

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY



BELLEFONTE - MARION CO.
LINE (PASSING LANES) (S)

BOONE COUNTY
ROUTE 62 SECTION 7

JOB 090581

FED. AID PROJ. CPFCDs-NHPP-0005(50)

NOT TO SCALE

STA. 197+60.00
END JOB 090581

STA. 110+00.00
BEGIN JOB 090581
LOG MILE 4.70

R 19 W | R 18 W

T 19 N
T 18 N

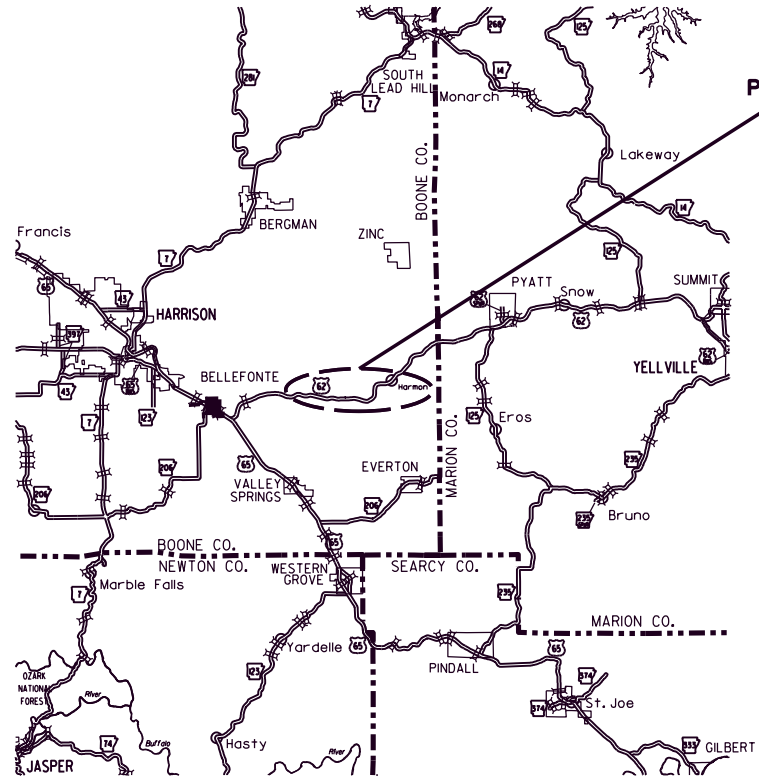
DESIGN TRAFFIC DATA

DESIGN YEAR	2045
2025 ADT	5,000
2045 ADT	5,800
2045 DHV	.638
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	7%
DESIGN SPEED	60 MPH

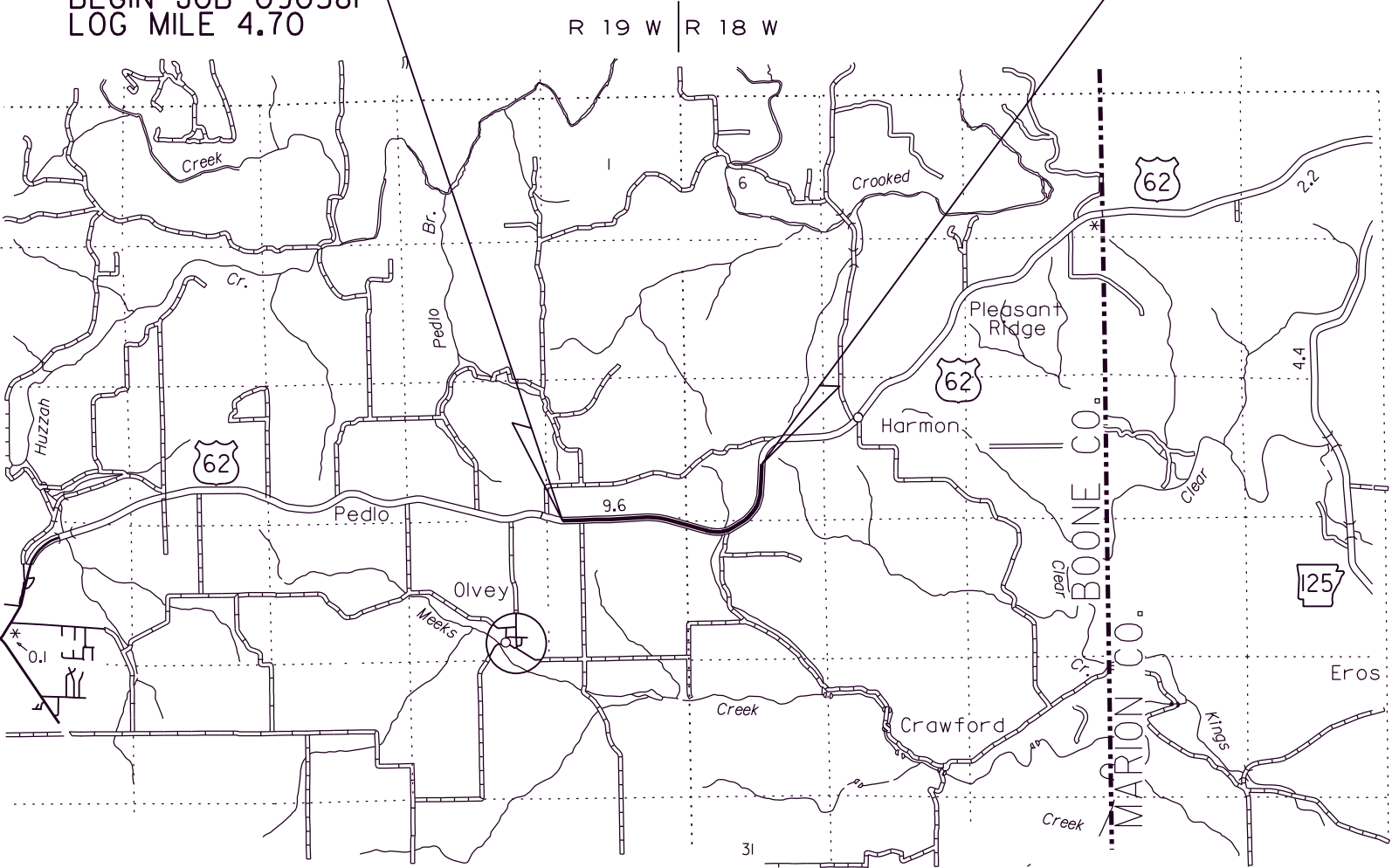
APPROVED



CHIEF ENGINEER - PRECONSTRUCTION



VICINITY MAP

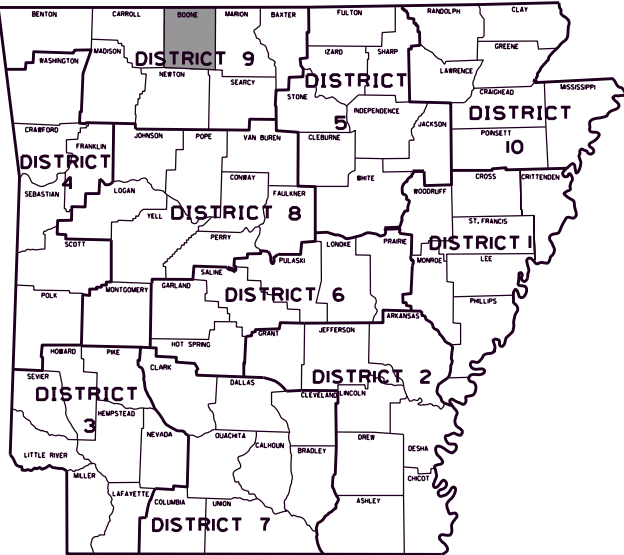


R 19 W | R 18 W

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 36°12' 11"	N 36°12' 09"	N 36°12' 25"
LONGITUDE	W 92°57' 35"	W 92°56' 41"	W 92°56' 01"

LENGTH OF PROJECT CALCULATED ALONG C.L.				
GROSS LENGTH OF PROJECT	8760.00	FEET	OR	1.659 MILES
NET ROADWAY	8760.00			1.659 MILES
NET BRIDGES	0.00			0.000 MILES
NET PROJECT	8760.00			1.659 MILES

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	1	117
BELLEFONTE - MARION CO. LINE (PASSING LANES) (S)						



ARK. HWY. DIST. NO. 9

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	2	117
INDEX OF SHEETS						



INDEX OF SHEETS

SHEET NO.	TITLE
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70 - 117	CROSS SECTIONS

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

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
CG-1	CURBING DETAILS	11-29-07
DR-2	DETAILS OF DRIVEWAYS & STREET TURNOUTS	05-19-22
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9D	DETAILS OF DROP INLETS	08-22-02
FPC-9S	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	07-26-12
MB-1	MAILBOX DETAILS	11-18-04
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PCP-3	PLASTIC PIPE CULVERT (POLYPROPYLENE)	02-27-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
RCB-1	REINFORCED CONCRETE BOX CULVERT DETAILS	07-26-12
RCB-2	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	11-20-03
RCB-3	METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS	10-12-95
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	11-07-19
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	05-20-21
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-12-21
TC-4	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
TC-5	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-2	TEMPORARY EROSION CONTROL DEVICES	06-02-94
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94
WF-2	WIRE FENCE WATER GAPS	04-20-79
WF-4	WIRE FENCE TYPE C AND D	08-22-02
W-X003-1	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	06-10-66
W-X15	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	06-13-63
R-100X-X1	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	10-10-62
R-115X-1	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	10-24-63

GOVERNING SPECIFICATIONS	
ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:	
NUMBER	TITLE
ERRATA_____	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273_____	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273_____	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273_____	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273_____	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273_____	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273_____	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273_____	SUPPLEMENT - WAGE RATE DETERMINATION
FHWA-1273_____	SUPPLEMENT - TRAINING PROGRAM - JOB NUMBER 090581
100-3_____	CONTRACTOR'S LICENSE
100-4_____	DEPARTMENT NAME CHANGE
102-2_____	ISSUANCE OF PROPOSALS
102-3_____	PREQUALIFICATION OF BIDDERS
103-2_____	CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS
105-4_____	MAINTENANCE DURING CONSTRUCTION
107-2_____	RESTRAINING CONDITIONS
108-1_____	LIQUIDATED DAMAGES
108-2_____	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
110-1_____	PROTECTION OF WATER QUALITY AND WETLANDS
210-1_____	UNCLASSIFIED EXCAVATION
303-1_____	AGGREGATE BASE COURSE
306-1_____	QUALITY CONTROL AND ACCEPTANCE
400-1_____	TACK COATS
400-4_____	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5_____	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6_____	LIQUID ANTI-STRIP ADDITIVE
400-7_____	TRACKLESS TACK
404-3_____	DESIGN OF ASPHALT MIXTURES
409-2_____	ASPHALT LABORATORY FACILITY
410-1_____	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2_____	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
410-4_____	EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL
416-1_____	RECYCLED ASPHALT PAVEMENT
501-3_____	PORTLAND CEMENT CONCRETE PAVEMENT
600-2_____	INCIDENTAL CONSTRUCTION
603-1_____	LANE CLOSURE NOTIFICATION
604-1_____	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3_____	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
605-1_____	CONCRETE DITCH PAVING
606-1_____	PIPE CULVERTS FOR SIDE DRAINS
619-1_____	FENCES
620-1_____	MULCH COVER
621-1_____	FILTER SOCKS
634-1_____	CURBING
637-1_____	MAILBOXES
800-1_____	STRUCTURES
802-5_____	CONCRETE FOR STRUCTURES
804-2_____	REINFORCING STEEL FOR STRUCTURES
JOB 090581_____	BIDDING REQUIREMENTS AND CONDITIONS
JOB 090581_____	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 090581_____	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 090581_____	BUY AMERICA - CONSTRUCTION MATERIALS
JOB 090581_____	CARGO PREFERENCE ACT REQUIREMENTS
JOB 090581_____	CAVE DISCOVERY
JOB 090581_____	COLD MILLING – COUNTY PROPERTY
JOB 090581_____	CONSTRUCTION PROJECT INFORMATION SIGN
JOB 090581_____	CULVERT CLEAN OUT
JOB 090581_____	DESIGN AND QUALITY CONTROL ASPHALT MIXTURES
JOB 090581_____	DESIGN OF ASPHALT MIXTURES - AGGREGATES
JOB 090581_____	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 090581_____	EXTENSION FOR PIPE CULVERTS
JOB 090581_____	FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT
JOB 090581_____	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 090581_____	LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 090581_____	LONGITUDINAL JOINT DENSITIES FOR ACHM SURFACE COURSES
JOB 090581_____	MANDATORY ELECTRONIC CONTRACT
JOB 090581_____	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 090581_____	NESTING SITES OF MIGRATORY BIRDS
JOB 090581_____	OFF-SITE RESTRAINING CONDITIONS FOR INDIANA AND NORTHERN LONG-EARED BATS
JOB 090581_____	PARTNERING REQUIREMENTS
JOB 090581_____	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)
JOB 090581_____	PLASTIC PIPE
JOB 090581_____	PRE-BID ON SITE INVESTIGATION OF SOIL CONDITIONS
JOB 090581_____	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 090581_____	PRICE ADJUSTMENT FOR FUEL
JOB 090581_____	PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 090581_____	REMOVING AND REPLACING TOPSOIL
JOB 090581_____	SHORING FOR CULVERTS
JOB 090581_____	SOIL STABILIZATION
JOB 090581_____	SPECIAL CLEARING PUP SEASON REQUIREMENTS
JOB 090581_____	STORM WATER POLLUTION PREVENTION PLAN
JOB 090581_____	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 090581_____	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 090581_____	UTILITY ADJUSTMENTS
JOB 090581_____	VALUE ENGINEERING
JOB 090581_____	WARM MIX ASPHALT

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	3	117
		GOVERNING SPECIFICATIONS & GENERAL NOTES				



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 ORGANZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
- 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.
- 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.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	4	117
TYPICAL SECTIONS OF IMPROVEMENT						



04/14/2025

NOTES:

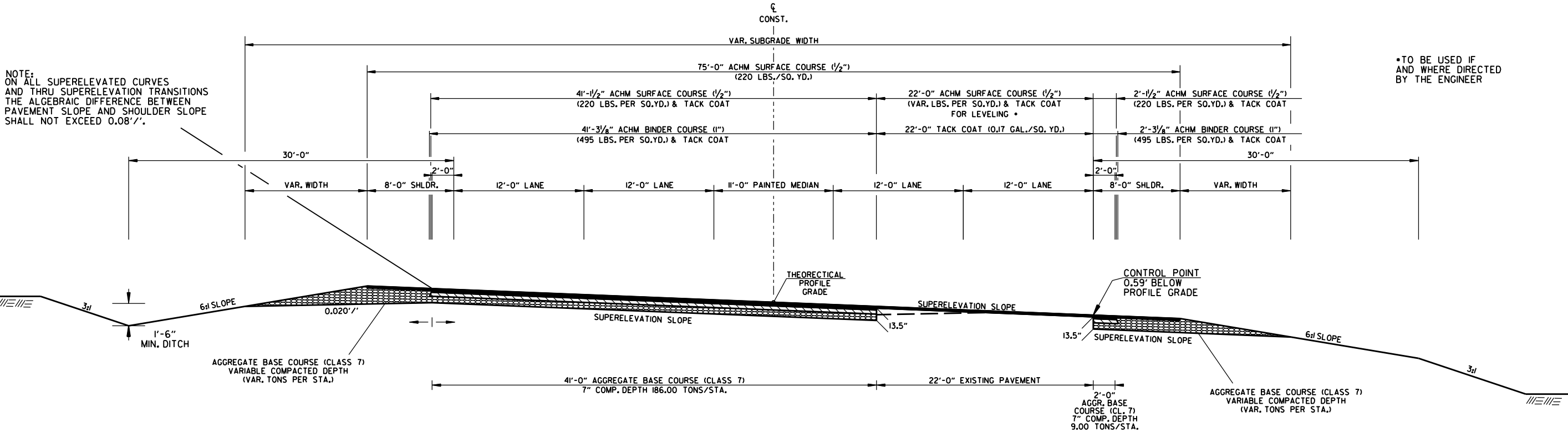
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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.

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

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 PAY ITEMS.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1 1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.



HWY. 62 - NOTCH & WIDEN RT. 5 LANE W/ PAINTED MEDIAN
SUPERELEVATION
STA. 110+00.00 TO STA. 111+80.00
STA. 139+00.00 TO STA. 142+00.00
STA. 160+00.00 TO STA. 165+70.00
STA. 169+00.00 TO STA. 172+10.00

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	5	117
TYPICAL SECTIONS OF IMPROVEMENT						



Charles Martin
04/14/2025

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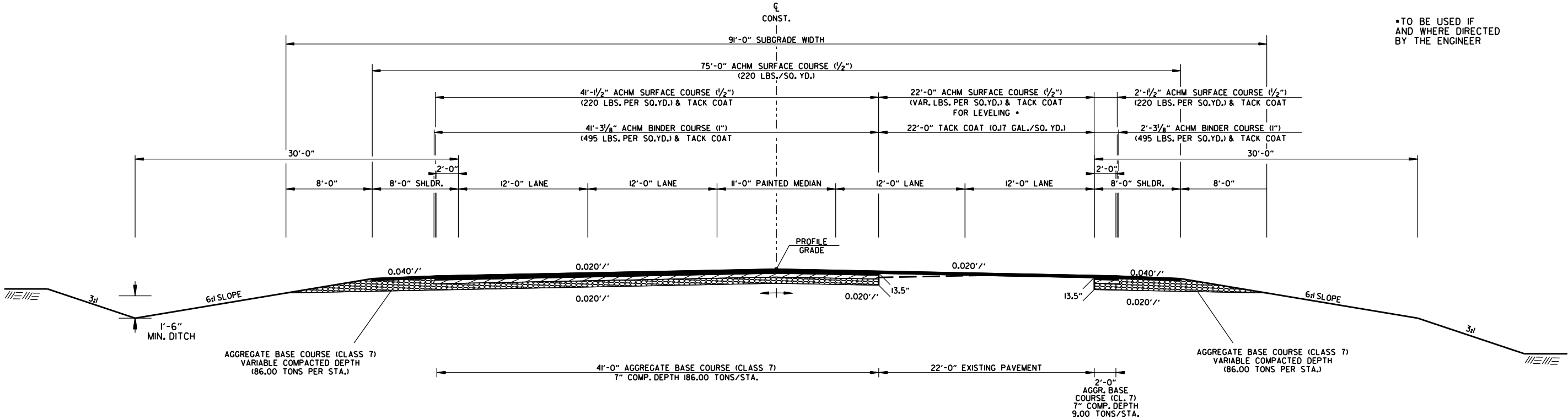
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WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

*TO BE USED IF
AND WHERE DIRECTED
BY THE ENGINEER



HWY. 62 - NOTCH & WIDEN RT. 5 LANE W/ PAINTED MEDIAN
STA. 111+80.00 TO STA. 121+30.00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	6	117
TYPICAL SECTIONS OF IMPROVEMENT						



04/28/2025

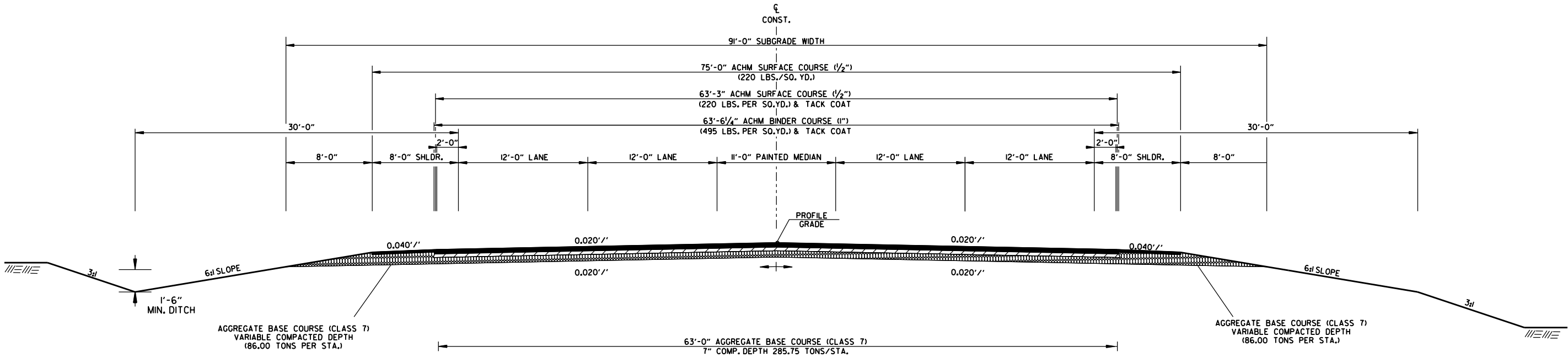
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HWY. 62 - FULL DEPTH 5 LANE W/ PAINTED MEDIAN

STA. 121+30.00 TO STA. 136+65.12
STA. 153+54.14 TO STA. 158+97.50

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	7	117
TYPICAL SECTIONS OF IMPROVEMENT						



04/28/2025

NOTES:

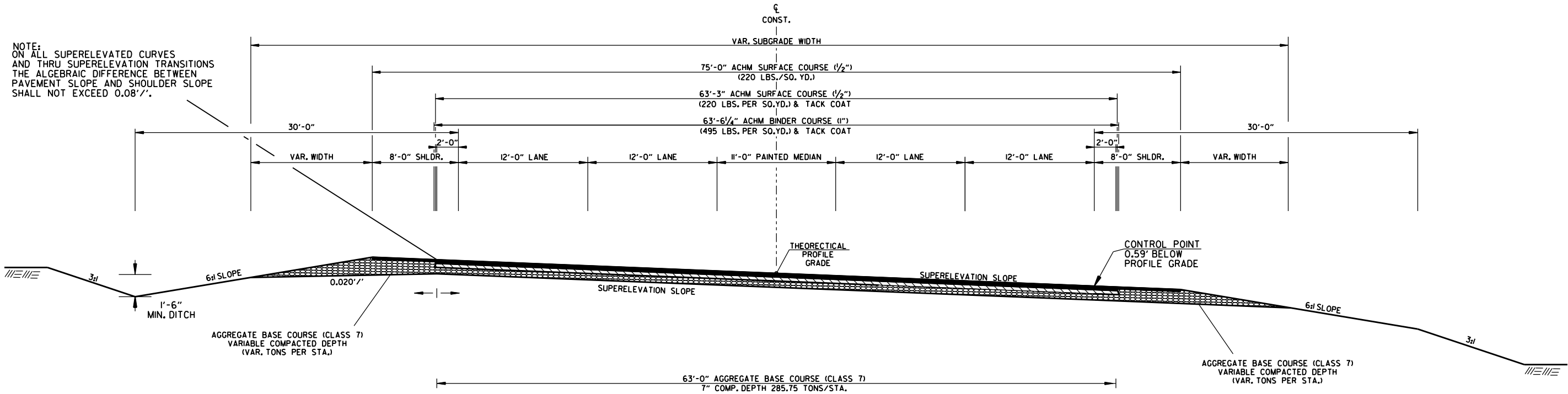
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NOTE:
ON ALL SUPERELEVATED CURVES
AND THRU SUPERELEVATION TRANSITIONS
THE ALGEBRAIC DIFFERENCE BETWEEN
PAVEMENT SLOPE AND SHOULDER SLOPE
SHALL NOT EXCEED 0.08'/'.



HWY. 62 - FULL DEPTH 5 LANE W/ PAINTED MEDIAN
SUPERELEVATION

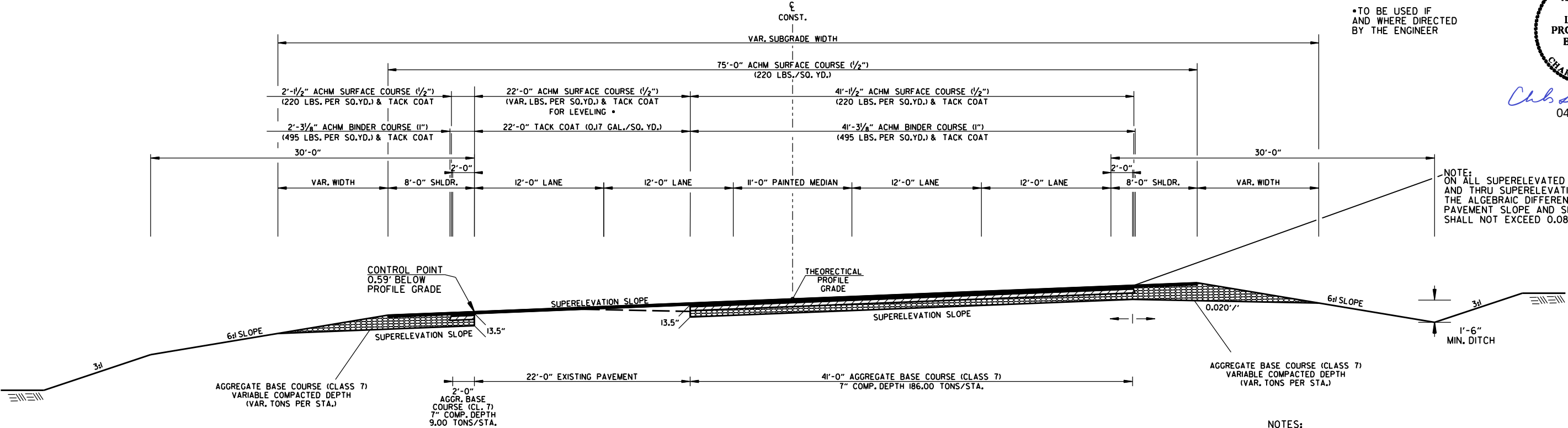
STA. 136+65.12 TO STA. 139+00.00
STA. 142+00.00 TLO STA. 153+54.14
STA. 158+97.50 TO STA. 160+00.00
STA. 165+70.00 TO STA. 169+00.00
STA. 172+10.00 TO STA. 187+00.00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	8	117
TYPICAL SECTIONS OF IMPROVEMENT						



04/28/2025

•TO BE USED IF
AND WHERE DIRECTED
BY THE ENGINEER

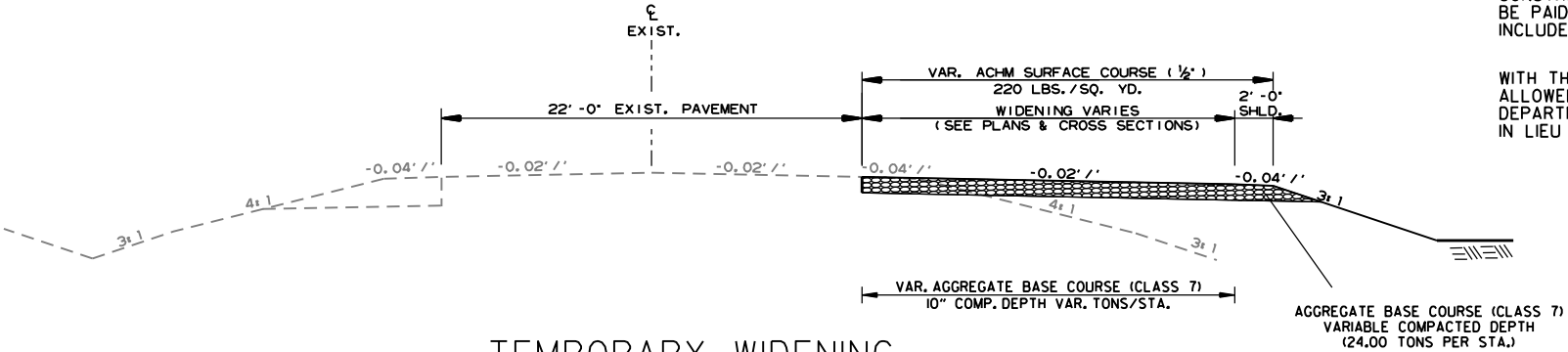


HWY. 62 - NOTCH & WIDEN LT. 5 LANE W/ PAINTED MEDIAN
SUPERELEVATION

STA. 187+00.00 TO STA. 197+59.86

- NOTES:
- 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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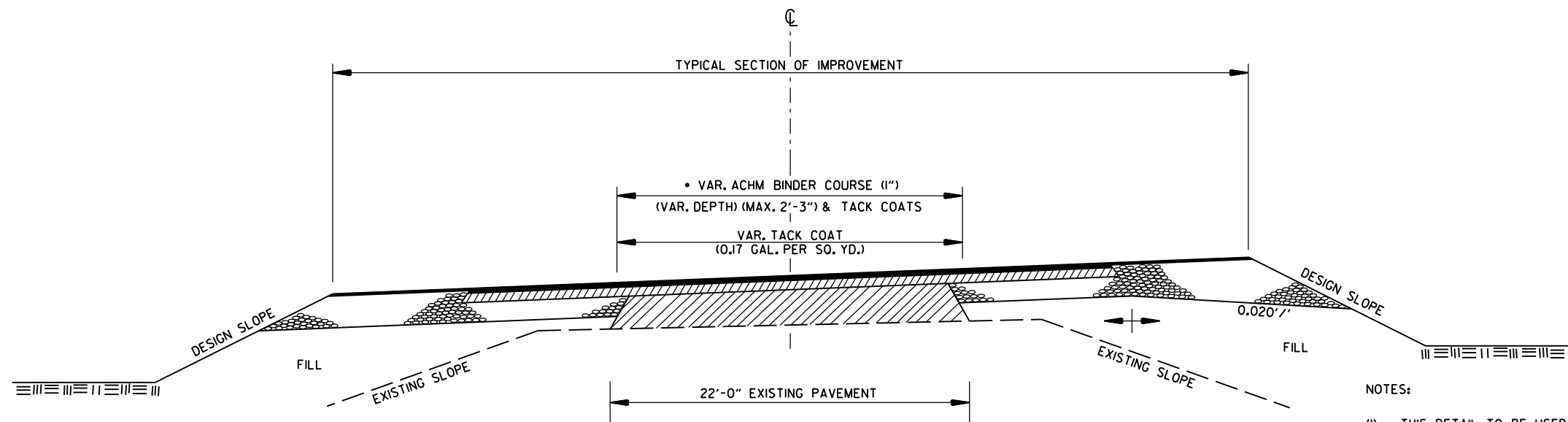
TEMPORARY WIDENING

STA. 127+00.00 TO STA. 139+00.00
STA. 143+77.00 TO STA. 159+00.00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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SPECIAL DETAILS						



Charles Martin
04/14/2025



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

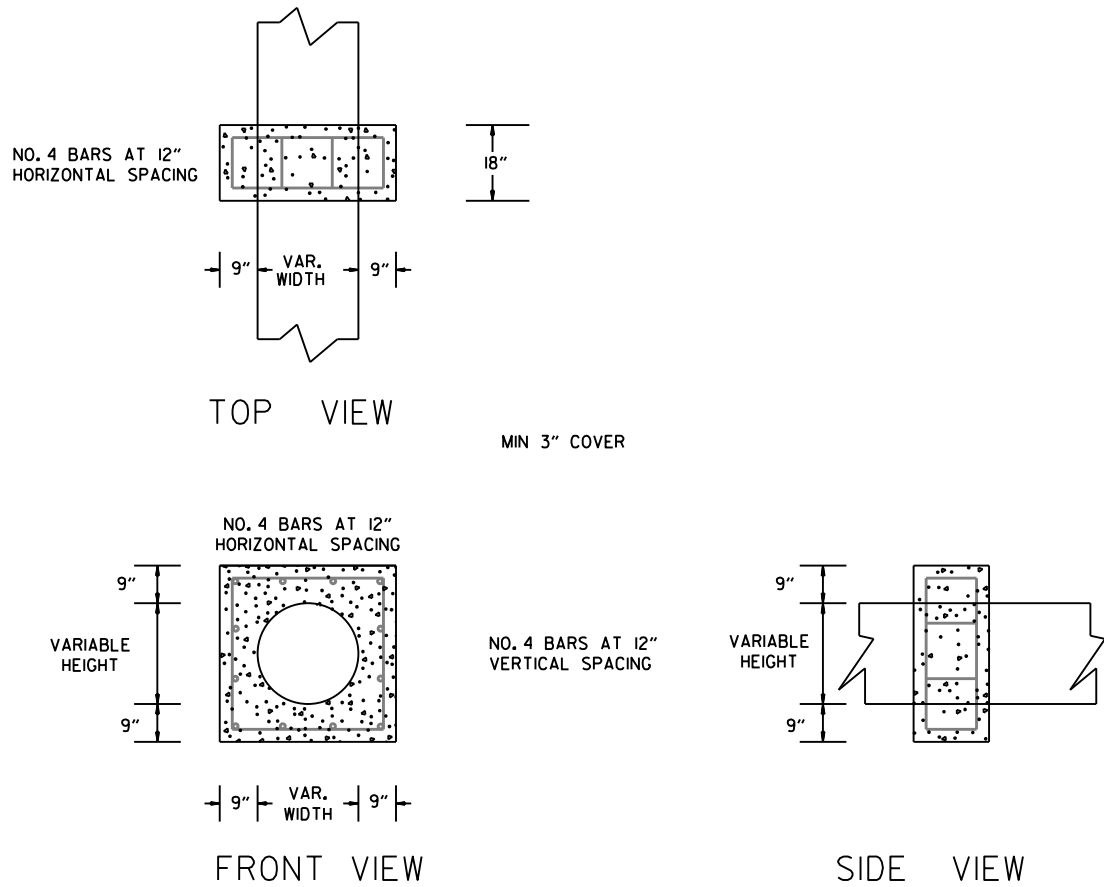
METHOD OF RAISING GRADE

- 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.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	10	117
SPECIAL DETAILS						



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04/14/2025

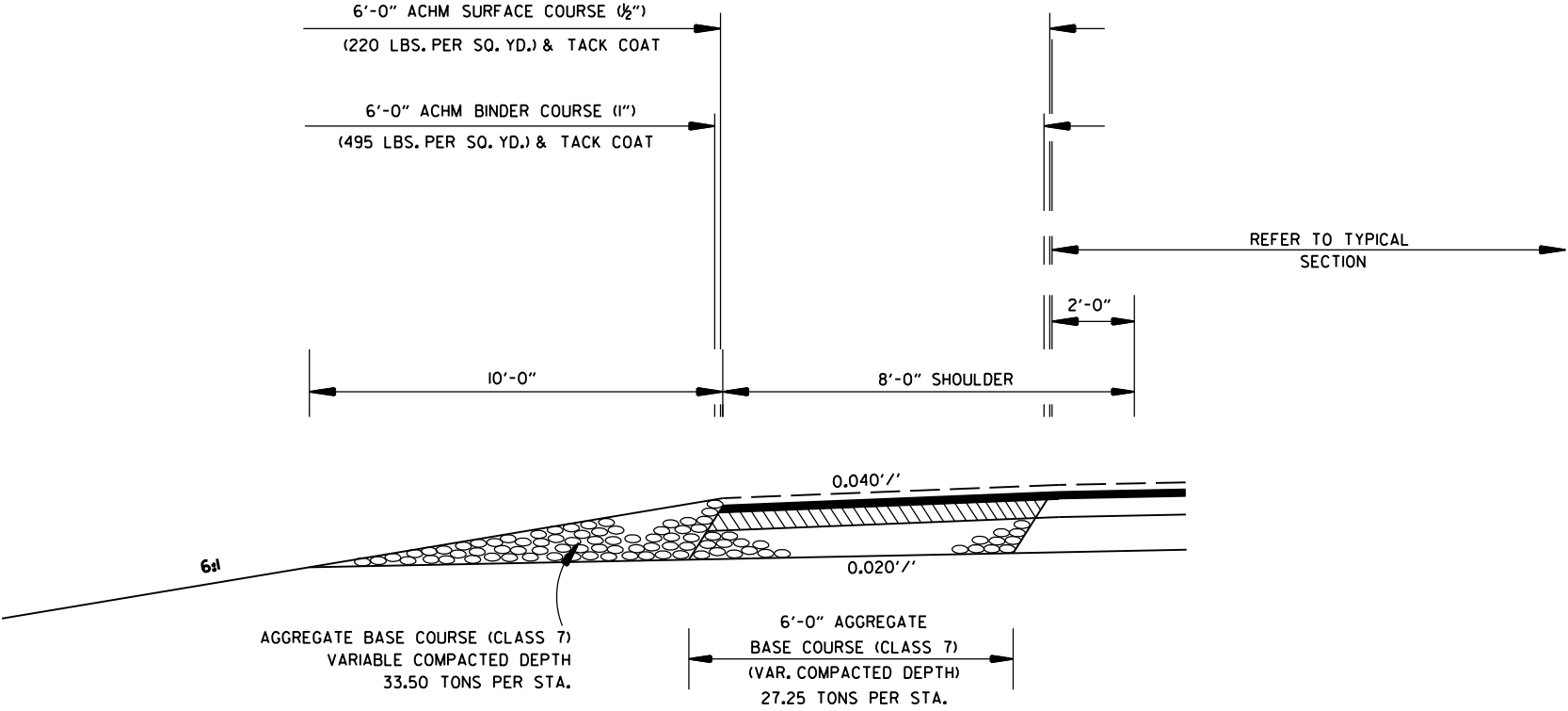


PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	11	117
SPECIAL DETAILS						



Charles Martin
04/14/2025

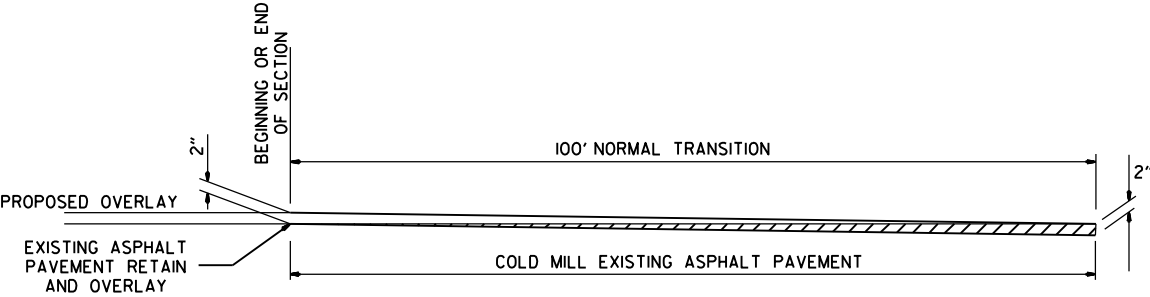


FULL DEPTH SHOULDER
FOR MAINTENANCE OF TRAFFIC

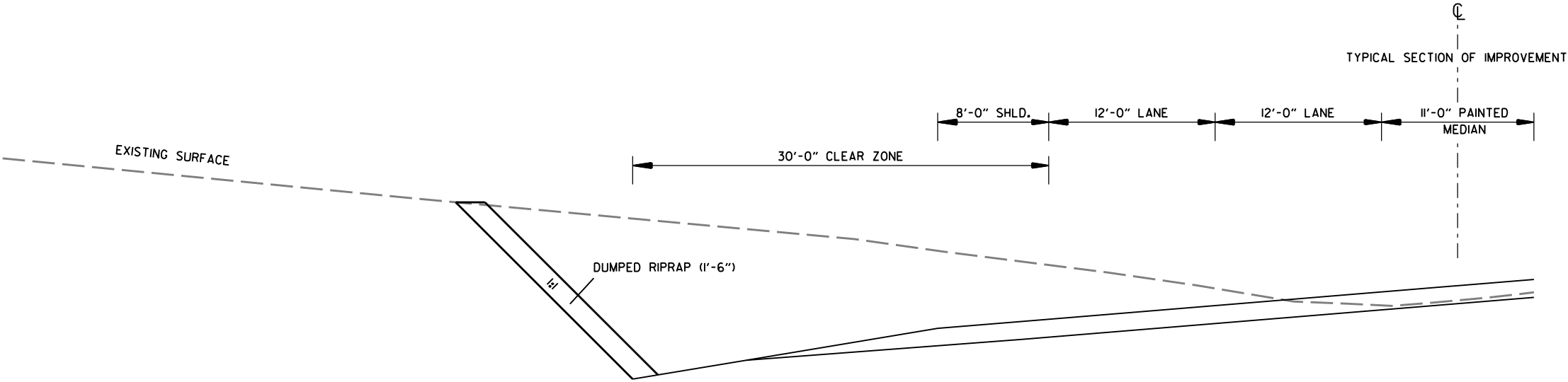
STATIONS: 126+00 - 162+00

SPECIAL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
05-07-2025		6	ARK.	090581	12	117
SPECIAL DETAILS						



DETAIL FOR TRANSITIONS



DETAIL FOR 1H :1V CUT SLOPE - HWY. 62
STA. 159+00.00 - STA. 169+00.00

NOTES:

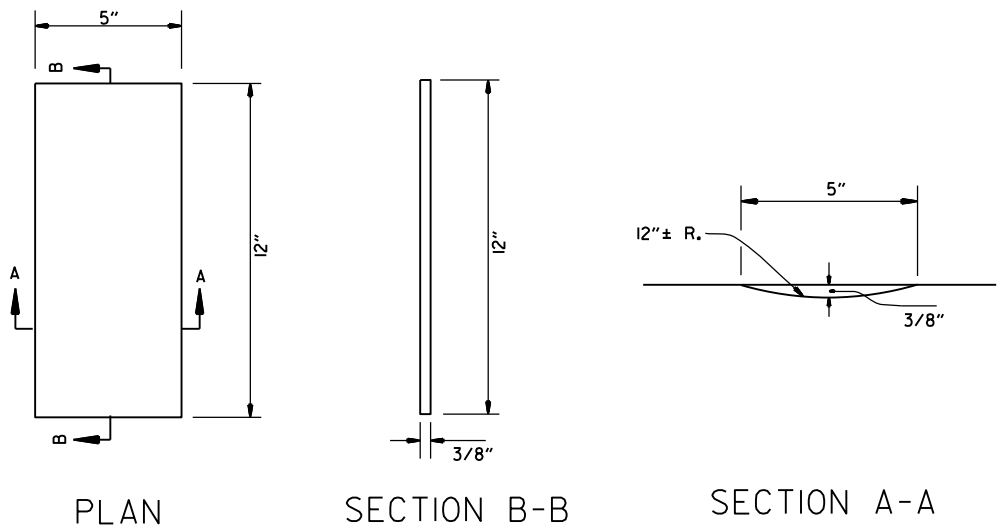
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

IF ROCK IS STABLE AT THE TIME OF CONSTRUCTION, CUT SLOPE CONFIGURATION STEEPER THAN 1H :1V MAY BE ACCEPTED.

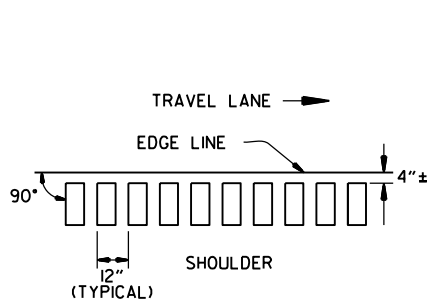
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	13	117
SPECIAL DETAILS						



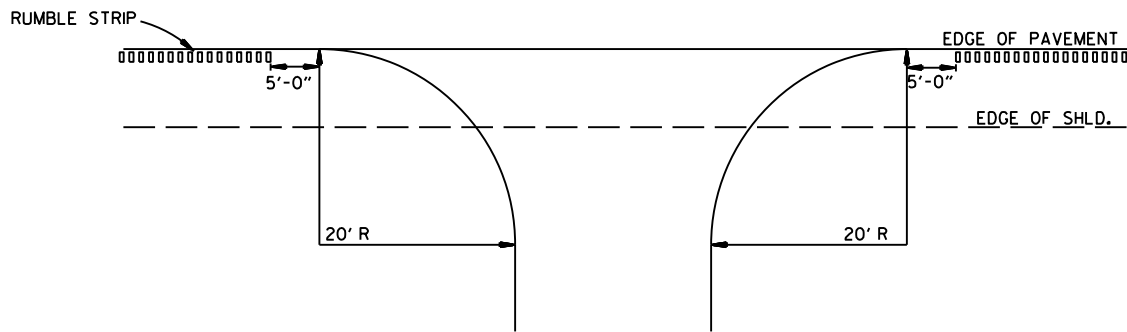
04/14/2025



DETAILS OF RUMBLE STRIPS



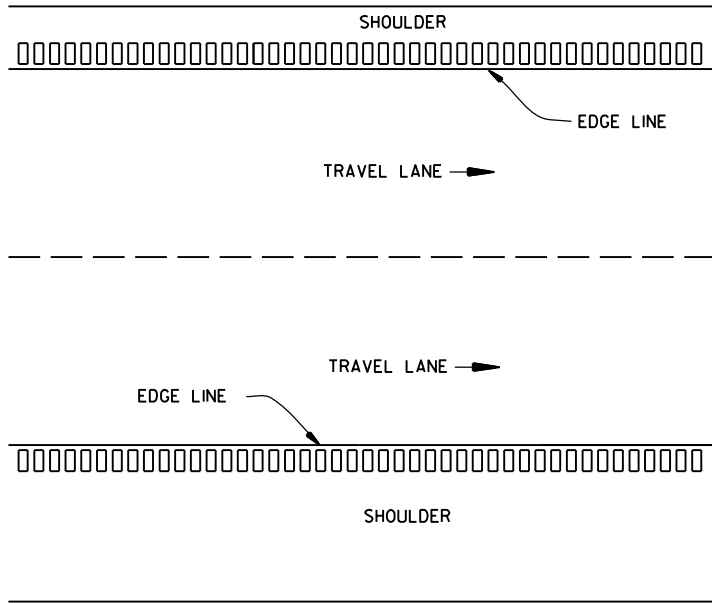
LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER



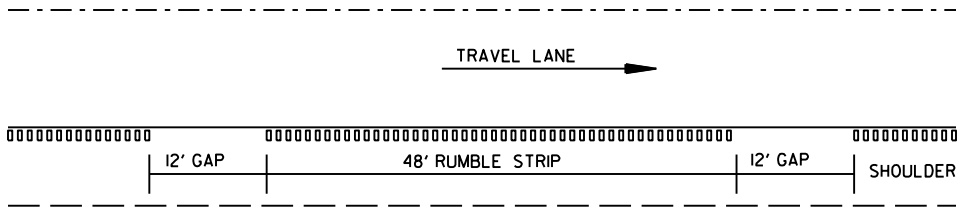
DETAIL FOR RUMBLE STRIP GAP
AT DRIVEWAY TURNOUTS

GENERAL NOTES:

1. RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.
4. RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPS HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPS HAVE NOT BEEN CONSTRUCTED.
5. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



PLAN VIEW



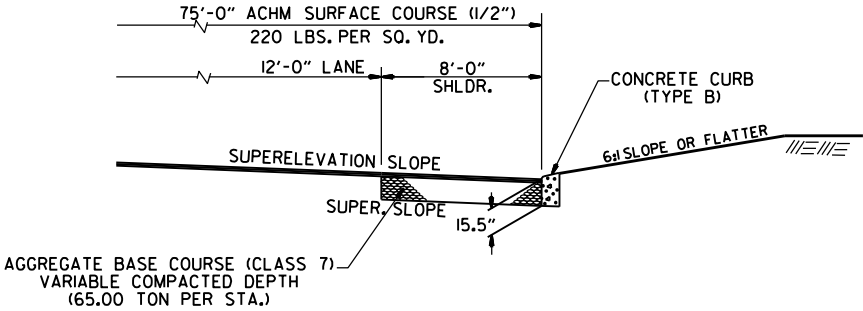
NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

DETAIL FOR GAP PATTERN RUMBLE STRIP

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	14	117
SPECIAL DETAILS						



Charles Martin
04/14/2025



DETAIL FOR MOUNTABLE CURB
STA. 141+00 TO STA. 145+00 RT.

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE MOUNTABLE CURB, 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.

MID-SECTION

C	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 "a" LENGTH = OW - 4"				BOTTOM SLAB REINFORCING STEEL "b" LENGTH = OW - 4"				SIDE WALL REINFORCING STEEL "f" LENGTH = OH - 4"				TOP SLAB DISTRIBUTION REINF. STEEL "d" LENGTH = SL			BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL			SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL		
	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	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D							
	20	10	5	11.5	12	6	11'-0"	6'-11 1/2"	114.00	8	6	228	10'-8"	8	6	228	10'-8"	4	4	684	6'-8"	4	9	15	4	9	15	4	9	15	4	12	10								

112.06	CU. YDS.	CLASS "S" CONCRETE
19173	LBS.	REINFORCING STEEL (Gr. 60)

INLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		TOP SLAB THICKNESS		BOTTOM SLAB THK.		SIDE WALL THICKNESS		OVERALL WIDTH		OVERALL HEIGHT		SECTION LENGTH (FT.)		TOP SLAB REINFORCING STEEL "a" LENGTH = OW - 4"				BOTTOM SLAB REINFORCING STEEL "b" LENGTH = OW - 4"				SIDE WALL REINFORCING STEEL "f" LENGTH = OH - 4"				TOP SLAB DISTRIBUTION REINF. STEEL "d" LENGTH = SL			BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL			SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL		
	D	S	H	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	LENGTH	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D							
	A	10	10	5	9	9	9.5	6	11'-0"	6'-6 1/2"	22	6	5	52	10'-8"	6	5.5	48	10'-8"	4	8.5	62	6'-2"	4	12	11	4	11	12	4	12	10							
B	15	10	5	11	11	6	11'-0"	6'-10"	11	6	4.5	29	10'-8"	6	4.5	29	10'-8"	4	6.5	40	6'-6"	4	10	13	4	10	13	4	12	10									
HDWL DEPTH		ADDITIONAL REINF. FOR HDWL										"h" HDWL BARS																											
HD		LBS										SIZE	Y		LENGTH		NO. REQ'D																						
3"		32										4	0'-8"		1'-8"		12																						

CU. YDS.	CLASS "S" CONCRETE	REINFORCING STEEL (GR. 50)
17.99		2440
10.25		1423
TOTAL		
28.25		3863

INLET SKEWED END SECTION

[illegible]

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)
								AT HDWL	AT WING END	WING A	WING B		WING A	WING B	WING A	WING B	WING A	WING B				
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	602

WING	F1				F2				F3				F4				F5				F6				F7				F8				F9				F10				F11				F12				REINF. STEEL QTY. PER WING (LBS)
	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS VARY	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS VARY	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS VARY	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS	BAR SIZE	MAX. SPACING	NO. REQ'D	LENGTHS									
WING A	4	12	14	L Min 2'-10" Max 7'-6" X Min 0'-9" Max 1'-7" Y Min 2'-2" Max 6'-0"	-	-	-	L - X - Y -	-	-	-	-	L - X - Y -	4	18	6	Min 2'-1" Max 12'-2"	4	18	2	13'-8"	4	18	10	L Min 3'-3" Max 7'-3" X Min 1'-4" Max 1'-4" Y Min 2'-0" Max 6'-0"	4	6	16'-9"	6	18	10	Min 1'-8" Max 2'-6"	-	-	-	Min - Max	4	2	14'-2"	4	2	15'-8"	6	12	5	L 3'-4" X 1'-8"	301		
WING B	4	12	14	L Min 2'-10" Max 7'-6" X Min 0'-9" Max 1'-7" Y Min 2'-2" Max 6'-0"	-	-	-	L - X - Y -	-	-	-	-	L - X - Y -	4	18	6	Min 2'-1" Max 12'-2"	4	18	2	13'-8"	4	18	10	L Min 3'-3" Max 7'-3" X Min 1'-4" Max 1'-4" Y Min 2'-0" Max 6'-0"	4	6	16'-9"	6	18	10	Min 1'-8" Max 2'-6"	-	-	-	Min - Max	4	2	14'-2"	4	2	15'-8"	6	12	5	L 3'-4" X 1'-8"	301		

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		15	117
				JOB NO.		090581		
				1 SPECIAL DETAILS				



TABULAR DATA BY: IHS DATE: 10/14/2024
CHECKED BY: JCG DATE: 10/14/2024

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.

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

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"

Design Fill Depth	Range of Actual Fill Depth
2	0.0 ft - 2.0 ft
5	>2.0 ft - 5.0 ft
10	>5.0 ft - 10.0 ft
15	>10.0 ft - 15.0 ft
20	>15.0 ft - 20.0 ft
25	>20.0 ft - 25.0 ft
30	>25.0 ft - 30.0 ft
35	>30.0 ft - 35.0 ft
40	>35.0 ft - 40.0 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.

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

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
SINGLE BARREL BOX CULVERT
STA 155+23

SPECIAL DETAILS



OUTLET SKEWED END SECTION

OUTLET WINGWALL TABLE

[illegible][illegible]

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		16	117
				JOB NO.		090581		
				1 SPECIAL DETAILS				

1



TABULAR DATA BY: IHS DATE: 10/14/2024
CHECKED BY: JCG DATE: 10/14/2024

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

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

#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"

CU. YDS.	CLASS "S" CONCRETE	REINFORCING STEEL (GR. 50)
17.99		2440
10.25		1423
TOTAL		
28.25		3863

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 1.17b090581_Culvert.dgn

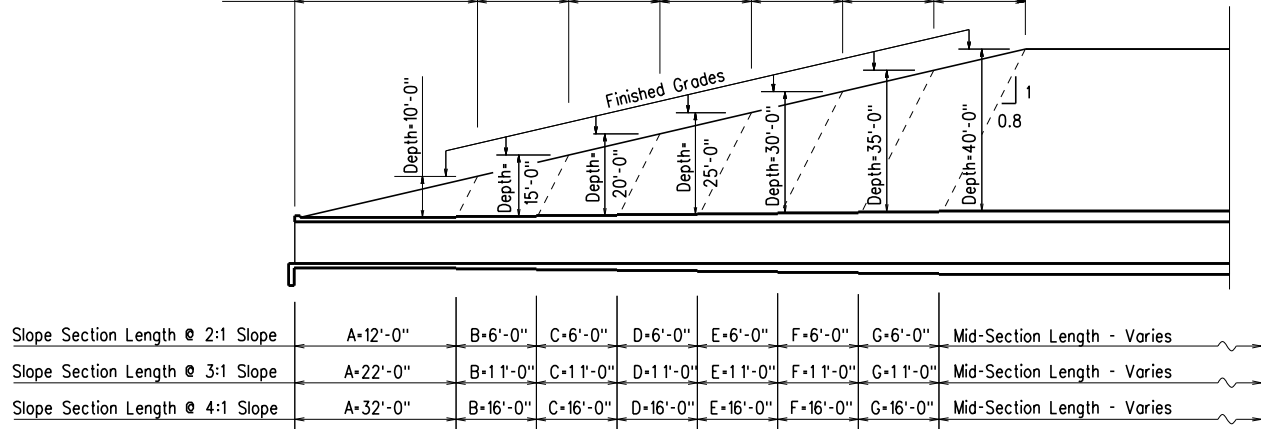
2:1 Slope	20'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
3:1 Slope	30'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
4:1 Slope	40'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"

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.

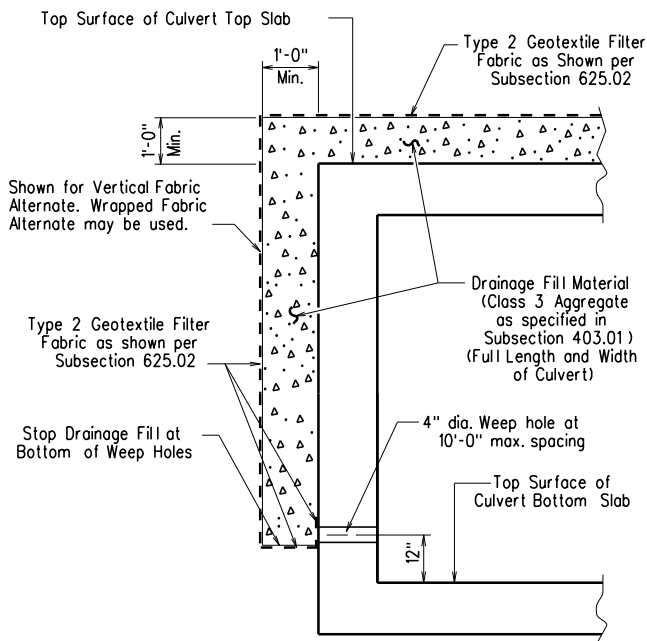
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		17	117
				JOB NO.	090581			

1 SPECIAL DETAILS



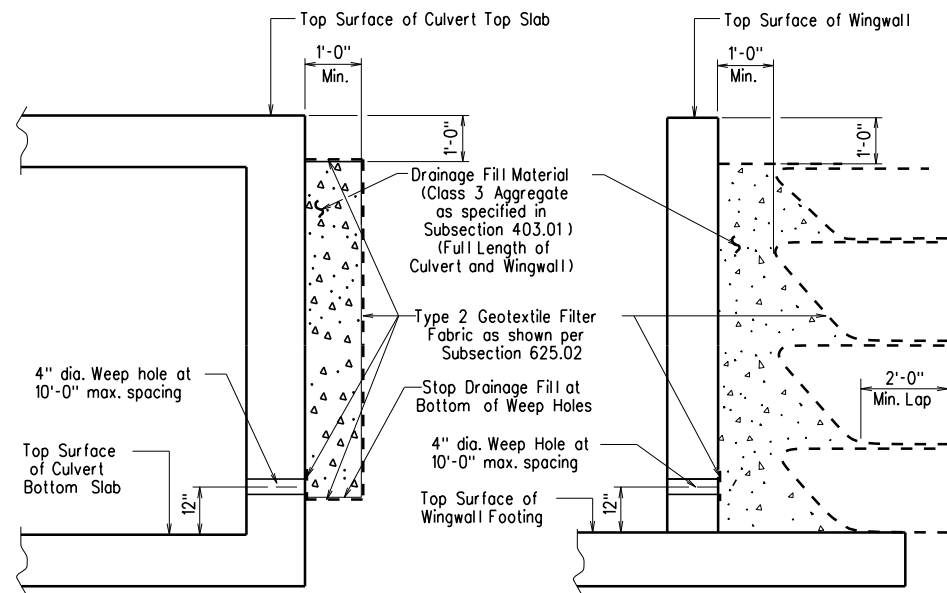
LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'

Lengths for Non-Skewed Boxes



CULVERT DRAINAGE DETAIL FOR ROCK FILL

This detail shall be used when rock fill is specified for embankment construction.



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

VERTICAL FABRIC ALTERNATE

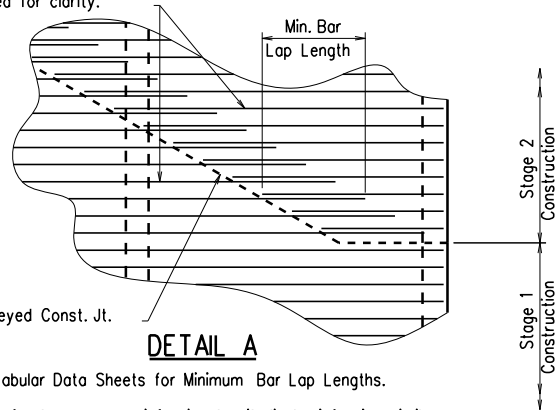
(Shown for Culvert, Similar for Wingwall)

WRAPPED FABRIC ALTERNATE

(Shown for Wingwall, Similar for Culvert)

WINGWALL & CULVERT DRAINAGE DETAIL

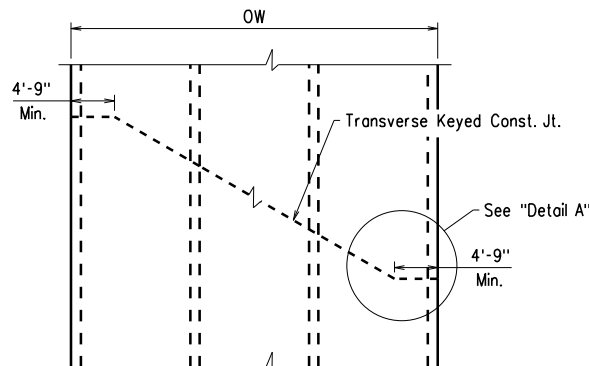
Slab bars "a", "b", "c", "d", "b1", or "f". Slab distribution and Wall reinforcing omitted for clarity.



DETAIL A

See Tabular Data Sheets for Minimum Bar Lap Lengths.

Shown for transverse reinforcing, longitudinal reinforcing similar.



SKewed TRANSVERSE JOINT DETAIL

This detail shall be used to construct a skewed transverse joint only for Multi-Barrel Culverts and only when required by the Maintenance of Traffic Plans. Otherwise, transverse joints should be made normal to the centerline of the barrel.

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 1/4" 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 keyed and shall be normal to the centerline of barrel except as noted. Reinforcing shall be continuous through joints unless noted otherwise. Reinforcing through stage construction joints shall provide the minimum bar lap length shown on the Tabular Data Sheets. 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 fine 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".

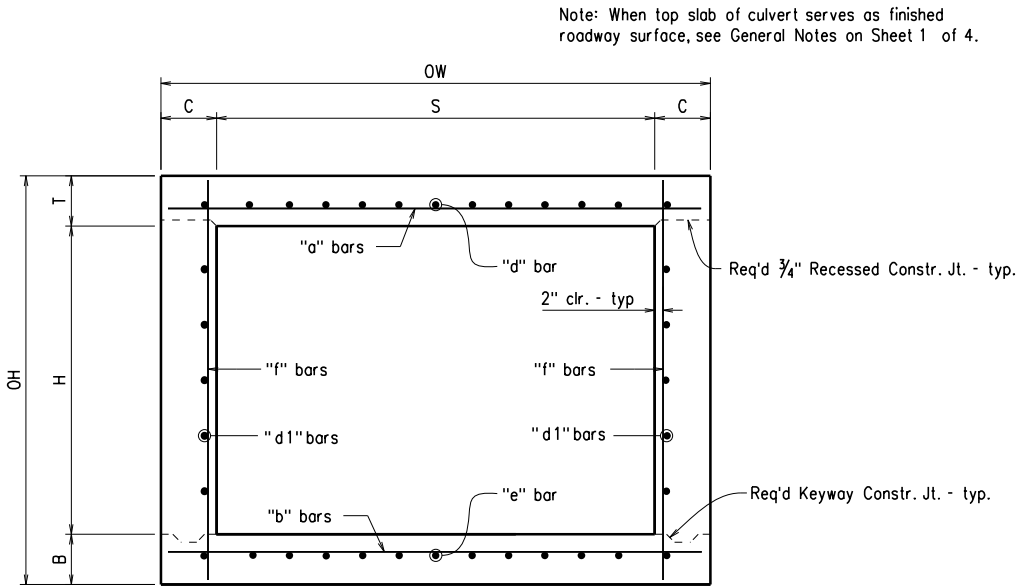
When precast reinforced concrete box culverts are substituted for cast in place box culverts, they shall be manufactured according to ASTM C 1577 and meet the requirements of Section 607. When the top slab of the box culvert serves as the finished roadway surface, a precast reinforced concrete box culvert substitution is not allowed.

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

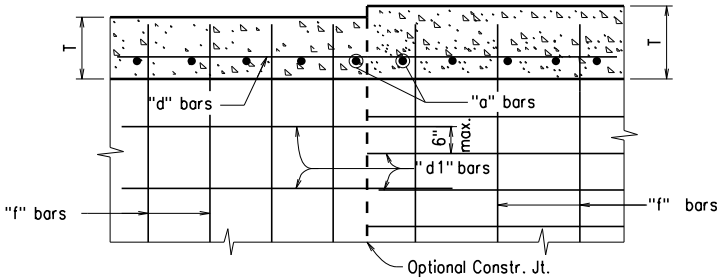


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	117
				JOB NO.	090581			

1 SPECIAL DETAILS

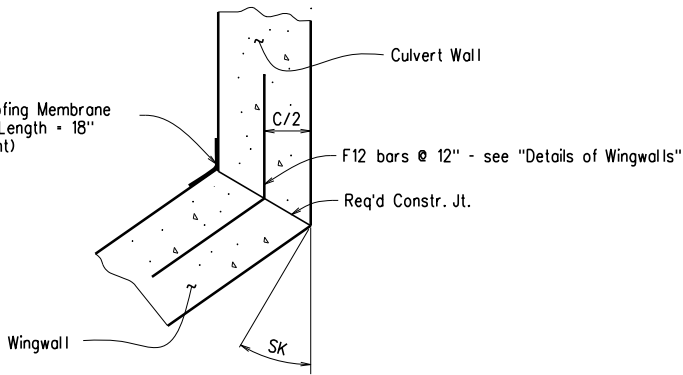


TYPICAL SECTION M-M



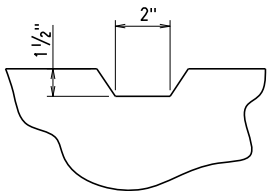
LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR



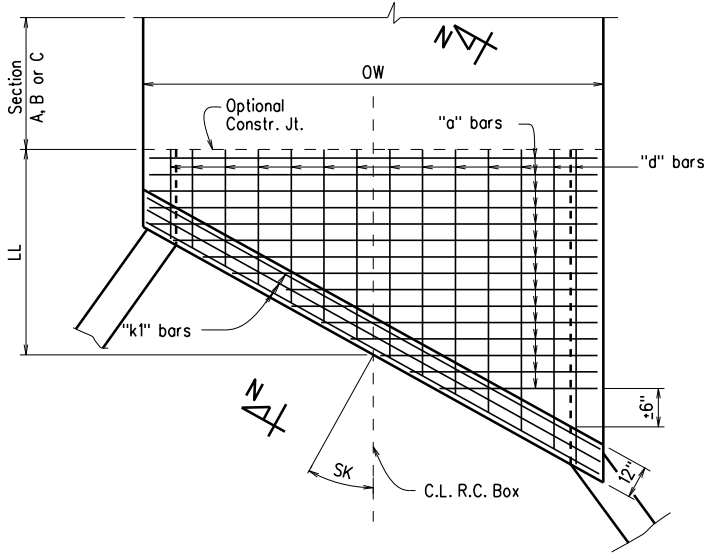
WINGWALL ATTACHMENT

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

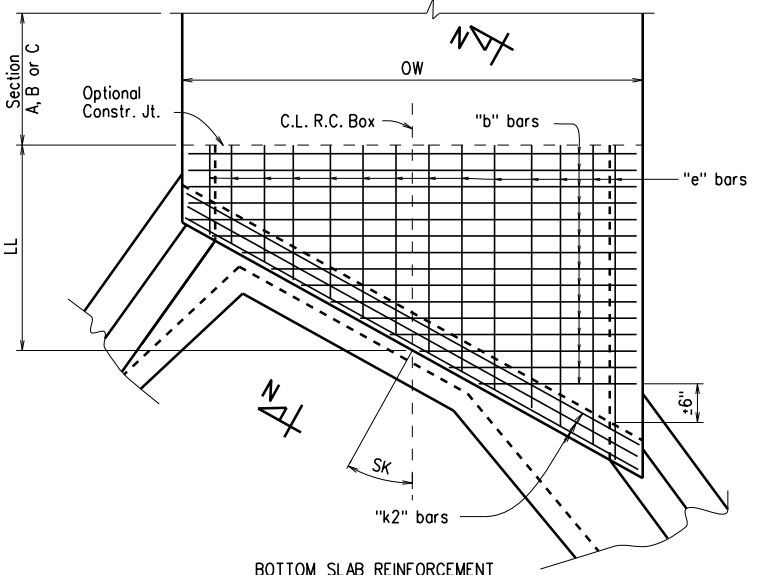


TYPICAL KEYWAY DETAIL

(All Construction Joints)



TOP SLAB REINFORCEMENT



BOTTOM SLAB REINFORCEMENT

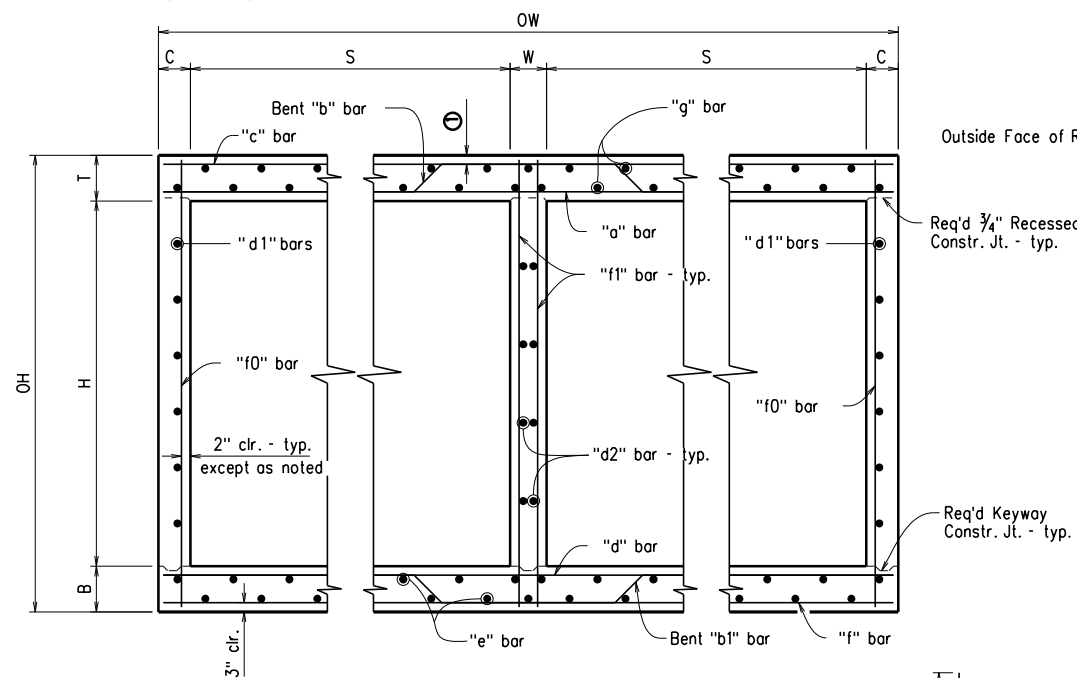
SKEWED END SECTION DETAILS

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



① 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.

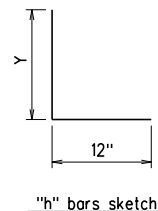
Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



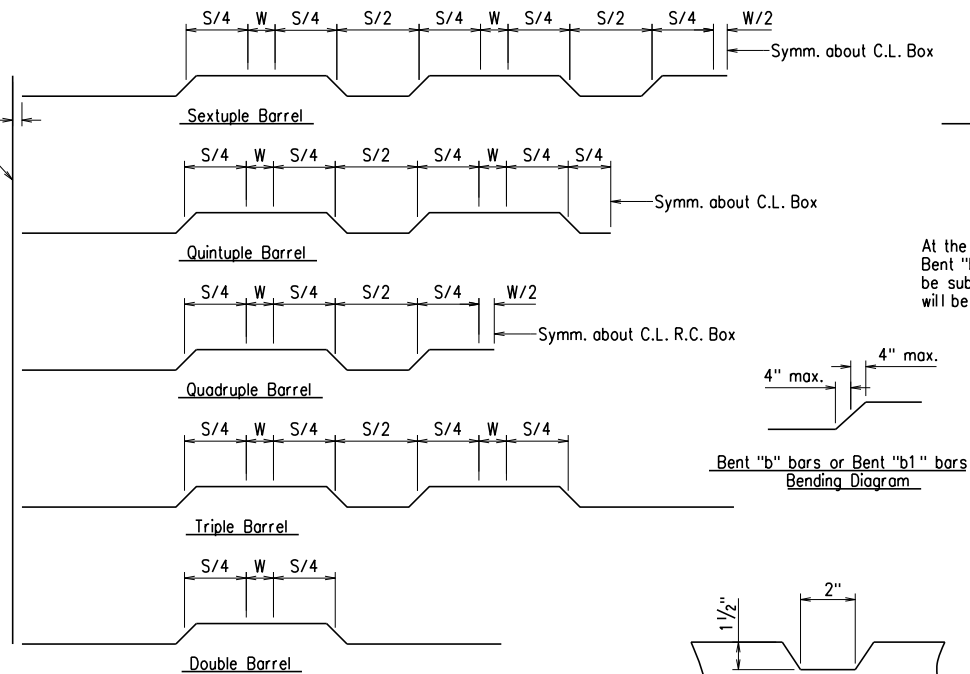
TYPICAL SECTION M-M

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 "b1" bars in top.
Straight "f" bars shall alternate with Bent "b1" bars in bottom.

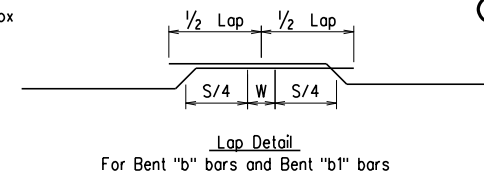


Bent "b" bars or Bent "b1" bars sketch

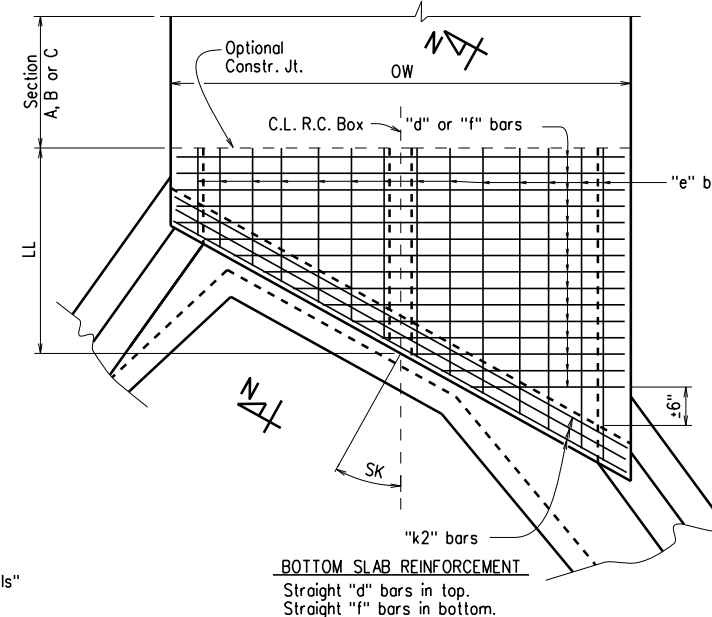
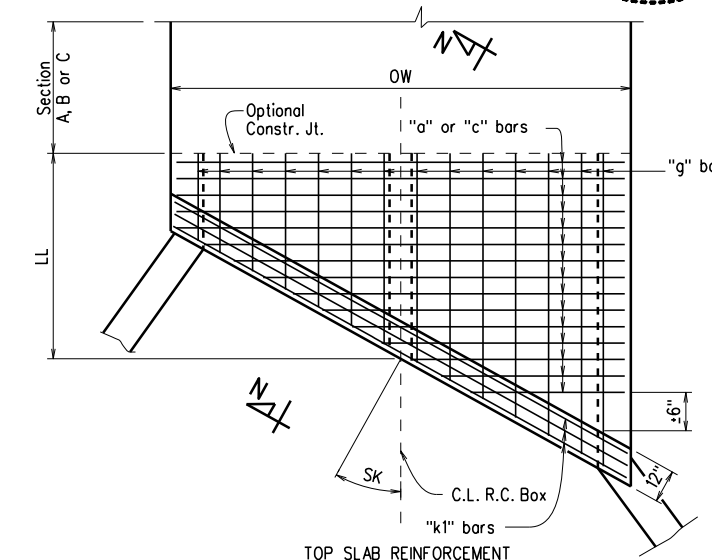


TYPICAL KEYWAY DETAIL
(All Construction Joints)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		19	117
				JOB NO.	090581			



At the Contractor's option in lieu of providing Bent "b" or Bent "b1" 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 "b1" bar.



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



STA. 110+00.00
BEGIN JOB 090581
LOG MILE 4.70

CLEARING & GRUBBING:
SAND BAG DITCH CHECKS (E-5)
(74 LOCATIONS = 74 BAG)
ROCK DITCH CHECKS (E-6)
(26 LOCATIONS = 78 CU. YDS.)
SILT FENCE (E-11)
(5 LOCATIONS = 3270 LIN. FT.)
SEDIMENT BASIN (E-14)
(11 LOCATION = 176 CU. YDS.)

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	21	117
TEMPORARY EROSION CONTROL DETAILS						



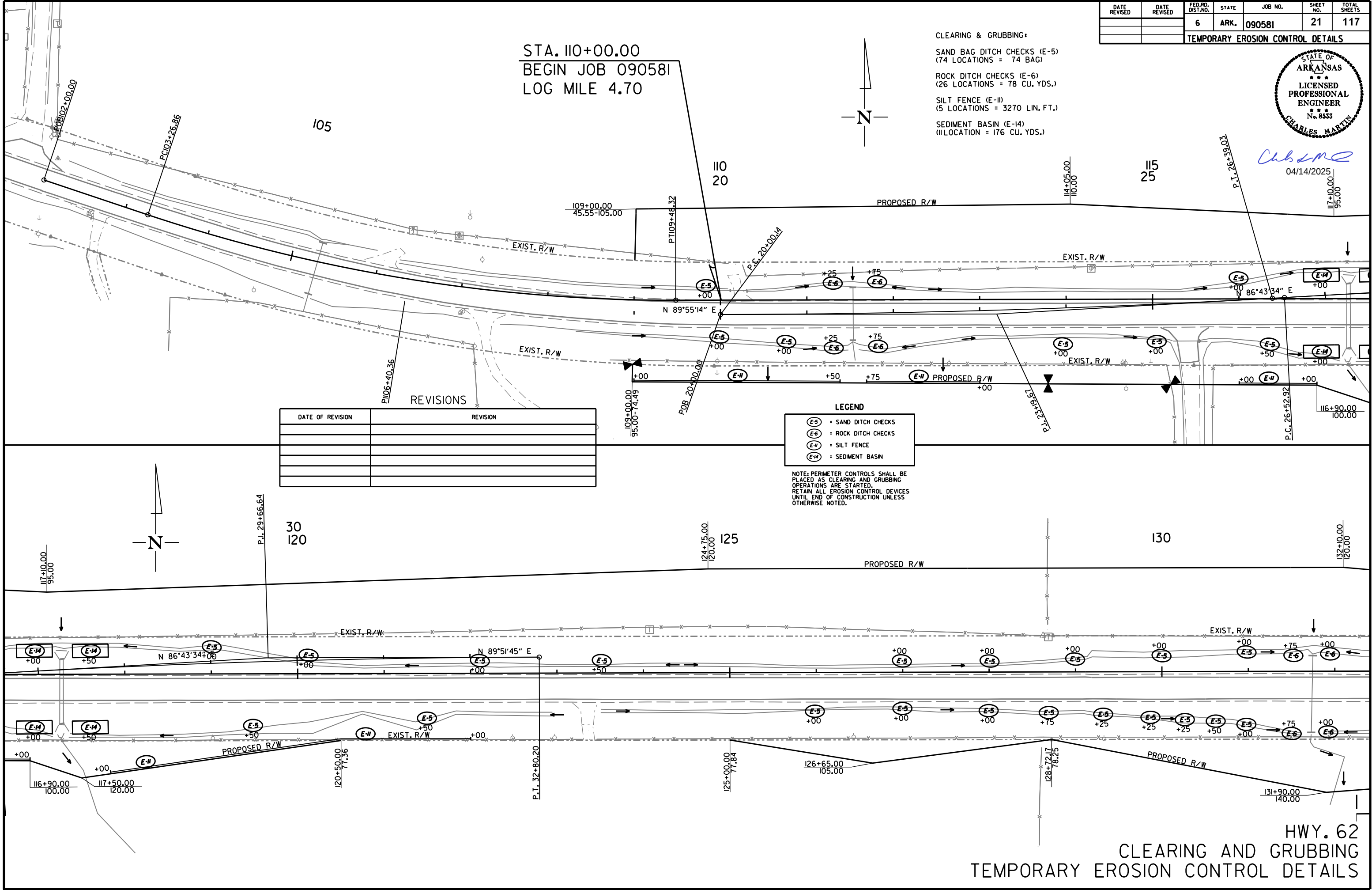
04/14/2025

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE
- (E-14) = SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

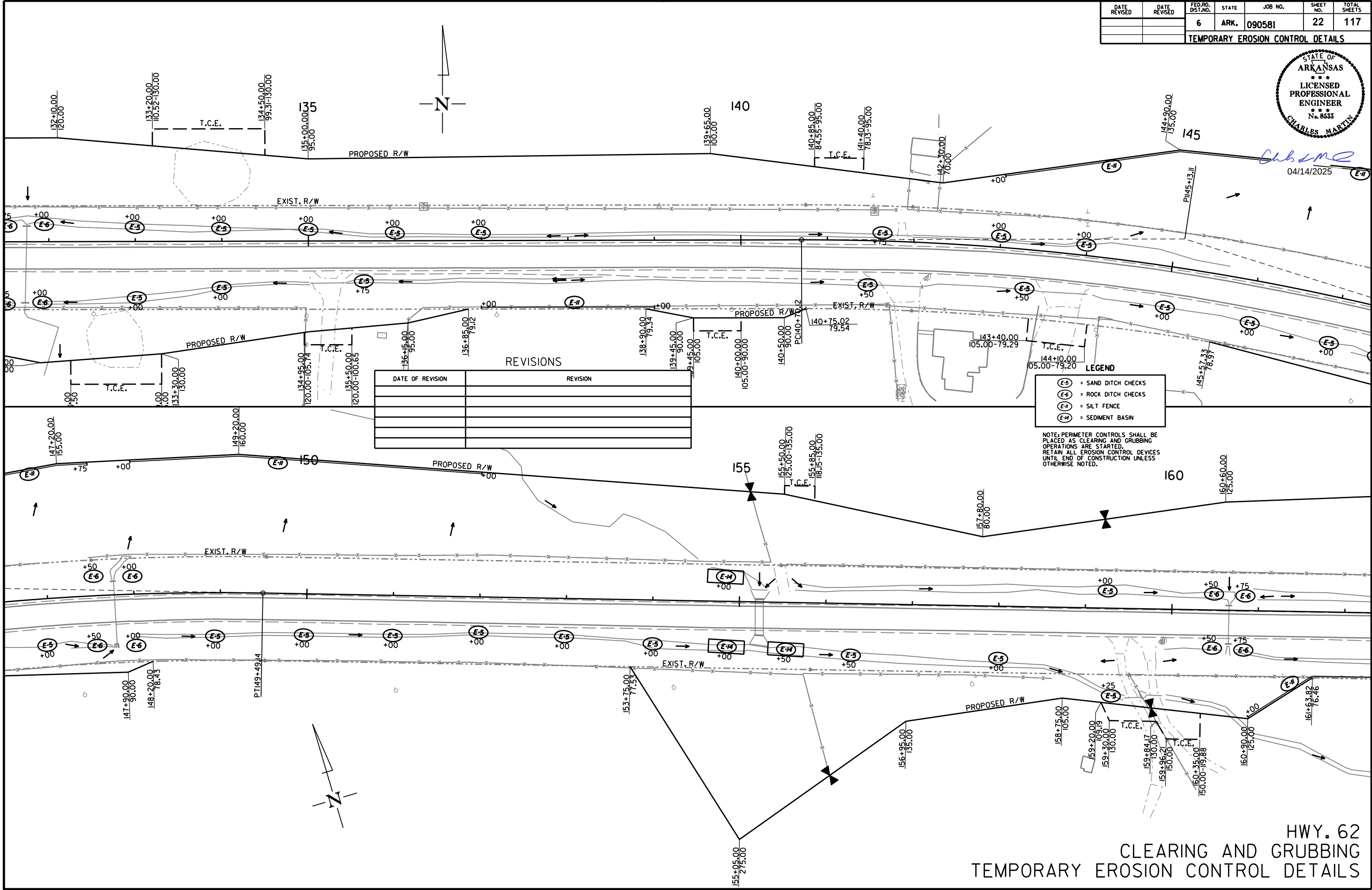


HWY. 62
CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	22	117
TEMPORARY EROSION CONTROL DETAILS						



Sub LME
04/14/2025



HWY. 62
CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	23	117
TEMPORARY EROSION CONTROL DETAILS						

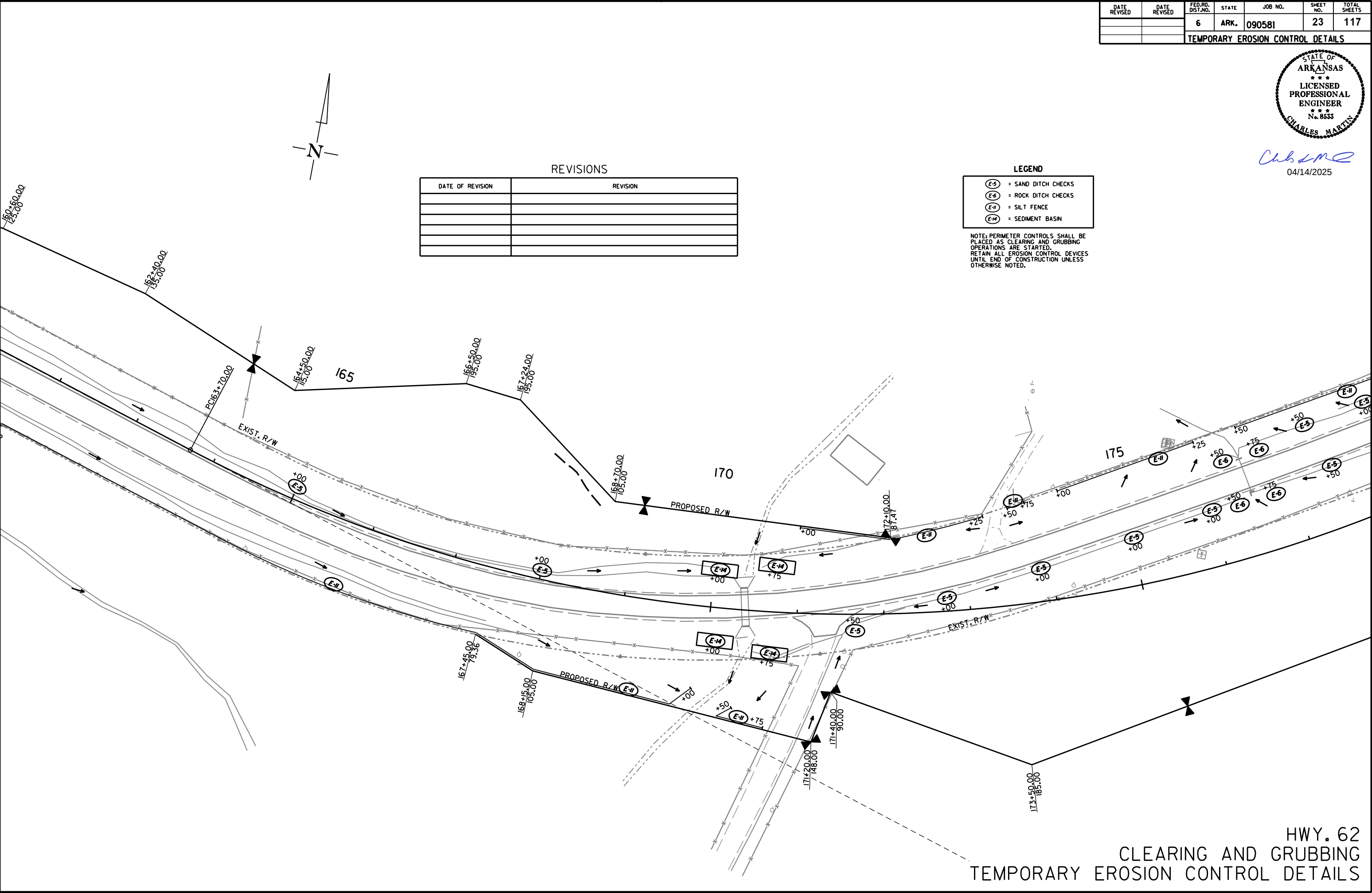


Charles Martin
04/14/2025

REVISIONS	
DATE OF REVISION	REVISION

LEGEND	
	= SAND DITCH CHECKS
	= ROCK DITCH CHECKS
	= SILT FENCE
	= SEDIMENT BASIN

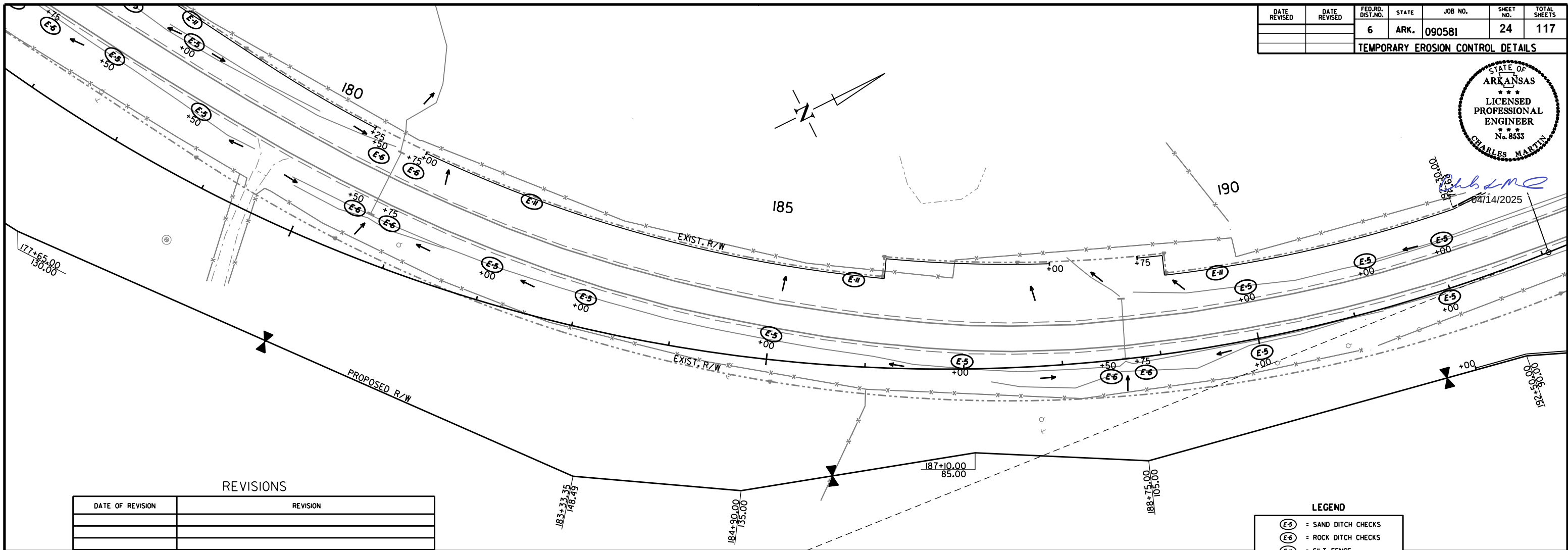
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	24	117
TEMPORARY EROSION CONTROL DETAILS						



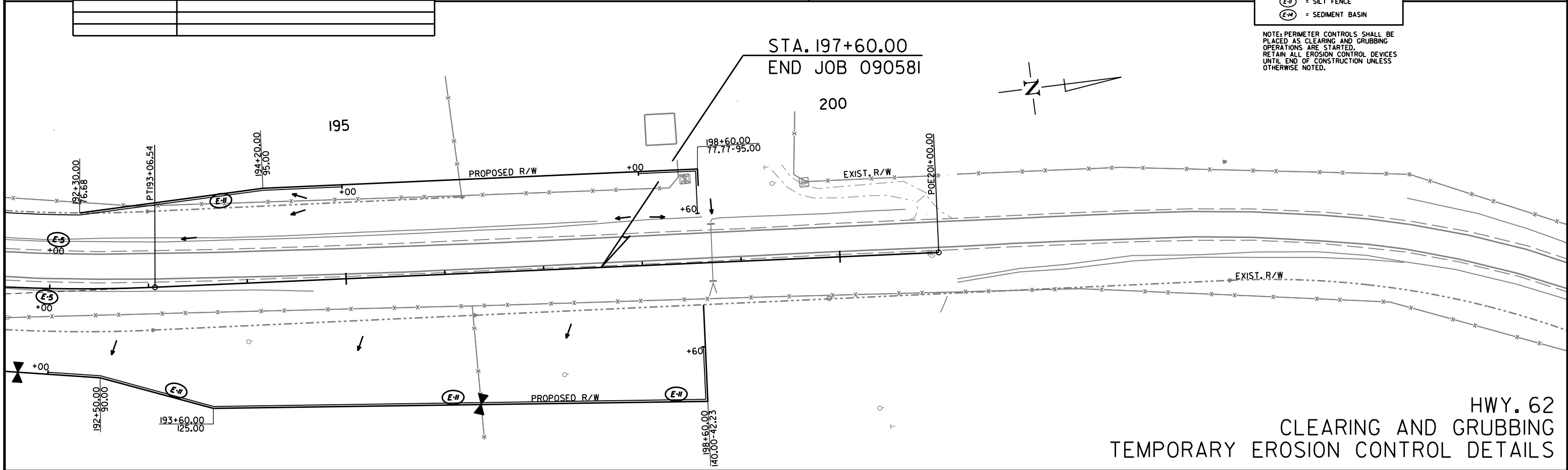
04/14/2025



REVISIONS	
DATE OF REVISION	REVISION

LEGEND	
(E-5)	= SAND DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

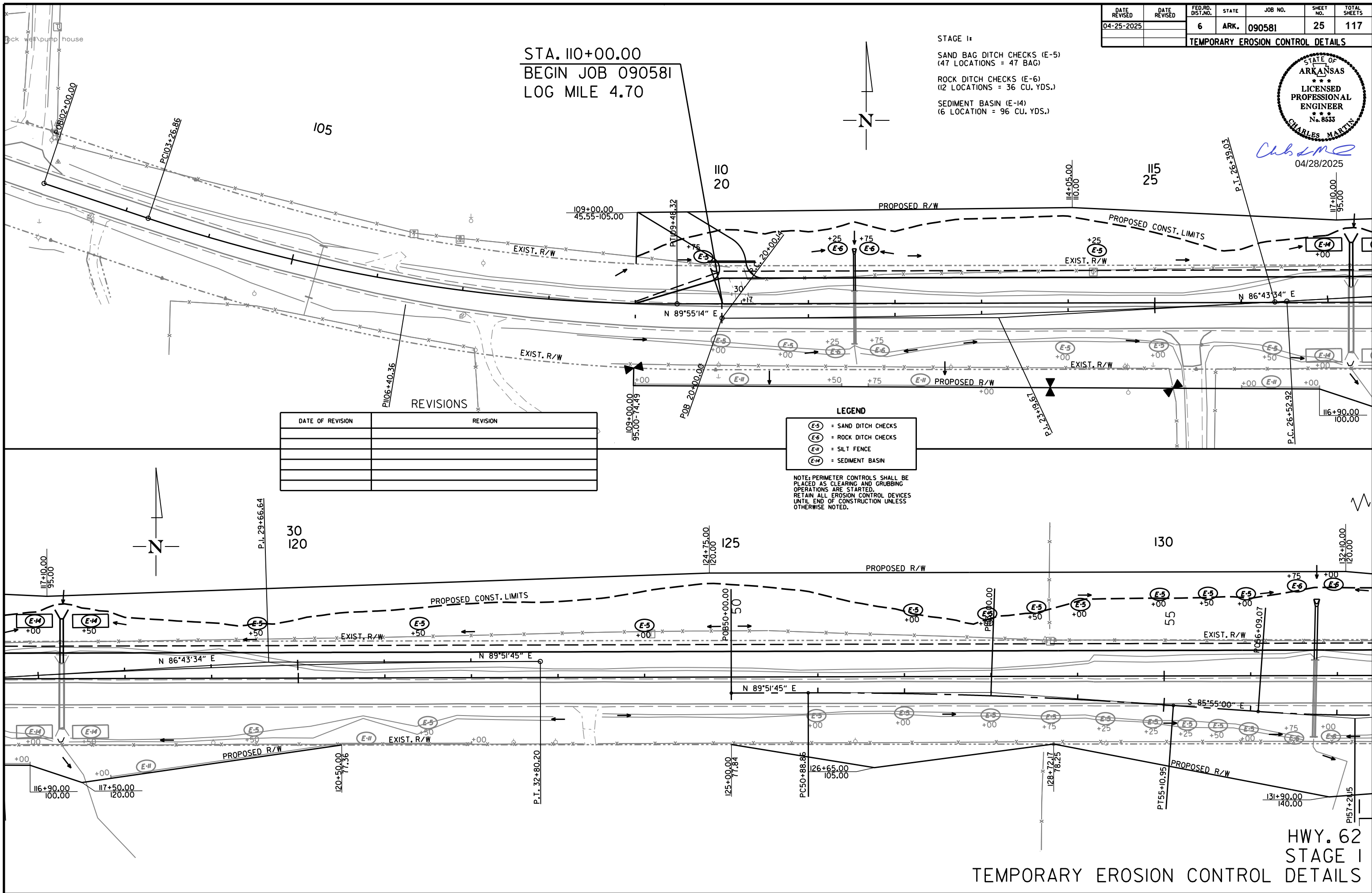


HWY. 62
CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

STA. 110+00.00
BEGIN JOB 090581
LOG MILE 4.70

STAGE I:
SAND BAG DITCH CHECKS (E-5)
(47 LOCATIONS = 47 BAG)
ROCK DITCH CHECKS (E-6)
(12 LOCATIONS = 36 CU. YDS.)
SEDIMENT BASIN (E-14)
(6 LOCATION = 96 CU. YDS.)

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	25	117
TEMPORARY EROSION CONTROL DETAILS						



DATE OF REVISION	REVISION

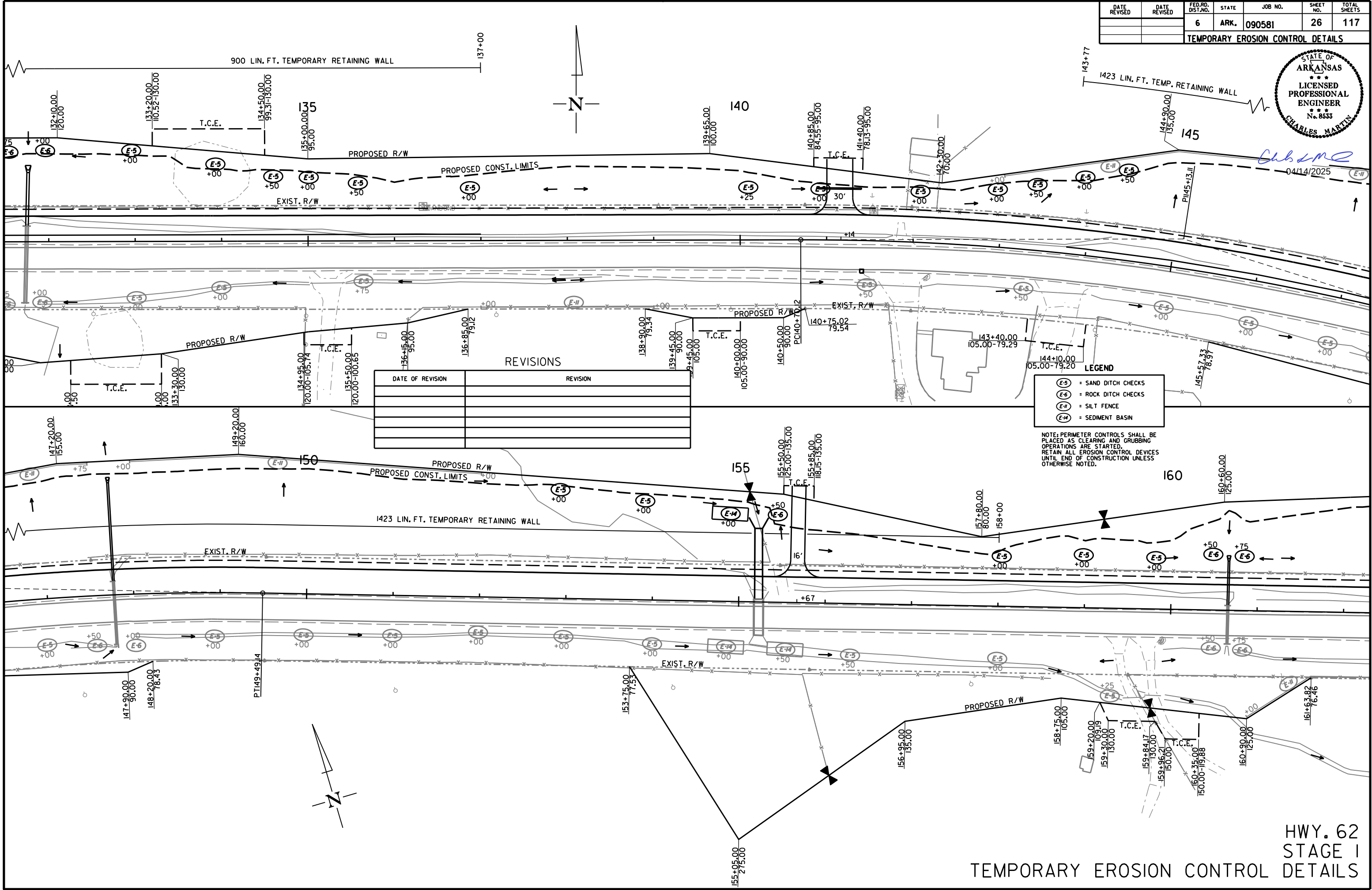
LEGEND

- (E-5) = SAND DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE
- (E-14) = SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

HWY. 62
STAGE I
TEMPORARY EROSION CONTROL DETAILS

DATE REVISION	DATE REVISION	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	26	117
TEMPORARY EROSION CONTROL DETAILS						



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	27	117
TEMPORARY EROSION CONTROL DETAILS						

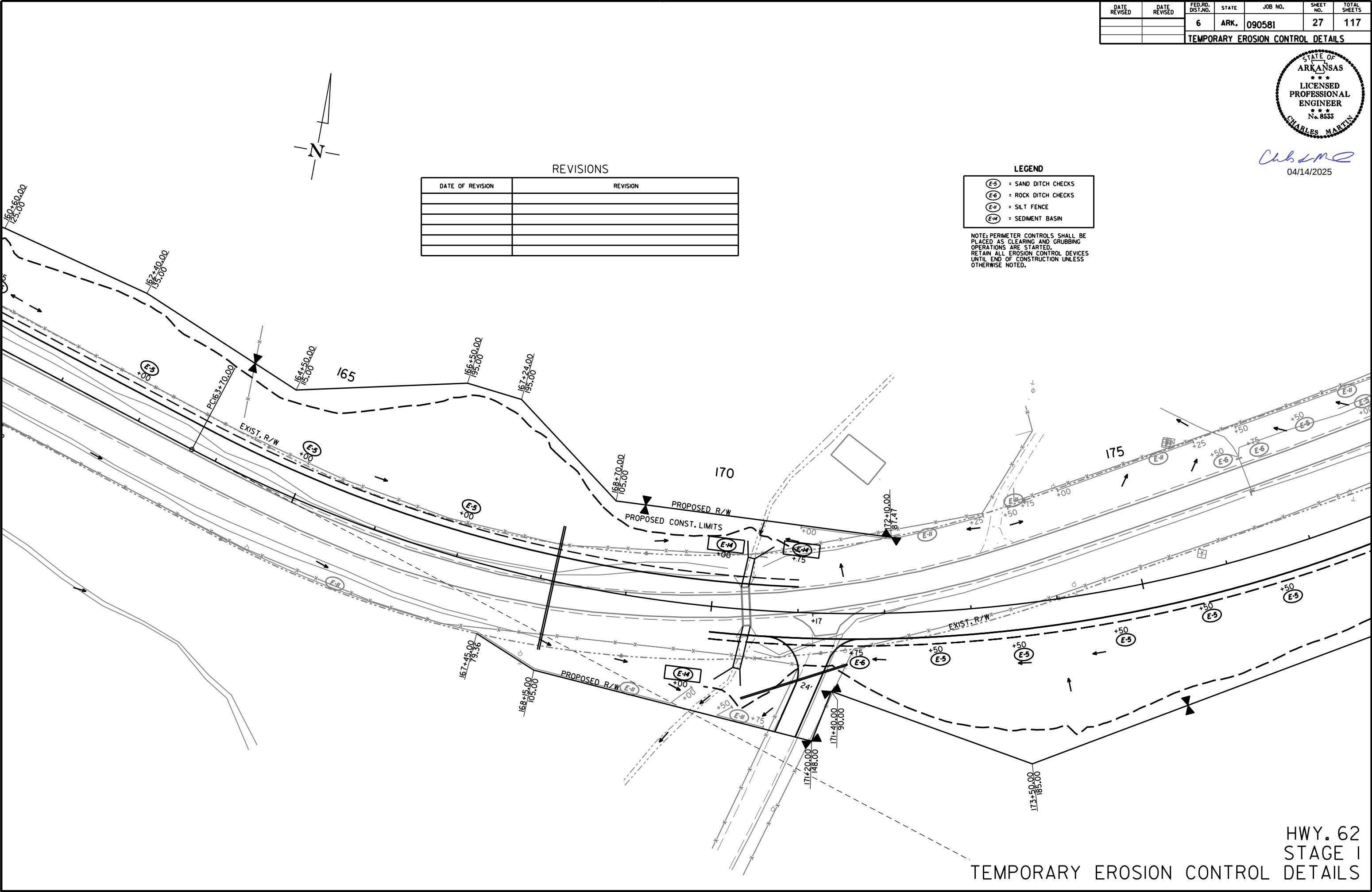


Charles Martin
04/14/2025

REVISIONS	
DATE OF REVISION	REVISION

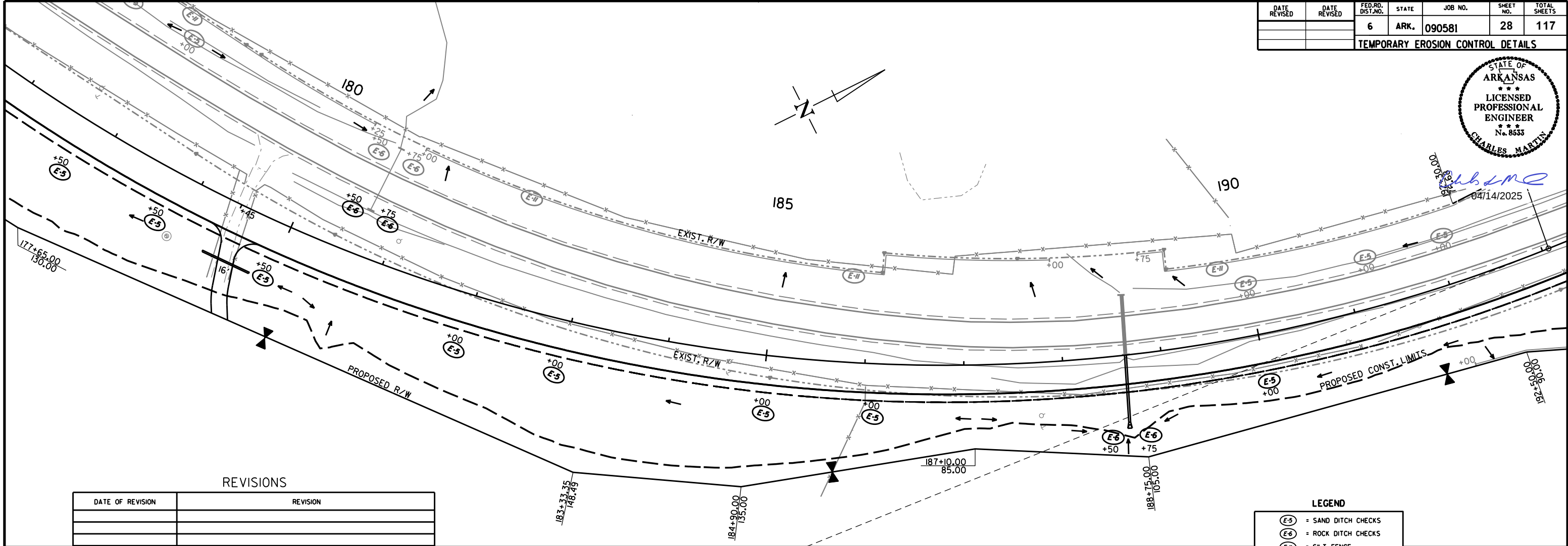
LEGEND	
(E-5)	= SAND DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



HWY. 62
STAGE I
TEMPORARY EROSION CONTROL DETAILS

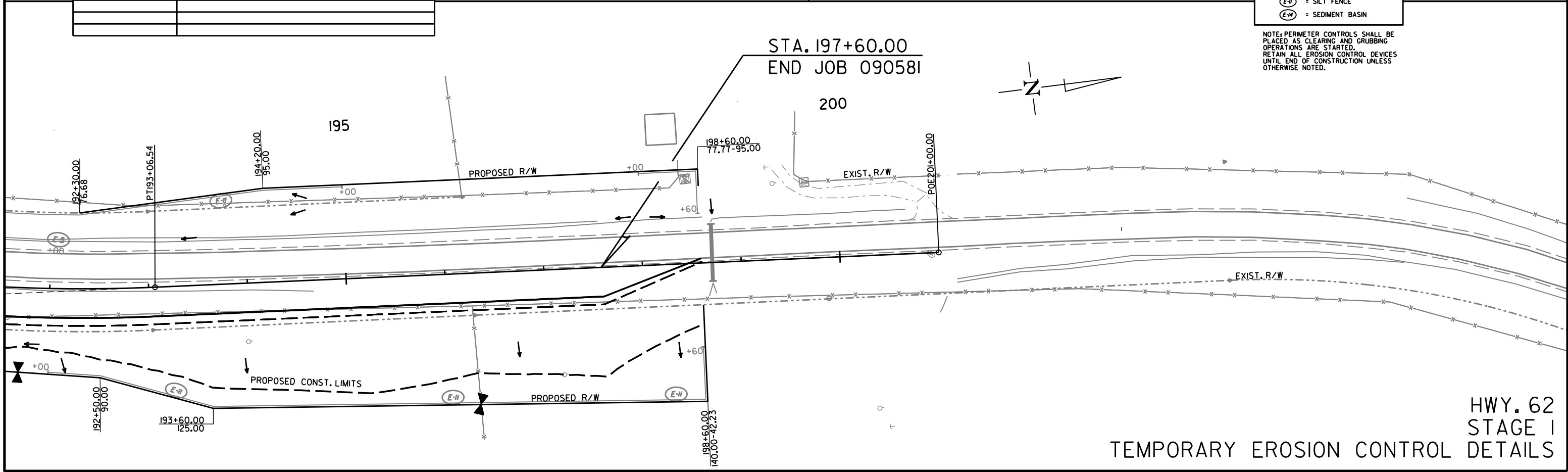
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	28	117
TEMPORARY EROSION CONTROL DETAILS						



REVISIONS	
DATE OF REVISION	REVISION

LEGEND	
(E-5)	= SAND DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-II)	= SILT FENCE
(E-III)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



HWY. 62
STAGE I
TEMPORARY EROSION CONTROL DETAILS

STA. 110+00.00
BEGIN JOB 090581
LOG MILE 4.70

STAGE 2:

SAND BAG DITCH CHECKS (E-5)
(27 LOCATIONS = 27 BAG)

ROCK DITCH CHECKS (E-6)
(12 LOCATIONS = 36 CU. YDS.)

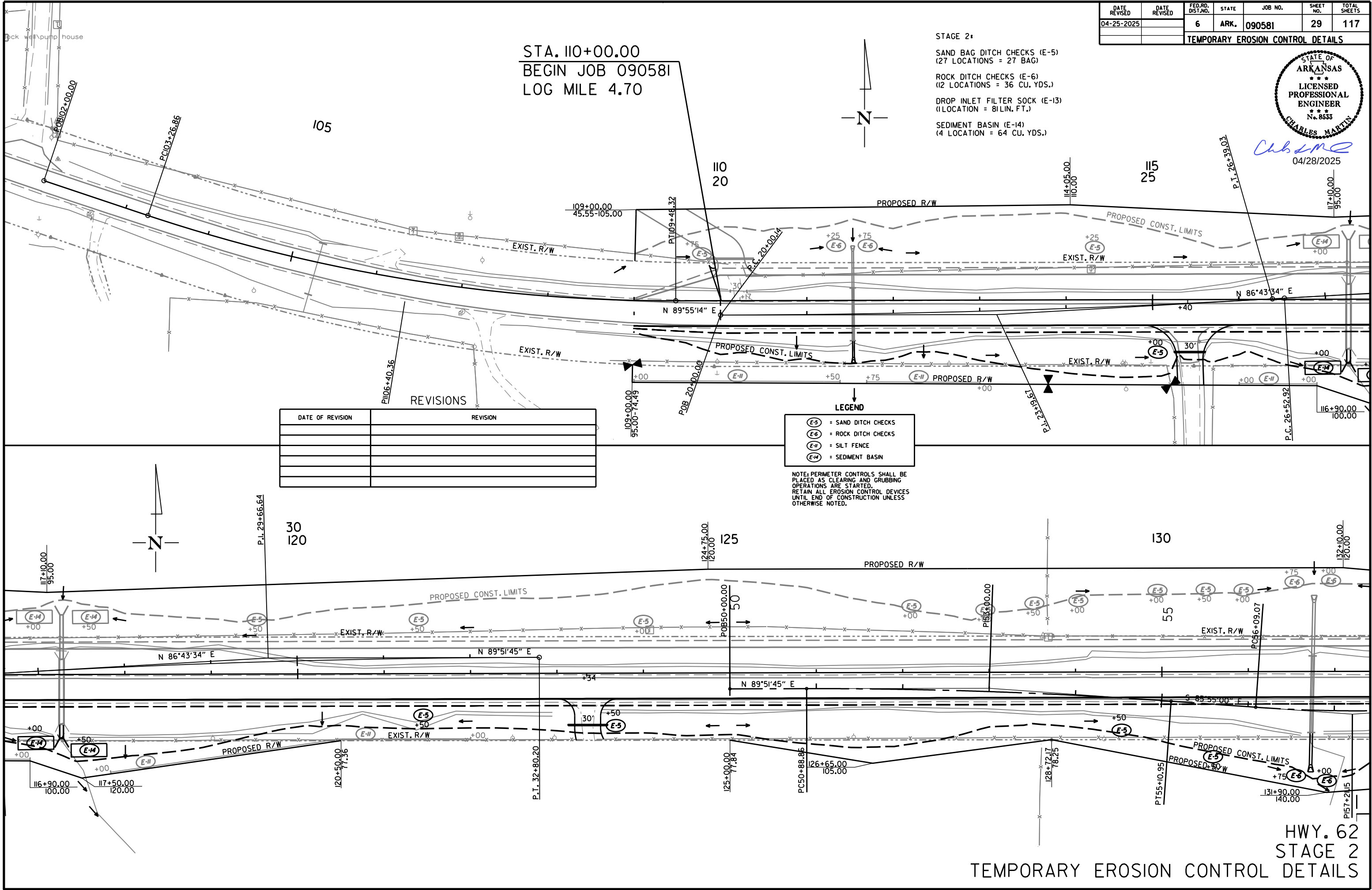
DROP INLET FILTER SOCK (E-13)
(1 LOCATION = 8 LIN. FT.)

SEDIMENT BASIN (E-14)
(4 LOCATION = 64 CU. YDS.)

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	29	117
TEMPORARY EROSION CONTROL DETAILS						



Chas Martin
04/28/2025



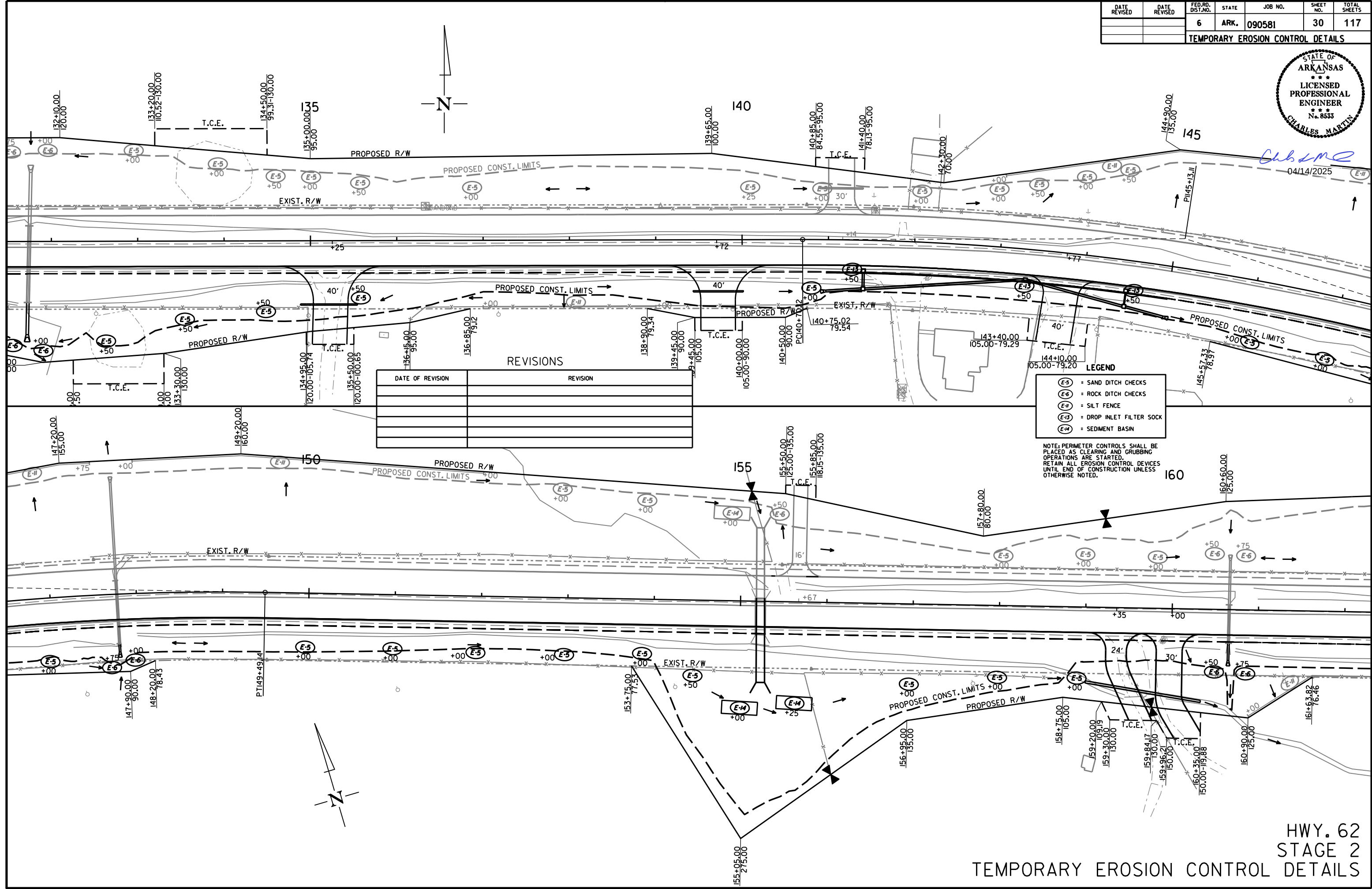
DATE OF REVISION	REVISION

(E-5)	= SAND DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

HWY. 62
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	30	117
TEMPORARY EROSION CONTROL DETAILS						



DATE OF REVISION	REVISION

(E-5)	= SAND DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE
(E-13)	= DROP INLET FILTER SOCK
(E-14)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

HWY. 62
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	31	117
TEMPORARY EROSION CONTROL DETAILS						

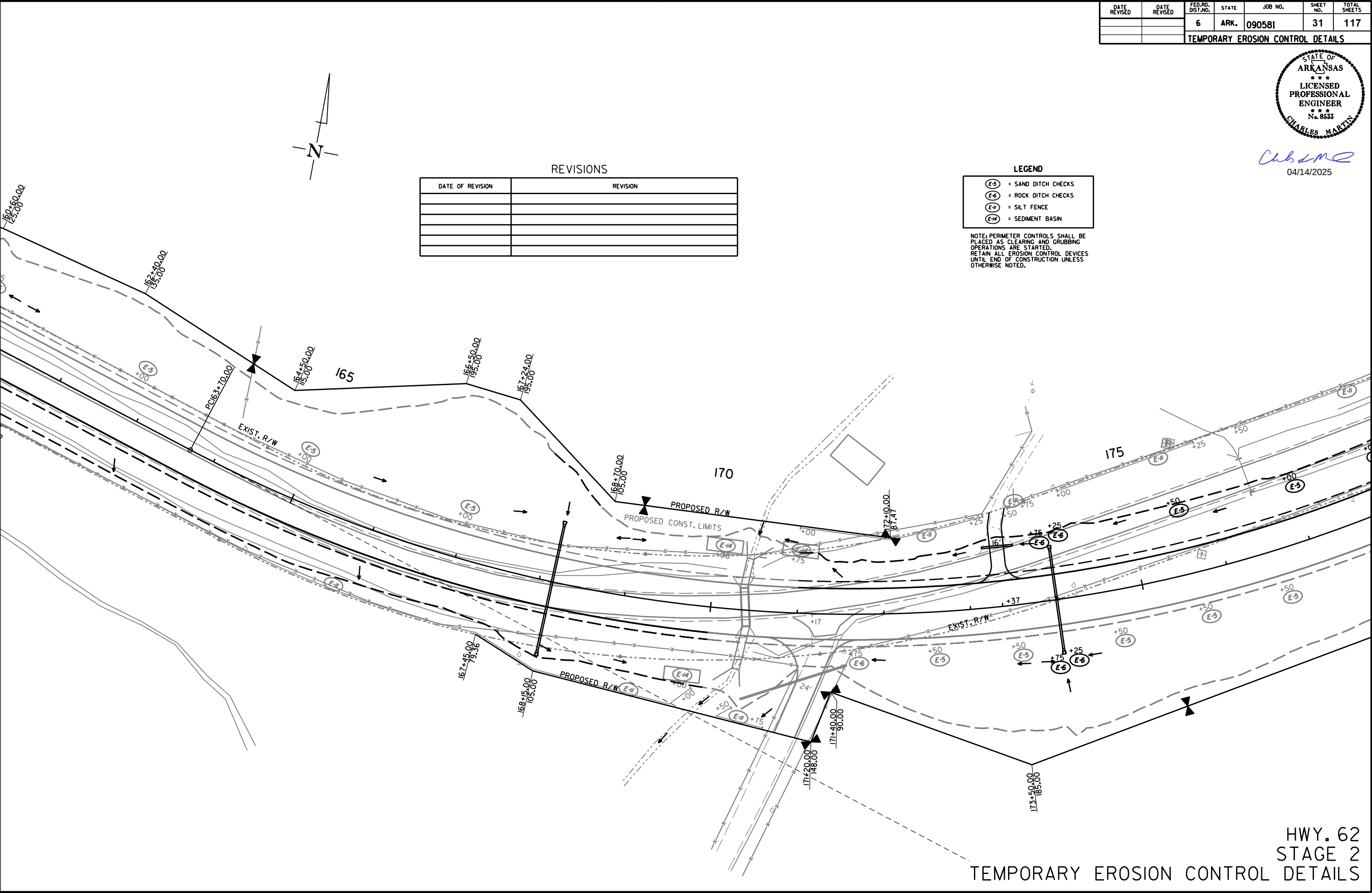


Charles Martin
04/14/2025

REVISIONS	
DATE OF REVISION	REVISION

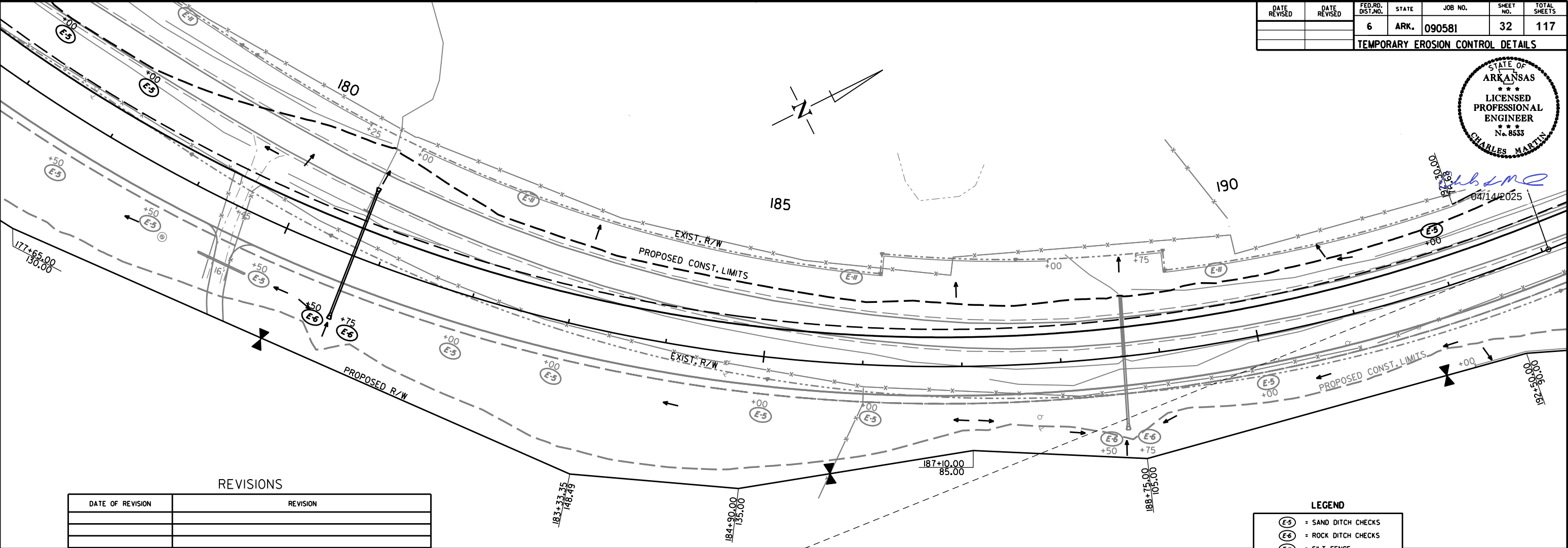
LEGEND	
(E-5)	= SAND DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



HWY. 62
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

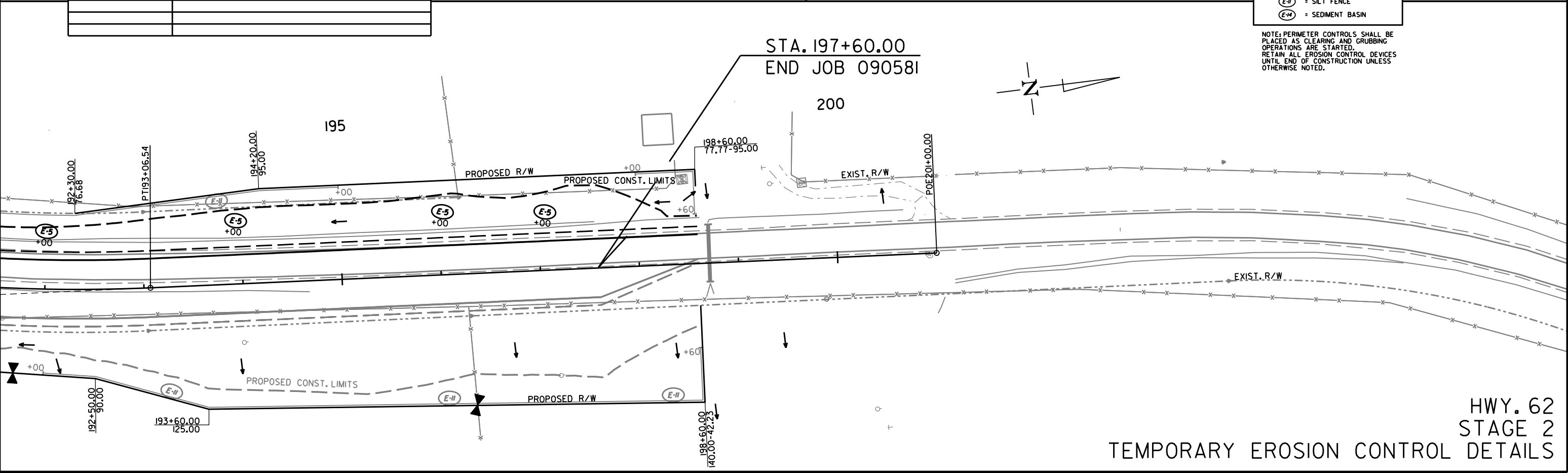
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	32	117
TEMPORARY EROSION CONTROL DETAILS						



REVISIONS	
DATE OF REVISION	REVISION

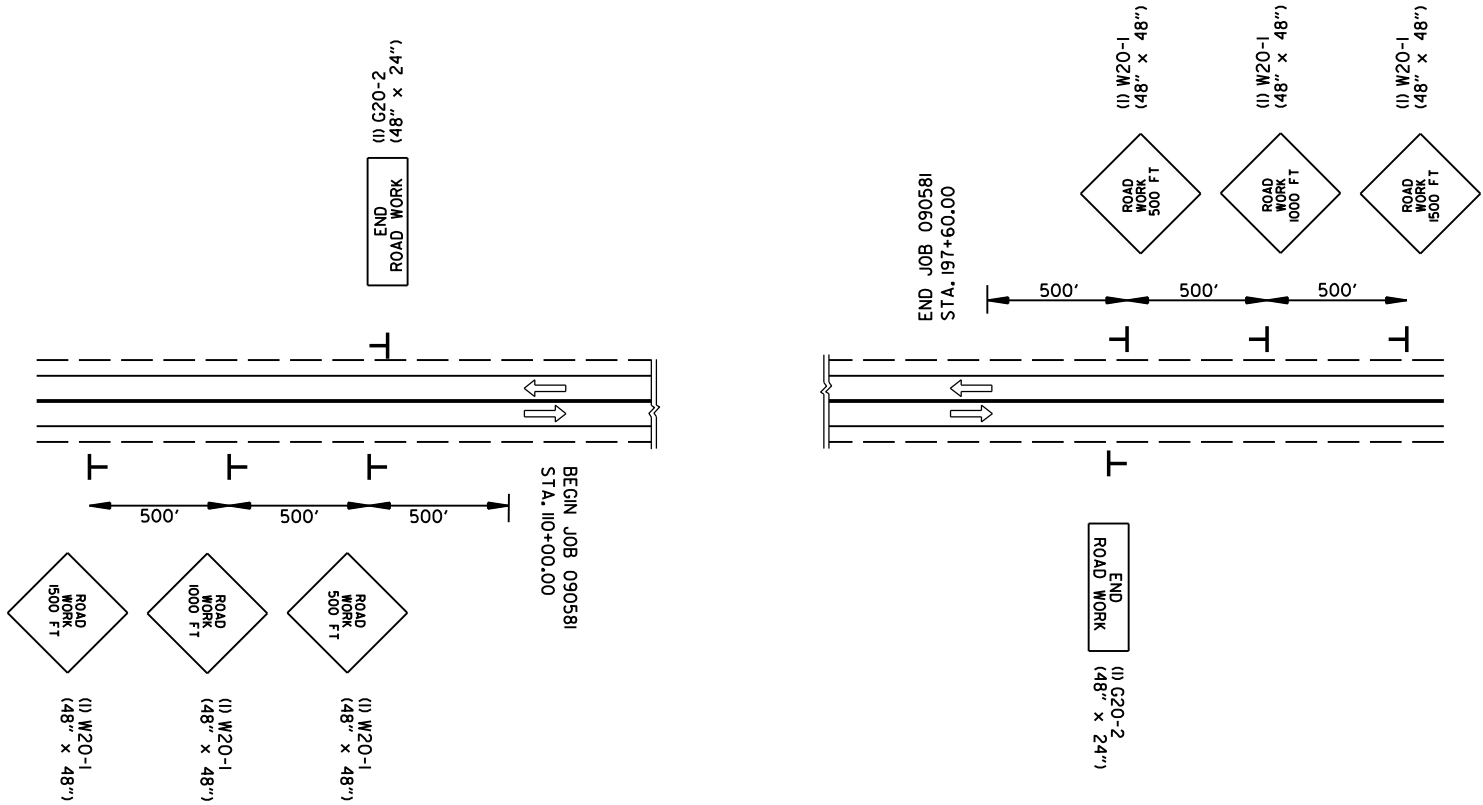
LEGEND	
(E-5)	= SAND DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE
(E-14)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

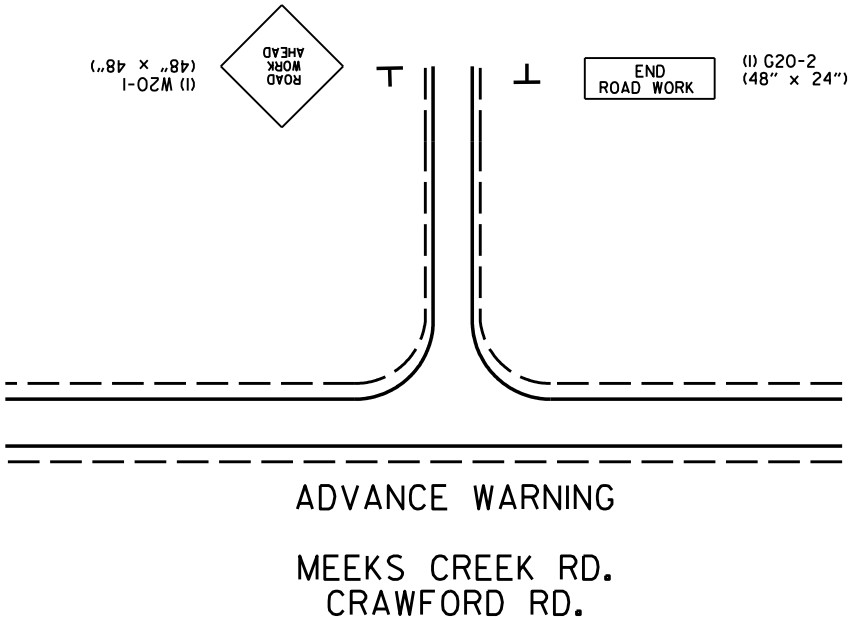


HWY. 62
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	33	117
MAINTENANCE OF TRAFFIC DETAILS						



ADVANCE WARNING (ALL STAGES)



STAGE 1 CONSTRUCTION SEQUENCE:

STAGE 1A:
MAINTAIN TRAFFIC ON EXISTING HWY. 62.

INSTALL ADVANCE WARNING SIGNS, END ROAD WORK SIGNS,
AND INSTALL ROAD WORK AHEAD (W20-1) SIGN AS SHOWN
ON THE ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAIL.

USE TRAFFIC DRUMS AND VERTICAL PANELS SPACED 50' ON CENTER TO DELINEATE
THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT TEMPORARY WIDENING ON RT.

STAGE 1B:
SHIFT TRAFFIC AS SHOWN IN PLANS.

INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON PLANS.

CONSTRUCT STRUCTURES AND EMBANKMENT ON RT.

STAGE 2 CONSTRUCTION SEQUENCE:

MOVE TRAFFIC TO NEW LOCATION.

MAINTAIN ADVANCE WARNING SIGNS AS SHOWN ON THE
ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAIL.

RELOCATE AND INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON PLANS.

CONSTRUCT STRUCTURES AND EMBANKMENT ON LT.

END OF JOB CONSTRUCTION SEQUENCE

PLACE FINAL 2" ACHM SURFACE COURSE AND TRANSITIONS.
PLACE FINAL STRIPING.

SHOULDER
CLOSED

(2) W21-50
(36" X 36")

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

DO
NOT
PASS

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

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

BUMP

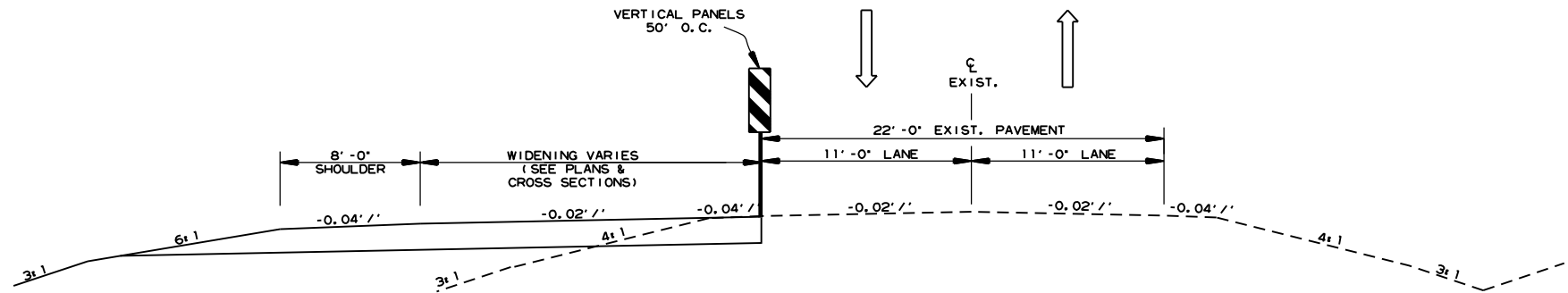
(2) W8-1
(30" X 30")

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

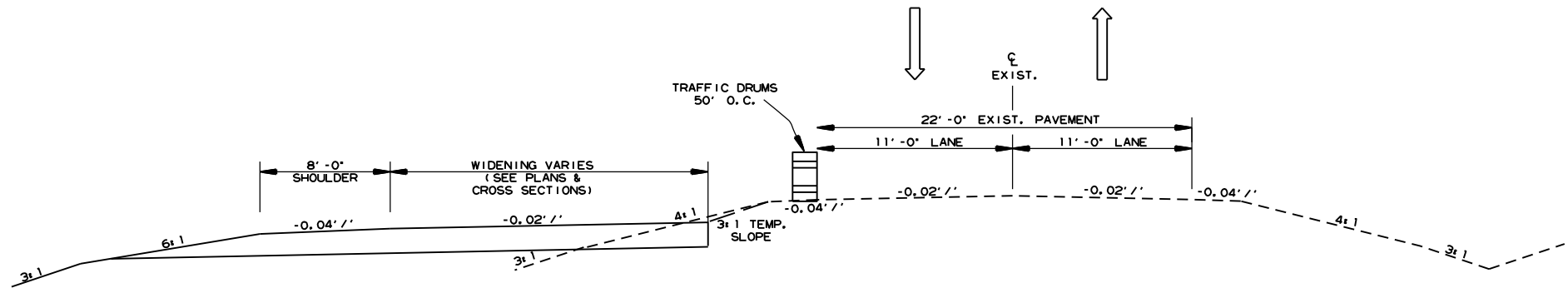
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	34	117
MAINTENANCE OF TRAFFIC DETAILS						



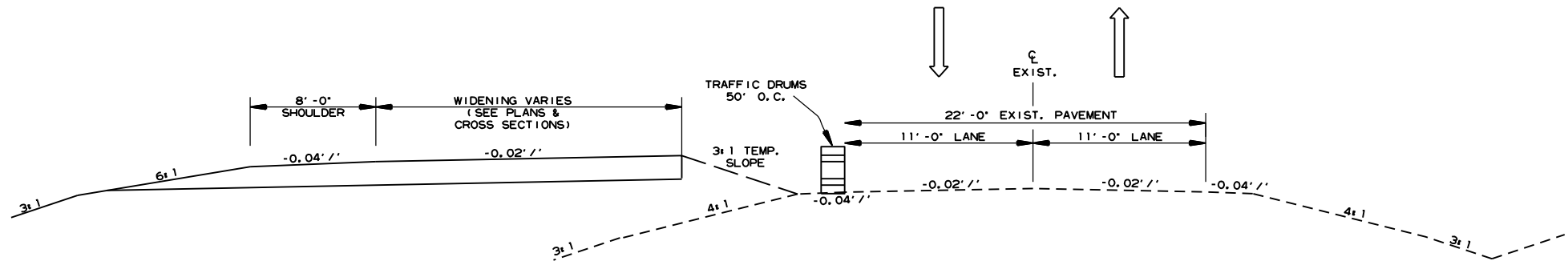
04/28/2025



NOTCH & WIDEN
STAGE 1
STA. 110+00.00 - STA. 122+50.00



NOTCH & WIDEN
STAGE 1
STA. 122+50.00 - STA. 126+00.00



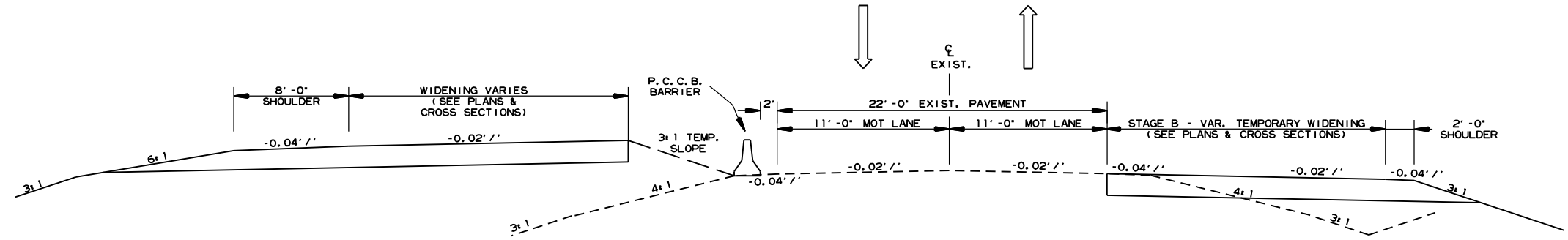
NOTCH & WIDEN
STAGE 1
STA. 126+00.00 - STA. 127+50.00
STA. 137+75.00 - STA. 143+50.00
STA. 158+75.00 - STA. 159+80.00

HWY. 62
ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

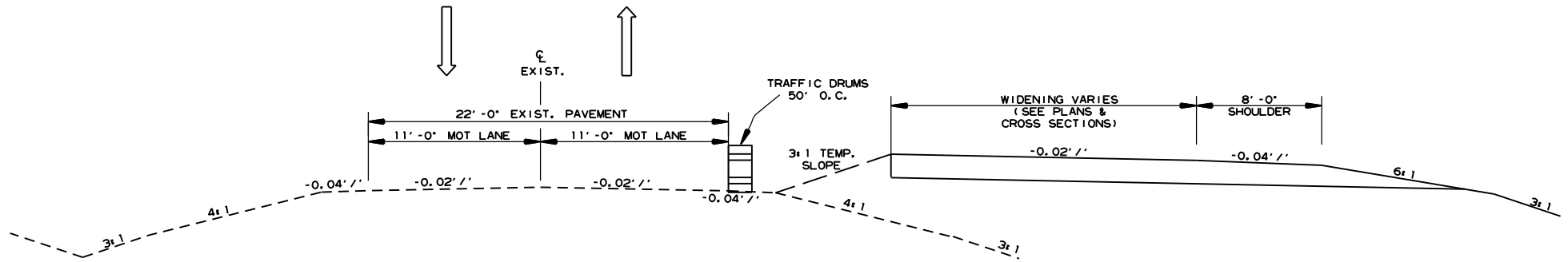
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	35	117
MAINTENANCE OF TRAFFIC DETAILS						



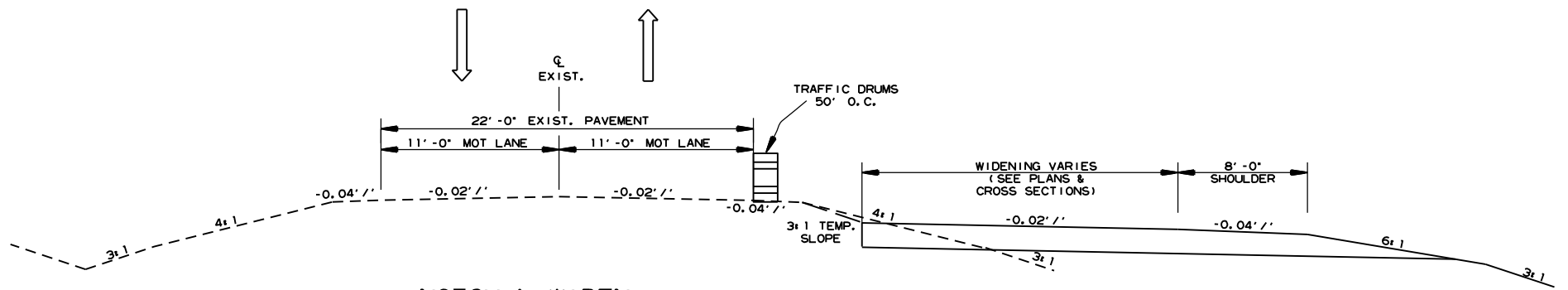
04/28/2025



NOTCH & WIDEN
STAGE 1
STA. 127+50.00 - STA. 137+75.00
STA. 143+50.00 - STA. 158+75.00



NOTCH & WIDEN
STAGE 1
STA. 170+50.00 - STA. 172+50.00



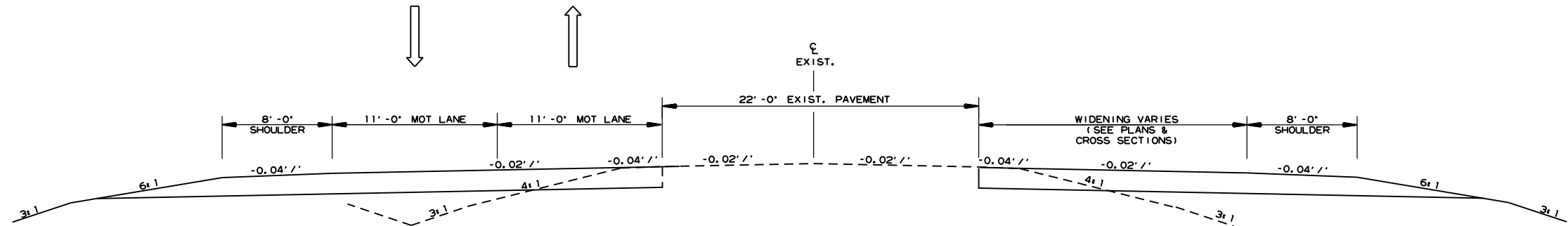
NOTCH & WIDEN
STAGE 1
STA. 172+50.00 - STA. 182+25.00

HWY. 62
ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	36	117
MAINTENANCE OF TRAFFIC DETAILS						



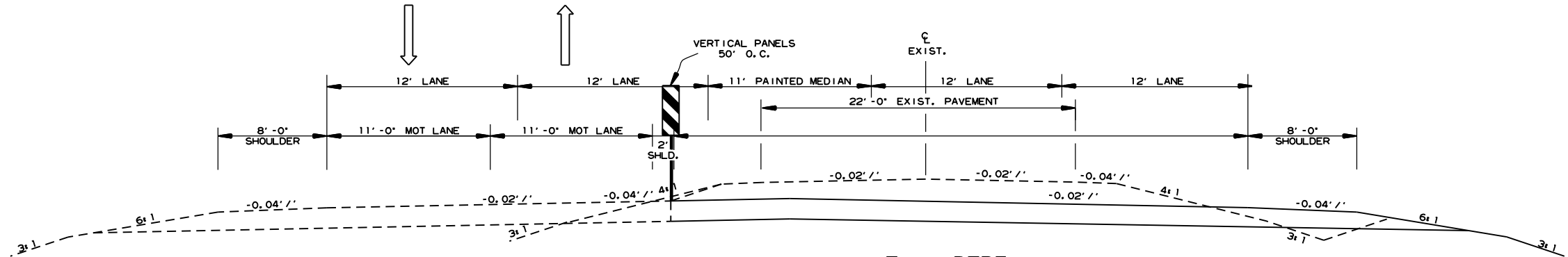
04/28/2025



NOTCH & WIDEN
STAGE 1

STA. 182+25.00 - STA. 197+60.00
STA. 159+80.00 - STA. 170+50.00

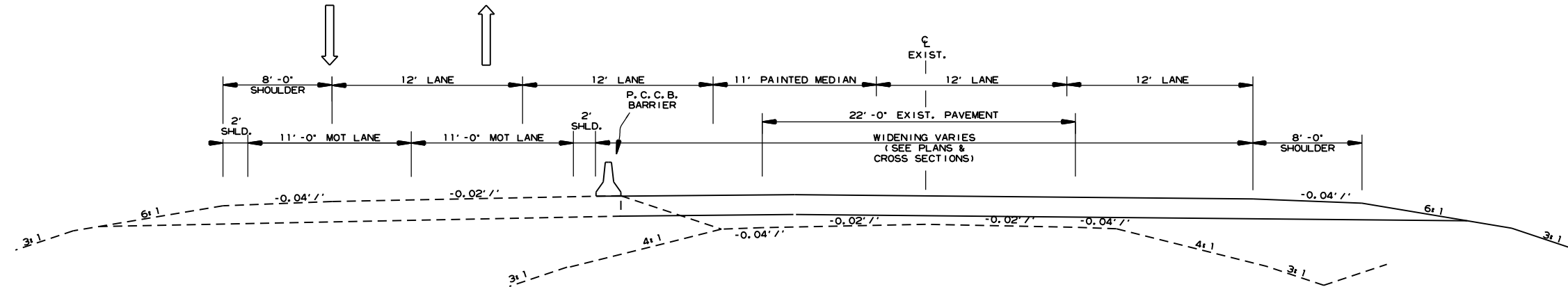
*STAGE 2 MOT LANE SHIFT: 110+00.00 - 122+00.00



FULL DEPTH
STAGE 2

STA. 122+00.00 - STA. 126+00.00
STA. 159+80.00 - STA. 170+50.00

*STAGE 2 MOT LANE SHIFT: 126+00.00 - 129+70.00



FULL DEPTH
STAGE 2

STA. 127+70.00 - STA. 159+00.00

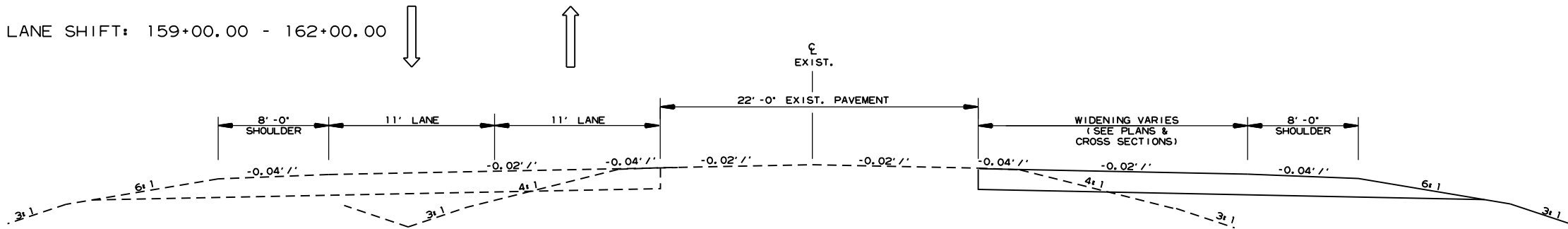
HWY. 62
ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	37	117
MAINTENANCE OF TRAFFIC DETAILS						

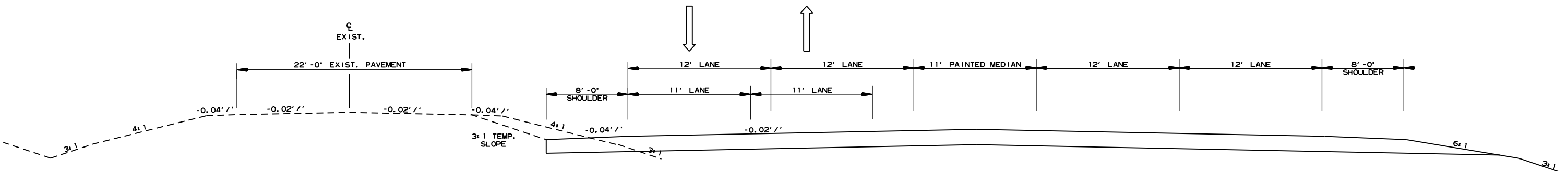


04/28/2025

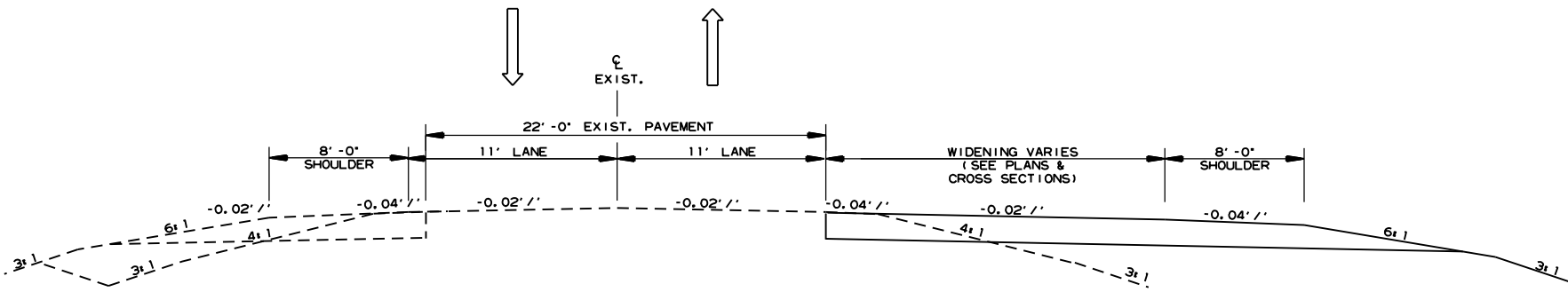
*STAGE 2 MOT LANE SHIFT: 159+00.00 - 162+00.00



NOTCH & WIDEN
STAGE 2
STA. 162+00.00 - STA. 173+00.00



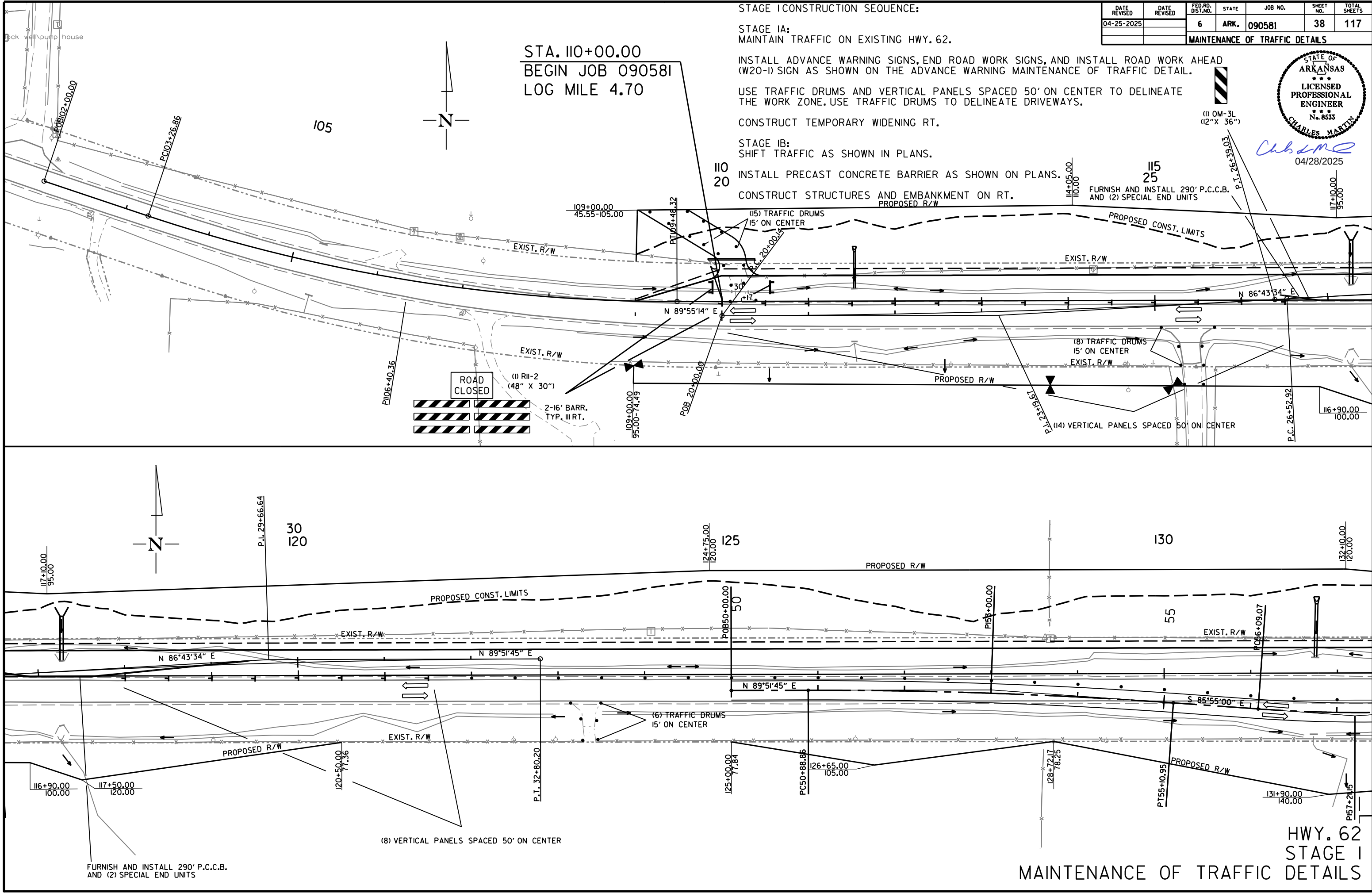
FULL DEPTH
STAGE 2
STA. 173+00.00 - STA. 194+00.00



NOTCH & WIDEN
STAGE 2
STA. 194+00.00 - STA. 197+60.00

HWY. 62
ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

RB4 3088 4/25/2025
R090581.DGN MicroStation v8.11.9.578



STAGE I CONSTRUCTION SEQUENCE:

STAGE IA:
MAINTAIN TRAFFIC ON EXISTING HWY. 62.

INSTALL ADVANCE WARNING SIGNS, END ROAD WORK SIGNS, AND INSTALL ROAD WORK AHEAD (W20-1) SIGN AS SHOWN ON THE ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAIL.

USE TRAFFIC DRUMS AND VERTICAL PANELS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT TEMPORARY WIDENING RT.

STAGE IB:
SHIFT TRAFFIC AS SHOWN IN PLANS.

INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON PLANS.

CONSTRUCT STRUCTURES AND EMBANKMENT ON RT.
PROPOSED R/W

FURNISH AND INSTALL 290' P.C.C.B. AND (2) SPECIAL END UNITS

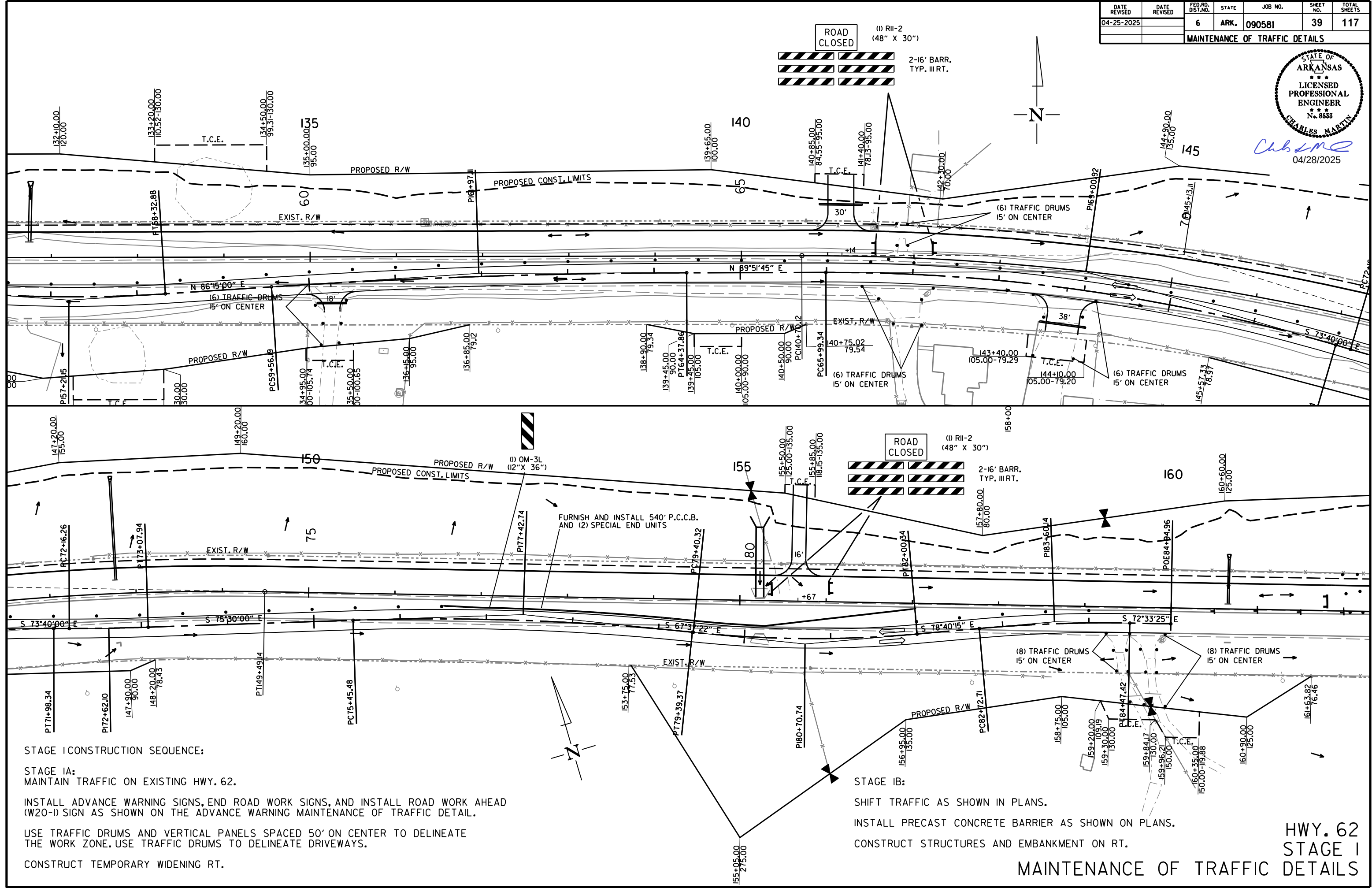
(1) OM-3L
(12\"/>



Chas Martin
04/28/2025

HWY. 62
STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	39	117
MAINTENANCE OF TRAFFIC DETAILS						



STAGE I CONSTRUCTION SEQUENCE:

STAGE IA:
MAINTAIN TRAFFIC ON EXISTING HWY. 62.

INSTALL ADVANCE WARNING SIGNS, END ROAD WORK SIGNS, AND INSTALL ROAD WORK AHEAD (W20-1) SIGN AS SHOWN ON THE ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAIL.

USE TRAFFIC DRUMS AND VERTICAL PANELS SPACED 50' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT TEMPORARY WIDENING RT.

STAGE IB:

SHIFT TRAFFIC AS SHOWN IN PLANS.

INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON PLANS.

CONSTRUCT STRUCTURES AND EMBANKMENT ON RT.

HWY. 62
STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	40	117
MAINTENANCE OF TRAFFIC DETAILS						



04/28/2025

STAGE I CONSTRUCTION SEQUENCE:

STAGE IA:
MAINTAIN TRAFFIC ON EXISTING HWY. 62.

INSTALL ADVANCE WARNING SIGNS, END ROAD WORK SIGNS,
AND INSTALL ROAD WORK AHEAD (W20-1) SIGN AS SHOWN
ON THE ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAIL.

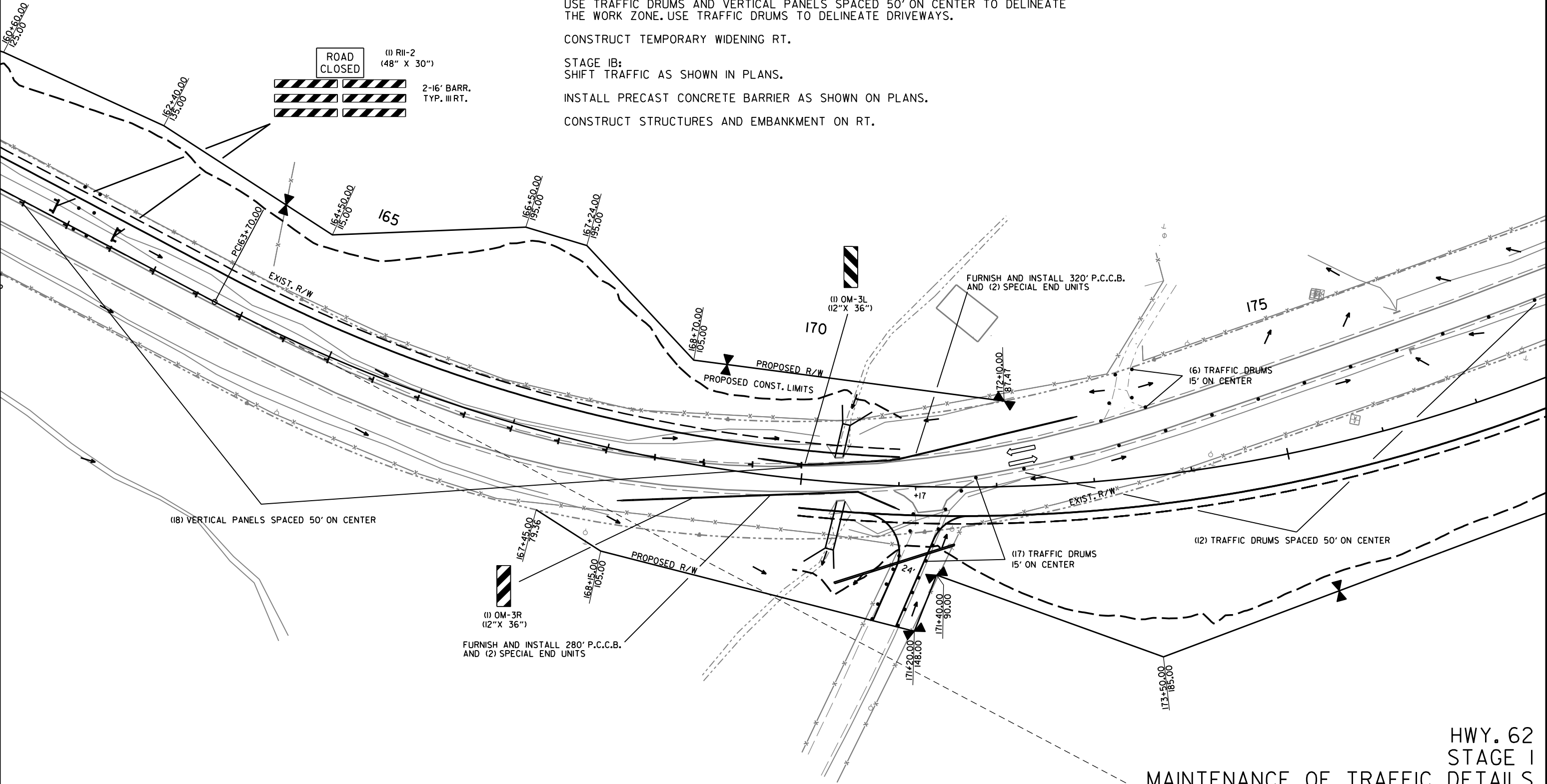
USE TRAFFIC DRUMS AND VERTICAL PANELS SPACED 50' ON CENTER TO DELINEATE
THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT TEMPORARY WIDENING RT.

STAGE IB:
SHIFT TRAFFIC AS SHOWN IN PLANS.

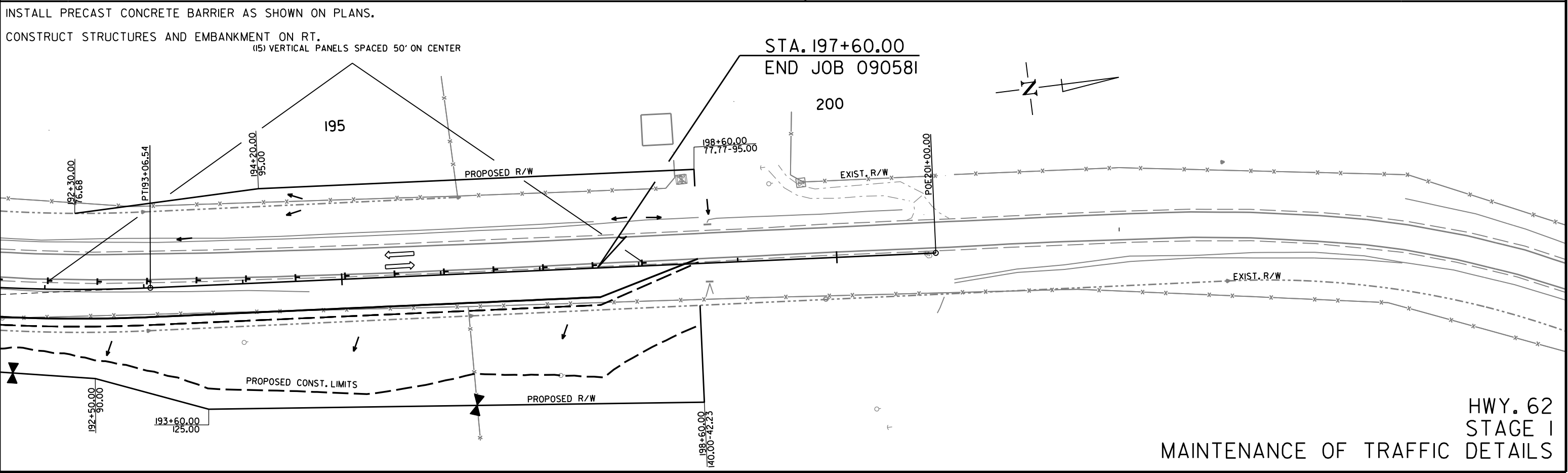
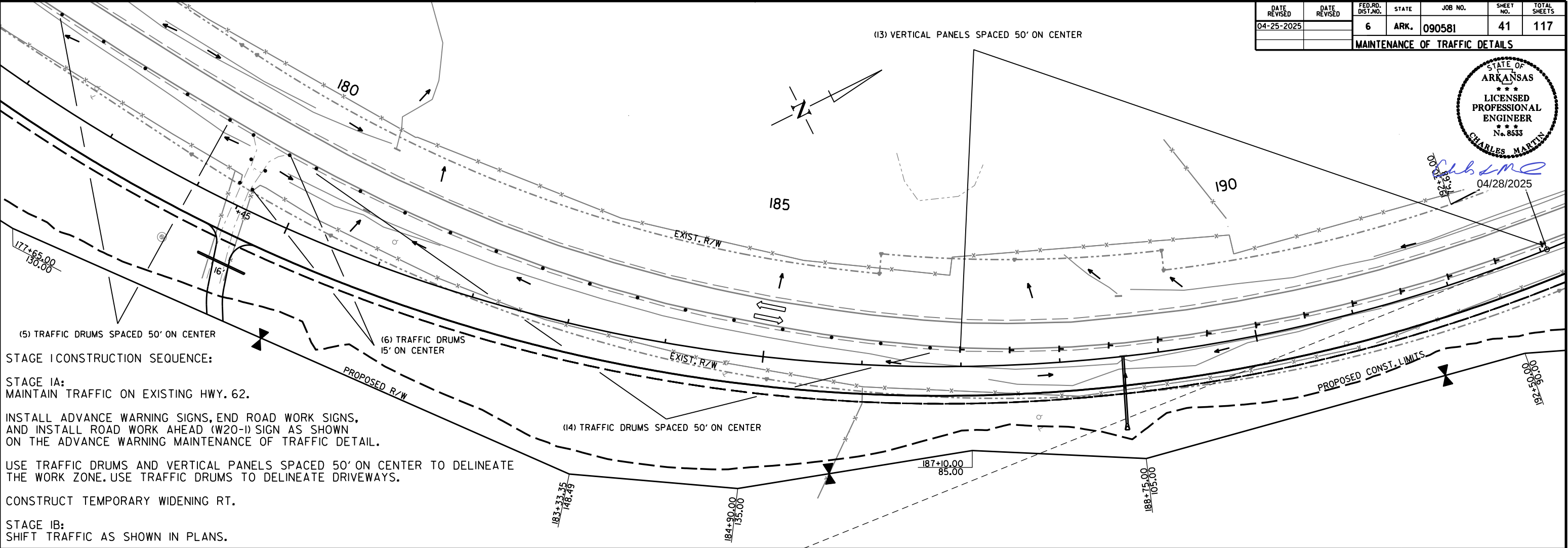
INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON PLANS.

CONSTRUCT STRUCTURES AND EMBANKMENT ON RT.



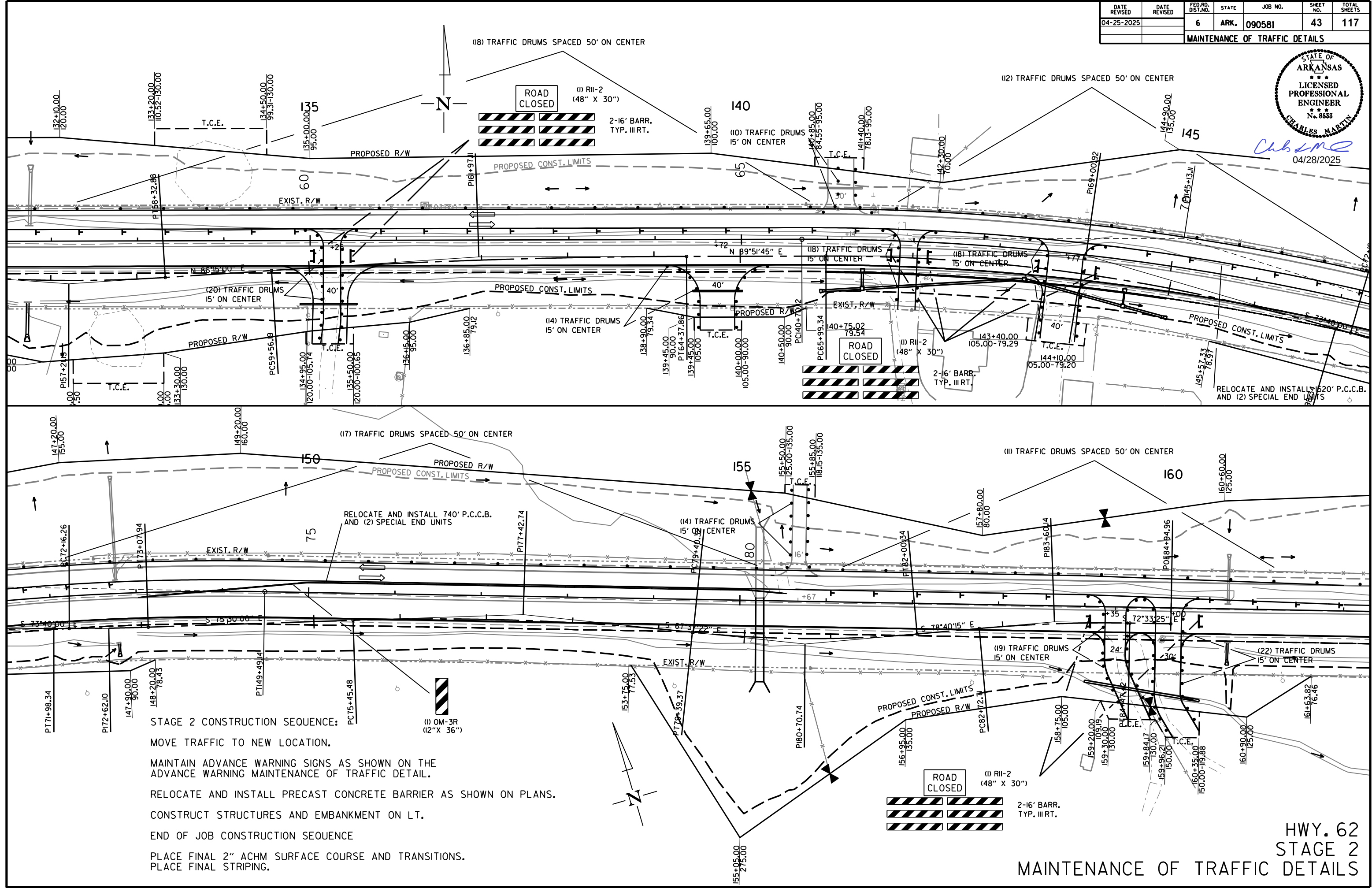
HWY. 62
STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	41	117
MAINTENANCE OF TRAFFIC DETAILS						



HWY. 62
STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	43	117
MAINTENANCE OF TRAFFIC DETAILS						



STAGE 2 CONSTRUCTION SEQUENCE:

MOVE TRAFFIC TO NEW LOCATION.

MAINTAIN ADVANCE WARNING SIGNS AS SHOWN ON THE ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAIL.

RELOCATE AND INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON PLANS.

CONSTRUCT STRUCTURES AND EMBANKMENT ON LT.

END OF JOB CONSTRUCTION SEQUENCE

PLACE FINAL 2" ACHM SURFACE COURSE AND TRANSITIONS.

PLACE FINAL STRIPING.

HWY. 62
STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	44	117
MAINTENANCE OF TRAFFIC DETAILS						



04/28/2025

STAGE 2 CONSTRUCTION SEQUENCE:

MOVE TRAFFIC TO NEW LOCATION.

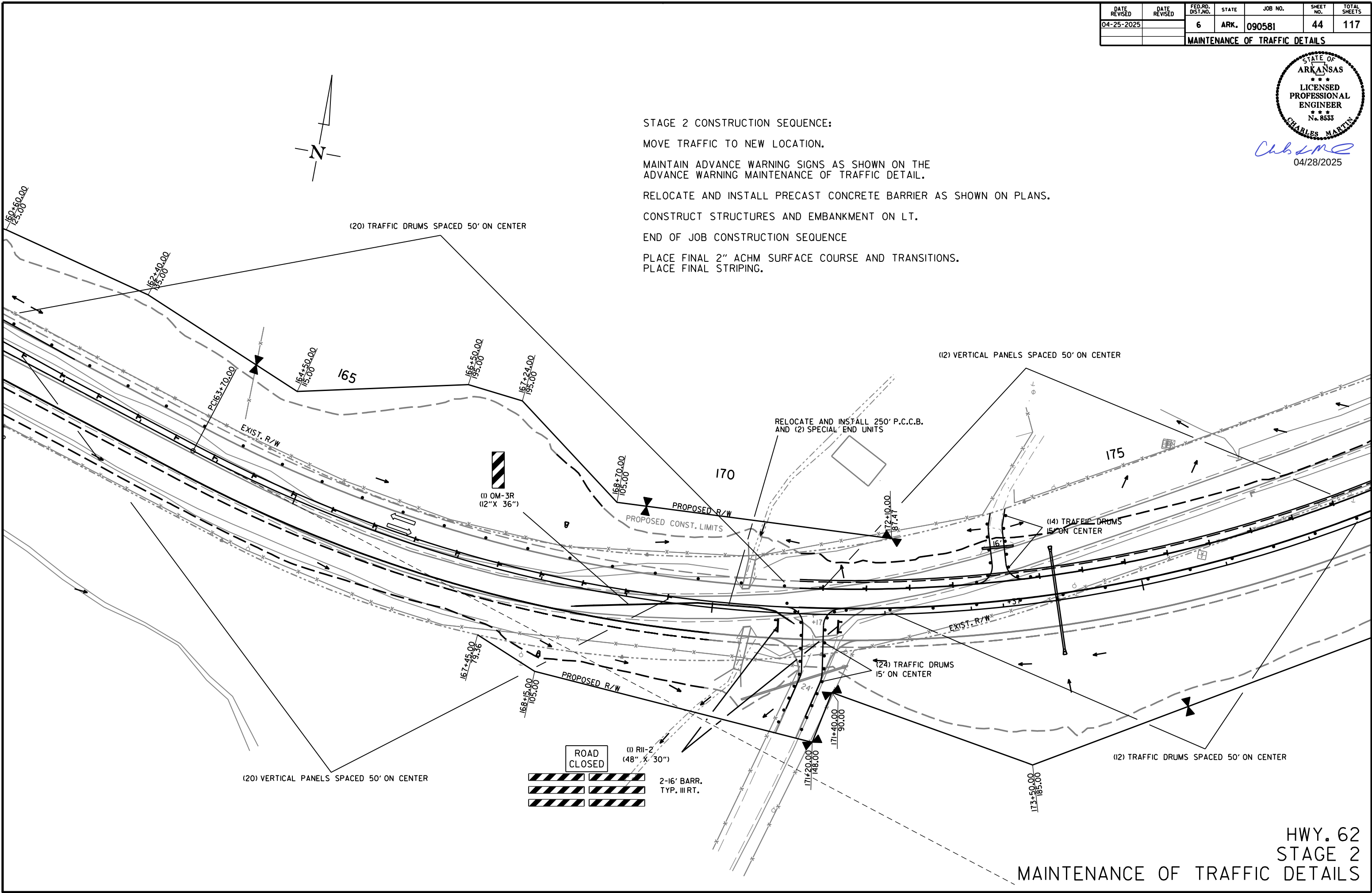
MAINTAIN ADVANCE WARNING SIGNS AS SHOWN ON THE
ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAIL.

RELOCATE AND INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON PLANS.

CONSTRUCT STRUCTURES AND EMBANKMENT ON LT.

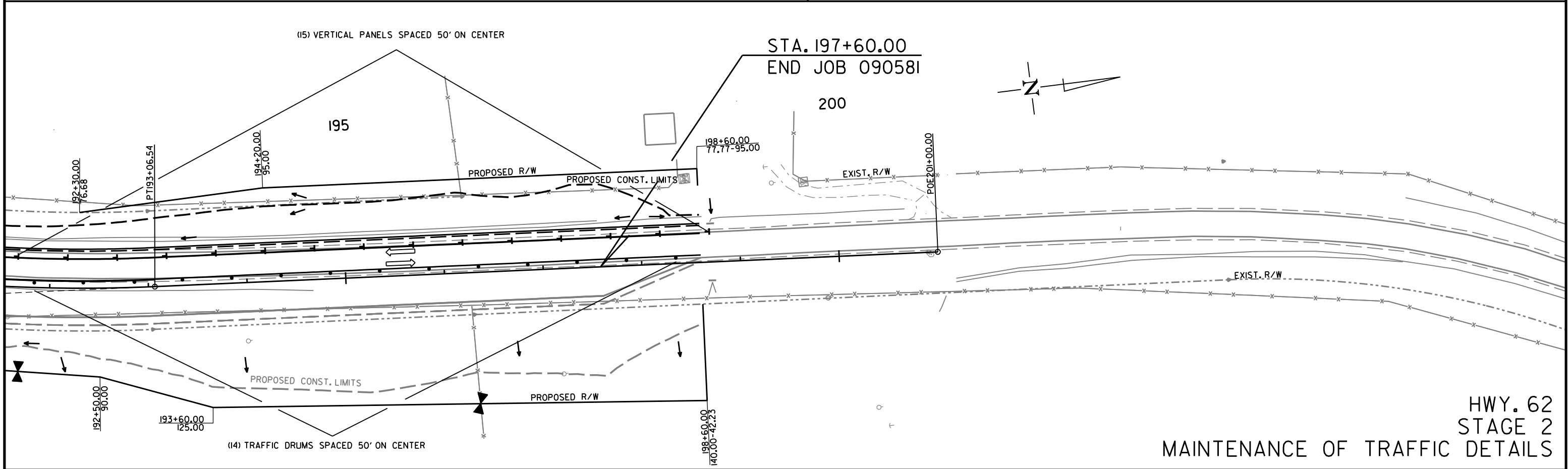
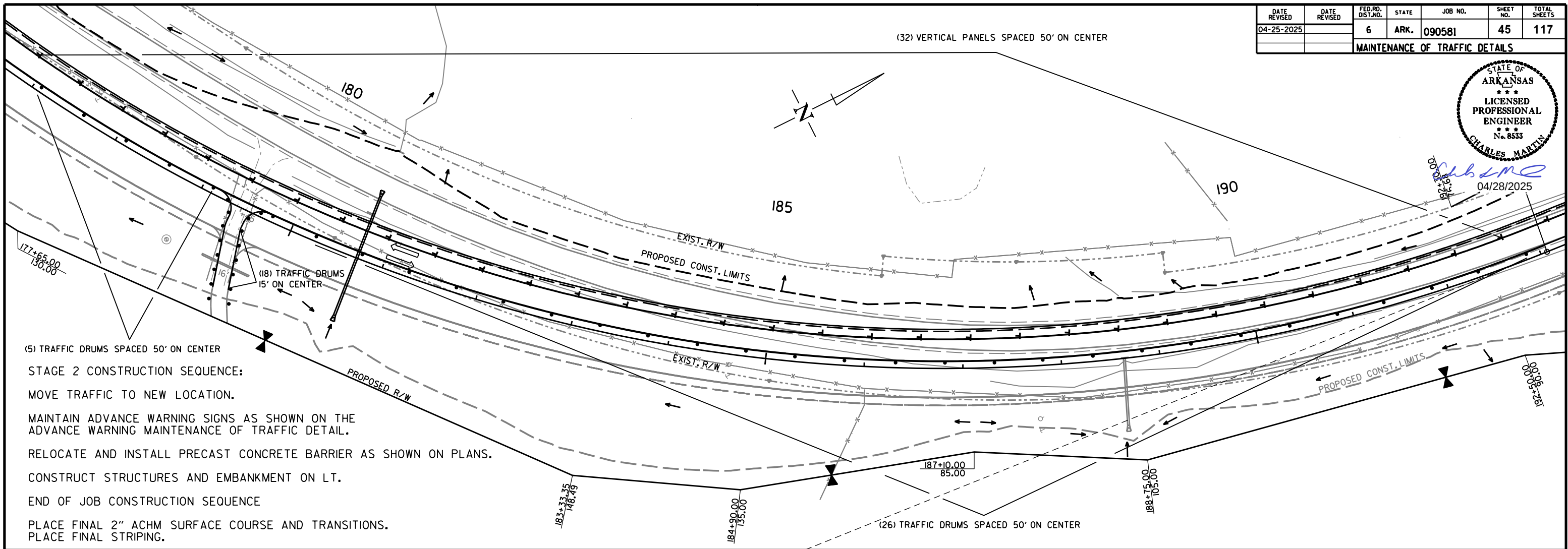
END OF JOB CONSTRUCTION SEQUENCE

PLACE FINAL 2" ACHM SURFACE COURSE AND TRANSITIONS.
PLACE FINAL STRIPING.

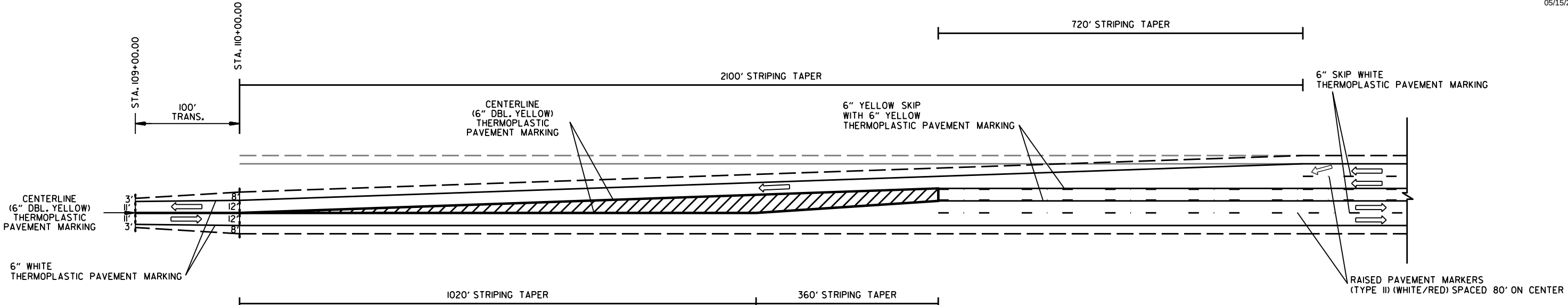


HWY. 62
STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	45	117
MAINTENANCE OF TRAFFIC DETAILS						

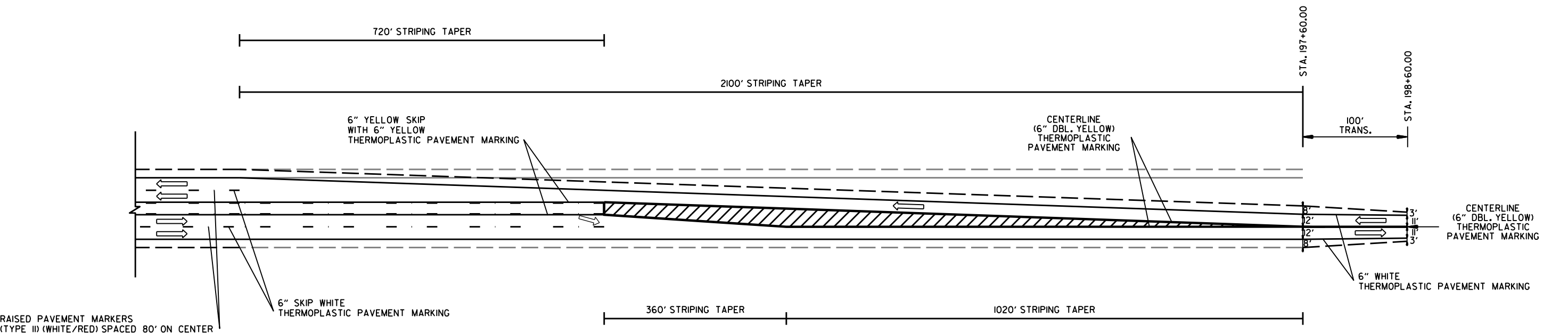


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
05-15-2025		6	ARK.	090581	46	117
PERMANENT PAVEMENT MARKING DETAILS						



HWY. 62 - PERMANENT PAVEMENT MARKING LAYOUT
BEGIN JOB TAPER

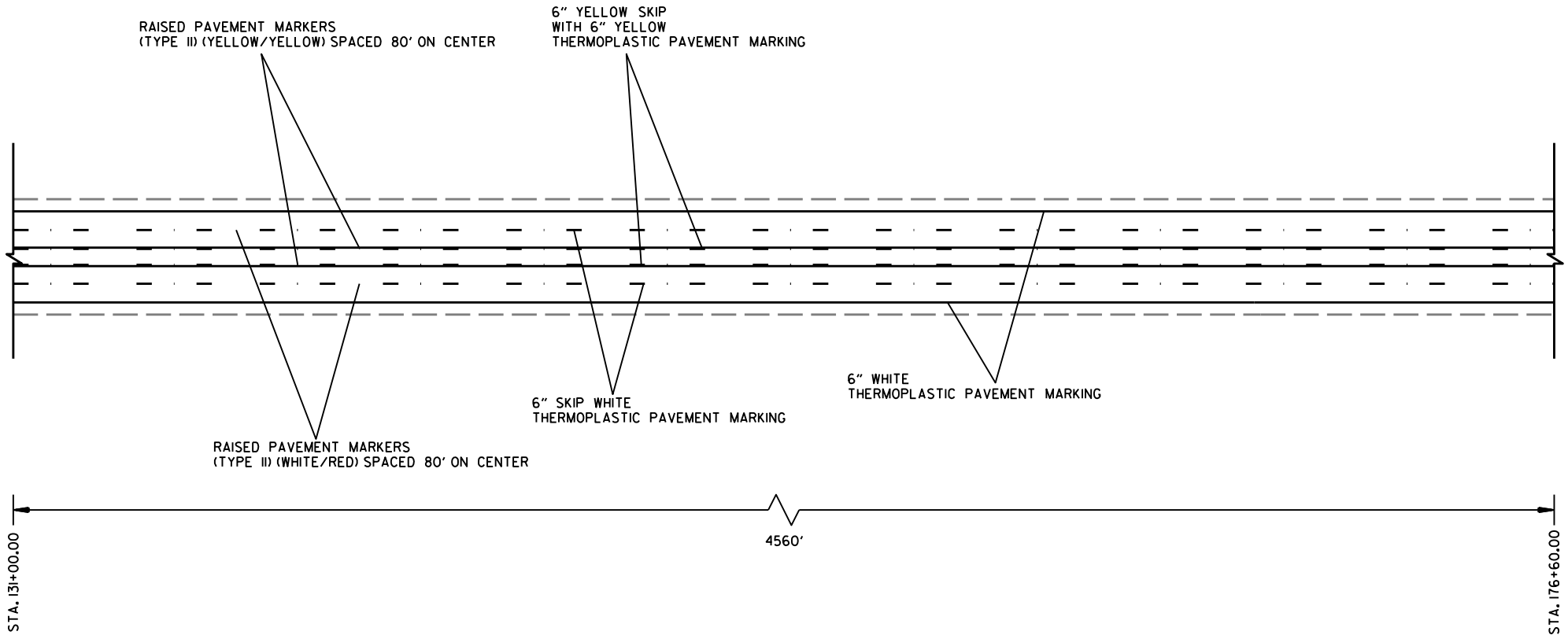
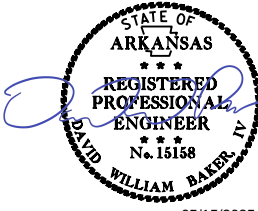
← THERMOPLASTIC PAVEMENT MARKING (ARROW)



HWY. 62 - PERMANENT PAVEMENT MARKING LAYOUT
END JOB TAPER

PERMANENT PAVEMENT MARKINGS
THERMOPLASTIC PAVEMENT MARKINGS WHITE (6") = 28,480 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (6") = 38,058 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS (ARROWS) = 4 EACH
RAISED PAVEMENT MARKERS (TYPE III)(WHITE/RED)(80' O.C.) = 132 EACH
RAISED PAVEMENT MARKERS (TYPE III)(YELLOW/YELLOW)(80' O.C.) = 150 EACH

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
05-15-2025		6	ARK.	090581	47	117
PERMANENT PAVEMENT MARKING DETAILS						



HWY. 62 - PERMANENT PAVEMENT MARKING LAYOUT

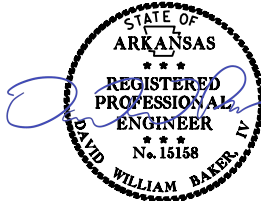
PERMANENT PAVEMENT MARKINGS

THERMOPLASTIC PAVEMENT MARKINGS WHITE (6") = 28,480 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (6") = 38,058 LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS (ARROWS) = 4 EACH

RAISED PAVEMENT MARKERS (TYPE II)(WHITE/RED)(80' O.C.) = 132 EACH
RAISED PAVEMENT MARKERS (TYPE II)(YELLOW/YELLOW)(80' O.C.) = 150 EACH

RB4 3088 3/13/2025 R090581.DCN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	48	117
05-15-2025		QUANTITIES				



05/15/2025

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE
										RIGHT	LEFT			
			LIN. FT. - EACH	NO.		SQ. FT.	EACH			LIN. FT.	EACH			
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	64.0							
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	64.0							
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	64.0							
W20-1	ROAD WORK AHEAD	48"x48"	4	4	4	4	64.0							
G20-2	END ROAD WORK	48"x24"	4	4	4	4	32.0							
R11-2	ROAD CLOSED	48"x30"	8	16	16	16	160.0							
OM-3L	OBJECT MARKER	12"x36"	3		3	3	9.0							
OM-3R	OBJECT MARKER	12"x36"	1	3	3	3	9.0							
R4-1	DO NOT PASS	24"x30"	10	10	10	10	50.0							
R4-2	PASS WITH CARE	24"x30"												
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	10	10	10	10	90.0							
W8-1	BUMP	30"x30"	10	10	10	10	62.5							
SPECIAL	WORK WITH US SIGN (USE CAUTION, SLOW DOWN)	96"x48"	2	2	2	2	64.0							
SPECIAL	CONSTRUCTION PROJECT INFORMATION	96"x48"	2	2	2	2	64.0							
	VERTICAL PANELS		68	215	215			215						
	TRAFFIC DRUMS		168	371	371				371					
	TYPE III BARRICADE-RT. (16')		8	16	16					256				
	TYPE III BARRICADE-LT. (16')		8	16	16						256			
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		1534		1534							1534		
	RELOCATING PRECAST CONCRETE BARRIER			1318	1318								1318	
	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE													1
TOTALS:							796.5	215	371	256	256	1534	1318	1

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

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.

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 2	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING		
	LIN. FT. - EACH		LIN. FT.	LIN. FT.	TYPE II (WHITE/RED)	TYPE II (YELLOW/YELLOW)	6" WHITE YELLOW		ARROWS
					EACH		LIN. FT.		EACH
CONSTRUCTION PAVEMENT MARKINGS	18220		18220						
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		800		800					
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)		132			132				
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)		150				150			
THERMOPLASTIC PAVEMENT MARKING WHITE (6")		28480					28480		
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")		38058						38058	
THERMOPLASTIC PAVEMENT MARKING (ARROWS)		4							4
TOTALS:			18220	800	132	150	28480	38058	4

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

QUANTITIES

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	49	117
05-15-2025		QUANTITIES				



CLEARING AND GRUBBING				
STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
113+00	118+00	HWY. 62 LT. & RT.	5	5
128+00	133+00	HWY. 62 LT. & RT.	5	5
135+00	137+00	HWY. 62 LT.	2	2
141+00	144+00	HWY. 62 RT.	3	3
150+00	161+00	HWY. 62 LT. & RT.	11	11
165+00	199+00	HWY. 62 LT. & RT.	34	34
TOTALS:			60	60

STATION	STATION	LOCATION	HEADWALLS
			EACH
111+56	111+53	HWY. 62 LT. & RT.	2
117+27	117+27	HWY. 62 LT. & RT.	2
131+74	131+74	HWY. 62 LT. & RT.	2
147+77	147+77	HWY. 62 LT. & RT.	2
155+23	155+23	HWY. 62 LT. & RT.	2
160+66	160+66	HWY. 62 LT. & RT.	2
170+37	170+37	HWY. 62 LT. & RT.	2
188+64	188+64	HWY. 62 RT.	1
TOTALS:			15

REMOVAL AND DISPOSAL OF FENCE				
STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
109+00	155+00	HWY. 62 LT.	4800	2
109+00	115+25	HWY. 62 RT.	645	
115+50	134+75	HWY. 62 RT.	1990	2
136+00	141+50	HWY. 62 RT.	560	
145+50	148+25	HWY. 62 RT.	260	
153+75	158+75	HWY. 62 RT.	620	
155+50	172+25	HWY. 62 LT.	1695	
167+45	171+00	HWY. 62 RT.	455	
171+75	198+60	HWY. 62 RT.	3425	
192+30	198+50	HWY. 62 LT.	575	
TOTALS:			15025	4

EARTHWORK				
STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
ENTIRE	PROJECT	STAGE 1-MAIN LANES	101456	136076
ENTIRE	PROJECT	STAGE 2-MAIN LANES	18485	55368
ENTIRE	PROJECT	APPROACHES	120	2980
ENTIRE	PROJECT	TEMPORARY APPROACHES	100	1200
117+20	117+34	CHANNEL CHANGE	808	
155+13	155+33	CHANNEL CHANGE	3350	
170+27	170+47	CHANNEL CHANGE	1182	
TOTALS:			125501	195624

SOIL LOG												
STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
111+00	36	12	10.90	92	57	28.90	06RT	0-5	30	19	A-6(4)	BROWN
111+00	36	12	10.70	92	57	28.90	27RT	0-5	29	15	A-6(7)	BROWN
111+00	36	12	10.70	92	57	28.90	27RT	0-5	26	8	A-4(1)	BROWN
119+00	36	12	11.10	92	57	19.20	06LT	0-5	25	8	A-4(2)	BR/GR
119+00	36	12	11.20	92	57	19.10	21LT	0-5	26	8	A-4(3)	BROWN
127+00	36	12	11.00	92	57	9.50	06RT	0-5	80	63	A-R-6(31)	BROWN
127+00	36	12	10.90	92	57	9.50	25RT	0-5	67	49	A-7-6(46)	BROWN
135+00	36	12	11.30	92	57	1.30	06LT	0-5	57	35	A-7-6(24)	BROWN
135+00	36	12	11.10	92	57	1.30	21LT	0-3.5	58	38	A-7-6(18)	BROWN
143+00	36	12	11.10	92	56	51.60	06RT	0-5	52	38	A-7-6(17)	BROWN
143+00	36	12	11.00	92	56	51.70	27RT	0-5	68	42	A-7-6(34)	BROWN
151+00	36	12	9.60	92	56	41.90	06LT	0-3.5	46	27	A-7-6(44)	RD/BR
151+00	36	12	9.70	92	56	41.80	22LT	0-5	41	28	A-2-7(1)	RD/BR
159+00	36	12	7.20	92	56	32.70	06RT	0-5	35	19	A-6(7)	BROWN
159+00	36	12	7.10	92	56	32.80	20RT	0-5	32	17	A-6(7)	GRAY
167+00	36	12	5.40	92	56	23.20	06LT	0-2.4	44	29	A-7-6(15)	BROWN
167+00	36	12	5.50	92	56	23.20	25LT	0-2	34	23	A-6(8)	BROWN
175+00	36	12	7.50	92	56	14.00	06RT	0-5	59	42	A-7-6(29)	BROWN
175+00	36	12	7.30	92	56	13.90	25RT	0-5	61	46	A-7-6(24)	BR/GR
182+00	36	12	11.40	92	56	7.10	06LT	0-5	49	30	A-7-6(24)	RD/BR
191+00	36	12	18.90	92	56	1.80	25RT	0-5	36	19	A-6(3)	RD/BR
197+00	36	12	26.80	92	56	1.10	06RT	0-5	36	23	A-6(9)	BROWN
197+00	36	12	26.80	92	56	1.00	27RT	0-4	34	17	A-6(3)	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

SELECTED PIPE BEDDING	
LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	150
TOTAL:	150
NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.	

CULVERT CLEAN OUT		
STATION	LOCATION	EACH
111+53	HWY. 62 - PIPE CULVERT	1
117+27	HWY. 62 - BOX CULVERT	1
131+74	HWY. 62 - PIPE CULVERT	1
147+77	HWY. 62 - PIPE CULVERT	1
155+23	HWY. 62 - BOX CULVERT	1
160+66	HWY. 62 - PIPE CULVERT	1
170+37	HWY. 62 - BOX CULVERT	1
188+64	HWY. 62 - PIPE CULVERT	1
TOTAL:		8

REMOVAL AND DISPOSAL OF CULVERTS		
STATION	DESCRIPTION	PIPE CULVERTS
		EACH
110+17	HWY. 62 LT.	1
115+40	HWY. 62 RT.	1
123+34	HWY. 62 RT.	1
135+25	HWY. 62 RT.	1
141+88	HWY. 62 LT.	1
141+93	HWY. 62 RT.	1
143+77	HWY. 62 RT.	1
159+35	HWY. 62 RT.	1
160+00	HWY. 62 RT.	1
171+17	HWY. 62 RT.	1
176+51	HWY. 62 LT.	1
180+72	HWY. 62 LT.	1
TOTAL:		12
NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.		

SOIL STABILIZATION			
STATION	STATION	LOCATION / DESCRIPTION	SOIL STABILIZATION
			TON
ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	750
TOTAL:			750
QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.			

BENCH MARKS		
STATION	LOCATION	BENCH MARKS
		EACH
117+27	HWY. 62 ON R.C. BOX CULVERT ON RT.	1
155+23	HWY. 62 ON R.C. BOX CULVERT ON LT.	1
170+37	HWY. 62 ON R.C. BOX CULVERT ON RT.	1
TOTAL:		3
NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.		

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	50	117
QUANTITIES						



Charles Martin
04/14/2025

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
110+00	198+60	HWY. 62 LT. & RT.	8860	37
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			2000	8
TOTALS:			10860	45

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

FLOWABLE SELECT MATERIAL

STATION	LOCATION	CU. YD.
155+23	HWY. 62 - BOX CULVERT	261
180+72	HWY. 62 - PIPE CULVERT	33
TOTAL:		294

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
110+00.00	111+53.00	HWY. 62 LT.	153.00	136.00
119+00.00	124+00.00	HWY. 62 LT. & RT.	1000.00	888.89
128+00.00	130+25.00	HWY. 62 LT. & RT.	500.00	444.44
163+00.00	165+00.00	HWY. 62 LT. & RT.	400.00	355.56
169+00.00	170+36.00	HWY. 62 LT.	136.00	120.89
182+00.00	195+00.00	HWY. 62 LT. & RT.	2600.00	2311.11
TOTAL:				4256.89

NOTE: AVERAGE WIDTH = 8'-0"

CONCRETE CURB

STATION	STATION	LOCATION	TYPE B
			LIN. FT.
141+00	145+00	HWY. 62 RT.	400
TOTAL:			400

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.
111+53.00	112+00.00	HWY. 62 LT.	47.00	4.00	20.89	20.89	0.26
131+50.00	131+74.00	HWY. 62 RT.	24.00	4.00	10.67	10.67	0.13
133+75.00	137+00.00	HWY. 62 RT.	325.00	4.00	144.44	144.44	1.82
134+00.00	136+00.00	HWY. 62 LT.	200.00	4.00	88.89	88.89	1.12
140+00.00	163+00.00	HWY. 62 LT. & RT.	4600.00	4.00	2044.44	2044.44	25.76
170+42.00	182+00.00	HWY. 62 RT.	1158.00	4.00	514.67	514.67	6.48
170+70.00	182+00.00	HWY. 62 LT.	1130.00	4.00	502.22	502.22	6.33
TOTALS:					3326.22	3326.22	41.90

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

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE C)	* 16'-0" GATES
			LIN. FT.	EACH
109+00	115+20	HWY. 62 - RT.	625	
156+00	159+85	HWY. 62 - RT.	400	1
171+20	196+25	HWY. 62 - RT.	2760	
TOTALS:			3785	1

* DENOTES ALTERNATE BID ITEM.

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL											
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS	ROCK DITCH CHECKS	SILT FENCE	PIPE FOR SLOPE DRAINS	DUMPED RIPRAP	DROP INLET FILTER SOCK (12")	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
											(E-5)	(E-6)	(E-11)	SLOPE DRAIN (E-12)	(E-13)	(E-14)			
ENTIRE	PROJECT	CLEARING AND GRUBBING	ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	LIN. FT.	CU.YD.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.	
ENTIRE	PROJECT	STAGE 1	23.20	46.40	23.20	2366.4	23.20	16.80	16.80	342.7	47	36					96	96	155
ENTIRE	PROJECT	STAGE 2	17.30	34.60	17.30	1764.6	17.30	22.70	22.70	463.1	27	36			81	64	64	103	
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.										30	45	500	200	10	50	40	40	104	
TOTALS:			40.50	81.00	40.50	4131.0	40.50	79.50	79.50	1621.8	178	195	3770	200	10	131	376	200	759

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
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION
FILTER SOCKS.....27 LIN. FT./ 5' DIA. INLET

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

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.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	51	117
05-07-2025		QUANTITIES				



05/07/2025

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS	
		(SINGLE) EACH	(DOUBLE)
ENTIRE PROJECT	3	1	1
TOTALS:	3	1	1

REMOVING AND REPLACING TOPSOIL

STATION	STATION	LOCATION	*REMOVING AND REPLACING TOPSOIL CU. YD.
133+70.00	140+51.00	HWY. 62 LT.	630
157+86.00	165+32.00	HWY. 62 LT.	1050
171+62.00	194+67.00	HWY. 62 RT.	3720
178+45.00	197+60.00	HWY. 62 LT.	17760
TOTAL:			23160

*NOTE: QUANTITY ESTIMATED
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
109+00.00	110+00.00	MAIN LANES	20.00	222.22
197+60.00	198+60.00	MAIN LANES	20.00	222.22
TOTAL:				444.44

NOTE: COORDINATE COLD MILLING STOCKPILE LOCATIONS WITH DISTRICT ENGINEER.
STOCKPILE LOCATIONS SHALL BE NO FURTHER THAN FIVE MILES FROM EACH SITE.

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	* RUMBLE STRIPS IN ASPHALT SHOULDERS LIN.FT.
109+00	198+60	HWY. 62 LT. & RT.	17920
TOTAL:			17920

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

DUMPED RIPRAP AND FILTER BLANKET

STATION	STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
			CU. YD.	SQ. YD.
159+00	165+50	HWY. 62 LT.	389	777
168+00	169+00	HWY. 62 LT.	98	195
TOTALS:			487	972

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

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE (CLASS III)		FLARED END SECTIONS FOR R.C. PIPE CULVERTS		TEMPORARY CULVERTS	DROP INLETS	JUNCT. BOXES	YARD DRAINS	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE- ROADWAY	REINF. STEEL- ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.- ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.		
		24"	36"	24"	36"		18"												ST	(TYPE E)
		LIN. FT.		EACH			LIN. FT.												EACH	
111+53	24" X 62' R.C. PIPE CULVERT, EXTEND 44' LT. & 15' RT. W/FES	59		2												16	0.20	FES-1, FES-2, PCC-1		
117+27	5' X 4' X 76' R.C. BOX CULVERT, EXTEND 52' LT. & 16' RT.									5	4	68	38	3670	24	14	0.18	W-X003-1, R-100X-X1, RCB-1, RCB-2, RCB-3		
131+74	36" X 90' R.C. PIPE CULVERT, EXTEND 62' LT. & 36' RT. W/FES		98		2											34	0.43	FES-1, FES-2, PCC-1		
141+41	CONST. DROP INLET ON RT. AND PIPE OUTLET	17					1											FPC-9S, PCC-1, PCM-1, PCP-1, PCP-3		
141+41	CONST. JUNCTION BOX ON RT. AND PIPE INLET W/FES	41		1				1								8	0.10	FPC-9, PCC-1, PCM-1, PCP-1, PCP-3, FES-1, FES-2		
143+31	CONST. DROP INLET ON RT. AND PIPE INLET AND OUTLET	300					1											FPC-9S, PCC-1, PCM-1, PCP-1, PCP-3		
144+50	CONST. DROP INLET ON RT. AND PIPE OUTLET	14					1											FPC-9S, PCC-1, PCM-1, PCP-1, PCP-3		
144+50	CONST. JUNCTION BOX ON RT. AND PIPE OUTLET W/FES	45		1				1								8	0.10	FPC-9, PCC-1, PCM-1, PCP-1, PCP-3, FES-1, FES-2		
147+77	24" X 74' R.C. PIPE CULVERT, EXTEND 124' LT. & 12' RT. W/FES	136		2												16	0.20	FES-1, FES-2, PCC-1		
155+23	CONST. 10' X 5' X 180' R.C. BOX CULVERT									10	5	180	181.06	28103	109	19	0.24	SPECIAL DETAILS, RCB-1, RCB-2		
160+66	24" X 45' R.C. PIPE CULVERT, EXTEND 52' LT. & 20' RT. W/FES	72		2												16	0.20	FES-1, FES-2, PCC-1		
168+15	CONST. 24" X 146' R.C. PIPE CULVERT W/ FES	146		2												16	0.20	FES-1, FES-2, PCC-1		
170+37	8' X 8' X 45' R.C. BOX CULVERT ON A 15° FWD. SKEW, EXTEND 36' LT. & 52' RT.									8	8	92	113.58	11273	55	70	0.88	W-X15 R-115X-1, R-100X-X1, RCB-1, RCB-2, RCB-3		
174+00	CONST. 24' X 114' R.C. PIPE CULVERT W/FES	114		2												16	0.20	FES-1, FES-2, PCC-1		
180+72	CONST. 24' X 129 R.C. PIPE CULVERT W/FES	129		2												16	0.20	FES-1, FES-2, PCC-1		
188+64	24' X 61' R.C. PIPE CULVERT, EXTEND 70' RT W/FES	70		2												16	0.20	FES-1, FES-2, PCC-1		
60+25	INSTALL 18" X 34' TEMP. PIPE CULVERT RT SIDE DRAIN					34												PCC-1, PCM-1, PCP-1, PCP-2, PCP-3		
68+80	INSTALL 18" X 54' TEMP. PIPE CULVERT RT SIDE DRAIN					54												PCC-1, PCM-1, PCP-1, PCP-2, PCP-3		
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER									20											
TOTALS:		1143	98	16	2	88	3	2	20				332.64	43046	188	265	3.33			

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.

* NOTE: QUANTITY ESTIMATED

SEE SECTION 104.03 OF THE STD. SPECS.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	52	117
QUANTITIES						



Charles Martin
04/14/2025

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS			STANDARD DRAWINGS
							18"	24"	30"	
			FEET	SQ. YD.	TON	TON	LIN. FT.			
110+17	LT.	HWY. 62	30	360.07	39.61	147.03	54			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
115+40	RT.	HWY. 62	30	214.26	23.57	87.49	46			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
123+34	RT.	HWY. 62	30	126.73	13.94	51.75	46			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
135+25	RT.	HWY. 62	40	385.37	42.39	157.36	66			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
139+72	RT.	HWY. 62	40	216.73	23.84	88.50	58			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
141+14	LT.	HWY. 62	30	190.07	20.91	77.61	50			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
143+77	RT.	HWY. 62	40	287.84	31.66	117.53		52		DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
155+67	LT.	HWY. 62	16	168.73	18.56	68.90				DR-2
159+35	RT.	HWY. 62	24	264.73	29.12	108.10			135	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
160+00	RT.	HWY. 62	30	376.73	41.44	153.83				DR-2
171+17	RT.	HWY. 62	24	258.26	28.41	105.46				DR-2
173+37	LT.	HWY. 62	16	108.29	11.91	44.22				DR-2
179+45	RT.	HWY. 62	16	131.40	14.45	53.66	52			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
199+32	LT.	HWY. 62	16	136.73	15.04	55.83	32			DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
ENTIRE PROJECT TEMPORARY DRIVES						150.00				
TOTALS:				3225.94	354.85	1467.27	404	52	135	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....93.9% MIN. AGGR..... 6.1% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

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

ASPHALT CONCRETE PATCHING FOR
MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	45	90
TOTALS:	45	90

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	25
TOTAL:	25

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

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	53	117
QUANTITIES						



BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT						ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")										
				TON / STATION	TON	(0.05 GAL. PER SQ. YD.)			(0.17 GAL. PER SQ. YD.)			TOTAL GALLONS	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	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	TOTAL PG 64-22 TON	
						TOTAL WID. FEET	SQ.YD.	GALLON	TOTAL WID. FEET	SQ.YD.	GALLON																			
MAIN LANES																														
109+00.00	110+00.00	HWY. 62 - TRANSITION	100.00	183.50	183.50	43.39	482.11	24.11	22.00	244.44	41.55	65.66					21.76	241.78	495.00	59.84	21.63	240.33	220.00	26.44	37.50	416.67	220.00	45.83	72.27	
110+00.00	121+30.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY	1130.00	367.00	4147.10	86.77	10894.46	544.72	22.00	2762.22	469.58	1014.30					43.52	5464.18	495.00	1352.38	43.25	5430.28	220.00	597.33	75.00	9416.67	220.00	1035.83	1633.16	
121+30.00	126+00.00	HWY. 62 - FULL DEPTH	470.00	457.75	2151.43	126.77	6620.21	331.01				331.01					63.52	3317.16	495.00	821.00	63.25	3303.06	220.00	363.34	75.00	3916.67	220.00	430.83	794.17	
126+00.00	138+50.00	HWY. 62 - FULL DEPTH - W/ MOT FULL DEPTH SHOULDER LT.	1250.00	405.25	5065.63	126.77	17603.94	880.35				880.35					63.52	8822.22	495.00	2183.50	63.25	8784.72	220.00	966.32	75.00	10416.67	220.00	1145.83	2112.15	
138+50.00	141+00.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY - W/ MOT FULL DEPTH SHOULDER LT.	250.00	314.50	786.25	86.77	2410.28	120.51				120.51					43.52	1208.89	495.00	299.20	43.25	1201.39	220.00	132.15	75.00	2083.33	220.00	229.17	361.32	
141+00.00	142+00.00	HWY. 62 - NOTCH, WIDEN, AND OVELAY - C.C.C. & G. RT - W/ MOT FULL DEPTH SHOULDER LT.	100.00	293.50	293.50	86.77	964.11	48.21	22.00	244.44	41.55	89.76					43.52	483.56	495.00	119.68	43.25	480.56	220.00	52.86	75.00	833.33	220.00	91.67	144.53	
142+00.00	145+00.00	HWY. 62 - FULL DEPTH - C.C.C. & G. RT - W/ MOT FULL DEPTH SHOULDER LT.	300.00	384.25	1152.75	126.77	4225.67	211.28				211.28					63.52	2117.33	495.00	524.04	63.25	2108.33	220.00	231.92	75.00	2500.00	220.00	275.00	506.92	
145+00.00	160+00.00	HWY. 62 - FULL DEPTH - W/ MOT FULL DEPTH SHOULDER LT.	1500.00	405.25	6078.75	126.77	21123.33	1056.42				1056.42					63.52	10586.67	495.00	2620.20	63.25	10541.67	220.00	1159.58	75.00	12500.00	220.00	1375.00	2534.58	
160+00.00	162+00.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY - W/ MOT FULL DEPTH SHOULDER LT.	200.00	314.50	629.00	86.77	1928.22	96.41	22.00	488.89	83.11	179.52					43.52	967.11	495.00	239.36	43.25	961.11	220.00	105.72	75.00	1666.67	220.00	183.33	289.05	
162+00.00	165+00.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY	300.00	367.00	1101.00	86.77	2892.33	144.62	22.00	733.33	124.67	269.29					43.52	1450.67	495.00	359.04	43.25	1441.67	220.00	158.58	75.00	2500.00	220.00	275.00	433.58	
165+00.00	169+00.00	HWY. 62 - FULL DEPTH	400.00	457.75	1831.00	126.77	5634.22	281.71				281.71					63.52	2823.11	495.00	698.72	63.25	2811.11	220.00	309.22	75.00	3333.33	220.00	366.67	675.89	
169+00.00	171+00.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY	200.00	367.00	734.00	86.77	1928.22	96.41	22.00	488.89	83.11	179.52					43.52	967.11	495.00	239.36	43.25	961.11	220.00	105.72	75.00	1666.67	220.00	183.33	289.05	
171+00.00	172+10.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY (TRANSITION)	110.00	412.38	453.62	104.77	1280.52	64.03	11.00	134.44	22.85	86.88					53.52	654.13	495.00	161.90	53.25	650.83	220.00	71.59	75.00	916.67	220.00	100.83	172.42	
172+10.00	187+00.00	HWY. 62 - FULL DEPTH	1490.00	457.75	6820.48	126.77	20987.48	1049.37				1049.37					63.52	10516.09	495.00	2602.73	63.25	10471.39	220.00	1151.85	75.00	12416.67	220.00	1365.83	2517.68	
187+00.00	190+00.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY (TRANSITION)	300.00	412.38	1237.14	104.77	3492.33	174.62	11.00	366.67	62.33	236.95					53.52	1784.00	495.00	441.54	53.25	1775.00	220.00	195.25	75.00	2500.00	220.00	275.00	470.25	
190+00.00	197+60.00	HWY. 62 - NOTCH, WIDEN, AND OVERLAY	760.00	367.00	2789.20	86.77	7327.24	366.36	22.00	1857.78	315.82	682.18					43.52	3675.02	495.00	909.57	43.25	3652.22	220.00	401.74	75.00	6333.33	220.00	696.67	1098.41	
197+60.00	198+60.00	HWY. 62 - TRANSITION	100.00	183.50	183.50	43.39	482.11	24.11	22.00	244.44	41.55	65.66					21.76	241.78	495.00	59.84	21.63	240.33	220.00	26.44	37.50	416.67	220.00	45.83	72.27	
ADDITIONAL FOR LEVELING																														
110+00.00	115+40.00	HWY. 62 - LEVELING	540.00			20.00	1200.00	60.00	22.00	1320.00	224.40	284.40									22.00	1320.00	220.00	145.20					145.20	
115+40.00	121+00.00	HWY. 62 - GRADE RAISE	560.00						22.00	1368.89	232.71	232.71	22.00	1368.89	357.50	244.69					22.00	1368.89	220.00	150.58					150.58	
121+00.00	121+30.00	HWY. 62 - LEVELING	30.00			20.00	66.37	3.33	22.00	73.33	12.47	15.80								22.00	73.33	220.00	8.07					8.07		
138+50.00	140+00.00	HWY. 62 - GRADE RAISE	150.00						22.00	366.67	62.33	62.33	22.00	366.67	481.67	88.31				22.00	366.67	220.00	40.33					40.33		
140+00.00	141+93.00	HWY. 62 - LEVELING	193.00			20.00	428.89	21.44				80.20								22.00	471.78	220.00	51.90					51.90		
141+93.00	142+00.00	HWY. 62 - GRADE RAISE	7.00						22.00	17.11	2.91		22.00	17.11	3068.00	26.25				22.00	17.11	220.00	1.88					1.88		
160+00.00	165+00.00	HWY. 62 - GRADE RAISE	500.00						22.00	1222.22	207.78	207.78	22.00	1222.22	344.30	210.41				22.00	1222.22	220.00	134.44					134.44		
169+00.00	172+00.00	HWY. 62 - GRADE RAISE	300.00						22.00	733.33	124.67	124.67	22.00	733.33	5878.53	2154.72				22.00	733.33	220.00	80.67					80.67		
187+00.00	188+00.00	HWY. 62 - LEVELING	100.00			20.00	222.22	11.11	22.00	244.44	41.55	52.66								22.00	244.44	220.00	26.89					26.89		
188+00.00	197+00.00	HWY. 62 - GRADE RAISE	900.00						22.00	2200.00	374.00	374.00	22.00	2200.00	1410.23	1551.25				22.00	2200.00	220.00	242.00					242.00		
197+00.00	197+60.00	HWY. 62 - LEVELING	60.00			20.00	133.33	6.67	22.00	146.67	24.93	31.60								22.00	146.67	220.00	16.13					16.13		
ADDITIONAL FOR SUPERELEVATION																														
110+00.00	111+80.00	HWY. 62 - SUPERELEVATION	180.00	19.38	34.88																									
136+65.12	141+00.00	HWY. 62 - SUPERELEVATION	434.88	2.16	9.39																									
141+00.00	142+05.12	HWY. 62 - SUPER ELEVATION C.C.C. & G.R.T.	105.12	4.87	5.12																									
142+05.12	145+00.00	HWY. 62 - SUPER ELEVATION C.C.C. & G.R.T.	294.88	6.25	18.43																									
145+00.00	148+14.14	HWY. 62 - SUPERELEVATION	314.14	6.25	19.63																									
148+14.14	153+54.14	HWY. 62 - SUPERELEVATION	540.00	3.25	17.55																									
158+97.50	165+27.50	HWY. 62 - SUPERELEVATION	630.00	14.13	89.02																									
165+27.50	191+29.86	HWY. 62 - SUPERELEVATION	2602.36	28.25	735.17																									
191+29.86	197+59.86	HWY. 62 - SUPERELEVATION	630.00	14.13	89.02																									
ADDITIONAL FOR MAINTENANCE OF TRAFFIC																														
126+00.00	162+00.00	HWY. 62 - FULL DEPTH SHOULDER LT.	3600.00			25.10	10040.00	502.00				502.00					8.33	3332.00	495.00	824.67	8.25	3300.00	220.00	363.00					363.00	
127+00.00	139+00.00	HWY. 62 - TEMPORARY WIDENING RT.	1200.00	VAR.	1114.00																VAR.	1663.67	220.00	183.00					183.00	
143+77.00	159+00.00	HWY. 62 - TEMPORARY WIDENING RT.	1523.00	VAR.	1651.00																VAR.	2582.33	220.00	284.06					284.06	
TOTALS:					39421.06		122375.89	6118.80		15729.98	2674.07	8792.87		5908.22		4275.63		58652.81		14516.57		70765.55		7784.20		73833.35		8121.65	15905.85	

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	54	117
05-07-2025						
05-15-2025		SUMMARY OF QUANTITIES & REVISIONS				



SUMMARY OF QUANTITIES			
ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 201	CLEARING	60	STATION
201	GRUBBING	60	STATION
202	REMOVAL AND DISPOSAL OF FENCE	15025	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	4	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	12	EACH
202	REMOVAL AND DISPOSAL OF HEADWALLS	15	EACH
SS & 206	FLOWABLE SELECT MATERIAL	294	CU. YD.
SP, SS, & 210	UNCLASSIFIED EXCAVATION	125501	CU. YD.
SP & 210	COMPACTED EMBANKMENT	195624	CU. YD.
SP	REMOVING AND REPLACING TOPSOIL	23160	CU. YD.
SP & 210	SOIL STABILIZATION	750	TON
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)	40888	TON
SS & 401	TACK COAT	8883	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	4092	TON
SP, SS, & 405	ASPHALT BINDER (PG 64-22) IN ACHM BASE COURSE (1 1/2")	184	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	13878	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	639	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	15269	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	992	TON
SP & 412	COLD MILLING ASPHALT PAVEMENT	444	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	45	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	25	TON
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
603	18" TEMPORARY CULVERT	88	LIN. FT.
SS & 604	SIGNS	797	SQ. FT.
SP, SS, & 604	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	1	EACH
SS & 604	BARRICADES	512	LIN. FT.
SS & 604	TRAFFIC DRUMS	371	EACH
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	1534	LIN. FT.
SS & 604	RELOCATING PRECAST CONCRETE BARRIER	1318	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	18220	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	800	LIN. FT.
SS & 604	VERTICAL PANELS	215	EACH
SP, SS, & 605	CONCRETE DITCH PAVING (TYPE B)	3326	SQ. YD.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	1143	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	98	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN	404	LIN. FT.
SP, SS, & 606	24" SIDE DRAIN	52	LIN. FT.
SP, SS, & 606	30" SIDE DRAIN	135	LIN. FT.
SS & 606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	16	EACH
SS & 606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
SP	CULVERT CLEAN OUT	8	EACH
SS & 606	SELECTED PIPE BEDDING	150	CU. YD.
SS & 609	DROP INLETS (TYPE ST)	3	EACH
SS & 609	JUNCTION BOXES (TYPE E)	2	EACH
SS & 609	YARD DRAINS	20	EACH
SS & 611	4" PIPE UNDERDRAINS	10860	LIN. FT.
SS & 611	UNDERDRAIN OUTLET PROTECTORS	45	EACH
SS & 619	WIRE FENCE (TYPE C)	3785	LIN. FT.
SS & 619	16" STEEL GATES (ALTERNATE NO. 1)	1	EACH
SS & 619	16" ALUMINUM GATES (ALTERNATE NO. 2)	1	EACH
620	LIME	81	TON
620	SEEDING	40.50	ACRE
SS & 620	MULCH COVER	120.00	ACRE
620	WATER	5798.0	M. GAL.
621	TEMPORARY SEEDING	79.50	ACRE
621	SILT FENCE	3770	LIN. FT.
621	SAND BAG DITCH CHECKS	178	BAG
621	SEDIMENT BASIN	376	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	200	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	759	CU. YD.
621	PIPE FOR SLOPE DRAINS	200	LIN. FT.
621	ROCK DITCH CHECKS	195	CU. YD.
SS & 621	FILTER SOCK (12")	131	LIN. FT.
623	SECOND SEEDING APPLICATION	40.50	ACRE
624	SOLID SODDING	3591	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	4257	SQ. YD.
SS & 634	CONCRETE CURB (TYPE B)	400	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	3	EACH
SS & 637	MAILBOX SUPPORTS (SINGLE)	1	EACH
SS & 637	MAILBOX SUPPORTS (DOUBLE)	1	EACH
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	17920	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	28480	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	38058	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	4	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	282	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	188	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-ROADWAY	332.64	CU. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	43046	POUND
SS & 816	FILTER BLANKET	972	SQ. YD.
SS & 816	DUMPED RIPRAP	497	CU. YD.

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
4/25/2025	REMOVED TEMPORARY RETAINING WALLS SPECIAL PROVISION. ADDED TYPICAL SECTION OF IMPROVEMENT FOR TEMPORARY WIDENING. REVISED TYPICAL SECTIONS OF IMPROVEMENT NOTES, TEMPORARY EROSION CONTROL NOTES, AND MAINTENANCE OF TRAFFIC DETAILS. REVISED QUANTITIES FOR ADVANCE WARNING SIGNS AND DEVICES, EARTHWORK, STRUCTURES, BASE AND SURFACING, AND TEMPORARY RETAINING WALL. REMOVED TEMPORARY RETAINING WALLS AND ADDED TEMPORARY WIDENING. ADDED TEMPORARY PIPE CULVERT SIDE DRAINS. ADDED NOTE TO PROFILE AND CURVE DATA, REVISED NOTES FOR CROSS DRAIN EXTENSIONS AT STA. 111+53, 131+74, 147+77, AND 174+00. REVISED CROSS DRAIN EXTENSION ON RT. AT STA. 147+77. LABELED M.O.R.G. STATIONS IN CROSS SECTIONS.	3, 6 - 8, 25, 29, 33-45, 48-49, 51, 53-54, 60-65, 71, 73-75, 77-94, 99, 101, 103, 115
5/7/2025	REVISED THE UTILITY ADJUSTMENTS SPECIAL PROVISION. ADDED SPECIAL DETAIL FOR CUT SLOPES. ADDED FILTER BLANKET AND DUMPED RIPRAP QUANTITIES. REVISED CROSS SECTION SHEETS.	12, 51, 54, 94 -98
5/15/2025	REVISED QUANTITIES FOR UNCLASSIFIED EXCAVATION, THERMOPLASTIC PAVEMENT MARKING, AND RAISED PAVEMENT MARKERS.	46-49, 54, 94-99

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	55	117
SURVEY CONTROL SHEETS						



04/14/2025

SURVEY CONTROL COORDINATES

Project Name: s090851
Date: 11/22/2019
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL,
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	681965.2169	1029230.2354	1149.102	CTL	ARDOT STD. MON. STAMPED Pn: 1
2	681990.8694	1030026.8893	1139.596	CTL	ARDOT STD. MON. STAMPED Pn: 2
3	681953.2289	1030975.4725	1153.631	CTL	ARDOT STD. MON. STAMPED Pn: 3
4	681990.6626	1031744.0193	1132.030	CTL	ARDOT STD. MON. STAMPED Pn: 4
5	681949.0865	1032315.0431	1145.940	CTL	ARDOT STD. MON. STAMPED Pn: 5
6	681924.6160	1032767.9730	1142.144	CTL	ARDOT STD. MON. STAMPED Pn: 6
7	681829.4916	1033391.7292	1092.030	CTL	ARDOT STD. MON. STAMPED Pn: 7
8	681607.7957	1034105.1174	1049.583	CTL	ARDOT STD. MON. STAMPED Pn: 8
9	681369.3606	1034870.2713	1035.852	CTL	ARDOT STD. MON. STAMPED Pn: 9
10	681366.7812	1035546.2194	1040.911	CTL	ARDOT STD. MON. STAMPED Pn: 10
11	681746.1367	1036212.1549	1083.256	CTL	ARDOT STD. MON. STAMPED Pn: 11
12	682244.6110	1036700.0109	1102.055	CTL	ARDOT STD. MON. STAMPED Pn: 12
13	682904.9258	1036898.1633	1119.404	CTL	ARDOT STD. MON. STAMPED Pn: 13
14	683669.2191	1036916.3103	1133.478	CTL	ARDOT STD. MON. STAMPED Pn: 14
15	684321.6703	1037054.0534	1162.924	CTL	ARDOT STD. MON. STAMPED Pn: 15
16	684704.2879	1037381.1355	1159.283	CTL	ARDOT STD. MON. STAMPED Pn: 16
17	684847.4900	1038046.8197	1127.809	CTL	ARDOT STD. MON. STAMPED Pn: 17
18	684859.0423	1038820.5202	1136.432	CTL	ARDOT STD. MON. STAMPED Pn: 18
19	684811.9061	1039496.4916	1141.420	CTL	ARDOT STD. MON. STAMPED Pn: 19
20	685071.3217	1040167.4786	1131.250	CTL	ARDOT STD. MON. STAMPED Pn: 20
100	683553.5112	1033926.6714	1183.315	GPS	ARDOT GPS #050410
101	684424.4611	1035118.7804	1148.091	GPS	ARDOT GPS #050410A
901	681944.9435	1032350.1767	1147.720	TBM	CHSQ IN ROCK OUTCROPPING
902	681654.6164	1033948.1306	1053.064	TBM	CHSQ IN W END S HW
903	681394.1191	1035427.8707	1036.717	TBM	CHSQ IN N HW
904	683430.5518	1036901.8294	1125.877	TBM	CHSQ IN N HW
905	684803.9100	1038157.4871	1125.449	TBM	CHSQ IN S HW
906	684969.8140	1040000.5651	1130.348	TBM	CHSQ IN S HW
907	679571.6132	1027400.7177	1152.225	TBM	CHSQ IN N HW OF A CUS
908	681997.8092	1027506.4834	1190.742	TBM	OLVEY RM 1
909	682050.4730	1027415.2285	1192.799	TBM	NGS 3RD ORDER HORIZONTAL MARK 0
999	676996.8943	1027486.9554	1013.390	BM	NGS 1ST ORDER BM J 6

*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 0.9999456301 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME s090581gi.ctb
HORIZONTAL DATUM: NAD 83 (2011)
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 - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 050410 - 050410A
CONVERGENCE ANGLE: 00 32 45.56 LEFT AT LAT N 36-12-05.53 LON W092-56-17.84
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

HWY. 62

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	102+00.00	682125.2321	1028698.5850
8001	PC	103+27.00	682084.9646	1028818.8885
8003	PT	109+48.00	681986.2101	1029429.6746
8004	PC	140+70.00	681993.7019	1032551.4618
8006	PT	149+49.00	681861.9745	1033417.0774
8007	PC	163+70.00	681436.0626	1034772.5971
8009	PT	193+07.00	682864.7005	1036894.9079
8010	POE	201+00.00	683655.5283	1036959.4240

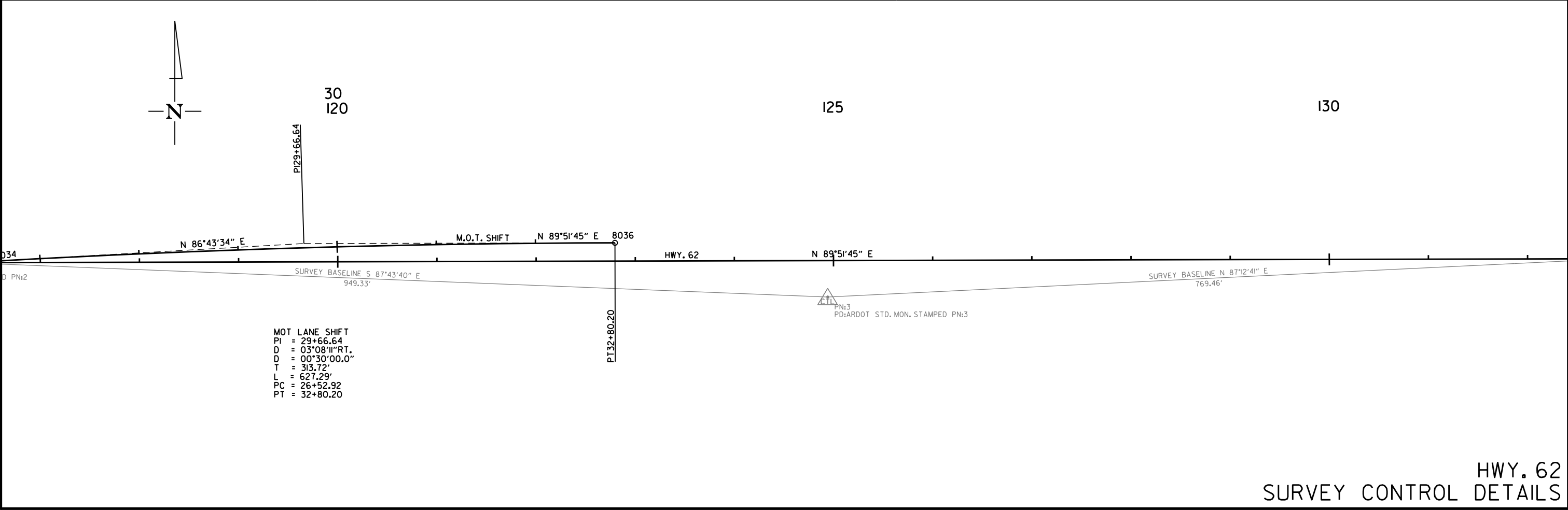
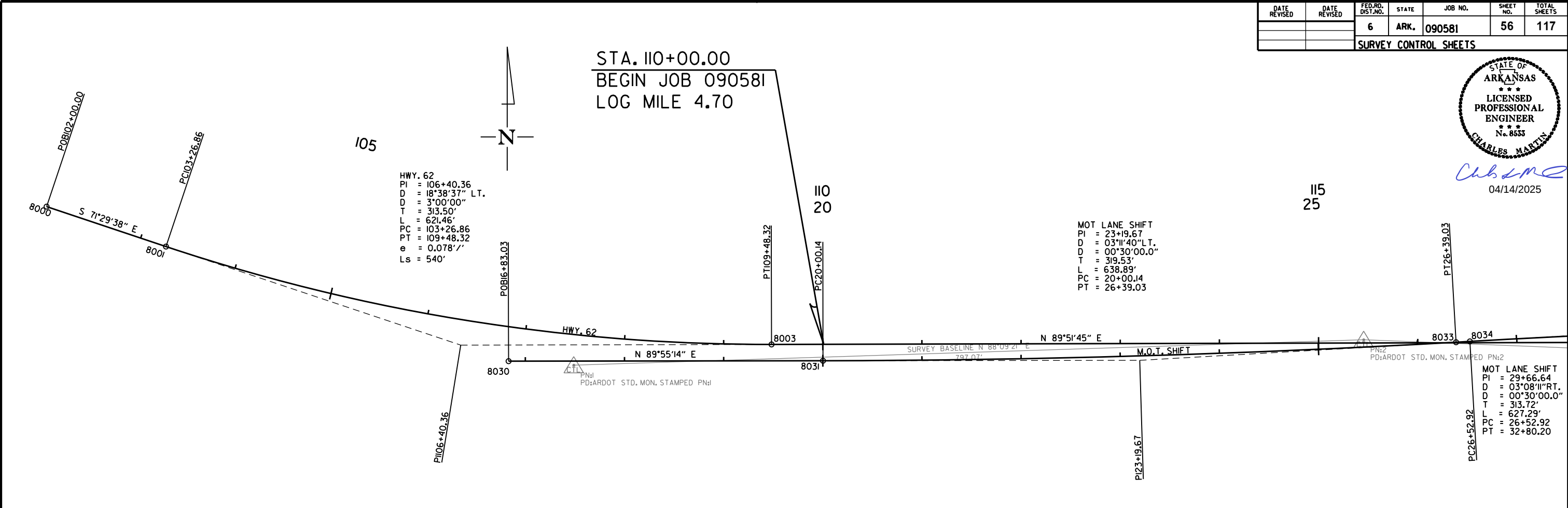
M. O. T. SHIFT

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	101+00.00	491191.0725	937060.7154
8001	PC	104+00.00	491380.7828	937293.1160
8003	PT	109+15.50	491784.2028	937607.0286
8004	PC	109+25.33	491793.1121	937611.1831
8006	PT	117+77.00	492368.1519	938212.7527
8007	POE	121+40.08	492506.6109	938548.4021

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	56	117
SURVEY CONTROL SHEETS						



Charles Martin
04/14/2025

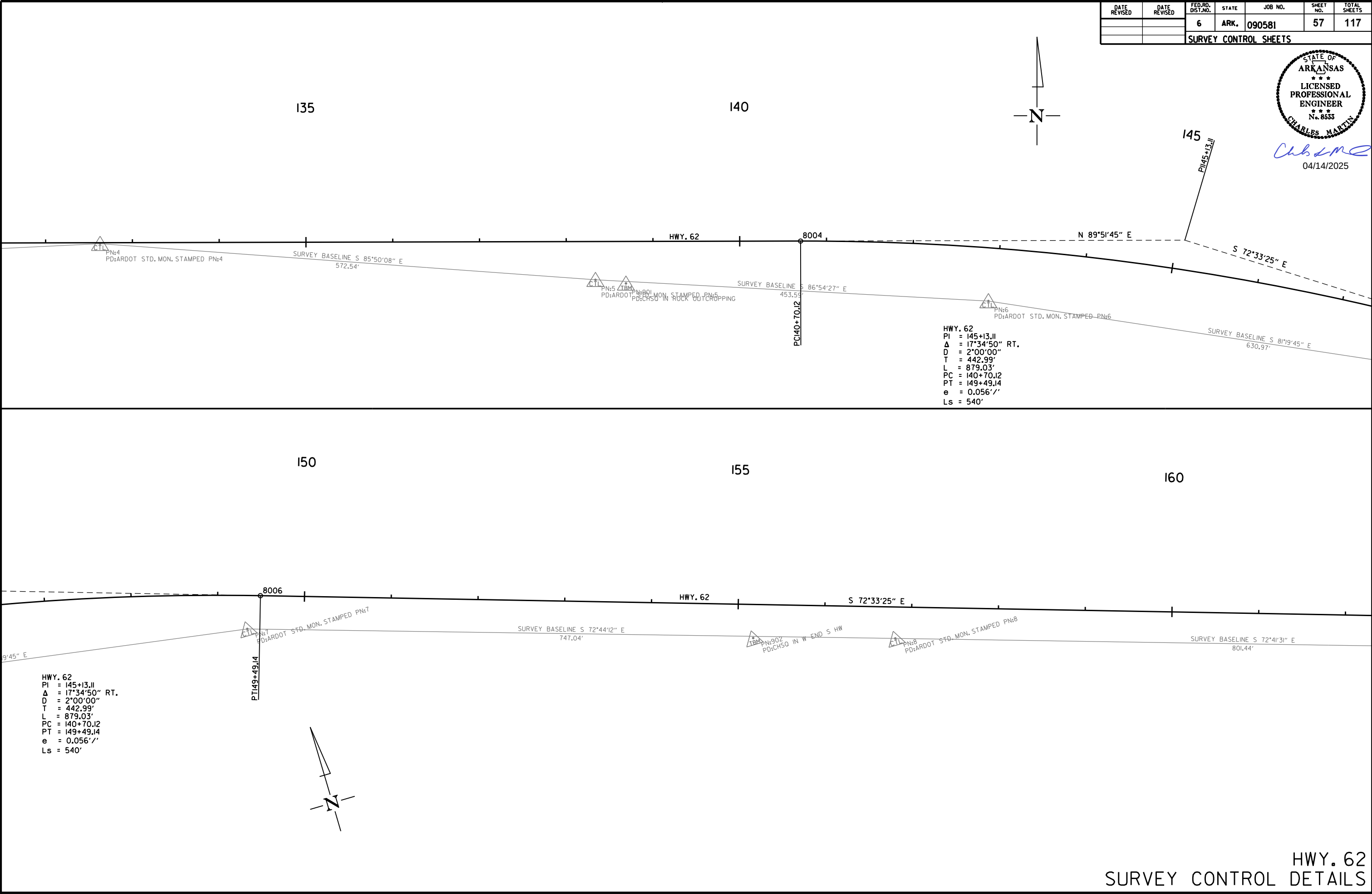


HWY. 62
SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	57	117
SURVEY CONTROL SHEETS						



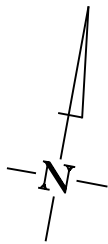
04/14/2025



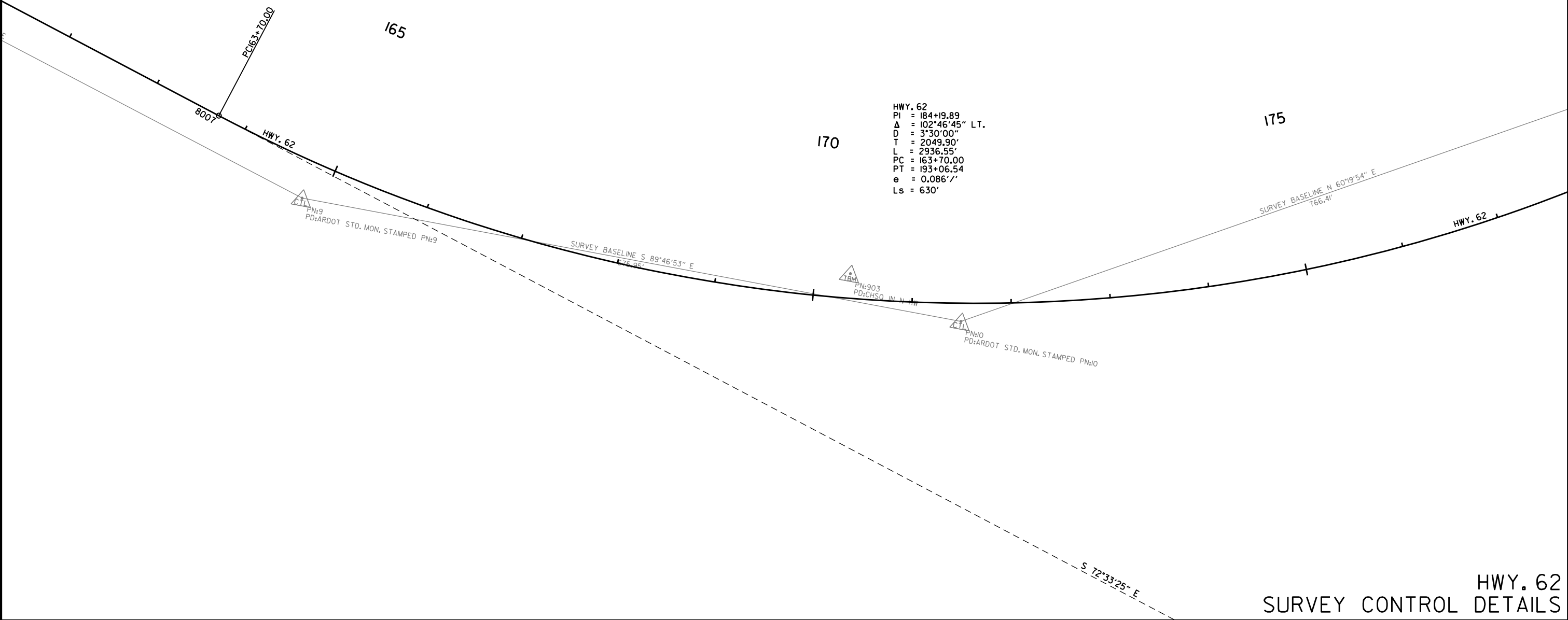
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		6	ARK.	090581	58	117
SURVEY CONTROL SHEETS						



Charles Martin
04/14/2025



HWY. 62
PI = 184+19.89
 Δ = 102°46'45" LT.
D = 3°30'00"
T = 2049.90'
L = 2936.55'
PC = 163+70.00
PT = 193+06.54
e = 0.086'/'
Ls = 630'



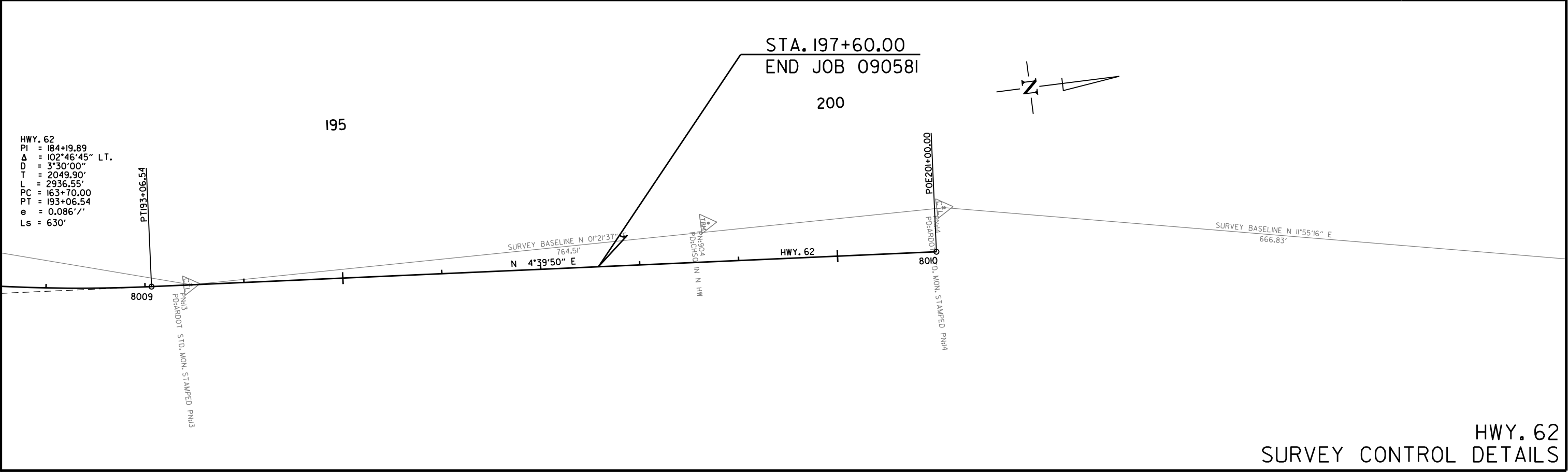
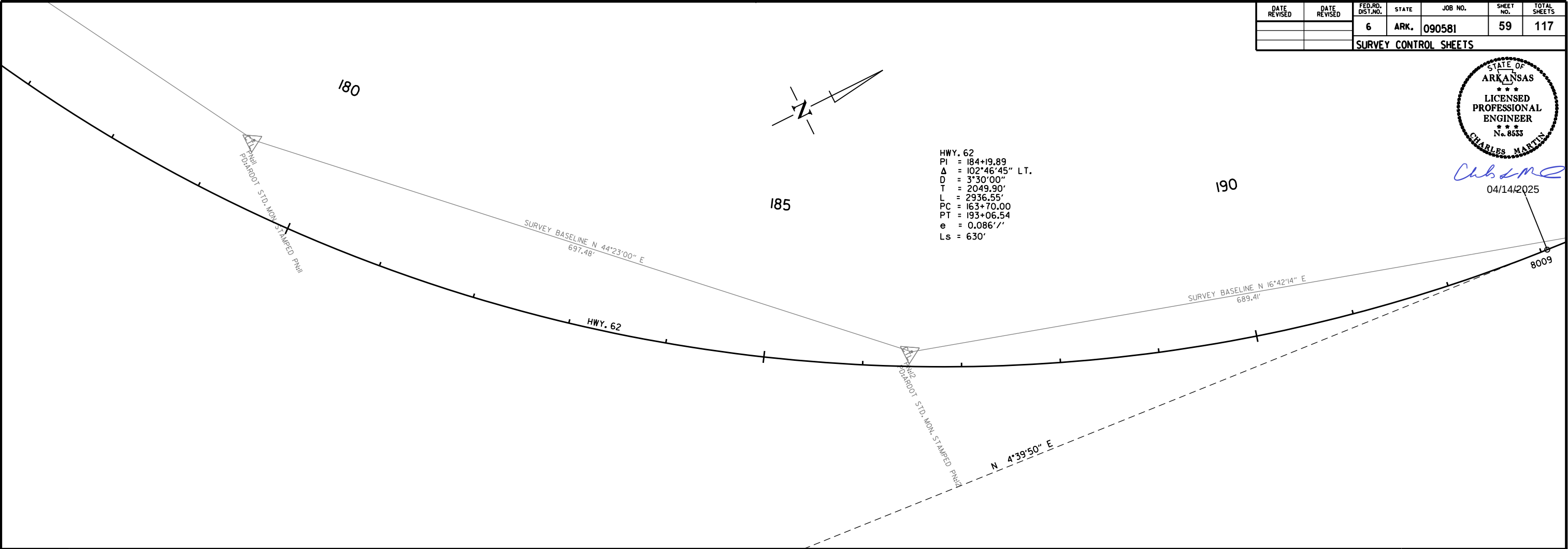
HWY. 62
SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	59	117
SURVEY CONTROL SHEETS						



Charles Martin
04/14/2025

HWY. 62
PI = 184+19.89
 Δ = 102°46'45" LT.
D = 3°30'00"
T = 2049.90'
L = 2936.55'
PC = 163+70.00
PT = 193+06.54
e = 0.086'/'
Ls = 630'

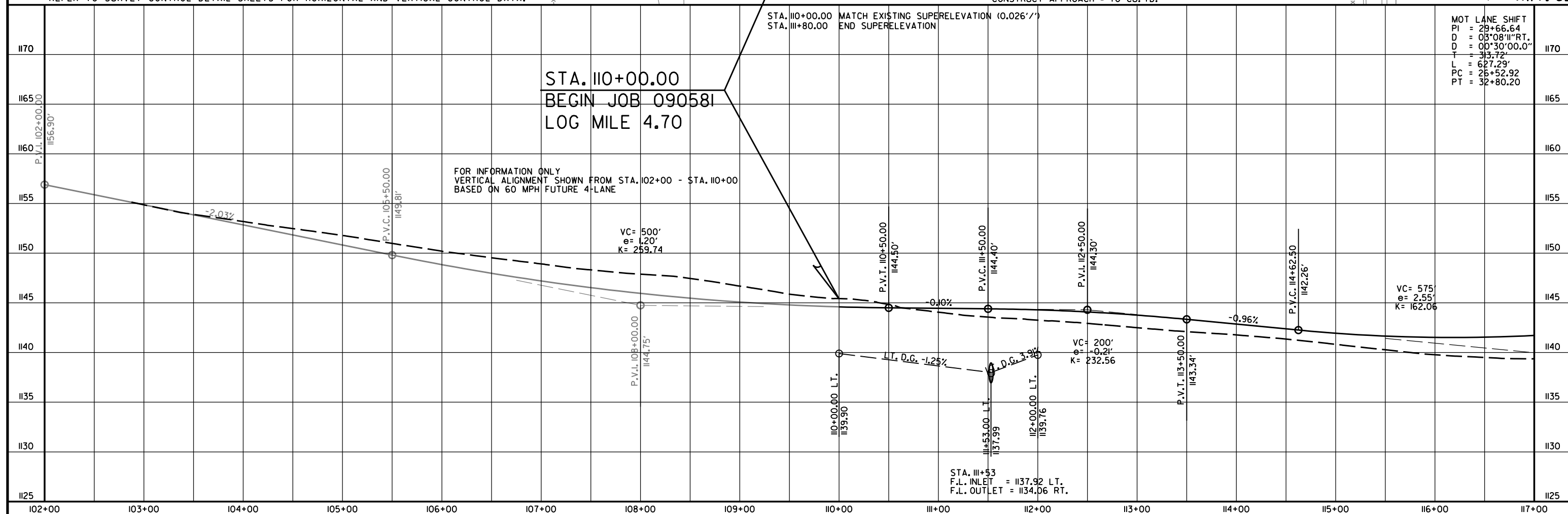
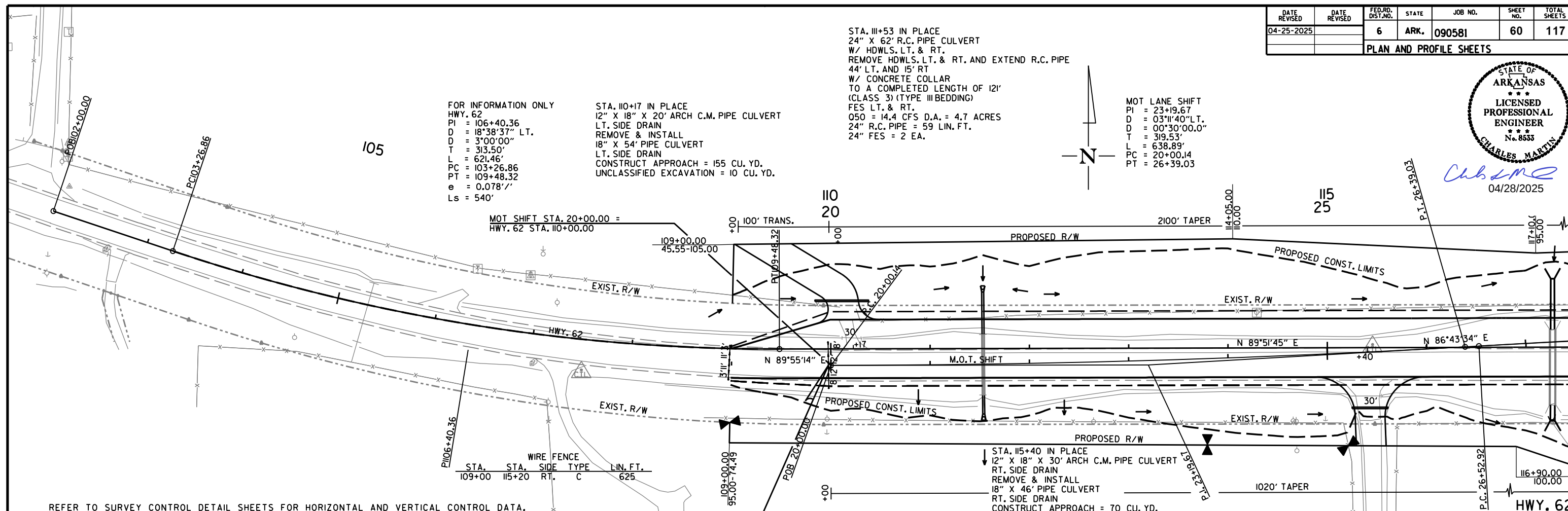


HWY. 62
SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	60	117
		PLAN AND PROFILE SHEETS				



Chb LME
04/28/2025

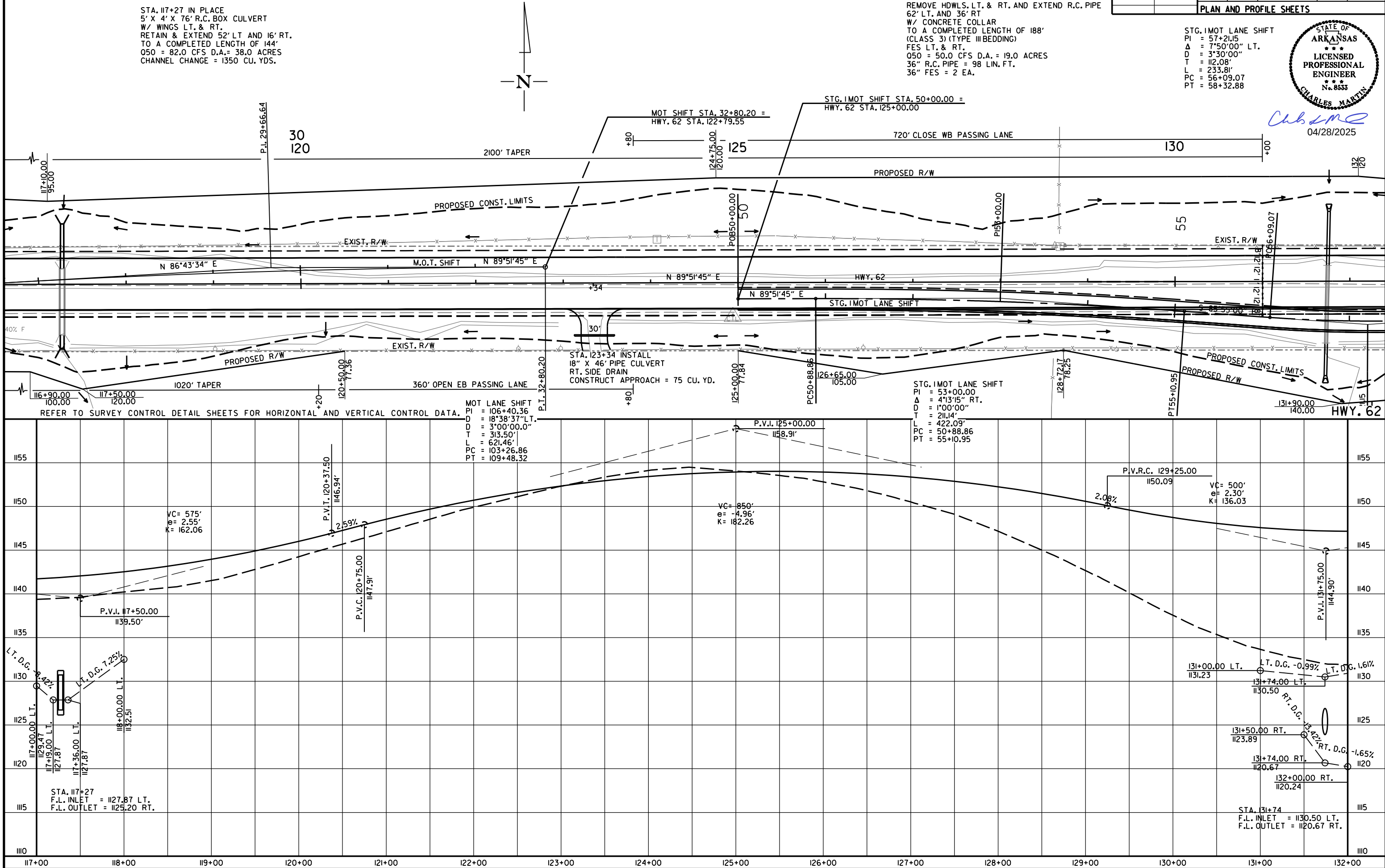


STA. 117+27 IN PLACE
5' X 4' X 76' R.C. BOX CULVERT
W/ WINGS LT. & RT.
RETAIN & EXTEND 52' LT AND 16' RT.
TO A COMPLETED LENGTH OF 144'
Q50 = 82.0 CFS D.A. = 38.0 ACRES
CHANNEL CHANGE = 1350 CU. YDS.

STA. 131+74 IN PLACE
36" X 90' R.C. PIPE CULVERT
W/ HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT. AND EXTEND R.C. PIPE
62' LT. AND 36' RT
W/ CONCRETE COLLAR
TO A COMPLETED LENGTH OF 188'
(CLASS 3) (TYPE III BEDDING)
FES LT. & RT.
Q50 = 50.0 CFS D.A. = 19.0 ACRES
36" R.C. PIPE = 98 LIN. FT.
36" FES = 2 EA.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	61	117
PLAN AND PROFILE SHEETS						

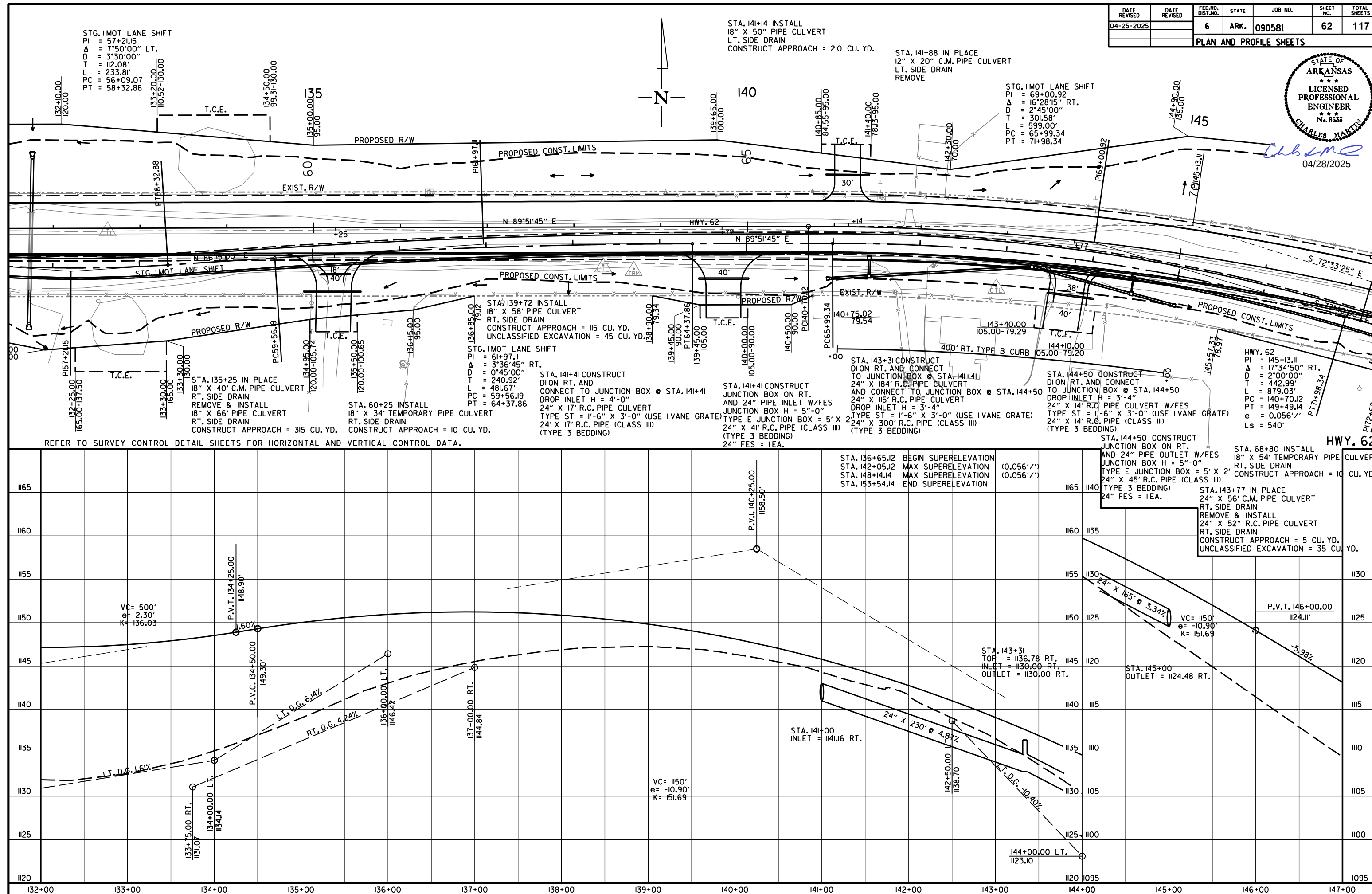
STG. 1MOT LANE SHIFT
PI = 57+21.5
Δ = 7°50'00" LT.
D = 3°30'00"
T = 112.08'
L = 233.81'
PC = 56+09.07
PT = 58+32.88



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	62	117
		PLAN AND PROFILE SHEETS				



04/28/2025



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	63	117
PLAN AND PROFILE SHEETS						



04/28/2025

STA. 147+77 IN PLACE
24" X 74' R.C. PIPE CULVERT
W/ HDWLS. LT. & RT.
REMOVE 17' RT. AND HDWLS. LT. & RT.
AND EXTEND R.C. PIPE 124' LT. AND 29' RT
W/ CONCRETE COLLAR
TO A COMPLETED LENGTH OF 200'
(CLASS 3) (TYPE III BEDDING)
FES LT. & RT.
Q50 = 9.0 CFS D.A. = 3.1 ACRES
24" R.C. PIPE = 126 LIN. FT.
24" FES = 2 EA.

STG. 1MOT LANE SHIFT
PI = 72+62.10
Δ = 1°50'00" LT.
D = 2°00'00"
T = 45.84'
L = 91.68'
PC = 72+16.26
PT = 73+07.94

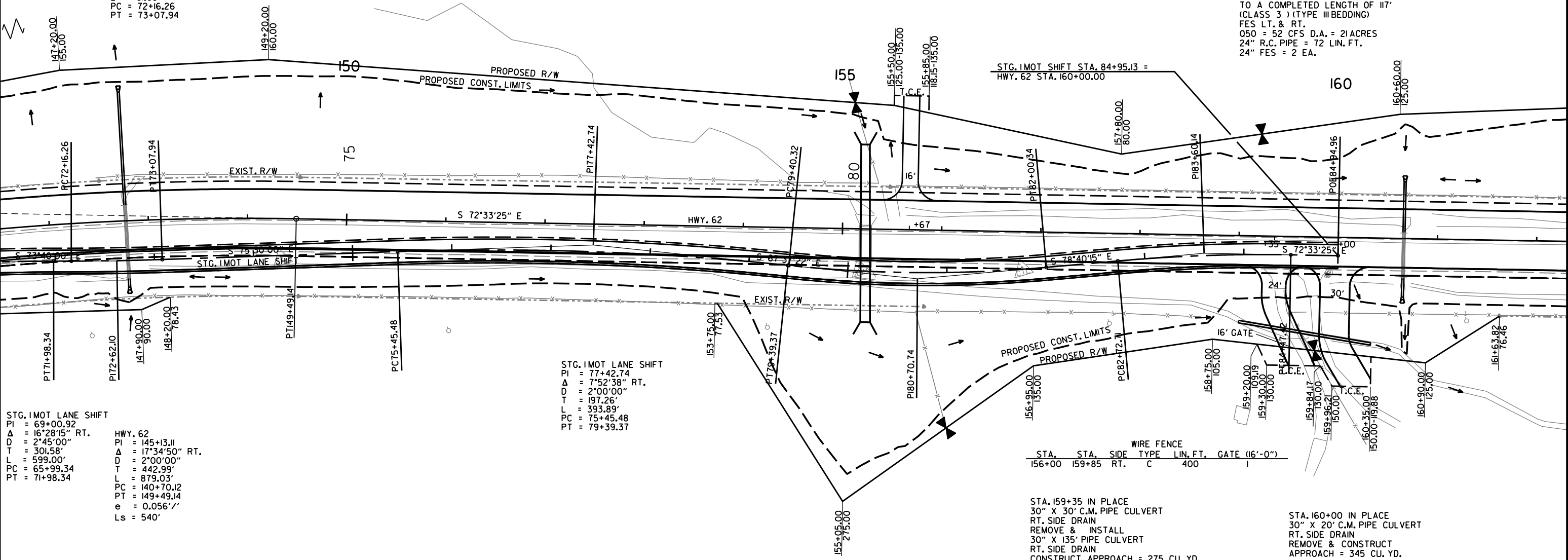
STA. 155+23 IN PLACE
10' X 5' X 43' R.C. BOX CULVERT
W/ WINGS LT. & RT.
REMOVE

STA. 155+23 CONSTRUCT
10' X 5' X 180' R.C. BOX CULVERT
W/ WINGS LT. & RT.
Q50 = 283.0 CFS D.A. = 146.0 ACRES
CHANNEL CHANGE = 1195 CU. YDS.

STG. 1MOT LANE SHIFT
PI = 80+70.74
Δ = 11°02'53" LT.
D = 4°15'00"
T = 260.02'
L = 130.42'
PC = 79+40.32
PT = 82+00.34

STA. 155+67 CONSTRUCT
APPROACH ON LT. = 510 CU. YDS.

STA. 160+66 IN PLACE
24" X 45' R.C. PIPE CULVERT
W/ HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT. AND EXTEND R.C. PIPE
52' LT. AND 20' RT
TO A COMPLETED LENGTH OF 117'
(CLASS 3) (TYPE III BEDDING)
FES LT. & RT.
Q50 = 52 CFS D.A. = 21 ACRES
24" R.C. PIPE = 72 LIN. FT.
24" FES = 2 EA.



STG. 1MOT LANE SHIFT
PI = 69+00.92
Δ = 16°28'15" RT.
D = 2°45'00"
T = 301.58'
L = 599.00'
PC = 65+99.34
PT = 71+98.34

HWY. 62
PI = 145+13.11
Δ = 17°34'50" RT.
D = 2°00'00"
T = 442.99'
L = 879.03'
PC = 140+70.12
PT = 149+49.14
e = 0.056'/'
Ls = 540'

STG. 1MOT LANE SHIFT
PI = 77+42.74
Δ = 7°52'38" RT.
D = 2°00'00"
T = 197.26'
L = 393.89'
PC = 75+45.48
PT = 79+39.37

STA.	STA.	SIDE	TYPE	LIN. FT.	GATE (16'-0")
156+00	159+85	RT.	C	400	I

STA. 159+35 IN PLACE
30" X 30' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
30" X 135' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 275 CU. YD.

STA. 160+00 IN PLACE
30" X 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & CONSTRUCT
APPROACH = 345 CU. YD.

STG. 1MOT LANE SHIFT
PI = 83+60.14
Δ = 6°06'50" RT.
D = 3°30'00"
T = 87.43'
L = 174.71'
PC = 82+72.71
PT = 84+47.42

RB43088 4/25/2025
R090581.DGN MicroStation v8.11.9.578

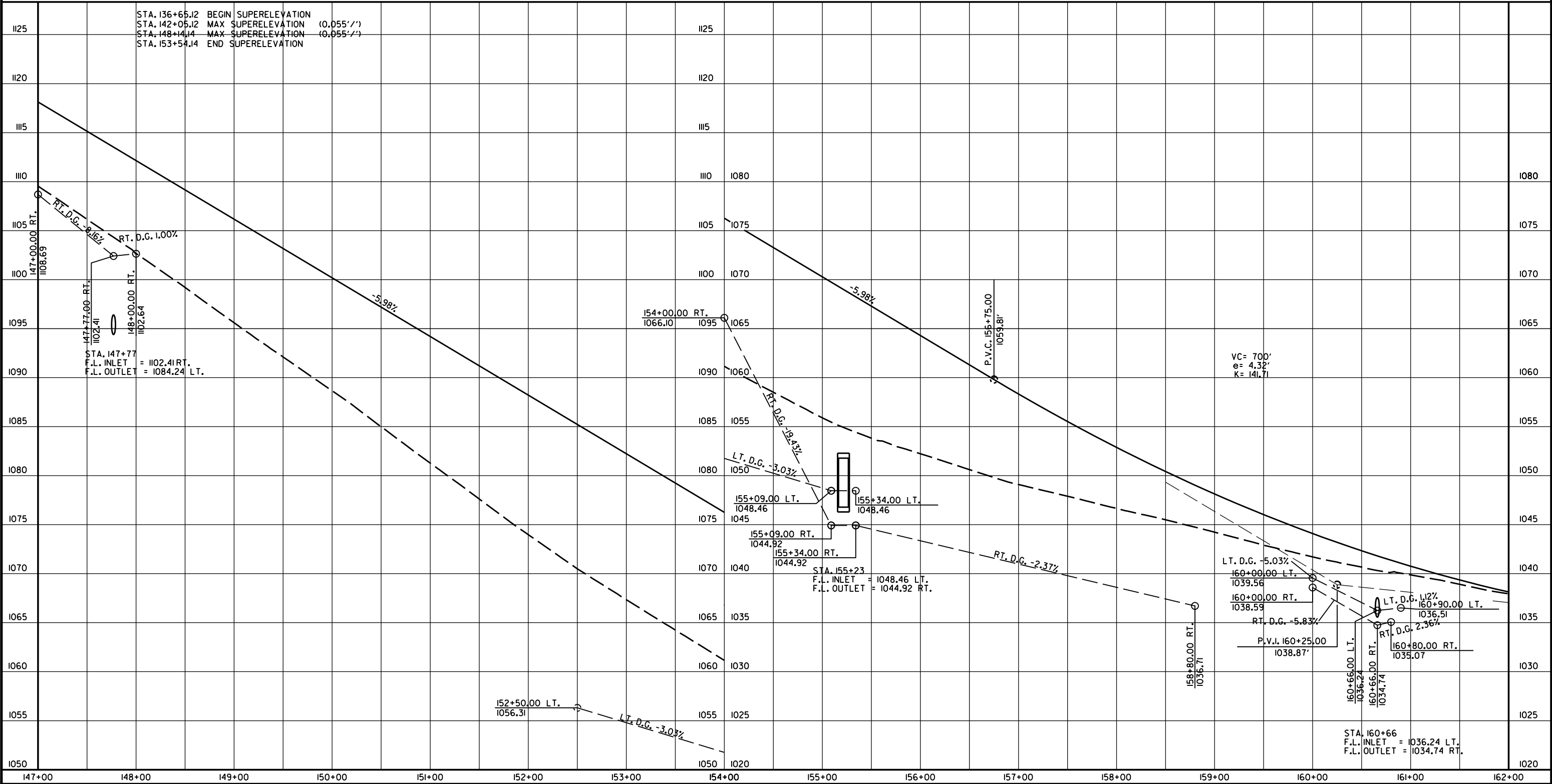
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	64	117
PLAN AND PROFILE SHEETS						



04/28/2025

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

HWY. 62



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	65	117
PLAN AND PROFILE SHEETS						



04/28/2025

HWY. 62
PI = 184+19.89
Δ = 102°46'45" LT.
D = 3°30'00"
T = 2049.90'
L = 2936.55'
PC = 163+70.00
PT = 193+06.54
e = 0.086'/'
Ls = 630'

STA. 168+15 CONSTRUCT
24" X 146' R.C. PIPE CULVERT
(CLASS 3) (TYPE III BEDDING)
FES LT. & RT.
Q50 = 45.0 CFS D.A. = 19.0 ACRES

STA. 170+37 IN PLACE
8' X 8' X 45' R.C. BOX CULVERT
ON A 15° LT. SKEW
W/ WINGS LT. & RT.
RETAIN & EXTEND 36' LT. AND 52' RT.
TO A COMPLETED LENGTH OF 133'
Q50 = 336.0 CFS D.A. = 212.0 ACRES
CHANNEL CHANGE = 1205 CU. YDS.

STA. 174+00 CONSTRUCT
24" X 114' R.C. PIPE CULVERT
(CLASS V) (TYPE III BEDDING)
FES LT. & RT.
Q50 = 13.1 CFS D.A. = 3.9 ACRES

STA. 173+37 CONSTRUCT
24" X 36' PIPE CULVERT
LT. SIDE DRAIN
APPROACH ON LT. = 30 CU. YDS.

STA. 171+17 IN PLACE
12" X 18" X 30' ARCH C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
18" X 130' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 655 CU. YD.

STA.	STA.	WIRE FENCE SIDE TYPE	LIN. FT.
171+20	196+25	RT. C	2760

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

HWY. 62

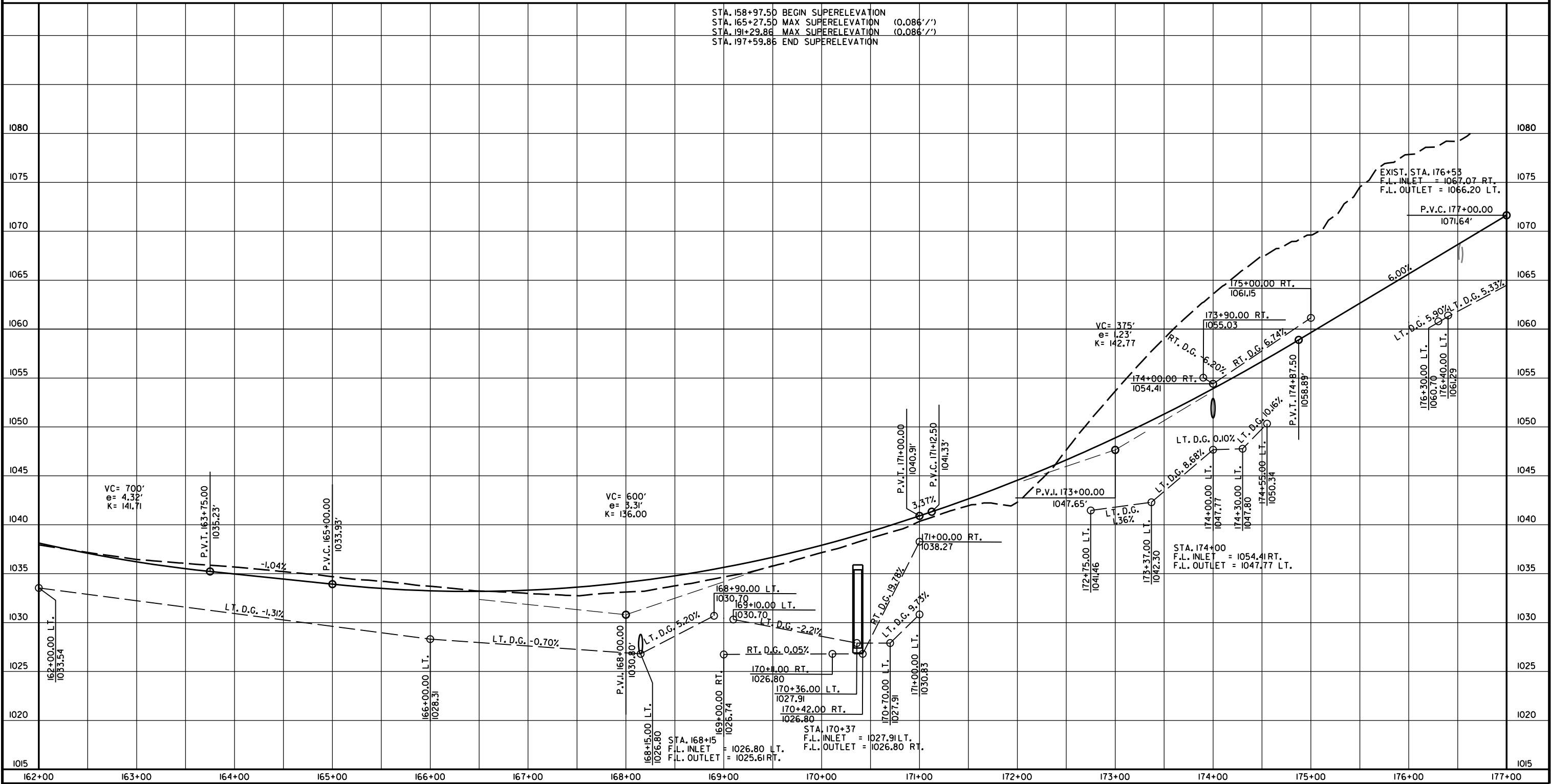
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	66	117
PLAN AND PROFILE SHEETS						



04/14/2025

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

HWY. 62



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	67	117
PLAN AND PROFILE SHEETS						



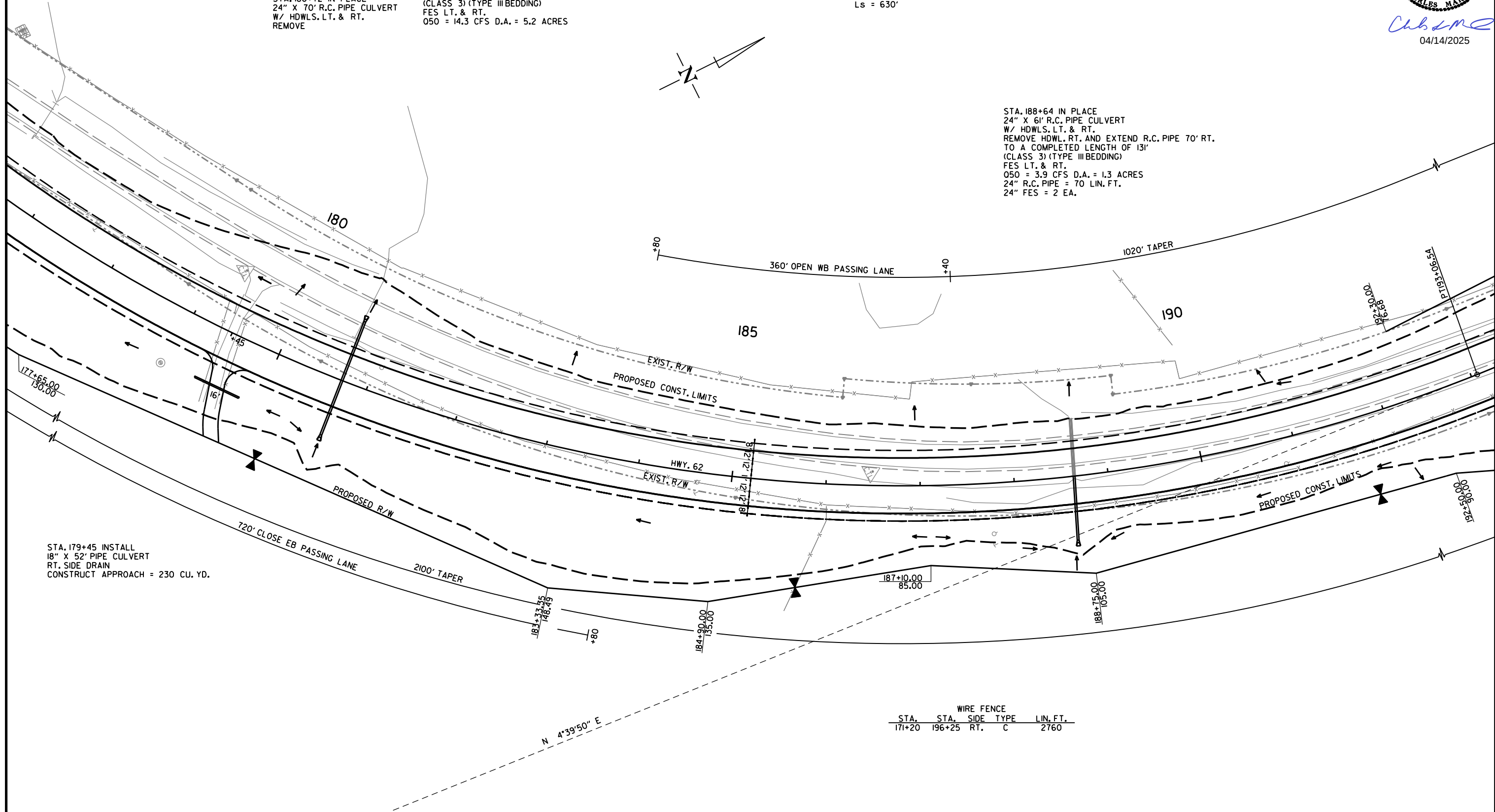
04/14/2025

HWY. 62
PI = 184+19.89
Δ = 102°46'45" LT.
D = 3°30'00"
T = 2049.90'
L = 2936.55'
PC = 163+70.00
PT = 193+06.54
e = 0.086'/'
Ls = 630'

STA. 180+72 IN PLACE
24" X 70' R.C. PIPE CULVERT
W/ HDWLS. LT. & RT.
REMOVE

STA. 180+72 CONSTRUCT
24" X 129' R.C. PIPE CULVERT
(CLASS 3) (TYPE III BEDDING)
FES LT. & RT.
050 = 14.3 CFS D.A. = 5.2 ACRES

STA. 188+64 IN PLACE
24" X 61' R.C. PIPE CULVERT
W/ HDWLS. LT. & RT.
REMOVE HDWL. RT. AND EXTEND R.C. PIPE 70' RT.
TO A COMPLETED LENGTH OF 131'
(CLASS 3) (TYPE III BEDDING)
FES LT. & RT.
050 = 3.9 CFS D.A. = 1.3 ACRES
24" R.C. PIPE = 70 LIN. FT.
24" FES = 2 EA.



STA. 179+45 INSTALL
18" X 52' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 230 CU. YD.

STA.	STA.	SIDE	TYPE	LIN. FT.
171+20	196+25	RT.	C	2760

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

HWY. 62

RB43088 3/12/2025
R090581.DGN MicroStation v8.11.9.578

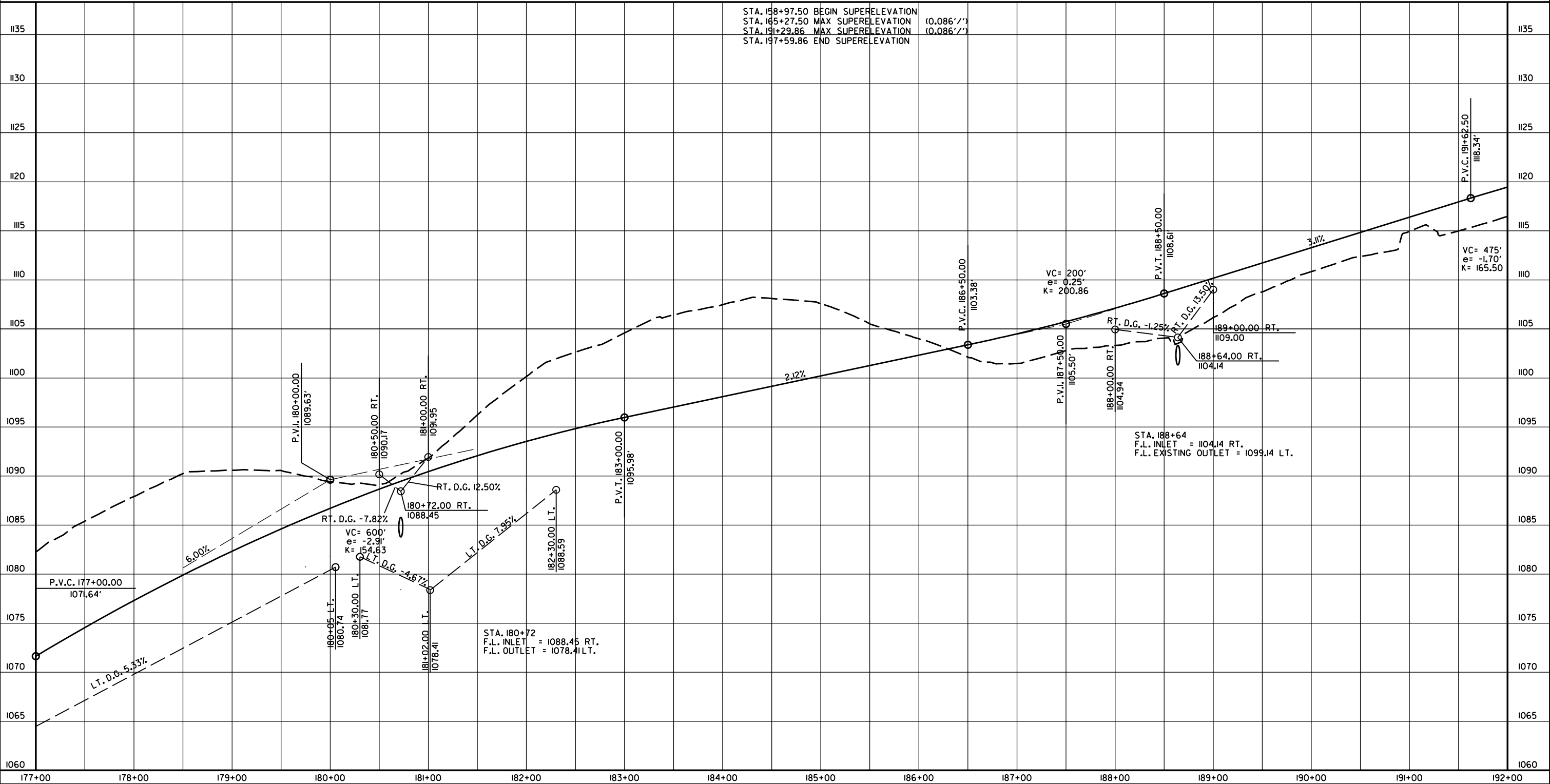
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	68	117
PLAN AND PROFILE SHEETS						



Charles Martin
04/14/2025

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

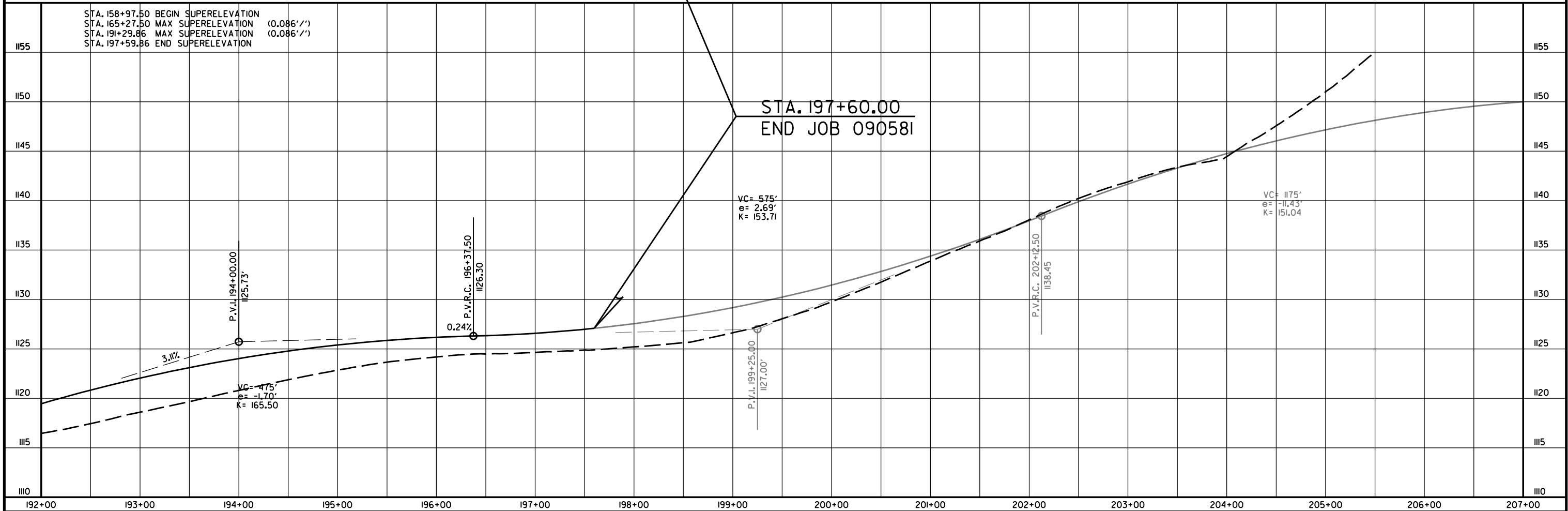
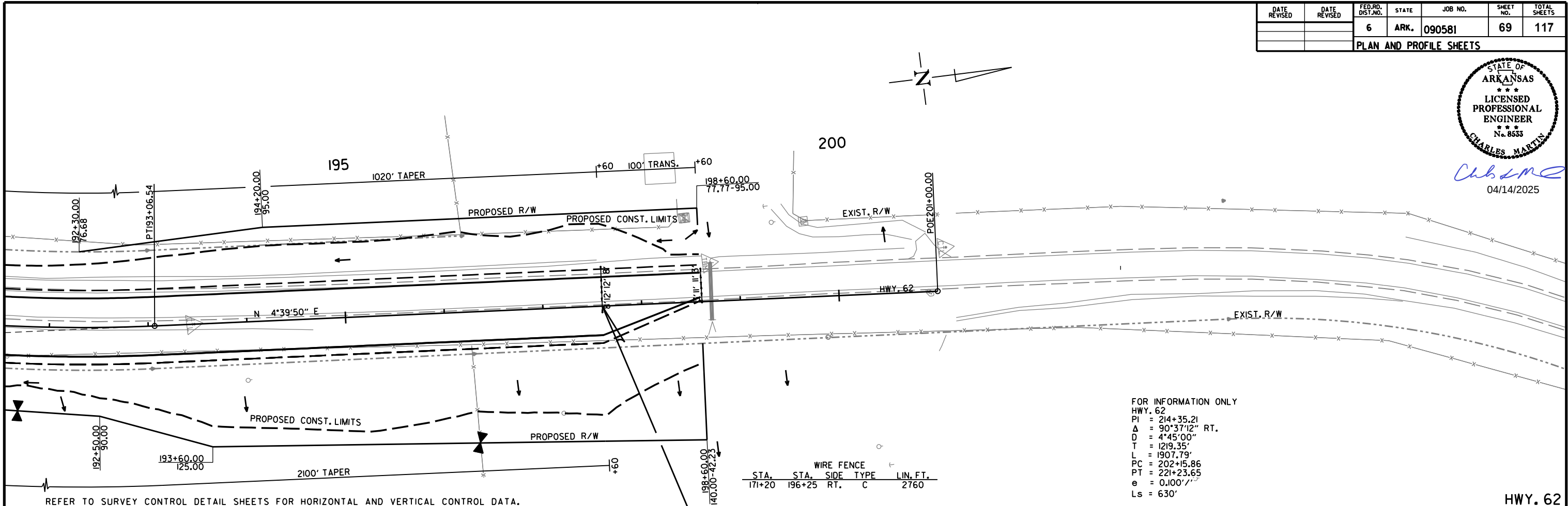
HWY. 62



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	69	117
PLAN AND PROFILE SHEETS						

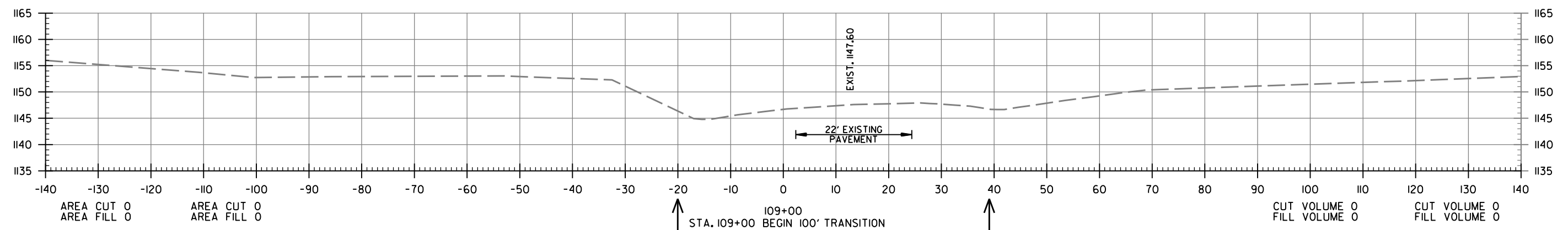
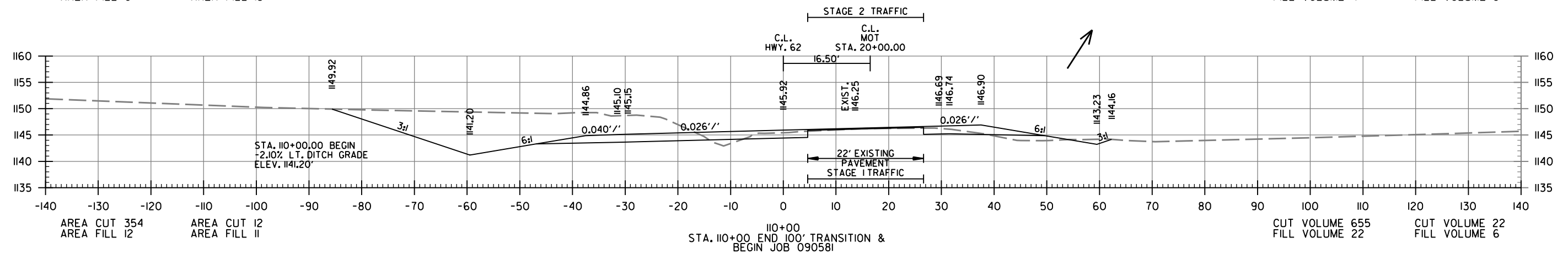
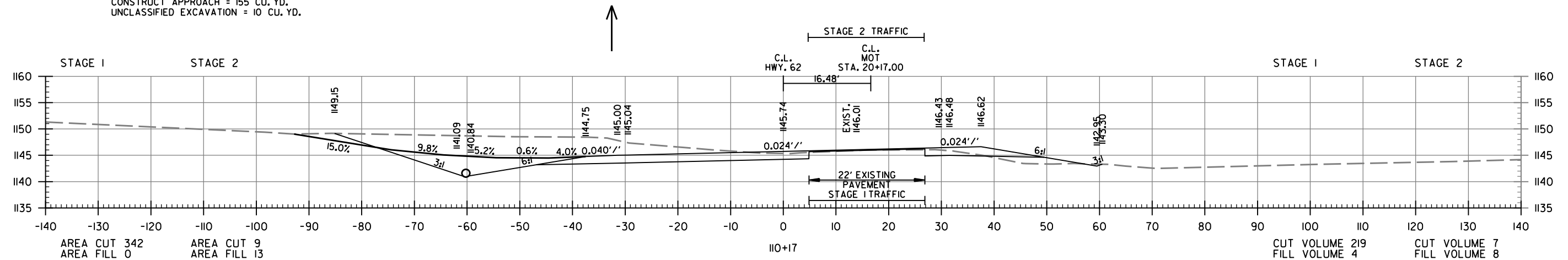


04/14/2025



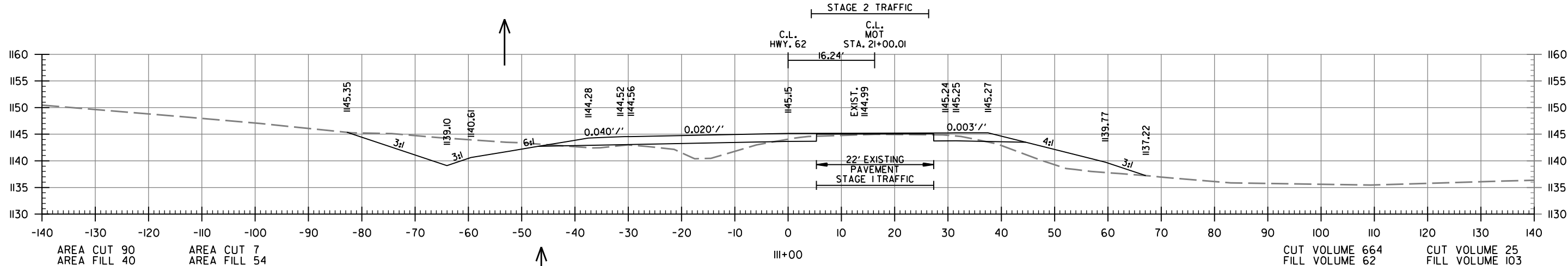
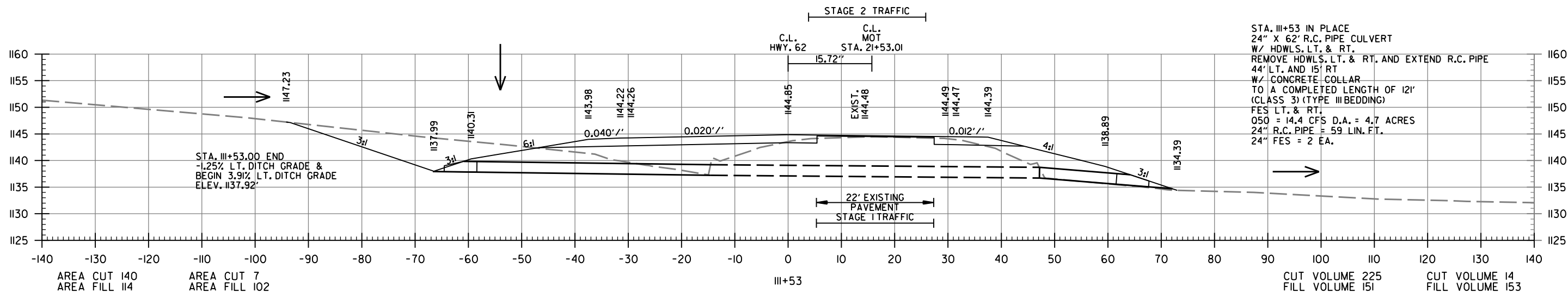
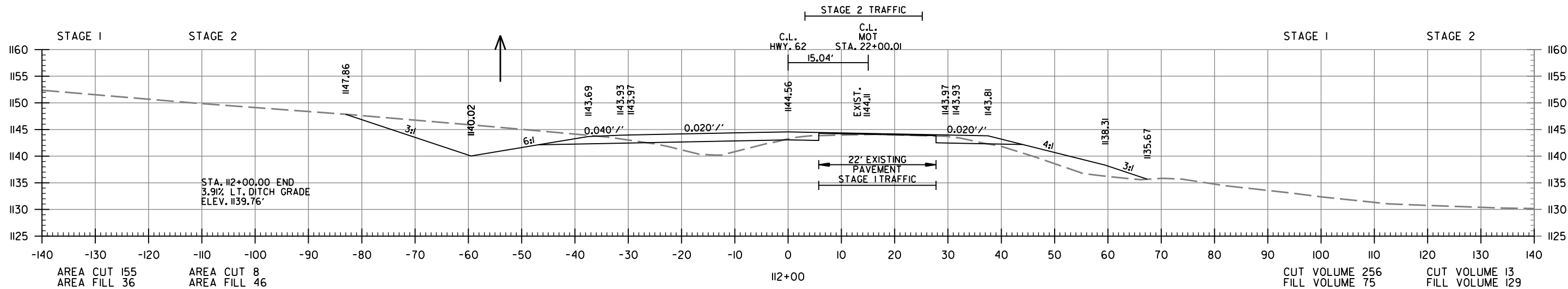
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	70	117
CROSS SECTIONS						

STA. 110+17 IN PLACE
12" X 18" X 20' ARCH C.M. PIPE CULVERT
L.T. SIDE DRAIN
REMOVE & INSTALL
18" X 54' PIPE CULVERT
L.T. SIDE DRAIN
CONSTRUCT APPROACH = 155 CU. YD.
UNCLASSIFIED EXCAVATION = 10 CU. YD.



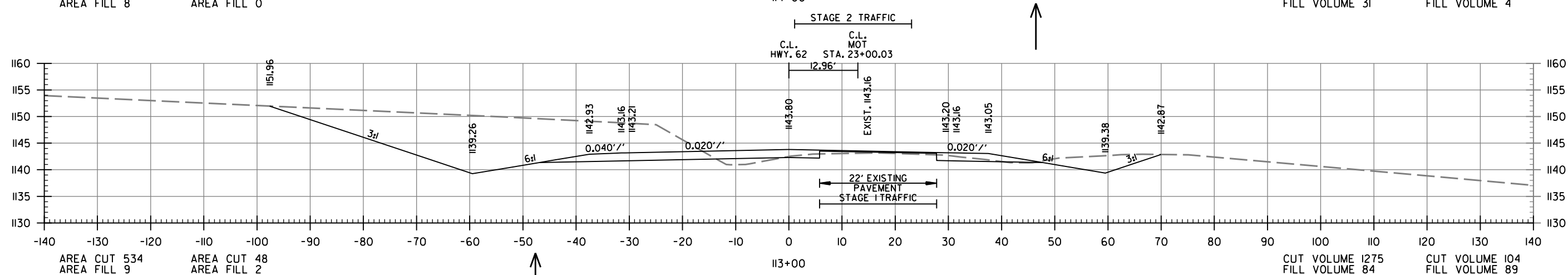
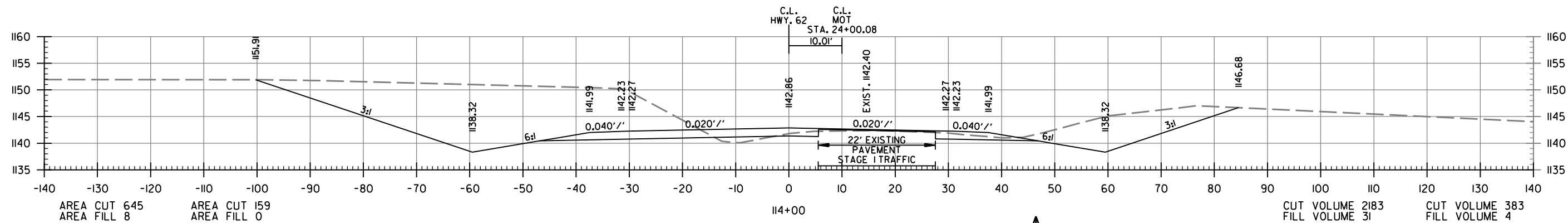
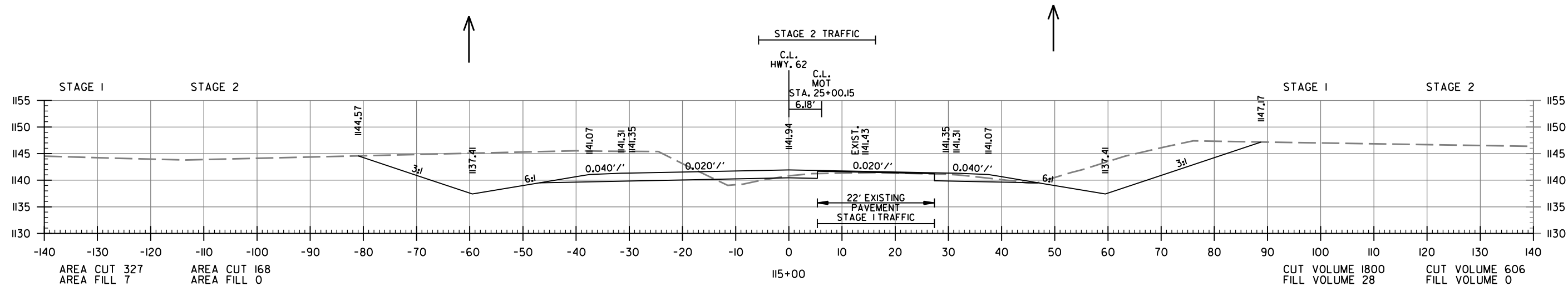
CROSS SECTION STA. 109+00 TO STA. 110+17

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	71	117
CROSS SECTIONS						



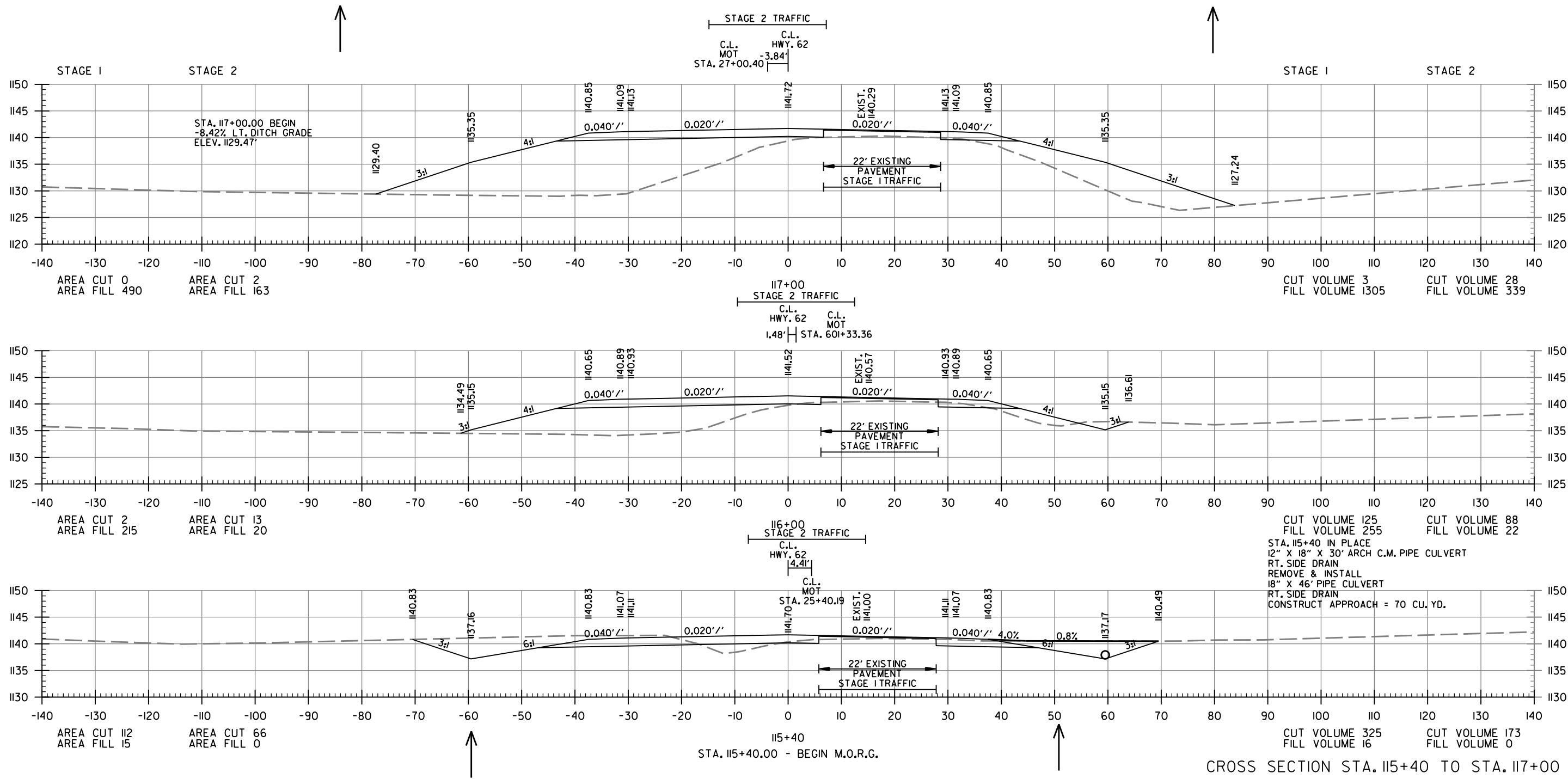
CROSS SECTION STA. III+00 TO STA. II2+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	72	117
CROSS SECTIONS						

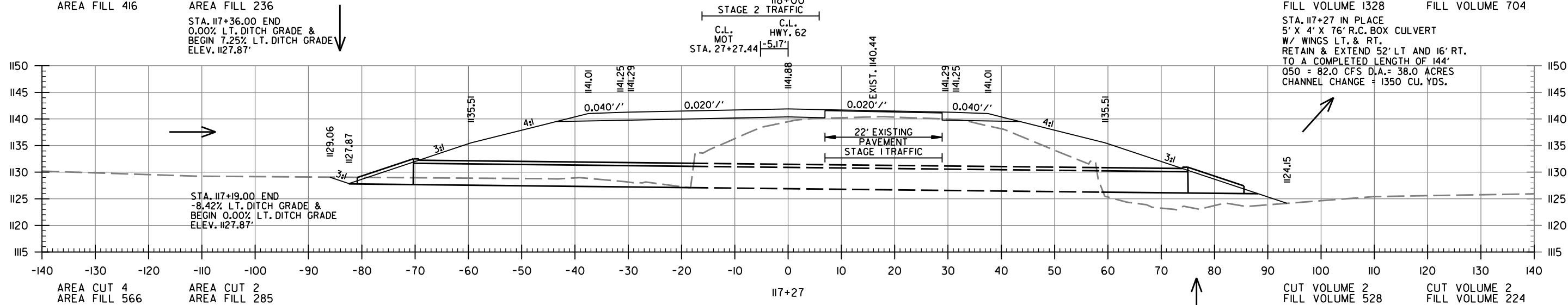
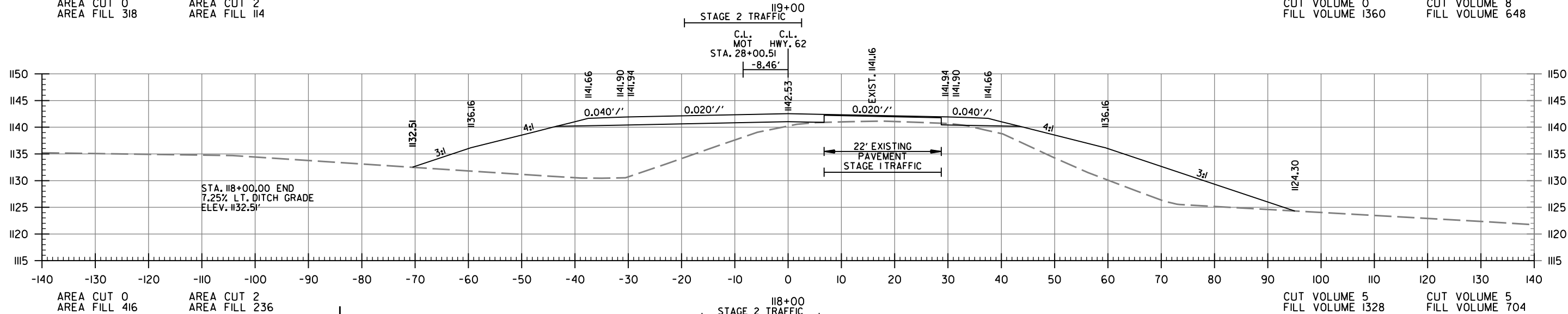
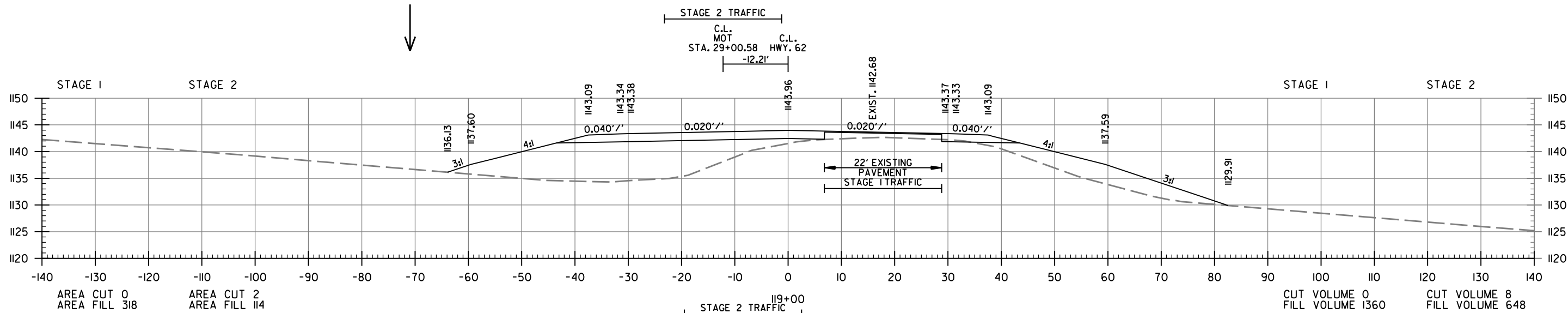


CROSS SECTION STA. 113+00 TO STA. 115+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	73	117
CROSS SECTIONS						

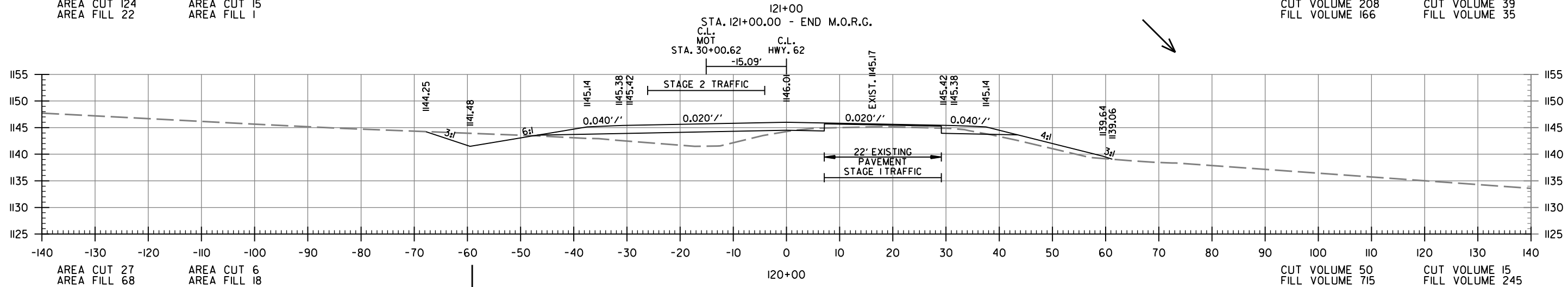
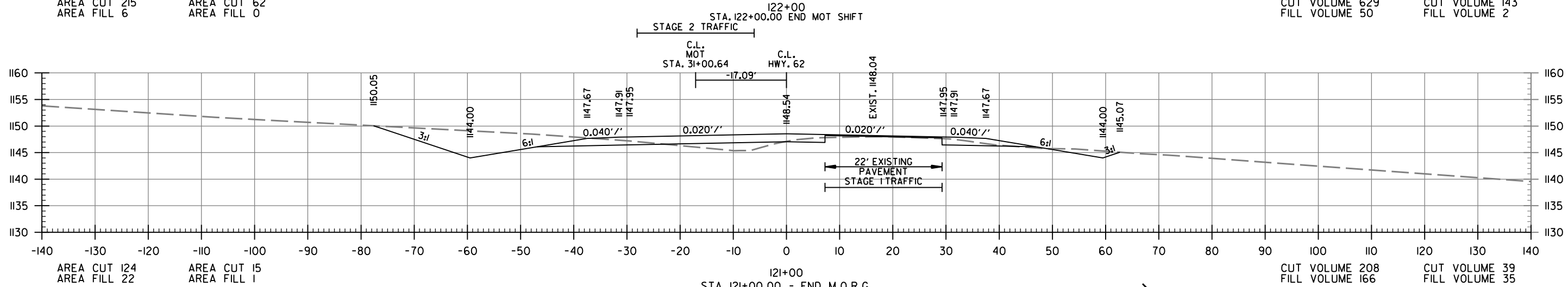
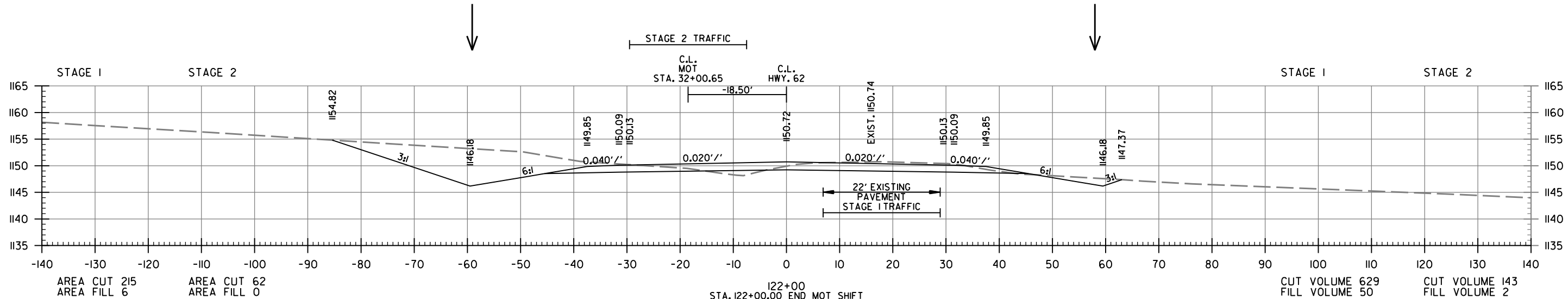


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	74	117
CROSS SECTIONS						



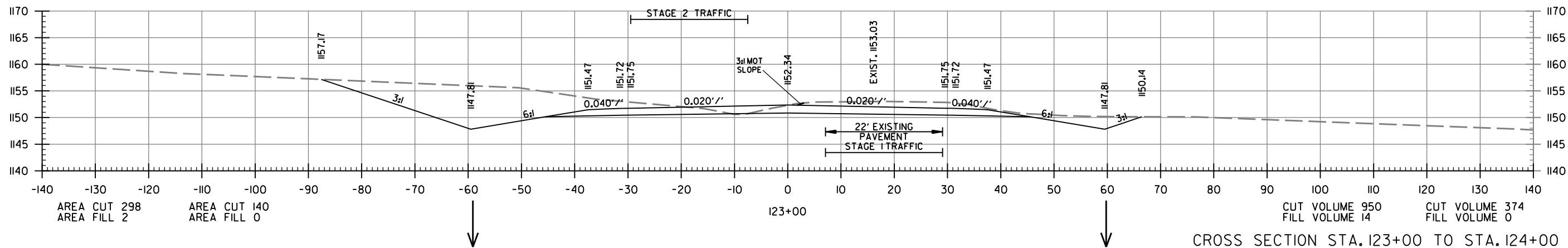
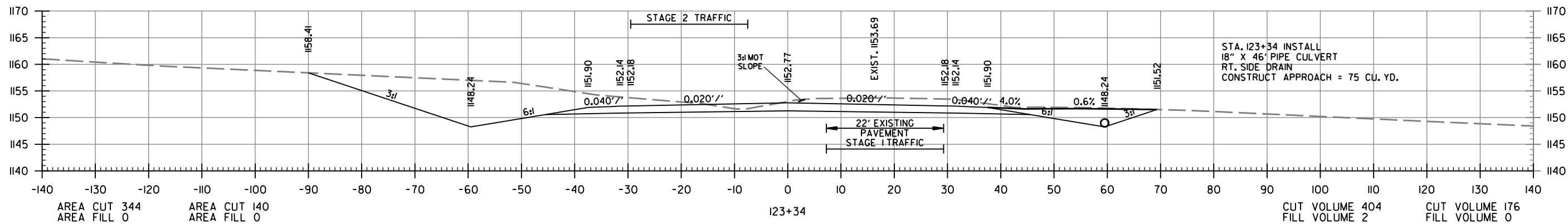
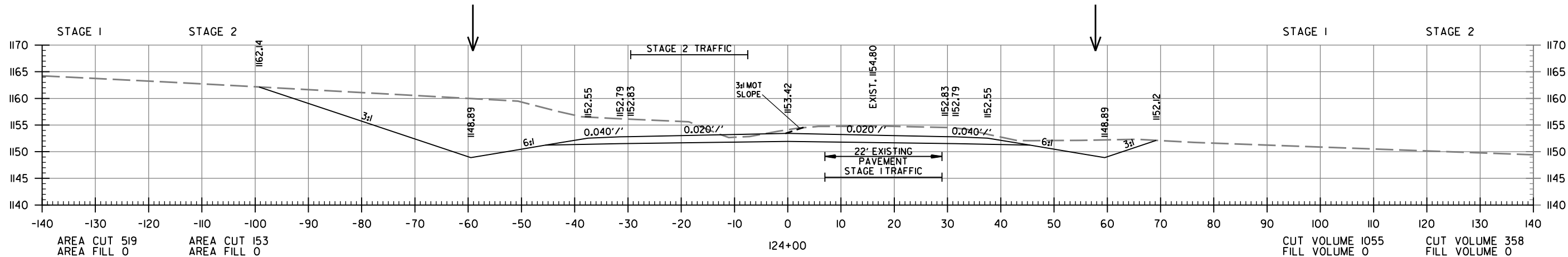
CROSS SECTION STA. 117+27 TO STA. 119+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	75	117
CROSS SECTIONS						

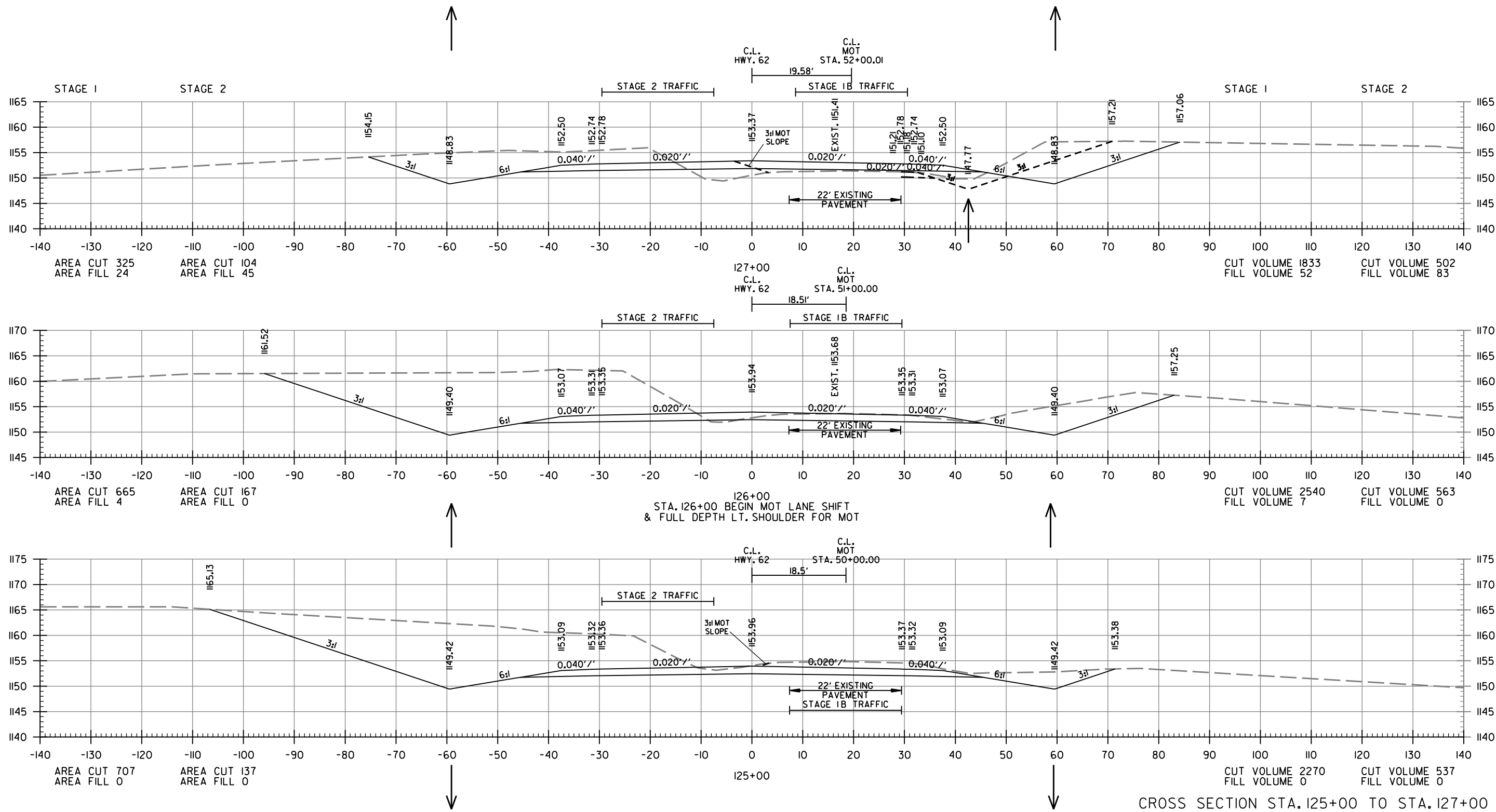


CROSS SECTION STA. 120+00 TO STA. 122+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	76	117
CROSS SECTIONS						

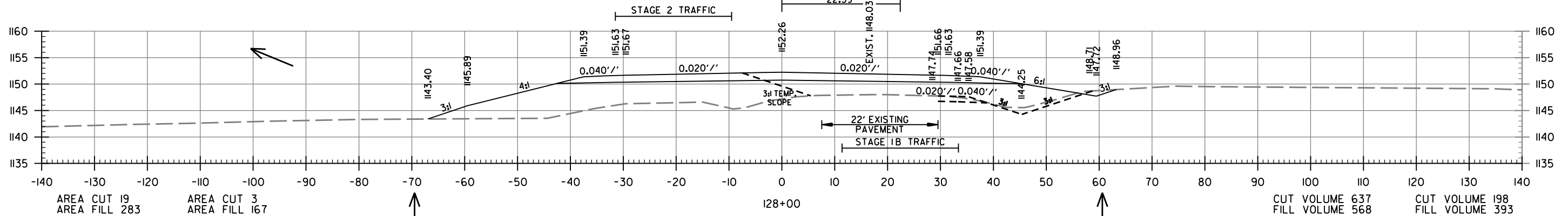
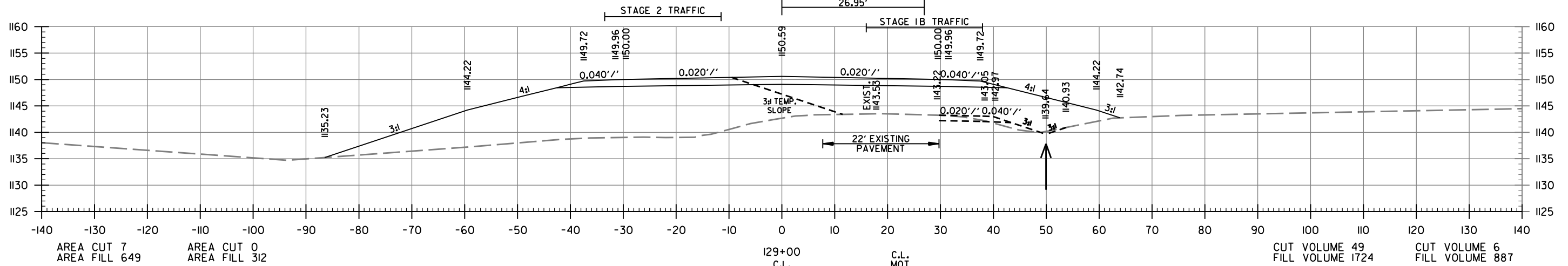
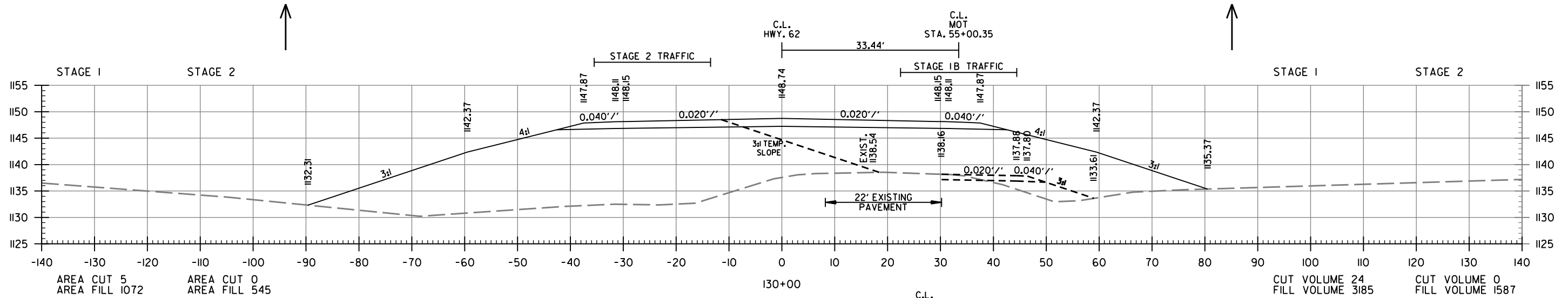


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	77	117
CROSS SECTIONS						



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

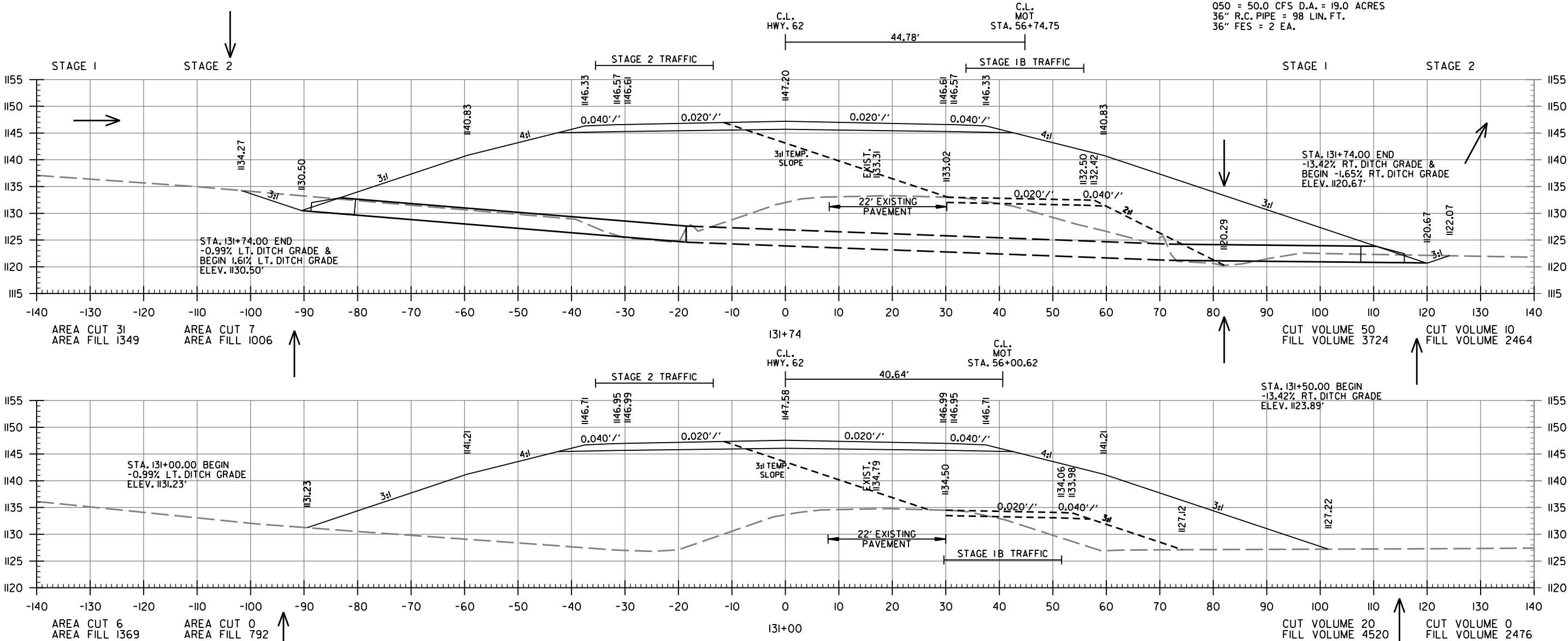
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04-25-2025		6	ARK.	090581	78	117
CROSS SECTIONS						



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

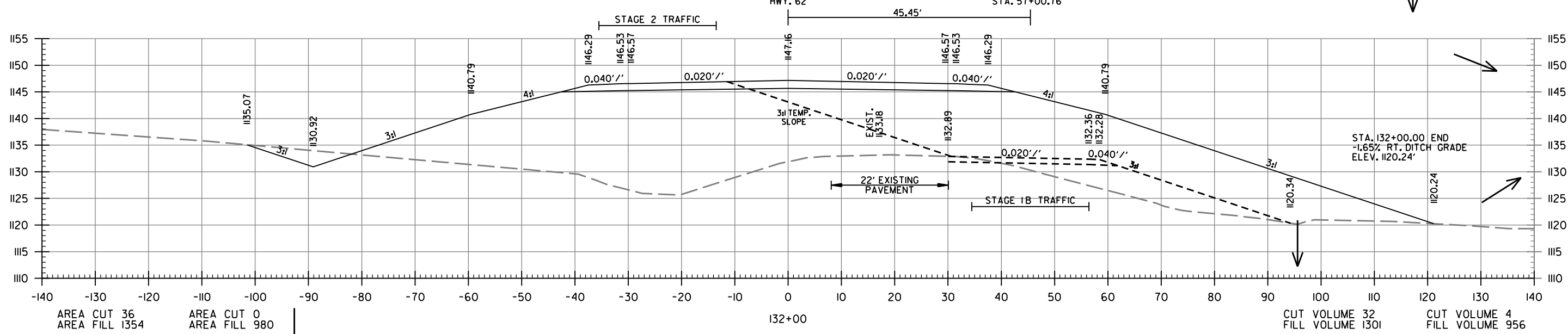
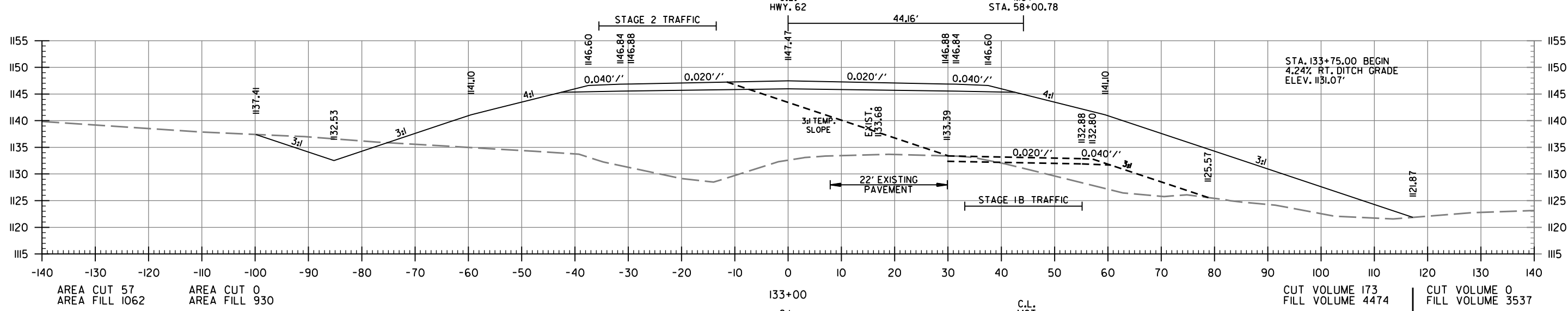
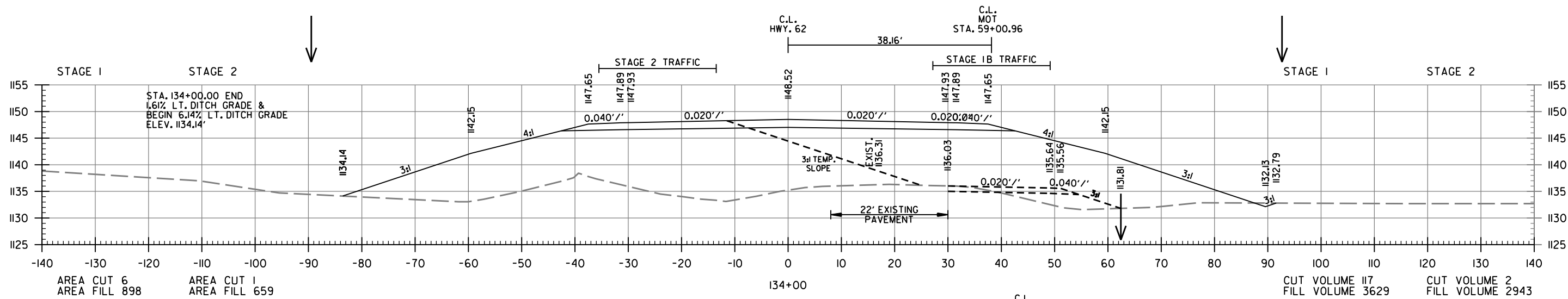
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	79	117
CROSS SECTIONS						

STA. 131+74 IN PLACE
36" X 90' R.C. PIPE CULVERT
W/ HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT. AND EXTEND R.C. PIPE
62' LT. AND 36' RT
W/ CONCRETE COLLAR
TO A COMPLETED LENGTH OF 188'
(CLASS 3) (TYPE III BEDDING)
FES LT. & RT.
050 = 50.0 CFS D.A. = 19.0 ACRES
36" R.C. PIPE = 98 LIN. FT.
36" FES = 2 EA.



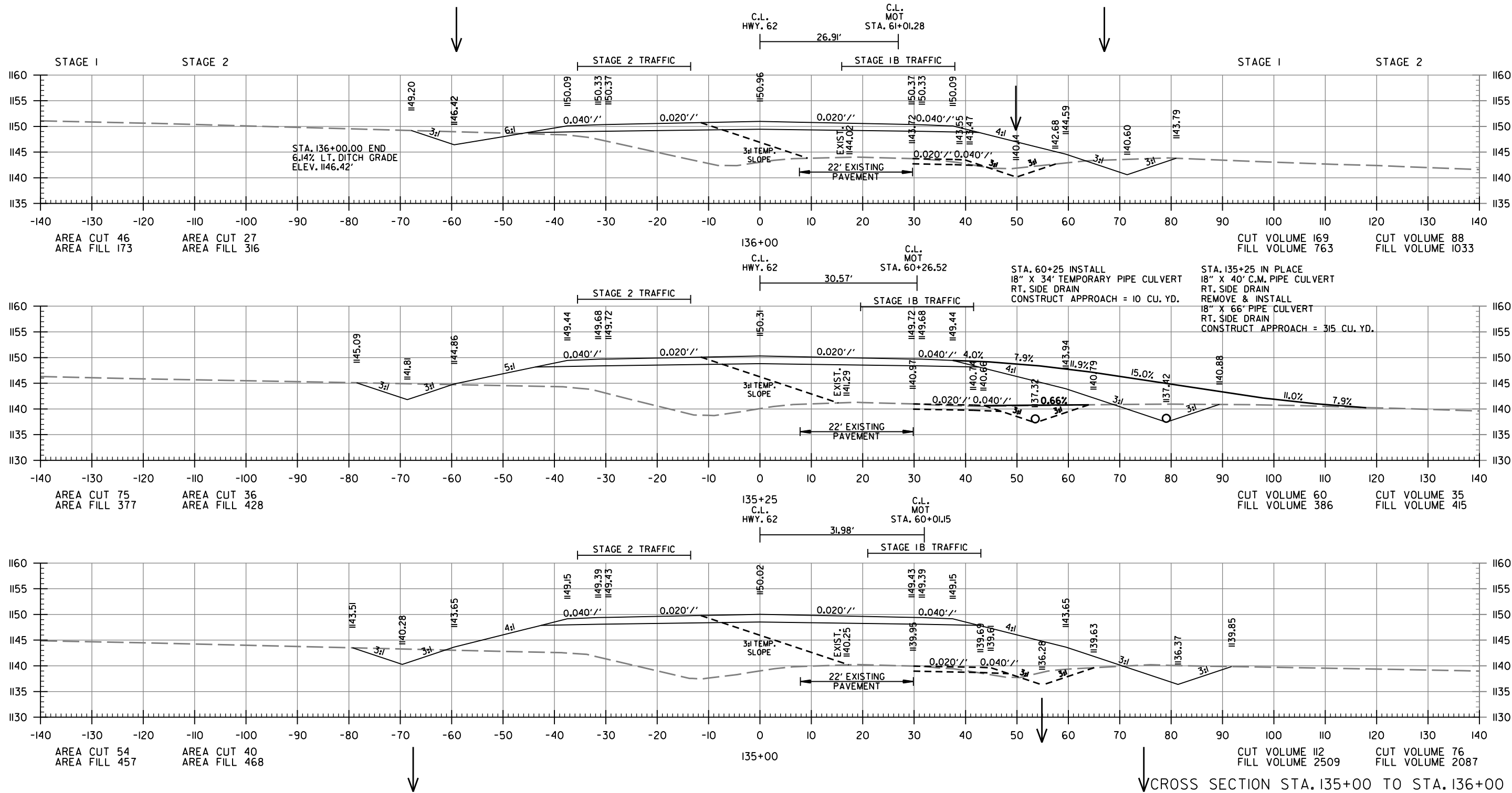
CROSS SECTION STA. 131+00 TO STA. 131+74

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	80	117
CROSS SECTIONS						

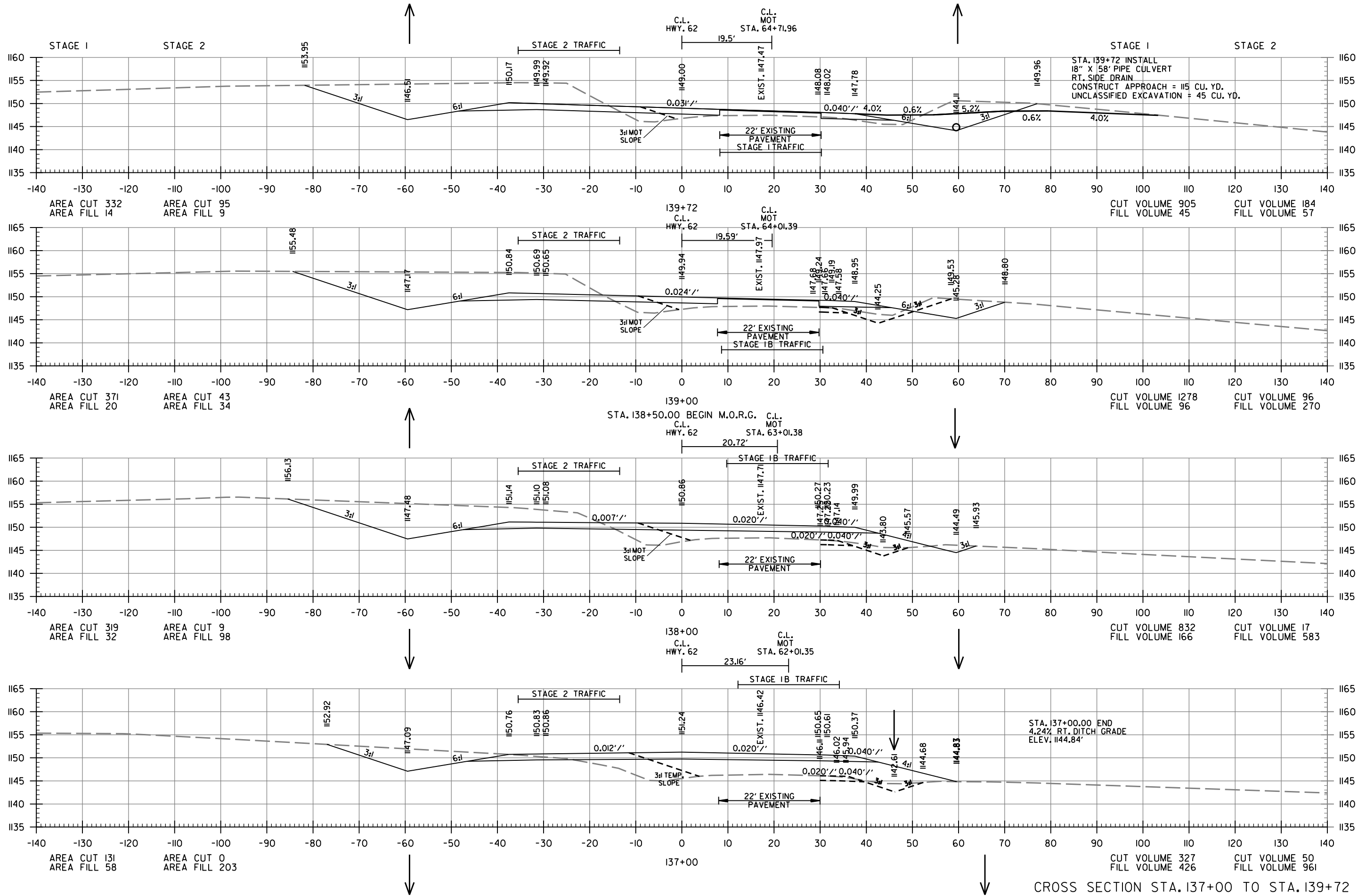


CROSS SECTION STA. 132+00 TO STA. 134+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	81	117
CROSS SECTIONS						

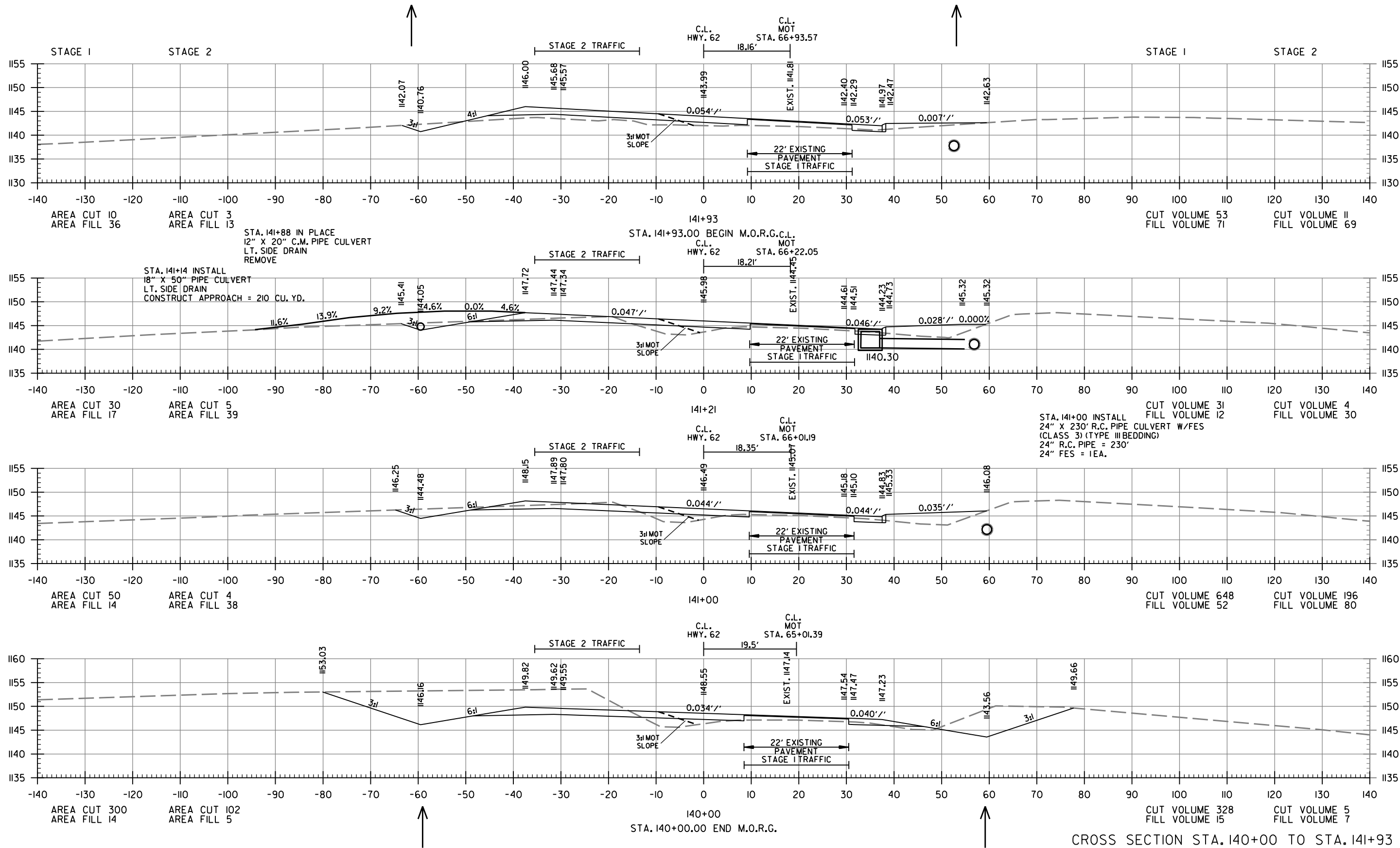


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	82	117
CROSS SECTIONS						



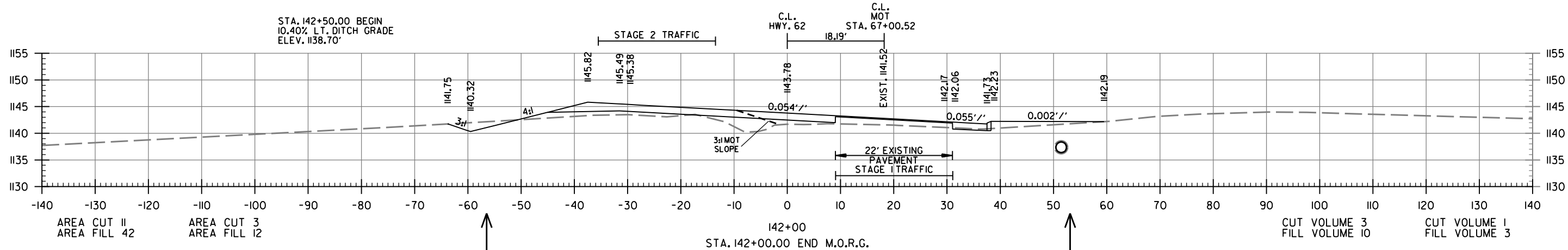
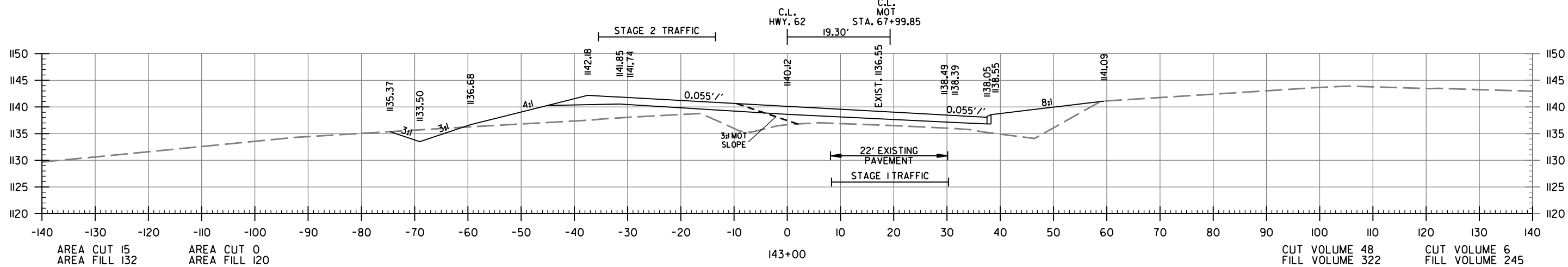
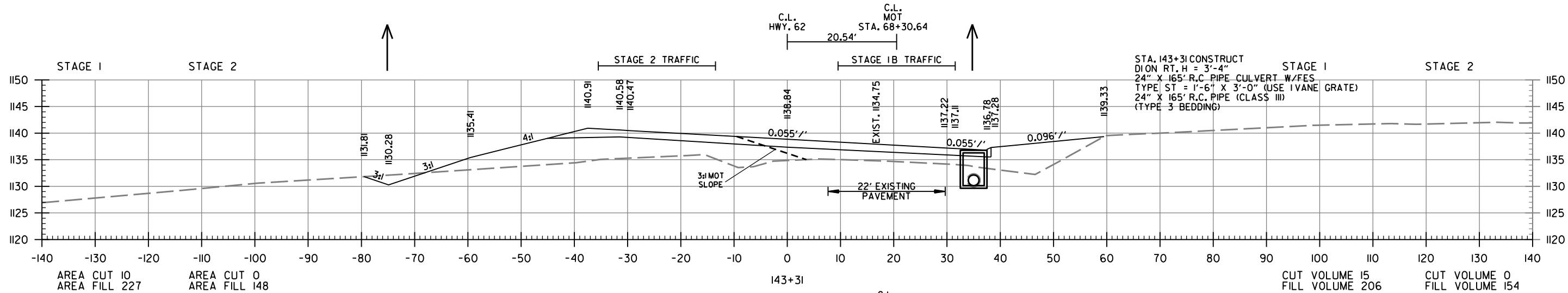
CROSS SECTION STA. 137+00 TO STA. 139+72

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	83	117
CROSS SECTIONS						



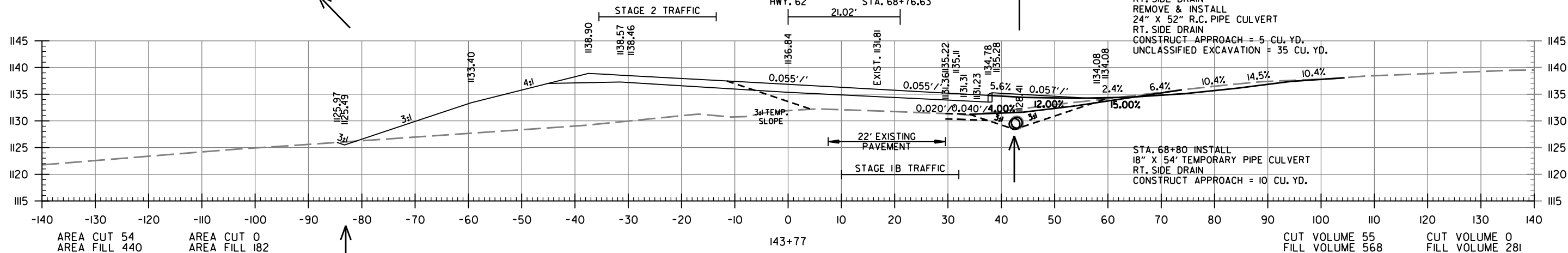
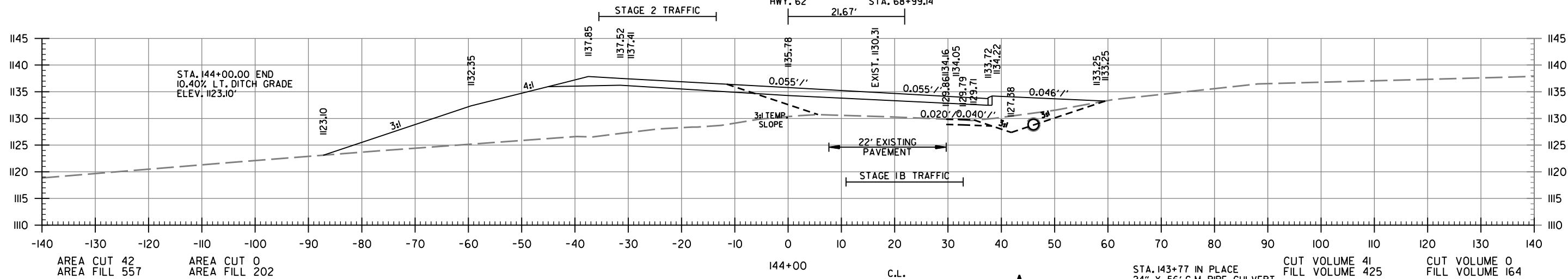
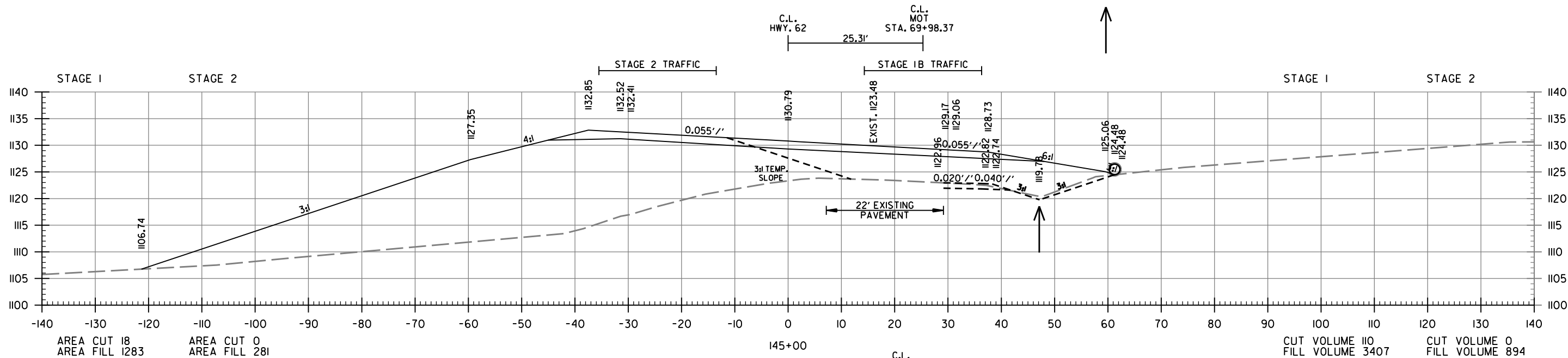
CROSS SECTION STA. 140+00 TO STA. 141+93

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	84	117
CROSS SECTIONS						



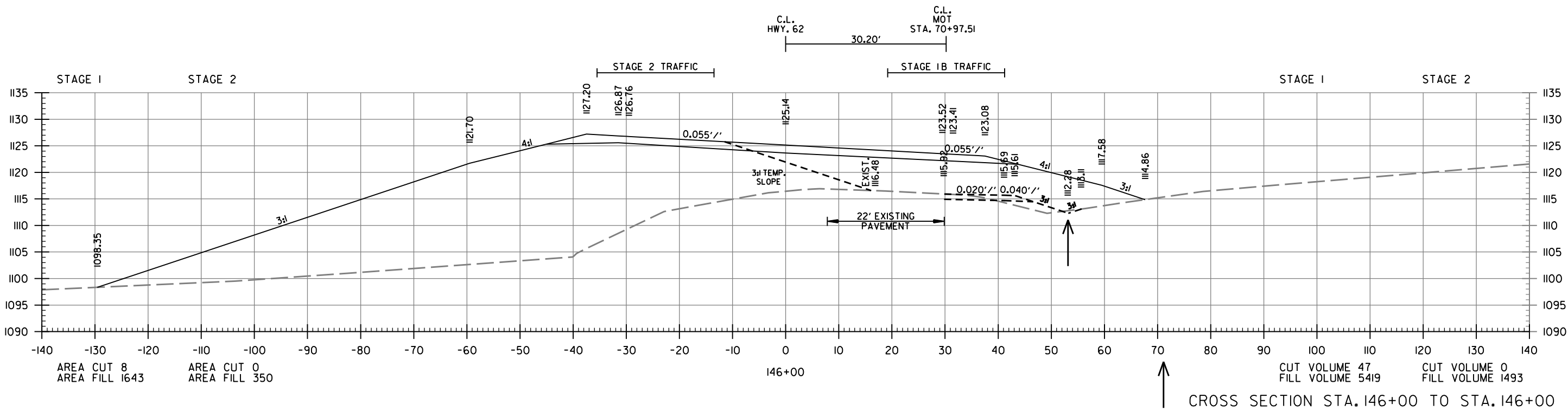
CROSS SECTION STA. 142+00 TO STA. 143+31

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	85	117
CROSS SECTIONS						

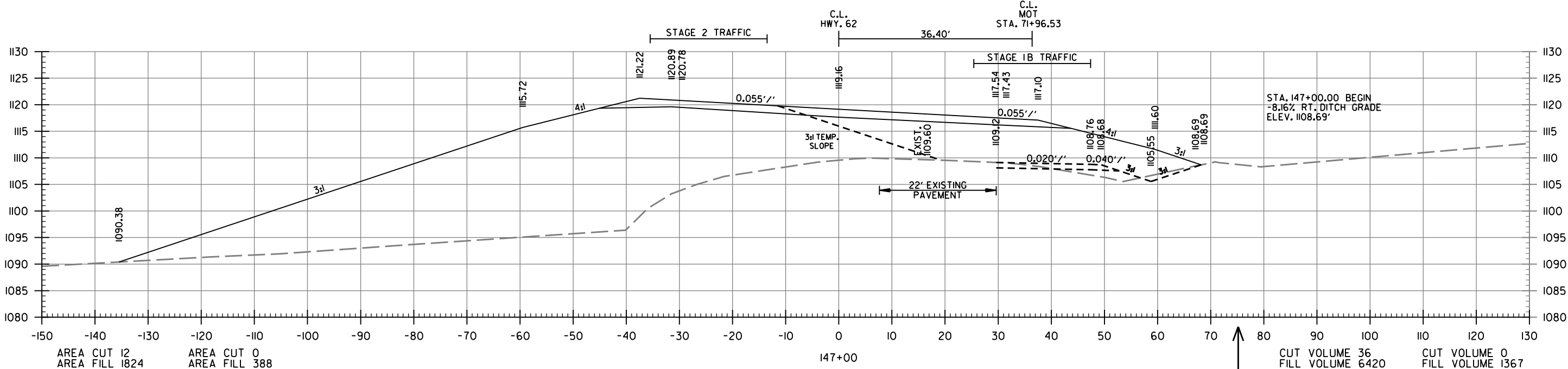
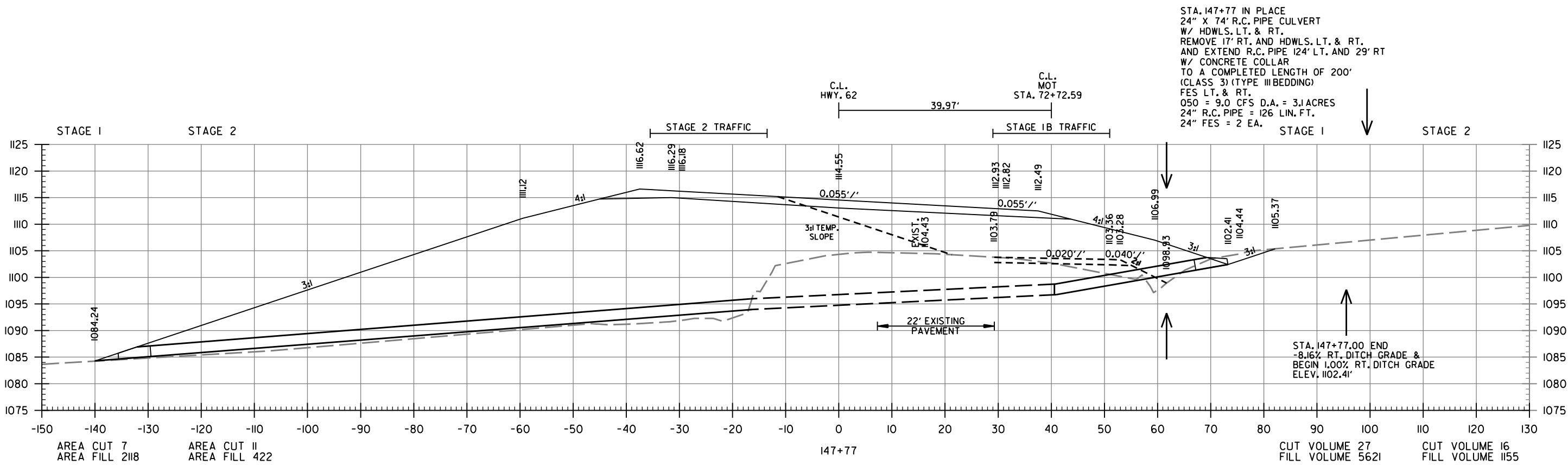


CROSS SECTION STA. 143+77 TO STA. 145+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	86	117
CROSS SECTIONS						

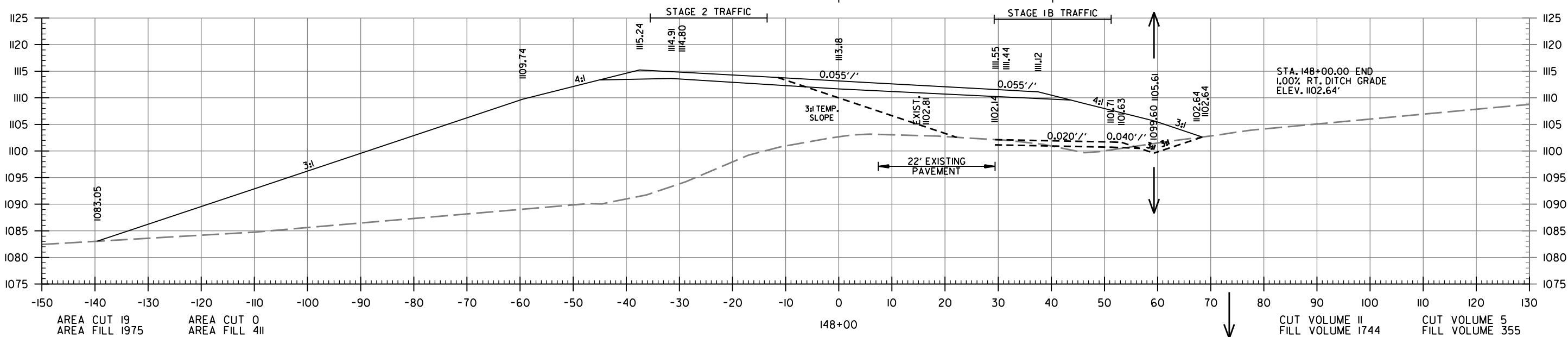
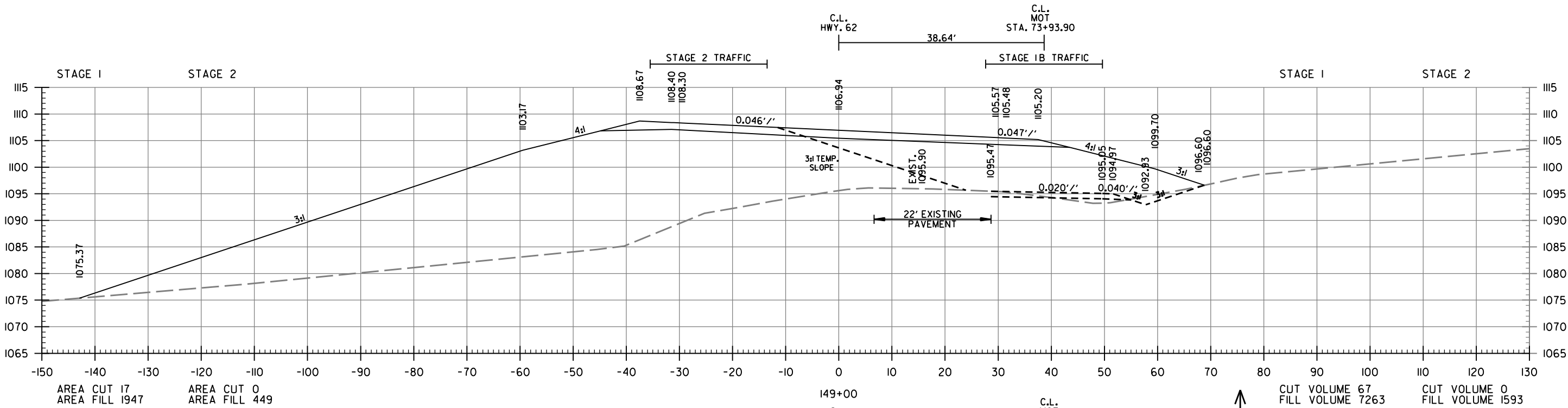


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	87	117
CROSS SECTIONS						



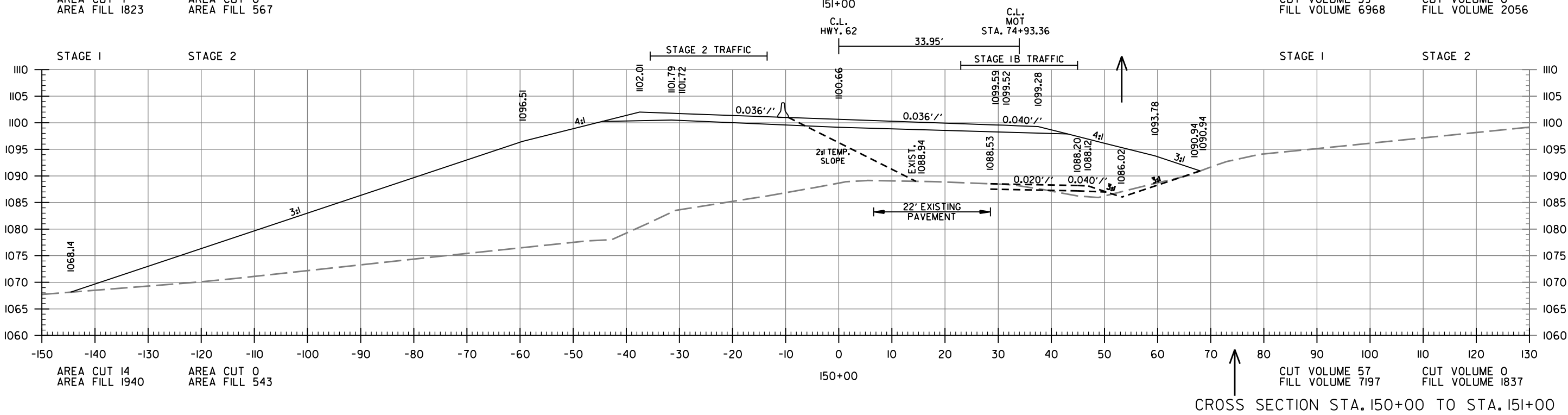
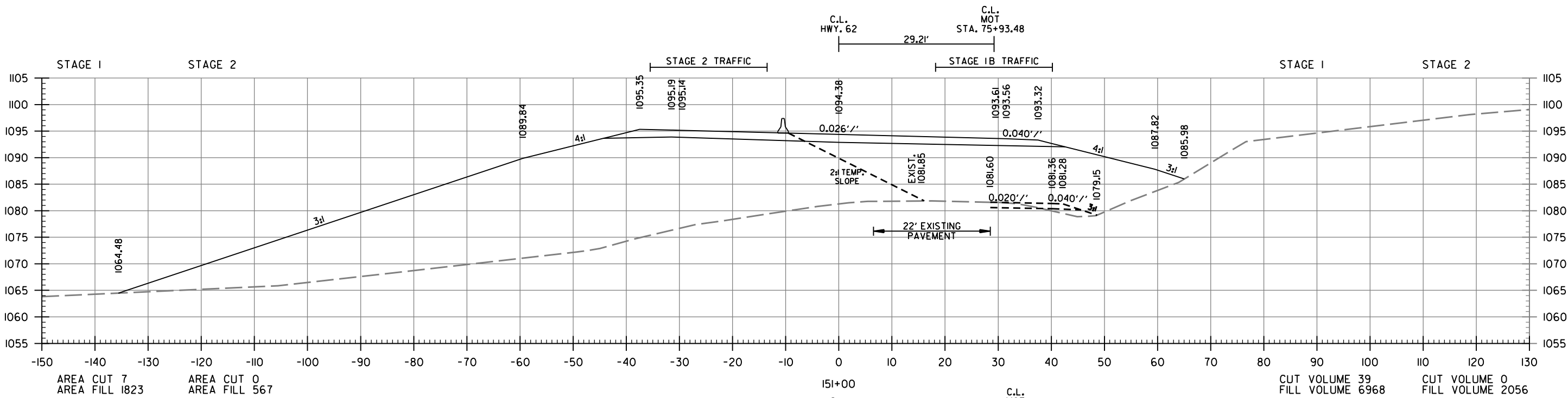
CROSS SECTION STA. 147+00 TO STA. 147+77

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	88	117
CROSS SECTIONS						

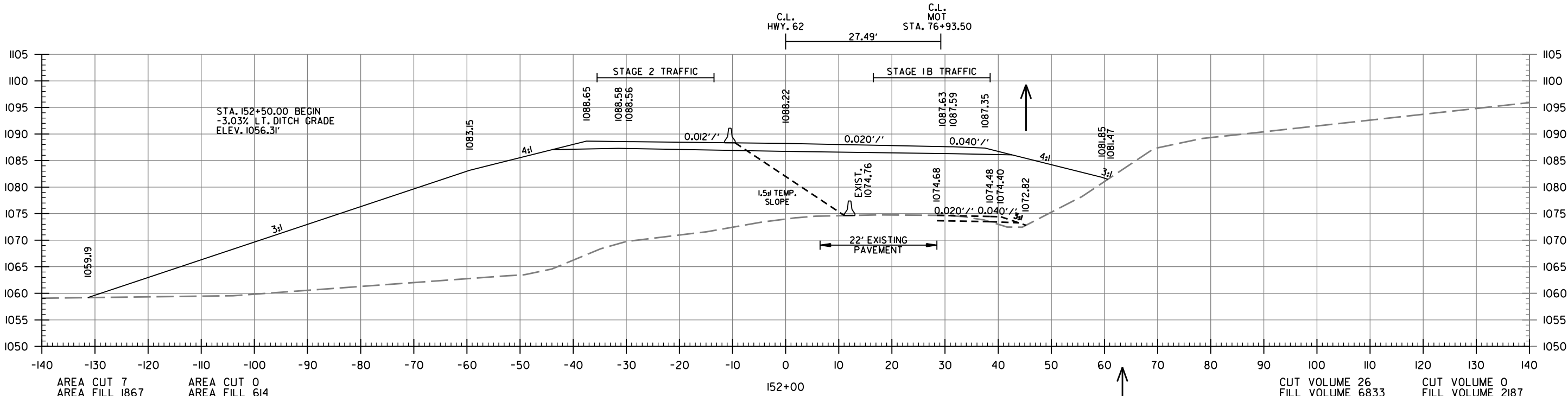
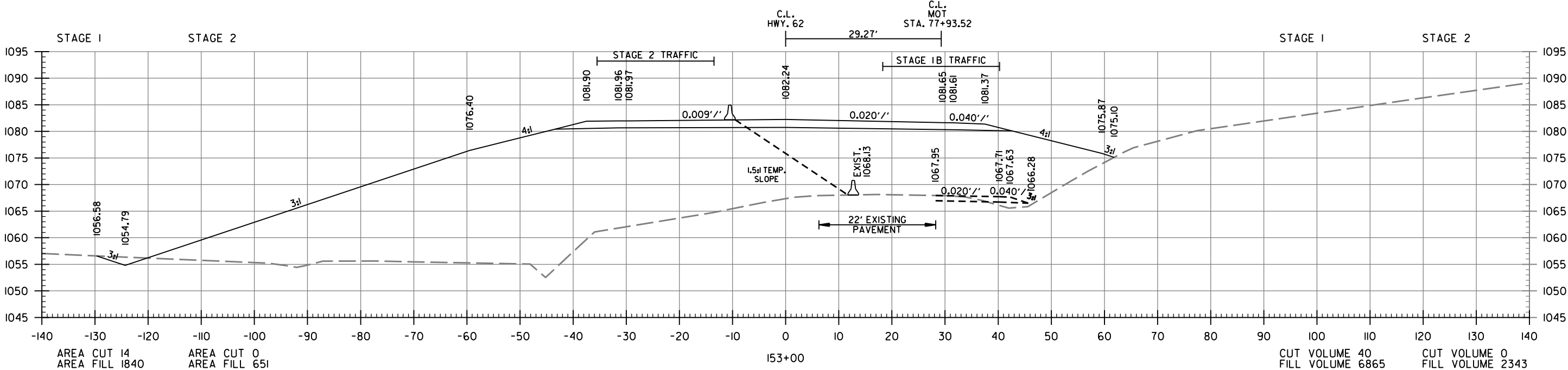


CROSS SECTION STA. 148+00 TO STA. 149+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	89	117
CROSS SECTIONS						

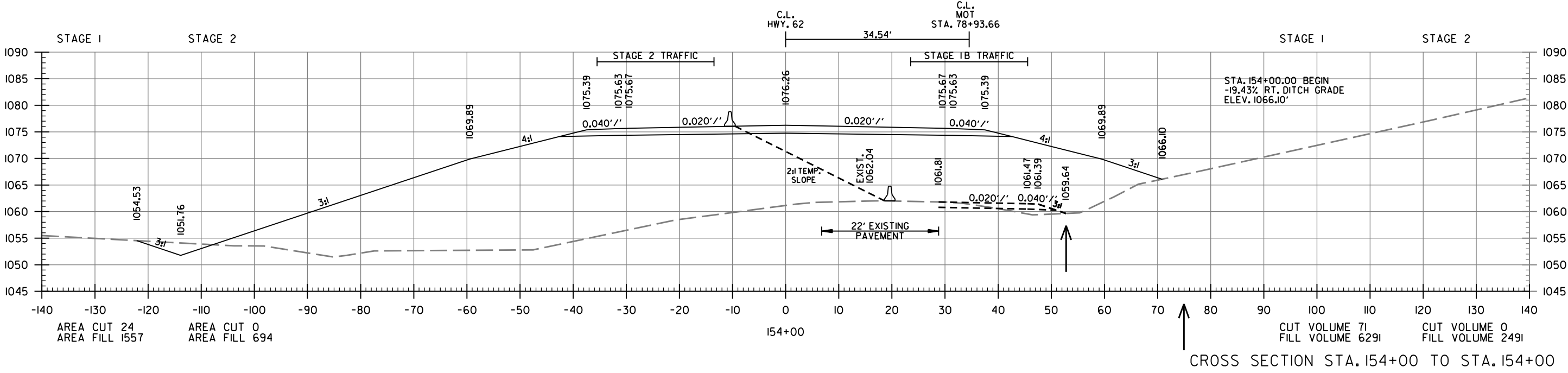


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	90	117
CROSS SECTIONS						

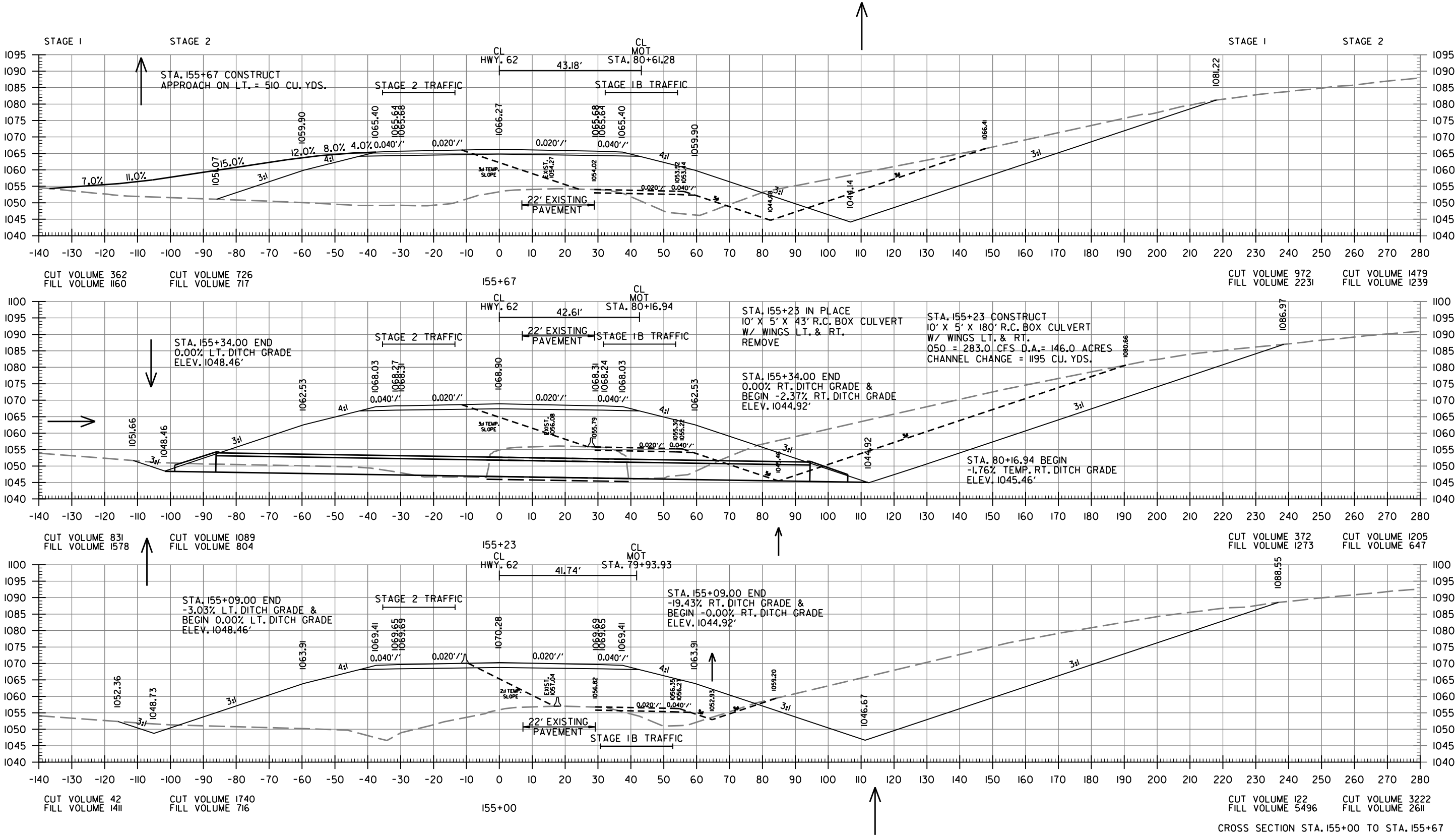


CROSS SECTION STA. 152+00 TO STA. 153+00

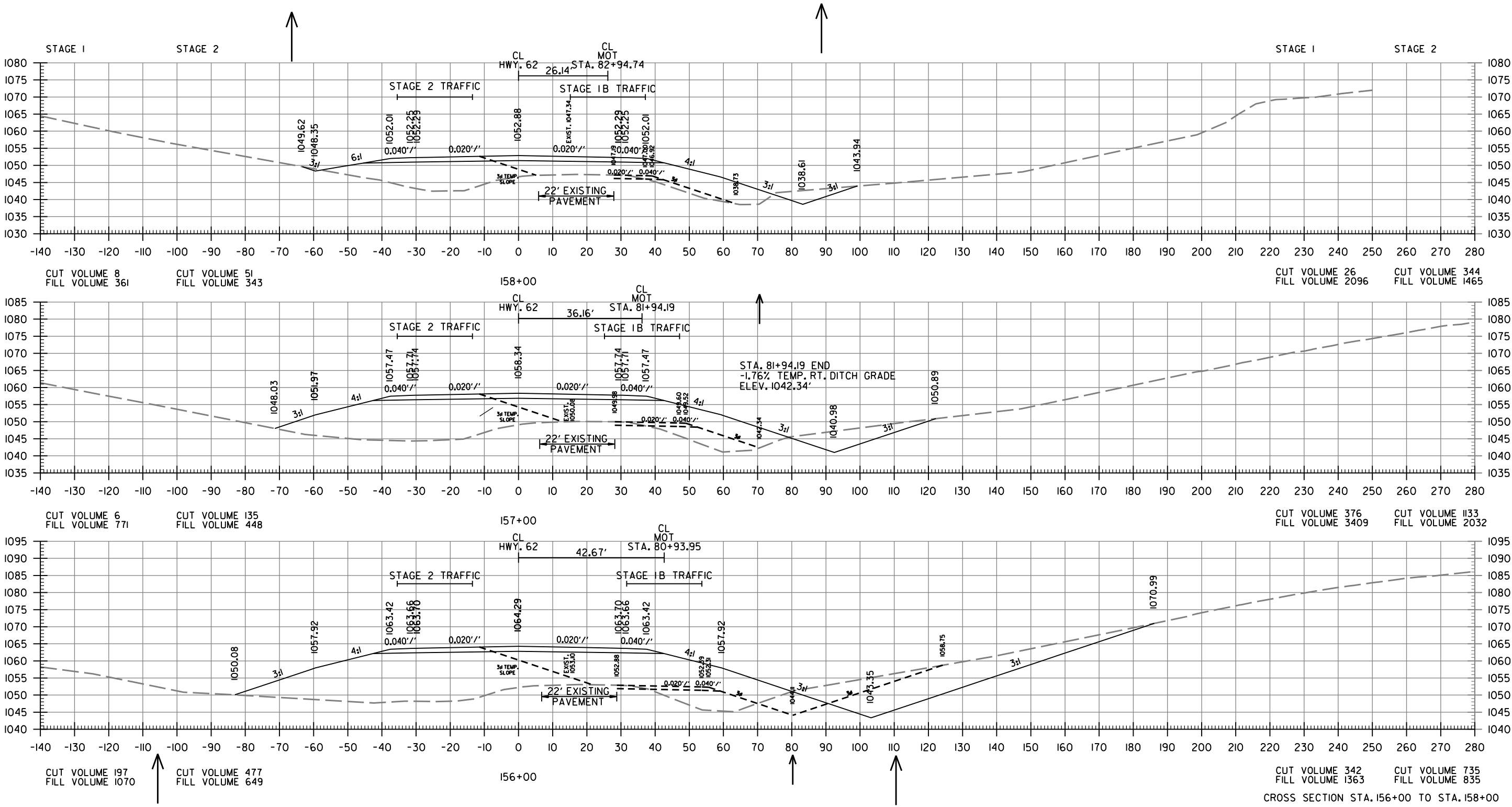
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	91	117
CROSS SECTIONS						



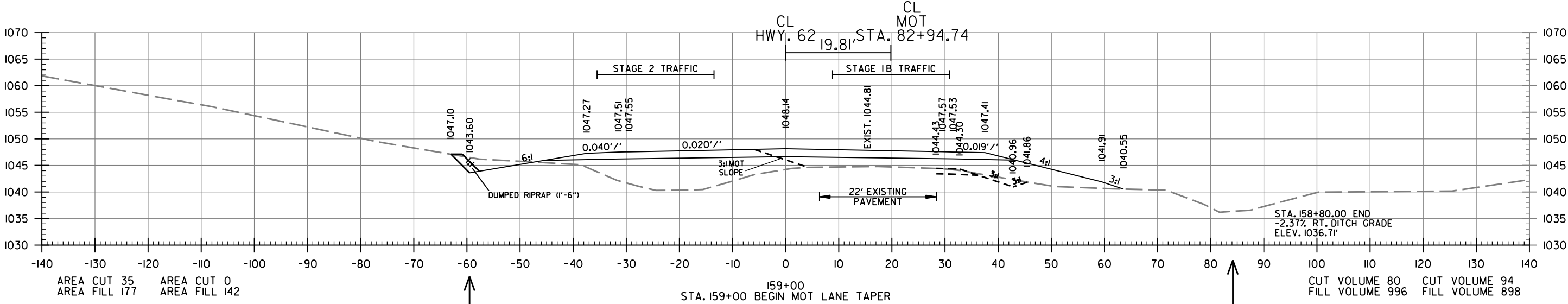
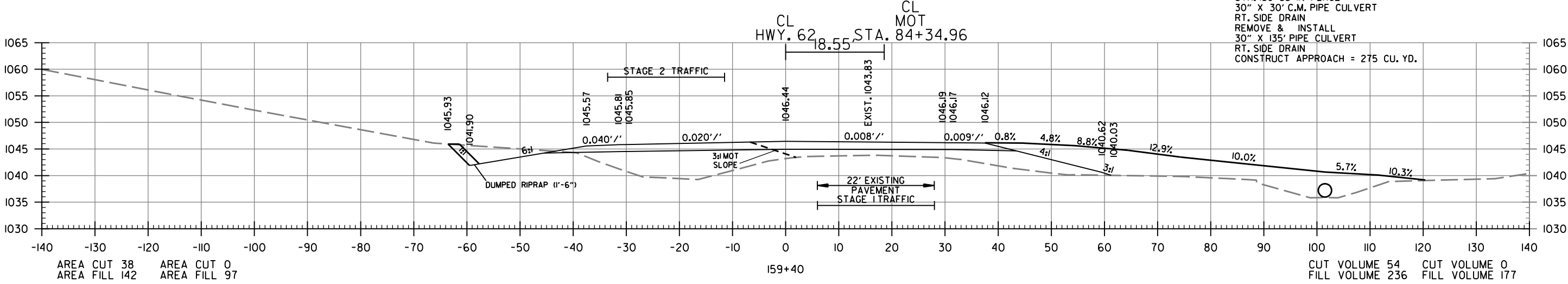
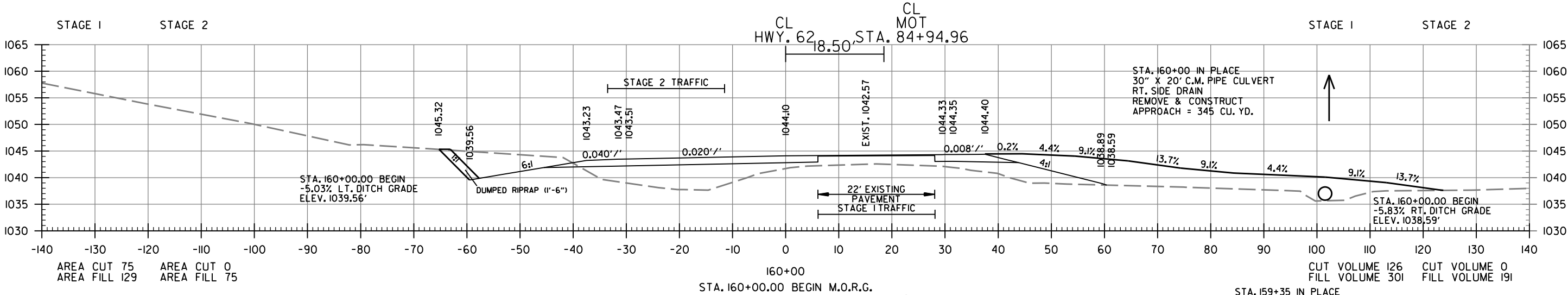
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	92	117
CROSS SECTIONS						



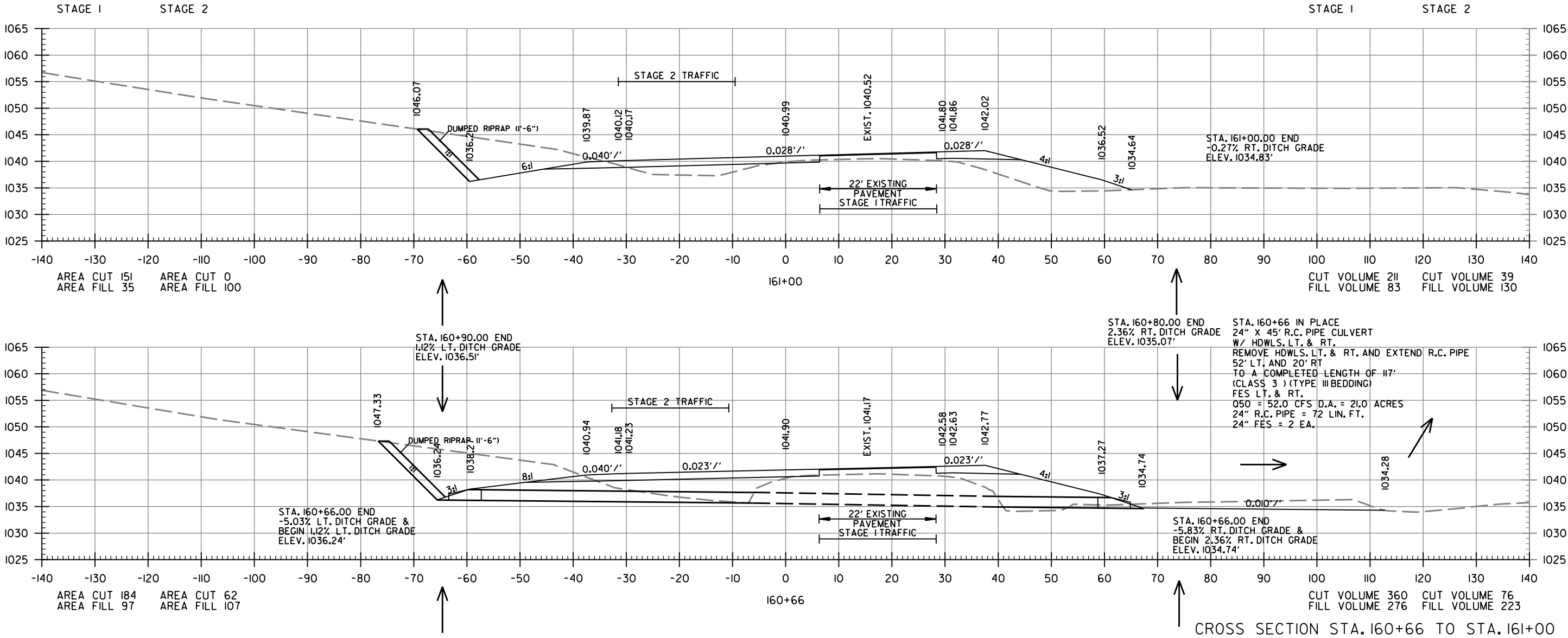
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	93	117
CROSS SECTIONS						



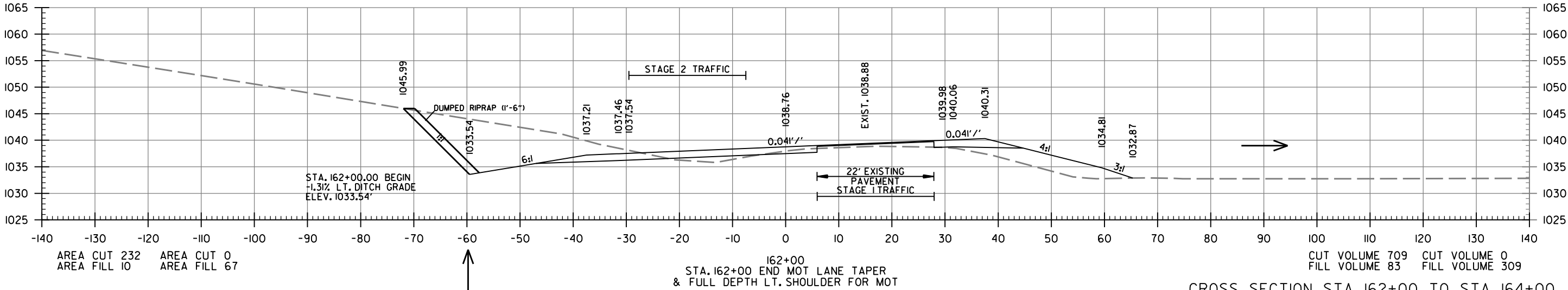
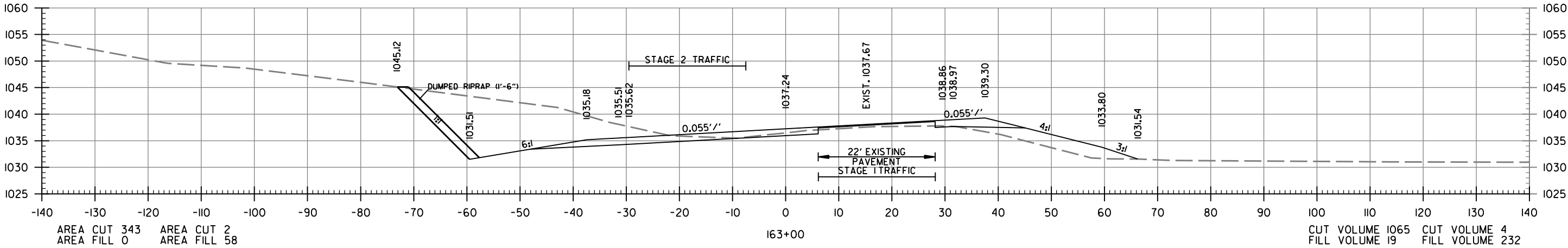
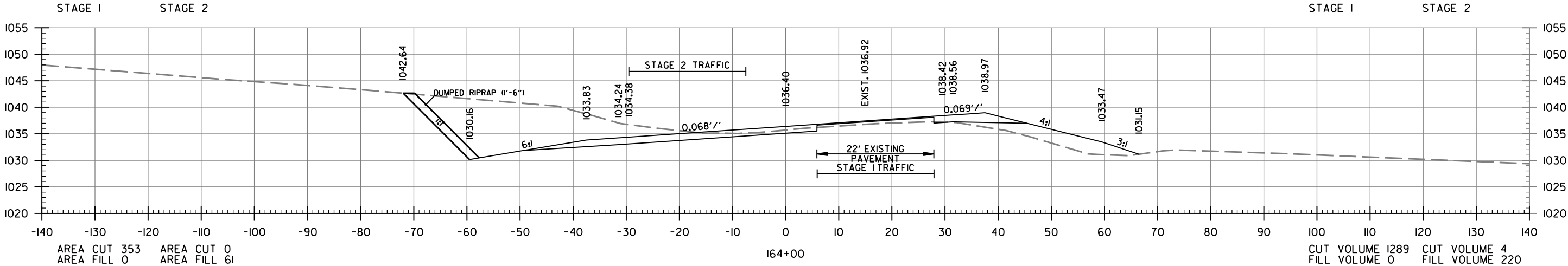
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	94	117
05-07-2025						
05-15-2025						
CROSS SECTIONS						



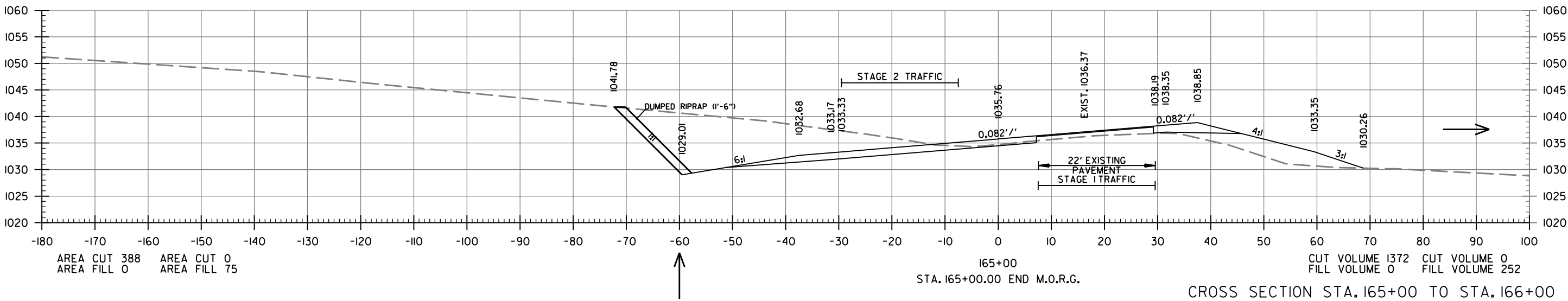
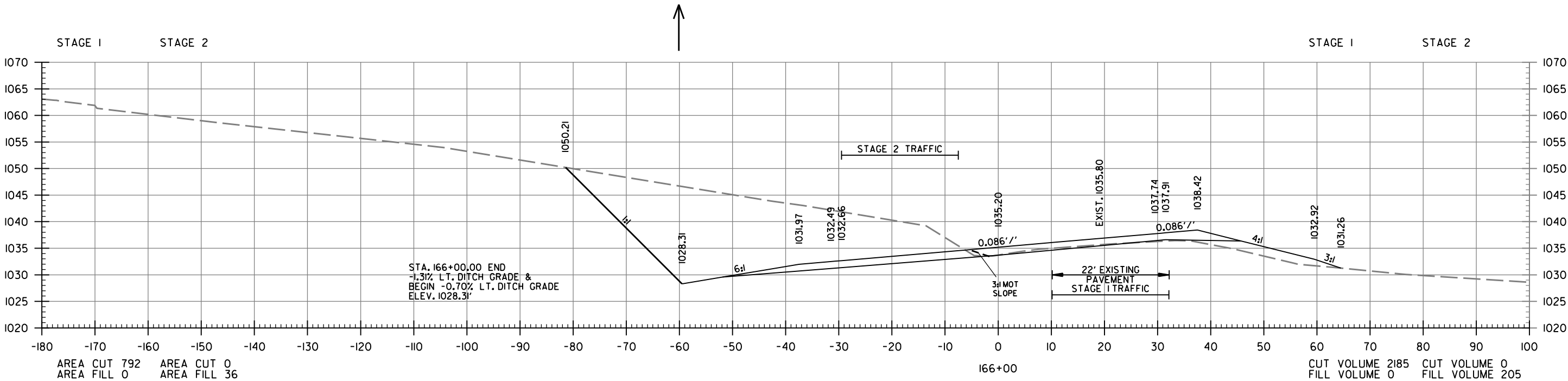
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
05-07-2025		6	ARK.	090581	95	117
05-15-2025						
CROSS SECTIONS						



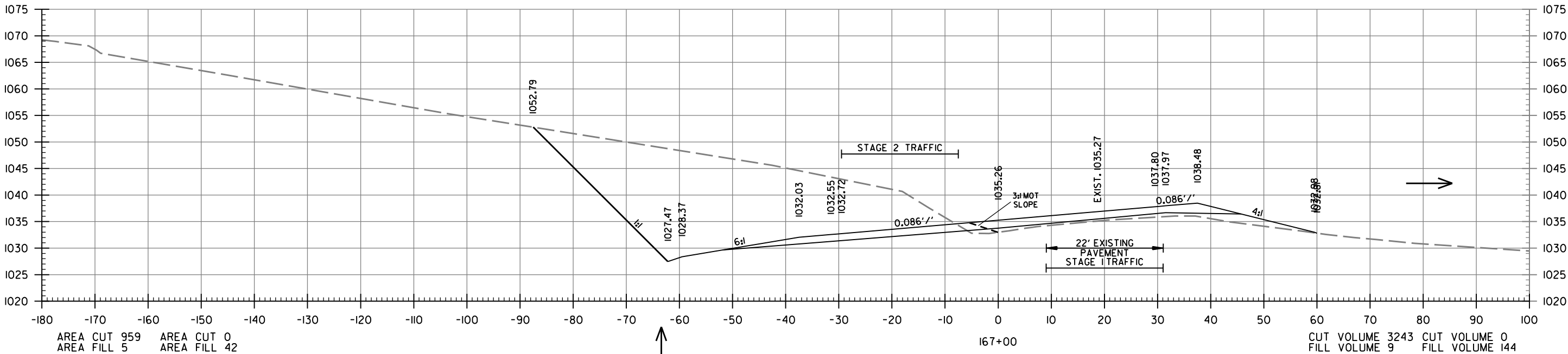
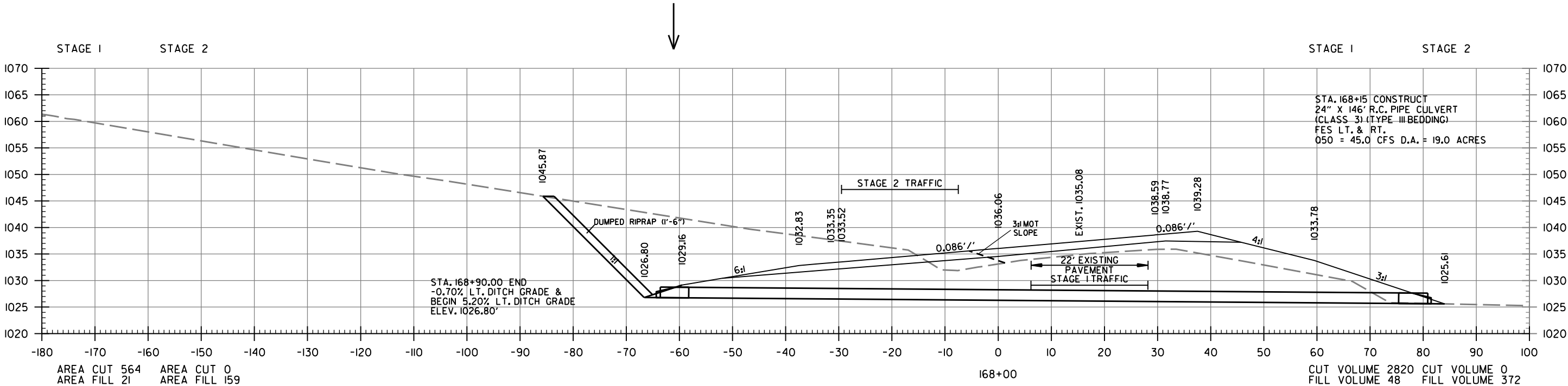
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
05-07-2025		6	ARK.	090581	96	117
05-15-2025		CROSS SECTIONS				



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
05-07-2025		6	ARK.	090581	97	117
05-15-2025		CROSS SECTIONS				

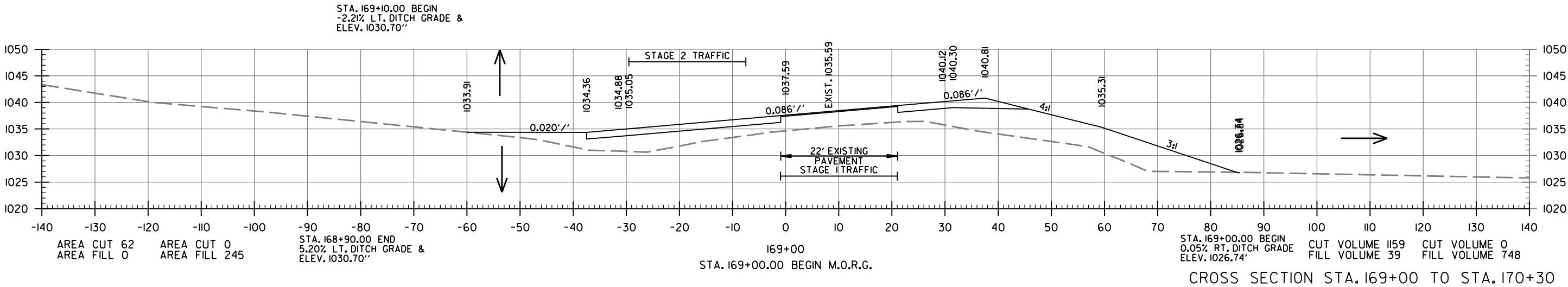
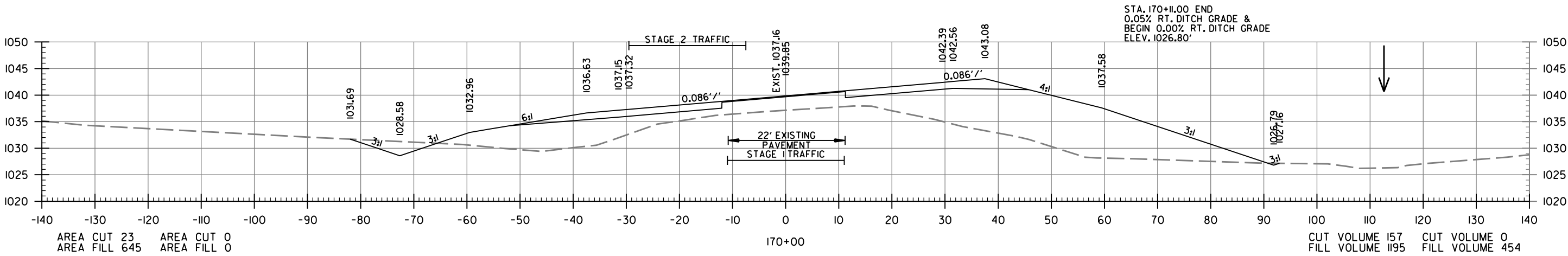
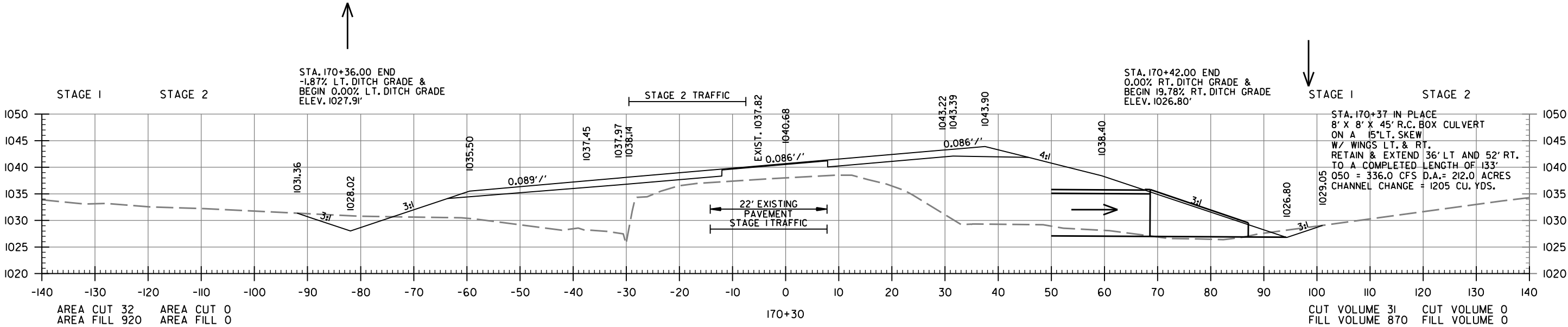


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
05-07-2025		6	ARK.	090581	98	117
05-15-2025		CROSS SECTIONS				

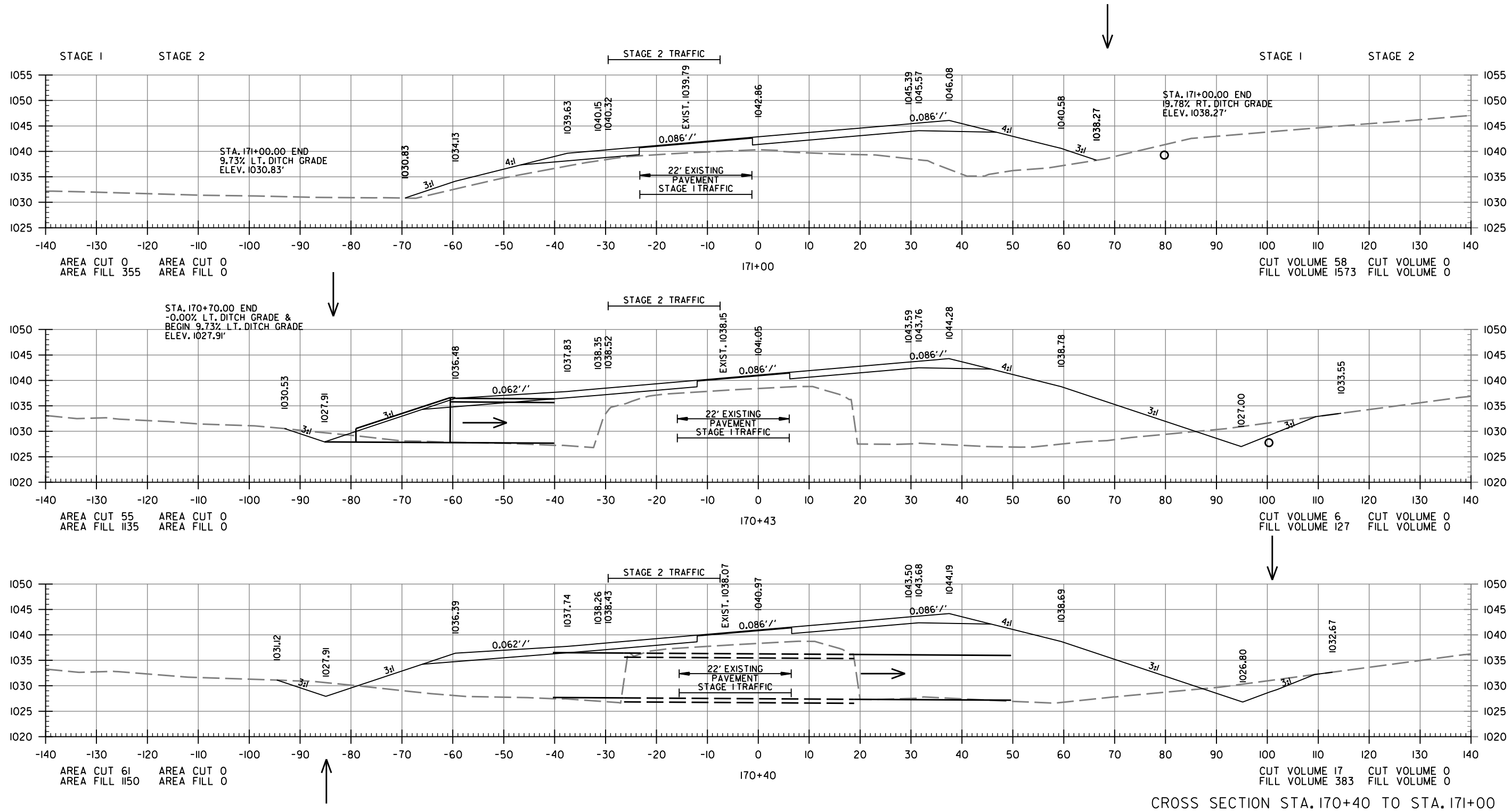


CROSS SECTION STA. 167+00 TO STA. 168+00

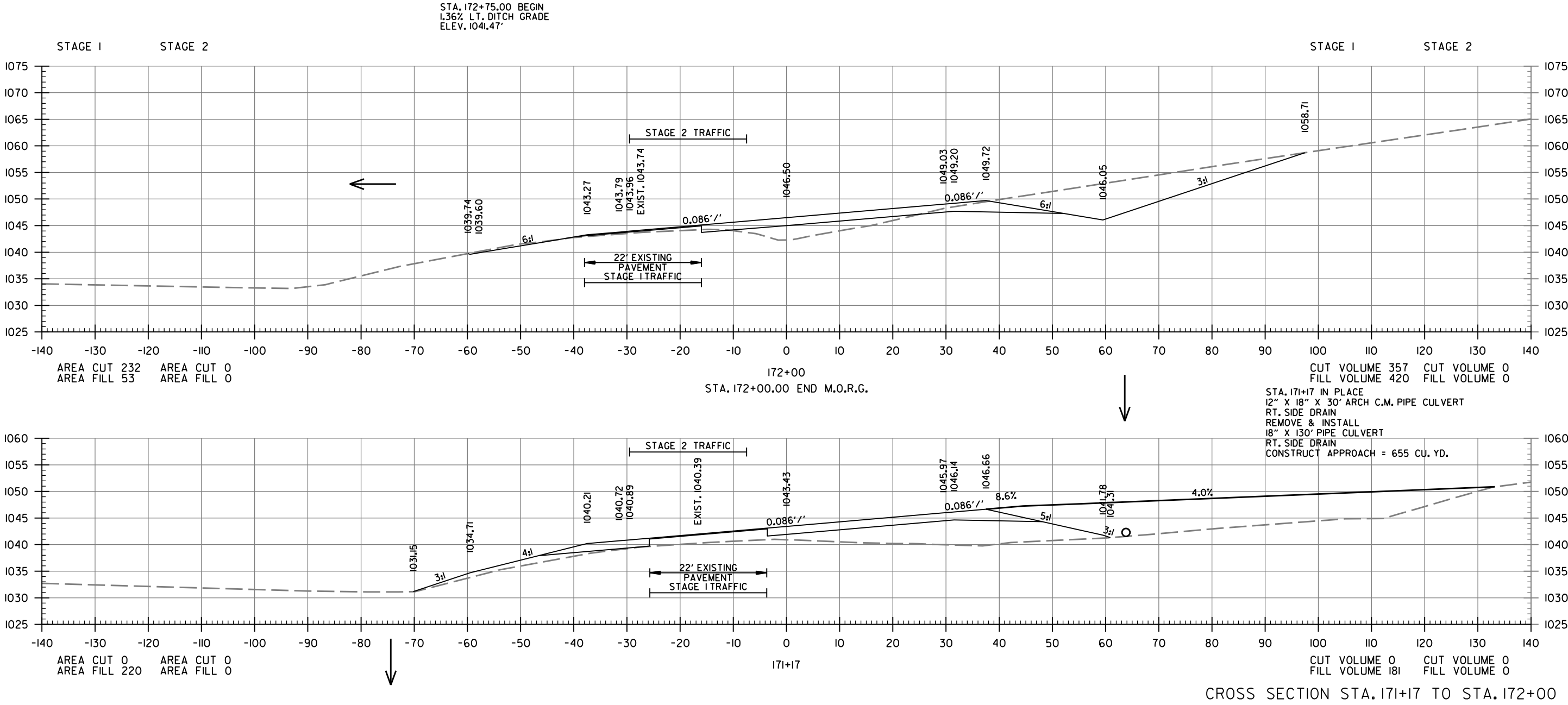
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	99	117
05-15-2025		CROSS SECTIONS				



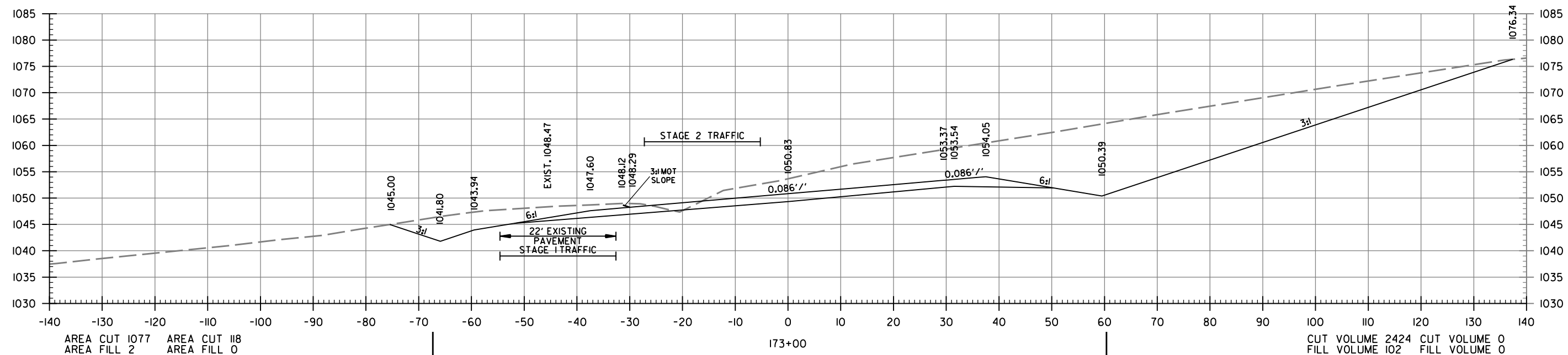
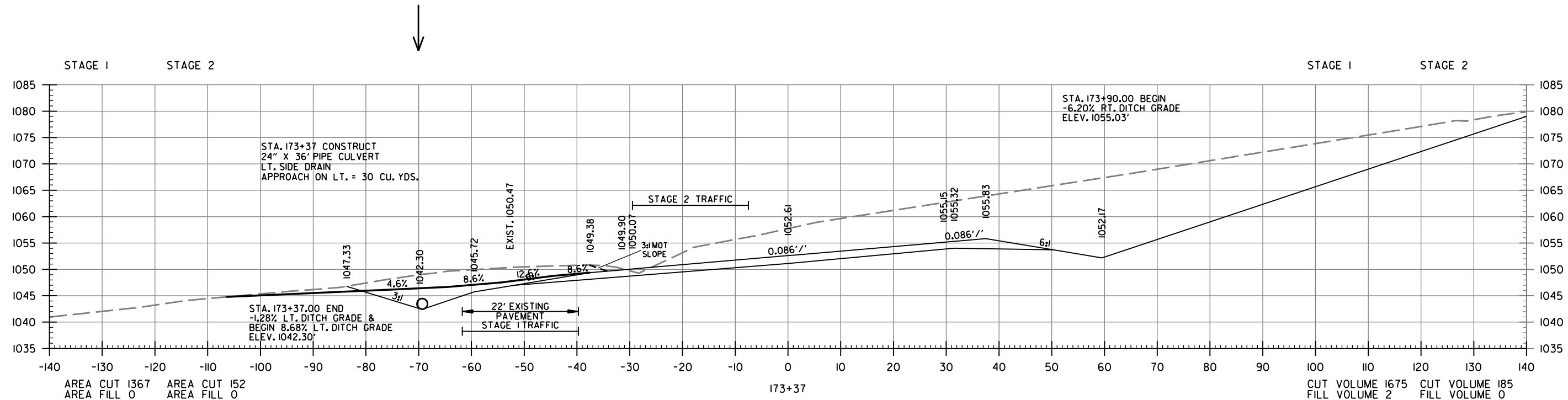
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	100	117
CROSS SECTIONS						



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	101	117
CROSS SECTIONS						

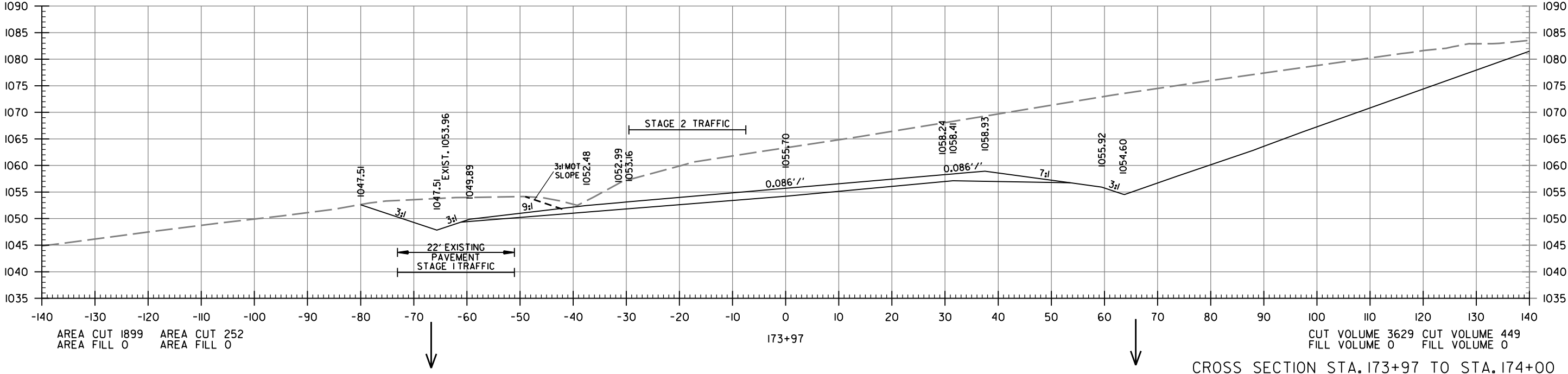
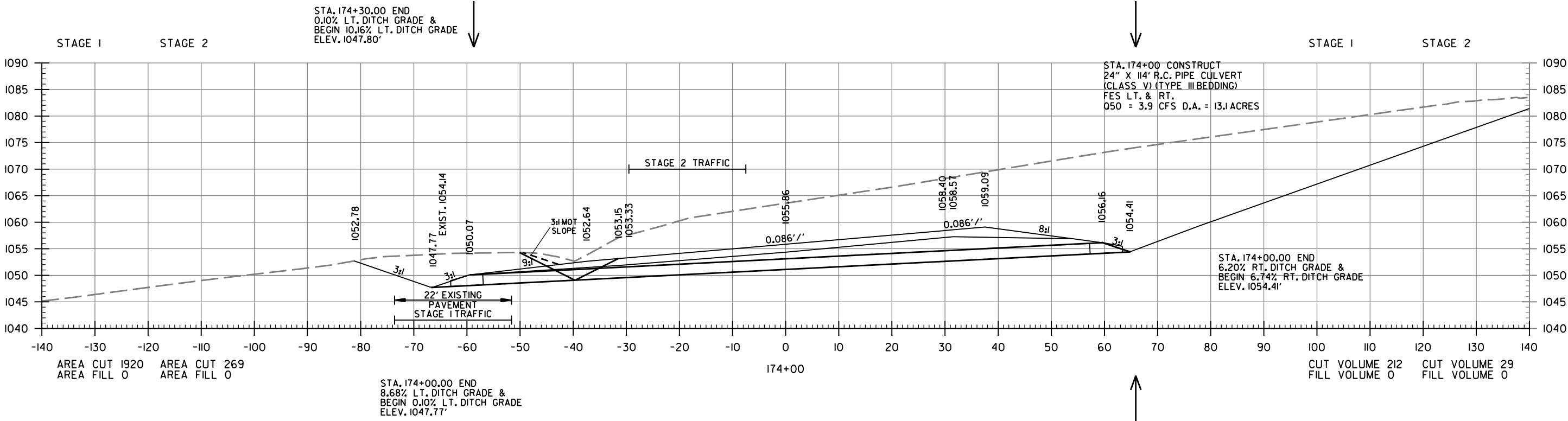


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	102	117
CROSS SECTIONS						

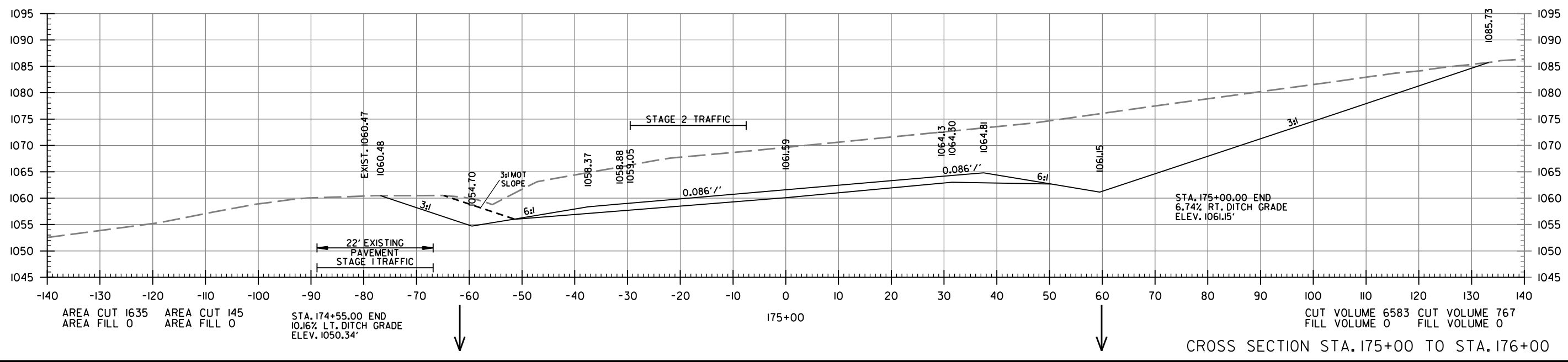
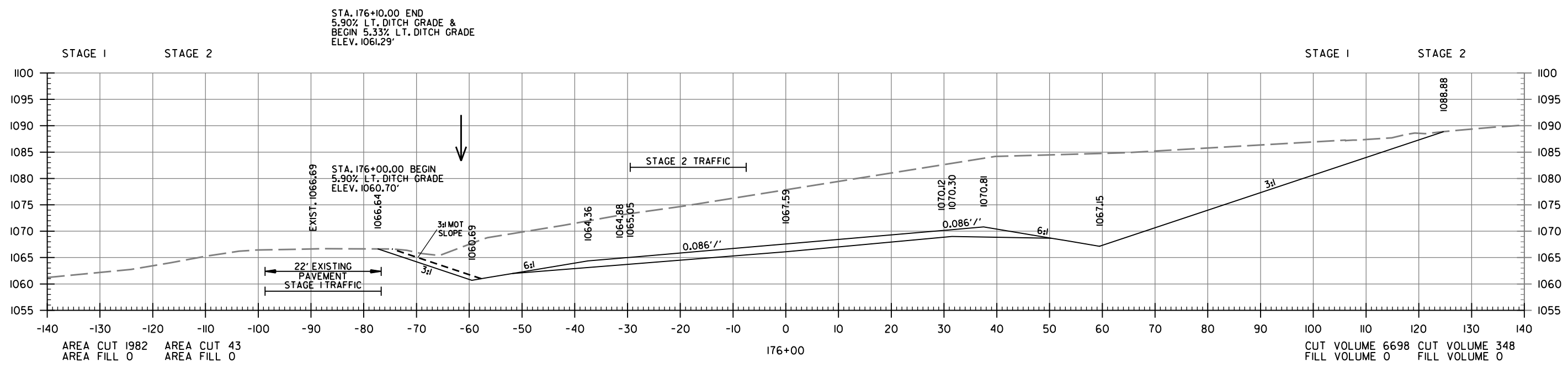


CROSS SECTION STA. 173+00 TO STA. 173+37

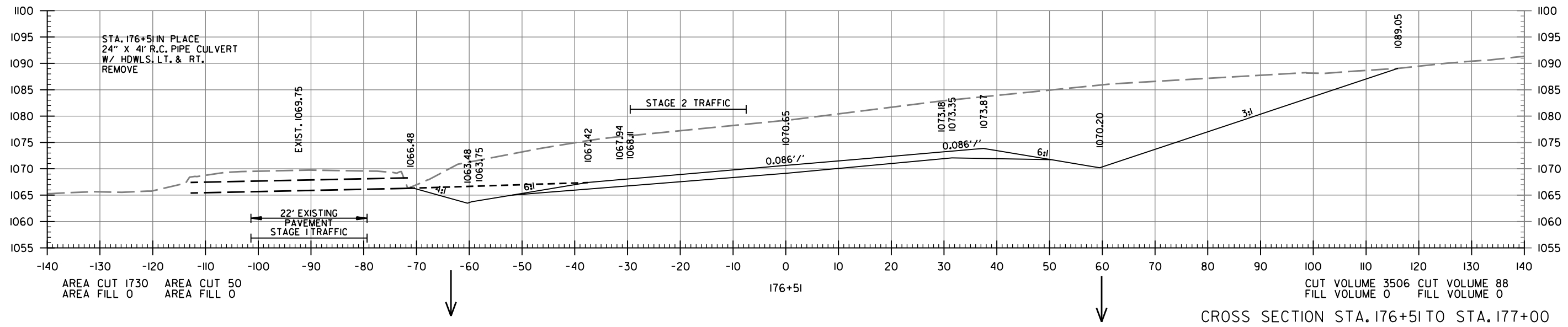
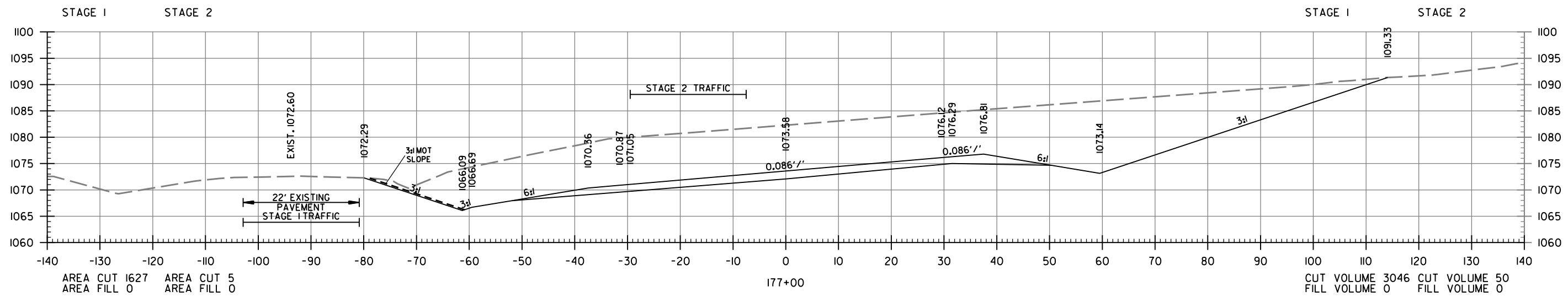
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	103	117
CROSS SECTIONS						



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	104	117
CROSS SECTIONS						

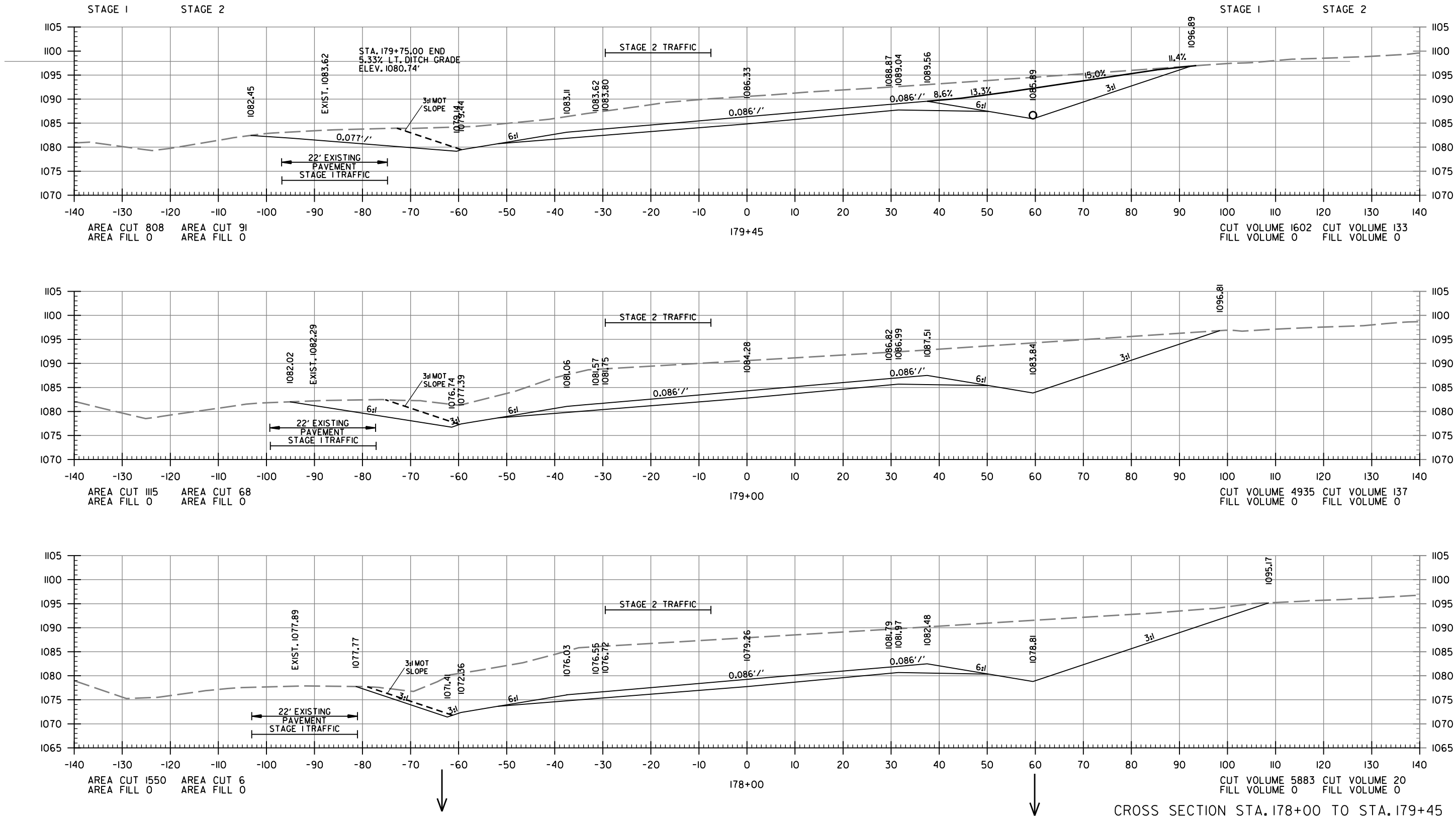


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	105	117
CROSS SECTIONS						



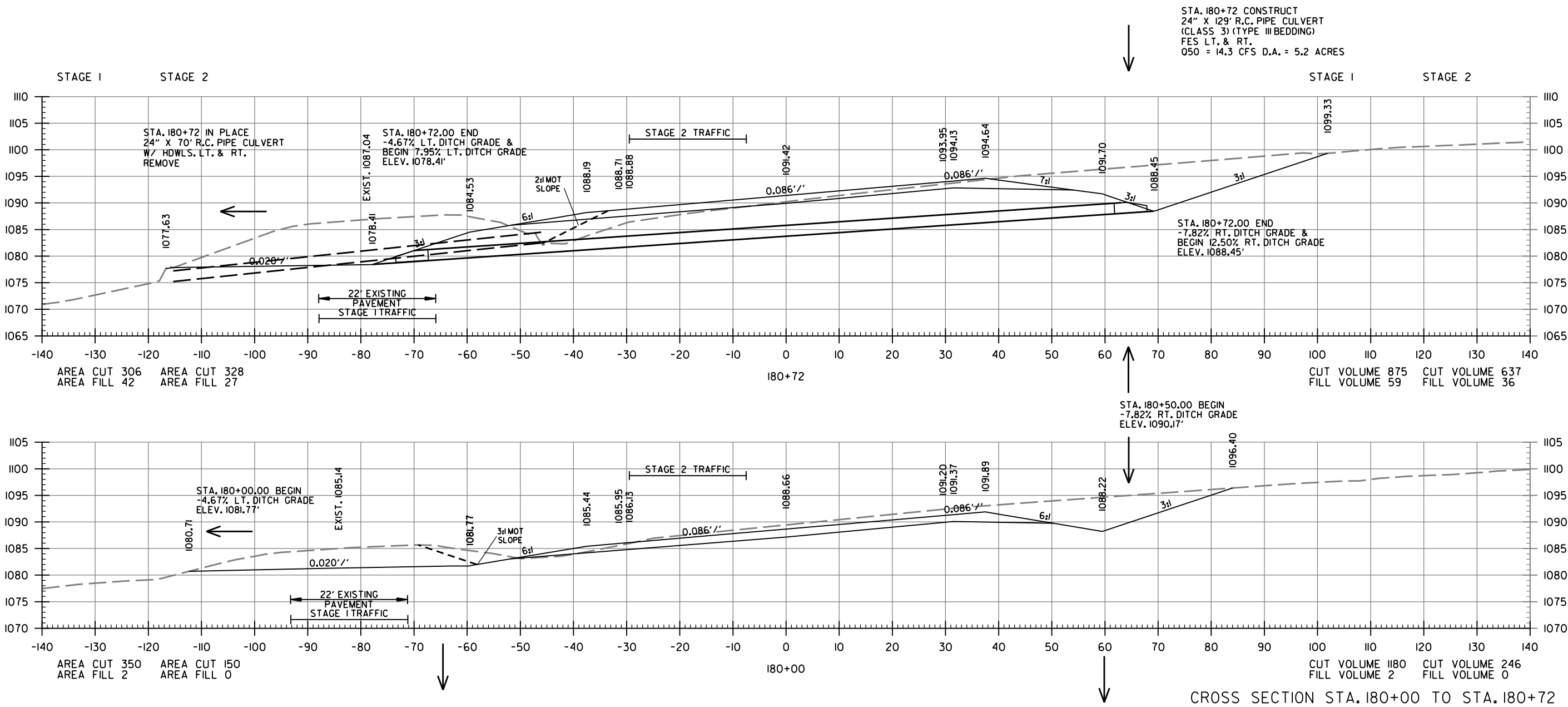
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	106	117
CROSS SECTIONS						

STA. 179+45 INSTALL
18" X 52' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 230 CU. YD.

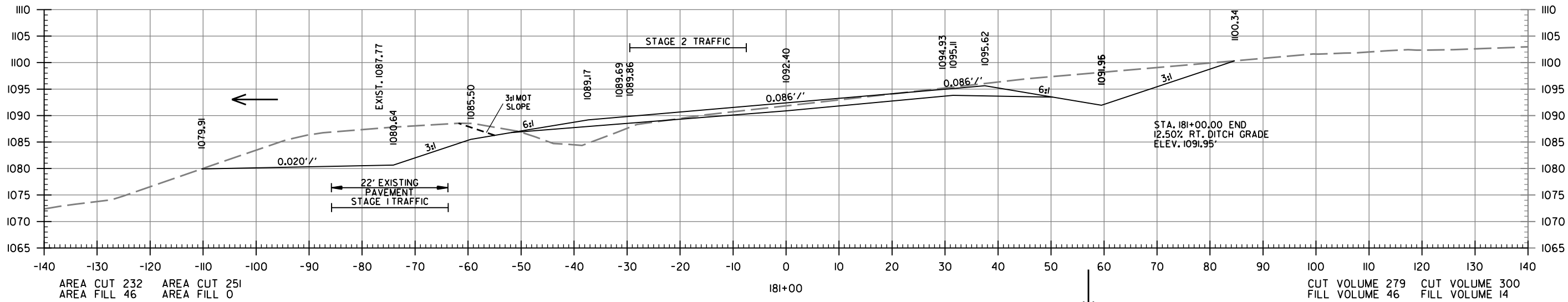
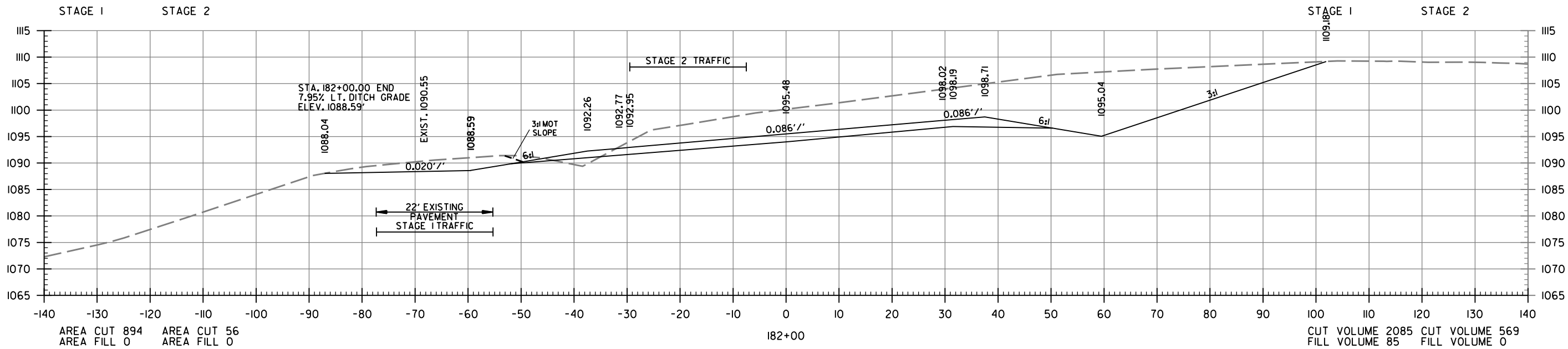


CROSS SECTION STA. 178+00 TO STA. 179+45

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	107	117
CROSS SECTIONS						

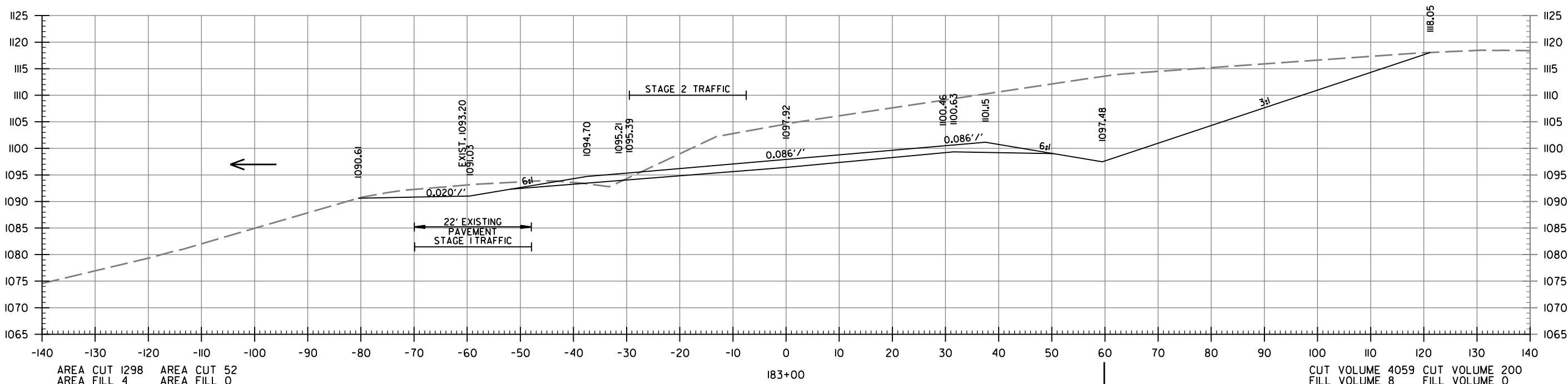
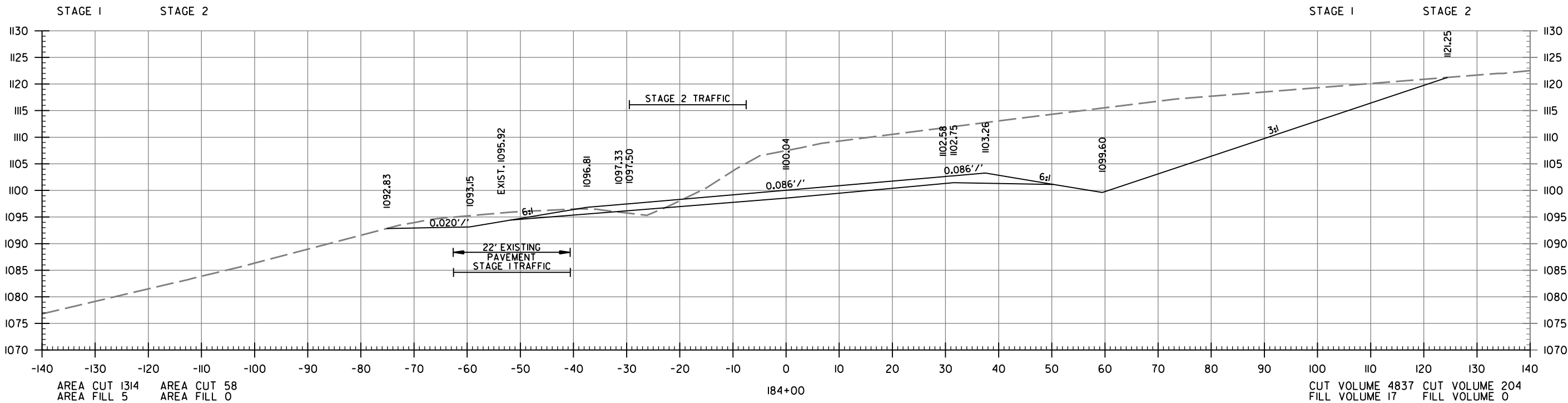


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	108	117
CROSS SECTIONS						



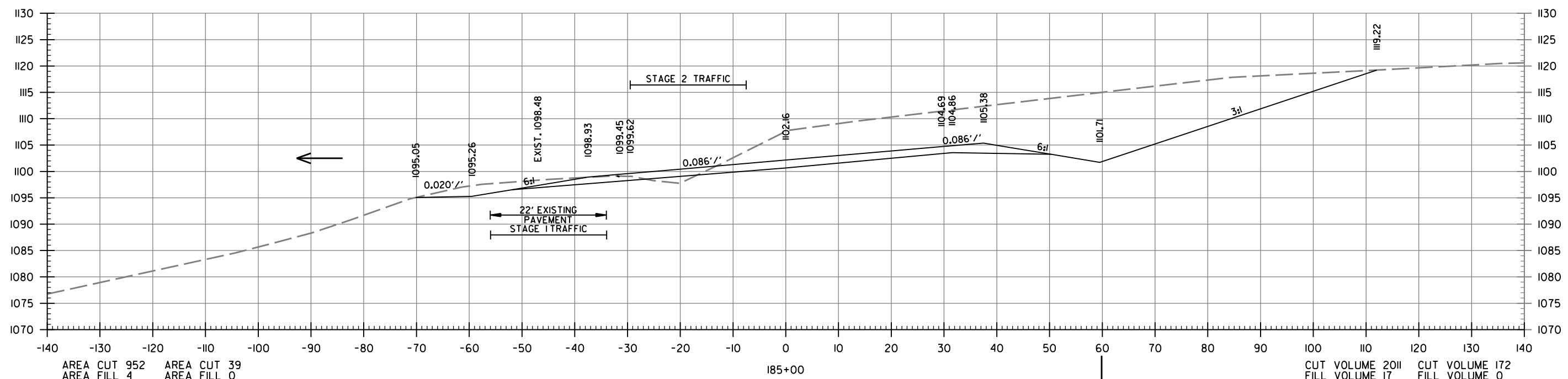
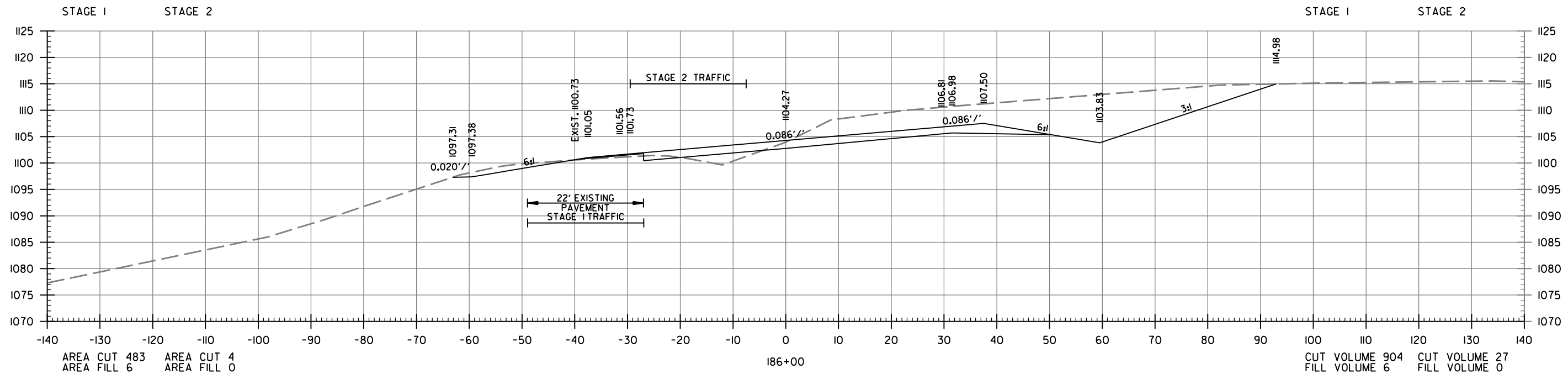
CROSS SECTION STA. 181+00 TO STA. 182+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	109	117
CROSS SECTIONS						



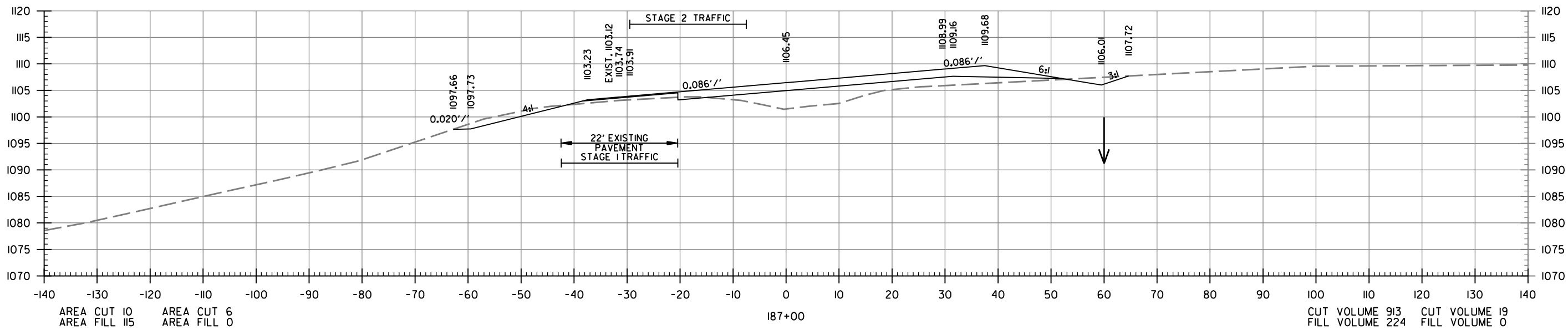
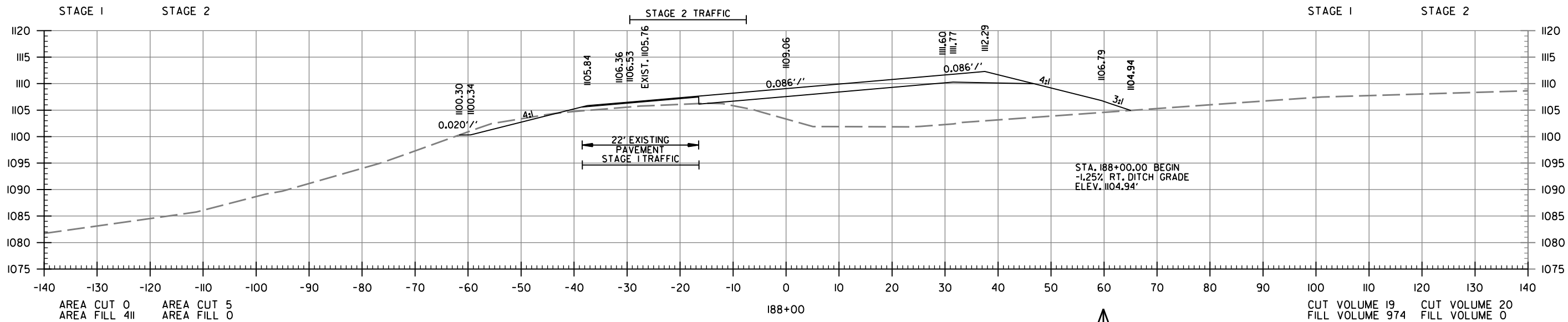
CROSS SECTION STA. 183+00 TO STA. 184+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	110	117
CROSS SECTIONS						



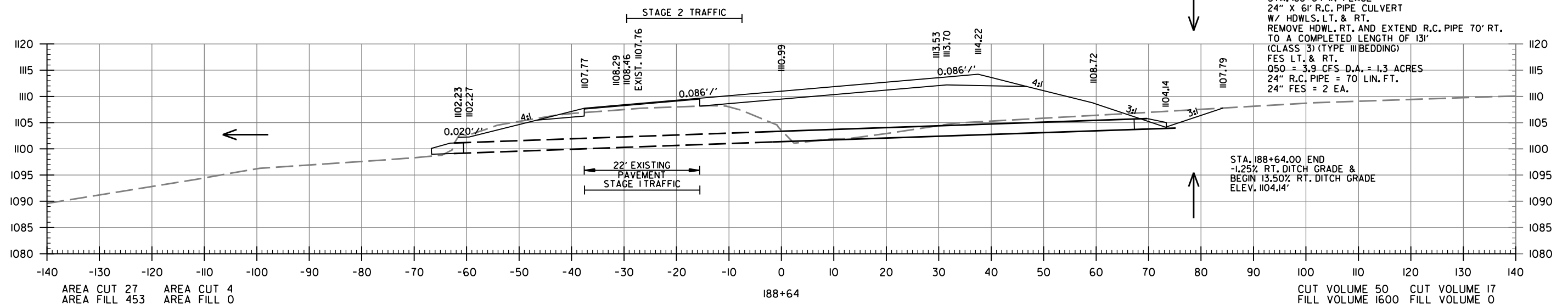
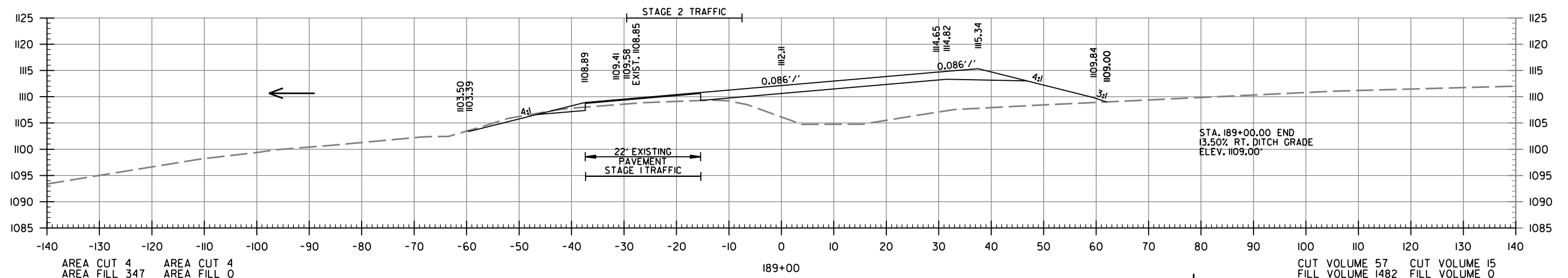
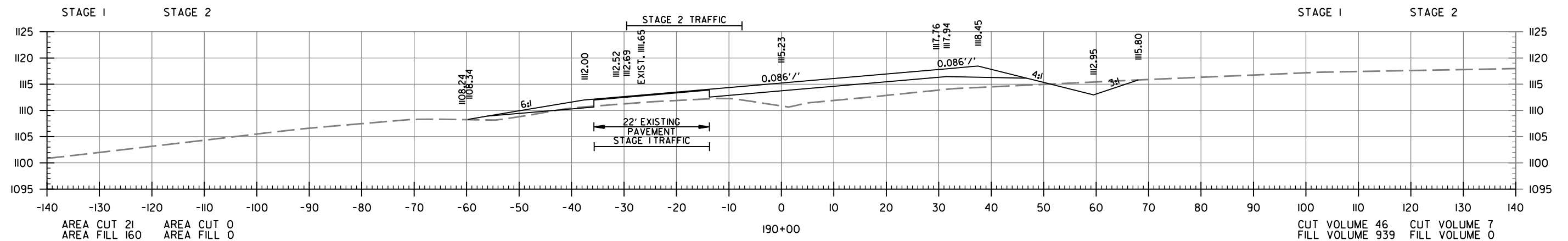
CROSS SECTION STA. 185+00 TO STA. 186+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	111	117
CROSS SECTIONS						



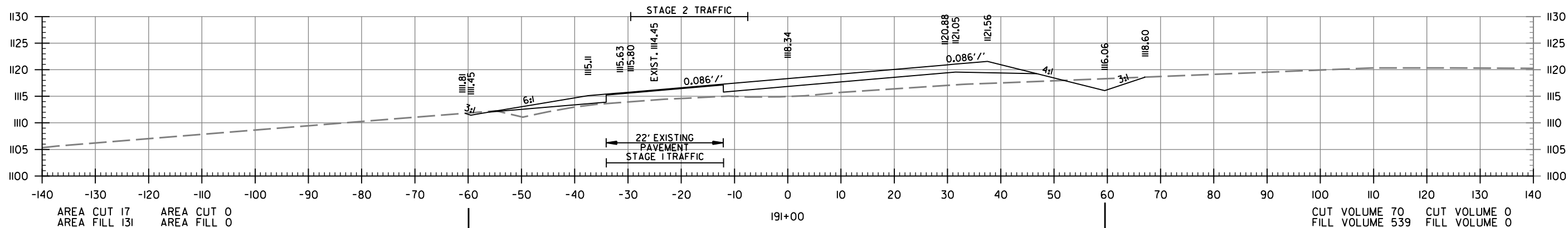
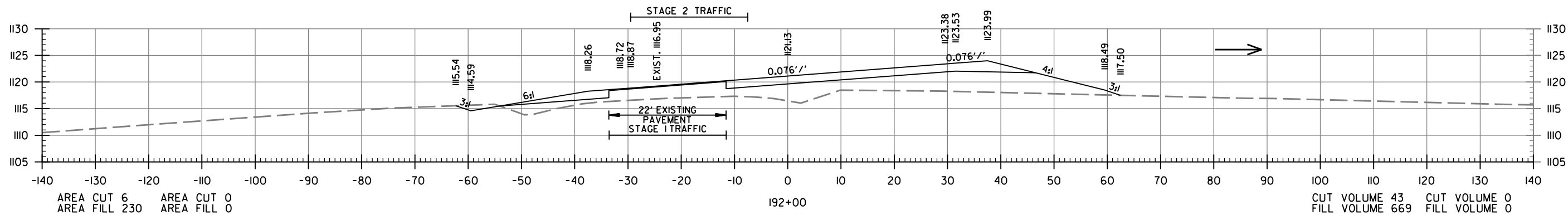
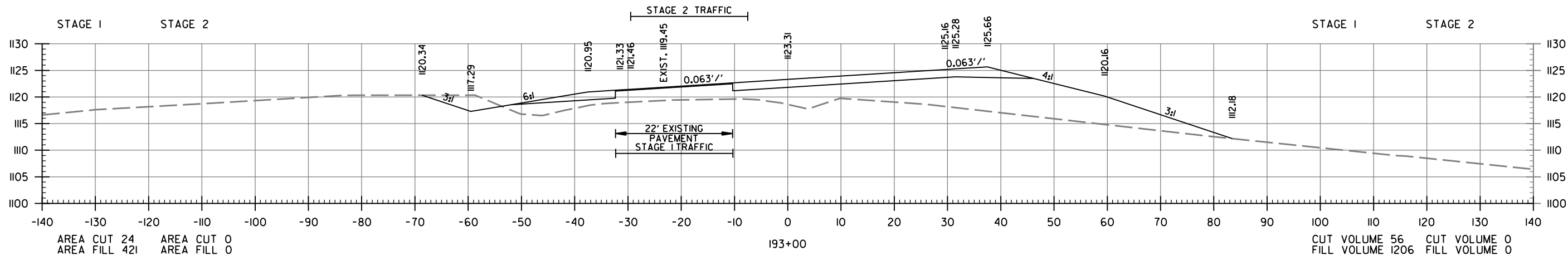
CROSS SECTION STA. 187+00 TO STA. 188+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	112	117
		CROSS SECTIONS				



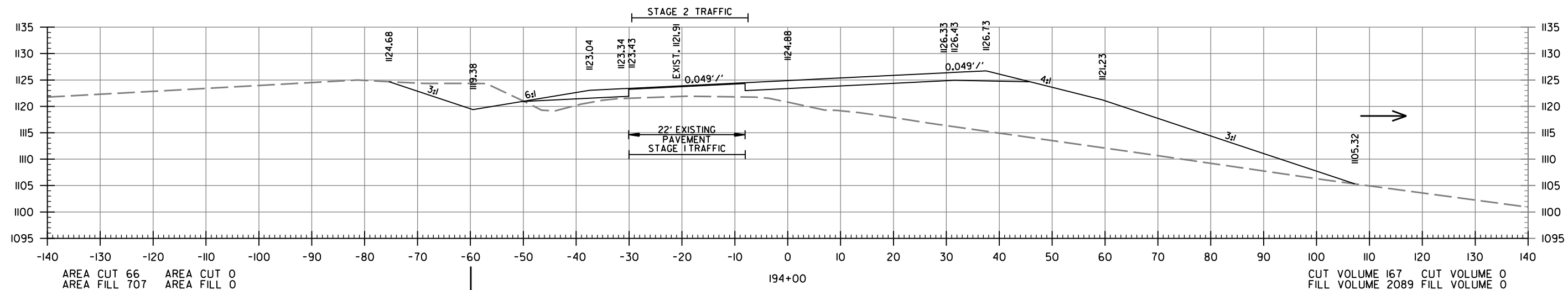
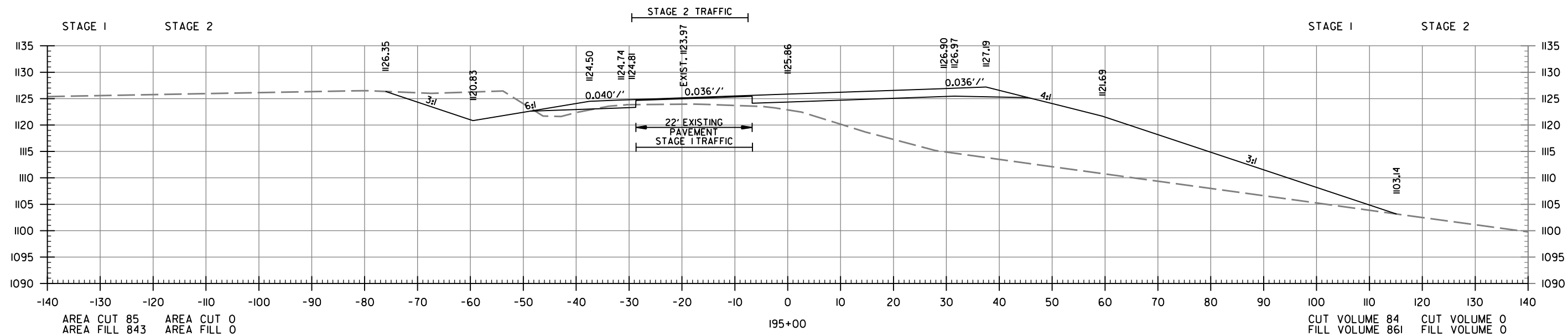
CROSS SECTION STA. 188+64 TO STA. 190+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	113	117
CROSS SECTIONS						



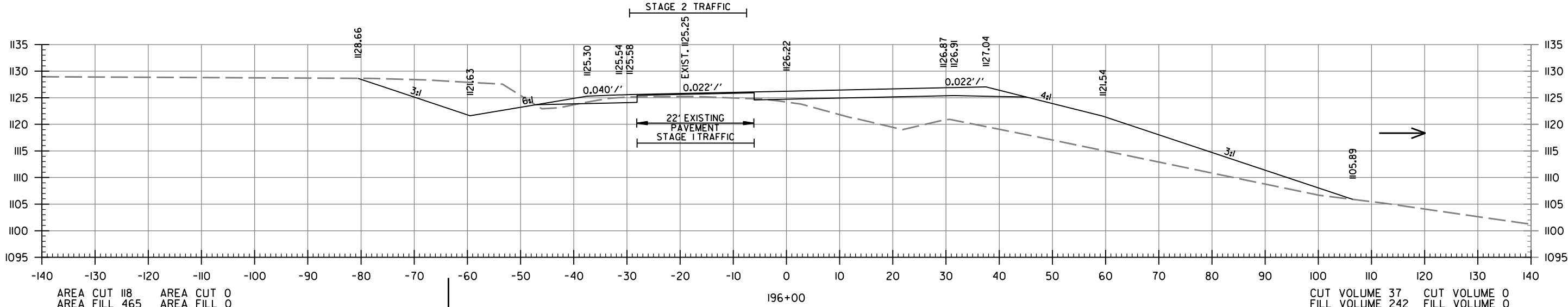
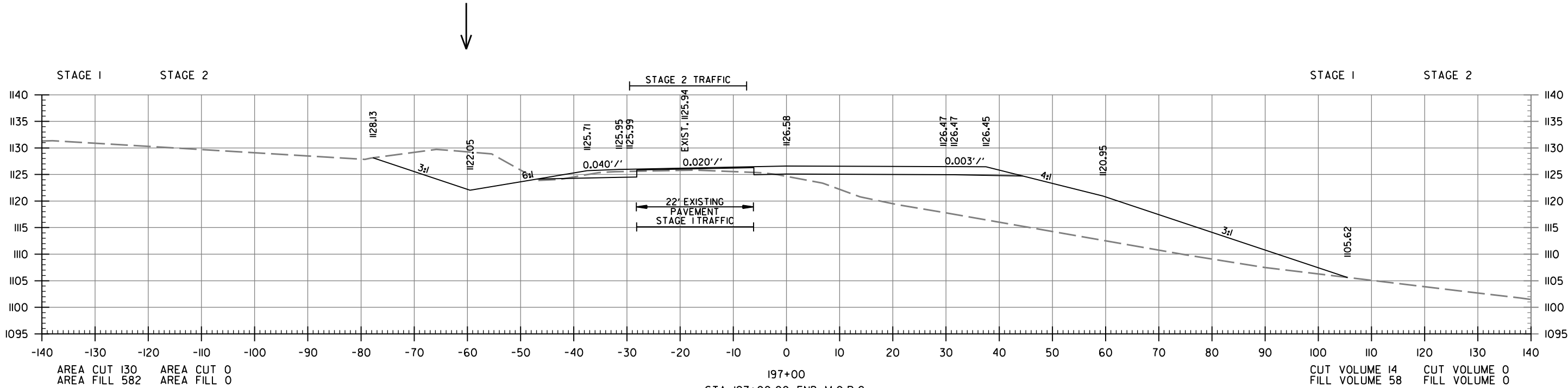
CROSS SECTION STA. 191+00 TO STA. 193+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	114	117
CROSS SECTIONS						



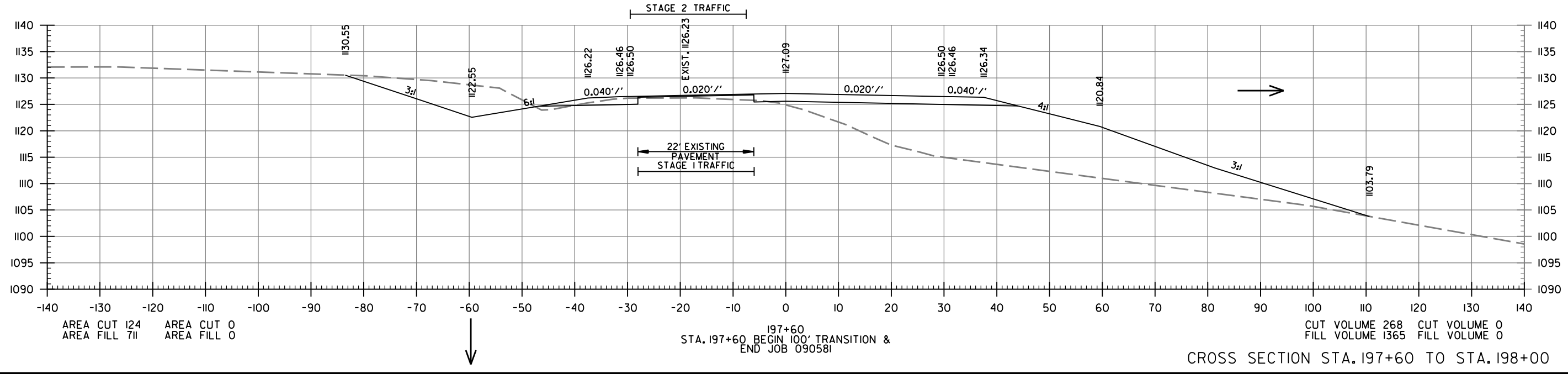
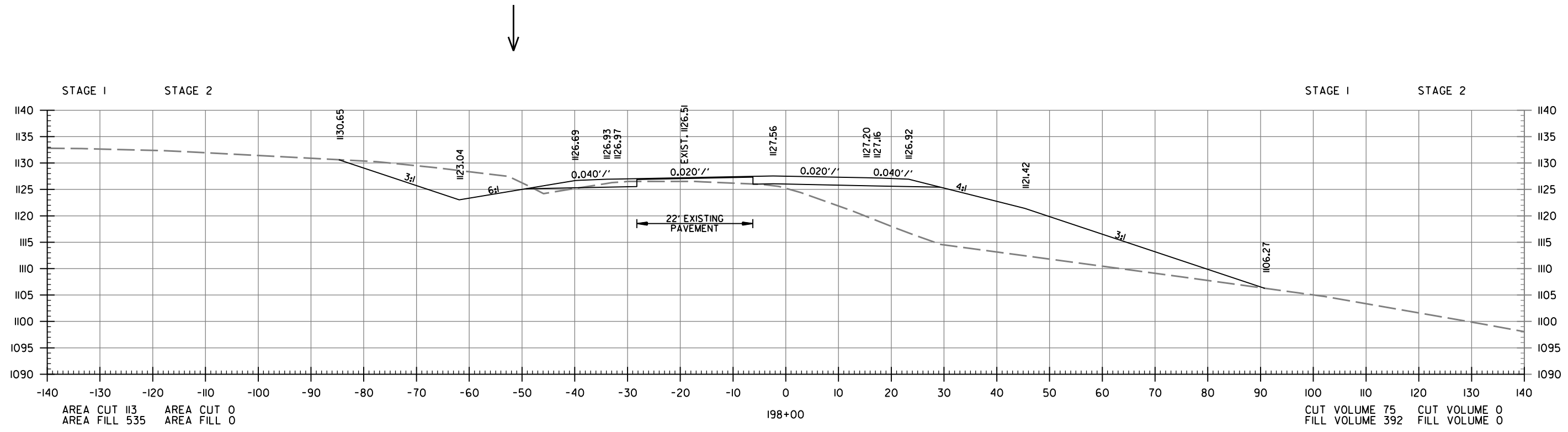
CROSS SECTION STA. 194+00 TO STA. 195+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
04-25-2025		6	ARK.	090581	115	117
CROSS SECTIONS						



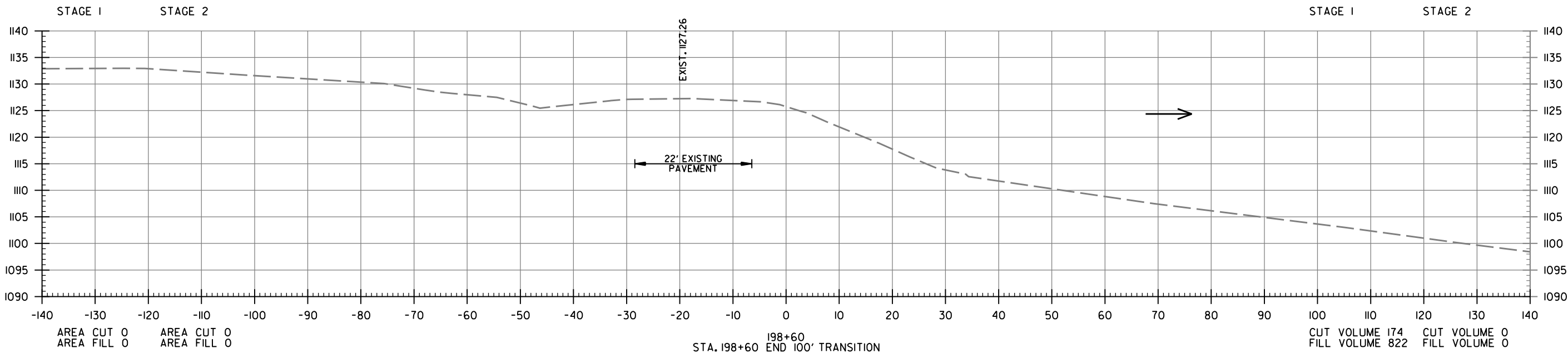
CROSS SECTION STA. 196+00 TO STA. 197+00

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	116	117
CROSS SECTIONS						

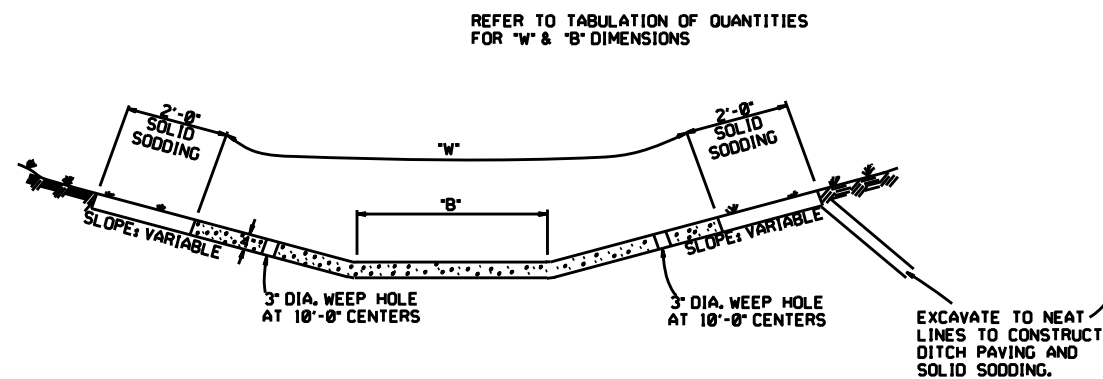


RB43088 3/12/2025
R090581.DGN MicroStation v8.11.9.578

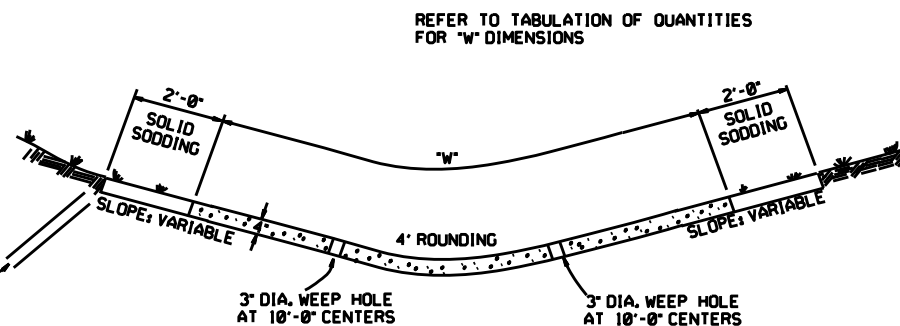
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090581	117	117
CROSS SECTIONS						



CROSS SECTION STA. 198+60 TO STA. 198+60

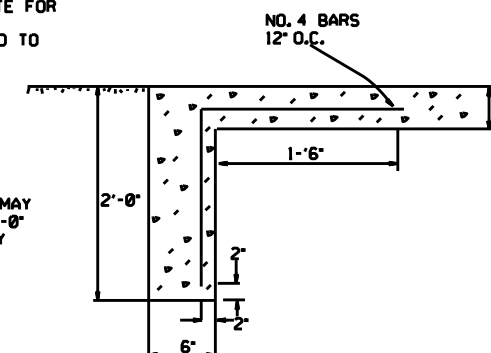


TYPE A

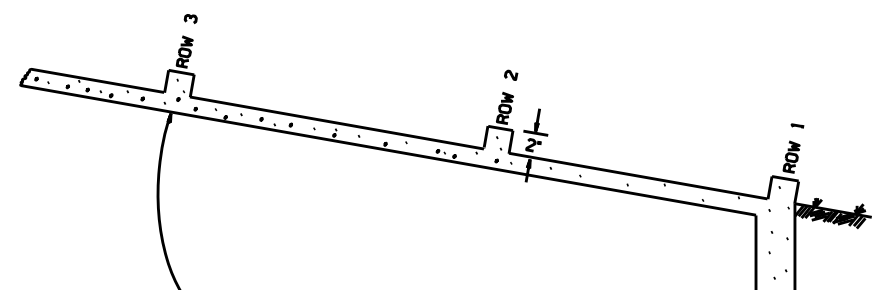


TYPE B

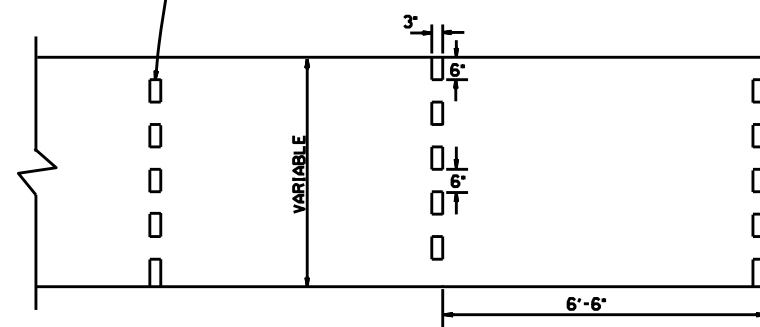
THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR "CONCRETE DITCH PAVING."



TOE WALL DETAIL FOR CONCRETE DITCH PAVING



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 INCLUDED 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.

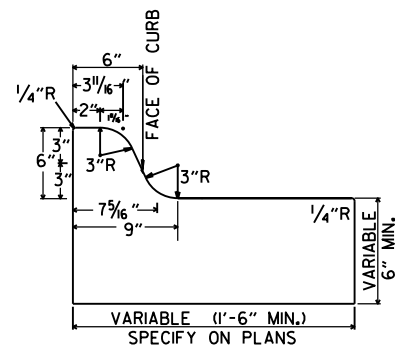
1' WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILM'D
12-8-16	CORRECTED ENERGY DISSIPATOR DRAWING AND NOTE	
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.	632-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	639-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED	
10-2-72	TYPED A & B	
	REVISED AND REDRAWN	508-10-2-72

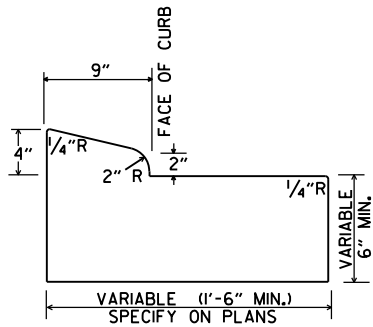
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

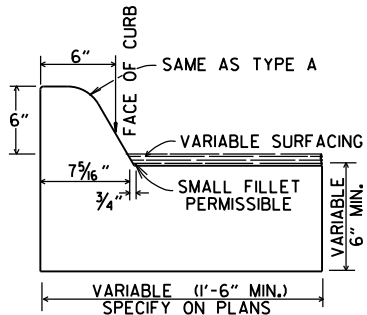
STANDARD DRAWING CDP-1



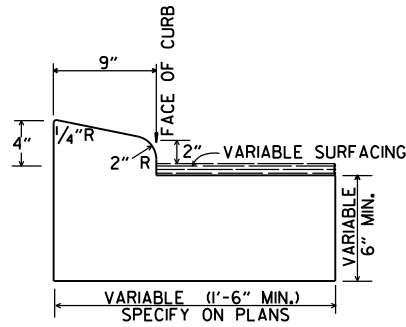
TYPE A



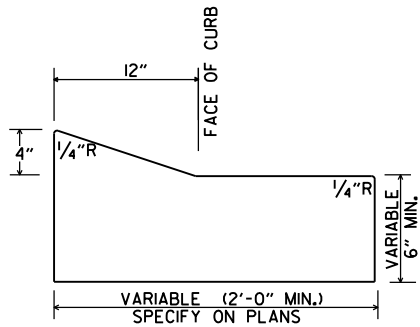
TYPE B-1



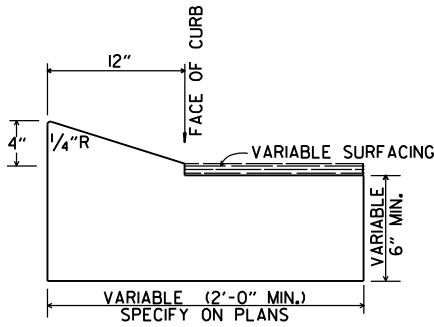
TYPE C



TYPE B-2

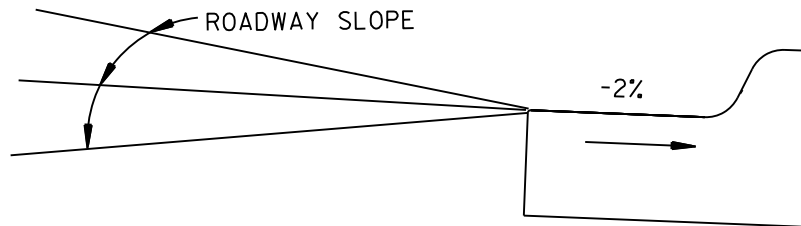


TYPE E-1



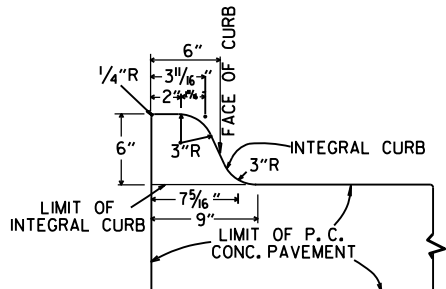
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

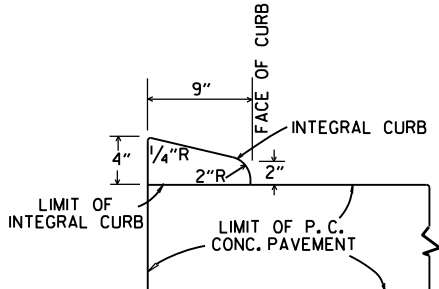


DETAIL OF GUTTER SLOPE

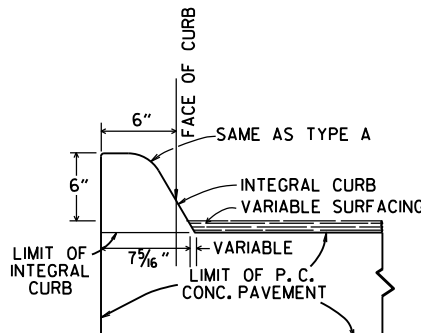
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

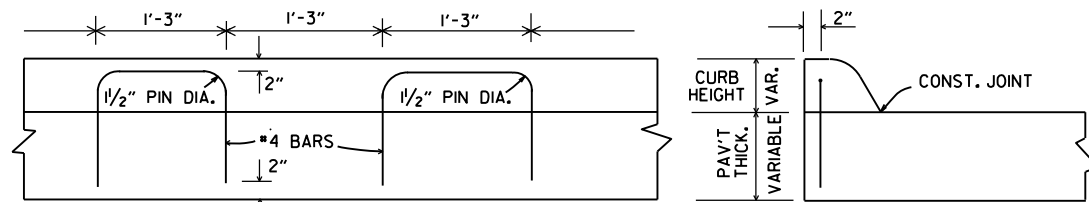


TYPE B



TYPE C

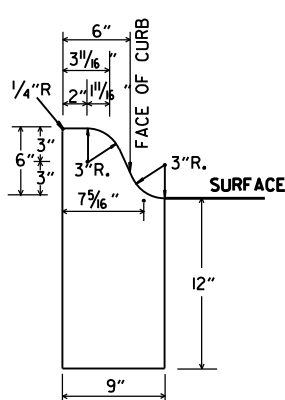
INTEGRAL CURB



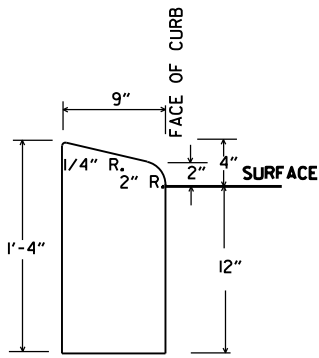
LONGITUDINAL SECTION

ELEVATION

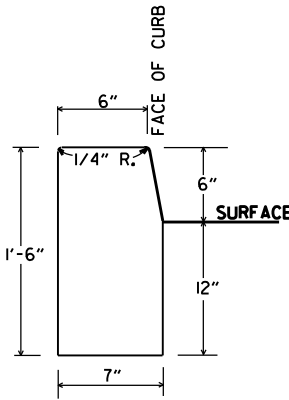
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



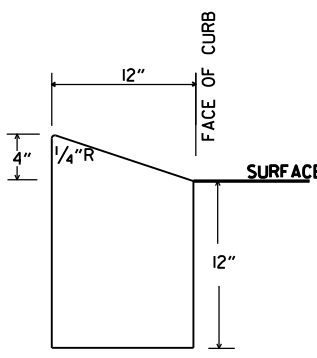
TYPE A



TYPE B

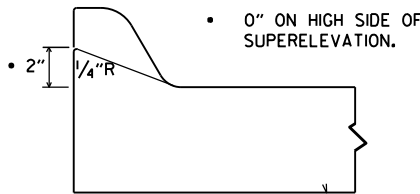


TYPE D



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.

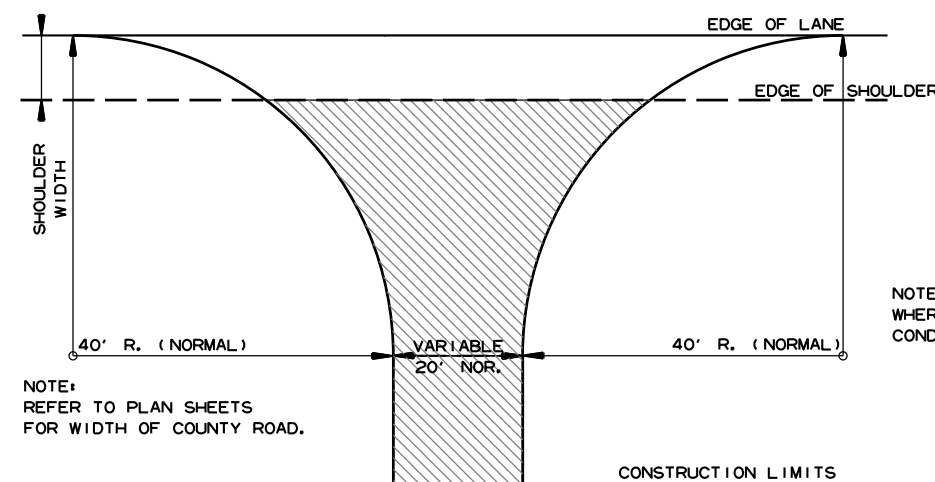
DETAILS OF MODIFIED CURB

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 I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
1-1-73	REVISED MODIFIED CURB	500-1-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

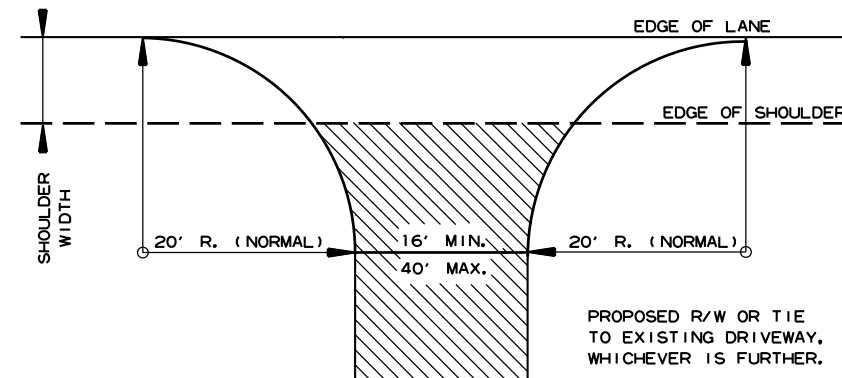
STANDARD DRAWING CG-1



NOTE: TURNOUTS 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, UNLESS OTHERWISE SPECIFIED IN PLANS.

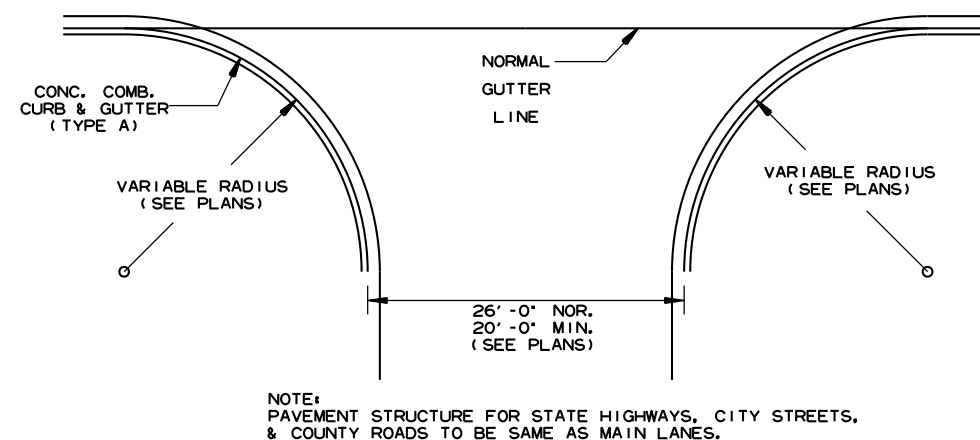
DETAIL FOR COUNTY ROAD TURNOUTS
OPEN SHOULDER SECTION



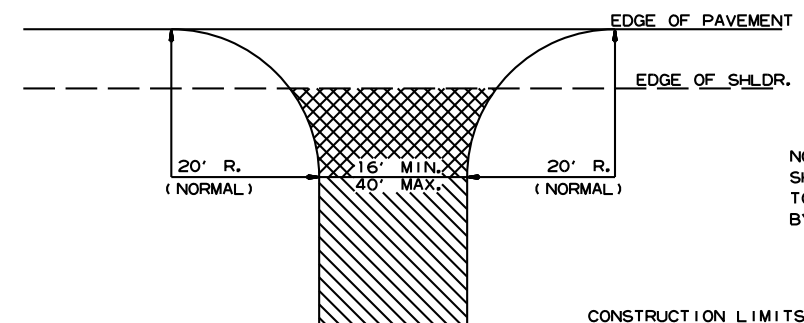
NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

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

DETAIL FOR DRIVEWAY TURNOUTS
OPEN SHOULDER SECTION
(ARTERIALS)



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



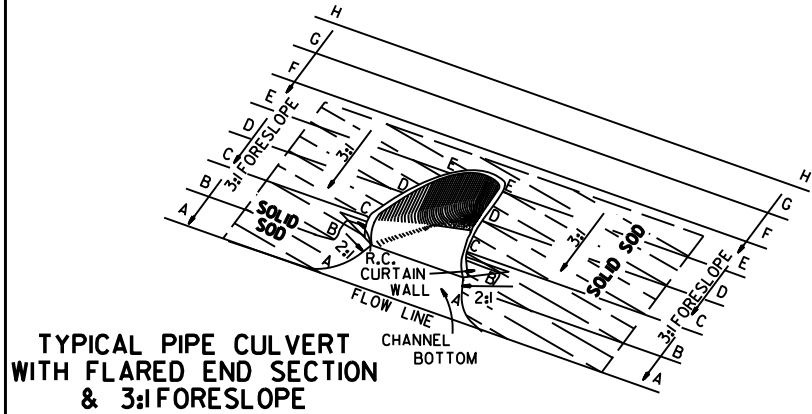
ASPHALT CONCRETE HOT MIX SURFACE COURSE (220 LBS. PER SQ. YD.) AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH IF ASPHALT DRIVE EXIST OR 6" CONCRETE IF CONCRETE DRIVE EXIST.

AGGREGATE BASE COURSE (CLASS 7) 9" COMP. DEPTH OR CONFORM TO EXISTING DRIVEWAY

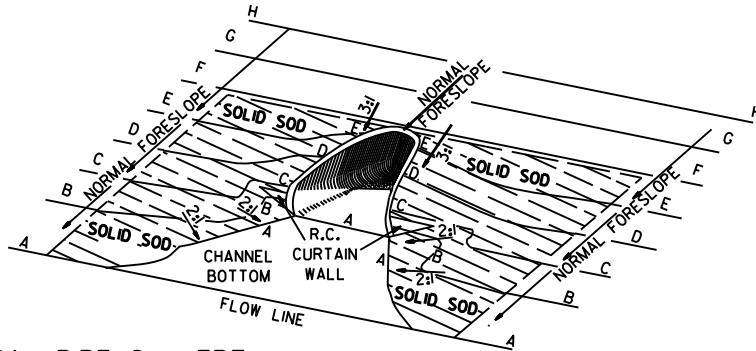
DETAIL FOR DRIVEWAY TURNOUTS
(COLLECTORS)

5-19-22		ISSUED
DATE REV	DATE FILMED	DESCRIPTION

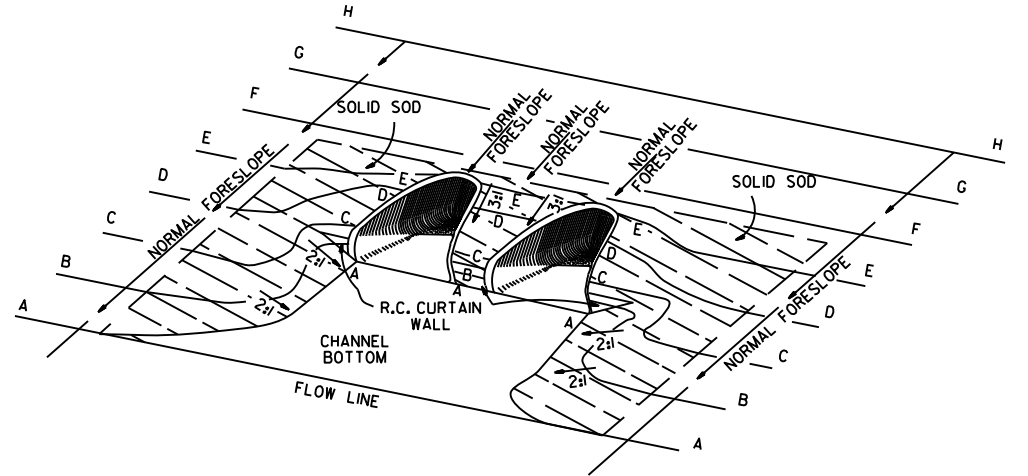
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & STREET
TURNOUTS
STANDARD DRAWING DR-2



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

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

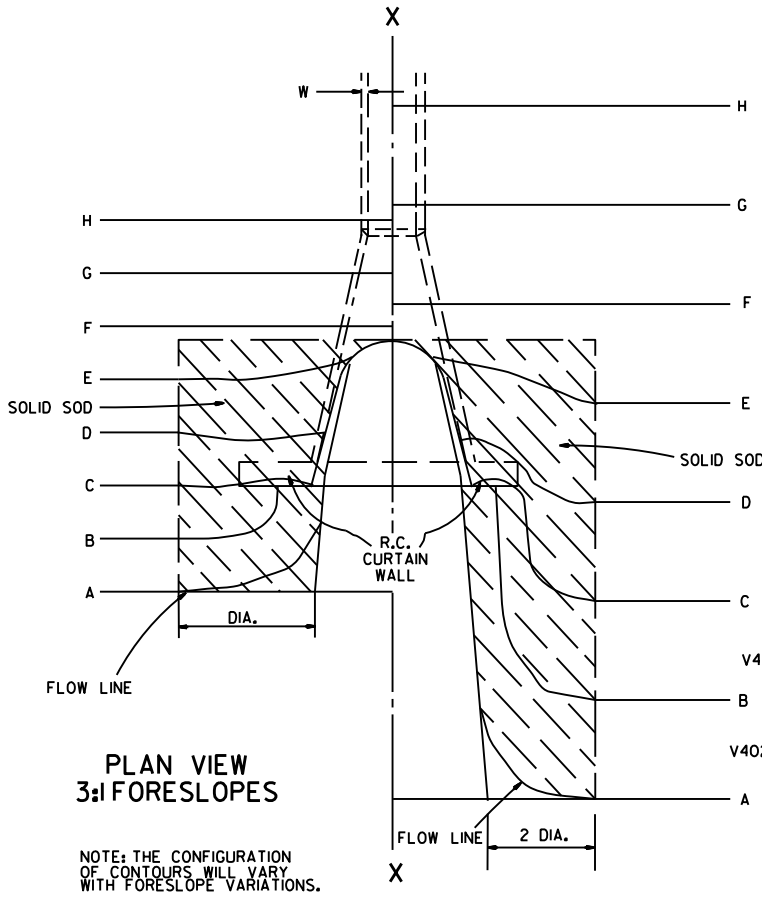
PIPE DIA.	H ₁	L ₁	L	L (DBL.) 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"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

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

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'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	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'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	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'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	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

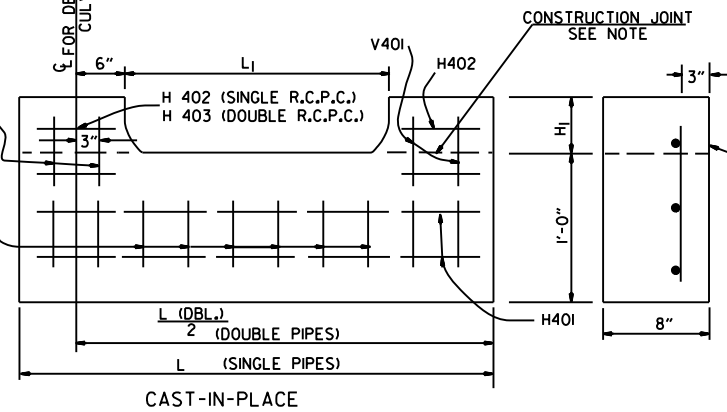
ALL REINFORCING STEEL #4 BARS @ 6" O.C.



PLAN VIEW
3:1 FORESLOPES

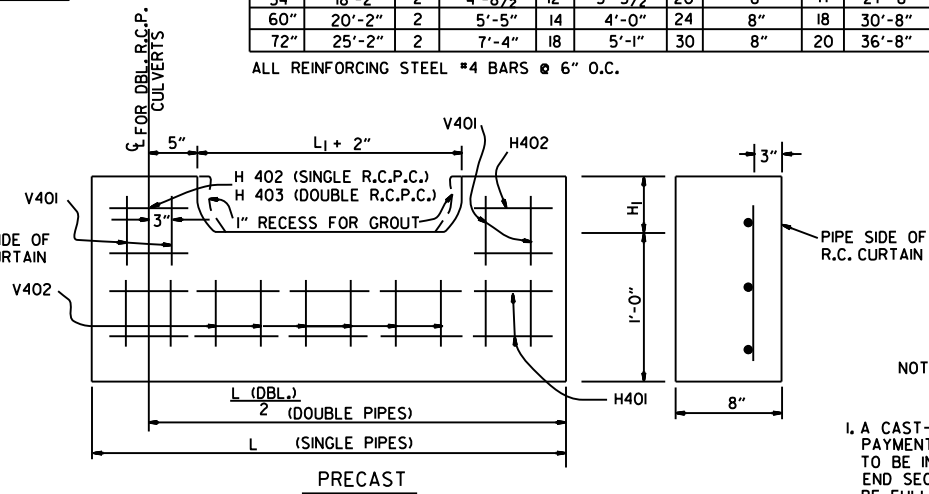
NOTE: THE CONFIGURATION
OF CONTOURS WILL VARY
WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES



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

R.C. CURTAIN WALL DETAILS



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

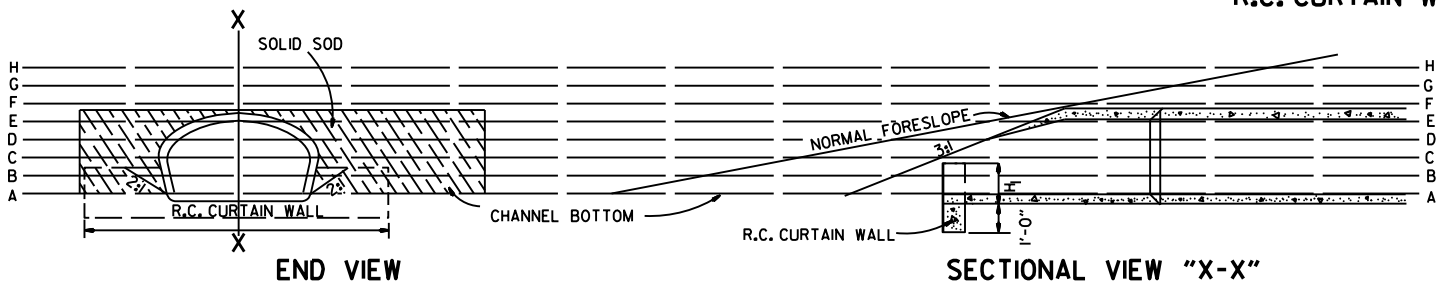
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.					
	3:1	4:1	6:1	3:1	4:1	6:1	3:1	4:1	6:1	3:1	4:1	6:1
	SQ. YDS.						SQ. YDS.					
18"	5	7	12	6	8	13	10	14	24	12	16	27
24"	8	12	19	9	13	20	16	22	36	18	24	40
30"	13	18	29	14	19	30	24	32	54	24	32	52
36"	17	26	41	18	28	43	32	44	72	32	44	72
42"	23	35	55	25	37	57	40	56	96	40	56	96
48"	29	46	68	31	48	70	50	70	120	50	70	120
54"	35	57	85	37	59	87	60	84	144	60	84	144
60"	45	62	104	48	65	107	80	112	180	80	112	180
72"	64	92	156	67	95	159	112	156	270	112	156	270

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.



END VIEW

SECTIONAL VIEW "X-X"

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

FLARED END SECTION

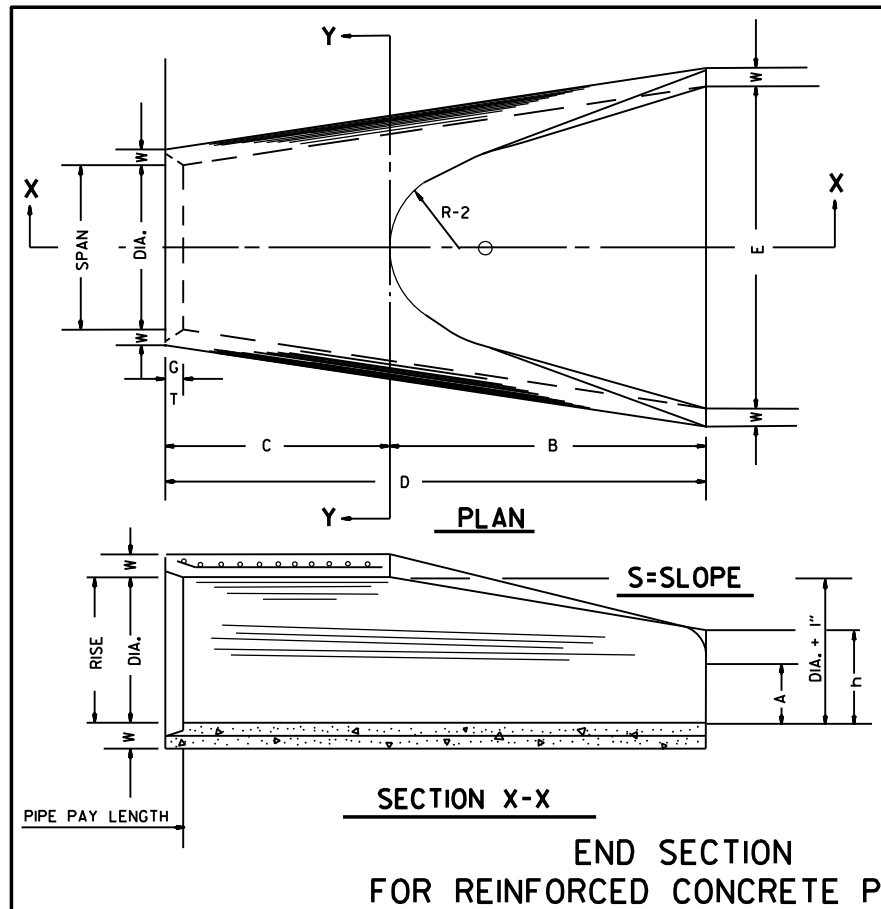
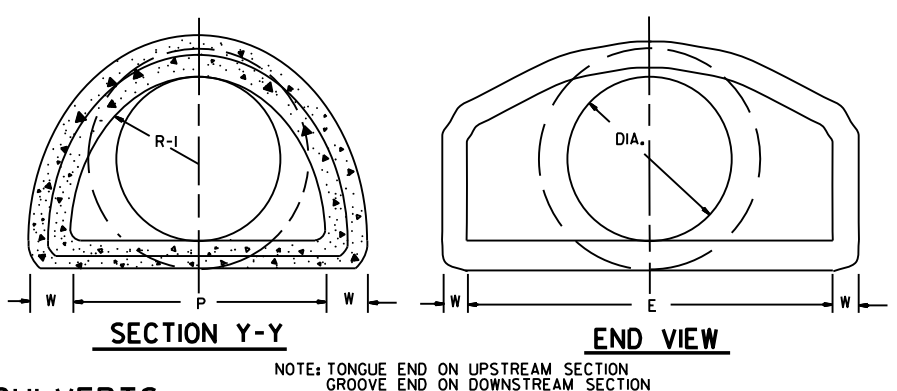
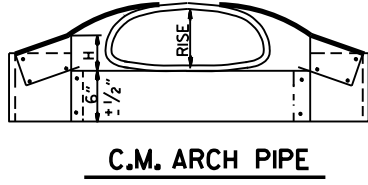
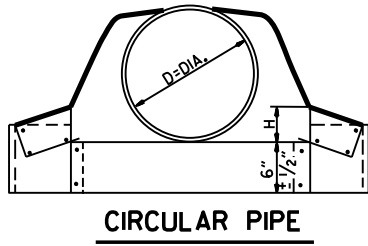
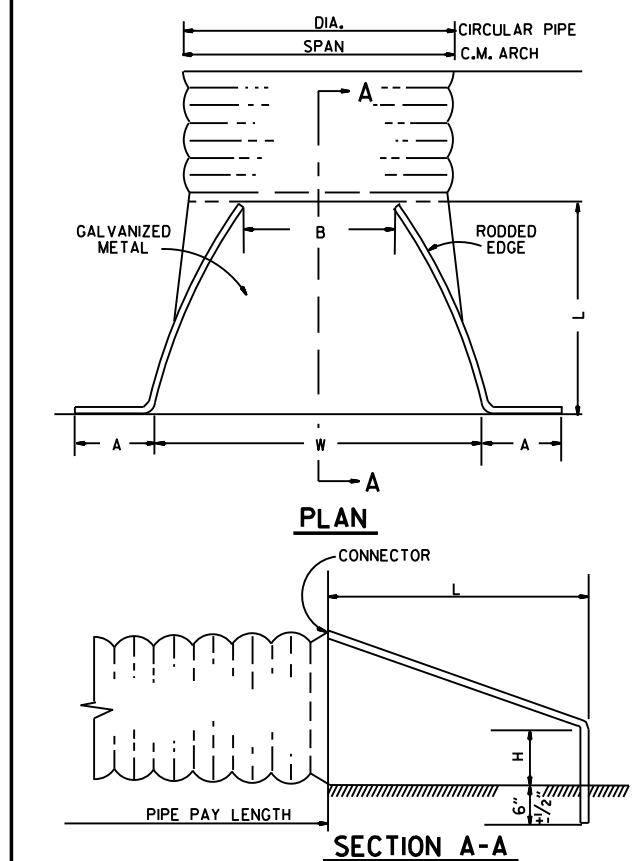
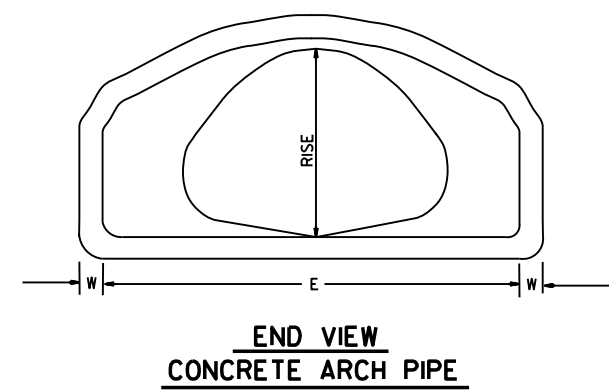


TABLE OF DIMENSIONS														
DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	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 1/8"	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 1/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 1/8"	24"	5"	13250	4'-6"



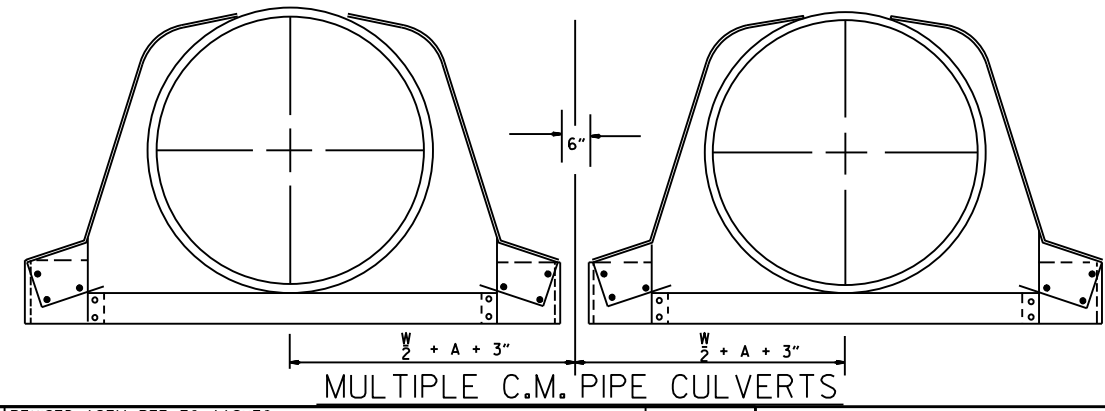
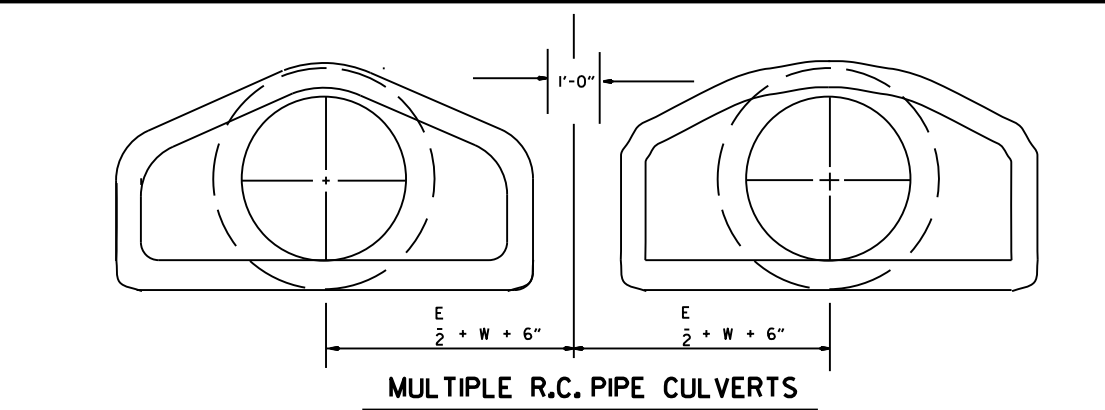
ARCH PIPE														
EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2:1
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/8"	13"	2 1/2"	2 1/2:1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

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



CIRCULAR PIPE								
D. DIA.	GAUGE	A 1" $\pm$	B. MAX.	H 1" $\pm$	L 1 1/2" $\pm$	W 2" $\pm$	S	
INCHES								
12	16	6	6	6	21	24	2 1/2:1	
15	16	7	8	6	26	30	2 1/2:1	
18	16	8	10	6	31	36	2 1/2:1	
21	16	9	12	6	36	42	2 1/2:1	
24	16	10	13	6	41	48	2 1/2:1	
30	14	12	16	8	51	60	2 1/2:1	
36	14	14	19	9	60	72	2 1/2:1	
42	12	16	22	11	69	84	2 1/2:1	
48	12	18	27	12	78	90	2 1/2:1	
54	12	18	30	12	84	102	2:1	
60	12	18	33	12	87	114	1 3/4:1	
66	12	18	36	12	87	120	1 1/2:1	
72	12	18	39	12	87	126	1 1/3:1	

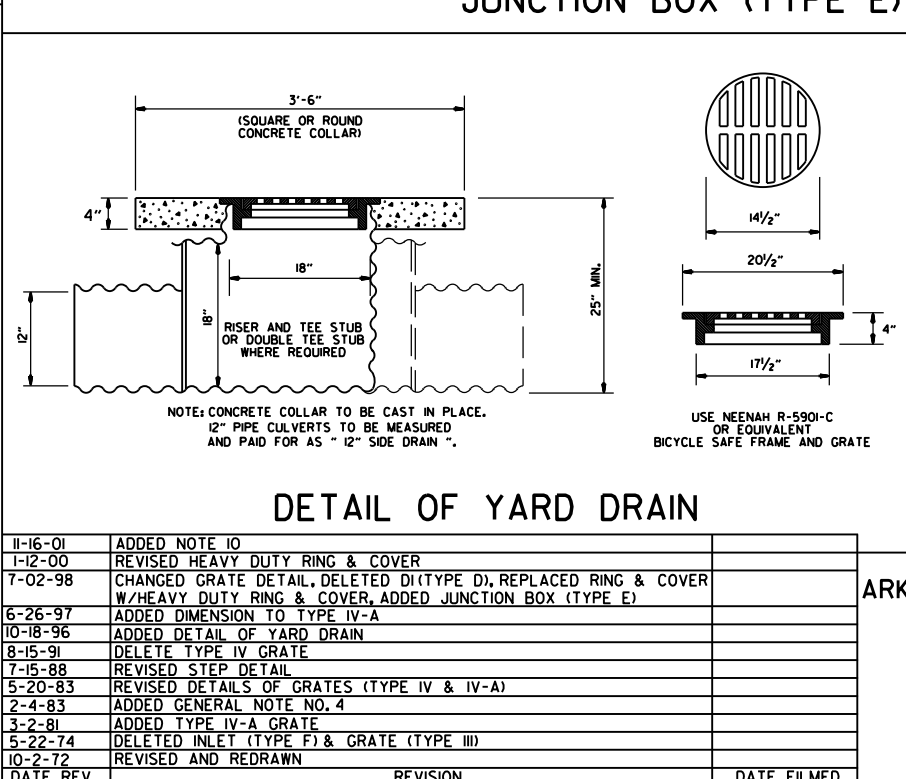
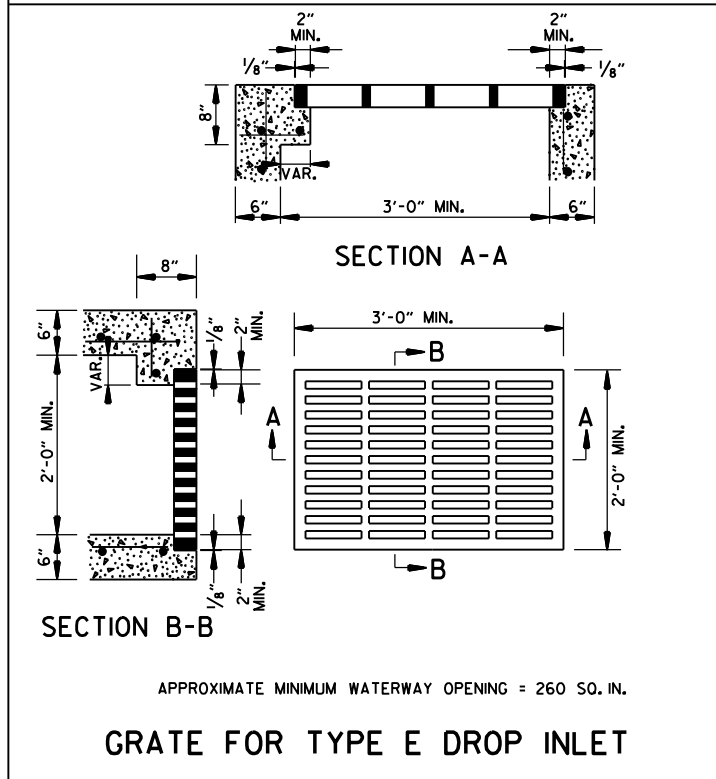
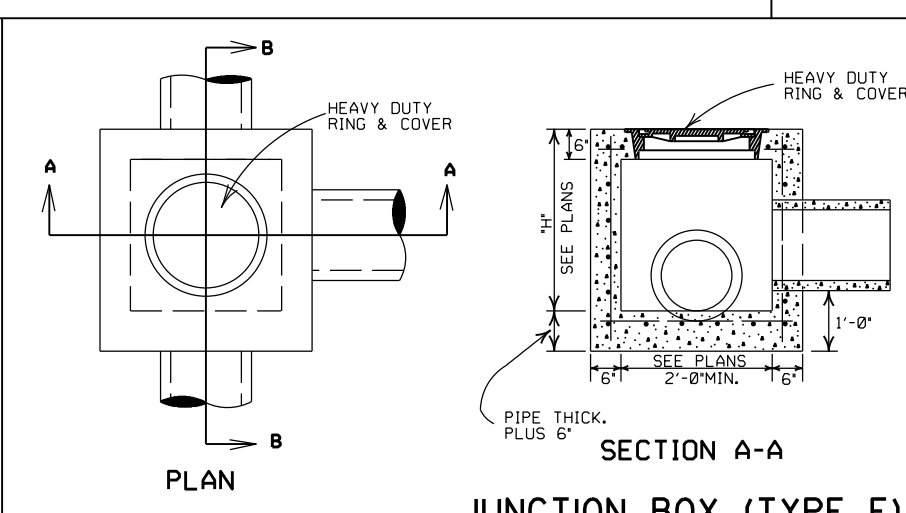
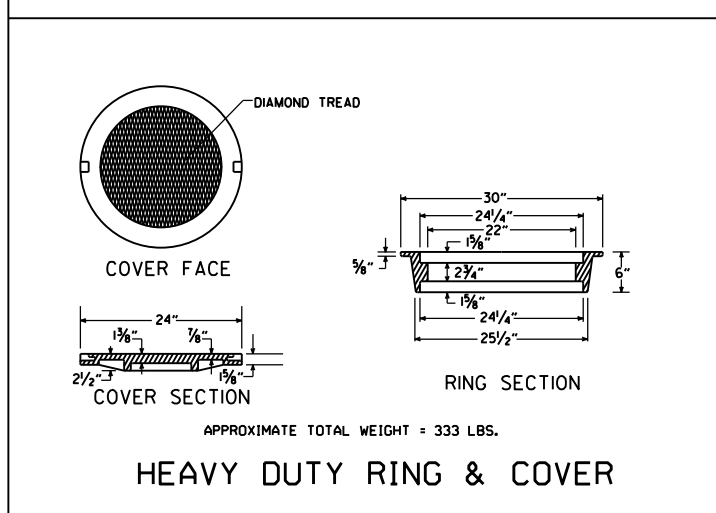
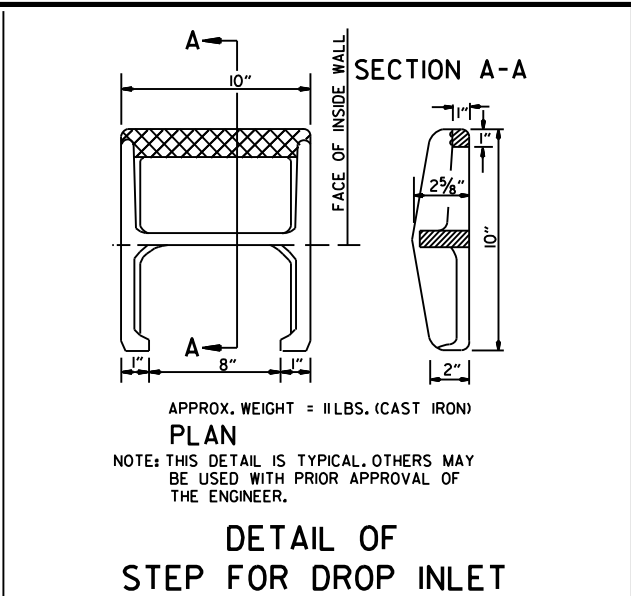
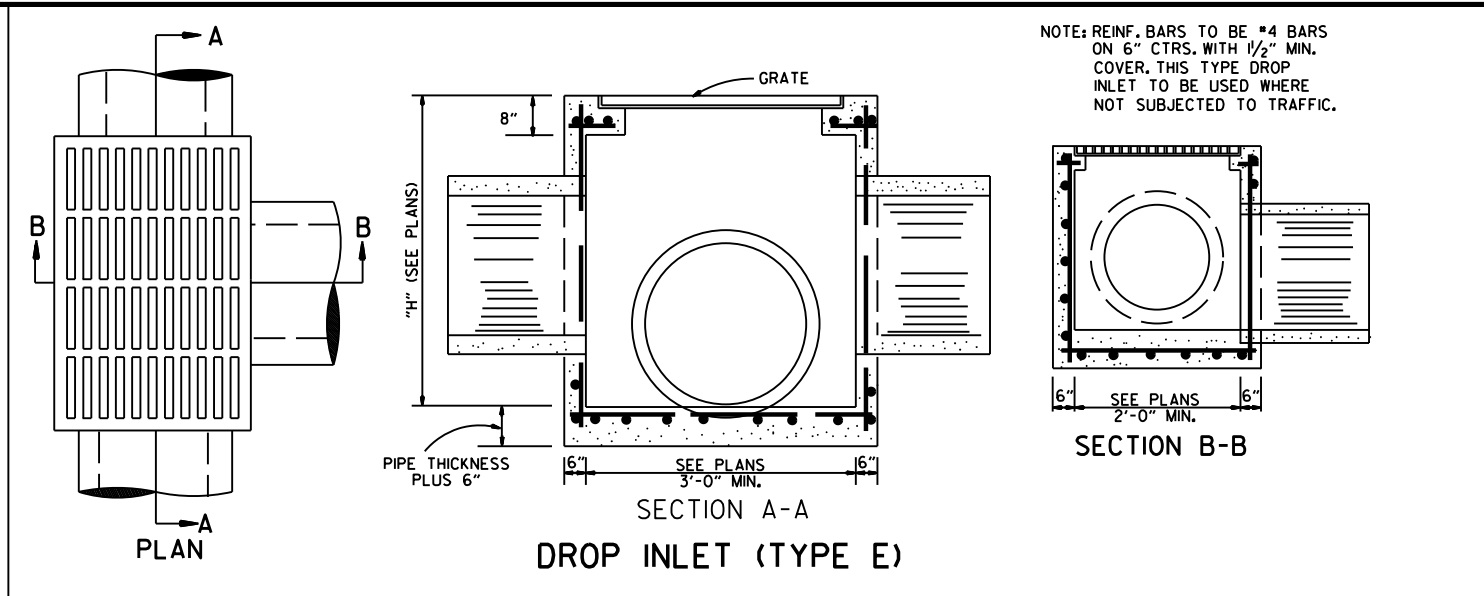
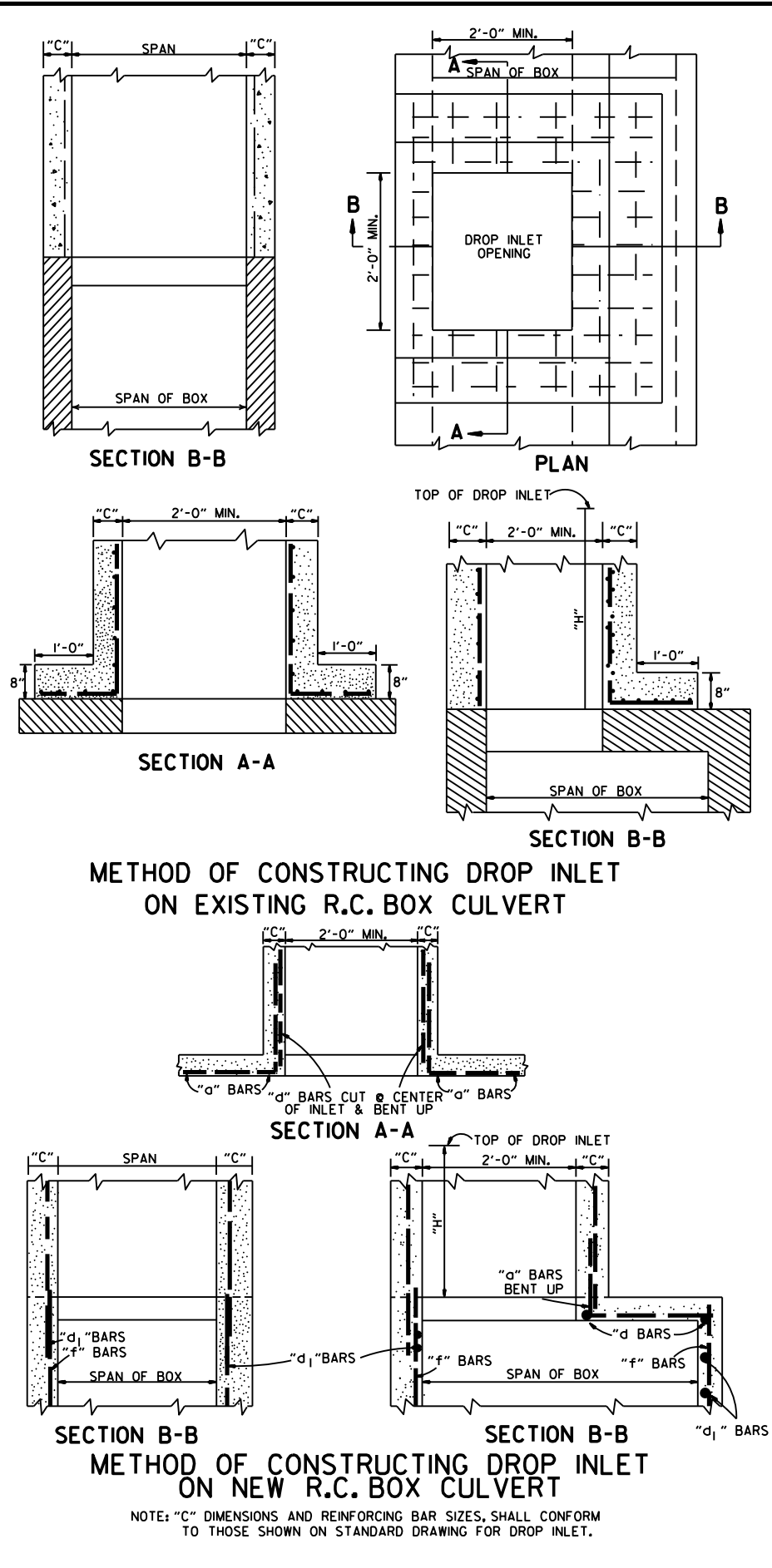
C.M. ARCH PIPE									
EQUIV. DIA.	SPAN	RISE	A 1" $\pm$	B MAX.	H 1" $\pm$	L 1/2" $\pm$	W 2" $\pm$	S	GAUGE
INCHES									
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	18	26	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/4:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



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

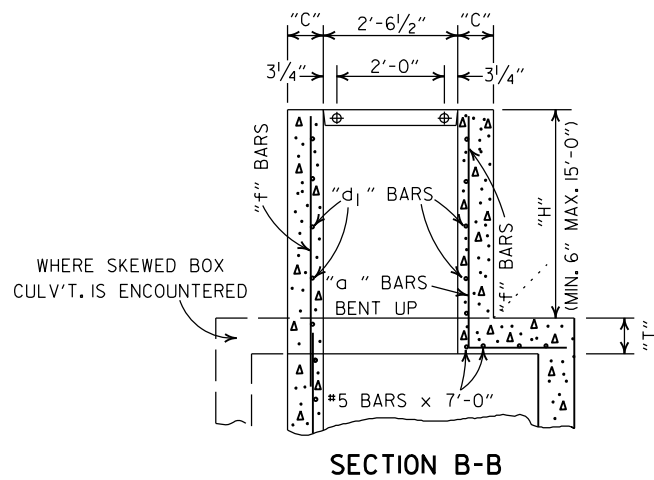
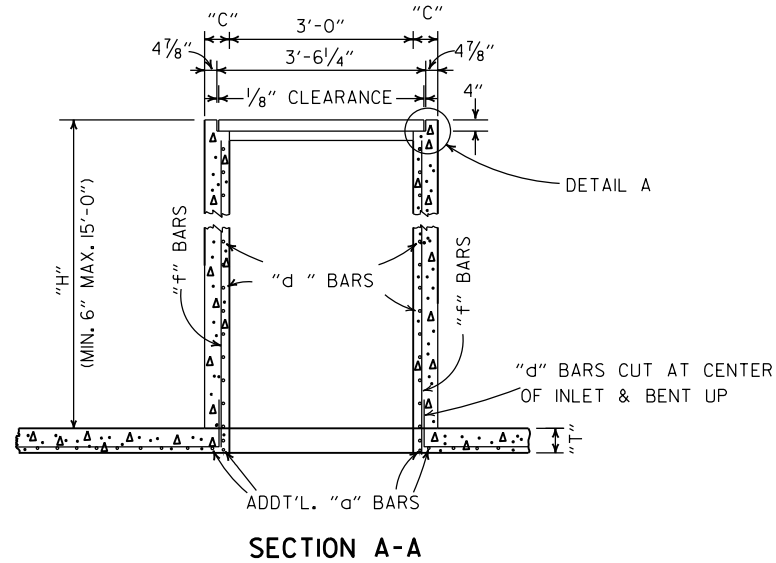
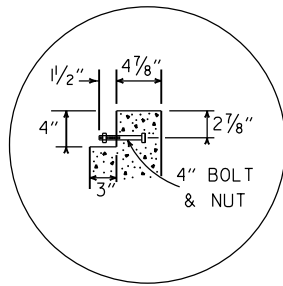
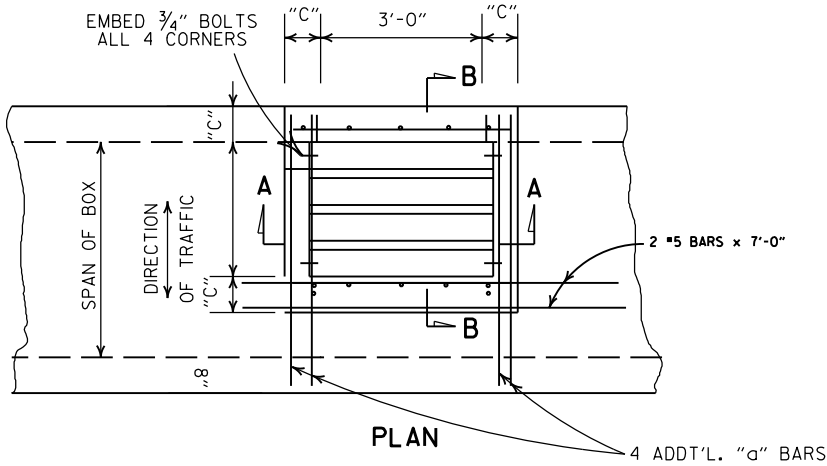
END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

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



- 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.
- SECTION A-A**
- SECTION B-B**
- 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 M 105 CLASS 35B & AASHTO M 306.
 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.
- ARKANSAS STATE HIGHWAY COMMISSION**
- DETAILS OF DROP INLETS & JUNCTION BOXES**
- STANDARD DRAWING FPC-9**

11-16-01	ADDED NOTE 10		
1-12-00	REVISED HEAVY DUTY RING & COVER		
7-02-98	CHANGED GRATE DETAIL, DELETED D (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	

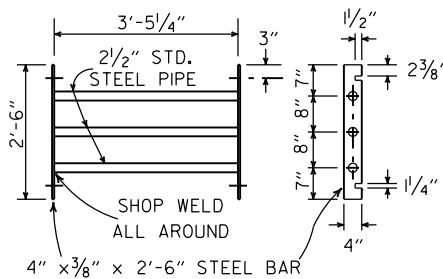


NOTE: ADDT'L. REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

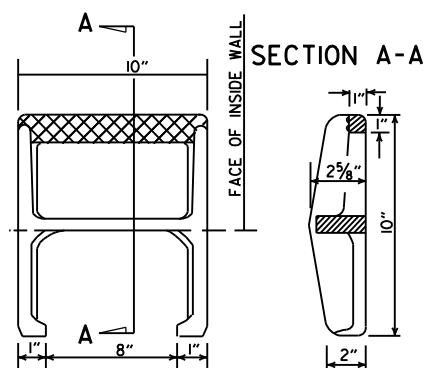
DIMENSIONS & REINF. BARS FOR D.I. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

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

DETAIL A



GRATE DETAIL



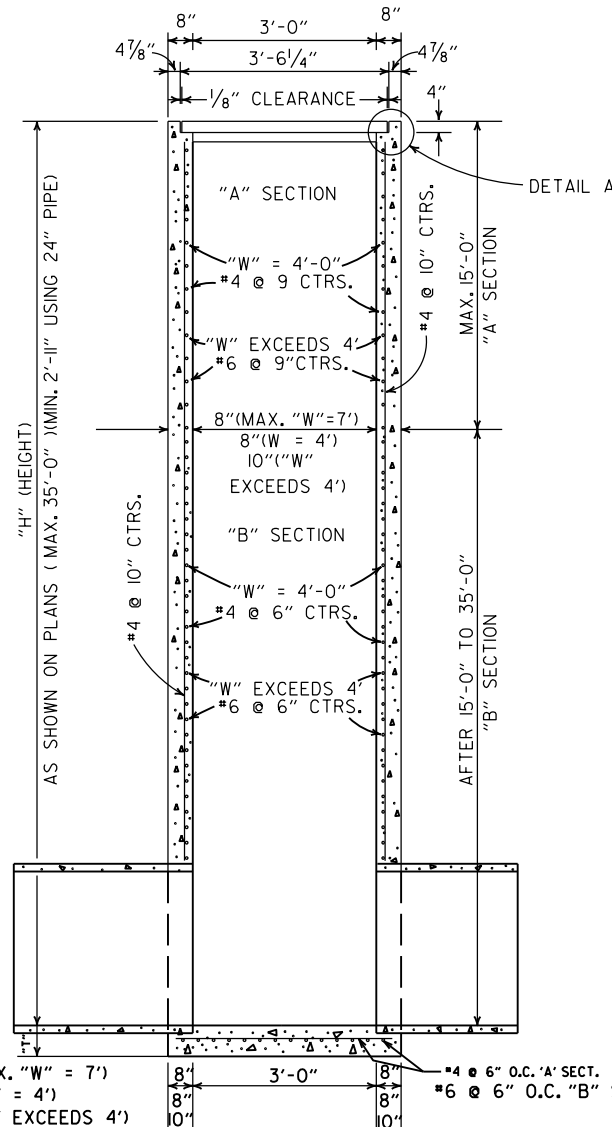
APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

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.



SECTION B-B

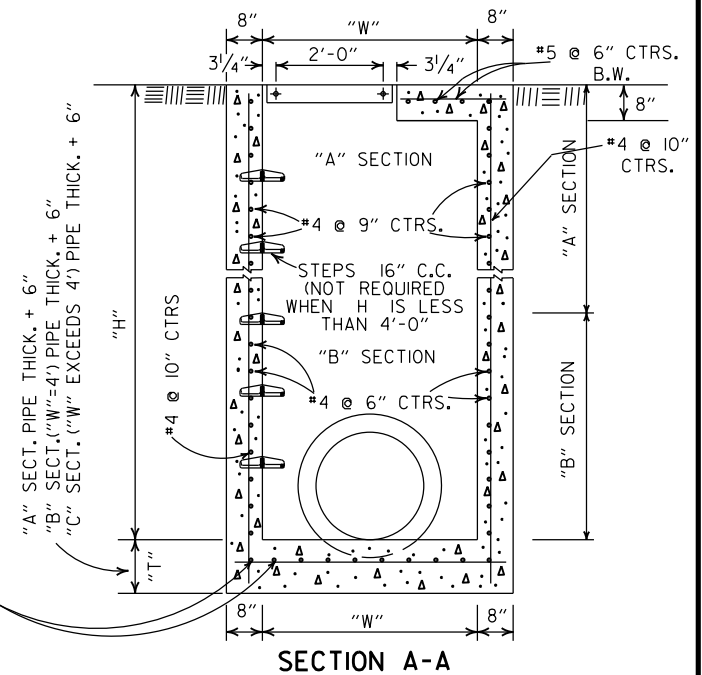
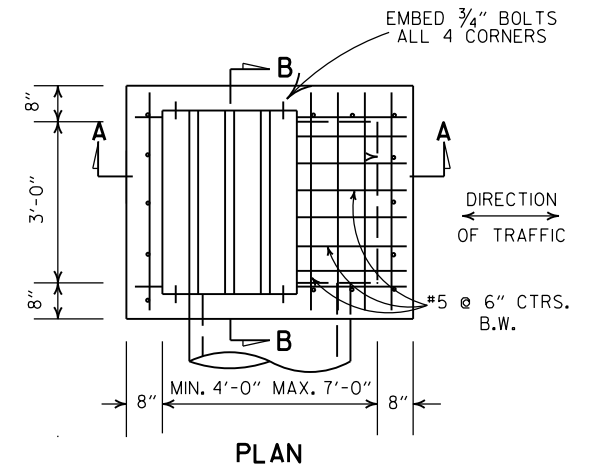
DROP INLET (TYPE RM)

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

TABLE OF "W" DIMENSIONS

I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
24"	"W"	"W"	"W"
30"	4'-0"	4'-0"	4'-0"
36"	4'-0"	4'-0"	4'-5"
42"	4'-0"	4'-3"	5'-3"
48"	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.

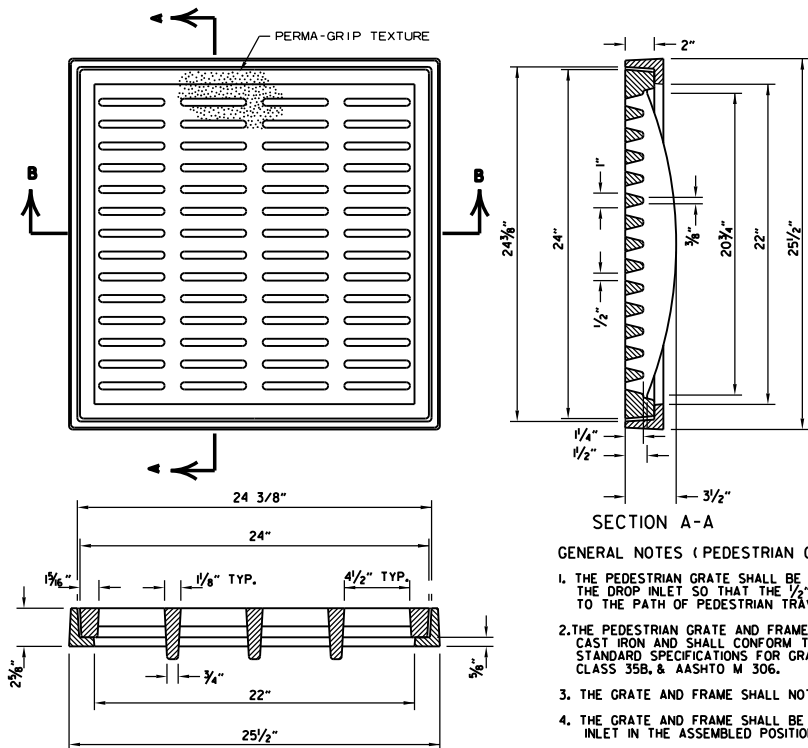


SECTION A-A

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

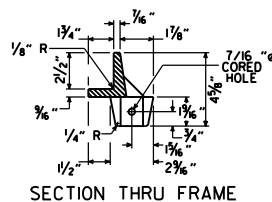
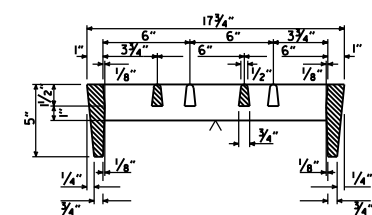
STANDARD DRAWING FPC-9D



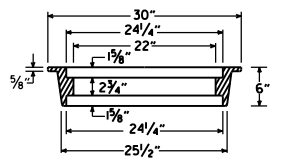
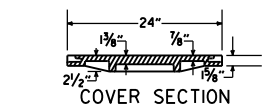
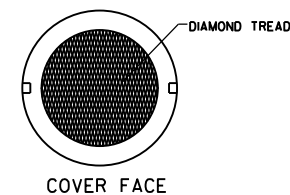
SECTION B-B
DETAILS OF PEDESTRIAN GRATE AND FRAME

GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE 1/2\"
2. THE PEDESTRIAN 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, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 21 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.



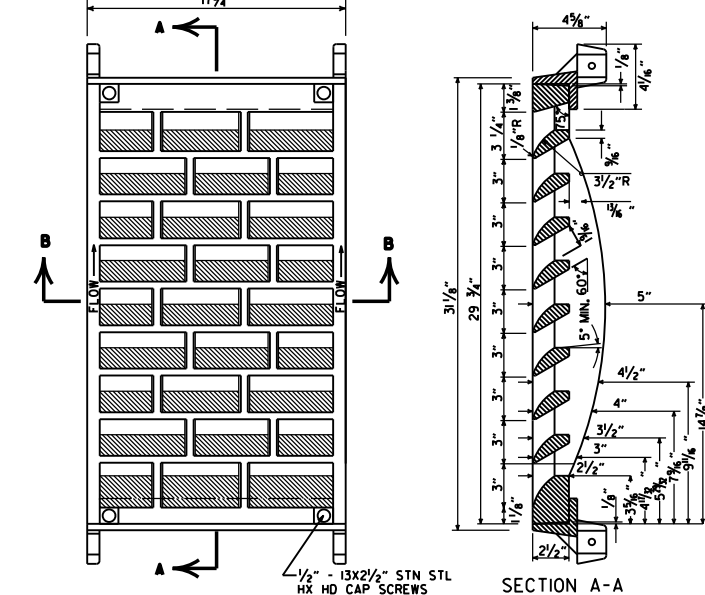
SECTION A-A
DETAILS OF DROP INLET
(TYPE ST)



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

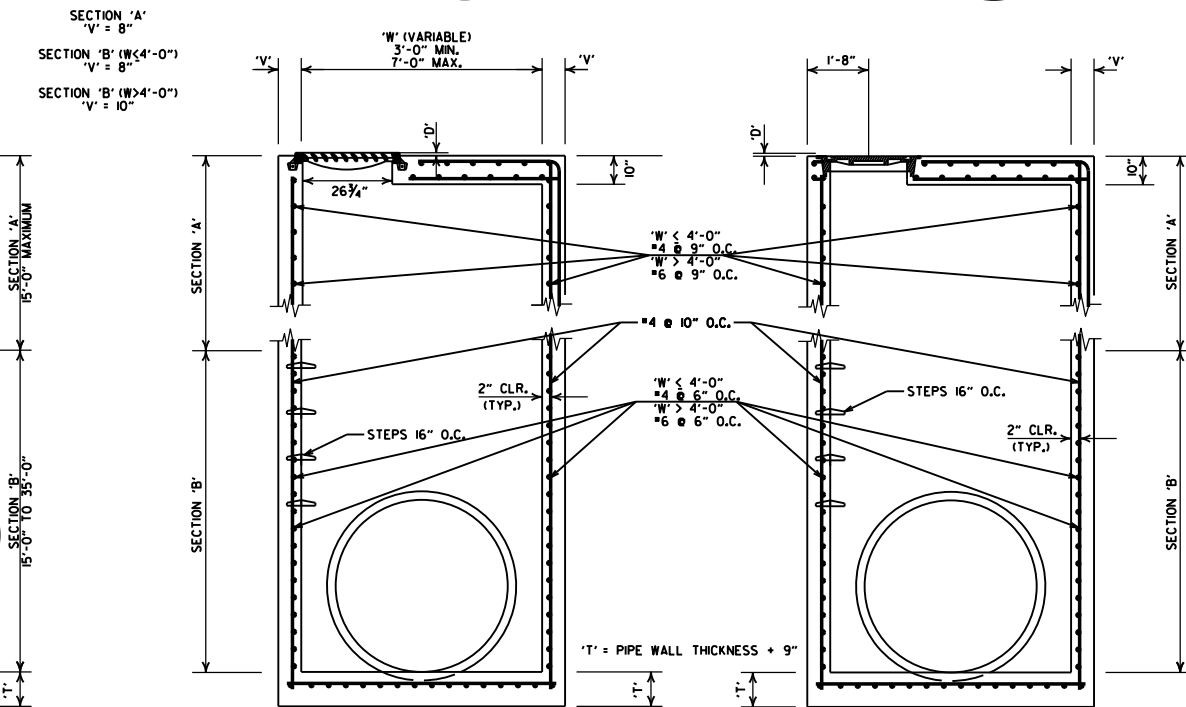
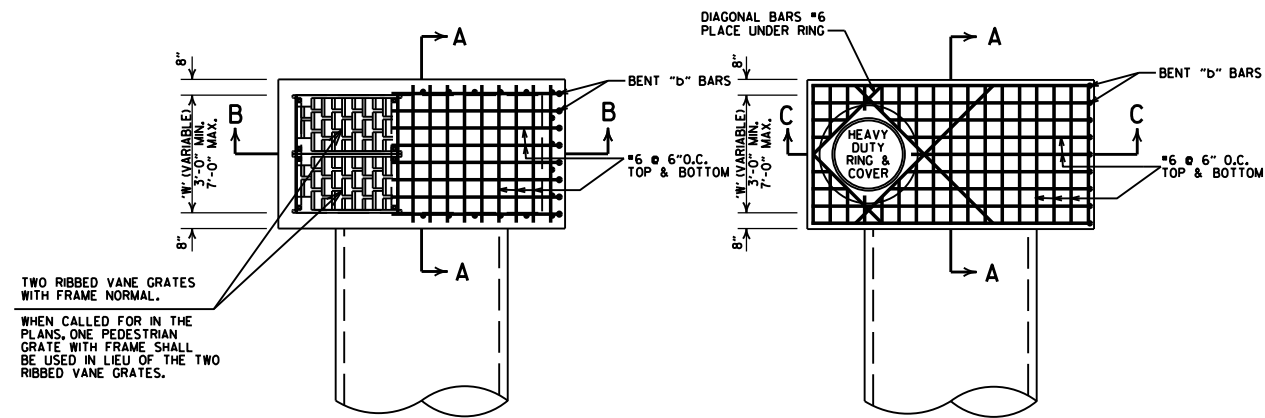
GENERAL NOTES (RIBBED VANE GRATE & FRAME)

1. RIBBED VANE 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, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.



DETAILS OF RIBBED VANE GRATE AND FRAME

DETAIL OF BENT "b" BAR



SECTION B-B
DETAILS OF JUNCTION BOX
(TYPE ST)

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

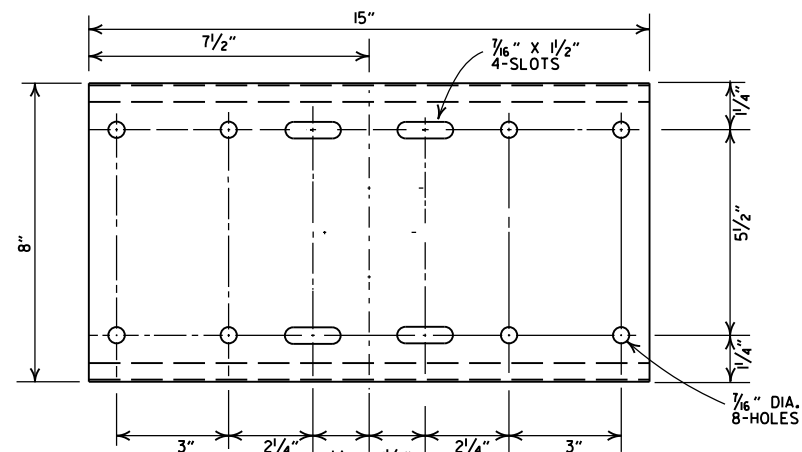
1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0\"
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0\"
3. ALL EXPOSED CORNERS ARE TO HAVE A 3/4\"

GENERAL NOTES (HEAVY DUTY RING & COVER):

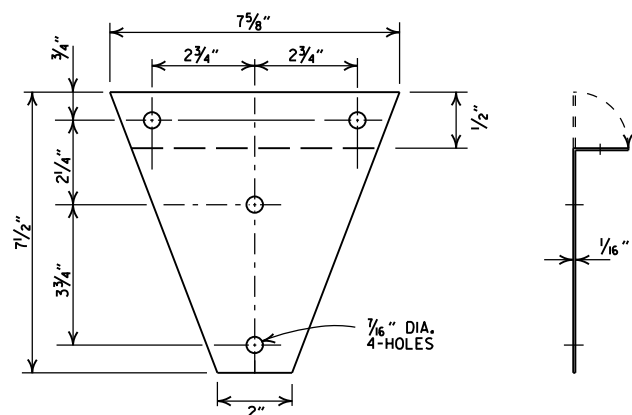
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. 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.

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

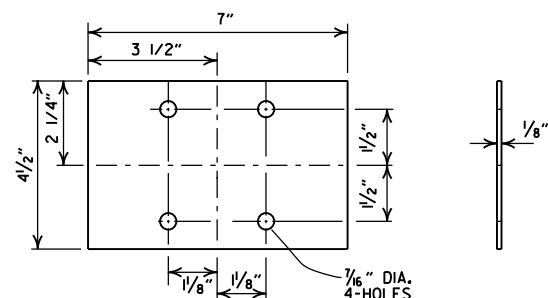




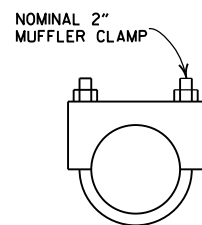
SHELF



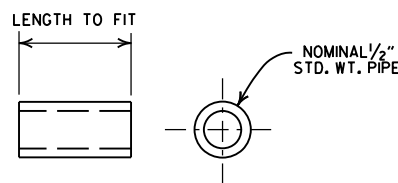
BRACKET



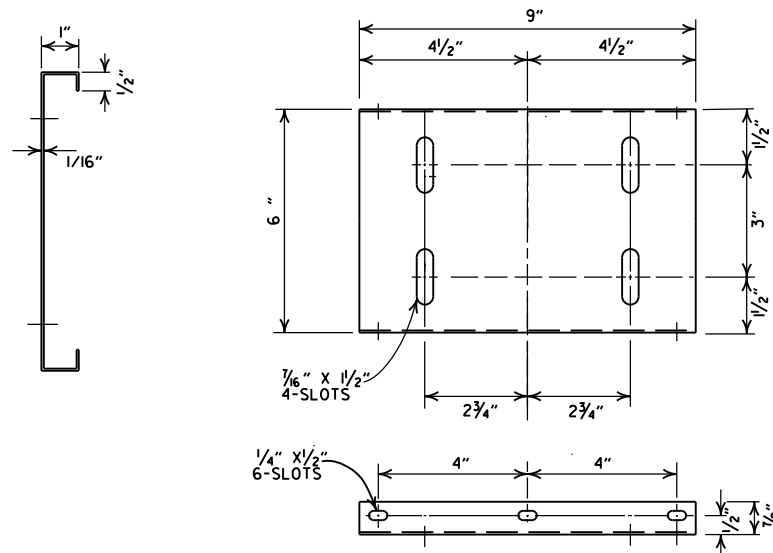
ANTI-TWIST PLATE



CLAMP



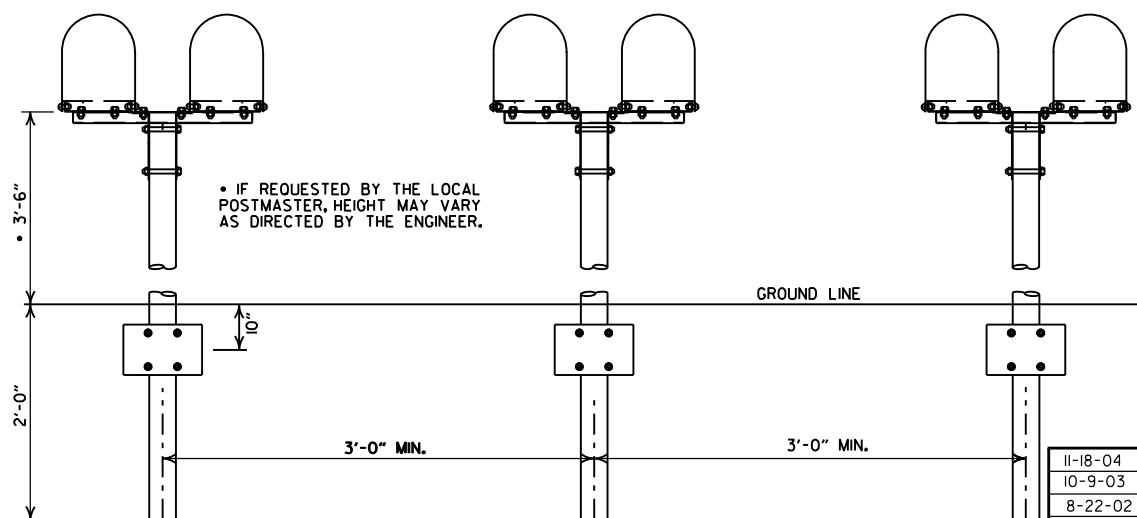
SPACER



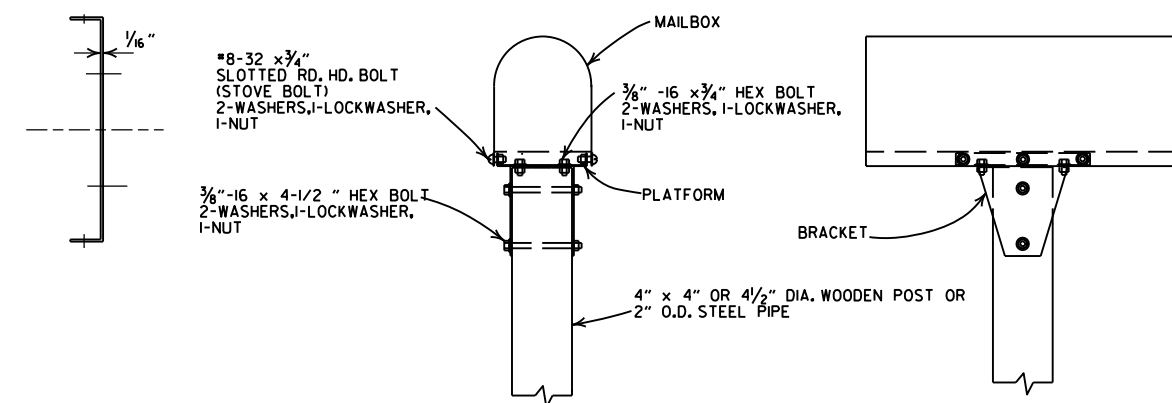
PLATFORM

GENERAL NOTES

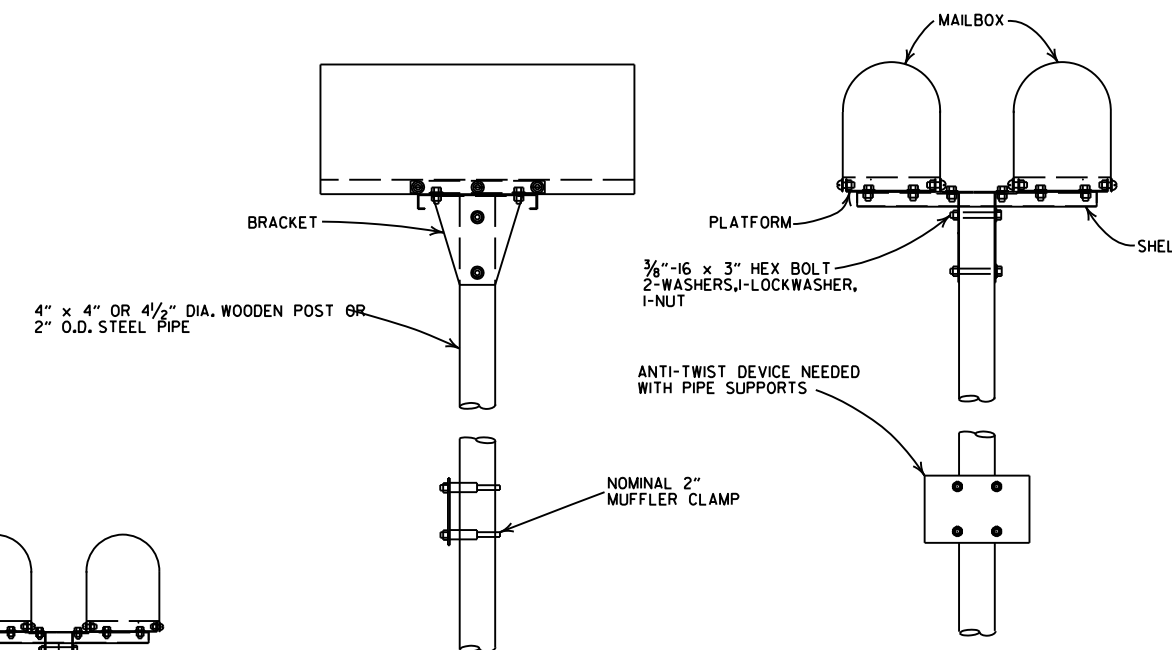
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED 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 ARDOT QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



SPACING FOR MULTIPLE POST INSTALLATION



SINGLE INSTALLATION



DOUBLE INSTALLATION

DATE	FILMED	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

REINFORCED CONCRETE
ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT 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.

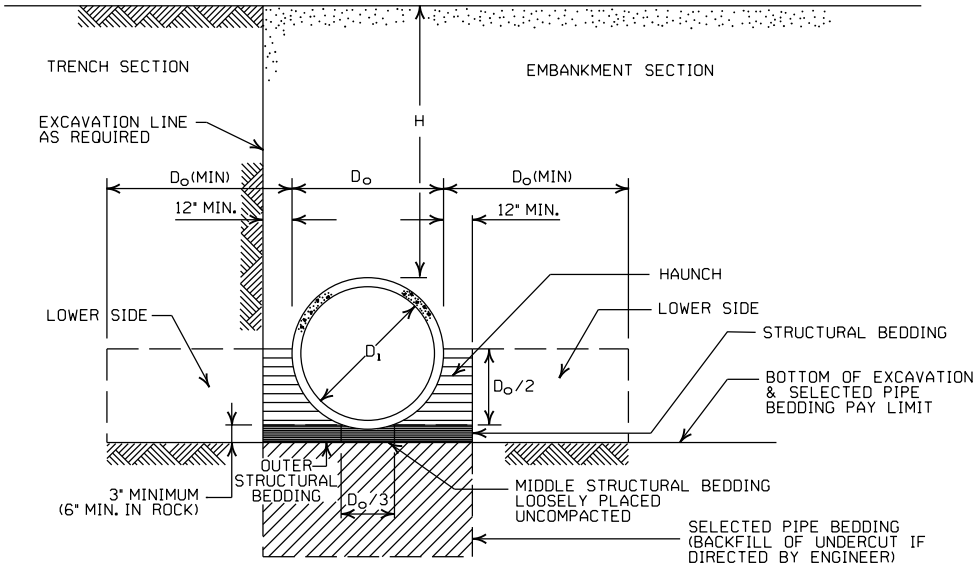
- LEGEND -

D_i = 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 DEPARTMENT OF TRANSPORTATION 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

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

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

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 3/4 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 3/4 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 3/4 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				2 3/4 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	15	
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				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		
			INSTALLATION		INSTALLATION				
			TYPE 2	TYPE 1	TYPE 2	TYPE 1			
36	40x31	5	0.079	3	2	12	15		
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.

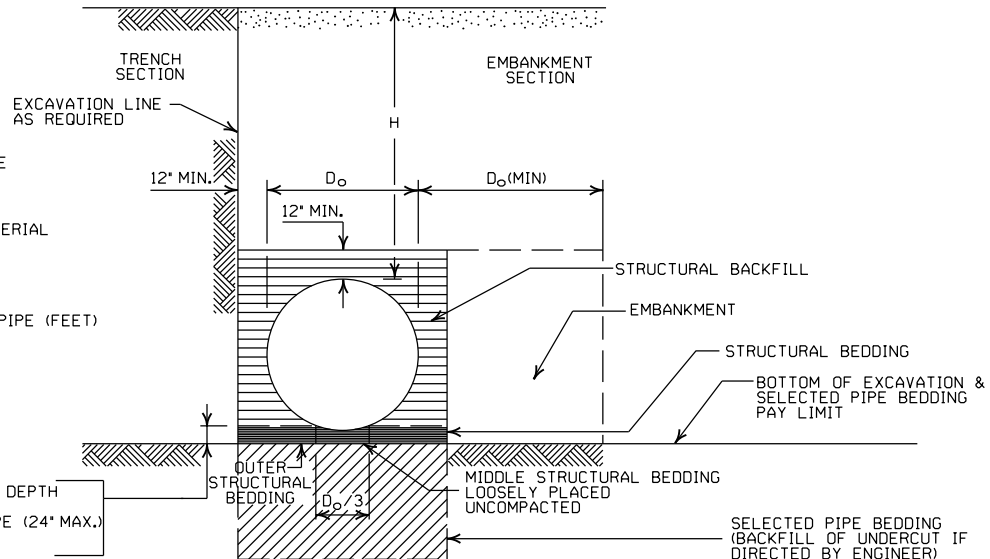
EQUIVALENT METAL THICKNESSES AND GAUGES

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 3/4" 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 DEPARTMENT OF TRANSPORTATION 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.

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

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1



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

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
 - SM3 WILL NOT BE ALLOWED.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/2 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" ≥ 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

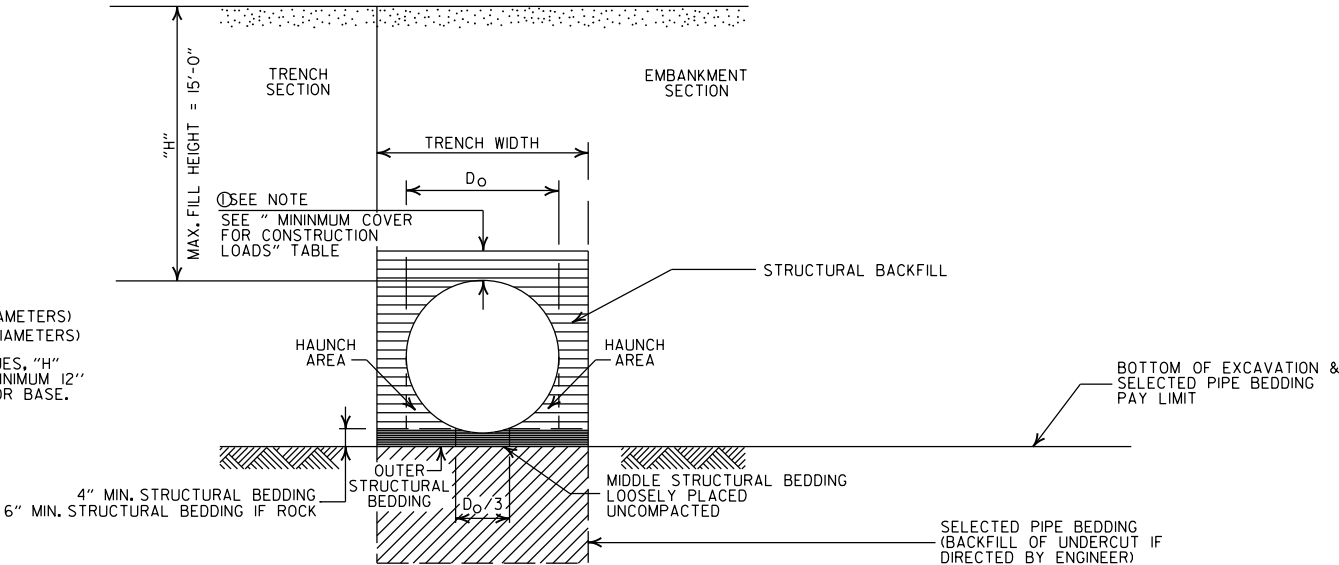
NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H"
SHALL INCLUDE A MINIMUM 12"
OF PAVEMENT AND/OR BASE.

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"

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

- 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.)
Do = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
- ===== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

- PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
- 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.
- HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- 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" ≥ 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

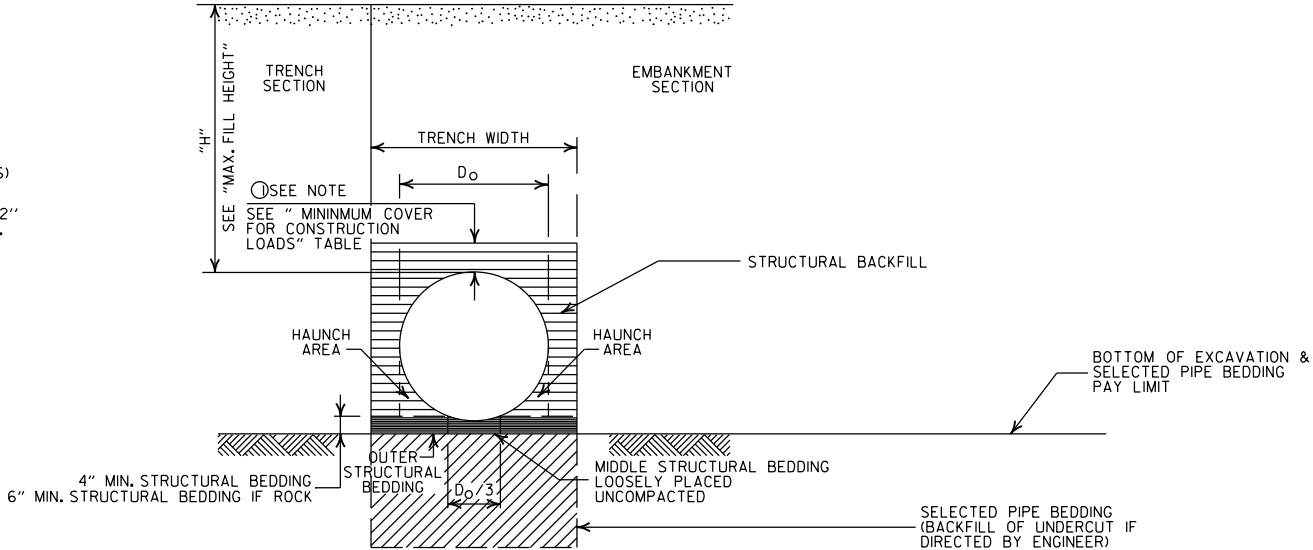
MULTIPLE INSTALLATION OF
PVC PIPES

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

MAXIMUM FILL HEIGHT
BASED ON STRUCTURAL BACKFILL

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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
XXXXXX = UNDISTURBED SOIL

GENERAL NOTES

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

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



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

* SM3 WILL NOT BE ALLOWED.

** STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1 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 POLYPROPYLENE PIPE.

MULTIPLE INSTALLATION OF POLYPROPYLENE 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"
60"	5'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

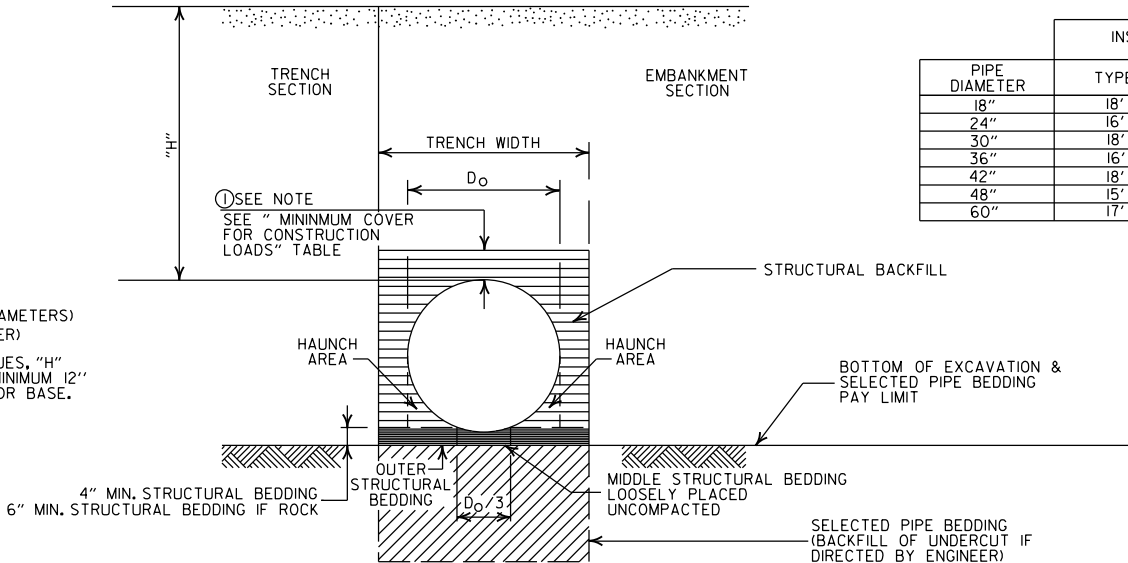
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"
60"	10'-0"	15'-0"

①NOTE:
12" MIN. (18" - 42" DIAMETERS)
24" MIN. (60" DIAMETER)
MINIMUM COVER VALUES, "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)	110.0-150.0 (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.



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.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M330, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION (2012) WITH 2013 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. POLYPROPYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND 30.4.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS 3RD EDITION (2010) WITH 2012 INTERIMS. JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

MAXIMUM HEIGHT OF FILL "H"

PIPE DIAMETER	INSTALLATION TYPE	
	TYPE 1	TYPE 2
18"	18'	14'
24"	16'	12'
30"	18'	14'
36"	16'	12'
42"	18'	13'
48"	15'	11'
60"	17'	12'

- LEGEND -

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

===== STRUCTURAL BACKFILL MATERIAL
XXXXXX UNDISTURBED SOIL

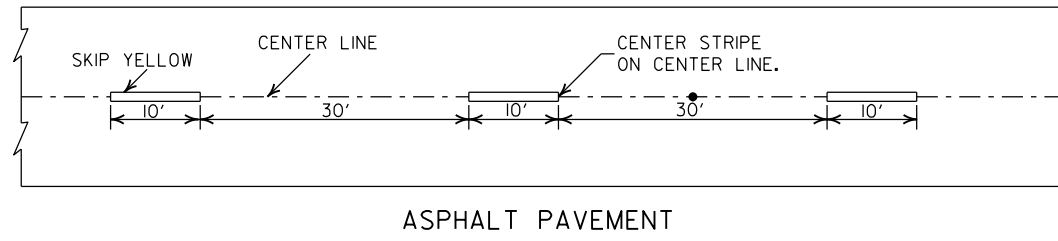
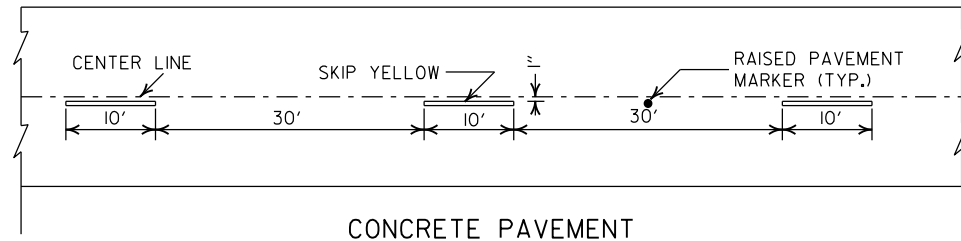
02-27-20	REVISED	
11-07-19	ISSUED	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

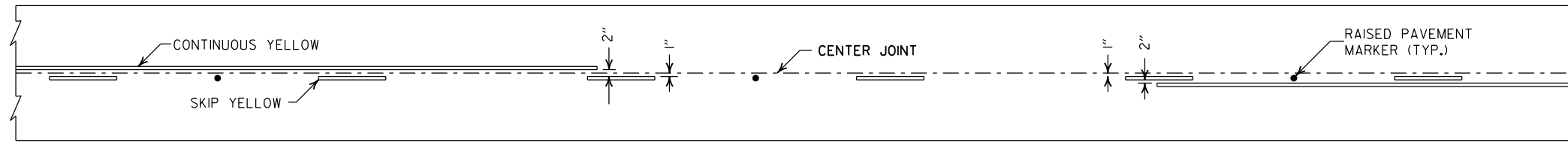
PLASTIC PIPE CULVERT
(POLYPROPYLENE)

STANDARD DRAWING PCP-3

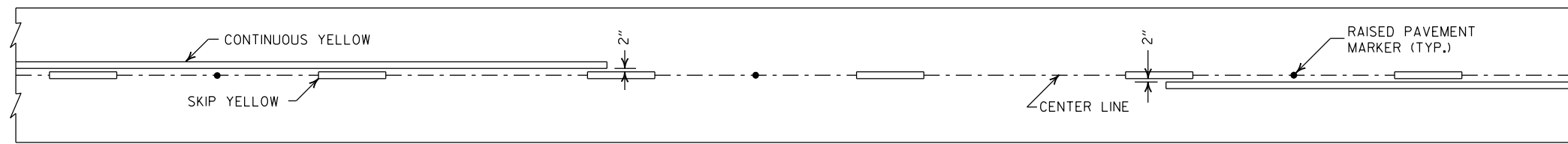




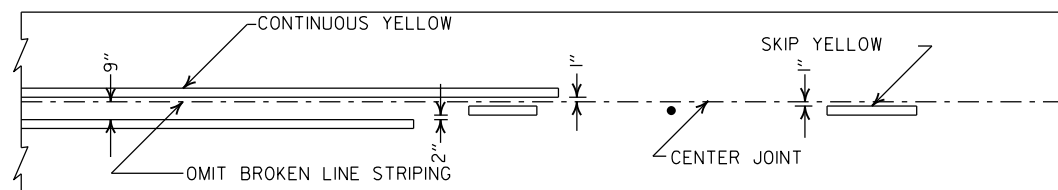
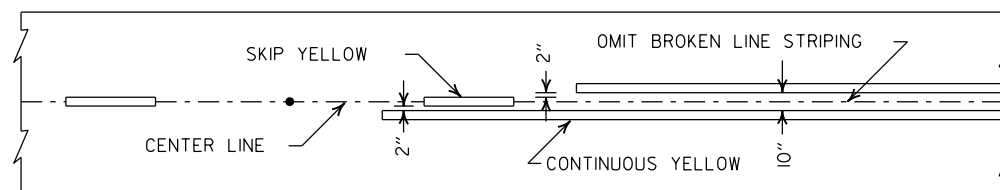
BROKEN LINE STRIPING



SOLID LINE STRIPING ON CONCRETE PAVEMENT



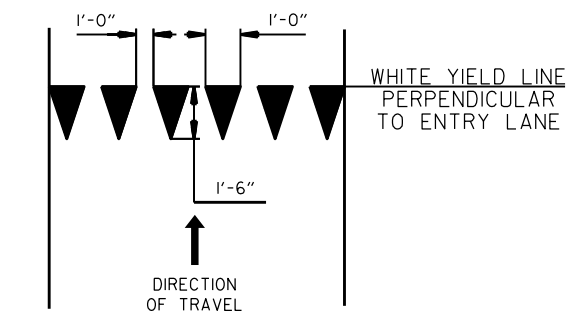
SOLID LINE STRIPING ON ASPHALT PAVEMENT



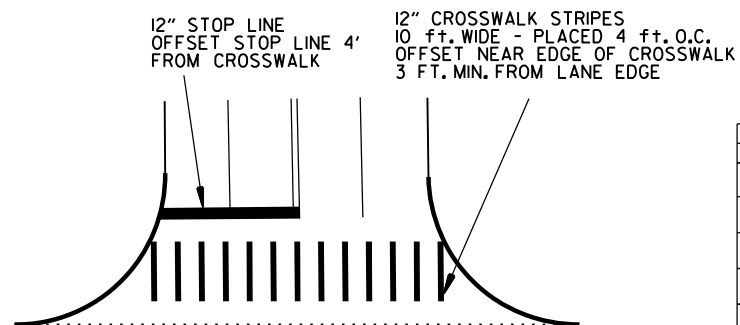
ASPHALT PAVEMENT

CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL

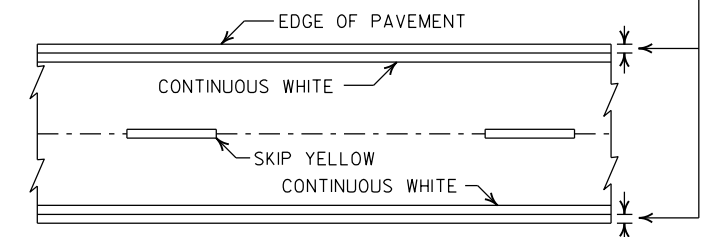


CROSSWALK AND STOP LINE DETAILS

NOTES:

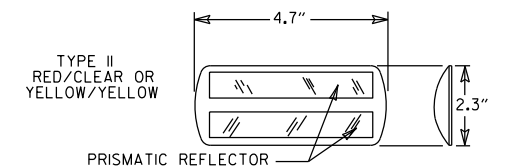
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

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

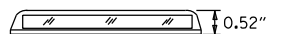


PAVEMENT EDGE LINE MARKING

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



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 ARDOT QUALIFIED
PRODUCTS LIST.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

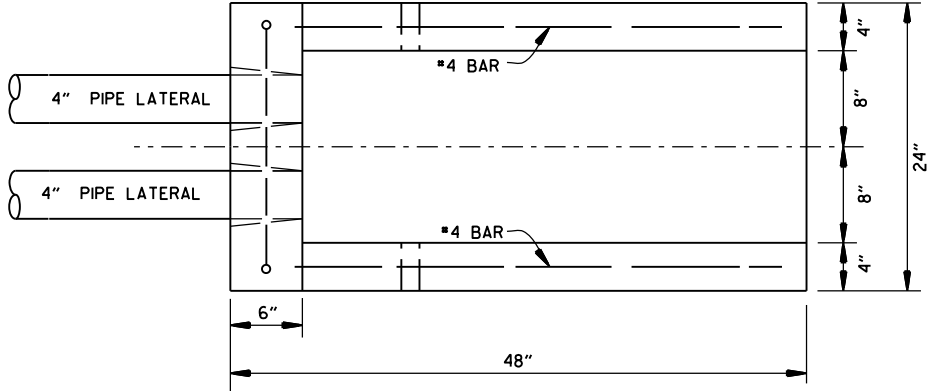
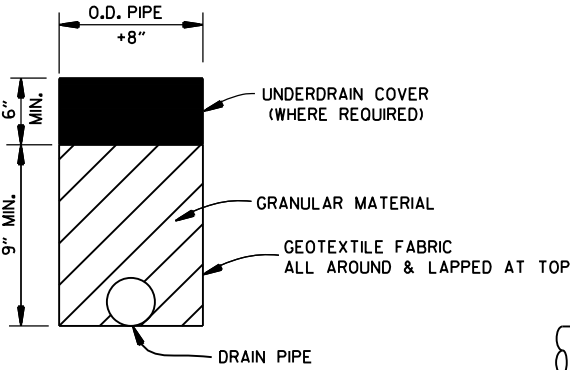
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & 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

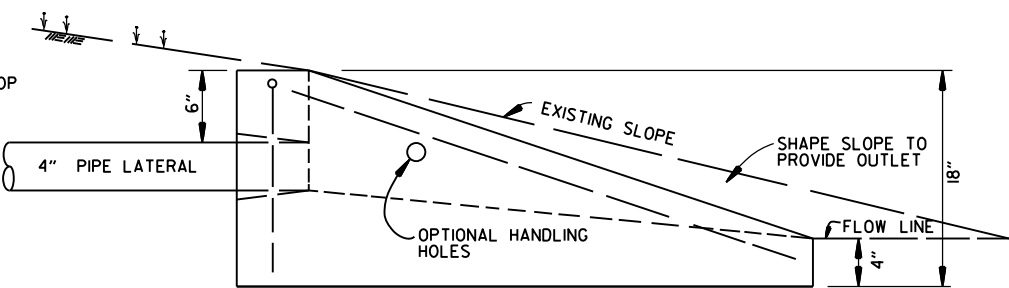
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

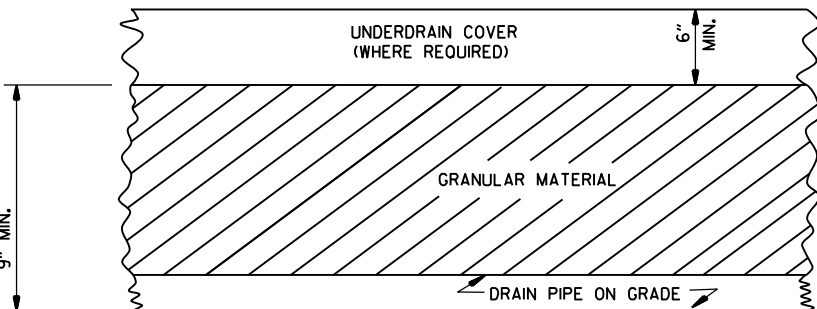
NOTE:
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



PLAN VIEW



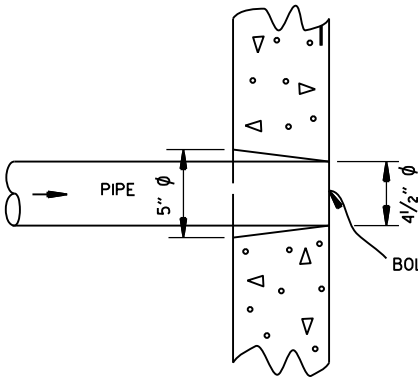
SIDE VIEW



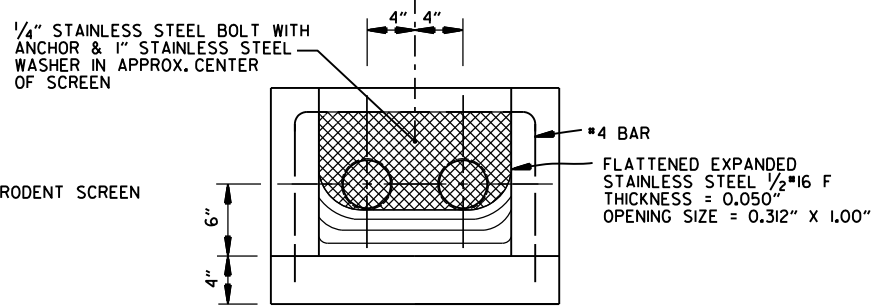
DETAILS OF PIPE UNDERDRAIN

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE I. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID PER LIN. FT. FOR "4" PIPE UNDERDRAINS" IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.
2. 4" NON-PERFORATED SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN HEREON. LATERALS WILL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.
3. EXISTING 4" PIPE UNDERDRAINS MAY BE CONNECTED TO PROPOSED DROP INLETS OR EXTENDED WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP INLETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS."
4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
5. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS."
6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE REMOVED UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS."
7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE.



DETAIL OF HOLE FOR 4" PIPE

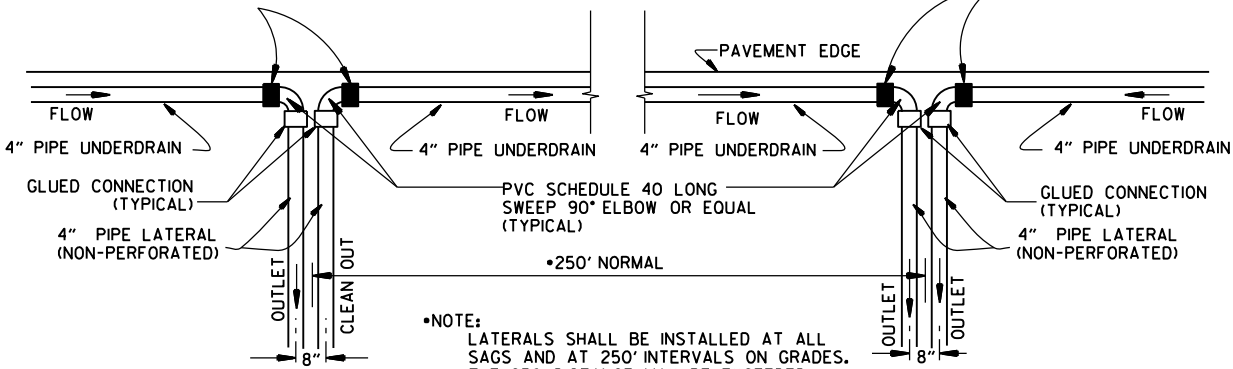


FRONT VIEW (DETAIL OF RODENT SCREEN)

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DI OR 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/DI OR 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.

12-8-16	ADDED NOTES FOR PIPE UNDERDRAINS, REVISED RODENT SCREEN DETAIL AND NOTES, REMOVED NOTE 1 FOR GRANULAR MATERIAL, ADDED NOTE FOR GEOTEXTILE FABRIC	
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

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2 $\frac{1}{4}$ "	4"
4	3 "	4 $\frac{1}{2}$ "
5	3 $\frac{3}{4}$ "	5"
6	4 $\frac{1}{2}$ "	6"
7	5 $\frac{1}{4}$ "	7"
8	6"	8"



Diagram illustrating the hook section of a reinforcement bar. The hook is shown as a semi-circular bend. The height of the hook is indicated by a vertical double-headed arrow labeled "HEIGHT OF HOOK". The diameter of the bar is labeled "BAR DIA" at both the top and bottom of the hook. The diameter of the pin (the straight section of the bar) is labeled "PIN DIAMETER".

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "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

2 BARS "a"

1'-0"

EMBANKMENT SLOPE

TOP OF WINGWALL

BENT BARS "r" CUT AS REQUIRED

• 10" OR T+3" (WHICHEVER IS GREATER)

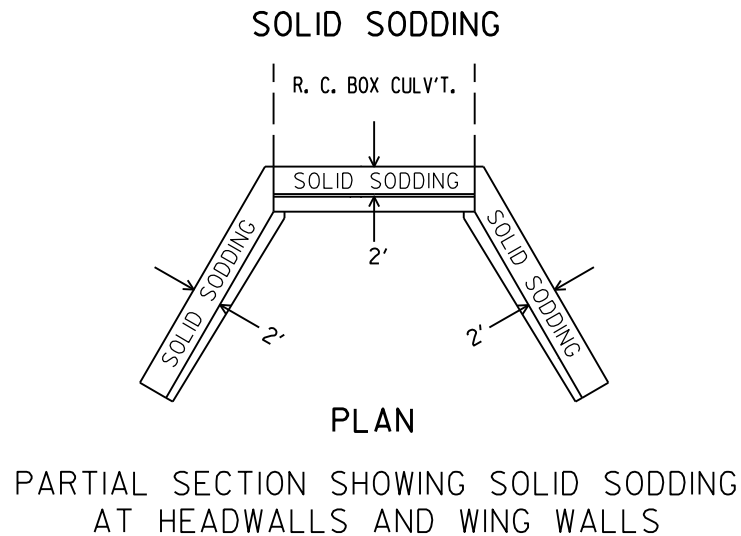
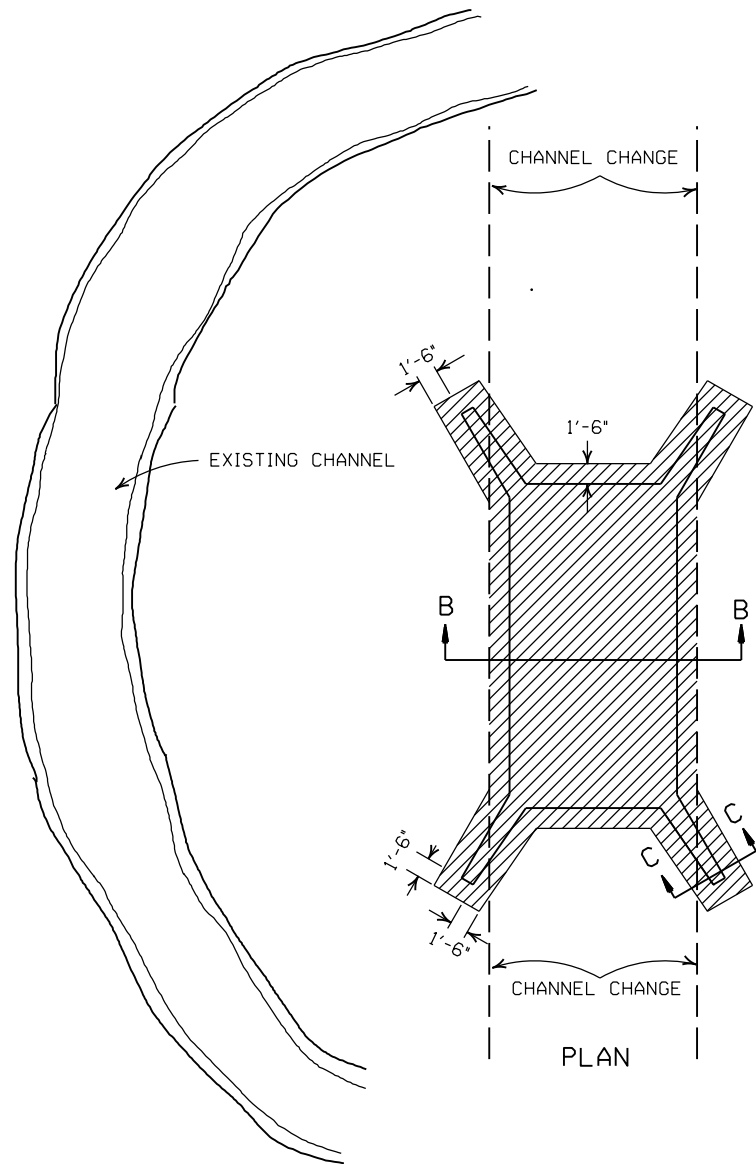
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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

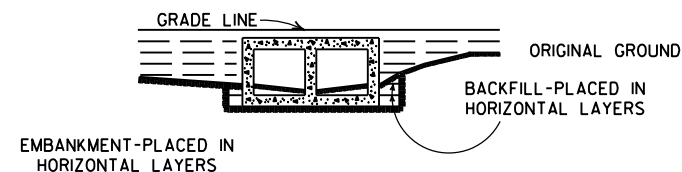
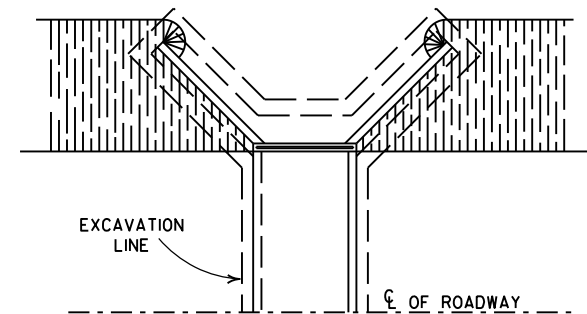
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

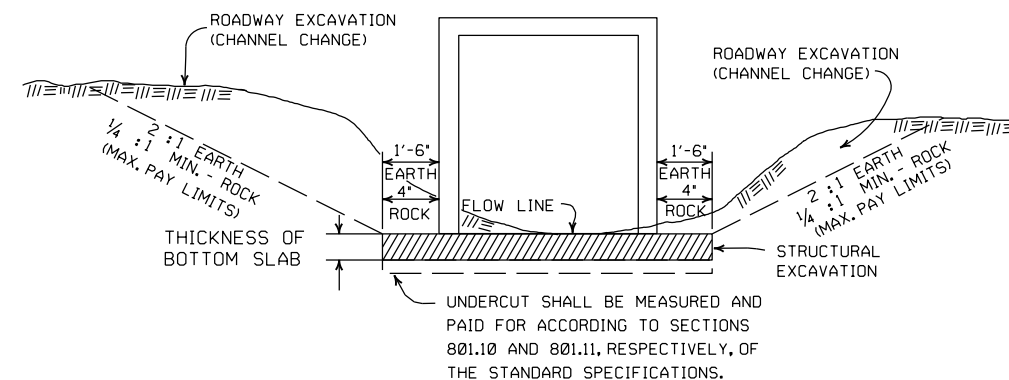
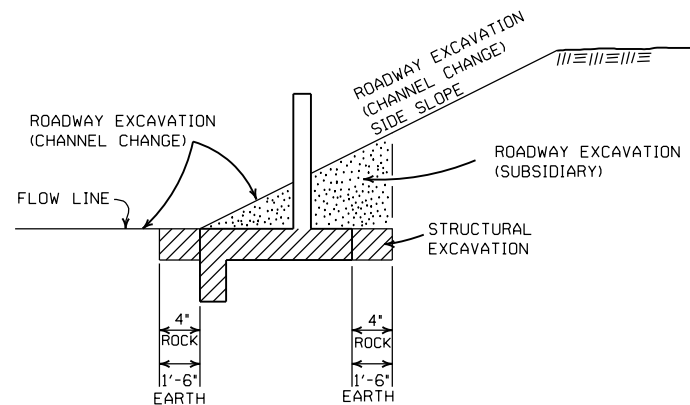
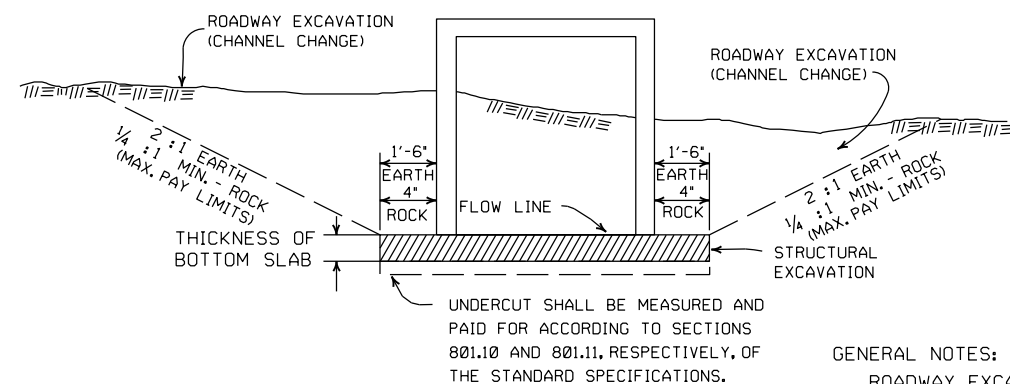
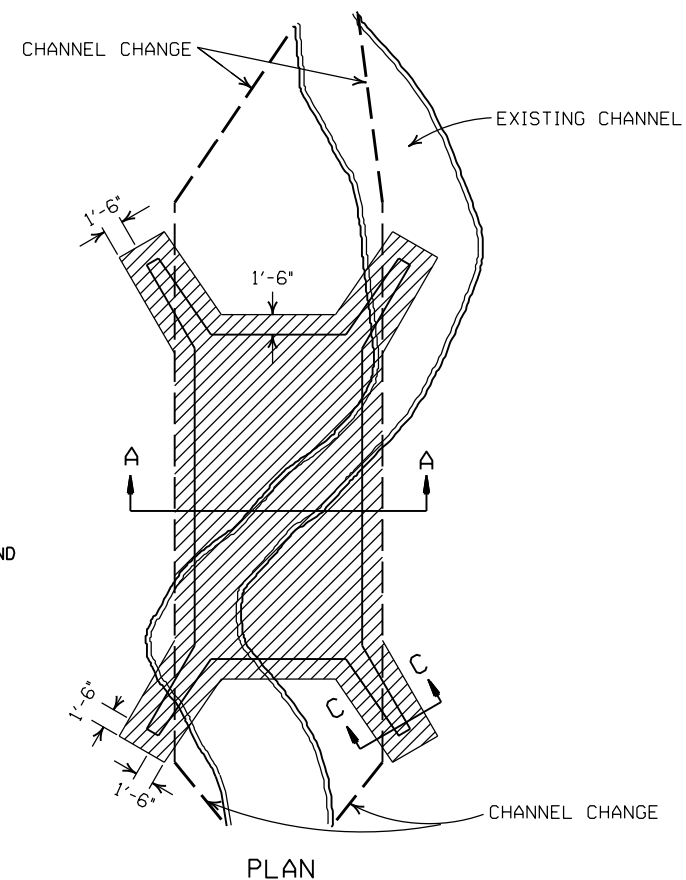
STANDARD DRAWING RCB-1



NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



BACKFILL DETAILS FOR BOX CULVERT



DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

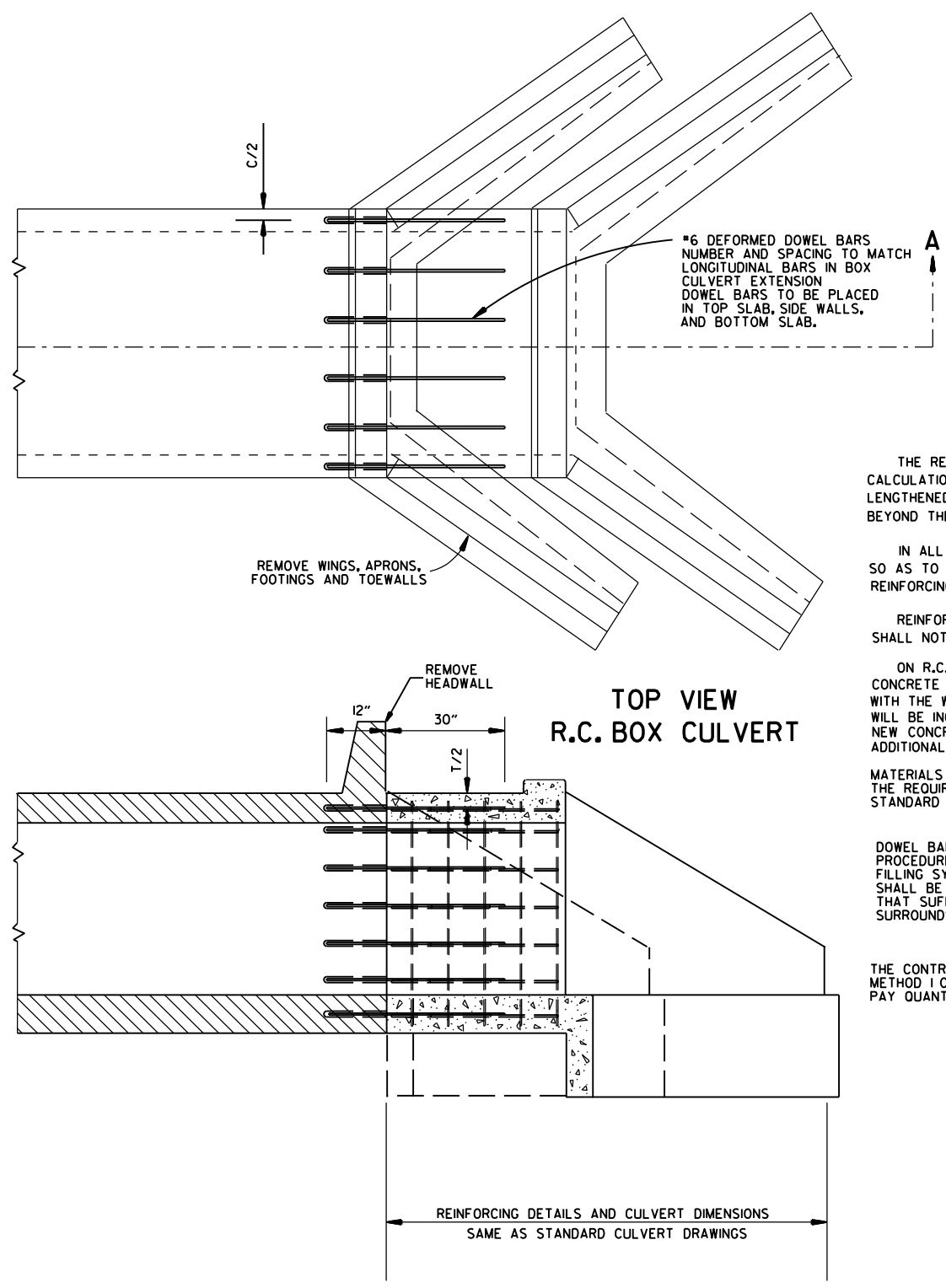
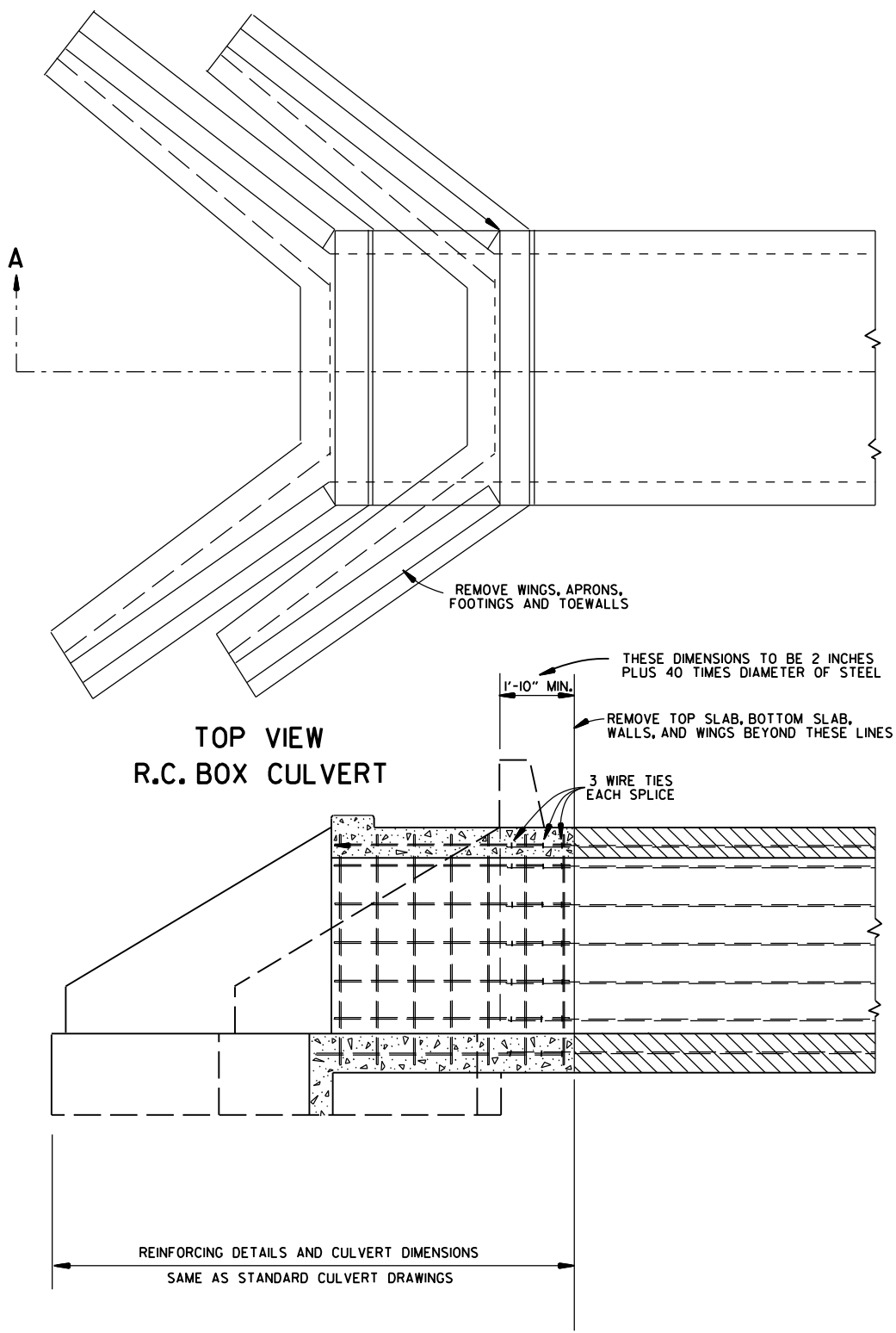
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-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	FILM

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH			35 MPH			40 MPH			45 MPH			50 MPH			55 MPH			60 MPH			65 MPH			70 MPH			75 MPH		
	e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)	
		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE
0° 15'	NC			NC			NC			NC			NC			NC			NC			NC			NC			NC		
0° 30'	NC			NC			NC			NC			NC			NC			RC	96		RC	96		RC	96		RC	96	
0° 45'	NC			NC			NC			NC			RC	96		RC	96		0.024	106		0.026	110		0.030	120		0.030	120	
1° 00'	NC			NC			NC			RC	90		0.022	101		0.026	110		0.030	120		0.034	130		0.038	139		0.038	139	
1° 15'	NC			NC			RC	84		0.022	95		0.028	115		0.032	125		0.038	139		0.044	154		0.046	158		0.046	158	
1° 30'	NC			RC	78		0.022	88		0.028	108		0.032	125		0.038	139		0.044	154		0.050	168		0.056	182		0.056	182	
1° 45'	RC	72		RC	78		0.026	97		0.030	113		0.036	134		0.044	154		0.050	168		0.056	182		0.064	202		0.064	202	
2° 00'	RC	72		0.024	86		0.028	101		0.034	122		0.042	149		0.048	163		0.056	182		0.064	202		0.070	216		0.070	216	
2° 15'	RC	72		0.026	90		0.032	109		0.038	131		0.046	158		0.054	178		0.062	197		0.070	216		0.078	235		0.078	235	
2° 30'	0.022	75		0.028	94		0.034	113		0.042	140		0.050	168		0.058	187		0.068	211		0.076	230		0.086	254		0.086	254	
2° 45'	0.024	79		0.030	98		0.038	122		0.046	149		0.054	178		0.064	202		0.072	221		0.082	245		0.092	269		0.092	269	
3° 00'	0.026	83		0.034	105		0.040	126		0.050	158		0.058	187		0.068	211		0.078	235		0.088	259		0.098	283		0.098	283	
3° 15'	0.028	86		0.036	109		0.044	134		0.052	162		0.062	197		0.072	221		0.082	245		0.092	269		0.100	288		0.100	288	
3° 30'	0.030	90		0.038	113		0.046	139		0.056	171		0.066	206		0.076	230		0.086	254		0.096	278		0.100	288		0.100	288	
3° 45'	0.032	93		0.040	117		0.050	147		0.058	176		0.070	216		0.080	240		0.090	264		0.098	283		0.100	288		0.100	288	
4° 00'	0.034	97		0.042	121		0.052	151		0.062	185		0.072	221		0.084	250		0.094	274		0.100	288		0.100	288		0.100	288	
4° 15'	0.036	100		0.044	125		0.054	155		0.064	189		0.076	230		0.086	254		0.096	278		0.100	288		0.100	288		0.100	288	
4° 30'	0.036	100		0.046	129		0.056	160		0.068	198		0.078	235		0.090	264		0.098	283		0.100	288		0.100	288		0.100	288	
4° 45'	0.038	104		0.048	133		0.060	168		0.070	203		0.082	245		0.092	269		0.098	283		0.100	288		0.100	288		0.100	288	
5° 00'	0.040	108		0.050	137		0.062	172		0.072	207		0.084	250		0.094	274		0.098	283		0.100	288		0.100	288		0.100	288	
5° 30'	0.044	115		0.054	144		0.066	181		0.078	221		0.088	259		0.098	283		0.098	283		0.100	288		0.100	288		0.100	288	
6° 00'	0.046	119		0.058	152		0.070	189		0.082	230		0.092	269		0.098	283		0.098	283		0.100	288		0.100	288		0.100	288	
6° 30'	0.050	126		0.062	160		0.074	198		0.086	239		0.096	278		0.098	283		0.098	283		0.100	288		0.100	288		0.100	288	
7° 00'	0.052	130		0.064	164		0.078	206		0.090	248		0.098	283		0.098	283		0.098	283		0.100	288		0.100	288		0.100	288	
7° 30'	0.054	133		0.068	172		0.080	210		0.092	252		0.100	288		0.100	288		0.100	288		0.100	288		0.100	288		0.100	288	
8° 00'	0.058	140		0.070	176		0.084	219		0.094	257		0.098	283		0.098	283		0.098	283		0.100	288		0.100	288		0.100	288	
8° 30'	0.060	144		0.072	179		0.086	223		0.096	261		0.098	283		0.098	283		0.098	283		0.100	288		0.100	288		0.100	288	
9° 00'	0.062	148		0.076	187		0.088	227		0.098	266		0.098	283		0.098	283		0.098	283		0.100	288		0.100	288		0.100	288	
9° 30'	0.064	151		0.078	191		0.092	235		0.100	270		0.100	288		0.100	288		0.100	288		0.100	288		0.100	288		0.100	288	
10° 00'	0.066	155		0.080	195		0.094	240		0.094	240		0.094	240		0.094	240		0.094	240		0.094	240		0.094	240		0.094	240	
11° 00'	0.070	162		0.084	203		0.096	244		0.096	244		0.096	244		0.096	244		0.096	244		0.096	244		0.096	244		0.096	244	
12° 00'	0.074	169		0.088	211		0.098	248		0.098	248		0.098	248		0.098	248		0.098	248		0.098	248		0.098	248		0.098	248	
13° 00'	0.076	173		0.090	215		0.100	252		0.100	252		0.100	252		0.100	252		0.100	252		0.100	252		0.100	252		0.100	252	
14° 00'	0.080	180		0.094	222		0.094	222		0.094	222		0.094	222		0.094	222		0.094	222		0.094	222		0.094	222		0.094	222	
15° 00'	0.082	184		0.096	226		0.096	226		0.096	226		0.096	226		0.096	226		0.096	226		0.096	226		0.096	226		0.096	226	
16° 00'	0.086	191		0.098	230		0.098	230		0.098	230		0.098	230		0.098	230		0.098	230		0.098	230		0.098	230		0.098	230	
17° 00'	0.088	194		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
18° 00'	0.090	198		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
19° 00'	0.092	202		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
20° 00'	0.094	205		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
21° 00'	0.096	209		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
22° 00'	0.096	209		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
23° 00'	0.098	212		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
24° 00'	0.098	212		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	
25° 00'	0.100	216		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234		0.100	234	

ABBREVIATIONS

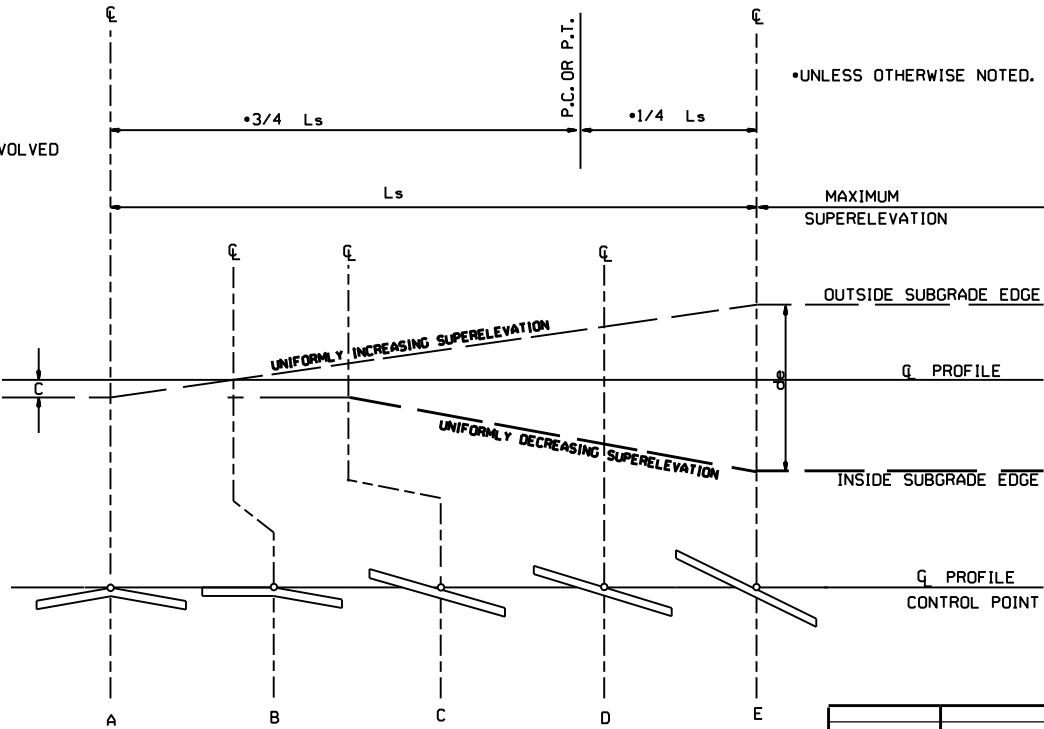
NC - NORMAL CROWN
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
e - RATE OF SUPERELEVATION (FT. PER FT.)
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)
C - NORMAL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

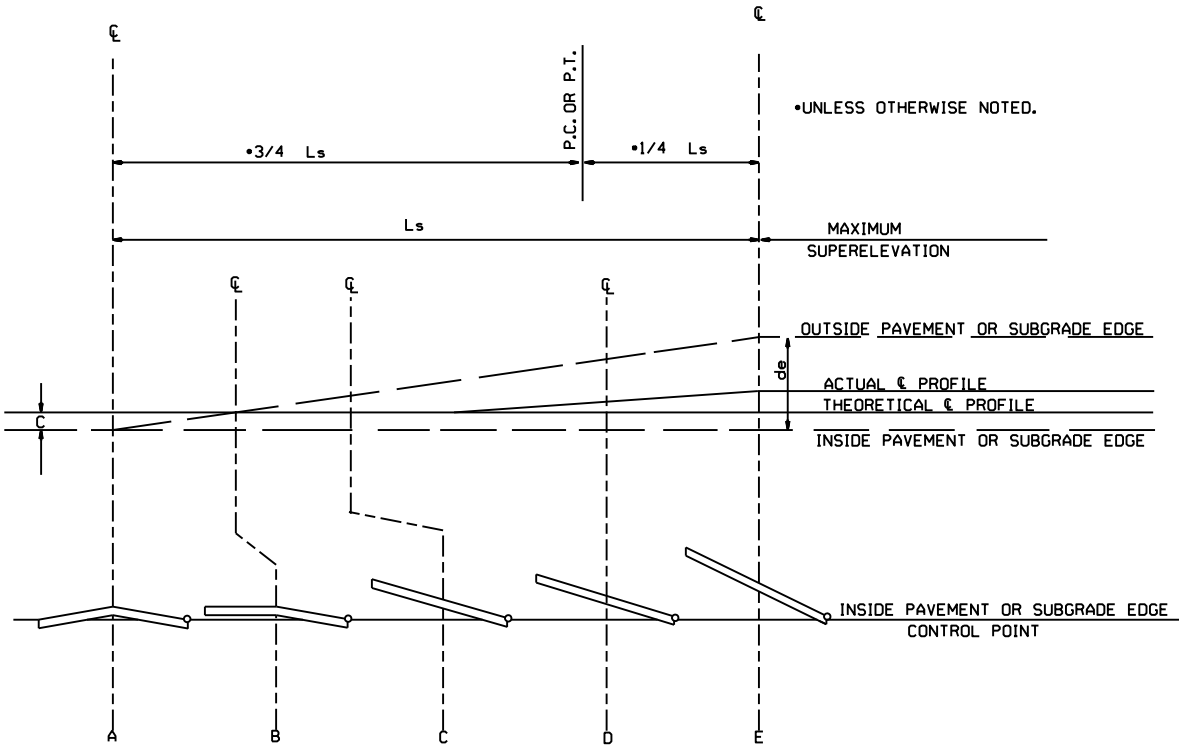
3 LANE UNDIVIDED - - - - +20%
4 LANE UNDIVIDED - - - - +50%
5 LANE UNDIVIDED - - - - +80%
6 LANE UNDIVIDED - - - - +100%

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

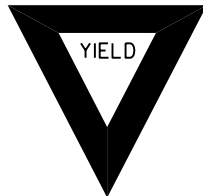
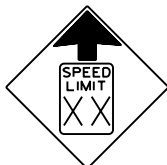
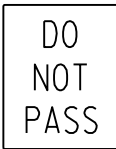
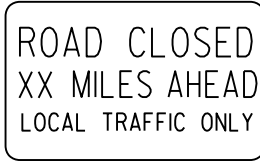
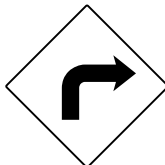
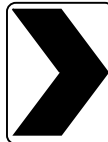
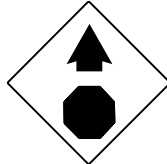
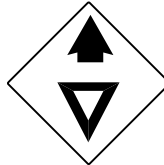
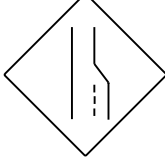
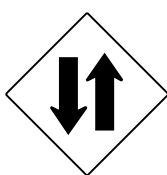
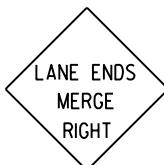
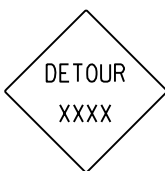
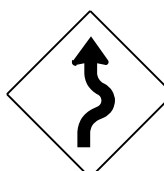
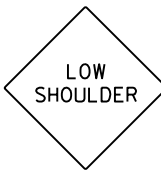
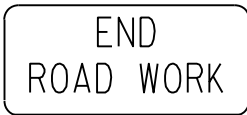
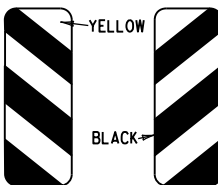
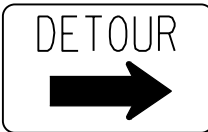
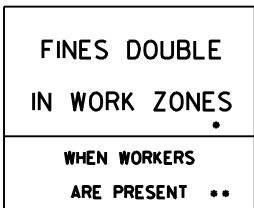
SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

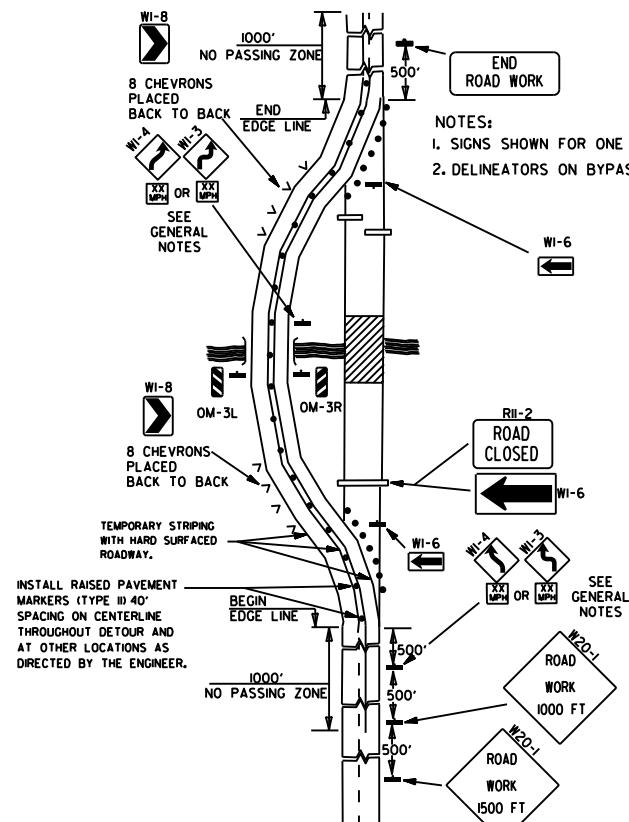


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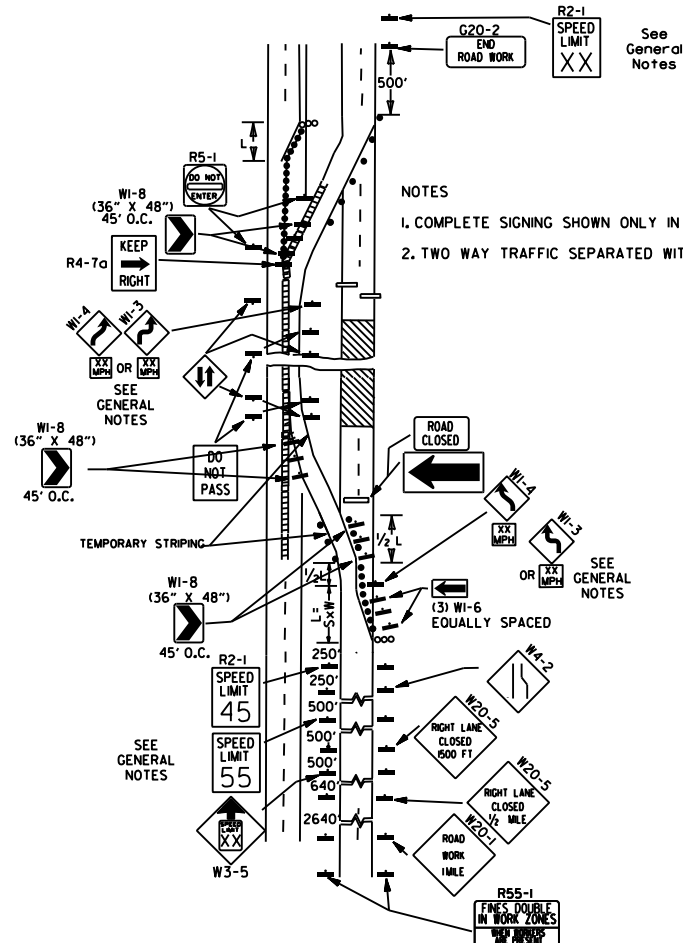
RI-I  STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"	RI-2  STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"	R2-I  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	W3-5  STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"	W3-5a  STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"	R4-I  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R4-2  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	ADVANCE DISTANCES (XXXX) 500 FT 1/2 MILE 1000 FT 3/4 MILE 1500 FT 1 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 (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS. 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 MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.
R5-I  STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"	R1I-2  48"x30"	R1I-3A  60"x30"	R1I-4  60"x30"	W2I-5a  STD. 36"x36" FWY. 48"x48"	WI-I  STD. 36"x36" FWY. 48"x48"	WI-2  STD. 36"x36" FWY. 48"x48"	
WI-3  STD. 48"x48"	WI-4  STD. 48"x48"	WI-6  STD. 48"x24" SPECIAL 60"x30"	WI-8  STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"	W3-I  STD. 36"x36" SPECIAL 48"x48"	W3-2  STD. 36"x36" SPECIAL 48"x48"	W4-2  STD. 36"x36" FWY. 48"x48"	
W5-I  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-I  STD. 24"x24"	W20-I  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  18" 500 FEET 24" W16-2 STD. 36"x36" FWY. 48"x48"	W2I-2  STD. 30"x30" SPECIAL 36"x36"	W2I-5  STD. 30"x30" SPECIAL 36"x36"	W24-I  STD. 36"x36"	WI-4b  STD. 48"x48"	R56-I  STD. 18"x18"
W8-II  STD. 36"x36" FWY. 48"x48"	W8-9  STD. 36"x36" FWY. 48"x48"	G20-I  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-I  36"x60" • USE 6" C LETTERS •• USE 4" D LETTERS

11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W2I-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

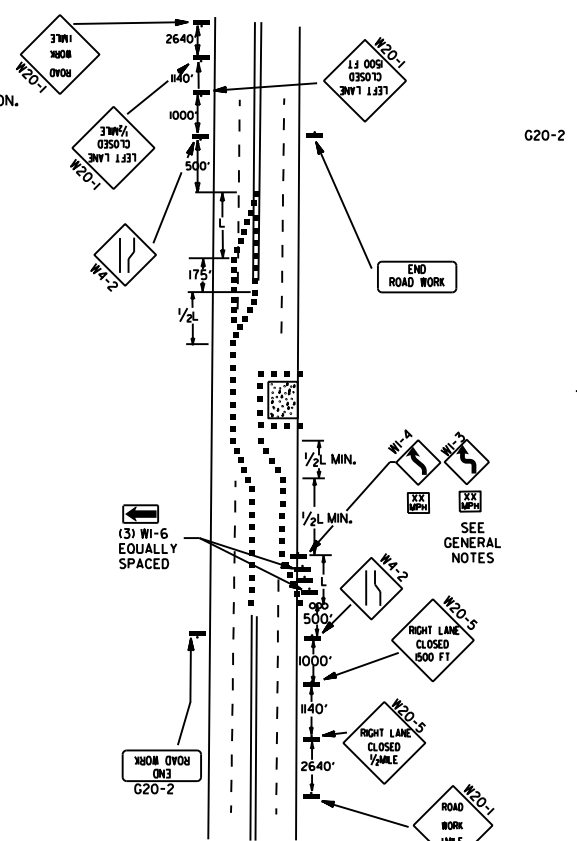
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



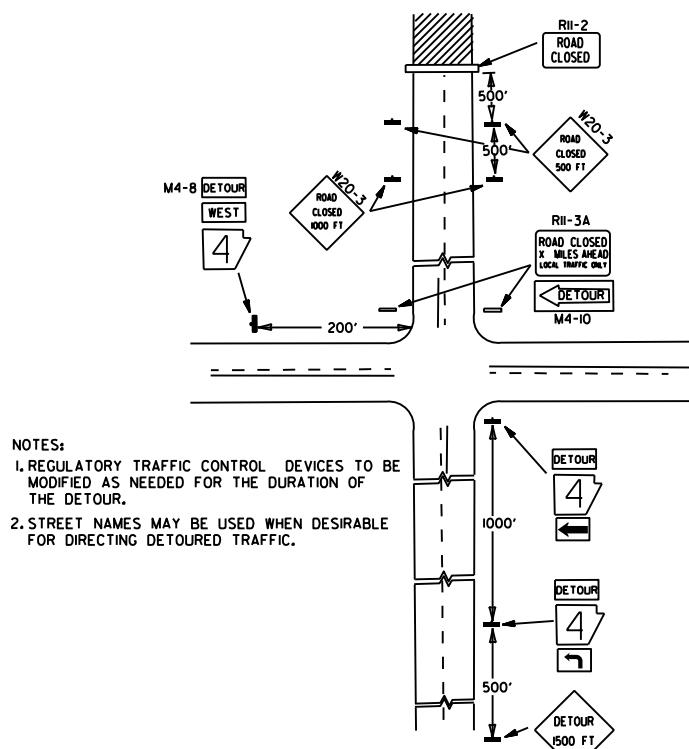
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



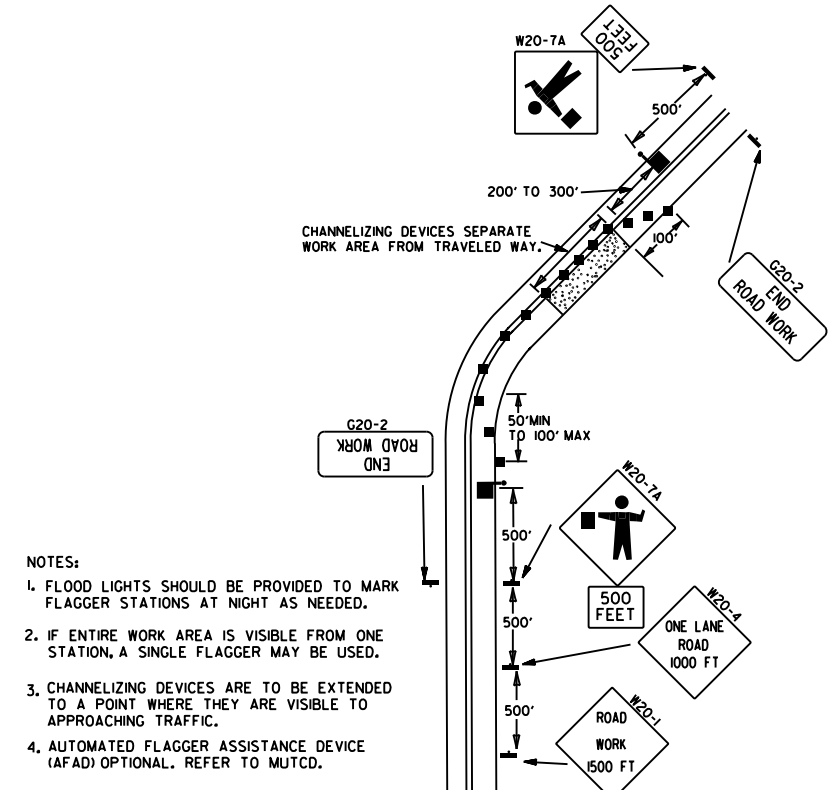
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



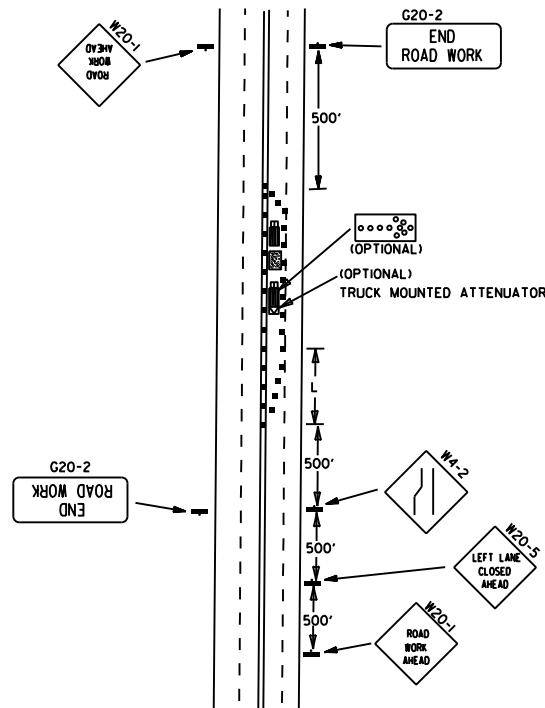
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



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

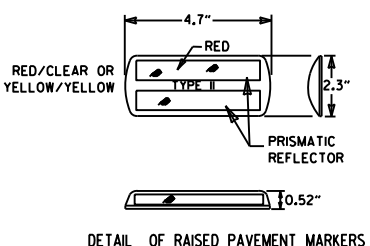


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



(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:
- THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. 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(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 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(65) SHALL BE OMITTED. ADDITIONAL R2-1(55)MPH 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.
 - 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
 - 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 ARDOT QUALIFIED PRODUCTS LIST.
 - ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

05-20-21	REVISED NOTE 7	
11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-2

(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

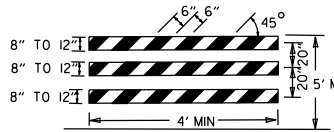
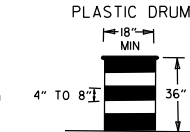
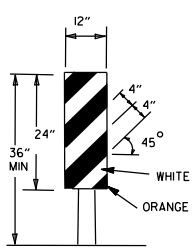
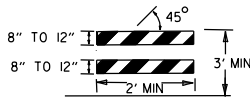
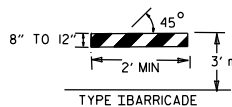
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

CHANNELIZING DEVICES



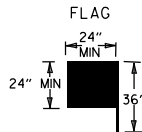
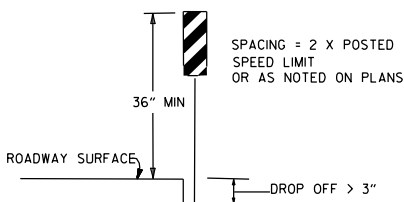
• WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

CONES



NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.

VERTICAL PANEL PLACEMENT



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

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-(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(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-(65) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(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(1/2 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 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
- ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

TRAFFIC CONTROL DEVICES

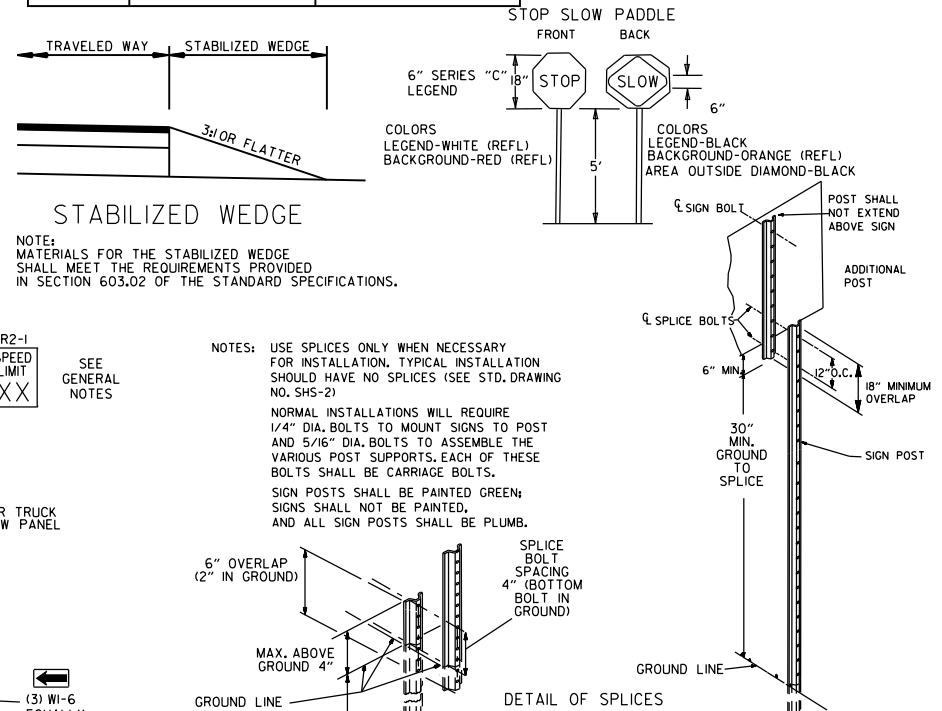
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
≤ 3"	CENTERLINE	STANDARD LANE CLOSURE ⁽⁶⁾	STANDARD LANE CLOSURE ⁽⁶⁾
> 3"	CENTERLINE	STANDARD LANE CLOSURE ⁽⁶⁾	STANDARD LANE CLOSURE ⁽⁶⁾
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS ⁽¹⁾	W8-9 AND TRAFFIC DRUMS ⁽¹⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS ⁽³⁾
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES	PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES

INTERSTATE		
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

GENERAL NOTES:

- WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
- WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
- A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
- W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER. TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).



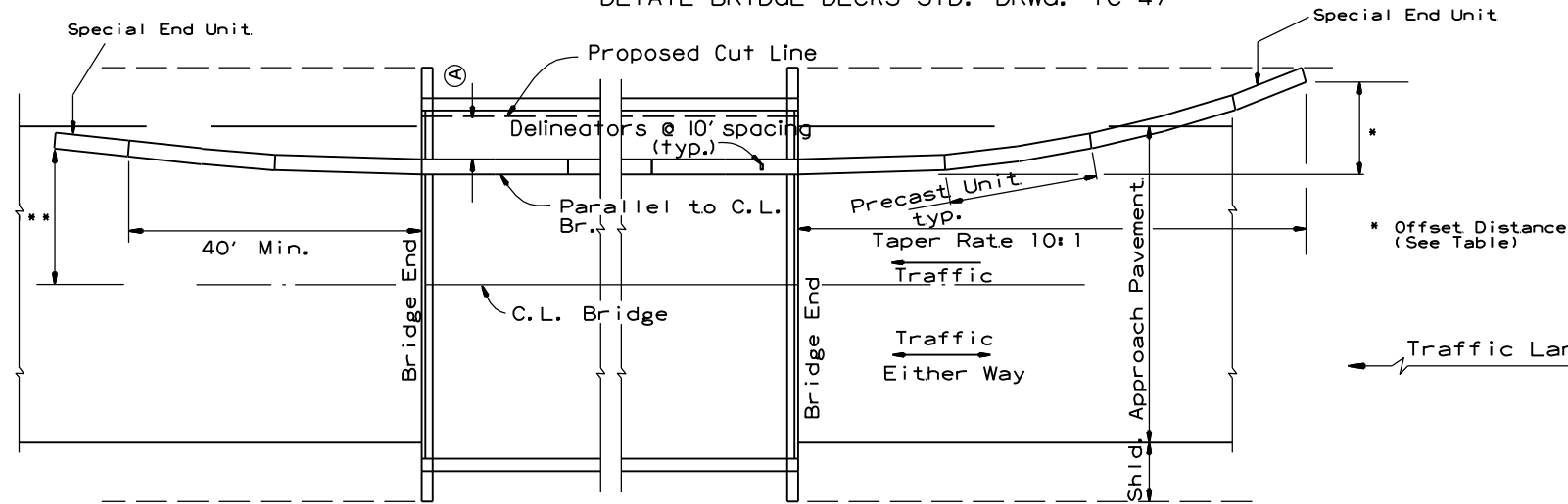
DETAIL OF SPLICES

DATE	REVISION	FILED
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES	
05-20-21	REVISED NOTE 10	
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE II	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
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 W6-18 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-3

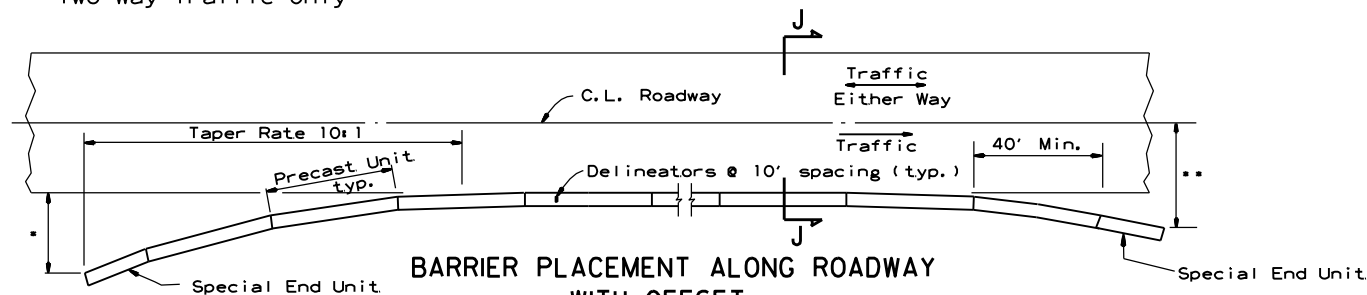
- (A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

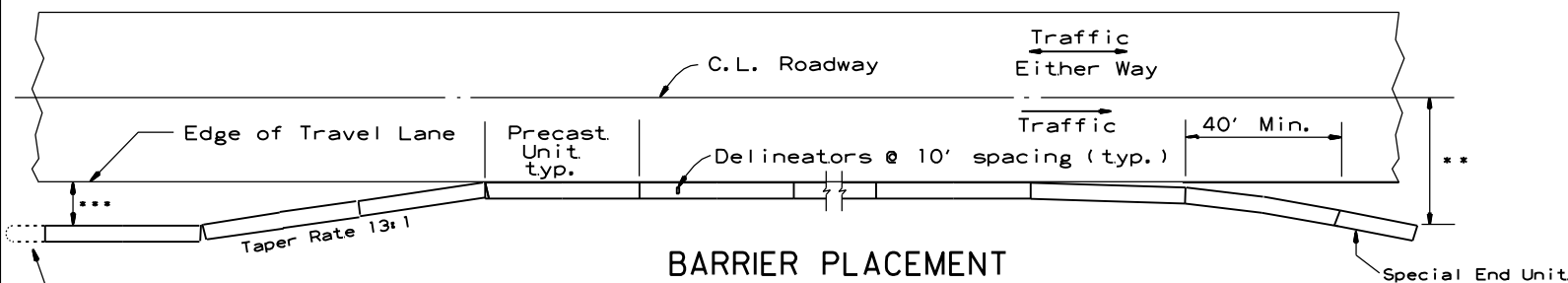
* Offset Distance (See Table)

** 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.

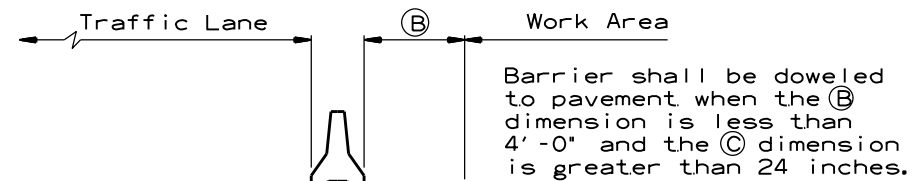


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

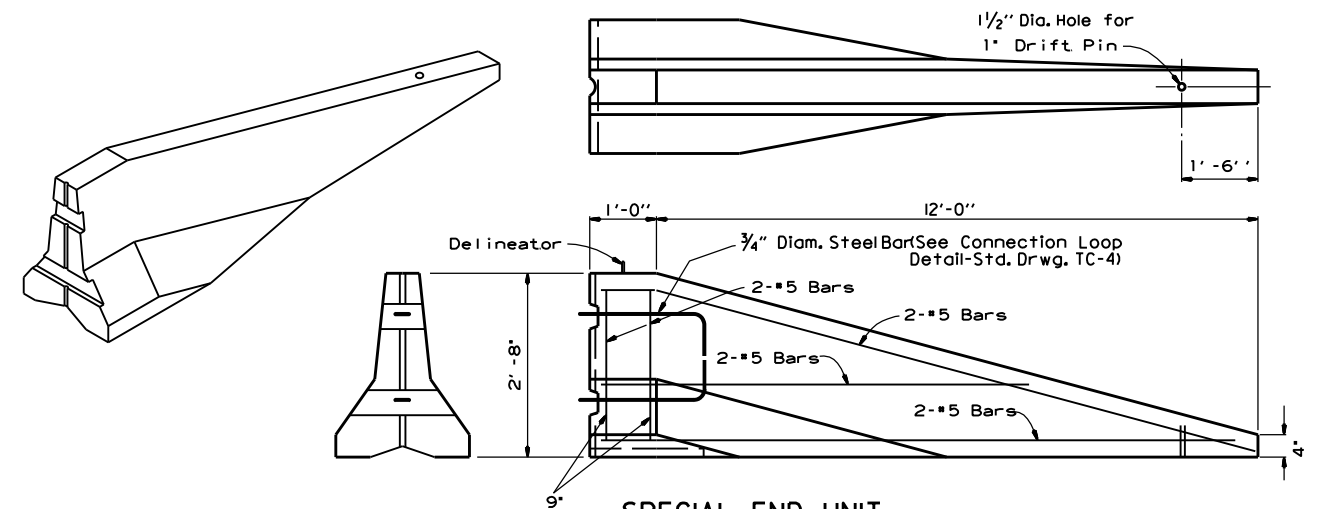
** Offset Distance For Two Way Traffic Only

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



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 a Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

DATE	REVISION	FILMED
11-07-19	REVISED NOTE	
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

**STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER**

STANDARD DRAWING TC-5

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



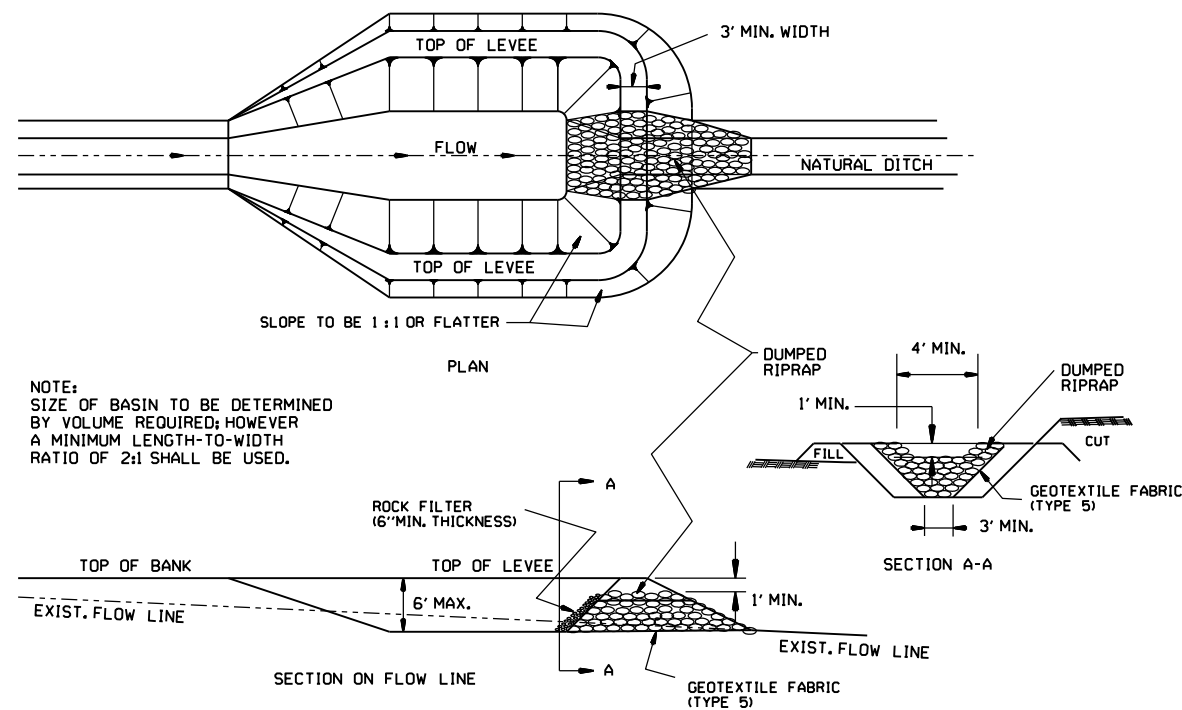
1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.
3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 125 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBSIDIARY TO "FILTER SOCK (18)".
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG, WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.
5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT, REMOVE AND REPLACE IF SIGNS OF UNCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.



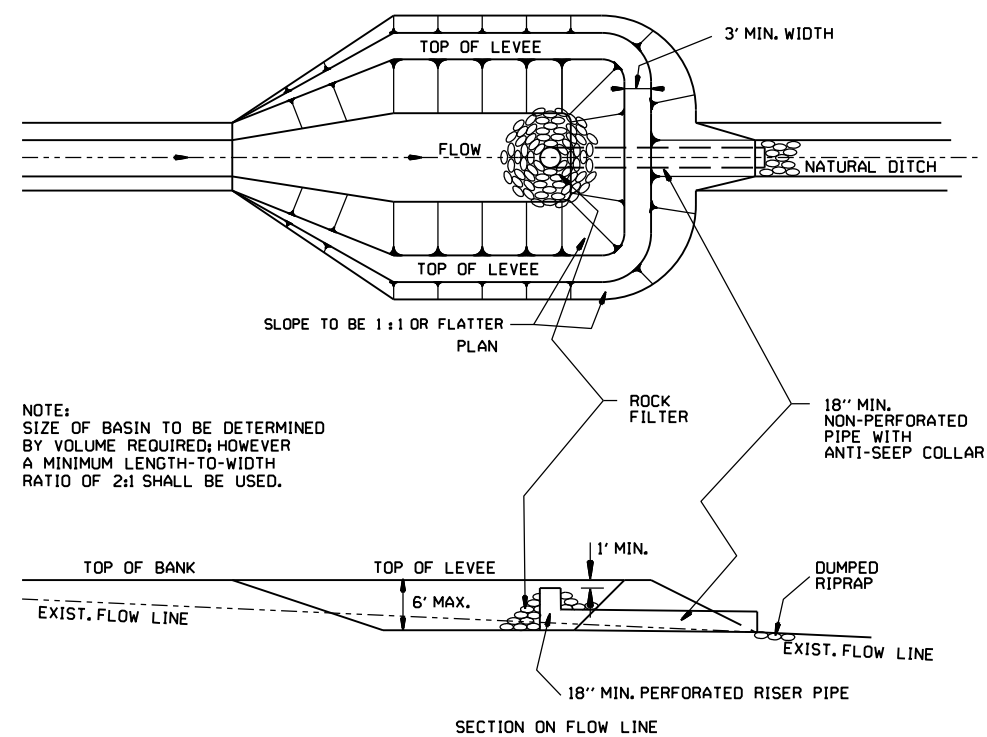
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

11-16-17	ADDED FIBER SOCK E-3 AND E-13
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK
11-18-98	ADDED NOTES
07-02-98	ADDED BALED STRAW FIBER BARRIER (E-2)
07-20-95	REVISED SILT FENCE E-4 AND E-11
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC
06-02-94	REVISED E-1, 4, 7 & 11; DELETED E-2 & 3
04-01-93	REDRAWN
10-01-92	REDRAWN
08-02-76	ISSUED R.D.M.
DATF	REVISION

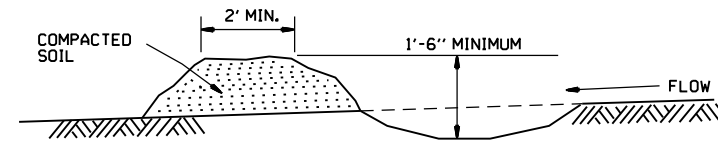
STANDARD DRAWING TEC-1



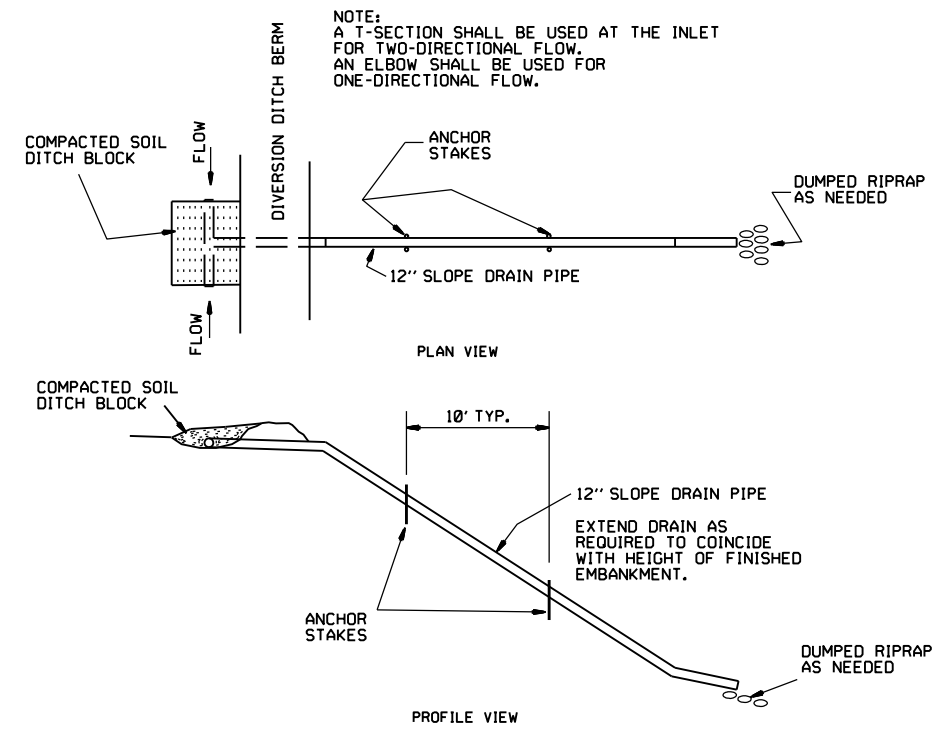
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



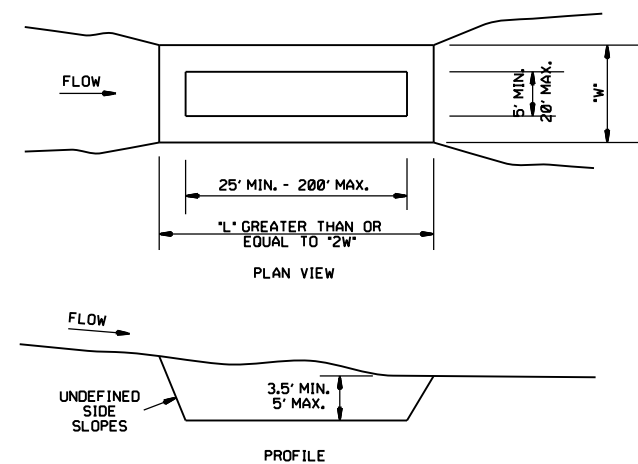
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



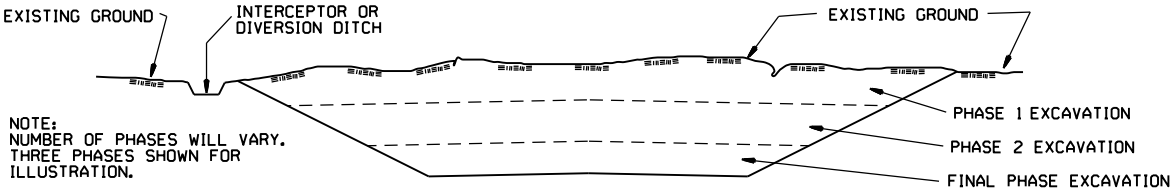
SEDIMENT BASIN (E-14)

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

CLEARING AND GRUBBING

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

EXCAVATION

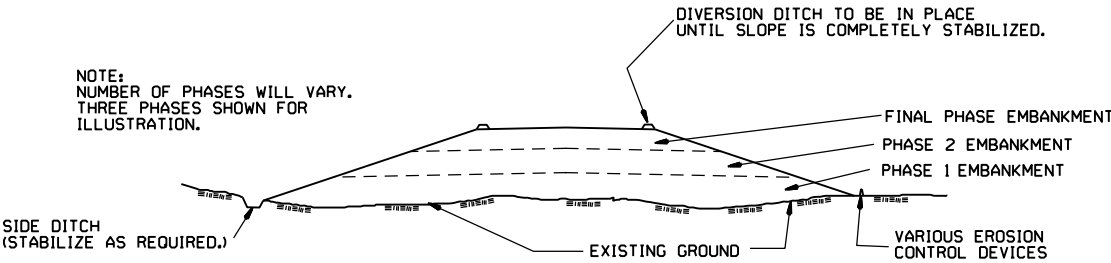


GENERAL NOTE

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

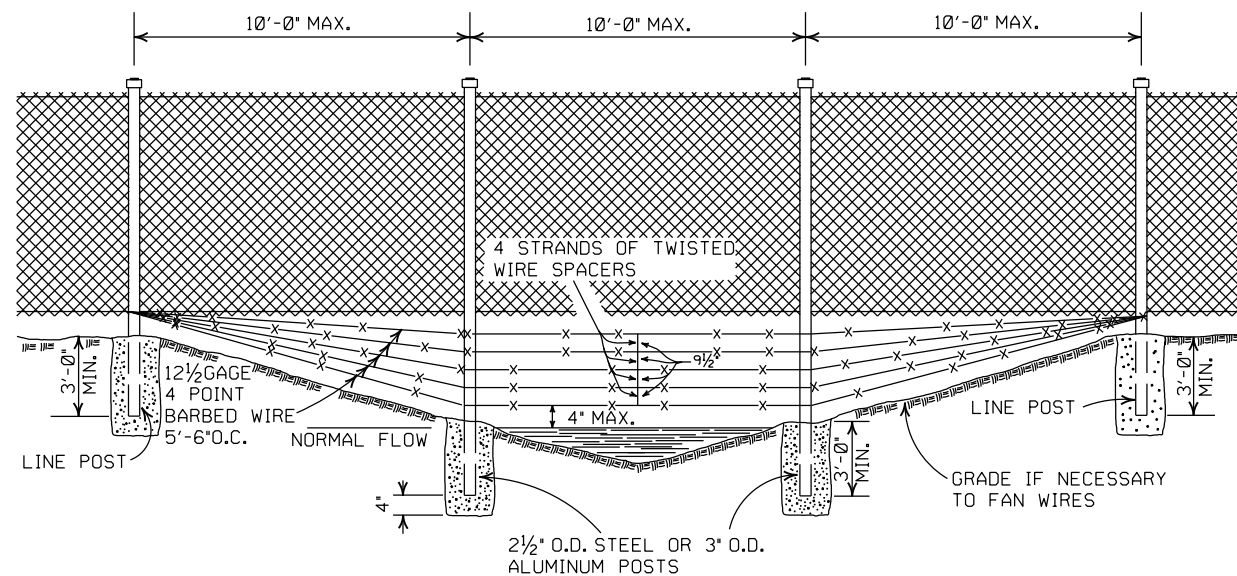


GENERAL NOTE

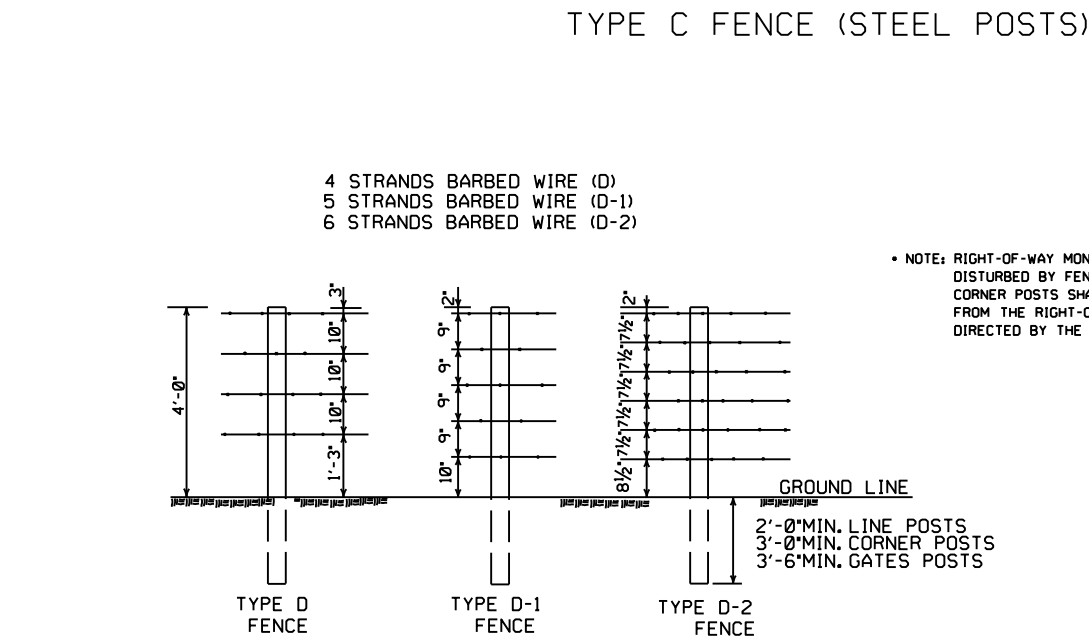
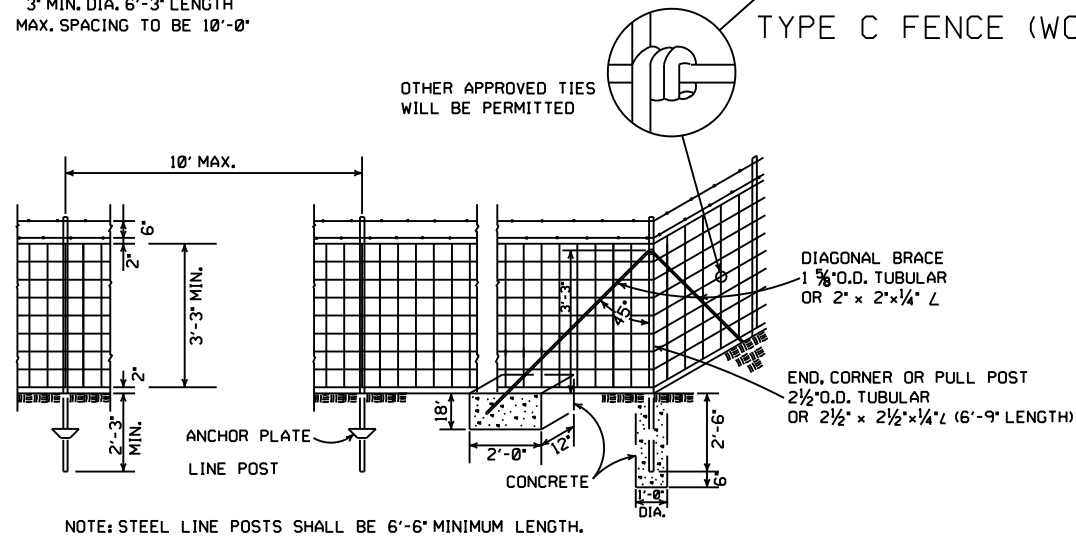
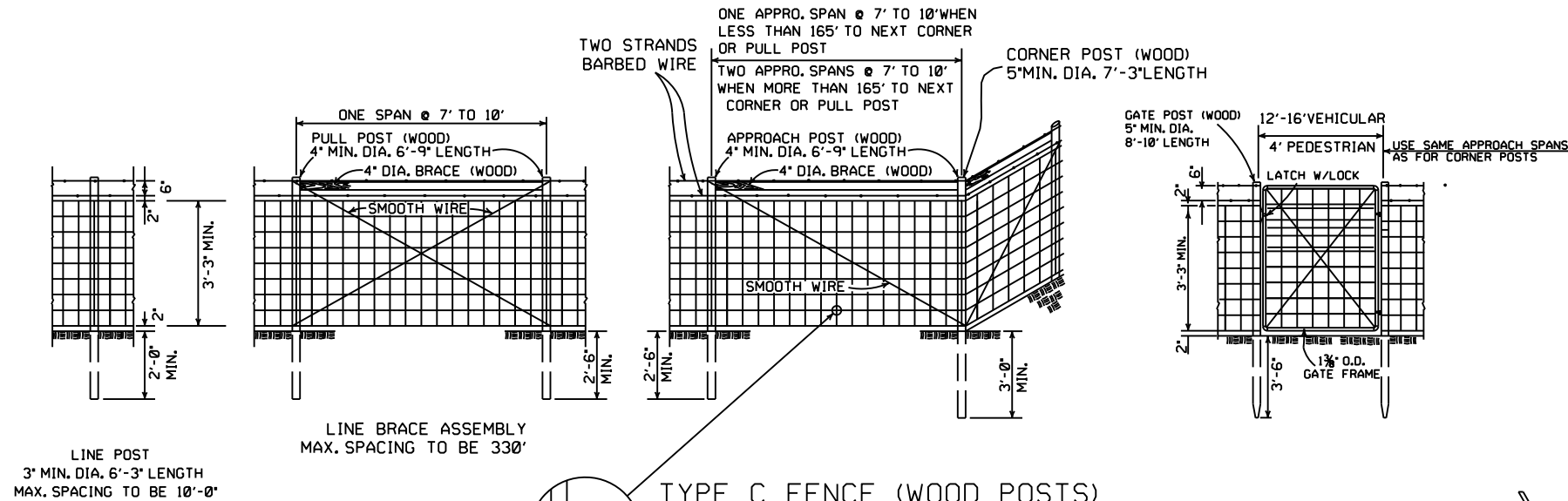
ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

- 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.

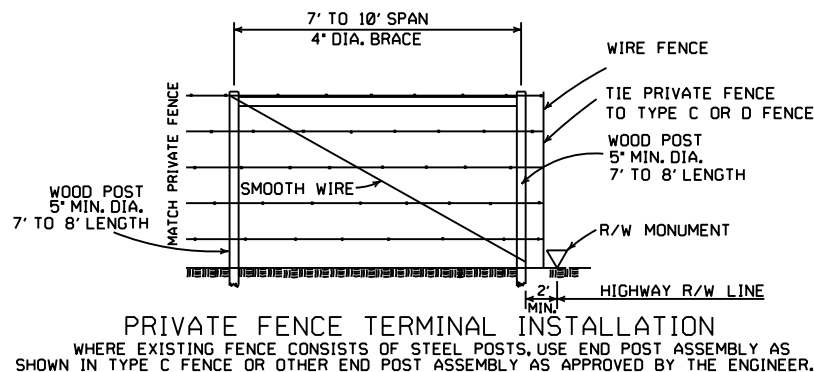
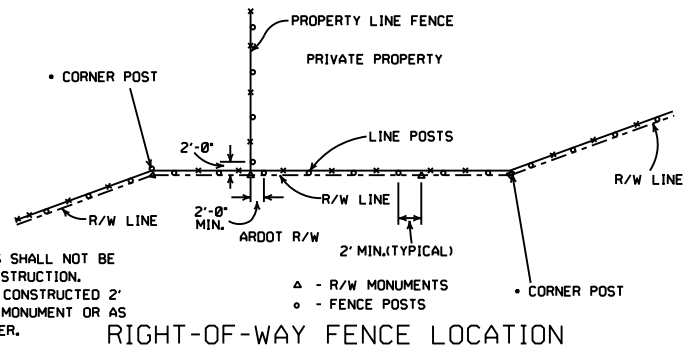
			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
11-03-94	CORRECTED SPELLING		STANDARD DRAWING TEC-3
6-2-94	Drawn & Issued	6-2-94	
DATE	REVISION	FILMED	



ARKANSAS STATE HIGHWAY COMMISSION
WIRE FENCE WATER GAPS
STANDARD DRAWING WF-2



NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.



GENERAL NOTES:

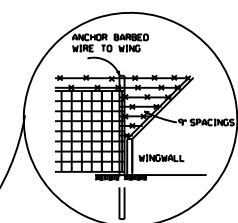
STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE. AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE - 1" TO +2". TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

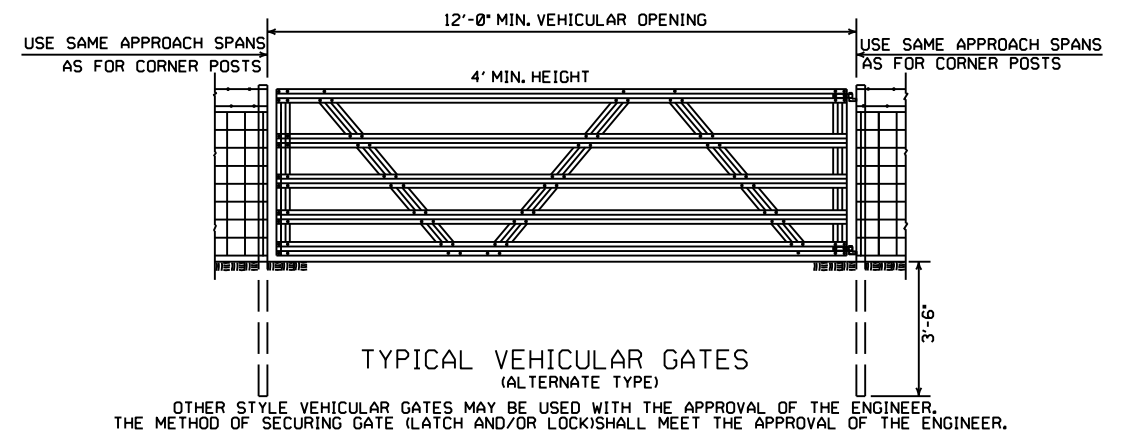
NOTE: USE 3/8" X 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.



SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE 'EYE METHOD' AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE 'WESTERN UNION METHOD' AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.



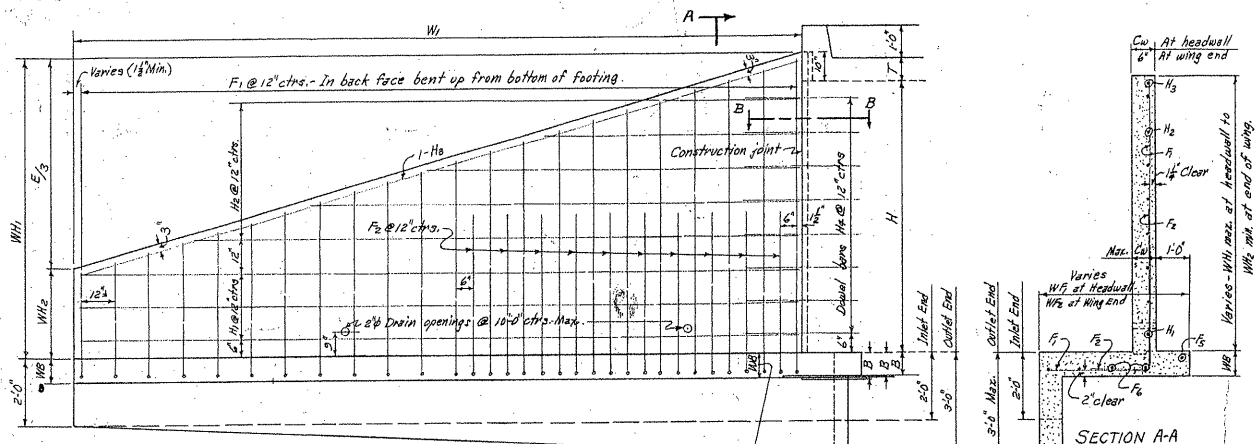
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
7-15-88	ADDED SPLICE NOTE	700-7-15-88
10-30-87	GENERAL REVISIONS	549-10-30-87
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84
1-4-83	MIN. DIA. LINE POST	648-1-4-83
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72
10-2-72	REVISED AND REDRAWN	540-10-2-72
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

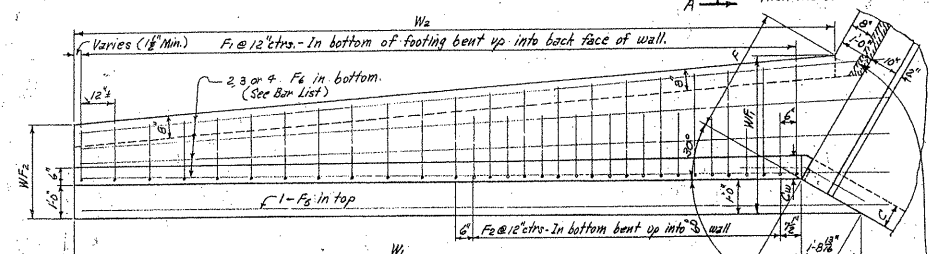
WIRE FENCE
TYPE C AND D

STANDARD DRAWING WF-4

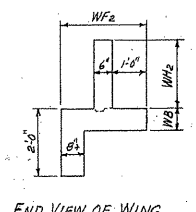
FED. ROAD DIST.	STATE	FED. AID PROJECT	FISCAL YEAR	DIST. NO.	TOTAL SHEETS
6	ARK.				
JOB NO.					



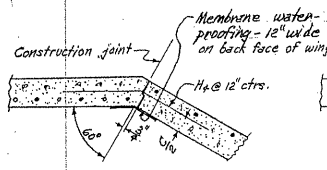
REAR ELEVATION OF WING - SHOWING BACK FACE REIN.



PLAN OF WING - SHOWING FOOTING REIN.



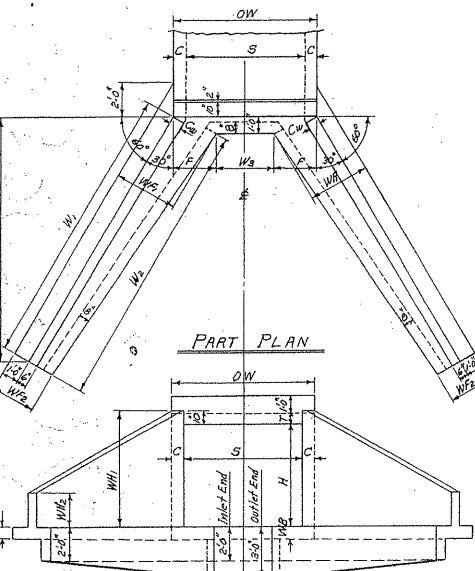
END VIEW OF WING



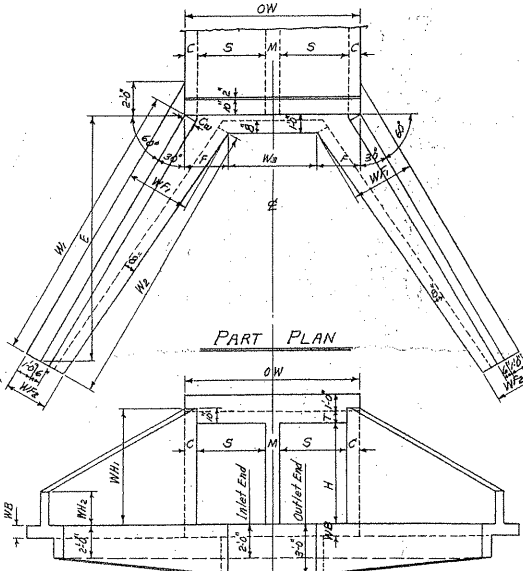
SECTION B-B THRU CONSTRUCTION JOINT

DETAIL AT TOP OF WING

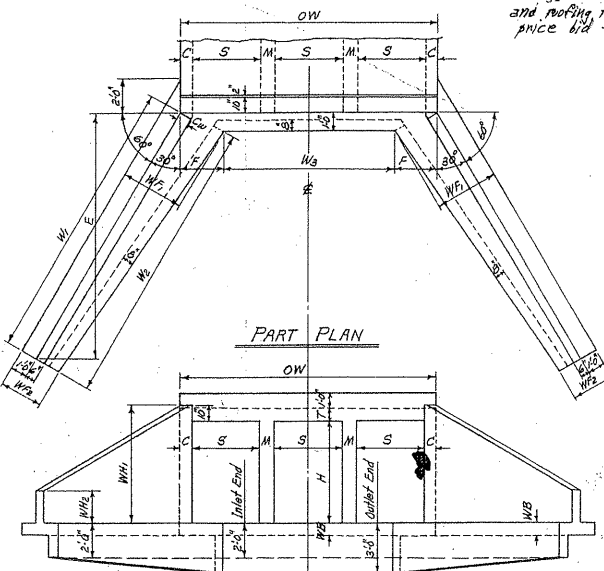
NOTE: Payment for membrane waterproofing and nailing felt to be included in the price bid for Class S Concrete.



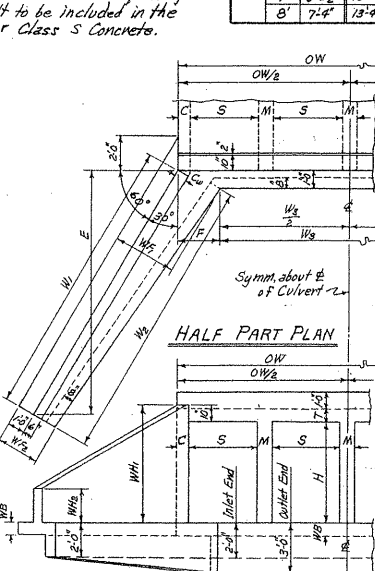
END ELEVATION SINGLE BARREL CULVERT



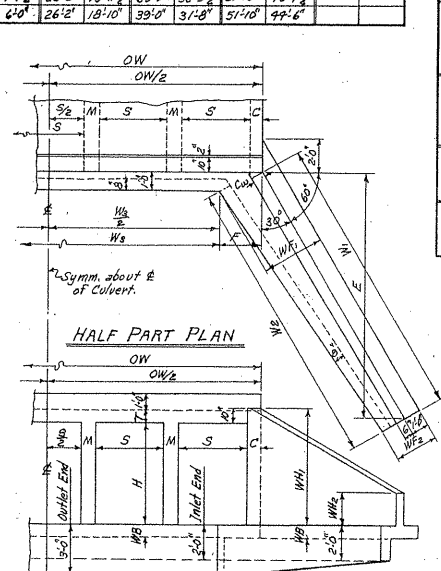
END ELEVATION DOUBLE BARREL CULVERT



END ELEVATION TRIPLE BARREL CULVERT



HALF END ELEVATION QUADRUPLE BARREL CULVERT



HALF END ELEVATION QUINTUPLE BARREL CULVERT

WING DIMENSIONS														
W3 = (OW - 2F)														
CLASS S CONCRETE														
QUANTITY PER WING														
INLET END OUTLET END														
H	WB	CW	WH	WH2	WF	WF2	F	E	W1	W2	Cu.Yd.	Cu.Yd.		
2'	7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11 1/2"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	2'-1 1/2"	1'-1 1/2"	8'-6"	9'-9 3/4"	9'-5 3/4"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-3"	1'-9"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-4 1/2"	2'-1 1/2"	12'-6"	14'-5 1/2"	14'-7 1/2"	2.478	2.648		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-6"	2'-6 1/2"	14'-6"	16'-9"	17'-1 1/2"	3.440	3.661		
7'	7"	6"	7'-0"	2'-4"	4'-2"	2'-7 1/2"	3'-1 1/4"	16'-6"	19'-0"	19'-8 3/4"	4.505	4.758		
8'	7"	6"	8'-0"	2'-8"	4'-6"	2'-9"	3'-8"	18'-6"	21'-4 1/2"	22'-4"	5.761	6.047		

* Quantity per wing does not include headwall or that portion of apron or toe wall for the length W3.

APRON DIMENSION W3														
W3 = (OW - 2F)														
CLASS S CONCRETE														
QUANTITY PER WING														
INLET END OUTLET END														
H	WB	CW	WH	WH2	WF	WF2	F	E	W1	W2	Cu.Yd.	Cu.Yd.		
2'	7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11 1/2"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	2'-1 1/2"	1'-1 1/2"	8'-6"	9'-9 3/4"	9'-5 3/4"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-3"	1'-9"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-4 1/2"	2'-1 1/2"	12'-6"	14'-5 1/2"	14'-7 1/2"	2.478	2.648		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-6"	2'-6 1/2"	14'-6"	16'-9"	17'-1 1/2"	3.440	3.661		
7'	7"	6"	7'-0"	2'-4"	4'-2"	2'-7 1/2"	3'-1 1/4"	16'-6"	19'-0"	19'-8 3/4"	4.505	4.758		
8'	7"	6"	8'-0"	2'-8"	4'-6"	2'-9"	3'-8"	18'-6"	21'-4 1/2"	22'-4"	5.761	6.047		

QUANTITIES

CLASS S CONCRETE - 4 WINGS														
HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS														
QUANTITY PER WING														
INLET END OUTLET END														
H	WB	CW	WH	WH2	WF	WF2	F	E	W1	W2	Cu.Yd.	Cu.Yd.		
2'	7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11 1/2"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	2'-1 1/2"	1'-1 1/2"	8'-6"	9'-9 3/4"	9'-5 3/4"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-3"	1'-9"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-4 1/2"	2'-1 1/2"	12'-6"	14'-5 1/2"	14'-7 1/2"	2.478	2.648		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-6"	2'-6 1/2"	14'-6"	16'-9"	17'-1 1/2"	3.440	3.661		
7'	7"	6"	7'-0"	2'-4"	4'-2"	2'-7 1/2"	3'-1 1/4"	16'-6"	19'-0"	19'-8 3/4"	4.505	4.758		
8'	7"	6"	8'-0"	2'-8"	4'-6"	2'-9"	3'-8"	18'-6"	21'-4 1/2"	22'-4"	5.761	6.047		

* 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 3/4" chamfers.
REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and side walls shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.
UNIT STRESSES:-
Class S Concrete (n=10) 1200 psi
Reinforcing Steel 20,000 psi

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

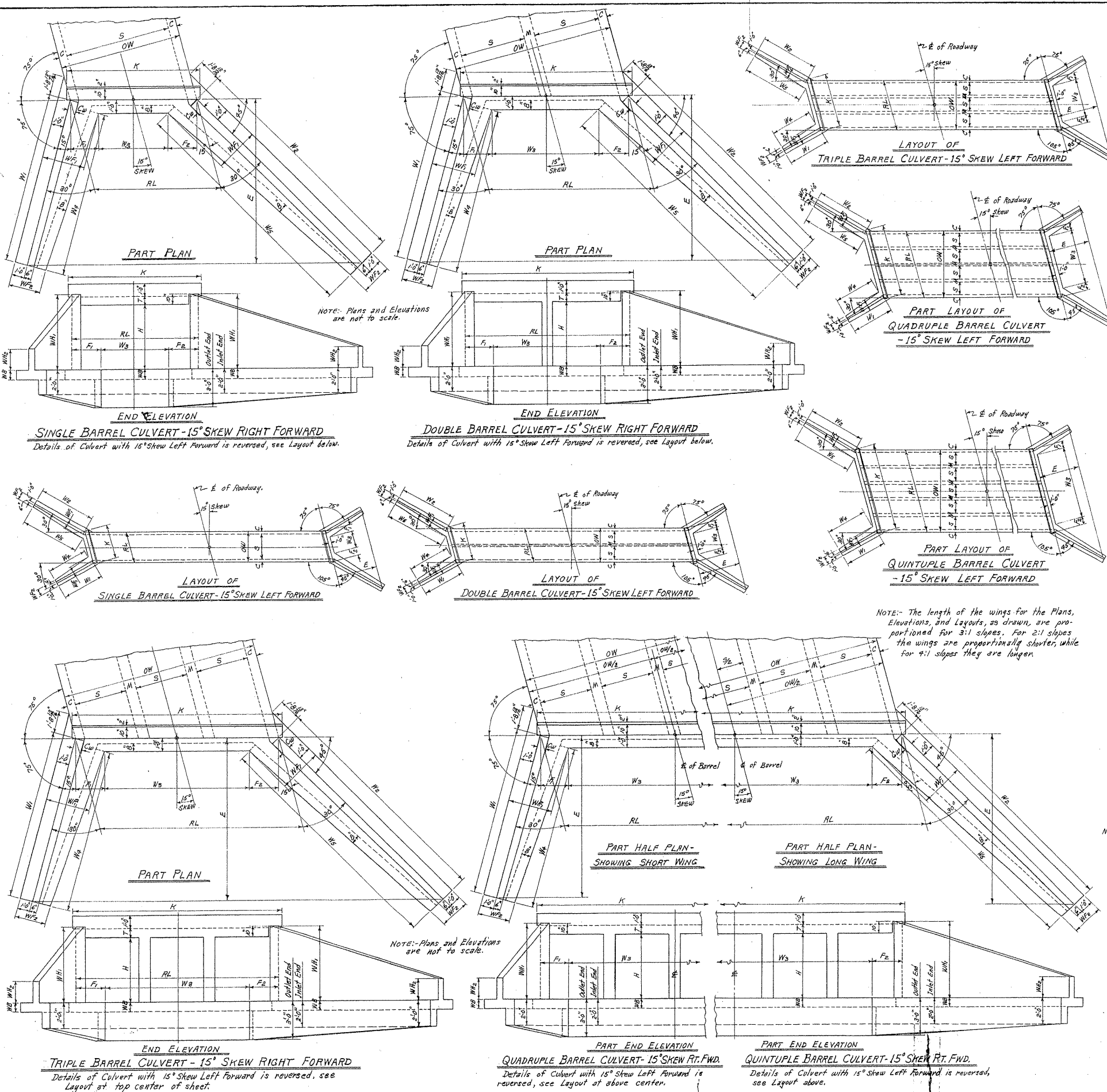
SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	
	R-200X-X3	R-300X-X3		

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
SINGLES, DOUBLES, TRIPLES, ALL DEPTHS OF COVER
QUADRUPLES & QUINTUPLES. FOR H = 8'-0" OR LESS
STANDARD DRAWING NO. W-X003-1

Designed By: M.C.H. 8-20-62. Checked By: RWS. 1-9-63
Drawn By: M.C.H. 12-14-62. Checked By: RWS. 1-31-63
Quantity: By: M.C.H. 12-14-62. Checked By: RWS. 1-31-63
Revised By: M.C.H. 12-14-62. Checked By: RWS. 1-31-63

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



ROADWAY LENGTH RL				HEADWALL LENGTH K				APRON DIMENSION W ₃			
RL = OW + 1.035276				K = RL + (6.5°)				W ₃ = RL + (F ₁ + F ₂)			
USE WITH DRAWING NO.	CLEAR SPAN	CLEAR HEIGHT	SUM OF FOOTING DIMENSIONS	SINGLE BARREL CULVERT				DOUBLE BARREL CULVERT			
				OW	RL	K	W ₃	OW	RL	K	W ₃
W-X-152-1, W-X-153-1 or W-X-154-1.	4'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
	5'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
	6'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
(FOR H=8'0" OR LESS)	7'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
	8'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
	9'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
(FOR H=9'0" & OVER)	10'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
	11'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
	12'	2'	2'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		3'	3'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		4'	4'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"
		5'	5'-0"	5'-0"	5'-2"	5'-8"	3'-2"	9'-8"	10'-0"	10'-6"	8'-0"

NOTE: This drawing to be used in conjunction with Standard Wing Drawings for 15° Skews for each slope as listed below.
2:1 Slopes W-X-152-1 or W-X-152-2 W-X-153-1 or W-X-153-2 W-X-154-1 or W-X-154-2.
3:1 Slopes W-X-152-1 or W-X-152-2 W-X-153-1 or W-X-153-2 W-X-154-1 or W-X-154-2.
4:1 Slopes W-X-152-1 or W-X-152-2 W-X-153-1 or W-X-153-2 W-X-154-1 or W-X-154-2.

This drawing to be used in conjunction with Std. Barrel Sections, Drawing No. SINGLES DOUBLES TRIPLES QUADRUPLES QUINTUPLES
R-115X-0 R-215X-0 R-315X-0 R-415X-0 R-515X-0
R-115X-1 R-215X-1 R-315X-1 R-415X-1 R-515X-1
R-215X-2 R-315X-2 R-415X-2 R-515X-2

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
15° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS 2:1, 3:1 & 4:1 SLOPES
SINGLES, DOUBLES, TRIPLES, ALL DEPTHS OF COVER
QUADRUPLES & QUINTUPLES. H=2', 3', 4', 5', 6', 7', 8', 9', 10', 11' & 12'.
STANDARD DRAWING NO. W-X-15

DIMENSIONS *QUANTITIES*

BAR SIZE	PIN DIAM.	H	ADD FOR 2 HOOKS	BARS "b"
#4	2"	4"	0'10 $\frac{1}{2}$ "	
#5	2 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	0'11 $\frac{1}{2}$ "	
#6	3"	5" ¹¹	1'2"	
#7	3 $\frac{3}{8}$ "	5 $\frac{1}{2}$ "	1'4"	

NOTE:- Dimensions are to centers of bars

BARREL DIMENSIONS										UNIT QUANTITIES			
MAX. DESIGN DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	SQ. FT. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF TOP WALLS	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	CLASS & CONC. FOR LIN. FT. OF BARREL	REINFORCING STEEL			
										PER LIN. FT. OF BARREL	ADDITIONAL		
D	S	H	A	OW	T	C	B	OH	CU YD.	LB.	LB.	LB.	
SECTION "A" - 10'-0"	1 @ 10'	3'	12	5'-0"	6"	6"	6"	4'-11"	0.312	29.62	13.86	51.94	
		4'	16	5'-0"	6"	6"	6"	5'-1"	0.399	32.29	15.03	51.94	
		5'	20	5'-0"	6"	6"	6"	6'-1"	0.386	34.96	16.70	51.94	
	1 @ 10'	6'	24	5'-0"	6"	6"	6"	7'-1"	0.467	38.08	18.37	52.33	
		3'	15	6'-0"	6"	6"	6"	4'-2"	0.370	33.64	15.03	79.37	
		4'	20	6'-0"	6"	6"	6"	5'-2"	0.407	35.83	16.70	79.37	
	1 @ 10'	5'	25	6'-0"	7"	6"	7"	6'-2"	0.444	38.50	18.37	79.37	
		6'	30	6'-0"	7"	7"	7"	7'-2"	0.526	51.87	20.04	80.77	
		7'	35	6'-3"	7"	7"	7"	8'-2"	0.594	57.00	21.71	81.66	
	1 @ 10'	4'	24	7'-0"	6"	6"	6"	5'-3"	0.572	59.99	23.37	93.29	
		5'	30	7'-0"	6"	6"	6"	6'-3"	0.609	61.66	24.04	93.29	
		6'	36	7'-2"	7"	7"	7"	7'-3"	0.591	65.18	21.71	94.68	
SECTION "B" - 15'-0"	1 @ 15'	7'	42	7'-3"	7"	7"	7"	8'-3"	0.660	70.41	23.38	95.37	
		8'	48	7'-4"	8"	8"	8"	9'-3"	0.735	79.63	25.05	96.07	
		3'	12	5'-0"	6"	6"	6"	4'-11"	0.312	29.62	13.86		
	1 @ 15'	4'	16	5'-0"	6"	6"	6"	5'-1"	0.349	36.65	15.03		
		5'	20	5'-0"	6"	6"	6"	6'-1"	0.386	39.32	16.70		
		6'	24	5'-0"	6"	6"	6"	7'-1"	0.467	44.79	18.37		
	1 @ 15'	3'	15	6'-0"	6"	6"	6"	4'-2"	0.370	49.78	15.03		
		4'	20	6'-0"	6"	6"	6"	5'-2"	0.407	55.15	16.70		
		5'	25	6'-0"	7"	6"	7"	6'-2"	0.444	55.12	18.37		
	1 @ 15'	6'	30	6'-0"	7"	7"	7"	7'-2"	0.526	59.89	20.04		
		7'	35	6'-3"	7"	7"	7"	8'-2"	0.594	67.68	21.71		
		4'	24	7'-0"	6"	6"	6"	5'-4"	0.499	65.30	18.37		
SECTION "C" - 20'-0"	1 @ 20'	5'	30	7'-0"	6"	6"	6"	6'-4"	0.536	66.63	20.04		
		6'	36	7'-2"	8"	8"	8"	7'-4"	0.619	73.65	21.71		
		7'	42	7'-3"	7"	7"	7"	8'-4"	0.688	82.41	23.38		
	1 @ 20'	8'	48	7'-4"	8"	8"	8"	9'-4"	0.763	93.14	25.05		
		3'	12	5'-0"	6"	6"	6"	4'-11"	0.316	37.25	13.36		
		4'	16	5'-0"	6"	6"	6"	5'-1"	0.353	40.21	15.03		
	1 @ 20'	5'	20	5'-0"	6"	6"	6"	6'-1"	0.390	44.94	16.70		
		6'	24	5'-0"	6"	6"	6"	7'-1"	0.471	51.38	18.37		
		3'	15	6'-0"	6"	6"	6"	4'-3"	0.394	52.85	15.03		
	1 @ 20'	4'	20	6'-0"	6"	6"	6"	5'-3"	0.431	55.52	16.70		
		5'	25	6'-0"	7"	6"	7"	6'-3"	0.468	59.92	18.37		
		6'	30	6'-0"	7"	7"	7"	7'-3"	0.550	67.04	20.04		
SECTION "D" - 25'-0"	1 @ 25'	7'	35	6'-3"	7"	7"	7"	8'-5"	0.618	78.27	21.71		
		8'	42	7'-0"	6"	6"	6"	5'-5"	0.526	39.39	18.37		
		5'	30	7'-0"	6"	6"	6"	6'-5"	0.563	72.06	20.04		
	1 @ 25'	6'	36	7'-2"	7"	7"	7"	7'-5"	0.646	81.20	21.71		
		7'	42	7'-3"	7"	7"	7"	8'-5"	0.716	92.67	23.38		
		8'	48	7'-4"	8"	8"	8"	9'-5"	0.787	103.07	25.05		
	1 @ 25'	3'	12	5'-0"	6"	6"	6"	4'-2"	0.327	39.63	13.36		
		4'	16	5'-0"	6"	6"	6"	5'-2"	0.364	46.30	15.03		
		5'	20	5'-0"	6"	6"	6"	6'-2"	0.401	49.97	16.70		
	1 @ 25'	6'	24	5'-0"	6"	6"	6"	7'-2"	0.483	55.14	18.37		
		3'	15	6'-0"	6"	6"	6"	4'-4"	0.417	55.28	15.03		
		4'	20	6'-0"	6"	6"	6"	5'-4"	0.454	57.95	16.70		
SECTION "E" - 30'-0"	1 @ 30'	5'	25	6'-0"	6"	6"	6"	6'-5"	0.501	61.61	18.37		
		6'	30	6'-2"	7"	7"	7"	7'-6"	0.585	71.20	20.04		
		7'	35	6'-4"	8"	8"	8"	8'-6"	0.668	81.45	21.71		
	1 @ 30'	4'	24	7'-0"	6"	6"	6"	5'-7"	0.559	72.95	18.37		
		5'	30	7'-0"	6"	6"	6"	6'-7"	0.616	76.21	20.04		
		6'	36	7'-2"	7"	7"	7"	7'-7"	0.679	85.22	21.71		
	1 @ 30'	7'	42	7'-3"	8"	8"	8"	8'-7"	0.776	92.83	23.38		
		8'	48	7'-5"	8"	8"	8"	9'-7"	0.869	104.02	25.05		
		3'	12	5'-0"	6"	6"	6"	4'-3"	0.343	42.12	13.36		
	1 @ 30'	4'	16	5'-0"	6"	6"	6"	5'-3"	0.380	44.79	15.03		
		5'	20	5'-1"	6"	6"	6"	6'-3"	0.436	53.36	16.70		
		6'	24	5'-3"	7"	6"	7"	7'-3"	0.521	63.09	18.37		
1 @ 30'	3'	15	6'-0"	6"	6"	6"	4'-4"	0.444	58.94	15.03			
	4'	20	6'-0"	6"	6"	6"	5'-4"	0.481	61.61	16.70			
	5'	25	6'-1"	6"	6"	6"	6'-4"	0.549	66.77	18.37			
SECTION "F" - 35'-0"	1 @ 35'	6'	30	6'-3"	7"	7"	7"	7'-6"	0.637	75.68	20.04		
		7'	35	6'-5"	8"	8"	8"	8'-6"	0.721	88.37	21.71		
		4'	24	7'-0"	6"	6"	6"	5'-8"	0.591	79.04	20.04		
	1 @ 35'	5'	30	7'-2"	7"	7"	7"	6'-8"	0.669	83.78	21.71		
		6'	36	7'-4"	10"	10"	10"	7'-8"	0.760	92.53	23.38		
		7'	42	7'-5"	8"	8"	8"	8'-8"	0.850	104.59	25.05		
	1 @ 35'	8'	48	7'-7"	9"	9"	9"	9'-8"	0.949	115.61	26.72		
		3'	12	5'-0"	6"	6"	6"	4'-4"	0.358	45.99	13.36		
		4'	16	5'-0"	6"	6"	6"	5'-4"	0.395	48.16	15.03		
	1 @ 35'	5'	20	5'-2"	7"	6"	7"	6'-4"	0.471	56.32	16.70		
		6'	24	5'-4"	8"	8"	8"	7'-4"	0.560	67.17	18.37		
		3'	15	6'-0"	6"	6"	6"	4'-5"	0.463	63.18	16.70		
1 @ 35'	4'	20	6'-0"	6"	6"	6"	5'-5"	0.509	66.11	18.37			
	5'	25	6'-2"	7"	7"	7"	6'-5"	0.588	71.65	20.04			
	6'	30	6'-4"	8"	8"	8"	7'-5"	0.679	80.70	21.71			
SECTION "G" - 40'-0"	1 @ 40'	7'	35	6'-5"	9"	9"	9"	8'-5"	0.770	92.59	23.38		
		4'	24	7'-0"	6"	6"	6"	5'-10"	0.641	80.81	21.71		
		5'	30	7'-5"	7"	7"	7"	6'-10"	0.724	91.60	23.38		
	1 @ 40'	6'	36	7'-5"	8"	8"	8"	7'-10"	0.818	96.56	25.05		
		7'	42	7'-7"	9"	9"	9"	8'-10"	0.910	112.23	26.72		
		8'	48	7'-9"	10"	10"	10"	9'-10"	1.020	123.01	28.39		
	1 @ 40'	3'	12	5'-0"	6"	6"	6"	4'-5"	0.373	49.38	15.03		
		4'	16	5'-1"	6"	6"	6"	5'-5"	0.427	52.56	16.70		
		5'	20	5'-3"	7"	7"	7"	6'-5"	0.507	60.85	18.37		
	1 @ 40'	6'	24	5'-5"	8"	8"	8"	7'-5"	0.599	71.86	20.04		
		3'	15	6'-0"	6"	6"	6"	4'-8"	0.481	67.30	16.70		
		4'	20	6'-1"	6"	6"	6"	5'-8"	0.545	70.89	18.37		
1 @ 40'	5'	25	6'-3"	7"	7"	7"	6'-8"	0.628	76.56	20.04			
	6'	30	6'-5"	8"	8"	8"	7'-8"	0.723	85.28	21.71			
	7'	35	6'-7"	9"	9"	9"	8'-8"	0.817	95.89	23.38			

CLASS S CONCRETE

10

Designed By: W.C.H. 9-5-62 Checked By: R.H.S. 11-8-62
 Drawn By: W.C.H. 10-10-62 Checked By: J.M. 11-12-62
 Quantities By: W.C.H. 11-7-62 Checked By: J.M. 11-16-62

