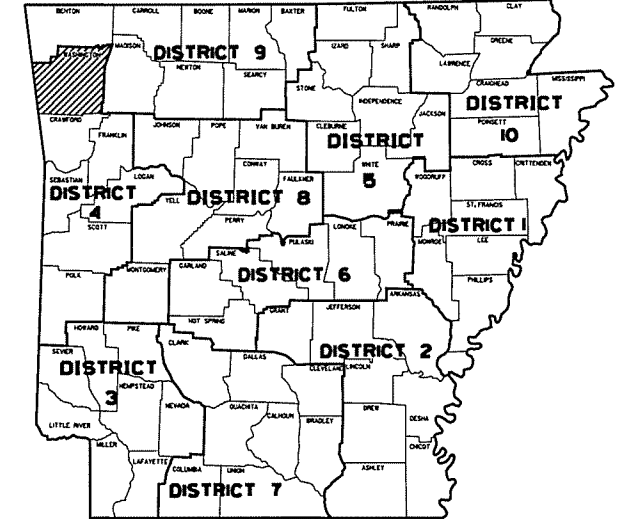


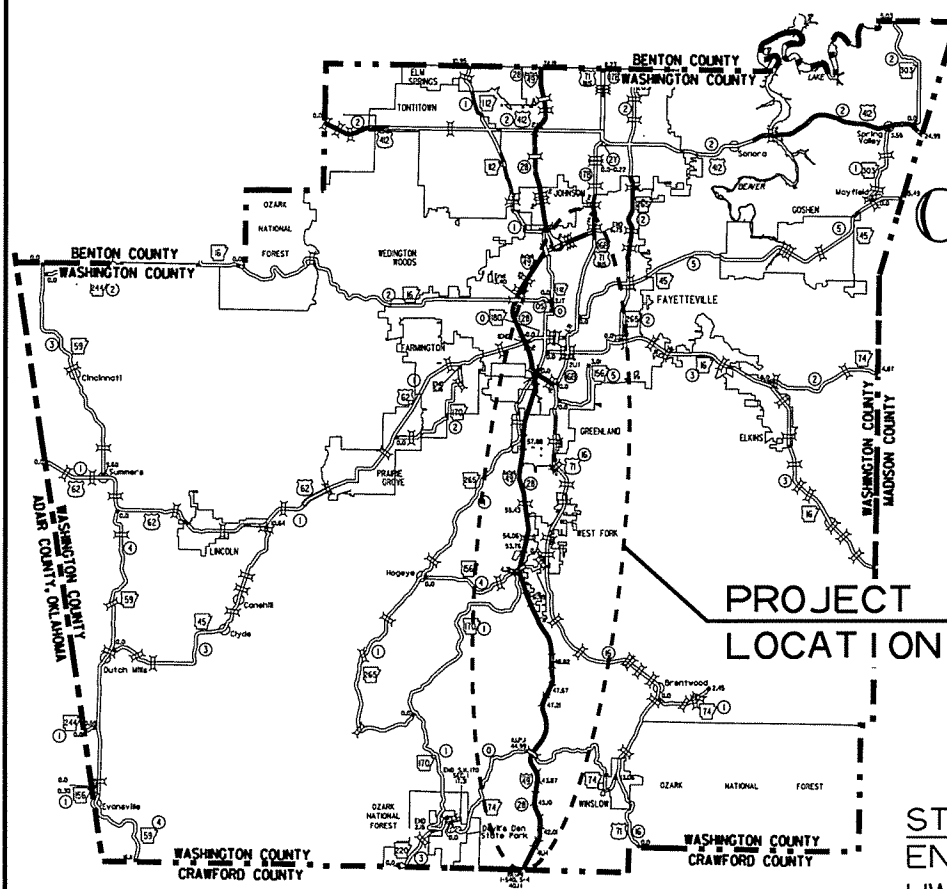
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040646	1	41
CRAWFORD CO. LINE - FAYETTEVILLE (SEL. SECS.) CABLE MEDIAN BARRIERS								

"A FULLY CONTROLLED ACCESS FACILITY"
 ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 CONSTRUCTION PLANS FOR STATE HIGHWAY

CRAWFORD CO. LINE - FAYETTEVILLE (SEL. SECS.) ((CABLE MEDIAN BARRIER) (S))



ARK. HWY. DIST. NO. 4



VICINITY MAP

PROJECT LOCATION

WASHINGTON COUNTY
 INTERSTATE 49 SECTION 28 & HIGHWAY 71B SECTION 17B

JOB 040646

FED. AID PROJ. HSIP-0072(43)

• DESIGN TRAFFIC DATA •

	SECT. 28 LM 40.20-41.11	SECT. 28 LM 60.00-60.43	SECT. 17B LM 0.25-1.70
DESIGN YEAR — — —	2034	2034	2034
2014 ADT — — — —	20,000	29,000	40,000
2034 ADT — — — —	28,000	42,000	56,000
2034 DHV — — — —	3,080	4,620	6,160
TRUCKS — — — —	23%	22%	3%
DESIGN SPEED — — —	70 MPH	70 MPH	70 MPH

STA. 575+63.20
 END JOB 040646
 HWY. 71B
 SECTION 17B
 LOG MILE 1.70

STA. 498+39.00
 BEGIN WORK
 HWY. 71B
 SECTION 17B
 LOG MILE 0.25

EQUATIONS TO JOB 040646

STA. 2192+21.26(BK.) - STA. 2193+94.77(AHD.)
 STA. 558+20.30(BK.) - STA. 558+74.50(AHD.)

EXCEPTIONS TO JOB 040646

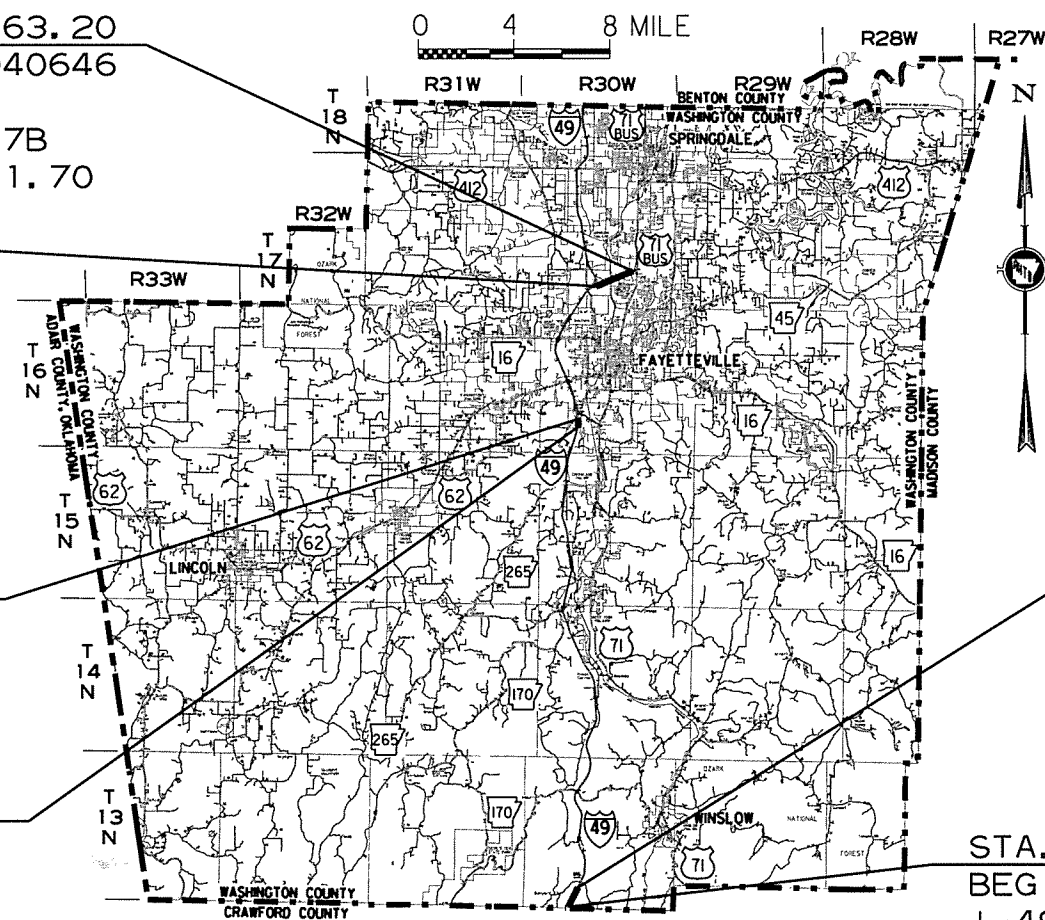
STA. 1151+55 - STA. 1152+45 = 90'
 STA. 520+41 - STA. 523+40 = 299'
 TOTAL EXCEPTIONS = 389'

STA. 2199+60.00
 END WRSF
 1-49
 SECTION 28
 LOG MILE 60.43

STA. 2175+21.09
 BEGIN WRSF
 1-49
 SECTION 28
 LOG MILE 60.00

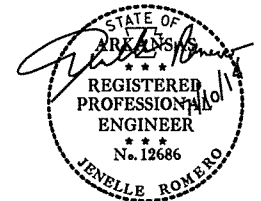
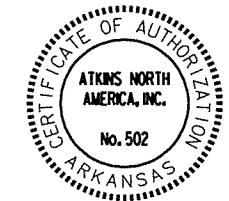
STA. 1159+37.00
 END WRSF
 1-49
 SECTION 28
 LOG MILE 41.11

STA. 1111+26.38
 BEGIN JOB 040646
 1-49
 SECTION 28
 LOG MILE 40.20



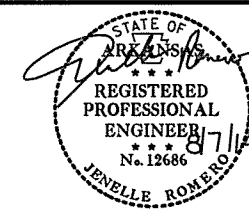
	GROSS LENGTH OF PROJECT	14746.02	FEET	OR	2,793	MILES
NET	" " ROADWAY	14357.02	" "	" "	2,719	"
NET	" " BRIDGES	0.00	" "	" "	0,000	"
NET	" " PROJECT	14357.02	" "	" "	2,719	"

BEGINNING OF PROJECT LAT. = N 35°45' 09.5" LONG. = W 94°11' 54.6"
 MID-POINT OF PROJECT LAT. = N 35°57' 09.7" LONG. = W 94°11' 38.1"
 END OF PROJECT LAT. = N 36°07' 00.6" LONG. = W 94°08' 47.9"



P.E. 040646
 NON-PART.

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	
							040646	2
							41	

INDEX, GOV. SPECS., AND GENERAL NOTES

SHEET NO.	INDEX OF SHEETS	DRWG. NO.	DATE
1	TITLE SHEET		
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES		
3 - 5	TYPICAL SECTIONS OF IMPROVEMENT		
6 - 8	SPECIAL DETAILS		
9 - 14	TEMPORARY EROSION CONTROL DETAILS		
15 - 21	MAINTENANCE OF TRAFFIC		
22 - 25	QUANTITIES		
26	SUMMARY OF QUANTITIES AND REVISIONS		
27 - 32	PLAN SHEETS		
33	CONCRETE DITCH PAVING	CDP-1	11-17-10
34	GUARD RAIL DETAILS	GR-8	7-14-10
35	GUARD RAIL DETAILS	GR-9A	4-17-08
36	GUARD RAIL DETAILS	GRT-1	7-14-10
37	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	PCC-1	2-27-14
38	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	12-15-11
39	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	9-12-13
40	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	10-15-09
41	TEMPORARY EROSION CONTROL DEVICES	TEC-1	12-15-11

GOVERNING SPECIFICATIONS

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

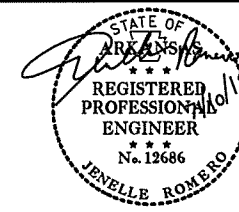
NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT-EQUAL EMPLOYMENT OPPORTUNITY-NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT-SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
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
108-1	LIQUIDATED DAMAGES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
620-1	MULCH COVER
JOB 040646	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 040646	CONCRETE DITCH PAVING
JOB 040646	DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 040646	FLEXIBLE BEGINNING OF WORK
JOB 040646	INTERNET BIDDING
JOB 040646	MAINTENANCE OF TRAFFIC
JOB 040646	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIERS
JOB 040646	SEQUENCE OF CONSTRUCTION
JOB 040646	SITE USE (A+C METHOD)
JOB 040646	STORM WATER POLLUTION PREVENTION PLAN
JOB 040646	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 040646	TEMPORARY PORTABLE RUMBLE STRIPS
JOB 040646	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 040646	UTILITY ADJUSTMENTS
JOB 040646	WARM MIX ASPHALT
JOB 040646	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS
JOB 040646	WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS
JOB 040646	WIRE ROPE SAFETY FENCE (POST REPAIR)
JOB 040646	WRSF TRAINING WORKSHOP

GENERAL NOTES

- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO.210 - UNCLASSIFIED EXCAVATION.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- WASTE MATERIAL SHALL BE DISPOSED OF AS APPROVED BY THE ENGINEER. ANY REQUIRED EROSION CONTROL MEASURES FROM WASTING MATERIAL SHALL BE AS APPROVED BY THE ENGINEER.
- CONTRACTOR TO ADJUST POSTS IN THE FIELD SO THAT EXISTING DRAINAGE STRUCTURES ARE AVOIDED.

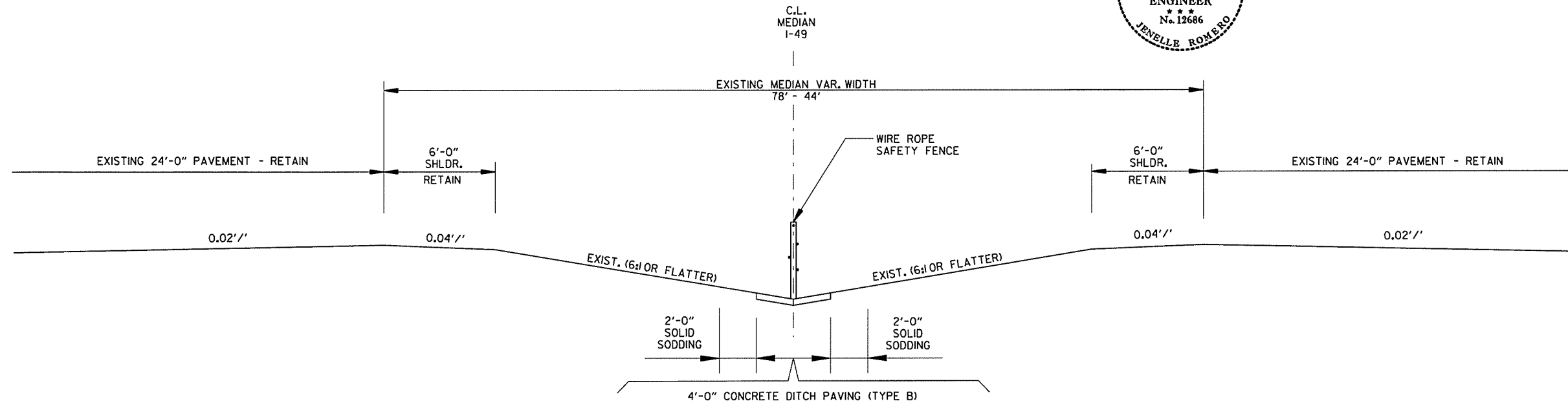
INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES

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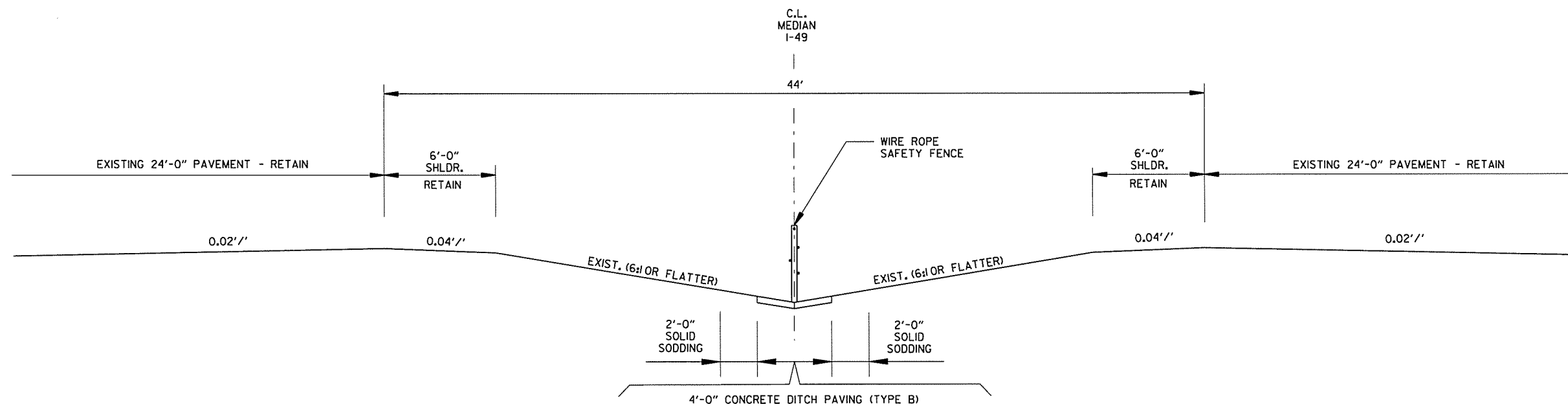
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				6	ARK.			
						JOB NO. 040646	3	41

TYPICAL SECTIONS OF IMPROVEMENT



**PROPOSED TYPICAL SECTION
WRSF IN BOTTOM OF DITCH
STA. 1111+26.38 TO STA. 1116+61.29**

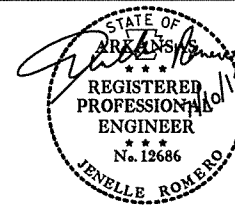
NOTE: RETAIN EXISTING CONCRETE DITCH PAVING IN MEDIAN. CORE EXISTING CONCRETE DITCH PAVING AS REQUIRED FOR LINE POST PLACEMENT. REMOVE EXISTING CONCRETE DITCH PAVING FOR WRSF ANCHOR CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.



**PROPOSED TYPICAL SECTION
WRSF IN BOTTOM OF DITCH
STA. 1116+61.29 TO STA. 1159+37.00**

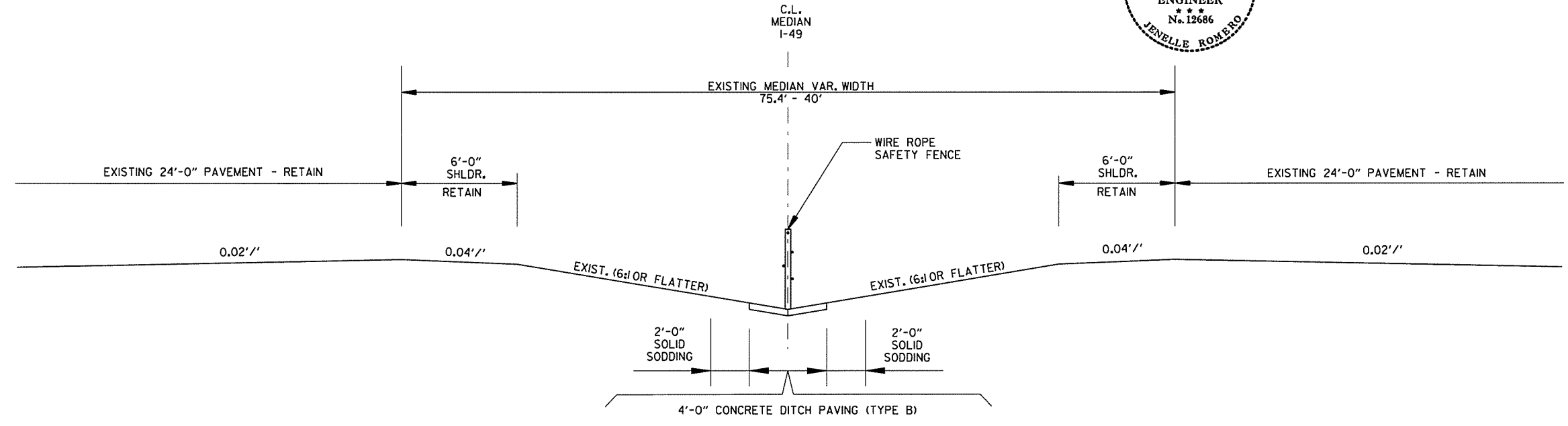
TYPICAL SECTIONS OF IMPROVEMENT

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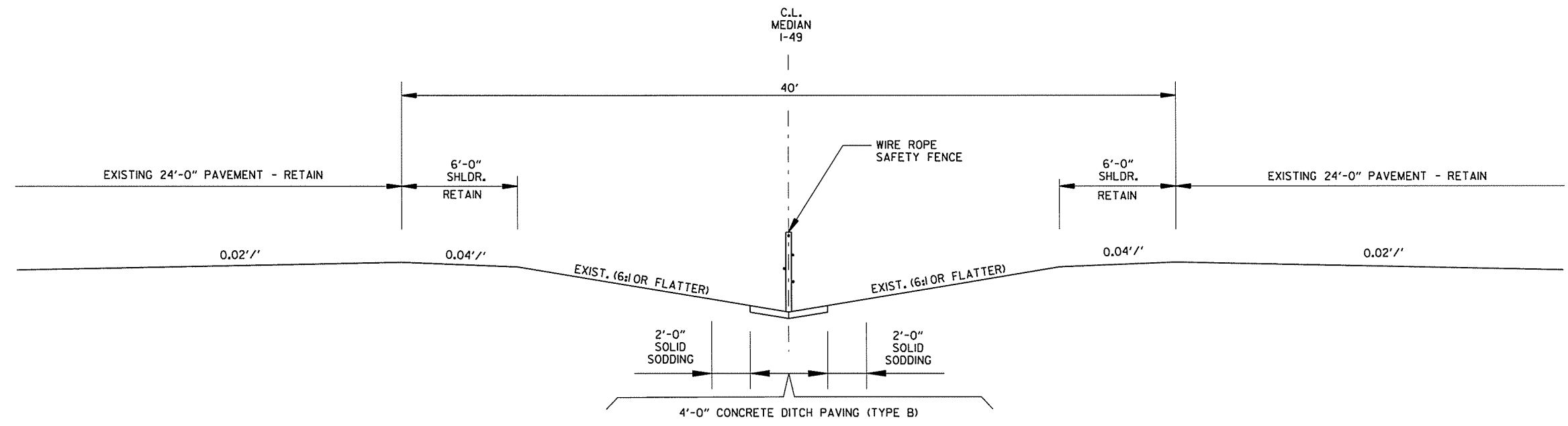
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				6	ARK.			
				JOB NO.	040646		4	41

TYPICAL SECTIONS OF IMPROVEMENT



**PROPOSED TYPICAL SECTION
WRSF IN BOTTOM OF DITCH
STA. 2175+21.09 TO STA. 2194+40.35**

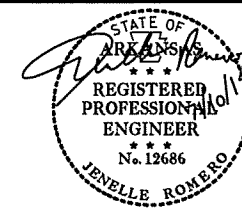
NOTE: RETAIN EXISTING CONCRETE DITCH PAVING IN MEDIAN. CORE EXISTING CONCRETE DITCH PAVING AS REQUIRED FOR LINE POST PLACEMENT. REMOVE EXISTING CONCRETE DITCH PAVING FOR WRSF ANCHOR CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.



**PROPOSED TYPICAL SECTION
WRSF IN BOTTOM OF DITCH
STA. 2194+40.35 TO STA. 2199+60.00**

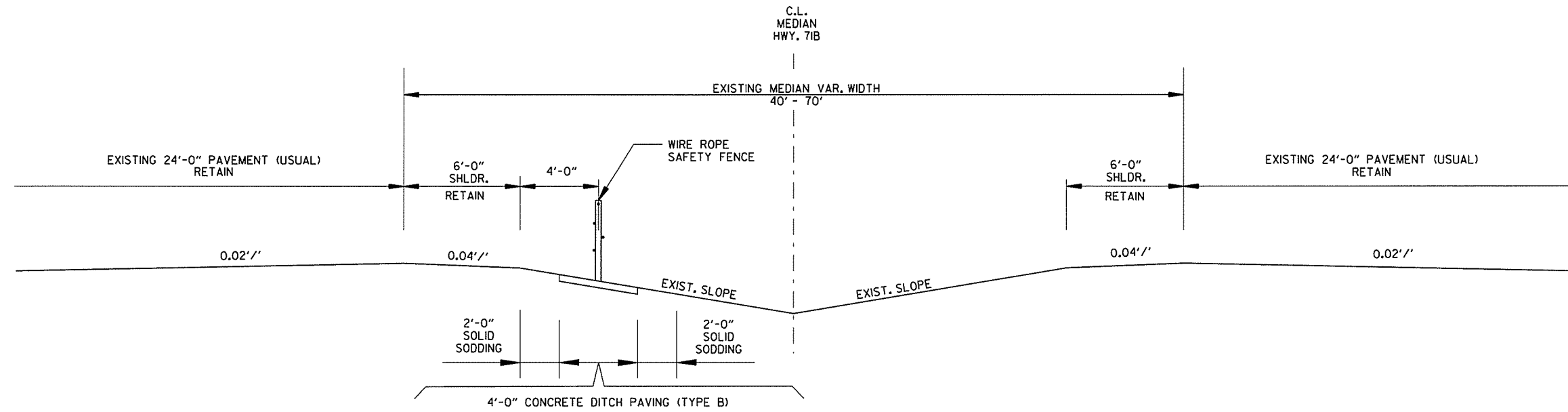
TYPICAL SECTIONS OF IMPROVEMENT

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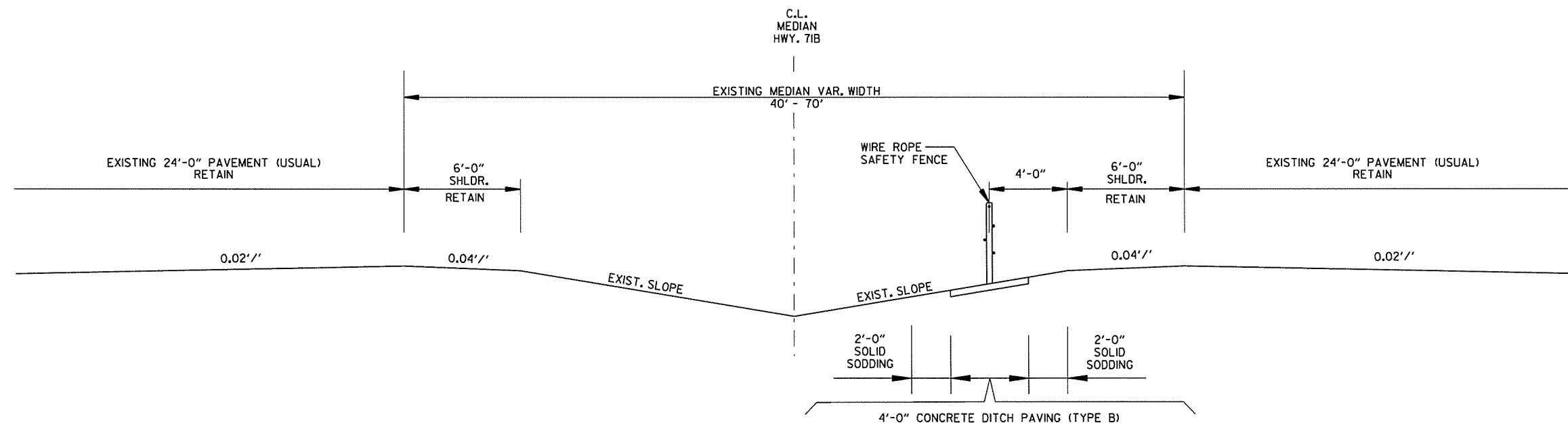


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040646	5	41

TYPICAL SECTIONS OF IMPROVEMENT



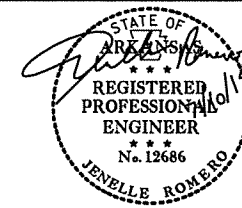
PROPOSED TYPICAL SECTION
WRSF ON WB FORESLOPE
STA. 506+86.77 TO STA. 520+41.00



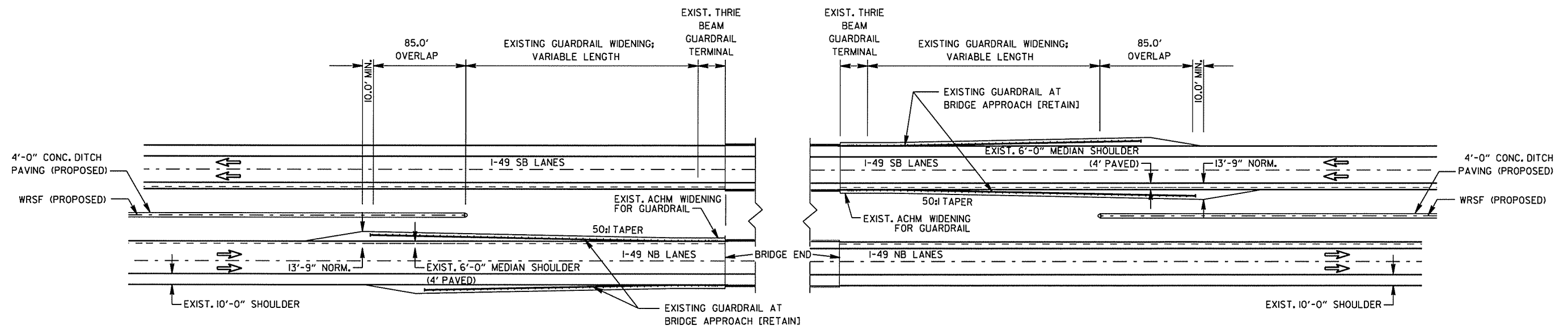
PROPOSED TYPICAL SECTION
WRSF ON EB FORESLOPE
STA. 523+40.00 TO STA. 575+63.20

TYPICAL SECTIONS OF IMPROVEMENT

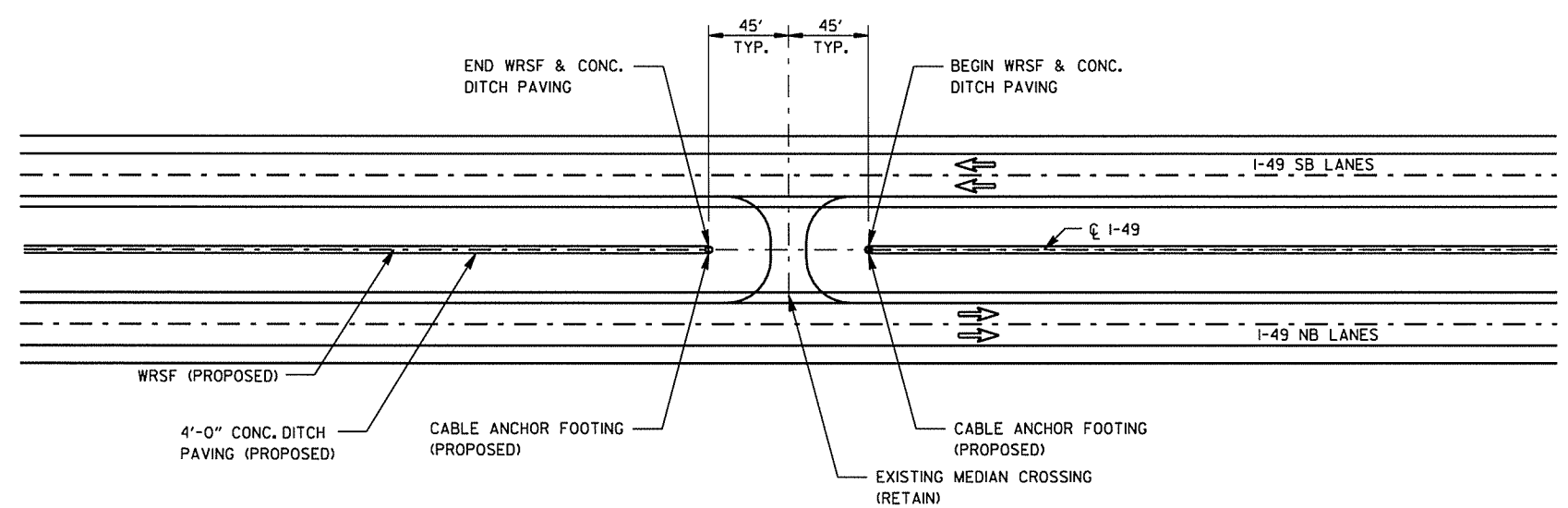
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				6	ARK.			
JOB NO. 040646							6	41

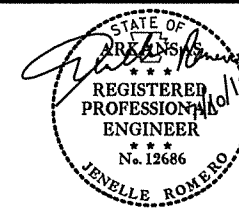


DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS (I-49)

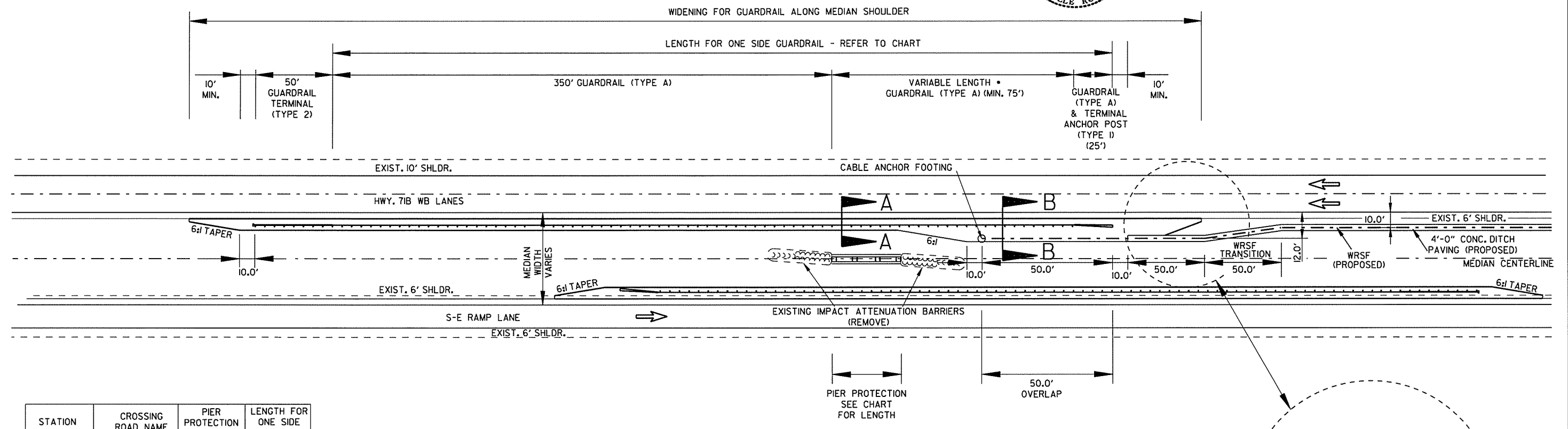


DETAIL AT MEDIAN CROSSING

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				6	ARK.		7	41
				JOB NO.		040646		
SPECIAL DETAILS								

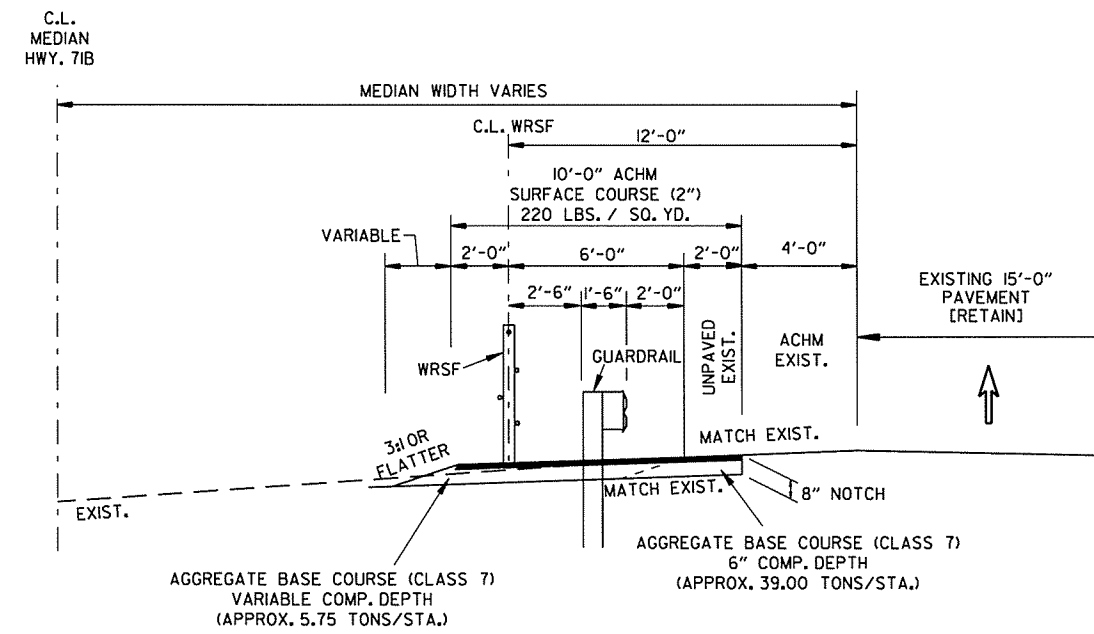
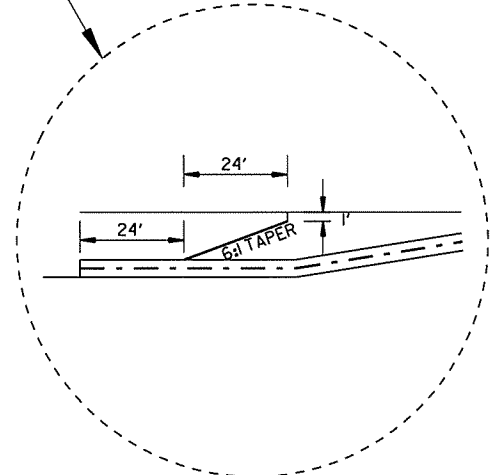


STATION	CROSSING ROAD NAME	PIER PROTECTION LENGTH	LENGTH FOR ONE SIDE GUARDRAIL
503+08	E-N RAMP	52.0'	525'

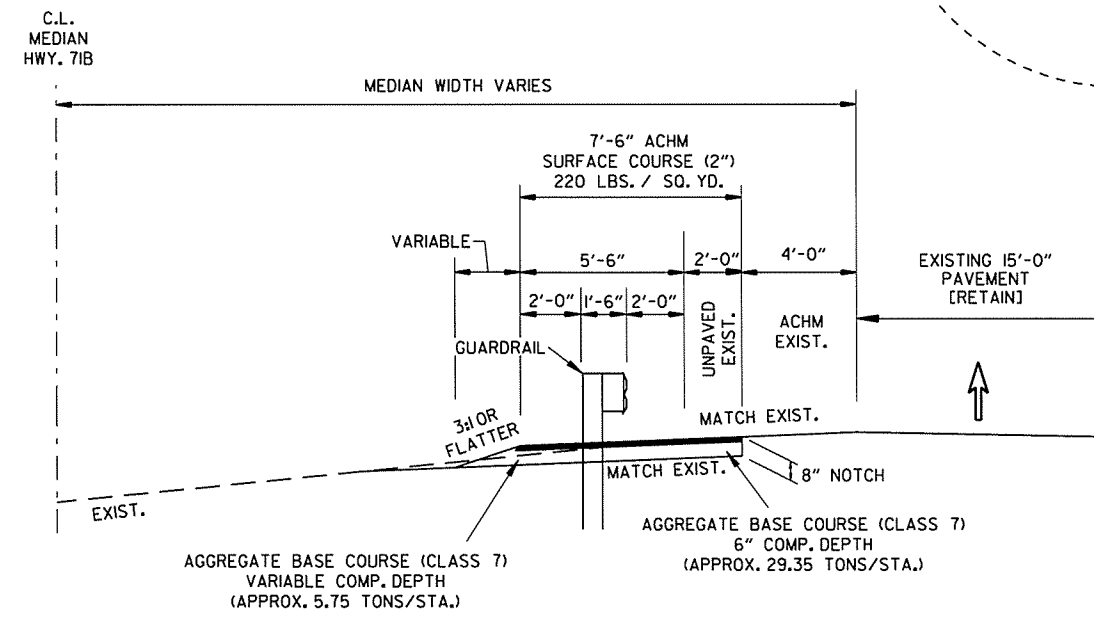
• GUARDRAIL LENGTH IS ROUNDED UP BASED ON GUARDRAIL STOCK LENGTH OF 25.0'.

DETAIL AT OVERPASS ON HWY. 71B

NOTE: REFER TO PLAN SHEETS FOR PLACEMENT OF WIRE ROPE SAFETY FENCE ON EASTBOUND FORESLOPE. DIMENSIONS ARE TYPICAL BOTH DIRECTIONS.



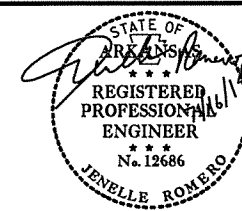
SECTION B-B



SECTION A-A

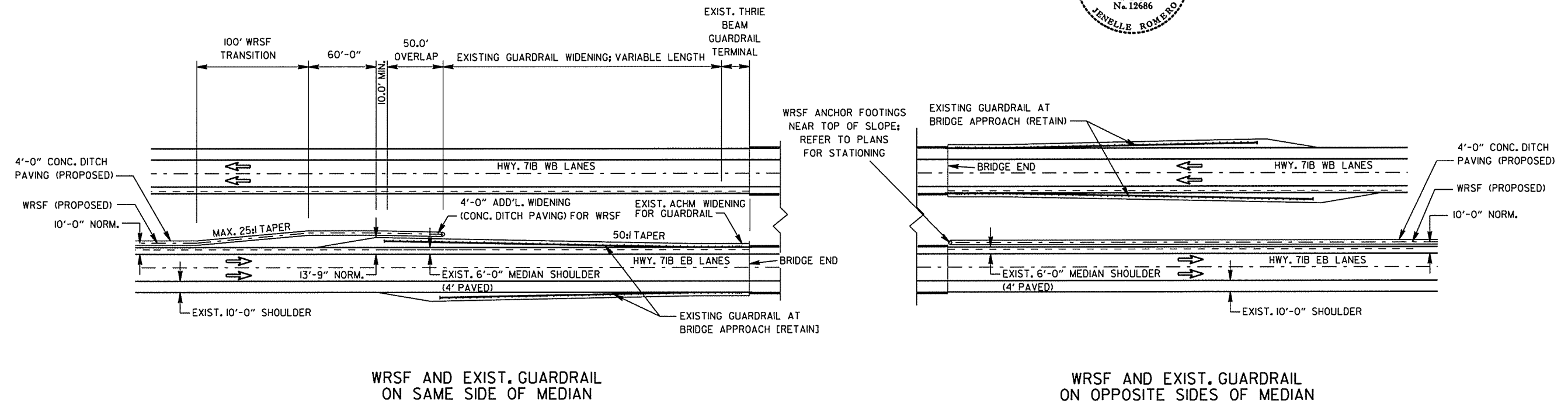
SPECIAL DETAILS

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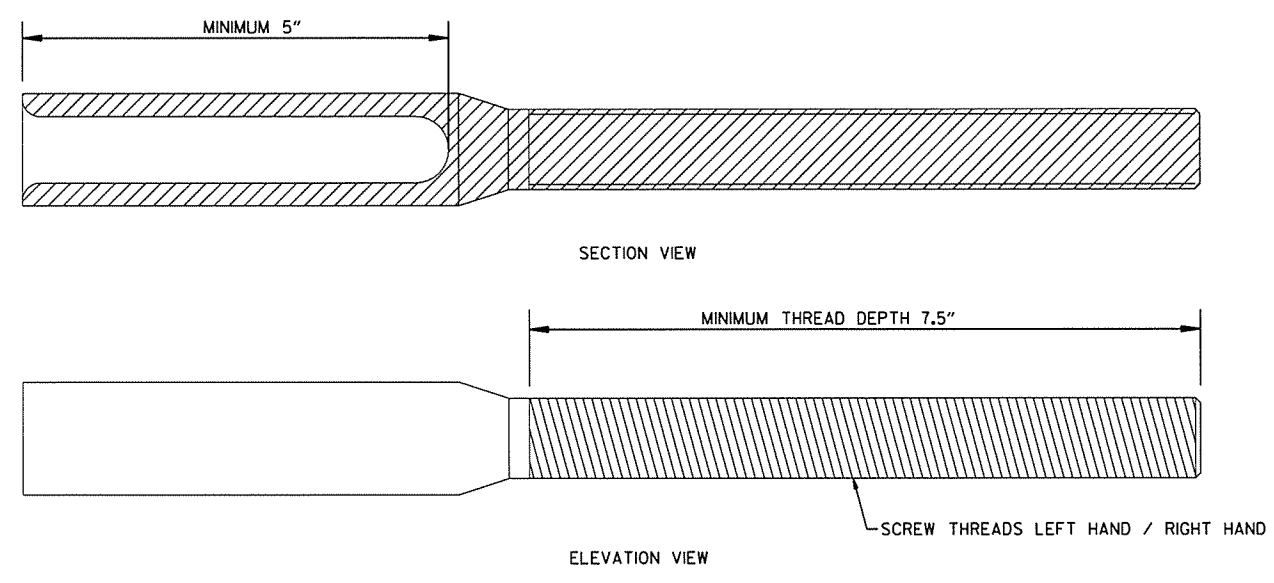


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				6	ARK.		8	41
JOB NO. 040646								

SPECIAL DETAILS



DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS (HWY. 71B)



NOTE:
REFER TO "WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS" SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.

THREADED TERMINAL DETAIL

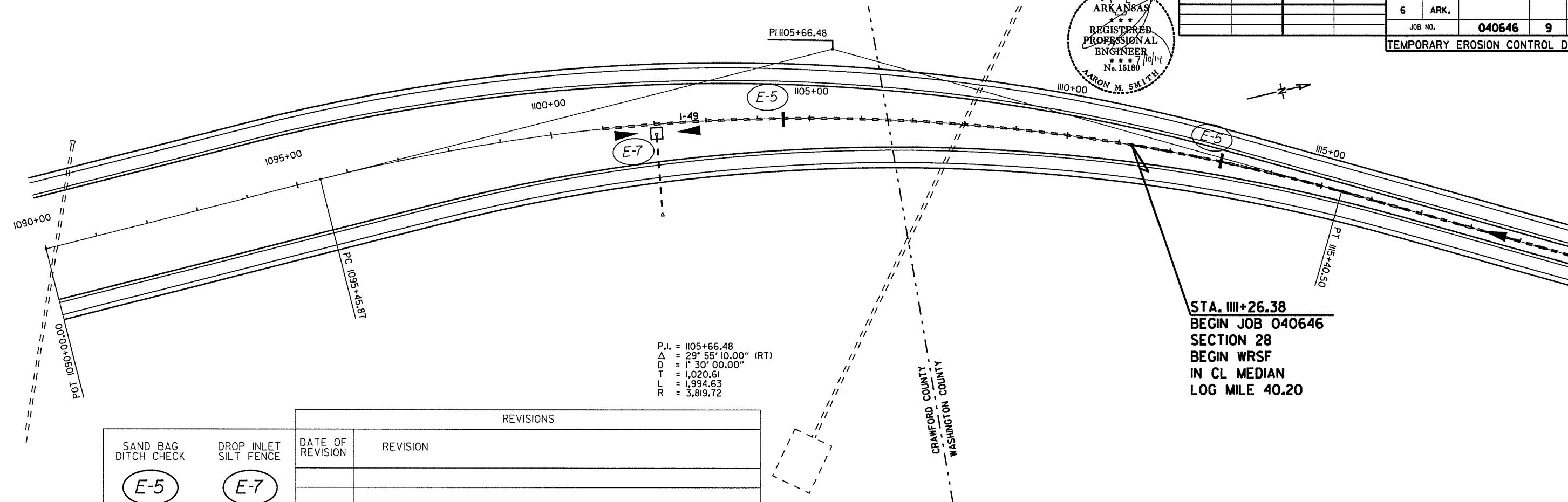
SPECIAL DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	040646		9	41

TEMPORARY EROSION CONTROL DETAILS



P.I. = 1105+66.48
 $\Delta = 29^\circ 55' 10.00''$ (RT)
 $D = 1^\circ 30' 00.00''$
 $T = 1,020.61$
 $L = 1,994.63$
 $R = 3,819.72$

STA. 111+26.38
 BEGIN JOB 040646
 SECTION 28
 BEGIN WRSF
 IN CL MEDIAN
 LOG MILE 40.20

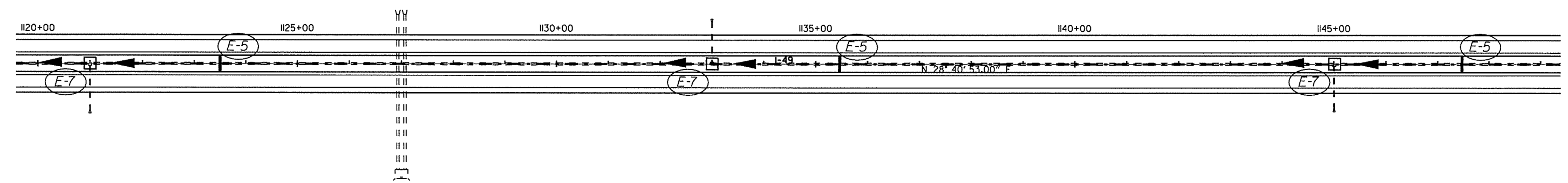
		REVISIONS	
DATE OF REVISION	REVISION	DATE OF REVISION	REVISION

LEGEND

SAND BAG DITCH CHECK

DROP INLET SILT FENCE

INDICATES DIRECTION OF MEDIAN DRAINAGE



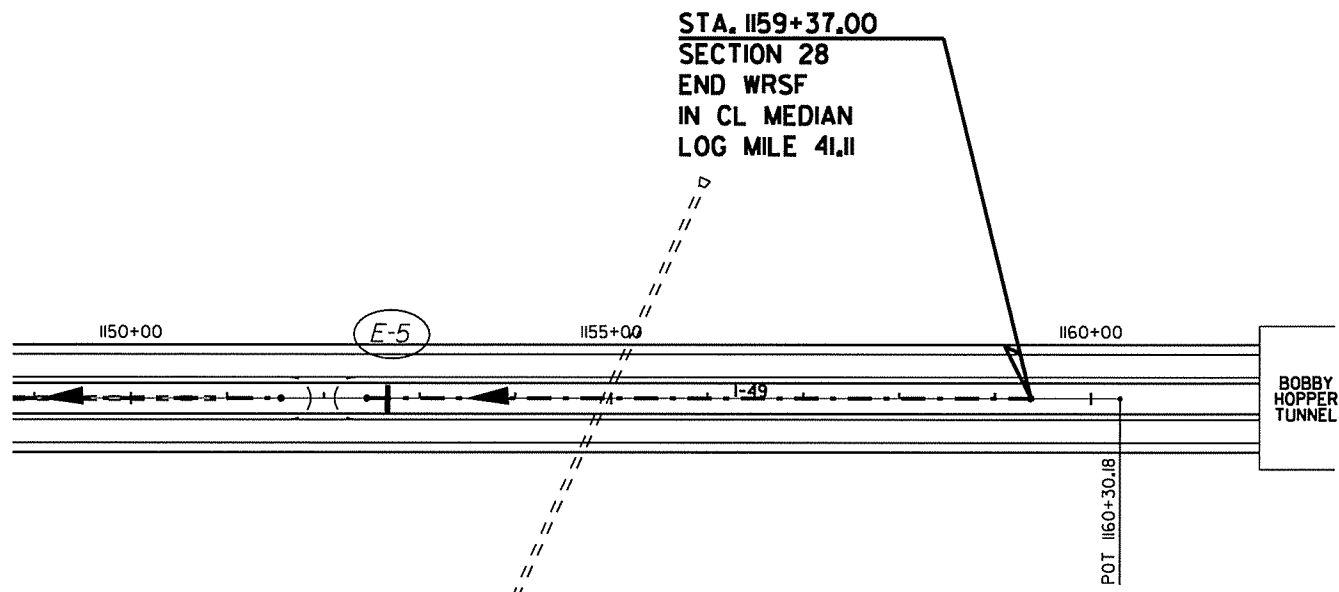
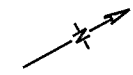
TEMPORARY EROSION CONTROL DETAILS
 STA. 1090+00 - STA. 1149+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							040646	10	41

TEMPORARY EROSION CONTROL DETAILS



LEGEND

SAND BAG DITCH CHECK: **E-5** (circle with vertical bar)

DROP INLET SILT FENCE: **E-7** (circle with square)

REVISIONS	
DATE OF REVISION	REVISION

INDICATES DIRECTION OF MEDIAN DRAINAGE

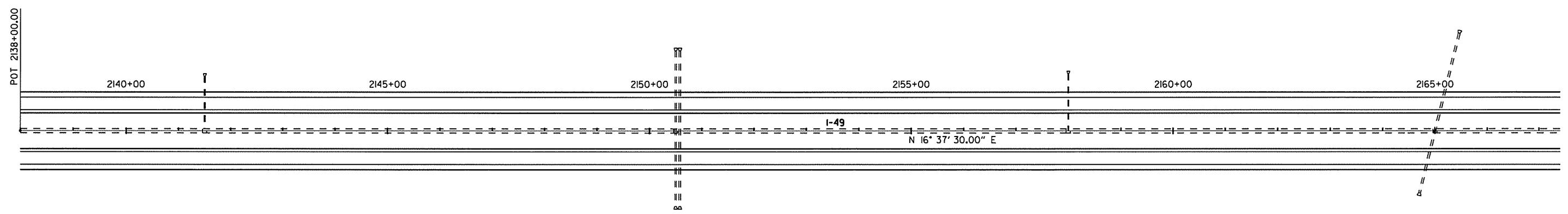
TEMPORARY EROSION CONTROL DETAILS
 STA. 1149+00 - STA. 1160+30.18

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	040646		II	41

TEMPORARY EROSION CONTROL DETAILS

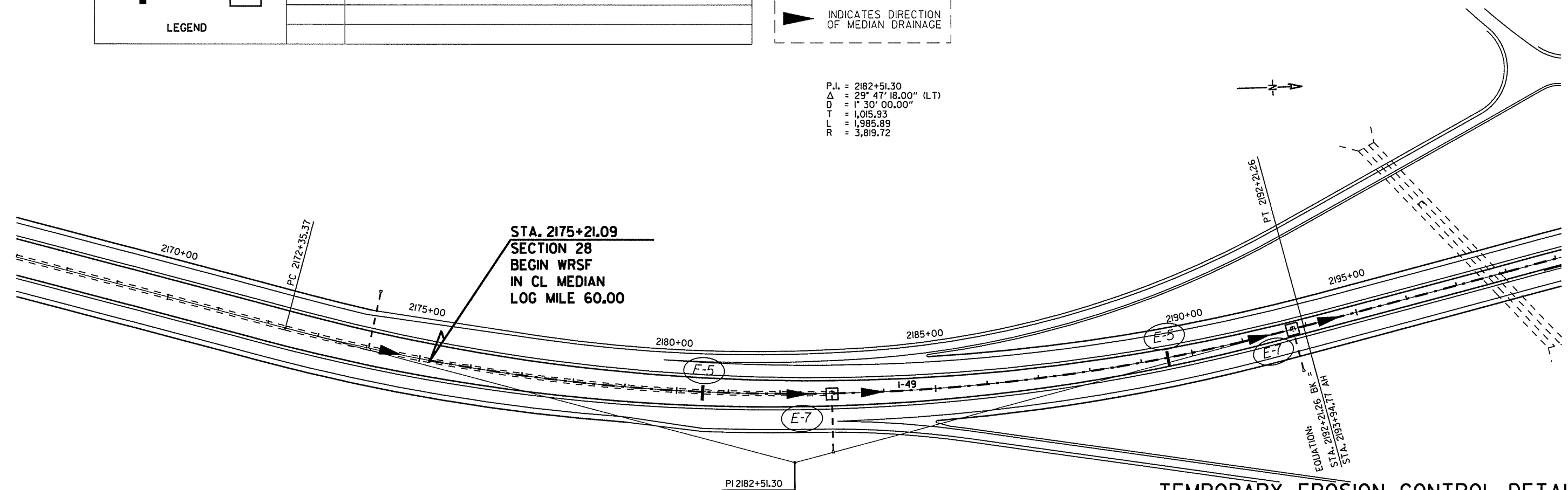


REVISIONS		DATE OF REVISION	REVISION
SAND BAG DITCH CHECK E-5 	DROP INLET SILT FENCE E-7 		

LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE

P.I. = 2182+51.30
 Δ = 29° 47' 18.00" (LT)
 D = 1° 30' 00.00"
 T = 1,015.93
 L = 1,985.89
 R = 3,819.72



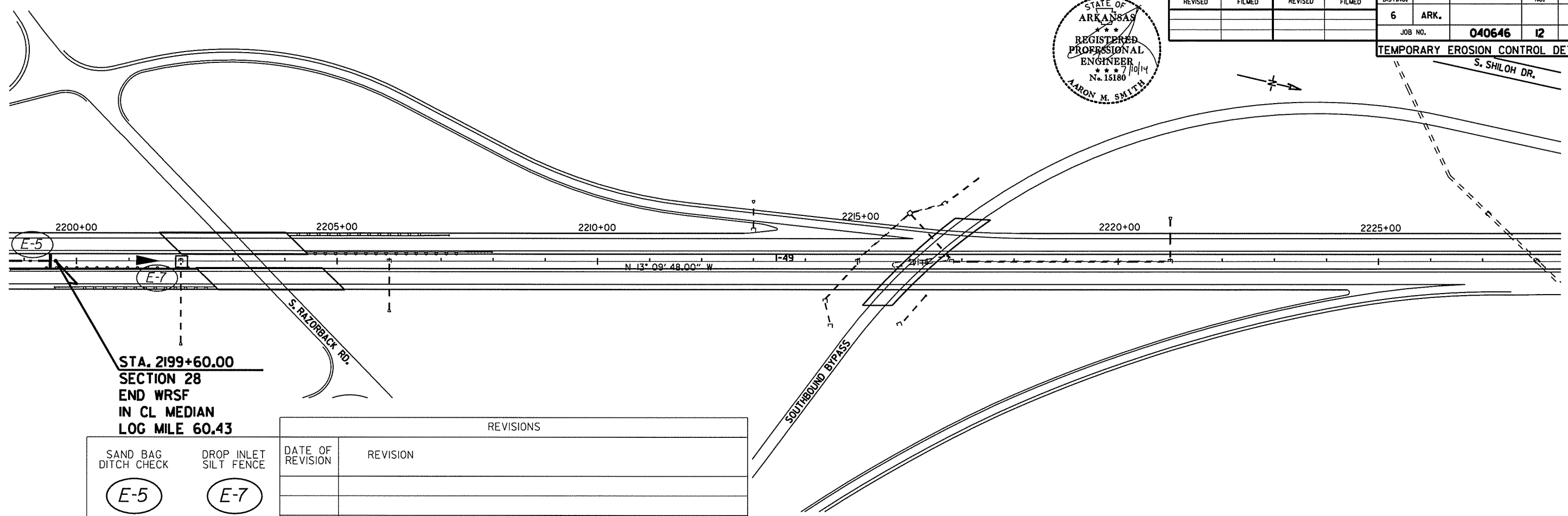
STA. 2175+21.09
 SECTION 28
 BEGIN WRSF
 IN CL MEDIAN
 LOG MILE 60.00

TEMPORARY EROSION CONTROL DETAILS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040646	12	41

TEMPORARY EROSION CONTROL DETAILS



STA. 2199+60.00
SECTION 28
END WRSF
IN CL MEDIAN
LOG MILE 60.43

SAND BAG DITCH CHECK	DROP INLET SILT FENCE
(E-5)	(E-7)
	□
LEGEND	

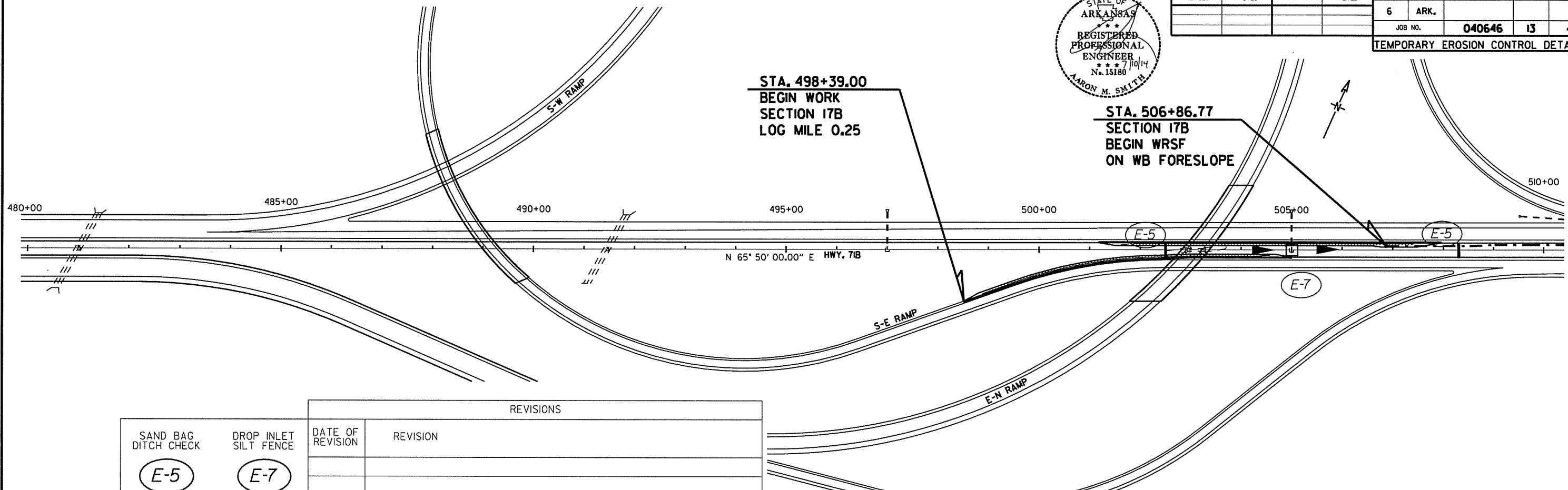
REVISIONS	
DATE OF REVISION	REVISION

INDICATES DIRECTION OF MEDIAN DRAINAGE

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	040646	13	41
				JOB NO. 040646 13 41				
TEMPORARY EROSION CONTROL DETAILS								

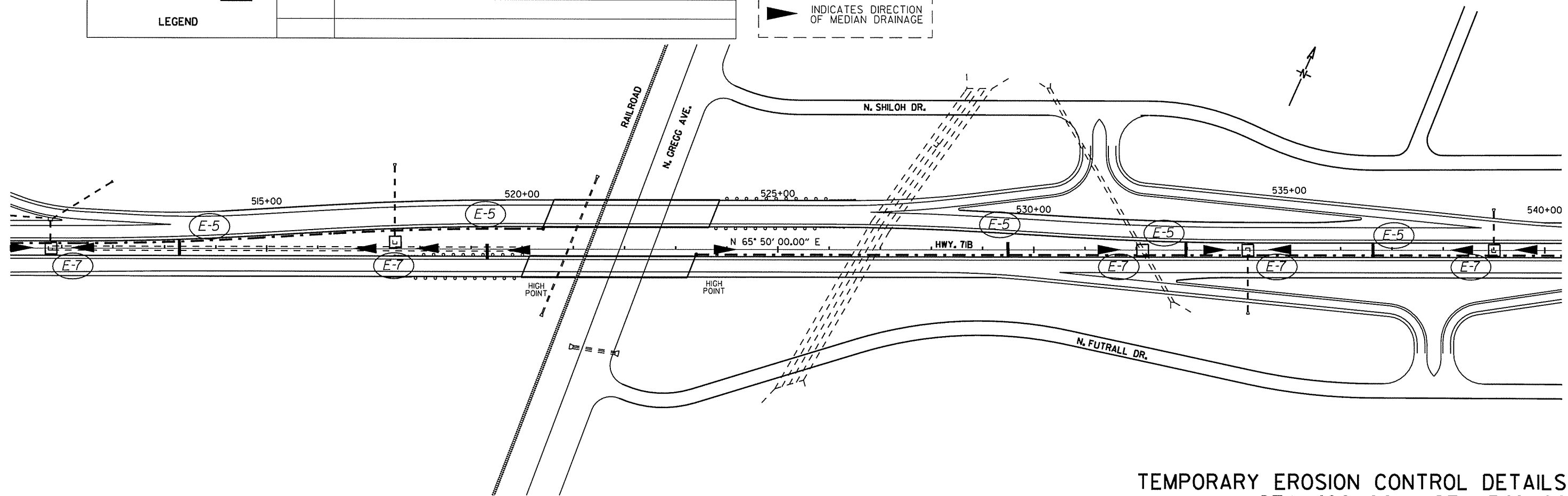


STA. 498+39.00
 BEGIN WORK
 SECTION 17B
 LOG MILE 0.25

STA. 506+86.77
 SECTION 17B
 BEGIN WRSF
 ON WB FORESLOPE

		REVISIONS	
		DATE OF REVISION	REVISION
SAND BAG DITCH CHECK (E-5) 	DROP INLET SILT FENCE (E-7) □		
LEGEND			

INDICATES DIRECTION
 OF MEDIAN DRAINAGE



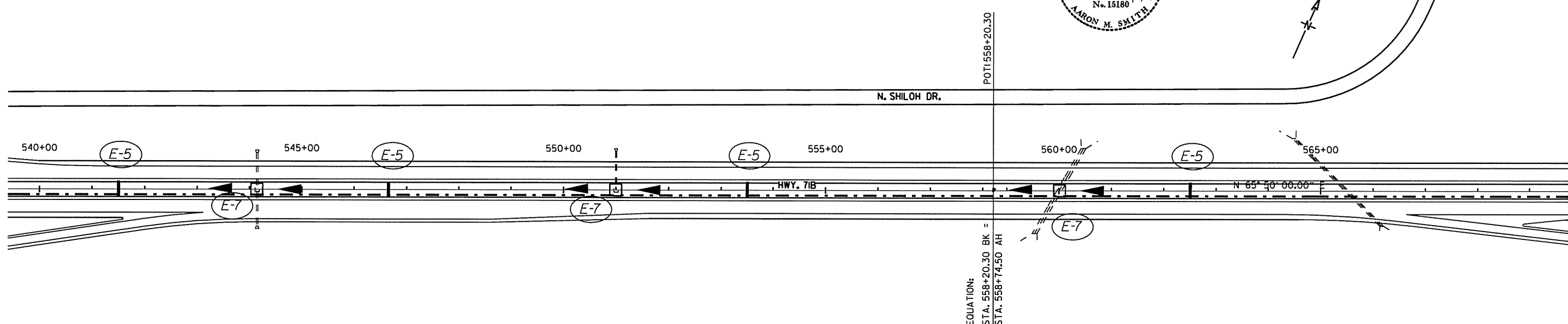
TEMPORARY EROSION CONTROL DETAILS
 STA. 480+00 - STA. 540+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							14	41

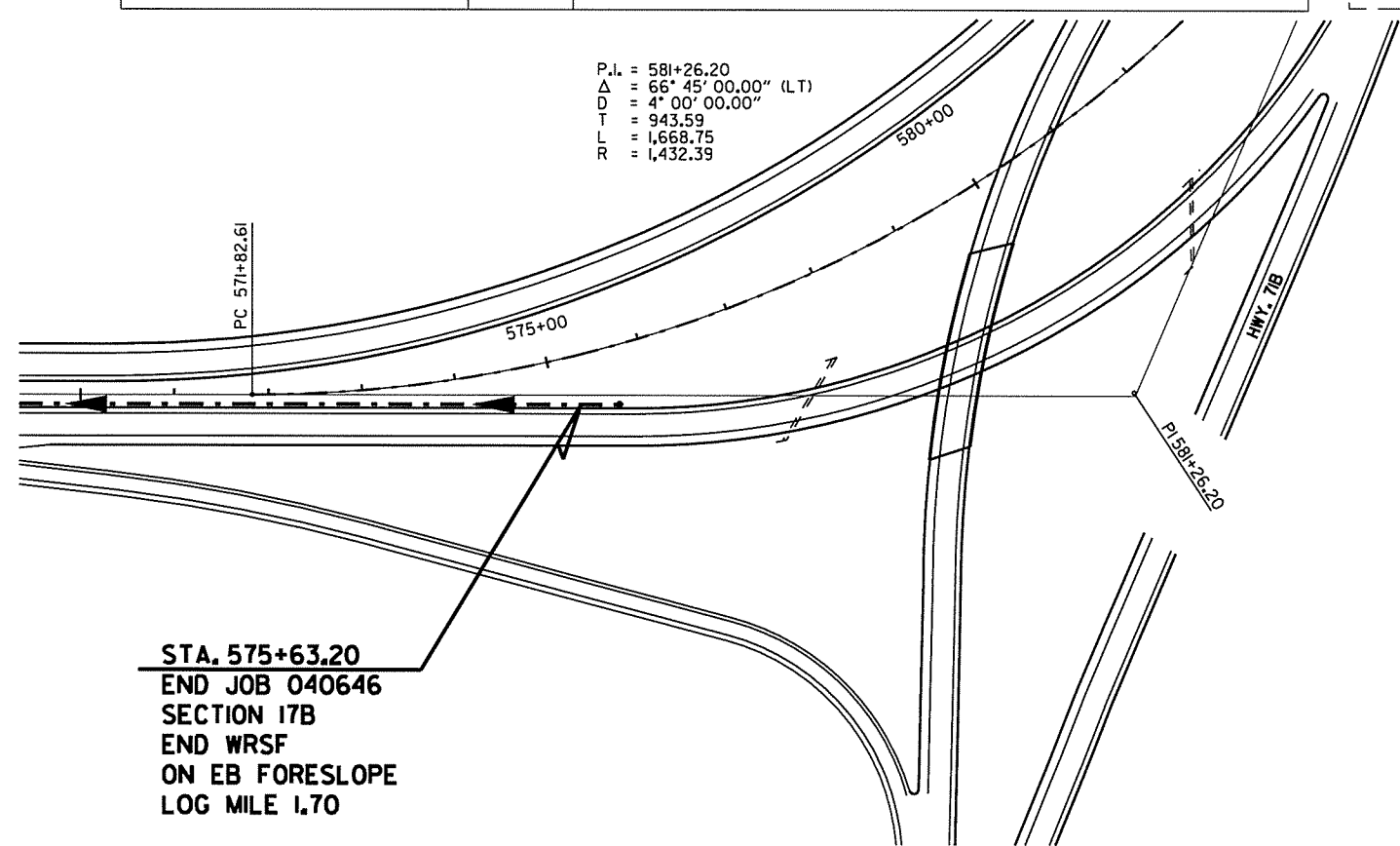
TEMPORARY EROSION CONTROL DETAILS



REVISIONS		DATE OF REVISION	REVISION
SAND BAG DITCH CHECK	DROP INLET SILT FENCE		

INDICATES DIRECTION OF MEDIAN DRAINAGE

P.I. = 581+26.20
 Δ = 66° 45' 00.00" (LT)
 D = 4° 00' 00.00"
 T = 943.59
 L = 1,668.75
 R = 1,432.39



STA. 575+63.20
 END JOB 040646
 SECTION 17B
 END WRSF
 ON EB FORESLOPE
 LOG MILE 1.70

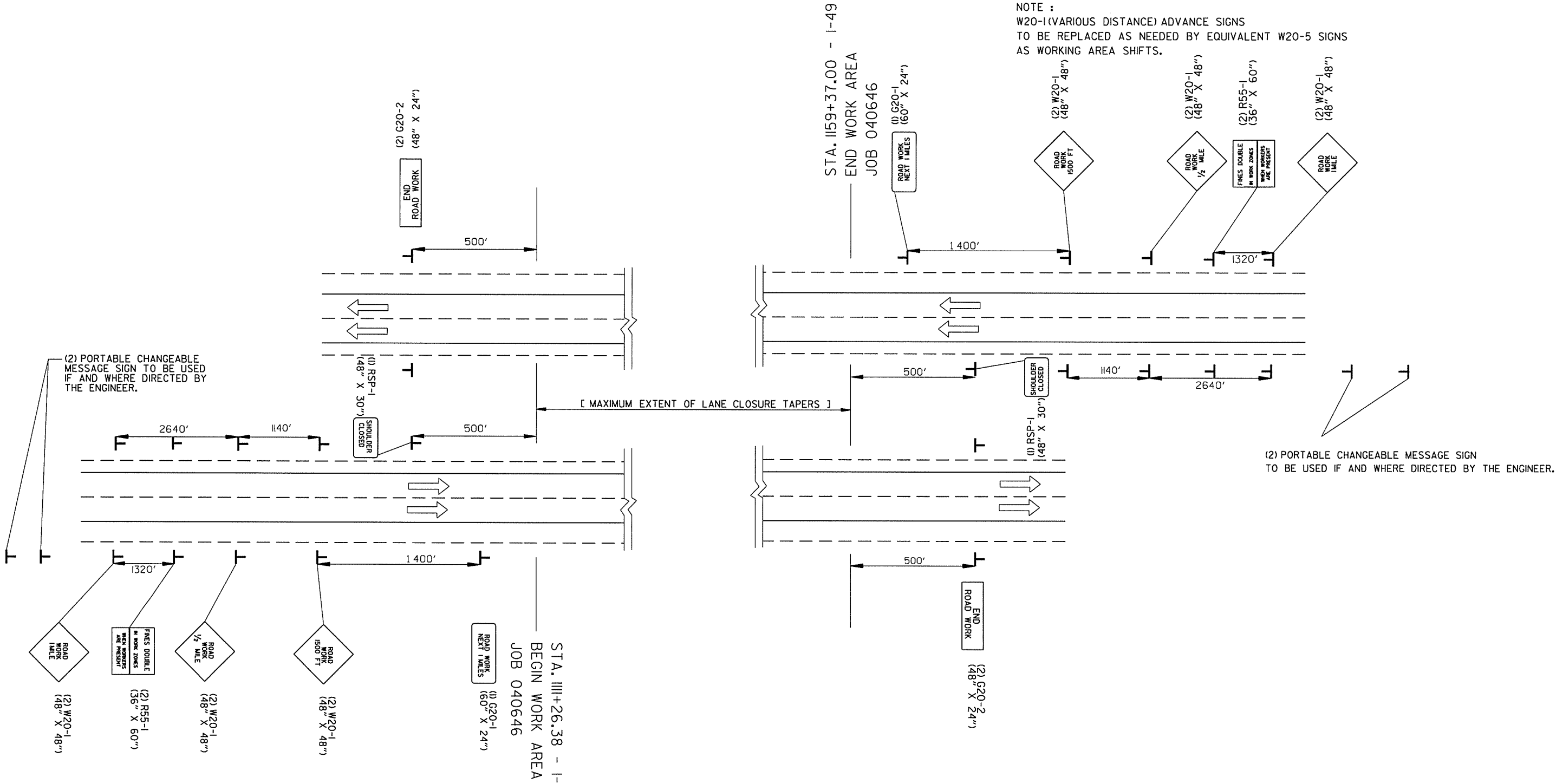
TEMPORARY EROSION CONTROL DETAILS
 STA. 540+00 - STA. 575+63.20

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							15	41

MAINTENANCE OF TRAFFIC



NOTE :
 W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS
 TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS
 AS WORKING AREA SHIFTS.

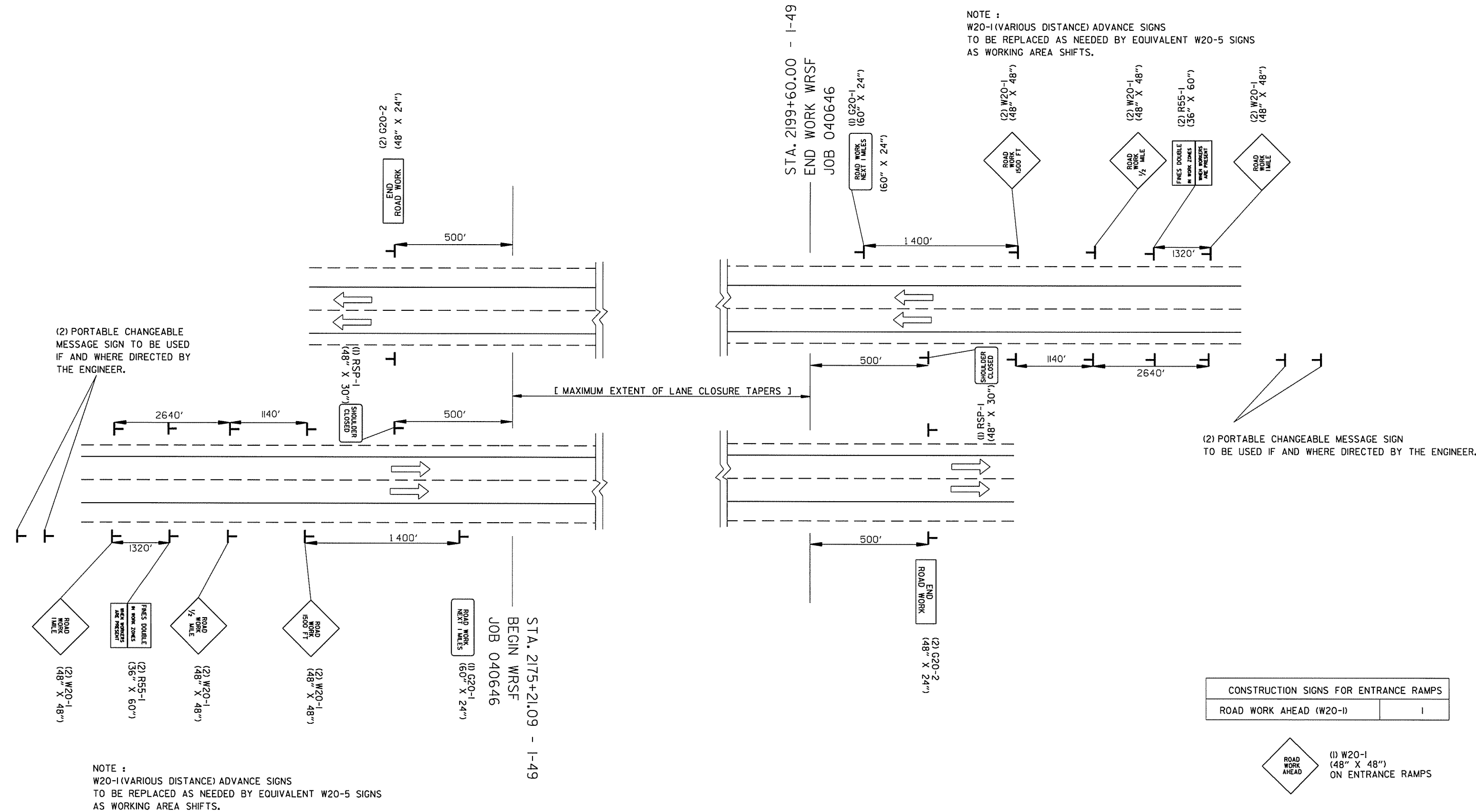
NOTE :
 W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS
 TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS
 AS WORKING AREA SHIFTS.

ADVANCE SIGNS AT BEGINNING AND END OF JOB
 ALL STAGES

MAINTENANCE OF TRAFFIC
 ADVANCE SIGNS AT JOB ENDS
 (I-49)



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040646	16	41
MAINTENANCE OF TRAFFIC								

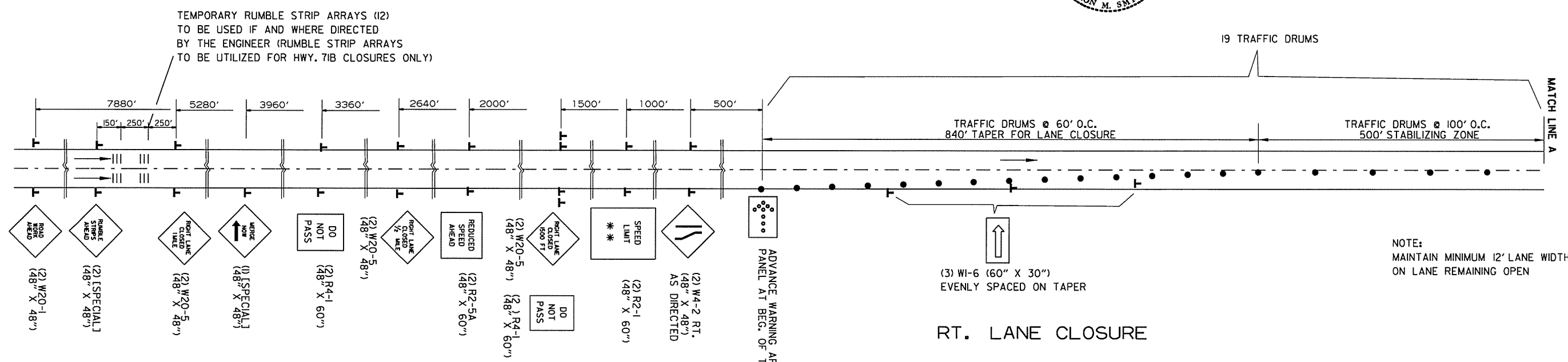


ADVANCE SIGNS AT BEGINNING AND END OF JOB
ALL STAGES

MAINTENANCE OF TRAFFIC
ADVANCE SIGNS AT JOB ENDS
(I - 49)



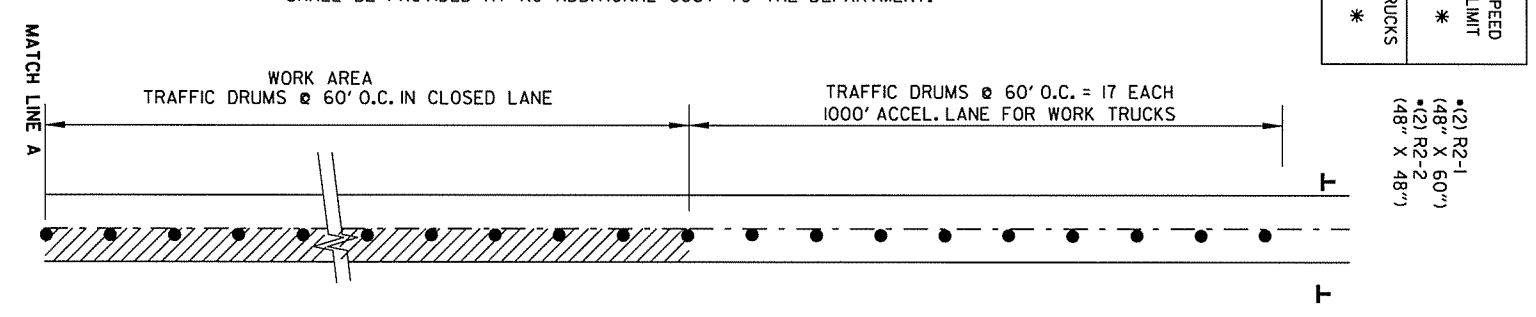
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	040546	17	41
				JOB NO.		040546	17	41
MAINTENANCE OF TRAFFIC								



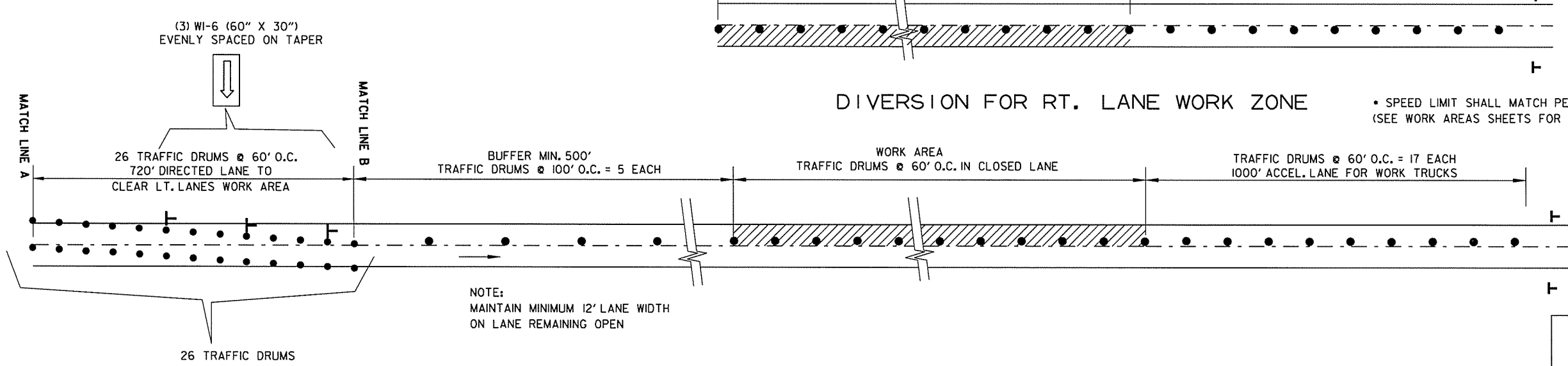
- (2) W20-1 (48" X 48") ROAD AHEAD
- (2) SPECIAL (48" X 48") RUMBLE STRIP AHEAD
- (2) W20-5 (48" X 48") RIGHT LANE CLOSED AHEAD
- (1) SPECIAL (48" X 48") MERGE NOW
- (2) R4-1 (48" X 60") DO NOT PASS
- (2) W20-5 (48" X 48") RIGHT LANE CLOSED 1/2 MILE
- (2) R2-5A (48" X 60") REDUCED SPEED AHEAD
- (2) W20-5 (48" X 48") RIGHT LANE CLOSED 500 FT
- (2) R4-1 (48" X 60") DO NOT PASS
- (2) R2-1 (48" X 60") SPEED LIMIT
- (2) W4-2 RT. (48" X 48") AS DIRECTED

••SPEED LIMIT SIGNS SHALL BE 10 MPH BELOW THE PERMANENT SPEED LIMIT (60MPH FOR I-49, 50MPH FOR 71B, TYP.).

SPEED LIMIT SIGNS ARE ALSO PROVIDED FOR PLACEMENT PAST ENTRANCE RAMP WITHIN THE WORK ZONE.



SPEED LIMIT	*	(2) R2-1 (48" X 60")
TRUCKS	*	(2) R2-2 (48" X 48")



SPEED LIMIT	*	(2) R2-1 (48" X 60")
TRUCKS	*	(2) R2-2 (48" X 48")

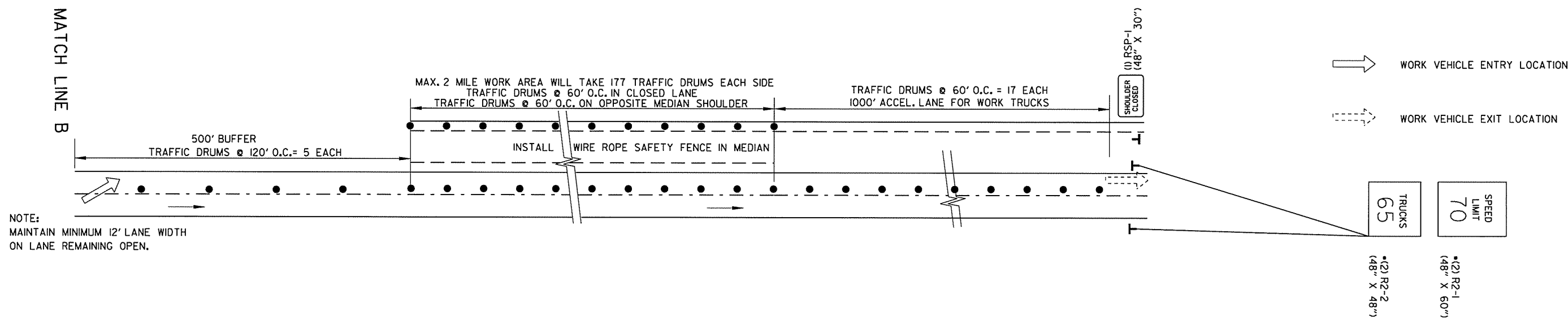
NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS. QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR ONE LANE CLOSURE AT EACH SECTION.

MAINTENANCE OF TRAFFIC LANE CLOSURES (I-49 & HWY. 71B)



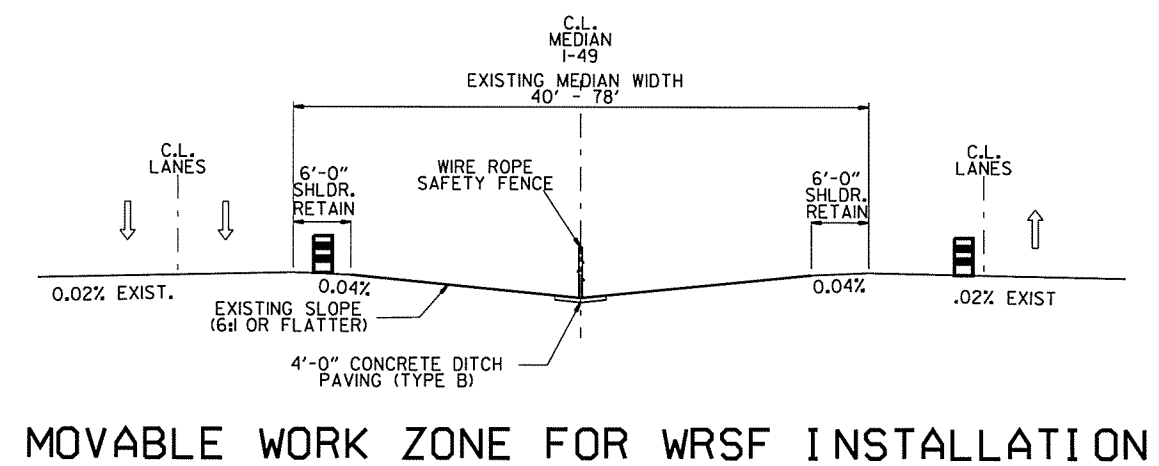
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							18	41

MAINTENANCE OF TRAFFIC



• SPEED LIMIT SHALL MATCH PERMANENT SPEED LIMIT.

NOTE: CONTRACTOR MUST UTILIZE ENTRY/EXIT LOCATION AS SHOWN ON THE PLANS.



NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS. QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR ONE LANE CLOSURE AT EACH SECTION.

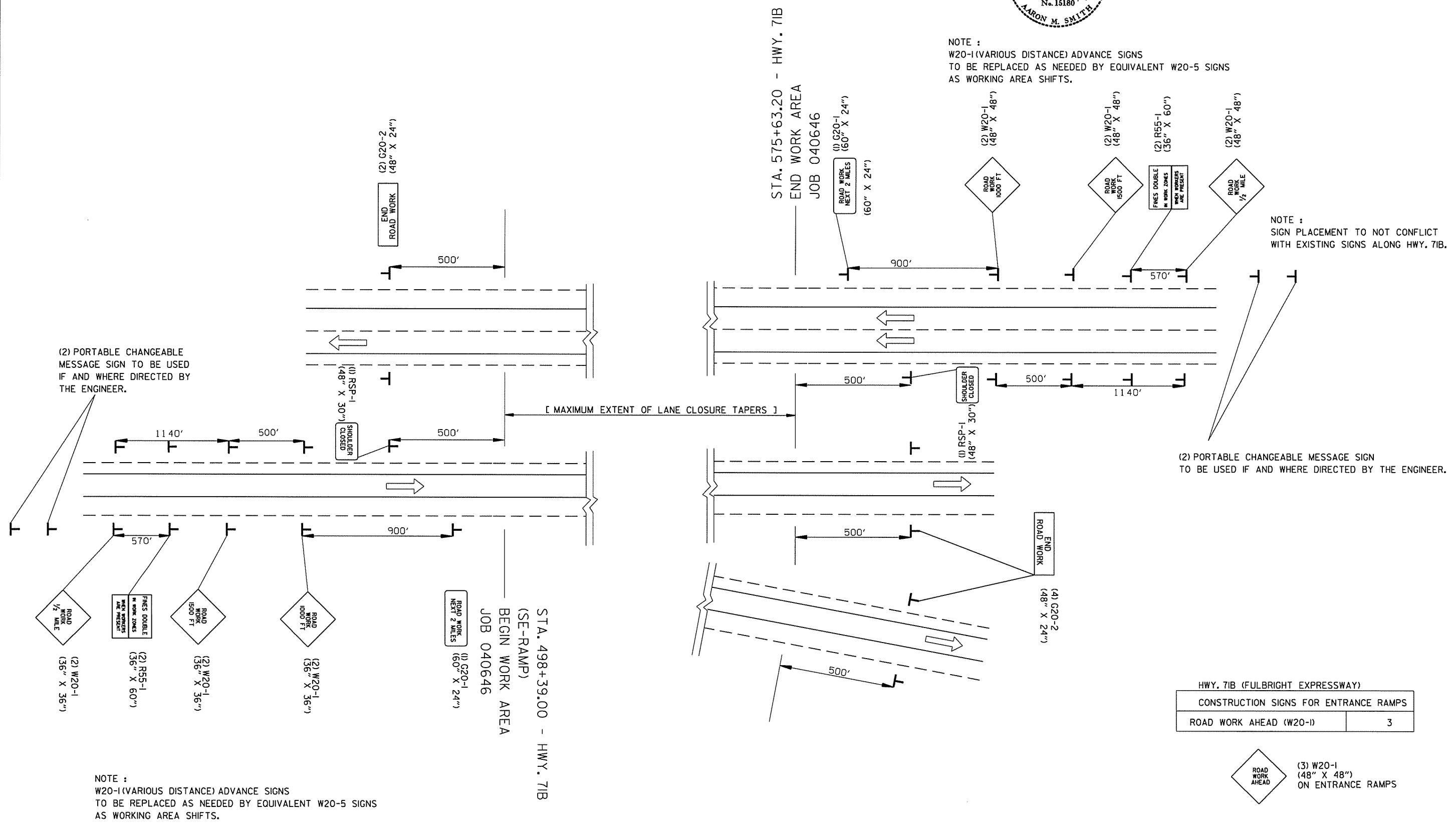
**MAINTENANCE OF TRAFFIC
WORK AREAS (I - 49)**



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							19	41

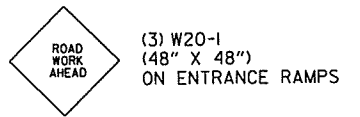
MAINTENANCE OF TRAFFIC

NOTE :
W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS
TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS
AS WORKING AREA SHIFTS.



HWY. 71B (FULBRIGHT EXPRESSWAY)
CONSTRUCTION SIGNS FOR ENTRANCE RAMP

ROAD WORK AHEAD (W20-1)	3
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NOTE :
W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS
TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS
AS WORKING AREA SHIFTS.

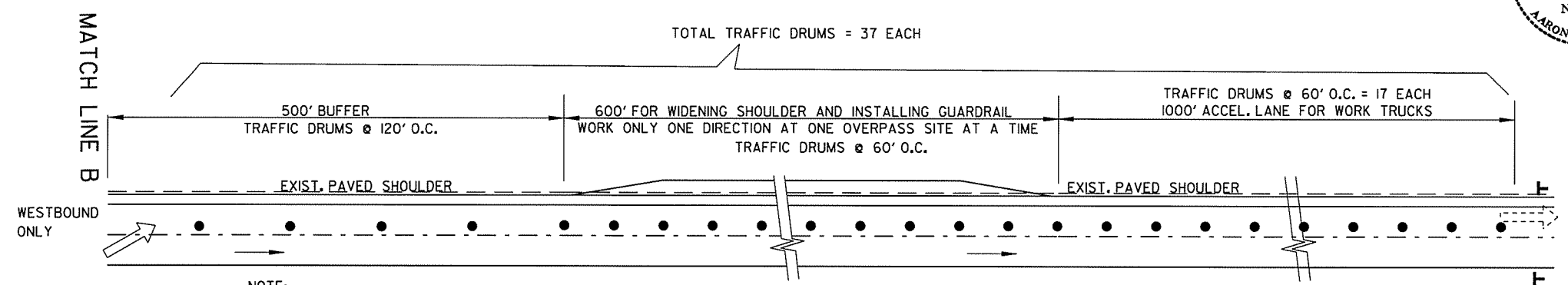
ADVANCE SIGNS AT BEGINNING AND END OF JOB
ALL STAGES

MAINTENANCE OF TRAFFIC
ADVANCE SIGNS AT JOB ENDS
(HWY. 71B)

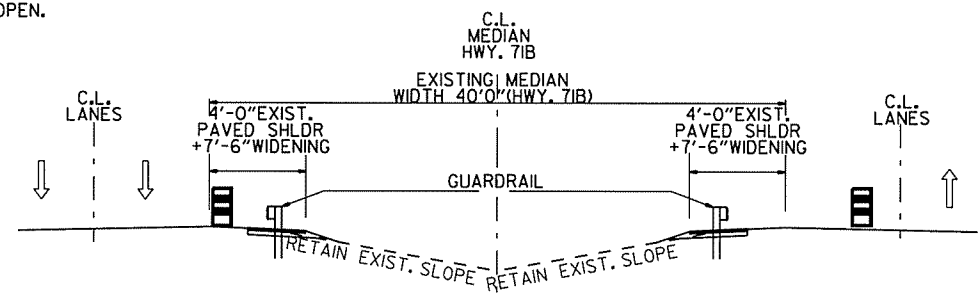
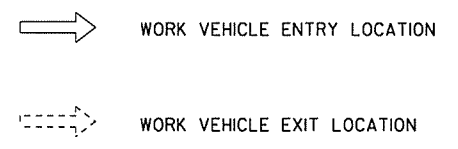


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	040546		20	41

MAINTENANCE OF TRAFFIC



NOTE:
MAINTAIN MINIMUM 12' LANE WIDTH
ON LANE REMAINING OPEN.



NOTE:
EASTBOUND RAMP TO UTILIZE PORTION OF
SHOULDER TO MAINTAIN 12' MIN. LANE WIDTH.
STATION 500+00 TO STATION 508+00.

SPEED
LIMIT
60

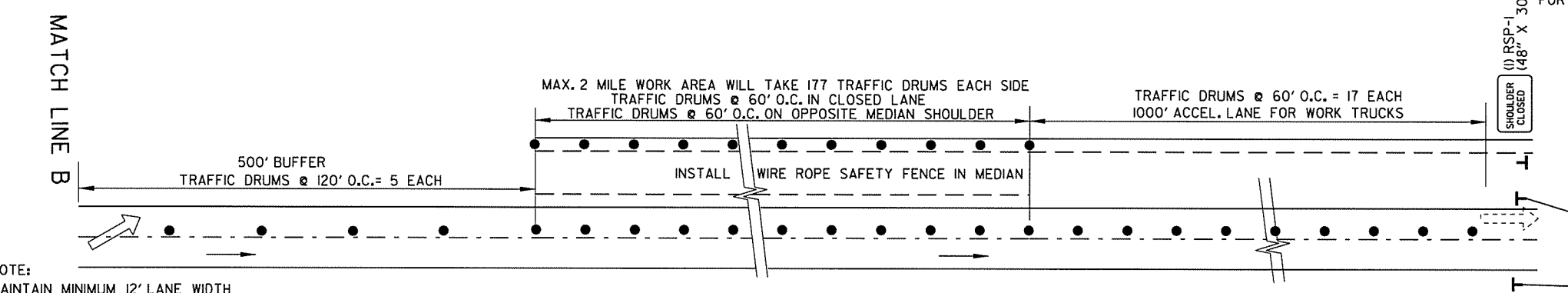
(2) R2-1
(48" X 60")

• SPEED LIMIT SHALL MATCH PERMANENT SPEED LIMIT.

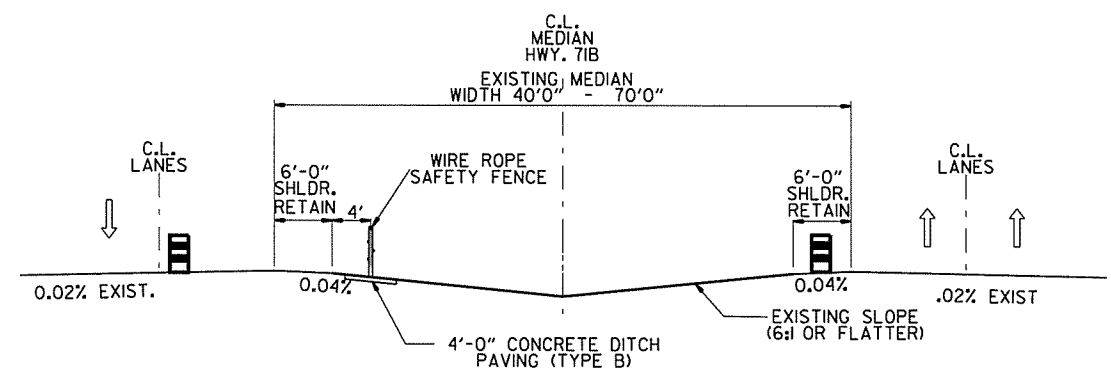
MOVABLE WORK ZONE FOR GUARDRAIL INSTALLATION

NOTE: CONTRACTOR MUST UTILIZE ENTRY/EXIT LOCATION AS SHOWN ON THE PLANS.

NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS. QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR ONE LANE CLOSURE AT EACH SECTION.



NOTE:
MAINTAIN MINIMUM 12' LANE WIDTH
ON LANE REMAINING OPEN.



(2) R2-1
(48" X 60")

SPEED
LIMIT
60

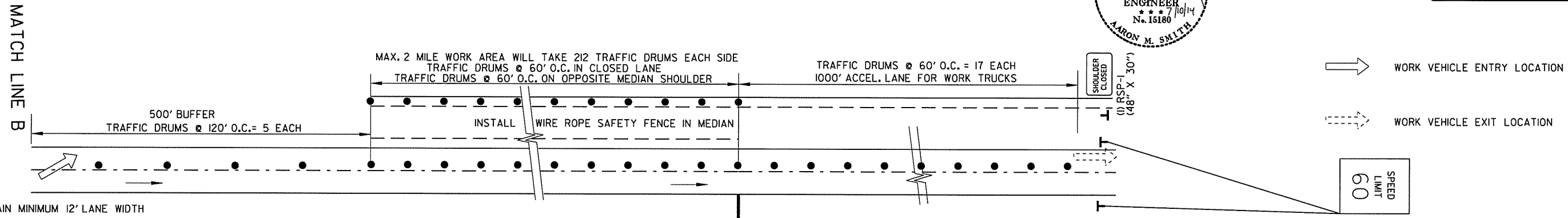
(2) R2-1
(48" X 60")

MOVABLE WORK ZONE FOR WRSF INSTALLATION



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							21	41

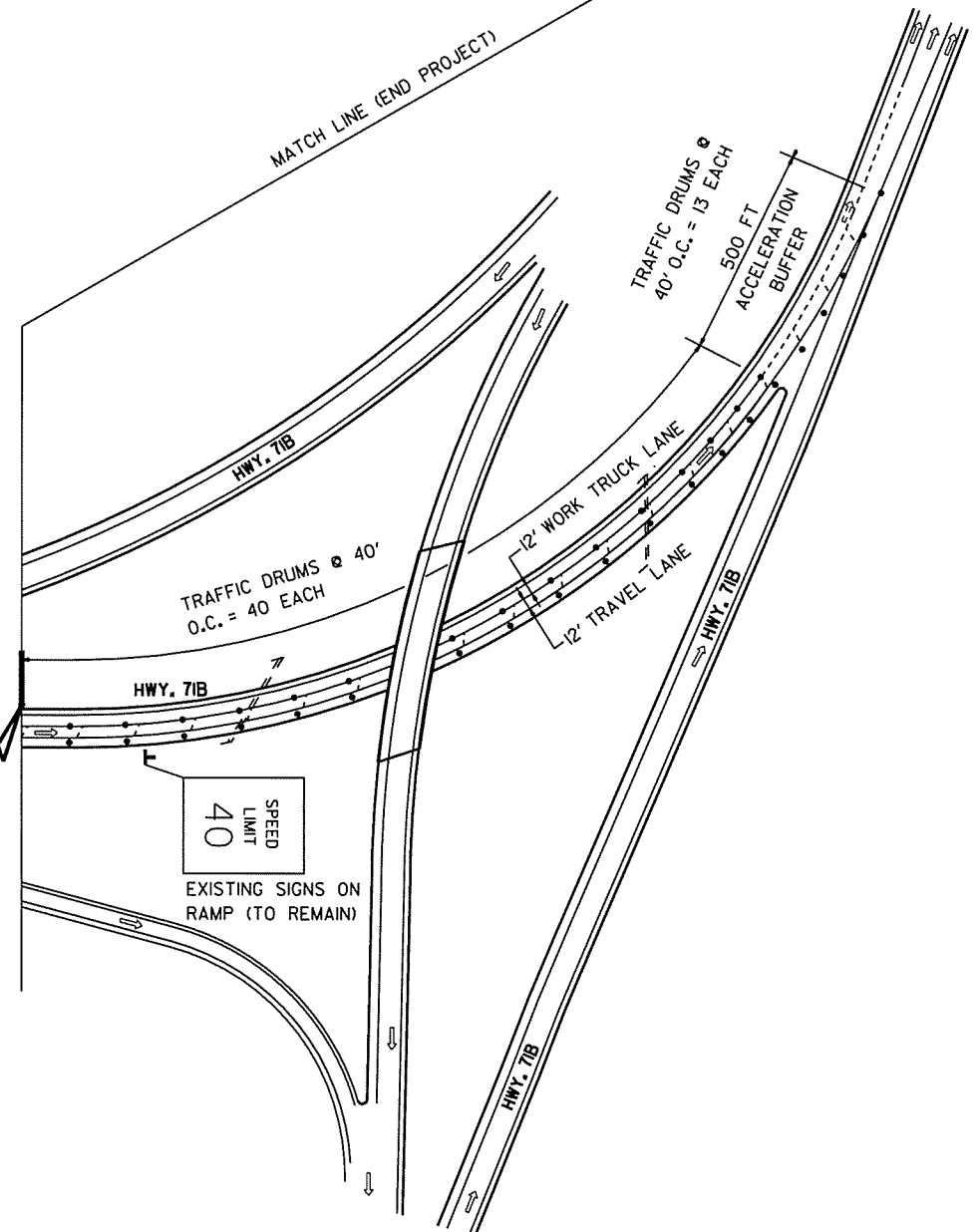
MAINTENANCE OF TRAFFIC



NOTE: MAINTAIN MINIMUM 12' LANE WIDTH ON LANE REMAINING OPEN.

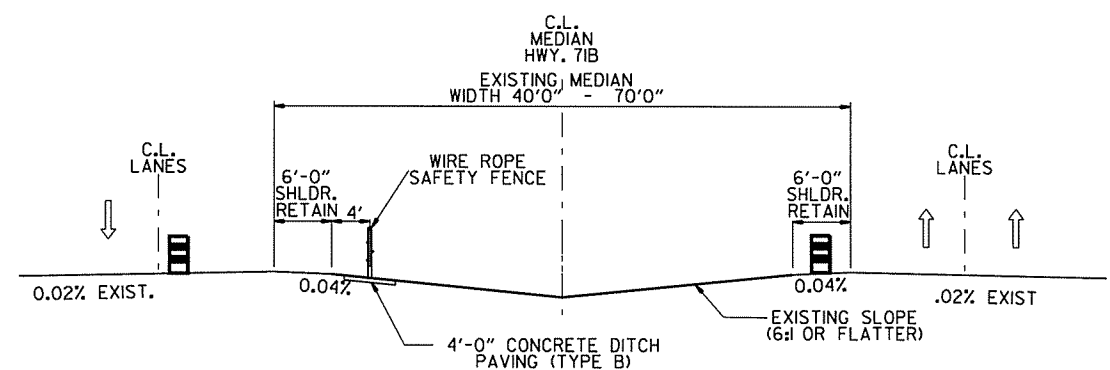
NOTE: CONTRACTOR MUST UTILIZE ENTRY/EXIT LOCATION AS SHOWN ON THE PLANS.

LEGEND
● ● TRAFFIC DRUMS



STA. 575+63.20
END JOB 040646
SECTION 17B
END WRSF
ON EB FORESLOPE
LOG MILE 1.70

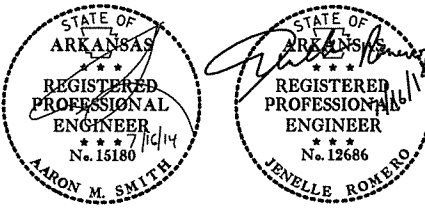
NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS. QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR ONE LANE CLOSURE AT EACH SECTION.



MOVABLE WORK ZONE FOR WRSF INSTALLATION

MAINTENANCE OF TRAFFIC
WORK AREAS (HWY. 71B)

EROSION CONTROL



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040646	22	41

LOCATION	TEMPORARY EROSION CONTROL						PERMANENT EROSION CONTROL				
	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	DROP INLET SILT FENCE (E-7)	SEDIMENT REMOVAL AND DISPOSAL	SEEDING	LIME	MULCH COVER	SECOND SEEDING APPLICATION	WATER
	ACRE	ACRE	M.GAL.	BAG	LIN.FT.	C.Y.	ACRE	TON	ACRE	ACRE	M.GAL.
ENTIRE JOB	4.54	4.54	92.55	400	480	37.8	4.54	9.07	4.54	4.54	462.76
* ENTIRE PROJECT IF AND WHERE DIRECTED BY THE ENGINEER											
TOTALS:	4.54	4.54	92.55	420	510	37.8	4.54	9.07	4.54	4.54	462.76

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
 DROP INLET SILT FENCES.....30 LIN.FT./LOCATION
 SAND BAG DITCH CHECKS.....20 BAGS/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 OF U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

* QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

RESPONSIBLE FOR QUANTITIES IN EROSION CONTROL AND ADVANCE WARNING SIGNS AND DEVICES TABLES

RESPONSIBLE FOR ALL OTHER QUANTITIES

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL	TERMINAL ANCHOR POST	GUARDRAIL TERMINAL
			(TYPE A)	(TYPE 1)	(TYPE 2)
			LIN.FT.	EACH	
498+82.00	504+57.00	RT. SHLDR. AT E-N RAMP OVERPASS (HWY. 71B)	525	1	1
501+62.00	507+37.00	LT. SHLDR. AT E-N RAMP OVERPASS (HWY. 71B)	525	1	1
TOTALS:			1050	2	2

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN	TEMPORARY PORTABLE RUMBLE STRIPS
			SQ.FT.-LIN.FT.-EA	NO.	SQ. FT.				
W20-1	ROAD WORK 1 MILE	48"X48"	16	8	128				
W20-1	ROAD WORK 1/2 MILE	48"X48"	16	10	160				
W20-1	ROAD WORK 1500 FT.	48"X48"	16	10	160				
W20-1	ROAD WORK 1000 FT.	48"X48"	16	2	32				
W20-1	ROAD WORK 1/2 MILE	36"X36"	9	2	18				
W20-1	ROAD WORK 1500 FT.	36"X36"	9	2	18				
W20-1	ROAD WORK 1000 FT.	36"X36"	9	2	18				
W20-1	ROAD WORK AHEAD	48"X48"	16	10	160				
G20-1	ROAD WORK NEXT xx MILES	60"X24"	10	6	60				
G20-2	END ROAD WORK	48"X24"	8	14	112				
SPECIAL 1	MERGE NOW + ARROW	48"X48"	16	3	48				
SPECIAL 2	RUMBLE STRIPS AHEAD	48"X48"	16	2	32				
W20-5	RIGHT LANE CLOSED 1 MILE	48"X48"	16	6	96				
W20-5	RIGHT LANE CLOSED 1/2 MILE	48"X48"	16	6	96				
W20-5	RIGHT LANE CLOSED 1500 FT.	48"X48"	16	6	96				
W4-2R	RIGHT LANE CLOSING GRAPHIC	48"X48"	16	6	96				
W1-6	LARGER ARROW	60"X30"	12.5	18	225				
R4-1	DO NOT PASS	48"X60"	20	12	240				
R55-1	FINES DOUBLE IN WORK ZONES	36"X60"	15	12	180				
R2-5A	REDUCED SPEED AHEAD	48"X60"	20	6	120				
R2-1	SPEED LIMIT 60 MPH	48"X60"	20	6	120				
R2-1	SPEED LIMIT 70 MPH	48"X60"	20	4	80				
R2-1	SPEED LIMIT 50 MPH	48"X60"	20	2	40				
R2-2	TRUCKS 65	48"X60"	20	4	80				
RSP-1	SHOULDER CLOSED	48"X30"	20	9	180				
TRAFFIC DRUMS			1263			1263			
TEMPORARY PORTABLE RUMBLE STRIPS									24
ADVANCE WARNING ARROW PANEL			3			75			
PORTABLE CHANGEABLE MESSAGE SIGN			12				228		
TOTALS:					2595	1263	75	228	24

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

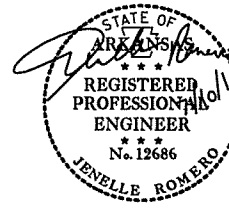
REMOVAL AND DISPOSAL ITEMS

STATION	DESCRIPTION	IMPACT ATTENUATION BARRIER	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING
		EACH	SQ YD
503+08	ON CENTERLINE OF MEDIAN (HWY. 71B)	2	
* ENTIRE PROJECT - AS DIRECTED BY THE ENGINEER			
TOTALS:		2	225

* QUANTITY IS ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

QUANTITIES

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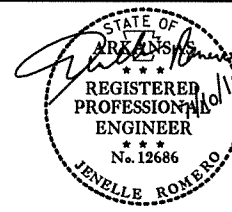
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							24	41
QUANTITIES								

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2") (PG 64-22)			
				TON / STATION	TON	AVG. WD. FEET	SQ. YD.	POUND / SQ. YD.	TON
498+39.00	505+00.00	RT. SHLDR. AT E-N RAMP OVERPASS (HWY. 71B)	661.00	35.10	232.01	7.20	528.80	220.00	58.17
501+19.00	507+95.00	LT. SHLDR. AT E-N RAMP OVERPASS (HWY. 71B)	676.00	36.92	249.58	7.50	563.33	220.00	61.97
TOTALS:					481.59		1092.13		120.14

BASIS OF ESTIMATE:
 110 LBS. PER SQ. YD. PER INCH DEPTH
 ACHM SURFACE COURSE (1/2") 94.5% MIN. AGGR. 5.5% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115

QUANTITIES



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							040646	25	41

QUANTITIES

EARTHWORK

STATION	STATION	LOCATION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
498+39	505+00	RT. SHLDR. AT E-N RAMP OVERPASS (HWY. 71B)	86	17
501+19	507+95	LT. SHLDR. AT E-N RAMP OVERPASS (HWY. 71B)	88	27
* ENTIRE PROJECT - AS DIRECTED BY THE ENGINEER			500	500
TOTALS:			674	544

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

* QUANTITIES ARE ESTIMATED FOR SLOPE MODIFICATION.
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040646	26	41

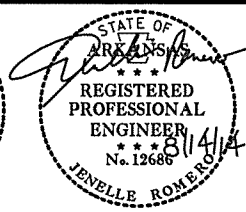
SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER	2	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING	225	SQ. YD.
210	UNCLASSIFIED EXCAVATION	674	CU. YD.
210	COMPACTED EMBANKMENT	544	CU. YD.
303	AGGREGATE BASE COURSE (CLASS 7)	482	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	113	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	7	TON
601	MOBILIZATION	1.00	LUMP SUM
SP & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
603	TRAFFIC CONTROL SUPERVISOR	1.00	LUMP SUM
604	SIGNS	2595	SQ. FT.
604	TRAFFIC DRUMS	1263	EACH
604	ADVANCE WARNING ARROW PANEL	75	DAY
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN	228	WEEK
SP & 605	CONCRETE DITCH PAVING (TYPE B)	3836	SQ. YD.
617	GUARDRAIL (TYPE A)	1050	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)	2	EACH
617	GUARDRAIL TERMINAL (TYPE 2)	2	EACH
620	SEEDING	4.54	ACRE
620	LIME	9	TON
SS & 620	MULCH COVER	9.08	ACRE
620	WATER	603.8	M. GAL.
621	TEMPORARY SEEDING	4.54	ACRE
621	SAND BAG DITCH CHECKS	420	BAG
621	DROP INLET SILT FENCE	510	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	38	CU. YD.
623	SECOND SEEDING APPLICATION	4.54	ACRE
624	SOLID SODDING	3836	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
SP	TEMPORARY PORTABLE RUMBLE STRIPS	24	EACH
SP	WIRE ROPE SAFETY FENCE	13508	LIN. FT.
SP	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS	1.00	LUMP SUM
SP	WIRE ROPE SAFETY FENCE (POST REPAIR)	50	EACH

RESPONSIBLE FOR QUANTITIES IN EROSION CONTROL AND ADVANCE WARNING SIGNS AND DEVICES TABLES

RESPONSIBLE FOR ALL OTHER QUANTITIES

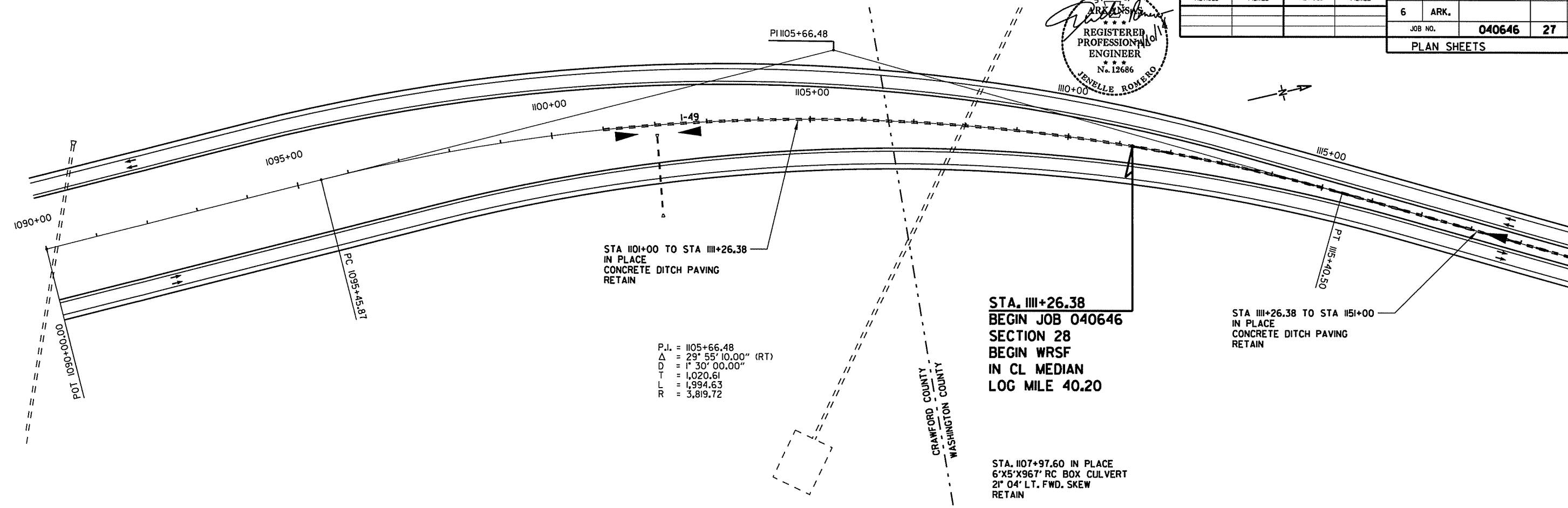
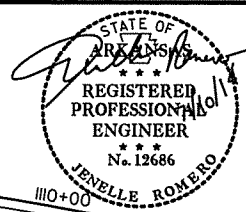


REVISIONS

DATE	REVISION	SHEET NUMBER

8/14/2014 9:45:19 AM P:\100039443\CADD\GEN\540sum05.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							27	41



STA 1101+00 TO STA 1111+26.38
IN PLACE
CONCRETE DITCH PAVING
RETAIN

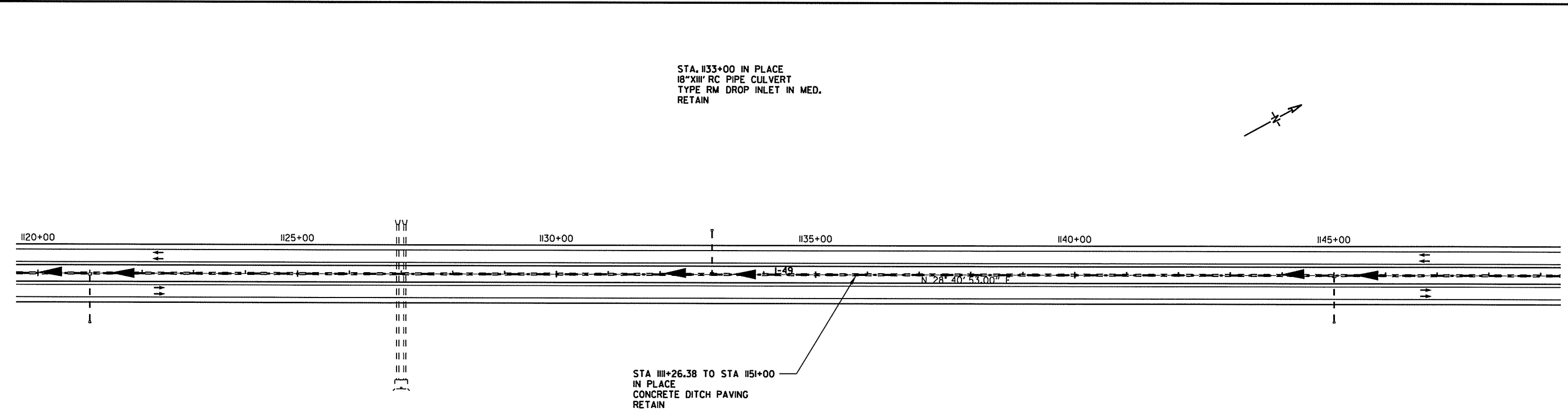
P.I. = 1105+66.48
Δ = 29° 55' 10.00" (RT)
D = 1° 30' 00.00"
T = 1,020.61
L = 1,994.63
R = 3,819.72

STA. 1111+26.38
BEGIN JOB 040646
SECTION 28
BEGIN WRSF
IN CL MEDIAN
LOG MILE 40.20

STA 1111+26.38 TO STA 1151+00
IN PLACE
CONCRETE DITCH PAVING
RETAIN

STA. 1107+97.60 IN PLACE
6'X5'X967' RC BOX CULVERT
21° 04' LT. FWD. SKEW
RETAIN

STA. 1133+00 IN PLACE
18"X111' RC PIPE CULVERT
TYPE RM DROP INLET IN MED.
RETAIN



STA. 1121+00 IN PLACE
18"X88' RC PIPE CULVERT
TYPE RM DROP INLET IN MED.
RETAIN

STA. 1127+00 IN PLACE
DBL. 54"X300' RC PIPE CULVERT
RETAIN

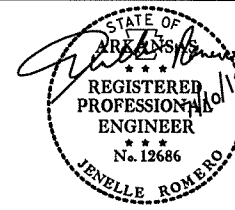
STA 1111+26.38 TO STA 1151+00
IN PLACE
CONCRETE DITCH PAVING
RETAIN

STA. 1145+00 IN PLACE
18"X84' RC PIPE CULVERT
TYPE RM DROP INLET IN MED.
RETAIN

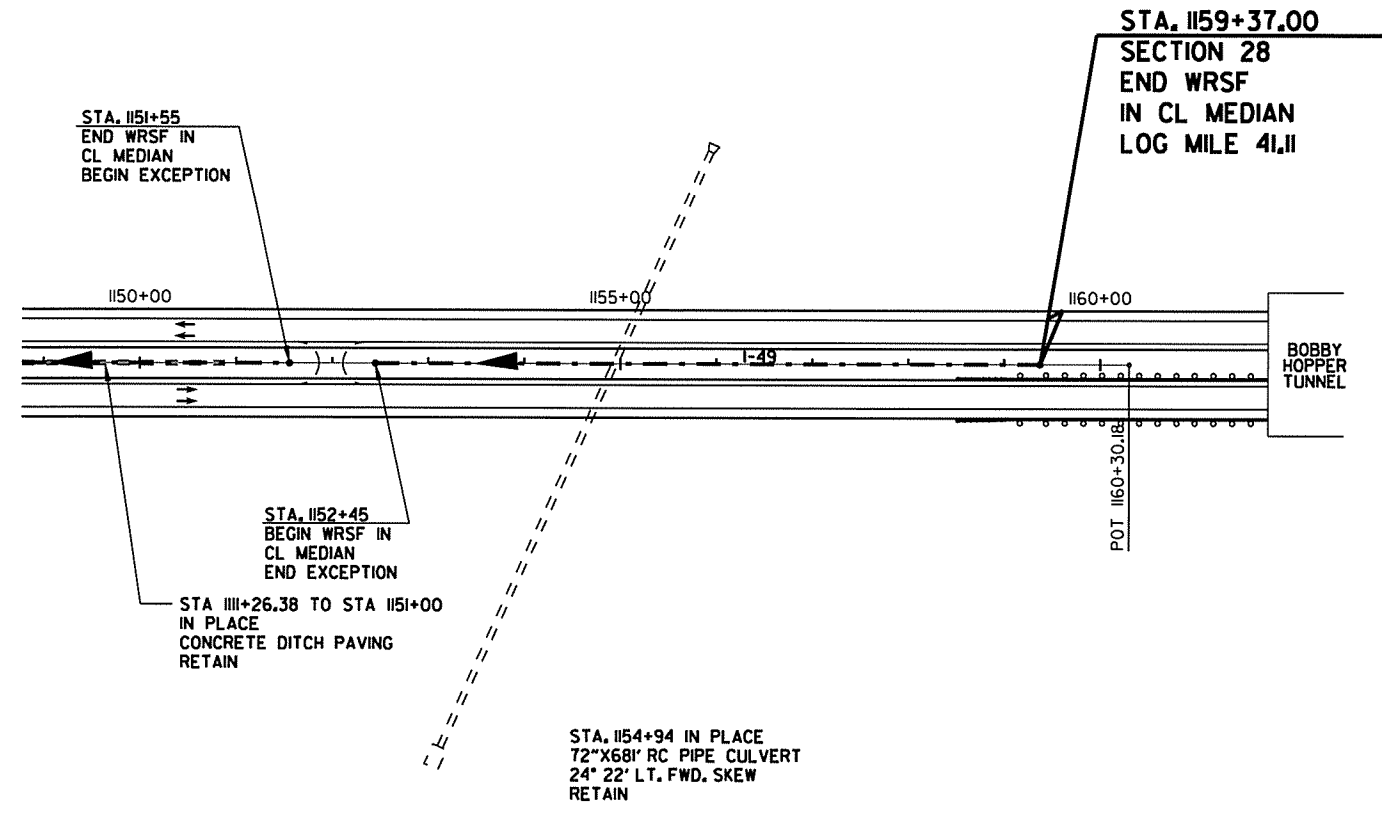
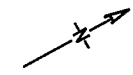
NOTE:
CONTRACTOR TO VERIFY EXISTING CROSSING
UTILITIES PRIOR TO CONSTRUCTION. EXERCISE
CARE AND PRECAUTION WHILE WORKING IN
THESE AREAS.

PLAN SHEETS
STA. 1090+00 - STA. 1149+00

7/9/2014 11:34:05 PM PA:\00039443\CADD\PAV\HWY540-1.dgn



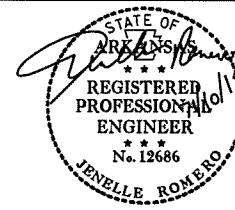
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							28	41
PLAN SHEETS								



NOTE:
 CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION. EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

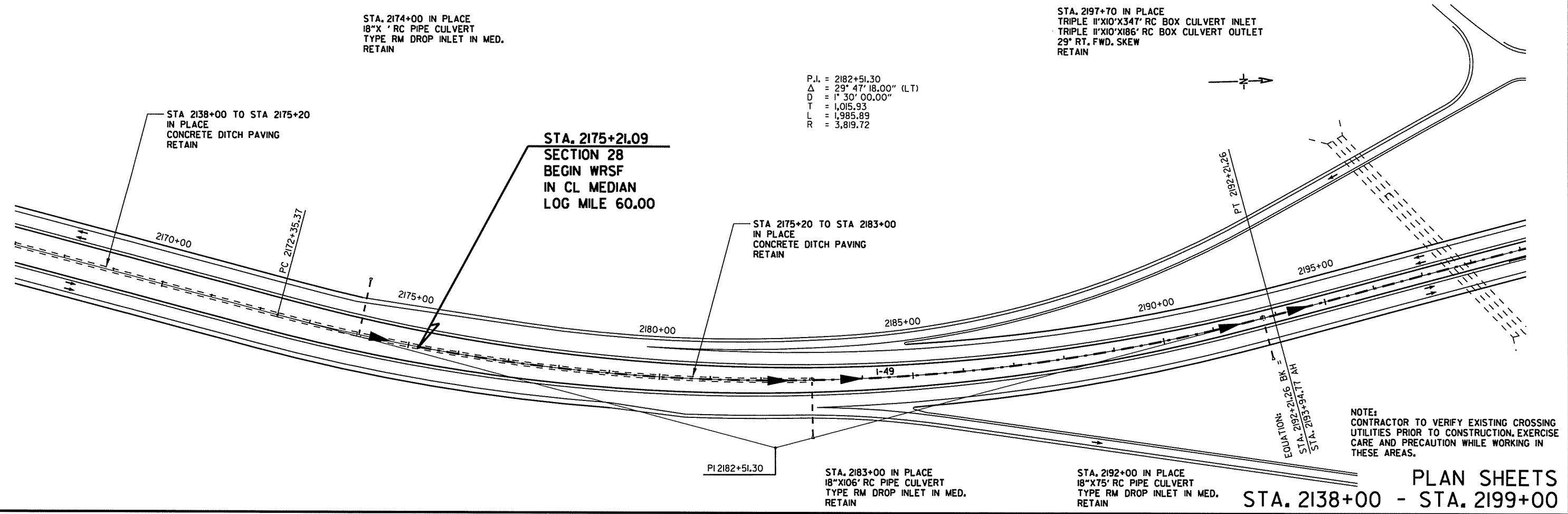
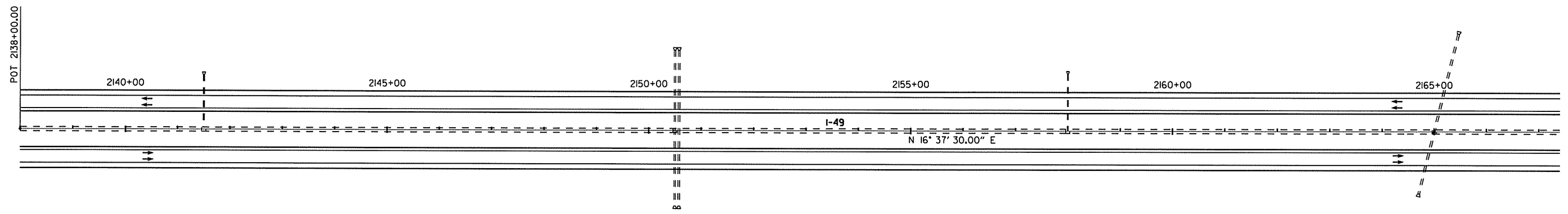
PLAN SHEETS
 STA. 1149+00 - STA. 1160+30.18

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							29	41

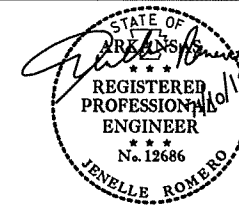
PLAN SHEETS



NOTE:
CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION. EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

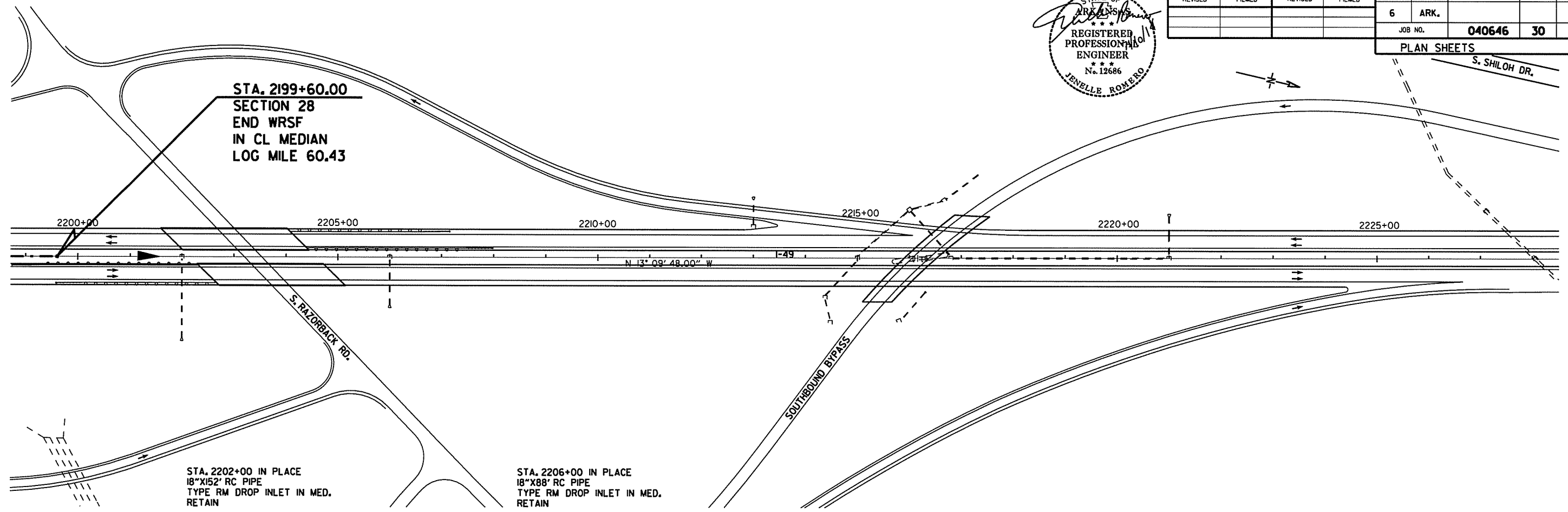
PLAN SHEETS
STA. 2138+00 - STA. 2199+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							30	41

PLAN SHEETS



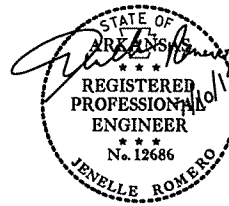
NOTE:
CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION. EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

PLAN SHEETS
STA. 2199+00 - STA. 2228+00

P:\100039443\CADD\PAV\HWY540B-2.dgn 7/9/2014 1:34:03 PM

STA. 491+45 IN PLACE
DBL. 6'X6'X157' RC BOX CULVERT
30° LT. FWD. SKEW
TYPE T DROP INLET IN MED.
RETAIN

STA. 497+00 IN PLACE
24"X70' RC PIPE CULVERT
TYPE R DROP INLET IN MED.
H=2'-10"
RETAIN

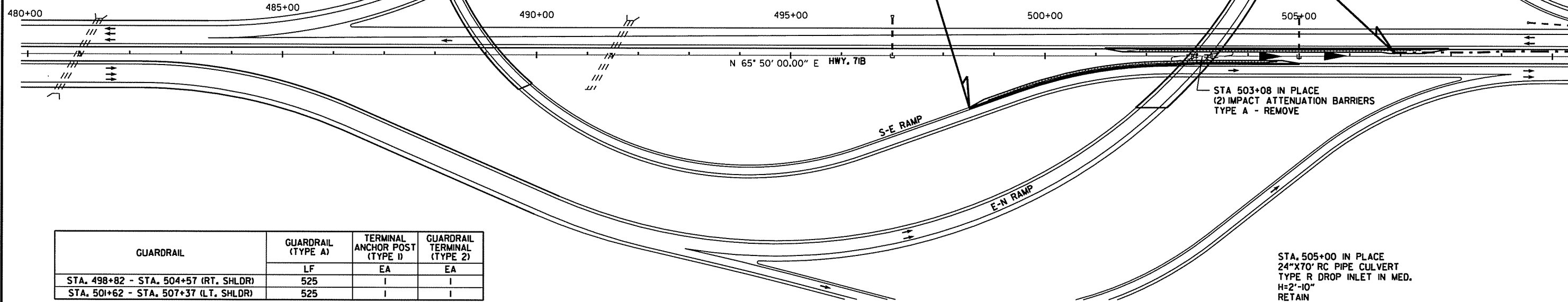


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							31	41

PLAN SHEETS

STA. 498+39.00
BEGIN WORK
SECTION 17B
LOG MILE 0.25

STA. 506+86.77
SECTION 17B
BEGIN WRSF
ON WB FORESLOPE



GUARDRAIL	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
	LF	EA	EA
STA. 498+82 - STA. 504+57 (RT. SHLDR)	525		
STA. 501+62 - STA. 507+37 (LT. SHLDR)	525		

STA. 505+00 IN PLACE
24"X70' RC PIPE CULVERT
TYPE R DROP INLET IN MED.
H=2'-10"
RETAIN

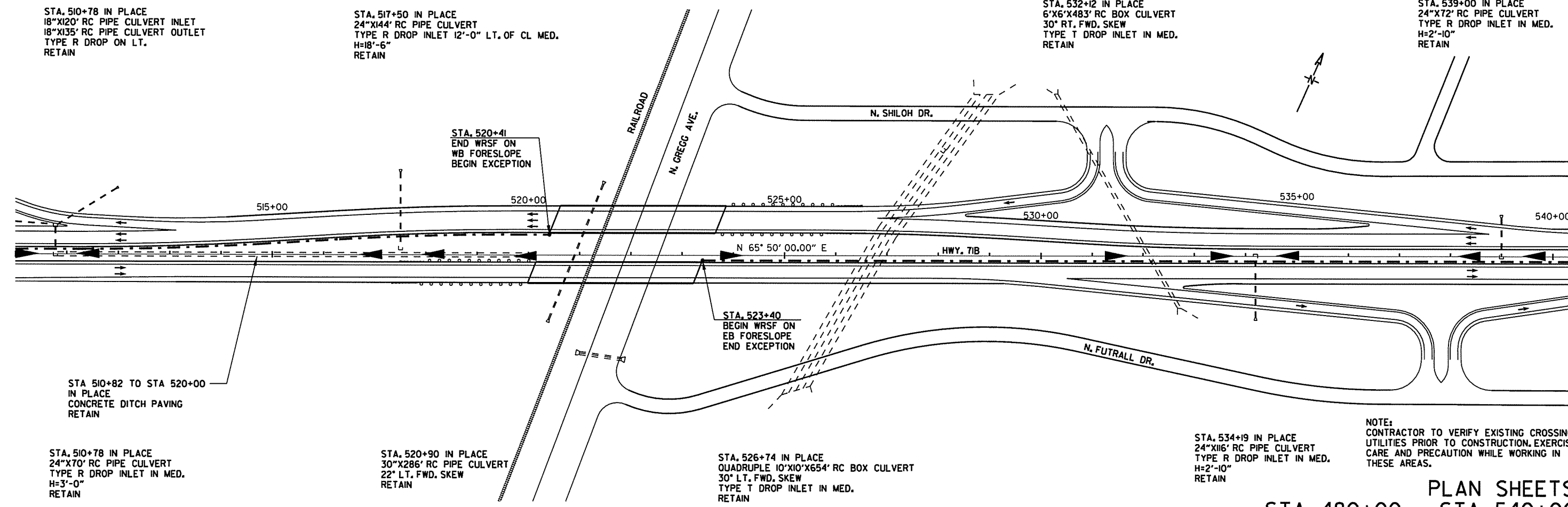
STA 503+08 IN PLACE
(2) IMPACT ATTENUATION BARRIERS
TYPE A - REMOVE

STA. 510+78 IN PLACE
18"X120' RC PIPE CULVERT INLET
18"X135' RC PIPE CULVERT OUTLET
TYPE R DROP ON LT.
RETAIN

STA. 517+50 IN PLACE
24"X144' RC PIPE CULVERT
TYPE R DROP INLET 12'-0" LT. OF CL MED.
H=18'-6"
RETAIN

STA. 532+12 IN PLACE
6'X6'X483' RC BOX CULVERT
30° RT. FWD. SKEW
TYPE T DROP INLET IN MED.
RETAIN

STA. 539+00 IN PLACE
24"X72' RC PIPE CULVERT
TYPE R DROP INLET IN MED.
H=2'-10"
RETAIN



STA. 520+41
END WRSF ON
WB FORESLOPE
BEGIN EXCEPTION

STA. 523+40
BEGIN WRSF ON
EB FORESLOPE
END EXCEPTION

STA 510+82 TO STA 520+00
IN PLACE
CONCRETE DITCH PAVING
RETAIN

STA. 510+78 IN PLACE
24"X70' RC PIPE CULVERT
TYPE R DROP INLET IN MED.
H=3'-0"
RETAIN

STA. 520+90 IN PLACE
30"X286' RC PIPE CULVERT
22° LT. FWD. SKEW
RETAIN

STA. 526+74 IN PLACE
QUADRUPLE 10'X10'X654' RC BOX CULVERT
30° LT. FWD. SKEW
TYPE T DROP INLET IN MED.
RETAIN

STA. 534+19 IN PLACE
24"X116' RC PIPE CULVERT
TYPE R DROP INLET IN MED.
H=2'-10"
RETAIN

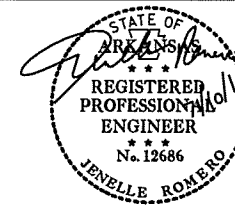
NOTE:
CONTRACTOR TO VERIFY EXISTING CROSSING
UTILITIES PRIOR TO CONSTRUCTION. EXERCISE
CARE AND PRECAUTION WHILE WORKING IN
THESE AREAS.

PLAN SHEETS
STA. 480+00 - STA. 540+00

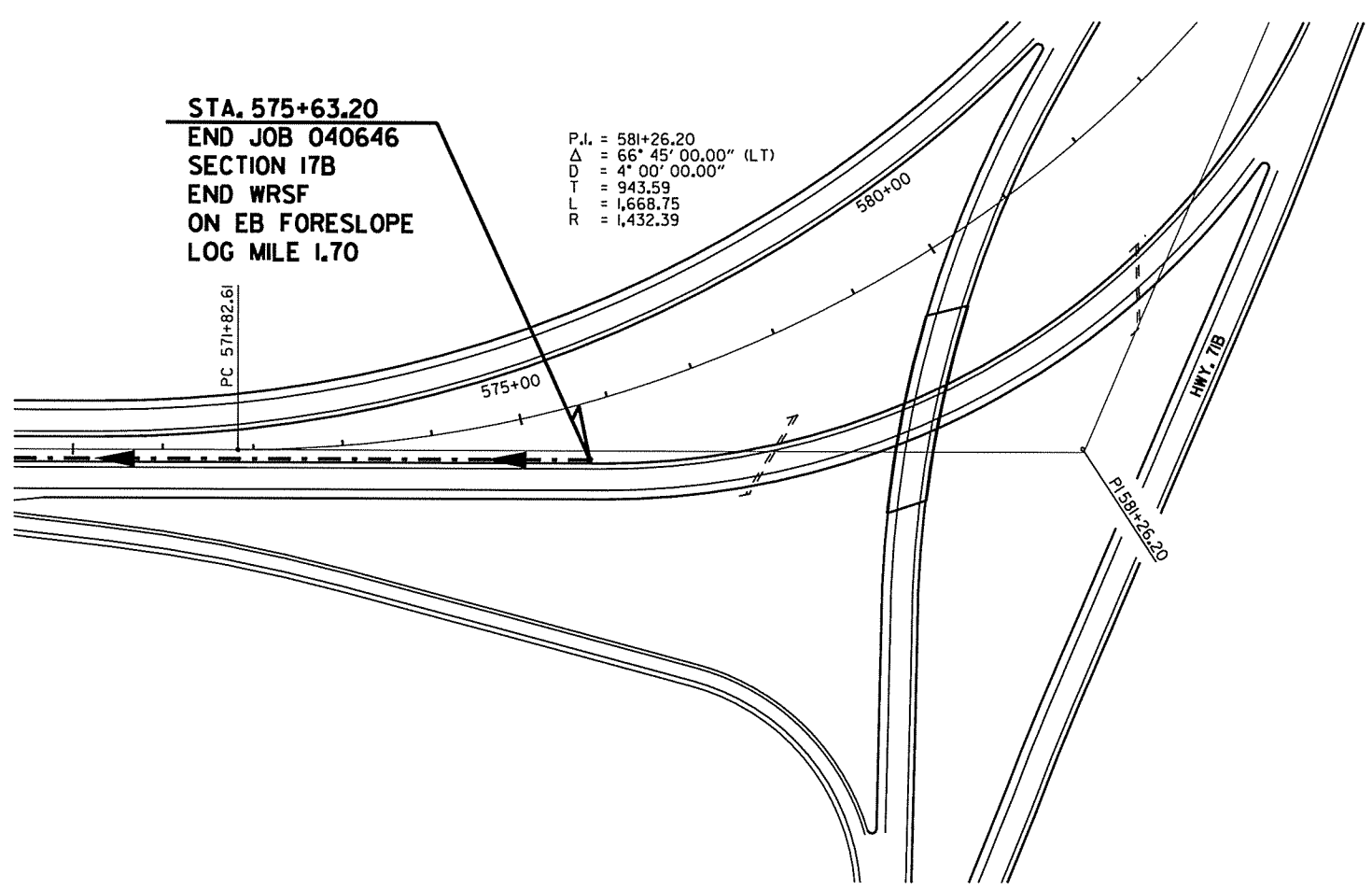
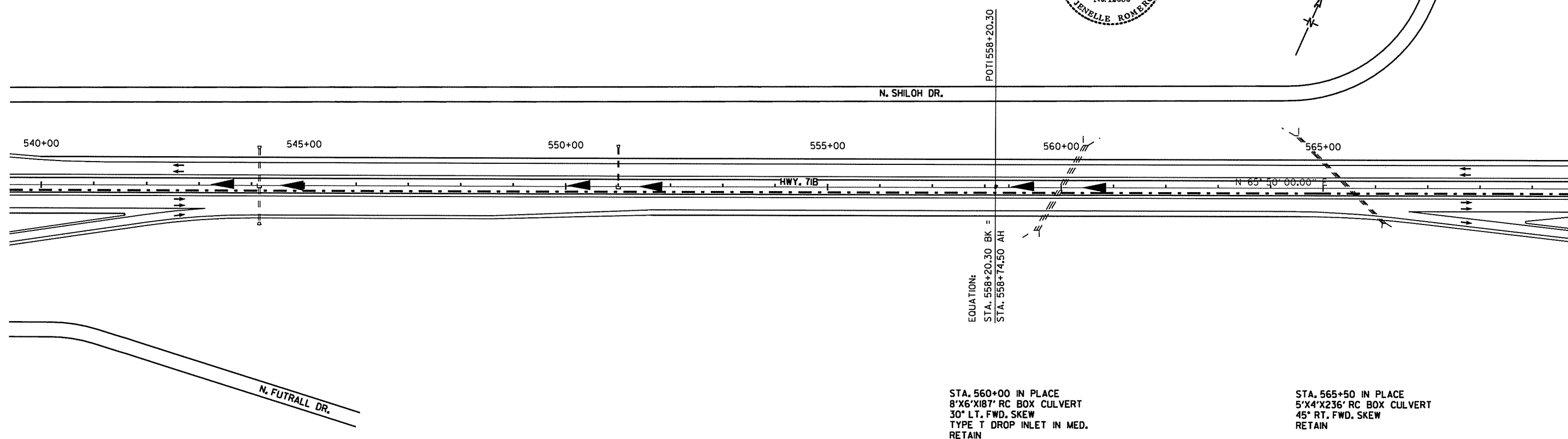
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STA. 544+15 IN PLACE
36"x140' RC PIPE CULVERT
TYPE R DROP INLET IN MED.
RETAIN

STA. 551+00 IN PLACE
24"x70' RC PIPE CULVERT
TYPE R DROP INLET IN MED.
H=2'-10"
RETAIN



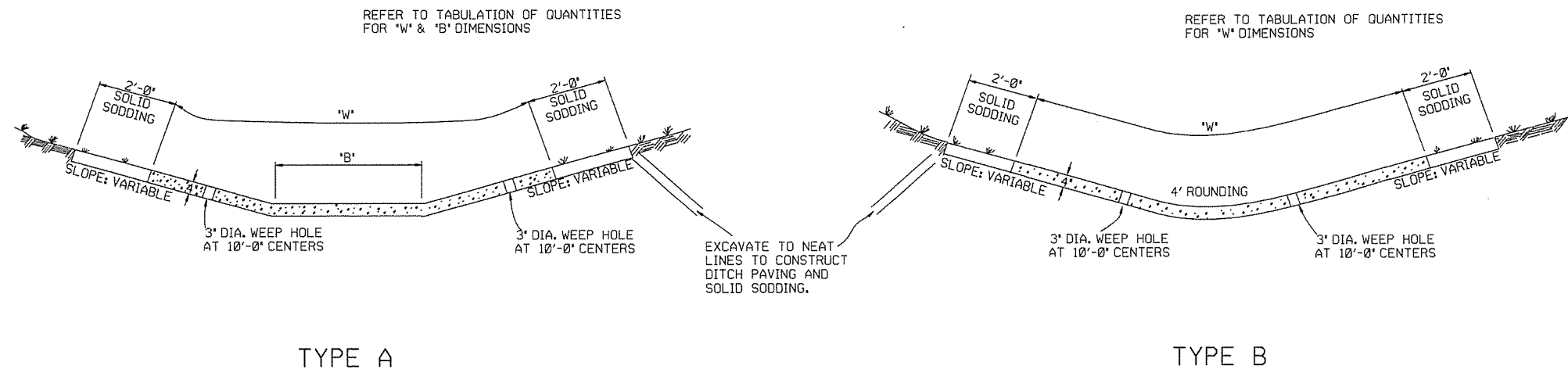
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 040646							32	41
PLAN SHEETS								



NOTE:
CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION. EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

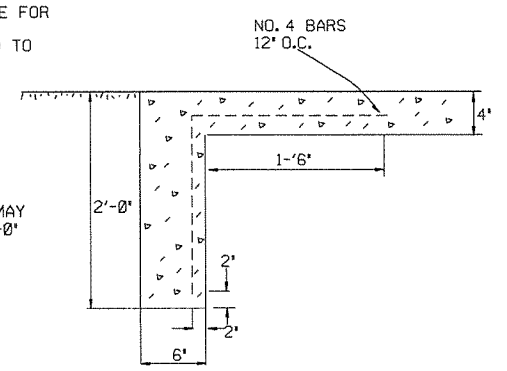
PLAN SHEETS
STA. 540+00 - STA. 575+63.20

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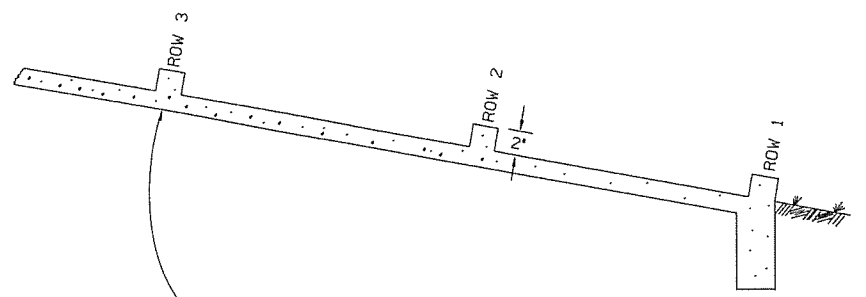


THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR 'CONCRETE DITCH PAVING.'

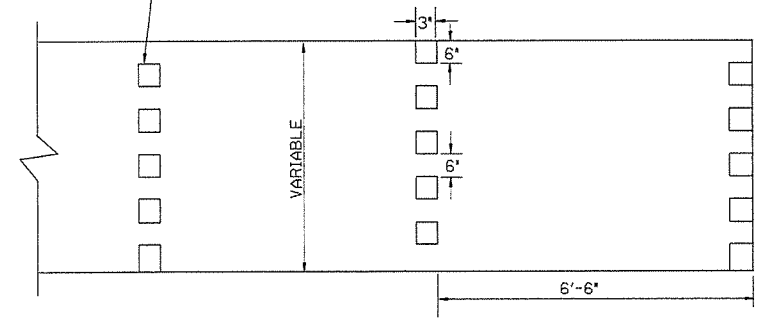
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION



TOE WALL DETAIL FOR CONCRETE DITCH PAVING



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



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

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

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

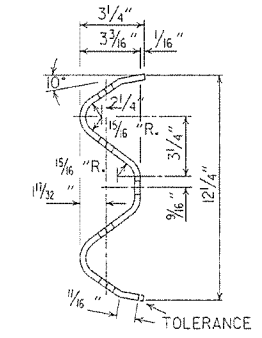
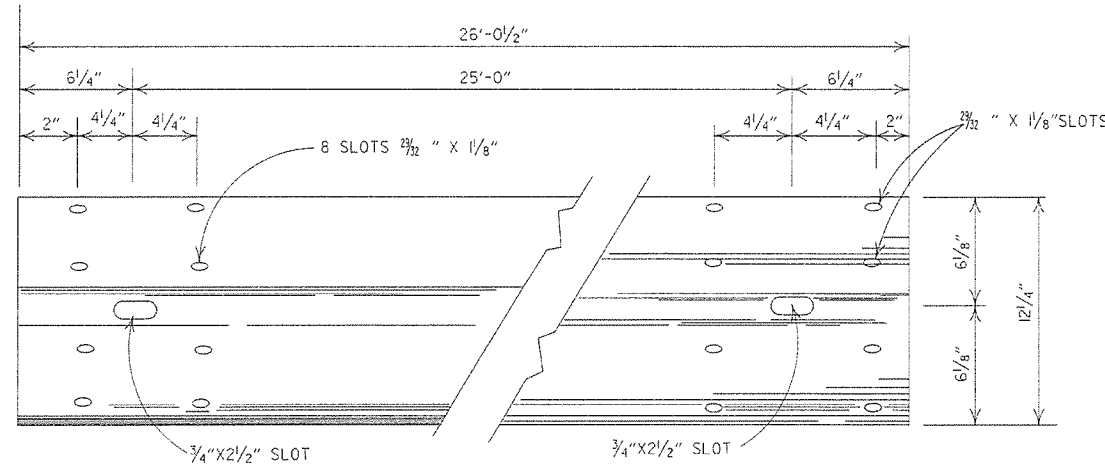
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

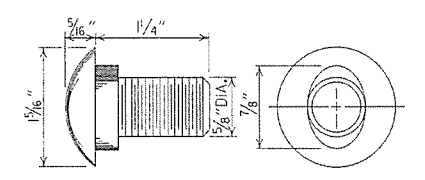
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

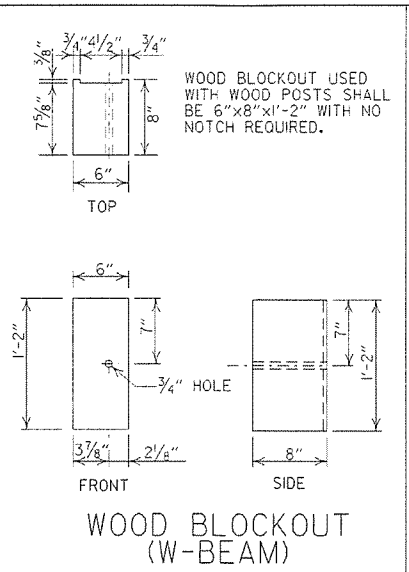
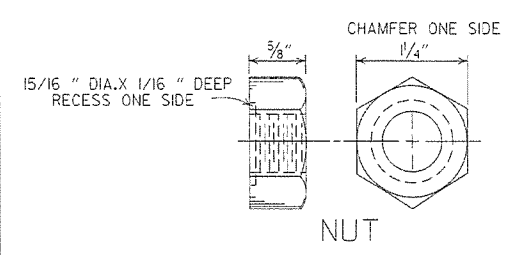
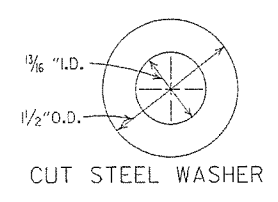
STANDARD DRAWING CDP-1



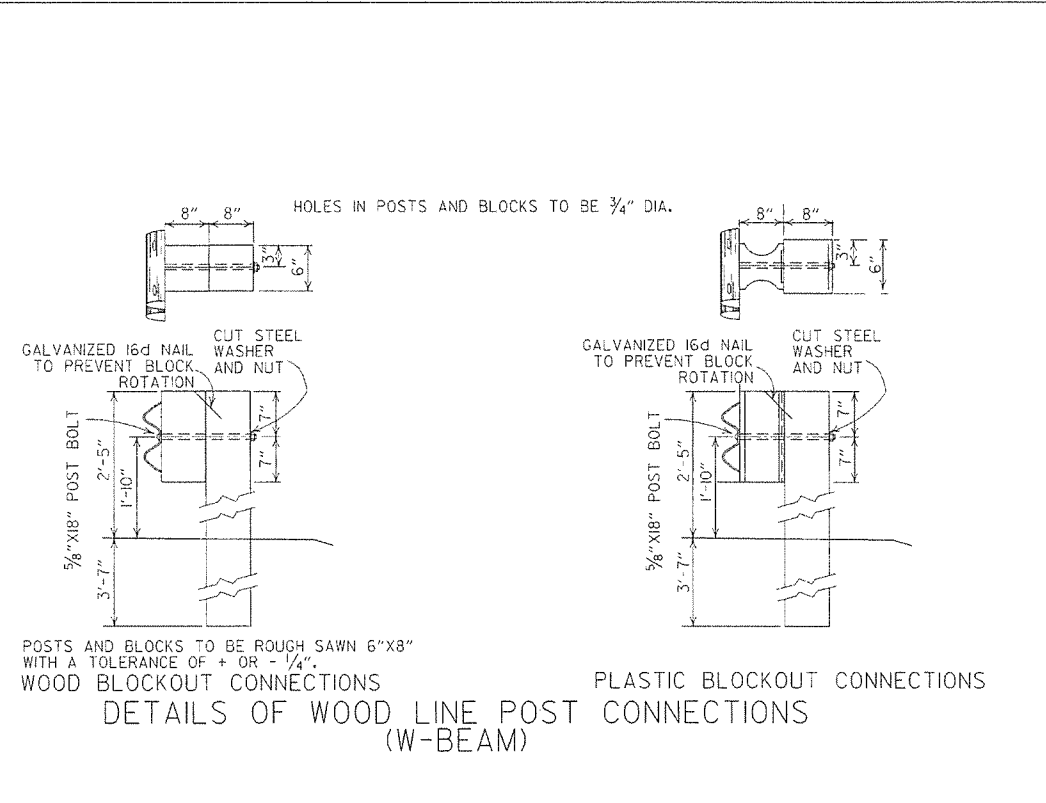
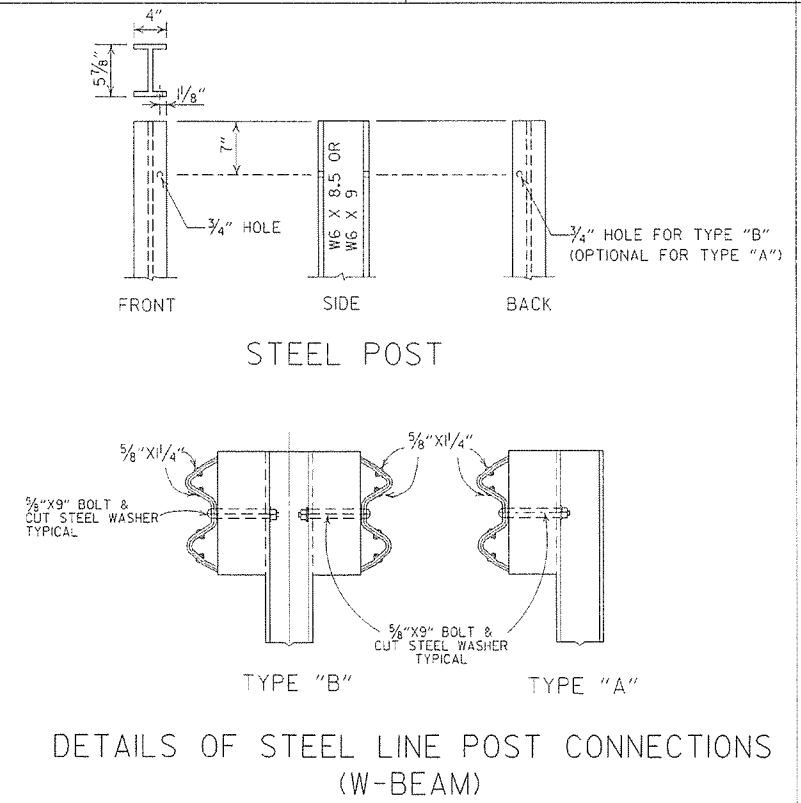
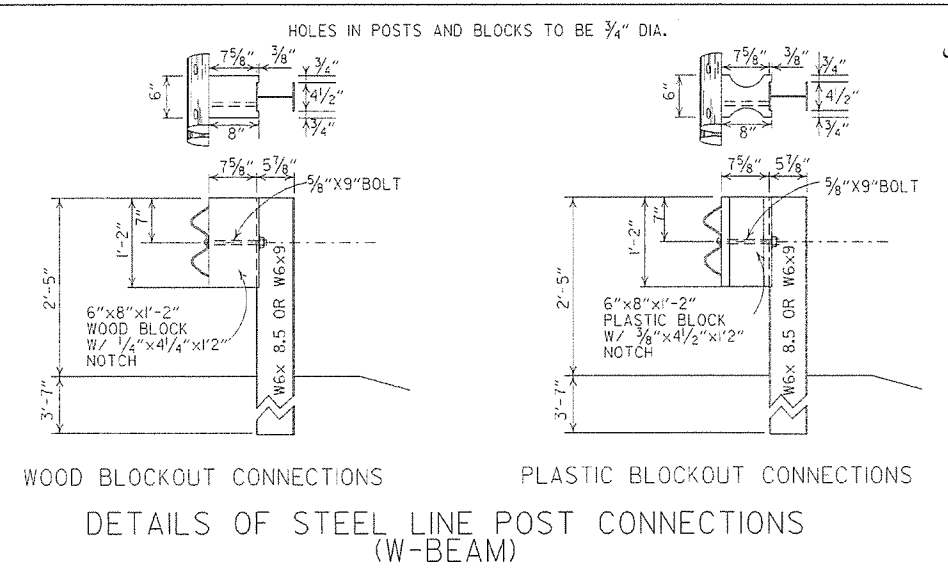
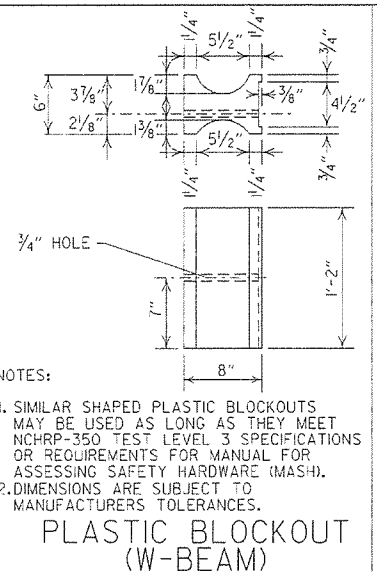
DETAILS OF W-BEAM GUARD RAIL
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



WOOD BLOCKOUT (W-BEAM)



-GENERAL NOTES-

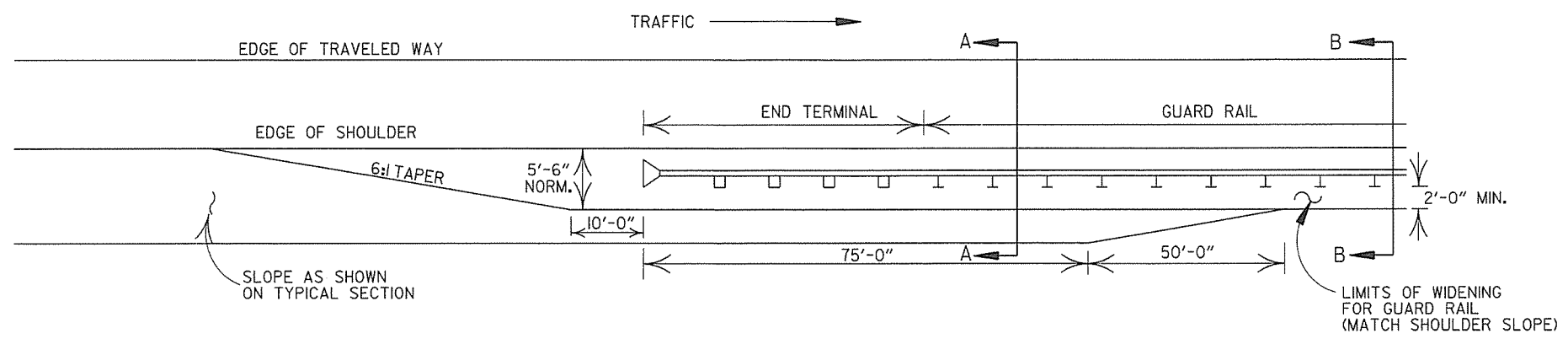
ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.
W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.
USE W-BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARD RAIL, W-BEAM GUARD RAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.
ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7F (4000 F) OR NO. 11350 F SOUTHERN PINE.
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

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

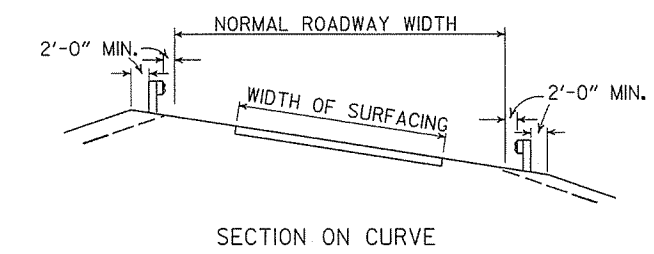
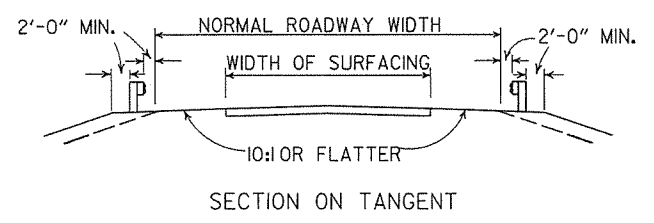
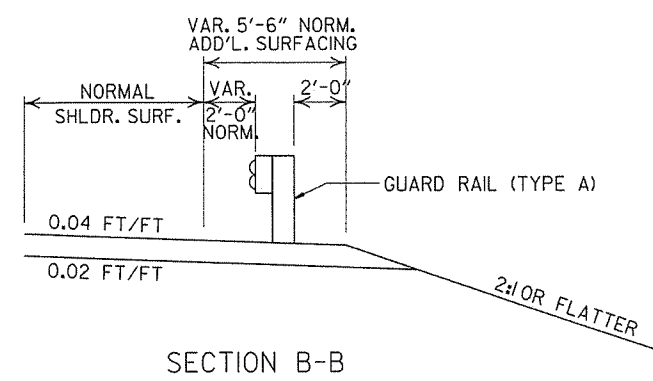
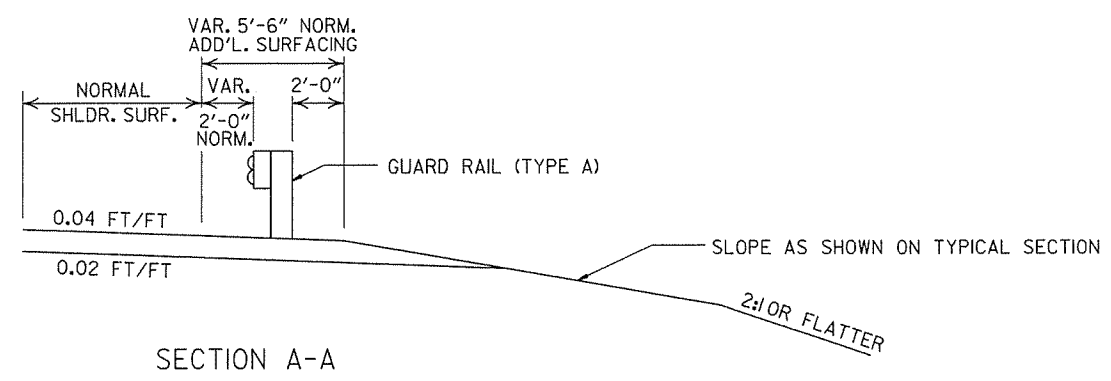
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8

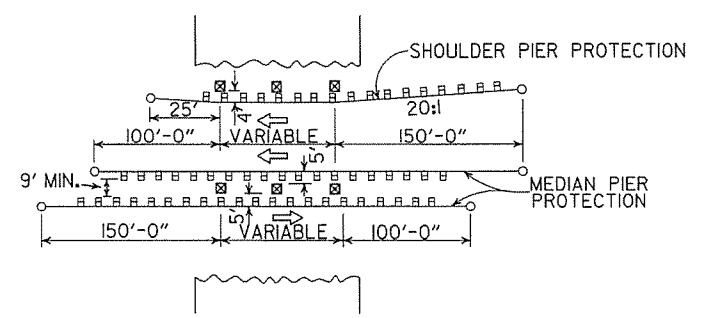


NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.



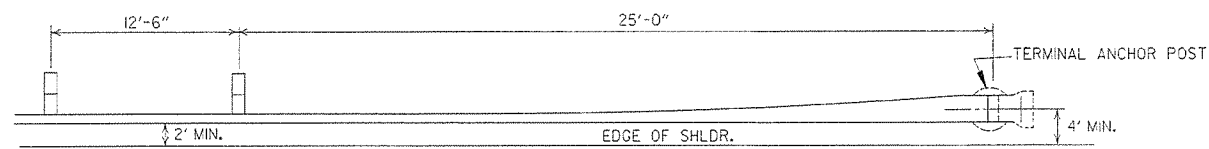
DETAILS OF WIDENING FOR GUARD RAIL

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

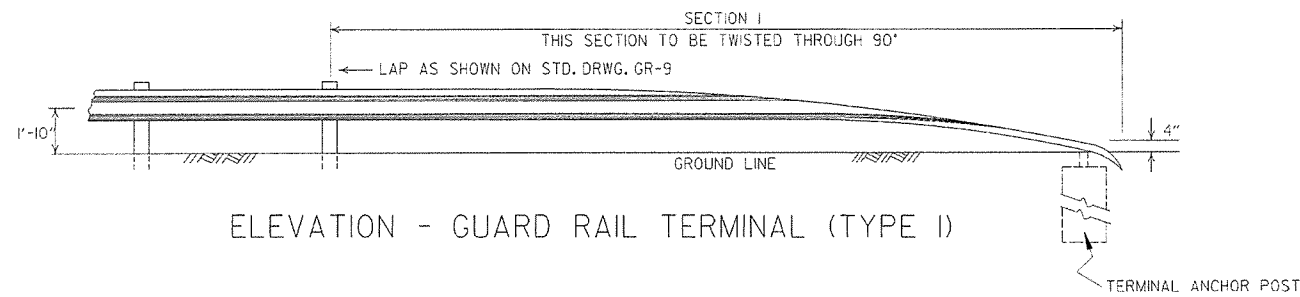


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

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

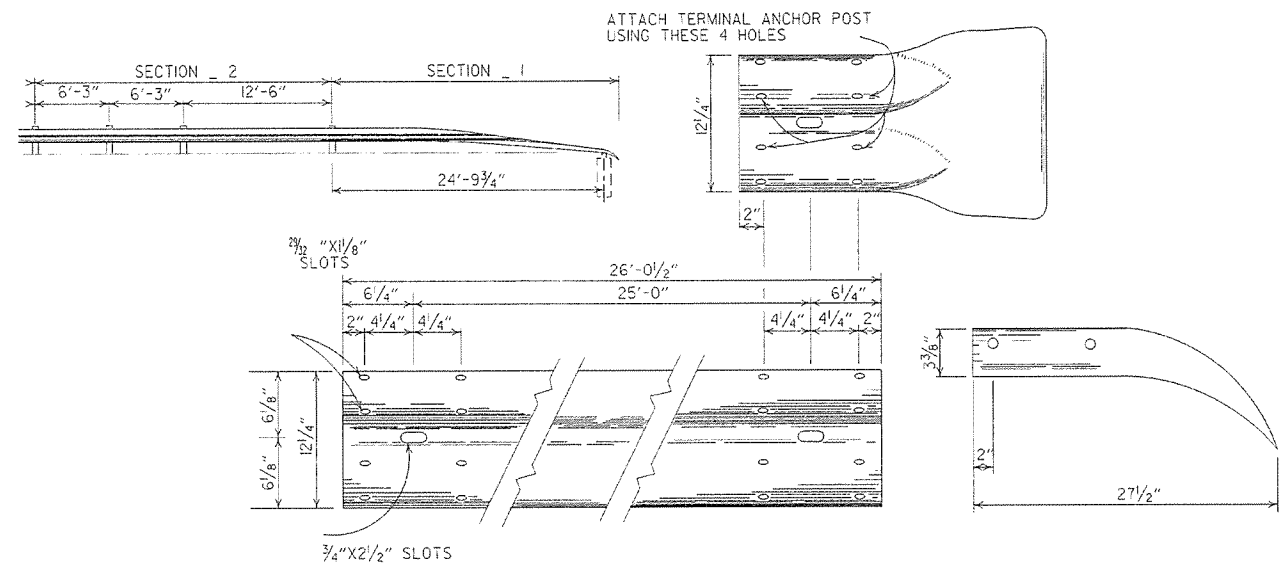


PLAN - GUARD RAIL TERMINAL (TYPE I)



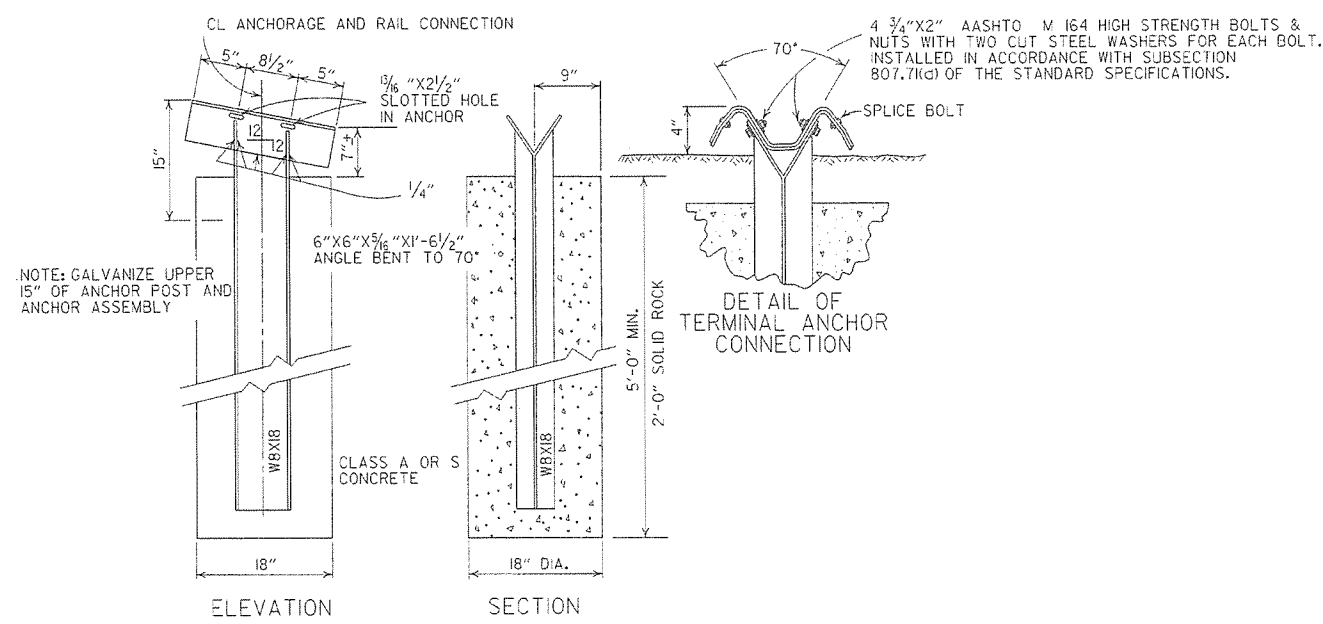
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

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



SECTION 1

TERMINAL SECTION



DETAIL OF TERMINAL ANCHOR POST (TYPE I)

NOTE: GALVANIZE UPPER 15" OF ANCHOR POST AND ANCHOR ASSEMBLY

4 3/4" x 2" AASHTO M 164 HIGH STRENGTH BOLTS & NUTS WITH TWO CUT STEEL WASHERS FOR EACH BOLT. INSTALLED IN ACCORDANCE WITH SUBSECTION 807.7(c) OF THE STANDARD SPECIFICATIONS.

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

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

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43¾	44	26¾	27
42	51⅞	51	31⅝	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅞	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

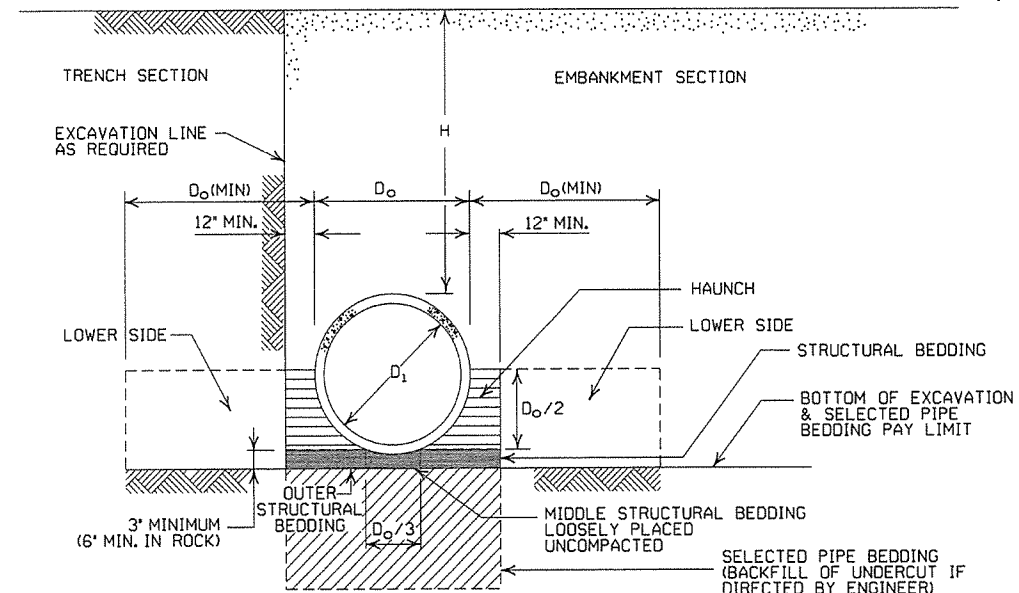
NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

- LEGEND -

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

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

- * SM-3 WILL NOT BE ALLOWED.
- ** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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


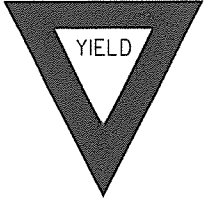
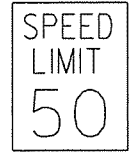
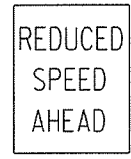



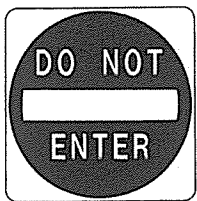
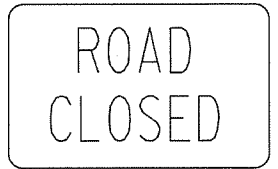
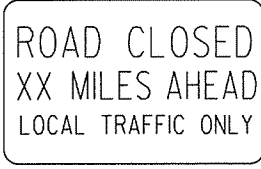
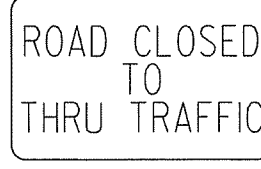
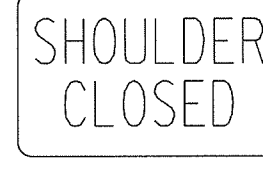
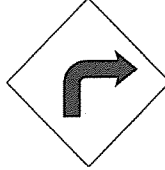
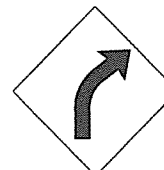
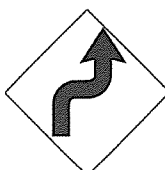
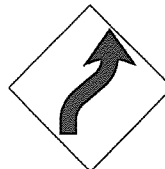
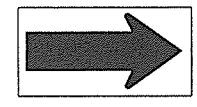
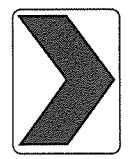
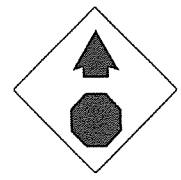
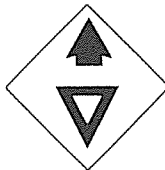
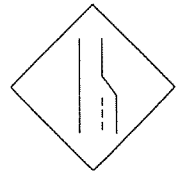



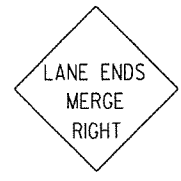
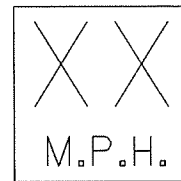

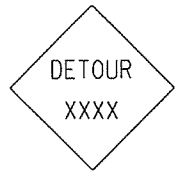


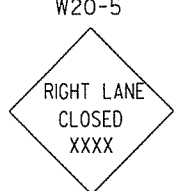
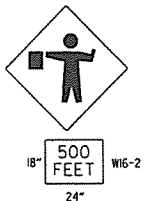

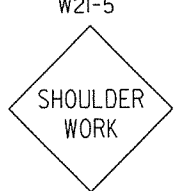
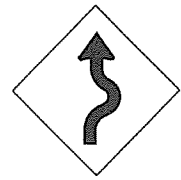
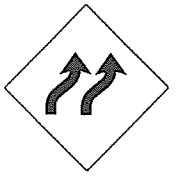


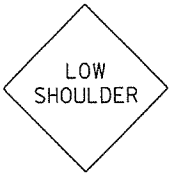
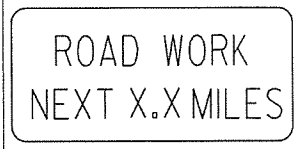
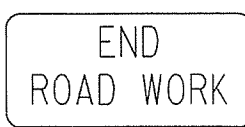
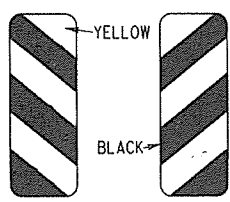
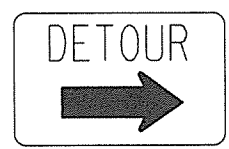
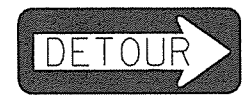
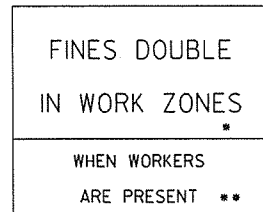
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

ADVANCE DISTANCES
(XXXX)

500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5A</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5C</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>RSP-1</p>  <p>48"x30"</p>	<p>WI-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>WI-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>WI-3</p>  <p>STD. 48"x48"</p>	<p>WI-4</p>  <p>STD. 48"x48"</p>	<p>WI-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>WI-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>18" 500 FEET W6-2 24" STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>WI-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60" * USE 6" C LETTERS</p>

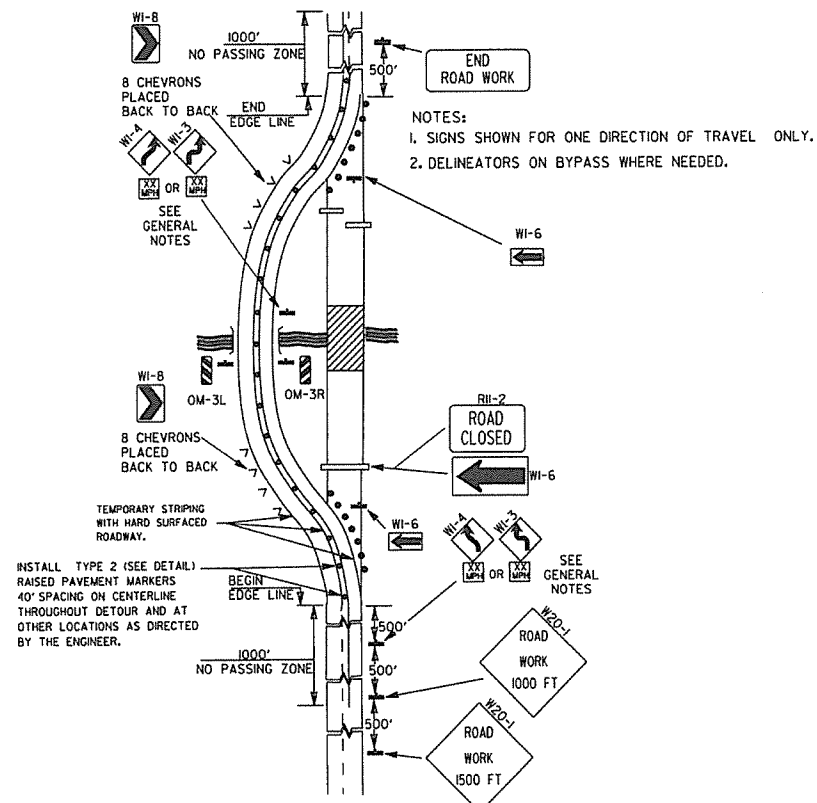
GENERAL NOTES:

- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
- EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
- POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
- ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.

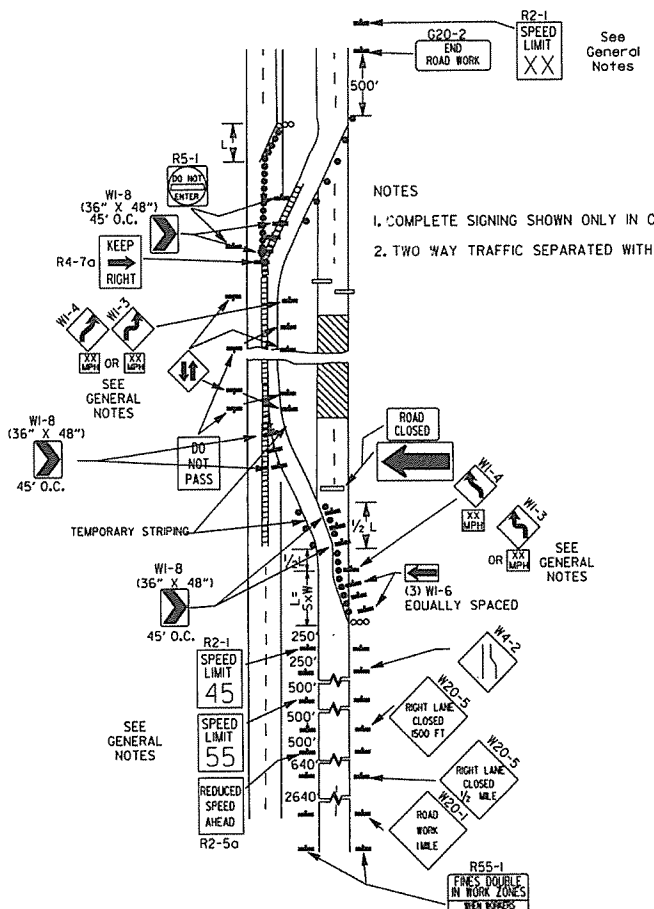
- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
- R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

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

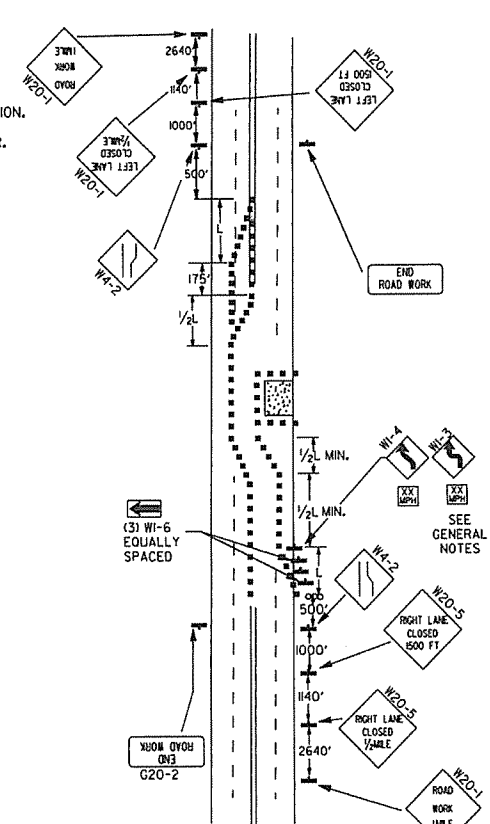
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED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



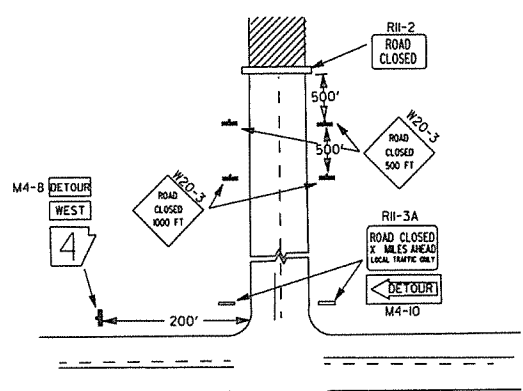
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



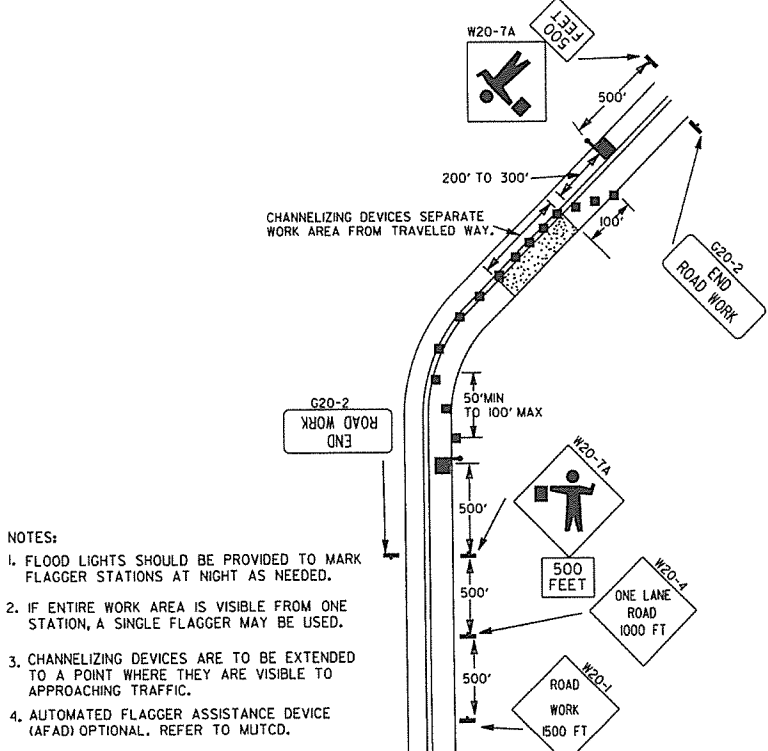
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



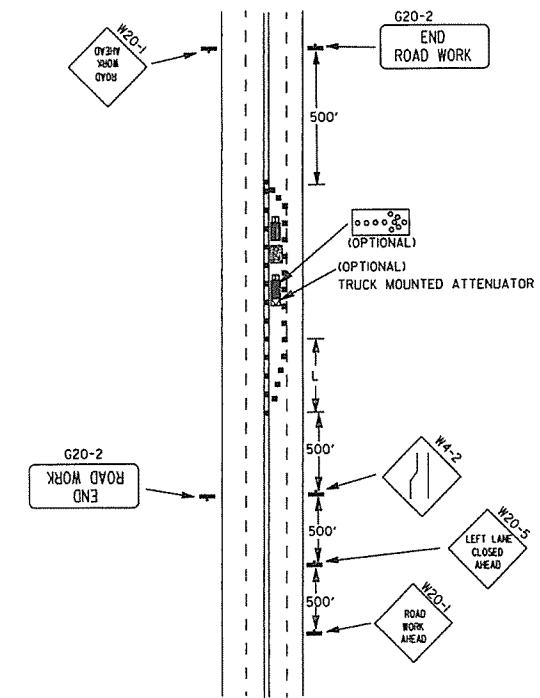
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



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

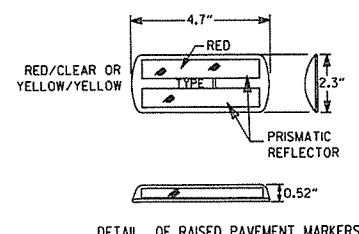


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



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

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



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

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

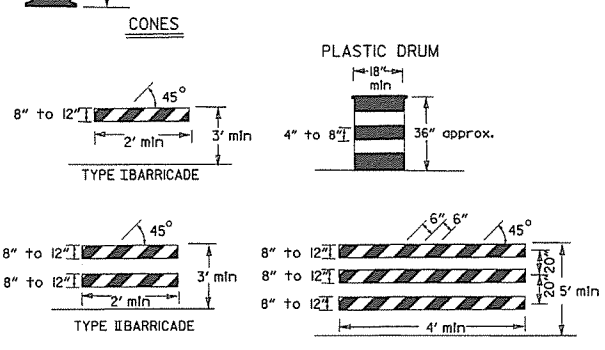
GENERAL NOTES:

1. ADVISORY SPEED POSTED ON WI-3 OR WI-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE WI-4 WHEN SPEED IS GREATER THAN 30MPH AND WI-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 R2-5A SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH 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(65) SHALL BE OMITTED. ADDITIONAL R2-155MPH 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.

DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	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 WI-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

Channelizing devices

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

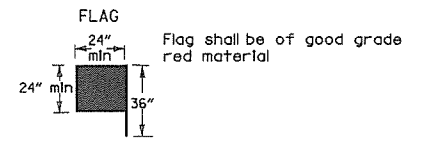


NOTE: For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.

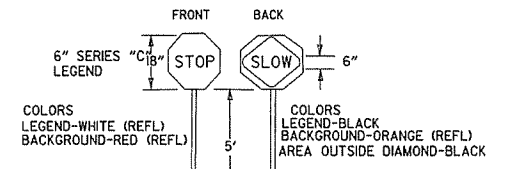
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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

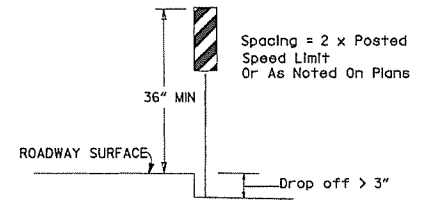
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



STOP SLOW PADDLE

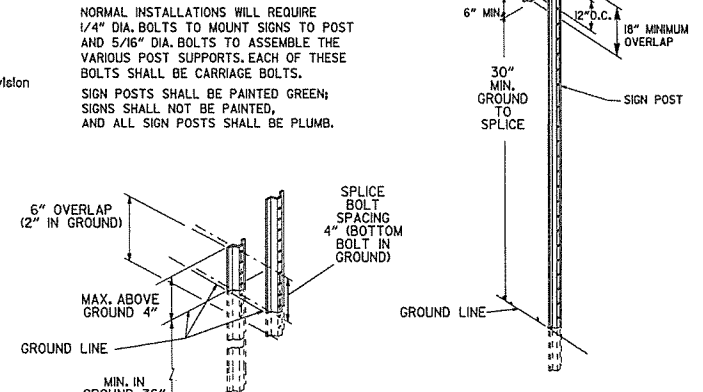


VERTICAL PANEL PLACEMENT



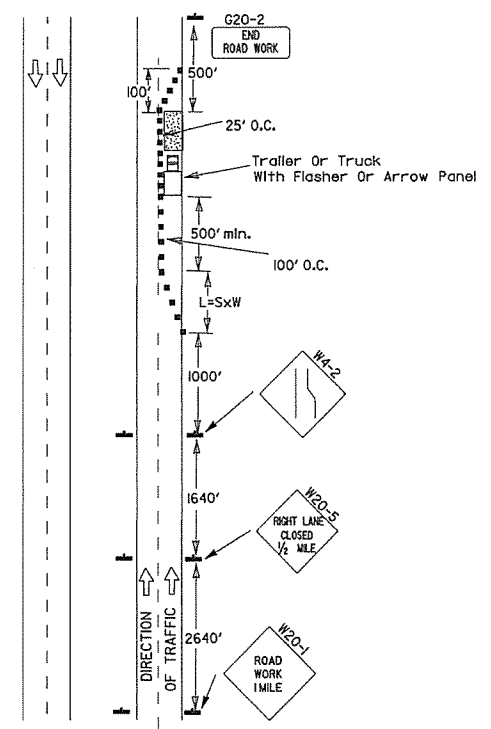
DETAIL OF SPLICES

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

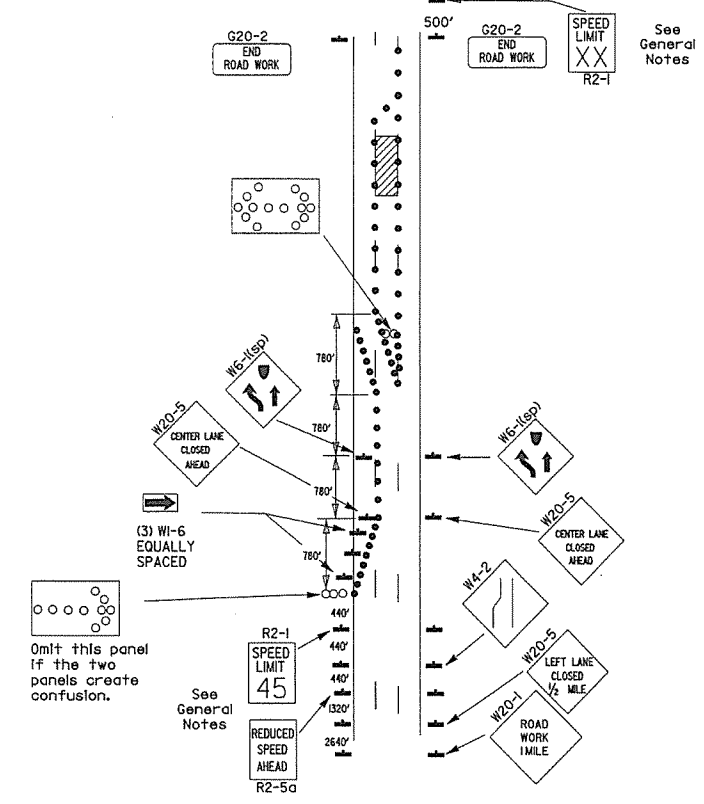


DATE	REVISION	FILED
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1& REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED 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



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

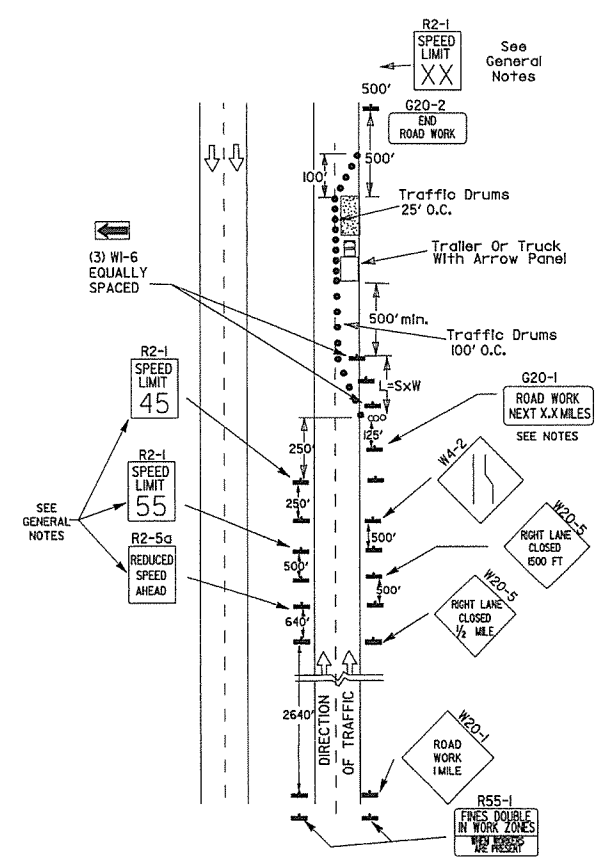


(B) Typical application - 3-lane oneway roadway where center lane is closed.

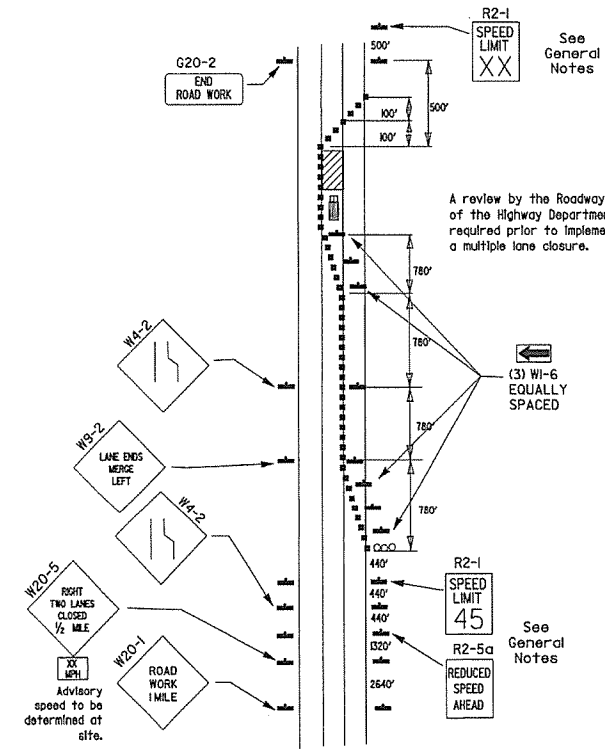
- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

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



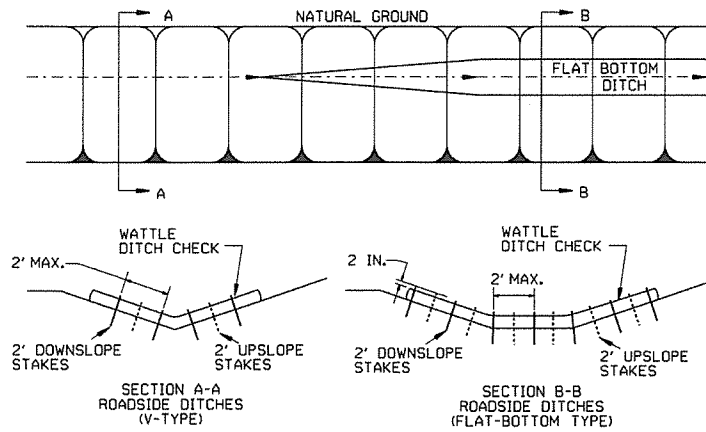
(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



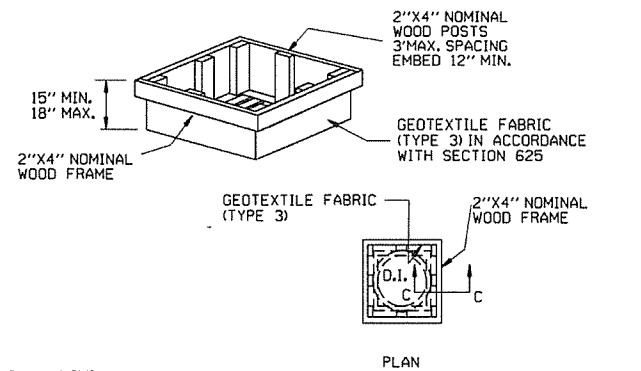
(D) Typical application - closing multiple lanes of a multi-lane highway.

GENERAL NOTES

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

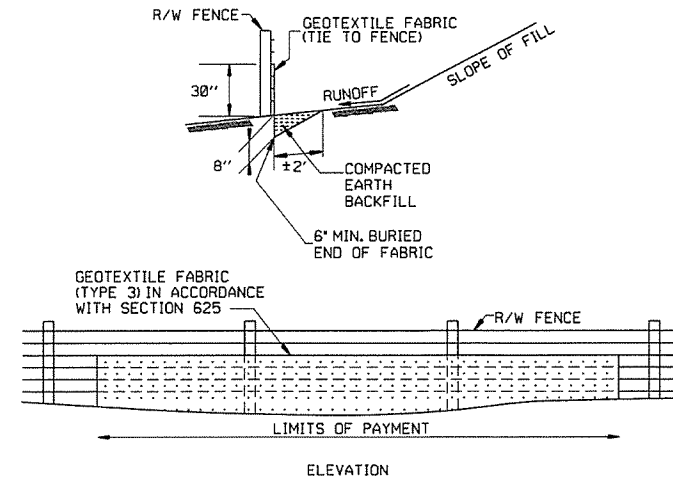


WATTLE DITCH CHECK (E-1)



SECTION C-C

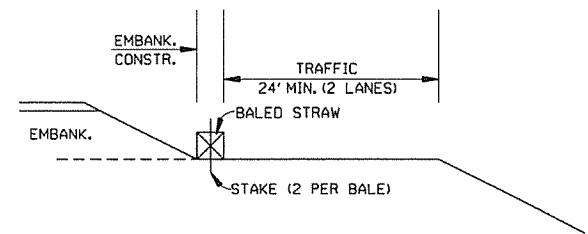
DROP INLET SILT FENCE (E-7)



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

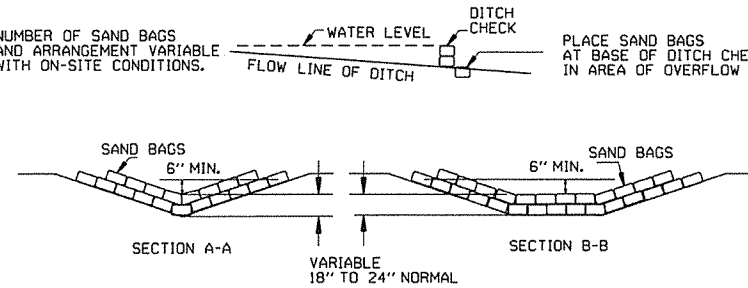
GENERAL NOTES

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

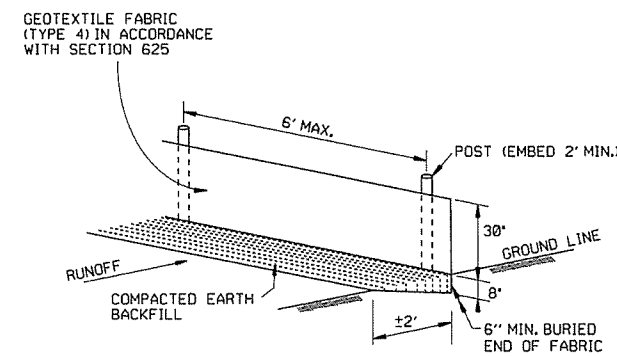


BALED STRAW FILTER BARRIER (E-2)

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS. PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW



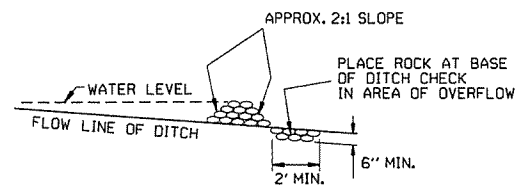
SAND BAG DITCH CHECK (E-5)



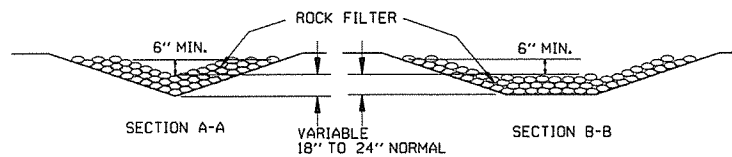
SILT FENCE (E-11)

GENERAL NOTES

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



ROCK DITCH CHECK (E-6)



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

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1