DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	1	58
		HWY. 34 STR. & APPRS. (GREENE CO.) (S)				

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 34 STR. & APPRS. (GREENE CO.) (S)

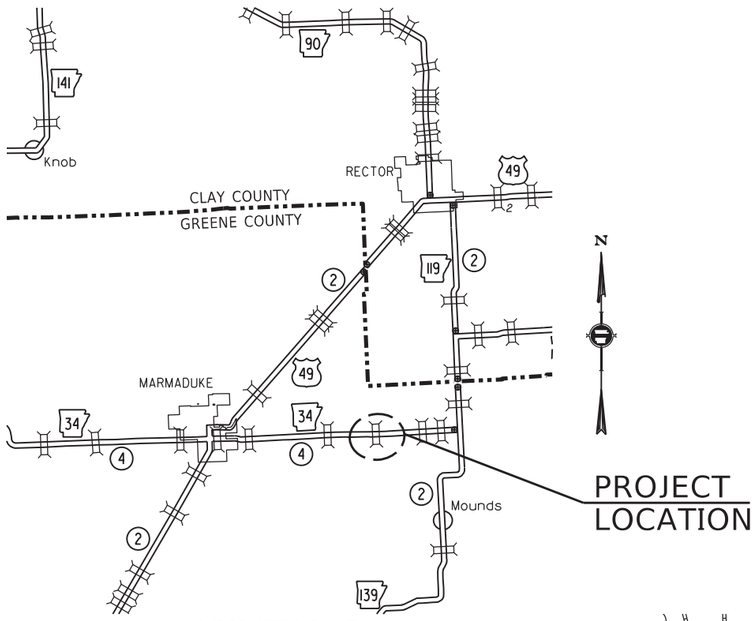
GREENE COUNTY

ROUTE 34 SECTION 4

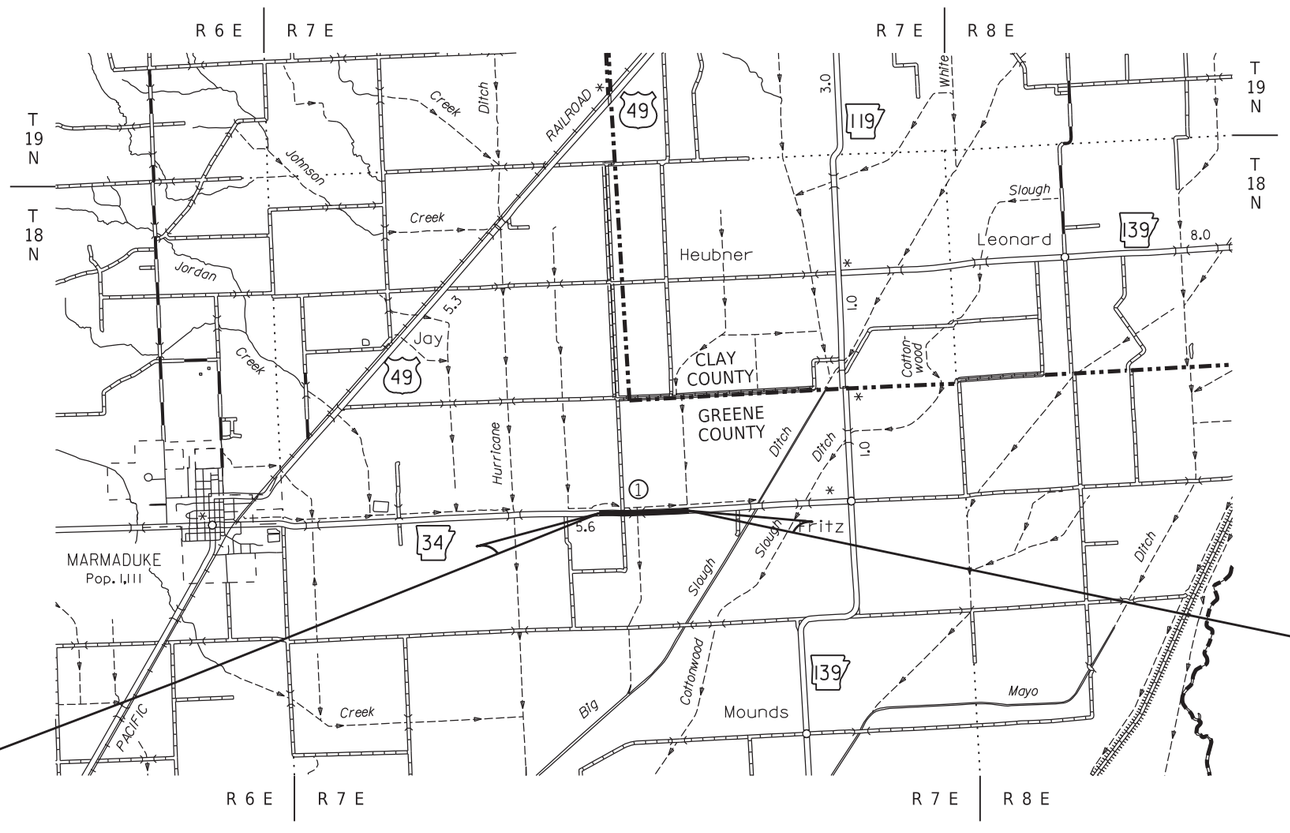
JOB 101100

FEDERAL AID PROJ. NHPP-0028(69)

NOT TO SCALE



VICINITY MAP



ARK. HWY. DIST. NO. 10

STRUCTURES OVER 20'-0" SPAN

① STA. 112+05.00 CONSTRUCT
QUINT. 12' X 12' X 52' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
Q25 = 1560 CFS; D.A. = 7.63 SQ. MI.
SPAN = 64' - 6"

DESIGN TRAFFIC DATA

DESIGN YEAR	2046
2026 ADT	570
2046 ADT	630
2046 DHV	70
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	6%
DESIGN SPEED	55 MPH

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 36° 11' 10"	N 36° 11' 09"	N 36° 11' 09"
LONGITUDE	W 90° 19' 27"	W 90° 19' 07"	W 90° 18' 51"

LENGTH OF PROJECT CALCULATED ALONG ℄

GROSS LENGTH OF PROJECT	2481.95	FEET OR	0.470	MILES
NET " " ROADWAY	2417.45	" "	0.458	MILES
NET " " BRIDGES	64.50	" "	0.012	MILES
NET " " PROJECT	2481.95	" "	0.470	MILES

CERTIFICATE OF AUTHORIZATION
PICKERING FIRM, INC.
No. 1329
ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9402
MICHAEL L. FOSTER

Digitally signed by Michael L. Foster
Date: 2026.01.07 10:46:22 -06'00'

101100 - TITLE SHEET.DGN CREATED: 5/22/2024 SAVED: 1/6/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
02/03/2026		6	ARK.	101100	2	58
		INDEX OF SHEETS AND STANDARD DRAWINGS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2026.02.04

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

INDEX OF SHEETS

SHEET NO.			TITLE
		1	TITLE SHEET
		2	INDEX OF SHEETS AND STANDARD DRAWINGS
		3	GOVERNING SPECIFICATIONS AND GENERAL NOTES
4	-	5	TYPICAL SECTIONS OF IMPROVEMENT
6	-	12	SPECIAL DETAILS
13	-	20	TEMPORARY EROSION CONTROL DETAILS
21	-	29	MAINTENANCE OF TRAFFIC DETAILS
		30	PERMANENT PAVEMENT MARKING DETAILS
31	-	34	QUANTITIES
		35	SUMMARY OF QUANTITIES AND REVISIONS
36	-	37	SURVEY CONTROL DETAILS
38	-	39	PLAN AND PROFILE SHEETS
40	-	58	CROSS SECTIONS

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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
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RCB-1	REINFORCED CONCRETE BOX CULVERT DETAILS	07-26-12
RCB-2	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	11-20-03
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
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TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
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
TC-6	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	01-22-26
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

101100 - INDEX OF SHEETS & STANDARD DRAWINGS.DGN CREATED: 11/20/2024 SAVED: 2/3/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
02/23/2026		6	ARK.	101100	3	58
		GOVERNING SPECIFICATIONS AND GENERAL NOTES				

Digitally signed by Thomas N. Taegtmeyer
Date: 2026.02.23

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

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
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)
606-1_____ PIPE CULVERTS FOR SIDE DRAINS
620-1_____ MULCH COVER
800-1_____ STRUCTURES
802-5_____ CONCRETE FOR STRUCTURES
804-2_____ REINFORCING STEEL FOR STRUCTURES
JOB 101100__ BIDDING REQUIREMENTS AND CONDITIONS
JOB 101100__ BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 101100__ BUY AMERICA - CONSTRUCTION MATERIALS
JOB 101100__ CARGO PREFERENCE ACT REQUIREMENTS
JOB 101100__ COLD MILLING – COUNTY PROPERTY
JOB 101100__ CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 101100__ DESIGN AND QUALITY CONTROL ASPHALT MIXTURES
JOB 101100__ DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 101100__ DOCUMENTATION OF PAYMENTS MADE TO SUBCONTRACTORS
JOB 101100__ FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT
JOB 101100__ LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 101100__ MANDATORY ELECTRONIC CONTRACT
JOB 101100__ MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 101100__ NESTING SITES OF MIGRATORY BIRDS
JOB 101100__ OFF-SITE RESTRAINING CONDITIONS FOR INDIANA AND NORTHERN LONG-EARED BATS
JOB 101100__ PARTNERING REQUIREMENTS
JOB 101100__ PLASTIC PIPE
JOB 101100__ PORTABLE TRAFFIC SIGNAL SYSTEM
JOB 101100__ PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 101100__ PRICE ADJUSTMENT FOR FUEL
JOB 101100__ PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 101100__ SHORING FOR CULVERTS
JOB 101100__ SOIL STABILIZATION
JOB 101100__ STORM WATER POLLUTION PREVENTION PLAN
JOB 101100__ SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 101100__ USE OF FOREIGN MADE UNMANNED AIRCRAFT SYSTEMS
JOB 101100__ UTILITY ADJUSTMENTS
JOB 101100__ VALUE ENGINEERING
JOB 101100__ WARM MIX ASPHALT

GENERAL NOTES

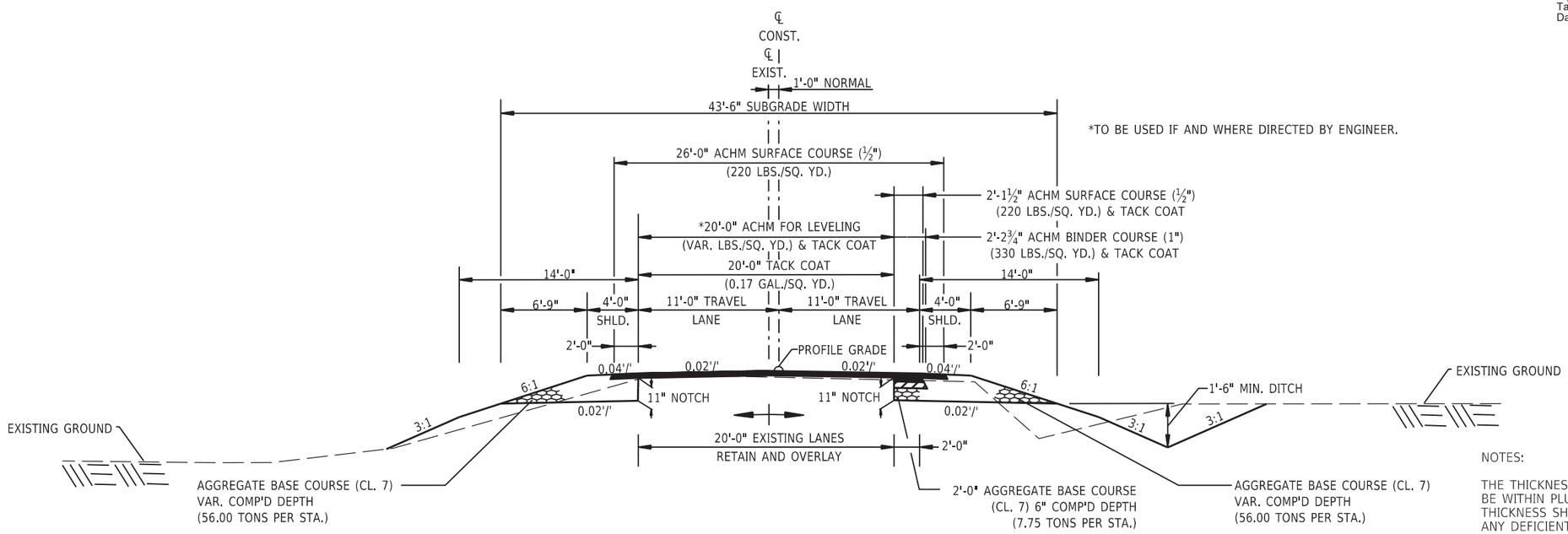
1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. 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.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. 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.
7. 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.
8. 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.
9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
10. 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.
11. 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.

101100 - SPECIFICATIONS AND GENERAL NOTES.DGN CREATED: 11/20/2024 SAVED: 2/23/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	4	58
		TYPICAL SECTIONS OF IMPROVEMENT				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER



*TO BE USED IF AND WHERE DIRECTED BY ENGINEER.

HWY. 34 - TWO LANE NOTCH AND WIDEN OPEN SHOULDER

STA. 100+00.00 - STA. 106+00.00
STA. 119+50.00 - STA. 124+81.95

NOTES:

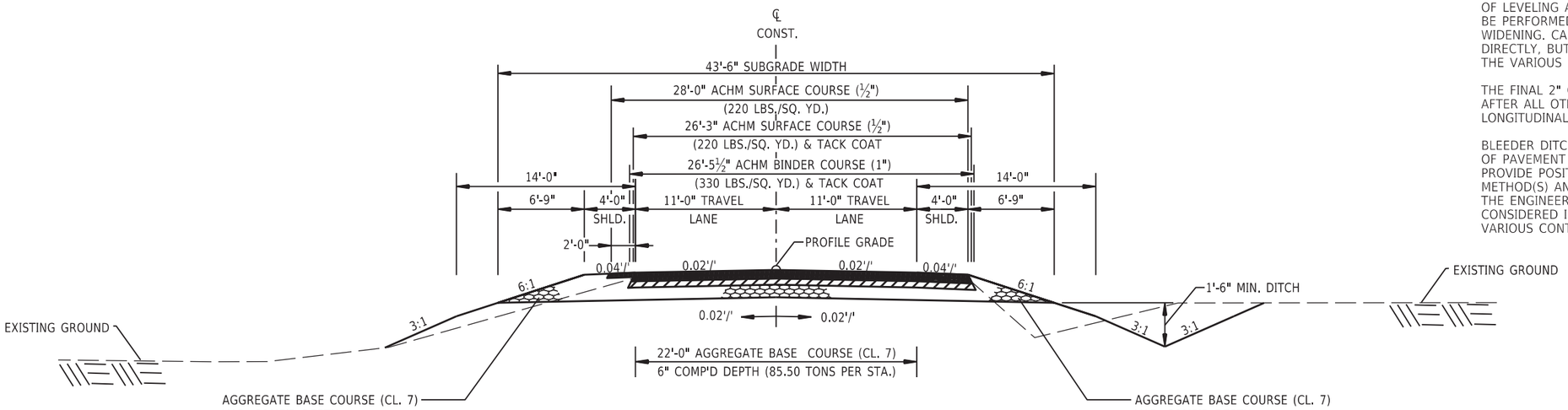
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

BLEEDER DITCHES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT AT THE NOTCH, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) AND SPACING USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.



HWY. 34 - TWO LANE FULL DEPTH OPEN SHOULDER

STA. 106+00.00 - STA. 119+50.00

101100 - TYPICAL SECTIONS.DGN CREATED: 5/30/2024 SAVED: 7/30/2025

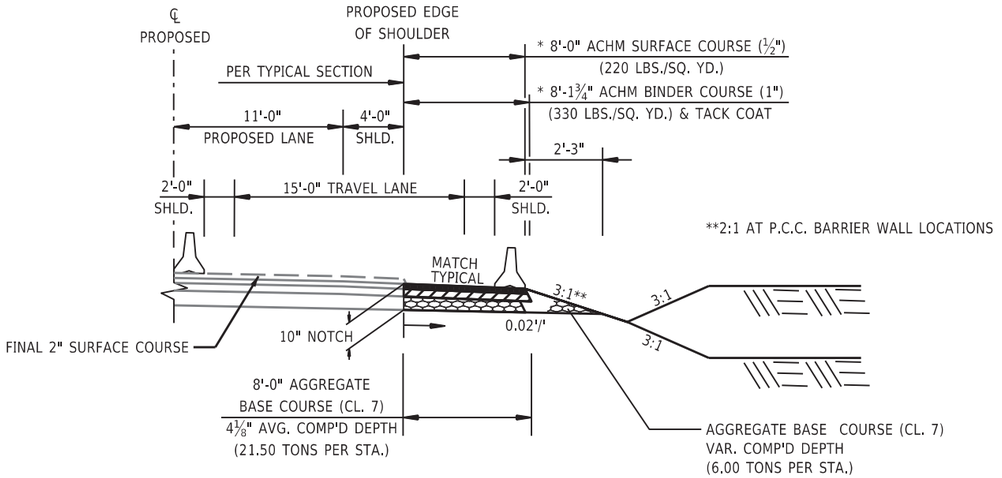
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	5	58
		TYPICAL SECTIONS OF IMPROVEMENT				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

*WIDTH TRANSITION
STA. 104+55.43 - STA. 106+00.00
STA. 119+50.00 - STA. 121+23.22

P.C.C.B. WALL LOCATIONS
STA. 106+15.00 - STA. 119+55.00 LT.
STA. 110+95.00 - STA. 113+15.00 RT.



HWY. 34 - TEMPORARY WIDENING FOR MAINTENANCE OF TRAFFIC
STA. 104+55.43 - STA. 121+23.22

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.

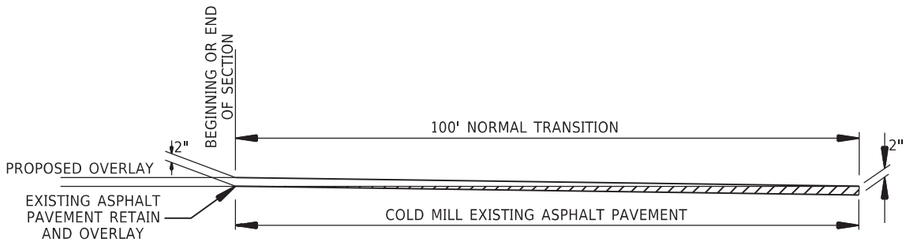
BLEEDER DITCHES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT AT THE NOTCH, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) AND SPACING USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.

101100 - TYPICAL SECTIONS.DGN CREATED: 5/30/2024 SAVED: 7/30/2025

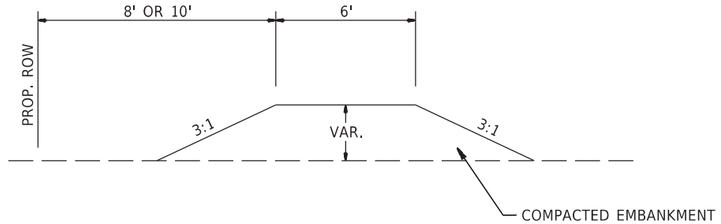
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	6	58
		SPECIAL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

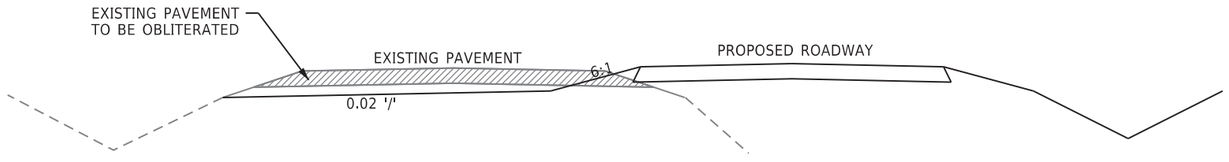


DETAIL FOR TRANSITIONS

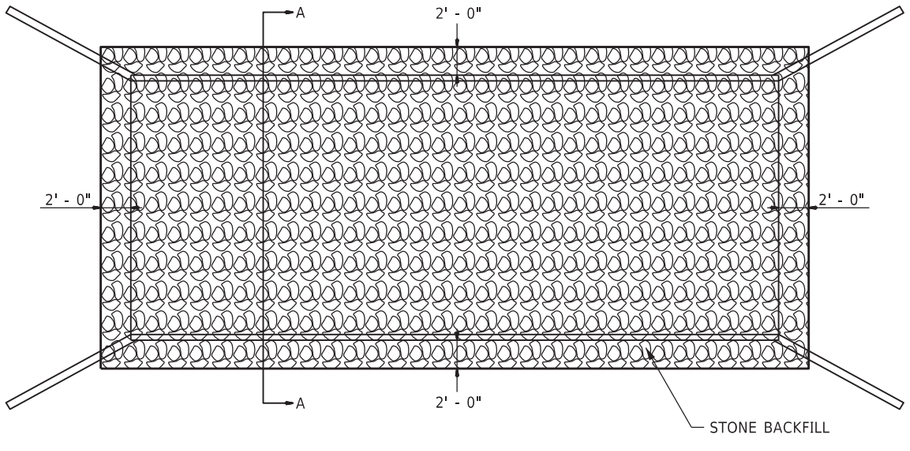


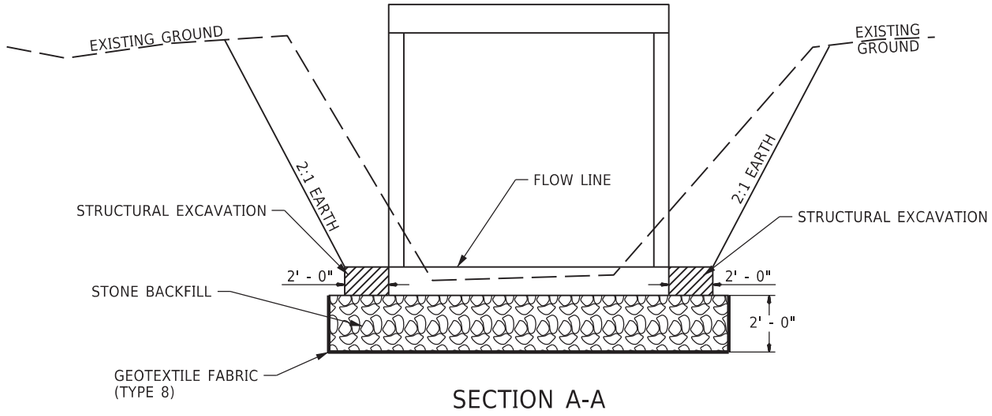
BERM DETAIL

STA. 105+65.85 - STA. 111+30.00 - 8' OFFSET
STA. 113+00.00 - STA. 125+00.00 - 10' OFFSET



PAVEMENT OBLITERATION DETAIL





SECTION A-A

NOTE: STONE BACKFILL TO BE CAPPED WITH 6" OF AGGREGATE BASE COURSE (CLASS 7). CAPPING MATERIAL WILL BE MEASRUED AND PAID FOR AS STONE BACKFILL.

STONE BACKFILL AT R.C. BOX

101100 - SPECIAL DETAILS SHEETS.DGN CREATED: 7/31/2024 SAVED: 7/30/2025

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		7	58
				JOB NO.		101100		

SPECIAL DETAILS

Ellis, Rick — Digitally signed by Ellis, Rick DN: cn="Ellis, Rick", ou=Engineers, ou=Users, ou=ARDOT, DC=ARTOC, DC=com Date: 2024.07.31 15:14:42 -05'00'

STATE OF ARKANSAS — LICENSED PROFESSIONAL ENGINEER — No. 9235 — 7/31/25 — CHARLES R. ELLIS

TABULAR DATA BY: CMW DATE: 9/19/2024
CHECKED BY: WAC DATE: 7/16/2025

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
64'-6"	12'-0"	1'-1"	1'-0"	0	3:1	62'-8"	2'-0"	12'-10"	4'-0"	30	30	3'-6"	6'-6"	6'-6"	3'-5 1/2"	3'-5 1/2"	30'-6"	30'-6"	33'-10 3/8"	33'-10 3/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
36.58	2822

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY	F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS	F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS	F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY	F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS	REINF. STEEL QTY. PER WING (LBS)
WING A	4	12	31	L Min	6	12	11	L 10'-3"	4	12	7	L 6'-1"	4	18	10	Min 5'-7"	4	18	6	30'-2"	4	18	21	L Min 7'-3"	4	8	34'-8"	6	18	21	Min 3'-0"	4	18	4	Min 17'-8"	4	2	31'-3"	4	2	33'-7"	6	12	12	L 3'-4"	1411
				L Max												Max 26'-4"								L Max 15'-11"							Max 5'-11"				Max 33'-4"										X 1'-8"	
				X Min 1'-1"				X 3'-0"				X 2'-4"												X Min 2'-3"																					
				X Max 4'-0"																				X Max 2'-3"																					
				Y Min 4'-8"				Y 7'-4"				Y 3'-10"												Y Min 4'-8"																					
				Y Max 13'-4"																				Y Max 13'-4"																					
WING B	4	12	31	L Min	6	12	11	L 10'-3"	4	12	7	L 6'-1"	4	18	10	Min 5'-7"	4	18	6	30'-2"	4	18	21	L Min 7'-3"	4	8	34'-8"	6	18	21	Min 3'-0"	4	18	4	Min 17'-8"	4	2	31'-3"	4	2	33'-7"	6	12	12	L 3'-4"	1411
				L Max												Max 26'-4"								L Max 15'-11"							Max 5'-11"				Max 33'-4"										X 1'-8"	
				X Min 1'-1"				X 3'-0"				X 2'-4"												X Min 2'-3"																					
				X Max 4'-0"																				X Max 2'-3"																					
				Y Min 4'-8"				Y 7'-4"				Y 3'-10"												Y Min 4'-8"																					
				Y Max 13'-4"																				Y Max 13'-4"																					

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

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"

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 3 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", 'DETAILS OF MULTI-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.

INLET SKEWED END SECTION

SKEW (DEGREE) SK	SLOPE SL	DESIGN FILL DEPTH (FT.) D	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	SECTION LENGTH LL	TOP SLAB THK. T	HDWL DEPTH HD	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVERALL WIDTH OW	OVERALL HEIGHT OH	TOP SLAB REINF. "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	TOP SLAB REINF. "c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D	BOTTOM SLAB REINF. "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	BOTTOM SLAB REINF. "f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D	SIDE WALL REINF. "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINF. "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIB. REINF. "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY	BOTTOM SLAB DISTRIB. REINF. "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY	SIDE WALL DISTRIB. REINF. "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH	INTERIOR WALL DISTRIB. REINF. "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH
															Max				Max				Max				Max											Max						LONG				LONG
															Min				Min				Min				Min											Min						SHORT				MID
																																																					SHORT

"k1" HDWL BARS SIZE	"k1" HDWL BARS LENGTH	"k1" HDWL BARS NO. REQ'D	"k2" HDWL BARS SIZE	"k2" HDWL BARS LENGTH	"k2" HDWL BARS NO. REQ'D	"h" HDWL BARS SIZE	"h" HDWL BARS LENGTH	"h" HDWL BARS Y	"h" HDWL BARS NO. REQ'D

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	REINFORCING STEEL (GR 60) (Includes HDWL) LBS.

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

INLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.) D	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	TOP SLAB THK. T	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH	SECTION LENGTH (FT.) SL	TOP SLAB REINF. LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	TOP SLAB REINF. SPACING	TOP SLAB REINF. NO. REQ'D	BOTTOM SLAB REINF. LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	BOTTOM SLAB REINF. SPACING	BOTTOM SLAB REINF. NO. REQ'D	SIDE WALL REINF. "f0" LENGTH = OH - 4" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINF. "f1" LENGTH = OH - 4" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIB. REINF. STEEL "g" LENGTH = SL SIZE	"g" SPACING	"g" NO. REQ'D	BOTTOM SLAB DISTRIB. REINF. STEEL "e" LENGTH = SL SIZE	"e" SPACING	"e" NO. REQ'D	SIDE WALL DISTRIB. REINF. STEEL "d1" LENGTH = SL SIZE	"d1" SPACING	"d1" NO. REQ'D	INTERIOR WALL DISTRIB. REINF. STEEL "d2" LENGTH = SL SIZE	"d2" SPACING	"d2" NO. REQ'D

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.	"h" HDWL BARS SIZE	"h" HDWL BARS Y	"h" HDWL BARS LENGTH	"h" HDWL BARS NO. REQ'D
3"	86	4	1'-1"	2'-1"	66

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	
0.60	177

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

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.) D	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	TOP SLAB THK. T	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH	SECTION LENGTH (FT.) SL	TOP SLAB REINF. LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	TOP SLAB REINF. SPACING	TOP SLAB REINF. NO. REQ'D	BOTTOM SLAB REINF. LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	BOTTOM SLAB REINF. SPACING	BOTTOM SLAB REINF. NO. REQ'D	SIDE WALL REINF. "f0" LENGTH = OH - 4" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINF. "f1" LENGTH = OH - 4" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIB. REINF. STEEL "g" LENGTH = SL SIZE	"g" SPACING	"g" NO. REQ'D	BOTTOM SLAB DISTRIB. REINF. STEEL "e" LENGTH = SL SIZE	"e" SPACING	"e" NO. REQ'D	SIDE WALL DISTRIB. REINF. STEEL "d1" LENGTH = SL SIZE	"d1" SPACING	"d1" NO. REQ'D	INTERIOR WALL DISTRIB. REINF. STEEL "d2" LENGTH = SL SIZE	"d2" SPACING	"d2" NO. REQ'D
A	5	12	12	14	14	11	8	64'-6"	14'-4"	52	5	64'-2"	8	65'-0"	4	64'-2"	18	34	4	64'-2"	4	65'-11"	4	64'-2"	10	62	8	8.5	146	14'-0"	5	12	416	14'-0"	5	12	129	5	12	129	4	10	30	4	12	96

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
393.85	49344

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
QUINTUPLE BARREL BOX CULVERT
Sta. 112+05

SPECIAL DETAILS

Ver. 1.17 b101100_ci.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		8	58
				JOB NO.		101100		

① SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
7/31/25
CHARLES R. ELLIS

TABULAR DATA BY: CMW DATE: 9/19/2024
CHECKED BY: WAC DATE: 7/16/2025

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
64'-6"	12'-0"	1'-1"	1'-0"	0	3:1	62'-8"	2'-0"	12'-10"	4'-0"	30	30	3'-6"	6'-6"	6'-6"	3'-5 1/2"	3'-5 1/2"	30'-6"	30'-6"	33'-10 3/8"	33'-10 3/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
38.73	2822

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS	F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS	F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS
WING A	4	12	31	L	Min	5'-8"	6	12	11	L 10'-3"	4	12	7	L 6'-1"	4	18	10	Min	4	18	6	30'-2"
					Max	17'-3"												5'-7"				
				X	Min	1'-1"				X 3'-0"				X 2'-4"				Max				
					Max	4'-0"												26'-4"				
				Y	Min	4'-8"				Y 7'-4"				Y 3'-10"								
					Max	13'-4"																
WING B	4	12	31	L	Min	5'-8"	6	12	11	L 10'-3"	4	12	7	L 6'-1"	4	18	10	Min	4	18	6	30'-2"
					Max	17'-3"												5'-7"				
				X	Min	1'-1"				X 3'-0"				X 2'-4"				Max				
					Max	4'-0"												26'-4"				
				Y	Min	4'-8"				Y 7'-4"				Y 3'-10"								
					Max	13'-4"																

WING	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	18	21	L	Min	7'-3"	4	8	34'-8"	6	18	21	Min	4	18	4	Min	4	2	31'-3"	4	2	33'-7"	6	12	12	L	3'-4"	1411
					Max	15'-11"							3'-0"				17'-8"												
				X	Min	2'-3"							Max				Max										X	1'-8"	
					Max	2'-3"							5'-11"				33'-4"												
				Y	Min	4'-8"																							
					Max	13'-4"																							
WING B	4	18	21	L	Min	7'-3"	4	8	34'-8"	6	18	21	Min	4	18	4	Min	4	2	31'-3"	4	2	33'-7"	6	12	12	L	3'-4"	1411
					Max	15'-11"							3'-0"				17'-8"												
				X	Min	2'-3"							Max				Max										X	1'-8"	
					Max	2'-3"							5'-11"				33'-4"												
				Y	Min	4'-8"																							
					Max	13'-4"																							

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"

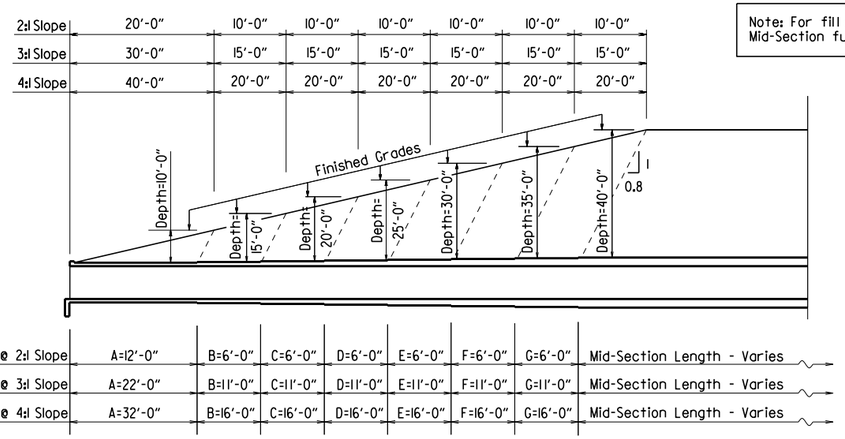
① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SKEWED END SECTION

| SKEW (DEGREE) | SLOPE | DESIGN FILL DEPTH (FT.) | CLEAR SPAN (FT.) | CLEAR HEIGHT (FT.) | SECTION LENGTH | TOP SLAB THK. | HDWL DEPTH | BOTTOM SLAB THK. | SIDE WALL THK. | INTERIOR WALL THK. | OVERALL WIDTH | OVERALL HEIGHT | TOP SLAB REINFORCING STEEL "a" SIZE | "a" SPACING | "a" LENGTHS VARY | "a" NO. REQ'D | TOP SLAB REINFORCING STEEL "c" SIZE | "c" SPACING | "c" LENGTHS VARY | "c" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "d" SIZE | "d" SPACING | "d" LENGTHS VARY | "d" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "f" SIZE | "f" SPACING | "f" LENGTHS VARY | "f" NO. REQ'D | SIDE WALL REINFORCING STEEL "f0" SIZE | "f0" SPACING | "f0" NO. REQ'D | "f0" LENGTH | INTERIOR WALL REINFORCING STEEL "f1" SIZE | "f1" SPACING | "f1" NO. REQ'D | "f1" LENGTH | TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE | "g" SPACING | "g" NO. REQ'D | "g" LENGTHS VARY | BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE | "e" SPACING | "e" NO. REQ'D | "e" LENGTHS VARY | SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE | "d1" SPACING | "d1" NO. REQ'D | "d1" LENGTH | INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE | "d2" SPACING | "d2" NO. REQ'D | "d2" LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		9	58
				JOB NO.		101100		

(1) SPECIAL DETAILS

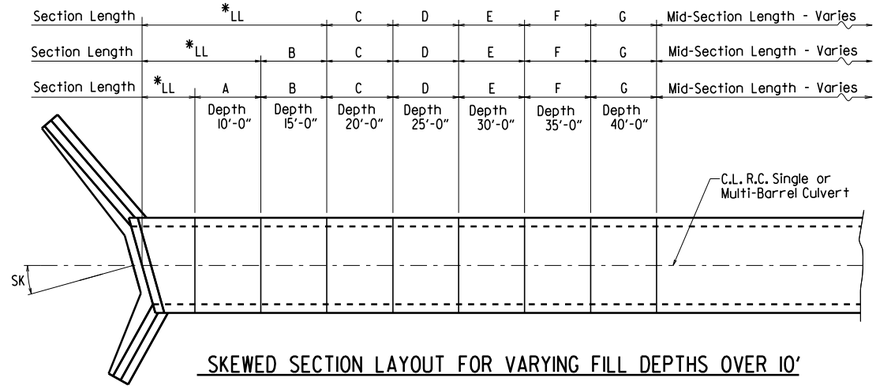


LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'

Lengths for Non-Skewed Boxes

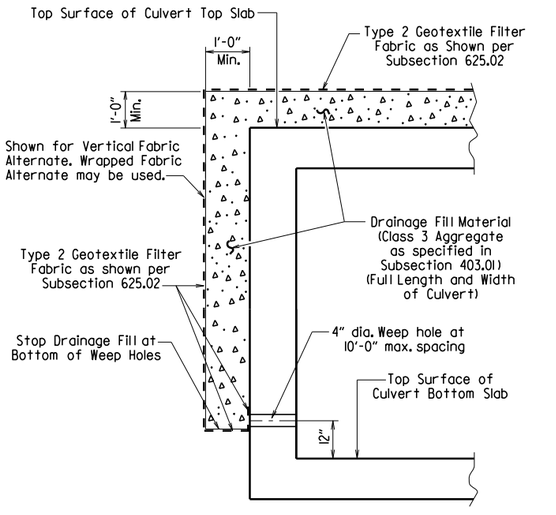
Note: For fill depths 10' and under, use Mid-Section full length of box culvert.

* 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.



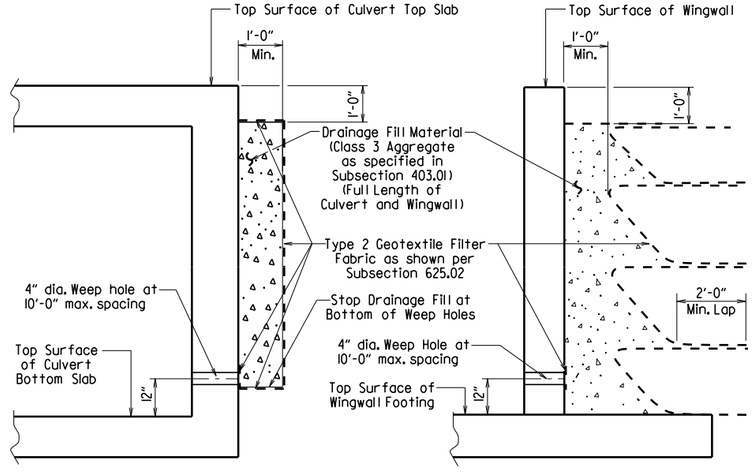
SKEWED SECTION LAYOUT FOR VARYING FILL DEPTHS OVER 10'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
7/31/25
CHARLES R. ELLIS



CULVERT DRAINAGE DETAIL FOR ROCK FILL

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

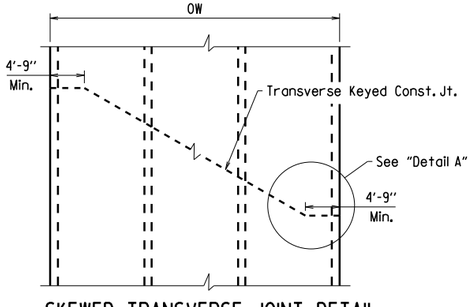


For Details of Excavation and Pay Limits, see Standard Drawing RCB-2.

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

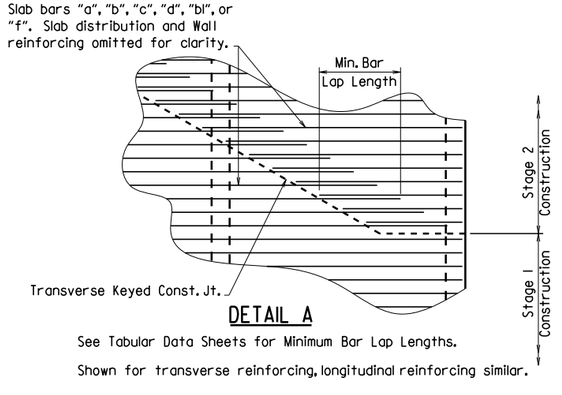
WRAPPED FABRIC ALTERNATE
(Shown for Wingwall, Similar for Culvert)

WINGWALL & CULVERT DRAINAGE DETAIL



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.



DETAIL A

See Tabular Data Sheets for Minimum Bar Lap Lengths.

Shown for transverse reinforcing, longitudinal reinforcing similar.

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 ¾" 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 tine 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

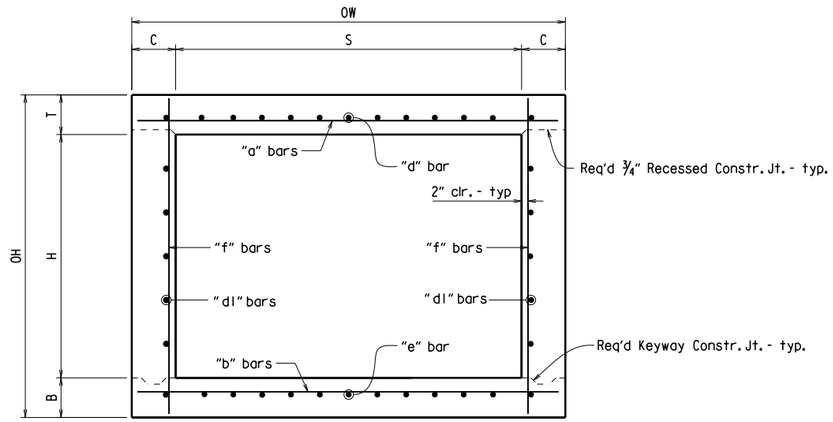
SPECIAL DETAILS

V 11.17 b101100_general.dgn

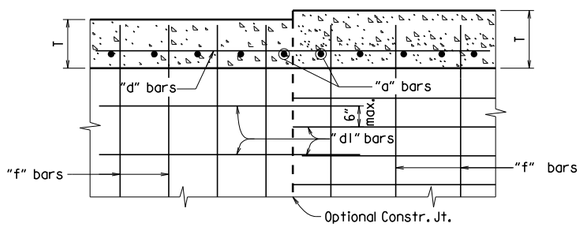
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		10	58
				JOB NO.		101100		

(1) SPECIAL DETAILS

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



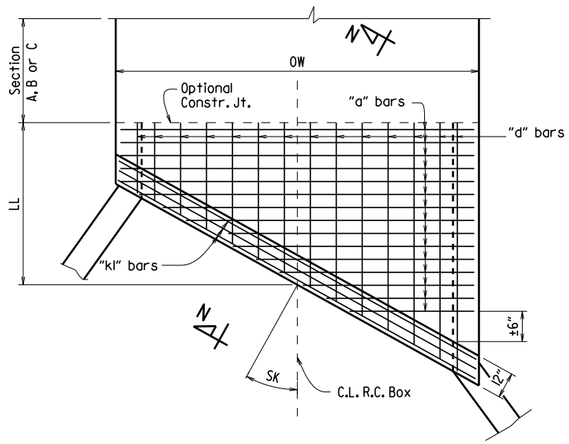
TYPICAL SECTION M-M



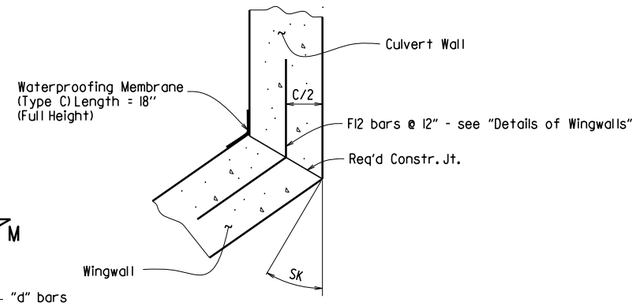
Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.

LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR

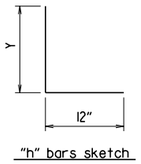


TOP SLAB REINFORCEMENT

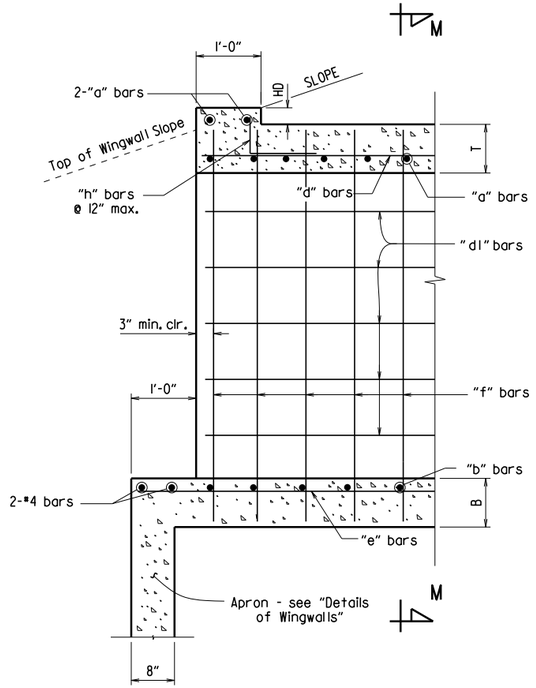


WINGWALL ATTACHMENT

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

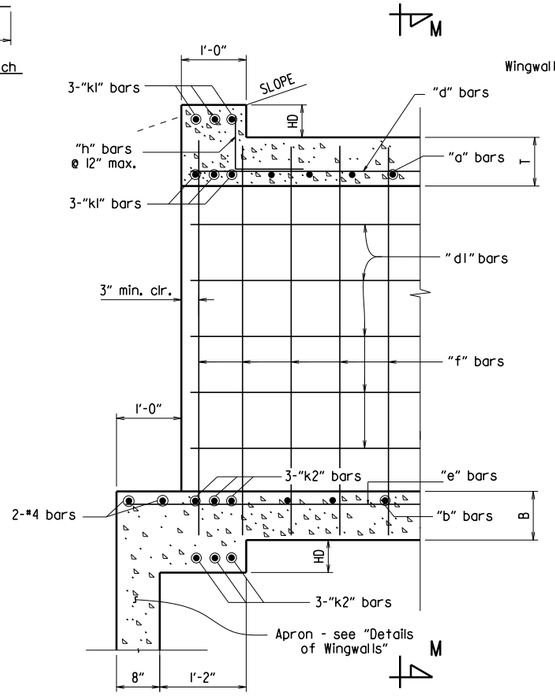


"h" bars sketch



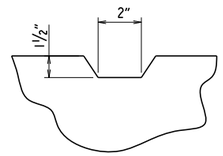
PART LONGITUDINAL SECTION

(Non-Skewed Ends)



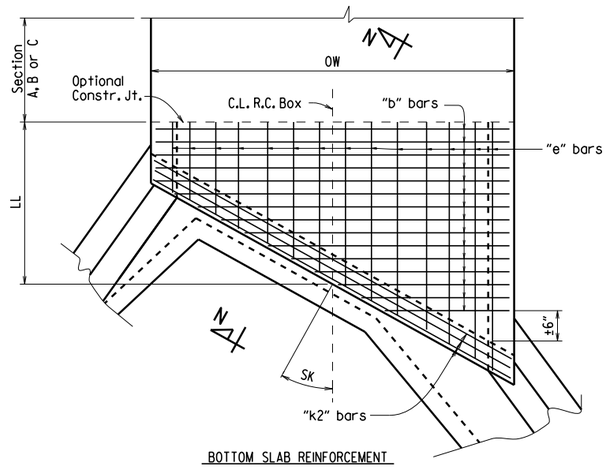
PART LONGITUDINAL SECTION N-N

(Skewed Ends)



TYPICAL KEYWAY DETAIL

(All Construction Joints)



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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
7/31/25
CHARLES R. ELLIS

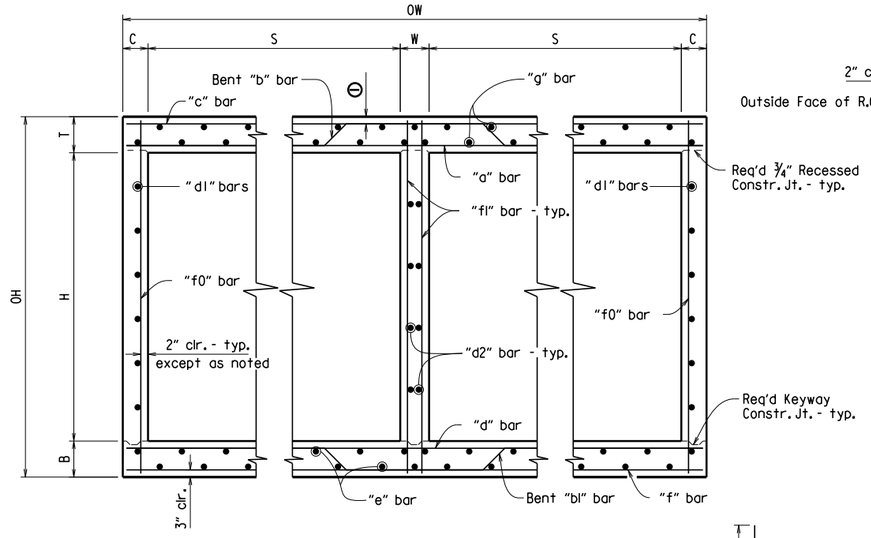
V 1.1.17 bl01100_general.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		11	58
				JOB NO.		101100		

① SPECIAL DETAILS

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

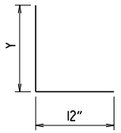
Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



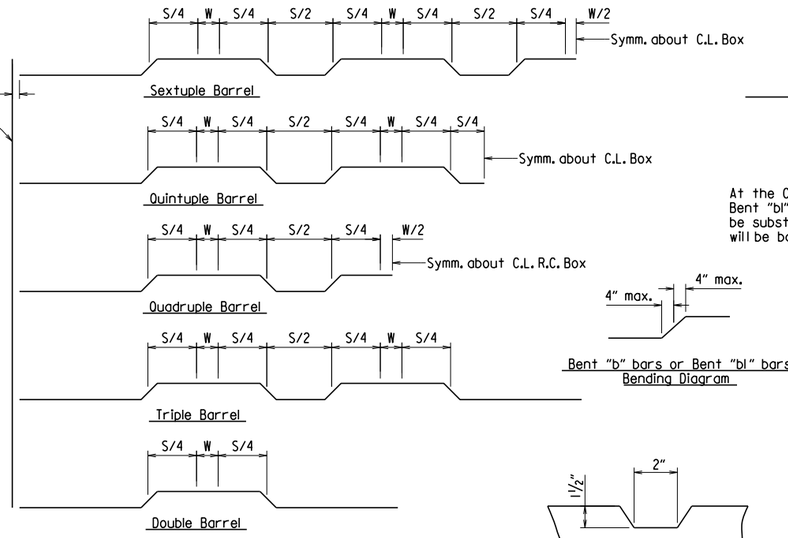
TYPICAL SECTION M-M

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

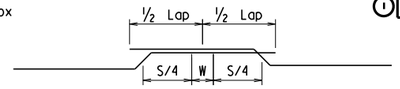
Bottom Slab
Straight "d" bars shall alternate with Bent "bl" bars in top.
Straight "f" bars shall alternate with Bent "bl" bars in bottom.



"h" bars sketch



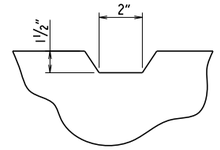
Bent "b" bars or Bent "bl" bars sketch



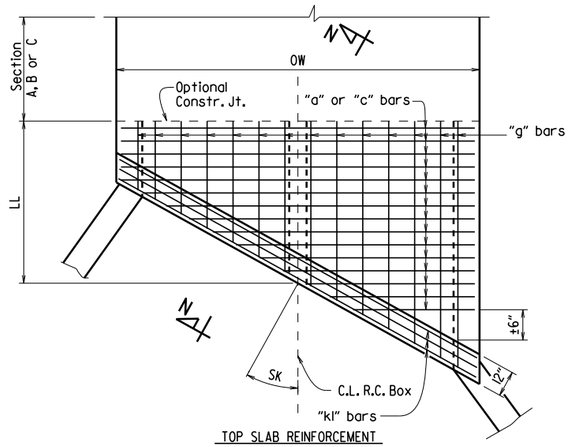
Lap Detail
For Bent "b" bars and Bent "bl" bars

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

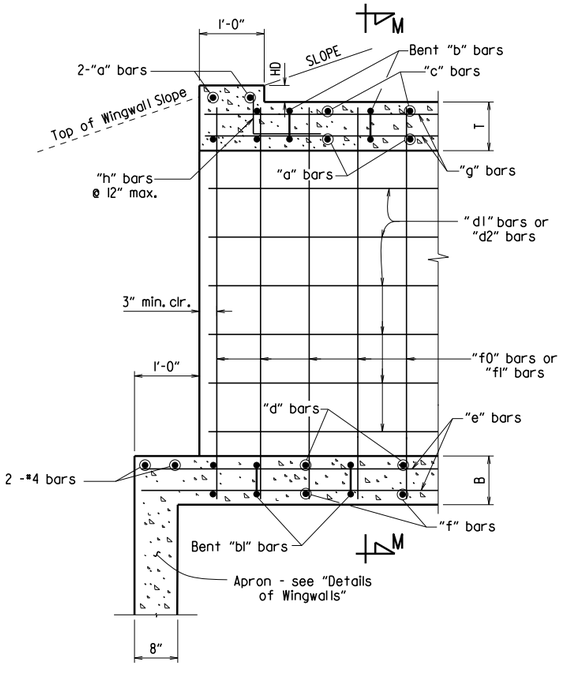
Bent "b" bars or Bent "bl" bars Bending Diagram



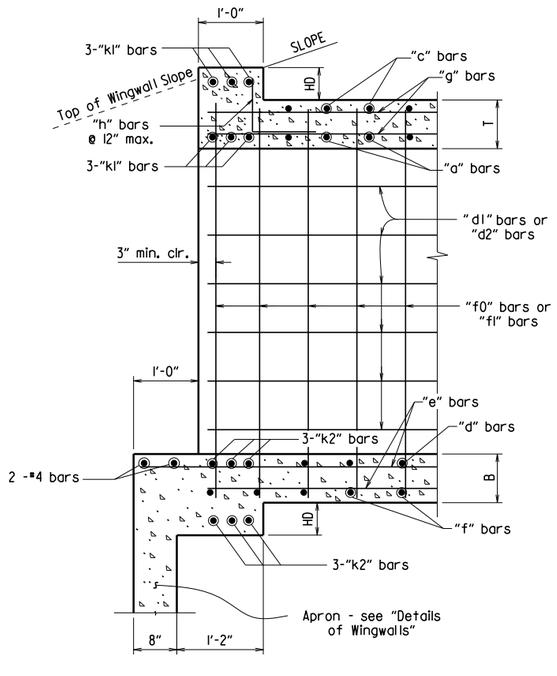
TYPICAL KEYWAY DETAIL
(All Construction Joints)



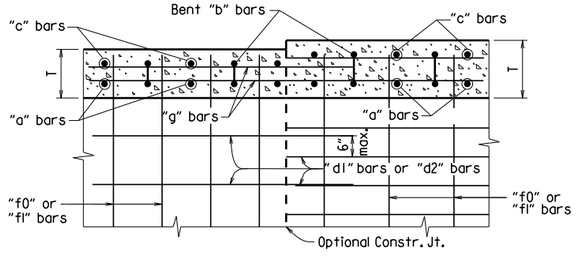
TOP SLAB REINFORCEMENT
Straight "c" bars in top.
Straight "a" bars in bottom.



PART LONGITUDINAL SECTION
(Non-Skewed Ends)

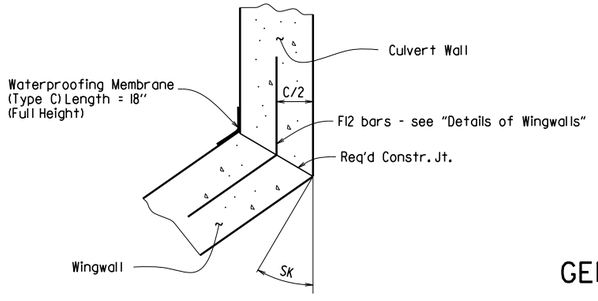


PART LONGITUDINAL SECTION N-N
(Skewed Ends)

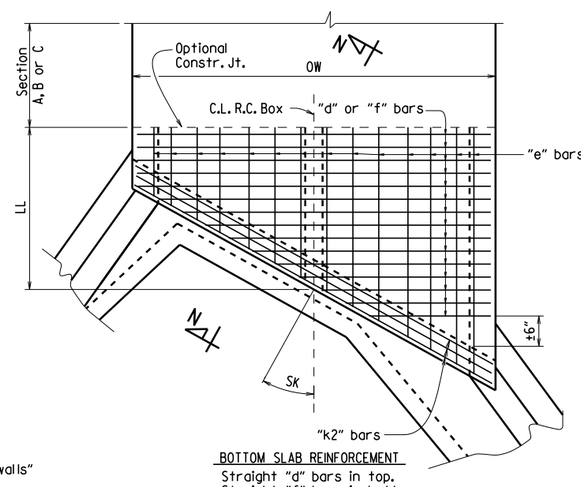


Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.

LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS
TOP SLAB SHOWN, BOTTOM SLAB SIMILAR



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



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

SKEWED END SECTION DETAILS

SHEET 3 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT

DETAILS OF MULTI-BARREL R.C. BOX CULVERT

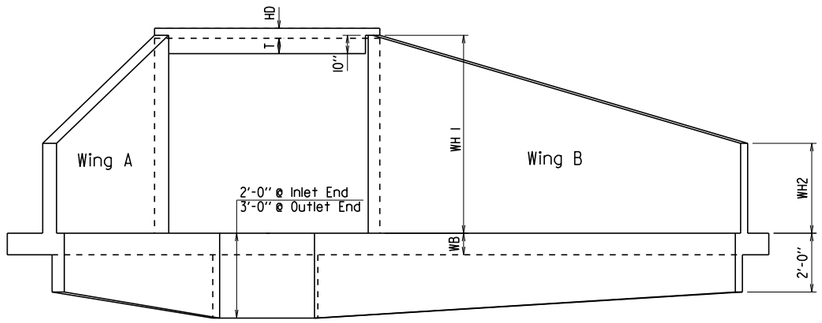
SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
7/31/25
CHARLES R. ELLIS

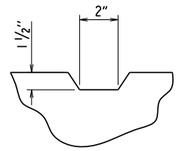
v 1.1.7 b101100_general.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		12	58
				JOB NO.		101100		

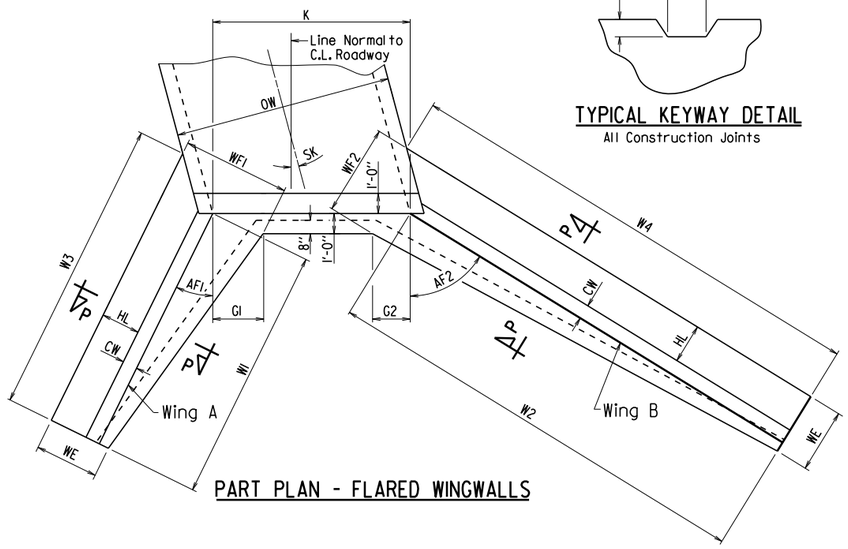
① SPECIAL DETAILS



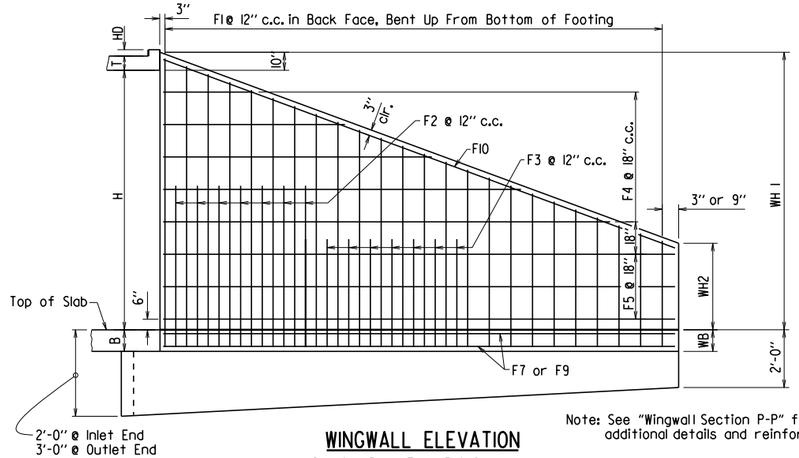
END ELEVATION
Flared Wingwalls Shown



TYPICAL KEYWAY DETAIL
All Construction Joints

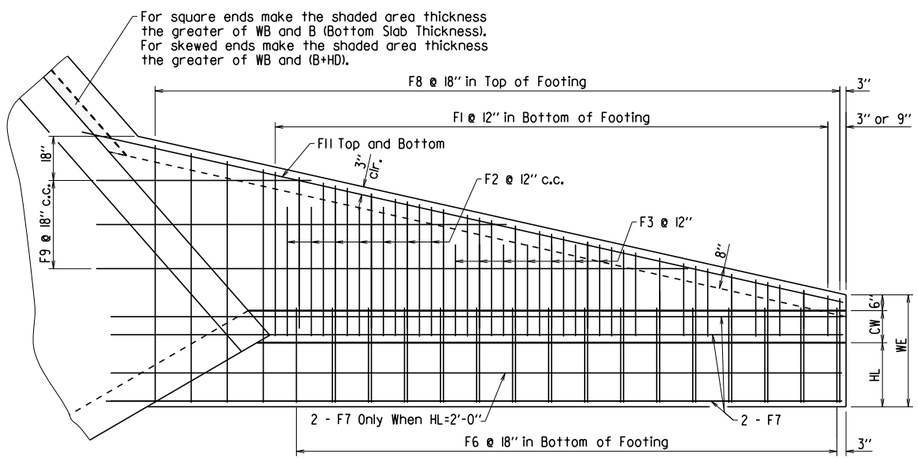


PART PLAN - FLARED WINGWALLS

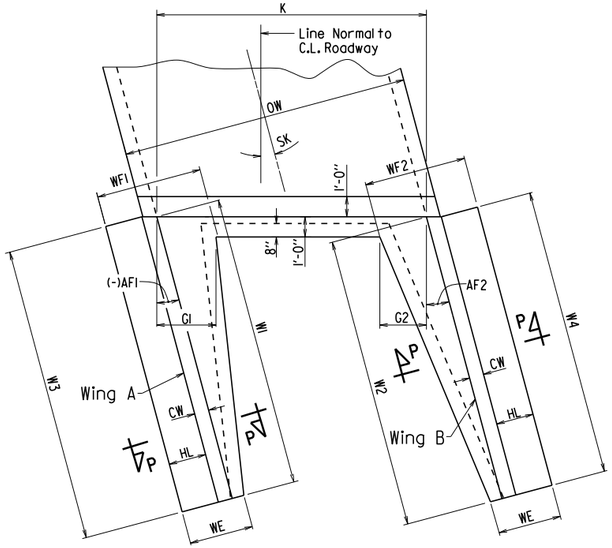


Note: See "Wingwall Section P-P" for additional details and reinforcing.

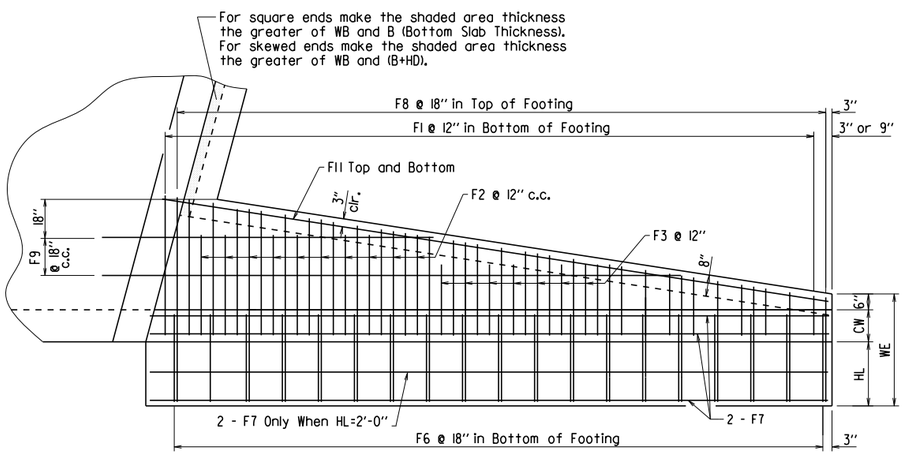
WINGWALL ELEVATION
Showing Back Face Reinforcement



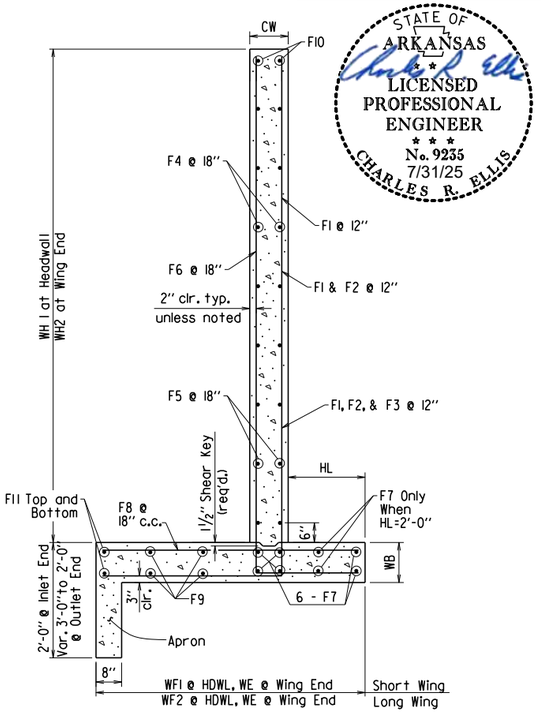
PLAN - FLARED WINGWALLS
Showing Footing Reinforcement



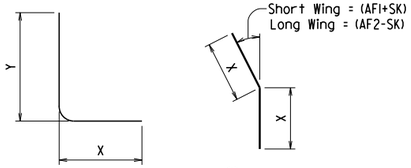
PART PLAN - PARALLEL WINGWALLS



PLAN - PARALLEL WINGWALLS
Showing Footing Reinforcement



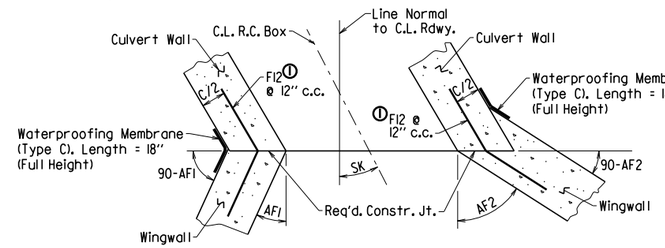
WINGWALL SECTION P-P



F1, F2, F3, & F6 BARS

①F12 BAR

①F12 is a straight bar for parallel wingwalls



CONSTRUCTION JOINTS
Flared Wingwalls Shown

SHEET 4 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF WINGWALLS
SPECIAL DETAILS

V 11.17 bl01100_general.dgn

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	13	58
		TEMPORARY EROSION CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

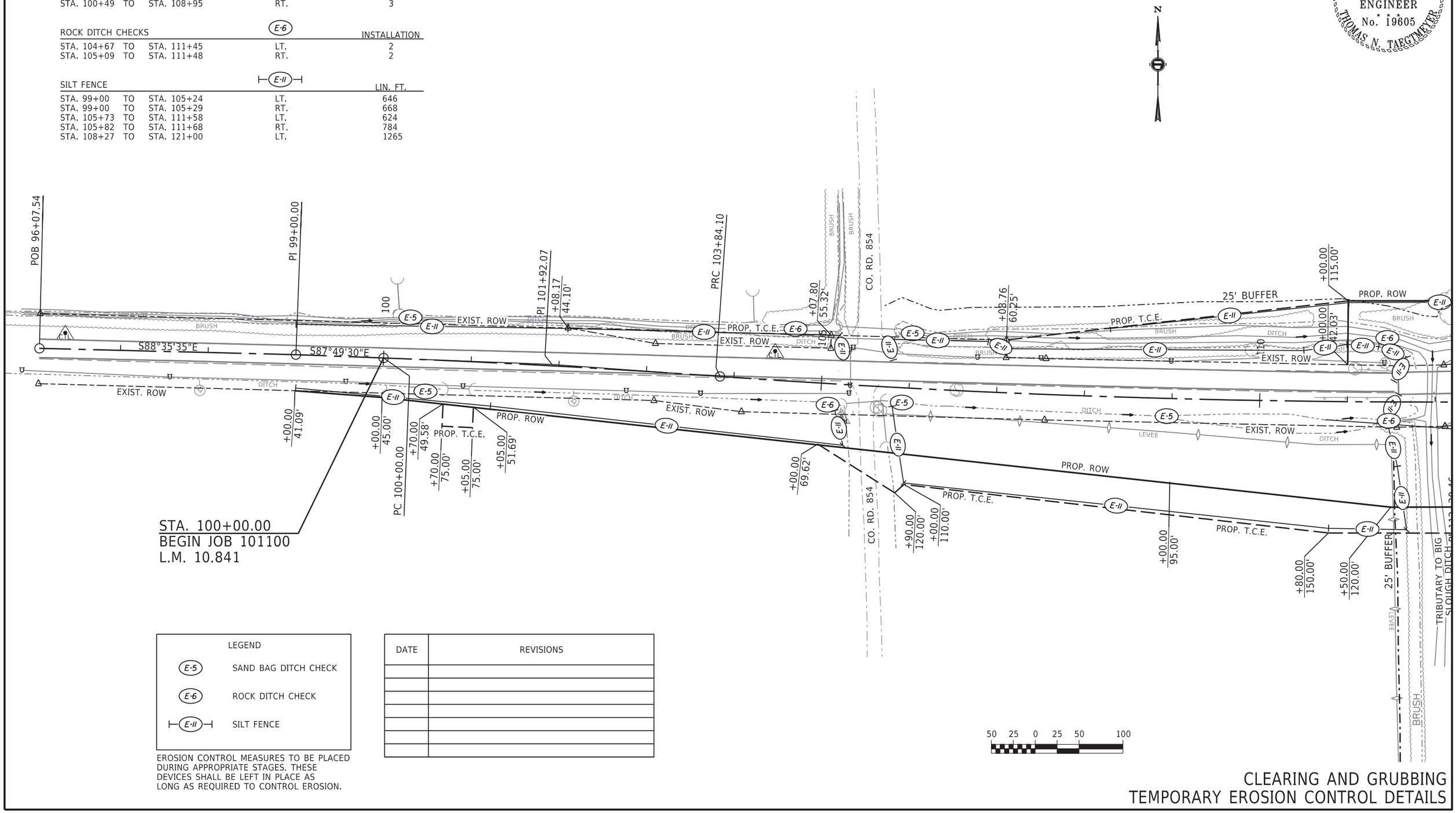
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

HWY. 34

SAND BAG DITCH CHECKS (E-5)			INSTALLATION
STA. 100+29	TO	STA. 106+02	LT. 2
STA. 100+49	TO	STA. 108+95	RT. 3

ROCK DITCH CHECKS (E-6)			INSTALLATION
STA. 104+67	TO	STA. 111+45	LT. 2
STA. 105+09	TO	STA. 111+48	RT. 2

SILT FENCE (E-II)			LIN. FT.
STA. 99+00	TO	STA. 105+24	LT. 646
STA. 99+00	TO	STA. 105+29	RT. 668
STA. 105+73	TO	STA. 111+58	LT. 624
STA. 105+82	TO	STA. 111+68	RT. 784
STA. 108+27	TO	STA. 121+00	LT. 1265



STA. 100+00.00
BEGIN JOB 101100
L.M. 10.841

LEGEND	
E-5	SAND BAG DITCH CHECK
E-6	ROCK DITCH CHECK
E-II	SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	14	58
		TEMPORARY EROSION CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

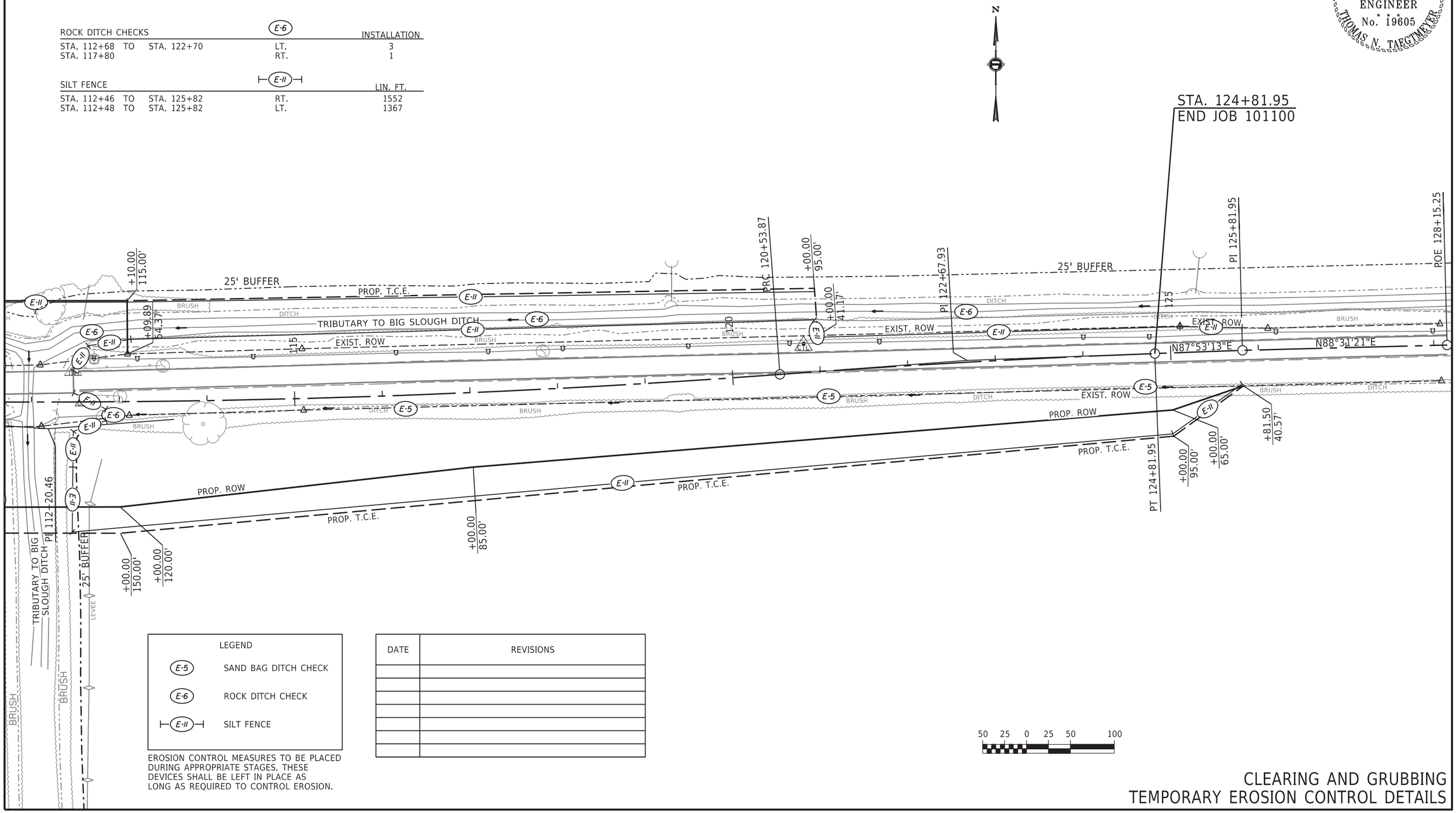
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

HWY. 34

SAND BAG DITCH CHECKS			(E-5)	INSTALLATION
STA. 116+26	TO	STA. 124+70	RT.	3

ROCK DITCH CHECKS			(E-6)	INSTALLATION
STA. 112+68	TO	STA. 122+70	LT.	3
STA. 117+80			RT.	1

SILT FENCE			(E-II)	LIN. FT.
STA. 112+46	TO	STA. 125+82	RT.	1552
STA. 112+48	TO	STA. 125+82	LT.	1367



LEGEND

(E-5)	SAND BAG DITCH CHECK
(E-6)	ROCK DITCH CHECK
(E-II)	SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

50 25 0 25 50 100

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	15	58
		TEMPORARY EROSION CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

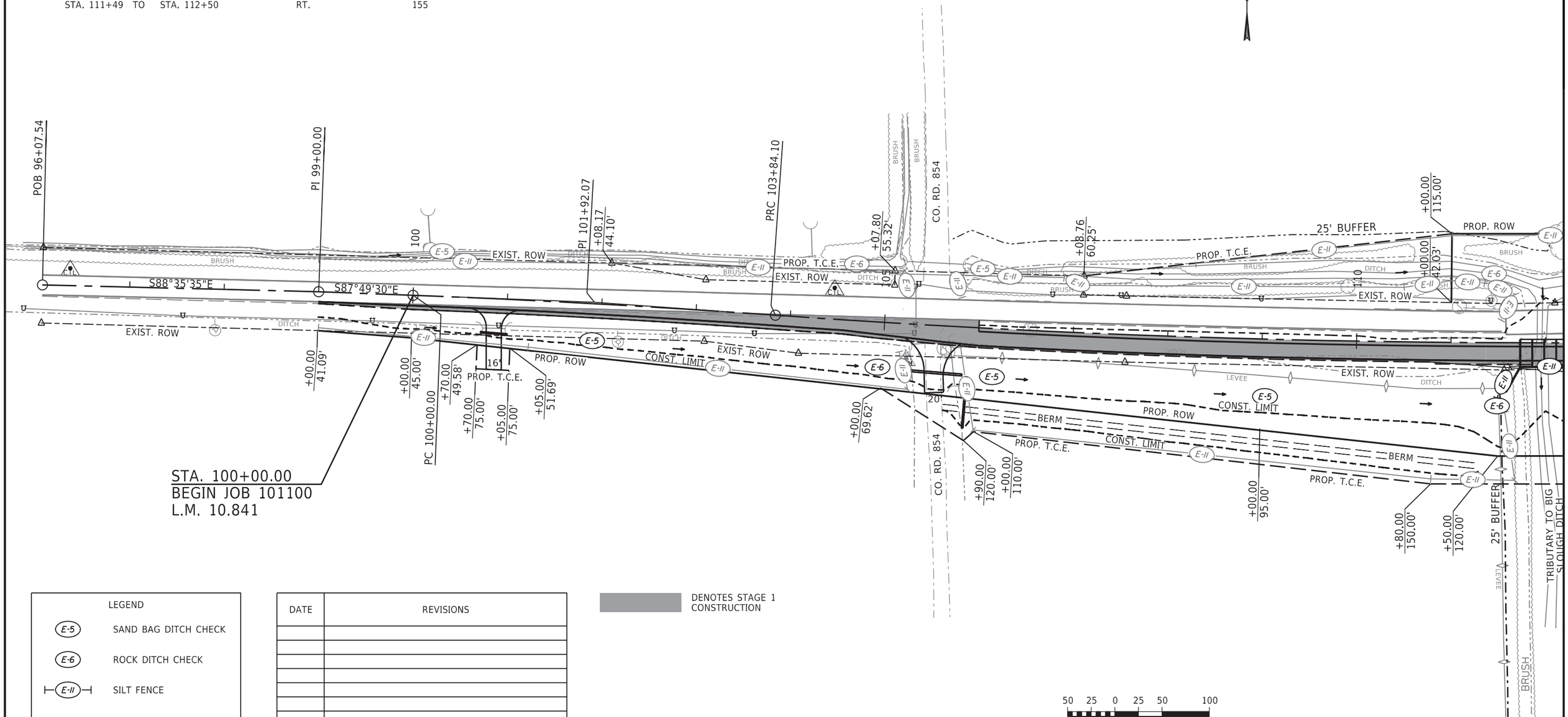
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

HWY. 34

SAND BAG DITCH CHECKS	E-5	INSTALLATION
STA. 101+92 TO STA. 109+05	RT.	3

ROCK DITCH CHECKS	E-6	INSTALLATION
STA. 104+95 TO STA. 111+49	RT.	2

SILT FENCE	E-11	LIN. FT.
STA. 111+49 TO STA. 112+50	RT.	155



LEGEND	
E-5	SAND BAG DITCH CHECK
E-6	ROCK DITCH CHECK
E-11	SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

DENOTES STAGE 1 CONSTRUCTION

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	16	58
		TEMPORARY EROSION CONTROL DETAILS				

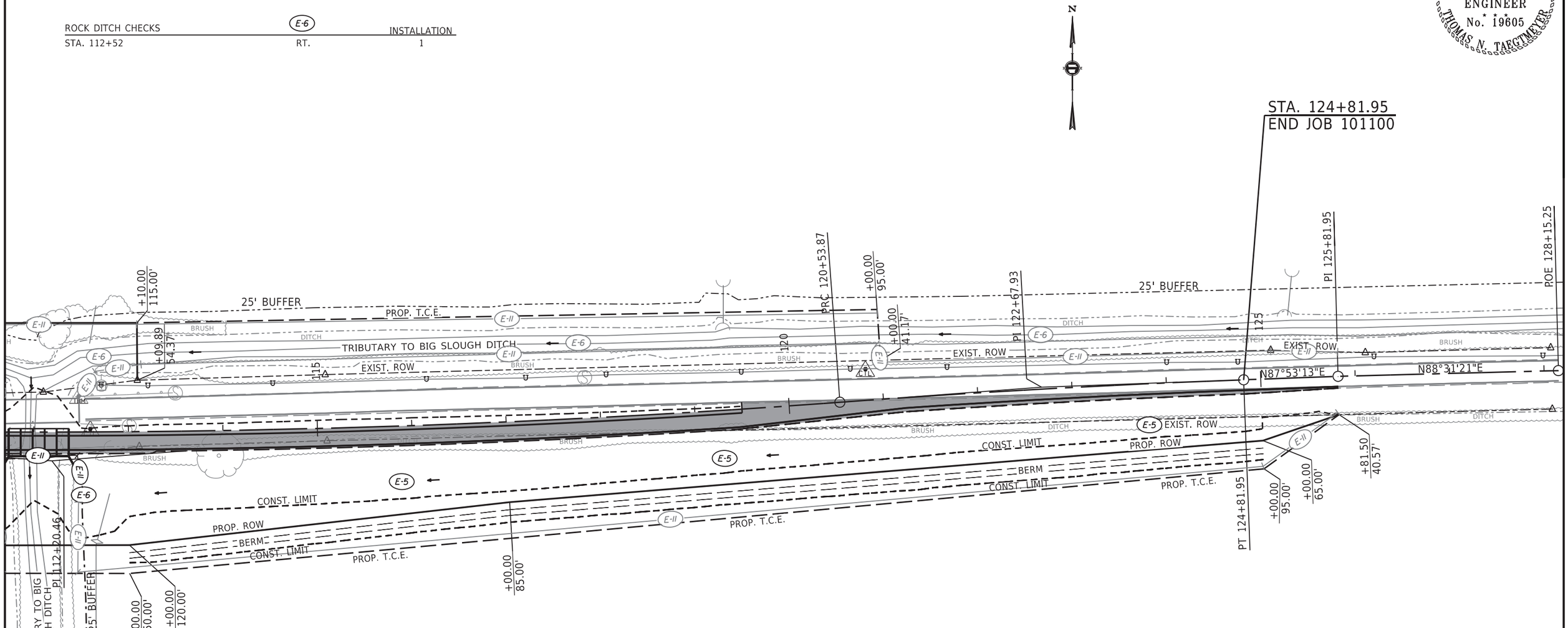
Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

HWY. 34

SAND BAG DITCH CHECKS	E-5	INSTALLATION
STA. 115+87 TO STA. 124+05	RT.	3

ROCK DITCH CHECKS	E-6	INSTALLATION
STA. 112+52	RT.	1



LEGEND

- E-5 SAND BAG DITCH CHECK
- E-6 ROCK DITCH CHECK
- E-II SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

DENOTES STAGE 1 CONSTRUCTION

50 25 0 25 50 100

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

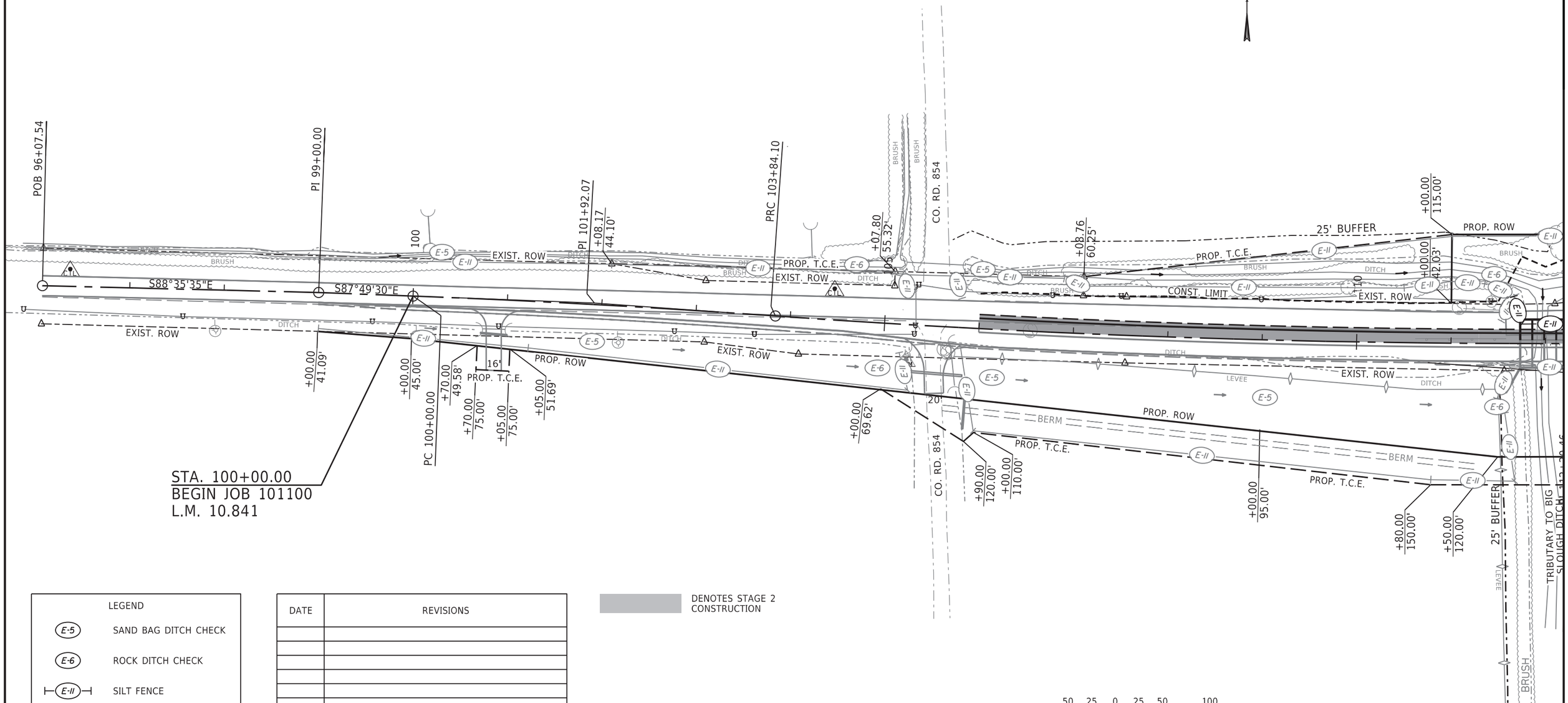
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	17	58
		TEMPORARY EROSION CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

HWY. 34

SILT FENCE	E-II	LIN. FT.
STA. 111+66 TO STA. 112+60	LT.	128



LEGEND

E-5	SAND BAG DITCH CHECK
E-6	ROCK DITCH CHECK
E-II	SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

DENOTES STAGE 2 CONSTRUCTION

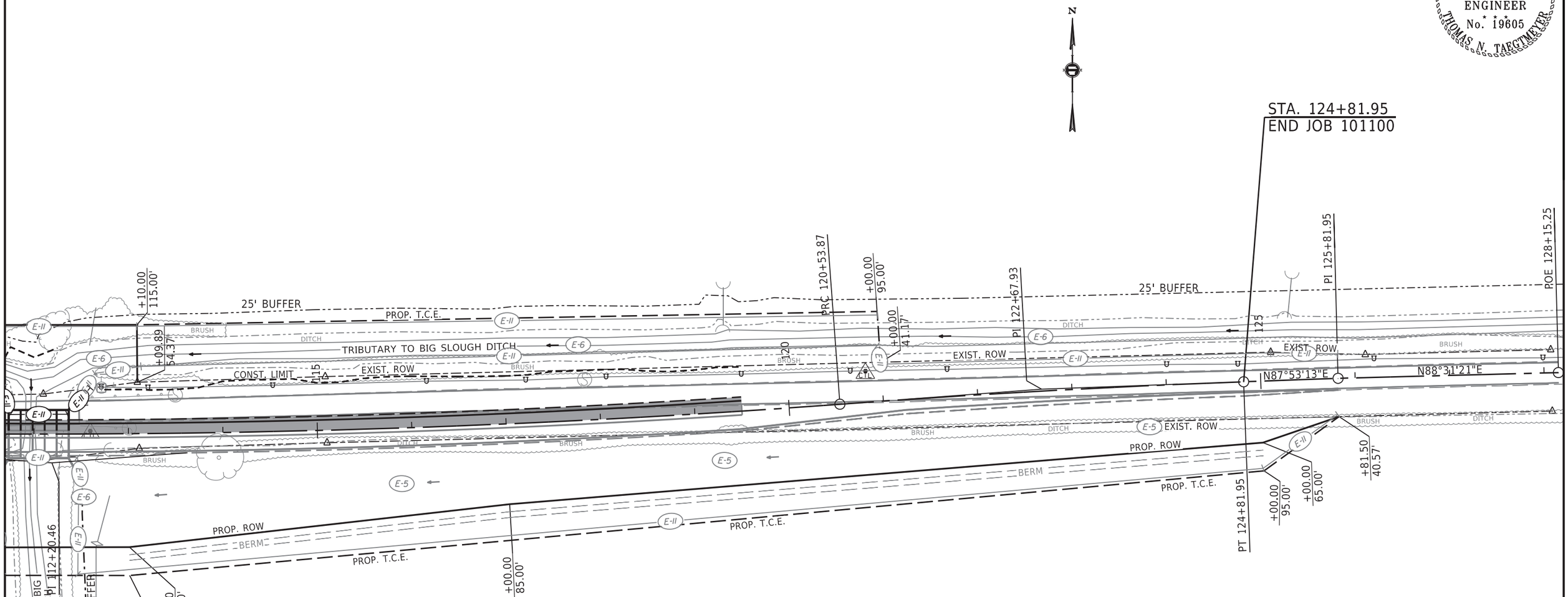
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	18	58
		TEMPORARY EROSION CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER



LEGEND

- E-5 — SAND BAG DITCH CHECK
- E-6 — ROCK DITCH CHECK
- E-II — SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

DENOTES STAGE 2 CONSTRUCTION

50 25 0 25 50 100

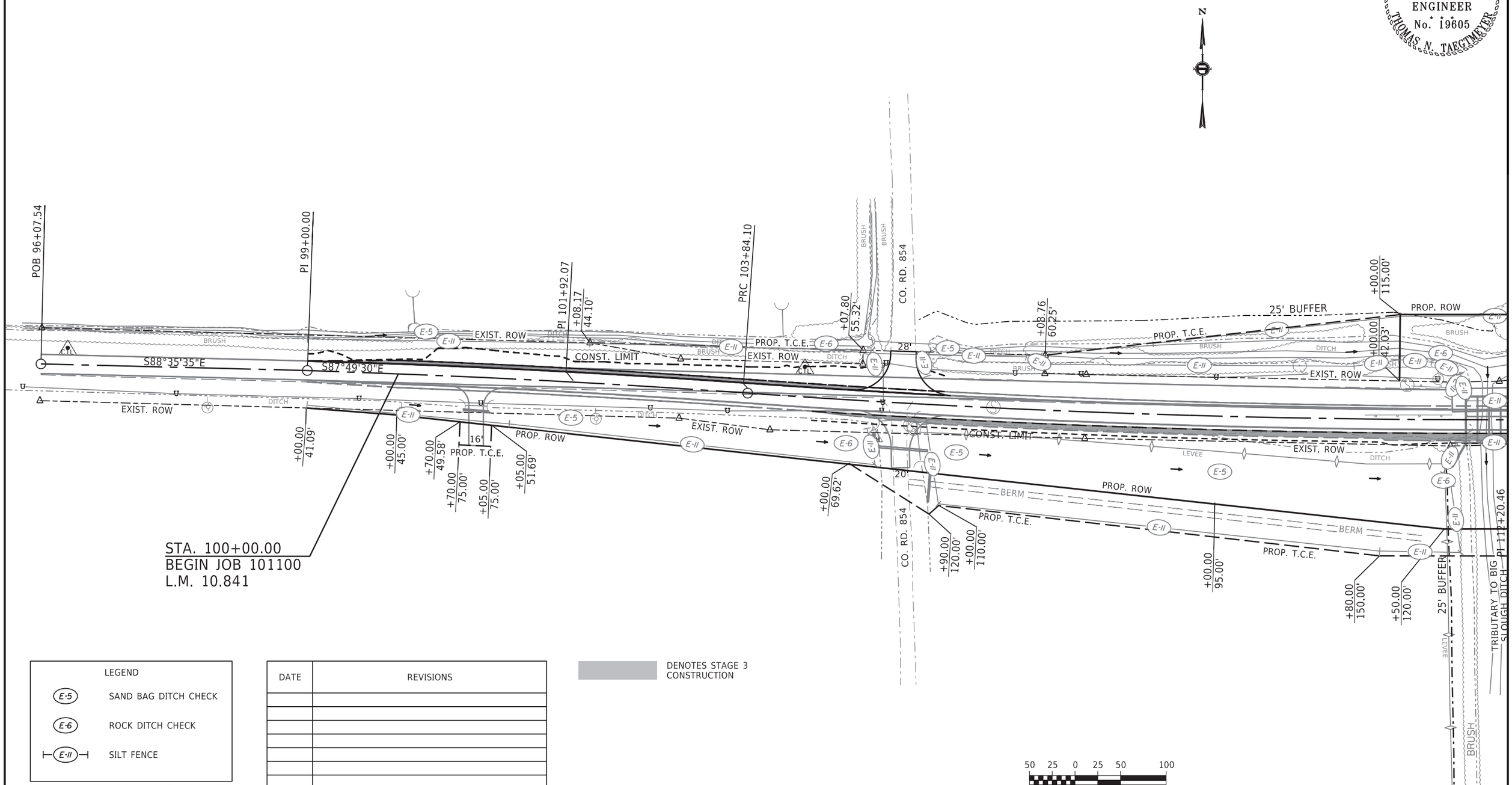
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	19	58
		TEMPORARY EROSION CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER



STA. 100+00.00
BEGIN JOB 101100
L.M. 10.841

LEGEND

E-5	SAND BAG DITCH CHECK
E-6	ROCK DITCH CHECK
E-II	SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

DENOTES STAGE 3 CONSTRUCTION

50 25 0 25 50 100

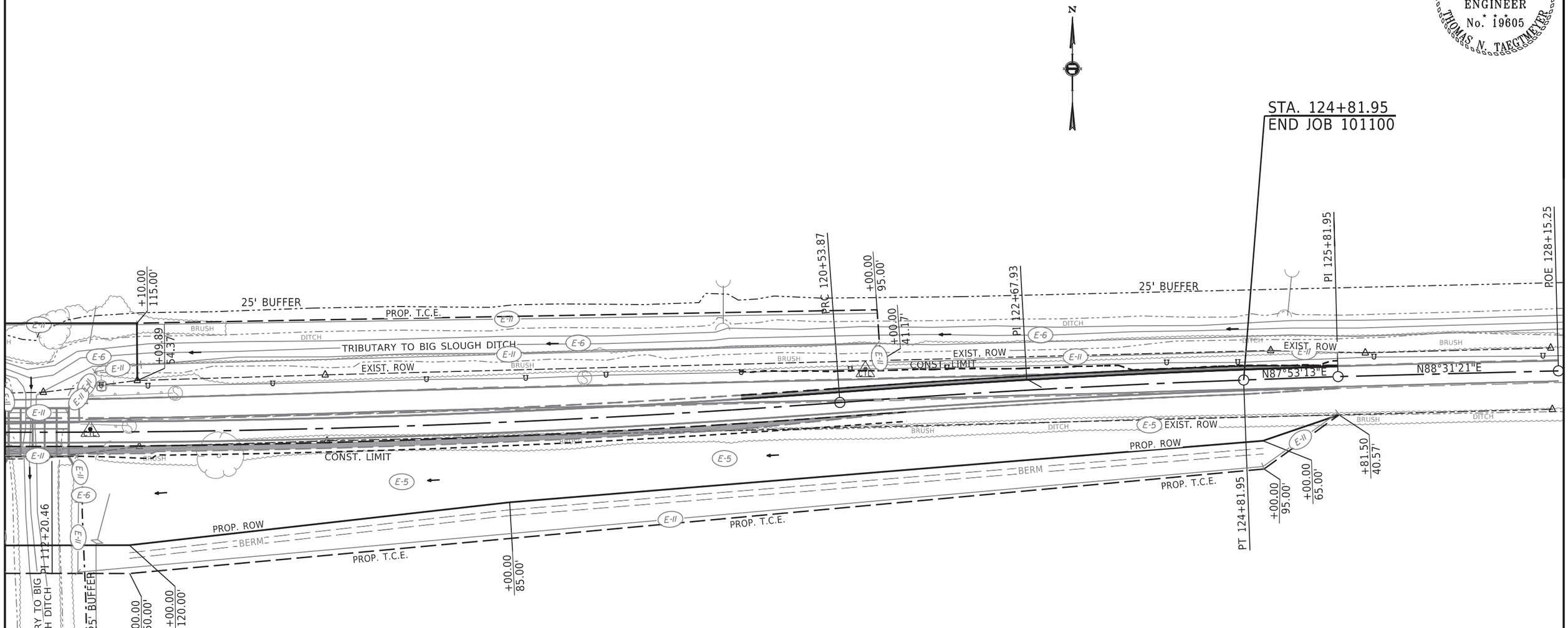
STAGE 3
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	20	58
		TEMPORARY EROSION CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER



LEGEND

- E-5 — SAND BAG DITCH CHECK
- E-6 — ROCK DITCH CHECK
- E-II — SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISIONS

DENOTES STAGE 3 CONSTRUCTION

50 25 0 25 50 100

STAGE 3
TEMPORARY EROSION CONTROL DETAILS

101100 - EROSION CONTROL SHEETS.DGN CREATED: 8/8/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
02/03/2026		6	ARK.	101100	21	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2026.02.04

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

STAGE 1 CONSTRUCTION SEQUENCE:

INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE BEGINNING AND END OF JOB AS SHOWN ON TC-6.

NOTCH AND WIDEN FOR TEMPORARY WIDENING ON RIGHT.

CONSTRUCT PART OF MAINLANE WITH TEMPORARY WIDENING AND PARTIAL R.C. BOX CULVERT.

STAGE 2 CONSTRUCTION SEQUENCE:

MAINTAIN OR MODIFY ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE BEGINNING AND END OF JOB AS SHOWN ON TC-6.

REMOVE CONFLICTING PAVEMENT MARKINGS.

INSTALL PORTABLE TRAFFIC SIGNAL SYSTEM AND CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

SHIFT TRAFFIC TO THE PARTIAL MAINLANE WITH TEMPORARY WIDENING AS SHOWN IN STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

CONSTRUCT LEFT PARTIAL MAINLANE ROADWAY AND REMAINDER R.C. BOX CULVERT.

STAGE 3 CONSTRUCTION SEQUENCE:

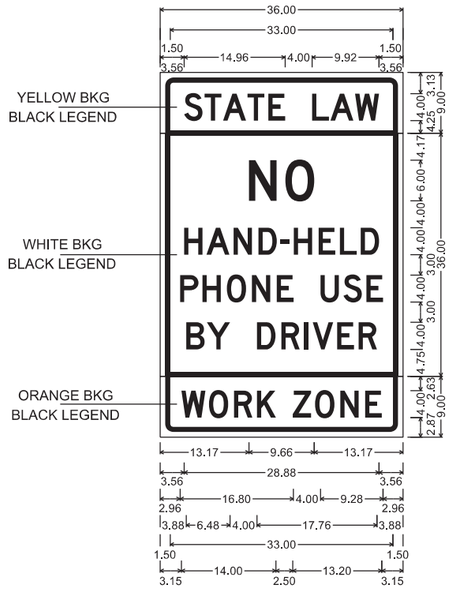
MAINTAIN OR MODIFY ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE BEGINNING AND END OF JOB AS SHOWN ON TC-6.

REMOVE PORTABLE TRAFFIC SIGNAL SYSTEM AND REMOVE ANY CONFLICTING PAVEMENT MARKINGS AND APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN STAGE 3 MAINTENANCE OF TRAFFIC DETAILS.

SHIFT TRAFFIC TO MAIN LANES AS SHOWN IN THE STAGE 3 MAINTENANCE OF TRAFFIC DETAILS.

OBLITERATE EXISTING PAVEMENT AND TEMPORARY WIDENING PAVEMENT AND CONSTRUCT SHOULDERS AND SLOPE FOR BOTH SIDES OF ROADWAY.

APPLY FINAL 2" LIFT OF ACHM SURFACE COURSE AND PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.

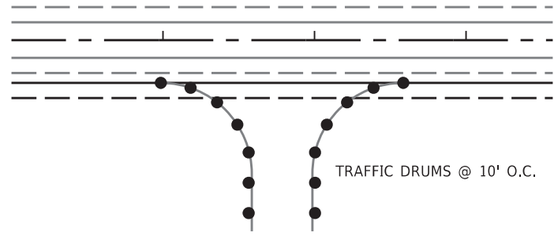


2.00" Radius, 0.75" Border, 0.75" Indent, Black on Yellow;
"STATE LAW", D 2K;

3.00" Radius, 0.75" Border, 0.75" Indent, Black on White;
"NO", D 2K; "HAND-HELD", D 2K;
"PHONE USE", D 2K;
"BY DRIVER", D 2K;

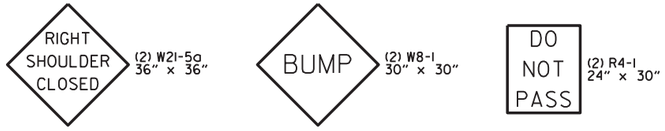
2.00" Radius, 0.75" Border, 0.75" Indent, Black on Orange;
"WORK", D 2K; "ZONE", D 2K;

WZ-4 (NON-INTERSTATE) SIGN

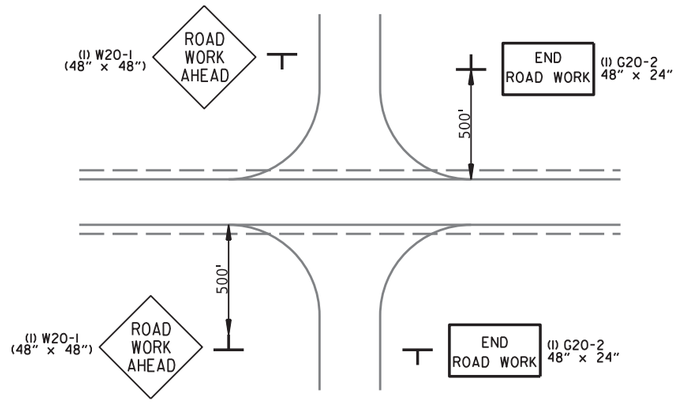


DRIVEWAY & TURNOUT
TRAFFIC DRUM DETAIL

TO BE PLACED AT THE BARRIER WALL TRANSITION LOCATION EQUALLY SPACED.



TO BE USED IF AND WHERE DIRECTED BY ENGINEER (ALL STAGES)



ADVANCE WARNING - SIDE ROADS
(ALL STAGES)

STA. 105+51.30 RT.
STA. 105+57.20 LT.

ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

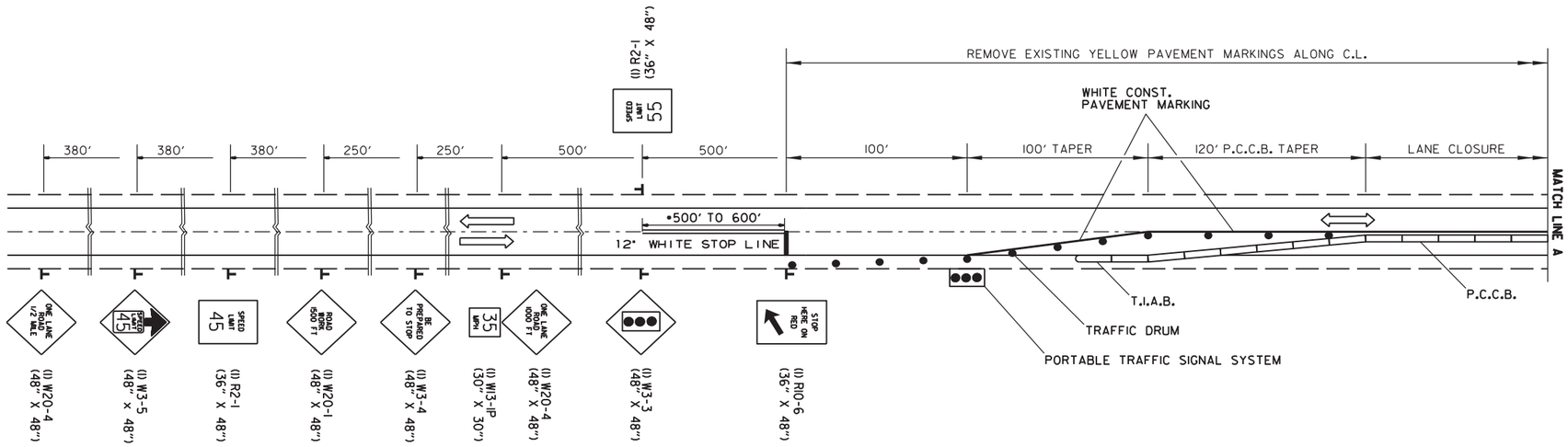
101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 2/3/2026

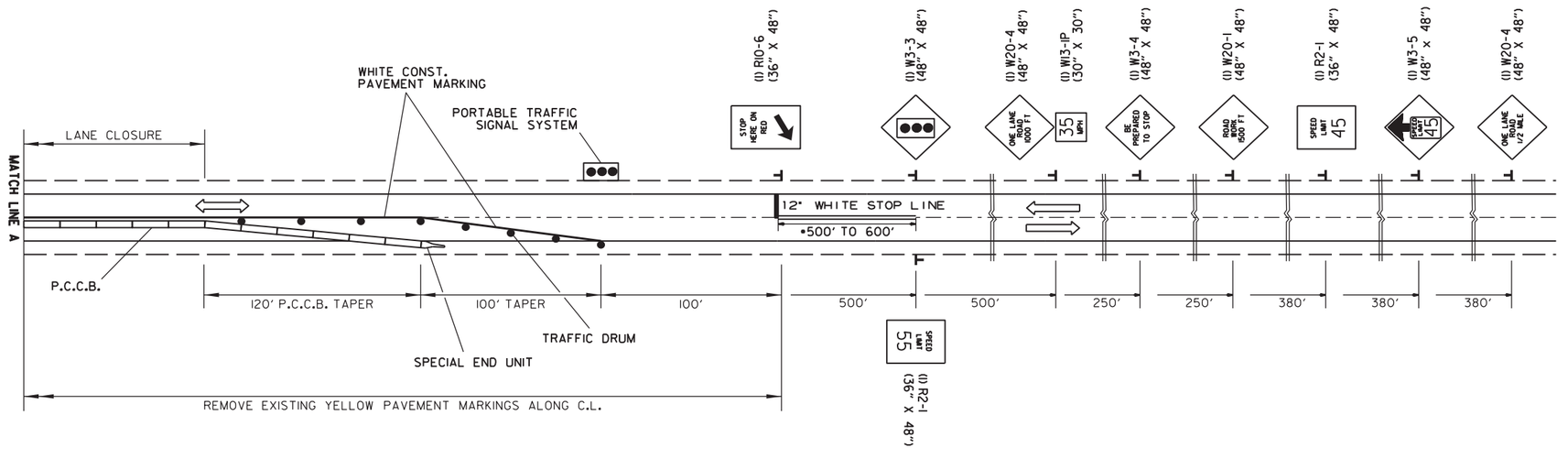
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	22	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

•YELLOW CONST. PAVEMENT MARKINGS TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER WHEN EXISTING PASSING LANES ARE PRESENT.

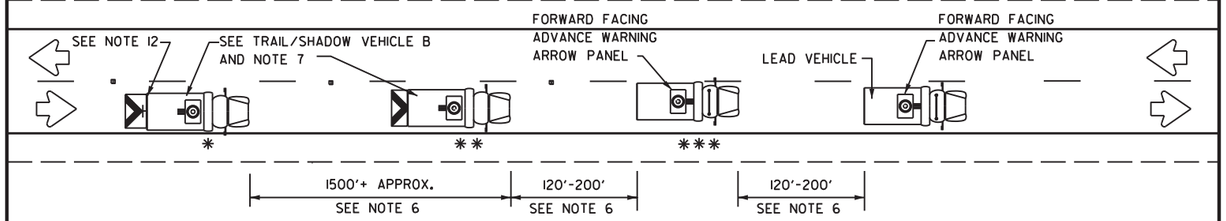




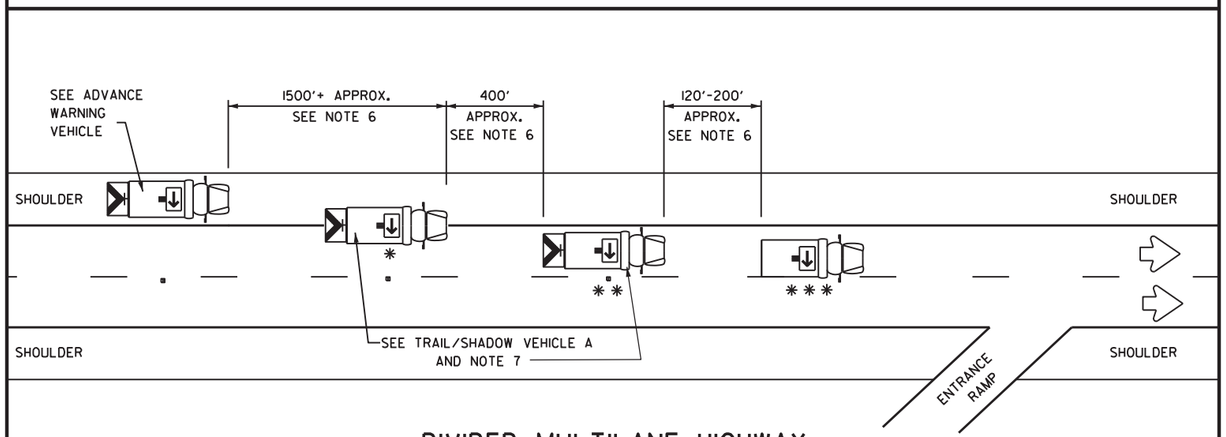
LANE CLOSURE WITH ADVANCE WARNING SIGNS, PORTABLE TRAFFIC SIGNAL SYSTEM & PRECAST CONCRETE BARRIER WALL (STAGE 2)

ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

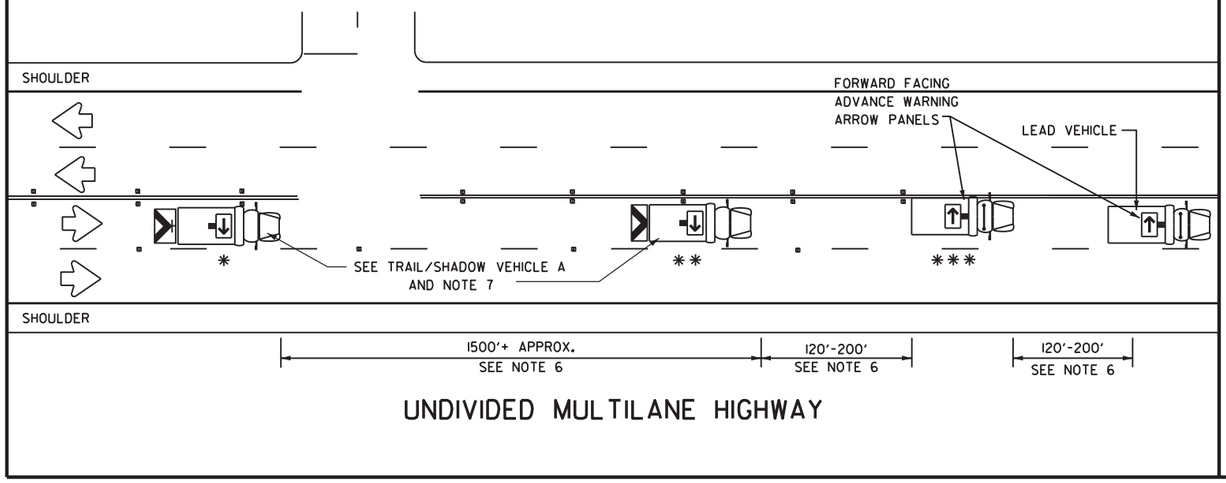
101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 8/7/2025



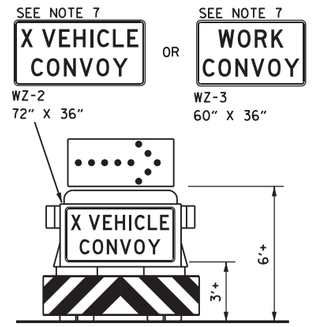
TWO LANE HIGHWAY (WORK ON TRAVEL LANE)



DIVIDED MULTILANE HIGHWAY

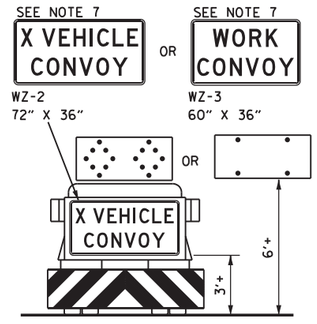


UNDIVIDED MULTILANE HIGHWAY



TRAIL/SHADOW VEHICLE A

WITH RIGHT DIRECTIONAL ADVANCE WARNING ARROW PANEL



TRAIL/SHADOW VEHICLE B

WITH ADVANCE WARNING ARROW PANEL IN CAUTION MODE

ADVANCE WARNING VEHICLE

WITH RIGHT DIRECTIONAL ADVANCE WARNING ARROW PANEL

STRIPING FOR TMA

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	22A	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2026.01.07

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

LEGEND			
*	TRAIL VEHICLE	ADVANCE WARNING ARROW PANEL DISPLAY	
**	SHADOW VEHICLE		
***	WORK VEHICLE		RIGHT DIRECTIONAL
	HEAVY WORK VEHICLE		LEFT DIRECTIONAL
	TRUCK MOUNTED ATTENUATOR (TMA)		DOUBLE ARROW
	TRAFFIC FLOW		CAUTION (ALTERNATING DIAMOND OR 4 CORNER FLASH)

TYPICAL APPLICATION - MOBILE WORK ZONE

GENERAL NOTES:

1. TRAIL, SHADOW, AND LEAD VEHICLES SHALL BE EQUIPPED WITH ADVANCE WARNING ARROW PANELS AS ILLUSTRATED.
2. THE USE OF AMBER OR GREEN HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON ALL VEHICLES ARE REQUIRED. VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.
3. THE USE OF TRUCK MOUNTED ATTENUATORS (TMA) ON THE SHADOW VEHICLE, ADVANCE WARNING AND TRAIL VEHICLE ARE REQUIRED.
4. EACH VEHICLE SHALL HAVE TWO-WAY RADIO COMMUNICATION CAPABILITY.
5. WHEN WORK CONVOYS MUST CHANGE LANES, THE TRAIL VEHICLE SHOULD CHANGE LANES FIRST TO SHADOW THE OTHER CONVOY VEHICLES. WHEN WORK CONVOY EXITS THE ROADWAY, THE TRAIL VEHICLE SHOULD EXIT LAST.
6. VEHICLE SPACING BETWEEN THE TRAIL VEHICLE AND THE SHADOW VEHICLE WILL VARY DEPENDING ON SIGHT DISTANCE RESTRICTIONS AND QUEUE LENGTHS. MOTORISTS APPROACHING THE CONVOY SHOULD BE ABLE TO SEE THE TRAIL VEHICLE IN TIME TO SLOW DOWN AND/OR CHANGE LANES AS THEY APPROACH THE TRAIL VEHICLE. VEHICLE SPACING BETWEEN THE WORK VEHICLE AND SHADOW VEHICLE AND VEHICLE SPACING BETWEEN THE WORK VEHICLE AND LEAD VEHICLE MAY VARY ACCORDING TO TERRAIN, WORK ACTIVITY AND OTHER FACTORS.
7. X VEHICLE CONVOY (WZ-2) OR WORK CONVOY (WZ-3) SIGNS SHALL BE USED ON TRAIL VEHICLES AND SHADOW VEHICLES AS SHOWN. AS AN OPTION 48" X 48" DIAMOND SHAPED WORK CONVOY (WZ-2A) OR X VEHICLE CONVOY (WZ-3A) SIGNS MAY BE USED WHERE ADEQUATE MOUNTING SPACE EXISTS. WHEN USED, THE X VEHICLE CONVOY SIGN SHALL HAVE THE NUMBER OF THE CONVOY VEHICLES DISPLAYED ON THE SIGN IN THE NUMBER DESIGNATION "X" LOCATION. THE X VEHICLE CONVOY SIGN SHALL NOT BE USED ON THE SHADOW VEHICLE.
8. FOR DIVIDED HIGHWAYS WITH TWO OR THREE LANES IN ONE DIRECTION, THE APPROPRIATE LEFT LANE CLOSED (WZ-W20-5L), RIGHT LANE CLOSED (WZ-W20-5R), OR CENTER LANE CLOSED (WZ-W20-5C) SIGN SHOULD BE USED ON THE ADVANCE WARNING VEHICLE. AS AN OPTION, A PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) OR TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (TMCMS) WITH A MINIMUM CHARACTER HEIGHT OF 12", AND DISPLAYING THE SAME LEGEND MAY BE SUBSTITUTED FOR THESE SIGNS. AN APPROPRIATE DIRECTIONAL ARROW DISPLAY, SIMULATING THE SIZE AND LEGIBILITY OF THE ADVANCE WARNING ARROW PANEL MAY BE USED IN THE SECOND PHASE OF THE PCMS/TMCMS MESSAGE. WHEN THIS IS DONE, THE ARROW BOARD WILL NOT BE REQUIRED ON THE ADVANCE WARNING VEHICLE.
9. A DOUBLE ARROW SHALL NOT BE DISPLAYED ON THE ADVANCE WARNING ARROW PANEL ON THE ADVANCE WARNING VEHICLE.
10. STANDARD DIAMOND SHAPE VERSIONS OF THE WZ SERIES SIGNS MAY BE USED AS AN OPTION IF THE RECTANGULAR SIGNS SHOWN ARE NOT AVAILABLE.
11. THE ADVANCE WARNING VEHICLE MAY STRADDLE THE EDGELINE WHEN SHOULDER WIDTH MAKES IT NECESSARY.
12. ON TWO-LANE TWO-WAY ROADWAYS, THE WORK AND PROTECTION VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW MOTOR VEHICLE TRAFFIC TO PASS. A DO NOT PASS (R4-1) SIGN SHALL BE PLACED ON THE BACK OF THE REARMOST PROTECTION VEHICLE.
13. MOBILE WORK ZONE METHODS AS DEPICTED IN THIS STANDARD DRAWING SHALL BE UTILIZED ON ALL PROJECTS THAT INCLUDE INSTALLATION OR REMOVAL OF RAISED PAVEMENT MARKERS OR PAVEMENT MARKINGS UNLESS APPROVED BY THE ENGINEER ON PROJECTS LESS THAN 0.5 MILE IN LENGTH.
14. NO DIRECT PAYMENT WILL BE MADE FOR COMPLIANCE WITH THE METHODS DEPICTED IN THIS STANDARD DRAWING (WHICH INCLUDES ALL SIGNS, DEVICES, MATERIALS, LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLY) BUT SHALL BE CONSIDERED SUBSIDIARY TO THE MAINTENANCE OF TRAFFIC PAY ITEM.

MOBILE WORK ZONE MAINTENANCE OF TRAFFIC DETAILS

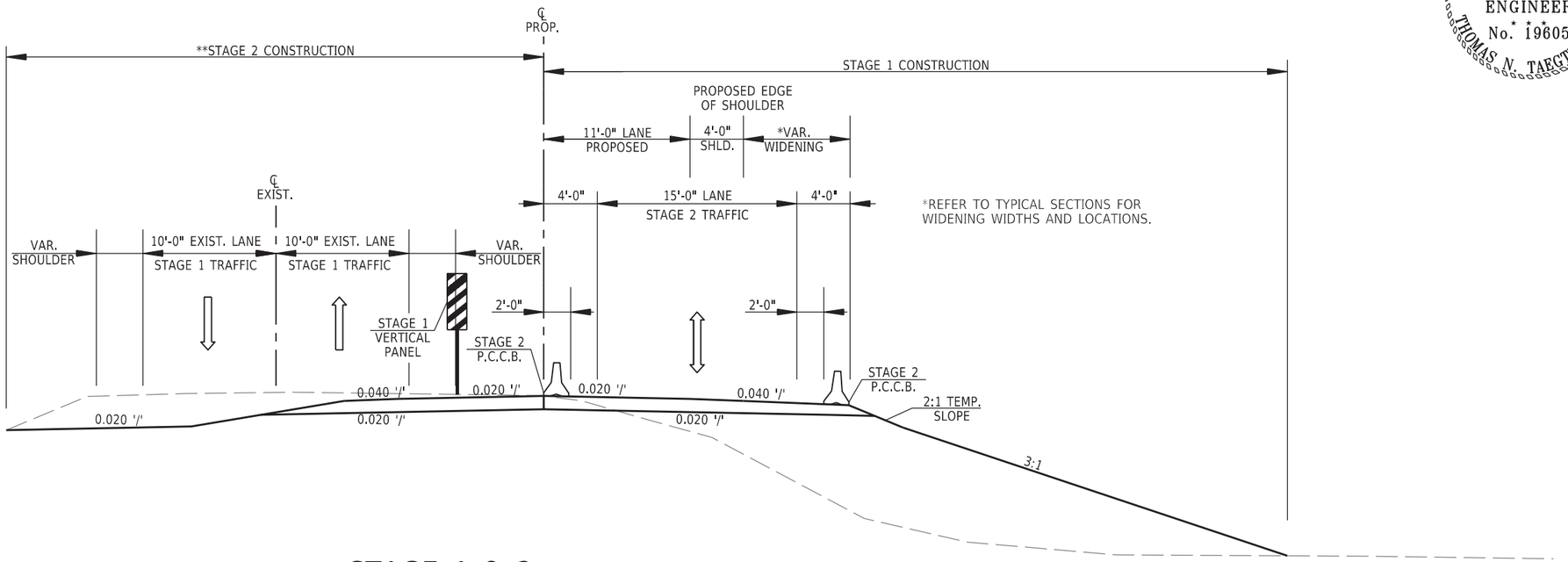
101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 1/6/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	23	58
		MAINTENANCE OF TRAFFIC DETAILS				

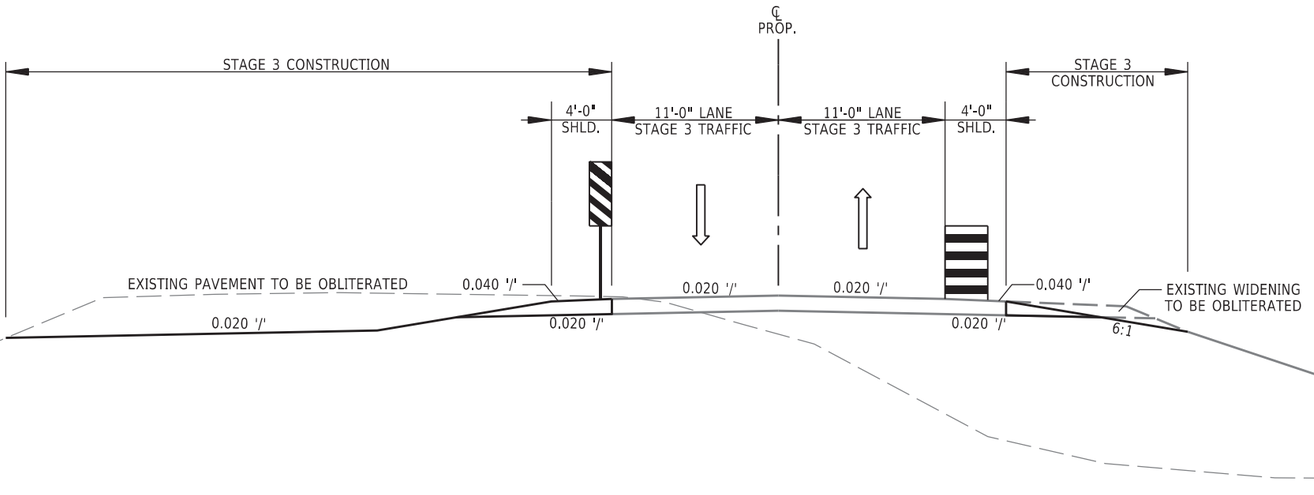
Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

**EXISTING PAVEMENT BETWEEN STA. 106+00.00 TO STA. 119+50.00 TO BE OBLITERATED DURING STAGE 2 CONSTRUCTION.



STAGE 1 & 2
CONSTRUCTION STAGING



STAGE 3
CONSTRUCTION STAGING

CONSTRUCTION STAGING
MAINTENANCE OF TRAFFIC DETAILS

101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	24	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

DENOTES STAGE 1 CONSTRUCTION

N

STA. 100+00.00
BEGIN JOB 101100
L.M. 10.841

POB 96+07.54

14 VERTICAL PANELS SPACED 45' O.C.

PI 99+00.00

100

PI 101+92.07
+08.17
44.10'

PRC 103+84.10

+07.80
55.32'

CO. RD. 854

+08.76
60.25'

+00.00
115.00'

+00.00
142.03'

PROP. ROW

EXIST. ROW

PROP. T.C.E.

BRUSH

DITCH

S88°35'35"E

S87°49'30"E

500'

RIGHT SHOULDER CLOSED
(I) W21-5a
36" x 36"

+00.00
41.09'

+00.00
45.00'

+70.00
49.58'

+70.00
75.00'

+05.00
75.00'

+05.00
51.69'

PC 100+00.00

16'

CONST. LIMIT

(I) R11-2
(48" X 30")
ROAD CLOSED
16' BARR. TYP III RT.

ROAD WORK AHEAD
(I) W20-1
(48" x 48")

END ROAD WORK
(I) G20-2
(48" x 24")

12 TRAFFIC DRUMS SPACED 45' O.C.

(I) R11-2
(48" x 30")
ROAD CLOSED
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.

(I) R11-2
(48" x 30")
ROAD CLOSED
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.

+00.00
69.62'

20'

BERM

+90.00
120.00'

+00.00
110.00'

+00.00
95.00'

+80.00
150.00'

+50.00
120.00'

18 TRAFFIC DRUMS SPACED 10' O.C.

END ROAD WORK
(I) G20-2
(48" x 24")

ROAD WORK AHEAD
(I) W20-1
(48" x 48")

LEVEE

TRIBUTARY TO BIG SLOUGH DITCH

50 25 0 25 50 100

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	25	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

DENOTES STAGE 1 CONSTRUCTION

N

15 TRAFFIC DRUMS SPACED 45' O.C.

15 VERTICAL PANELS SPACED 45' O.C.

STA. 124+81.95
END JOB 101100

+10.00
115.00'

+09.89
54.37'

PROP. T.C.E.

TRIBUTARY TO BIG SLOUGH DITCH

BRUSH

DITCH

EXIST. ROW

15

PRC 120+53.87

120

+00.00
95.00'

+00.00
41.17'

PI 122+67.93

125

PI 125+81.95

POE 128+15.25

N87°53'13"E

N88°31'21"E

CONST. LIMIT

PROP. ROW

BERM

PROP. T.C.E.

+81.50
40.57'

+00.00
65.00'

+00.00
95.00'

PT 124+81.95

+00.00
85.00'

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

16' BARR. TYP. III LT.

+00.00
150.00'

+00.00
120.00'

PT 112+20.46

TRIBUTARY TO BIG SLOUGH DITCH

LEVEE

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

50 25 0 25 50 100

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	26	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

HWY. 34

DENOTES STAGE 2 CONSTRUCTION

REMOVAL OF PERMANENT PAVEMENT MARKINGS

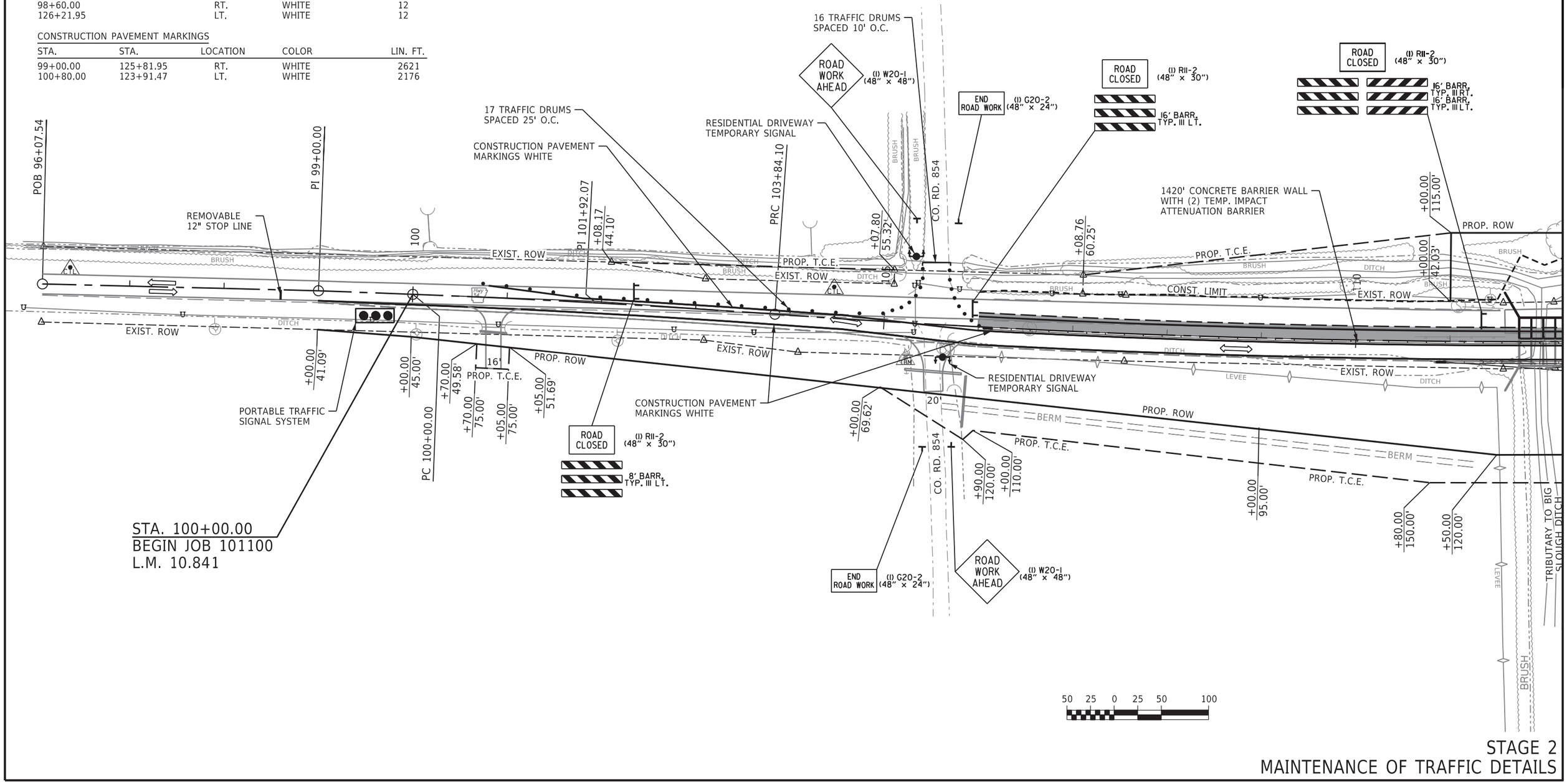
STA.	STA.	LOCATION	LIN. FT.
99+00.00	106+00.00	RT.	700
99+00.00	106+00.00	C.L.	175
100+80.00	106+00.00	LT.	520
119+50.00	123+91.47	LT.	442
119+50.00	125+81.95	RT.	632
119+50.00	125+81.95	C.L.	158

REMOVABLE PAVEMENT MARKINGS

STA.	STA.	LOCATION	COLOR	LIN. FT.
98+60.00		RT.	WHITE	12
126+21.95		LT.	WHITE	12

CONSTRUCTION PAVEMENT MARKINGS

STA.	STA.	LOCATION	COLOR	LIN. FT.
99+00.00	125+81.95	RT.	WHITE	2621
100+80.00	123+91.47	LT.	WHITE	2176



STA. 100+00.00
BEGIN JOB 101100
L.M. 10.841

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	27	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

DENOTES STAGE 2 CONSTRUCTION

N

ROAD CLOSED (I) RII-2 (48" x 30")
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.
+10.00 115.00'
+09.89 54.37'
PROP. T.C.E.
BRUSH
DITCH
TRIBUTARY TO BIG SLOUGH DITCH
CONST. LIMIT
15
EXIST. ROW
BRUSH
BM
220' CONCRETE BARRIER WALL WITH (2) TEMP. IMPACT ATTENUATION BARRIERS
+00.00 150.00'
+00.00 120.00'
PROP. ROW
BERM
PROP. T.C.E.
+00.00 85.00'
TRIBUTARY TO BIG SLOUGH DITCH
BRUSH
LEVEE

ROAD CLOSED (I) RII-2 (48" x 30")
24' BARR. TYP III RT.
CONSTRUCTION PAVEMENT MARKINGS WHITE
PRC 120+53.87
+00.00 95.00'
+00.00 41.17'
120
18 TRAFFIC DRUMS SPACED 25' O.C.
PI 122+67.93
EXIST. ROW
BRUSH
DITCH
PROP. T.C.E.
CONSTRUCTION PAVEMENT MARKINGS WHITE

STA. 124+81.95
END JOB 101100
PORTABLE TRAFFIC SIGNAL SYSTEM
PI 125+81.95
125
EXIST. ROW
BRUSH
DITCH
POE 128+15.25
REMOVABLE 12" STOP LINE
+81.50 40.57'
+00.00 65.00'
+00.00 95.00'
PT 124+81.95
PROP. ROW
BERM
PROP. T.C.E.
EXIST. ROW
BRUSH
DITCH

50 25 0 25 50 100

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	28	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

HWY. 34

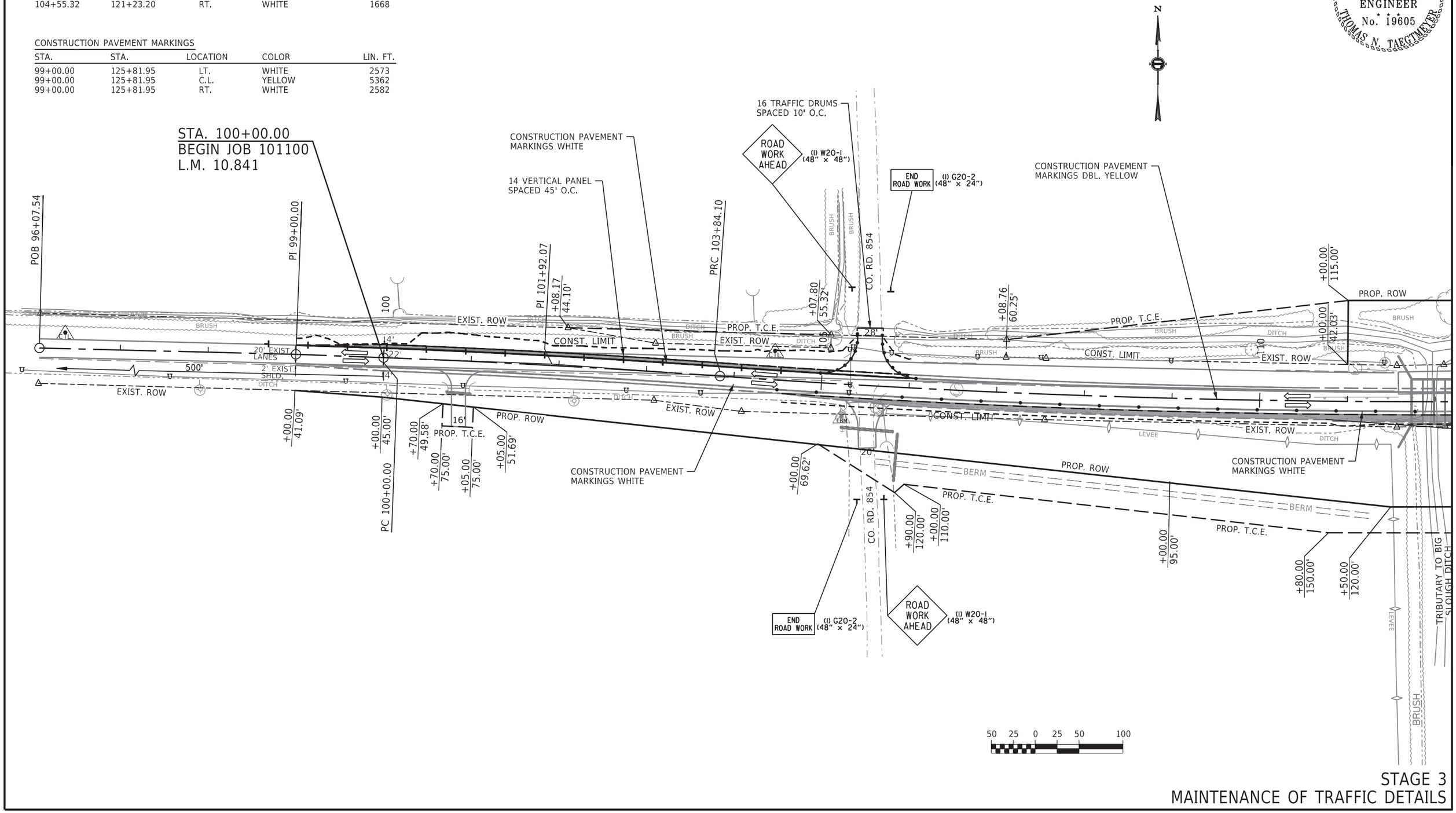
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS

STA.	STA.	LOCATION	COLOR	LIN. FT.
100+80.00	123+91.47	LT.	WHITE	2176
104+55.32	121+23.20	RT.	WHITE	1668

CONSTRUCTION PAVEMENT MARKINGS

STA.	STA.	LOCATION	COLOR	LIN. FT.
99+00.00	125+81.95	LT.	WHITE	2573
99+00.00	125+81.95	C.L.	YELLOW	5362
99+00.00	125+81.95	RT.	WHITE	2582

DENOTES STAGE 3 CONSTRUCTION



STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	29	58
		MAINTENANCE OF TRAFFIC DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

DENOTES STAGE 3 CONSTRUCTION

N

STA. 124+81.95
END JOB 101100

CONSTRUCTION PAVEMENT MARKINGS DBL. YELLOW
CONSTRUCTION PAVEMENT MARKINGS WHITE
16 VERTICAL PANELS SPACED 45' O.C.
38 TRAFFIC DRUMS SPACED 45' O.C.
CONSTRUCTION PAVEMENT MARKINGS WHITE
CONSTRUCTION PAVEMENT MARKINGS WHITE

PROP. T.C.E.
TRIBUTARY TO BIG SLOUGH DITCH
CONST. LIMIT
EXIST. ROW
PROP. ROW
BERM
DITCH
BRUSH
LEVEE
TBM
CTL
20' EXIST. LANES
2' EXIST. SHLD.

+10.00 115.00'
+09.89 54.37'
PRC 120+53.87
+00.00 95.00'
+00.00 41.17'
PI 122+67.93
PI 125+81.95
POE END 128+15.25
+81.50 40.57'
+00.00 65.00'
+00.00 95.00'
PT 124+81.95
PT 112+20.46
+00.00 150.00'
+00.00 120.00'
+00.00 85.00'

50 25 0 25 50 100

STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

101100 - TRAFFIC CONTROL SHEETS.DGN CREATED: 8/5/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	30	58
		PERMANENT PAVEMENT MARKING DETAILS				

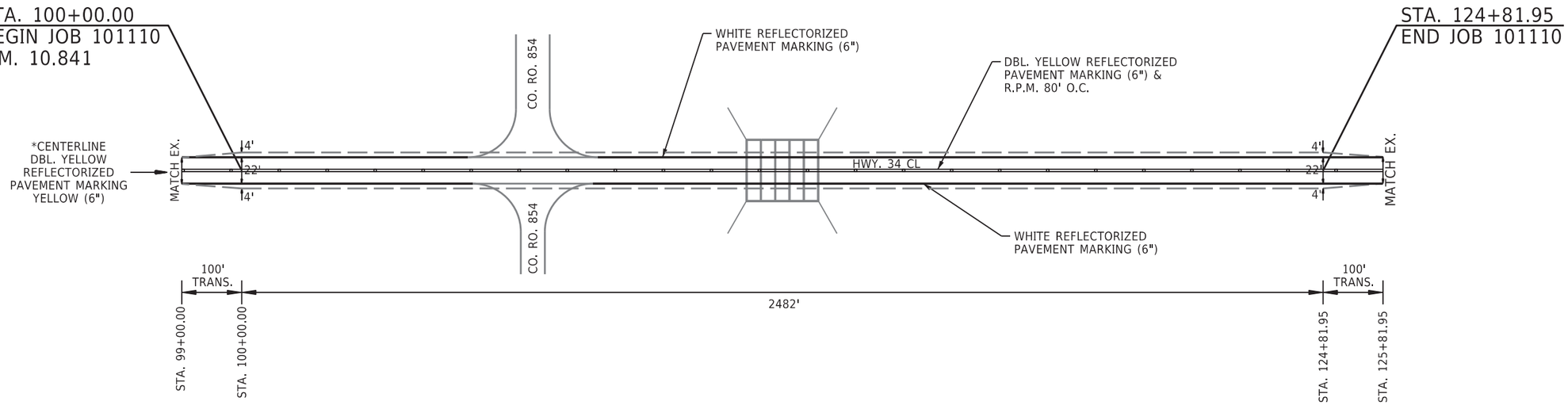
Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

PERMANENT PAVEMENT MARKINGS:

6" REFLECTORIZED PAINT PAVEMENT MARKINGS:
RT. AND LT. EDGE LINES = 5155 LIN. FT. WHITE
DBL. CENTERLINE = 5362 LIN. FT. YELLOW

RAISED PAVEMENT MARKERS:
TYPE II (YEL./YEL.) 80' O.C. ON CENTERLINE = 34 EACH



HWY. 34 - PERMANENT PAVEMENT MARKING LAYOUT

*THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

101100 - PAVEMENT MARKING SHEETS.DGN CREATED: 8/9/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
02/03/2026		6	ARK.	101100	31	58
		QUANTITIES				

Digitally signed by Thomas N. Taegtmeyer
Date: 2026.02.04

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)	* PORTABLE TRAFFIC SIGNAL SYSTEM
											RIGHT	LEFT				
			LIN. FT. - EACH				NO.	SQ. FT.	EACH		LIN. FT.			EACH		WEEK
W20-1	ROAD WORK 1500 FT.	48"x48"	2	2	2	2	2	32.0								
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2	2	2	32.0								
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2	2	2	32.0								
W20-1	ROAD WORK AHEAD	48"x48"	2	2	2	2	2	32.0								
G20-2	END ROAD WORK	48"x24"	4	4	4	4	4	32.0								
W3-3	SIGNAL HEAD	48"x48"		2		2	2	32.0								
W3-4	BE PREPARED TO STOP	48"x48"		2		2	2	32.0								
W3-5	REDUCED SPEED LIMIT AHEAD	48"x48"		2		2	2	32.0								
R11-2	ROAD CLOSED	48"x30"	6	3		6	6	60.0								
OM-3L	OBJECT MARKER	12"x36"		3		3	3	9.0								
OM-3R	OBJECT MARKER	12"x36"		3		3	3	9.0								
R2-1	SPEED LIMIT	36"x48"		4		4	4	48.0								
R2-6aP	FINES DOUBLE WHEN WORKERS ARE PRESENT	48"x36"	2	2	2	2	2	24.0								
R2-11	END HIGHER FINES ZONE	36"x48"	2	2	2	2	2	24.0								
R4-1	DO NOT PASS	24"x30"	2	2	2	2	2	10.0								
R10-6	STOP HERE ON RED	36"x48"		2		2	2	24.0								
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	2	2	2	2	2	18.0								
W8-1	BUMP	30"x30"	2	2	2	2	2	12.5								
W20-4	ONE LANE ROAD 1/2 MILE	48"x48"		2		2	2	32.0								
W20-4	ONE LANE ROAD 1000 FT	48"x48"		2		2	2	32.0								
W13-1P	ADVISORY SPEED	30"x30"		2		2	2	12.5								
WZ-4	STATE LAW NO HAND-HELD PHONE USE BY DRIVER WORK ZONE	36"x54"	2	2	2	2	2	27.0								
	VERTICAL PANELS		29		30	30			30							
	TRAFFIC DRUMS		45	51	54	54				54						
	TYPE III BARRICADE-RT. (24')			1		1					24					
	TYPE III BARRICADE-RT. (16')		5	2		5					80					
	TYPE III BARRICADE-LT. (16')		5	3		5						80				
	TYPE III BARRICADE-LT. (8')			1		1						8				
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER			1640		1640							1640			
	TEMPORARY IMPACT ATTENUATION BARRIER			4		4								4		
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)			4		4									4	
	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED			2		2										25
TOTALS:							**598.0**		**30**	**54**	**104**	**88**	**1640**	**4**	**4**	**25**

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

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	REFLECTORIZED PAINT PAVEMENT MARKING	
								TYPE II	6"	
								(YELLOW/YELLOW)	WHITE	YELLOW
	LIN. FT. - EACH			LIN. FT.		LIN. FT.		EACH	LIN. FT.	
REMOVAL OF PERMANENT PAVEMENT MARKINGS	2627			2627						
CONSTRUCTION PAVEMENT MARKINGS	4797	10517			15314					
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		3844				3844				
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS			24				24			
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)			34					34		
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")			5155						5155	
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")			5362							5362
TOTALS:				**2627**	**15314**	**3844**	**24**	**34**	**5155**	**5362**

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

NOTE: THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT.
THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING.
CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

101100 - QUANTITIES.DGN CREATED: 10/28/2024 SAVED: 2/3/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	32	58
		QUANTITIES				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
108+00.00	110+00.00	LT. & RT. OF MAINLANES	2	2
112+00.00	114+00.00	LT. & RT. OF MAINLANES	2	2
TOTALS:			**4**	**4**

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
100+87.00	RT. OF HWY. 34	1
105+51.30	RT. OF HWY. 34	1
105+85.75	RT. OF HWY. 34	1
TOTAL:		**3**

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

REMOVAL AND DISPOSAL OF GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL
			LIN. FT.
110+62	111+58	RT. OF HWY. 34	100
111+13	111+56	LT. OF HWY. 34	50
112+49	112+99	RT. OF HWY. 34	50
112+49	113+47	LT. OF HWY. 34	100
TOTAL:			**300**

NOTE: THE QUANTITY SHOWN ABOVE FOR THE REMOVAL AND DISPOSAL OF GUARDRAIL SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL GUARDRAIL TERMINALS AND TERMINAL ANCHOR POSTS.

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	20
DIRECTED BY THE ENGINEER	
TOTAL:	**20**

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

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND			200	2
WHERE DIRECTED BY THE ENGINEER				
TOTALS:			**200**	**2**

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

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
ENTIRE	PROJECT	STAGE 1	8900	14702
ENTIRE	PROJECT	STAGE 2	1951	331
ENTIRE	PROJECT	STAGE 3	613	74
ENTIRE	PROJECT	APPROACHES		300
ENTIRE	PROJECT	CHANNEL CHANGE	2718	
TOTALS:			**14182**	**15407**

NOTE: EARTHWORK QUANTITIES SHALL BE PAID AS PLAN QUANTITY.

SOIL STABILIZATION

STATION	STATION	LOCATION / DESCRIPTION	SOIL STABILIZATION
			TON
ENTIRE	PROJECT	TO BE USED IF AND WHERE	50
		DIRECTED BY THE ENGINEER	
TOTAL:			**50**

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

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
111+73	HWY. 34 - HEADWALL ON RT.	1
TOTAL:		**1**

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

STONE BACKFILL

STATION	STATION	LOCATION / DESCRIPTION	STONE BACKFILL	GEOTEXTILE FABRIC (TYPE 8)
			TON	SQ.YD.
111+71	112+40	R.C. BOX CULVERT	455	482
TOTAL:			**455**	**482**

REMOVAL OF EXISTING BRIDGE STRUCTURE

STATION	STATION	LOCATION	LUMP SUM
111+57.71	112+48.08	BRIDGE NO. M3221 (SITE NO. 1)	1.00

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	12	24
DIRECTED BY THE ENGINEER		
TOTALS:	**12**	**24**

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	30
AND WHERE DIRECTED BY THE	
ENGINEER	
TOTAL:	**30**

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

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
99+00.00	100+00.00	DEPTH TRANSITION	20.00	222.22
124+81.95	125+81.95	DEPTH TRANSITION	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.

101100 - QUANTITIES.DGN CREATED: 10/28/2024 SAVED: 7/18/2025

DATE REVISED	DATE REVISED

FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	101100	33	58

QUANTITIES

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

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 (E-5)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING									176	24	6906	272
ENTIRE	PROJECT	STAGE 1	2.73	5.46	2.73	278.5	2.73	2.73	2.73	55.7	132	9	155	15
ENTIRE	PROJECT	STAGE 2	0.96	1.92	0.96	97.9	0.96	0.96	0.96	19.6			128	5
ENTIRE	PROJECT	STAGE 3	0.55	1.10	0.55	56.1	0.55	0.55	0.55	11.2				
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.85	1.70	0.85	86.7	0.85	0.85	0.85	17.3				
TOTALS:			**5.09**	**10.18**	**5.09**	**519.2**	**5.09**	**5.09**	**5.09**	**103.8**	**308**	**33**	**7189**	**292**

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

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

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 18"	SIDE DRAINS 24"	STANDARD DRAWINGS
			FEET	SQ. YD.	TON	TON	LIN. FT.		
100+87	RT	HWY. 34 - DRIVEWAY	16	37.01	4.07	15.11	28		DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
105+50	RT	HWY. 34 - DRIVEWAY	20	131.19	14.43	53.57		60	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
105+57	LT	HWY. 34 - DRIVEWAY	28	163.19	17.95	66.64			DR-2
* ENTIRE PROJECT TEMPORARY DRIVES						35.00			
TOTALS:				**331.39**	**36.45**	**170.32**	**28**	**60**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

* 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.

STRUCTURES

STATION	DESCRIPTION	SIDE DRAIN 18"	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.	CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL.	
105+88	18" X 54' PIPE CULVERT CO. RD. 854	54						PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
SUBTOTAL:		**54**						
STRUCTURES OVER 20' - 0" SPAN								
112+05	QUINT. 12' X 12' X 52' R.C. BOX CULVERT		470.36	55342	219.05	57	0.72	PBC-1, RCB-1, RCB-2, SPECIAL DETAILS
SUBTOTALS:			**470.36**	**55342**	**219.05**	**57**	**0.72**	
TOTALS:		**54**	**470.36**	**55342**	**219.05**	**57**	**0.72**	

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.

101100 - QUANTITIES.DGN CREATED: 10/28/2024 SAVED: 7/18/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	34	58
		QUANTITIES				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT							ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								
						(0.05 GAL. PER SQ. YD.)			(0.17 GAL. PER SQ. YD.)																
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON	TOTAL GALLONS	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	TOTAL PG 64-22
			FEET			FEET			FEET				FEET			TON	FEET			TON	FEET			TON	TON
MAIN LANES																									
99+00.00	100+00.00	HWY. 34 - TRANSITION	100.00						23.00	255.56	43.45	43.45									23.00	255.56	220.00	28.11	28.11
100+00.00	106+00.00	HWY. 34 - NOTCH AND WIDEN	600.00	119.75	718.50	4.35	290.00	14.50	20.00	1333.33	226.67	241.17	VAR.	768.33	330.00	126.78	VAR.	761.43	220.00	83.76	26.00	1733.33	220.00	190.67	274.43
106+00.00	119+50.00	HWY. 34 - FULL DEPTH	1350.00	182.00	2457.00	52.71	7906.50	395.33				395.33	26.46	3969.00	330.00	654.89	26.25	3937.50	220.00	433.13	26.00	3900.00	220.00	429.00	862.13
119+50.00	124+81.95	HWY. 34 - NOTCH AND WIDEN	531.95	119.75	637.01	4.35	257.11	12.86	20.00	1182.11	200.96	213.82	VAR.	592.94	330.00	97.84	VAR.	586.79	220.00	64.55	26.00	1536.74	220.00	169.04	233.59
124+81.95	125+81.95	HWY. 34 - TRANSITION	100.00						24.00	266.67	45.33	45.33									24.00	266.67	220.00	29.33	29.33
104+55.43	106+00.00	HWY. 34 - MOT WIDENING TRANSITION	144.57	43.50	62.89	VAR.	35.18	1.76				1.76	VAR.	35.18	330.00	5.80	VAR.	34.68	220.00	3.81					3.81
106+00.00	110+95.00	HWY. 34 - MOT 6' WIDENING	495.00	23.25	115.09	6.15	338.25	16.91				16.91	6.15	338.25	330.00	55.81	6.00	330.00	220.00	36.30					36.30
110+95.00	113+15.00	HWY. 34 - MOT 8' WIDENING	220.00	27.50	60.50	8.15	199.22	9.96				9.96	8.15	199.22	330.00	32.87	8.00	195.56	220.00	21.51					21.51
113+15.00	119+50.00	HWY. 34 - MOT 6' WIDENING	635.00	23.25	147.64	6.15	433.92	21.70				21.70	6.15	433.92	330.00	71.60	6.00	423.33	220.00	46.57					46.57
119+50.00	121+23.22	HWY. 34 - MOT WIDENING TRANSITION	173.22	43.50	75.35	VAR.	40.78	2.04				2.04	VAR.	40.78	330.00	6.73	VAR.	40.17	220.00	4.42					4.42
ADDITIONAL FOR LEVELING																									
100+00.00	106+00.00	HWY. 34 - LEVELING	600.00			VAR.	846.86	42.34				42.34					VAR.	846.86	VAR.	65.40					65.40
119+50.00	124+81.95	HWY. 34 - LEVELING	531.95			VAR.	839.83	41.99				41.99					VAR.	839.83	VAR.	105.66					105.66
TOTALS:					**4273.98**		**11187.65**	**559.39**		**3037.67**	**516.41**	**1075.80**		**6377.67**		**1052.32**		**7996.15**		**865.11**		**7692.30**		**846.15**	**1711.26**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.8% MIN. AGGR.....4.2% ASPHALT BINDER
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
02/03/2026		6	ARK.	101100	35	58
02/23/2026		SUMMARY OF QUANTITIES AND REVISIONS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2026.02.23

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	4	STATION
201	GRUBBING	4	STATION
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	3	EACH
202	REMOVAL AND DISPOSAL OF GUARDRAIL	300	LIN. FT.
SP & 207	STONE BACKFILL	455	TON
SP, SS, & 210	UNCLASSIFIED EXCAVATION	14182	CU. YD.
SP & 210	COMPACTED EMBANKMENT	15407	CU. YD.
SP & 210	SOIL STABILIZATION	50	TON
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)	4444	TON
SS & 401	TACK COAT	1100	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	1008	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	44	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	1655	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	93	TON
SP & 412	COLD MILLING ASPHALT PAVEMENT	444	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	12	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	20	TON
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	598	SQ. FT.
SS & 604	BARRICADES	192	LIN. FT.
SS & 604	TRAFFIC DRUMS	54	EACH
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	1640	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	15314	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	24	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	3844	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	2627	LIN. FT.
SS & 604	VERTICAL PANELS	30	EACH
SP, SS, & 606	18" SIDE DRAIN	82	LIN. FT.
SP, SS, & 606	24" SIDE DRAIN	60	LIN. FT.
SS & 606	SELECTED PIPE BEDDING	30	CU. YD.
SS & 611	4" PIPE UNDERDRAINS	200	LIN. FT.
SS & 611	UNDERDRAIN OUTLET PROTECTORS	2	EACH
620	LIME	10	TON
620	SEEDING	5.09	ACRE
SS & 620	MULCH COVER	10.18	ACRE
620	WATER	623.7	M. GAL.
621	TEMPORARY SEEDING	5.09	ACRE
621	SILT FENCE	7189	LIN. FT.
621	SAND BAG DITCH CHECKS	308	BAG
621	SEDIMENT REMOVAL AND DISPOSAL	292	CU. YD.
621	ROCK DITCH CHECKS	33	CU. YD.
623	SECOND SEEDING APPLICATION	5.09	ACRE
624	SOLID SODDING	57	SQ. YD.
625	GEOTEXTILE FABRIC (TYPE 8)	482	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
SP	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED	25	WEEK
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	5155	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	5362	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	34	EACH
SS & 731	TEMPORARY IMPACT ATTENUATION BARRIER	4	EACH
SS & 731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	4	EACH
	STRUCTURES OVER 20' SPAN		
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	219.05	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-ROADWAY	470.36	CU. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	55342	POUND

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
2/3/2026	REVISED ROADWAY STANDARD DRAWING TC-6. MAINTENANCE OF TRAFFIC DETAILS REVISED TO ADD "WZ-4" SIGN. QUANTITY REVISED FOR "SIGNS".	2, 21, 31, 35
2/23/2026	REVISED GOVERNING SPECIFICATIONS TO ADD "USE OF FOREIGN MADE UNMANNED AIRCRAFT SYSTEMS" SP.	3, 35

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	36	58
		SURVEY CONTROL DETAILS				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

SURVEY CONTROL COORDINATES

Project Name: s101100
Date: 6/16/2023
Coordinate System: ARKANSAS STATE PLANE – NORTH ZONE BASED ON GPS CONTROL, PN:1 & 5
THIS IS A GRID PROJECT.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	678609.1446	1806903.0810	254.18	CTL	ARDOT STD MON STAMPED PN:1
2	678588.3692	1807712.3080	254.08	CTL	ARDOT STD MON STAMPED PN:2
3	678533.5426	1808524.3030	254.27	CTL	ARDOT STD MON STAMPED PN:3
4	678596.8811	1809344.7830	251.59	CTL	ARDOT STD MON STAMPED PN:4
5	678581.1552	1810143.4310	253.37	CTL	ARDOT STD MON STAMPED PN:5
900	678551.9517	1806749.9180	255.43	TBM	RBR W ALUM CAP
901	678513.7771	1807787.8600	248.86	TBM	RBR W ALUM CAP
902	678568.3742	1808512.1770	255.75	TBM	SQUARE CUT NE CRNR BR

*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).

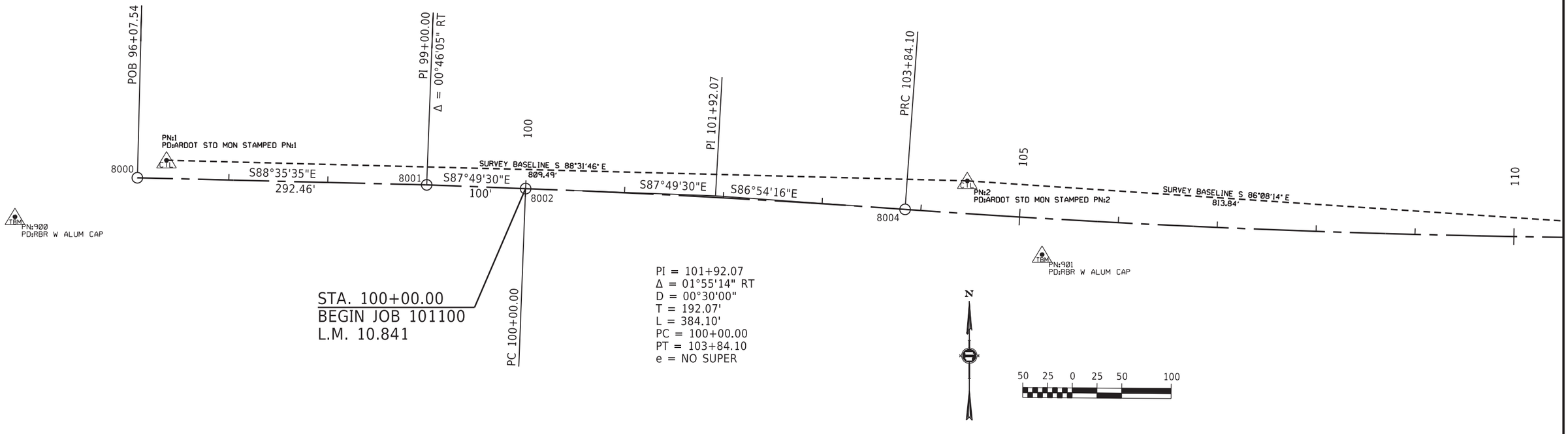
GRID COORDINATES ARE STORED UNDER FILE NAME s101100gi.CTL
HORIZONTAL DATUM: NAD 83 (2011)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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: PN:1 & 5
CONVERGENCE ANGLE: 00 58 42.3 RIGHT AT PN:3 LT:N36°11'09.0254" LG:W90°19'06.8283"
GRID AZIMUTH = ASTRONOMICAL AZIMUTH – CONVERGENCE ANGLE.

HWY. 34 CONST.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	P.O.B.	96+07.54	678591.4250	1806873.6290
8001	P.I.	99+00.00	678584.2437	1807166.0026
8002	P.C.	100+00.00	678580.4486	1807265.9305
8004	P.R.C.	103+84.10	678559.4422	1807649.4392
8006	P.R.C.	120+53.87	678561.7412	1809317.7245
8007	P.T.	124+81.95	678585.5105	1809745.1234
8008	P.I.	125+81.95	678589.1974	1809845.0554
8009	P.O.E.	128+15.25	678595.2135	1810078.2810



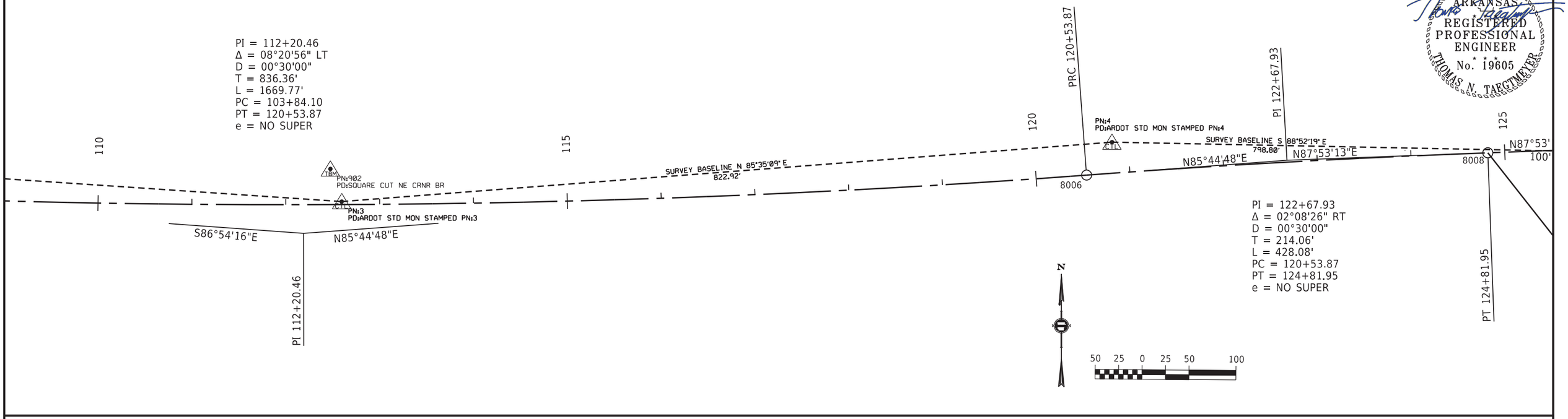
101100 - SURVEY CONTROL SHEETS.DGN CREATED: 8/13/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	37	58
		SURVEY CONTROL DETAILS				

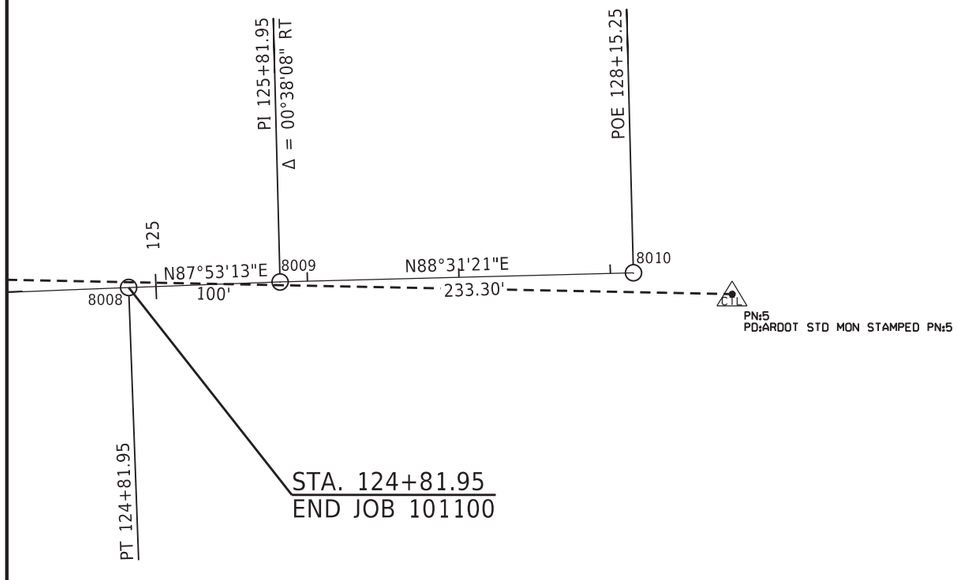
Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

PI = 112+20.46
Δ = 08°20'56" LT
D = 00°30'00"
T = 836.36'
L = 1669.77'
PC = 103+84.10
PT = 120+53.87
e = NO SUPER



PI = 122+67.93
Δ = 02°08'26" RT
D = 00°30'00"
T = 214.06'
L = 428.08'
PC = 120+53.87
PT = 124+81.95
e = NO SUPER



SURVEY CONTROL DETAILS

101100 - SURVEY CONTROL SHEETS.DGN CREATED: 8/13/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	38	58
		PLAN AND PROFILE				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

ENTIRE PROJECT WITHIN FLOODPLAIN BOUNDRY

100' TRANSITION

PI 99+00.00
Δ = 00°46'05" RT.

PI 101+92.07
+08.17
44.10'

PRC 103+84.10

+07.80
55.32'

CO. RD. 854

+08.76
60.25'

+00.00
115.00'

+00.00
142.03'

PROP. ROW

25' BUFFER

PROP. T.C.E.

EXIST. ROW

CONST. LIMIT

S88°35'35"E

S87°49'30"E

20' EXIST LANES

2' EXIST. SHLD.

DITCH

BRUSH

LEVEE

TBM

+00.00
41.09'

+00.00
45.00'

+70.00
49.58'

+70.00
75.00'

+05.00
75.00'

+05.00
51.69'

+00.00
69.62'

+90.00
120.00'

+00.00
110.00'

+00.00
95.00'

+80.00
150.00'

+50.00
120.00'

PC 100+00.00

PI = 101+92.07
Δ = 01°55'14" RT
D = 00°30'00"
T = 192.07'
L = 384.10'
PC = 100+00.00
PT = 103+84.10
e = NO SUPER

STA. 105+57.20 LT. IN PLACE
DBL. 7' x 60' C.M. PIPE
RETAIN
CONSTRUCT TURNOUT
5 CU. YDS.

STA. 100+87.00 RT. IN PLACE
18" x 24' C.M. PIPE
REMOVE AND INSTALL
18" x 28' SIDE DRAIN
CONSTRUCT APPROACH
75 CU. YDS.

STA. 105+51.30 RT. IN PLACE
24" x 40' C.M. PIPE
REMOVE AND INSTALL
24" X 60' SIDE DRAIN
CONSTRUCT TURNOUT
275 CU. YDS.

STA. 105+87.85 RT. IN PLACE
18" x 43' C.M. PIPE
REMOVE AND INSTALL
18" X 54' SIDE DRAIN

STA. 111+57.71 - STA. 112+48.08 IN PLACE
BRIDGE NO. M3221
REMOVAL AS EXISTING BRIDGE
STRUCTURE (SITE NO. 1) = 1.00 LUMP SUM

STA. 112+05.00 CONSTRUCT
QUINT. 12' x 12' x 52' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
Q25= 1560 CFS; D.A. = 7.63 SQ. MI.
SPAN = 64' - 6"

TRIBUTARY TO BIG SLOUGH DITCH

PI 112+20.46

HWY. 34

STA. 100+00
BEGIN JOB 101100
L.M. 10.841

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

FOR THE CONSTRUCTION OF TEMPORARY RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAM BANK ELEVATION IS 253 FT. MSL. BETWEEN STATIONS 111+62 AND 112+52. REFER TO SECTION 110.05 (C) OF THE 2014 STANDARD SPECIFICATIONS.

PVI 100+00.00 ELEV 255.85
PVI 103+00.00 ELEV 256.15
PVI 106+00.00 ELEV 256.16

PROFILE GRADE
EXISTING GROUND

+0.10%
+0.00%
+0.02%
SDG RT.-1.10%
SDG RT.-0.85%

99+00.00
252.10 (RT.)

102+00.00
248.80 (RT.)

111+73.66
240.50 (RT.)

112+36.33
240.50 (RT.)

STA. 108+20.00 TO STA. 108+60.00
TRANSITION V-BOTTOM RT. D.G. TO 4' F.B. RT. D.G.

98+00	99+00	100+00	101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00	109+00	110+00	111+00	112+00
255.79	255.85 255.85	255.66 255.85	255.65 255.95	255.68 256.05	255.71 256.15	255.84 256.16	254.90 256.16	254.00 256.16	253.08 256.18	252.19 256.21	251.47 256.23	252.24 256.25	253.60 256.28	241.49 256.30

101100 - PLAN & PROFILE SHEETS.DGN CREATED: 10/19/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	39	58
		PLAN AND PROFILE				

Digitally signed by Thomas N. Taegtmeyer
Date: 2025.10.17

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19605
THOMAS N. TAEGTMEYER

PI = 112+20.46
Δ = 08°20'56" LT
D = 00°30'00"
T = 836.36'
L = 1669.77'
PC = 103+84.10
PT = 120+53.87
e = NO SUPER

ENTIRE PROJECT WITHIN FLOODPLAIN BOUNDRY

PI = 122+67.93
Δ = 02°08'26" RT
D = 00°30'00"
T = 214.06'
L = 428.08'
PC = 120+53.87
PT = 124+81.95
e = NO SUPER

STA. 124+81.95
END JOB 101100

HWY. 34

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

FOR THE CONSTRUCTION OF TEMPORARY RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAM BANK ELEVATION IS 253 FT. MSL. BETWEEN STATIONS 111+62 AND 112+52. REFER TO SECTION 110.05 (C) OF THE 2014 STANDARD SPECIFICATIONS.

STA. 112+05
F.L. INLET LT. = 240.60
F.L. OUTLET RT. = 240.50

Q25 HW = 250.84

PVI 112+00.00 ELEV 256.30
PVI 119+50.00 ELEV 254.01
PVI 122+00.00 ELEV 254.14
PVI 124+81.95 ELEV 254.05

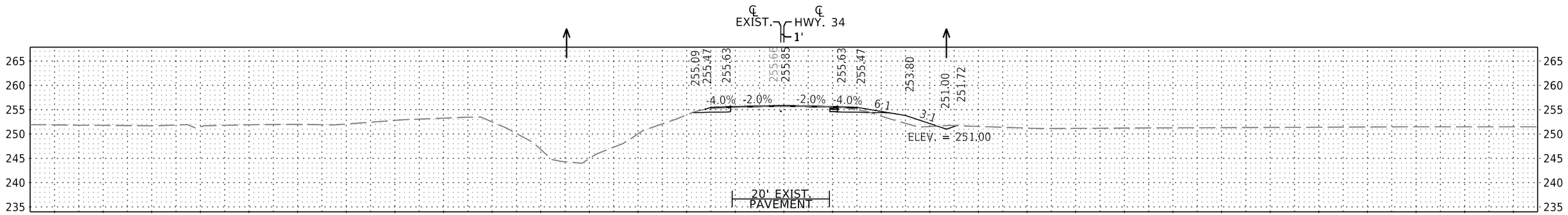
-0.31% +0.05% -0.03%

PROFILE GRADE
EXISTING GROUND
SDG RT.+0.47%

111+73.66 240.50 (RT.)
112+36.33 240.50 (RT.)
125+00.00 246.50 (RT.)

| | | | |

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	40	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 3 SF
FILL AREA: 16 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

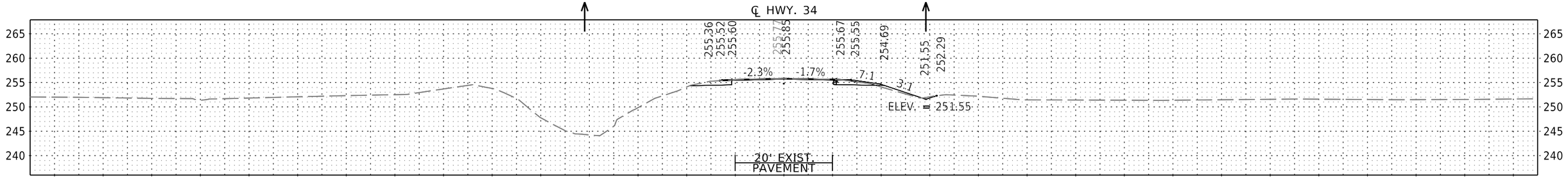
STAGE 3
CUT AREA: 0 SF
FILL AREA: 0 SF

STA 100+00.00 - END 100' TRANSITION

STAGE 1
CUT VOLUME: 4 CY
FILL VOLUME: 19 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 2 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 1 SF
FILL AREA: 5 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

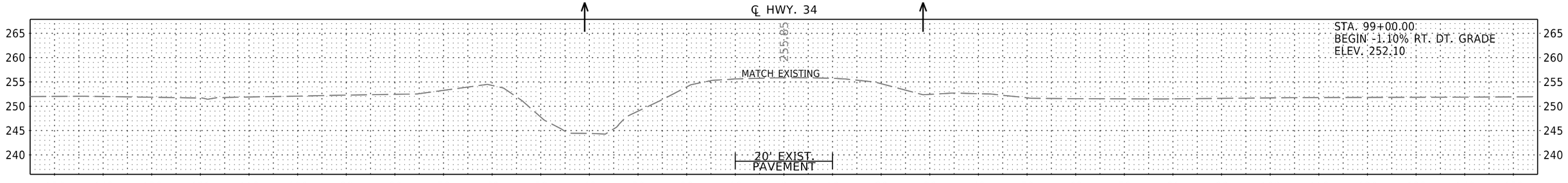
STAGE 3
CUT AREA: 2 SF
FILL AREA: 0 SF

STA 99+50.00

STAGE 1
CUT VOLUME: 1 CY
FILL VOLUME: 4 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 4 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 3 SF
FILL AREA: 0 SF

STA 99+00.00 - BEGIN 100' TRANSITION

STAGE 1
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

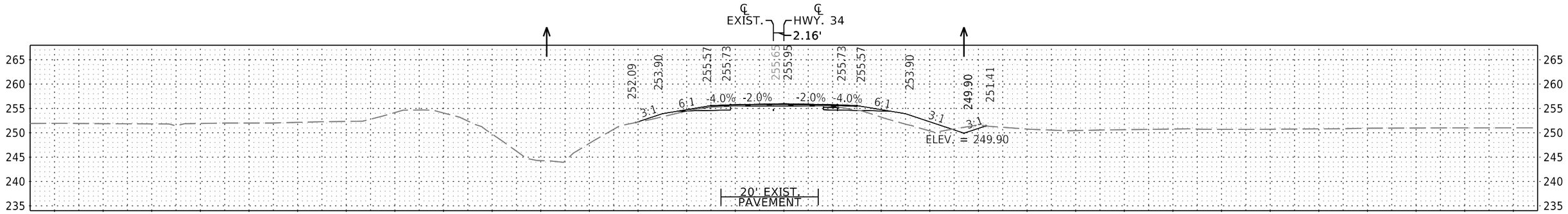
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

CROSS SECTION STA. 99+00.00 TO STA. 100+00.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	41	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 7 SF
FILL AREA: 31 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

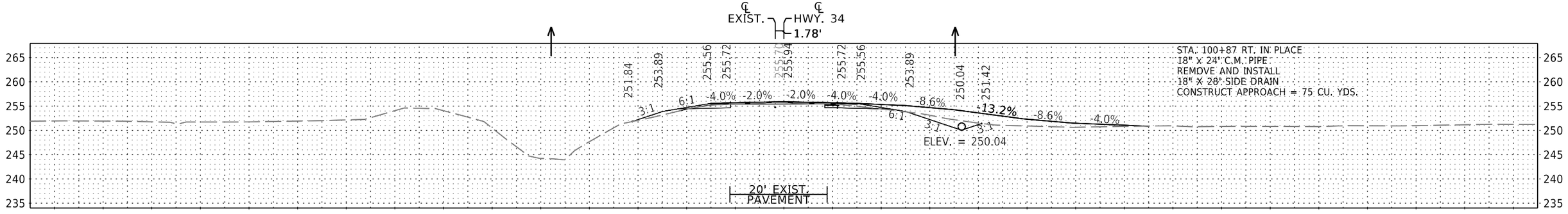
STAGE 3
CUT AREA: 0 SF
FILL AREA: 7 SF

STA 101+00.00

STAGE 1
CUT VOLUME: 6 CY
FILL VOLUME: 8 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 0 CY
FILL VOLUME: 3 CY



STAGE 1
CUT AREA: 17 SF
FILL AREA: 3 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

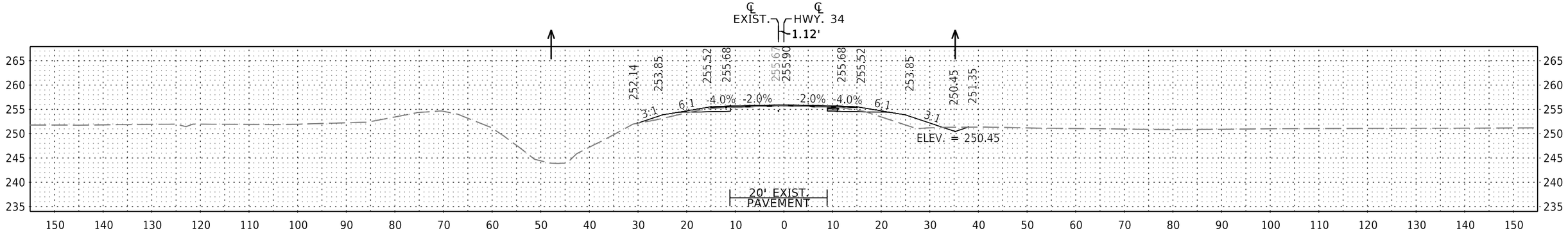
STAGE 3
CUT AREA: 0 SF
FILL AREA: 8 SF

STA 100+87.00

STAGE 1
CUT VOLUME: 15 CY
FILL VOLUME: 18 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 0 CY
FILL VOLUME: 11 CY



STAGE 1
CUT AREA: 4 SF
FILL AREA: 23 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 0 SF
FILL AREA: 8 SF

STA 100+50.00

STAGE 1
CUT VOLUME: 7 CY
FILL VOLUME: 37 CY

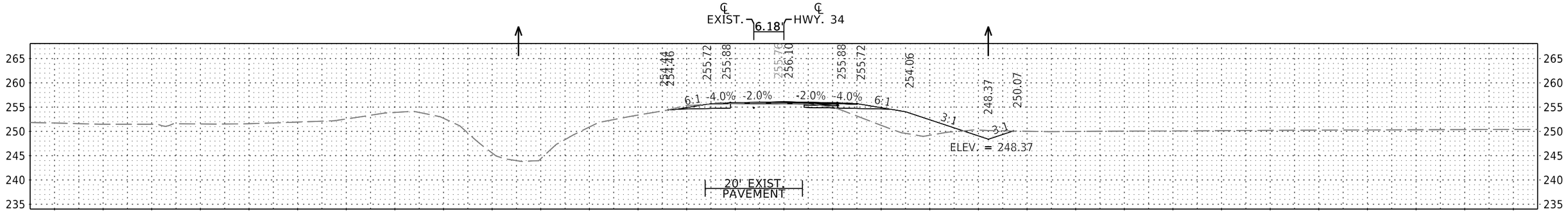
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 0 CY
FILL VOLUME: 7 CY

CROSS SECTION STA. 100+50.00 TO STA. 101+00.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	42	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 13 SF
FILL AREA: 73 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

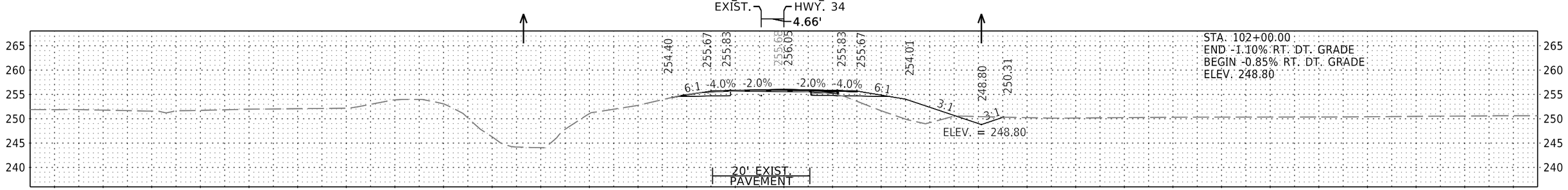
STAGE 3
CUT AREA: 2 SF
FILL AREA: 0 SF

STA 102+50.00

STAGE 1
CUT VOLUME: 22 CY
FILL VOLUME: 125 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 3 CY
FILL VOLUME: 1 CY



STAGE 1
CUT AREA: 11 SF
FILL AREA: 63 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

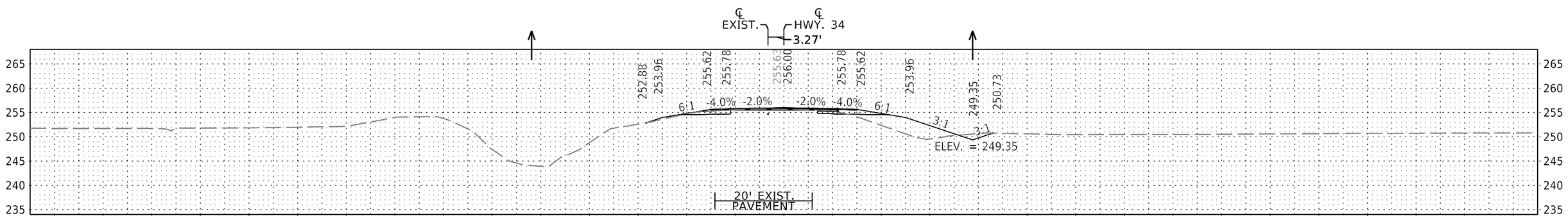
STAGE 3
CUT AREA: 1 SF
FILL AREA: 1 SF

STA 102+00.00

STAGE 1
CUT VOLUME: 16 CY
FILL VOLUME: 106 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 1 CY
FILL VOLUME: 4 CY



STAGE 1
CUT AREA: 7 SF
FILL AREA: 51 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 0 SF
FILL AREA: 4 SF

STA 101+50.00

STAGE 1
CUT VOLUME: 13 CY
FILL VOLUME: 76 CY

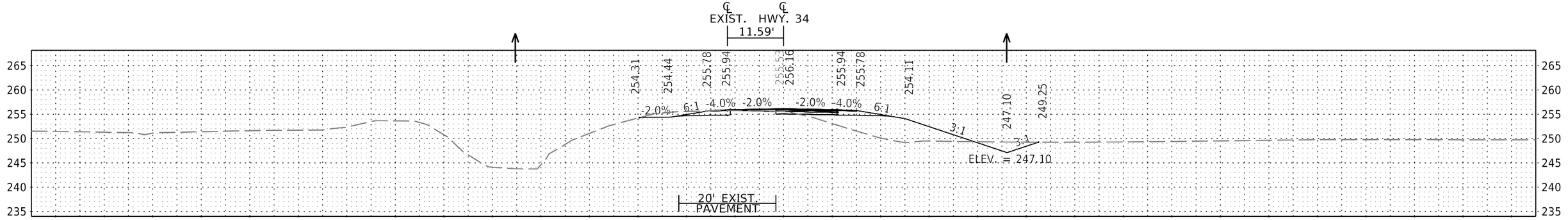
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 0 CY
FILL VOLUME: 9 CY

CROSS SECTION STA. 101+50.00 TO STA. 102+50.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	43	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 16 SF
FILL AREA: 102 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

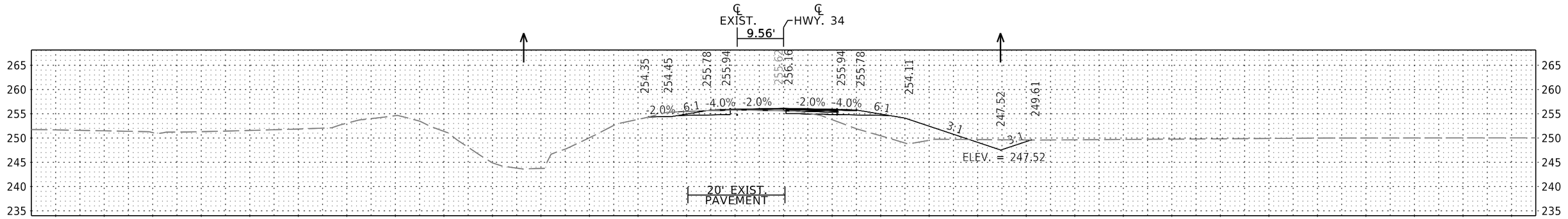
STAGE 3
CUT AREA: 8 SF
FILL AREA: 2 SF

STA 104+00.00

STAGE 1
CUT VOLUME: 30 CY
FILL VOLUME: 178 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 13 CY
FILL VOLUME: 2 CY



STAGE 1
CUT AREA: 16 SF
FILL AREA: 91 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

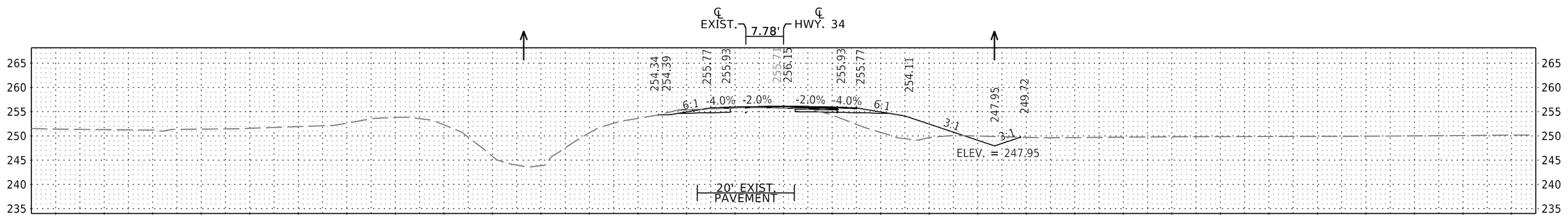
STAGE 3
CUT AREA: 6 SF
FILL AREA: 1 SF

STA 103+50.00

STAGE 1
CUT VOLUME: 27 CY
FILL VOLUME: 160 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 9 CY
FILL VOLUME: 1 CY



STAGE 1
CUT AREA: 13 SF
FILL AREA: 82 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 3 SF
FILL AREA: 1 SF

STA 103+00.00

STAGE 1
CUT VOLUME: 24 CY
FILL VOLUME: 143 CY

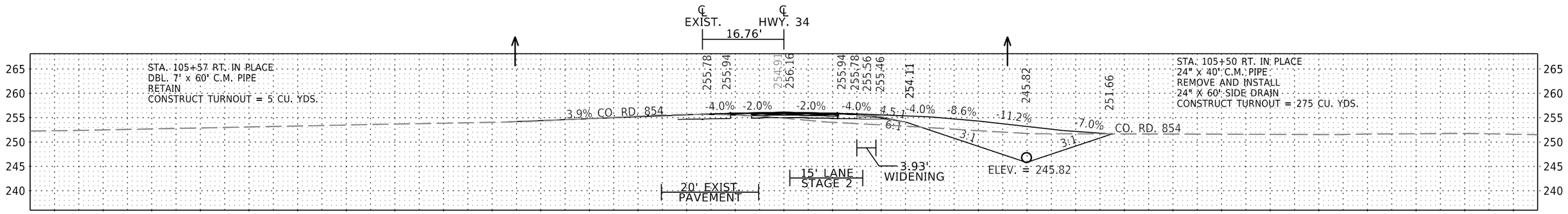
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 5 CY
FILL VOLUME: 1 CY

CROSS SECTION STA. 103+00.00 TO STA. 104+00.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	44	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 117 SF
FILL AREA: 25 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

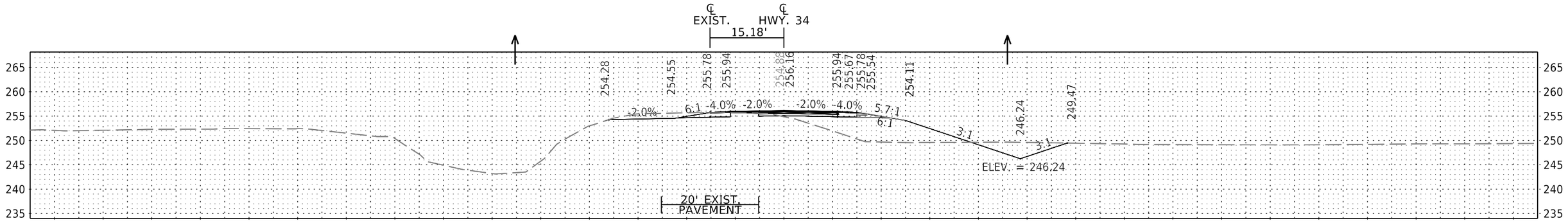
STAGE 3
CUT AREA: 7 SF
FILL AREA: 1 SF

STA 105+50.00

STAGE 1
CUT VOLUME: 141 CY
FILL VOLUME: 131 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 26 CY
FILL VOLUME: 2 CY



STAGE 1
CUT AREA: 35 SF
FILL AREA: 116 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

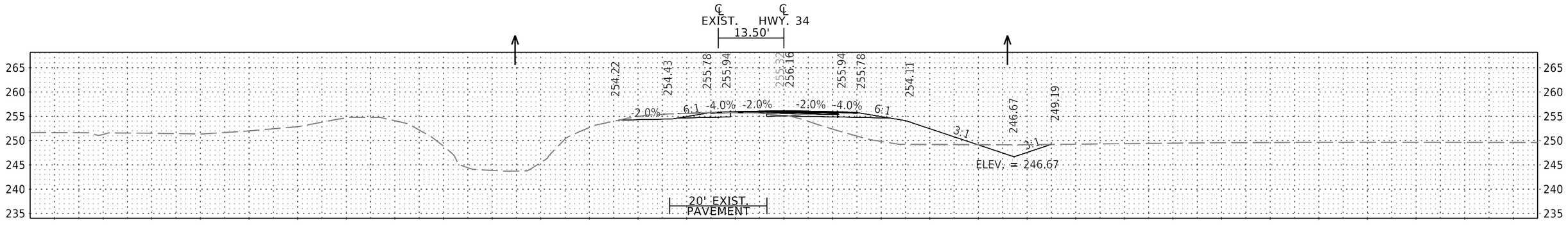
STAGE 3
CUT AREA: 21 SF
FILL AREA: 1 SF

STA 105+00.00

STAGE 1
CUT VOLUME: 51 CY
FILL VOLUME: 215 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 31 CY
FILL VOLUME: 1 CY



STAGE 1
CUT AREA: 20 SF
FILL AREA: 116 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 13 SF
FILL AREA: 0 SF

STA 104+50.00

STAGE 1
CUT VOLUME: 33 CY
FILL VOLUME: 202 CY

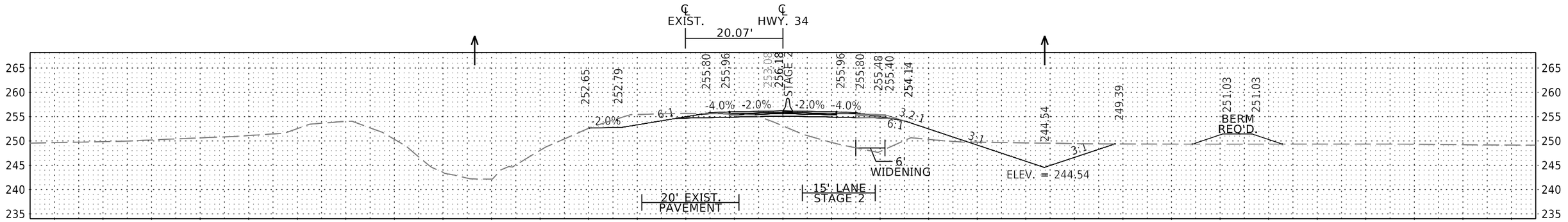
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 20 CY
FILL VOLUME: 2 CY

CROSS SECTION STA. 104+50.00 TO STA. 105+50.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	45	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 75 SF
FILL AREA: 183 SF

STAGE 2
CUT AREA: 40 SF
FILL AREA: 0 SF

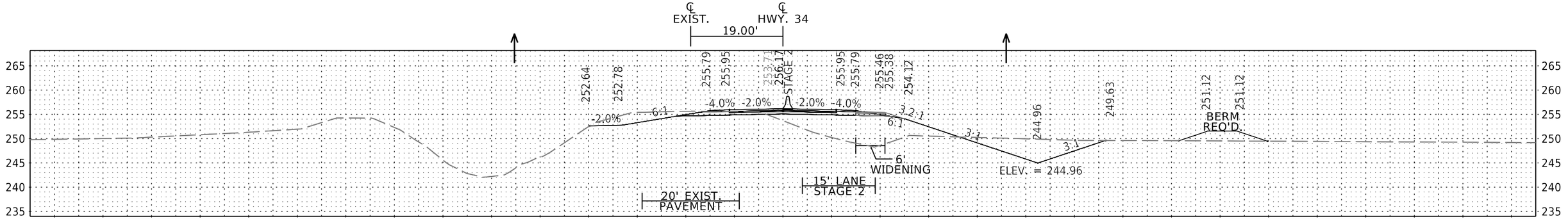
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 107+00.00

STAGE 1
CUT VOLUME: 138 CY
FILL VOLUME: 319 CY

STAGE 2
CUT VOLUME: 76 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 74 SF
FILL AREA: 162 SF

STAGE 2
CUT AREA: 42 SF
FILL AREA: 0 SF

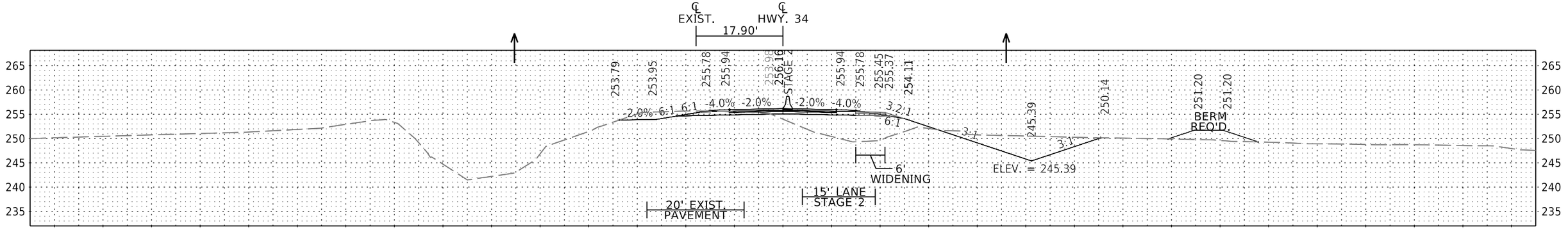
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 106+50.00

STAGE 1
CUT VOLUME: 143 CY
FILL VOLUME: 275 CY

STAGE 2
CUT VOLUME: 74 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 81 SF
FILL AREA: 135 SF

STAGE 2
CUT AREA: 38 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 106+00.00

STAGE 1
CUT VOLUME: 183 CY
FILL VOLUME: 148 CY

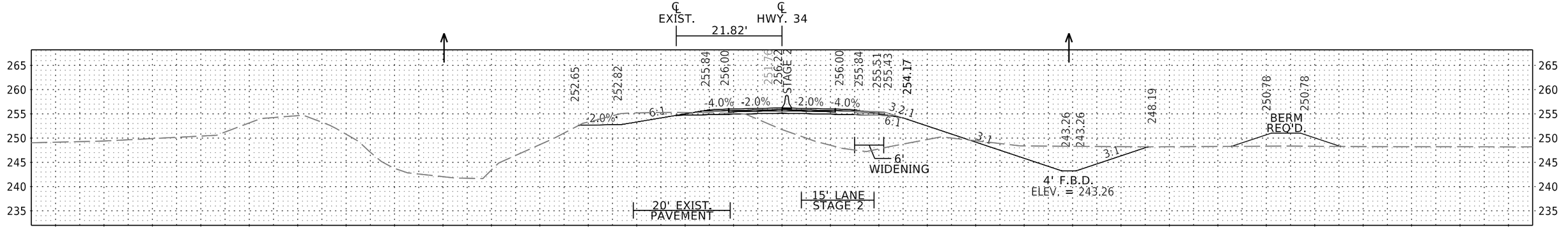
STAGE 2
CUT VOLUME: 35 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 12 CY
FILL VOLUME: 1 CY

CROSS SECTION STA. 106+00.00 TO STA. 107+00.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	46	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 96 SF
FILL AREA: 233 SF

STAGE 2
CUT AREA: 34 SF
FILL AREA: 2 SF

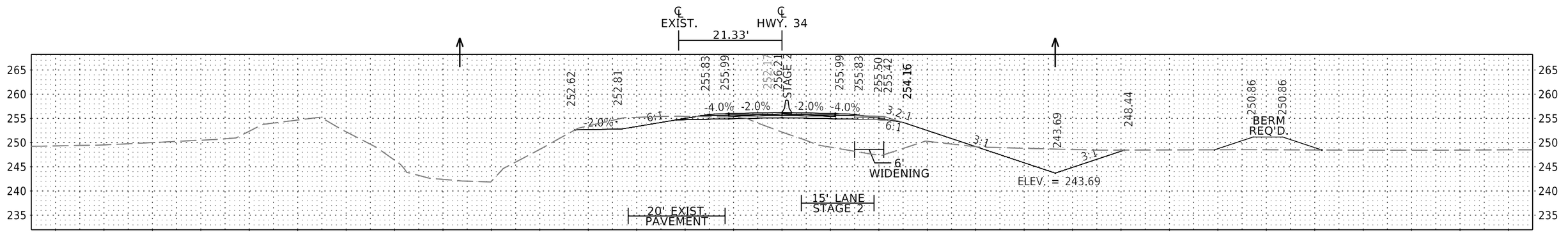
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 108+50.00

STAGE 1
CUT VOLUME: 158 CY
FILL VOLUME: 422 CY

STAGE 2
CUT VOLUME: 66 CY
FILL VOLUME: 3 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 75 SF
FILL AREA: 223 SF

STAGE 2
CUT AREA: 38 SF
FILL AREA: 2 SF

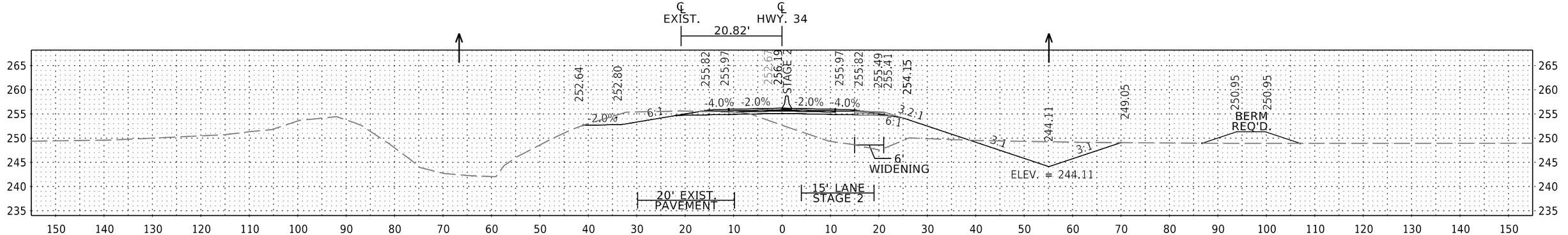
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 108+00.00

STAGE 1
CUT VOLUME: 143 CY
FILL VOLUME: 394 CY

STAGE 2
CUT VOLUME: 71 CY
FILL VOLUME: 3 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 79 SF
FILL AREA: 202 SF

STAGE 2
CUT AREA: 39 SF
FILL AREA: 1 SF

STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 107+50.00

STAGE 1
CUT VOLUME: 143 CY
FILL VOLUME: 356 CY

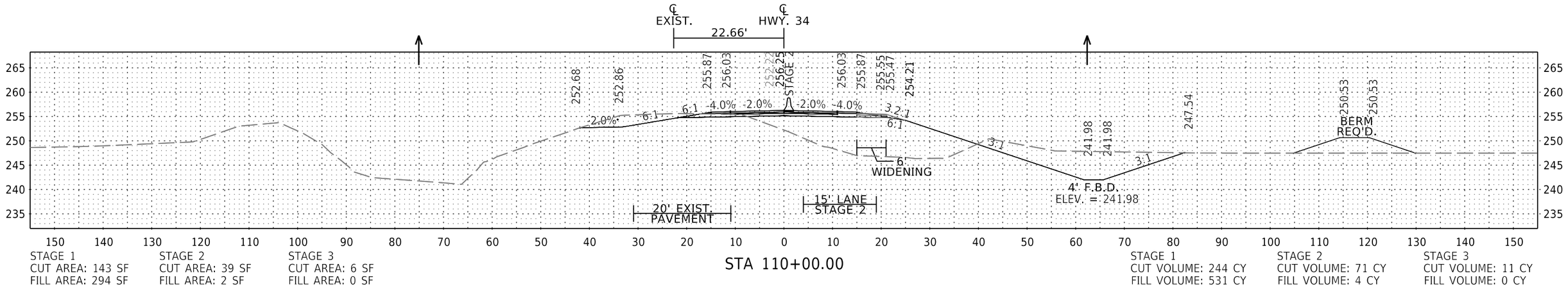
STAGE 2
CUT VOLUME: 73 CY
FILL VOLUME: 1 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY

CROSS SECTION STA. 107+50.00 TO STA. 108+50.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	47	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 143 SF
FILL AREA: 294 SF

STAGE 2
CUT AREA: 39 SF
FILL AREA: 2 SF

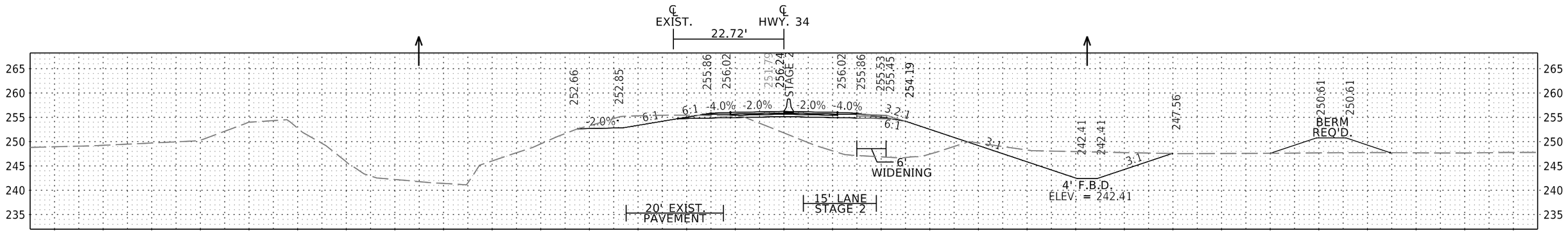
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 110+00.00

STAGE 1
CUT VOLUME: 244 CY
FILL VOLUME: 531 CY

STAGE 2
CUT VOLUME: 71 CY
FILL VOLUME: 4 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 121 SF
FILL AREA: 279 SF

STAGE 2
CUT AREA: 37 SF
FILL AREA: 2 SF

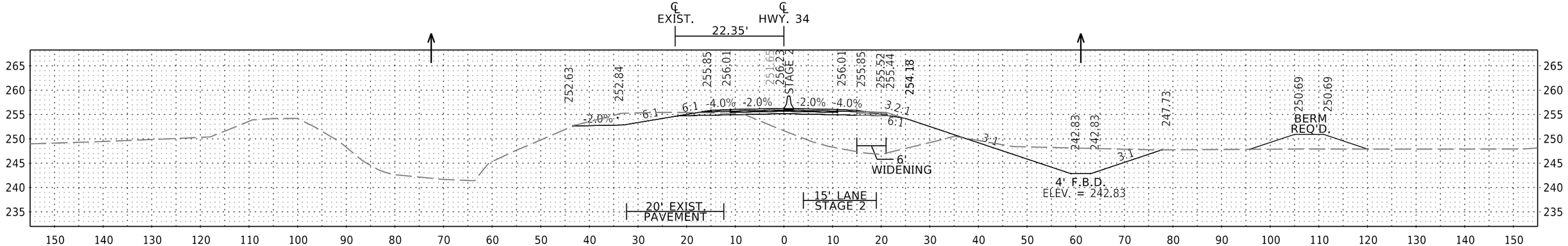
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 109+50.00

STAGE 1
CUT VOLUME: 212 CY
FILL VOLUME: 494 CY

STAGE 2
CUT VOLUME: 70 CY
FILL VOLUME: 4 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 108 SF
FILL AREA: 254 SF

STAGE 2
CUT AREA: 39 SF
FILL AREA: 2 SF

STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 109+00.00

STAGE 1
CUT VOLUME: 189 CY
FILL VOLUME: 451 CY

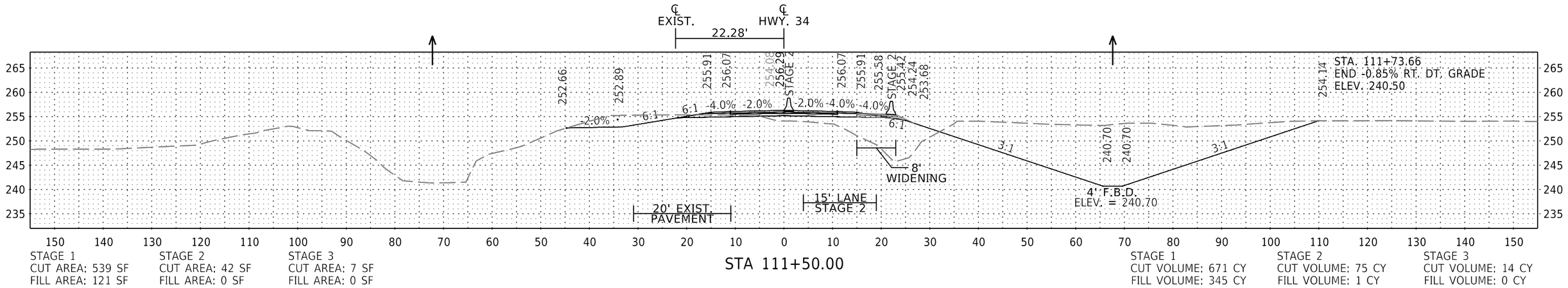
STAGE 2
CUT VOLUME: 67 CY
FILL VOLUME: 4 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY

CROSS SECTION STA. 109+00.00 TO STA. 110+00.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

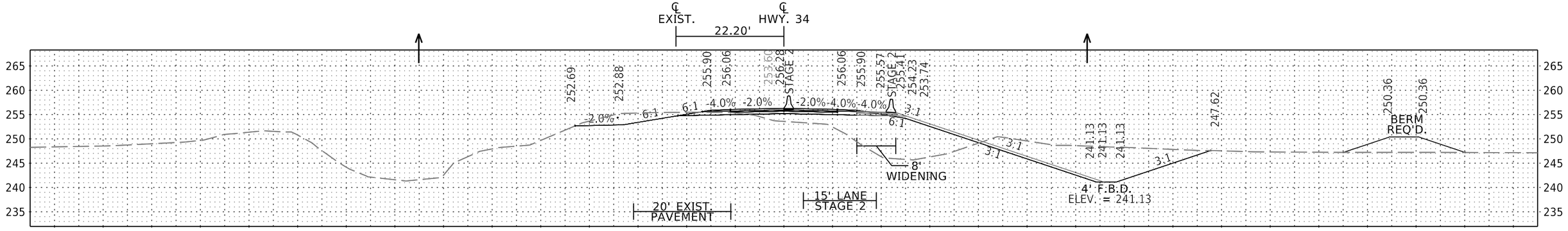
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	48	58
		CROSS SECTIONS				



STA 111+50.00

STAGE 1	STAGE 2	STAGE 3
CUT AREA: 539 SF	CUT AREA: 42 SF	CUT AREA: 7 SF
FILL AREA: 121 SF	FILL AREA: 0 SF	FILL AREA: 0 SF

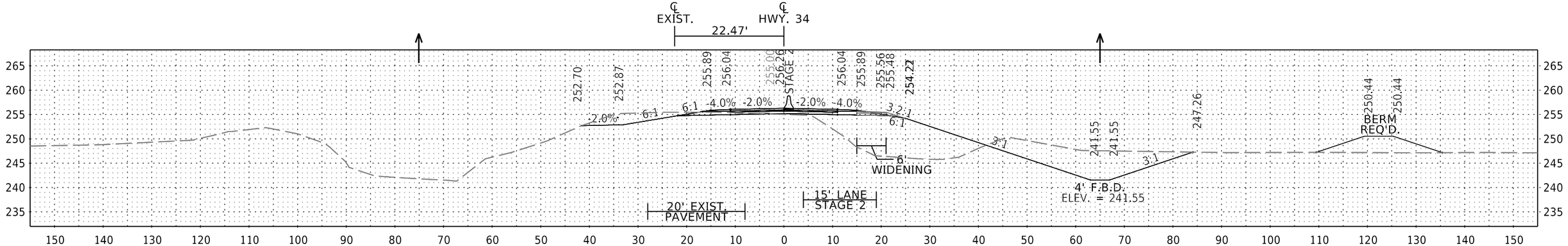
STAGE 1	STAGE 2	STAGE 3
CUT VOLUME: 671 CY	CUT VOLUME: 75 CY	CUT VOLUME: 14 CY
FILL VOLUME: 345 CY	FILL VOLUME: 1 CY	FILL VOLUME: 0 CY



STA 111+00.00

STAGE 1	STAGE 2	STAGE 3
CUT AREA: 185 SF	CUT AREA: 40 SF	CUT AREA: 8 SF
FILL AREA: 252 SF	FILL AREA: 1 SF	FILL AREA: 0 SF

STAGE 1	STAGE 2	STAGE 3
CUT VOLUME: 318 CY	CUT VOLUME: 72 CY	CUT VOLUME: 13 CY
FILL VOLUME: 465 CY	FILL VOLUME: 1 CY	FILL VOLUME: 0 CY



STA 110+50.00

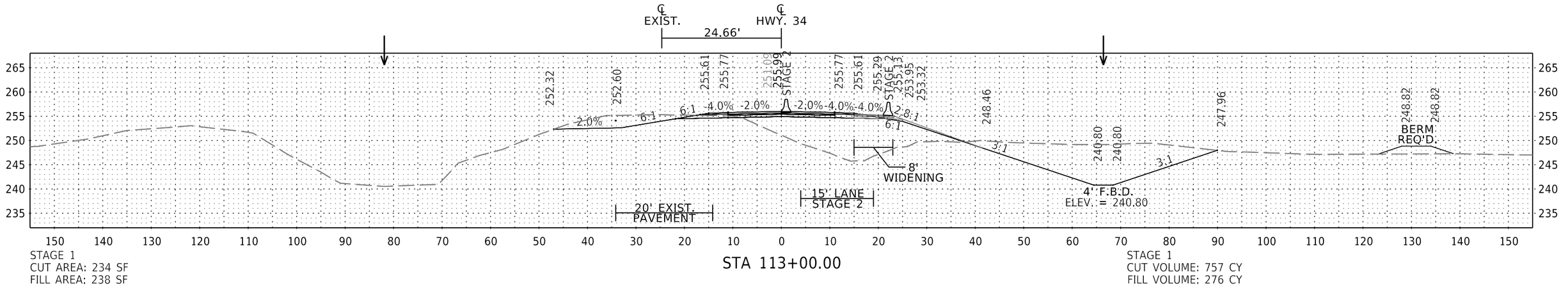
STAGE 1	STAGE 2	STAGE 3
CUT AREA: 158 SF	CUT AREA: 38 SF	CUT AREA: 6 SF
FILL AREA: 250 SF	FILL AREA: 0 SF	FILL AREA: 0 SF

STAGE 1	STAGE 2	STAGE 3
CUT VOLUME: 279 CY	CUT VOLUME: 72 CY	CUT VOLUME: 11 CY
FILL VOLUME: 504 CY	FILL VOLUME: 2 CY	FILL VOLUME: 0 CY

CROSS SECTION STA. 110+50.00 TO STA. 111+50.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

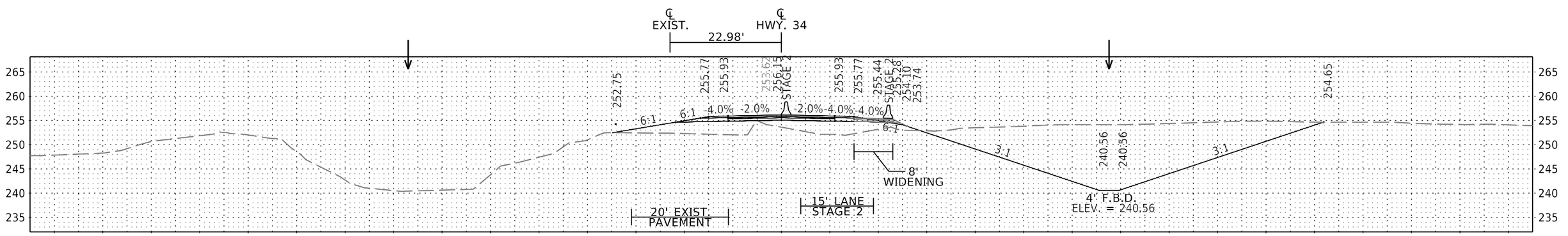
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	49	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 234 SF
FILL AREA: 238 SF

STA 113+00.00

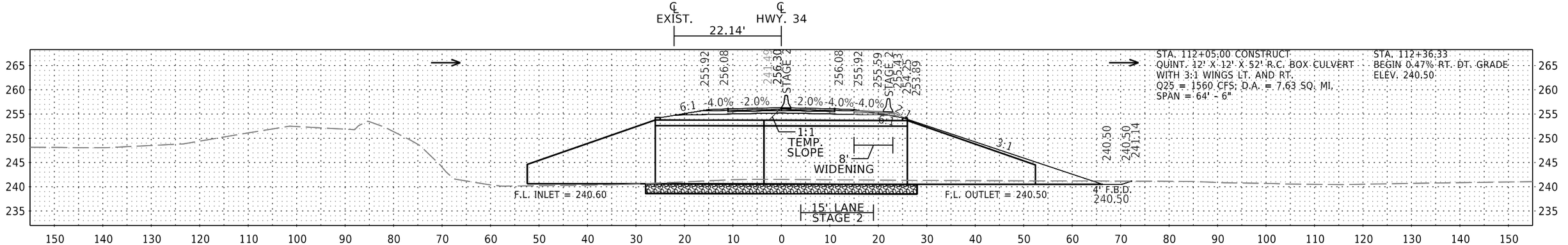
STAGE 1
CUT VOLUME: 757 CY
FILL VOLUME: 276 CY



STAGE 1
CUT AREA: 584 SF
FILL AREA: 59 SF

STA 112+50.00

STAGE 1
CUT VOLUME: 540 CY
FILL VOLUME: 427 CY



STAGE 1
CUT AREA: 4 SF
FILL AREA: 37 SF

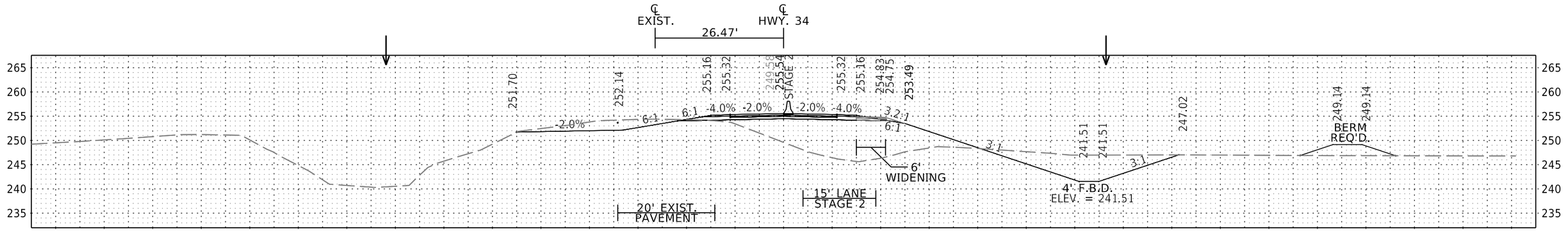
STA 112+00.00

STAGE 1
CUT VOLUME: 503 CY
FILL VOLUME: 147 CY

CROSS SECTION STA. 112+00.00 TO STA. 113+00.00

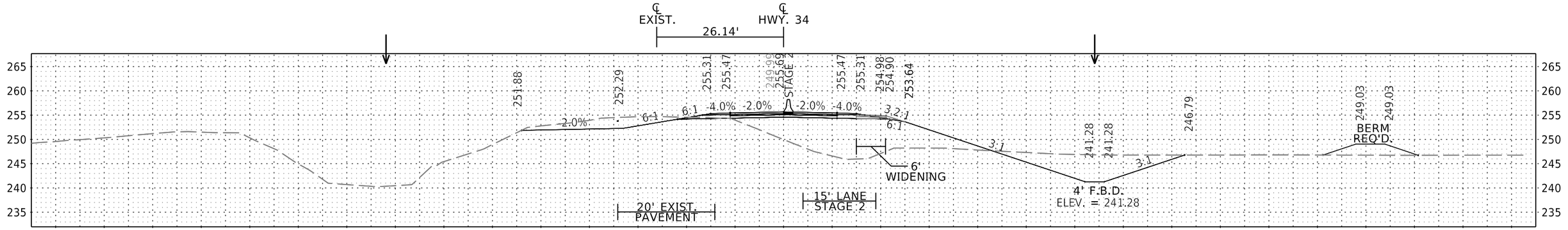
101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	50	58
		CROSS SECTIONS				



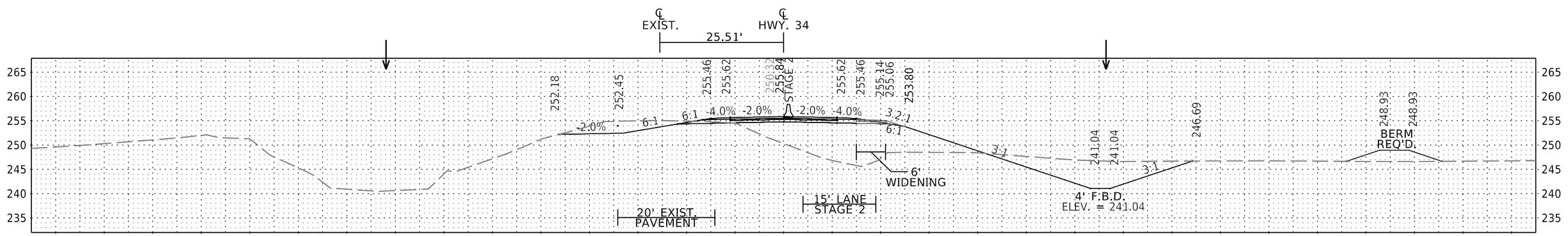
STA 114+50.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 122 SF	CUT AREA: 44 SF	CUT AREA: 6 SF	CUT VOLUME: 224 CY	CUT VOLUME: 87 CY	CUT VOLUME: 11 CY
FILL AREA: 274 SF	FILL AREA: 8 SF	FILL AREA: 0 SF	FILL VOLUME: 506 CY	FILL VOLUME: 13 CY	FILL VOLUME: 0 CY



STA 114+00.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 121 SF	CUT AREA: 50 SF	CUT AREA: 6 SF	CUT VOLUME: 233 CY	CUT VOLUME: 86 CY	CUT VOLUME: 11 CY
FILL AREA: 272 SF	FILL AREA: 6 SF	FILL AREA: 0 SF	FILL VOLUME: 498 CY	FILL VOLUME: 10 CY	FILL VOLUME: 0 CY



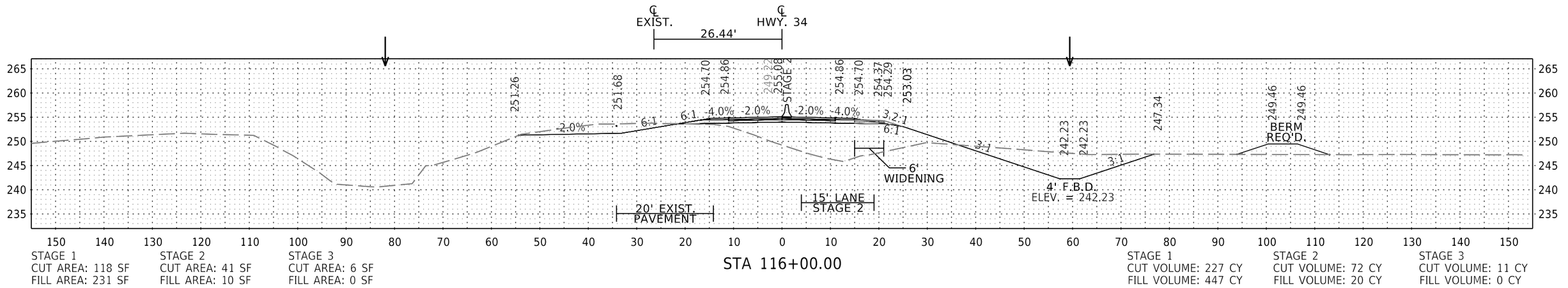
STA 113+50.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 131 SF	CUT AREA: 44 SF	CUT AREA: 6 SF	CUT VOLUME: 338 CY	CUT VOLUME: 88 CY	CUT VOLUME: 13 CY
FILL AREA: 266 SF	FILL AREA: 5 SF	FILL AREA: 0 SF	FILL VOLUME: 467 CY	FILL VOLUME: 7 CY	FILL VOLUME: 0 CY

CROSS SECTION STA. 113+50.00 TO STA. 114+50.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	51	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 118 SF
FILL AREA: 231 SF

STAGE 2
CUT AREA: 41 SF
FILL AREA: 10 SF

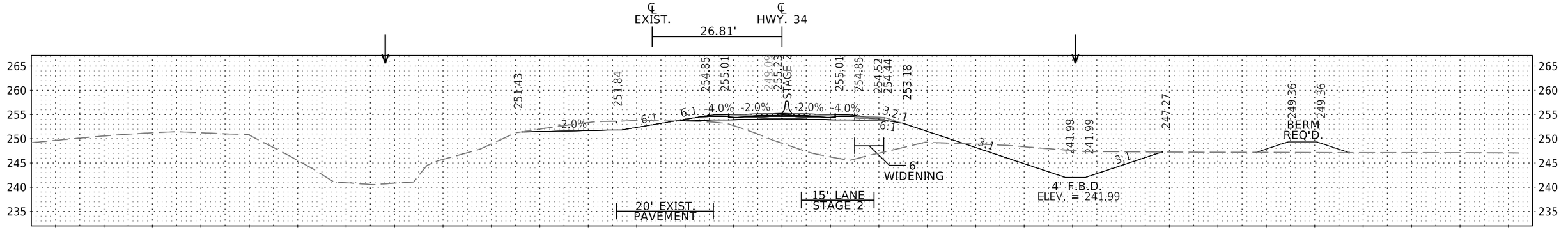
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 116+00.00

STAGE 1
CUT VOLUME: 227 CY
FILL VOLUME: 447 CY

STAGE 2
CUT VOLUME: 72 CY
FILL VOLUME: 20 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 127 SF
FILL AREA: 252 SF

STAGE 2
CUT AREA: 36 SF
FILL AREA: 12 SF

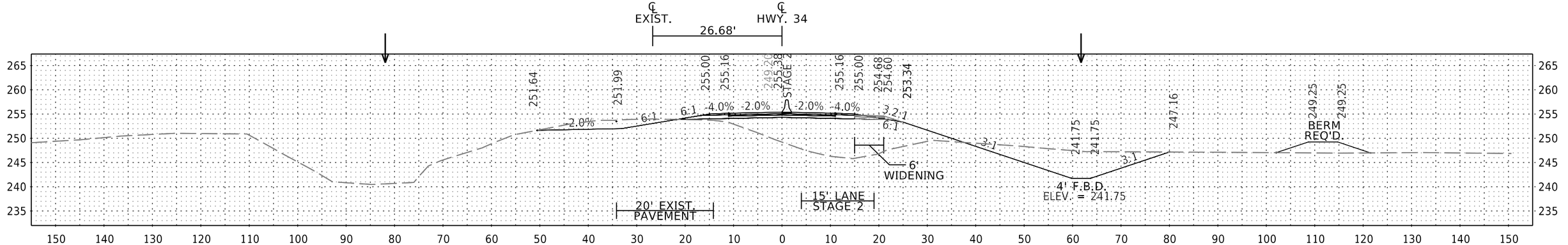
STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 115+50.00

STAGE 1
CUT VOLUME: 239 CY
FILL VOLUME: 470 CY

STAGE 2
CUT VOLUME: 65 CY
FILL VOLUME: 21 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 131 SF
FILL AREA: 256 SF

STAGE 2
CUT AREA: 33 SF
FILL AREA: 11 SF

STAGE 3
CUT AREA: 6 SF
FILL AREA: 0 SF

STA 115+00.00

STAGE 1
CUT VOLUME: 234 CY
FILL VOLUME: 491 CY

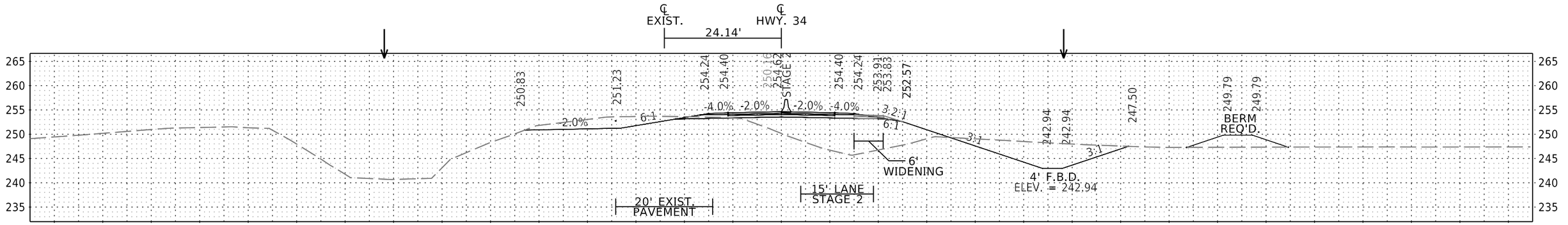
STAGE 2
CUT VOLUME: 72 CY
FILL VOLUME: 18 CY

STAGE 3
CUT VOLUME: 11 CY
FILL VOLUME: 0 CY

CROSS SECTION STA. 115+00.00 TO STA. 116+00.00

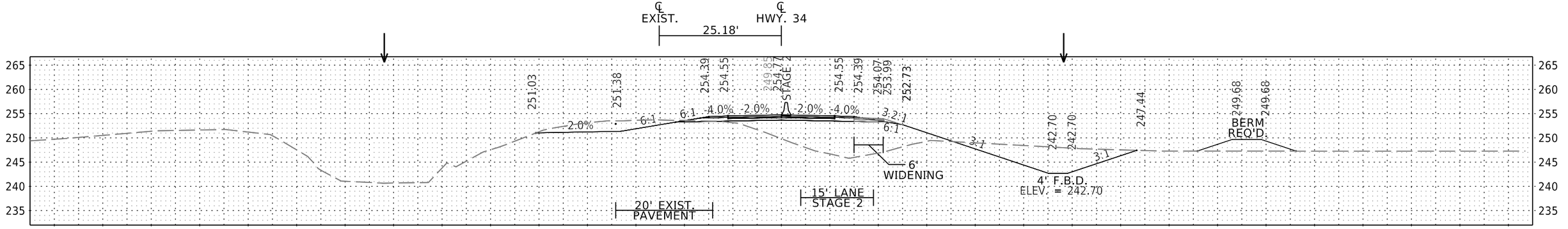
101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	52	58
		CROSS SECTIONS				



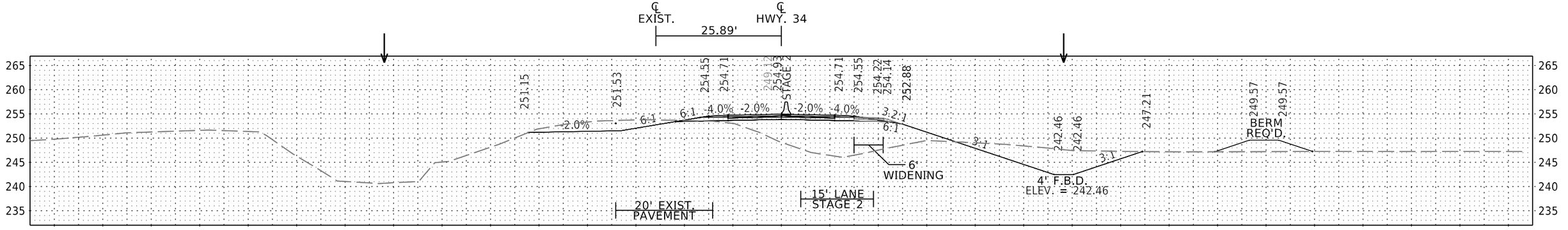
STA 117+50.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 107 SF	CUT AREA: 53 SF	CUT AREA: 6 SF	CUT VOLUME: 202 CY	CUT VOLUME: 90 CY	CUT VOLUME: 11 CY
FILL AREA: 217 SF	FILL AREA: 3 SF	FILL AREA: 0 SF	FILL VOLUME: 407 CY	FILL VOLUME: 7 CY	FILL VOLUME: 0 CY



STA 117+00.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 112 SF	CUT AREA: 45 SF	CUT AREA: 6 SF	CUT VOLUME: 207 CY	CUT VOLUME: 84 CY	CUT VOLUME: 11 CY
FILL AREA: 222 SF	FILL AREA: 5 SF	FILL AREA: 0 SF	FILL VOLUME: 418 CY	FILL VOLUME: 12 CY	FILL VOLUME: 0 CY



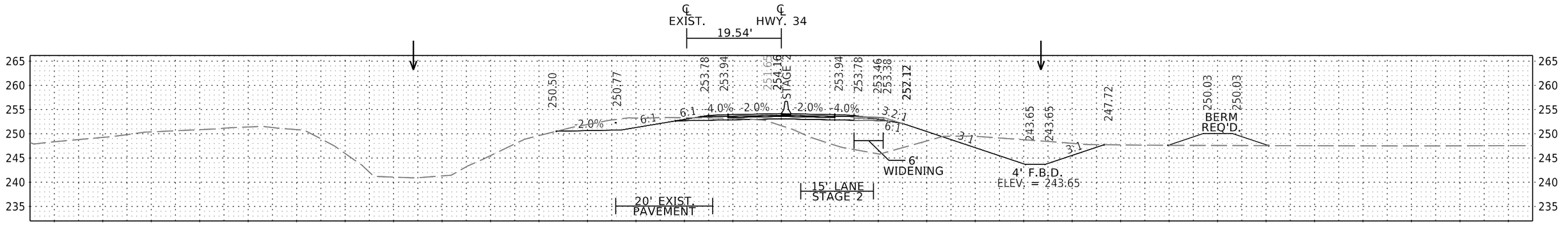
STA 116+50.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 112 SF	CUT AREA: 46 SF	CUT AREA: 6 SF	CUT VOLUME: 213 CY	CUT VOLUME: 80 CY	CUT VOLUME: 11 CY
FILL AREA: 230 SF	FILL AREA: 7 SF	FILL AREA: 0 SF	FILL VOLUME: 426 CY	FILL VOLUME: 16 CY	FILL VOLUME: 0 CY

CROSS SECTION STA. 116+50.00 TO STA. 117+50.00

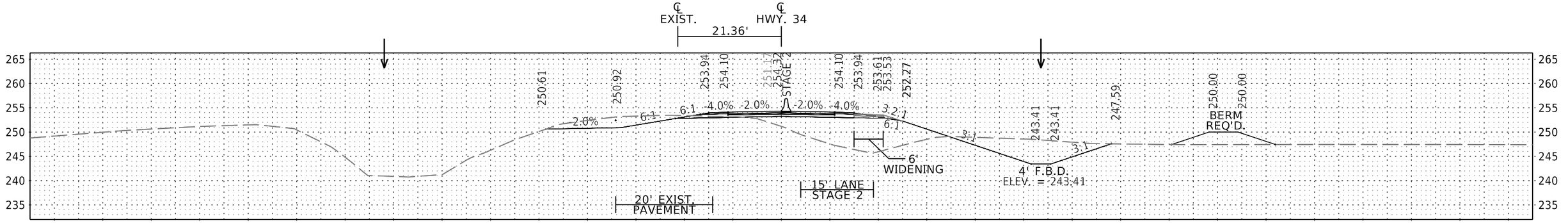
101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	53	58
		CROSS SECTIONS				



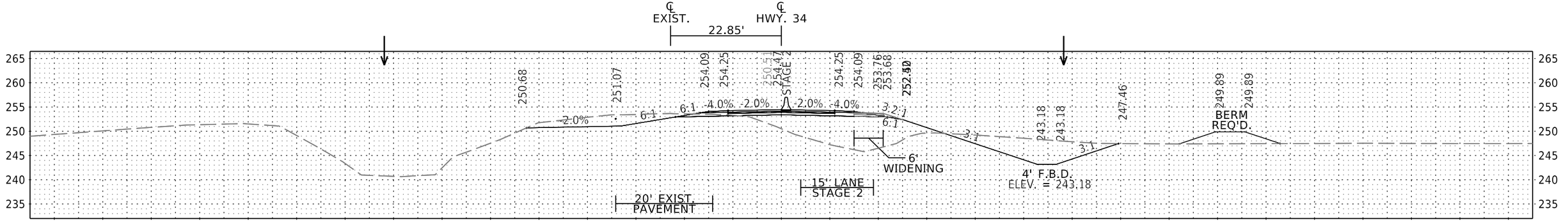
STA 119+00.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 95 SF	CUT AREA: 43 SF	CUT AREA: 6 SF	CUT VOLUME: 174 CY	CUT VOLUME: 81 CY	CUT VOLUME: 11 CY
FILL AREA: 180 SF	FILL AREA: 0 SF	FILL AREA: 0 SF	FILL VOLUME: 351 CY	FILL VOLUME: 1 CY	FILL VOLUME: 0 CY



STA 118+50.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 93 SF	CUT AREA: 45 SF	CUT AREA: 6 SF	CUT VOLUME: 179 CY	CUT VOLUME: 93 CY	CUT VOLUME: 11 CY
FILL AREA: 199 SF	FILL AREA: 1 SF	FILL AREA: 0 SF	FILL VOLUME: 367 CY	FILL VOLUME: 3 CY	FILL VOLUME: 0 CY



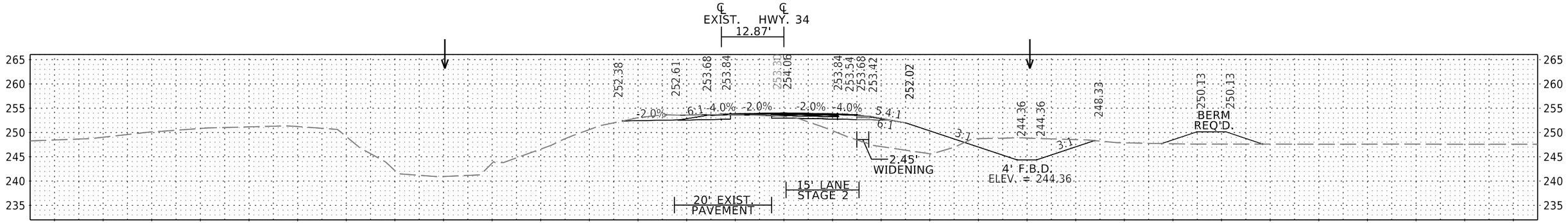
STA 118+00.00

STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
CUT AREA: 101 SF	CUT AREA: 55 SF	CUT AREA: 6 SF	CUT VOLUME: 192 CY	CUT VOLUME: 100 CY	CUT VOLUME: 11 CY
FILL AREA: 198 SF	FILL AREA: 2 SF	FILL AREA: 0 SF	FILL VOLUME: 385 CY	FILL VOLUME: 5 CY	FILL VOLUME: 0 CY

CROSS SECTION STA. 118+00.00 TO STA. 119+00.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	54	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 74 SF
FILL AREA: 160 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

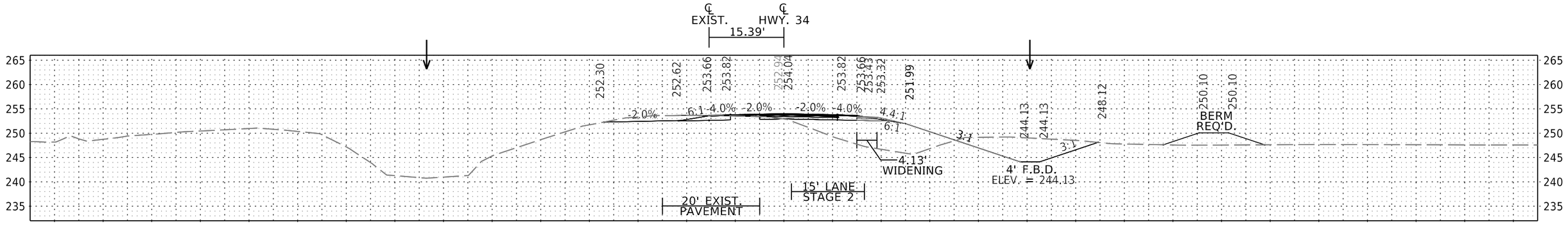
STAGE 3
CUT AREA: 17 SF
FILL AREA: 0 SF

STA 120+50.00

STAGE 1
CUT VOLUME: 149 CY
FILL VOLUME: 302 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 37 CY
FILL VOLUME: 1 CY



STAGE 1
CUT AREA: 87 SF
FILL AREA: 167 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

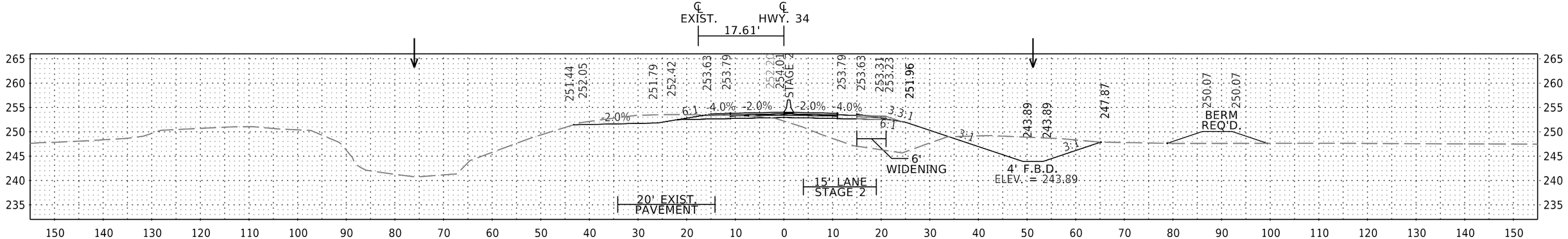
STAGE 3
CUT AREA: 23 SF
FILL AREA: 1 SF

STA 120+00.00

STAGE 1
CUT VOLUME: 164 CY
FILL VOLUME: 314 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 46 CY
FILL VOLUME: 3 CY



STAGE 1
CUT AREA: 90 SF
FILL AREA: 173 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 27 SF
FILL AREA: 2 SF

STA 119+50.00

STAGE 1
CUT VOLUME: 172 CY
FILL VOLUME: 327 CY

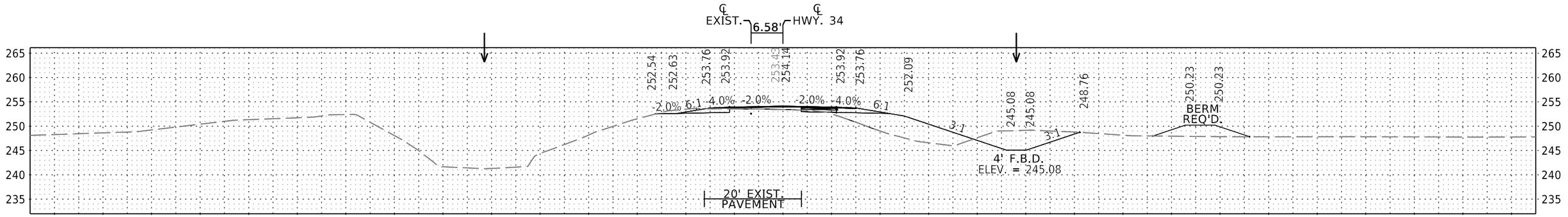
STAGE 2
CUT VOLUME: 39 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 31 CY
FILL VOLUME: 2 CY

CROSS SECTION STA. 119+50.00 TO STA. 120+50.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	55	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 55 SF
FILL AREA: 121 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

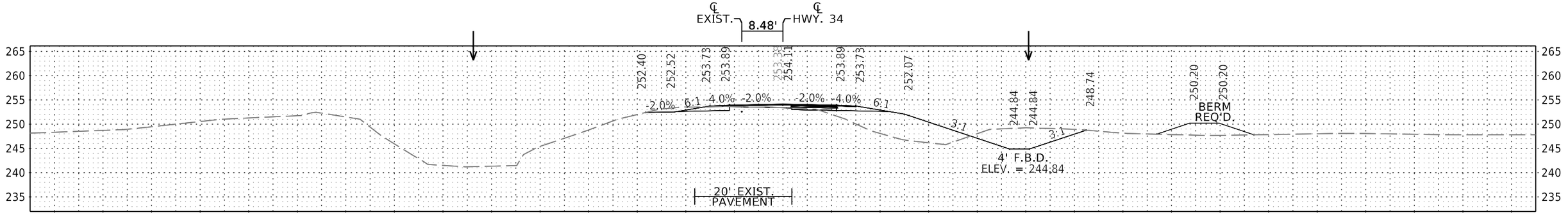
STAGE 3
CUT AREA: 4 SF
FILL AREA: 2 SF

STA 122+00.00

STAGE 1
CUT VOLUME: 111 CY
FILL VOLUME: 240 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 10 CY
FILL VOLUME: 5 CY



STAGE 1
CUT AREA: 65 SF
FILL AREA: 138 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

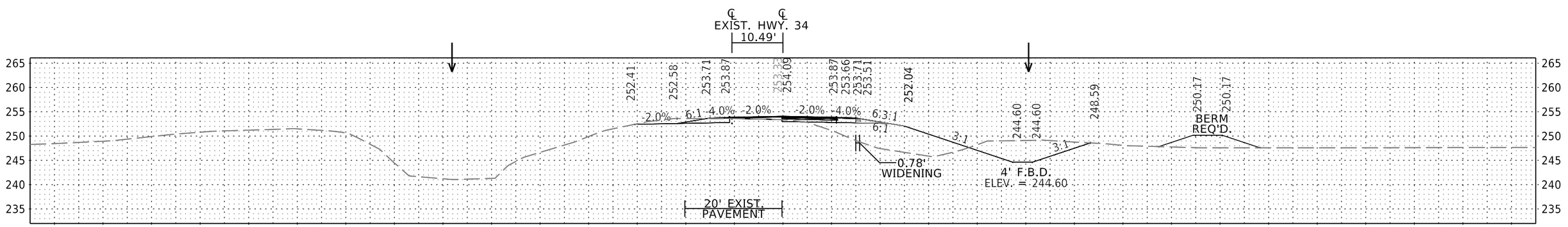
STAGE 3
CUT AREA: 6 SF
FILL AREA: 3 SF

STA 121+50.00

STAGE 1
CUT VOLUME: 125 CY
FILL VOLUME: 268 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 17 CY
FILL VOLUME: 6 CY



STAGE 1
CUT AREA: 70 SF
FILL AREA: 151 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 12 SF
FILL AREA: 3 SF

STA 121+00.00

STAGE 1
CUT VOLUME: 133 CY
FILL VOLUME: 288 CY

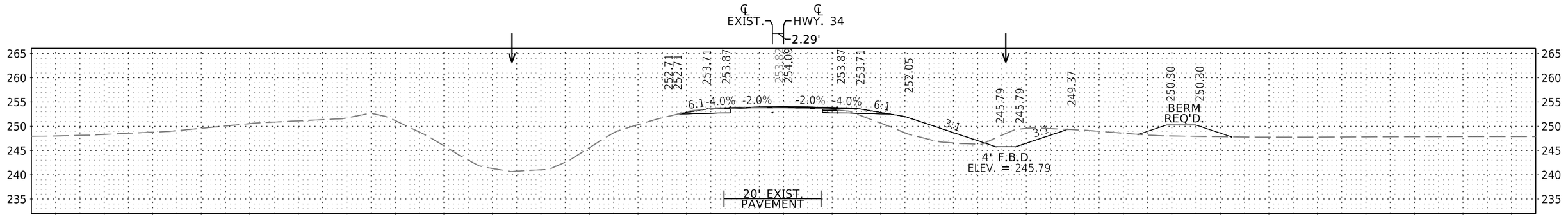
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 27 CY
FILL VOLUME: 3 CY

CROSS SECTION STA. 121+00.00 TO STA. 122+00.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	56	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 36 SF
FILL AREA: 90 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

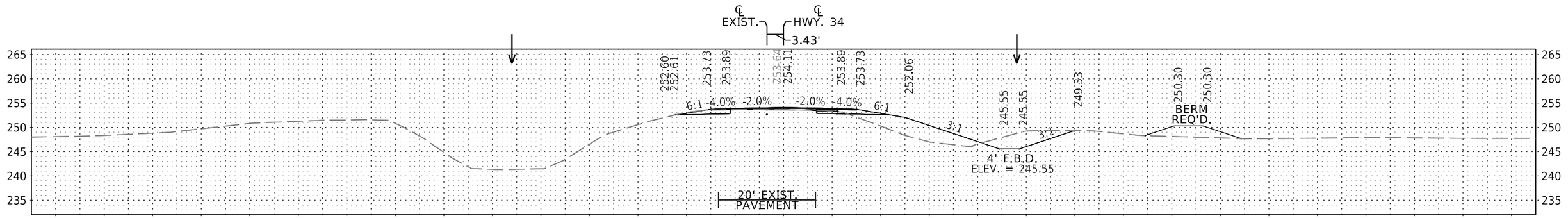
STAGE 3
CUT AREA: 1 SF
FILL AREA: 0 SF

STA 123+50.00

STAGE 1
CUT VOLUME: 70 CY
FILL VOLUME: 175 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 2 CY
FILL VOLUME: 2 CY



STAGE 1
CUT AREA: 39 SF
FILL AREA: 99 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

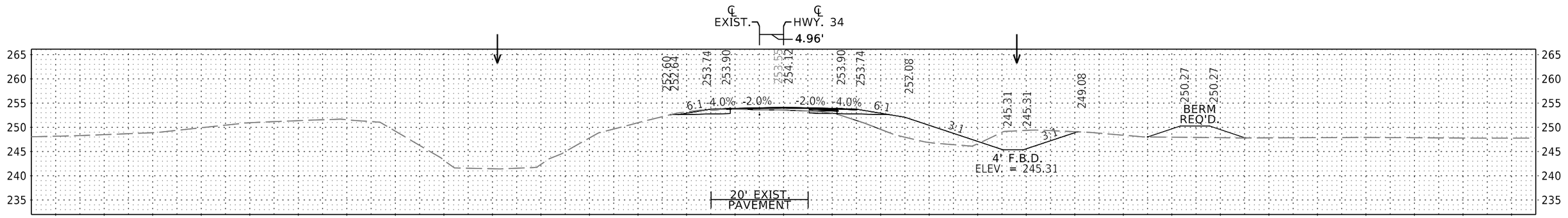
STAGE 3
CUT AREA: 1 SF
FILL AREA: 2 SF

STA 123+00.00

STAGE 1
CUT VOLUME: 82 CY
FILL VOLUME: 195 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 2 CY
FILL VOLUME: 3 CY



STAGE 1
CUT AREA: 50 SF
FILL AREA: 112 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 2 SF
FILL AREA: 1 SF

STA 122+50.00

STAGE 1
CUT VOLUME: 97 CY
FILL VOLUME: 216 CY

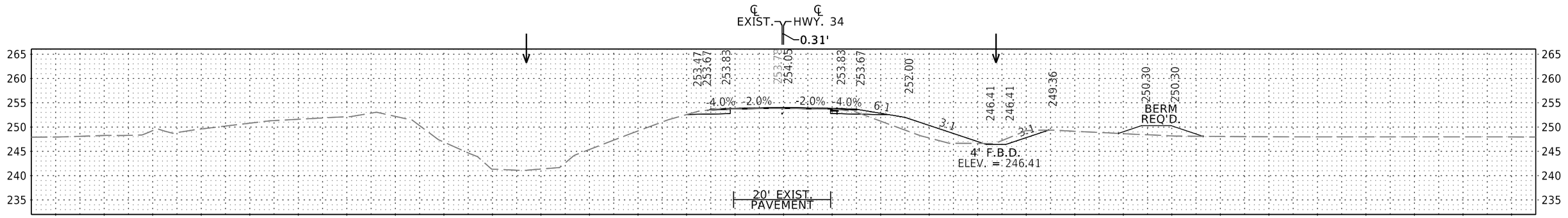
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 6 CY
FILL VOLUME: 3 CY

CROSS SECTION STA. 122+50.00 TO STA. 123+50.00

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 7/30/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	57	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 11 SF
FILL AREA: 75 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

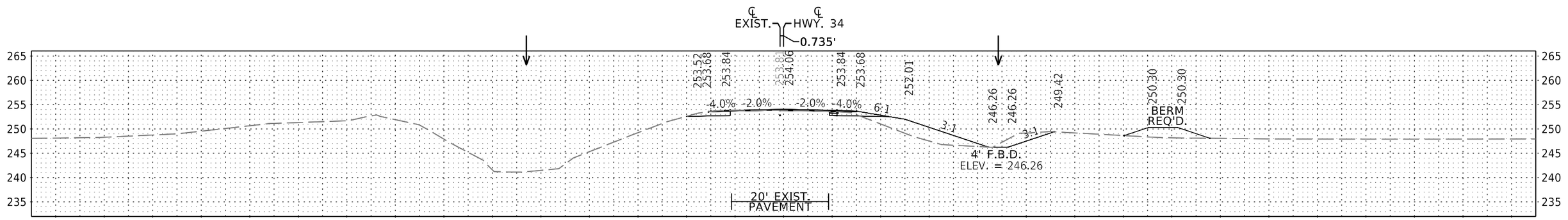
STAGE 3
CUT AREA: 1 SF
FILL AREA: 0 SF

STA 124+81.95 - BEGIN 100' TRANSITION

STAGE 1
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 16 SF
FILL AREA: 77 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

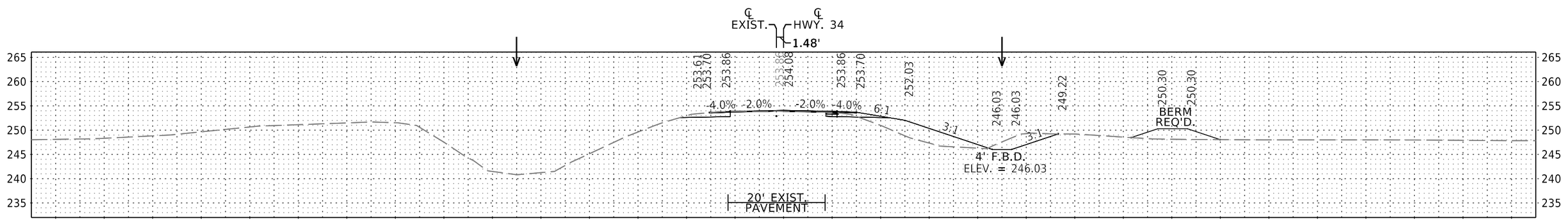
STAGE 3
CUT AREA: 1 SF
FILL AREA: 0 SF

STA 124+50.00

STAGE 1
CUT VOLUME: 36 CY
FILL VOLUME: 150 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 2 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 23 SF
FILL AREA: 84 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 1 SF
FILL AREA: 0 SF

STA 124+00.00

STAGE 1
CUT VOLUME: 55 CY
FILL VOLUME: 162 CY

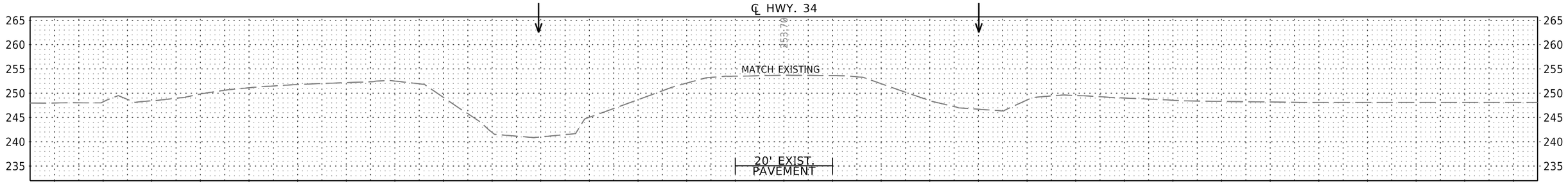
STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 2 CY
FILL VOLUME: 0 CY

CROSS SECTION STA. 124+00.00 TO STA. 124+81.95

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101100	58	58
		CROSS SECTIONS				



STAGE 1
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

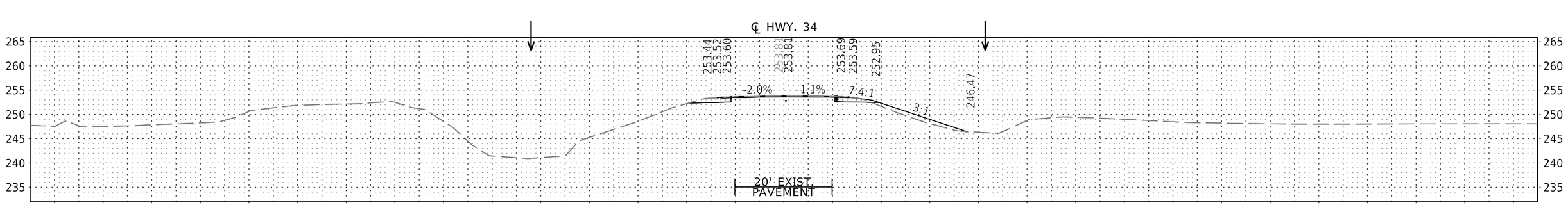
STAGE 3
CUT AREA: 0 SF
FILL AREA: 0 SF

STA 125+81.95 - END 100' TRANSITION

STAGE 1
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 0 SF
FILL AREA: 15 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

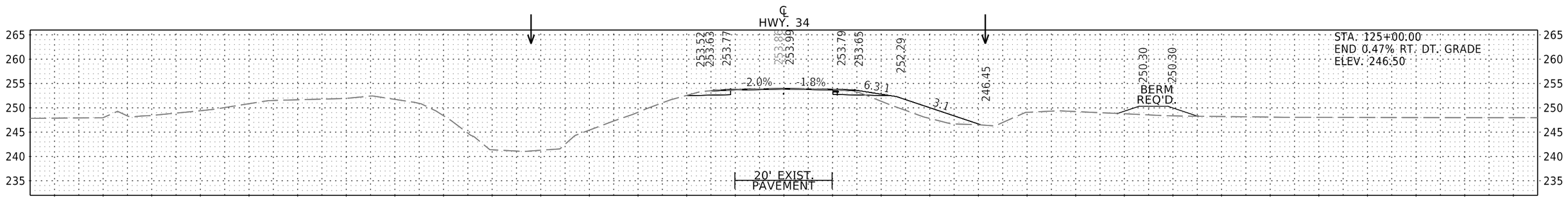
STAGE 3
CUT AREA: 2 SF
FILL AREA: 0 SF

STA 125+50.00

STAGE 1
CUT VOLUME: 5 CY
FILL VOLUME: 54 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 4 CY
FILL VOLUME: 0 CY



STAGE 1
CUT AREA: 5 SF
FILL AREA: 43 SF

STAGE 2
CUT AREA: 0 SF
FILL AREA: 0 SF

STAGE 3
CUT AREA: 1 SF
FILL AREA: 0 SF

STA 125+00.00

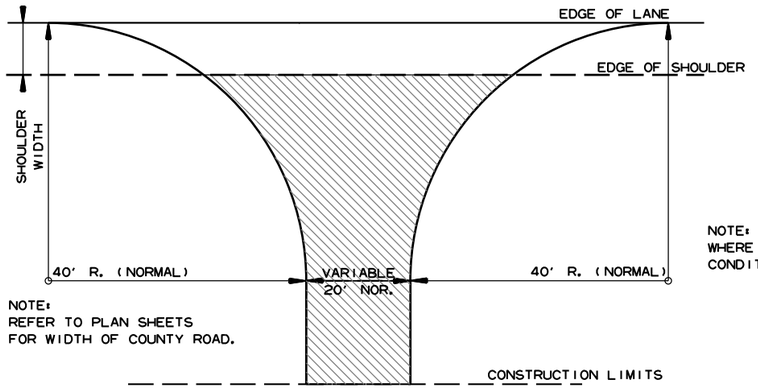
STAGE 1
CUT VOLUME: 5 CY
FILL VOLUME: 39 CY

STAGE 2
CUT VOLUME: 0 CY
FILL VOLUME: 0 CY

STAGE 3
CUT VOLUME: 1 CY
FILL VOLUME: 0 CY

CROSS SECTION STA. 125+00.00 TO STA. 125+81.95

101100 - CROSS SECTION SHEETS.DGN CREATED: 9/30/2024 SAVED: 10/2/2025

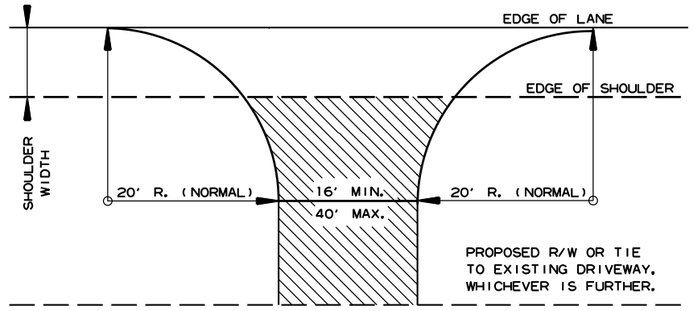


NOTE:
REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.

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.

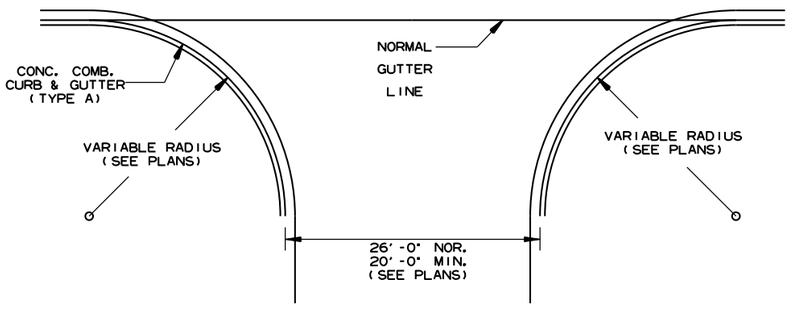
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



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

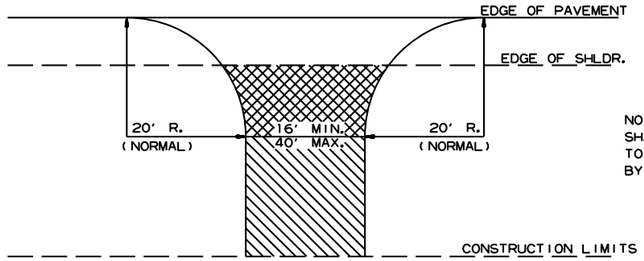
ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT OR
GRAVEL DRIVE EXISTING; OR 6"
CONCRETE IF CONCRETE DRIVE
EXISTING.

DETAIL FOR DRIVEWAY TURNOUTS OPEN SHOULDER SECTION (ARTERIALS)



NOTE:
PAVEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS,
& COUNTY ROADS TO BE SAME AS MAIN LANES.

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



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

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

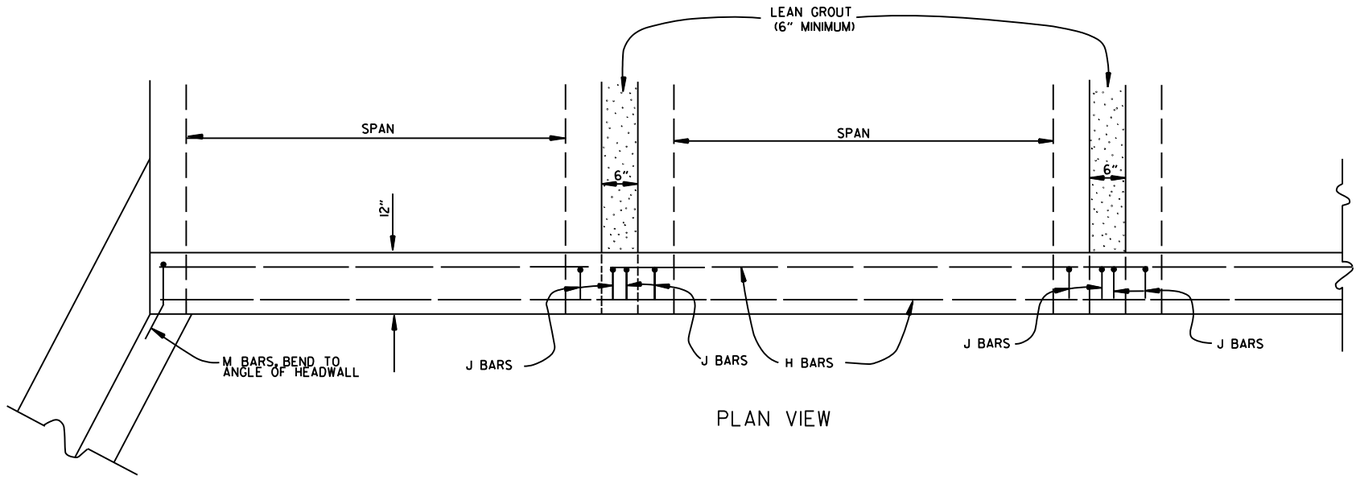
DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & STREET TURNOUTS

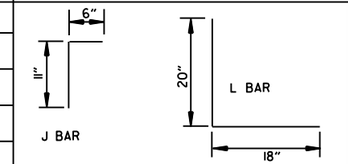
STANDARD DRAWING DR-2



PLAN VIEW

BAR LIST

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



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

GENERAL NOTES

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

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

ALL EXPOSED CORNERS TO HAVE ¾" CHAMFERS.

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

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

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

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

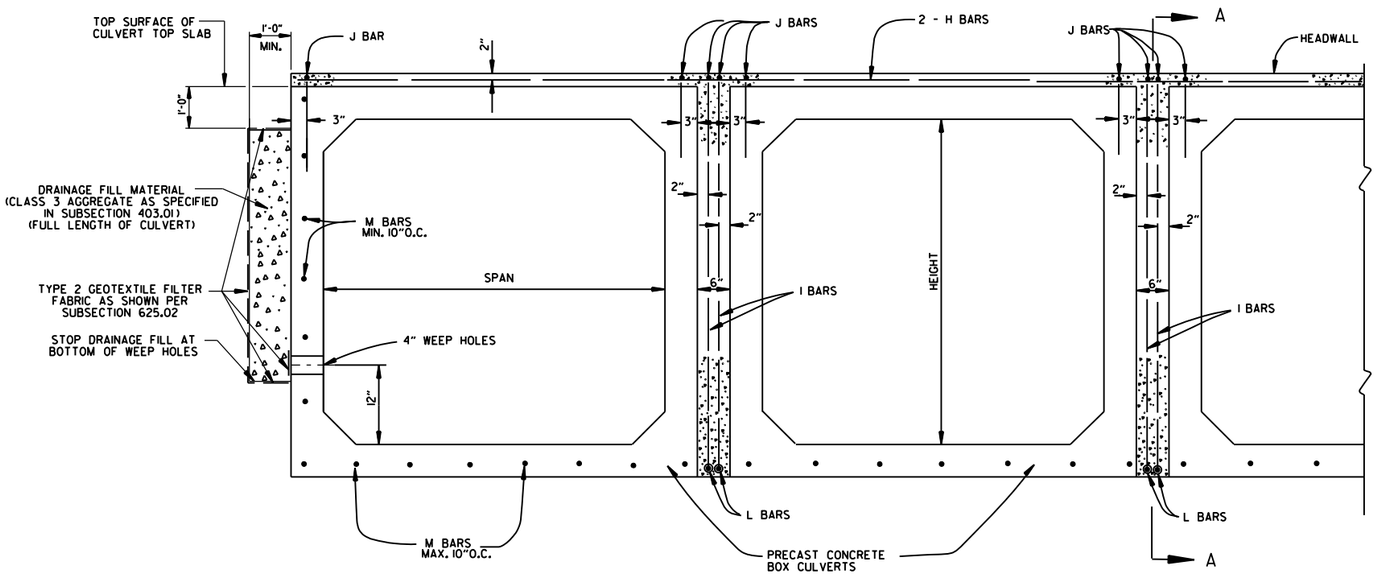
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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

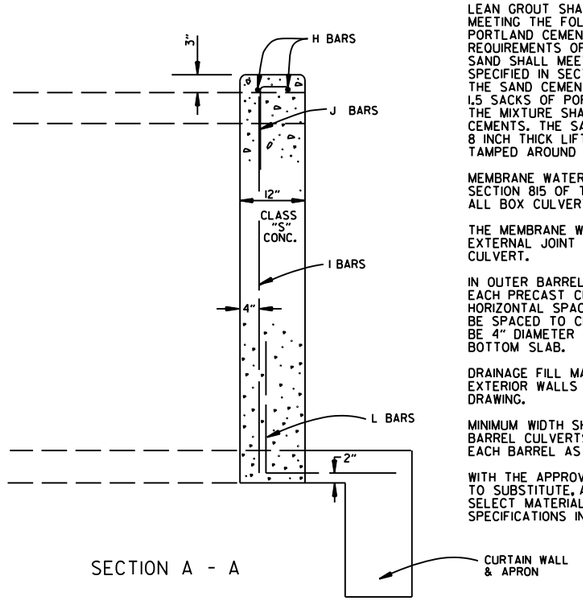
DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

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

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



END VIEW



SECTION A - A

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

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-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	43⅜	44	26⅝	27
42	51⅛	51	31⅜	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	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

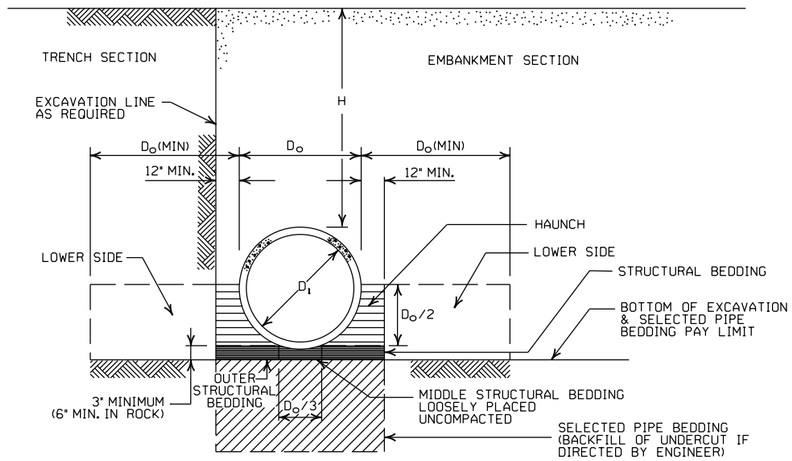
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
▨ = UNDISTURBED SOIL

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS 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.

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM 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
2⅔ INCH BY ½ 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 MINUMUM 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 ⅔ INCH BY ½ 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

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			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

CORRUGATED METAL PIPE ARCHES

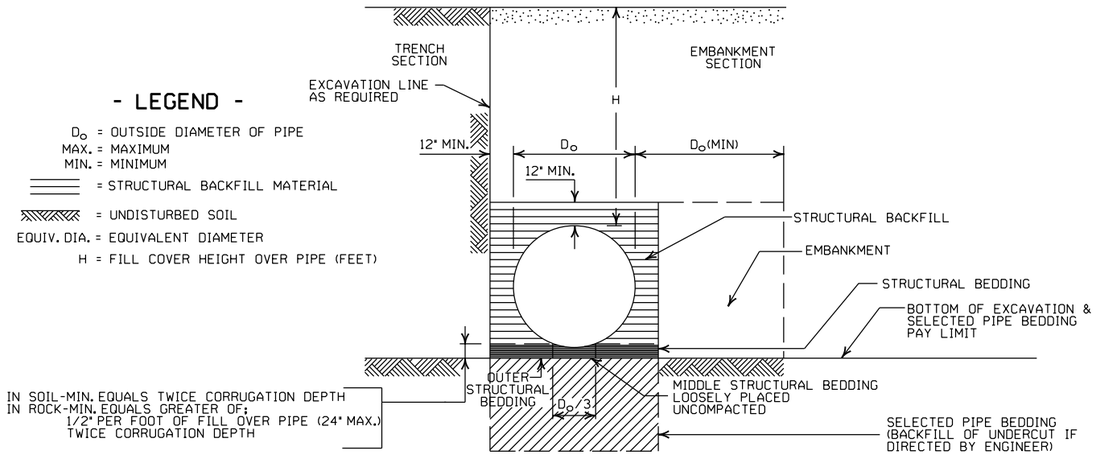
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL			ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)
				INSTALLATION TYPE 1	INSTALLATION TYPE 1		INSTALLATION TYPE 1	INSTALLATION TYPE 1
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM			2 ⅔ INCH BY ½ 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	3½	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	0.164	3	15
66	77x52	8	0.168	3	15			
72	83x57	9	0.168	3	15			
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM					
				INSTALLATION TYPE 2	INSTALLATION TYPE 1		INSTALLATION TYPE 2	INSTALLATION 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

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

② WHERE THE STANDARD 2 2/3"x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALALTION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2⅔" X ½" 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."

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

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 1INCH. 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.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

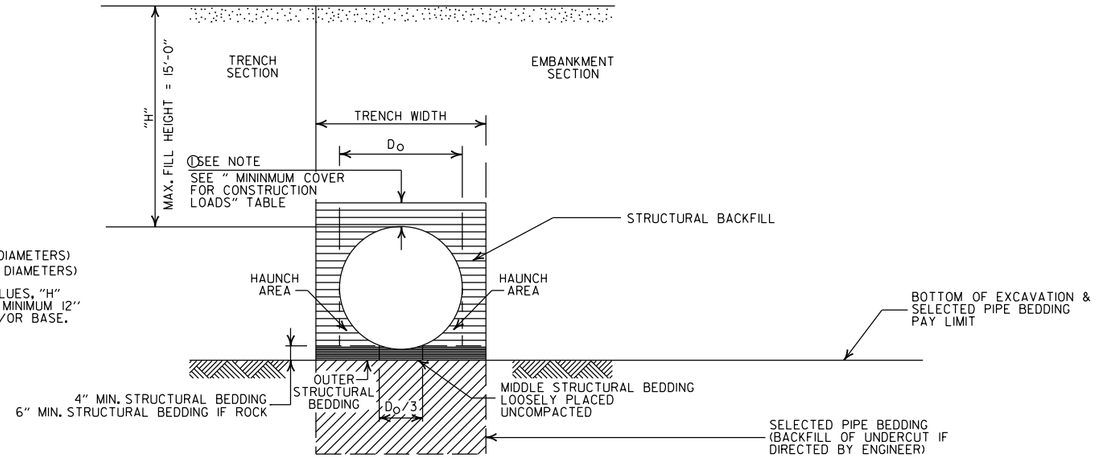
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

GENERAL NOTES

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

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

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

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

MULTIPLE INSTALLATION OF PVC PIPES

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

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

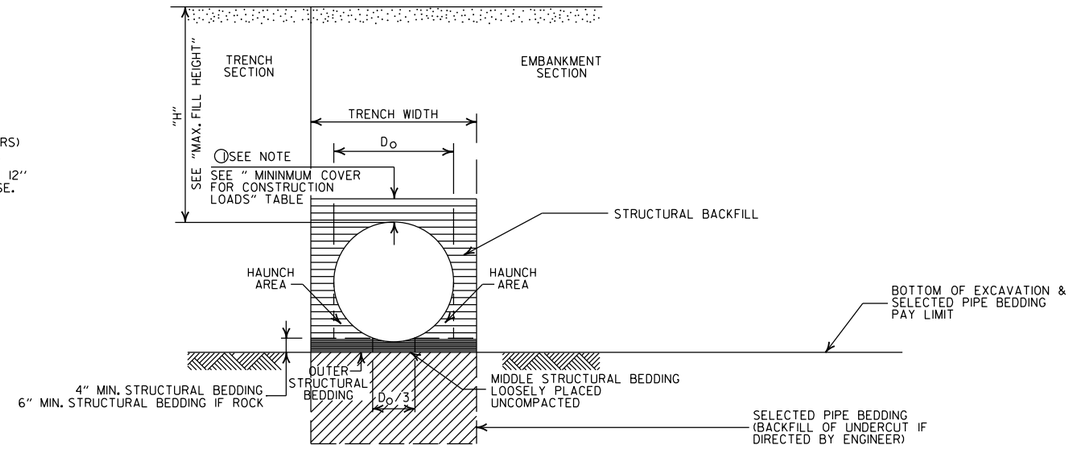
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

GENERAL NOTES

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

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

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

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

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 1INCH. 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"

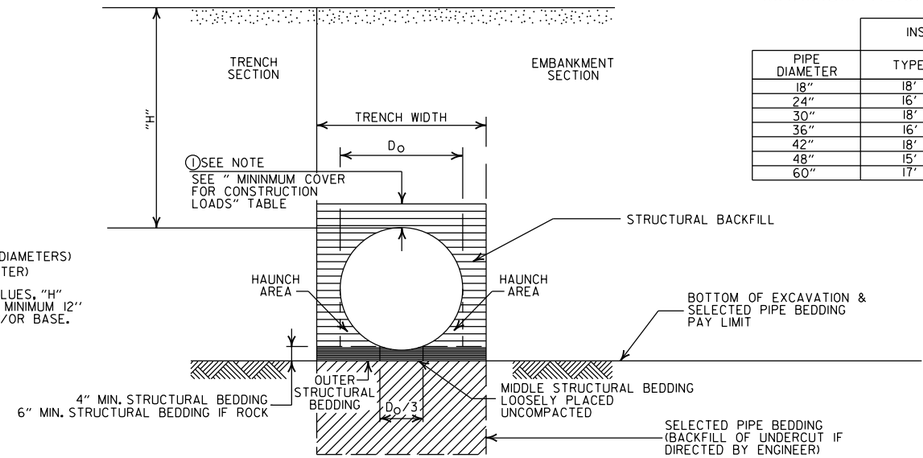
MINIMUM COVER FOR CONSTRUCTION LOADS

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.

①NOTE:
12" MIN. (18" - 42" DIAMETERS)
24" MIN. (60" DIAMETER)

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



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'

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 SPECIFICIATIONS 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.

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

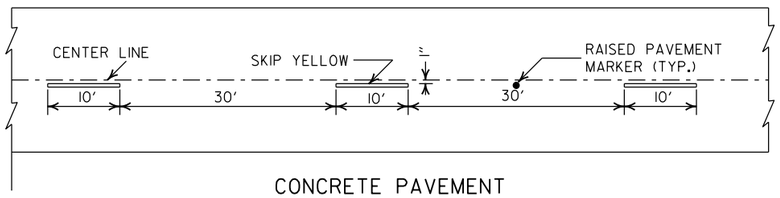
DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

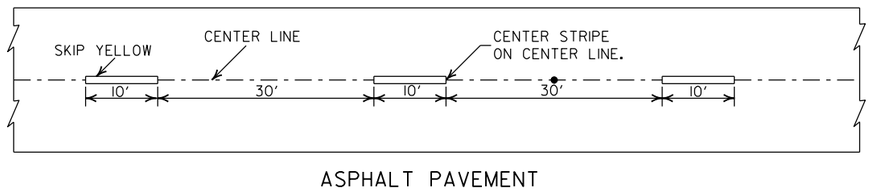
PLASTIC PIPE CULVERT (POLYPROPYLENE)

STANDARD DRAWING PCP-3

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.

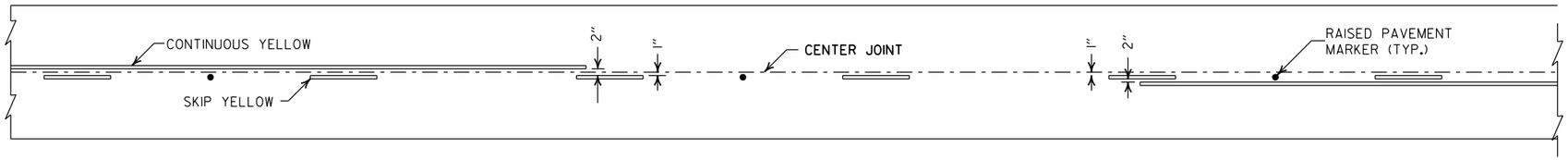


CONCRETE PAVEMENT

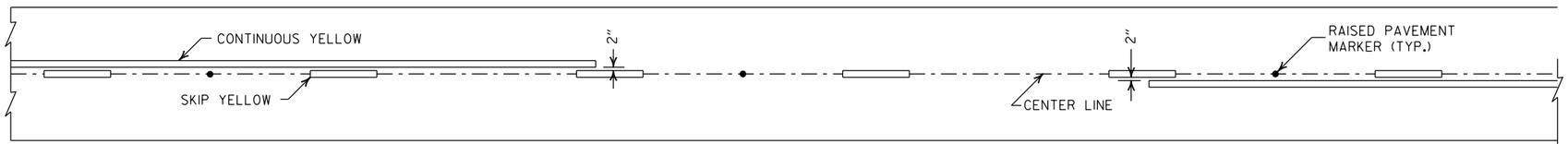


ASPHALT PAVEMENT

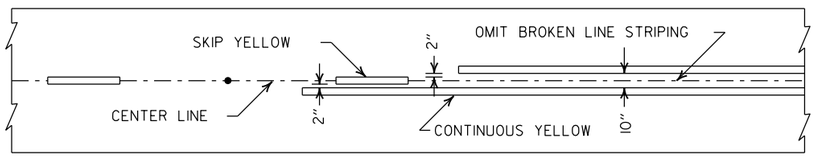
BROKEN LINE STRIPING



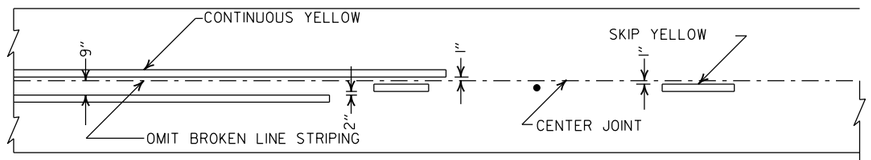
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

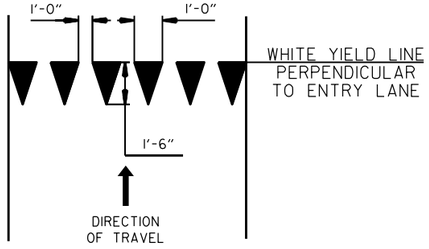


ASPHALT PAVEMENT

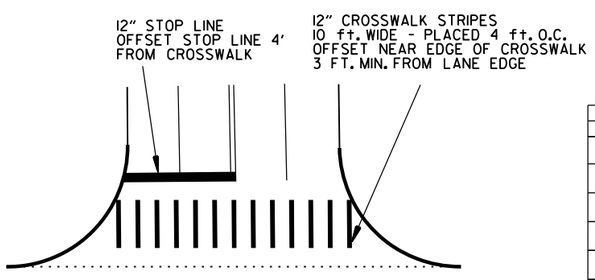


CONCRETE PAVEMENT

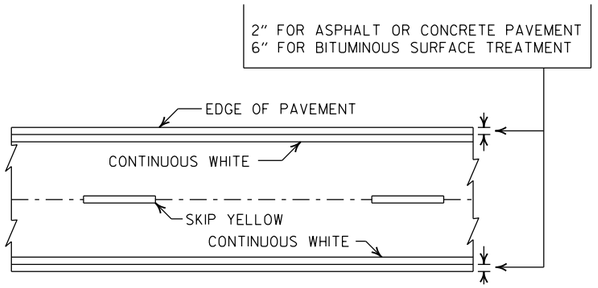
STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL



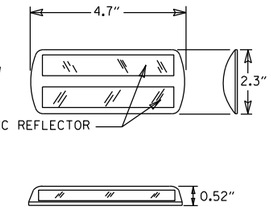
CROSSWALK AND STOP LINE DETAILS



PAVEMENT EDGE LINE MARKING

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

TYPE II
RED/CLEAR OR YELLOW/YELLOW



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

DATE	REVISION	FILMED
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

ARKANSAS STATE HIGHWAY COMMISSION

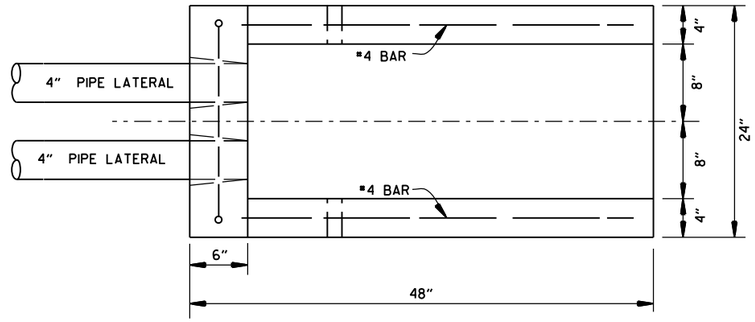
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

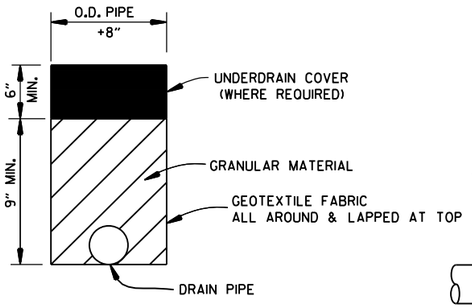
NOTE:

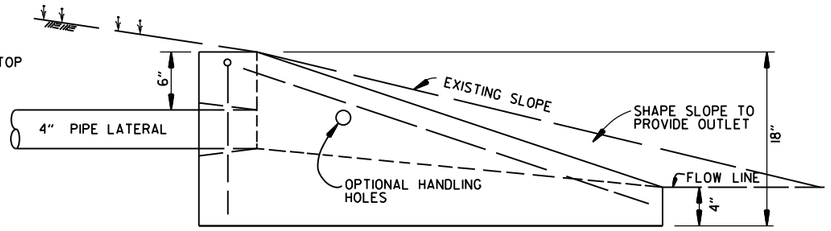
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.

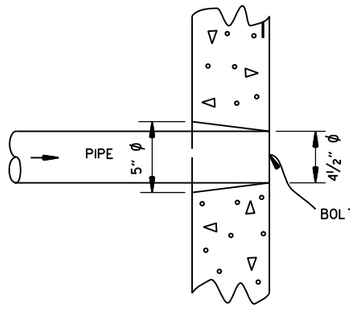


PLAN VIEW

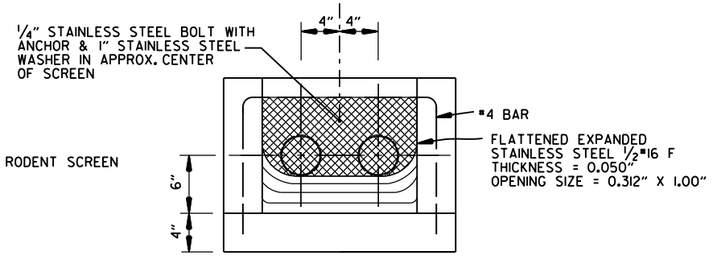




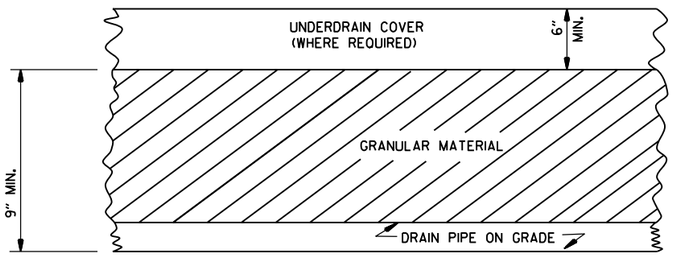
SIDE VIEW



DETAIL OF HOLE FOR 4" PIPE

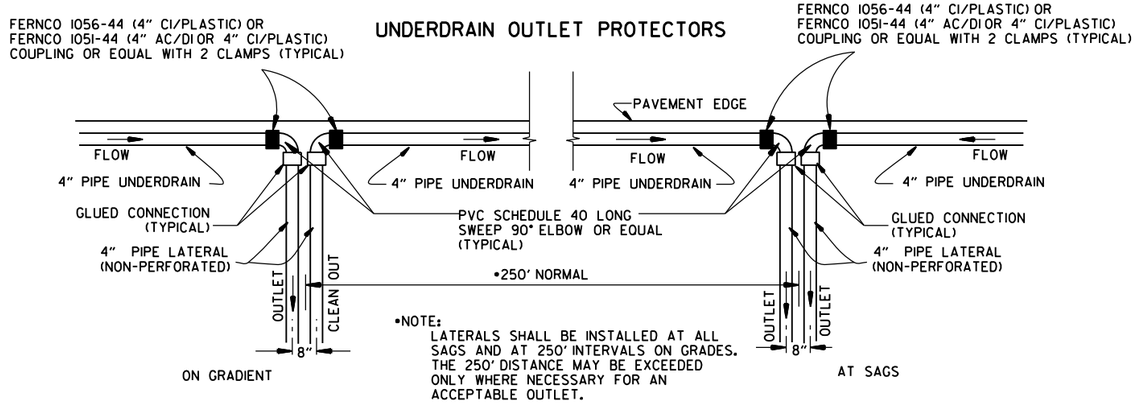


FRONT VIEW
(DETAIL OF RODENT SCREEN)



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



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.

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.

DATE	REVISION	DATE FILMED
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; 5½" 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 POLYEDTHYLENE 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

ARKANSAS STATE HIGHWAY COMMISSION

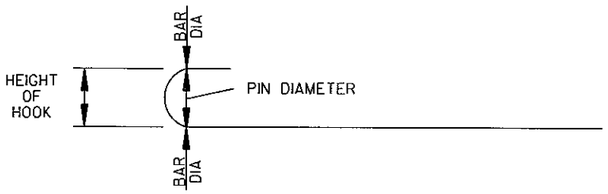
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

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

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2¼"	4"
4	3 "	4½"
5	3¾"	5"
6	4½"	6"
7	5¼"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



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

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

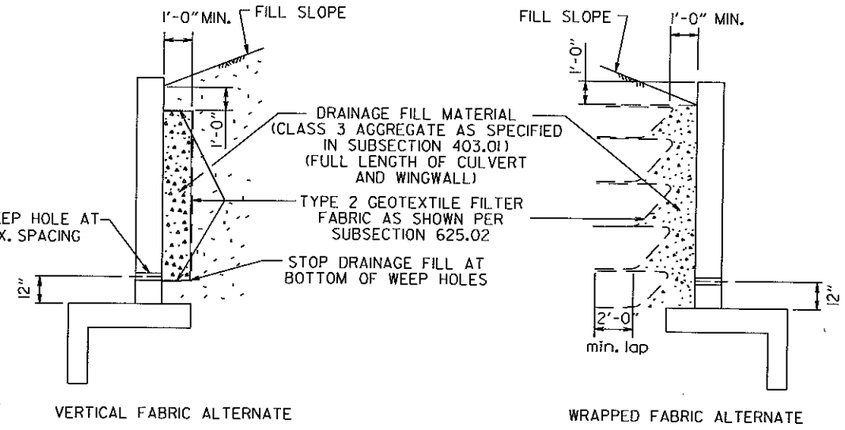
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "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

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI.

REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

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

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

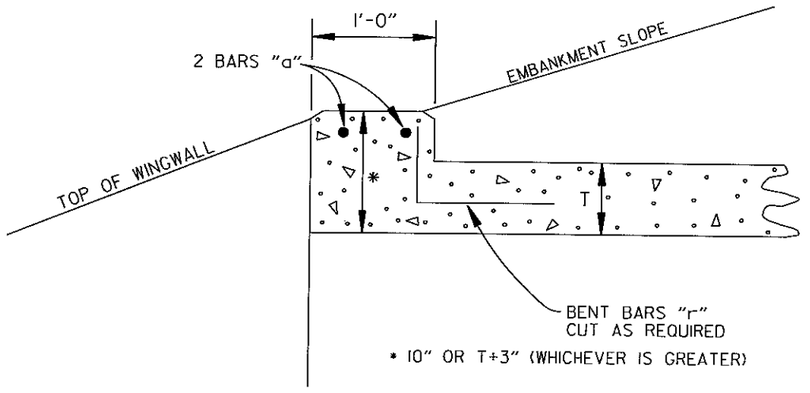
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS ½ INCH.

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

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

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



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

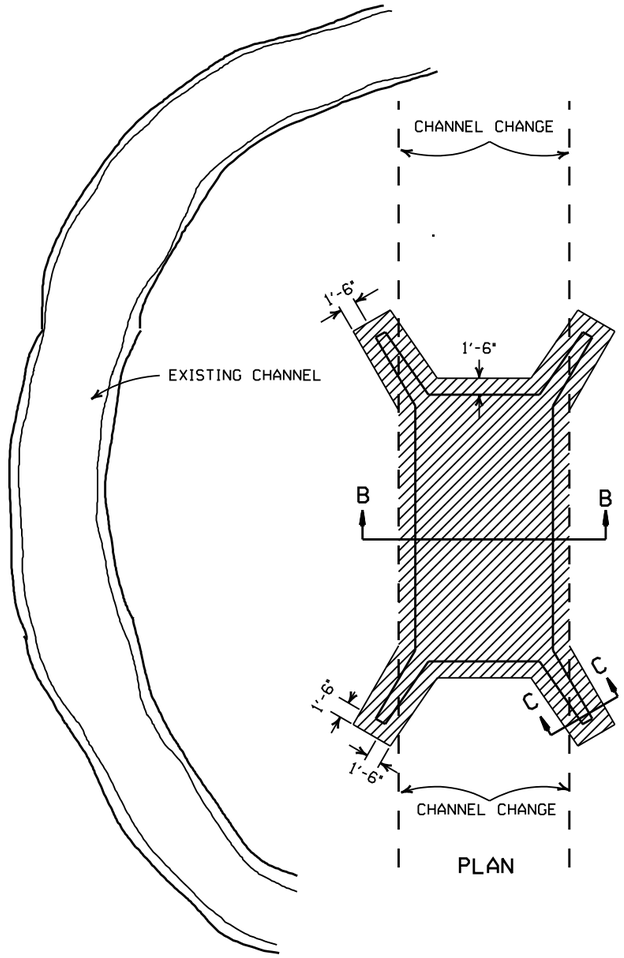
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
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	

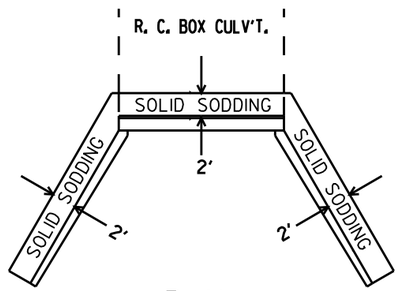
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



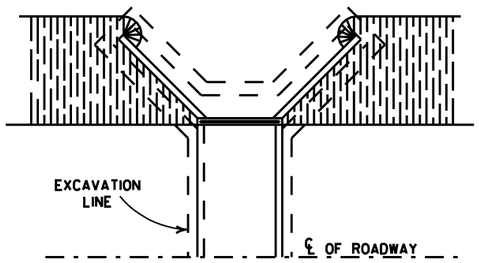
PLAN



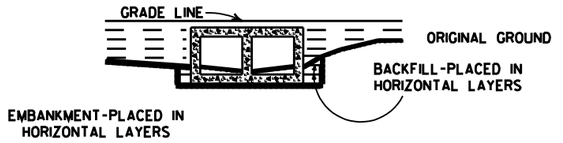
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

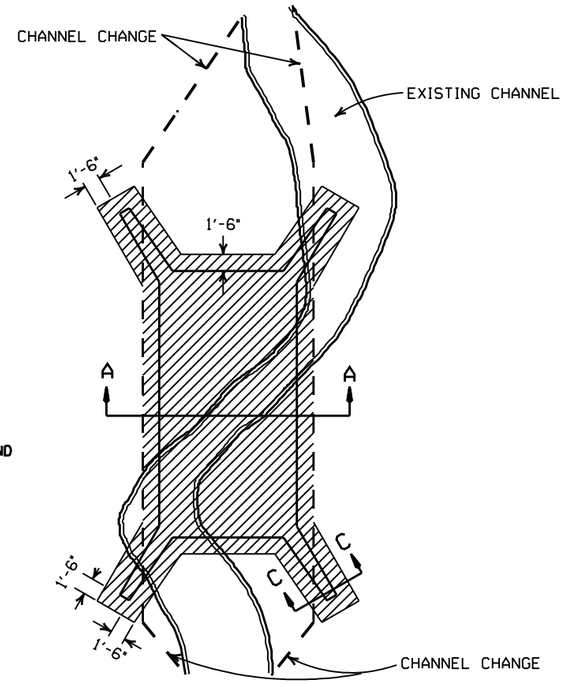


PLAN

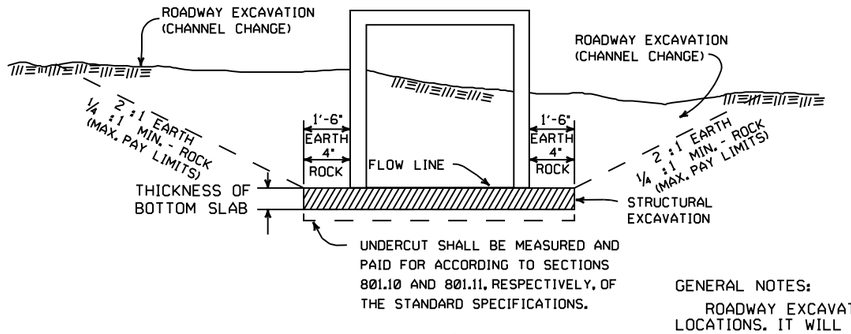


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

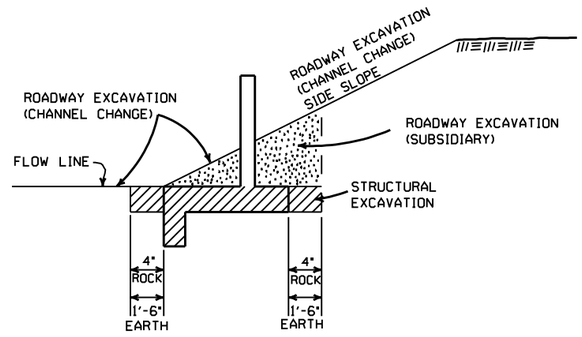


PLAN

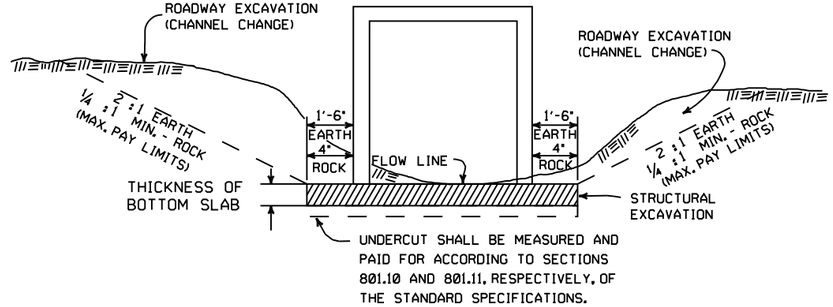


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

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	674-1-4-83
	AND ADDED MAXIMUM PAY	
	LIMIT NOTES.	
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

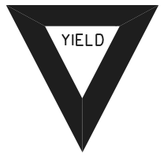
EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

R1-1

STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

W3-5

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

R4-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R2-6aP

48"X36"

*USE 6" C LETTERS
**USE 4" D LETTERS

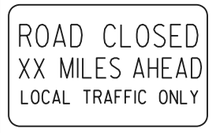
R5-1

STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2

48"X30"

RII-3A



60"X30"

RII-4

60"X30"

W21-5a

STD. 36"X36"
FWY. 48"X48"

WI-1

STD. 36"X36"
FWY. 48"X48"

WI-2

STD. 36"X36"
FWY. 48"X48"

R2-11

36"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"

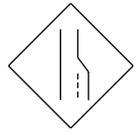
W3-1

STD. 36"X36"
SPECIAL 48"X48"

W3-2

STD. 36"X36"
SPECIAL 48"X48"

W4-2



STD. 36"X36"
FWY. 48"X48"

R56-1

STD. 18"X18"

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7

EXPWY. 36"X36"
FWY. 48"X48"

W9-2

STD. 36"X36"
FWY. 48"X48"

WI3-1

STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

STD. 36"X36"
FWY. 48"X48"

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

WI-4b

STD. 48"X48"

W8-11

STD. 36"X36"
FWY. 48"X48"

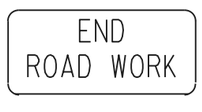
W8-9

STD. 36"X36"
FWY. 48"X48"

G20-1

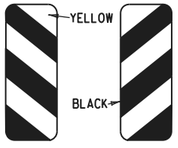
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

M4-9

STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

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. R2-6aP PLAQUES SHALL BE MOUNTED BELOW AN APPLICABLE ADVANCE WARNING SIGN THAT IS LOCATED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE PLAQUE SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE W3-5 "REDUCED SPEED AHEAD" SIGN. R2-11 SIGNS SHALL BE INSTALLED AT OR NEAR THE DOWNSTREAM END OF THE WORK ZONE. SEE STANDARD DRAWINGS TC-2, TC-3, AND TC-6 FOR TYPICAL PLACEMENT LOCATIONS.

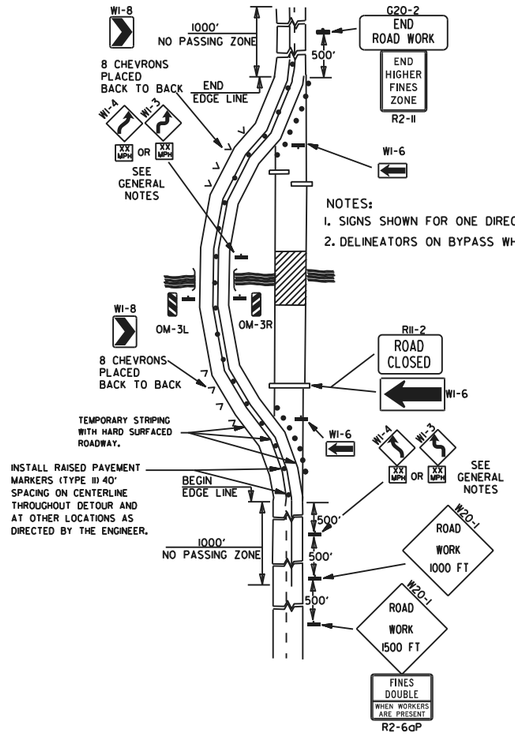
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED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

DATE REV	DESCRIPTION
08-14-25	REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10
11-07-19	REVISED FOR MASH
04-13-17	DELETED RSP-1 & ADDED W21-5a
09-02-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES
12-15-11	REVISED W24-1

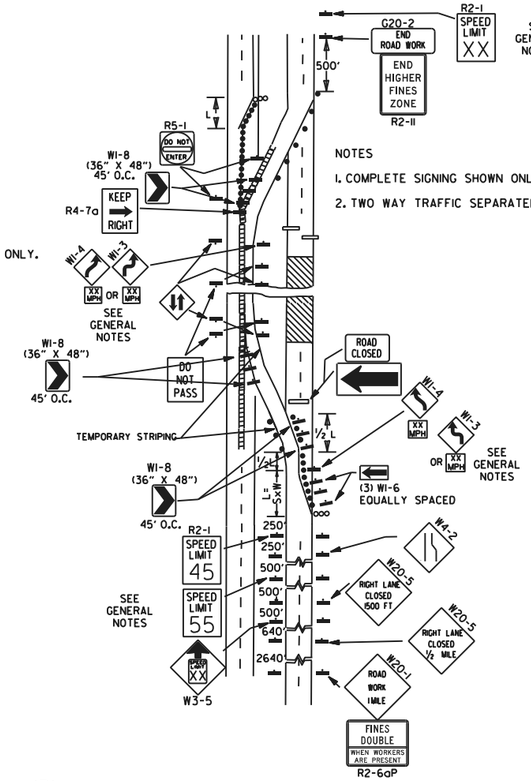
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

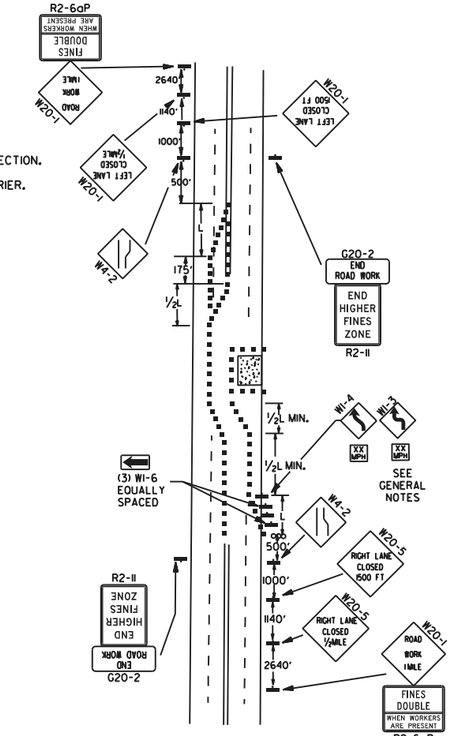
DATE EFFECTIVE 08-14-2025 | STANDARD DRAWING | TC-1



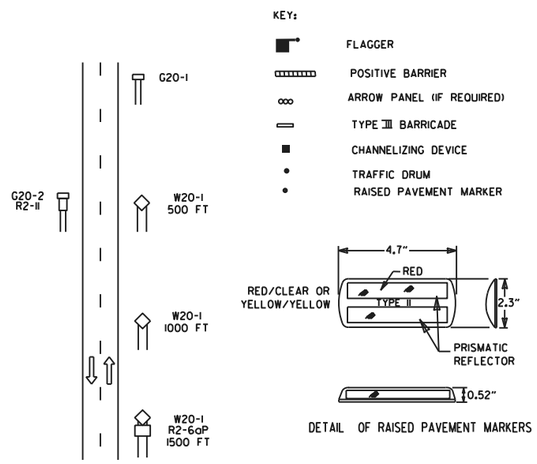
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(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.



DETAIL OF RAISED PAVEMENT MARKERS

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:

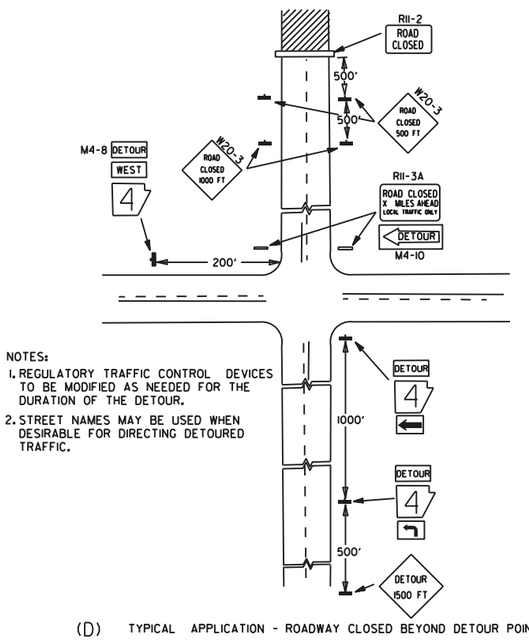
L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

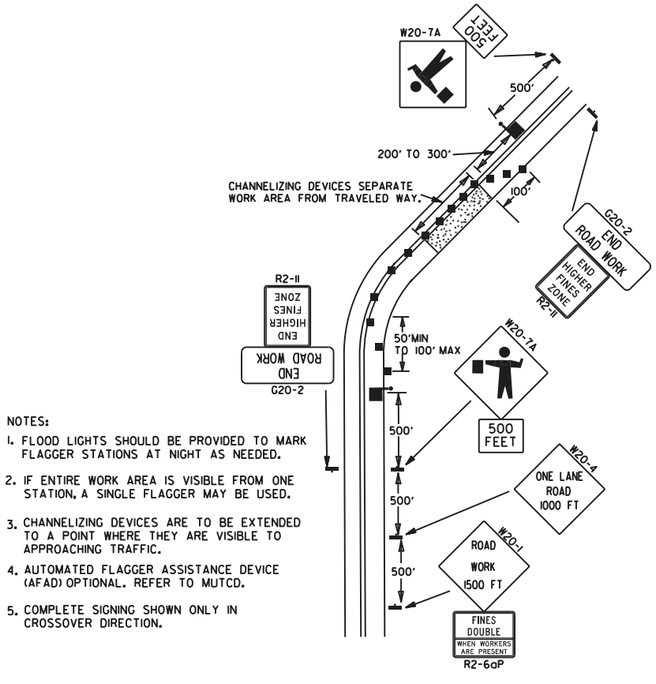
W= WIDTH OF OFFSET.

GENERAL NOTES:

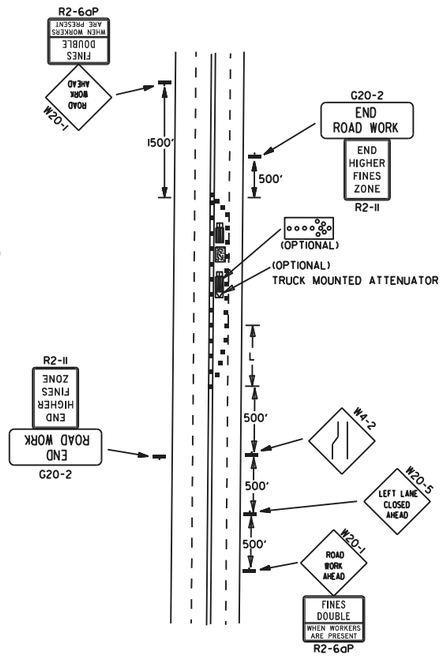
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. 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.
8. 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.
9. 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 - ROADWAY CLOSED BEYOND DETOUR POINT.



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



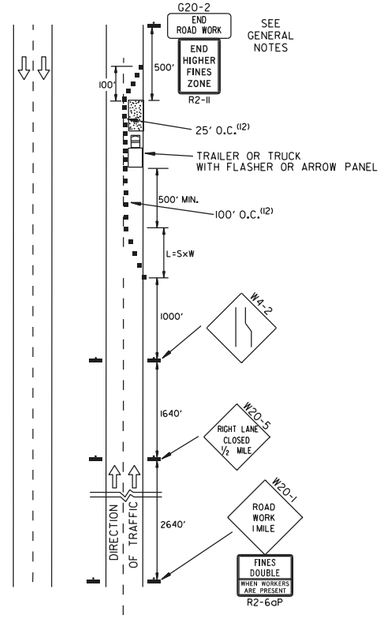
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE REV	DESCRIPTION
08-14-25	ADDED R2-6aP AND R2-11
05-20-21	REVISED NOTE 7
11-07-19	REVISED NOTE 1. ADDED NOTE 9
09-02-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (AT & REPLACED R2-5A WITH W3-5
09-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKINGS

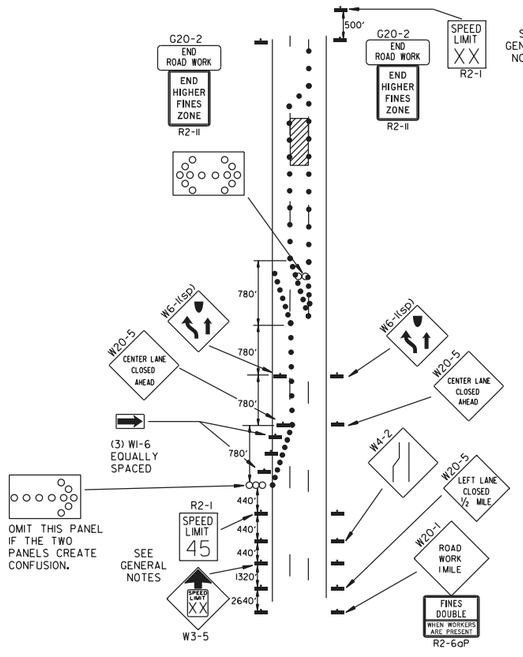
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

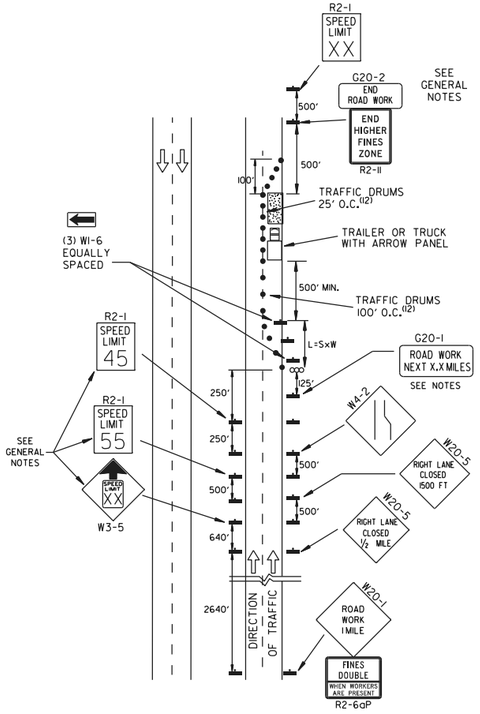
DATE EFFECTIVE	STANDARD DRAWING	TC-2
08-14-2025		



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



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

KEY:

○○○ ARROW PANEL (IF REQUIRED)

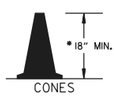
■ CHANNELIZING DEVICE

● TRAFFIC DRUM

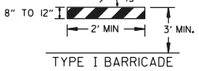
GENERAL NOTES:

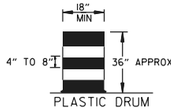
1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-I(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-I 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-I(45) SHALL BE OMITTED. ADDITIONAL R2-I 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. THE G20-1 SIGN SHOULD BE INSTALLED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
10. 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.
11. 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).
12. ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR TRAFFIC DRUMS, TUBULAR MARKERS MAY BE USED AT 50' O.C. IN STABILIZATION ZONES AND AT 10' O.C. DIRECTLY ADJACENT TO CONSTRUCTION OPERATIONS AND AT EXIT TAPERS. TUBULAR MARKERS SHALL BE STABILIZED WITH WEIGHTED BASES IN ACCORDANCE WITH THE M.U.T.C.D.

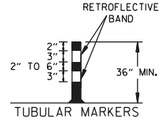
CHANNELIZING DEVICES

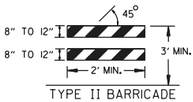


* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

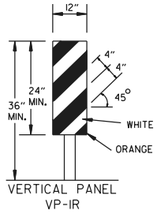


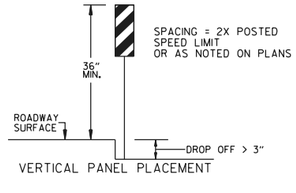


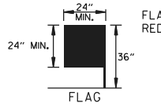




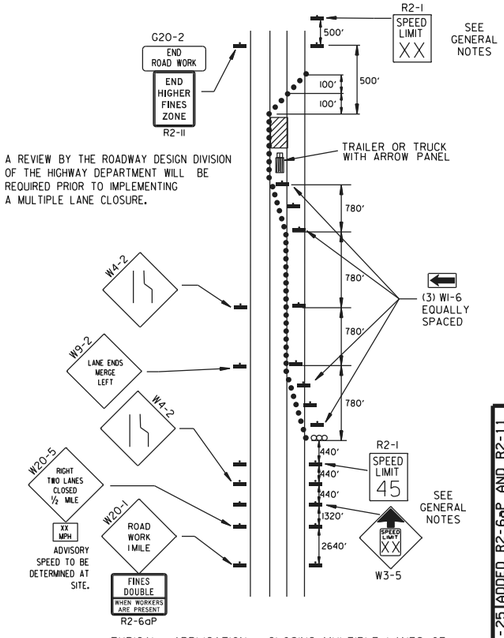
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.







FLAG SHALL BE OF GOOD GRADE RED MATERIAL



A REVIEW BY THE ROADWAY DESIGN DIVISION OF THE HIGHWAY DEPARTMENT WILL BE REQUIRED PRIOR TO IMPLEMENTING A MULTIPLE LANE CLOSURE.

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

TRAFFIC CONTROL DEVICES

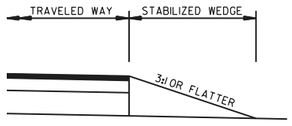
NON-INTERSTATE			
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1" ≤ 3"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE[6]	STANDARD LANE CLOSURE[6]
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS[1]	W8-9 AND TRAFFIC DRUMS[1]
> 3" ≤ 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[1]
> 6" ≤ 18"	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" ≤ 24"	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" ≤ 6"	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

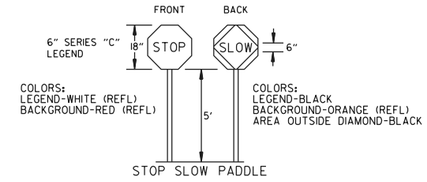
INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

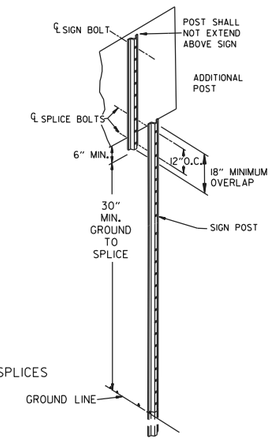
GENERAL NOTES:

1. 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.
2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED.
3. 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.
4. 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.
5. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.
6. TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).



NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

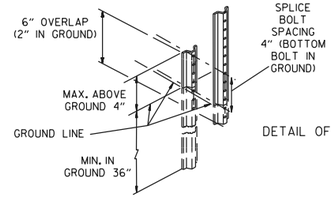




NOTES:
USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.



DATE REV	DESCRIPTION
08-14-25	ADDED R2-6aP AND R2-11
05-22-25	REVISED TRAFFIC CONTROL DEVICES AND NOTES. ADDED NOTE 12.
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES
05-20-21	REVISED NOTE 10
02-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

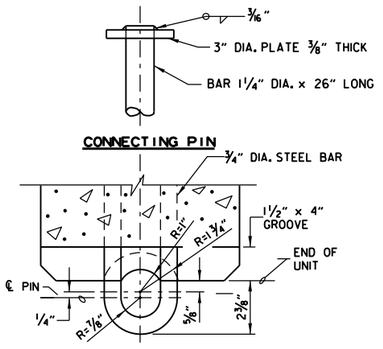
DATE EFFECTIVE 08-14-2025

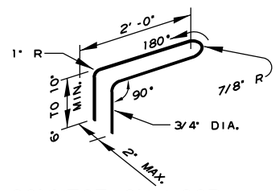
STANDARD DRAWING

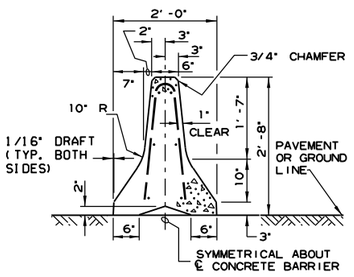
TC-3

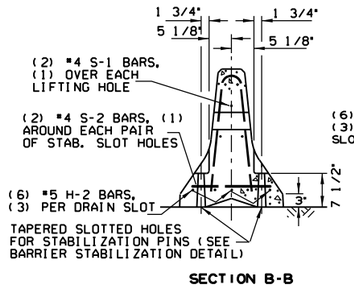
REINFORCING BAR TABLE PER BARRIER UNIT

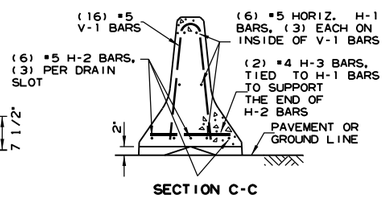
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", LIFTING HOLE, 90°, 3 3/8" R
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1'-6", 1" MIN. CLEAR TO BAR; 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9"; 2 3/16" R; 12°; 1 1/2"; 9"; 2'-1 3/8"; 4 3/8"

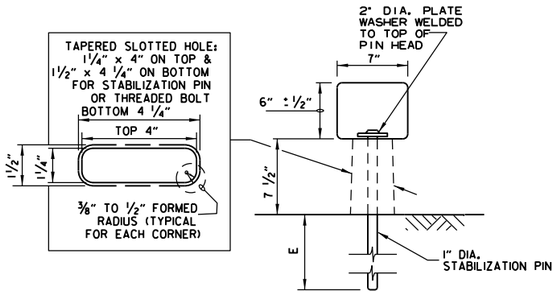




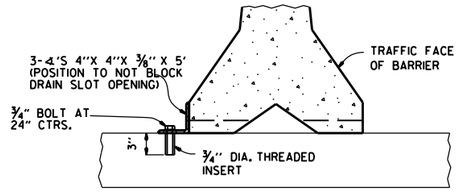






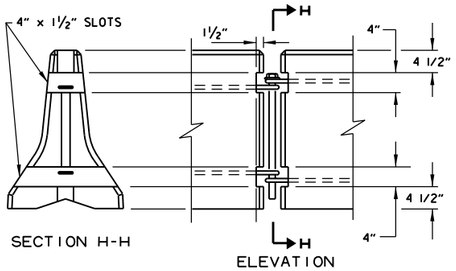


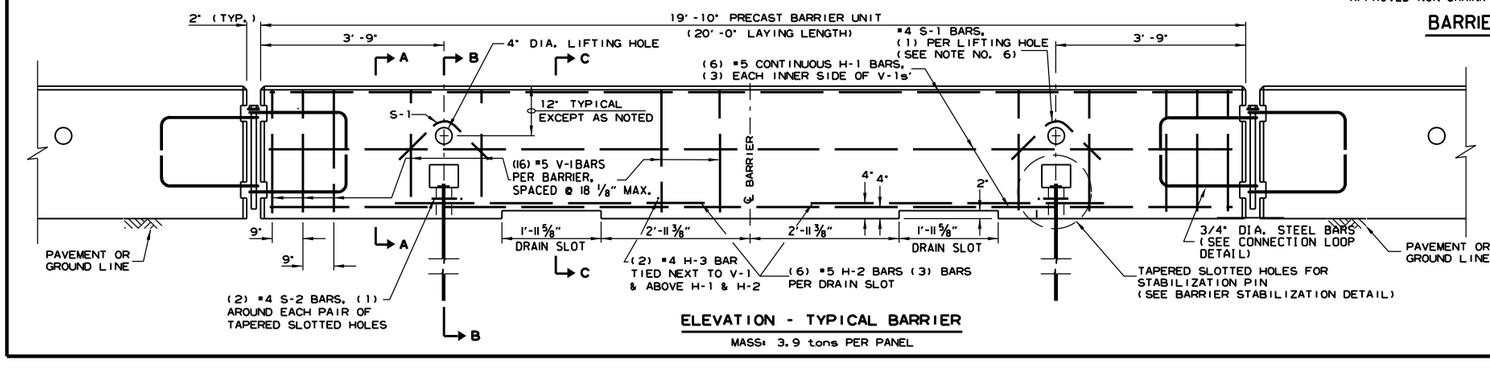
Ⓔ 4" - CONCRETE PAVEMENT
8" - ASPHALT PAVEMENT
12" - SHOULDER AREAS



NOTE: " THREADED INSERTS SHALL BE CAST IN PLACE FOR ALL NEW BRIDGE DECKS AND DRILLED AND GROUTED FOR EXISTING BRIDGE DECKS. INSERTS SHALL HAVE A MINIMUM ULTIMATE LOAD CAPACITY OF 8000 LBS. IN TENSION. AFTER REMOVAL OF BARRIER, BOLTS, AND ANGLES, THE INSERTS SHALL BE FILLED WITH APPROVED NON-SHRINK EPOXY.

BARRIER STABILIZATION DETAIL
BRIDGE DECKS





MASS: 3.9 tons PER PANEL

GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH THE PRECAST CONCRETE BARRIER UNITS AND SHALL BE RESPONSIBLE FOR THE MANUFACTURE, SHIPMENT, STORAGE, PLACEMENT AND REMOVAL. AT THE COMPLETION OF THE PROJECT, THE PRECAST UNITS WILL REMAIN THE PROPERTY OF THE CONTRACTOR.

2. MATERIALS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
   CONCRETE: 2500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
   REINFORCING STEEL: AASHTO M 31 OR M 53, GRADE 60
   STRUCTURAL STEEL: AASHTO-M270 GRADE 36 SHALL BE USED FOR THE CONNECTION PIN, CONNECTION LOOPS, AND STABILIZATION PINS. A ONE PIECE PIN WITH A 3" ROUNDED TOP MAY BE USED IN PLACE OF THE DETAILED CONNECTION PIN.
   DELINEATORS: DELINEATORS SHALL BE MOUNTED AT 10' SPACING ON TOP OF PRECAST BARRIER.

   IN APPLICATIONS WHERE BARRIER WALL IS WITHIN 6 FEET OF A TRAFFIC LANE, ADDITIONAL DELINEATORS SHALL BE PLACED ON THE BARRIER AT 10' SPACING APPROXIMATELY ONE (1) FOOT FROM THE TOP OF THE BARRIER. DELINEATORS SHALL BE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR CONSTRUCTION CONCRETE BARRIER MARKERS.
   DELINEATOR COLOR SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
   PAYMENT FOR DELINEATORS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID PER LIN. FT. FOR "FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER". THE CONTRACTOR SHALL CERTIFY TO THE ENGINEER THAT THE MATERIAL AND THE DESIGN USED IN THE PRECAST BARRIER UNITS MEETS THE REQUIREMENTS AS SHOWN ON THIS STANDARD DRAWING.

3. OTHER PRECAST CONCRETE BARRIERS THAT HAVE BEEN CRASH TESTED AND APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION TO MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) WILL BE ACCEPTED IN LIEU OF THE BARRIER SHOWN. DRAIN SLOTS SHALL BE PROVIDED AS NEEDED OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH A CERTIFICATION OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) COMPLIANCE FOR ANY OTHER TYPES OF PRECAST BARRIER TO BE USED. THE CERTIFICATION SHALL STATE THAT THE PRECAST CONCRETE BARRIER MEETS THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH). MIXING OF SHAPES WILL NOT BE ALLOWED IN A CONTINUOUS LINE OF UNITS.

4. DOWEL HOLES IN PAVEMENT OR BRIDGE SLABS THAT ARE TO REMAIN IN PLACE SHALL BE FILLED. HOLES IN CONCRETE PAVEMENT AND BRIDGE SLABS SHALL BE FILLED WITH AN APPROVED NON-SHRINK EPOXY GROUT. HOLES IN ASPHALT PAVEMENT SHALL BE FILLED WITH AN APPROVED ASPHALT JOINT FILLER. PAYMENT FOR DRILLING AND FILLING HOLES TO BE INCLUDED IN THE PRICE FOR VARIOUS BARRIER ITEMS.

5. ATTACH UNITS TO ROADWAY SURFACE WITH STABILIZATION PINS AND TO DECK SLABS USING BOLTS WHEN REQUIRED.

6. A 4" WHITE PVC SLEEVE MAY BE USED TO FORM THE LIFTING HOLE AND IF USED THE SLEEVE IS TO BE LEFT IN PLACE.

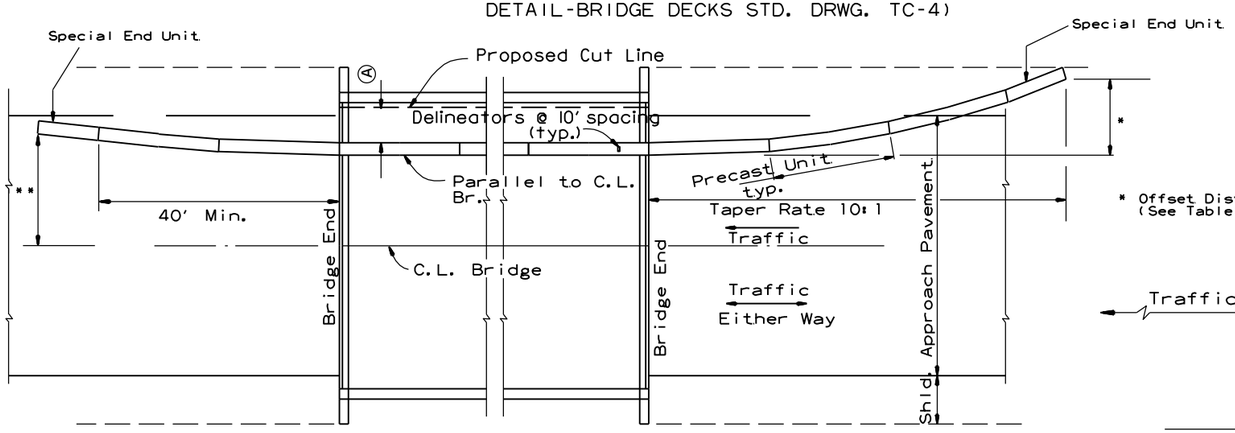
DATE	REVISION	FILMED
11-07-19	REVISED NOTE 3	
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO WASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

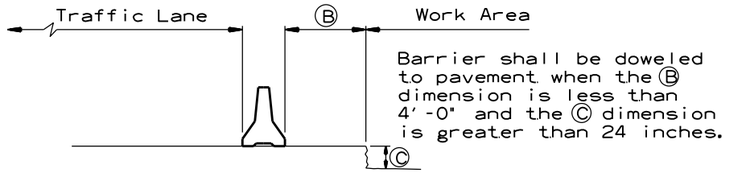
Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

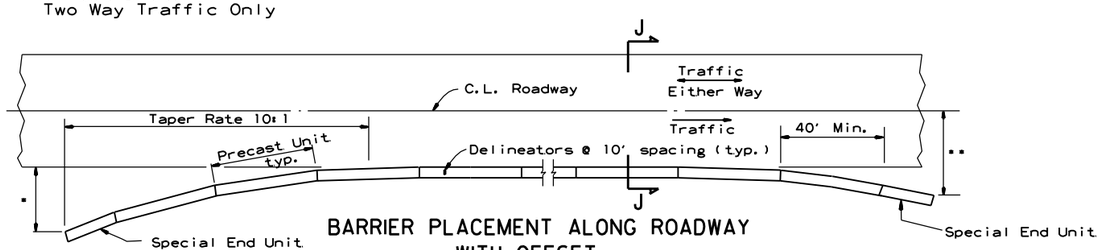
** Offset Distance for Two Way Traffic Only



Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

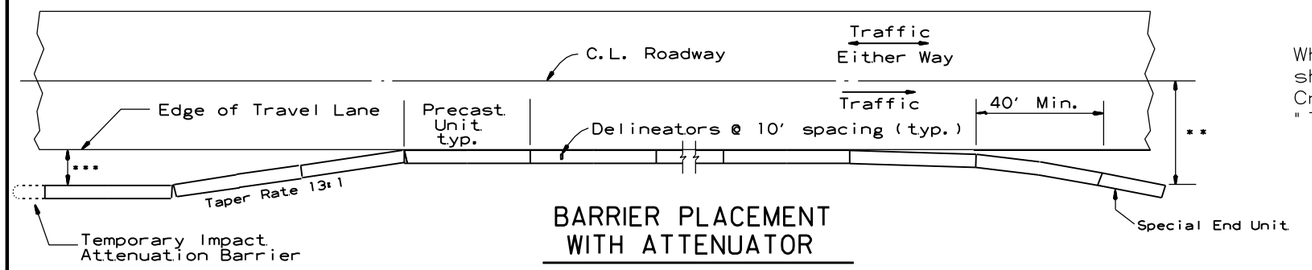
** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)

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.

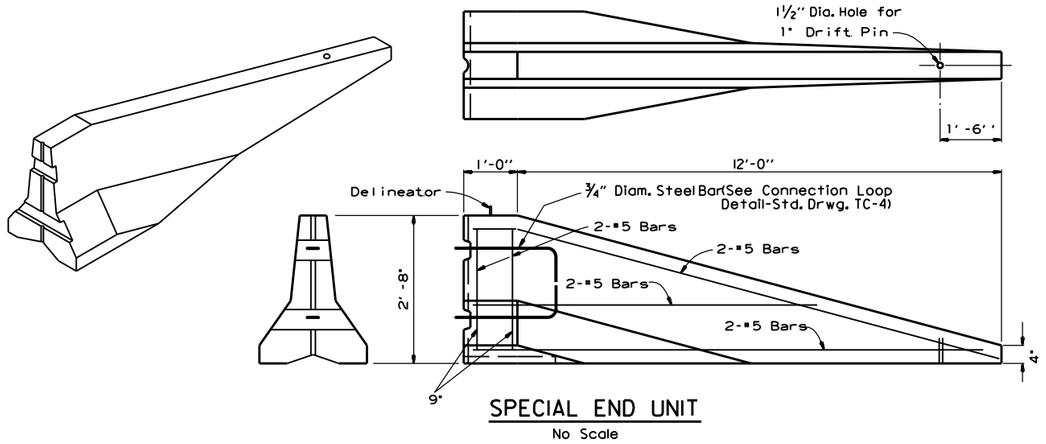


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

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

** Offset Distance For Two Way Traffic Only



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."

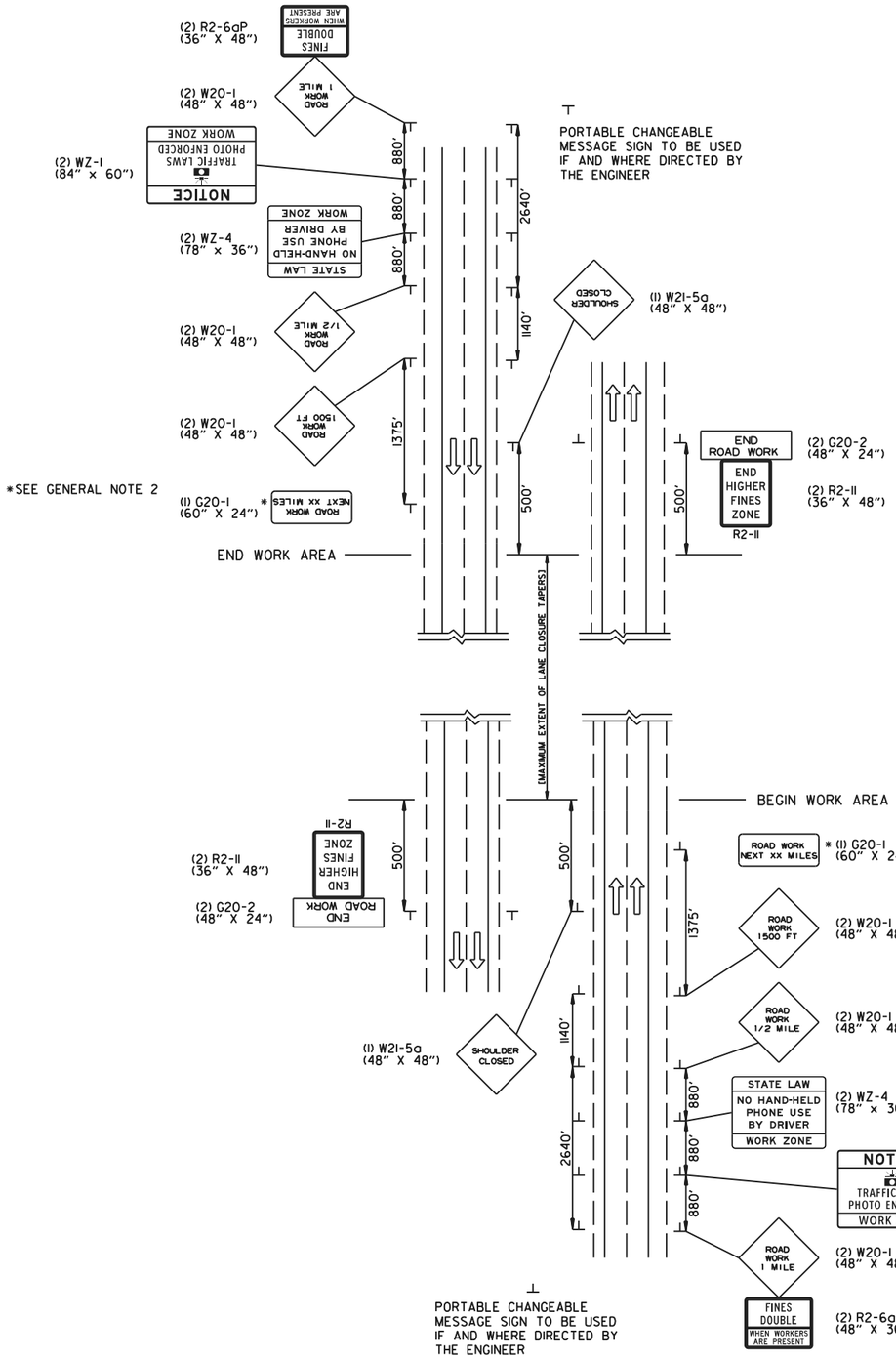
DATE	REVISION	FILMED
11-07-19	REVISED NOTE	
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

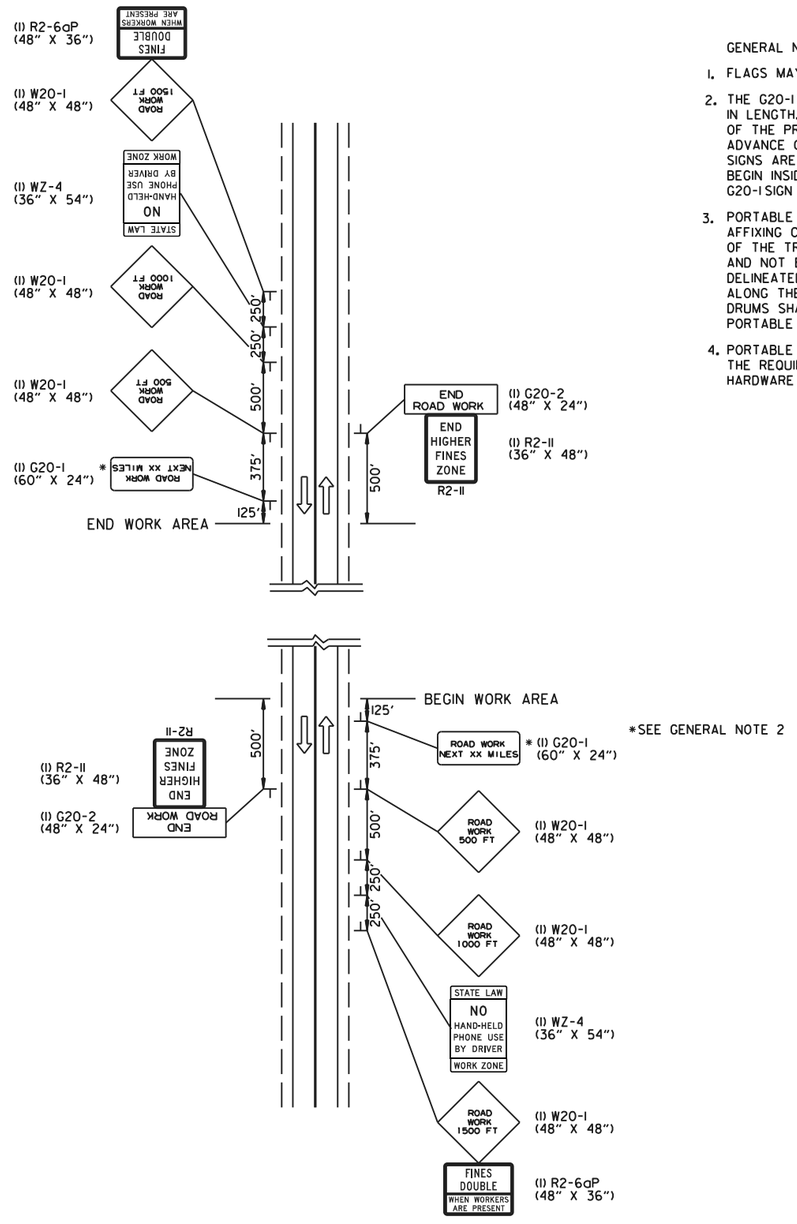
STANDARD DRAWING TC-5

NOTE : W20-1(VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS AS WORKING AREA SHIFTS.



NOTE : W20-1(VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS AS WORKING AREA SHIFTS.

(A) TYPICAL APPLICATION - ADVANCE WARNING SIGNS AT BEGINNING AND END OF JOB (FULLY CONTROLLED ACCESS FACILITIES) (ALL STAGES)



(B) TYPICAL APPLICATION - ADVANCE WARNING SIGNS AT BEGINNING AND END OF JOB (NON-FULLY CONTROLLED ACCESS FACILITIES) (ALL STAGES)

GENERAL NOTES:

1. FLAGS MAY BE MOUNTED TO SIGNS AT NIGHT AS NEEDED.
2. THE G20-1 SIGN SHOULD BE INSTALLED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE OR 1500 FT) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. 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, THIS DEVICE 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 PORTABLE CHANGEABLE MESSAGE SIGNS.
4. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

DATE REV	DESCRIPTION
01-22-26	ADDED WZ-4 AND REVISED GENERAL NOTE 1
11-06-25	REPLACED "SPEED" WITH "TRAFFIC LAWS" ON WZ-1
08-14-25	ISSUED

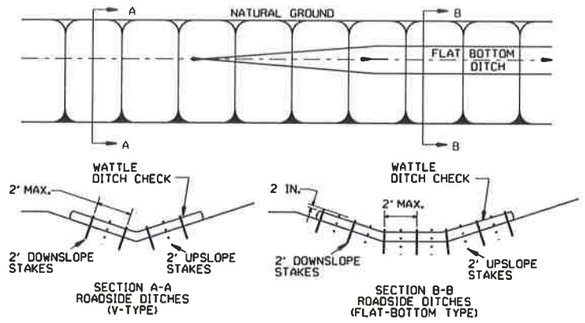
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

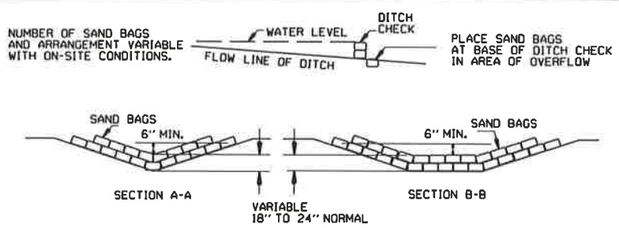
DATE EFFECTIVE	STANDARD DRAWING	TC-6
01-22-2026		

GENERAL NOTES

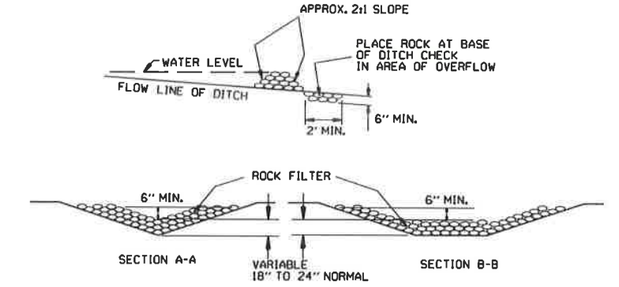
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

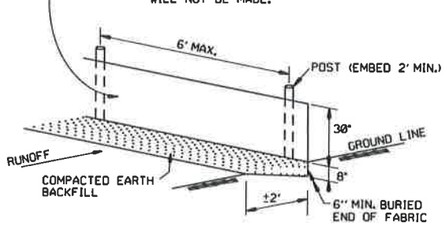


ROCK DITCH CHECK (E-6)

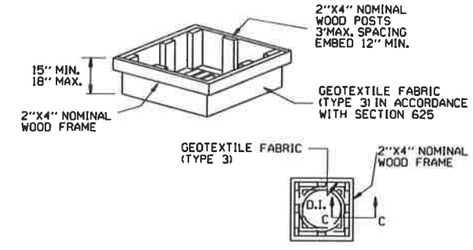
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

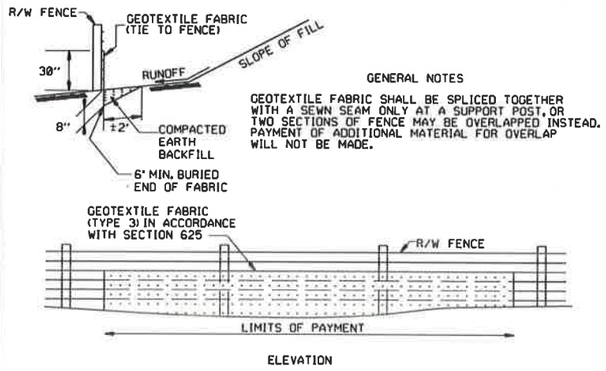
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



GENERAL NOTES

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

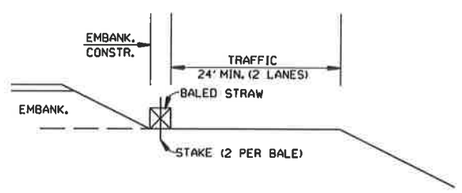
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

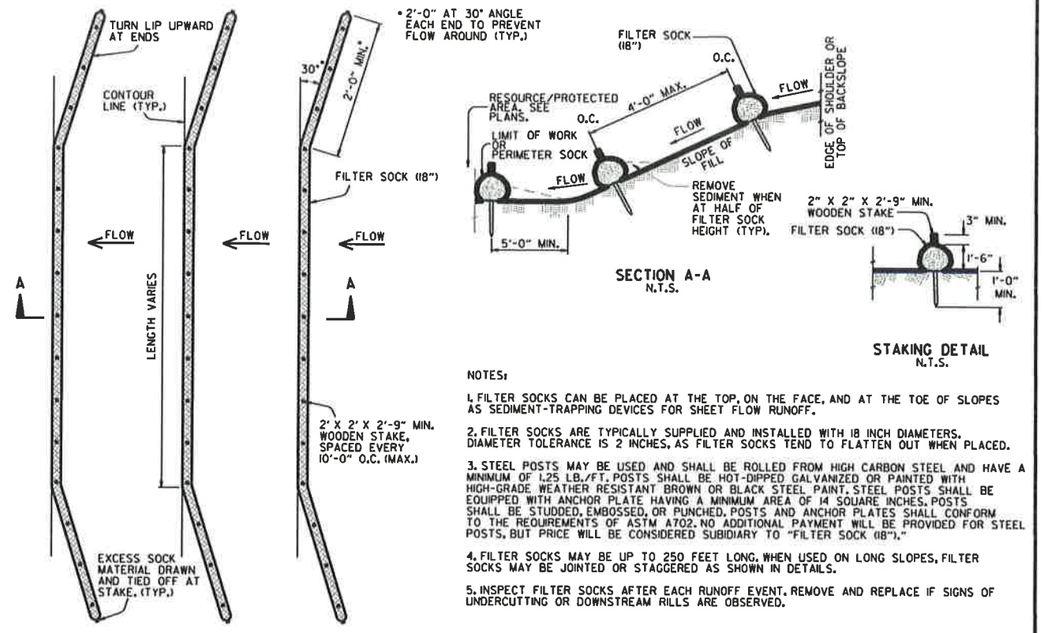
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



NOTES:

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.

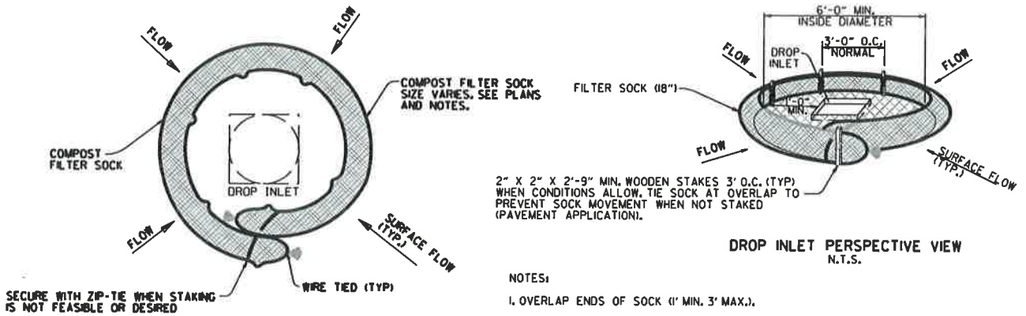
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 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 SUBIDIARY 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 UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

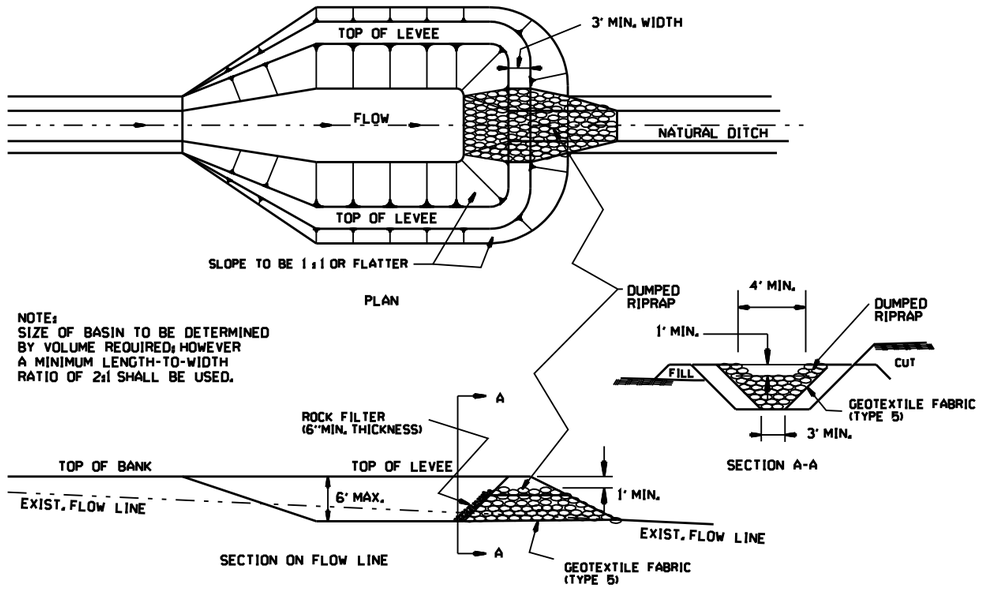
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER 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 FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
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	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

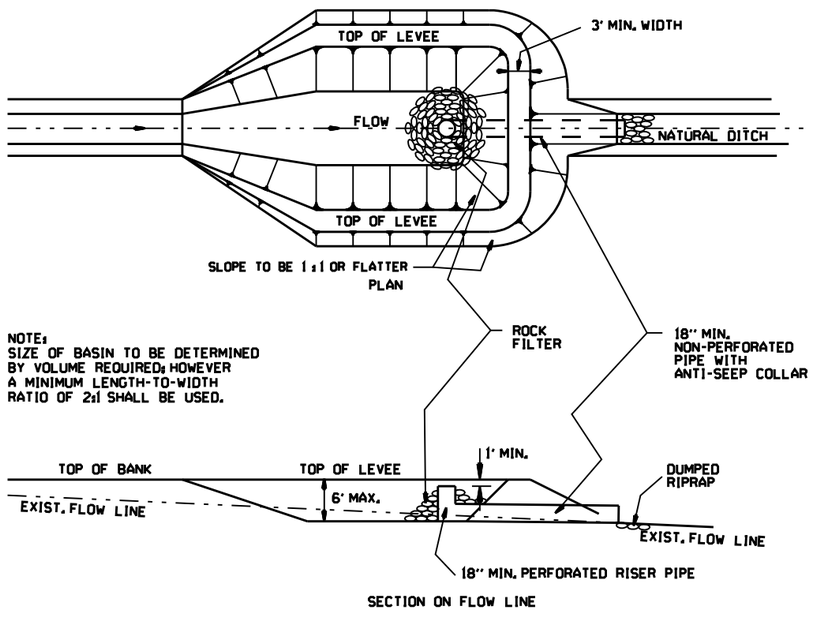
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

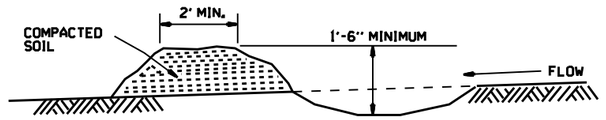
STANDARD DRAWING TEC-1



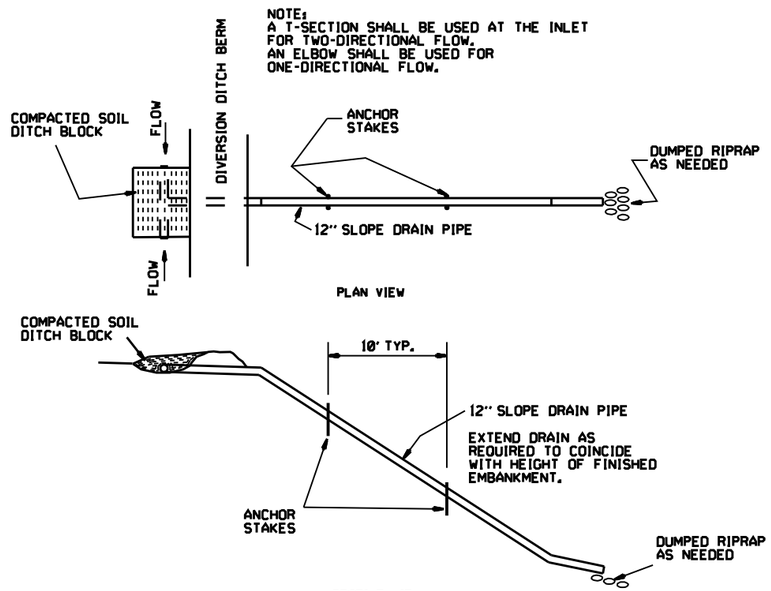
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



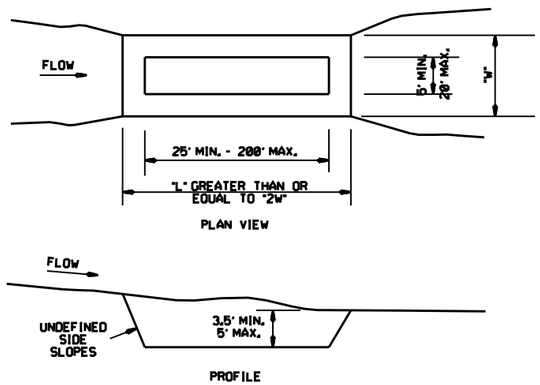
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

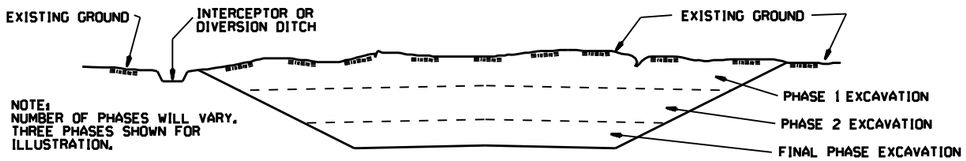
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



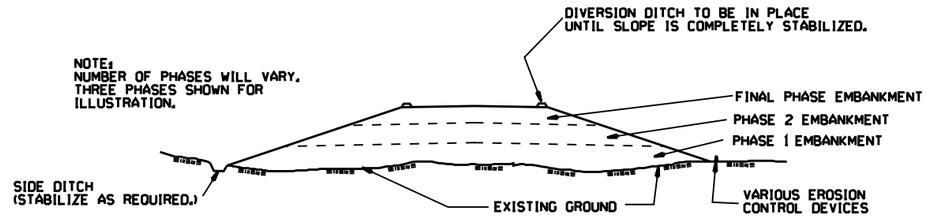
GENERAL NOTE

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.

DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3