DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
5/12/21				JOB NO.		020629	1	72
				(2) HWY. 65 - YELLOW BEND PORT (S)				

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

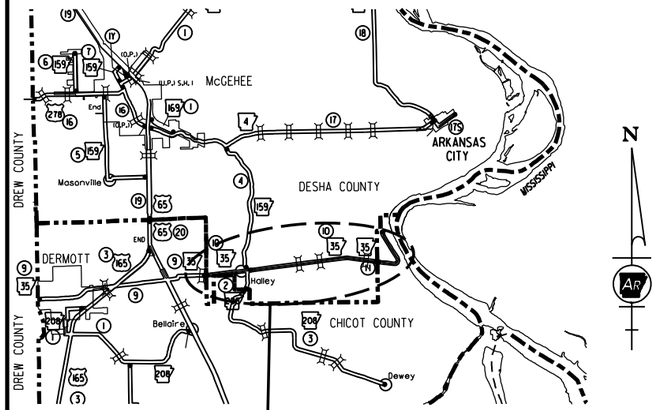
HWY. 65 - YELLOW BEND PORT (S)

CHICOT & DESHA COUNTIES

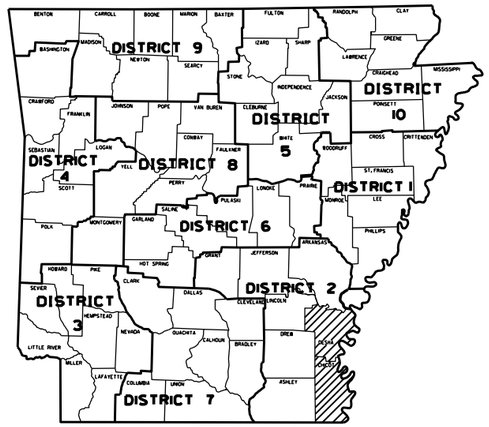
ROUTE 35 SECTIONS 9 , 10 & 11

JOB 020629

FED. AID PROJ. STPR-0921(3)



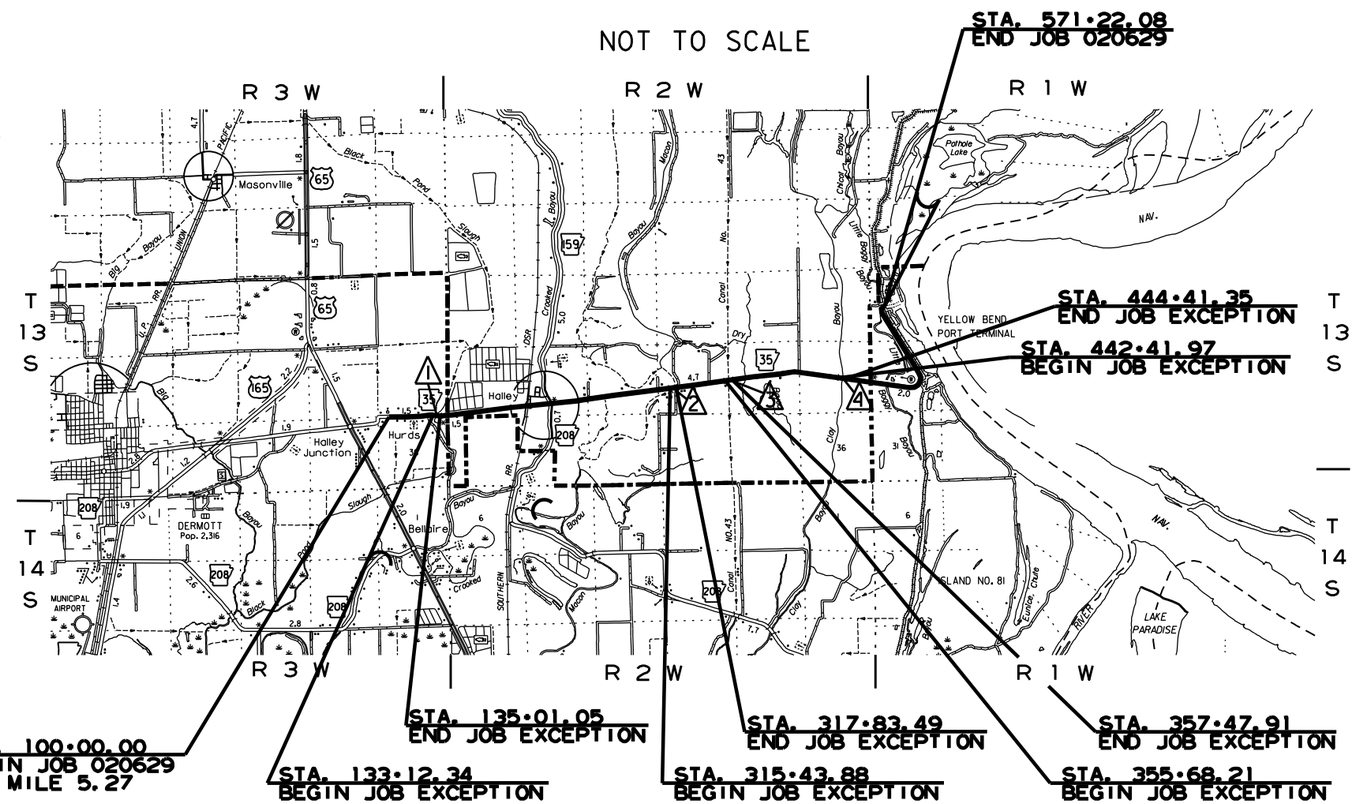
PROJECT LOCATION



ARK. HWY. DIST. NO. 2

VICINITY MAP

NOT TO SCALE



BRIDGE EXCEPTIONS

(1) STA. 133+12.34
28'-0" CLEAR ROADWAY
188.71' TOTAL LENGTH
BR. NO 03600
STA. 135+01.05

(2) STA. 315+43.88
28'-0" CLEAR ROADWAY
239.61' TOTAL LENGTH
BR. NO 05140
STA. 317+83.49

(3) STA. 355+68.21
28'-0" CLEAR ROADWAY
179.70' TOTAL LENGTH
BR. NO 05139
STA. 357+47.91

(4) STA. 442+41.97
28'-0" CLEAR ROADWAY
199.38' TOTAL LENGTH
BR. NO 05138
STA. 444+41.35

DESIGN TRAFFIC DATA

DESIGN YEAR	2041
2021 ADT	270
2041 ADT	300
2041 DHV	33
DIRECTIONAL DISTRIBUTION	0.60%
TRUCKS	20%
AVERAGE RUNNING SPEED SECT. 9	55 MPH
AVERAGE RUNNING SPEED SECT. 10	45 MPH
AVERAGE RUNNING SPEED SECT. 11	50 MPH

N

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APPROVED

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 10045
KELVIN REX VINES

Date: 2021.05.13 13:46:10 -05'00'

DEPUTY DIRECTOR AND CHIEF ENGINEER

PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	N33° 32' 03"	N33° 32' 19"	N33° 33' 11"
LONG.	W91° 21' 35"	W91° 17' 13"	W91° 14' 27"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF PROJECT	47122.08	FEET	OR	8.925	MILES
NET " " ROADWAY	46314.68	"	"	8.772	"
NET " " BRIDGES	000.00	"	"	0.000	"
NET " " PROJECT	46314.68	"	"	8.772	"

10/11/2019

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			
5/12/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	2	72

(2) INDEX OF SHEETS AND STANDARD DRAWINGS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

May 12 2021 4:28 PM

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INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS AND STANDARD DRAWINGS
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES
4	TYPICAL SECTIONS OF IMPROVEMENT
5 - 7	SPECIAL DETAILS
8	TEMPORARY EROSION CONTROL DETAILS
9 - 12	MAINTENANCE OF TRAFFIC DETAILS
13	PERMANENT PAVEMENT MARKING DETAILS
14 - 21	QUANTITIES
22	SUMMARY OF QUANTITIES AND REVISIONS
23 - 40	SURVEY CONTROL DETAILS
41 - 72	PLAN AND PROFILE SHEETS

BRIDGE STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
55036	STANDARD DETAILS FOR TYPE 'AT' APPROACH GUTTERS (BRIDGES WITH 6" CURBS & TYPE A, B, C, D OR E RAILING)	11-07-19
55039	STANDARD DETAILS FOR TYPE 'CT' APPROACH GUTTERS (BRIDGES WITH CURB)	11-07-19

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
GR-6	GUARDRAIL DETAILS	11-07-19
GR-7	GUARDRAIL DETAILS	11-07-19
GR-8	GUARDRAIL DETAILS	11-07-19
GR-9	GUARDRAIL DETAILS	11-07-19
GR-10	GUARDRAIL DETAILS	11-07-19
GR-11	GUARDRAIL DETAILS	11-07-19
GR-12	GUARDRAIL DETAILS	05-14-20
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PCP-3	PLASTIC PIPE CULVERT (POLYPROPYLENE)	02-27-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
RRS-1	PAVEMENT MARKING FOR RAILROAD CROSSING	12-08-16
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	02-27-20
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

7/8/2020

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/08/20		1/19/21	
10/29/20		2/19/21	
11/30/20		5/12/21	

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	3	72

(2) GOVERNING SPECS. AND GENERAL NOTES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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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
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
410-1_____	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2_____	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
505-1_____	PORTLAND CEMENT CONCRETE DRIVEWAY
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
617-1_____	GUARDRAIL TERMINAL (TYPE 2)
620-1_____	MULCH COVER
734-1_____	BRIDGE END TERMINAL
800-1_____	STRUCTURES
804-2_____	REINFORCING STEEL FOR STRUCTURES
JOB 020629__	BIDDING REQUIREMENTS AND CONDITIONS
JOB 020629__	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 020629__	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 020629__	CARGO PREFERENCE ACT REQUIREMENTS
JOB 020629__	DELAY IN RIGHT OF WAY OCCUPANCY
JOB 020629__	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 020629__	ESTABLISHING CONTRACT TIME - WORKING DAY CONTRACT
JOB 020629__	FLEXIBLE BEGINNING OF WORK
JOB 020629__	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 020629__	INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (NLA)
JOB 020629__	MAINTENANCE OF TRAFFIC
JOB 020629__	MANDATORY ELECTRONIC CONTRACT
JOB 020629__	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 020629__	PARTNERING REQUIREMENTS
JOB 020629__	PLASTIC PIPE
JOB 020629__	PORTABLE TRAFFIC SIGNAL SYSTEM
JOB 020629__	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 020629__	PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 020629__	STORM WATER POLLUTION PREVENTION PLAN
JOB 020629__	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 020629__	UTILITY ADJUSTMENTS
JOB 020629__	VALUE ENGINEERING
JOB 020629__	WARM MIX ASPHALT
JOB 020629__	WELLHEAD PROTECTION

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. 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.
10. 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.

7/8/2020

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			
5/13/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	4	72

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

May 17 2021 9:13 AM

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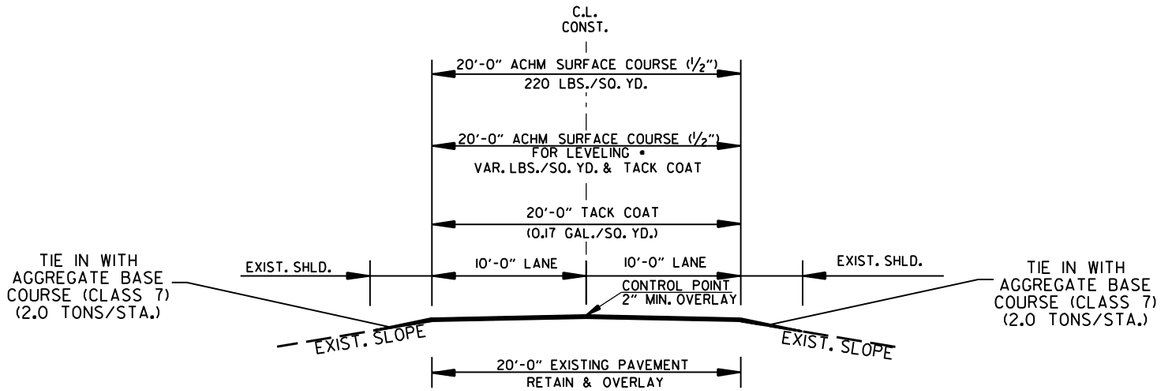

2 LANE OPEN SHOULDER OVERLAY

*TO BE USED IF & WHERE DIRECTED BY THE ENGINEER.

ROUTE 35, SECTION 9, 10, & 11
STA. 101+00.00 TO STA. 132+12.34
STA. 135+01.05 TO STA. 203+42.00
STA. 203+52.00 TO STA. 315+43.88
STA. 317+83.49 TO STA. 355+68.21
STA. 357+47.91 TO STA. 442+41.97
STA. 444+41.35 TO STA. 569+20.00

9/17/2020

R020629.DGN

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	5	72

(2) SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

Mar 9 2021 2:38 PM

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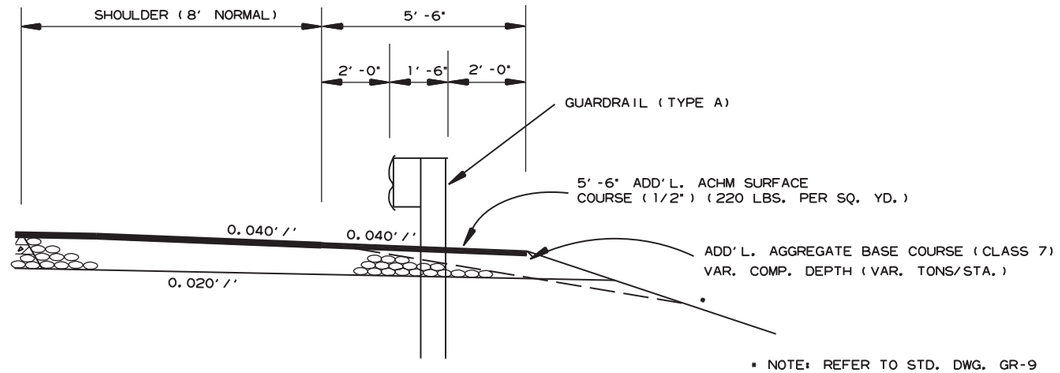
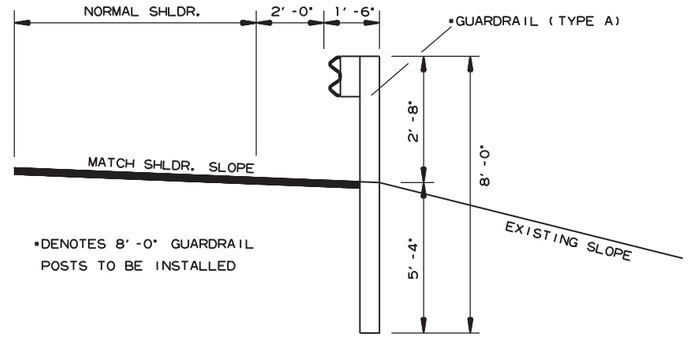


WIDENING FOR GUARDRAIL



SECTION DETAIL FOR GUARDRAIL

NOTE: REFER TO STANDARD DRAWINGS GR-6, GR-8, GR-9, GR-10, GR-11, & GR-12 FOR ADDITIONAL INFORMATION.

7/7/2020

R020629.DGN

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	6	72

(2) SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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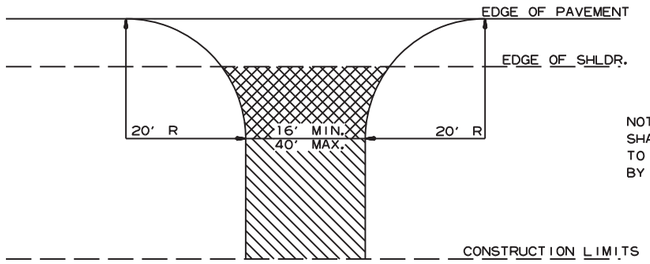
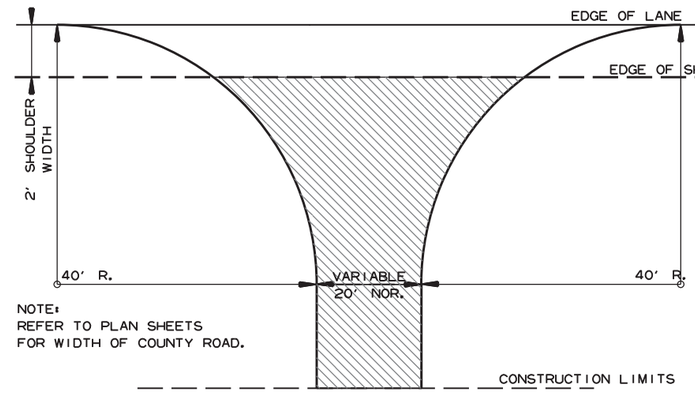


NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

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)

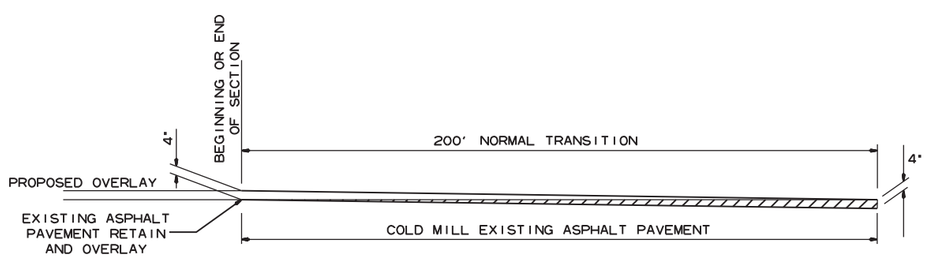


NOTE:
REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.

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

DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



DETAIL FOR TRANSITIONS

7/7/2020

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2/19/21				6	ARK.			
				JOB NO.		020629	7	72

(2) SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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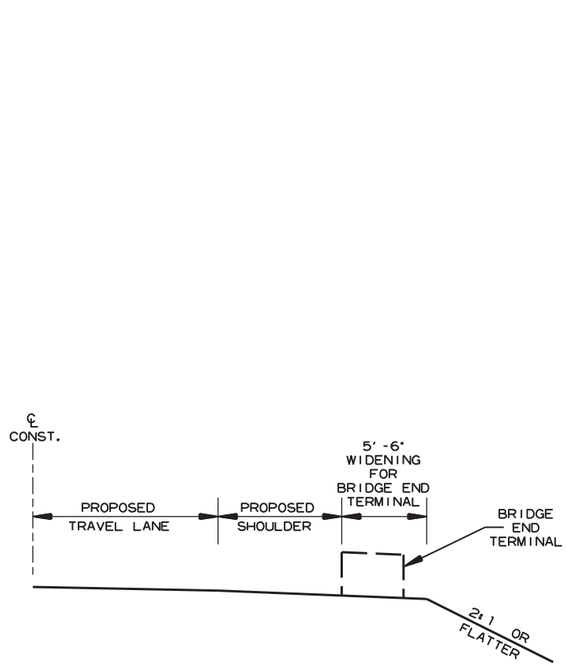
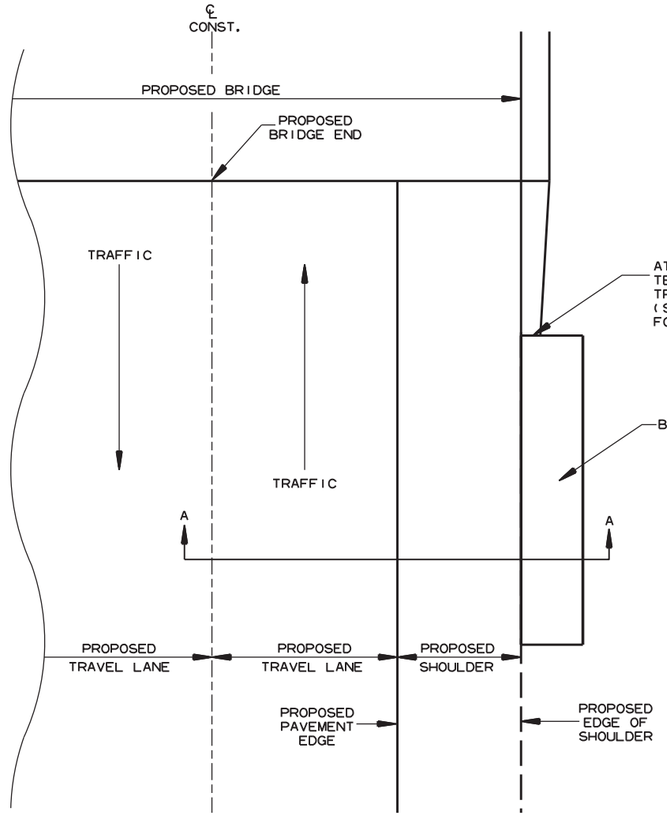


SECTION A-A

NOTE:
ELIMINATE OR MODIFY APPROACH CURB SECTION TO FIT BRIDGE END TERMINAL. NO PAYMENT SHALL BE MADE FOR ELIMINATING OR MODIFYING THIS CURB BUT SHALL BE CONSIDERED IN PAYMENT MADE FOR APPROACH GUTTERS OF THE TYPE SPECIFIED.

NOTE:
BRIDGE END TERMINAL SHALL CONFORM TO THE FOLLOWING:
-MAXIMUM LENGTH: 20'
-MAXIMUM HEIGHT: 2.75'
-DESIGN SPEED: 55 MPH



PLAN VIEW

BRIDGE END TERMINAL DETAILS

7/7/2020

R020629.DGN

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	8	72

(2) TEMPORARY EROSION CONTROL DETAILS

DATE OF REVISION	REVISION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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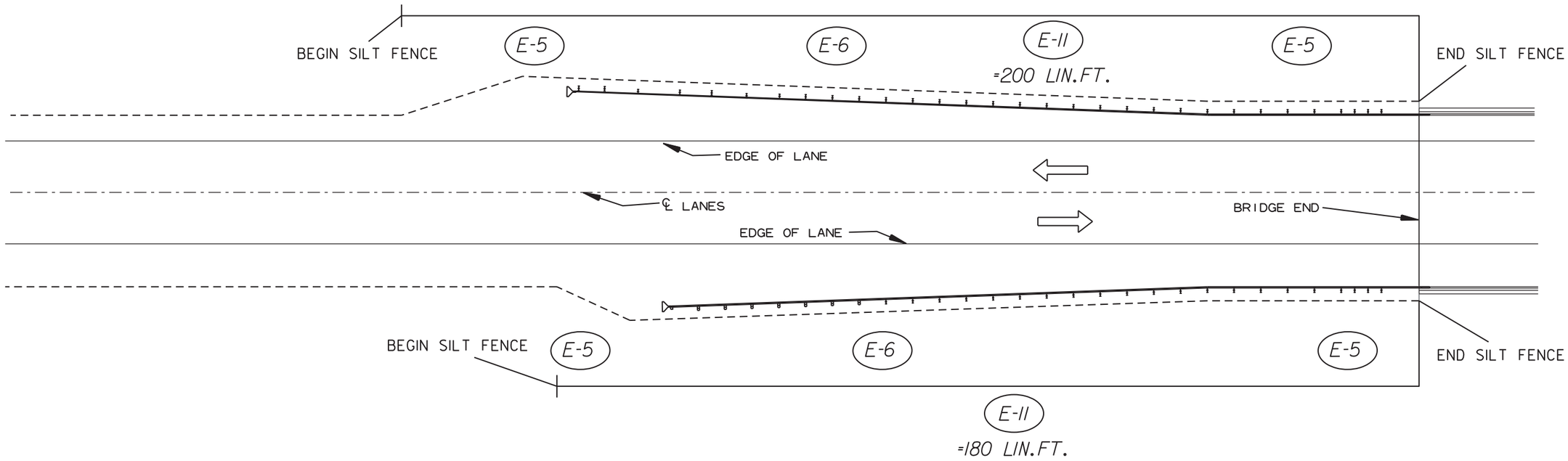
LEGEND

E-11 — E-11	SILT FENCE
E-5	ROCK DITCH CHECKS
E-6	SAND BAG DITCH CHECKS

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



TYPICAL EROSION CONTROL INSTALLATION FOR WIDENING FOR GUARDRAIL AT BRIDGE ENDS

2/11/2021

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
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(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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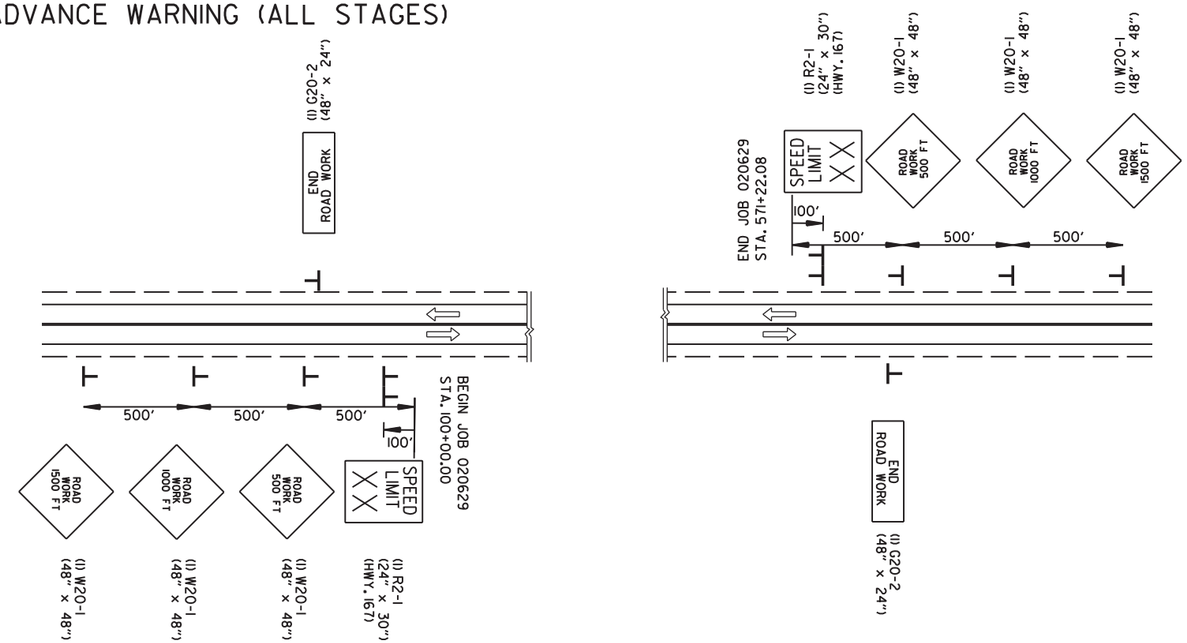
ADVANCE WARNING (ALL STAGES)



CONSTRUCTION SEQUENCE

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

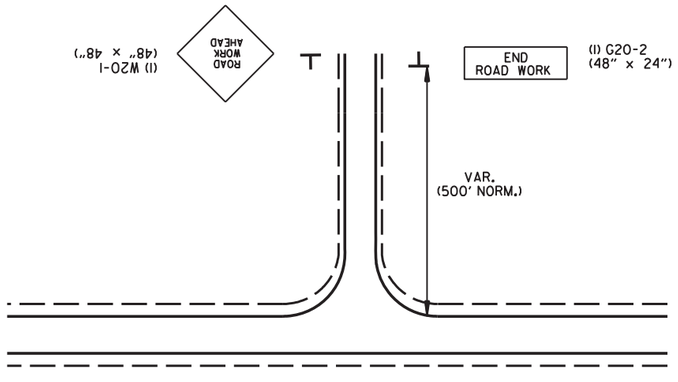
USE TRAFFIC DRUMS SPACED 45' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT EMBANKMENT ON LT & RT FOR GUARDRAIL WIDENING. INSTALL GUARDRAIL AND APPROACH GUTTERS.

END OF JOB CONSTRUCTION SEQUENCE

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

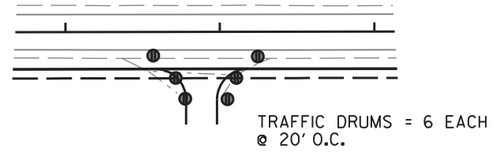
RIGHT SHOULDER CLOSED	(2) W21-5a 36"X36"	ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
DO NOT PASS	(2) R4-1 (24" X 30")	ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
BUMP	(2) W8-1 (30" X 30")	ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



ADVANCE WARNING - SIDE ROADS (ALL STAGES)

COUNTY RD. 51 (BLACK POND RD.)
PERKINS LN.
DAVIS LN.
HWY. 159
HWY. 208

COUNTY RD. 15
COUNTY RD. 4
LEVEE RD.
COUNTY RD. 55



DRIVEWAY/TRAFFIC DRUM DETAIL

7/23/2020

R020629.DGN

ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
11/30/20			
2/19/21			
5/12/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	10	72

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
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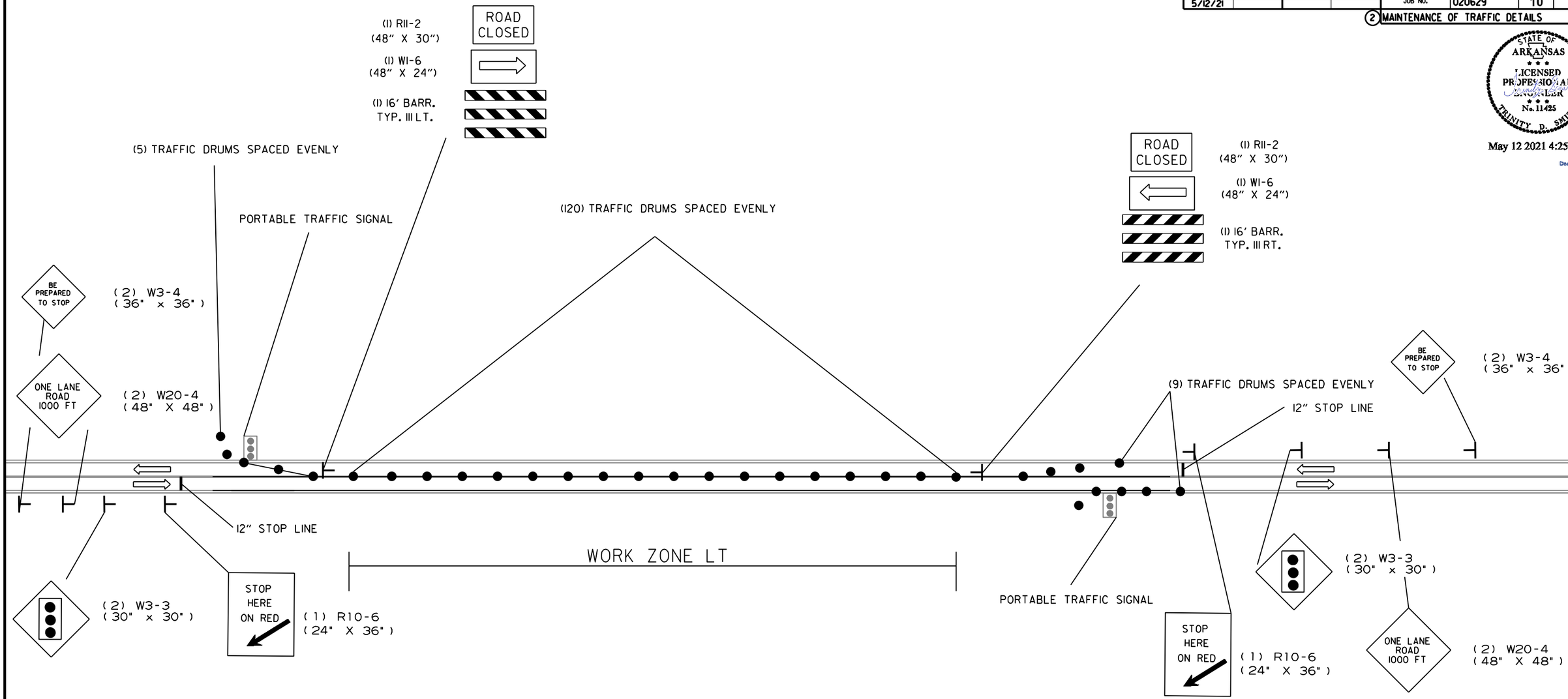

CONSTRUCTION SEQUENCE

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

USE TRAFFIC DRUMS SPACED 45' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT EMBANKMENT ON LT & RT FOR GUARDRAIL WIDENING. INSTALL GUARDRAIL AND APPROACH GUTTERS.

END OF JOB CONSTRUCTION SEQUENCE

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

7/23/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
11/30/20			
2/19/21			
5/12/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	11	72

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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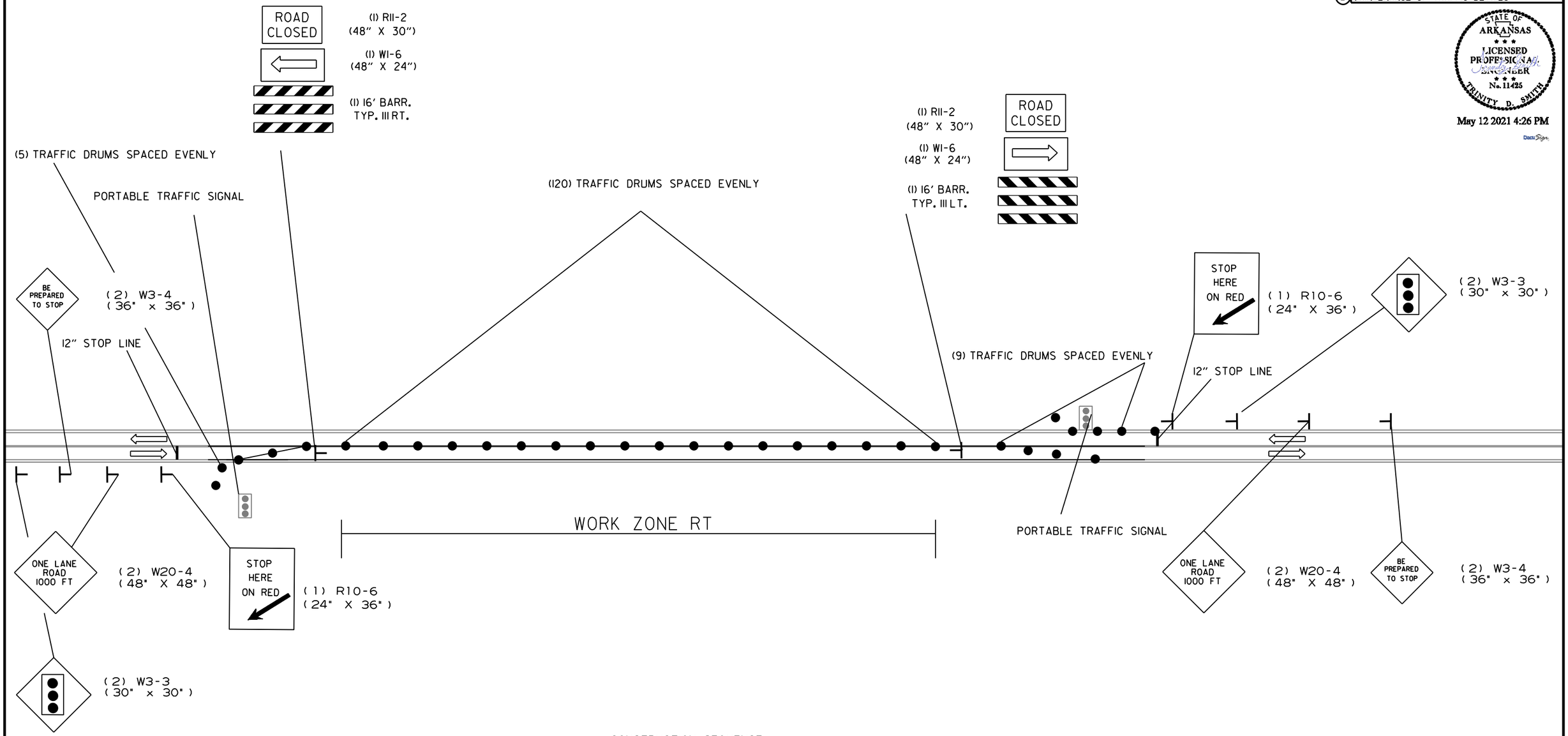

CONSTRUCTION SEQUENCE

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

USE TRAFFIC DRUMS SPACED 45' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

CONSTRUCT EMBANKMENT ON LT & RT FOR GUARDRAIL WIDENING. INSTALL GUARDRAIL AND APPROACH GUTTERS.

END OF JOB CONSTRUCTION SEQUENCE

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

7/23/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	12	72

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
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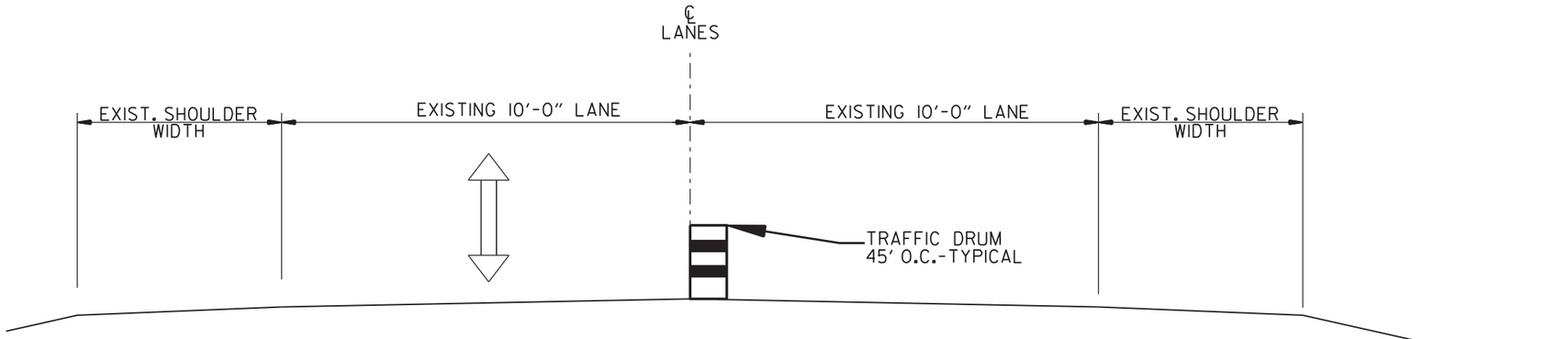
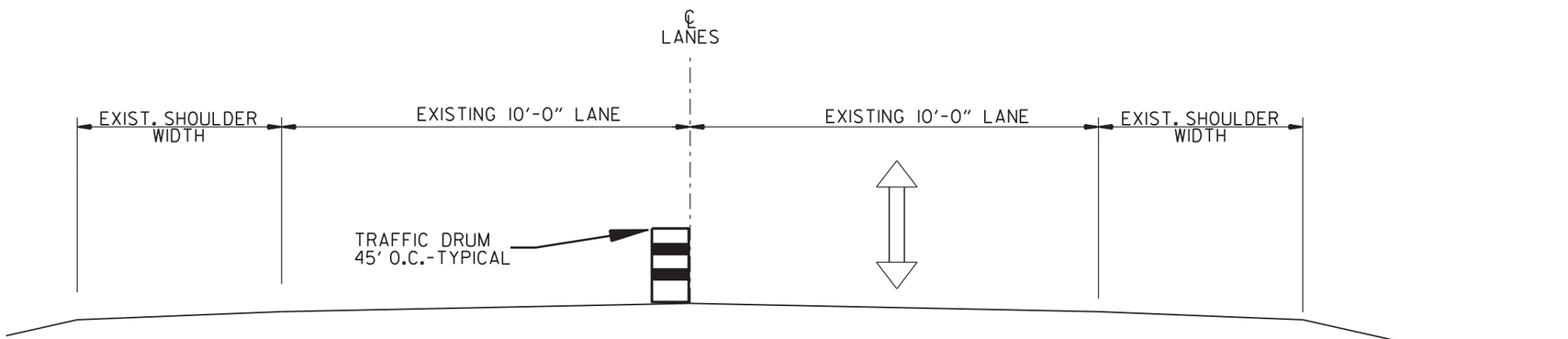


LOCATION OF TRAFFIC DRUMS FOR MAINTENANCE OF TRAFFIC
RIGHT LANE CLOSED
(SHOWN IN DIRECTION OF STATIONING)

STAGE 1
APPROACH GUTTERS
&
GUARDRAIL INSTALLMENT



LOCATION OF TRAFFIC DRUMS FOR MAINTENANCE OF TRAFFIC
LEFT LANE CLOSED
(SHOWN IN DIRECTION OF STATIONING)

STAGE 2
APPROACH GUTTERS
&
GUARDRAIL INSTALLMENT

7/23/2020

R020629.DGN

MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	13	72

(2) PERMANENT PAVEMENT MARKING DETAILS

PERMANENT PAVEMENT MARKINGS

REFLECTORIZED PAINT PAVEMENT MARKINGS WHITE (6") = 93867 LIN. FT.
REFLECTORIZED PAINT PAVEMENT MARKINGS YELLOW (6") = 93867 LIN. FT.

RAISED PAVEMENT MARKERS (TYPE II)(YELLOW/YELLOW)(80' O.C.) = 587 EACH

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
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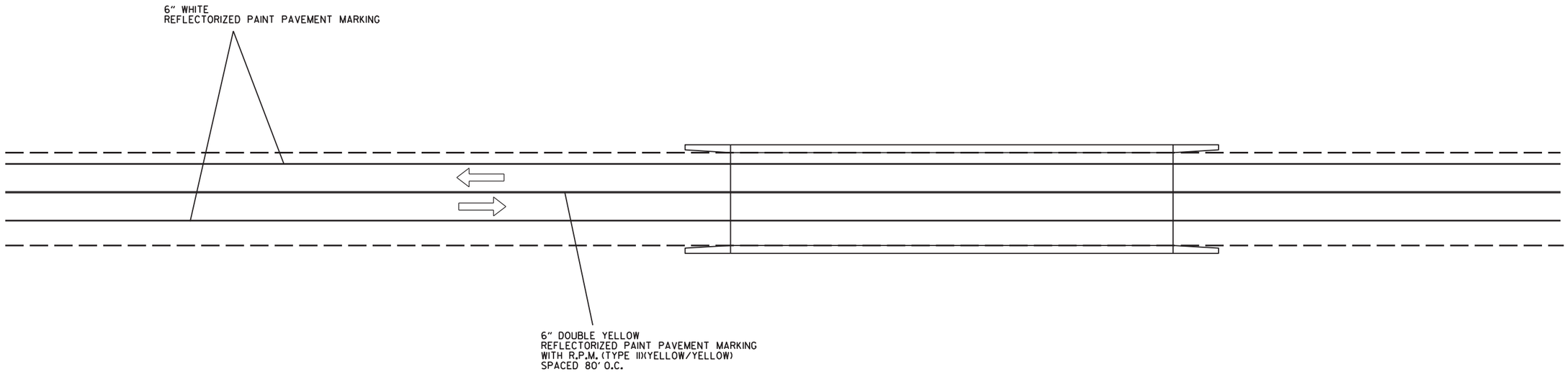

NOTE: THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS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

7/23/2020

R020629.DGN

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
11/30/20				6	ARK.			
2/19/21				JOB NO.		020629	14	72
5/12/21								

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED	BARRICADES (TYPE III)	
			LIN. FT. - EACH - LUMP SUM		NO.	SQ. FT.	EACH	LUMP SUM	RIGHT	LEFT
									LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	2	2	2	32.0				
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2	32.0				
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2	32.0				
W20-1	ROAD WORK AHEAD	48"x48"	9	9	9	144.0				
W20-4	ONE LANE ROAD 1000 FT	48"x48"	2	2	2	32.0				
W3-3	SIGNAL AHEAD	30"x30"	2	2	2	12.5				
W3-4	BE PREPARED TO STOP	36"x36"	2	2	2	18.0				
G20-2	END ROAD WORK	48"x24"	11	11	11	88.0				
R10-6	STOP HERE ON RED	24"x36"	2	2	2	12.0				
R2-1	SPEED LIMIT	24"x30"	2	2	2	10.0				
R11-2	ROAD CLOSED	48"x30"	2	2	2	20.0				
W1-6	LARGE ARROW	48"x24"	2	2	2	16.0				
R4-1	DO NOT PASS	24"x30"	2	2	2	10.0				
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	2	2	2	18.0				
W8-1	BUMP	30"x30"	2	2	2	12.5				
	TRAFFIC DRUMS		194	194			194			
	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED		1					1.00		
	TYPE III BARRICADE-RT. (16')		1	1					16	
	TYPE III BARRICADE-LT. (16')		1	1						16
TOTALS:						**489.0**	**194**	**1.00**	**16**	**16**

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	REFLECTORIZED PAINT PAVEMENT MARKING		
			TYPE II	6"		RAILROAD
			(YELLOW/YELLOW)	WHITE	YELLOW	EMBLEM
	LIN. FT. - EACH	LIN. FT.	EACH	LIN. FT.		EACH
CONSTRUCTION PAVEMENT MARKINGS	141366	141366				
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	587		587			
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	93867			93867		
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	93867				93867	
REFLECTORIZED PAVEMENT MARKINGS (RAILROAD EMBLEMS)	2					2
TOTALS:		**141366**	**587**	**93867**	**93867**	**2**

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.

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
5/12/21				JOB NO.		020629	15	72

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
130+00	133+12	HWY. 35 LT. & RT.	4	4
135+02	138+00	HWY. 35 LT. & RT.	3	3
313+00	315+43	HWY. 35 LT. & RT.	3	3
317+84	318+70	HWY. 35 LT. & RT.	1	1
353+35	355+68	HWY. 35 LT. & RT.	3	3
357+48	360+30	HWY. 35 LT. & RT.	3	3
440+25	442+42	HWY. 35 LT. & RT.	3	3
444+41	447+40	HWY. 35 LT. & RT.	3	3
TOTALS:			23	23

REMOVAL AND DISPOSAL OF GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL
			LIN. FT.
132+68.65	132+99.56	BRIDGE 03500 RT.	31
132+94.99	133+23.99	BRIDGE 03500 LT.	29
134+87.37	135+16.39	BRIDGE 03500 RT.	29
135+11.76	135+41.70	BRIDGE 03500 LT.	30
314+66.17	315+43.85	BRIDGE 05140 RT.	78
314+66.52	315+43.92	BRIDGE 05140 LT.	77
317+83.48	318+60.23	BRIDGE 05140 RT.	77
317+83.49	318+34.54	BRIDGE 05140 LT.	51
354+91.12	355+68.09	BRIDGE 05139 LT.	77
354+94.79	355+68.30	BRIDGE 05139 RT.	74
357+47.89	358+22.13	BRIDGE 05139 LT.	74
357+47.92	358+21.87	BRIDGE 05139 RT.	74
441+65.11	442+41.75	BRIDGE 05138 LT.	77
441+68.47	442+41.92	BRIDGE 05138 RT.	73
444+41.36	445+18.61	BRIDGE 05138 LT.	77
444+41.71	445+15.59	BRIDGE 05138 RT.	74
TOTAL:			1002

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.

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	BRIDGE END TERMINAL
			LIN. FT.	EACH		
130+77.22	133+02.22	HWY. 35 RT	225	1	1	
131+72.46	133+22.46	HWY. 35 LT	150	1	1	
134+90.93	136+40.93	HWY. 35 RT	150	1	1	
135+11.17	137+36.17	HWY. 35 LT	225	1	1	
313+18.88	315+43.88	HWY. 35 RT	225	1	1	
313+93.88	315+43.88	HWY. 35 LT	150	1	1	
317+83.49	318+08.49	HWY. 35 RT				1
317+83.49	318+08.49	HWY. 35 LT				1
353+93.21	355+68.21	HWY. 35 RT	175	1	1	
354+18.21	355+68.21	HWY. 35 LT	150	1	1	
357+47.91	358+97.91	HWY. 35 RT		1	1	
357+47.91	359+72.91	HWY. 35 LT	225	1	1	
440+16.97	442+41.97	HWY. 35 RT	225	1	1	
440+91.97	442+41.97	HWY. 35 LT	150	1	1	
444+41.34	445+91.35	HWY. 35 RT		1	1	
444+41.34	446+66.35	HWY. 35 LT	225	1	1	
TOTALS:			2275	14	14	2

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10/27/20		2/19/21		6	ARK.			
11/30/20		5/12/21		JOB NO.		020629	16	72
1/5/21				(2) QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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SOIL LOG

LOG MILE	SECTION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
		DEG	MIN	SEC	DEG	MIN	SEC		FEET				
5.35	9	33	32	3.00	9	21	50.30	5' RT	0-5	34	16	A-6(16)	BROWN
5.35	9	33	32	2.90	9	21	50.40	15' RT	0-5	31	13	A-6(12)	BROWN
5.60	9	33	32	3.00	9	21	34.40	15' LT	0-5	32	14	A-6(10)	BROWN
5.85	9	33	32	2.80	9	21	19.30	5' RT	0-5	39	15	A-6(15)	GRAY
5.85	9	33	32	2.70	9	21	19.30	15' RT	0-5	32	16	A-6(10)	BROWN
6.10	9	33	32	2.40	9	21	3.80	5' LT	0-5	63	38	A-7-6(36)	BROWN
6.10	9	33	32	2.50	9	21	3.80	15' LT	0-5	43	24	A-7-6(16)	BROWN
0.20	10	33	32	3.30	9	20	49.80	15' RT	0-5	60	43	A-7-6(44)	BROWN
0.20	10	33	32	3.30	9	20	49.80	15' LT	0-5	38	22	A-6(9)	BROWN
0.45	10	33	32	4.50	9	20	34.30	5' LT	0-5	64	47	A-7-6(51)	BROWN
0.45	10	33	32	4.60	9	20	34.30	15' LT	0-5	46	24	A-7-6(21)	BROWN
0.70	10	33	32	5.50	9	20	18.80	5' RT	0-5	74	47	A-7-6(39)	BR/GR
0.70	10	33	32	5.50	9	20	18.80	15' RT	0-5	90	57	A-7-5(66)	BROWN
0.95	10	33	32	6.90	9	20	3.20	15' LT	0-5	30	16	A-2-6(0)	BROWN
1.20	10	33	32	7.10	9	19	47.40	5' RT	0-5	27	5	A-4(4)	BROWN
1.20	10	33	32	7.00	9	19	47.40	15' RT	0-5	ND	NP	A-4(0)	BROWN
1.45	10	33	32	8.30	9	19	32.00	5' LT	0-5	ND	NP	A-4(0)	BROWN
1.45	10	33	32	8.40	9	19	32.00	15' LT	0-5	ND	NP	A-4(0)	BROWN
1.70	10	33	32	9.50	9	19	16.50	5' RT	0-5	ND	NP	A-4(0)	BROWN
1.70	10	33	32	9.30	9	19	16.50	15' RT	0-5	ND	NP	A-4(0)	BROWN
1.95	10	33	32	10.70	9	19	1.00	5' LT	0-5	24	4	A-4(2)	BROWN
1.95	10	33	32	10.80	9	19	1.00	15' LT	0-5	32	14	A-6(13)	BROWN
2.20	10	33	32	11.90	9	18	45.40	5' RT	0-5	54	32	A-7-6(34)	BR/GR
2.20	10	33	32	11.80	9	18	45.40	15' RT	0-5	63	45	A-7-6(48)	BR/GR
2.45	10	33	32	13.20	9	18	30.00	5' LT	0-5	36	21	A-6(20)	BR/GR
2.45	10	33	32	13.30	9	18	30.00	15' LT	0-5	37	22	A-6(20)	BR/GR
2.70	10	33	32	14.30	9	18	14.40	5' RT	0-5	34	18	A-6(17)	BROWN
2.70	10	33	32	14.20	9	18	14.40	15' RT	0-5	23	3	A-4(0)	BROWN
2.95	10	33	32	15.70	9	17	58.90	5' LT	0-5	34	17	A-6(15)	BROWN
2.95	10	33	32	15.80	9	17	59.00	15' LT	0-5	34	17	A-6(16)	BROWN
3.20	10	33	32	16.80	9	17	43.20	5' RT	0-5	29	14	A-6(7)	BROWN
3.20	10	33	32	16.80	9	17	43.20	15' RT	0-5	31	13	A-6(9)	BROWN
3.45	10	33	32	18.20	9	17	27.90	5' LT	0-5	26	10	A-4(8)	BROWN
3.95	10	33	32	20.70	9	16	56.80	5' LT	0-5	59	39	A-7-6(36)	BROWN
3.95	10	33	32	20.70	9	16	56.70	15' LT	0-5	36	18	A-6(12)	BROWN
4.20	10	33	32	21.70	9	16	41.40	5' RT	0-5	48	28	A-7-6(25)	BROWN
4.20	10	33	32	21.70	9	16	41.40	15' RT	0-5	43	29	A-7-6(24)	BR/GR
4.45	10	33	32	23.10	9	16	25.90	5' LT	0-5	51	29	A-7-6(32)	BROWN
4.45	10	33	32	23.20	9	16	26.00	15' LT	0-5	56	33	A-7-6(34)	BROWN
4.70	10	33	32	24.20	9	16	10.20	5' RT	0-5	53	32	A-7-6(35)	BR/GR
4.70	10	33	32	24.20	9	16	10.20	15' RT	0-5	45	25	A-7-6(23)	BROWN
4.95	10	33	32	25.50	9	15	54.80	5' LT	0-5	58	36	A-7-6(36)	BROWN
4.95	10	33	32	25.60	9	15	54.80	15' LT	0-5	38	21	A-6(18)	BROWN
5.20	10	33	32	24.30	9	15	39.40	5' RT	0-5	42	22	A-7-6(22)	BR/GR
5.20	10	33	32	24.20	9	15	39.40	15'RT	0-5	63	45	A-7-6(47)	BR/GR
5.45	10	33	32	22.20	9	15	24.10	5' LT	0-5	66	40	A-7-6(46)	BR/GR
5.45	10	33	32	22.30	9	15	24.00	15' LT	0-5	59	38	A-7-6(36)	BR/GR
5.75	10	33	32	19.40	9	15	5.50	5' RT	0-5	56	34	A-7-6(37)	BR/GR
5.75	10	33	32	19.40	9	15	5.50	15' RT	0-5	51	31	A-7-6(28)	BR/GR
5.95	10	33	32	17.80	9	14	53.20	5' LT	0-5	64	44	A-7-6(48)	BR/GR
5.95	10	33	32	17.90	9	14	53.20	15' LT	0-5	58	38	A-7-6(38)	BR/GR
0.30	11	33	32	13.00	9	14	20.00	5' RT	0-5	60	38	A-7-6(39)	BR/GR
0.30	11	33	32	12.90	9	14	20.00	15' RT	0-5	60	35	A-7-6(40)	BR/GR
0.55	11	33	32	11.00	9	14	4.60	5' LT	0-5	63	41	A-7-6(45)	BROWN
0.55	11	33	32	11.10	9	14	4.60	15' LT	0-5	38	20	A-6(17)	BR/GR
0.80	11	33	32	19.90	9	13	56.80	5' RT	0-5	60	39	A-7-6(43)	BR/GR
0.80	11	33	32	20.00	9	13	56.60	15' RT	0-5	59	38	A-7-6(39)	BR/GR
1.05	11	33	32	31.40	9	14	4.80	5' LT	0-5	54	31	A-7-6(34)	BR/GR
1.05	11	33	32	31.30	9	14	4.90	15' LT	0-5	54	34	A-7-6(32)	BR/GR
1.30	11	33	32	42.60	9	14	12.50	5' RT	0-5	38	22	A-6(21)	BR/GR
1.30	11	33	32	42.70	9	14	12.40	15' RT	0-5	50	33	A-7-6(35)	BR/GR
1.55	11	33	32	53.80	9	14	20.50	5' LT	0-5	39	21	A-6(21)	BR/GR
1.55	11	33	32	53.70	9	14	20.60	15' LT	0-5	48	29	A-7-6(30)	BR/GR
1.80	11	33	33	5.30	9	14	27.80	5' RT	0-5	54	31	A-7-6(35)	BR/GR
1.80	11	33	33	5.30	9	14	27.70	15' RT	0-6	37	19	A-6(18)	BR/GR
2.02	11	33	33	11.10	9	14	27.90	5' LT	0-5	55	36	A-7-6(39)	BROWN
2.02	11	33	33	11.20	9	14	28.00	15' LT	0-5	49	30	A-7-6(29)	BROWN

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

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	225	450
DIRECTED BY THE ENGINEER		
TOTALS:	**225**	**450**

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

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

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
100+00.00	101+00.00	TRANSITION	20.00	222.22
132+12.34	133+12.34	TRANSITION	20.00	222.22
135+01.05	136+01.05	TRANSITION	20.00	222.22
203+17.00	203+42.00	TRANSITION	20.00	55.55
203+52.00	203+77.00	TRANSITION	20.00	55.55
314+43.88	315+43.88	TRANSITION	20.00	222.22
317+83.49	318+83.49	TRANSITION	20.00	222.22
354+68.21	355+68.21	TRANSITION	20.00	222.22
357+47.91	358+47.91	TRANSITION	20.00	222.22
441+41.97	442+41.97	TRANSITION	20.00	222.22
444+41.35	445+41.35	TRANSITION	20.00	222.22
569+20.00	571+22.08	TRANSITION	VAR	835.34
TOTAL:				**2946.44**

NOTE: AVERAGE MILLING DEPTH 2".

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
ENTIRE	PROJECT	HWY. 35 GUARDRAIL WIDENING	112	615
ENTIRE	PROJECT	APPROACHES		975
TOTALS:			**112**	**1590**

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

7/8/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10/27/20				6	ARK.			
2/19/21				JOB NO.		020629	17	72
				(2) QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

Mar 9 2021 2:40 PM

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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 TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			3.26	6.52	3.26	332.5	3.26	3.26	3.26	66.5	484	33	3040	113
TOTALS:			3.26	6.52	3.26	332.5	3.26	3.26	3.26	66.5	484	33	3040	113

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
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.

7/8/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
5/12/21				JOB NO.		020629	18	72

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS EACH
116+37	24" X 12" X 24' SID DRAIN RT.	1
136+60	18" X 24' SIDE DRAIN RT.	1
228+58	18" X 18' SIDE DRAIN LT.	1
229+97	18" X 25' SIDE DRAIN LT.	1
234+70	18" X 20' SIDE DRAIN LT.	1
236+10	18" X 24' SIDE DRAIN LT.	1
237+32	18" X 24' SIDE DRAIN LT.	1
304+94	18" X 20' SIDE DRAIN LT.	1
318+78	18" X 26 SIDE DRAIN RT.	1
318+46	18" X 82' SIDE DRAIN LT.	1
353+75	18" X 20' SIDE DRAIN RT.	1
TOTALS:		**11**

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

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS				STANDARD DRAWINGS
								18"	24"	36"	22"X14"	
			FEET	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.				
116+37.00	RT	HWY. 35	20	74.09					34			PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
136+60.00	RT	HWY. 35	16		134.72	14.82	55.01	28				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
228+58.00	LT	HWY. 35	20	75.51				30				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
229+97.00	LT	HWY. 35	20	75.40				30				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
234+69.00	LT	HWY. 35	16	62.58				28				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
236+10.00	LT	HWY. 35	16	62.60				28				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
237+32.00	LT	HWY. 35	16	62.99				30				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
304+94.00	LT	HWY. 35	16	63.63							28	PCC-1, PCM-1
318+46.00	LT	HWY. 35	20		193.91	21.33	79.18	28				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
318+78.00	RT	HWY. 35	20		266.71	29.34	108.91	28				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
353+72.00	RT	HWY. 35	16		89.24	9.82	36.44	34				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
360+60.00	LT	HWY. 35	16		126.19	13.88	51.53	50				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
439+40.00	RT	HWY. 35	16		81.65	8.98	33.34	36				PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
440+00.00	LT	HWY. 35	16		169.24	18.62	69.11			78		PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
* ENTIRE PROJECT TEMPORARY DRIVES							150.00					
TOTALS:				**476.80**	**1061.66**	**116.79**	**583.52**	**350**	**34**	**78**	**28**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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.

7/8/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
11/30/20				6	ARK.			
2/19/21				JOB NO.		020629	19	72
5/12/21				(2) QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

May 12 2021 4:27 PM

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DRIVEWAYS & TURNOUTS

LOG MILE	SIDE	LOCATION	WIDTH	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		TACK COAT	
			FEET	SQ. YD.	TON	GALLONS/ SQ. YD.	GALLON
101+97.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
102+62.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
103+00.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
103+98.00	RT.	HWY. 35	18	16.89	1.86	0.17	2.87
105+34.00	RT.	HWY. 35	18	16.89	1.86	0.17	2.87
105+36.00	LT.	HWY. 35	24	19.56	2.15	0.17	3.33
110+05.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
115+82.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
116+60.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
120+45.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
122+00.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
123+57.00	RT.	HWY. 35	18	16.89	1.86	0.17	2.87
125+12.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
128+18.00	RT.	HWY. 35	18	123.19	13.55	0.17	20.94
140+99.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
155+40.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
169+31.00	LT.	HWY. 35	24	19.56	2.15	0.17	3.33
169+47.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
197+35.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
198+78.00	RT.	HWY. 35	20	17.78	1.96	0.17	3.02
199+95.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
201+46.00	LT.	HWY. 35	20	131.19	14.43	0.17	22.30
201+92.00	RT.	HWY. 35	20	131.19	14.43	0.17	22.30
204+41.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
205+22.00	LT.	HWY. 35	20	17.78	1.96	0.17	3.02
205+60.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
206+55.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
207+58.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
210+40.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
210+49.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
215+10.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
216+61.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
217+70.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
220+51.00	LT.	HWY 159 TURNOUT	22	88.67	9.75	0.17	15.07
220+58.00	RT.	HWY 208 TURNOUT	18	77.12	8.48	0.17	13.11
221+29.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
222+87.00	RT.	HWY. 35	22	18.67	2.05	0.17	3.17
223+74.00	RT.	HWY. 35	24	19.56	2.15	0.17	3.33
224+09.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
224+75.00	RT.	HWY. 35	20	17.78	1.96	0.17	3.02
225+82.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
226+63.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
229+11.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
230+19.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
230+65.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
231+60.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
232+66.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
240+29.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
242+18.00	LT.	HWY. 35	24	19.56	2.15	0.17	3.33
246+32.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
249+82.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
251+22.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
274+31.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
276+36.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
276+62.00	RT.	HWY. 35	20	17.78	1.96	0.17	3.02
282+41.00	RT.	HWY. 35	20	17.78	1.96	0.17	3.02
302+53.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
302+65.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
304+94.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
319+70.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
320+54.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
329+86.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
331+14.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
341+65.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
346+11.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
358+50.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
365+76.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
380+08.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
386+93.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
394+74.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
395+44.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
410+48.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
410+61.00	RT.	HWY. 35	20	17.78	1.96	0.17	3.02
428+80.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
445+24.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
472+29.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
475+84.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
478+33.00	LT.	HWY. 35	28	21.33	2.35	0.17	3.63
479+79.00	RT.	HWY. 35	16	16.00	1.76	0.17	2.72
490+10.00	RT.	HWY. 35	24	19.56	2.15	0.17	3.33
503+62.00	RT.	HWY. 35	36	72.56	7.98	0.17	12.34
541+76.00	LT.	HWY. 35	16	16.00	1.76	0.17	2.72
553+63.00	RT.	HWY. 35	24	19.56	2.15	0.17	3.33
TOTALS:				**1898.63**	**208.86**		**322.77**

BASIS OF ESTIMATE:

ACHM PATCHING OF EXISTING ROADWAY

SECTION	DIRECTION	BEGIN STATION	END STATION	LENGTH	WIDTH	THICKNESS	TON
				LIN. FT.	FEET	INCHES	
10	SB	239+25	244+50	525	10	12	385
10	SB	281+10	286+35	525	10	12	385
10	SB	296+85	310+30	1345	10	12	986
10	NB	304+90	312+35	745	10	12	546
10	SB	317+90	323+15	525	10	12	385
10	NB	320+30	325+60	530	10	12	389
10	NB	420+40	430+95	1055	10	12	774
10	NB	467+65	472+95	530	10	12	389
10	SB	470+20	475+50	530	10	12	389
11	SB	505+60	510+85	525	10	12	385
11	NB	508+70	513+90	520	10	12	381
TOTAL:							**5394**

NOTE: APPROXIMATE LOCATIONS USED. EXACT LOCATIONS TO BE DETERMINED BY ENGINEER SEE SECTION 104.03 OF THE STD. SPECS.

APPROACH GUTTERS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE AT)	APPROACH GUTTER (TYPE CT)	REINFORCING STEEL-RDWY. (GR. 60)
			CU.YD.		POUND
132+78.34	132+98.34	RT. SIDE		2.09	148
133+06.34	133+26.34	LT. SIDE		2.09	148
134+87.35	135+07.35	RT. SIDE		2.09	148
135+15.35	135+35.35	LT. SIDE		2.09	148
315+07.38	315+43.88	LT. SIDE	9.40		831
315+07.38	315+43.88	RT. SIDE	9.40		831
317+83.49	318+00.49	LT. SIDE	9.40		831
317+83.49	318+00.49	RT. SIDE	9.40		831
355+31.71	355+68.21	LT. SIDE	9.40		831
355+31.71	355+68.21	RT. SIDE	9.40		831
357+47.91	357+84.41	LT. SIDE	9.40		831
357+47.91	357+84.41	RT. SIDE	9.40		831
442+05.47	442+41.97	LT. SIDE	9.40		831
442+05.47	442+41.97	RT. SIDE	9.40		831
444+41.35	444+77.85	LT. SIDE	9.40		831
444+41.35	444+77.85	RT. SIDE	9.40		831
TOTALS:			**112.80**	**8.36**	**10564**

NOTE: USE T =" FOR 2" SHOULDER.

7/8/2020

R020629.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
11/30/20		5/13/21	
2/19/21			
5/12/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	20	72

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
May 17 2021 9:12 AM

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT							ACHM SURFACE COURSE (1/2")								
				TON / STATION	TON	(0.05 GAL. PER SQ. YD.)			(0.17 GAL. PER SQ. YD.)			TOTAL GALLONS	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			TOTAL WID. FEET	SQ.YD.	GALLON	TOTAL WID. FEET	SQ.YD.	GALLON		FEET			TON	FEET			TON	TON
MAIN LANES																					
100+00.00	101+00.00	TRANSITION	100.00														20.00	244.44	220.00	26.89	26.89
101+00.00	132+12.34	HWY. 35 TWO LANE OVERLAY	3112.34	4.00	124.49	20.00	6916.31	345.82				345.82					20.00	6916.31	220.00	760.79	760.79
135+01.05	203+42.00	HWY. 35 TWO LANE OVERLAY	6840.95	4.00	273.64	20.00	15202.11	760.11				760.11					20.00	15202.11	220.00	1672.23	1672.23
203+52.00	315+43.88	HWY. 35 TWO LANE OVERLAY	11191.88	4.00	447.68	20.00	24870.84	1243.54				1243.54					20.00	24870.84	220.00	2735.79	2735.79
317+83.49	355+68.21	HWY. 35 TWO LANE OVERLAY	3784.72	4.00	151.39	20.00	8410.49	420.52				420.52					20.00	8410.49	220.00	925.15	925.15
357+47.91	442+41.97	HWY. 35 TWO LANE OVERLAY	8494.06	4.00	339.76	20.00	18875.69	943.78				943.78					20.00	18875.69	220.00	2076.33	2076.33
444+41.35	569+20.00	HWY. 35 TWO LANE OVERLAY	12478.65	4.00	499.15	20.00	27730.33	1386.52				1386.52					20.00	27730.33	220.00	3050.34	3050.34
569+20.00	571+22.08	HWY. 35 TWO LANE OVERLAY	202.08	4.00	8.08	VAR.	835.34	41.77				41.77					VAR.	835.34	220.00	91.89	91.89
569+20.00	571+22.08	TRANSITION	202.08														VAR.	835.34	220.00	91.89	91.89
ADDITIONAL FOR LEVELING																					
101+00.00	132+12.34		3112.34						20.00	6916.31	1175.77	1175.77	20.00	6916.31	VAR.	760.79					760.79
135+01.05	203+42.00		6840.95						20.00	15202.11	2584.36	2584.36	20.00	15202.11	VAR.	1672.23					1672.23
203+52.00	315+43.88		11191.88						20.00	24870.84	4228.04	4228.04	20.00	24870.84	VAR.	2735.79					2735.79
317+83.49	355+68.21		3784.72						20.00	8410.49	1429.78	1429.78	20.00	8410.49	VAR.	925.15					925.15
357+47.91	442+41.97		8494.06						20.00	18875.69	3208.87	3208.87	20.00	18875.69	VAR.	2076.33					2076.33
444+41.35	569+20.00		12478.65						20.00	27730.33	4714.16	4714.16	20.00	27730.33	VAR.	3050.34					3050.34
569+20.00	571+22.08		202.08						20.00	449.07	76.34	76.34	20.00	449.07	VAR.	49.40					49.40
ADDITIONAL FOR GUARDRAIL WIDENING																					
130+34.22	130+67.22	HWY. 35 RT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
130+67.22	130+77.22	HWY. 35 RT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
130+77.22	133+02.22	HWY. 35 RT.	225.00	46.25	104.06												5.50	137.50	220.00	15.13	15.13
131+29.46	131+62.46	HWY. 35 LT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
131+62.46	131+72.46	HWY. 35 LT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
131+72.46	133+22.46	HWY. 35 LT.	150.00	46.25	69.38												5.50	91.67	220.00	10.08	10.08
134+90.93	136+40.93	HWY. 35 RT.	150.00	46.25	69.38												5.50	91.67	220.00	10.08	10.08
136+40.93	136+50.93	HWY. 35 RT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
136+50.93	136+83.93	HWY. 35 RT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
135+11.17	137+36.17	HWY. 35 LT.	225.00	46.25	104.06												5.50	137.50	220.00	15.13	15.13
137+36.17	137+46.17	HWY. 35 LT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
137+46.17	137+79.17	HWY. 35 LT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
312+75.88	313+08.88	HWY. 35 RT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
313+08.88	313+18.88	HWY. 35 RT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
313+18.88	315+43.88	HWY. 35 RT.	225.00	46.25	104.06												5.50	137.50	220.00	15.13	15.13
313+50.88	313+83.88	HWY. 35 LT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
313+83.88	313+93.88	HWY. 35 LT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
313+93.88	315+43.88	HWY. 35 LT.	150.00	46.25	69.38												5.50	91.67	220.00	10.08	10.08
317+83.49	318+13.49	HWY. 35 LT.	30.00	46.25	13.88												5.50	18.33	220.00	2.02	2.02
317+83.49	318+13.49	HWY. 35 RT.	30.00	46.25	13.88												5.50	18.33	220.00	2.02	2.02
353+50.21	353+83.21	HWY. 35 RT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
353+83.21	353+93.21	HWY. 35 RT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
353+93.21	355+68.21	HWY. 35 RT.	175.00	46.25	80.94												5.50	106.94	220.00	11.70	11.70
353+75.21	354+08.21	HWY. 35 LT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
354+08.21	354+18.21	HWY. 35 LT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
354+18.21	355+68.21	HWY. 35 LT.	150.00	46.25	69.38												5.50	91.67	220.00	10.08	10.08
357+47.91	358+15.91	HWY. 35 RT.	68.00	46.25	31.45												5.50	41.56	220.00	4.57	4.57
358+15.91	358+25.91	HWY. 35 RT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
358+25.91	358+46.91	HWY. 35 RT. - TAPER	21.00	23.13	4.86												2.75	6.42	220.00	0.71	0.71
357+47.91	359+72.91	HWY. 35 LT.	225.00	46.25	104.06												5.50	137.50	220.00	15.13	15.13
359+72.91	359+82.91	HWY. 35 LT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
359+82.91	360+15.91	HWY. 35 LT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
439+73.97	440+06.97	HWY. 35 RT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
440+06.97	440+16.97	HWY. 35 RT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
440+16.97	442+41.97	HWY. 35 RT.	225.00	46.25	104.06												5.50	137.50	220.00	15.13	15.13
440+48.97	440+81.97	HWY. 35 LT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
440+81.97	440+91.97	HWY. 35 LT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
440+91.97	442+41.97	HWY. 35 LT.	150.00	46.25	69.38												5.50	91.67	220.00	10.08	10.08
444+41.35	445+09.35	HWY. 35 RT.	68.00	46.25	31.45												5.50	41.56	220.00	4.57	4.57
445+09.35	445+19.35	HWY. 35 RT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
445+19.35	445+40.35	HWY. 35 RT. - TAPER	21.00	23.13	4.86												2.75	6.42	220.00	0.71	0.71
444+41.35	446+66.35	HWY. 35 LT.	225.00	46.25	104.06												5.50	137.50	220.00	15.13	15.13
446+66.35	446+76.35	HWY. 35 LT.	10.00	46.25	4.63												4.50	5.00	220.00	0.55	0.55
446+76.35	447+09.35	HWY. 35 LT. - TAPER	33.00	23.13	7.63												2.75	10.08	220.00	1.11	1.11
TOTALS					**3153.15**		**102841.11**	**5142.06**		**102454.84**	**17417.32**	**22559.38**		**102454.84**		**11270.03**		**105634.76**		**11619.86**	**22889.89**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

7/8/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
5/12/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	21	72

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

May 12 2021 4:27 PM

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7/8/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/08/20		11/30/20		1/19/21		04/14/21	
10/27/20		12/15/20		2/19/21		05/12/21	
10/29/20		1/5/21		3/29/21		05/13/21	

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	22	72

(2) SUMMARY OF QUANTITIES & REVISIONS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

May 17 2021 9:12 AM

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	23	STATION
201	GRUBBING	23	STATION
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	11	EACH
202	REMOVAL AND DISPOSAL OF GUARDRAIL	1002	LIN. FT.
SS & 210	UNCLASSIFIED EXCAVATION	112	CU. YD.
210	COMPACTED EMBANKMENT	1590	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	3737	TON
SS & 401	TACK COAT	23332	GAL.
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	22009	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	1207	TON
412	COLD MILLING ASPHALT PAVEMENT	2946	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	225	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	5394	TON
504	APPROACH GUTTERS	121.16	CU. YD.
SS & 505	PORTLAND CEMENT CONCRETE DRIVEWAY	476.80	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SP, SS, & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	489	SQ. FT.
SS & 604	BARRICADES	32	LIN. FT.
SS & 604	TRAFFIC DRUMS	194	EACH
604	CONSTRUCTION PAVEMENT MARKINGS	141366	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN	350	LIN. FT.
SP, SS, & 606	24" SIDE DRAIN	34	LIN. FT.
SP, SS, & 606	36" SIDE DRAIN	78	LIN. FT.
SS & 606	22" X 14" SIDE DRAIN	28	LIN. FT.
SS & 617	GUARDRAIL (TYPE A)	2275	LIN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	14	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL	14	EACH
620	LIME	7	TON
620	SEEDING	3.26	ACRE
SS & 620	MULCH COVER	6.52	ACRE
620	WATER	399.0	M. GAL.
621	TEMPORARY SEEDING	3.26	ACRE
621	SILT FENCE	3040	LIN. FT.
621	SAND BAG DITCH CHECKS	484	BAG
621	SEDIMENT REMOVAL AND DISPOSAL	113	CU. YD.
621	ROCK DITCH CHECKS	33	CU. YD.
623	SECOND SEEDING APPLICATION	3.26	ACRE
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
SP	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED	1.00	LUMP SUM
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	93867	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	93867	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING (RAILROAD EMBLEMS)	2	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	587	EACH
SS & 734	BRIDGE END TERMINAL	2	EACH
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	10564	POUND

REVISIONS

DATE	REVISION	SHEET NUMBER
10/8/2020	REVISED SS 1C0-3. ADDED SUPPLEMENTAL SPECIFICATION 400-7 "TRACKLESS TACK."	3 & 72
10/27/2020	REVISED EXISTING RIGHT OF WAY. REVISED TEMPORARY EROSION CONTROL SHEETS. REVISED THE QUANTITIES UNCLASSIFIED EXCAVATION, COMPACTED EMBANKMENT, 24" PIPE CULVERTS ALTERNATE, 36" PIPE CULVERTS ALTERNATE, SOLID SODDING, UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY, CLASS S CONCRETE - ROADWAY, AND REINFORCING STEEL - ROADWAY (GRADE 60). REVISED THE PLAN AND PROFILE SHEETS.	9-59, 65, 66, 72, & 91-122
10/29/2020	ADDED THE SPECIAL PROVISION PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT. REVISED PLAN AND PROFILE SHEET.	3, 72, & 92
11/30/2020	ADDED THE SPECIAL PROVISION "PORTABLE TRAFFIC SIGNAL SYSTEM". REVISED THE TYPICAL SECTIONS. ADDED MAINTENANCE OF TRAFFIC DETAILS FOR PORTABLE TRAFFIC SIGNAL SYSTEM. REVISED THE QUANTITIES SOIL STABILIZATION, PROCESSING LIME TREATED SUBGRADE AND ALTERNATES, TACK COAT, MINERAL AGGREGATE IN ACHM BINDER COURSE (1"), ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1"), MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2"), ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2"), AND PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED.	3-5, 60A, 60B, 63, 65, 68-70, & 72
12/15/2020	REVISED TEMPORARY CONSTRUCTION EASEMENT ANNOTATION TO CORRELATE WITH RIGHT OF WAY.	17,19-20,34,36-37,51,53-54,72,108, & 112-114
1/5/2021	ADDED NOTE TO EARTHWORK QUANTITY BOX	65 & 72
1/19/2021	ADDED DELAY IN RIGHT OF WAY OCCUPANCY SPECIAL PROVISION	3 & 72
2/19/2021	REVISED ENTIRE PROJECT DUE TO SCOPE CHANGES. REMOVED THE STANDARD DRAWINGS: CDP-1, FES-1, FES-2, MB-1, PBC-1, PCC-1, PU-1, RCB-1, RCB-2, RCB-3, SE-2, W-X003-1, AND R-100X-0. REMOVED THE SPECIAL PROVISIONS: CULVERT CLEAN OUT, EXTENSION FOR PIPE CULVERTS, SHORING FOR CULVERTS, AND SOIL STABILIZATION. REVISED THE STORM WATER POLLUTION PREVENTION PLAN SPECIAL PROVISION. REMOVED FHWA-1273 SUPPLEMENT - TRAINING PROGRAM AND SS-605. REVISED ALL QUANTITIES.	ALL SHEETS
3/29/2021	REVISED THE MANDATORY ELECTRONIC DOCUMENT SUBMITTAL SPECIAL PROVISION.	22
4/14/2021	REVISED "DELAY IN RIGHT OF WAY OCCUPANCY" AND "UTILITY ADJUSTMENTS" SPECIAL PROVSIONS.	22
5/12/2021	REVISED TEMPORARY CONSTRUCTION EASEMENT ANNOTATION AT DRIVEWAY STA. 439+40 TO CORRELATE WITH RIGHT OF WAY. REVISED TEMPOARY CONSTRUCTION EASEMENTS AND DRIVEWAYS AT STA. 360+00 AND STA. 447+00. REVISED THE MAINTENANCE OF TRAFFIC DETAILS TO INCLUDE THE CORRECT SIGNAGE FOR THE PORTABLE TRAFFIC SIGNAL SYSTEM. REVISED THE GENERAL NOTES. REMOVED THE BRIDGE STANDARD DRAWING: STANDARD DETAILS FOR JOINT REPAIRS & MODIFICATION. REMOVED THE SCHEDULE OF BRIDGE QUANTITIES. REMOVED THE SPECIAL PROVISIONS: BRIDGE DECK REPAIR FOR POLYMER OVERLAYS, PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI), AND POLYMER OVERLAY. REVISED THE QUANTITIES COMPACTED EMBANKMENT, AGGREGATE BASE COURSE (CLASS 7), TACK COAT, MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2"), ASPHLAT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2"), SIGNS, 18" SIDE DRAIN, 36" SIDE DRAIN, GUARDRAIL (TYPE A), REINFORCING STEEL - BRIDGE (GRADE 60), SILICONE JOINT SEALANT, BRIDGE DECK REPAIR FOR POLYMER OVERLAYS, AND POLYMER OVERLAY.	1-3,10,11,14-16,18-22,55, 58, 63, & 64
5/13/2021	REVISED THE TYPICAL SECTION TO INCLUDE AN AGGREGE WEDGE AT THE PAVEMENT EDGE. REVISED THE QUANTITY: AGGREGATE BASE COURSE (CLASS 7)	4,20, & 22

7/8/2020

R020629.DGN

SUMMARY OF QUANTITIES & REVISIONS

SURVEY CONTROL COORDINATES

Project Name: s020629
Date: 2/19/2019
Coordinate System: ARKANSAS STATE PLANE - SOUTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	1628173.0634	1505064.2006	134.944	CTL	STD ARDOT CAP STAMPED PN: 1
2	1628667.1637	1506077.5284	134.953	CTL	STD ARDOT CAP STAMPED PN: 2
3	1628671.8679	1506972.6674	134.378	CTL	STD ARDOT CAP STAMPED PN: 3
4	1628673.1100	1507841.4421	135.261	CTL	STD ARDOT CAP STAMPED PN: 4
5	1628675.1011	1508794.9910	134.318	CTL	STD ARDOT CAP STAMPED PN: 5
6	1628641.0304	1509604.0407	135.666	CTL	STD ARDOT CAP STAMPED PN: 6
7	1628664.0615	1510523.0419	134.380	CTL	STD ARDOT CAP STAMPED PN: 7
8	1628744.7905	1511425.9053	134.380	CTL	STD ARDOT CAP STAMPED PN: 8
9	1628826.0665	1512292.6509	134.919	CTL	STD ARDOT CAP STAMPED PN: 9
10	1628911.9467	1513210.1350	134.061	CTL	STD ARDOT CAP STAMPED PN: 10
11	1628996.4929	1514102.2088	134.130	CTL	STD ARDOT CAP STAMPED PN: 11
12	1629077.2418	1515002.8961	133.816	CTL	STD ARDOT CAP STAMPED PN: 12
13	1629126.9253	1515802.2114	134.436	CTL	STD ARDOT CAP STAMPED PN: 13
14	1629162.3020	1516649.6670	135.988	CTL	STD ARDOT CAP STAMPED PN: 14
15	1629264.1660	1517381.7840	137.525	CTL	STD ARDOT CAP STAMPED PN: 15
16	1628541.8065	1518066.5857	140.587	CTL	STD ARDOT CAP STAMPED PN: 16
17	1629338.5997	1518159.8703	140.054	CTL	STD ARDOT CAP STAMPED PN: 17
18	1630069.6986	1517753.9253	139.656	CTL	STD ARDOT CAP STAMPED PN: 18
19	1629383.3059	1518942.3357	139.120	CTL	STD ARDOT CAP STAMPED PN: 19
20	1629480.1506	1519929.9373	137.330	CTL	STD ARDOT CAP STAMPED PN: 20
21	1629571.4781	1520855.9178	135.098	CTL	STD ARDOT CAP STAMPED PN: 21
22	1629660.5885	1521753.9479	134.245	CTL	STD ARDOT CAP STAMPED PN: 22
23	1629751.5250	1522637.6593	134.868	CTL	STD ARDOT CAP STAMPED PN: 23
24	1629846.4076	1523589.2141	135.870	CTL	STD ARDOT CAP STAMPED PN: 24
25	1629940.4432	1524492.5435	137.272	CTL	STD ARDOT CAP STAMPED PN: 25
26	1630036.5770	1525428.4465	136.760	CTL	STD ARDOT CAP STAMPED PN: 26
27	1630121.9742	1526265.3736	138.804	CTL	STD ARDOT CAP STAMPED PN: 27
28	1630241.8811	1527121.4877	138.376	CTL	STD ARDOT CAP STAMPED PN: 28
29	1630281.3310	1527894.6017	136.773	CTL	STD ARDOT CAP STAMPED PN: 29
30	1630384.0430	1528795.0120	135.587	CTL	STD ARDOT CAP STAMPED PN: 30
31	1630481.1588	1529807.4837	131.542	CTL	STD ARDOT CAP STAMPED PN: 31
32	1630577.6336	1530742.9017	130.987	CTL	STD ARDOT CAP STAMPED PN: 32
33	1630684.0568	1531762.2048	135.639	CTL	STD ARDOT CAP STAMPED PN: 33
34	1630775.0303	1532667.4613	131.012	CTL	STD ARDOT CAP STAMPED PN: 34
35	1630900.6694	1533563.5873	131.860	CTL	STD ARDOT CAP STAMPED PN: 35
36	1630956.3892	1534394.8742	134.295	CTL	STD ARDOT CAP STAMPED PN: 36
37	1631038.3332	1535210.0133	133.252	CTL	STD ARDOT CAP STAMPED PN: 37
38	1631142.9083	1535966.2714	133.508	CTL	STD ARDOT CAP STAMPED PN: 38
39	1631152.0558	1536913.7050	132.379	CTL	STD ARDOT CAP STAMPED PN: 39
40	1631007.3687	1537828.6870	133.060	CTL	STD ARDOT CAP STAMPED PN: 40
41	1630859.1064	1538737.3136	129.874	CTL	STD ARDOT CAP STAMPED PN: 41
42	1630723.9578	1539562.9752	130.931	CTL	STD ARDOT CAP STAMPED PN: 42
43	1630658.8046	1540169.6060	134.685	CTL	STD ARDOT CAP STAMPED PN: 43
44	1630492.8574	1540962.6260	134.954	CTL	STD ARDOT CAP STAMPED PN: 44
45	1630357.4407	1541775.7260	134.176	CTL	STD ARDOT CAP STAMPED PN: 45
46	1630227.4374	1542617.2003	135.153	CTL	STD ARDOT CAP STAMPED PN: 46
47	1630110.2566	1543311.9095	134.993	CTL	STD ARDOT CAP STAMPED PN: 47
48	1629995.1819	1544027.4226	135.208	CTL	STD ARDOT CAP STAMPED PN: 48
49	1629846.4776	1544864.7498	135.460	CTL	STD ARDOT CAP STAMPED PN: 49
50	1629740.1354	1545539.4710	139.977	CTL	STD ARDOT CAP STAMPED PN: 50
51	1630002.6043	1546186.1187	144.218	CTL	STD ARDOT CAP STAMPED PN: 51
52	1630593.6294	1546327.3487	143.932	CTL	STD ARDOT CAP STAMPED PN: 52
53	1631289.3855	1545959.2906	139.705	CTL	STD ARDOT CAP STAMPED PN: 53
54	1631922.1226	1545580.6730	138.913	CTL	STD ARDOT CAP STAMPED PN: 54
55	1632681.1280	1545124.5816	138.903	CTL	STD ARDOT CAP STAMPED PN: 55
56	1633360.0033	1544716.7875	139.509	CTL	STD ARDOT CAP STAMPED PN: 56
57	1634070.1322	1544296.2028	139.629	CTL	STD ARDOT CAP STAMPED PN: 57
58	1634696.9020	1543918.4603	139.583	CTL	STD ARDOT CAP STAMPED PN: 58
59	1635345.5359	1543608.5511	140.450	CTL	STD ARDOT CAP STAMPED PN: 59
60	1635880.4842	1543637.3065	159.390	CTL	STD ARDOT CAP STAMPED PN: 60
61	1636588.9660	1543534.3944	159.022	CTL	STD ARDOT CAP STAMPED PN: 61
71	1627577.1381	1503161.7471	133.487	CTL	STD AHDT CAP STAMPED PN: 1 JOB#020595
73	1628516.4443	1502722.5325	135.458	CTL	STD AHDT CAP STAMPED PN: 3 JOB# 020595
100	1633248.2458	1500413.3730	138.092	GPS	ARDOT GPS MON. 090005
101	1632642.8661	1499794.9996	137.868	GPS	ARDOT GPS MON. 090006
103	1633765.6023	1544432.2915	138.799	GPS	ARDOT GPS MON. 090024
104	1635167.7602	1543634.8973	139.115	GPS	ARDOT GPS MON. 090024A
105	1628639.9153	1510494.4365	132.846	GPS	ARDOT GPS MON. 210051
106	1628735.0730	1511638.3537	134.565	GPS	ARDOT GPS MON. 210051A
107	1629962.7913	1524854.1803	133.817	GPS	ARDOT GPS MON. 210052
108	1630103.8963	1526298.1532	139.265	GPS	ARDOT GPS MON. 210052A
109	1630831.9281	1538730.8593	129.534	GPS	ARDOT GPS MON. 210053
110	1630626.8430	1540065.4899	133.937	GPS	ARDOT GPS MON. 210053A
900	1628250.8502	1504983.8737	135.002	TBM	X CUT IN BOLT OF FH
901	1628724.9645	1506226.0297	136.350	TBM	X CUT IN BOLT OF FH
902	1628702.1084	1507362.5756	134.993	TBM	SQUARE CUT IN CNTR N HW
903	1628671.6919	1508828.1006	133.767	TBM	SQUARE CUT CNTR S HW
904	1628686.8336	1509437.8386	137.188	TBM	BRONZE DISK IN NW CRNR BR
905	1628734.3800	1510898.8144	133.269	TBM	ARDOT CAP 24" REBAR
906	1628873.1495	1512467.1995	135.205	TBM	ARDOT CAP 24" REBAR
907	1629004.8773	1513772.5376	130.649	TBM	ARDOT CAP 24" REBAR
908	1629092.9176	1514831.7587	134.083	TBM	SQUARE CUT IN CNTR N HW
909	1629159.2539	1516204.9202	133.631	TBM	ARDOT CAP 24" REBAR
910	1629324.8640	1518004.4196	138.198	TBM	SQUARE CUT IN CNTR N HW
911	1629455.9184	1519171.9090	140.060	TBM	X CUT IN BOLT OF FH
912	1629523.7748	1520725.5634	135.646	TBM	SQUARE CUT IN CONC
913	1629693.5761	1522190.0613	127.944	TBM	SQUARE CUT ON S END CU
914	1629813.1200	1523681.3516	135.649	TBM	SQUARE CUT ON CONC
915	1630021.6042	1524894.2002	134.689	TBM	ARDOT CAP 24" REBAR
916	1630073.8778	1526276.0862	139.254	TBM	SQUARE CUT IN CONC
917	1630311.7655	1527805.8344	137.273	TBM	BRONZE DISK IN NE CRNR BR
918	1630485.3060	1529431.4002	130.972	TBM	ARDOT CAP 24" REBAR
919	1630577.7616	1530807.1479	128.172	TBM	SQUARE CUT IN S END CU
920	1630686.3299	1531752.4793	136.573	TBM	BRONZE DISK IN SE CRNR BR
921	1630889.0339	1533356.0611	129.895	TBM	ARDOT CAP 24" REBAR
922	1630905.8537	1534640.2263	130.916	TBM	SQUARE CUT IN CONC
923	1631061.4813	1535968.0005	131.440	TBM	SQUARE CUT IN CONC
924	1631211.3777	1537050.3577	130.612	TBM	SQUARE CUT IN CONC
925	1630823.9117	1538817.1396	130.916	TBM	ARDOT CAP 24" REBAR
926	1630652.5352	1540178.5695	136.606	TBM	BRONZE DISK ON NW CRNR BR
927	1630375.2586	1541599.8893	133.492	TBM	ARDOT CAP 24" REBAR
928	1630201.2201	1543148.8225	135.286	TBM	SQUARE CUT IN CONC
929	1629972.9248	1544535.2106	132.629	TBM	ARDOT CAP 24" REBAR
930	1629752.1440	1545852.9584	136.685	TBM	ARDOT CAP 24" REBAR
931	1630925.5837	1546109.9120	137.066	TBM	ARDOT CAP 24" REBAR
932	1631999.4144	1545469.3615	135.926	TBM	ARDOT CAP 24" REBAR
933	1633077.0194	1544807.0850	134.833	TBM	ARDOT CAP 24" REBAR
934	1634153.7903	1544134.2079	134.675	TBM	SQUARE CUT IN CONC
935	1635311.0602	1543554.2094	134.321	TBM	ARDOT CAP 24" REBAR
936	1636713.6091	1543500.0627	158.400	TBM	SQUARE CUT IN CONC
990	1630620.8137	1501735.6360	135.982	TBM	SQUARE CUT IN CONC 65
991	1628388.2990	1502732.1080	135.712	TBM	SQUARE CUT TOP OF CU
999	1612075.6382	1483247.2483	135.649	BM	NGS BM H 243

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.9999508502 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE s020629gi.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 - 0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 090005-090006, 090024-090024A, 210051-210051A, 210052-210052A, 210053-210053A
CONVERGENCE ANGLE: 00-23-40 RIGHT AT LT: N 33-32-17 LG: W 091-17-43
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

HWY. 35

POINT TYPE	POINT NUMBER	STATION	ELEVATION	NORTHING
POB	8000	100+00.00	1628687.9762	1506112.3897
P.I.	8001	102+00.00	1628687.0589	1506312.3875
P.I.	8002	106+46.48	1628686.9637	1506758.8691
P.I.	8003	124+89.16	1628685.6505	1508601.5478
P.C.	8004	129+89.16	1628688.0939	1509101.5418
P.T.	8006	132+63.18	1628677.9716	1509375.2907
P.C.	8007	136+88.16	1628644.5146	1509798.9580
P.T.	8009	140+69.05	1628649.3071	1510179.2865
P.I.	8010	142+82.76	1628671.4940	1510391.8376
P.I.	8011	145+76.90	1628696.1327	1510684.9450
P.I.	8012	162+16.47	1628843.9867	1512317.8320
P.I.	8013	172+99.24	1628944.6040	1513395.9178
P.I.	8014	177+50.03	1628988.8695	1513844.5279
P.I.	8015	189+74.37	1629099.3916	1515063.8738
P.C.	8016	195+56.86	1629157.5392	1515643.4512
P.T.	8018	197+25.00	1629141.7852	1515809.7921
P.C.	8019	197+55.64	1629133.0570	1515839.1643
P.T.	8021	199+21.76	1629117.1058	1516003.4918
P.I.	8022	205+39.09	1629175.8570	1516618.0174
P.I.	8023	212+38.42	1629240.7176	1517314.3310
P.I.	8024	216+16.50	1629274.5607	1517690.8956
P.I.	8025	223+91.19	1629352.3021	1518461.6720
P.I.	8026	235+85.11	1629468.6703	1519649.9100
P.I.	8027	242+18.21	1629529.0017	1520280.1266
P.I.	8028	251+54.89	1629621.4097	1521212.2451
P.I.	8029	262+24.00	1629728.1658	1522276.0106
P.I.	8030	271+62.87	1629825.0912	1523209.8644
P.I.	8031	299+01.28	1630104.3467	1525933.9908
P.I.	8032	313+17.29	1630250.1282	1527342.4857
P.I.	8033	329+87.91	1630419.9295	1529004.4505
P.I.	8034	339+16.45	1630511.0768	1529928.5067
P.I.	8035	350+32.68	1630624.5840	1531038.9493
P.I.	8036	355+27.13	1630677.1881	1531530.5913
P.I.	8037	364+20.94	1630765.4520	1532420.0301
P.I.	8038	370+14.85	1630829.0075	1533010.5340
P.I.	8039	376+97.85	1630898.7929	1533689.9560
P.I.	8040	386+46.93	1630994.4563	1534634.2038
P.I.	8041	392+77.05	1631058.3770	1535261.0726
P.C.	8042	403+67.14	1631165.8081	1536345.8540
P.T.	8044	411+14.09	1631142.2333	1537090.3251
P.I.	8045	420+01.17	1630999.1333	1537965.7812
P.I.	8046	422+89.78	1630952.0062	1538250.5217
P.I.	8047	428+68.16	1630860.8638	1538821.6703
P.I.	8048	434+90.53	1630761.2386	1539436.0201
P.I.	8049	455+95.70	1630416.9065	1541512.8369
P.I.	8050	461+67.75	1630327.1302	1542077.8005
P.I.	8051	466+97.79	1630244.4913	1542601.3526
P.I.	8052	479+86.86	1630035.3460	1543873.3451
P.I.	8053	483+51.28	1629977.0257	1544233.0716
P.I.	8054	486+71.50	1629923.7721	1544548.8291
P.C.	8055	496+54.88	1629761.9935	1545518.8148
P.T.	8057	512+35.40	1630803.9224	1546228.8416
P.I.	8058	534+79.28	1632728.8451	1545075.7215
P.I.	8059	538+03.14	1633005.9467	1544908.0919
P.C.	8060	559+26.16	1634829.0834	1543820.2537
P.T.	8062	562+80.96	1635147.7364	1543665.2119
P.C.	8063	567+97.69	1635629.9258	1543479.4700
P.T.	8065	570+03.69	1635797.6546	1543556.8592
POE	8066	571+22.08	1635836.9727	1543668.5314

HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.ROJ. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.		23	72

JOB NO. 020629

② SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11435
TIMOTHY D. SMITH
Mar 9 2021 2:41 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	24	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

Mar 9 2021 2:41 PM

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STA. 100+00
BEGIN JOB 020629
LOG MILE 5.27

100 105

POB 100+00.00
8000

PI 102+00.00 8001
Δ = 0°15'02" LT.
8001

TBM
PN:901
PD:X CUT IN BOLT OF FH 208

S 89°44'14" E

S 89°59'16" E

HWY 35

S 89°57'33" E

N 89°41'56" E 895.15'
SURVEY BASELINE

CTL
PN:2
PD:STD ARDOT CAP STAMPED PN:2

PI 106+46.48 8002
Δ = 0°01'43" RT.

CTL
PN:3
PD:STD ARDOT CAP STAMPED PN:3

1127.3'

110 115 120 125

PI 124+89.16
Δ = 0°19'15" LT.
8003

TBM
PN:902
PD:SQUARE CUT IN CNTR N HW 208

N 89°55'05" E 868.78'
SURVEY BASELINE

S 89°57'33" E

HWY 35

CTL
PN:4
PD:STD ARDOT CAP STAMPED PN:4

N 89°52'49" E 953.55'
SURVEY BASELINE

AMPED PN:3

PN:1100
PD:8 SPK TRIG ELEV

6/17/2020

R020629.DGN

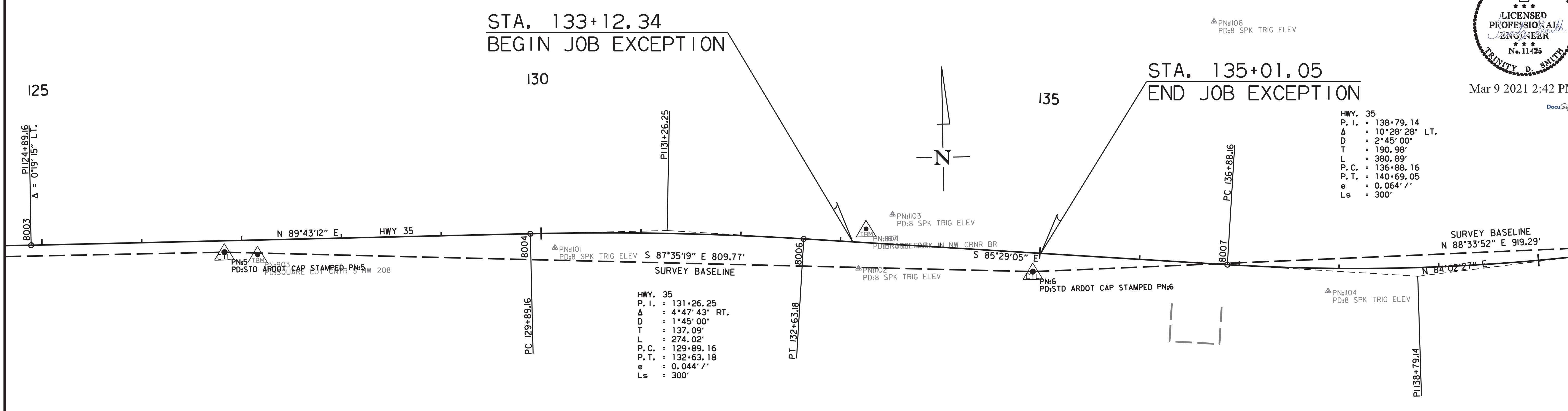
HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	25	72

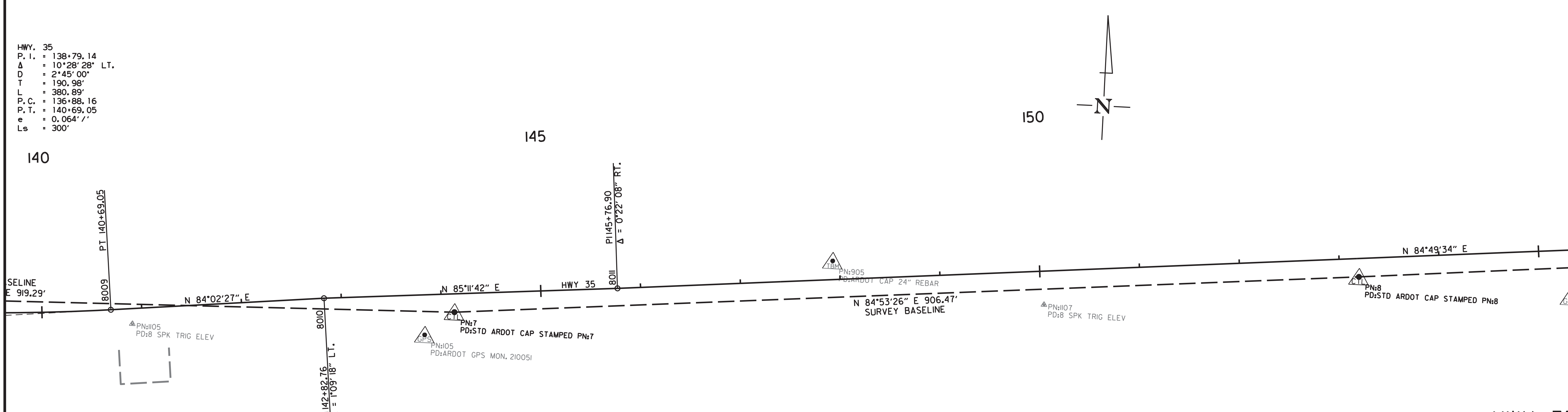
(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

Mar 9 2021 2:42 PM



STA. 133+12.34
BEGIN JOB EXCEPTION
STA. 135+01.05
END JOB EXCEPTION
125
130
135
PI124+89.16
Δ = 0°19'15" LT.
PI131+26.25
PC 136+88.16
PC 129+89.16
PT 132+63.18
PI138+79.14
8003
8004
8006
8007
N 89°43'12" E
HWY 35
S 87°35'19" E 809.77'
SURVEY BASELINE
S 85°29'05" E
SURVEY BASELINE
N 88°33'52" E 919.29'
N 84°02'27" E
PN:5
PD:STD ARDOT CAP STAMPED PN:5
PN:6
PD:STD ARDOT CAP STAMPED PN:6
PN:1101
PD:8 SPK TRIG ELEV
PN:1102
PD:8 SPK TRIG ELEV
PN:1103
PD:8 SPK TRIG ELEV
PN:1104
PD:8 SPK TRIG ELEV
PN:1106
PD:8 SPK TRIG ELEV
HWY. 35
P.I. = 131+26.25
Δ = 4°47'43" RT.
D = 1°45'00"
T = 137.09'
L = 274.02'
P.C. = 129+89.16
P.T. = 132+63.18
e = 0.044'/'
Ls = 300'
HWY. 35
P.I. = 138+79.14
Δ = 10°28'28" LT.
D = 2°45'00"
T = 190.98'
L = 380.89'
P.C. = 136+88.16
P.T. = 140+69.05
e = 0.064'/'
Ls = 300'



HWY. 35
P.I. = 138+79.14
Δ = 10°28'28" LT.
D = 2°45'00"
T = 190.98'
L = 380.89'
P.C. = 136+88.16
P.T. = 140+69.05
e = 0.064'/'
Ls = 300'
140
145
150
PT 140+69.05
PI145+76.90
Δ = 0°22'08" RT.
PI142+82.76
Δ = 1°09'18" LT.
8009
8010
8011
N 84°02'27" E
N 85°11'42" E
HWY 35
N 84°53'26" E 906.47'
SURVEY BASELINE
N 84°49'34" E
PN:7
PD:STD ARDOT CAP STAMPED PN:7
PN:8
PD:STD ARDOT CAP STAMPED PN:8
PN:105
PD:ARDOT GPS MON. 210051
PN:905
PD:ARDOT CAP 24" REBAR
PN:1105
PD:8 SPK TRIG ELEV
PN:1107
PD:8 SPK TRIG ELEV

HWY. 35
SURVEY CONTROL DETAILS

6/17/2020

R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	26	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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155 160 165

N

P.I. 162+16.47
Δ = 0° 09' 32" RT.
8012

N 84°49'34" E HWY 35 N 84°40'05" E N 84°

N 84°38'35" E 870.55'
SURVEY BASELINE

N 84°39'09" E 921.49'

GPS PN:106
PD:ARDOT GPS MON. 210051A

P.I. PN:9
PD:STD ARDOT CAP STAMPED PN:9

TBM PN:906
PD:ARDOT CAP 24" REBAR

170 175 180 185

N

P.I. 172+99.24
Δ = 0° 18' 14" RT.
8013

N 84°40'05" E HWY 35 N 84°21'53" E N 84°49'15" E

N 84°35'09" E 896.07'
SURVEY BASELINE

N 84°52'37" E 904.30'
SURVEY BASELINE

P.I. PN:10
PD:STD ARDOT CAP STAMPED PN:10

TBM PN:907
PD:ARDOT CAP REBAR

P.I. PN:11
PD:STD ARDOT CAP STAMPED PN:11

P.I. 177+50.03
Δ = 0° 27' 25" LT.
8014

6/17/2020

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	27	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
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185 190 195

N 84°49'15" E
N 84°52'37" E 904.30'
SURVEY BASELINE

TBM PN:908 PD:SQUARE CUT IN CNTR N HW
PN:1108 PD:8 SPK TRIG ELEV
C.T. PN:12 PD:STD ARDOT CAP STAMPED PN:12

P.I. 189+74.37
Δ = 0° 27' 25" RT.
8015

N 84°16'15" E HWY 35
N 86°26'36" E 800.86'
SURVEY BASELINE

8016

HWY. 35
P. I. = 196+42.00
Δ = 22°16' 44" RT.
D = 13°15' 00"
T = 85.14
L = 168.14'
P.C. = 195+56.86
P.T. = 197+25.00
e = 0.100 '/'
Ls = 300'

PC 195+56.86

HWY. 35
P. I. = 198+39.74
Δ = 22°00' 39" LT
D = 13°15' 00"
T = 84.18'
L = 166.12'
P.C. = 197+55.64
P.T. = 199+21.76
e = 0.100 '/'
Ls = 300'

P.I. 196+42.00

PC 197+55.64

S 73°27'01" E

8019

PT 197+25.00

8018

C.T. PN:13 PD:STD ARDOT CAP STAMPED PN:13

P.I. 198+39.74

PT 199+21.76

8021

SURVEY B
N 87°36'35"
N 84°32'20" E

200 205 210

SURVEY BASELINE
N 87°36'35" E 848.19'
2'20" E

TBM PN:909 PD:RAILROAD SPK IN 24" REBAR
PN:1109 PD:8 SPK

N 84°32'20" E

8022

P.I. 205+39.09
Δ = 0° 08' 24" LT.

C.T. PN:14 PD:STD ARDOT CAP STAMPED PN:14

HWY. 35
N 84°40'42" E

SURVEY BASELINE
N 82°04'44" E 739.17'

8023

P.I. 212+38.42
Δ = 0° 11' 13" LT.

C.T. PN:15 PD:STD ARDOT CAP STAMPED PN:15

N 84°51'52" E
N 84°51'

6/17/2020

R020629.DGN

HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	28	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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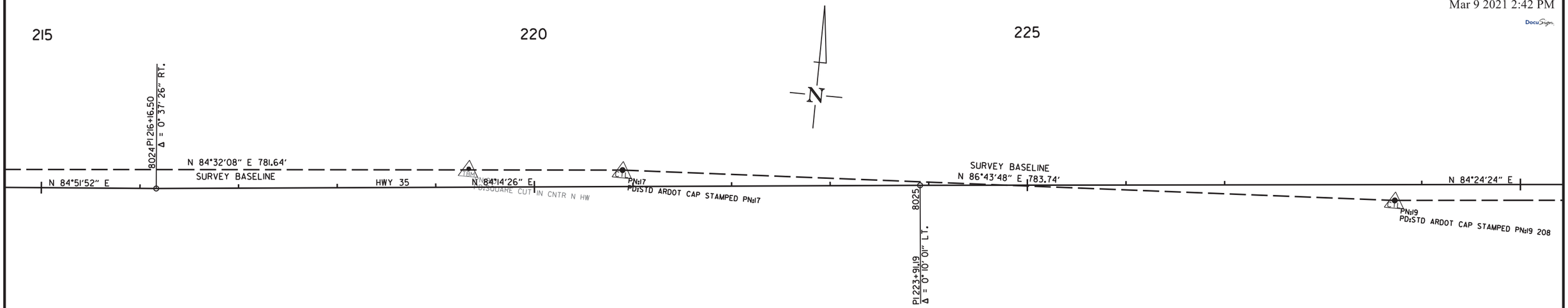
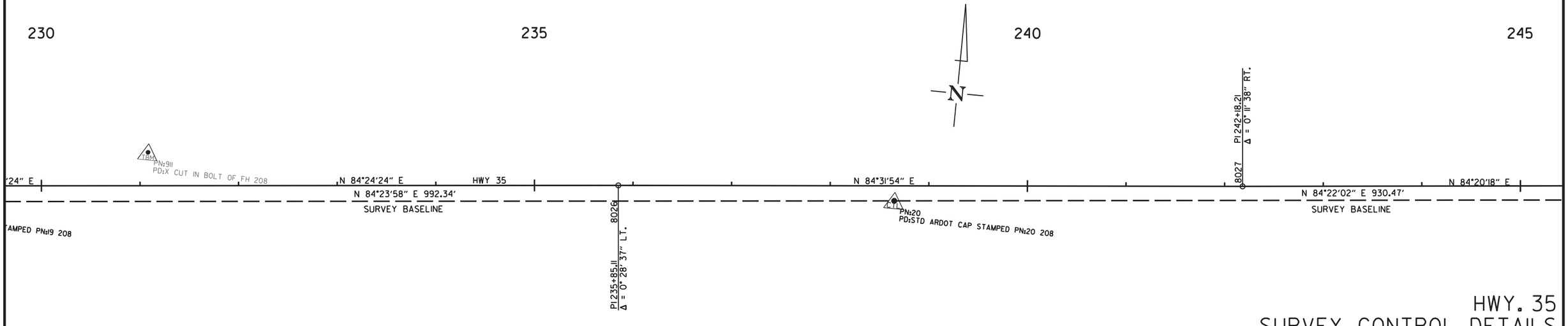
215 220 225



230 235 240 245



6/17/2020

R020629.DGN

HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	29	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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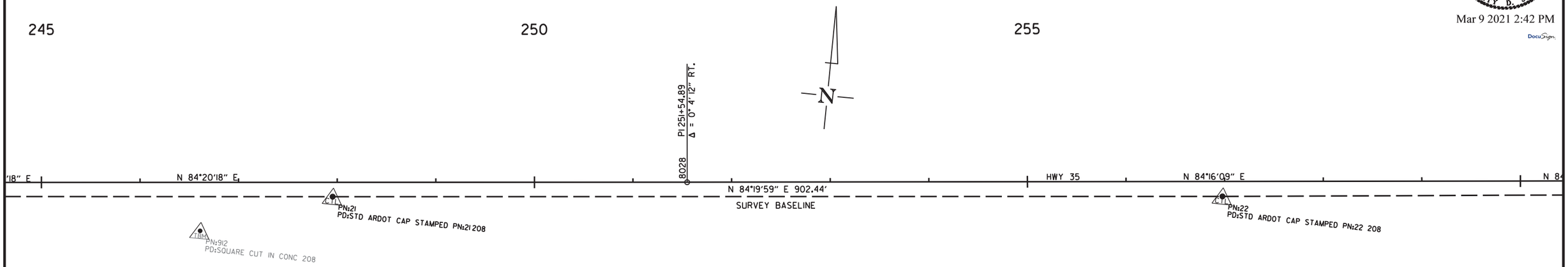

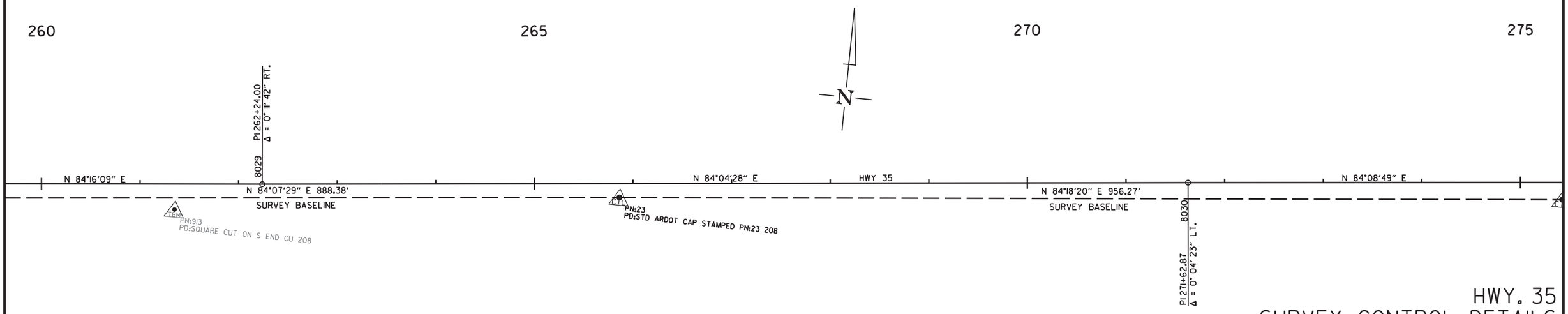

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	30	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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275 280 285

N

N 84°03'25" E 908.21'
SURVEY BASELINE

HWY 35 N 84°08'49" E

N 84°08'07" E 940.83'
SURVEY BASELINE

CP
PN:24
PD:STD ARDOT CAP STAMPED PN:24 208

TBM
PN:923
PD:SQUARE CUT ON CONC 208

CP
PN:25
PD:STD ARDOT CAP STAMPED PN:25 208

TBM
PN:915
PD:ARDOT CAP 24, REBAR 208

GPS
PN:107
PD:ARDOT GPS MON. 210052

290 295 300 305

N

PI 299+01.28
Δ = 0° 03' 25" RT.
803'

208

N 84°08'49" E

N 84°10'26" E 841.27'
SURVEY BASELINE

HWY 35 N 84°05'27" E

CP
PN:26
PD:STD ARDOT CAP STAMPED PN:26 208

CP
PN:27
PD:STD ARDOT CAP STAMPED PN:27 208

GPS
PN:108
PD:ARDOT GPS MON. 210052A

TBM
PN:916
PD:SQUARE CUT IN CONC 208

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	31	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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305 310 315

N

N 84°05'27" E

SURVEY BASELINE
N 82°01'37" E 864.47'

PN:28
PD:STD ARDOT CAP STAMPED PN:28 208

8032
PI 313+17.29
Δ = 0° 04' 34" LT.

PN:1110
PD:8 SPK TRIG FLEV

N 84°09'59" E

HWY 35

TBM
PN:912
PD:BRONZE DISK IN NE CRNR BR 208

N 87°04'44" E 774.12'
SURVEY BASELINE

PN:29
PD:STD ARDOT CAP STAMPED PN:29 208

320 325 330 335

N

N 84°09'59" E

HWY 35

N 83°29'32" E 906.25'
SURVEY BASELINE

PN:30
PD:STD ARDOT CAP STAMPED PN:30 208

8033
PI 329+87.91
Δ = 0° 12' 04" LT.

TBM
PN:918
PD:ARDOT CAP 24 REBAR 208

N 84°31'16" E 1017.12'

N 84°22'00" E

SURVEY BASELINE

AMPED PN:29 208

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	32	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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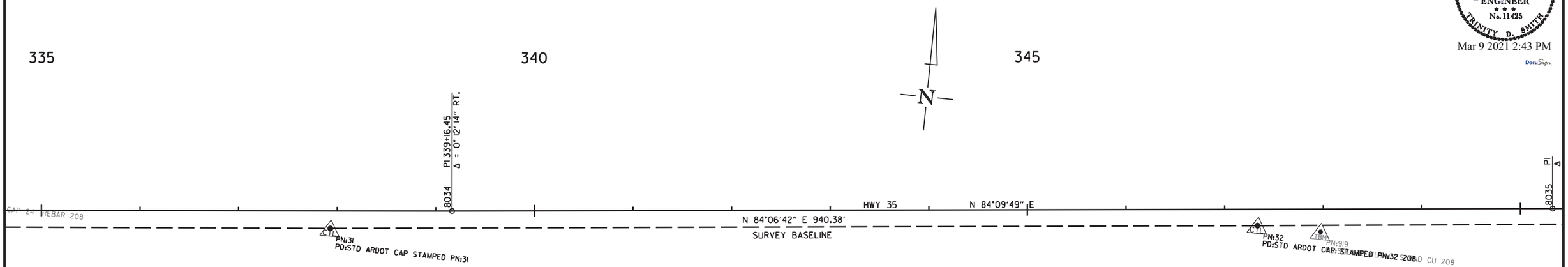

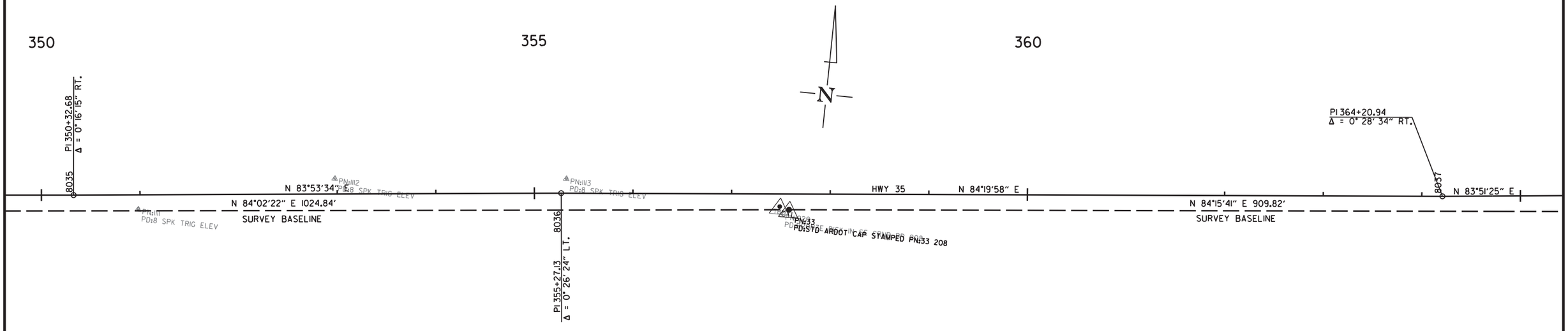

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	33	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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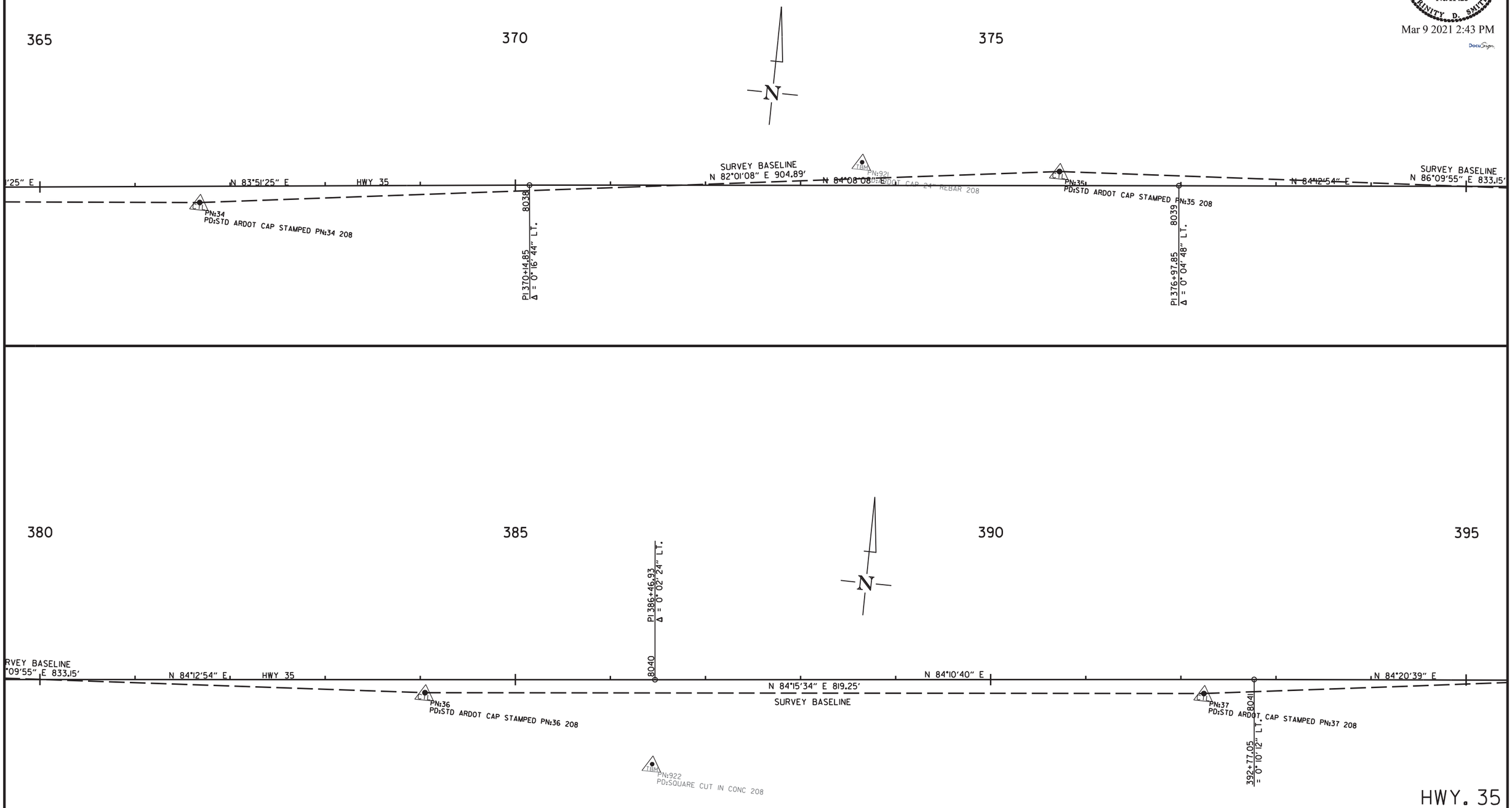

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	34	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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395 400 405

N

SURVEY BASELINE
N 82°07'38" E 763.45'
N 84°20'39" E

HWY 35 PN:38
PD:STD ARDOT CAP STAMPED PN:38 208

TBM PN:923
PD:SQUARE CUT IN CONC 208

PC 403+67.14

N 89°26'49" E 947.48'
SURVEY BASELINE

PI 407+42.75

S 80°43'00" E

PN:39
PD:STD ARDOT CAP STAMPE

HWY. 35
P.I. = 407+42.75
Δ = 14°56'21" RT.
D = 2°00'00"
T = 375.61'
L = 746.95'
P.C. = 403+67.14
P.T. = 411+14.09
e = 0.048'/'
Ls = 300'

410 415 420 425

N

TBM PN:924
PD:SQUARE CUT IN CONC 208

TD ARDOT CAP STAMPED PN:39 208

S 80°43'00" E

PT 411+14.09

S 81°00'51" E 926.35'
SURVEY BASELINE

S 80°43'00" E HWY 35

PN:40
PD:STD ARDOT CAP STAMPED PN:40 208

PI 420+01.17
Δ = 0°07'12" RT.

S 80°36'08" E

PI 422+89.78
Δ = 0°19'52" LT.

S 80°56'00" E
S 80°43'57" E 920.64'
SURVEY BASELINE

HWY. 35
P.I. = 407+42.75
Δ = 14°56'21" RT.
D = 2°00'00"
T = 375.61'
L = 746.95'
P.C. = 403+67.14
P.T. = 411+14.09
e = 0.048'/'
Ls = 300'

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	35	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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425 430 435

N

S 80°56'00" E
E 920.64'
BASELINE

PN:41
PD:STD ARDOT CAP STAMPED PN:41 208

PN:109
PD:ARDOT GPS MON. 210035

PD:ARDOT CAP 24" REBAR 208

8047
PI 428+68.16
Δ = 0° 09' 00" RT.

S 80°47'20" E
S 80°42'14" E 836.65'
SURVEY BASELINE

8048
PI 434+90.53
Δ = 0° 12' 36" RT.

HWY 35
S 80°35'10" E

PN:42
PD:STD ARDOT CAP STAMPED PN:42 208

SURVEY BASELINE
S 83°52'11" E 610.12'

PN:1412
PD:8 SPIKE TRIG ELEV

440 445 450 455

N

RIG ELEV

PN:110
PD:ARDOT GPS MON. 210053A

PN:43
PD:STD ARDOT CAP STAMPED PN:43 208

PD:BRONZE DISK ON NW CAP BR 208

S 80°35'40" E

PN:1411
PD:8 SPIKE TRIG ELEV

S 78°10'51" E 810.20'
SURVEY BASELINE

HWY 35

PN:44
PD:STD ARDOT CAP STAMPED PN:44 208

PN:1410
PD:8 SPIKE TRIG ELEV

S 80°32'40" E 824.30'
SURVEY BASELINE

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	36	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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455 460 465

PI 455+95.70
Δ = 0° 23' 24" LT.
8049

PI 461+67.75
Δ = 0° 03' 36" LT.
8050

PI 466+97.79
Δ = 0° 22' 12" RT.
8051

S 80°35'10" E
824.30'
SELINE

TBM PN:927
PD:ARDOT CAP 24" REBAR 208

S 80°58'15" E

PN:45
PD:STD ARDOT CAP STAMPED PN:45 208

HWY 35

S 81°13'03" E 851.46'
SURVEY BASELINE

S 81°01'49" E

PN:46
PD:STD ARDOT CAP STAMPED PN:46 208

S 80°39'46" E

PN:1409
PD:8 SP
S 80°
SU

470 475 480 485

PI 479+86.86
Δ = 0° 07' 48" LT.
8052

PI 483+51.28
Δ = 0° 22' 12" RT.
8053

TBM PN:928
PD:SQUARE CUT IN CONC 208

PN:1409
PD:8 SPIKE TRIG ELEV

S 80°39'46" E

HWY 35

S 80°25'33" E 704.52'
SURVEY BASELINE

PN:47
PD:STD ARDOT CAP STAMPED PN:47 208

S 80°51'48" E 724.71'
SURVEY BASELINE

S 80°47'28" E

PN:48
PD:STD ARDOT CAP STAMPED PN:48 208

S 80°25'37" E

S 79
SU

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	37	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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HWY. 35
P.I. = 511+57.65
Δ = 130°23' 33" LT.
D = 8°15' 00"
T = 1502.77'
L = 1580.52'
P.C. = 496+54.88
P.T. = 512+35.40
e = 0.100'/'
Ls = 300'

485 490 495 500

N

PI 486+71.50
Δ = 0° 06' 36" LT.

PC 496+54.88

5'37" E

HWY 35

S 80°31'52" E

S 79°55'47" E 850.43'
SURVEY BASELINE

S 81°02'36" E 683.05'
SURVEY BASELINE

TBM
PN:929
PD:ARDOT CAP 24" REBAR 208

PN:49
PD:STD ARDOT CAP STAMPED PN:49 208

PN:50
PD:STD ARDOT CAP STAMPED PN:50 208

TBM
PN:930
PD:ARDOT C

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	38	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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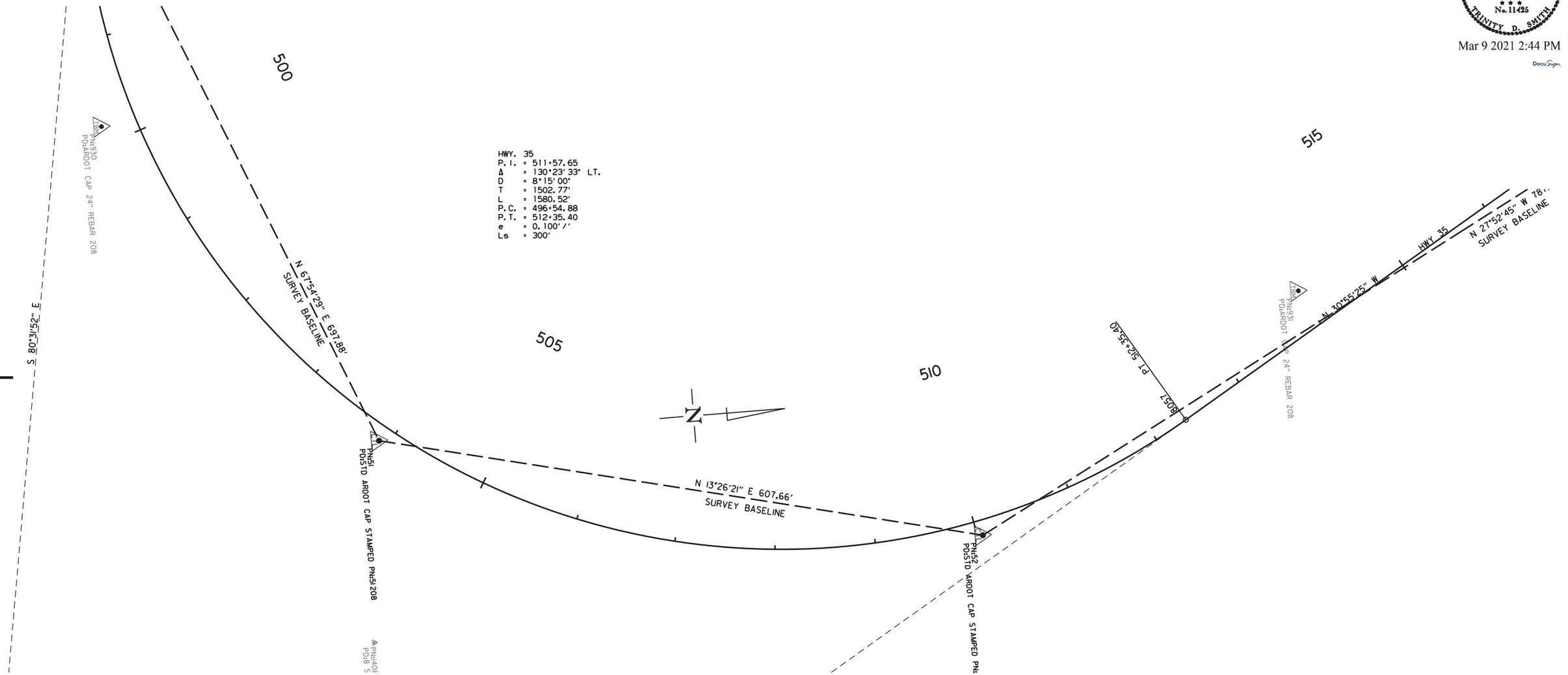

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
				JOB NO.		020629	39	72

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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515 520 525

W

N 27°52'45" W 787.11'
SURVEY BASELINE

N 30°53'44" W 737.37'
SURVEY BASELINE

N 30°55'25" W

HWY 35

N 31°00'07" W 885.50'
SURVEY BASELINE

PNA53 ADOT CAP STAMPED PNA53 2018

PNA54 ADOT CAP STAMPED PNA54 2018

PNA52 ADOT CAP 2" REBAR 208

530 535 540 545

N30°53'27"W

7" W 885.50'
BASELINE

N 30°55'25" W

PI 534+79.28
Δ = 0° 14' 53" RT.
8058

N 31°10'17" W

HWY 35

8059
PI 538+03.14
Δ = 0° 20' 51" LT.

N 30°59'34" W 791.94'
SURVEY BASELINE

N 30°49'26" W

PNA55 ADOT CAP STAMPED PNA55 2018

PNA56 ADOT CAP STAMPED PNA56 2018

PNA53 ADOT CAP 2" REBAR 208

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HWY. 35
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2/19/21				6	ARK.			
					JOB NO.	020629	40	72

② SURVEY CONTROL DETAILS

TRINITY D. SMITH
No. 11425

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STA. 571+22.08
END JOB 020629

HWY. 35
P. I. = 561+03.99
Δ = 9°45'25" RT.
D = 2°45'00"
T = 177.83'
L = 354.80'
P.C. = 559+26.16
P.T. = 562+80.96
e = 0.064'/'
Ls = 300'

HWY. 35
P. I. = 561+03.99
Δ = 9°45'25" RT.
D = 2°45'00"
T = 177.83'
L = 354.80'
P.C. = 559+26.16
P.T. = 562+80.96
e = 0.064'/'
Ls = 300'

HWY. 35
P. I. = 569+30.25
Δ = 91°40'14" RT.
D = 44°30'00"
T = 132.56'
L = 206.00'
P.C. = 567+97.69
P.T. = 570.03.69
e = 0.100'/'
Ls = 250'

HWY. 35
SURVEY CONTROL DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	41	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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100

105

N

POB 100+00.00

PI 102+00.00
Δ = 0°15'02" LT.

EXIST. R/W

EXIST. R/W

EXIST. R/W

S 89°44'14" E

S 89°59'16" E

S 89°57'33" E

MATCH EX.

SHOT UNDER LOW WIR

TBM

TANK

PI 106+46.48
Δ = 0°01'43" RT.

100' TAPER

200' TRANSITION

STA. 100+00.00
BEGIN JOB 020629
LOG MILE 5.27

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

020595

180 170 160 150 140 130 120 110 100 90

95+00 96+00 97+00 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

bh38527 10/28/2019
R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
10/29/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	42	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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110 115 120

N

EXIST. R/W

S 89°57'33" E

SHOT UNDER LOW WIRE

MATCH EX.

EXIST. R/W

SHOT UNDER LOW WIRE

EXIST. R/W

EXIST. R/W

SHOT UNDER LOW WIRE

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

180 170 160 150 140 130 120 110 100 90

110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	43	72

(2) PLAN AND PROFILE SHEETS

GUARDRAIL

STA.	STA.	SIDE	GUARDRAIL (TYPE A) LIN. FT.	GUARDRAIL TERMINAL (TYPE 2) EACH	THRIE BEAM GUARDRAIL TERMINAL EACH
130+77.22	133+02.22	RT.	225	1	1
131+72.46	133+22.46	LT.	150	1	1
134+90.93	136+40.93	RT.	150	1	1
135+11.17	137+36.17	LT.	225	1	1

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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STA. 133+12.34
BEGIN JOB EXCEPTION

STA. 135+01.05
END JOB EXCEPTION

STA. 133+12.34
24'-0" CLEAR ROADWAY
188'-1½" TOTAL LENGTH
BR. NO 03600
STA. 135+01.05

125 130 135

PI 124+89.16
Δ = 019°15" LT.

PI 131+26.25

PC 129+89.16

PT 132+63.18

PC 136+88.16

EXIST. R/W

N 89°43'12" E.

S 85°29'05" E.

N 84°02'27" E.

LOW WIRE

25' BUFFER

BLACK POND SLOUGH

HWY. 35
P.I. = 131+26.25
Δ = 4°47'43" RT.
D = 1°45'00"
T = 137.09'
L = 274.02'
P.C. = 129+89.16
P.T. = 132+63.18
e = 0.044'/'
Ls = 300'

HWY. 35
P.I. = 138+79.14
Δ = 10°28'28" LT.
D = 2°45'00"
T = 190.98'
L = 380.89'
P.C. = 136+88.16
P.T. = 140+69.05
e = 0.064'/'
Ls = 300'

STA. 133+12.34
BRIDGE END

STA. 135+01.05
BRIDGE END

+60

16'

T.C.E.

136+35.00
80.00 - 42.12

136+85.00
80.00 - 42.33

STA. 136+60 IN PLACE
18" X 24" PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
18" X 28" PIPE CULVERT
RT. SIDE DRAIN
APPROACH ON RT. = 70 CU. YD.

PI 138+79.14

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

NOTE:

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM, STA. 133+12 TO STA. 135+00, IS CLASSIFIED AS A PERENNIAL STREAM. THE TOP OF CHANNEL ELEVATION IS 136 FT. MSL. REFER TO SECTION 110.06(c) OF THE 2014 STANDARD SPECIFICATIONS.

180 170 160 150 140 130 120 110 100 90

125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	44	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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HWY. 35
P.I. = 138+79.14
Δ = 10°28'28" LT.
D = 2°45'00"
T = 190.98'
L = 380.89'
P.C. = 136+88.16
P.T. = 140+69.05
e = 0.064'/'
Ls = 300'

140 145 150

N

PT 140+69.05
PI 142+82.76
Δ = 1°09'18" LT.
PI 145+76.90
Δ = 0°22'08" RT.
N 84°02'27" E
N 85°11'42" E
N 84°49'34" E
MATCH EX.
EXIST. R/W
EXIST. R/W
EXIST. R/W
TBM
CTL
GPS
T

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

180 170 160 150 140 130 120 110 100 90

140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+00

bh38527 10/28/2019
R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	45	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

Mar 9 2021 2:46 PM

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155 160 165

N

P.I. 162+16.47
Δ = 0° 09' 32" RT.

TANK

EXIST. R/W

N 84°49'34" E

TBM

MAG. BRG. E.

N 84°40'05" E

N 84°

SHOT UNDER LOW WIRE

EXIST. R/W

EXIST. R/W

EXIST. R/W

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

180 170 160 150 140 130 120 110 100 90

155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00 167+00 168+00 169+00 170+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	46	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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170 175 180

N

P.I. 72+99.24
Δ = 0° 18' 14" RT.

EXIST. R/W

TBM

N 84°40'05" E

MATCH E.C.

LOW WIRE

N 84°21'53" E

EXIST. R/W

P.I. 77+50.03
Δ = 0° 27' 25" LT.

SHOT UNDER LOW WIRE

N 84°49'15" E

EXIST. R/W

EXIST. R/W

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

180
170
160
150
140
130
120
110
100
90

170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	47	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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185 190 195

N

HWY. 35
P. I. = 198+39.74
Δ = 22°00'39" LT
D = 13°15'00"
T = 84.18'
L = 166.12'
P.C. = 197+55.64
P.T. = 199+21.76
e = 0.100 '/'
Ls = 300'

P.I 189+74.37
Δ = 0° 27' 25" RT.

P.I 196+42.00

PC 197+55.64

PT 199+21.76

EXIST. R/W

N 84°49'15" E

N 84°16'15" E

MATCH E.L.

S 73°27'01" E

SLOT UNDER LOW WIRE

EXIST

N 84°32'20" E

PC 195+56.86

PT 197+25.00

P.I 198+39.74

HWY. 35
P. I. = 196+42.00
Δ = 22°16'44" RT.
D = 13°15'00"
T = 85.14
L = 168.14'
P.C. = 195+56.86
P.T. = 197+25.00
e = 0.100'/'
Ls = 300'

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

180 170 160 150 140 130 120 110 100 90

185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	48	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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200 205 210

N

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

N 84°32'20" E

N 84°40'42" E

N 84°51'52" E

N 84°51'

2'20" E

SHOT UNDER LOW WIRE

SHOT UNDER LOW WIRE

PI 205+39.09
Δ = 0° 08' 24" LT.

PI 212+38.42
Δ = 0° 11' 13" LT.

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

180 170 160 150 140 130 120 110 100 90

200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	49	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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215 220 225

STA. 220+55 HWY. 35

PI 216+16.50
Δ = 0° 37' 26" RT.

N 84°51'52" E

N 84°14'26" E

HWY. 159

SHOT UNDER LOW WIRE

EXIST. R/W

HWY. 208

18'

PI 223+91.19
Δ = 0° 10' 01" LT.

MATCH E.X.

N 84°24'24" E

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

170 160 150 140 130 120 110 100 90

215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	50	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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230 235 240

N

EXIST. R/W EXIST. R/W

'24" E N 84°24'24" E N 84°31'54" E N 84°20'18" E

SHOT UNDER LOW WIRE

EXIST. R/W EXIST. R/W

PI 235+85.11
Δ = 0° 28' 37" LT.

PI 242+18.21
Δ = 0° 11' 38" RT.

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

180 170 160 150 140 130 120 110 100 90

230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00 244+00 245+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	51	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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245 250 255

PI 251+54.89
Δ = 0° 4' 12" RT.

N

EXIST. R/W

EXIST. R/W

'18" E N 84°20'18" E

SHOT UNDER LOW WIRE

MATCH E.J.

N 84°16'09" E

N 84

EXIST. R/W

EXIST. R/W

TBM

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

180 170 160 150 140 130 120 110 100 90

245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258+00 259+00 260+00

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10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	52	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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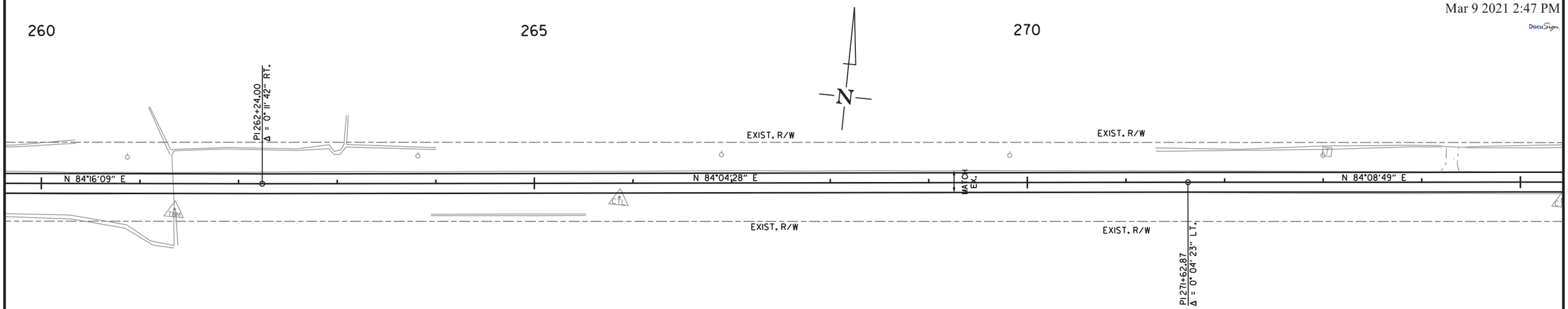
260 265 270



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

180 170 160 150 140 130 120 110 100 90

260+00 261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00 269+00 270+00 271+00 272+00 273+00 274+00 275+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	53	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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275 280 285

N

EXIST. R/W

EXIST. R/W

N 84°08'49" E

SHOT UNDER LOW WIRE

TBM

TBM

EXIST. R/W

EXIST. R/W

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

180 170 160 150 140 130 120 110 100 90

275+00 276+00 277+00 278+00 279+00 280+00 281+00 282+00 283+00 284+00 285+00 286+00 287+00 288+00 289+00 290+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	54	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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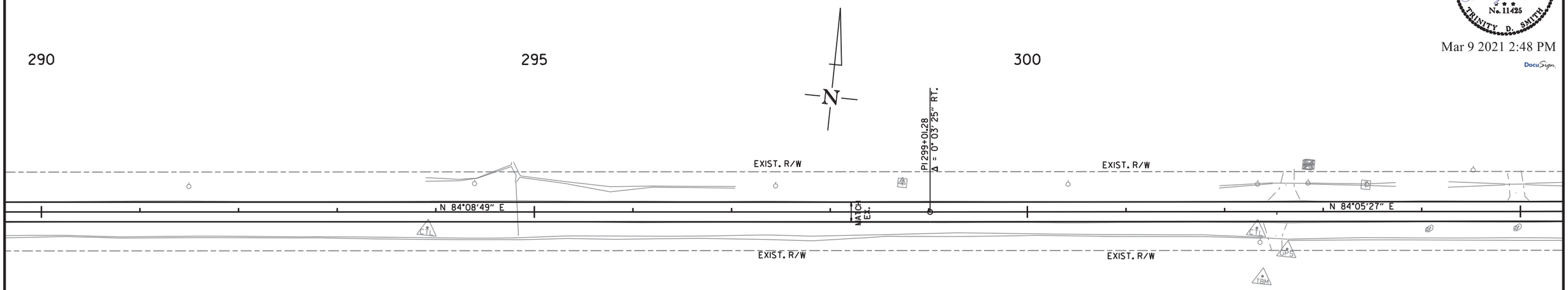
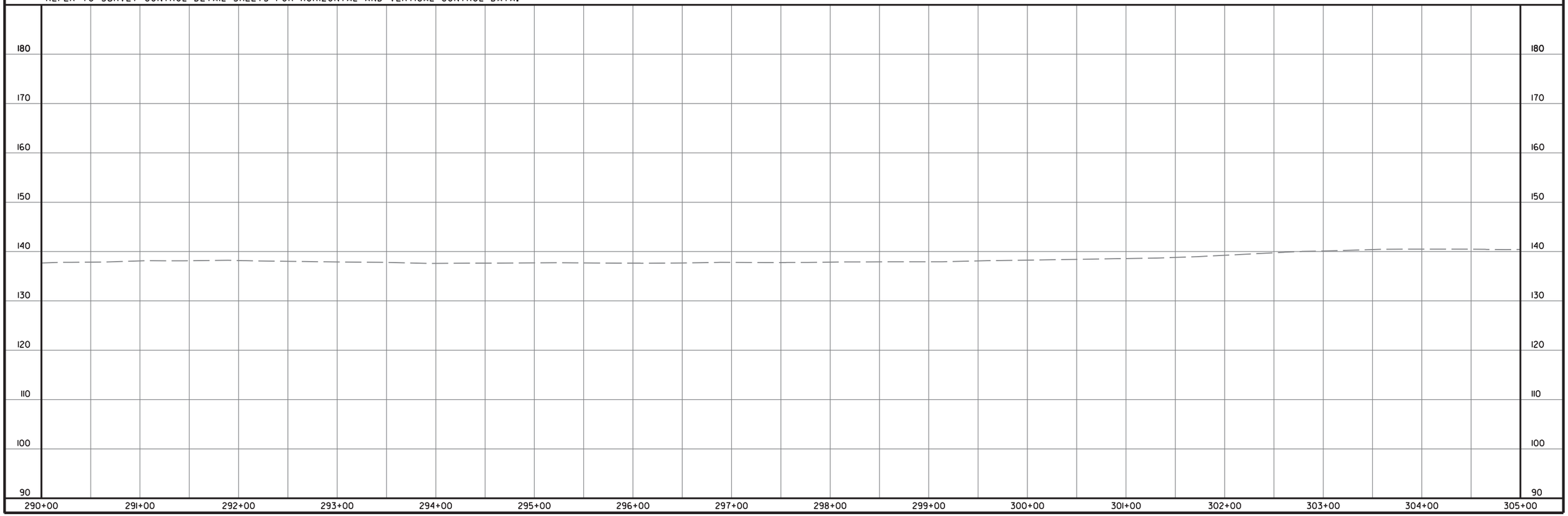
290 295 300



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



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			
5/12/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	55	72

(2) PLAN AND PROFILE SHEETS

STA.	STA.	SIDE	GUARDRAIL (TYPE A) LIN. FT.	GUARDRAIL TERMINAL (TYPE 2) EACH	THRIE BEAM GUARDRAIL TERMINAL EACH	BRIDGE END TERMINAL EACH
313+18.88	315+43.88	RT.	225	1	1	
313+93.88	315+43.88	LT.	150	1	1	
317+83.49	318+08.49	RT.				1
317+83.49	318+08.49	LT.				1

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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STA. 315+43.88
28'-0" CLEAR ROADWAY
242'-1" TOTAL LENGTH
BR. NO 05140
STA. 317+83.49

STA. 317+83.49
END JOB EXCEPTION

STA. 318+46 IN PLACE
18" X 82" PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL
18" X 28' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 0 CU. YD.

305 310 315

STA. 315+43.88
BEGIN JOB EXCEPTION

317+85.00
40.54 - 65.00

PHILLIPS LN.

319+05.00
40.64 - 65.00

T.C.E.

20'

EXIST. R/W

N 84°05'27" E

MATCH E.L.

EXIST. R/W

N 84°09'59" E

+46

+78

25' BUFFER

25' BUFFER

EXIST. R/W

BAYOU MACON

PI 313+17.29
Δ = 0° 04' 34" LT.

STA. 315+43.88
BRIDGE END

STA. 317+83.49
BRIDGE END

STA. 318+78 IN PLACE
18" X 26' PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
18" X 28' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 5 CU. YD.

20'

318+45.00
65.00 - 39.41
RIAL LN.

318+95.00
85.00

319+25.00
39.34

T.C.E.

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

NOTE:

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM, STA. 315+50 TO STA. 317+80, IS CLASSIFIED AS A PERENNIAL STREAM. THE TOP OF CHANNEL ELEVATION IS 137 FT. MSL. REFER TO SECTION 110.06(c) OF THE 2014 STANDARD SPECIFICATIONS.

STA. 315+43.88 BRIDGE END

STA. 317+83.49 BRIDGE END

180 170 160 150 140 130 120 110 100 90

305+00 306+00 307+00 308+00 309+00 310+00 311+00 312+00 313+00 314+00 315+00 316+00 317+00 318+00 319+00 320+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	56	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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320 325 330

N

EXIST. R/W

EXIST. R/W

N 84°09'59" E

N 84°22'00" E

SHOT UNDER LOW WIRE

SHOT UNDER LOW WIRE

EXIST. R/W

EXIST. R/W

PI 329+87.91
Δ = 0° 12' 04" LT.

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

180 170 160 150 140 130 120 110 100 90

320+00 321+00 322+00 323+00 324+00 325+00 326+00 327+00 328+00 329+00 330+00 331+00 332+00 333+00 334+00 335+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	57	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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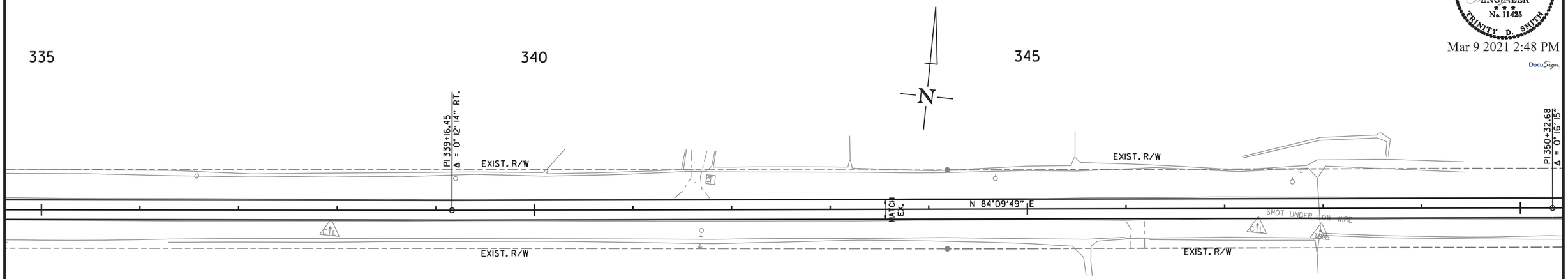
335 340 345



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

180 170 160 150 140 130 120 110 100 90

335+00 336+00 337+00 338+00 339+00 340+00 341+00 342+00 343+00 344+00 345+00 346+00 347+00 348+00 349+00 350+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20		5/12/21	
12/15/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	58	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
TRINITY D. SMITH
No. 11425

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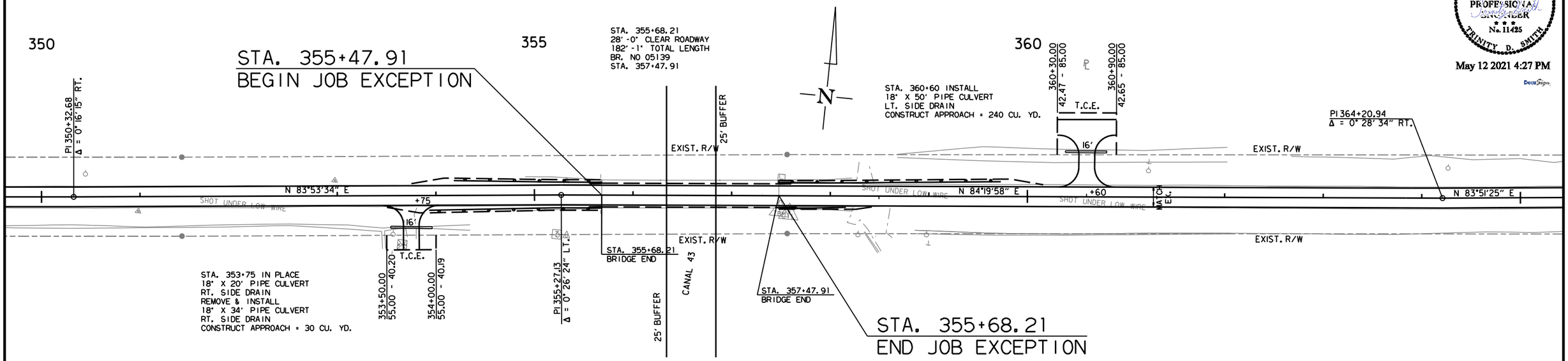
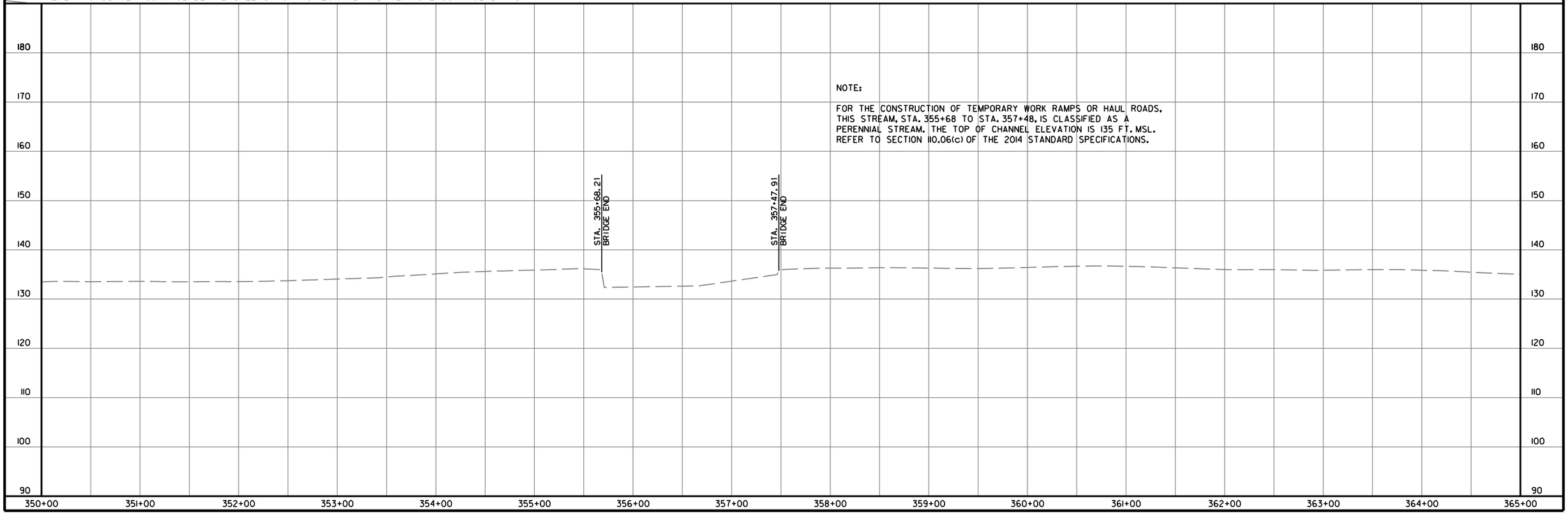
STA.	STA.	SIDE	GUARDRAIL (TYPE A) LIN. FT.	GUARDRAIL TERMINAL (TYPE 2) EACH	THRIE BEAM GUARDRAIL TERMINAL EACH
353+93.21	355+68.21	RT.	175	1	1
354+18.21	355+68.21	LT.	150	1	1
357+47.91	358+07.91	RT.		1	1
357+47.91	359+72.91	LT.	225	1	1



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

NOTE:

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM, STA. 355+68 TO STA. 357+48, IS CLASSIFIED AS A PERENNIAL STREAM. THE TOP OF CHANNEL ELEVATION IS 135 FT. MSL. REFER TO SECTION 110.06(c) OF THE 2014 STANDARD SPECIFICATIONS.



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	59	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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365 370 375

N

EXIST. R/W EXIST. R/W

'25" E N 83°51'25" E N 84°08'08" E N 84°12'54" E

TRM MATCH EX.

EXIST. R/W EXIST. R/W

PI 370+14.85
Δ = 0° 16' 44" LT.

PI 376+97.85
Δ = 0° 04' 48" LT.

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

180 170 160 150 140 130 120 110 100 90

365+00 366+00 367+00 368+00 369+00 370+00 371+00 372+00 373+00 374+00 375+00 376+00 377+00 378+00 379+00 380+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	60	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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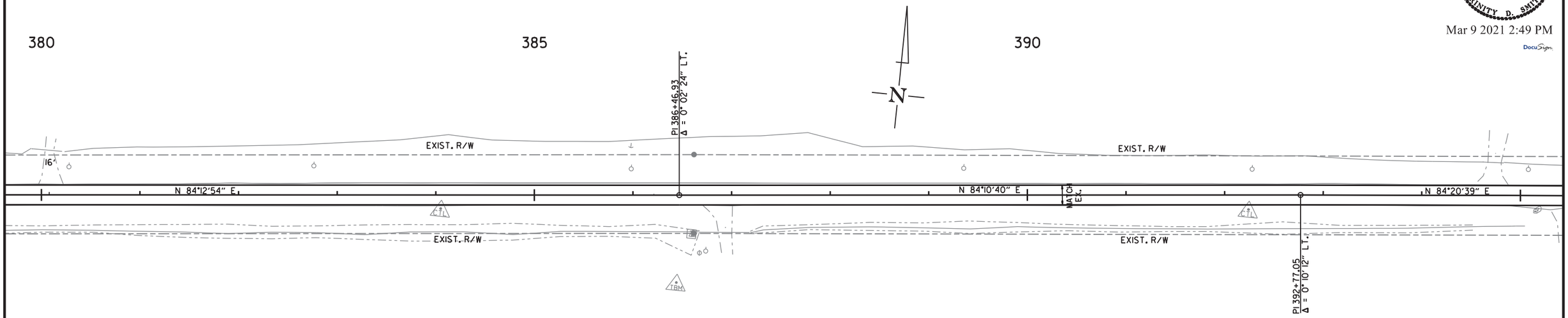
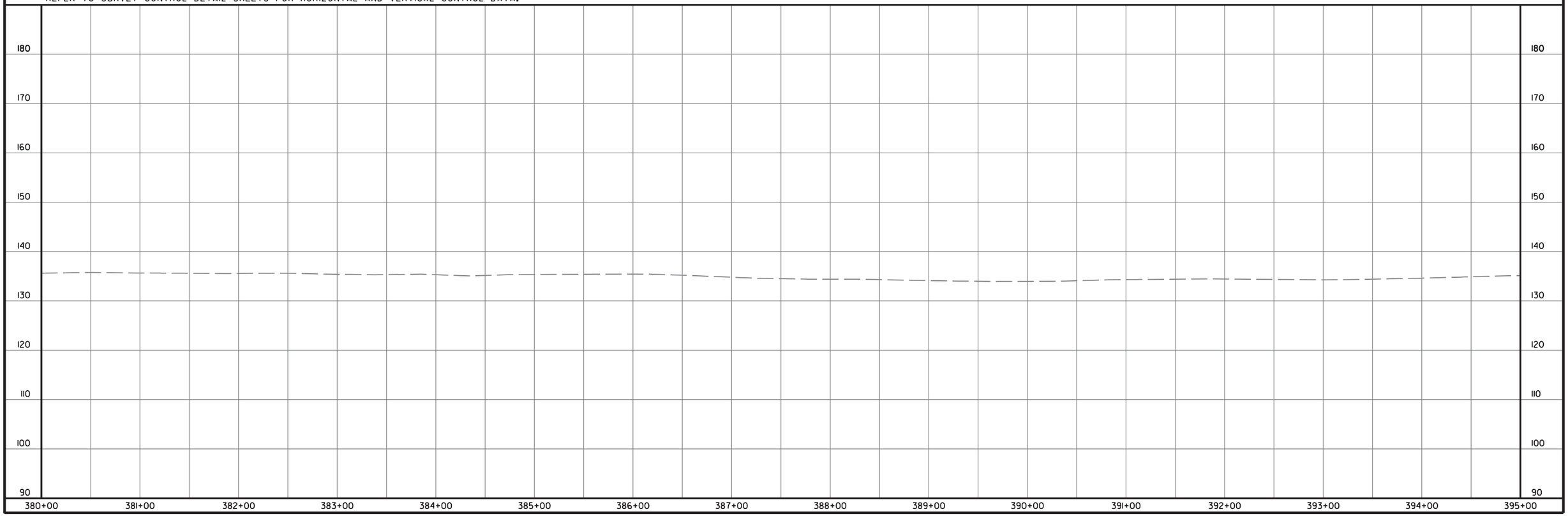
380 385 390



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



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	61	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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395 400 405

N

EXIST. R/W

N 84°20'39" E

MATCH E.X.

EXIST. R/W

TBM

PC 403+67.14

PI 407+42.75

EXIST. R/W

S 80°43'00" E

EXIST. R/W

HWY. 35
P.I. = 407+42.75
Δ = 14°56'21" RT.
D = 2°00'00"
T = 375.61'
L = 746.95'
P.C. = 403+67.14
P.T. = 411+14.09
e = 0.048'/'
Ls = 300'

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

180 170 160 150 140 130 120 110 100 90

395+00 396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00 407+00 408+00 409+00 410+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
12/15/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	62	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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410

415

420

N

TBM

EXIST. R/W

S 80°43'00" E

S 80°43'00" E

EXIST. R/W

MATCH EX.

S 80°36'08" E

EXIST. R/W

PI 422+83.78
Δ = 0°19'52" LT.

S 80°56'00" E

EXIST. R/W

PT 411+14.09

PI 420+01.17
Δ = 0°07'12" RT.

HWY. 35
P.I. = 407+42.75
Δ = 14°56'21" RT.
D = 2°00'00"
T = 375.61'
L = 746.95'
P.C. = 403+67.14
P.T. = 411+14.09
e = 0.048'/'
Ls = 300'

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

180 170 160 150 140 130 120 110 100 90

410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00 422+00 423+00 424+00 425+00

bh38527 10/28/2019
R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20		5/12/21	
12/15/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	63	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
May 12 2021 4:28 PM

425 430 435

STA. 440+00 INSTALL
36' X 78' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH ON LT. = 540 CU. YD.

439+50.00
37.07 - 100.00

T.C.E.

16'

EXIST. R/W

EXIST. R/W

S 80°56'00" E

S 80°47'20" E

S 80°35'10" E

MATCH EX.

+40

+00

EXIST. R/W

EXIST. R/W

16'

T.C.E.

PI 428+68.16
Δ = 0°09'00" RT.

PI 434+90.53
Δ = 0°12'36" RT.

STA. 439+40 INSTALL
18" X 36' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH ON RT. = 45 CU. YD.

439+15.00
50.00 - 42.99

439+65.00
50.00 - 42.91

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

180 170 160 150 140 130 120 110 100 90

425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00 440+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
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12/15/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	64	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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DocuSigned

STA. 440+00 INSTALL
36" X 78' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH ON LT. = 540 CU. YD.

GUARDRAIL

STA.	STA.	SIDE	GUARDRAIL (TYPE A) LIN. FT.	GUARDRAIL TERMINAL (TYPE 2) EACH	THRIE BEAM GUARDRAIL TERMINAL EACH
440+16.97	442+41.97	RT.	225	1	1
440+91.97	442+41.97	LT.	150	1	1
444+41.34	445+01.34	RT.		1	1
444+41.34	445+66.35	LT.	225	1	1

STA. 442+41.97
28'-0" CLEAR ROADWAY
202'-1" TOTAL LENGTH
BR. NO 05138
STA. 444+41.35

STA. 444+41.35
END JOB EXCEPTION

440 445 450

440+50.00
37.24 - 100.00

T.C.E.

16'

STA. 442+41.97
BRIDGE END

25' BUFFER

EXIST. R/W

STA. 444+41.35
BRIDGE END

EXIST. R/W

+00

S 80°35'10" E

MATCH EX.

S 80°3

EXIST. R/W

EXIST. R/W

50.00 - 42.91

STA. 442+41.97
BEGIN JOB EXCEPTION

25' BUFFER

CLAY BAYOU

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

NOTE:

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM, STA. 442+40 TO STA. 444+40, IS CLASSIFIED AS A PERENNIAL STREAM. THE TOP OF CHANNEL ELEVATION IS 136 FT. MSL. REFER TO SECTION 110.06(c) OF THE 2014 STANDARD SPECIFICATIONS.

STA. 442+41.97 BRIDGE END

STA. 444+41.35 BRIDGE END

180 170 160 150 140 130 120 110 100 90

440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00 448+00 449+00 450+00 451+00 452+00 453+00 454+00 455+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	65	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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455 460 465

PI 455+95.70
Δ = 0° 23' 24" LT.

PI 461+67.75
Δ = 0° 03' 36" LT.

PI 466+97.79
Δ = 0° 22' 12" RT.

EXIST. R/W

S 80°35'10" E

S 80°58'15" E

S 81°01'49" E

MATCH EX.

S 80°39'46" E

TBM

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

180 170 160 150 140 130 120 110 100 90

455+00 456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00 470+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	66	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
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470 475 480

N

EXIST. R/W

28'

PI 479+86.86
Δ = 0° 07' 48" LT.

MATCH E.L.

S 80°39'46" E

S 80°47'28" E

S 80°25'37" E

EXIST. R/W

EXIST. R/W

EXIST. R/W

PI 483+51.28
Δ = 0° 22' 12" RT.

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

180 170 160 150 140 130 120 110 100 90

470+00 471+00 472+00 473+00 474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00 482+00 483+00 484+00 485+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
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2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	67	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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485 490 495

HWY. 35
P. I. = 511+57.65
Δ = 130°23' 33" LT.
D = 8°15' 00"
T = 1502.77'
L = 1580.52'
P. C. = 496+54.88
P. T. = 512+35.40
e = 0.100'/'
Ls = 300'

PI 486+71.50
Δ = 0° 06' 36" LT.

PC 496+54.88

EXIST. R/W

5'37" E

S 80°31'52" E

MATCH E.P.

EXIST. R/W

EXIST. R/W

EXIST. R/W

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

180 170 160 150 140 130 120 110 100 90

485+00 486+00 487+00 488+00 489+00 490+00 491+00 492+00 493+00 494+00 495+00 496+00 497+00 498+00 499+00 500+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	68	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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HWY. 35
P.I. = 511+57.65
Δ = 130°23'33" LT.
D = 8°15'00"
T = 1502.77'
L = 1580.52'
P.C. = 496+54.88
P.T. = 512+35.40
e = 0.100'/'
Ls = 300'

500
505
510
515

S 80°31'52" E

N 30°55'25" W

PT 512+35.40

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

100' R/W

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

170
160
150
140
130
120
110

500+00 501+00 502+00 503+00 504+00 505+00 506+00 507+00 508+00 509+00 510+00 511+00 512+00 513+00 514+00 515+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	69	72

(2) PLAN AND PROFILE SHEETS

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LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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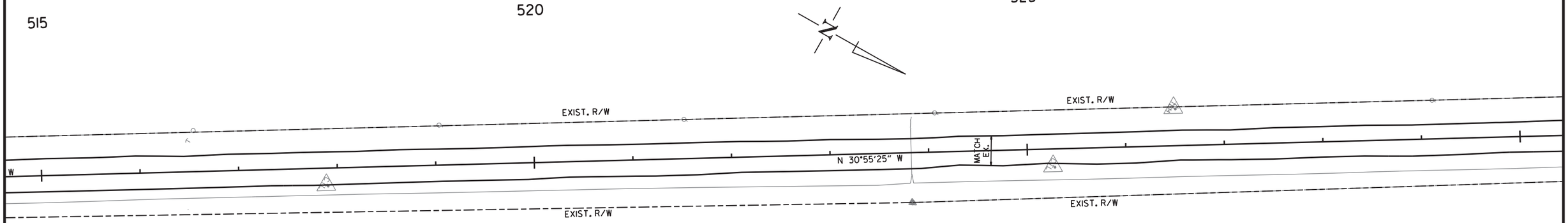
515 520 525



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

180 170 160 150 140 130 120 110 100 90

STA. 494+29.88 BEGIN SUPERELEVATION
STA. 497+29.88 MAX SUPERELEVATION (0.100'/')
STA. 511+60.40 MAX SUPERELEVATION (0.100'/')
STA. 514+60.40 END SUPERELEVATION

515+00 516+00 517+00 518+00 519+00 520+00 521+00 522+00 523+00 524+00 525+00 526+00 527+00 528+00 529+00 530+00

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R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	70	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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530 535 540

P.I. 534+79.28
Δ = 0° 14' 53" RT.

EXIST. R/W

N 30°55'25" W

N 31°10'17" W

MATCH EX.

N 30°49'26" W

EXIST. R/W

EXIST. R/W

P.I. 538+03.14
Δ = 0° 20' 51" LT.

EXIST. R/W

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

180 170 160 150 140 130 120 110 100 90

530+00 531+00 532+00 533+00 534+00 535+00 536+00 537+00 538+00 539+00 540+00 541+00 542+00 543+00 544+00 545+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	71	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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545 550 555

EXIST. R/W

N 30°49'26" W

MATCH E.

EXIST. R/W

EXIST. R/W

N 30°49'26" W

EXIST. R/W

PC 559+26.16

HWY. 35
P.I. = 561+03.99
Δ = 9°45'25" RT.
D = 2°45'00"
T = 177.83'
L = 354.80'
P.C. = 559+26.16
P.T. = 562+80.96
e = 0.064'/'
Ls = 300'

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

180 170 160 150 140 130 120 110 100 90

545+00 546+00 547+00 548+00 549+00 550+00 551+00 552+00 553+00 554+00 555+00 556+00 557+00 558+00 559+00 560+00

bh38527 10/28/2019
R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10/27/20			
2/19/21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020629	72	72

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

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560

565

570

EXIST. R/W

EXIST. R/W

PI 561+03.99

N 30°49'26" W

9'26" W

PT 562+80.96

N 21°04'01" W

PC 567+97.69

PT 570+03.69

PI 569+30.25

MATCH EXIST.

N 70°36'13" E

202.08' TRANSITION

POE 571+22.08

STA. 571+22.08
END JOB 020629

HWY. 35
P. I. = 561+03.99
Δ = 9°45' 25" RT.
D = 2°45' 00"
T = 177.83'
L = 354.80'
P. C. = 559+26.16
P. T. = 562+80.96
e = 0.064'/'
Ls = 300'

HWY. 35
P. I. = 569+30.25
Δ = 91°40' 14" RT.
D = 44°30' 00"
T = 132.56'
L = 206.00'
P. C. = 567+97.69
P. T. = 570.03.69
e = 0.100'/'
Ls = 250'

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

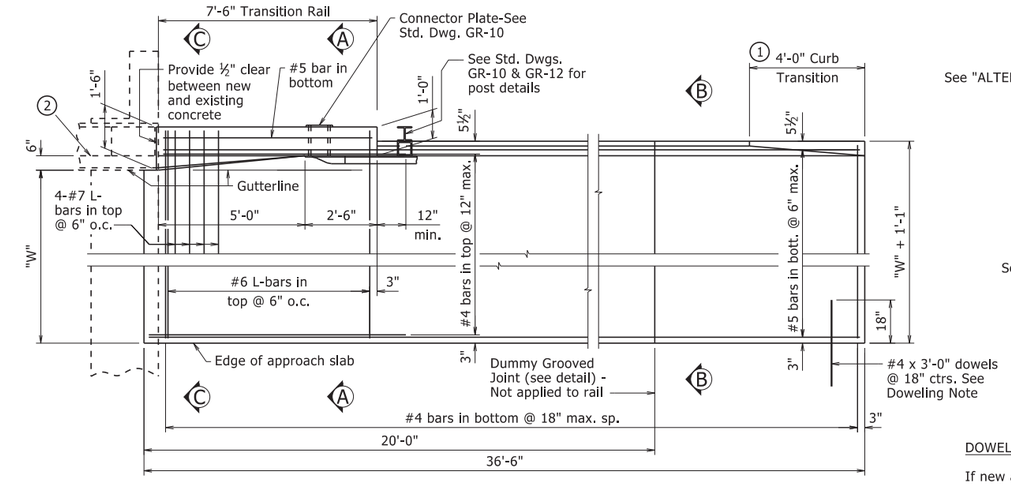
180
170
160
150
140
130
120
110
100
90

560+00 561+00 562+00 563+00 564+00 565+00 566+00 567+00 568+00 569+00 570+00 571+00 572+00 573+00 574+00 575+00

bh38527 10/28/2019
R020629.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11/7/19				6	ARK.			
				JOB NO.				

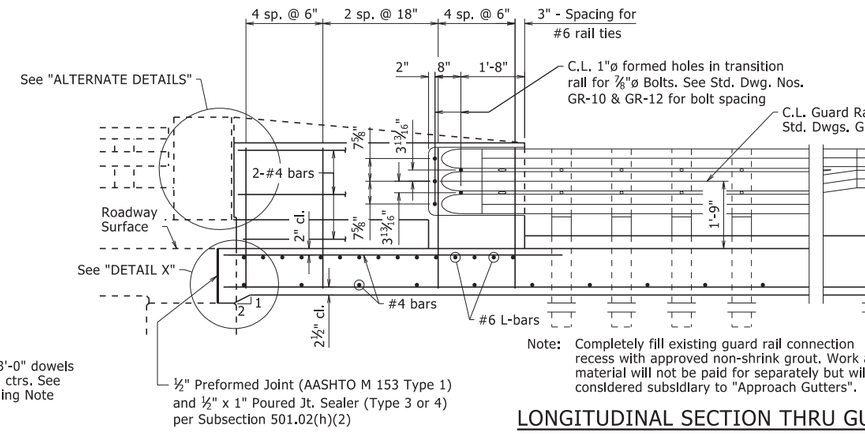
1 - TYPE AT GUTTERS - 55036



PLAN - SQUARE BRIDGES

⅜" = 1'-0"

(2) Front face of concrete wall (Type A Rail) or front face of metal pipe or tubing (Types B, C, D or E Rail).



LONGITUDINAL SECTION THRU GUTTER

½" = 1'-0"

Note: Completely fill existing guard rail connection recess with approved non-shrink grout. Work and material will not be paid for separately but will be considered subsidiary to "Approach Gutters".

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

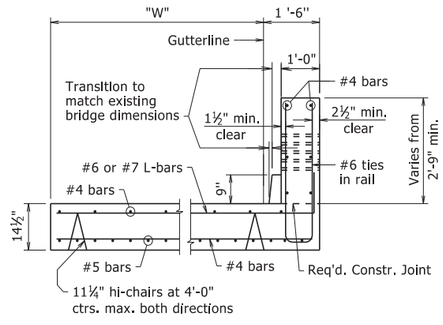
Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.

DOWELING NOTES

If new approach slab is used: Place dowels into approach slab using 18" embedment.

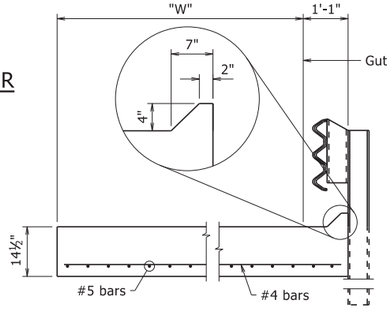
If existing approach slab is retained: Dowels shall be drilled and grouted 18" into existing slab. At the Contractor's option, existing dowels may be retained, cleaned and incorporated into new gutters. Work for drilling and grouting, or retaining and cleaning will not be paid for separately but will be considered subsidiary to "Approach Gutters".

Dowel bars, if required, will not be paid for separately, but will be considered subsidiary to other pay items.



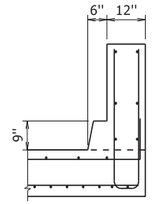
SECTION A-A

½" = 1'-0"



SECTION B-B

½" = 1'-0"



SECTION C-C

At End of Transition Rail

½" = 1'-0"

GENERAL NOTES

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

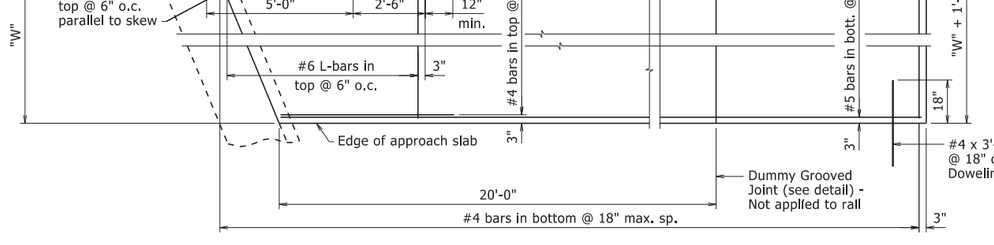
Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

Preformed Joint and Poured Joint Sealer included in the item "Approach Gutters".

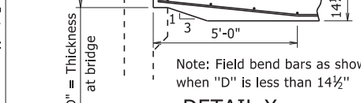
All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

When this Standard Drawing is used as a retrofit for an existing bridge and an existing drop inlet is located within the Plan of the approach gutter, adjust the reinforcing as needed to facilitate construction of the approach gutter, unless otherwise noted.



PLAN - SKEWED BRIDGES

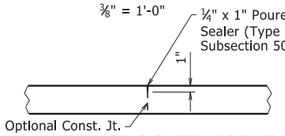
⅜" = 1'-0"



Note: Field bend bars as shown when "D" is less than 14½"

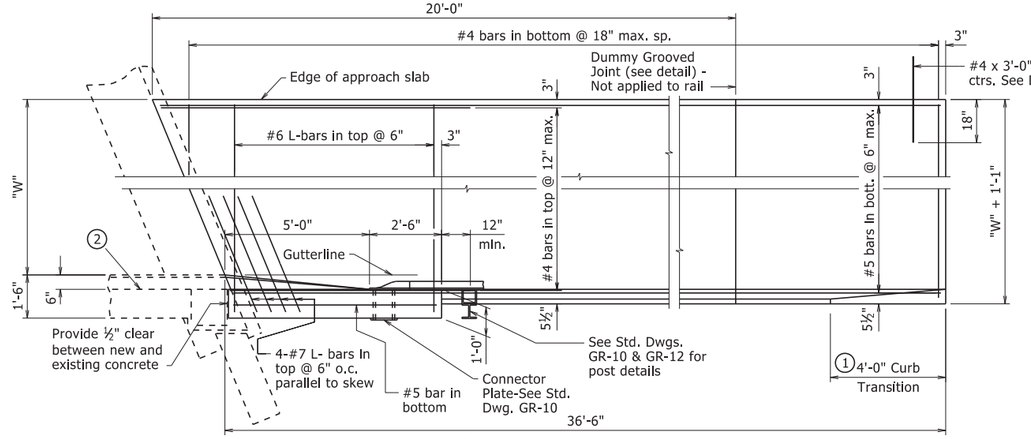
DETAIL X

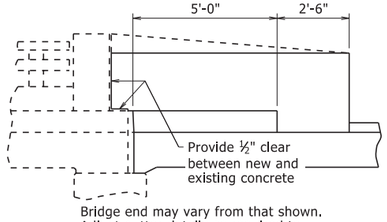
⅜" = 1'-0"



DUMMY GROOVED JOINT

No Scale



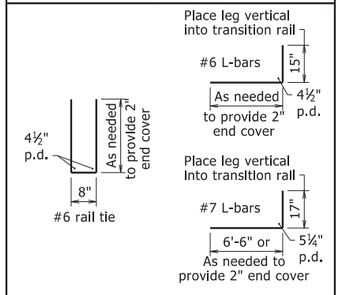


Bridge end may vary from that shown. Adjust gutter details as required to provide similar railing transition.

ALTERNATE DETAILS

NO SCALE

BENDING DIAGRAMS



Dimensions are out to out of bars.

1 Revised and Redrawn. By: TMG
Checked By: CRE 11/7/2019

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

APPROX. QUANTITIES FOR ONE SQUARE 36'-6" APPROACH GUTTER

(For Information Only)

Concrete (cu. yd.)	("W" x 1.65) + 2.80
Reinforcing Steel (lb.)	("W" x 128.1) + 318.5

Variables: Units of "W" are in feet.

"W" = Distance from gutterline to edge of shoulder or edge of approach slab. "W" shall not be less than 3'-0" unless approach gutter is doweled into an approach slab or concrete pavement.

STANDARD DETAILS FOR TYPE 'AT' APPROACH GUTTERS (BRIDGES WITH 6" CURBS & TYPE A, B, C, D OR E RAILING)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

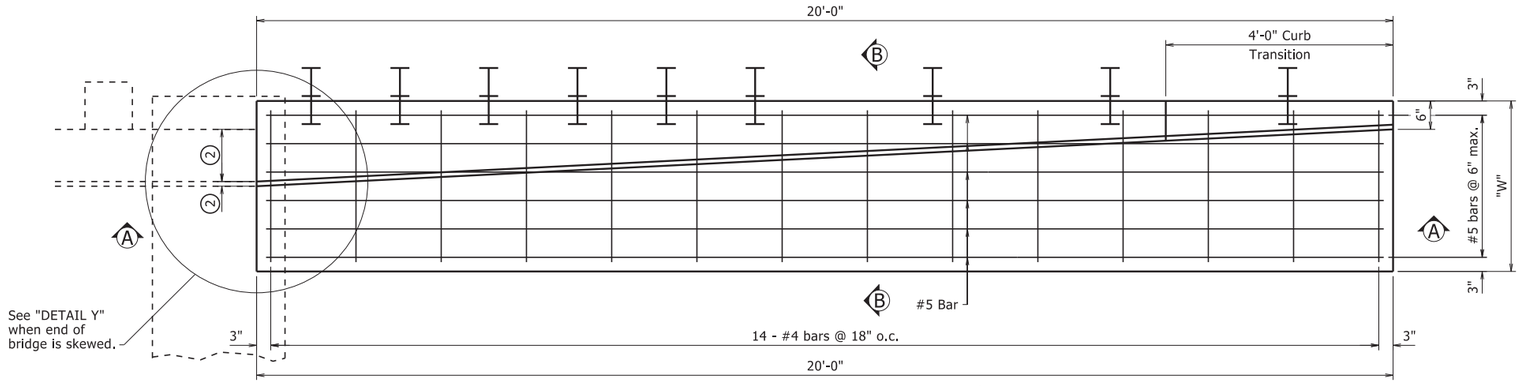
DRAWN BY:	KDH	DATE:	2/27/2014	FILENAME:	b55036.dgn
CHECKED BY:	KWY	DATE:	2/27/2014	SCALE:	AS NOTED
DESIGNED BY:	STD.	DATE:	-		

DRAWING NO. 55036

PRINT DATE: 11/20/2019

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

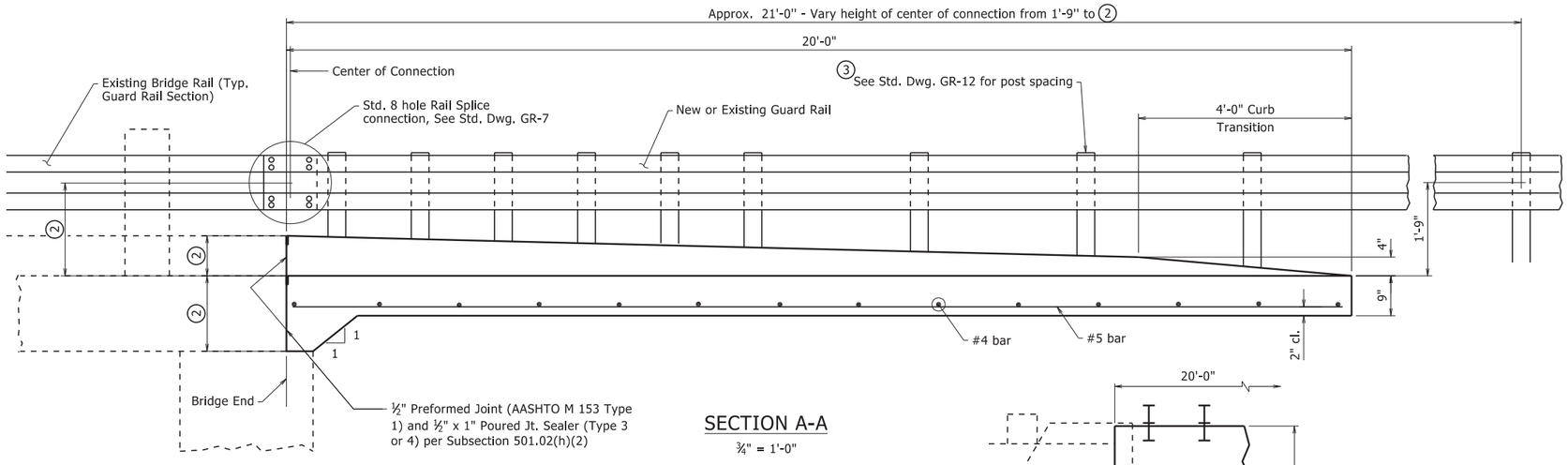
① - TYPE CT GUTTERS - 55039



PLAN OF APPROACH GUTTER ①

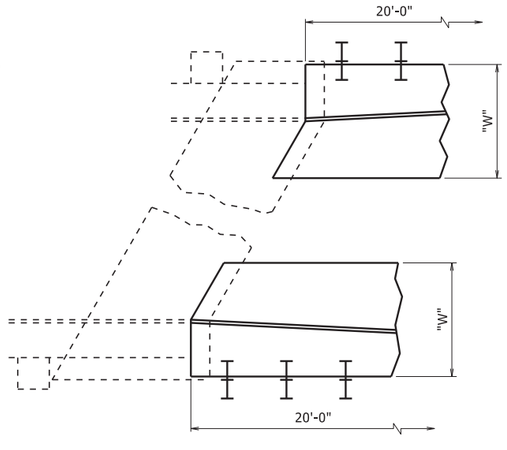
¾" = 1'-0"

Remove the existing terminal section as needed and attach a new guard rail to the existing guard rail on the bridge.



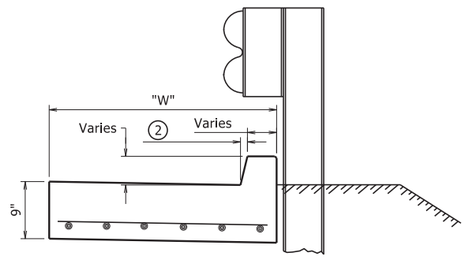
SECTION A-A

¾" = 1'-0"



DETAIL Y

No Scale



SECTION B-B

1" = 1'-0"

APPROXIMATE QUANTITIES FOR ONE SQUARE 20'-0" APPROACH GUTTER

Concrete (Cu. Yd.)	("W" x 0.56) + 0.41
Reinforcing Steel (lb.)	("W" x 50.38) - 3.11

Variables: Units of "W" are in feet.

① Square approach gutter is shown. Modify approach gutter as necessary to accommodate a bridge on a skew. See "DETAIL Y."

② Match existing conditions at bridge end.

③ Vary post height, as necessary, to match height of existing w-beam bridge rail.

GENERAL NOTES

This drawing shall only be used as a retrofit of an existing bridge end where an existing curb creates a snag point.

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

Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

Preformed Joint and Poured Joint Sealer included in the item "Approach Gutters".

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

If an existing drop inlet is located within the Plan of the approach gutter, adjust the reinforcing as needed to facilitate construction of the approach gutter, unless otherwise noted.

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

STANDARD DETAILS FOR TYPE 'CT' APPROACH GUTTERS (BRIDGES WITH CURB)

ROUTE SEC.

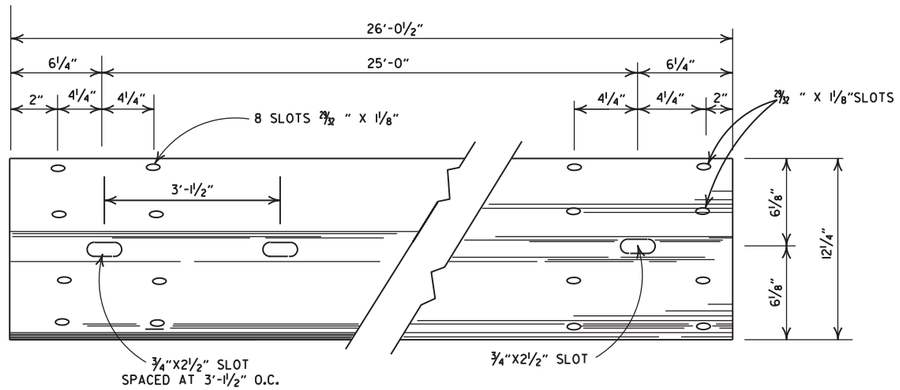
ARKANSAS STATE HIGHWAY COMMISSION

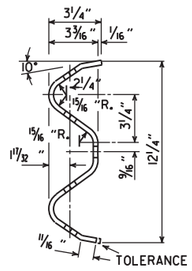
LITTLE ROCK, ARK.

DRAWN BY: TMG DATE: 11/7/2019 FILENAME: b55039.dgn
CHECKED BY: CRE DATE: 11/7/2019 SCALE: AS NOTED
DESIGNED BY: STD. DATE: -

DRAWING NO. 55039

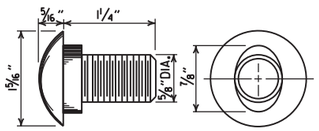
PRINT DATE: 7/17/2020



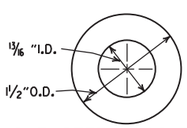


DETAILS OF W-BEAM GUARDRAIL

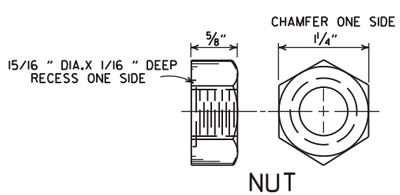
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



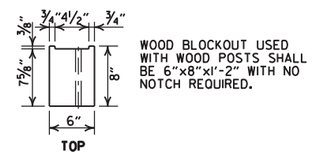
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER

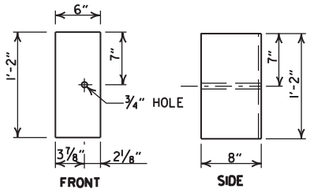


NUT

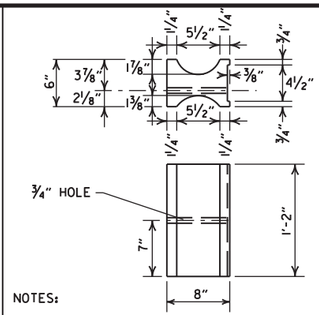


WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"x1'-2" WITH NO NOTCH REQUIRED.

TOP



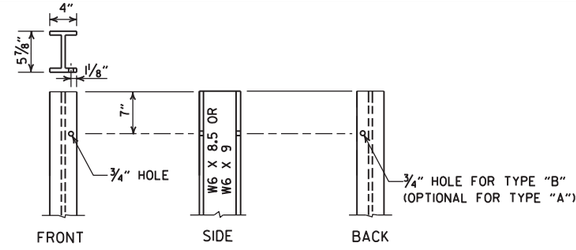
WOOD BLOCKOUT (W-BEAM)



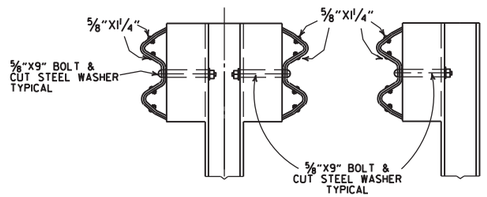
NOTES:

1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT (W-BEAM)



STEEL POST



TYPE "B" TYPE "A"

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

WHERE W-BEAM GUARDRAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.

W-BEAM GUARDRAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

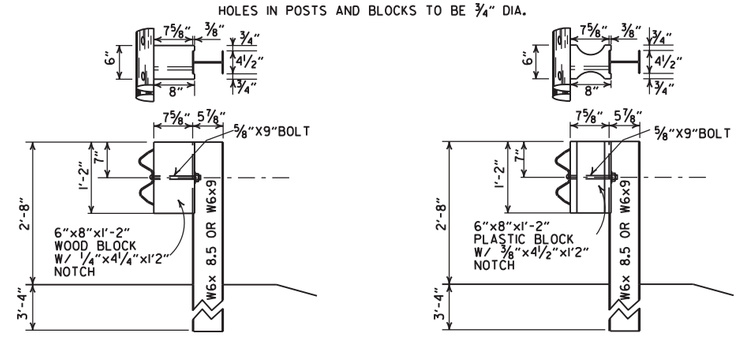
USE W-BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARDRAIL, W-BEAM GUARDRAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.

ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARDRAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARDRAIL.

HOLES IN POSTS AND BLOCKS TO BE ¾" DIA.



WOOD BLOCKOUT CONNECTIONS PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE ¾" DIA.

POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - ¼".

WOOD BLOCKOUT CONNECTIONS PLASTIC BLOCKOUT CONNECTIONS

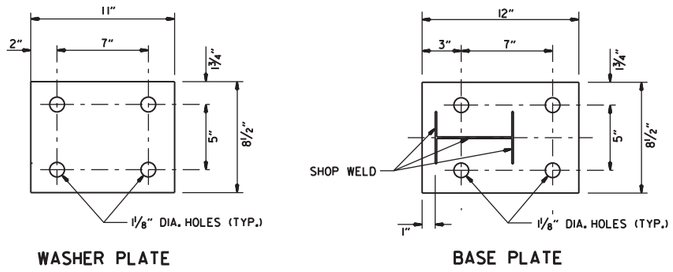
DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

DATE	REVISION	FILMED
11-07-19	RENUMBERED AND RENAMED	
11-16-17	REVISED GENERAL NOTES AND RAISED GUARDRAIL HEIGHT 3"	
07-14-10	RAISED HEIGHT OF GUARDRAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
03-30-00	REMOVED GUARDRAIL AT BRIDGE ENDS	
01-12-00	ADDED PLASTIC BLOCKOUT	
08-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARDRAIL REPLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
04-03-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
06-02-94	ADDED ALT. STEEL POST SIZE	
08-05-93	REVISED STEEL POST SIZE	8-5-93
10-01-92	REDRAWN & REVISED	10-1-92
08-15-91	REVISED WASHER NOTE	8-15-91
08-02-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
07-15-88	REVISED SECTION 3 & GENERAL NOTES	
03-04-88	REV. ANCHOR POST ,ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-09-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

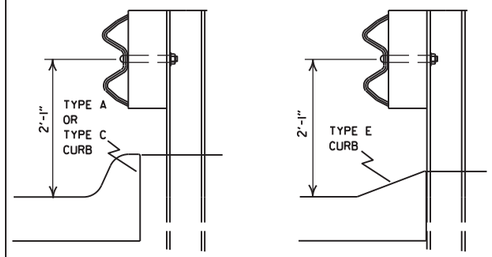
STANDARD DRAWING GR-6



WASHER PLATE

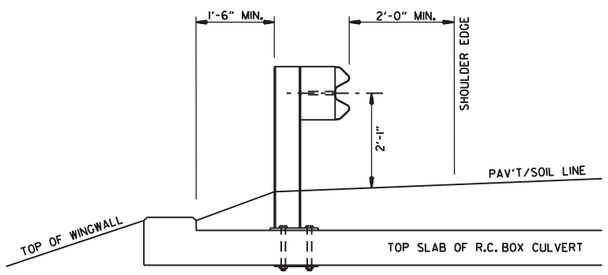
BASE PLATE

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

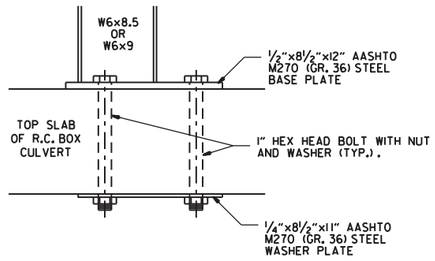


DETAIL OF GUARDRAIL PLACEMENT BEHIND CURB (W-BEAM)

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

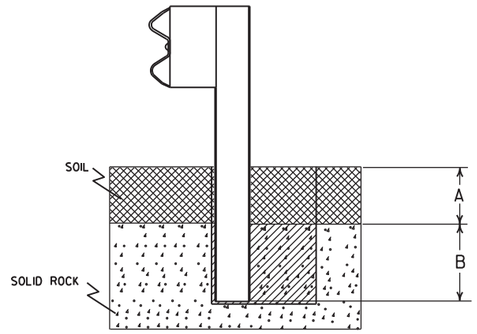


SECTION A-A

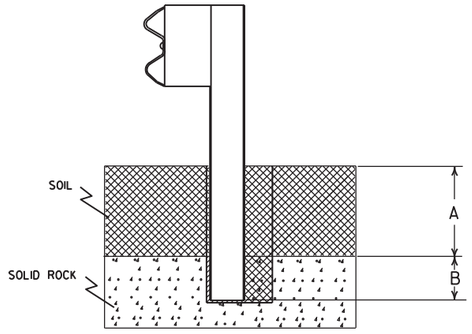


DETAIL OF CONNECTION

Case 1

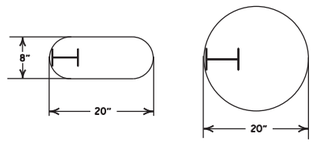


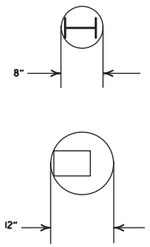
Case 2



Plan View Steel Posts

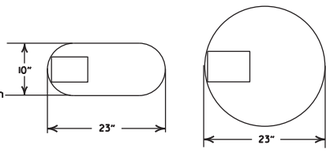
Either hole configuration acceptable





Plan View Wood Posts

Either hole configuration acceptable



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

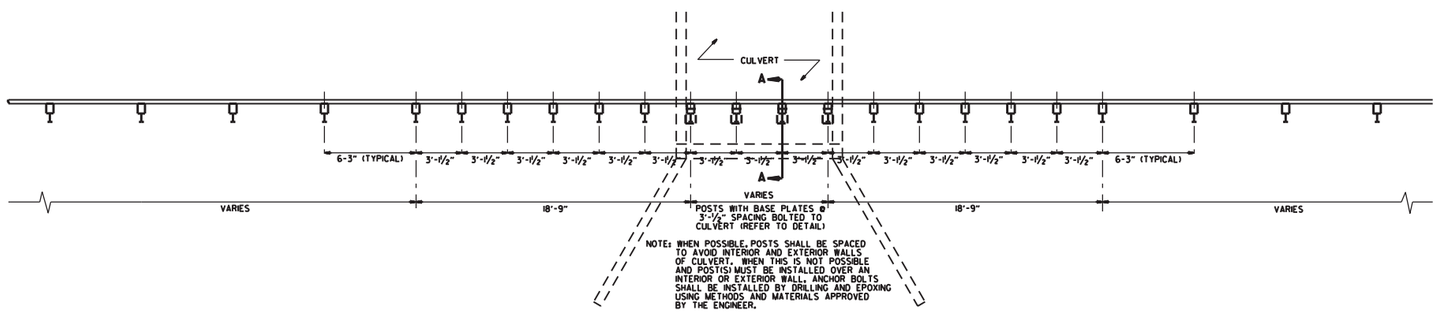
Zone A:
Backfill according to Section 617.03(a).

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

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

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

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



PLAN LAYOUT OF TYPE A GUARDRAIL AT LOW-FILL CULVERTS

NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARDRAIL POSTS AS SHOWN ON STD. DWG. GR-6.

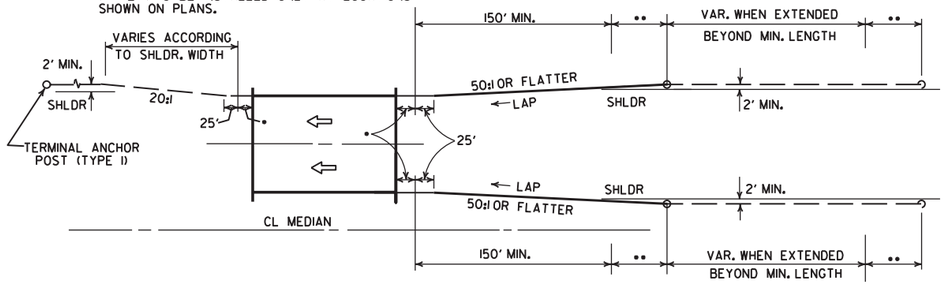
DATE	REVISION	FILMED
11-07-19	RENUMBERED, RENAMED, REVISED REFERENCE	
11-16-17	REVISED GUARDRAIL HEIGHT	
07-14-10	RAISED HEIGHT OF GUARDRAIL 1"	
04-12-07	REVISED DETAIL OF GUARDRAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARDRAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARDRAIL PLACEMENT AT LOW-FILL CULVERTS	
03-30-00	REMOVED CONCRETE INSERT ANCHOR	
08-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT. ADDED DET. OF GUARDRAIL CONNECTION TO R.C. BOX CULV'T., DELETED DET. OF STEEL LINE POST CONN. & ADDED DET. OF GUARDRAIL PLACE. BEHIND CURB & DET. OF POSTPLACE. IN SOLID ROCK	
04-03-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
06-02-94	REVISED ALTERNATE POST SIZE	
08-05-93	REVISED STEEL POST SIZE	
10-01-92	REDRAWN & REVISED	10-1-92
08-02-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
07-15-88	CONFORMED TO 1988 SPECS	
03-04-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	712-10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-09-87	REDRAWN & REVISED	803-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

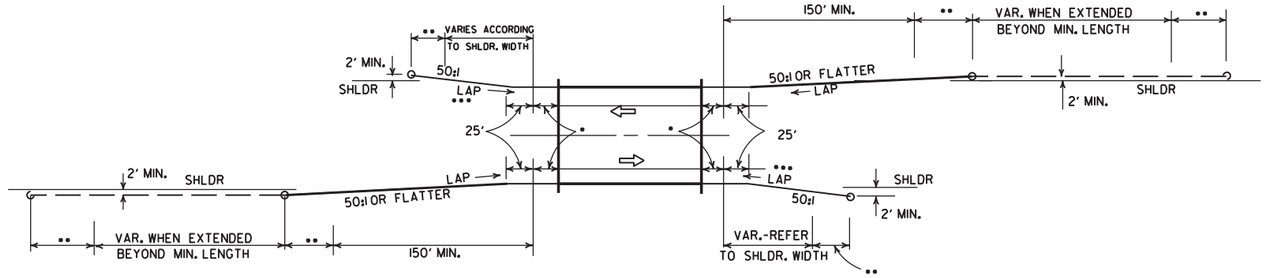
STANDARD DRAWING GR-7

NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE I) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

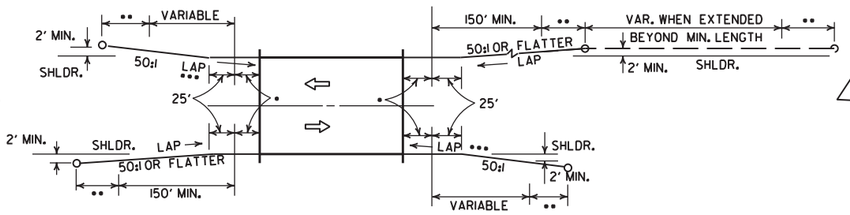
••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

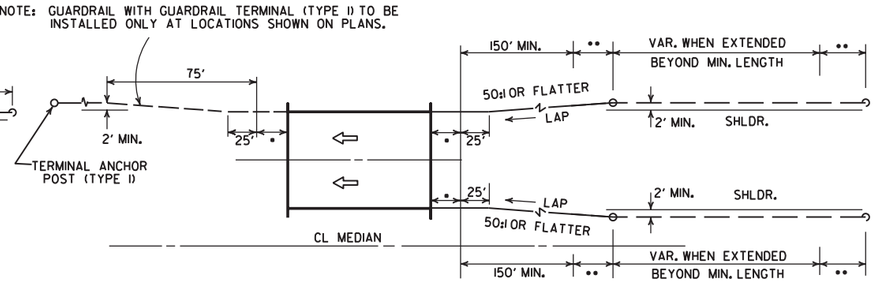
METHODS OF INSTALLATION OF GUARDRAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

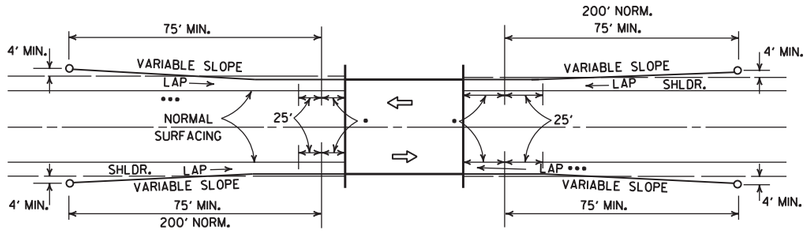
NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE I) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

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

••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERMINAL (TYPE I) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

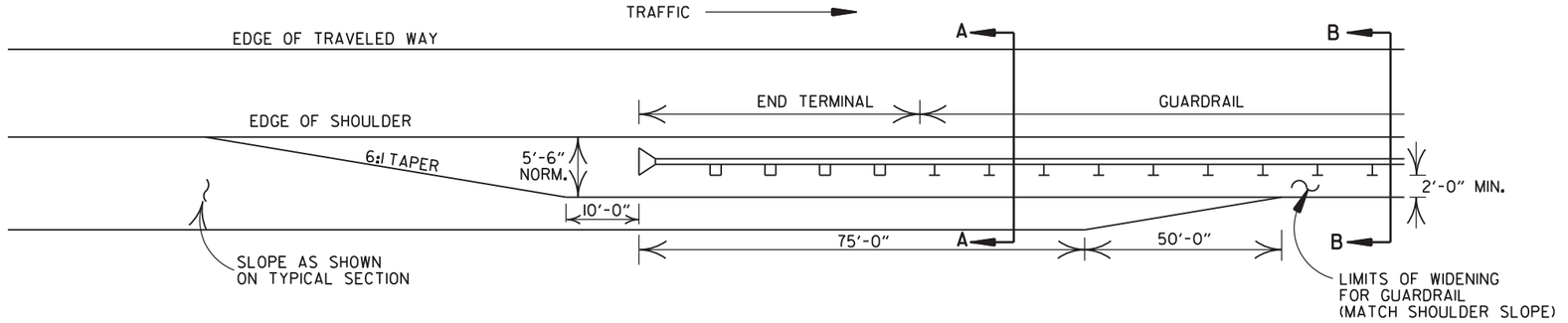
- • THRIE BEAM GUARDRAIL TERMINAL
- •• GUARDRAIL TERMINAL (TYPE 2)

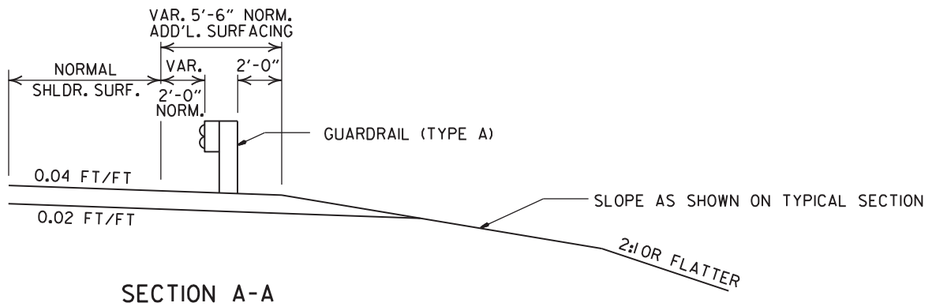
DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARDRAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

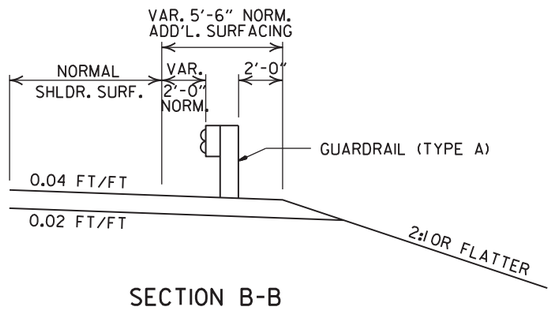
GUARDRAIL DETAILS

STANDARD DRAWING GR-8





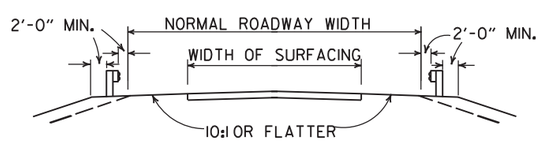
SECTION A-A



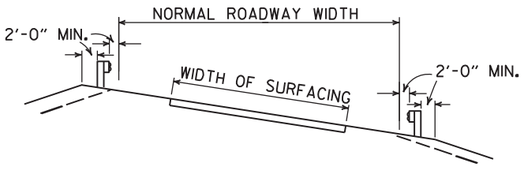
SECTION B-B

DETAILS OF WIDENING FOR GUARDRAIL

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

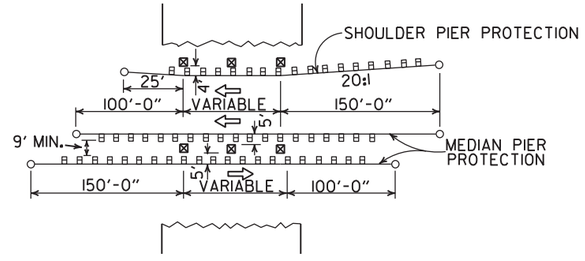


SECTION ON TANGENT



SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARDRAIL ON HIGHWAY



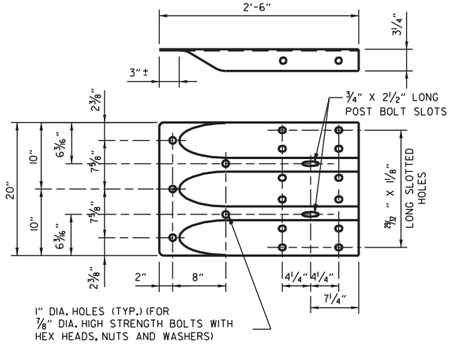
METHOD OF INSTALLATION OF GUARDRAIL AT FIXED OBSTACLE

DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

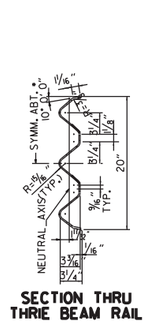
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

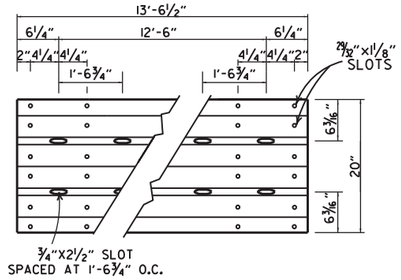
STANDARD DRAWING GR-9



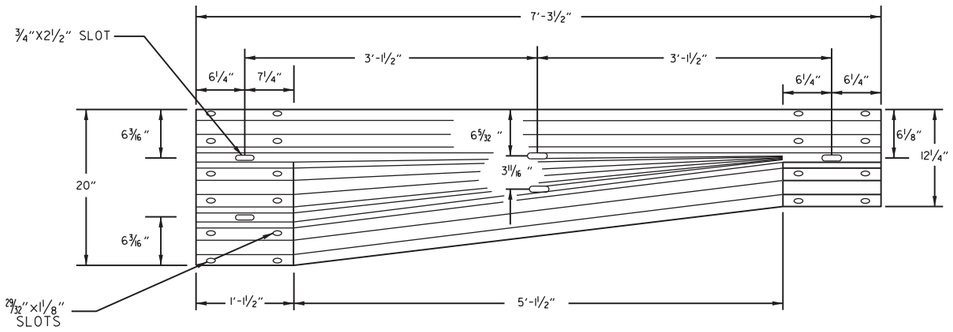
SPECIAL END SHOE



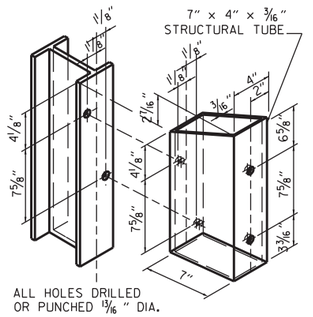
SECTION THRU THRIE BEAM RAIL



THRIE BEAM RAIL

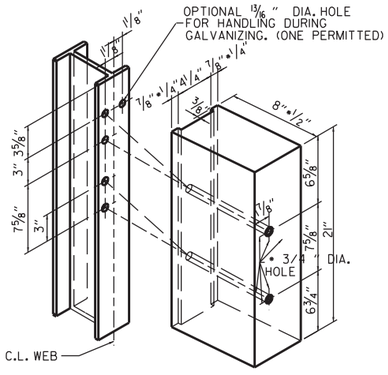


TRANSITION SECTION



ATTACH BLOCKOUT TO POST USING 5/8" DIA. HEX HEAD BOLTS WITH 1 1/2" O.D. CUT STEEL WASHERS AND NUT.

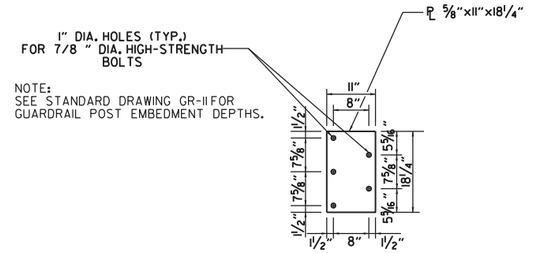
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

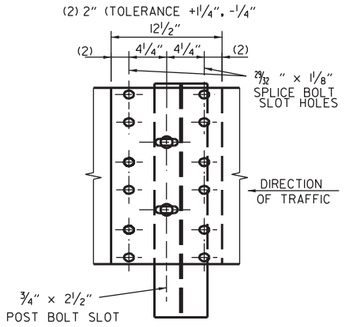
HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



CONNECTOR PLATE

CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING 7/8" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



THRIE BEAM RAIL SPLICE AT POST

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3*4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

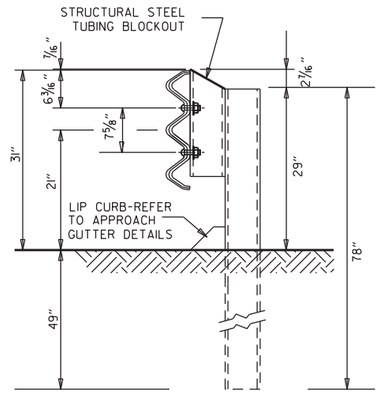
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED AND REVISED REFERENCES	
11-16-17	REVISED TRANSITION SECTION, GUARD RAIL HEIGHT, AND GENERAL NOTES; MOVED THRIE BEAM GUARD RAIL CONNECTIONS AT BRIDGES ENDS TO STD. DRWG. GR-12	
07-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED NOTE (2)	
06-29-00	MOVED DIMENSION LINES	
05-18-00	ADDED NOTE	
03-30-00	DRAWN & ISSUED	

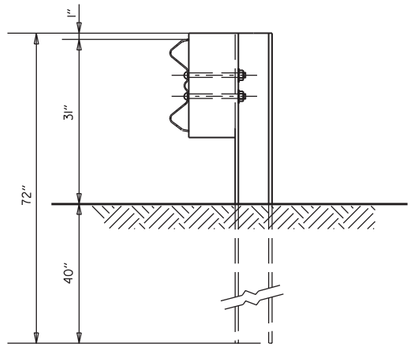
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

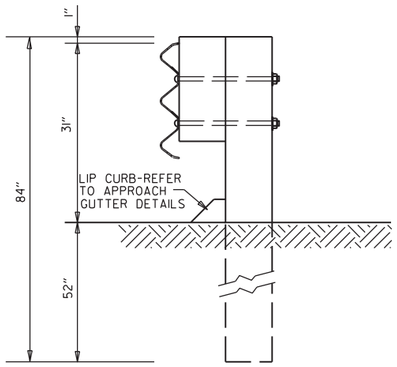
STANDARD DRAWING GR-10



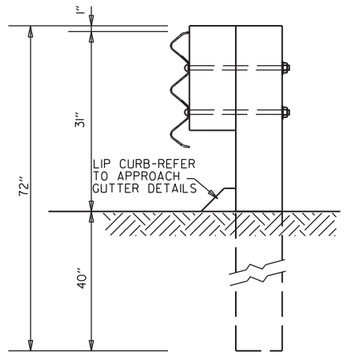
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7



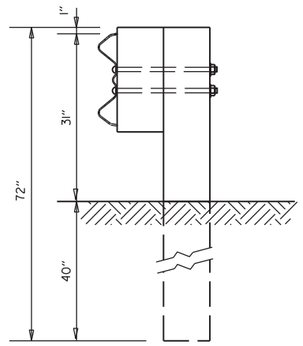
W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8



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



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



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

GENERAL NOTES:

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

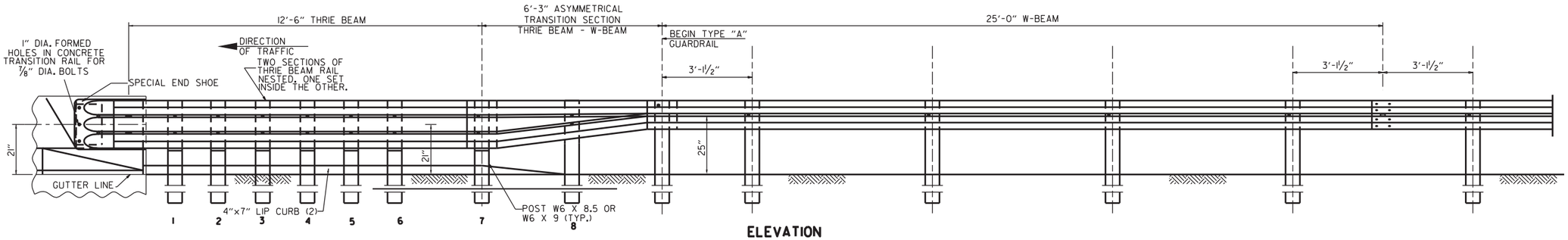
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED	
11-16-17	REVISED GUARDRAIL HEIGHT, CHANGED STD. DWG. NUMBER FROM GR-10A TO GR-11	
07-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
08-22-02	REVISED LIP CURB NOTE	
03-30-00	DRAWN & ISSUED	

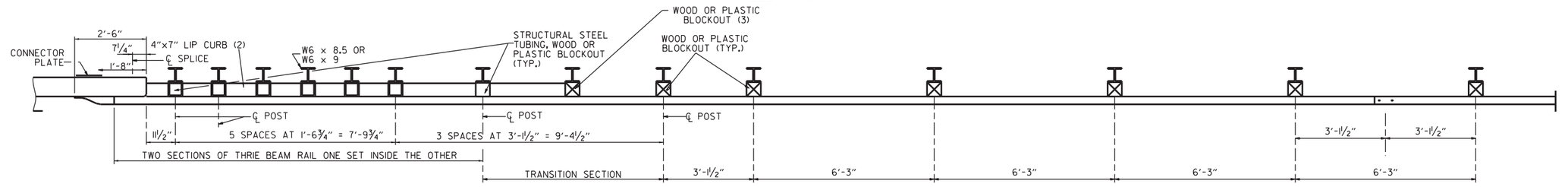
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

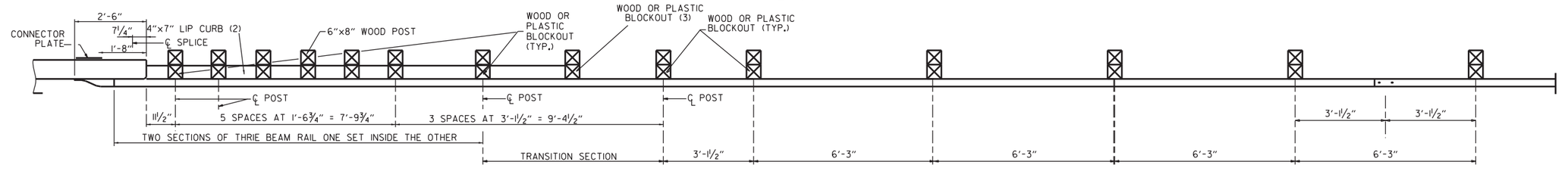
STANDARD DRAWING GR-11



ELEVATION



PLAN



PLAN

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

THRIE BEAM GUARDRAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

POSTS SHALL NOT BE PLACED AT SPLICE LOCATIONS ALONG W-BEAM RAILS.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
05-14-20	REVISED NOTES	
11-07-19	RENAMED & REVISED REFERENCES	
11-16-17	RE-DRAWN FROM STD. DWG. GR-10 & ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

STANDARD DRAWING GR-12

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

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	INSTALLATION		INSTALLATION	INSTALLATION
				TYPE 1	TYPE 1		TYPE 1	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	INSTALLATION			
				TYPE 2	TYPE 1	TYPE 2	TYPE 1	
36	40x31	5	0.079	3	2	12	15	
42	46x36	6	0.079	3	2	13	15	
48	53x41	7	0.079	3	2	13	15	
54	60x46	8	0.079	3	2	13	15	
60	66x51	9	0.079	3	2	13	15	
66	73x55	12	0.079	3	2	15	15	
72	81x59	14	0.079	3	2	15	15	
78	87x63	14	0.079	3	2	15	15	
84	95x67	16	0.109	3	2	15	15	
90	103x71	16	0.109	3	2	15	15	
96	112x75	18	0.109	3	2	15	15	
102	117x79	18	0.109	3	2	15	15	
108	128x83	18	0.138	3	2	15	15	

CONSTRUCTION SEQUENCE

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

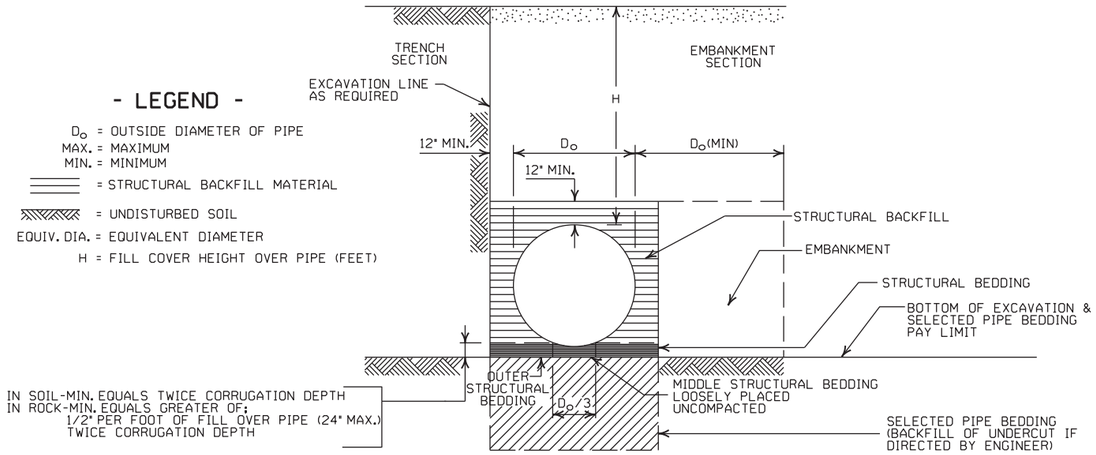
NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

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

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
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



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."

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.

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 1 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

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

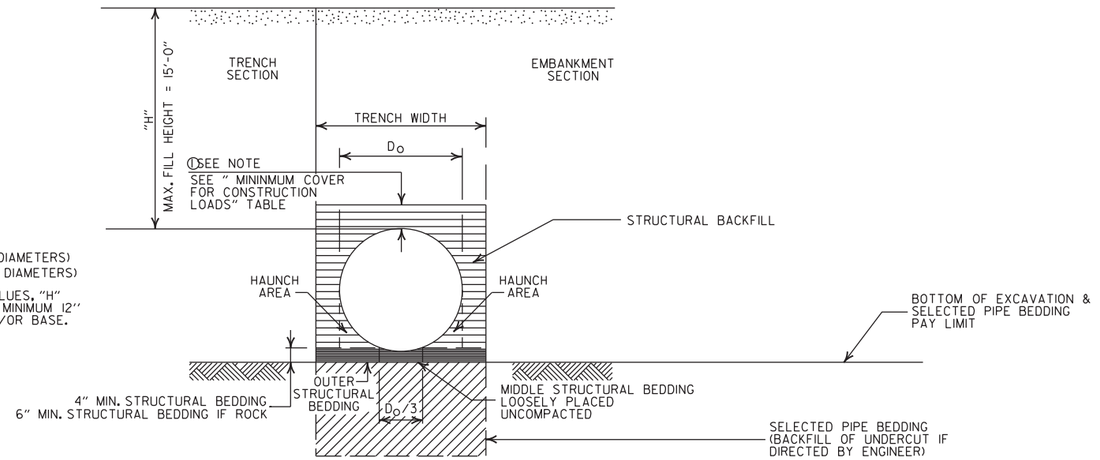
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

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

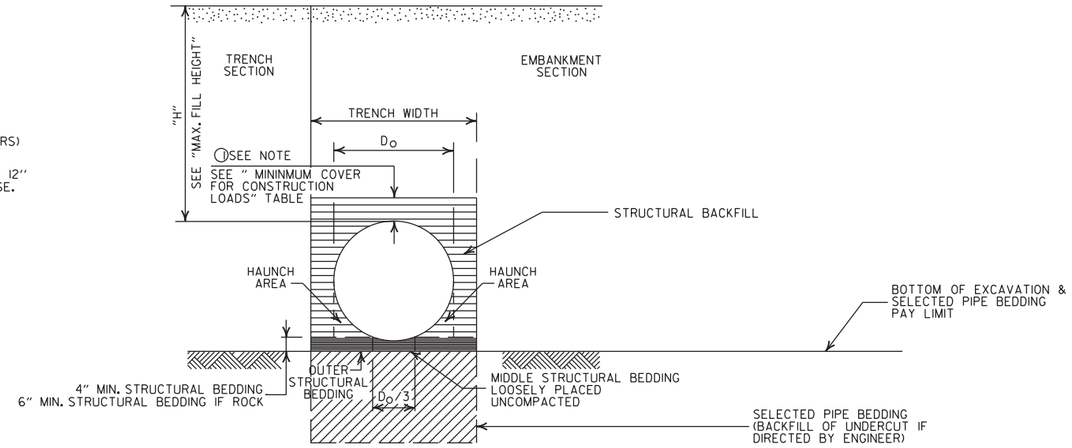
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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"

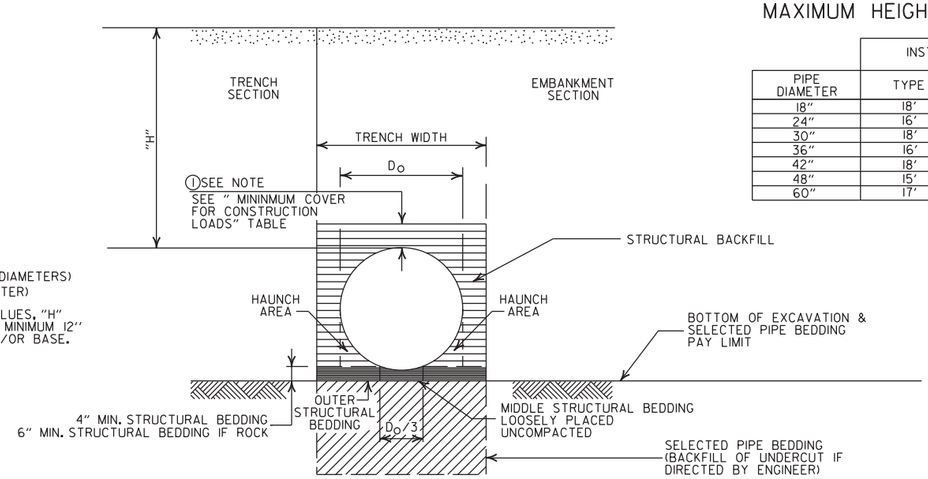
MINIMUM COVER FOR CONSTRUCTION LOADS

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

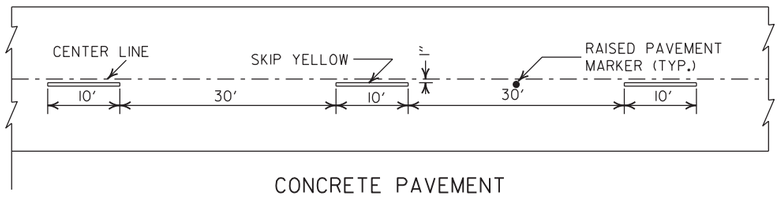
DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

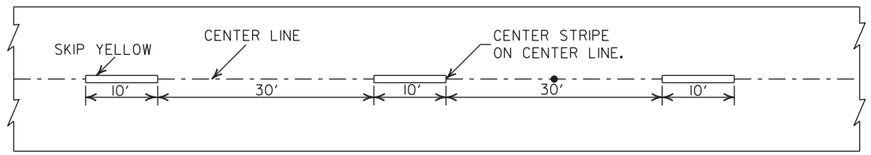
PLASTIC PIPE CULVERT (POLYPROPYLENE)

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.

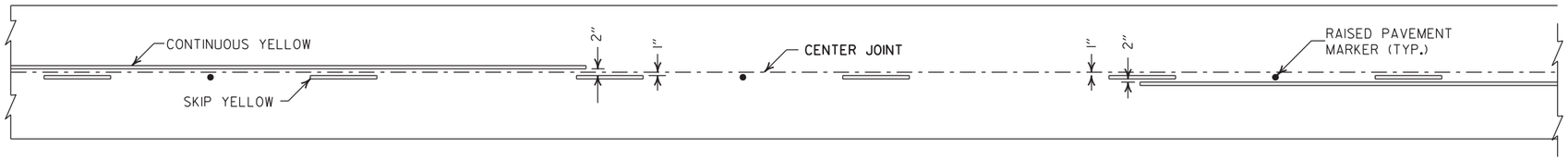


CONCRETE PAVEMENT

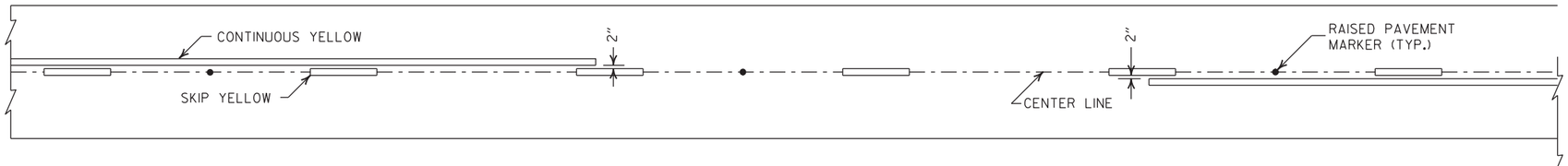


ASPHALT PAVEMENT

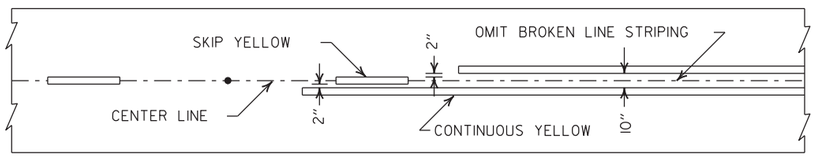
BROKEN LINE STRIPING



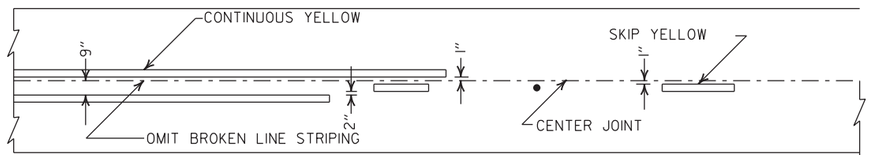
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

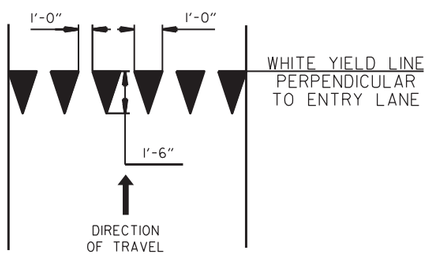


ASPHALT PAVEMENT

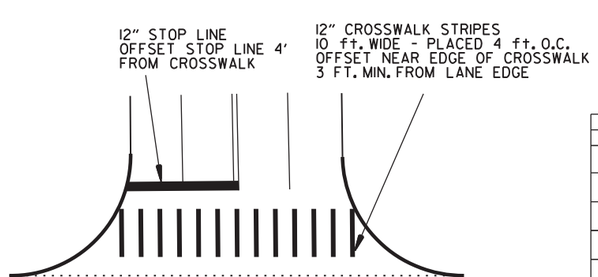


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

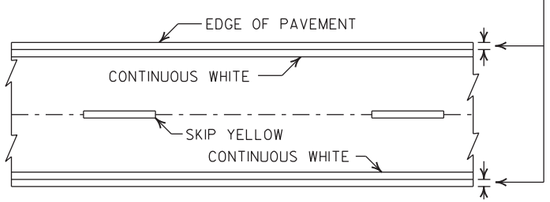


YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

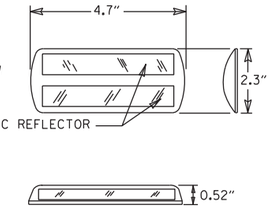
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING

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

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.

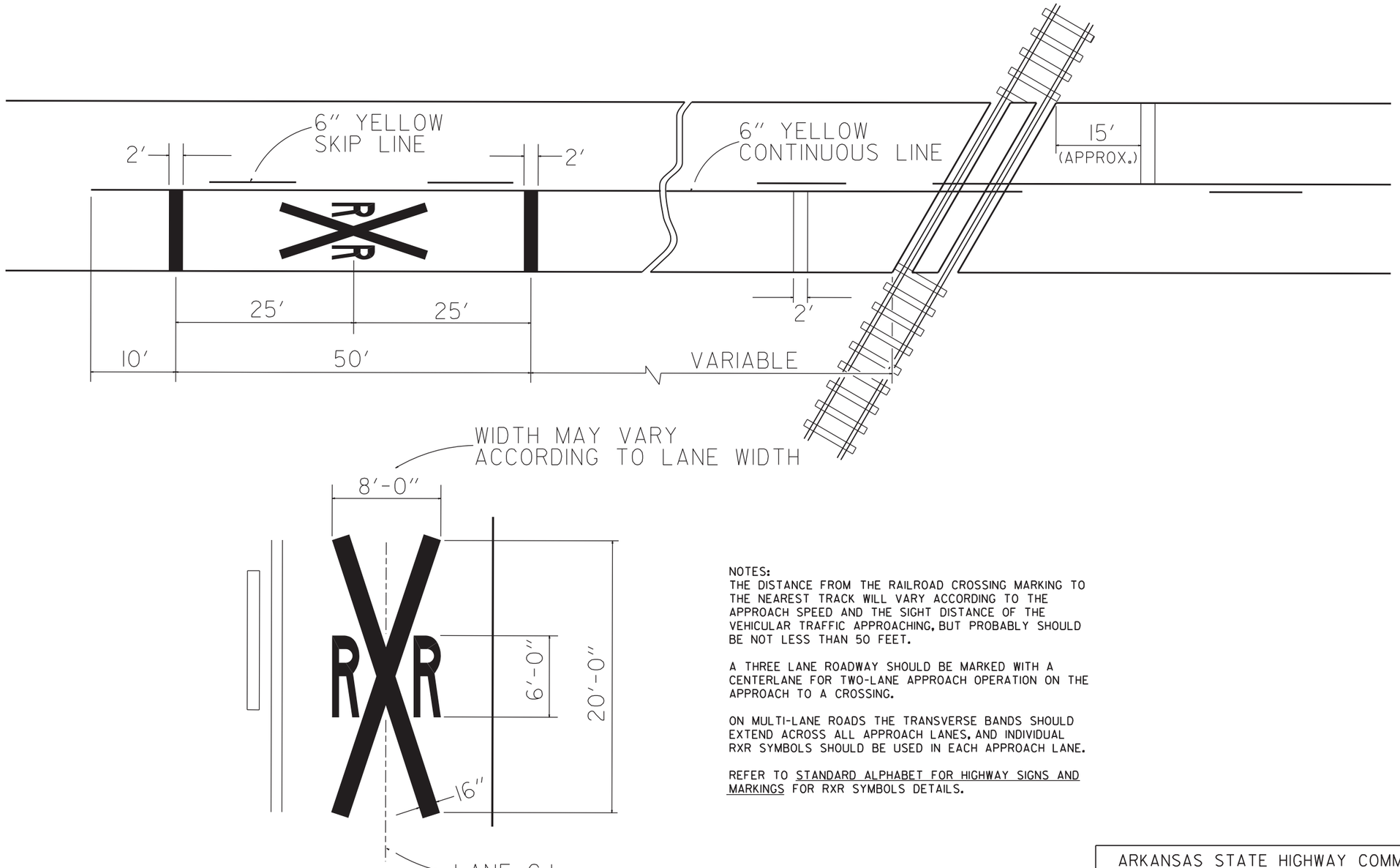
DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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



DETAIL OF PAVEMENT MARKINGS FOR RAILROAD CROSSING

PAVEMENT MARKING TO BE
SYMMETRICAL ABOUT RAILROAD

NOTES:
THE DISTANCE FROM THE RAILROAD CROSSING MARKING TO THE NEAREST TRACK WILL VARY ACCORDING TO THE APPROACH SPEED AND THE SIGHT DISTANCE OF THE VEHICULAR TRAFFIC APPROACHING, BUT PROBABLY SHOULD BE NOT LESS THAN 50 FEET.

A THREE LANE ROADWAY SHOULD BE MARKED WITH A CENTERLANE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL RXR SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

REFER TO STANDARD ALPHABET FOR HIGHWAY SIGNS AND MARKINGS FOR RXR SYMBOLS DETAILS.

DATE	REVISION	DATE FILMED
12-8-16	REVISED CENTERLINE LABELS	
11-20-08	CORRECTED SPELLING	
4-10-03	REVISED NOTES	
3-2-81	DELETED LETTER & ADDED NOTE	684-3-2-81
7-20-79	STOP LINE CHGD. TO PERP.	636-8-30-79
4-23-75	SHEET RENUMBER	697-4-20-79
4-23-75	REDRAWN	860-4-23-75

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING
FOR RAILROAD CROSSING

STANDARD DRAWING RRS-1

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"

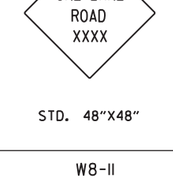
R4-1

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

R4-2

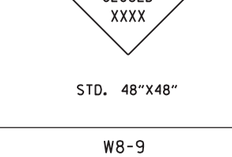
STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



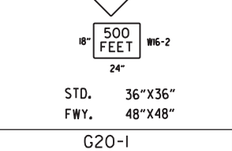
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



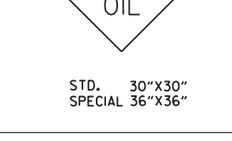
48"X30"

RII-3A



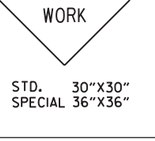
60"X30"

RII-4



60"X30"

W21-5a

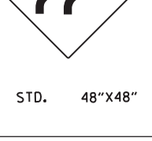


STD. 36"X36"
FWY. 48"X48"

WI-1

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

WI-2

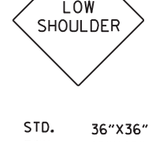


STD. 36"X36"
FWY. 48"X48"

WI-3

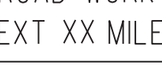
STD. 48"X48"

WI-4



STD. 48"X48"

WI-6

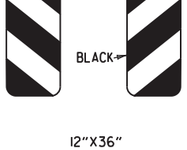


STD. 48"X24"
SPECIAL 60"X30"

WI-8

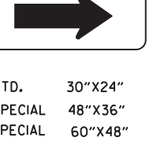
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



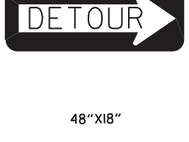
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

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"

R56-1

STD. 18"X18"

W8-11

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

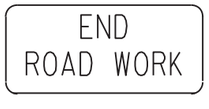
W8-9

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

G20-1

60"X24"

G20-2



48"X24"

OM-3L OM-3R

12"X36"

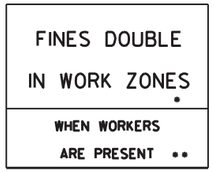
M4-9

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

M4-10

48"X18"

R55-1



36"X60"

• USE 6" C LETTERS
•• USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	½ MILE
1000 FT	¾ MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

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

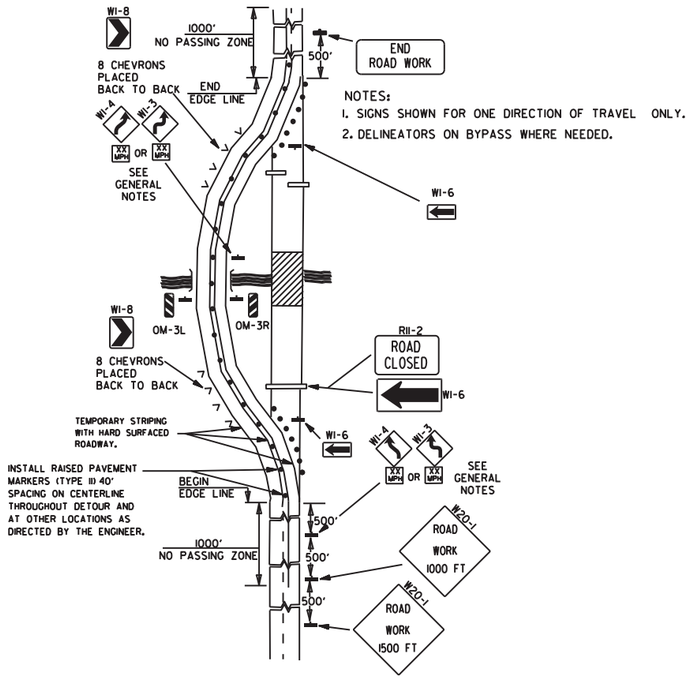
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED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

DATE	REVISION	FILMED
11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

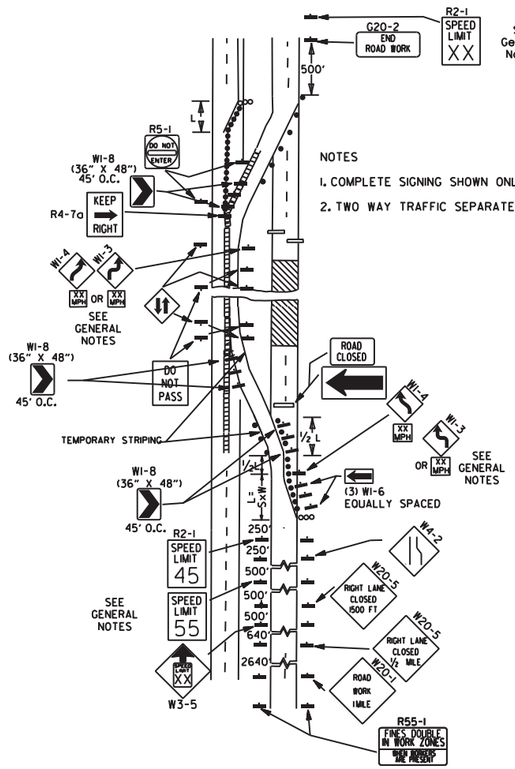
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



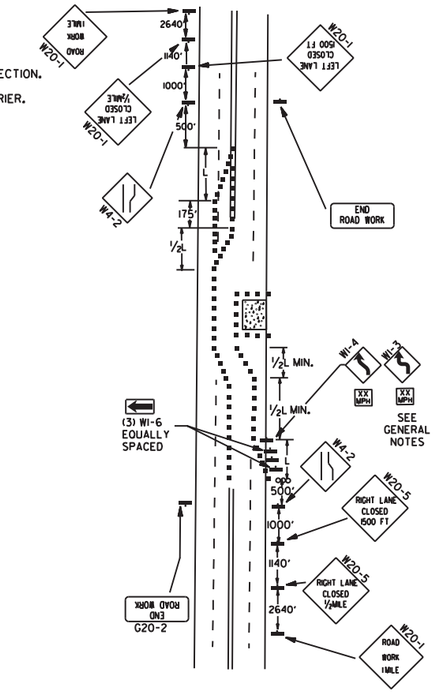
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

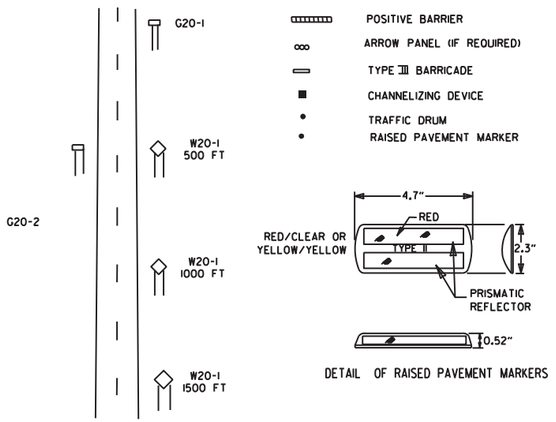


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

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

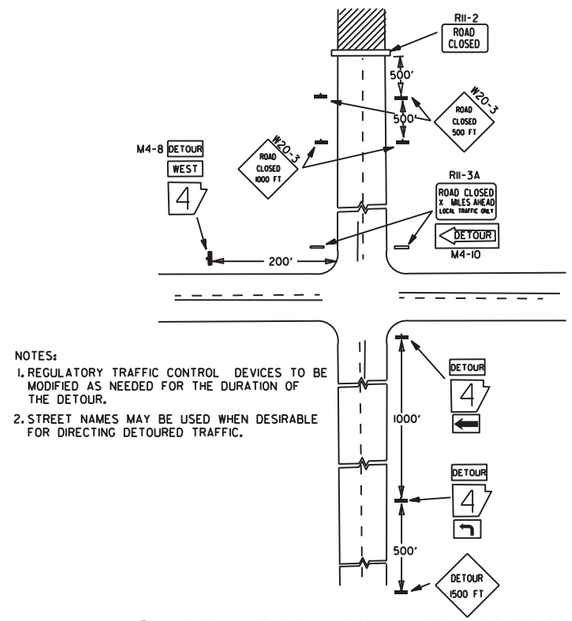


(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



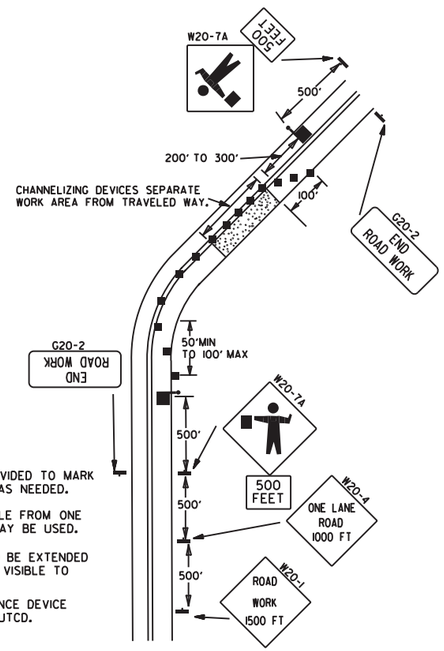
DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT



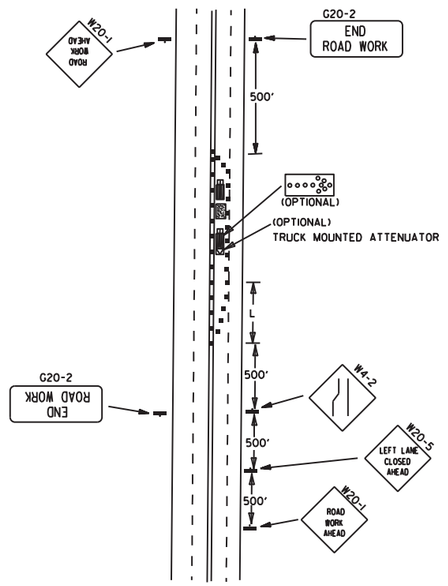
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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



NOTES:
1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(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.

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.

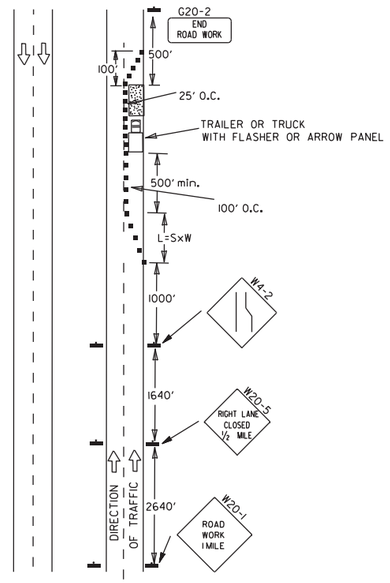
GENERAL NOTES:
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING 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.
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).

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

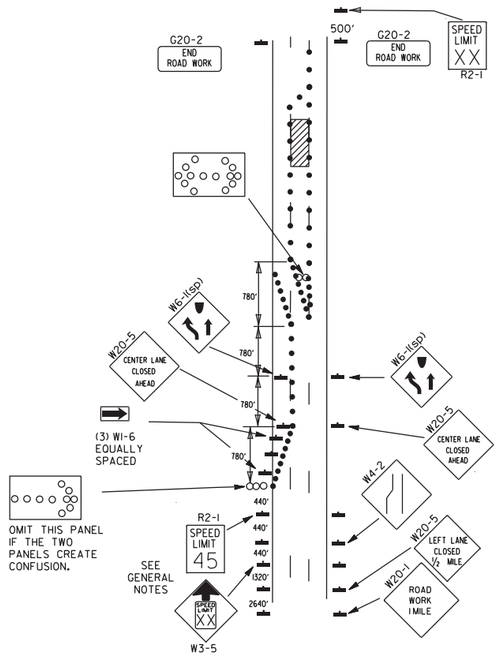
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-2



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



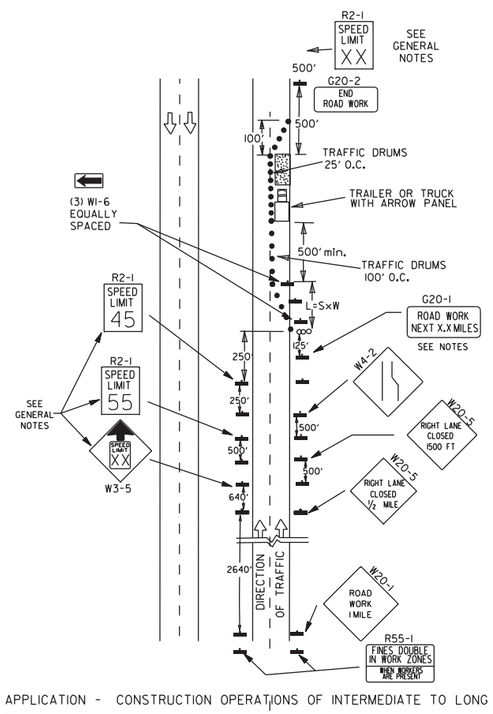
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

KEY:

- ○○○ ARROW PANEL (IF REQUIRED)
- ■ CHANNELIZING DEVICE
- ● TRAFFIC DRUM

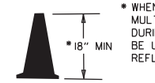
GENERAL NOTES:

1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 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. THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
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.
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).



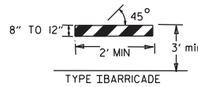
(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

CHANNELIZING DEVICES



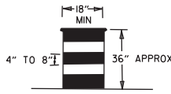
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS. 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

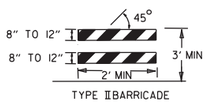
CONES



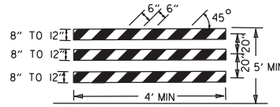
TYPE I BARRICADE

PLASTIC DRUM



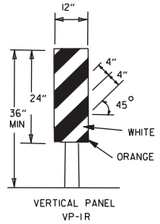


TYPE II BARRICADE



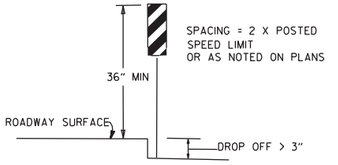
TYPE III BARRICADE

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

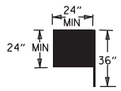


VERTICAL PANEL
VP-1R

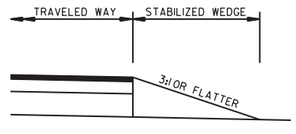
VERTICAL PANEL PLACEMENT



FLAG

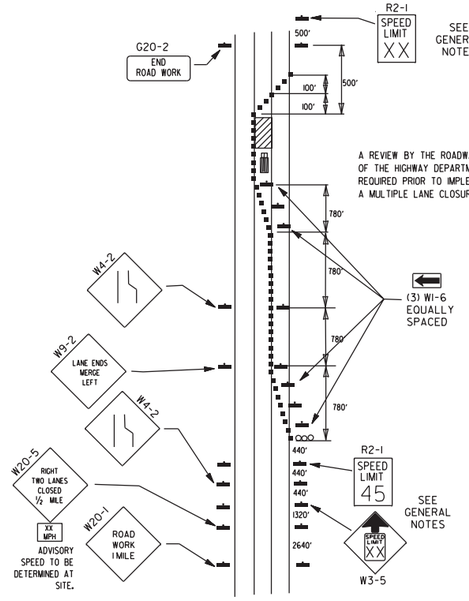


FLAG SHALL BE OF GOOD GRADE RED MATERIAL



STABILIZED WEDGE

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



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
≤ 2"	CENTERLINE	W8-11 AND LANE STRIPING	W8-11 AND LANE STRIPING
> 2"	CENTERLINE	STANDARD LANE CLOSURE	STANDARD LANE CLOSURE
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS	W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS	W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS
> 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

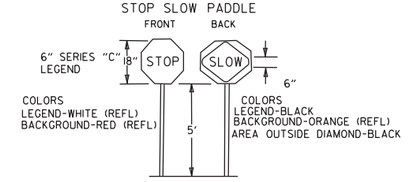
INTERSTATE		
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 2"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 2"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 2" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 6"	EDGE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

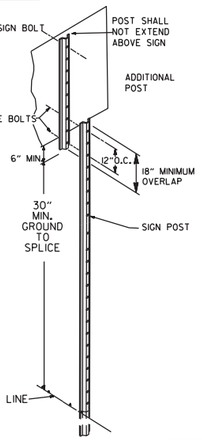
GENERAL NOTES:

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.

STOP SLOW PADDLE



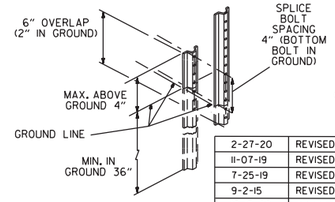
DETAIL OF SPLICES



NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21)

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

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



DATE	REVISION	FILMED
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE 11	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1& REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

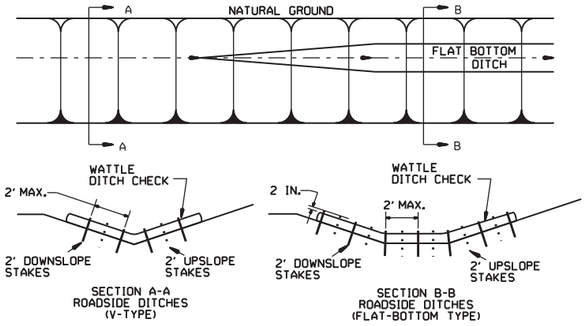
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

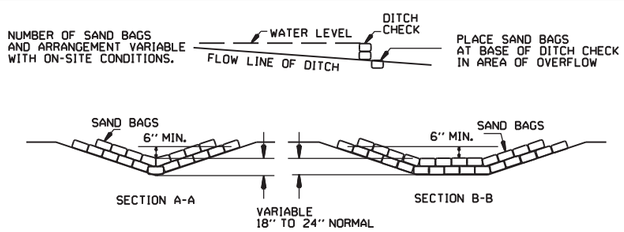
STANDARD DRAWING TC-3

GENERAL NOTES

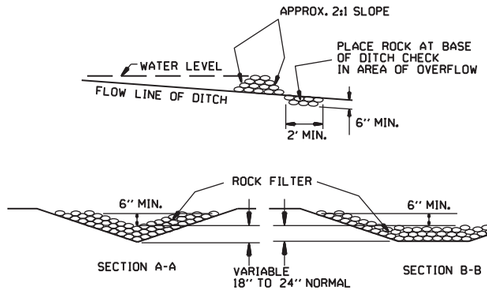
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

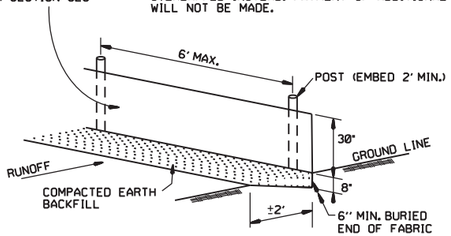


ROCK DITCH CHECK (E-6)

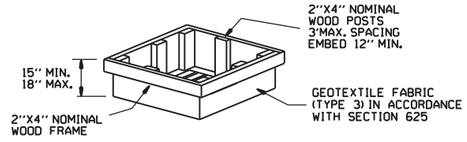
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

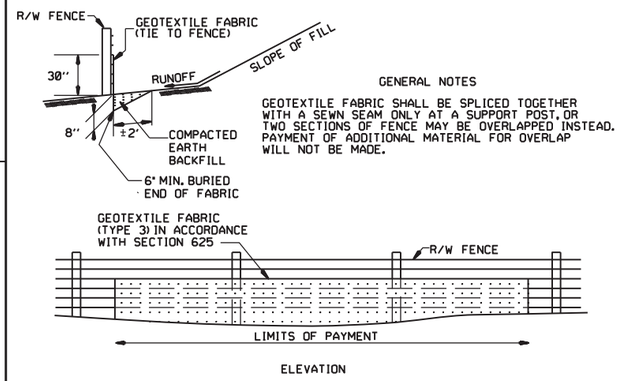
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



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.

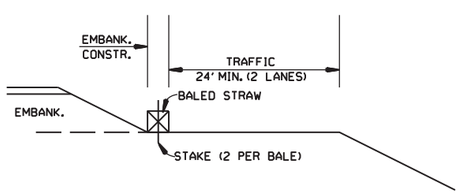
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

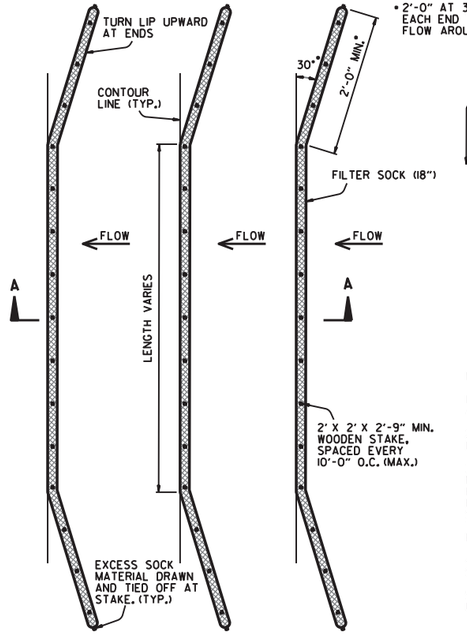
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

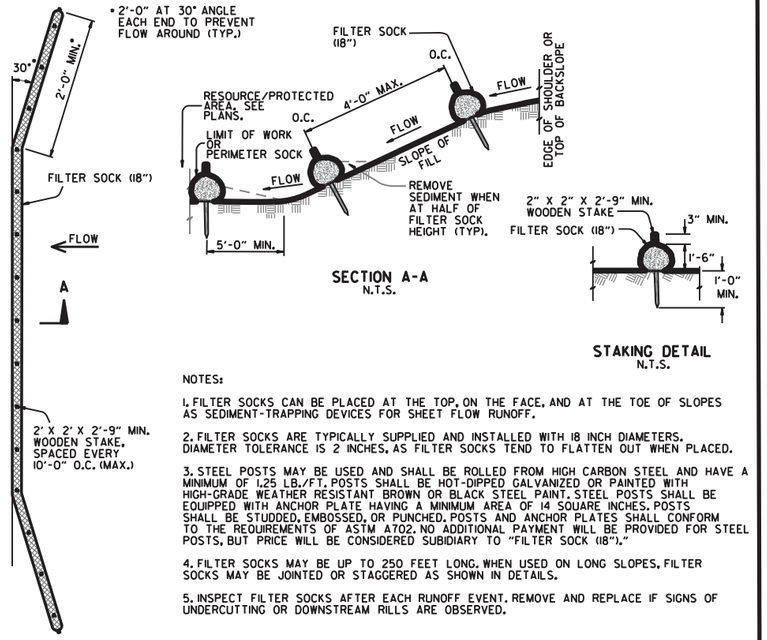
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



PLAN VIEW
N.T.S.



FILTER SOCK ALONG SLOPE (E-3)

NOTES:

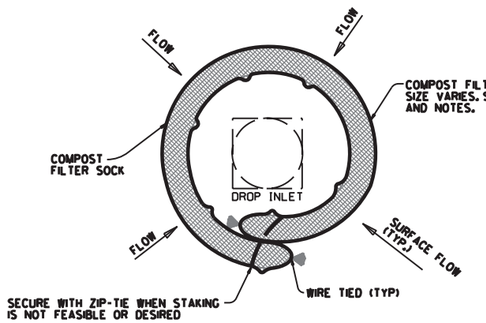
1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

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.

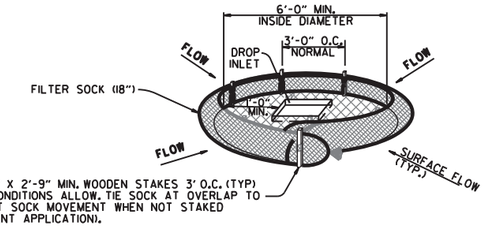
3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. 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.



DROP INLET PLAN VIEW
N.T.S.



2" X 2" X 2'-9" MIN. WOODEN STAKES 3' O.C. (TYP) WHEN CONDITIONS ALLOW. TIE SOCK AT OVERLAP TO PREVENT SOCK MOVEMENT WHEN NOT STAKED (PAVEMENT APPLICATION).

DROP INLET PERSPECTIVE VIEW
N.T.S.

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.

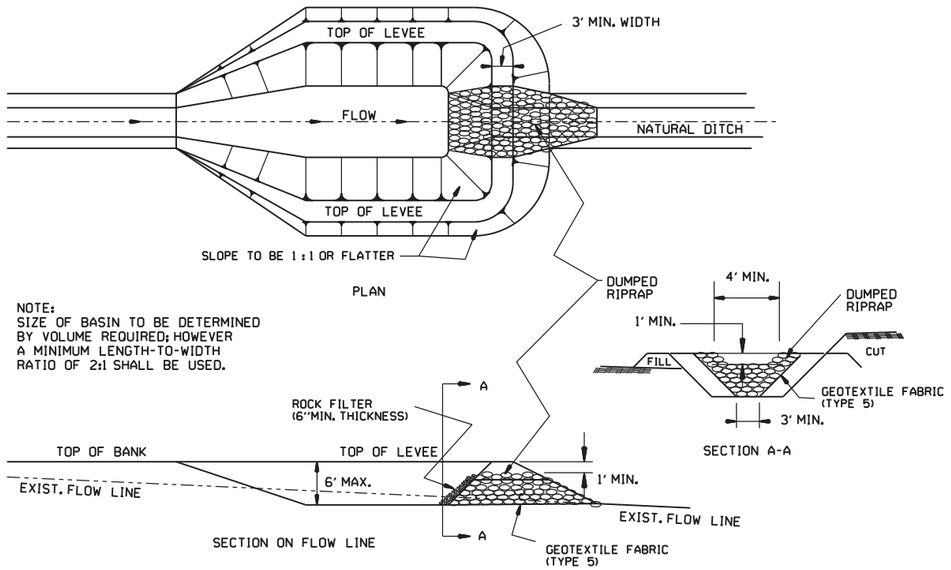
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

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

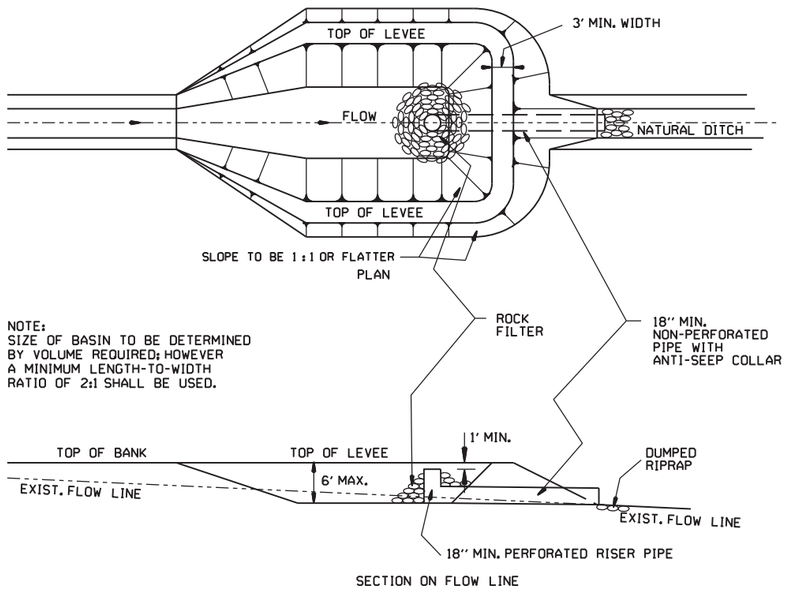
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

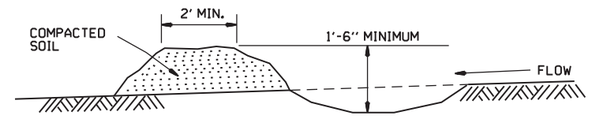
STANDARD DRAWING TEC-1



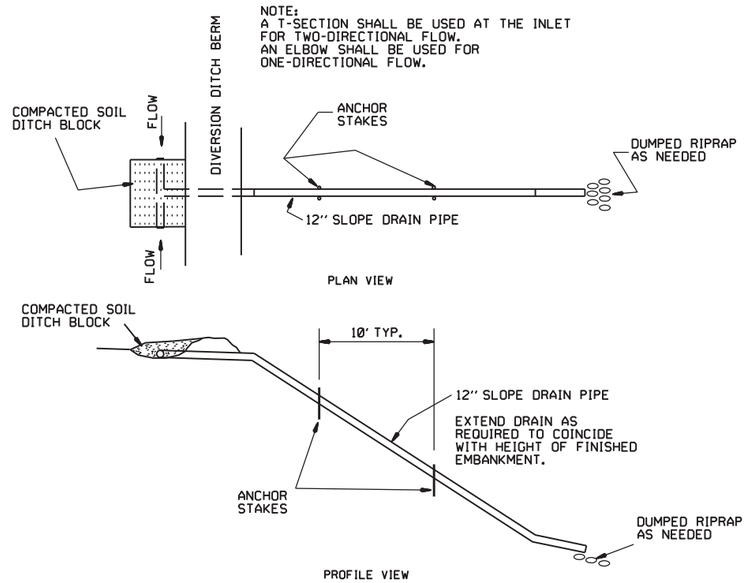
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



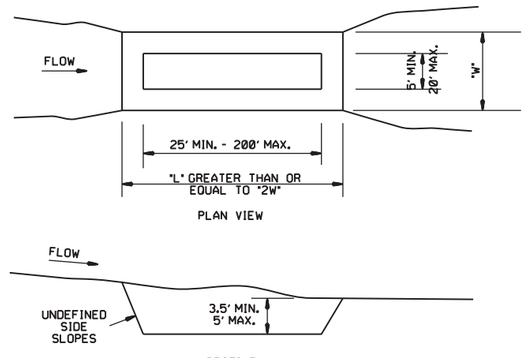
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



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

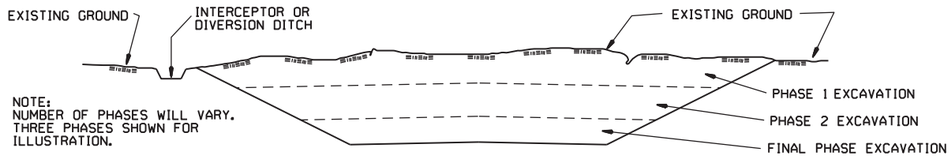
CLEARING AND GRUBBING

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

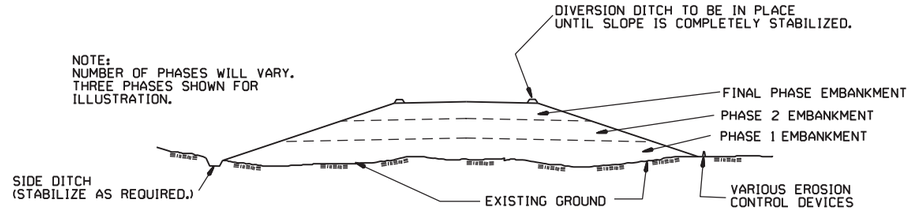
1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.

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