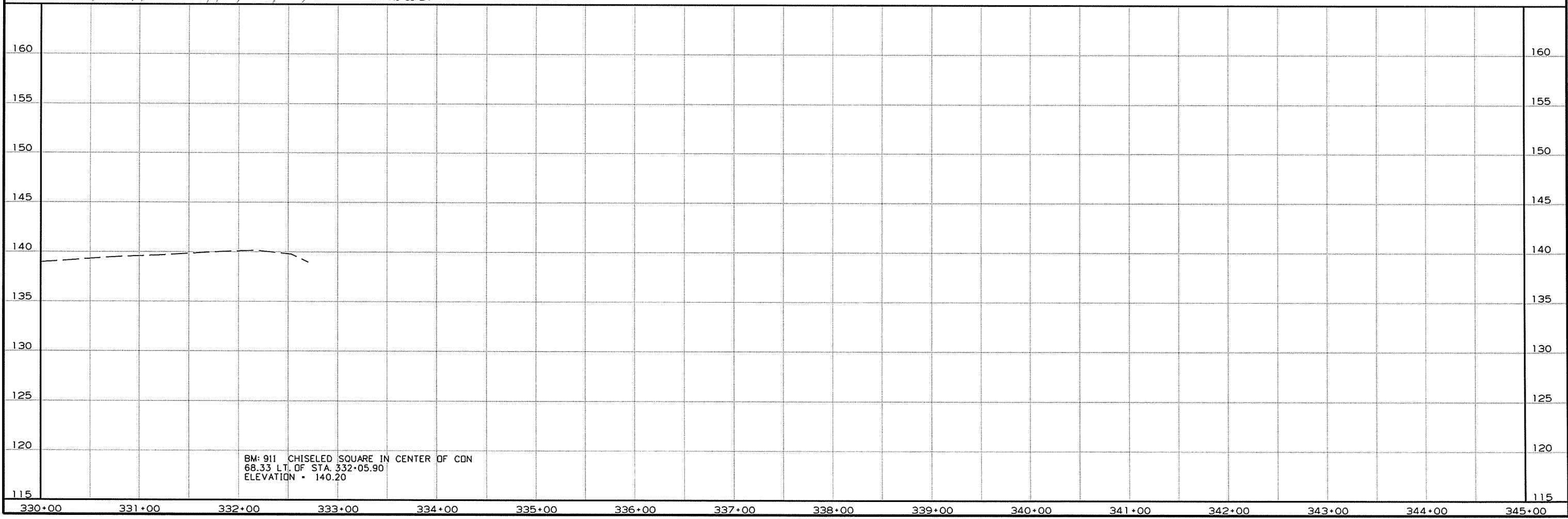
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							70	178

② PLAN AND PROFILE SHEETS



STA. 332+40.00
END JOB 020576

P. I. = 331+51.49
Δ = 69°00'41.9" RT.
D = 27°00'00.0"
T = 145.88'
L = 255.60'
P. C. = 330+05.61
P. T. = 332+61.21
NO SUPER



BM: 911 CHISELED SQUARE IN CENTER OF CDN
68.33 LT. OF STA. 332+05.90
ELEVATION = 140.20

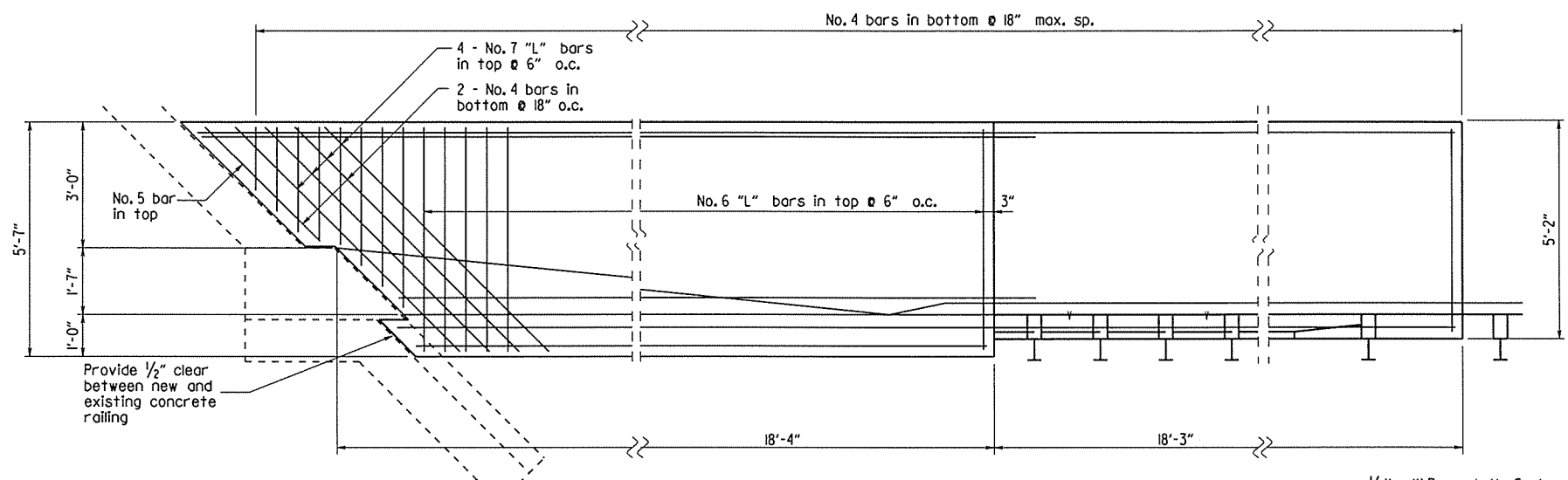
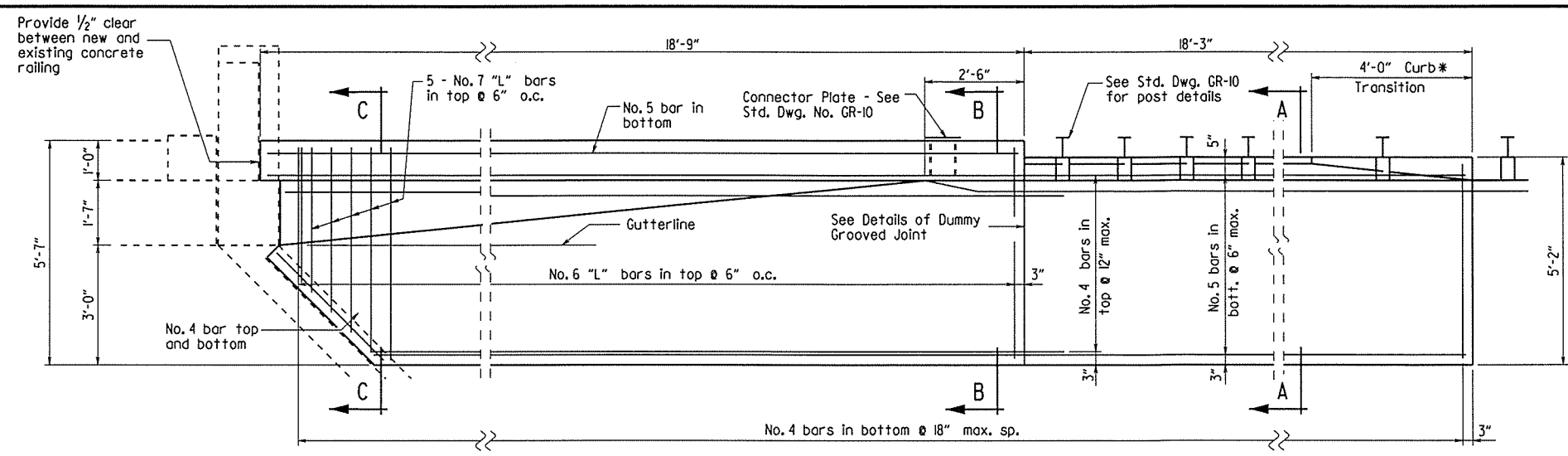
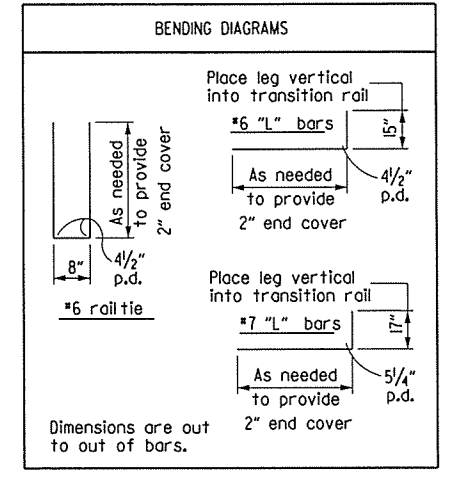
R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							71	178

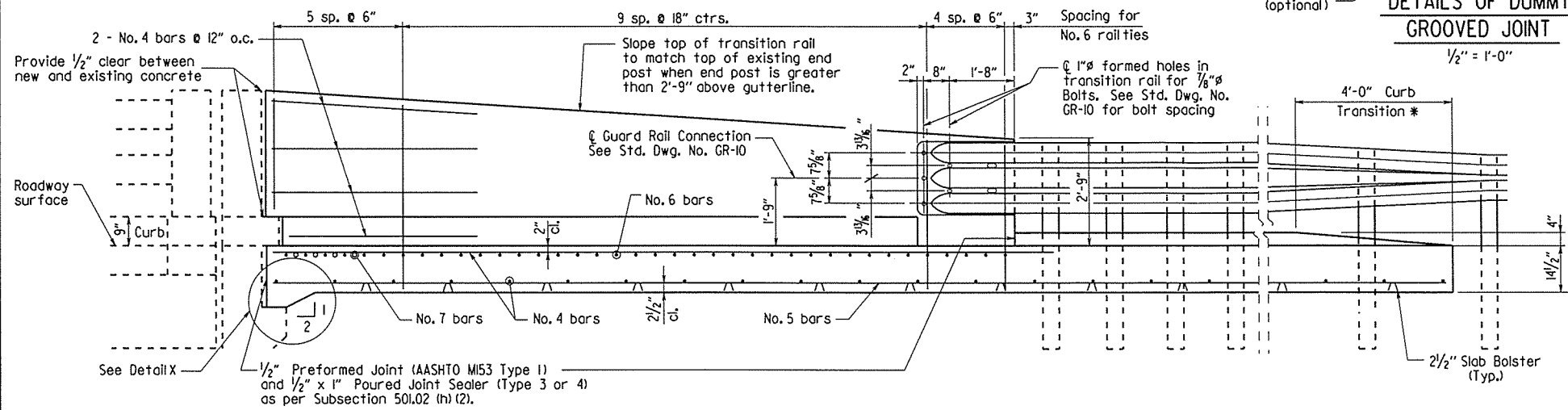
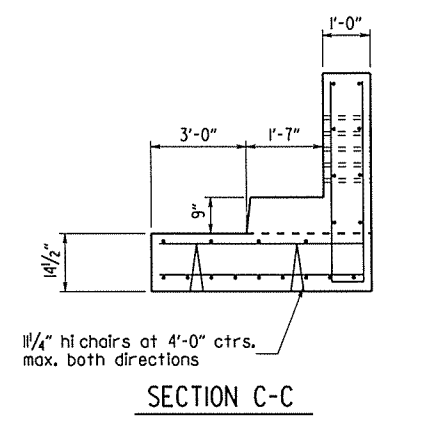
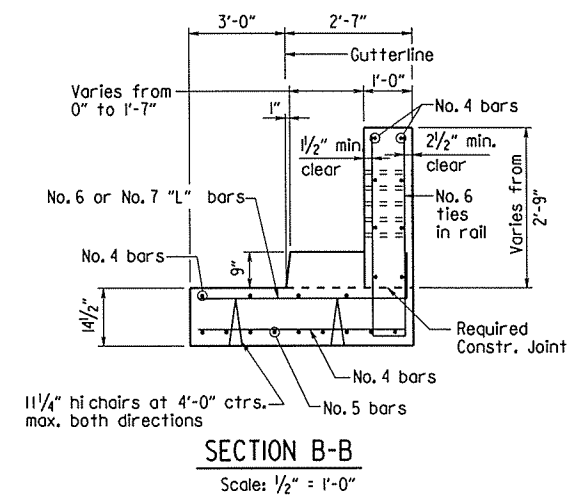
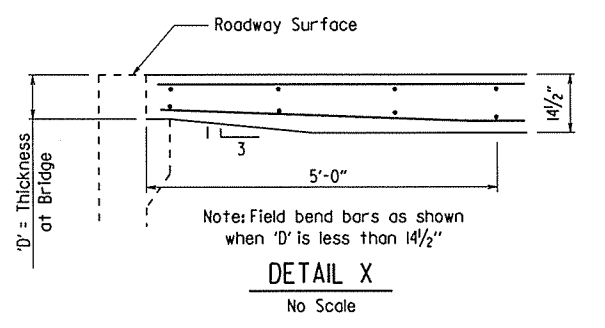
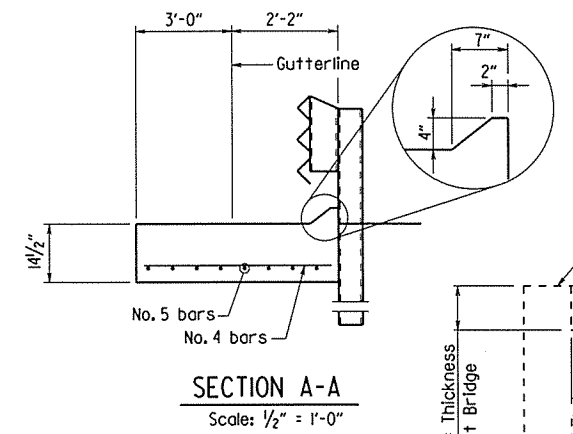
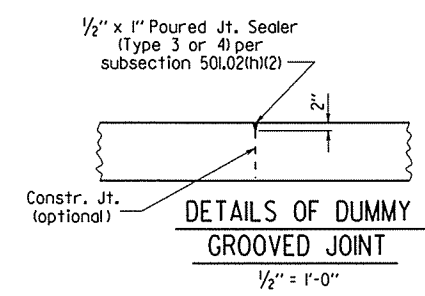
02067 - APPROACH GUTTER - 53021

*Construct curb with height-transition as shown if drop inlet is not used at end of gutter.

Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.



NOTE: Reinforcing Steel is similar as shown for opposite side.



APPROX. QUANTITIES (FOR ONE APPROACH GUTTER)

CONCRETE	REINFORCING STEEL
CU. YD.	LB.
11.65	1,080

GENERAL NOTES

Concrete shall be Class S or S(AE) or mixture used for Portland Cement Concrete Pavement.

All reinforcing steel be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M32, Type A with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. BULLIS
12-10-14
BRIDGE ENGINEER

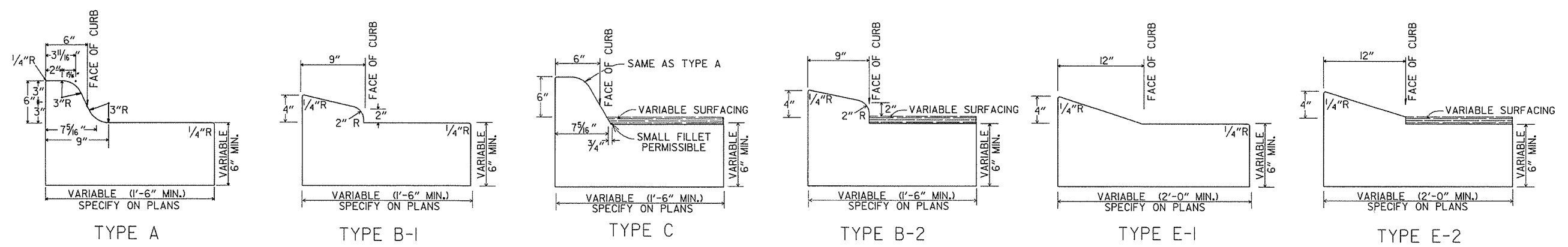
TYPE SPECIAL APPROACH GUTTERS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

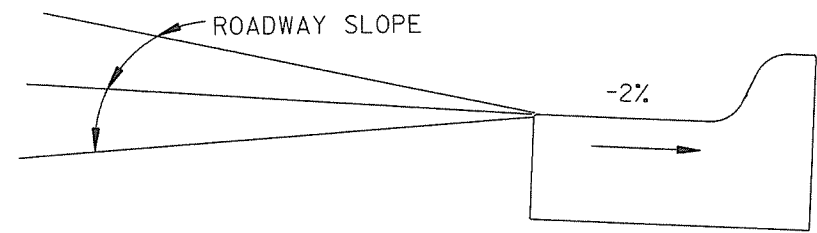
DRAWN BY: TMG DATE: 1/29/2014 FILENAME: b020576_ag.dgn
CHECKED BY: JCT DATE: 2/13/2014 SCALE: AS NOTED
DESIGNED BY: STD DATE: -

BRIDGE NO. 02067 DRAWING NO. 53021

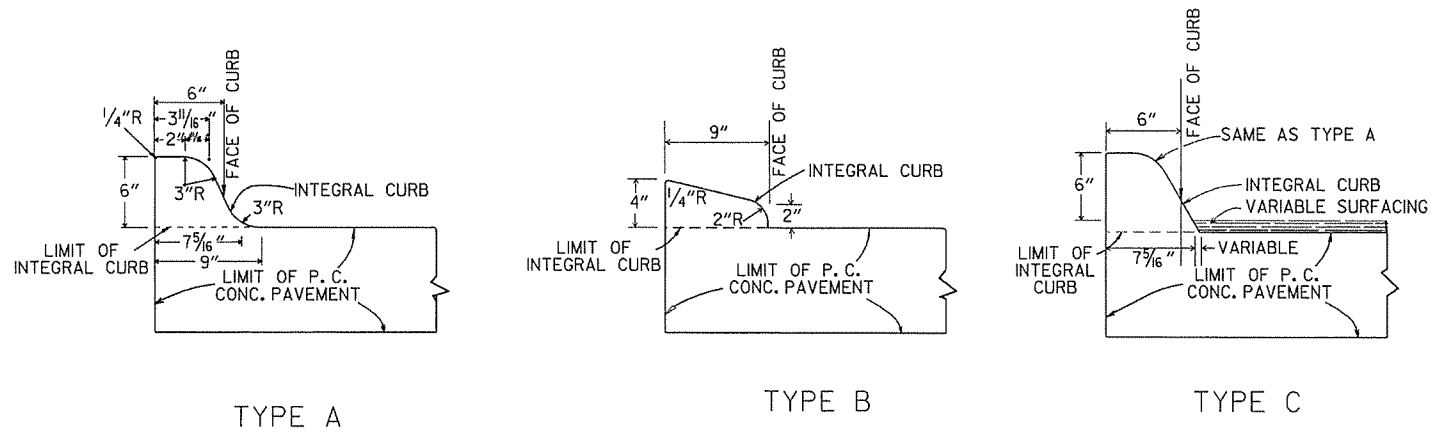
PRINT DATE: 10-DEC-2014



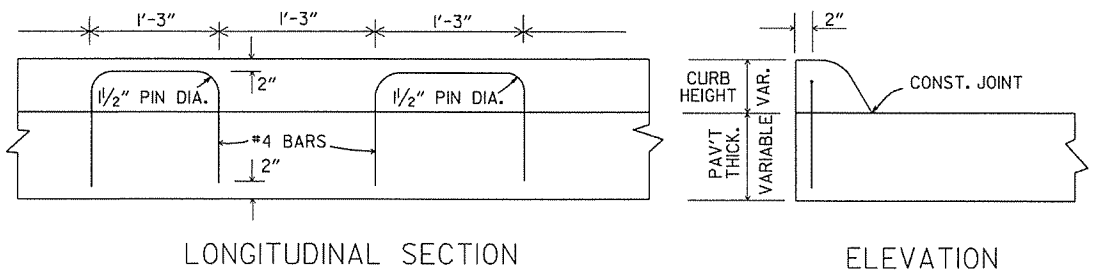
CONCRETE COMBINATION CURB AND GUTTER



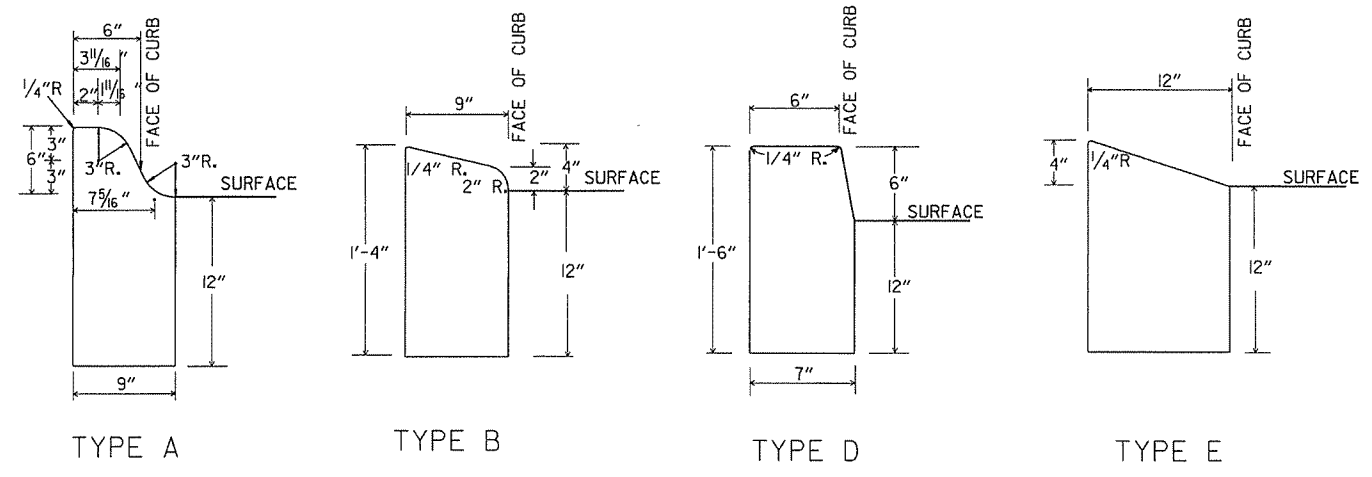
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



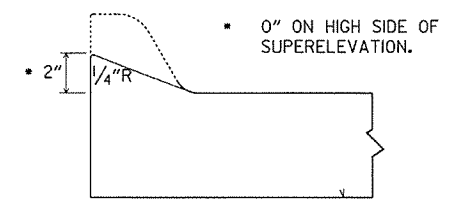
INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

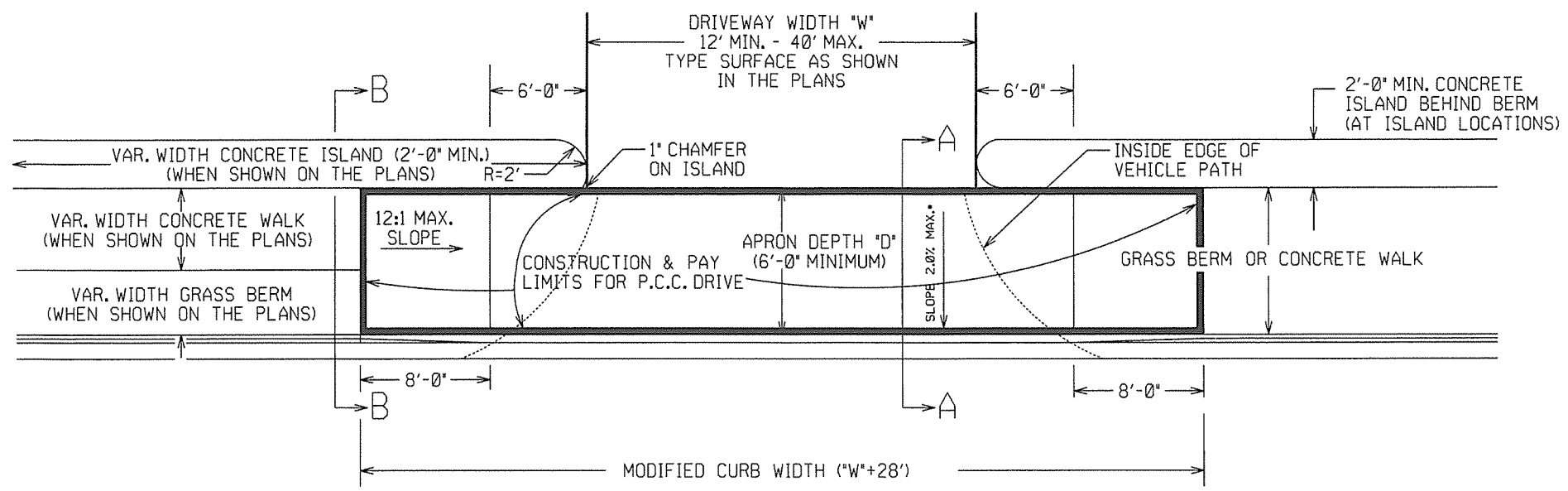
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIABLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

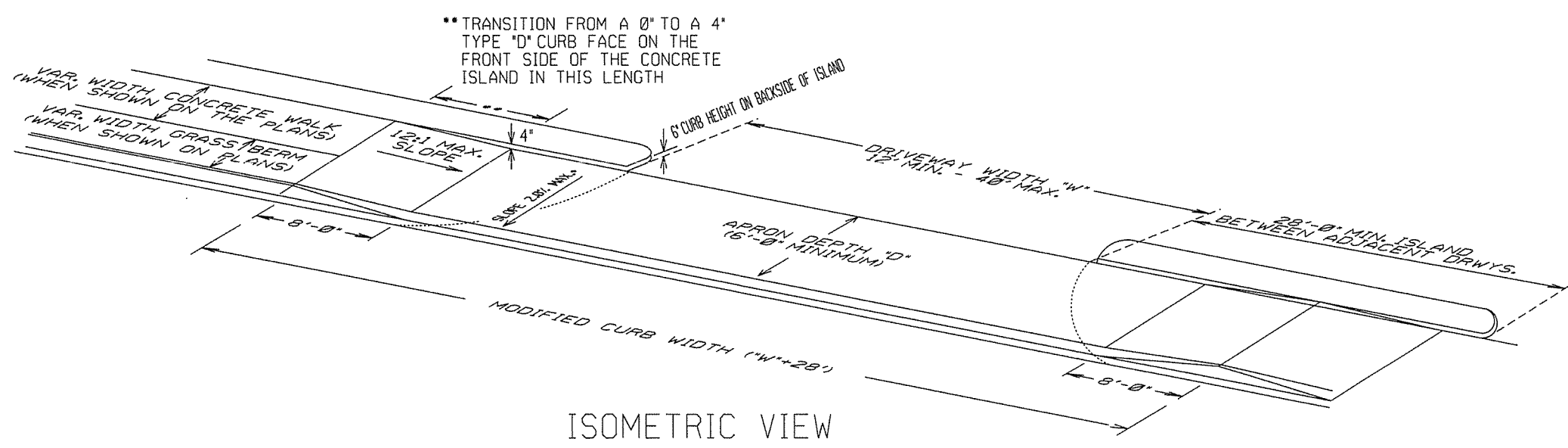
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

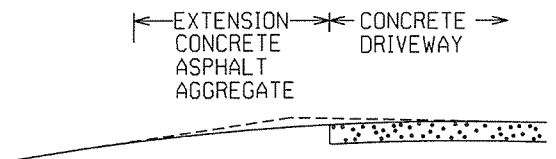
STANDARD DRAWING CG-1



PLAN VIEW



ISOMETRIC VIEW

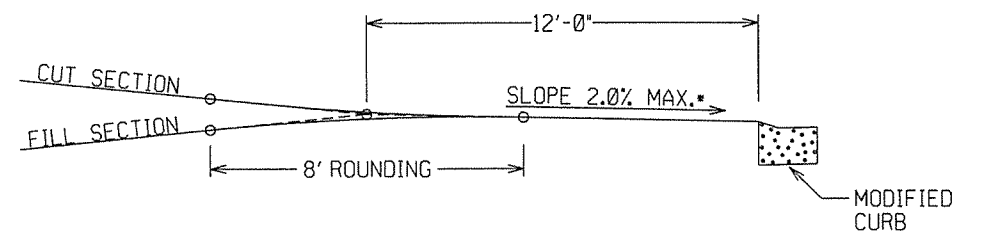


EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

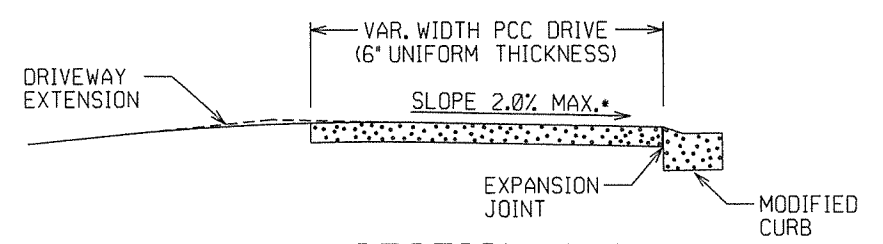
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

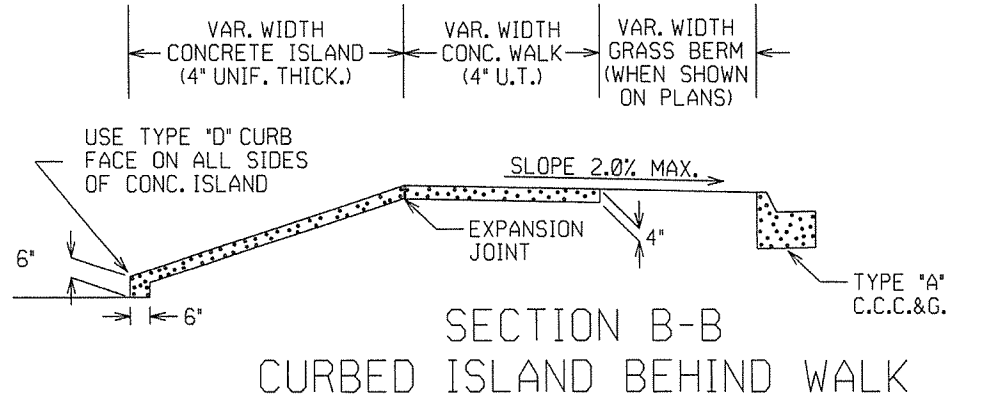


DRIVEWAY VERTICAL ALIGNMENT DETAILS

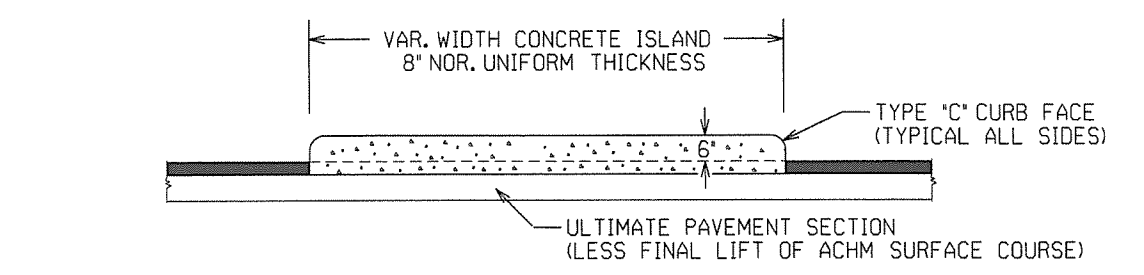
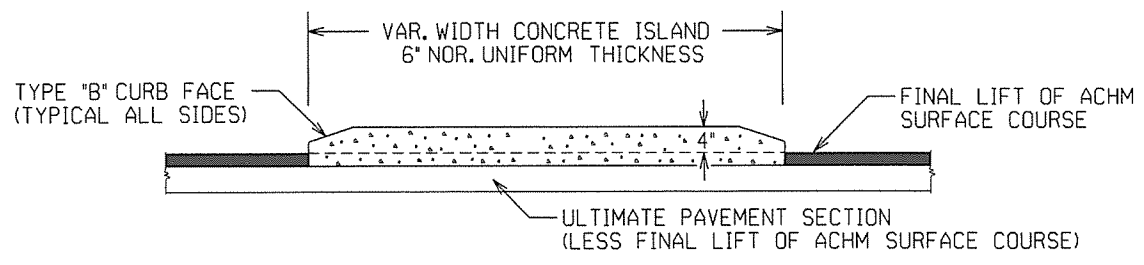
NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A



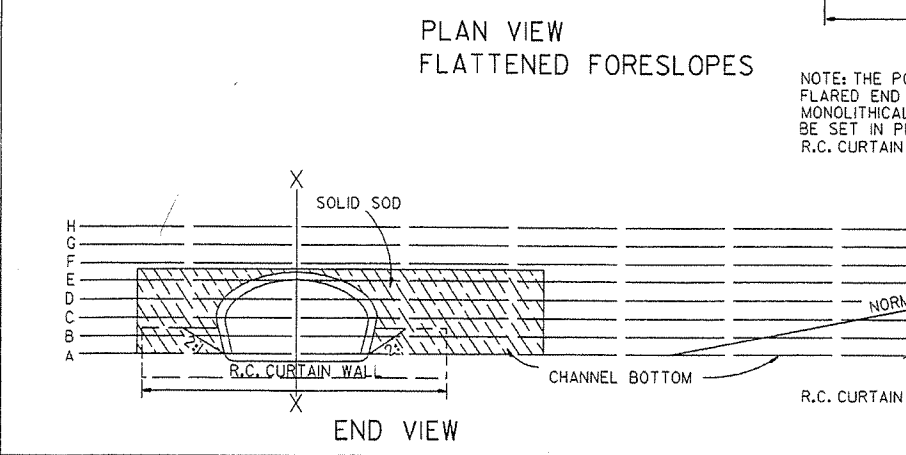
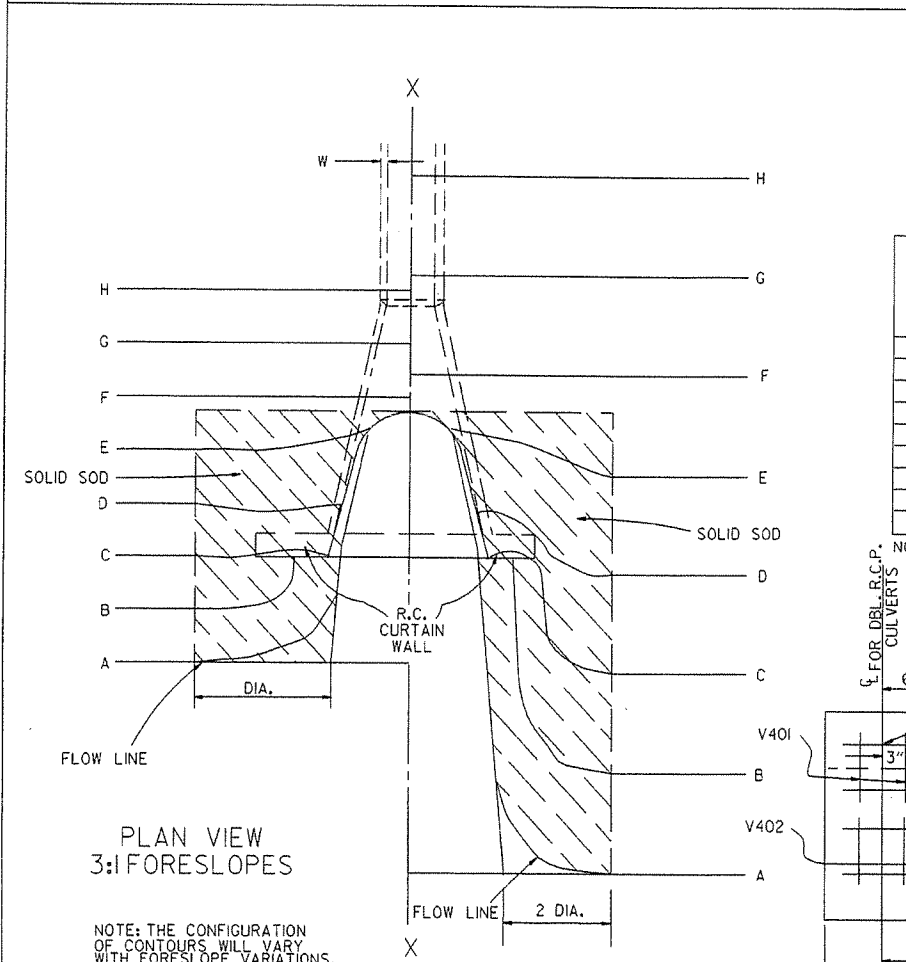
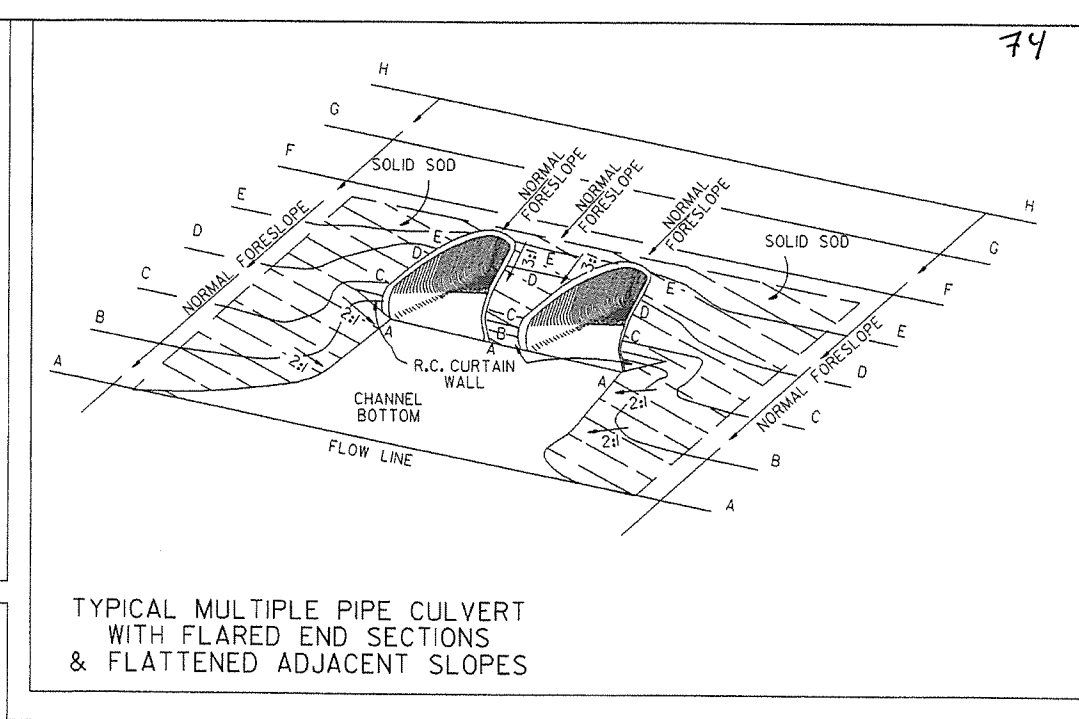
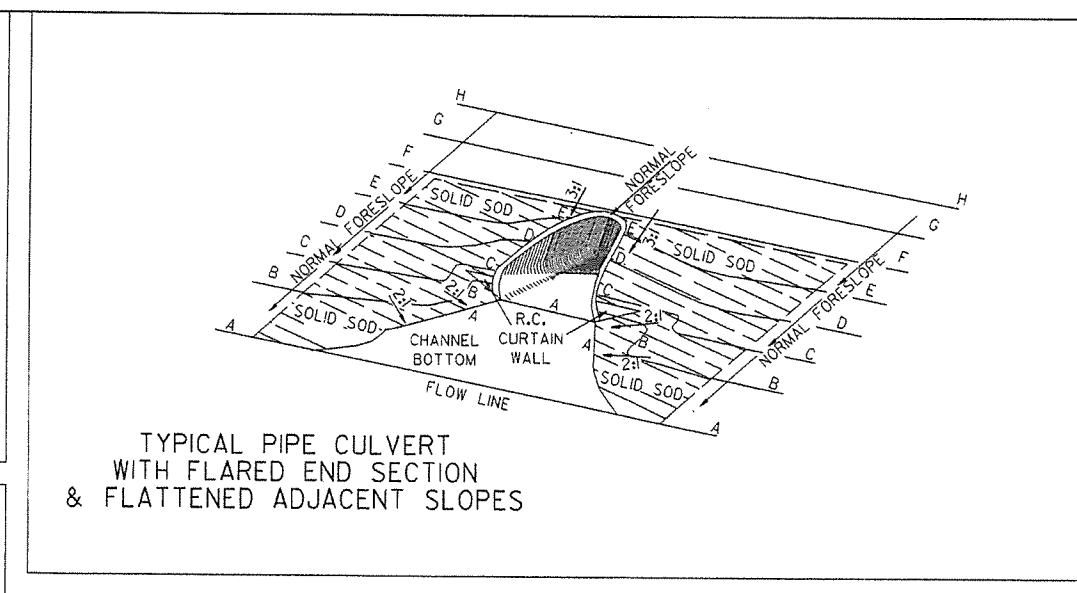
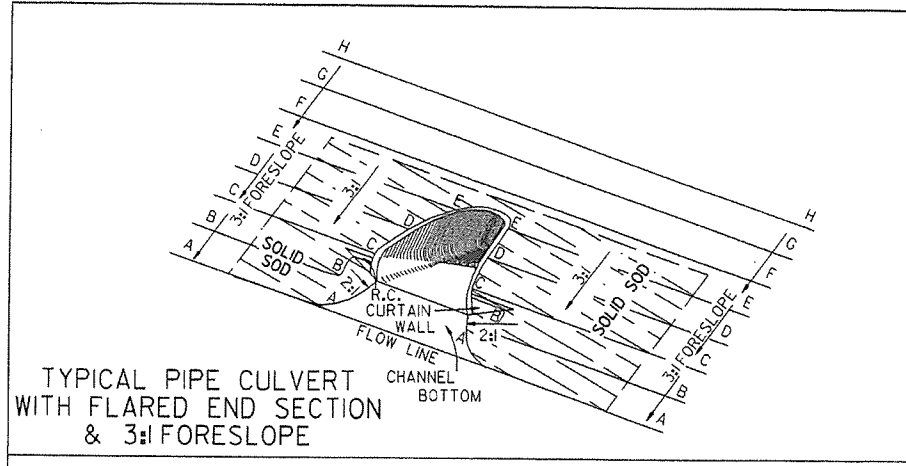
SECTION B-B
CURBED ISLAND BEHIND WALK



CURBED ISLANDS FOR CHANNELIZATION

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".

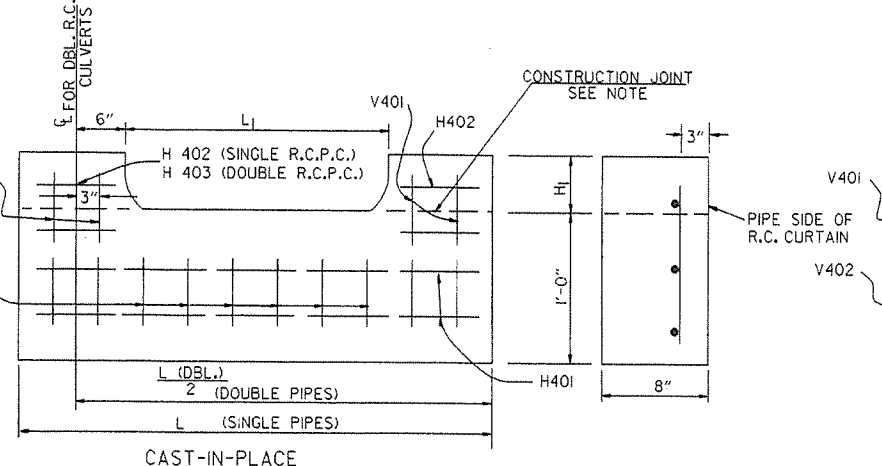
DATE	REVISED	DESCRIPTION
2-27-14		REVISED PLAN & ISOMETRIC VIEW
11-29-07		ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02		ADDED ISLAND DETAILS & NOTES
3-30-00		REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98		REVISED NOTES
11-18-98		REDRAWN AND REISSUED
DATE	REVISED	DESCRIPTION



R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

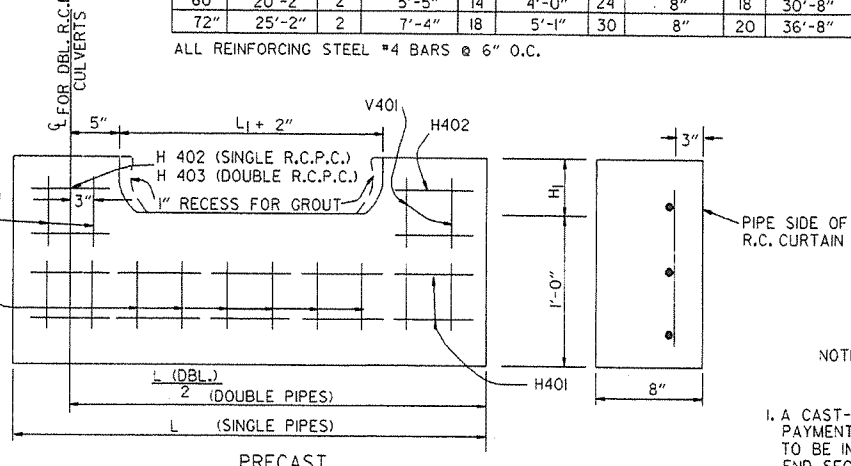
PIPE DIA.	H ₁	L ₁	L	L (DBL.) 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9 1/2"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.

R.C. CURTAIN WALL DETAILS



NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		V401		V402			
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.		
18"	7'-8"	2	1'-11 1/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11 1/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	14	8"	22
30"	10'-8"	2	2'-4 1/2"	4	1'-11 1/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11 1/2"	14	8"	28
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.			DOUBLE R.C.P.C.		
	3:1	4:1	6:1	3:1	4:1	6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

- GENERAL NOTES
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
 2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
 3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
 4. WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.

10-18-96	ADDED NOTE TO SOLID SODDING		10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
10-12-95	CORRECTED SPELLING			
11-3-94	ADDED GENERAL NOTE NO. 4			
8-15-91	REV. CURTAIN WALL QUANT., STEEL SCH. & SOLID SOD QUANT.			
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES			
5-15-80	ADDED PRECAST WALL & GENERAL NOTES			
10-2-72	REVISED AND REDRAWN			
DATE	REVISION		FILMED	STANDARD DRAWING FES-1

FLARED END SECTION

10-18-96

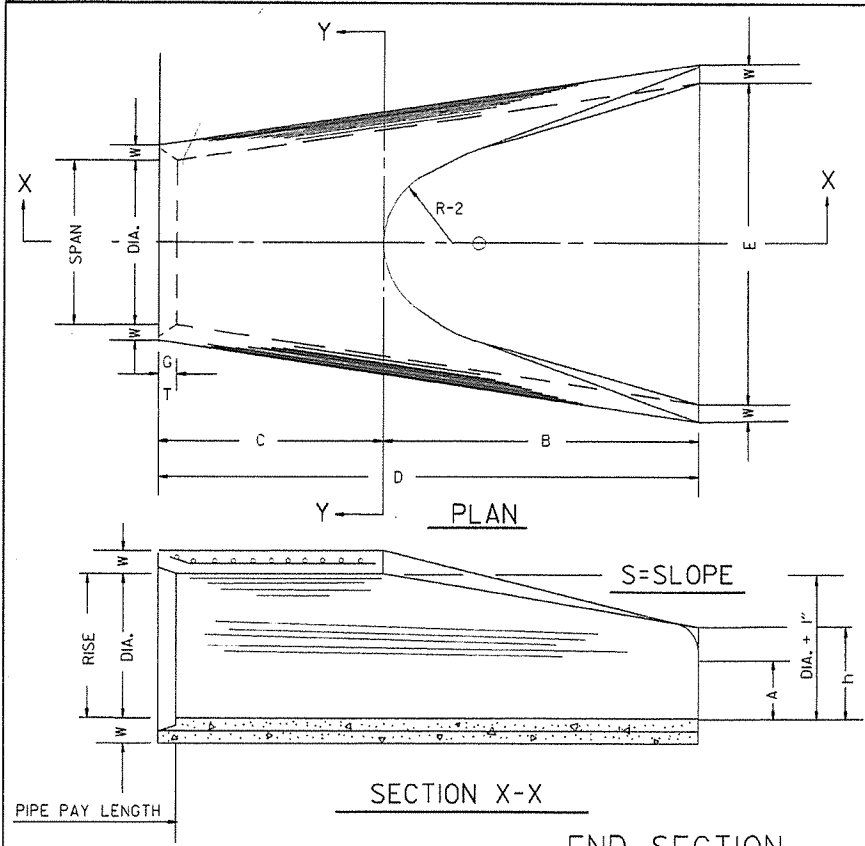


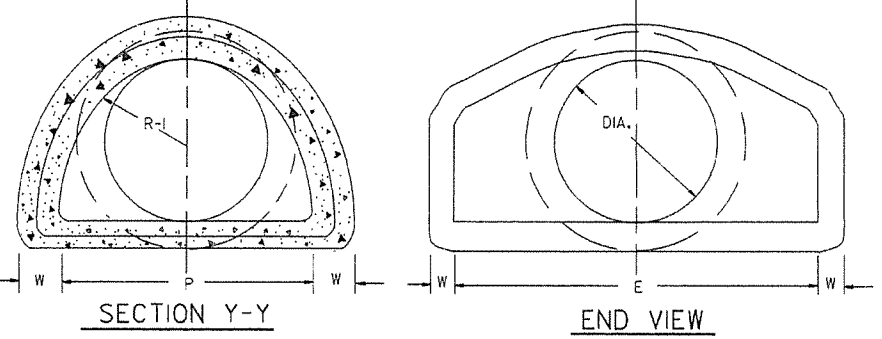
TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. - 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/2"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 1/8"	24 5/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 3/8"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65 1/2"	33 1/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 1/8"	24"	5"	13250	4'-6"

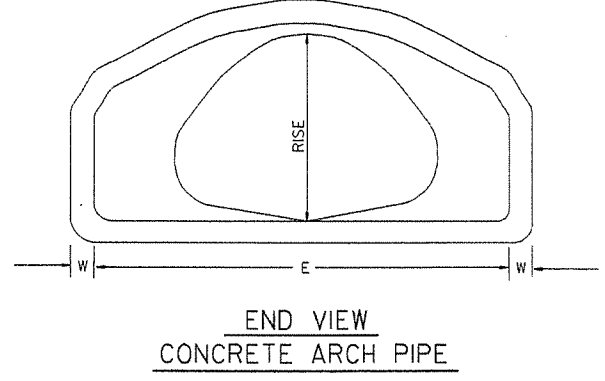
ARCH PIPE

EQUIV. DIA.	SPAN		RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2:1
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/8"	13"	2 1/2"	2 1/2:1
21	26	26	15 1/2	16	2 3/4"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34 1/8"	14"	2 1/2"	2 1/2:1
24	28 1/2	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 1/8"	15"	2 1/2"	2 1/2:1
30	36 1/4	36	22 1/2	23	3 1/2"	10"	3'-1"	3'-0 1/2"	6'-1 1/2"	6'-0"	47 1/8"	20"	3"	2 1/2:1
36	43 3/4	44	26 3/4	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 1/8"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 1/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2:1
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 5/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/2:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 9/16"	24"	5"	2 1/2:1

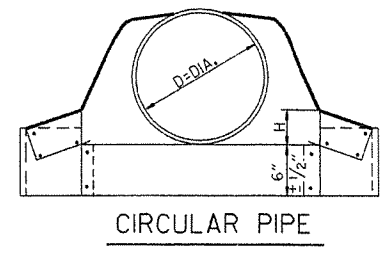
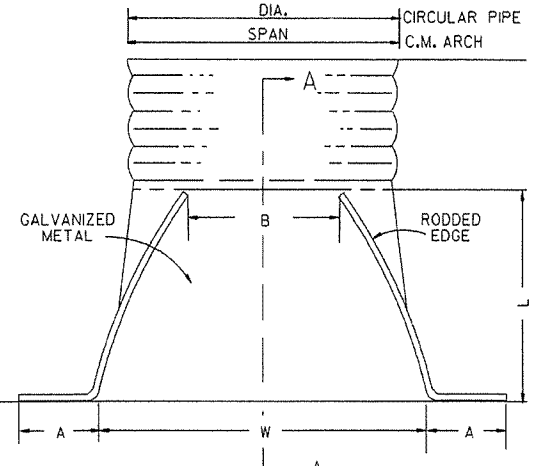
* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



NOTE: TONGUE END ON UPSTREAM SECTION GROOVE END ON DOWNSTREAM SECTION

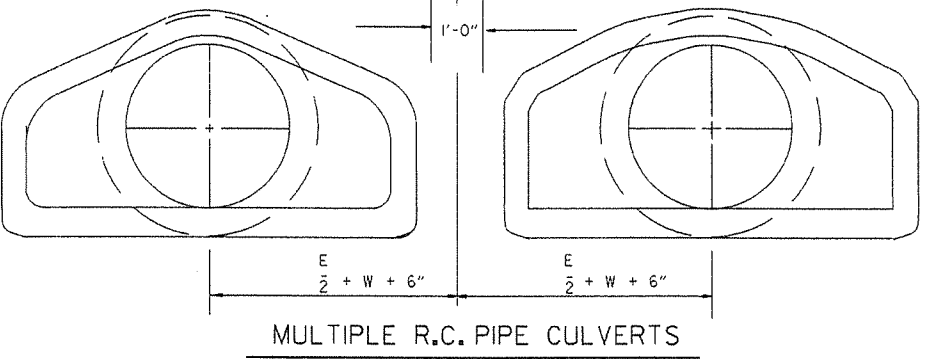


END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

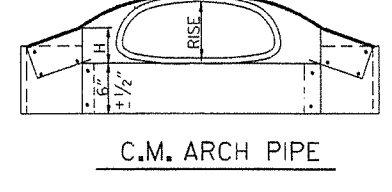
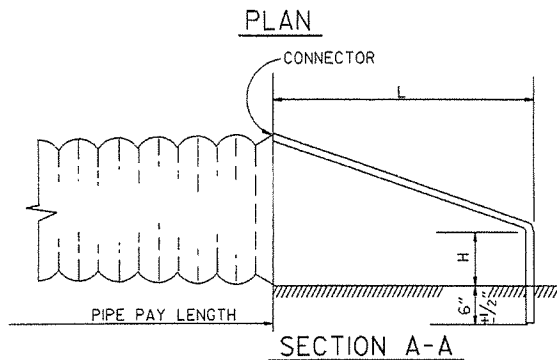


CIRCULAR PIPE

D. DIA.	GAUGE	A 1" ±	B MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	12	78	90	2 1/2:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1 1/2:1
66	12	18	36	12	87	120	1 1/2:1
72	12	18	39	12	87	126	1 1/3:1

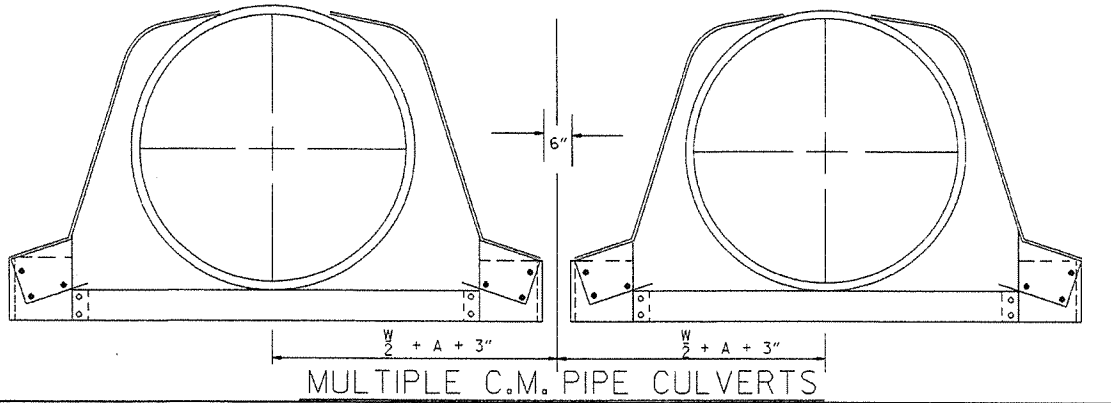


MULTIPLE R.C. PIPE CULVERTS



C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	18	25	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/2:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12

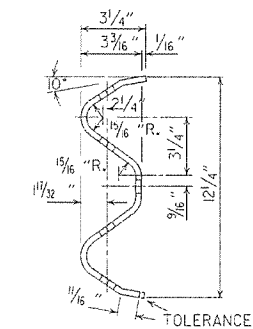
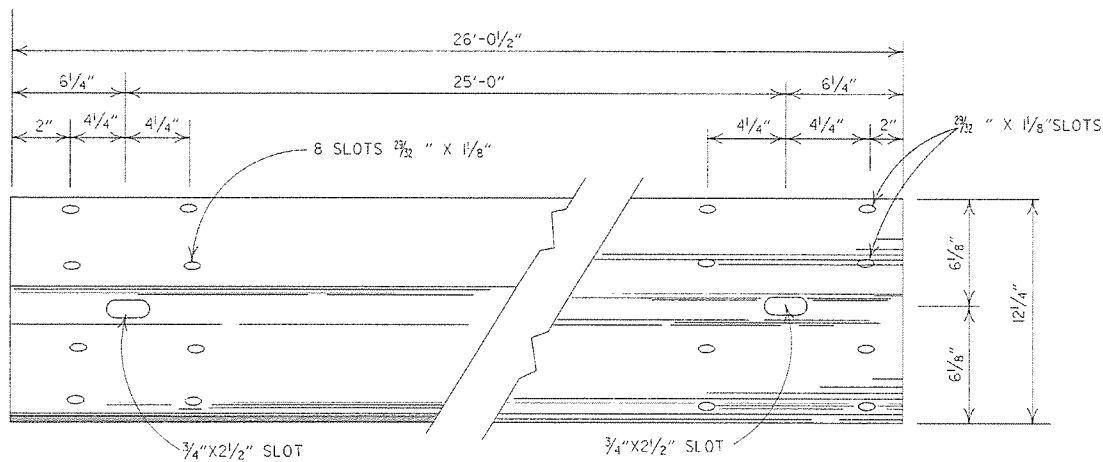


MULTIPLE C.M. PIPE CULVERTS

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

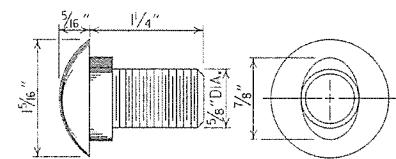
END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	FLARED END SECTION
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74	
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73	
10-2-72	REVISED AND REDRAWN	760-10-2-72	STANDARD DRAWING FES-2
DATE	REVISION	FILMED	

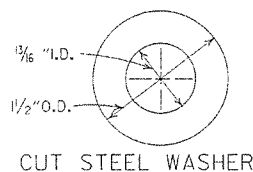


DETAILS OF W-BEAM GUARD RAIL

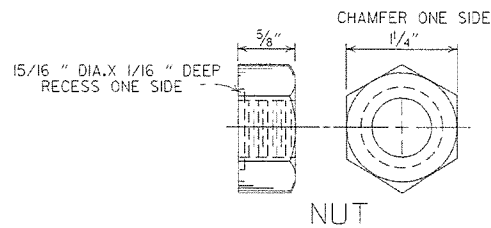
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



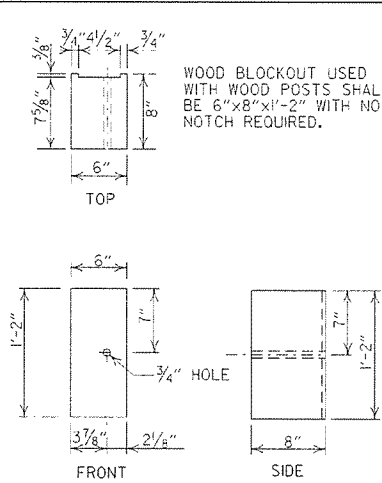
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER

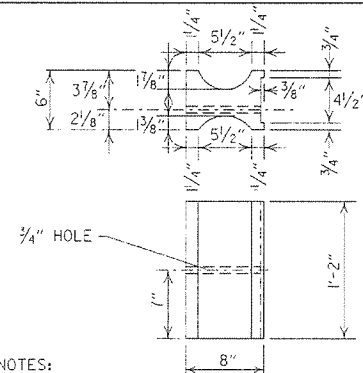


NUT



WOOD BLOCKOUT (W-BEAM)

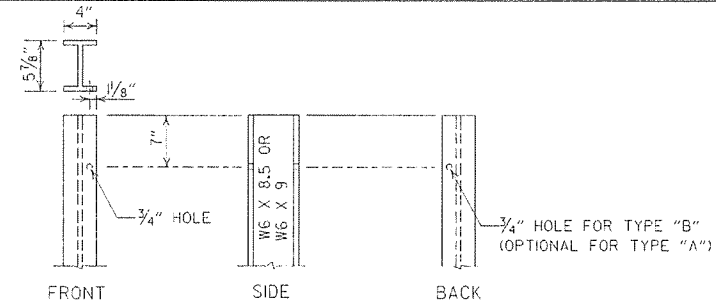
WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6" X 8" X 1'-2" WITH NO NOTCH REQUIRED.



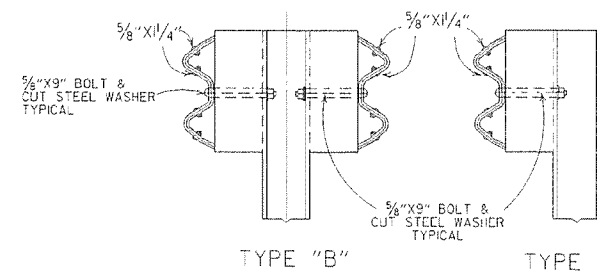
NOTES:

1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT (W-BEAM)

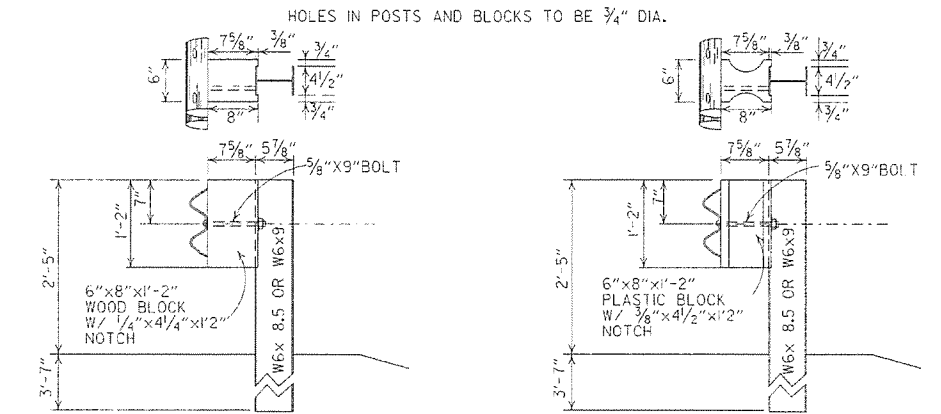


STEEL POST



TYPE "B" TYPE "A"

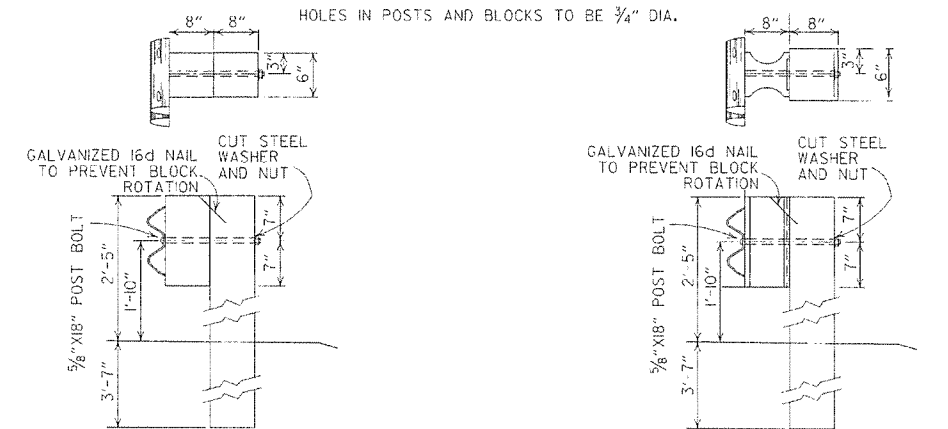
DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



WOOD BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

PLASTIC BLOCKOUT CONNECTIONS



WOOD BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

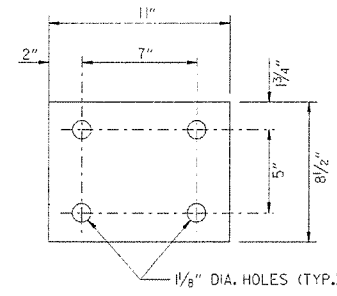
- ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
- WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.
- W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.
- USE W-BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARD RAIL, W-BEAM GUARD RAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.
- ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.
- WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 F (1400 F) OR NO. 1 350 F SOUTHERN PINE.
- CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

DATE	REVISION	DATE FILM
7-4-10	RAISED HEIGHT OF GUARD RAIL 1"	
0-15-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
1-12-00	ADDED PLASTIC BLOCKOUT	
8-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARD RAIL REPLACE BEHIND CURB & DET. OF POST PLACE IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
4-3-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
6-2-94	ADDED 4" STEEL POST SIZE	
8-5-93	REVISED STEEL POST SIZE	8-5-93
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED WASHER NOTE	8-15-91
8-2-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
7-15-88	REVISED SECTION 3 & GENERAL NOTES	
3-4-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
0-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
0-9-87	REDRAWN & REVISED	802-10-9-87
	REVISION	

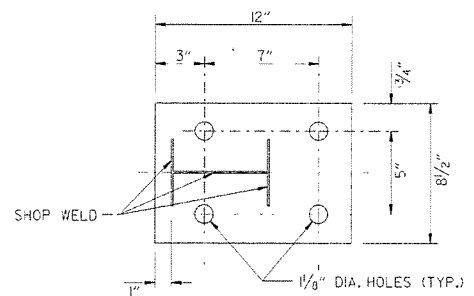
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8

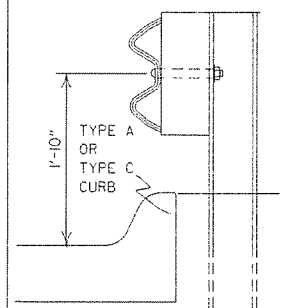


WASHER PLATE

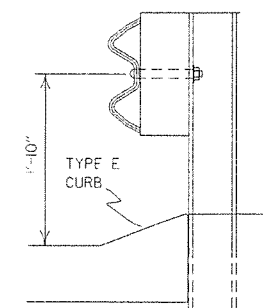


BASE PLATE

Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.



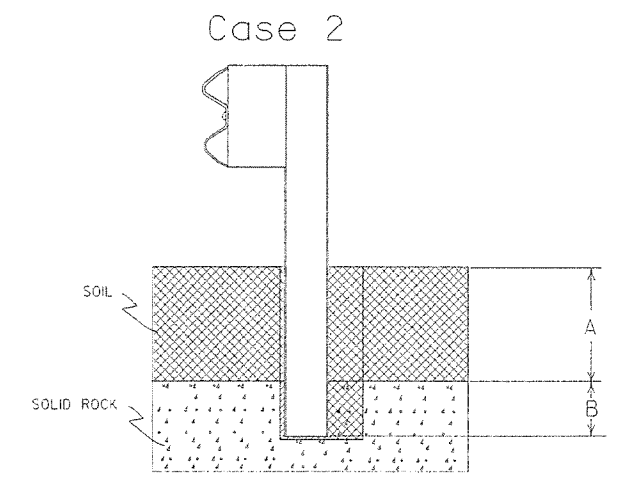
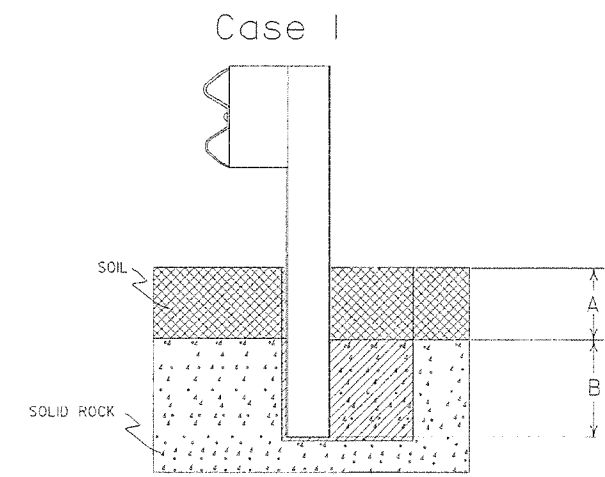
FOR DESIGN SPEEDS OF 50 MPH OR LESS
ALIGN FACE OF GUARD RAIL WITH FACE OF CURB.



FOR DESIGN SPEEDS OF 55 MPH OR MORE
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

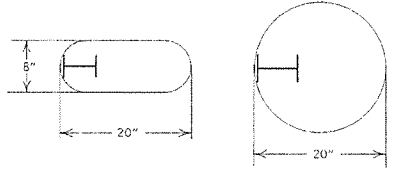
DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



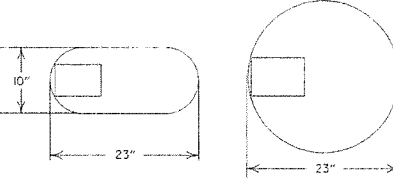
Plan View Steel Posts

Either hole configuration acceptable



Plan View Wood Posts

Either hole configuration acceptable



Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

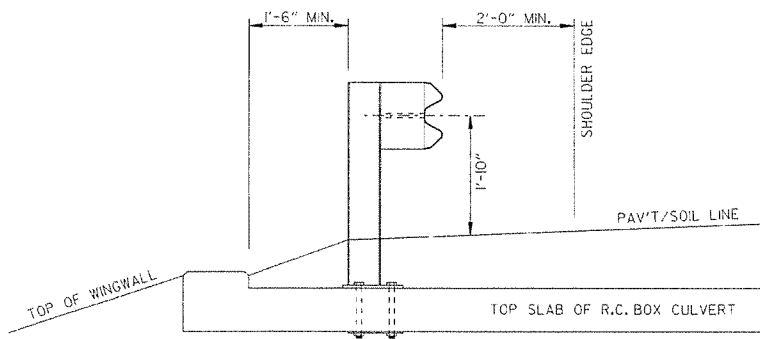
Zone A: Backfill according to Section 617.03(a).

Zone B: Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.

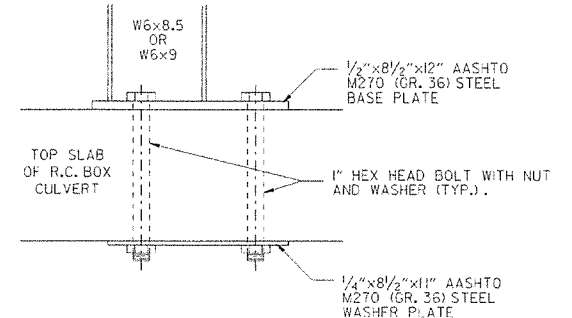
Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.

Zone A & B: Backfill according to Section 617.03(a).

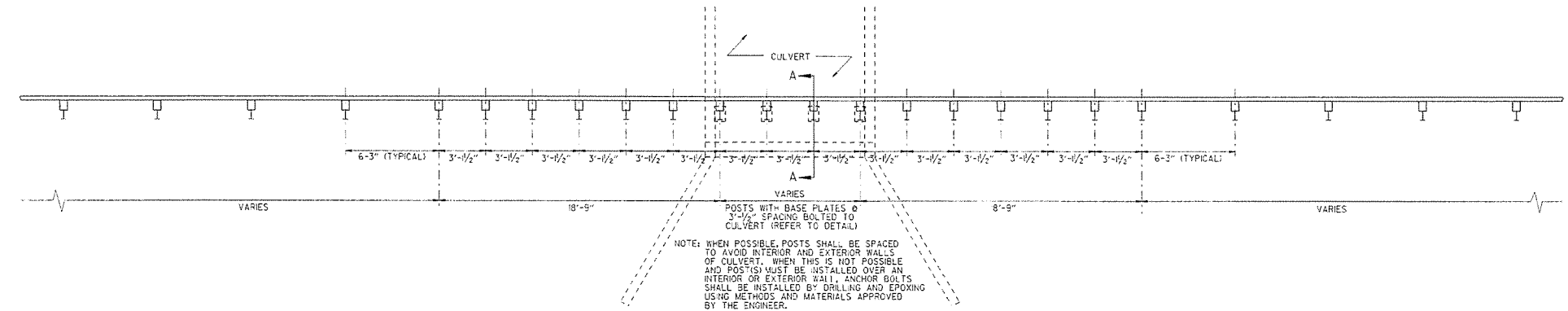
DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)



SECTION A-A



DETAIL OF CONNECTION



PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DRWG. GR-8.

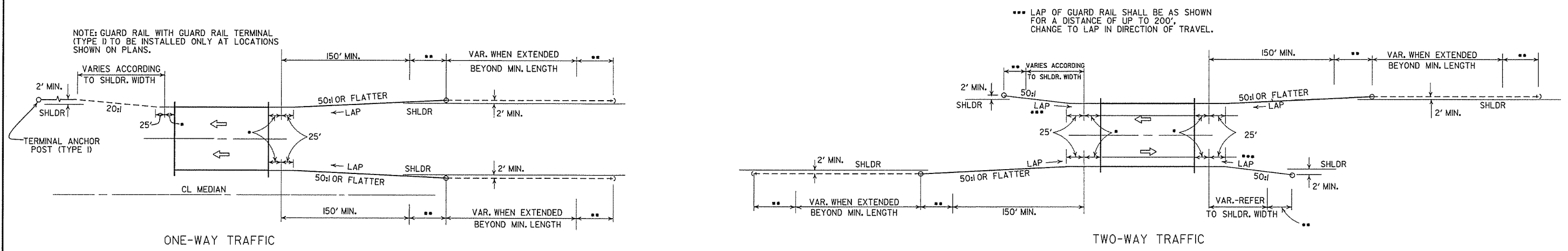
NOTE: WHEN POSSIBLE, POSTS SHALL BE SPACED TO AVOID INTERIOR AND EXTERIOR WALLS OF CULVERT. WHEN THIS IS NOT POSSIBLE AND POSTS MUST BE INSTALLED OVER AN INTERIOR OR EXTERIOR WALL, ANCHOR BOLTS SHALL BE INSTALLED BY DRILLING AND EPOXYING USING METHODS AND MATERIALS APPROVED BY THE ENGINEER.

7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
4-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS	
3-30-00	REMOVED CONCRETE INSERT ANCHOR	
6-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT; ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULV. DELETED DET. OF STEEL LINE POST CONN. & ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK	
4-3-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
11-2-94	REVISED ALTERNATE POST SIZE	
8-5-93	REVISED STEEL POST SIZE	
10-1-92	REDRAWN & REVISED	10-1-92
8-2-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
7-15-88	CONFORMED TO 1988 SPECS	
3-4-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-9-87	REDRAWN & REVISED	803-10-9-87
DATE	REVISION	DATE FILM

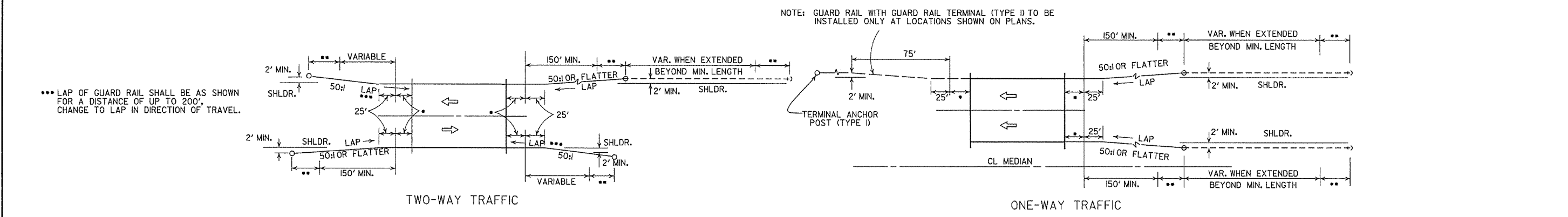
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

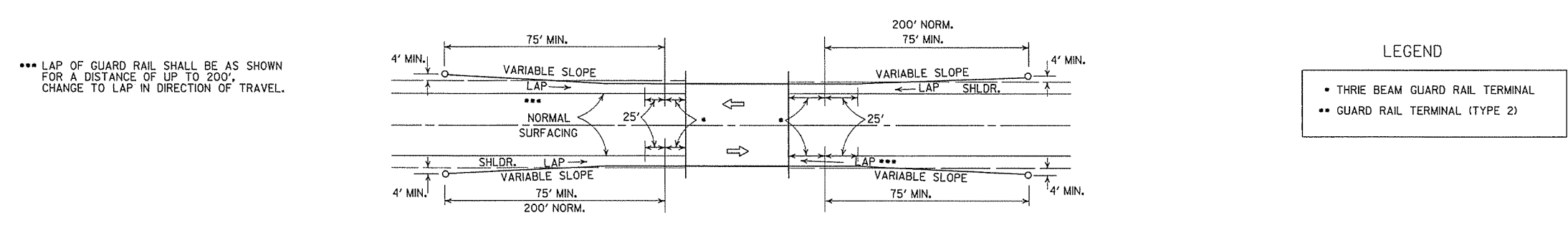
STANDARD DRAWING GR-8A



METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

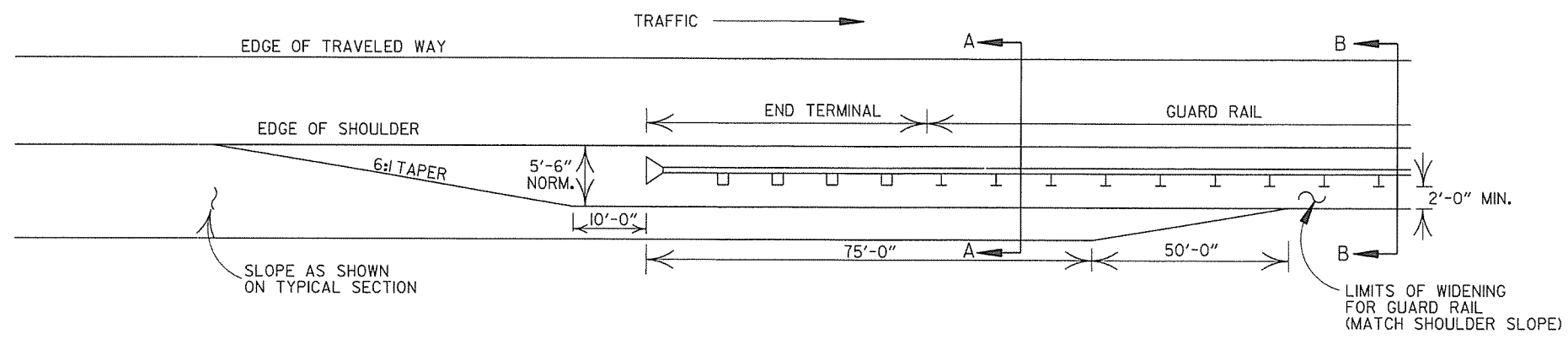


METHOD OF INSTALLATION OF GUARD RAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

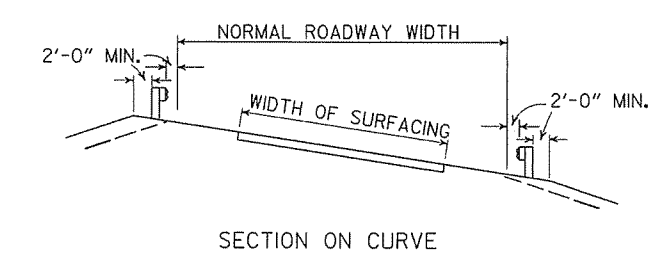
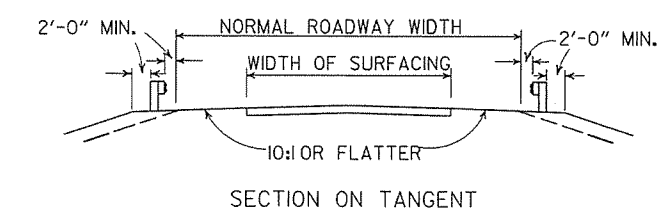
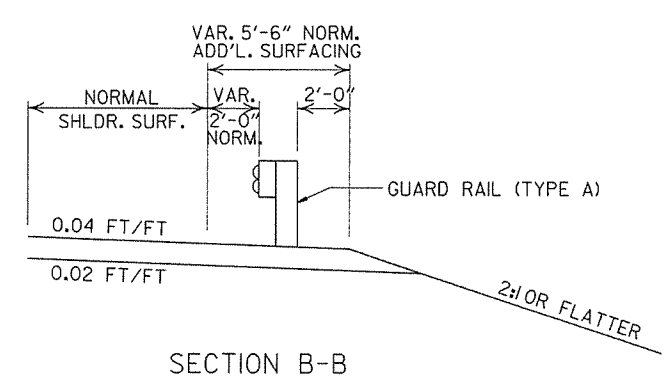
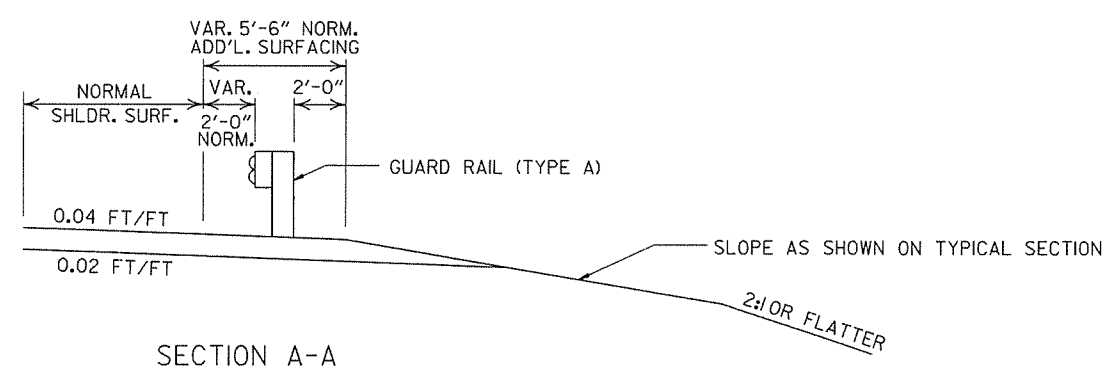


METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	
DATE	REVISION	DATE FILM
STANDARD DRAWING GR-9		

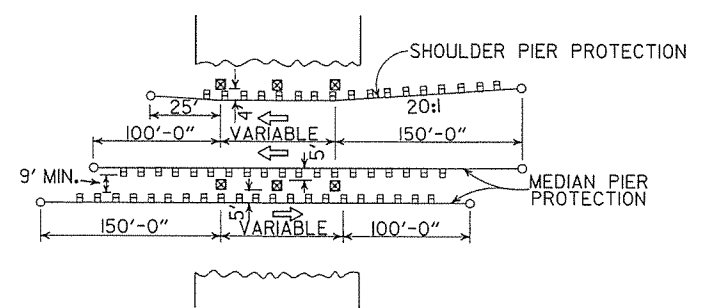


NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.



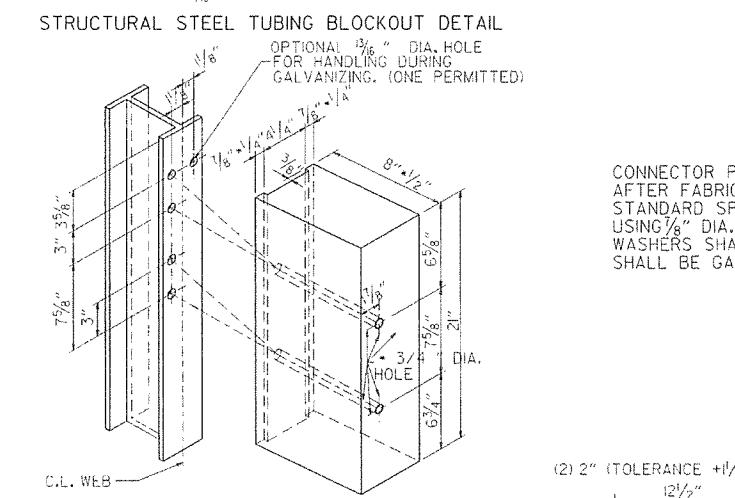
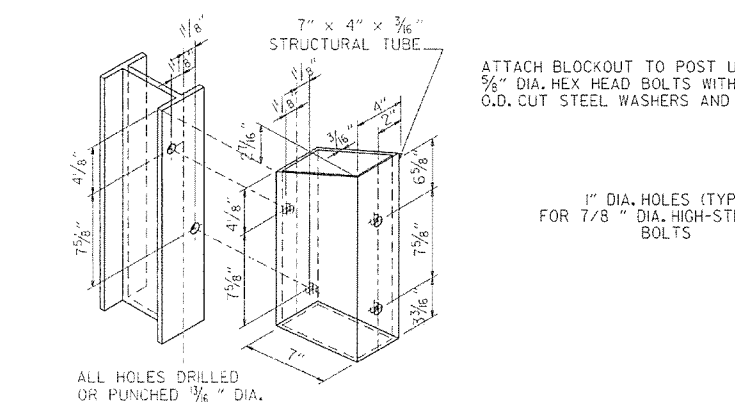
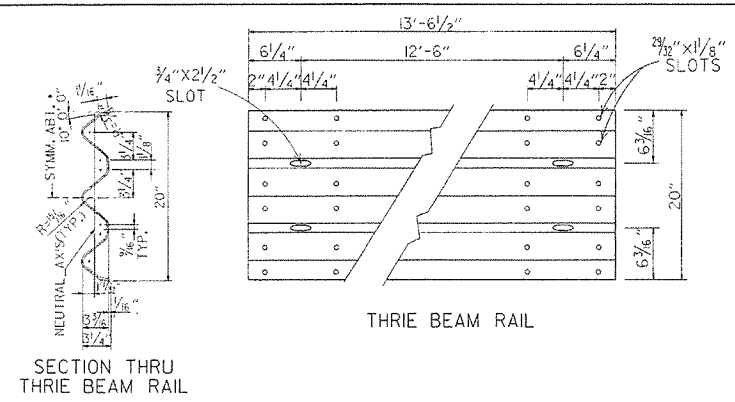
DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

DETAILS OF WIDENING FOR GUARD RAIL

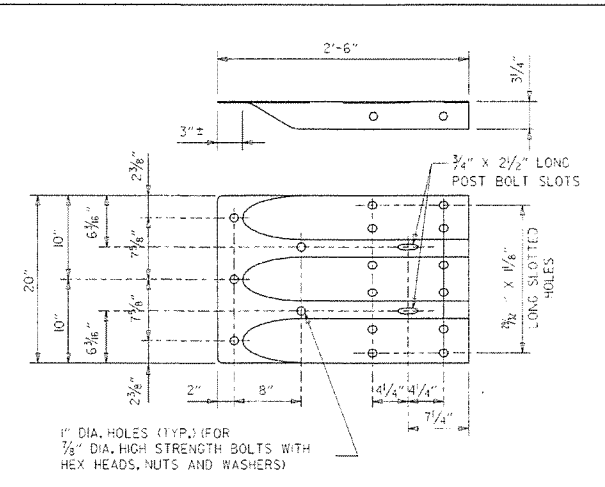


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

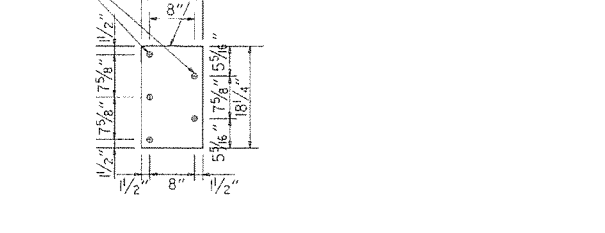
ARKANSAS STATE HIGHWAY COMMISSION			
GUARD RAIL DETAILS			
STANDARD DRAWING GR-9A			
4-17-08	MINOR REVISION		
11-10-05	DRAWN		
DATE	REVISION	DATE	FILM



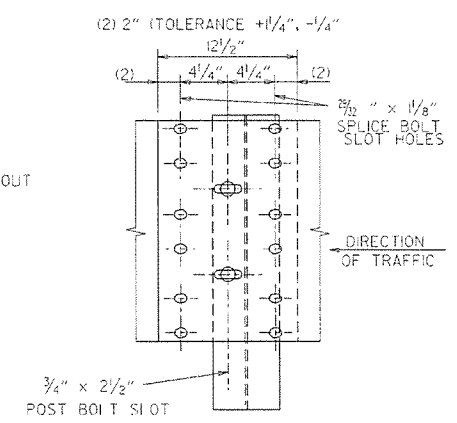
ALL HOLES 1/8" DIAMETER EXCEPT AS NOTED
 HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS
 NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



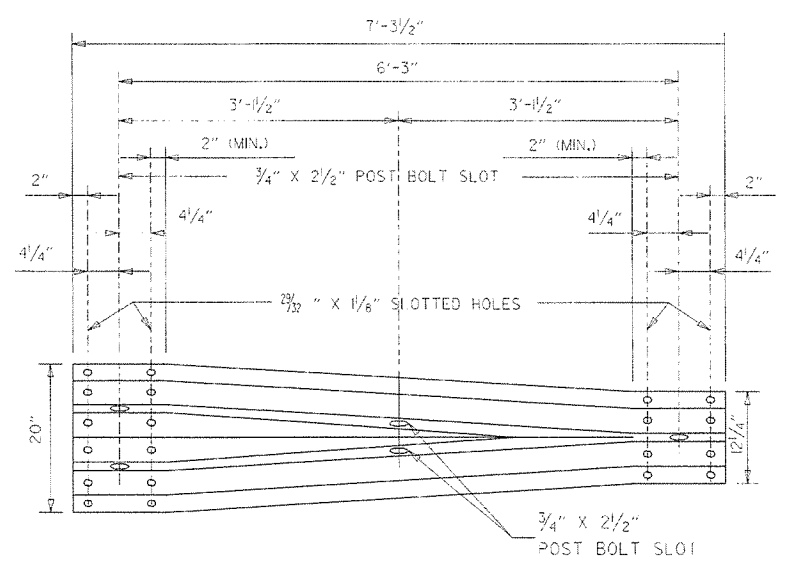
1" DIA. HOLES (TYP.) FOR 7/8" DIA. HIGH STRENGTH BOLTS WITH HEX HEADS, NUTS AND WASHERS
 SPECIAL END SHOE
 NOTE: SEE STANDARD DRAWING GR-10A FOR GUARD RAIL POST EMBEDMENT DEPTHS.



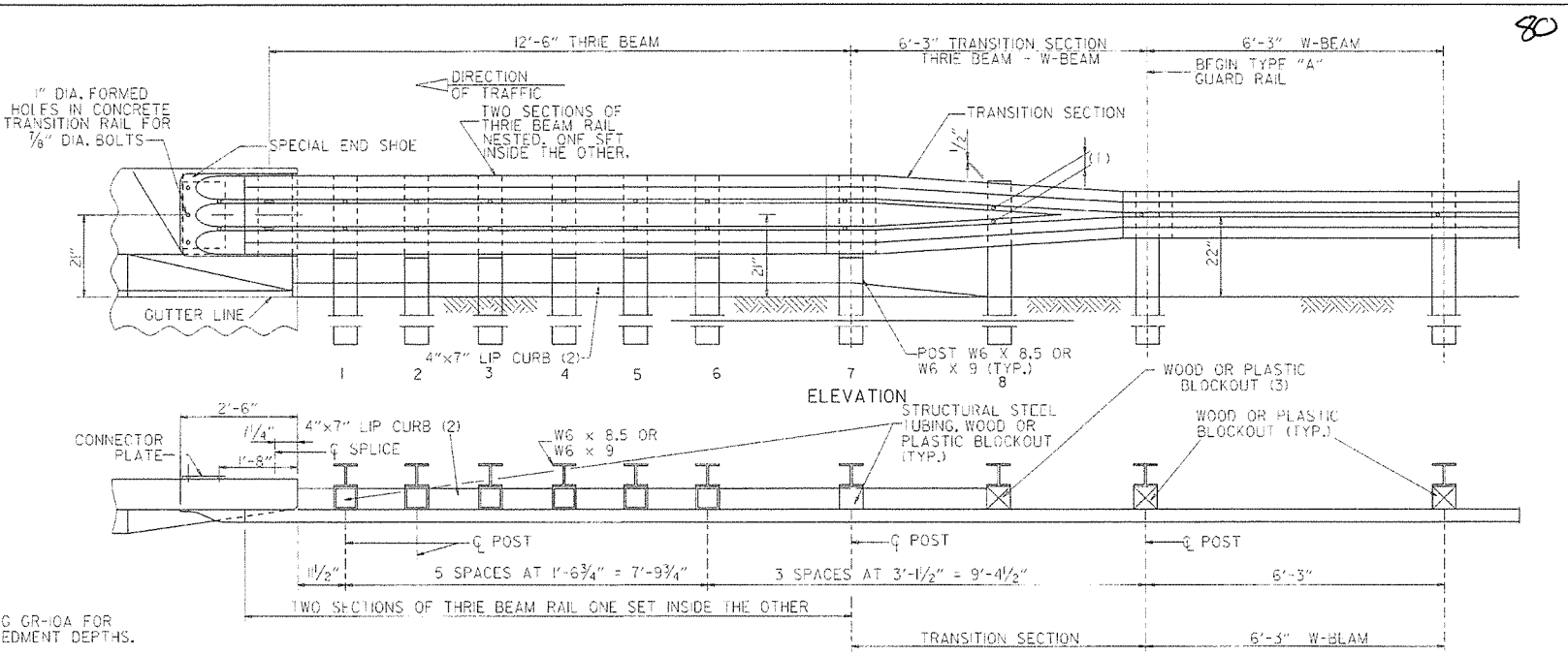
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING 3/8" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



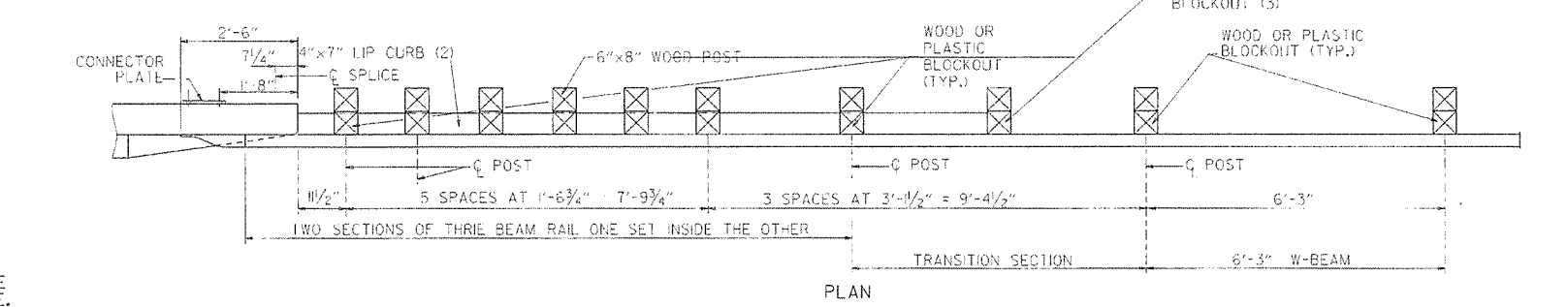
THRIE BEAM RAIL SPLICE AT POST



TRANSITION SECTION



ELEVATION



PLAN

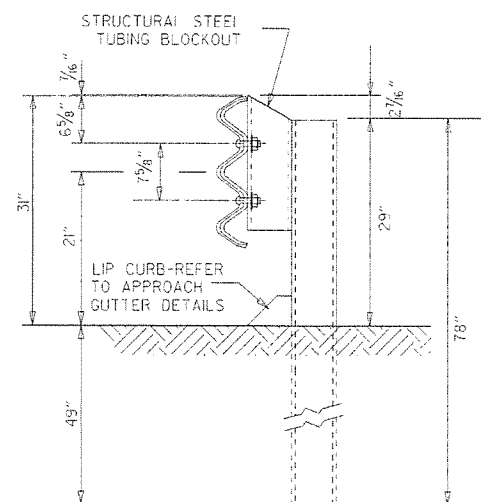
- (1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
- (2) REFER TO APPROACH GUTTER DETAILS.
- (3) LENGTH OF BLOCKOUT ON POST 8 TO BE MODIFIED TO FIT RAIL WIDTH.

THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

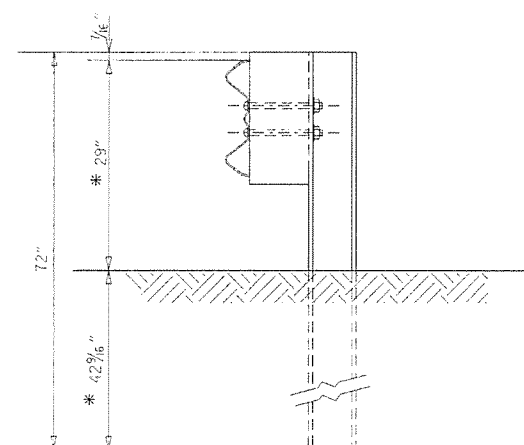
GENERAL NOTES:
 THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE 1.
 RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
 ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
 ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11.
 WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7F (4000 #) OR NO. 1 350 F SOUTHERN PINE.
 REFER TO STD. DRWG. GR-10A FOR POST DETAILS.
 USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.
 THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W BEAM POSTS FOR ENTIRE JOB.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GR-10		

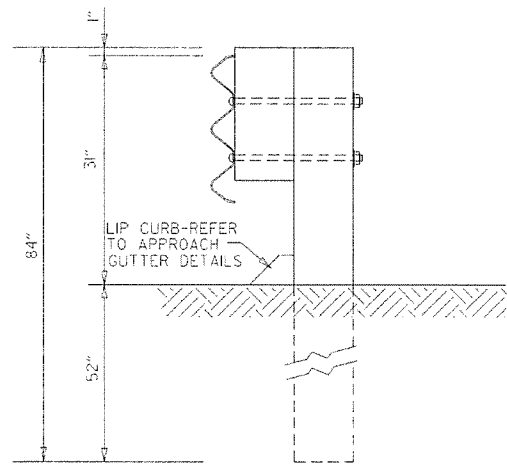


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POST
POSTS 1-7

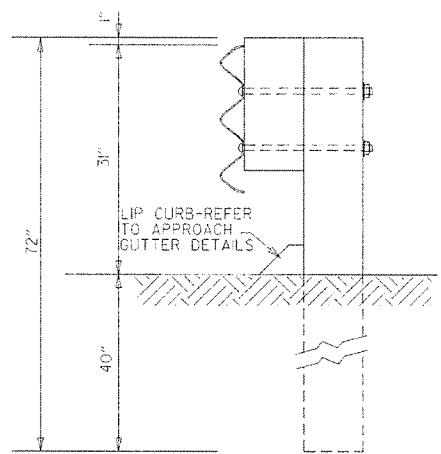


W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

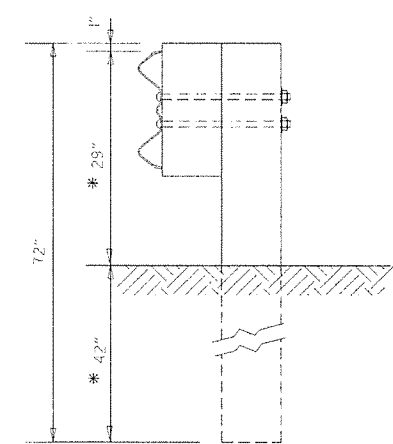
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



THRIE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUTS & WOOD POSTS
POSTS 1-6



THRIE BEAM RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST
POST 7

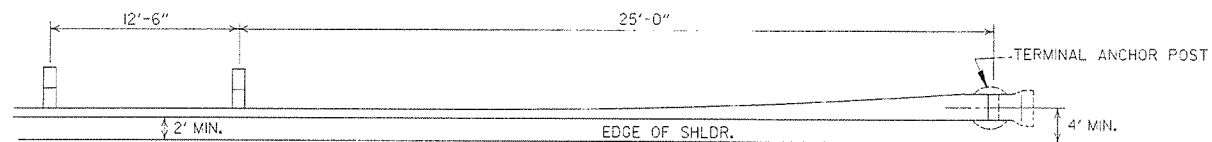


W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT & WOOD POST
POST 8

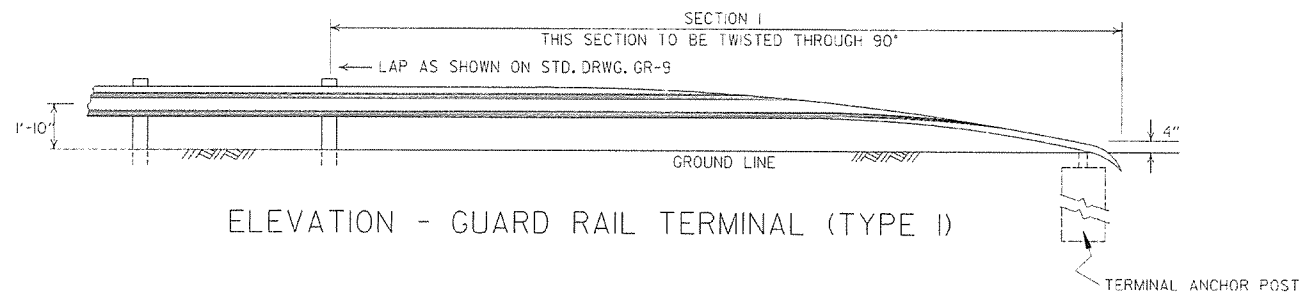
GENERAL NOTES:
RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 F (400 F) OR NO. 1 1350 F SOUTHERN PINE.

DATE	REVISION	DATE FILM
7-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION
GUARD RAIL DETAILS
STANDARD DRAWING GR-10A

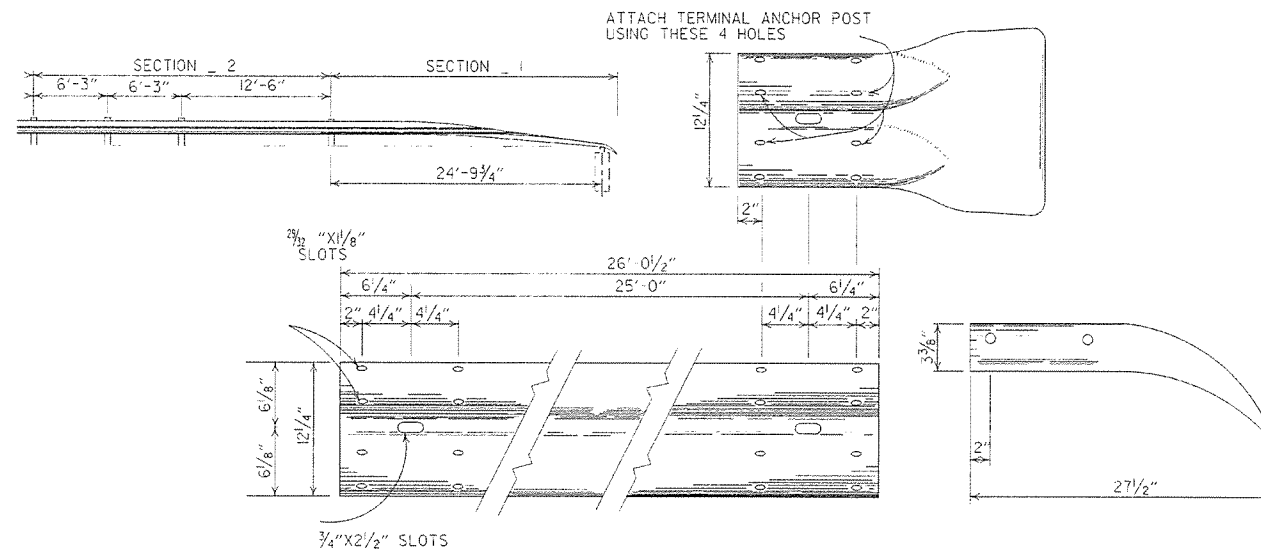


PLAN - GUARD RAIL TERMINAL (TYPE I)



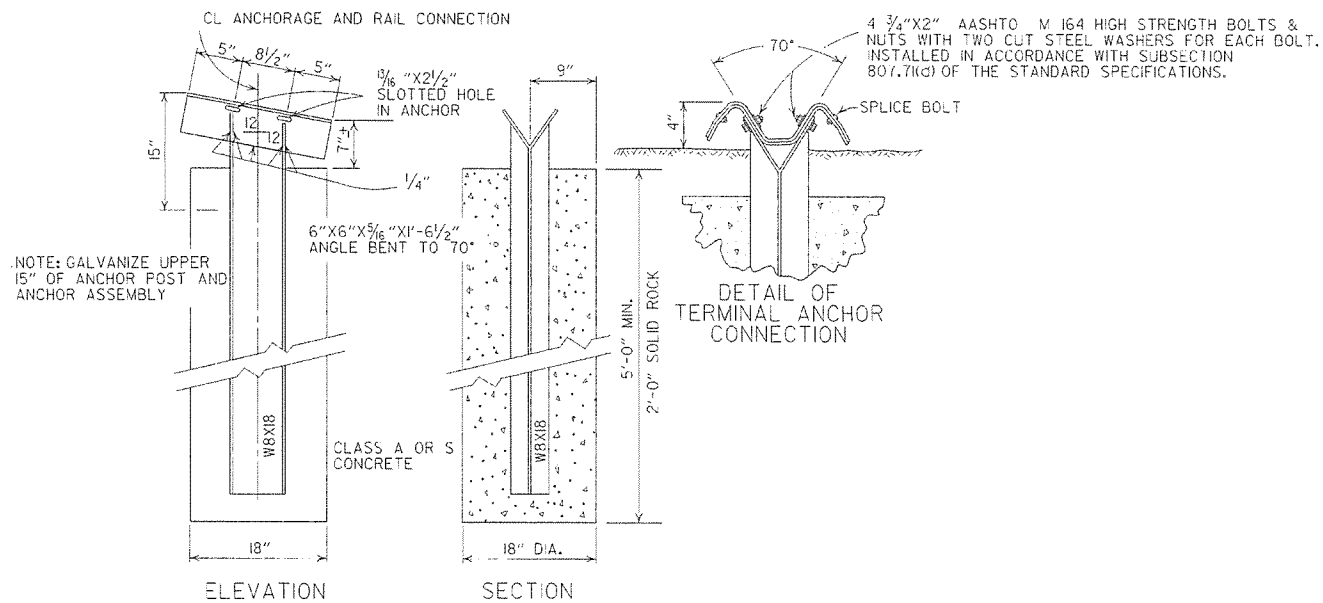
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE:
SECTIONS 1 AND 2 OF GUARD RAIL TERMINAL SHALL BE PAID FOR AT THE PRICE BID PER LINEAR FOOT OF THE TYPE OF GUARD RAIL SPECIFIED.



SECTION I

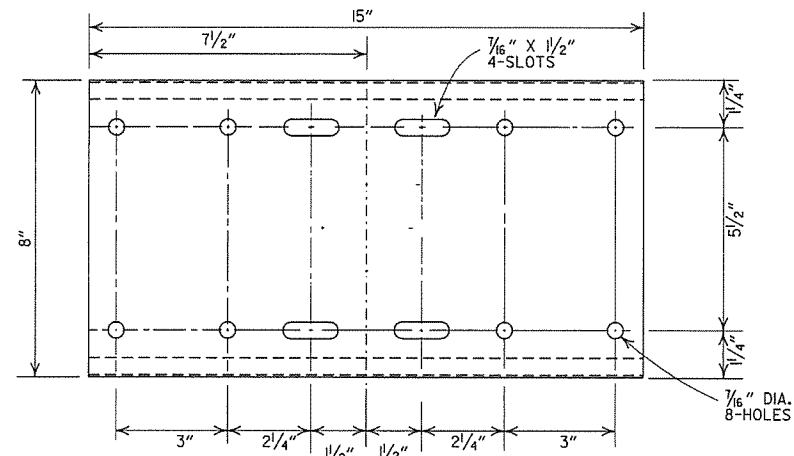
TERMINAL SECTION



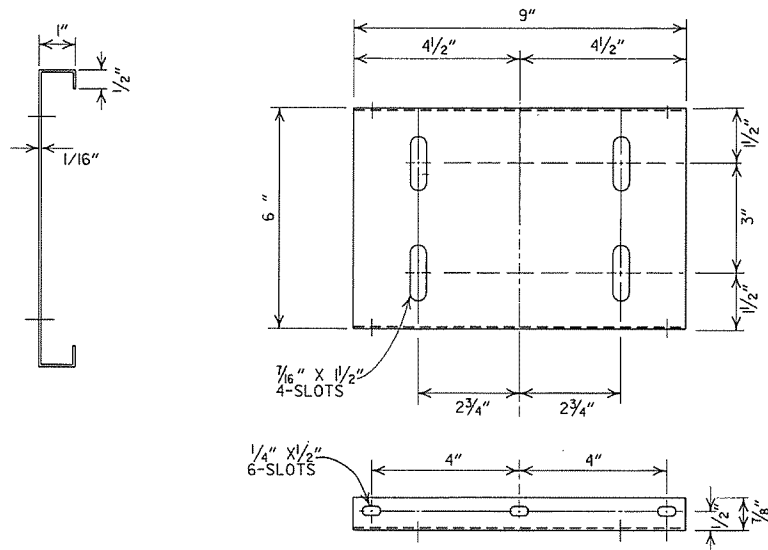
DETAIL OF TERMINAL ANCHOR POST (TYPE I)

NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 WF 17 POST IF CONTRACTOR SO DESIRES.

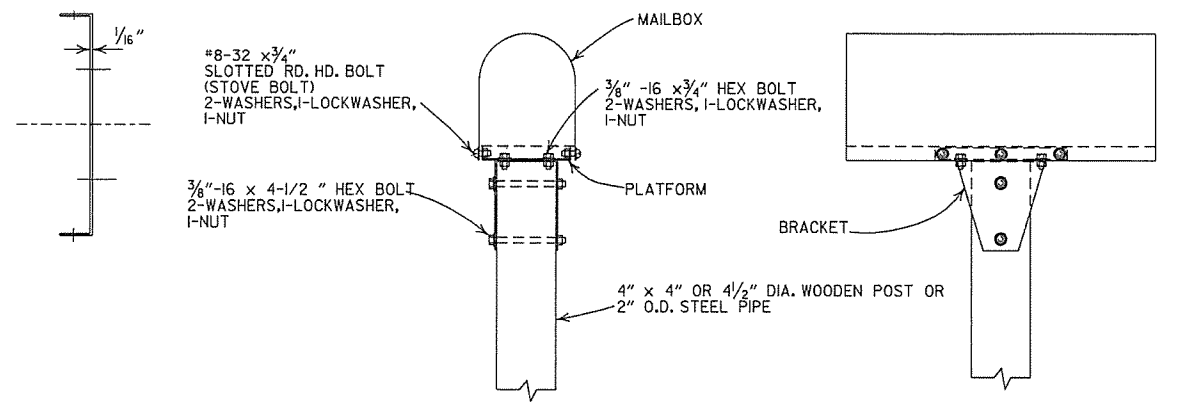
ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GRT-I		
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
6-26-97	REVISED LAP NOTE	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-3-94	DIMENSION TERMINAL DETAIL	
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92
10-1-92	DRAWN & ISSUED	10-1-92
DATE	REVISION	DATE FILM



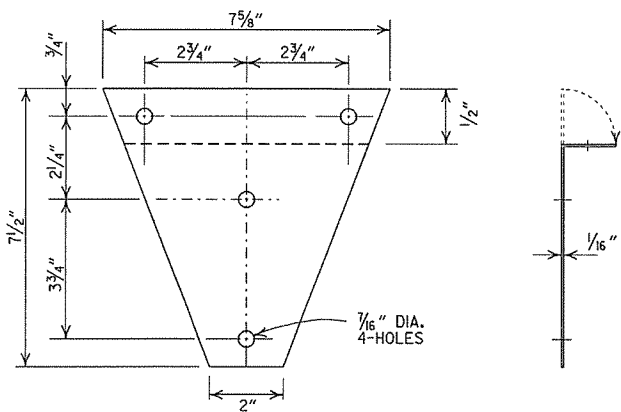
SHELF



PLATFORM

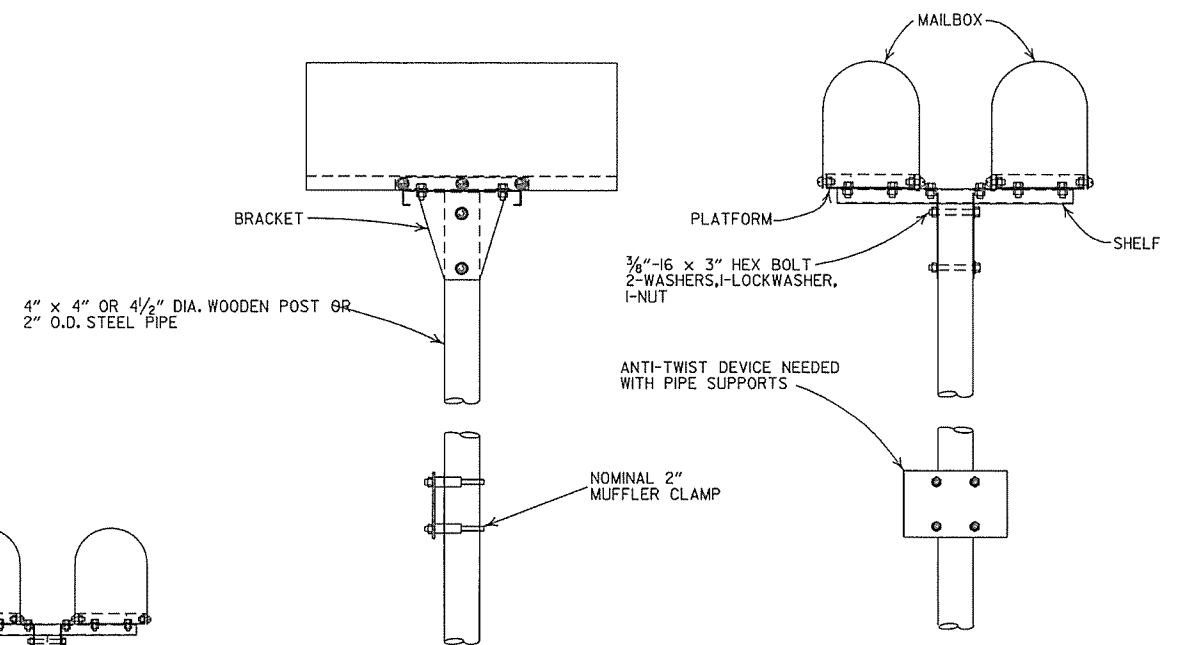


SINGLE INSTALLATION

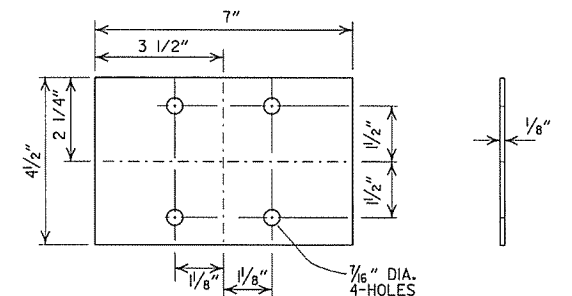


BRACKET

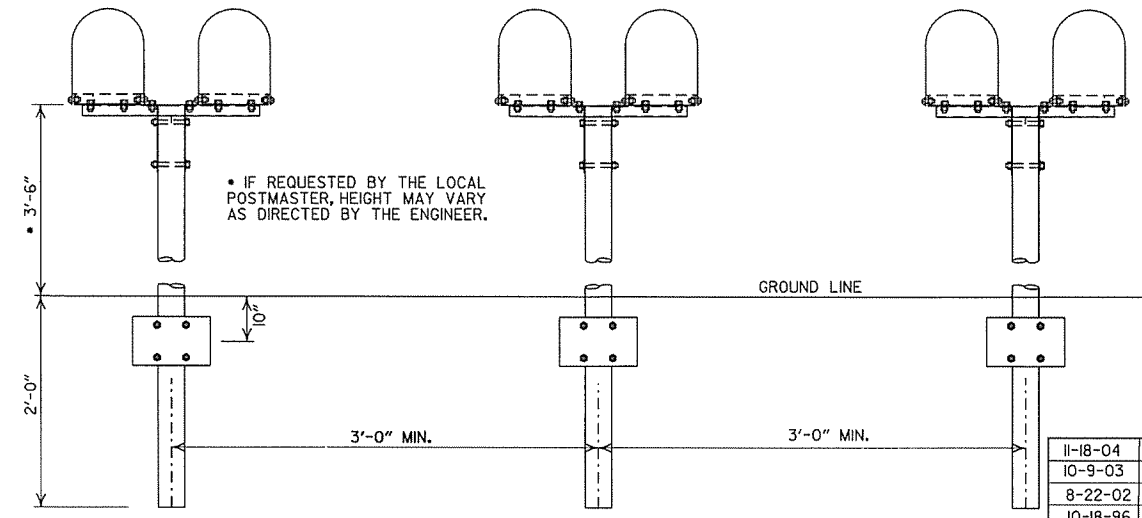
- GENERAL NOTES
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 3/4" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X 3/4" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
 4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
 5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
 6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



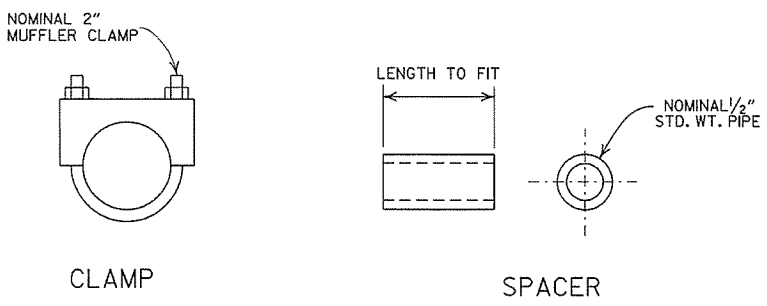
DOUBLE INSTALLATION



ANTI-TWIST PLATE



SPACING FOR MULTIPLE POST INSTALLATION



DATE	FILED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	120-7-15-88	ISSUED
		REVISION

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13 1/2	14
21	26	26	15 1/2	16
24	28 1/2	29	18	18
30	36 1/4	36	22 1/2	23
36	43 3/8	44	26 3/8	27
42	51 1/8	51	31 1/8	31
48	58 1/2	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77 1/2	77
108	138	138	87 1/8	87
120	154	154	96 3/8	97
132	168 3/4	169	106 1/2	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(ii).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

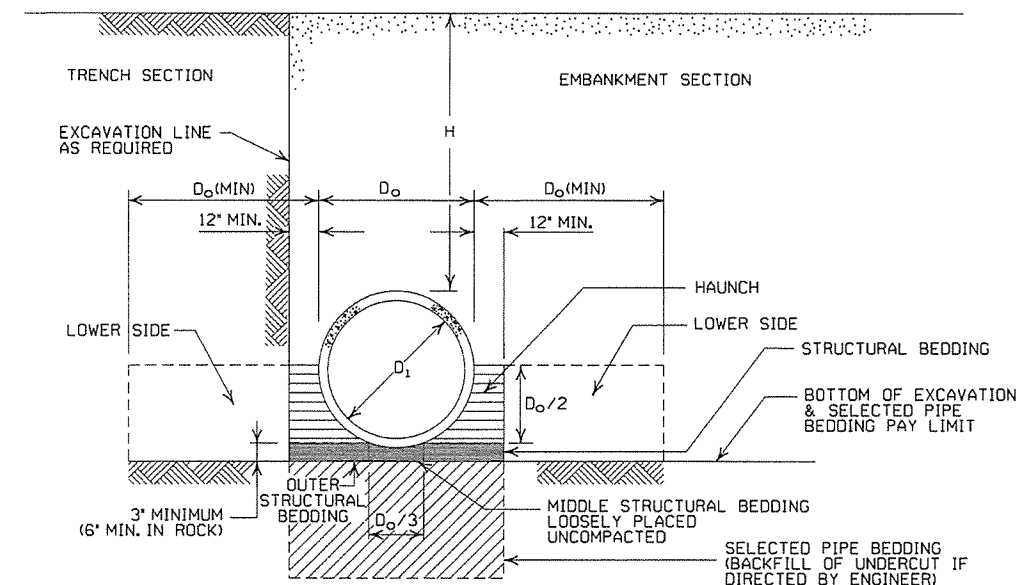
- LEGEND -

- D₁ = NORMAL INSIDE DIAMETER OF PIPE
- D_o = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	ISSUED	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.		
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS		
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE		
3-30-00	REVISED INSTALLATIONS		
11-06-97	ISSUED		

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

CORRUGATED METAL PIPE ARCHES

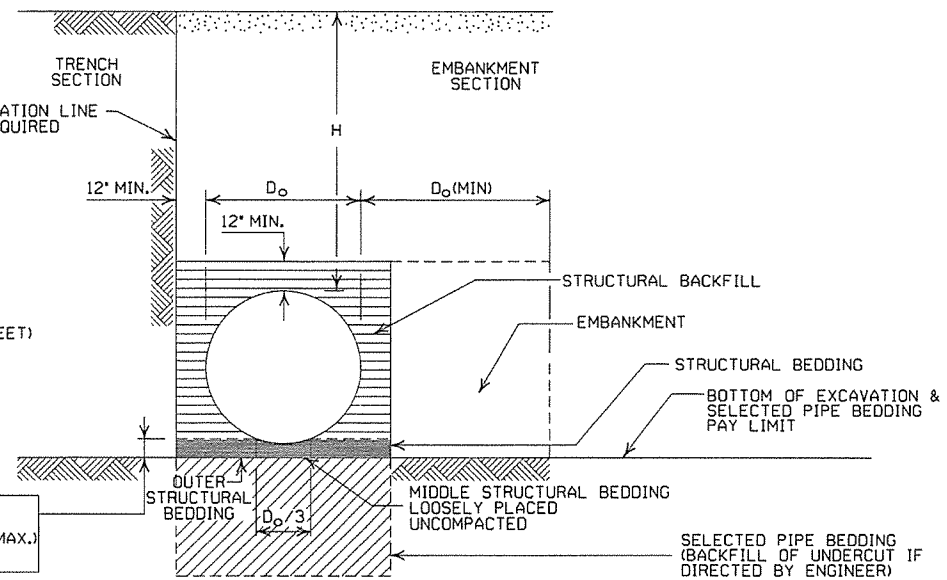
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	MIN. THICKNESS REQUIRED INCHES	STEEL				ALUMINUM			
				① MIN. HEIGHT OF FILL, "H" (FT.)		MAX. HEIGHT OF FILL, "H" (FT.)		① MIN. HEIGHT OF FILL, "H" (FT.)		MAX. HEIGHT OF FILL, "H" (FT.)	
				INSTALLATION TYPE 1	INSTALLATION TYPE 1	INSTALLATION TYPE 1	INSTALLATION TYPE 1	INSTALLATION TYPE 1	INSTALLATION TYPE 1		
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM											
15	17x13	3	0.064	2	15	0.060	2	15	0.060	2	15
18	21x15	3	0.064	2	15	0.060	2	15	0.060	2	15
21	24x18	3	0.064	2.25	15	0.060	2.25	15	0.060	2.25	15
24	28x20	3	0.064	2.5	15	0.075	2.5	15	0.075	2.5	15
30	35x24	3	0.079	3	12	0.075	3	12	0.075	3	12
36	42x29	3 1/2	0.079	3	12	0.105	3	12	0.105	3	12
42	49x33	4	0.079	3	12	0.105	3	12	0.105	3	12
48	57x38	5	0.109	3	13	0.135	3	13	0.135	3	13
54	64x43	6	0.109	3	14	0.135	3	14	0.135	3	14
60	71x47	7	0.138	3	15	0.164	3	15	0.164	3	15
66	77x52	8	0.168	3	15	0.168	3	15	0.168	3	15
72	83x57	9	0.168	3	15	0.168	3	15	0.168	3	15
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM											
				INSTALLATION TYPE 2		INSTALLATION TYPE 1		INSTALLATION TYPE 2		INSTALLATION TYPE 1	
36	40x31	5	0.079	3	2	12	15	3	2	12	15
42	46x36	6	0.079	3	2	13	15	3	2	13	15
48	53x41	7	0.079	3	2	13	15	3	2	13	15
54	60x46	8	0.079	3	2	13	15	3	2	13	15
60	66x51	9	0.079	3	2	13	15	3	2	13	15
66	73x55	12	0.079	3	2	15	15	3	2	15	15
72	81x59	14	0.079	3	2	15	15	3	2	15	15
78	87x63	14	0.079	3	2	15	15	3	2	15	15
84	95x67	16	0.109	3	2	15	15	3	2	15	15
90	103x71	16	0.109	3	2	15	15	3	2	15	15
96	112x75	18	0.109	3	2	15	15	3	2	15	15
102	117x79	18	0.109	3	2	15	15	3	2	15	15
108	128x83	18	0.138	3	2	15	15	3	2	15	15

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3" x 1/2" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

- LEGEND -

- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Symbol] = STRUCTURAL BACKFILL MATERIAL
- [Symbol] = UNDISTURBED SOIL
- EQUIV. DIA. = EQUIVALENT DIAMETER
- H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/8" x 1/2" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" x 1" OR 5" x 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS, UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

ARKANSAS STATE HIGHWAY COMMISSION		
METAL PIPE CULVERT FILL HEIGHTS & BEDDING		
STANDARD DRAWING PCM-1		
DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

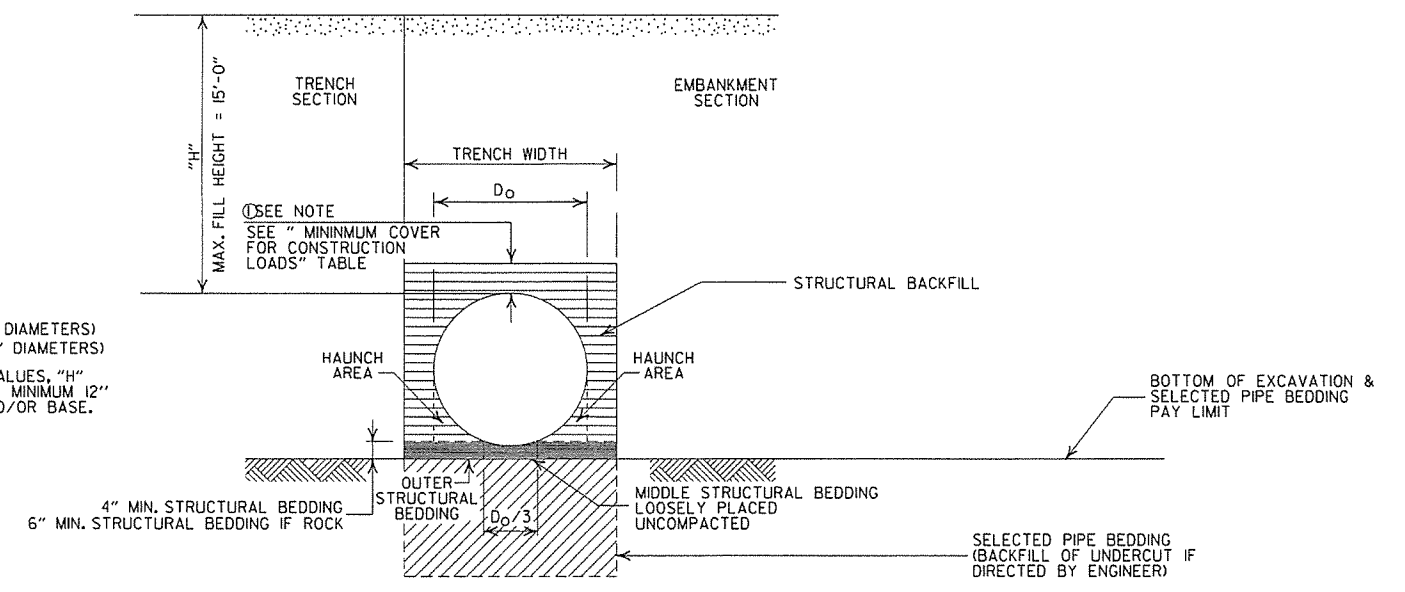
INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
- SM3 WILL NOT BE ALLOWED.
- STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/2 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

- H = FILL HEIGHT (FT.)
- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- ===== = STRUCTURAL BACKFILL MATERIAL
- ||||| = UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT
(HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/4 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

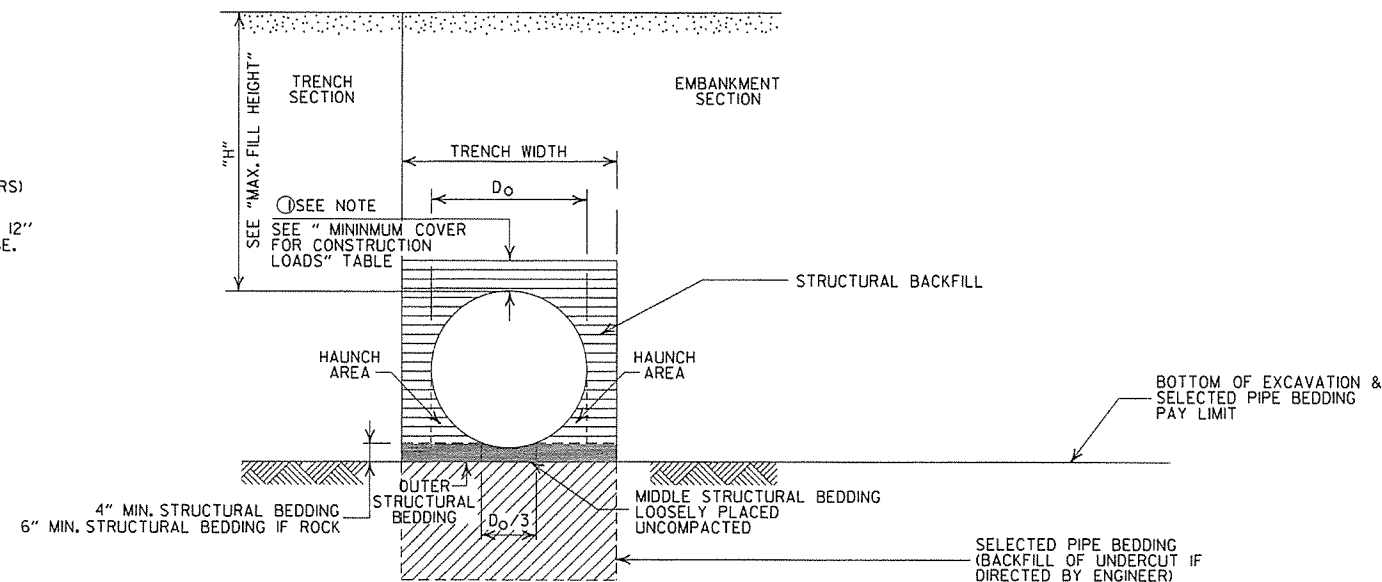
MULTIPLE INSTALLATION OF PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

I. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

==== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE, IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE I.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

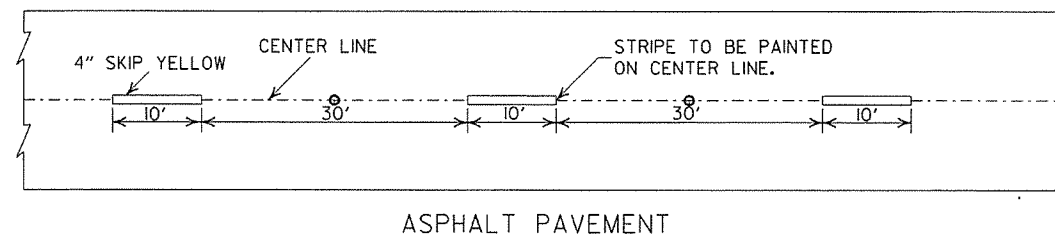
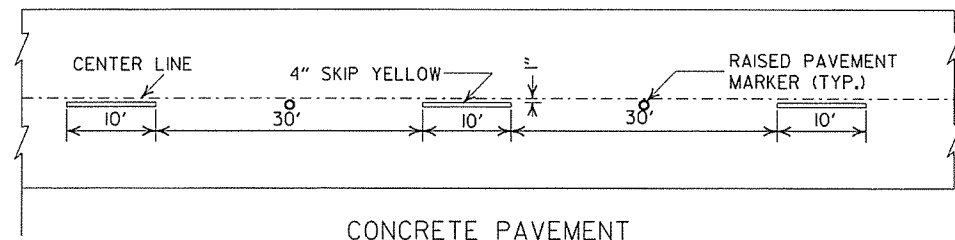
PLASTIC PIPE CULVERT
(PVC F949)

STANDARD DRAWING PCP-2



NOTES:

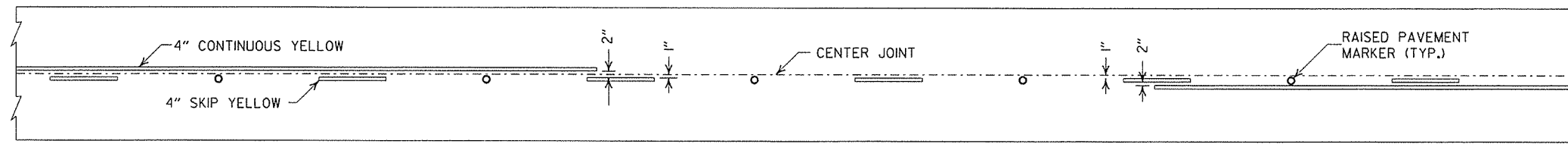
1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.



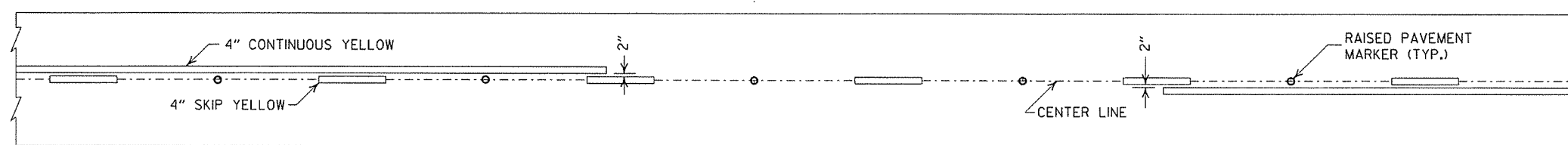
CONCRETE PAVEMENT

ASPHALT PAVEMENT

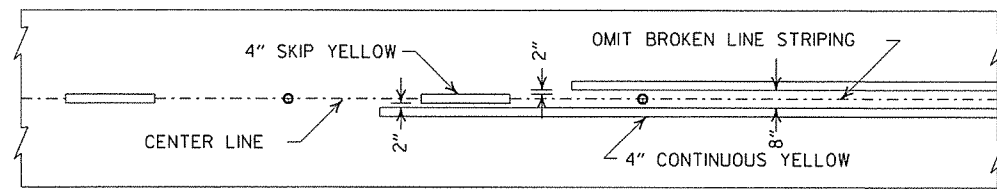
BROKEN LINE STRIPING



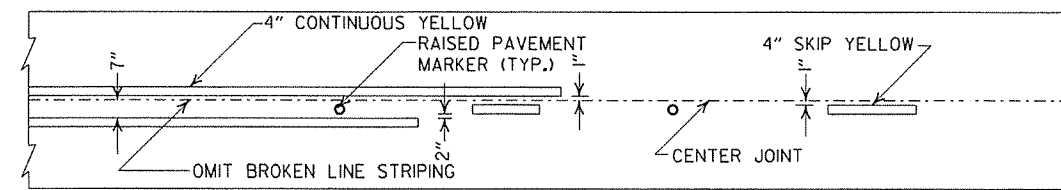
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

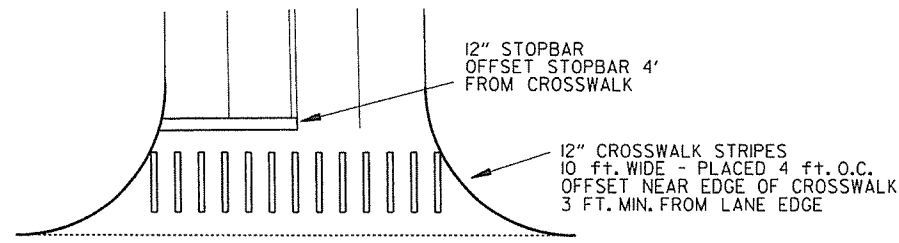


ASPHALT PAVEMENT



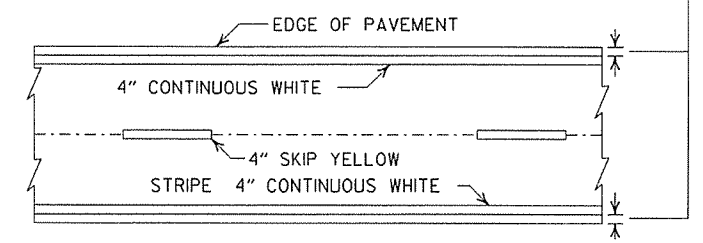
CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

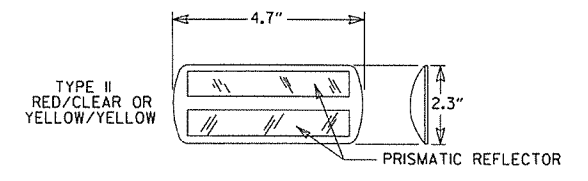


CROSSWALK AND STOPBAR DETAILS

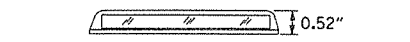
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING



NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

GENERAL NOTES:
THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

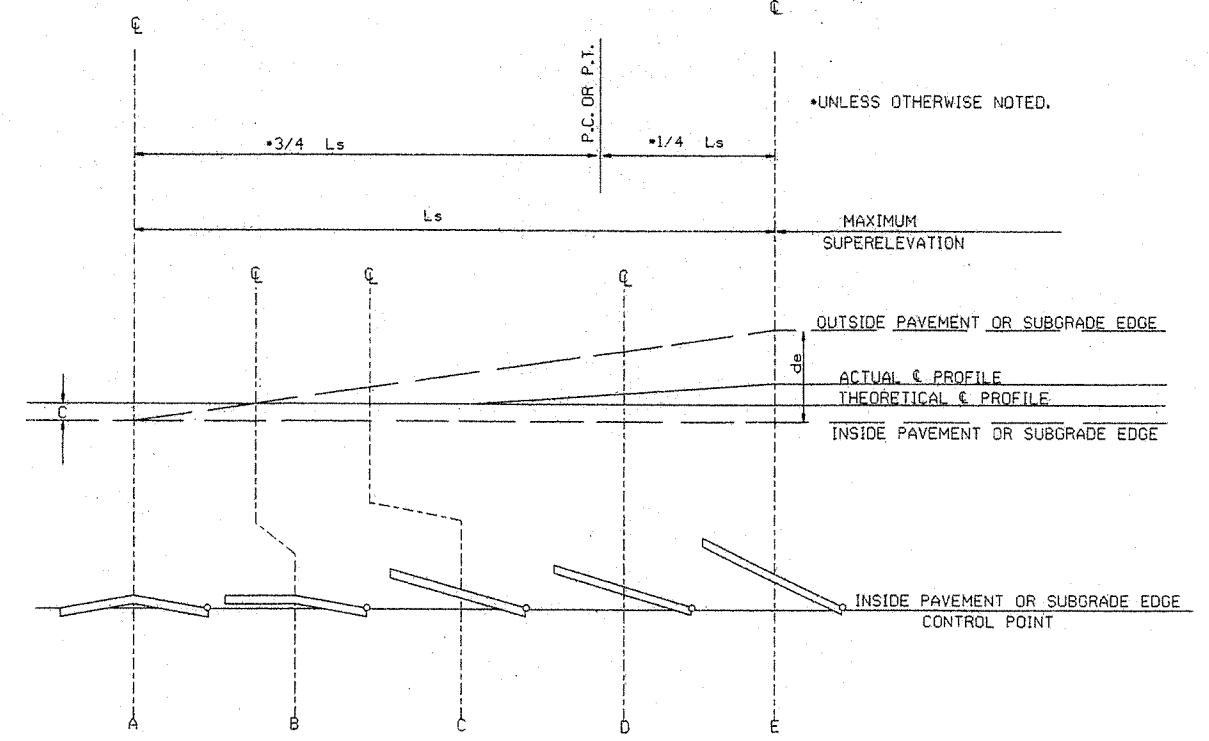
NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED FLOWABLE PVMT MKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION	
PAVEMENT MARKING DETAILS	
STANDARD DRAWING PM-1	

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		70 MPH	
	Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)	
e	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE
0° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 00'	R.C.		0.021		0.021		0.021		0.023		0.028	
2° 15'	R.C.		0.025		0.026		0.026		0.030		0.037	
2° 30'	R.C.		0.028		0.031	200	0.032		0.037		0.046	
2° 45'	R.C.		0.031		0.036		0.043	225	0.043	250	0.054	
3° 00'	R.C.		0.034	175	0.040		0.049		0.049	300	0.062	
3° 15'	R.C.		0.037		0.045		0.055		0.055		0.070	
3° 30'	R.C.	150	0.040		0.049		0.058		0.061		0.078	300
3° 45'	R.C.		0.043		0.053		0.063		0.067		0.085	350
4° 00'	R.C.		0.046		0.057		0.067	230	0.072		0.091	350
4° 15'	R.C.		0.049		0.061		0.072	245	0.077		0.096	350
4° 30'	R.C.		0.051		0.065	205	0.076	255	0.082	260	0.098	360
4° 45'	R.C.		0.053		0.069	215	0.080	265	0.086	275	0.100	360
5° 00'	R.C.		0.056		0.072	225	0.083	270	0.090	285		
5° 15'	R.C.		0.058		0.075	230	0.087	280	0.093	295		
5° 30'	R.C.		0.061		0.078	240	0.091	285	0.096	305		
5° 45'	R.C.		0.063		0.081	250	0.094	290	0.098	315		
6° 00'	R.C.		0.066	185	0.083	250	0.096	295	0.100	320		
6° 15'	R.C.		0.068		0.086	260	0.099	300				
6° 30'	R.C.		0.070	190	0.089	270	0.100	305				
6° 45'	R.C.		0.072		0.092	280						
7° 00'	R.C.		0.074	200	0.095	285						
7° 15'	R.C.		0.076		0.098	290						
7° 30'	R.C.		0.078	210	0.100	290						
7° 45'	R.C.		0.081									
8° 00'	R.C.		0.084	220								
8° 15'	R.C.		0.087									
8° 30'	R.C.		0.089	230								
8° 45'	R.C.		0.091									
9° 00'	R.C.		0.093	240								
9° 15'	R.C.		0.095									
9° 30'	R.C.		0.097	250								
9° 45'	R.C.		0.099									
10° 00'	R.C.		0.100	250								



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

ABBREVIATIONS

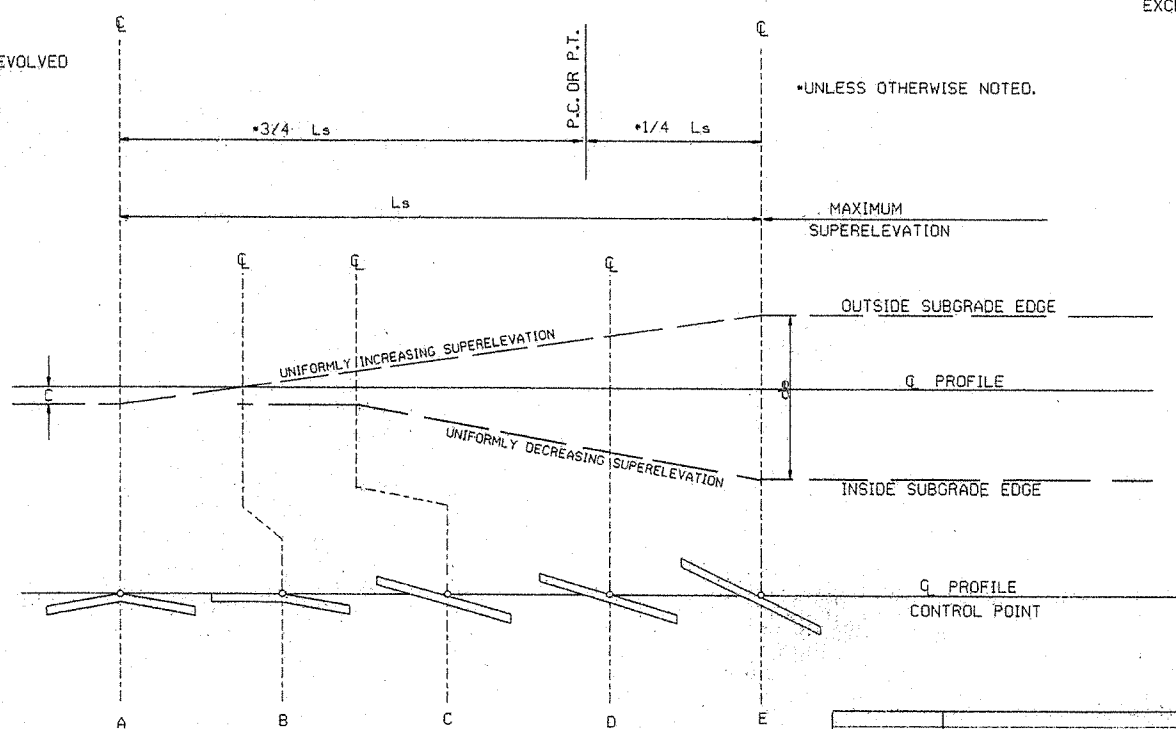
- NC - NORMAL CROWN
- RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
- e - RATE OF SUPERELEVATION (FT. PER FT.)
- Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
- L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
- d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)
- C - NORMAL CROWN (FT.)

GENERAL NOTES

1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

- 3 LANE UNDIVIDED - - - - +20%
- 4 LANE UNDIVIDED - - - - +50%
- 5 LANE UNDIVIDED - - - - +80%
- 6 LANE UNDIVIDED - - - - +100%

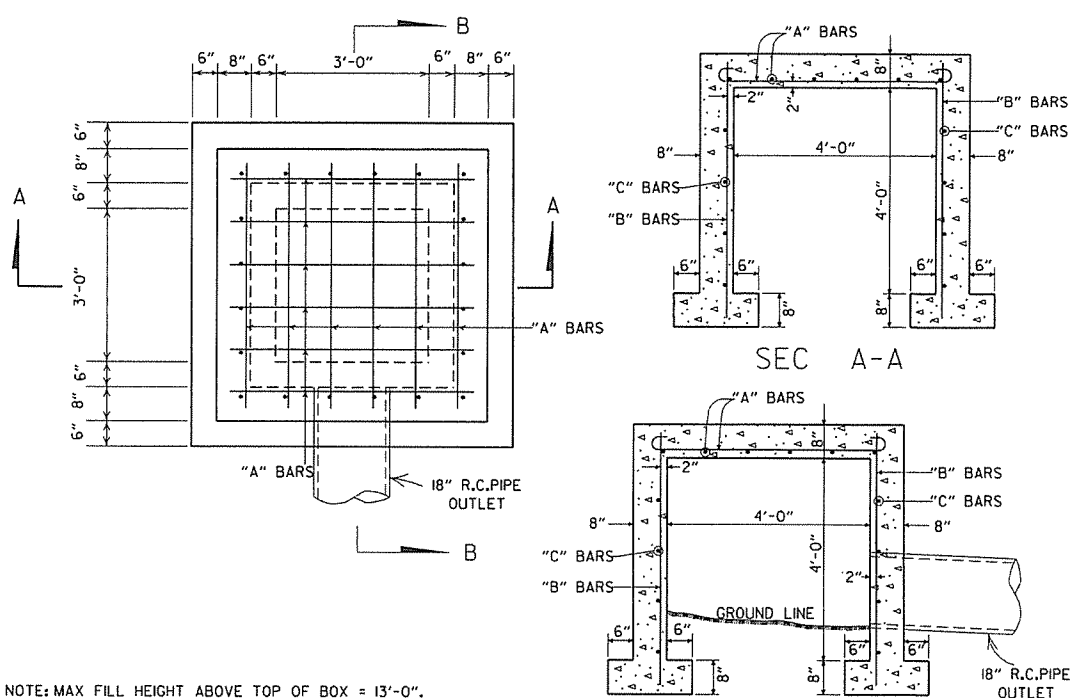
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.
RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

ARKANSAS STATE HIGHWAY COMMISSION	
TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	
10-18-96 ADDED FORMULA	10-18-96
01-09-87 ISSUED	534-1-9-87
DATE	REVISION
	DATE FILMED

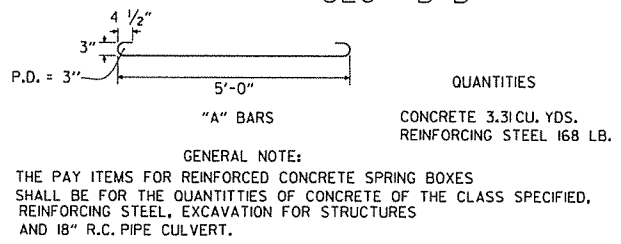


NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

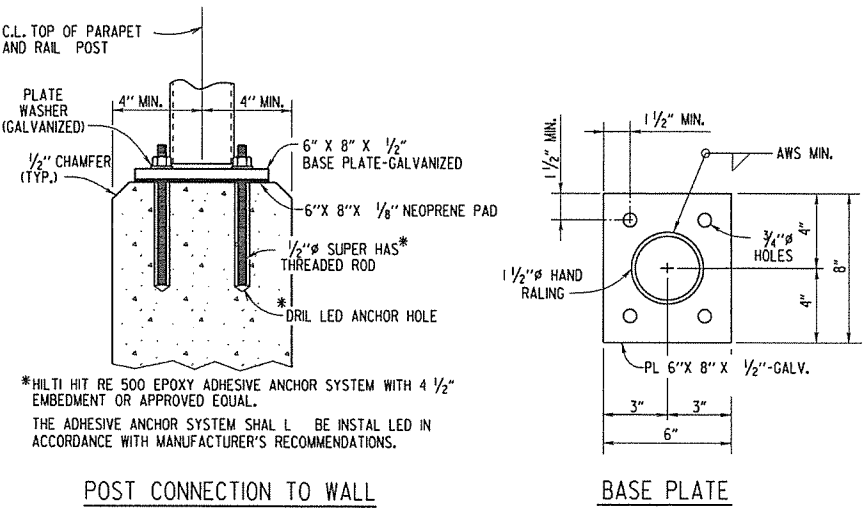
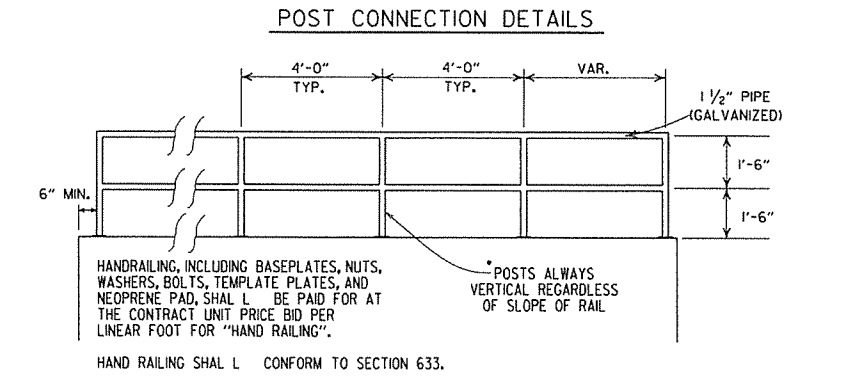
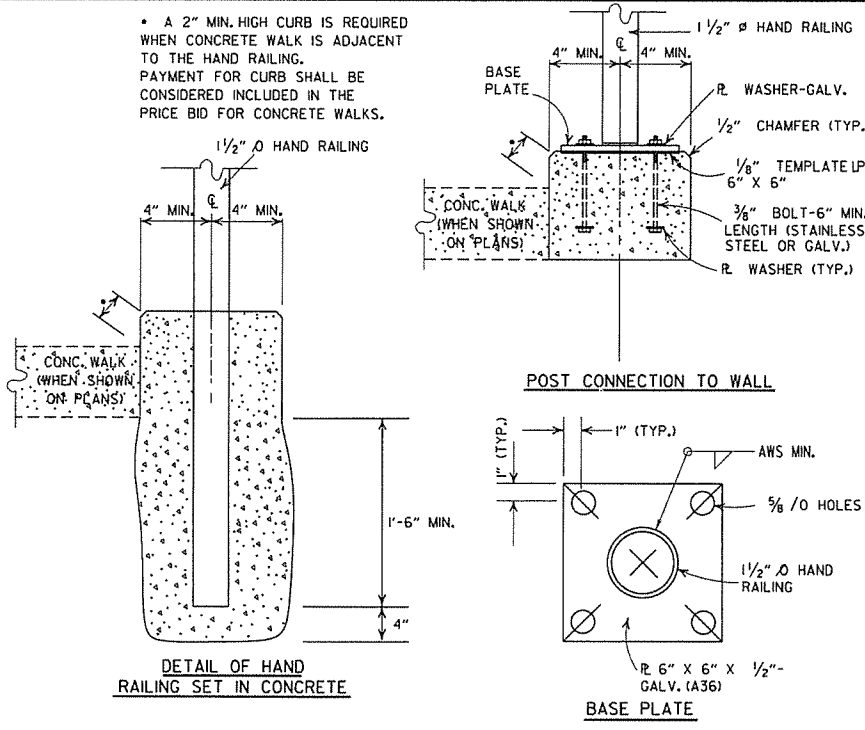
STEEL SCHEDULE

BAR	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"

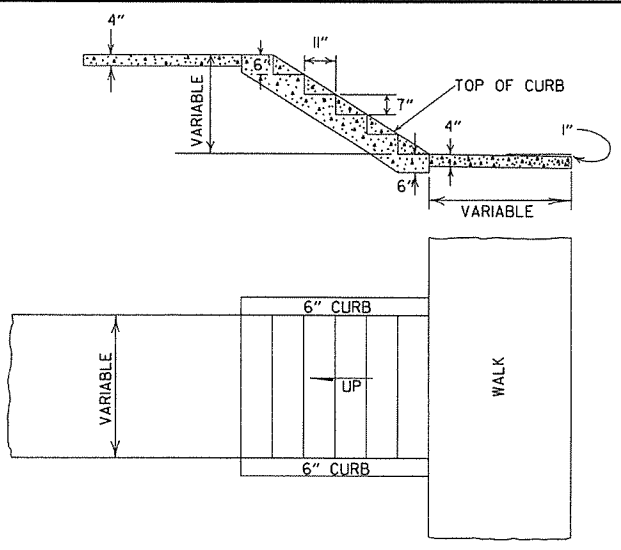
ALL STEEL TO BE #4 BARS



REINFORCED CONCRETE SPRING BOX



DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)



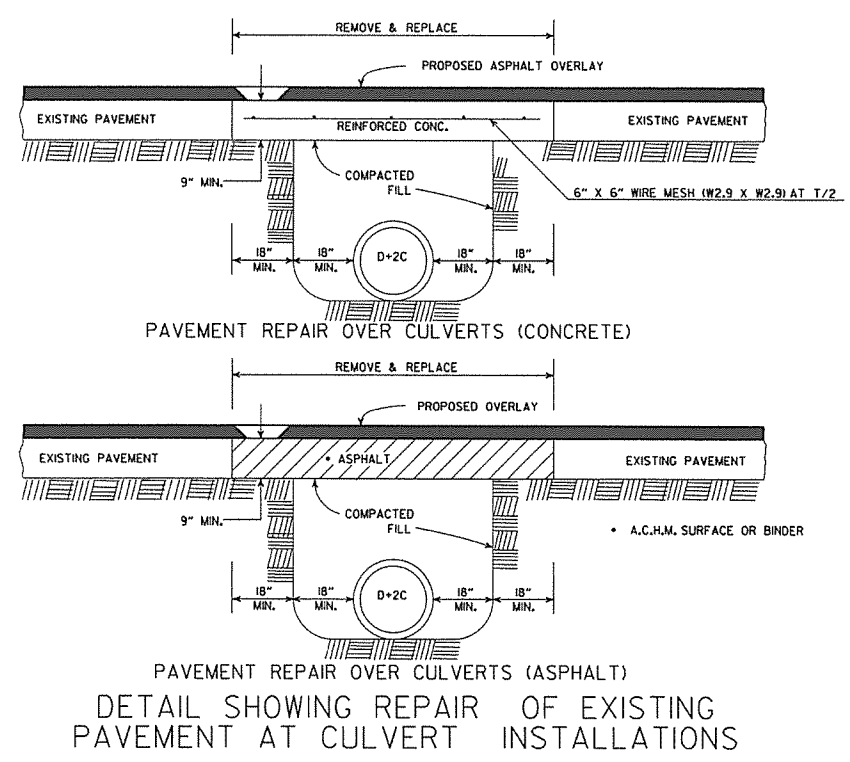
DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	10-1-92
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	8-15-91
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS. DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET & PAVEMENT REPAIR	674-4-20-79
2-2-76	12" MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72


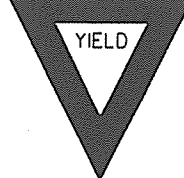
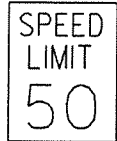


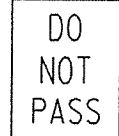


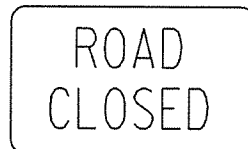
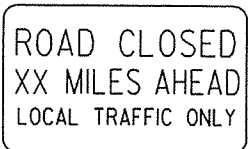
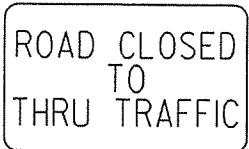
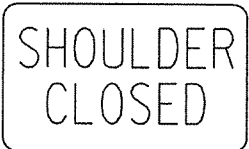
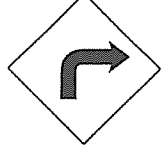

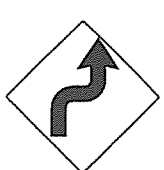
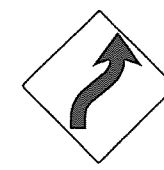
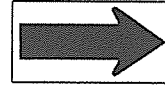
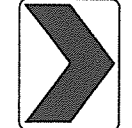
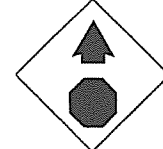
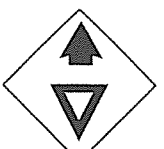
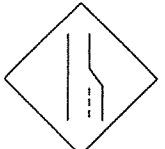

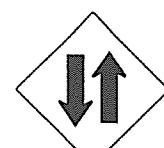





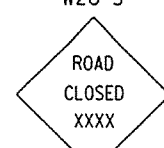

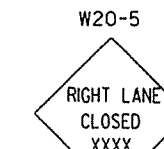


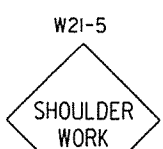
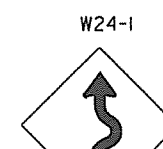
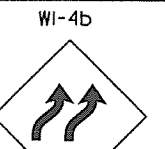
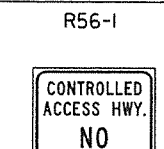
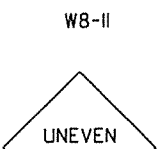
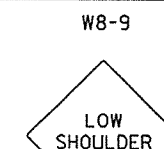
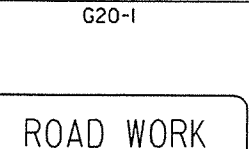
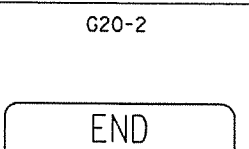
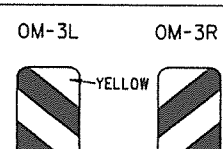
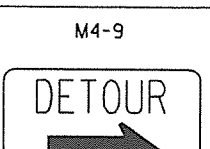
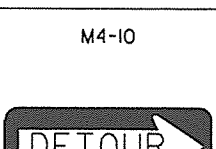
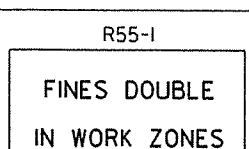
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1



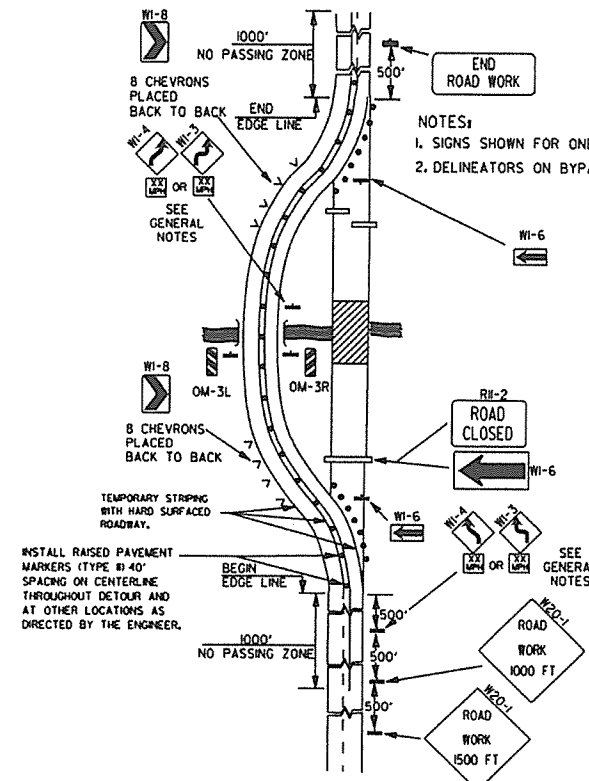
DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

							ADVANCE DISTANCES (XXXX)	91
<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>500 FT 1/2 MILE 1000 FT 3/4 MILE 1500 FT 1 MILE AHEAD</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>RSP-1</p>  <p>48"x30"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>		
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>		
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>	
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>	
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60" • USE 6" C LETTERS •• USE 4" D LETTERS</p>	

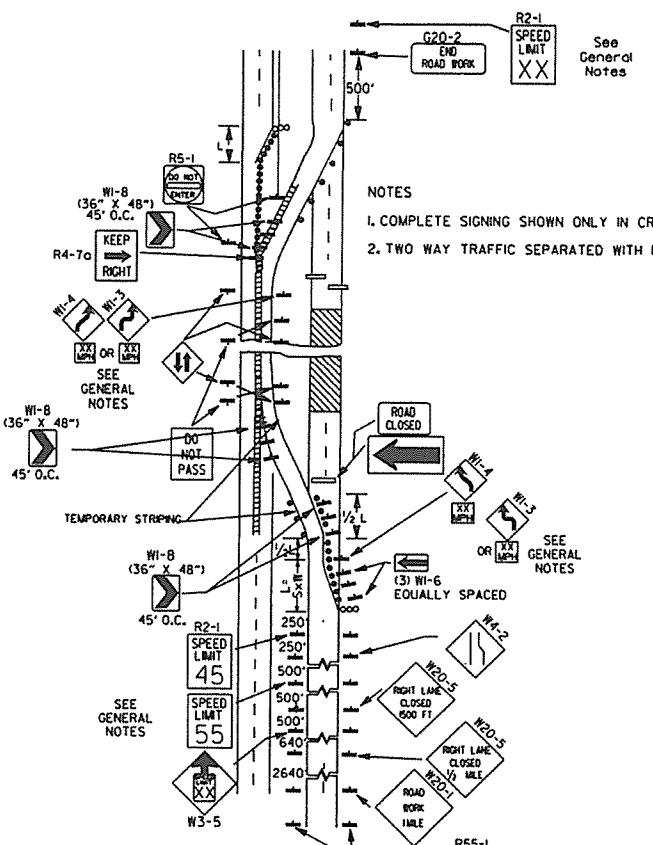
- GENERAL NOTES:
- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
 - TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
 - EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
 - SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
 - SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
 - POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
 - ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
 - FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
 - MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
 - R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

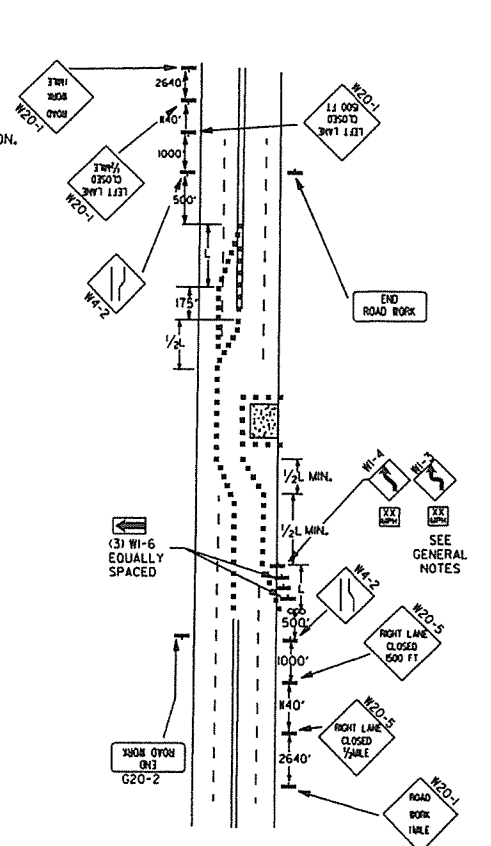
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS	
	REVISED ROAD WORK NEXT XX MILES	
12-15-1	REVISED W24-1	
1-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
1-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
1-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED



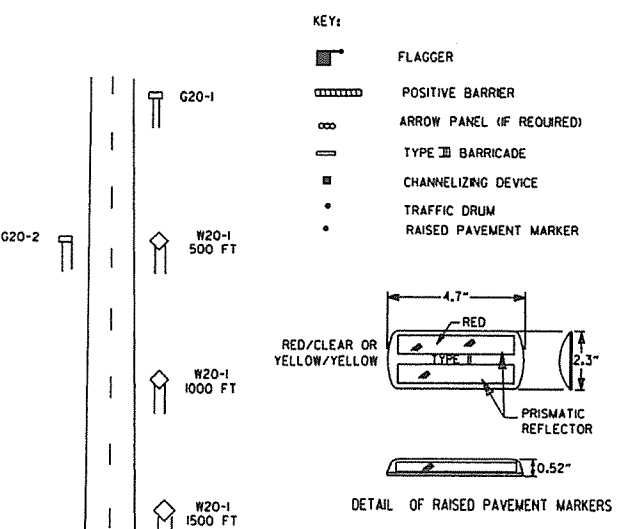
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



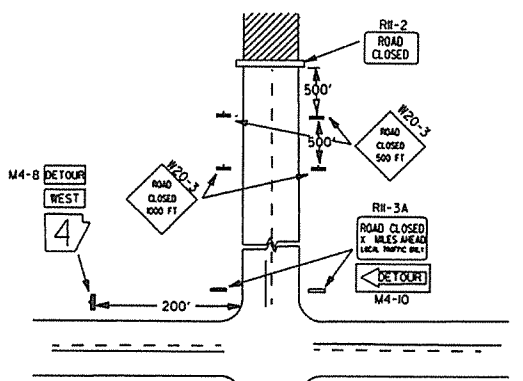
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



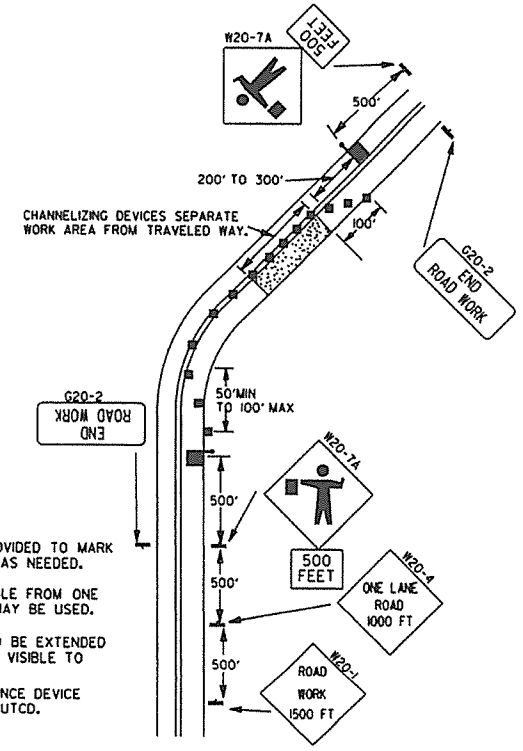
TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W = WIDTH OF OFFSET.

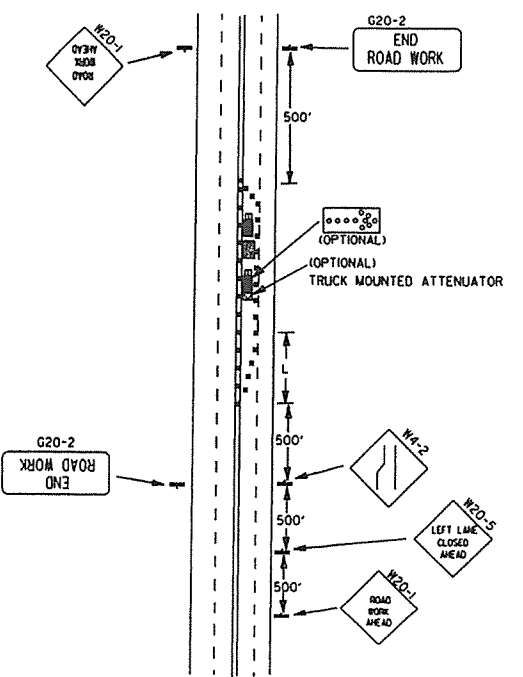
- GENERAL NOTES:
- ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 - WHEN THE EXISTING SPEED LIMIT IS 55MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1(55)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 - WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 - PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 - TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
 - DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER, REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.



(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



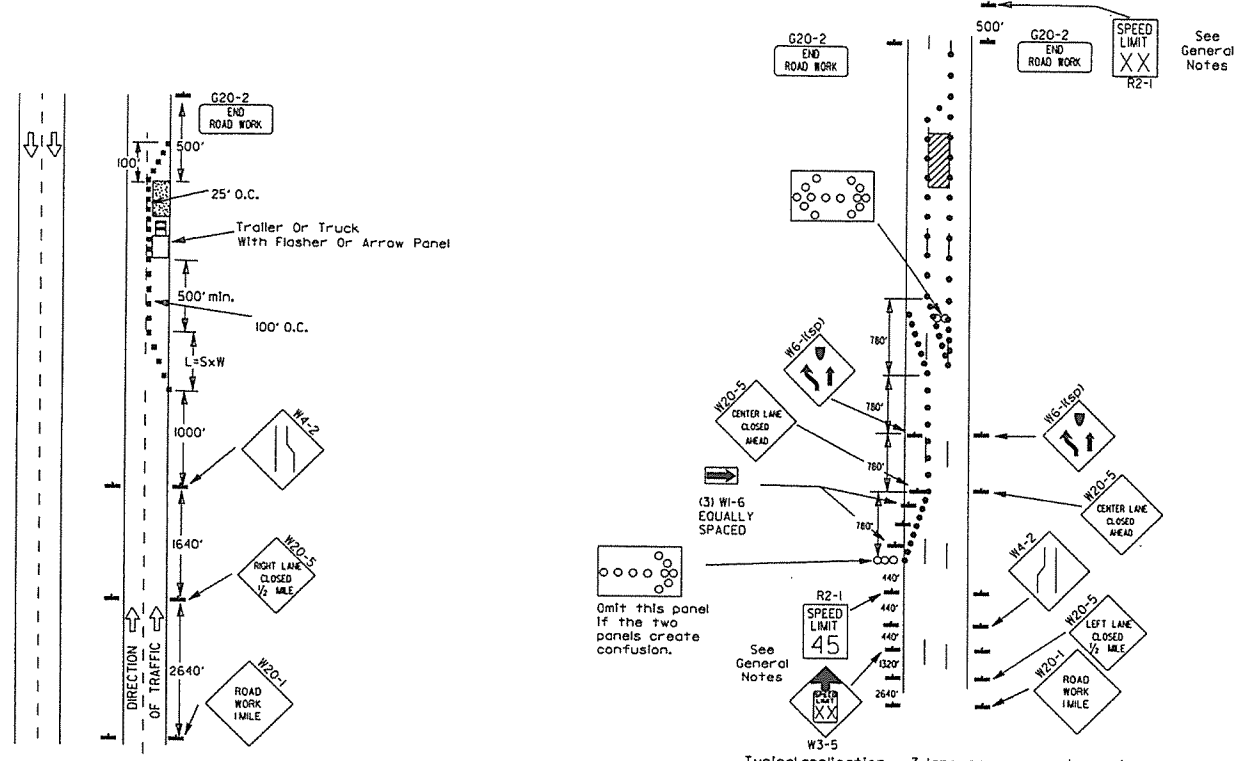
(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



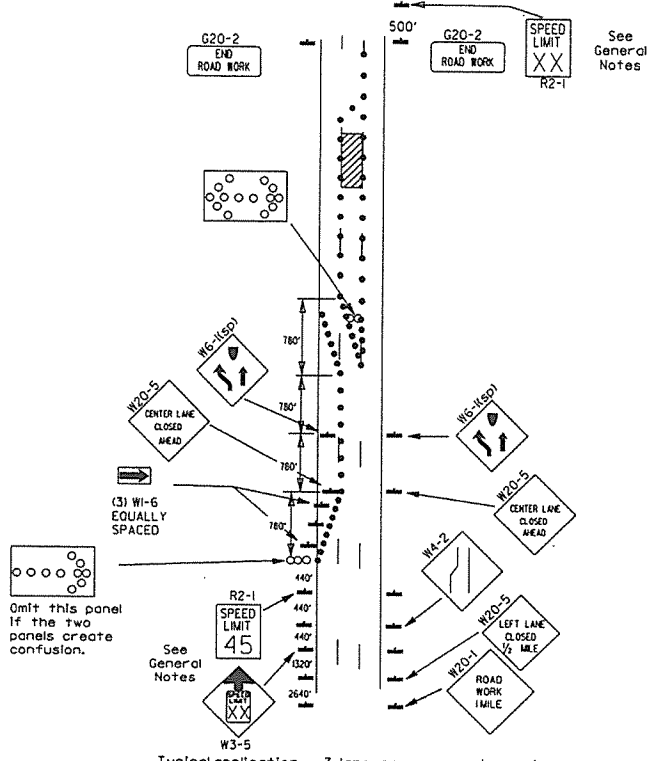
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-4-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

Channelizing devices



(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.

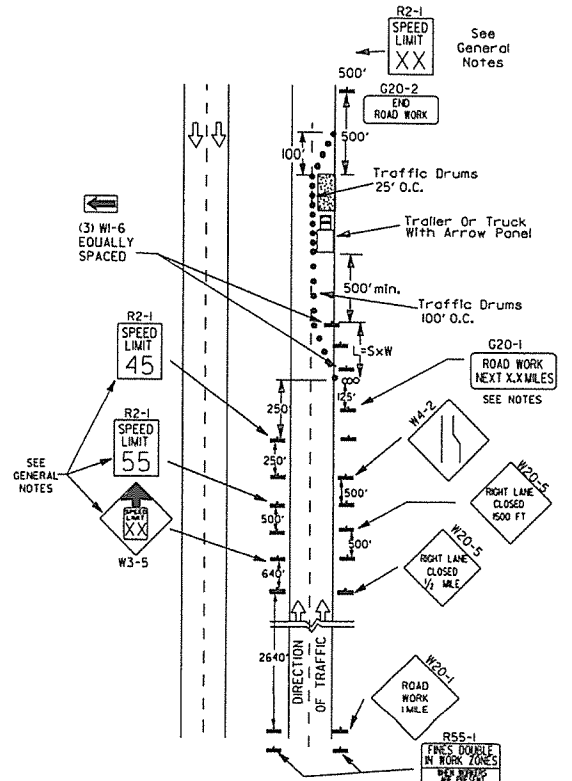


(B) Typical application - 3-lane one-way roadway where center lane is closed.

- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

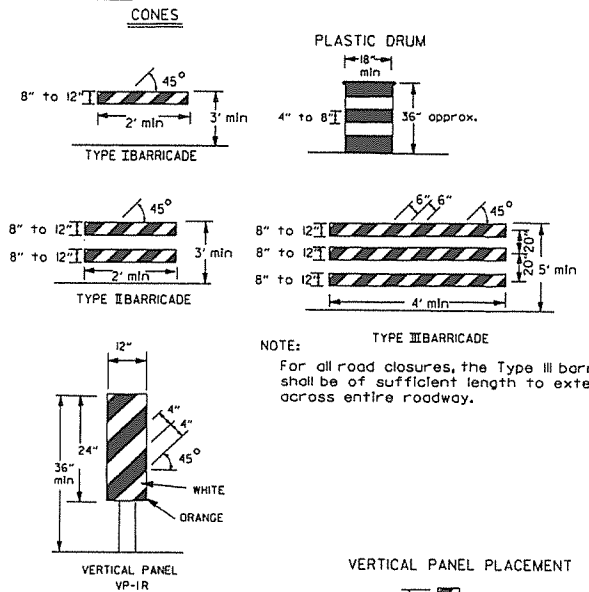
GENERAL NOTES:

1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1XX shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1XX shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1(1/2 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
10. Trawler mounted devices such as arrow panels and portable changeable message signs shall be delineated by offsetting conspicuity material in a continuous line on the face of the trawler. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



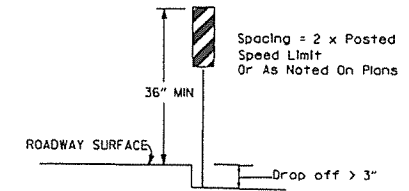
(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.

When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.



NOTE: For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.

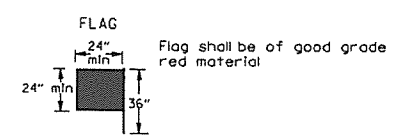
VERTICAL PANEL PLACEMENT



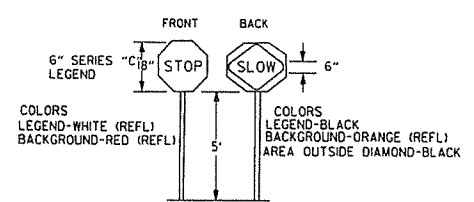
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-land vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

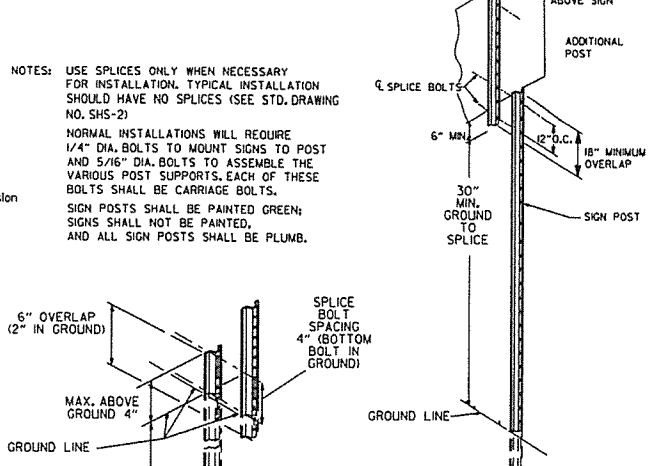
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



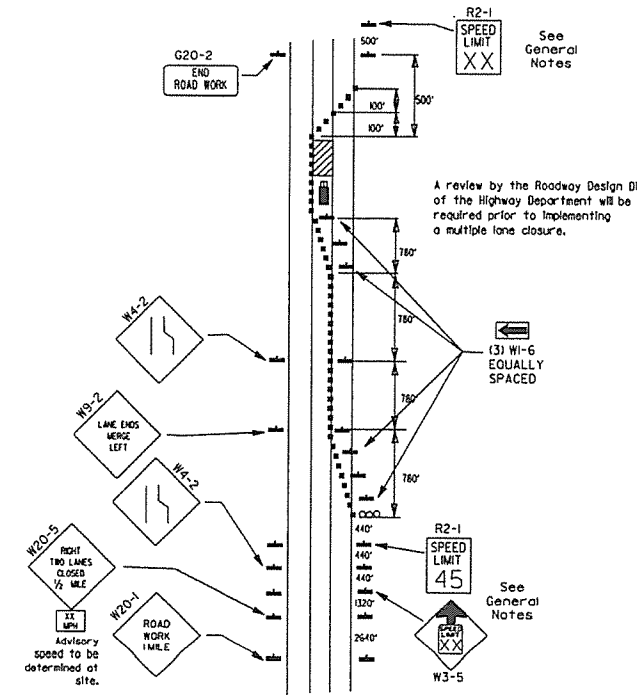
STOP SLOW PADDLE



DETAIL OF SPLICES



- NOTES:
- USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)
 - NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.
 - SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED.
 - AND ALL SIGN POSTS SHALL BE PLUMB.

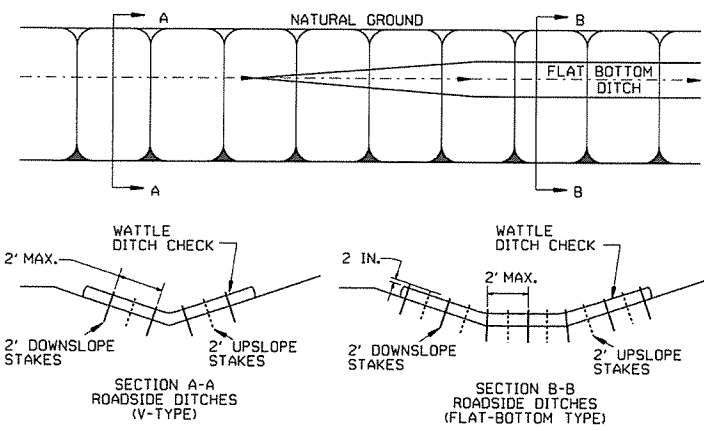


(D) Typical application - closing multiple lanes of a multi-lane highway.

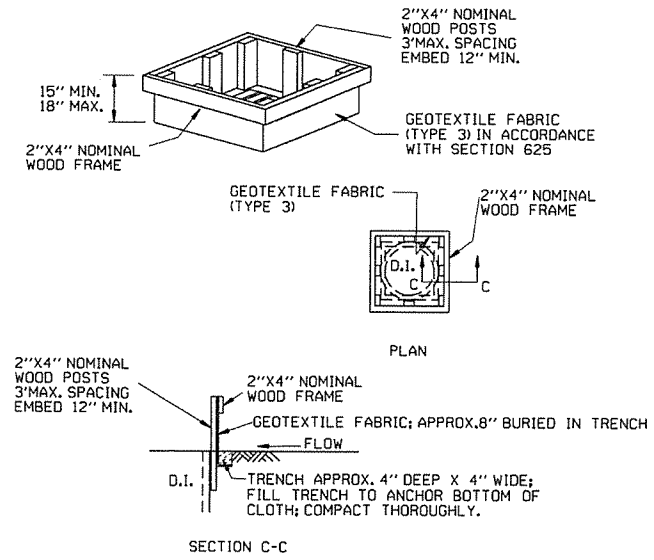
DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-18 REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-3

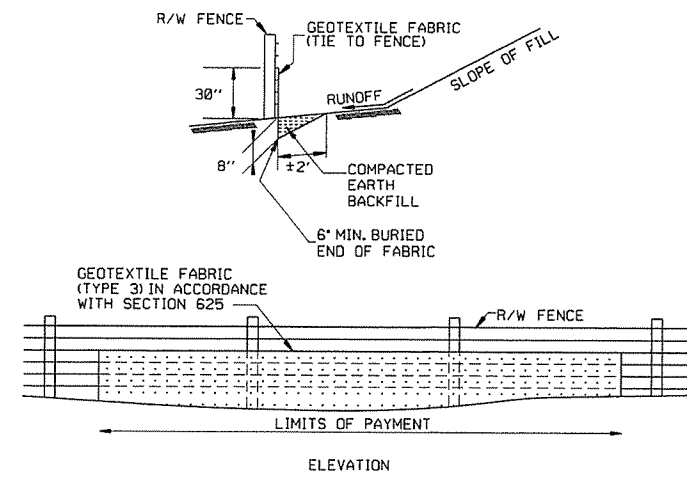
GENERAL NOTES
 INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



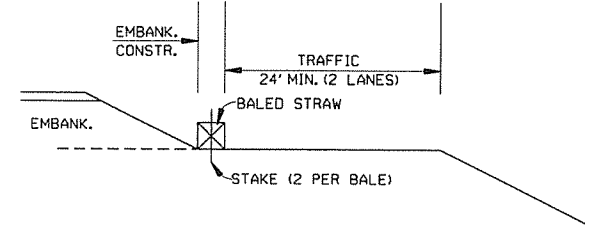
DROP INLET SILT FENCE (E-7)



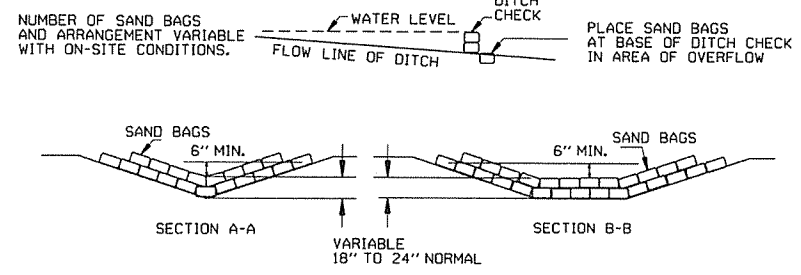
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

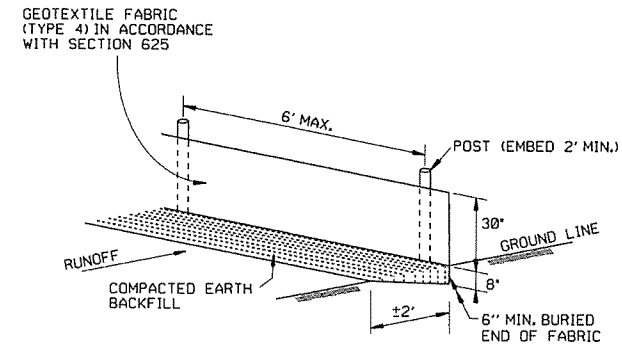
GENERAL NOTES
 1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
 2. NO GAPS SHALL BE LEFT BETWEEN BALES.
 3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)

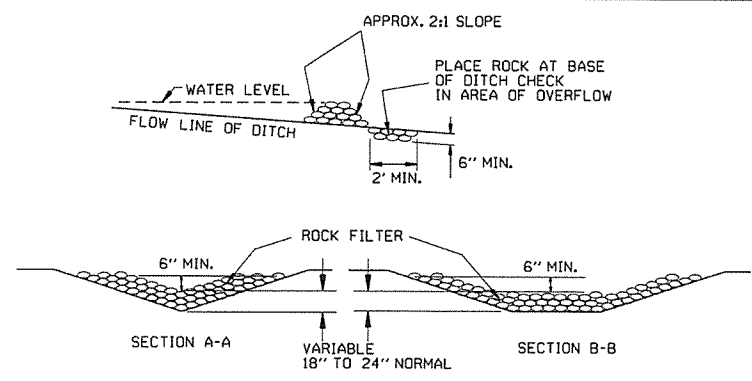


SAND BAG DITCH CHECK (E-5)



SILT FENCE (E-11)

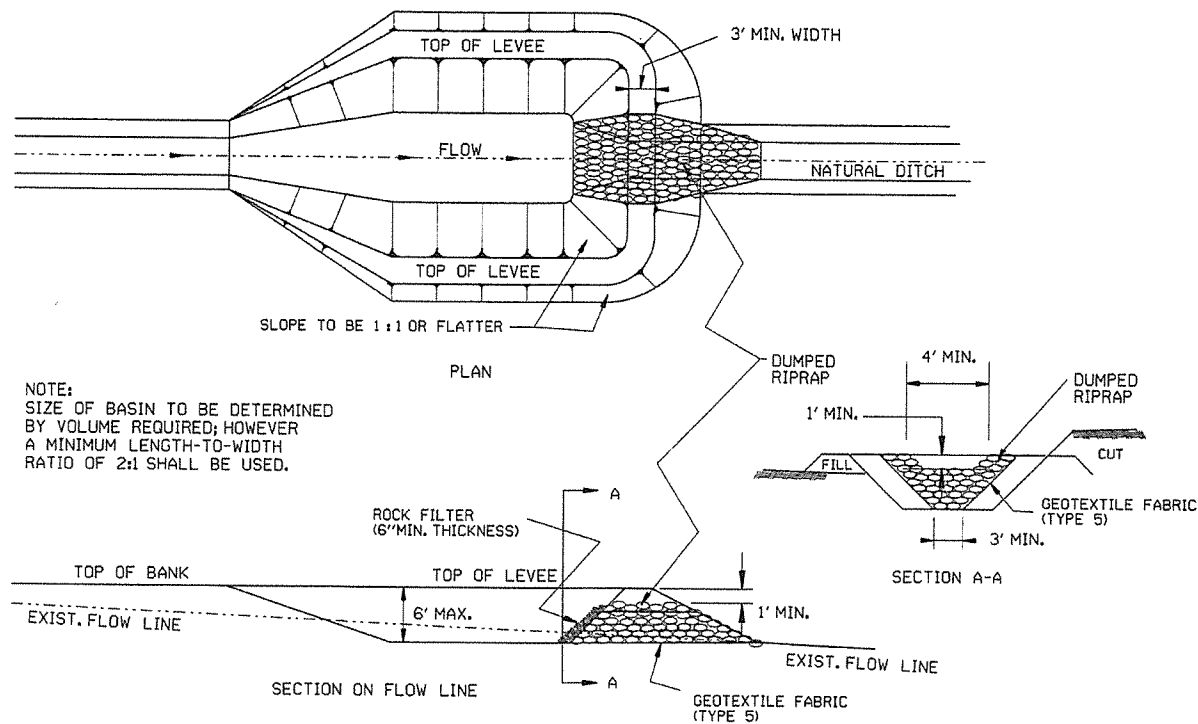
GENERAL NOTES
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



ROCK DITCH CHECK (E-6)

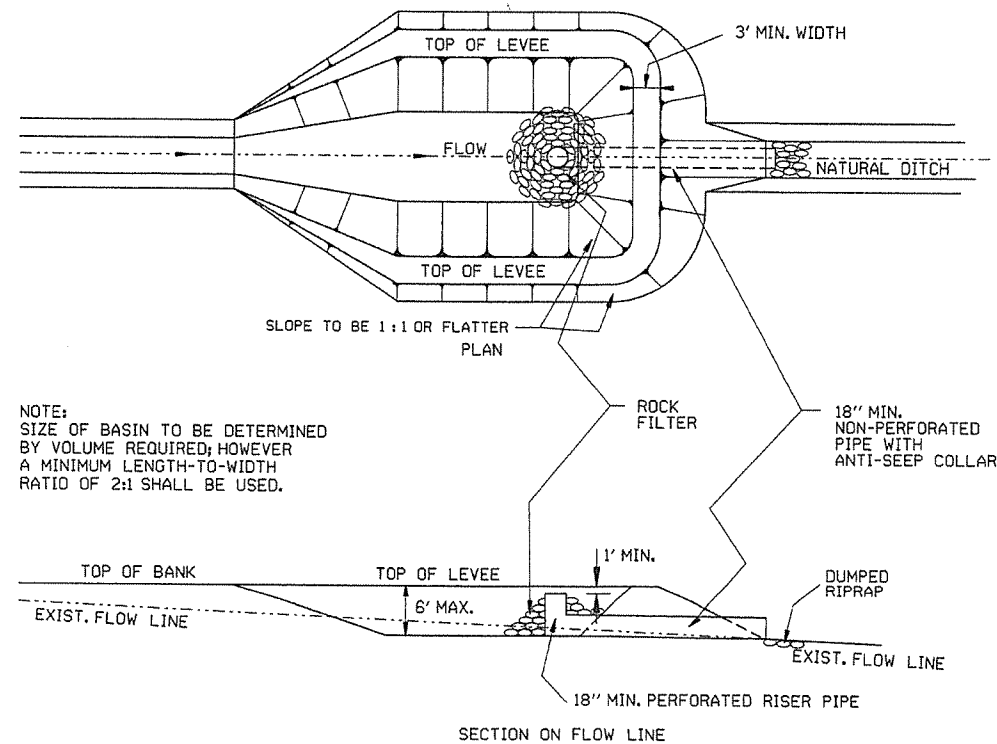
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
6-2-94	REVISED E-1, 4, 7 & 11; DELETED E-2 & 3	6-2-94
4-1-93	REDRAWN	
10-1-92	REDRAWN	
8-2-76	ISSUED R.D.M.	298-7-28-76
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION
 TEMPORARY EROSION CONTROL DEVICES
 STANDARD DRAWING TEC-1



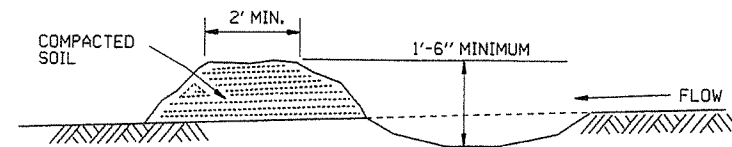
NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.

SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)

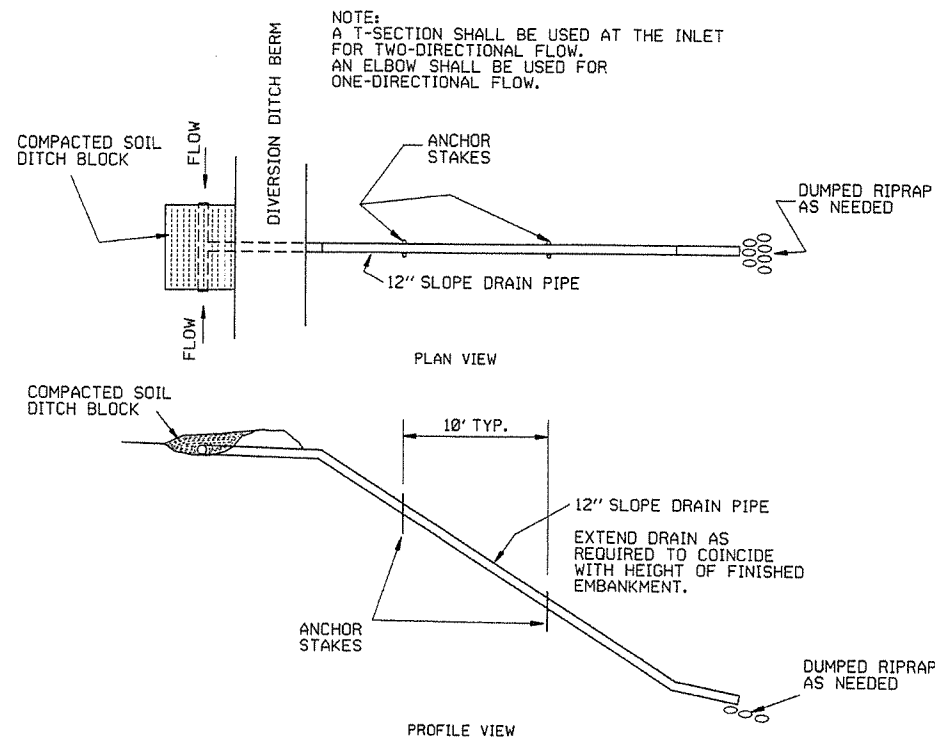


NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.

SEDIMENT BASIN WITH PIPE OUTLET (E-10)

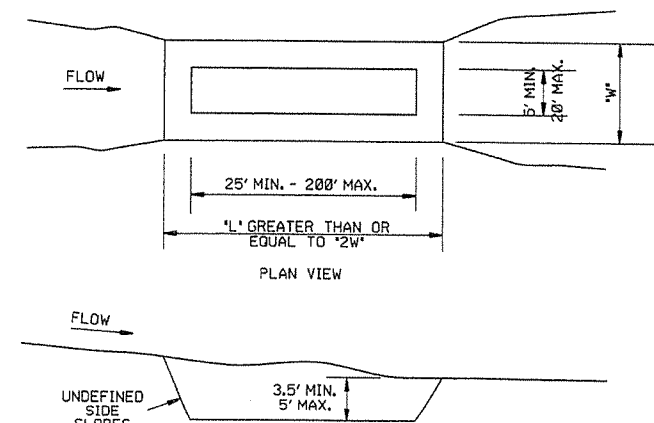


DIVERSION DITCH (E-8)



NOTE:
A T-SECTION SHALL BE USED AT THE INLET
FOR TWO-DIRECTIONAL FLOW.
AN ELBOW SHALL BE USED FOR
ONE-DIRECTIONAL FLOW.

SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION
CONTROL DEVICES

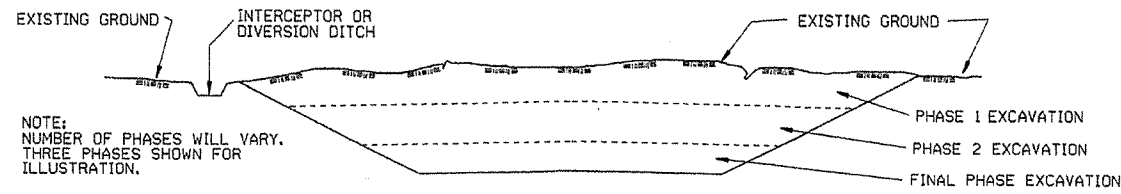
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

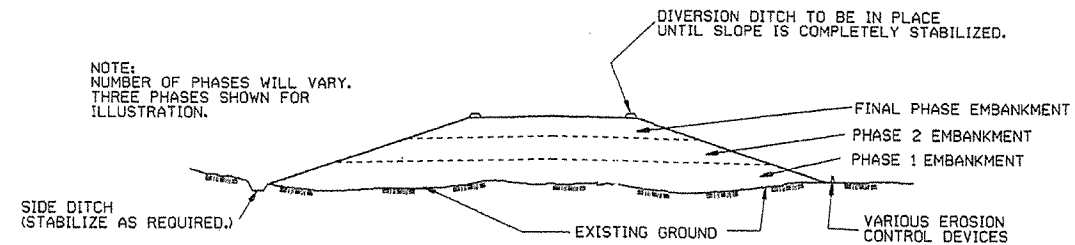
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES, CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

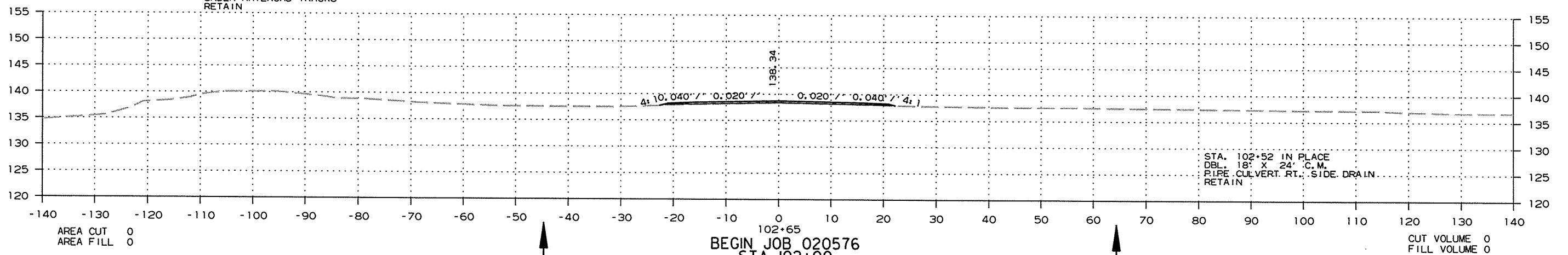
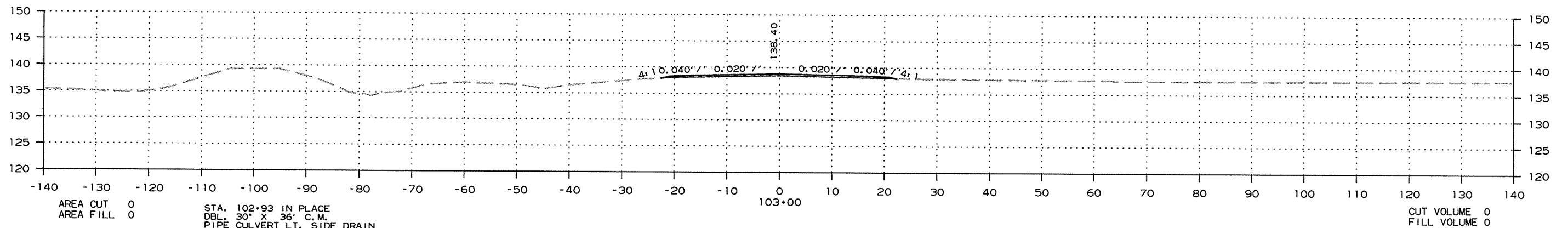
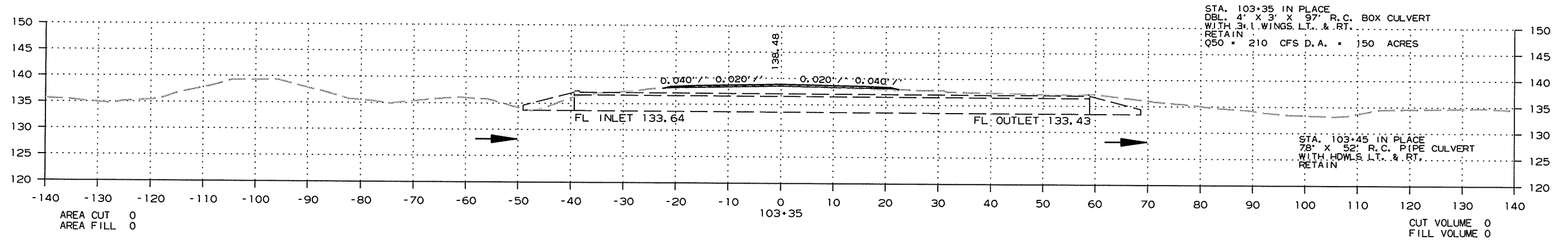
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

96

ARKANSAS STATE HIGHWAY COMMISSION			
TEMPORARY EROSION CONTROL DEVICES			
STANDARD DRAWING TEC-3			
11-23-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		6-2-94
DATE	REVISION		FILMED

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							97	178

② CROSS SECTIONS



BEGIN JOB 020576
STA. 102+00
LOG MILE 5.68

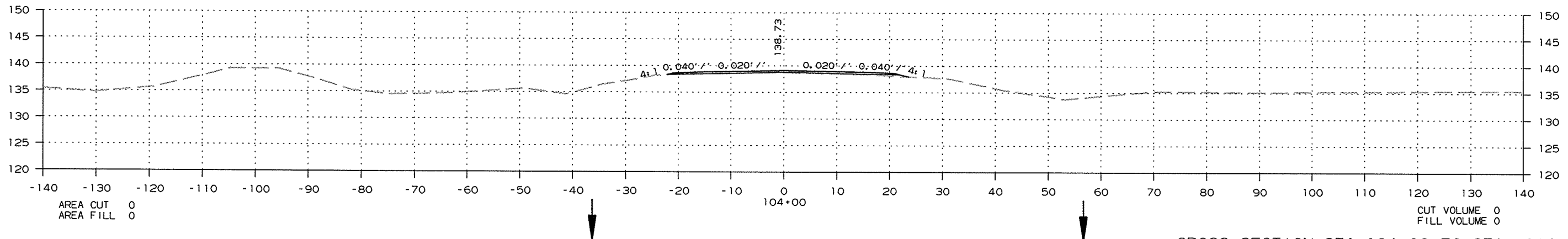
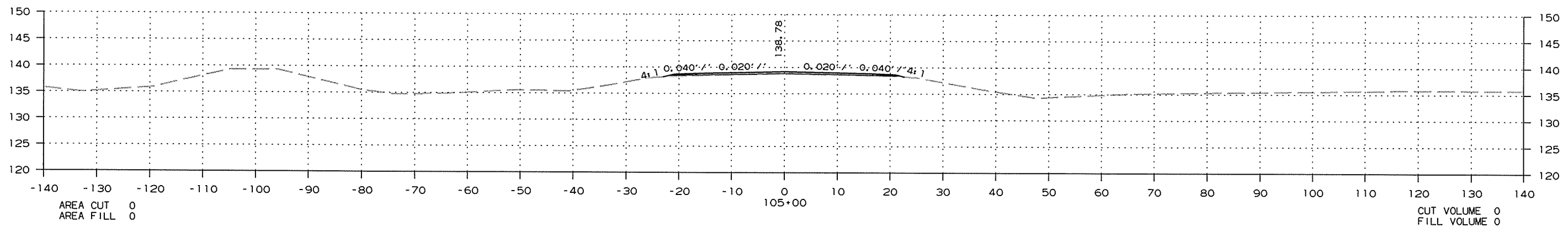
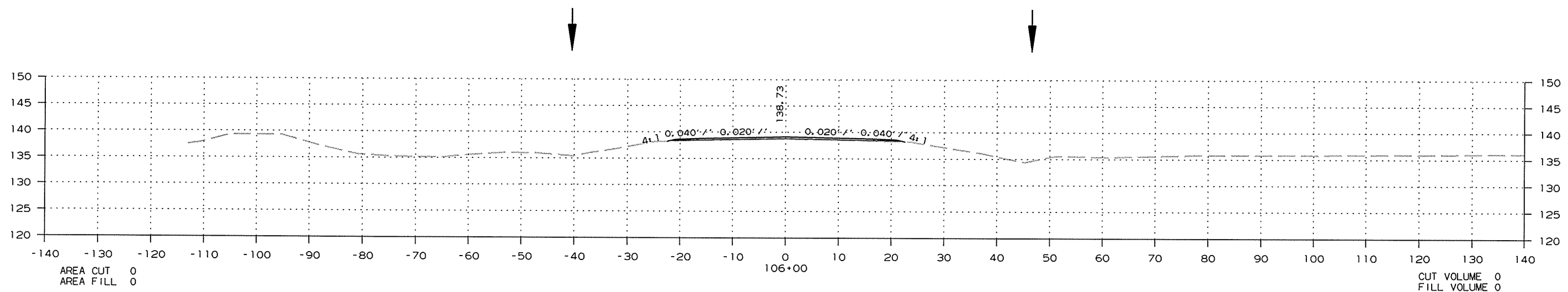
CROSS SECTION STA. 102+65 TO STA. 103+35

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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② CROSS SECTIONS

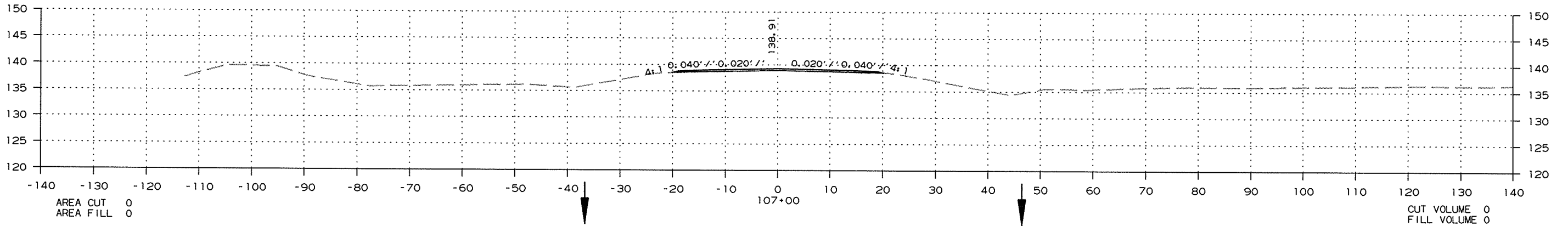
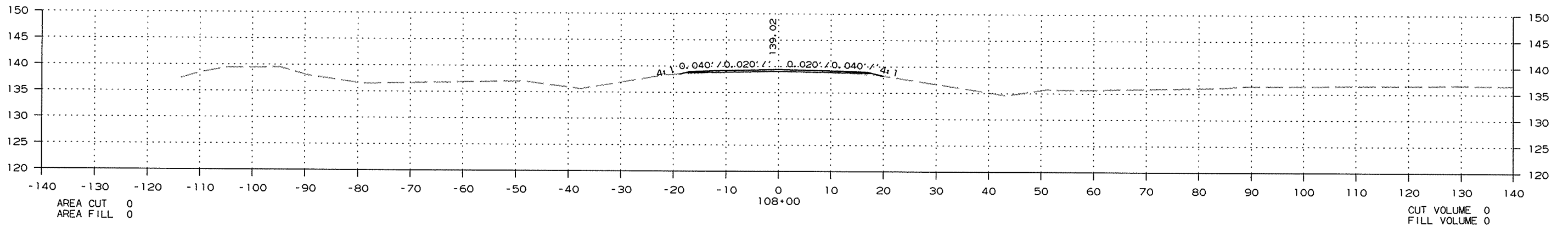


CROSS SECTION STA. 104+00 TO STA. 106+00

4/24/2015 R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020576	99	178

② CROSS SECTIONS



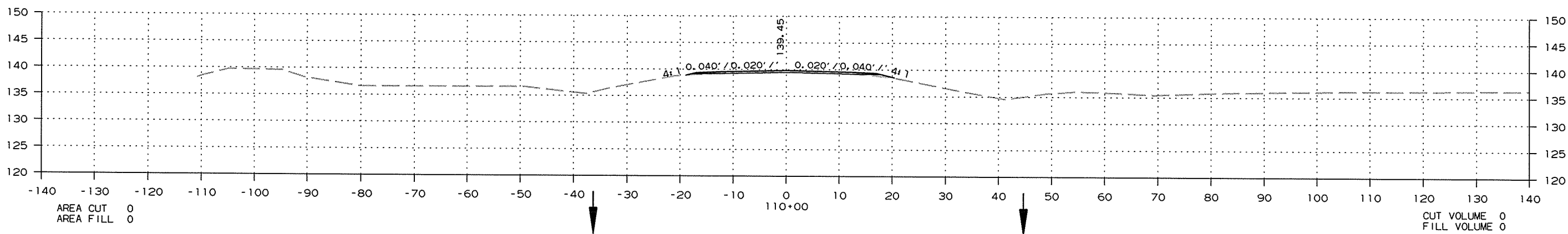
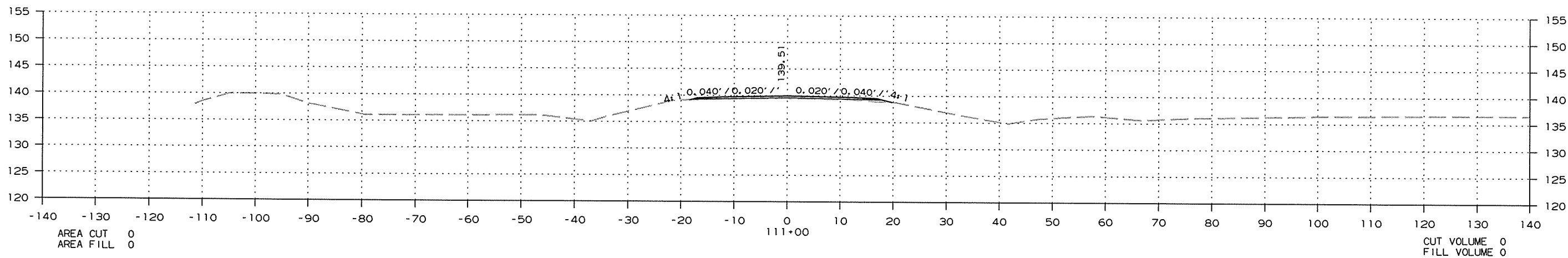
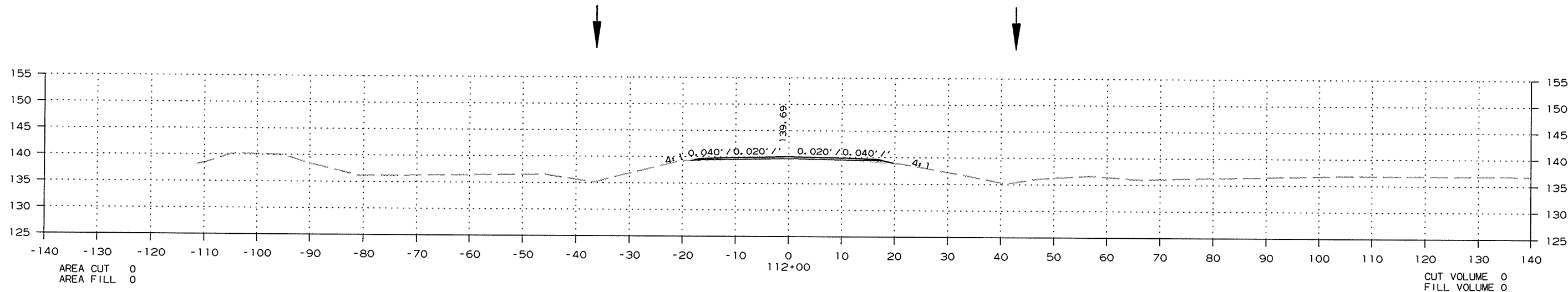
CROSS SECTION STA. 107+00 TO STA. 109+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	100	178

② CROSS SECTIONS



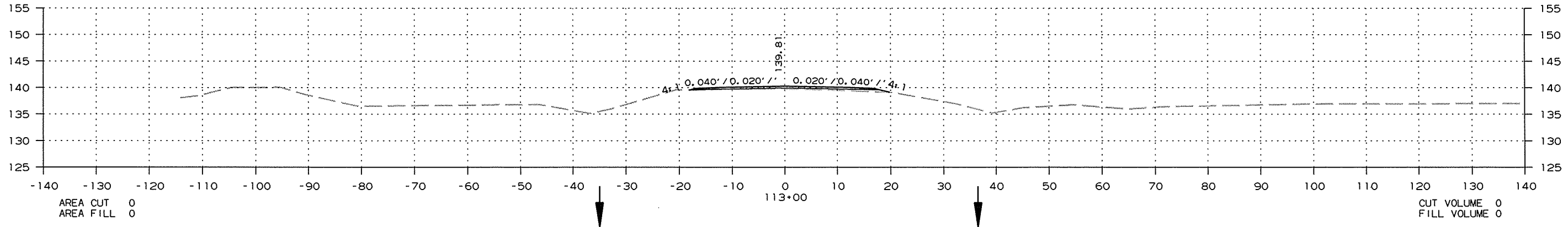
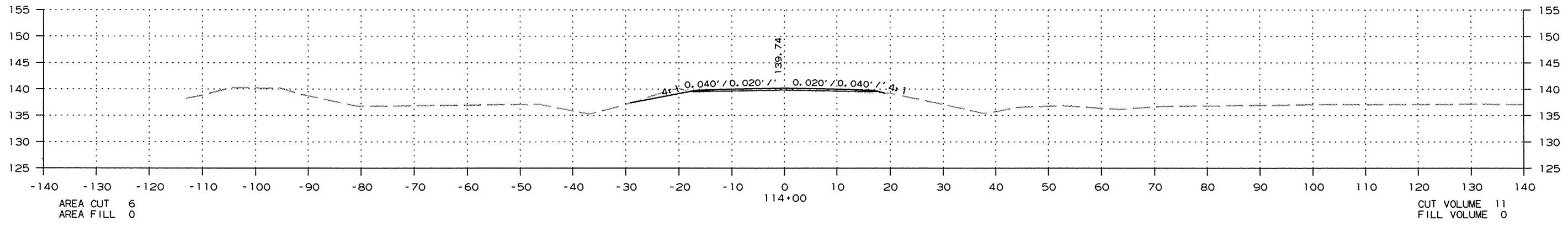
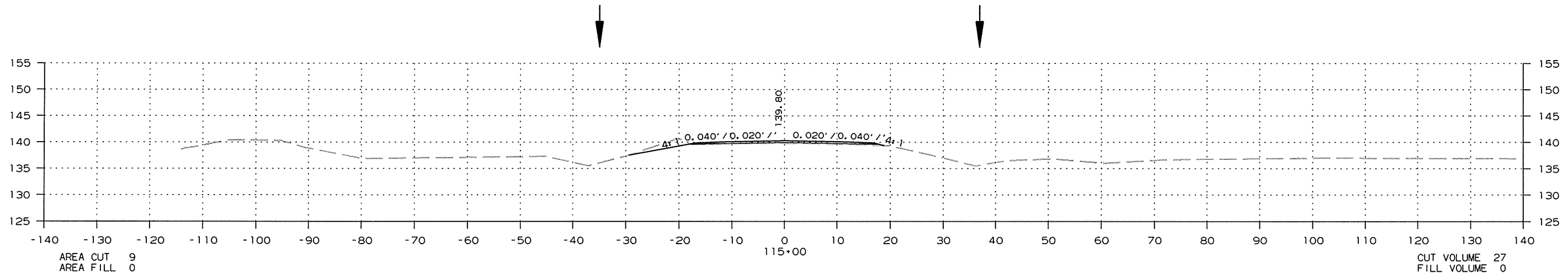
CROSS SECTION STA. 110+00 TO STA. 112+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
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JOB NO.							020576	101	178

② CROSS SECTIONS

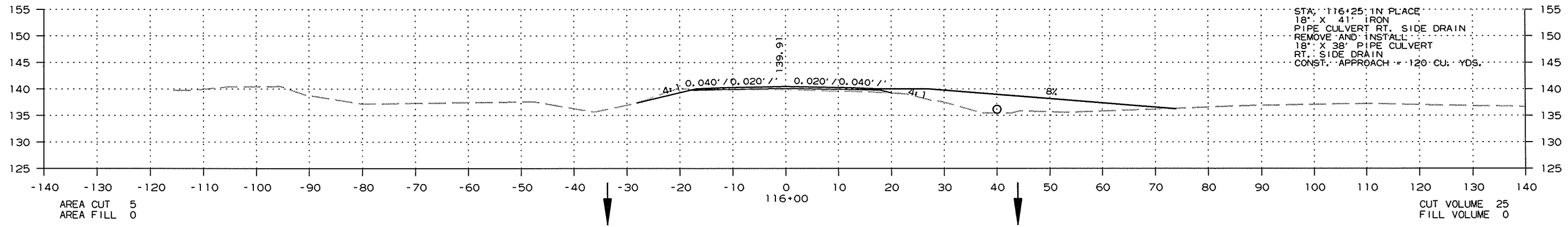
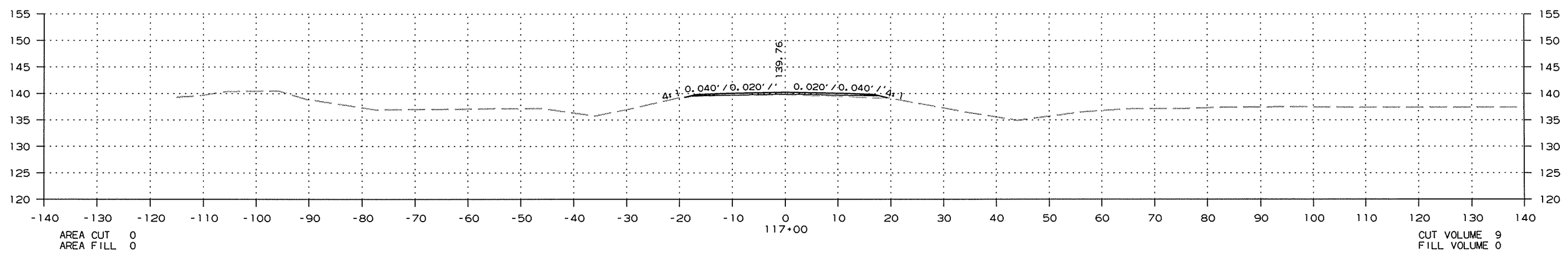
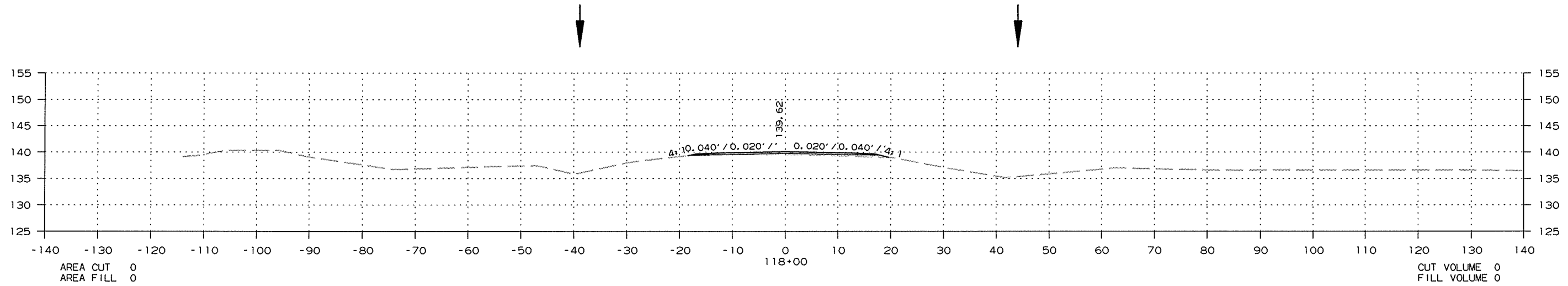


CROSS SECTION STA. 113+00 TO STA. 115+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 CROSS SECTIONS

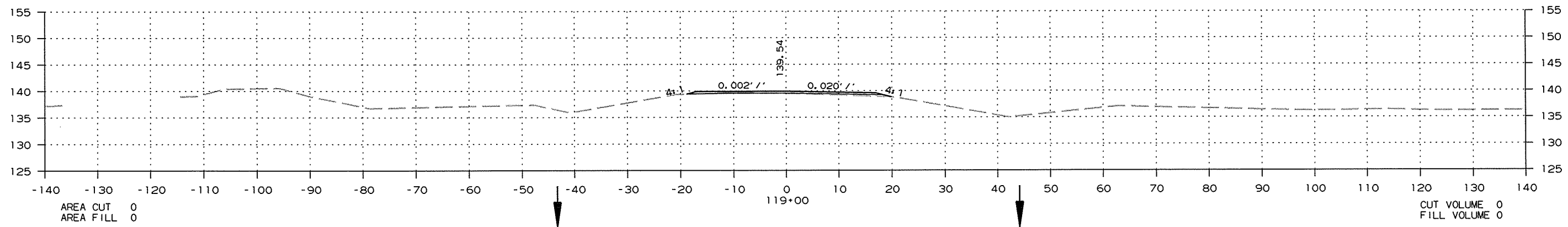
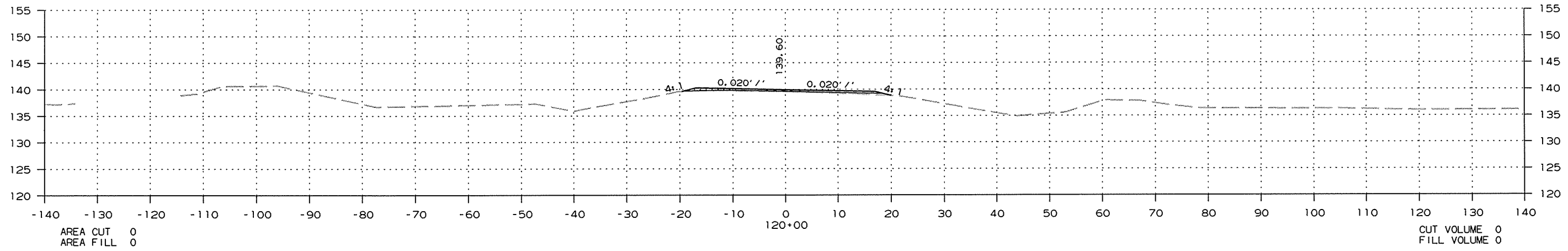
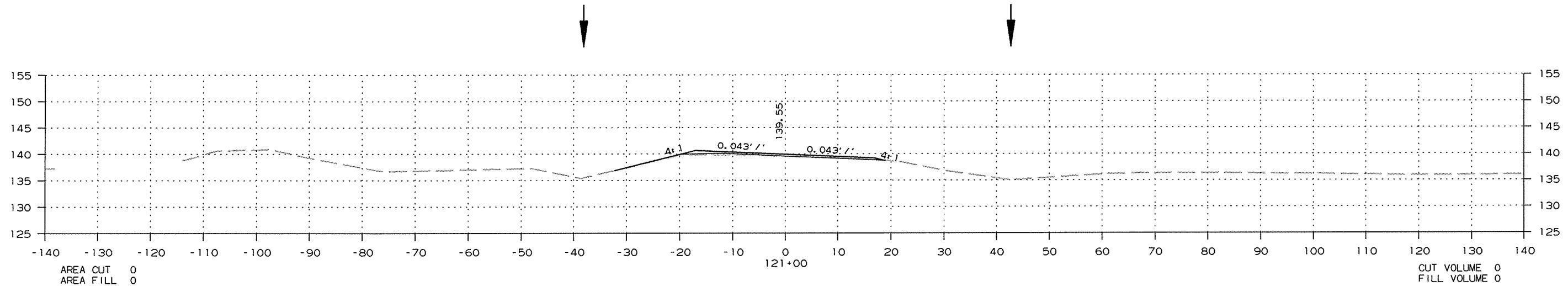


CROSS SECTION STA. 116+00 TO STA. 118+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	103	178

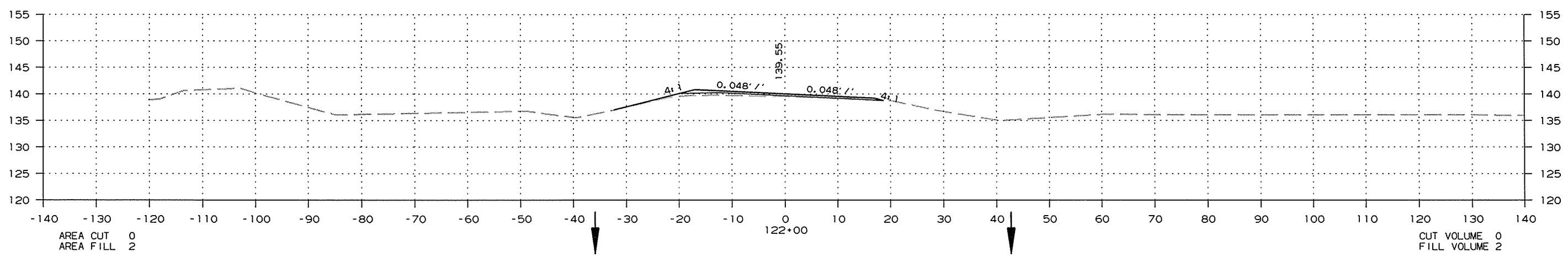
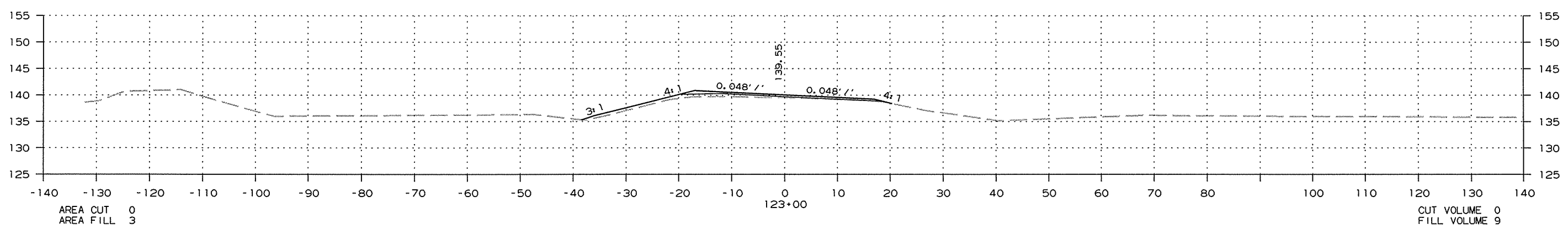
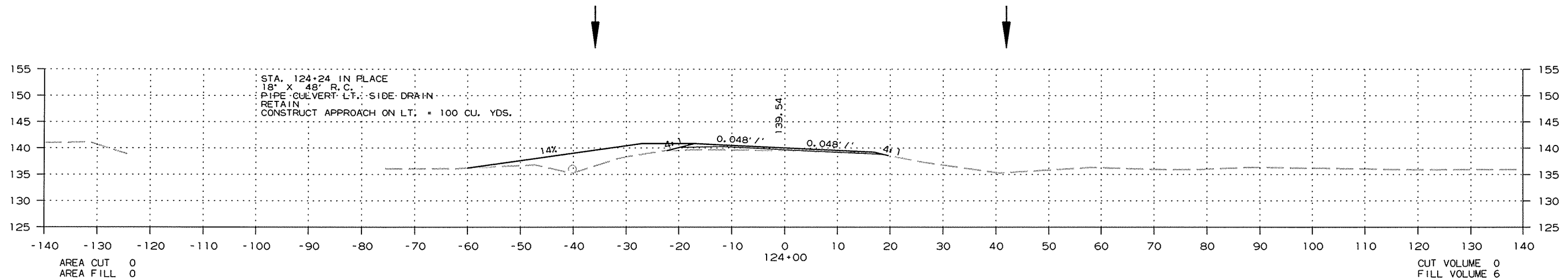
② CROSS SECTIONS



CROSS SECTION STA. 119+00 TO STA. 121+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	104	178

② CROSS SECTIONS

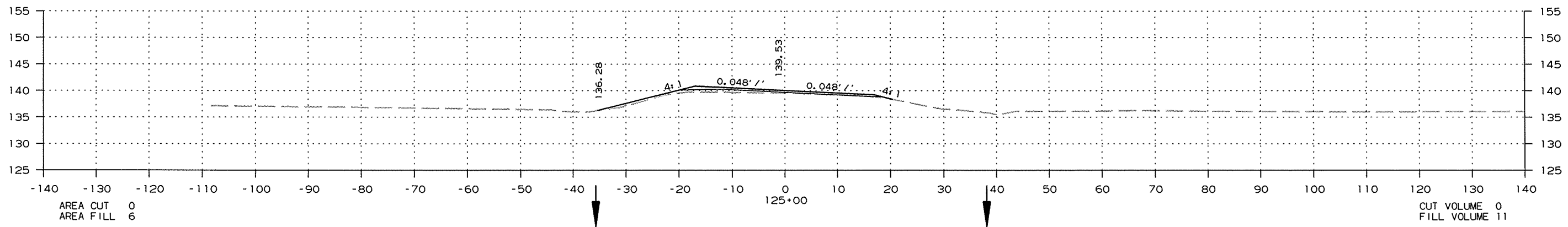
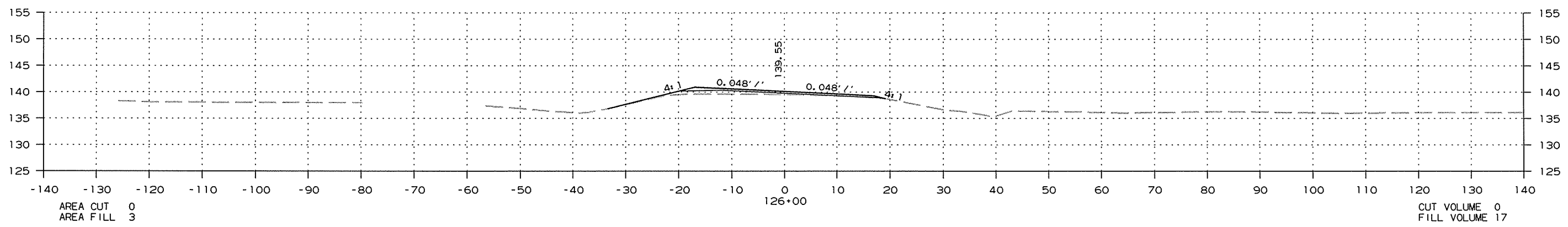
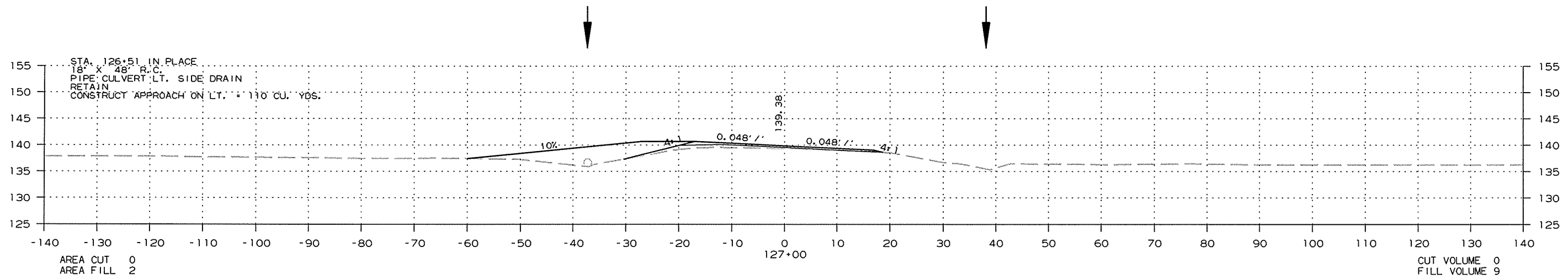


CROSS SECTION STA. 122+00 TO STA. 124+00

R020576.DCN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	105	178

② CROSS SECTIONS

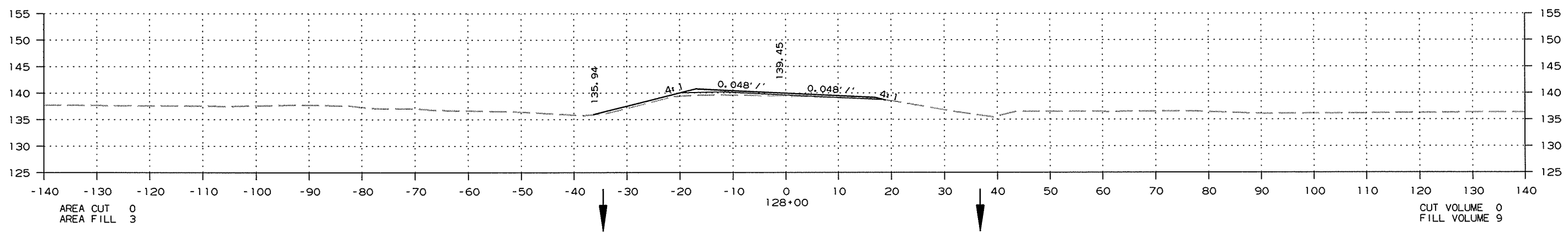
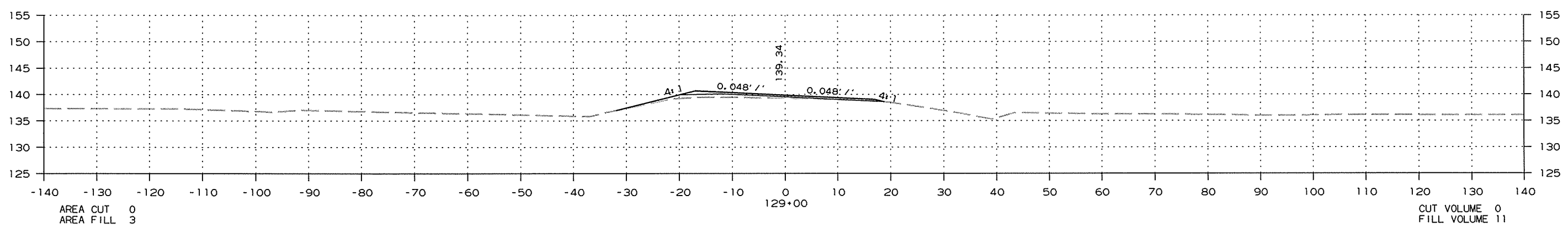
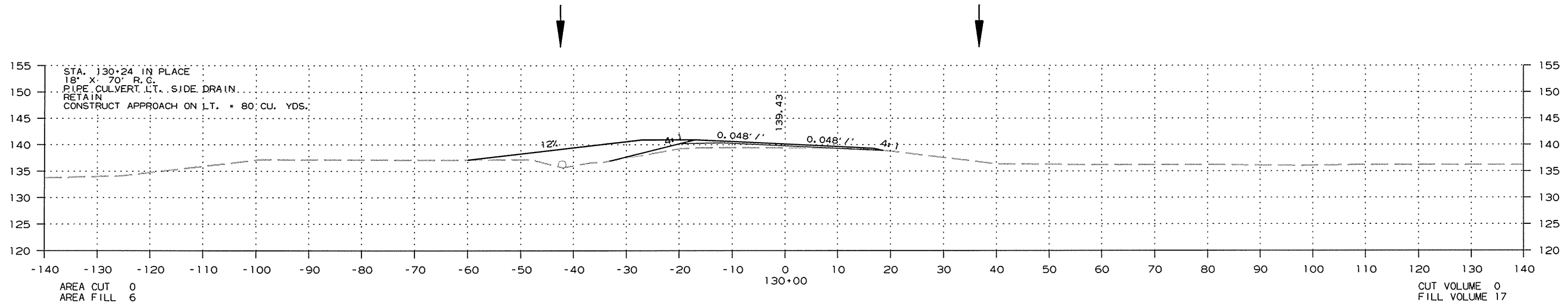


CROSS SECTION STA. 125+00 TO STA. 127+00

4/24/2015
R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		106	178

② CROSS SECTIONS

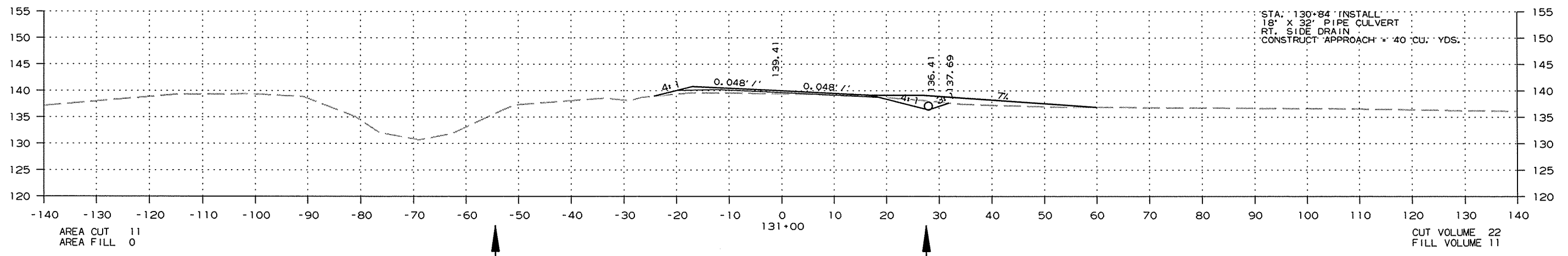
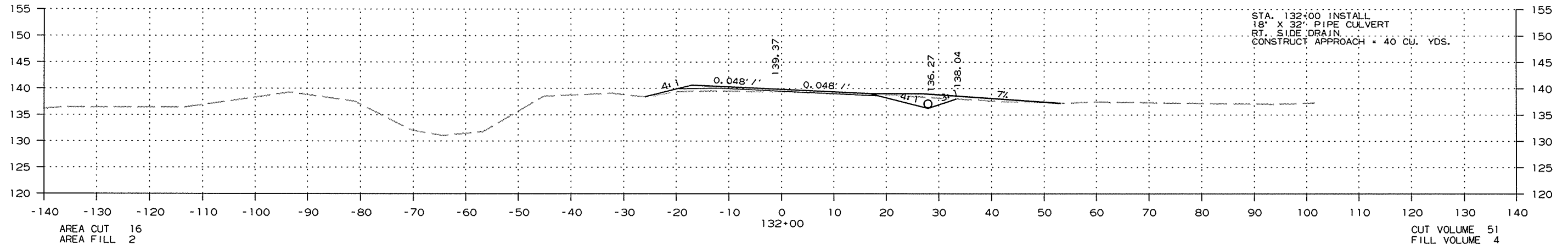
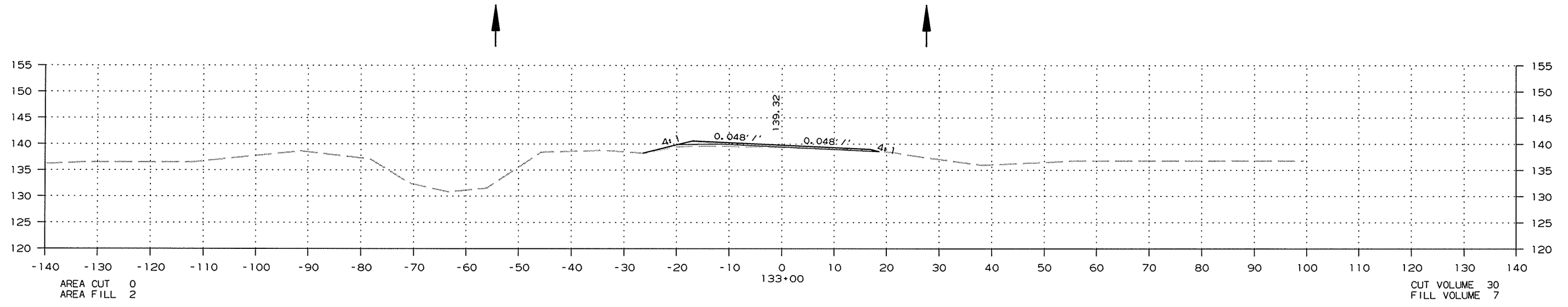


CROSS SECTION STA. 128+00 TO STA. 130+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							107	178

② CROSS SECTIONS



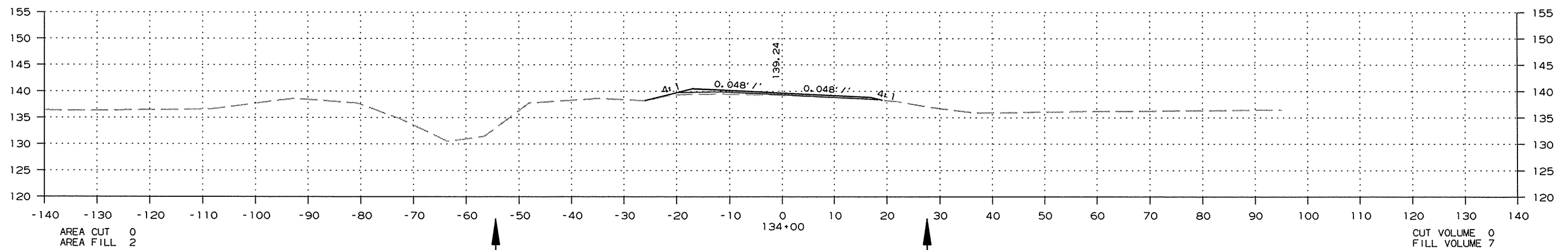
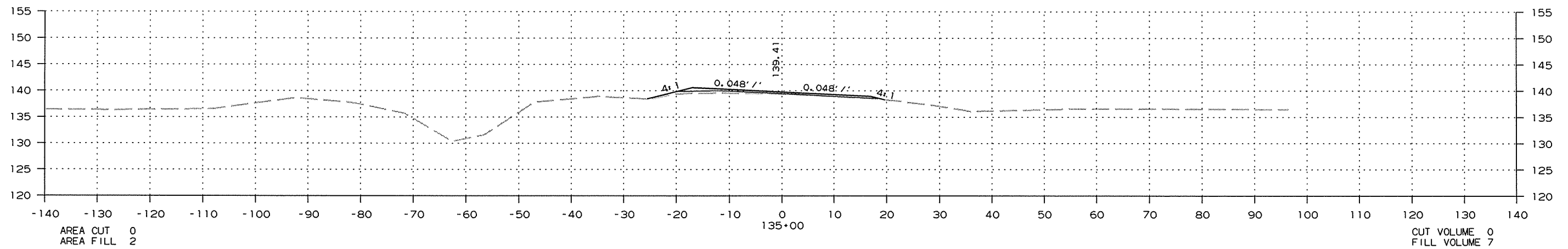
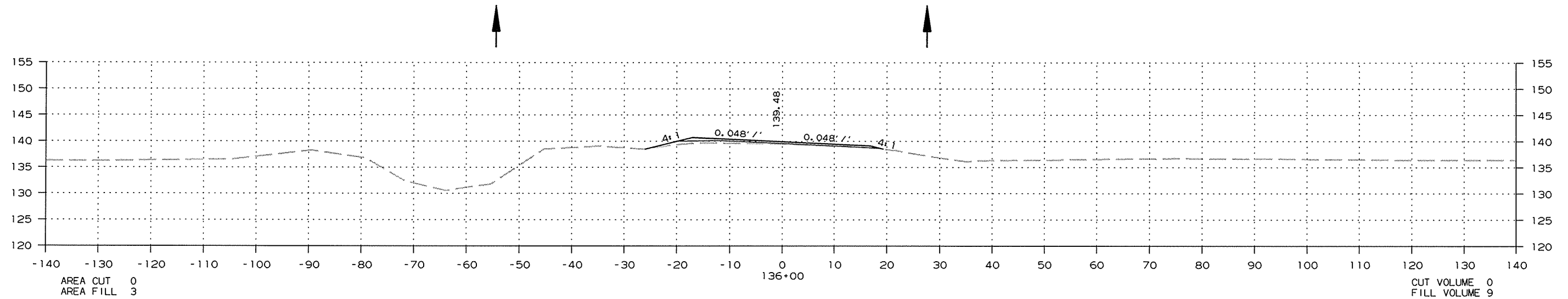
CROSS SECTION STA. 131+00 TO STA. 133+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	108	178

② CROSS SECTIONS



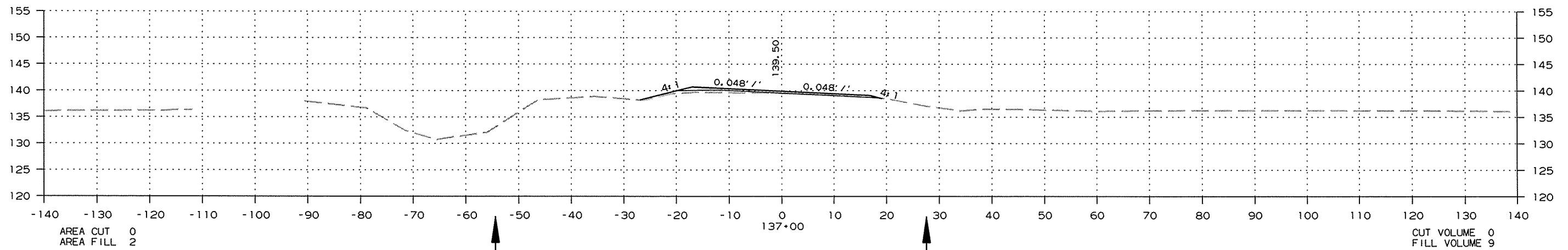
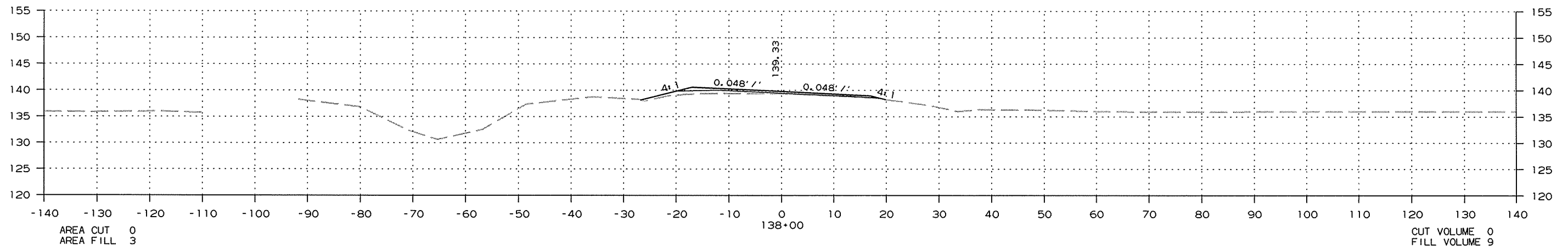
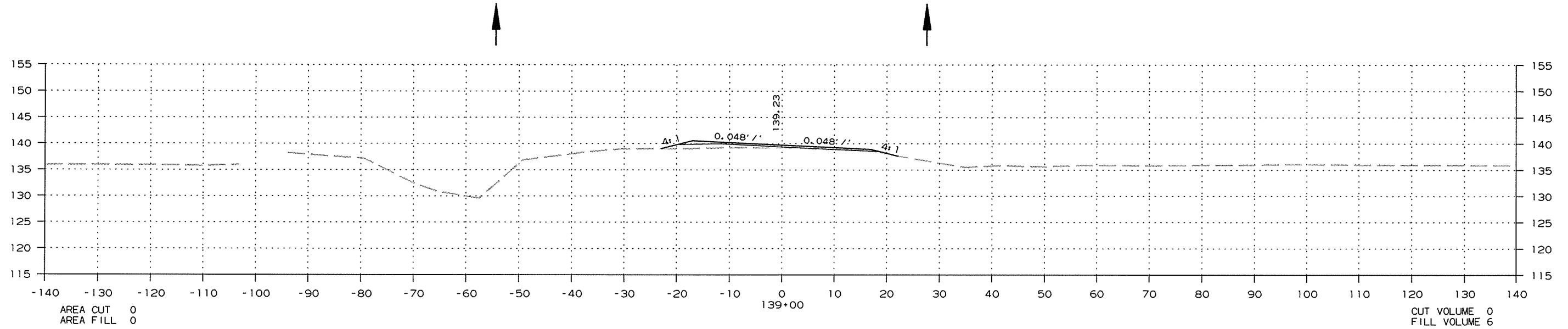
CROSS SECTION STA. 134+00 TO STA. 136+00

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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							109	178

② CROSS SECTIONS



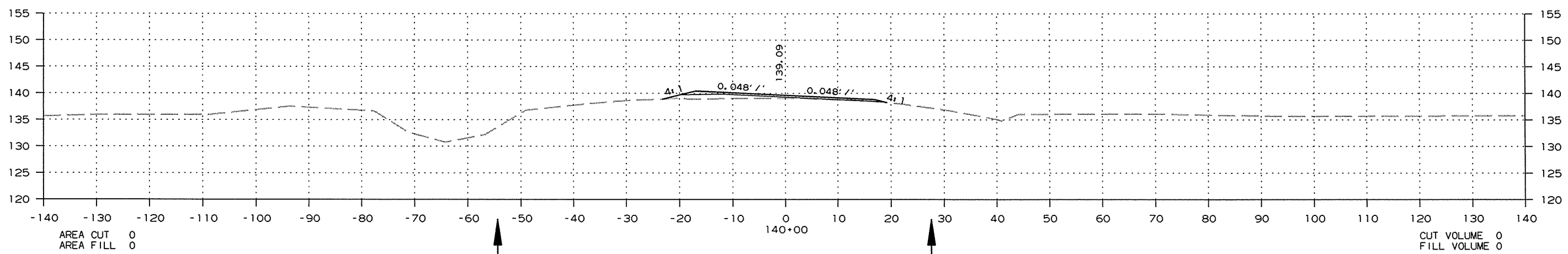
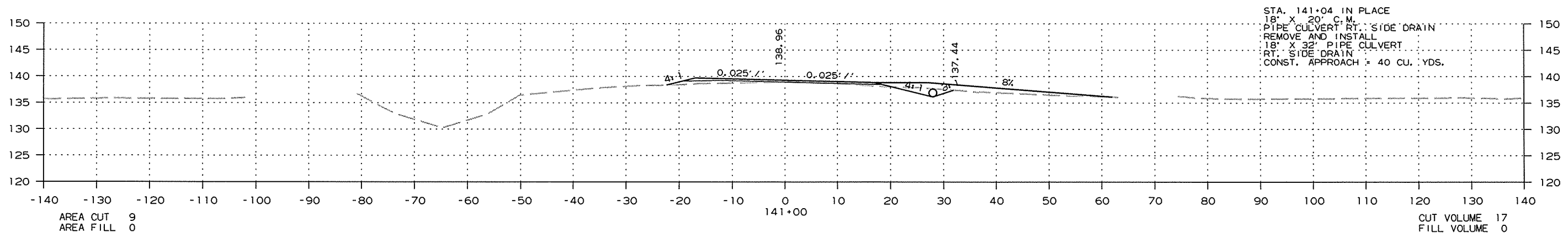
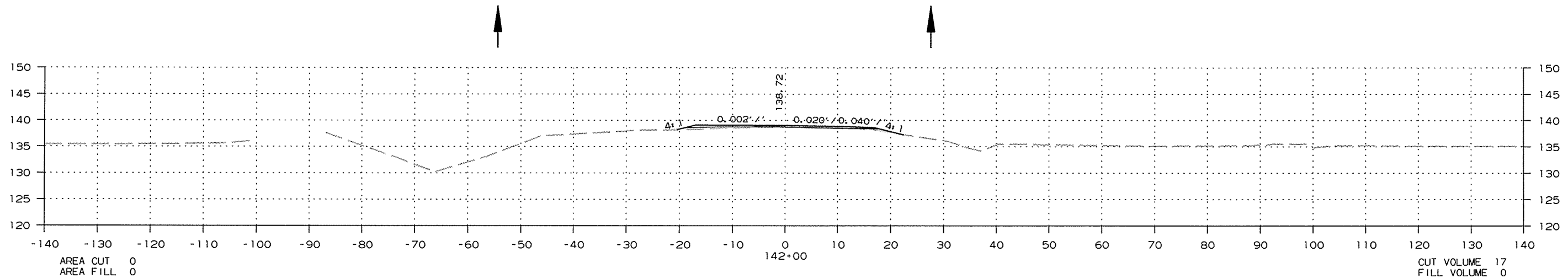
CROSS SECTION STA. 137+00 TO STA. 139+00

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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		110	178

2 CROSS SECTIONS

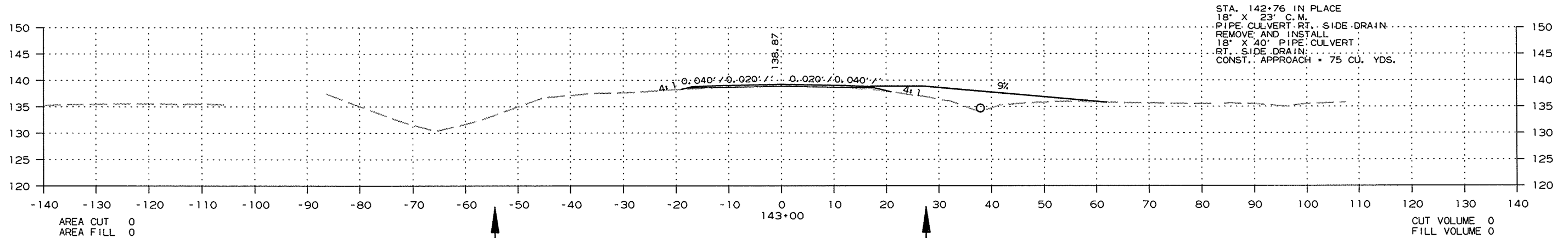
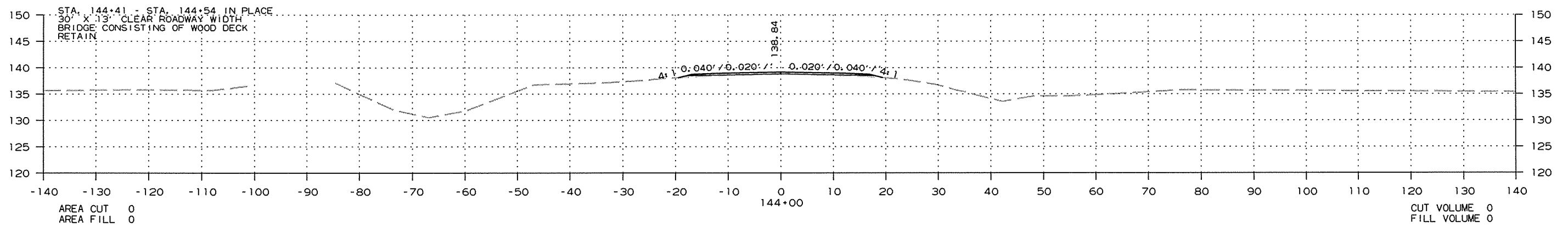
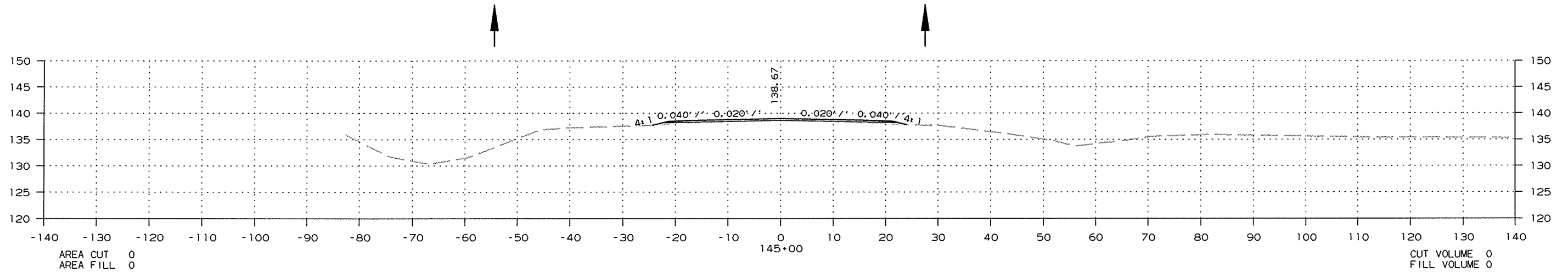


CROSS SECTION STA. 140+00 TO STA. 142+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		111	178

② CROSS SECTIONS



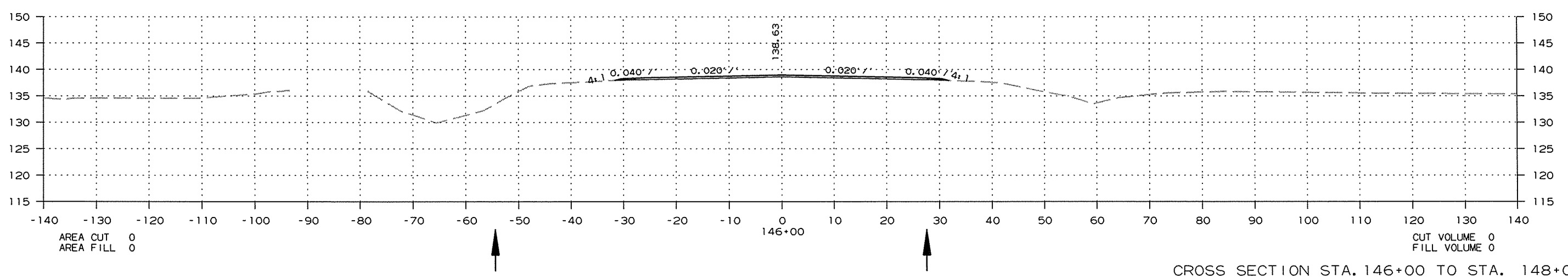
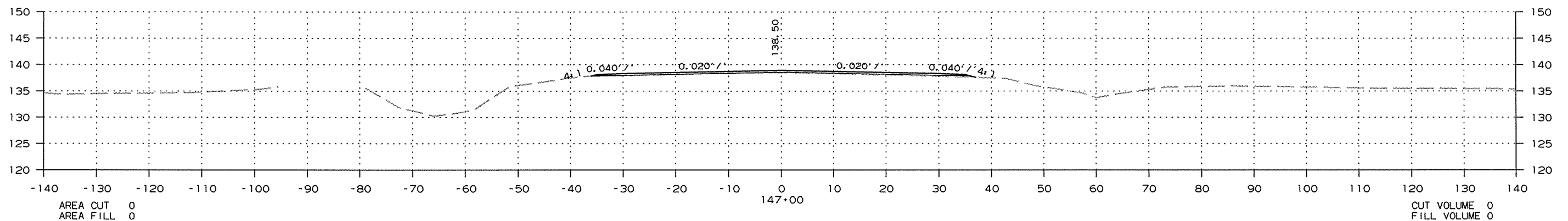
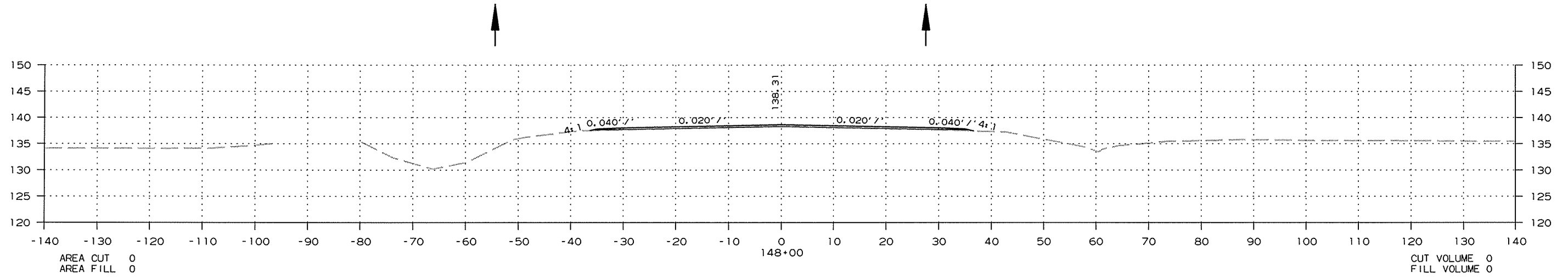
CROSS SECTION STA. 143+00 TO STA. 145+00

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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						020576	112	178

② CROSS SECTIONS

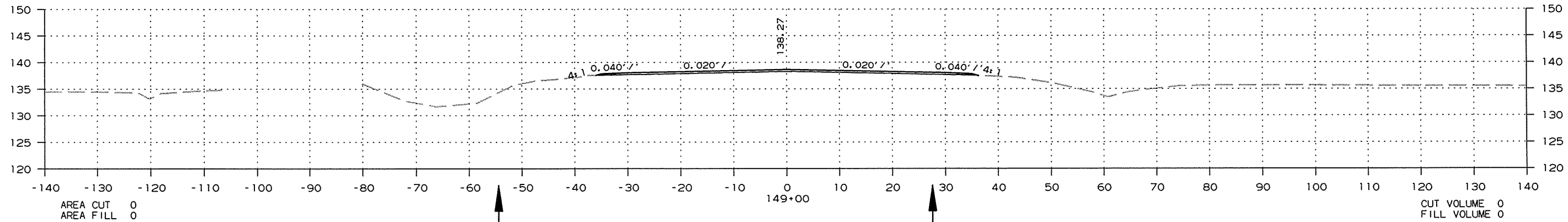
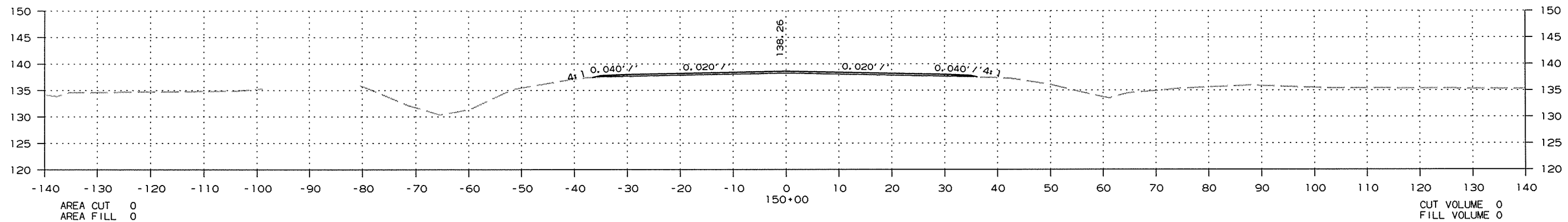
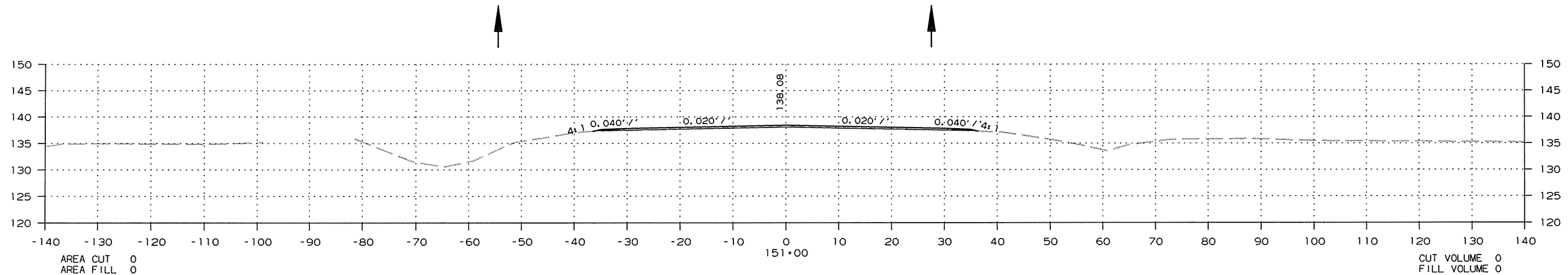


CROSS SECTION STA. 146+00 TO STA. 148+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		113	178

② CROSS SECTIONS

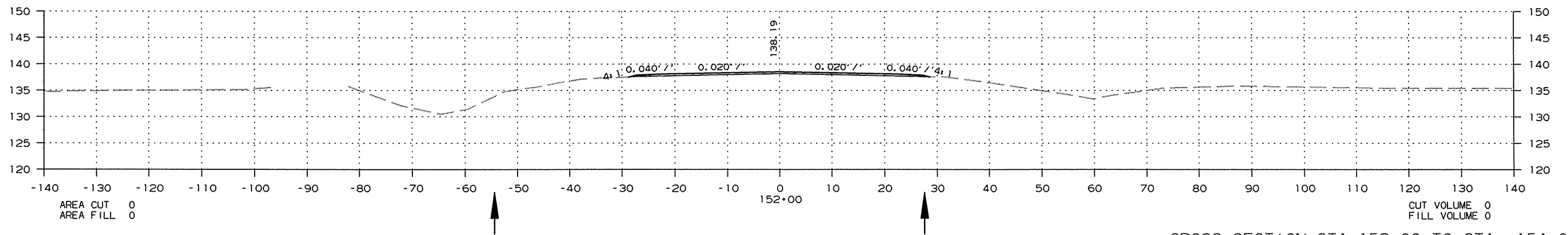
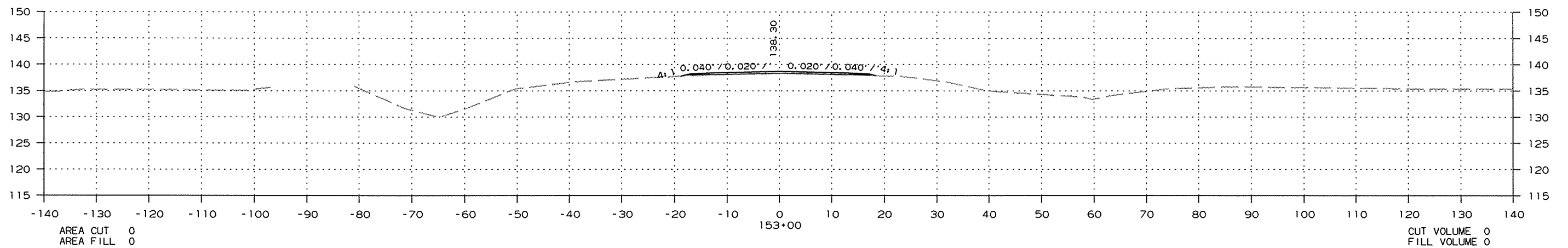
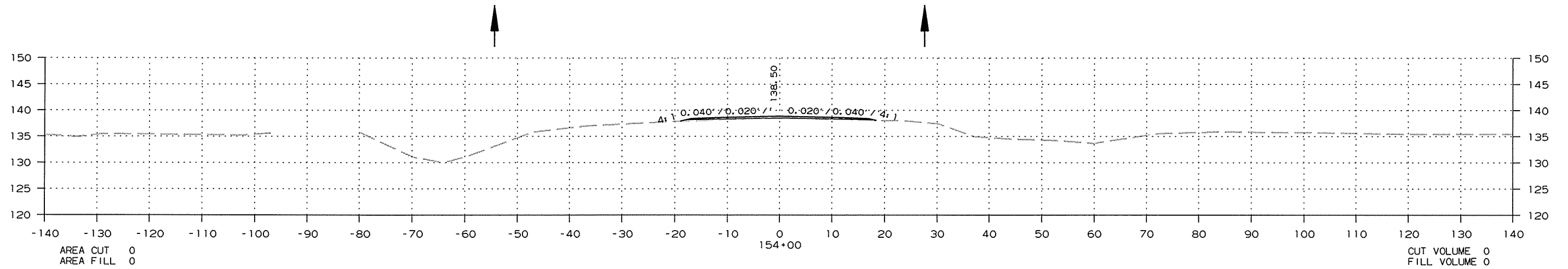


CROSS SECTION STA. 149+00 TO STA. 151+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020576	114	178

② CROSS SECTIONS



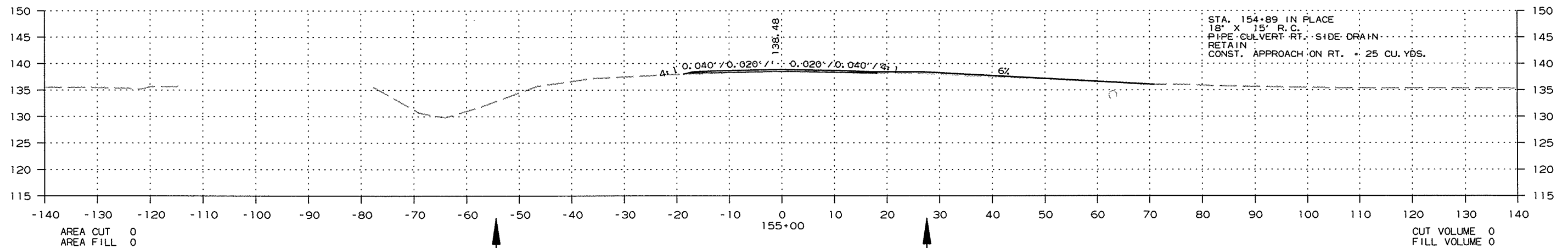
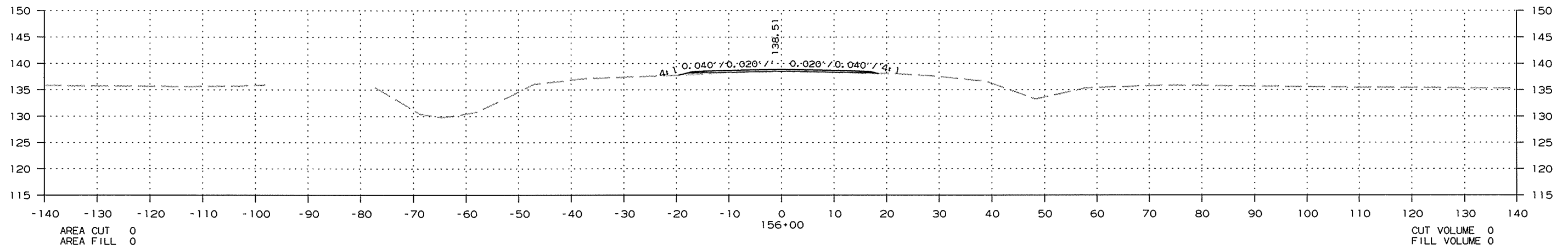
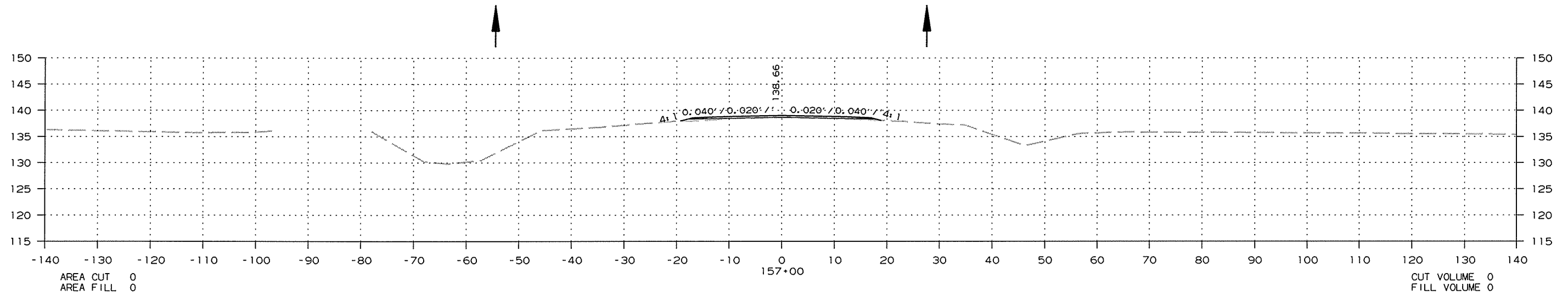
CROSS SECTION STA. 152+00 TO STA. 154+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020576	115	178

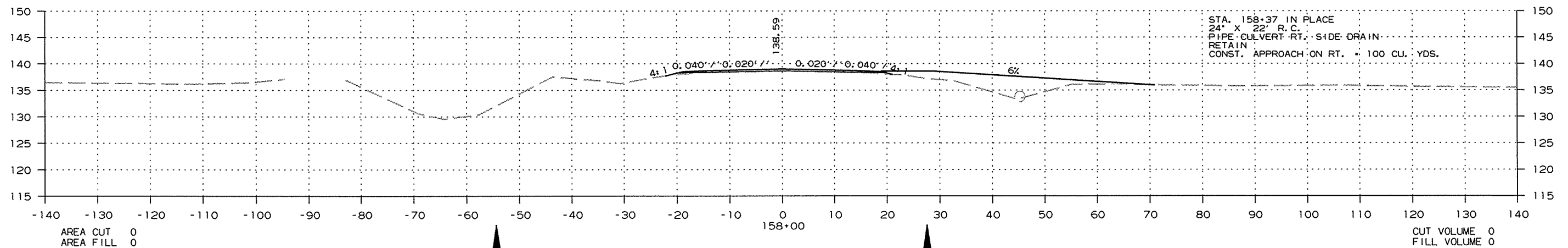
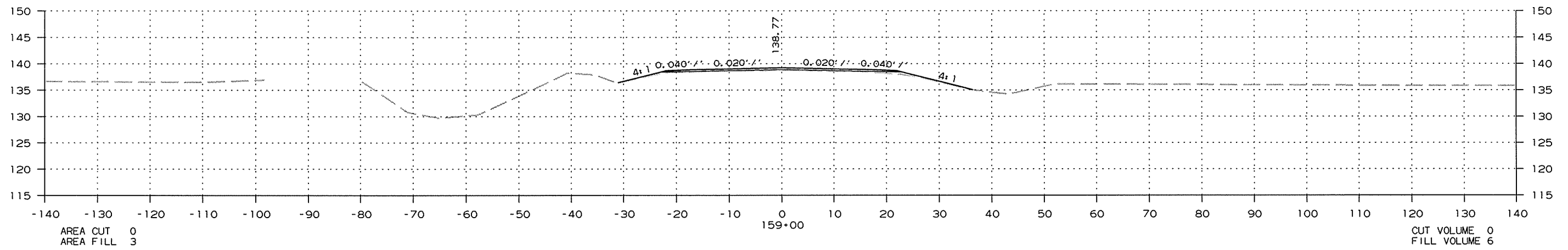
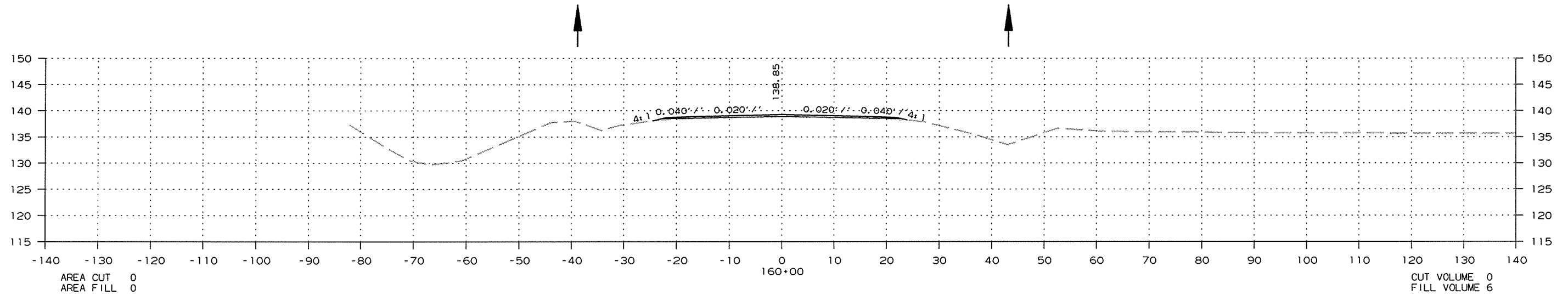
② CROSS SECTIONS



CROSS SECTION STA. 155+00 TO STA. 157+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							116	178

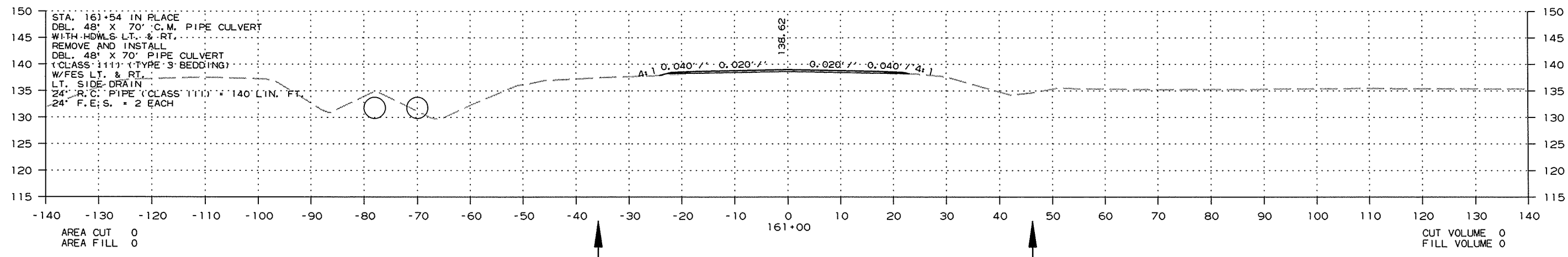
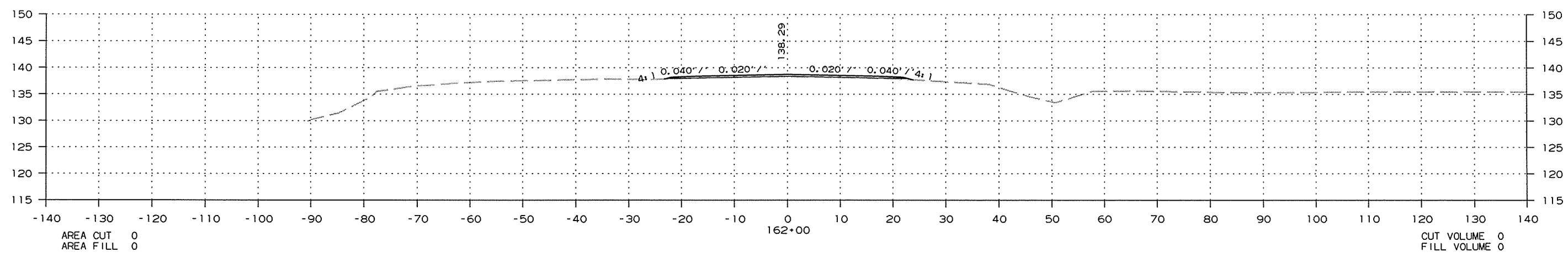
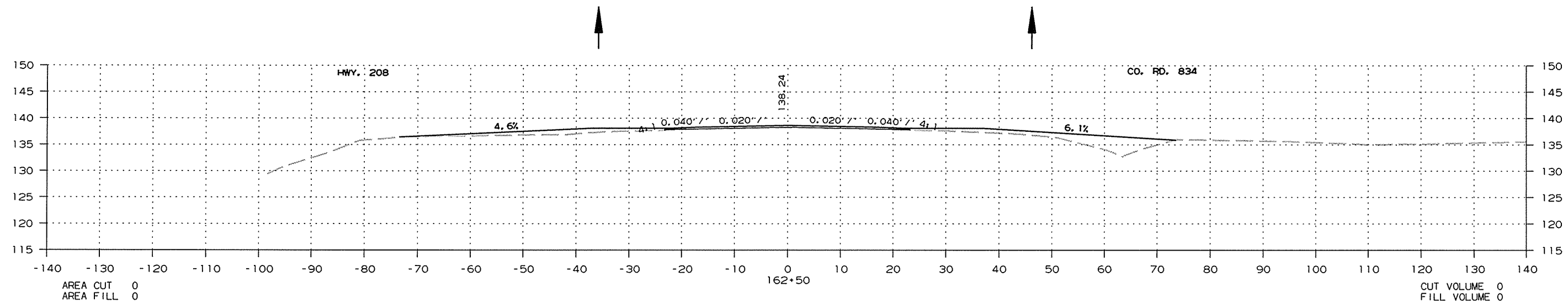
② CROSS SECTIONS



CROSS SECTION STA. 158+00 TO STA. 160+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	117	178

② CROSS SECTIONS



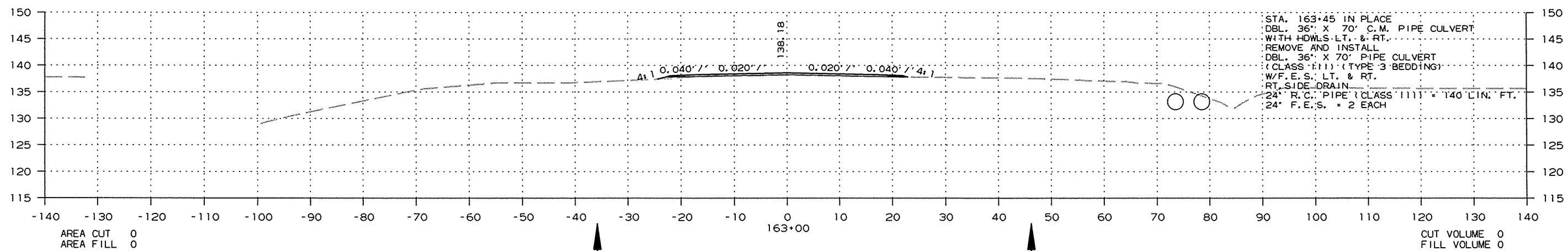
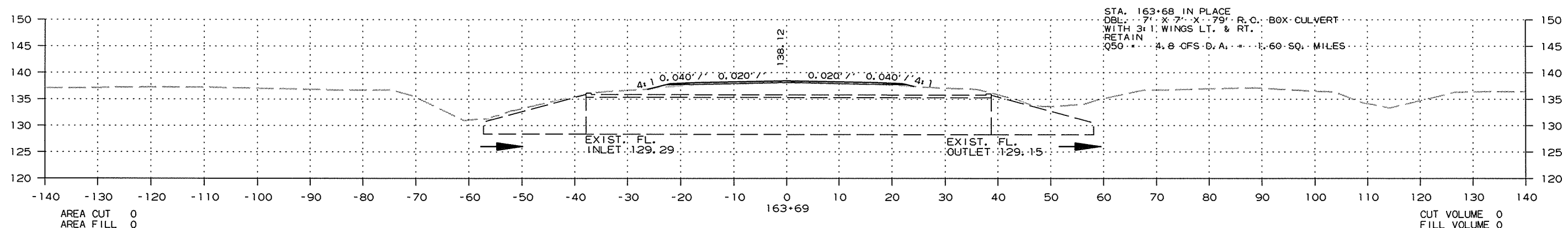
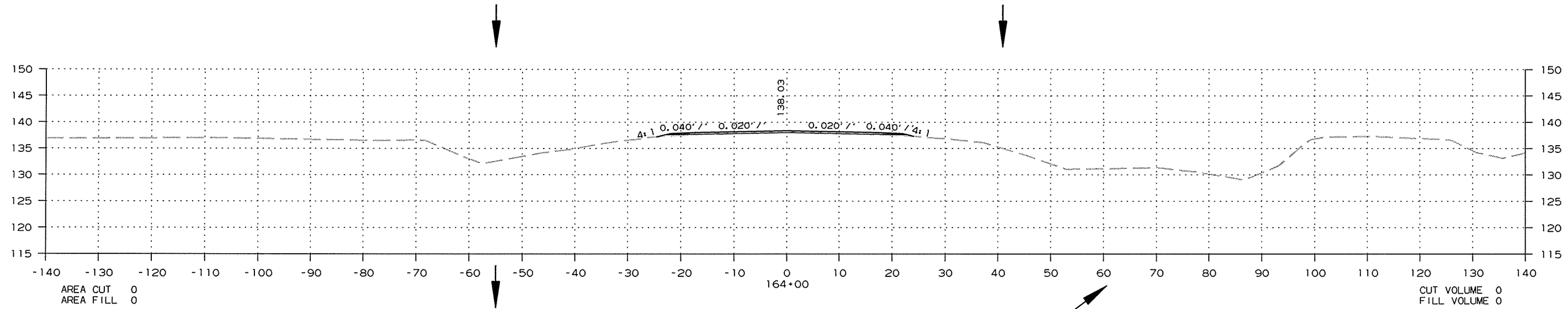
STA. 161+54 IN PLACE
 DBL. 48" X 70" C.M. PIPE CULVERT
 WITH HDWLS. LT. & RT.
 REMOVE AND INSTALL
 DBL. 48" X 70" PIPE CULVERT
 (CLASS 111) (TYPE 3 BEDDING)
 W/FES LT. & RT.
 LT. SIDE DRAIN
 24" R.C. PIPE (CLASS 111) = 140' LTN. FT.
 24" F.E.S. = 2 EACH

CROSS SECTION STA. 161+00 TO STA. 162+50

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							118	178

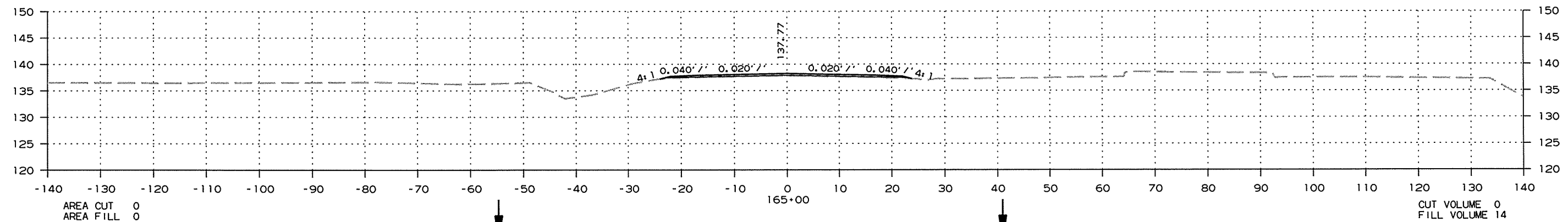
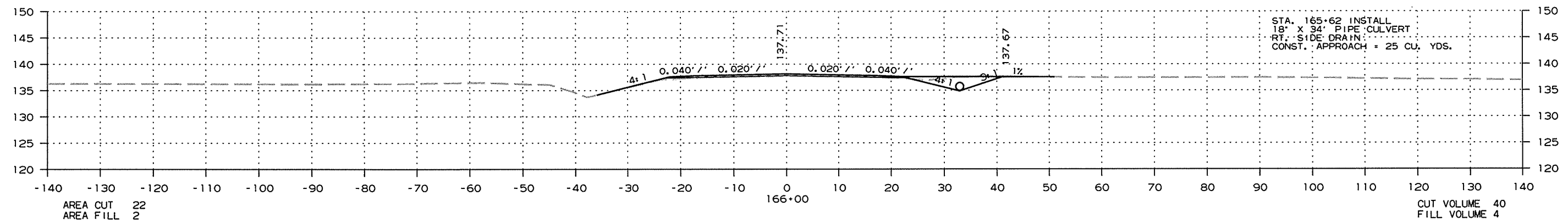
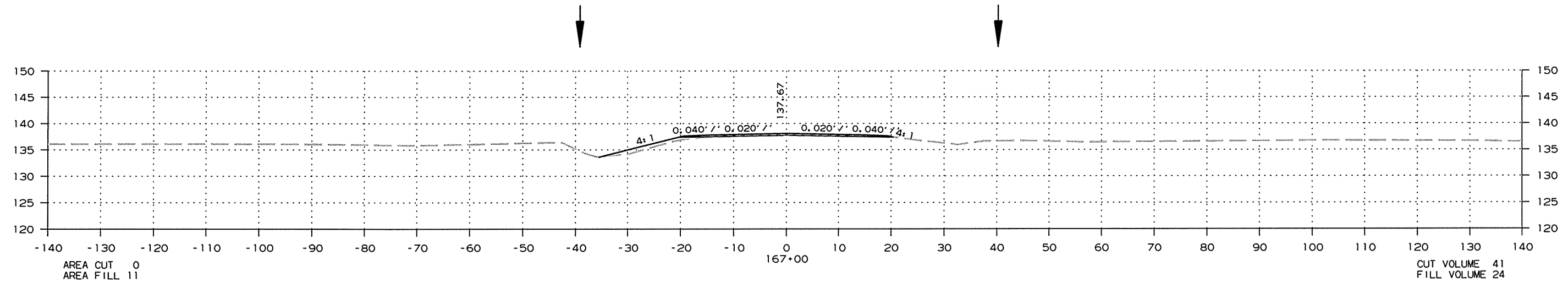
② CROSS SECTIONS



CROSS SECTION STA. 163+00 TO STA. 164+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	119	178

② CROSS SECTIONS



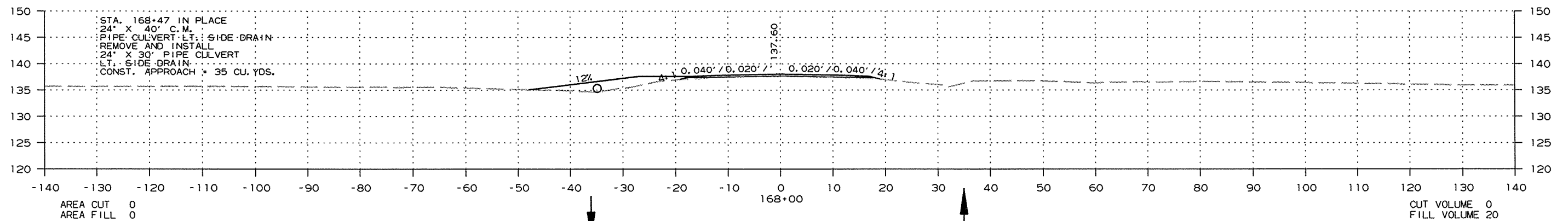
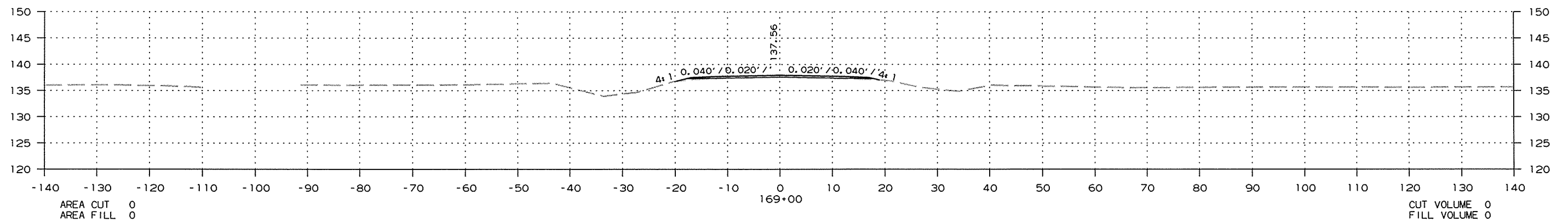
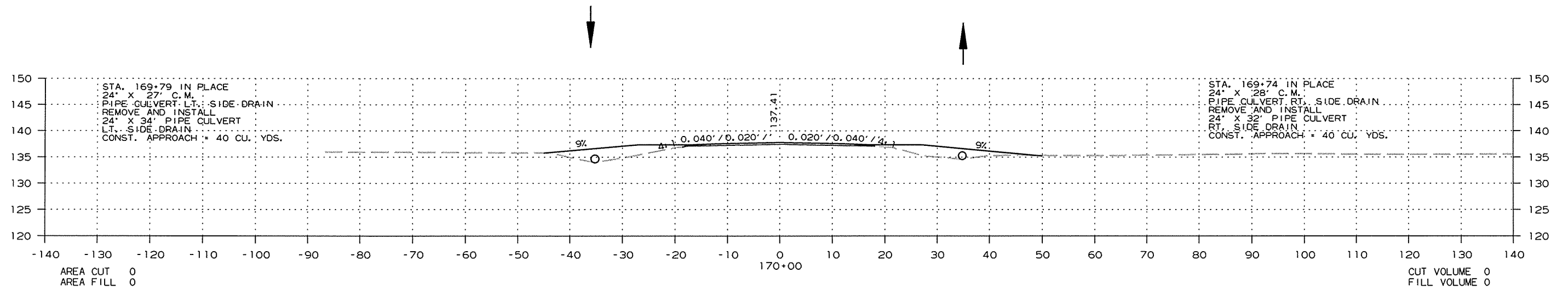
CROSS SECTION STA. 165+00 TO STA. 167+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	120	178

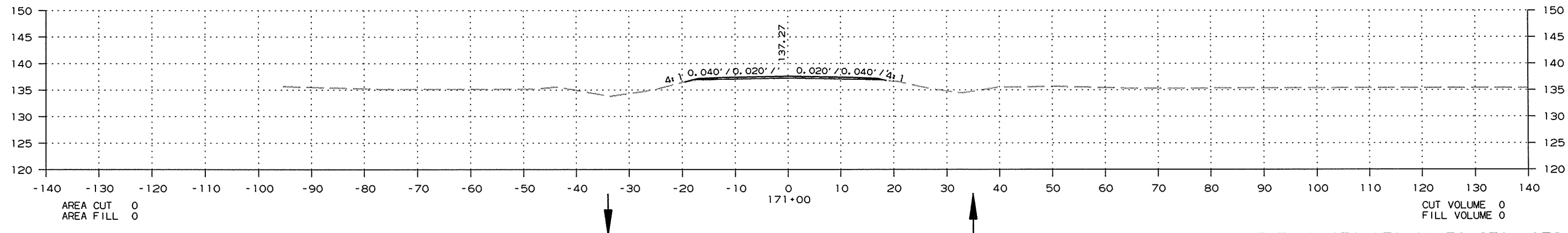
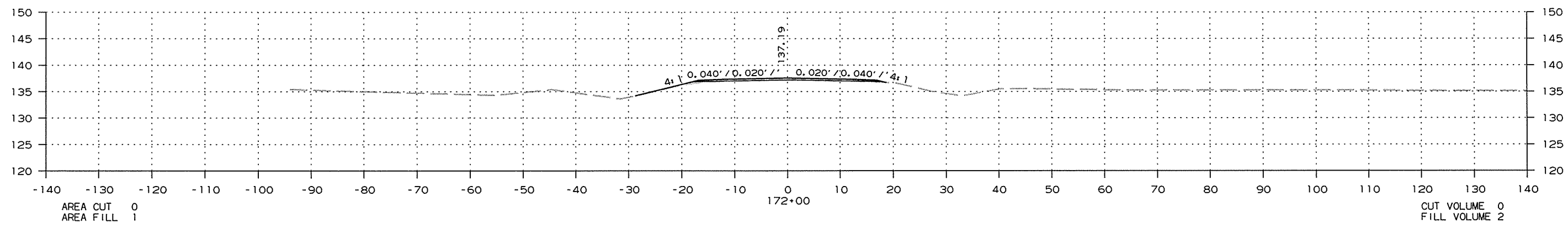
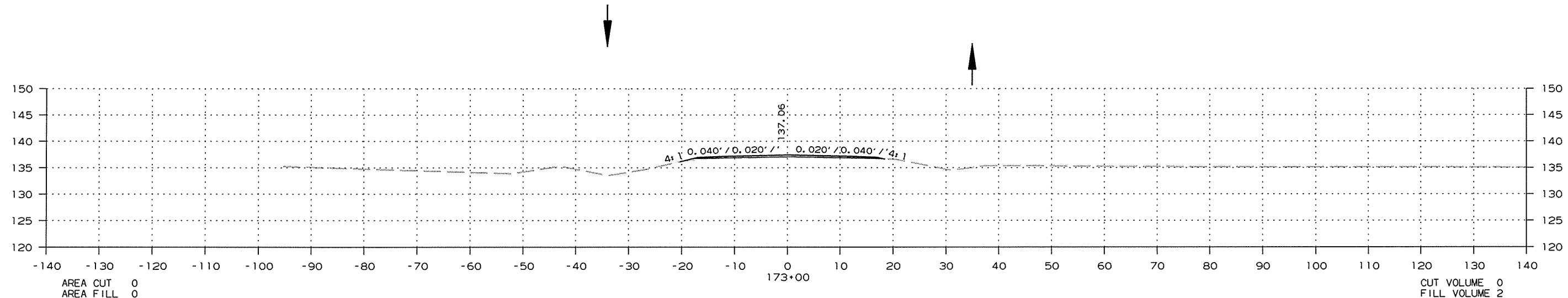
② CROSS SECTIONS



CROSS SECTION STA. 168+00 TO STA. 170+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	121	178

② CROSS SECTIONS

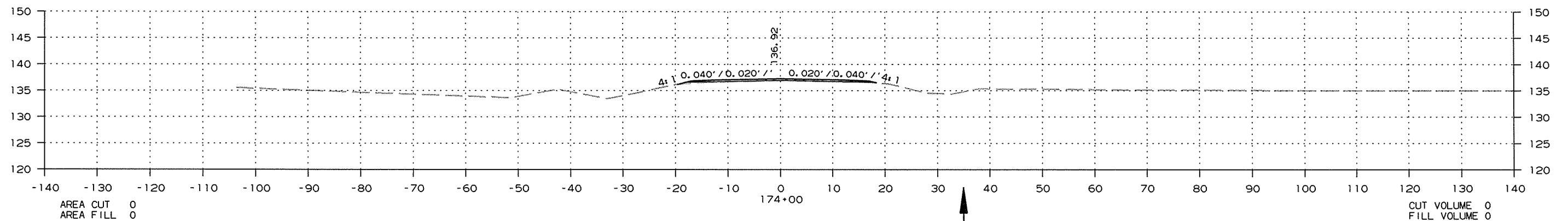
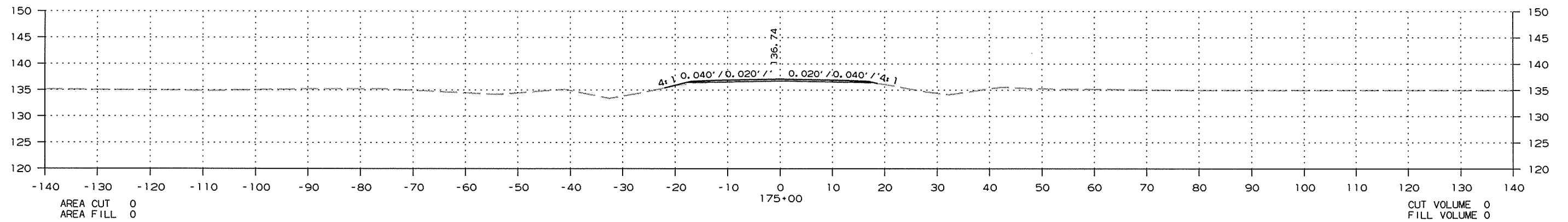
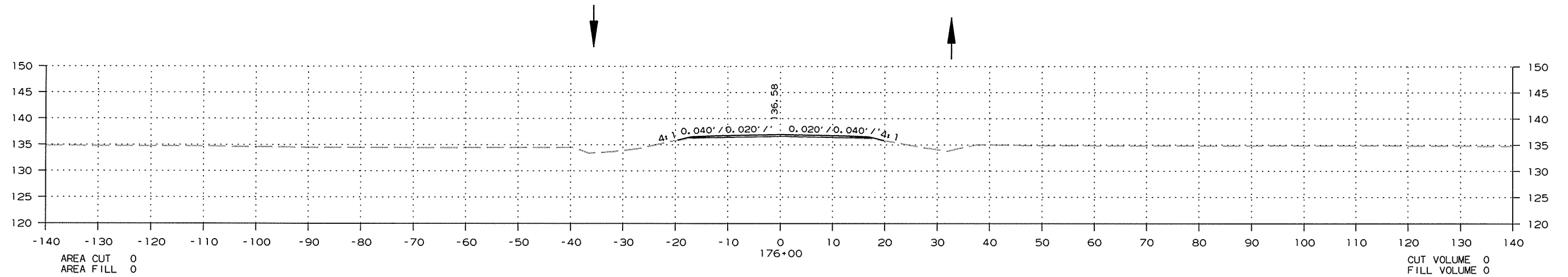


CROSS SECTION STA. 171+00 TO STA. 173+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	122	178

② CROSS SECTIONS



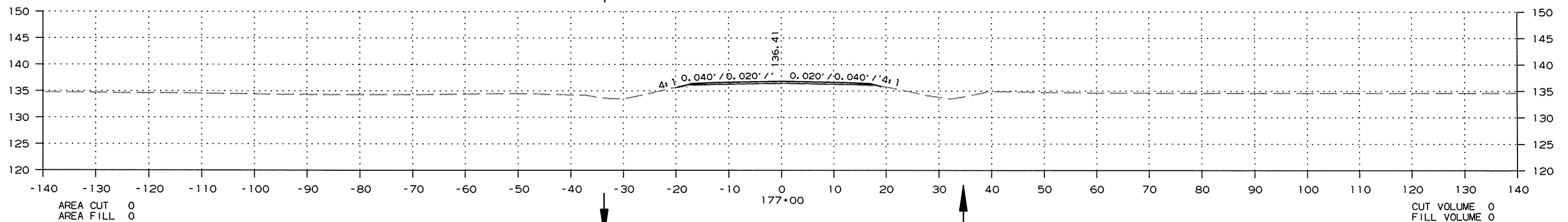
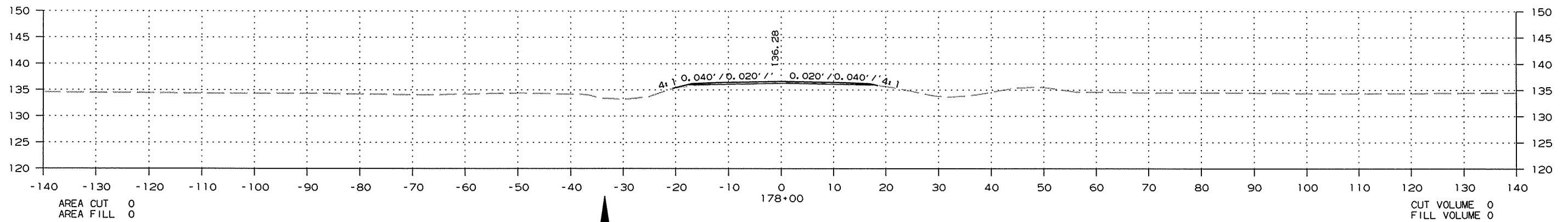
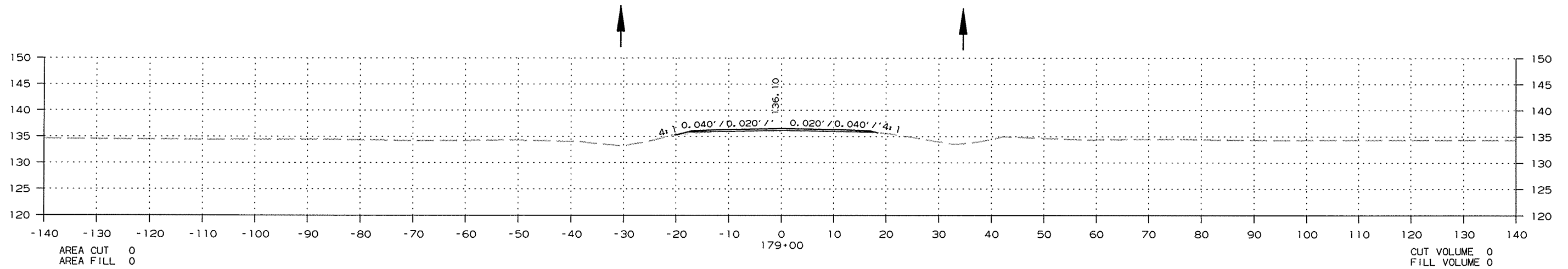
CROSS SECTION STA. 174+00 TO STA. 176+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							123	178

② CROSS SECTIONS



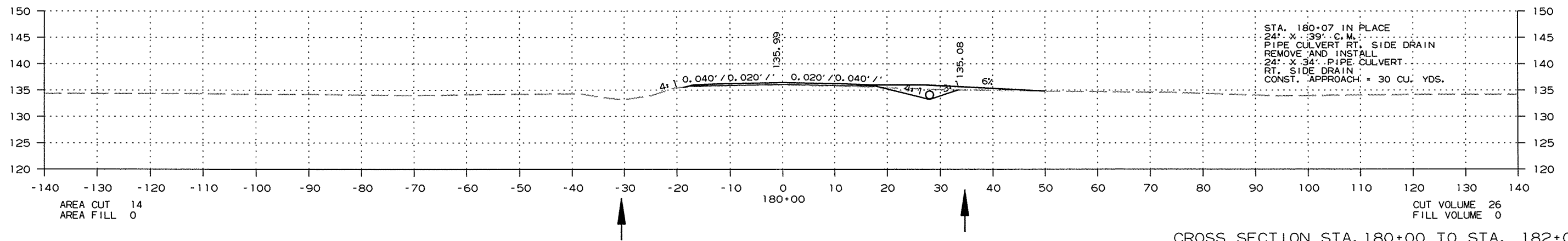
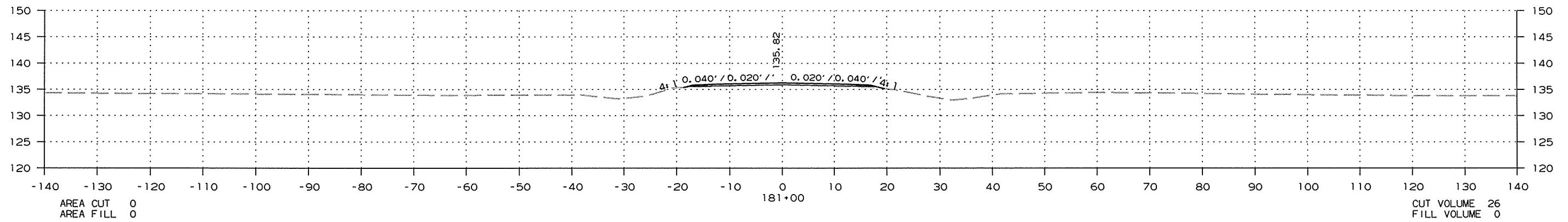
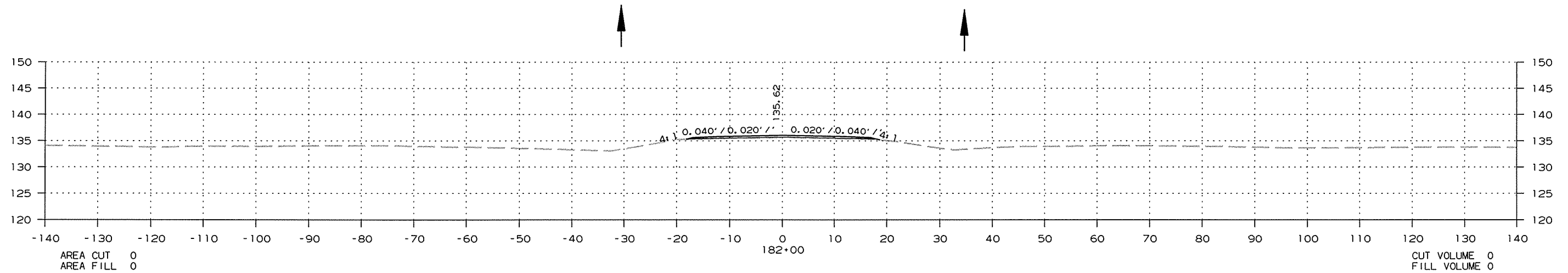
CROSS SECTION STA. 177+00 TO STA. 179+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	124	178

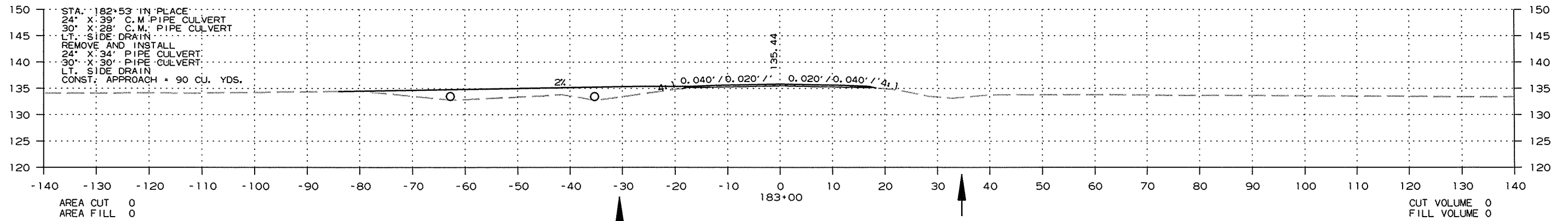
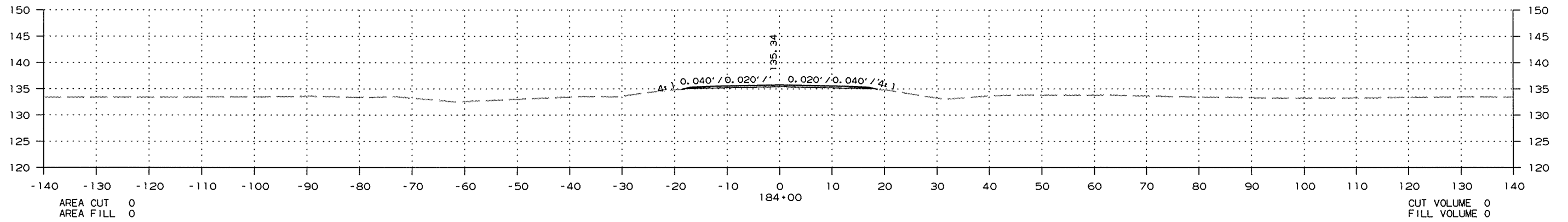
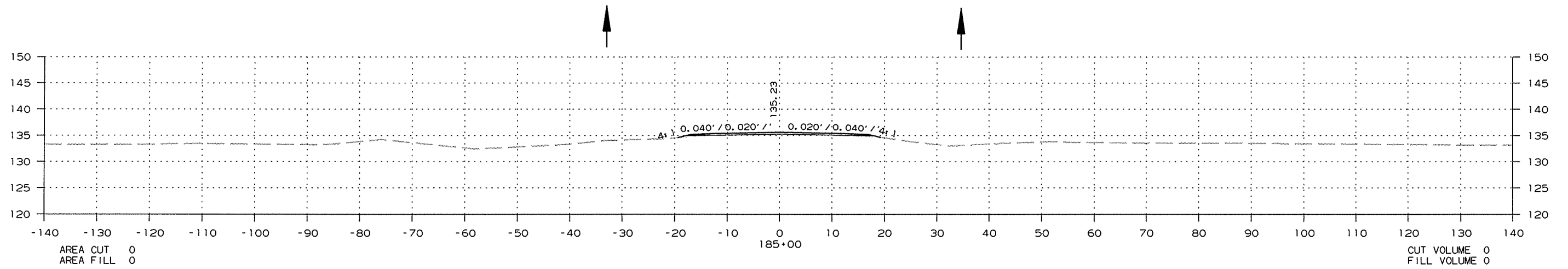
② CROSS SECTIONS



CROSS SECTION STA. 180+00 TO STA. 182+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	125	178

② CROSS SECTIONS



STA. 182+53' IN PLACE
24" X 39" C.M. PIPE CULVERT
30" X 28" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24" X 34" PIPE CULVERT
30" X 30" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 90 CU. YDS.

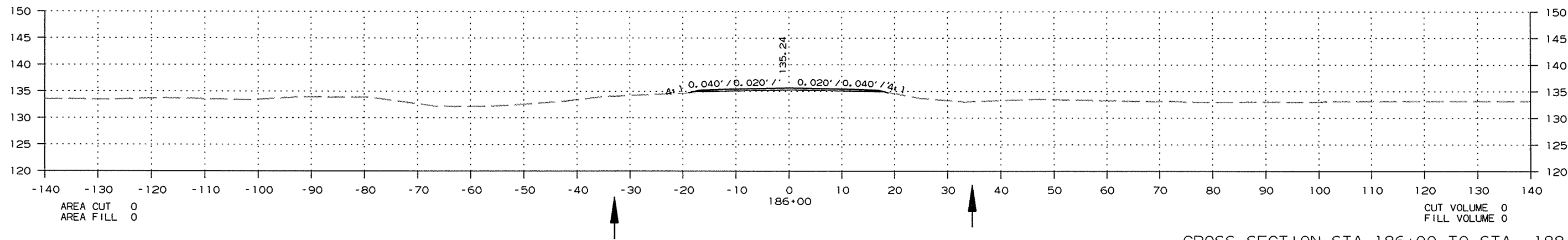
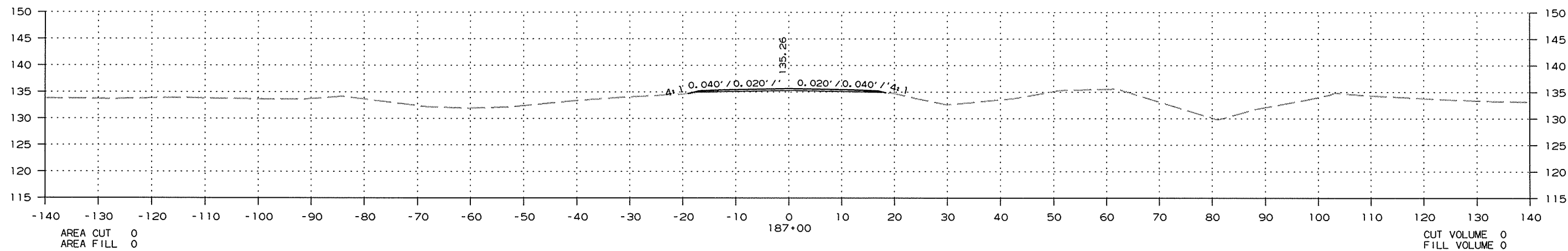
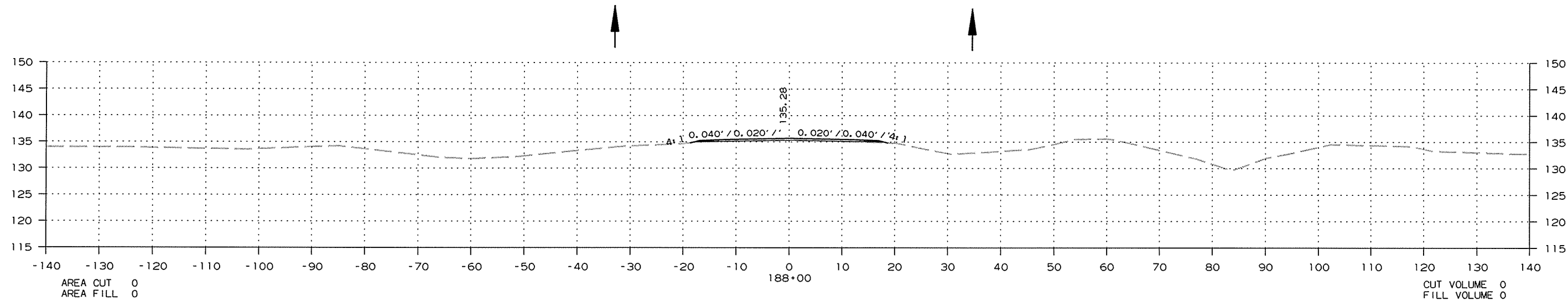
CROSS SECTION STA. 183+00 TO STA. 185+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	126	178

② CROSS SECTIONS



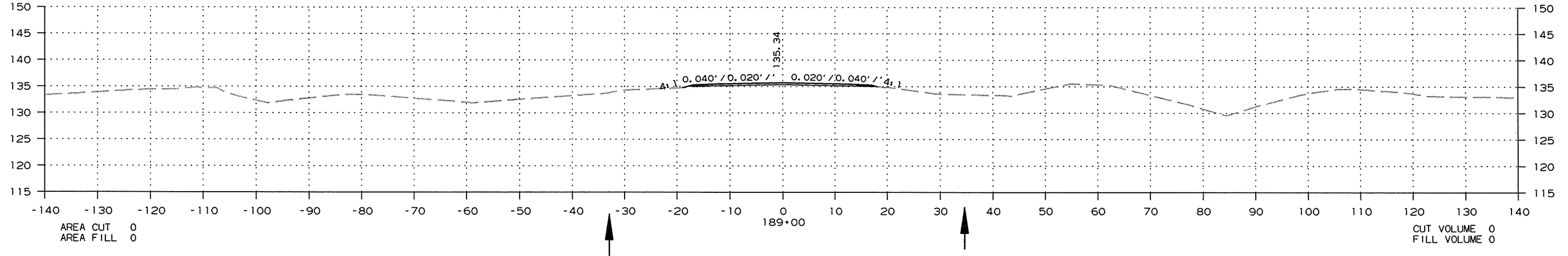
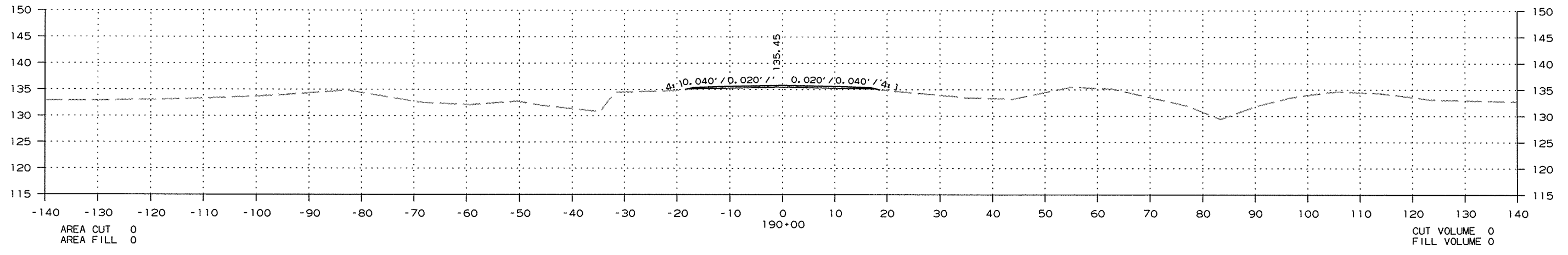
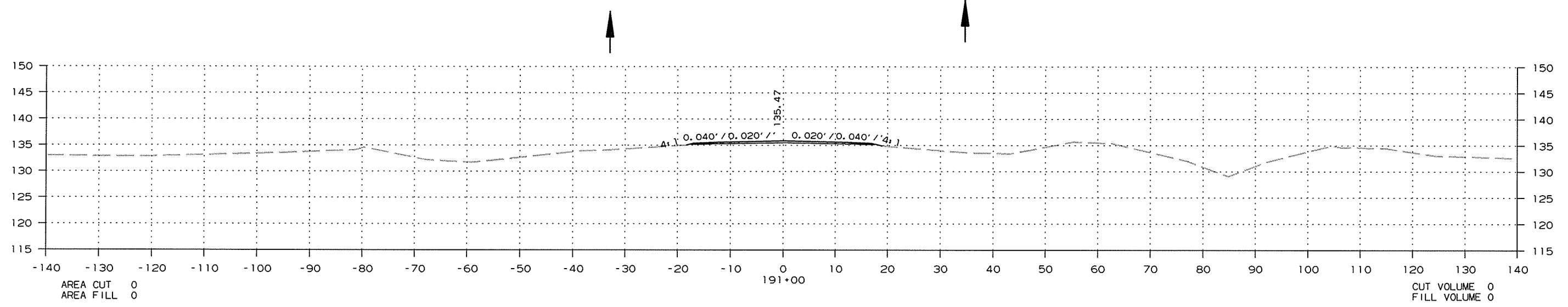
CROSS SECTION STA. 186+00 TO STA. 188+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	127	178

② CROSS SECTIONS



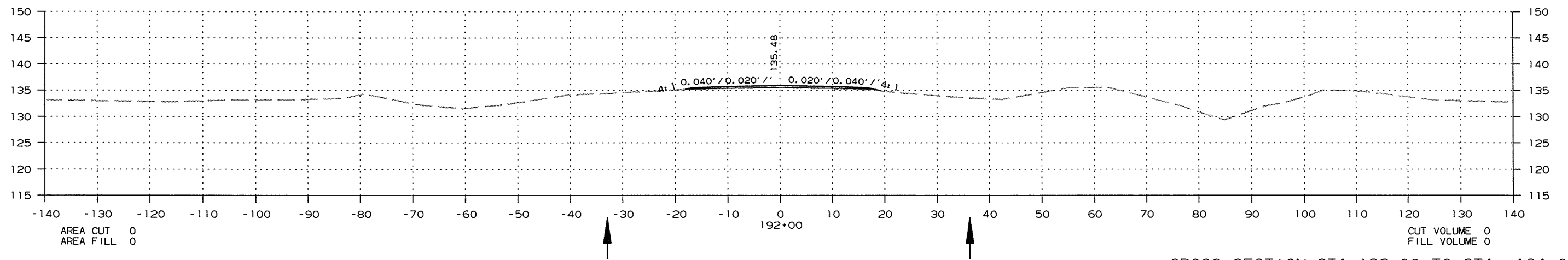
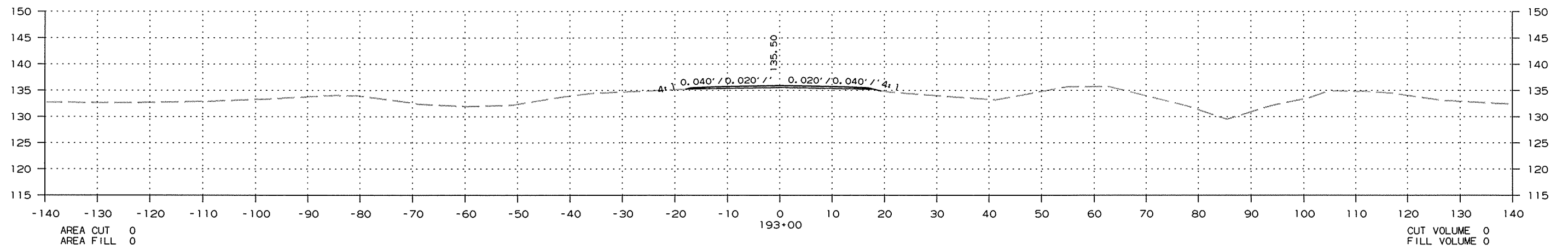
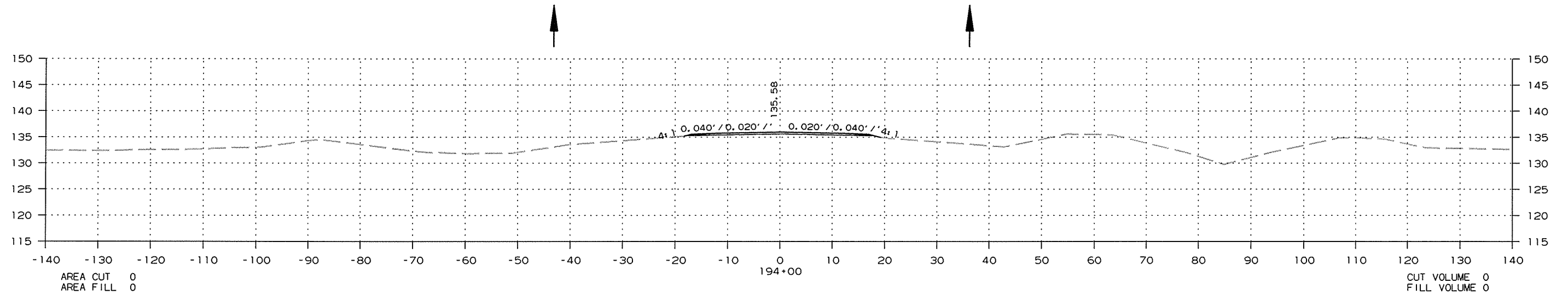
CROSS SECTION STA. 189+00 TO STA. 191+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						020576	128	178

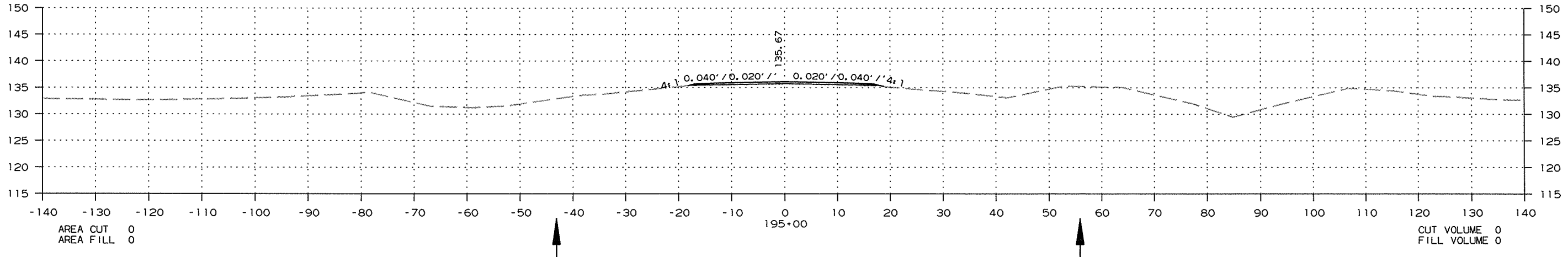
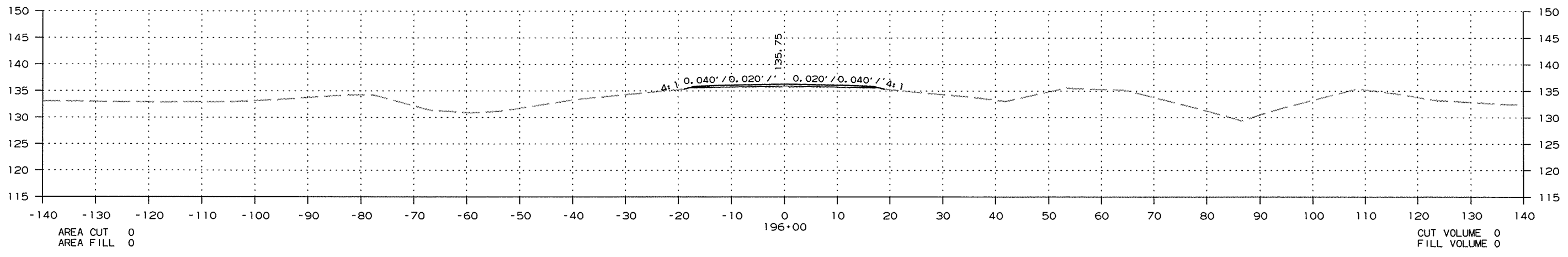
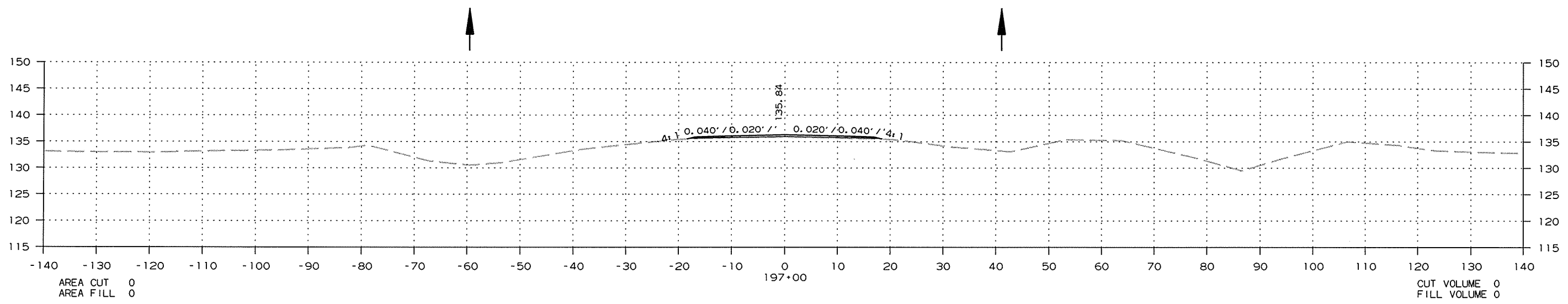
② CROSS SECTIONS



CROSS SECTION STA. 192+00 TO STA. 194+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	129	178

2 CROSS SECTIONS

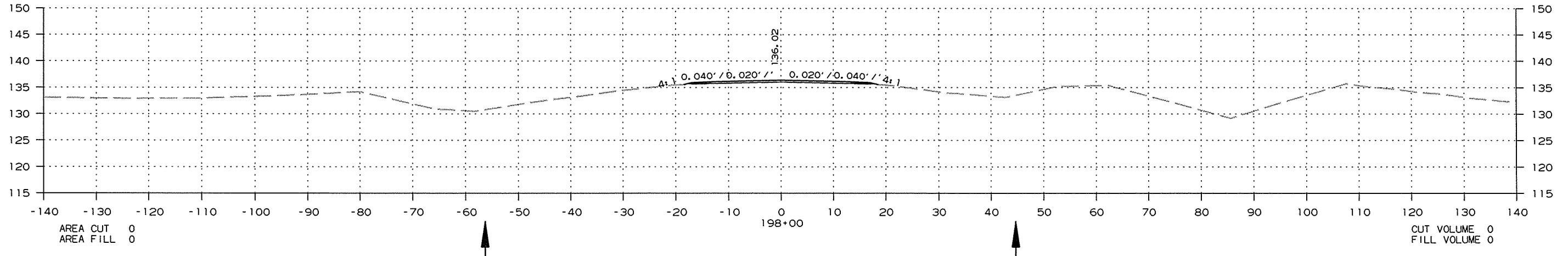
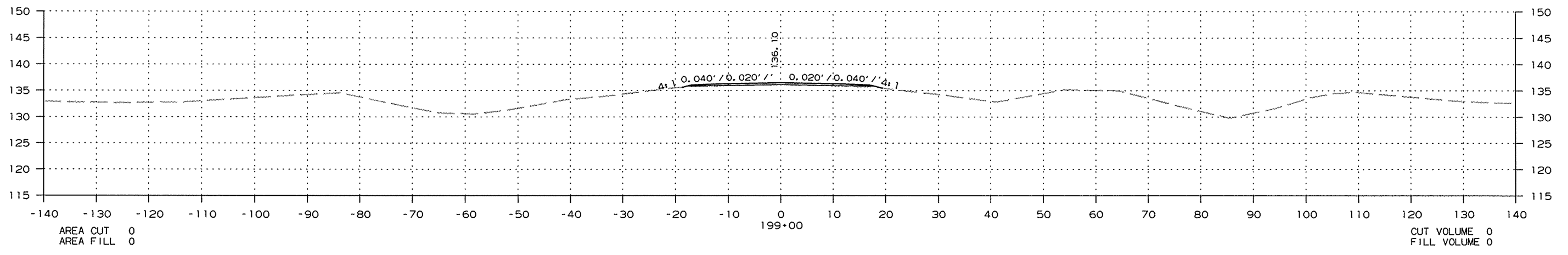
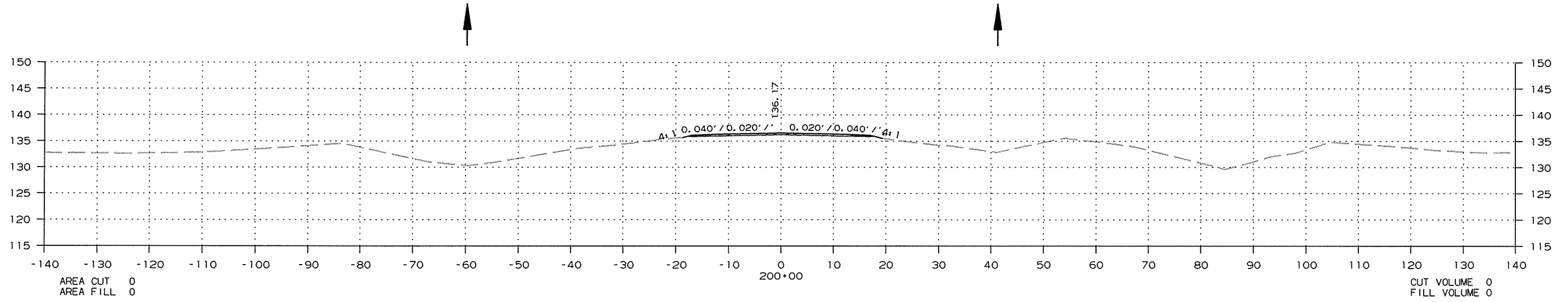


CROSS SECTION STA. 195+00 TO STA. 197+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							130	178

2 CROSS SECTIONS

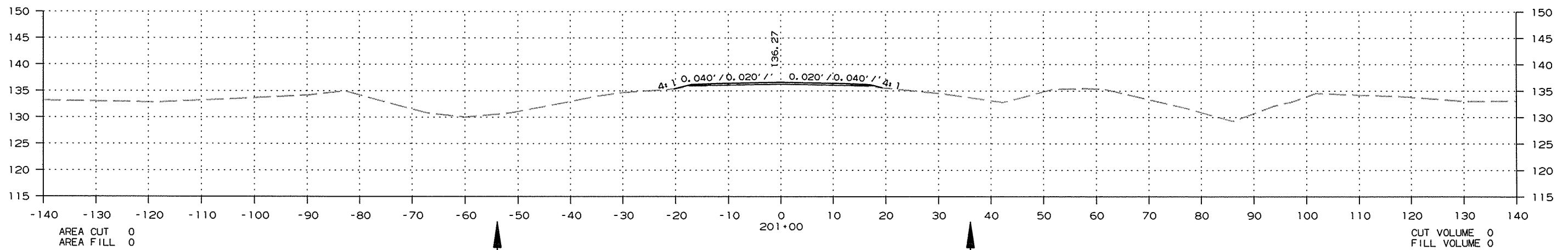
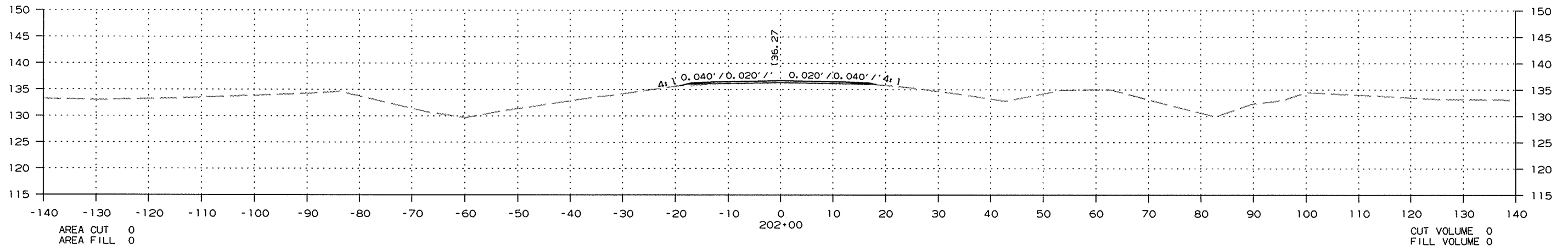
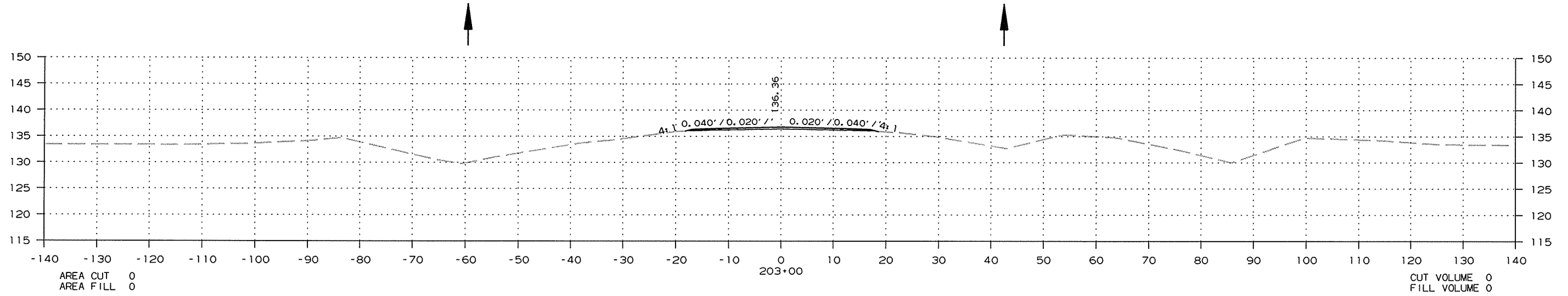


CROSS SECTION STA. 198+00 TO STA. 200+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							131	178

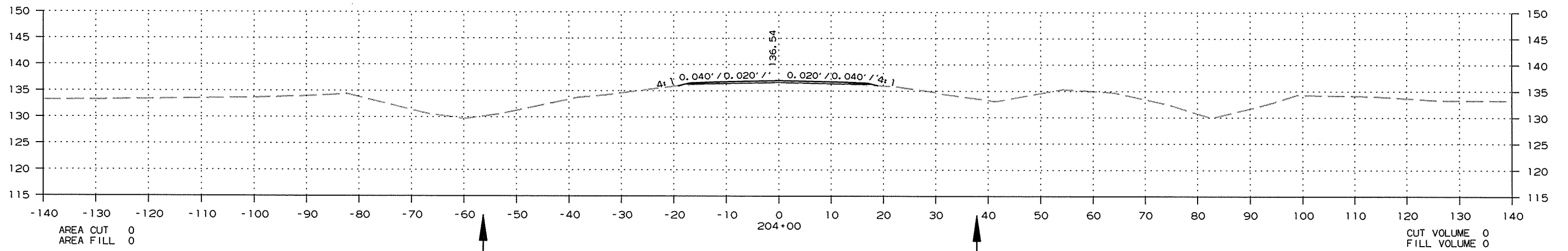
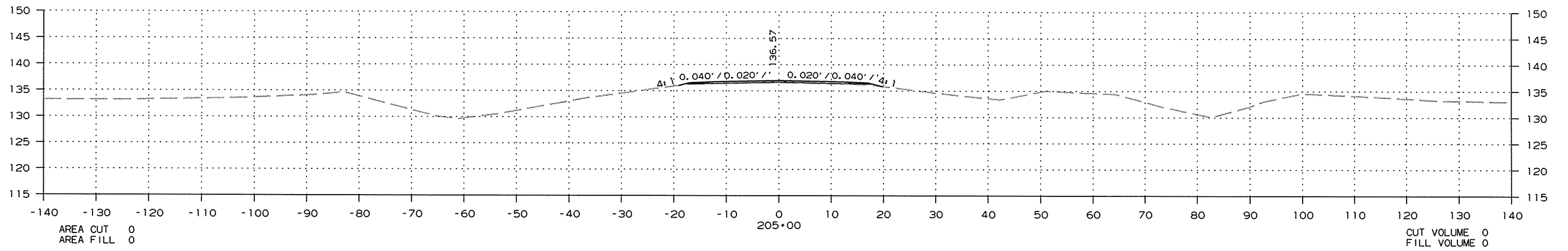
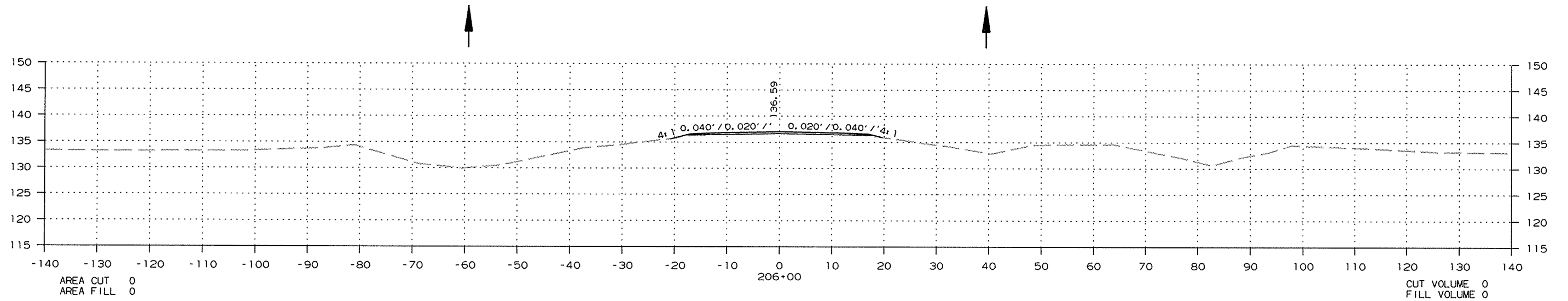
2 CROSS SECTIONS



CROSS SECTION STA. 201+00 TO STA. 203+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							132	178

2 CROSS SECTIONS



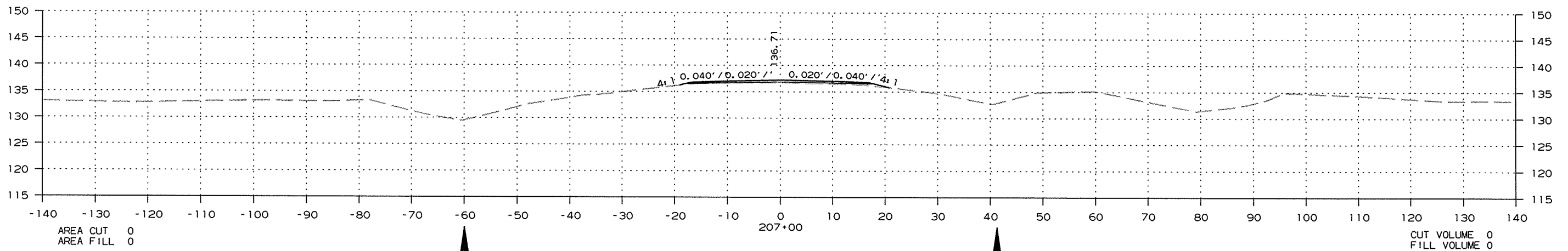
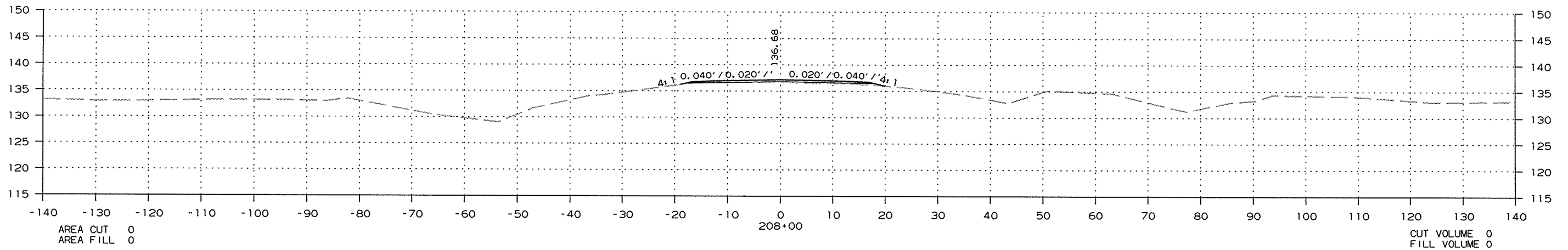
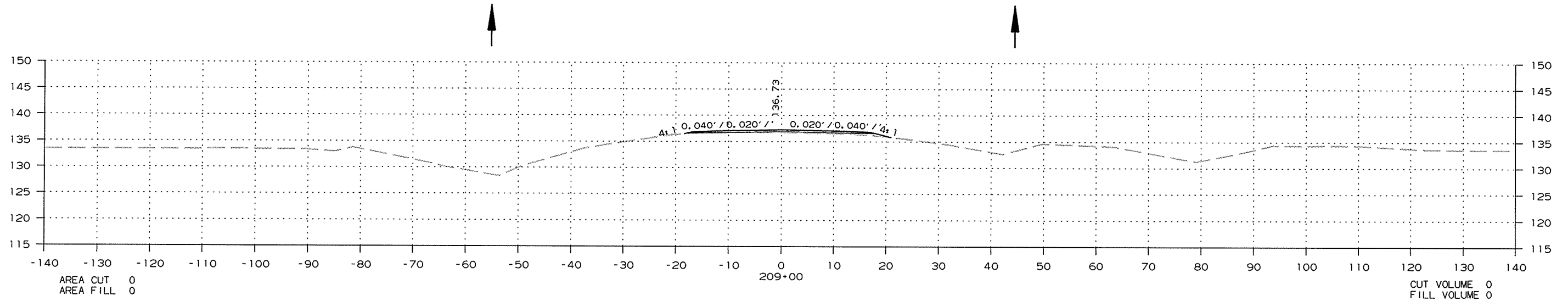
CROSS SECTION STA. 204+00 TO STA. 206+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							133	178

2 CROSS SECTIONS

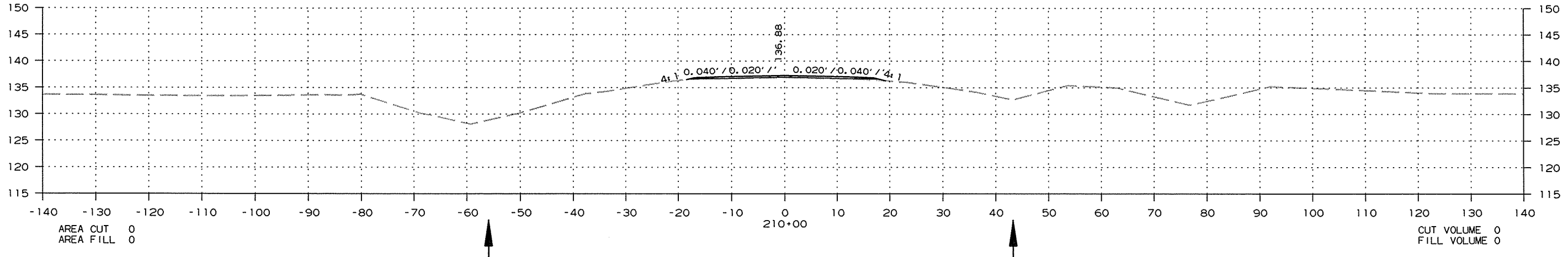
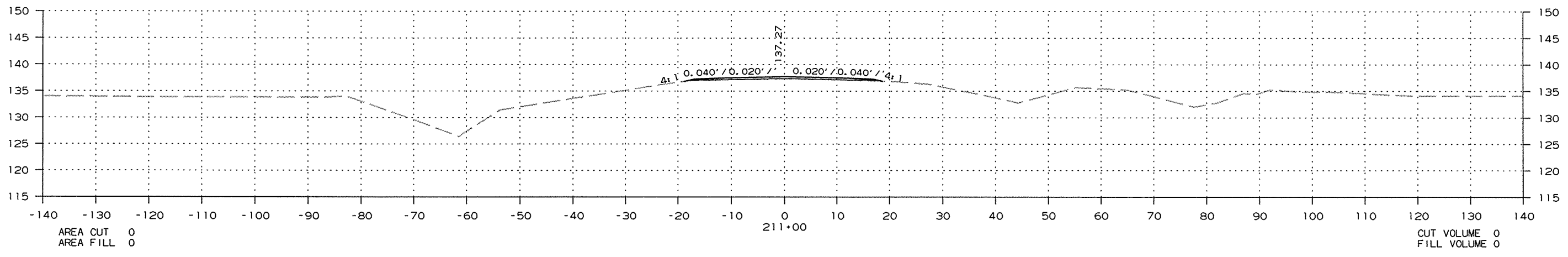
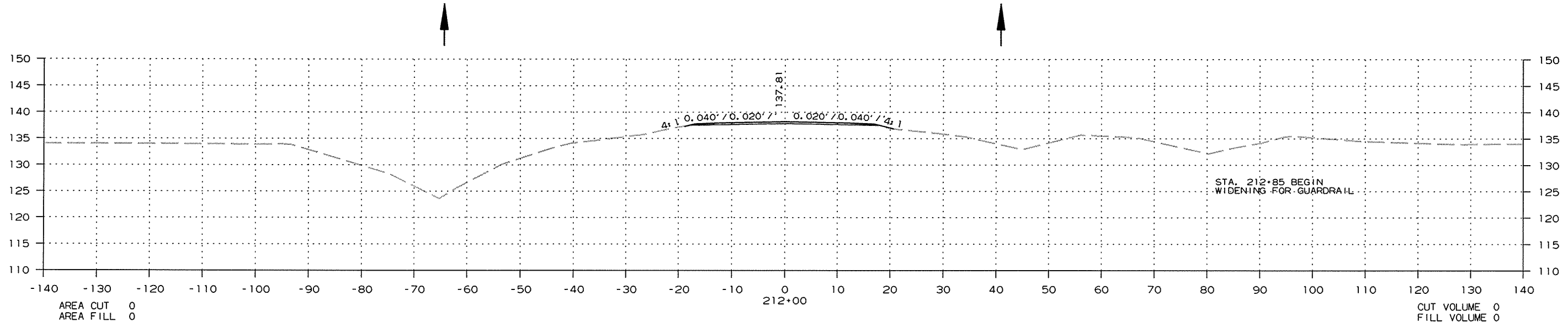


CROSS SECTION STA. 207+00 TO STA. 209+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	134	178

2 CROSS SECTIONS

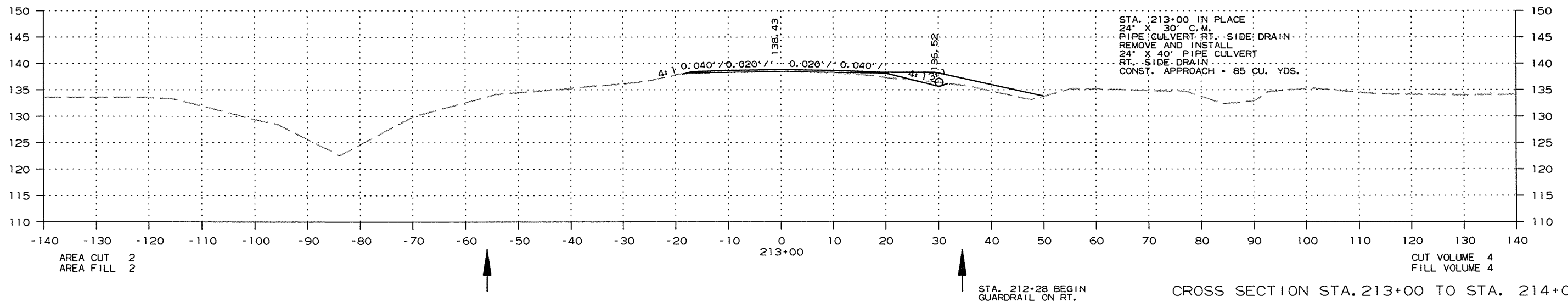
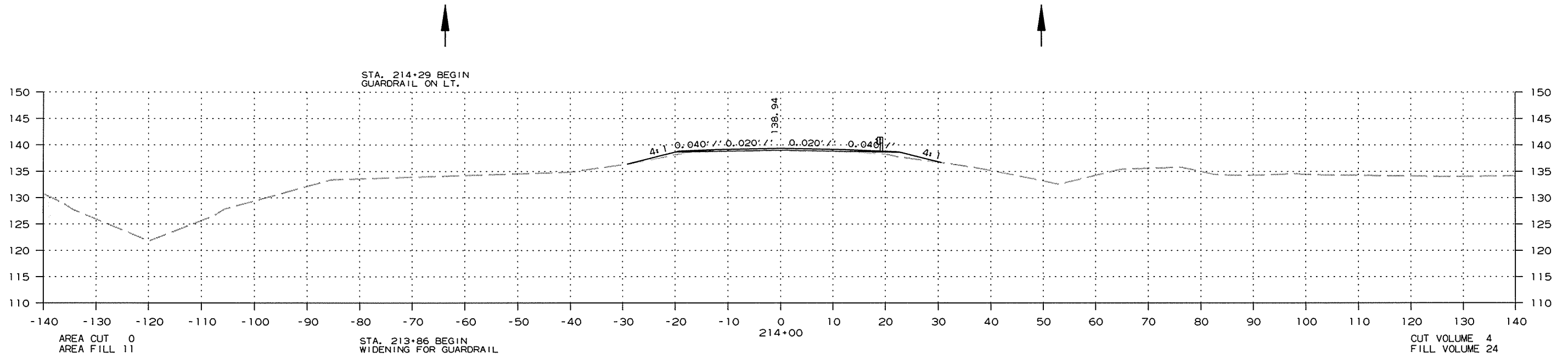


CROSS SECTION STA. 210+00 TO STA. 212+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							135	178

2 CROSS SECTIONS



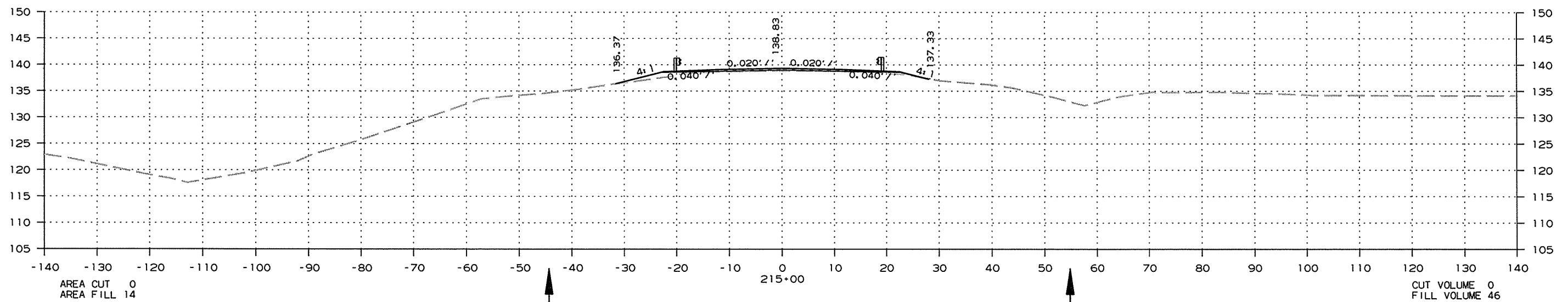
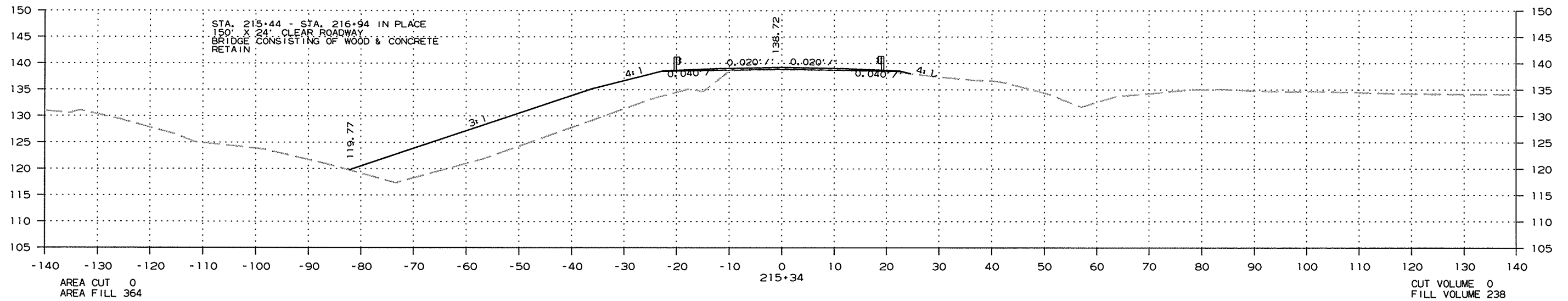
CROSS SECTION STA. 213+00 TO STA. 214+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	020576	136

② CROSS SECTIONS

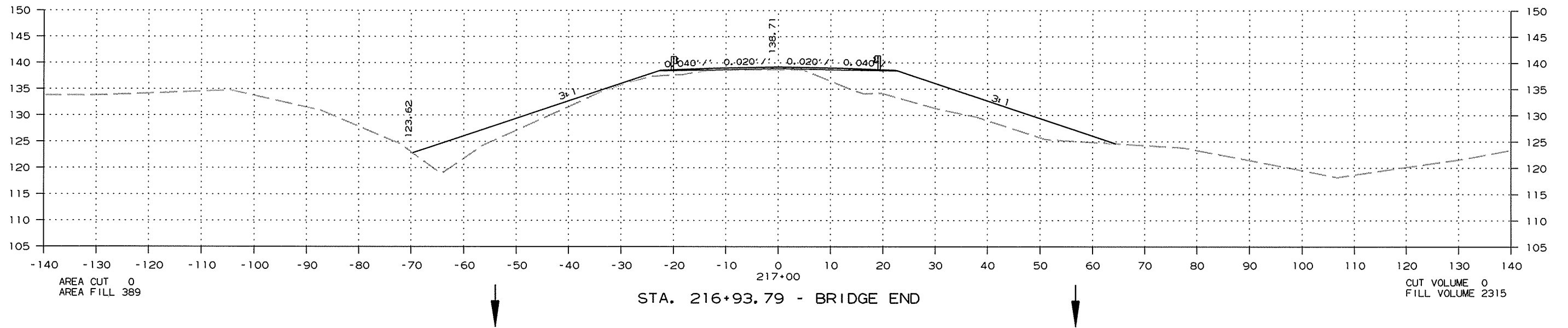
STA. 215+44.21 - BRIDGE END



CROSS SECTION STA. 215+00 TO STA. 215+44

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020576		137	178

2 CROSS SECTIONS

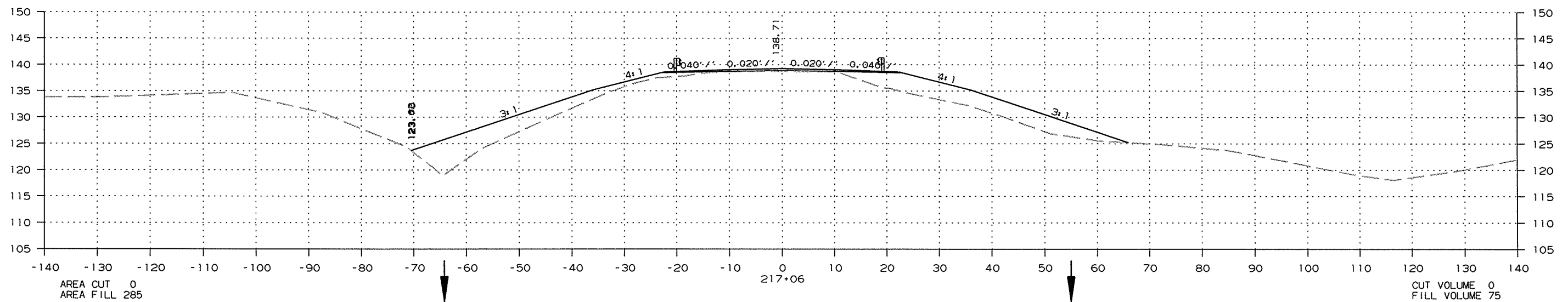
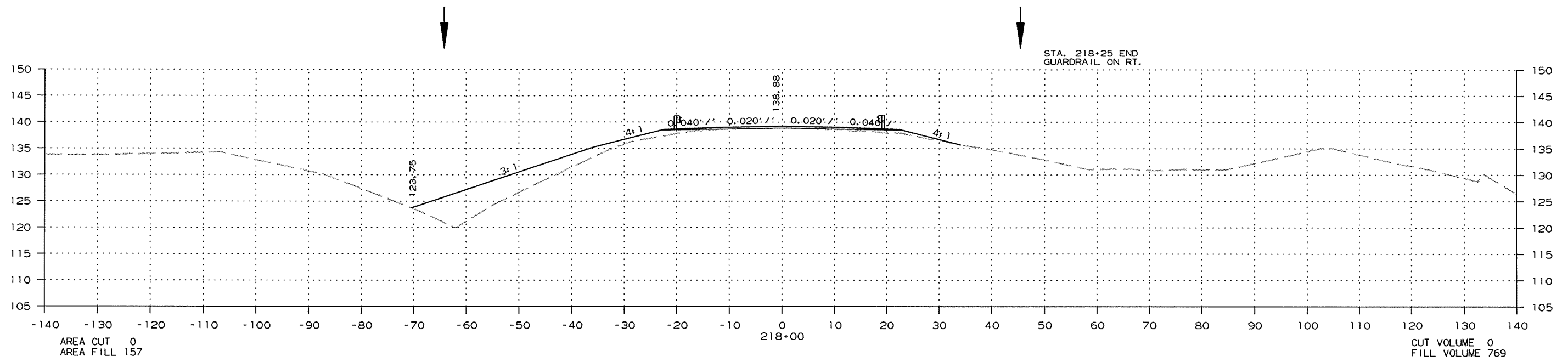


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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							138	178

② CROSS SECTIONS



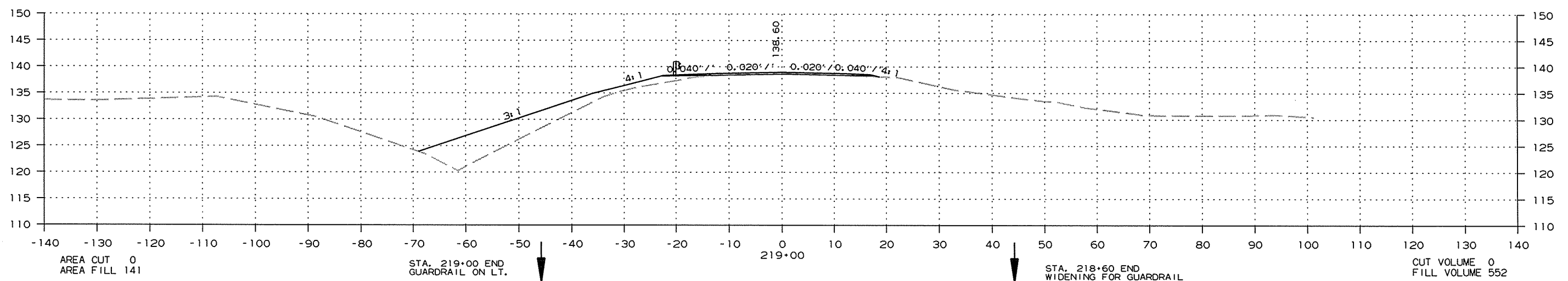
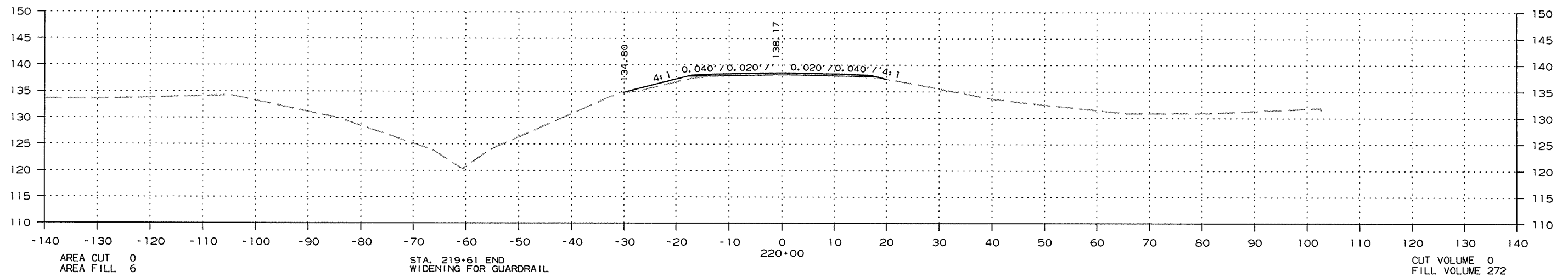
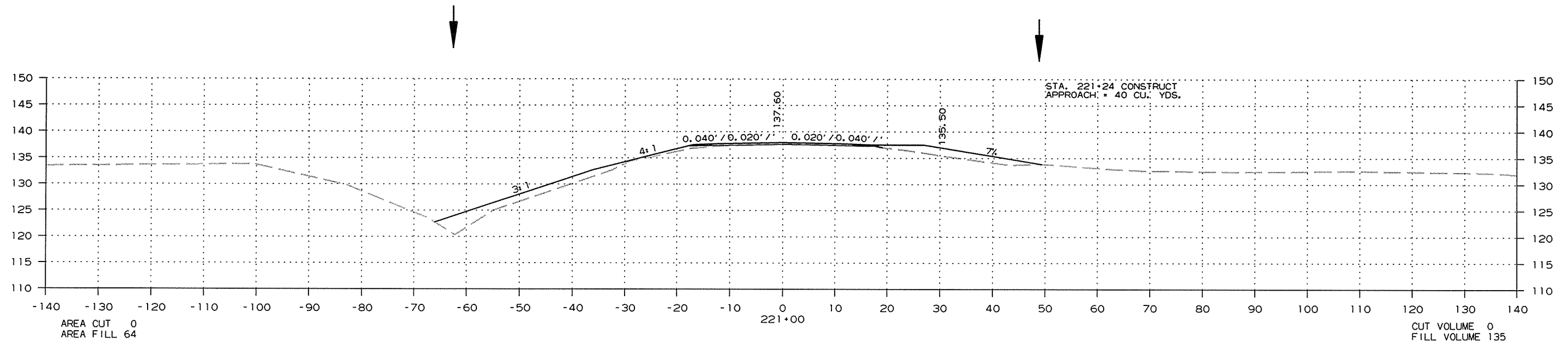
CROSS SECTION STA. 217+06 TO STA. 218+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							139	178

② CROSS SECTIONS



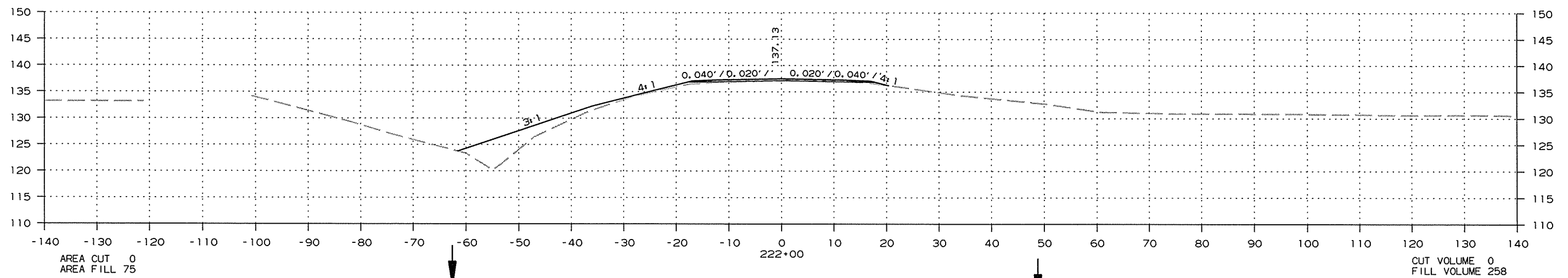
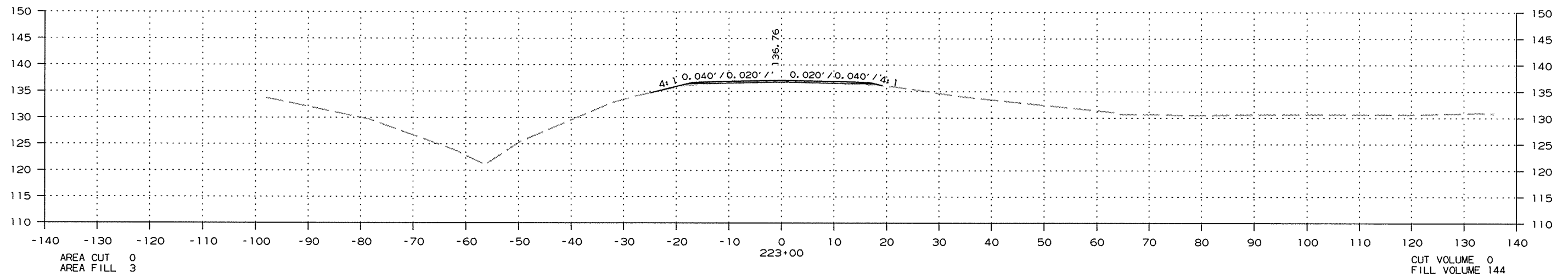
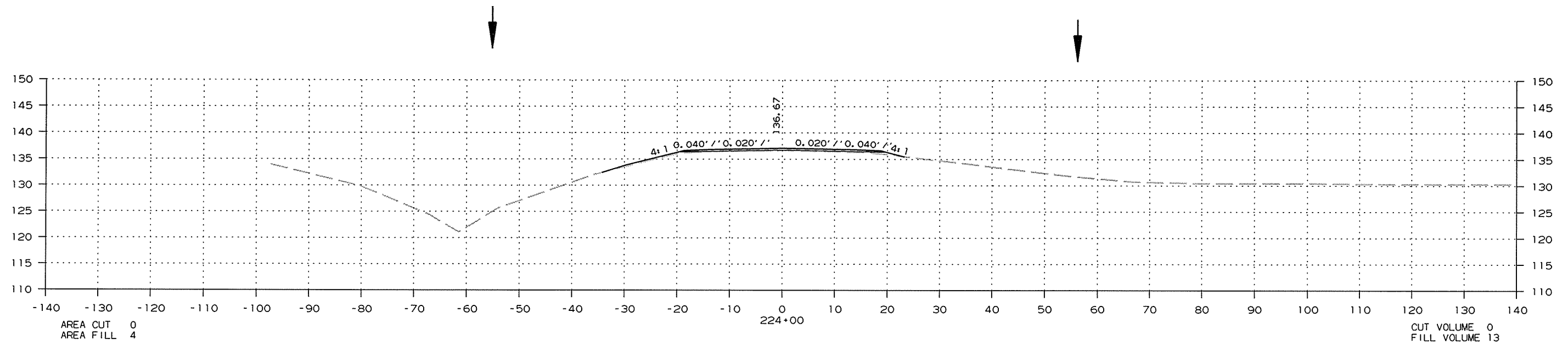
CROSS SECTION STA. 219+00 TO STA. 221+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							140	178

② CROSS SECTIONS



CROSS SECTION STA. 222+00 TO STA. 224+00

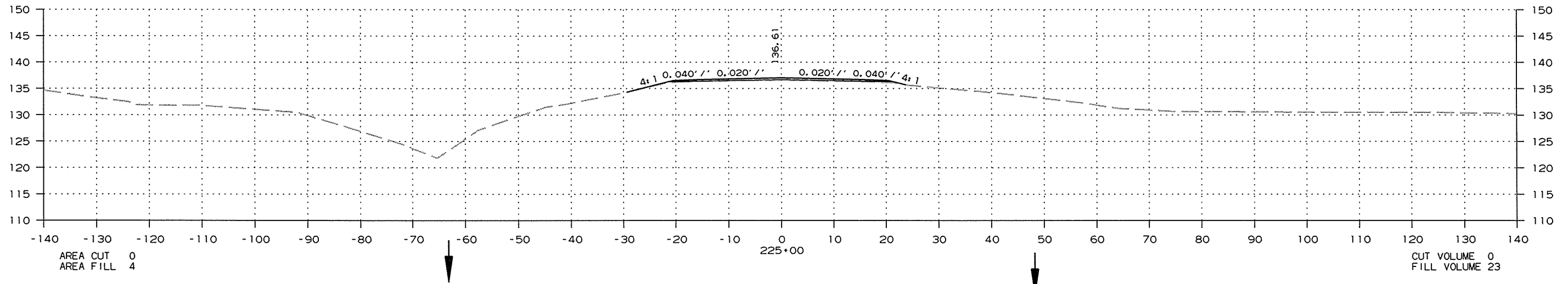
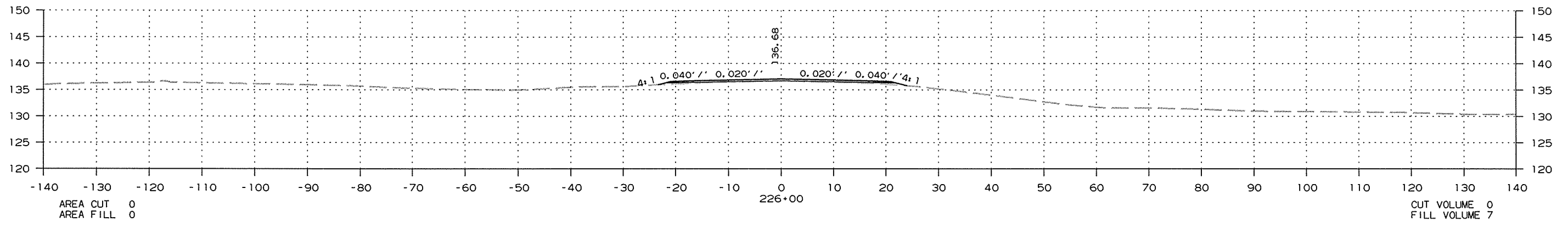
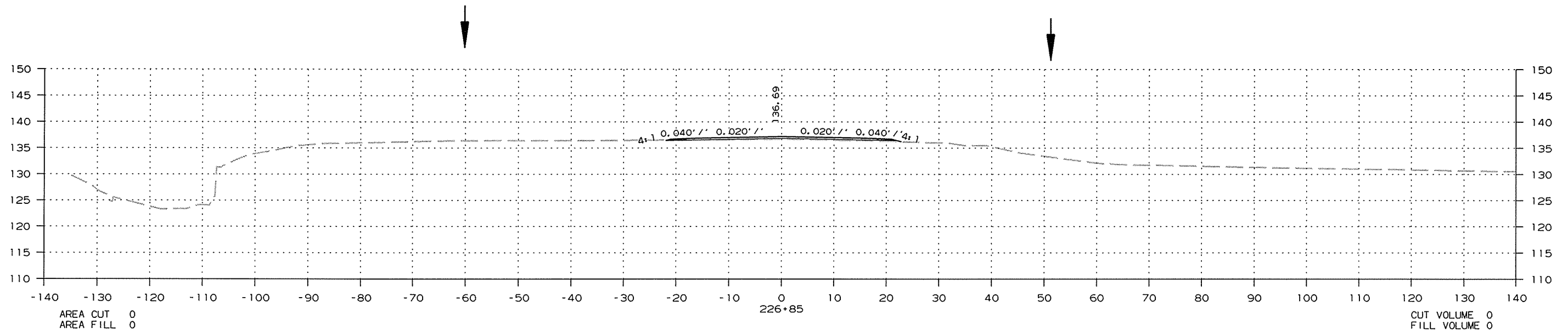
4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							141	178

② CROSS SECTIONS

STA. 226+25 IN PLACE
 6' X 5' X 116' R.C. BOX CULVERT
 WITH 3:1 WINGS LT. & RT.
 RETAIN



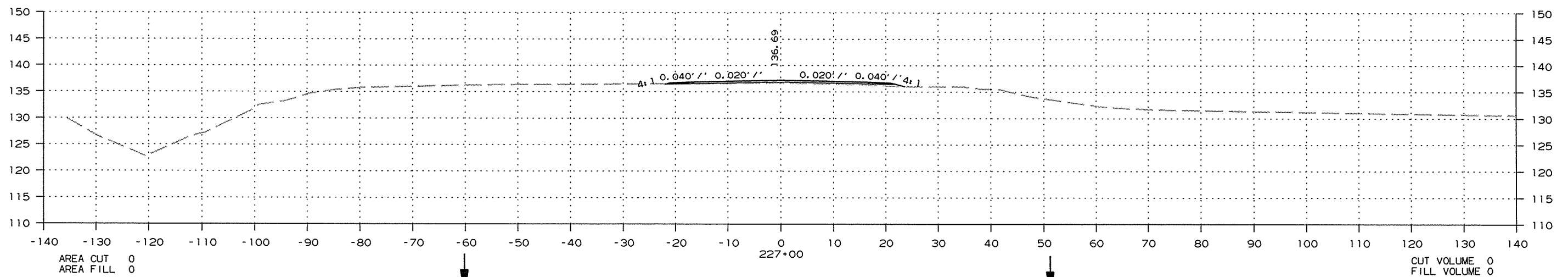
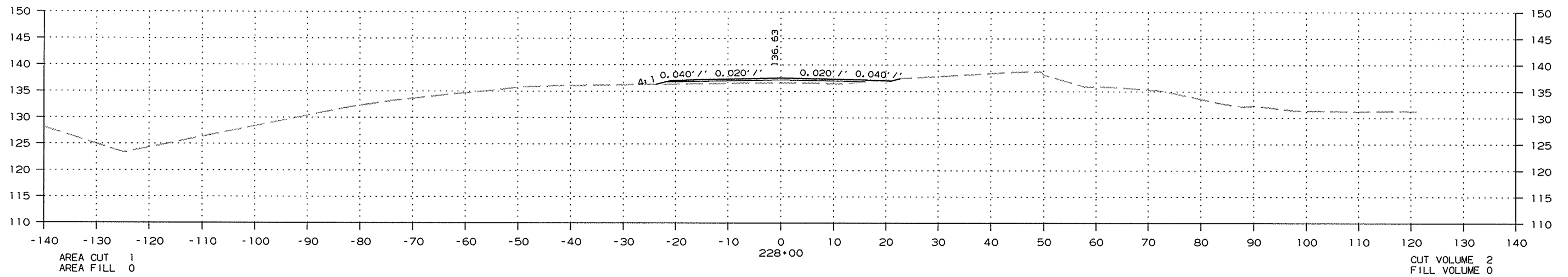
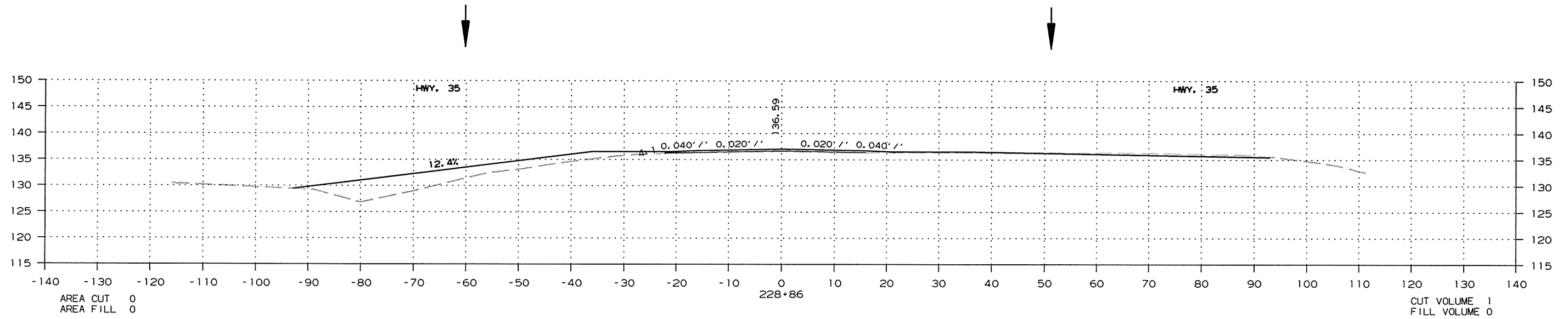
CROSS SECTION STA. 225+00 TO STA. 226+85

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							142	178

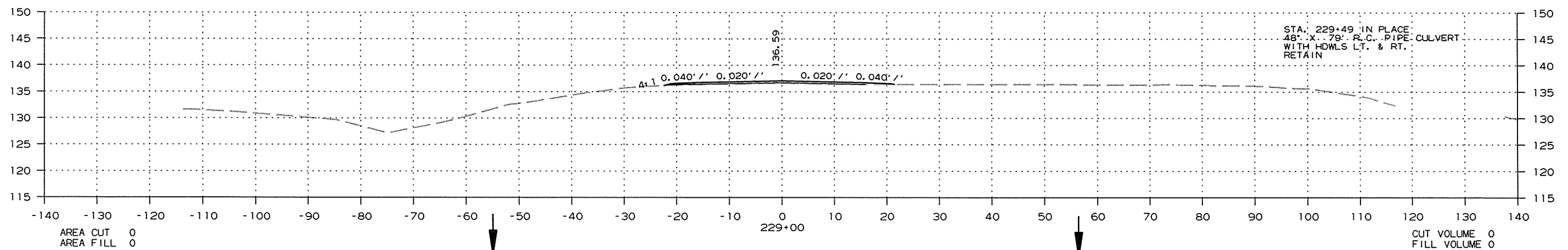
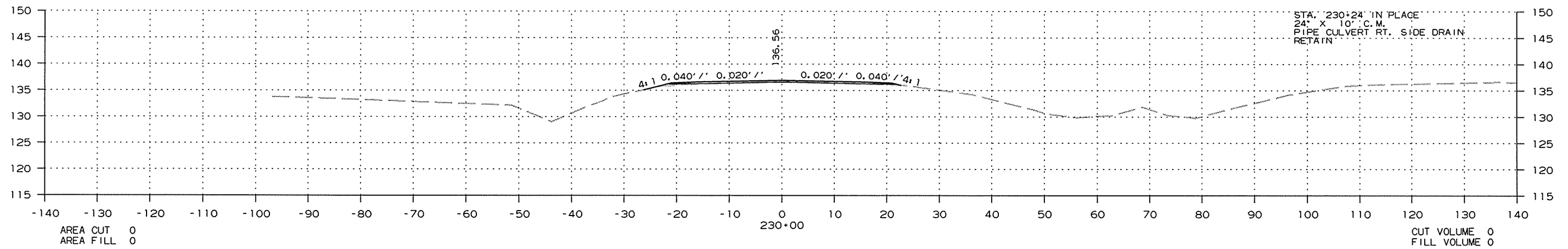
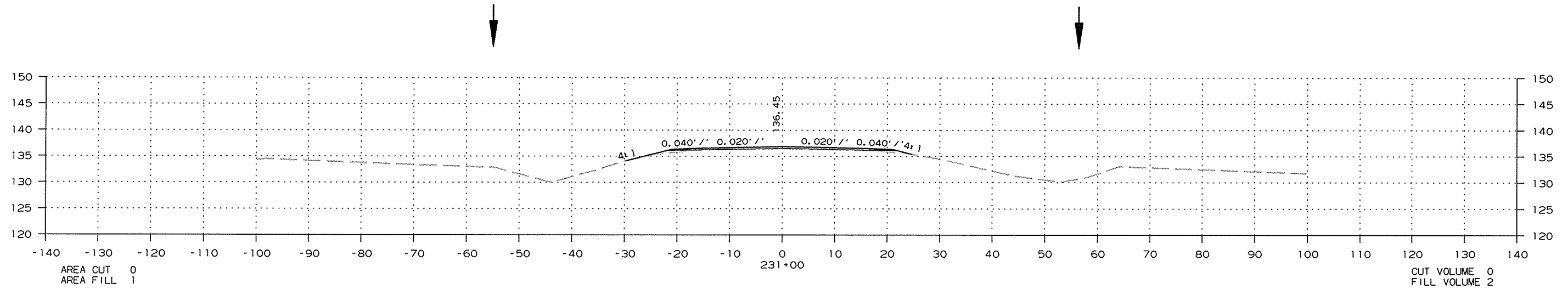
② CROSS SECTIONS



CROSS SECTION STA. 227+00 TO STA. 228+86

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							143	178

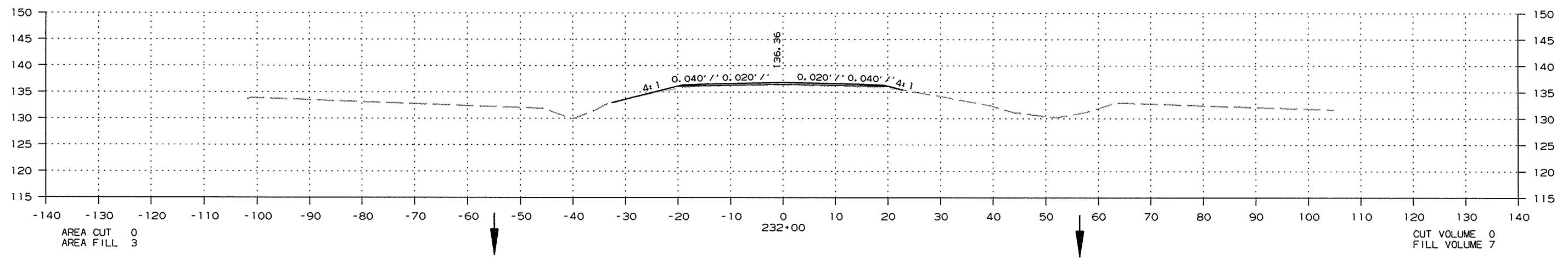
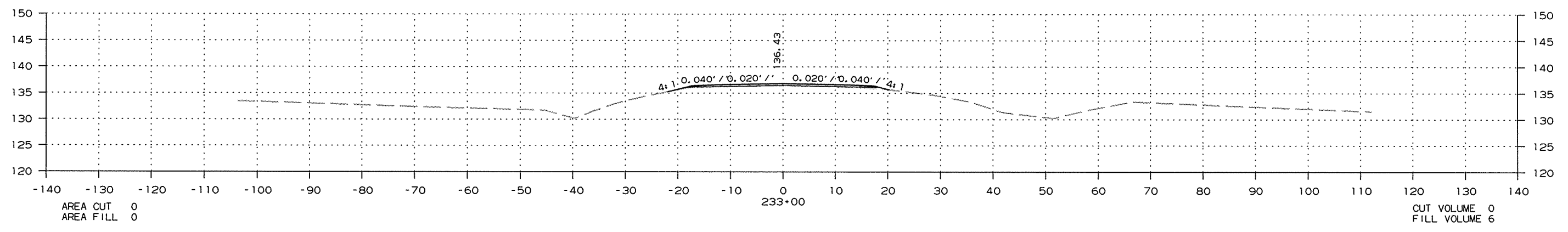
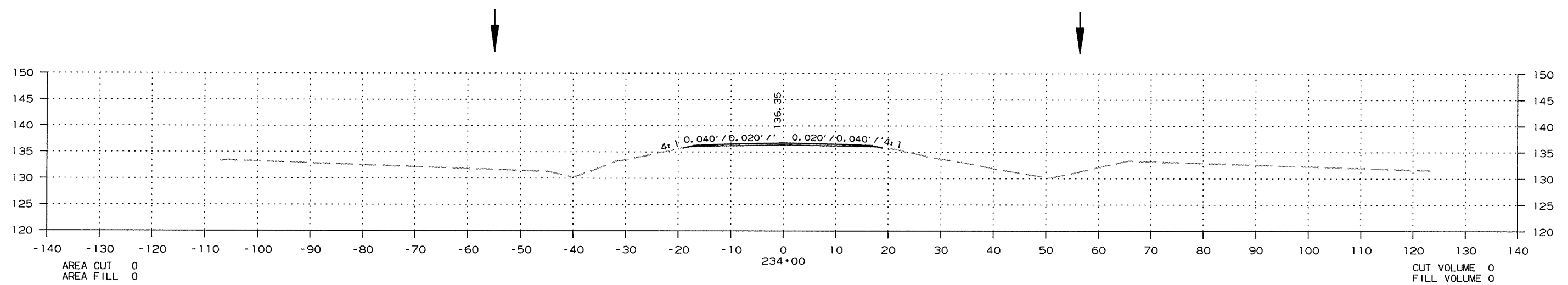
② CROSS SECTIONS



CROSS SECTION STA. 229+00 TO STA. 231+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	144	178

② CROSS SECTIONS

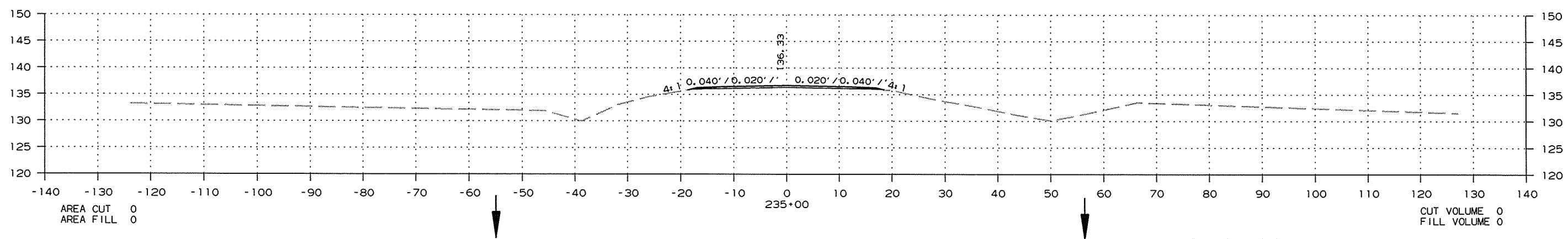
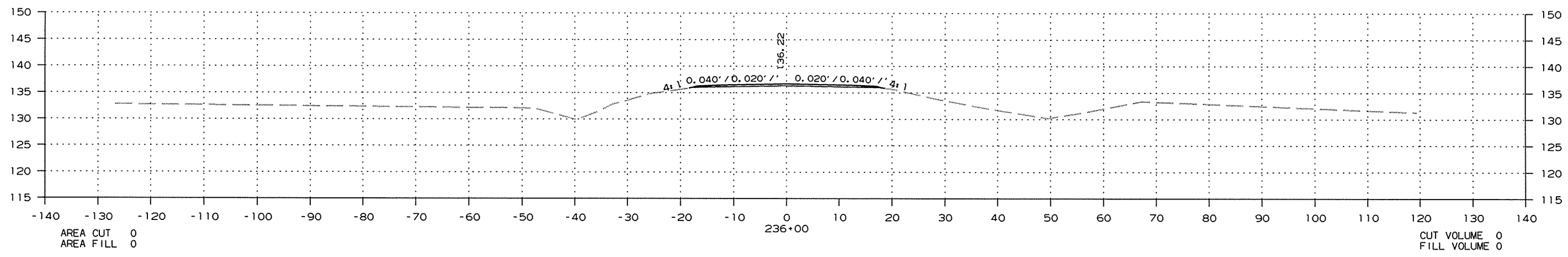
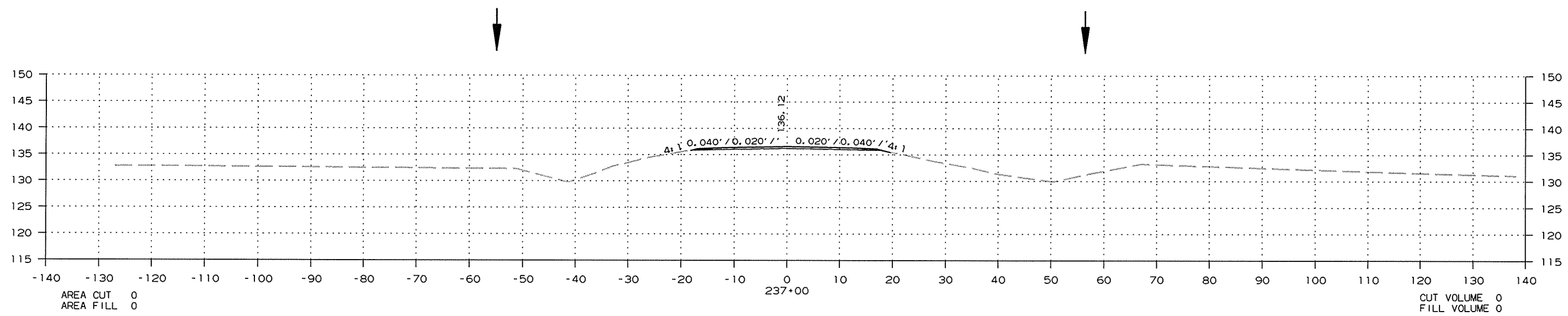


CROSS SECTION STA. 232+00 TO STA. 234+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020576	145	178

② CROSS SECTIONS

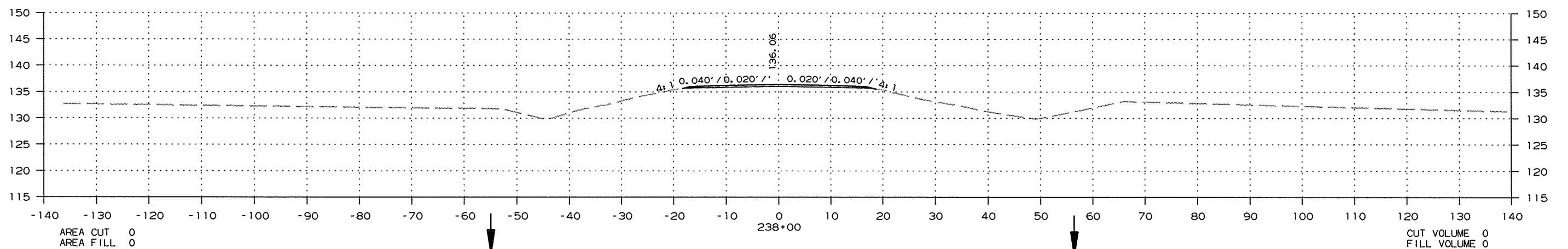
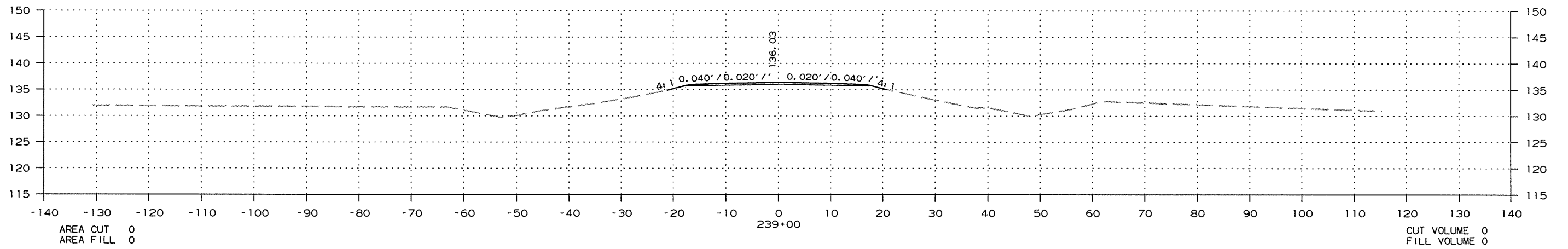
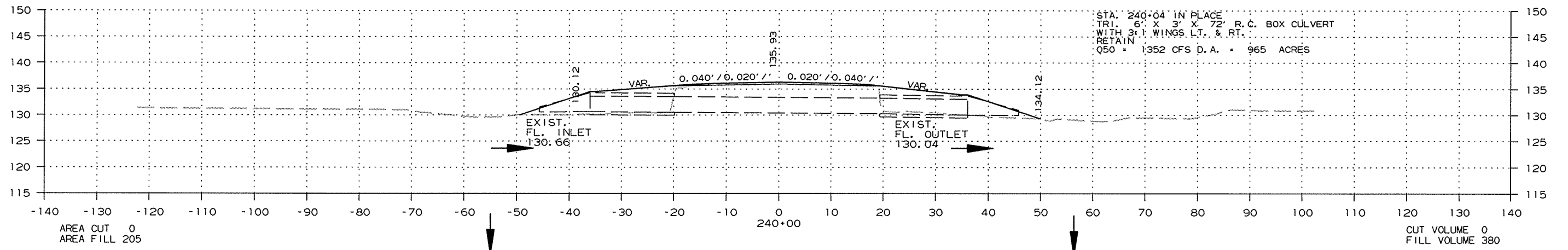


CROSS SECTION STA. 235+00 TO STA. 237+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	146	178

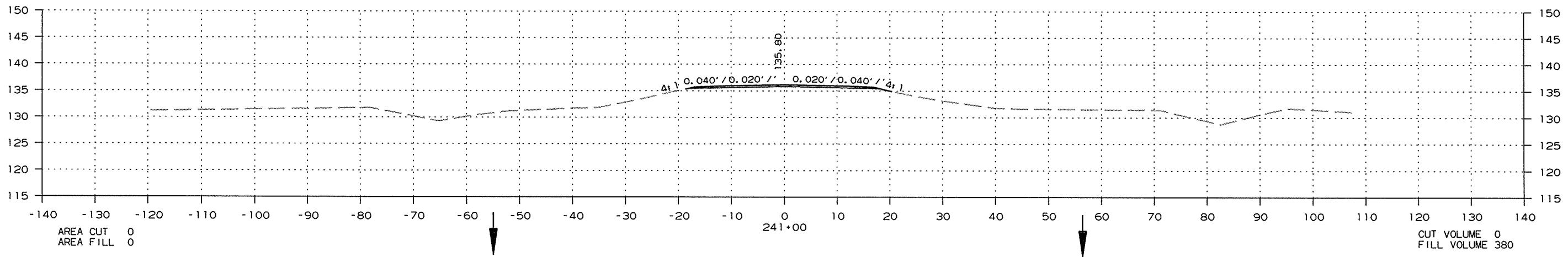
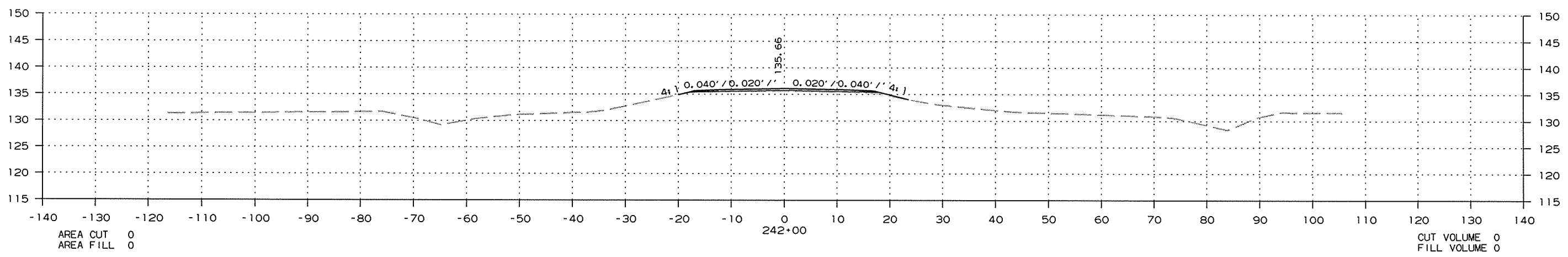
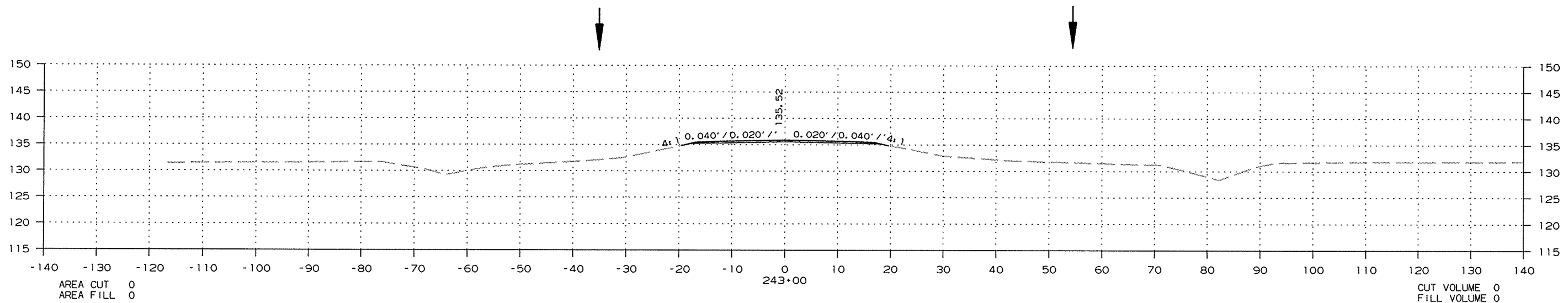
2 CROSS SECTIONS



CROSS SECTION STA. 238+00 TO STA. 240+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							147	178

2 CROSS SECTIONS

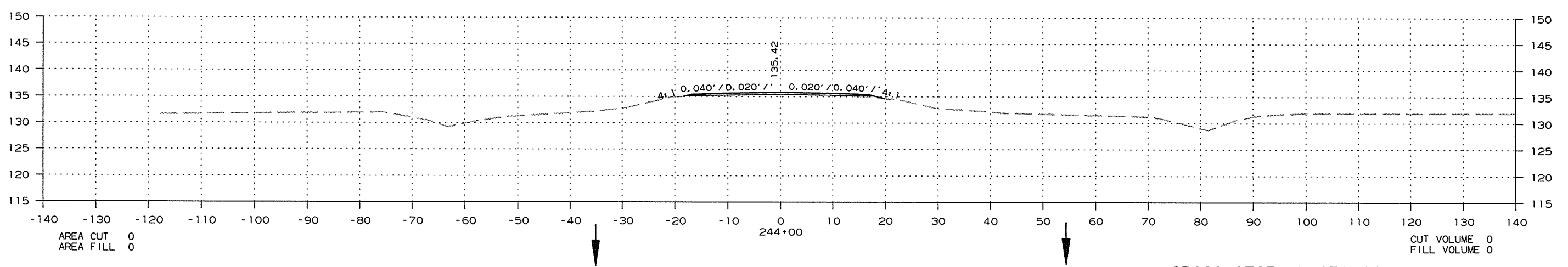
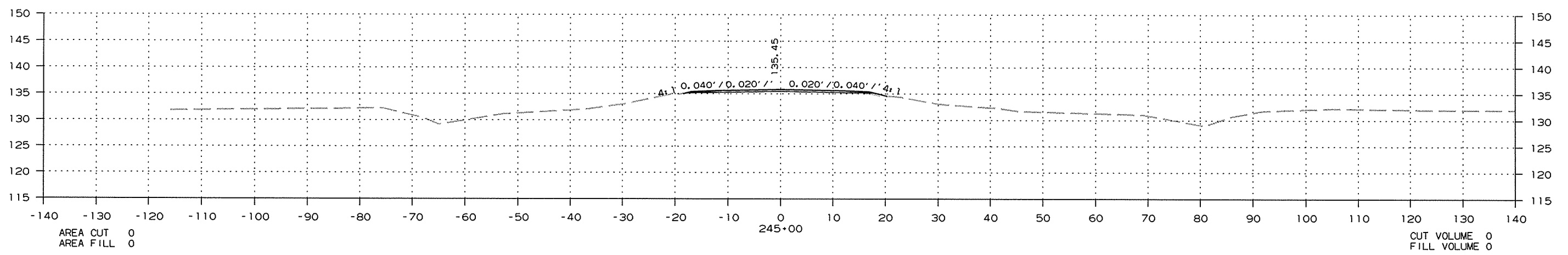
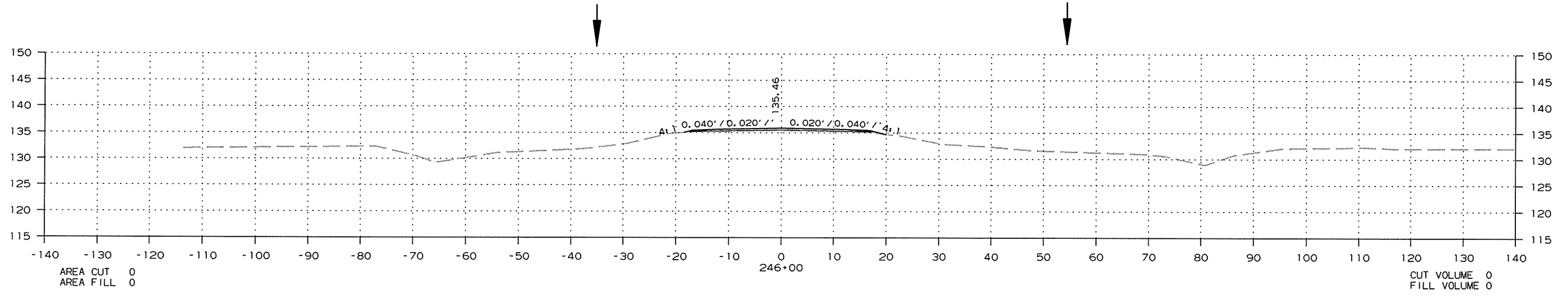


CROSS SECTION STA. 241+00 TO STA. 243+00

R020576.DGN 4/24/2015

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				6	ARK.			
JOB NO. 020576							148	178

② CROSS SECTIONS

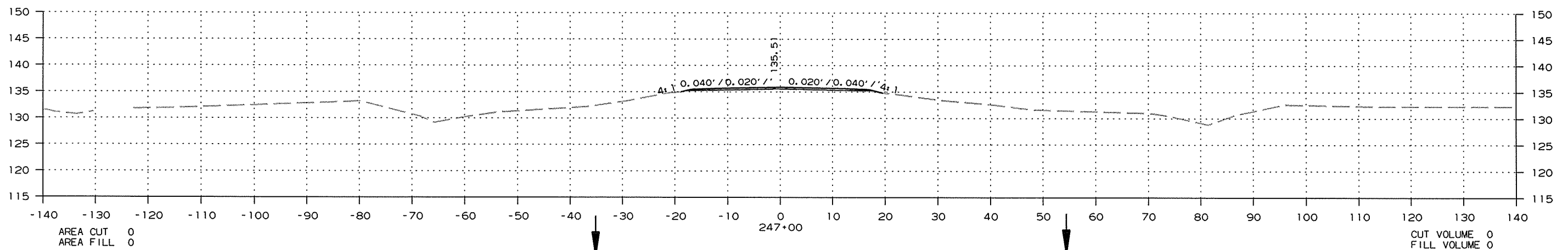
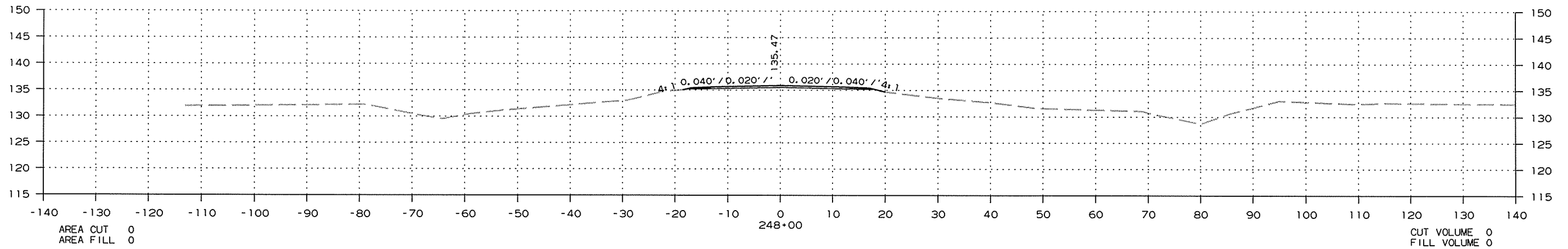
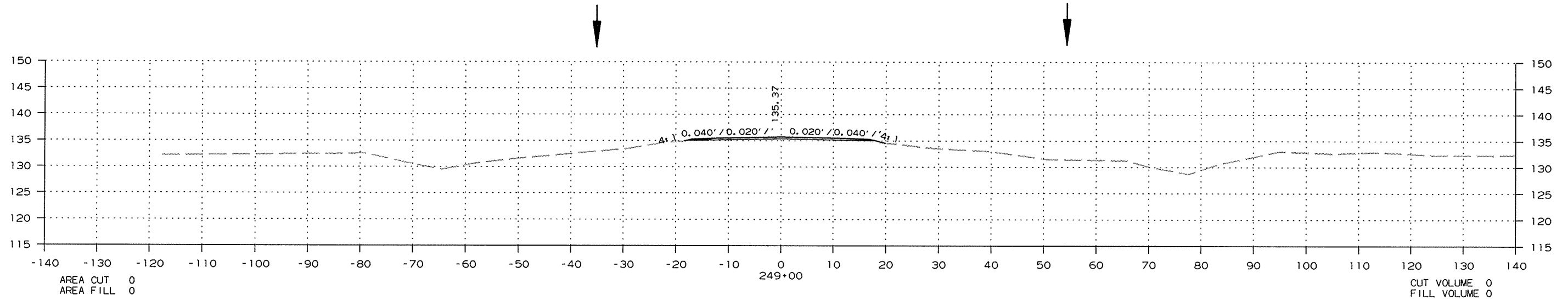


CROSS SECTION STA. 244+00 TO STA. 246+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							149	178

② CROSS SECTIONS



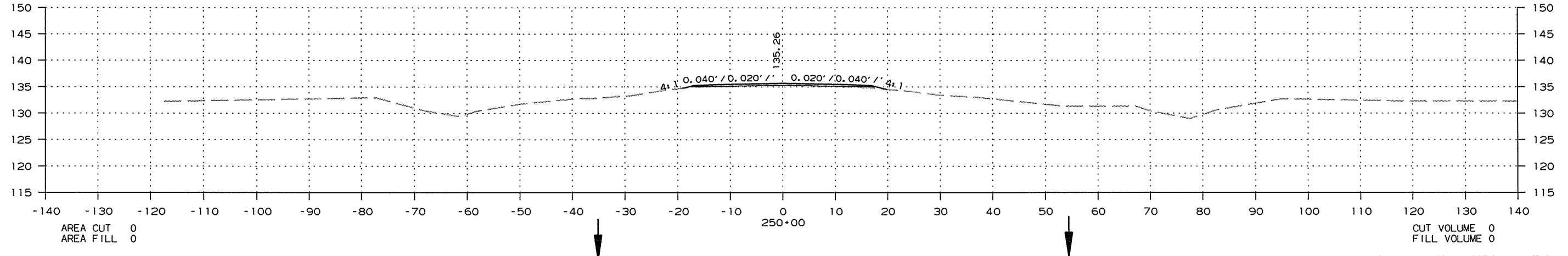
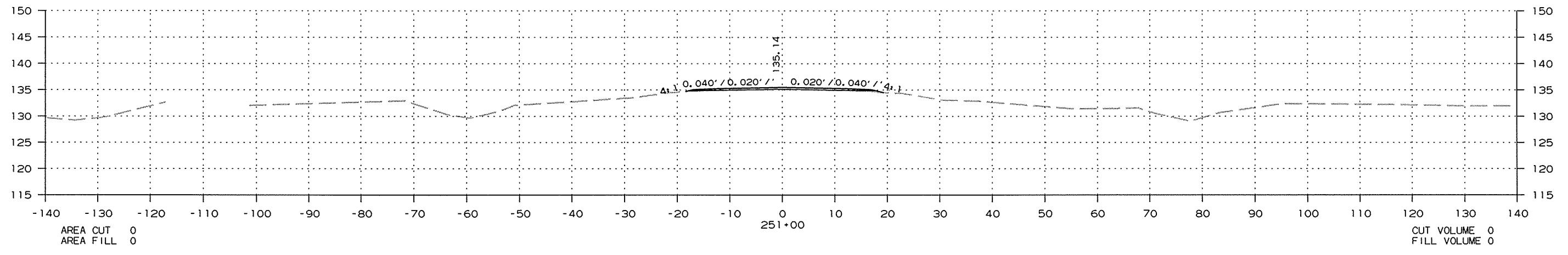
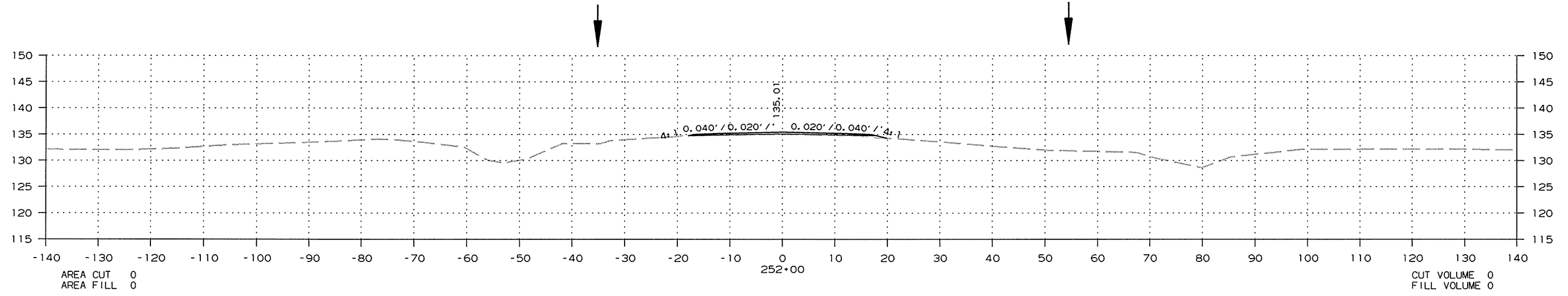
CROSS SECTION STA. 247+00 TO STA. 249+00

4/24/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							150	178

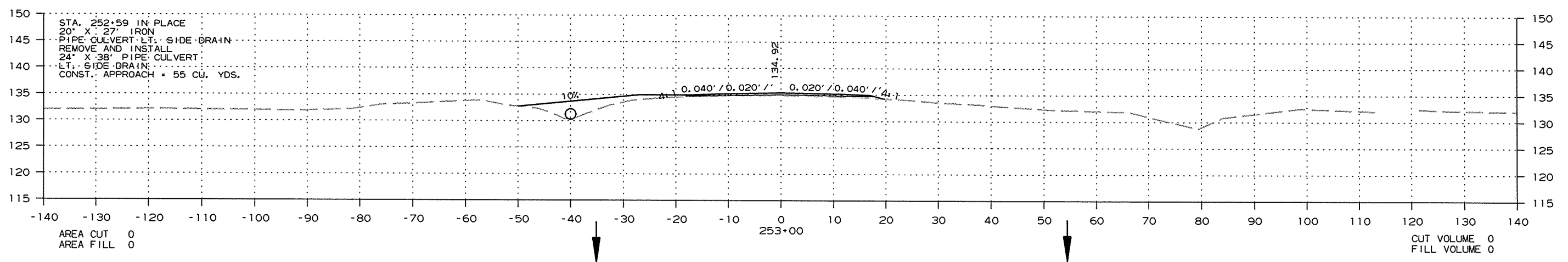
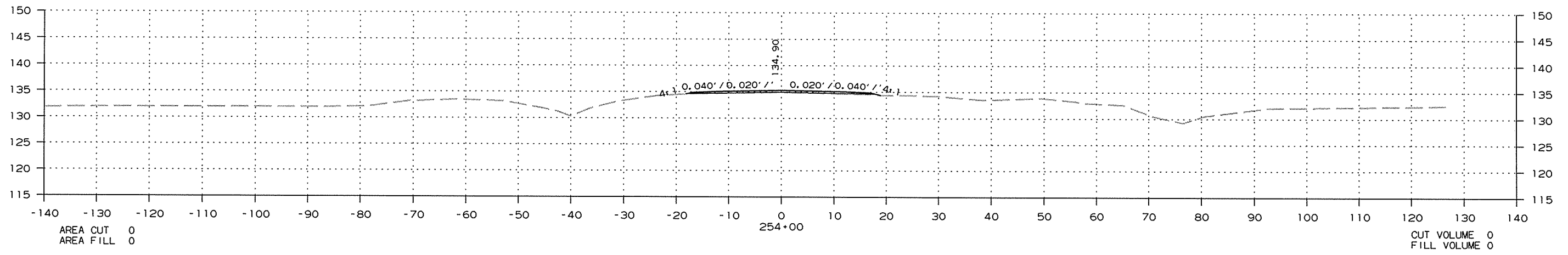
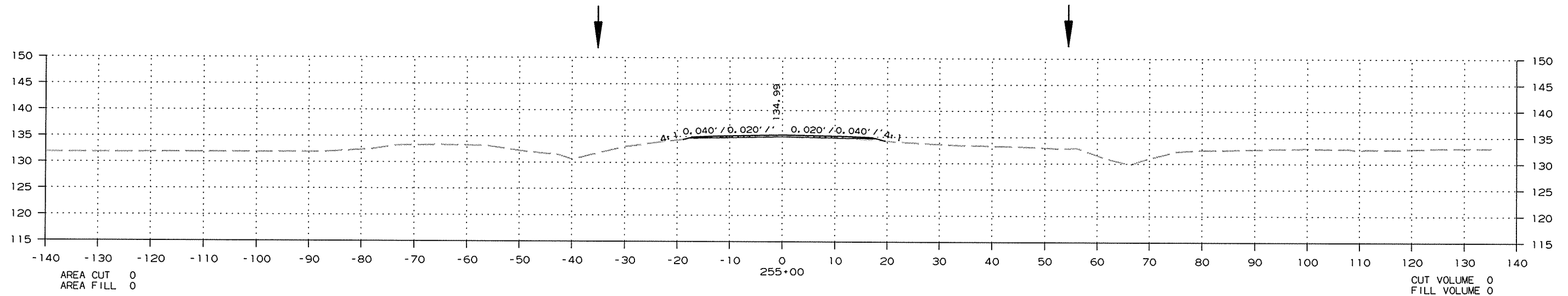
② CROSS SECTIONS



CROSS SECTION STA. 250+00 TO STA. 252+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							151	178

② CROSS SECTIONS

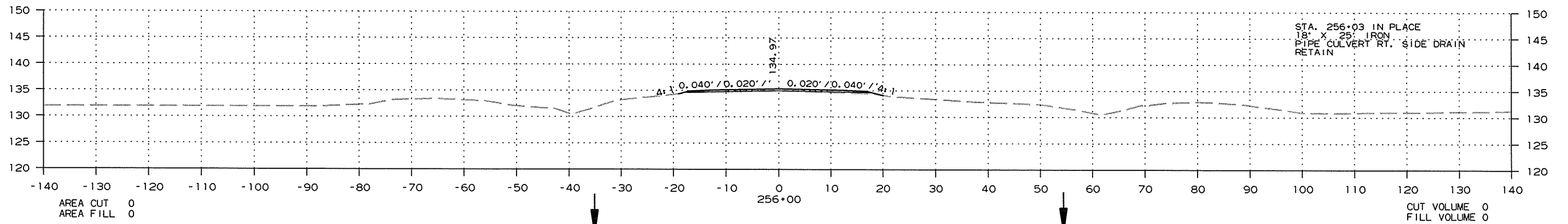
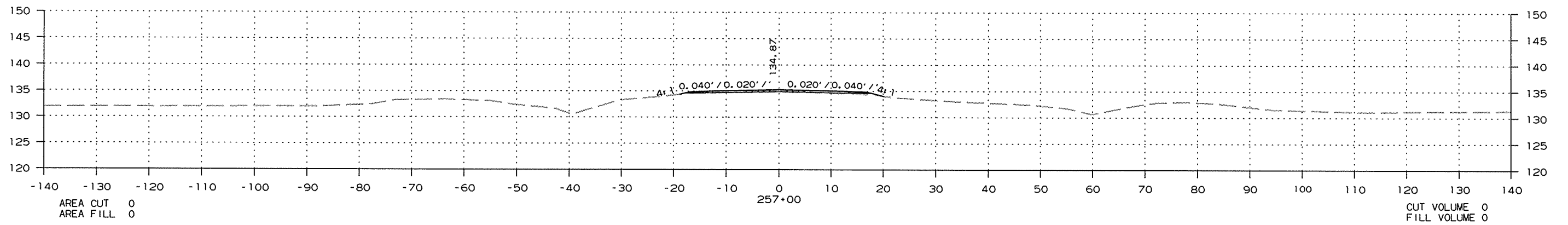
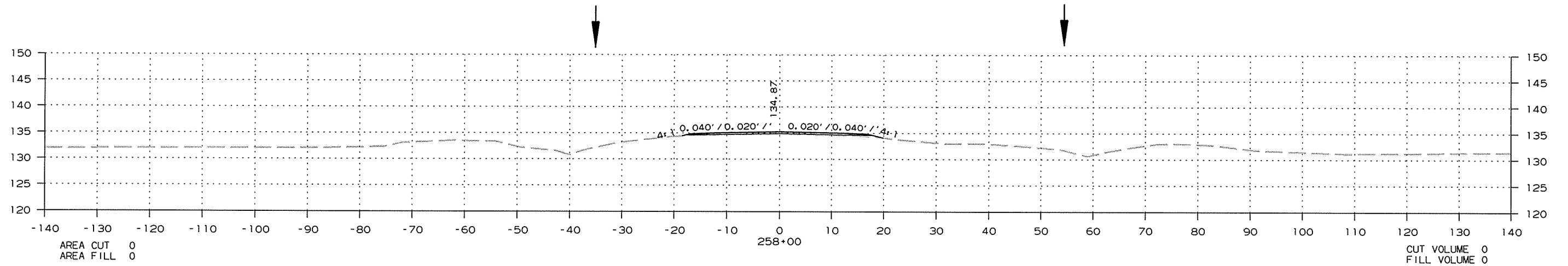


CROSS SECTION STA. 253+00 TO STA. 255+00

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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							152	178

② CROSS SECTIONS



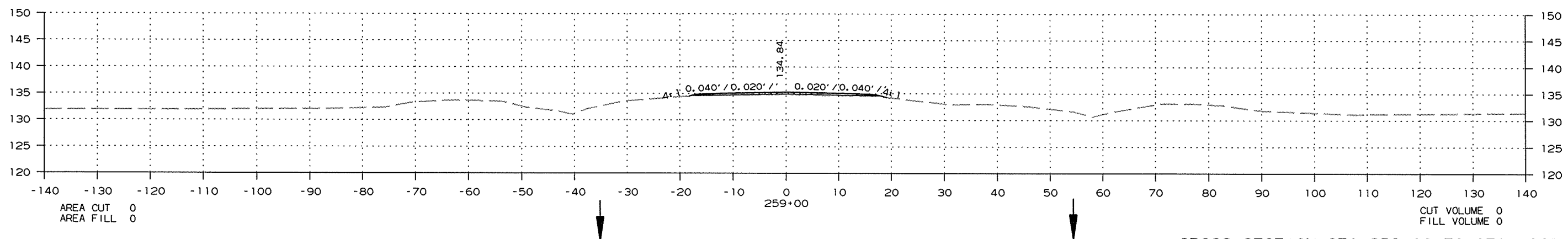
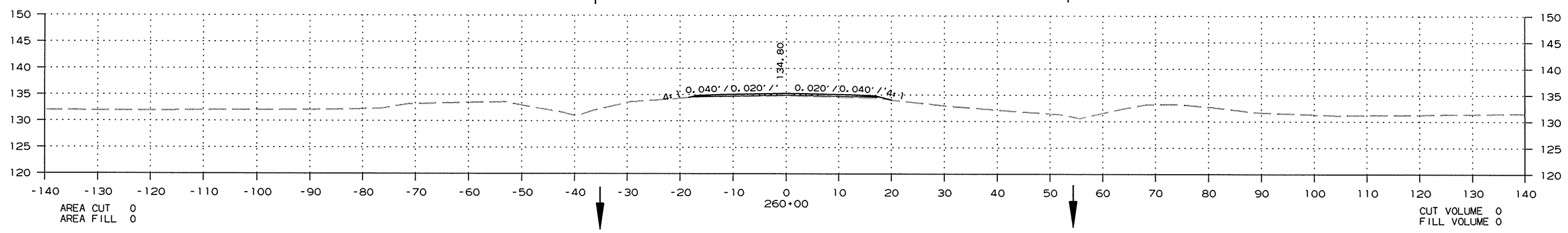
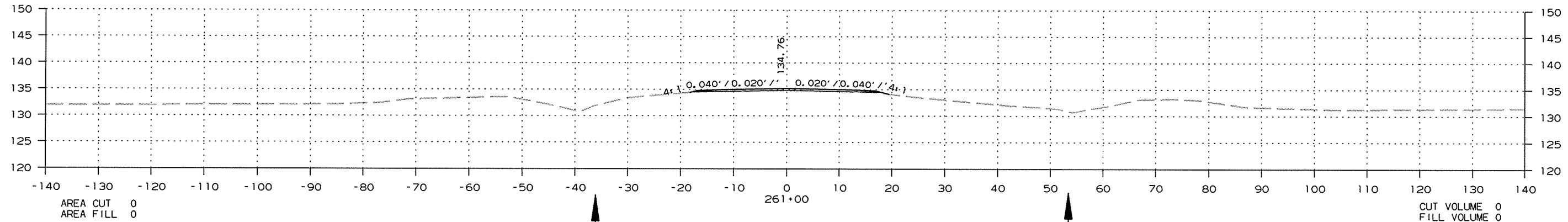
CROSS SECTION STA. 256+00 TO STA. 258+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	153	178

② CROSS SECTIONS

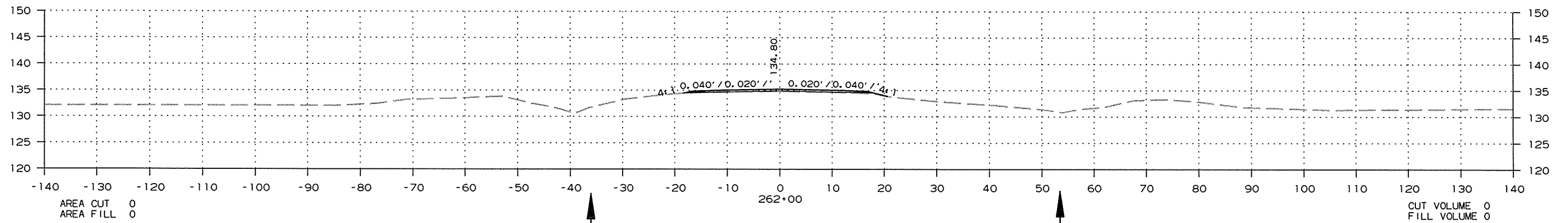
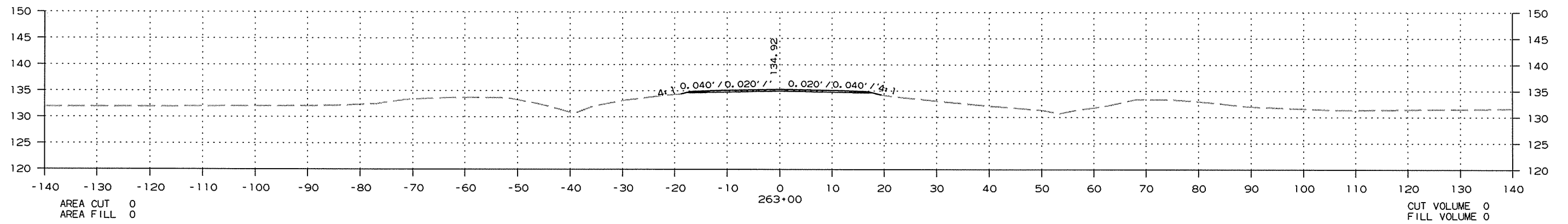
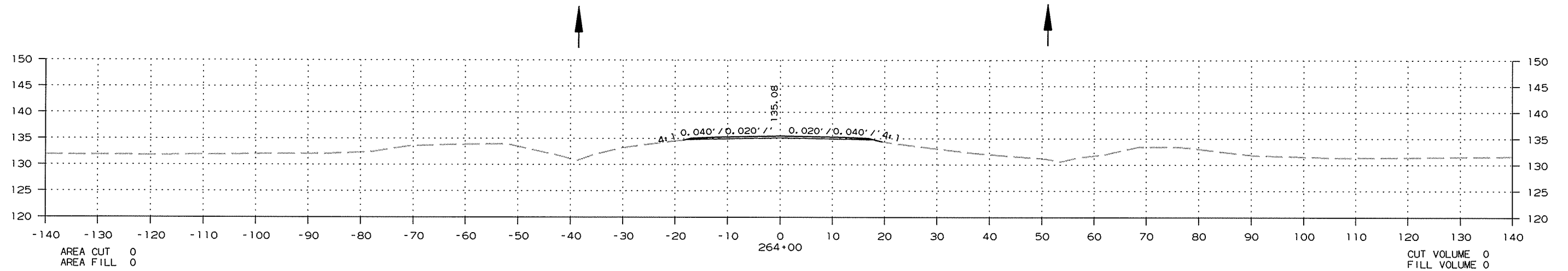


CROSS SECTION STA. 259+00 TO STA. 261+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	154	178

② CROSS SECTIONS



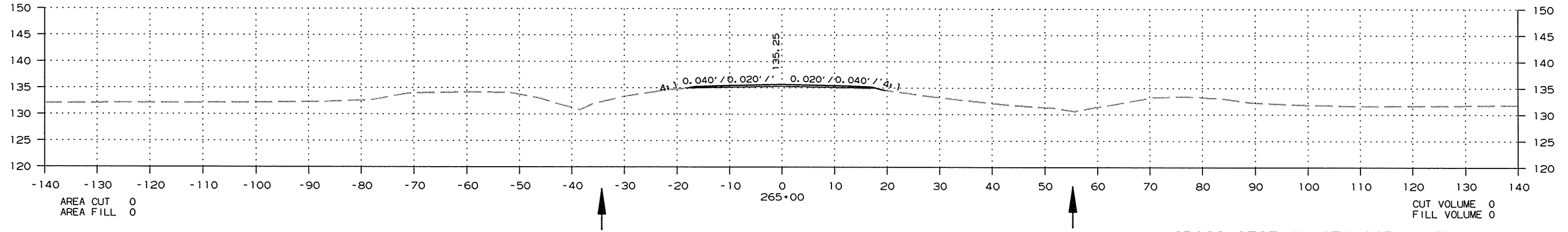
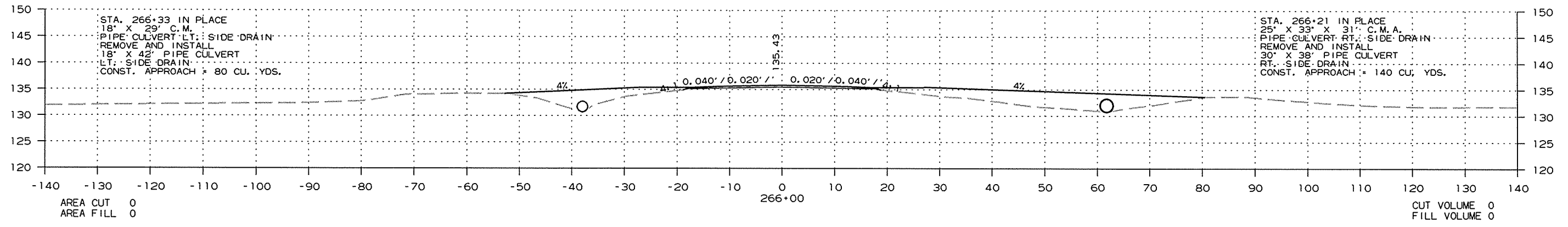
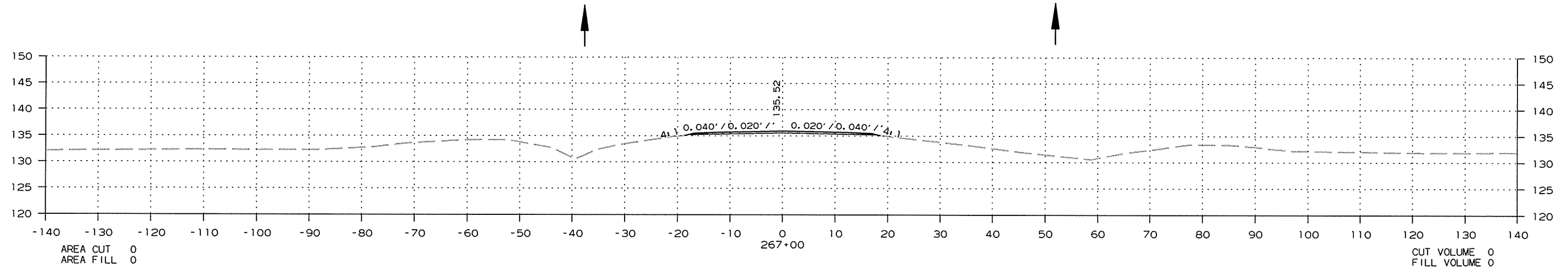
CROSS SECTION STA. 262+00 TO STA. 264+00

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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020576	155	178

② CROSS SECTIONS



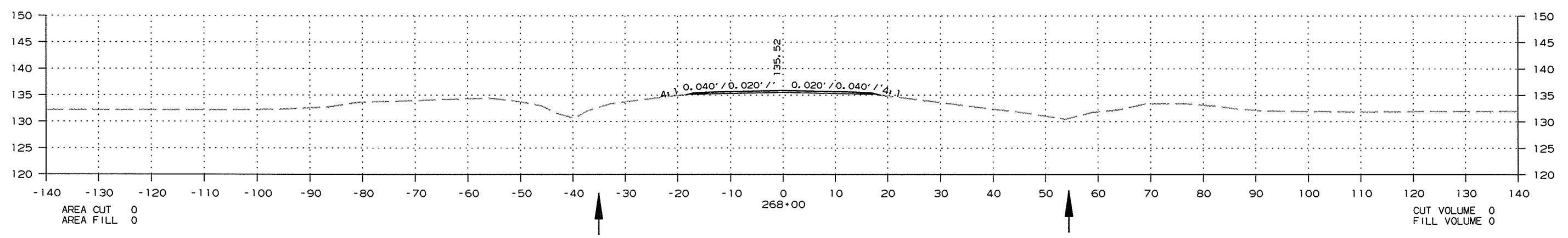
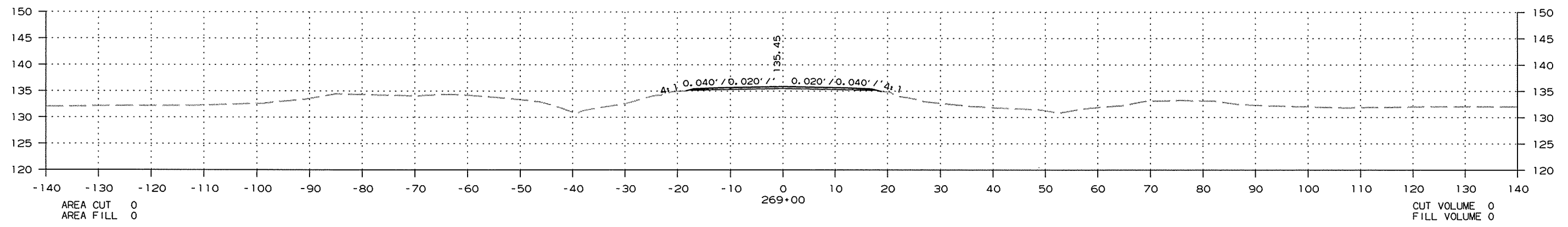
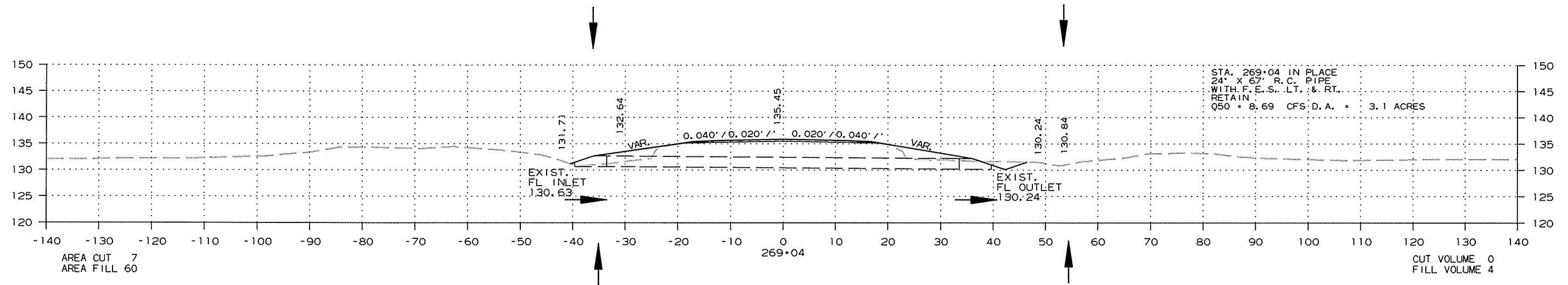
CROSS SECTION STA. 265+00 TO STA. 267+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	020576	156 178

② CROSS SECTIONS

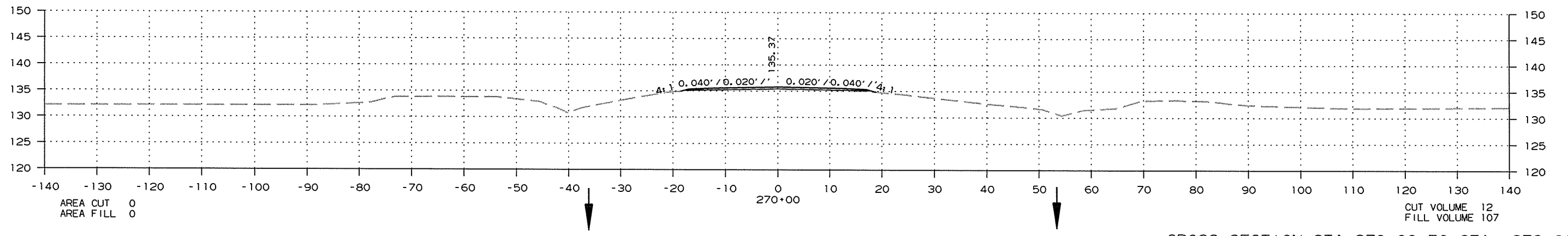
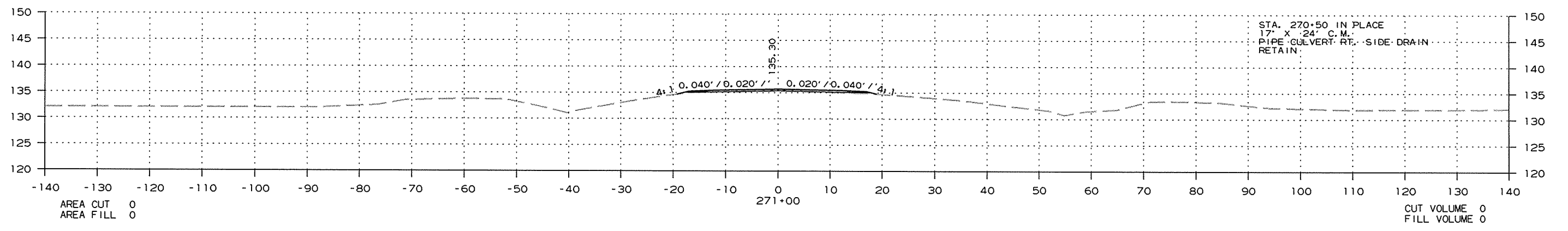
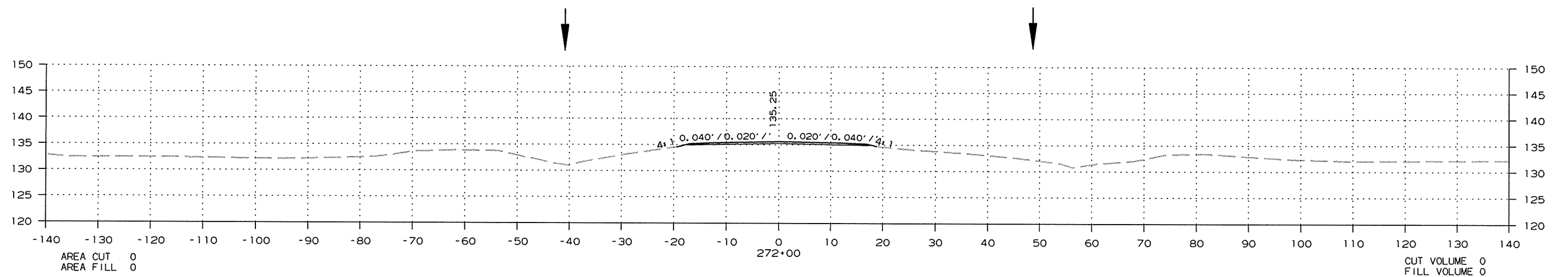


CROSS SECTION STA. 268+00 TO STA. 269+04

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	157	178

② CROSS SECTIONS

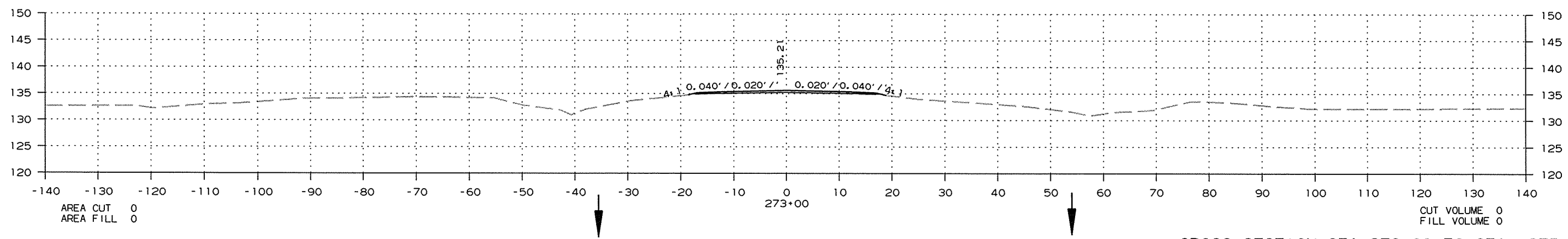
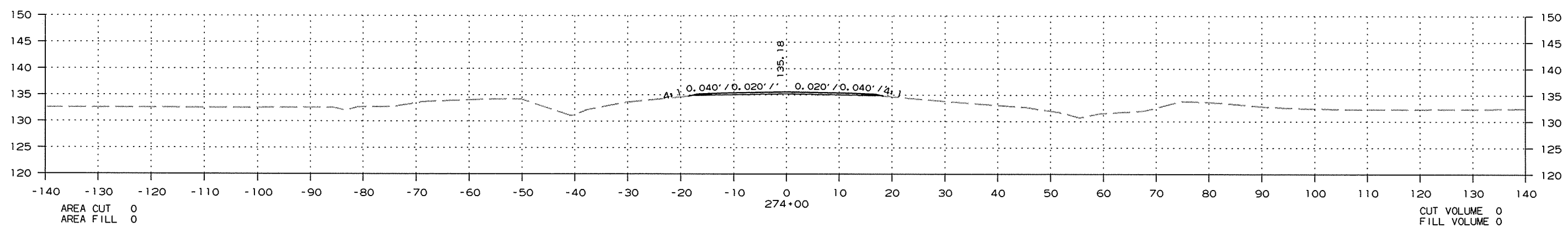
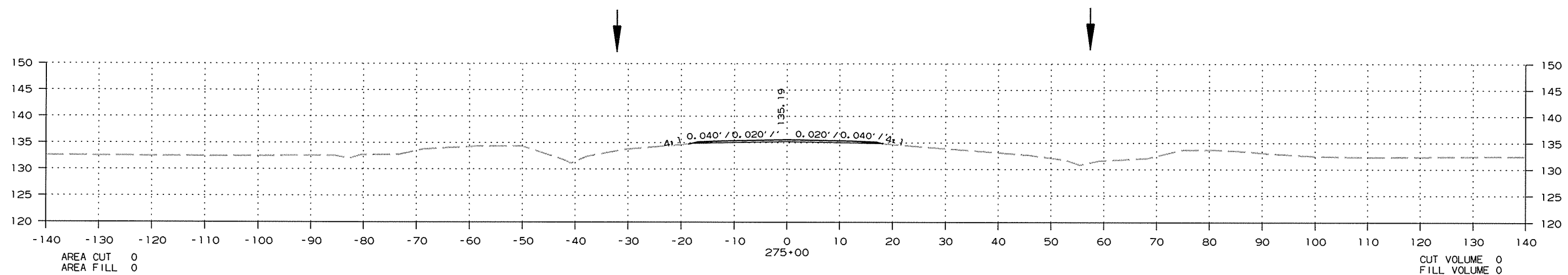


CROSS SECTION STA. 270+00 TO STA. 272+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020576	158	178

② CROSS SECTIONS

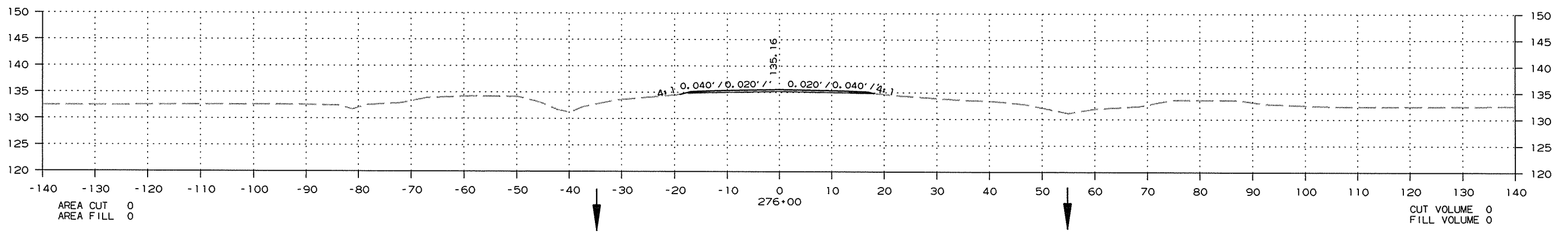
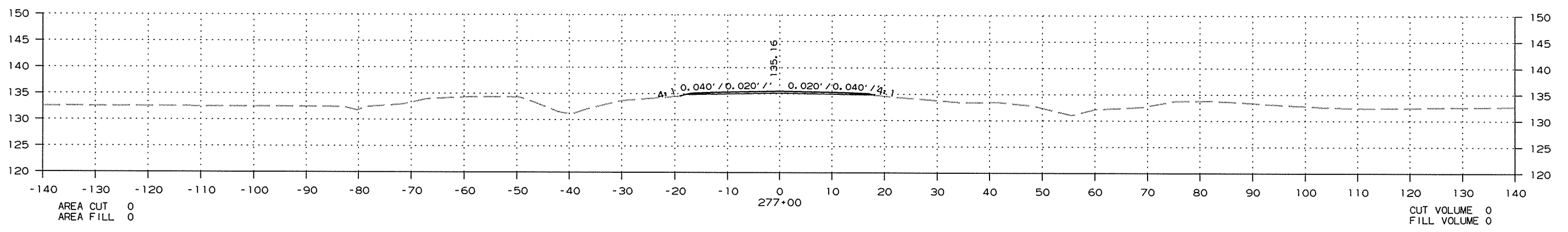
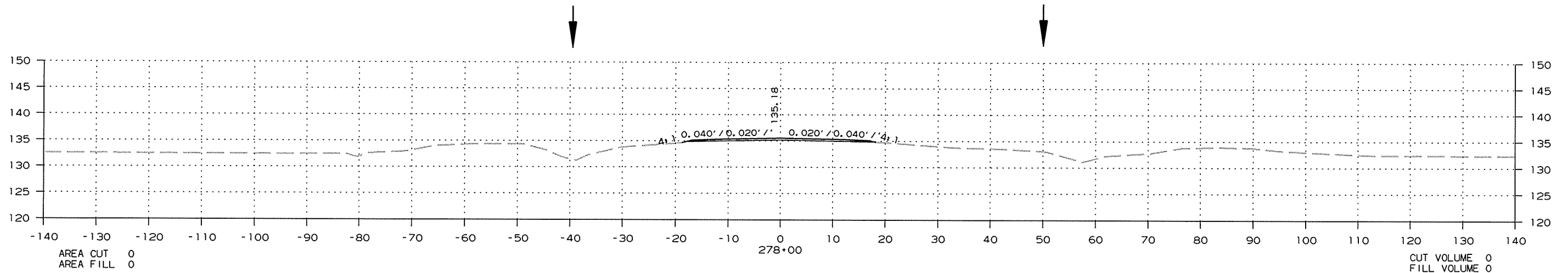


CROSS SECTION STA. 273+00 TO STA. 275+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020576	159	178

② CROSS SECTIONS



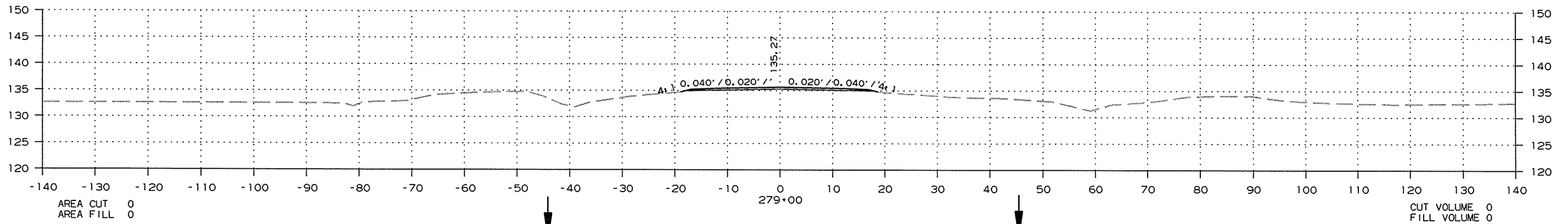
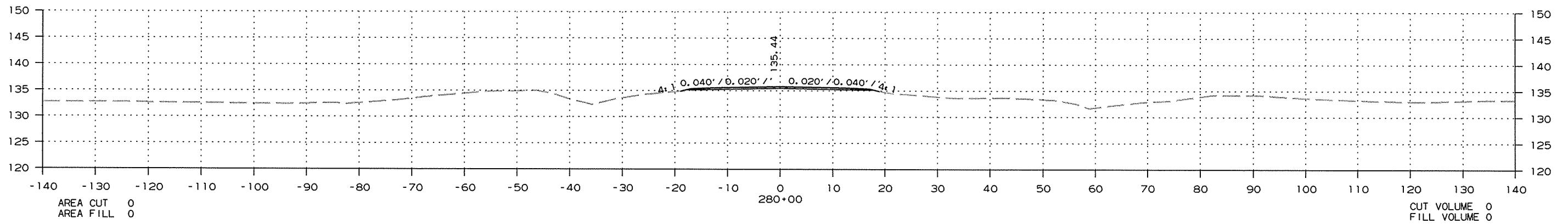
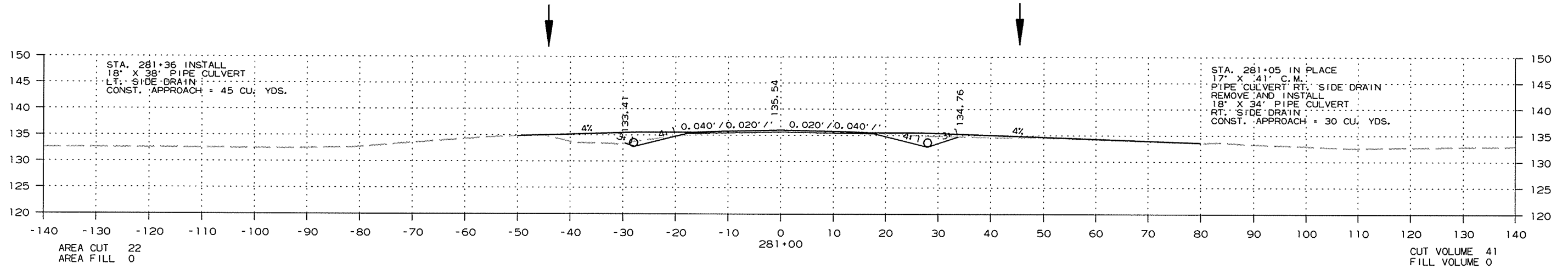
CROSS SECTION STA. 276+00 TO STA. 278+00

4/24/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							160	178

② CROSS SECTIONS



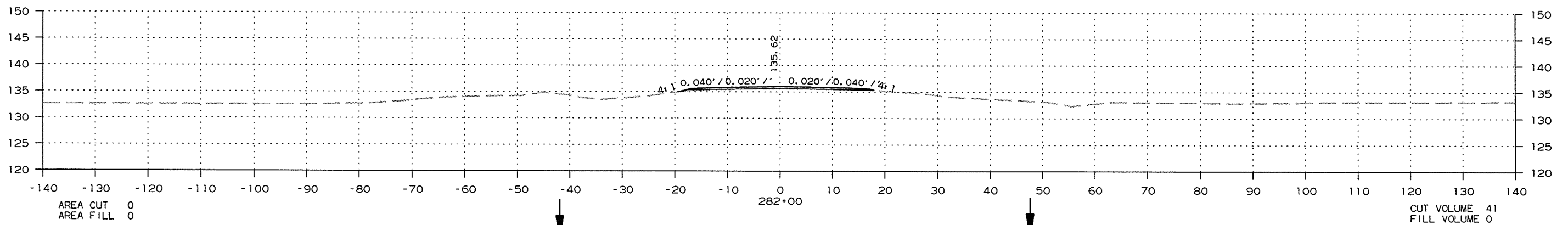
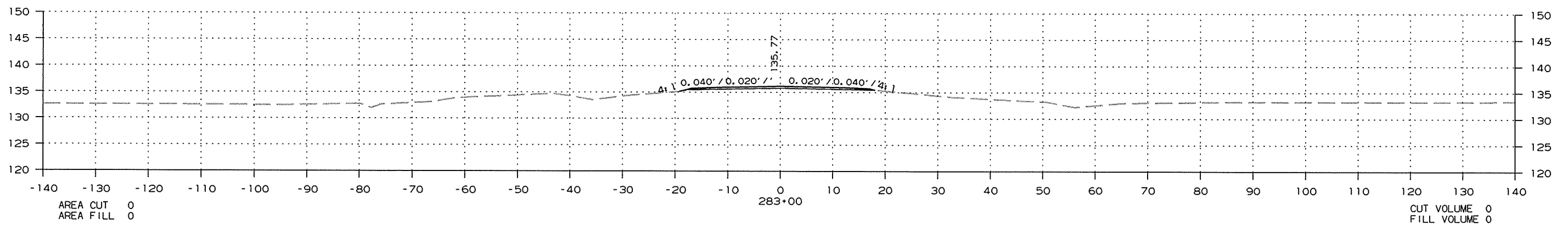
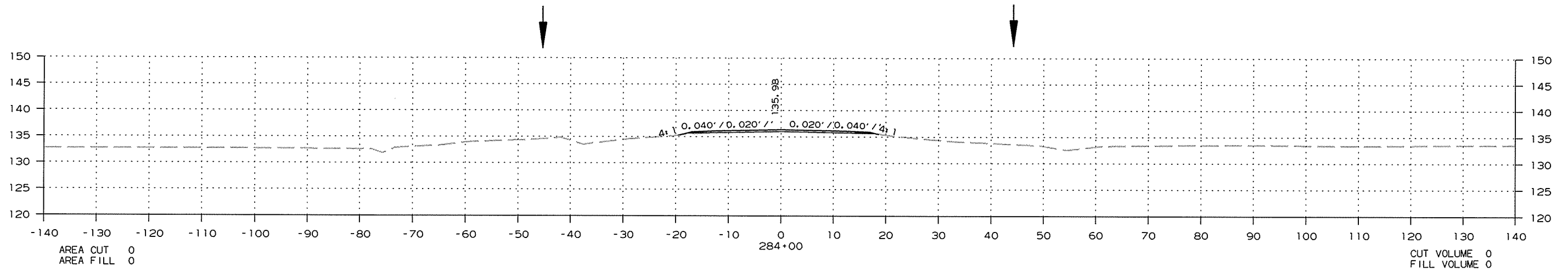
CROSS SECTION STA. 279+00 TO STA. 281+00

4/24/2015

R020576.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							161	178

② CROSS SECTIONS



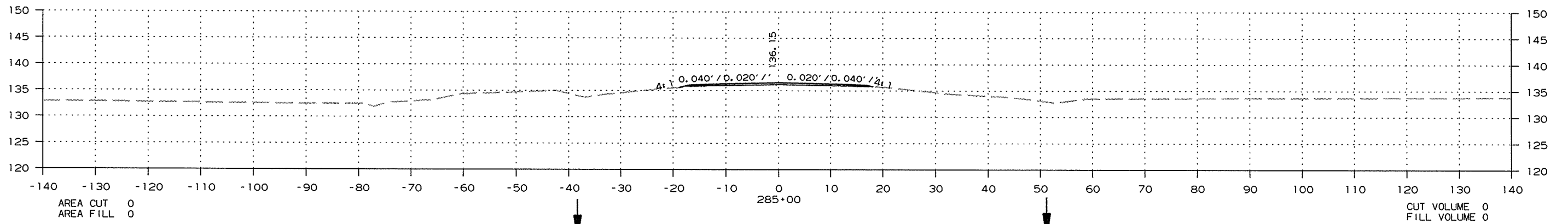
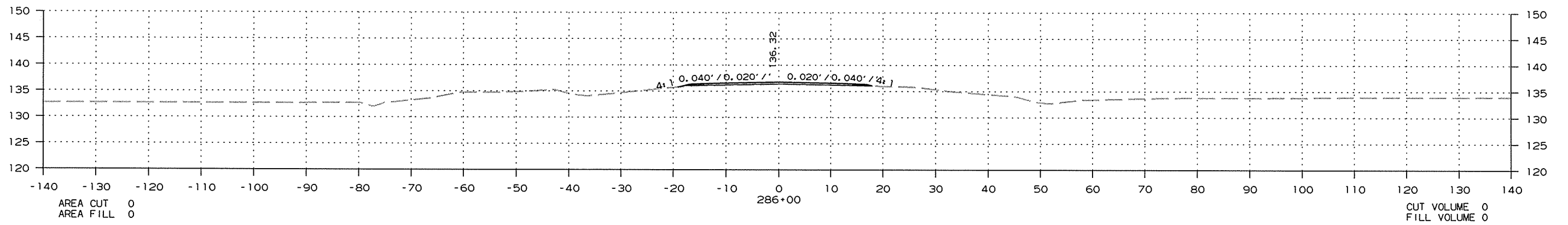
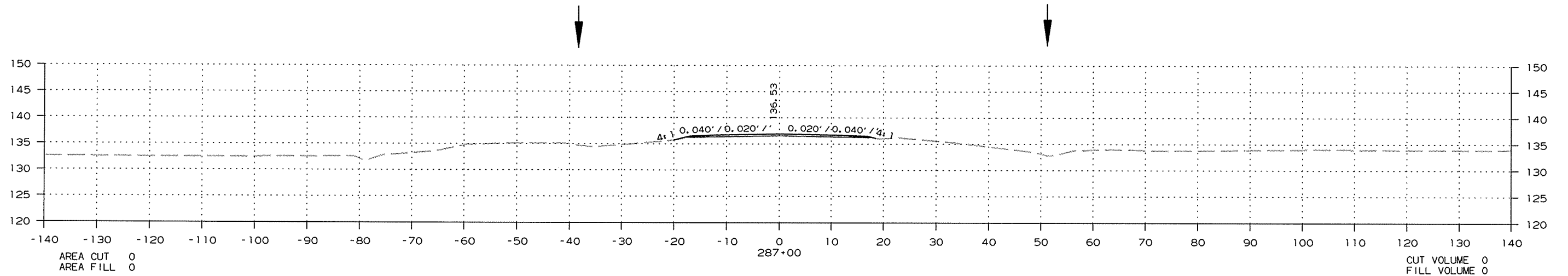
CROSS SECTION STA. 282+00 TO STA. 284+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020576	162	178

② CROSS SECTIONS



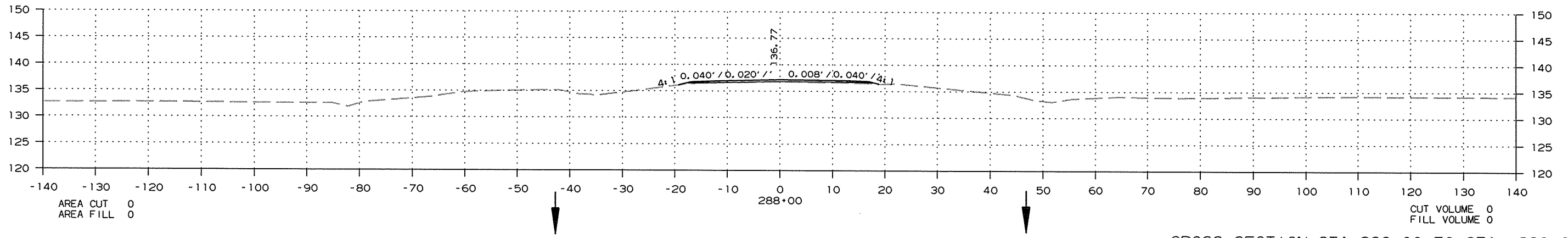
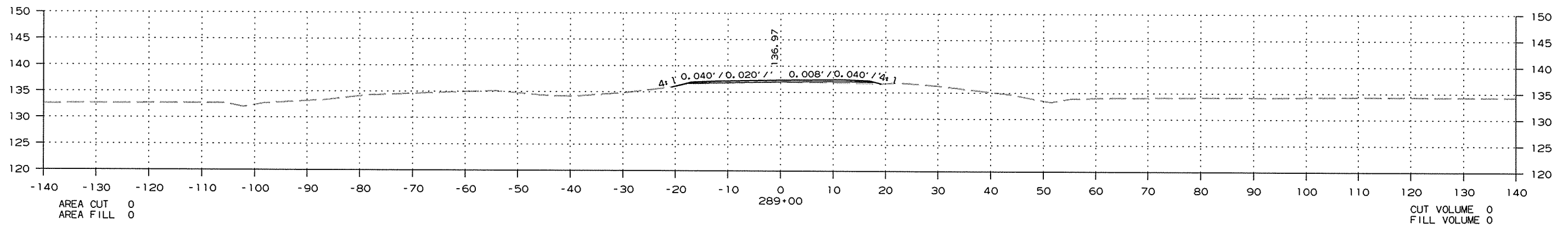
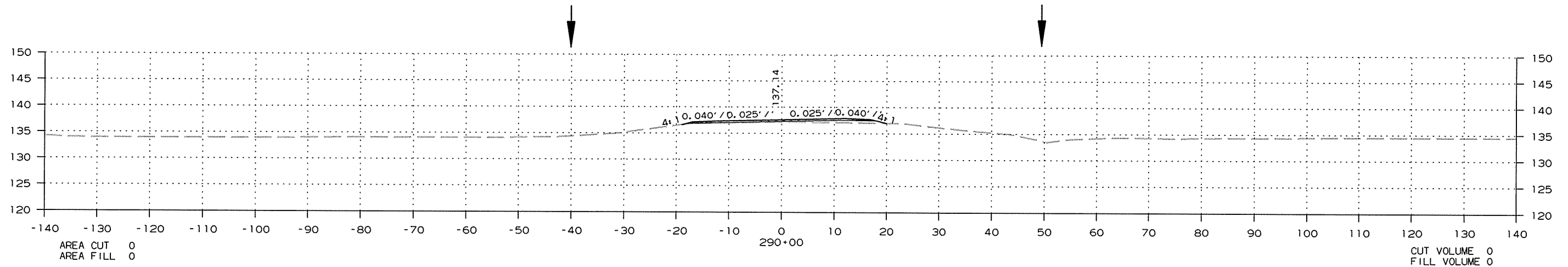
CROSS SECTION STA. 285+00 TO STA. 287+00

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R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	163	178

② CROSS SECTIONS

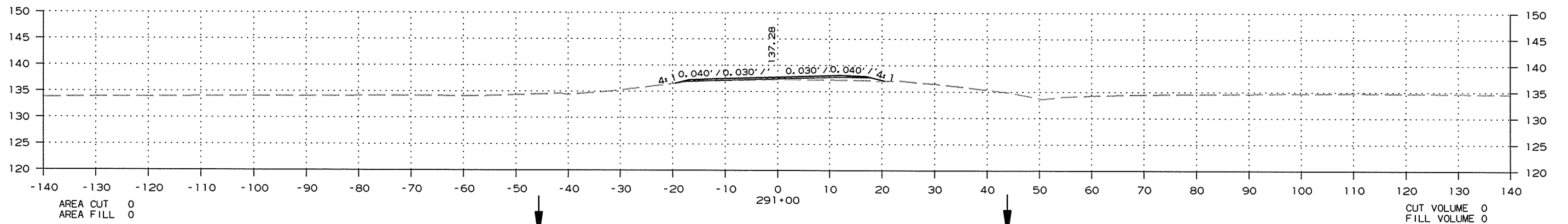
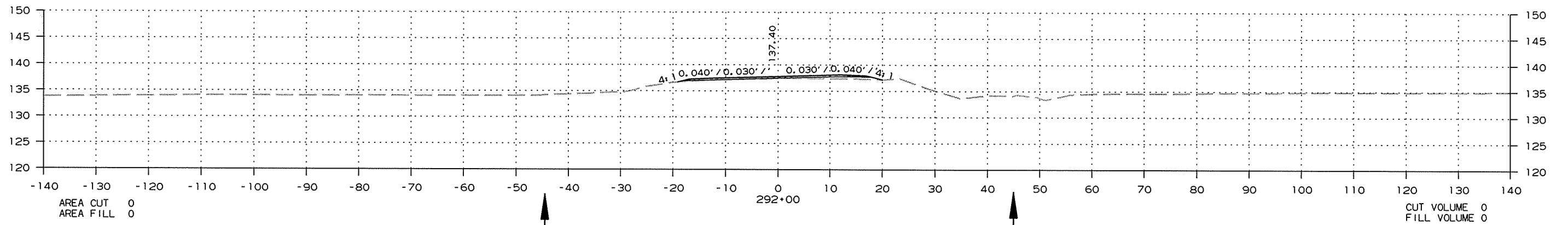
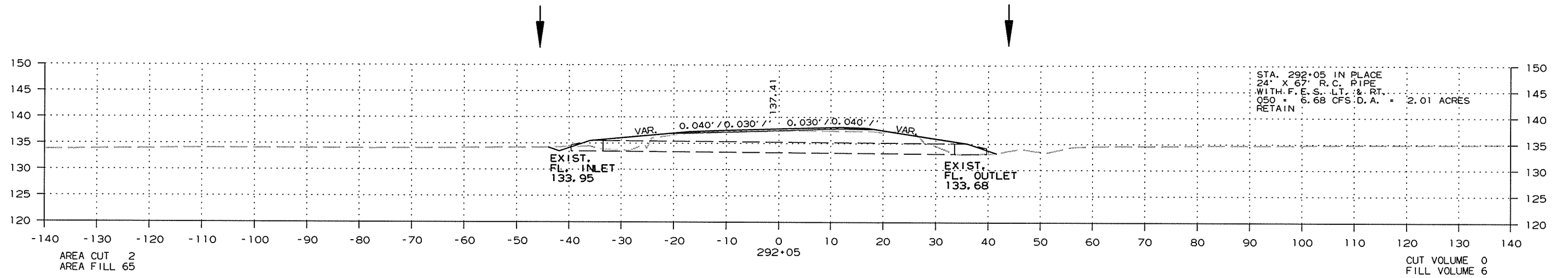


CROSS SECTION STA. 288+00 TO STA. 290+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							164	178

② CROSS SECTIONS



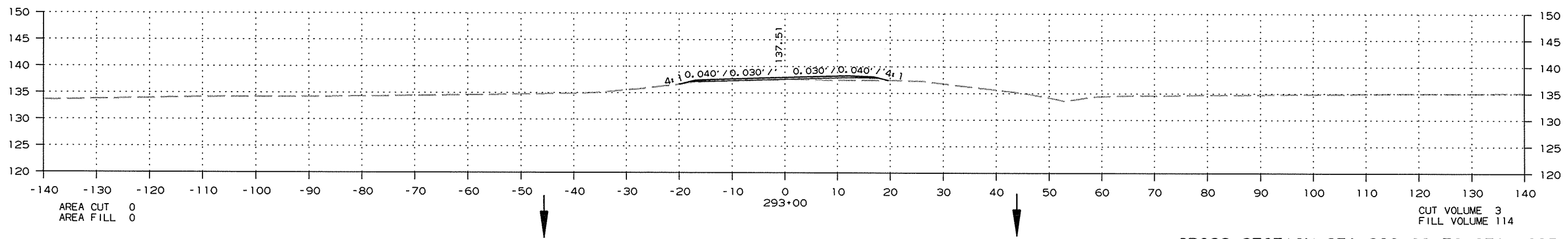
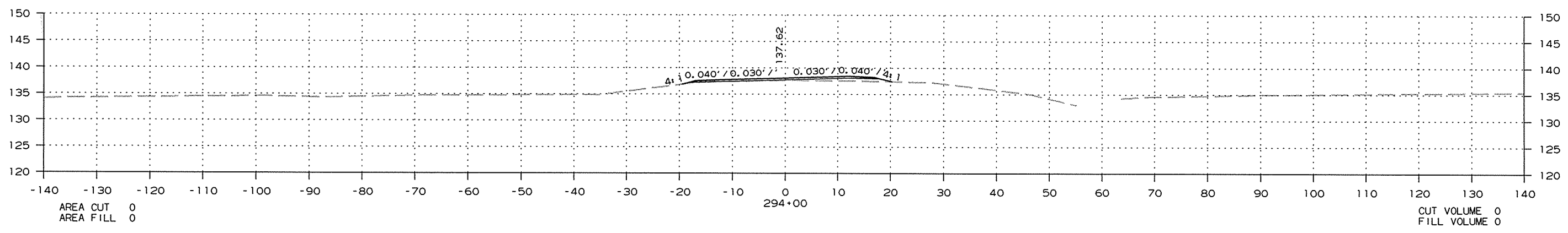
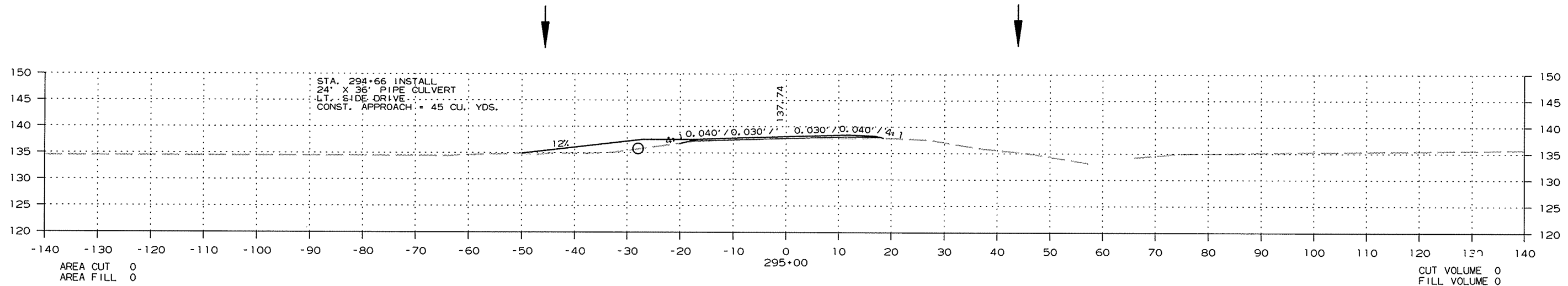
CROSS SECTION STA. 291+00 TO STA. 292+05

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	165	178

② CROSS SECTIONS

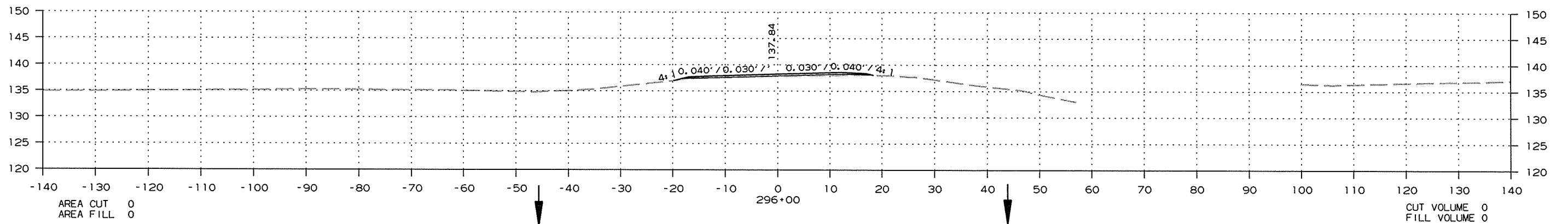
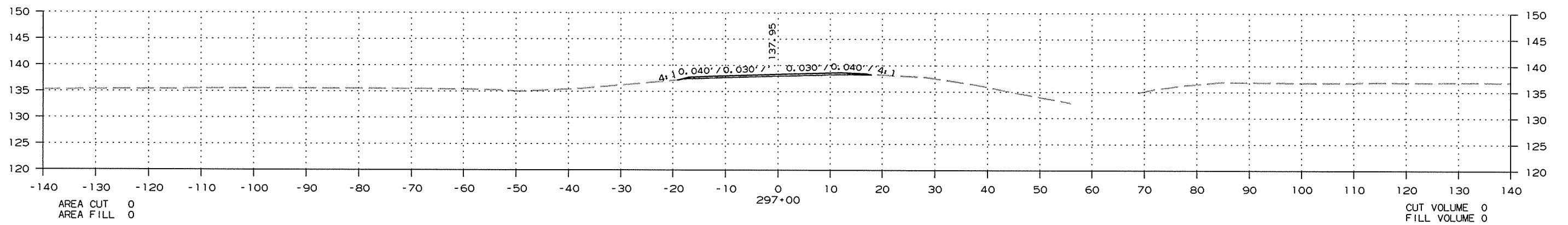
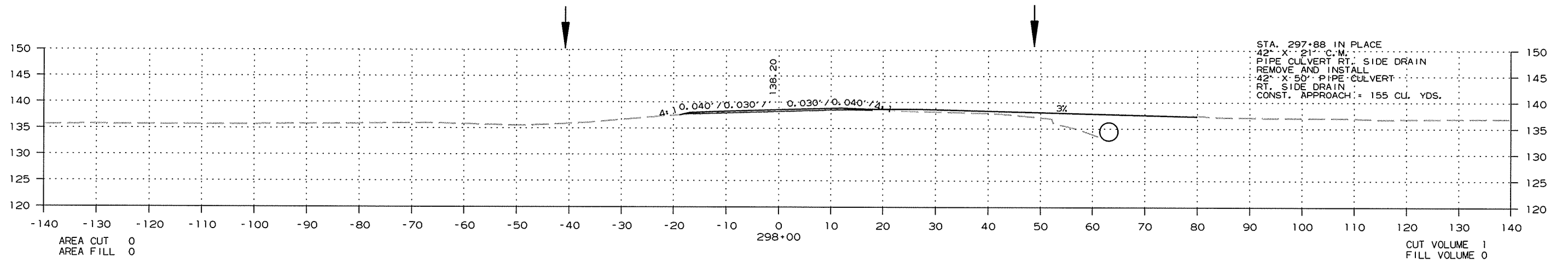


CROSS SECTION STA. 293+00 TO STA. 295+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020576							166	178

② CROSS SECTIONS



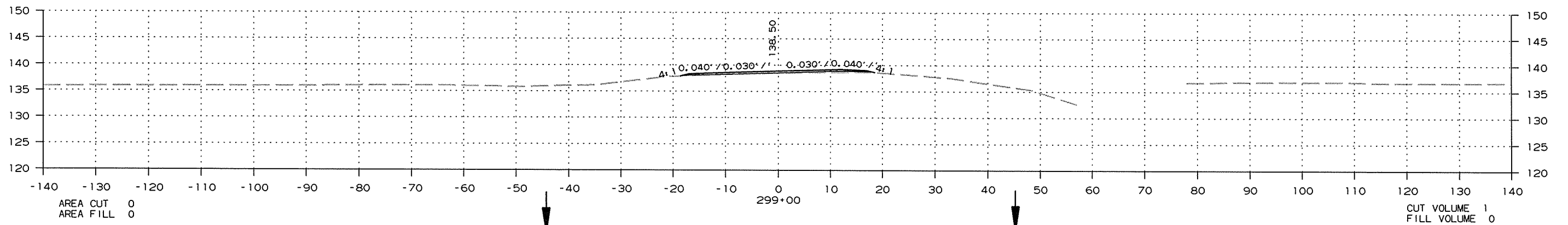
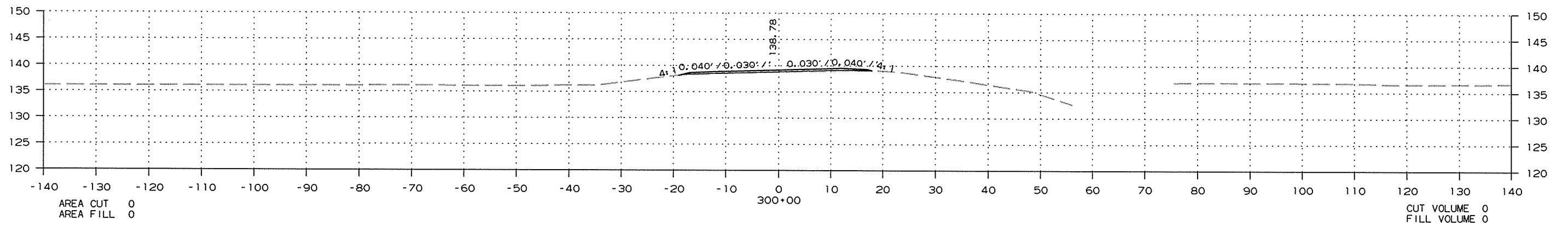
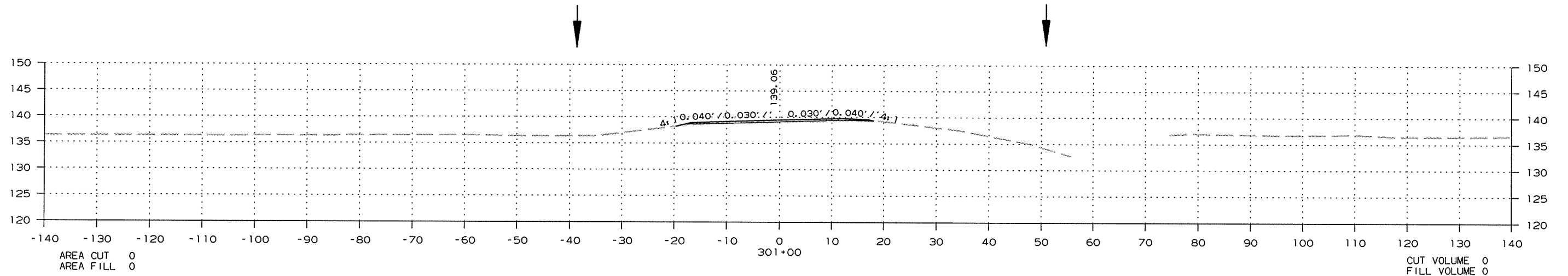
CROSS SECTION STA. 296+00 TO STA. 298+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 020576			167	178

② CROSS SECTIONS



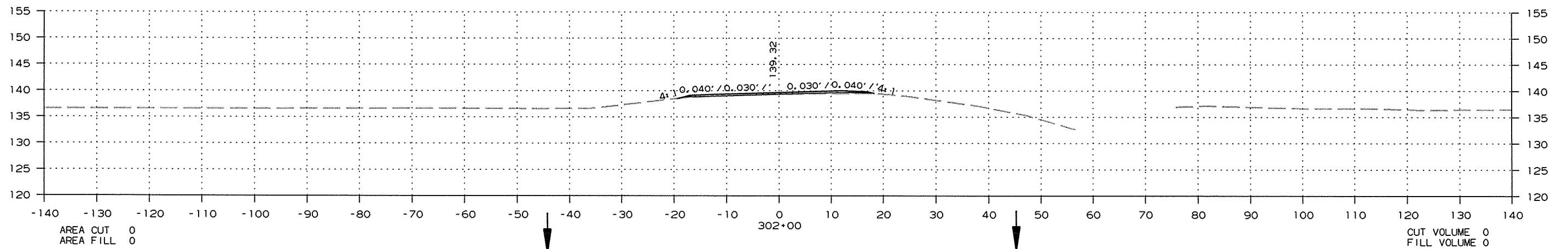
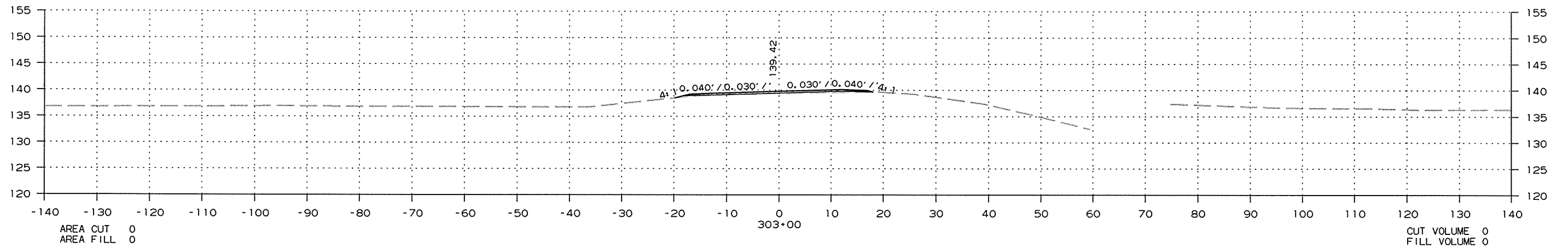
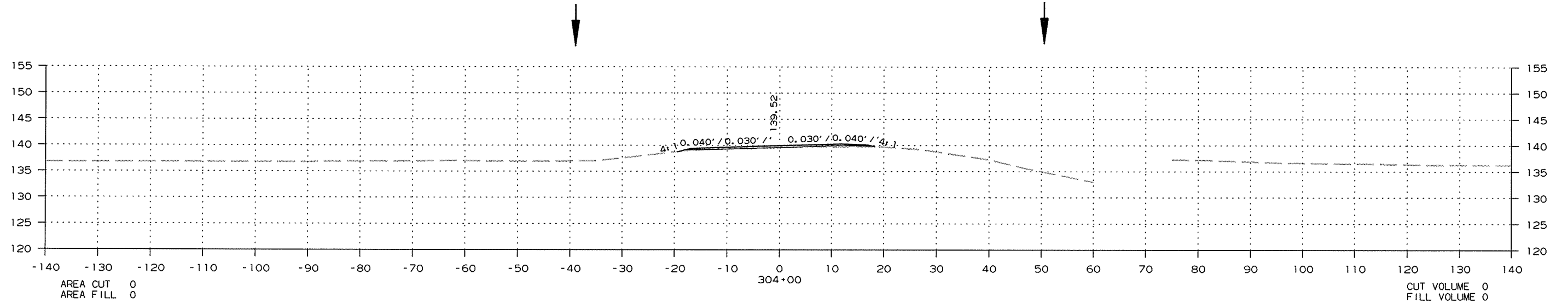
CROSS SECTION STA. 299+00 TO STA. 301+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						020576	168	178

② CROSS SECTIONS



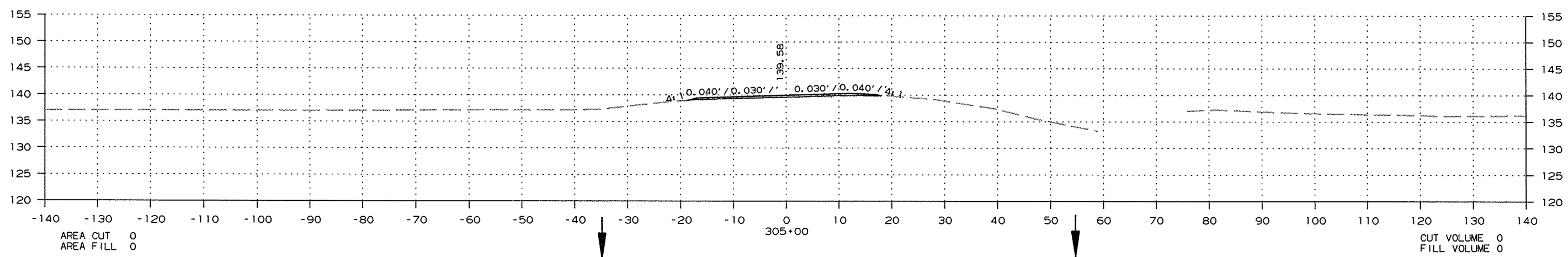
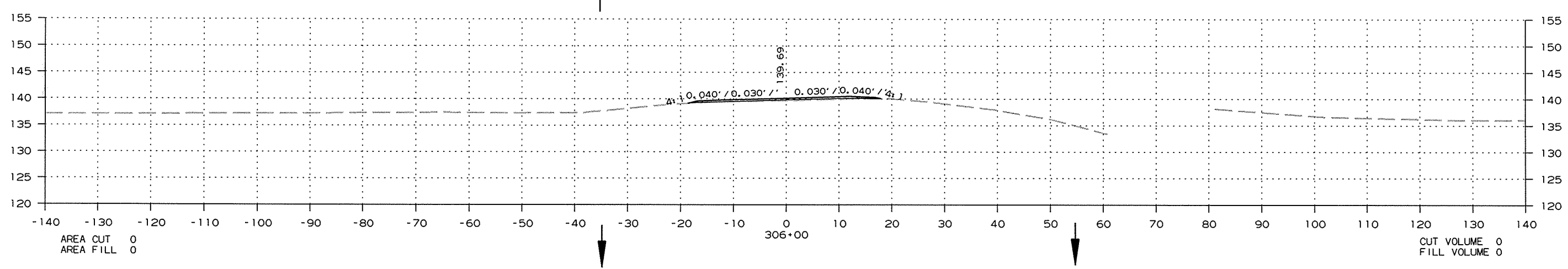
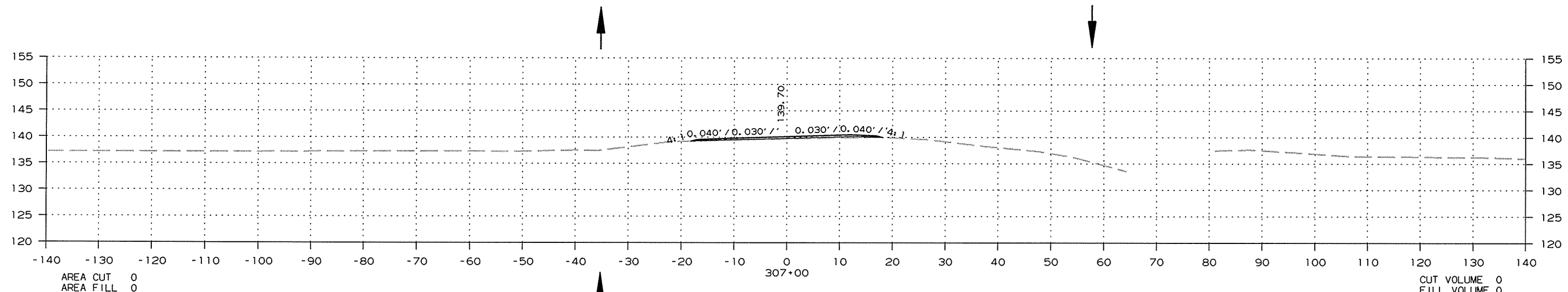
CROSS SECTION STA. 302+00 TO STA. 304+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						020576	169	178

② CROSS SECTIONS

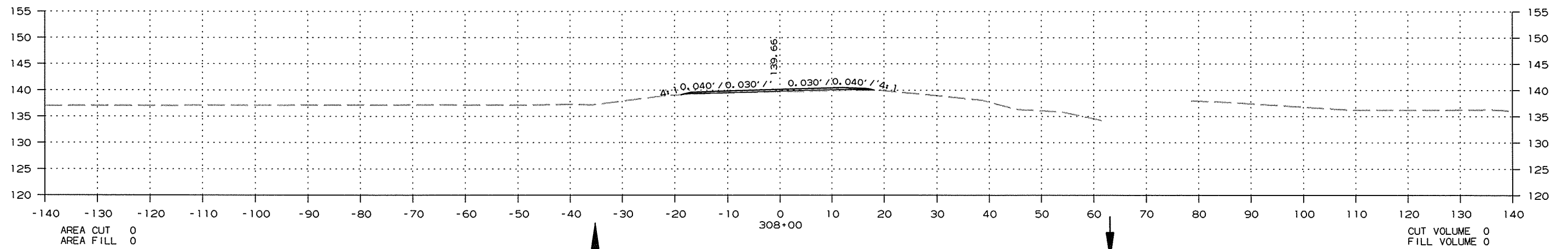
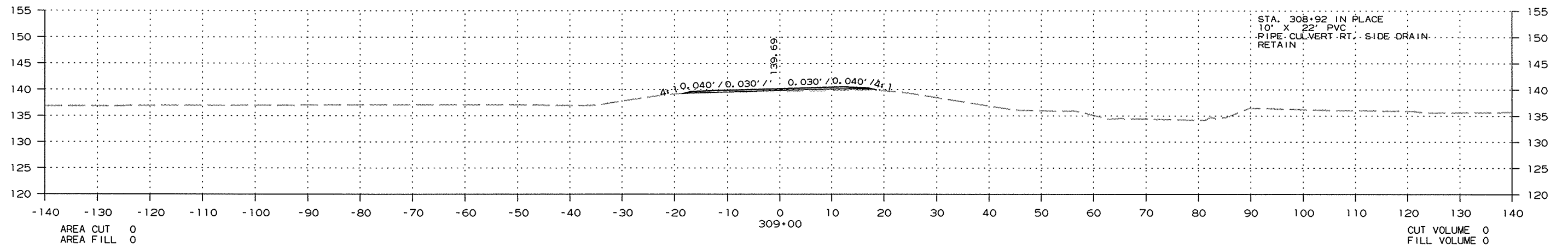
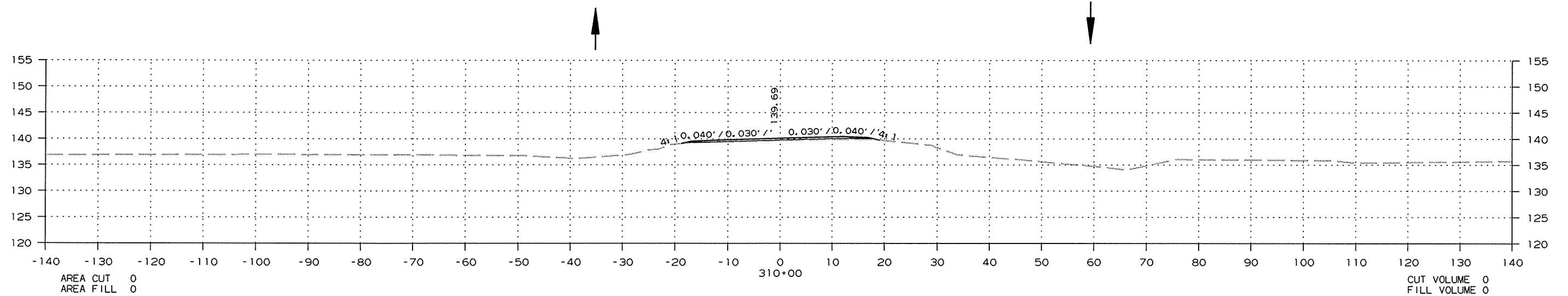


CROSS SECTION STA. 305+00 TO STA. 307+00

R020576.DCN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						020576	170	178

② CROSS SECTIONS



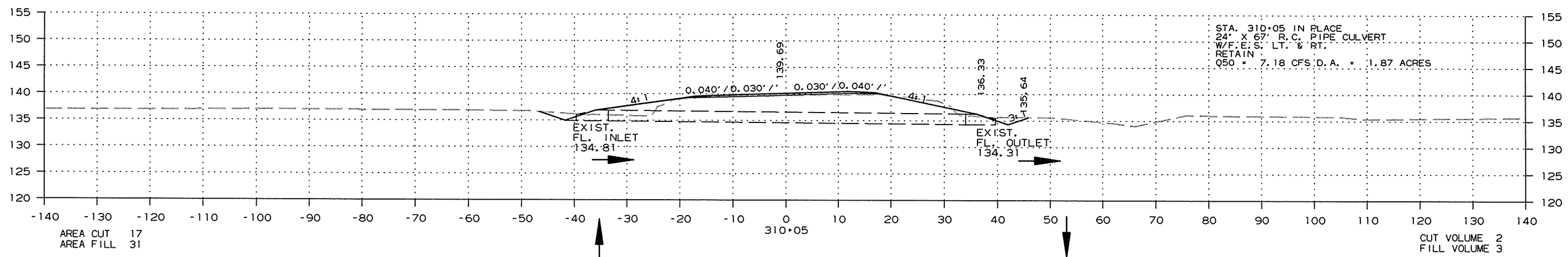
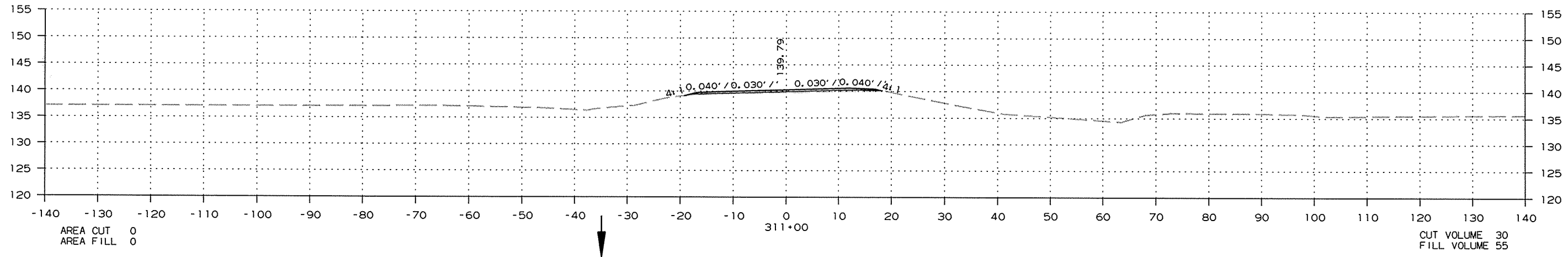
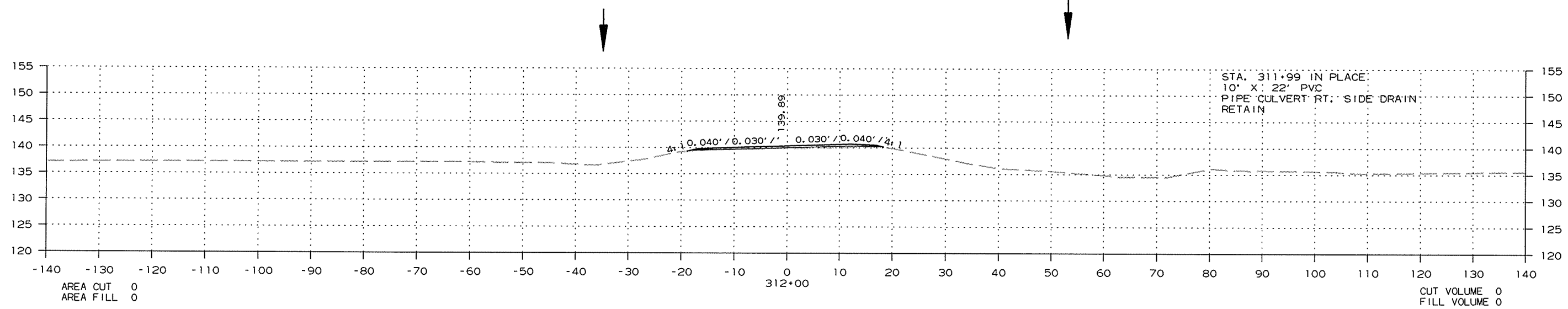
CROSS SECTION STA. 308+00 TO STA. 310+00

4/24/2015

R020576.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	171	178

② CROSS SECTIONS

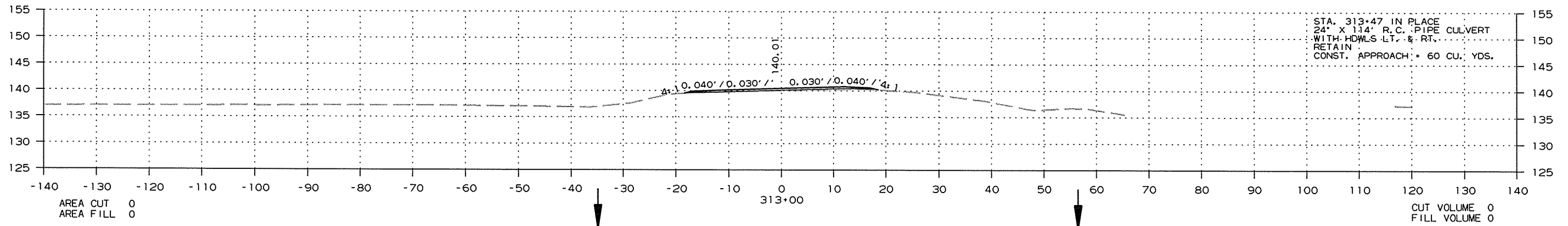
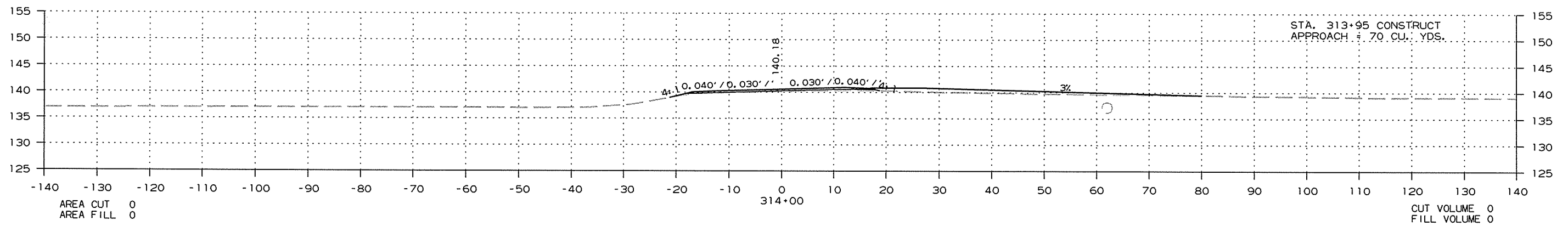
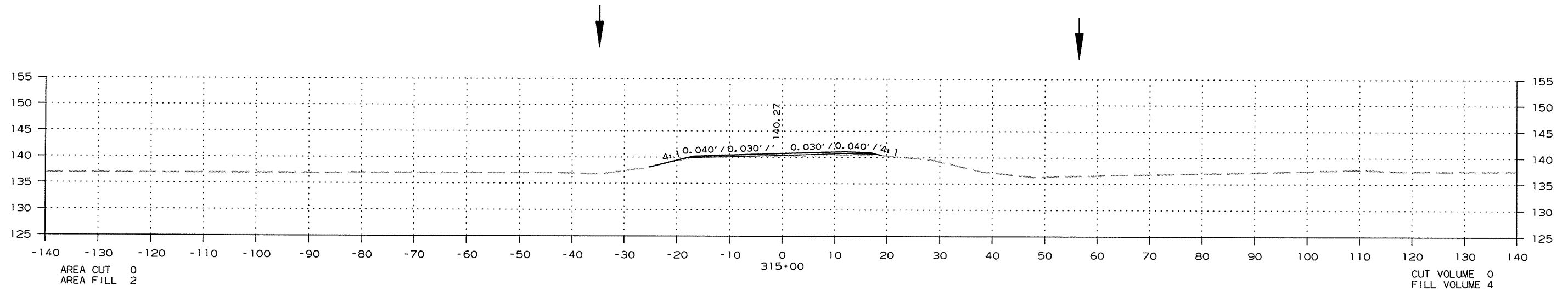


CROSS SECTION STA. 310+05 TO STA. 312+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	172	178

② CROSS SECTIONS

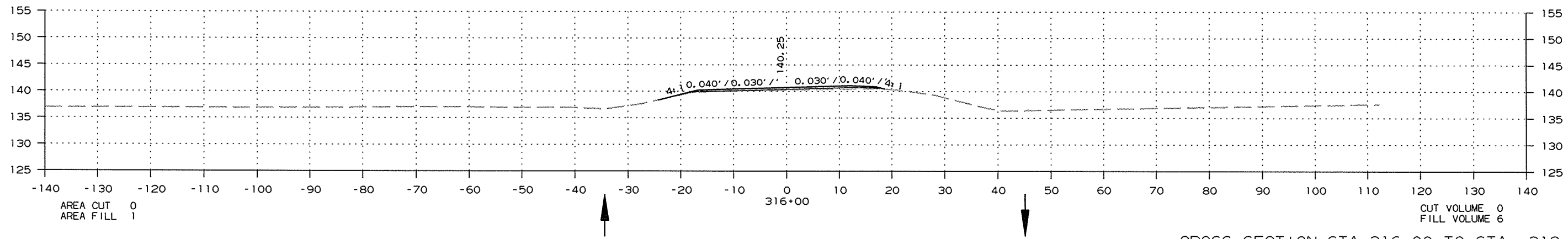
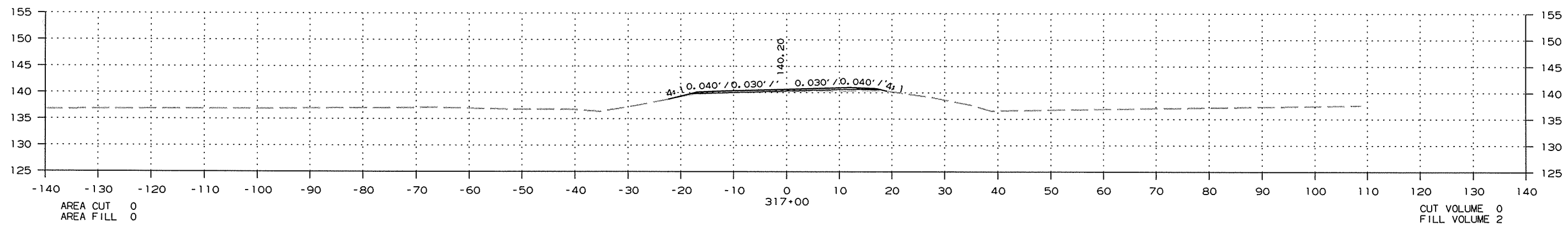
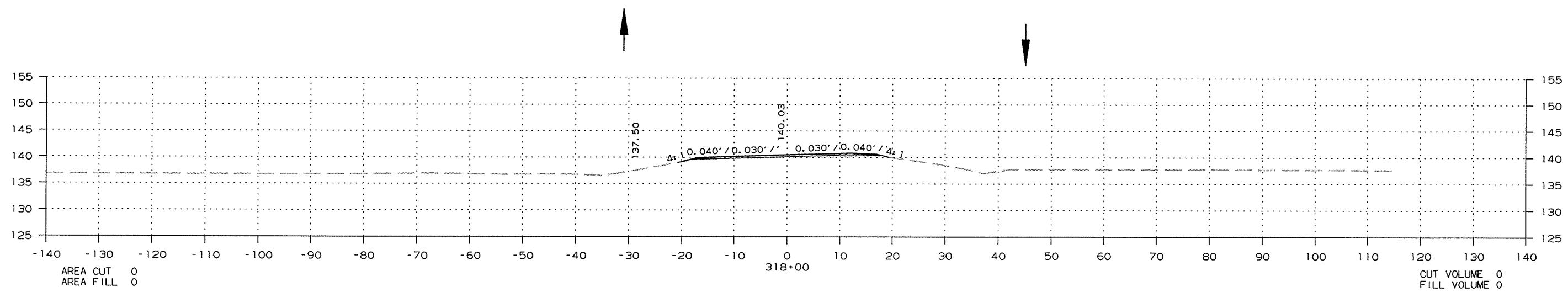


CROSS SECTION STA. 313+00 TO STA. 315+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	173	178

② CROSS SECTIONS

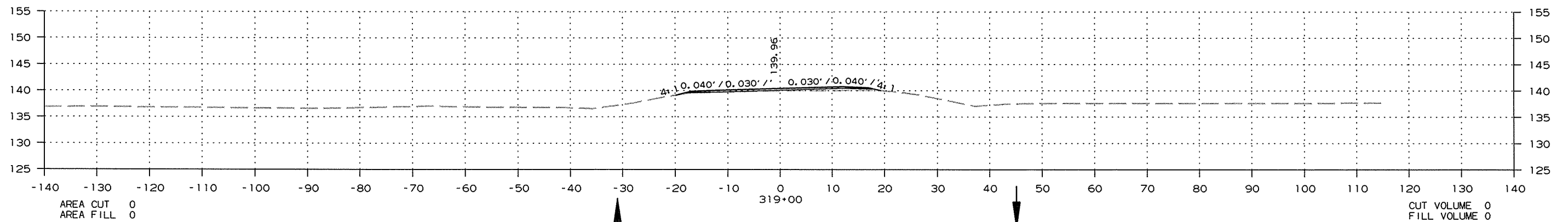
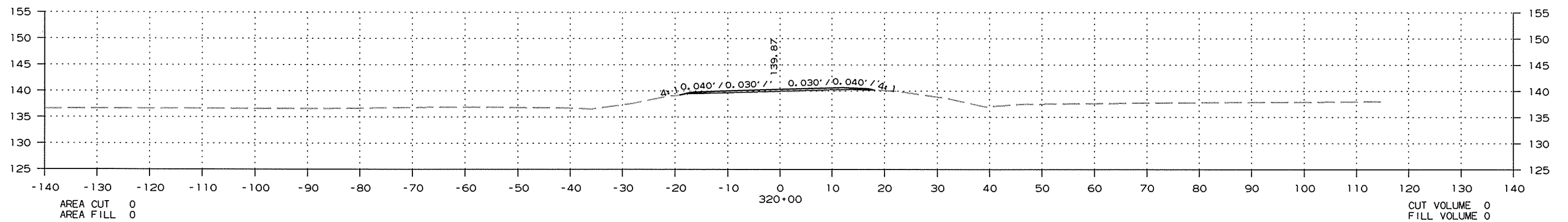
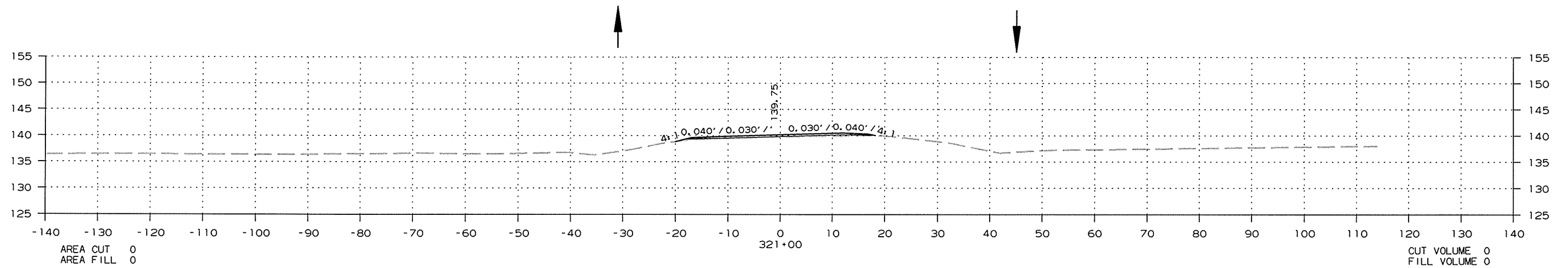


CROSS SECTION STA. 316+00 TO STA. 318+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	174	178

② CROSS SECTIONS



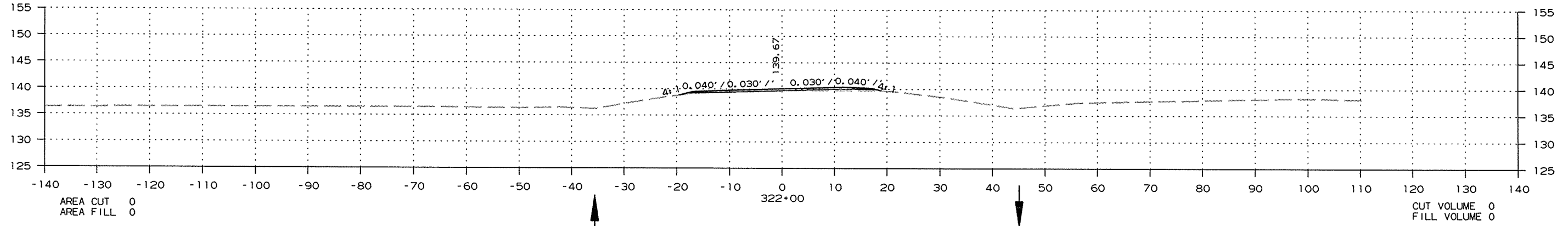
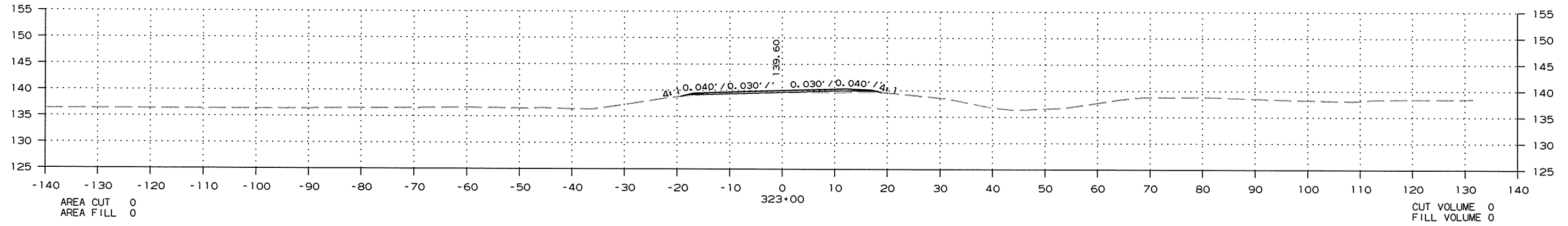
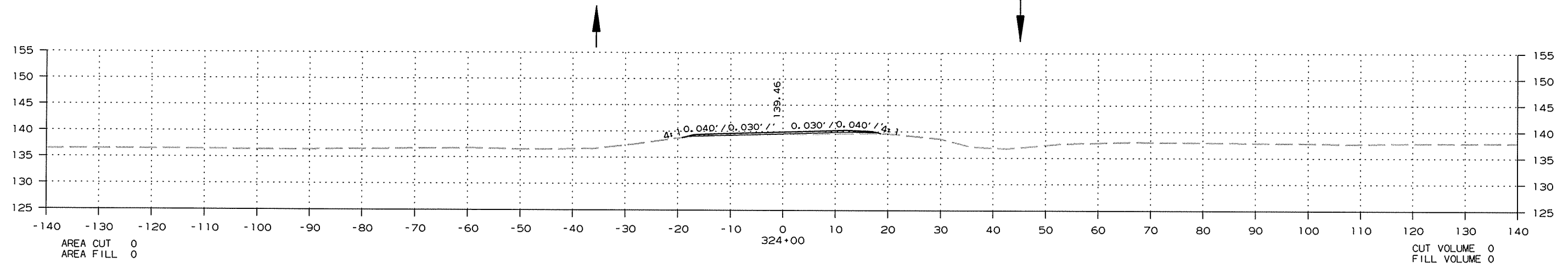
CROSS SECTION STA. 319+00 TO STA. 321+00

4/24/2015

R020576.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	175	178

2 CROSS SECTIONS

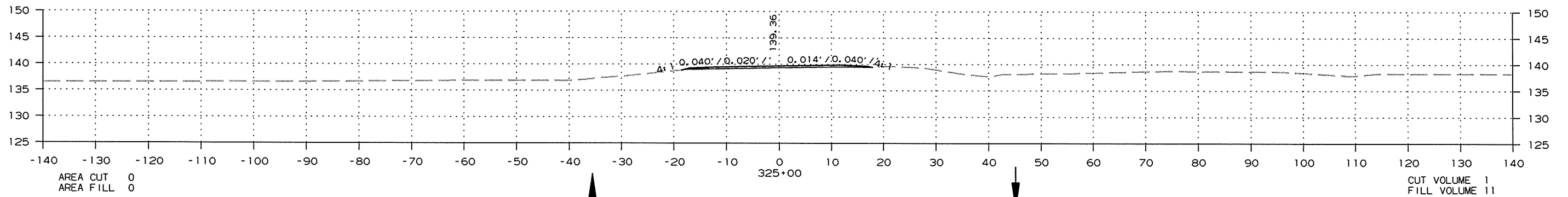
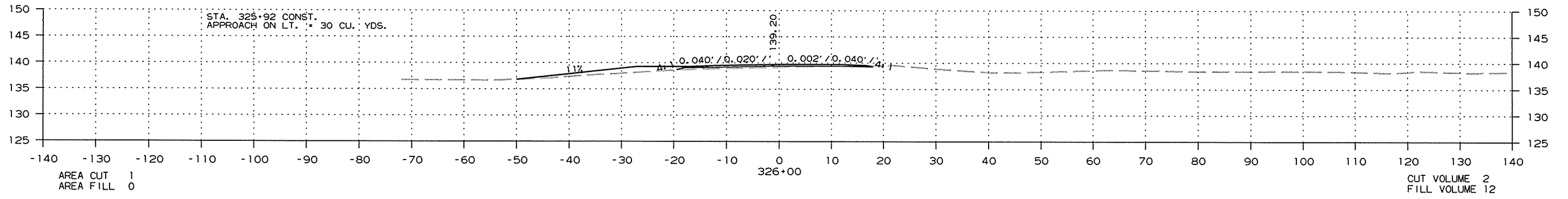
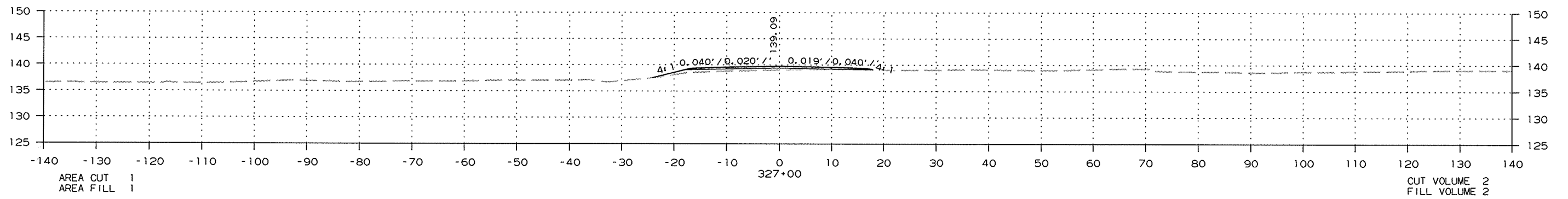
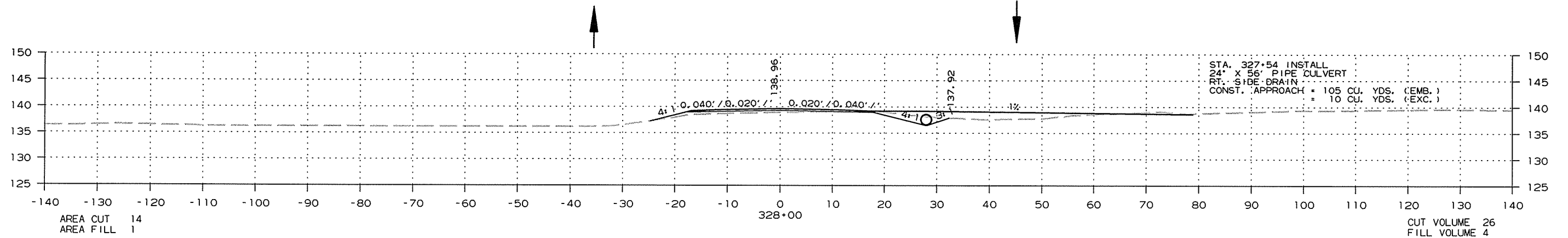


CROSS SECTION STA. 322+00 TO STA. 324+00

R020576.DGN 4/24/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	176	178

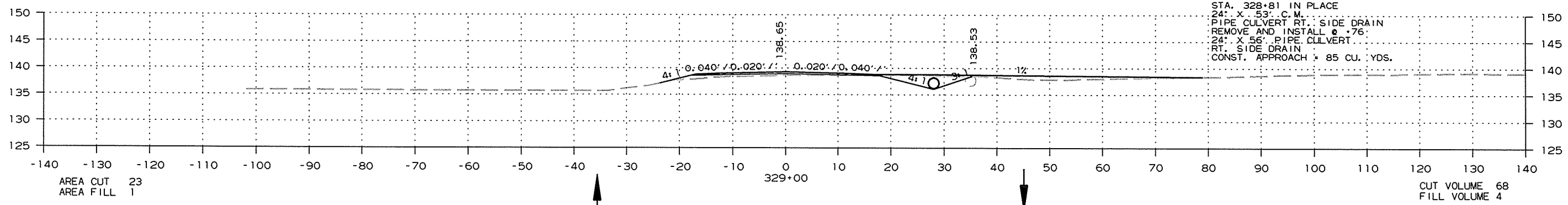
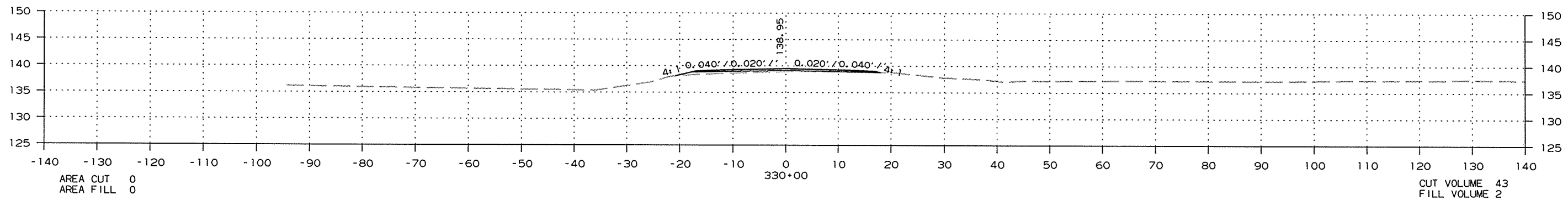
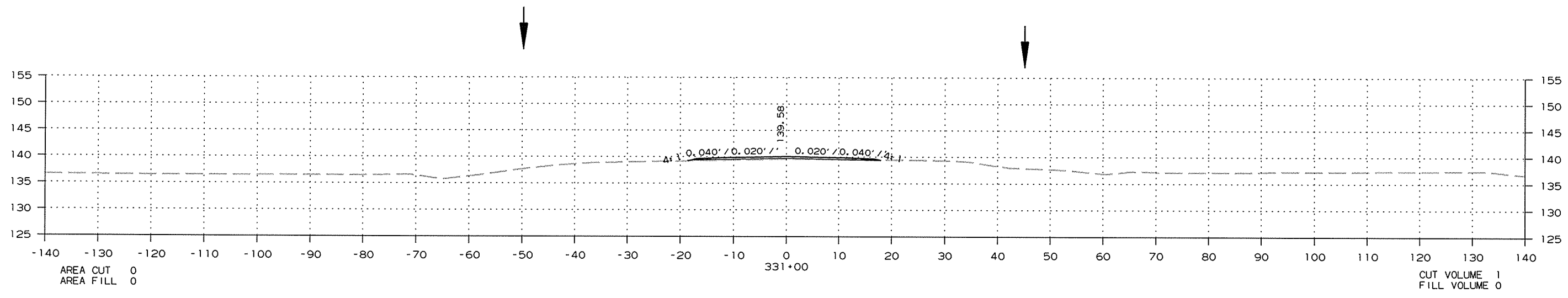
② CROSS SECTIONS



CROSS SECTION STA. 325+00 TO STA. 328+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020576	177	178

② CROSS SECTIONS



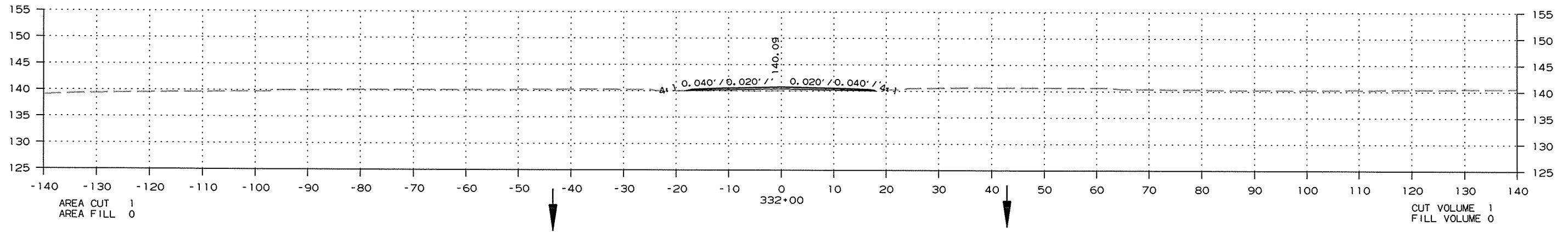
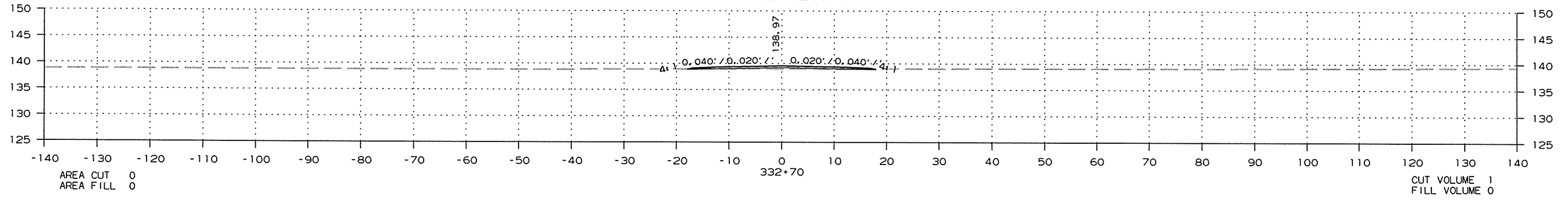
CROSS SECTION STA. 329+00 TO STA. 331+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020576	178	178

② CROSS SECTIONS

END JOB 020576



CROSS SECTION STA. 332+00 TO STA. 332+70

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