

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

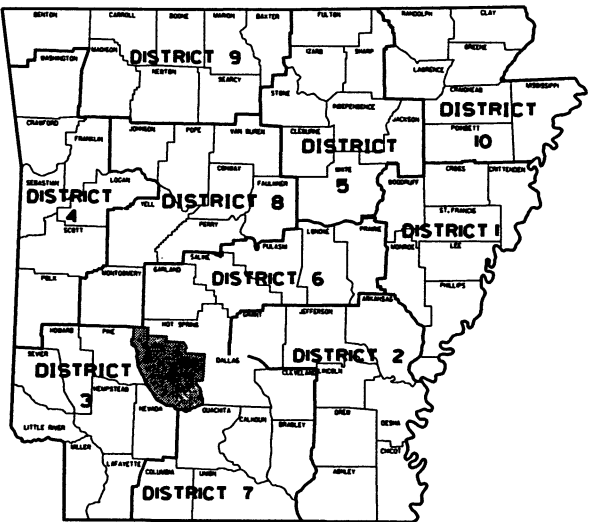
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070364		1	260
2 HWY. 26 - HWY. 8 (REHAB.) (S)								

HWY. 26 - HWY. 8
(REHAB.) (S)

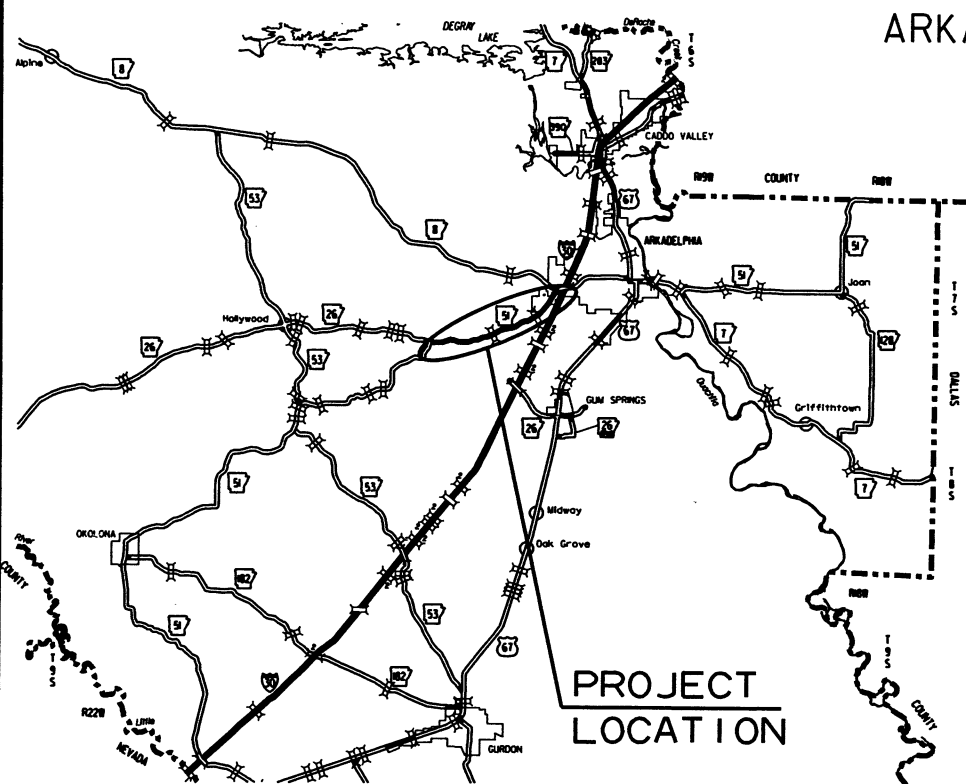
CLARK COUNTY
ROUTE 51 SECTION 1

JOB 070364

FED. AID PROJ. HSIP-0010(35)



ARK. HWY. DIST. NO. 7



VICINITY MAP

NOT TO SCALE

• DESIGN TRAFFIC DATA •

DESIGN YEAR	2036
2016 ADT	2000
2036 ADT	2400
2036 DHV	264
DIRECTIONAL DISTRIBUTION	60 %
TRUCKS	5 %
AVG. RUNNING SPEED	55 MPH

BRIDGE EXCEPTIONS
(FOR INFORMATION ONLY)

- BR. END STA. 615+71.28
BRIDGE NO. 06082
43'-00" CLEAR ROADWAY
107'-4 1/2" TOTAL LENGTH
STEEL STRINGER
BR. END STA. 616+78.65
RETAIN
- BR. END STA. 693+73.18
BRIDGE NO. 06083
43'-00" CLEAR ROADWAY
107'-4 1/2" TOTAL LENGTH
STEEL STRINGER
BR. END STA. 694+80.55
RETAIN

EQUATIONS

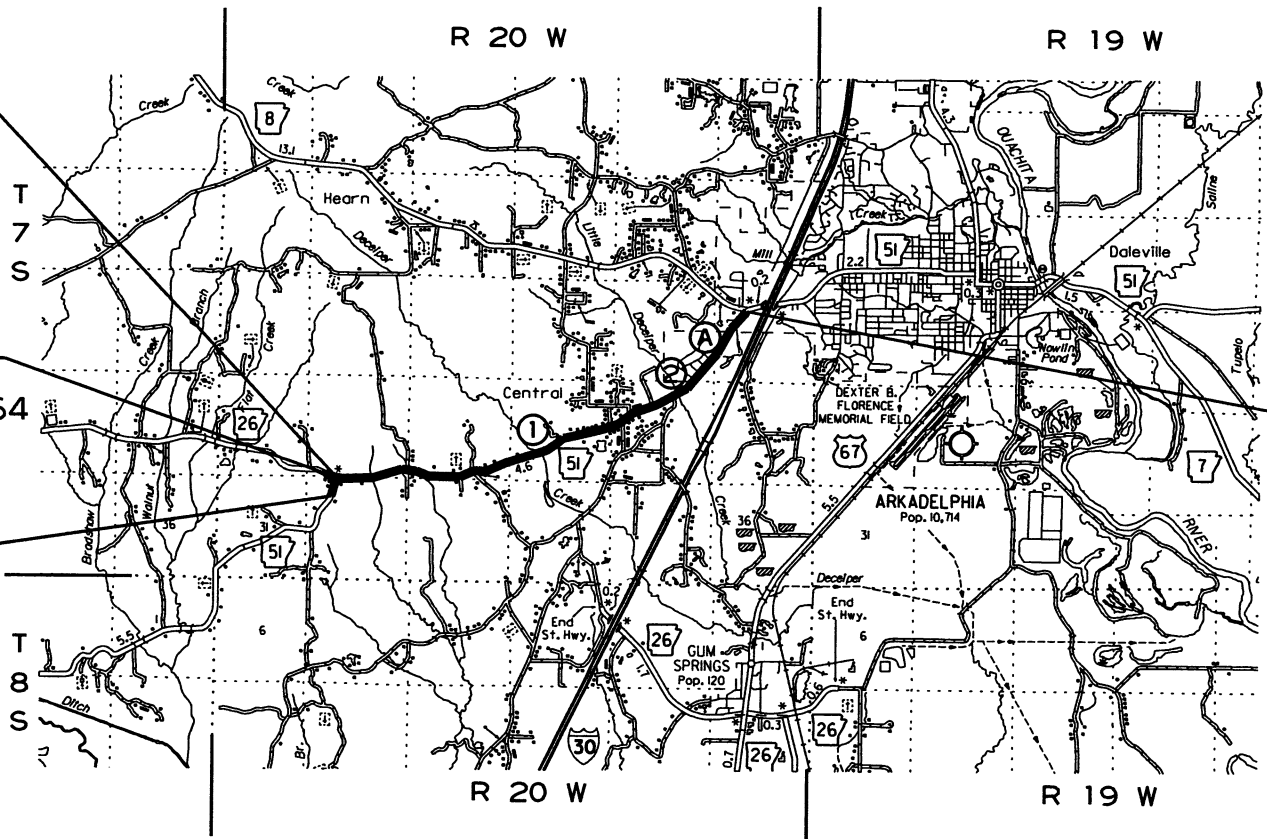
- (A) STA. 735+99.91 BK. =
STA. 736+00.00 AHD.

STA. 506+74.70 HWY. 26
= STA. 29+95.07 HWY. 51

STA. 500+13.56
HIGHWAY 26
BEGIN JOB 070364
LOG MILE 16.03

STA. 33+75.63
HIGHWAY 51
LOG MILE 24.23

STA. 752+47.56
END JOB 070364



APPROVED



10-4-16
DEPUTY DIRECTOR
AND CHIEF ENGINEER

BEGINNING OF PROJECT	MID POINT OF PROJECT	END OF PROJECT
LATITUDE = N 34°05'42"	LATITUDE = N 34°06'00"	LATITUDE = N 34°07'03"
LONGITUDE = W 93°10'12"	LONGITUDE = W 93°07'34"	LONGITUDE = W 93°05'48"

GROSS LENGTH OF PROJECT	25233.91	FEET OR	4,779	MILES
NET " " ROADWAY	25019.77	" "	4,738	"
NET " " BRIDGES	0.00	" "	0.000	"
NET " " PROJECT	25233.91	" "	4,779	"

INDEX OF SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						070364	2	260

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

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103	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	FPC-9S	7-26-12
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105	PRECAST CONCRETE BOX CULVERTS	PBC-1	1-28-15
106	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	PCC-1	2-27-14
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131 - 260	CROSS SECTIONS		

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

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 RESPONSBLE 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 RESPONSBLE 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.

GOVERNING SPECIFICATIONS

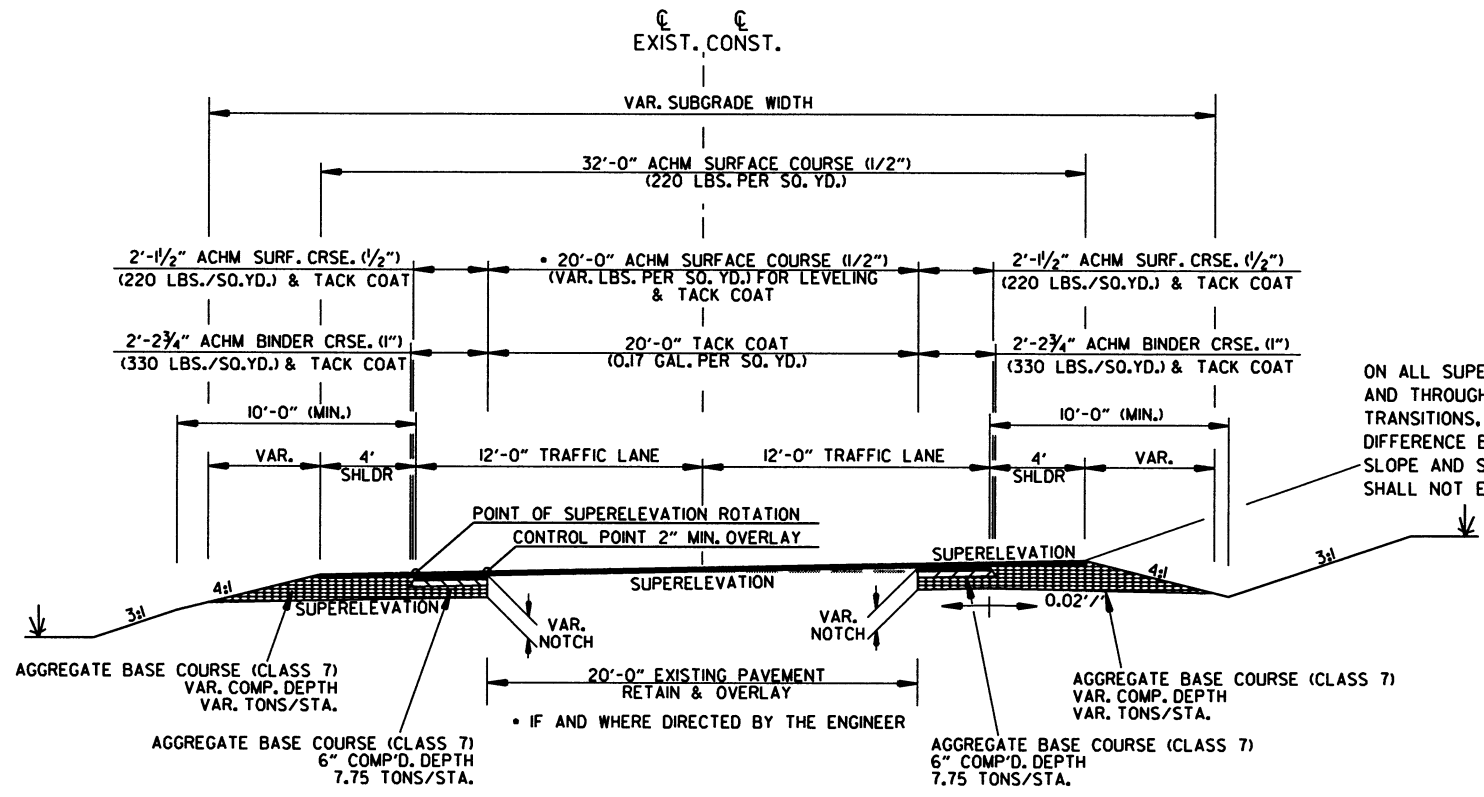
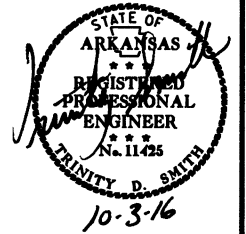
ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

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
100-3	CONTRACTOR'S LICENSE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 070364	AIRPORT CLEARANCE REQUIREMENTS
JOB 070364	BIDDING REQUIREMENTS AND CONDITIONS
JOB 070364	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 070364	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 070364	CARGO PREFERENCE ACT REQUIREMENTS
JOB 070364	DELAY IN RIGHT OF WAY OCCUPANCY
JOB 070364	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 070364	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 070364	MANDATORY ELECTRONIC CONTRACT
JOB 070364	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 070364	NESTING SITES OF MIGRATORY BIRDS
JOB 070364	OFF-SITE RESTRAINING CONDITIONS FOR BATS
JOB 070364	PARTNERING REQUIREMENTS
JOB 070364	PLASTIC PIPE
JOB 070364	PORTABLE TRAFFIC SIGNAL SYSTEM
JOB 070364	ROCK FILL
JOB 070364	SHORING FOR CULVERTS
JOB 070364	SOIL STABILIZATION
JOB 070364	STORM WATER POLLUTION PREVENTION PLAN
JOB 070364	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 070364	SUBMISSION OF CONTRACTOR MATERIALS TEST RESULTS
JOB 070364	UTILITY ADJUSTMENTS
JOB 070364	VALUE ENGINEERING
JOB 070364	WARM MIX ASPHALT



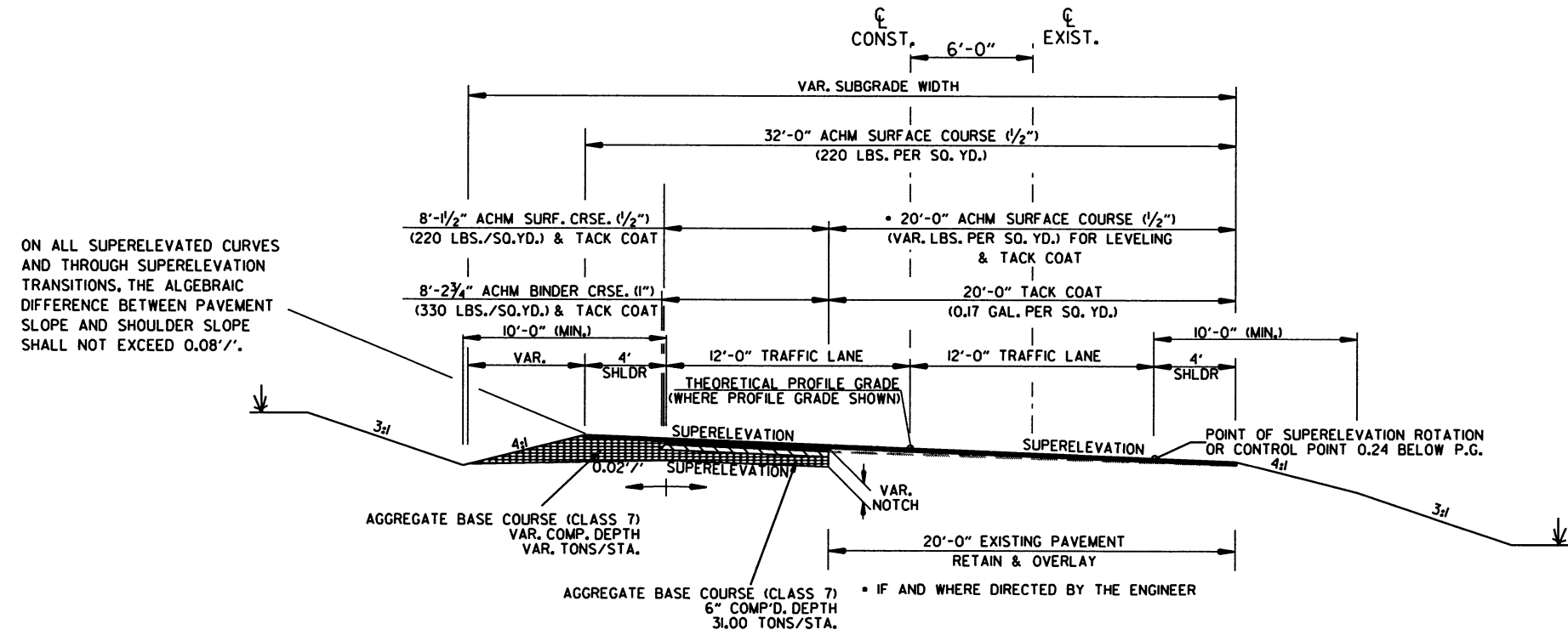
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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY. 51 - 2 LANES NOTCH AND WIDEN - SUPERELEVATION
STA. 500+13.56 - STA. 511+79.17

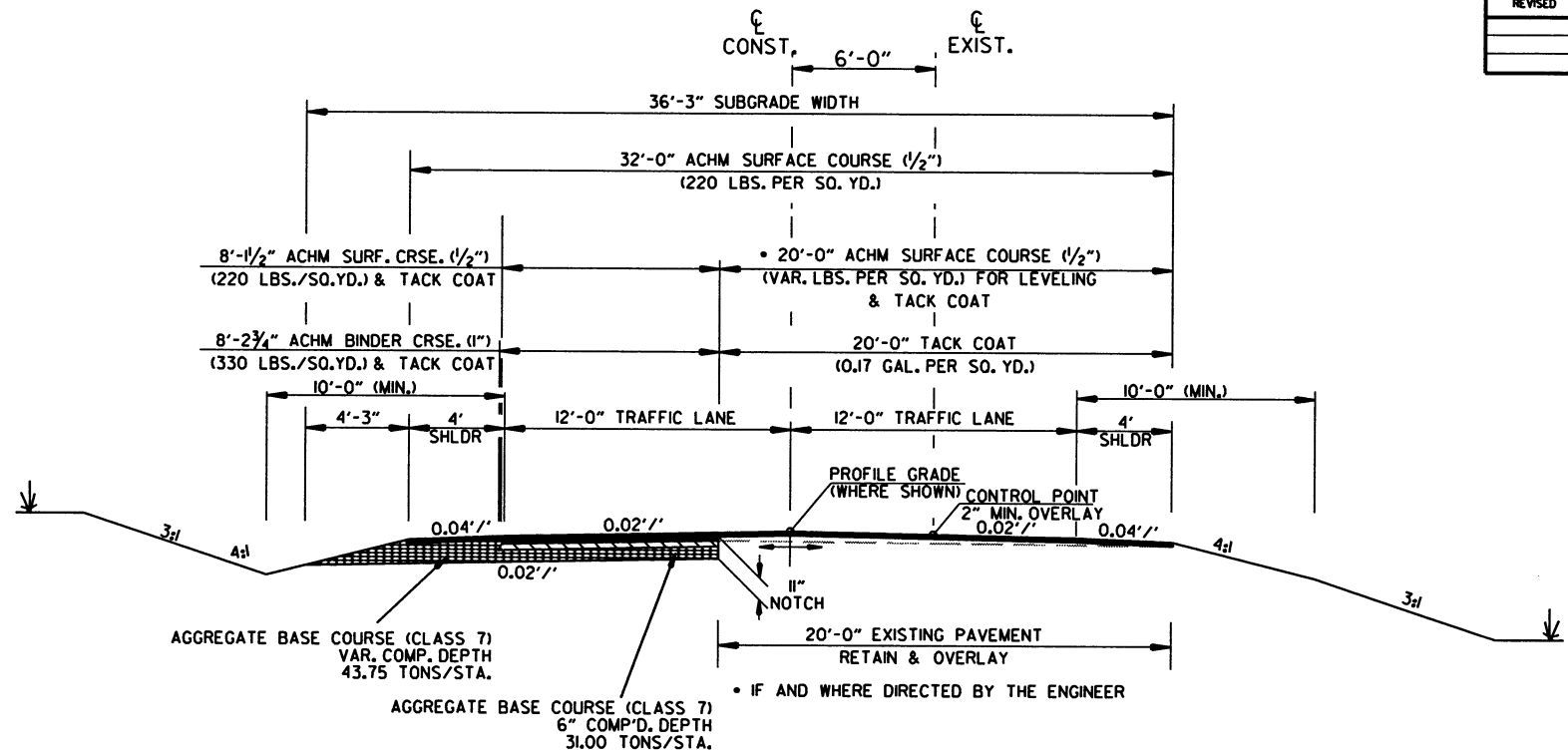
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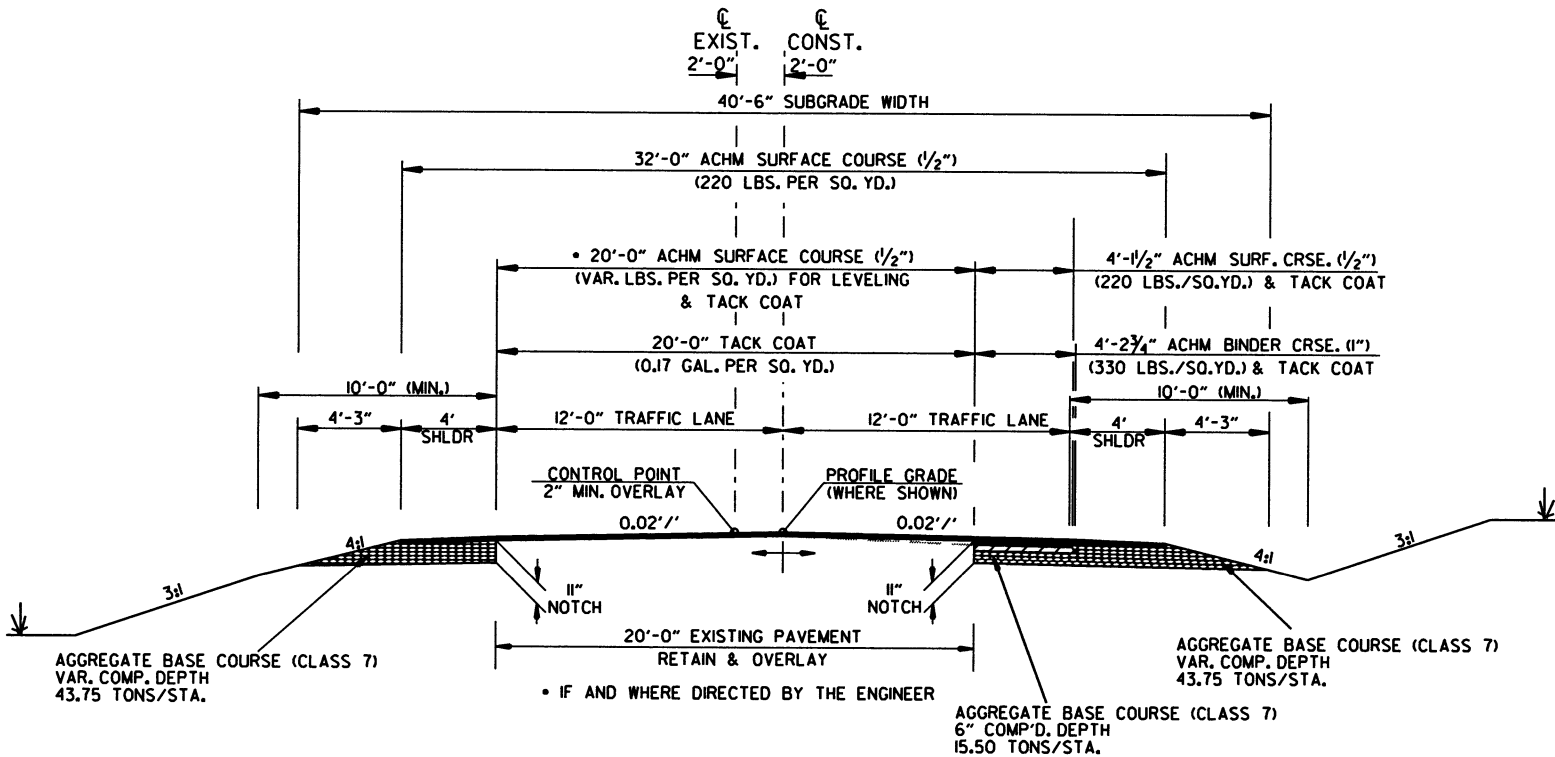
HWY. 51 - 2 LANES NOTCH AND WIDEN - SUPERELEVATION (6 FEET LEFT)
STA. 511+79.17 - STA. 515+41.81
STA. 521+49.35 - STA. 549+78.63

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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY. 51 - 2 LANES NOTCH AND WIDEN (6 FEET LEFT)
STA. 515+41.81 - STA. 521+49.35

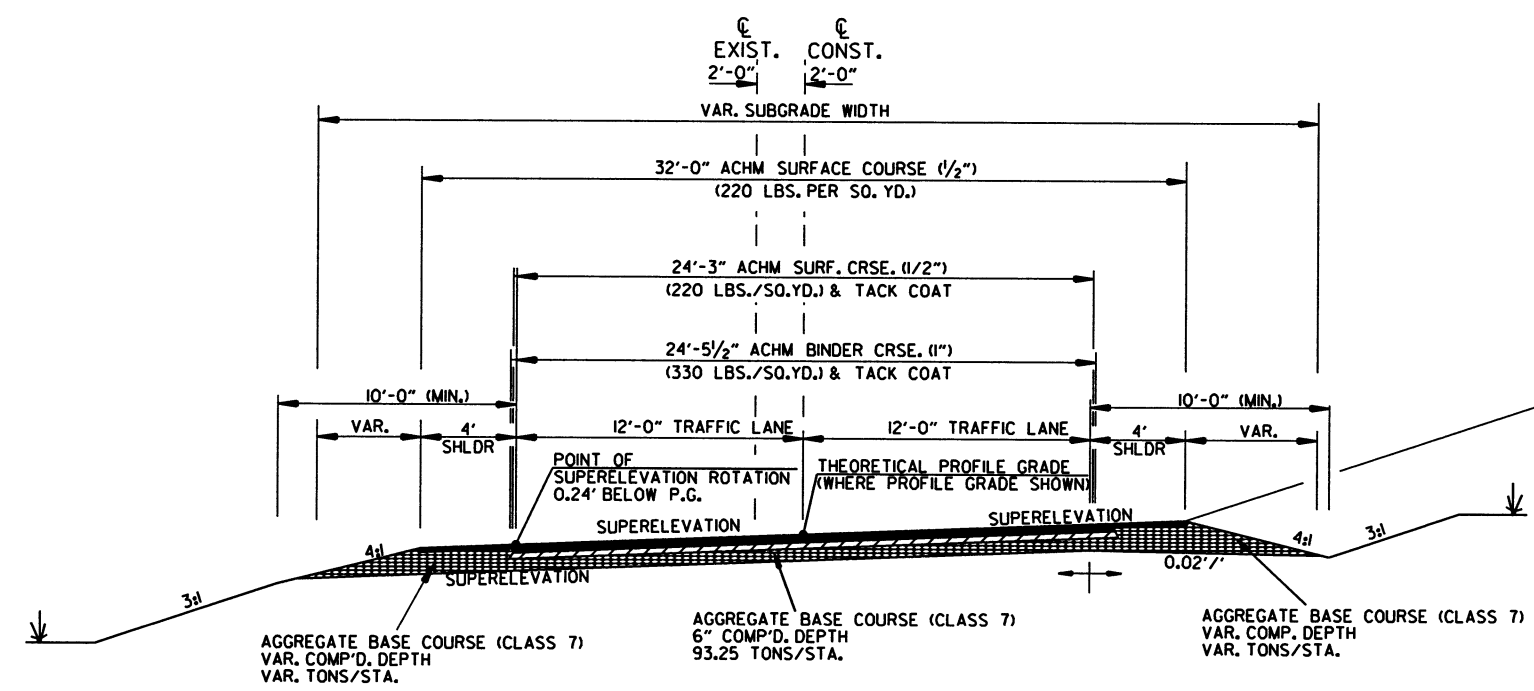
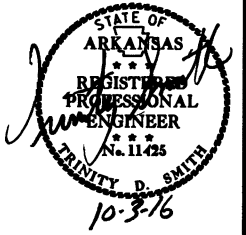


HWY. 51 - 2 LANES NOTCH AND WIDEN (2 FEET RIGHT)
STA. 589+33.07 - STA. 589+89.10
STA. 637+18.24 - STA. 645+00.00
STA. 673+73.95 - STA. 679+51.20

- NOTES:
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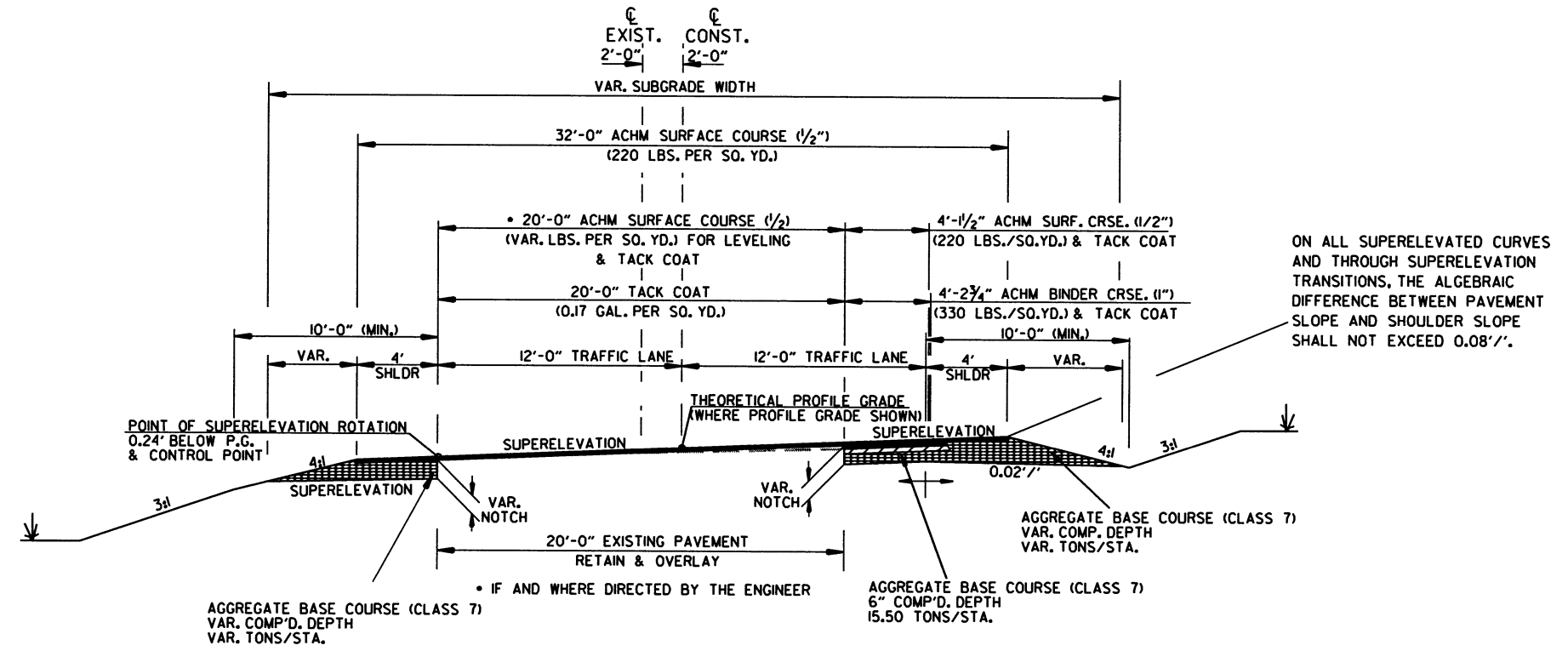
2 TYPICAL SECTIONS OF IMPROVEMENT



ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

HWY. 51- 2 LANES FULL DEPTH - SUPERELEVATION (2 FEET RIGHT)

STA. 549+78.63 - STA. 553+00.00
STA. 569+00.00 - STA. 587+00.00



ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

HWY. 51- NOTCH AND WIDEN SUPERELEVATION

STA. 553+00.00 - STA. 569+00.00
STA. 587+00.00 - STA. 589+33.07
STA. 589+89.10 - STA. 599+21.49
STA. 625+13.64 - STA. 634+35.35
STA. 663+72.03 - STA. 673+73.95
STA. 679+51.20 - STA. 680+92.89
STA. 746+04.17 - STA. 746+50.00

NOTES:

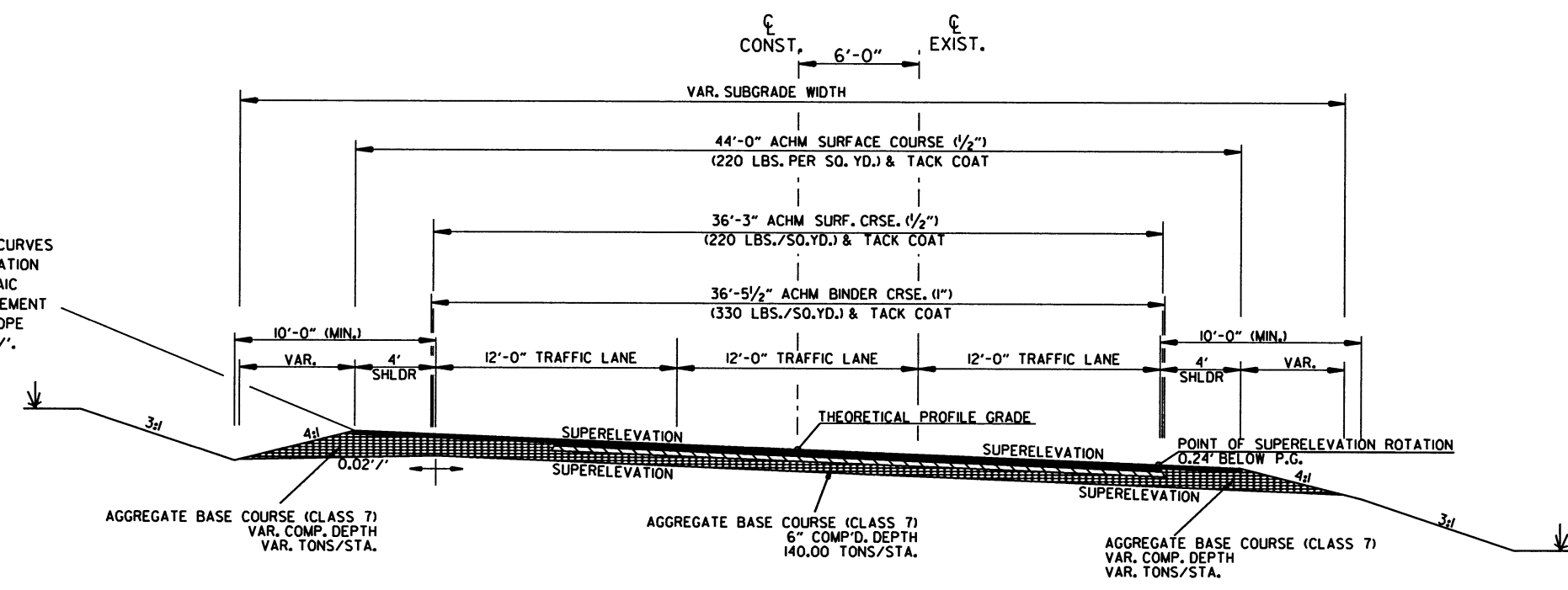
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2 TYPICAL SECTIONS OF IMPROVEMENT



ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

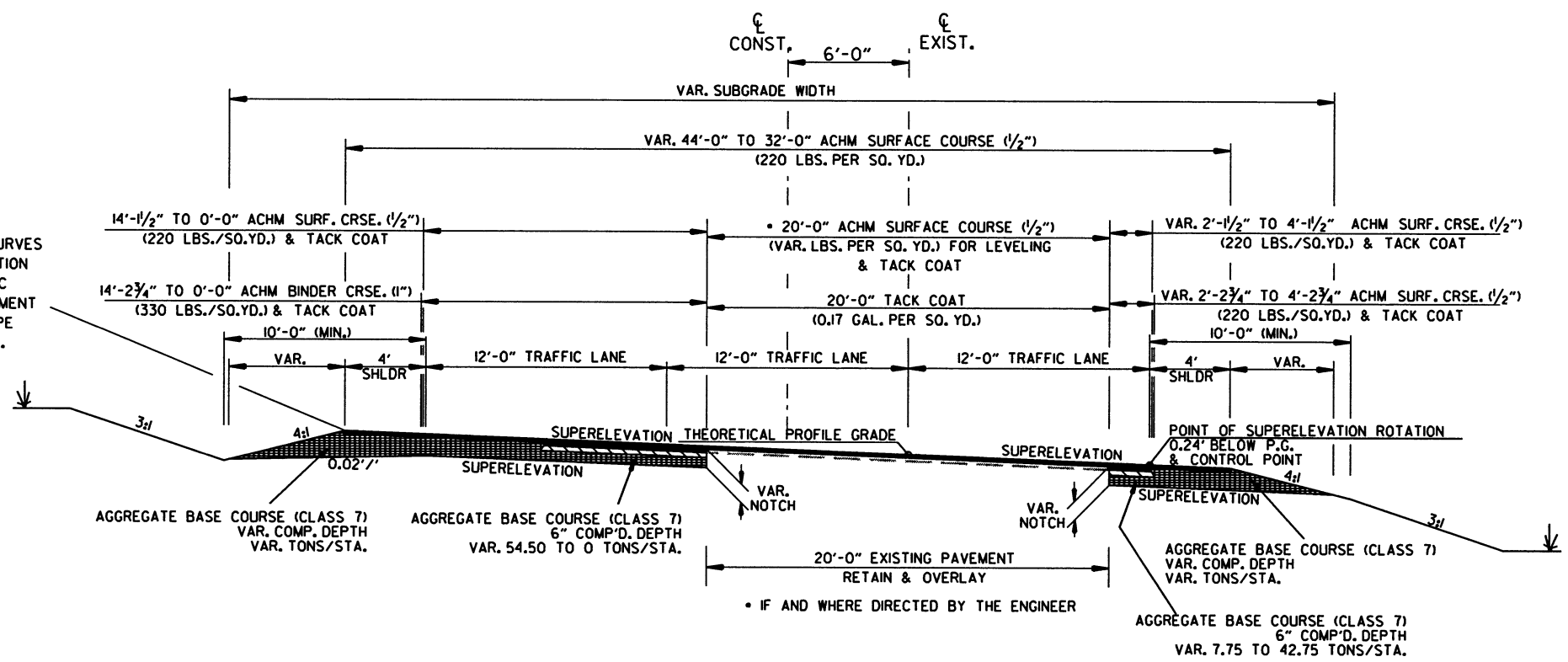


HWY. 51 - 3 LANE FULL DEPTH SUPERELEVATION
STA. 652+51.52 - STA. 658+00.00

NOTES:

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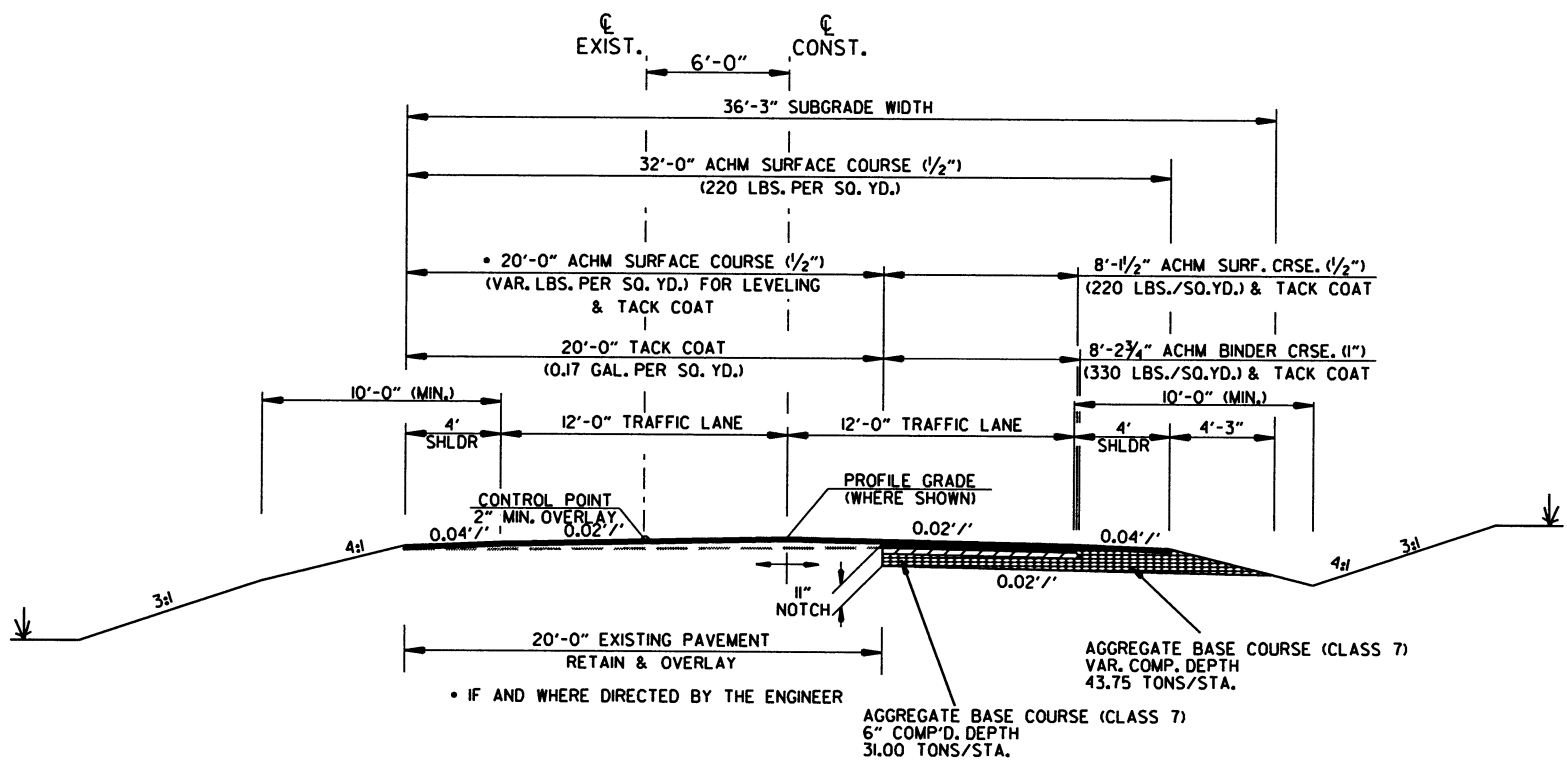


HWY. 51 - 3 NOTCH AND WIDEN SUPERELEVATION
STA. 658+00.00 - STA. 663+72.03

TYPICAL SECTIONS OF IMPROVEMENT

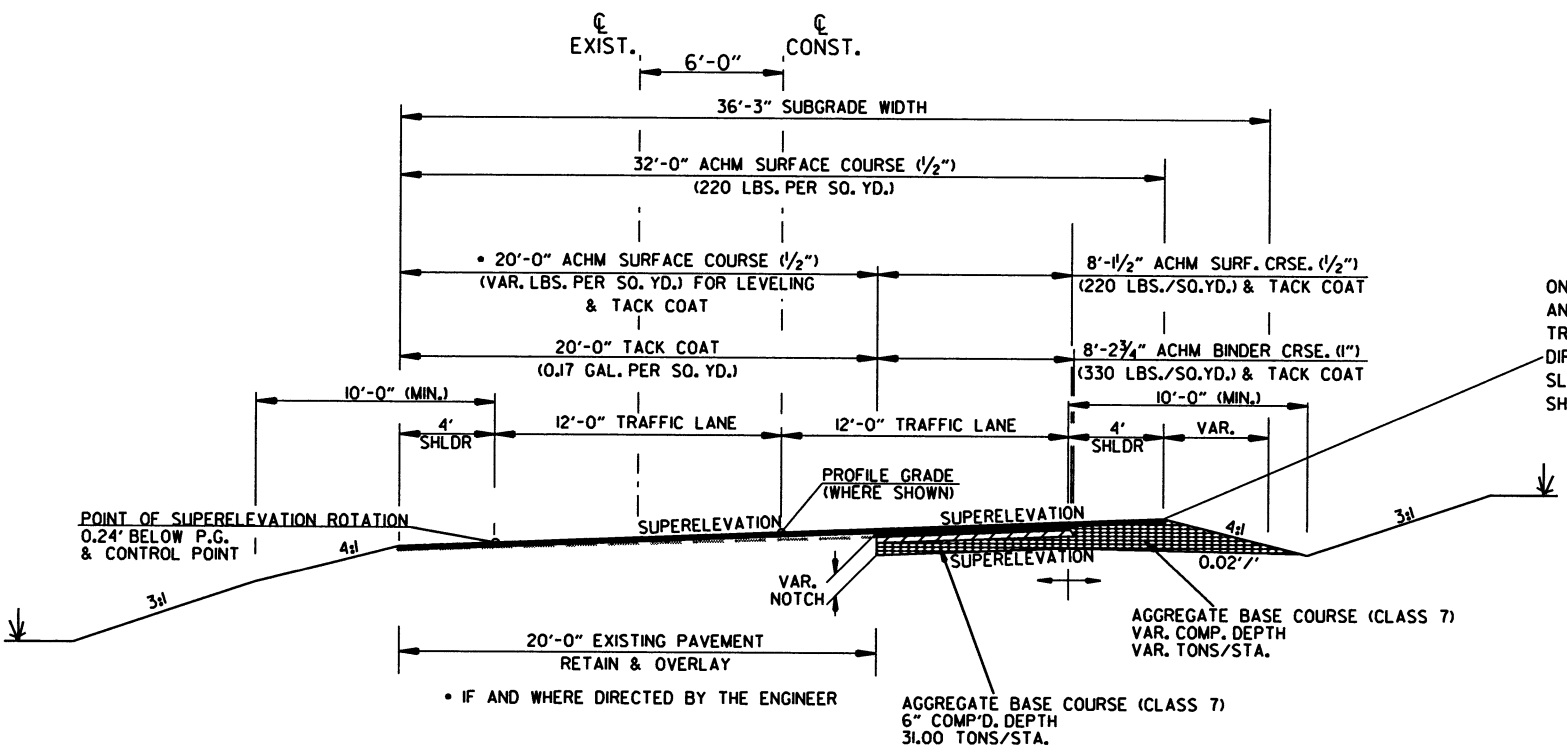
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070364	7	260

2 TYPICAL SECTIONS OF IMPROVEMENT



HWY. 51 - 2 LANES NOTCH AND WIDEN NORMAL CROWN (6 FEET RIGHT)
STA. 706+31.10 - STA. 737+60.16

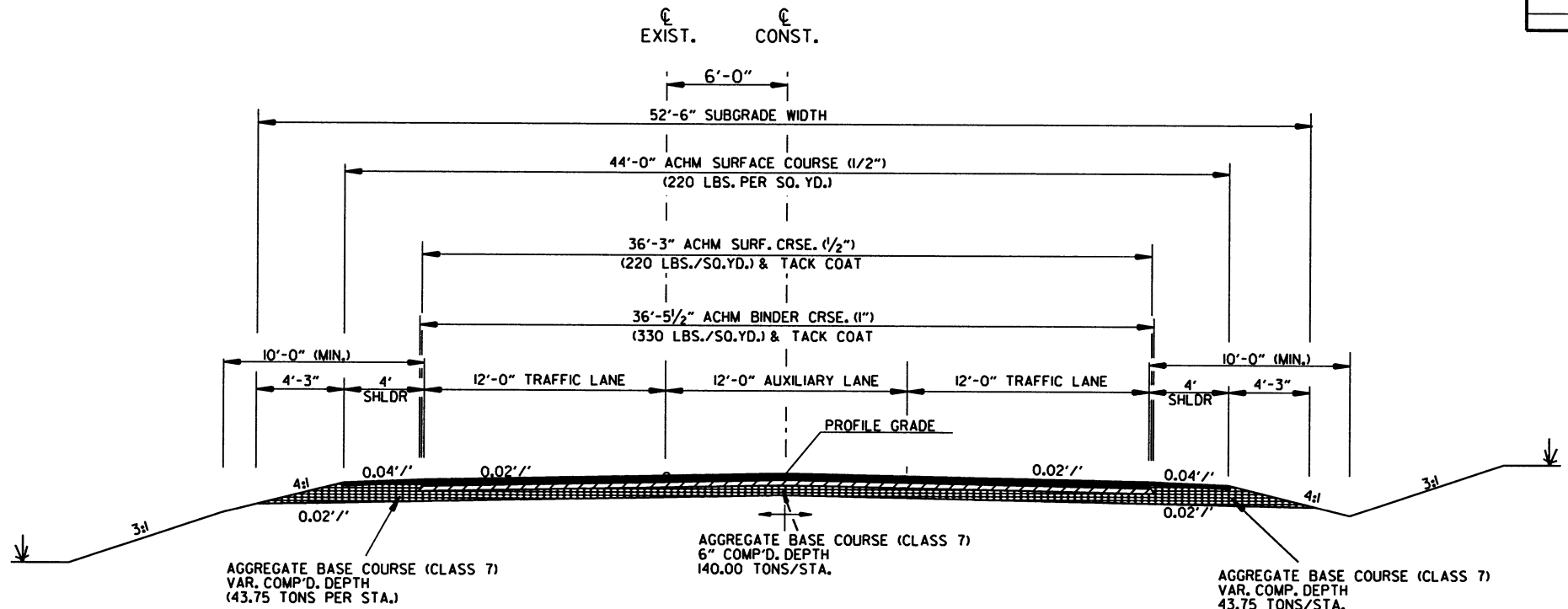
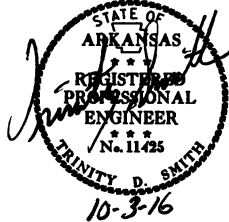
- NOTES:
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 2. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS.
 3. THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE ACHM SURFACE COURSE (1") IN LIEU OF AGGREGATE BASE COURSE UNDER THE PROPOSED SHOULDER AT NO ADDITIONAL COST TO THE DEPARTMENT. MEASUREMENT WILL BE BASED UPON CALCULATIONS FROM THE PLAN DIMENSIONS.
 4. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
 5. 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.
 6. THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.



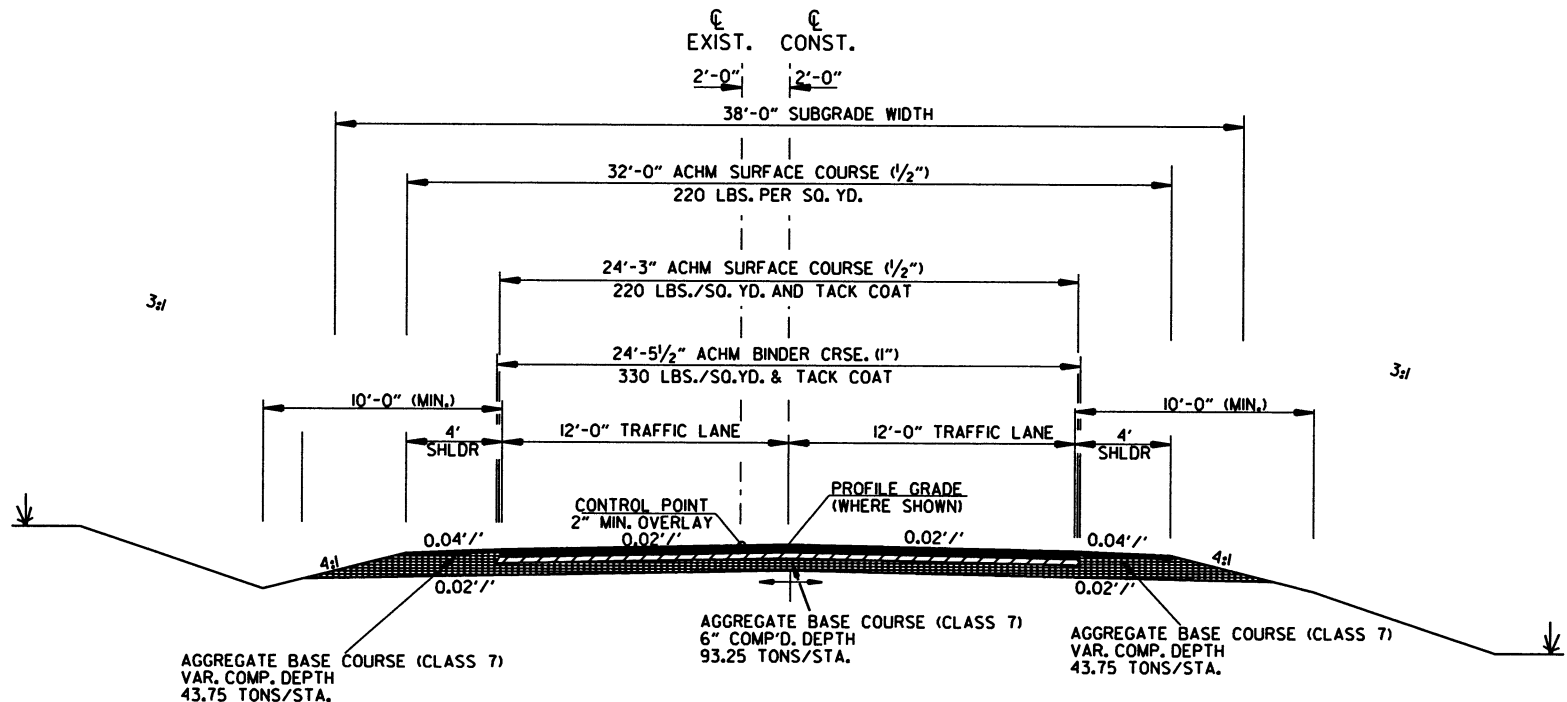
HWY. 51 - 2 LANES NOTCH AND WIDEN SUPERELEVATION (6 FEET RIGHT)
STA. 699+73.49 - STA. 706+31.10
STA. 737+60.16 - STA. 746+04.17

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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY. 51 - 3 FULL DEPTH
STA. 651+68.32 - STA. 652+51.52

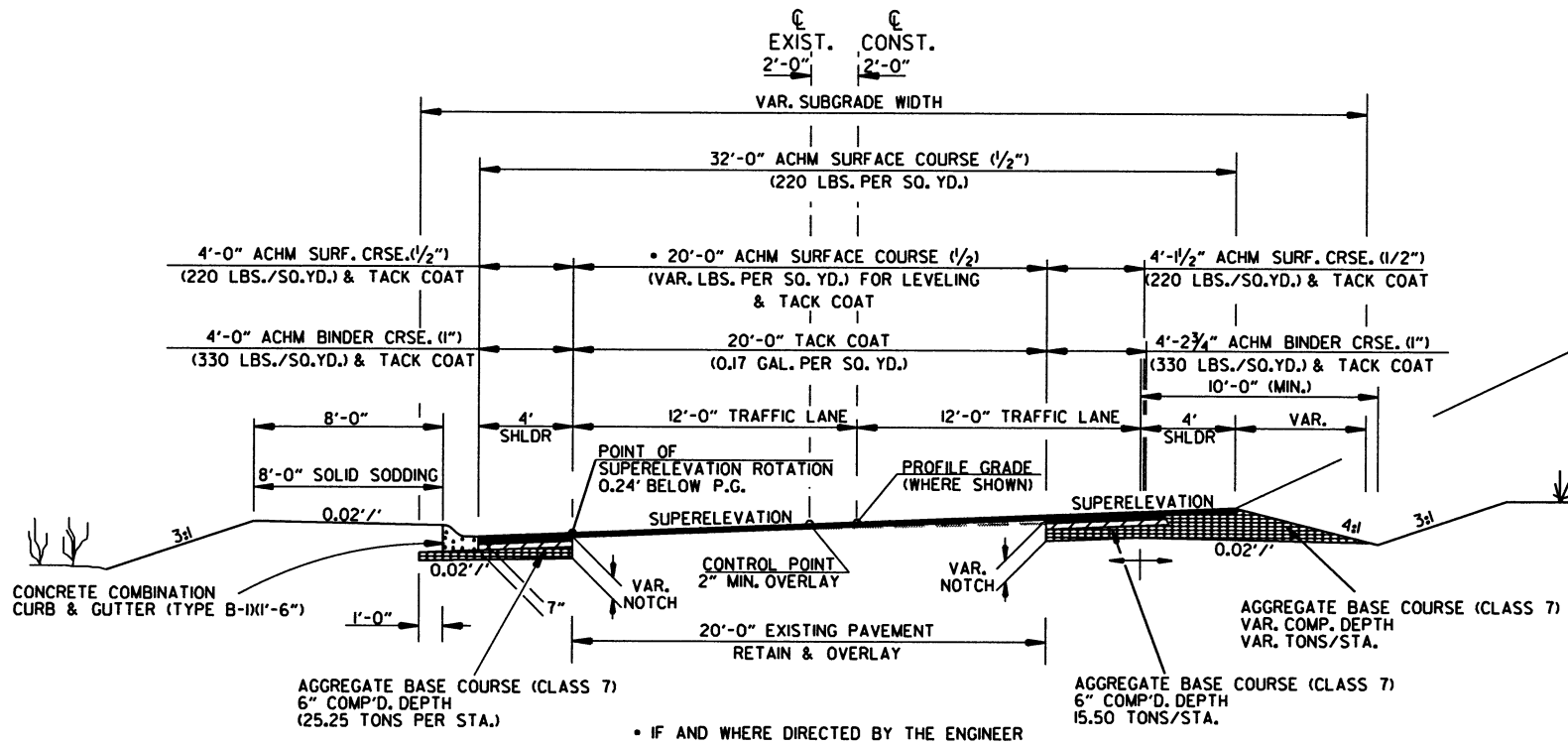
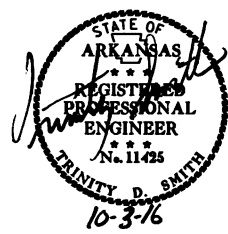


HWY. 51 - FULL DEPTH
STA. 645+00.00 - STA. 651+68.32

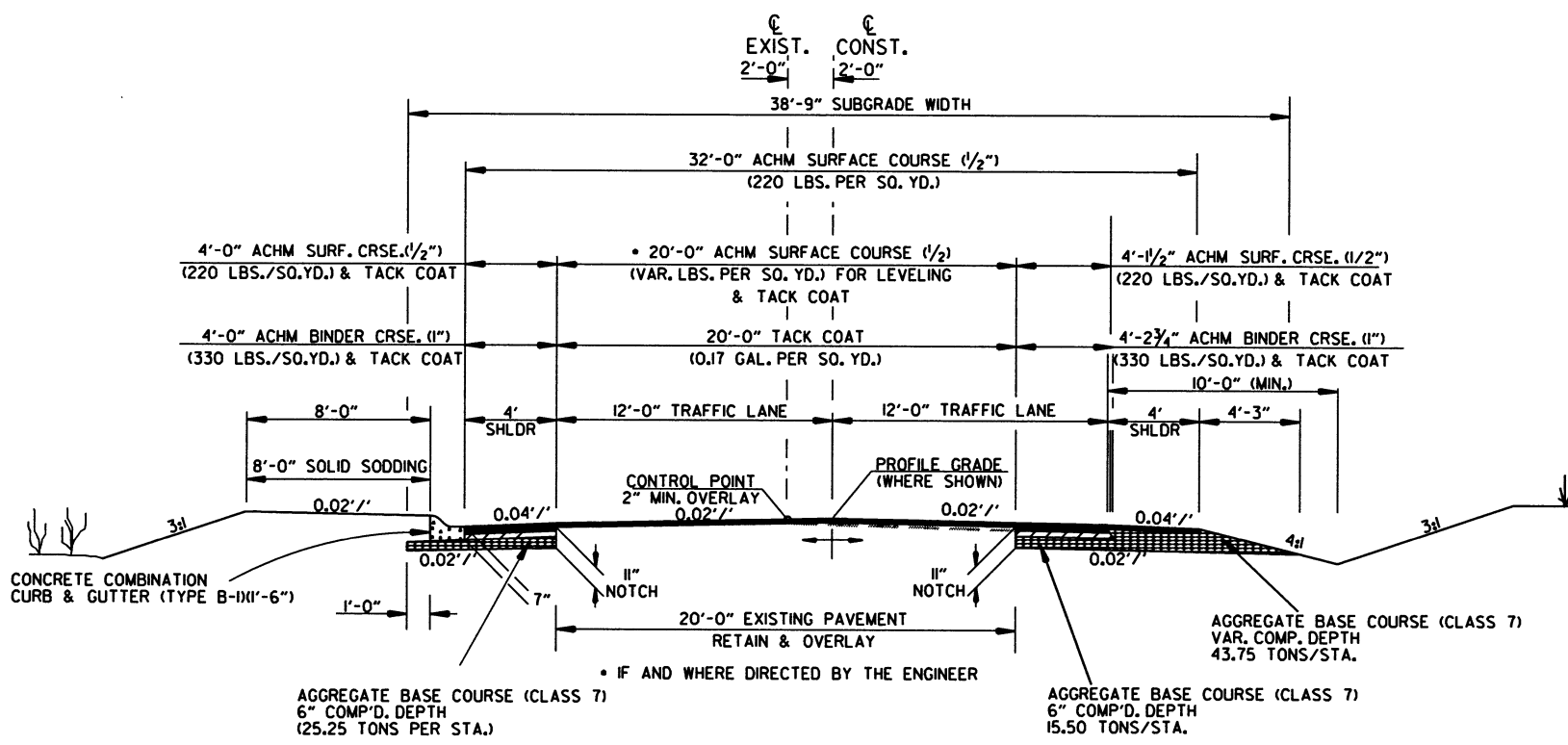
- NOTES:
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 2. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS.
 3. THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE ACHM SURFACE COURSE (1") IN LIEU OF AGGREGATE BASE COURSE UNDER THE PROPOSED SHOULDER AT NO ADDITIONAL COST TO THE DEPARTMENT. MEASUREMENT WILL BE BASED UPON CALCULATIONS FROM THE PLAN DIMENSIONS.
 4. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
 5. 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.
 6. THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY. 51 - 2 LANE NOTCH AND WIDEN - SUPERELEVATION W/CURB AND GUTTER LEFT
STA. 746+50.00 - STA. 748+29.17

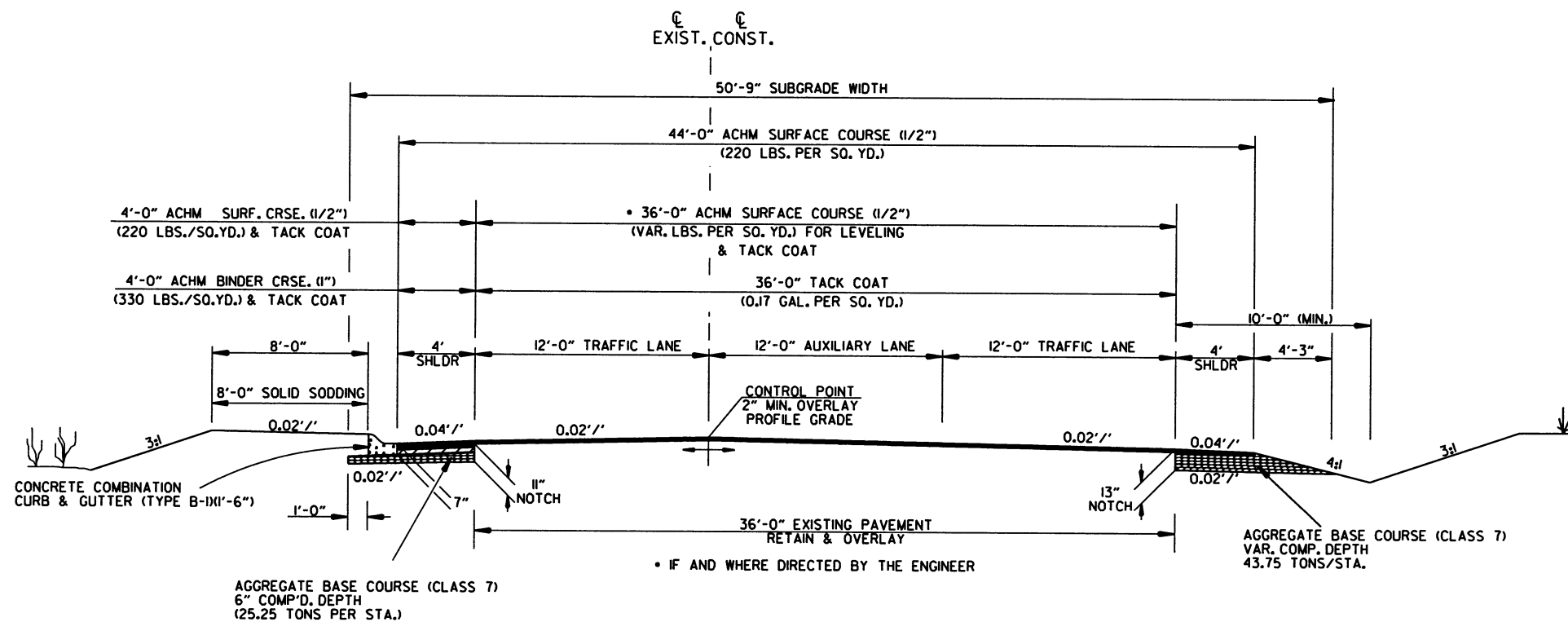
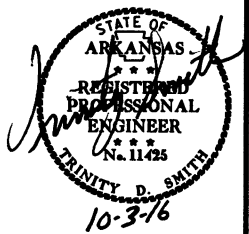


HWY. 51 - NOTCH AND WIDEN
STA. 748+29.17 - STA. 751+47.55

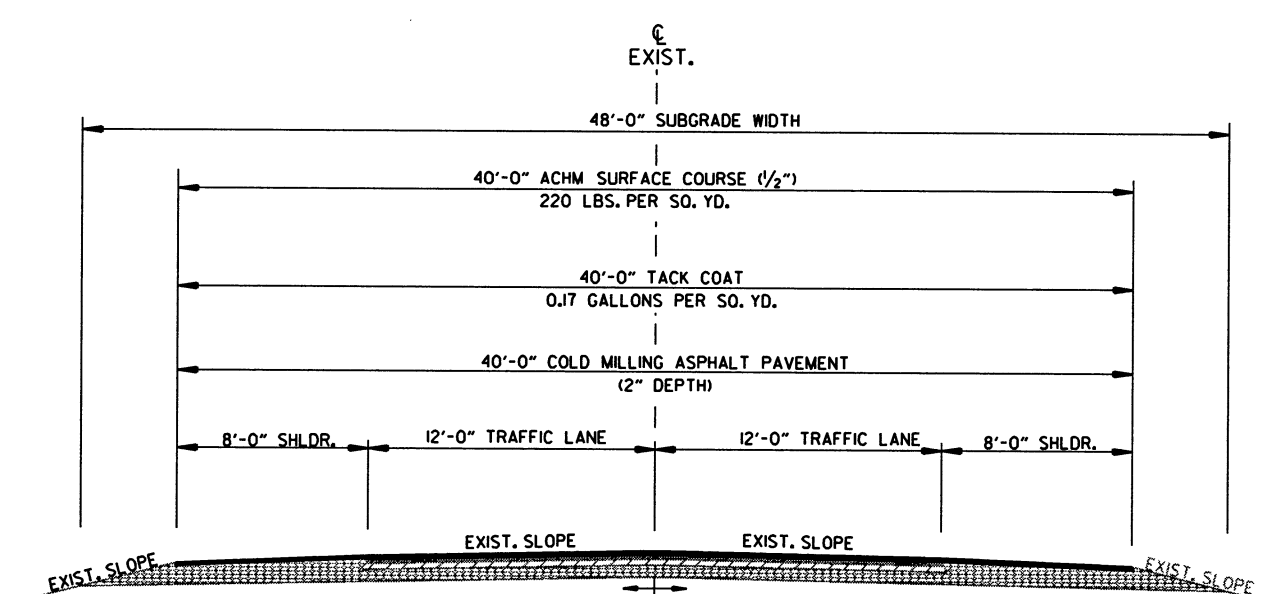
- NOTES:
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 2. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS.
 3. ** THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE ACHM SURFACE COURSE (1") IN LIEU OF AGGREGATE BASE COURSE UNDER THE PROPOSED SHOULDER AT NO ADDITIONAL COST TO THE DEPARTMENT. MEASUREMENT WILL BE BASED UPON CALCULATIONS FROM THE PLAN DIMENSIONS.
 4. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
 5. 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.
 6. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
 7. THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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2 TYPICAL SECTIONS OF IMPROVEMENT



HWY. 51 - 3 LANES NOTCH AND WIDEN W/CURB AND GUTTER
STA. 751+47.55 - STA. 752+47.56



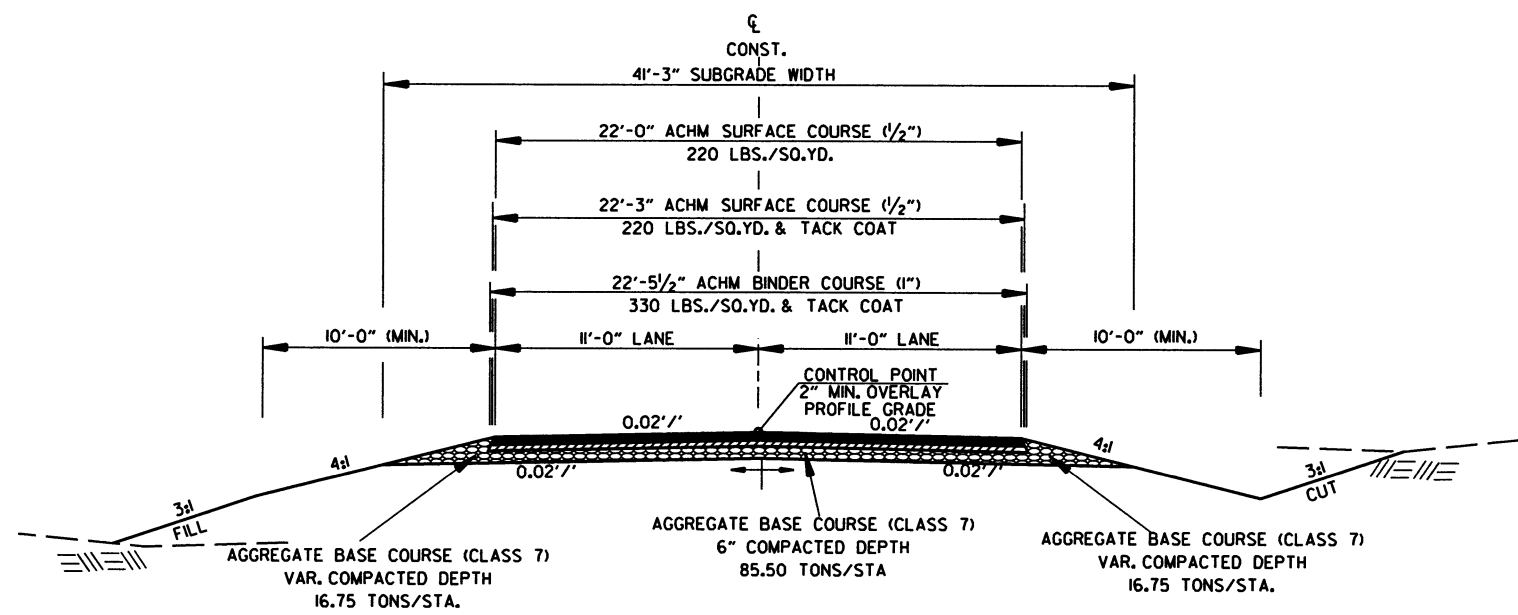
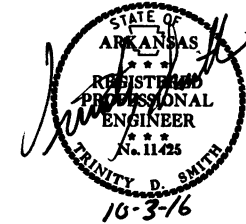
HWY. 51 - MILL & INLAY
STA. 599+21.49 - STA. 615+71.28
STA. 616+78.65 - STA. 625+13.64
STA. 634+35.35 - STA. 637+18.24
STA. 680+92.89 - STA. 693+73.18
STA. 694+80.55 - STA. 699+73.49

NOTES:

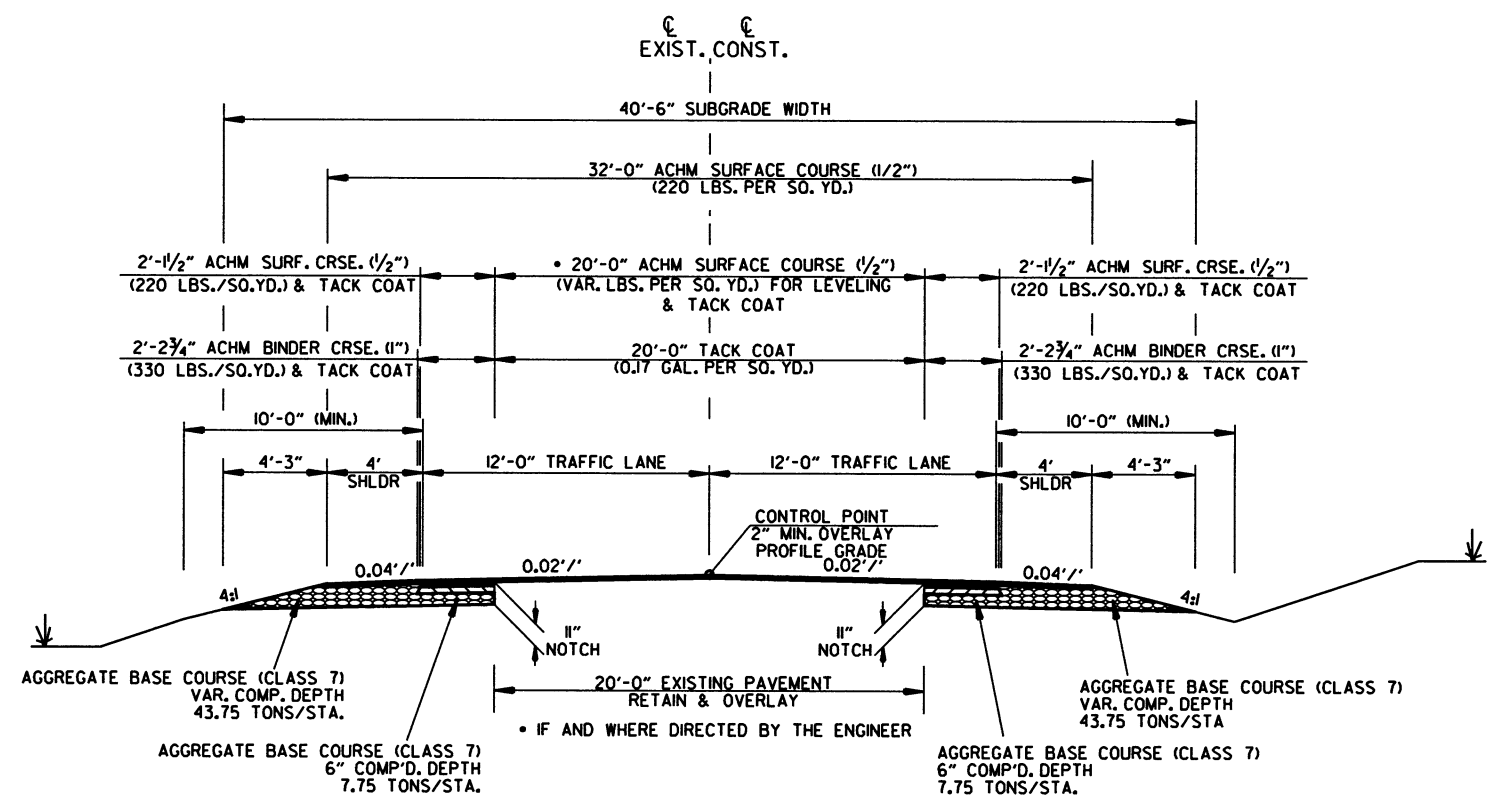
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2 TYPICAL SECTIONS OF IMPROVEMENT



MOUNT ZION ROAD
STA. 60+18.00 - STA. 61+87.22



HWY. 26 - NOTCH AND WIDEN

NOTES:

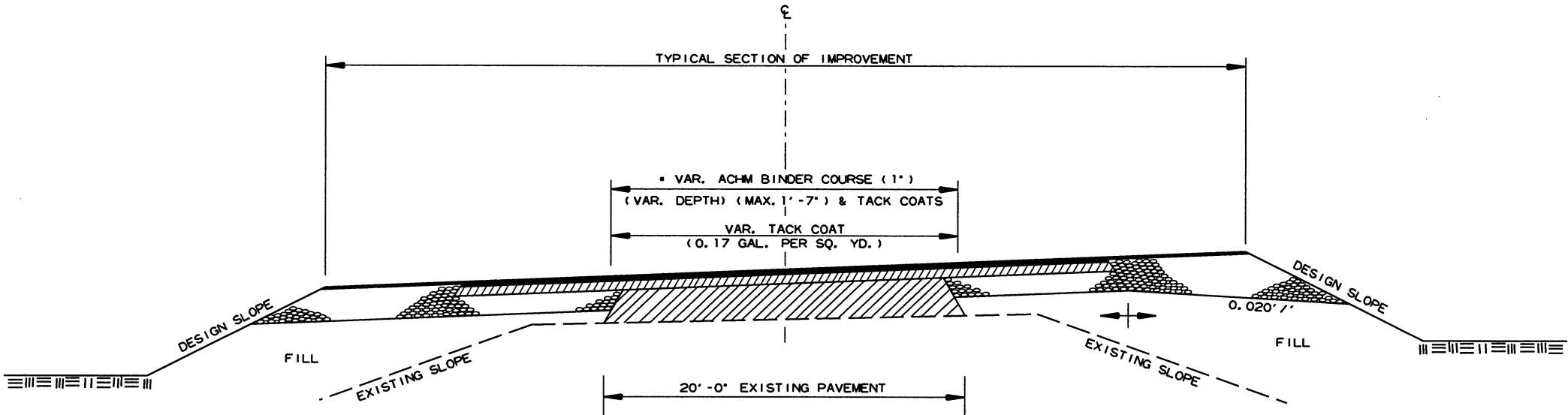
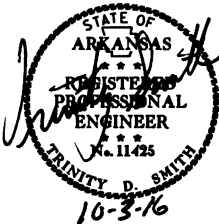
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
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7/27/2016

R070364.DGN

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						JOB NO. 070364	12	260

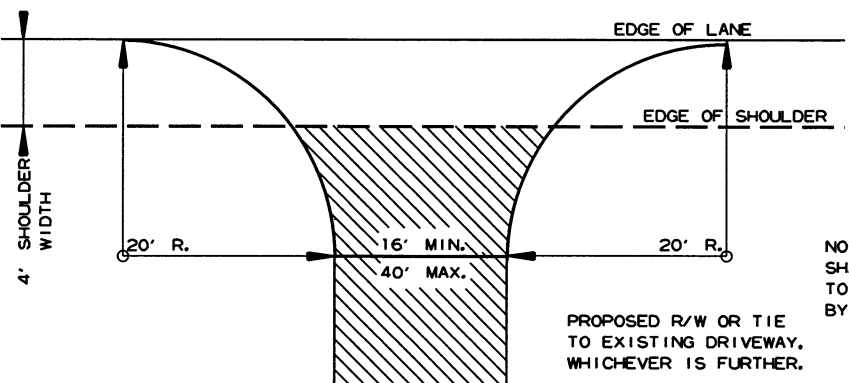
2 SPECIAL DETAILS



• 7" AGGREGATE BASE COURSE (CLASS 7)
TO BE REPLACED WITH ACHM BINDER COURSE (1")

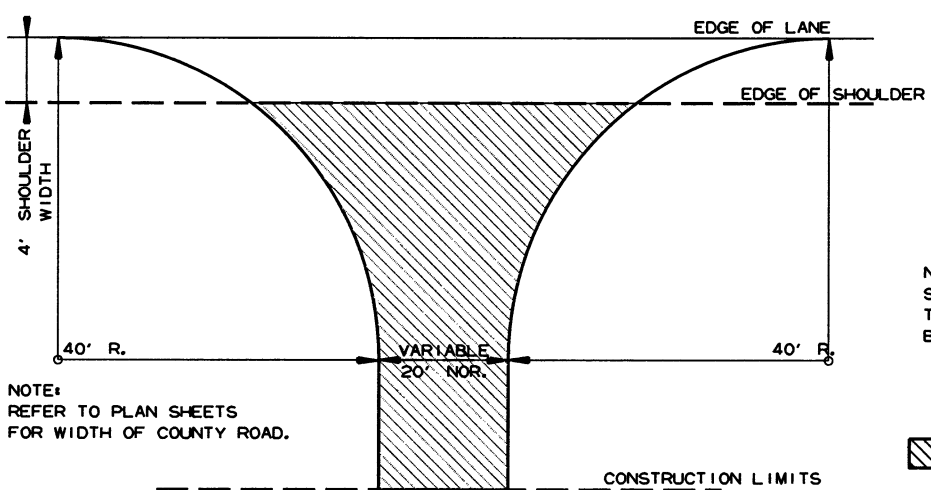
METHOD OF RAISING GRADE

- NOTES:
- (1) THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
 - (2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
 - (3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09, OF THE STANDARD SPECIFICATIONS.



DETAIL FOR DRIVEWAY TURNOUTS
OPEN SHOULDER SECTION
(ARTERIALS)

ACHM 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.



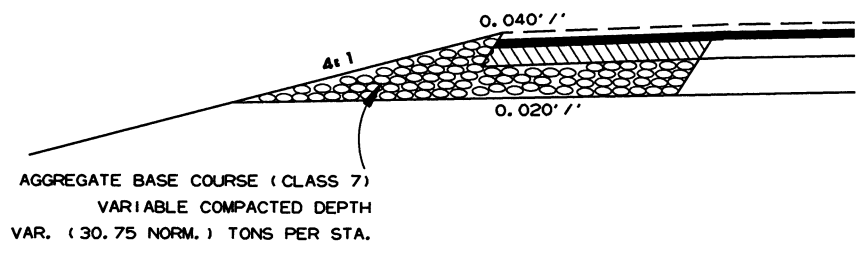
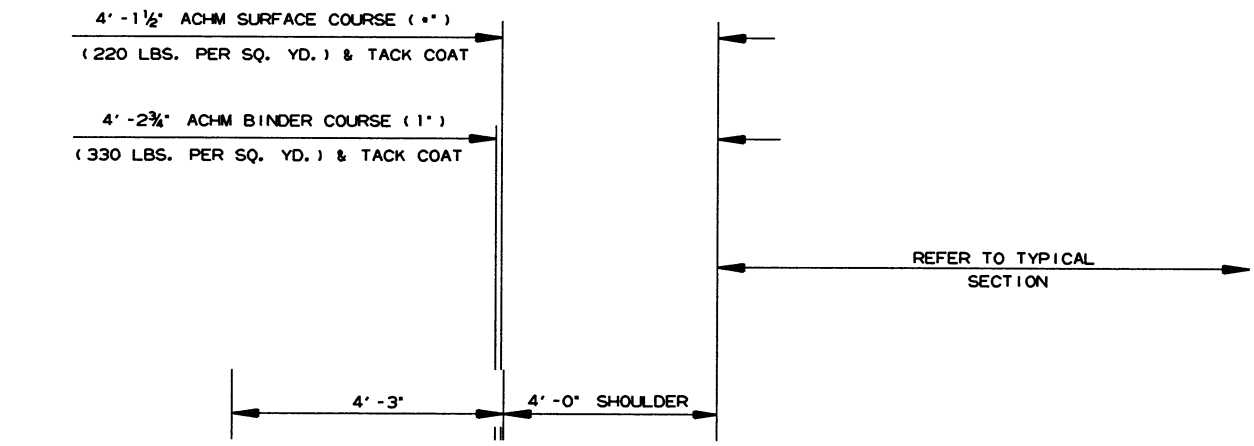
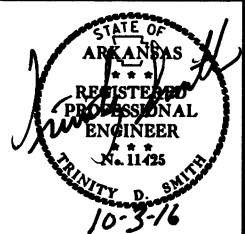
DETAIL FOR COUNTY ROAD TURNOUTS
OPEN SHOULDER SECTION

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

ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH

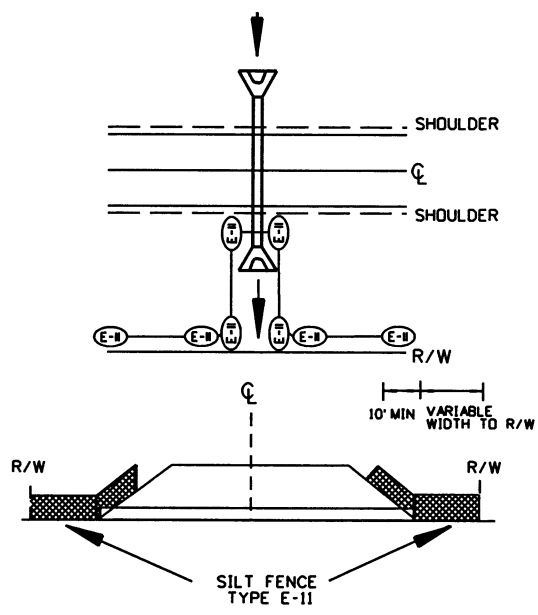
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070364	13	260

2 SPECIAL DETAILS

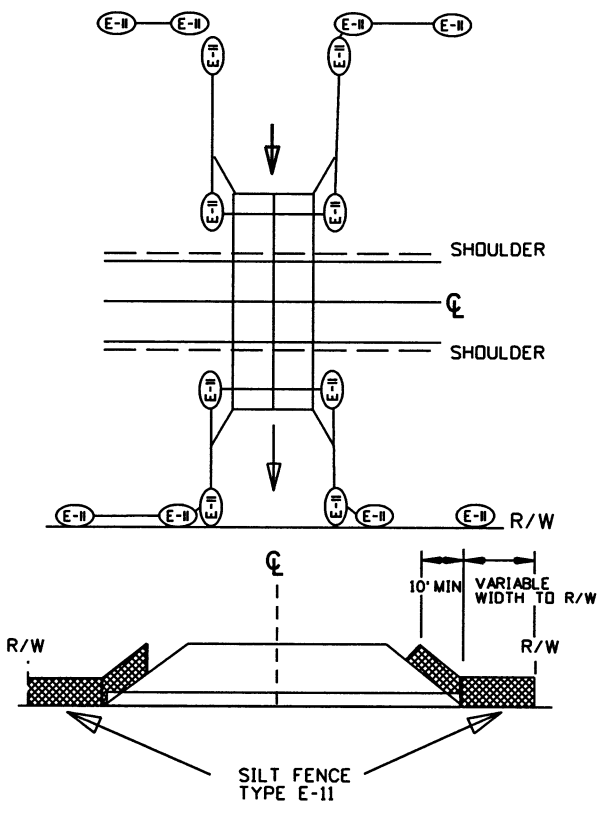


FULL DEPTH SHOULDER
FOR MAINTENANCE OF TRAFFIC

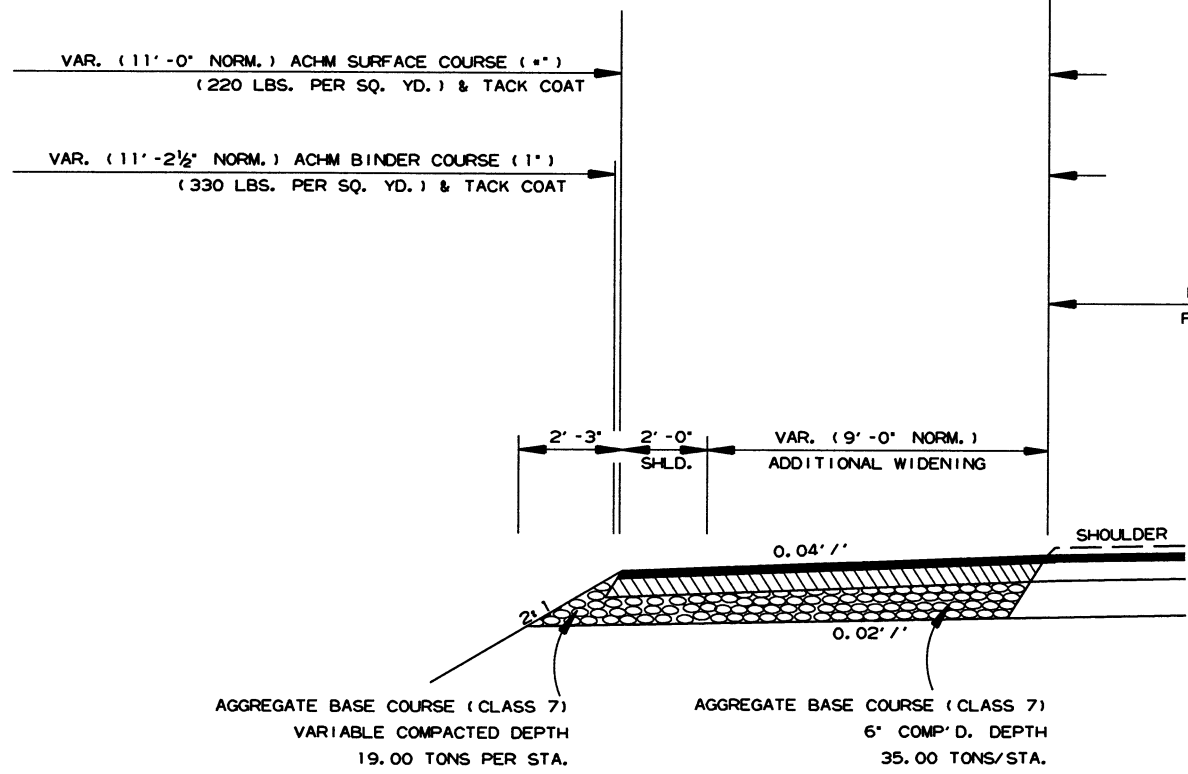
STATIONS: 523+83.84 - 526+99.87 LT.



DETAIL OF SILT FENCE
AT CROSS DRAINS

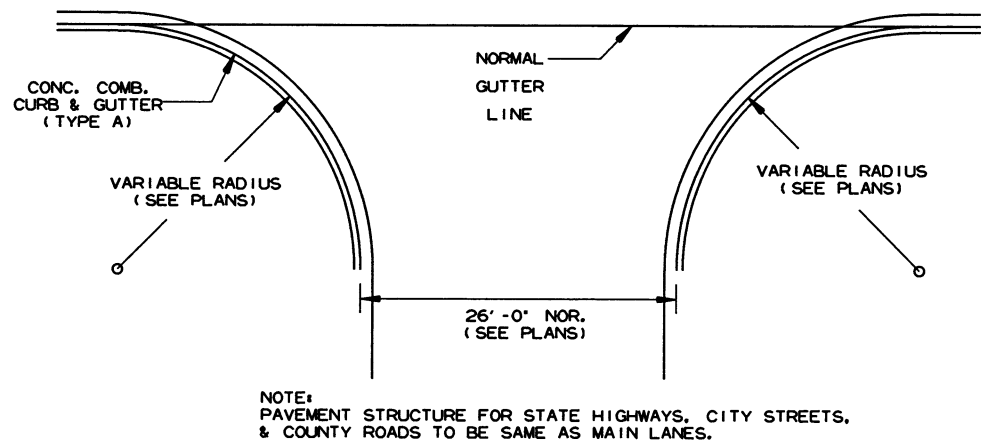


DETAIL OF SILT FENCE
AT R.C. BOX



ADDITIONAL WIDENING
FOR MAINTENANCE OF TRAFFIC

STATIONS: 524+09.52 - 526+74.19 LT.

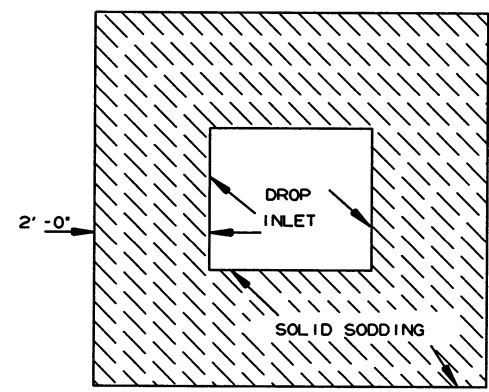
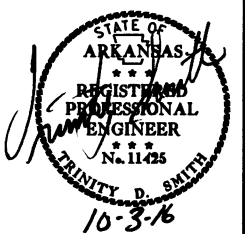


DETAIL OF TURNOUTS, ASPHALT STREETS,
COUNTY ROADS, & STATE HIGHWAYS
CURB & GUTTER SECTION

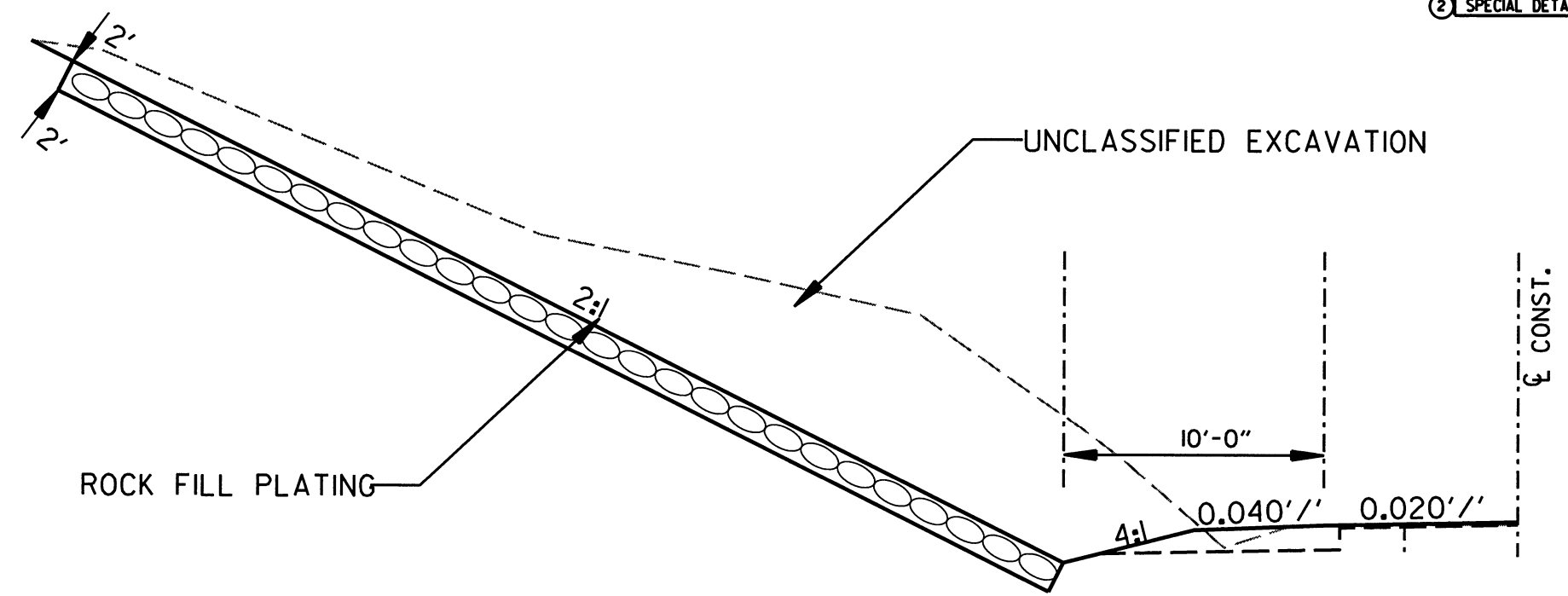
SPECIAL DETAILS

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. 070364	14	260

2 SPECIAL DETAILS



DETAIL FOR SOLID SODDING
AROUND DROP INLETS

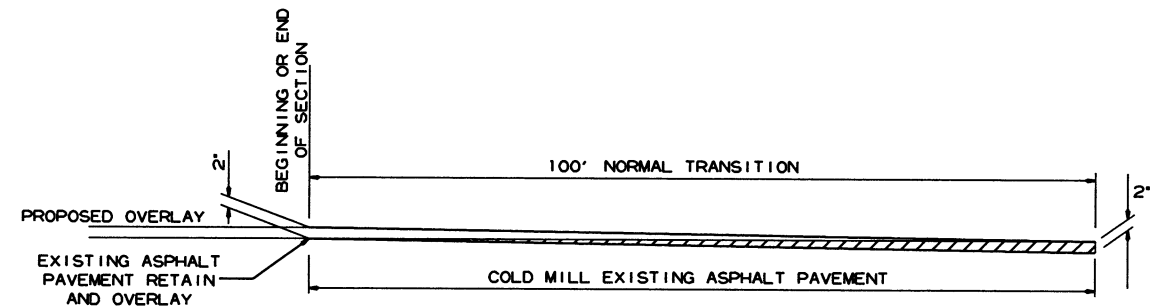


DETAIL SHOWING SLOPE PLATING

NOTE: REFER TO CROSS SECTIONS AND QUANTITY SHEETS FOR QUANTITIES.

NOTE:

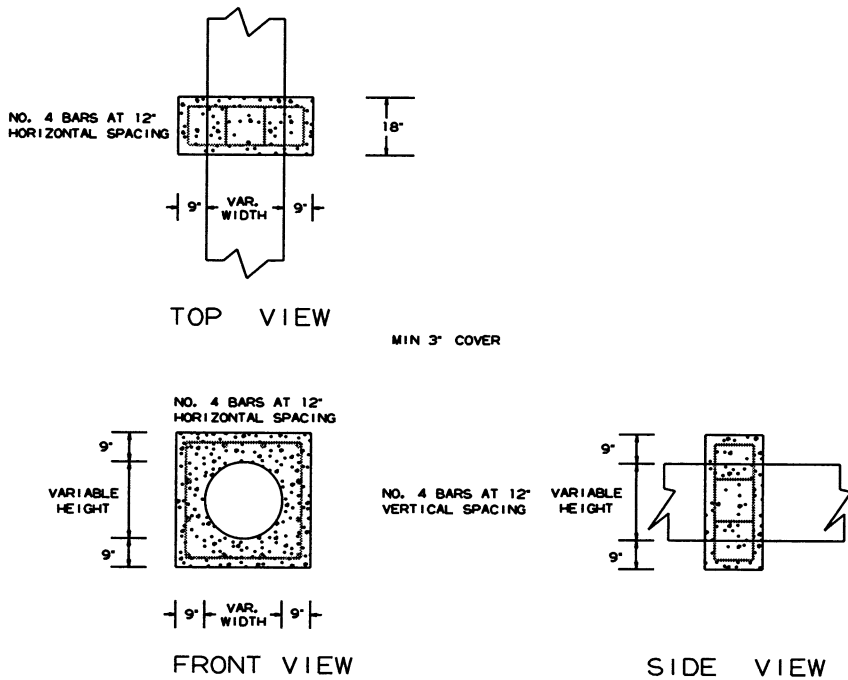
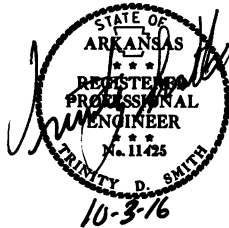
1. SHOULD BE CONSTRUCTED USING MATERIAL MEETING THE REQUIREMENTS OF THE SPECIAL PROVISION "ROCK FILL".
2. DEPTHS OF PLATING SHOULD BE EMBEDDED 2'-0" DEEP.



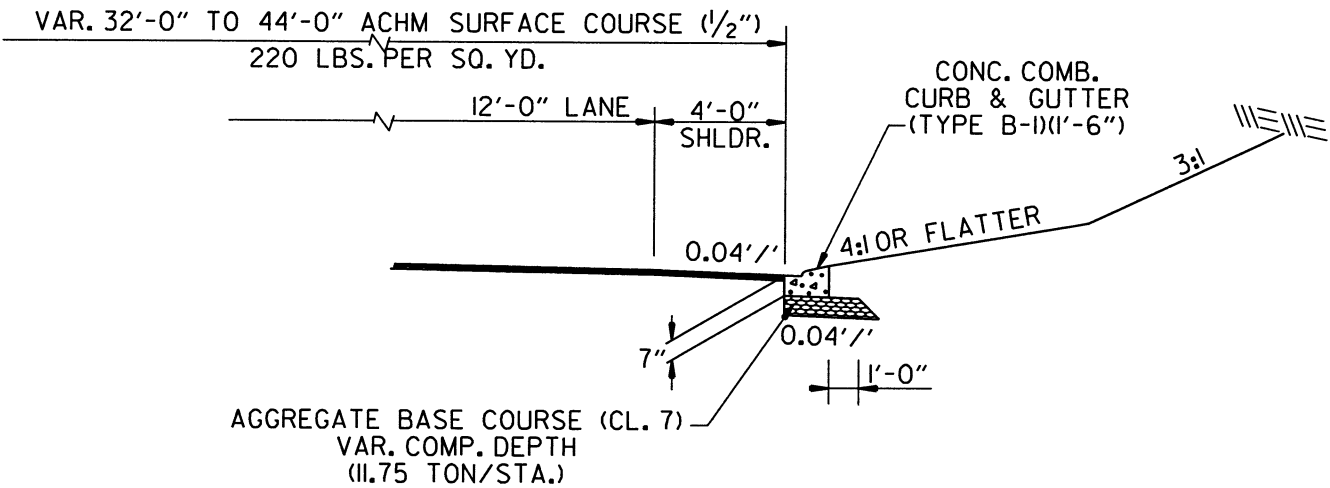
DETAIL FOR TRANSITIONS

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				6	ARK.			
						JOB NO. 070364	15	260

2 SPECIAL DETAILS



PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL



DETAIL FOR CONCRETE CURB AND GUTTER

STA. 518+00.00 TO STA. 524+00.00 RT.
STA. 556+05.00 TO STA. 579+50.00 RT. & LT.
STA. 746+50.00 TO STA. 752+47.56 LT.

MID-SECTION

R.C. BOX SECTION		DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (FT.)		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL				TOP SLAB DISTRIBUTION REINF. STEEL			BOTTOM SLAB DISTRIBUTION REINF. STEEL			SIDE WALL DISTRIBUTION REINF. STEEL																	
		D		S		H		T		B		C		OW		OH		SL		LENGTH = OW - 4"				LENGTH = OW - 4"				LENGTH = OH - 4"				LENGTH = SL			LENGTH = SL			LENGTH = SL																	
																				SIZE		SPACING		NO. REQ'D		LENGTH		SIZE		SPACING		NO. REQ'D		LENGTH		SIZE		SPACING		NO. REQ'D		LENGTH		SIZE		SPACING		NO. REQ'D		SIZE		SPACING		NO. REQ'D	
A	2	10	5	12	12	6	11'-0"	7'-0"	65.00	7	9	86	10'-8"	7	9	86	10'-8"	5	7	222	6'-8"	4	9	15	4	9	15	4	9	15	4	12	10																						

CLASS "S" CONCRETE	REINFORCING STEEL (Gr. 60)
CU YDS.	LBS.
65.00	7112

INLET SLOPE SECTION(S)

R.C. BOX SECTION										R.C. BOX SECTION									
DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (FT.)		TOP SLAB REINFORCING STEEL	
D	S	H	T	B	C	OW	OH	SL	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D
HDWL DEPTH		ADDITIONAL REINF. FOR HDWL					"h" HDWL BARS					SIZE		LENGTH		NO. REQ'D			
HD		LBS					Y					4		0'-8"		1'-8"		12	
3"		32																	

INLET SKEWED END SECTION

SKEW (DEGREE)		SLOPE		DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		SECTION LENGTH		TOP SLAB THICKNESS		BOTTOM SLAB THK.		SIDE WALL THICKNESS		HEADWALL DEPTH		OVER ALL WIDTH		OVER ALL HEIGHT		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL				TOP SLAB DISTRIBUTION REINFORCING STEEL				BOTTOM SLAB DISTRIBUTION REINFORCING STEEL				SIDE WALL DISTRIBUTION REINFORCING STEEL				HEADWALL REINFORCING STEEL				CLASS "S" CONCRETE (Includes HDWL)		REINFORCING STEEL (GR. 60) (Includes HDWL)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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INLET WINGWALL TABLE

OVER ALL WIDTH		CLEAR HEIGHT		FOOTING THK.		WING WALL THK.		BOX SKEW (DEG.)		SLOPE		HDWL LENGTH		HEEL		WALL HEIGHT		WINGWALL ANGLE (DEGREE)		FOOTING WIDTH AT WALL END		WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WINGWALLS		LENGTH OF FOOTING HEEL		CLASS "S" CONCRETE (Includes apron)		REINFORCING STEEL (Includes apron and laps if required)																																																																																																																																																																																																																																																																																																																																																																																																																													
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OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4	CU.YD	LBS.																																																																																																																																																																																																																																																																																																																																																																																																																																							
11'-0"	5'-0"	0'-9"	0'-8"	0	3:1	10'-0"	1'-0"	5'-10"	1'-8"	30	30	2'-2"	2'-11 3/4"	2'-11 3/4"	0'-11 1/4"	0'-11 1/4"	14'-0"	14'-0"	15'-10 5/8"	15'-10 5/8"	5.98	566																																																																																																																																																																																																																																																																																																																																																																																																																																							
WING		BAR SIZE		F1		F2		F3		F4		F5		F6		F7		F8		F9		F10		F11		F12		REINF. STEEL QTY. PER WING (LBS)																																																																																																																																																																																																																																																																																																																																																																																																																																	
WING A		4	12	14	L	Min 2'-10" Max 7'-6" Min 0'-9" Max 1'-7" Min 2'-2" Max 6'-0"	-	-	-	L	-	-	-	-	X	-	4	18	6	Min 2'-1" Max 12'-2"	4	18	2	13'-8"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	-	-	-	-	Min 2'-10" Max 7'-6" Min 0'-9" Max 1'-7" Min 2'-2" Max 6'-0"	L	-	-	-	-	X	-	4	18	6	Min 2'-1" Max 12'-2"	4	18	2	13'-8"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L	Min 3'-3" Max 7'-3" Min 1'-8" Max 2'-6"	4	6	16'-9"	4	18	10	X	Min 3'-3" Max 7'-3" Min 1'-4" Max 1'-4" Min 2'-0" Max 6'-0"	L

This drawing to be used in conjunction with SHEET 1 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "GENERAL NOTES & LONGITUDINAL SECTION LENGTH SCHEDULE", SHEET 2 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF SINGLE-BARREL R.C. BOX CULVERT", SHEET 4 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF WINGWALLS", and STANDARD DRAWING RCB-2.
For additional information and outlet sections, see Sheet 2 of 2.

Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

MID-SECTION BAR LAP TABLE

# of Long. Laps Req'd.	SL = Section Length
0	< 40.0 ft
1	> 40.0 ft - 78.0 ft
2	> 78.0 ft - 116.0 ft
3	> 116.0 ft - 154.0 ft
4	> 154.0 ft - 192.0 ft
5	> 192.0 ft - 230.0 ft
6	> 230.0 ft - 268.0 ft
7	> 268.0 ft - 306.0 ft
8	> 306.0 ft - 344.0 ft

Data shown for Mid-Section, Slope Section(s), and Skewed End Section is based on the design fill depth shown in the table, see PLAN AND PROFILE SHEETS for actual fill depth.

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
SINGLE BARREL BOX CULVERT
STA. 525+61
SPECIAL DETAILS

DATE REVISED
DATE FILMED
DATE REVISED
DATE FILMED

FED. ROAD DIST. NO.
STATE
FED. AND PROJ. NO.
SHEET NO.
TOTAL SHEETS

6
ARK.
070364
16
260

SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
10-4-16
CHARLES R. ELLIS

TABULAR DATA BY: CMW
CHECKED BY: RMY
DATE: 10/3/16
DATE: 10/4/16

OUTLET SLOPE SECTION(S)

[illegible]

	CU. YDS.	CLASS "S" CONCRETE
TOTAL	0.10	REINFORCING STEEL (GR. 50) LBS. 45

Min. Bar Lap Length	
#4	1'-9"
#5	2'-2"
#6	2'-7"
#7	3'-6"
#8	4'-7"

Bar Pin Dia. Table	
#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"

OUTLET SKEWED END SECTION

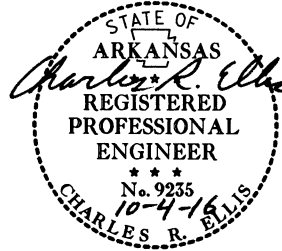
[illegible]

OUTLET WINGWALL TABLE

[illegible]

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.		070364	17	260

1
SPECIAL DETAILS



TABULAR DATA BY: CMW DATE: 10/3/16
CHECKED BY: KWY DATE: 10/4/16

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

SHEET 2 OF 2
DETAILS OF R.C. BOX CULVERT
SINGLE BARREL BOX CULVERT
STA. 525+61
SPECIAL DETAILS

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.

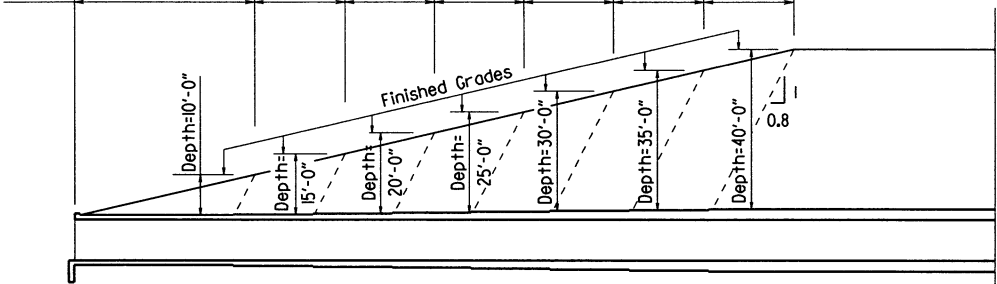
V 1114 b070364_culvert.dgn

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.		070364	18	260
SPECIAL DETAILS								

2:1 Slope	20'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
3:1 Slope	30'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
4:1 Slope	40'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"

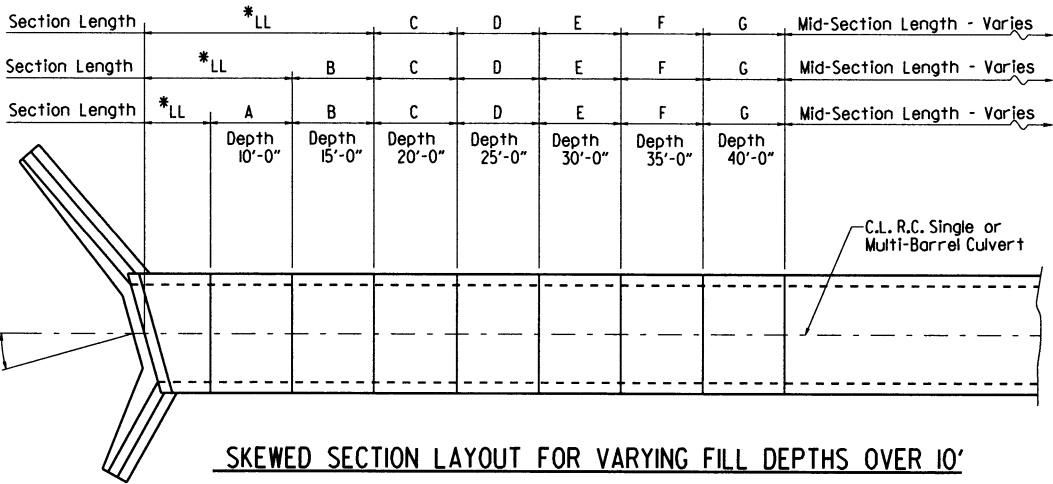
Note: For fill depths 10' and under, use Mid-Section full length of box culvert.

* LL = Skewed End Section Length - See "Skewed End Section Details"
Length LL varies with skew angle, overall box width and fill depth and may eliminate the need for some slope section lengths as shown.

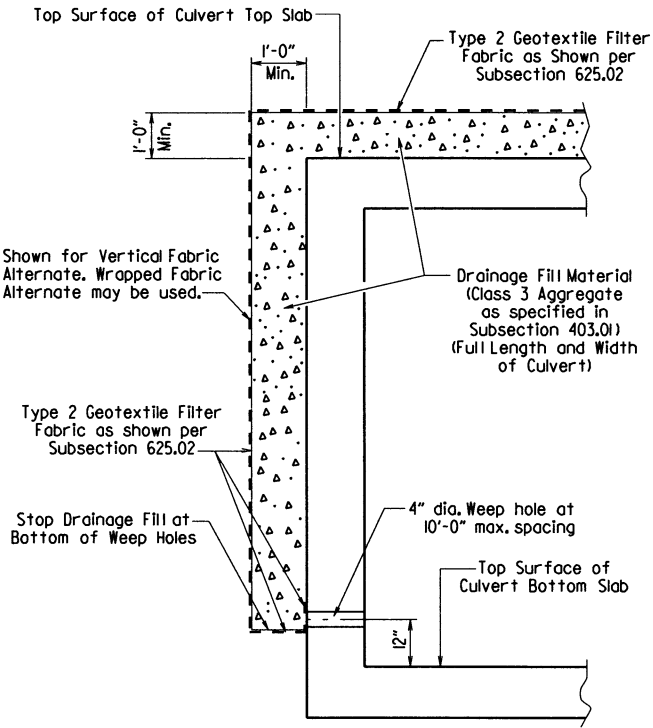


Slope Section Length @ 2:1 Slope	A=12'-0"	B=6'-0"	C=6'-0"	D=6'-0"	E=6'-0"	F=6'-0"	G=6'-0"	Mid-Section Length - Varies
Slope Section Length @ 3:1 Slope	A=22'-0"	B=11'-0"	C=11'-0"	D=11'-0"	E=11'-0"	F=11'-0"	G=11'-0"	Mid-Section Length - Varies
Slope Section Length @ 4:1 Slope	A=32'-0"	B=16'-0"	C=16'-0"	D=16'-0"	E=16'-0"	F=16'-0"	G=16'-0"	Mid-Section Length - Varies

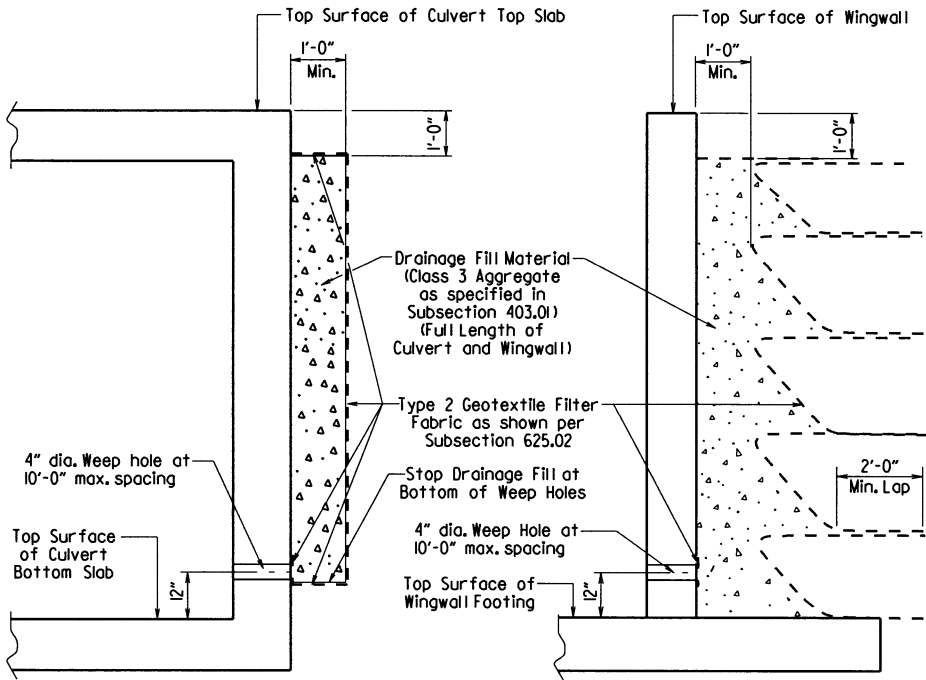
LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'
Lengths for Non-Skewed Boxes



GENERAL NOTES:
CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.
DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Fifth Edition (2010) with 2010 interim revisions.
LIVE LOADING: HL-93
All concrete shall be Class S with a minimum 28-day compressive strength of 3,500 psi and shall be poured in the dry. All exposed corners to have 3/4" chamfers.
Reinforcing Steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.
Reinforcing Steel Tolerances: The tolerances for reinforcing steel shall meet those listed in 'Manual of Standard Practice' published by Concrete Reinforcing Steel Institute (CRSI) except that the tolerance for truss bars such as Figure 3 on page 7-4 of the CRSI Manual shall be minus zero to plus 1/2 inch.
Excavation and backfilling shall be in accordance with the requirements of Section 801.
Membrane Waterproofing shall conform to the requirements of Section 815. Membrane Waterproofing shall be Type C and as directed by the Engineer applied to all construction joints in the top slab and the sidewalls of R.C. Box culverts and to the construction joint between wingwalls and R.C. Box culvert walls.
Weep Holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab.
Weep Holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain opening shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.
The barrel components of the culvert may be constructed using continuous pours. For longer culvert construction, the Contractor may use multiple pours with transverse construction joints spaced a minimum of 50 feet apart unless superseded by stage construction or site constraints as approved by the Engineer. Construction joints between footings and walls shall be made only where shown in the Plans. Joints shall be normal to the centerline of barrel and shall be keyed. Longitudinal reinforcing shall be continuous through joints unless shown otherwise. All longitudinal construction joints shall be submitted to the Engineer for approval.
Membrane Waterproofing, Weep Holes, Geotextile Filter Fabric, and Drainage Fill Material will not be paid for directly but shall be considered subsidiary to Class S Concrete.
When the top slab of the box culvert serves as finished roadway surface, curing and finishing shall be in accordance with subsections 802.17 and 802.20 for bridge roadway surface and a time finish shall be applied in accordance with subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Curing and finishing shall not be paid for directly, but shall be considered incidental to the item "Class S Concrete-Roadway". Class 1 Protective Surface Treatment shall be applied to the roadway surface and this work shall be paid for under the unit price bid for "Class 1 Protective Surface Treatment".
When precast reinforced concrete box culverts are substituted for cast in place box culverts, they shall be manufactured according to ASTM C 1577 and meet the requirements of Section 607. When the top slab of the box culvert serves as the finished roadway surface, a precast reinforced concrete box culvert substitution is not allowed.



CULVERT DRAINAGE DETAIL FOR ROCK FILL
This detail shall be used when rock fill is specified for embankment construction.



VERTICAL FABRIC ALTERNATE
(Shown for Culvert, Similar for Wingwall)
WRAPPED FABRIC ALTERNATE
(Shown for Wingwall, Similar for Culvert)

For Details of Excavation and Pay Limits, see Standard Drawing RCB-2.

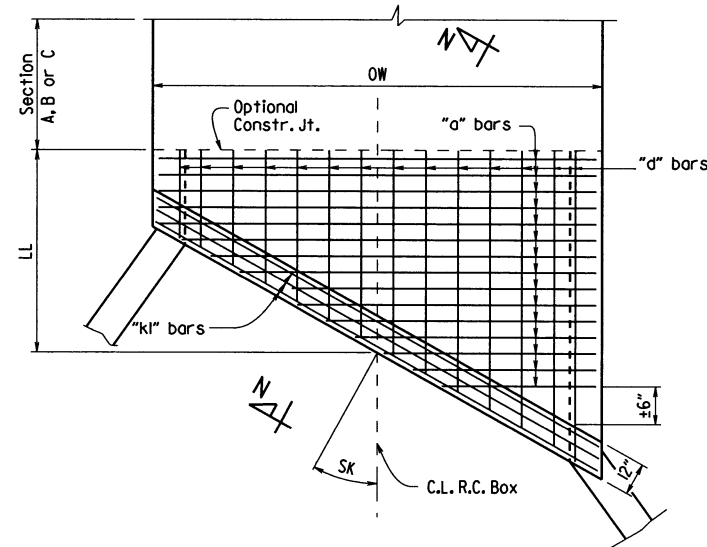
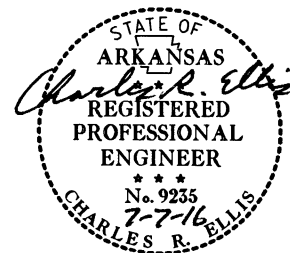
WINGWALL & CULVERT DRAINAGE DETAIL

SHEET 1 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
GENERAL NOTES &
LONGITUDINAL SECTION LENGTH SCHEDULE
SPECIAL DETAILS

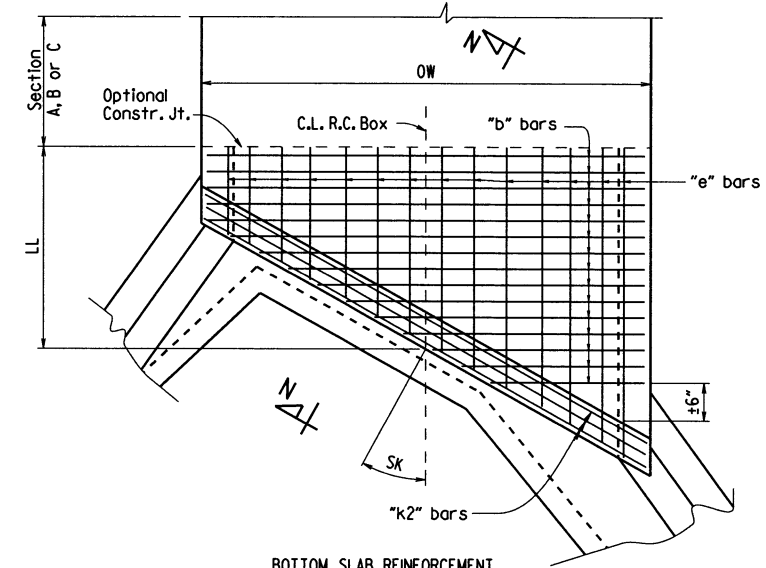


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070364	19	260

SPECIAL DETAILS



TOP SLAB REINFORCEMENT



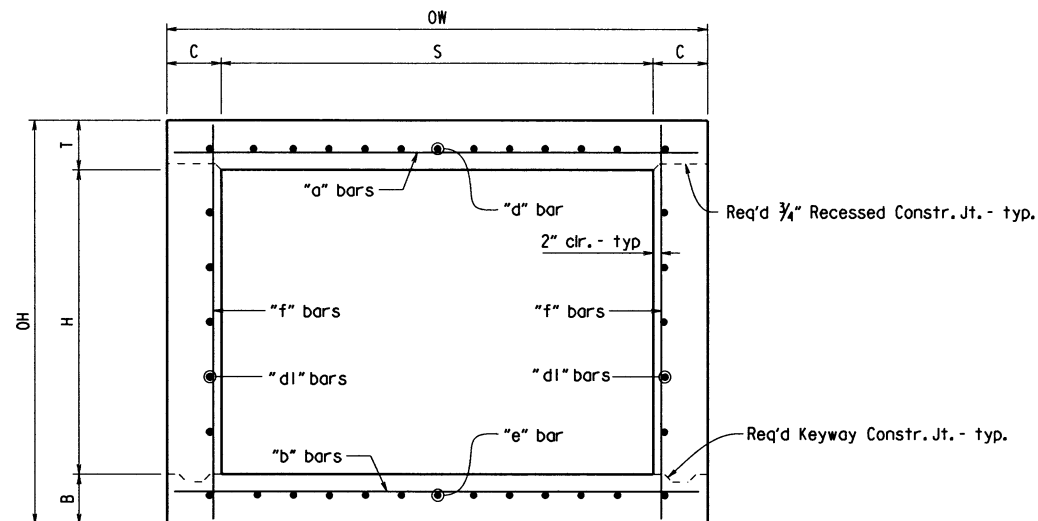
SKewed END SECTION DETAILS

SHEET 2 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF SINGLE BARREL
R.C. BOX CULVERT

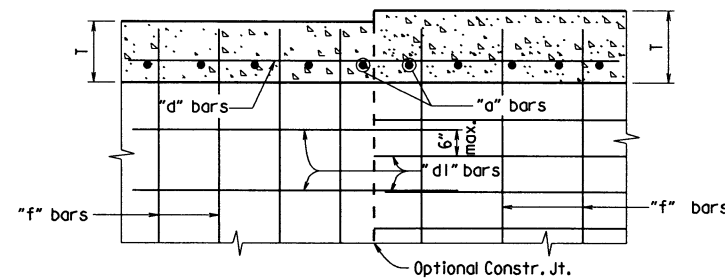
SPECIAL DETAILS



Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



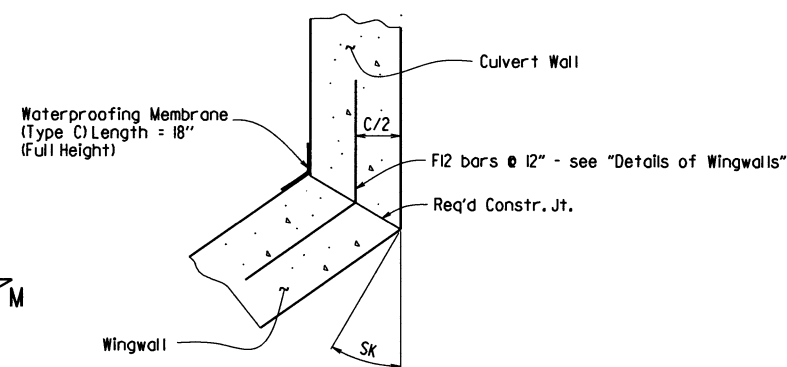
TYPICAL SECTION M-M



Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.

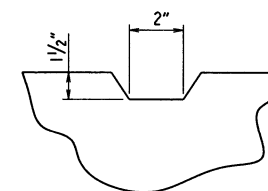
LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR

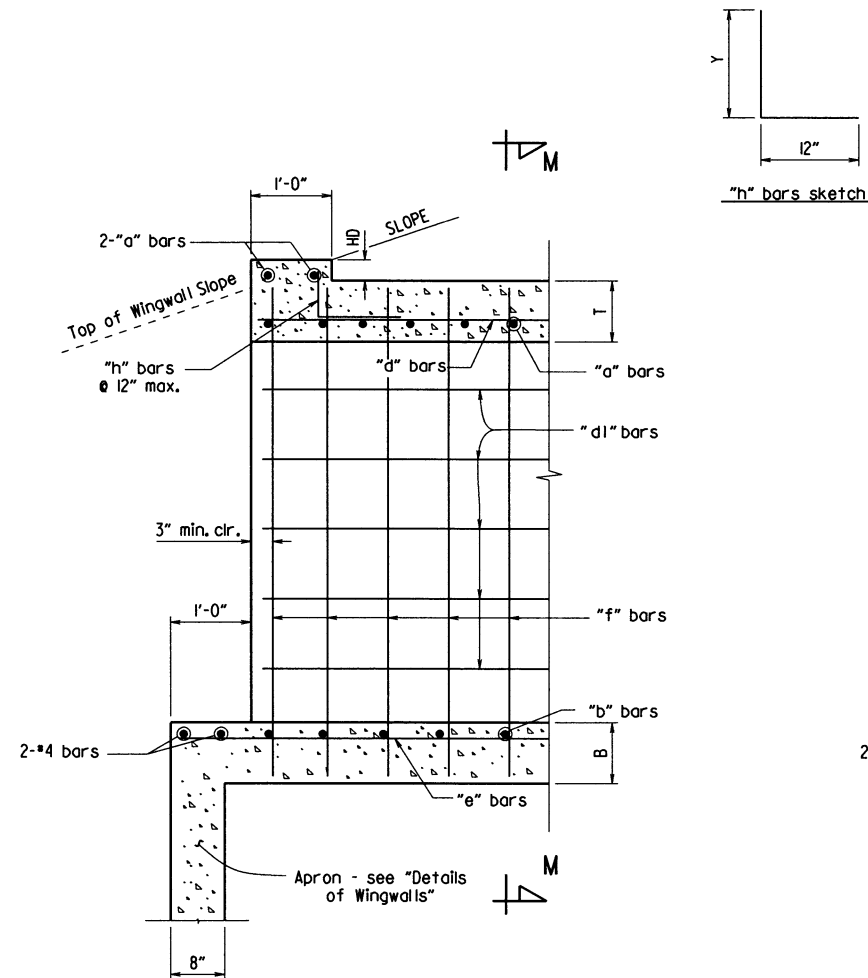


WINGWALL ATTACHMENT

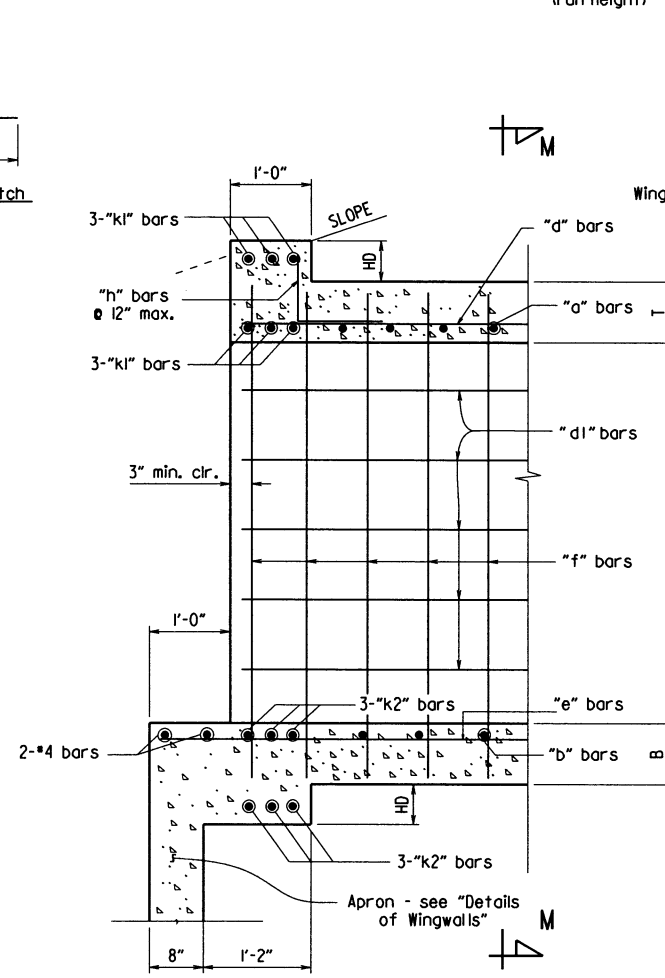
See "Details of Wingwalls" for additional information and wingwall details.



TYPICAL KEYWAY DETAIL
(All Construction Joints)



PART LONGITUDINAL SECTION
(Non-Skewed Ends)

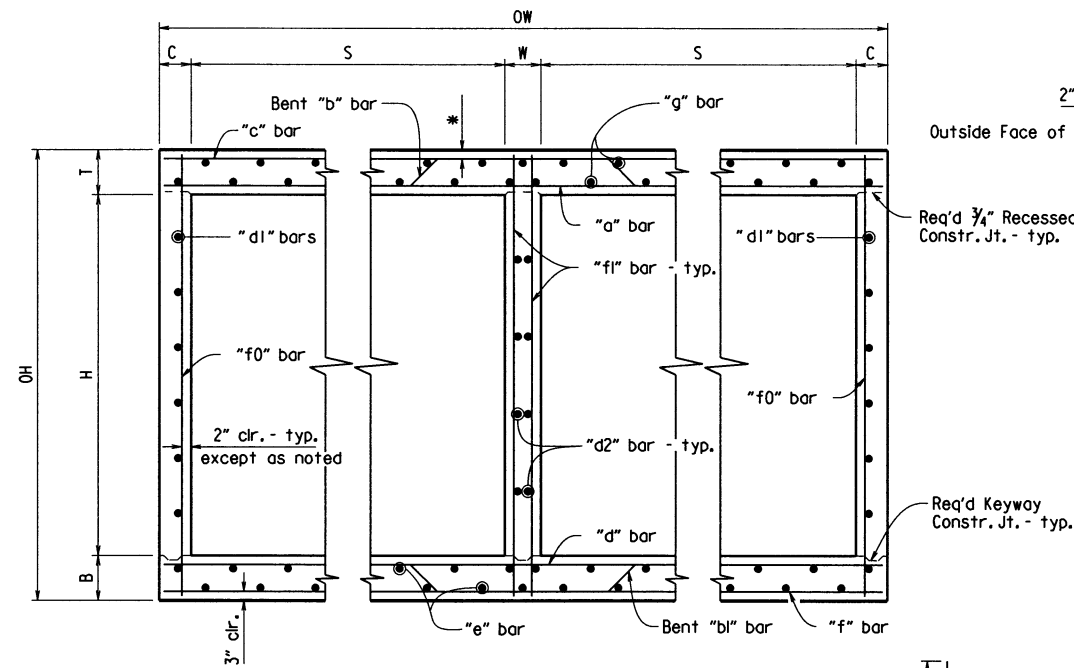


PART LONGITUDINAL SECTION N-N
(Skewed Ends)

b070364_culvert.dgn

*2" clr. for fill depth (D) greater than 2 ft.
2 1/2" clr. for fill depth (D) equal to or less than 2 ft.

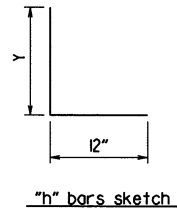
Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



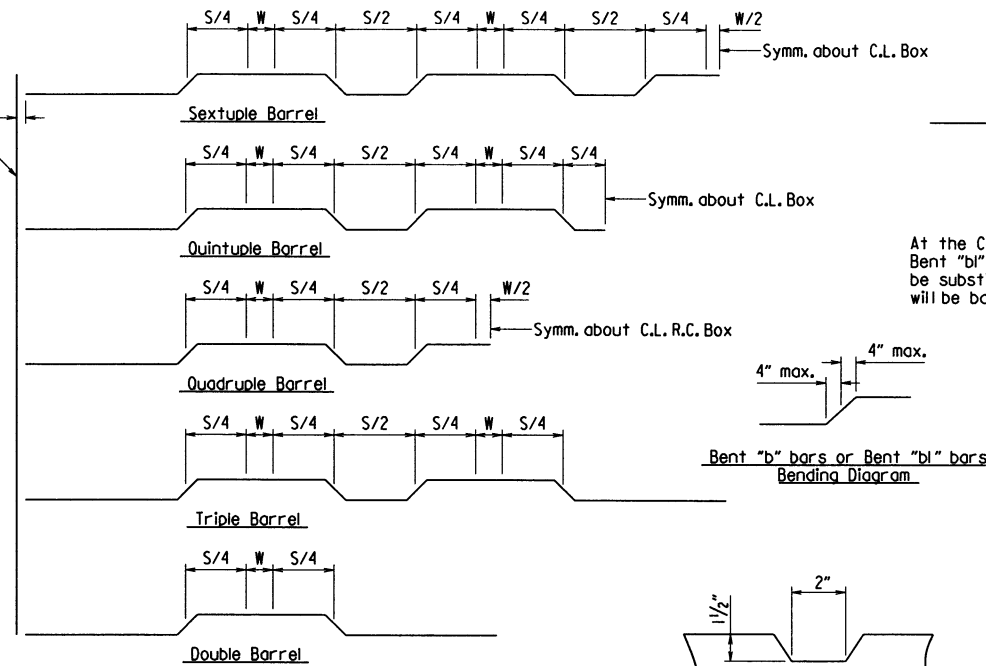
TYPICAL SECTION M-M

Top Slab
Straight "c" bars shall alternate with Bent "b" bars in top.
Straight "a" bars shall alternate with Bent "b" bars in bottom.

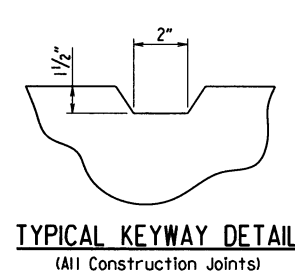
Bottom Slab
Straight "d" bars shall alternate with Bent "bl" bars in top.
Straight "f" bars shall alternate with Bent "bl" bars in bottom.



"h" bars sketch



Bent "b" bars or Bent "bl" bars sketch



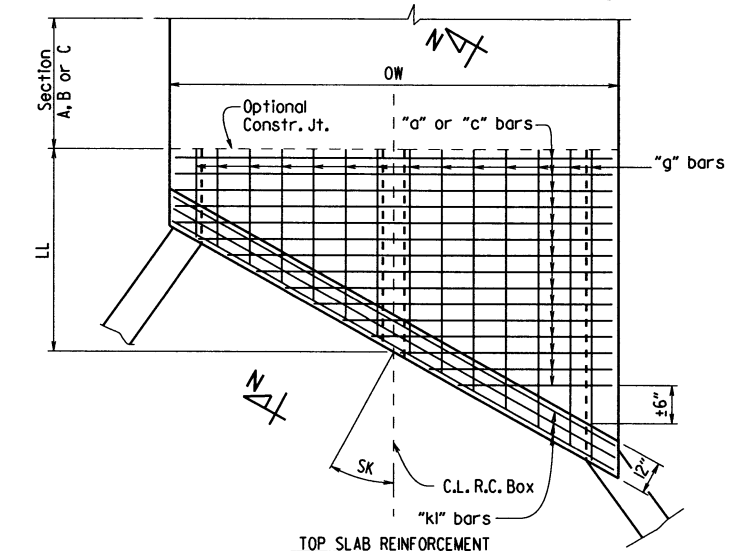
DATE REVISED	DATE FILMED	REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070364	20	260

SPECIAL DETAILS

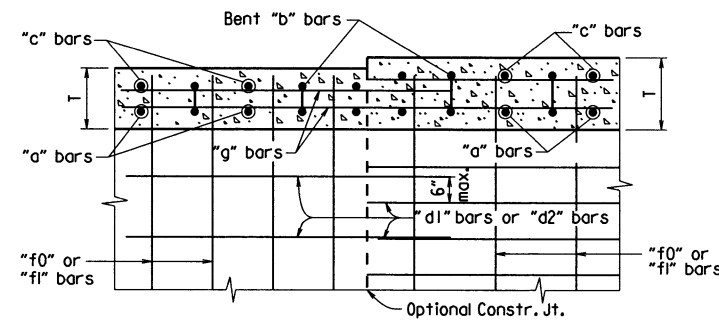


Lap Detail
For Bent "b" bars and Bent "bl" bars

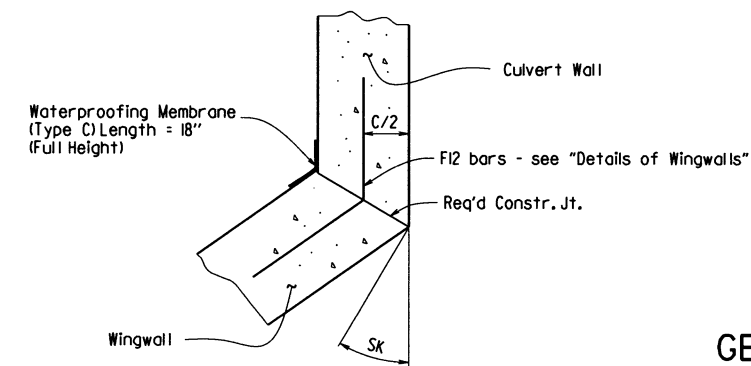
At the Contractor's option in lieu of providing Bent "b" or Bent "bl" bars, one bar top and bottom of equivalent size may be substituted for each bent bar. Payment for the reinforcing will be based on the weight of the "b" or "bl" bar.



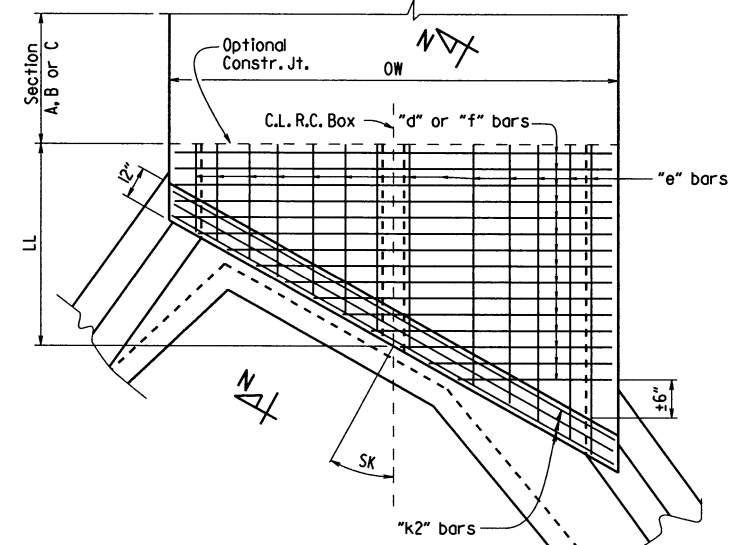
TOP SLAB REINFORCEMENT
Straight "c" bars in top.
Straight "a" bars in bottom.



Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.
LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS
TOP SLAB SHOWN, BOTTOM SLAB SIMILAR



WINGWALL ATTACHMENT
See "Details of Wingwalls" for additional information and wingwall details.



BOTTOM SLAB REINFORCEMENT
Straight "d" bars in top.
Straight "f" bars in bottom.

SKewed END SECTION DETAILS

SHEET 3 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF MULTI-BARREL
R.C. BOX CULVERT
SPECIAL 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. 070364	22	260

2 TEMPORARY EROSION CONTROL DETAILS



STA. 499+99 - STA. 505+00
INSTALL E-II = 556 LIN. FT.

STA. 500+13.56
BEGIN JOB 070364
LOG MILE 16.03

STA. 514+28 - STA. 514+66
INSTALL E-II = 150 LIN. FT.

DATE OF REVISION	REVISION

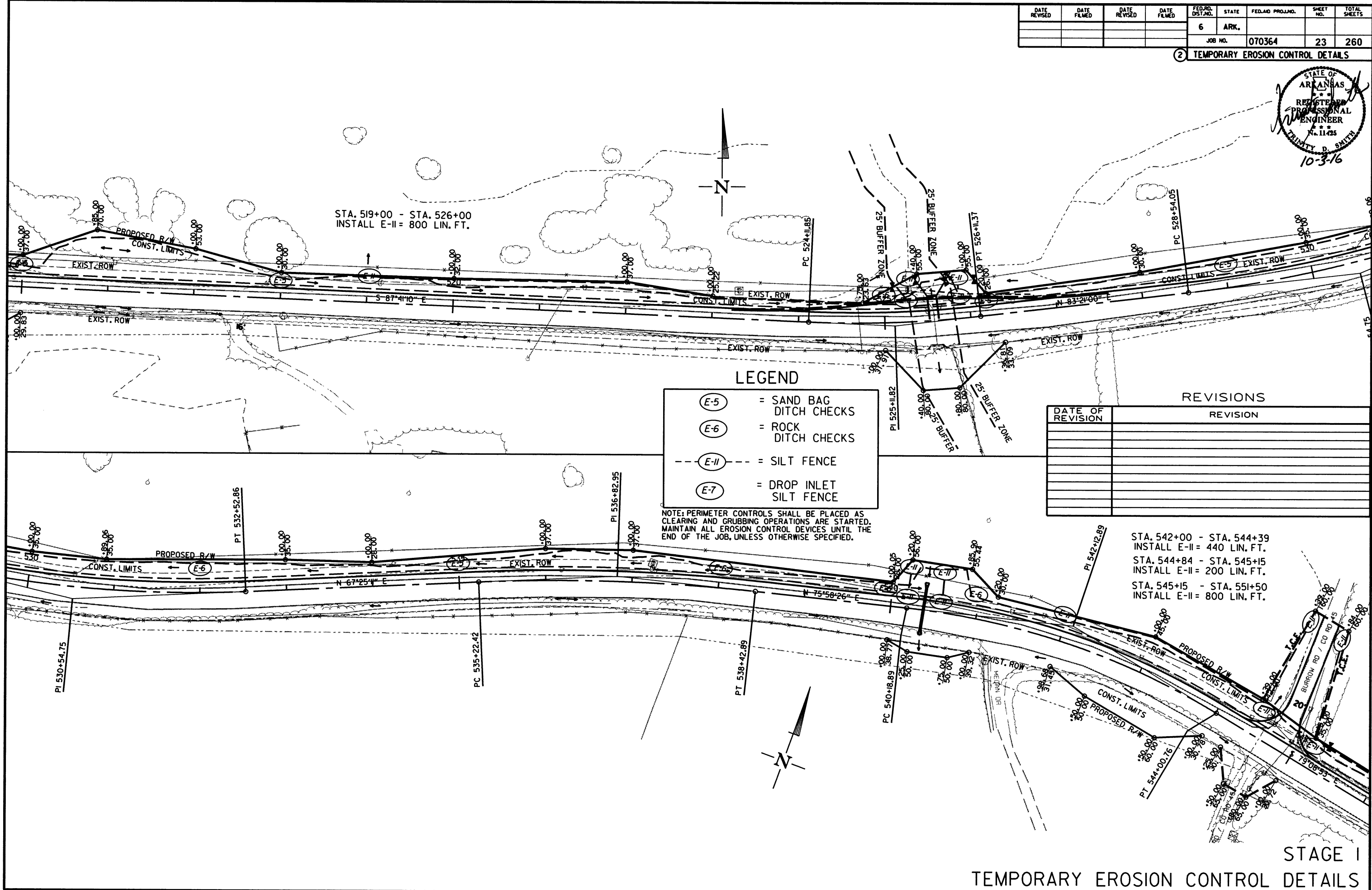
LEGEND	
(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
---(E-II)---	= SILT FENCE
(E-7)	= DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS
CLEARING AND GRUBBING OPERATIONS ARE STARTED.
MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE
END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

STAGE I
TEMPORARY EROSION CONTROL DETAIL

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. 070364	23	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

REVISIONS

DATE OF REVISION	REVISION

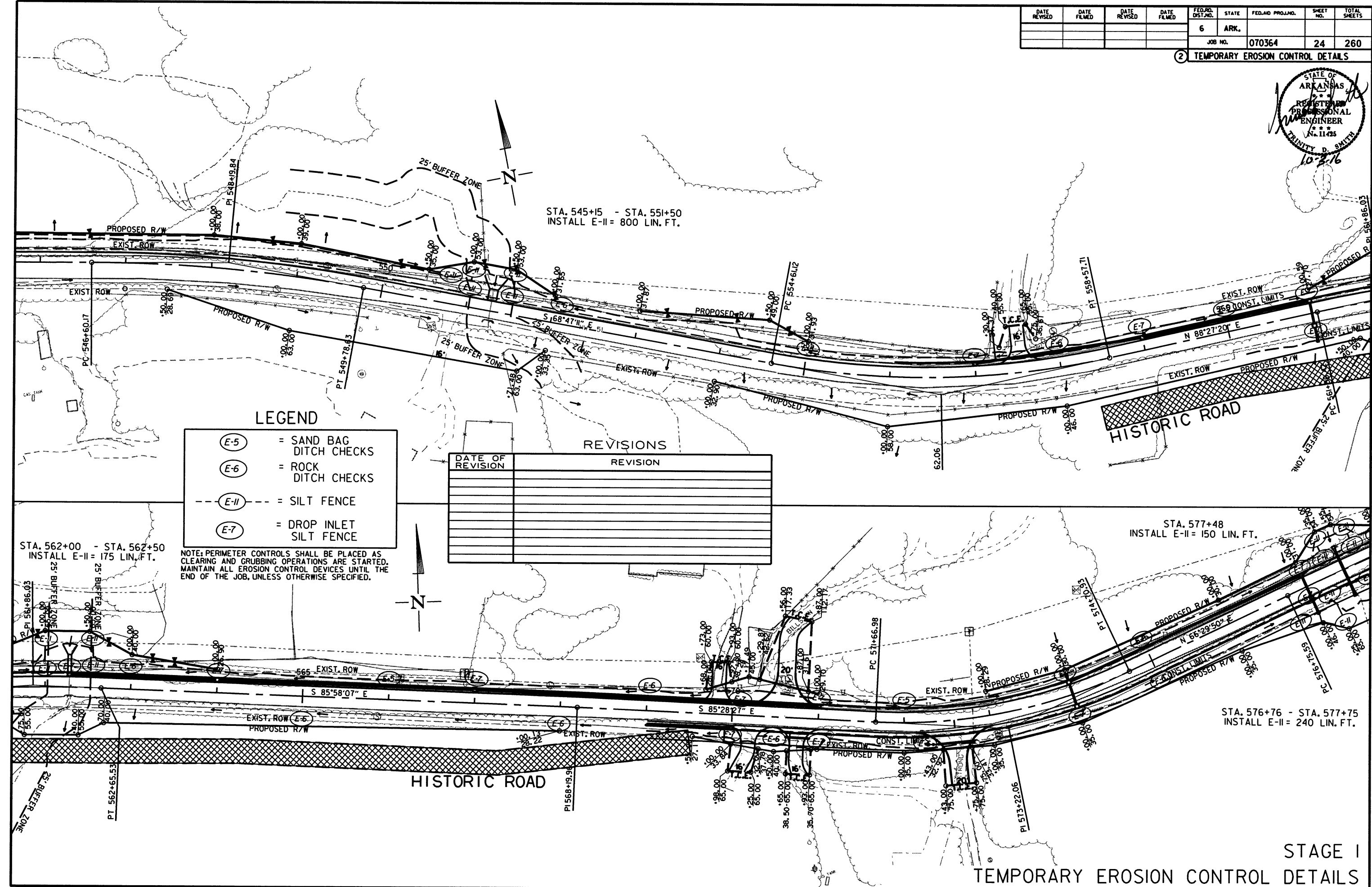
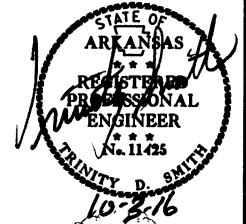
STA. 542+00 - STA. 544+39
INSTALL E-II = 440 LIN. FT.

STA. 544+84 - STA. 545+15
INSTALL E-II = 200 LIN. FT.

STA. 545+15 - STA. 551+50
INSTALL E-II = 800 LIN. FT.

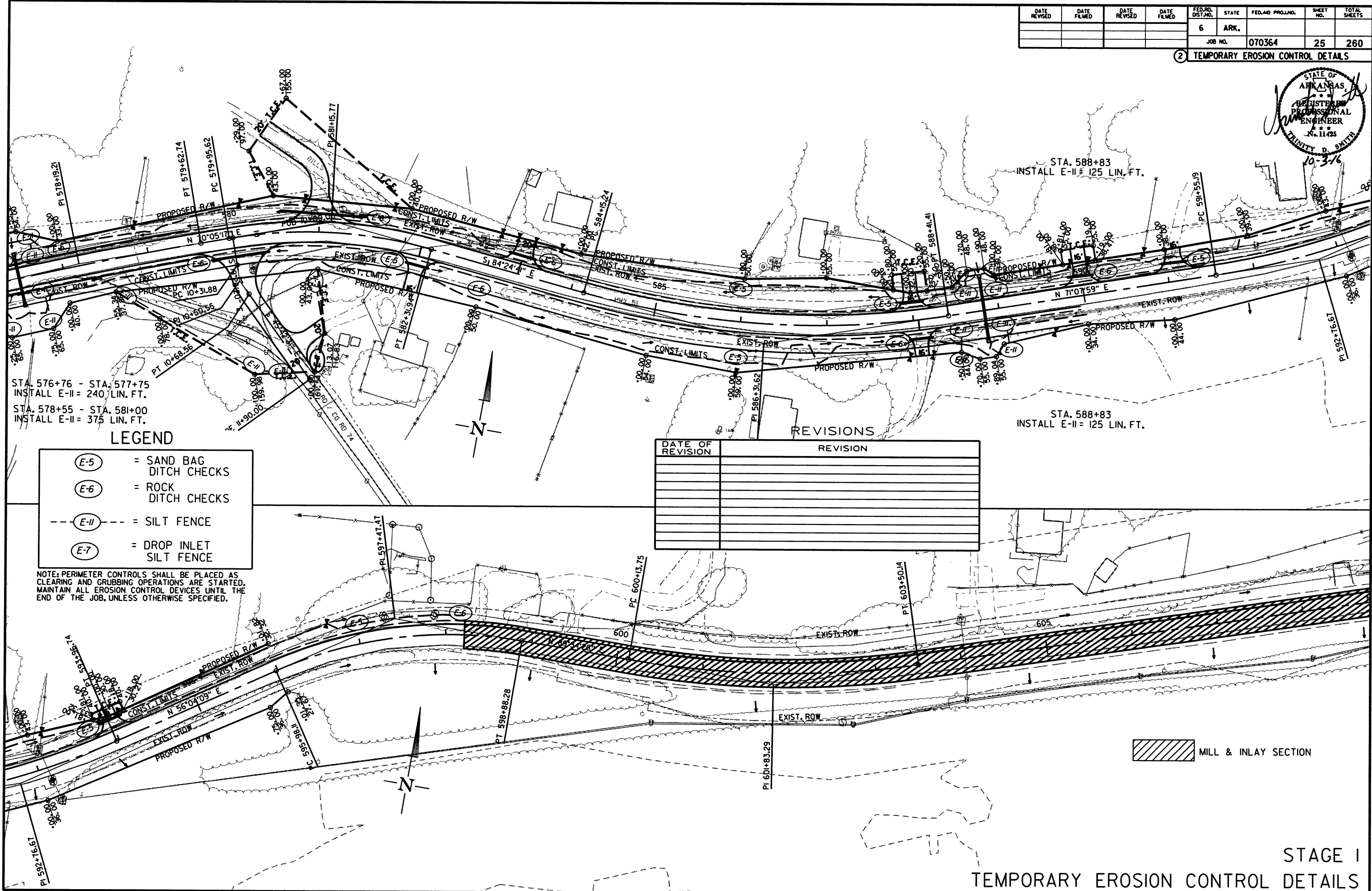
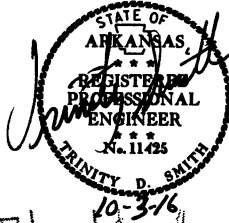
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070364	24	260

2 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. 070364	25	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II)--- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

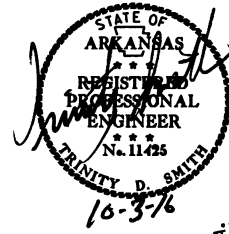
REVISIONS

DATE OF REVISION	REVISION

MILL & INLAY SECTION

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. 070364	26	260

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND

E-5

= SAND BAG DITCH CHECKS

E-6

= ROCK DITCH CHECKS

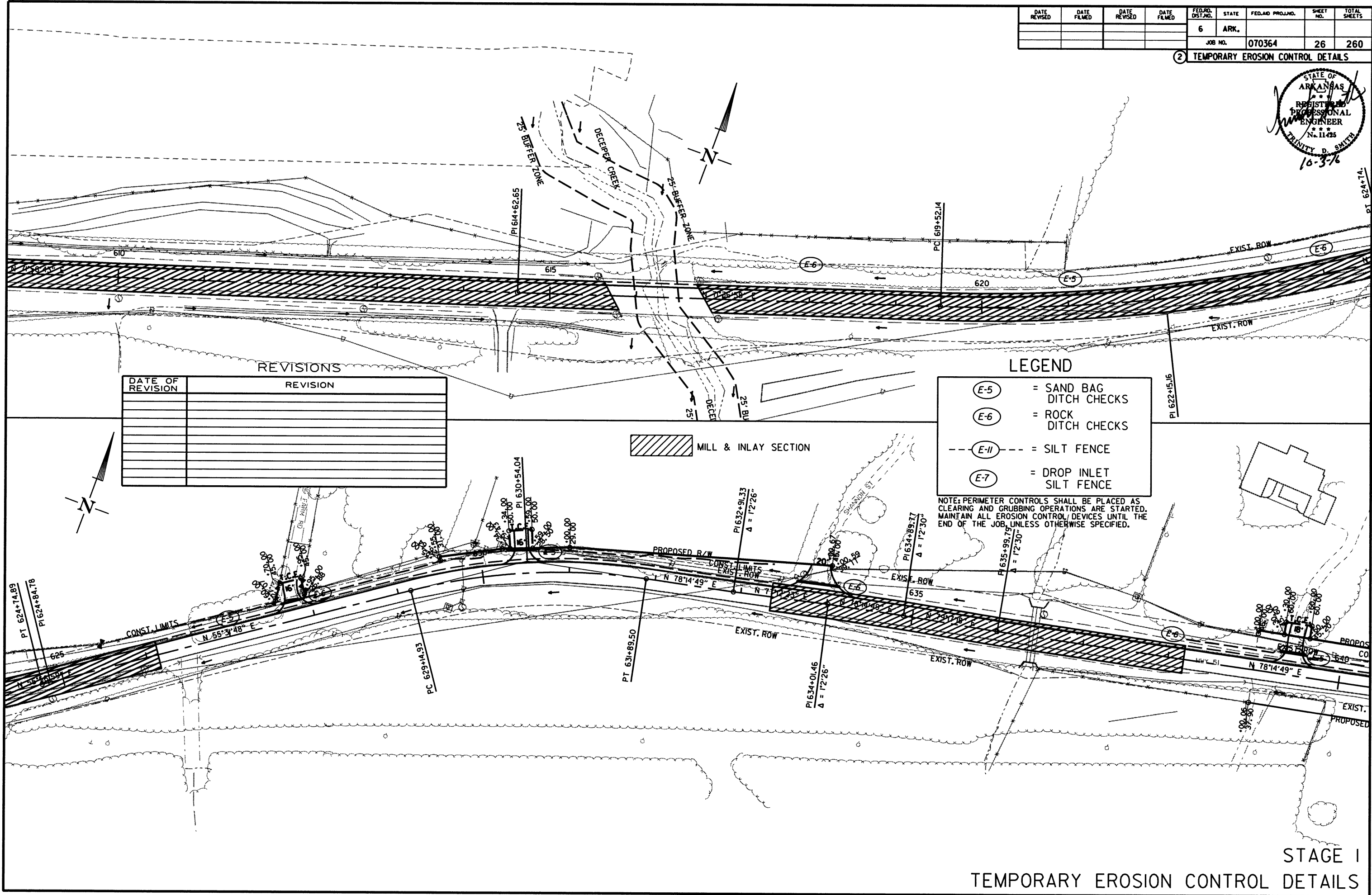
E-II

= SILT FENCE

E-7

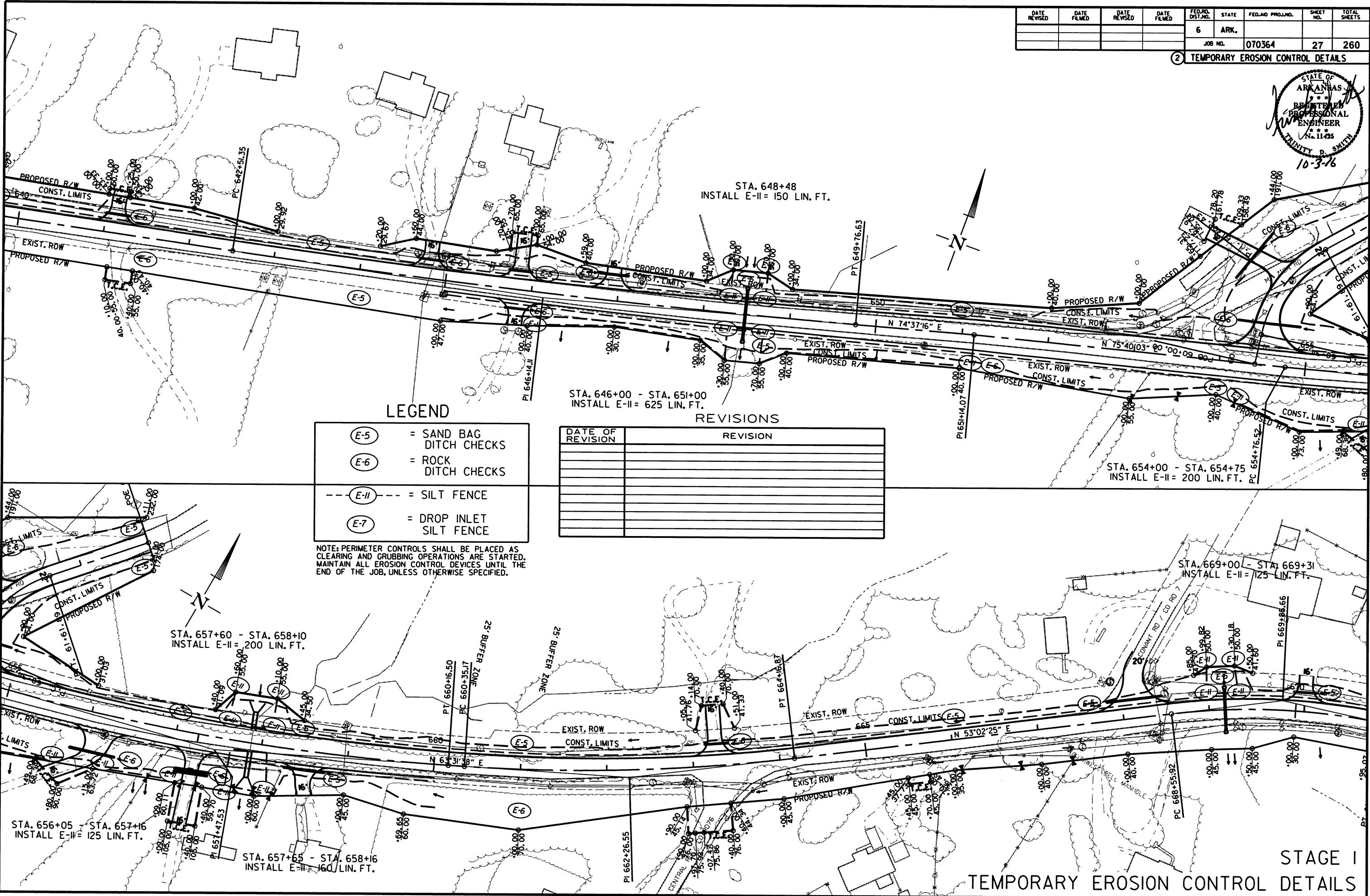
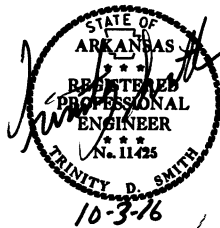
= DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.



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. 070364	27	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
--- (E-II) ---	= SILT FENCE
(E-7)	= DROP INLET SILT FENCE

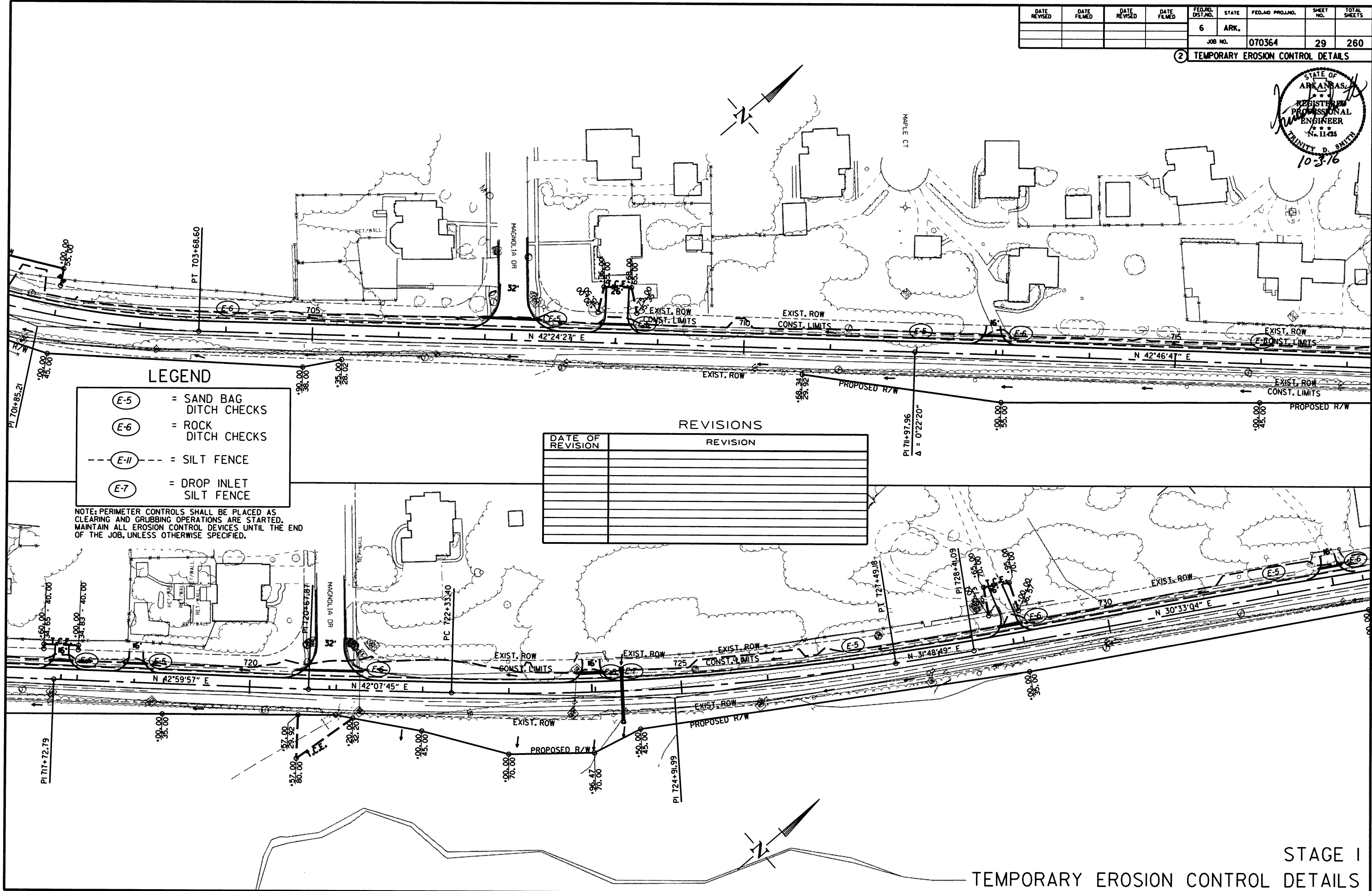
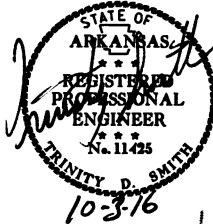
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS
CLEARING AND GRUBBING OPERATIONS ARE STARTED.
MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE
END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

REVISIONS

DATE OF REVISION	REVISION

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.		070364	29	260

2 TEMPORARY EROSION CONTROL DETAILS



- LEGEND**
- (E-5) = SAND BAG DITCH CHECKS
 - (E-6) = ROCK DITCH CHECKS
 - (E-11)--- = SILT FENCE
 - (E-7) = DROP INLET SILT FENCE

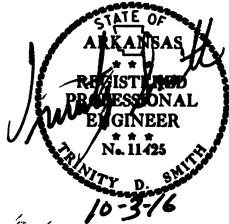
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

REVISIONS

DATE OF REVISION	REVISION

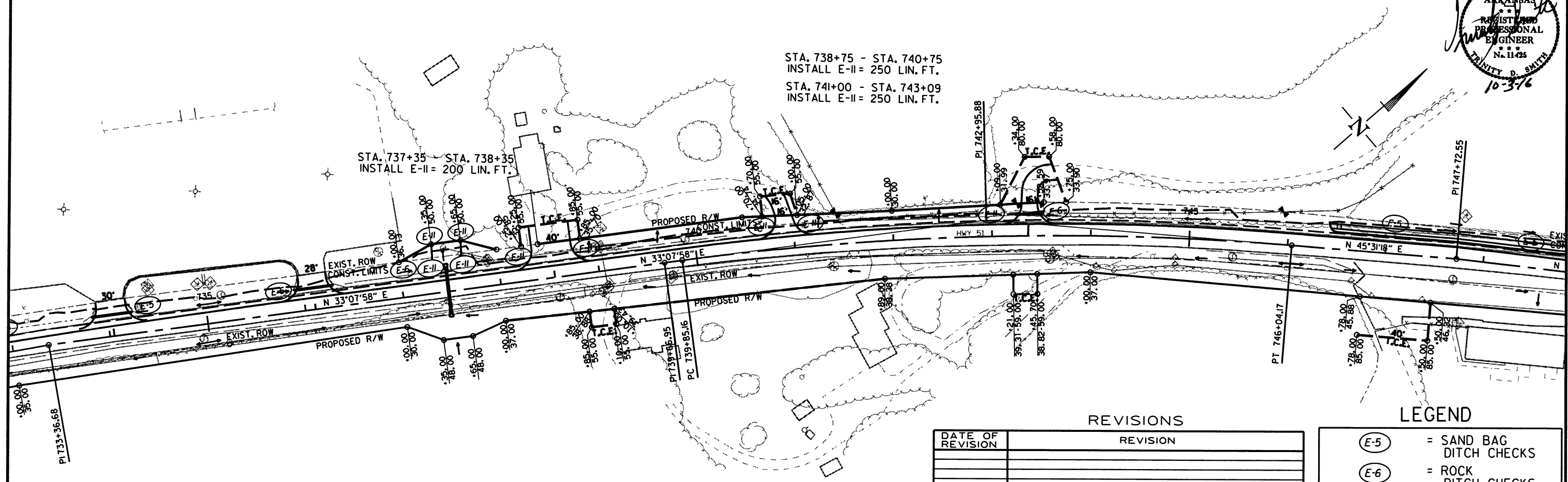
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070364	30	260

2 TEMPORARY EROSION CONTROL DETAILS



STA. 738+75 - STA. 740+75
INSTALL E-II = 250 LIN. FT.
STA. 741+00 - STA. 743+09
INSTALL E-II = 250 LIN. FT.

STA. 737+35 - STA. 738+35
INSTALL E-II = 200 LIN. FT.



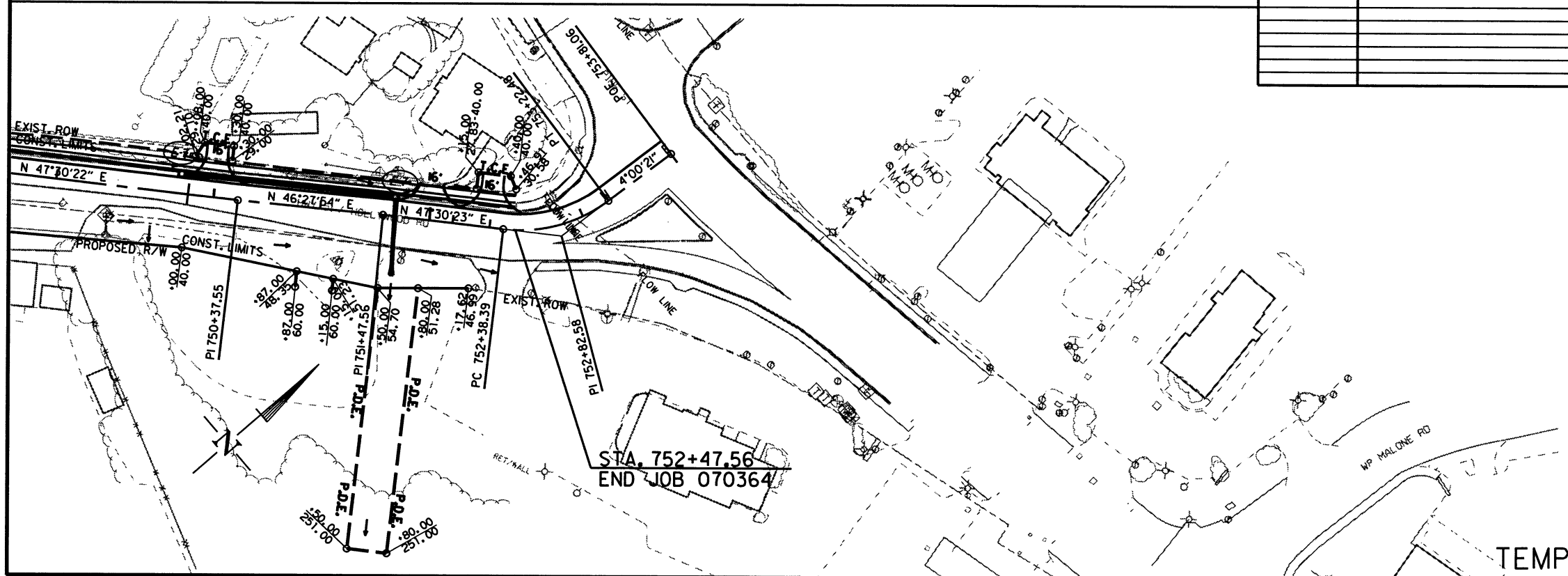
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) --- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

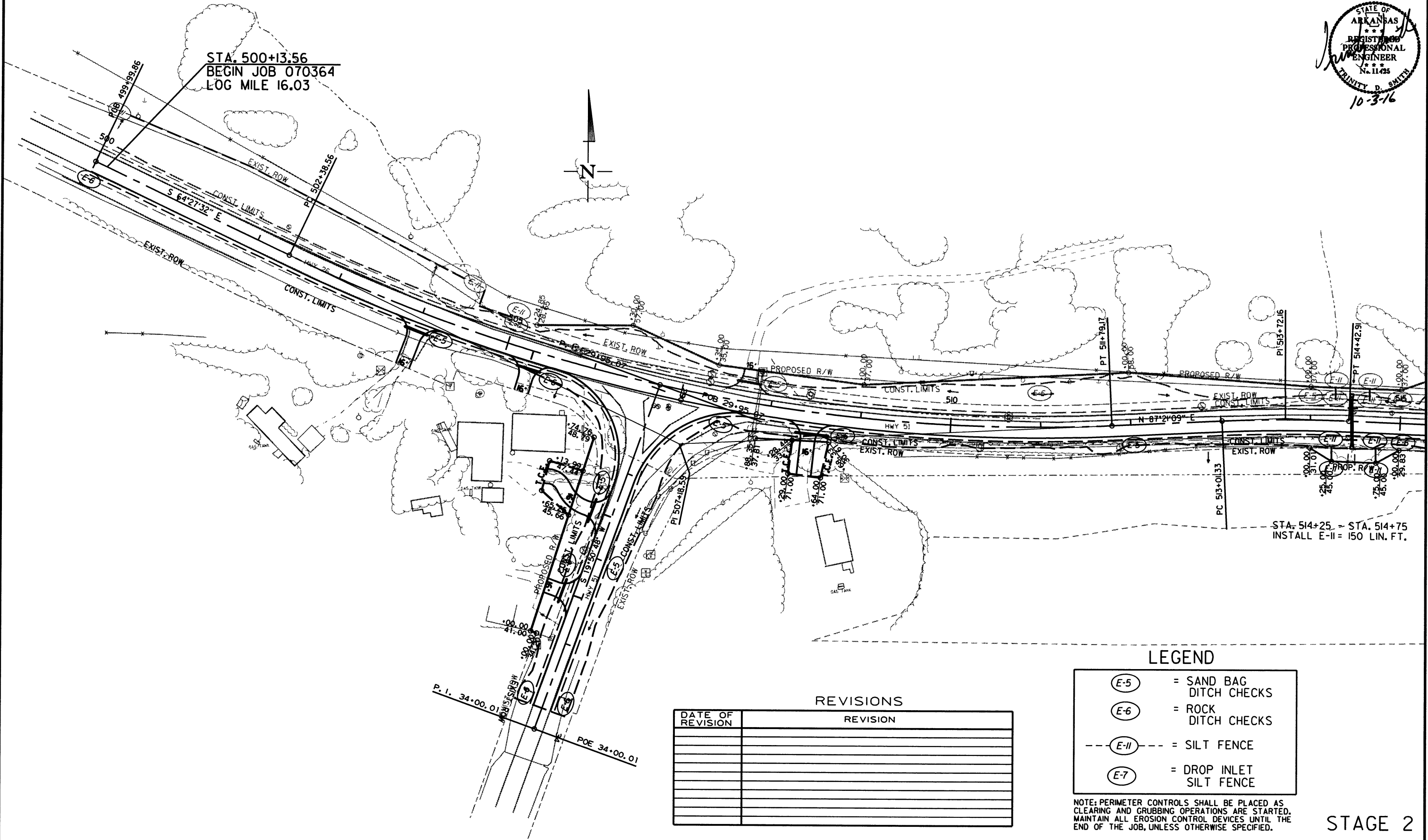
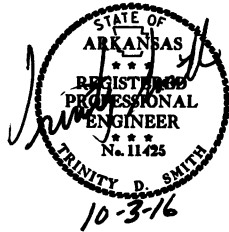


STA. 752+47.56
END JOB 070364

STAGE I
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. 070364	31	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) --- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

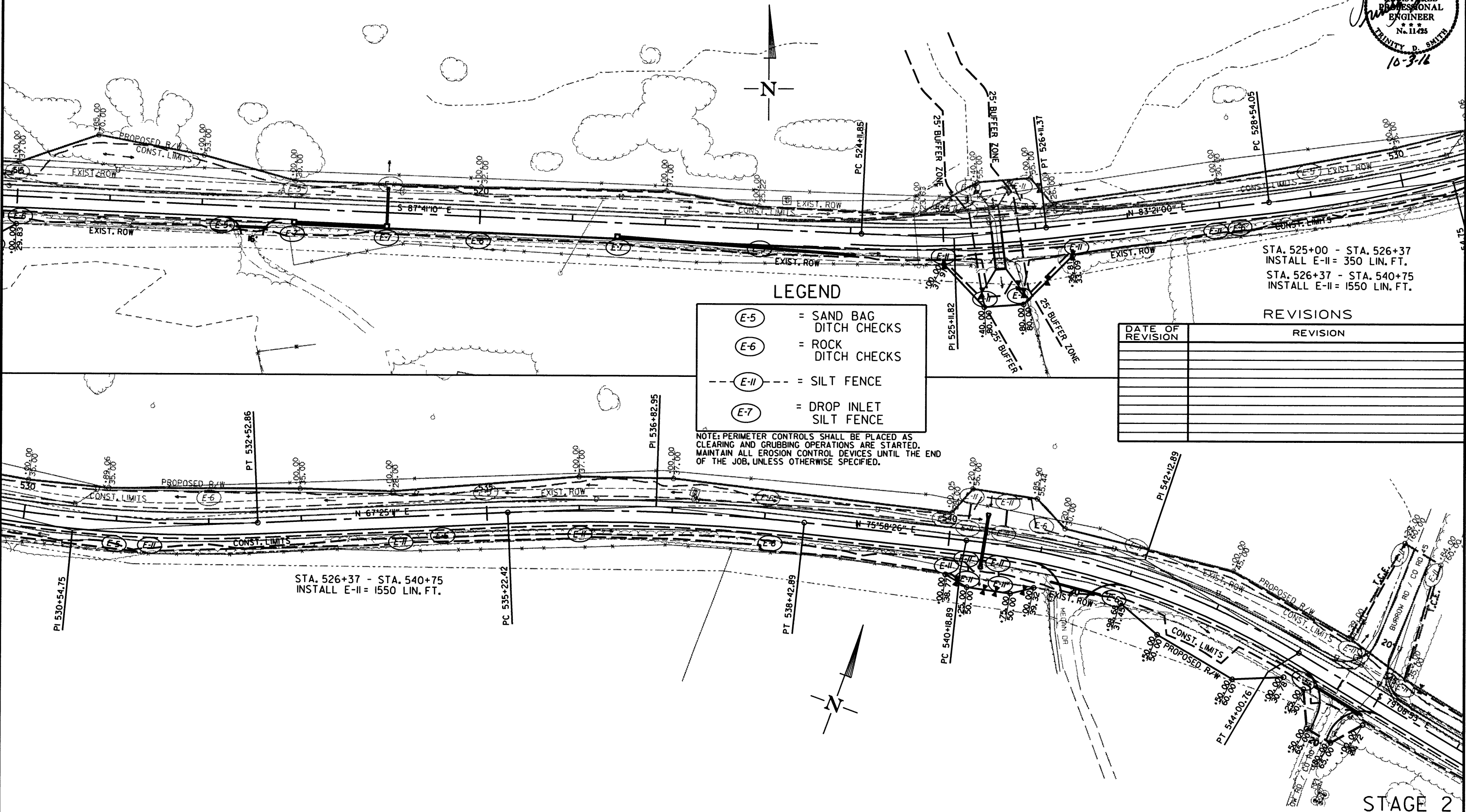
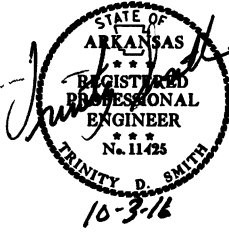
REVISIONS

DATE OF REVISION	REVISION

STAGE 2
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. 070364	32	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

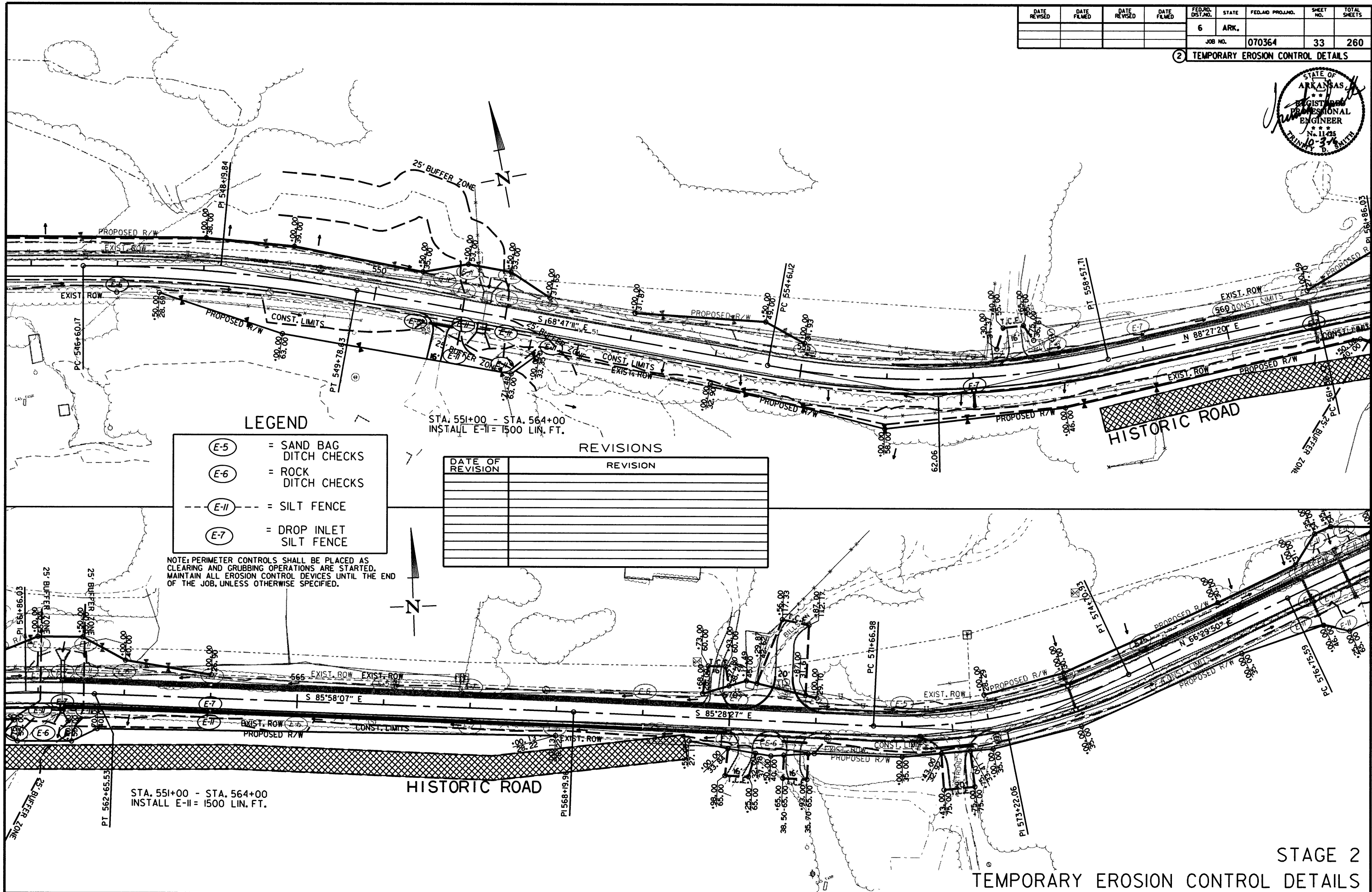
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II)--- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

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. 070364	33	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

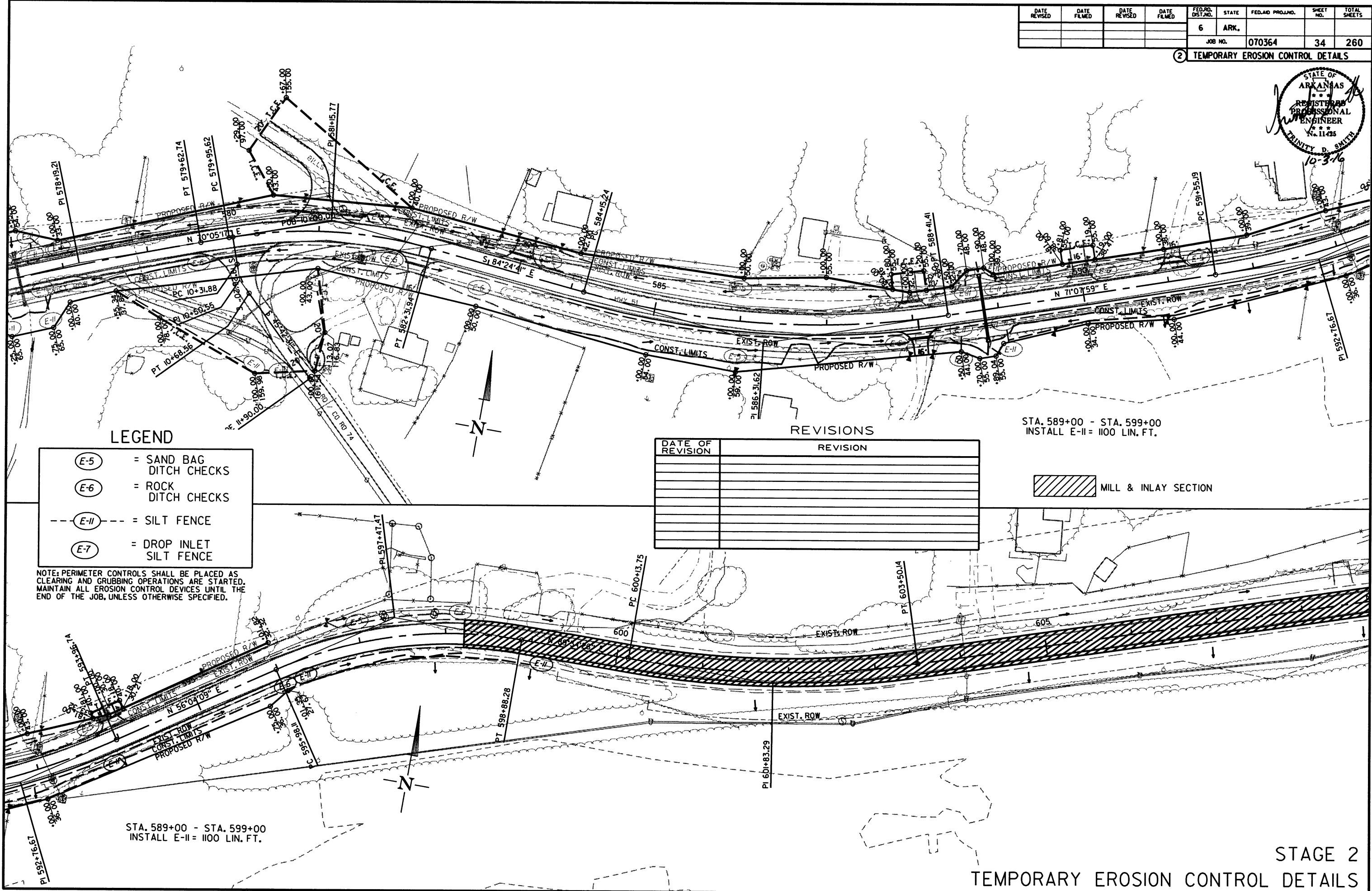
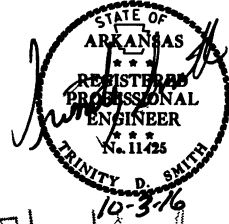
REVISIONS

DATE OF REVISION	REVISION

7/14/2016
R070364.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. 070364	34	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II)--- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

REVISIONS

DATE OF REVISION	REVISION

MILL & INLAY SECTION

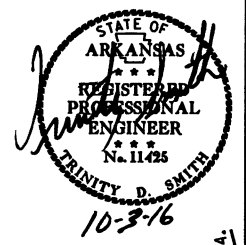
STA. 589+00 - STA. 599+00
INSTALL E-II = 1100 LIN. FT.

STA. 589+00 - STA. 599+00
INSTALL E-II = 1100 LIN. FT.

7/14/2016
R070364.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. 070364	35	260

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) --- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

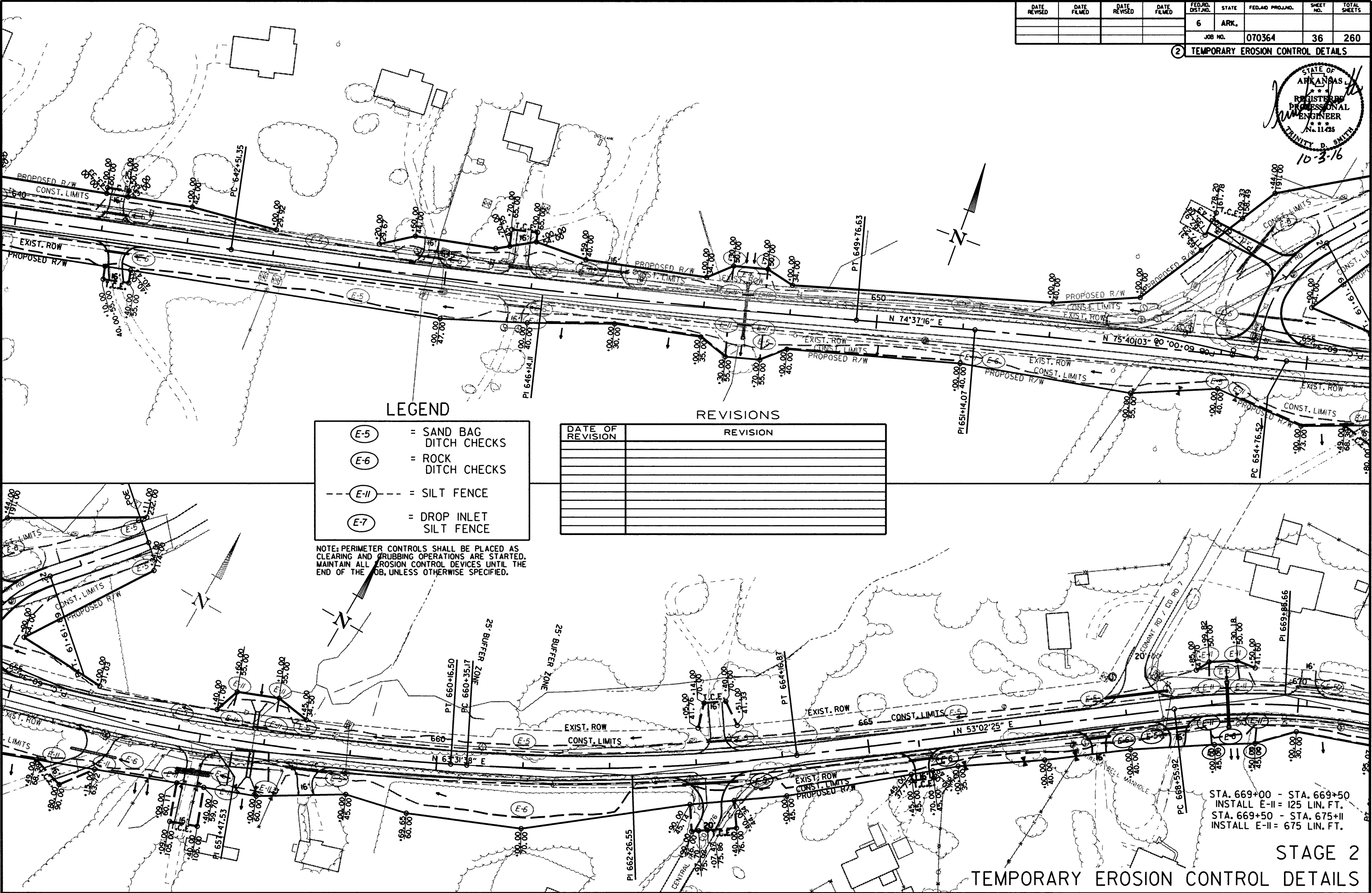
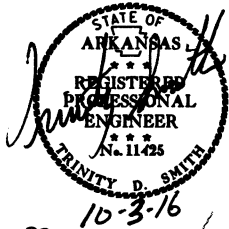
STA. 618+00 - STA. 623+00
INSTALL E-II = 550 LIN. FT.

MILL & INLAY SECTION

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070364		36	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- E-5 = SAND BAG DITCH CHECKS
- E-6 = ROCK DITCH CHECKS
- E-II = SILT FENCE
- E-7 = DROP INLET SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

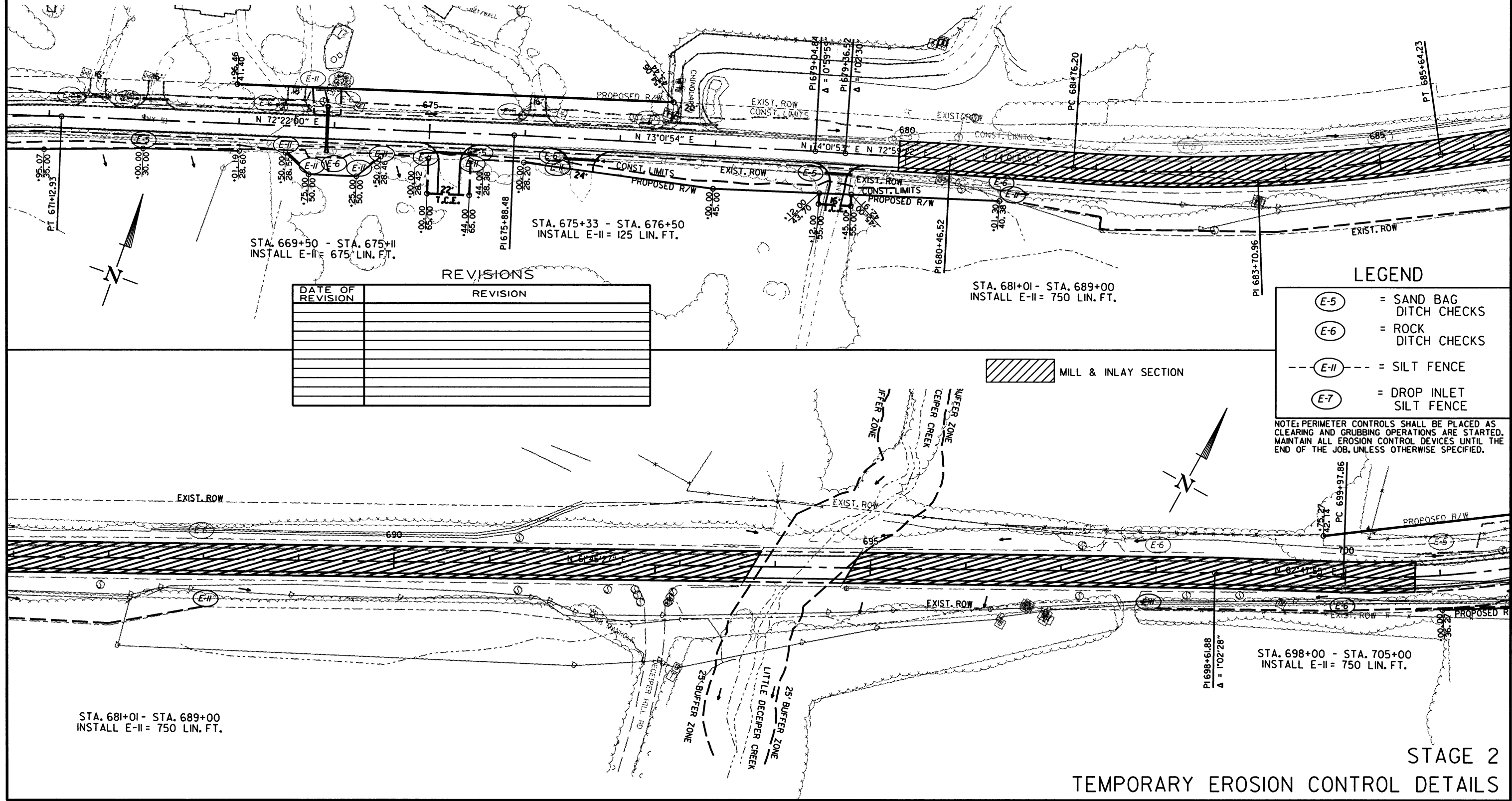
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

STA. 669+00 - STA. 669+50
INSTALL E-II = 125 LIN. FT.
STA. 669+50 - STA. 675+00
INSTALL E-II = 675 LIN. FT.

STAGE 2
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.	070364		37	260

2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND

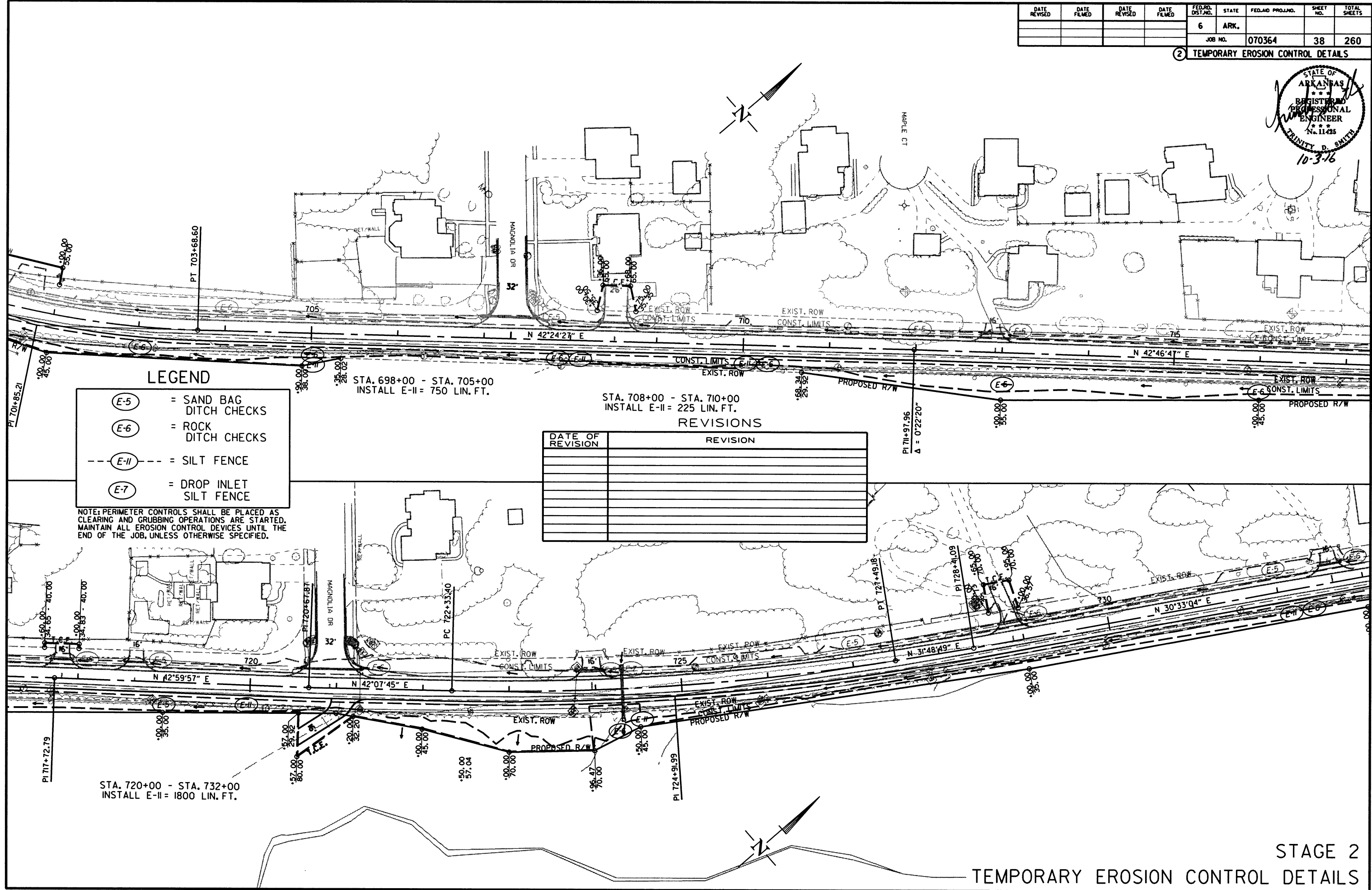
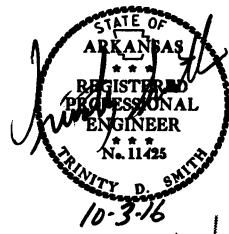
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II)--- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

7/14/2016
R070364.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. 070364	38	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) --- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

STA. 698+00 - STA. 705+00
INSTALL E-II = 750 LIN. FT.

STA. 708+00 - STA. 710+00
INSTALL E-II = 225 LIN. FT.

REVISIONS

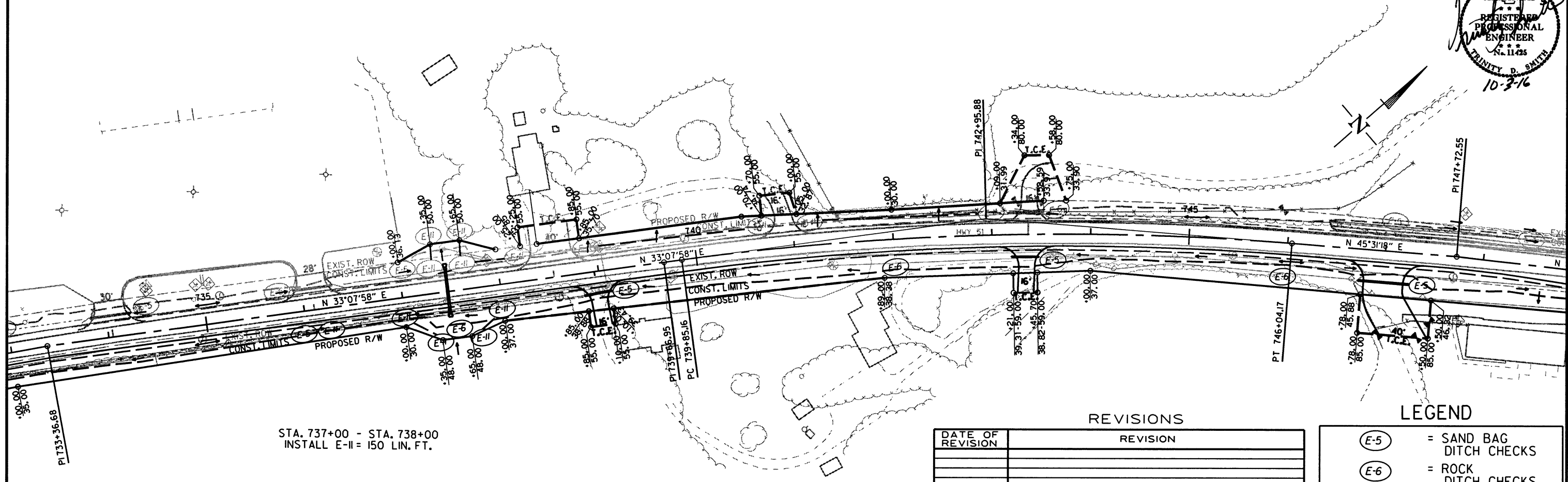
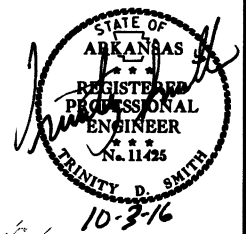
DATE OF REVISION	REVISION

7/14/2016

R070364.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.	070364		39	260

2 TEMPORARY EROSION CONTROL DETAILS



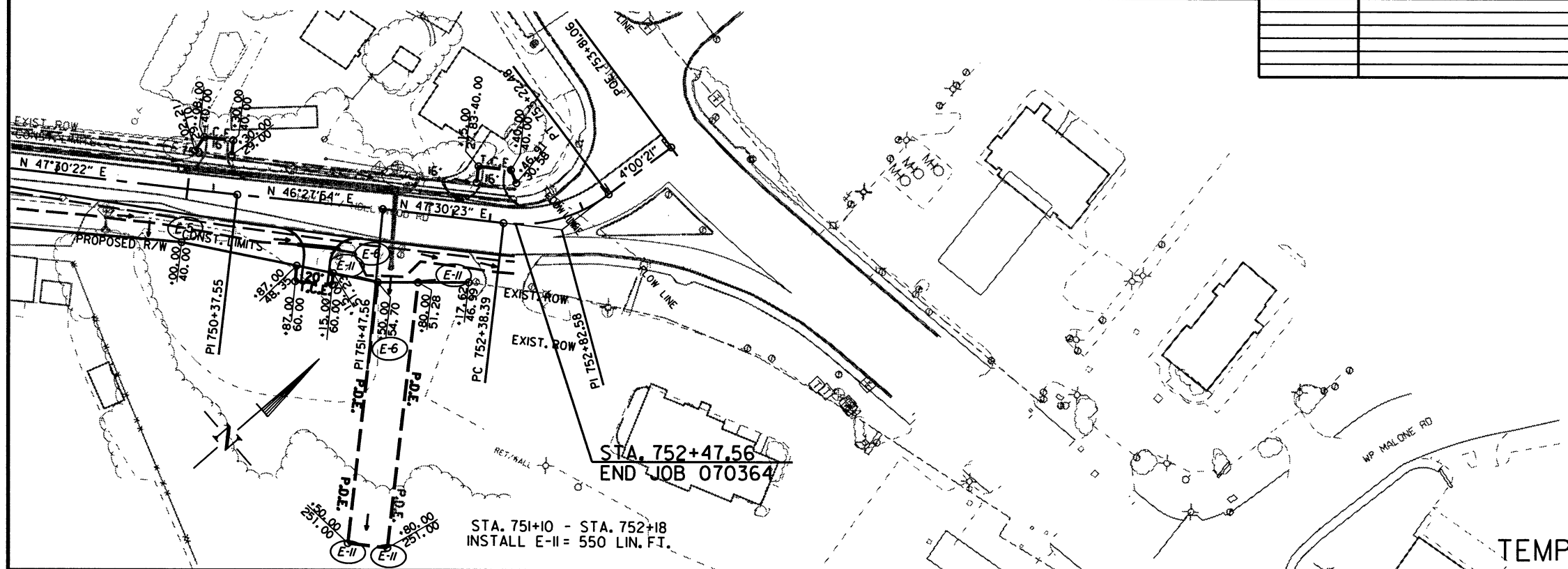
REVISIONS

DATE OF REVISION	REVISION

LEGEND

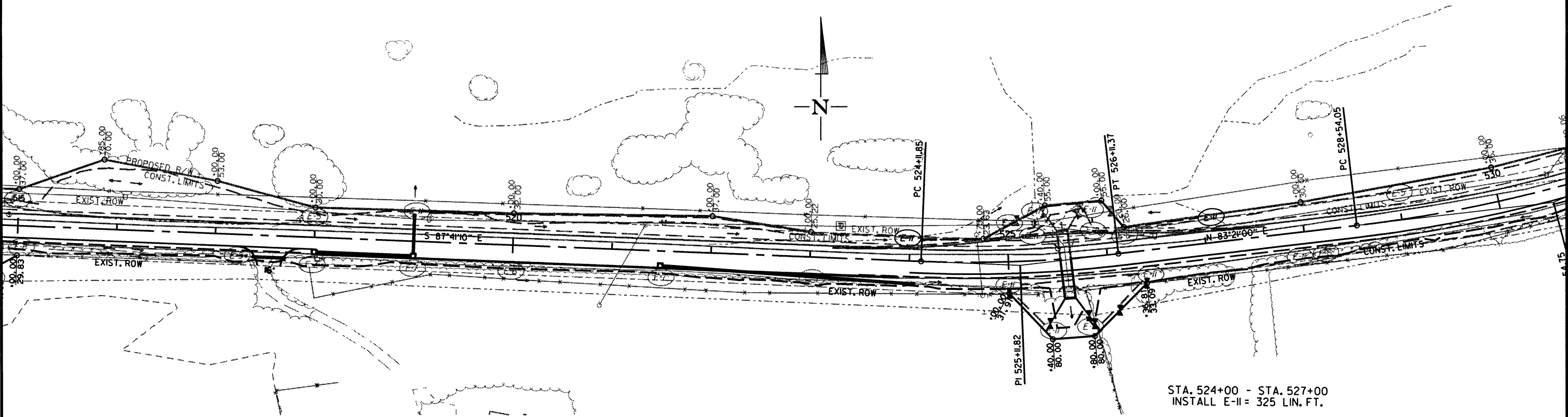
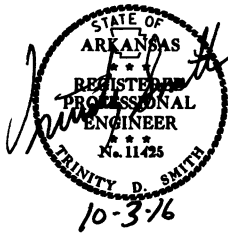
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) --- = SILT FENCE
- (E-7) = DROP INLET SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.



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. 070364			40	260

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
---(E-II)---	= SILT FENCE
(E-7)	= DROP INLET SILT FENCE

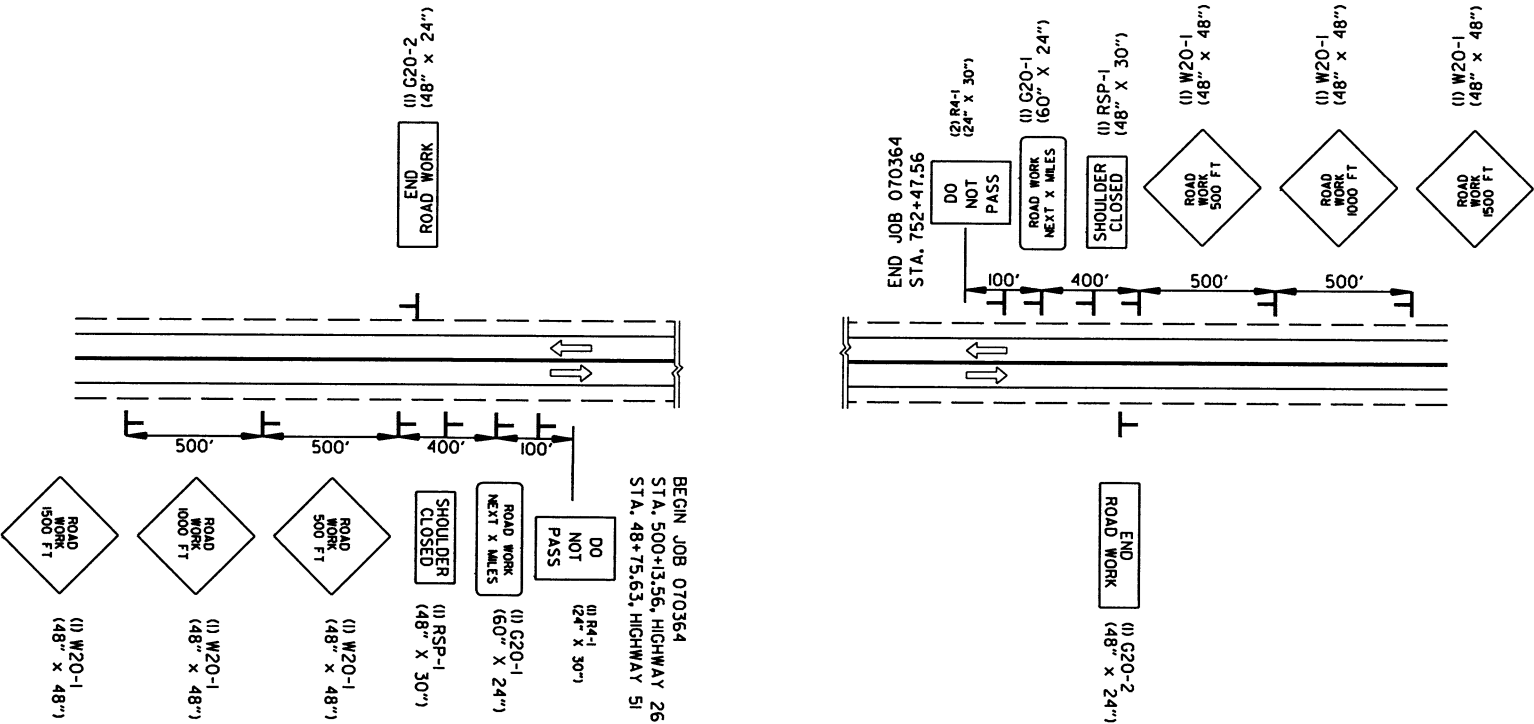
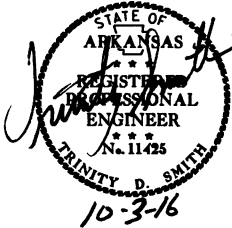
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

REVISIONS

DATE OF REVISION	REVISION

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.		070364	41	260

2 MAINTENANCE OF TRAFFIC DETAILS



ADVANCE WARNING (ALL STAGES)

- XX
M.P.H.

(8) W13-1
(24" X 24")

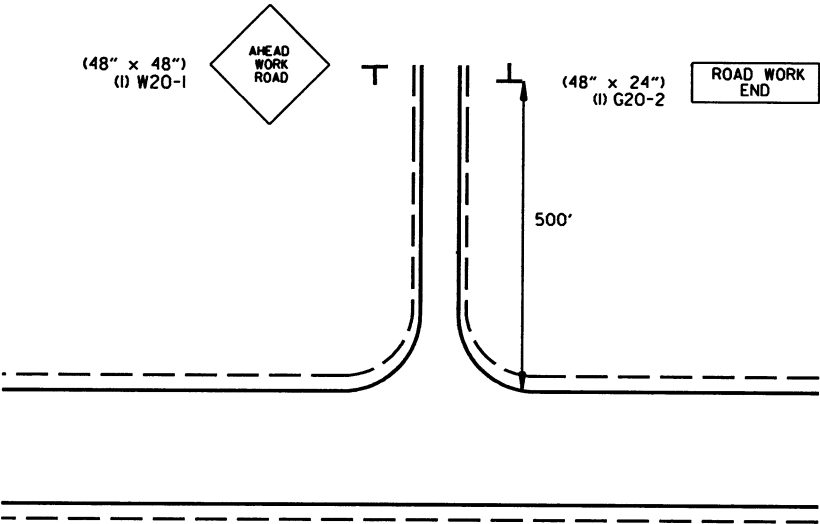
ALL STAGES
TO BE USED IF AND
WHERE DIRECTED BY
THE ENGINEER
- DO
NOT
PASS

(8) R4-1
(24" X 30")

ALL STAGES
TO BE USED IF AND
WHERE DIRECTED BY
THE ENGINEER
- SHOULDER
CLOSED

(8) RSP-1
(48" X 30")

ALL STAGES
TO BE USED IF AND
WHERE DIRECTED BY
THE ENGINEER



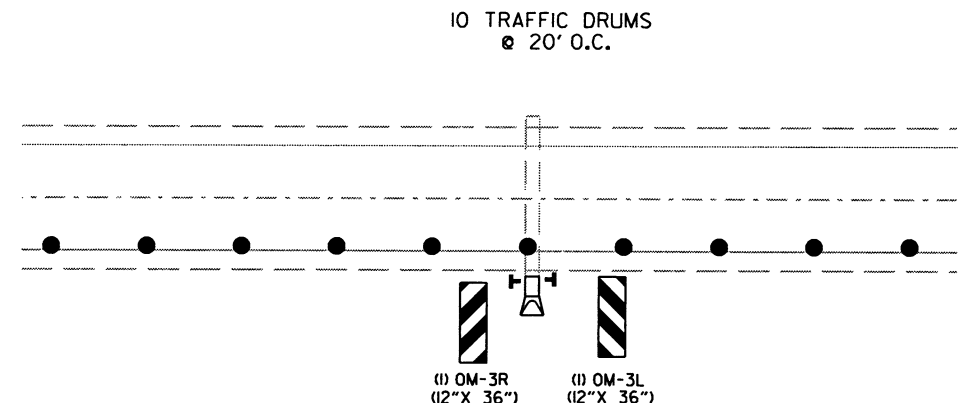
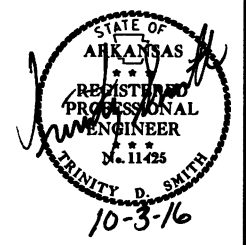
ADVANCE WARNING - SIDE ROADS
(ALL STAGES)

- STA. 506+75, HIGHWAY 51/HIGHWAY 26
- STA. 544+81, CO. RD. 45
- STA. 544+81, CO. RD. 45
- STA. 572+58, ARMSTRONG LANE
- STA. 580+00, CO. RD. 74
- STA. 581+00, BILLS LANE
- STA. 633+87, SHANNON STREET
- STA. 654+41, MT. ZION ROAD
- STA. 663+23, CO. RD. 76
- STA. 668+00, CONANT RD.
- STA. 677+73, CHINOJAPIN DRIVE
- STA. 707+31, MAGNOLIA DRIVE
- STA. 720+92, MAGNOLIA DRIVE

NOTE: ALL STATIONS BASED OFF HWY. 51.

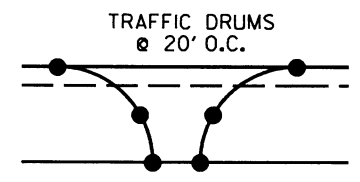
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070364	42	260

② MAINTENANCE OF TRAFFIC DETAILS



TRAFFIC DRUMS AND SIGNS ON EXISTING SHOULDER
FOR EXTENDING/CONSTRUCTING PIPE CULVERTS LT. AND RT.

- | | | | | |
|-------------|-------------|-------------|-------------|-------------|
| STA. 514+46 | STA. 577+48 | STA. 648+49 | STA. 673+92 | STA. 737+46 |
| STA. 540+38 | STA. 588+83 | STA. 669+18 | STA. 724+31 | STA. 751+57 |



TRAFFIC DRUMS PLACEMENT AT DRIVES

CONSTRUCTION SEQUENCE

- STAGE 1
- INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AS SHOWN ON THE ADVANCE WARNING DETAIL.
- APPLY LEVELING COURSE IF AND WHERE DIRECTED BY THE ENGINEER.
- USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 45' O.C. TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

- CONSTRUCT FULL DEPTH PAVEMENT SECTION ON HWY. 51
- STAGE 1-A STA. 565+00 TO STA. 575+00 (LT.)
- STAGE 1-B STA. 565+00 TO STA. 575+00 (RT.)
- STAGE 1-C STA. 575+00 TO STA. 590+00 (LT.)
- STAGE 1-D STA. 575+00 TO STA. 590+00 (RT.)
- STAGE 1-E STA. STA. 639+00 TO STA. 650+00 (LT.)
- STAGE 1-F STA. STA. 639+00 TO STA. 650+00 (RT.)
- STAGE 1-G STA. STA. 650+00 TO STA. 660+00 (LT.)
- STAGE 1-H STA. STA. 650+00 TO STA. 660+00 (RT.)
- UTILIZING TEMPORARY PORTABLE TRAFFIC SIGNALS.

- NOTCH AND WIDEN LEFT SIDE OF HWY. 51.
- CONSTRUCT MOUNT ZION ROAD.

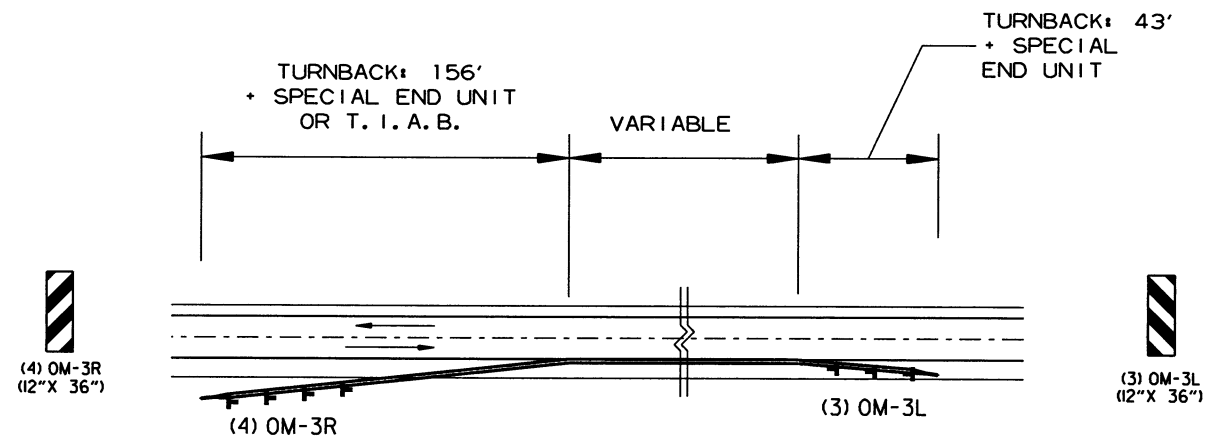
- SHIFT TRAFFIC 2' RT. OF THE EXISTING CENTERLINE APPROACHING R.C. BOX AT STA. 525+61 AND CONSTRUCT INLET SECTION OF R.C. BOX CULVERT WITH TEMPORARY WIDENING ON LEFT OF THE CONSTRUCT CENTERLINE.

- STAGE 2:
- INSTALL CONSTRUCTION PAVEMENT MARKINGS.
- USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 45' O.C. TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

- NOTCH AND WIDEN RIGHT SIDE OF HWY. 51.
- SHIFT TRAFFIC TO STAGE 1 CONSTRUCTION AND CONSTRUCT OUTLET SECTION OF R. C. BOX AT STA. 525+61.

- STAGE 3
- PERFORM MILL AND INLAY BETWEEN THE FOLLOWING STATIONS:
- STA. 599+21.49 - STA. 625+13.64
- STA. 634+35.35 - STA. 637+18.24
- STA. 680+92.89 - STA. 699+73.49

- REMOVE STAGE 1 CONSTRUCTION TEMPORARY WIDENING.
- APPLY FINAL 2" LIFT OF ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.



REFER ALSO TO STANDARD DRAWING TC-5 FOR DETAILS OF PLACEMENT OF PCCB TURNBACKS.

NOTE: OM-3L & OM-3R SIGNS SHALL BE EQUALLY SPACED ALONG P.C.C.B. TURNBACK.

DETAIL OF OBJECT MARKERS
AT PRECAST CONCRETE BARRIER TURNBACKS

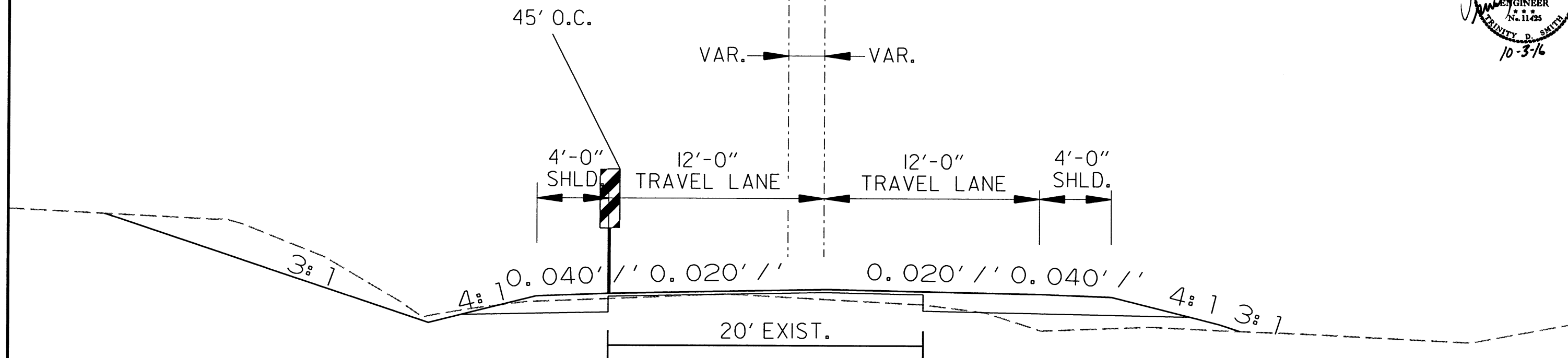
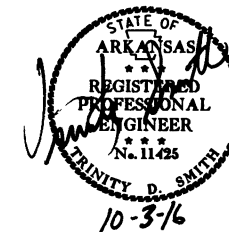
- STA. 525+61(LT.) FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 556 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 551+28 (LT.) FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 239 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 562+28 (LT.) FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 229 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 657+88 (LT.) FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 233 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 525+61(RT.) FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 556 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 525+61(LT.) RELOCATING PRECAST CONCRETE BARRIER = 556 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 551+28 (RT.) RELOCATING PRECAST CONCRETE BARRIER = 239 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 562+28 (RT.) RELOCATING PRECAST CONCRETE BARRIER = 229 LIN.FT. INCLUDES (2) SPECIAL END UNITS
- STA. 657+88 (RT.) RELOCATING PRECAST CONCRETE BARRIER = 233 LIN.FT. INCLUDES (2) SPECIAL END UNITS

NOTE:

THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4' OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

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. 070364	43	260

② MAINTENANCE OF TRAFFIC DETAILS



VERTICAL PANELS AT NOTCH & WIDENING LEFT OF EXISTING

INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AS SHOWN ON THE ADVANCE WARNING DETAIL.

APPLY LEVELING COURSE IF AND WHERE DIRECTED BY THE ENGINEER.

USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 45' O.C. TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT FULL DEPTH PAVEMENT SECTION ON HWY. 51
 STAGE 1-A STA. 565+00 TO STA. 575+00 (LT.)
 STAGE 1-B STA. 565+00 TO STA. 575+00 (RT.)
 STAGE 1-C STA. 575+00 TO STA. 590+00 (LT.)
 STAGE 1-D STA. 575+00 TO STA. 590+00 (RT.)
 STAGE 1-E STA. STA. 639+00 TO STA. 650+00 (LT.)
 STAGE 1-F STA. STA. 639+00 TO STA. 650+00 (RT.)
 STAGE 1-G STA. STA. 650+00 TO STA. 660+00 (LT.)
 STAGE 1-H STA. STA. 650+00 TO STA. 660+00 (RT.)
 UTILIZING TEMPORARY PORTABLE TRAFFIC SIGNALS.

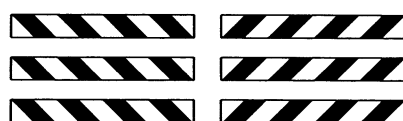
NOTCH AND WIDEN LEFT SIDE OF HWY. 51.

CONSTRUCT MOUNT ZION ROAD.

SHIFT TRAFFIC 2' RT. OF THE EXISTING CENTERLINE APPROACHING R.C. BOX AT STA. 525+61 AND CONSTRUCT INLET SECTION OF R.C. BOX CULVERT WITH TEMPORARY WIDENING ON LEFT OF THE CONSTRUCT CENTERLINE.

ROAD
CLOSED

(I) RII-2
(48" X 30")



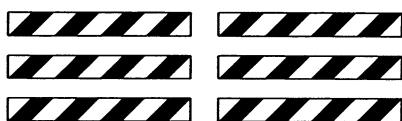
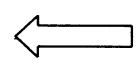
STA. 580+00 RT.
 STA. 581+00 LT.
 STA. 654+41 LT.

16' BARR.
 TYP. III RT.
 16' BARR.
 TYP. III LT.

(I) RII-2
(48" X 30")

ROAD
CLOSED

(I) WI-6
(48" X 24")



STA. 581+64 LT.

16' BARR.
 TYP. III LT.
 16' BARR.
 TYP. III LT.

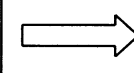
STAGE 1 QUANTITIES

TRAFFIC DRUMS = 1070 EACH
 VERTICAL PANELS = 556 EACH
 TEMPORARY IMPACT ATTENUATION BARRIER = 4 EACH
 FURNISHING AND INSTALLING P.C.C.B. = 1257 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS = 102919 LIN. FT.
 CONSTRUCTION PAVEMENT MARKINGS (WORDS) = 2 EACH
 CONSTRUCTION PAVEMENT MARKINGS (ARROW) = 2 EACH

(I) RII-2
(48" X 30")

ROAD
CLOSED

(I) WI-6
(48" X 24")

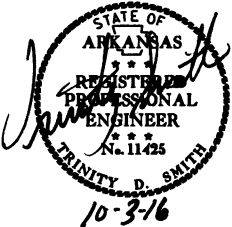


STA. 578+58 RT.
 STA. 653+58 LT.

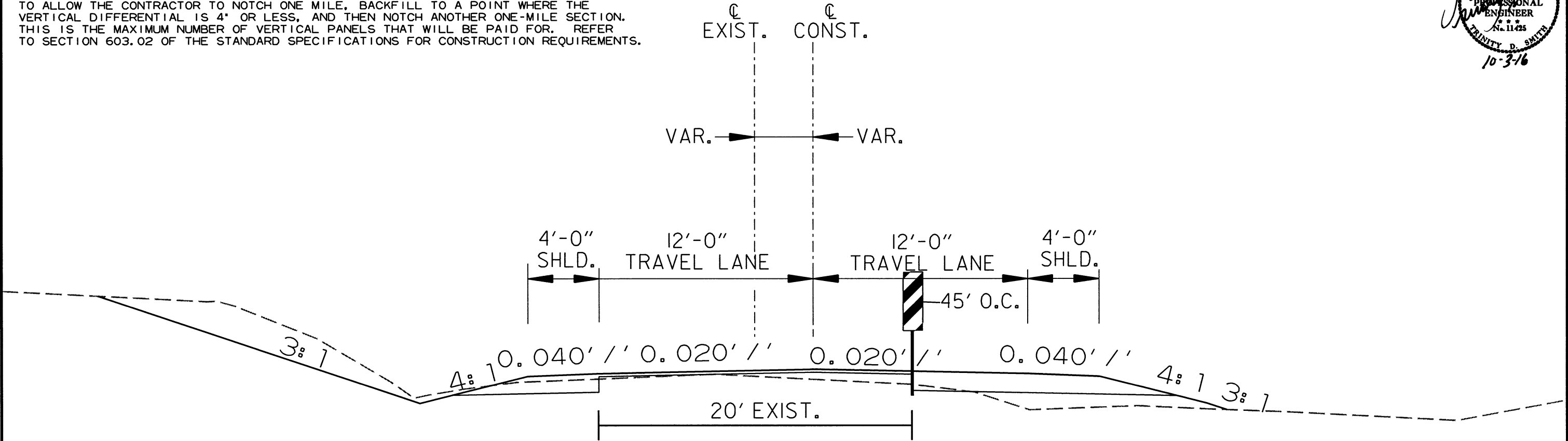
STAGE 1
 MAINTENANCE OF TRAFFIC

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.	070364		44	260

② MAINTENANCE OF TRAFFIC DETAILS



NOTE:
THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4' OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.



VERTICAL PANELS AT NOTCH & WIDENING RIGHT OF EXISTING

ROAD
CLOSED

(1) RII-2
(48" X 30")

16' BARR.
TYP. III RT.
16' BARR.
TYP. III LT.

STA. 723+25 RT.

NOTE: ALL STATIONS BASED OFF HWY. 51.

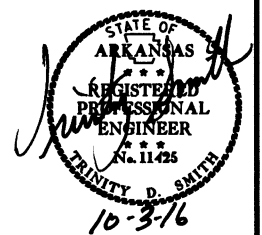
- STAGE 2 QUANTITIES
- TRAFFIC DRUMS = 908 EACH
 - VERTICAL PANELS = 556 EACH
 - RELOCATING P.C.C.B. = 1257 LIN. FT.
 - RELOCATING TEMPORARY IMPACT ATTENUATION BARRIER = 4 EACH
 - CONSTRUCTION PAVEMENT MARKINGS = 104571 LIN. FT.
 - CONSTRUCTION PAVEMENT MARKINGS (WORDS) = 3 EACH
 - CONSTRUCTION PAVEMENT MARKINGS (ARROW) = 3 EACH

- STAGE 3 QUANTITIES
- TRAFFIC DRUMS = 208 EACH
 - CONSTRUCTION PAVEMENT MARKINGS = 19022 LIN. FT.

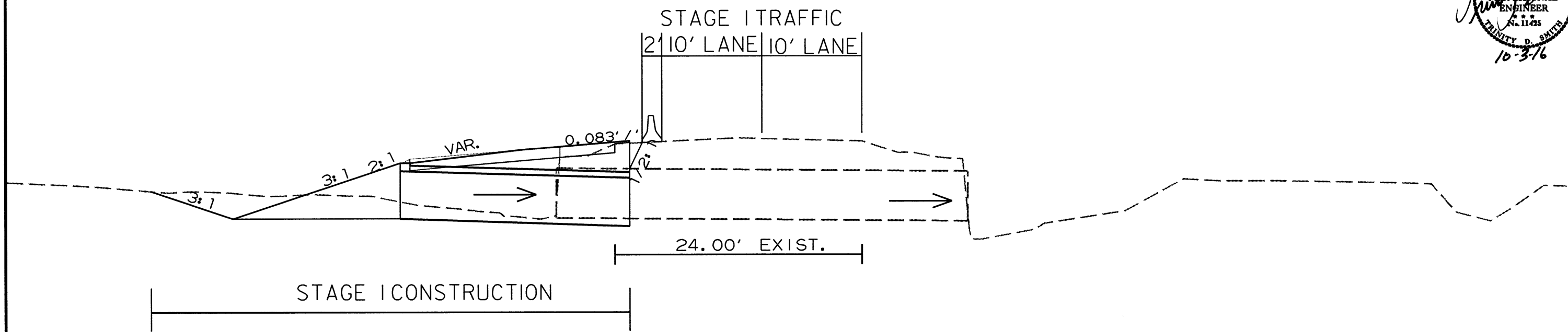
- STAGE 2:
- INSTALL CONSTRUCTION PAVEMENT MARKINGS AND TRAFFIC DRUMS
 - USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 55' O.C. TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.
 - NOTCH AND WIDEN RIGHT SIDE OF HWY. 51.
 - SHIFT TRAFFIC TO STAGE 1 CONSTRUCTION AND CONSTRUCT OUTLET SECTION OF R. C. BOX AT STA. 525+61.

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.	070364		45	260

② MAINTENANCE OF TRAFFIC DETAILS



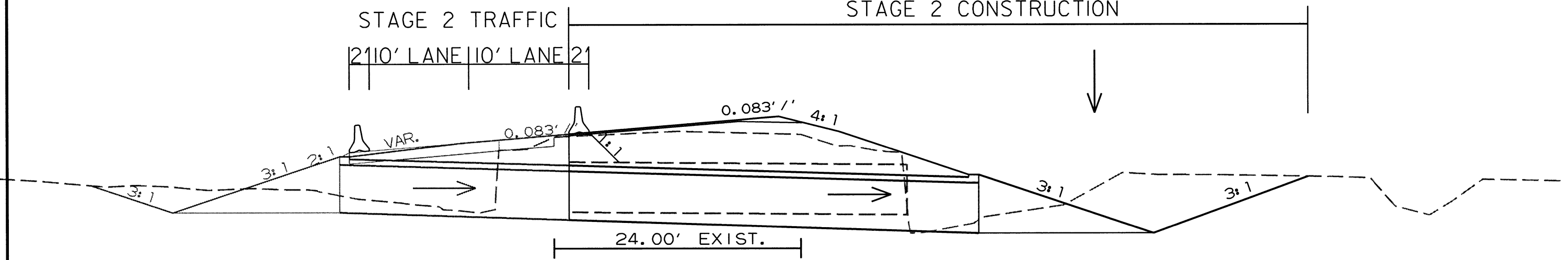
STAGE 1 TRAFFIC
2' 10' LANE | 10' LANE



STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

STAGE 2 TRAFFIC
2' 10' LANE | 10' LANE | 2'

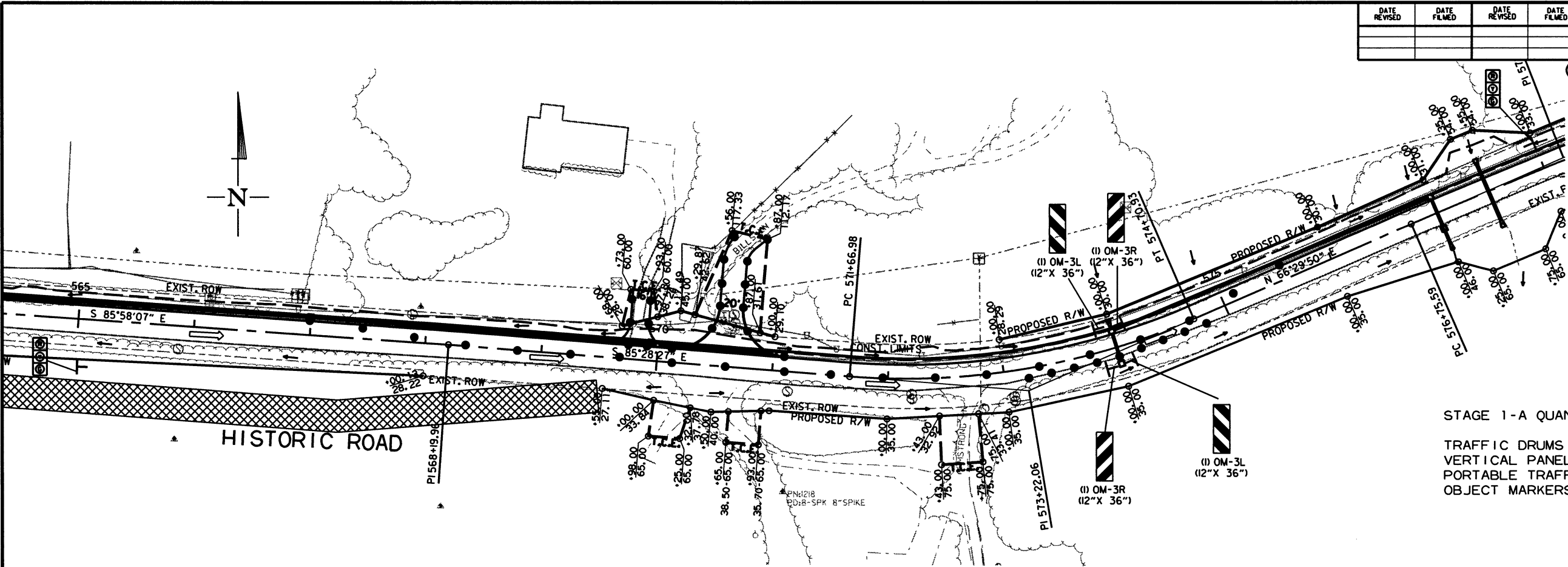
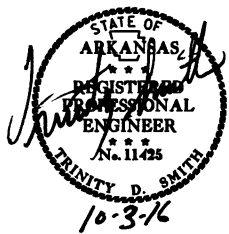


STAGE 2 CONSTRUCTION

STAGE CONSTRUCTION STA. 525+61
MAINTENANCE OF TRAFFIC

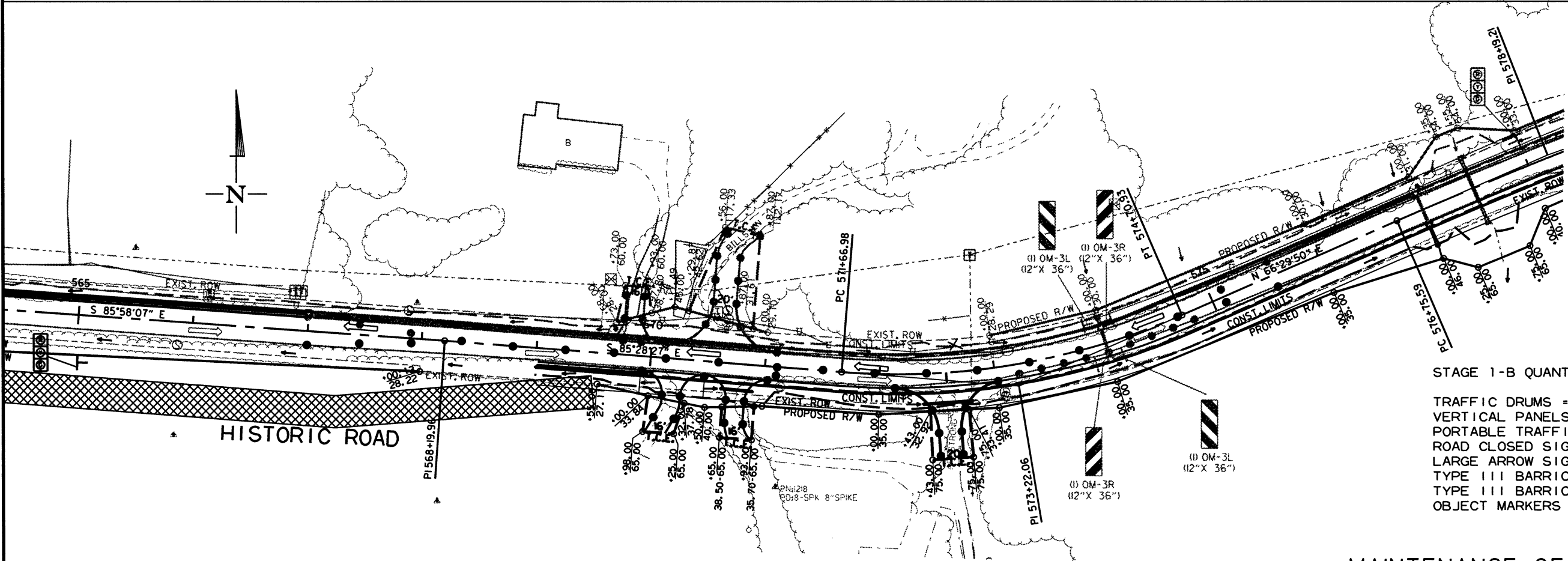
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 070364		46	260	

2 MAINTENANCE OF TRAFFIC DETAILS



- STAGE 1-A QUANTITIES
- TRAFFIC DRUMS = 41 EACH
 - VERTICAL PANELS = 15 EACH
 - PORTABLE TRAFFIC SIGNAL HEADS = 4 EACH
 - OBJECT MARKERS = 4 EACH

STAGE 1-A
MAINTENANCE OF TRAFFIC DETAILS

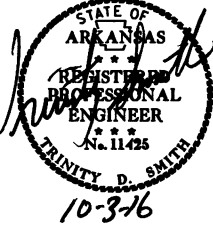


- STAGE 1-B QUANTITIES
- TRAFFIC DRUMS = 44 EACH
 - VERTICAL PANELS = 18 EACH
 - PORTABLE TRAFFIC SIGNAL HEADS = 4 EACH
 - ROAD CLOSED SIGNS = 2 EACH
 - LARGE ARROW SIGNS = 2 EACH
 - TYPE III BARRICADE-RT. (8') = 1 EACH
 - TYPE III BARRICADE-LT. (8') = 1 EACH
 - OBJECT MARKERS = 4 EACH

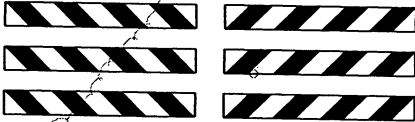
STAGE 1-B
MAINTENANCE OF TRAFFIC DETAILS

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.	070364		47	260

2 MAINTENANCE OF TRAFFIC DETAILS



ROAD CLOSED
(I) RII-2
(48" X 30")

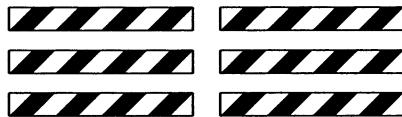
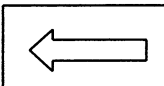


16' BARR.
TYP. III RT.
16' BARR.
TYP. III LT.

(I) RII-2
(48" X 30")

ROAD CLOSED

(I) WI-6
(48" X 24")

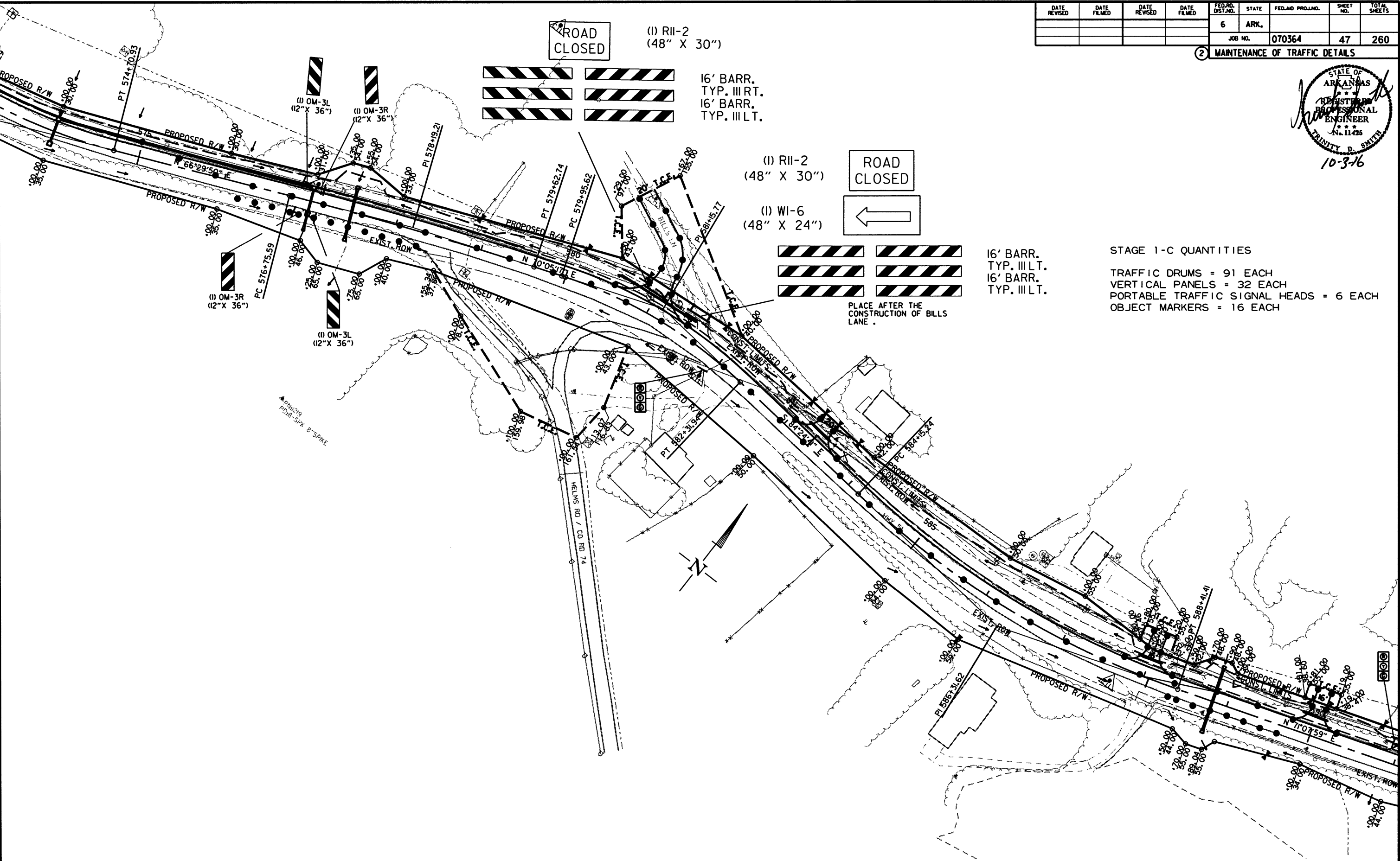


16' BARR.
TYP. III LT.
16' BARR.
TYP. III RT.

PLACE AFTER THE
CONSTRUCTION OF BILLS
LANE.

STAGE 1-C QUANTITIES

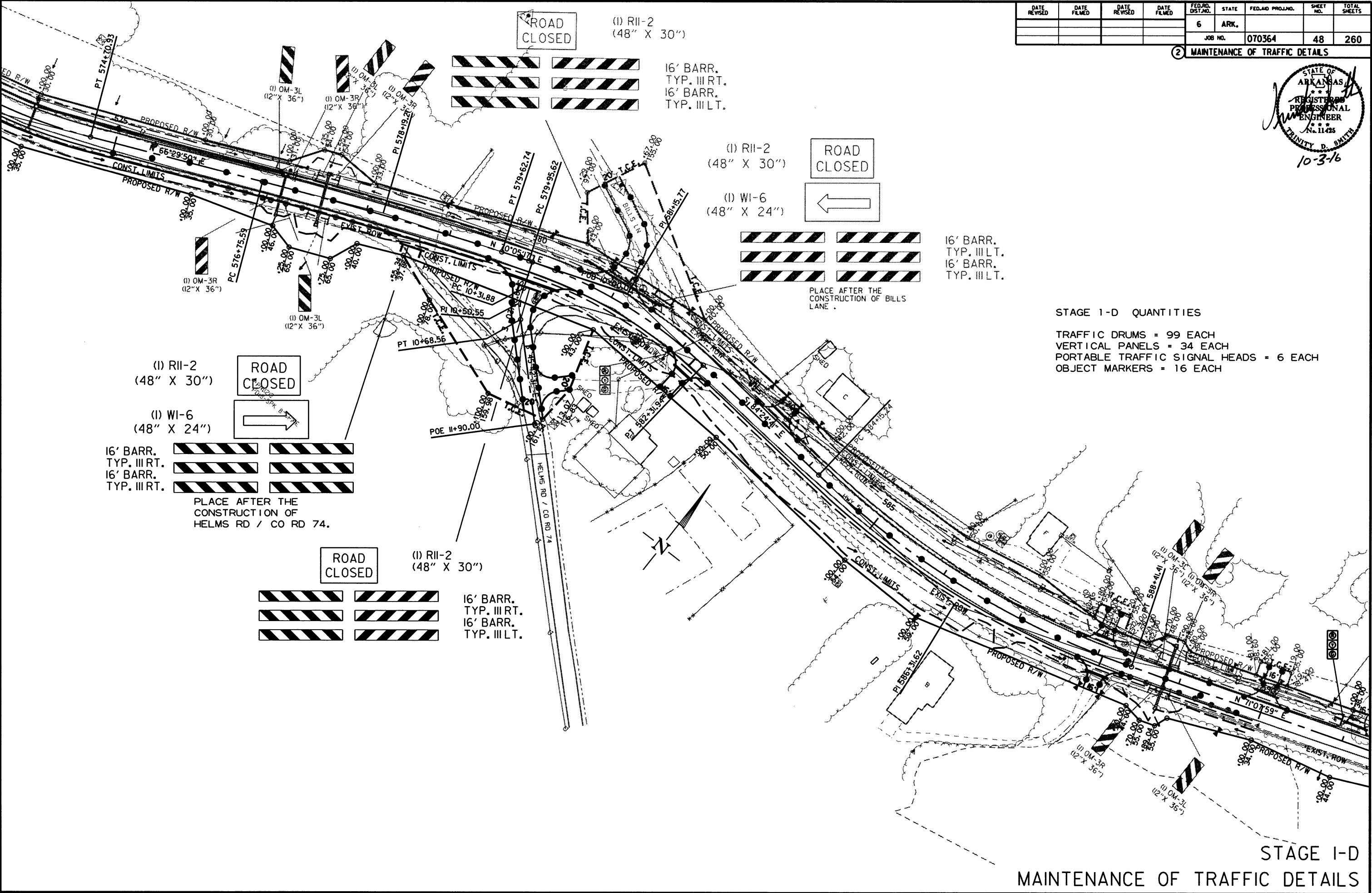
TRAFFIC DRUMS = 91 EACH
VERTICAL PANELS = 32 EACH
PORTABLE TRAFFIC SIGNAL HEADS = 6 EACH
OBJECT MARKERS = 16 EACH



STAGE 1-C
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070364		48	260

2 MAINTENANCE OF TRAFFIC DETAILS



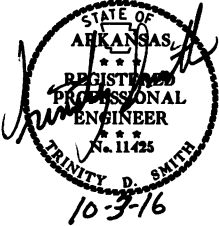
STAGE 1-D QUANTITIES

- TRAFFIC DRUMS = 99 EACH
- VERTICAL PANELS = 34 EACH
- PORTABLE TRAFFIC SIGNAL HEADS = 6 EACH
- OBJECT MARKERS = 16 EACH

STAGE 1-D
MAINTENANCE OF TRAFFIC DETAILS

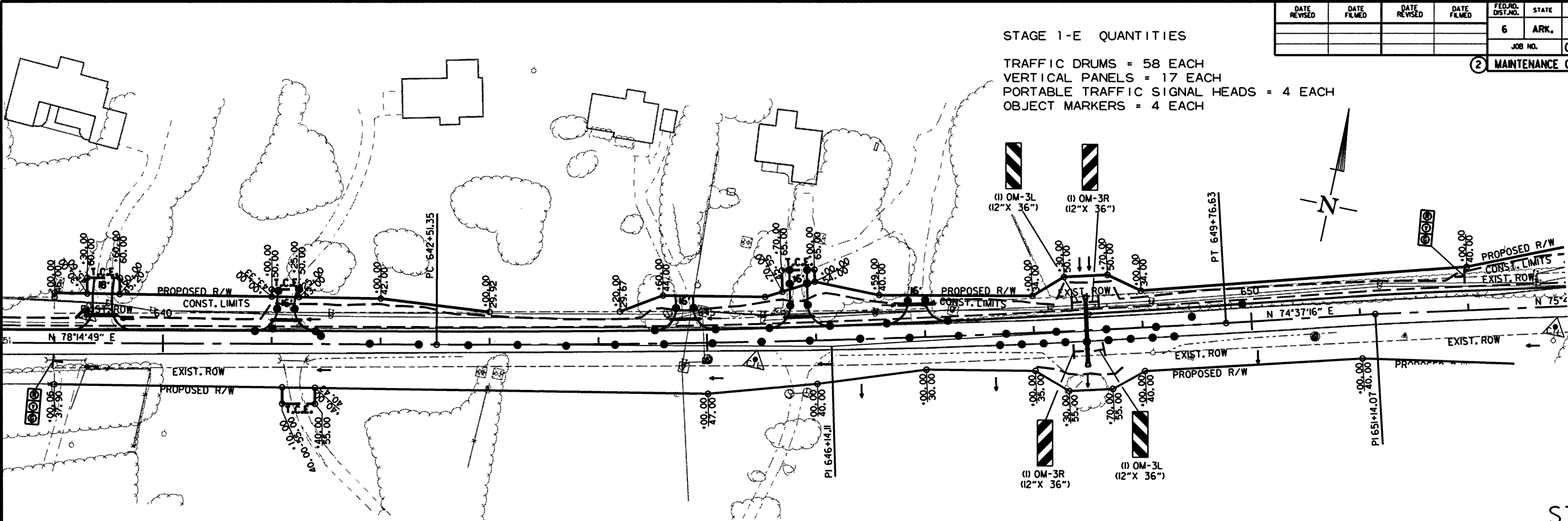
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		49	260
				JOB NO.	070364			

2 MAINTENANCE OF TRAFFIC DETAILS

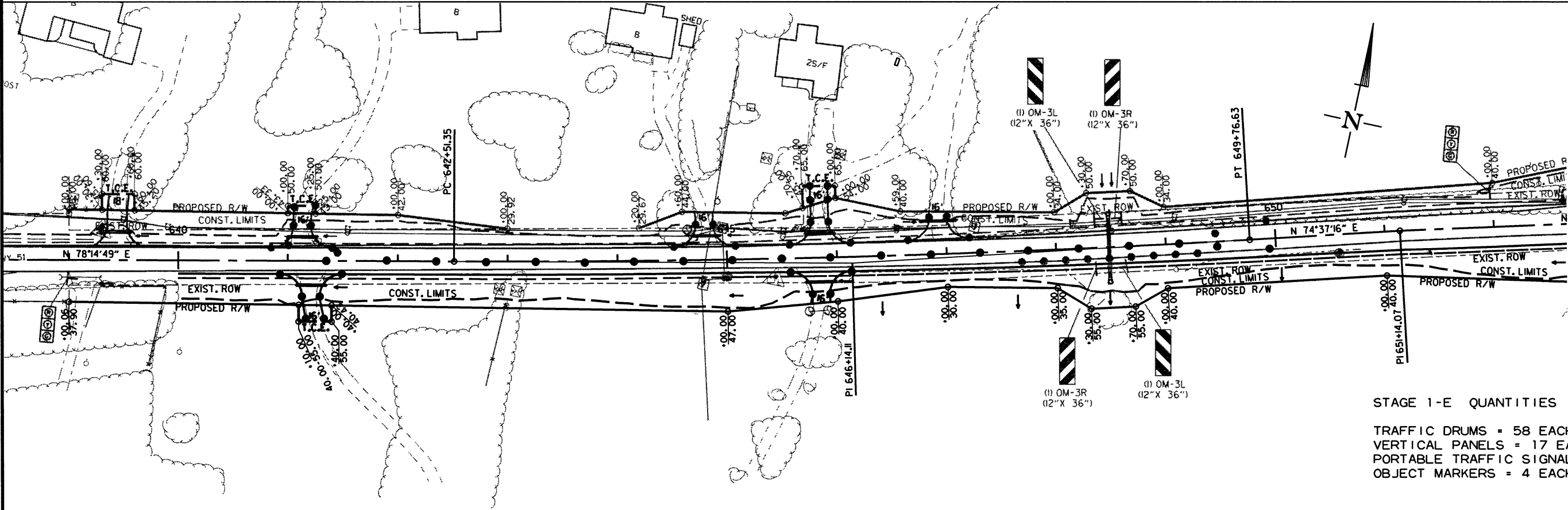


STAGE 1-E QUANTITIES

TRAFFIC DRUMS = 58 EACH
VERTICAL PANELS = 17 EACH
PORTABLE TRAFFIC SIGNAL HEADS = 4 EACH
OBJECT MARKERS = 4 EACH



STAGE I-E MAINTENANCE OF TRAFFIC DETAILS



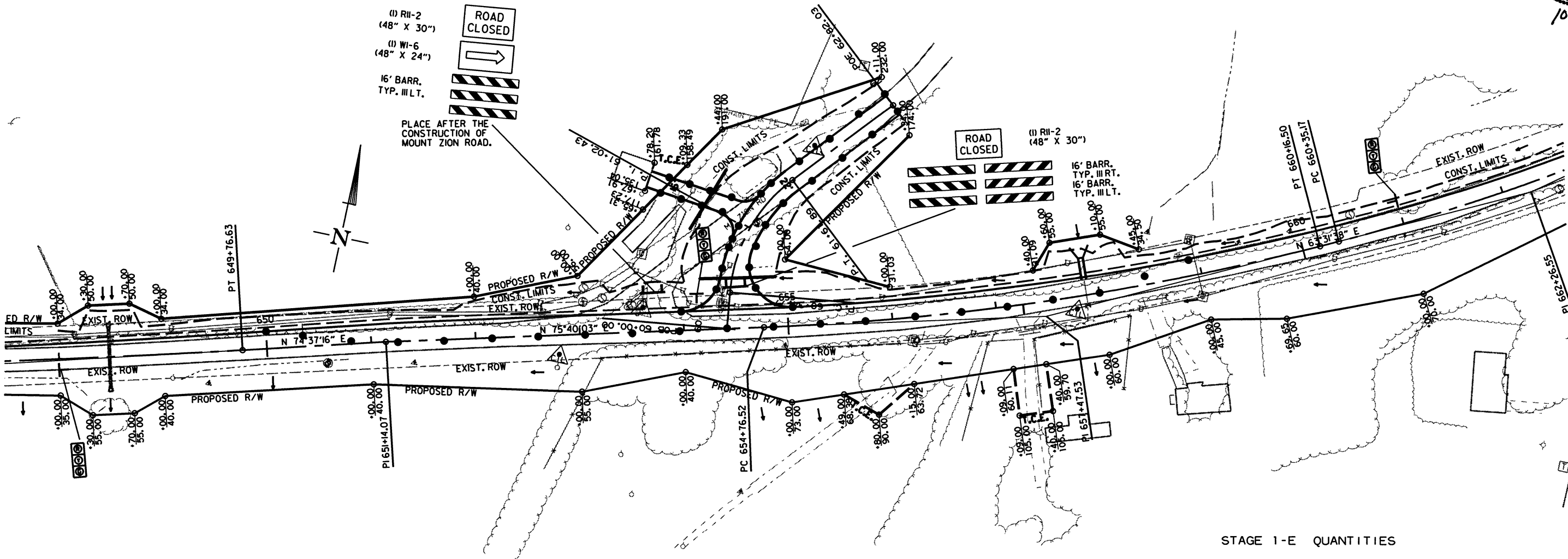
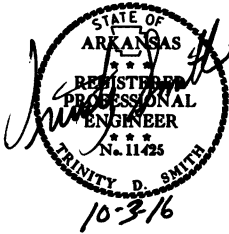
STAGE 1-E QUANTITIES

TRAFFIC DRUMS = 58 EACH
VERTICAL PANELS = 17 EACH
PORTABLE TRAFFIC SIGNAL HEADS = 4 EACH
OBJECT MARKERS = 4 EACH

STAGE I-F MAINTENANCE OF TRAFFIC DETAILS

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. 070364	50	260

2 MAINTENANCE OF TRAFFIC DETAILS

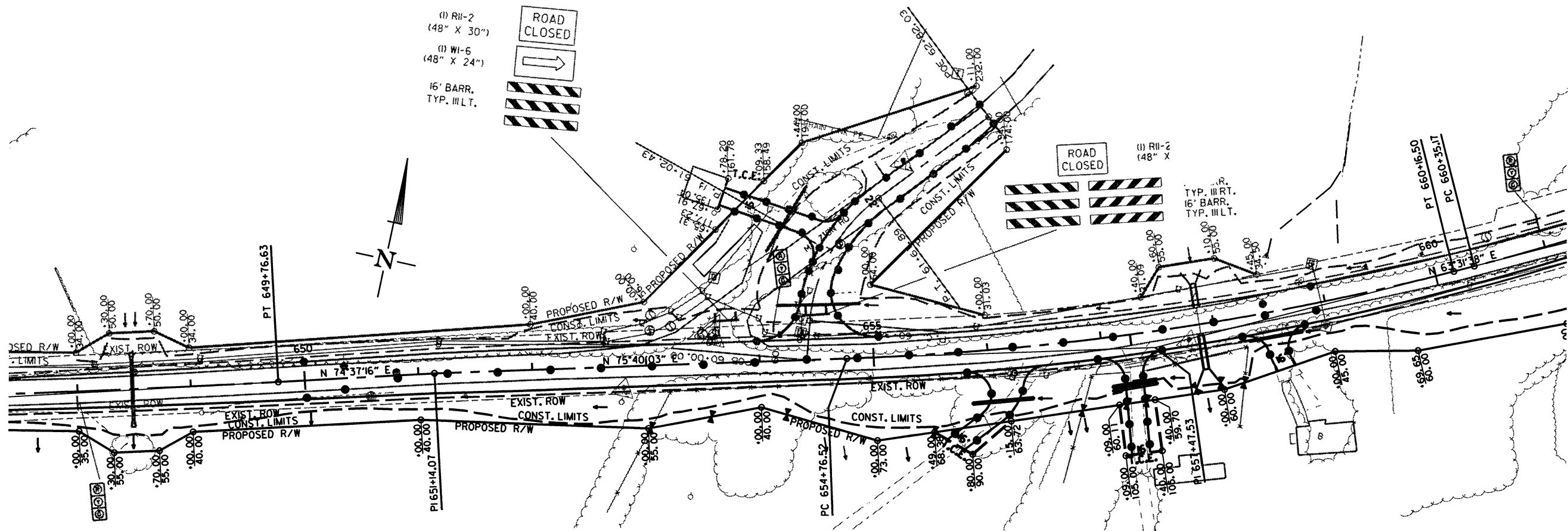


STAGE 1-E QUANTITIES
 TRAFFIC DRUMS = 49 EACH
 VERTICAL PANELS = 39 EACH
 PORTABLE TRAFFIC SIGNAL HEADS = 6 EACH

STAGE 1-G
 MAINTENANCE OF TRAFFIC DETAILS

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.	070364		51	260

2 MAINTENANCE OF TRAFFIC DETAILS



STAGE I-H QUANTITIES

TRAFFIC DRUMS = 40 EACH

VERTICAL PANELS = 19 EACH

PORTABLE TRAFFIC SIGNAL HEADS = 6 EACH

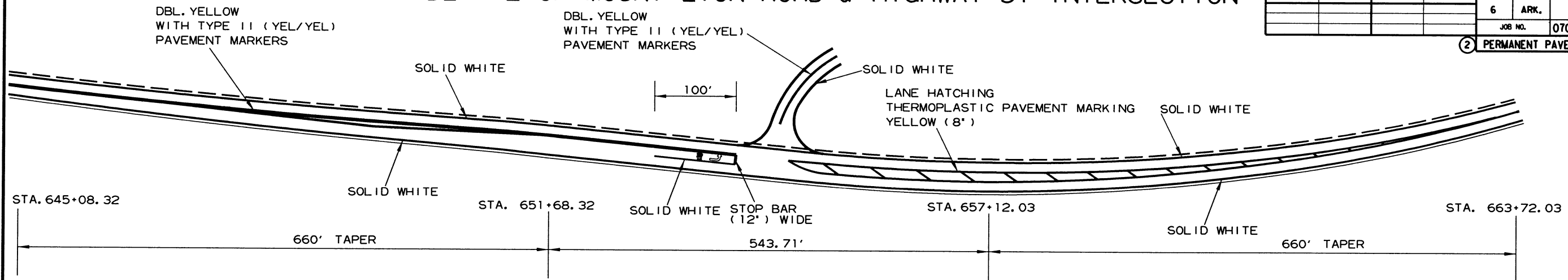
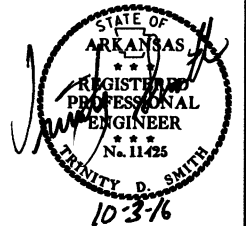
STAGE I-H

MAINTENANCE OF TRAFFIC DETAILS

DETAIL OF MOUNT ZION ROAD & HIGHWAY 51 INTERSECTION

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.		070364	52	260

PERMANENT PAVEMENT MARKING DETAILS



FINAL STRIPING:

MOUNT ZION ROAD & HIGHWAY 51 INTERSECTION
THERMOPLASTIC PAVEMENT MARKING
RT. AND LT. EDGE LINES WHITE (4") = 4028 LIN. FT.
DBL. CENTERLINE YELLOW (4") = 7257 LIN. FT.
LANE HATCHING YELLOW (8") = 242 LIN. FT.
STOP BAR WHITE (12") = 26 LIN. FT.
ARROWS = 1 EACH
WORDS = 1 EACH
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 69 EACH
TYPE II (WHITE/RED) = 5 EACH

FINAL STRIPING:

HIGHWAY 26 & HIGHWAY 51 INTERSECTION
THERMOPLASTIC PAVEMENT MARKING
DBL. CENTERLINE YELLOW (4") = 940 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 940 LIN. FT.
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 12 EACH

HIGHWAY 26
THERMOPLASTIC PAVEMENT MARKING
DBL. CENTERLINE YELLOW (4") = 1323 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 1323 LIN. FT.
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 17 EACH

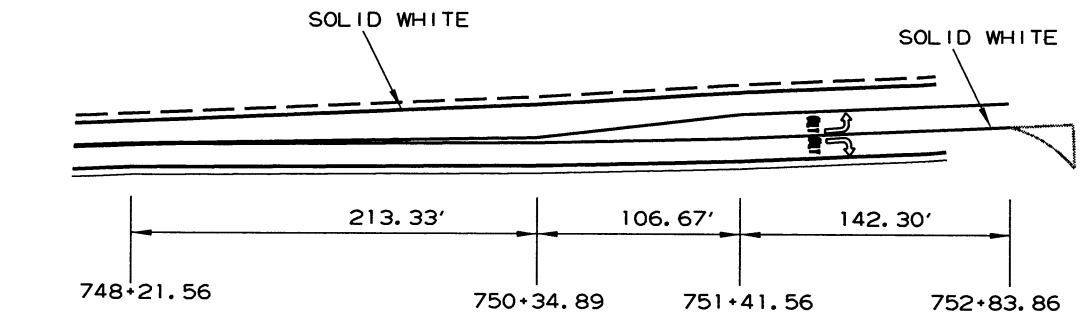
HIGHWAY 51
THERMOPLASTIC PAVEMENT MARKING
STA. 506+74.70 - STA. 615+71.28
DBL. CENTERLINE YELLOW (4") = 21794 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 21794 LIN. FT.
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 273 EACH

THERMOPLASTIC PAVEMENT MARKING
STA. 615+71.28 - STA. 616+78.90
DBL. CENTERLINE YELLOW (4") = 216 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 216 LIN. FT.
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 3 EACH

THERMOPLASTIC PAVEMENT MARKING
STA. 616+78.90 - STA. 645+08.32
DBL. CENTERLINE YELLOW (4") = 5659 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 5659 LIN. FT.
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 71 EACH

THERMOPLASTIC PAVEMENT MARKING
STA. 663+72.03 - STA. 694+80.55
DBL. CENTERLINE YELLOW (4") = 6217 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 6217 LIN. FT.
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 78 EACH

THERMOPLASTIC PAVEMENT MARKING
STA. 694+80.55 - STA. 748+21.56
DBL. CENTERLINE YELLOW (4") = 10682 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 10682 LIN. FT.
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 134 EACH

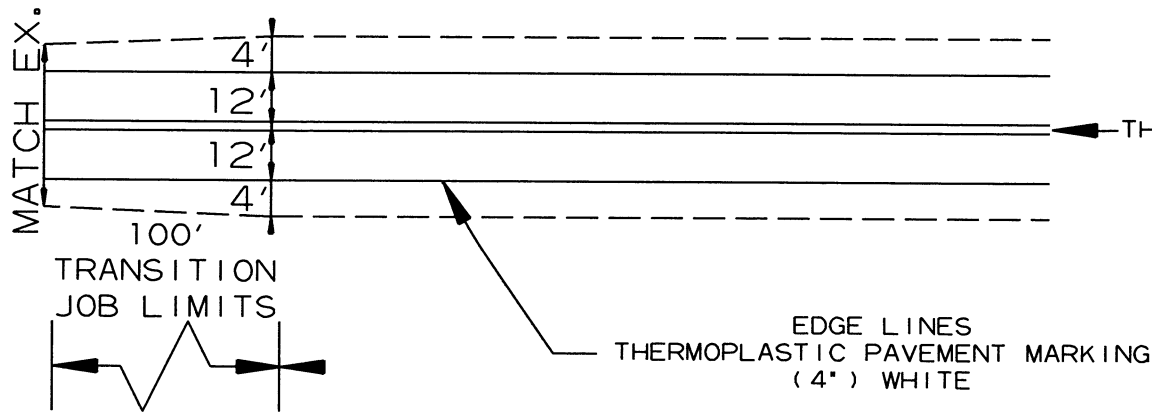


DETAIL OF HWY. 51 & HWY. 8 INTERSECTION

FINAL STRIPING:

THERMOPLASTIC PAVEMENT MARKING
STA. 748+21.56 - STA. 753+47.56
DBL. CENTERLINE YELLOW (4") = 1565 LIN. FT.
RT. AND LT. EDGE LINES WHITE (4") = 1067 LIN. FT.
ARROWS = 2 EACH
WORDS = 2 EACH
RAISED PAVEMENT MARKERS 40' O.C.
TYPE II (YELLOW/YELLOW) = 20 EACH
TYPE II (WHITE/RED) = 4 EACH
ARROWS = 2 EACH
WORDS = 2 EACH

DETAIL OF 2 LANE STRIPING



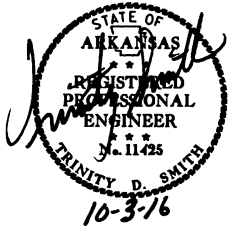
* DOUBLE
THERMOPLASTIC PAVEMENT MARKING
YELLOW (4")

*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

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.	070364	53 260

② QUANTITIES



CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKINGS						REFLECTORIZED PAINT PAVEMENT MARKINGS	
						WORDS	ARROWS	TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	4"		8"	12"	WORDS	ARROWS	4"	
										WHITE	YELLOW	YELLOW	WHITE			WHITE	YELLOW
LIN. FT. - EACH					LIN. FT.	EACH		EACH		LIN. FT.				EACH		LIN. FT.	
CONSTRUCTION PAVEMENT MARKINGS	102919	104571	19022		226512												
CONSTRUCTION PAVEMENT MARKINGS (WORDS)	2	2				4											
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	2	2					4										
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)				9				9									
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)				681					681								
THERMOPLASTIC PAVEMENT MARKING WHITE (4")				51926						51926							
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")				55653							55653						
THERMOPLASTIC PAVEMENT MARKING YELLOW (8")				242								242					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")				26									26				
THERMOPLASTIC PAVEMENT MARKING WORDS				3										3			
THERMOPLASTIC PAVEMENT MARKING ARROWS				3											3		
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4")				264												264	
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4")				264													264
TOTALS:					226512	4	4	9	681	51926	55653	242	26	3	3	264	264
NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03. STANDARD SPECIFICATIONS FOR U.S. HIGHWAY CONSTRUCTION.																	

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

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 ZONEING OF THE PROJECT.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED
								NO.	SQ. FT.			RIGHT	LEFT					
			LIN. FT. - EACH															
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	4	4	64.0									
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	4	4	64.0									
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	4	4	64.0									
W20-1	ROAD WORK AHEAD	48"x48"	13	13	13	13	13	13	208.0									
G20-2	END ROAD WORK	48"x24"	17	17	17	17	17	17	136.0									
G20-1	ROAD WORK NEXT xx MILES	60"x24"	4	4	4	4	4	4	40.0									
W13-1	SPEED LIMIT (ADVISORY)	24"x24"	8	8	8	8	8	8	32.0									
R11-2	ROAD CLOSED	48"x30"	6	4	4	4	6	6	60.0									
OM-3L	OBJECT MARKER	12"x36"	22	22	2	22	22	22	66.0									
OM-3R	OBJECT MARKER	12"x36"	26	26	2	26	26	26	78.0									
W1-6	LARGE ARROW	48"x24"	3	4	4	4	4	4	32.0									
R4-1	DO NOT PASS	24"x30"	10	10	10	10	10	10	50.0									
RSP-1	SHOULDER CLOSED	48"x30"	10	10	10	10	10	10	100.0									
	VERTICAL PANELS		556	556			556			556								
	TRAFFIC DRUMS		1070	908	308		1070				1070							
	TYPE III BARRICADE-RT. (16')		7	5	5	5	7					112						
	TYPE III BARRICADE-LT. (16')		5	3	3	3	5						80					
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		1257	556			1813							1813				
	RELOCATING PRECAST CONCRETE BARRIER			1257			1257								1257			
	TEMPORARY IMPACT ATTENUATION BARRIER		4	5			9									9		
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		4	5			9										9	
	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED		1	1	1		1											1.00
TOTALS:									994.0	556	1070	112	80	1813	1257	9	9	1.00
NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.02, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.																		

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

NOTE:
THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION.

QUANTITIES

8/2/2016

R070364.DGN

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
505+00	34	5	40.60	93	10	7.70	5' RT	0-5	21	5	A-4(0)	BROWN
505+00	34	5	40.60	93	10	7.70	13' RT	0-5	29	13	A-6(6)	BR/GR
505+00	34	5	40.50	93	10	7.80	23' RT	0-5	34	18	A-6(4)	BR/GR
513+00	34	5	39.80	93	9	57.70	5' LT	0-5	38	21	A-6(17)	BROWN
513+00	34	5	39.90	93	9	57.70	25' LT	0-5	35	18	A-6(5)	BROWN
521+00	34	5	39.50	93	9	47.60	5' RT	0-5	29	16	A-6(9)	BROWN
521+00	34	5	39.40	93	9	47.60	25' RT	0-5	30	16	A-6(10)	GRAY
529+00	34	5	40.00	93	9	39.00	5' LT	0-5	38	13	A-6(3)	BR/GR
529+00	34	5	40.10	93	9	39.10	25' LT	0-5	43	27	A-7-6(19)	BROWN
537+00	34	5	42.40	93	9	29.80	5' RT	0-5	38	19	A-6(5)	BROWN
537+00	34	5	42.30	93	9	29.80	25' RT	0-5	41	26	A-7-6(12)	BROWN
545+00	34	5	43.50	93	9	20.50	5' LT	0-5	35	19	A-6(4)	BROWN
553+00	34	5	41.10	93	9	10.90	5' RT	0-5	16	2	A-2-4(0)	BR/GR
553+00	34	5	41.00	93	9	11.00	25' RT	0-5	ND	NP	A-2-4(0)	BR/GR
560+00	34	5	40.20	93	9	1.50	5' LT	0-5	ND	NP	A-2-4(0)	BR/GR
560+00	34	5	40.40	93	9	1.50	25' LT	0-5	27	10	A-2-4(0)	BR/GR
569+00	34	5	39.70	93	8	52.40	5' RT	0-5	29	13	A-6(1)	BR/GR
569+00	34	5	39.60	93	8	52.40	25' RT	0-5	28	10	A-4(1)	BR/GR
577+00	34	5	41.50	93	8	42.30	5' LT	0-5	19	3	A-2-4(0)	BR/GR
577+00	34	5	41.60	93	8	42.30	25' LT	0-5	ND	NP	A-2-4(0)	BR/GR
585+00	34	5	42.20	93	8	34.00	5' RT	0-5	27	12	A-6(1)	BR/GR
585+00	34	5	42.10	93	8	34.00	25' RT	0-5	26	7	A-2-4(0)	BR/GR
593+00	34	5	44.50	93	8	24.80	5' LT	0-5	28	12	A-6(2)	BR/GR
593+00	34	5	44.60	93	8	24.90	20' LT	0-5	36	20	A-6(7)	BR/GR
601+00	34	5	46.90	93	8	16.00	5' RT	0-5	25	12	A-2-6(0)	BR/GR
601+00	34	5	46.90	93	8	16.00	15' RT	0-5	30	17	A-6(3)	BR/GR
601+00	34	5	46.70	93	8	16.00	25' RT	0-5	25	9	A-4(0)	BR/GR
609+00	34	5	49.40	93	8	7.10	5' LT	0-5	26	11	A-6(1)	BR/GR
609+00	34	5	49.40	93	8	7.00	13' LT	0-5	34	20	A-6(4)	BR/GR
609+00	34	5	49.40	93	8	7.10	25' LT	0-5	27	27	A-6(2)	BR/GR
618+00	34	5	51.80	93	7	51.80	5' RT	0-5	23	9	A-4(0)	BR/GR
618+00	34	5	57.50	93	7	57.70	12' RT	0-5	28	14	A-6(3)	BR/GR
618+00	34	5	57.70	93	7	57.70	25' RT	0-5	28	13	A-6(1)	BR/GR
625+00	34	5	55.10	93	7	49.70	5' LT	0-5	36	22	A-6(9)	BR/GR
625+00	34	5	55.20	93	7	49.80	25' LT	0-5	36	11	A-6(2)	BR/GR
633+00	34	5	58.70	93	7	41.30	5' RT	0-5	23	8	A-4(0)	BR/GR
633+00	34	5	58.60	93	7	41.30	25' RT	0-5	26	11	A-6(2)	BR/GR
640+00	34	6	0.70	93	7	31.30	5' LT	0-5	20	5	A-4(0)	BROWN
640+00	34	6	0.80	93	7	31.30	25' LT	0-5	ND	NP	A-2-4(0)	BROWN
681+00	34	6	15.30	93	6	45.10	15' RT	0-5	24	9	A-2-4(0)	BROWN
681+00	34	6	15.20	93	6	45.00	25' RT	0-5	39	27	A-6(7)	BR/GR
689+00	34	6	19.40	93	6	36.60	5' LT	0-5	41	28	A-7-6(11)	BROWN
689+00	34	6	19.40	93	6	36.60	15' LT	0-5	32	19	A-6(6)	BR/GR
689+00	34	6	19.50	93	6	36.70	25' LT	0-5	41	26	A-7-6(8)	BR/GR
697+00	34	6	23.70	93	6	27.00	5' RT	0-5	ND	NP	A-2-4(0)	BR/GR
697+00	34	6	23.60	93	6	23.60	25' RT	0-5	47	33	A-7-6(14)	BR/GR
705+00	34	6	26.90	93	6	26.90	5' LT	0-5	26	12	A-6(2)	BR/GR
713+00	34	6	32.20	93	6	32.20	5' RT	0-5	ND	NP	A-4(0)	BROWN

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.

Z- AUGER REFUSAL
NP - NON-PLASTIC
ND - NOT DETERMINABLE

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			5100	21
TOTALS:			5100	21

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

UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR 4" PIPE UNDERDRAIN.

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS	
		(SINGLE)	(DOUBLE)
	EACH		
ENTIRE PROJECT	41	35	3
TOTALS:	41	35	3

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
505+94	506+67	LT. OF C.L. HWY. 51	77	
515+00	517+60	LT. OF C.L. HWY. 51	260	
525+20	526+37	RT. OF C.L. HWY. 51	140	
525+20	526+08	LT. OF C.L. HWY. 51	90	
540+00	541+00	RT. OF C.L. HWY. 51	100	
540+10	541+10	LT. OF C.L. HWY. 51	100	
542+15	544+55	LT. OF C.L. HWY. 51	260	
544+55		LT. OF C.L. HWY. 51	30	
545+23	552+18	LT. OF C.L. HWY. 51	620	
547+68	550+00	RT. OF C.L. HWY. 51	220	
551+50	551+90	RT. OF C.L. HWY. 51	60	
553+00	554+80	LT. OF C.L. HWY. 51	180	
554+38	559+07	RT. OF C.L. HWY. 51	470	
561+15	563+45	LT. OF C.L. HWY. 51	230	
575+85	578+90	LT. OF C.L. HWY. 51	205	
579+00	581+13	LT. OF C.L. HWY. 51	227	
579+99		RT. OF C.L. HWY. 51		2
583+31	583+81	RT. OF C.L. HWY. 51	50	
588+65	590+75	LT. OF C.L. HWY. 51	216	
581+82	583+77	LT. OF C.L. HWY. 51	213	
585+90	587+95	RT. OF C.L. HWY. 51	210	
588+20	592+62	RT. OF C.L. HWY. 51	450	
593+17	596+70	RT. OF C.L. HWY. 51	380	
625+49	627+70	LT. OF C.L. HWY. 51	235	
627+95		LT. OF C.L. HWY. 51	21	
639+23	639+88	RT. OF C.L. HWY. 51	91	
653+02	656+06	RT. OF C.L. HWY. 51	323	
654+80	655+25	LT. OF C.L. HWY. 51	55	
656+80	657+24	RT. OF C.L. HWY. 51	80	
657+33	658+27	RT. OF C.L. HWY. 51	150	
666+10	667+45	RT. OF C.L. HWY. 51	140	
677+48		LT. OF C.L. HWY. 51	10	
700+27	702+00	LT. OF C.L. HWY. 51	179	
741+45	743+52	LT. OF C.L. HWY. 51	217	
743+23	745+93	LT. OF C.L. HWY. 51	273	
746+99	747+50	RT. OF C.L. HWY. 51	51	
TOTALS:			6613	2

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
1+80	2+73	LT. SIDE DITCH	93.0	82.7
540+88	542+00	RT. SIDE DITCH	112.0	99.6
550+81	551+28	RT. SIDE DITCH	47.0	41.8
625+00	627+00	RT. SIDE DITCH	200.0	177.8
641+00	642+00	RT. SIDE DITCH	100.0	88.9
663+00	663+27	LT. SIDE DITCH	27.0	24.0
670+00	671+00	LT. SIDE DITCH	100.0	88.9
676+00	677+00	LT. SIDE DITCH	100.0	88.9
723+00	724+00	LT. SIDE DITCH	100.0	88.9
733+00	735+00	LT. SIDE DITCH	200.0	177.8
736+00	737+35	LT. SIDE DITCH	135.0	120.0
742+00	744+00	RT. SIDE DITCH	200.0	177.8
TOTAL:				1257.1

NOTE: AVERAGE WIDTH = 8'-0"

QUANTITIES



QUANTITIES

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS	BOX CULVERTS
		EACH	EACH
504+00	18" x 42' PIPE CULV'T.	1	
508+44	18" x 24' C.M. PIPE CULV'T.	1	
514+46	18" x 36' CLAY PIPE CULV'T.	1	
517+72	18" x 41' C.M. PIPE CULV'T.	1	
525+61	10' x 5' x 40' ARCH C.M. PIPE CULVERT		1
540+42	18" x 43' C.M. PIPE CULV'T.	1	
544+57	15" x 22' R.C. PIPE CULV'T.	1	
550+81	18" x 23' R.C. PIPE CULV'T.	1	
577+48	18" x 33' CLAY PIPE CULVERT	1	
578+56	18" x 33' CLAY PIPE CULVERT	1	
588+06	18" x 27' R.C. PIPE CULV'T.	1	
588+47	18" x 36' R.C. PIPE CULV'T.	1	
588+84	24" x 37' C.M. PIPE CULVERT	1	
591+00	18" x 18' R.C. PIPE CULV'T.	1	
599+45	18" x 26' C.M. PIPE CULV'T.	1	
61+14	18" x 28' PIPE CULV'T.	1	
626+42	18" x 24' R.C. PIPE CULV'T.	1	
627+80	18" x 42' R.C. PIPE CULV'T.	1	
629+97	18" x 18' C.M. PIPE CULV'T.	1	
639+11	18" x 36' C.M. PIPE CULV'T.	1	
639+44	24" x 30' R.C. PIPE CULV'T.	1	
641+13	18" x 24' C.M. PIPE CULV'T.	1	
641+20	18" x 24' C.M. PIPE CULV'T.	1	
644+80	15" x 30' C.M. PIPE CULV'T.	1	
648+49	24" x 32' PIPE CULVERT	1	
656+84	18" x 34' R.C. PIPE CULV'T.	1	
657+26	DBL. 24" x 21' R.C. PIPE CULV'T.	2	
658+52	18" x 26' R.C. PIPE CULV'T.	1	
659+02	18" x 26' R.C. PIPE CULV'T.	1	
663+23	18" x 60' C.M. PIPE CULV'T.	1	
669+18	18" x 33' CLAY PIPE CULVERT	1	
672+11	18" x 23' R.C. PIPE CULV'T.	1	
673+59	18" x 23' R.C. PIPE CULV'T.	1	
673+92	15" x 31' C.M. PIPE CULVERT	1	
707+31	18" x 85' R.C. PIPE CULV'T.	1	
708+51	18" x 41' PLASTIC PIPE CULV'T.	1	
712+92	18" x 20' C.M. PIPE CULV'T.	1	
717+81	18" x 24' C.M. PIPE CULV'T.	1	
718+66	18" x 24' PLASTIC PIPE CULV'T.	1	
723+96	24" x 24' C.M. PIPE CULV'T.	1	
724+31	18" x 36' PIPE CULVERT	1	
728+88	24" x 20' PLASTIC PIPE CULV'T.	1	
737+46	18" x 31' R.C. PIPE CULVERT	1	
TOTALS:		43	1

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

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION	* ROCK FILL
			CU. YD.	CU. YD.	TON	CU. YD.
ENTIRE	PROJECT	STAGE 1-MAIN LANES	16343	10882		
ENTIRE	PROJECT	STAGE 2-MAIN LANES	6627	3834		
ENTIRE	PROJECT	STAGE 3-MAIN LANES	48			
ENTIRE	PROJECT	HWY. 51 & HWY. 26 INTERSECTION	94	637		
ENTIRE	PROJECT	CO. RD. 76	140	16		
ENTIRE	PROJECT	MOUNT ZION	1848	16		
ENTIRE	PROJECT	APPROACHES	685	2185		
ENTIRE	PROJECT	MOUNT ZION OBLITERATION	132			
551+28		CHANNEL CHANGE	18			
562+28		CHANNEL CHANGE	5			
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			200	2500
TOTALS:			25940	17570	200	2500

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

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

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE B-1 (1' 6")
			LIN. FT.
517+18	524+00	RT. SIDE OF HWY. 51	682
556+05	579+50	LT. SIDE OF HWY. 51	2345
556+05	579+50	RT. SIDE OF HWY. 51	2345
746+50	752+48	LT. SIDE OF HWY. 51	598
TOTAL:			5970

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
515+00	518+00	MAIN LANES	3	3
509+00	599+21	MAIN LANES	91	91
625+13	634+36	MAIN LANES	10	10
637+18	640+00	MAIN LANES	3	3
644+00	680+93	MAIN LANES	37	37
699+73	752+48	MAIN LANES	53	53
31+00	32+00	HWY. 51/HWY. 26	1	1
TOTALS:			198	198

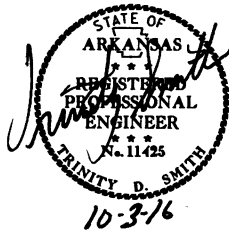
SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	440
TOTAL:	440

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

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.	070364		55	260

QUANTITIES



PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
506+75	MAIN LANES	7.92	96	51
514+46	MAIN LANES	8.50	20	11
540+42	MAIN LANES	8.50	20	11
561+00	MAIN LANES	7.92	20	11
577+00	MAIN LANES	7.92	20	11
577+48	MAIN LANES	8.50	20	11
588+84	MAIN LANES	8.50	20	11
648+49	MAIN LANES	8.50	20	11
669+18	MAIN LANES	8.50	20	11
673+92	MAIN LANES	8.50	20	11
724+31	MAIN LANES	8.50	20	11
737+46	MAIN LANES	8.50	20	11
751+57	MAIN LANES	7.92	36	19
TOTAL:				191

AVG. DEPTH = 11"

FENCING

STATION	STATION	LOCATION	WIRE FENCE			* 5' CHAIN LINK FENCE	* 16'-0" GATES
			(TYPE C)	(TYPE D)	(TYPE D-1)		
			LIN. FT.				EACH
514+00	515+00	RT. SIDE OF C.L. HWY. 51		30			1
525+00	525+46	RT. SIDE OF C.L. HWY. 51		76			
525+09	525+43	LT. SIDE OF C.L. HWY. 51			42		
525+71	526+09	LT. SIDE OF C.L. HWY. 51			52		1
525+72	526+37	RT. SIDE OF C.L. HWY. 51			95		1
540+00	541+00	RT. SIDE OF C.L. HWY. 51		101			1
544+55		LT. SIDE OF C.L. HWY. 51		30			
545+33	551+13	LT. SIDE OF C.L. HWY. 51	620				
547+77	550+00	RT. SIDE OF C.L. HWY. 51			223		
551+43	552+00	LT. SIDE OF C.L. HWY. 51	71				1
551+60	551+96	RT. SIDE OF C.L. HWY. 51			46		
553+81	554+75	LT. SIDE OF C.L. HWY. 51	146				
554+38	559+06	RT. SIDE OF C.L. HWY. 51			487		
556+62	557+18	LT. SIDE OF C.L. HWY. 51	55				
561+15	562+19	LT. SIDE OF C.L. HWY. 51		125			
562+36	563+50	LT. SIDE OF C.L. HWY. 51		130			1
578+88	580+90	LT. SIDE OF C.L. HWY. 51		208			
583+06	583+77	LT. SIDE OF C.L. HWY. 51		52			1
585+90	587+92	RT. SIDE OF C.L. HWY. 51			203		
588+18	592+56	RT. SIDE OF C.L. HWY. 51			452		
588+65	590+75	LT. SIDE OF C.L. HWY. 51		200			1
593+17	598+69	LT. SIDE OF C.L. HWY. 51		333			1
625+49	627+70	LT. SIDE OF C.L. HWY. 51			232		
627+95		LT. SIDE OF C.L. HWY. 51			22		
639+23	639+88	RT. SIDE OF C.L. HWY. 51	63				1
653+02	655+94	RT. SIDE OF C.L. HWY. 51	280				
656+77	657+16	RT. SIDE OF C.L. HWY. 51	40				
657+31	658+18	RT. SIDE OF C.L. HWY. 51	87				1
666+07	667+36	RT. SIDE OF C.L. HWY. 51	129				
700+27	702+00	LT. SIDE OF C.L. HWY. 51		177			
741+43	743+31	LT. SIDE OF C.L. HWY. 51		189			
743+46	745+93	LT. SIDE OF C.L. HWY. 51			250		
746+99	747+50	RT. SIDE OF C.L. HWY. 51				37	2
TOTALS:			1491	1651	2104	37	13

* DENOTES ALTERNATE BID ITEM.

8/2/2016
R070364.DGN

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	CONCRETE DRIVEWAYS	SIGN FOUNDATIONS	SIGNS	PLANTERS	POSTS	BRICK WALLS
			LIN. FT.	LIN. FT.	SQ. YD.	EACH	EACH	EACH	EACH	LIN. FT.
550+75		RT. OF C.L. HWY. 51							1	
570+25		LT. OF C.L. HWY. 51						1		
570+55		LT. OF C.L. HWY. 51						1		
570+70		LT. OF C.L. HWY. 51				2	2			
580+10		RT. OF C.L. HWY. 51							1	
580+20		RT. OF C.L. HWY. 51				2	1			
653+05		LT. OF C.L. HWY. 51				1	1			
673+87		LT. OF C.L. HWY. 51				1	1			
676+05		LT. OF C.L. HWY. 51								30
676+23		LT. OF C.L. HWY. 51								30
653+50		LT. OF C.L. HWY. 51	47							
677+72		LT. OF C.L. HWY. 51			662					
707+31		LT. OF C.L. HWY. 51		108						
708+51		LT. OF C.L. HWY. 51			657					
712+92		LT. OF C.L. HWY. 51			274					
720+92		LT. OF C.L. HWY. 51		108						
734+04		LT. OF C.L. HWY. 51	25		750					
736+10		LT. OF C.L. HWY. 51	25		711					
751+58	752+31	RT. OF C.L. HWY. 51	107							
TOTALS:			204	216	3054	6	5	2	2	60

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
1+30	1+80	RT. SIDE DITCH	50.00	6	33.33	22.22	0.28
505+70	506+50	LT. SIDE DITCH	80.00	7	62.22	35.56	0.45
550+81	551+28	RT. SIDE DITCH	47.00	7	36.56	20.89	0.26
550+81	552+00	LT. SIDE DITCH	119.00	7	92.56	52.89	0.67
641+00	642+00	LT. SIDE DITCH	100.00	7	77.78	44.44	0.56
663+27	664+00	LT. SIDE DITCH	73.00	7	56.78	32.44	0.41
667+65	669+00	LT. SIDE DITCH	135.00	7	105.00	60.00	0.76
TOTALS:					464.23	268.44	3.39

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
525+51	R.C. BOX HEADWALL	1
551+28	R.C. BOX HEADWALL	1
562+28	R.C. BOX HEADWALL	1
657+88	R.C. BOX HEADWALL	1
TOTAL:		4

NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YDS.	SQ. YDS.
514+46	OUTLET OF PIPE CULVERT	12	23
525+61	INLET OF BOX CULVERT	19	37
540+42	OUTLET OF PIPE CULVERT	16	31
557+00	OUTLET OF PIPE CULVERT	10	20
561+00	OUTLET OF PIPE CULVERT	8	16
577+00	OUTLET OF PIPE CULVERT	10	20
577+48	OUTLET OF PIPE CULVERT	21	42
588+84	OUTLET OF PIPE CULVERT	14	27
648+49	OUTLET OF PIPE CULVERT	16	31
669+18	OUTLET OF PIPE CULVERT	14	27
673+92	OUTLET OF PIPE CULVERT	17	33
724+31	OUTLET OF PIPE CULVERT	13	26
737+46	OUTLET OF PIPE CULVERT	12	24
751+57	OUTLET OF PIPE CULVERT	22	44
	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	50	100
TOTALS:		254	501

*NOTE: QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS

NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL										
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SOLID SODDING	TEMPORARY SEEDING	MULCH COVER	WATER	WATTLE (20") DITCH CHECKS (E-1)	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ.YD.	ACRE	ACRE	M.GAL.	LIN.FT.	BAG	CU.YD.	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	STAGE 1	16.00	32.00	16.00	1638.7	16.00	532					1122	195	400	7046			392
ENTIRE	PROJECT	STAGE 2	17.00	34.00	17.00	1734.0	17.00						506	108	50	5025			247
ENTIRE	PROJECT	STAGE 3	0.50	1.00	0.50	51.0	0.50									325			
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			5.00	10.00	5.00	510.0	5.00		65.00	65.00	1326.0	300	400	75	125	3000	1110	1110	1226
TOTALS:			38.50	77.00	38.50	3933.7	38.50	532	65.00	65.00	1326.0	300	2028	378	575	15396	1110	1110	1865

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
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

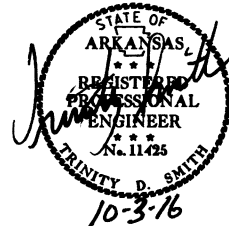
NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

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

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.		070364	56	260

② 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. 070364	57	260

② QUANTITIES

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
499+13.56	500+13.56	HWY. 26	24	266.67
598+21.49	615+71.28	HWY. 51	40	7776.84
616+78.65	626+13.64	HWY. 51	40	4155.51
633+35.35	638+18.24	HWY. 51	40	2146.18
679+92.89	693+73.18	HWY. 51	40	6134.62
694+80.55	700+73.49		40	2635.29
61+87.22	62+87.22	MT. ZION ROAD	22	244.44
33+75.63	34+75.63	HWY. 51/HWY. 26 TIE	20	222.22
TOTAL:				23581.77

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100
TOTAL:	100

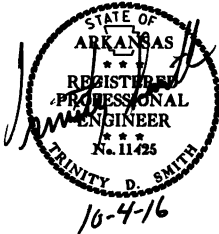
NOTE: QUANTITY ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.

ASPHALT CONCRETE PATCHING FOR
MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	120	240
TOTALS:	120	240

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

*NOTE: QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS



STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT						PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2	FLARED END SECTIONS FOR R.C. PIPE CULVERTS		DROP INLETS TYPE		SPAN	HEIGHT	LENGTH	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.					
		(CLASS III)		(CLASS IV)		(CLASS V)			PIPE CULVERTS		TYPE															
		18"	24"	18"	24"	18"	24"	18"	24"	E	ST															
								LIN. FT.		EACH		EACH					CU.YD.		POUND		CU.YD.		SQ.YD.		M.GAL.	
514+46	CONSTRUCT 24" R.C. PIPE CULVERT				44					2											16		0.20		FES-1, FES-2, PCC-1, PCM-1	
518+00	CONSTRUCT TYPE ST DROP INLET ON RT.							100				1													FPC-9S, PCC-1, PCM-1	
519+00	CONSTRUCT TYPE ST DROP INLET ON LT.			34						1			1								5		0.06		FES-1, FES-2, FPC-9S, PCC-1, PCM-1	
521+49	CONSTRUCT TYPE ST DROP INLET ON RT.					250				1			1								5		0.06		FES-1, FES-2, FPC-9S, PCC-1, PCM-1	
525+61	CONSTRUCT 10' x 5' R.C. BOX CULVERT													10	5	65	77.70	8334	50		11		0.14		SPECIAL DETAILS, RCB-1, RCB-2, RCB-3	
540+42	CONSTRUCT 24" R.C. PIPE CULVERT						46			2											16		0.20		FES-1, FES-2, PCC-1, PCM-1	
551+28	EXTEND DBL. 5' x 3' R.C. BOX CULVERT													5	3	29	25.62	3957	18		15		0.19		R-200X-0, W-X003-1, RCB-1, RCB-2, RCB-3	
557+00	CONSTRUCT TYPE ST DROP INLET ON LT.							200				1													FPC-9S, PCC-1, PCM-1	
559+00	CONSTRUCT TYPE ST DROP INLET ON LT.							200				1													FPC-9S, PCC-1, PCM-1	
561+00	CONSTRUCT TYPE ST DROP INLET ON LT.	36										1													FPC-9S, PCC-1, PCM-1	
561+00	CONSTRUCT TYPE ST DROP INLET ON RT.	8								1			1								5		0.06		FES-1, FES-2, FPC-9S, PCC-1, PCM-1	
562+28	CONSTRUCT TYPE ST DROP INLET ON LT.											1													FPC-9S, PCC-1, PCM-1	
562+28	CONSTRUCT TYPE ST DROP INLET ON RT.											1													FPC-9S, PCC-1, PCM-1	
562+28	EXTEND 4' x 3' R.C. BOX CULVERT													4	3	27	16.31	1622	13		13		0.16		R-100X-0, W-X003-1, RCB-1, RCB-2, RCB-3	
564+00	CONSTRUCT TYPE ST DROP INLET ON LT.							172				1													FPC-9S, PCC-1, PCM-1	
564+00	CONSTRUCT TYPE ST DROP INLET ON RT.							172				1													FPC-9S, PCC-1, PCM-1	
567+00	CONSTRUCT TYPE ST DROP INLET ON LT.							300				1													FPC-9S, PCC-1, PCM-1	
567+00	CONSTRUCT TYPE ST DROP INLET ON RT.							300				1													FPC-9S, PCC-1, PCM-1	
570+00	CONSTRUCT TYPE ST DROP INLET ON LT.							300				1													FPC-9S, PCC-1, PCM-1	
570+00	CONSTRUCT TYPE ST DROP INLET ON RT.							300				1													FPC-9S, PCC-1, PCM-1	
571+00	CONSTRUCT TYPE ST DROP INLET ON LT.							100				1													FPC-9S, PCC-1, PCM-1	
574+00	CONSTRUCT TYPE ST DROP INLET ON LT.	2						300	1			1									5		0.06		FES-1, FES-2, FPC-9S, PCC-1, PCM-1	
577+00	CONSTRUCT TYPE E DROP INLET ON LT.	26										1													FPC-9S, PCC-1, PCM-1	
577+00	CONSTRUCT TYPE ST DROP INLET ON RT.	6							1			1									5		0.06		FES-1, FES-2, FPC-9S, PCC-1, PCM-1	
577+48	CONSTRUCT 24" R.C. PIPE CULVERT		56							2											16		0.20		FES-1, FES-2, PCC-1, PCM-1	
588+84	CONSTRUCT 24" R.C. PIPE CULVERT					47				2											16		0.20		FES-1, FES-2, PCC-1, PCM-1	
648+49	CONSTRUCT 24" R.C. PIPE CULVERT		54							2											16		0.20		FES-1, FES-2, PCC-1, PCM-1	
657+88	EXTEND 4' x 3' R.C. BOX CULVERT													4	3	40	20.46	2196	15		12		0.15		R-200X-0, W-X003-1, RCB-1, RCB-2, RCB-3	
669+18	CONSTRUCT 24" R.C. PIPE CULVERT						42			2											16		0.20		FES-1, FES-2, PCC-1, PCM-1	
673+92	CONSTRUCT 24" R.C. PIPE CULVERT						38			2											10		0.13		FES-1, FES-2, PCC-1, PCM-1	
724+31	CONSTRUCT TYPE E DROP INLET ON LT.	22								1	1										5		0.06		FES-1, FES-2, FPC-9D PCC-1, PCM-1	
737+46	CONSTRUCT 24" R.C. PIPE CULVERT						42			2											16		0.20		FES-1, FES-2, PCC-1, PCM-1	
749+92	CONSTRUCT TYPE ST DROP INLET ON LT.							160				1													FPC-9S, PCC-1, PCM-1	
751+57	CONSTRUCT TYPE ST DROP INLET ON LT.	60							1			1									5		0.06		FES-1, FES-2, FPC-9S, PCC-1, PCM-1	
TOTALS:		160	110	34	44	297	168	2604	8	15	4	18					140.09	16109	96		208		2.59			

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.

QUANTITIES

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH		**MODIFIED CURB		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
			FEET		STATION	STATION	SQ. YD.		SQ. YD.	TON		18"	24"	21"X15"	28"X20"	
504+00	RT.	MAIN LANES	16					87.10	9.58	35.57				28		PCC-1, PCM-1, PCP-1, PCP-2
505+30	RT.	MAIN LANES	16					57.20	6.29	23.36				28		PCC-1, PCM-1, PCP-1, PCP-2
506+75	RT.	MAIN LANES	22					22.00	2.42	8.98						
507+73	LT.	MAIN LANES	16					37.00	4.07	15.11				28		PCC-1, PCM-1, PCP-1, PCP-2
508+48	RT.	MAIN LANES	16					130.50	14.36	53.29		42				PCC-1, PCM-1, PCP-1, PCP-2
517+52	RT.	MAIN LANES	16					47.10	5.18	19.23				34		PCC-1, PCM-1, PCP-1, PCP-2
541+50	RT.	MAIN LANES	20					131.10	14.42	53.53		34				PCC-1, PCM-1, PCP-1, PCP-2
544+57	RT.	MAIN LANES	20					187.10	20.58	76.40				58		PCC-1, PCM-1, PCP-1, PCP-2
544+80	LT.	MAIN LANES	20					360.70	39.68	147.29						PCC-1, PCM-1, PCP-1, PCP-2
550+81	RT.	MAIN LANES	16					114.40	12.58	46.71				28		PCC-1, PCM-1, PCP-1, PCP-2
557+53	LT.	MAIN LANES	20					71.20	7.83	29.07				28		PCC-1, PCM-1, PCP-1, PCP-2
569+83	LT.	MAIN LANES	16					86.80	9.55	35.44				28		PCC-1, PCM-1, PCP-1, PCP-2
570+20	RT.	MAIN LANES	16					99.80	10.98	40.75				28		PCC-1, PCM-1, PCP-1, PCP-2
570+61	LT.	MAIN LANES	20					323.70	35.61	132.18				32		PCC-1, PCM-1, PCP-1, PCP-2
570+76	RT.	MAIN LANES	16					98.40	10.82	40.18				28		PCC-1, PCM-1, PCP-1, PCP-2
572+58	RT.	MAIN LANES	20					228.30	25.11	93.22		44				PCC-1, PCM-1, PCP-1, PCP-2
580+00	RT.	MAIN LANES	20					388.60	42.75	158.68		76				PCC-1, PCM-1, PCP-1, PCP-2
581+00	LT.	MAIN LANES	20					723.50	79.59	295.43				60		PCC-1, PCM-1, PCP-1, PCP-2
582+20	RT.	MAIN LANES	16					72.00	7.92	29.40				28		PCC-1, PCM-1, PCP-1, PCP-2
583+36	LT.	MAIN LANES	20					64.20	7.06	26.22				32		PCC-1, PCM-1, PCP-1, PCP-2
588+00	LT.	MAIN LANES	16					112.90	12.42	46.10				28		PCC-1, PCM-1, PCP-1, PCP-2
590+06	RT.	MAIN LANES	16					76.80	8.45	31.36				28		PCC-1, PCM-1, PCP-1, PCP-2
590+00	LT.	MAIN LANES	16					77.90	8.57	31.81				28		PCC-1, PCM-1, PCP-1, PCP-2
591+00	RT.	MAIN LANES	16					71.40	7.85	28.16				30		PCC-1, PCM-1, PCP-1, PCP-2
594+00	LT.	MAIN LANES	16					50.90	5.60	20.78				28		PCC-1, PCM-1, PCP-1, PCP-2
598+53	LT.	MAIN LANES	36					120.40	13.24	49.16				46		PCC-1, PCM-1, PCP-1, PCP-2
599+45	LT.	MAIN LANES	18					52.70	5.80	21.52				28		PCC-1, PCM-1, PCP-1, PCP-2
626+42	RT.	MAIN LANES	18					51.20	5.63	20.91				30		PCC-1, PCM-1, PCP-1, PCP-2
627+80	LT.	MAIN LANES	16					56.70	6.24	23.15				28		PCC-1, PCM-1, PCP-1, PCP-2
630+47	LT.	MAIN LANES	16					70.00	7.70	28.58		34				PCC-1, PCM-1, PCP-1, PCP-2
633+87	LT.	MAIN LANES	20					131.10	14.42	53.53				50		PCC-1, PCM-1, PCP-1, PCP-2
639+11	LT.	MAIN LANES	16					47.70	5.25	19.48				28		PCC-1, PCM-1, PCP-1, PCP-2
641+13	LT.	MAIN LANES	16					96.80	10.65	39.53			30			PCC-1, PCM-1, PCP-1, PCP-2
641+20	RT.	MAIN LANES	16					69.40	7.63	28.34				28		PCC-1, PCM-1, PCP-1, PCP-2
644+80	LT.	MAIN LANES	16					77.90	8.57	31.81				28		PCC-1, PCM-1, PCP-1, PCP-2
645+85	LT.	MAIN LANES	16					57.40	6.31	23.44				28		PCC-1, PCM-1, PCP-1, PCP-2
645+85	RT.	MAIN LANES	16					94.40	10.38	38.55				28		PCC-1, PCM-1, PCP-1, PCP-2
646+93	LT.	MAIN LANES	16					66.70	7.34	27.24				28		PCC-1, PCM-1, PCP-1, PCP-2
656+22	RT.	MAIN LANES	16					45.90	5.05	18.74				28		PCC-1, PCM-1, PCP-1, PCP-2
657+26	RT.	MAIN LANES	16					141.20	15.53	57.66			108			PCC-1, PCM-1, PCP-1, PCP-2
658+52	RT.	MAIN LANES	16					156.80	17.25	64.03				92		PCC-1, PCM-1, PCP-1, PCP-2
663+15	RT.	MAIN LANES	20					58.40	6.42	23.85				28		PCC-1, PCM-1, PCP-1, PCP-2
663+27	LT.	MAIN LANES	16					171.10	18.82	69.87				64		PCC-1, PCM-1, PCP-1, PCP-2
665+58	RT.	MAIN LANES	16					103.50	11.39	42.26				28		PCC-1, PCM-1, PCP-1, PCP-2
667+67	RT.	MAIN LANES	16					61.00	6.71	24.91				28		PCC-1, PCM-1, PCP-1, PCP-2
668+15	LT.	MAIN LANES	20					51.30	5.64	20.95				28		PCC-1, PCM-1, PCP-1, PCP-2
668+58	RT.	MAIN LANES	16					182.30	20.05	74.44				66		PCC-1, PCM-1, PCP-1, PCP-2
670+10	LT.	MAIN LANES	16					52.90	5.82	21.60				30		PCC-1, PCM-1, PCP-1, PCP-2
671+50	LT.	MAIN LANES	16					54.70	6.02	22.34				28		PCC-1, PCM-1, PCP-1, PCP-2
672+11	LT.	MAIN LANES	16					52.10	5.73	21.27				28		PCC-1, PCM-1, PCP-1, PCP-2
673+59	LT.	MAIN LANES	16					53.60	5.90	21.89				28		PCC-1, PCM-1, PCP-1, PCP-2
675+22	RT.	MAIN LANES	22					59.40	6.53	24.26				30		PCC-1, PCM-1, PCP-1, PCP-2
676+12	LT.	MAIN LANES	16					128.40	14.12	52.43				34		PCC-1, PCM-1, PCP-1, PCP-2
676+61	RT.	MAIN LANES	24					54.20	5.96	22.13				28		PCC-1, PCM-1, PCP-1, PCP-2
677+30	LT.	MAIN LANES	20					54.70	6.02	22.34				36		PCC-1, PCM-1, PCP-1, PCP-2
679+30	RT.	MAIN LANES	16					131.10	14.42	53.53				34		PCC-1, PCM-1, PCP-1, PCP-2
707+31	LT.	MAIN LANES	32					78.70	8.66	32.14				28		PCC-1, PCM-1, PCP-1, PCP-2
708+51	LT.	MAIN LANES	26					225.20	24.77	91.96				68		PCC-1, PCM-1, PCP-1, PCP-2
712+92	LT.	MAIN LANES	16					150.10						38		PCC-1, PCM-1, PCP-1, PCP-2
717+81	LT.	MAIN LANES	16					40.60						28		PCC-1, PCM-1, PCP-1, PCP-2
718+66	LT.	MAIN LANES	16					51.30	5.64	20.95				28		PCC-1, PCM-1, PCP-1, PCP-2
720+92	LT.	MAIN LANES	32					42.70	4.70	17.44				30		PCC-1, PCM-1, PCP-1, PCP-2
720+91	RT.	MAIN LANES	16					179.00	19.69	73.09				78		PCC-1, PCM-1, PCP-1, PCP-2
723+96	LT.	MAIN LANES	16					99.20	10.91	40.51						PCC-1, PCM-1, PCP-1, PCP-2
728+88	LT.	MAIN LANES	16					46.70	5.14	19.07						PCC-1, PCM-1, PCP-1, PCP-2
732+65	LT.	MAIN LANES	16					102.10	11.23	41.69						PCC-1, PCM-1, PCP-1, PCP-2
734+04	LT.	MAIN LANES	30					41.90	4.61	17.11						PCC-1, PCM-1, PCP-1, PCP-2
736+10	LT.	MAIN LANES	28					76.40								PCC-1, PCM-1, PCP-1, PCP-2
738+96	LT.	MAIN LANES	40					71.80						40		PCC-1, PCM-1, PCP-1, PCP-2
741+00	LT.	MAIN LANES	16					166.30	18.29	67.91						PCC-1, PCM-1, PCP-1, PCP-2
743+37	RT.	MAIN LANES	16					80.90	8.90	33.03				28		PCC-1, PCM-1, PCP-1, PCP-2
743+74	RT.	MAIN LANES	16					84.80	9.33	34.63				28		PCC-1, PCM-1, PCP-1, PCP-2
747+00	RT.	MAIN LANES	40											56		PCC-1, PCM-1, PCP-1, PCP-2
750+19	LT.	MAIN LANES	16					69.90								PCC-1, PCM-1, PCP-1, PCP-2
751+03	RT.	MAIN LANES	20					82.90	9.12	33.85				32		PCC-1, PCM-1, PCP-1, PCP-2
751+62	LT.	MAIN LANES	16					32.90								PCC-1, PCM-1, PCP-1, PCP-2
752+28	LT.	MAIN LANES	16					11.60								PCC-1, PCM-1, PCP-1, PCP-2
61+14	LT.	MOUNT ZION ROAD	16													PCC-1, PCM-1, PCP-1, PCP-2
31+51	RT.	HWY. 51 AND HWY. 26 INTERSECTION	16					179.50	19.75	73.30				66		PCC-1, PCM-1, PCP-1, PCP-2
32+47	RT.	HWY. 51 AND HWY. 26 INTERSECTION	16					142.90	15.72	56.35		30				PCC-1, PCM-1, PCP-1, PCP-2
* ENTIRE PROJECT TEMPORARY DRIVES																
TOTALS:							453.30	7989.50	873.85	4082.44		288	230	2184	30	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2") 94.6% MIN. AGGR 5.4% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

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

** FOR INFORMATION ONLY

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.

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.

070364

58

260

2

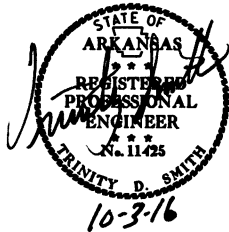
QUANTITIES

STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

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. 070364	59	260

2 QUANTITIES

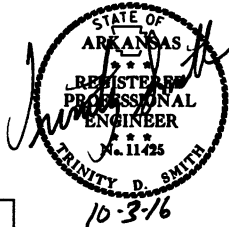


BASE AND SURFACING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")									
				TON / STATION	TON	AVG. WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	TOTAL PG 64-22 TON	
MAIN LANES																							
499+13.56	500+13.56	TRANSITION	100.00														24.00	266.67	220.00	29.33	29.33		
500+13.56	502+38.56	2 LANES NOTCH AND WIDEN SUPERELEVATION	225.00	103.00	231.75	8.71	217.75	0.05	10.89	4.46	111.50	330.00	18.40	4.25	106.25	220.00	11.69	32.00	800.00	220.00	88.00	99.69	
502+38.56	511+79.17	2 LANES NOTCH AND WIDEN SUPERELEVATION (TRANSITION)	940.61	88.88	836.01	12.35	1290.73	0.05	64.54	6.23	651.11	330.00	107.43	6.13	640.66	220.00	70.47	32.00	3344.39	220.00	367.88	438.35	
511+79.17	515+41.81	2 LANES NOTCH AND WIDEN SUPERELEVATION (6 FEET LEFT)	362.64	74.75	271.07	16.35	658.80	0.05	32.94	8.23	331.61	330.00	54.72	8.13	327.58	220.00	36.03	32.00	1289.39	220.00	141.83	177.86	
515+41.81	518+00.00	2 LANES NOTCH AND WIDEN NORMAL CROWN (6 FEET LEFT)	258.19	74.75	193.00	16.35	469.05	0.05	23.45	8.23	236.10	330.00	38.96	8.13	233.23	220.00	25.66	32.00	918.01	220.00	100.98	126.64	
518+00.00	521+49.35	2 LANES NOTCH AND WIDEN W/MOUNTABLE CURB (6 FEET LEFT)	349.35	86.50	302.19	16.35	634.65	0.05	31.73	8.23	319.46	330.00	52.71	8.13	315.58	220.00	34.71	32.00	1242.13	220.00	136.63	171.34	
521+49.35	523+83.84	2 LANES NOTCH AND WIDEN SUPERELEVATION W/MOUNTABLE CURB (6 FEET LEFT)	234.49	86.50	202.83	16.35	425.99	0.05	21.30	8.23	214.43	330.00	35.38	8.13	211.82	220.00	23.30	32.00	833.74	220.00	91.71	115.01	
523+83.84	524+00.00	2 LANES NOTCH AND WIDEN SUPERELEVATION W/MOUNTABLE CURB (6 FEET LEFT)	16.16	73.50	11.88	24.35	43.72	0.05	2.19	12.23	21.96	330.00	3.62	12.13	21.78	220.00	2.40	32.00	57.46	220.00	6.32	8.72	
524+00.00	526+99.87	2 LANES NOTCH AND WIDEN SUPERELEVATION (6 FEET LEFT)	299.87	61.75	185.17	24.35	811.31	0.05	40.57	12.23	407.49	330.00	67.24	12.13	404.16	220.00	44.46	32.00	1066.20	220.00	117.28	161.74	
526+99.87	546+60.17	2 LANES NOTCH AND WIDEN SUPERELEVATION (6 FEET LEFT)	1960.30	74.75	1465.32	16.35	3561.21	0.05	178.06	8.23	1792.59	330.00	295.78	8.13	1770.80	220.00	194.79	32.00	6969.96	220.00	766.70	961.49	
546+60.17	549+78.63	2 LANES NOTCH AND WIDEN SUPERELEVATION (TRANSITION)	318.46	127.25	405.24	32.53	1151.06	0.05	57.55	16.46	582.43	330.00	96.10	16.30	576.77	220.00	63.44	32.00	1132.30	220.00	124.55	187.99	
549+78.63	553+00.00	2 LANES FULL DEPTH SUPERELEVATION (2 FEET RIGHT)	321.37	180.75	580.88	48.71	1739.33	0.05	86.97	24.25	865.91	330.00	142.88	24.25	865.91	220.00	95.25	32.00	1142.65	220.00	125.69	220.94	
553+00.00	556+05.00	2 LANES NOTCH AND WIDEN SUPERELEVATION (2 FEET RIGHT)	305.00	103.00	314.15	8.71	295.17	0.05	14.76	4.46	151.14	330.00	24.94	4.25	144.03	220.00	15.84	32.00	1084.44	220.00	119.29	135.13	
556+05.00	569+00.00	2 LANES NOTCH AND WIDEN SUPERELEVATION W/MOUNTABLE CURB	1295.00	93.00	1204.35	8.71	1253.27	0.05	62.66	4.46	641.74	330.00	105.89	4.25	611.53	220.00	67.27	32.00	4604.44	220.00	506.49	573.76	
569+00.00	579+50.00	2 LANES FULL DEPTH SUPERELEVATION W/MOUNTABLE CURB	1050.00	171.25	1798.13	48.71	5682.83	0.05	284.14	24.46	2853.67	330.00	470.86	24.25	2829.17	220.00	311.21	32.00	3733.33	220.00	410.67	721.88	
579+50.00	587+00.00	2 LANES FULL DEPTH SUPERELEVATION (2 FEET RIGHT)	750.00	180.75	1355.63	48.71	4059.17	0.05	202.96	24.46	2038.33	330.00	336.32	24.25	2020.83	220.00	222.29	32.00	2666.67	220.00	293.33	515.62	
587+00.00	589+33.07	2 LANES NOTCH AND WIDEN SUPERELEVATION (2 FEET RIGHT)	233.07	103.00	240.06	8.71	225.56	0.05	11.28	4.46	115.50	330.00	19.06	4.25	110.06	220.00	12.11	32.00	828.69	220.00	91.16	103.27	
589+33.07	590+05.06	2 LANES NOTCH AND WIDEN (2 FEET RIGHT)	71.99	103.00	74.15	8.71	69.67	0.05	3.48	4.46	35.68	330.00	5.89	4.25	34.00	220.00	3.74	32.00	255.96	220.00	28.16	31.90	
590+05.06	598+88.28	2 LANES NOTCH AND WIDEN SUPERELEVATION (2 FEET RIGHT)	883.22	103.00	909.72	8.71	854.76	0.05	42.74	4.46	437.68	330.00	72.22	4.25	417.08	220.00	45.88	32.00	3140.34	220.00	345.44	391.32	
598+88.28	599+21.49	2 LANES NOTCH AND WIDEN SUPERELEVATION	33.21	103.00	34.21	8.71	32.14	0.05	1.61	4.46	16.46	330.00	2.72	4.25	15.68	220.00	1.72	32.00	118.08	220.00	12.99	14.71	
599+21.49	615+71.28	MILL & INLAY	1749.79			40.00	7776.84	0.05	388.84									40.00	7776.84	220.00	855.45	855.45	
615+71.28	625+13.64	MILL & INLAY	834.99			40.00	3711.07	0.05	185.55									40.00	3711.07	220.00	408.22	408.22	
625+13.64	634+35.35	2 LANES NOTCH AND WIDEN SUPERELEVATION	921.71	103.00	949.36	8.71	892.01	0.05	44.60	4.46	456.76	330.00	75.37	4.25	435.25	220.00	47.88	32.00	3277.19	220.00	360.49	408.37	
634+35.35	637+18.24	MILL & INLAY	282.89			40.00	1257.29	0.05	62.86									40.00	1257.29	220.00	138.30	138.30	
637+18.24	645+00.00	2 LANES NOTCH AND WIDEN (2 FEET RIGHT)	781.76	103.00	805.21	8.71	756.57	0.05	37.83	4.46	387.41	330.00	63.92	4.25	369.16	220.00	40.61	32.00	2779.59	220.00	305.75	346.36	
645+00.00	645+08.32	2 LANES FULL DEPTH SUPERELEVATION (2 FEET RIGHT)	8.32	180.75	15.04	48.71	45.03	0.05	2.25	24.46	22.61	330.00	3.73	24.25	22.42	220.00	2.47	32.00	29.58	220.00	3.25	5.72	
645+08.32	651+68.32	3 LANES FULL DEPTH SUPERELEVATION TAPER	660.00	204.13	1347.26	60.71	4452.07	0.05	222.60	30.46	2233.73	330.00	368.57	30.25	2218.33	220.00	244.02	38.00	2786.67	220.00	306.53	550.55	
651+68.32	657+12.03	3 LANES FULL DEPTH SUPERELEVATION	543.71	227.50	1236.94	72.71	4392.57	0.05	219.63	36.46	2202.63	330.00	363.43	36.25	2189.94	220.00	240.89	44.00	2658.14	220.00	292.40	533.29	
657+12.03	658+00.00	3 LANES FULL DEPTH SUPERELEVATION TAPER	87.97	165.25	145.37	40.53	396.16	0.05	19.81	20.35	198.91	330.00	32.82	20.19	197.35	220.00	21.71	38.00	371.43	220.00	40.86	62.57	
658+00.00	663+72.03	3 LANES NOTCH AND WIDEN SUPERELEVATION TAPER	572.03	165.25	945.28	40.53	2576.04	0.05	128.80	20.35	1293.42	330.00	213.41	20.19	1283.25	220.00	141.16	38.00	2415.24	220.00	265.68	406.84	
663+72.03	673+73.95	2 LANES NOTCH AND WIDEN SUPERELEVATION	1001.92	103.00	1031.98	8.71	969.64	0.05	48.48	4.46	496.51	330.00	81.92	4.25	473.13	220.00	52.04	32.00	3562.38	220.00	391.86	443.90	
673+73.95	679+36.52	2 LANES NOTCH AND WIDEN (2 FEET RIGHT)	562.57	103.00	579.45	8.71	544.44	0.05	27.22	4.46	278.78	330.00	46.00	4.25	265.66	220.00	29.22	32.00	2000.25	220.00	220.03	249.25	
679+36.52	679+51.20	2 LANES NOTCH AND WIDEN (2 FEET RIGHT) (TRANSITION)	14.68	103.00	15.12	8.71	14.21	0.05	0.71	4.46	7.27	330.00	1.20	4.25	6.93	220.00	0.76	32.00	52.20	220.00	5.74	6.50	
679+51.20	680+46.52	2 LANES NOTCH AND WIDEN SUPERELEVATION (2 FEET RIGHT) (TRANSITION)	95.32	103.00	98.18	8.71	92.25	0.05	4.61	4.46	47.24	330.00	7.79	4.25	45.01	220.00	4.95	32.00	338.92	220.00	37.28	42.23	
680+46.52	680+92.89	2 LANES NOTCH AND WIDEN SUPERELEVATION	46.37	103.00	47.76	8.71	44.88	0.05	2.24	4.46	22.98	330.00	3.79	4.25	21.90	220.00	2.41	32.00	164.87	220.00	18.14	20.55	
680+92.89	693+73.18	MILL & INLAY	1280.29			40.00	5690.18	0.05	284.51			330.00						40.00	5690.18	220.00	625.92	625.92	
693+73.18	694+80.55	MILL & INLAY	492.94			40.00	2190.84	0.05	109.54			330.00						40.00	2190				

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. 070364	60	260

2 QUANTITIES



MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

BASE AND SURFACING (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")									
				TON / STATION	TON	AVG. WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	TOTAL PG 64-22 TON	
ADDITIONAL FOR METHOD OF RAISING GRADE																							
517+00.78	525+10.81	HWY. 51	810.03			20.00	1800.07	0.05	90.00	20.00	VAR.	VAR.	555.79										
548+31.80	588+82.69	HWY. 51	4050.89			20.00	9001.98	0.05	450.10	20.00	VAR.	VAR.	3600.82										
641+82.96	664+14.42	HWY. 51	2231.46			20.00	4958.80	0.05	247.94	20.00	VAR.	VAR.	2588.26										
747+91.81	752+47.64	HWY. 51	455.83			20.00	1012.96	0.05	50.65	20.00	VAR.	VAR.	123.16										
29+95.07	33+75.63	HWY. 51 & HWY. 26 INTERSECTION	380.56			20.00	845.69	0.05	42.28	20.00	VAR.	VAR.	1181.86										
ADDITIONAL FOR SUPERELEVATION																							
500+13.56	503+13.56	TRANSITION	300.00	4.93	14.79																		
503+13.56	509+40.35	MAX SUPERELEVATION	626.79	9.86	61.80																		
509+40.25	512+40.25	TRANSITION	300.00	4.93	14.79																		
512+40.25	513+72.12	TRANSITION	131.87	7.76	10.23																		
513+72.12	514+09.94	MAX SUPERELEVATION	37.82	15.52	5.87																		
514+09.94	515+41.81	TRANSITION	131.87	7.76	10.23																		
521+49.35	523+83.84	TRANSITION	234.49	6.51	15.27																		
523+83.84	524+99.35	TRANSITION	115.51	6.55	7.57																		
524+99.35	525+23.87	MAX SUPERELEVATION	24.52	13.10	3.21																		
525+23.87	525+39.96	TRANSITION	16.09	6.29	1.01																		
525+39.96	529+29.05	MAX SUPERELEVATION	389.09	12.05	46.89																		
529+29.05	530+87.64	MAX SUPERELEVATION	158.59	12.00	19.03																		
530+87.64	533+87.64	TRANSITION	300.00	6.00	18.00																		
533+87.64	536+87.64	TRANSITION	300.00	12.04	36.12																		
536+87.64	537+67.89	MAX SUPERELEVATION	80.25	24.07	19.32																		
537+67.89	540+56.39	TRANSITION	288.50	24.07	69.44																		
540+56.39	541+06.39	TRANSITION	50.00	28.58	14.29																		
541+06.39	543+13.26	MAX SUPERELEVATION	206.87	33.08	68.43																		
543+13.26	544+11.36	TRANSITION	98.10	29.42	28.86																		
544+11.36	547+35.17	TRANSITION	323.81	25.75	83.38																		
547+35.17	549+01.13	MAX SUPERELEVATION	165.96	25.75	42.73																		
549+01.13	549+78.63	TRANSITION	77.50	12.88	9.98																		
549+78.63	552+01.13	TRANSITION	222.50	17.81	39.63																		
552+01.13	555+51.13	TRANSITION	350.00	11.58	40.53																		
555+51.13	556+05.00	MAX SUPERELEVATION	53.87	23.16	12.48																		
556+05.00	556+59.42	MAX SUPERELEVATION	54.42	23.16	12.60																		
556+59.42	560+09.42	TRANSITION	350.00	22.75	79.63																		
560+09.42	561+85.98	TRANSITION	176.56	21.25	37.52																		
561+85.98	562+21.39	MAX SUPERELEVATION	35.41	42.50	15.05																		
562+21.39	563+97.95	TRANSITION	176.56	21.25	37.52																		
569+79.48	572+29.48	TRANSITION	250.00	22.75	56.88																		
572+29.48	573+23.27	MAX SUPERELEVATION	93.79	45.50	42.67																		
573+23.27	575+73.27	TRANSITION	250.00	22.75	56.88																		
580+22.99	581+13.78	TRANSITION	90.79	20.15	18.29																		
581+13.78	581+89.00	MAX SUPERELEVATION	75.22	40.30	30.31																		
581+89.00	583+23.59	TRANSITION	134.59	20.15	27.12																		
583+23.59	586+28.33	TRANSITION	304.74	20.56	62.65																		
586+28.33	589+33.07	TRANSITION	304.74	20.56	62.65																		
589+33.07	592+10.56	TRANSITION	221.46	16.44	36.41																		
592+10.56	592+75.97	MAX SUPERELEVATION	65.41	32.88	21.51																		
592+75.97	594+97.43	TRANSITION	221.46	16.44	36.41																		
594+97.43	597+05.26	TRANSITION	207.83	20.38	42.36																		
597+05.26	597+43.19	MAX SUPERELEVATION	37.93	40.75	15.46																		
597+43.19	599+21.49	TRANSITION	178.30	20.38	36.34																		
627+27.43	629+77.43	TRANSITION	250.00	20.56	51.40																		
629+77.43	631+27.00	MAX SUPERELEVATION	149.57	41.11	61.49																		
631+27.00	633+77.00	TRANSITION	250.00	20.56	51.40																		
652+51.52	655+51.52	TRANSITION	300.00	16.44	49.32																		
655+51.52	663+36.40	MAX SUPERELEVATION	784.88	32.88	258.07																		
663+36.40	666+36.40	TRANSITION	300.00	16.44	49.32																		
666+36.40	669+36.40	TRANSITION	300.00	24.10	72.30																		
669+36.40	670+37.93	MAX SUPERELEVATION	101.53	48.19	48.93																		
670+37.93	673+37.93	TRANSITION	300.00	24.10	72.30																		
699+73.49	700+85.36	TRANSITION	111.87	16.13	18.04																		
700+85.36	702+81.10	MAX SUPERELEVATION	195.74	32.25	63.13																		
702+81.10	706+31.10	TRANSITION	350.00	16.13	56.46																		
720+08.40	723+08.40	TRANSITION	300.00	3.38	10.14																		
723+08.40	726+74.18	MAX SUPERELEVATION	365.78	6.75	24.69																		
726+74.18	729+74.18	TRANSITION	300.00	3.38	10.14																		
737+60.16	740+60.16	TRANSITION	300.00	3.38	10.14																		
740+60.16	745+29.17	MAX SUPERELEVATION	469.01	6.75	31.66																		
745+29.17	748+29.17	TRANSITION	300.00	3.38	10.14																		
SUBTOTALS SHEET 1 OF 2:					39795.20		111523.68		10398.03		26158.23		4316.12		65991.88		11706.21		98230.52		10805.34	22511.55	
SUBTOTALS SHEET 2 OF 2:					2371.21		17619.50		880.97				8049.89										

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

QUANTITIES

8/2/2016

R070364.DGN

SURVEY CONTROL COORDINATES

Project Name: s070364
Date: 7/6/2012
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	1842480.7838	981217.7968	333.235	CTL	2' REBAR W/2' ALUM CAP
2	1842270.5188	980600.5648	337.366	CTL	2' REBAR W/2' ALUM CAP
3	1841845.4969	980073.1883	354.305	CTL	2' REBAR W/2' ALUM CAP
4	1841583.0301	979824.8522	359.824	CTL	2' REBAR W/2' ALUM CAP
5	1840971.4230	979387.1773	357.113	CTL	2' REBAR W/2' ALUM CAP
6	1840443.1214	979111.4350	343.955	CTL	2' REBAR W/2' ALUM CAP
7	1840101.0529	978901.6744	327.181	CTL	2' REBAR W/2' ALUM CAP
8	1839678.0279	978489.4148	321.572	CTL	2' REBAR W/2' ALUM CAP
9	1839194.7391	978051.7852	293.836	CTL	2' REBAR W/2' ALUM CAP
10	1838709.3394	977651.0303	278.523	CTL	2' REBAR W/2' ALUM CAP
11	1838299.3190	977248.3158	255.693	CTL	2' REBAR W/2' ALUM CAP
12	1838037.0465	976686.1617	243.996	CTL	2' REBAR W/2' ALUM CAP
13	1837657.5112	976080.8002	293.628	CTL	2' REBAR W/2' ALUM CAP
14	1837413.8164	975409.6835	325.821	CTL	2' REBAR W/2' ALUM CAP
15	1837264.5394	974927.0916	345.135	CTL	2' REBAR W/2' ALUM CAP
16	1837006.5967	974224.0273	347.176	CTL	2' REBAR W/2' ALUM CAP
17	1836640.4050	973813.1351	330.128	CTL	2' REBAR W/2' ALUM CAP
18	1836404.5854	973342.8576	308.743	CTL	2' REBAR W/2' ALUM CAP
19	1836257.7363	972866.4334	325.618	CTL	2' REBAR W/2' ALUM CAP
20	1836075.4766	972153.1024	306.050	CTL	2' REBAR W/2' ALUM CAP
21	1835991.2159	971543.6477	281.024	CTL	2' REBAR W/2' ALUM CAP
22	1835864.0370	970981.9147	276.818	CTL	2' REBAR W/2' ALUM CAP
23	1835648.5209	970458.0383	260.903	CTL	2' REBAR W/2' ALUM CAP
24	1835307.5277	969999.5612	255.786	CTL	2' REBAR W/2' ALUM CAP
25	1835039.8315	969254.7193	262.684	CTL	2' REBAR W/2' ALUM CAP
26	1834858.8711	968554.4848	308.393	CTL	2' REBAR W/2' ALUM CAP
27	1834652.1799	967573.5843	331.077	CTL	2' REBAR W/2' ALUM CAP
28	1834387.6061	967204.2749	337.025	CTL	2' REBAR W/2' ALUM CAP
29	1834226.0431	966744.8935	336.079	CTL	2' REBAR W/2' ALUM CAP
30	1834212.2901	966168.1659	360.523	CTL	2' REBAR W/2' ALUM CAP
31	1834118.5573	965696.4677	350.301	CTL	2' REBAR W/2' ALUM CAP
32	1833928.6103	965279.4615	368.373	CTL	2' REBAR W/2' ALUM CAP
33	1833994.6936	964997.6935	375.191	CTL	2' REBAR W/2' ALUM CAP
34	1834006.7014	964286.9501	326.305	CTL	2' REBAR W/2' ALUM CAP
35	1834041.2566	963818.5285	339.012	CTL	2' REBAR W/2' ALUM CAP
36	1834056.8752	963525.6969	326.407	CTL	2' REBAR W/2' ALUM CAP
37	1834307.4193	962979.4260	328.585	CTL	2' REBAR W/2' ALUM CAP
38	1834424.0537	962384.3757	361.395	CTL	2' REBAR W/2' ALUM CAP
39	1834317.8305	961739.4138	370.692	CTL	2' REBAR W/2' ALUM CAP
40	1834032.6451	961123.3350	332.269	CTL	2' REBAR W/2' ALUM CAP
41	1834020.8421	960485.3338	325.744	CTL	2' REBAR W/2' ALUM CAP
42	1834013.1645	959852.6262	364.252	CTL	2' REBAR W/2' ALUM CAP
43	1834069.4010	959303.2701	379.931	CTL	2' REBAR W/2' ALUM CAP
44	1833499.6116	958603.1168	344.328	CTL	2' REBAR W/2' ALUM CAP
45	1832971.7561	958432.2608	354.501	CTL	2' REBAR W/2' ALUM CAP
46	1834340.1770	966006.9495	356.293	CTL	2' REBAR W/2' ALUM CAP
47	1834428.0517	965801.8100	359.786	CTL	2' REBAR W/2' ALUM CAP
48	1836504.9642	973063.7327	333.858	CTL	2' REBAR W/2' ALUM CAP
49	1836852.8315	973207.9133	339.900	CTL	2' REBAR W/2' ALUM CAP
100	1842486.9760	981777.9647	333.919	GPS	AHTD GPS *100021
101	1841315.9219	981275.6987	310.296	GPS	AHTD GPS *100005A
102	1835385.0731	970144.5503	254.412	GPS	AHTD GPS *100023
103	1834677.2371	968139.2639	330.022	GPS	AHTD GPS *100023A
104	1834090.2299	958856.8785	356.019	GPS	AHTD GPS *100022
105	1834575.5912	957438.9514	304.393	GPS	AHTD GPS *100022A
900	-99999.0000	-99999.0000	273.066	TBM	CHISELED SQUARE IN CONCRETE
901	-99999.0000	-99999.0000	291.332	TBM	CHISELED SQUARE IN CONCRETE SIDEWALK
902	-99999.0000	-99999.0000	319.797	TBM	CHISELED SQUARE IN CONCRETE SIDEWALK
903	1842517.7879	981480.2015	337.508	TBM	4" AHTD ALUM BENCHMARK CAP
904	1841105.0719	979487.5977	353.692	TBM	CHISELED SQUARE TOP CENTER OF 15' CULVERT
905	1839997.9288	978781.3045	324.315	TBM	CHISELED SQUARE IN HEADWALL
906	1838778.3501	977667.5555	280.792	TBM	CHISELED SQUARE TOP CENTER OF 18' CULVERT
907	1837914.6853	976561.0976	252.110	TBM	4" CAP IN BRIDGE
908	1837413.6440	975307.5735	332.164	TBM	2' REBAR W/2' ALUM CAP
909	1836728.8067	974028.3523	346.500	TBM	2' REBAR W/2' ALUM CAP
910	1836318.5392	972935.1895	326.966	TBM	CHISELED SQUARE IN CULVERT
911	1835938.8229	971266.7455	273.871	TBM	CHISELED SQUARE IN HEADWALL
912	1835123.5335	969362.2517	258.181	TBM	4" AHTD ALUM BENCHMARK CAP IN BRIDGE END
913	1834719.2561	967779.2950	330.845	TBM	2' REBAR W/2' ALUM CAP
914	1834039.9265	964257.1250	326.841	TBM	CHISELED SQUARE IN CONCRETE HEADWALL
915	1834221.6236	963189.5768	324.342	TBM	CHISELED SQUARE IN CONCRETE HEADWALL
916	1834055.7595	959595.7453	362.598	TBM	CHISELED SQUARE IN CONCRETE HEADWALL
998	1843098.9886	993731.7893	248.020	BM	NGS BM Y 136
999	1844333.7199	991642.5438	248.340	BM	NGS BM X 136

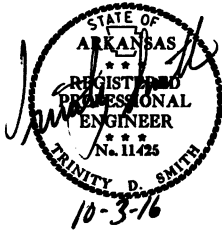
*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.999902573 HAS BEEN USED TO COMPUTE THE GROUND COORDINATES LISTED ABOVE.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME: s070364gi.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
AT A SPECIFIC POINT.

REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL
IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS -0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 100021 - 100005A 100022 - 100022A 100023 - 100023A
CONVERGENCE ANGLE: 00 37 58 LEFT AT LT: 34-05-54.21 LG: 093-07-50.51
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

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.		070364	62	260

2 SURVEY CONTROL DETAILS

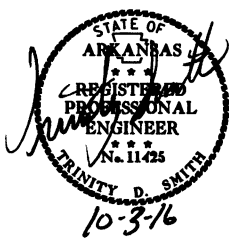


HIGHWAY 51

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	499+99.86	1834326.3265	958202.4698
8052	PC	502+38.56	1834223.4066	958417.8479
8054	PT	511+79.17	1834038.6130	959330.4724
8055	PC	513+01.33	1834044.2557	959452.5048
8057	PT	514+42.91	1834044.6676	959594.0437
8058	PC	524+11.85	1834005.5452	960562.1953
8060	PT	526+11.37	1834013.0853	960761.3648
8061	PC	528+54.05	1834041.1893	961002.4150
8063	PT	532+52.86	1834141.4945	961387.0764
8064	PC	535+22.42	1834244.9990	961635.9729
8066	PT	538+42.89	1834345.5460	961939.9427
8067	PC	540+18.89	1834388.2043	962110.7039
8069	PT	544+00.76	1834398.6983	962489.4361
8070	PC	546+60.17	1834349.8592	962744.2061
8072	PT	549+78.63	1834262.0258	963049.8599
8073	PC	554+61.12	1834087.4388	963499.6582
8075	PT	558+57.71	1834020.1453	963887.8491
8076	PC	561+06.42	1834026.8481	964136.4683
8078	PT	562+65.53	1834023.3965	964295.4789
8079	PI	568+19.96	1833984.4183	964848.5412
8080	PC	571+66.98	1833957.0365	965194.4755
8082	PT	574+70.93	1834006.6455	965491.2908
8083	PC	576+75.59	1834088.2645	965678.9759
8085	PT	579+62.74	1834194.4517	965945.7113
8086	PC	579+95.62	1834205.6496	965976.6249
8088	PT	582+31.94	1834234.8697	966209.1771
8089	PC	584+15.24	1834217.0190	966391.6015
8091	PT	588+41.41	1834265.9178	966811.7085
8092	PC	591+55.19	1834367.3871	967108.6338
8094	PT	593+96.74	1834474.4734	967324.3685
8095	PC	595+98.11	1834586.8741	967491.4446
8097	PT	598+88.28	1834671.3609	967764.7405
8098	PC	600+13.75	1834672.2943	967890.2088
8152	PT	603+50.14	1834726.0987	968220.9287
8020	PI	614+62.65	1835070.8890	969278.6539
8153	PC	619+52.14	1835225.2667	969743.1638
8155	PT	624+74.89	1835455.4869	970210.6809
8156	PI	624+84.78	1835461.0254	970218.8767
8157	PC	629+14.93	1835704.4803	970573.5021
8159	PT	631+89.50	1835811.5486	970824.3792
8160	PI	632+91.33	1835832.2917	970924.0778
8161	PI	634+01.46	1835856.6788	971031.4723
8162	PI	634+89.77	1835874.6664	971117.9272
8163	PI	635+99.79	1835895.1149	971226.0283
8164	PC	642+51.35	1836027.8366	971863.9364
8166	PT	649+76.63	1836197.9325	972568.8571
8167	PI	651+14.07	1836234.3812	972701.3739
8168	PC	654+76.52	1836324.1066	973052.5454
8170	PT	660+16.50	1836512.0028	973557.7102
8171	PC	660+35.17	1836520.3219	973574.4154
8173	PT	664+16.87	1836720.7086	973898.6643
8174	PC	668+55.92	1836984.6886	974249.4921
8176	PT	671+12.93	1837101.9932	974476.7994
8177	PI	675+88.48	1837246.0498	974930.0055
8178	PI	679+04.84	1837338.3766	975232.5909
8179	PI	679+36.52	1837347.0927	975263.0505
8180	PI	680+46.52	1837379.2732	975368.2393
8181	PC	681+76.20	1837414.9504	975492.9178
8183	PT	685+64.23	1837560.6895	975851.7298
8184	PI	698+61.88	1838174.7459	976994.9050
8185	PI	699+71.97	1838225.0697	977092.8182
8186	PC	699+97.86	1838236.9038	977115.8433
8188	PT	703+68.60	1838460.8825	977408.8276
8189	PI	711+97.96	1839073.2478	977968.1428
8190	PI	717+72.79	1839495.1603	978358.5621
8191	PI	720+67.87	1839710.9673	978559.7990
8192	PC	722+33.40	1839833.7308	978670.8377
8194	PT	727+49.18	1840245.2510	978980.6175
8195	PI	728+41.09	1840323.3549	979029.0694
8196	PC	730+78.47	1840527.7805	979149.7310
8284	PT	735+94.81	1840966.3735	979422.1147
8197	PI	a 739+66.96	1841277.9394	979625.4760
8198	PC	a 739+85.17	1841293.1885	979635.4292
8254	PT	a 746+04.18	1841771.0848	980026.9618
8255	PI	a 747+72.56	1841889.0597	980147.1046
8256	PI	a 750+37.55	1842068.0660	980342.4973
8257	PI	a 751+47.56	1842143.8397	980422.2487
8258	PC	a 752+38.39	1842205.1950	980489.2210
8260	PT	a 753+22.48	1842279.1279	980524.8917
8051	POE	a 753+81.06	1842337.5678	980528.9844

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						070364	63	260

2 SURVEY CONTROL DETAILS



HWY. 51 INTERSECTION

POINT NO.	TYPE	STATION	NORTHING	EASTING
8261	POB	29+95.07	1834081.6794	958829.3161
8262	POE	34+00.01	1833700.7926	958691.8370

MOUNT ZION ROAD

POINT NO.	TYPE	STATION	NORTHING	EASTING
8273	POB	60+00.00	1836315.3579	973018.3044
8274	PC	60+34.77	1836349.8446	973013.8666
8276	PT	61+61.89	1836467.8383	973049.8179
8277	POE	62+82.03	1836558.2044	973128.9923

HELMS RD./CO. RD. 74

POINT NO.	TYPE	STATION	NORTHING	EASTING
8263	POB	10+00.00	1834207.1429	965980.7473
8264	PC	10+31.88	1834177.0795	965991.3573
8266	PT	10+68.56	1834146.4397	966010.9325
8267	POE	11+90.00	1834061.6400	966097.8565

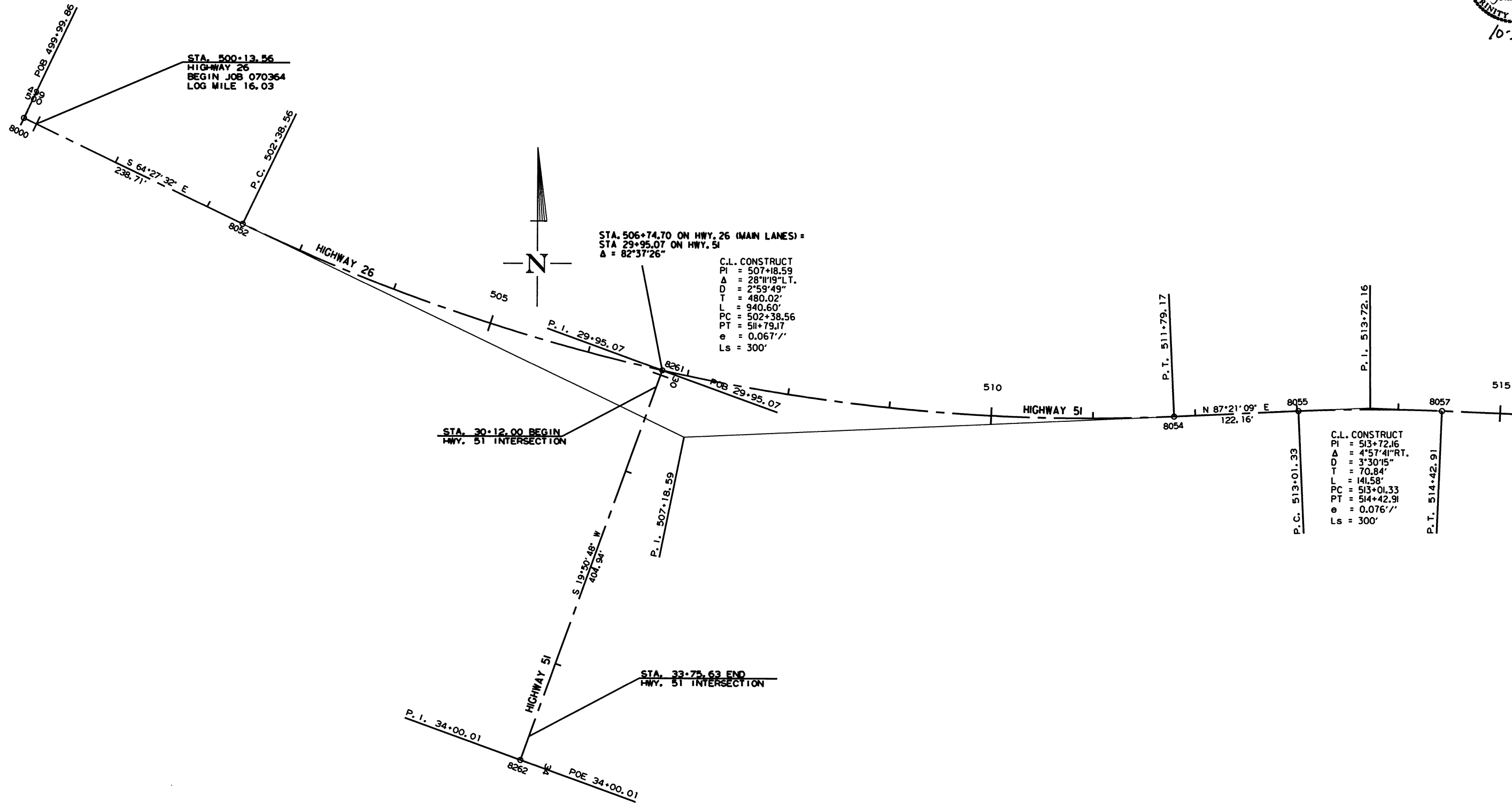
STAGE 1 TEMPORARY WIDENING DETOUR

POINT NO.	TYPE	STATION	NORTHING	EASTING
8285	POB	1982+00.00	1834022.1744	960150.6773
8286	PC	1985+22.39	1834009.1574	960472.8055
8288	PT	1986+77.27	1834015.4532	960627.3851
8289	PC	1986+92.54	1834017.3091	960642.5471
8291	PT	1988+20.47	1834024.3130	960770.1885
8292	PC	1988+38.38	1834024.0951	960788.0927
8294	PT	1989+60.83	1834030.4493	960910.2974
8061	POE	1990+53.57	1834041.1893	961002.4150

SURVEY 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. 070364			64	260

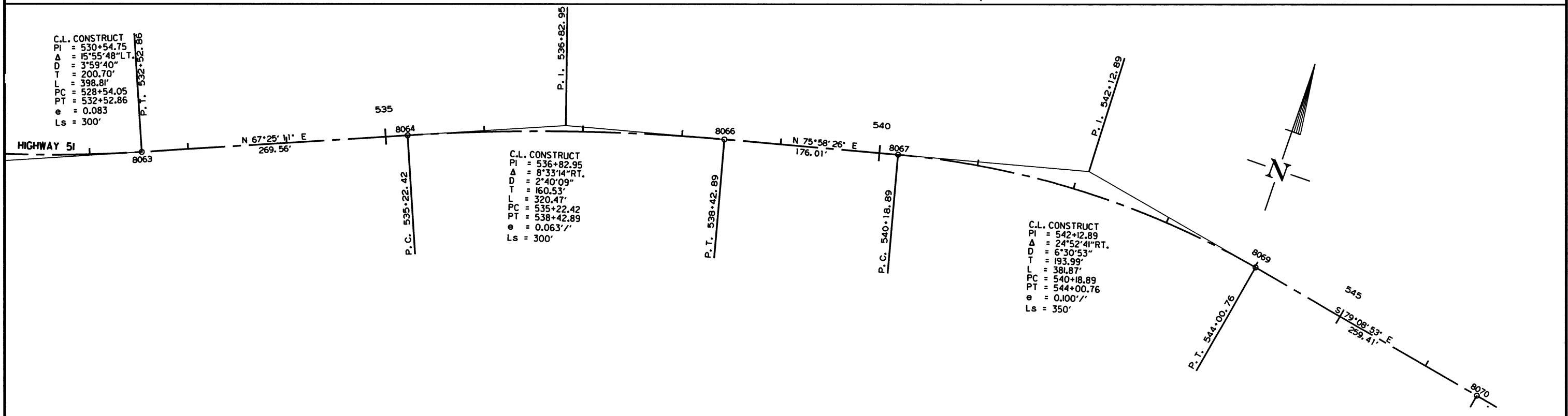
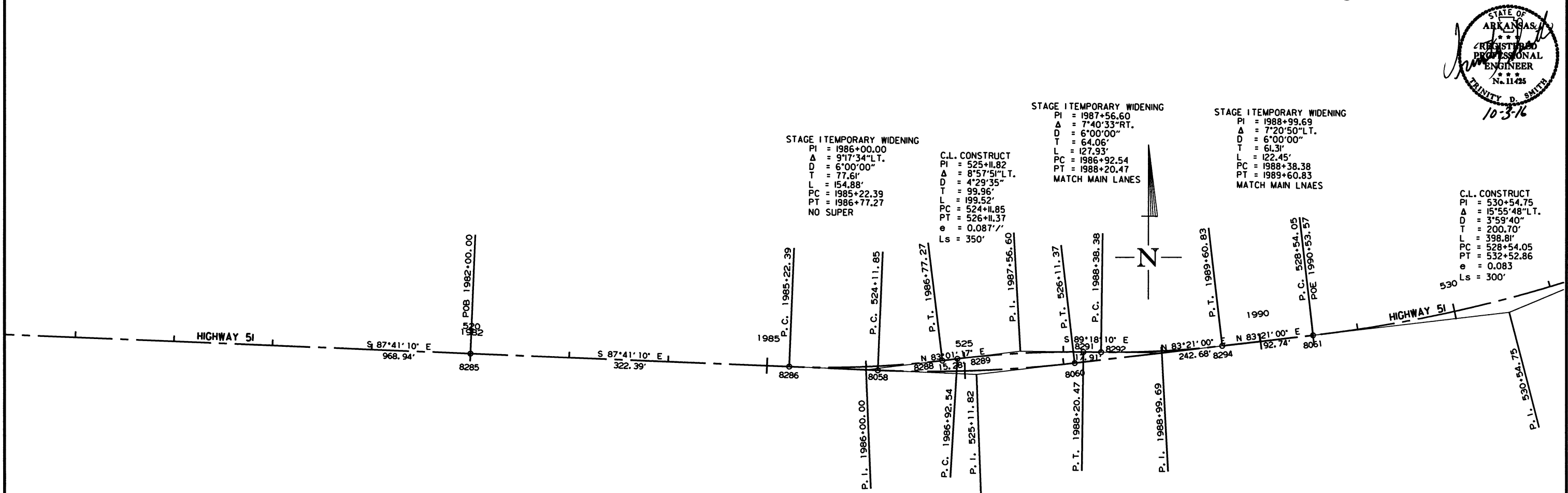
2 SURVEY CONTROL DETAILS



SURVEY CONTROL DETAILS

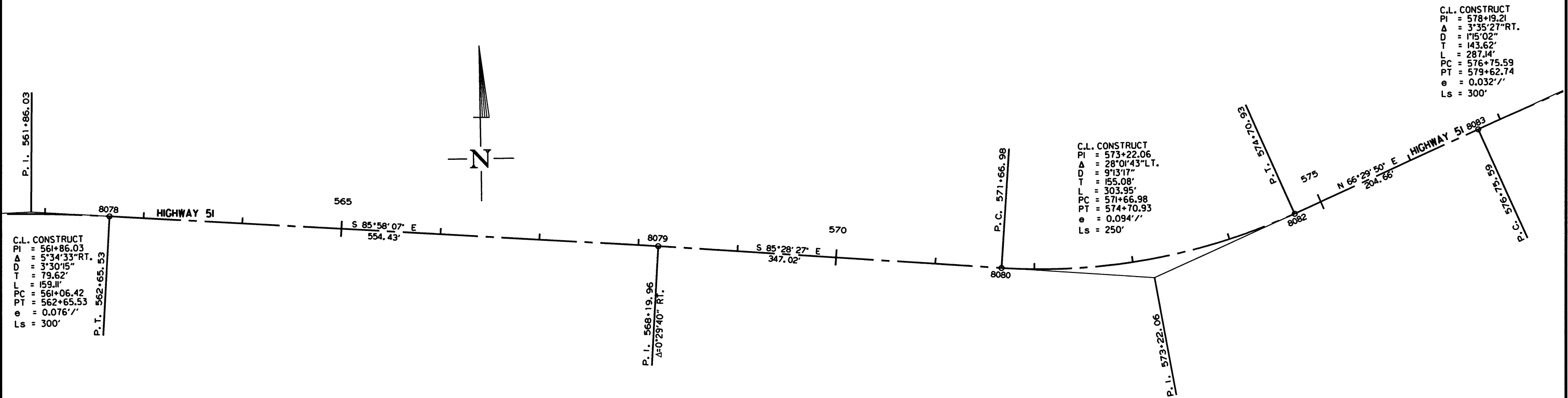
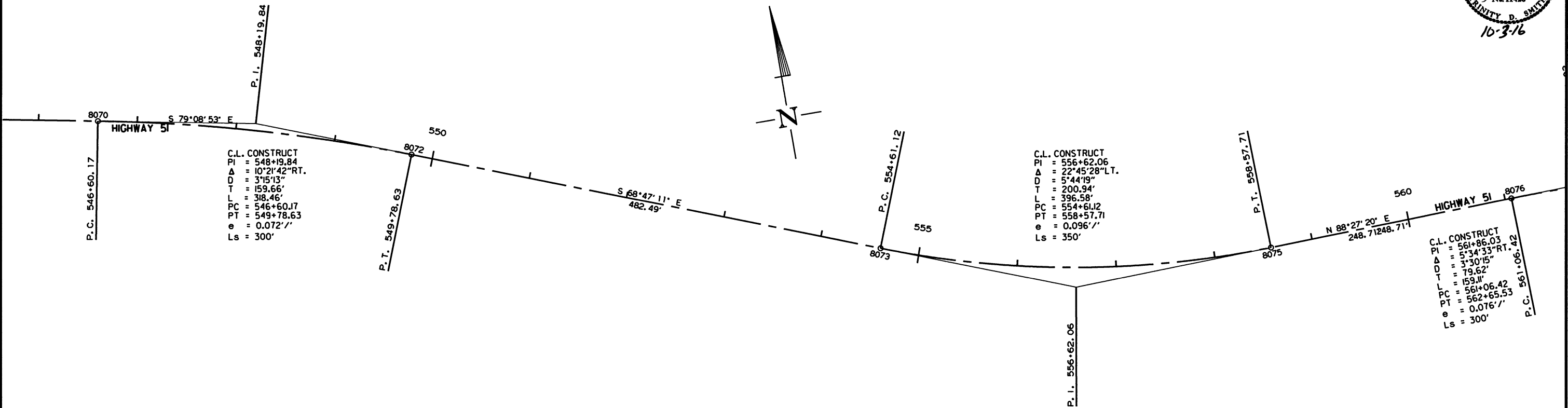
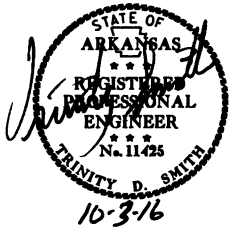
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070364	65	260

2 SURVEY 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. 070364	66	260

2 SURVEY CONTROL DETAILS



SURVEY CONTROL DETAILS

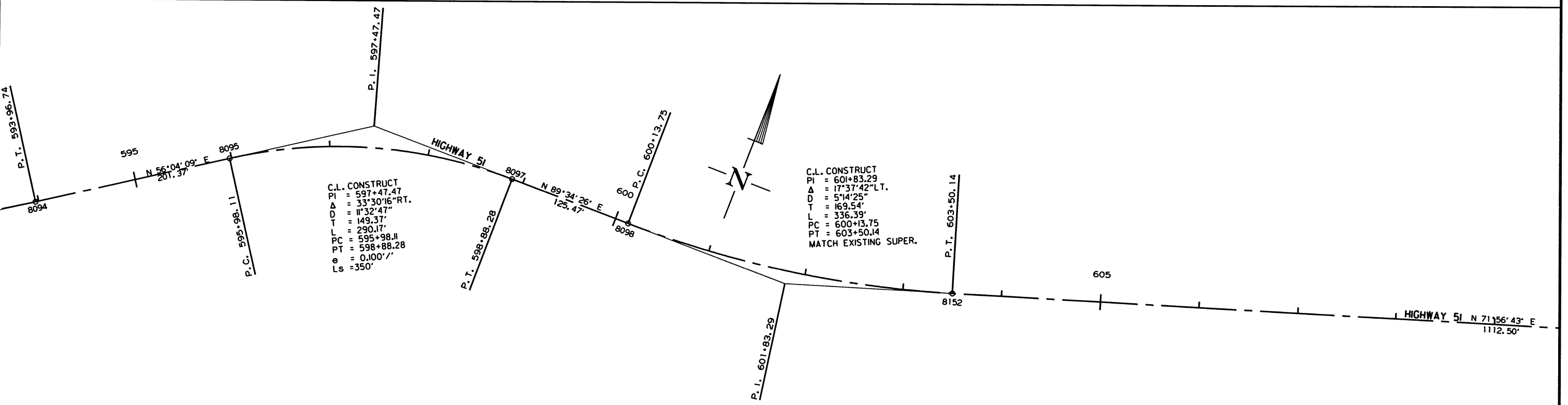
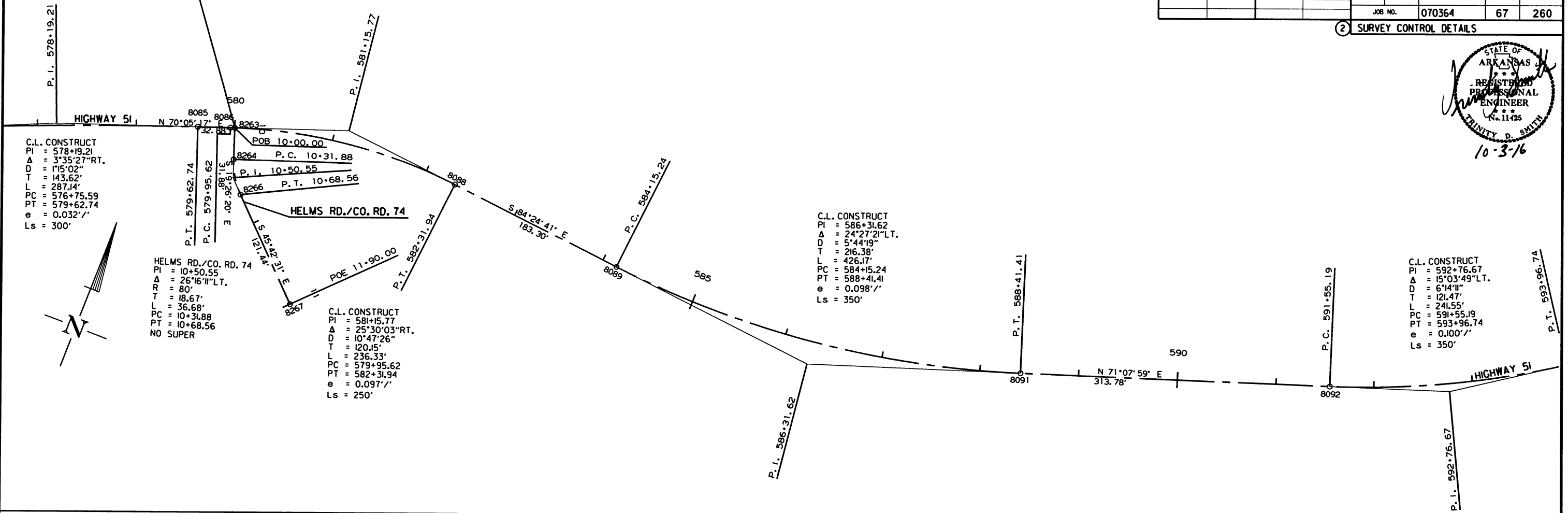
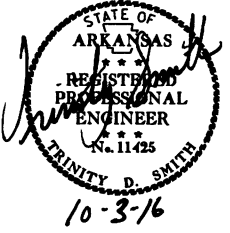
9/27/2016

R070364.DGN

STA. 580+00.00 ON HWY 51=
STA. 10+00.02 ON HELMS RD./CO. RD. 74
Δ = 90°00'00"

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.		070364	67	260

② SURVEY CONTROL DETAILS



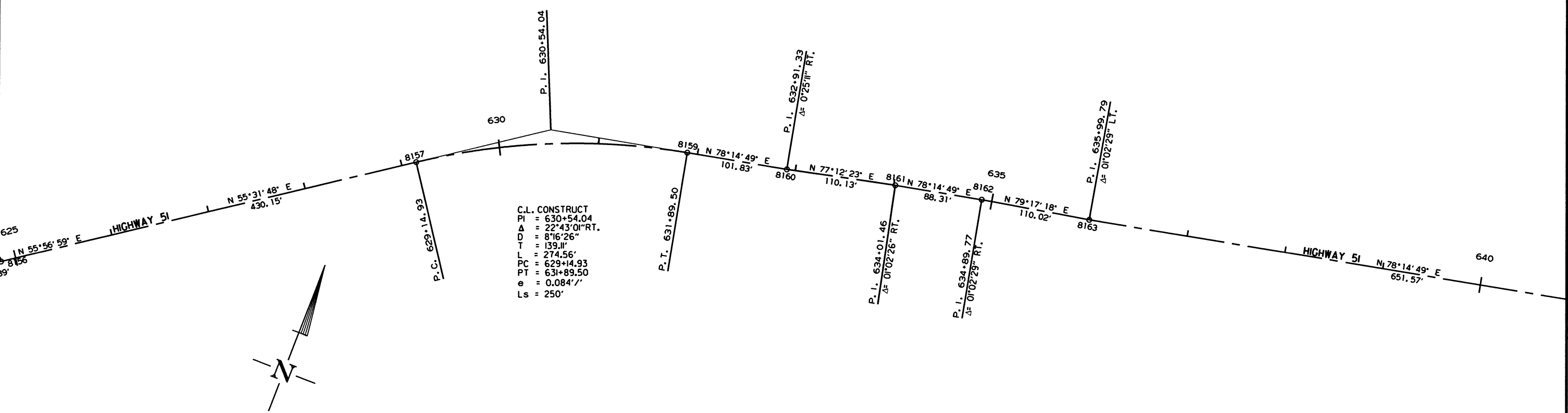
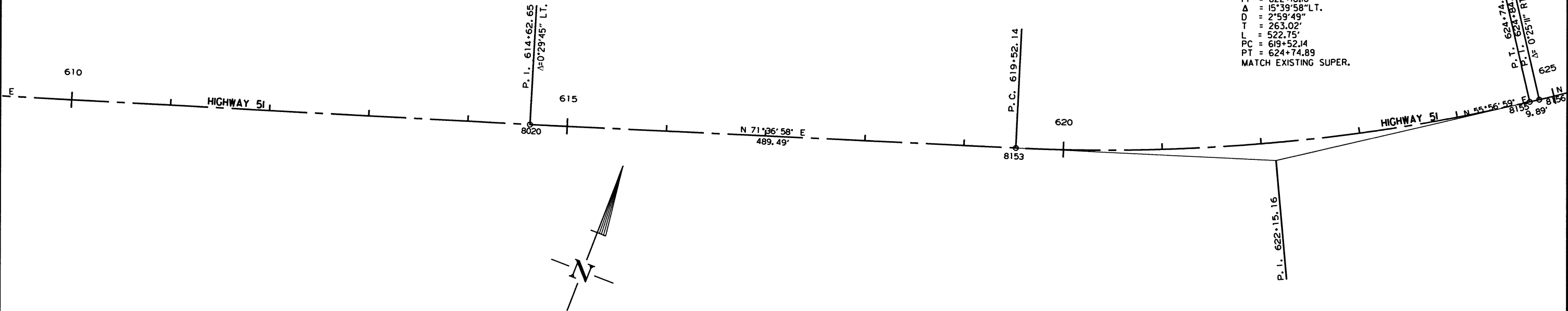
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070364	68	260

2 SURVEY CONTROL DETAILS



C.L. CONSTRUCT
PI = 622+16.16
Δ = 15°39'58" LT.
D = 2°59'49"
T = 263.02'
L = 522.75'
PC = 619+52.14
PT = 624+74.89
MATCH EXISTING SUPER.

P.I. 624+74.89
P.T. 624+74.78
Δ = 0°25'11" RT.
625



C.L. CONSTRUCT
PI = 630+54.04
Δ = 22°43'01" RT.
D = 8°16'26"
T = 139.11'
L = 274.56'
PC = 629+14.93
PT = 631+89.50
e = 0.084'/'
Ls = 250'

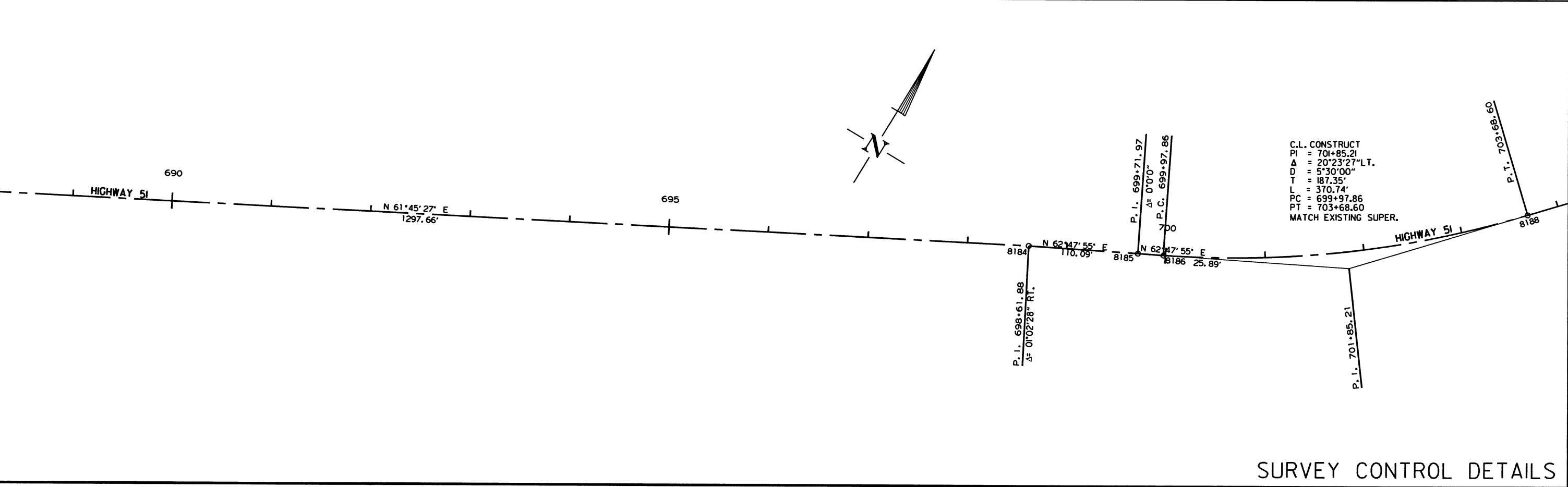
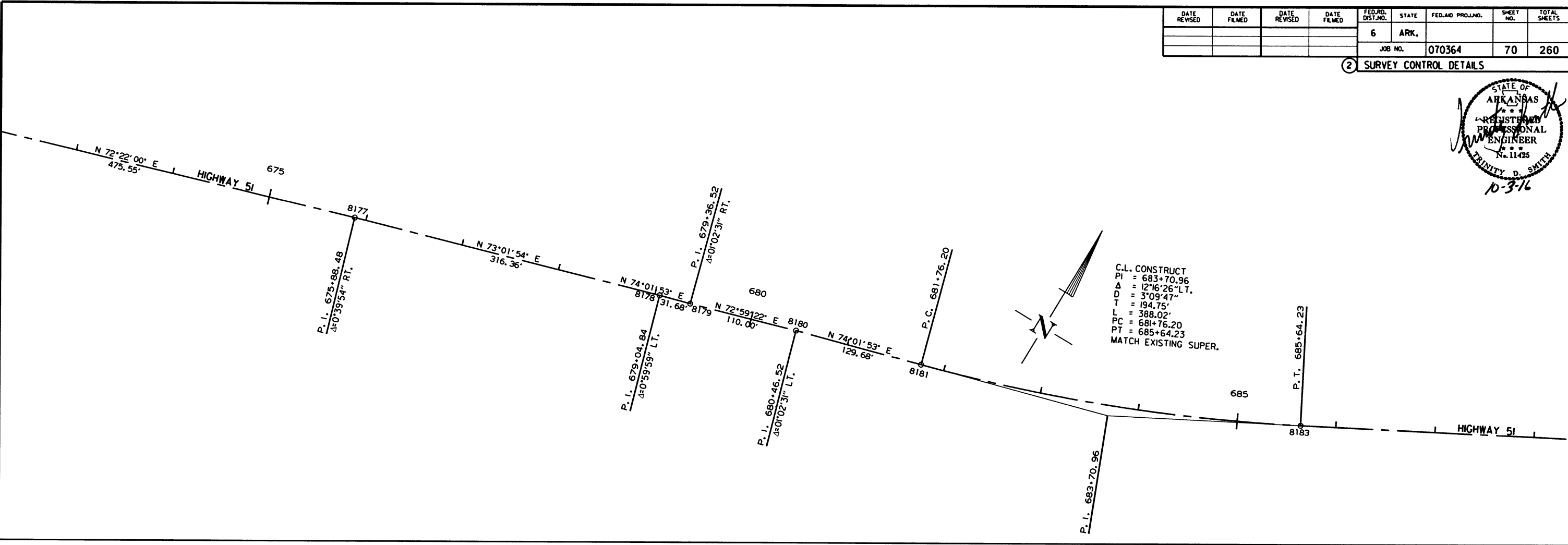
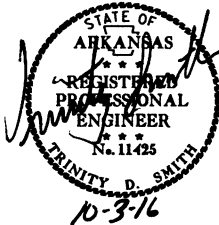
SURVEY CONTROL DETAILS

9/27/2016

R070364.DGN

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				6	ARK.			
				JOB NO. 070364			70	260

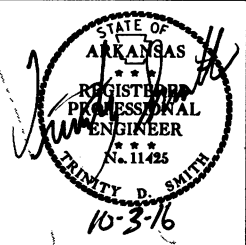
2 SURVEY CONTROL DETAILS



SURVEY 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.		070364	73	260

2 PLAN AND PROFILE SHEETS



C.L. CONSTRUCT
 PI = 507+18.59
 Δ = 28°11'19" LT.
 D = 2°59'49"
 T = 480.02'
 L = 940.60'
 PC = 502+38.56
 PT = 511+79.17
 e = 0.067'/'
 Ls = 300'

STA.	STA.	SIDE	"W"	SQ. YDS.
505+70	506+50	LT.	7	36.56

STA. 514+46 IN PLACE
 18" x 36' CLAY PIPE CULV'T.
 W/HDWLS. LT. & RT.
 REMOVE AND CONSTRUCT
 24" x 44' R.C. PIPE CULVERT
 (CLASS IV TYPE 3 BEDDING) WITH
 FES LT. & RT.
 D.A. = 5 AC. 050' x 22' C.F.S.
 24" R.C. PIPE = 44 LIN. FT.
 24" FES = 2 EACH

C.L. CONSTRUCT
 PI = 513+72.16
 Δ = 4°57'41" RT.
 D = 3°30'15"
 T = 70.84'
 L = 141.58'
 PC = 513+01.33
 PT = 514+42.91
 e = 0.076'/'
 Ls = 300'

STA. 506+75
 CONST. APPR. = 190 CU. YDS.

STA. 506+74.70 ON HWY. 26 (MAIN LANES) =
 STA. 29+95.07 ON HWY. 51
 Δ = 82°37'26"

STA. 504+00 IN PLACE
 18" x 42' PIPE CULV'T.
 REMOVE AND INSTALL
 21" x 15" x 28' ARCH PIPE CULV'T.
 RT. SIDE DRAIN
 CONST. APPR. = 30 CU. YDS.

STA. 500+13.56
 BEGIN JOB 070364
 LOG MILE 16.03

STA. 505+30 INSTALL
 21" x 15" x 28' ARCH PIPE CULV'T.
 RT. SIDE DRAIN
 CONST. APPR. = 25 CU. YDS.

STA. 507+73 INSTALL
 21" x 15" x 28' ARCH PIPE CULV'T.
 LT. SIDE DRAIN
 CONST. APPR. = 5 CU. YDS.

STA. 508+44 IN PLACE
 18" x 24' C.M. PIPE CULV'T.
 RT. SIDE DRAIN
 REMOVE AND INSTALL
 18" x 42' PIPE CULV'T.
 RT. SIDE DRAIN
 CONST. APPR. ON RT. = 135 CU. YDS.

STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
514+00	515+00	RT.	D	30	1

WIRE FENCE AND GATE

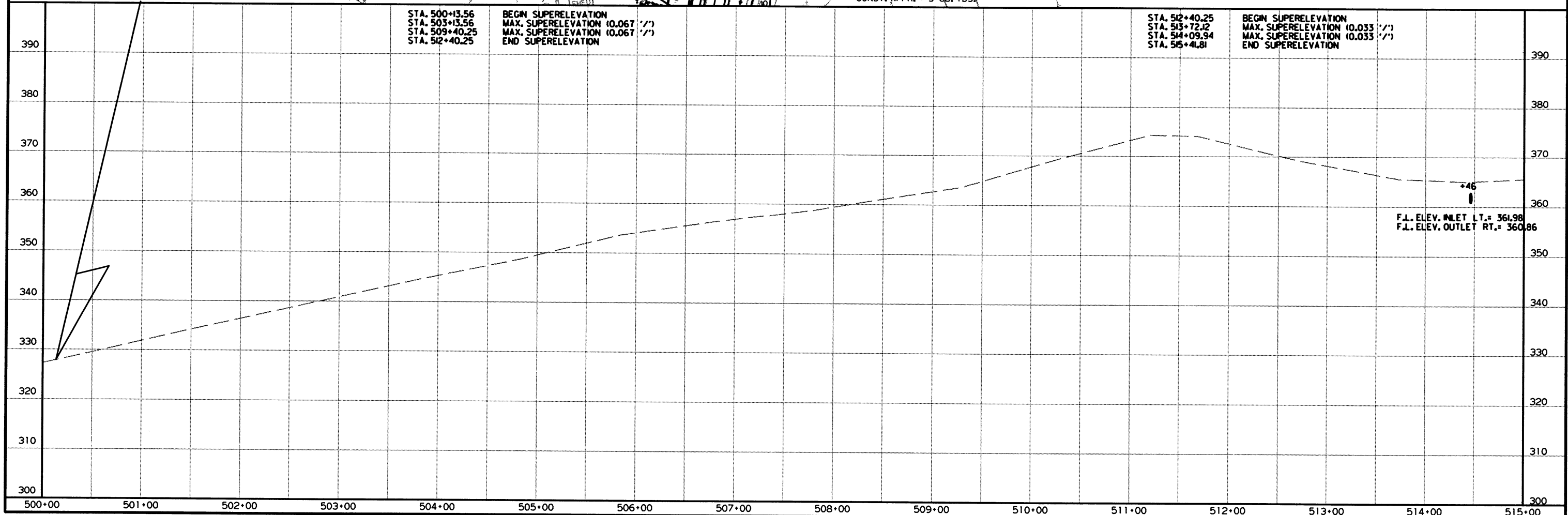
HWY. 51

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

STA. 500+13.56
 STA. 503+13.56
 STA. 509+40.25
 STA. 512+40.25
 BEGIN SUPERELEVATION
 MAX. SUPERELEVATION (0.067'/'')
 MAX. SUPERELEVATION (0.067'/'')
 END SUPERELEVATION

STA. 512+40.25
 STA. 513+72.16
 STA. 514+09.94
 STA. 515+41.81
 BEGIN SUPERELEVATION
 MAX. SUPERELEVATION (0.033'/'')
 MAX. SUPERELEVATION (0.033'/'')
 END SUPERELEVATION

F.L. ELEV. INLET LT. = 361.98
 F.L. ELEV. OUTLET RT. = 360.86



WIRE FENCE AND GATE				
STA.	STA.	SIDE	TYPE	LIN. FT.
525+00	525+46	RT.	D	76
525+09	525+43	LT.	D-I	42
525+71	526+09	LT.	D-I	52
525+72	526+37	RT.	D-I	95

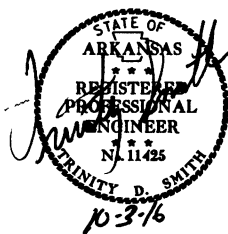
CURB AND GUTTER				
STA.	STA.	SIDE	TYPE	LIN. FT.
518+00	524+00	RT.	B-1	600

C.L. CONSTRUCT
 PI = 525+11.82
 Δ = 8°57'51"LT.
 D = 4°29'35"
 T = 99.96'
 L = 199.52'
 PC = 524+11.85
 PT = 526+11.37
 e = 0.087'/'
 Ls = 350'

STA. 525+61 IN PLACE
 10' x 5' x 40' METAL BOX CULVERT
 ON 15° RT. FWD. SKEW
 REMOVE AND CONSTRUCT
 PRECAST 10' x 5' x 65' R.C. BOX CULVERT
 W/34 WINGS LT. & RT.
 D.A. = 95 AC., 050 = 283 C.F.S.

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. 070364	74	260

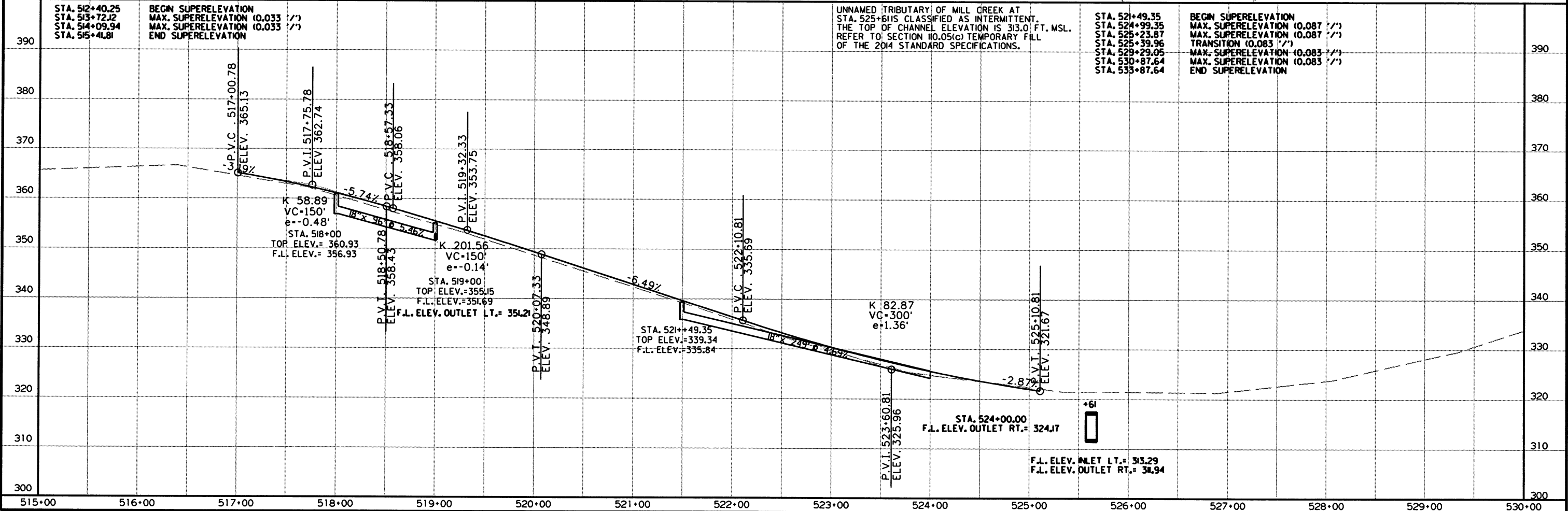
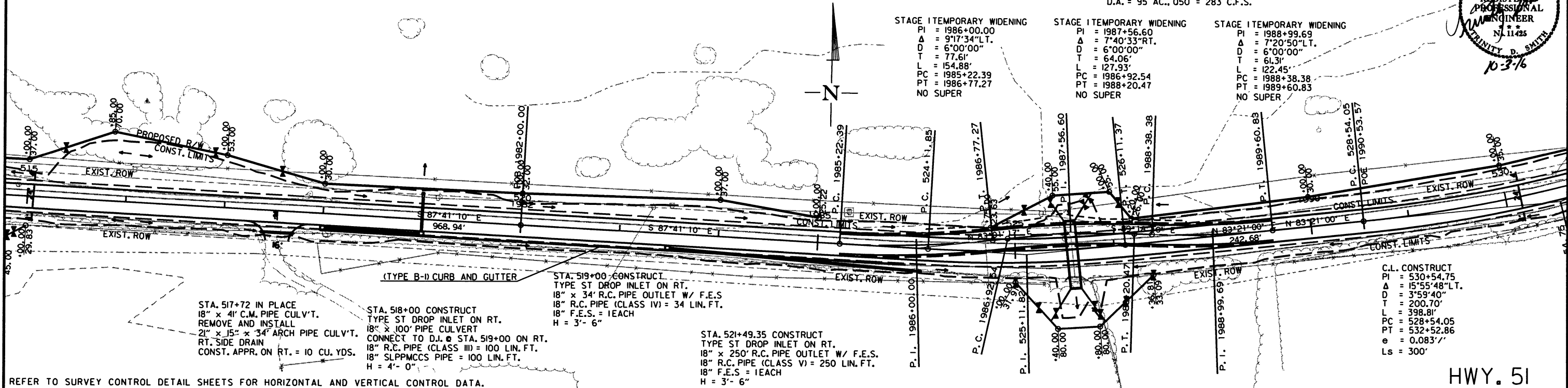
(2) PLAN AND PROFILE SHEETS



STAGE I TEMPORARY WIDENING
 PI = 1986+00.00
 Δ = 9°17'34"LT.
 D = 6°00'00"
 T = 77.61'
 L = 154.88'
 PC = 1985+22.39
 PT = 1986+77.27
 NO SUPER

STAGE I TEMPORARY WIDENING
 PI = 1987+56.60
 Δ = 7°40'33"RT.
 D = 6°00'00"
 T = 64.06'
 L = 127.93'
 PC = 1986+92.54
 PT = 1989+20.47
 NO SUPER

STAGE I TEMPORARY WIDENING
 PI = 1988+99.69
 Δ = 7°20'50"LT.
 D = 6°00'00"
 T = 61.31'
 L = 122.45'
 PC = 1988+38.38
 PT = 1989+60.83
 NO SUPER



C.L. CONSTRUCT
PI = 530+54.75
Δ = 15°55'48"LT.
D = 3°59'40"
T = 200.70'
L = 398.81'
PC = 528+54.05
PT = 532+52.86
e = 0.083'/'
Ls = 300'

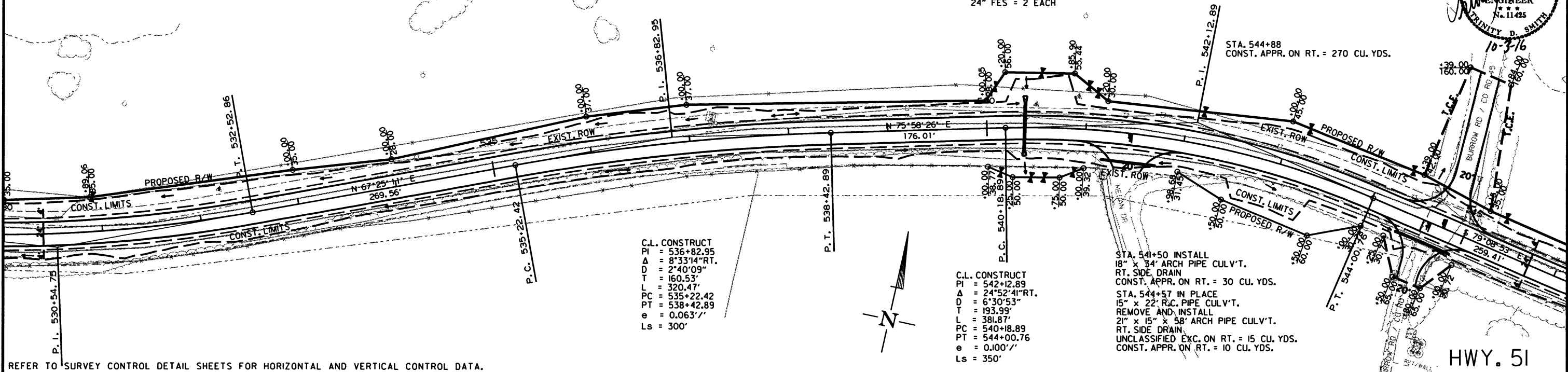
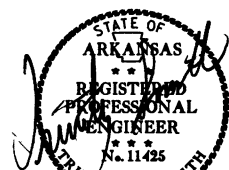
WIRE FENCE AND GATE					
STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
525+00	525+46	RT.	D	76	
525+09	525+43	LT.	D-I	42	
525+71	526+09	LT.	D-I	52	
525+72	526+37	RT.	D-I	95	
540+00	541+00	RT.	D	101	
544+55		LT.	D	30	

EROSION CONTROL MATTING				
STA.	STA.	SIDE	LENGTH LIN. FT.	CLASS SO. YDS.
540+88	542+00	RT.	112	99.60

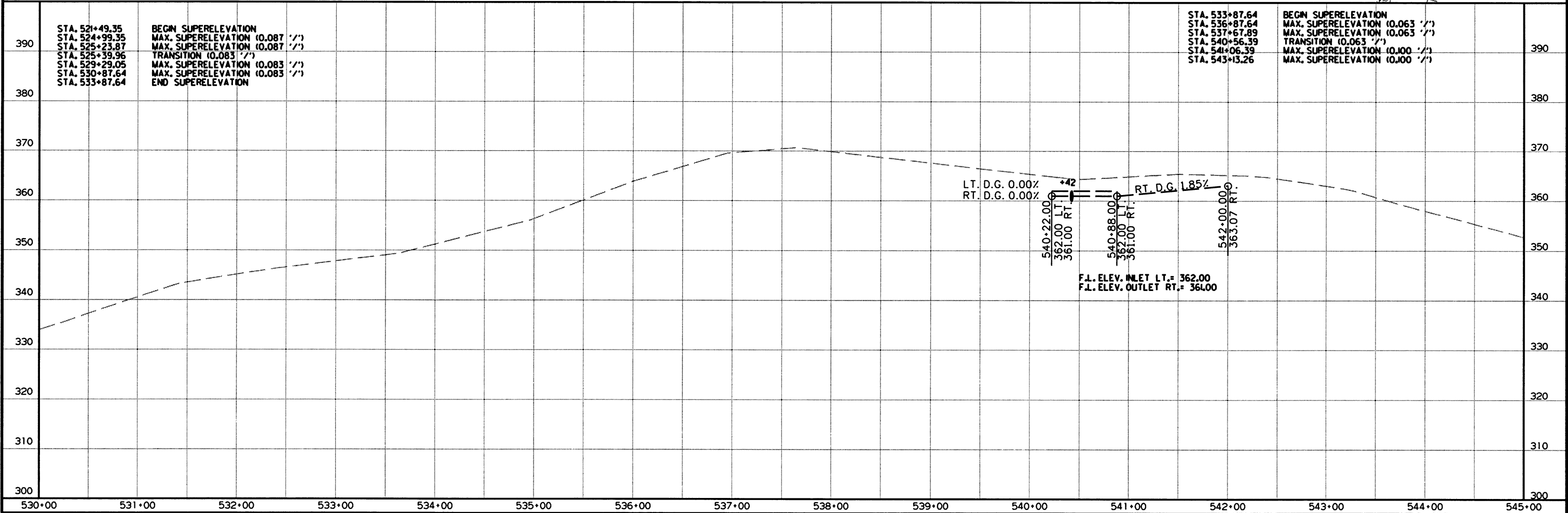
STA. 540+42 IN PLACE
18" x 43' C.M. PIPE CULV'T.
W/HDWLS. LT. & RT.
REMOVE AND CONSTRUCT
24" x 46' R.C. PIPE CULVERT
(CLASS V)(TYPE 3 BEDDING) WITH
FES LT. & RT.
D.A. = 5 AC., 050 = 19 C.F.S.
24" R.C. PIPE = 46 LIN. FT.
24" FES = 2 EACH

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. 070364			75	260

2 PLAN AND PROFILE SHEETS

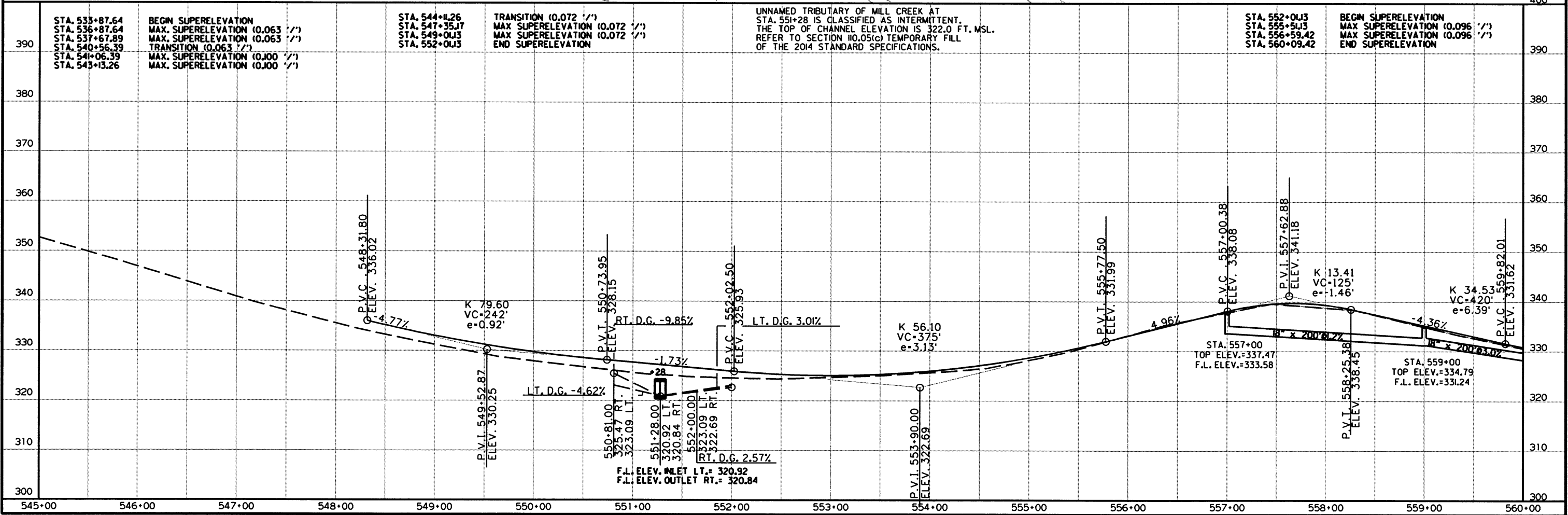
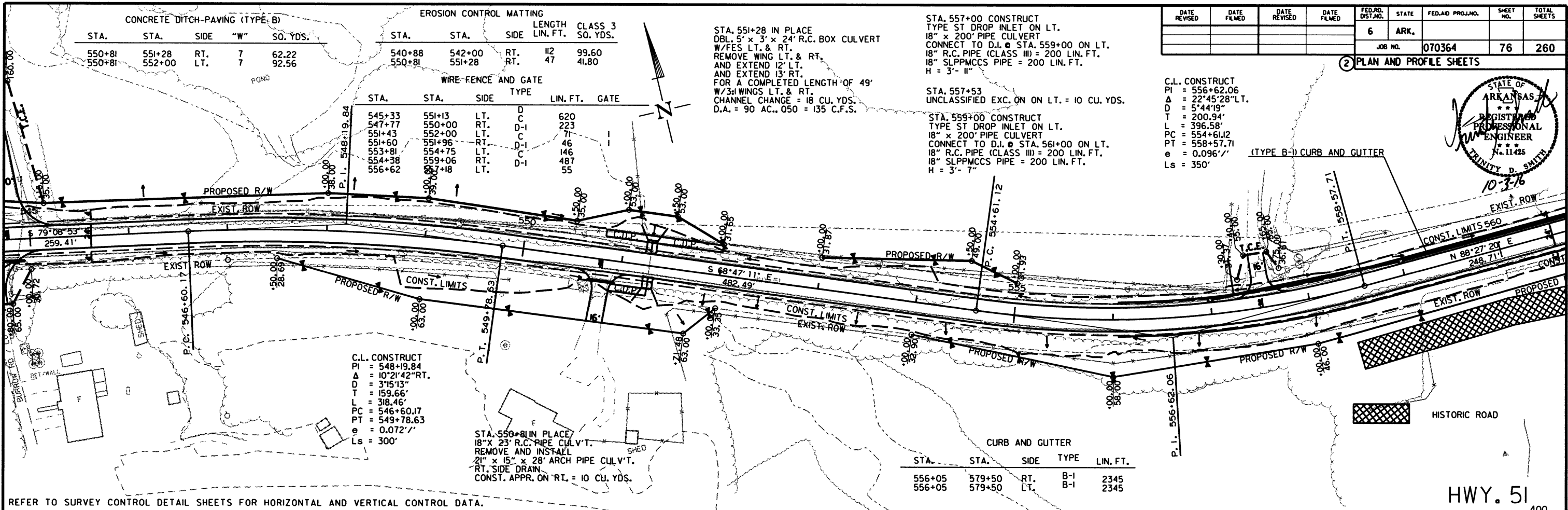


REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



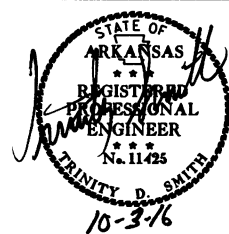
10/3/2016

R070364.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. 070364	77	260

2 PLAN AND PROFILE SHEETS



STA. 569+83
UNCLASSIFIED EXC. ON LT. = 35 CU. YDS.

STA. 570+61
UNCLASSIFIED EXC. ON LT. = 45 CU. YDS.
CONST. APPR. ON LT. = 10 CU. YDS.

C.L. CONSTRUCT
PI = 573+22.06
A = 28°01'43"LT.
D = 913.17'
T = 155.08'
L = 303.95'
PC = 571+66.98
PT = 574+70.93
e = 0.094'/'
Ls = 250'

C.L. CONSTRUCT
PI = 561+86.03
A = 5°34'33"RT.
D = 3°30'15"
T = 79.62'
L = 159.11'
PC = 561+06.42
PT = 562+65.53
e = 0.076'/'
Ls = 300'

CURB AND GUTTER				
STA.	STA.	SIDE	TYPE	LIN. FT.
556+05	579+50	RT.	B-1	2345
556+05	579+50	LT.	B-1	2345

WIRE FENCE AND GATE				
STA.	STA.	SIDE	TYPE	LIN. FT.
561+15	562+19	LT.	C	125
562+36	563+50	LT.	D	130

STA. 562+28 IN PLACE
4' x 3' x 25' R.C. BOX CULVERT
W/FES LT. & RT.
REMOVE WING LT. & RT.
AND EXTEND 13' LT.
AND EXTEND 14' RT.
FOR A TOTAL COMPLETED LENGTH 52'
W/3d WINGS LT. & RT.
CHANNEL CHANGE = 5 CU. YDS.
D.A. = 90 AC., 050 = 135 C.F.S.

STA. 552+04J3
STA. 555+54J3
STA. 556+59.42
STA. 560+09.42
BEGIN SUPERELEVATION
MAX. SUPERELEVATION (0.096'/'')
END SUPERELEVATION

STA. 560+09.42
STA. 561+85.98
STA. 562+21.39
STA. 563+97.95
BEGIN SUPERELEVATION
MAX. SUPERELEVATION (0.045'/'')
END SUPERELEVATION

STA. 569+79.48
STA. 572+29.48
STA. 573+23.27
STA. 575+73.27
BEGIN SUPERELEVATION
MAX. SUPERELEVATION (0.094'/'')
END SUPERELEVATION

STA. 570+20
UNCLASSIFIED EXC. ON RT. = 40 CU. YDS.

STA. 570+76 INSTALL
21" x 15" x 28' ARCH PIPE CULV'T.
RT. SIDE DRAIN
UNCLASSIFIED EXC. ON RT. = 10 CU. YDS.
CONST. APPR. ON RT. = 5 CU. YDS.

STA. 572+58 INSTALL
18" x 44' PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 45 CU. YDS.

HISTORIC ROAD

STA. 561+00 CONSTRUCT
TYPE E DROP INLET ON LT.
18" x 36" R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 561+00 ON RT.
18" R.C. PIPE (CLASS III) = 36 LIN. FT.
H = 3'- 0"

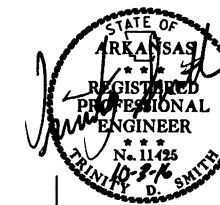
STA. 562+28 CONSTRUCT
TYPE E DROP INLET ON LT.
H = 4'- 8"

STA. 564+00 CONSTRUCT
TYPE ST DROP INLET ON LT.
18" x 172" PIPE CULVERT
CONNECT TO D.I. @ STA. 562+28 ON RT.
18" R.C. PIPE (CLASS III) = 172 LIN. FT.
18" SLPPMCCS PIPE = 172 LIN. FT.
H = 3'- 4"

STA. 567+00 CONSTRUCT
TYPE ST DROP INLET ON LT.
18" x 300" PIPE CULVERT
CONNECT TO D.I. @ STA. 564+00 ON LT.
18" R.C. PIPE (CLASS III) = 300 LIN. FT.
18" SLPPMCCS PIPE = 300 LIN. FT.
H = 3'- 6"

STA. 571+00 CONSTRUCT
TYPE ST DROP INLET ON LT.
18" x 100" PIPE CULVERT
CONNECT TO D.I. @ STA. 570+00 ON LT.
18" R.C. PIPE (CLASS III) = 100 LIN. FT.
18" SLPPMCCS PIPE = 100 LIN. FT.
H = 5'- 4"

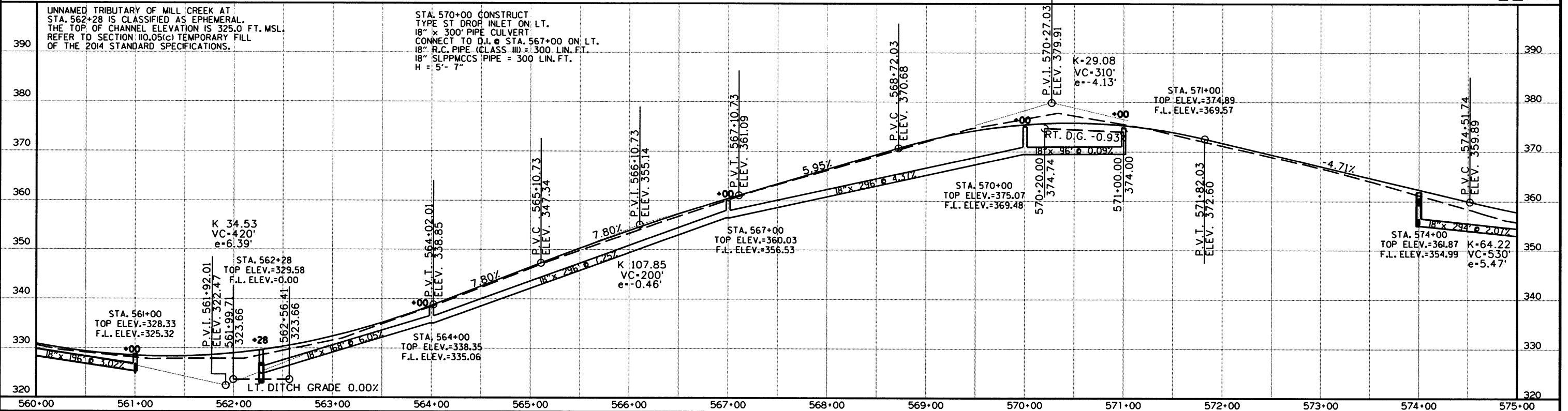
STA. 574+00 CONSTRUCT
TYPE ST DROP INLET ON LT. W./ F.E.S.
18" x 2" STUB INLET W./ F.E.S.
18" x 300" PIPE CULVERT
CONNECT TO D.I. @ STA. 577+00 ON LT.
18" R.C. PIPE (CLASS III) = 302 LIN. FT.
18" SLPPMCCS PIPE = 300 LIN. FT.
18" F.E.S. = 1 EACH
H = 6'- 10"



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				6	ARK.			
				JOB NO. 070364			78	260

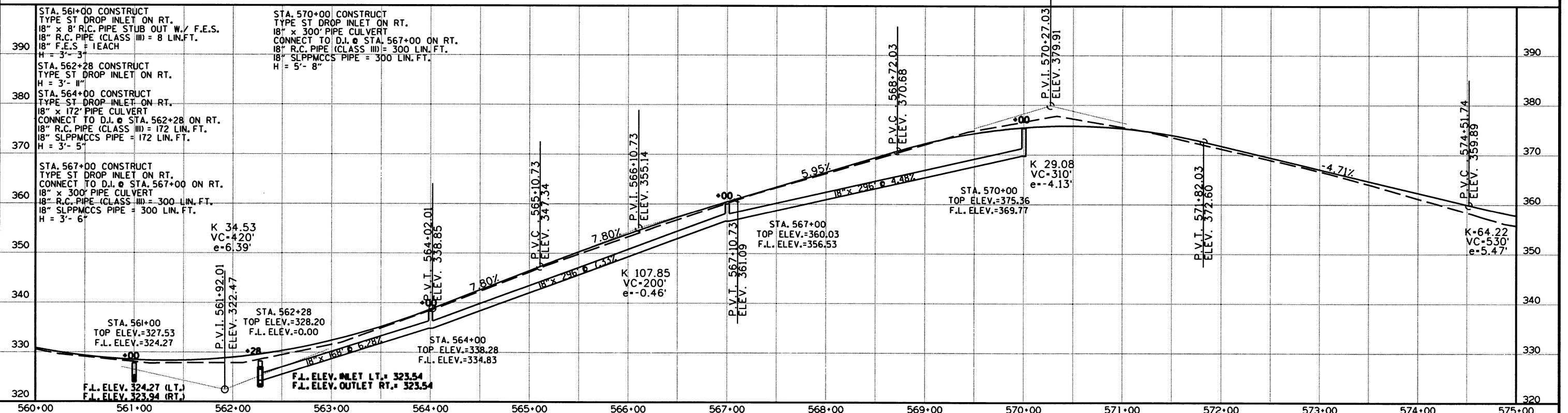
2 PLAN AND PROFILE SHEETS

LEFT



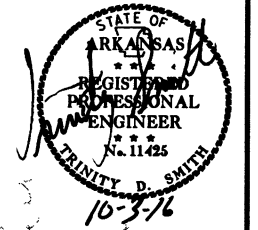
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

RIGHT



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.	070364		79	260

② PLAN AND PROFILE SHEETS



C.L. CONSTRUCT STA. 577+00 CONSTRUCT
PI = 573+22.06 TYPE E DROP INLET ON LT.
D = 28'0"43"LT. 18" x 26" R.C. PIPE CULVERT
Δ = 9'13"17" CONNECT TO D.I. STA. 577+00 ON RT.
T = 155.08' 18" R.C. PIPE (CLASS III) = 26 LIN. FT.
L = 303.95' H = 3'- 11"

PC = 571+66.98
PT = 574+70.93
e = 0.094'/'
Ls = 250'

WIRE FENCE AND GATE					
STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
578+88	580+90	LT.	D	208	I
583+06	583+77	LT.	D	52	
585+90	587+92	RT.	D	203	I
588+18	592+56	RT.	D-I	452	
588+65	590+75	LT.		200	

STA. 580+00.00 ON HWY. 51 =
STA 10+00.02 ON HELMS RD./CO. RD. 74
 $\Delta = 90^{\circ}00'00''$

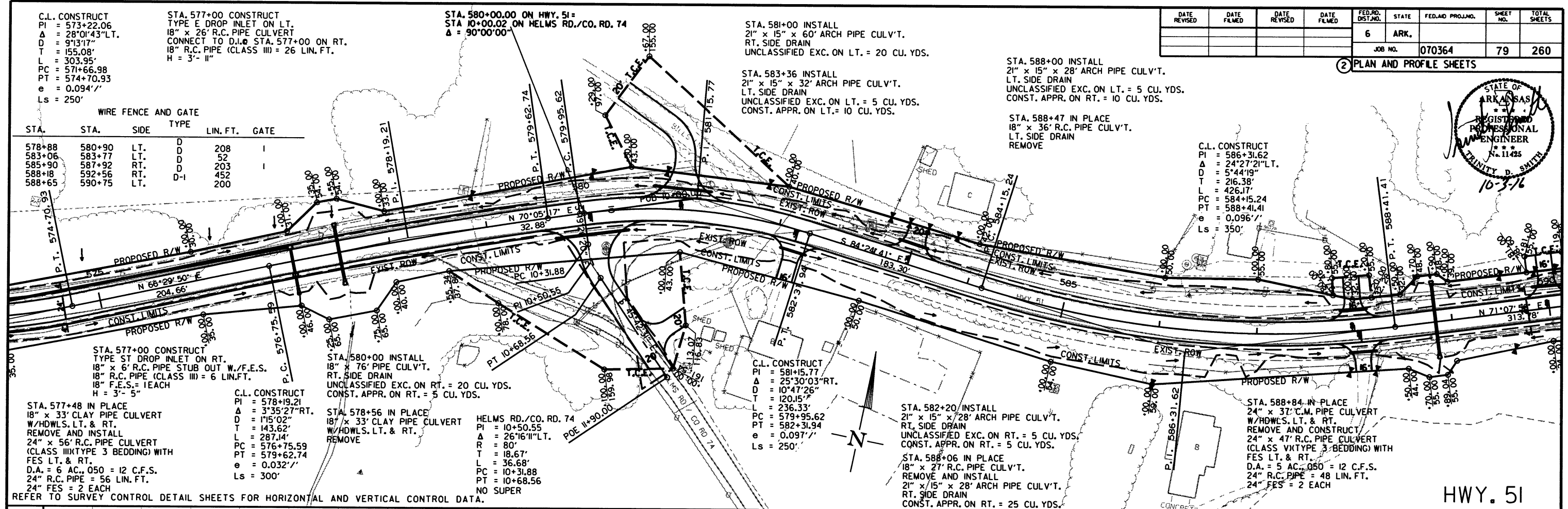
STA. 581+00 INSTALL
21" x 15" x 60' ARCH PIPE CULV'T.
RT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 20 CU. YDS.

STA. 583+36 INSTALL
21" x 15" x 32' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 5 CU. YDS.
CONST. APPR. ON LT. = 10 CU. YDS.

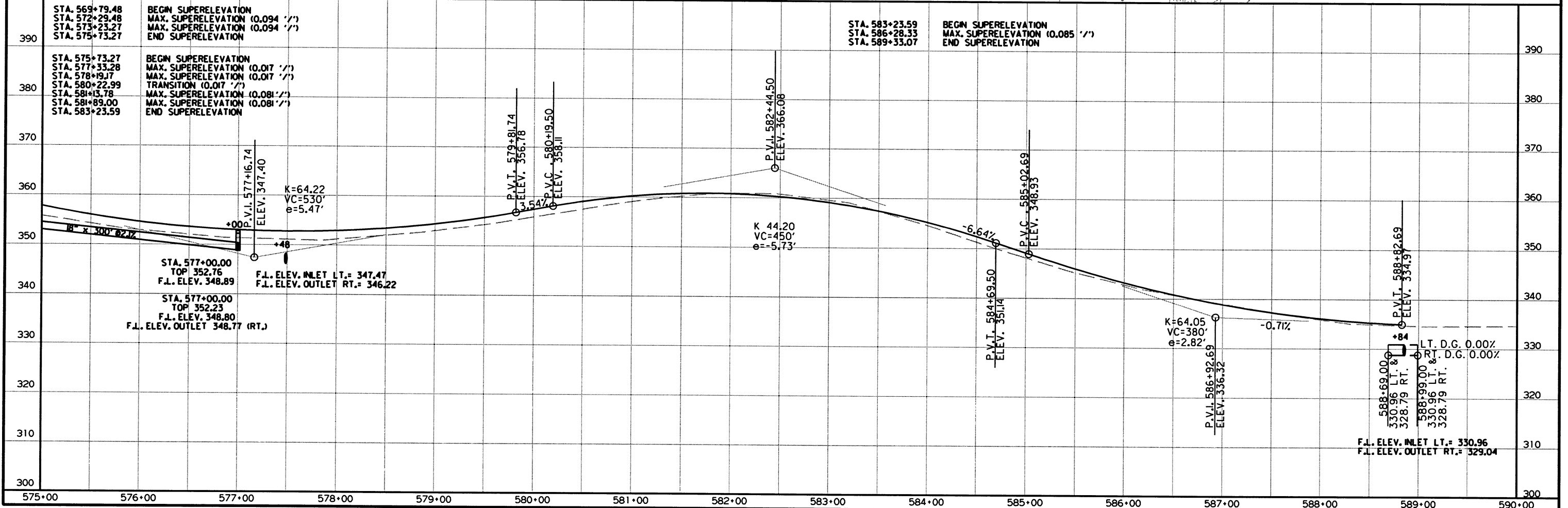
STA. 588+00 INSTALL
21" x 15" x 28' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 5 CU. YDS.
CONST. APPR. ON RT. = 10 CU. YDS.

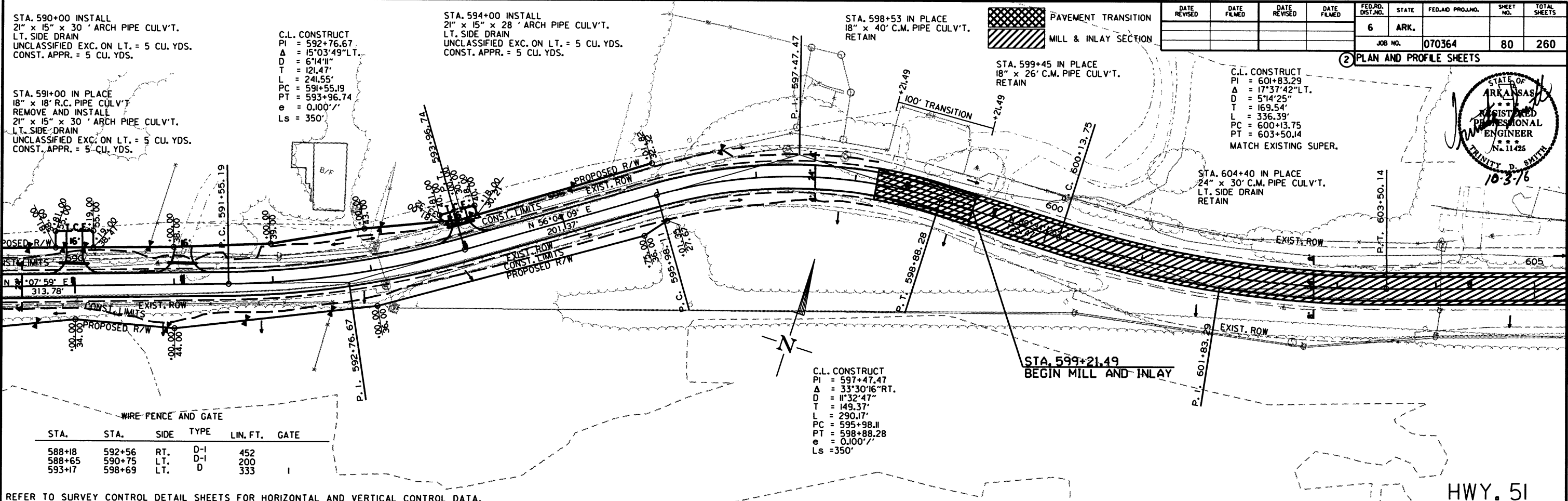
STA. 588+47 IN PLACE
18" x 36' R.C. PIPE CULV'T.
LT. SIDE DRAIN
REMOVE

C.L. CONSTRUCT
PI = 586+31.62
 Δ = 24°27'21" L.T.
D = 5°44'19"
T = 216.38'
L = 426.17'
PC = 584+15.24
PT = 588+41.41
e = 0.096' /'
Ls = 350'

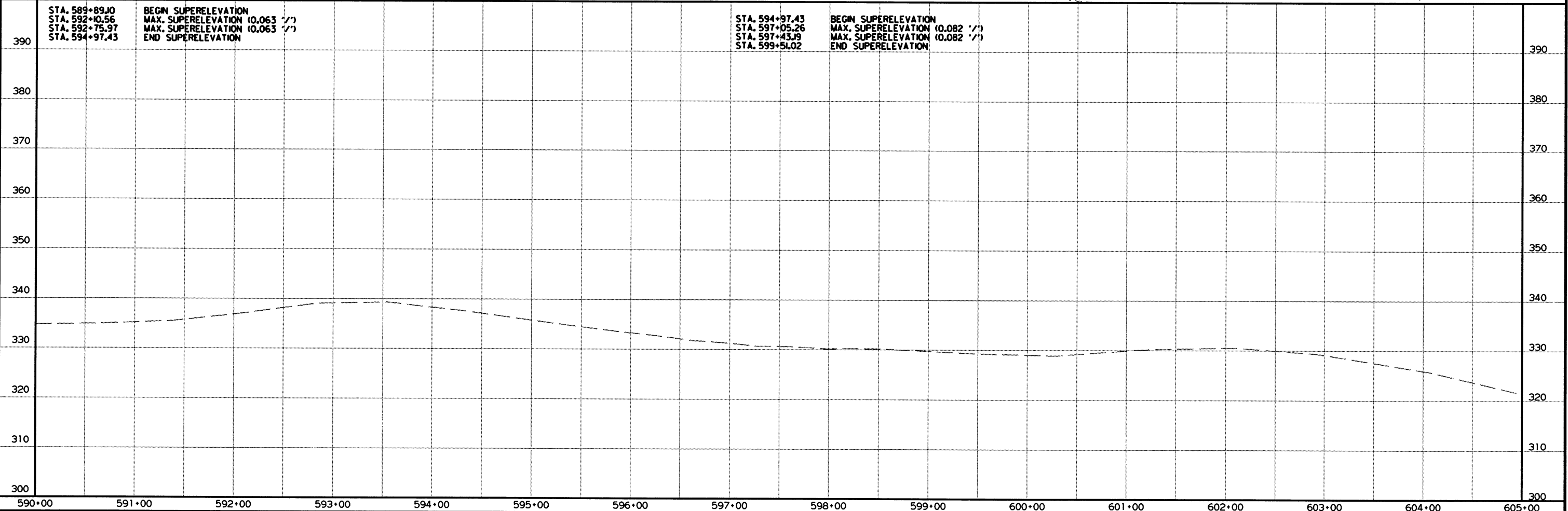


HWY. 51



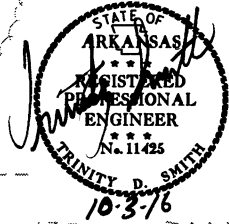


REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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. 070364		80	260	

2 PLAN AND PROFILE SHEETS



HWY. 51

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. 070364	81	260

2 PLAN AND PROFILE SHEETS



C.L. CONSTRUCT
PI = 622+16.16
Δ = 15°39'58" LT.
D = 2°59'49"
T = 263.02'
L = 522.75'
PC = 619+52.14
PT = 624+74.89
MATCH EXISTING SUPER.

BR. END STA. 615+71.28
BRIDGE NO. 06082
43'-00" CLEAR ROADWAY
107'-4" TOTAL LENGTH
STEEL STRINGER
BR. END STA. 616+78.65
RETAIN

EXISTING GUARD RAIL (RETAIN)
STA. 615+08.85 - STA. 615+60.19 LT.
STA. 615+32.21 - STA. 615+82.69 RT.
STA. 617+67.55 - STA. 618+18.79 LT.
STA. 616+91.49 - STA. 617+42.36 RT.

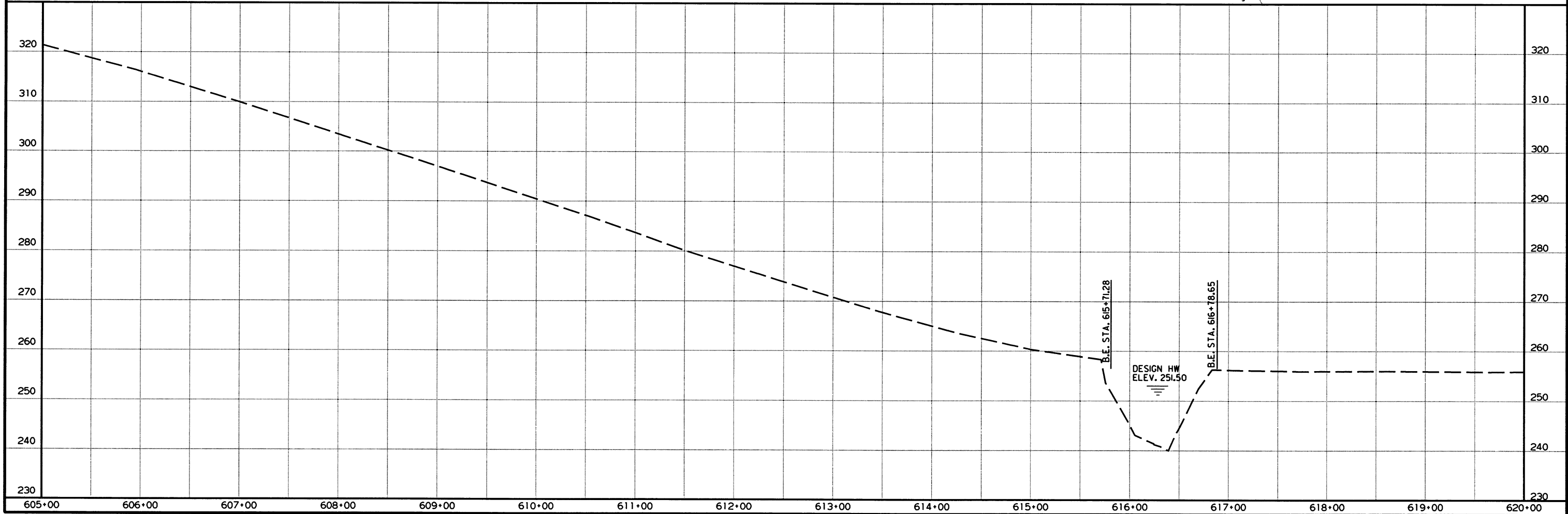
PAVEMENT TRANSITION
MILL & INLAY SECTION

STA. 608+51 IN PLACE
24" x 30" C.M. PIPE CULV'T.
LT. SIDE DRAIN
RETAIN

STA. 614+48 IN PLACE
24" x 30" C.M. PIPE CULV'T.
RT. SIDE DRAIN
RETAIN

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

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STA. 636+42 IN PLACE
DBL. 4' x 3' x 65' R.C. BOX CULVERT
W/ 3:1 WINGS LT. & RT.
RETAIN

WIRE FENCE AND GATE

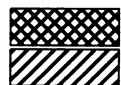
STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
639+23	639+88	RT.	D-1	280	I

CONCRETE DITCH PAVING (TYPE B)

STA.	STA.	SIDE	"W"	SO. YDS.
641+20	642+00	LT.	7	92.56

EROSION CONTROL MATTING

STA.	STA.	SIDE	LENGTH LIN. FT.	CLASS 3 SO. YDS.
641+00	642+00	RT.	100	88.90



PAVEMENT TRANSITION

MILL & INLAY SECTION

STA. 639+44 IN PLACE
24" x 30' R.C. PIPE CULV'T.
REMOVE AND INSTALL
24" x 30' PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 10 CU. YDS.
CONST. APPR. ON LT. = 20 CU. YDS.

STA. 641+13 IN PLACE
18" x 24' C.M. PIPE CULV'T.
REMOVE AND INSTALL
21" x 15" x 28' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 5 CU. YDS.
CONST. APPR. ON LT. = 15 CU. YDS.

STA. 644+80 IN PLACE
15" x 30' C.M. PIPE CULV'T.
REMOVE AND INSTALL
21" x 15" x 28' ARCH PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.
UNCLASSIFIED EXC. ON LT. = 5 CU. YDS.

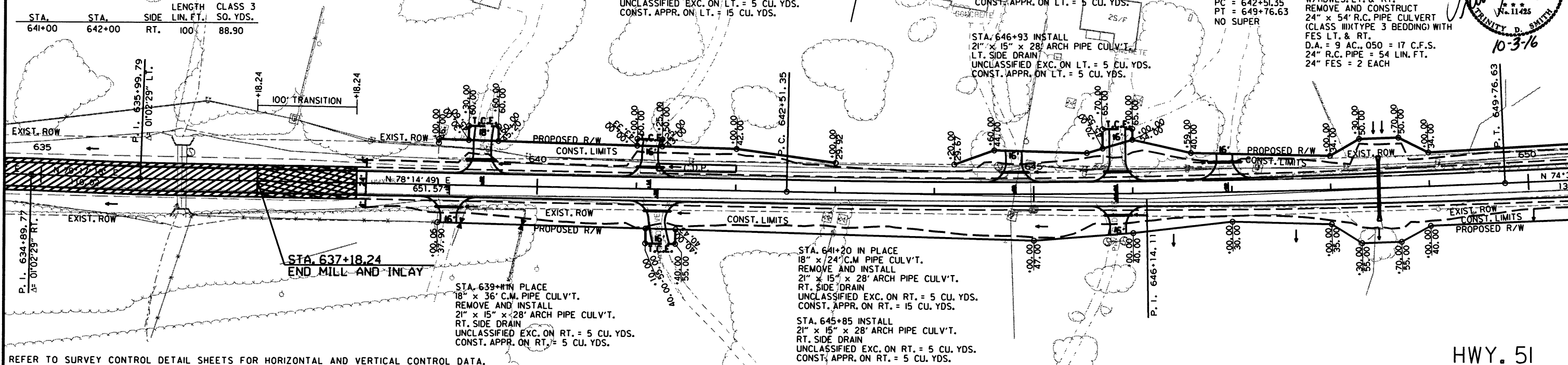
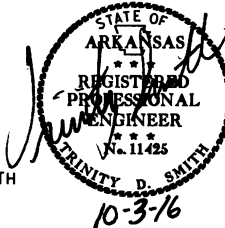
STA. 645+85 INSTALL
21" x 15" x 28' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 5 CU. YDS.
CONST. APPR. ON LT. = 5 CU. YDS.

STA. 646+93 INSTALL
21" x 15" x 28' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 5 CU. YDS.
CONST. APPR. ON LT. = 5 CU. YDS.

C.L. CONSTRUCT
PI = 646+14.11
Δ = 3°37'33" LT.
D = 0°30'00" LT.
T = 362.76'
L = 725.27'
PC = 642+51.35
PT = 649+76.63
NO SUPER

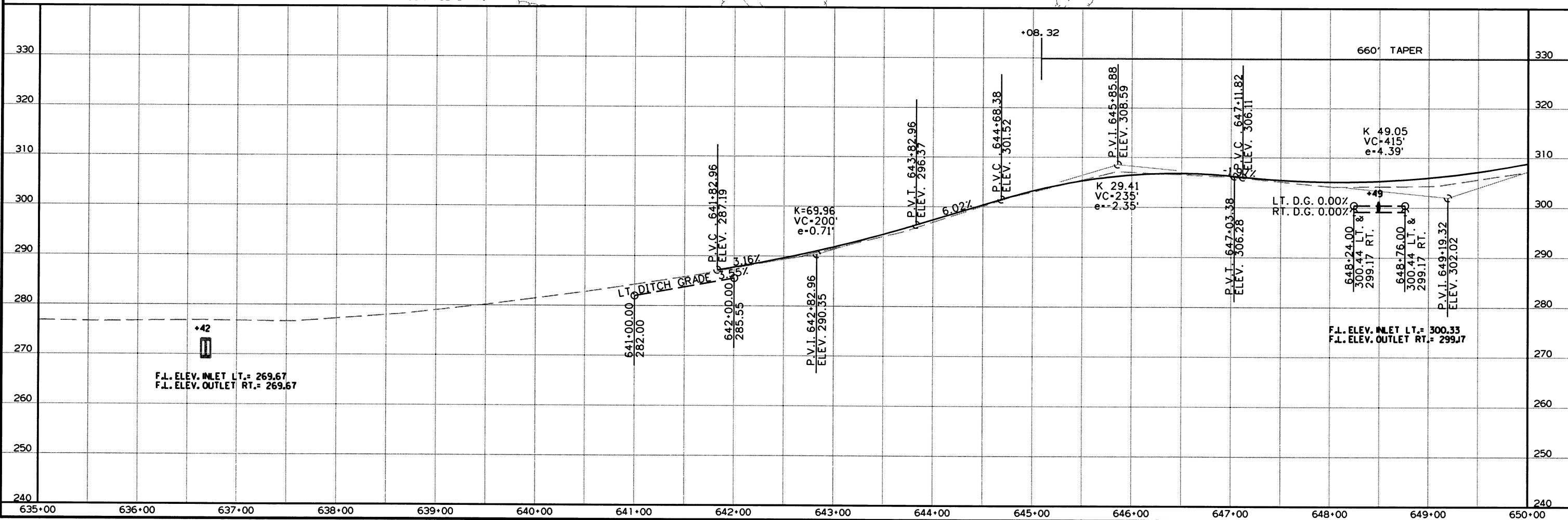
STA. 648+49 IN PLACE
24" x 32' PIPE CULVERT
W/HOWLS LT. & RT.
REMOVE AND CONSTRUCT
24" x 54' R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING) WITH
FES LT. & RT.
D.A. = 9 AC., 050 = 17 C.F.S.
24" R.C. PIPE = 54 LIN. FT.
24" FES = 2 EACH

2 PLAN AND PROFILE SHEETS



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 51



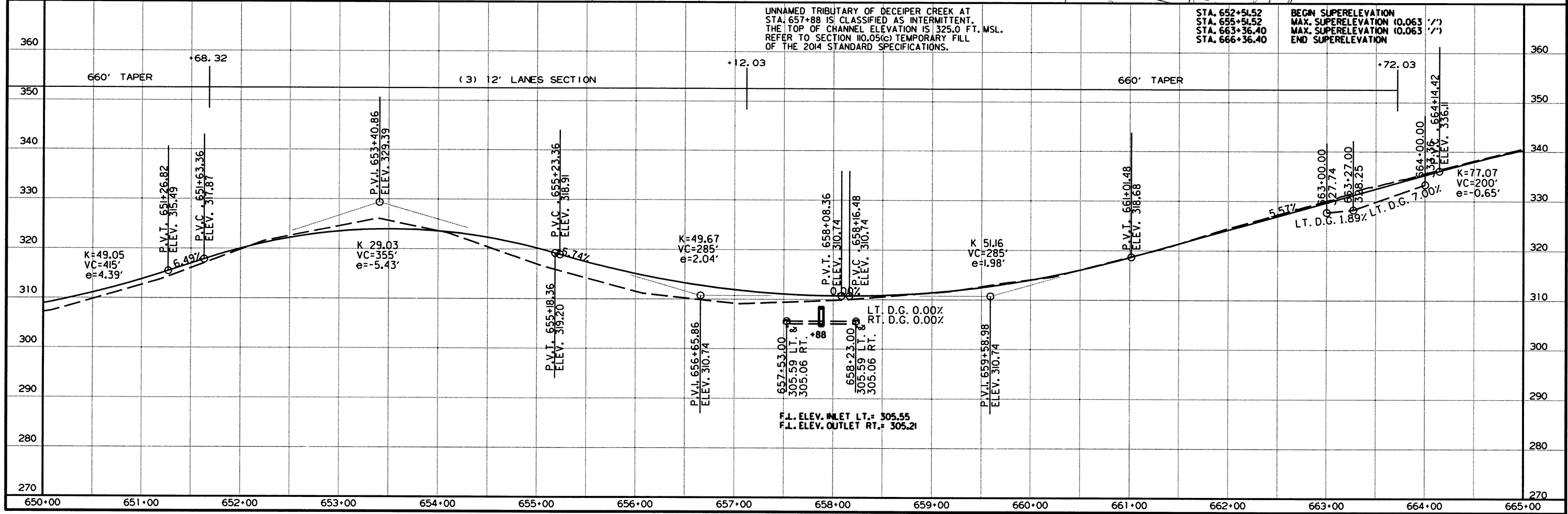
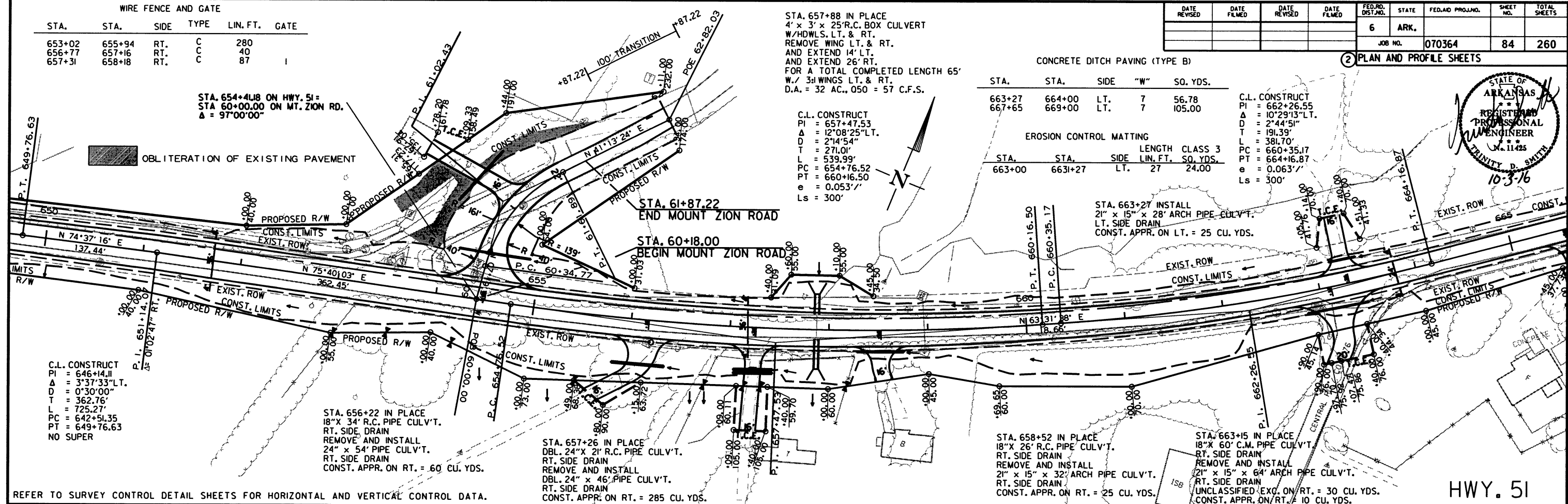
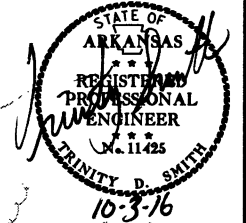
10/3/2016

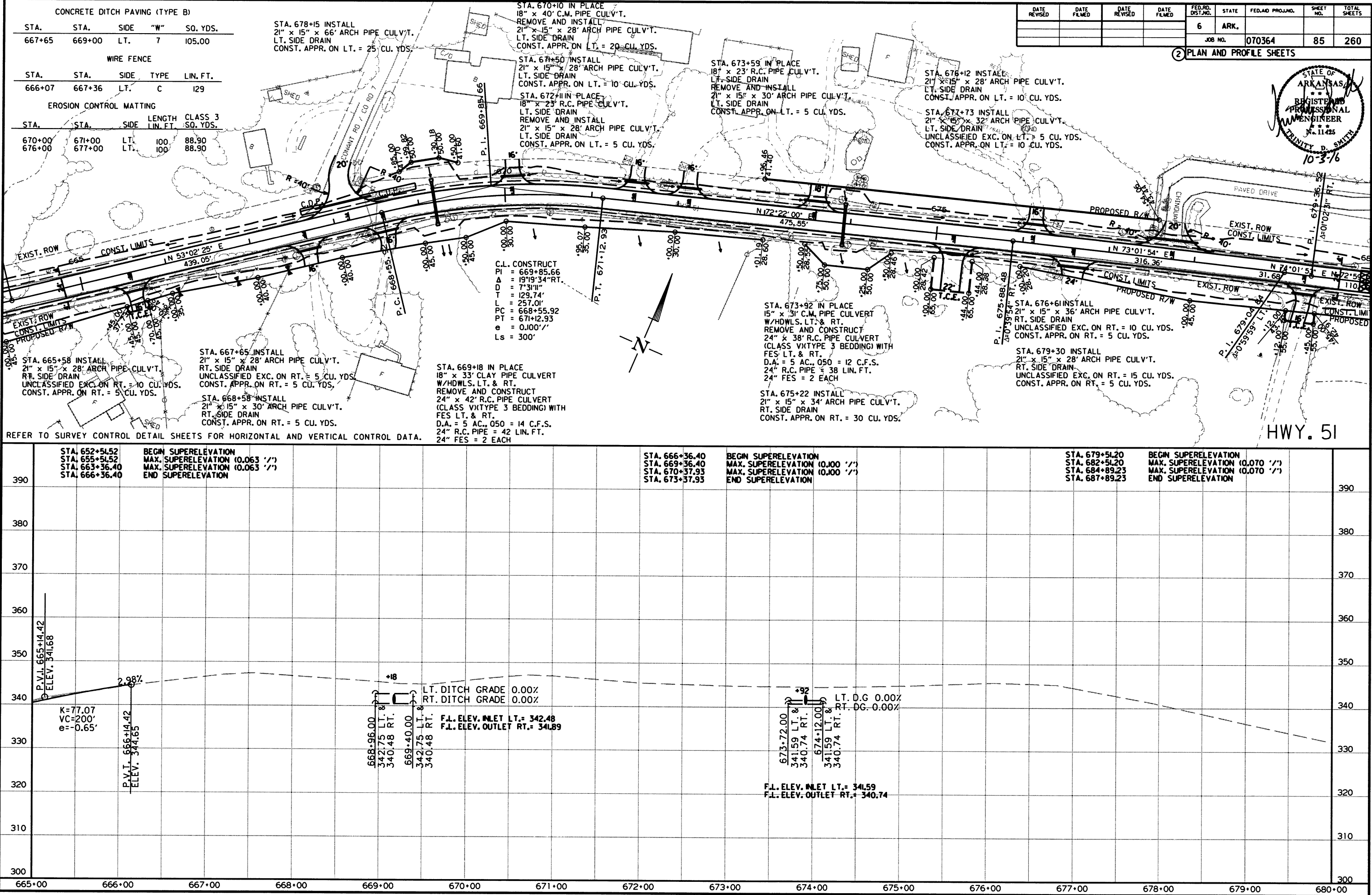
R070364.DGN

WIRE FENCE AND GATE					
STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
653+02	655+94	RT.	C	280	
656+77	657+16	RT.	C	40	
657+31	658+18	RT.	C	87	I

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. 070364	84	260

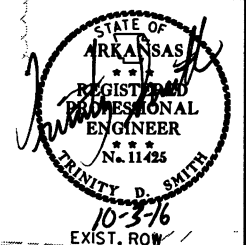
2 PLAN AND PROFILE SHEETS





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. 070364	86	260

2 PLAN AND PROFILE SHEETS

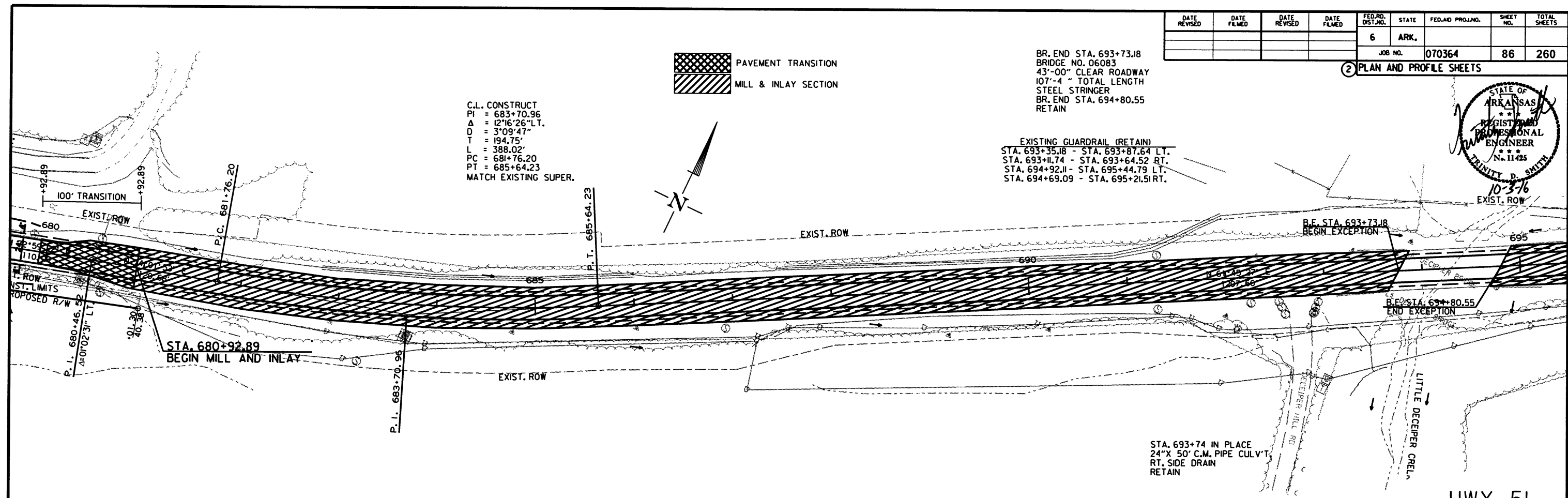
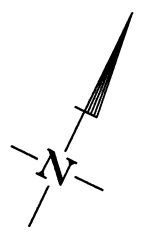


PAVEMENT TRANSITION
MILL & INLAY SECTION

BR. END STA. 693+73.18
BRIDGE NO. 06083
43'-00" CLEAR ROADWAY
107'-4" TOTAL LENGTH
STEEL STRINGER
BR. END STA. 694+80.55
RETAIN

EXISTING GUARDRAIL (RETAIN)
STA. 693+35.18 - STA. 693+87.64 LT.
STA. 693+11.74 - STA. 693+64.52 RT.
STA. 694+92.11 - STA. 695+44.79 LT.
STA. 694+69.09 - STA. 695+21.51 RT.

C.L. CONSTRUCT
PI = 683+70.96
Δ = 12°16'26" LT.
D = 3°09'47"
T = 194.75'
L = 388.02'
PC = 681+76.20
PT = 685+64.23
MATCH EXISTING SUPER.



STA. 693+74 IN PLACE
24"X 50' C.M. PIPE CULV'T.
RT. SIDE DRAIN
RETAIN

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

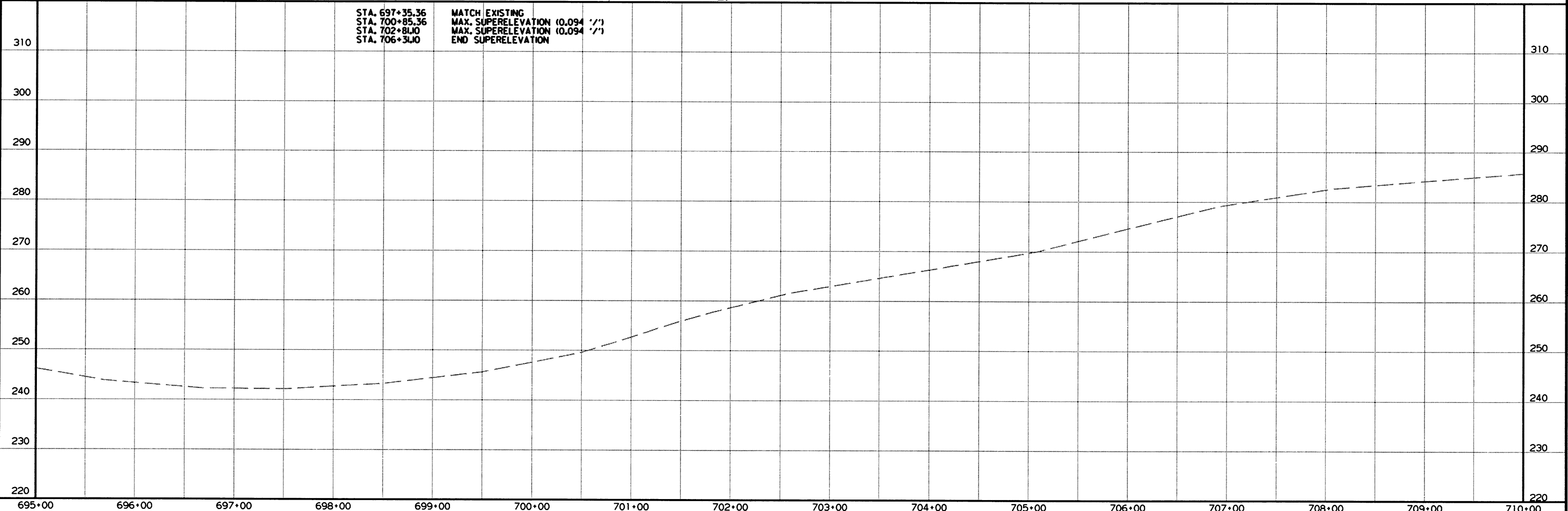
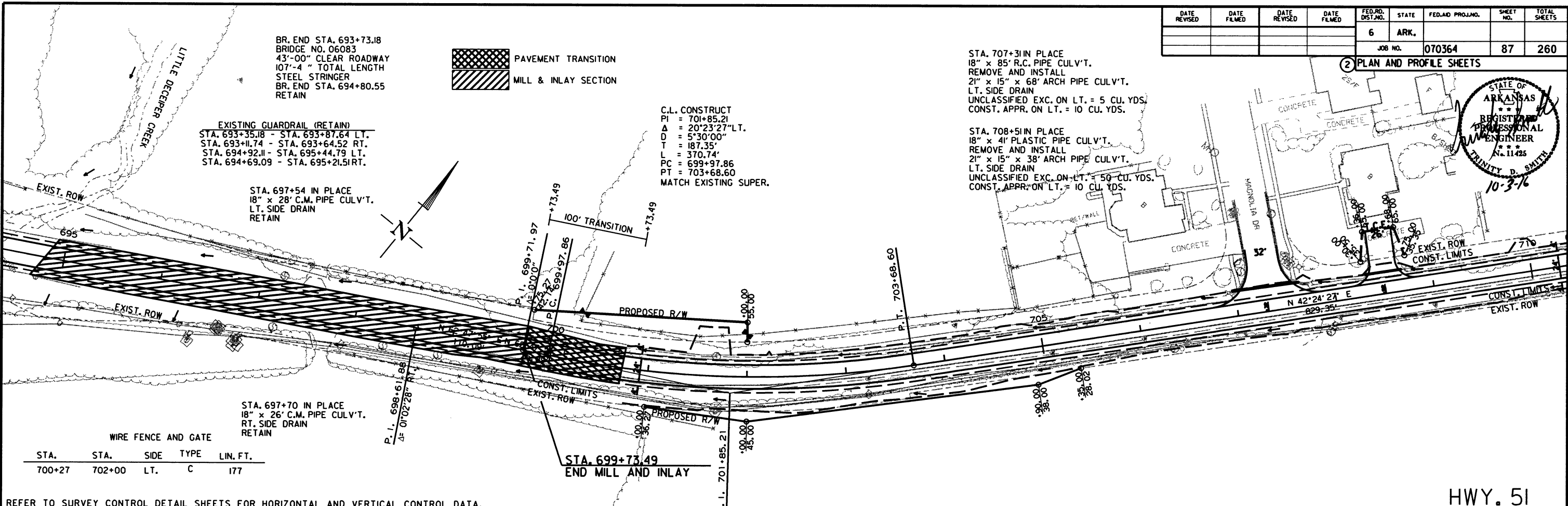
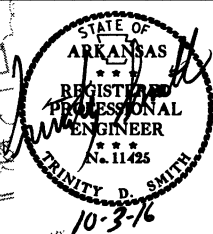
HWY. 51



10/3/2016
R070364.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. 070364	87	260

2 PLAN AND PROFILE SHEETS



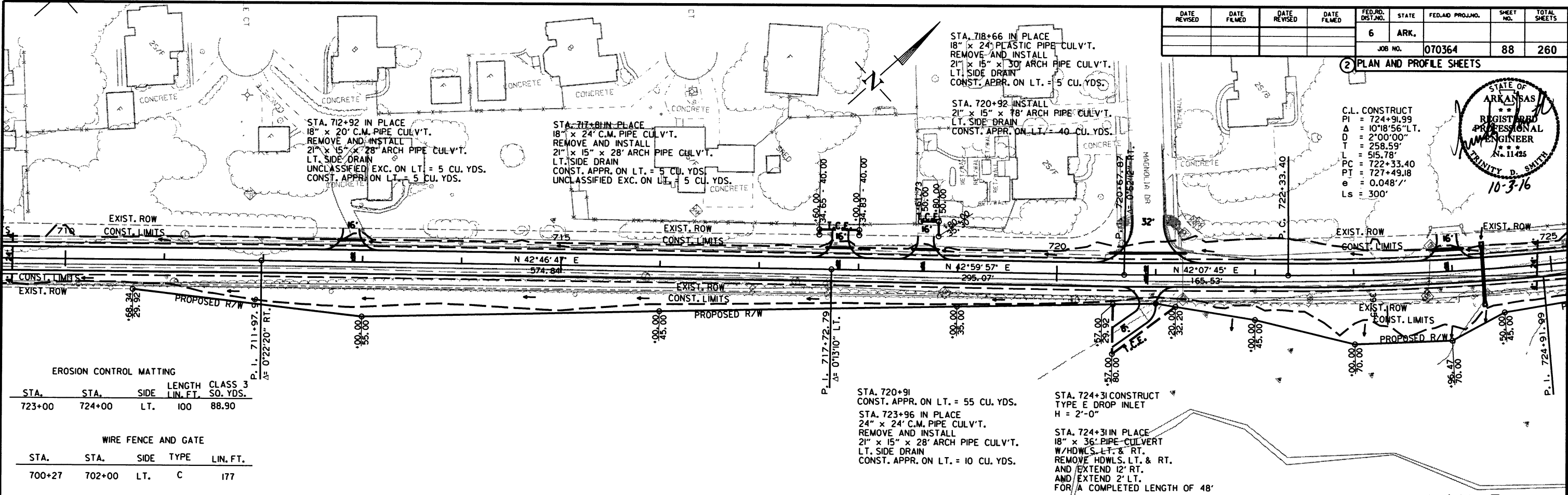
10/3/2016
R070364.DGN

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. 070364	88	260

2 PLAN AND PROFILE SHEETS



C.L. CONSTRUCT
 PI = 724+91.99
 Δ = 10°18'56" L.T.
 D = 2'00"00"
 T = 258.59'
 L = 515.78'
 PC = 722+33.40
 PT = 727+49.18
 e = 0.048'/'
 LS = 300'



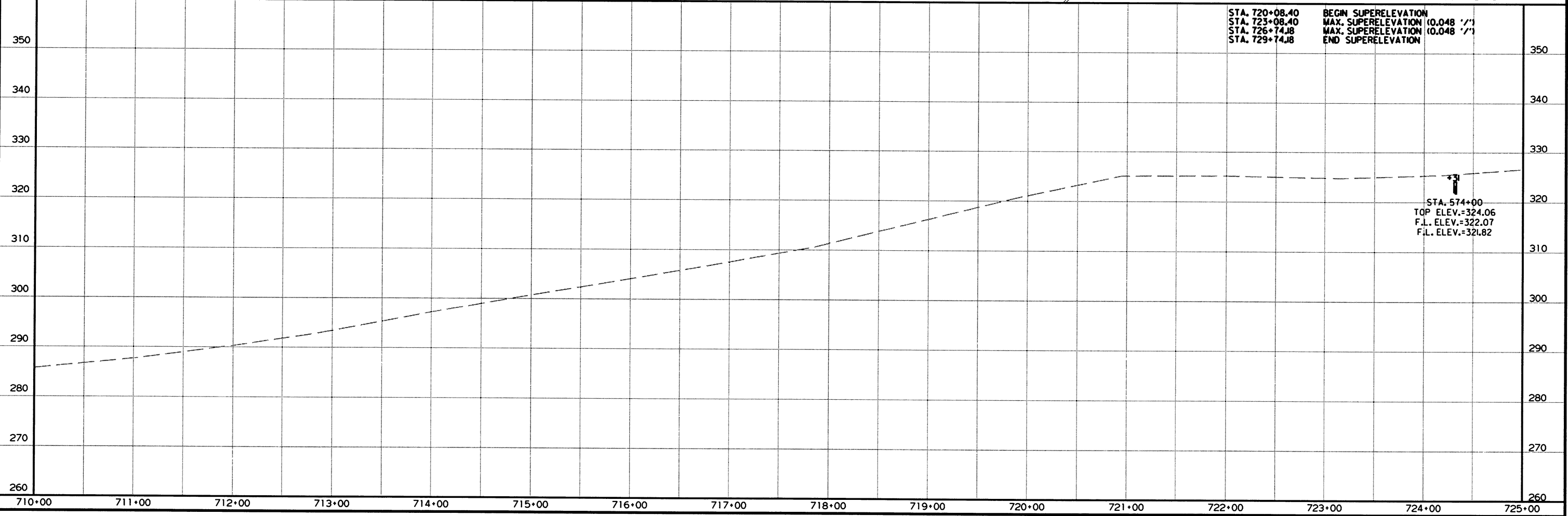
EROSION CONTROL MATTING

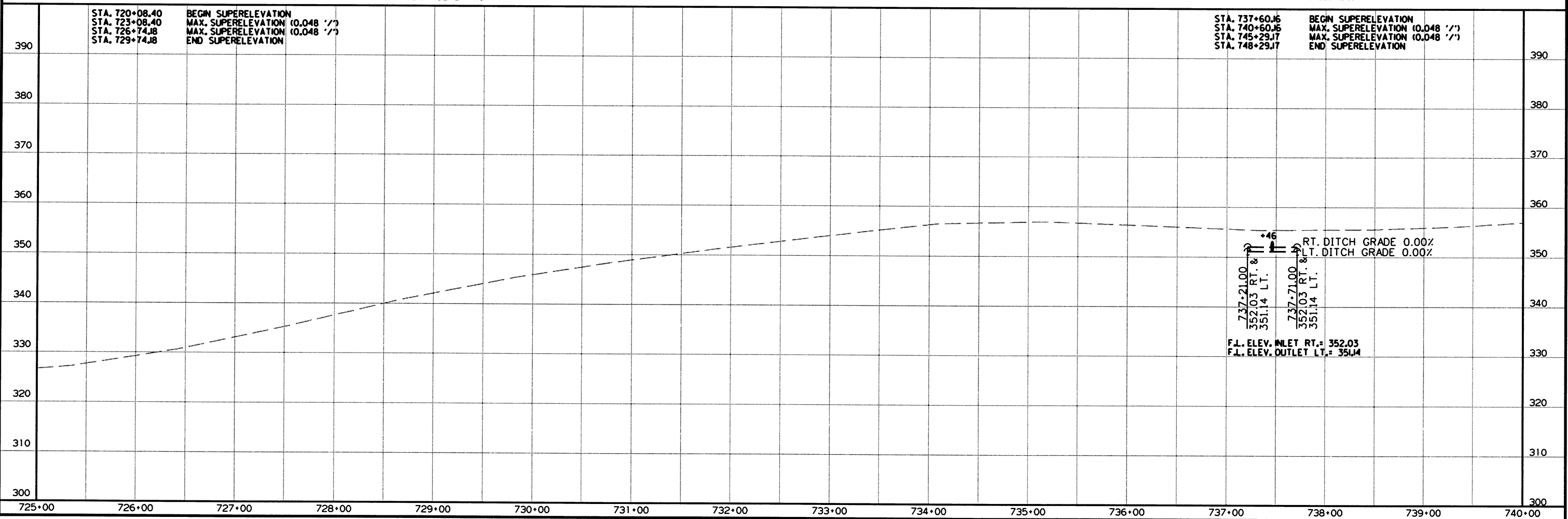
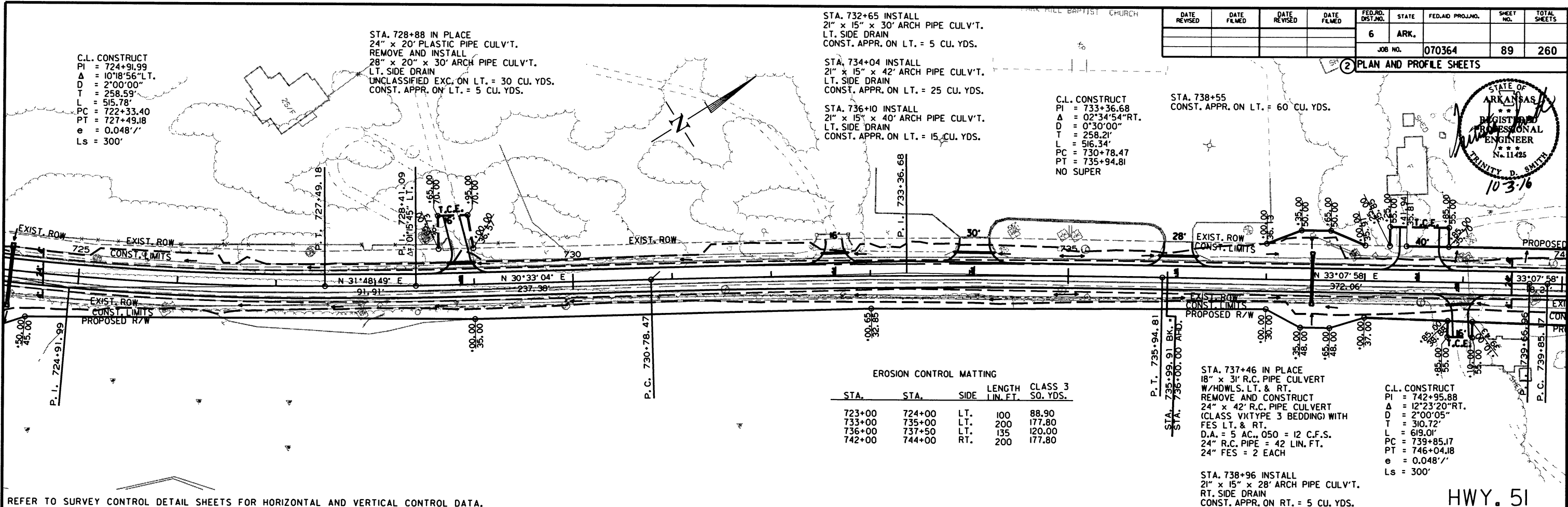
STA.	STA.	SIDE	LENGTH LIN. FT.	CLASS 3 SQ. YDS.
723+00	724+00	LT.	100	88.90

WIRE FENCE AND GATE

STA.	STA.	SIDE	TYPE	LIN. FT.
700+27	702+00	LT.	C	177

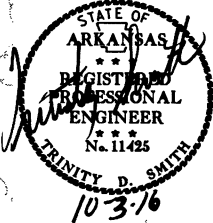
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.





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. 070364			89	260

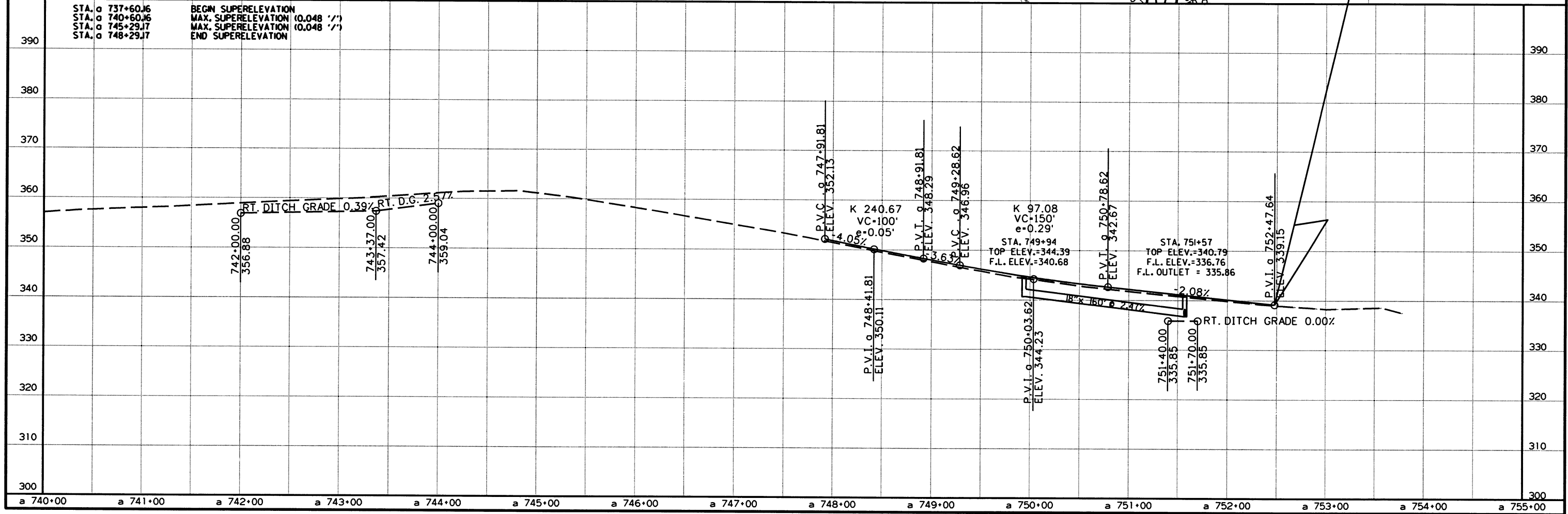
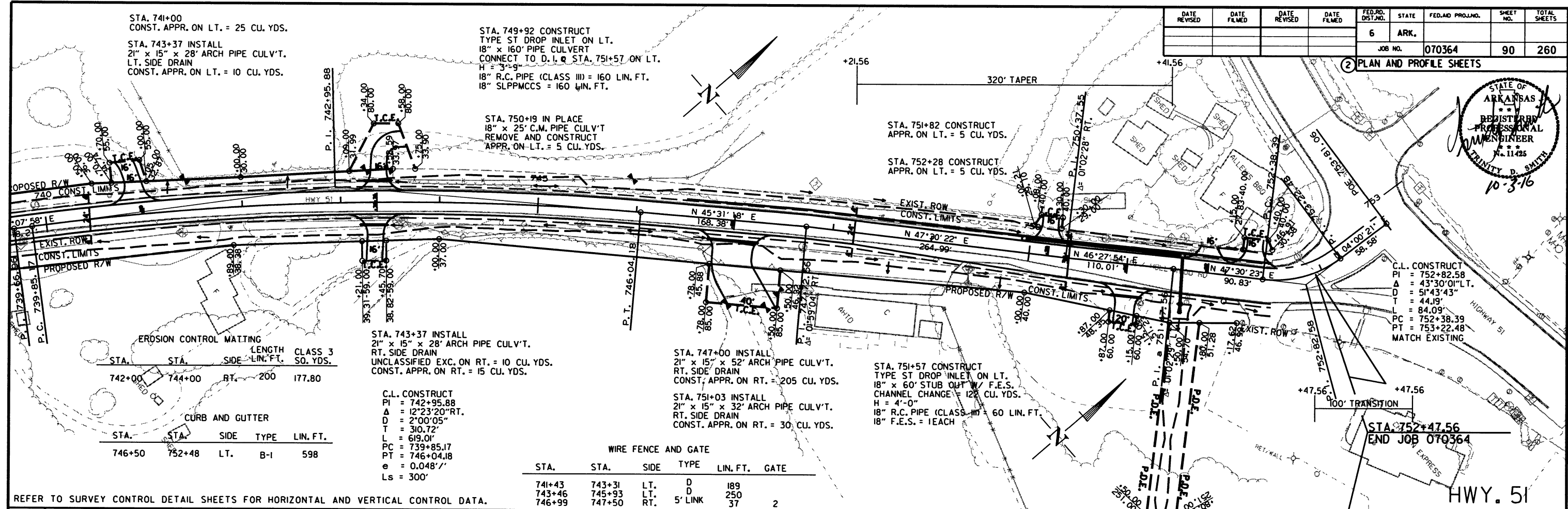
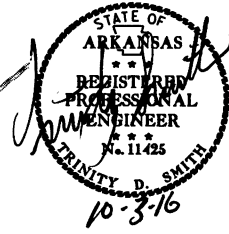
2 PLAN AND PROFILE SHEETS



HWY. 51

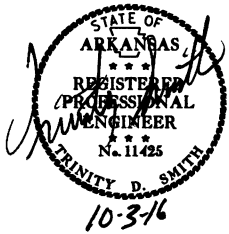
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070364		90	260

2 PLAN AND PROFILE SHEETS

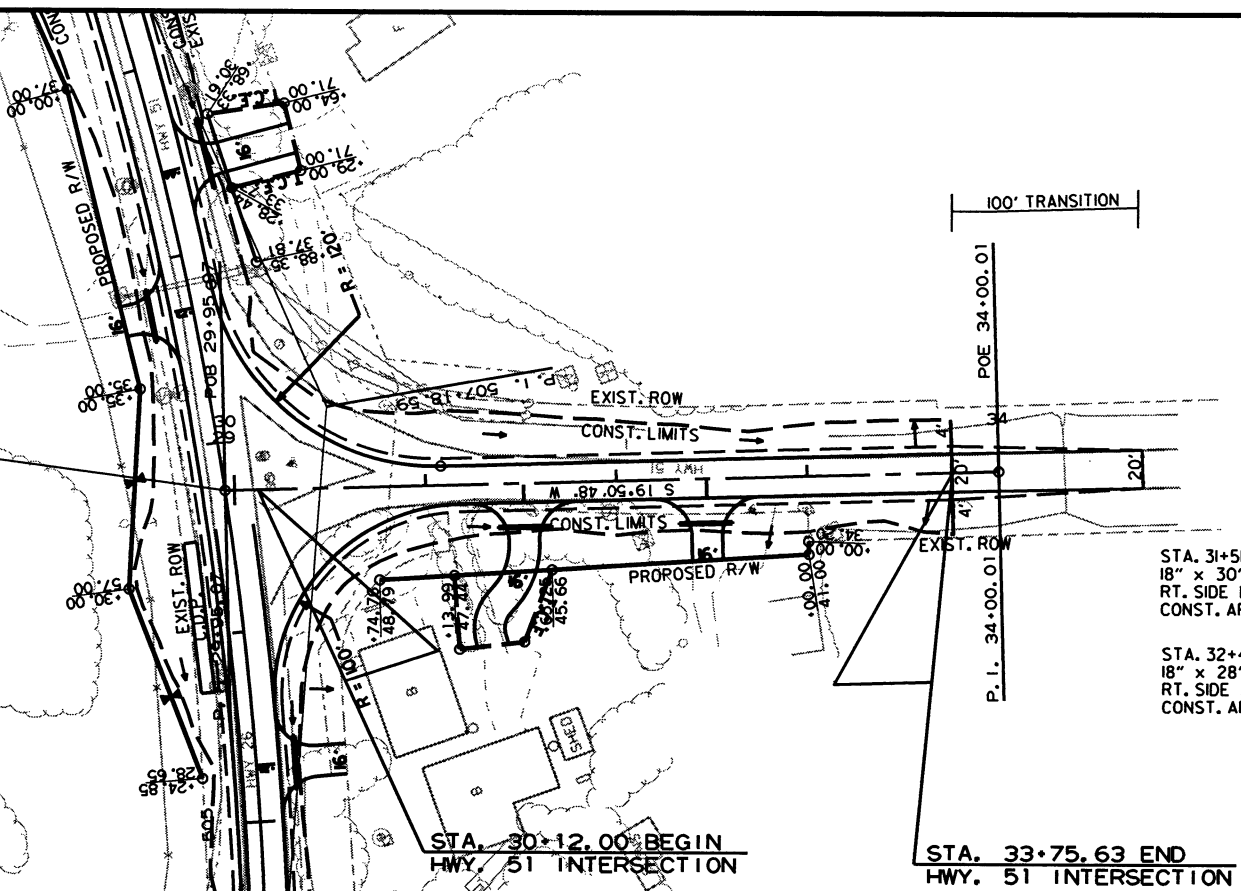


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070364	91	260

2 PLAN AND PROFILE SHEETS



STA. 506+74.70 ON HWY. 51 (MAIN LANES) =
STA 29+95.07 ON HWY. 51 (INTERSECTION)
Δ = 82°37'26"

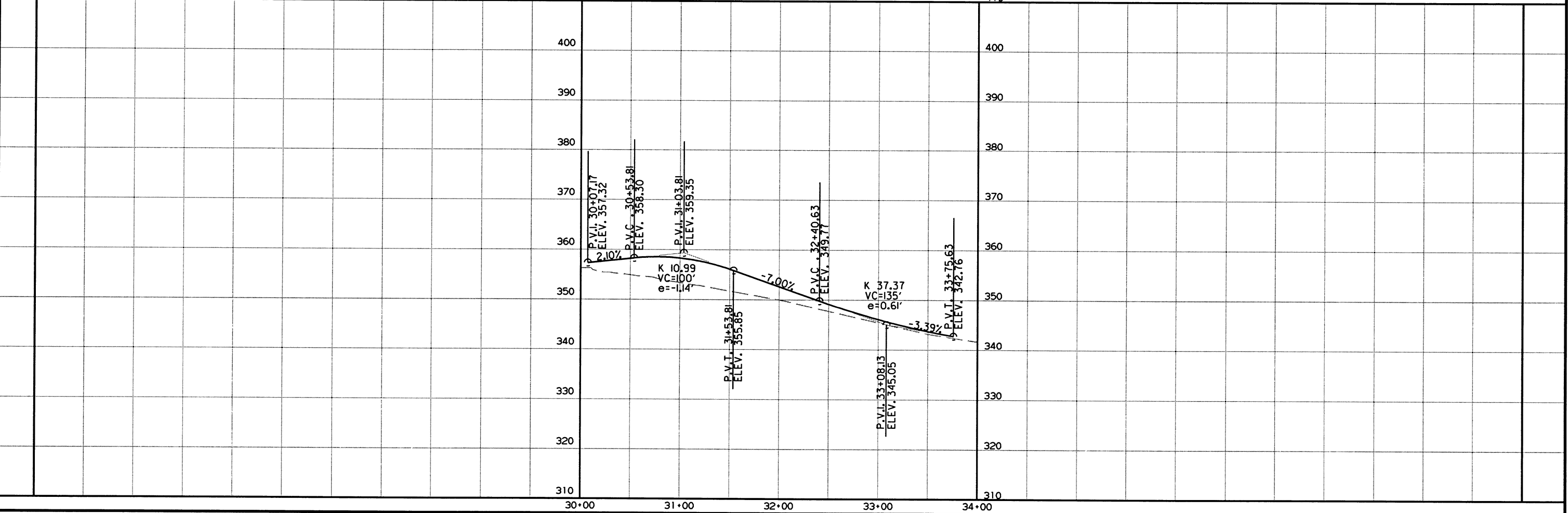


STA. 31+51 INSTALL
18" x 30' PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 45 CU. YDS.

STA. 32+47 INSTALL
18" x 28' PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 25 CU. YDS.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 51/26 INTERSECTION



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.	070364		92	260

2 PLAN AND PROFILE SHEETS

WIRE FENCE AND GATE					
STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
578+88	580+90	LT.	D	208	I
583+06	583+77	LT.	D	52	
585+90	587+92	RT.	D	203	I
588+18	592+56	RT.	D	452	
588+65	590+75	LT.	D-I	200	



STA. 580+00.00 ON HWY. 51 =
STA 10+00.02 ON HELMS RD./CO. RD. 74
Δ = 90°00'00"

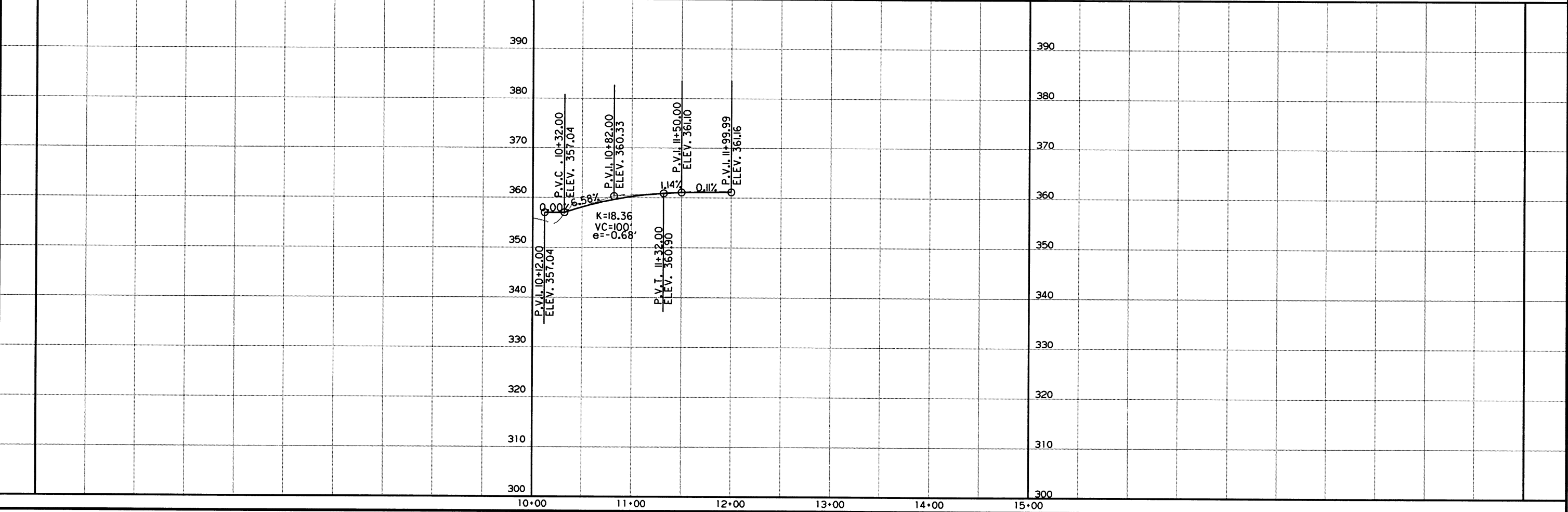
STA. 11+48
UNCLASSIFIED EXC. ON LT. = 10 CU. YDS.

STA. 11+85.91
END HELMS RD./CO. RD. 74

HELMS RD./CO. RD. 74
PI = 10+50.55
Δ = 26°16'11" LT.
T = 80'
L = 18.67'
E = 36.68'
PC = 10+31.88
PT = 10+68.56
NO SUPER

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HELMS RD./CO. RD. 74

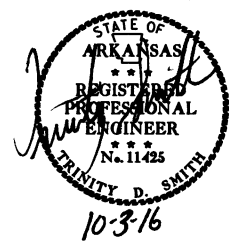


10/3/2016

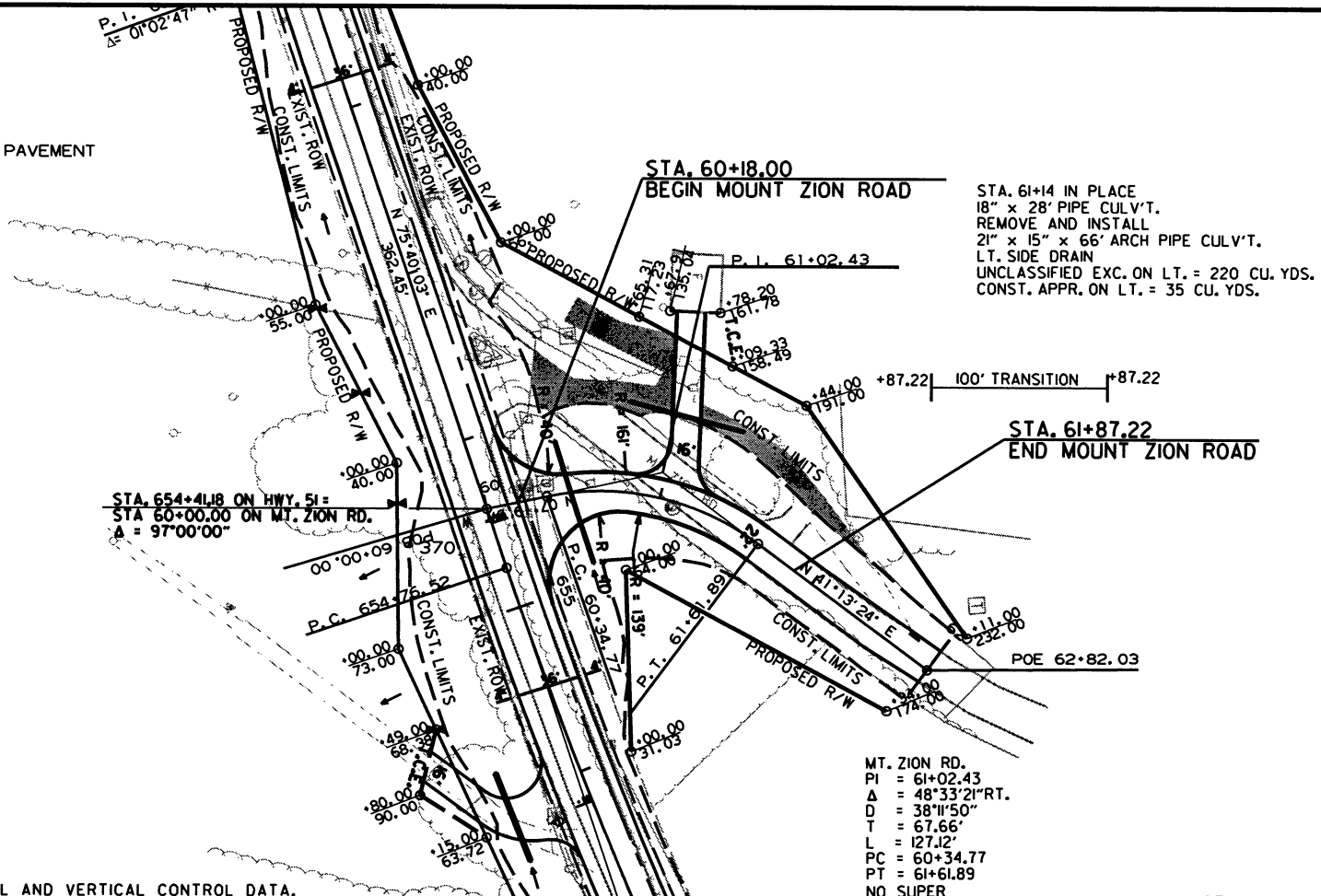
R070364.DGN

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. 070364	93	260

2 PLAN AND PROFILE SHEETS



OBLITERATION OF EXISTING PAVEMENT

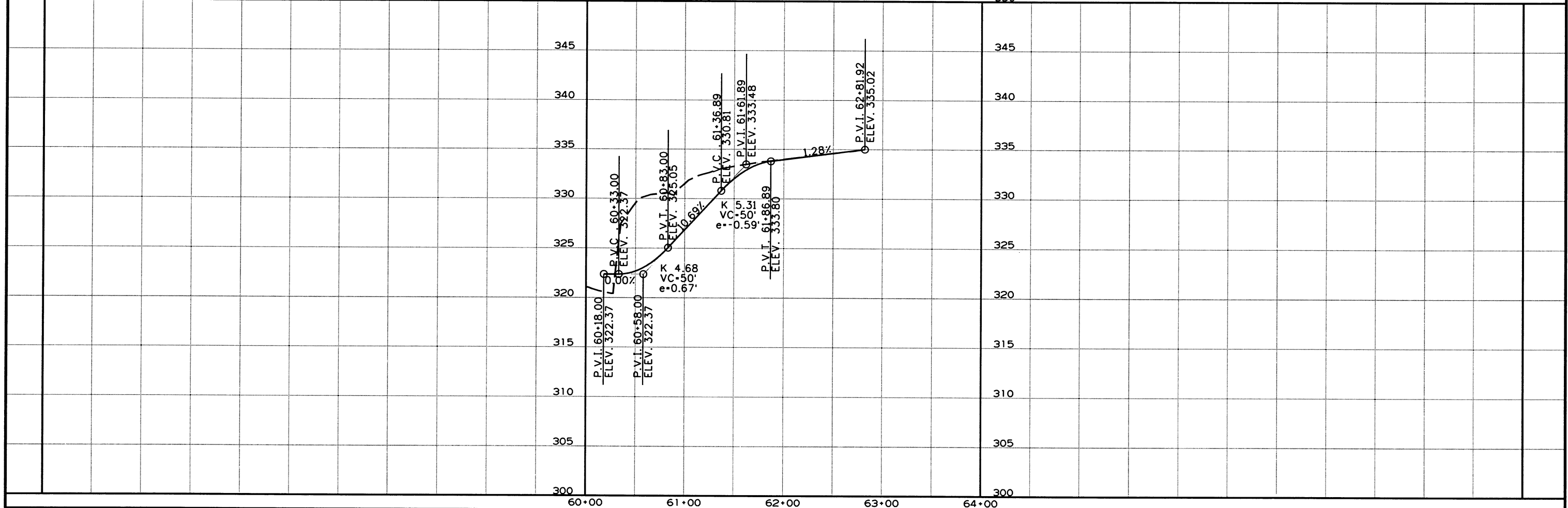


STA. 61+14 IN PLACE
18" x 28' PIPE CULV'T.
REMOVE AND INSTALL
21" x 15" x 66' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 220 CU. YDS.
CONST. APPR. ON LT. = 35 CU. YDS.

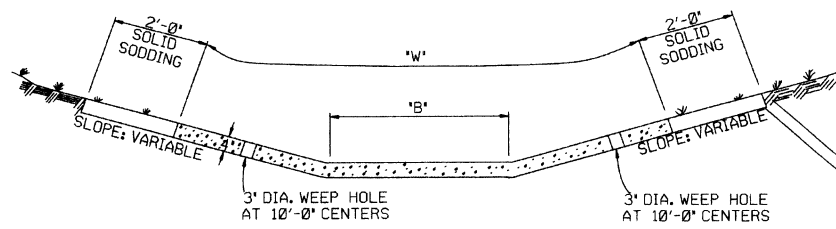
MT. ZION RD.
PI = 61+02.43
Δ = 48°33'21" RT.
D = 38°11'50"
T = 67.66'
L = 127.12'
PC = 60+34.77
PT = 61+61.89
NO SUPER

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

MT. ZION RD.

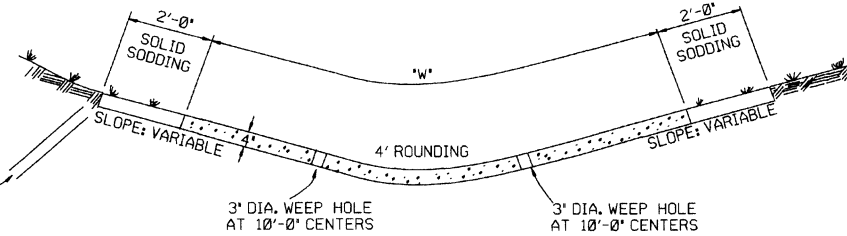


REFER TO TABULATION OF QUANTITIES
FOR 'W' & 'B' DIMENSIONS



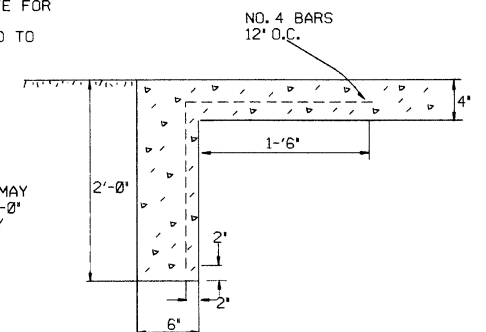
TYPE A

REFER TO TABULATION OF QUANTITIES
FOR 'W' DIMENSIONS

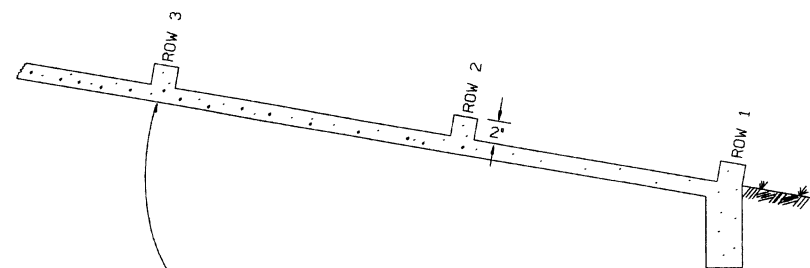


TYPE B

THE STEEL AND ADDITIONAL CONCRETE FOR
THE WALLS SHALL NOT BE PAID FOR
DIRECTLY, BUT SHALL BE CONSIDERED TO
BE INCLUDED IN THE PRICE BID FOR
'CONCRETE DITCH PAVING.'

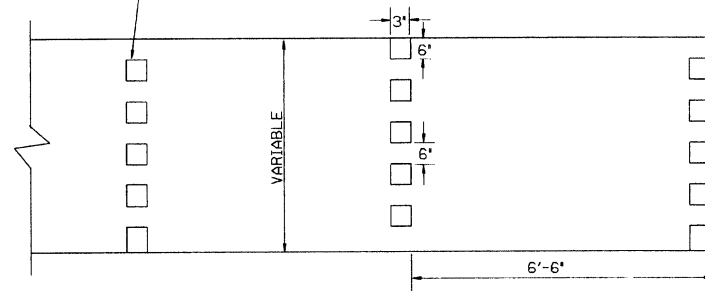


TOE WALL DETAIL FOR
CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE
LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING
EXCEEDS 7%. THE DISSIPATORS WILL NOT BE
PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED
TO BE UNCLUDED IN THE PRICE BID FOR CONCRETE
DITCH PAVING.



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH
PAVING, AND POURED MONOLITHICALLY.

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS
OF DITCH PAVING CONSTRUCTION.

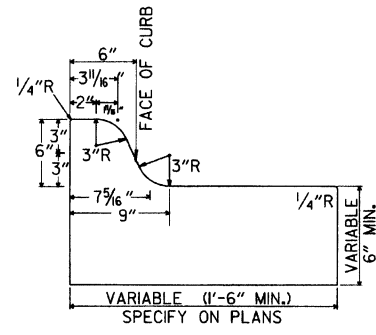
1' WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE
DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH
APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILLED
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-88	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS	508-11-1-84
	ADDED	
11-1-84	EXCAVATION DETAILS ADDED	
	TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72
DATE	REVISION	DATE FILLED

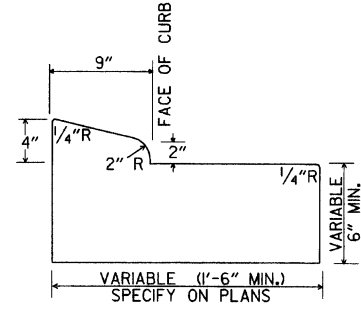
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

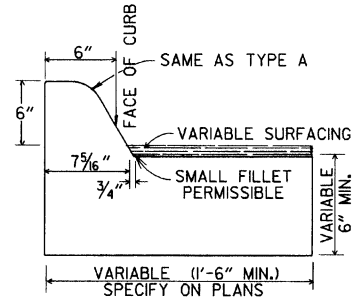
STANDARD DRAWING CDP-1



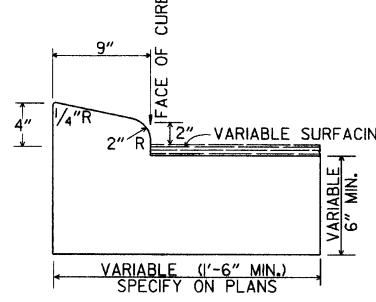
TYPE A



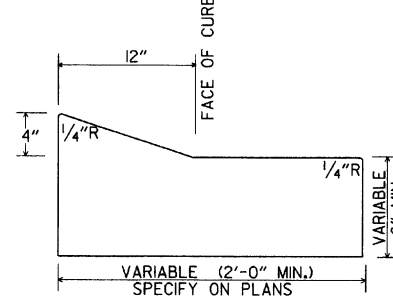
TYPE B-1



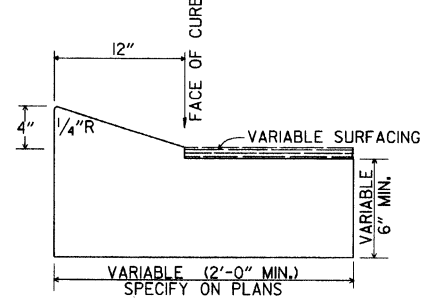
TYPE C



TYPE B-2

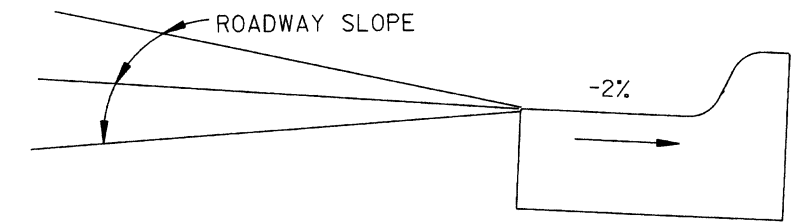


TYPE E-1

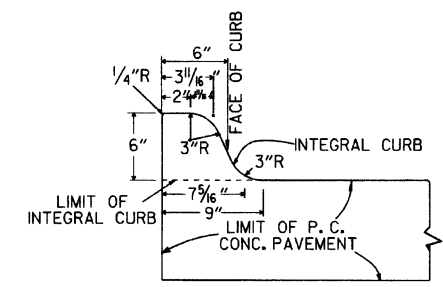


TYPE E-2

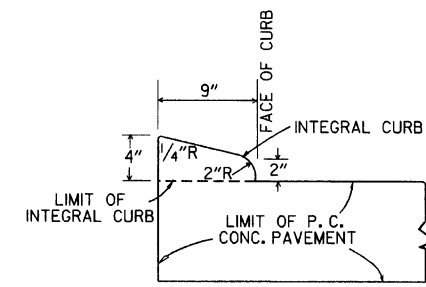
CONCRETE COMBINATION CURB AND GUTTER



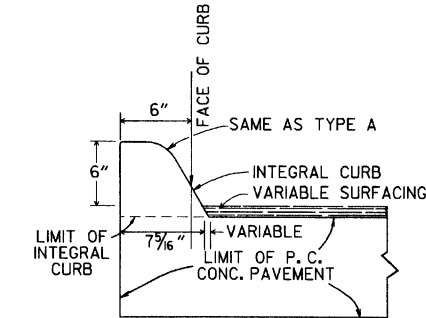
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

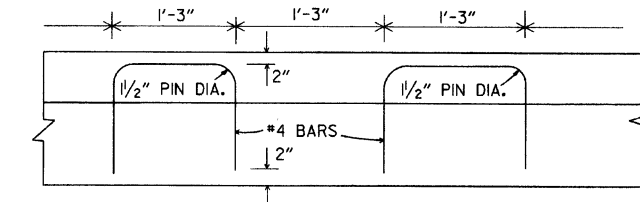


TYPE B

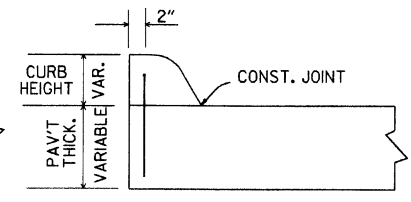


TYPE C

INTEGRAL CURB

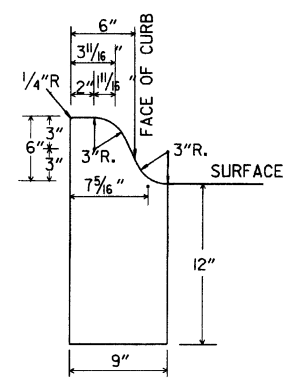


LONGITUDINAL SECTION

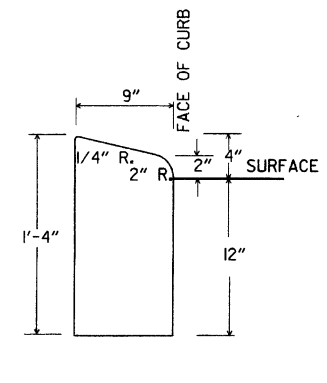


ELEVATION

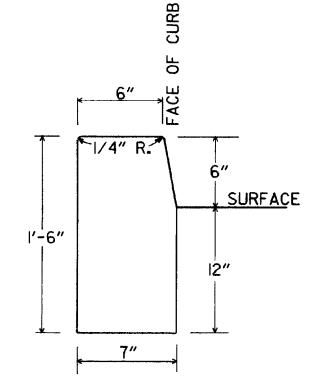
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



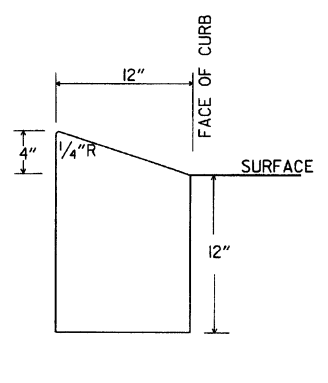
TYPE A



TYPE B

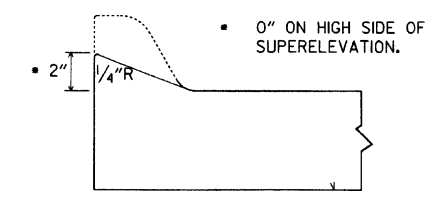


TYPE D



TYPE E

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.

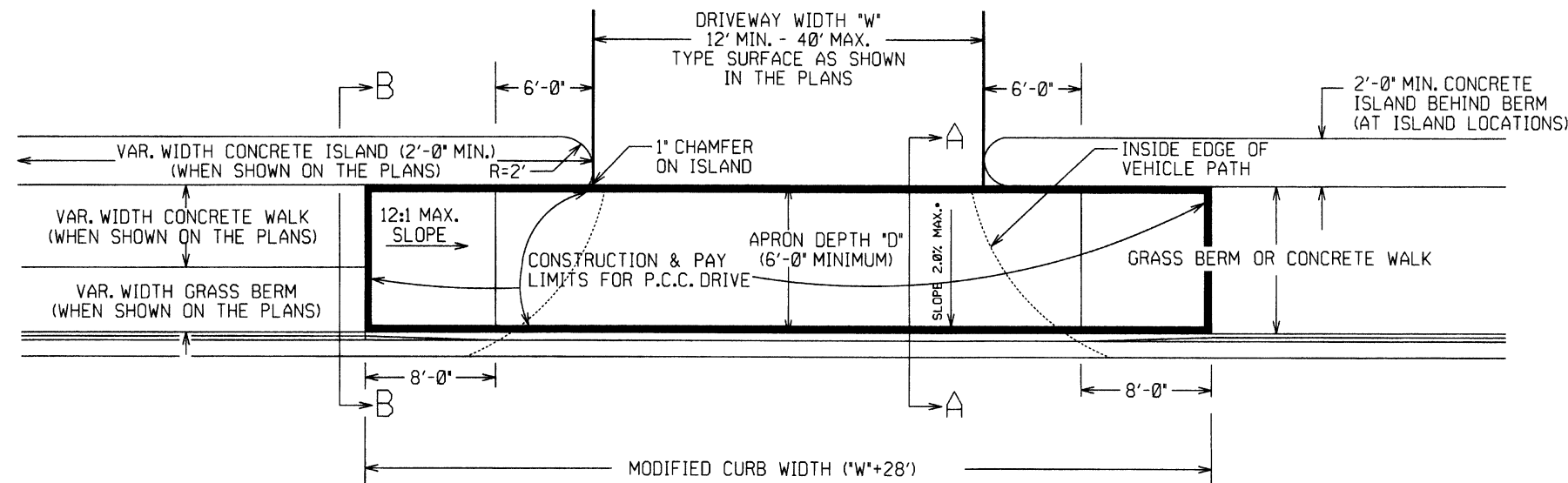
DETAILS OF MODIFIED CURB

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 1	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	502-10-2-72

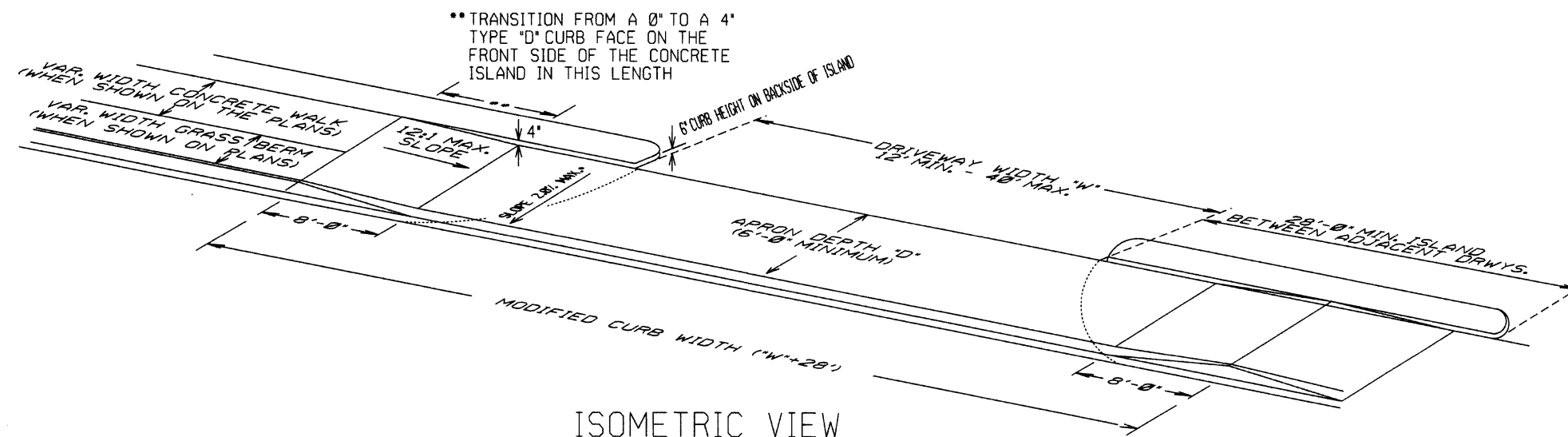
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

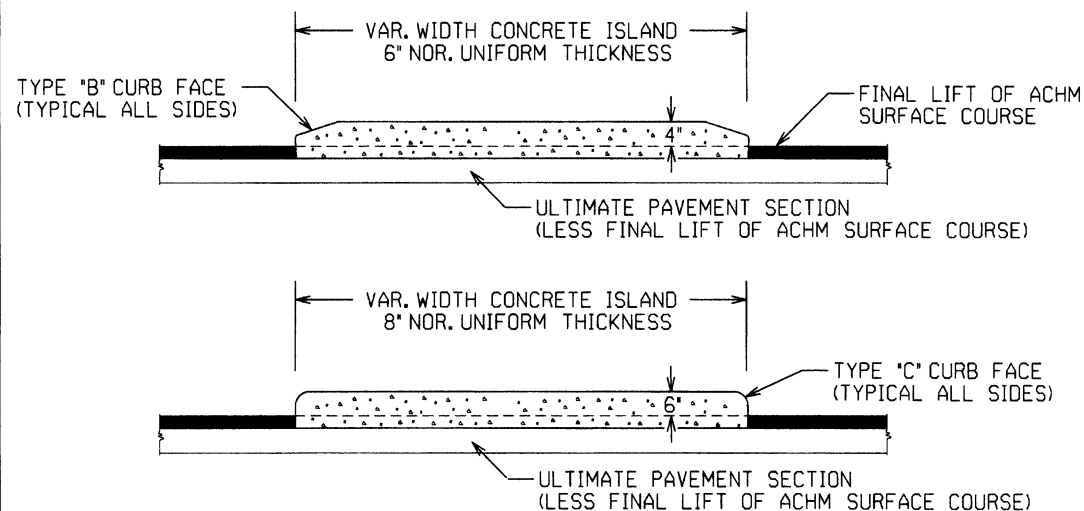
STANDARD DRAWING CG-1



PLAN VIEW

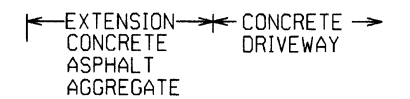


ISOMETRIC VIEW



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".

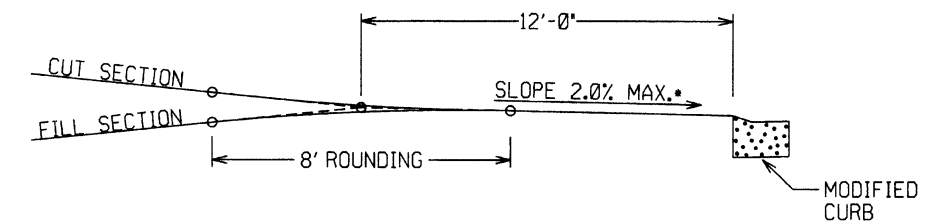


EXTENSION TYPICAL SECTIONS

- 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

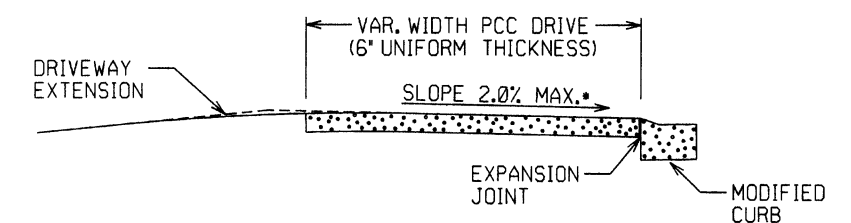
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

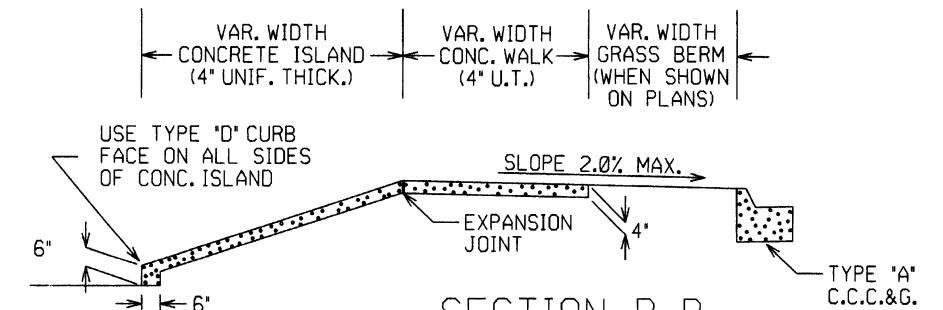


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



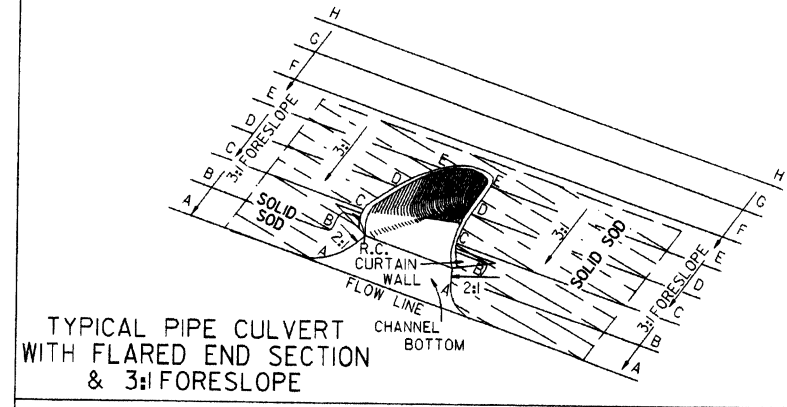
SECTION A-A



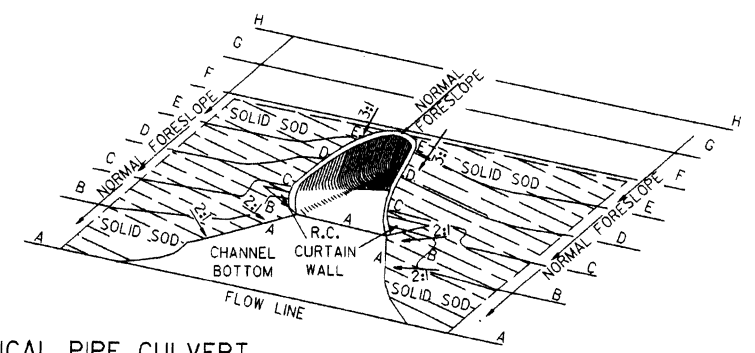
SECTION B-B
CURBED ISLAND BEHIND WALK

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	REV	DATE	FILMED	DESCRIPTION

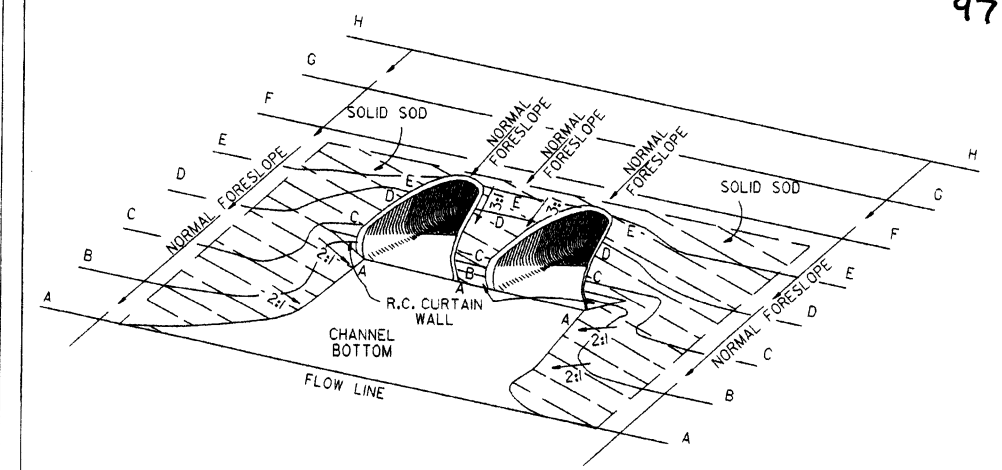
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



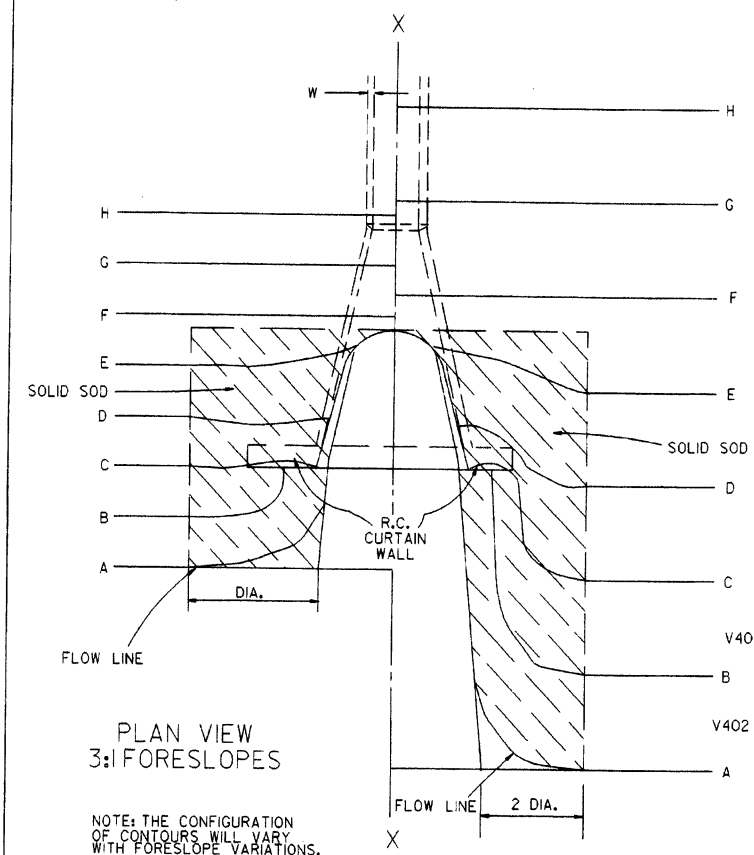
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3:1 FORESLOPES

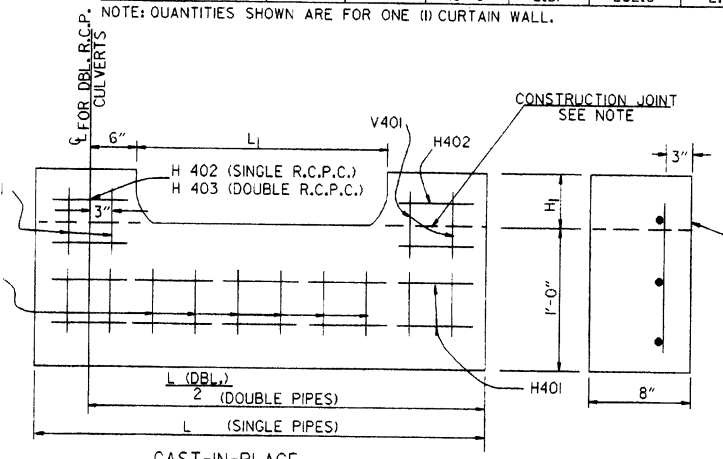
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

PIPE DIA.	H ₁	L ₁	L	L (DBL.)	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
18"	11'-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

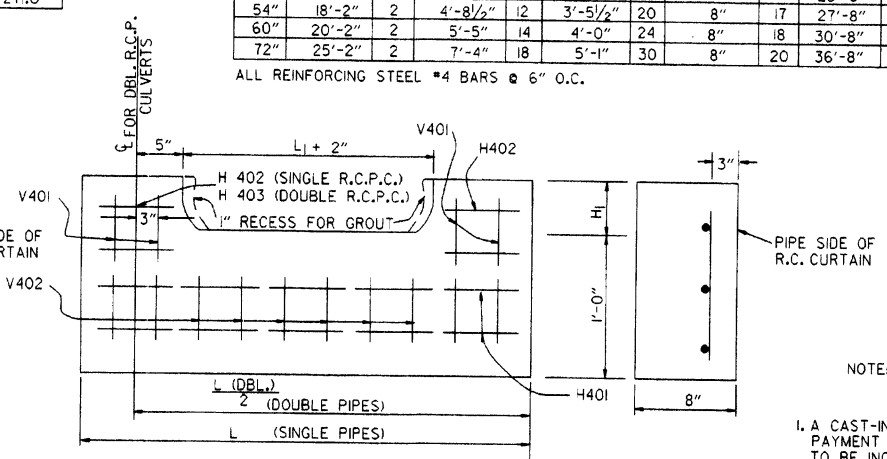
NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



CAST-IN-PLACE

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



PRECAST

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		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
18"	7'-8"	2	1'-11/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11/2"	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"	12	8"	18
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"	22
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.

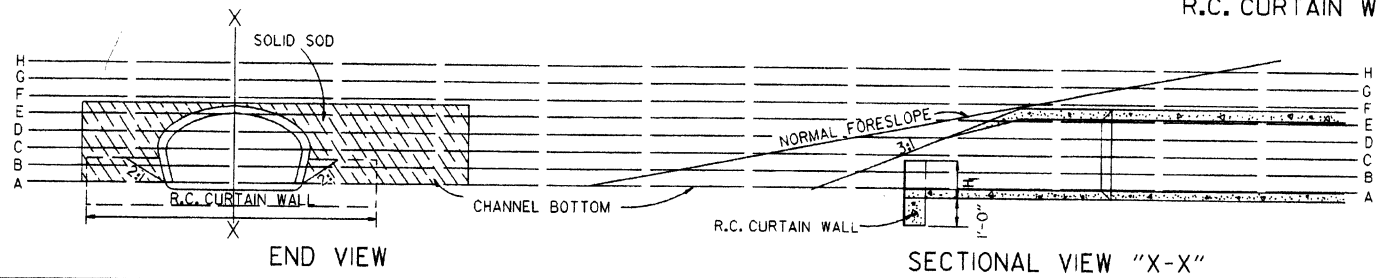
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.			DOUBLE R.C.P.C.		
	3:1	4:1	6:1	3:1	4:1	6:1
18"	5	12	12	6	8	13
24"	8	18	16	9	12	20
30"	13	29	24	14	19	30
36"	17	41	34	18	26	43
42"	23	55	46	25	37	57
48"	29	68	58	31	48	70
54"	35	85	71	37	59	87
60"	45	104	88	48	75	107
72"	64	156	129	67	95	159

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

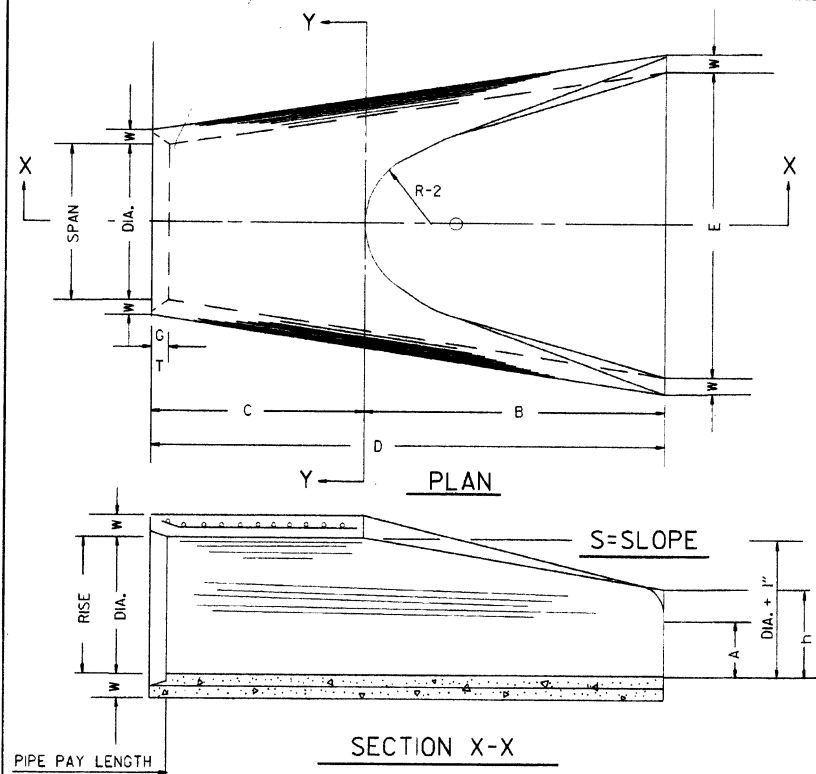
- GENERAL NOTES
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL 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 W/10 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
FLARED END SECTION		STANDARD DRAWING FES-1



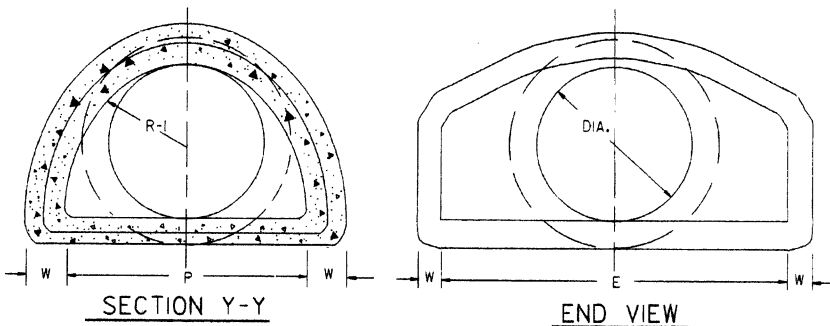
END VIEW

SECTIONAL VIEW "X-X"



END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS

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'-3 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	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 3/8"	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 1/8"	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 1/4"	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 3/8"	24"	5"	13250	4'-6"			

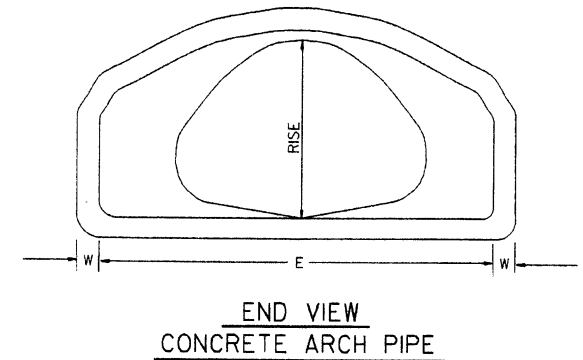


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

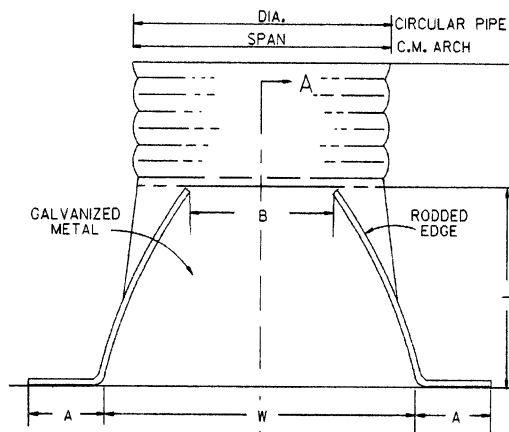
ARCH PIPE

EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO	AHD	AASHTO	AHD										
	M 206	NOMINAL	M 206	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"
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"
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"
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"
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 3/8"	20"	3"	2 1/2"
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"
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"
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 1/8"	24"	4 1/4"	2 1/2"
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 1/4"
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/8"	24"	5"	2 1/4"

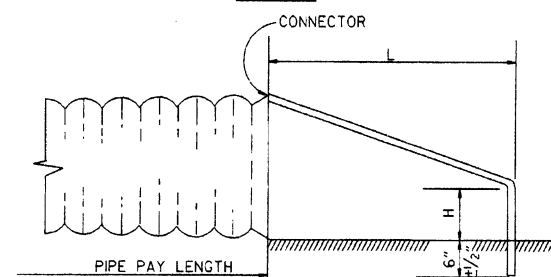
* THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



END VIEW
CONCRETE ARCH PIPE



PLAN



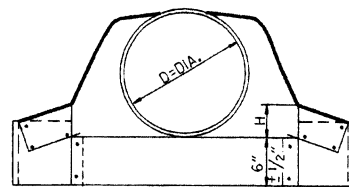
SECTION A-A

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

CIRCULAR PIPE

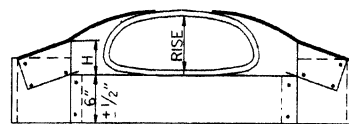
D. DIA.	GAUGE	A 1" $\pm$	B MAX.	H 1" $\pm$	L 1 1/2" $\pm$	W 2" $\pm$	S
12	16	6	6	6	21	24	2 1/2"
15	16	7	8	6	26	30	2 1/2"
18	16	8	10	6	31	36	2 1/2"
21	16	9	12	6	36	42	2 1/2"
24	16	10	13	6	41	48	2 1/2"
30	14	12	16	8	51	60	2 1/2"
36	14	14	19	9	60	72	2 1/2"
42	12	16	22	11	69	84	2 1/2"
48	12	18	27	12	78	90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



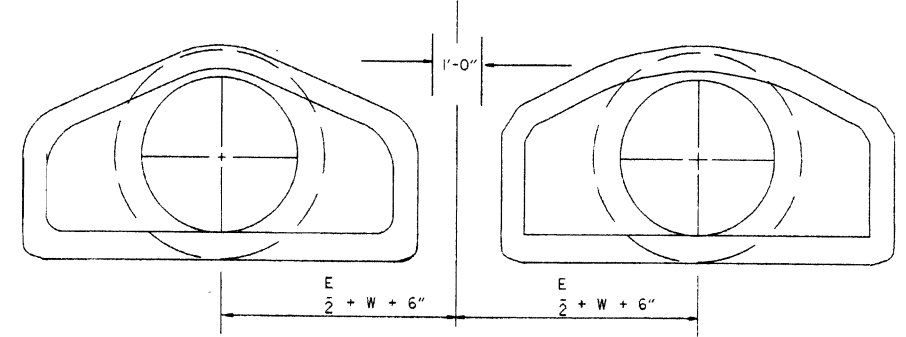
CIRCULAR PIPE

C.M. ARCH PIPE

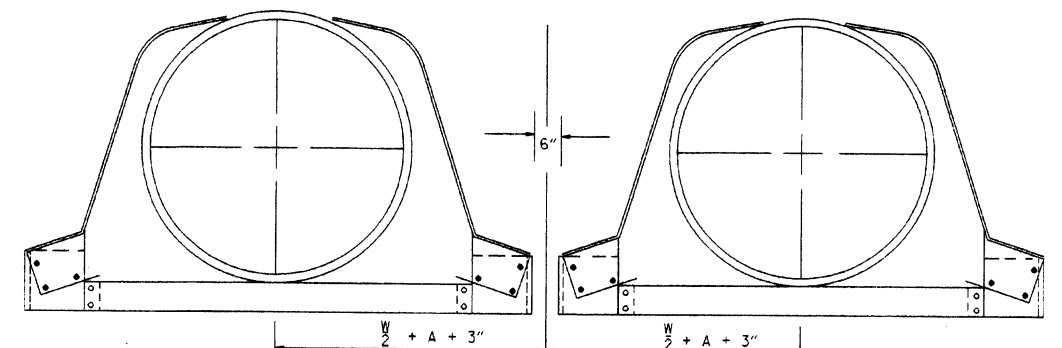
EQUIV. DIA.	SPAN	RISE	A 1" $\pm$	B MAX.	H 1" $\pm$	L 1 1/2" $\pm$	W 2" $\pm$	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2"	16
18"	21	15	7	10	6	23	36	2 1/2"	16
21"	24	18	8	12	6	28	42	2 1/2"	16
24"	28	20	9	14	6	32	48	2 1/2"	16
30"	35	24	10	16	6	39	60	2 1/2"	14
36"	42	29	12	18	8	46	75	2 1/2"	14
42"	49	33	13	21	9	53	85	2 1/2"	12
48"	57	38	18	26	12	63	90	2 1/2"	12
54"	64	43	18	30	12	70	102	2 1/2"	12
60"	71	47	18	33	12	77	114	2 1/2"	12



C.M. ARCH PIPE

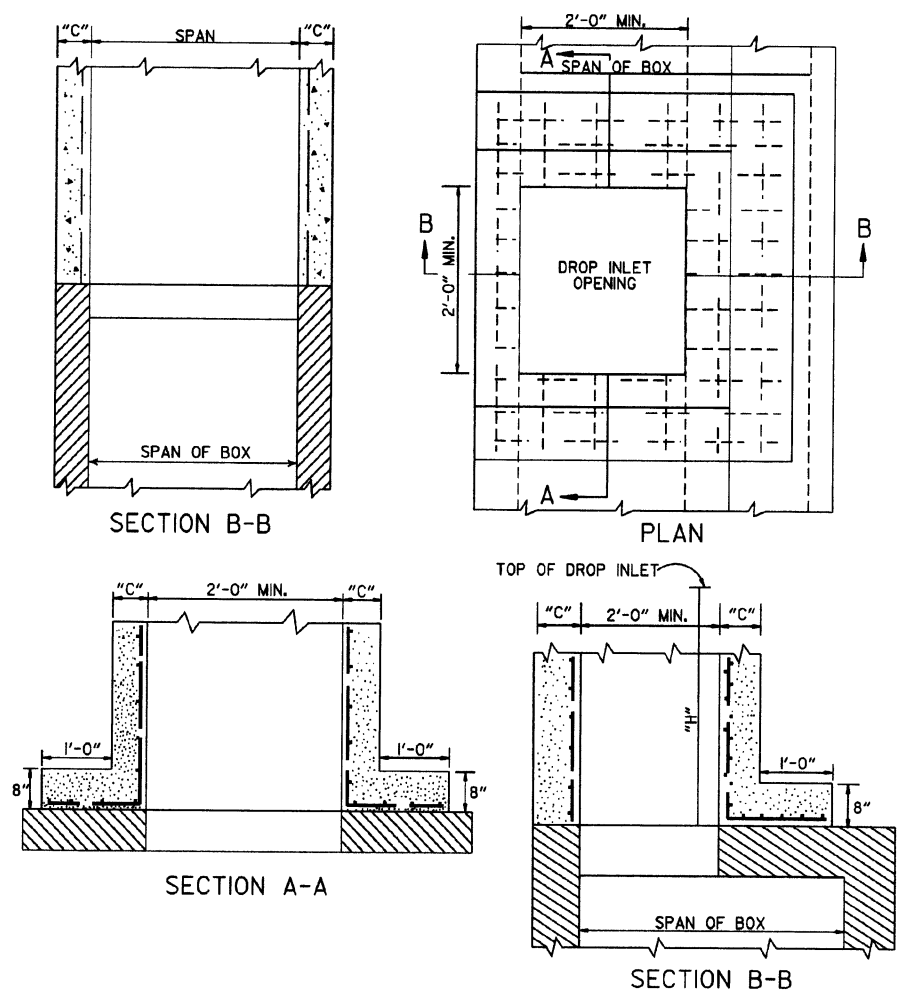


MULTIPLE R.C. PIPE CULVERTS

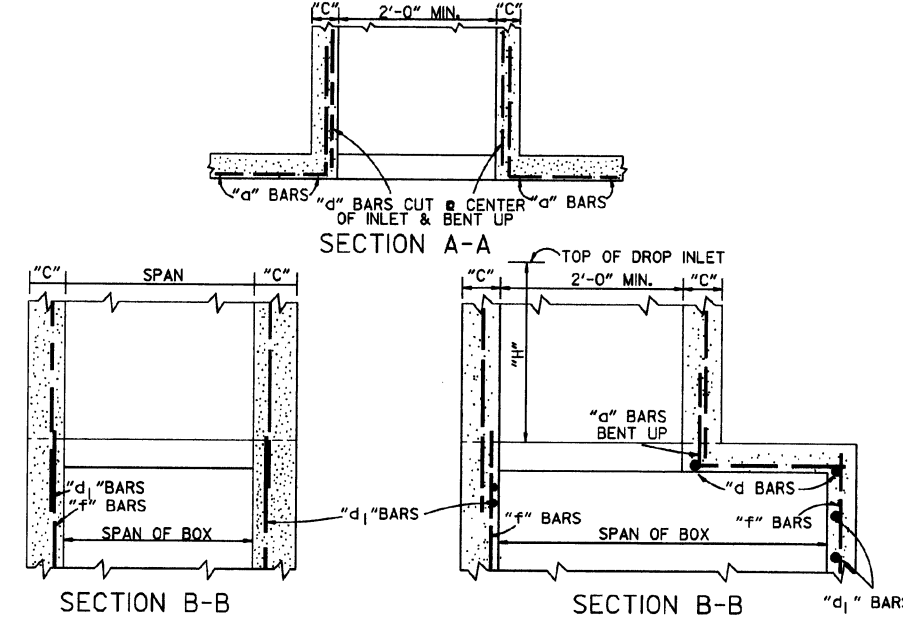


MULTIPLE C.M. PIPE CULVERTS

10-18-96	REVISED ASTM REF. TO AASHTO	16-18-96	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	FILED	

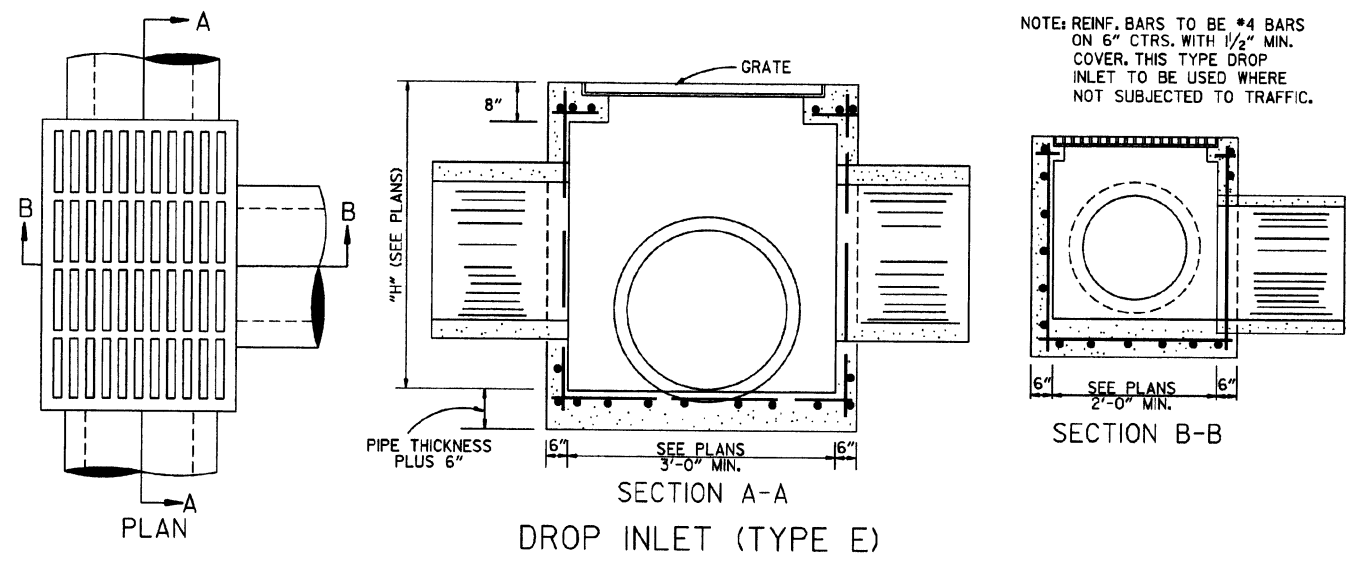


METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



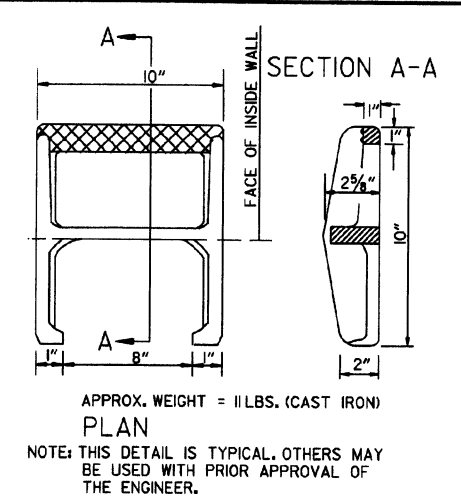
METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

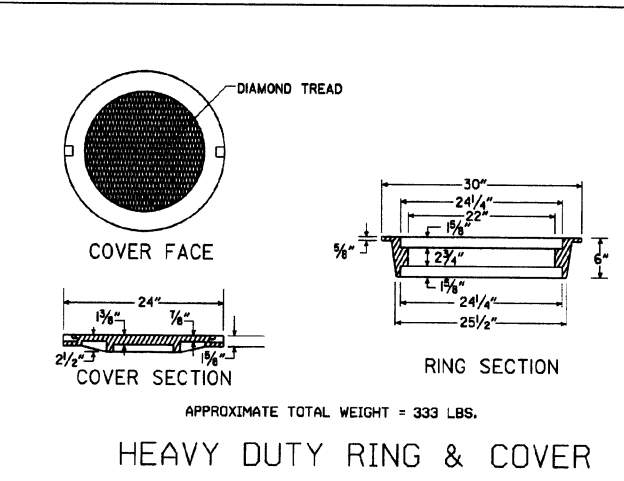


DROP INLET (TYPE E)

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

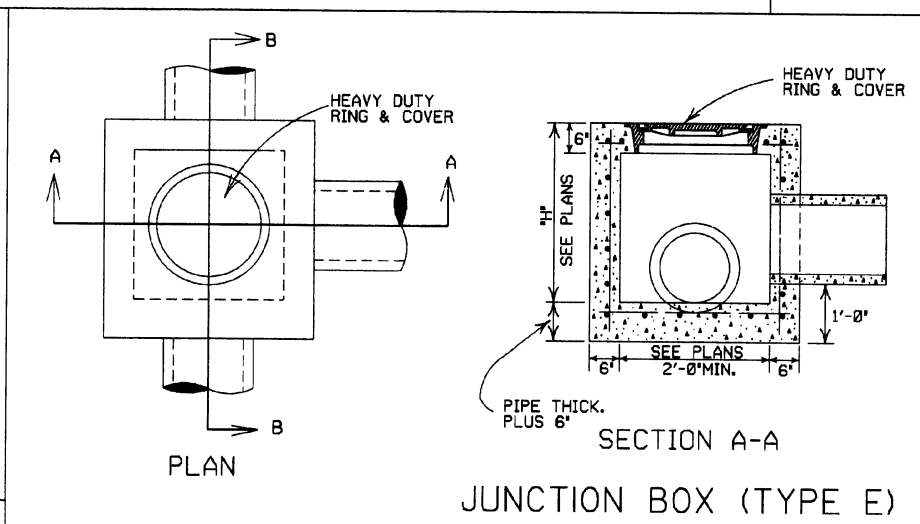


DETAIL OF STEP FOR DROP INLET



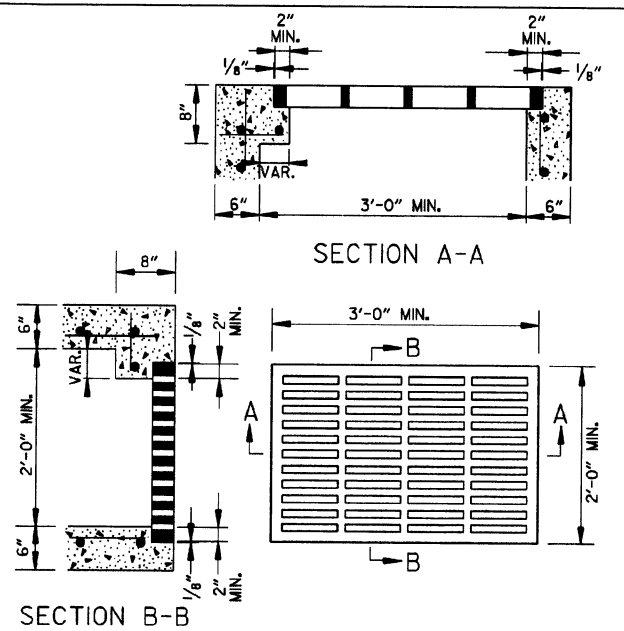
HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.



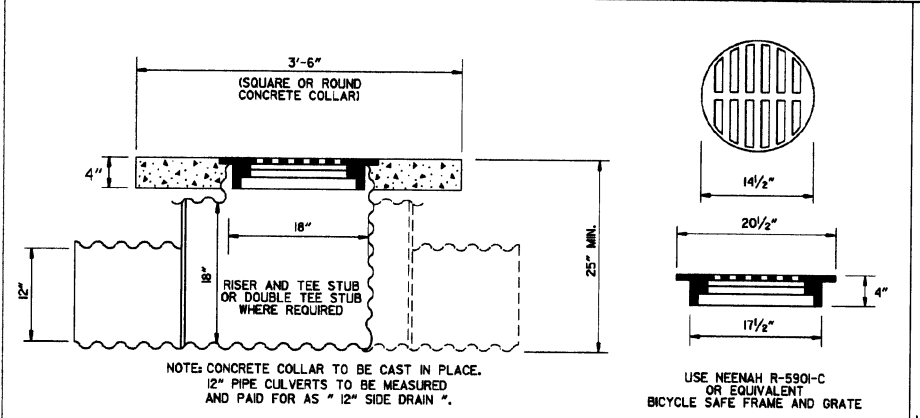
JUNCTION BOX (TYPE E)

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



GRATE FOR TYPE E DROP INLET

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.



DETAIL OF YARD DRAIN

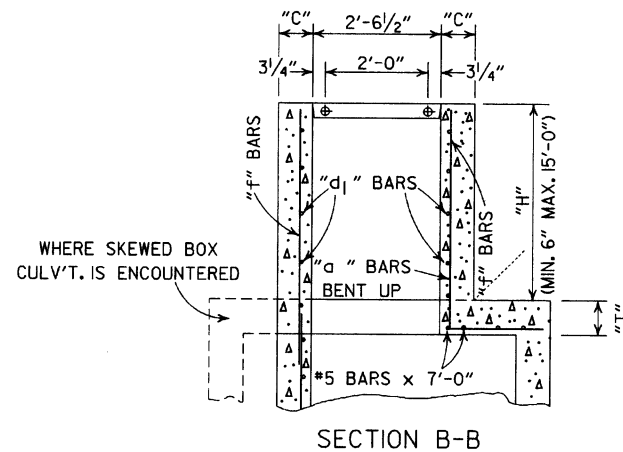
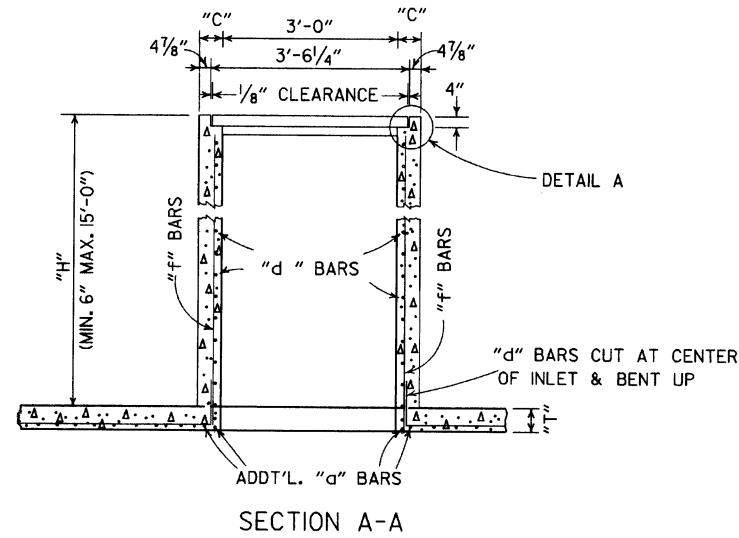
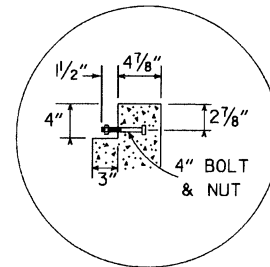
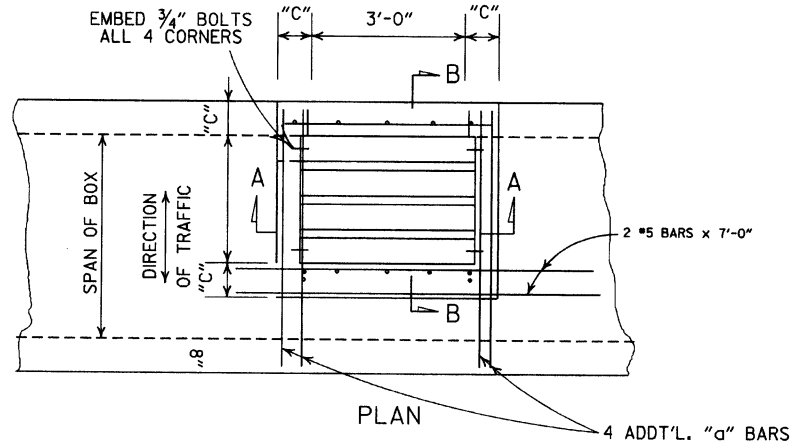
- GENERAL NOTES:
1. ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
 2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
 3. EXPANSION JOINT MATERIAL SHALL BE 3/4" PREFORMED FIBER.
 4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
 5. GRATE AND FRAME SHALL NOT BE PAINTED.
 6. GRATE SHALL BE BICYCLE SAFE.
 7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
 9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

11-16-01	ADDED NOTE 10		
1-12-00	REVISED HEAVY DUTY RING & COVER		
7-02-98	CHANGED GRATE DETAIL, DELETED D1 (TYPE D), REPLACED RING & COVER W/ HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)		
6-26-97	ADDED DIMENSION TO TYPE IV-A		
10-18-96	ADDED DETAIL OF YARD DRAIN		
8-15-91	DELETE TYPE IV GRATE		
7-15-88	REVISED STEP DETAIL		
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)		
2-4-83	ADDED GENERAL NOTE NO. 4		
3-2-81	ADDED TYPE IV-A GRATE		
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)		
10-2-72	REVISED AND REDRAWN		
DATE REV.	REVISION		DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

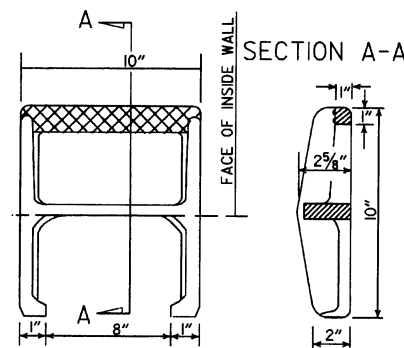
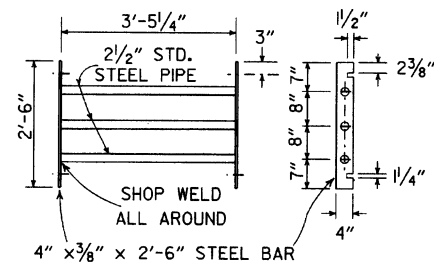
STANDARD DRAWING FPC-9



NOTE: ADDT'L. REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

DIMENSIONS & REINF. BARS FOR D.I. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

DROP INLET TYPE "TM" FOR REINFORCED CONC. BOX CULVERTS



APPROX. WEIGHT = 11 LBS. (CAST IRON)

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

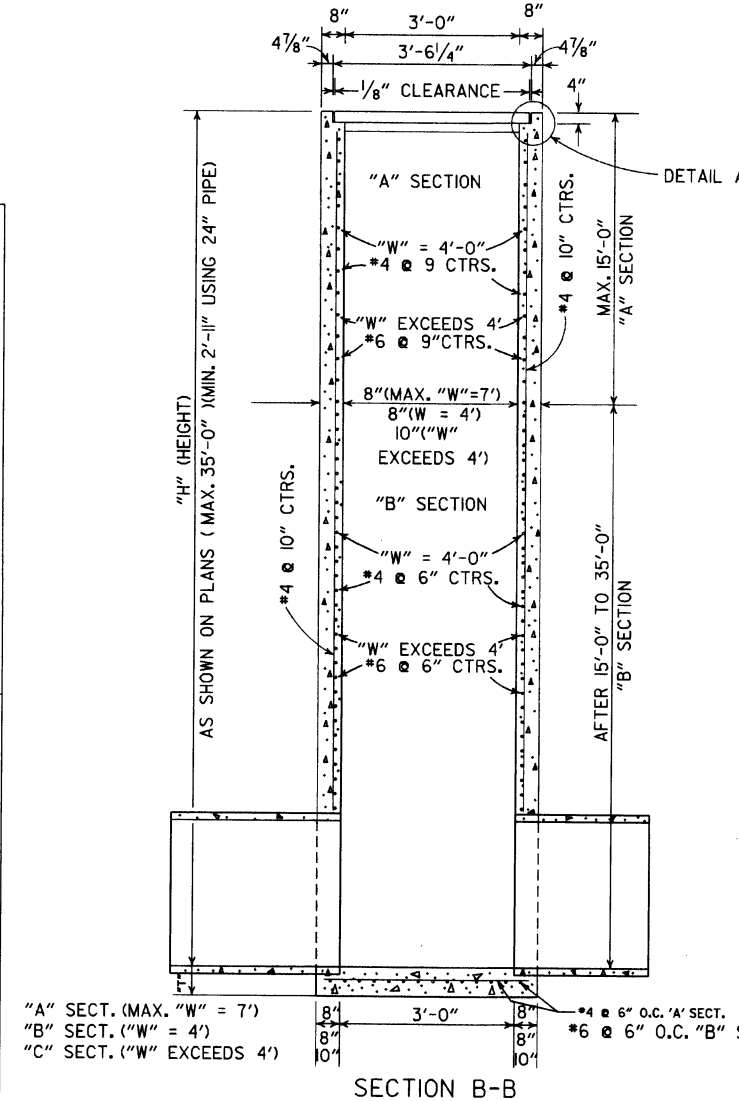
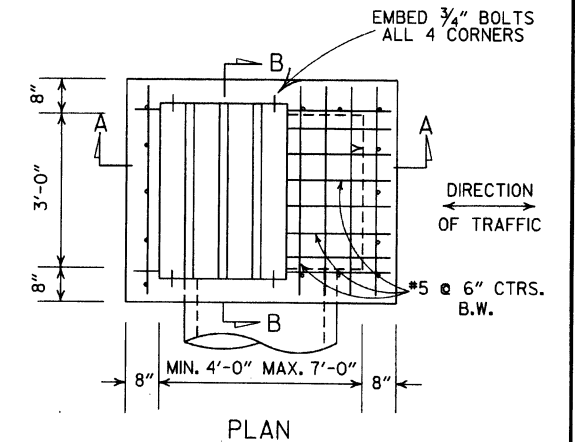
DETAIL OF STEP FOR DROP INLET

- GENERAL NOTES:
- STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 10R 2, ASTM A307 OR AASHTO M 164.
 - STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
 - BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
 - ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 - ALL #4 AND #5 REINFORCING BARS TO HAVE 1/2" COVER. LARGER SIZES TO HAVE 2" COVER.
 - THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TABLE OF "W" DIMENSIONS

I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
24"	4'-0"	4'-0"	4'-0"
30"	4'-0"	4'-0"	4'-5"
36"	4'-0"	4'-3"	5'-3"
42"	4'-3"	4'-11"	6'-1"
48"	4'-10"	5'-7"	6'-11"

NOTE: DIMENSIONS SHOWN ABOVE ARE FOR PIPES INTERSECTING DROP INLET ON ONE SIDE ONLY. FOR SKEWED PIPES INTERSECTING BOTH SIDES OF DROP INLET, "W" WILL NEED TO BE INCREASED OR AXIS OF INTERSECTING PIPES WILL NEED TO BE SHIFTED.



DROP INLET (TYPE RM)

8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE	8-15-91
11-30-89	ALTERED DETAIL A	11-30-89
7-15-88	REVISED STEP DETAIL, TM & RM D.I. & GRATE DETAIL	719-7-15-88
10-2-72	REVISED AND REDRAWN	542-10-2-72
REVISED		DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

STANDARD DRAWING FPC-9D

4'-0" LENGTH DROP INLET

DROP INLET EXTENSION

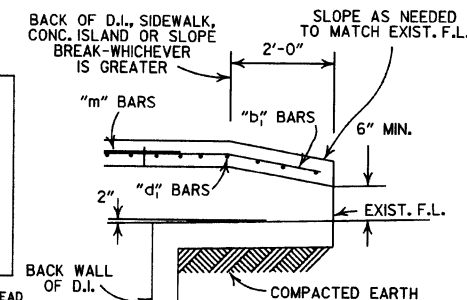
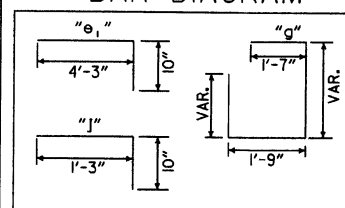
PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0"		PLUS OR MINUS PER LIN. FT. OF HEIGHT		4'-0"		8'-0"	
		CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL	CLASS A CONC.	REINF. STEEL
18"	2'-6"	1.77	156	0.28	22	0.58	38	0.87	72
24"	2'-6"	1.79	156	0.28	22				
30"	3'-2"	2.39	205	0.30	26				
36"	3'-8"	2.63	236	0.32	28				
42"	4'-4"	2.95	250	0.34	30				
48"	4'-10"	3.21	265	0.36	32				
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.						DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
						0.04	3		

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

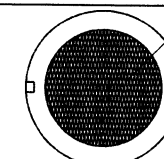
INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

BAR DIAGRAM

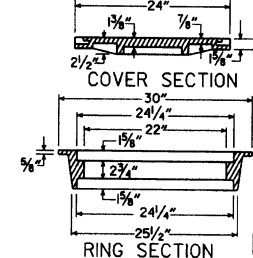


BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



COVER FACE



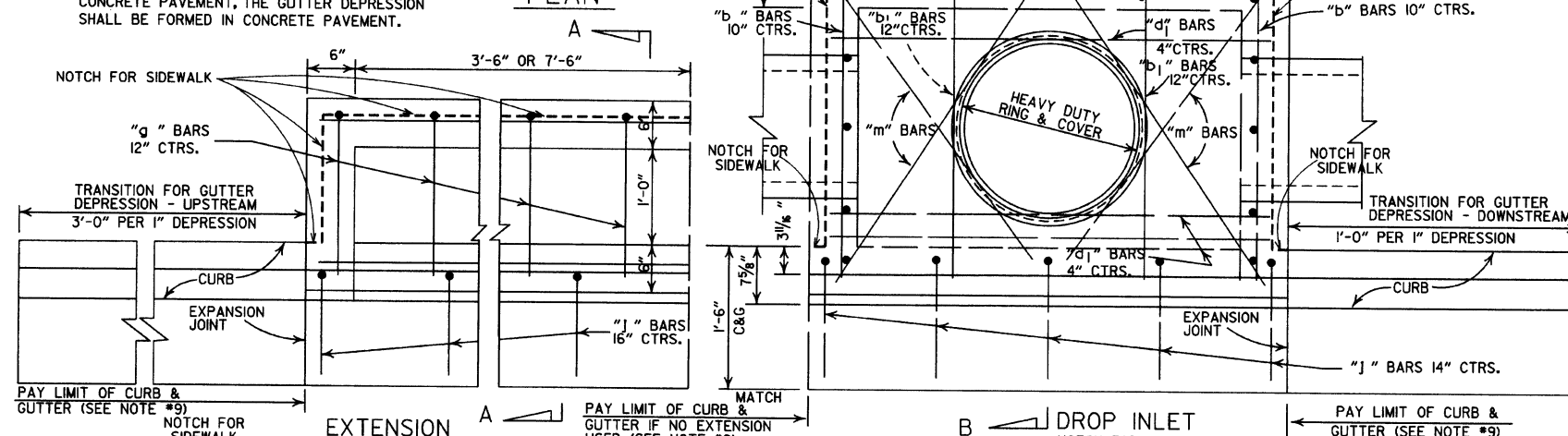
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

- GENERAL NOTES:
- ALL EXPOSED CORNERS TO HAVE $\frac{3}{4}$ " CHAMFER.
 - STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
 - ALL REINF. BARS SHALL BE #4 AND HAVE $\frac{1}{2}$ " COVER.
 - DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 - THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
 - WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 - PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
 - HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M103 CLASS 35B & AASHTO M306.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 - DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

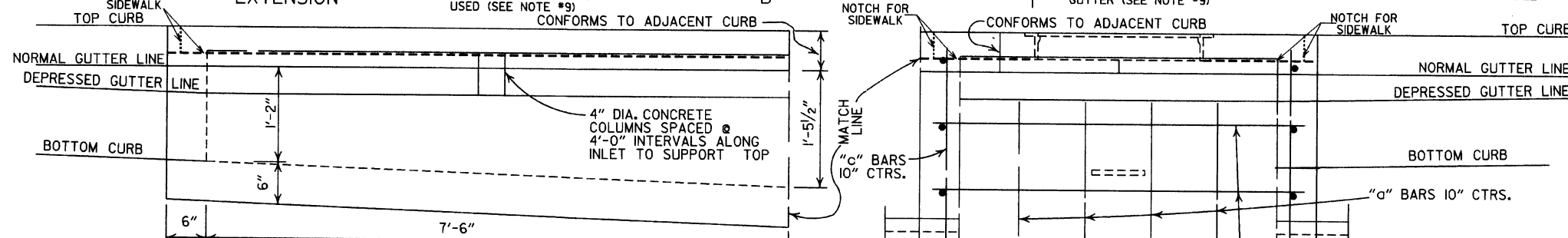
NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.

PLAN



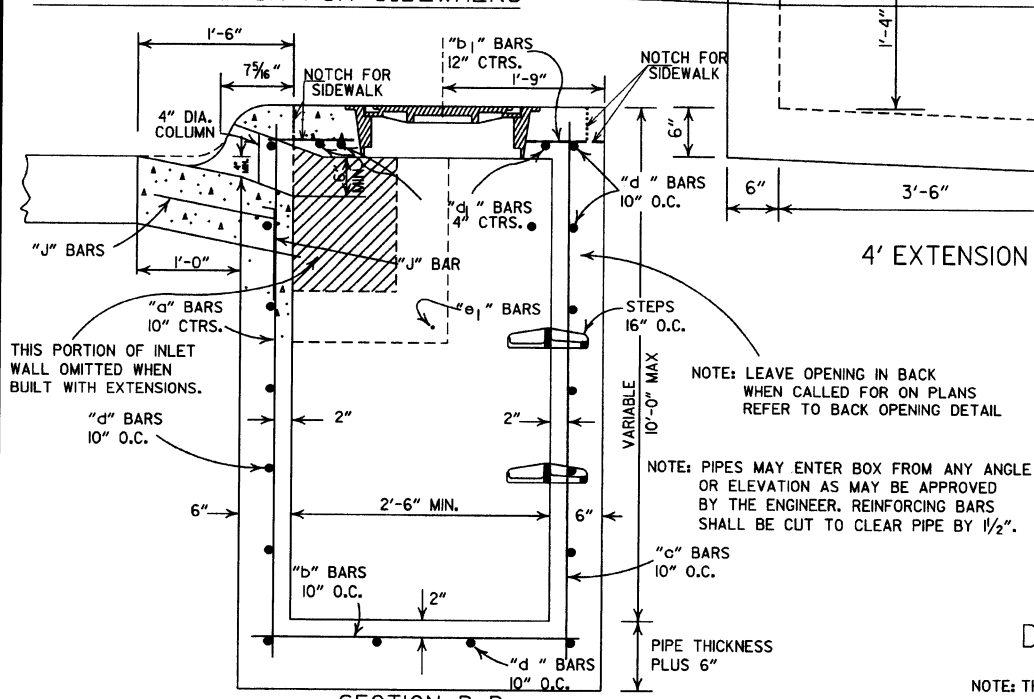
EXTENSION

DROP INLET



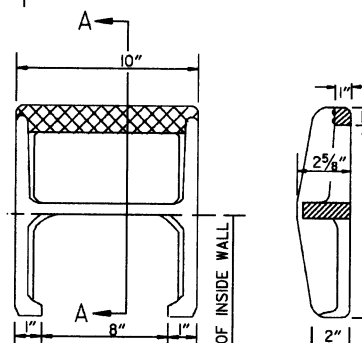
ELEVATION

DETAIL OF NOTCH FOR SIDEWALKS

PLAN
DETAIL OF STEP FOR DROP INLET

APPROX. WEIGHT = 11 LBS. (CAST IRON)

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



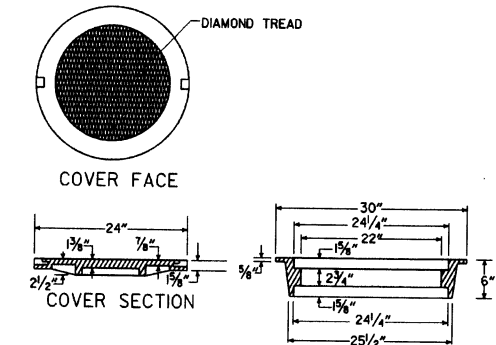
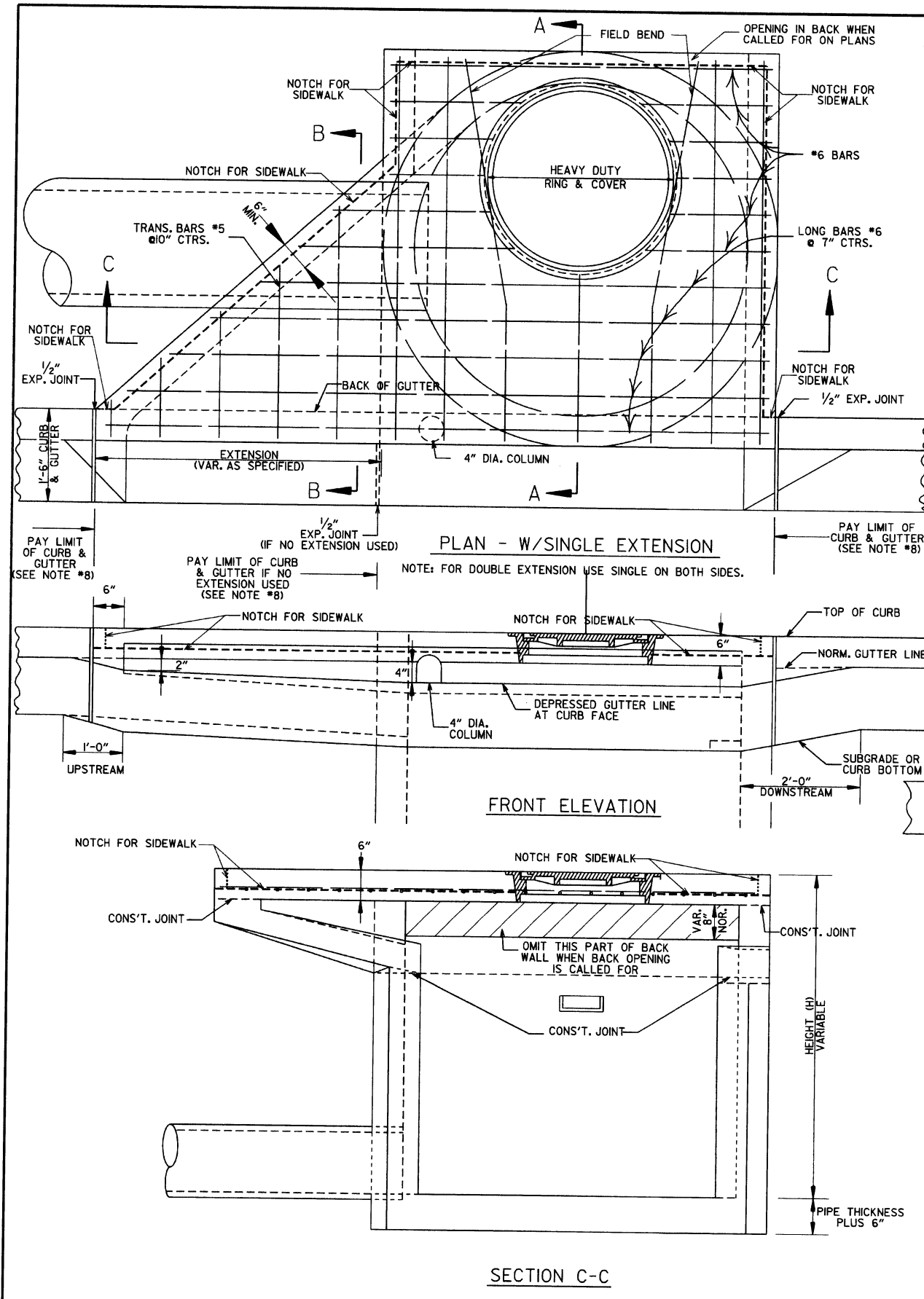
SECTION A-A

8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13, REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER	
10-18-96	ADDED NOTES 9, 10, & 11	
4-26-96	CORRECTED SPELLING	
4-1-93	ADDED NOTE 8 & REVISED (4'x18') EXTENSION TITLES	10-18-96
8-15-91	REVISED BACK OPENING & NOTE	
7-15-88	DELETE TYPE IV GRATE	
5-20-83	REVISED STEP DETAIL	
2-4-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
3-2-81	ADDED GENERAL NOTE NO. 4	
5-22-74	ADDED TYPE IV-A GRATE	
10-2-72	DELETED INLET (TYPE F) & GRATE (TYPE III)	
DATE REV.	REVISED AND REDRAWN	REVISION
		DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS
(TYPE C)

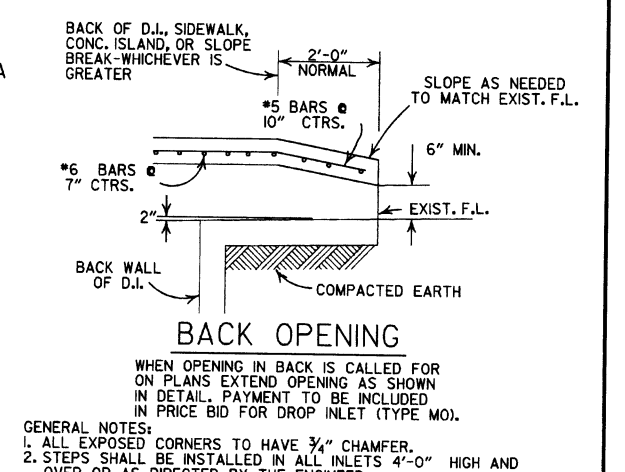
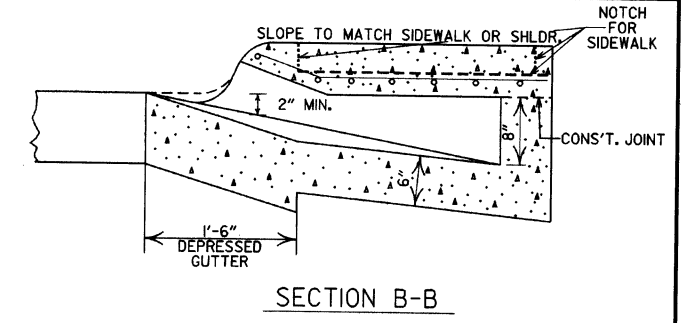
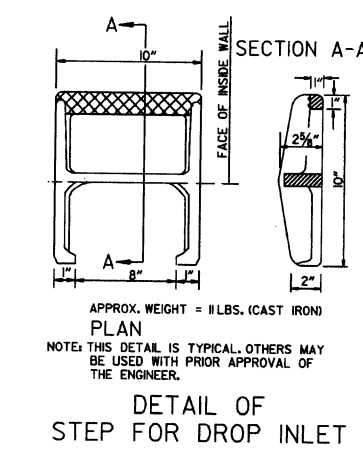
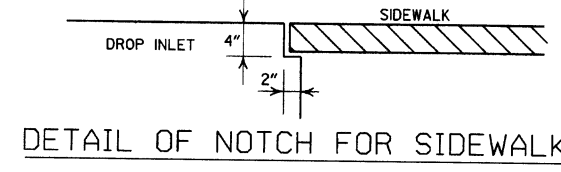
STANDARD DRAWING FPC-9E



HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1/2" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

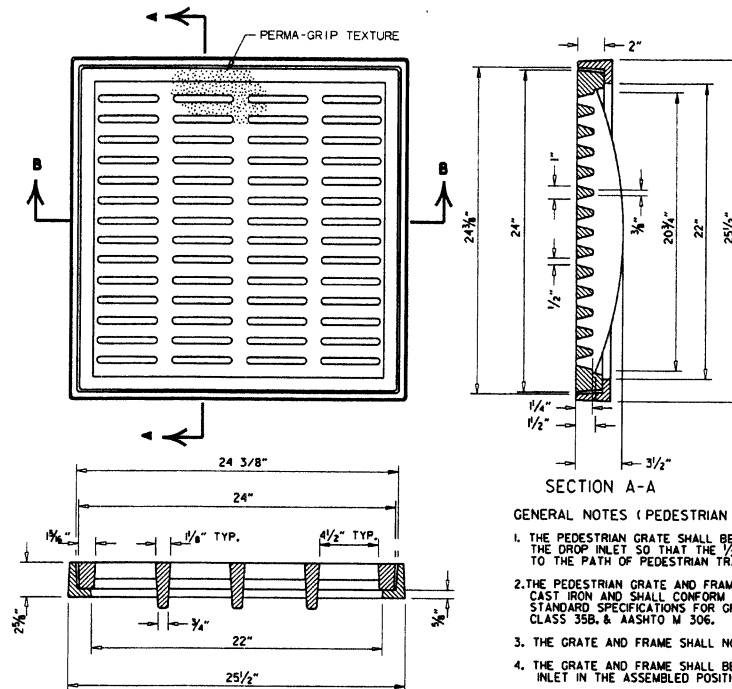
MINIMUM WALL THICKNESS			
DIA. OF D.I.	DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4" I.D.	12" THRU 27"	6"	5"
5" I.D.	30" THRU 42"	8"	6"
6" I.D.	48" THRU 54"	8"	7"

DATE	ISSUED	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B		
11-16-01	ADDED NOTE 13		
11-12-00	REVISED HEAVY DUTY RING & COVER		
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS		
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET		
4-28-98	ADDED NOTE 11, PLAN OPENING DETAIL		
10-26-95	CORRECTED 24 BAR SPACING		
12-22-95	CORRECTED DIAMETER OF D.I. IN BOX		
12-22-95	TYPE C TO MO (OPEN BACK DETAIL)		
11-13-94	REVISED GENERAL NOTES		11-13-94
8-13-94	REV. BACK OPEN DETAIL & NOTE		8-13-94
8-13-94	REVISED NOTES 11, 2 & ADDED BK OPEN DETAIL		8-13-94
11-30-89	ADDED NOTE NO. 10		11-30-89
11-21-89	COVER NOTE & MINIMUM WALL THICKNESS		11-21-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A		7-15-88
12-27-87	MODIFIED WALL THICKNESS		12-27-87
6-12-87	ISSUED		6-12-87

ARKANSAS STATE HIGHWAY COMMISSION

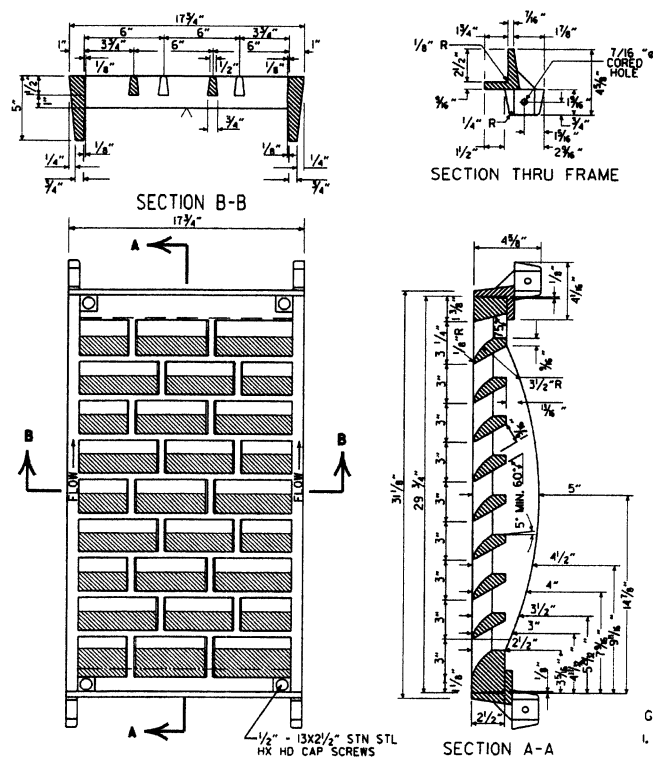
DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M

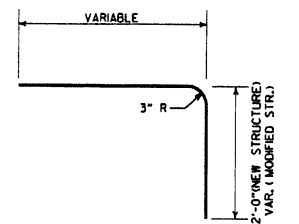


SECTION B-B

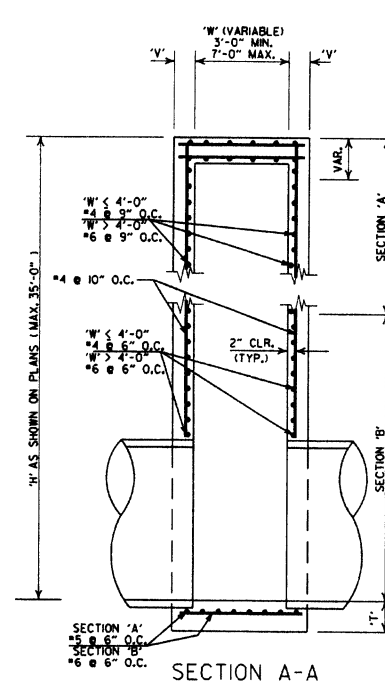
DETAILS OF PEDESTRIAN GRATE AND FRAME



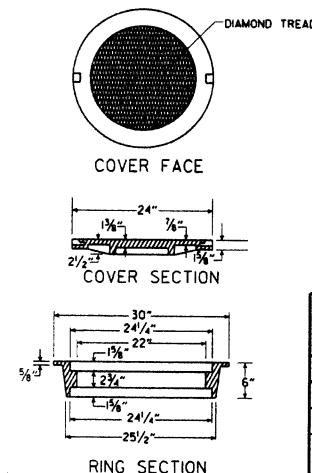
DETAILS OF RIBBED VANE GRATE AND FRAME



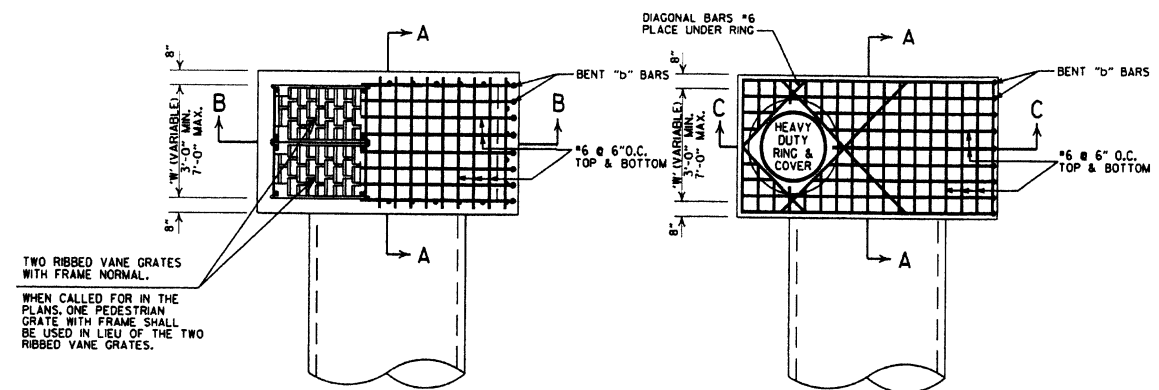
DETAIL OF BENT "b" BAR



DETAILS OF DROP INLET
(TYPE ST)



RING SECTION
HEAVY DUTY
RING & COVER
APPROXIMATE TOTAL WEIGHT = 333 LBS.



The image contains two technical drawings, Section A-A and Section B-B, of a pipe structure. Section A-A is a cross-section showing a rectangular frame with a central circular opening. The frame has a thickness of 10 inches. The width of the frame is labeled as 'W' (VARIABLE) with a range of 3'-0" MIN. to 7'-0" MAX. The height of the frame is labeled as 'H' with a range of 4'-0" MIN. to 4'-0" MAX. The frame is made of 1/4 inch thick plate. The central opening has a diameter of 26 3/4 inches. Section B-B is a longitudinal section showing the frame's profile. It has a height of 10 inches and a width of 1'-8 inches. The frame is made of 1/4 inch thick plate. The central opening has a diameter of 26 3/4 inches. The frame is supported by a base. The drawings include various dimensions and labels for materials and construction details.

SECTION A-A

W' (VARIABLE)
3'-0" MIN.
7'-0" MAX.

H' (VARIABLE)
4'-0" MIN.
4'-0" MAX.

10"

26 3/4"

1/4"

1'-8"

10"

1/4"

W' < 4'-0"
#4 @ 9" O.C.

W' > 4'-0"
#6 @ 9" O.C.

H' < 4'-0"
#4 @ 10" O.C.

H' > 4'-0"
#6 @ 6" O.C.

2" CLR. (TYP.)

STEPS 16" O.C.

STEPS 16" O.C.

2" CLR. (TYP.)

T' = PIPE WALL THICKNESS + 9"

SECTION B-B

SECTION C-C

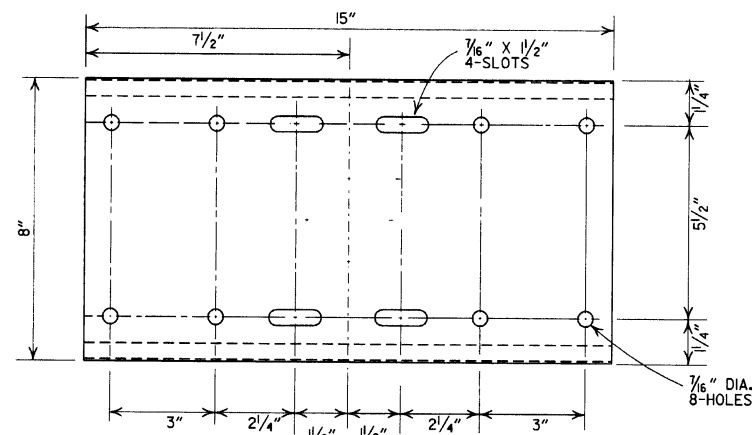
SECTION B-B

- GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)
1. THE 12" DIMENSION SHALL MATCH THE FINAL LEFT OF ACHM SURFACE CROWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
 2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
 3. ALL EXPOSED CORNERS ARE TO HAVE A 3/4" CHAMFER.

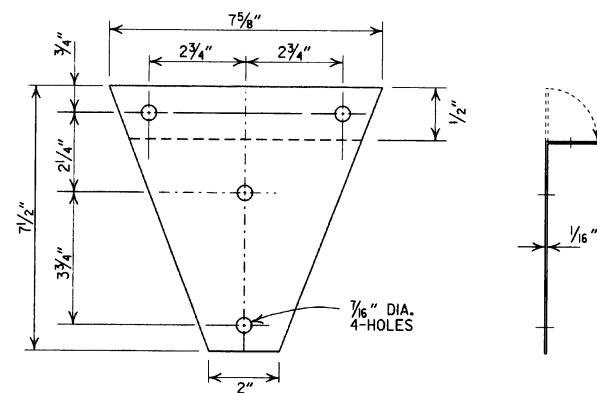
- GENERAL NOTES (HEAVY DUTY RING & COVER):
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS A81810 M OR, CLASS 350, A81810 M 306.
 2. HEAVY DUTY RING AND COVER SHALL NOT BE PATENTED.
 3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 4. DIMENSIONS SHOWN ON RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DETAILS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

7-26-12		REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED
DATE REVISED	DATE FILMED	DESCRIPTION

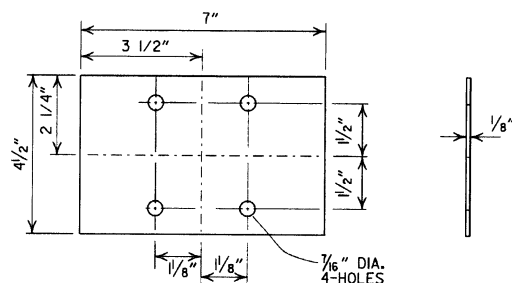
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DROP INLET &
JUNCTION BOX (TYPE ST)
STANDARD DRAWING FPC-95



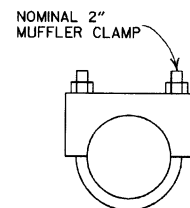
SHELF



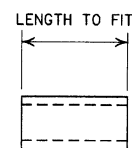
BRACKET



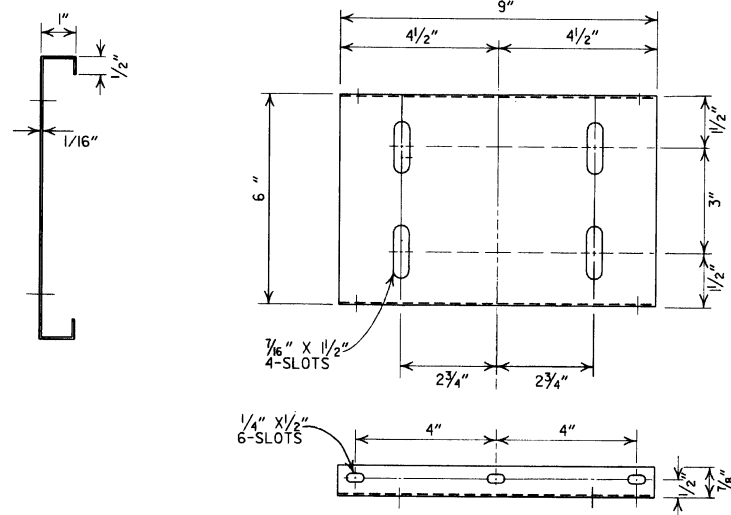
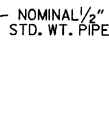
ANTI-TWIST PLATE



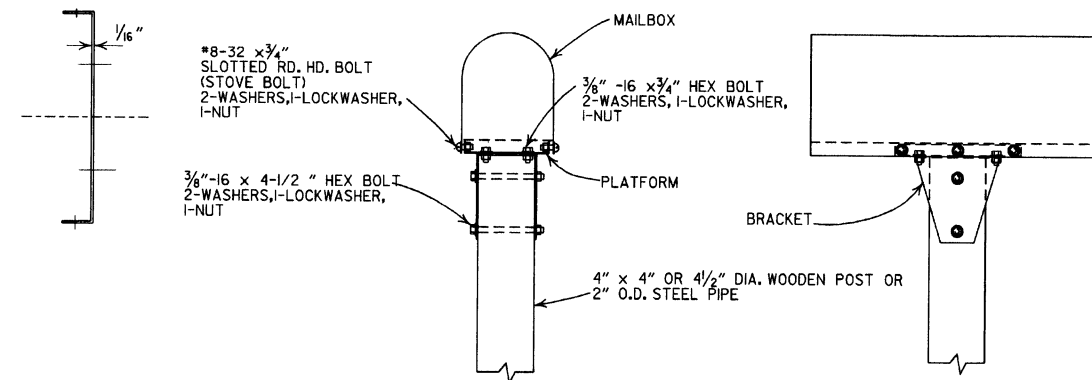
CLAMP



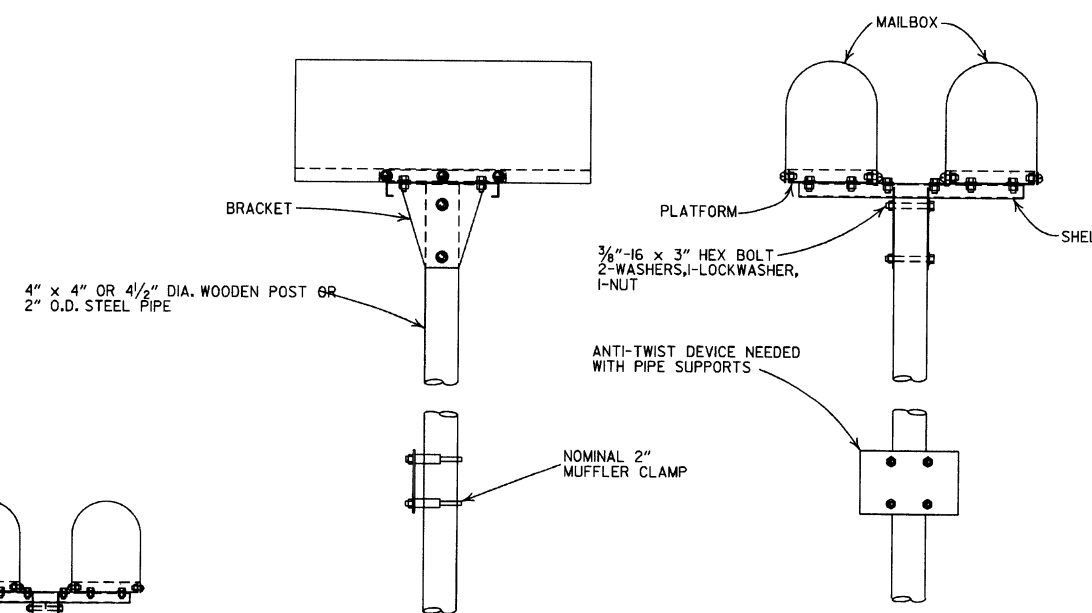
SPACER



PLATFORM

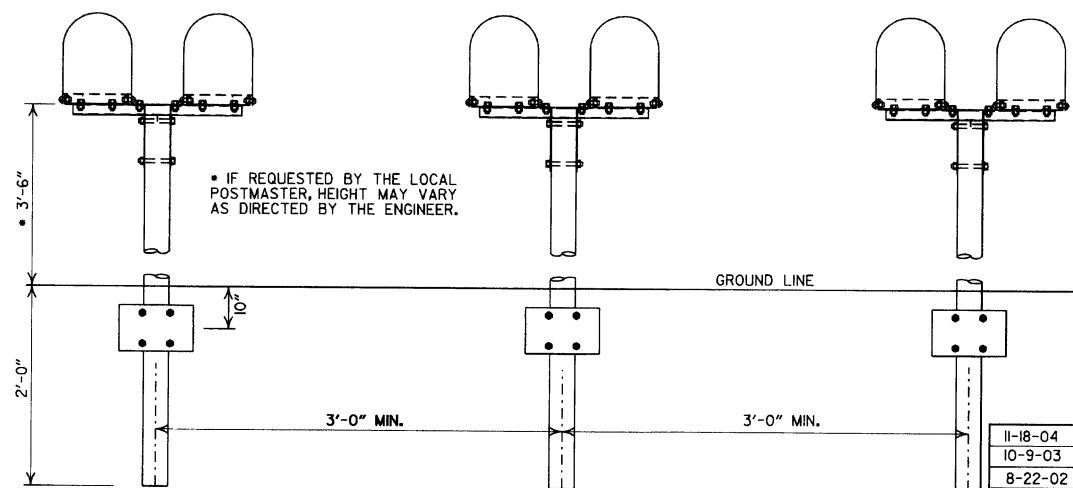


SINGLE INSTALLATION



DOUBLE INSTALLATION

- 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.



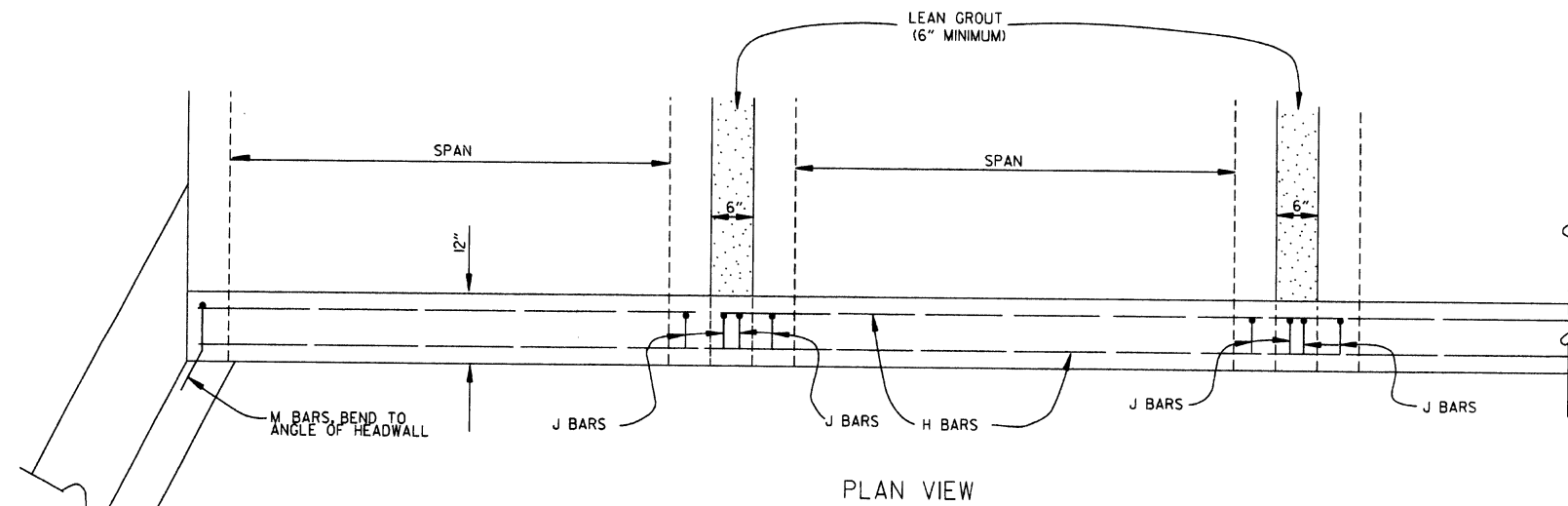
SPACING FOR MULTIPLE POST INSTALLATION

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

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1



BAR LIST

BAR	NO.	SIZE	LENGTH	BAR BENDING DIAGRAM
H	2	#4	•	
I	•	#4	•	
J	•	#4	1'-5"	
L	•	#4	3'-2"	
M	•	#4	1'-8"	

• NOTE: LENGTH AND NUMBER OF BARS VARIES WITH SIZE OF CULVERT

GENERAL NOTES

WINGS, CURTAIN WALLS AND APRONS SHALL BE TIED TO THE PRECAST CULVERT SECTION BY CASTING BARS IN CULVERT END SECTIONS AS SHOWN OR BY DOWELING AND GROUTING. J BARS AND M BARS SHALL BE EMBEDDED A MINIMUM OF 10" IN PRECAST BOX.

WINGS, FOOTINGS, APRONS AND CURTAIN WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE WING DRAWING, STEEL AND CONCRETE QUANTITIES WILL BE ADJUSTED TO FIT THE IN-PLACE WIDTH & HEIGHT OF THE PRECAST CONCRETE BOX CULVERTS.

ALL EXPOSED CORNERS TO HAVE $\frac{3}{4}$ " CHAMFERS.

WINGWALLS AND FOOTINGS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

ALL CONCRETE, REINFORCING STEEL, LEAN GROUT, MEMBRANE WATERPROOFING, DRAINAGE FILL MATERIAL, GEOTEXTILE FILTER FABRIC, LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLING PRECAST BOX CULVERTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR THE ITEMS AS SPECIFIED IN SECTION 607 OF THE STANDARD SPECIFICATIONS.

LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS:
PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85.
SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS. THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE. THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

MEMBRANE WATERPROOFING CONFORMING TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL BOX CULVERT JOINTS.

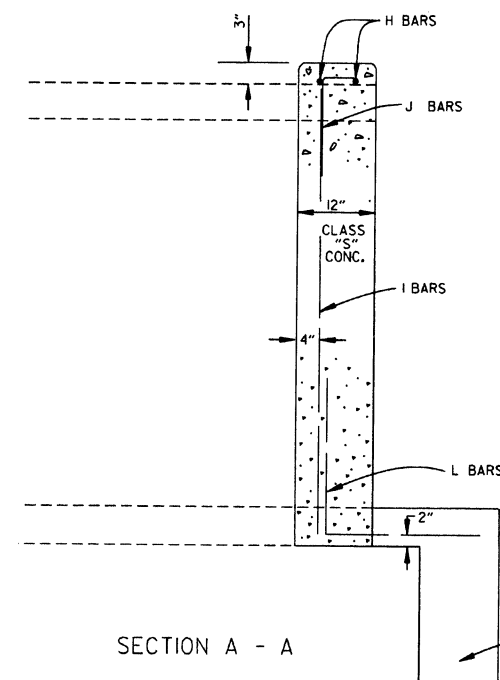
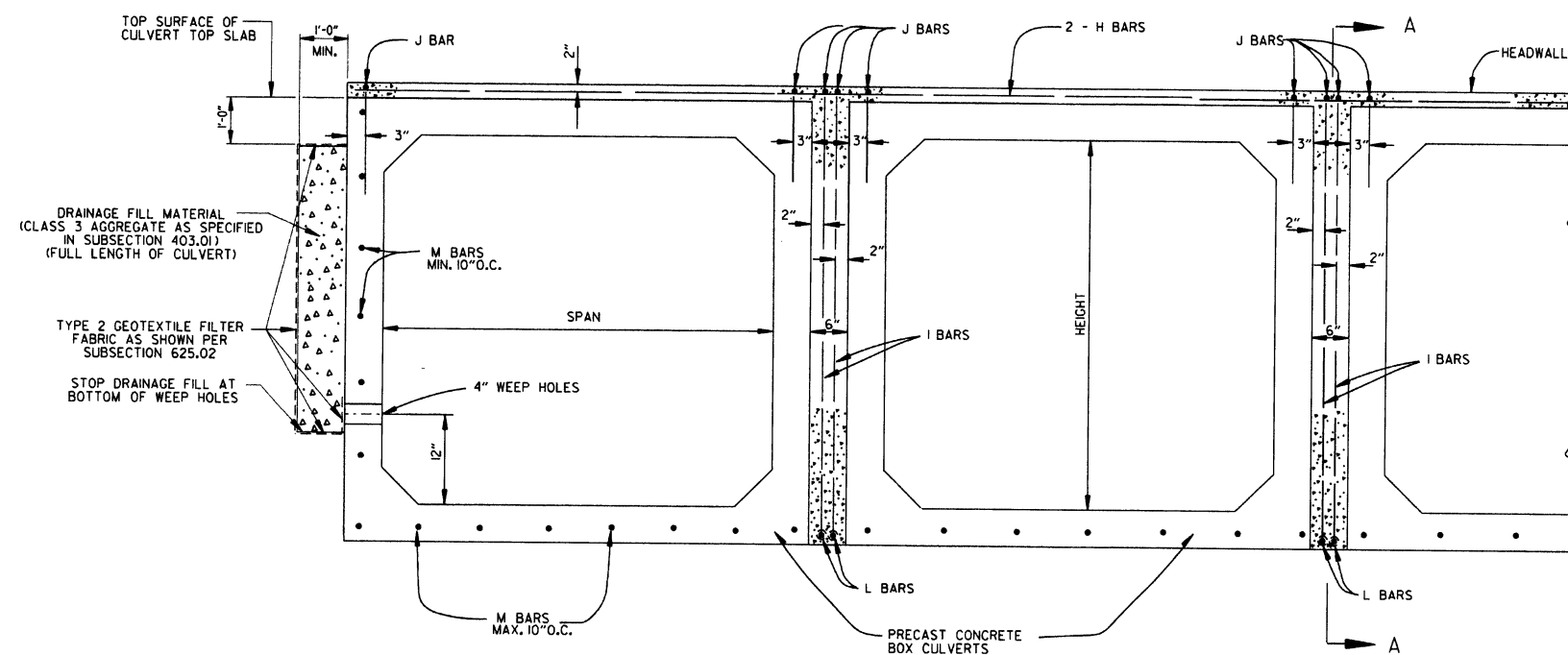
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

IN OUTER BARRELS, ONE WEEP HOLE IS REQUIRED IN EXTERIOR WALLS OF EACH PRECAST CULVERT SECTION. WEEP HOLES SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" IN THE ASSEMBLED CULVERT AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

MINIMUM WIDTH SHALL BE 12" (6" ON EACH SIDE OF JOINT). ON MULTIPLE BARREL CULVERTS, MEMBRANE WATERPROOFING SHALL BE APPLIED TO EACH BARREL AS DESCRIBED ABOVE.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, FLOWABLE SELECT MATERIAL CONFORMING TO SECTION 206 OF THE STANDARD SPECIFICATIONS IN LIEU OF LEAN GROUT.



1-28-15	REVISED GEOTEXTILE FABRIC PLACEMENT	
12-15-11	ADDED NOTE & DTLS FOR WEEP HOLE AND DRAINAGE FILL	
10-15-09	ADDED GENERAL NOTE	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11- 8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED; JABE	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-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	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43¾	44	26¾	27
42	51½	51	31¾	31
48	58½	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	77½	77
108	138	138	87½	87
120	154	154	96¾	97
132	168¾	169	106½	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)(1).

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.

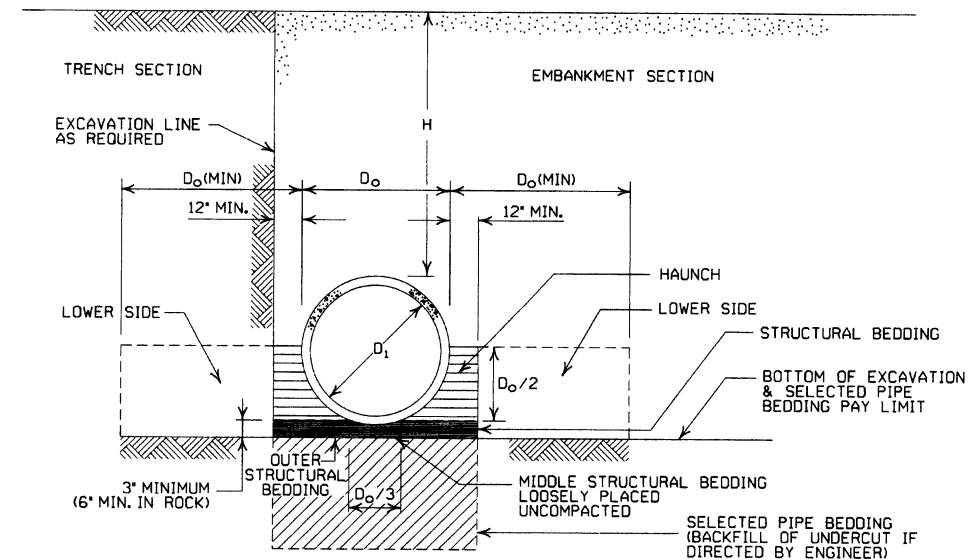
- LEGEND -

D_1 = 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	
PIPE ID (IN.)	TYPE 1 OR 2	TYPE 3	ALL	ALL
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.

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 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.

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.

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	
DATE	REVISION	DATE FILMED

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

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

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)		
				INSTALLATION	INSTALLATION		INSTALLATION	INSTALLATION		
				TYPE 1	TYPE 1		TYPE 1	TYPE 1		
			2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM			
15	17x13	3	0.064	2	15	0.060	2	15		
18	21x15	3	0.064	2	15	0.060	2	15		
21	24x18	3	0.064	2,25	15	0.060	2,25	15		
24	28x20	3	0.064	2.5	15	0.075	2.5	15		
30	35x24	3	0.079	3	12	0.075	3	12		
36	42x29	3 1/2	0.079	3	12	0.105	3	12		
42	49x33	4	0.079	3	12	0.105	3	12		
48	57x38	5	0.109	3	13	0.135	3	13		
54	64x43	6	0.109	3	14	0.135	3	14		
60	71x47	7	0.138	3	15	0.135	3	14		
66	77x52	8	0.168	3	15	0.164	3	15		
72	83x57	9	0.168	3	15					
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM							
			INSTALLATION				INSTALLATION			
			TYPE 2		TYPE 1	TYPE 2		TYPE 1		
36	40x31	5	0.079	3	2	12	15			① FOR MINIMUM COVER VALUES, "H" SHALL ② WHERE THE STANDARD 2 2/3"x 1/2" COR WITH A 3' x 1' OR 5' x 1' CORRUGATION OR GREATER THAN THE MAXIMUM FILL
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

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.

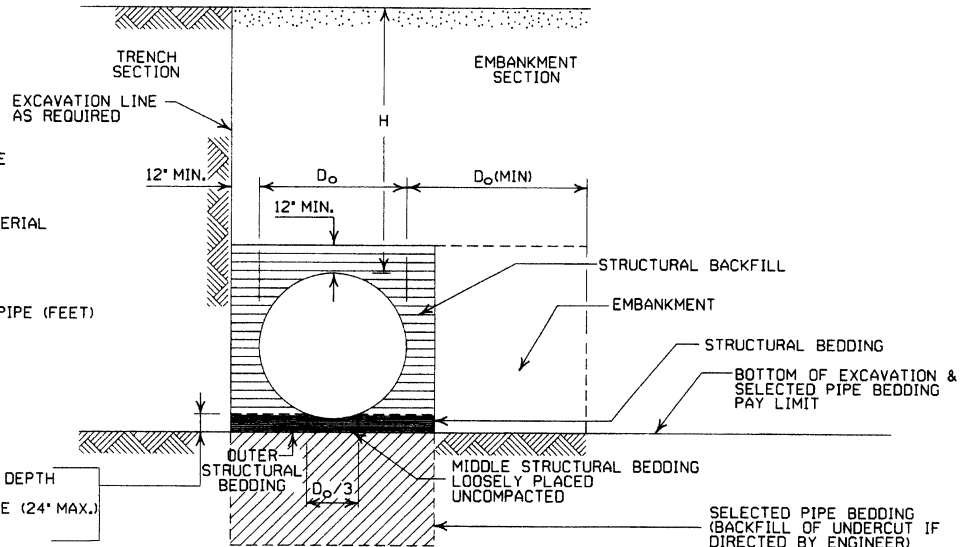
EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL		ALUMINUM	
ZINC COATED	UNCOATED		
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

- LEGEND -

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

IN SOIL-MIN. EQUALS TWICE CORRUGATION DEPTH
 IN ROCK-MIN. EQUALS GREATER OF:
 1/2' PER FOOT OF FILL OVER PIPE (24' MAX.)
 TWICE CORRUGATION DEPTH



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."

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.

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

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"

①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H"
SHALL INCLUDE A MINIMUM 12"
OF PAVEMENT AND/OR BASE.

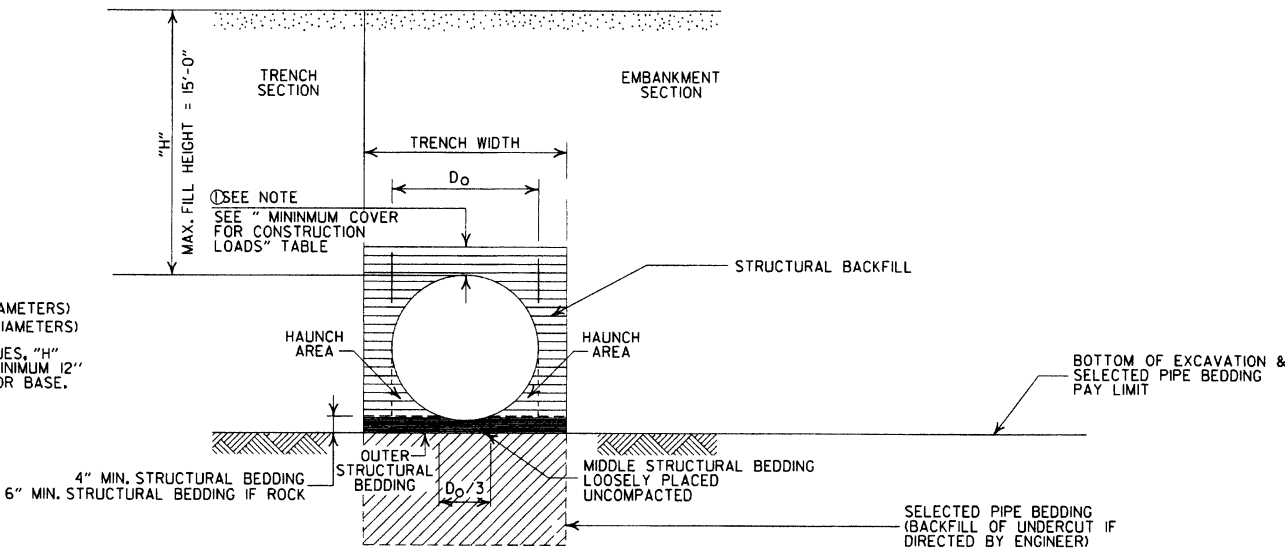
MULTIPLE INSTALLATION OF
HIGH DENSITY POLYETHYLENE PIPES

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	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)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

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



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.

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 AASHTO M294, TYPE S. INSTALLATION SHALL CONFROM 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.

ARKANSAS STATE HIGHWAY COMMISSION		
PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)		
STANDARD DRAWING PCP-1		
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	
DATE	REVISION	DATE FILMED

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

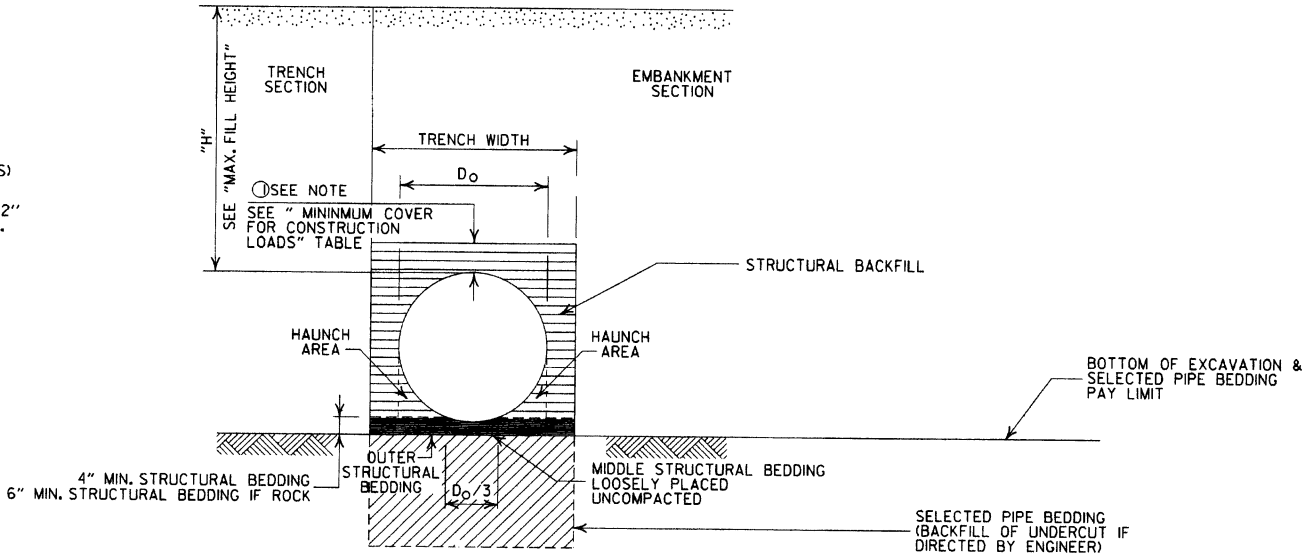
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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

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.



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.

CONSTRUCTION SEQUENCE

- PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
- INSTALL PIPE TO GRADE.
- COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
- 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.
- 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

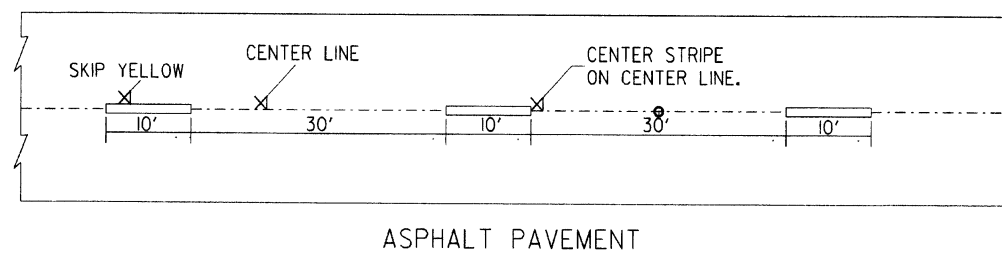
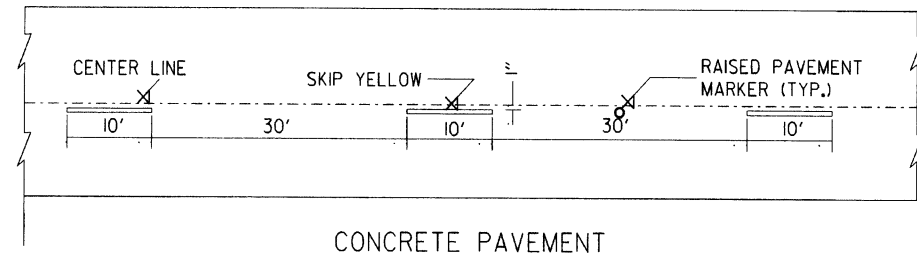
- PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
- PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
- 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.
- 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.
- 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."
- 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."
- 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.
- PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- 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.

2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	
DATE	REVISION	DATE FILMED

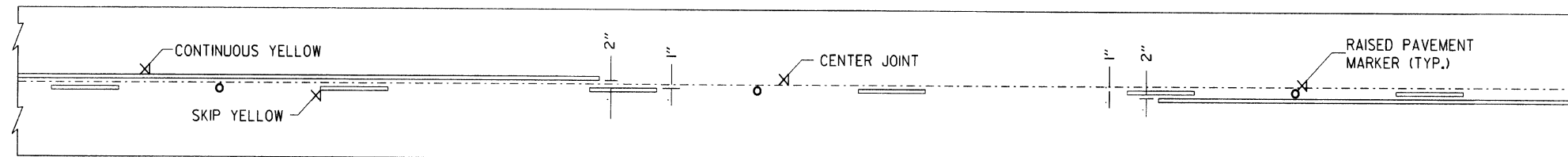
ARKANSAS STATE HIGHWAY COMMISSION
PLASTIC PIPE CULVERT (PVC F949)
STANDARD DRAWING PCP-2 

NOTES:

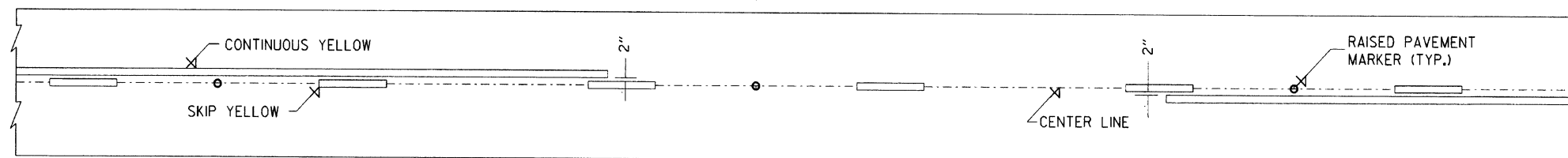
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



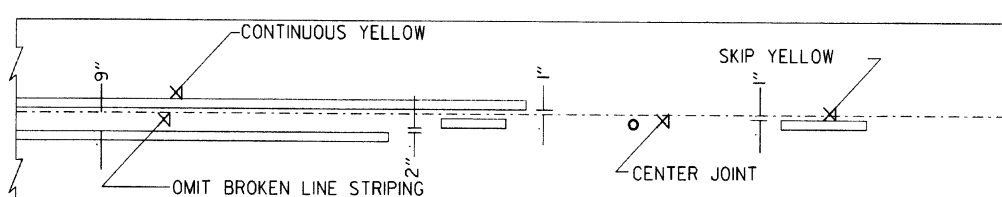
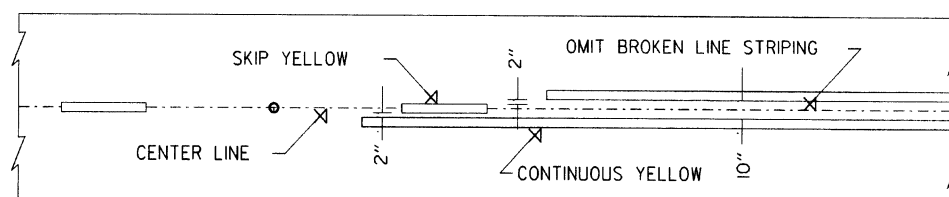
BROKEN LINE STRIPING



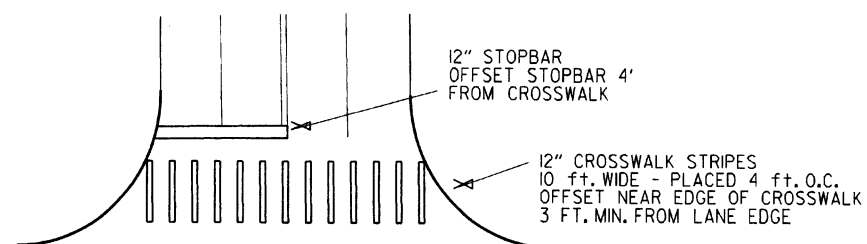
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

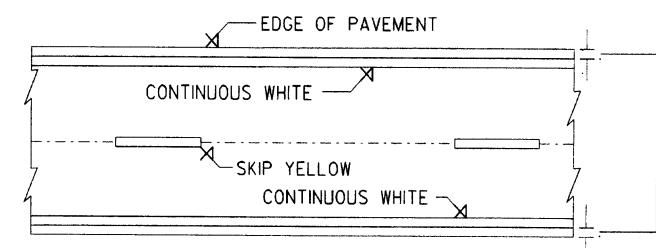


STRIPING AT ADJACENT NO PASSING LANES

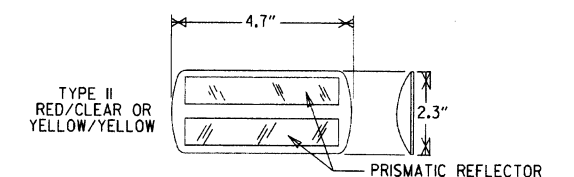


CROSSWALK AND STOPBAR DETAILS

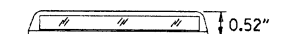
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



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

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.

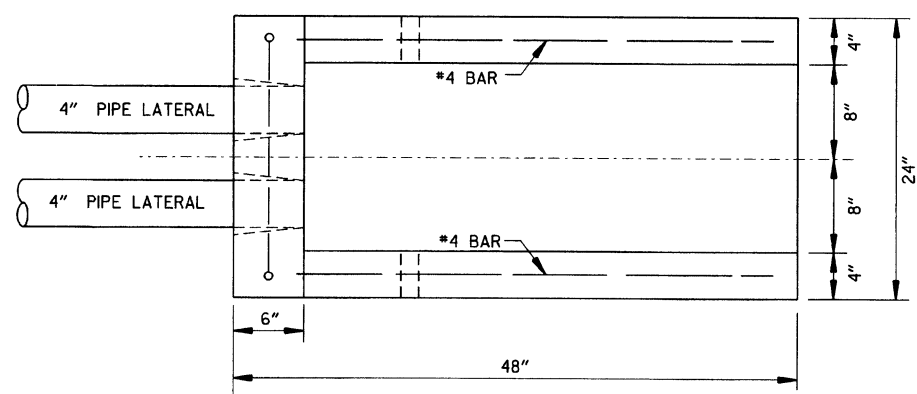
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PAV'T. MKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

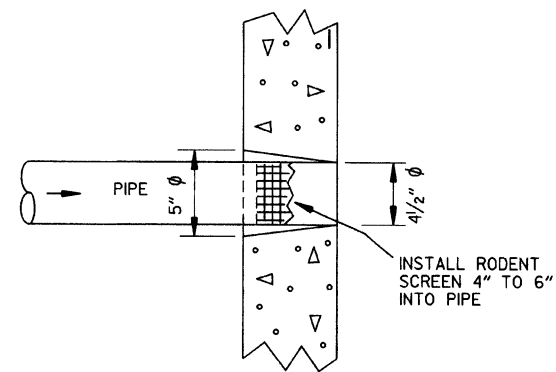
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

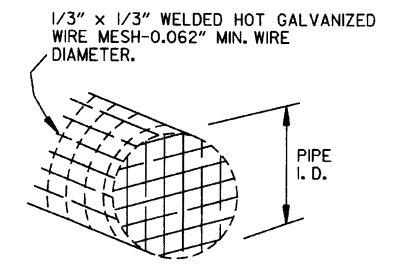
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



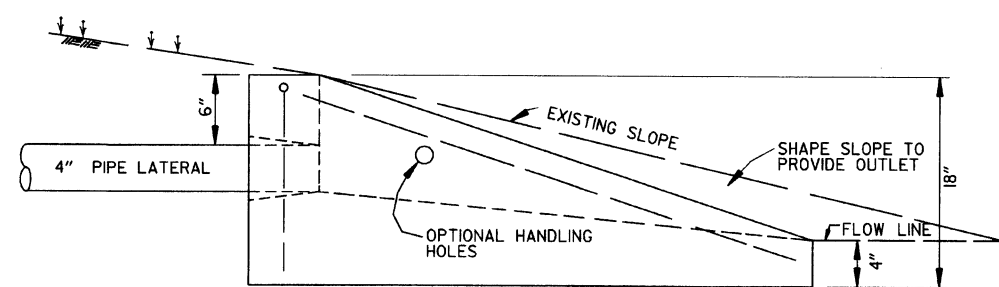
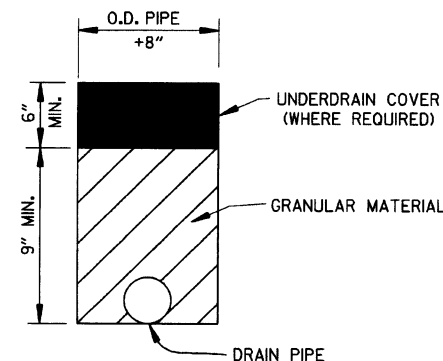
PLAN VIEW



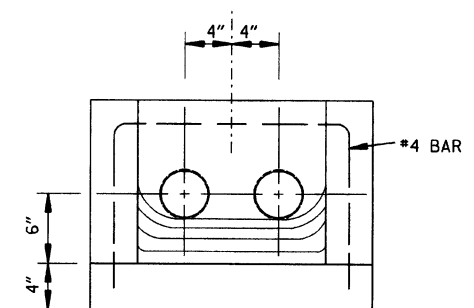
DETAIL OF HOLE FOR 4" PIPE



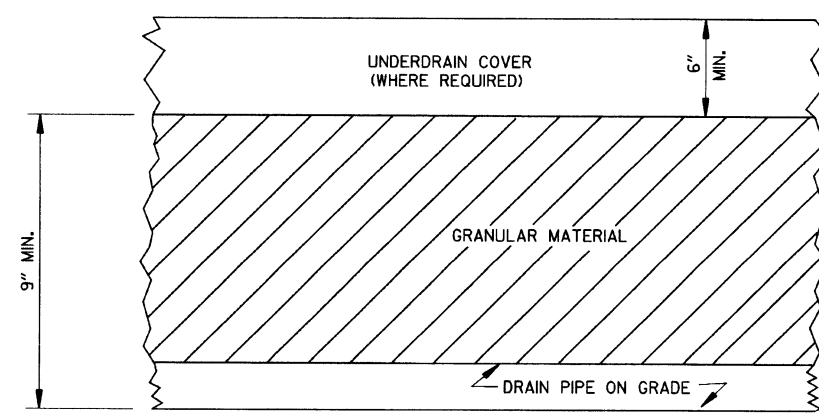
DETAIL OF RODENT SCREEN



SIDE VIEW



FRONT VIEW

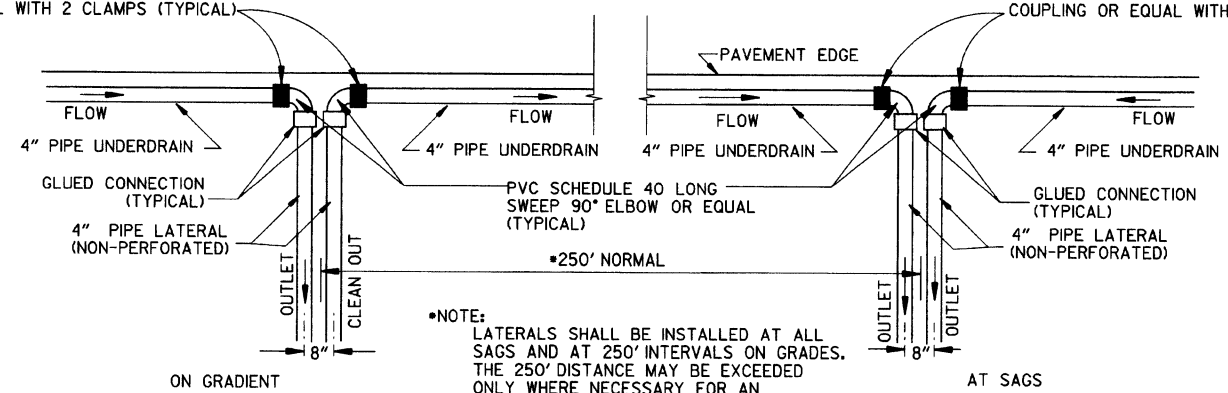


DETAILS OF PIPE UNDERDRAIN

FERNCO 1056-44 (4" CI/PLASTIC) OR
FERNCO 1051-44 (4" AC/DIOR 4" CI/PLASTIC)
COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)

UNDERDRAIN OUTLET PROTECTORS

FERNCO 1056-44 (4" CI/PLASTIC) OR
FERNCO 1051-44 (4" AC/DIOR 4" CI/PLASTIC)
COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



NOTE:
LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE, 5 1/2" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11-3-94	REVISED FOR DUAL LATERALS	11-3-94
10-1-92	SUBSTITUTED GEOTEXTILE	10-1-92
8-15-91	ADDED POLYETHYLENE PIPE	8-15-91
11-8-90	DELETED ALTERNATE NOTE	11-8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

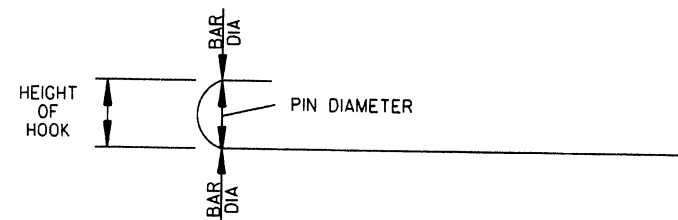
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2 1/4"	4"
4	3"	4 1/2"
5	3 3/4"	5"
6	4 1/2"	6"
7	5 1/4"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "bi", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2 3/4 INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "bi", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

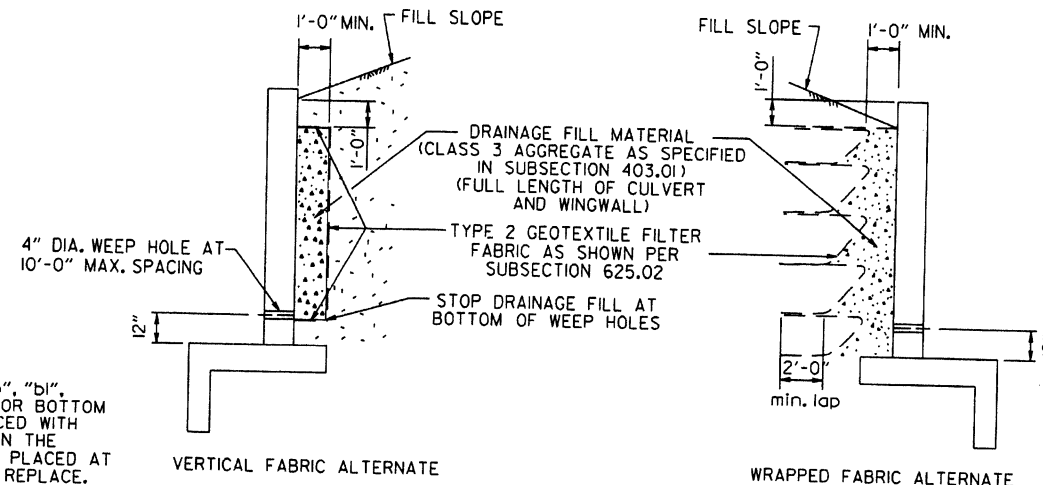
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "bi", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI. REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

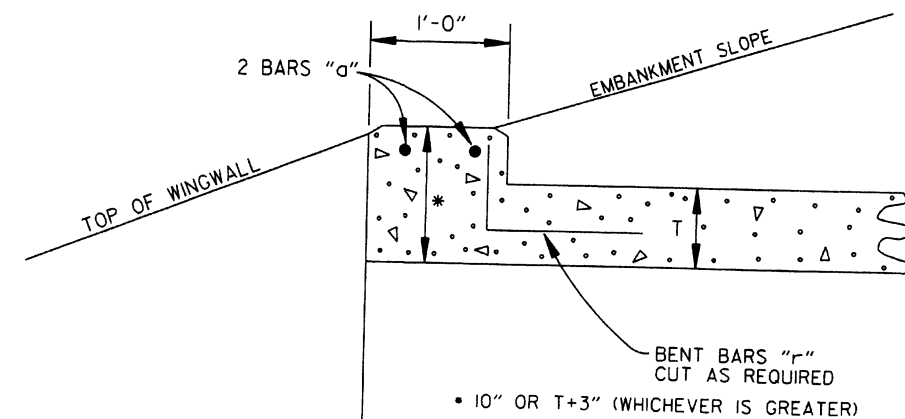
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS 1/2 INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

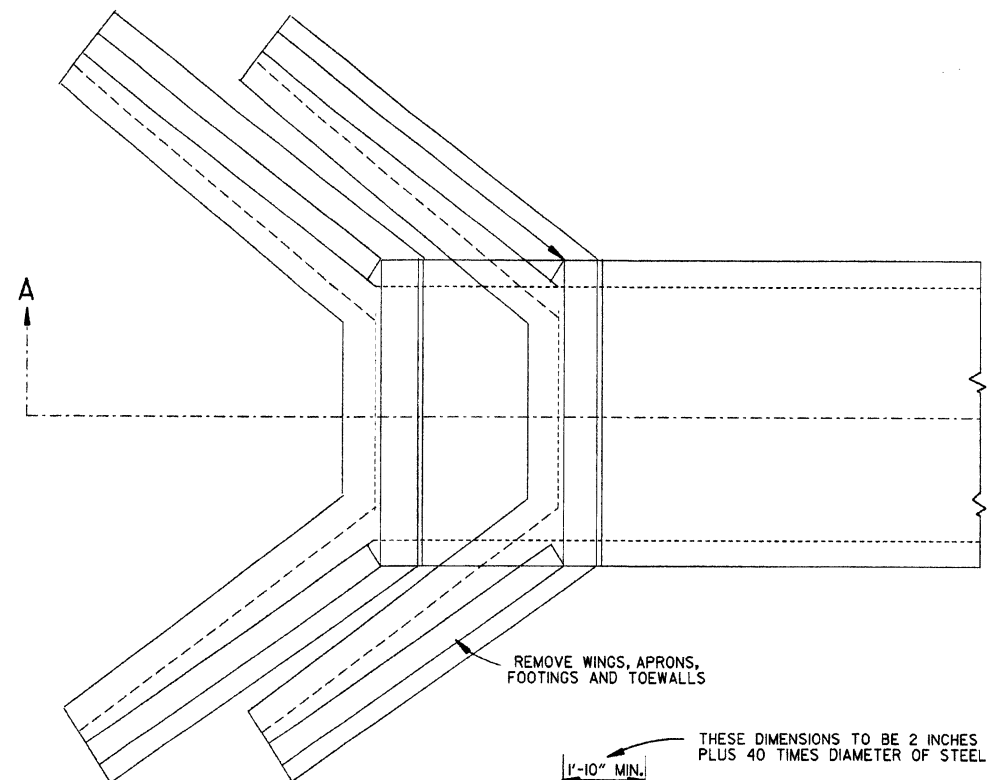
R.C. BOX CULVERT HEADWALL MODIFICATIONS

7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL		
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS		
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM		
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES		
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM		
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2		
6-2-94	ADDED SOLID SODDING PLAN DETAIL		
8-5-93	REVISED PIN DIAMETER TO SPECS.		
8-15-91	DRAWN AND ISSUED		
DATE	REVISION	DATE FILMED	

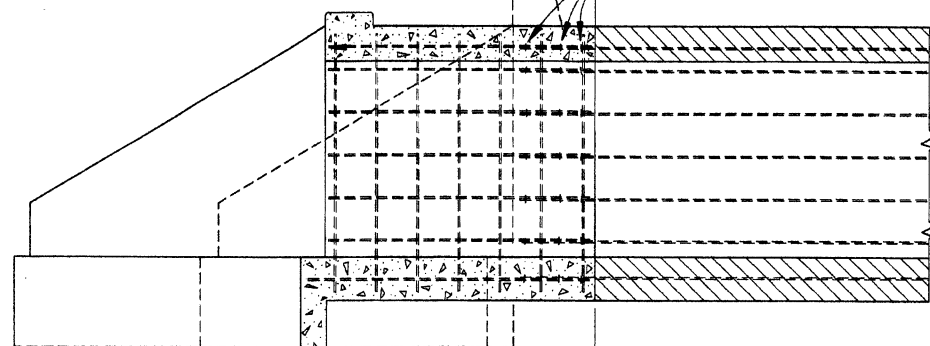
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX
CULVERT DETAILS

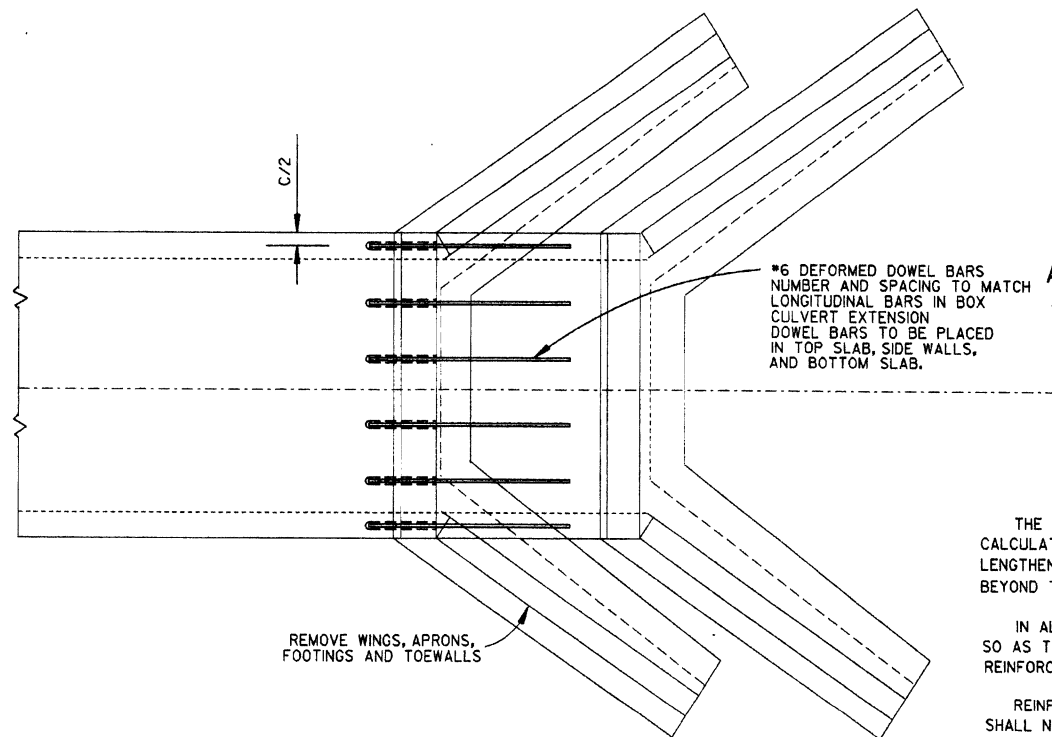
STANDARD DRAWING RCB-1



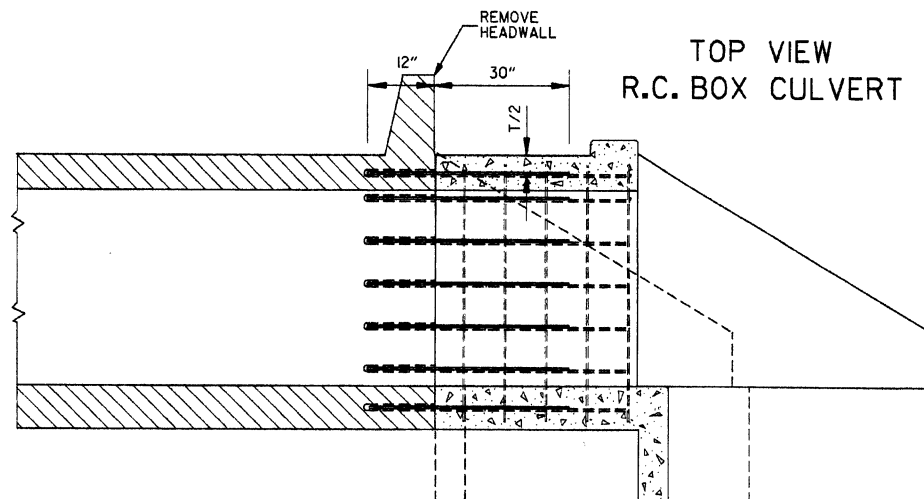
TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 1



TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 2

- GENERAL NOTES
- THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.
- IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.
- REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.
- ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON, THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.
- DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.
- THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2, REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.

USE FOR
METHOD

1

1

1&2

1&2

2

2

1&2

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.
SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

ARKANSAS STATE HIGHWAY COMMISSION		
METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS		
STANDARD DRAWING RCB-3		
10-12-95	CHANGED DRAWING * FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	
DATE	REVISION	DATE FILE

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

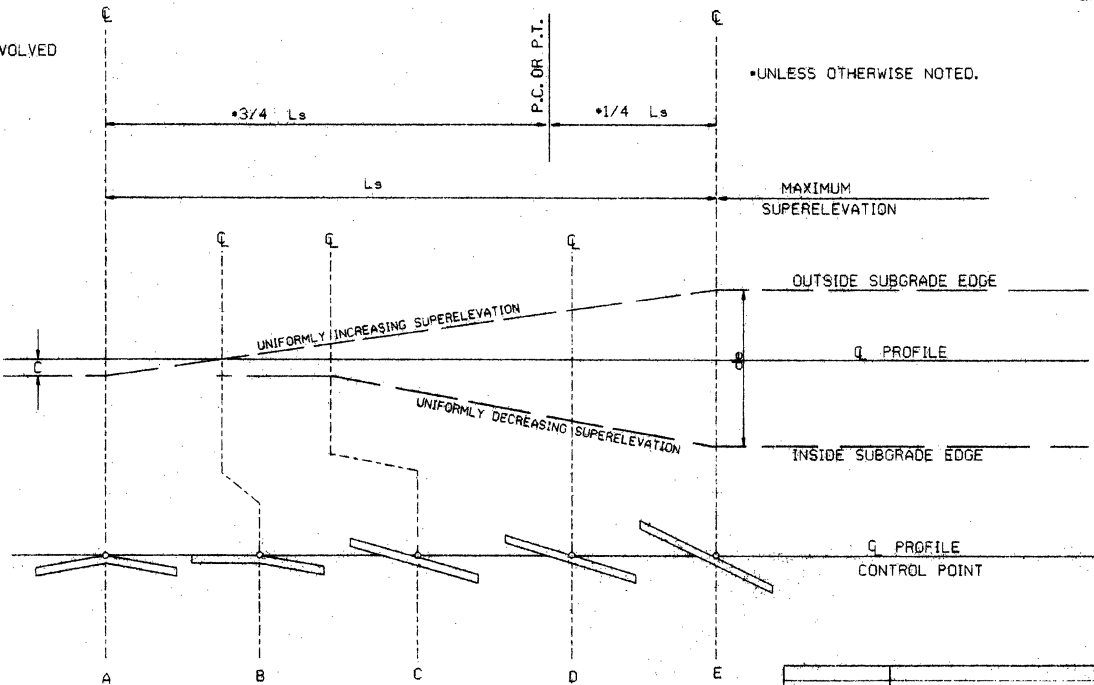
DEGREE OF CURVE	e	30 MPH		e	40 MPH		e	50 MPH		e	55 MPH		e	60 MPH		e	70 MPH	
		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE
0° 15'	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 30'	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45'	N.C.			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.			R.C.			N.C.			N.C.			N.C.			N.C.		
2° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
2° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
2° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
3° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
3° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
3° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
3° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
4° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
4° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
4° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
4° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
5° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
5° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
5° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
5° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
6° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
6° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
6° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
6° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
7° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
7° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
7° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
7° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
8° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
8° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
8° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
8° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
9° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
9° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
9° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
9° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
10° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
10° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
10° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
10° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
11° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
11° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
11° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
11° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
12° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
12° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
12° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
12° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
13° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
13° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
13° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
13° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
14° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
14° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
14° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
14° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
15° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
15° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
15° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
15° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
16° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
16° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
16° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
16° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
17° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
17° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
17° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
17° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
18° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
18° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
18° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
18° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
19° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
19° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
19° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
19° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
20° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
20° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
20° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
20° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
21° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
21° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
21° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
21° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
22° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
22° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
22° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
22° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
23° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
23° 15'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
23° 30'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
23° 45'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
24° 00'	R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		

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.)

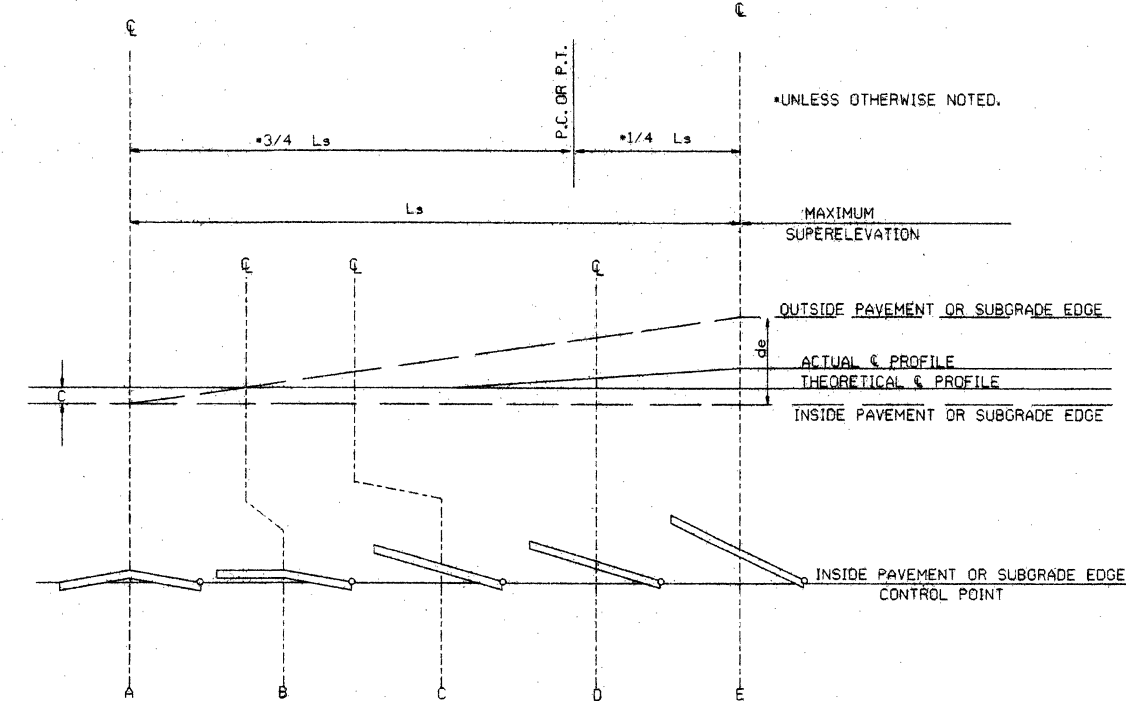
GENERAL NOTES

- ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS.
- SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
- LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
- 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



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

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

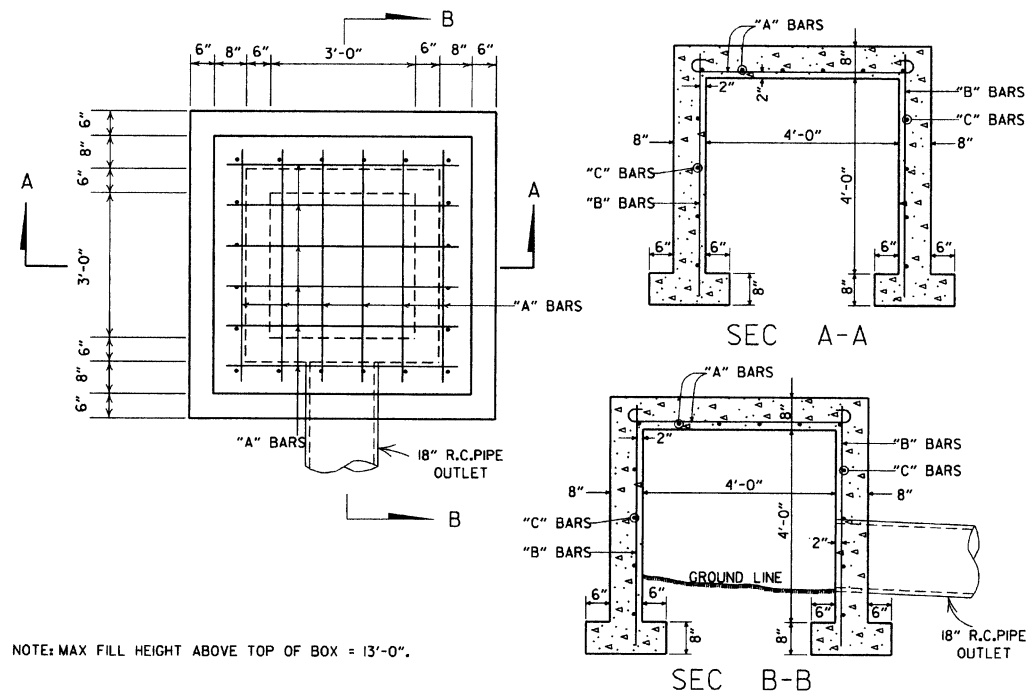
SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2

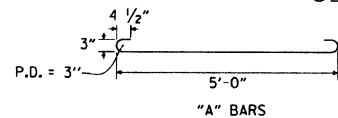
10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87
DATE	REVISION	DATE FILMED



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

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

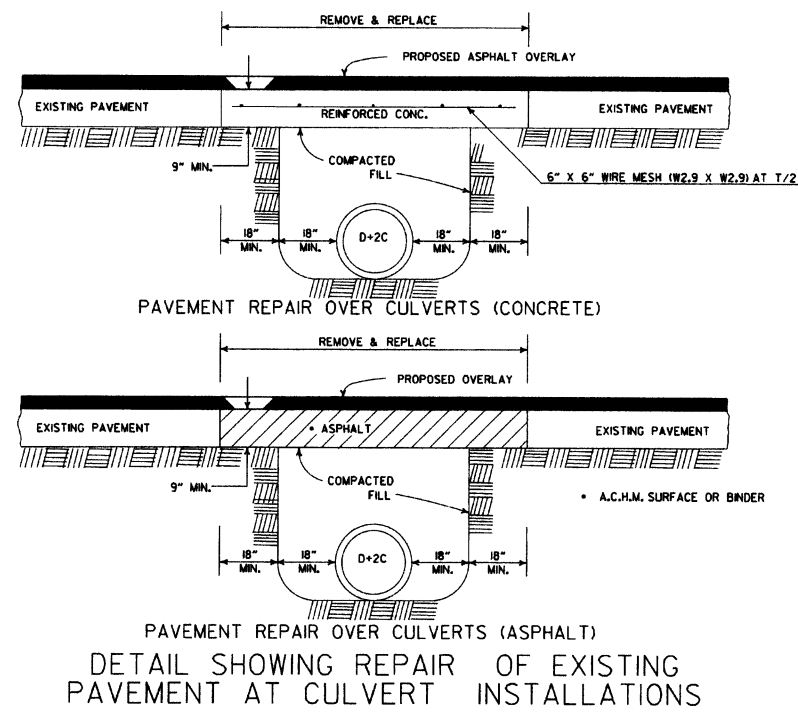
ALL STEEL TO BE #4 BARS



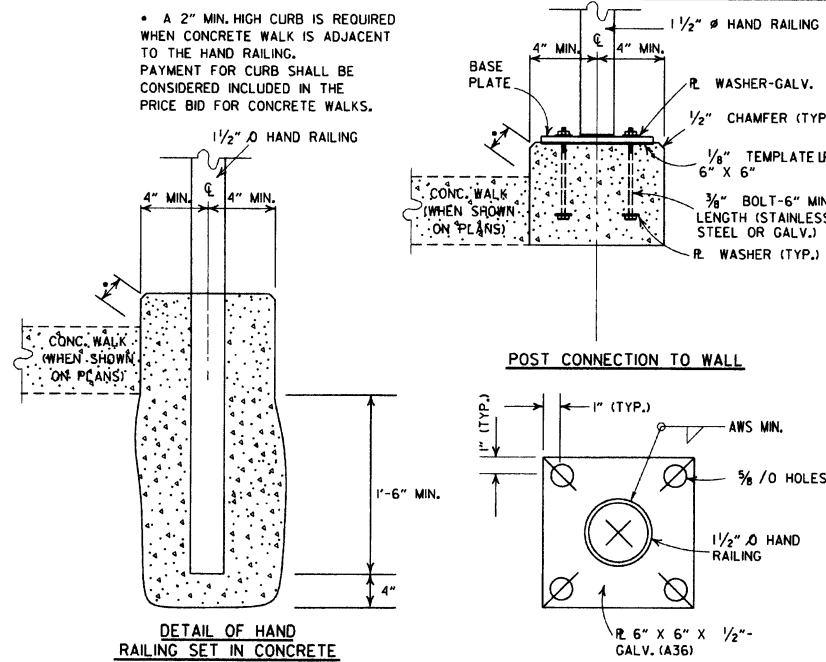
QUANTITIES
CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

GENERAL NOTE:
THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

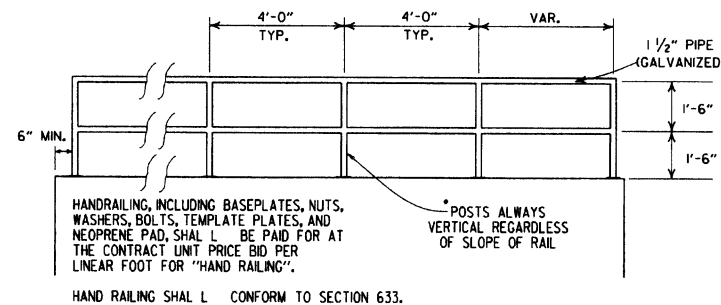
REINFORCED CONCRETE SPRING BOX



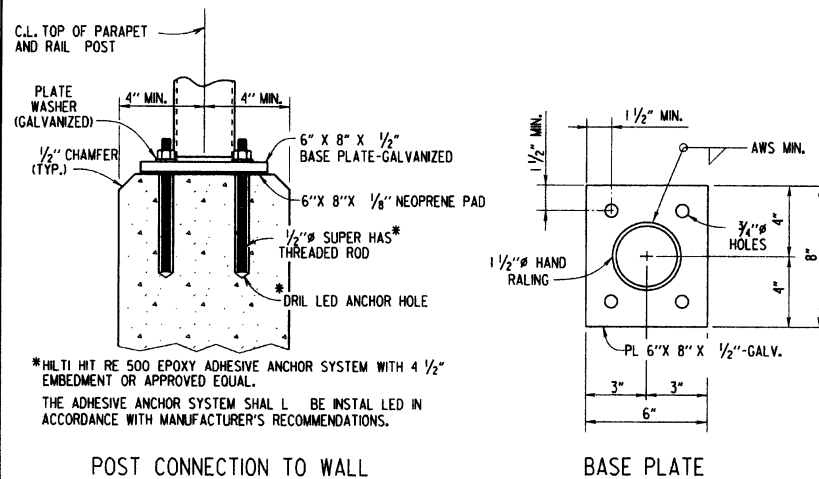
DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS



POST CONNECTION DETAILS



HAND RAILING SHALL CONFORM TO SECTION 633.

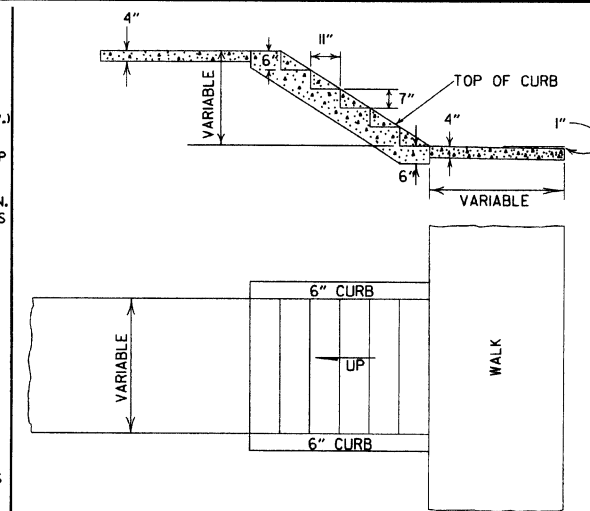


POST CONNECTION TO WALL

BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



DETAILS OF CONCRETE STEPS & WALKS

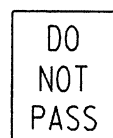
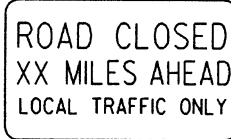
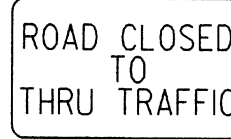
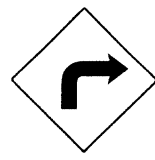
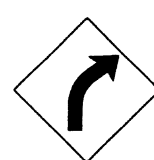
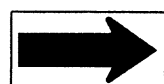
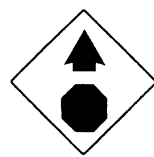
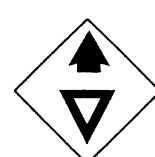
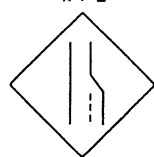
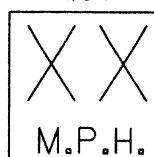
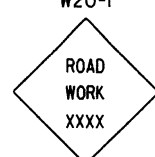
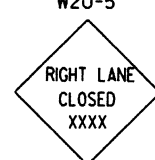
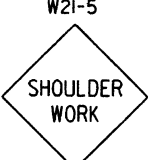
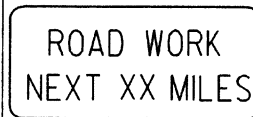
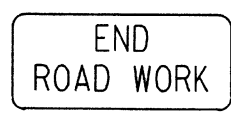
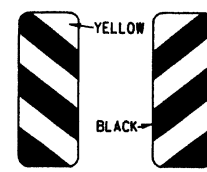
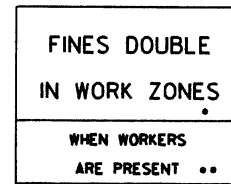
GENERAL NOTES
1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISE DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

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	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
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	649-7-15-88
	ADDED HDWL. MODS. DEL. PIPE UNDERDRAINS	
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
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

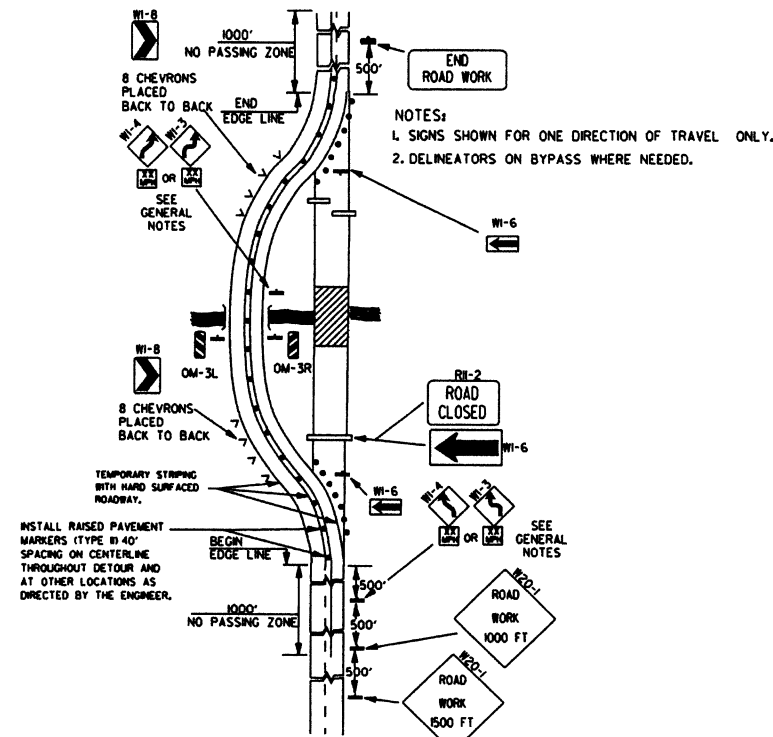
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1

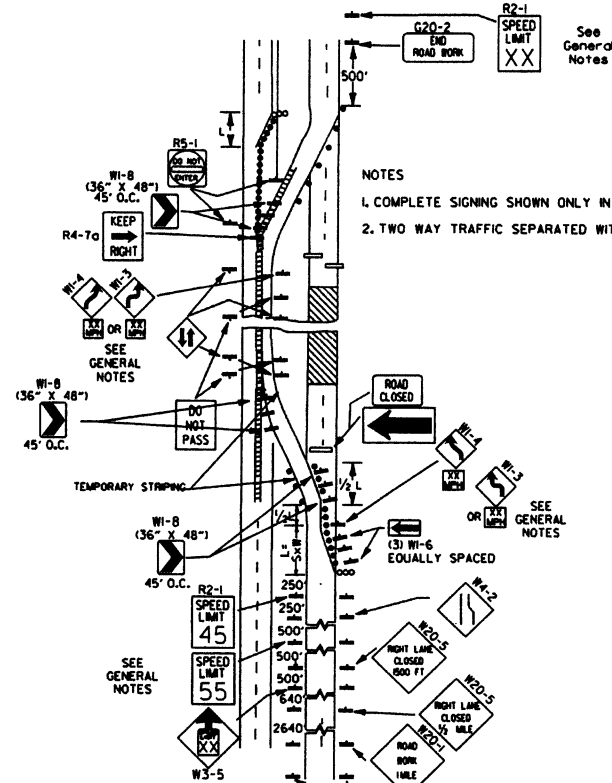
RI-1  STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"	RI-2  STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"	R2-1  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	W3-5  STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"	W3-5a  STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"	R4-1  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R4-2  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	ADVANCE DISTANCES (XXXX) 500 FT1/2 MILE 1000 FT3/4 MILE 1500 FT1 MILE AHEAD GENERAL NOTES: 1. 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. 2. 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. 3. 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. 4. 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. 5. 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. 6. 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. 7. 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 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. 8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS. 9. 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. 10. 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.
R5-1  STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"	R11-2  48"x30"	R11-3A  60"x30"	R11-4  60"x30"	RSP-1  48"x30"	W1-1  STD. 36"x36" FWY. 48"x48"	W1-2  STD. 36"x36" FWY. 48"x48"	
W1-3  STD. 48"x48"	W1-4  STD. 48"x48"	W1-6  STD. 48"x24" SPECIAL 60"x30"	W1-8  STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"	W3-1  STD. 36"x36" SPECIAL 48"x48"	W3-2  STD. 36"x36" SPECIAL 48"x48"	W4-2  STD. 36"x36" FWY. 48"x48"	
W5-1  STD. 36"x36" SPECIAL 48"x48"	W6-3  EXPWY. 36"x36" SPECIAL 48"x48"	W8-7  EXPWY. 36"x36" FWY. 48"x48"	W9-2  STD. 36"x36" FWY. 48"x48"	W13-1  STD. 24"x24"	W20-1  STD. 48"x48"	W20-2  STD. 48"x48"	W20-3  STD. 48"x48"
W20-4  STD. 48"x48"	W20-5  STD. 48"x48"	W20-7a  STD. 36"x36" FWY. 48"x48"	W21-2  STD. 30"x30" SPECIAL 36"x36"	W21-5  STD. 30"x30" SPECIAL 36"x36"	W24-1  STD. 36"x36"	W1-4b  STD. 48"x48"	R56-1  STD. 18"x18"
W8-11  STD. 36"x36" FWY. 48"x48"	W8-9  STD. 36"x36" FWY. 48"x48"	G20-1  60"x24"	G20-2  48"x24"	OM-3L OM-3R  12"x36"	M4-9  STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"	M4-10  48"x18"	R55-1  36"x60" • USE 6" C LETTERS • USE 4" D LETTERS

9-2-95	REVISED REDUCED SPEED LIMIT AHEAD SIGNS	
12-15-98	REVISED ROAD WORK NEXT XX MILES	
8-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
8-18-04	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	FILED

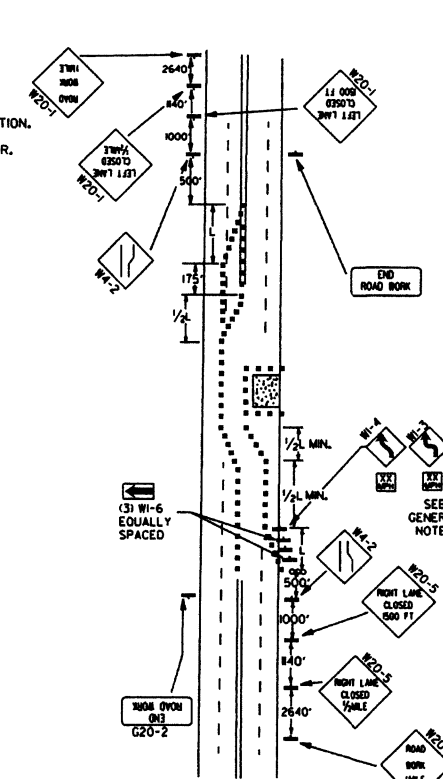
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STANDARD DRAWING TC-1



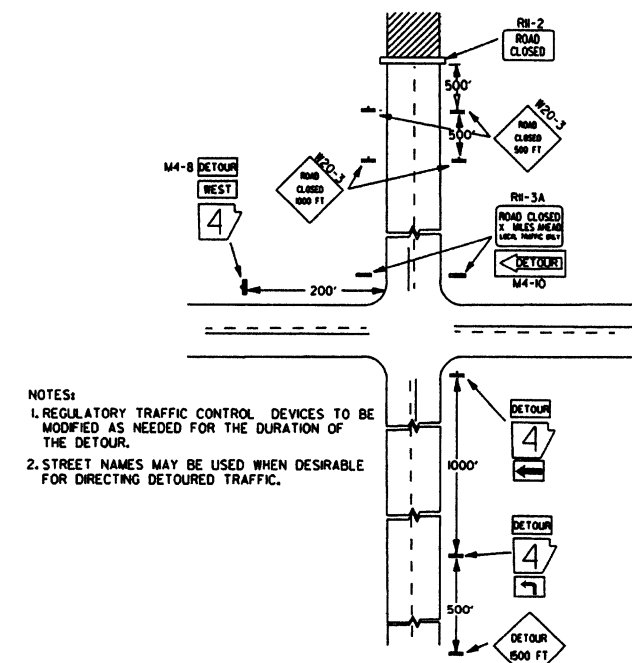
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



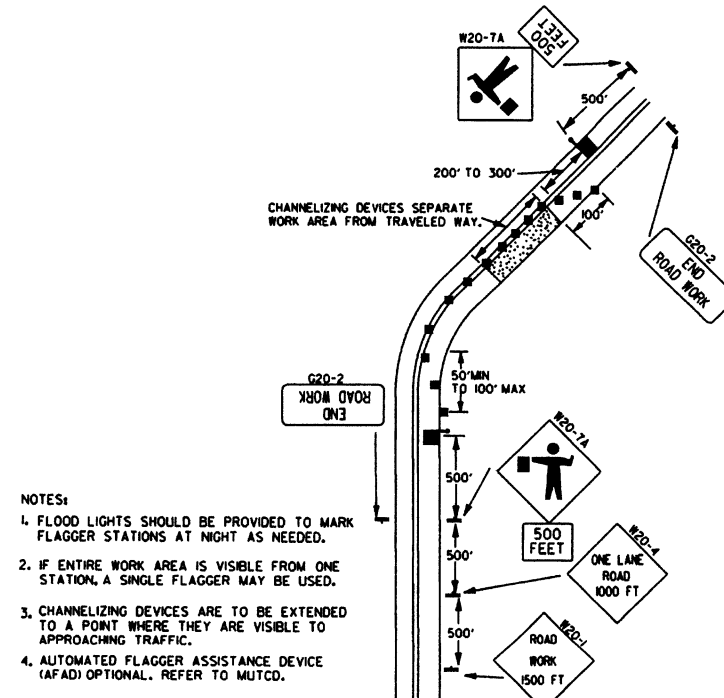
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



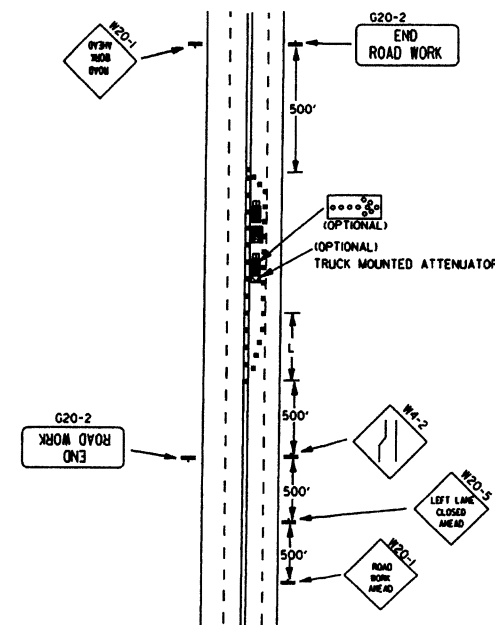
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



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

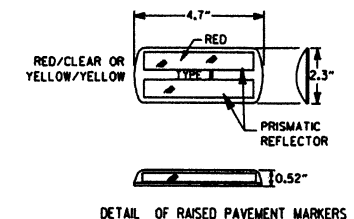


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



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

- KEY:
- FLAGGER
 - POSITIVE BARRIER
 - ARROW PANEL (IF REQUIRED)
 - TYPE III BARRICADE
 - CHANNELIZING DEVICE
 - TRAFFIC DRUM
 - RAISED PAVEMENT MARKER



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.

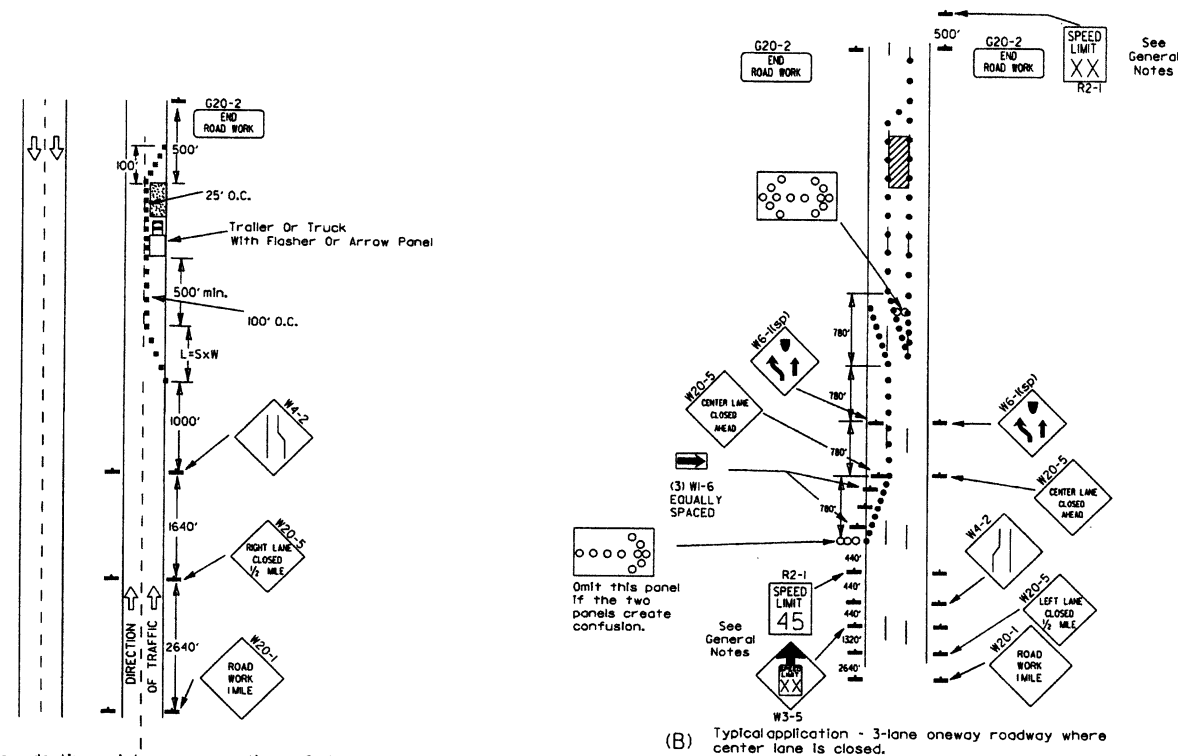
GENERAL NOTES:

- 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 AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(45) 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 1/4 MILE 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(55) SHALL BE OMITTED. ADDITIONAL R2-1(55)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/4 MILE 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.

9-2-15	REVISED NOTE 2, ADDED NOTE 4, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-4-10	ADDED (AFAD)	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-28-96	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	FILED

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STANDARD DRAWING TC-2

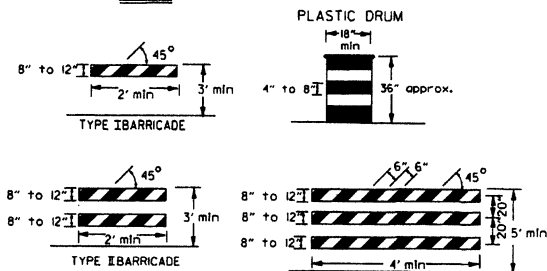
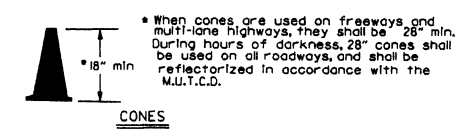
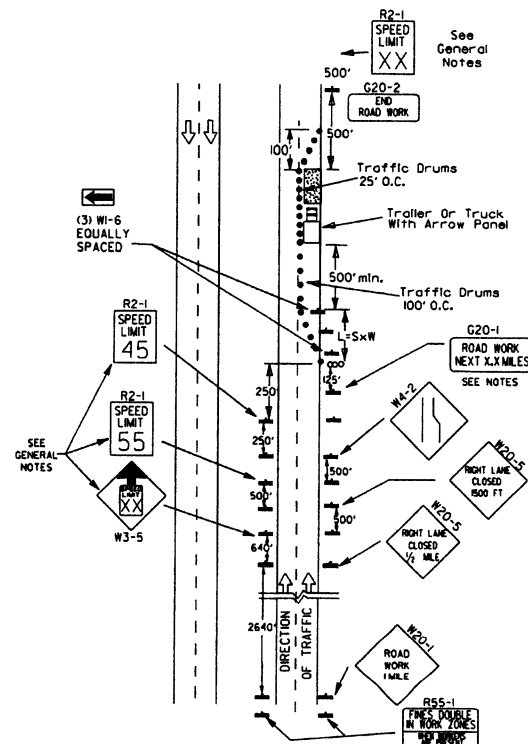
Channelizing devices



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

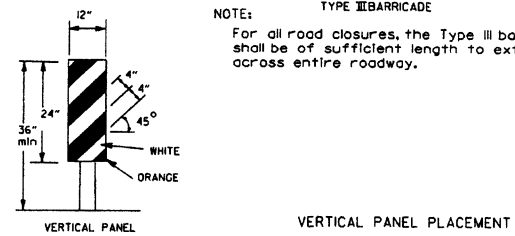
GENERAL NOTES:

- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
- 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 R2-1(45) speed limit signs shall be installed at a maximum of 1 mile 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) speed limit signs shall be installed at a maximum of 1 mile 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.
- 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 MILE) signs are not required in advance of lane closures that begin inside the project limits.
- Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
- All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).
- 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.

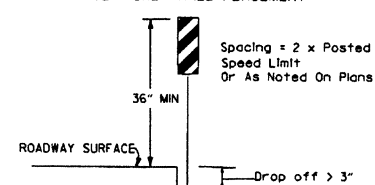


NOTE:

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



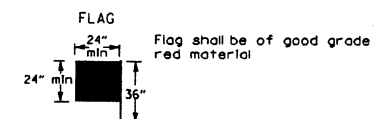
VERTICAL PANEL PLACEMENT



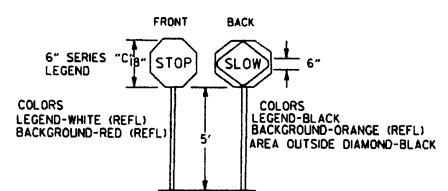
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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

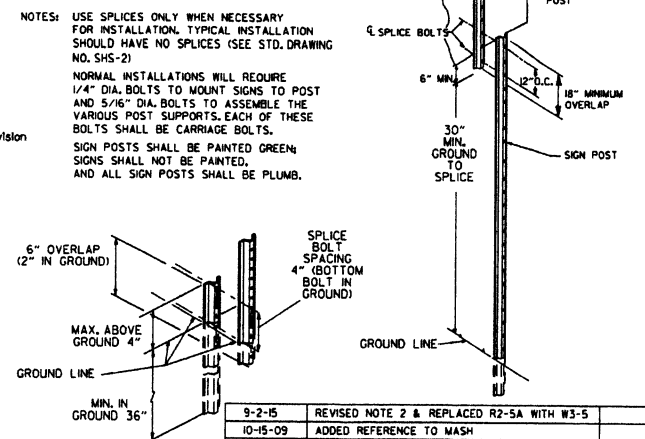
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



STOP SLOW PADDLE



DETAIL OF SPLICES

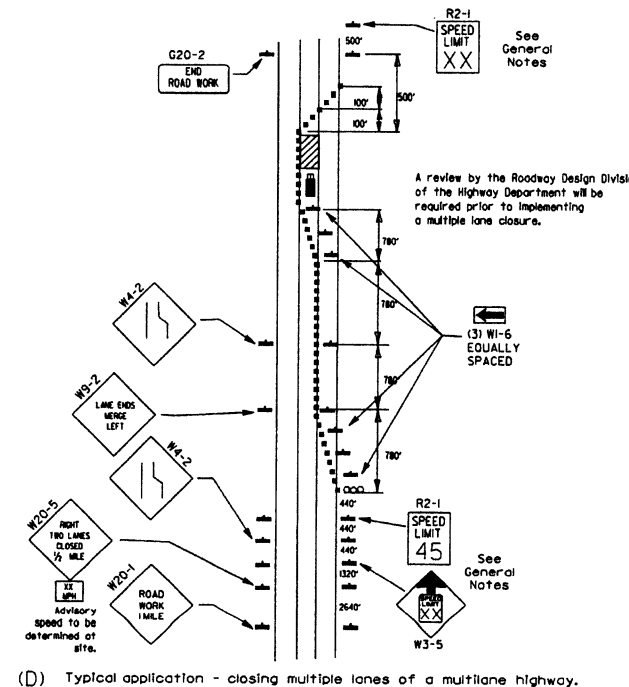


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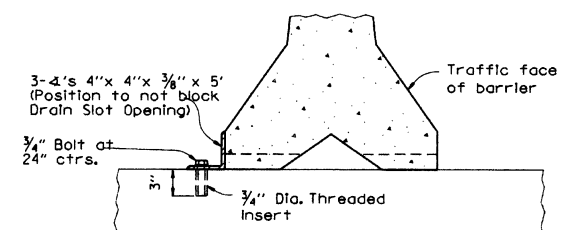
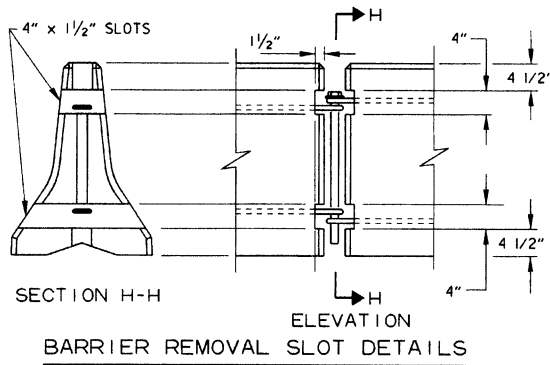
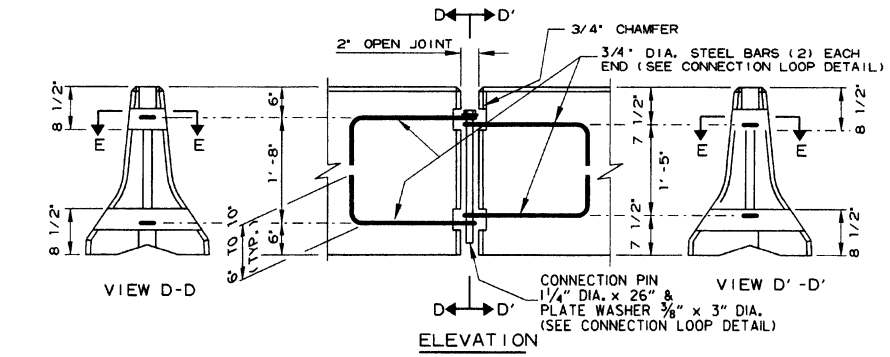
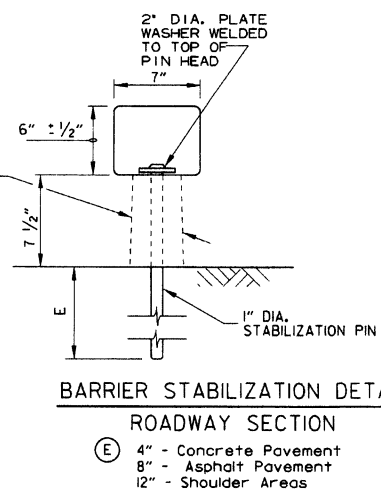
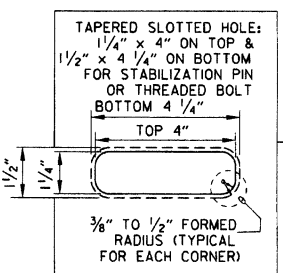
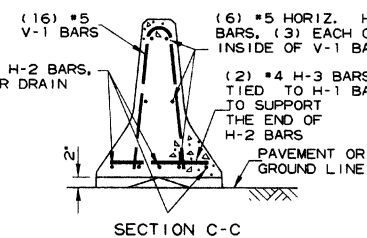
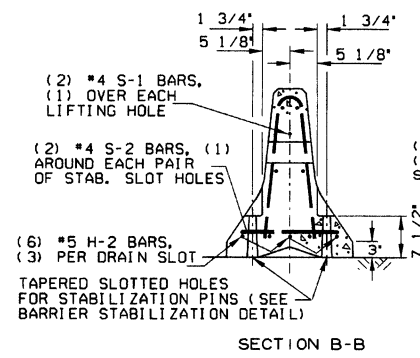
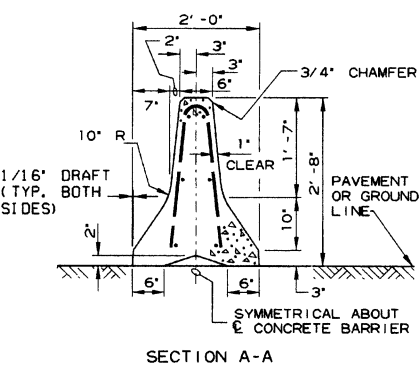
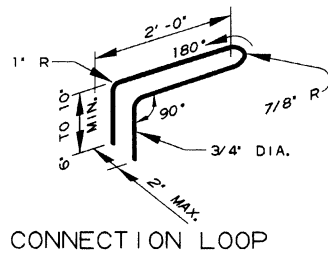
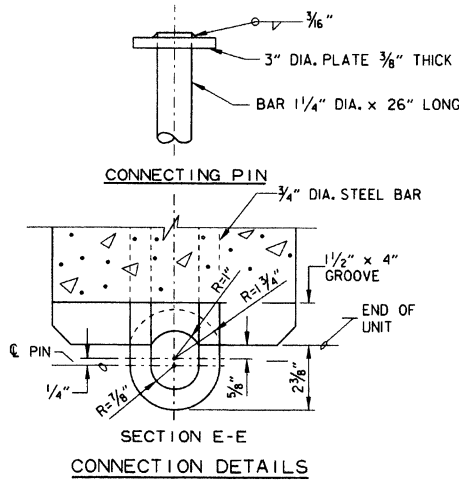
- USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)
- NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.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

DATE	REVISION	FILED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & 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	

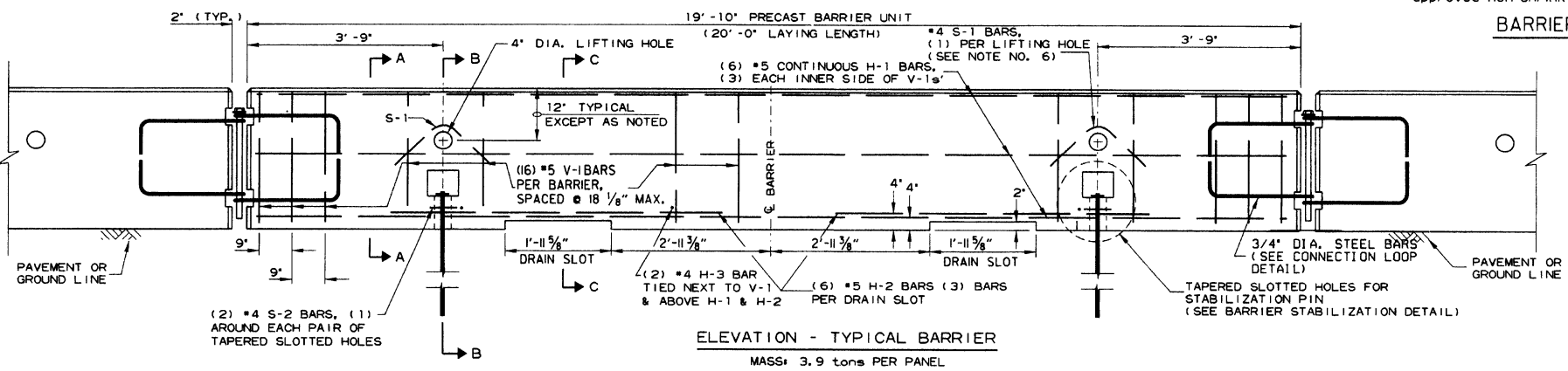
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-3



REINFORCING BAR TABLE PER BARRIER UNIT				
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S & DRAIN SLOTS	#4	(2)	
V-1	VERTICAL IN BARRIER (3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	



NOTE: 3/4" Threaded inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.



BARRIER STABILIZATION DETAIL
BRIDGE DECKS

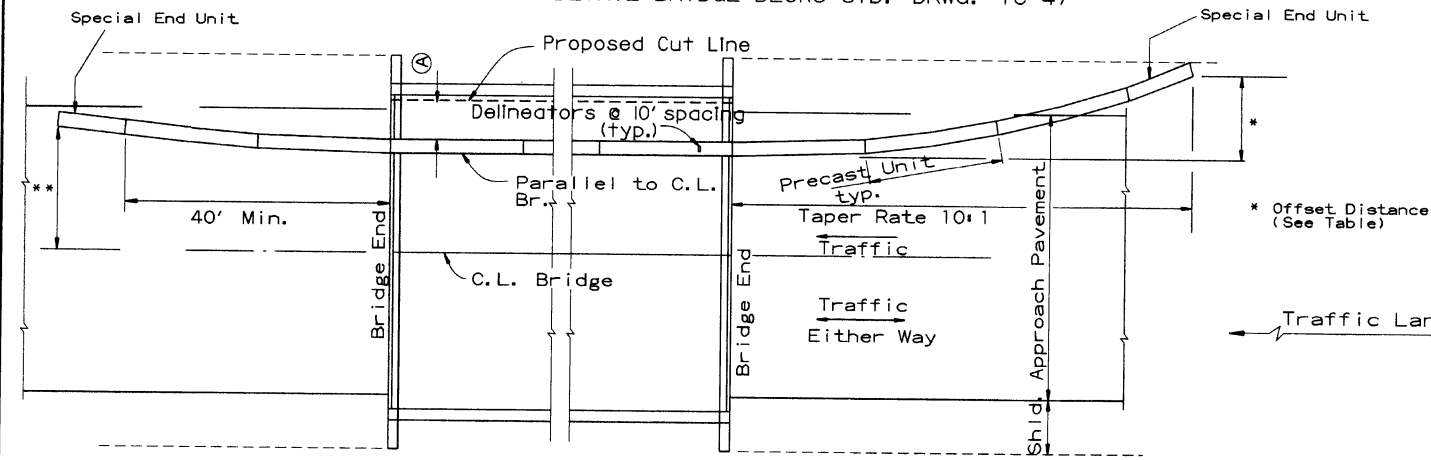
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	
DATE	REVISION	FILMED

- General Notes**
- The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
 - Materials shall meet the following minimum requirements:
Concrete: 2500 psi compressive strength at 28 days.
Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin. Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

In applications where barrier walls within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers. Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices. Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.
 - Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.
 - Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.
 - Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.
 - A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

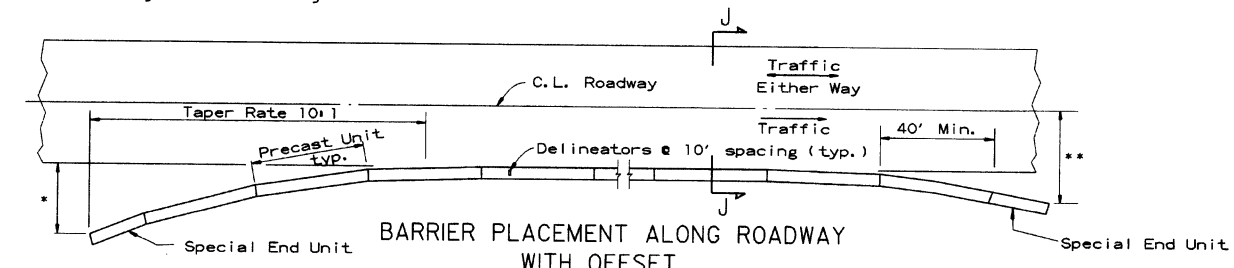
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER
STANDARD DRAWING TC-4

(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

** Offset Distance for Two Way Traffic Only
No Scale

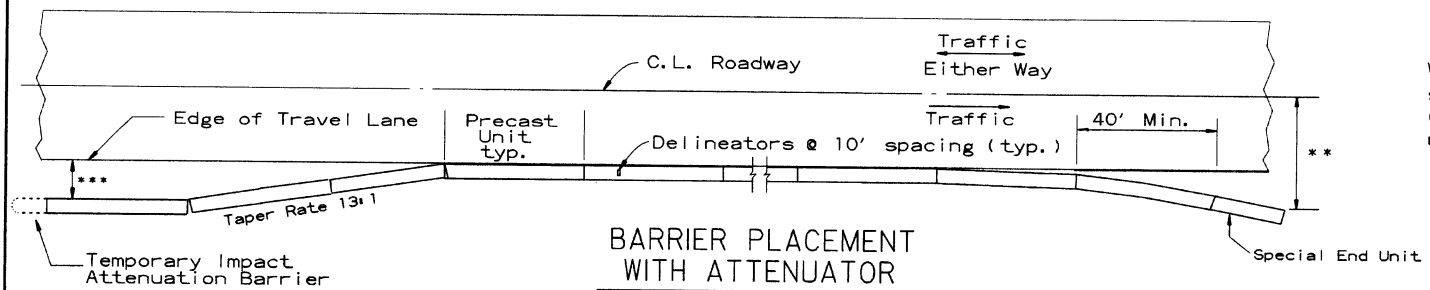


BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

* Offset Distance (See Table)
No Scale
** Offset Distance For Two Way Traffic Only

Offset Distance Table	
Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.

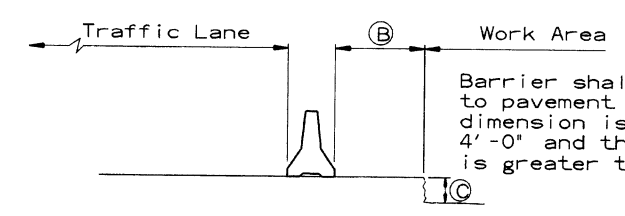


BARRIER PLACEMENT WITH ATTENUATOR

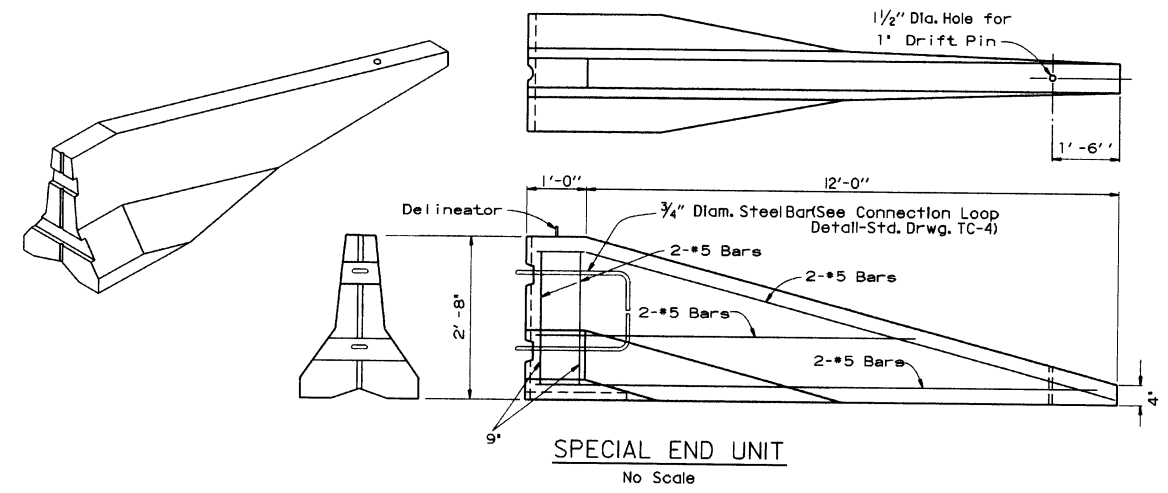
***Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)



SECTION J-J
No Scale



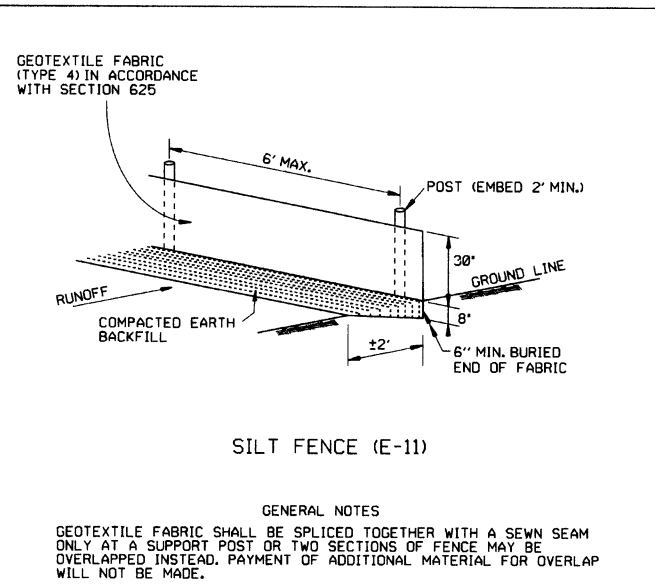
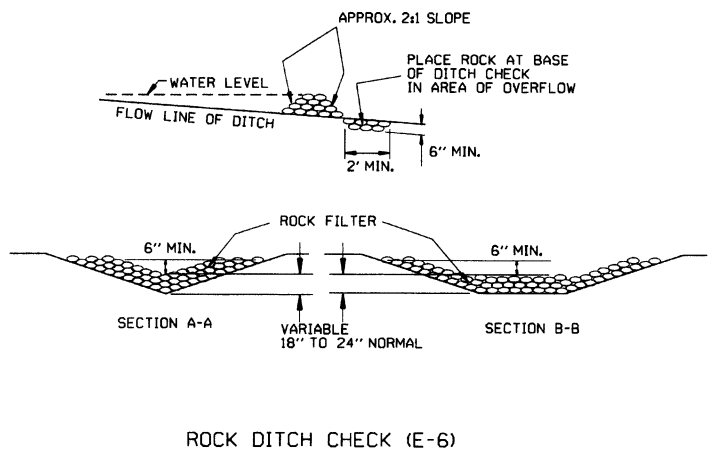
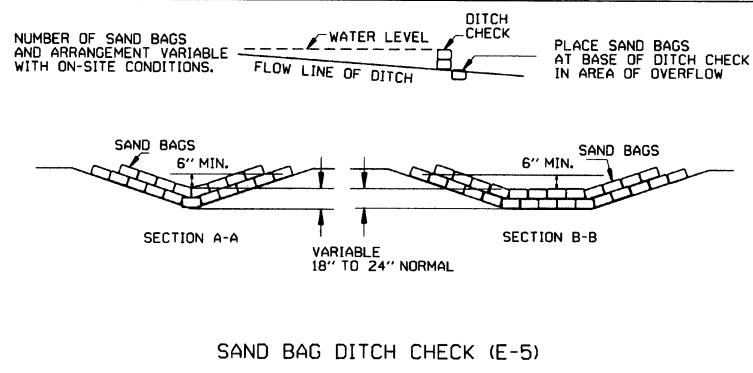
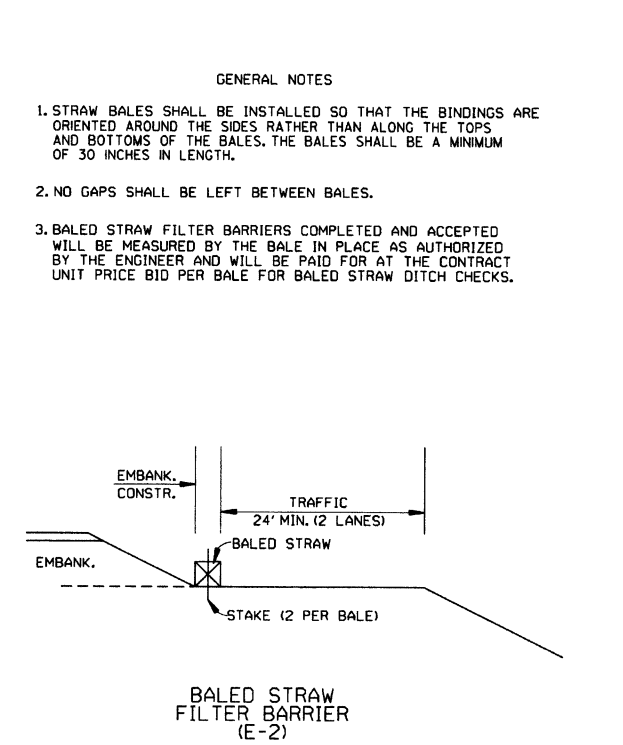
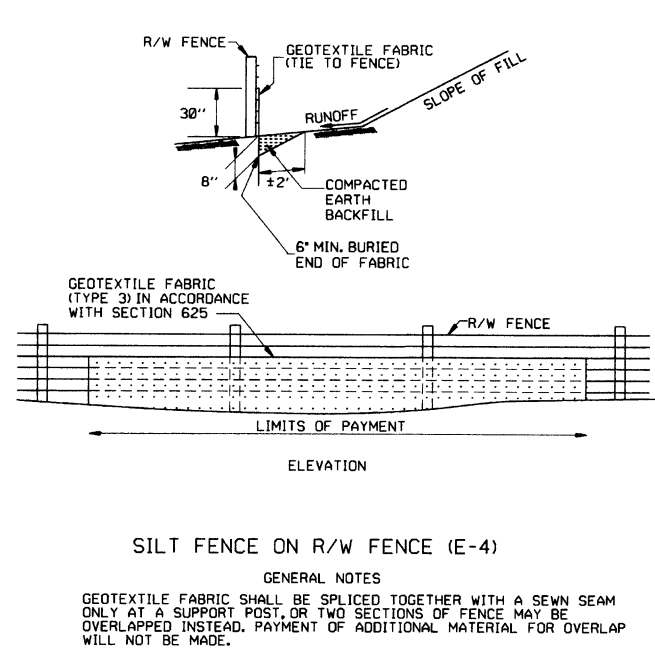
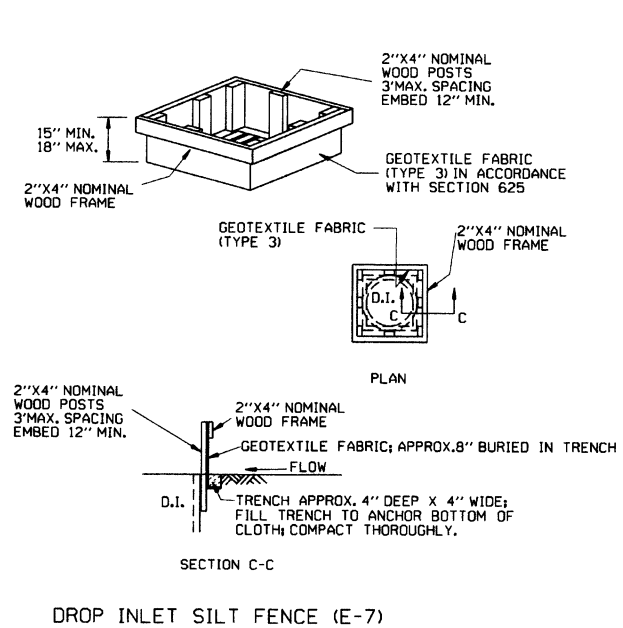
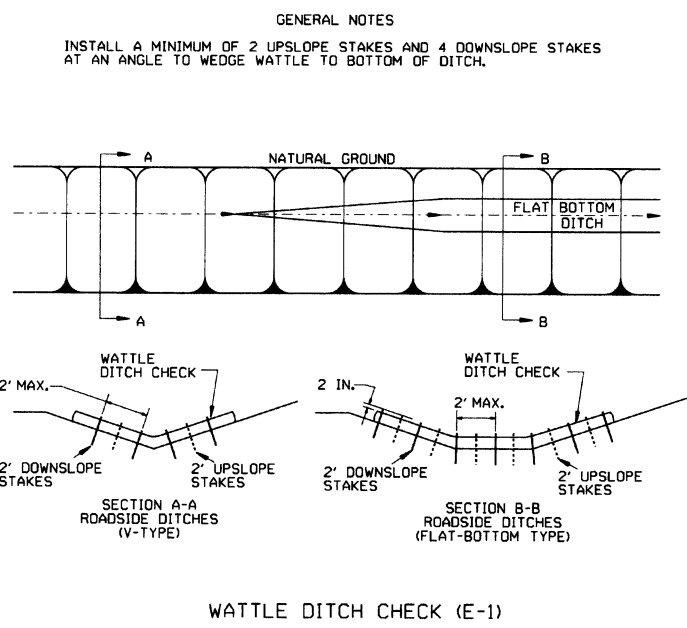
SPECIAL END UNIT
No Scale

General Notes

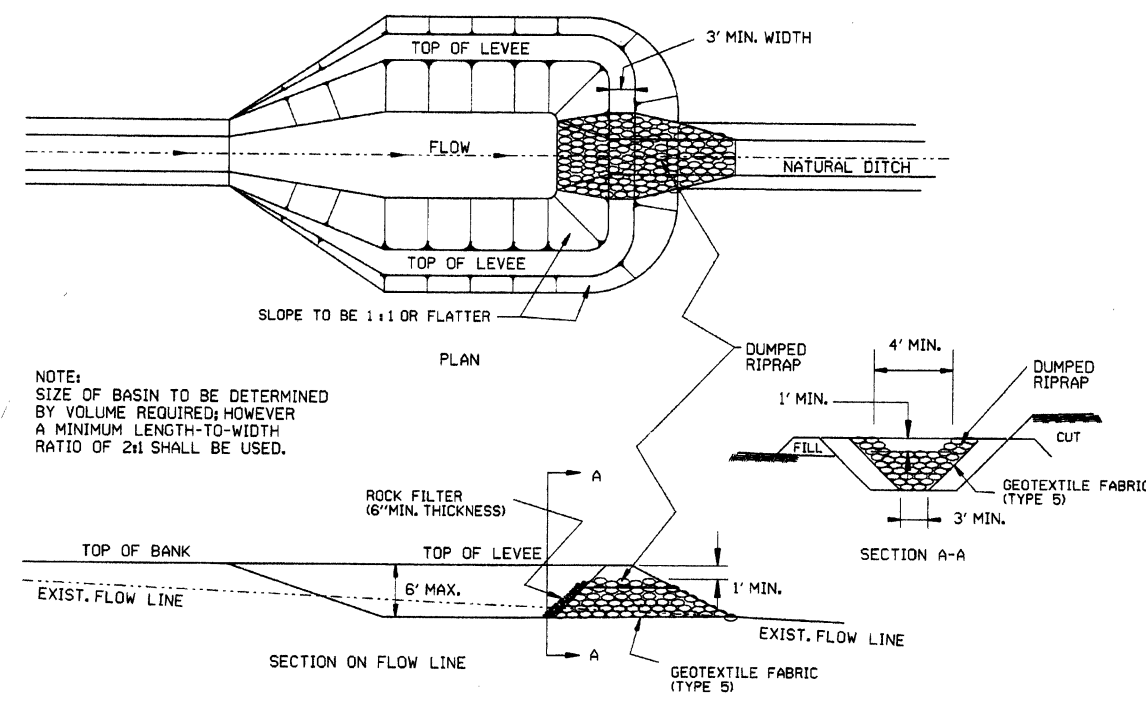
When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

ARKANSAS STATE HIGHWAY COMMISSION		
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER		
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	
DATE	REVISION	FILMED

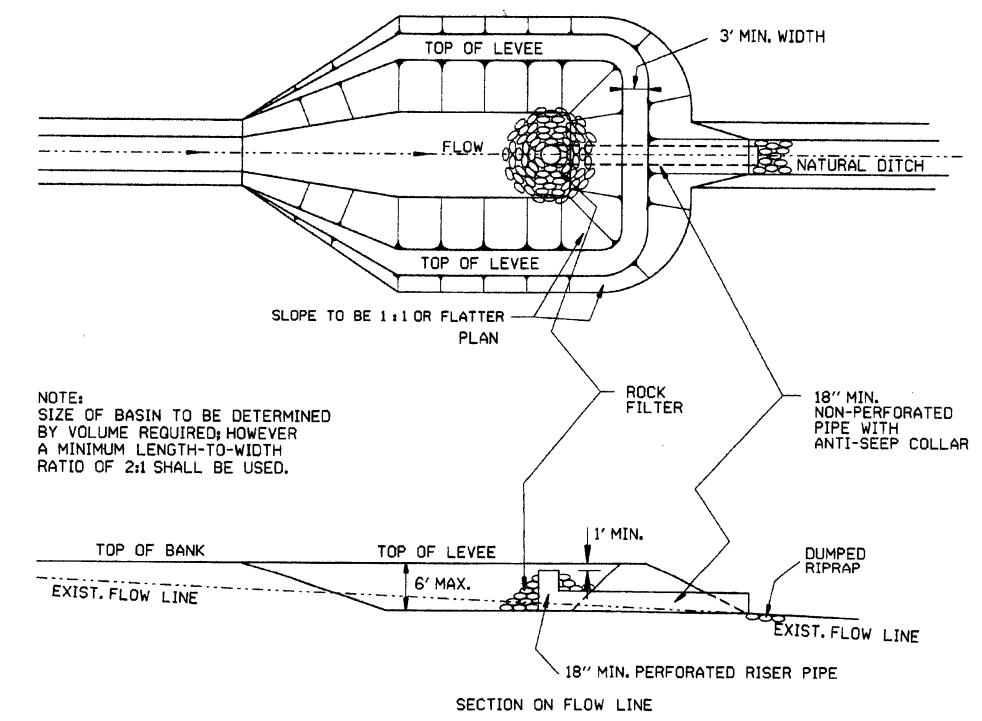
STANDARD DRAWING TC-5



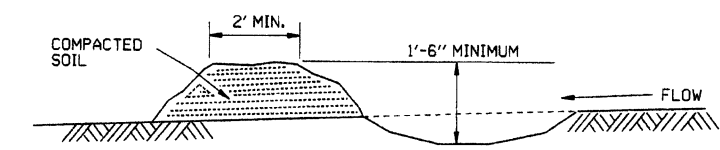
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		ARKANSAS STATE HIGHWAY COMMISSION
11-18-98	ADDED NOTES		
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC		
6-2-94	REVISED E-1, 4, 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	STANDARD DRAWING TEC-1



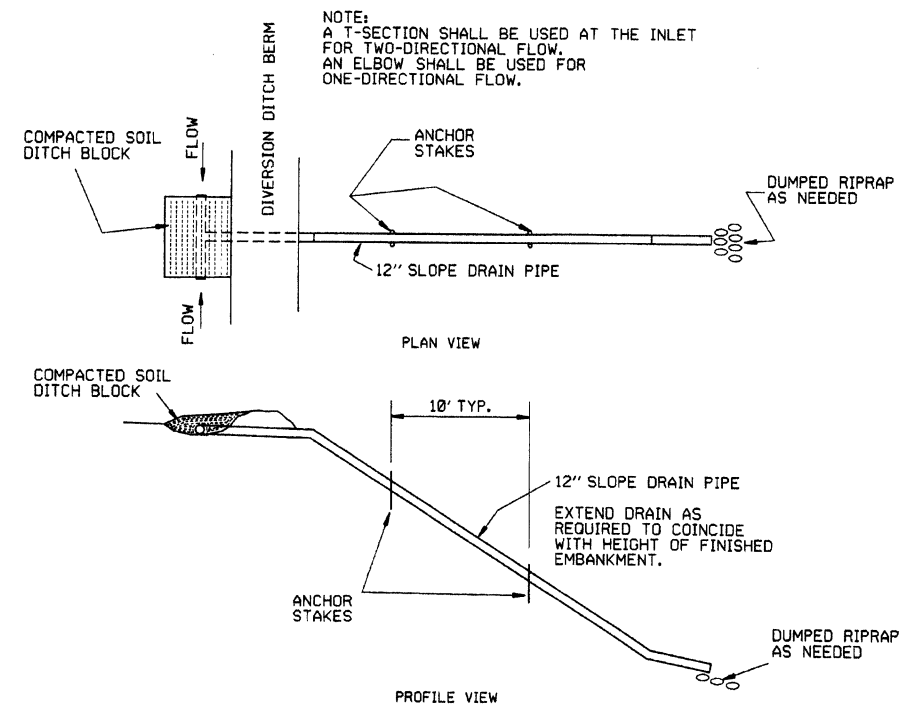
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



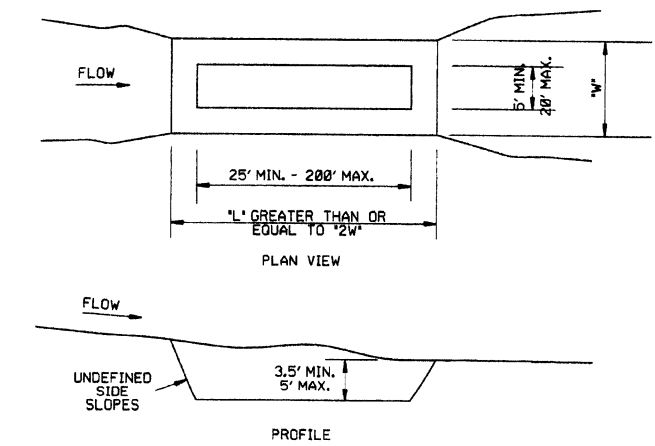
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



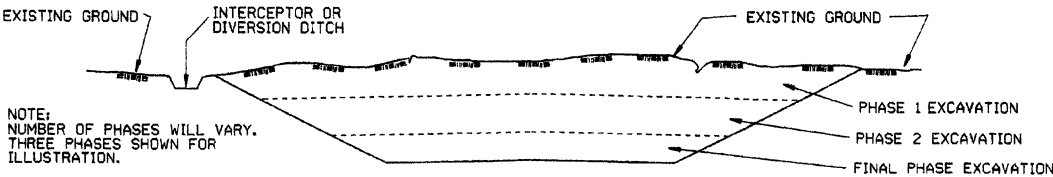
SEDIMENT BASIN (E-14)

ARKANSAS STATE HIGHWAY COMMISSION			
TEMPORARY EROSION CONTROL DEVICES			
STANDARD DRAWING TEC-2			
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

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

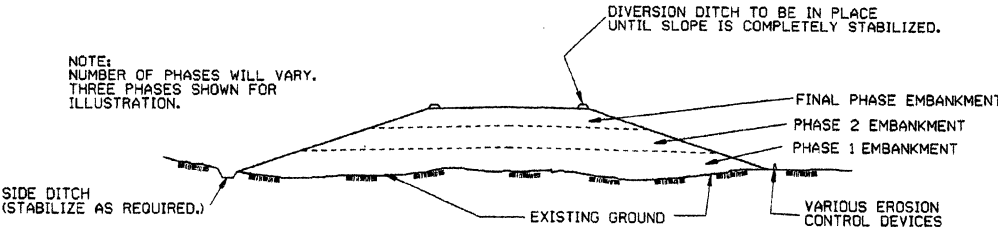


GENERAL NOTE

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

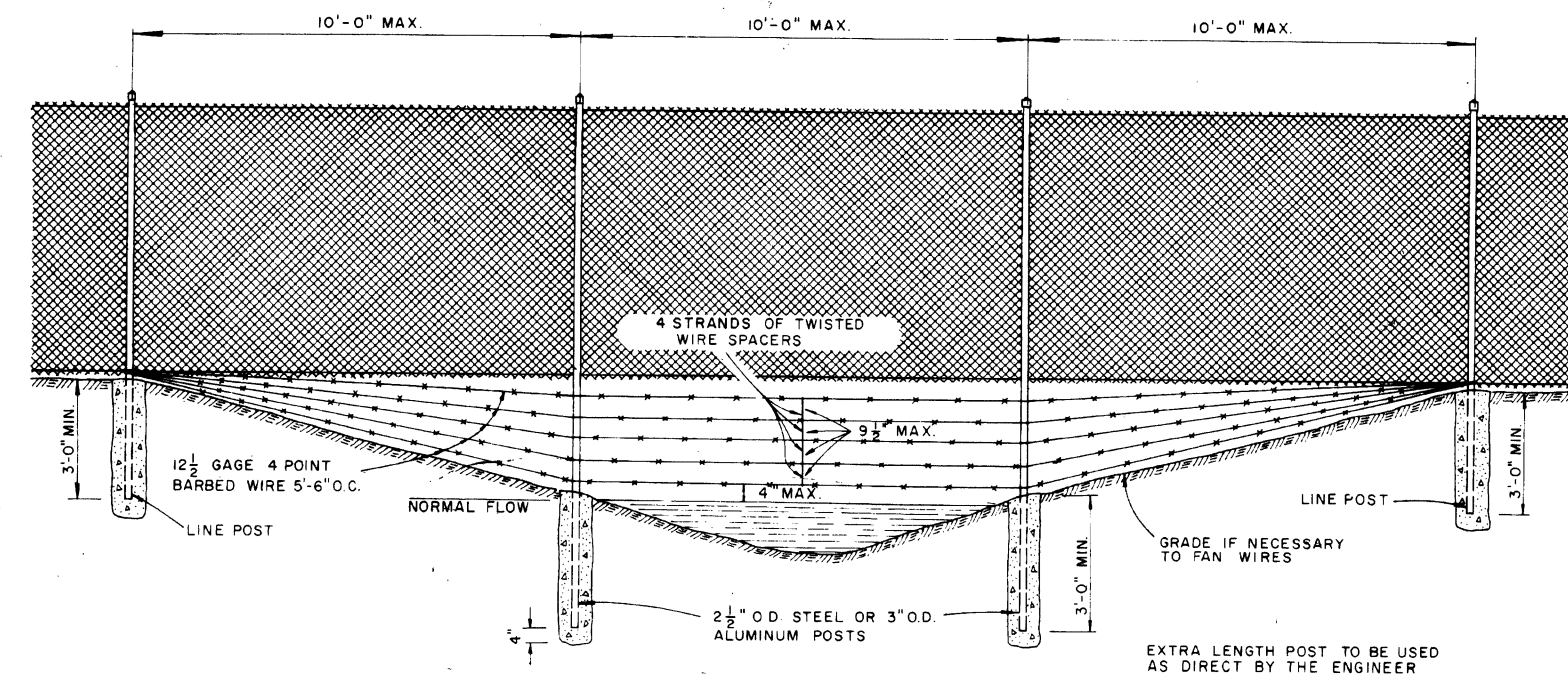
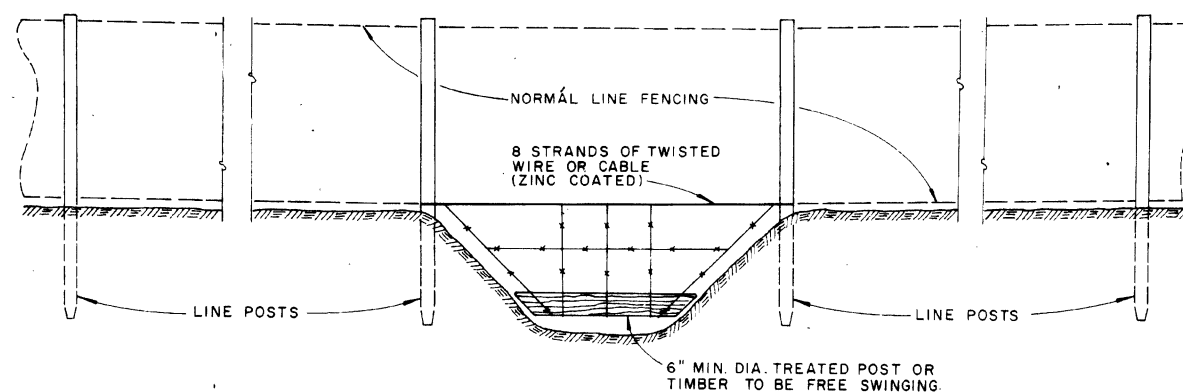
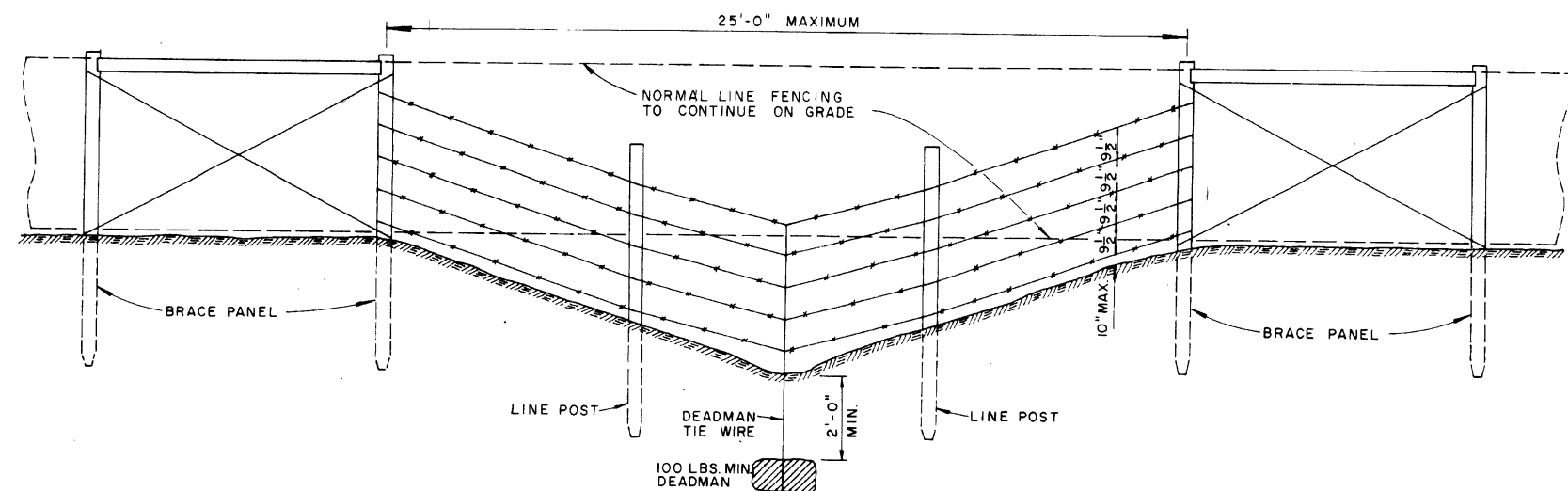


GENERAL NOTE

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.

			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
			STANDARD DRAWING TEC-3
11-03-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued	6-2-94	FILMED
DATE	REVISION		



GENERAL NOTES:

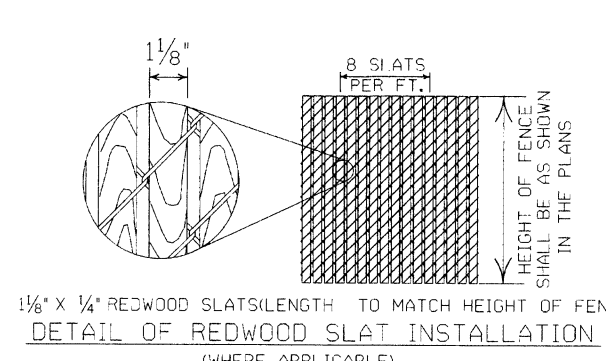
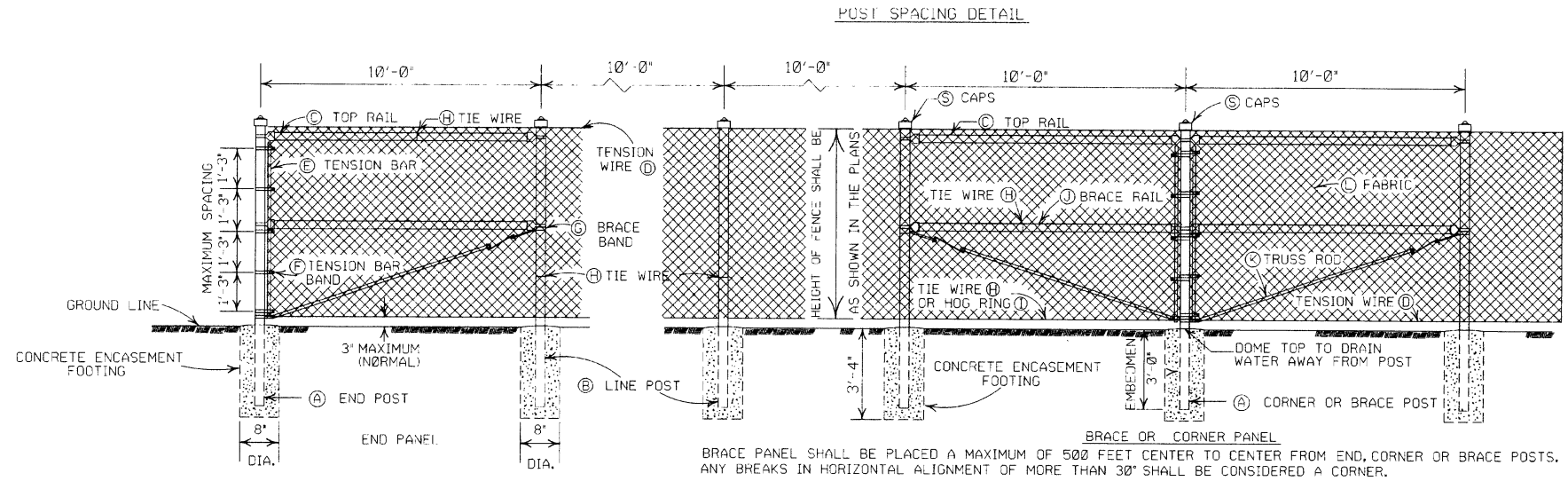
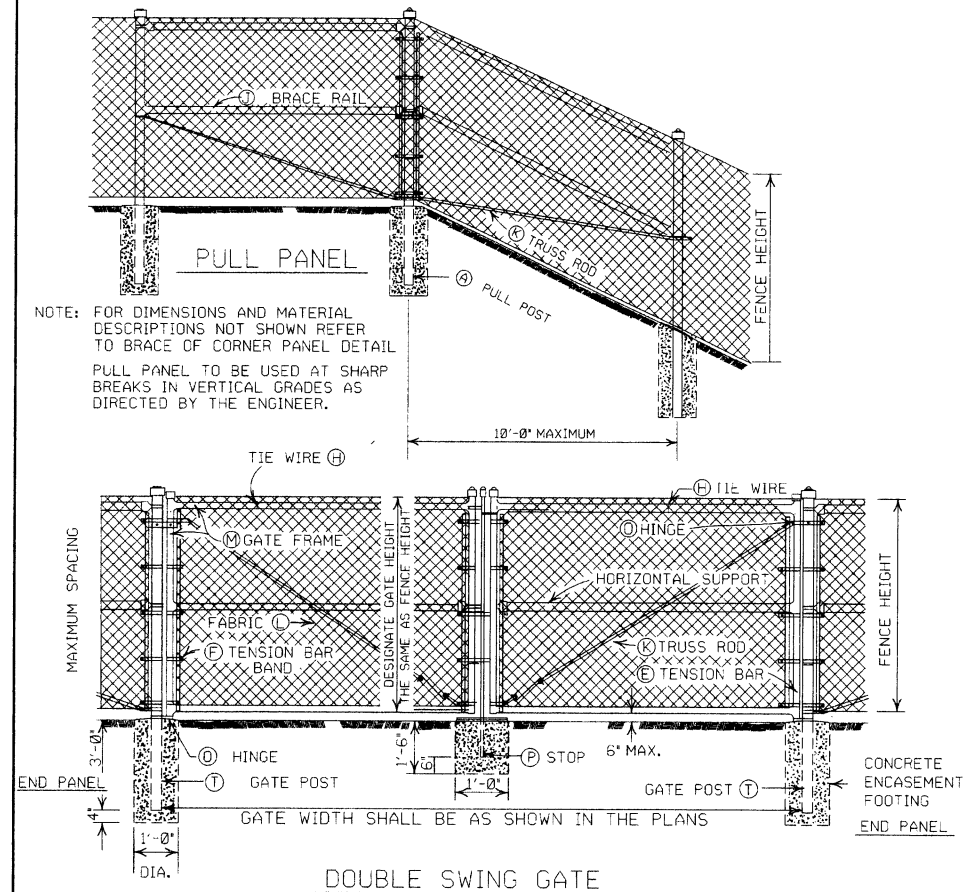
THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.

WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.

IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.

PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

ARKANSAS STATE HIGHWAY COMMISSION		
WIRE FENCE WATER GAPS		
STANDARD DRAWING		
WF-2		
4-20-79	REVISED TOP RAIL & TENSION WIRE	696-4-20-79
10-2-72	REVISED & REDRAWN	529-10-2-72
DATE	REVISION	DATE FILMD



- GENERAL NOTES:
- (C) CHAIN LINK FENCE BEING PLACED ON PRIVATE PROPERTY SHALL INCLUDE A TOP RAIL, ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LIN. FT. OF CHAIN LINK FENCE.
 - (D) TENSION WIRE: SHALL BE SECURED TO ALL TERMINAL, PULL, BRACE OR CORNER POSTS WITH TENSION BAR BANDS.
 - (J) BRACE RAIL: BRACE RAILS SHALL BE PROVIDED AT ALL TERMINAL, PULL, BRACE OR CORNER POSTS HALFWAY BETWEEN THE TOP RAIL AND GROUND LEVEL WHEN TOPRAIL IS SPECIFIED AND TWELVE INCHES (12") DOWN FROM TOP OF FABRIC WHEN TOP TENSION WIRE IS SPECIFIED. BRACE RAIL SHALL EXTEND FROM SUCH POST TO THE FIRST ADJACENT LINE POST.
 - (L) FABRIC: SHALL CONFORM TO THE SPECIFICATIONS.

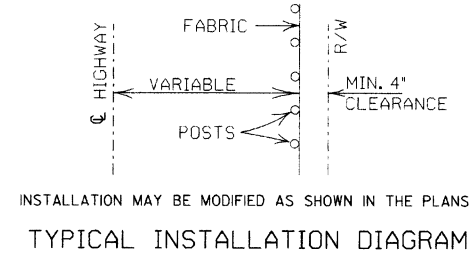
HEIGHT OF FENCE FABRIC	(A)	(B)		(C)			(D)		(E)		(F)			(G)	
	END, PULL CORNER OR BRACE POST	LINE POSTS		TOP RAIL			TENSION WIRE		TENSION BAR		TENSION BAR BAND			BRACE BAND	
		SIZE	TIE SPACING	SIZE	TIE SPACING	MIN. LENGTH	SIZE	TIE SPACING	SIZE	LENGTH	SIZE	BOLT SIZE	SPACING	SIZE	BOLT SIZE
6' AND LESS	2½" O.D.	2" O.D.	1 TIE EVERY 1'-2"	1½" O.D.	1 TIE EVERY 2'-0"	10'-2"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	¾" X ¾"	MIN. OF 2" LESS THAN FABRIC HEIGHT	¾" X ¾"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	¾" X ¾"	5/8" X 1½"	
OVER 6' TO 12' INCL.	3" O.D.	2½" O.D.	1 TIE EVERY 1'-2" OF FABRIC HEIGHT	1½" O.D.	1 TIE EVERY 2'-0"	10'-2"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	¾" X ¾"	MIN. OF 2" LESS THAN FABRIC HEIGHT	¾" X ¾"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	¾" X ¾"	5/8" X 1½"	

HEIGHT OF FENCE FABRIC	(H)	(I)	(J)		(K)	(L)		(M)		(N)	(O)	(P)	
	TIE WIRE	HOG RING	BRACE RAIL		TRUSS ROD	FABRIC		GATE FRAME		HORIZONTAL SUPPORT	HINGE TYPE	GATE POST	
			SIZE	TIE SPACING		SIZE	MESH SELVAGE	SIZE	TIE SPACING			SIZE	TIE SPACING
6' AND LESS	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1½" O.D.	1 TIE EVERY 2'-0"	MIN. OF ¾" ROUND WITH TIGHTENERS AND FITTINGS	9 GA. 2"	KNUCK-ING AND/OR TWIST-ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	180° SWING	12" AND LESS
OVER 6' TO 12' INCL.	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1½" O.D.	1 TIE EVERY 2'-0"	MIN. OF ¾" ROUND WITH TIGHTENERS AND FITTINGS	9 GA. 2"	KNUCK-ING AND/OR TWIST-ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	180° SWING	12" AND LESS

NOTE: POST SIZES SHOWN ARE FOR STEEL. WHERE ALUMINUM IS PROVIDED, LINE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 2 1/2" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' TO 12'. END, PULL, CORNER OR BRACE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3 1/2" FOR FENCE HEIGHTS OF 6' TO 12'. GATE POSTS WHERE GATE WIDTH IS 12' AND LESS SHALL HAVE AN OUTSIDE DIAMETER OF 3 1/2" FOR FENCE HEIGHT OF 6' AND LESS. ALUMINUM TENSION WIRE SHALL BE 0.192" IN DIAMETER, MINIMUM THICKNESS OF MATERIAL FROM WHICH EXPANSION SLEEVES SHALL BE MADE WILL BE 0.078". POSTS AND RAILS MAY HAVE ANY CROSS-SECTIONAL SHAPE THAT WILL MEET THE SPECIFICATIONS.

OTHER DETAILS APPLY TO BOTH STEEL AND ALUMINUM FENCE.

ALL MISCELLANEOUS FITTINGS AND HARDWARE SHALL MEET THE REQUIREMENTS AND PRODUCTION TOLERANCES AS SET FORTH IN THE SPECIFICATIONS. 9 GAUGE ALUMINUM WIRE SHALL BE ACCEPTABLE FOR TIEING FABRIC TO TUBULAR AND ROLL FORMED MEMBERS OF STEEL FENCE.



POSIS AND RAILS							
SIZE O.D.	GRADE 1 AND ALUMINUM ALLOY				GRADE 2		
	O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.		O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.
			STEEL	ALUMINUM			
1"	1.660	0.140	2.27	0.786	1.660	0.111	1.84
2	1.900	0.145	2.72	0.940	1.900	0.120	2.28
2½	2.375	0.154	3.65	1.264	2.375	0.130	3.11
3	2.875	0.203	5.79	2.004	2.875	0.160	4.64
3½	3.500	0.216	7.58	2.621	3.500	0.160	5.71
4	4.000	0.226	9.11	3.151	4.000	0.160	6.56

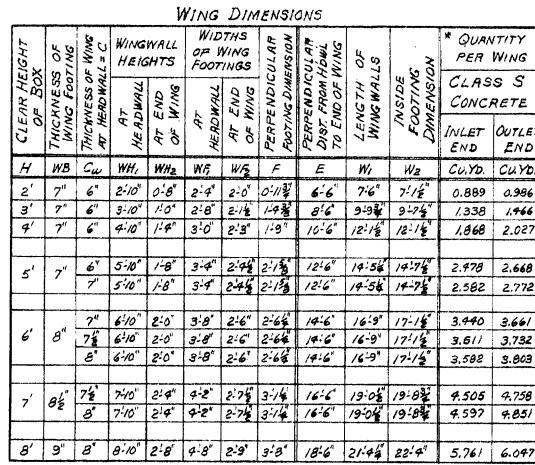
TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181

DATE	REVISION	FILMED
11-17-10	REVISED TRUSS ROD	
12-10-09	REVISED POSTS & RAILS TABLE	
5-21-09	ADDED TABLE & GEN. NOTE (C)	
8-22-02	REVISED NOTES, REMOVED TABLE, & REMOVED FENCE ALTERNATE	
4-3-97	REVISED BRACE RAIL NOTE	
10-18-96	REVISED AASHTO & ASTM REF.	
11-3-94	REVISED NOTE (L)	
10-1-92	DELETED ALTERNATE POST	10-1-92
8-15-91	DELETED ROLL FORMED POST	8-15-91
8-15-91	DETAIL & ADDED NOTE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
11-17-88	REVISED O.D. SIZES	668-11-17-88
10-30-87	GENERAL REVISIONS	548-10-30-87
4-20-79	REVISED TOP RAIL & TENSION WIRE	695-4-20-79
10-2-72	REVISED AND REDRAWN	530-10-2-72

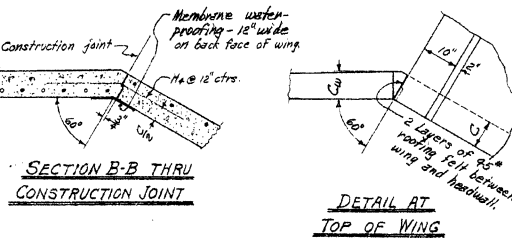
ARKANSAS STATE HIGHWAY COMMISSION

CHAIN LINK FENCE

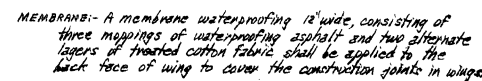
STANDARD DRAWING WF-3



SECTION A-A



END VIEW OF WING



HALF END ELEVATION

BAR LIST FOR ONE WING - 4 REQUIRED

CLEAR HEIGHT	F ₁										F ₂					F ₃			F ₄			H ₁			H ₂			H ₃			H ₄			QUANTITY REINFORCING STEEL PER WING	BAR BENDING DIAGRAMS						
	BENT										BENT					STRAIGHT			STRAIGHT			STRAIGHT			STRAIGHT			STRAIGHT			BENT										
	In bottom of footing bent up into back face of wing. One bar of each length.										In bottom of footing bent up into back face of wing. Alt. with F ₁ bars.					Longitudinal in top of wing footing heel.			Longitudinal in bottom of wing footing too.			Horizontal in back face of wing.			Horizontal in back face of wing. One bar of each length.			In back face of wing at top-on slope			Dowels thru construction joint at headwall.										
H	SIZE	SPACING	No Reqd		LENGTHS VARY		X		Y		SIZE	SPACING	No Reqd		LENGTH	X	Y	SIZE	No Reqd	LENGTH	SIZE	No Reqd	LENGTH	SIZE	SPACING	No Reqd	LENGTH	SIZE	SPACING	No Reqd	LENGTH	SIZE	SPACING	No Reqd	LENGTH	X	LB.				
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.																																	
2'	#3	12"	8	1-6"	3-0"	0-8"	1-0"	6-11"	2-11"									#3	1	3-8"	#3	2	8-6"	#3	12"	1	7-2"	#3	12"	1		4-0"	#3	1	7-4"	#3	12"	2	2-8"	1-4"	27.0
3'	#3	12"	10	2-2"	5-2"	0-8"	1-1"	1-5"	9-0"									#3	1	12-0"	#3	12"	1	9-6"	#3	12"	2	7-6"	#4	1	3-9"	#3	12"	3	2-8"	1-4"	41.1				
4'	#3	12"	13	2-4"	6-6"	0-11"	1-4"	1-6"	5-0"									#3	1	19-4"	#3	3	13-6"	#3	12"	1	11-10"	#3	12"	3	10-11"	4-0"	#3	1	12-12"	#3	12"	9	2-8"	1-4"	63.7
5'	#3	12"	15	2-11"	7-10"	1-1"	1-11"	1-11"	6-0"	#3	12"	4	3-6"	1-11"	2-6"	#3	1	16-8"	#3	3	16-0"	#3	12"	2	14-2"	#3	12"	3	10-11"	4-0"	#3	1	14-3"	#3	12"	5	2-8"	1-4"	89.5		
6'	#4	12"	17	3-6"	9-3"	1-2"	2-3"	2-5"	7-1"	#3	12"	4	4-6"	1-4"	3-3"	#3	1	19-0"	#3	3	18-6"	#3	12"	2	14-6"	#3	12"	4	14-4"	4-0"	#3	1	17-0"	#3	12"	6	2-8"	1-4"	145.6		
7'	#4	12"	20	3-6"	10-9"	1-3"	2-9"	2-7"	9-2"	#4	12"	7	5-6"	1-7"	4-0"	#4	1	21-4"	#4	4	21-8"	#4	12"	2	18-9"	#4	12"	5	17-9"	4-0"	#4	1	19-5"	#4	12"	7	3-6"	1-9"	283.7		
8'	#4	12"	22	4-4"	12-3"	1-5"	3-2"	3-0"	8-1"	#4	12"	10	6-6"	1-10"	4-9"	#4	1	23-8"	#4	4	23-8"	#4	12"	3	21-4"	#4	12"	5	17-9"	4-0"	#4	1	21-10"	#4	12"	8	3-6"	1-9"	356.4		

NOTE: Dimensions
are to bar
centers.

REVISIONS:- Membrane added: 5-10-66 W.C.H.

QUANTITIES									
CLEAR SPAN	CLASS 9 CONCRETE - 4 WINGS								
	HEADWALLS, WINGWALLS, FOOTINGS, RETAINING WALLS AND APRONS								
	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	REINFORCING STEEL - 8	FOR 4 WINGS	SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
H	C _W	W _B	L _B	C _W D _Y	C _W D _Y	C _W D _Y	C _W D _Y	C _W D _Y	C _W D _Y
4'	2'	6"	108.0	9.50	5.46	6.42	7.38	8.34	
	3'	6"	1699	6.26	7.21	8.17	9.13	10.09	
	4'	6"	2586	8.93	9.28	10.24	11.20	12.16	
	5'	6"	3578	10.72	11.68	12.64	13.60	14.56	
	6'	7"	5831	14.53	15.53	16.52	17.51	18.49	
	3'	6"	1644	6.47	7.43	8.79	9.96	11.12	
	4'	6"	2596	8.56	9.70	10.87	12.03	13.20	
	5'	6"	3578	10.94	12.10	13.26	14.43	15.59	
	6'	7"	5831	14.77	15.96	17.15	18.34	19.54	
	7'	8"	11346	18.94	20.15	21.37	22.59	23.80	
	3'	6"	1644	6.68	8.06	9.42	10.80	12.18	
	4'	6"	2566	8.75	10.14	11.49	12.87	14.25	
	5'	6"	3568	11.15	12.53	13.89	15.27	16.65	
	6'	7"	5581	14.98	16.39	17.78	19.18	20.59	
	7'	8"	11346	19.16	20.58	22.00	23.43	24.86	
	8'	9"	14256	24.08	25.53	26.96	28.39	29.83	
	4'	6"	2594	9.97	10.58	12.15	13.76	15.35	
	5'	6"	3578	11.96	12.97	14.94	16.15	17.75	
	6'	8"	5931	15.20	16.82	18.92	20.94	22.64	
	7'	8"	11346	19.38	21.02	22.66	24.28	25.95	
	8'	9"	14256	24.32	25.97	27.60	29.25	30.89	
	4'	6"	2596	9.19	11.05	12.82	14.65	16.45	
	5'	7"	3578	12.08	13.89	15.70	17.55	19.34	
	6'	7"	5931	15.42	17.27	19.09	20.93	22.75	
	7'	8"	11346	19.59	21.46	23.30	25.16	26.99	
	8'	9"	14256	24.54	26.47	28.28	30.11	31.94	
	5'	7"	3578	12.26	14.39	16.37	18.95	20.97	
	6'	7"	5931	15.94	18.04	20.29	22.79	24.23	
	7'	8"	11346	19.81	21.91	23.93	26.06	28.10	
	8'	9"	14256	24.76	26.86	28.91	31.00	33.05	
	5'	7"	3578	12.49	14.80	17.05	19.24	21.52	
	6'	7"	5931	16.17	18.50	20.77	22.99	25.28	
	7'	8"	11346	20.04	22.37	24.64	26.97	29.15	
	8'	9"	14256	24.98	27.31	29.58	31.91	34.10	
	6'	8"	5931	16.69	19.27	21.76	24.23		
	7'	8"	11346	20.64	23.22	25.71	28.18		
	8'	9"	14256	25.19	27.77	30.27	32.77		
	6'	8"	5931	16.93	19.75	22.95	25.18		
	7'	8"	11346	20.87	23.69	26.40	29.13		
	8'	9"	14256	25.42	28.25	30.96	33.49		

* For reinforcing steel in Headwalls and Aprons, See Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have $\frac{3}{4}$ " chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

footings and sidewalls shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard

Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-
Class 5 Concrete ($n=10$) $1200 \frac{\text{N}}{\text{mm}^2}$
Reinforcing Steel $20000 \frac{\text{N}}{\text{mm}^2}$

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections,

Drawing Nos. as listed below.				
SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
B-100X-0	B-200X-0	B-300X-0	B-400X-0	B-500X-0

R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	

R-200X-X3 R-300X-X3

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
4.5, 6, 7, 8, 9, 10, 11 & 12 SPANS 3:1 SLOPES
SINGLES, DOUBLES, TRIPLES, ALL DEPTHS OF COVER
QUADRUPLES & QUINTUPLES. FOR H = 8'-0" OR LESS
STANDARD DRAWING NO. W-X003-1

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEET
6	ARK.				
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	a' bane										b' bars										c' bars										d' bars										e' bars.										f' bars									
			STRAIGHT										BENT - See Diagram below										STRAIGHT										STRAIGHT										STRAIGHT																			
			In Top and Bottom Slabs of Barrel. 2 Add'l. in Apron and Headwall - Each.										In Top and Bottom Slabs of Barrel. Alternate with "a" bars.										Longitudinal in Top Slab of Barrel										Longitudinal in Sidewalls										Longitudinal in Bottom Slab of Barrel										Verticals in Sidewalls									
			SIZE	SPACING	NUMBER REQ'D	3:1	4:1	LENGTH	SIZE	SPACING	NUMBER REQ'D	3:1	4:1	LENGTH	X	SIZE	SPACING	NUMBER REQ'D	3:1	4:1	LENGTH	SIZE	SPACING	NUMBER REQ'D	3:1	4:1	LENGTH	SIZE	SPACING	NUMBER REQ'D	3:1	4:1	LENGTH																													
0'-0" TO 5'-0" MAXIMUM	1 @ 10'	1	2'	#5	13'	120	180	4'-9"	#6	19'	110	110	5'-0"	4'-8"	#5	10 1/2'	6				#4	12'	5				#4	12'	120	120	2'-2"																															
		2	4'	#5	13'	120	120	4'-9"	#6	19'	110	110	5'-0"	4'-8"	#5	10 1/2'	6				#4	12'	5				#4	12'	120	120	3'-11"																															
		3	6'	#5	13'	120	120	4'-9"	#6	19'	110	110	5'-0"	4'-8"	#5	10 1/2'	6				#4	12'	5				#4	12'	120	120	4'-7 1/2"																															
		4	8'	#5	13'	120	120	4'-11"	#6	19'	110	110	6'-0"	4'-10"	#5	10 1/2'	6				#4	12'	5				#4	12'	120	120	5'-11"																															
		5	10'	#5	13'	120	120	5'-19"	#6	19'	110	110	6'-0"	5'-8"	#5	10 1/2'	7				#4	12'	6				#4	12'	120	120	6'-11"																															
		6	12'	#5	13'	120	120	5'-19"	#6	19'	110	110	6'-0"	5'-8"	#5	10 1/2'	7				#4	12'	6				#4	12'	120	120	6'-11"																															
		7	14'	#5	13'	120	120	5'-11"	#6	19'	110	110	7'-0"	5'-8"	#5	10 1/2'	7				#4	12'	6				#4	12'	120	120	7'-0"																															
		8	16'	#5	13'	120	120	6'-0"	#6	19'	110	110	7'-11"	5'-11"	#5	10 1/2'	7				#4	12'	6				#4	12'	120	120	8'-0"																															
		9	18'	#5	13'	120	120	6'-9"	#6	19'	118	118	7'-10"	6'-8"	#5	10 1/2'	8				#4	12'	7				#4	12'	120	120	8'-7 1/2"																															
		10	20'	#5	13'	120	120	6'-9"	#6	19'	118	118	7'-10"	6'-8"	#5	10 1/2'	8				#4	12'	7				#4	12'	120	120	8'-7 1/2"																															
		11	22'	#5	13'	120	120	6'-9"	#6	19'	118	118	7'-10"	6'-8"	#5	10 1/2'	8				#4	12'	7				#4	12'	120	120	8'-7 1/2"																															
		12	24'	#5	13'	120	120	6'-9"	#6	19'	118	118	7'-10"	6'-8"	#5	10 1/2'	8				#4	12'	7				#4	12'	120	120	8'-7 1/2"																															
0'-0" TO 5'-0" MAXIMUM	1 @ 10'	1	2'	#5	11'	140	140	7'-9"	#6	11'	120	120	8'-10"	7'-8"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		2	4'	#5	11'	140	140	7'-9"	#6	11'	120	120	8'-10"	7'-8"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		3	6'	#5	11'	140	140	7'-11"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		4	8'	#5	11'	140	140	8'-0"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		5	10'	#5	11'	140	140	8'-0"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		6	12'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		7	14'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		8	16'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		9	18'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		10	20'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		11	22'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		12	24'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
0'-0" TO 5'-0" MAXIMUM	1 @ 10'	1	2'	#5	11'	140	140	7'-9"	#6	11'	120	120	8'-10"	7'-8"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		2	4'	#5	11'	140	140	7'-9"	#6	11'	120	120	8'-10"	7'-8"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		3	6'	#5	11'	140	140	7'-11"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		4	8'	#5	11'	140	140	8'-0"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		5	10'	#5	11'	140	140	8'-0"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		6	12'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		7	14'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		8	16'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		9	18'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		10	20'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		11	22'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		12	24'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
0'-0" TO 5'-0" MAXIMUM	1 @ 10'	1	2'	#5	11'	140	140	7'-9"	#6	11'	120	120	8'-10"	7'-8"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		2	4'	#5	11'	140	140	7'-9"	#6	11'	120	120	8'-10"	7'-8"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		3	6'	#5	11'	140	140	7'-11"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		4	8'	#5	11'	140	140	8'-0"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		5	10'	#5	11'	140	140	8'-0"	#6	11'	120	120	8'-10"	7'-10"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		6	12'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		7	14'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		8	16'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		9	18'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		10	20'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		11	22'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															
		12	24'	#5	11'	140	140	8'-3"	#6	11'	120	120	9'-2"	8'-2"	#5	10 1/2'	9				#4	12'	8				#4	12'	120	120	9'-2"																															

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS	BENDING DIAGRAM Bars 6.
#6	3"	5"	1'-2"	
#7	3 1/2"	5 3/4"	1'-4"	

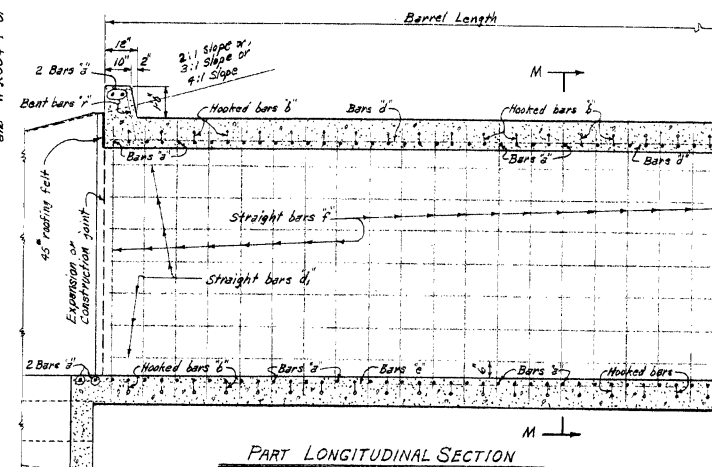
NOTE:- Dimensions are to centers of bars

DOWEL BARS FOR TWO HEADWALLS					
SPAN	SIZE	SPACING	WALL THICKNESS	LENGTH	X
Bars "n" Dowel bars in Headwalls. 					
4'	#4	11" $\frac{1}{2}$	12	2'-6"	1'-3"
5'	#4	11" $\frac{1}{2}$	14	2'-7"	1'-3 $\frac{1}{2}$ "
6'	#4	11" $\frac{1}{2}$	16	2'-8"	1'-4"
7'	#4	11" $\frac{1}{2}$	18	2'-9"	1'-4 $\frac{1}{2}$ "
8'	#4	11 $\frac{1}{2}$ " $\frac{1}{2}$	20	2'-11"	1'-5 $\frac{1}{2}$ "
9'	#4	11 $\frac{1}{2}$ " $\frac{1}{2}$	22	3'-0"	1'-6"
10'	#4	11 $\frac{1}{2}$ " $\frac{1}{2}$	24	3'-1"	1'-6 $\frac{1}{2}$ "
11'	#4	12"	26	3'-2"	1'-7"
12'	#4	12"	28	3'-3"	1'-7 $\frac{1}{2}$ "

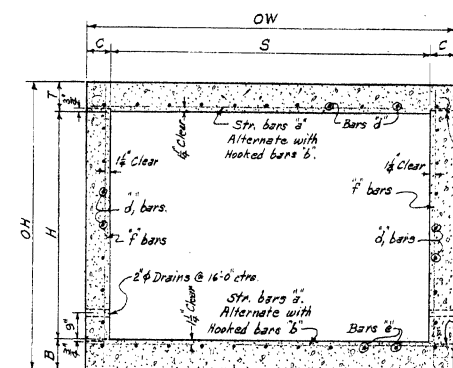
DIMENSIONS QUANTITIES

BARREL DIMENSIONS										UNIT QUANTITIES				
MAX. DESIGN DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	OVERALL				THICKNESS OF TOP SLAB	THICKNESS OF TOP SLAB	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	CLASS S CONG PER LIN. FT. OF BARREL	REINFORCING STEEL		
			SOFT OPENING	WIDTH	THICKNESS	THICKNESS						PER LIN. OF BARREL	PER LAP	TOTAL WEIGHT IN POUNDS
D	S	H	A	OW	T	C	B	OH	CUYD	LB.	LB.	LB.		
4	1 @	4	2'	8"	5'0"	7"	6"	6 1/2"	3'-1 1/4"	0.202	4199	17.95	66.3	
			3'	12"	5'0"		6"		4'-1 1/4"	0.319	4416	19.62	66.3	
			4'	16"	5'0"		6"		5'-1 1/4"	0.356	4683	21.29	66.3	
			5'	20"	5'0"		6"		6'-1 1/4"	0.394	4950	22.96	66.3	
			6'	24"	5'2"		7"		7'-1 1/4"	0.474	5246	24.63	67.2	
			3'	15"	6'0"		7"		4'-2 1/4"	0.380	55.55	22.19	101.2	
	1 @	5	4'	20"	6'0"	7 1/2"	6"	5'-2 1/4"	0.471	58.23	23.86	101.2		
			5'	25"	6'0"		6"	6'-2 1/4"	0.459	60.90	25.53	101.2		
			6'	30"	6'2"		7"	7'-2 1/4"	0.535	64.99	27.20	103.2		
			7'	35"	6'3"		7 1/2"	8'-2 1/4"	0.604	67.63	28.87	104.2		
			3'	18"	7'0"		6"	4'-3 1/4"	0.446	66.23	24.76	110.9		
			4'	24"	7'0"		6"	5'-3 1/4"	0.493	68.96	26.43	110.9		
5-0"	1 @	6	3'	30"	7'0"	8"	6"	7 1/2"	6'-3 1/4"	0.520	71.64	28.10	118.9	
			4'	36"	7'2"		7"		7'-3 1/4"	0.602	75.31	29.77	120.94	
			7'	42"	7'3"		7 1/2"		8'-3 1/4"	0.671	78.98	31.44	121.91	
			8'	48"	7'4"		8"		9'-3 1/4"	0.746	82.67	33.11	121.91	
			4'	28"	8'0"		6"		5'-5"	0.568	81.32	29.01	136.8	
			5'	35"	8'0"		6"		6'-5"	0.605	84.00	30.68	136.8	
	1 @	7	6'	42"	8'2"	8 1/2"	8"	7'-5"	0.688	87.74	32.35	138.8		
			7'	49"	8'3"		7 1/2"	8'-5"	0.757	90.98	34.02	139.88		
			8'	54"	8'4"		8"	9'-5"	0.832	94.65	35.69	140.88		
			9'	63"	8'6"		9"	10'-5"	0.916	105.39	37.36	142.88		
			4'	32"	9'0"		6"	5'-7"	0.676	95.26	38.32	149.07		
			5'	40"	9'2"		7"	6'-7"	0.759	99.12	39.99	149.07		
5-0"	1 @	8	6'	48"	9'4"	9 1/2"	8"	7'-7"	0.797	101.79	36.66	149.07		
			7'	56"	9'5"		7 1/2"	8'-7"	0.867	105.05	38.33	149.07		
			8'	64"	9'6"		8"	9'-7"	0.942	108.01	40.00	149.07		
			9'	72"	9'8"		9"	10'-7"	1.057	119.32	41.67	202.8		
			10'	80"	9'8"		10"	11'-7"	1.184	126.67	43.35	204.97		
			5'	45"	10'2"		7"	6'-8"	0.844	114.72	37.56	219.61		
	1 @	9	6'	54"	10'3"	10"	7 1/2"	7'-8"	0.910	118.04	39.23	220.91		
			7'	63"	10'3"		7 1/2"	8'-8"	0.957	120.71	40.90	222.93		
			8'	72"	10'4"		8"	9'-8"	1.033	126.54	42.57	222.93		
			9'	81"	10'6"		9"	10'-8"	1.149	135.80	44.24	225.08		
			10'	90"	10'6"		10"	11'-8"	1.276	142.68	45.91	227.78		
			11'	99"	10'10"		11"	12'-8"	1.416	150.40	47.58	230.57		
5-0"	1 @	10	5'	50"	11'	11"	6'	54"	12'0"	0.957	130.69	40.13	242.61	
			6'	60"	11'5"		7 1/2"	1.024	133.99	41.80	244.00			
			7'	70"	11'5"		7 1/2"	1.071	136.66	43.47	244.00			
			8'	80"	11'4"		8"	1.197	142.55	45.14	245.36			
			9'	90"	11'4"		9"	1.263	147.92	46.81	248.05			
			10'	100"	11'8"		10"	1.383	153.89	48.48	250.08			
	1 @	11	11'	110"	11'8"	11 1/2"	11'	110"	12'0"	1.532	166.71	50.15	253.94	
			12'	120"	12'0"		12'	1.685	178.67	51.82	256.26			
			6'	66"	12'4"		8'	7'-10"	1.193	158.16	46.12	248.62		
			7'	77"	12'4"		8'	8'-10"	1.202	159.83	47.79	248.62		
			8'	88"	12'4"		8'	9'-10"	1.252	168.06	49.46	261.34		
			9'	99"	12'6"		9"	10'-10"	1.368	172.60	51.13	271.62		
5-0"	1 @	12	11'	120"	12'8"	12"	10'	110"	12'8"	1.497	179.70	52.80	274.07	
			12'	128"	12'8"		11'	12'-10"	1.639	191.67	54.47	274.07		
			12'	132"	13'0"		12'	13'-0"	1.792	199.79	56.14	278.52		
			6'	72"	13'5"		8'	8'-0"	1.284	178.20	48.69	357.62		
			8'	94"	15'4"		8'	9'-0"	1.333	174.87	50.36	357.62		
			9'	108"	13'4"		9'	10'-0"	1.383	180.15	52.03	357.62		
	1 @	13	10'	130"	13'8"	13 1/4"	11'	120"	13'8"	1.500	189.85	53.70	364.18	
			11'	140"	13'8"		12'	12'-0"	1.630	197.07	55.37	364.18		
			11'	132"	13'8"		11'	13'-0"	1.772	205.16	57.04	364.18		
			12'	144"	14'0"		12'	14'-0"	1.926	219.55	58.71	372.90		
			12'	144"	14'0"		12'	14'-0"	1.926	219.55	58.71	372.90		
			12'	144"	14'0"		12'	14'-0"	1.926	219.55	58.71	372.90		

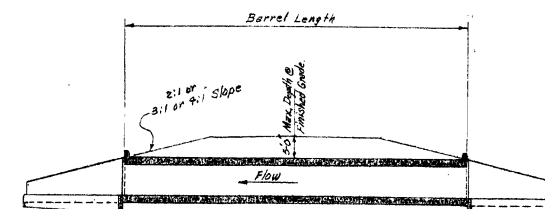
Notes: For details of wings and tail lists, see Drawing Nos. W-X002-1 or W-X002-2 or W-X003-1 or W-X003-2 or W-X004-1 or W-X004-2.



PART LONGITUDINAL SECTION



TYPICAL SECTION M-M



LONGITUDINAL SECTION

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry.
All exposed corners to have $\frac{1}{4}$ chamfers.

REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.

BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 32-0 length of barrel over 32-0. Lap longitudinal bars 30 diameters.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, side walls and slabs shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

DESIGN LIVE LOAD

H20-516 LOADING A.A.S.H.O. 1961
AND

SPECIAL MILITARY LOADING

Two 29,000 Lb. Axles @ 9'-0" ctrs.

UNIT STRESSES:-

Class S Concrete (n=10) 1200#/ft²
Reinforcing Steel 20000#/ft²

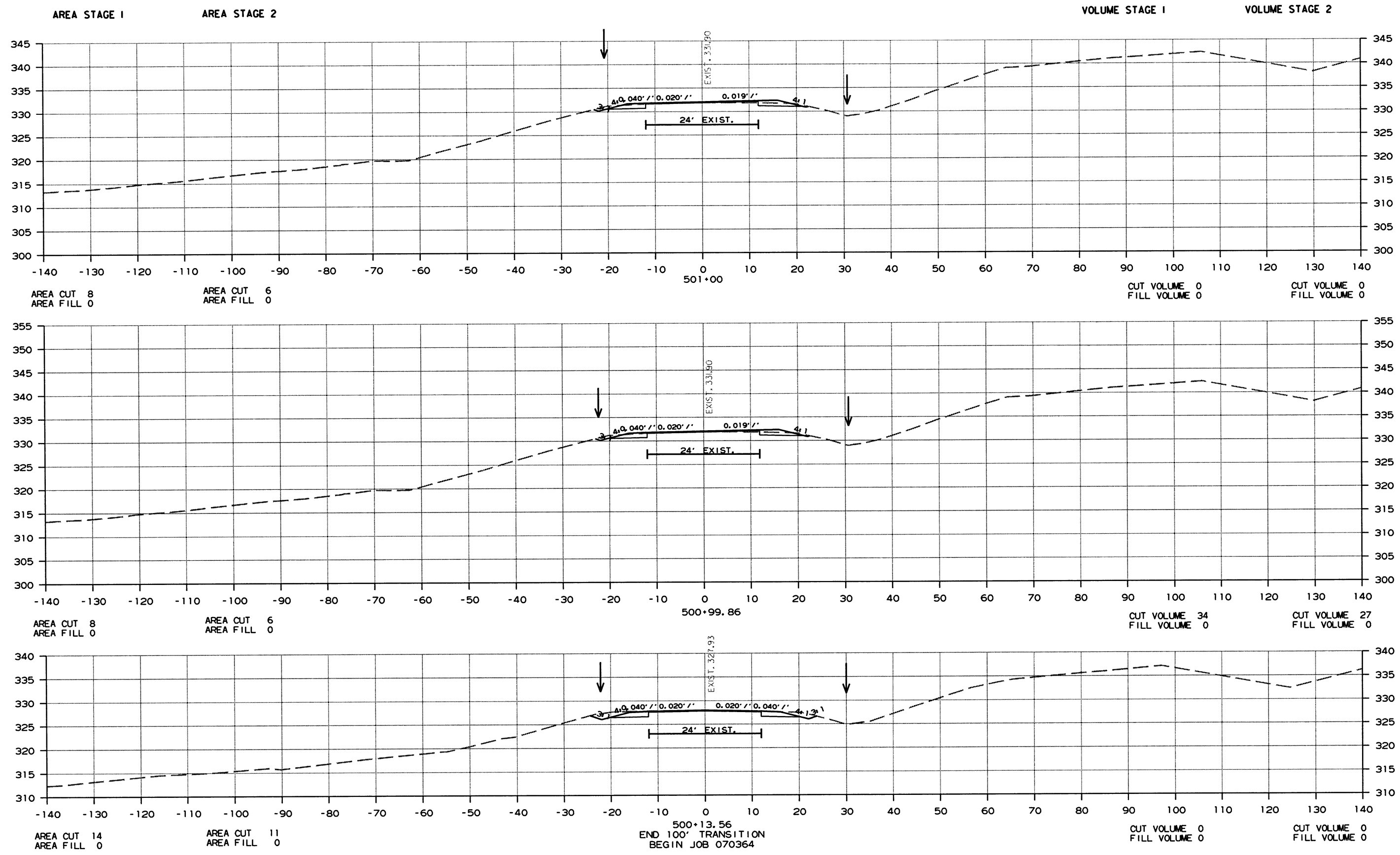
NOTE:- This drawing to be used in conjunction with Standard Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing Nos. W-X002-1 or W-X002-2.

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD BARREL SECTIONS
FOR
REINFORCED CONCRETE BOX CULVERTS
4.5, 6, 7.8, 9, 10, 11, 12' SPANS 3:1 OR 4:1 SLOPES
SINGLES UNDER 5'-0" COVER
STANDARD DRAWING NO. R-100X-Q

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. 070364		131	260	

2 CROSS SECTIONS



CROSS SECTION STA. 500+13.56 TO STA. 501+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. 070364			132	260

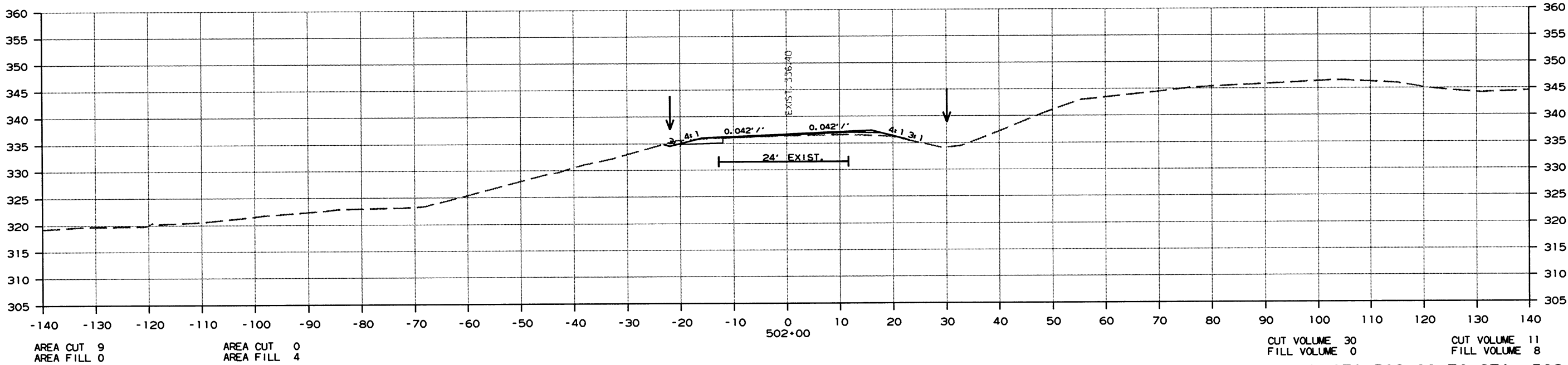
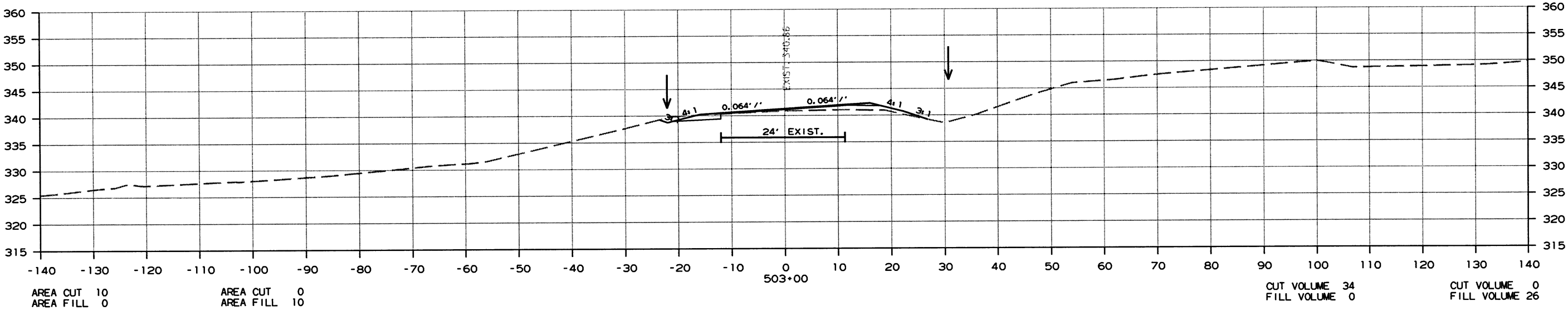
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 502+00 TO STA. 503+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
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					JOB NO.	070364	133	260

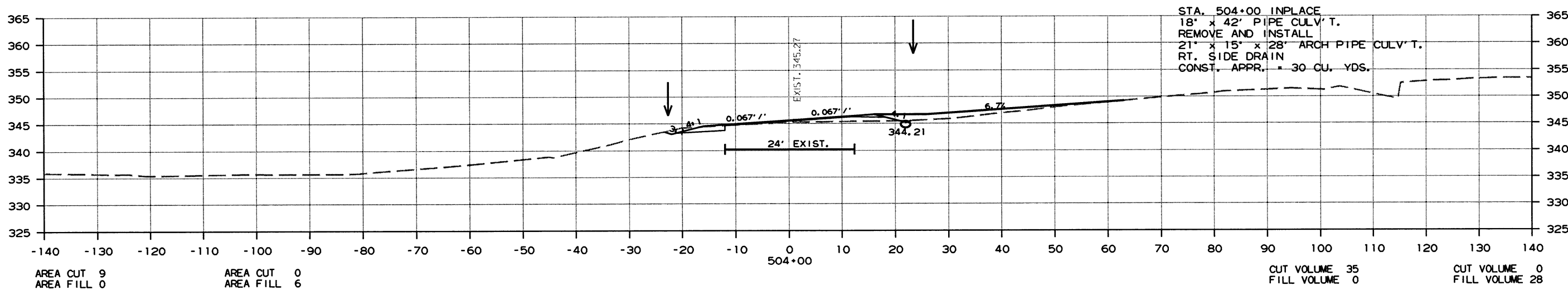
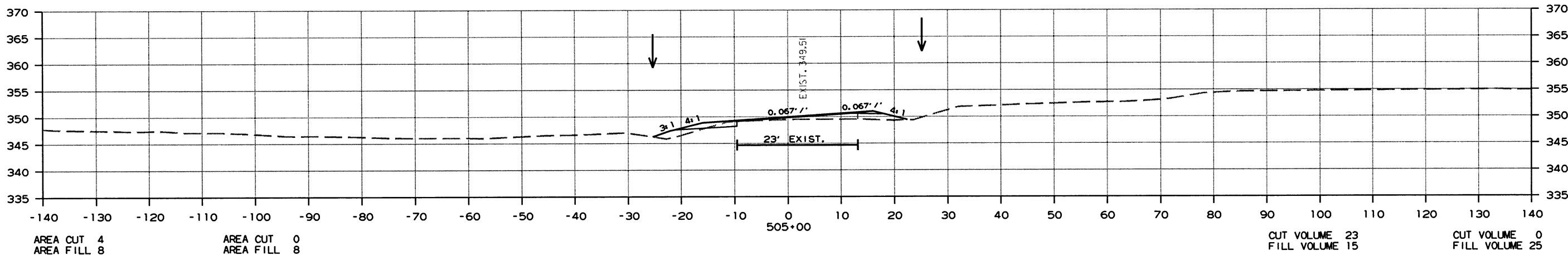
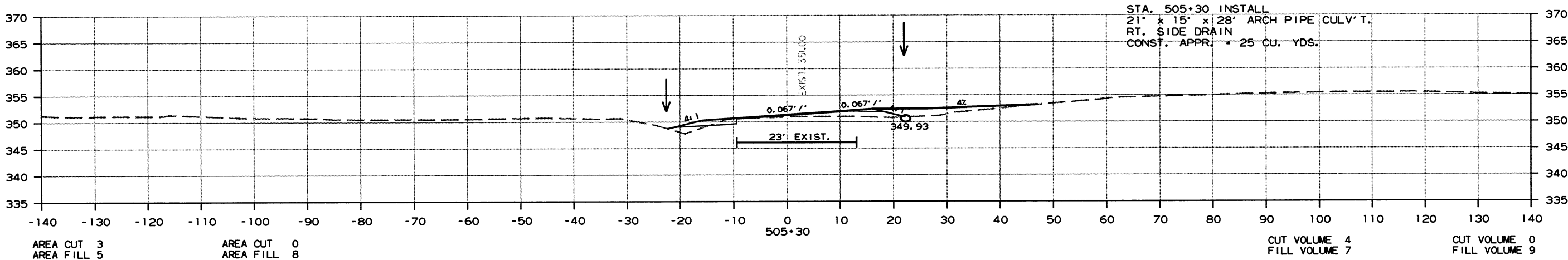
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 504+00 TO STA. 505+30

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. 070364			134	260

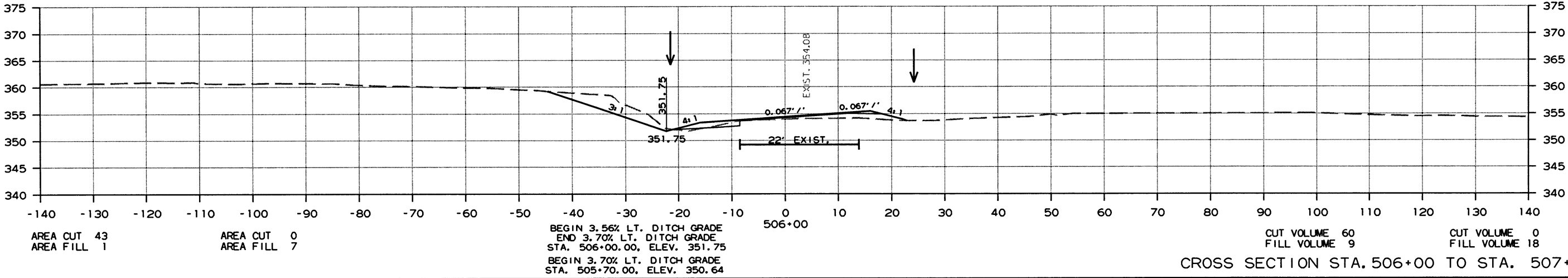
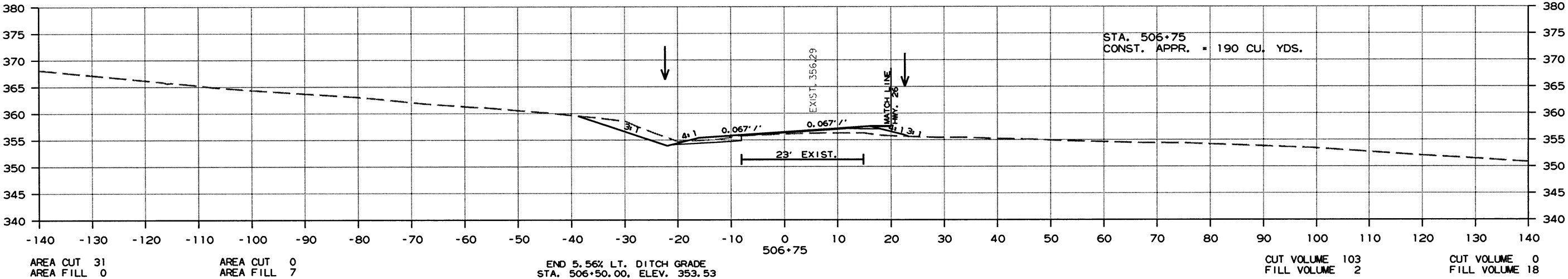
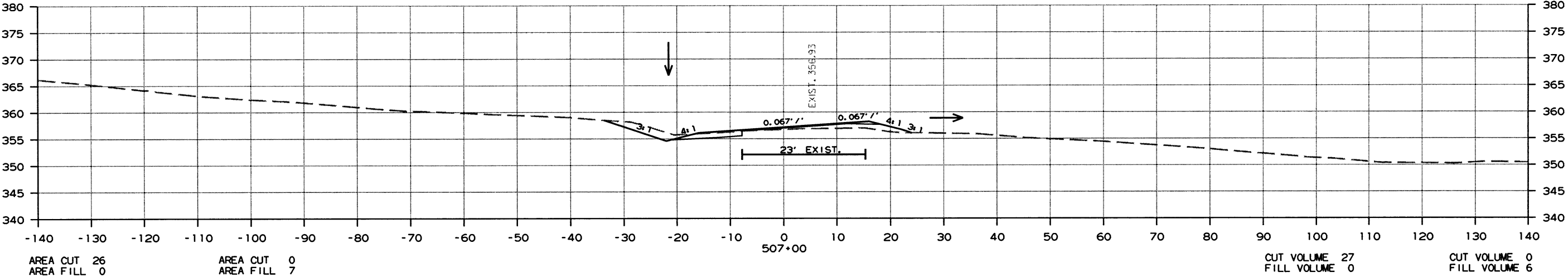
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 506+00 TO STA. 507+00

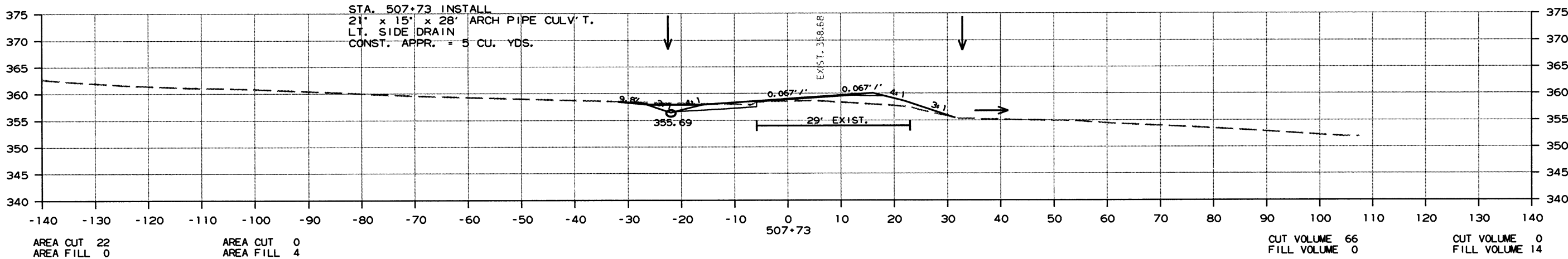
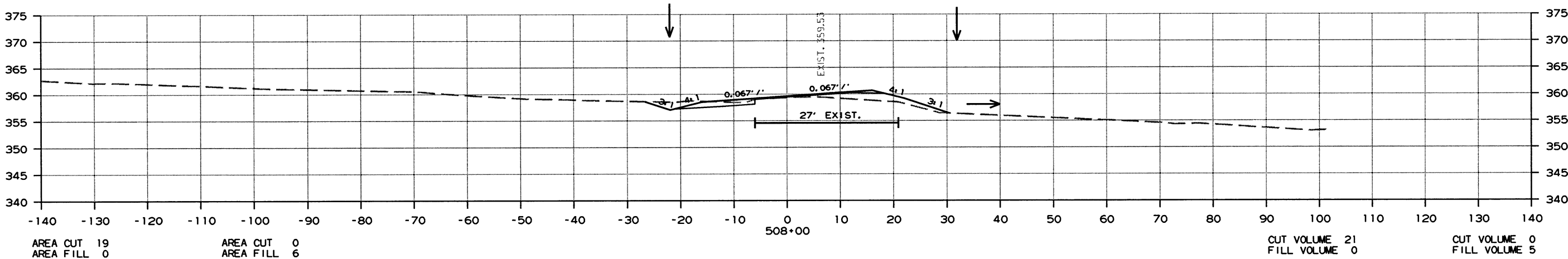
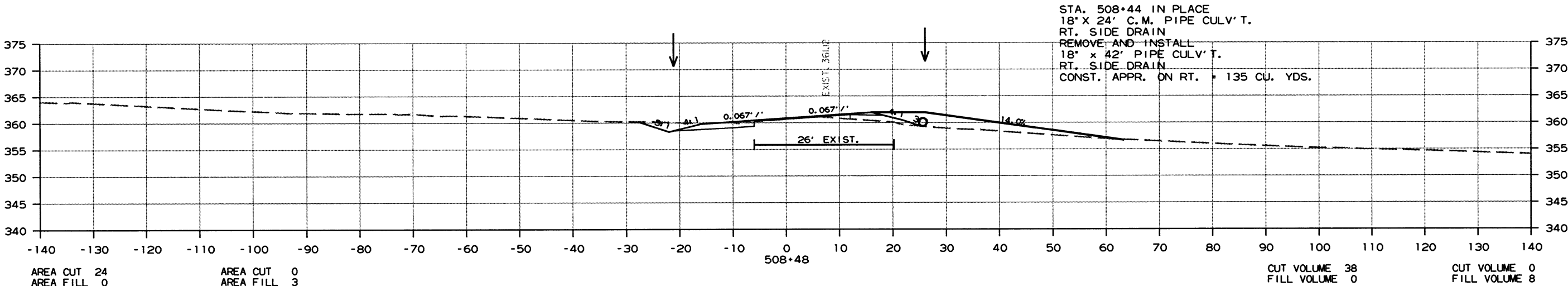
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				6	ARK.			
				JOB NO.	070364		135	260
② CROSS SECTIONS								

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 507+73 TO STA. 508+48

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. 070364		136	260	

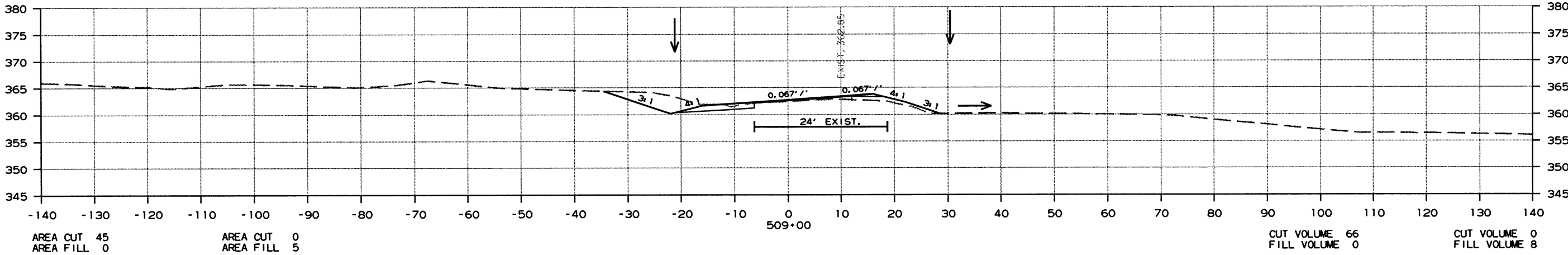
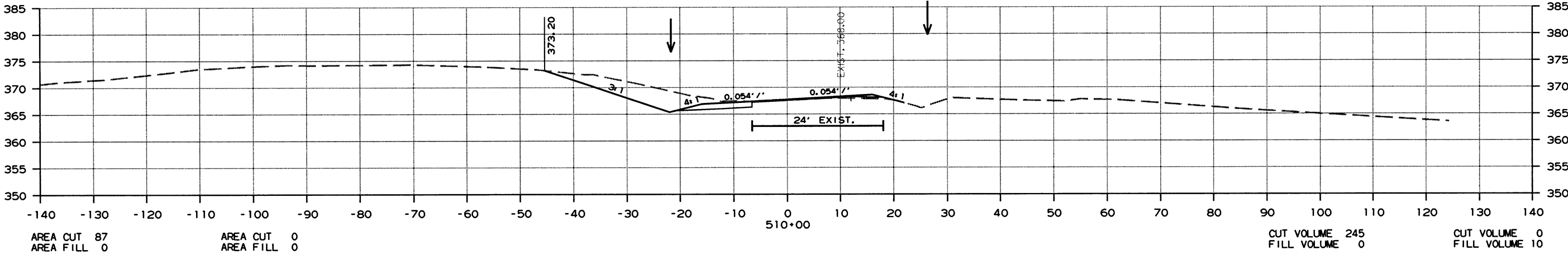
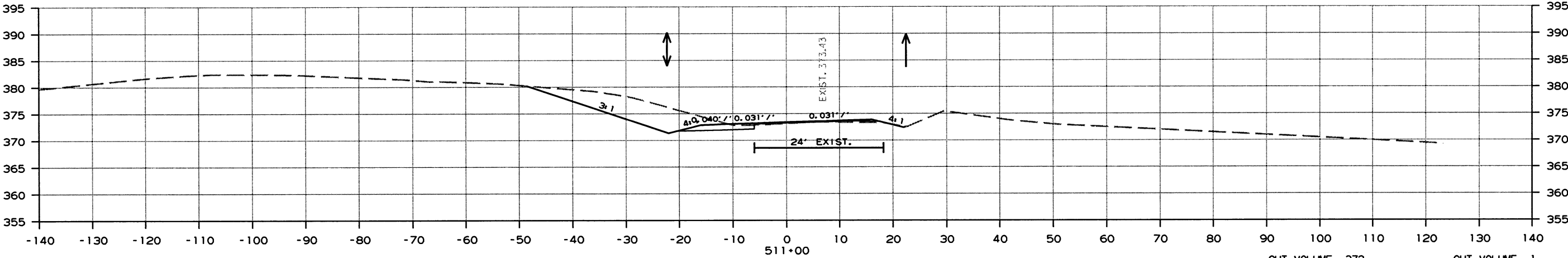
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 509+00 TO STA. 511+00

10/2/2016

R070364.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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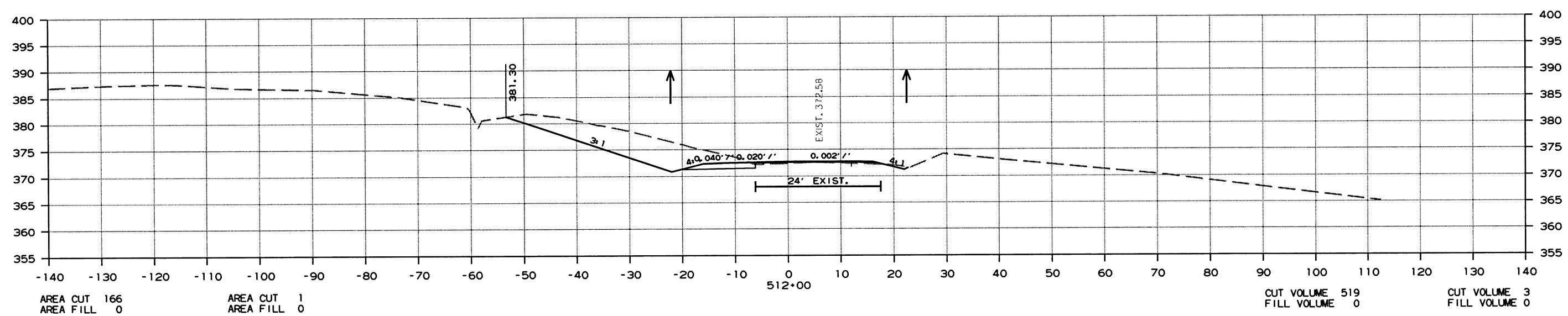
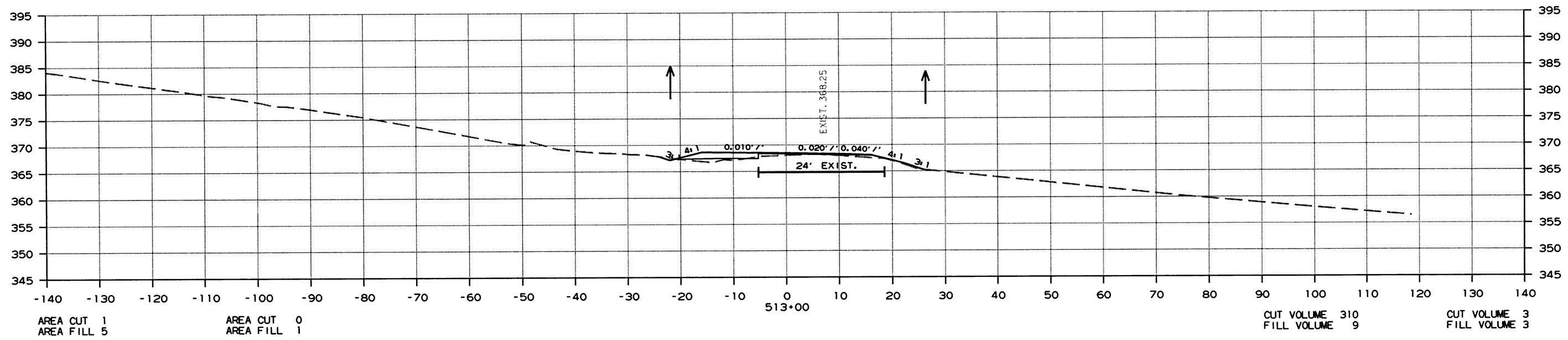
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 512+00 TO STA. 513+00

10/2/2016
R070364.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.		070364	138	260

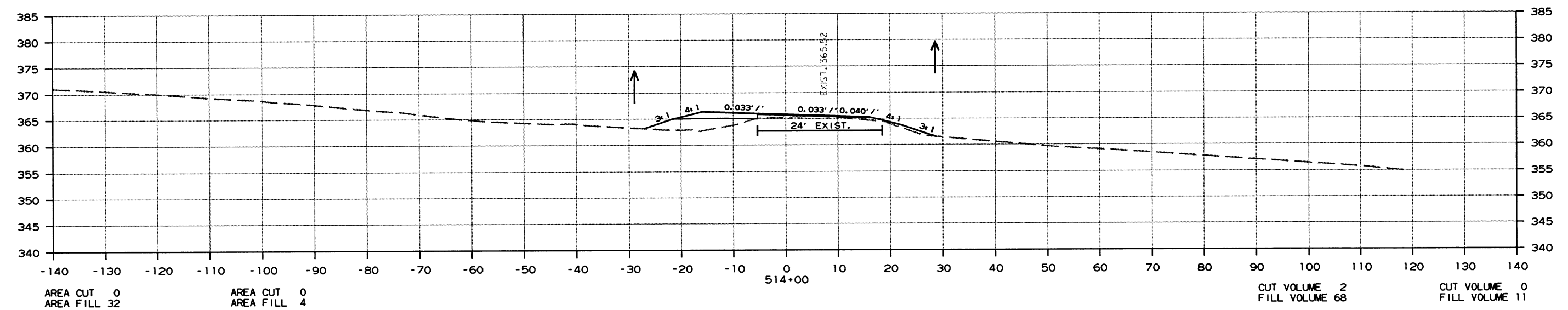
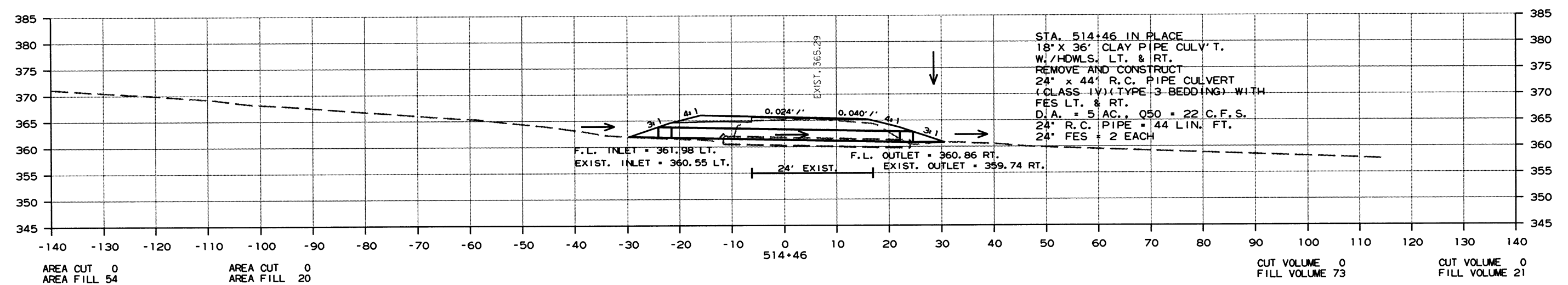
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 514+00 TO STA. 514+46

10/2/2016

R070364.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. 070364			139	260

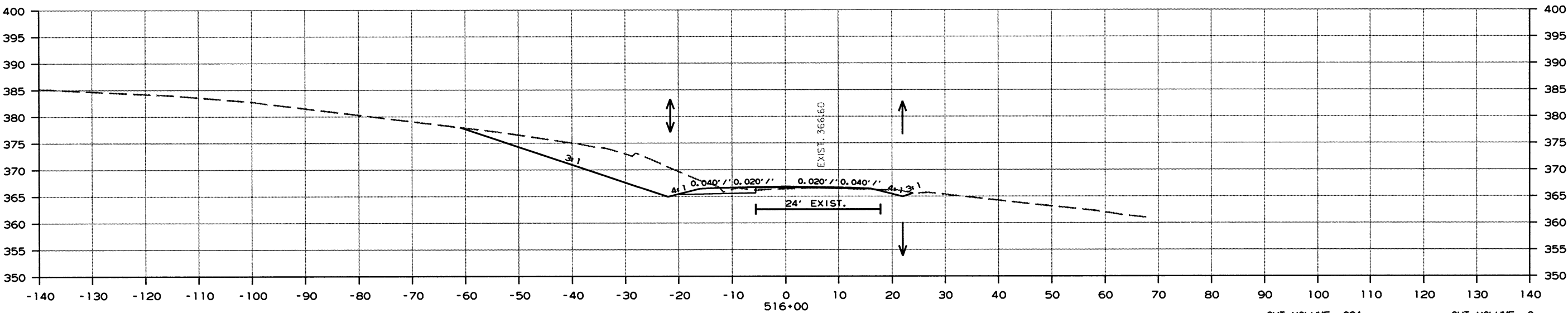
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2

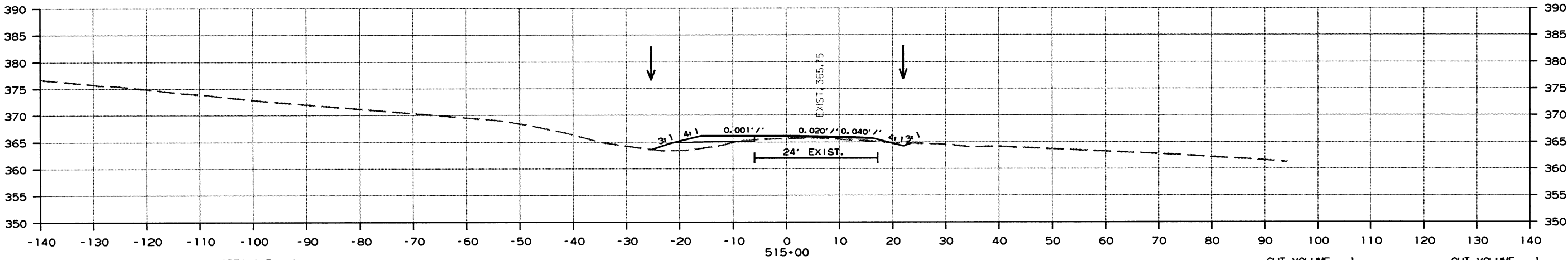


AREA CUT 174
AREA FILL 0

AREA CUT 4
AREA FILL 0

CUT VOLUME 324
FILL VOLUME 28

CUT VOLUME 9
FILL VOLUME 1



AREA CUT 1
AREA FILL 15

AREA CUT 1
AREA FILL 1

CUT VOLUME 1
FILL VOLUME 69

CUT VOLUME 1
FILL VOLUME 21

CROSS SECTION STA. 515+00 TO STA. 516+00

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. 070364	140	260

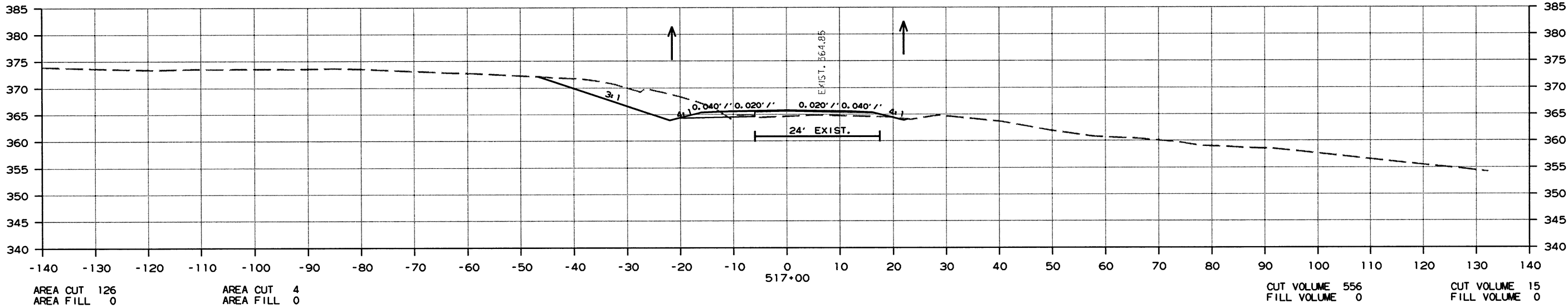
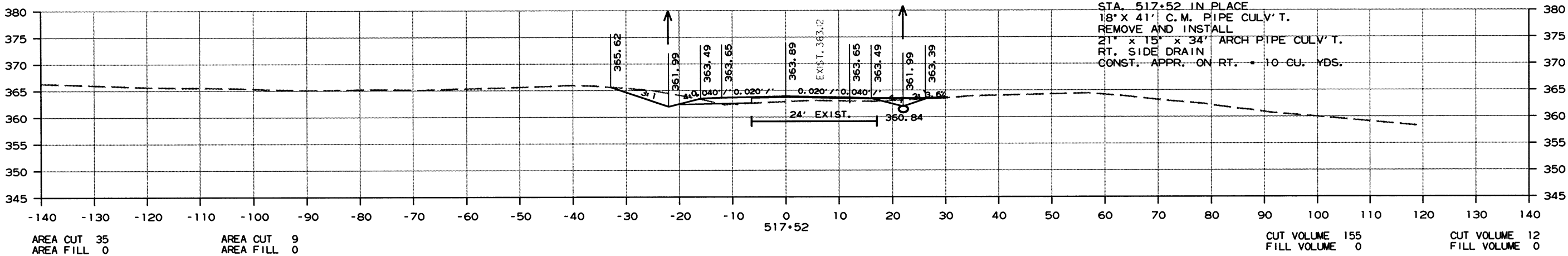
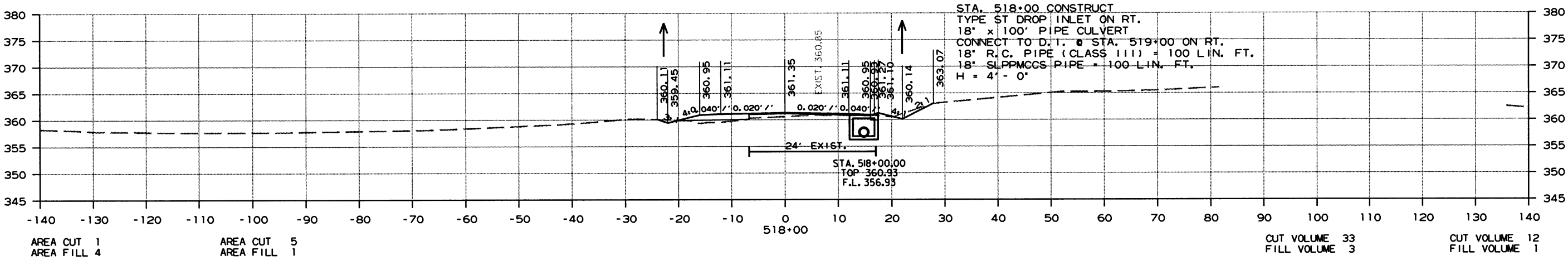
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 517+00 TO STA. 518+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. 070364			142	260

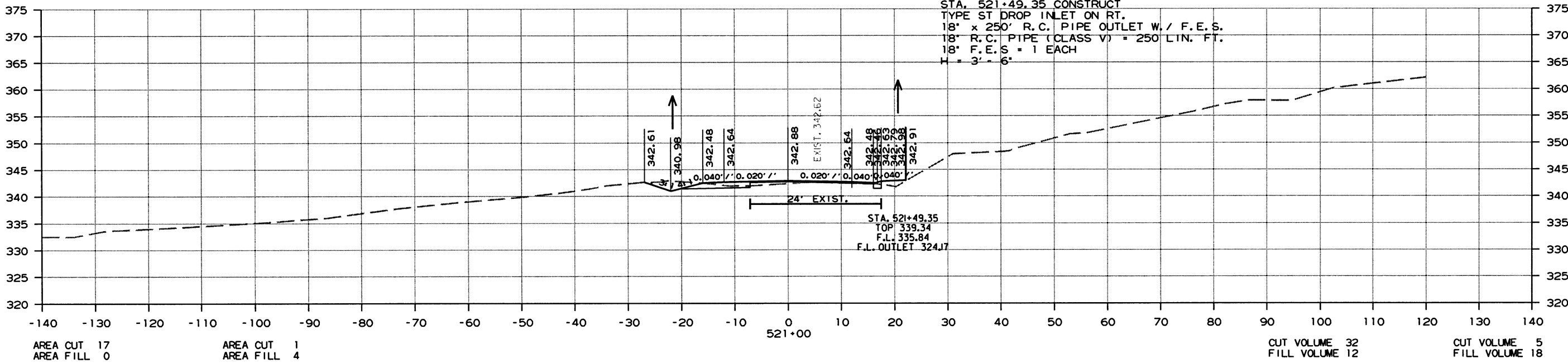
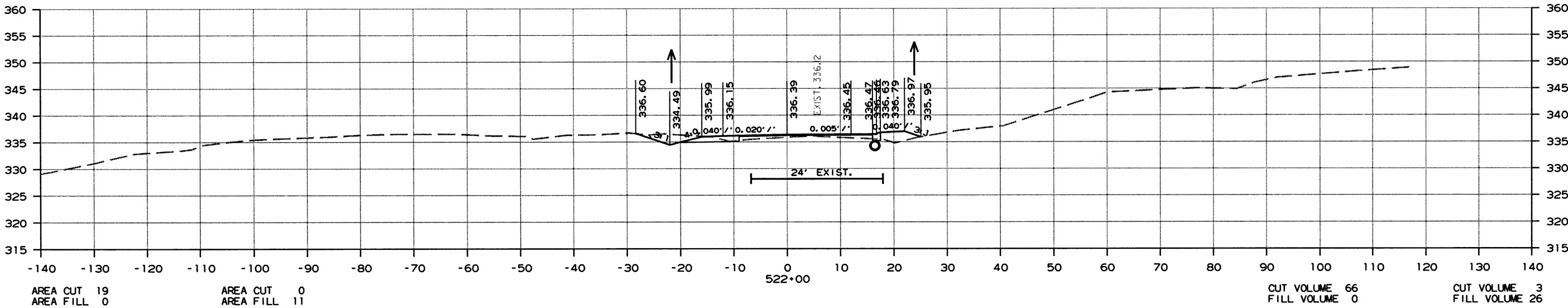
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

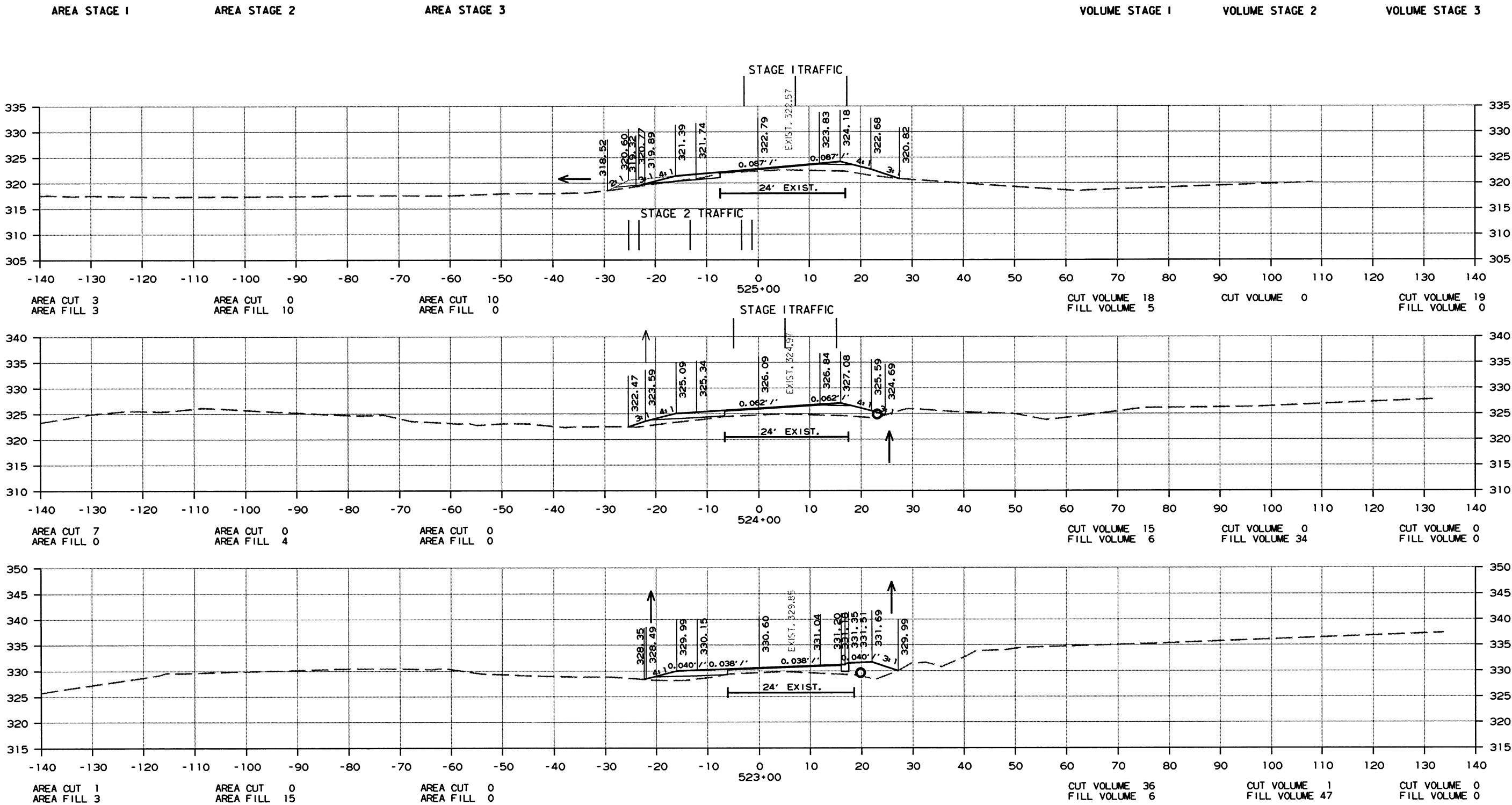
VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 521+00 TO STA. 522+00

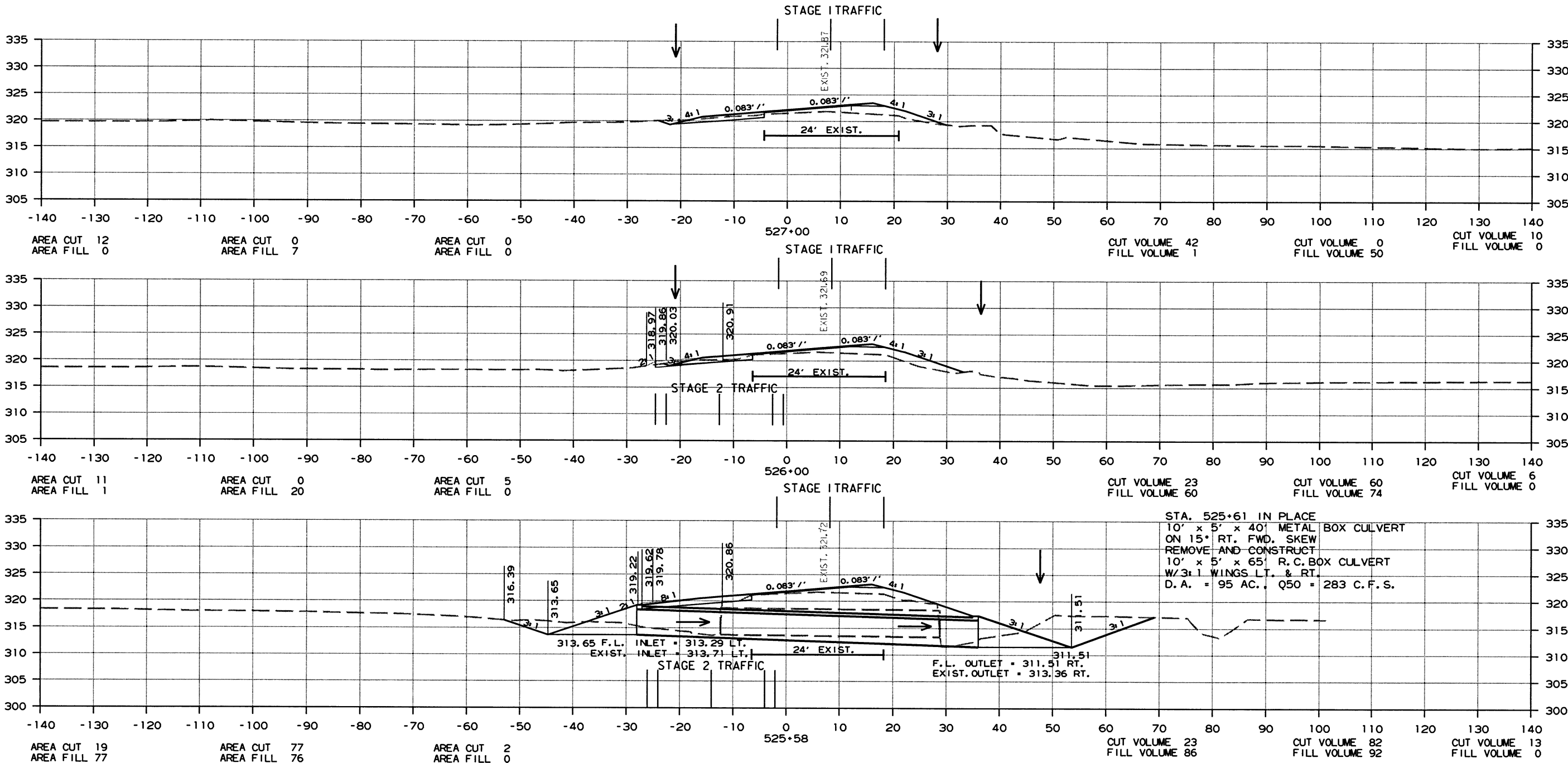
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070364	143	260
② CROSS SECTIONS								



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.	070364		144	260

2 CROSS SECTIONS

AREA STAGE 1 AREA STAGE 2 AREA STAGE 3 VOLUME STAGE 1 VOLUME STAGE 2 VOLUME STAGE 3



CROSS SECTION STA. 525+58 TO STA. 527+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. 070364		145	260	

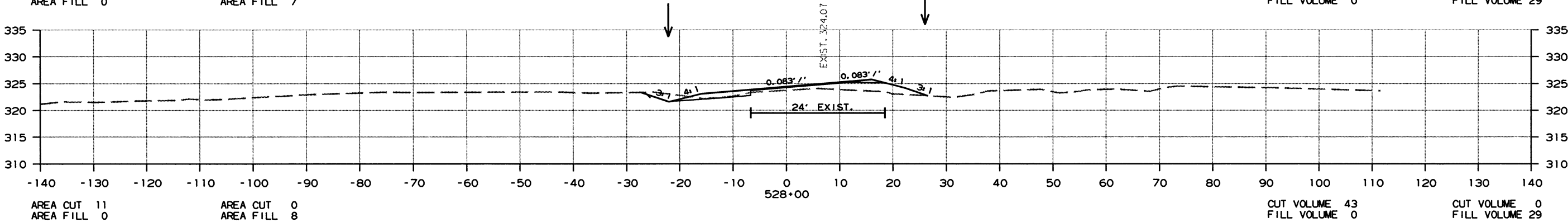
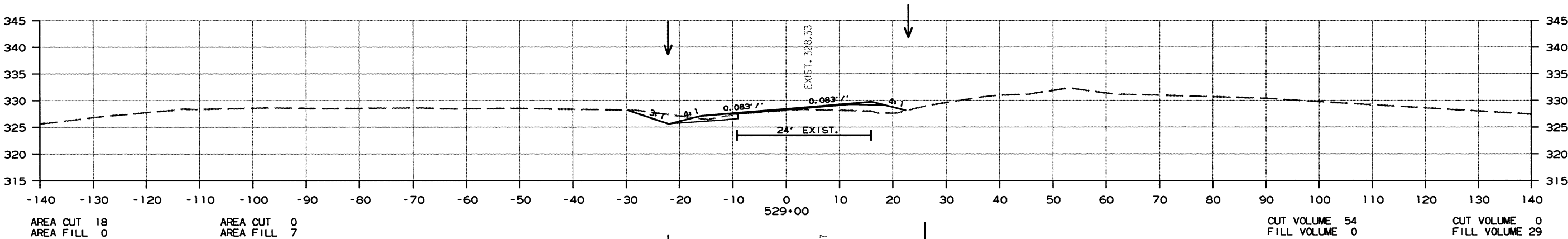
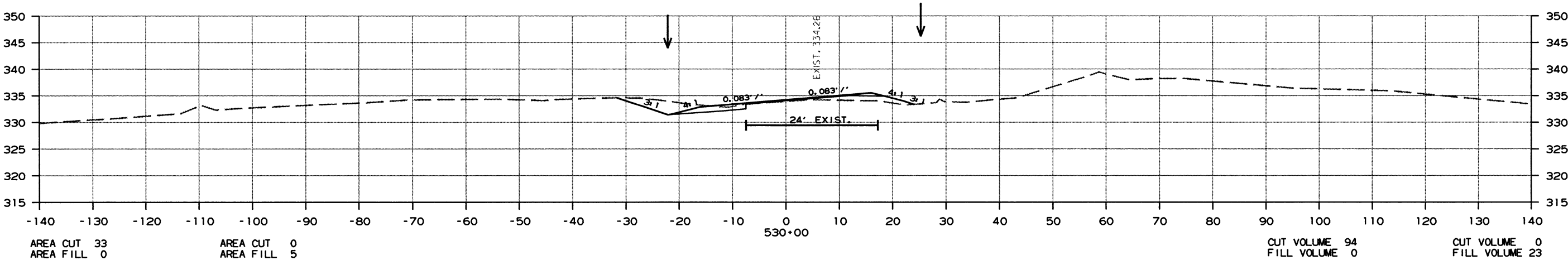
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 528+00 TO STA. 530+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. 070364		146	260	

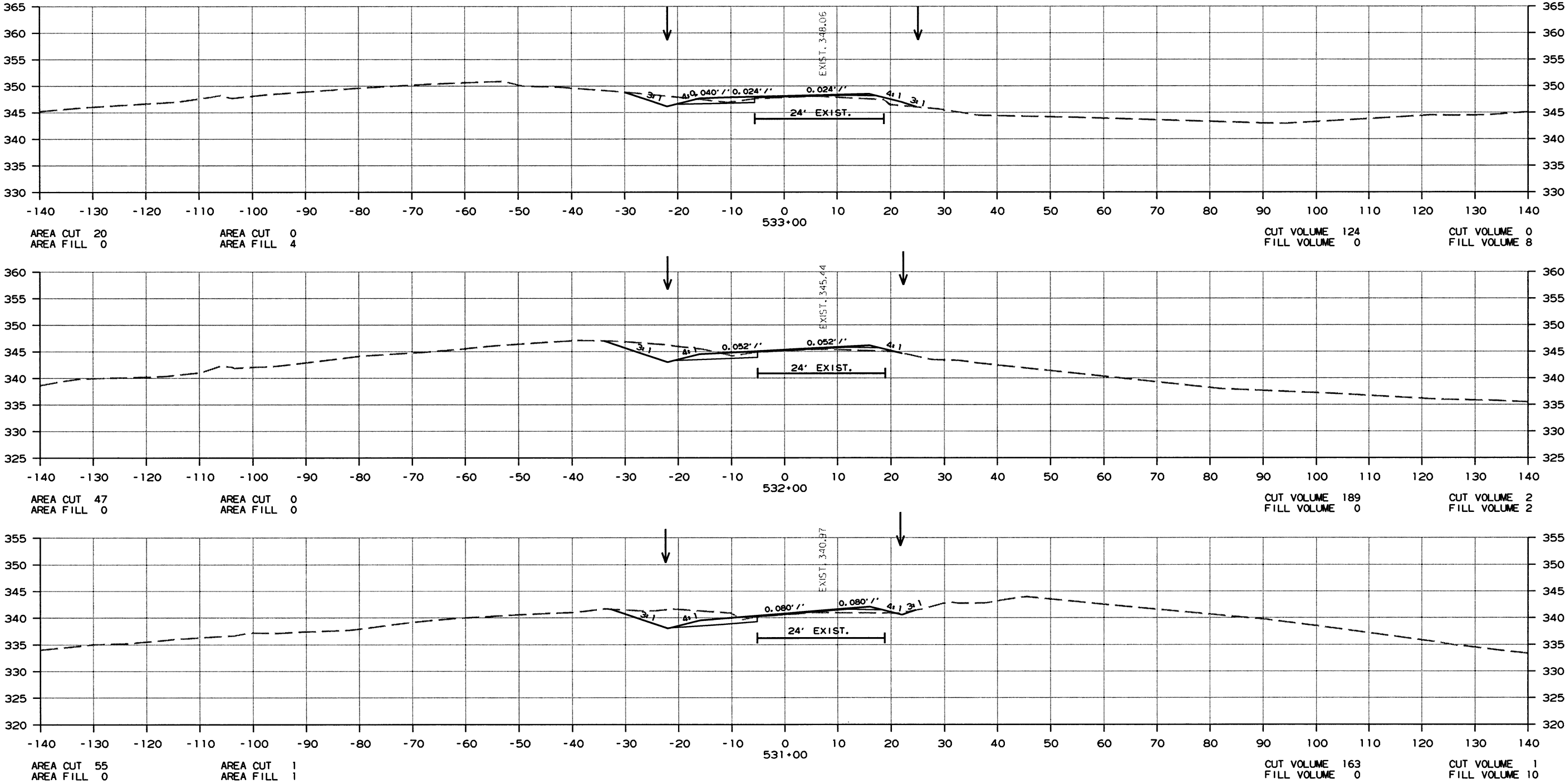
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 531+00 TO STA. 533+00

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. 070364	147	260

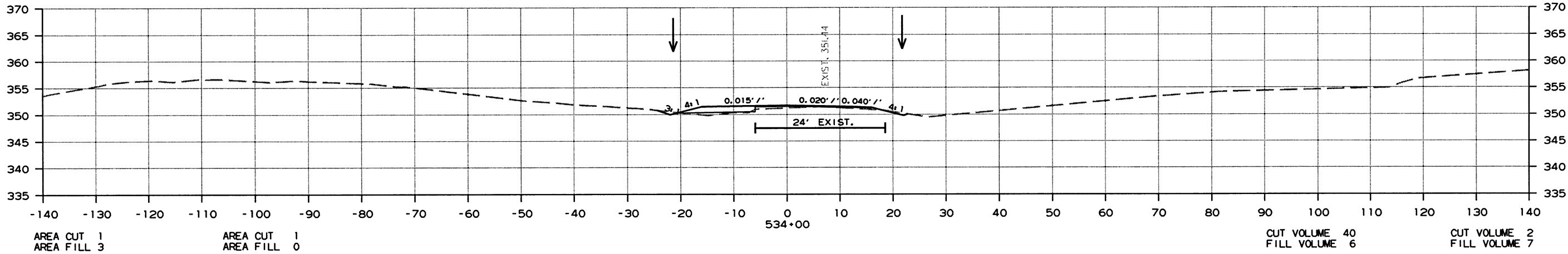
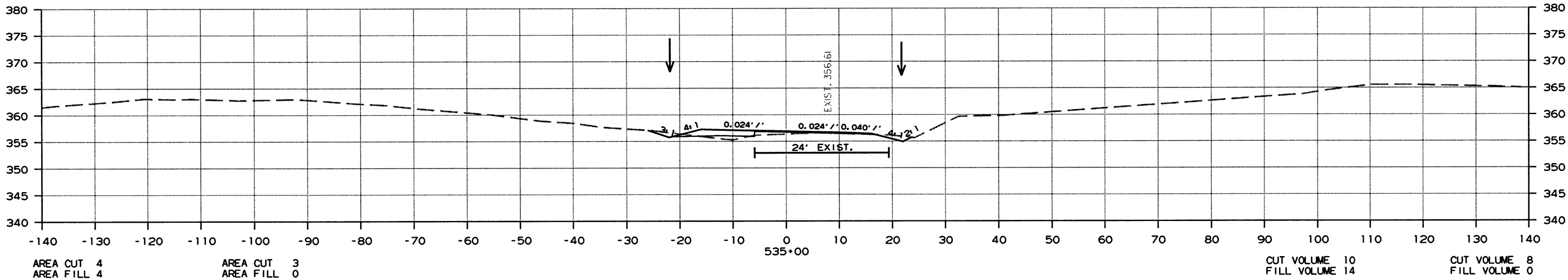
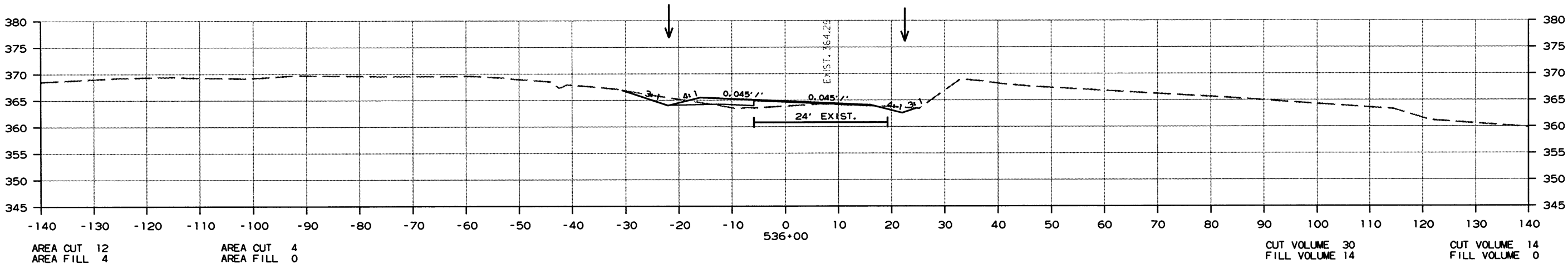
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 534+00 TO STA. 536+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. 070364			148	260

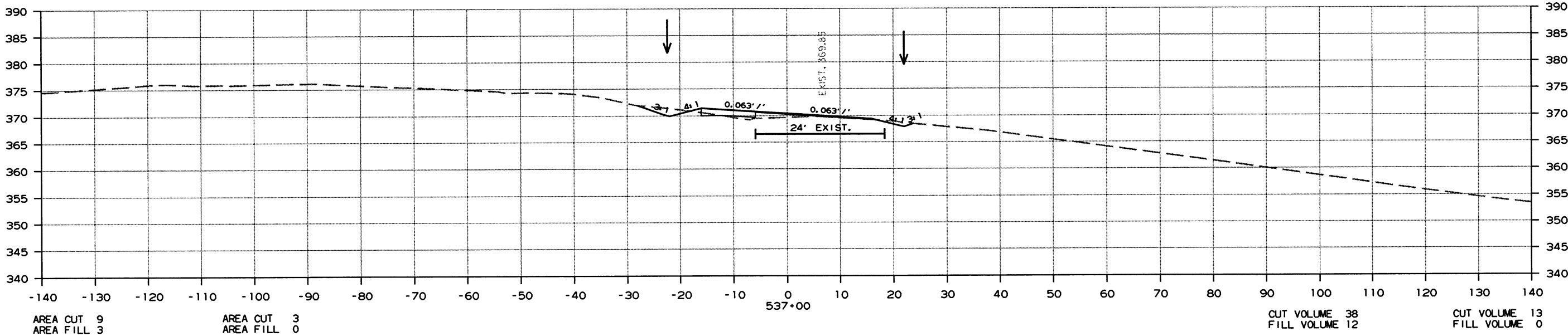
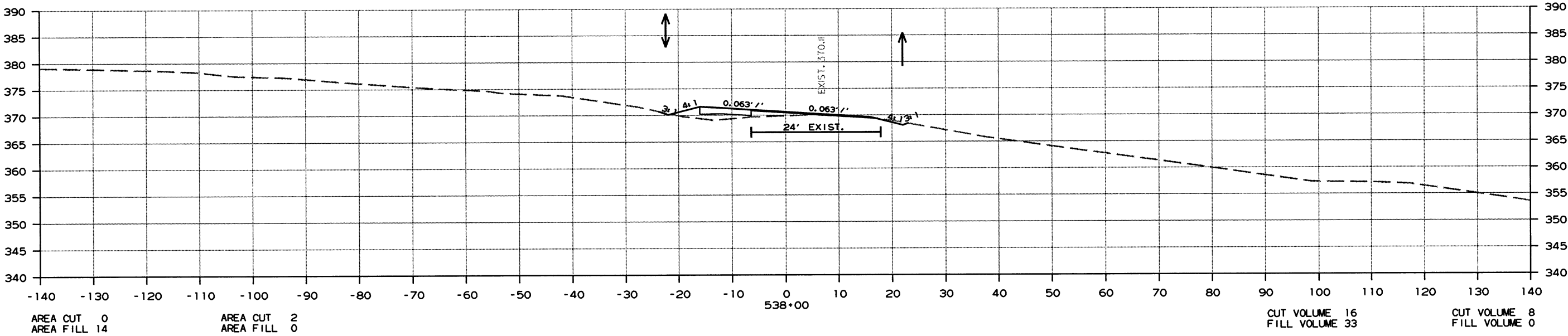
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 537+00 TO STA. 538+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. 070364			149	260

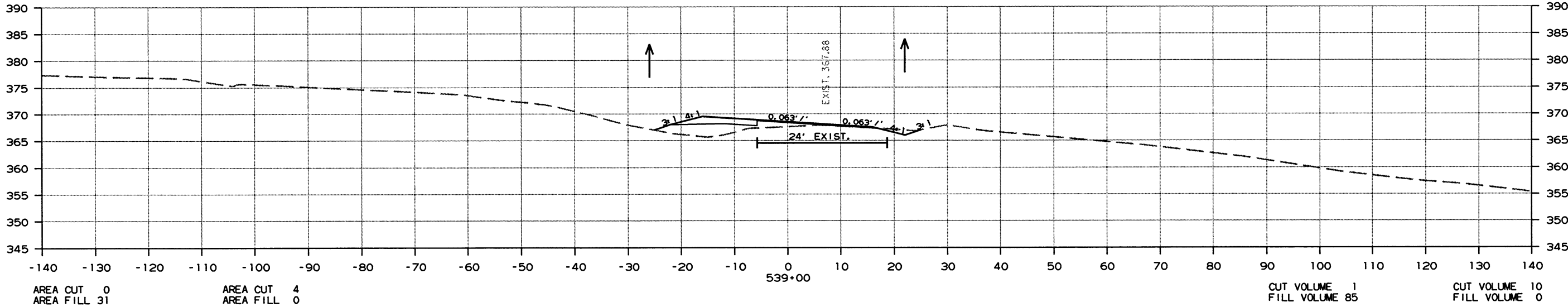
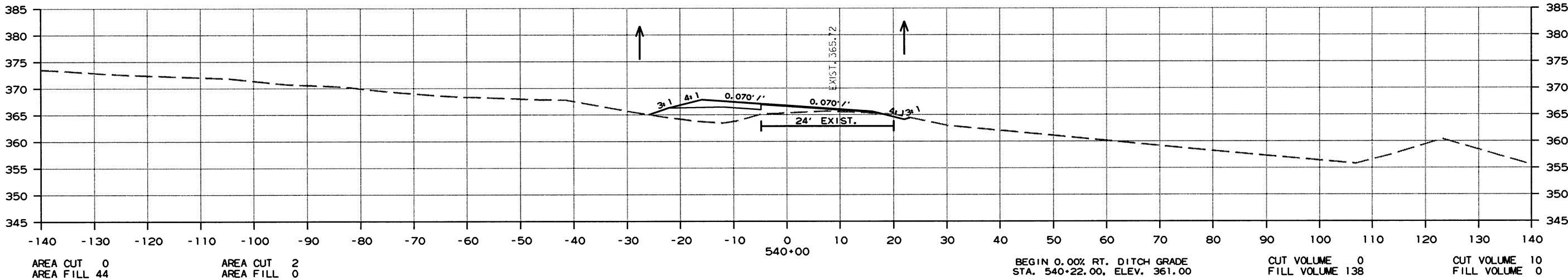
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 539+00 TO STA. 540+00

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.	070364		150	260

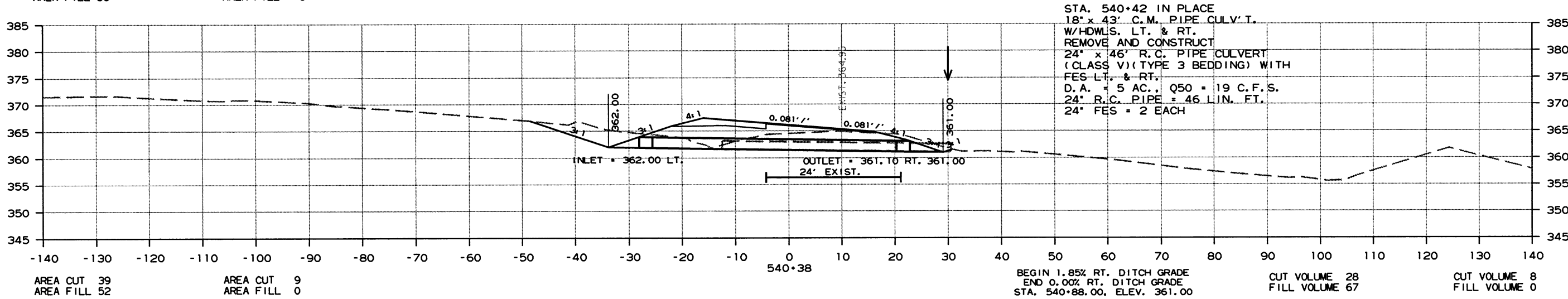
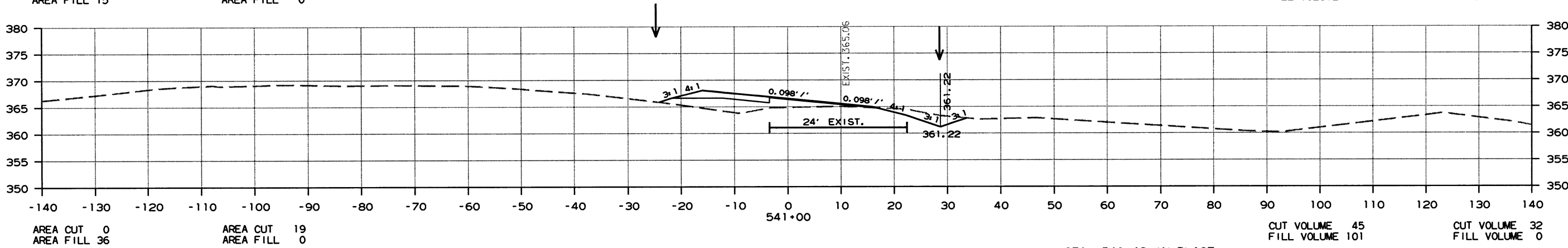
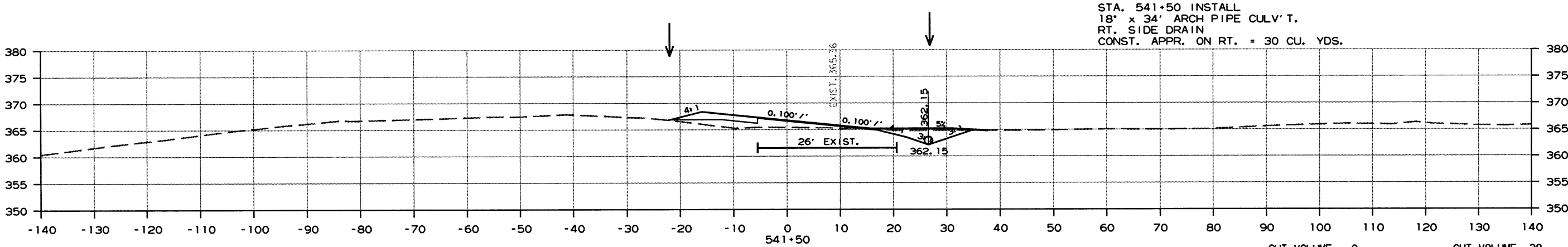
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 540+38 TO STA. 541+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.		070364	151	260

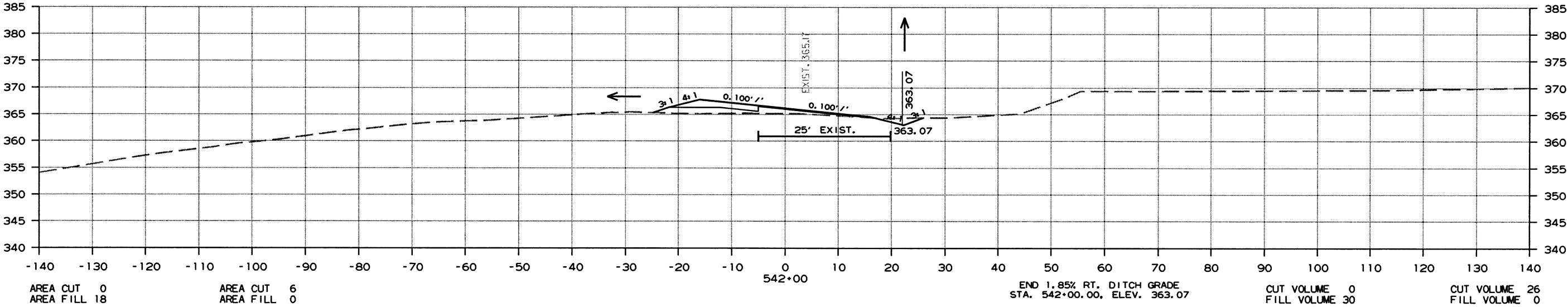
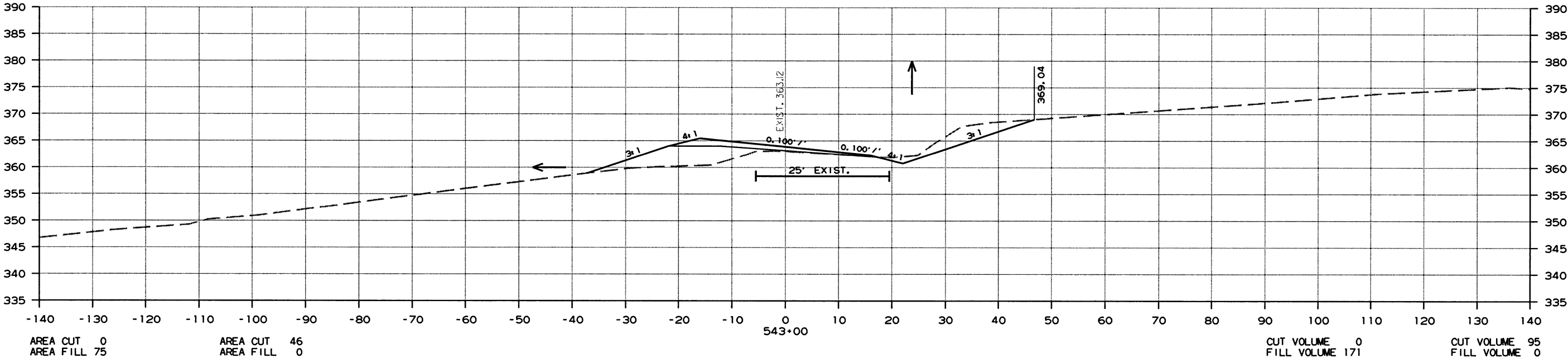
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 542+00 TO STA. 543+00

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.	070364	152	260

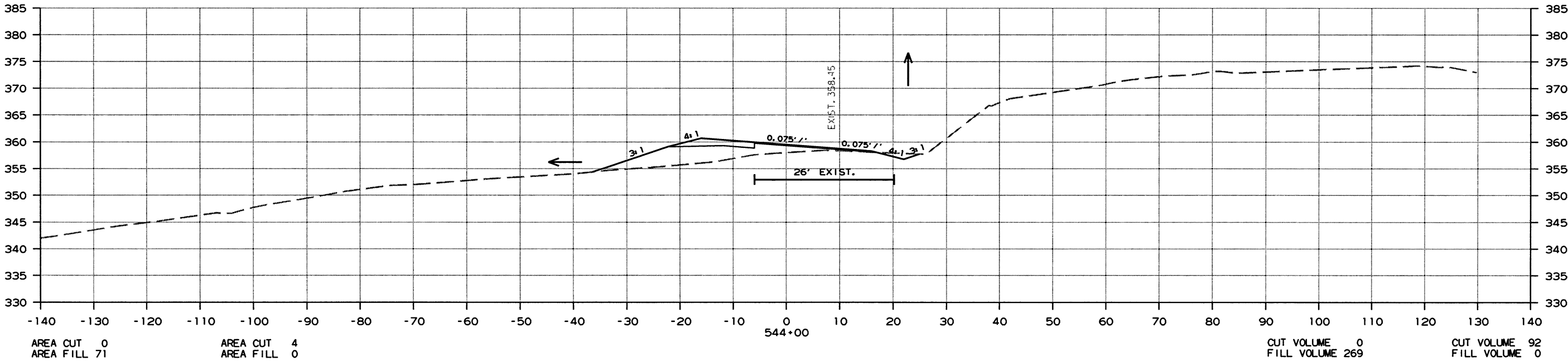
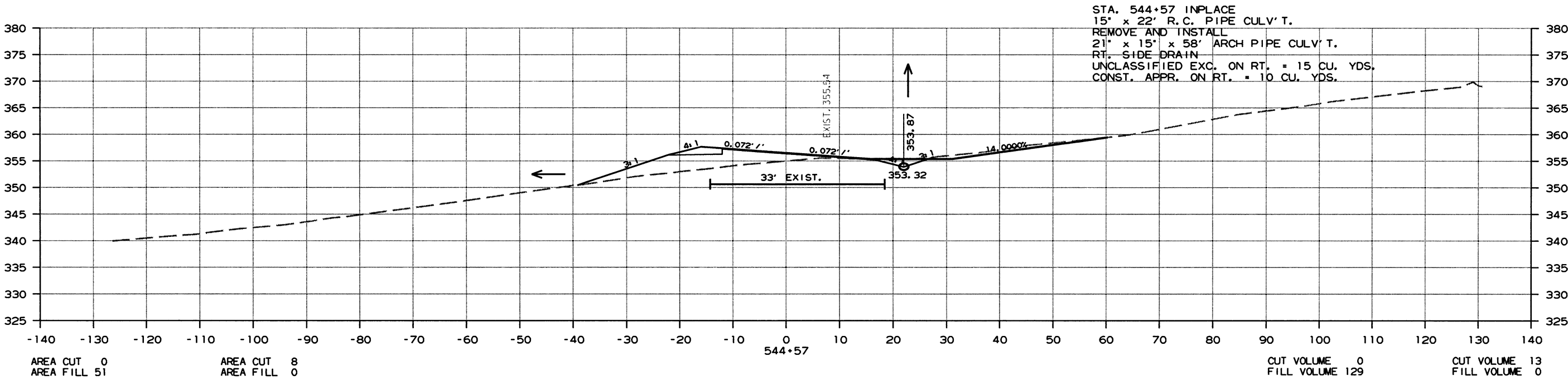
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 544+00 TO STA. 544+57

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. 070364		153	260	

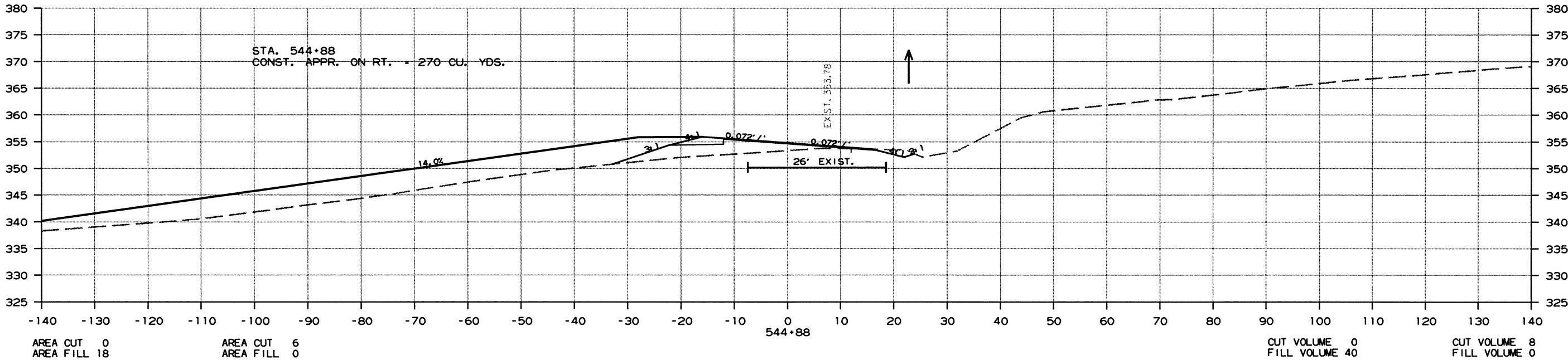
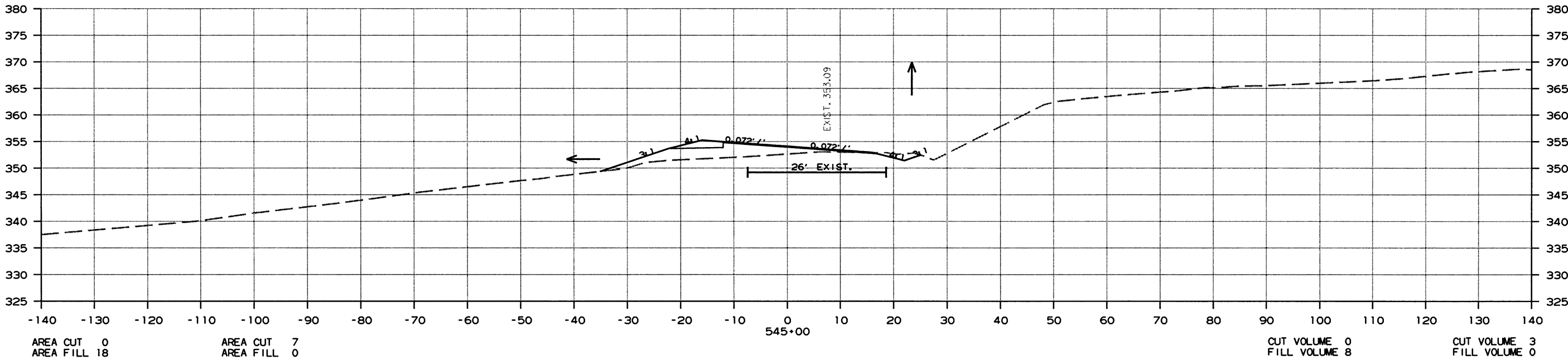
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 544+88 TO STA. 545+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.		070364	154	260

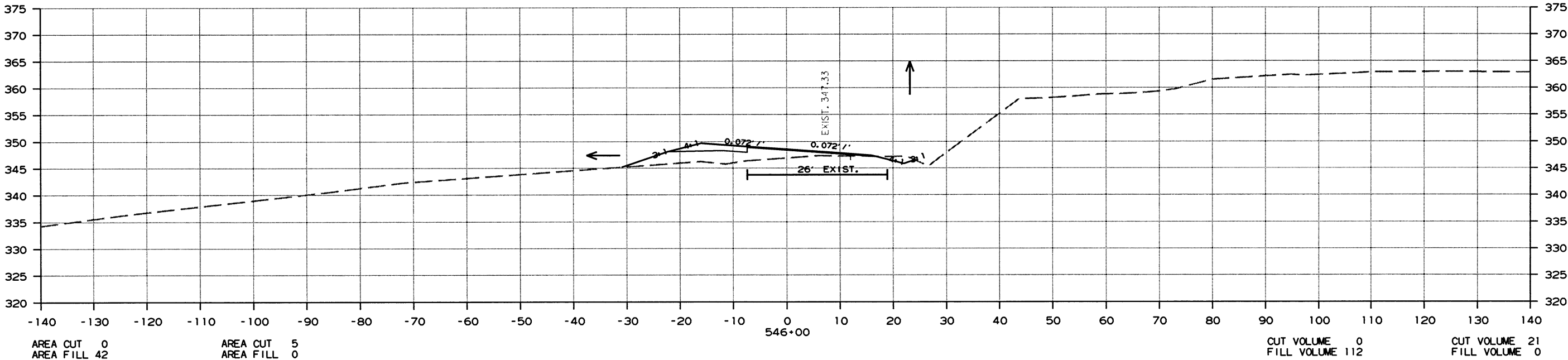
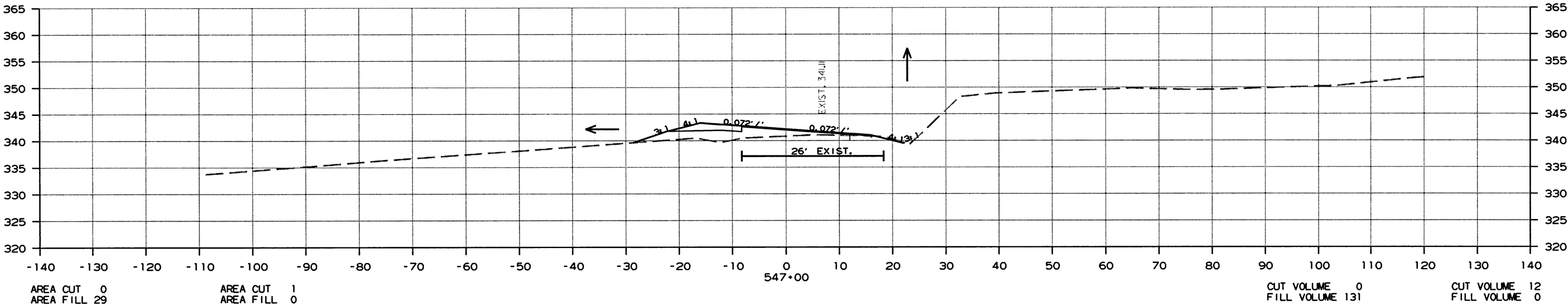
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 546+00 TO STA. 547+00

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.	070364		155	260

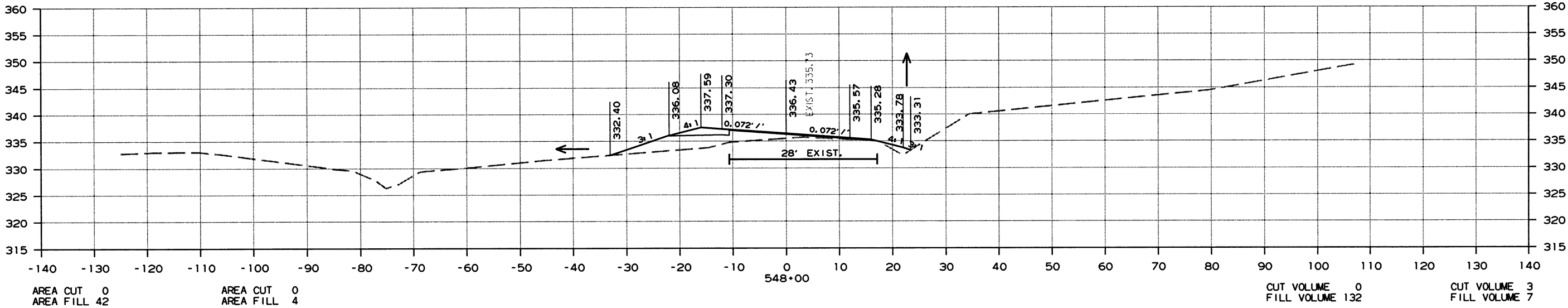
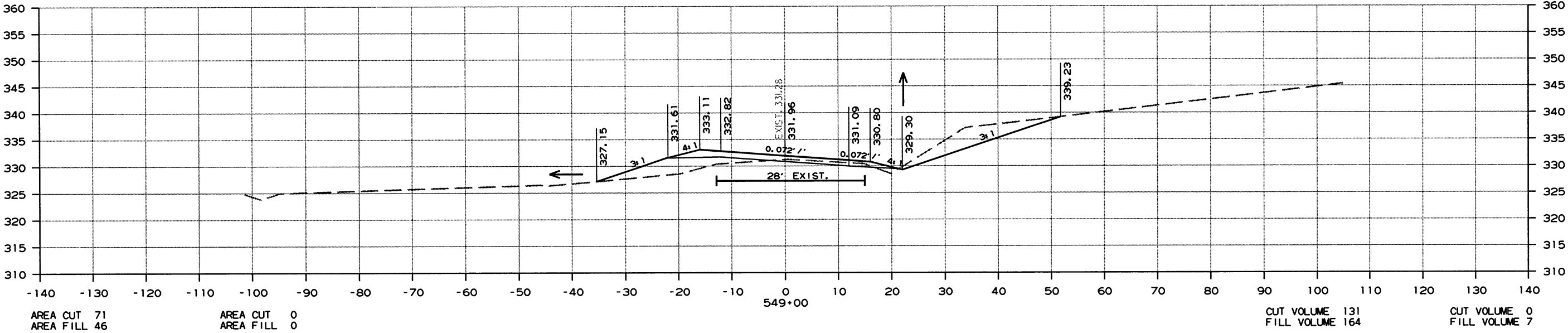
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 548+00 TO STA. 549+00

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.	070364	156	260

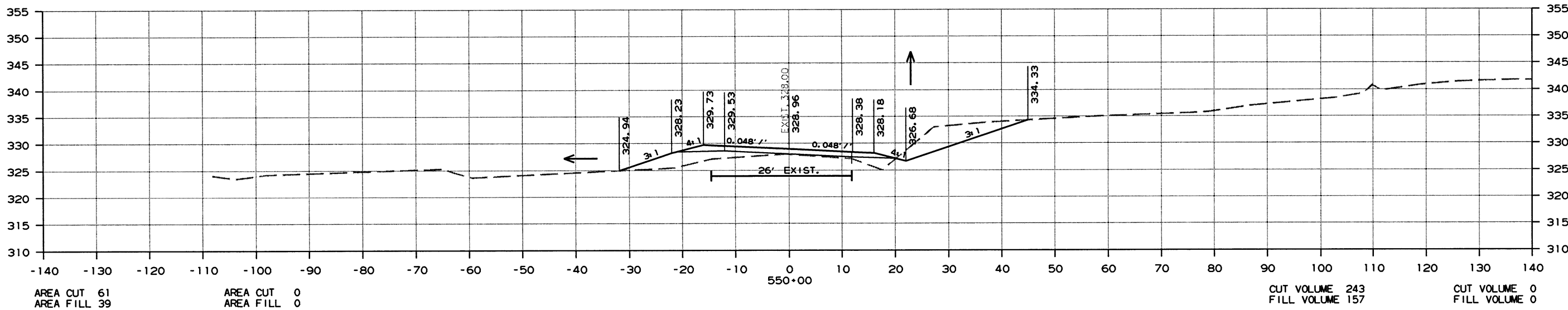
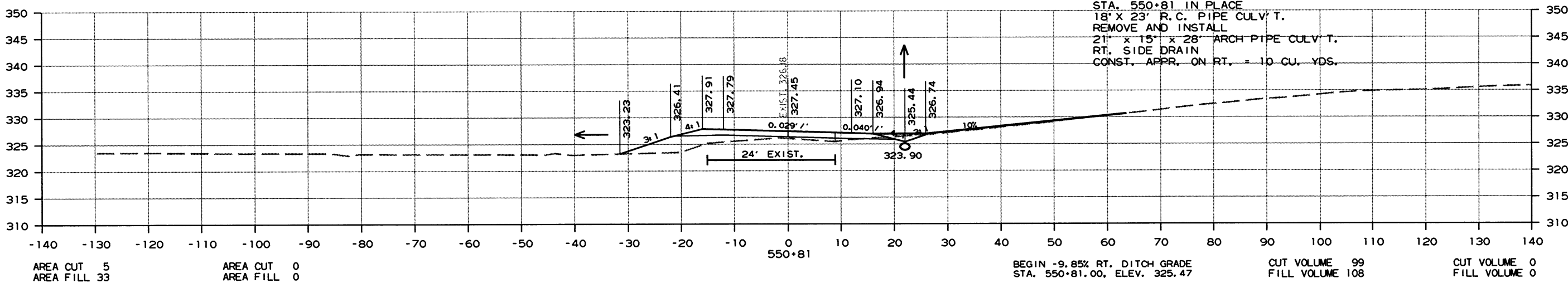
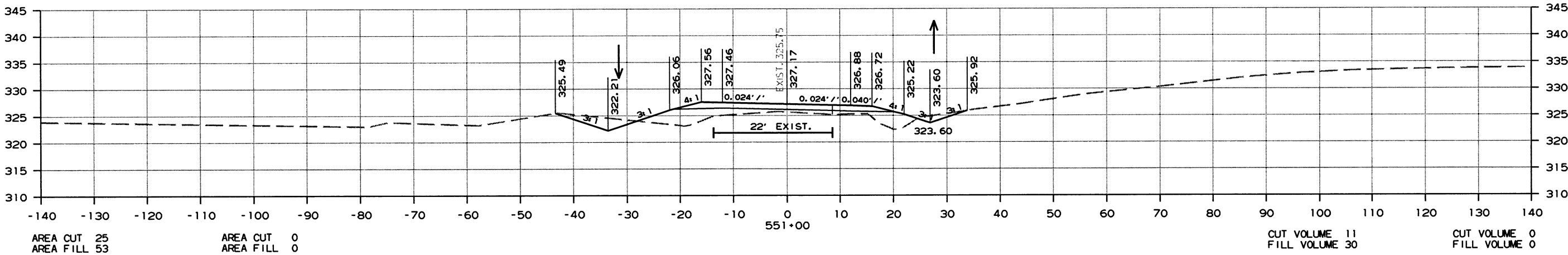
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 550+00 TO STA. 551+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.	070364	157	260

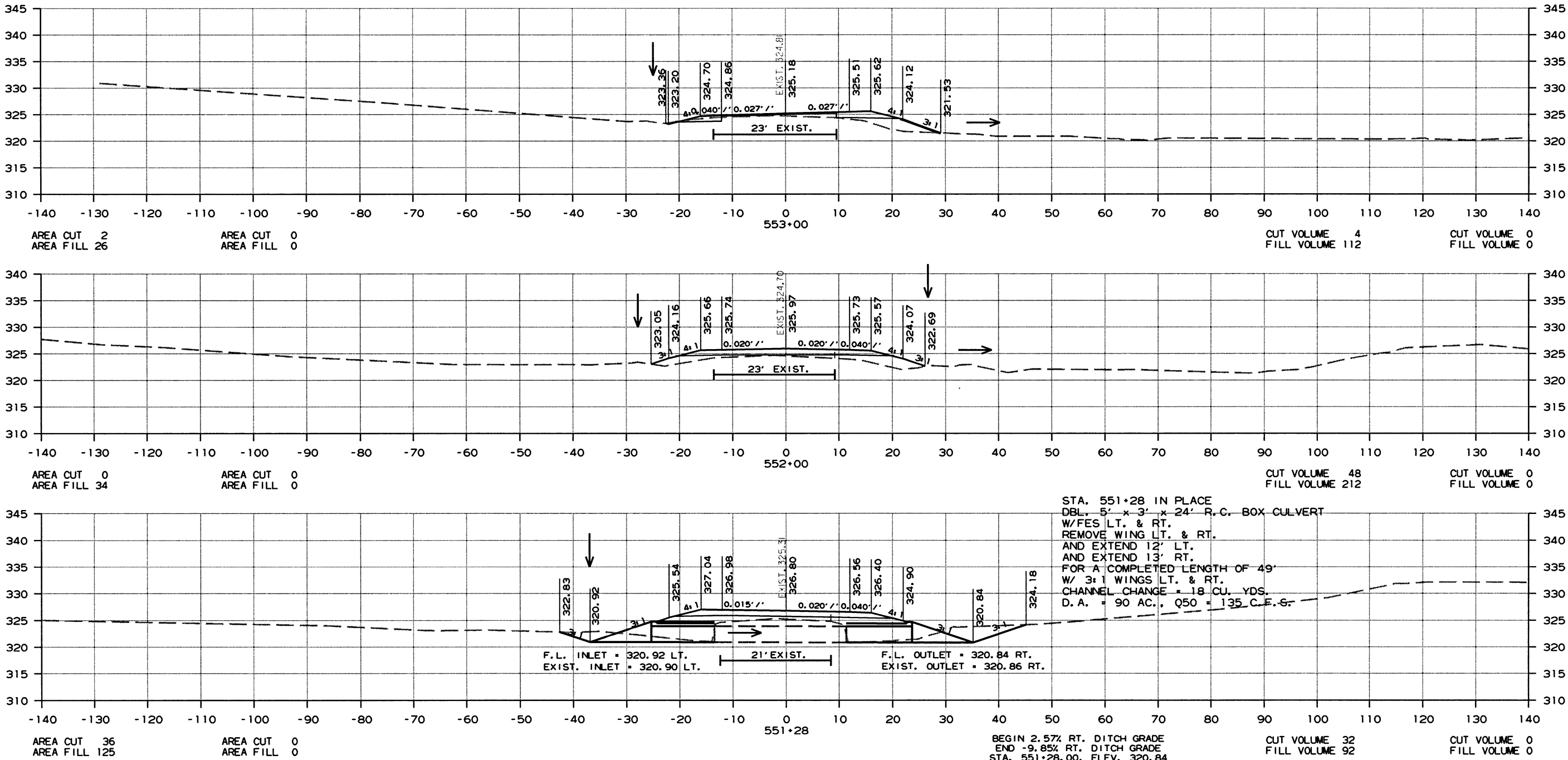
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



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.		070364	158	260

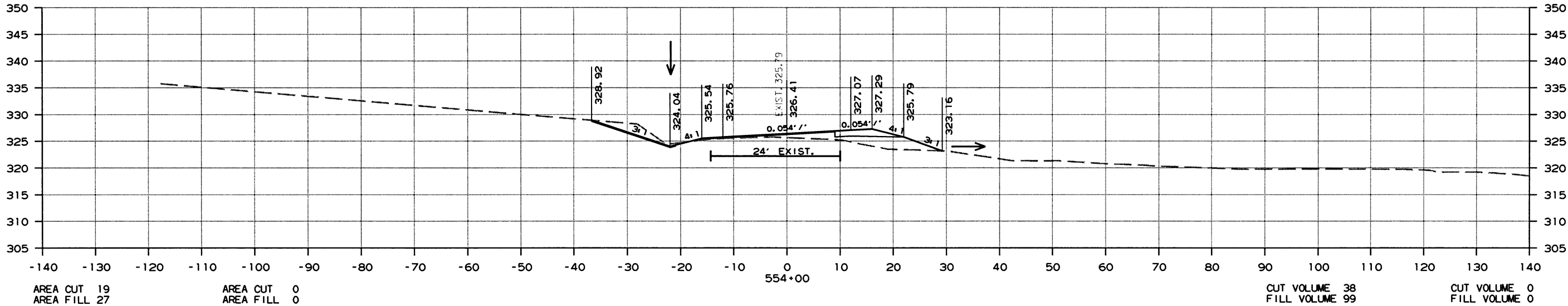
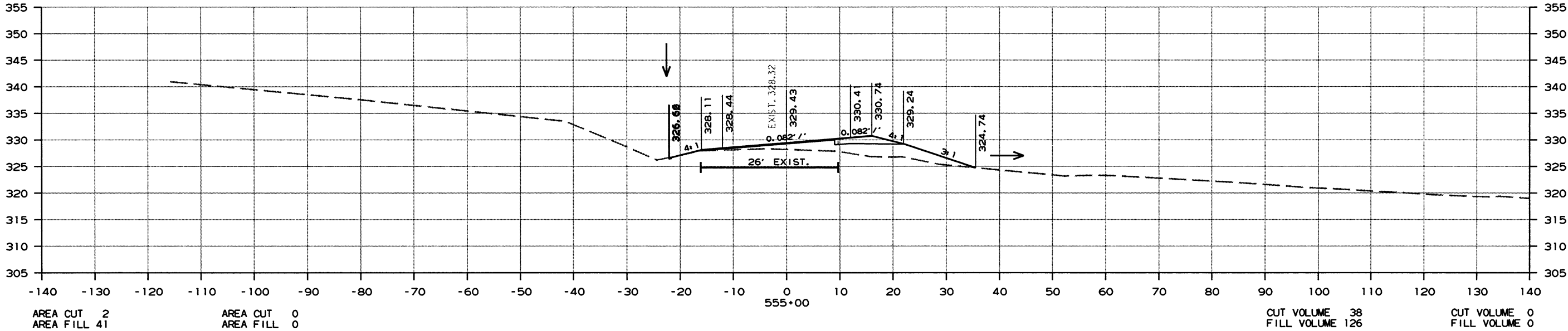
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 554+00 TO STA. 555+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. 070364	160	260

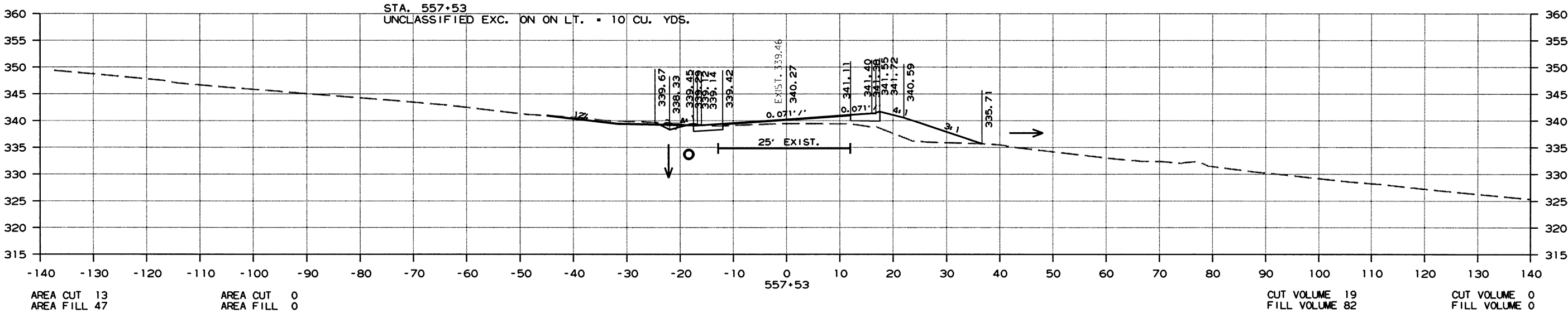
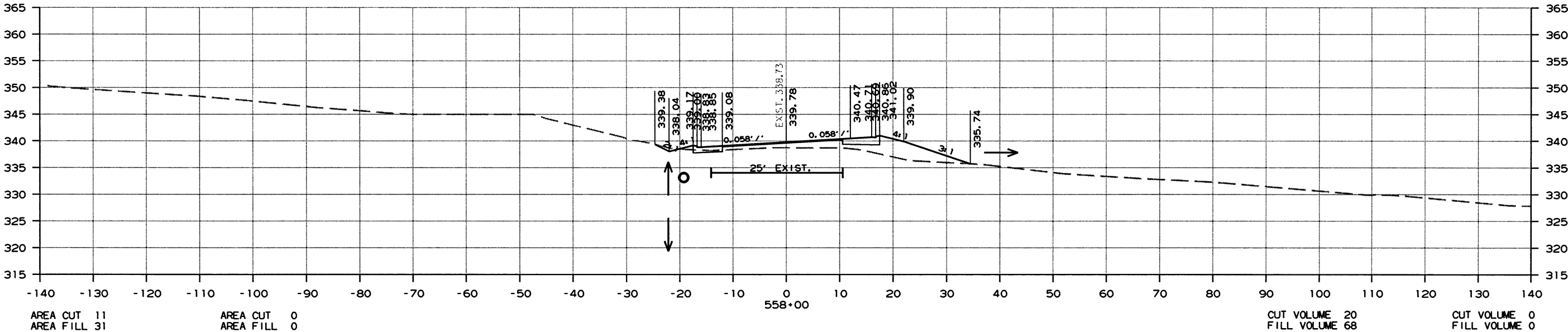
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 557+53 TO STA. 558+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.	070364		161	260

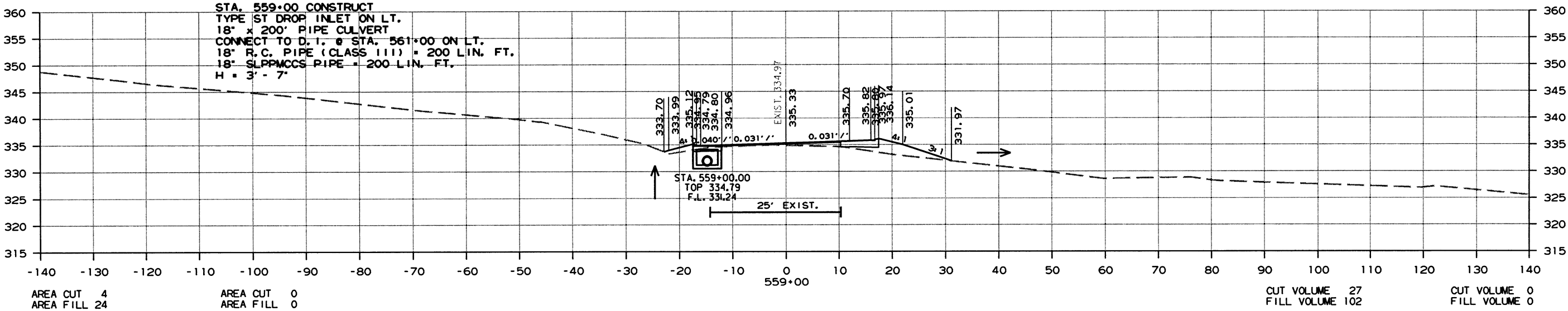
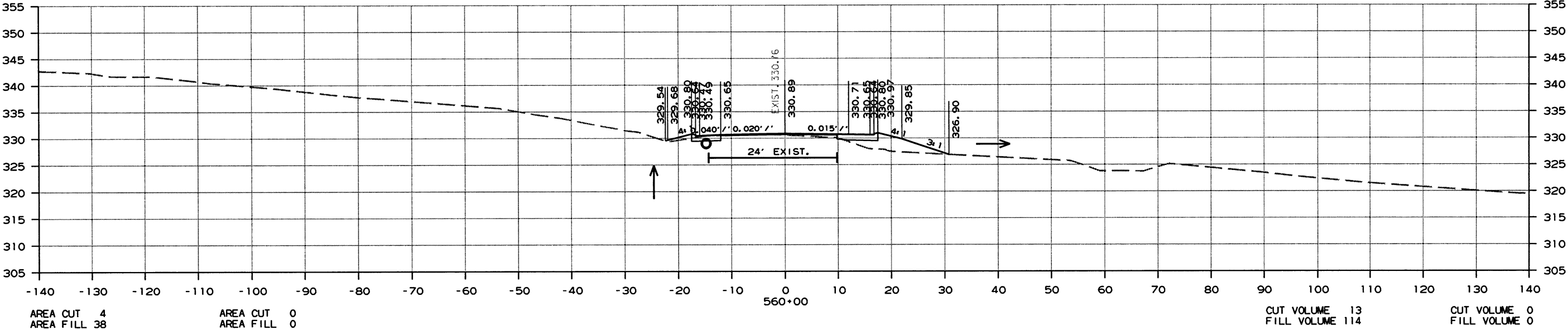
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



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.	070364	162	260

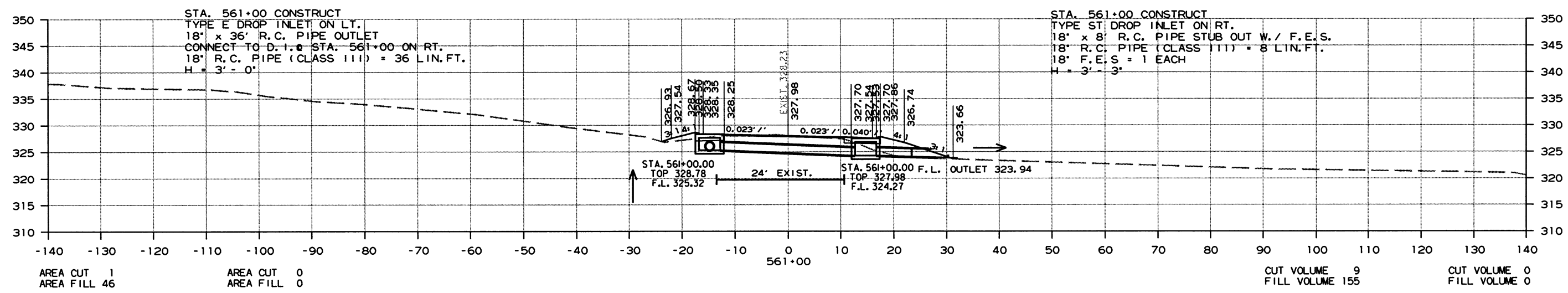
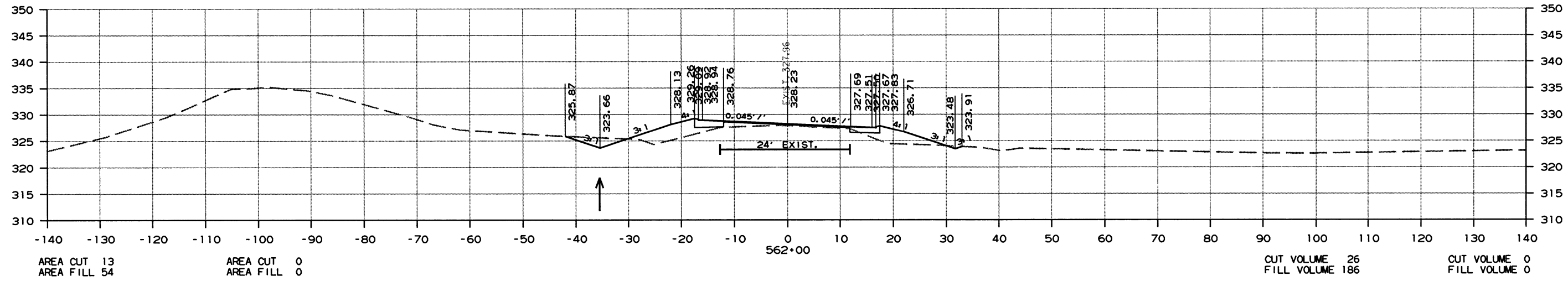
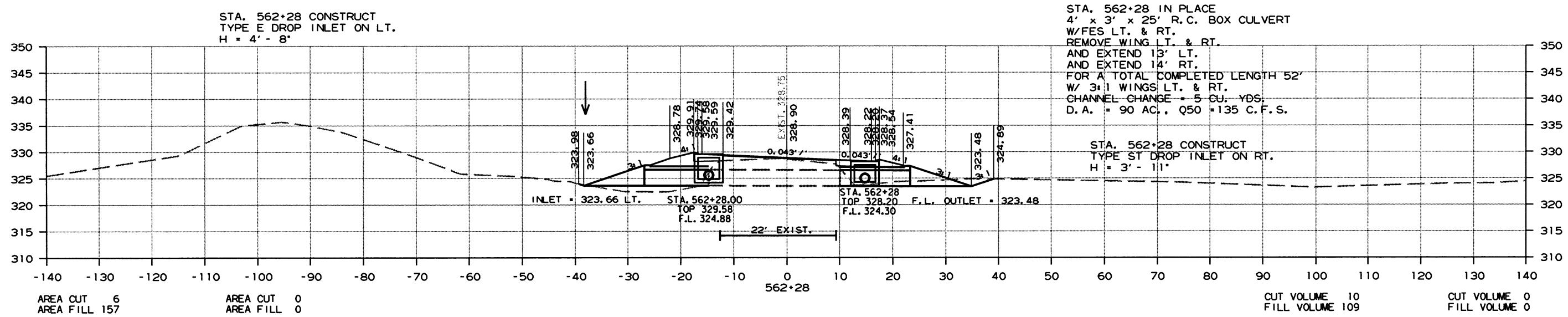
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 561+00 TO STA. 562+28

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. 070364	163	260

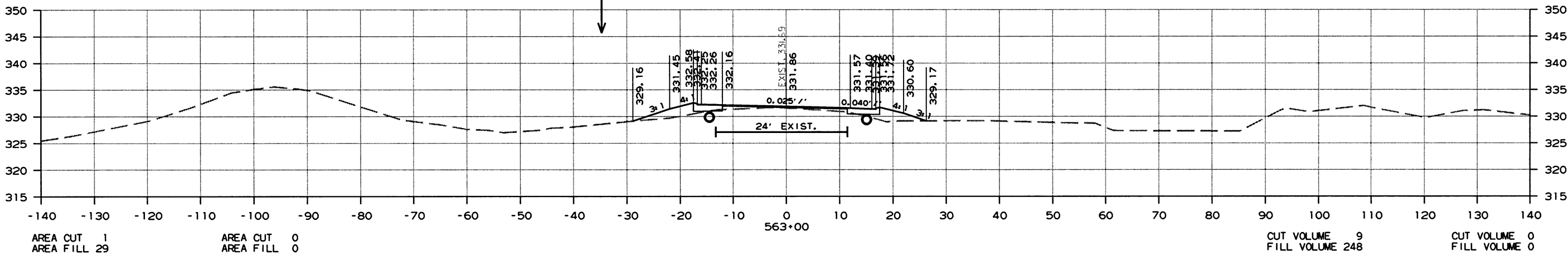
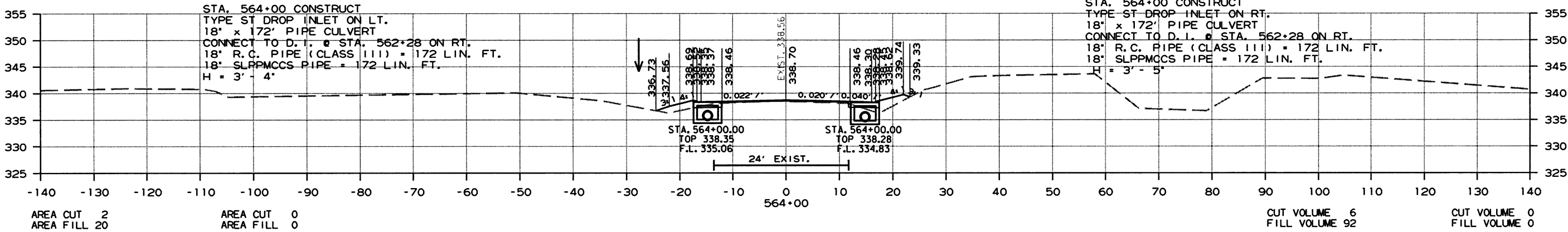
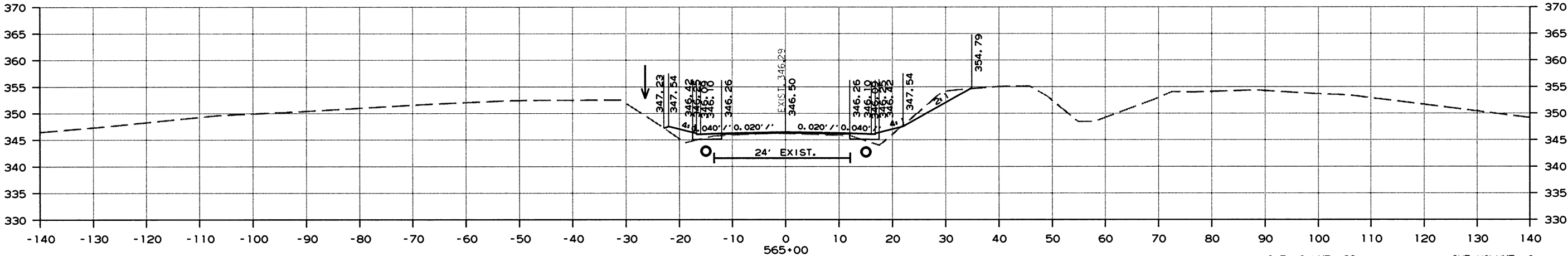
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 563+00 TO STA. 565+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. 070364	164	260

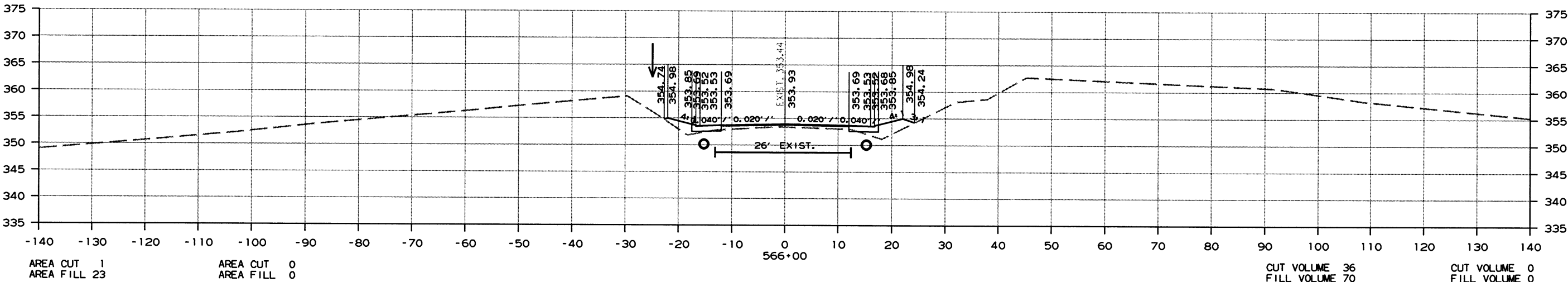
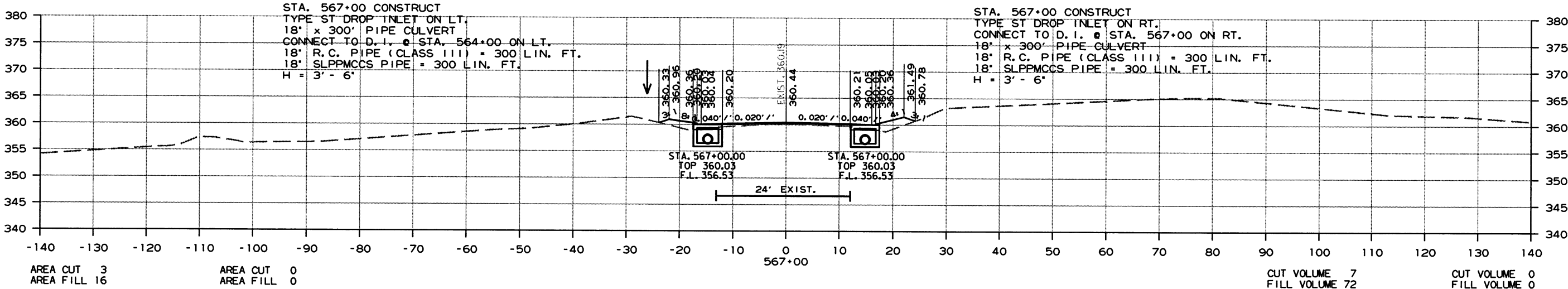
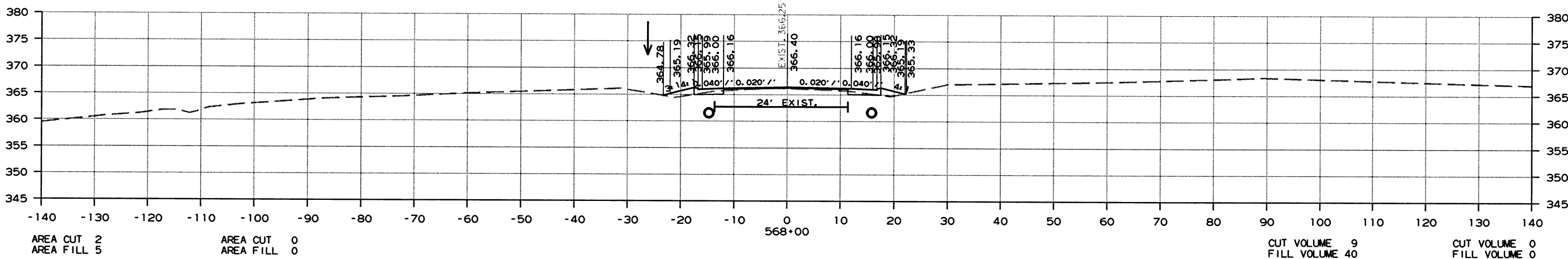
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 566+00 TO STA. 568+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. 070364	165	260

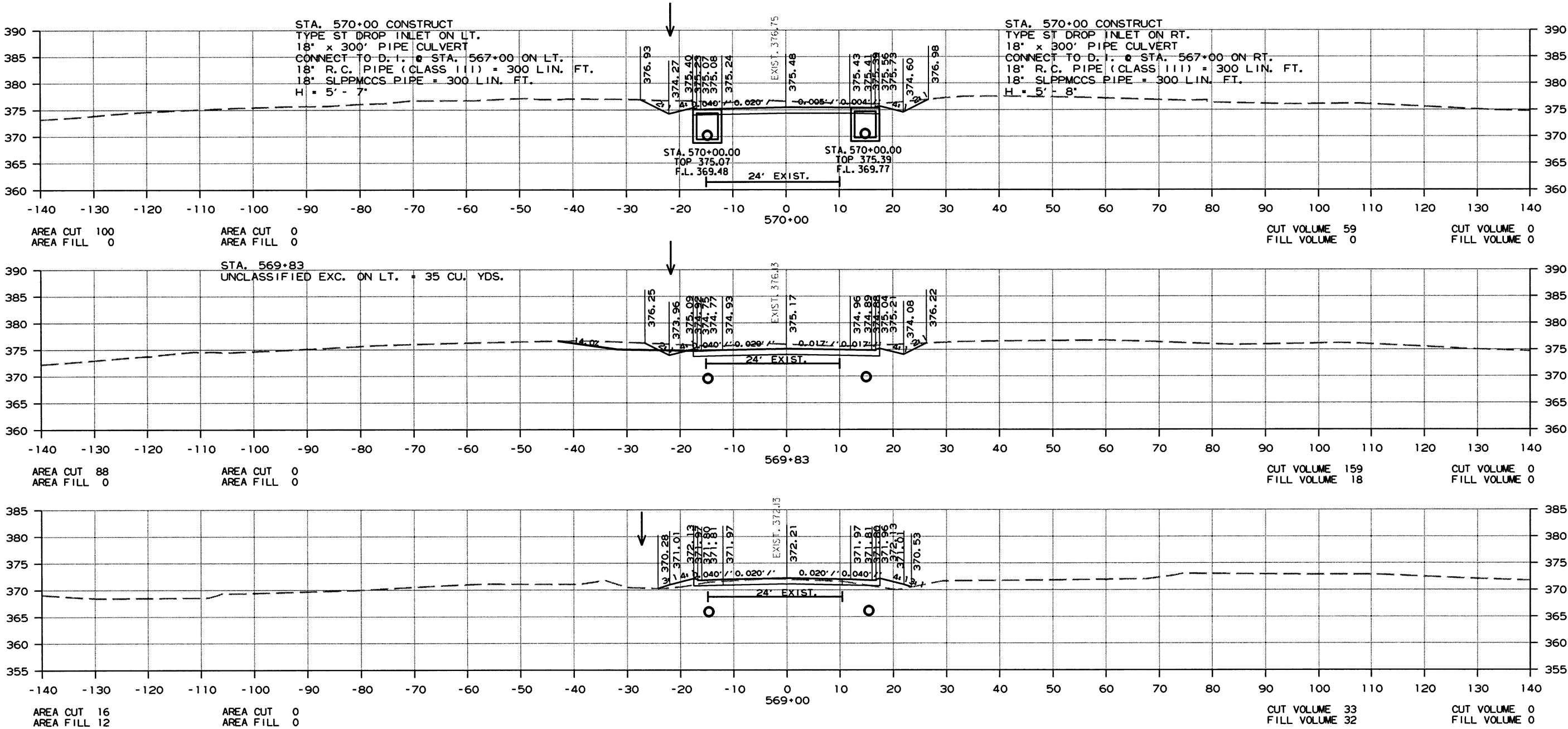
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 569+00 TO STA. 570+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.	070364	166	260

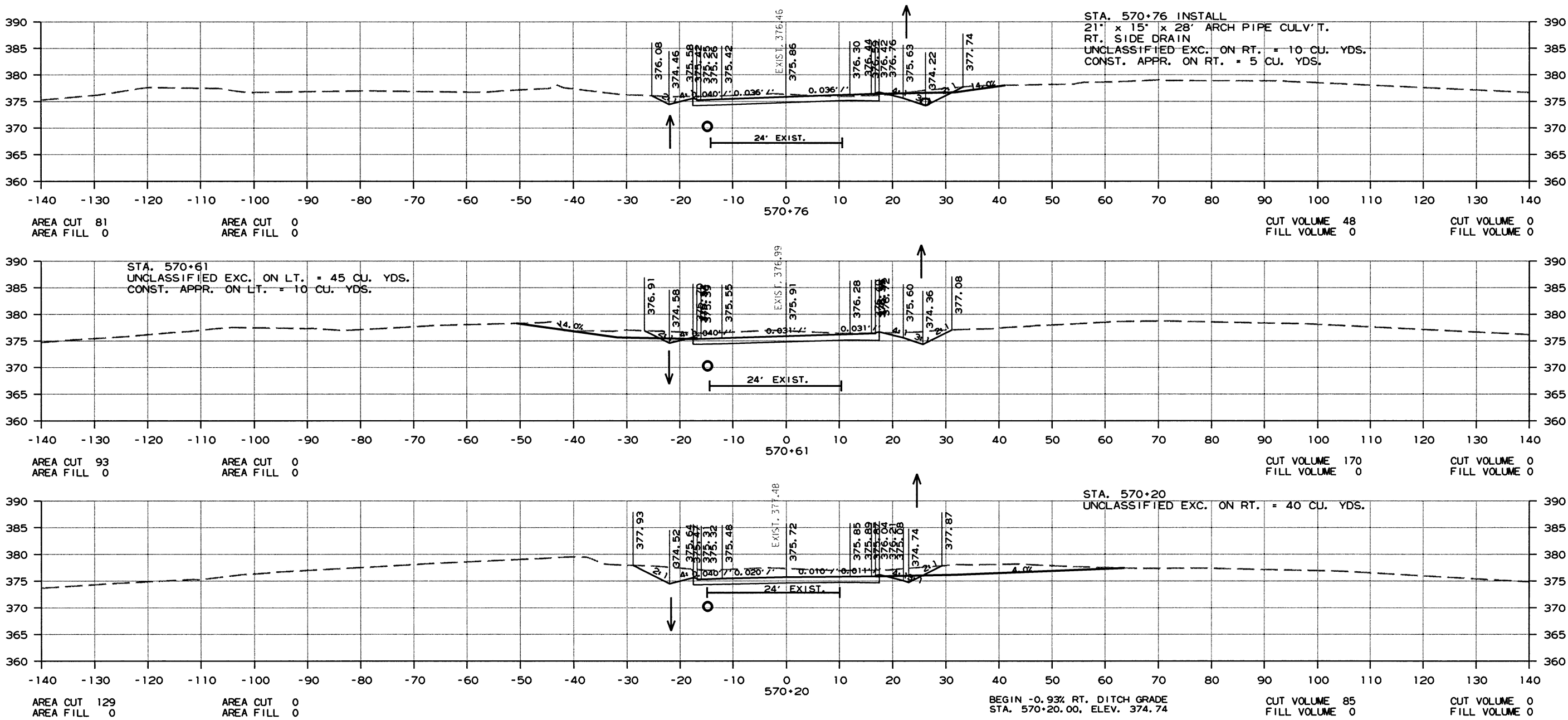
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

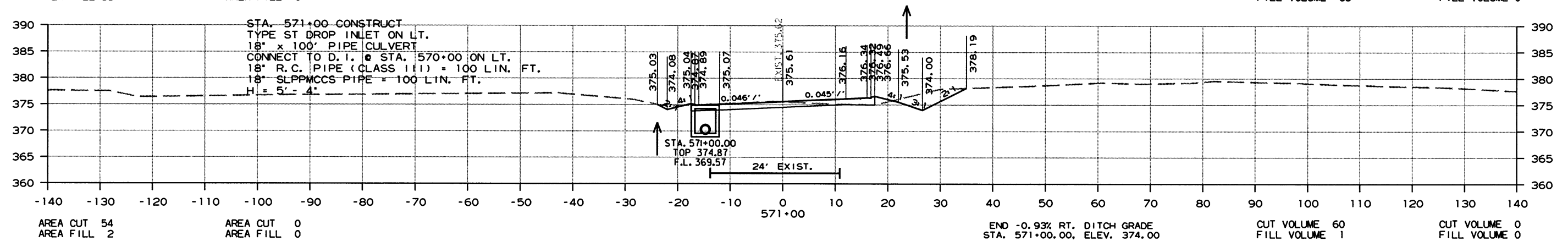
VOLUME STAGE 2



CROSS SECTION STA. 570+20 TO STA. 570+76

2 CROSS SECTIONS

VOLUME STAGE 2



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CROSS SECTION STA. 571+00 TO STA. 572+58

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. 070364	169	260

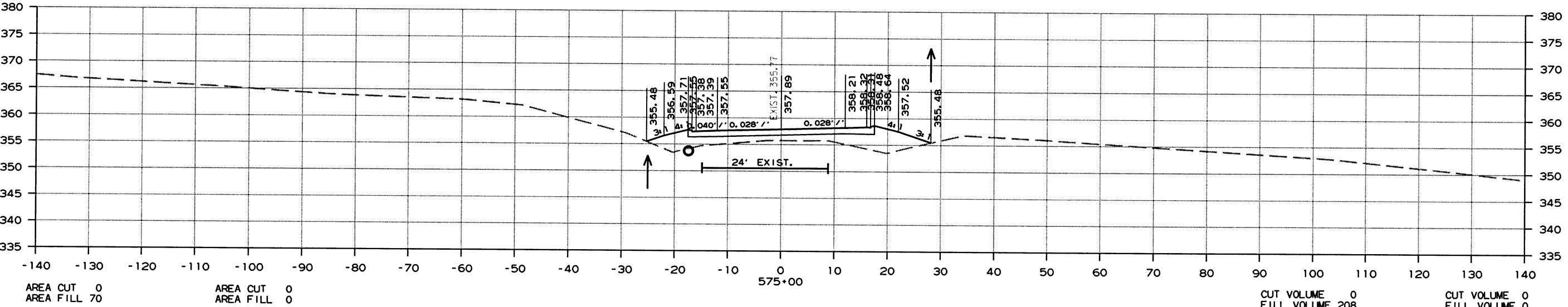
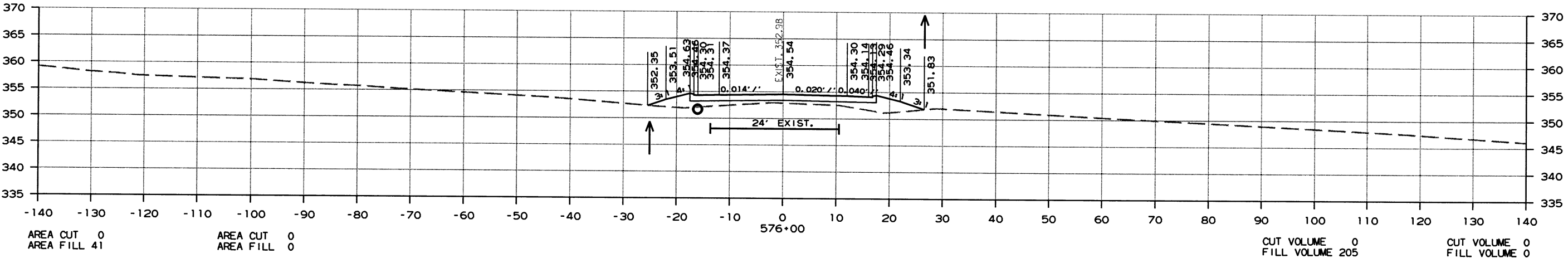
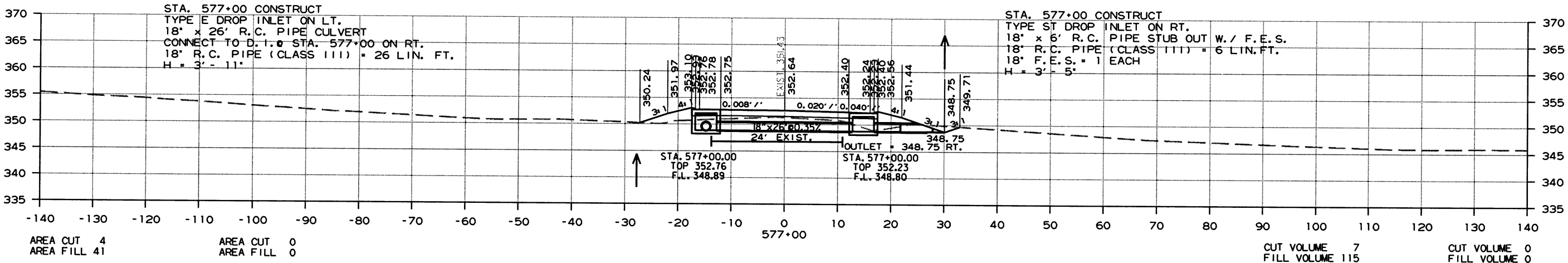
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 575+00 TO STA. 577+00

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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.	070364	170	260

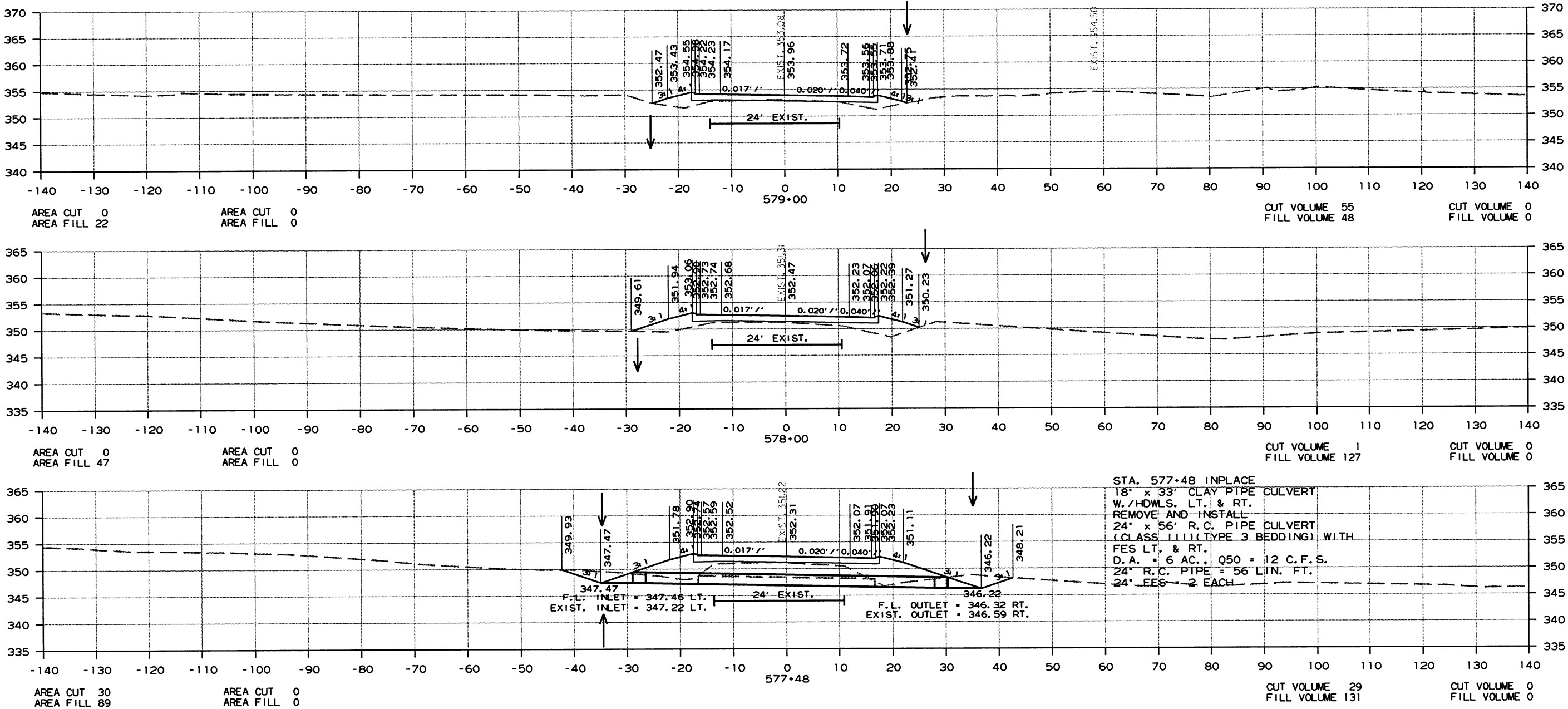
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



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. 070364			171	260

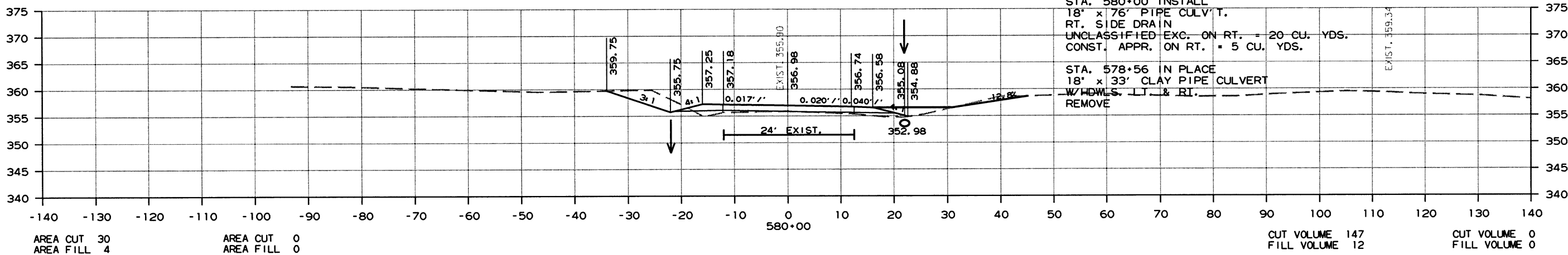
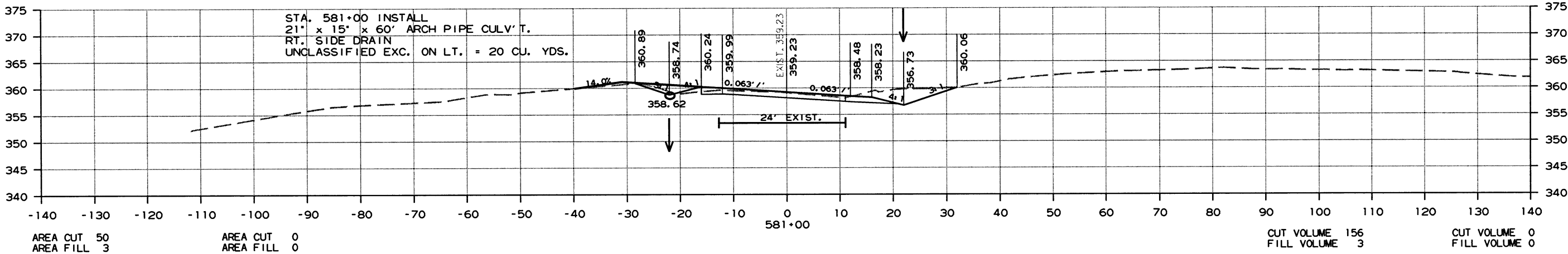
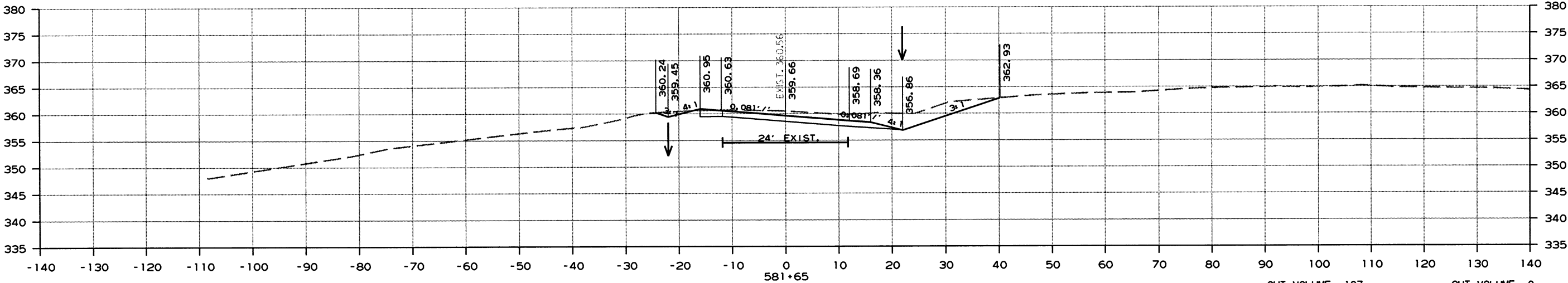
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 580+00 TO STA. 581+65

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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.	070364	172	260

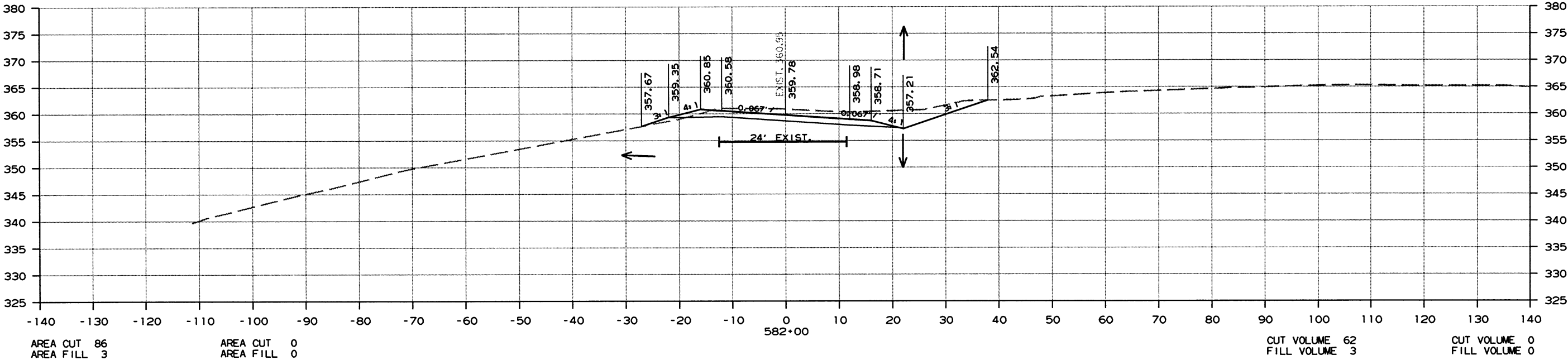
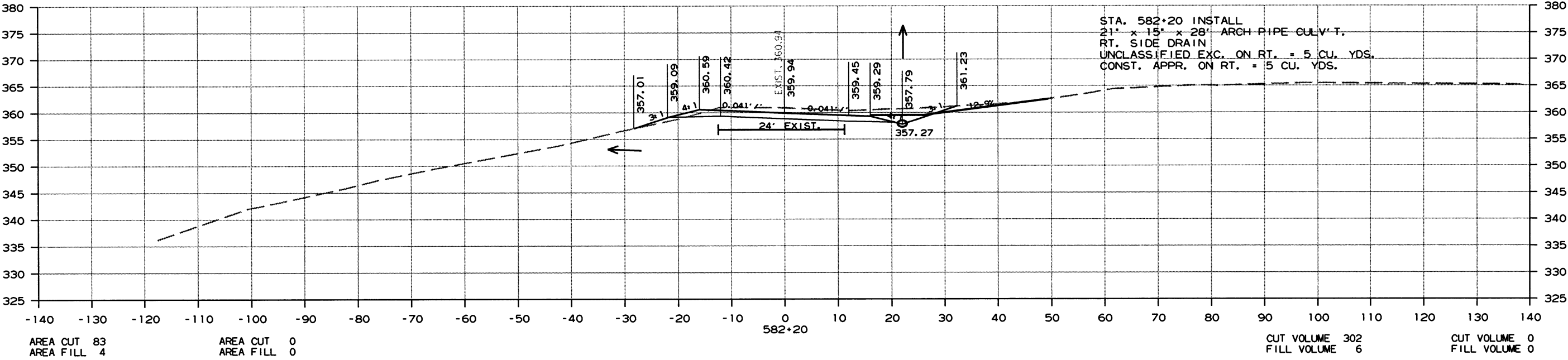
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

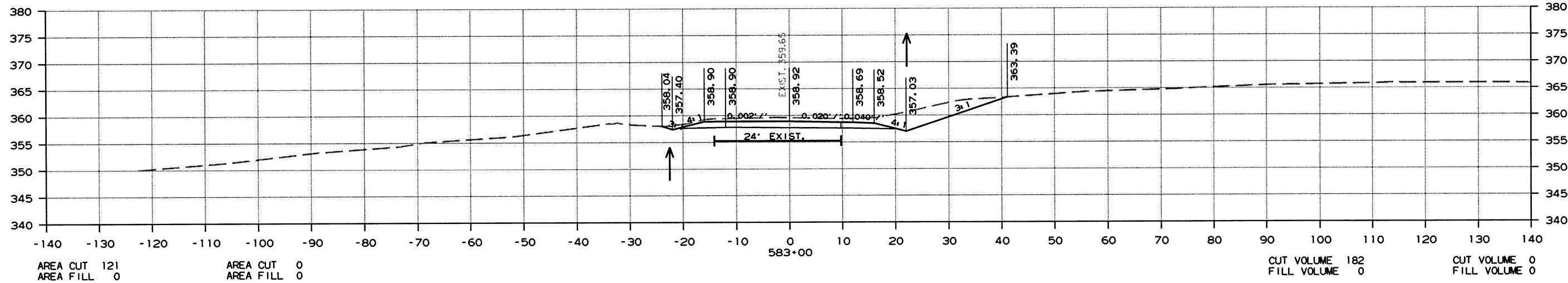
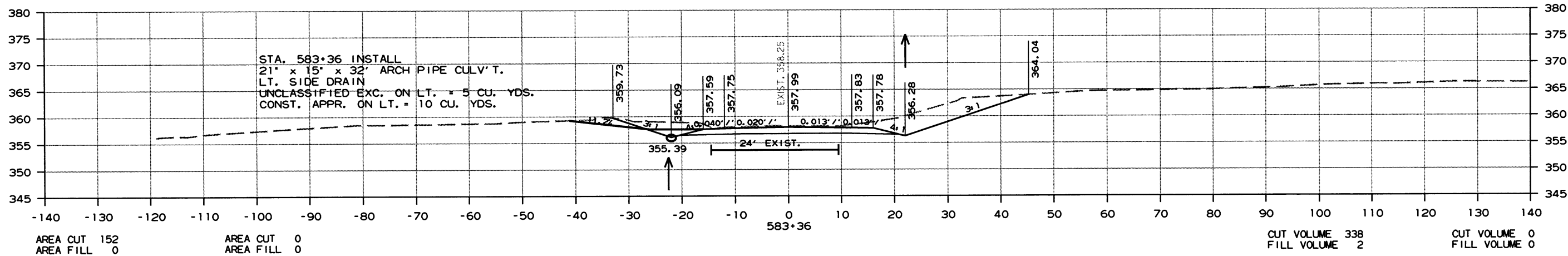
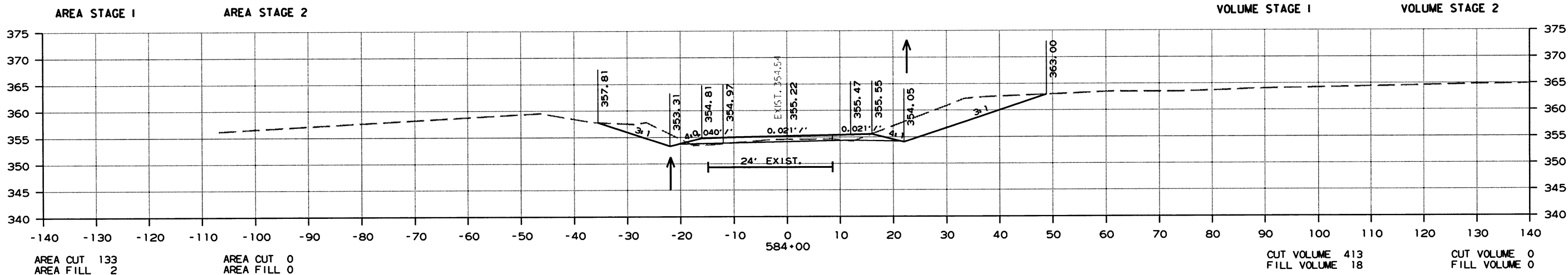
VOLUME STAGE 2



CROSS SECTION STA. 582+00 TO STA. 582+20

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.	070364	173	260

2 CROSS SECTIONS



CROSS SECTION STA. 583+00 TO STA. 584+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. 070364			174	260

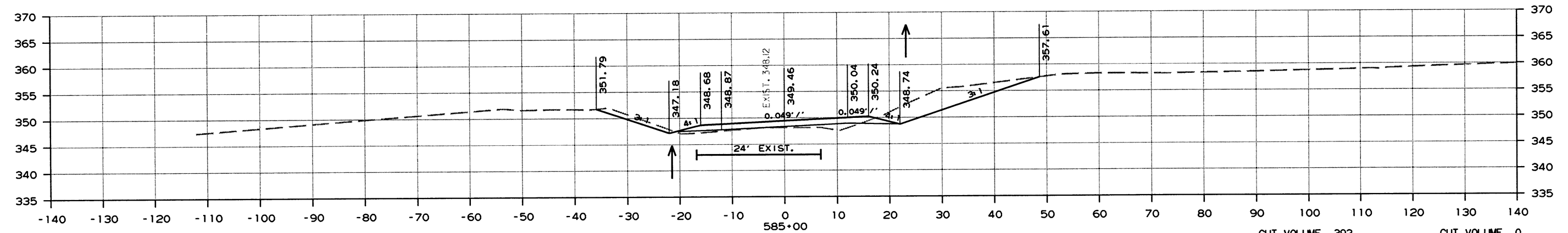
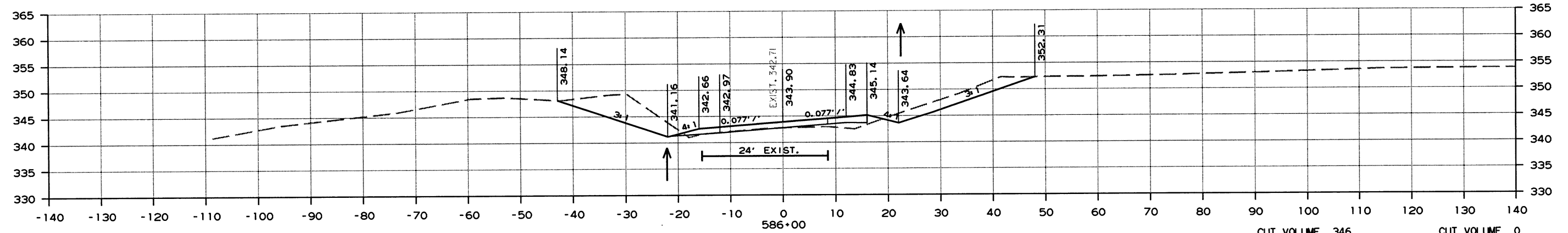
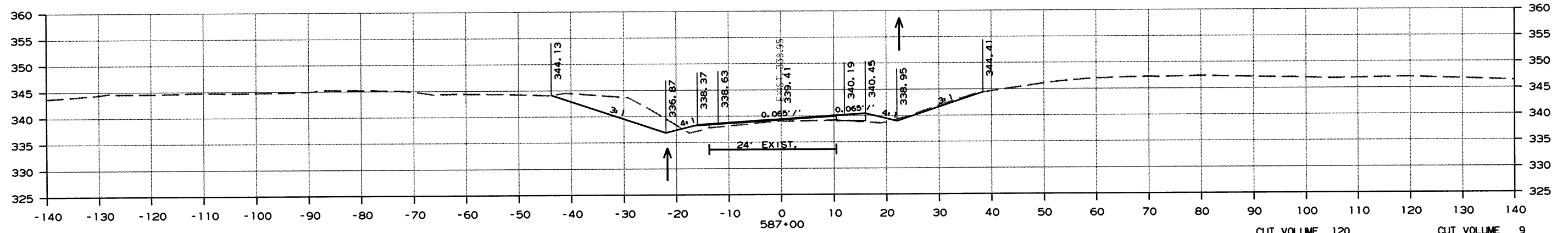
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 585+00 TO STA. 587+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.	070364	175	260

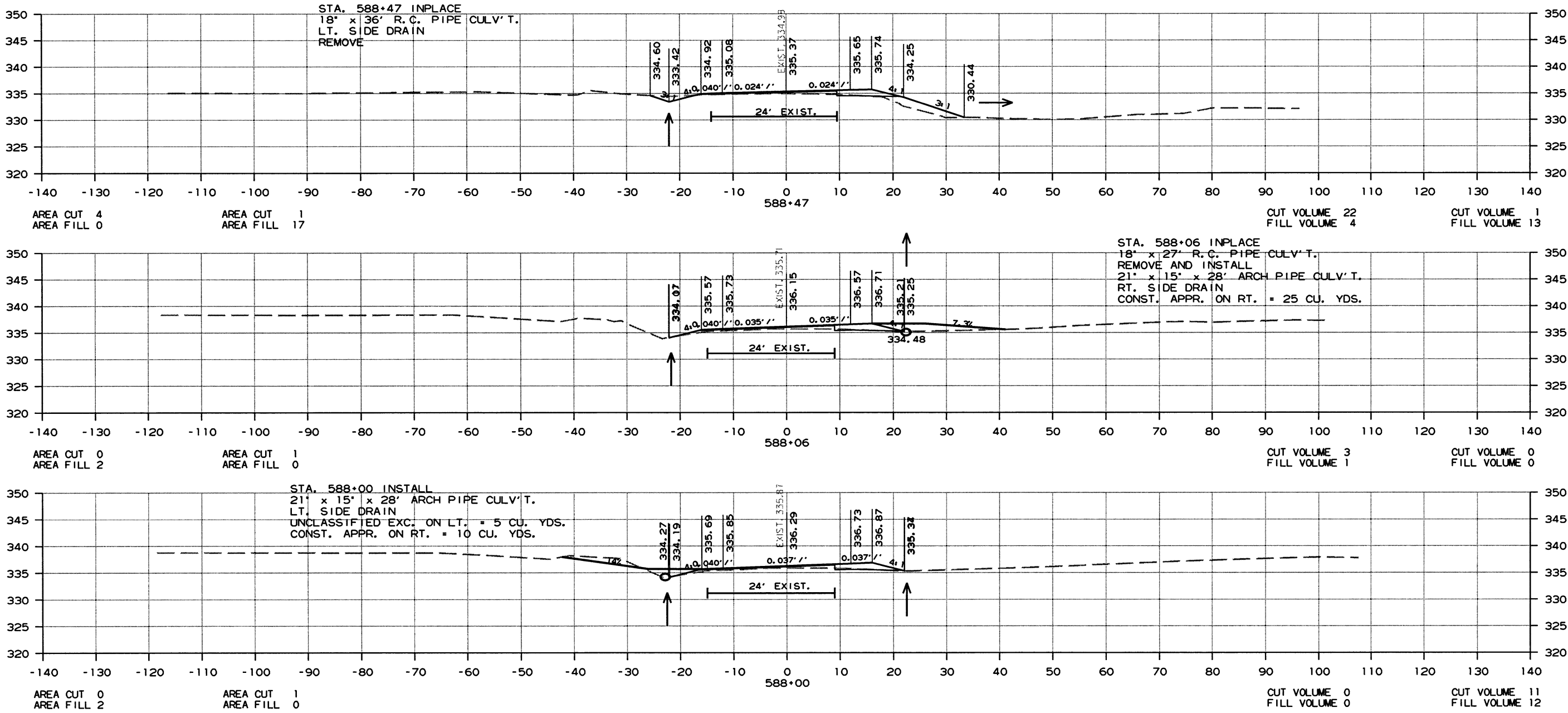
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

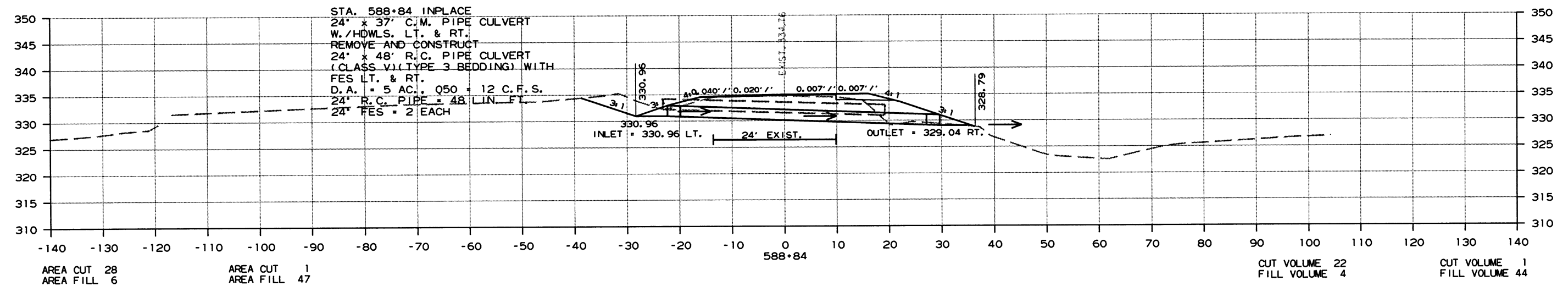
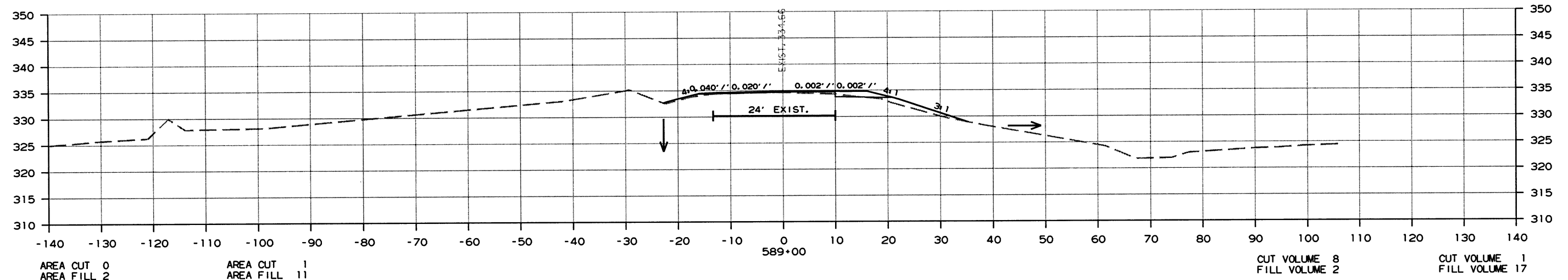
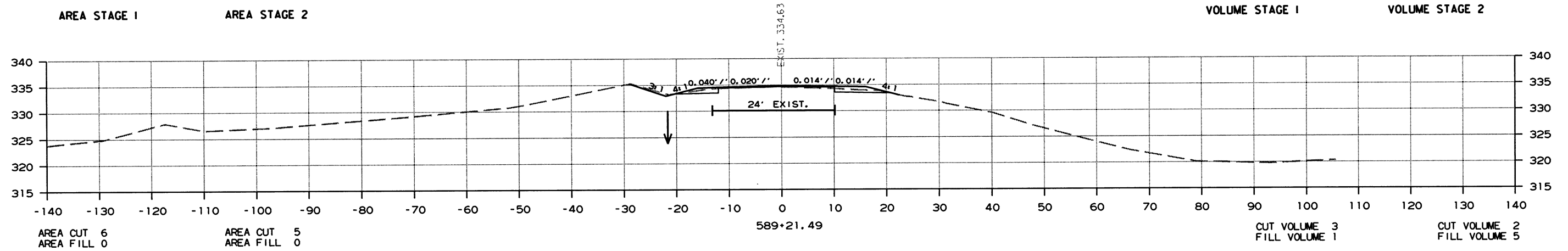
VOLUME STAGE 1

VOLUME STAGE 2



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.		070364	176	260

② CROSS SECTIONS



CROSS SECTION STA. 588+84 TO STA. 589+21.49

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.	070364		177	260

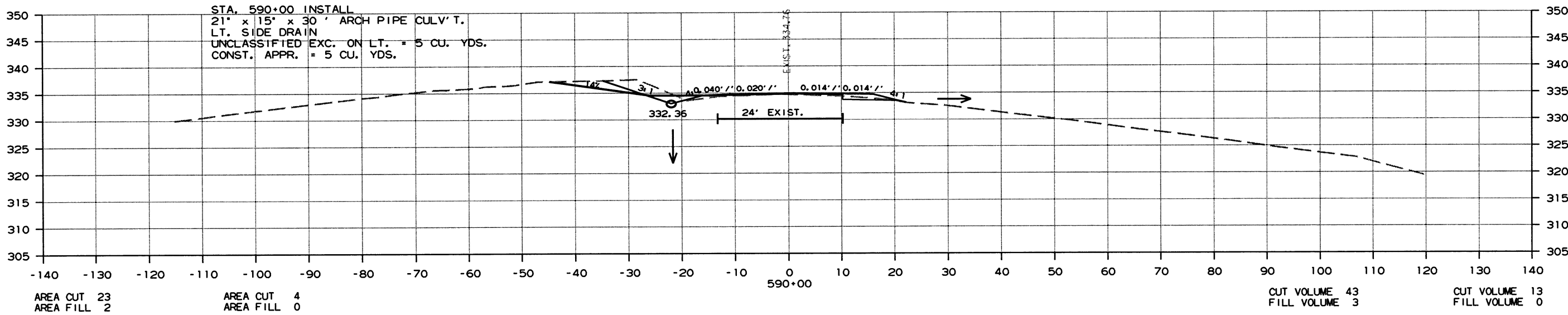
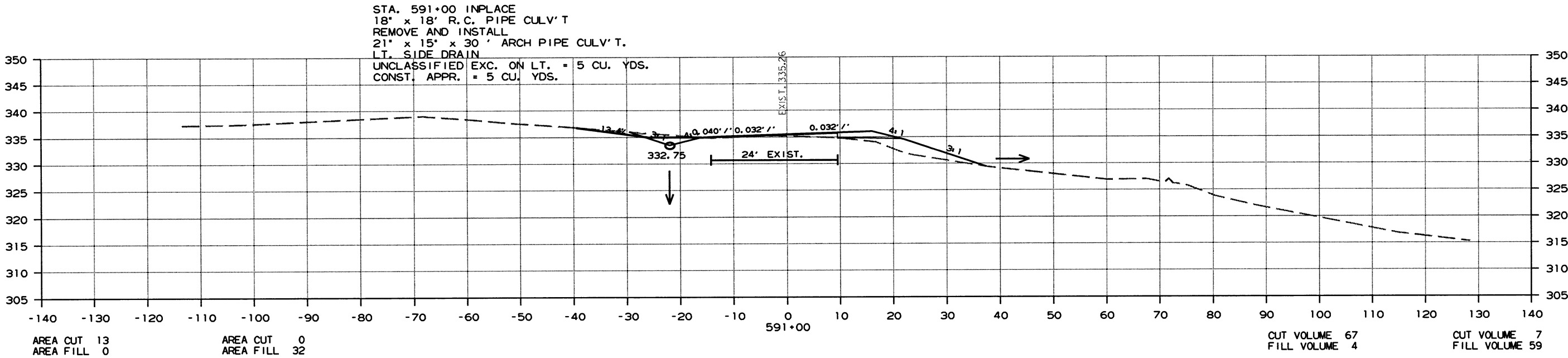
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 590+00 TO STA. 591+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.		070364	178	260

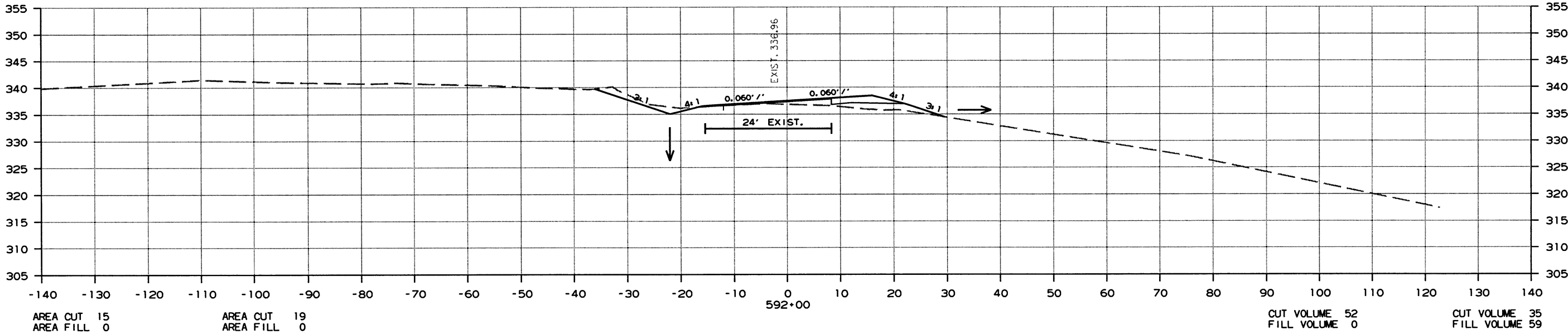
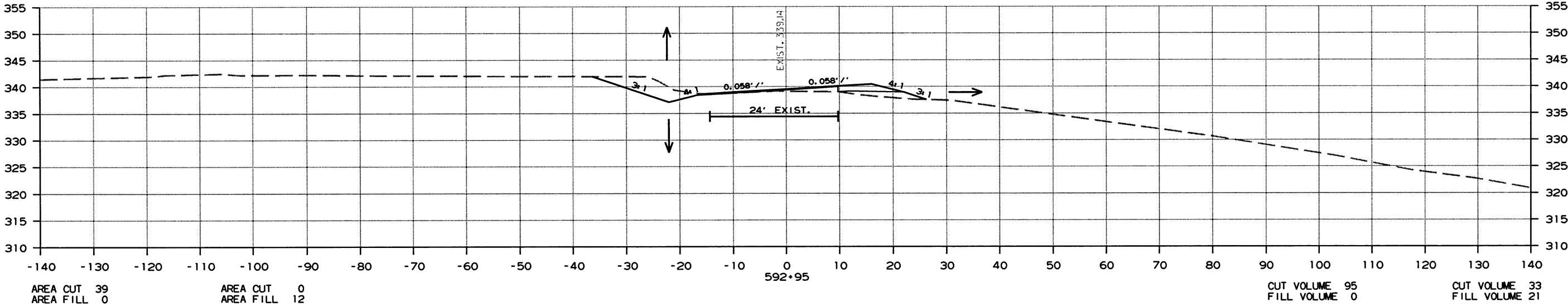
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 592+00 TO STA. 592+95

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. 070364			179	260

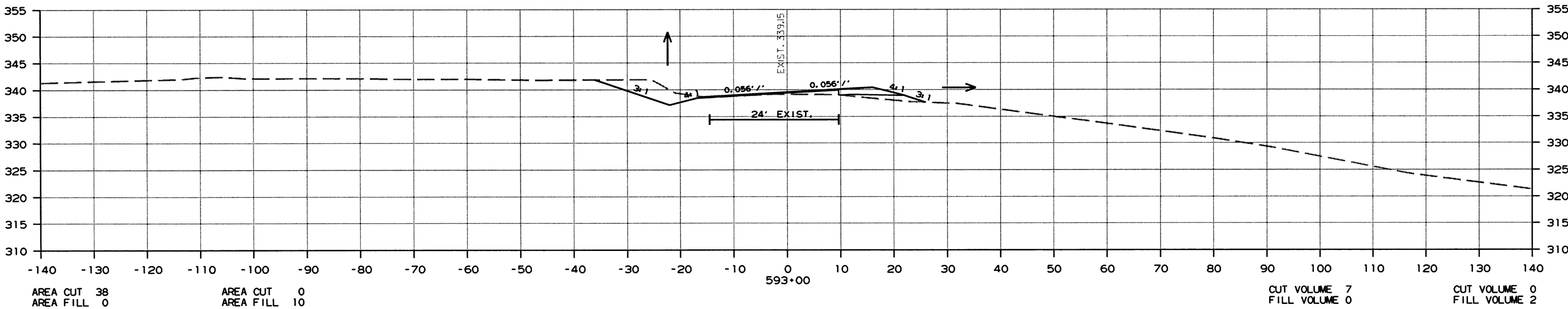
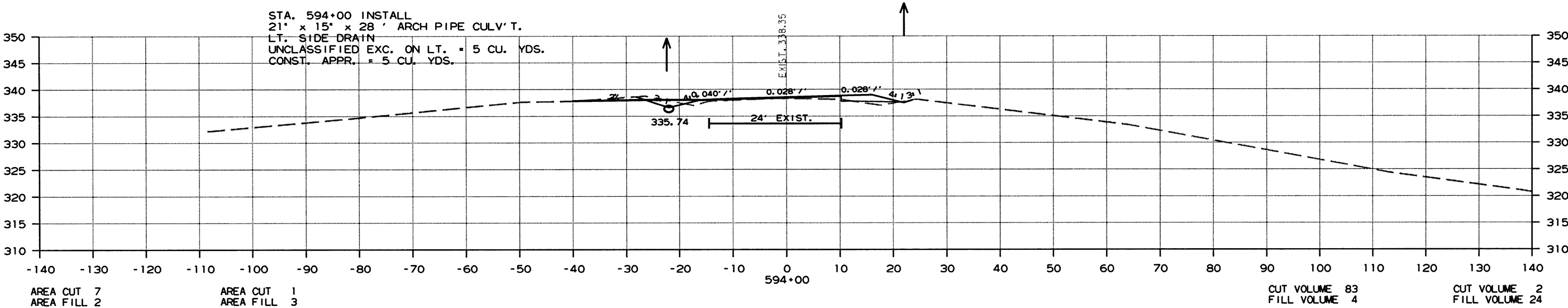
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 593+00 TO STA. 594+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. 070364		180	260	

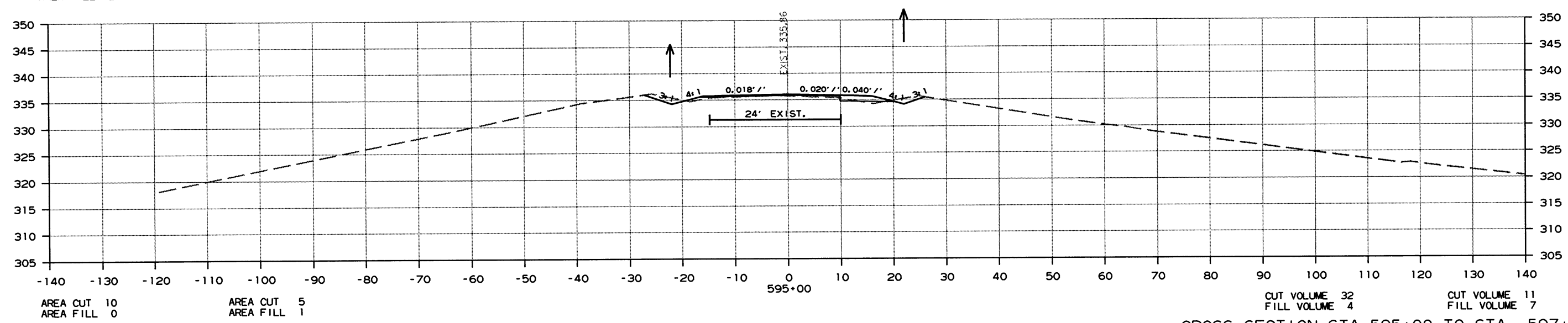
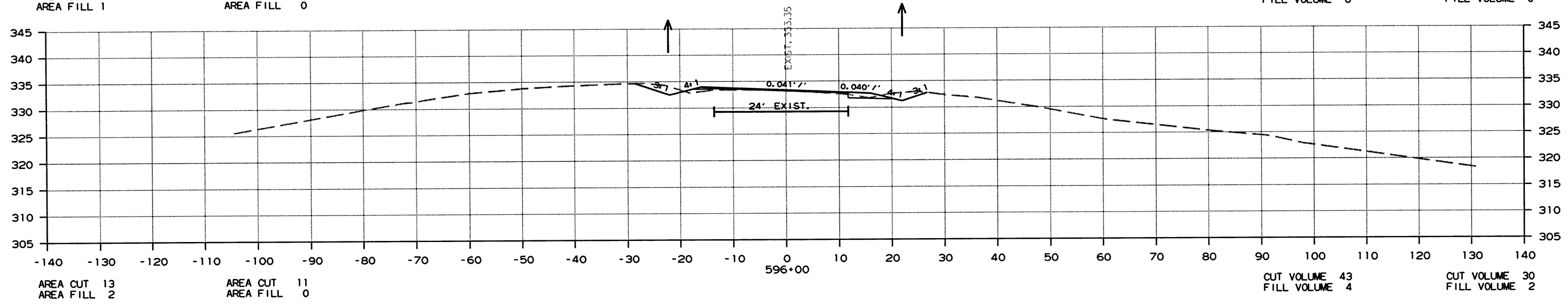
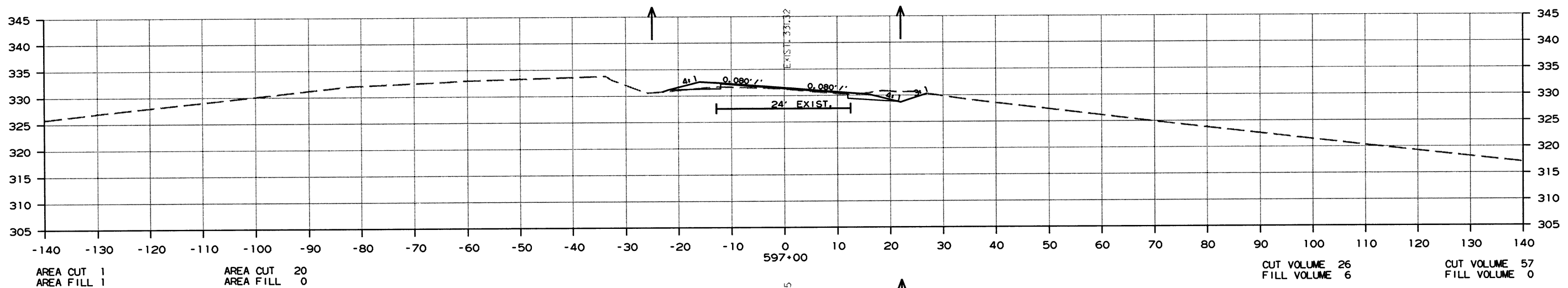
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 595+00 TO STA. 597+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.		070364	181	260

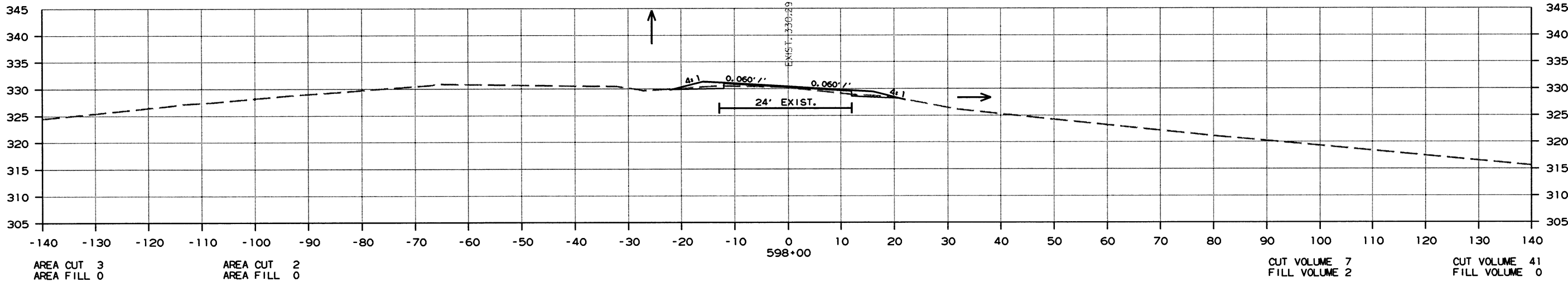
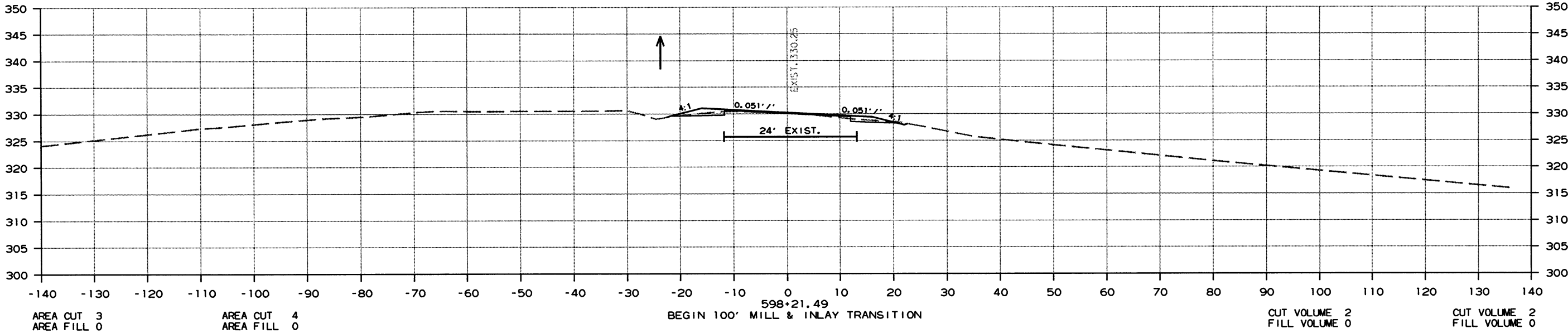
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 597+00 TO STA. 598+51.02

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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. 070364			182	260

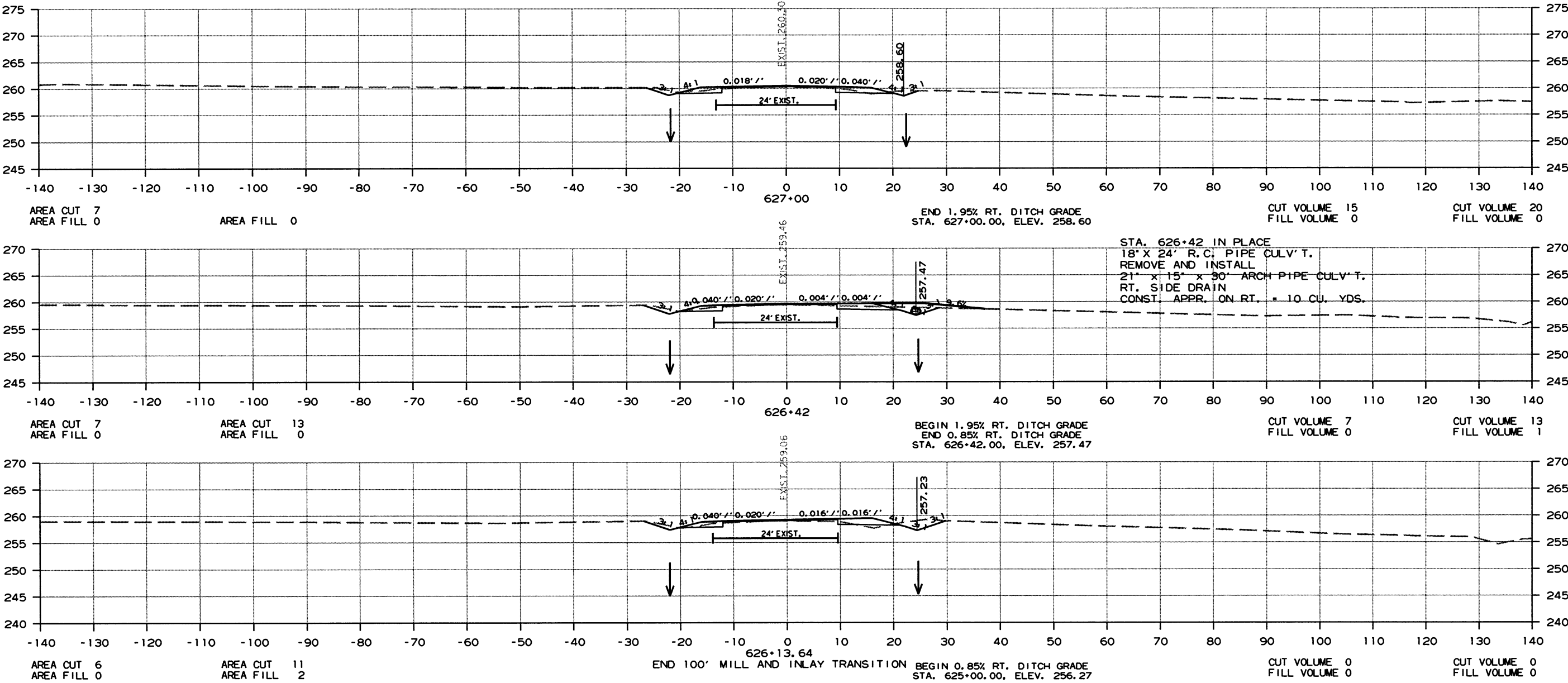
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 626+14 TO STA. 627+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. 070364			183	260

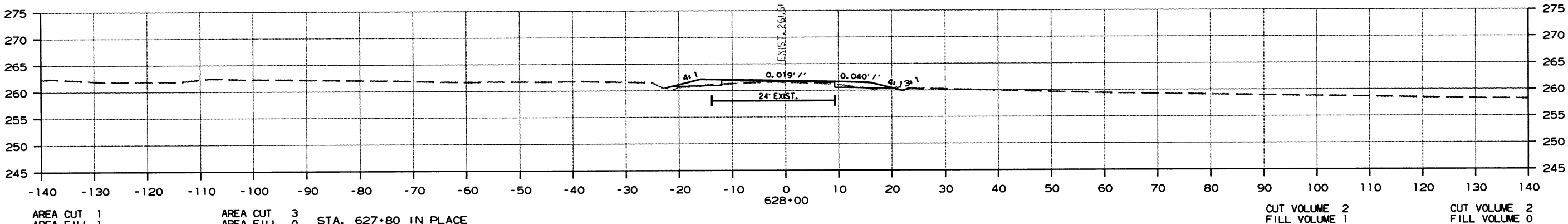
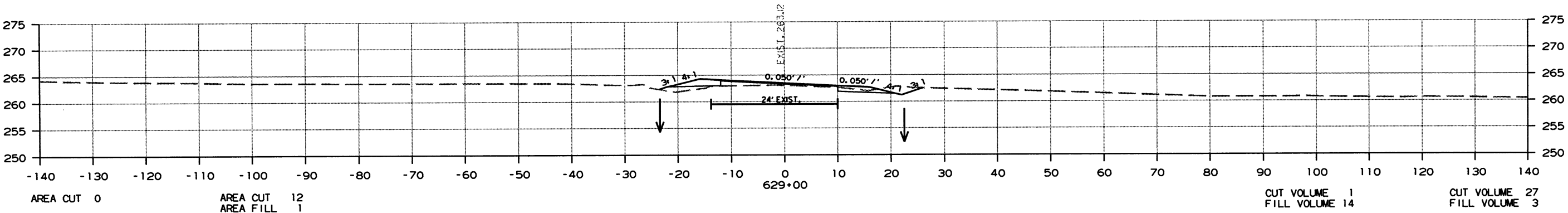
2 CROSS SECTIONS

AREA STAGE 1

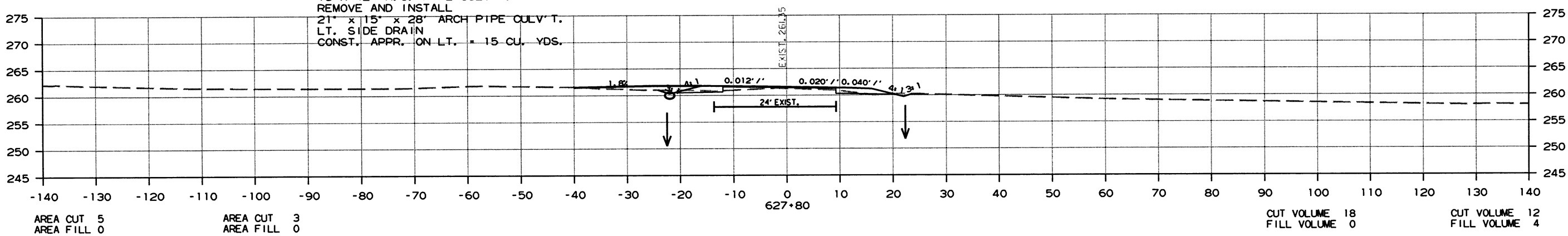
AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



STA. 627+80 IN PLACE
18" X 42" R.C. PIPE CULV'T.
REMOVE AND INSTALL
21" X 15" X 28" ARCH PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 15 CU. YDS.



CROSS SECTION STA. 627+80 TO STA. 629+00

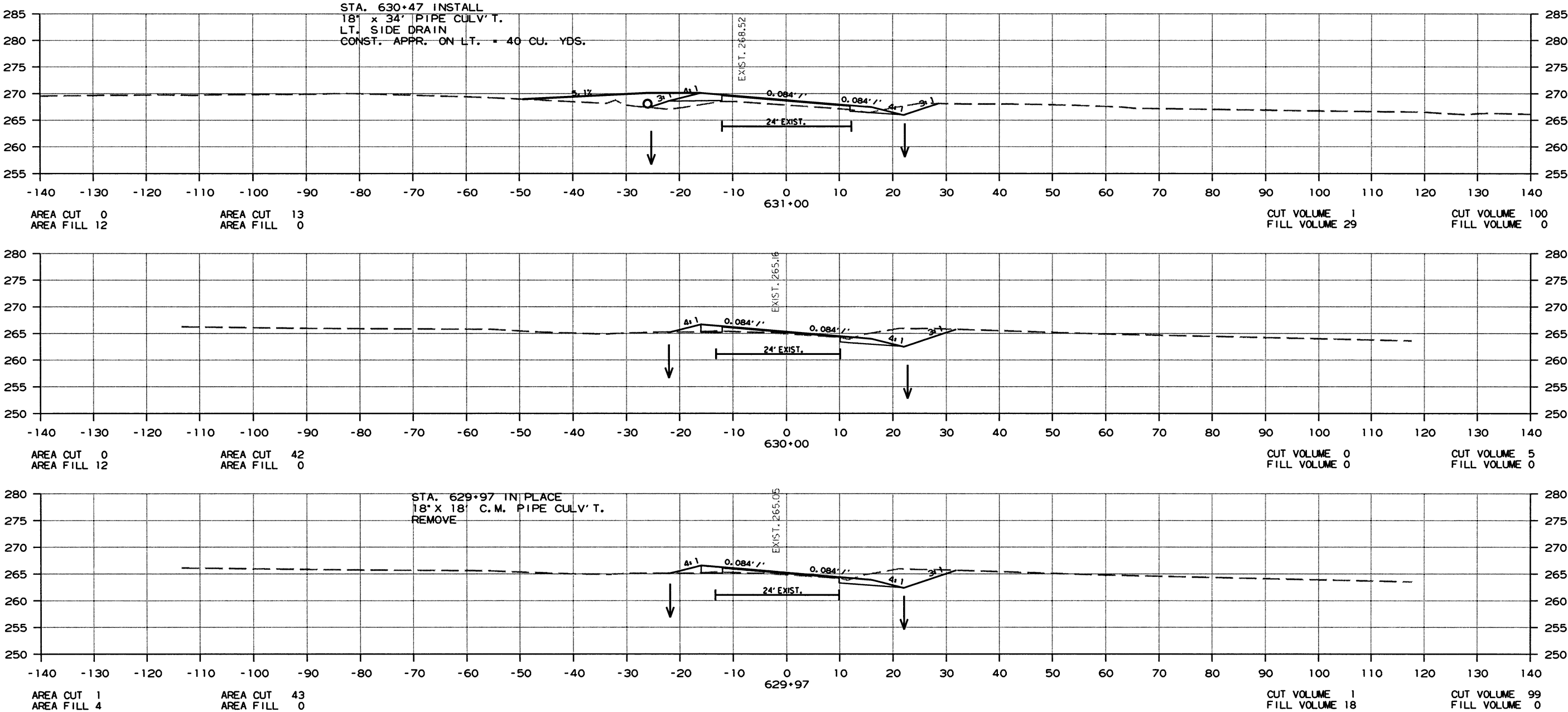
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070364		184	260
2 CROSS SECTIONS								

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 629+97 TO STA. 631+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.		070364	185	260

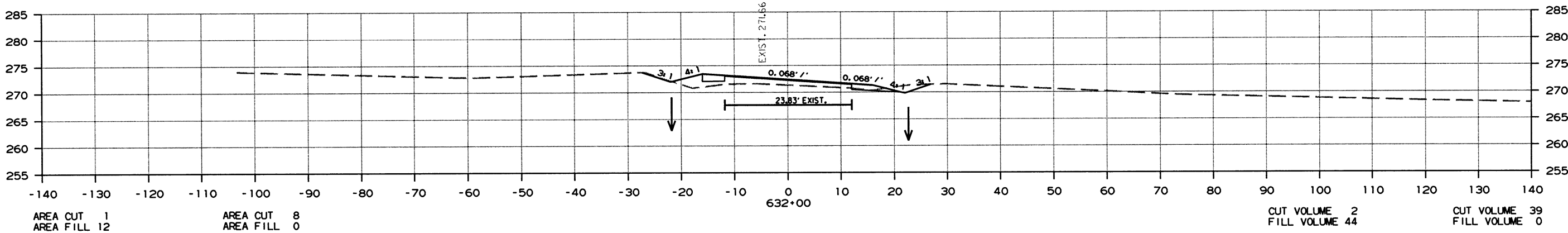
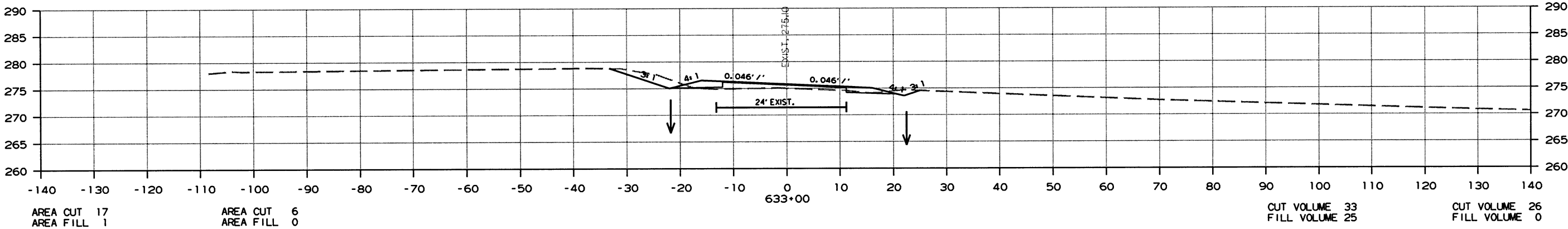
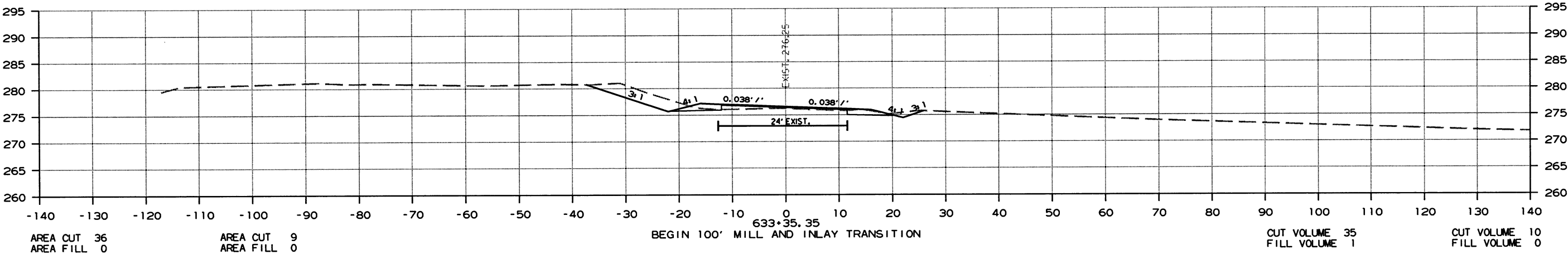
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 632+00 TO STA. 633+35

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. 070364			186	260

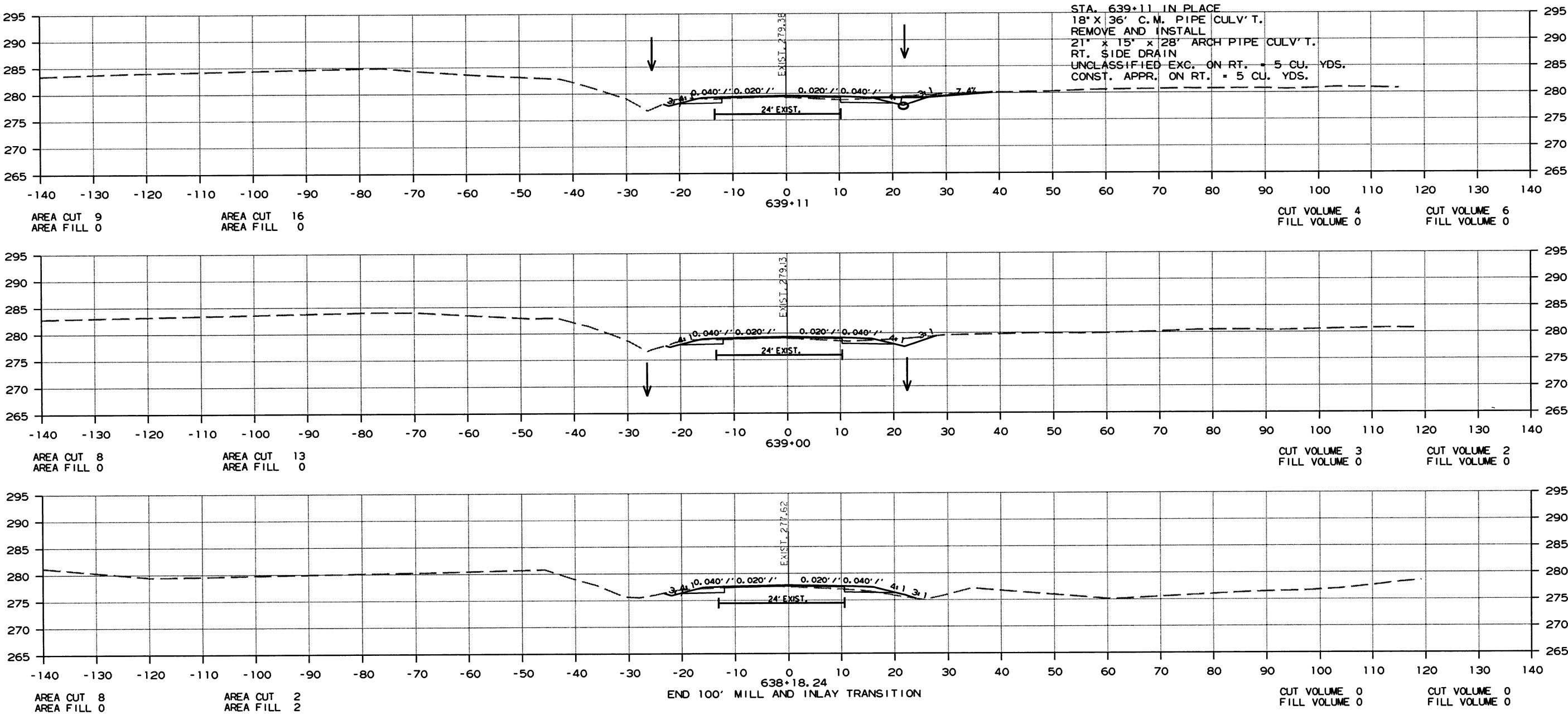
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



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. 070364		187	260	

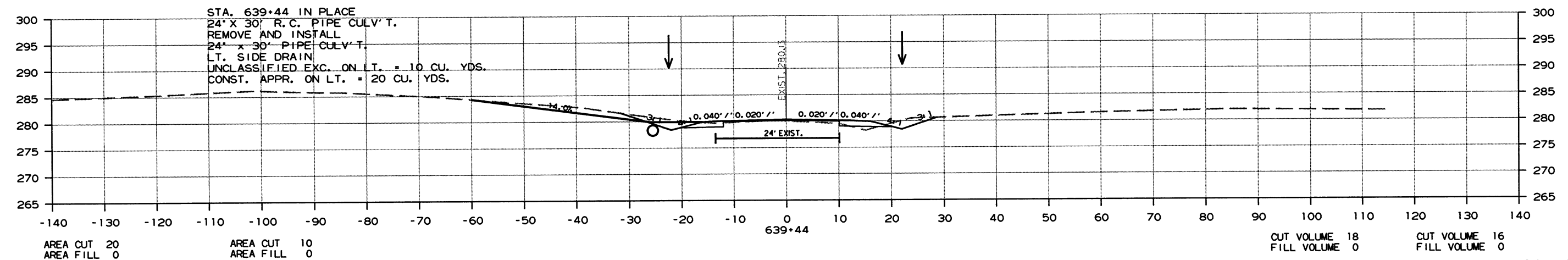
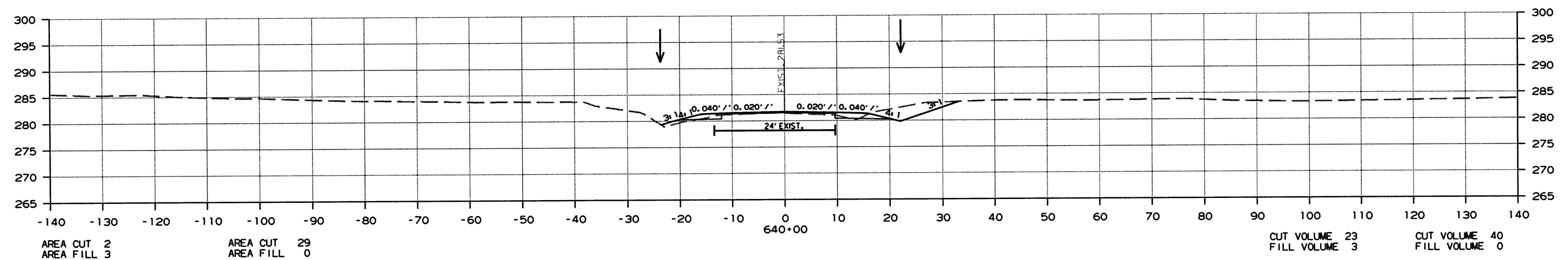
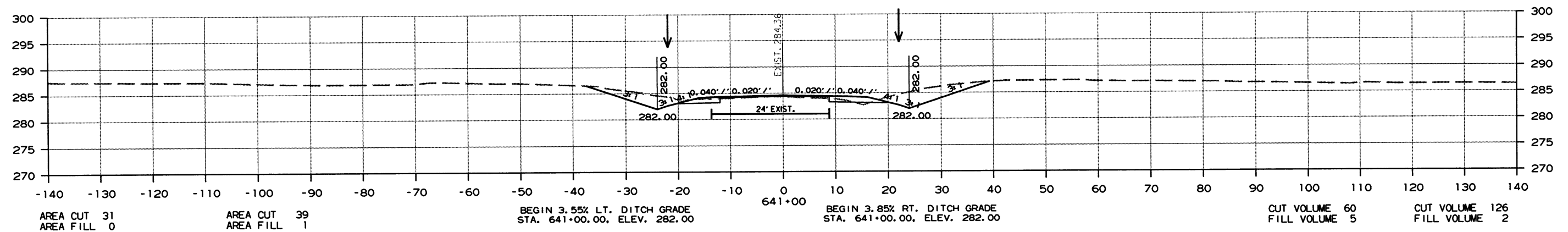
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



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. 070364	188	260

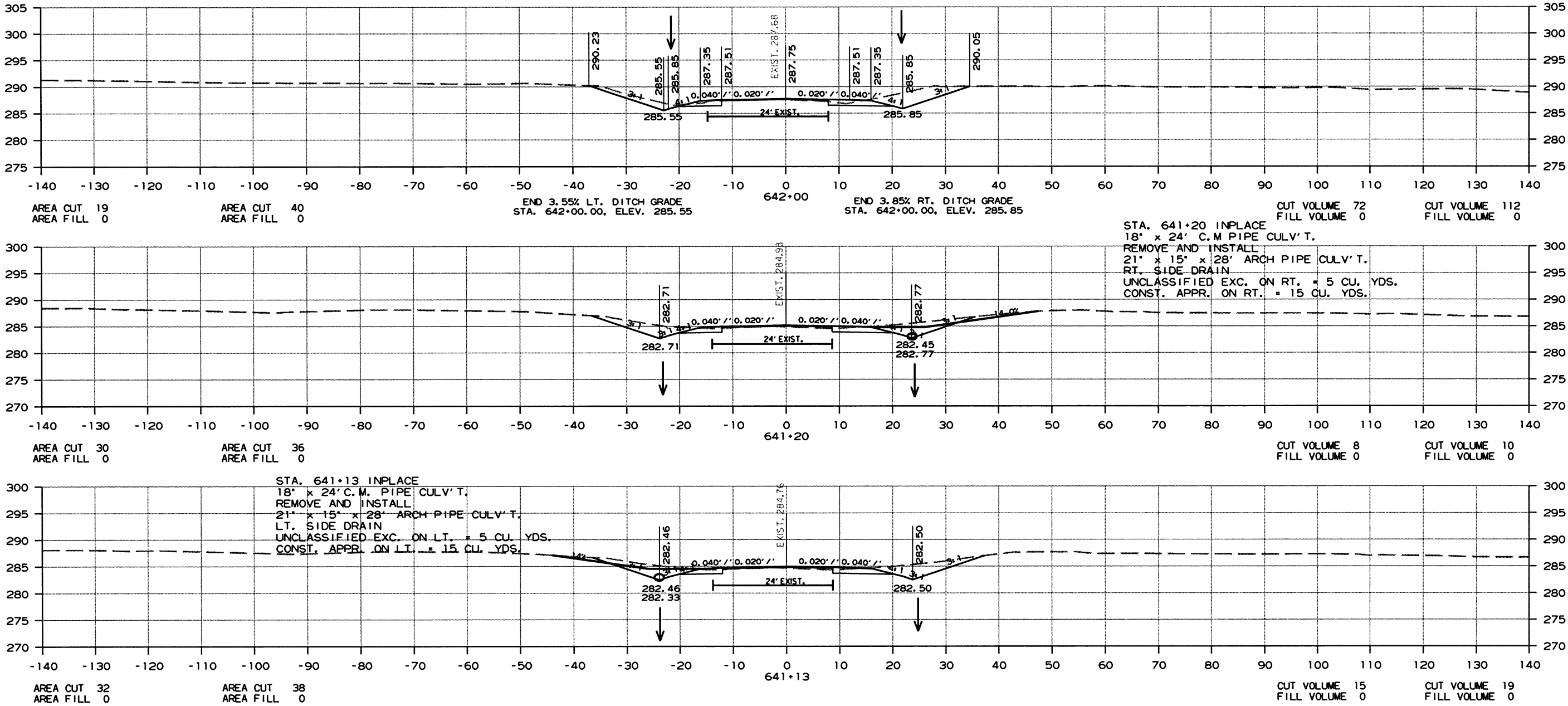
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 641+13 TO STA. 642+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.	070364		189	260

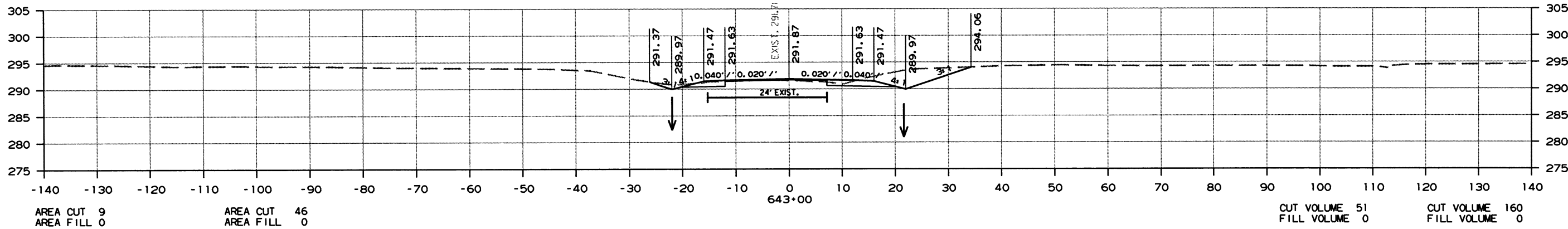
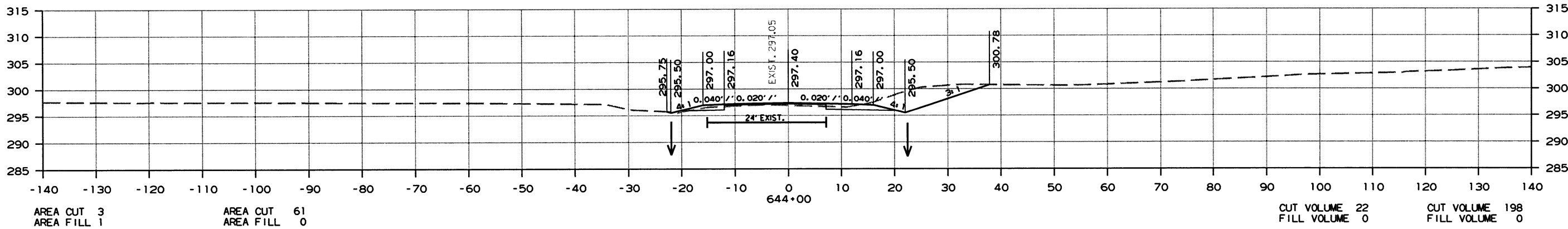
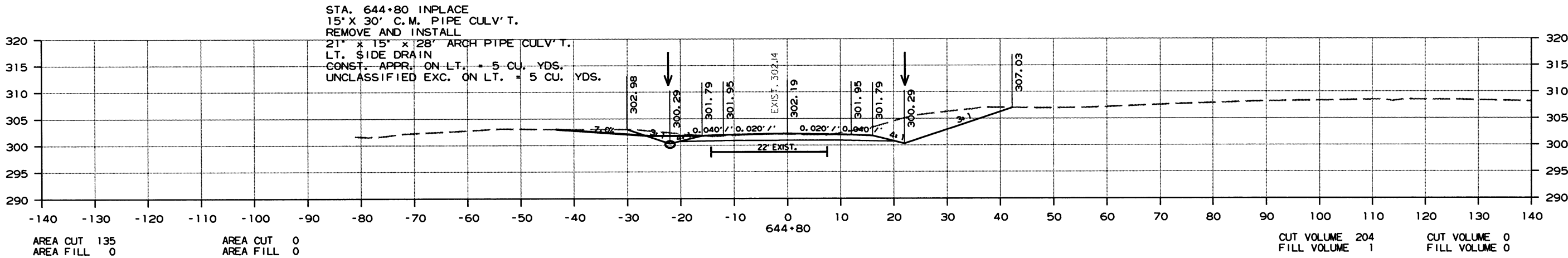
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 643+00 TO STA. 644+80

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. 070364		190	260	

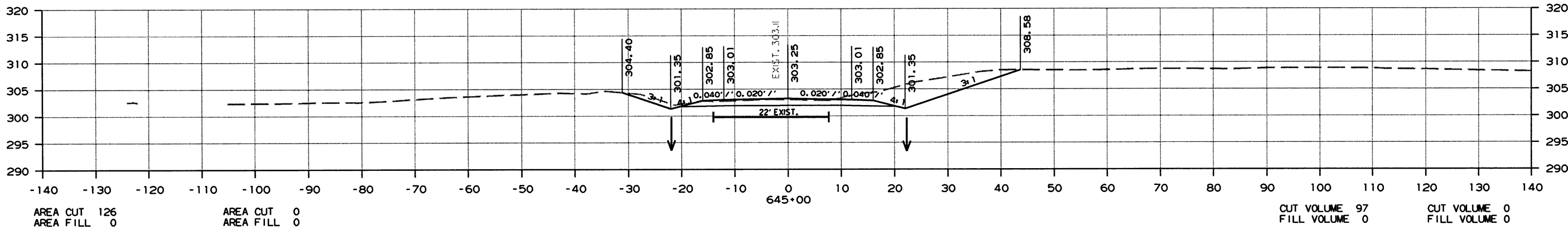
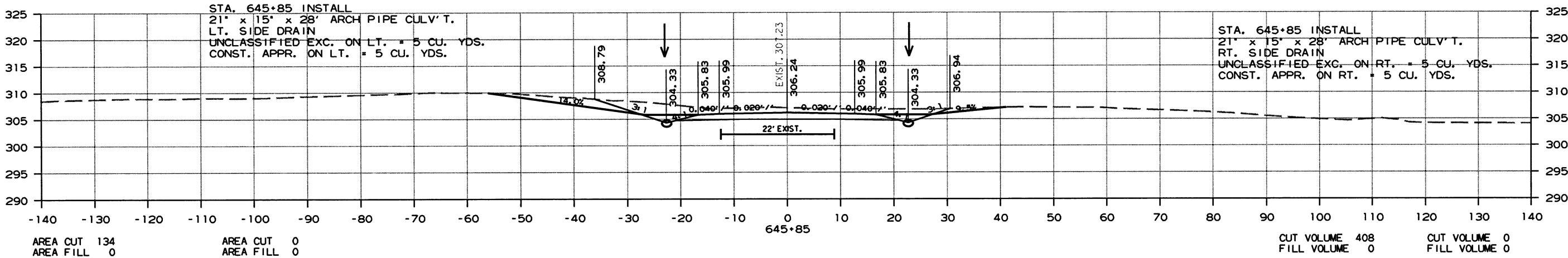
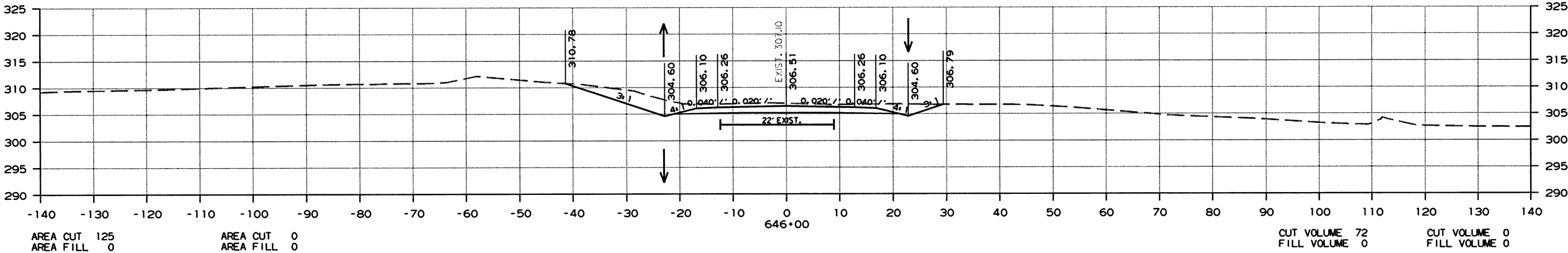
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 645+00 TO STA. 646+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. 070364		191	260	

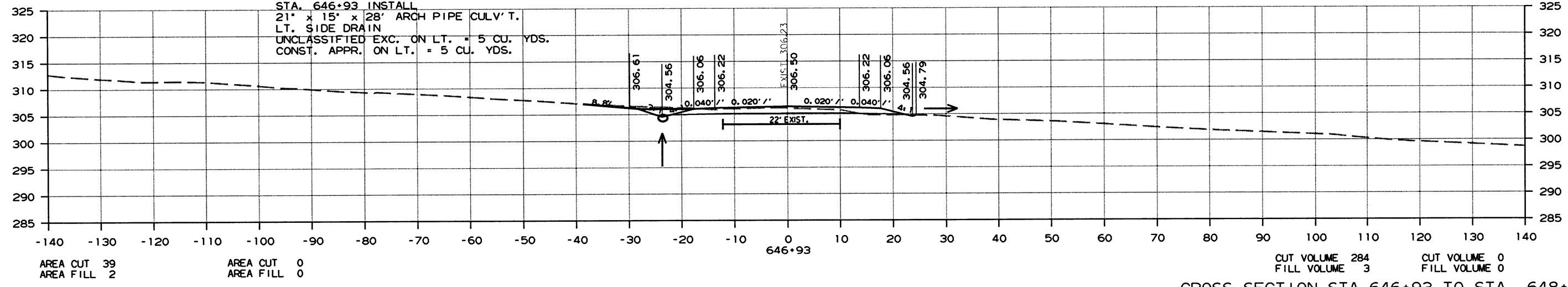
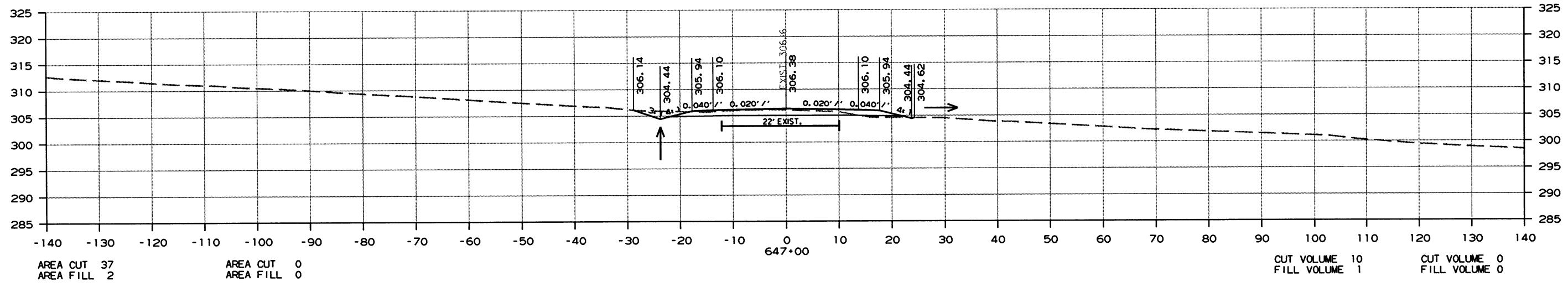
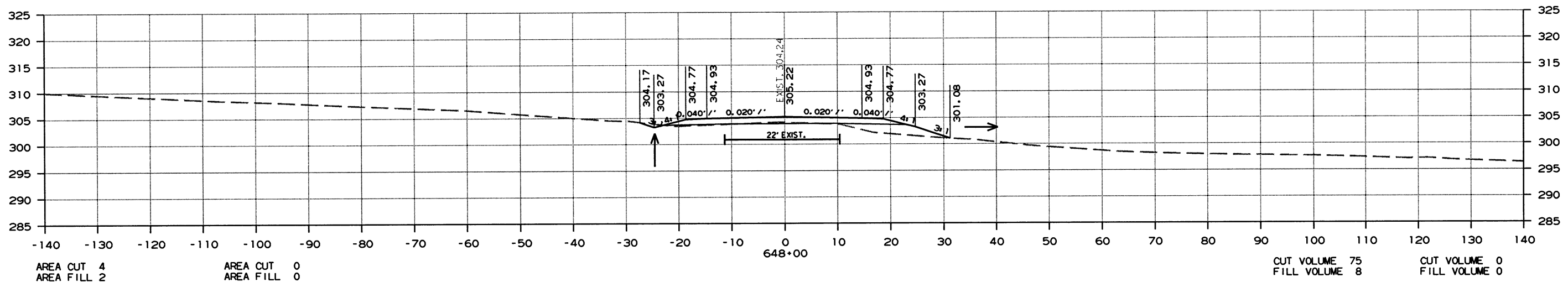
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 646+93 TO STA. 648+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.	070364		193	260

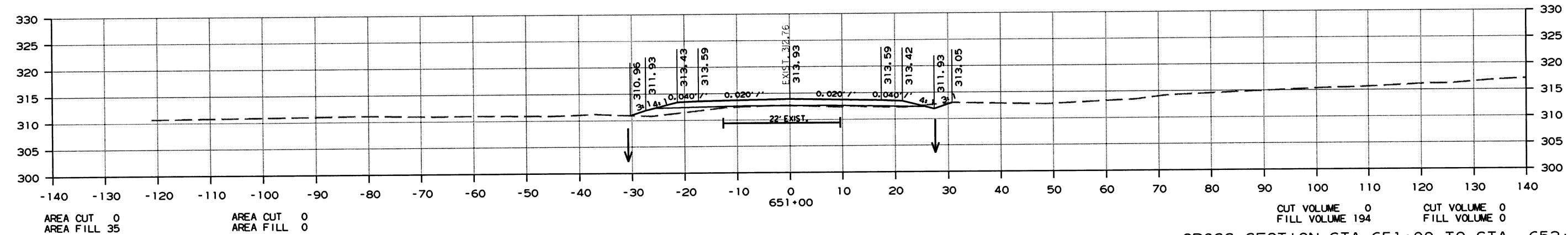
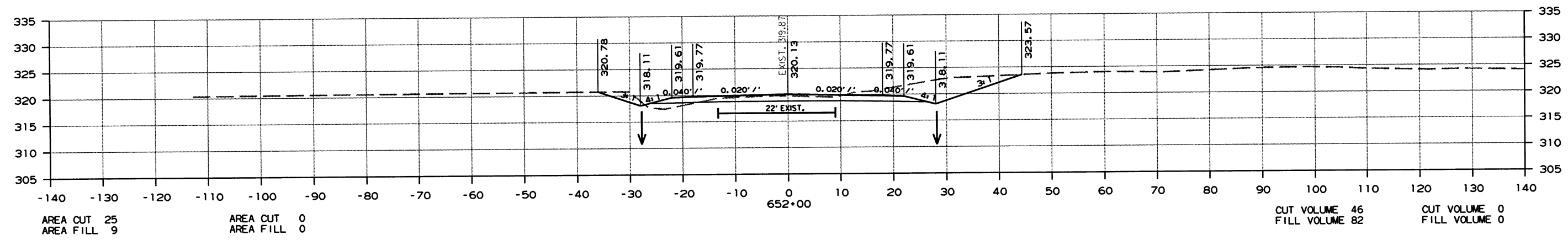
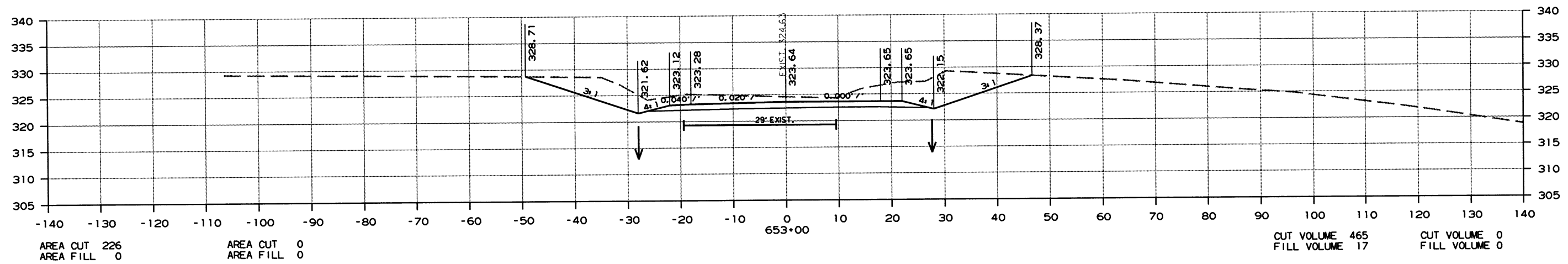
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 651+00 TO STA. 653+00

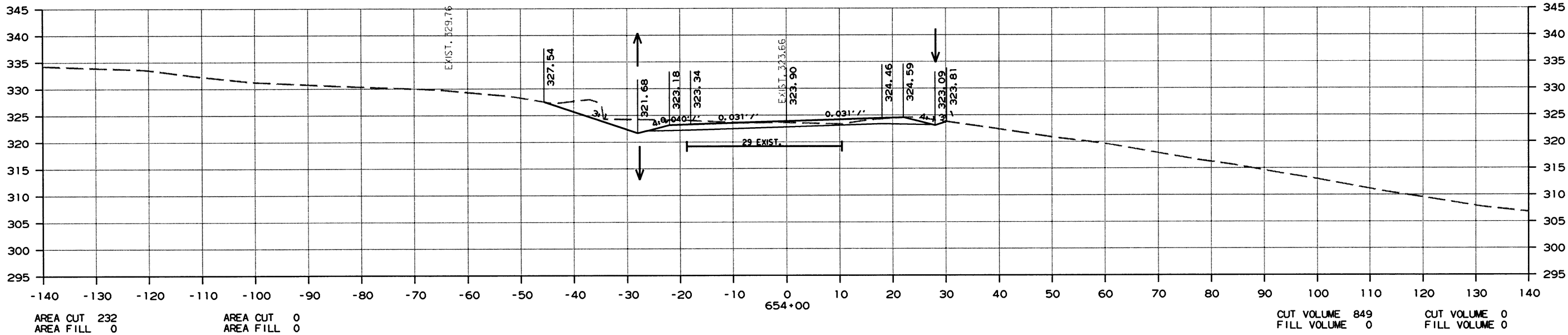
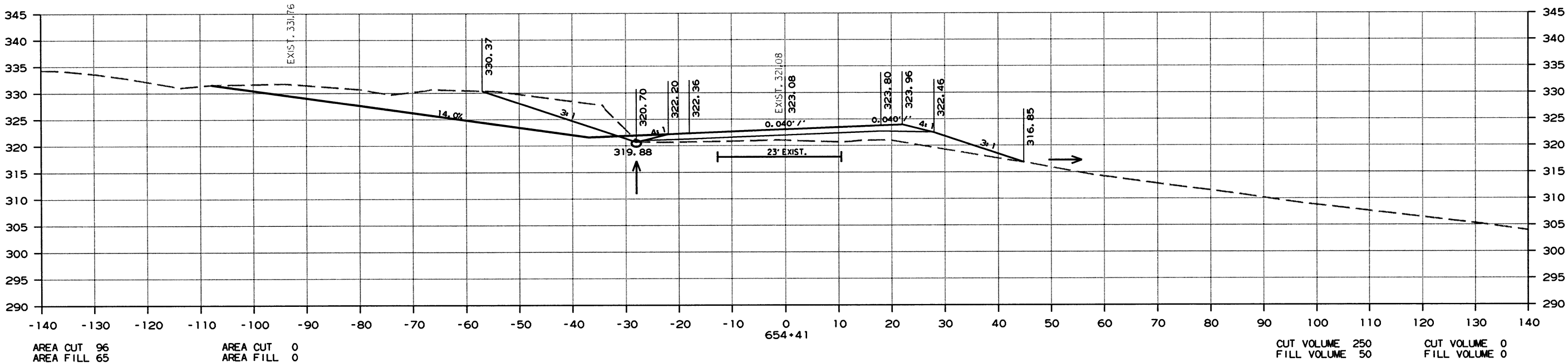
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070364		194	260
2 CROSS SECTIONS								

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 654+00 TO STA. 654+41

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. 070364			195	260

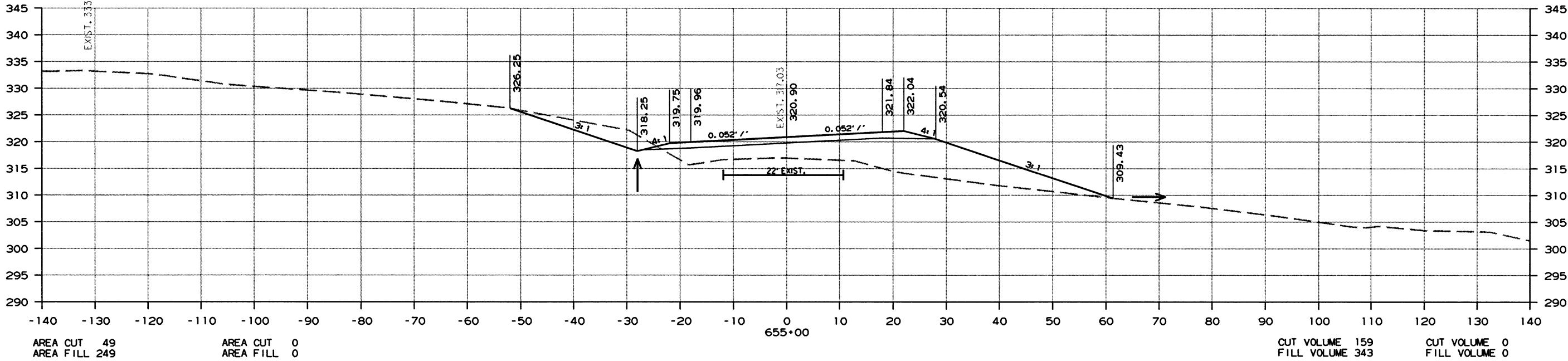
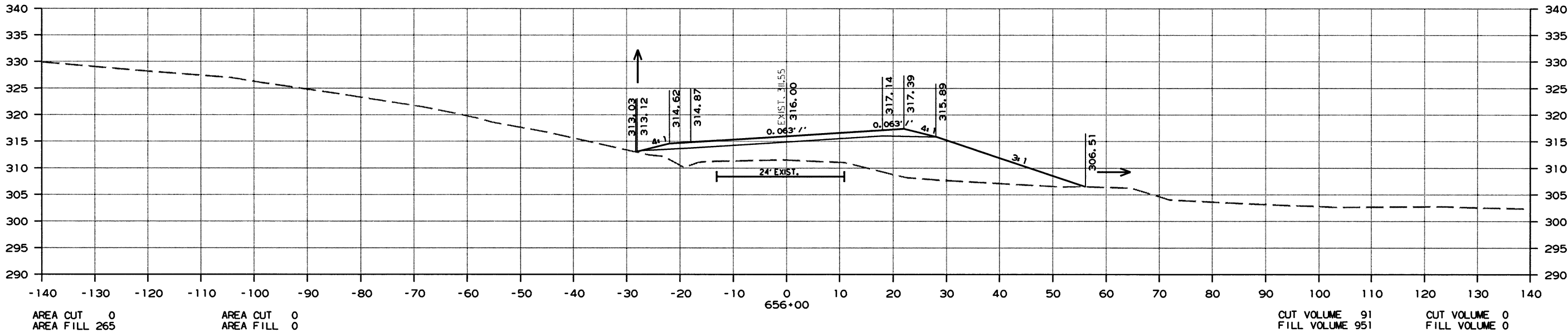
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 655+00 TO STA. 656+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. 070364			196	260

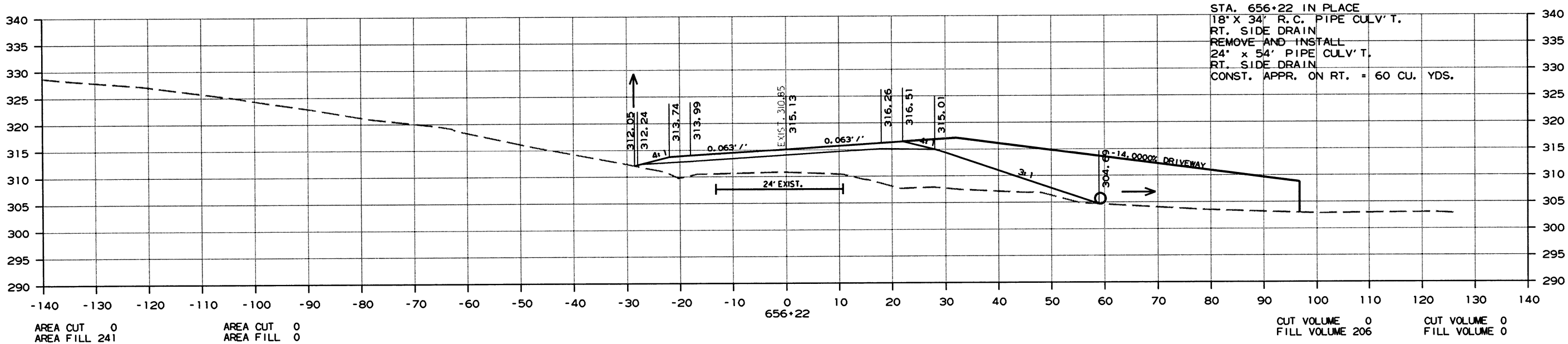
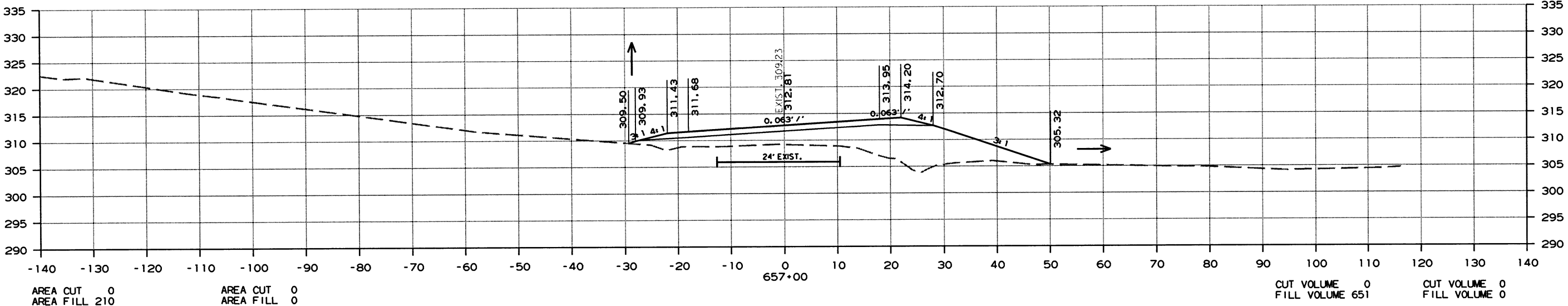
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 656+22 TO STA. 657+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. 070364	197	260

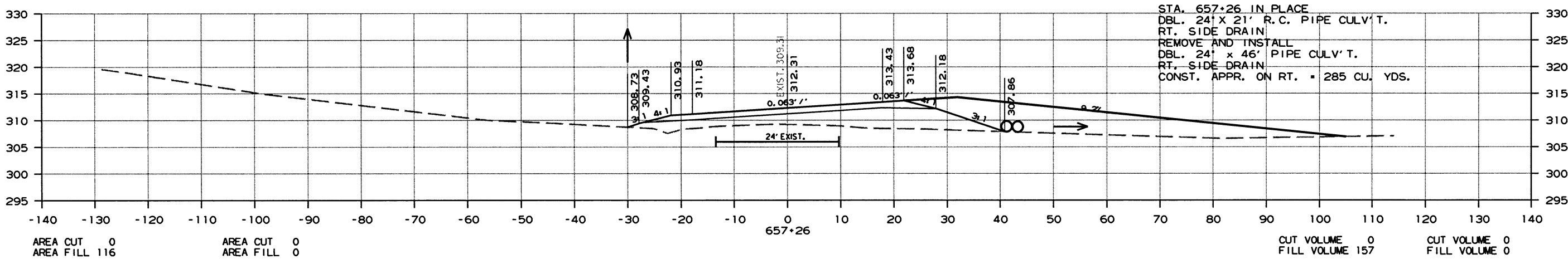
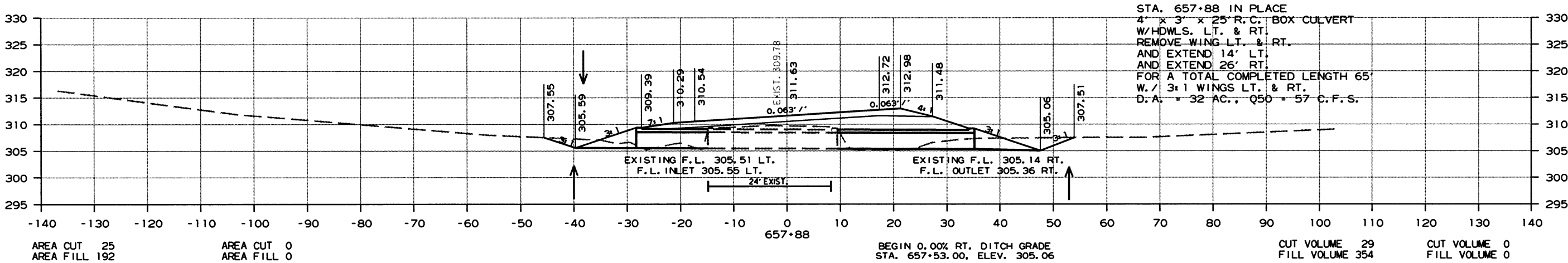
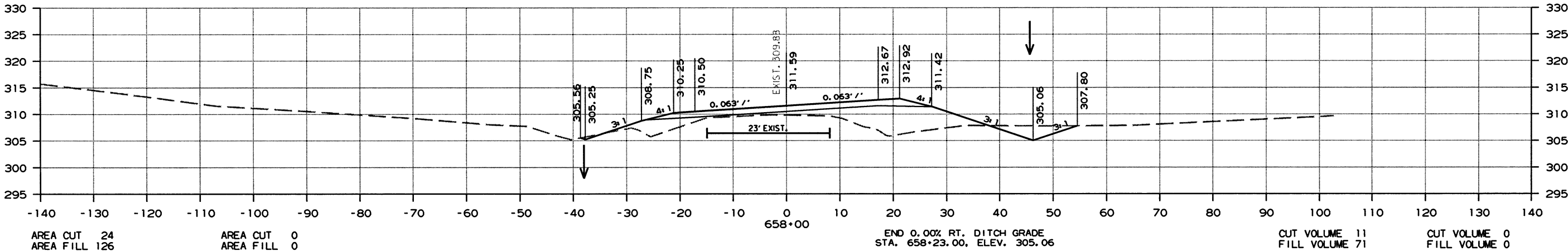
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 657+26 TO STA. 658+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. 070364		198	260	

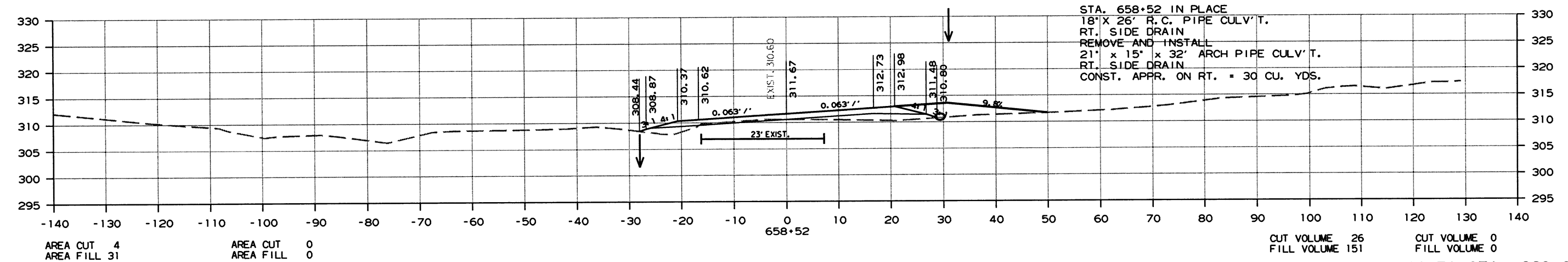
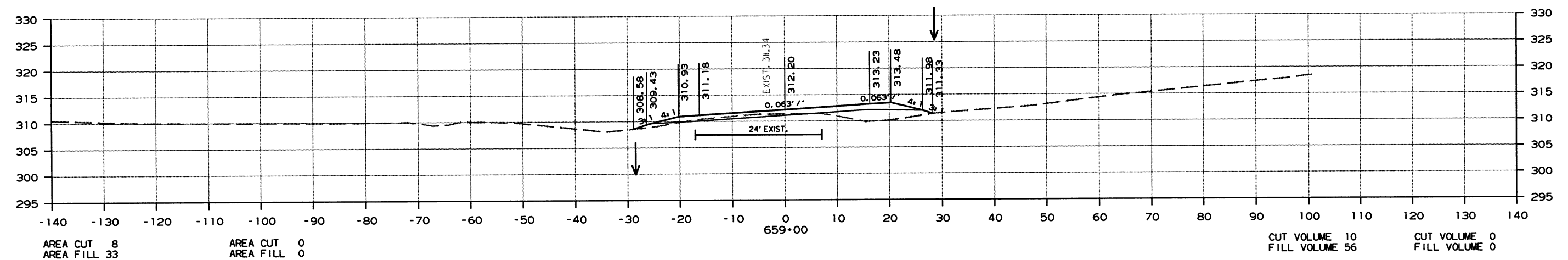
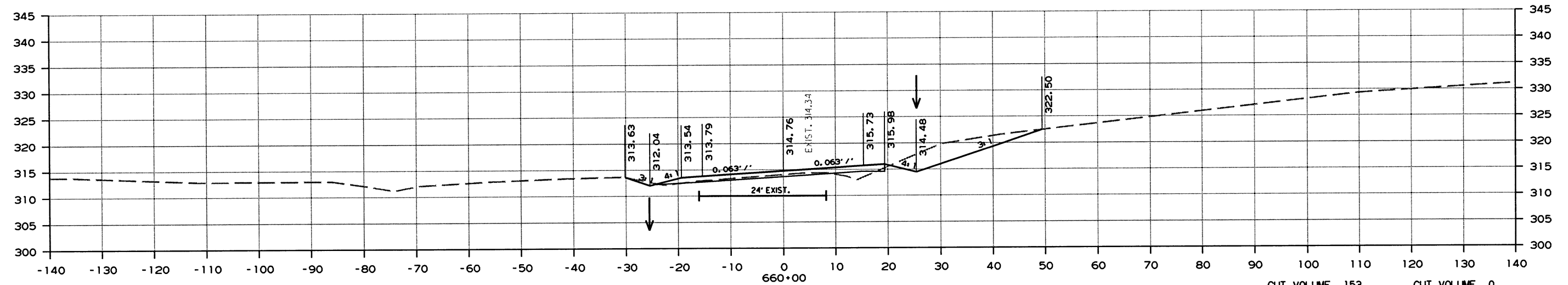
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 658+52 TO STA. 660+00

10/2/2016

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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. 070364			199	260

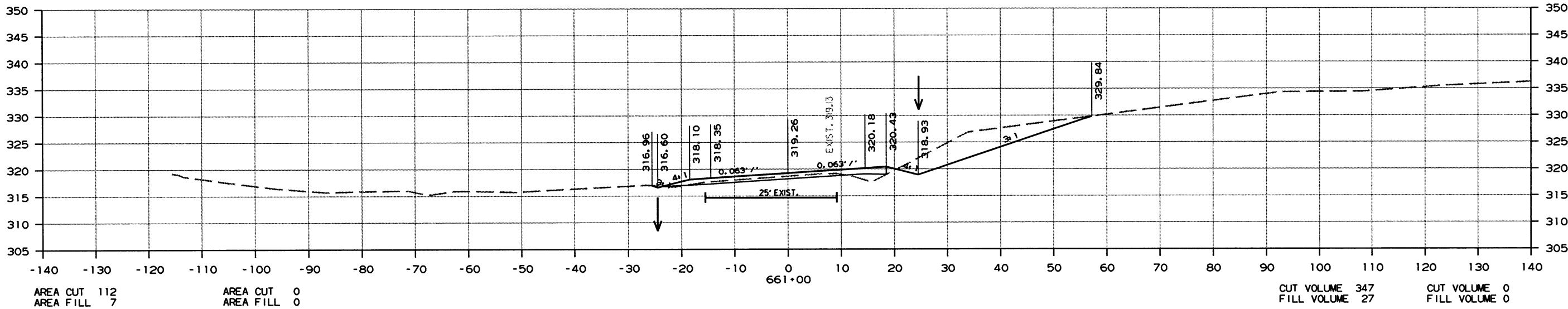
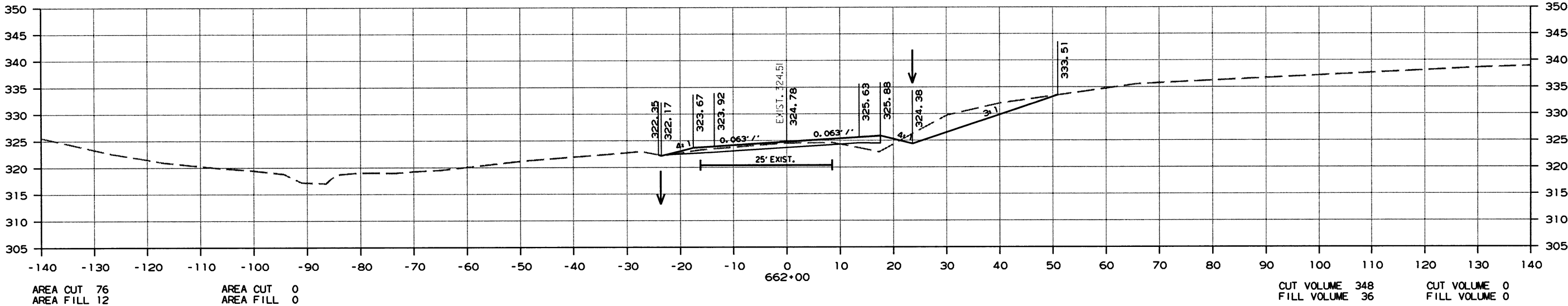
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 661+00 TO STA. 662+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. 070364			200	260

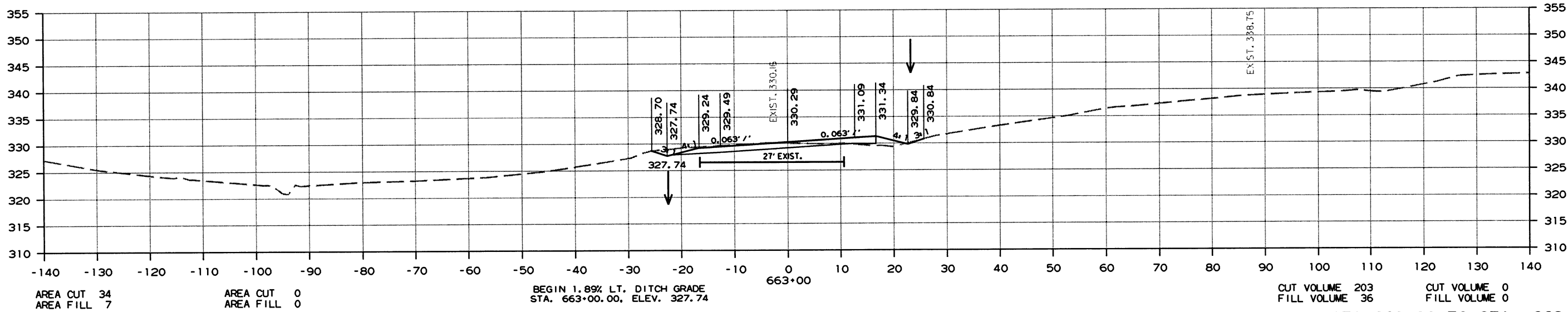
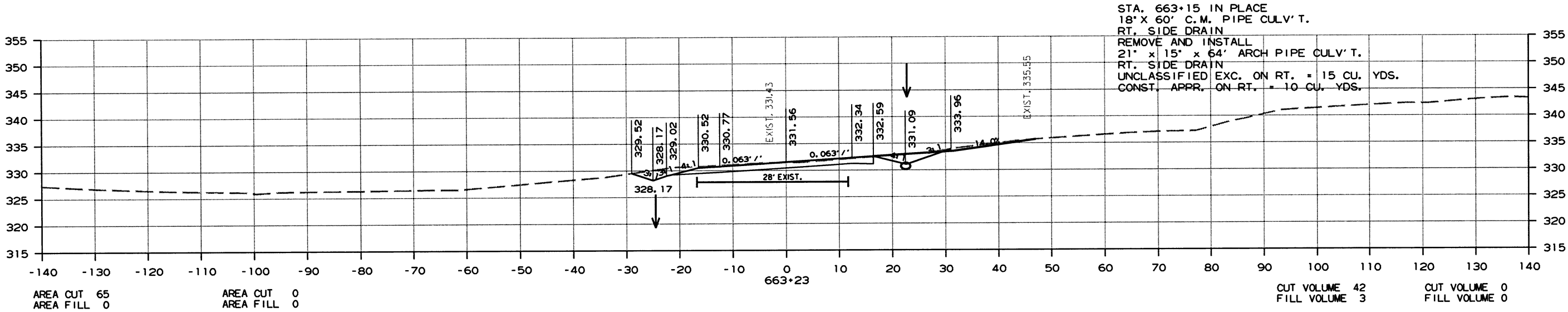
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 663+00 TO STA. 663+23

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.		070364	201	260

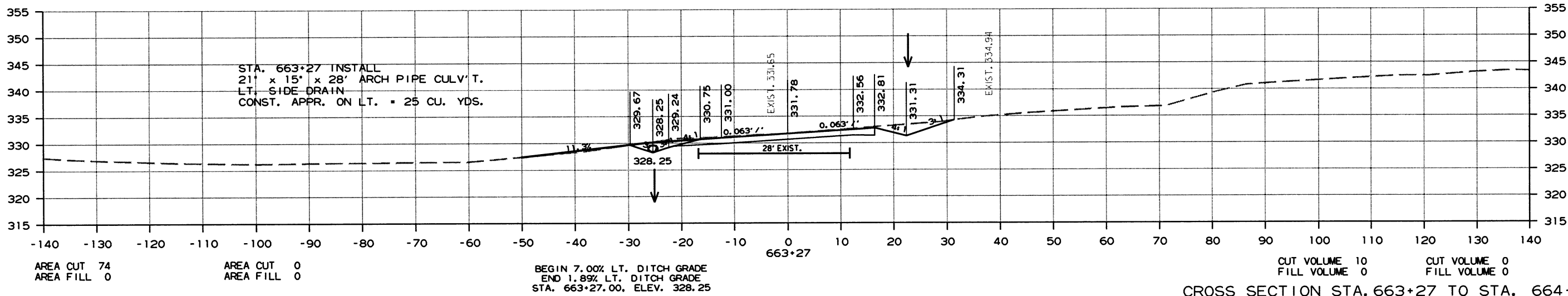
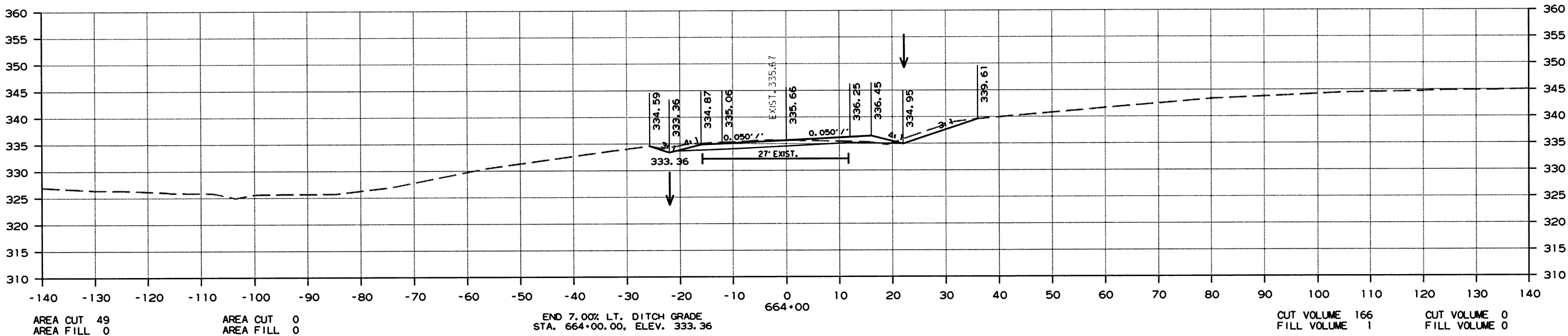
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 663+27 TO STA. 664+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. 070364	202	260

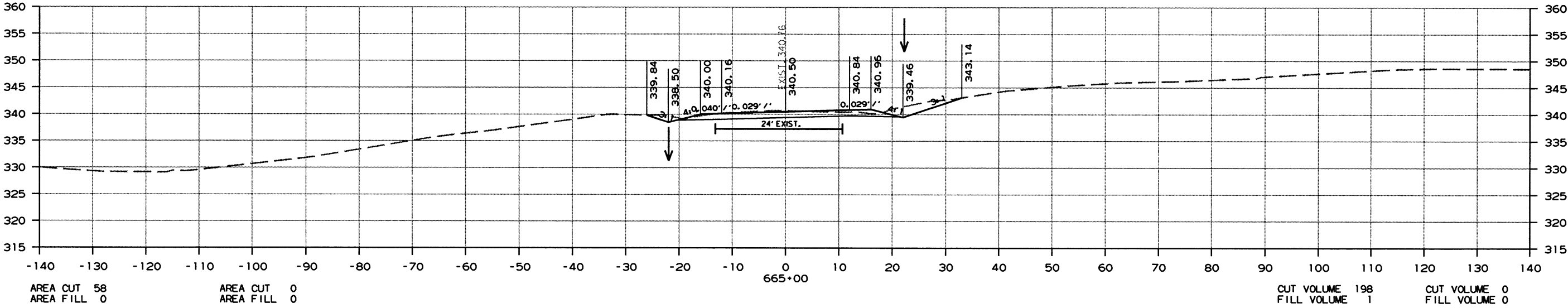
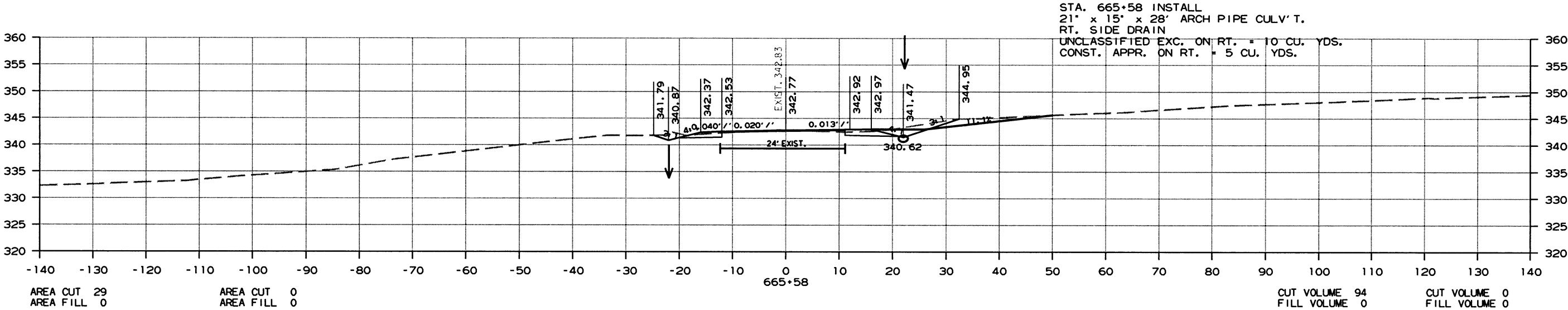
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 665+00 TO STA. 665+58

10/2/2016

R070364.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. 070364		203	260	

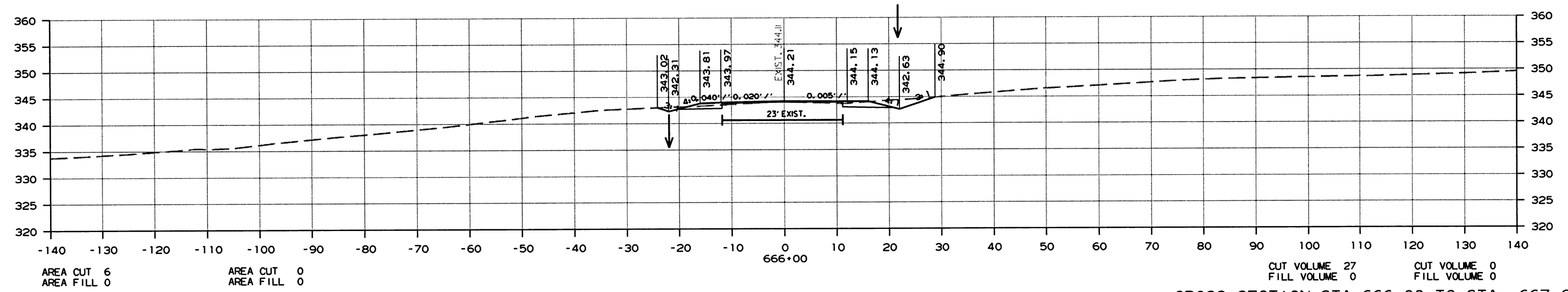
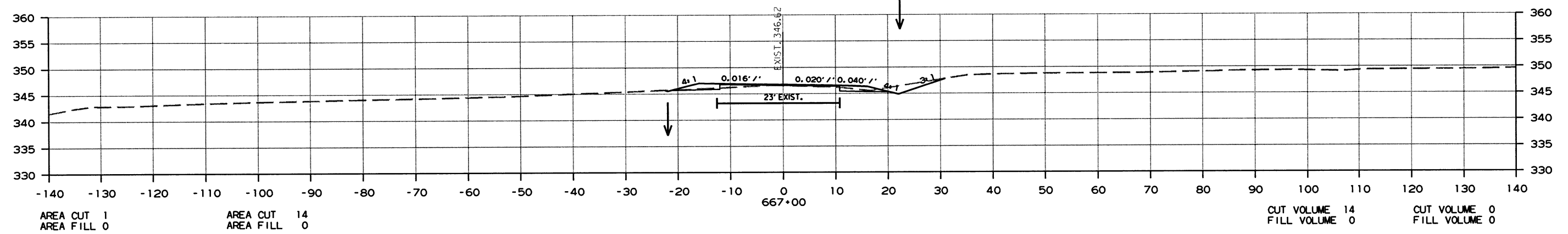
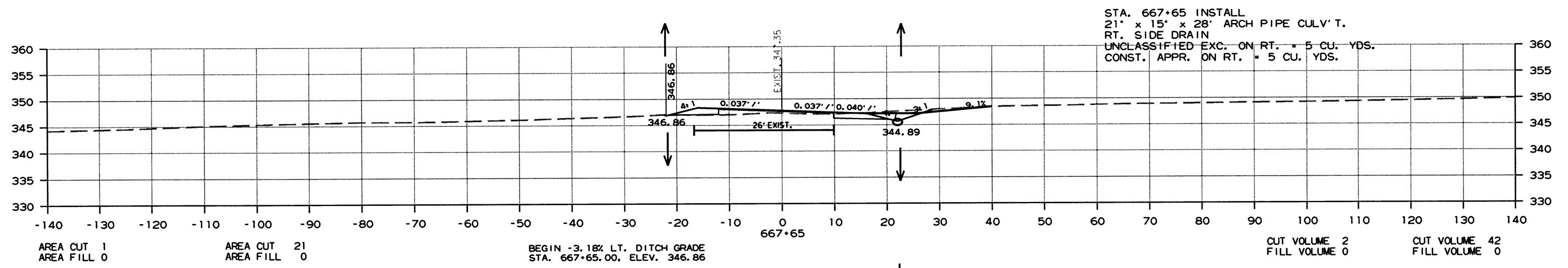
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 666+00 TO STA. 667+65

10/2/2016
R070364.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. 070364	204	260

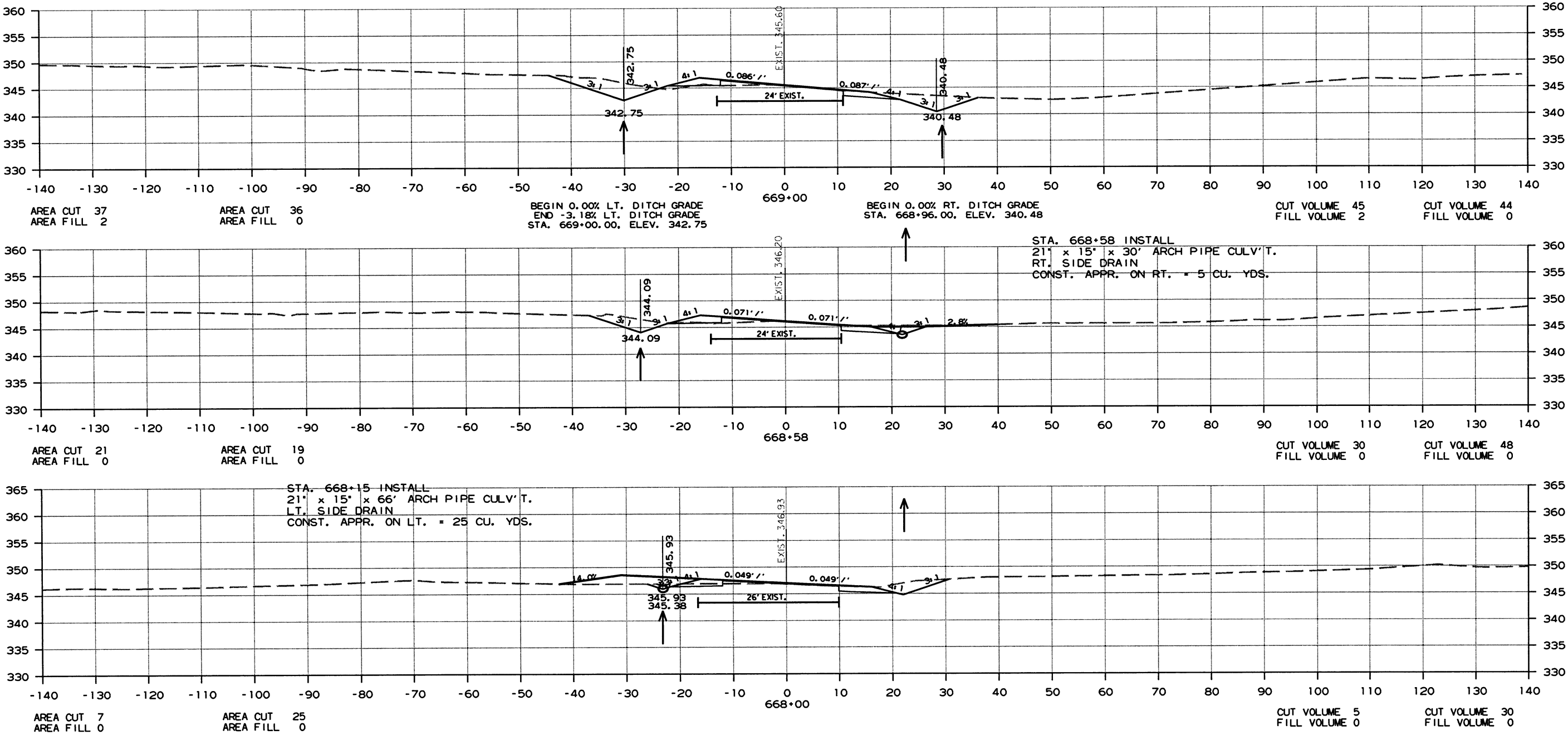
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 668+00 TO STA. 669+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.	070364		205	260

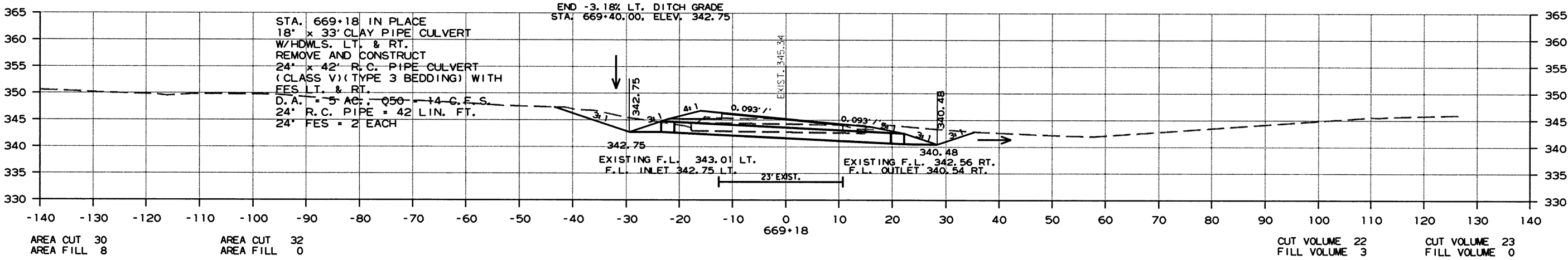
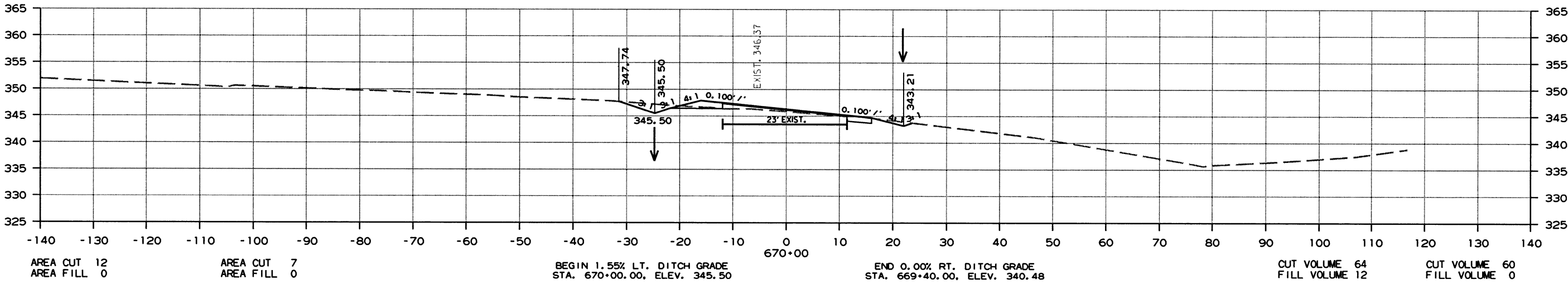
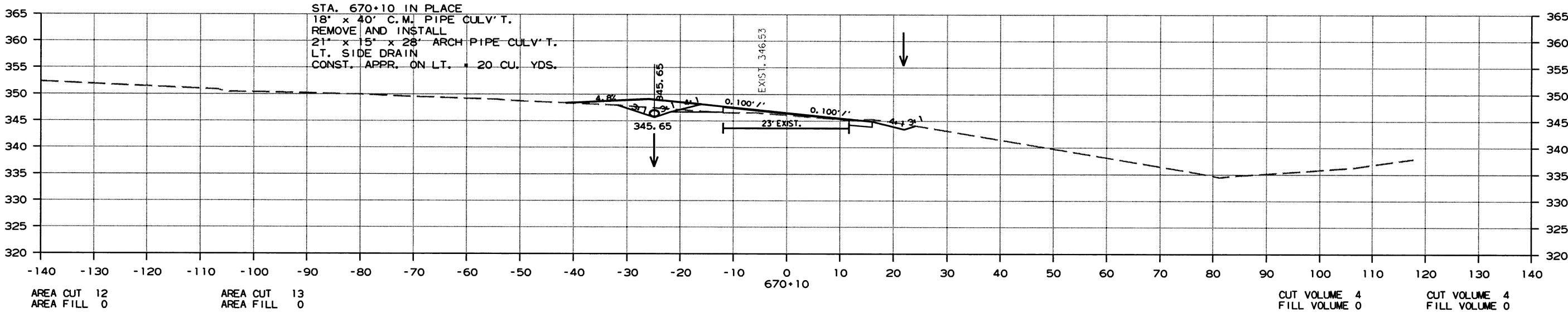
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 669+18 TO STA. 670+10

10/2/2016

R070364.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. 070364		206	260	

2 CROSS SECTIONS

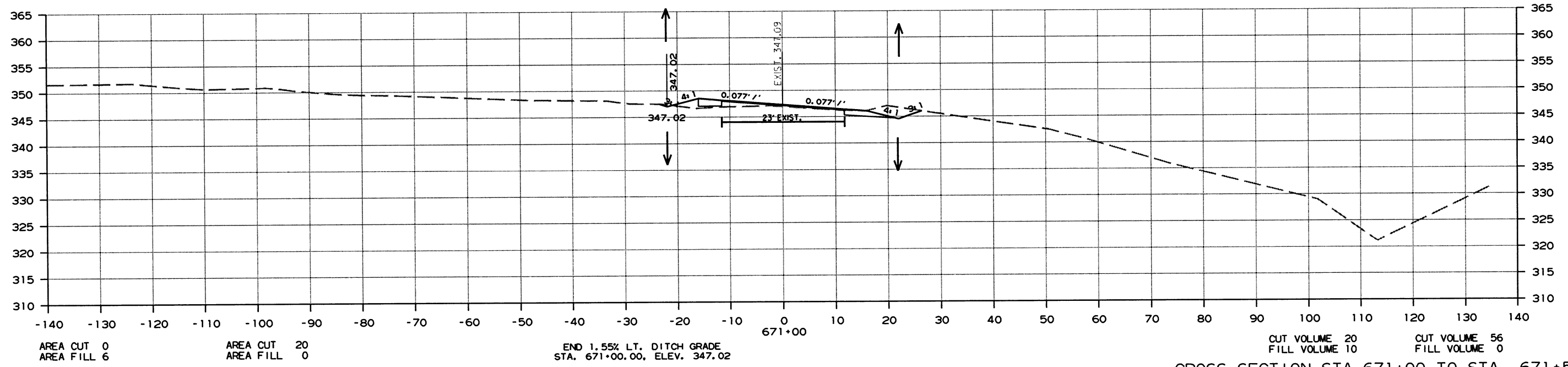
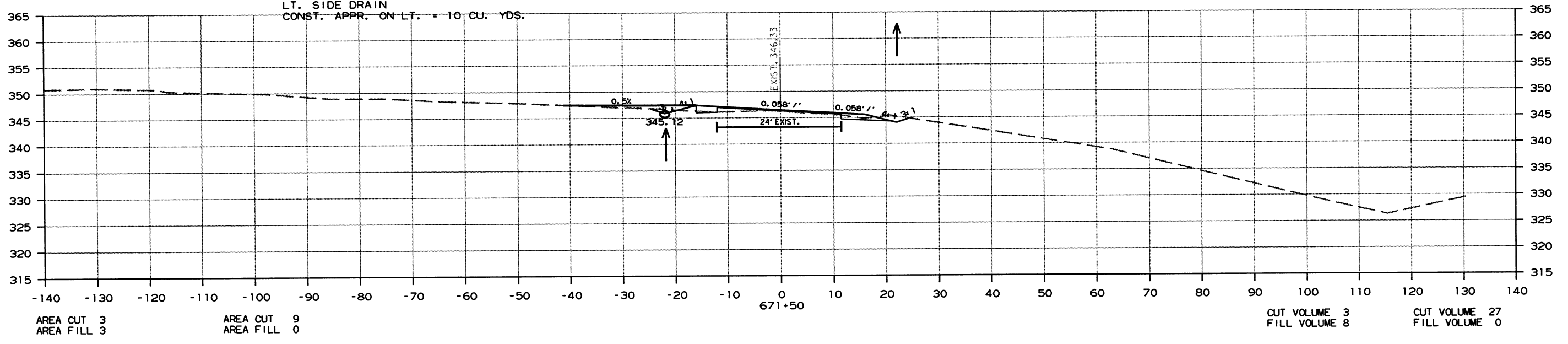
AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2

STA. 671+50 INSTALL
21" x 15" x 28' ARCH PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 10 CU. YDS.



END 1.55% LT. DITCH GRADE
STA. 671+00.00, ELEV. 347.02

CROSS SECTION STA. 671+00 TO STA. 671+50

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R070364.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. 070364	207	260

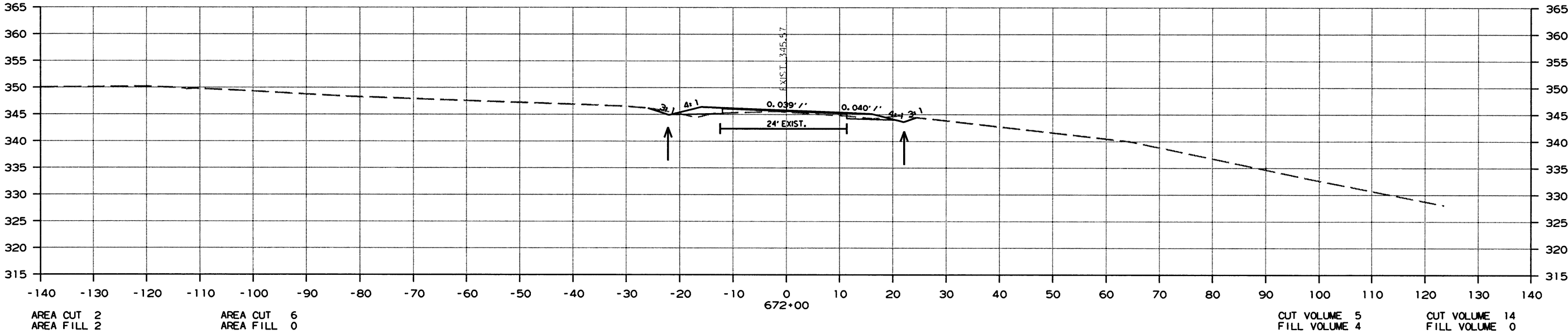
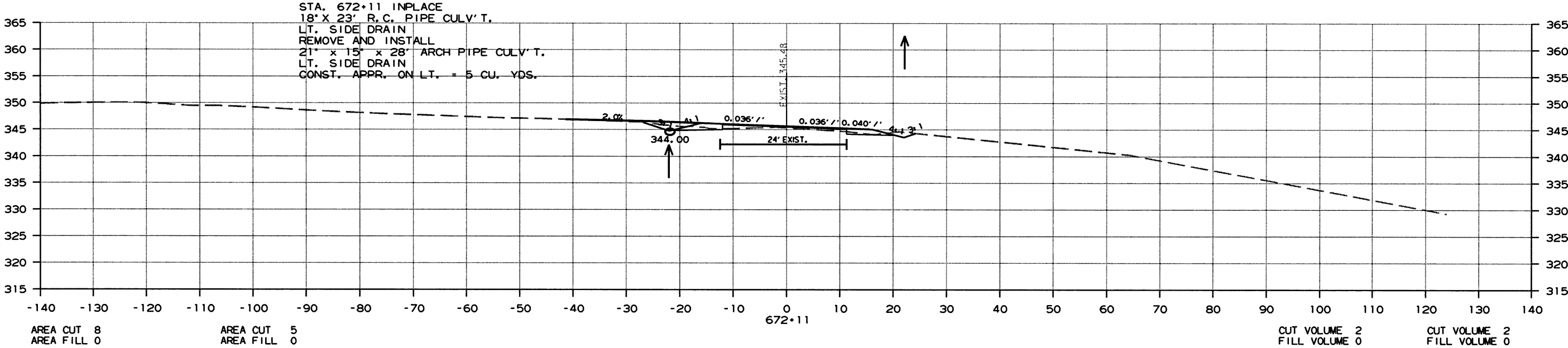
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 672+00 TO STA. 672+11

10/2/2016

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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.		070364	208	260

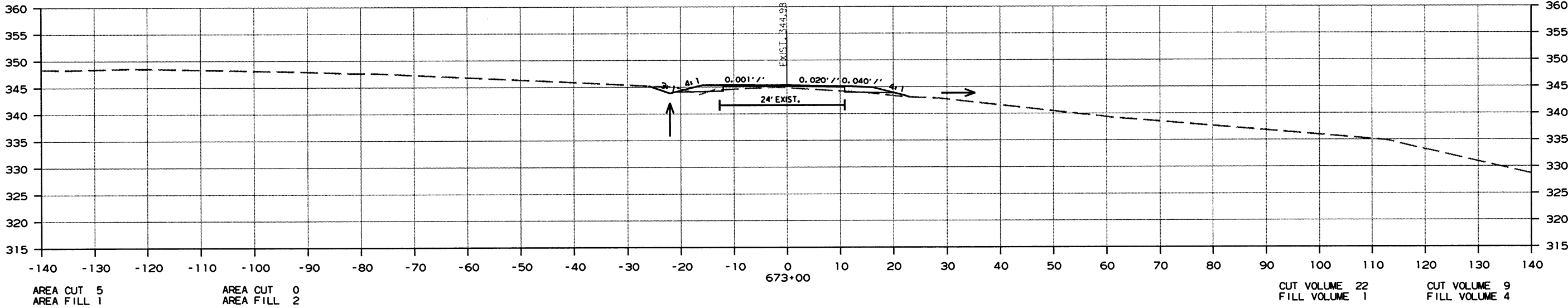
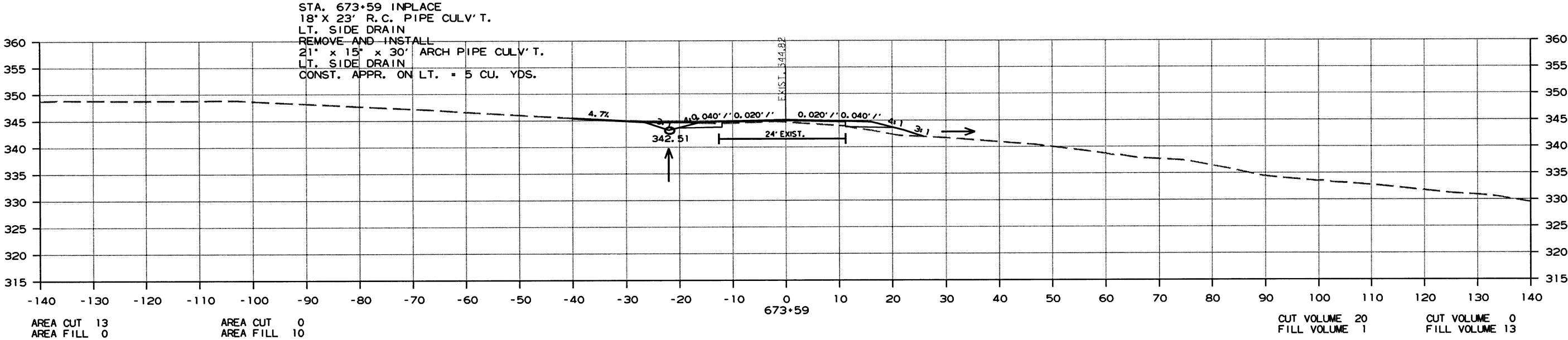
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 673+00 TO STA. 673+59

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. 070364		209	260	

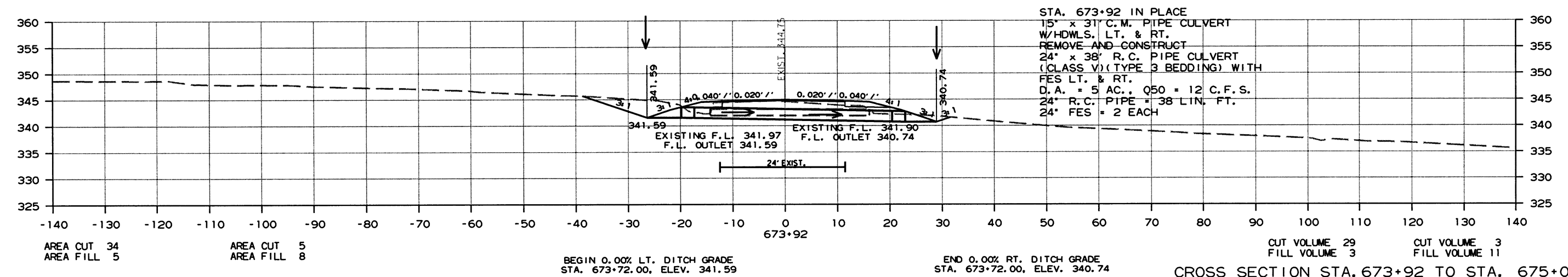
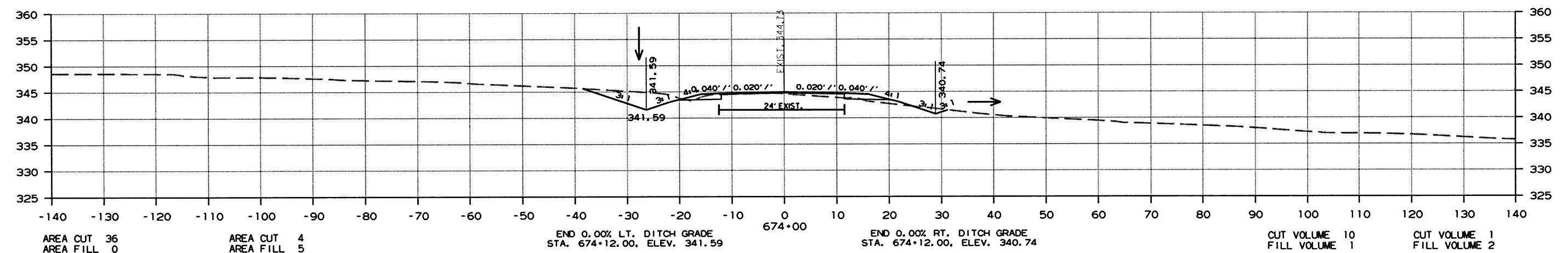
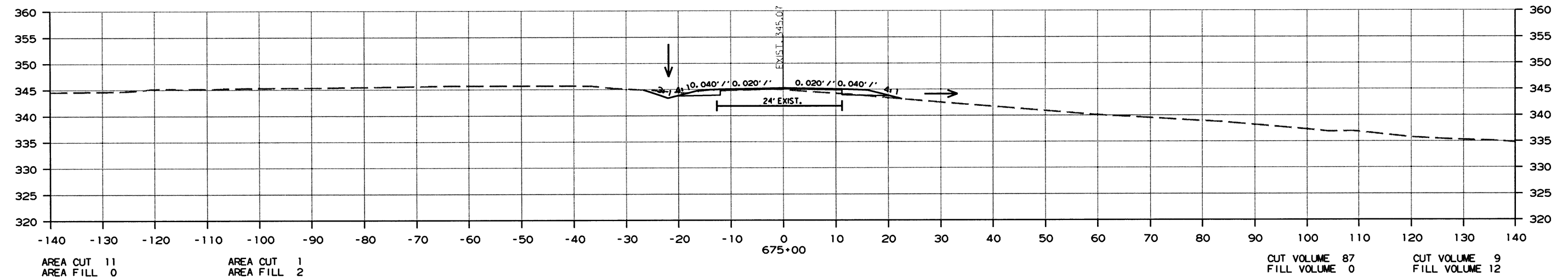
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



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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.	070364		210	260

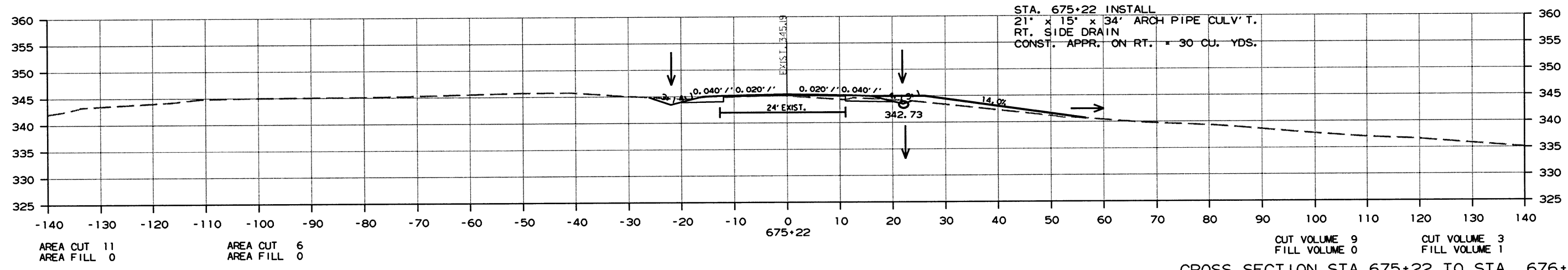
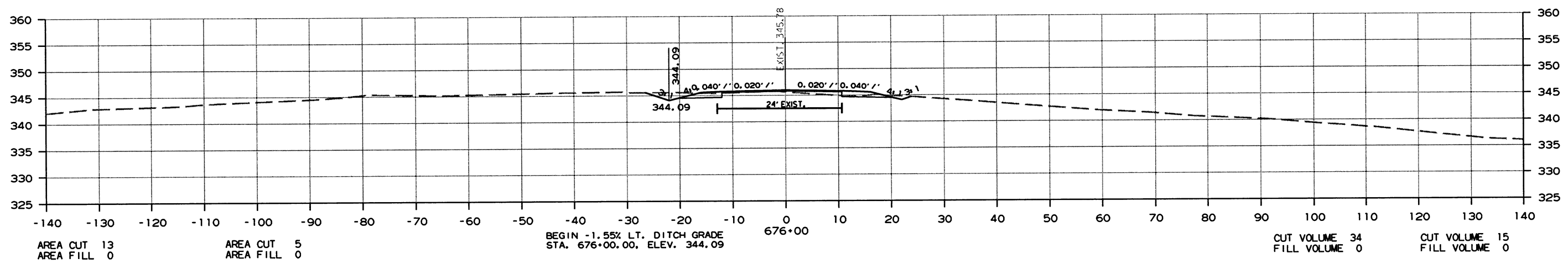
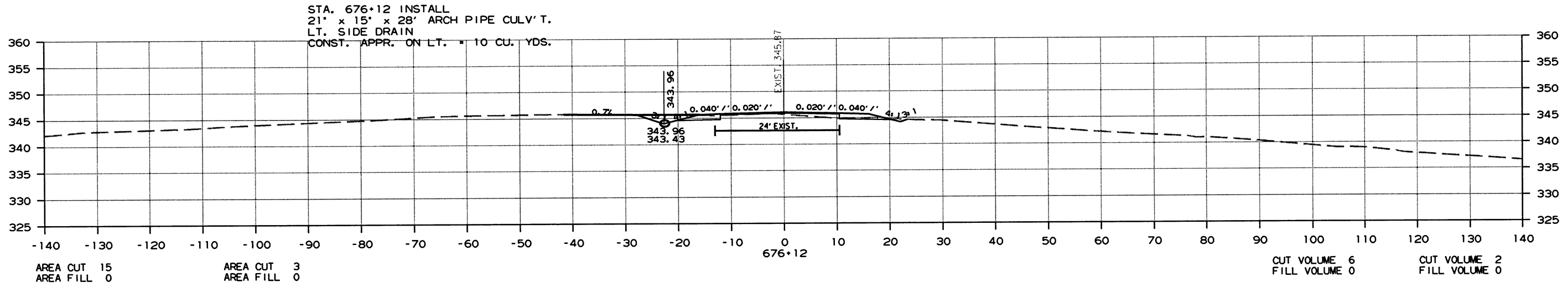
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 675+22 TO STA. 676+12

10/2/2016
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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. 070364		211	260	

2 CROSS SECTIONS

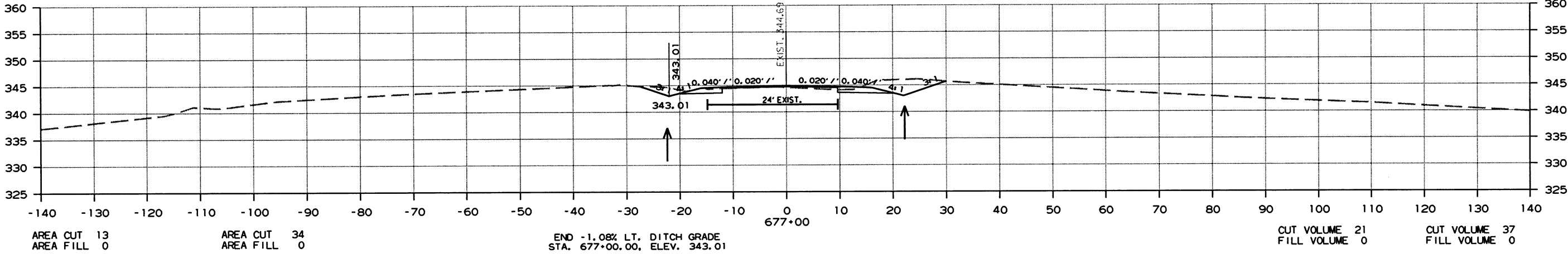
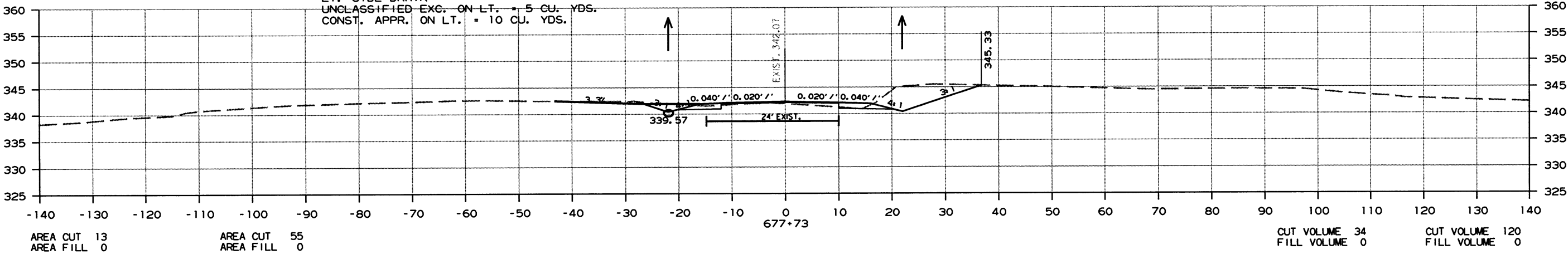
AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

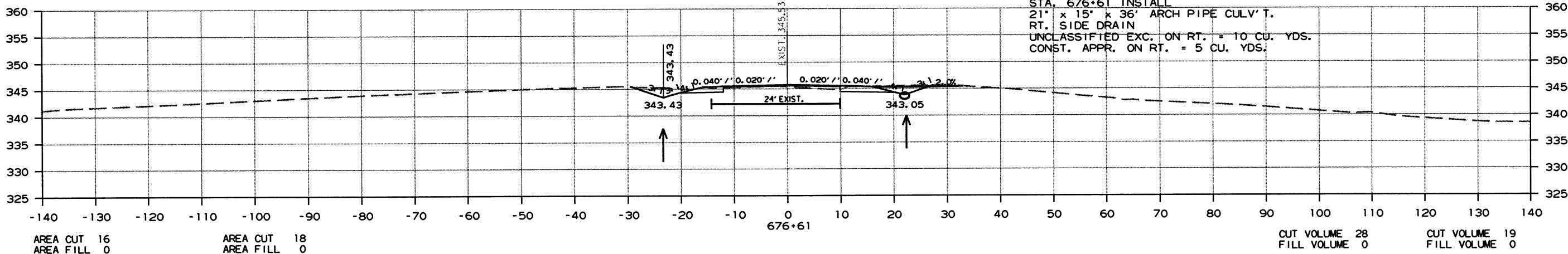
VOLUME STAGE 2

STA. 677+73 INSTALL
21" x 15" x 34' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 5 CU. YDS.
CONST. APPR. ON LT. = 10 CU. YDS.



END -1.08% LT. DITCH GRADE
STA. 677+00.00, ELEV. 343.01

STA. 676+61 INSTALL
21" x 15" x 36' ARCH PIPE CULV'T.
RT. SIDE DRAIN
UNCLASSIFIED EXC. ON RT. = 10 CU. YDS.
CONST. APPR. ON RT. = 5 CU. YDS.



CROSS SECTION STA. 676+61 TO STA. 677+73

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. 070364	212	260

2 CROSS SECTIONS

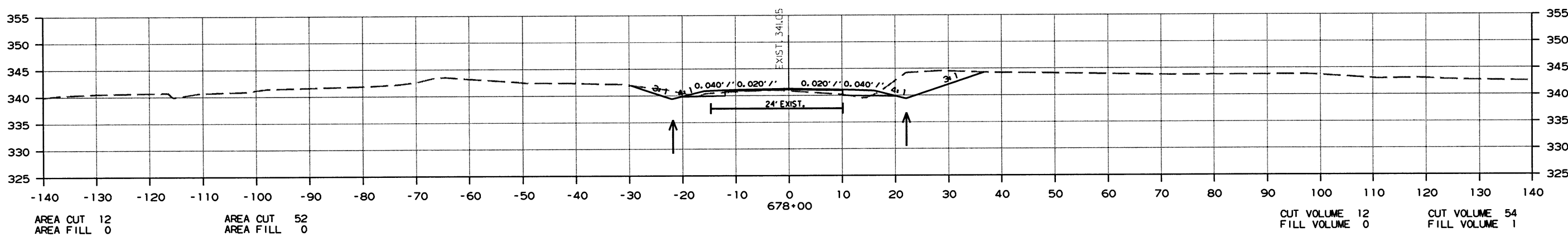
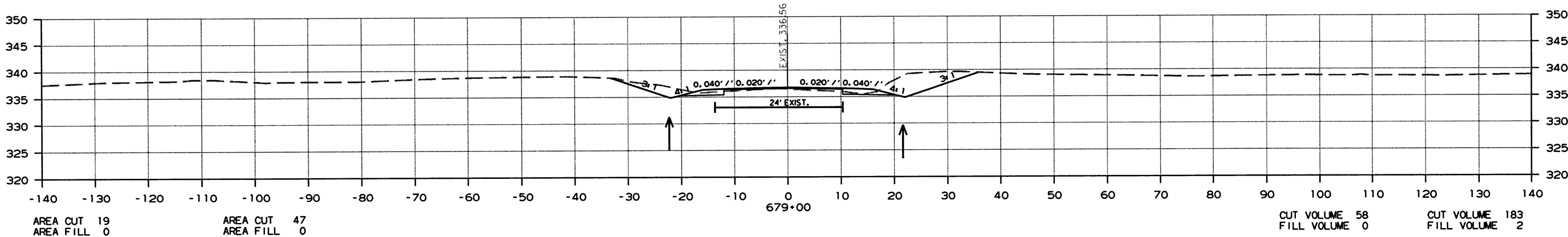
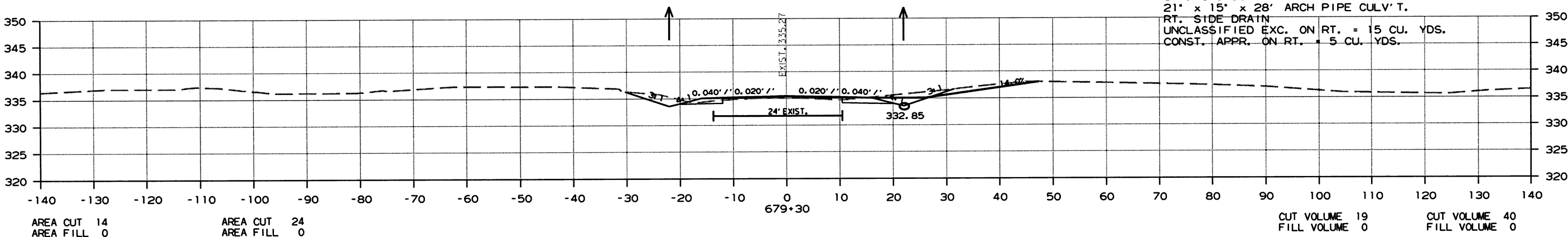
AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2

STA. 679+30 INSTALL
21' x 15' x 28' ARCH PIPE CULV'T.
RT. SIDE DRAIN
UNCLASSIFIED EXC. ON RT. = 15 CU. YDS.
CONST. APPR. ON RT. = 5 CU. YDS.



CROSS SECTION STA. 678+00 TO STA. 679+30

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.		070364	213	260

2 CROSS SECTIONS

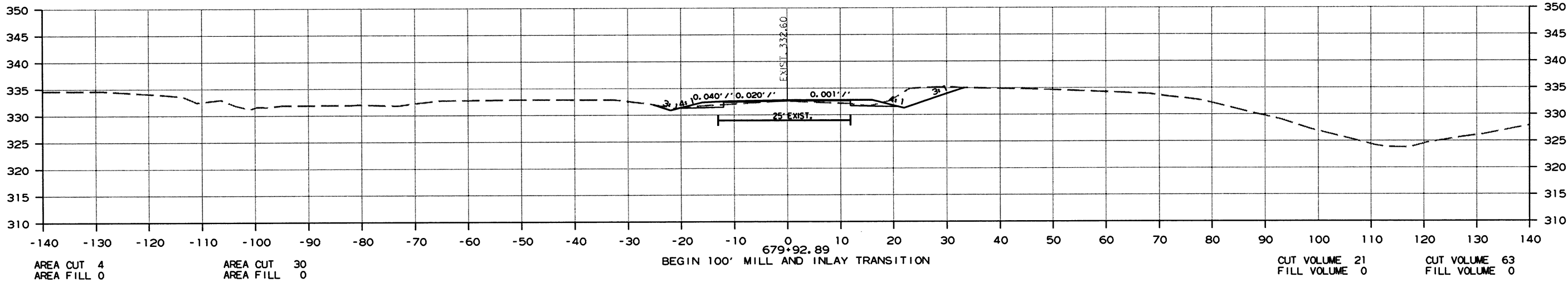
AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2

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R070364.DGN



CROSS SECTION STA. 679+92.89 TO STA. 679+92.89

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. 070364	214	260

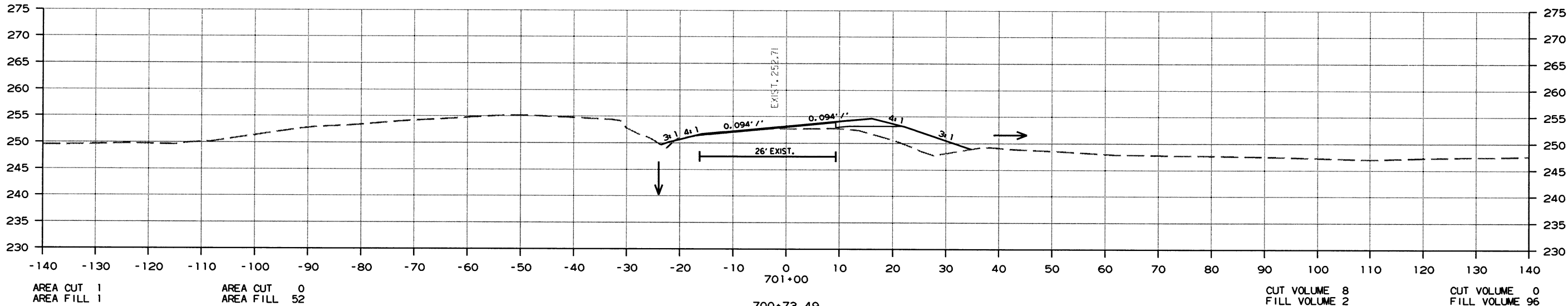
2 CROSS SECTIONS

AREA STAGE 1

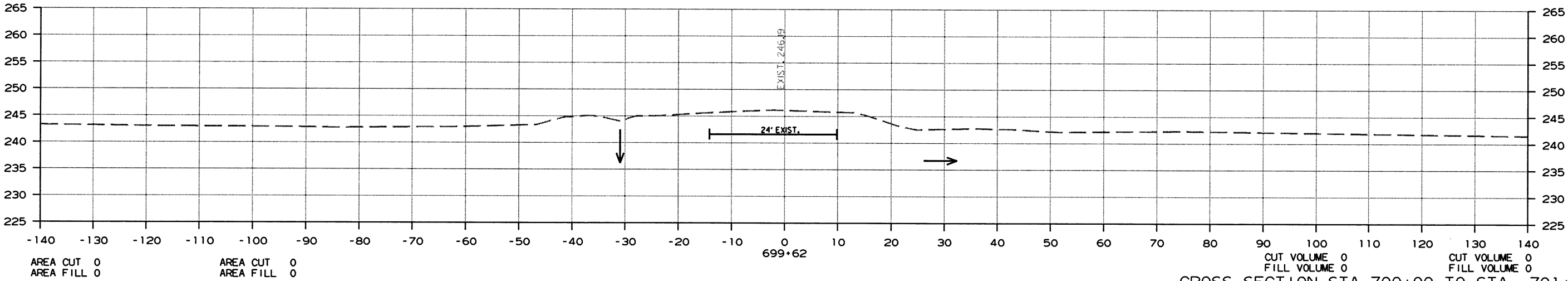
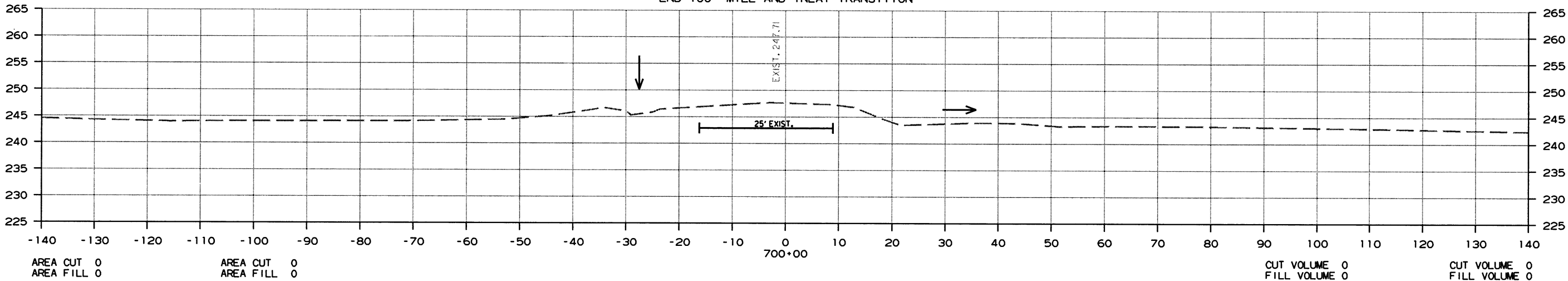
AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



700+73.49
END 100' MILL AND INLAY TRANSITION



CROSS SECTION STA. 700+00 TO STA. 701+00

10/2/2016

R070364.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. 070364			215	260

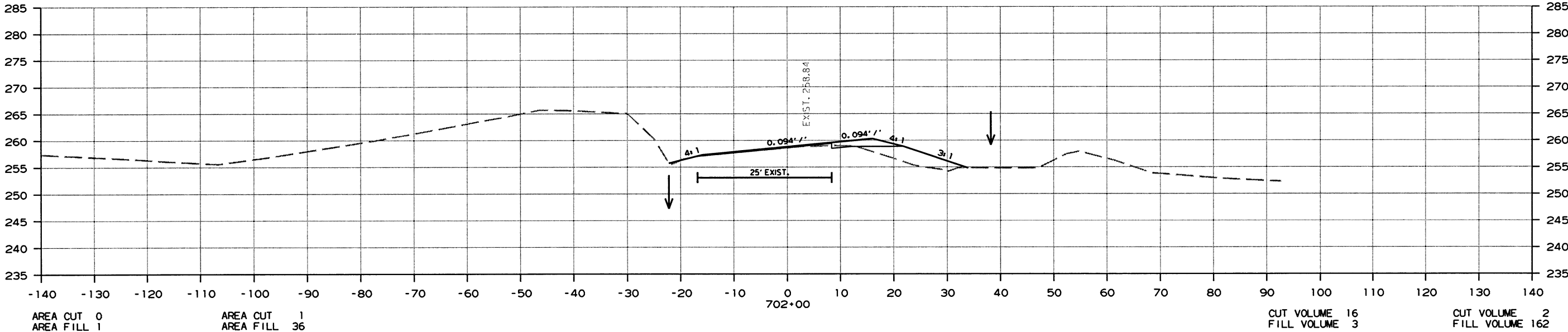
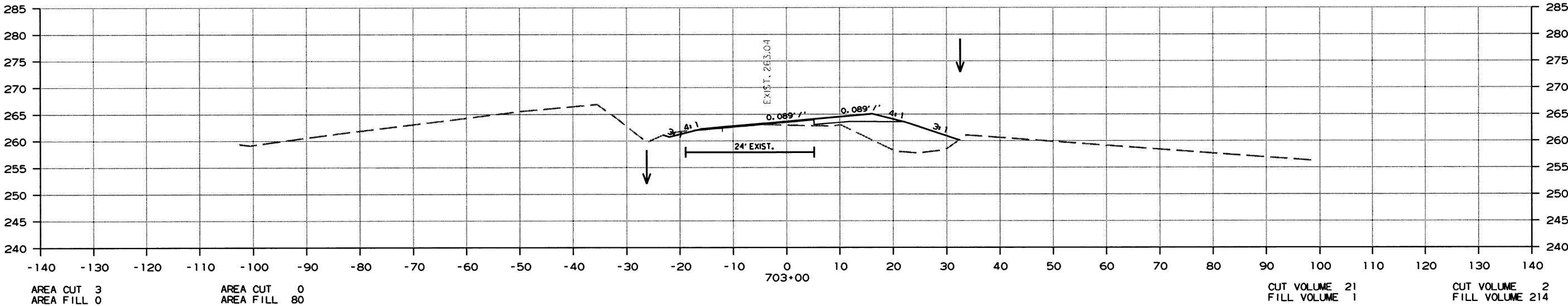
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 702+00 TO STA. 703+00

10/2/2016

R070364.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. 070364	216	260

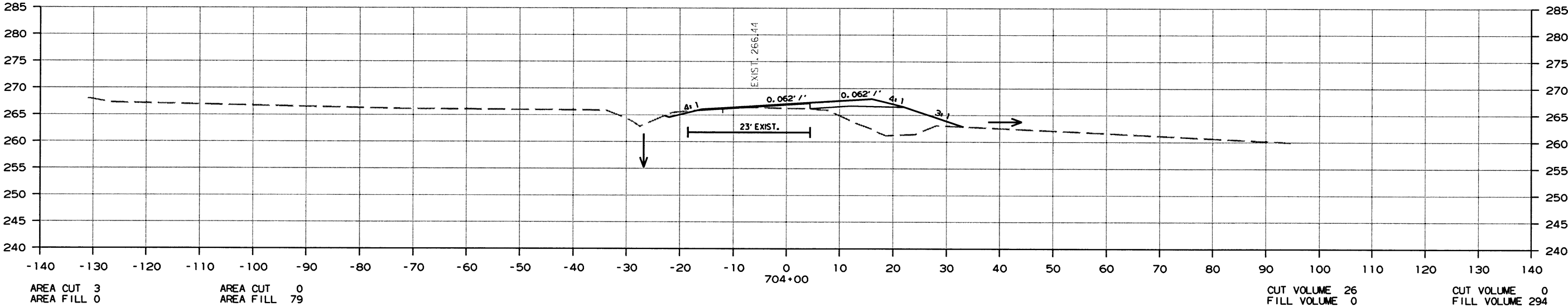
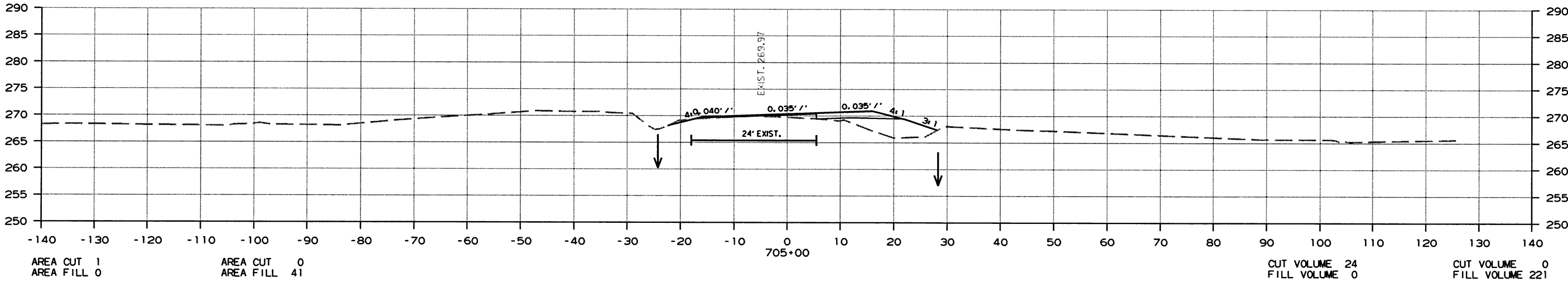
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 704+00 TO STA. 705+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.	070364	217	260

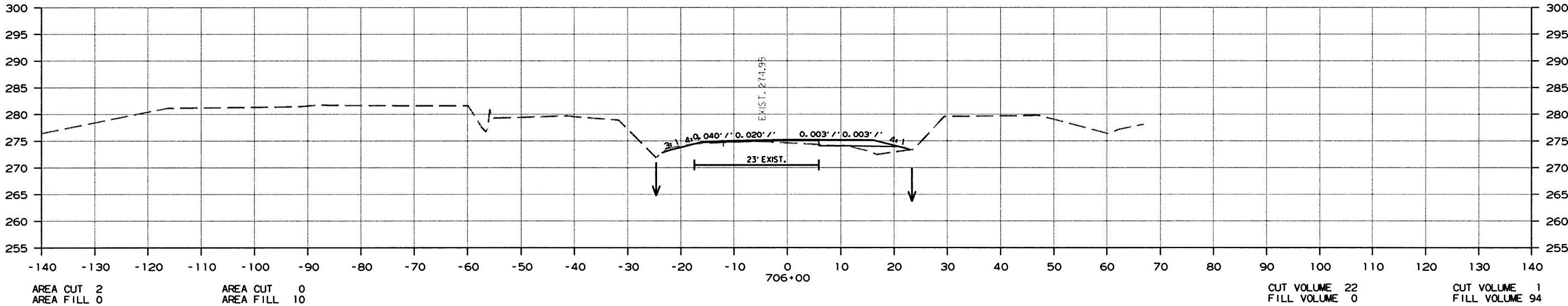
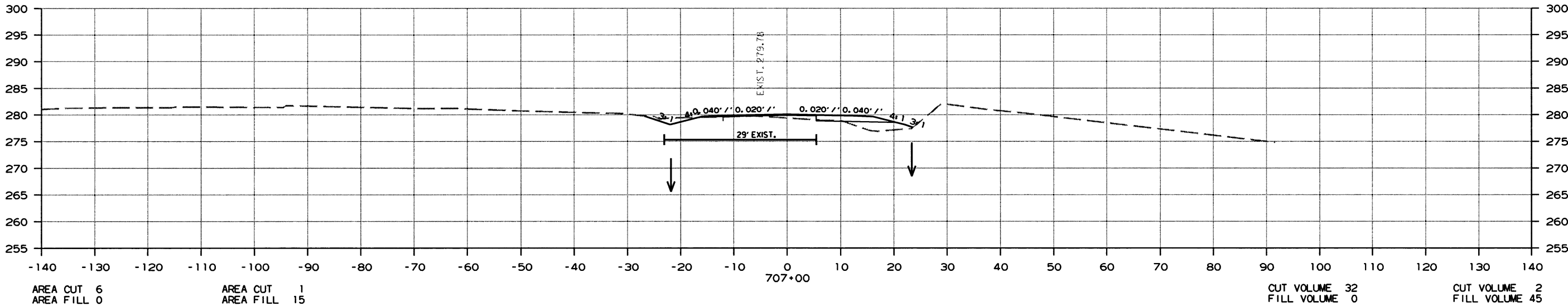
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 706+00 TO STA. 707+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.		070364	218	260

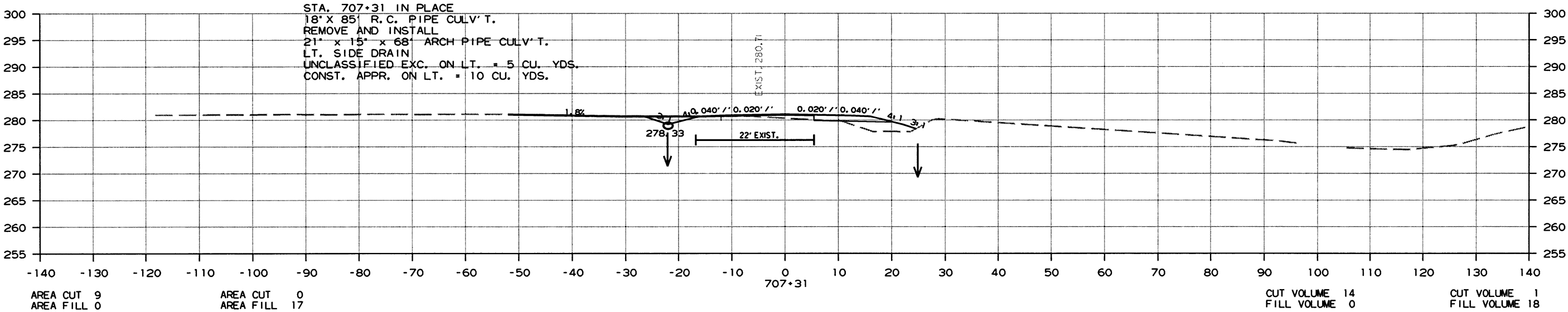
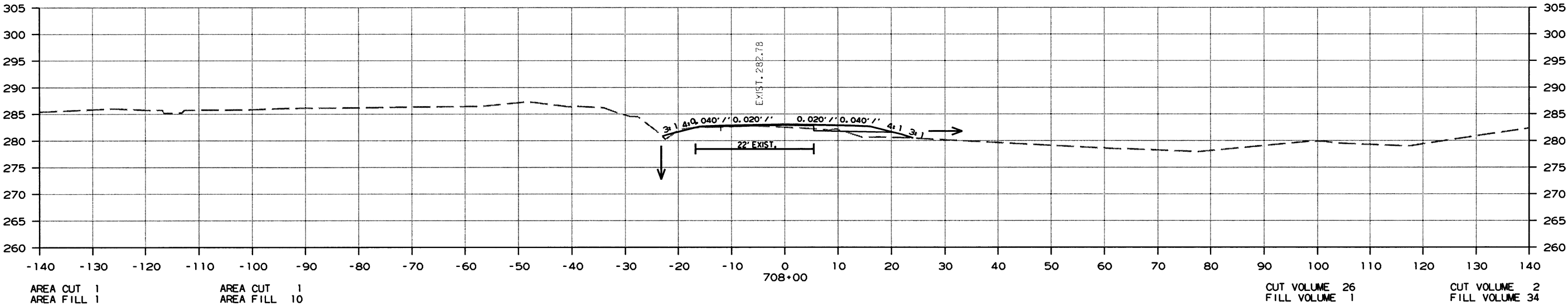
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 707+31 TO STA. 708+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. 070364	219	260

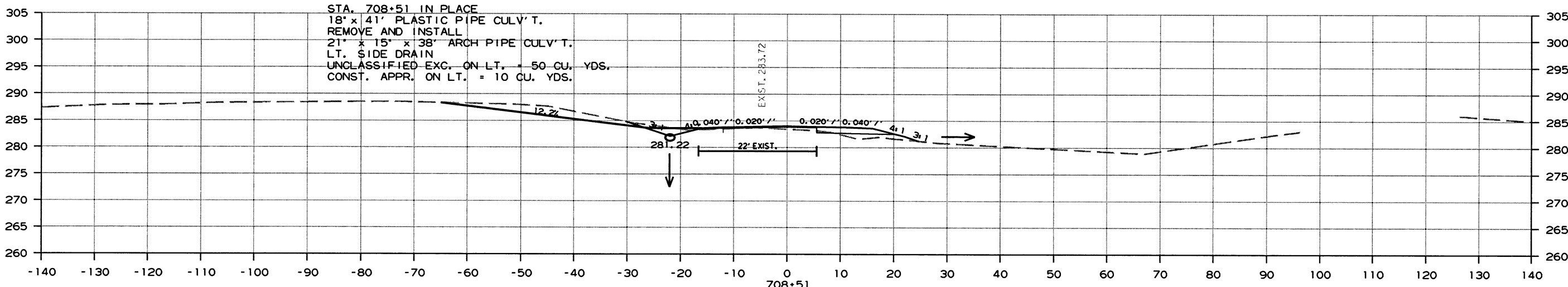
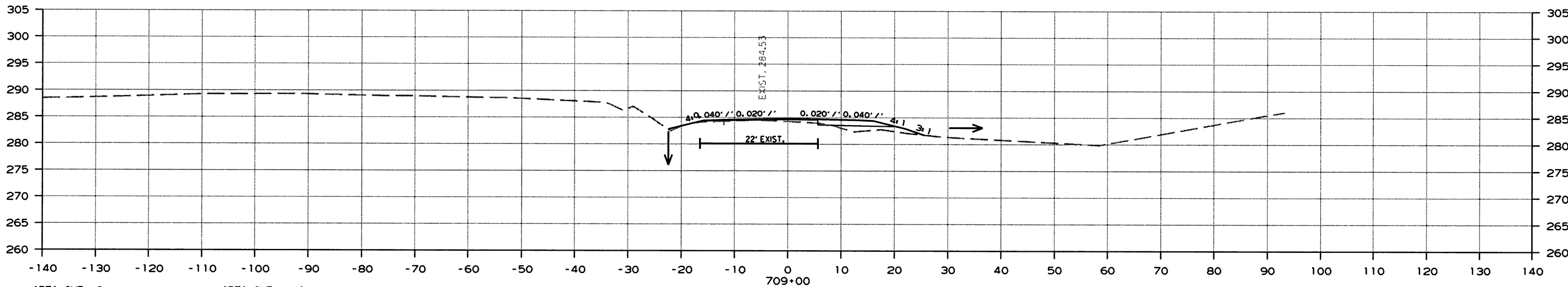
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 708+51 TO STA. 709+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. 070364	220	260

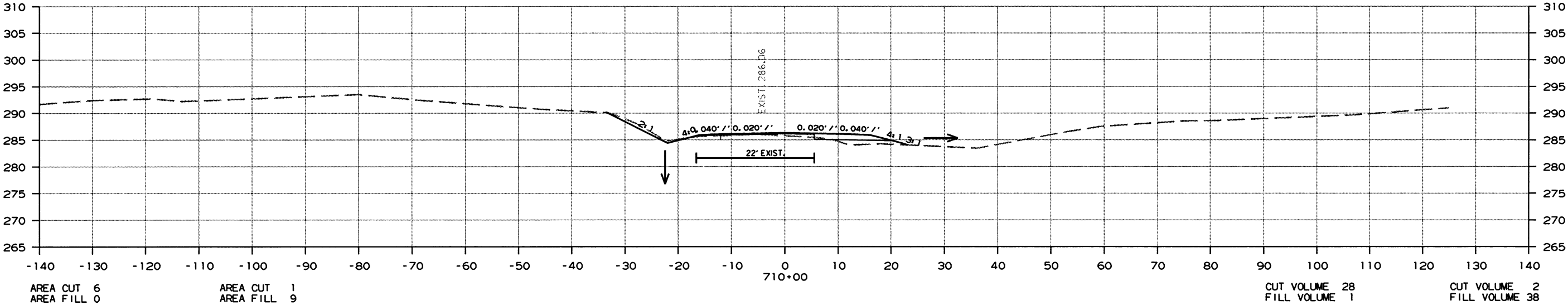
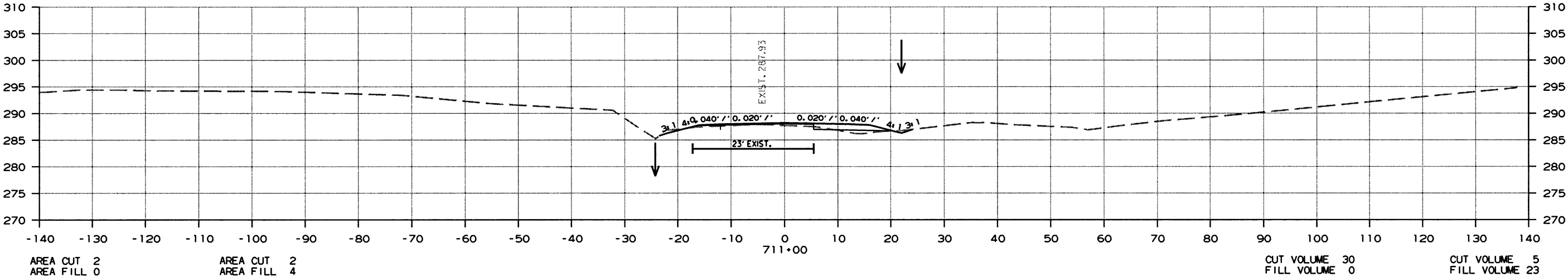
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 710+00 TO STA. 711+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. 070364	222	260

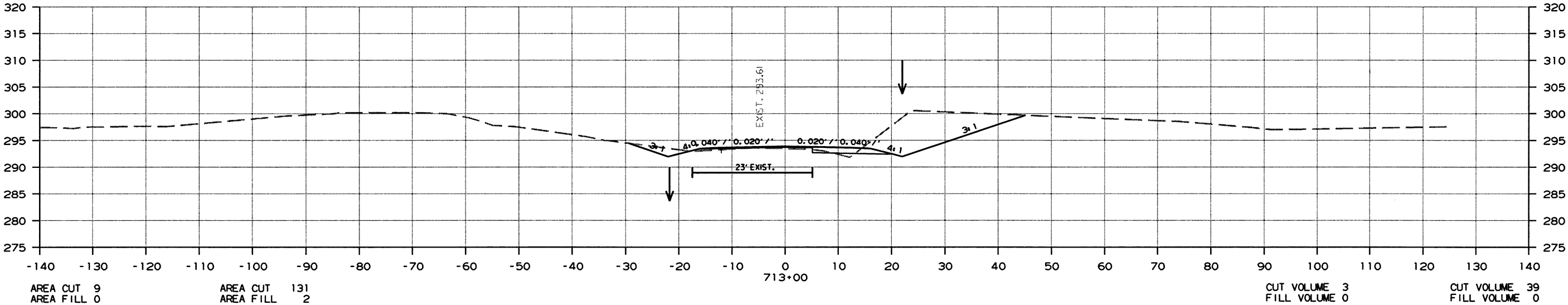
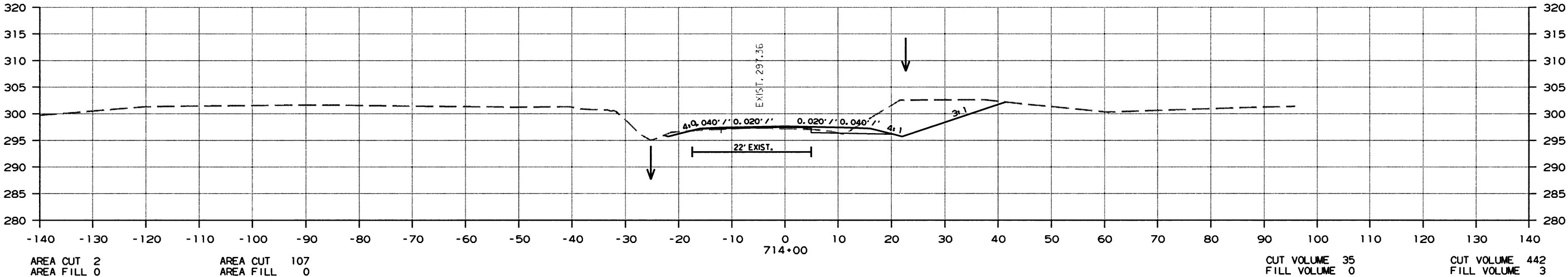
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 713+00 TO STA. 714+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.		070364	223	260

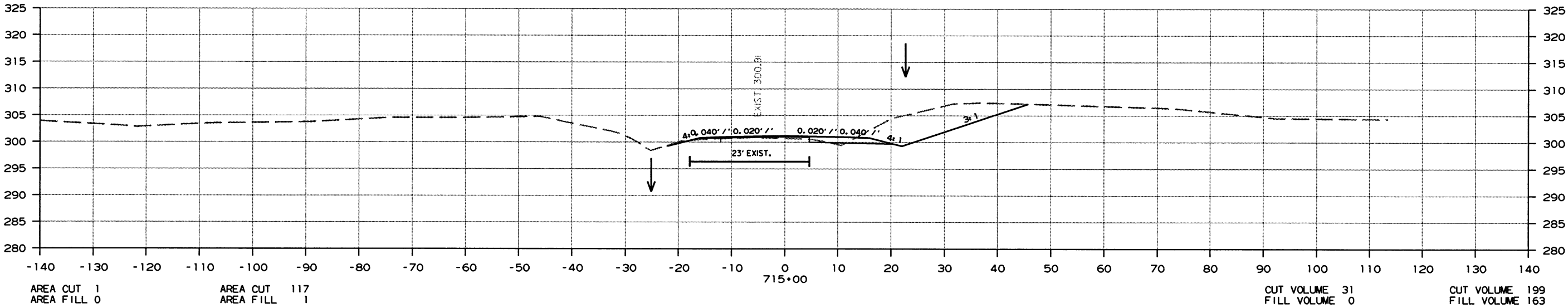
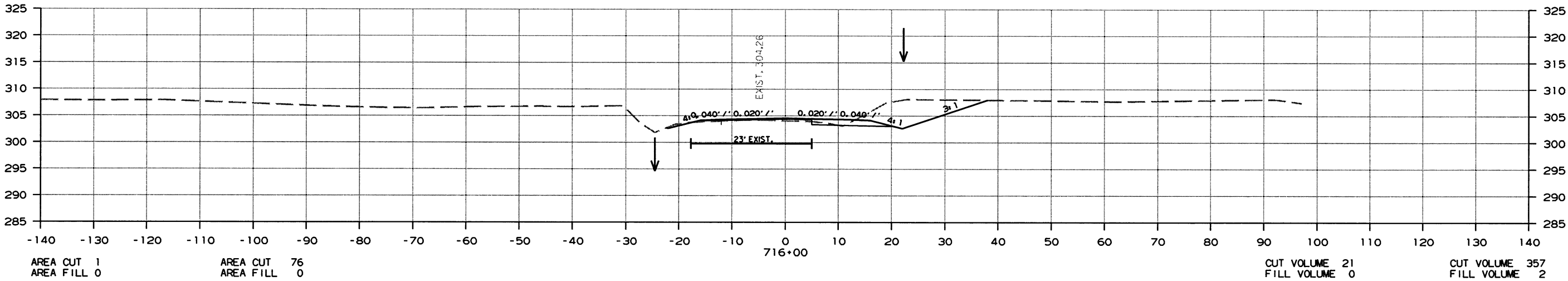
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 715+00 TO STA. 716+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. 070364	224	260

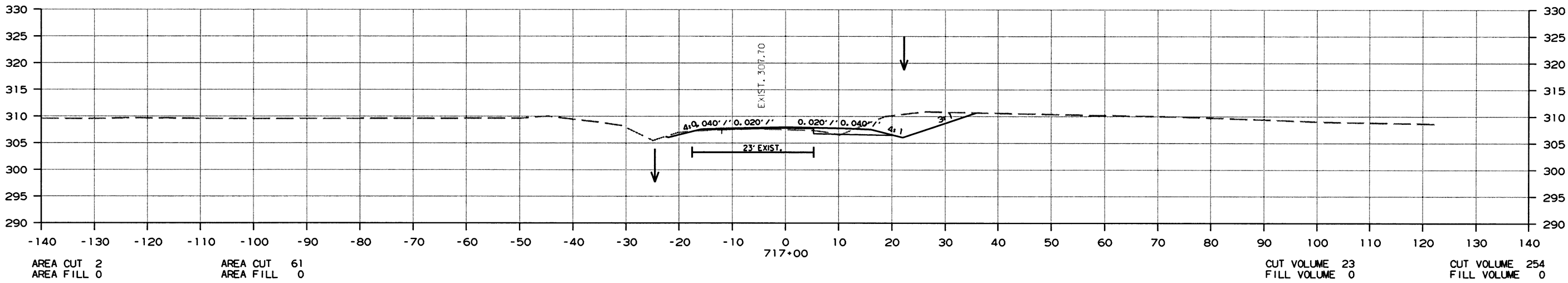
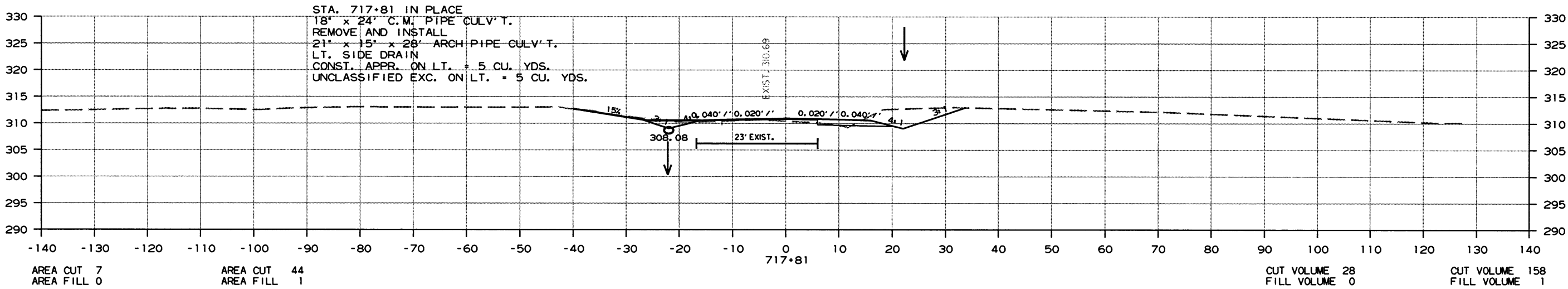
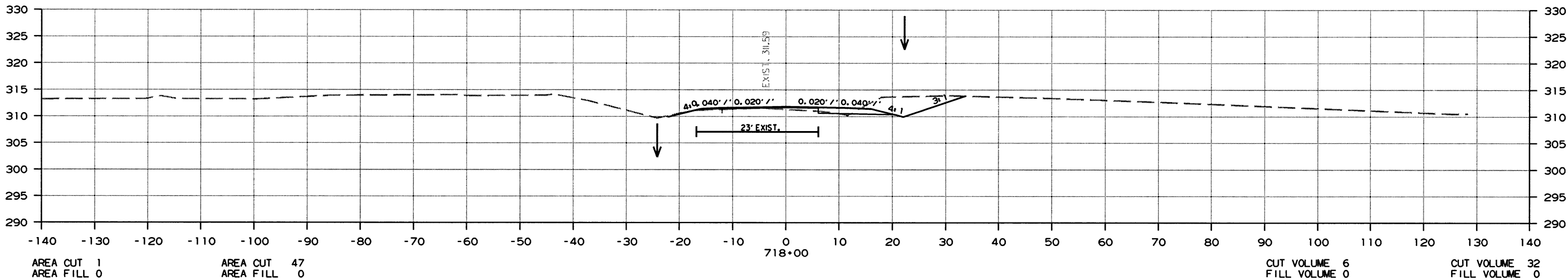
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 717+00 TO STA. 718+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. 070364	225	260

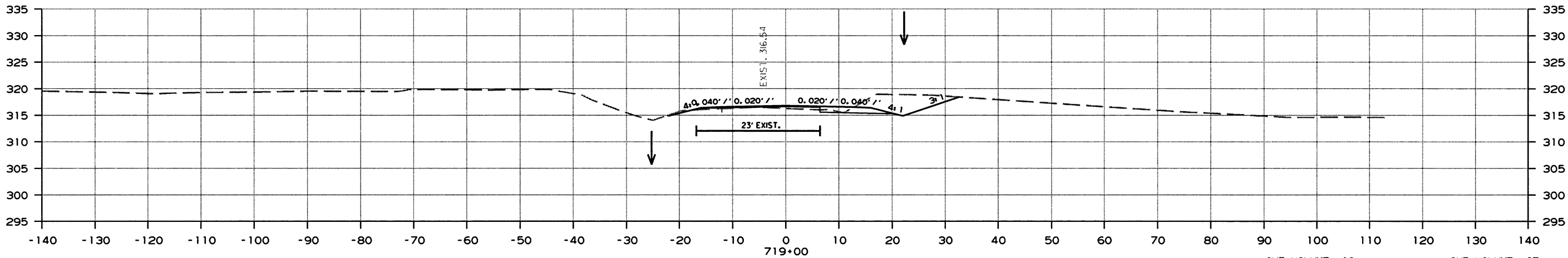
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2

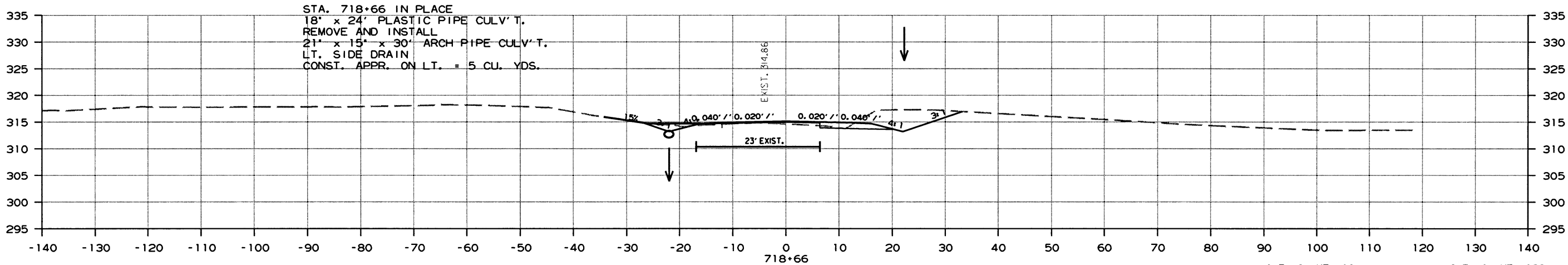


AREA CUT 6
AREA FILL 0

AREA CUT 52
AREA FILL 0

CUT VOLUME 10
FILL VOLUME 0

CUT VOLUME 67
FILL VOLUME 0



STA. 718+66 IN PLACE
18" x 24" PLASTIC PIPE CULV'T.
REMOVE AND INSTALL
21" x 15" x 30" ARCH PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

AREA CUT 5
AREA FILL 0

AREA CUT 54
AREA FILL 0

CUT VOLUME 18
FILL VOLUME 0

CUT VOLUME 122
FILL VOLUME 1

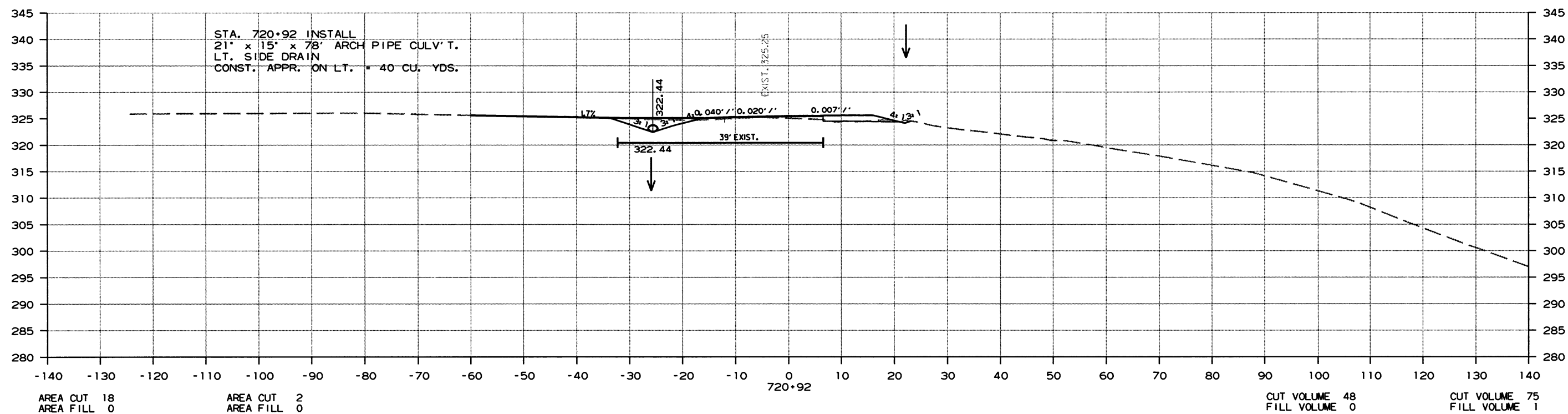
CROSS SECTION STA. 718+66 TO STA. 719+00

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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.	070364		226	260

AREA STAGE I



CROSS SECTION STA. 720+00 TO STA. 720+92

10/2/2016

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.		070364	228	260

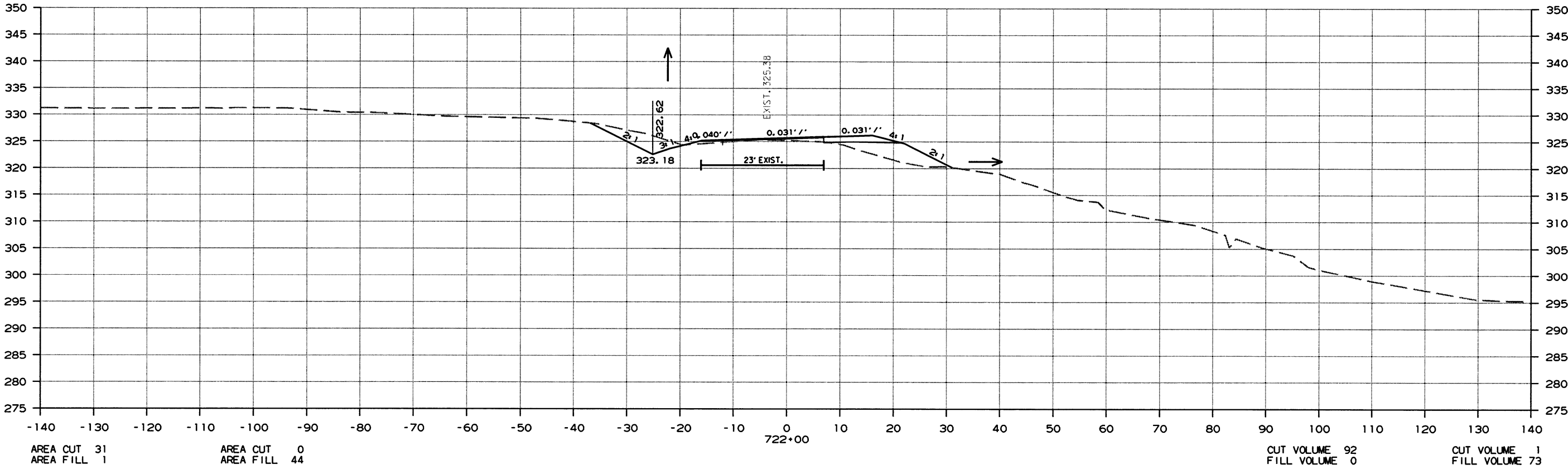
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



10/2/2016
R070364.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. 070364	230	260

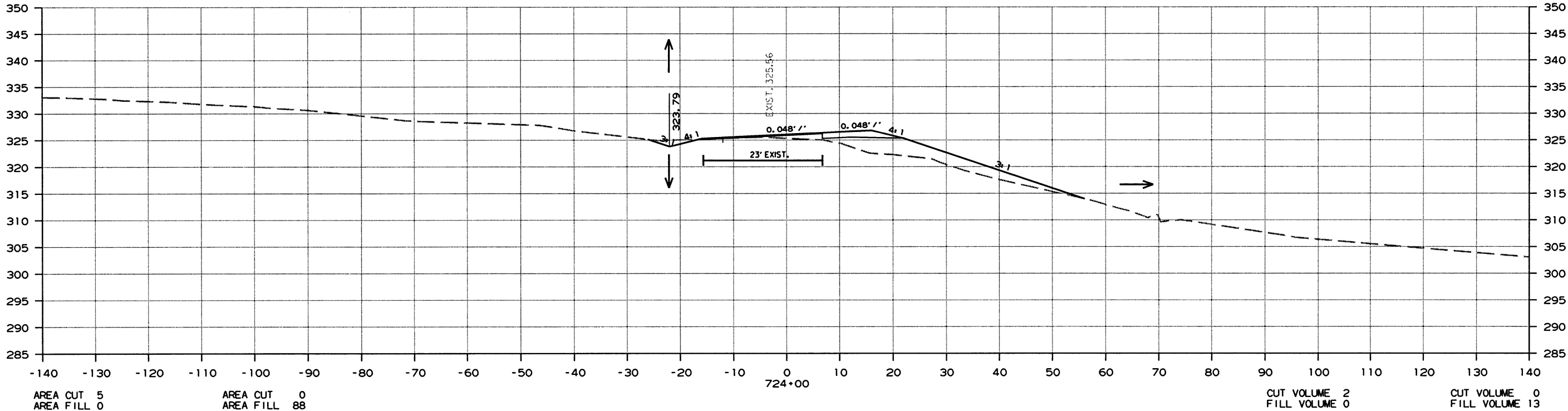
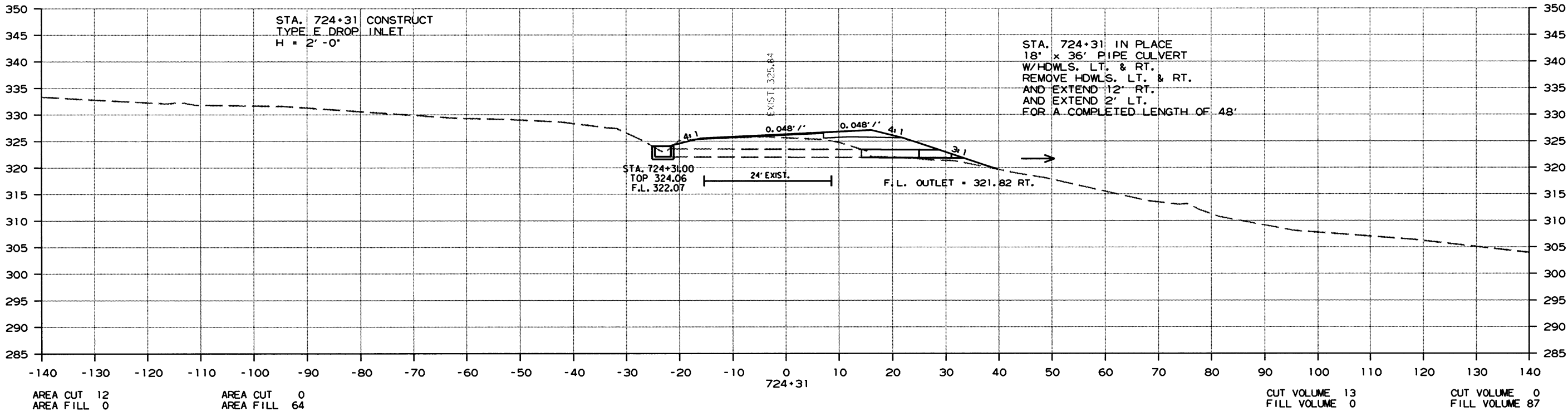
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 724+00 TO STA. 724+31

10/2/2016 R070364.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.	070364	231	260

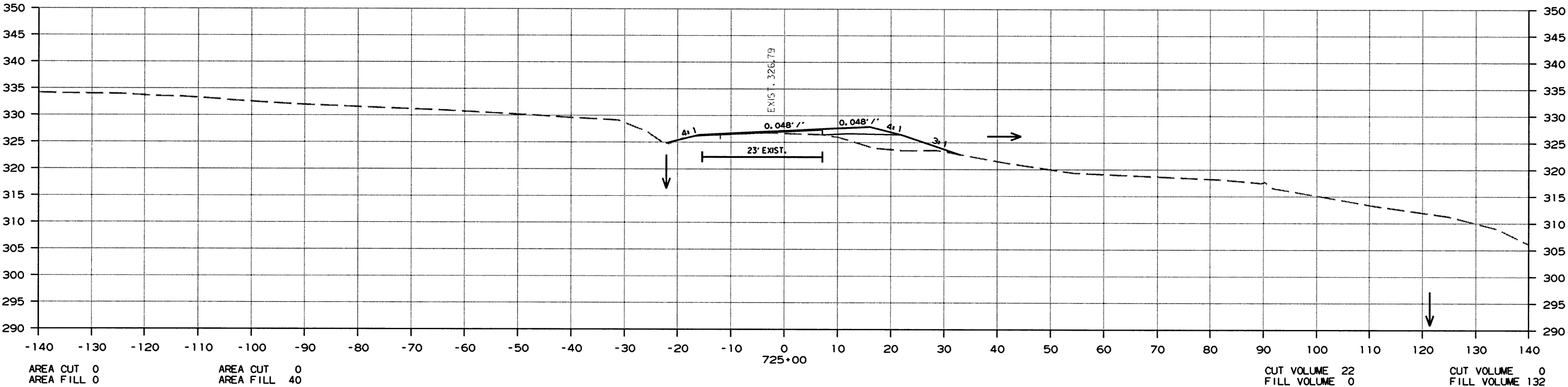
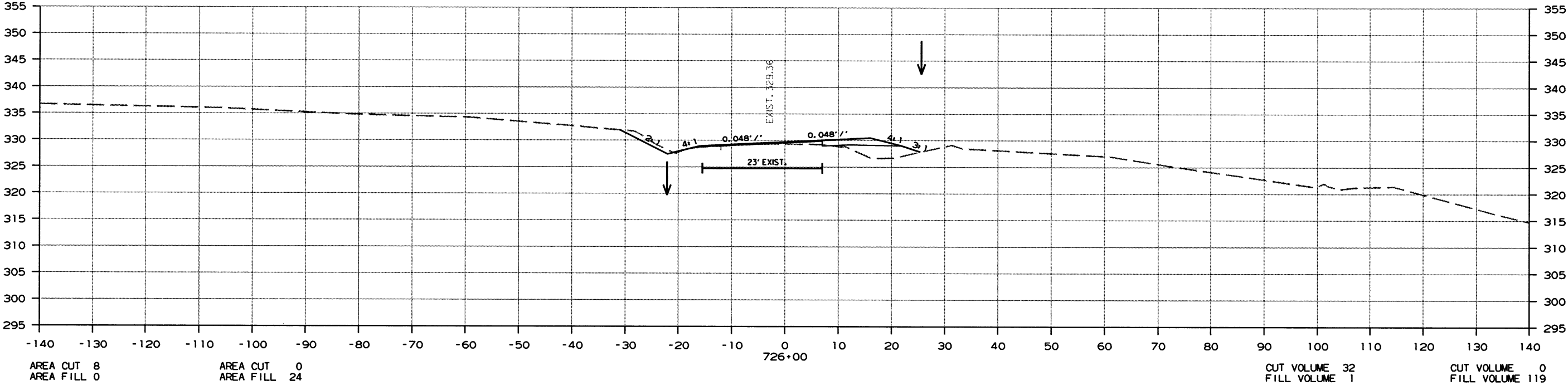
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 725+00 TO STA. 726+00

10/2/2016

R070364.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.	070364	232	260

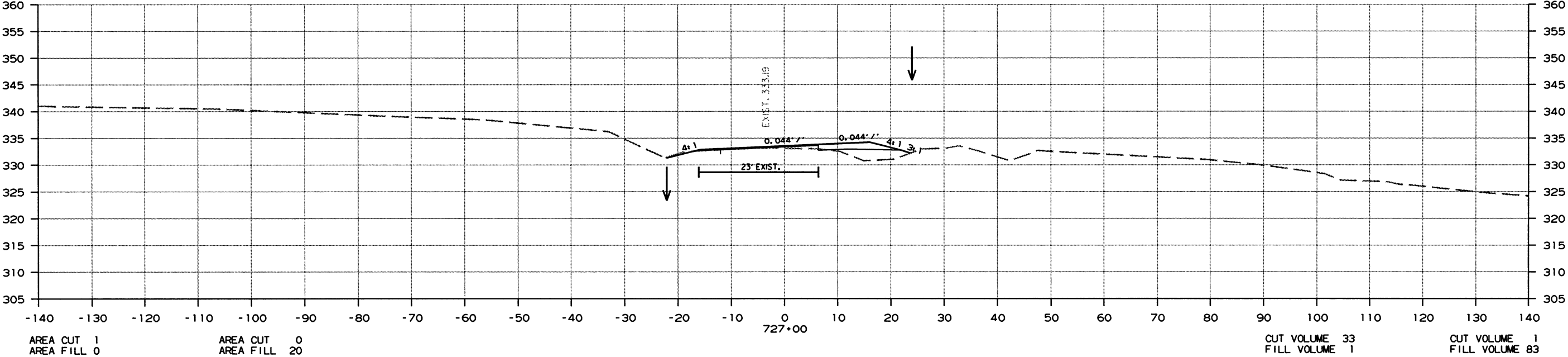
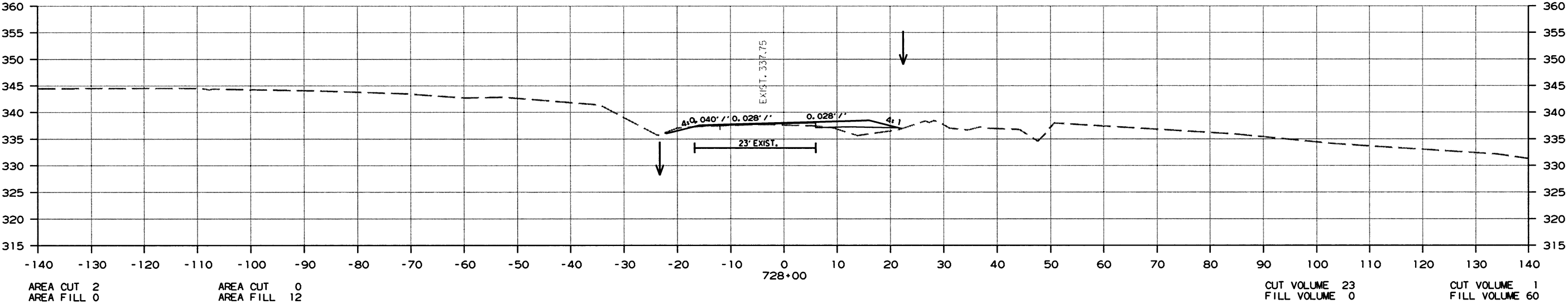
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 727+00 TO STA. 728+00

10/2/2016
R070364.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. 070364			233	260

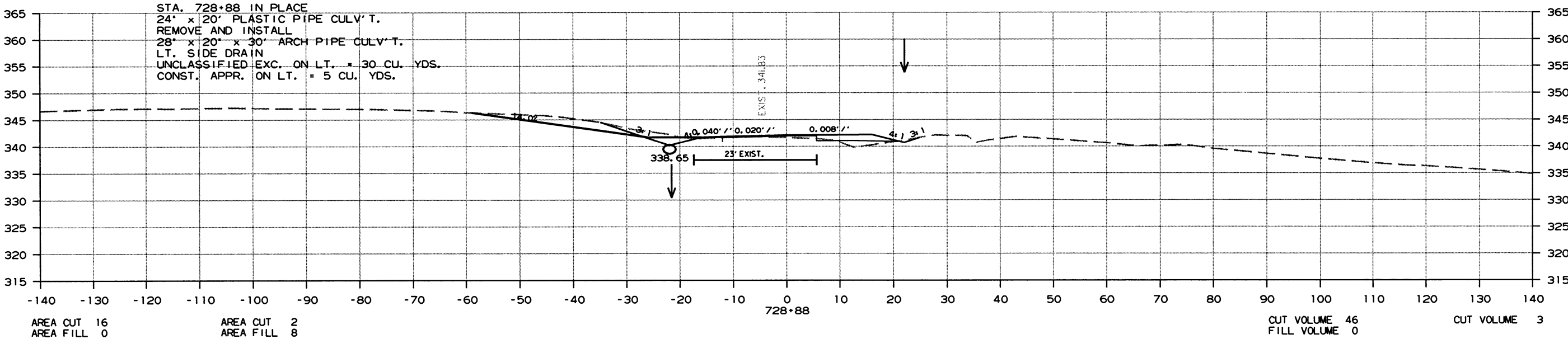
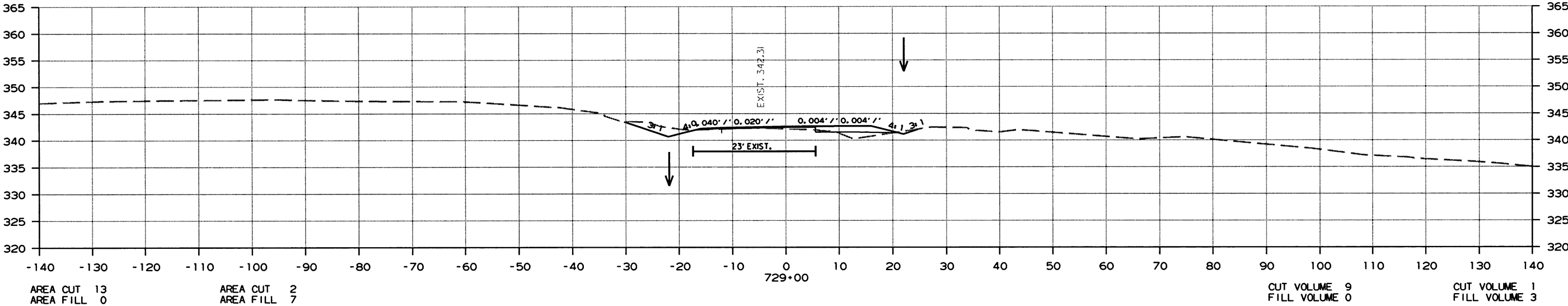
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 728+88 TO STA. 729+00

10/2/2016

R070364.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. 070364	234	260

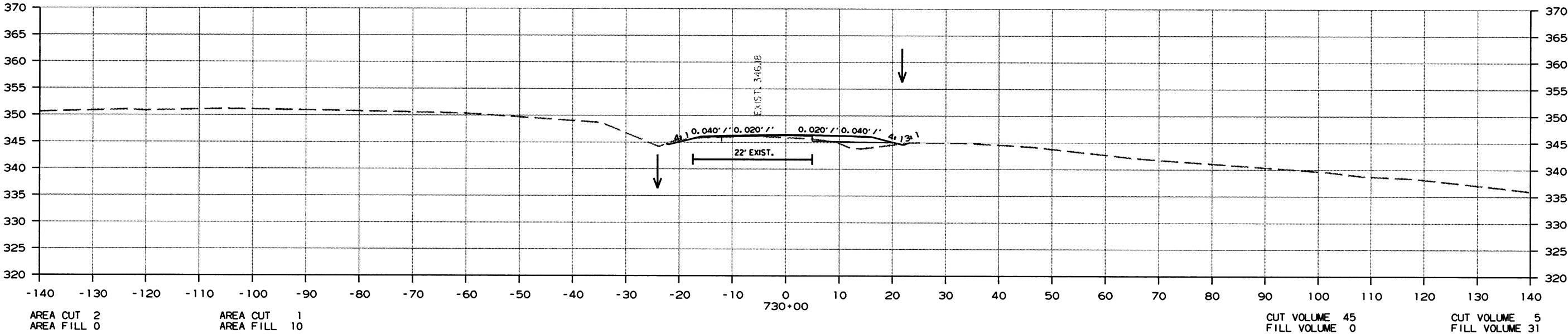
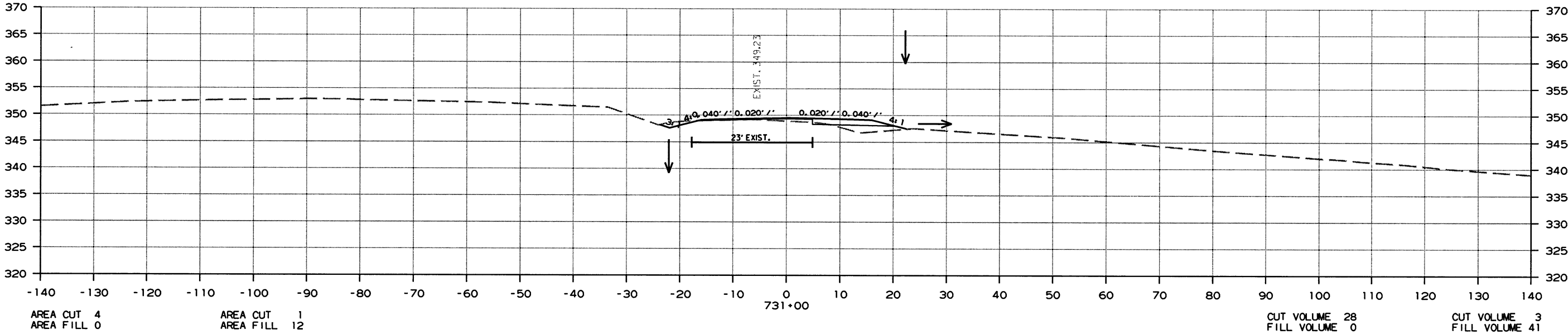
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 730+00 TO STA. 731+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. 070364	235	260

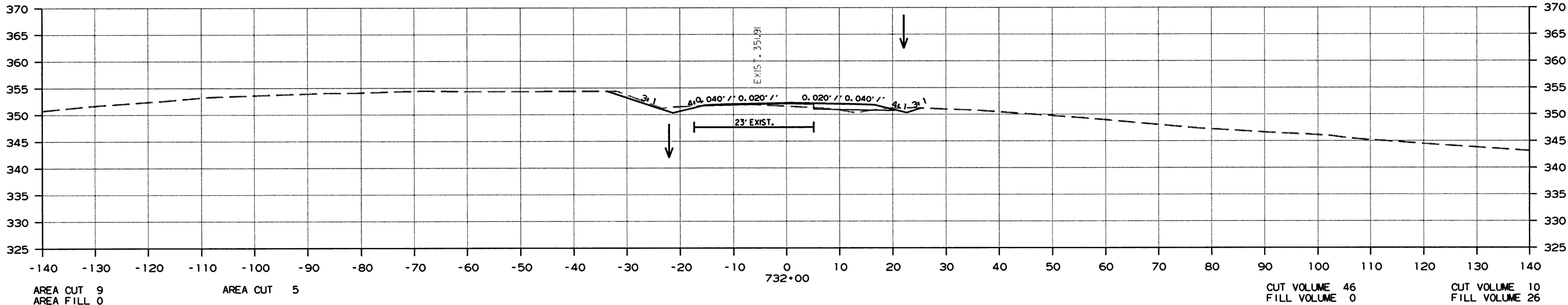
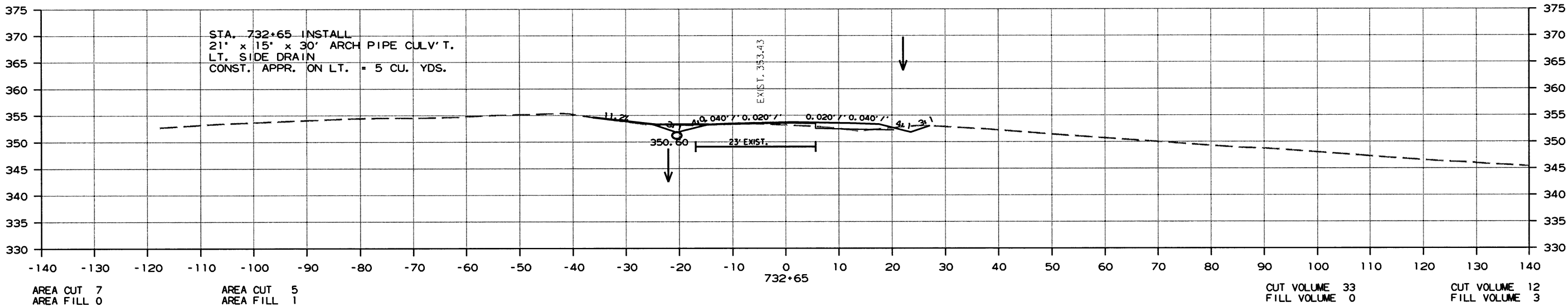
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 732+00 TO STA. 732+65

10/2/2016

R070364.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. 070364	237	260

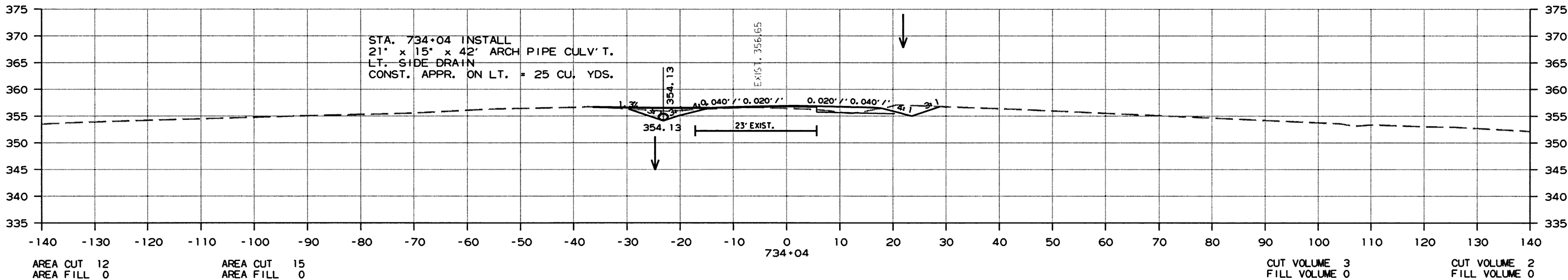
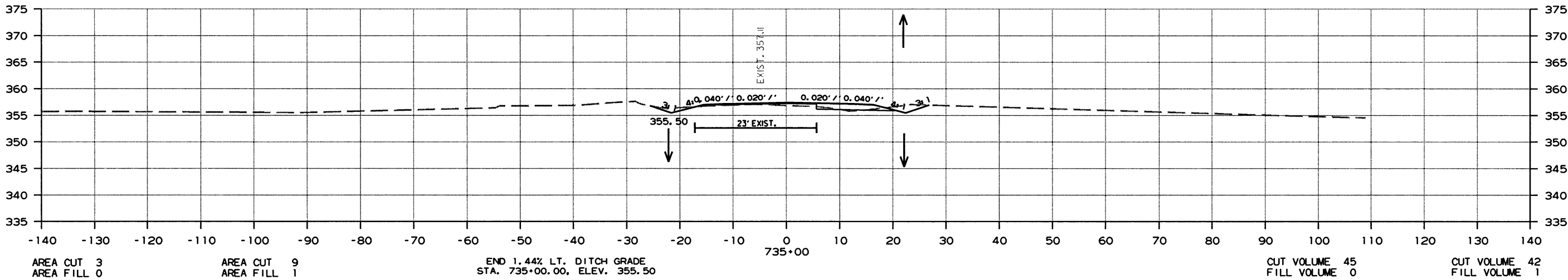
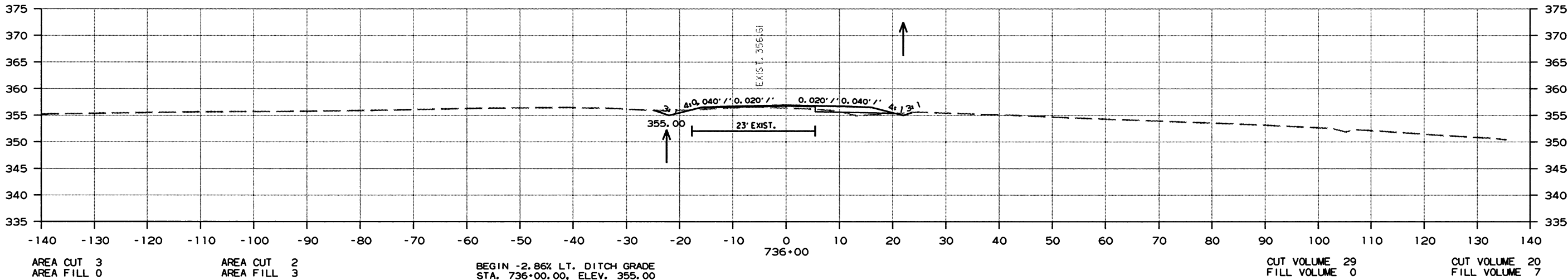
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 734+04 TO STA. 736+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. 070364	238	260

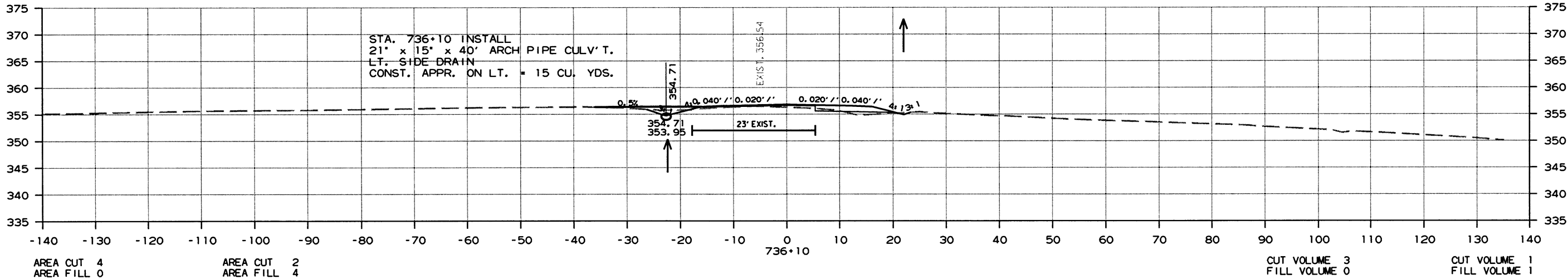
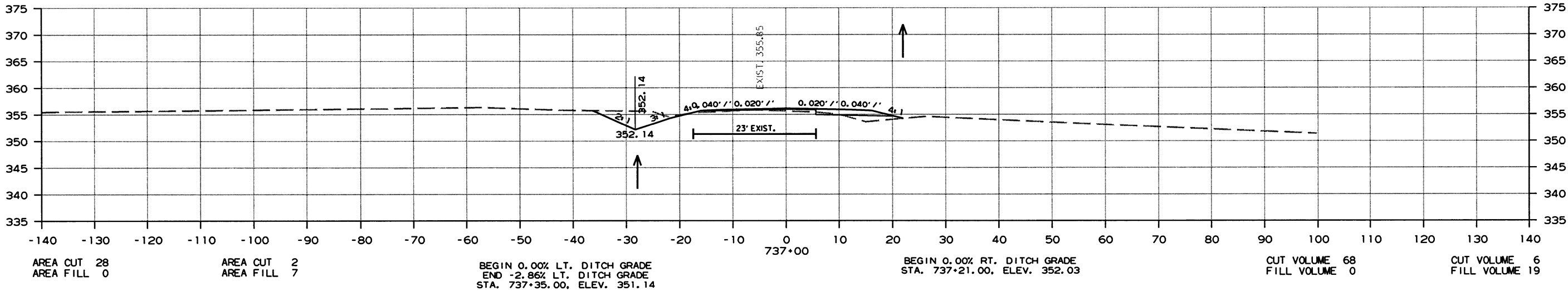
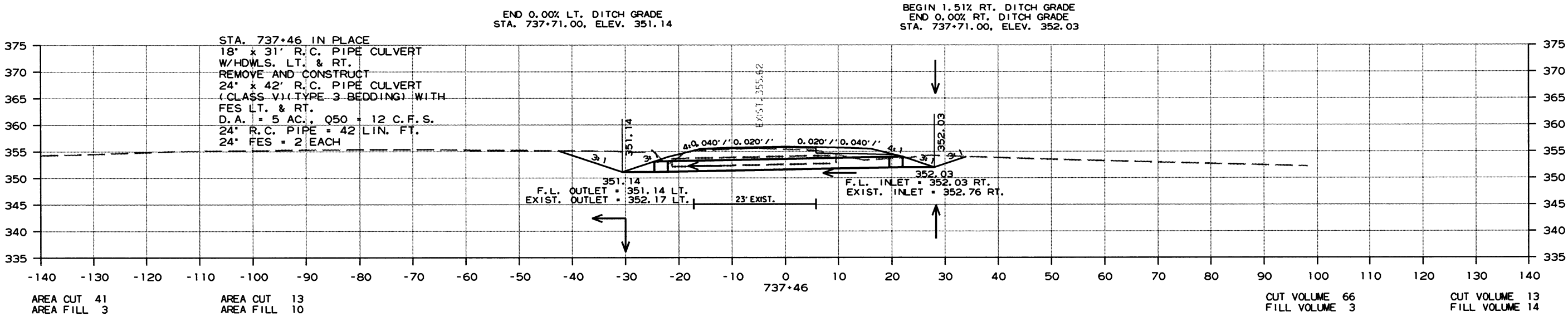
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 736+10 TO STA. 737+46

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. 070364	239	260

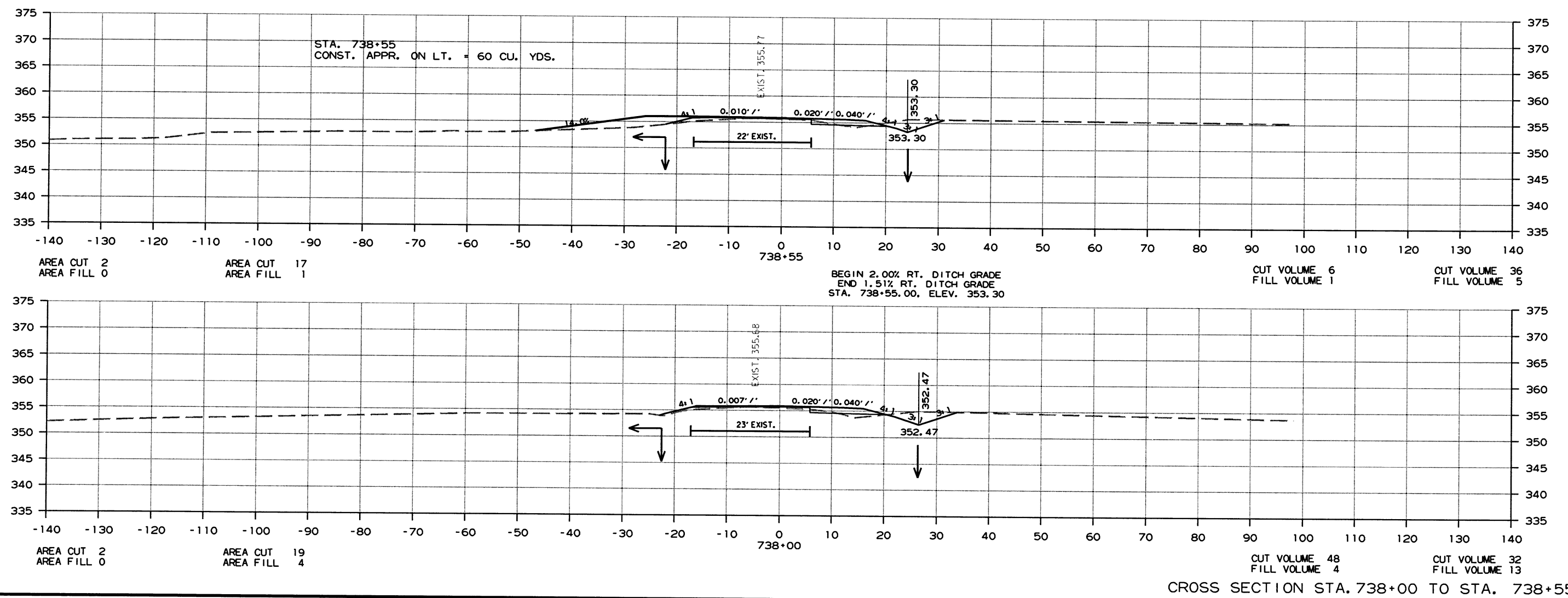
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



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. 070364	241	260

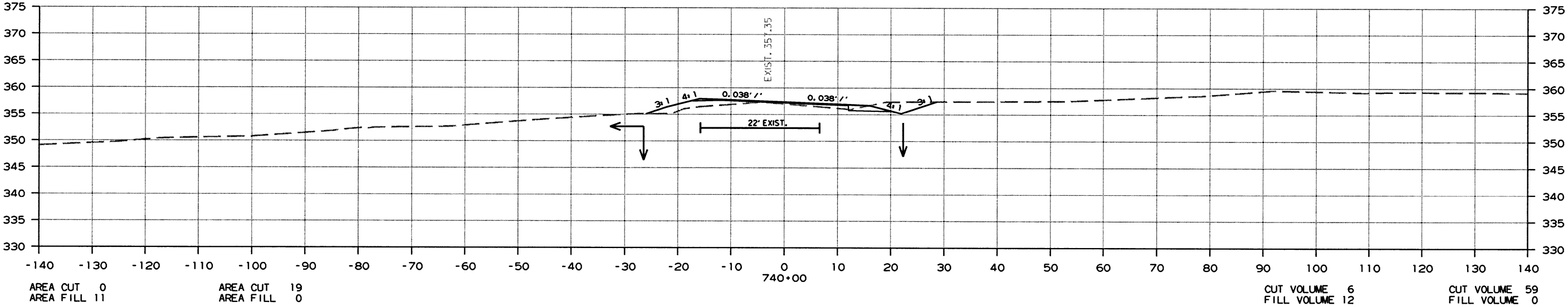
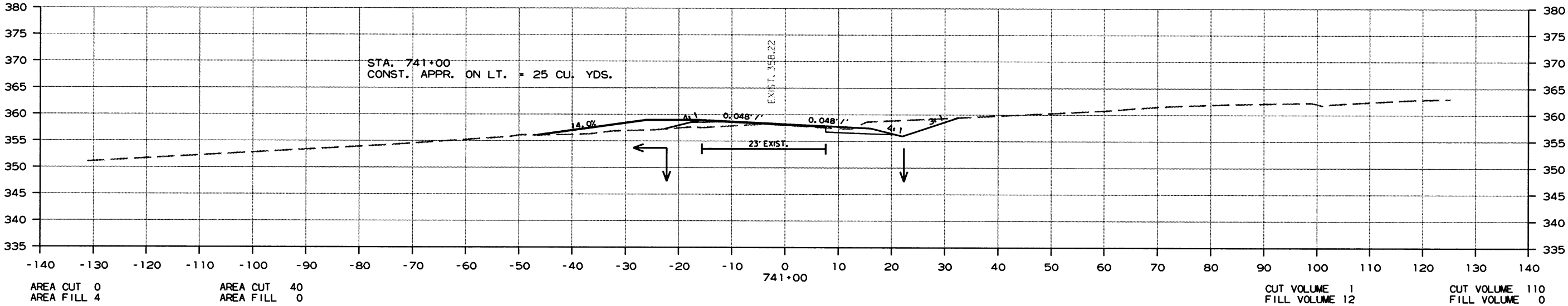
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 740+00 TO STA. 741+00

10/2/2016

R070364.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. 070364	242	260

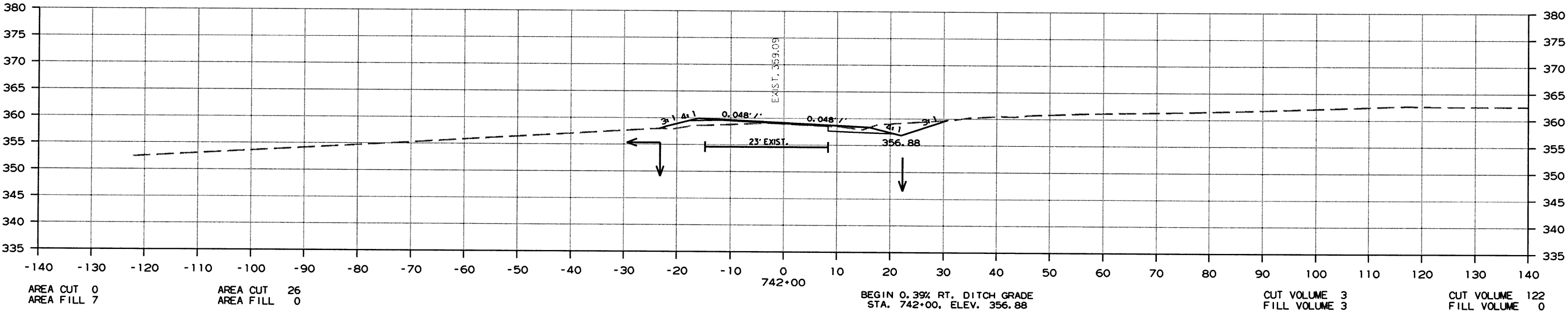
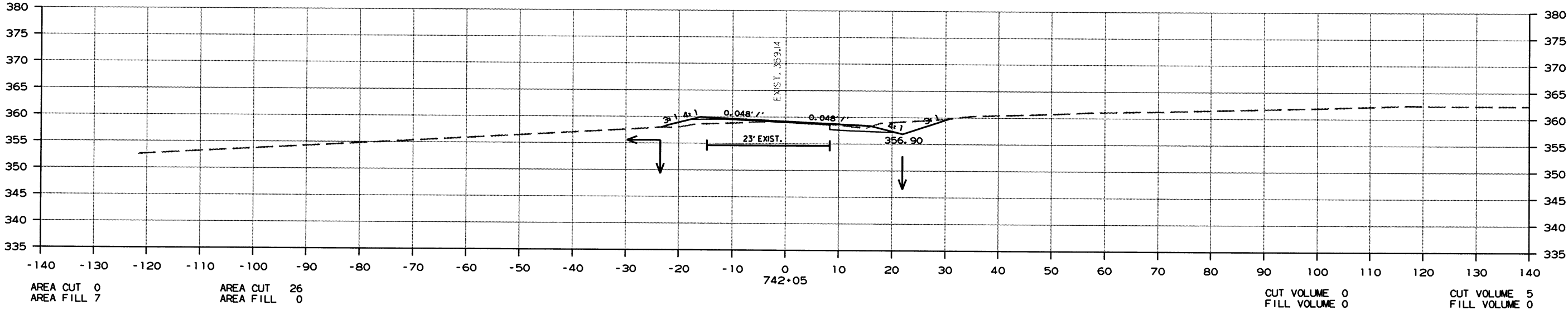
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 742+00 TO STA. 742+05

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. 070364	243	260

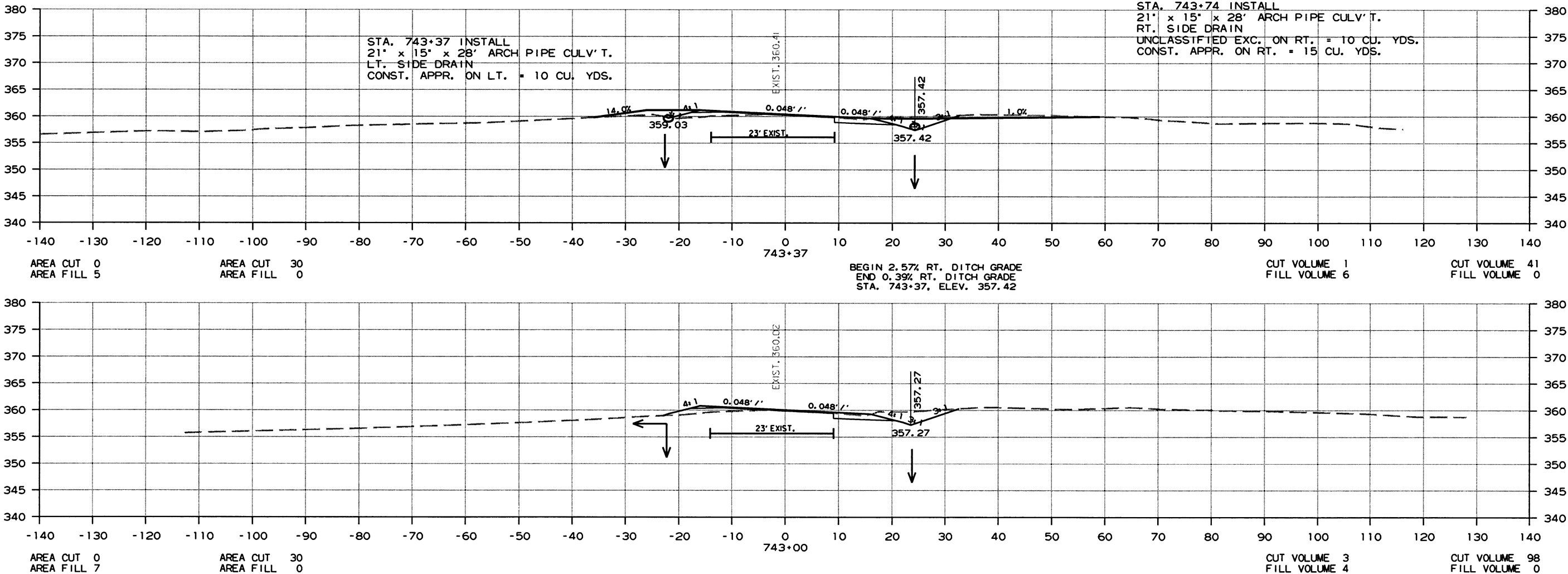
2 CROSS SECTIONS

AREA STAGE I

AREA STAGE 2

VOLUME STAGE I

VOLUME STAGE 2



CROSS SECTION STA. 743+00 TO STA. 743+37

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. 070364	244	260

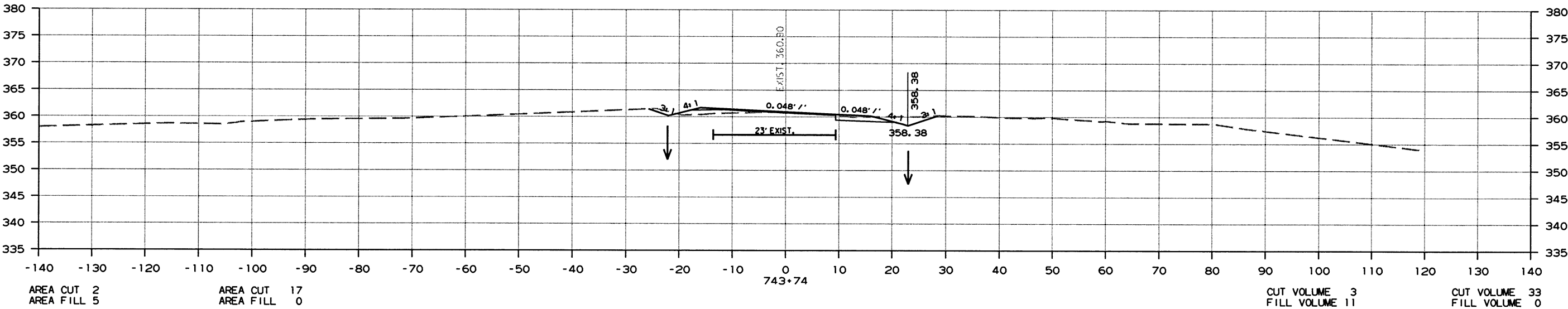
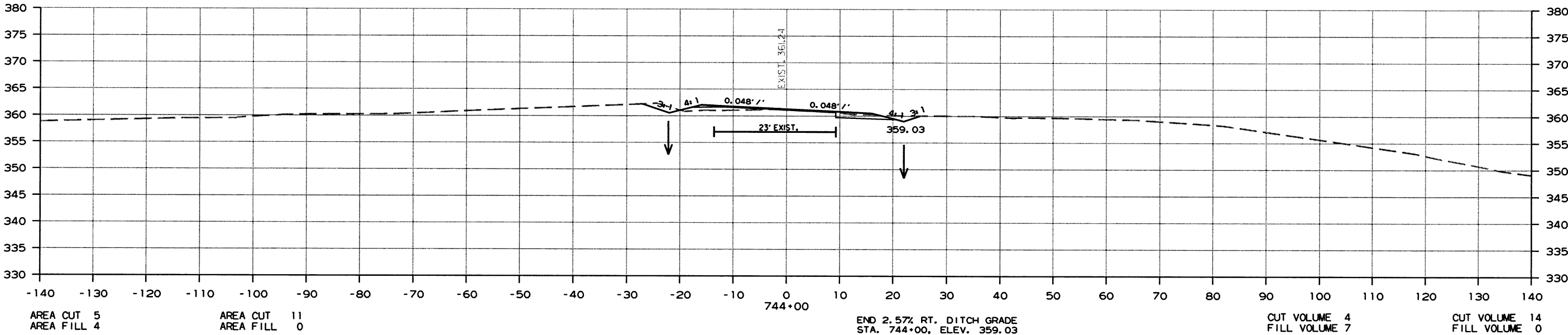
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 743+74 TO STA. 744+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. 070364	245	260

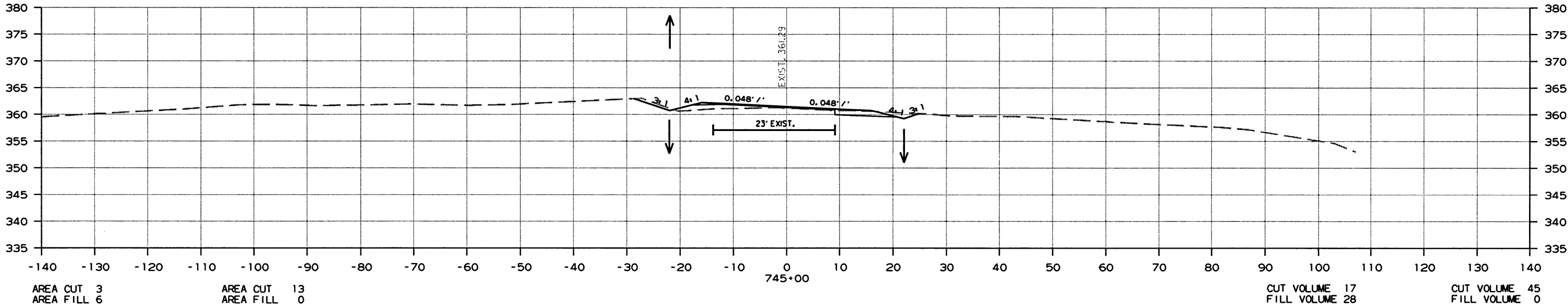
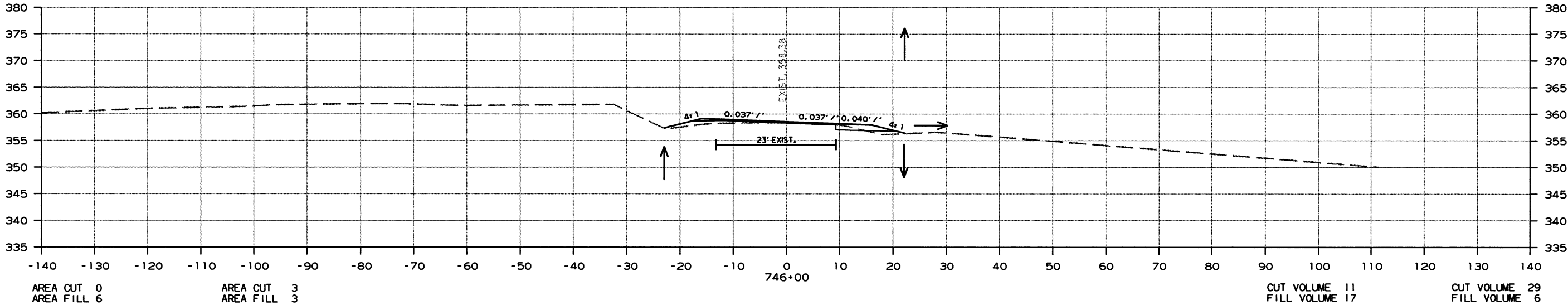
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 745+00 TO STA. 746+00

10/2/2016

R070364.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. 070364	246	260

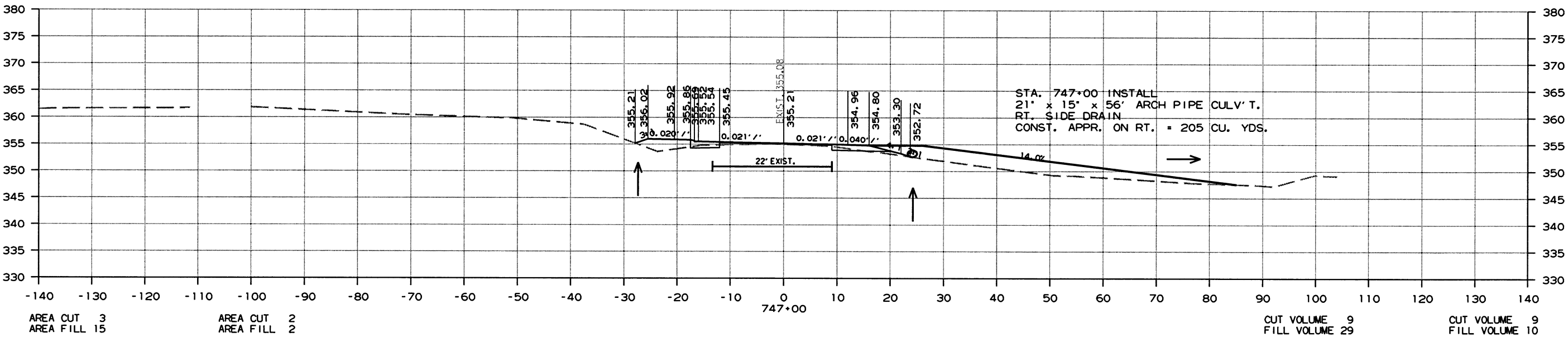
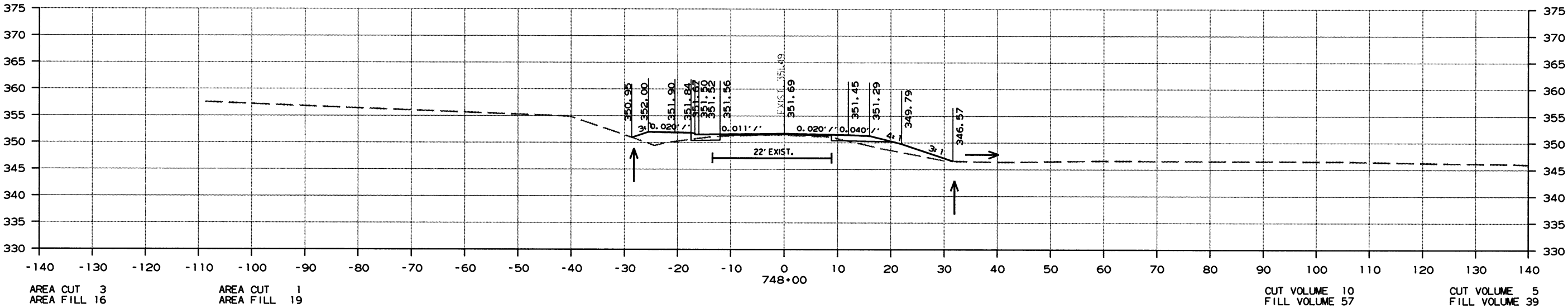
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 747+00 TO STA. 748+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.	070364	248	260

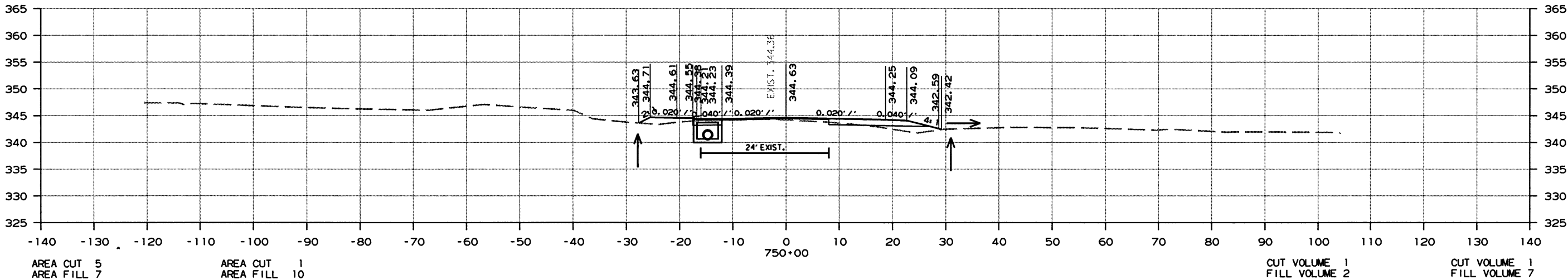
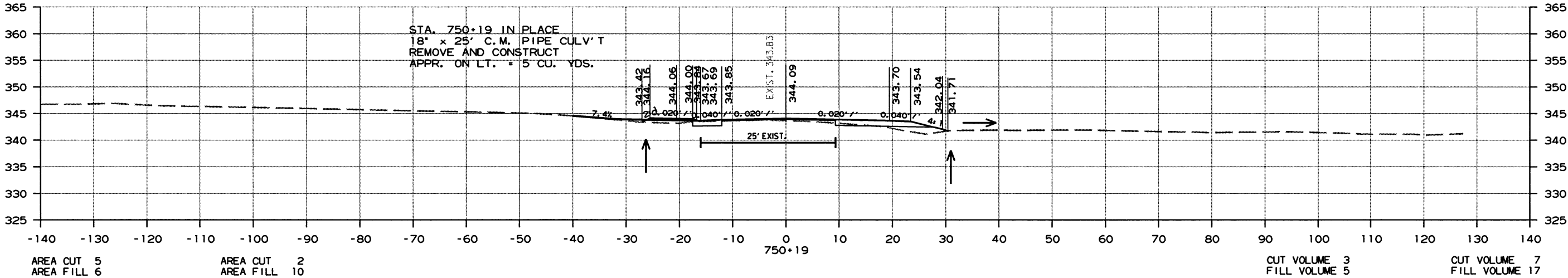
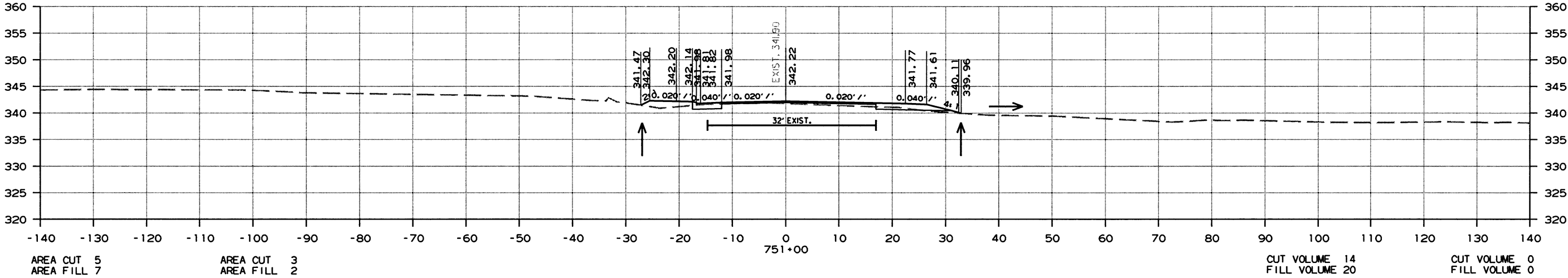
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 750+00 TO STA. 751+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.	070364	249	260

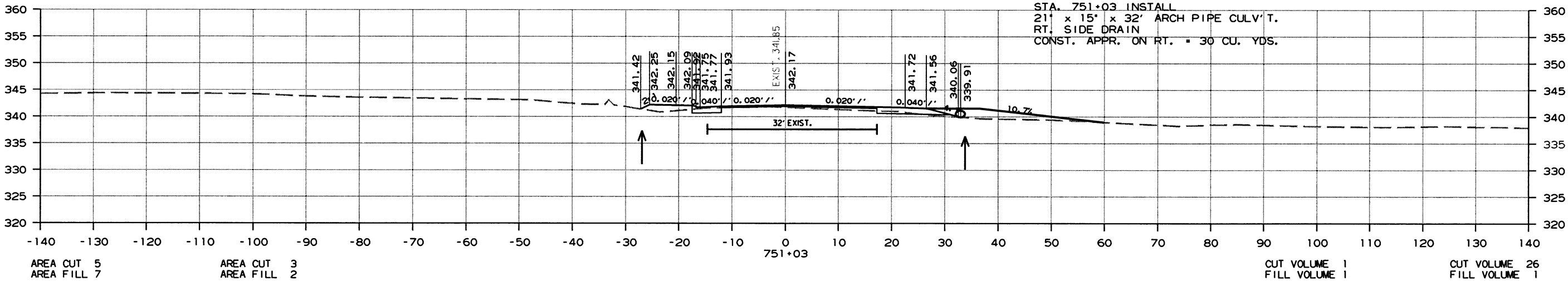
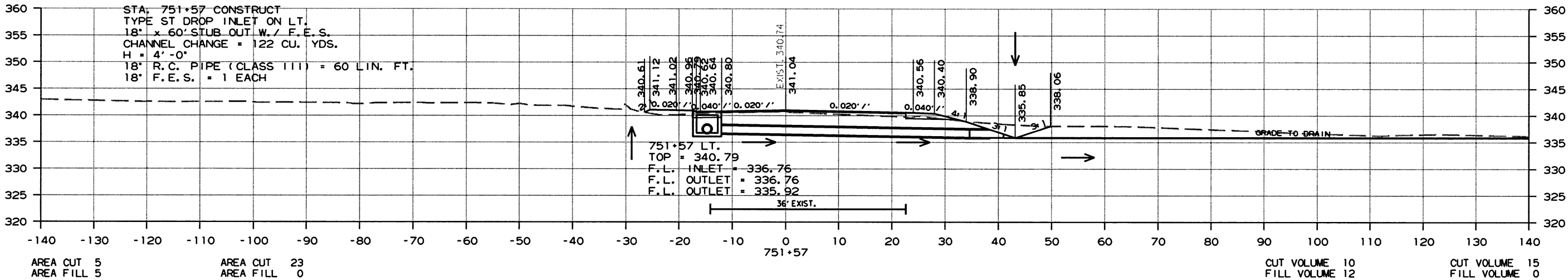
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 751+03 TO STA. 751+57

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.		070364	250	260

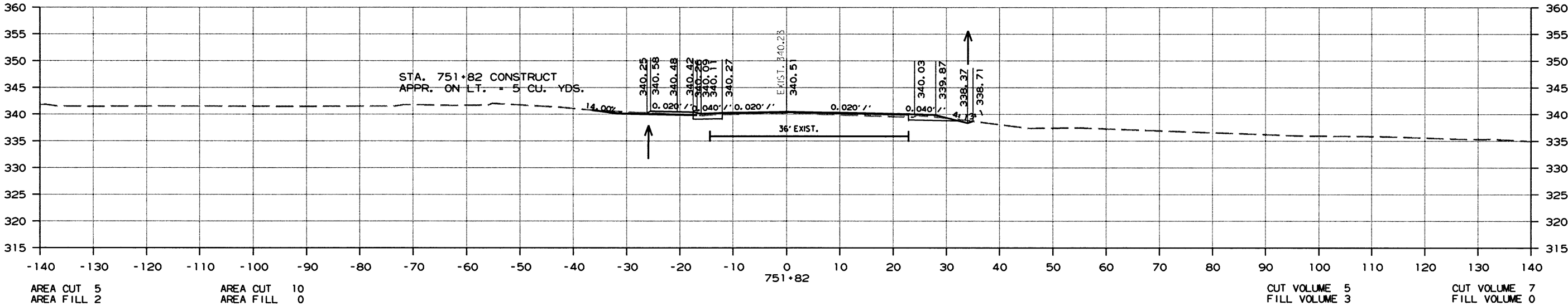
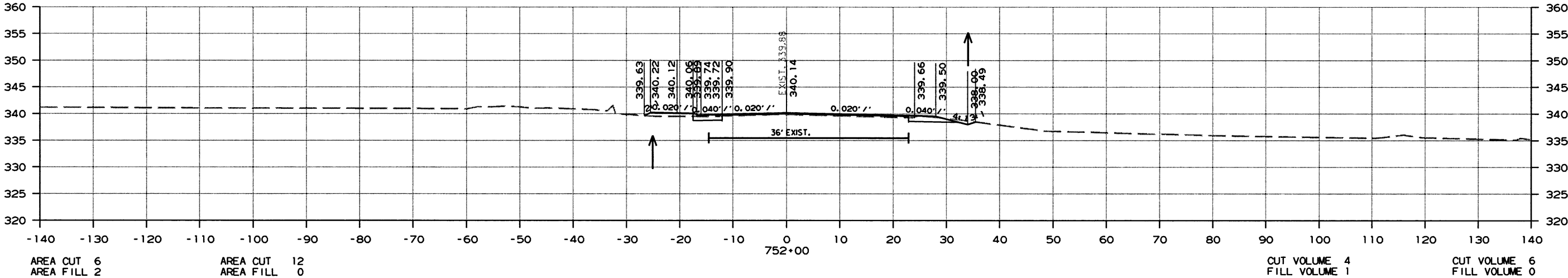
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 751+82 TO STA. 752+00

10/2/2016

R070364.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. 070364	251	260

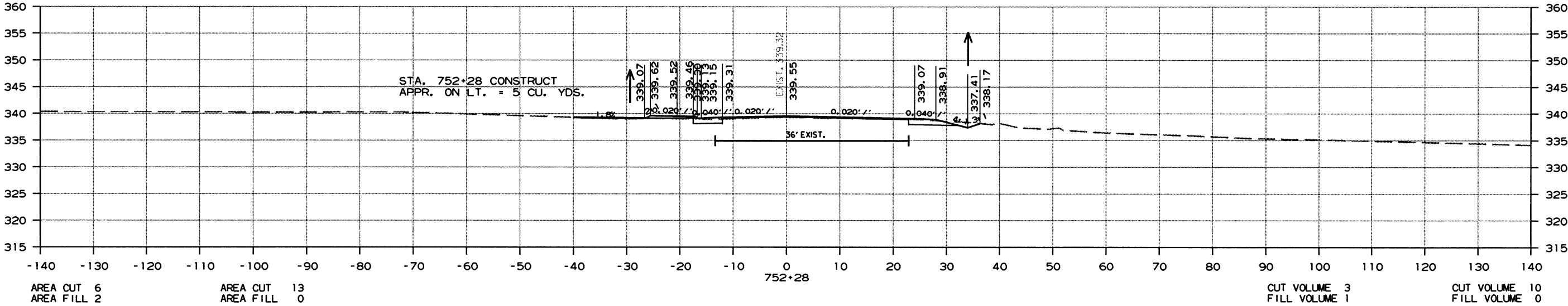
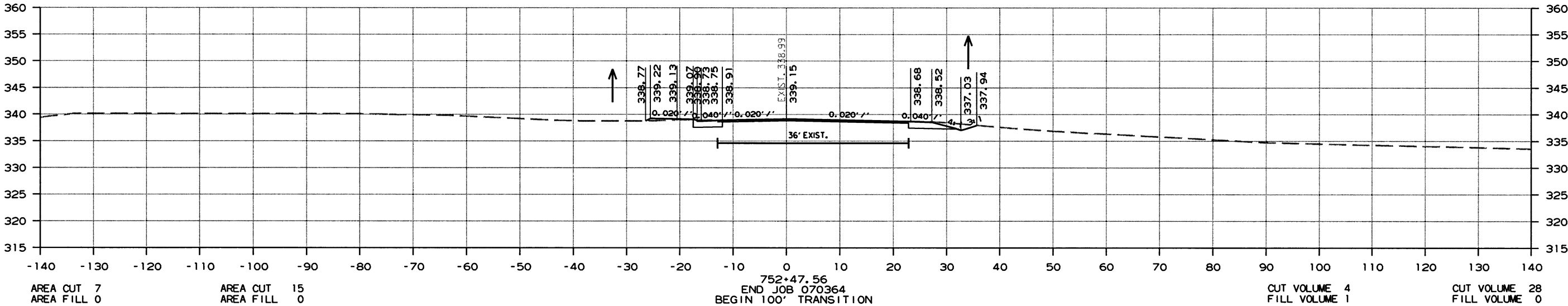
2 CROSS SECTIONS

AREA STAGE 1

AREA STAGE 2

VOLUME STAGE 1

VOLUME STAGE 2



CROSS SECTION STA. 752+28 TO STA. 752+47.56

10/2/2016

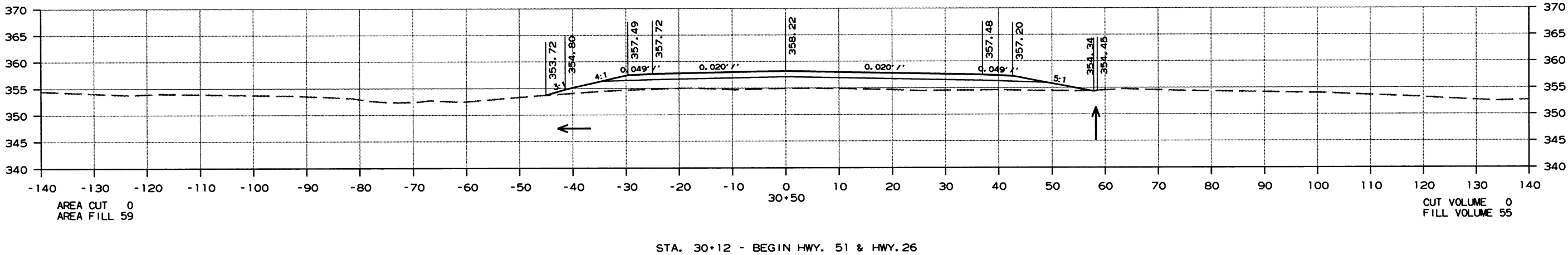
R070364.DGN

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. 070364			252	260

2 CROSS SECTIONS

AREA STAGE

VOLUME STAGE



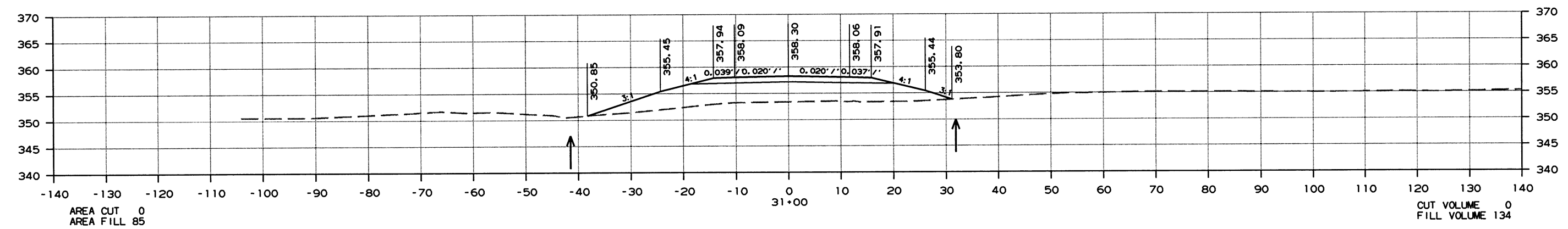
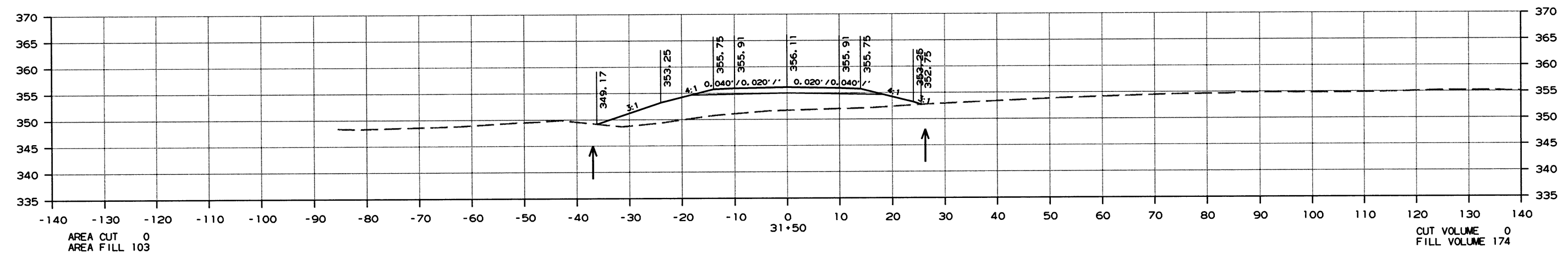
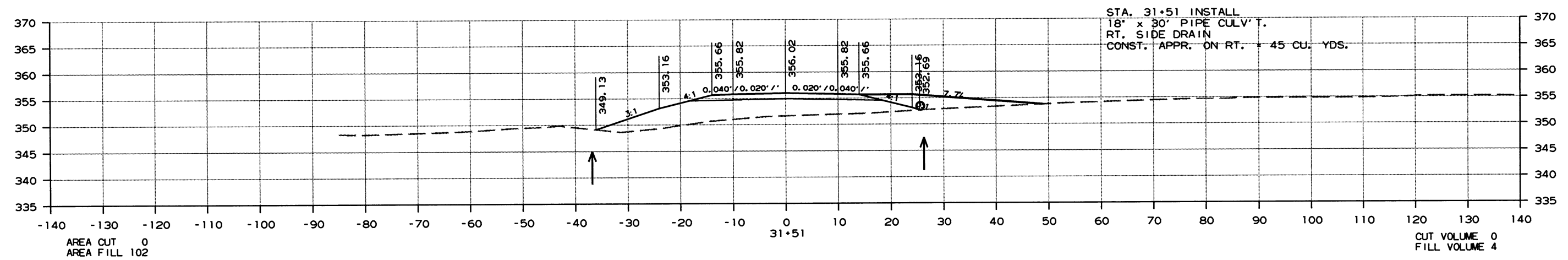
CROSS SECTION HWY. 51 & HWY. 26 INTERSECTION STA. 30+12 TO STA. 30+50

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. 070364			253	260

2 CROSS SECTIONS

AREA STAGE

VOLUME STAGE



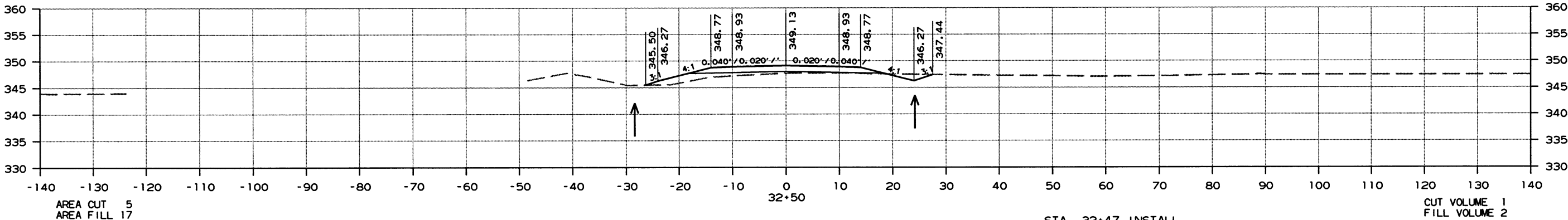
CROSS SECTION HWY. 51 & HWY. 26 INTERSECTION STA. 31+00 TO STA. 31+51

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. 070364			254	260

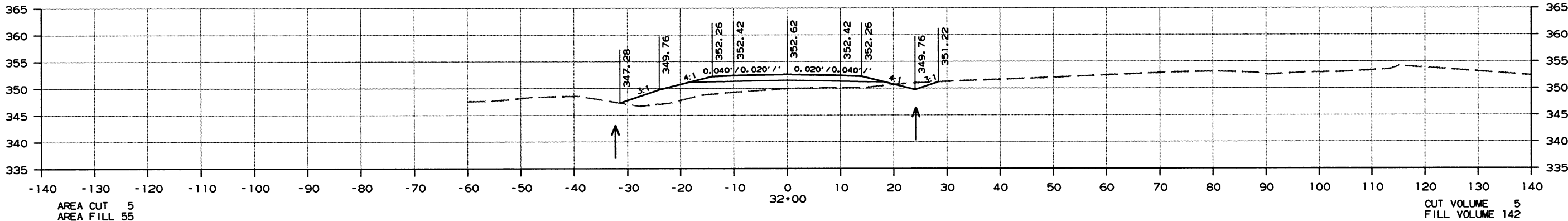
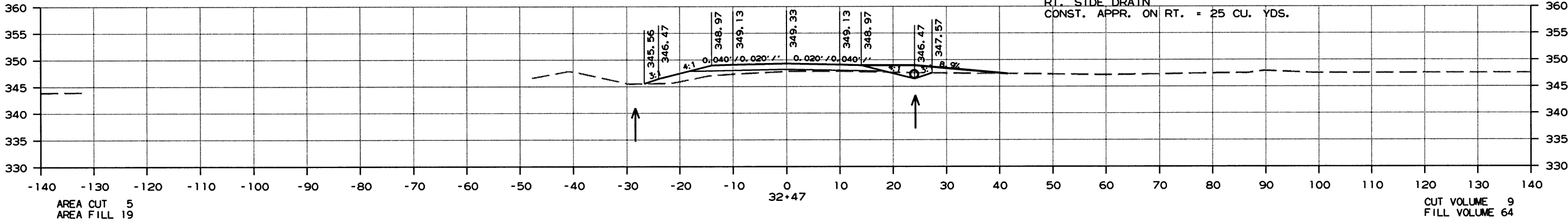
2 CROSS SECTIONS

AREA STAGE

VOLUME STAGE



STA. 32+47 INSTALL
18' x 28' PIPE CULV' T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 25 CU. YDS.



CROSS SECTION HWY. 51 & HWY. 26 INTERSECTION STA. 32+00 TO STA. 32+50

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.	070364		255	260

2 CROSS SECTIONS

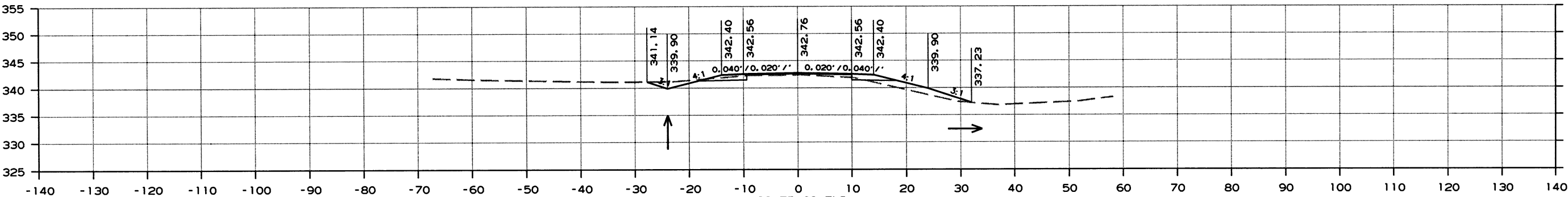
AREA STAGE

VOLUME STAGE

AREA CUT 0
AREA FILL 0

34+75.63 END
END 100' TRANSITION

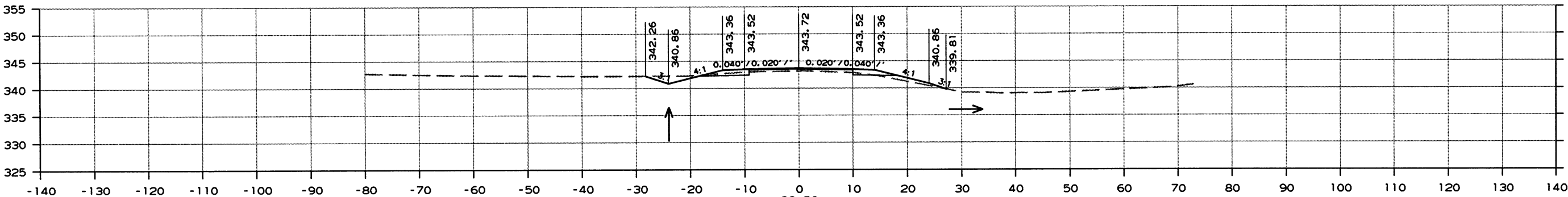
CUT VOLUME 21
FILL VOLUME 31



AREA CUT 11
AREA FILL 17

33+75.63 END
HWY. 51 INTERSECTION
BEGIN 100' TRANSITION

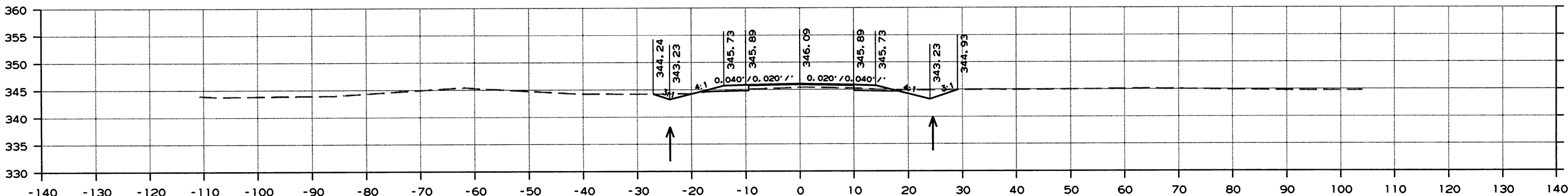
CUT VOLUME 11
FILL VOLUME 10



AREA CUT 12
AREA FILL 5

33+50

CUT VOLUME 26
FILL VOLUME 5



AREA CUT 17
AREA FILL 0

33+00

CUT VOLUME 21
FILL VOLUME 16

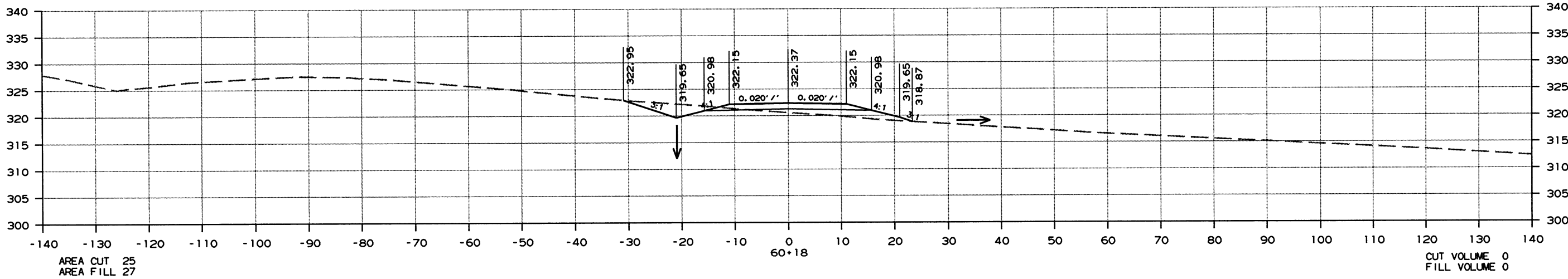
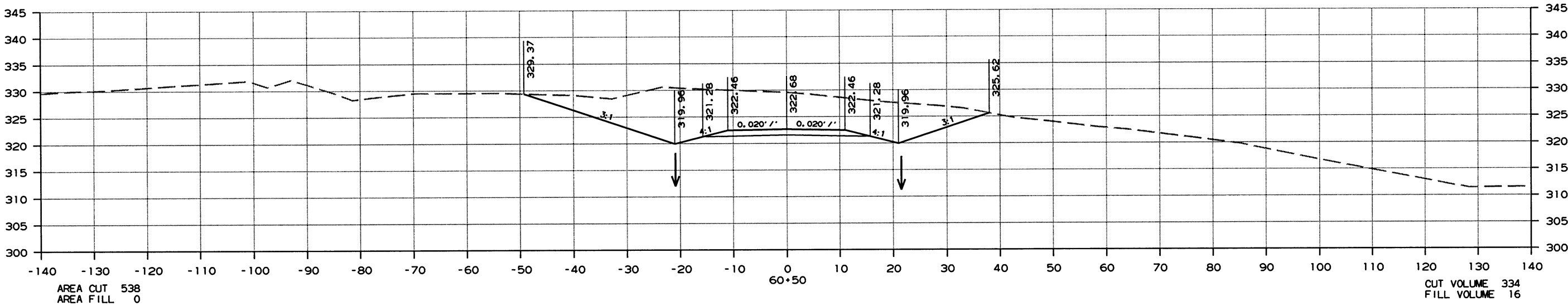
CROSS SECTION HWY. 51 & HWY. 26 INTERSECTION STA. 33+00 TO STA. 33+76

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. 070364			256	260

2 CROSS SECTIONS

AREA STAGE

VOLUME STAGE



CROSS SECTION MOUNT ZION ROAD STA. 60+18 TO STA. 60+50

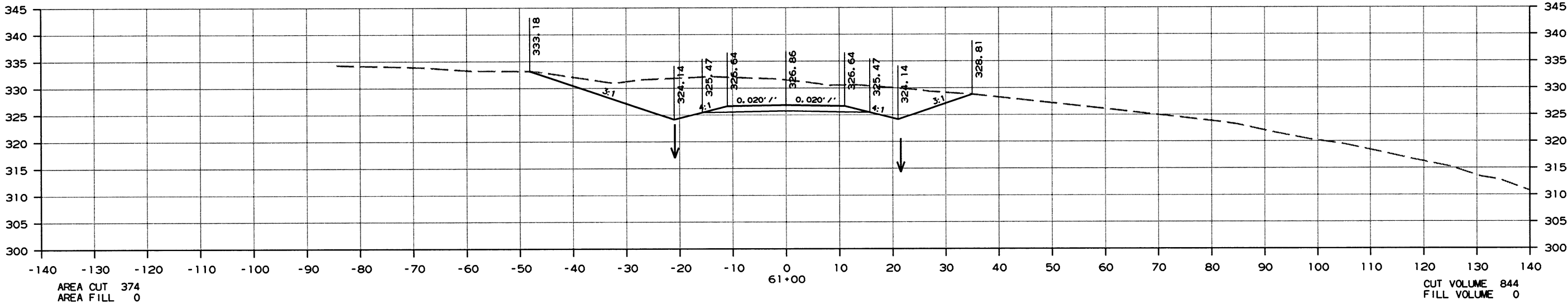
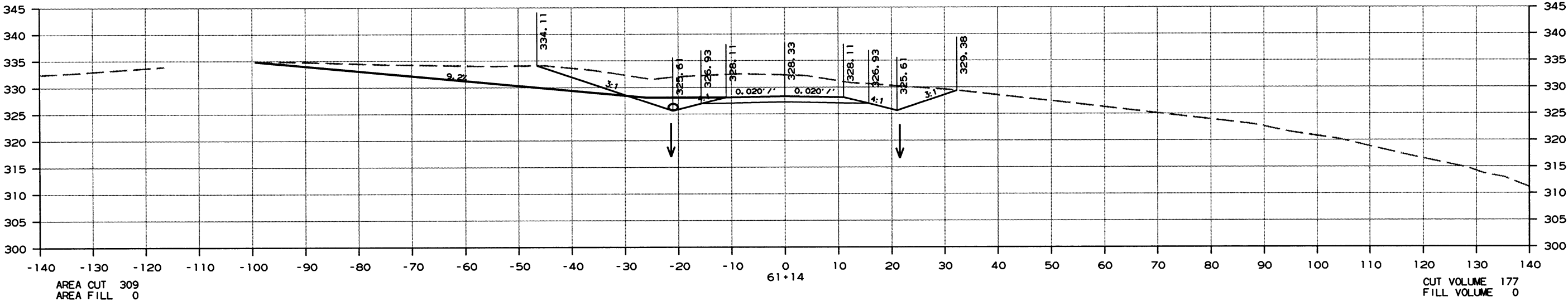
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 070364			257	260

2 CROSS SECTIONS

AREA STAGE

VOLUME STAGE

STA. 61+14 IN PLACE
18" X 28' PIPE CULV'T.
REMOVE AND INSTALL
21" X 15" X 66' ARCH PIPE CULV'T.
LT. SIDE DRAIN
UNCLASSIFIED EXC. ON LT. = 220 CU. YDS.
CONST. APPR. ON LT. = 35 CU. YDS.



CROSS SECTION MOUNT ZION ROAD STA. 61+00 TO STA. 61+14

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. 070364		258	260	

2 CROSS SECTIONS

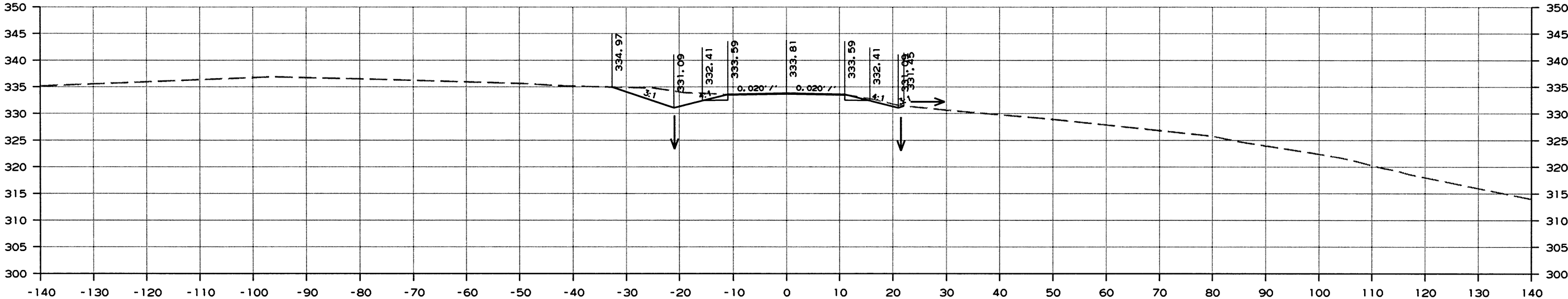
AREA STAGE

VOLUME STAGE

AREA CUT 0
AREA FILL 0

STA. 62+87.22
END 100' TRANSITION

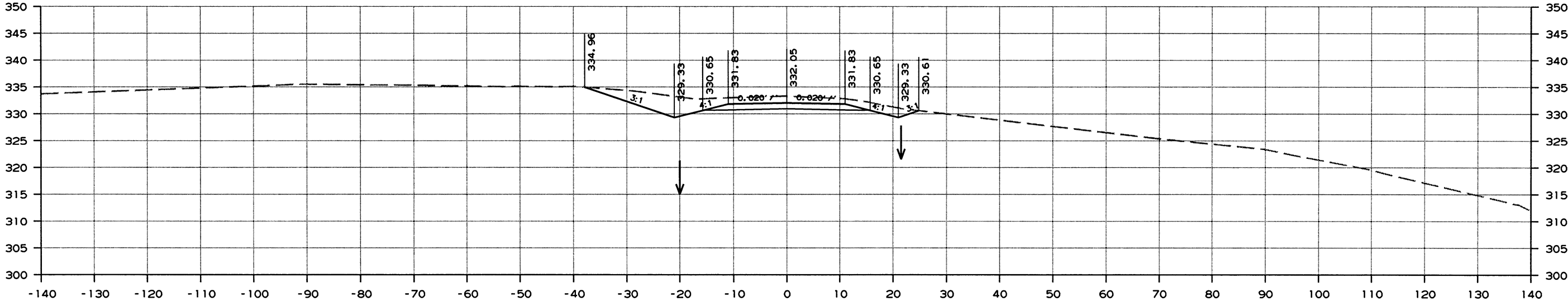
CUT VOLUME 80
FILL VOLUME 0



AREA CUT 43
AREA FILL 0

STA. 61+87.22
END MOUNT ZION ROAD
BEGIN 100' TRANSITION

CUT VOLUME 120
FILL VOLUME 0



AREA CUT 131
AREA FILL 0

CUT VOLUME 293
FILL VOLUME 0

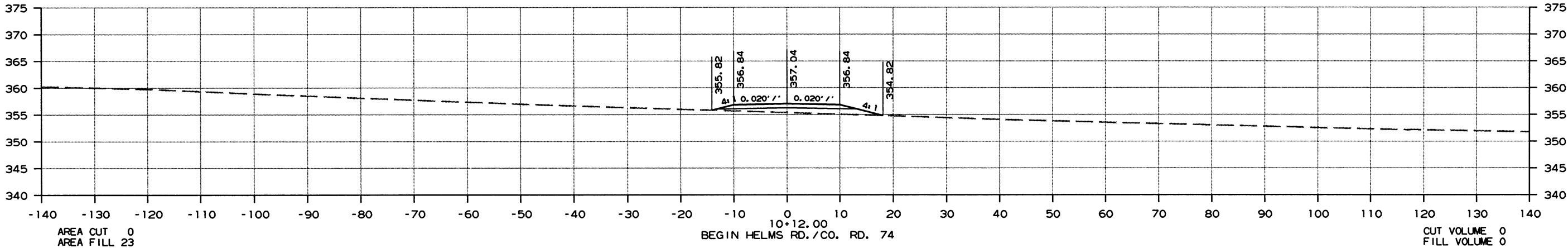
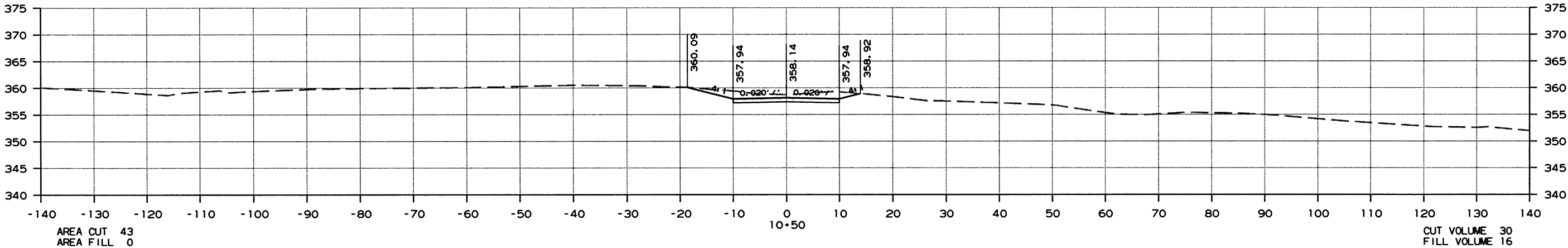
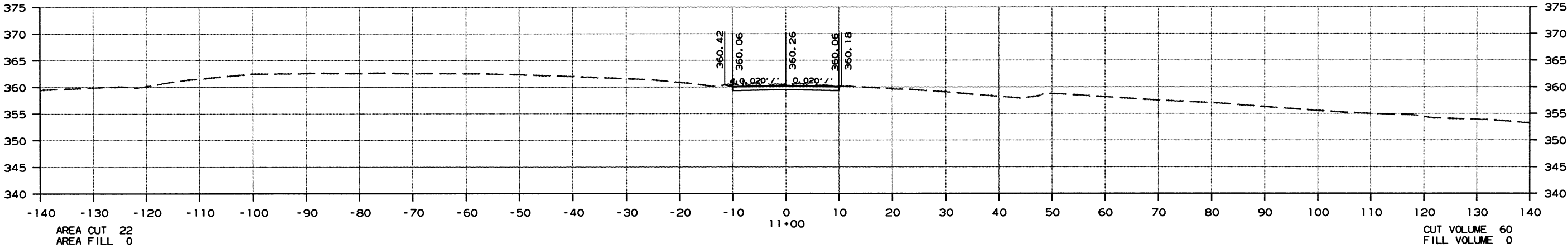
CROSS SECTION MOUNT ZION ROAD STA. 61+50 TO STA. 61+87

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. 070364			259	260

2 CROSS SECTIONS

AREA STAGE

VOLUME STAGE



BEGIN HELMS RD./CO. RD. 74

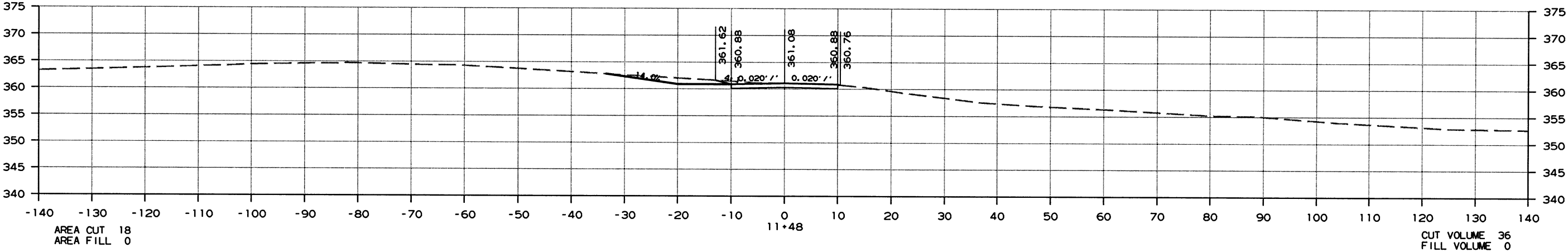
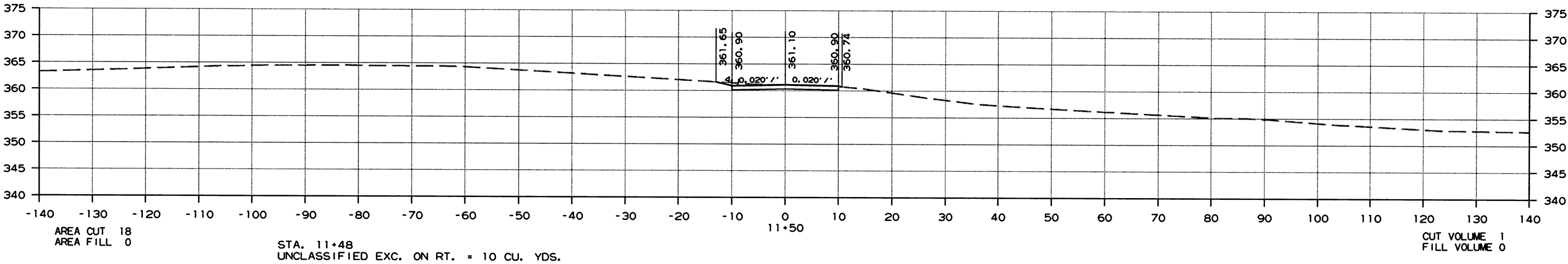
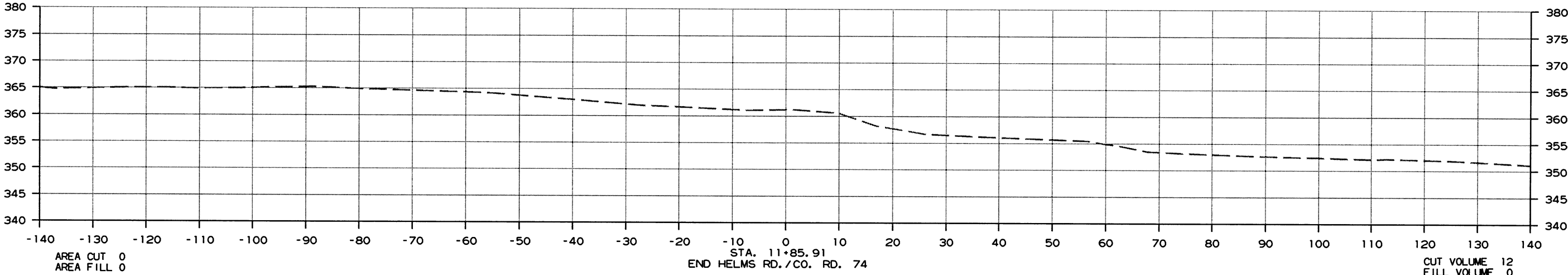
CROSS SECTION CO. RD. 74 STA. 10+12 TO STA. 11+00

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. 070364	260	260

2 CROSS SECTIONS

AREA STAGE

VOLUME STAGE



CROSS SECTION CO. RD. 74 STA. 11+48 TO STA. 11+86

10/2/2016

R070364.DGN