

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.		061328	1	54
				② I-30 - I-40 (SEL. SECS.) (CABLE MEDIAN BARRIER) (F)				

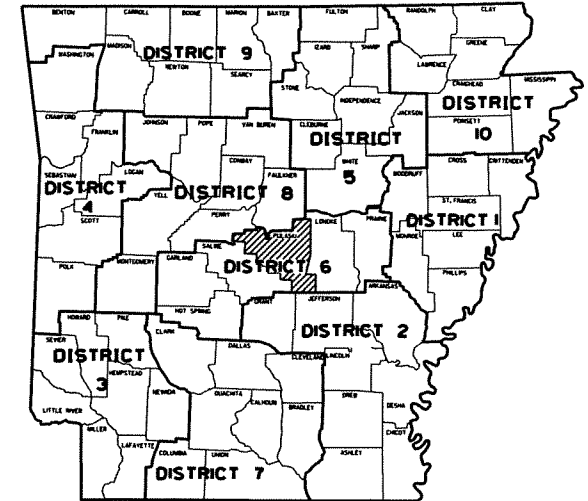
"A FULLY-CONTROLLED ACCESS FACILITY"
 ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 CONSTRUCTION PLANS FOR STATE HIGHWAY

I-30 - I-40 (SEL. SECS.)
 (CABLE MEDIAN BARRIER) (F)

PULASKI COUNTY
 ROUTE 430 SECTION 21

JOB 061328

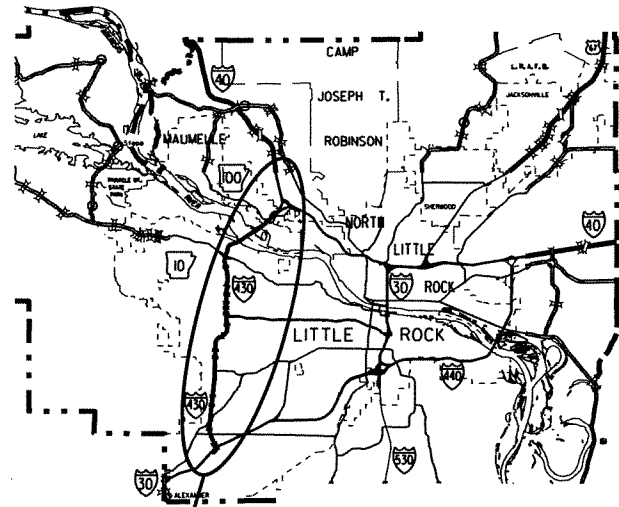
FED. AID PROJ. HSIP-0076(80)



ARK. HWY. DIST. NO. 6

• DESIGN TRAFFIC DATA •

DESIGN YEAR	-----	2032
2012 ADT	-----	80,000
2032 ADT	-----	104,000
2032 DHV	-----	11,440
DIRECTIONAL DISTRIBUTION	-----	90 %
TRUCKS	-----	6 %
DESIGN SPEED	-----	70 MPH

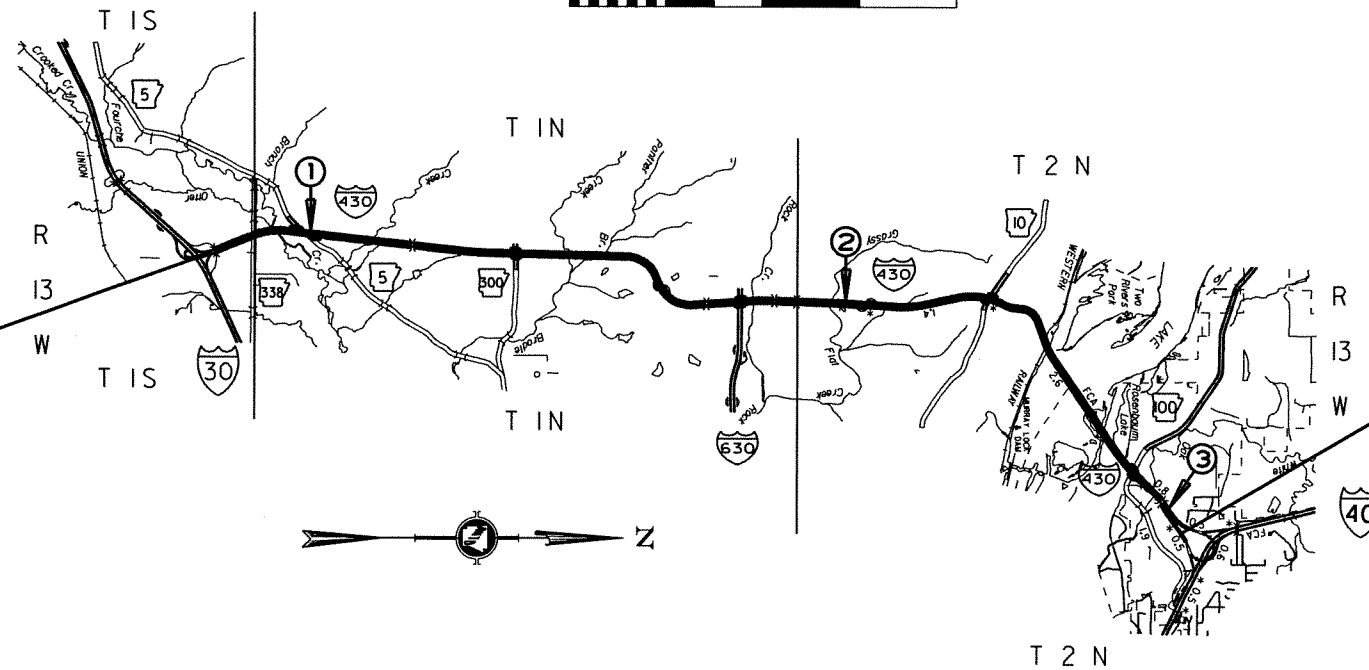


PROJECT LOCATION

VICINITY MAP

EXCEPTIONS

STA. 59+57 - STA. 65+42	[585']
STA. 75+65 - STA. 79+08	[343']
STA. 217+04 - STA. 226+25	[921']
STA. 248+64 - STA. 251+19	[255']
STA. 267+42 - STA. 404+32	[13,690']
STA. 416+00 - STA. 417+46	[146']
STA. 473+07 - STA. 475+80	[273']
STA. 508+18 - STA. 614+60	[10,642']
STA. 658+89 - STA. 662+76	[387']
TOTAL LENGTH OF EXCEPTIONS = 27,242'	



STA. 35+00 CL I-430
 BEGIN JOB 061328
 LOG MILE 0.13

STA. 231+10.82 W-S RAMP
 END JOB 061328

EQUATIONS

- ① EQUATION POT
 STA. 99+00.00 BK. -
 STA. 99+69.95 AHD.
- ② EQUATION POT
 STA. 424+31.83 BK. -
 STA. 416+72.94 AHD.
- ③ EQUATION POT
 STA. 672+15.94 END I-430 -
 STA. 245+34.07 END W-S RAMP
 FROM I-40

GROSS LENGTH OF PROJECT	65828.13	FEET OR	12.467	MILES
NET " " ROADWAY	38586.13	" "	7.308	"
NET " " BRIDGES	0.00	" "	0.000	"
NET " " PROJECT	38586.13	" "	7.308	"

BEGINNING OF PROJECT	MID-POINT OF PROJECT	END OF PROJECT
LAT. = N 34°39'48"	LAT. = N 34°44'56"	LAT. = N 34°49'04"
LONG. = W 92°24'11"	LONG. = W 92°23'29"	LONG. = W 92°20'45"

P.E. 061328
 NON-PART.

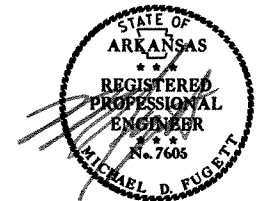
APPROVED



4/20/12
 DEPUTY DIRECTOR
 AND CHIEF ENGINEER

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.	061328		2	54

2 INDEX, GOV. SPECS, & GEN. NOTES



4-20-12

INDEX OF SHEETS

SHEET NO.	TITLE	DRWG. NO.	DATE
1	TITLE SHEET		
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES		
3	TYPICAL SECTIONS OF IMPROVEMENT		
4-10	SPECIAL DETAILS		
11-19	TEMPORARY EROSION CONTROL DETAILS		
20-26	MAINTENANCE OF TRAFFIC		
27-30	QUANTITY SHEETS		
31	SUMMARY OF QUANTITIES AND REVISIONS		
32-40	PLAN SHEETS		
41	CONCRETE DITCH PAVING	CDP-1	11-17-10
42	GUARD RAIL DETAILS	GR-8	7-14-10
43	GUARD RAIL DETAILS	GR-8A	7-14-10
44	GUARD RAIL DETAILS	GR-9	4-17-08
45	GUARD RAIL DETAILS	GR-9A	4-17-08
46	GUARD RAIL DETAILS	GR-10	7-14-10
47	GUARD RAIL DETAILS	GR-10A	7-14-10
48	GUARD RAIL DETAILS	GRT-1	7-14-10
49	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	12-15-11
50	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	3-11-10
51	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	10-15-09
52	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	TC-4	10-15-09
53	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	TC-5	10-15-09
54	TEMPORARY EROSION CONTROL DEVICES	TEC-1	12-15-11

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	FHWA-1273 REVISIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-2	MANUAL FOR ASSESSING SAFETY HARDWARE
102-1	BIDDING REQUIREMENTS AND CONDITIONS
103-1	DETERMINATION OF DBE PARTICIPATION
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
105-3	CONTROL OF WORK
107-1	WORKER VISIBILITY
108-1	LIQUIDATED DAMAGES
303-1	AGGREGATE BASE COURSE
404-1	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
409-1	MINERAL AGGREGATES
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 061328	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 061328	COORDINATION OF WORK
JOB 061328	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 061328	INTERNET BIDDING
JOB 061328	MAINTENANCE OF TRAFFIC
JOB 061328	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB 061328	SEQUENCE OF CONSTRUCTION
JOB 061328	SITE USE (A + C METHOD)
JOB 061328	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 061328	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 061328	WARM MIX ASPHALT
JOB 061328	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS
JOB 061328	WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS
JOB 061328	WRSF TRAINING WORKSHOP

GENERAL NOTES

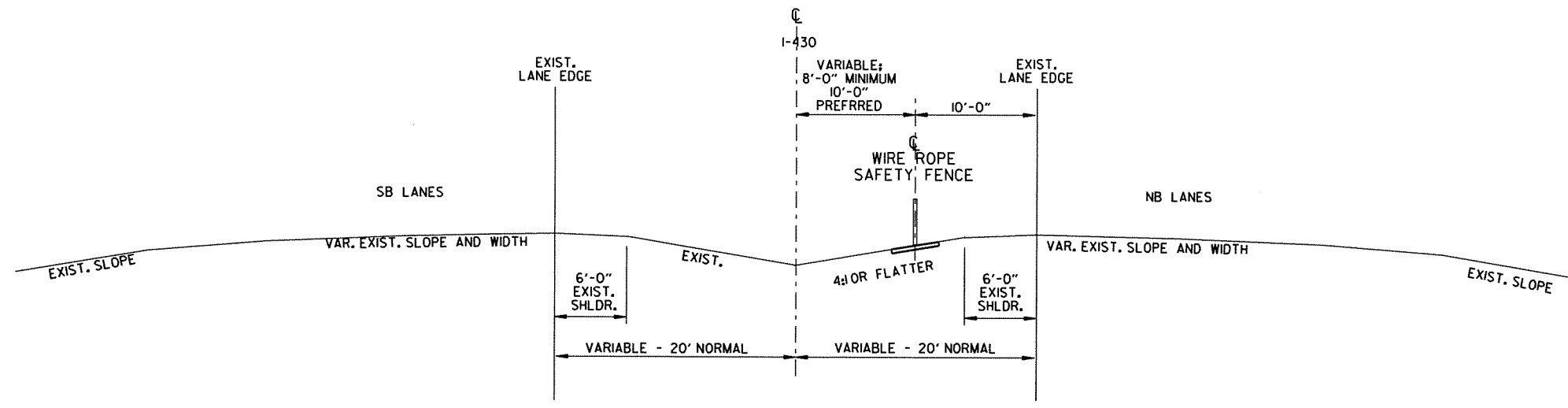
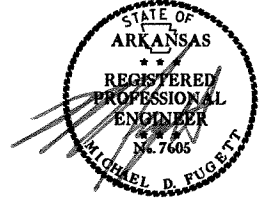
- ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE 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.

04/12/2012

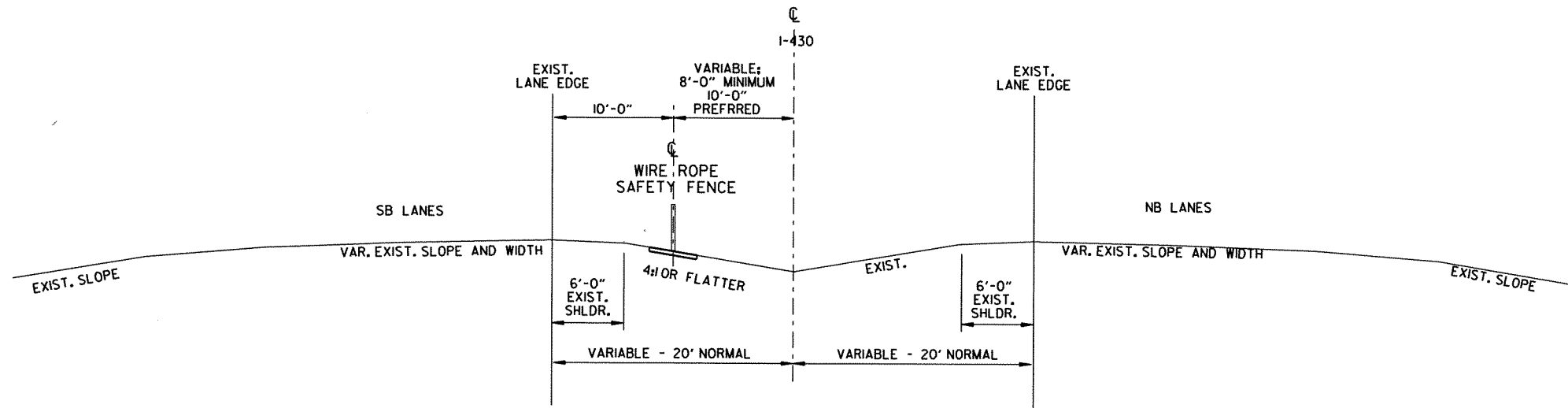
r061328.dgn index

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.	061328		3	54

② TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT
WRSF ON NORTHBOUND FORESLOPE

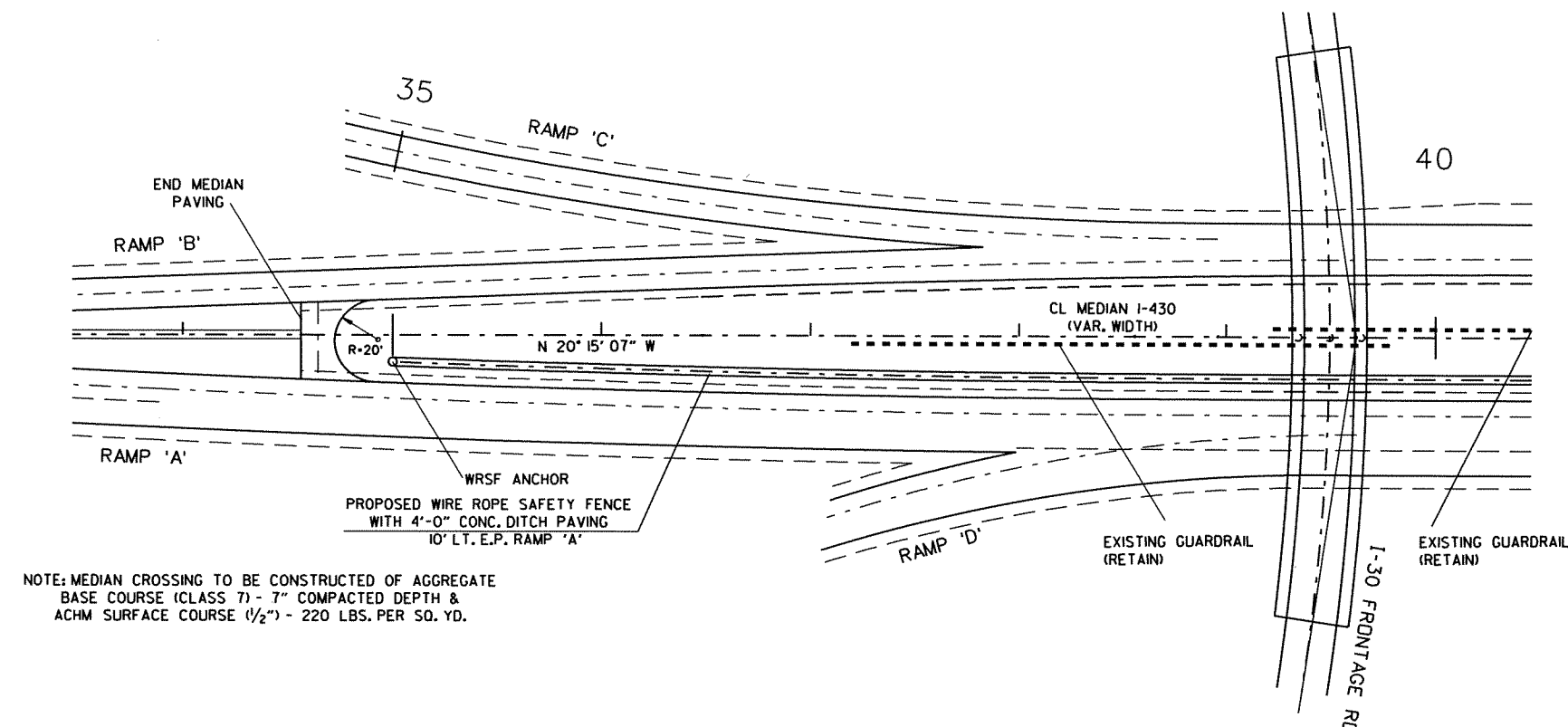
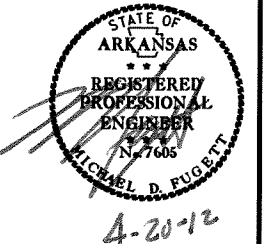


TYPICAL SECTION OF IMPROVEMENT
WRSF ON SOUTHBOUND FORESLOPE

r061328.dgn/TYPICAL 04/10/2012

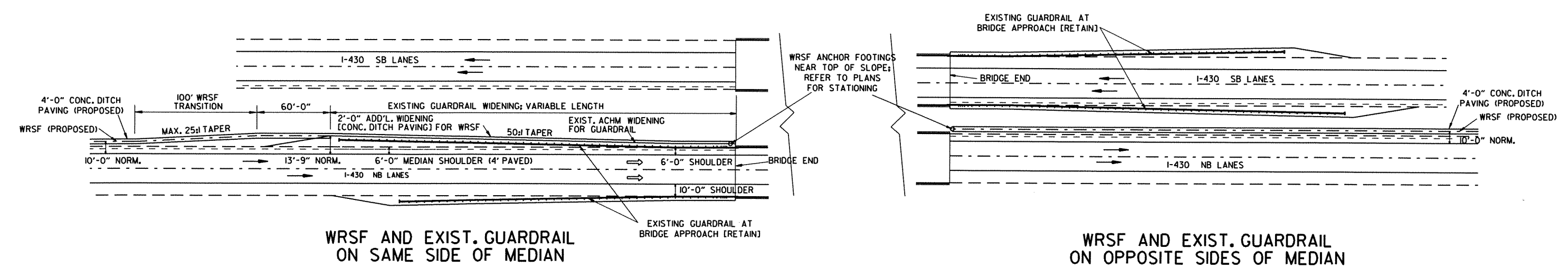
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				6	ARK.			
						JOB NO. 061328	4	54

2 SPECIAL DETAILS



NOTE: MEDIAN CROSSING TO BE CONSTRUCTED OF AGGREGATE BASE COURSE (CLASS 7) - 7" COMPACTED DEPTH & ACHM SURFACE COURSE (1/2") - 220 LBS. PER SQ. YD.

DETAIL AT STA. 35+00 JUNCTION RAMPS A, B, C & D



WRSF AND EXIST. GUARDRAIL ON SAME SIDE OF MEDIAN

WRSF AND EXIST. GUARDRAIL ON OPPOSITE SIDES OF MEDIAN

DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS

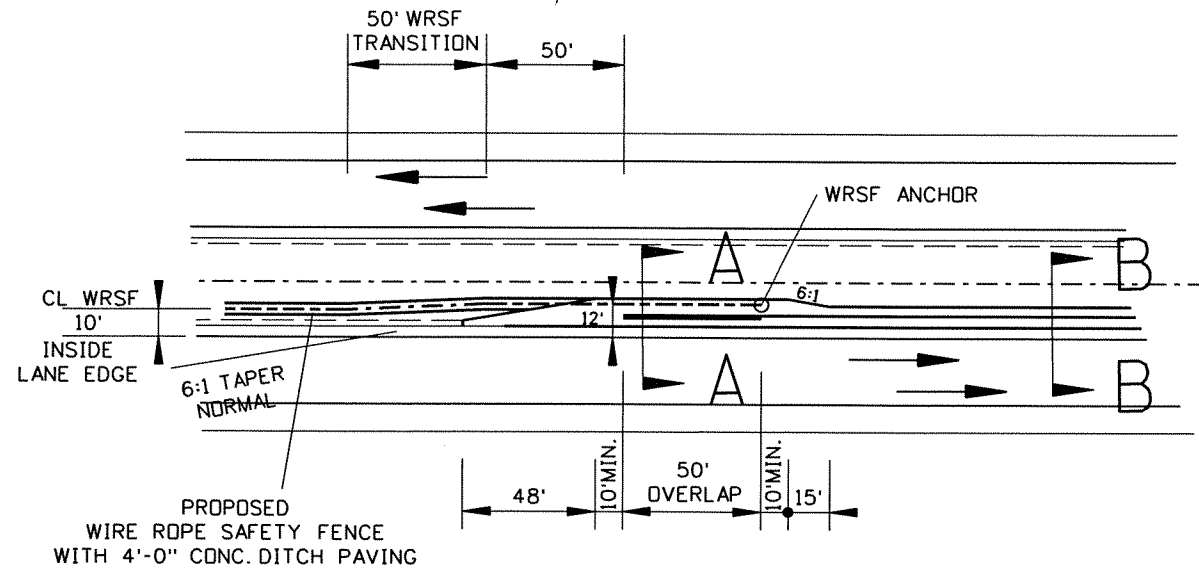
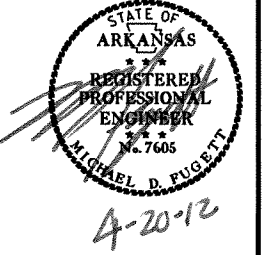
REFER TO PLANS FOR RELATIVE PLACEMENT OF GUARDRAIL AND WIRE ROPE SAFETY FENCE AT EACH BRIDGE END

SPECIAL DETAILS

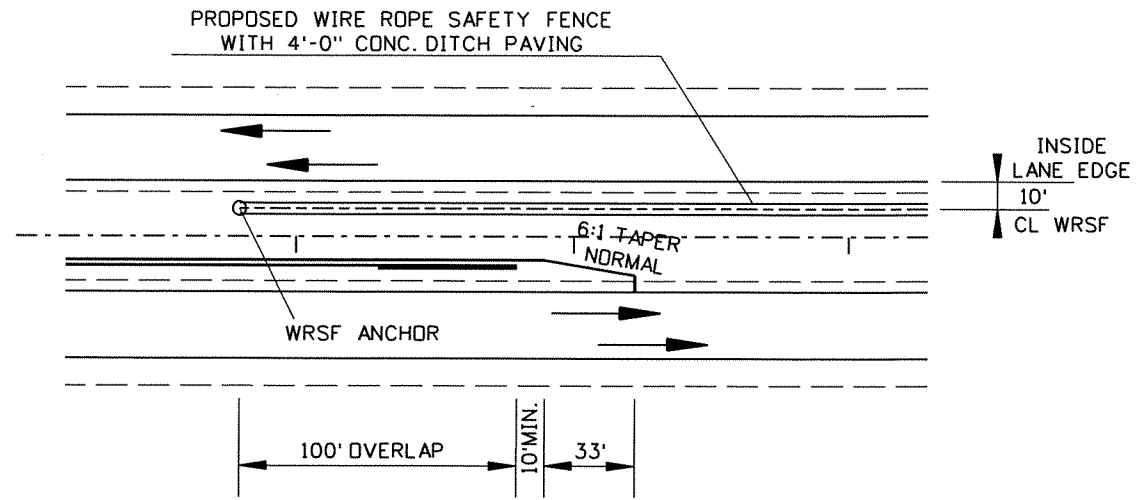
r061328.dgn/SPEC DET 03/15/2012

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				6	ARK.		5	54

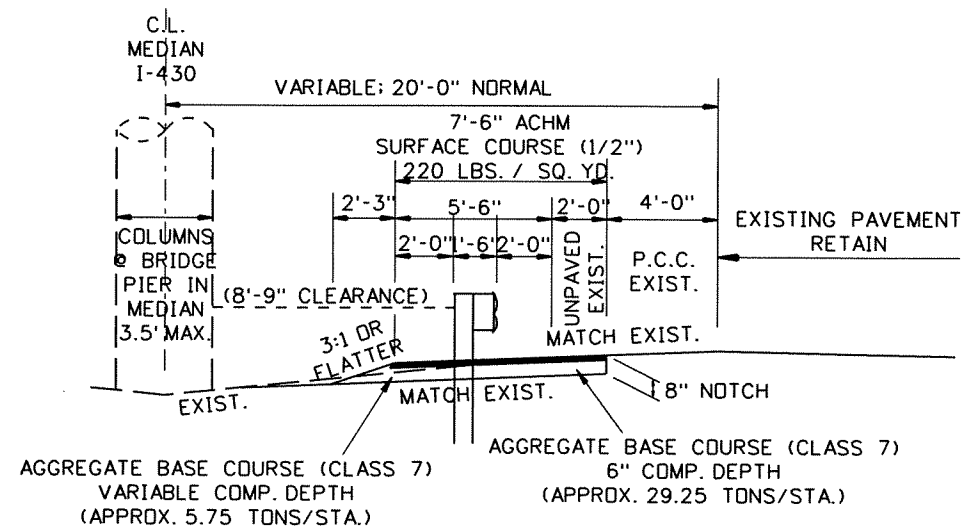
2 SPECIAL DETAILS



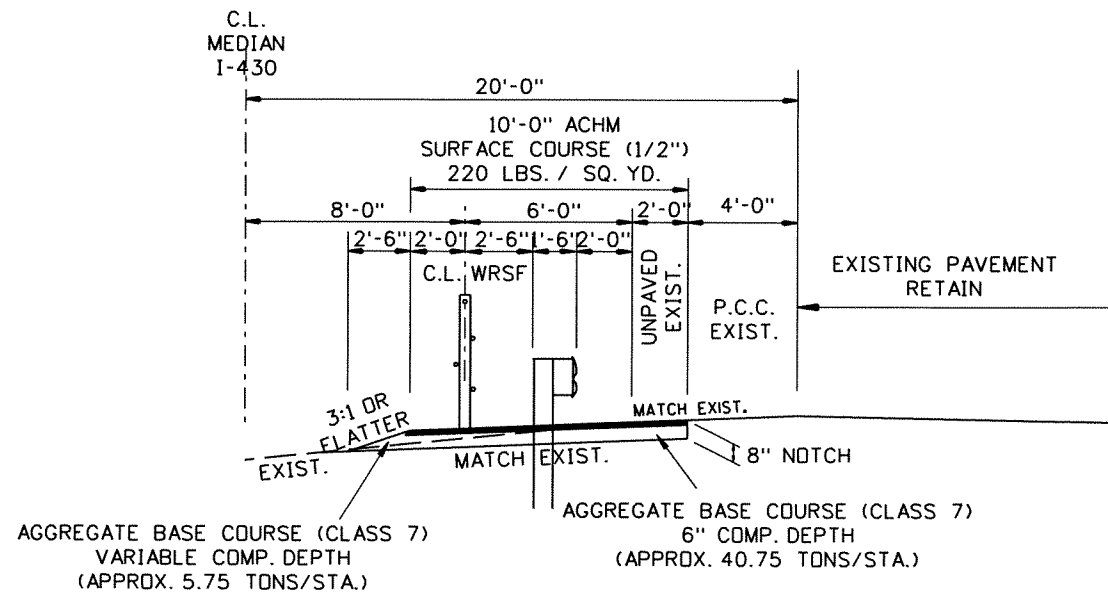
WRSF AND GUARDRAIL
SAME SIDE OF CL CONST.



WRSF AND GUARDRAIL
OPPOSITE SIDES OF CL CONST.



SECTION B-B

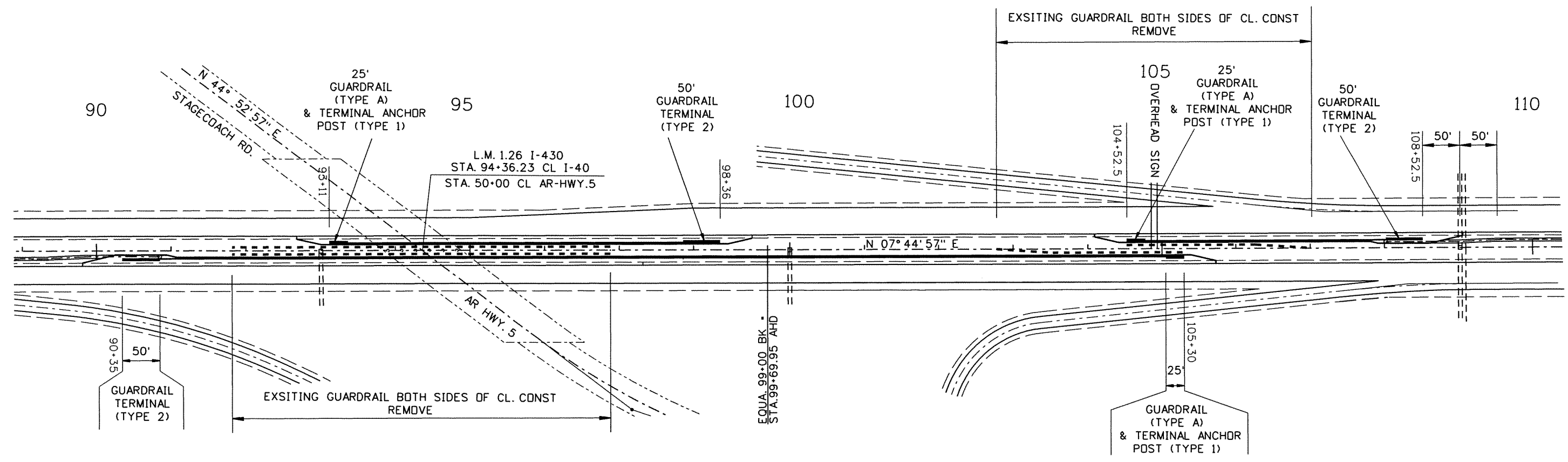
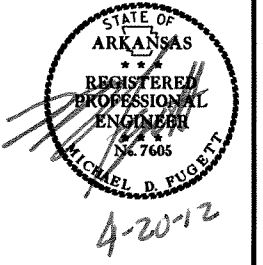


SECTION A-A

DETAILS OF SHOULDER WIDENING FOR GUARDRAIL
AND OVERLAPS WITH ENDS OF WIRE ROPE SAFETY FENCE

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061328	6	54
				2 SPECIAL DETAILS				



DETAIL AT HWY. 5 - STAGECOACH RD. INTERCHANGE

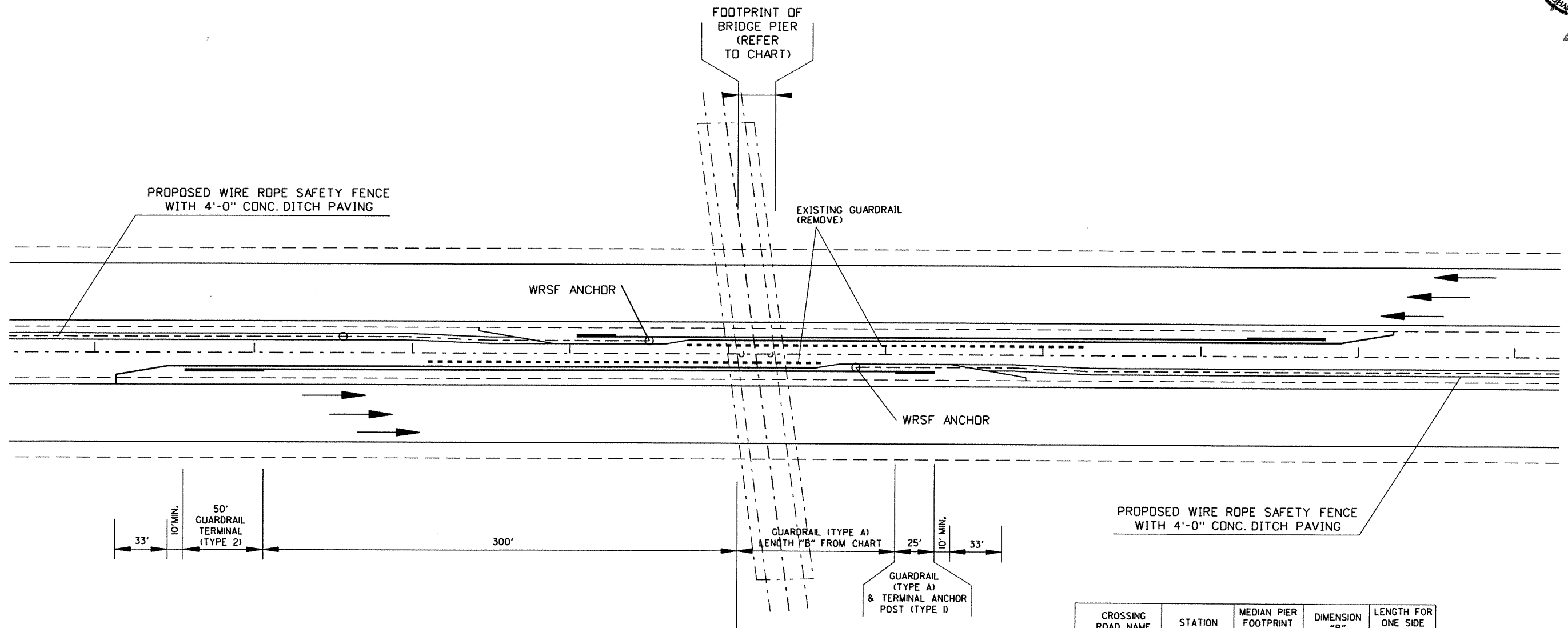
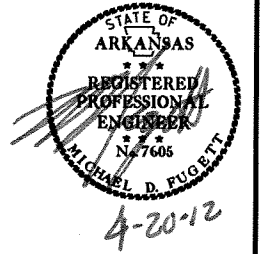
AGGREGATE BASE COURSE (CLASS 7)
6" COMP. DEPTH
(APPROX. 40.75 TONS/STA.)

r061328.dgn/SPEC DET 03/02/2012

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 061328	7 54

2 SPECIAL DETAILS



CROSSING ROAD NAME	STATION	MEDIAN PIER FOOTPRINT LENGTH	DIMENSION "B"	LENGTH FOR ONE SIDE GUARDRAIL *
DAVID O. DODD RD.	158+17.40	22.0'	100'	425'
RODNEY PARHAM RD.	427+38.85	102'	175'	500'
HWY. 10	499+64.92	107'	150'	475'
HWY. 100	642+76.69	98'	150'	475'

DIMENSIONS ARE TYPICAL BOTH DIRECTIONS

* GUARDRAIL LENGTH IS ROUNDED UP BASED ON GUARDRAIL STOCK LENGTH OF 25.0'

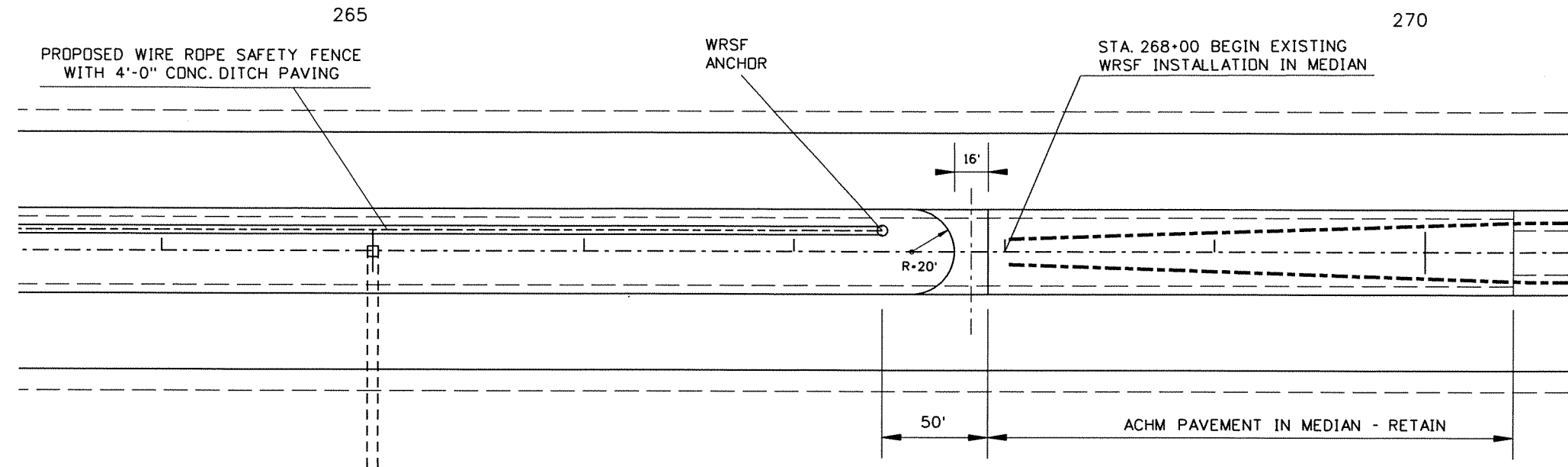
DETAIL AT OVERPASSES:

DAVID O. DODD, RODNEY PARHAM
 HWY. 10 - CANTRELL RD.
 HWY. 100 - CRYSTAL HILL RD.

SPECIAL DETAILS

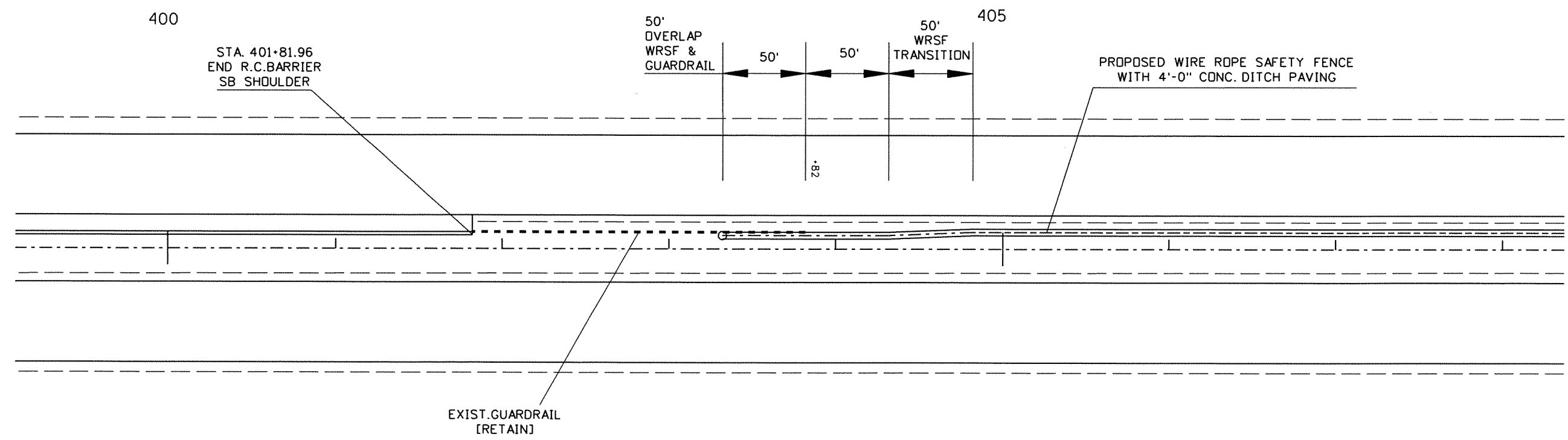
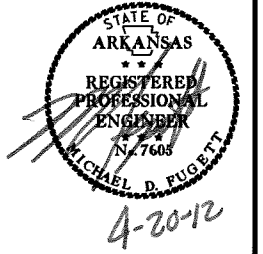
r061328.dgn/SPEC DET 04/09/2012

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							JOB NO. 061328	8 54
② SPECIAL DETAILS								



DETAIL AT MEDIAN CROSSING STA.267+84

NOTE: MEDIAN CROSSING TO BE CONSTRUCTED OF AGGREGATE BASE COURSE (CLASS 7) - 7" COMPACTED DEPTH & ACHM SURFACE COURSE (1/2") - 220 LBS. PER SQ. YD.



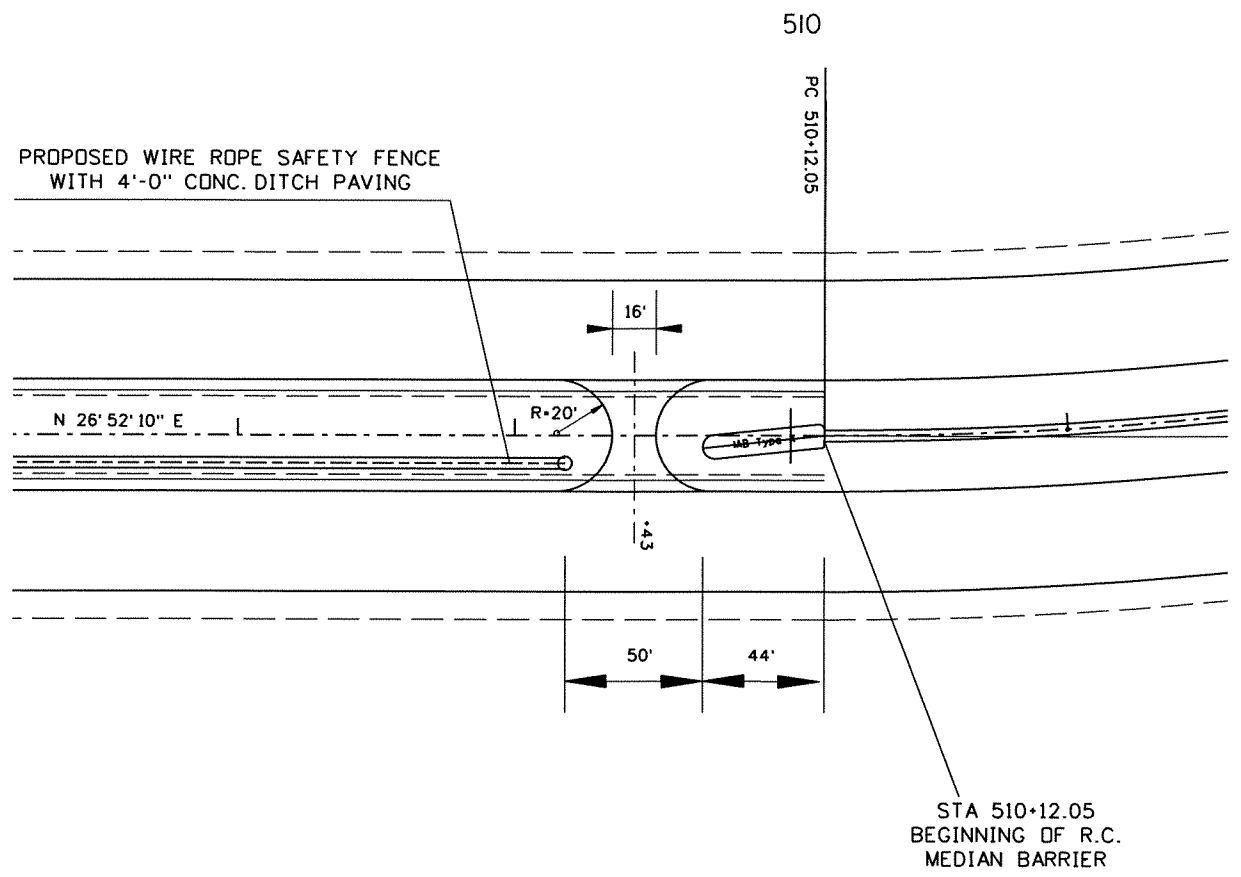
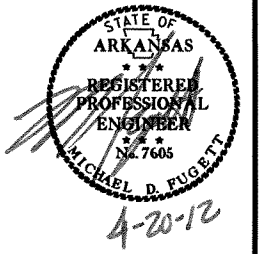
DETAIL AT GUARDRAIL OVERLAP STA.403+85

SPECIAL DETAILS

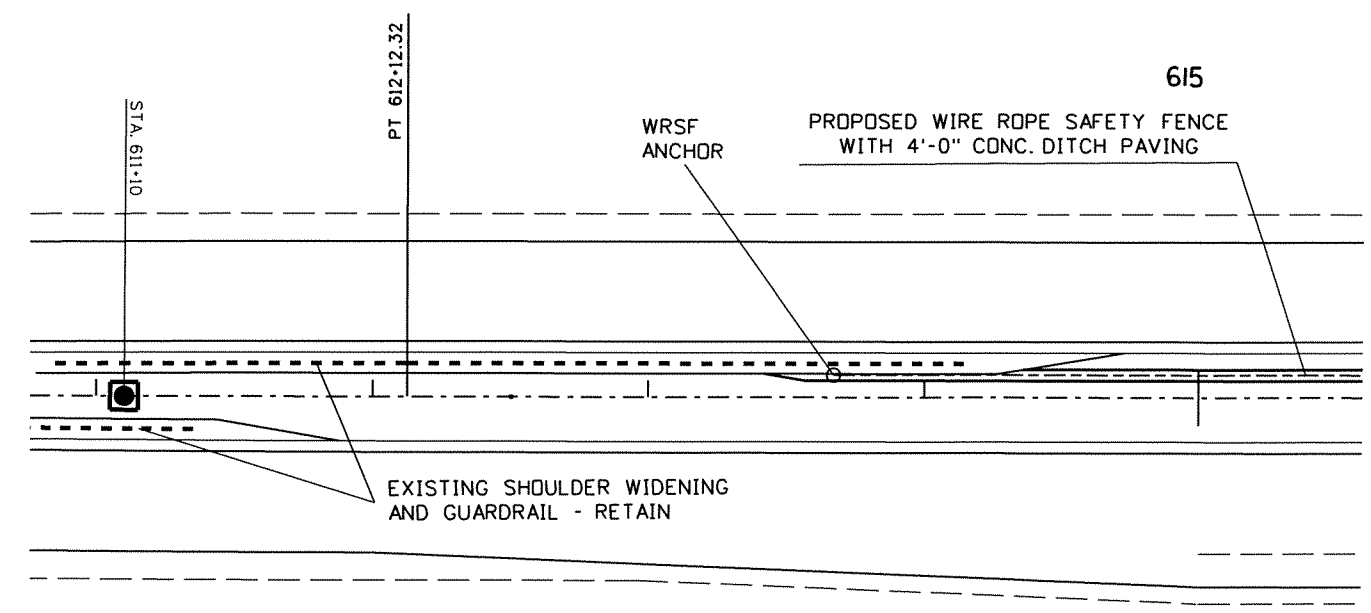
r061328.dgn/SPEC DET 04/09/2012

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						JOB NO. 061328	9	54

② SPECIAL DETAILS



DETAIL AT MEDIAN CROSSING STA. 508+43



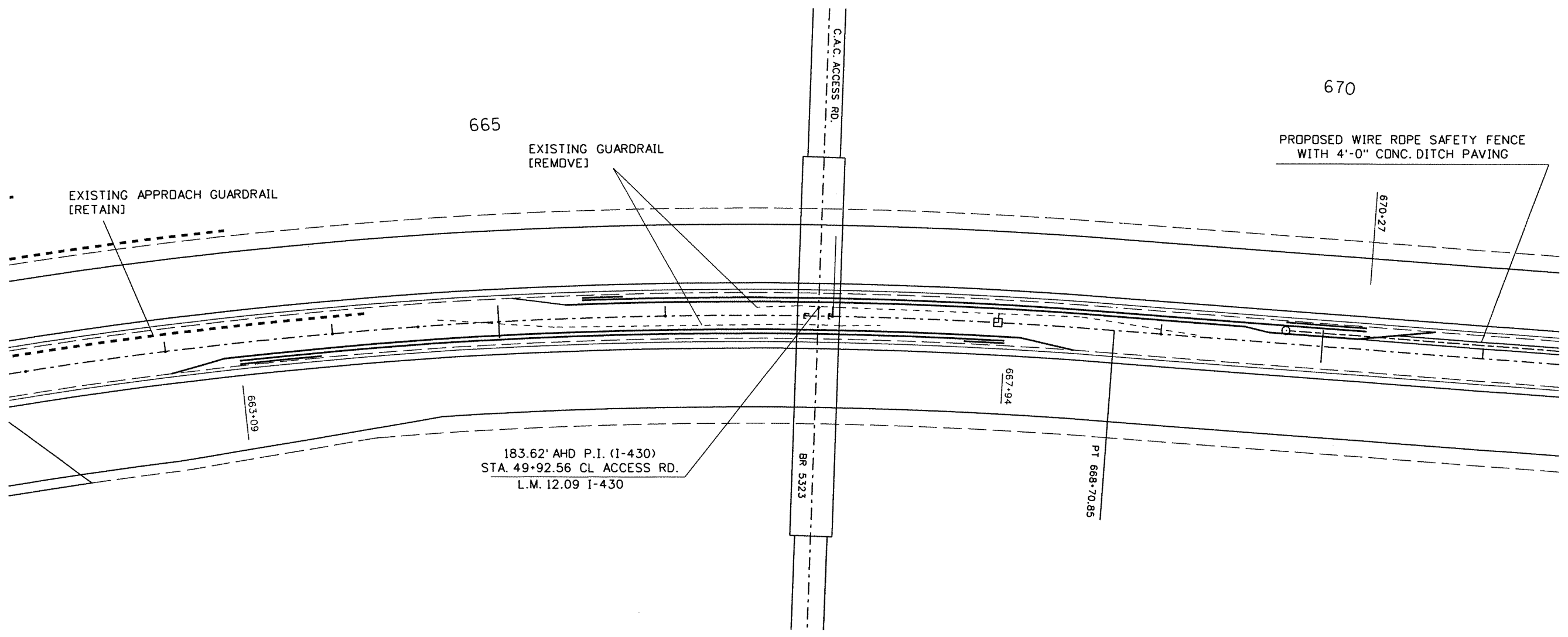
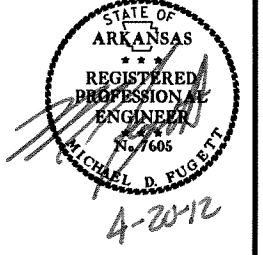
DETAIL OF OVERLAP OF WRSF ON EXISTING GUARDRAIL STA. 615+00

r061328.dgn/SPEC DET 04/09/2012

SPECIAL DETAILS

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							JOB NO.	061328
								10
								54

② SPECIAL DETAILS



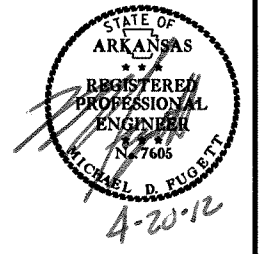
DETAIL AT OVERPASS STA. 666+68

SPECIAL DETAILS

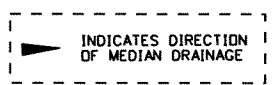
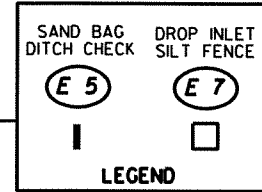
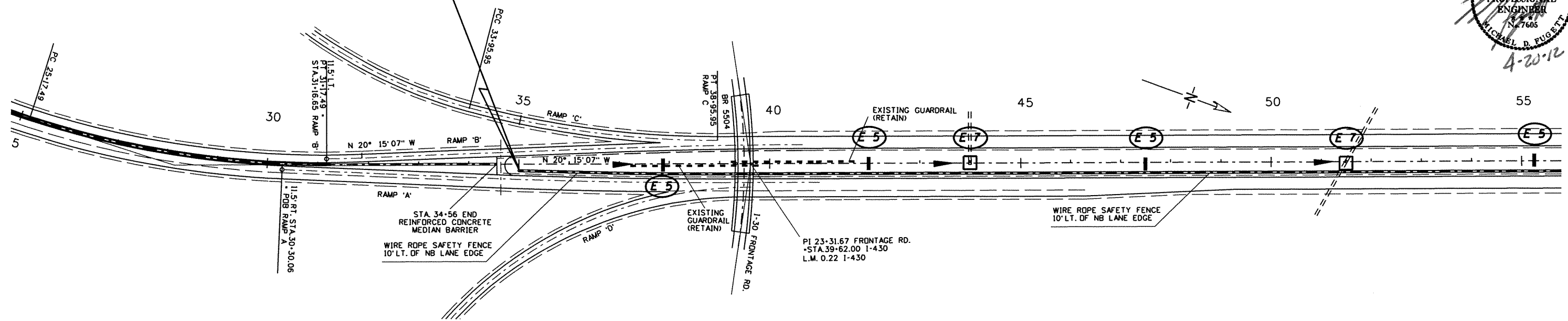
r061328.dgn/SPEC DET 04/09/2012

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JOB NO. 061328							11	54

2 TEMPORARY EROSION CONTROL DETAILS



STA. 35+00
 BEGIN JOB 061328
 BEGIN WRSF L.M. 0.13



REVISION BOX

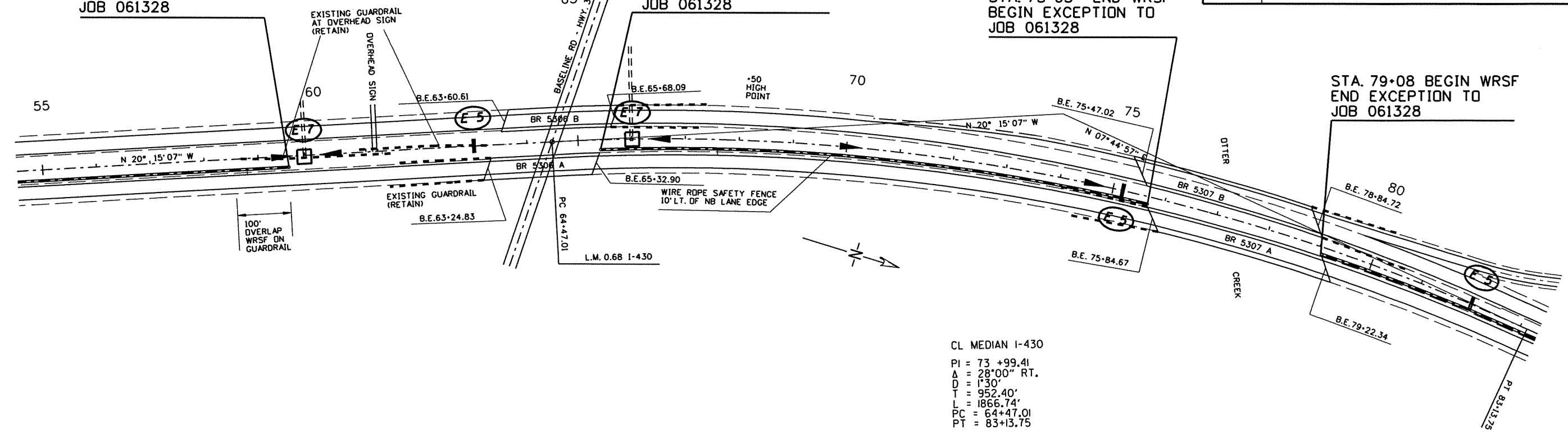
DATE OF REVISION	REVISION

STA. 59+57 END WRSF
 BEGIN EXCEPTION TO
 JOB 061328

STA. 65+42 BEGIN WRSF
 END EXCEPTION TO
 JOB 061328

STA. 75+65 END WRSF
 BEGIN EXCEPTION TO
 JOB 061328

STA. 79+08 BEGIN WRSF
 END EXCEPTION TO
 JOB 061328



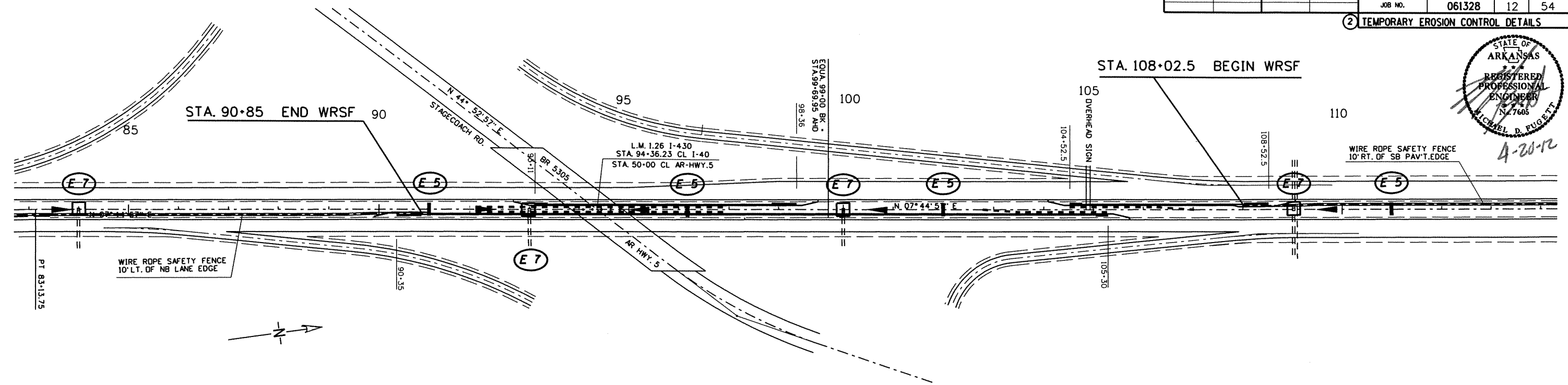
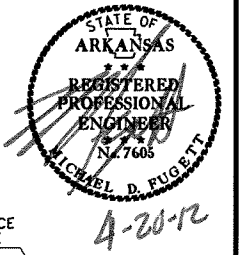
CL MEDIAN I-430
 PI = 73 +99.41
 Δ = 28°00' RT.
 D = 1'30"
 T = 952.40'
 L = 1866.74'
 PC = 64+47.01
 PT = 83+13.75

TEMPORARY EROSION CONTROL DETAILS
 STA. 25+00 - STA. 83+00

r061328.dgn / ERDS CONT 04/10/2012

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				6	ARK.			
JOB NO. 061328						12	54	

② TEMPORARY EROSION CONTROL DETAILS



REVISION BOX

DATE OF REVISION	REVISION

LEGEND

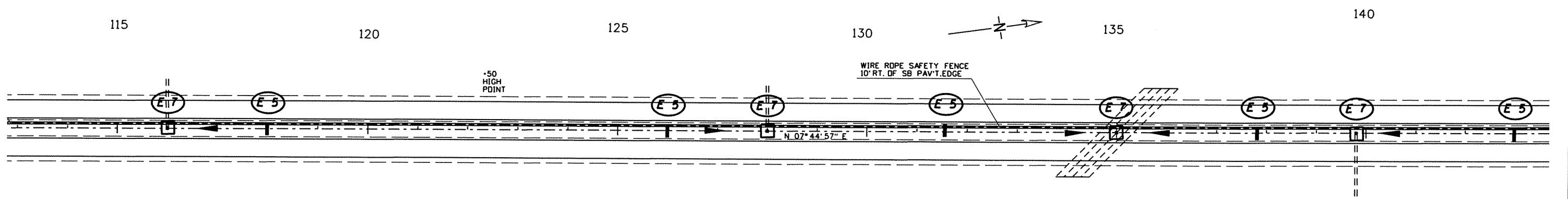
SAND BAG DITCH CHECK (E 5)

DROP INLET SILT FENCE (E 7)

I

□

INDICATES DIRECTION OF MEDIAN DRAINAGE

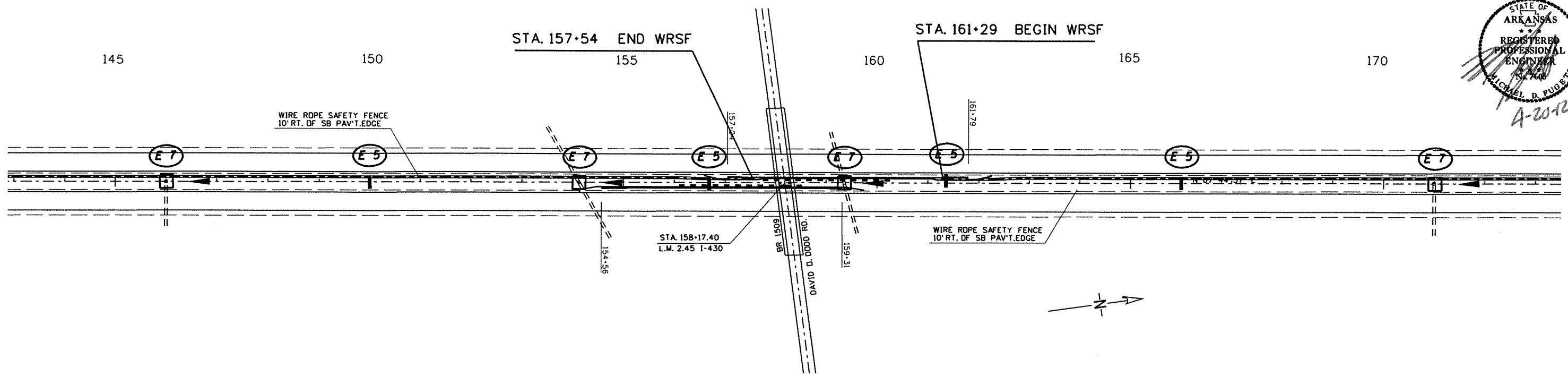
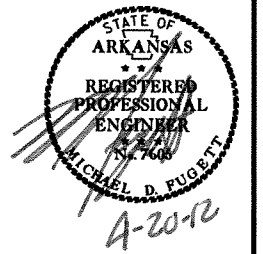


TEMPORARY EROSION CONTROL DETAILS
STA. 83+00 - STA. 143+00

r061328.dgn / ERDS CONT 03/15/2012

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. 061328							13	54

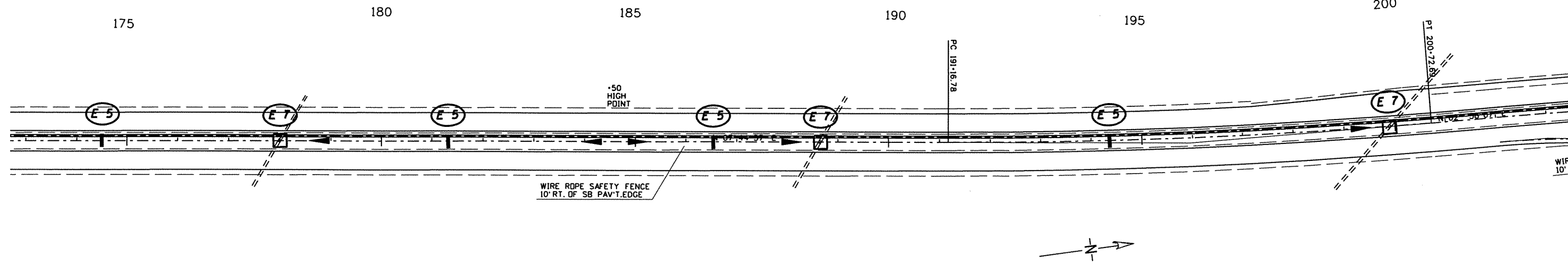
② TEMPORARY EROSION CONTROL DETAILS



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



CL MEDIAN I-430
 PI = 195+95.12
 Δ = 4°46' 50" LT.
 D = 0°30'
 T = 478.34'
 L = 856.11'
 PC = 191+16.78
 PT = 200+72.89

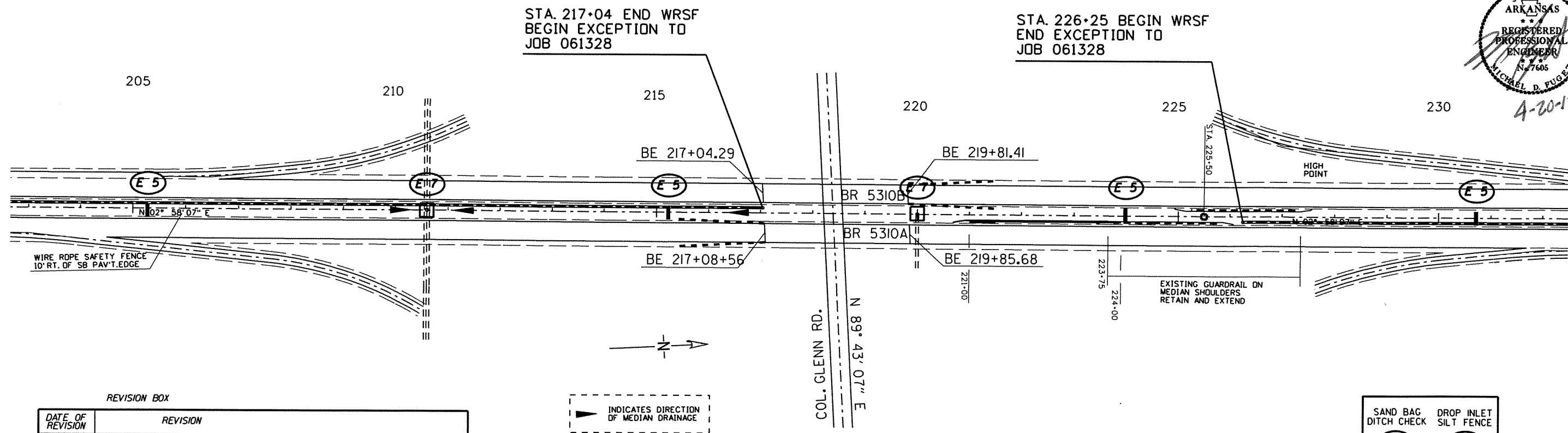


TEMPORARY EROSION CONTROL DETAILS
 STA. 143+00 - STA. 203+00

r061328.dgn / EROS CONT 04/10/2012

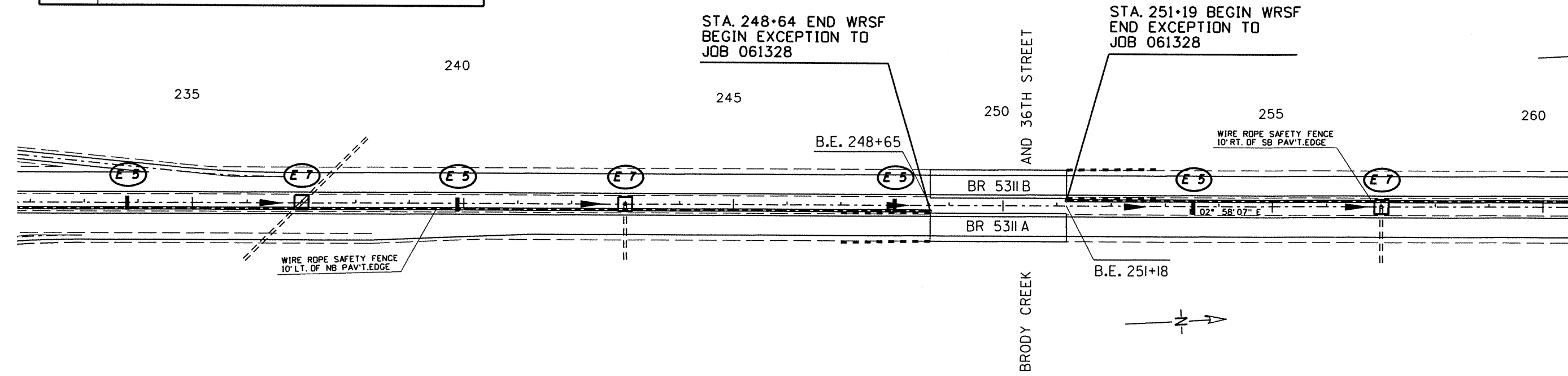
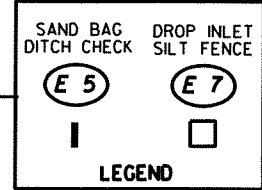
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	061328
							SHEET NO.	14
							TOTAL SHEETS	54

2 TEMPORARY EROSION CONTROL DETAILS



REVISION BOX

DATE OF REVISION	REVISION

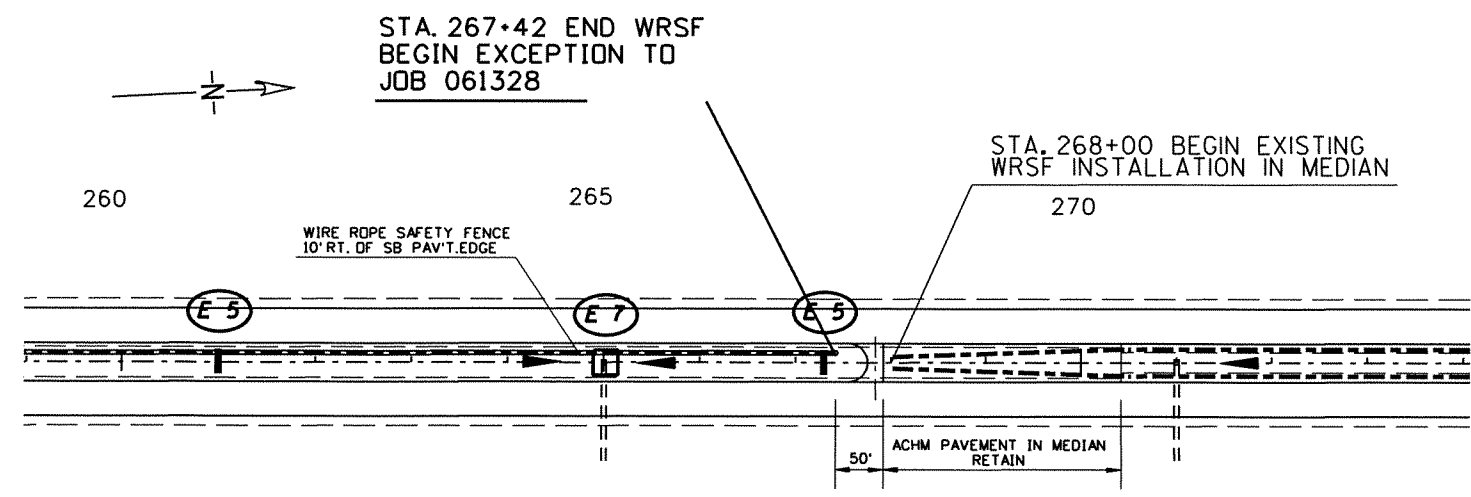


TEMPORARY EROSION CONTROL DETAILS
STA. 203+00 - STA. 260+00

r061328.dgn / ERDS CONT 04/10/2012

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.							061328	15	54

② TEMPORARY EROSION CONTROL DETAILS

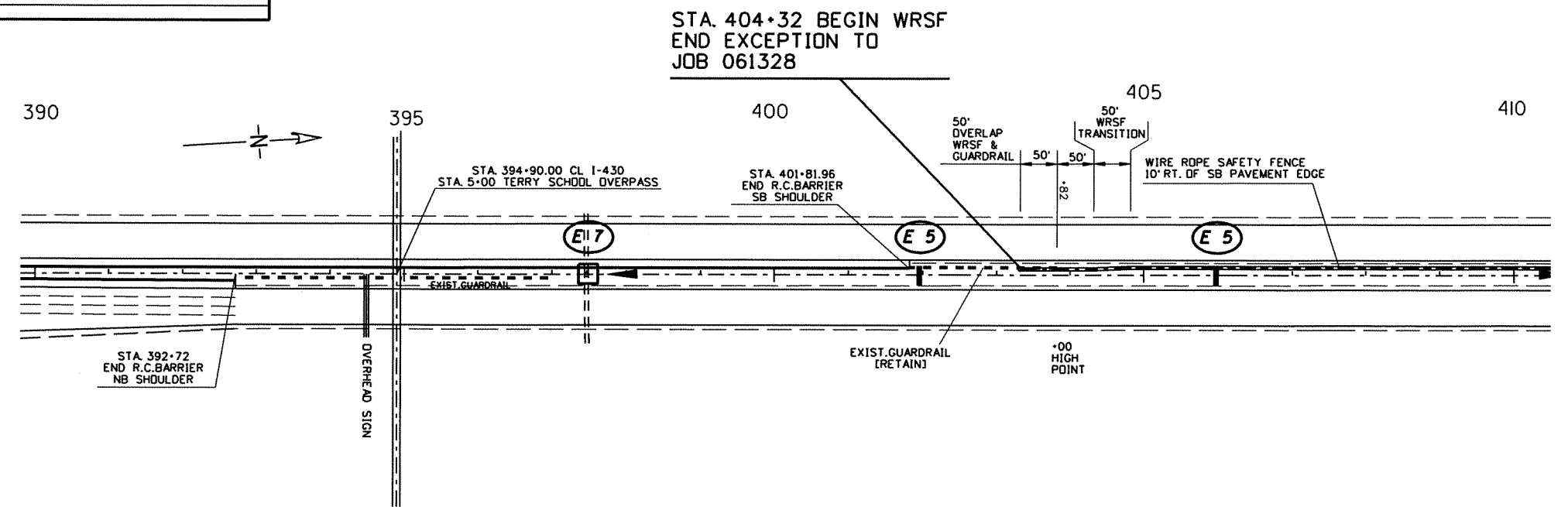
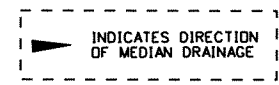


REVISION BOX

DATE OF REVISION	REVISION

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

LEGEND

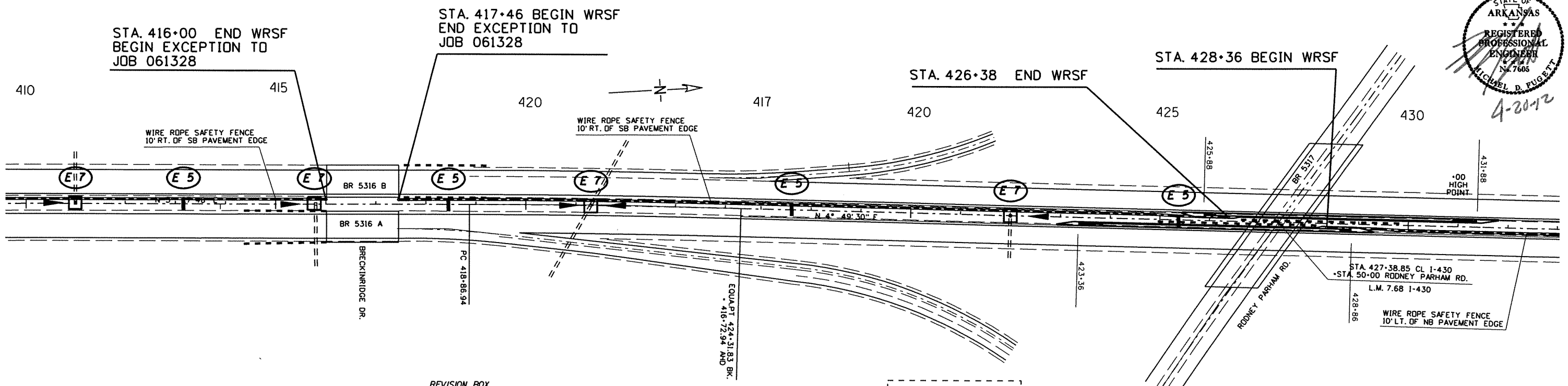
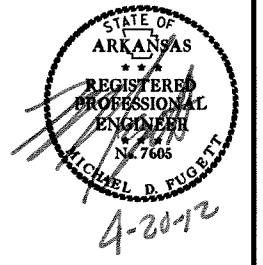


TEMPORARY EROSION CONTROL DETAILS
 STA. 260+00 - STA. 280+00
 AND STA. 380+00 - STA. 410+00

r061328.dgn / ERDS CONT 04/10/2012

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. 061328							16	54

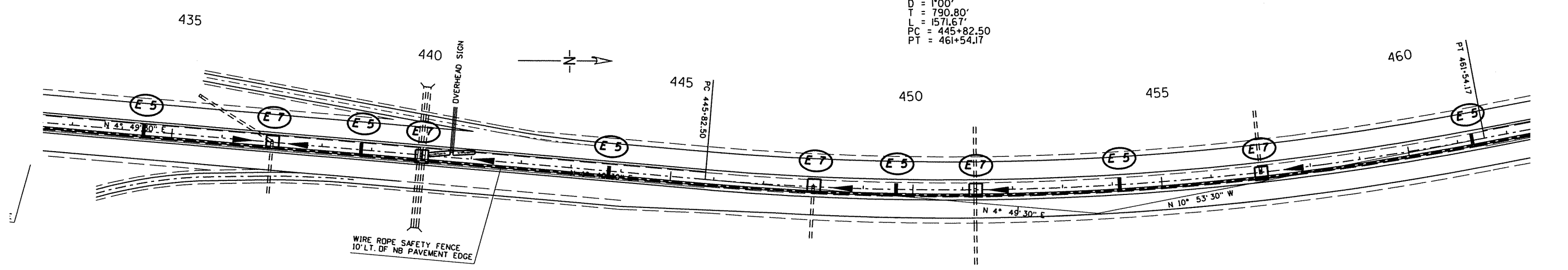
2 TEMPORARY EROSION CONTROL DETAILS



REVISION BOX		DATE OF REVISION	REVISION
SAND BAG DITCH CHECK	DROP INLET SILT FENCE		
(E 5)	(E 7)		
I	□		

INDICATES DIRECTION OF MEDIAN DRAINAGE

CL MEDIAN I-430
 PI = 453+75.30
 Δ = 15° 43' LT.
 D = 1°00'
 T = 790.80'
 L = 1571.67'
 PC = 445+82.50
 PT = 461+54.17

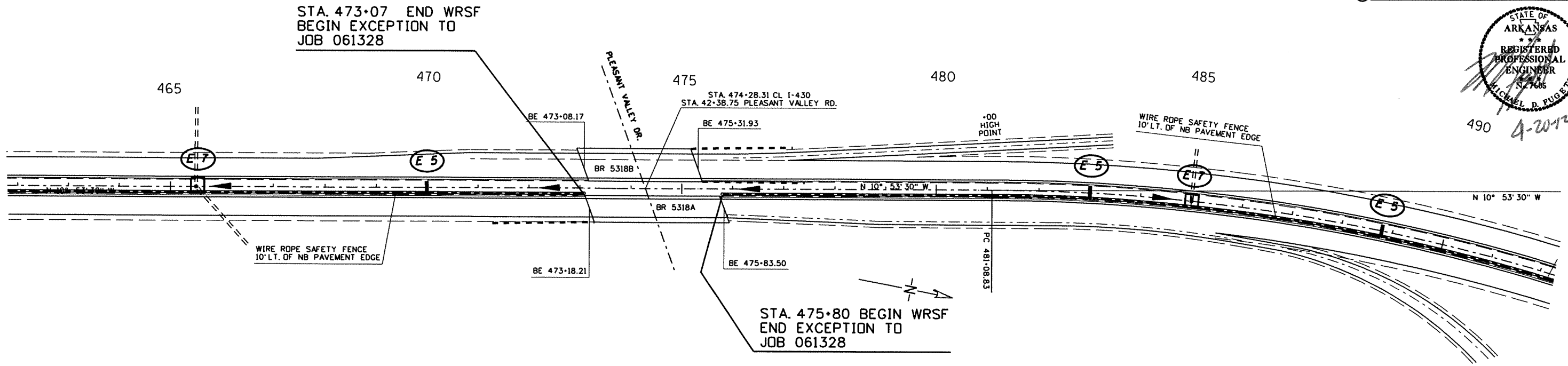
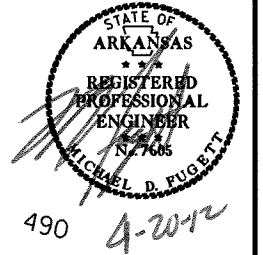


TEMPORARY EROSION CONTROL DETAILS
 STA. 410+00 - STA. 462+00

r061328.dgn / EROS CDNT 04/12/2012

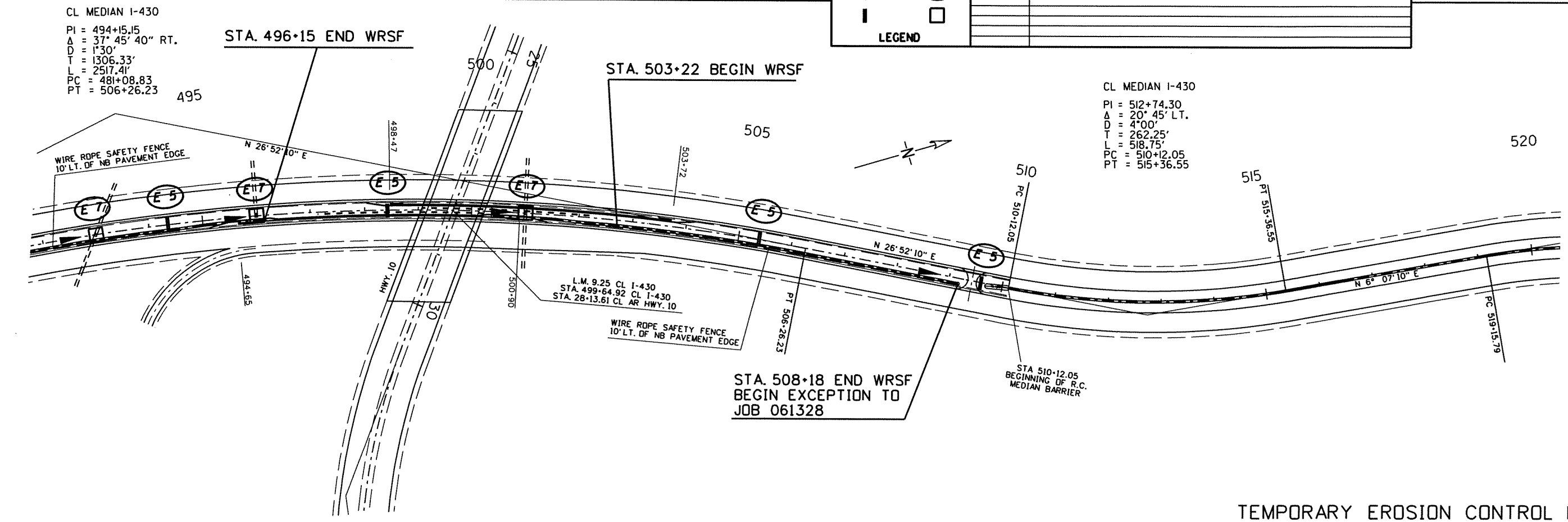
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	061328	17 54

② TEMPORARY EROSION CONTROL DETAILS



INDICATES DIRECTION OF MEDIAN DRAINAGE

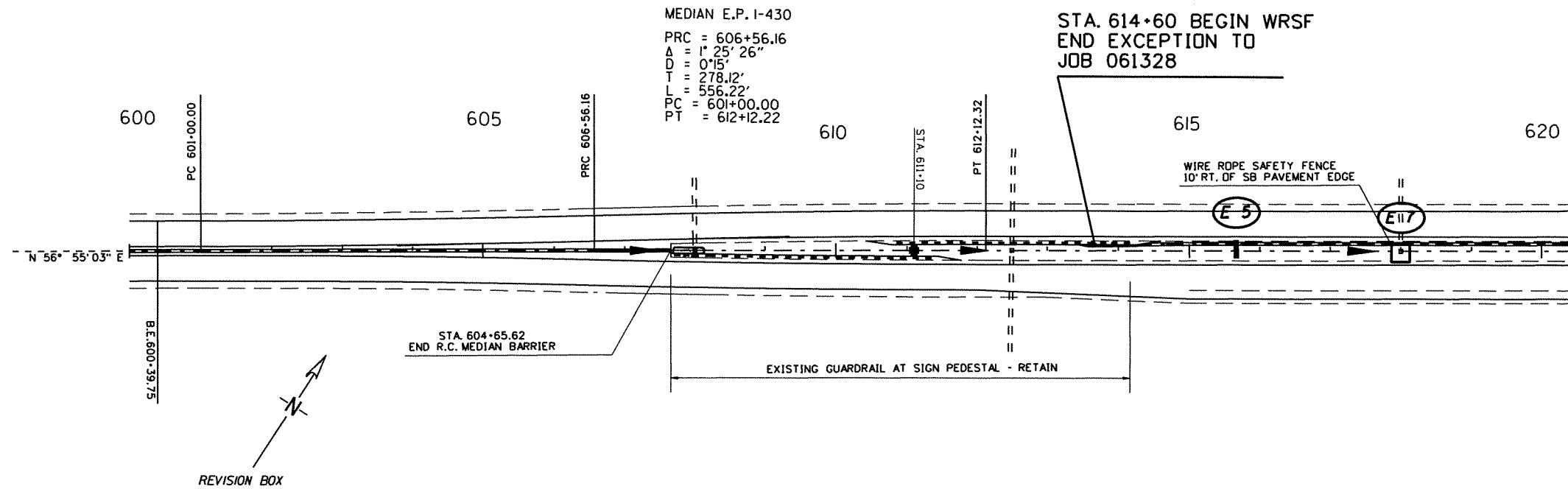
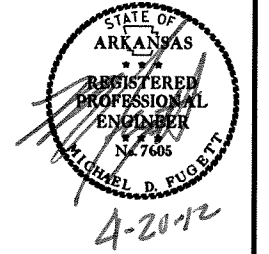
REVISION BOX		DATE OF REVISION	REVISION
SAND BAG DITCH CHECK	DROP INLET SILT FENCE		
(E 5)	(E 7)		
I	□		
LEGEND			



TEMPORARY EROSION CONTROL DETAILS
STA. 462+00 - STA. 520+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	54
				JOB NO.		061328		

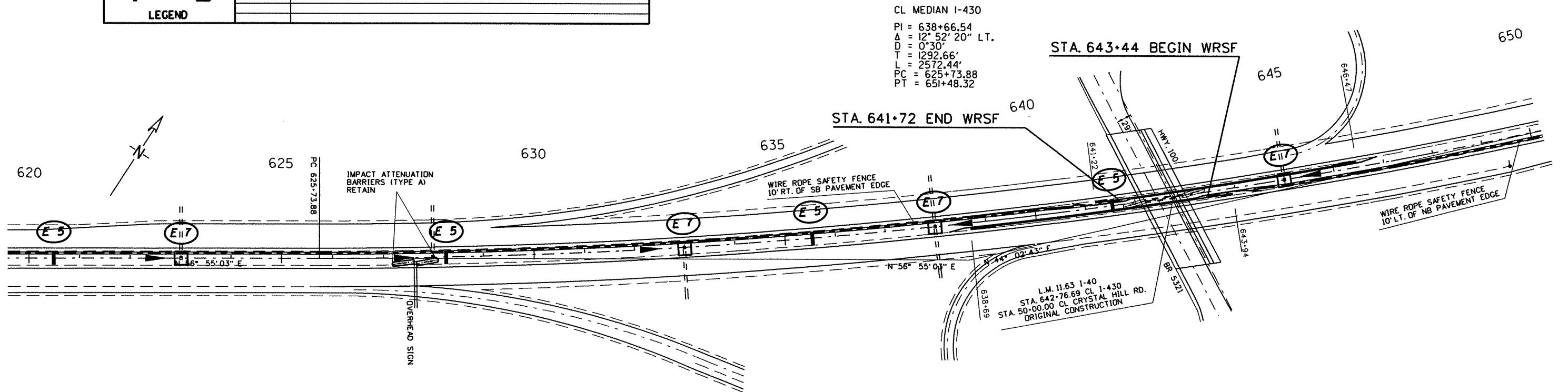
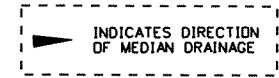
2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

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

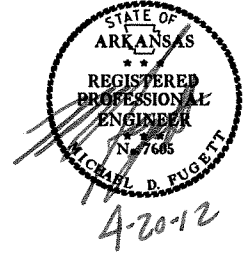
LEGEND



TEMPORARY EROSION CONTROL DETAILS
STA. 600+00 - STA. 650+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	061328	19	54	

② TEMPORARY EROSION CONTROL DETAILS

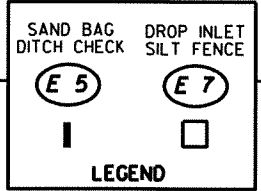
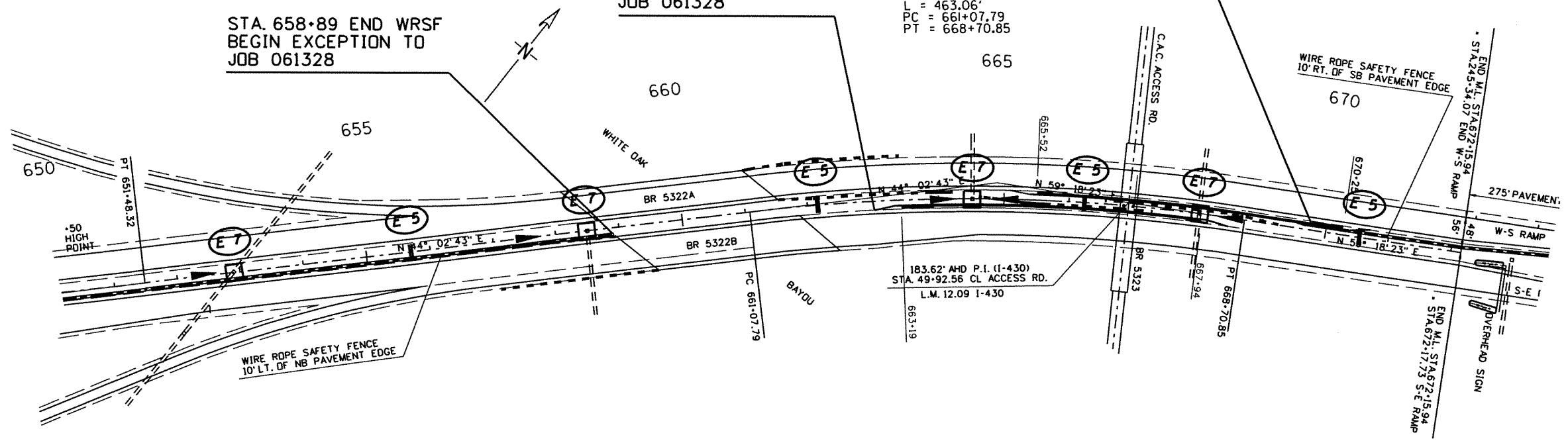


CL MEDIAN I-430
 PI = 664+91.59
 Δ = 15° 15' 40" RT.
 D = 2° 00'
 L = 383.80'
 PC = 661+07.79
 PT = 668+70.85

STA. 662+76
 END EXCEPTION TO
 JOB 061328

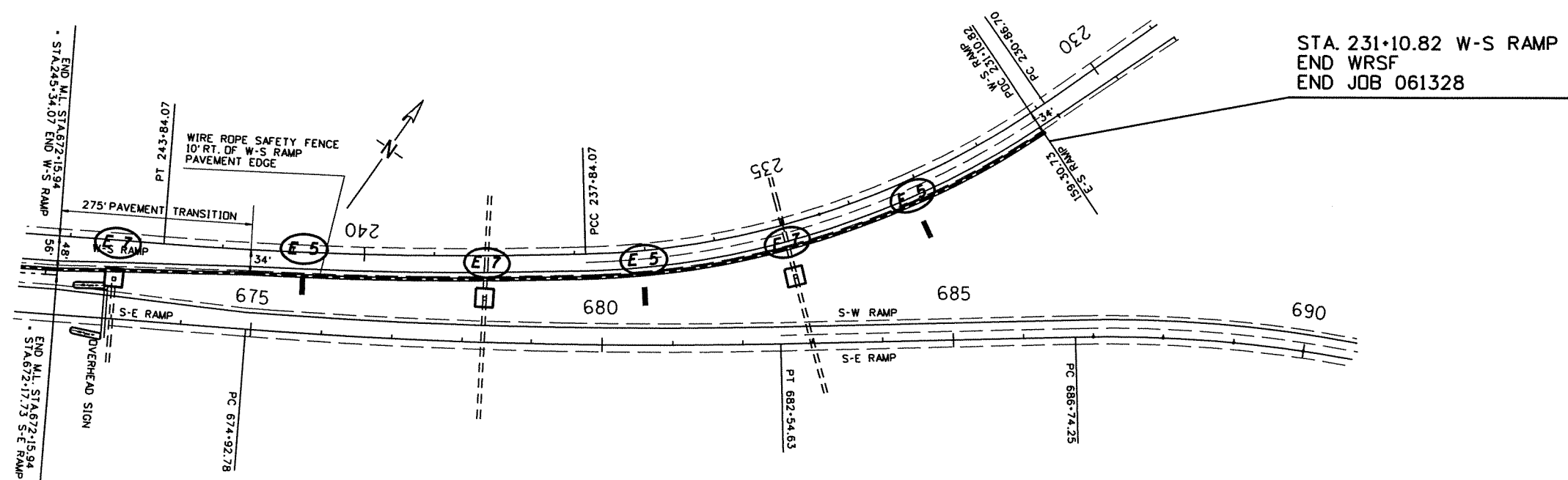
STA. 669+75 BEGIN WRSF

STA. 658+89 END WRSF
 BEGIN EXCEPTION TO
 JOB 061328



REVISION BOX

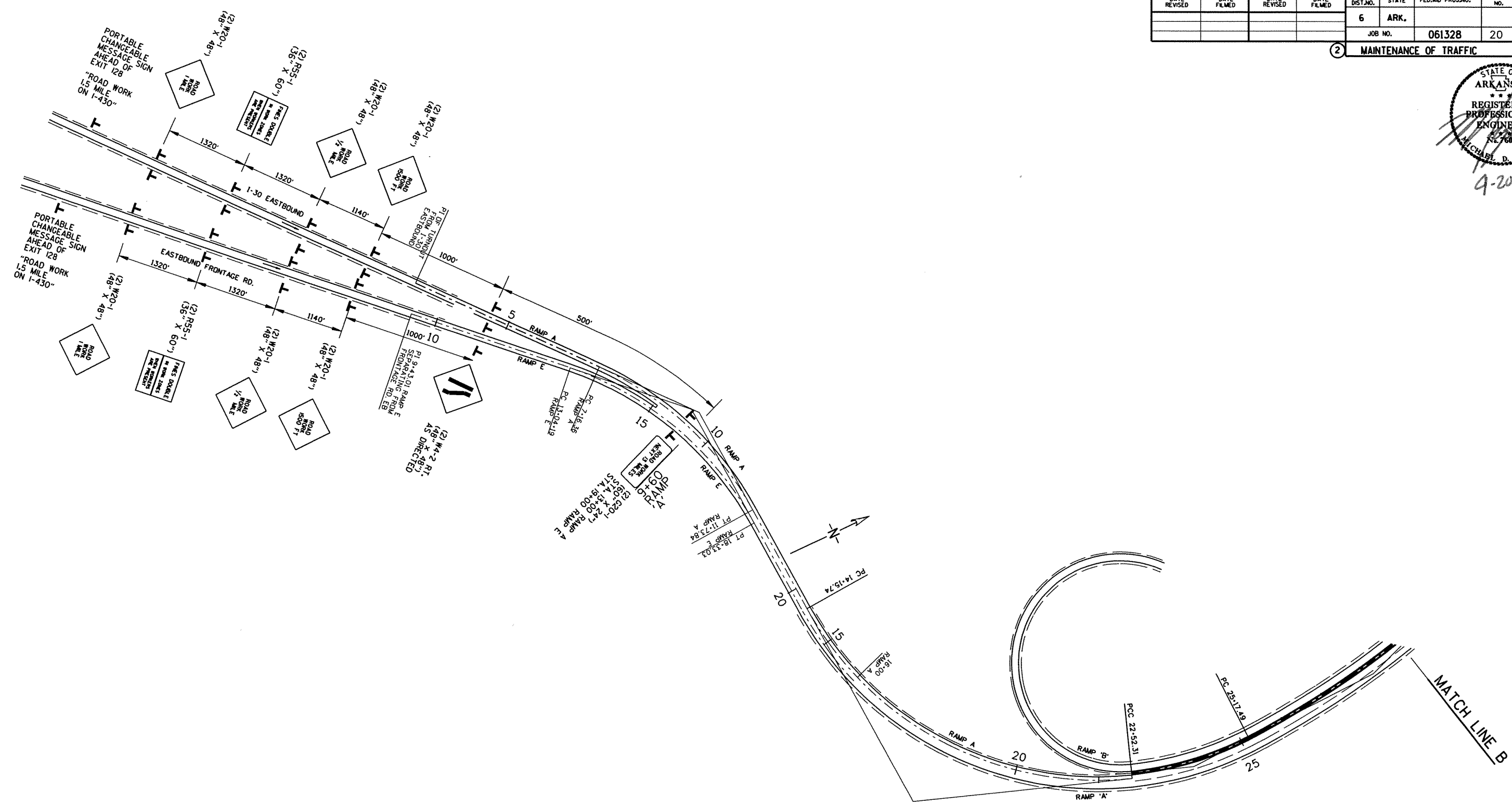
DATE OF REVISION	REVISION



TEMPORARY EROSION CONTROL DETAILS
 STA. 650+00 - STA. 684+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	061328
							20	54

② MAINTENANCE OF TRAFFIC

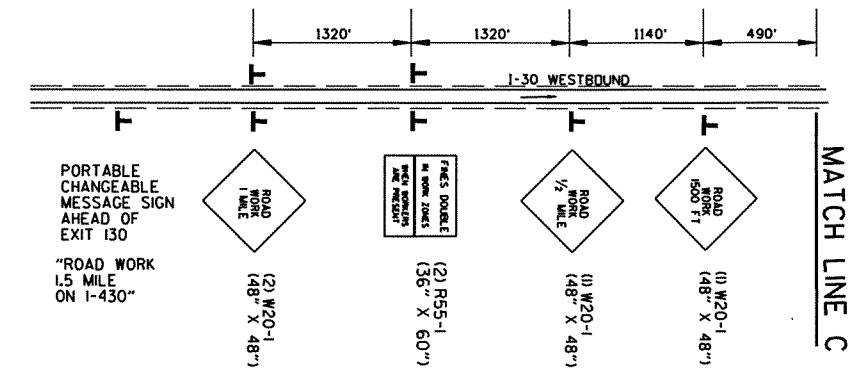
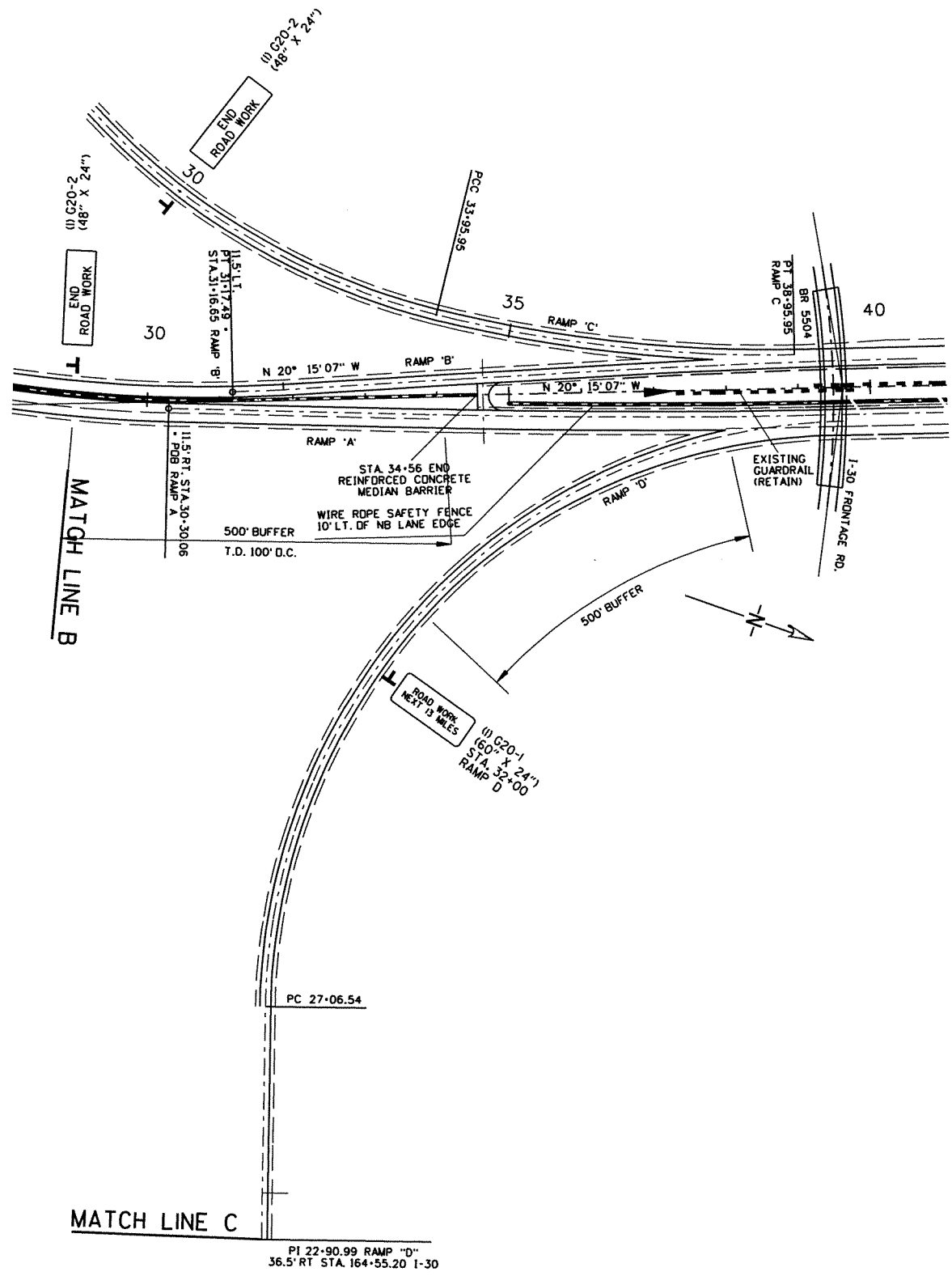
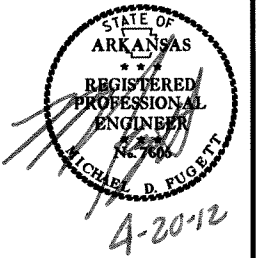


ADVANCE SIGNS ON EASTBOUND I-30 & FRONTAGE RD.

MAINTENANCE OF TRAFFIC
ADVANCE SIGNS ON
RAMPS FROM I-30

04/10/2012
r061328.dgn/MDT

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. 061328							21	54
② MAINTENANCE OF TRAFFIC								



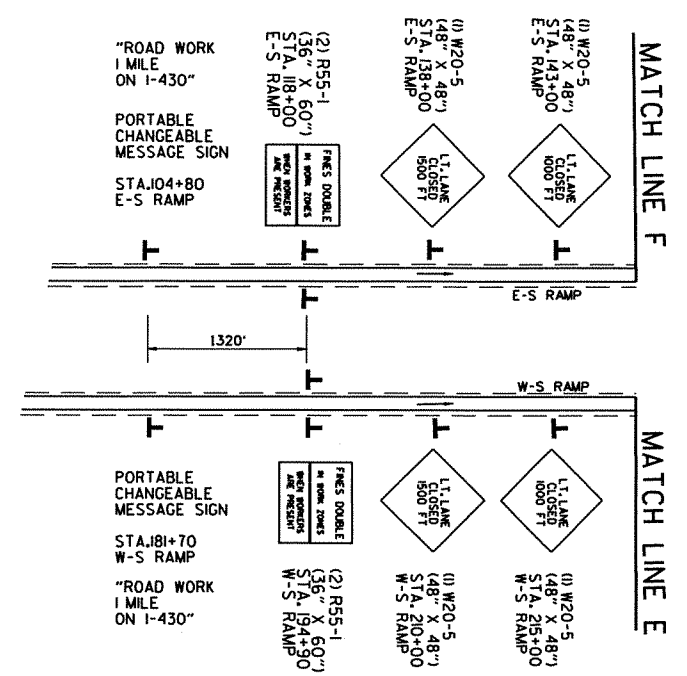
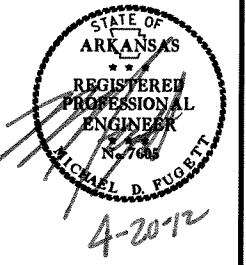
ADVANCE SIGNS ON I-30 WESTBOUND

MAINTENANCE OF TRAFFIC
ADVANCE SIGNS ON
RAMPS FROM I-30

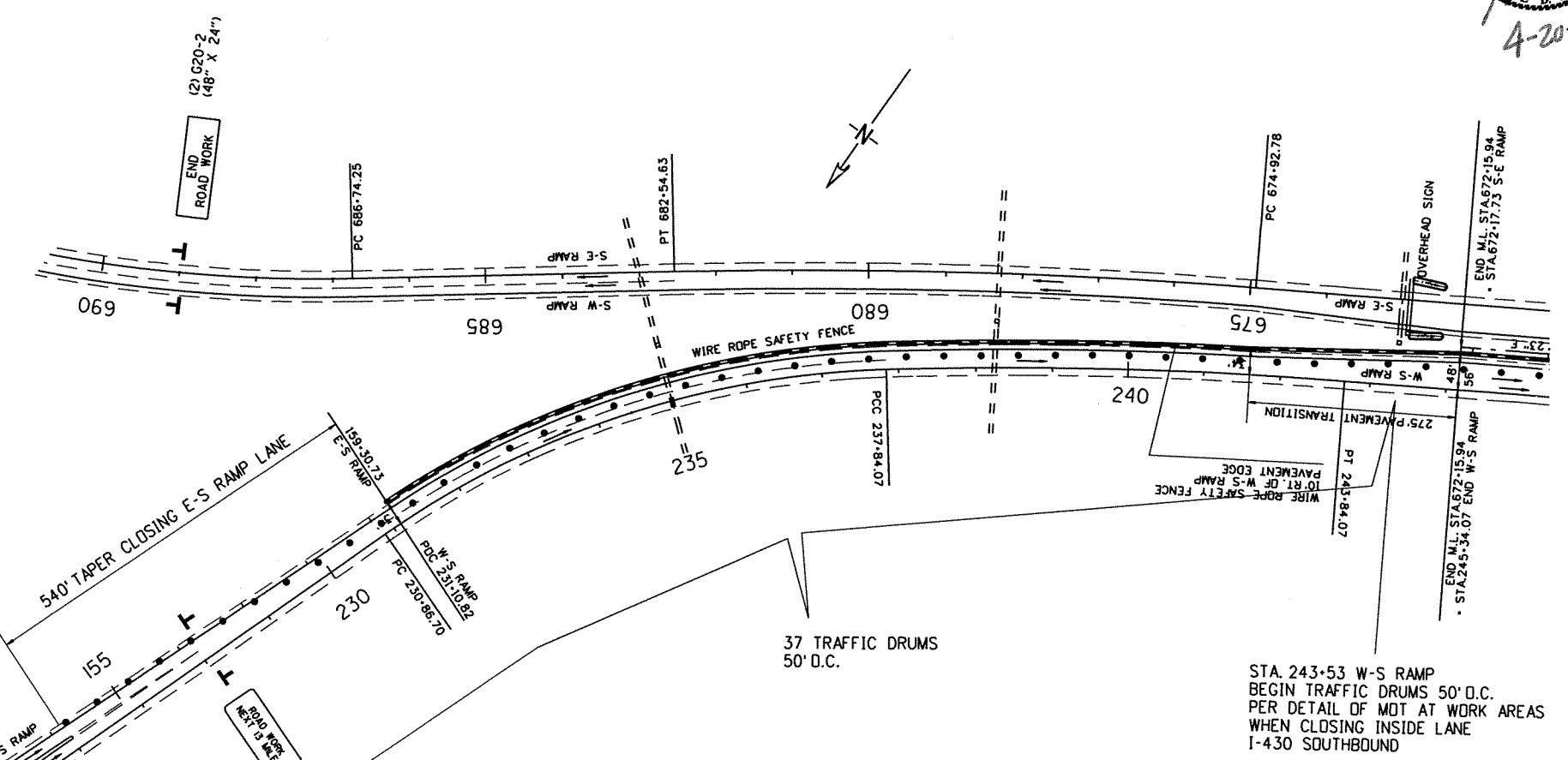
04/10/2012 r061328.dgn/MDT

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	061328	22

2 MAINTENANCE OF TRAFFIC



SIGNS ON RAMPS



TRAFFIC DRUMS SHOWN ARE FOR WORK AREA LEFT OF E-S RAMP

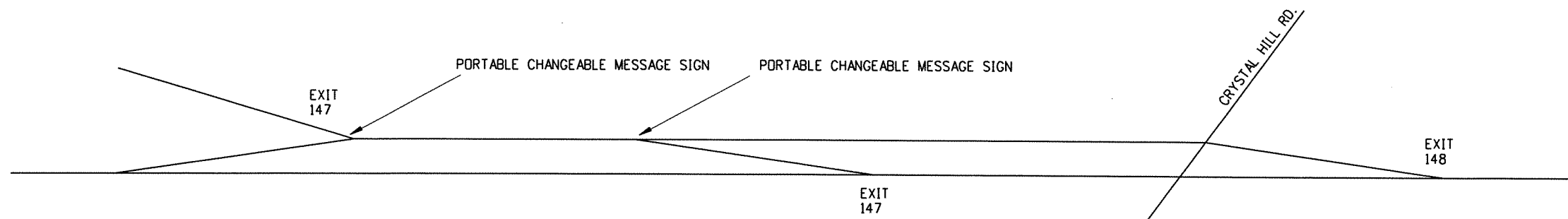
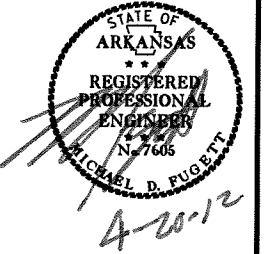
- NOTES:
- 1: TRUCK MOUNTED IMPACT ATTENUATOR IS REQUIRED WHEN BUFFER ZONE CANNOT BE PROVIDED AND OPTIONAL WHEN BUFFER ZONE CAN BE PROVIDED.
 - 2: THE E-S RAMP LANE CLOSURE SHALL BE USED FOR THE MINIMUM NUMBER OF DAYS REQUIRED TO ACCOMPLISH THE WORK ALONG THE W-S RAMP.

ADVANCE SIGNS AT NORTH END OF WORK AREA

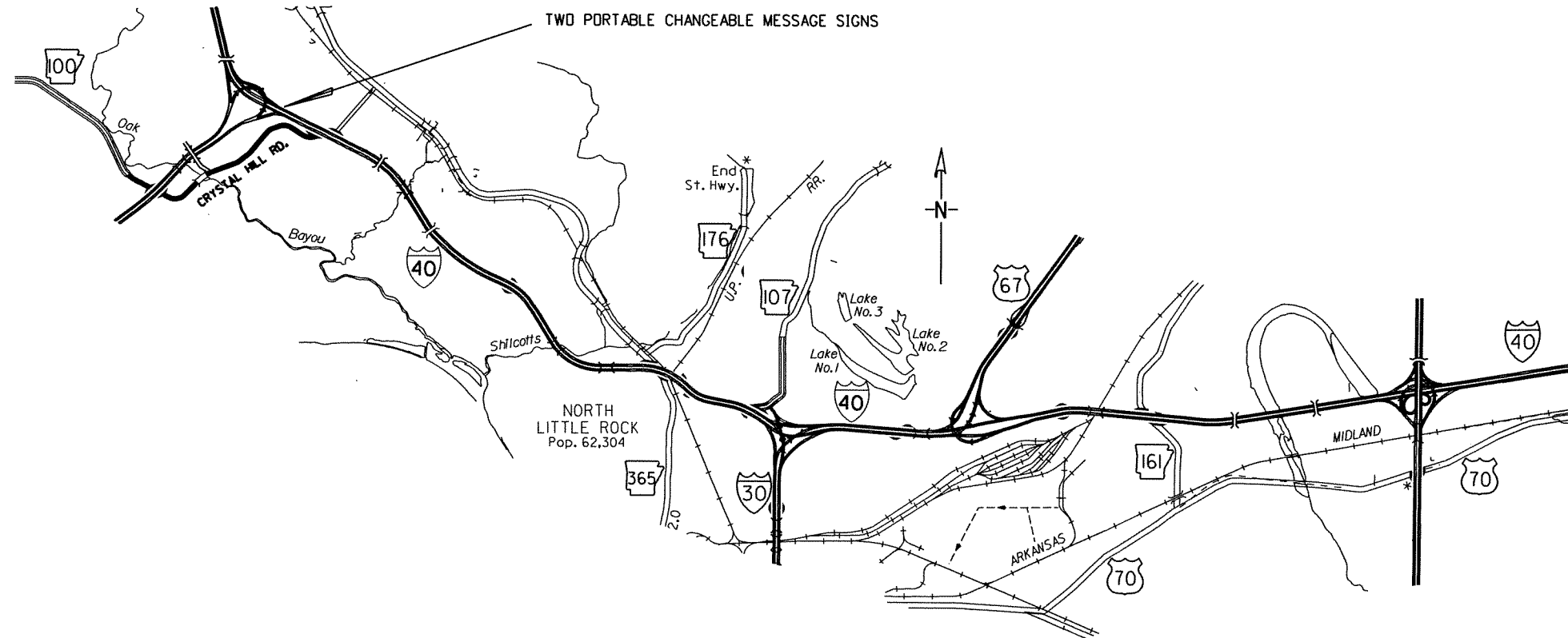
MAINTENANCE OF TRAFFIC
ADVANCE SIGNS ON
RAMPS FROM I-40

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.						061328	23	54

② MAINTENANCE OF TRAFFIC



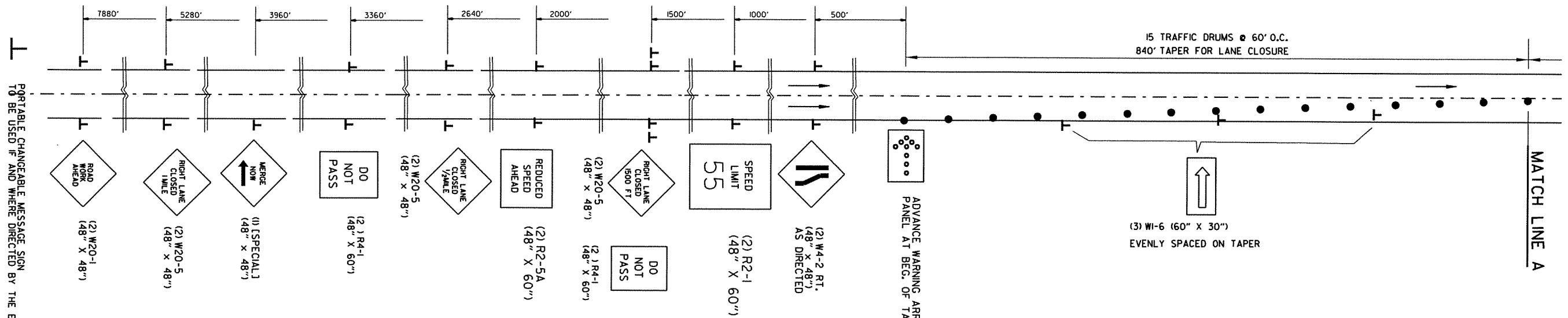
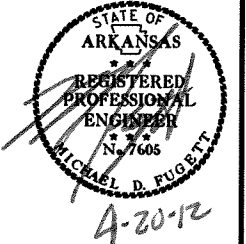
DETAIL OF CRYSTAL HILL EXIT
[NOT TO SCALE]



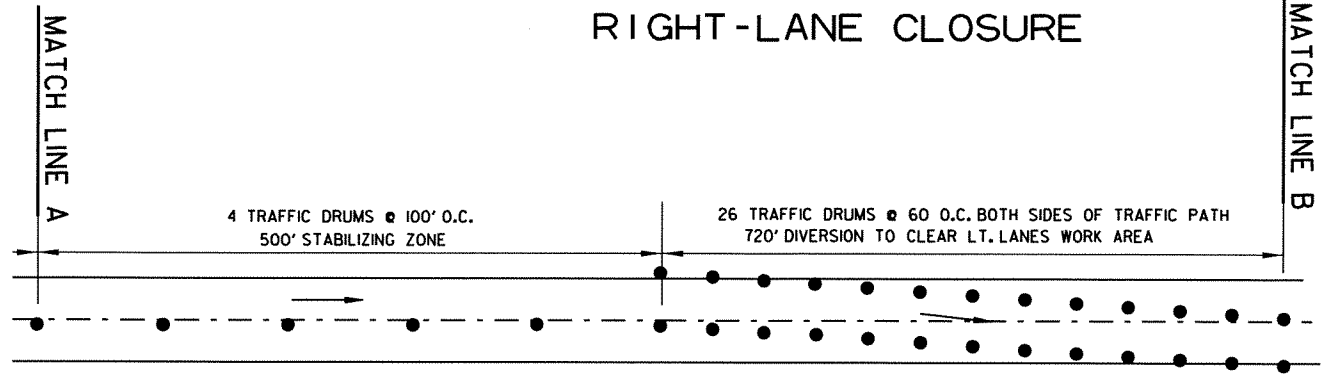
MAINTENANCE OF TRAFFIC
SIGNS ON I-40 AND
DETOUR OF ES RAMP TRAFFIC
ON CRYSTAL HILL RD.

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. 061328							24	54

② MAINTENANCE OF TRAFFIC



PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



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

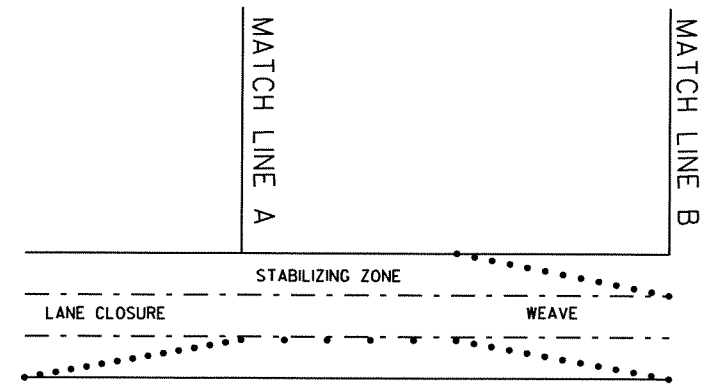
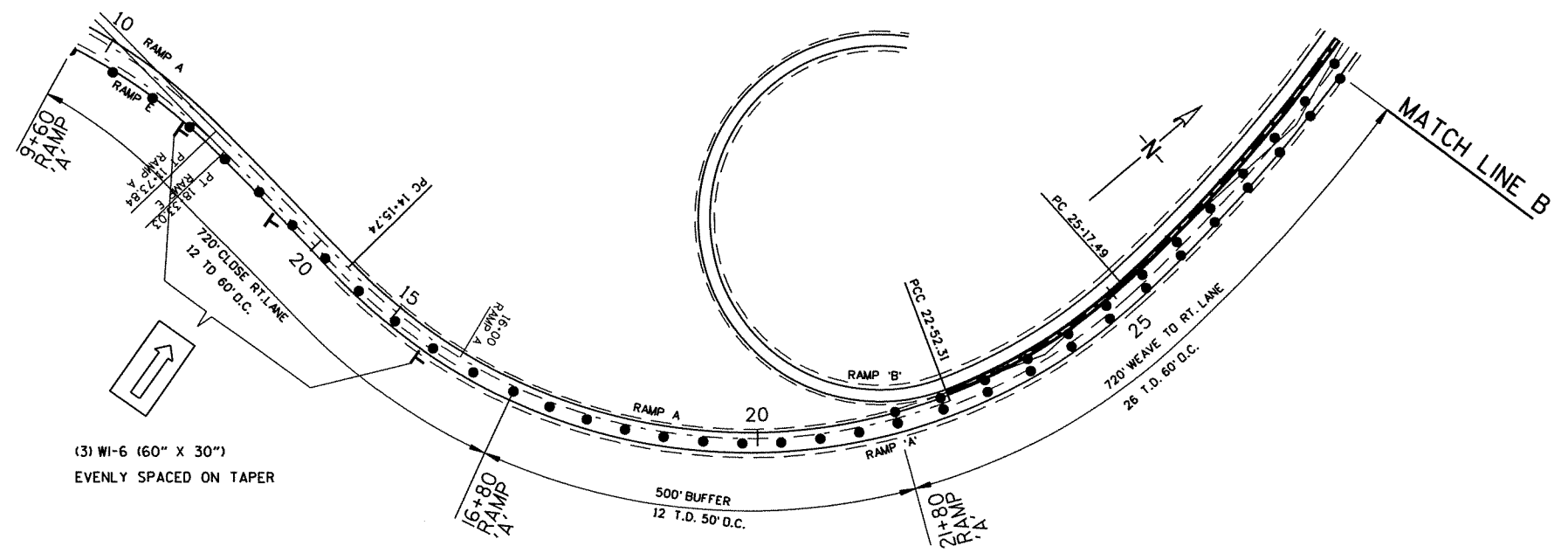


DIAGRAM OF LANE CLOSURE AND WEAVE IN 3-LANE PAVEMENT. NO ADDITIONAL SIGNS OR TRAFFIC CONTROL DEVICES ARE NEEDED.



(3) W1-6 (60" x 30") EVENLY SPACED ON TAPER

NOTE: ONE PORTABLE CHANGEABLE MESSAGE SIGN IS ALSO NEEDED ON I-630 WESTBOUND WHEN WORK AREA ON I-430 BEGINS AT STA.404+32 OR ENDS AT STA.268+00

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 CLOSING ONE LANE EACH DIRECTION IN ONE WORK AREA.

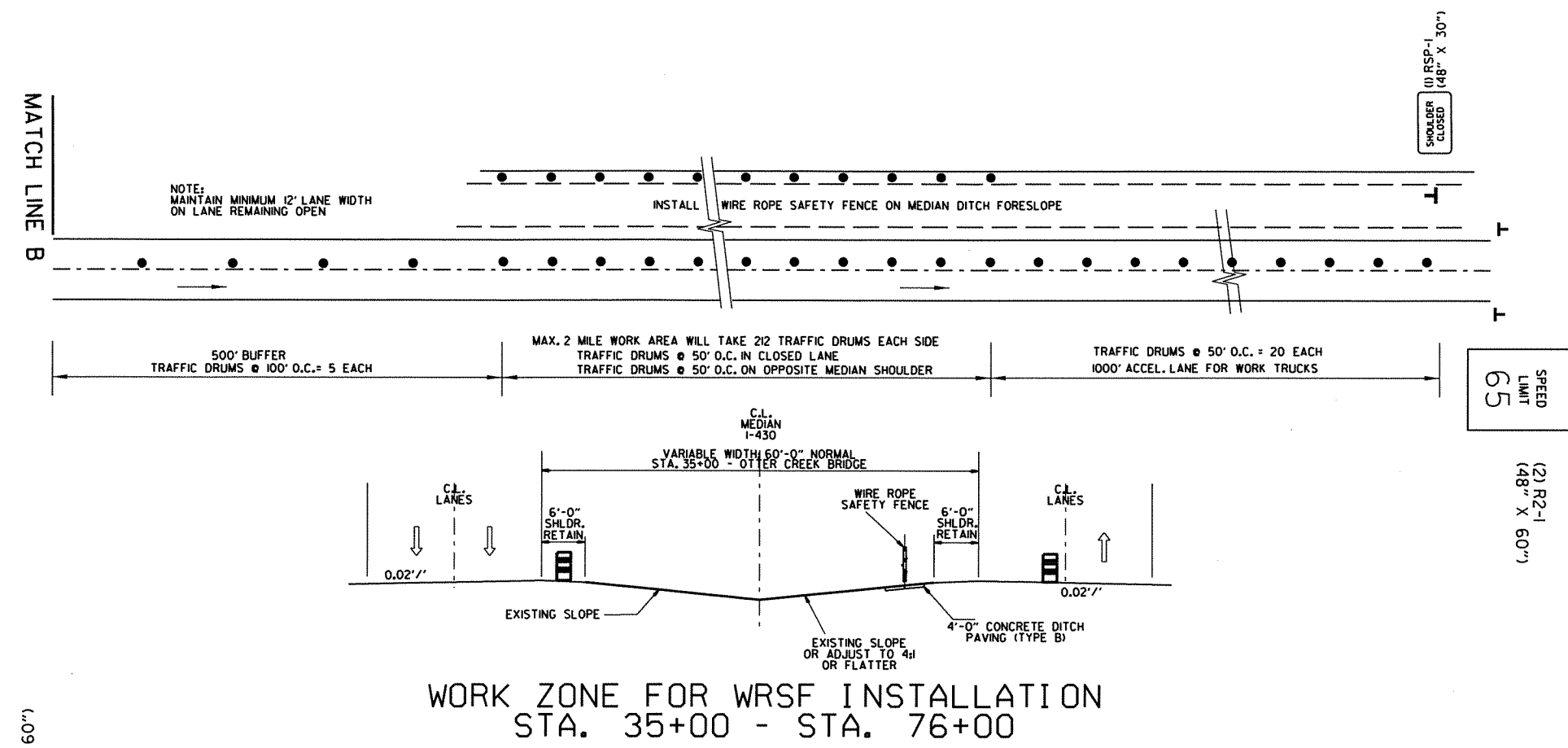
WEAVE FOR LEFT LANE WORK ZONE BEGINNING STA. 35+00

MAINTENANCE OF TRAFFIC LANE CLOSURES

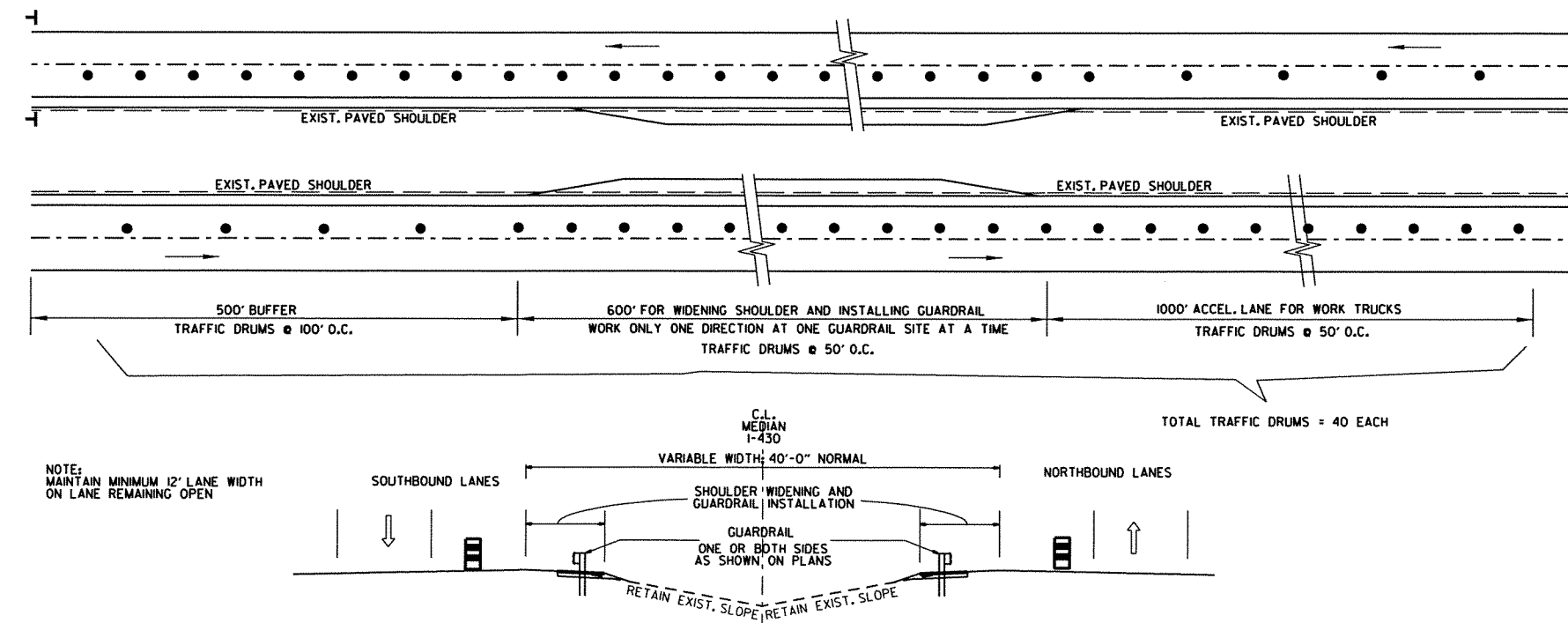
04/10/2012 061328.dgn/MDT

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.		061328	25	54

② MAINTENANCE OF TRAFFIC

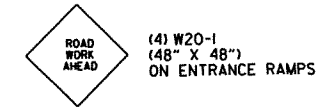


WORK ZONE FOR WRSF INSTALLATION
STA. 35+00 - STA. 76+00



MOVABLE WORK ZONE FOR GUARDRAIL INSTALLATION

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 CLOSING ONE LANE EACH DIRECTION IN ONE WORK AREA.

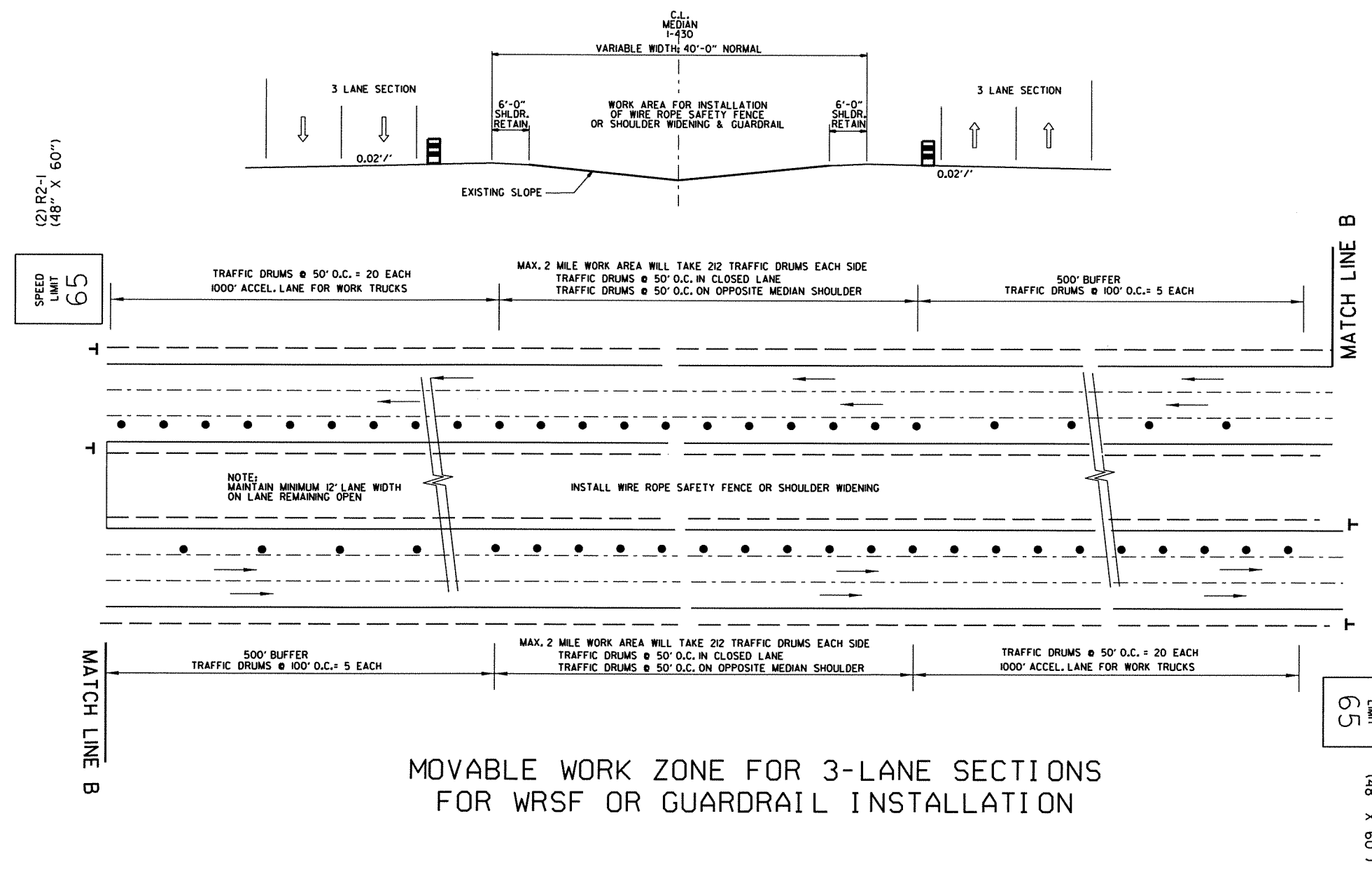
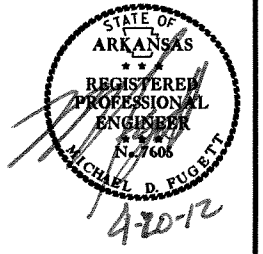


MAINTENANCE OF TRAFFIC
WORK AREAS

04/10/2012 r061328MDT

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 061328	26	54

② MAINTENANCE OF TRAFFIC



MOVABLE WORK ZONE FOR 3-LANE SECTIONS
FOR WRSF OR GUARDRAIL INSTALLATION

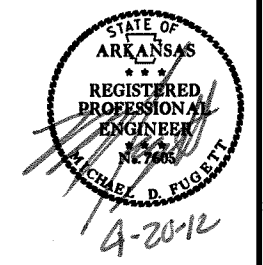
NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS.
QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR CLOSING ONE LANE EACH DIRECTION IN ONE WORK AREA.

MAINTENANCE OF TRAFFIC
WORK AREAS

04/10/2012
r061328MDT

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.	061328		27	54

② QUANTITIES



ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS EACH	ADVANCE WARNING ARROW PANEL DAY	PORTABLE CHANGEABLE MESSAGE SIGN WEEK
			SQ.FT.-LIN.FT.-EA.	NO.	SQ. FT.			
W20-1	ROAD WORK 1 MILE	48"x48"	6	6	96.0			
W20-1	ROAD WORK 1/2 MILE	48"x48"	7	7	112.0			
W20-1	ROAD WORK 1500 FT.	48"x48"	7	7	112.0			
W20-1	ROAD WORK AHEAD	48"x48"	6	6	96.0			
G20-2	END ROAD WORK	48"x24"	4	4	32.0			
G20-1	ROAD WORK NEXT xx MILES	60"x24"	5	5	50.0			
SPECIAL 1	MERGE NOW + ARROW	48"x48"	2	2	32.0			
W20-5	RIGHT LANE CLOSED 1 MILE	48"x48"	4	4	64.0			
W20-5	RIGHT LANE CLOSED 1/2 MILE	48"x48"	4	4	64.0			
W20-5	RIGHT LANE CLOSED 1500 FEET	48"x48"	4	4	64.0			
W20-5	LEFT LANE CLOSED 1500 FEET	48"x48"	2	2	32.0			
W20-5	LEFT LANE CLOSED 1000 FEET	48"x48"	2	2	32.0			
W20-5	LEFT LANE CLOSED 500 FEET	48"x48"	2	2	32.0			
W4-2R	RIGHT LANE CLOSING GRAPHIC	48"x48"	7	7	112.0			
W1-6	LARGER ARROW	30"x60"	6	6	72.0			
R4-1	DO NOT PASS	24"x30"	8	8	40.0			
R55-1	FINES DOUBLE IN WORK ZONES	36"x60"	10	10	150.0			
R2-5A	REDUCED SPEED AHEAD	48"x60"	4	4	80.0			
R2-1	SPEED LIMIT 55 MPH	48"x60"	4	4	80.0			
R2-1	SPEED LIMIT 65 MPH	48"x60"	4	4	80.0			
RSP-1	SHOULDER CLOSED	48"x30"	1	1	10.0			
R1-2	YIELD	60"X60"X60"	2	2	25.0			
	TRAFFIC DRUMS		606			606		
	ADVANCE WARNING ARROW PANEL		2				266	
	PORTABLE CHANGEABLE MESSAGE SIGN		8					76
TOTALS:					1467.0	606	266	76

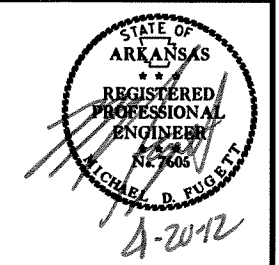
THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

04/13/2012
R061328.DGN/QUANTITIES

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.	061328		28	54

② QUANTITIES



REMOVAL AND DISPOSAL

STATION	STATION	DESCRIPTION	REMOVAL AND DISPOSAL OF GUARD CABLE	REMOVAL AND DISPOSAL OF GUARDRAIL	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER
			LIN. FT.	LIN. FT.	EACH
34+56	36+31	ON CL CONST	175		
91+85	96+85	LT & RT CL CONST		1000	
104+52	107+02	LT OF CL CONST		250	
102+78	105+28	RT OF CL CONST		250	
157+66	160+16	LT OF CL CONST		250	
156+09	158+57	RT OF CL CONST		250	
223+75	224+25	RT OF CL CONST		50	
426+62	429+89	LT OF CL CONST		325	
424+89	428+15	RT OF CL CONST		325	
499+00	502+25	LT OF CL CONST		325	
497+10	500+35	RT OF CL CONST		325	
642+77		ON CL CONST			2
666+50	669+25	LT OF CL CONST		275	
664+65	667+40	RT OF CL CONST		275	
TOTALS:			175	3900	2

EARTHWORK

STATION	STATION	LOCATION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	CU. YD.
89+77	105+73	RT. SHLDR. WIDENING FOR GUARDRAIL AT HWY. 5 OVERPASS	301	
92+68	98+79	LT. SHLDR. WIDENING FOR GUARDRAIL AT HWY. 5 OVERPASS	116	
104+10	109+11	LT. SHLDR. WIDENING FOR OVERHEAD SIGN STA. 1 04+90	94	
154+13	159+74	RT. SHLDR. WIDENING FOR GUARDRAIL AT DAVID O.DODD OVERPASS	106	
156+46	162+37	LT. SHLDR. WIDENING FOR GUARDRAIL AT DAVID O.DODD OVERPASS	111	
220+57	223+86	EXTEND RT.SHLDR WIDENING AT PROGRAMMABLE SIGN	62	
422+93	429+43	RT. SHLDR. WIDENING FOR GUARDRAIL AT RODNEY PARHAM OVERPASS	123	
425+30	432+31	LT. SHLDR. WIDENING FOR GUARDRAIL AT RODNEY PARHAM OVERPASS	121	
494+07	501+48	RT. SHLDR. WIDENING FOR GUARDRAIL AT HWY. 10 OVERPASS	140	
498+04	504+15	LT. SHLDR. WIDENING FOR GUARDRAIL AT HWY. 10 OVERPASS	116	
613+55	614+49	LT. SHLDR. WIDENING FOR WRSF OVERLAP AT STA. 615+00	4	
638+26	0+52	RT. SHLDR. WIDENING FOR GUARDRAIL AT HWY. 100 OVERPASS	118	
640+64	646+90	LT. SHLDR. WIDENING FOR GUARDRAIL AT HWY. 100 OVERPASS	118	
662+76	668+37	RT. SHLDR. WIDENING FOR GUARDRAIL AT C A C ACCESS RD OVERPASS	107	
665+09	670+83	LT. SHLDR. WIDENING FOR GUARDRAIL AT C A C ACCESS RD OVERPASS	109	
* ENTIRE	JOB	AS DIRECTED BY THE ENGINEER FOR PAVING MEDIAN CROSSINGS	70	35
TOTALS:			1816	35

SOIL LOG

STATION	LOCATION	DEPTH FEET	LATITUDE			LONGITUDE			AASHTO CLASSIFICATION	LIQUID LIMIT	PLASTICITY INDEX	REMARKS
			DEG	MIN	SEC	DEG	MIN	SEC				
42+00	CL	0-4 Z	34	39	54.30	92	24	13.80	A-4 (0)	24	2	BROWN
70+00	10' RT.	0-2.5 Z	34	39	55.70	92	24	14.40	A-4 (0)	25	4	GRAY
89+00	CL	0-5	34	40	25.40	92	24	25.30	A-4 (1)	23	6	GRAY
141+00	CL	0-3.6 Z	34	41	22.20	92	24	17.70	A-4 (3)	25	8	GRAY
193+00	CL	0-2.5Z	34	41	56.10	92	24	12.10	A-4 (3)	ND	NP	BR/GR
245+00	CL	0-5	34	42	57.60	92	24	5.50	A-4 (2)	28	6	GRAY
405+00	CL	0-5	34	45	37.30	92	23	27.50	A-4 (3)	26	8	GRAY
456+00	CL	0-5	34	45	49.00	92	23	26.30	A-4 (2)	26	9	GRAY
509+00	CL	0-5	34	46	46.40	92	23	25.20	A-4 (1)	22	8	BR/GR
615+00	CL	0-5	34	47	47.40	92	22	46.50	A-2-4 (0)	ND	NP	BROWN
952+00	CL	0-5	34	48	39.90	92	21	22.20	A-4 (5)	25	9	BROWN
680+00	CL	0-5	34	48	47.40	92	21	12.00	A-4 (3)	24	9	GRAY

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

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

* QUANTITIES ARE ESTIMATED FOR MEDIAN CROSSING CONSTRUCTION. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

QUANTITIES

03/19/2012 R061328.DGN/QUANTITIES

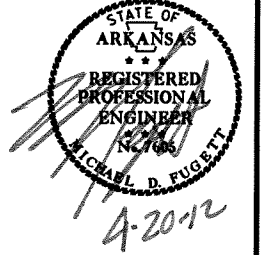
BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH		AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2") (PG 64-22)			
			FEET	TON / STATION	TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	TON	
89+77	90+25	RT SHLDR TAPER	48.0	20.4	9.8	6.0	32.0	220.0	3.5	
90+25	90+95	RT SHLDR EXTRA WIDTH WIDENING	70.0	20.4	14.3	10.0	77.8	220.0	8.6	
90+95	91+10	RT SHLDR TAPER	15.0	20.4	3.1	8.8	14.7	220.0	1.6	
91+10	105+40	RT SHLDR NORMAL WIDENING	1430.0	28.5	407.6	7.5	1191.7	220.0	131.1	
105+40	105+73	RT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
92+68	93+11	LT SHLDR TAPER	43.0	20.4	8.8	4.8	22.9	220.0	2.5	
93+11	98+46	LT SHLDR NORMAL WIDENING	535.0	28.5	152.5	7.5	445.8	220.0	49.0	
98+46	98+79	LT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
104+10	104+43	LT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
104+43	107+78	LT SHLDR NORMAL WIDENING	335.0	28.5	95.5	7.5	279.2	220.0	30.7	
107+78	107+93	LT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
107+93	108+63	LT SHLDR EXTRA WIDTH WIDENING	70.0	46.5	10.0	10.0	77.8	220.0	8.6	
108+63	109+11	LT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
154+13	154+46	RT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
154+46	159+41	RT SHLDR NORMAL WIDENING	495.0	28.5	141.1	7.5	412.5	220.0	45.4	
159+41	159+74	RT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
156+46	156+94	LT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
156+94	157+64	LT SHLDR EXTRA WIDTH WIDENING	70.0	46.5	10.0	10.0	77.8	220.0	8.6	
157+64	157+79	LT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
157+79	161+04	LT SHLDR NORMAL WIDENING	325.0	28.5	92.6	7.5	270.8	220.0	29.8	
161+04	161+19	LT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
161+19	161+89	LT SHLDR EXTRA WIDTH WIDENING	70.0	46.5	10.0	10.0	77.8	220.0	8.6	
161+89	162+37	LT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
422+93	423+26	RT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
423+26	428+11	RT SHLDR NORMAL WIDENING	485.0	28.5	138.2	7.5	404.2	220.0	44.5	
428+11	428+26	RT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
428+26	428+96	RT SHLDR EXTRA WIDTH WIDENING	70.0	46.5	10.0	10.0	77.8	220.0	8.6	
428+96	429+44	RT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
425+30	425+78	LT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
425+78	426+59	LT SHLDR EXTRA WIDTH WIDENING	81.0	46.5	10.0	10.0	90.0	220.0	9.9	
426+59	426+74	LT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
426+74	431+98	LT SHLDR NORMAL WIDENING	524.0	28.5	149.3	7.5	436.7	220.0	48.0	
431+98	432+31	LT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
495+07	495+55	RT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
495+55	496+25	RT SHLDR EXTRA WIDTH WIDENING	70.0	46.5	10.0	10.0	77.8	220.0	8.6	
496+25	496+40	RT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
496+40	500+15	RT SHLDR NORMAL WIDENING	375.0	28.5	106.9	7.5	312.5	220.0	34.4	
500+15	500+30	RT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
500+30	501+00	RT SHLDR EXTRA WIDTH WIDENING	70.0	46.5	10.0	10.0	77.8	220.0	8.6	
501+00	501+48	RT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
498+04	498+37	LT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
498+37	503+82	LT SHLDR NORMAL WIDENING	545.0	28.5	155.3	7.5	454.2	220.0	50.0	
503+82	504+15	LT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
613+44	613+57	LT SHLDR TAPER	13.0	3.5	0.5	1.4	2.0	220.0	0.2	
613+57	614+27	LT SHLDR WIDENING	70.0	6.9	4.8	2.7	21.0	220.0	2.3	
614+27	614+49	LT SHLDR TAPER	22.0	3.5	0.8	1.4	3.4	220.0	0.4	
638+26	638+59	RT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
638+59	643+69	RT SHLDR NORMAL WIDENING	510.0	28.5	145.4	7.5	425.0	220.0	46.8	
643+69	643+84	RT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
643+84	644+04	RT SHLDR EXTRA WIDTH WIDENING	20.0	46.5	10.0	10.0	22.2	220.0	2.4	
644+04	644+52	RT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
640+64	641+12	LT SHLDR TAPER	48.0	20.4	9.8	4.8	25.6	220.0	2.8	
641+12	641+32	LT SHLDR EXTRA WIDTH WIDENING	20.0	46.5	10.0	10.0	22.2	220.0	2.4	
641+32	641+47	LT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
641+47	646+57	LT SHLDR NORMAL WIDENING	510.0	28.5	145.4	7.5	425.0	220.0	46.8	
646+57	646+90	LT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
662+76	663+09	RT SHLDR TAPER	33.0	20.4	6.7	4.8	17.6	220.0	1.9	
663+09	668+04	RT SHLDR NORMAL WIDENING	495.0	28.5	141.1	7.5	412.5	220.0	45.4	
668+04	668+37	RT SHLDR TAPER	33.0	41.1	8.8	4.8	17.6	220.0	1.9	
665+09	665+42	LT SHLDR TAPER	33.0	41.1	8.8	4.8	17.6	220.0	1.9	
665+42	669+50	LT SHLDR NORMAL WIDENING	408.0	28.5	116.3	7.5	340.0	220.0	37.4	
669+50	669+65	LT SHLDR TAPER	15.0	41.1	8.8	4.8	8.0	220.0	0.9	
669+65	670+35	LT SHLDR EXTRA WIDTH WIDENING	70.0	46.5	10.0	10.0	77.8	220.0	8.6	
670+35	670+83	LT SHLDR TAPER	48.0	29.5	6.0	4.8	25.6	220.0	2.8	
	34+64	MEDIAN CROSSING			34.1				9.2	
	267+84	MEDIAN CROSSING			37.0				10.0	
	615+43	MEDIAN CROSSING			44.7				12.0	
TOTALS:					2494.9				828.1	

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		29	54

2 QUANTITIES



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.	061328		30	54

2 QUANTITIES



TEMPORARY EROSION CONTROL

LOCATION	SAND BAG DITCH CHECKS (E-5)	DROP INLET SILT FENCE (E-7)	* SEDIMENT REMOVAL AND DISPOSAL
	BAG	LIN. FT.	CU. YD.
ENTIRE JOB	1220	864	50
TOTALS:	1220	864	50

BASIS OF ESTIMATE:
 SAND BAG DITCH CHECKS.....20 BAGS / LOCATION
 DROP INLET SILT FENCE.....18 LIN.FT./LOCATION

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

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

GUARDRAIL

STATION	STATION	SIDE	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	EACH
90+35	105+30	NB SHLDR	1375	1	1
93+11	98+16	SB SHLDR	475	1	1
104+53	108+53	SB SHLDR	350	1	1
154+56	159+31	NB SHLDR	425	1	1
157+04	161+79	SB SHLDR	425	1	1
221+00	224+00	NB SHLDR	275		1
423+26	428+86	NB SHLDR	500	1	1
425+88	431+88	SB SHLDR	500	1	1
495+65	500+90	NB SHLDR	475	1	1
498+47	503+72	SB SHLDR	475	1	1
638+69	643+94	NB SHLDR	475	1	1
641+22	646+47	SB SHLDR	475	1	1
663+19	667+94	NB SHLDR	425	1	1
664+00	670+25	SB SHLDR	625		1
TOTALS:			7275	12	14

WIRE ROPE SAFETY FENCE

STATION	STATION	LOCATION	WIRE ROPE SAFETY FENCE	WRSF ANCHOR *	WRSF MAINTENANCE MATERIALS
			LIN. FT.	EACH	LUMP SUM
35+00.00	59+57.00	LT OF NB LANE EDGE	2457	2	
65+42.00	75+65.00	LT OF NB LANE EDGE	1023	2	
79+08.00	90+85.00	LT OF NB LANE EDGE	1177	2	
108+02.50	157+54.00	RT OF SB LANE EDGE	4952	2	
161+29.00	217+04.00	RT OF SB LANE EDGE	5575	2	
226+25.00	248+64.00	LT OF NB LANE EDGE	2239	2	
251+19.00	267+42.00	RT OF SB LANE EDGE	1623	2	
404+32.00	416+00.00	RT OF SB LANE EDGE	1168	2	
417+46.00	426+38.00	RT OF SB LANE EDGE	892	1	
428+36.00	473+07.00	LT OF NB LANE EDGE	4471	2	
475+80.00	496+15.00	LT OF NB LANE EDGE	2035	2	
503+22.00	508+18.00	LT OF NB LANE EDGE	496	2	
614+60.00	641+72.00	RT OF SB LANE EDGE	2712	2	
643+44.00	658+89.00	LT OF NB LANE EDGE	1545	2	
669+75.00	672+15.94	RT OF SB LANE EDGE	241	1	
231+10.82	245+34.07	RT OF W-S RAMP	1423	1	
ENTIRE PROJECT					1.00
TOTALS:			34029	29	1.00

* THIS ITEM SHOWN FOR INFORMATION ONLY

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	WIDTH	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	*WATER
			FEET	FEET	SQ. YD.		M. GAL.
35+00.00	59+57.00	LT OF NB LANE EDGE	2457	4	1092	485	6.1
65+42.00	75+65.00	LT OF NB LANE EDGE	1023	4	455	202	2.5
79+08.00	90+85.00	LT OF NB LANE EDGE	1177	4	523	232	2.9
108+02.50	157+54.00	RT OF SB LANE EDGE	4952	4	2201	978	0.1
161+29.00	217+04.00	RT OF SB LANE EDGE	5575	4	2478	1101	13.9
226+25.00	248+64.00	LT OF NB LANE EDGE	2239	4	995	442	5.6
251+19.00	267+42.00	RT OF SB LANE EDGE	1623	4	721	320	4.0
404+32.00	416+00.00	RT OF SB LANE EDGE	1168	4	519	231	2.9
417+46.00	426+38.00	RT OF SB LANE EDGE	892	4	396	176	2.2
428+36.00	473+07.00	LT OF NB LANE EDGE	4471	4	1987	883	11.1
475+80.00	496+15.00	LT OF NB LANE EDGE	2035	4	904	402	5.1
503+22.00	508+18.00	LT OF NB LANE EDGE	496	4	220	98	1.2
614+60.00	641+72.00	RT OF SB LANE EDGE	2712	4	1205	536	6.8
643+44.00	658+89.00	LT OF NB LANE EDGE	1545	4	687	305	3.8
669+75.00	672+15.94	RT OF SB LANE EDGE	241	4	107	48	0.6
231+10.82	245+34.07	RT OF W-S RAMP	1423	4	632	281	3.5
TOTALS:					15122	6720	72.3

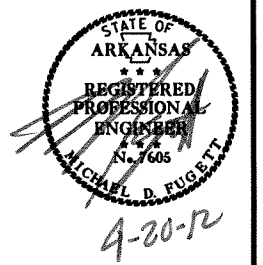
BASIS OF ESTIMATE:
 WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

03/19/2012 R061328.DGN/QUANTITIES

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.	061328		31	54

② SUMMARY OF QUANTITIES AND REVISIONS



SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
202	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER	2	EACH
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL	3900	LIN.FT.
202	REMOVAL AND DISPOSAL OF GUARD CABLE	175	LIN.FT.
210	UNCLASSIFIED EXCAVATION	1816	CU.YD.
210	COMPACTED EMBANKMENT	35	CU.YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	2495	TON
SP,SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	784	TON
SP,SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	44	TON
601	MOBILIZATION	1.00	LUMP SUM
SP,SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	1467	SQ.FT.
SS & 604	TRAFFIC DRUMS	606	EACH
SS & 604	ADVANCE WARNING ARROW PANEL	266	DAY
SP,SS & 604	PORTABLE CHANGEABLE MESSAGE SIGN	76	WEEK
605	CONCRETE DITCH PAVING (TYPE B)	15122	SQ.YD.
SS & 617	GUARDRAIL (TYPE A)	7275	LIN.FT.
SS & 617	TERMINAL ANCHOR POSTS (TYPE 1)	12	EACH
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	14	EACH
SS & 620	WATER	72.3	M.GAL.
621	SAND BAG DITCH CHECKS	1220	BAG
621	DROP INLET SILT FENCE	864	LIN.FT.
621	SEDIMENT REMOVAL AND DISPOSAL	50	CU. YD.
624	SOLID SODDING	6720	SQ.YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
SP	WIRE ROPE SAFETY FENCE	34029	LIN.FT.
SP	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS	1.00	LUMP SUM

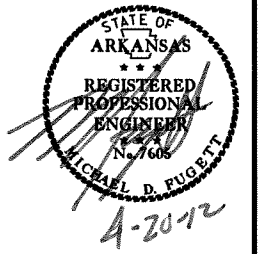
DATE	REVISION	SHEET NUMBER

SUMMARY OF QUANTITIES AND REVISIONS

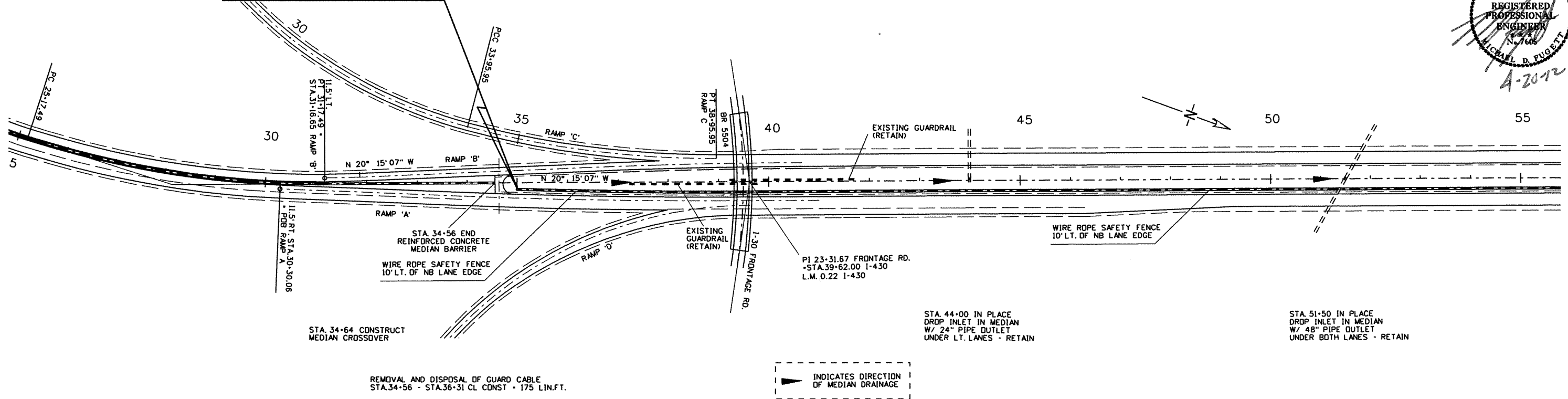
04/13/2012 R061328.DGN/QUANTITIES

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. 061328	32 54

2 PLAN SHEETS



STA. 35+00
BEGIN JOB 061328
BEGIN WRSF L.M. 0.13

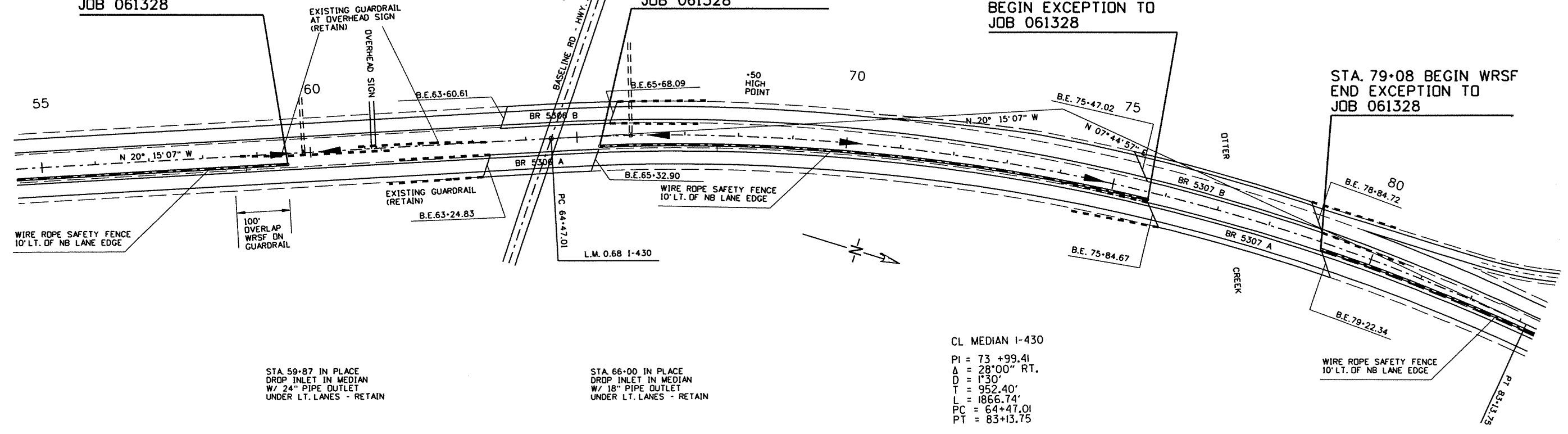


STA. 59+57 END WRSF
BEGIN EXCEPTION TO
JOB 061328

STA. 65+42 BEGIN WRSF
END EXCEPTION TO
JOB 061328

STA. 75+65 END WRSF
BEGIN EXCEPTION TO
JOB 061328

STA. 79+08 BEGIN WRSF
END EXCEPTION TO
JOB 061328

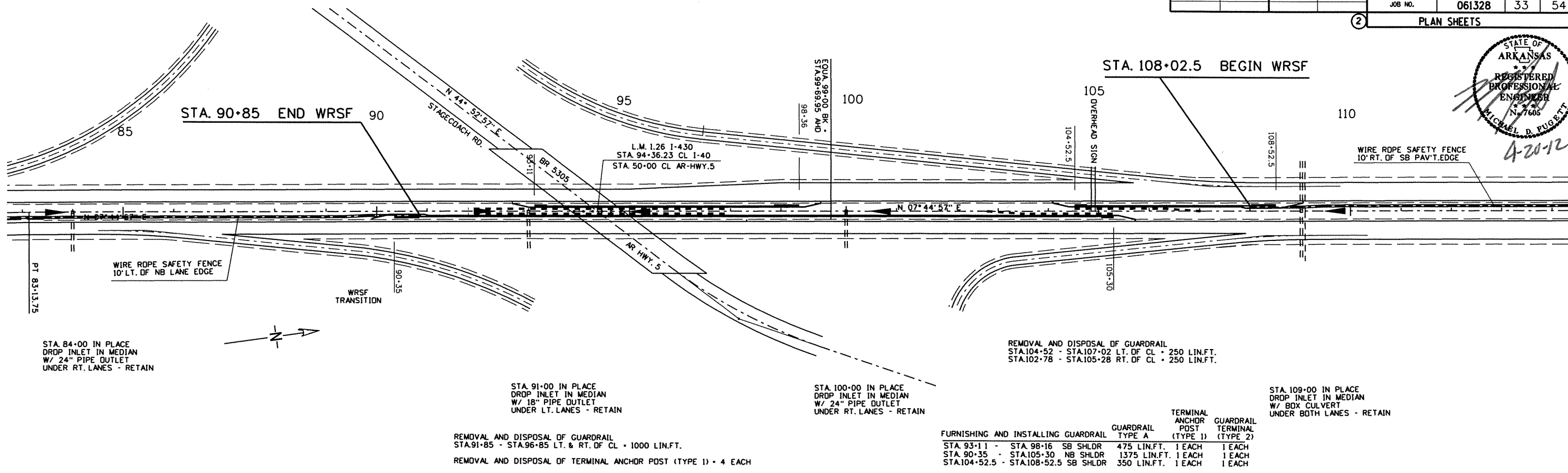


PLAN SHEET STA.25+00 - STA.83+00

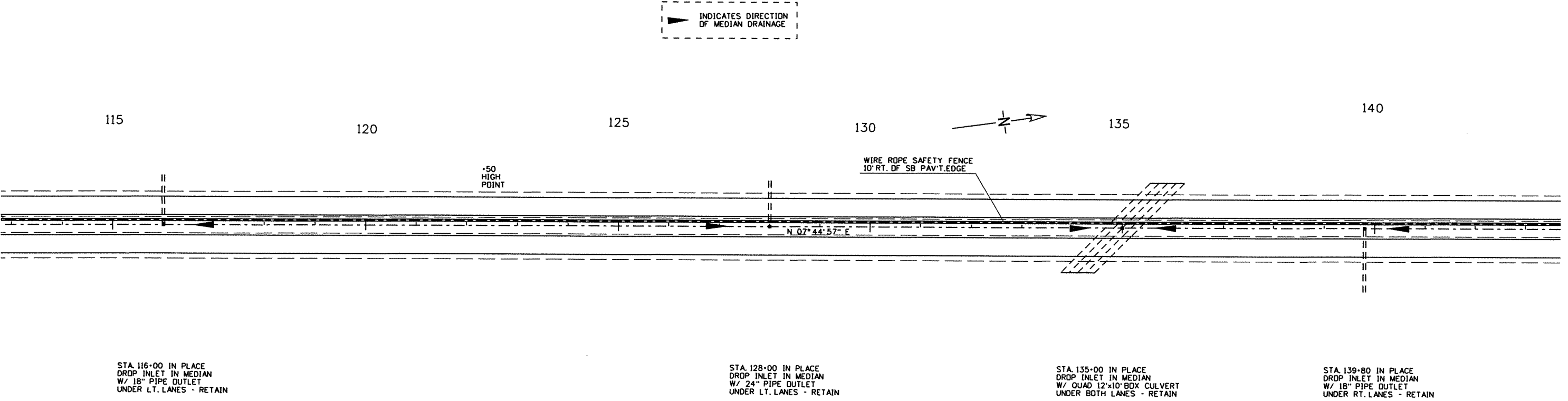
r061328.dgn / plan sheets 03/06/2012

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. 061328							33	54

2 PLAN SHEETS



INDICATES DIRECTION OF MEDIAN DRAINAGE

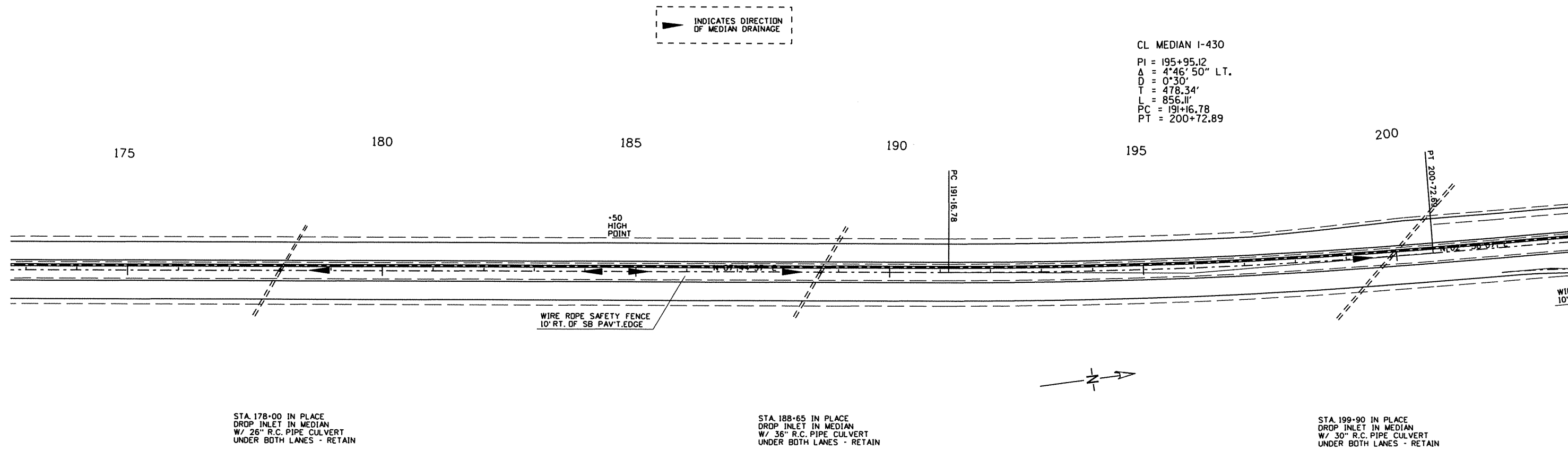
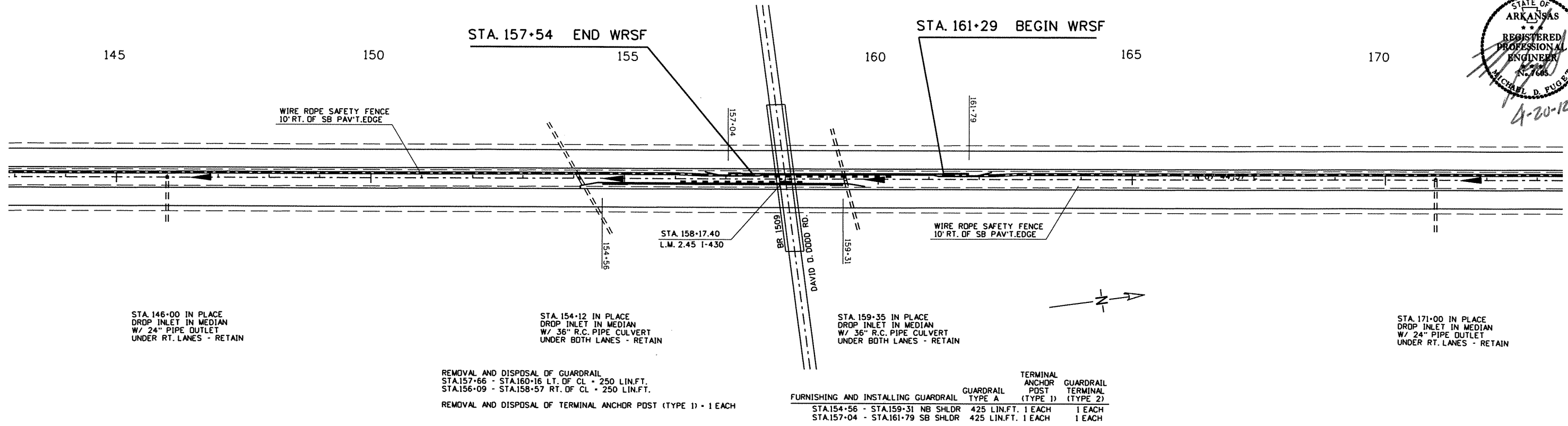


r061328.dgn / plan sheets 03/20/2012

PLAN SHEET STA.83+00 - STA.143+00

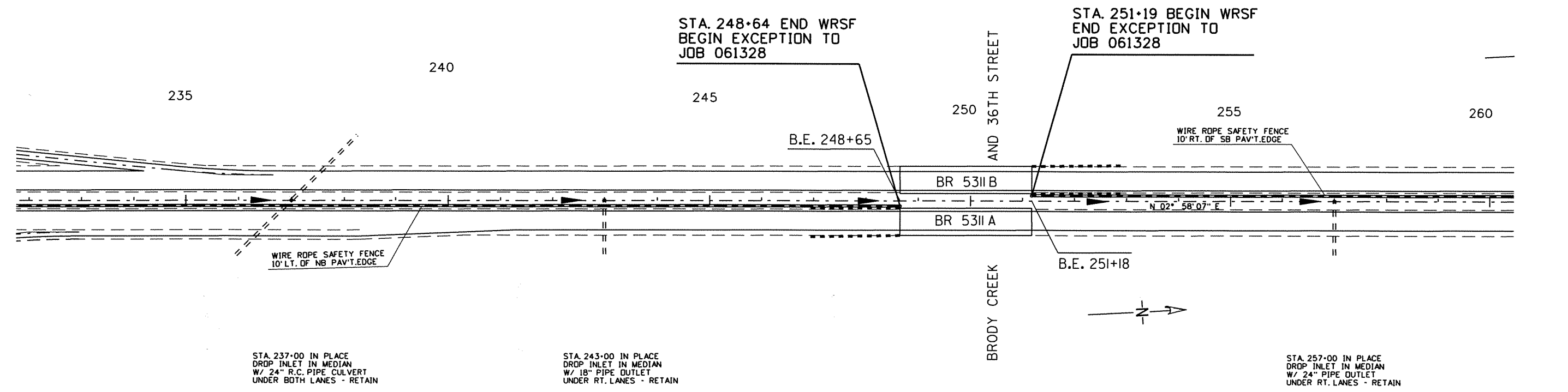
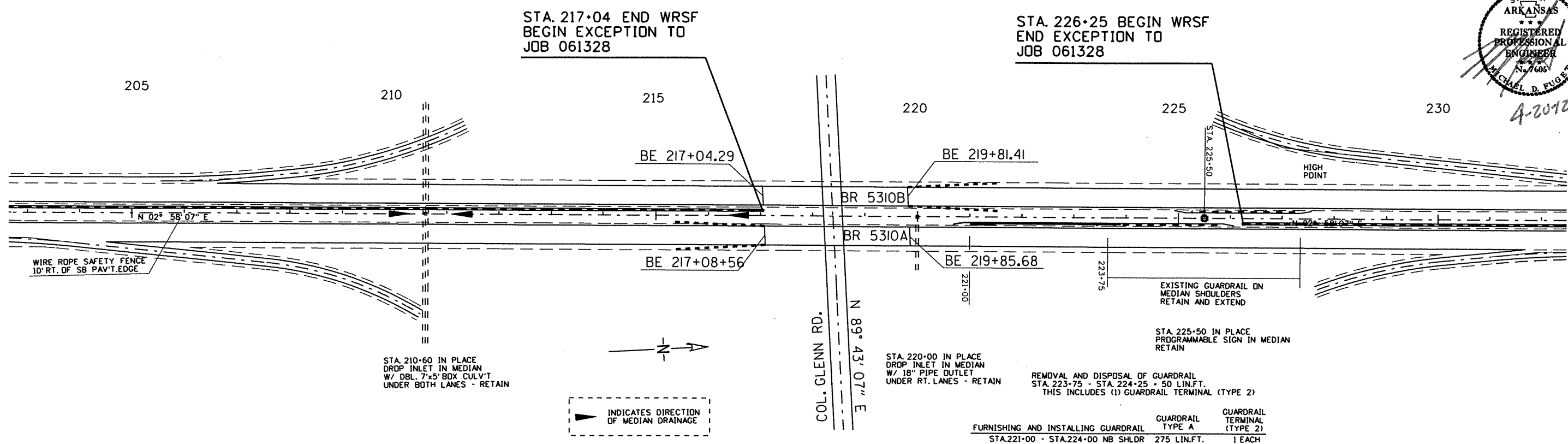
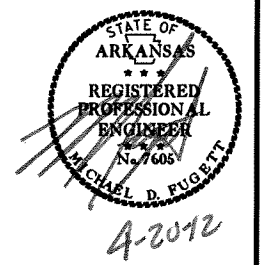
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	061328	34

② PLAN SHEETS



PLAN SHEET STA. 143+00 - STA. 203+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 061328	35	54
2								PLAN SHEETS	

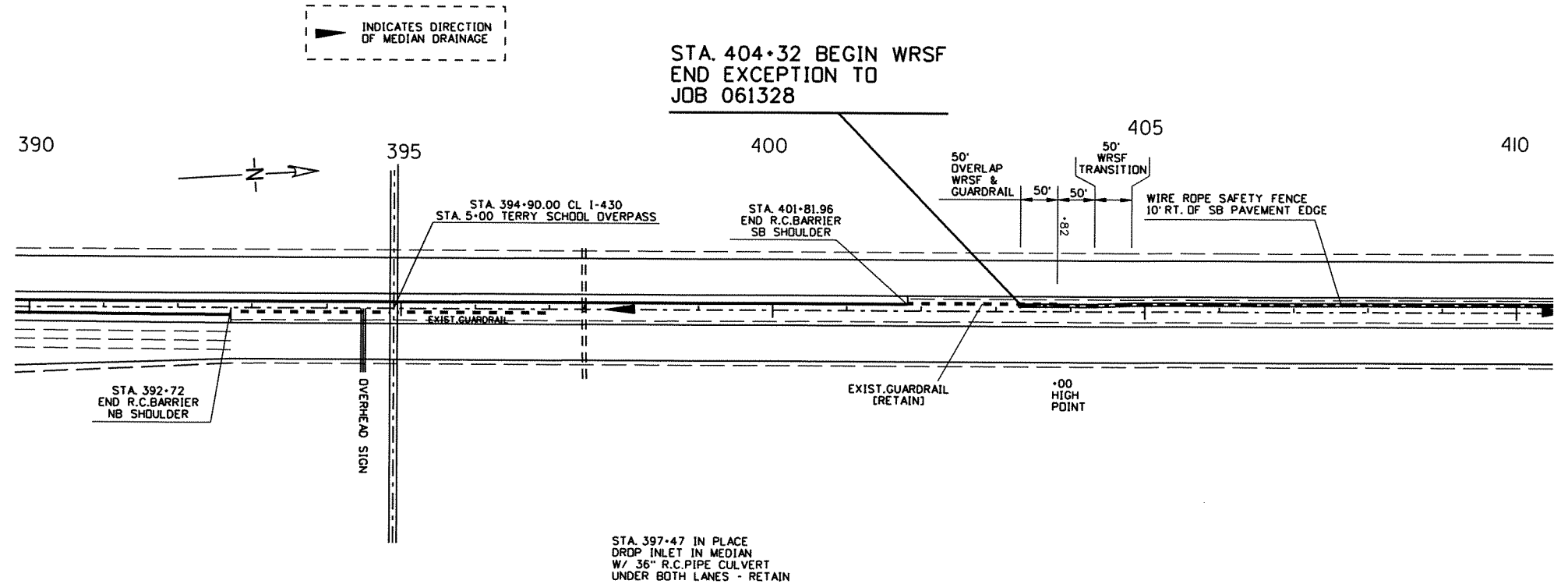
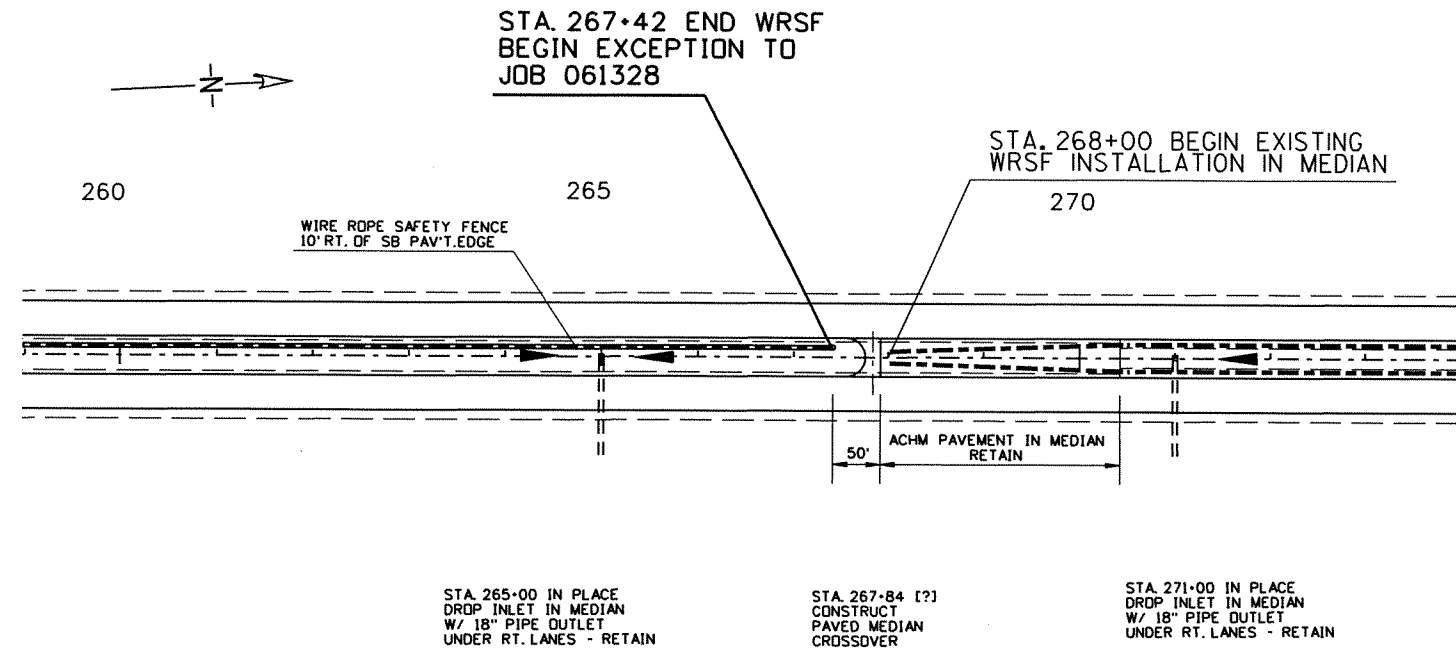


PLAN SHEET STA.203+00 - STA.260+00

r061328.dgn / plan sheets 03/02/2012

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.	061328		36	54

2 PLAN SHEETS



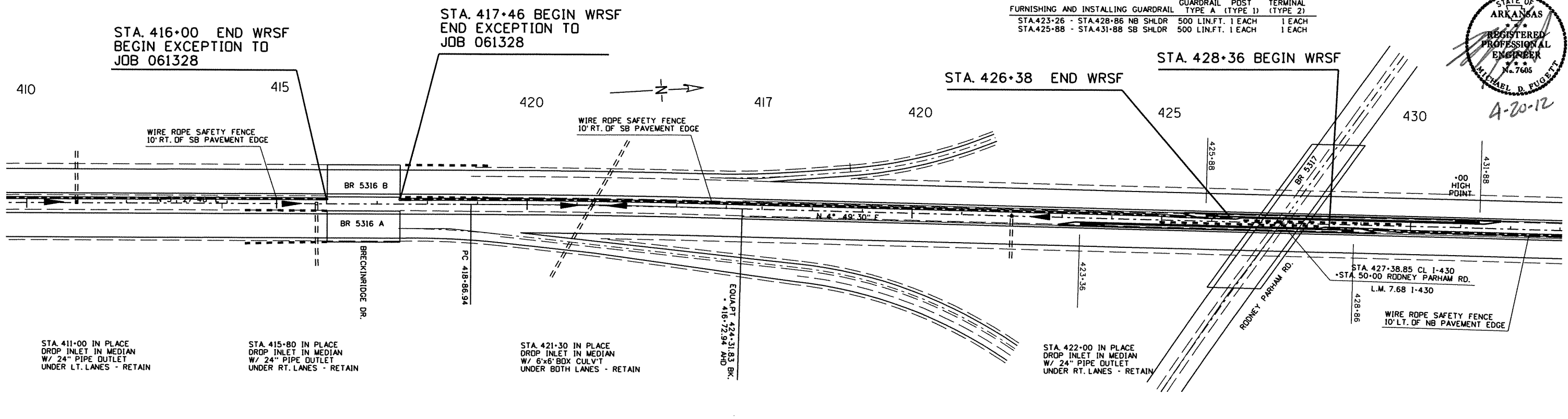
PLAN SHEET STA.260+00 - STA.280+00
AND STA.380+00 - STA.410+00

REMOVAL AND DISPOSAL OF GUARDRAIL
 STA.426+62 - STA.429+89 LT. OF CL - 325 LIN.FT.
 STA.424+89 - STA.428+15 RT. OF CL - 325 LIN.FT.
 REMOVAL AND DISPOSAL OF TERMINAL ANCHOR POST (TYPE 1) - 4 EACH

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	061328		37	54

2 PLAN SHEETS

FURNISHING AND INSTALLING GUARDRAIL	GUARDRAIL POST TYPE A (TYPE 1)	GUARDRAIL POST TYPE B (TYPE 2)
STA.423+26 - STA.428+86 NB SHLDR	500 LIN.FT. 1 EACH	1 EACH
STA.425+88 - STA.431+88 SB SHLDR	500 LIN.FT. 1 EACH	1 EACH



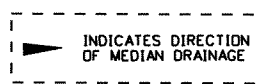
STA. 411+00 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE OUTLET
 UNDER LT. LANES - RETAIN

STA. 415+80 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE OUTLET
 UNDER RT. LANES - RETAIN

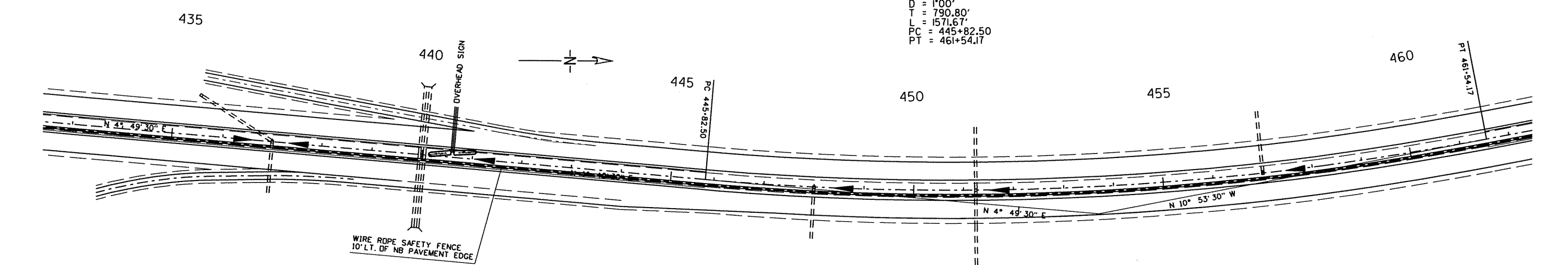
STA. 421+30 IN PLACE
 DROP INLET IN MEDIAN
 W/ 6"x6" BOX CULVERT
 UNDER BOTH LANES - RETAIN

STA. 422+00 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE OUTLET
 UNDER RT. LANES - RETAIN

STA. 427+38.85 CL I-430
 STA. 50+00 RODNEY PARHAM RD.
 L.M. 7.68 I-430



CL MEDIAN I-430
 PI = 453+75.30
 Δ = 15° 43' LT.
 D = 1'00'
 T = 790.80'
 L = 1571.67'
 PC = 445+82.50
 PT = 461+54.17



STA. 437+00 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE INLET
 UNDER LT. LANES - RETAIN
 AND 24" PIPE OUTLET
 UNDER RT. LANES - RETAIN

STA. 440+00 IN PLACE
 DROP INLET IN MEDIAN
 W/ TRIPL. 5'x5' BOX CULVERT
 UNDER BOTH LANES - RETAIN

STA. 440+60 IN PLACE
 (2) IMPACT ATTENUATION BARRIERS (TYPE A)
 IN MEDIAN AT O/H SIGN FOOTING - RETAIN

STA. 448+00 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE OUTLET
 UNDER RT. LANES - RETAIN

STA. 451+25 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE CULVERT
 UNDER BOTH LANES - RETAIN

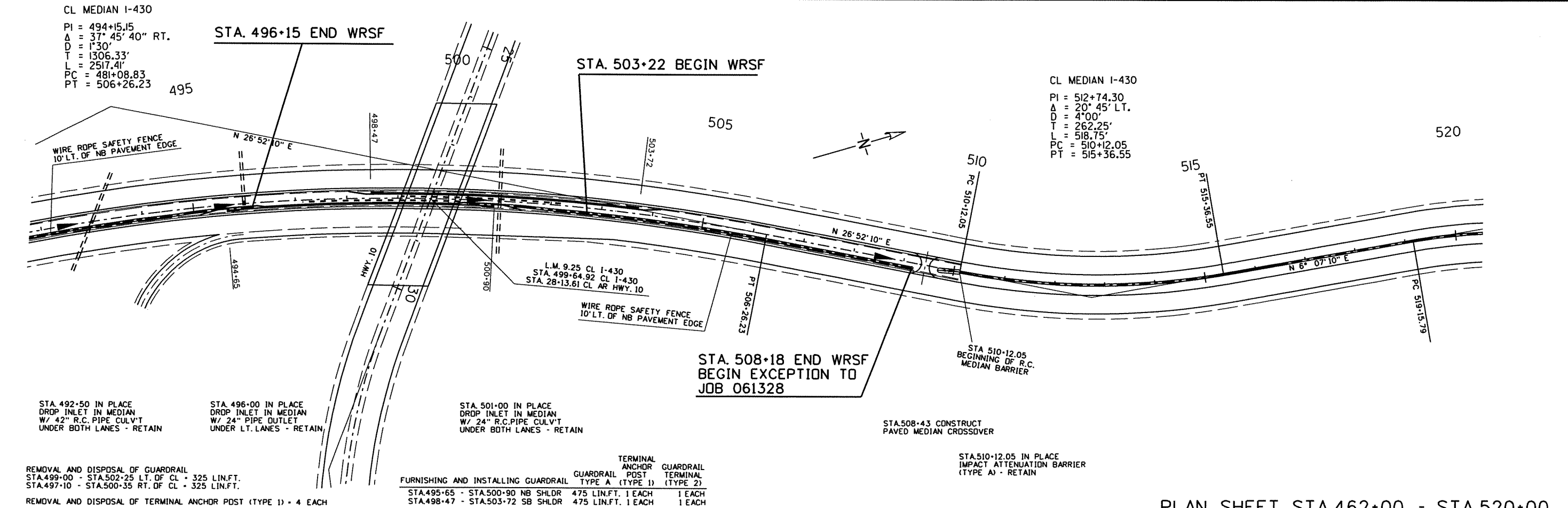
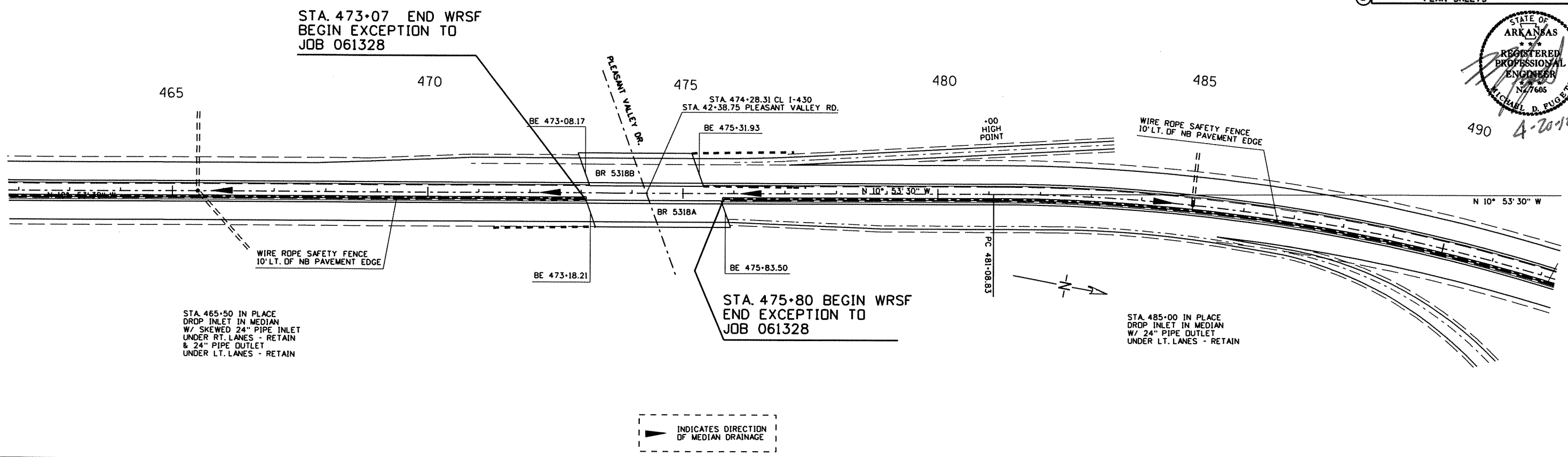
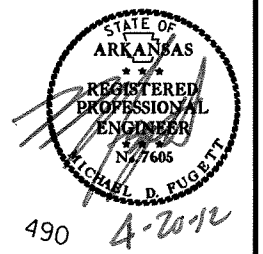
STA. 457+00 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE OUTLET
 UNDER LT. LANES - RETAIN

PLAN SHEET STA.410+00 - STA.462+00

03/02/2012 061328.dgn / plan sheets

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 061328	38	54

PLAN SHEETS

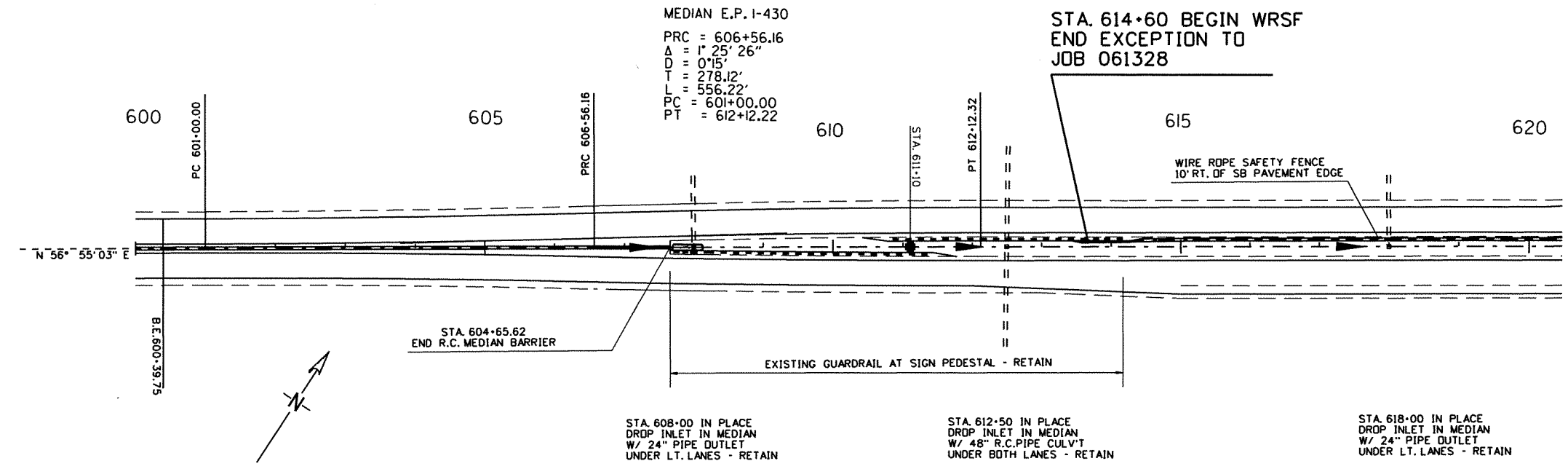
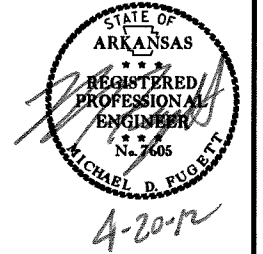


PLAN SHEET STA. 462+00 - STA. 520+00

r061328.dgn / plan sheets 03/20/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AD PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 061328							39	54

2 PLAN SHEETS

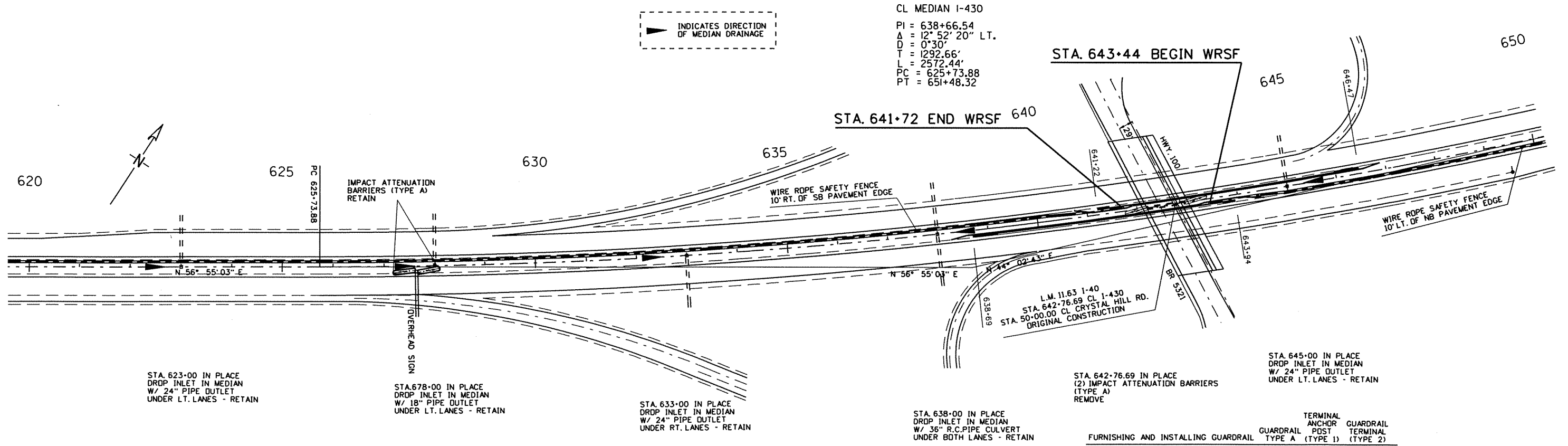


MEDIAN E.P. I-430
 PRC = 606+56.16
 Δ = 1° 25' 26"
 D = 0° 15'
 T = 278.12'
 L = 556.22'
 PC = 601+00.00
 PT = 612+12.22

STA. 614+60 BEGIN WRSF
 END EXCEPTION TO
 JOB 061328

CL MEDIAN I-430
 PI = 638+66.54
 Δ = 12° 52' 20" LT.
 D = 0° 30'
 T = 1292.66'
 L = 2572.44'
 PC = 625+73.88
 PT = 651+48.32

INDICATES DIRECTION OF MEDIAN DRAINAGE



STA. 643+44 BEGIN WRSF

STA. 641+72 END WRSF

STA. 642+76.69 IN PLACE
 (2) IMPACT ATTENUATION BARRIERS
 (TYPE A)
 REMOVE

STA. 645+00 IN PLACE
 DROP INLET IN MEDIAN
 W/ 24" PIPE OUTLET
 UNDER LT. LANES - RETAIN

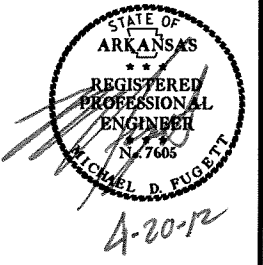
FURNISHING AND INSTALLING GUARDRAIL	GUARDRAIL TYPE A	ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
STA. 638+69 - STA. 643+94 NB SHLDR	475 LIN.FT.	1 EACH	1 EACH
STA. 641+22 - STA. 646+47 SB SHLDR	475 LIN.FT.	1 EACH	1 EACH

r061328.dgn / plan sheets 03/20/2012

PLAN SHEET STA.600+00 - STA.650+00

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	061328		40	54

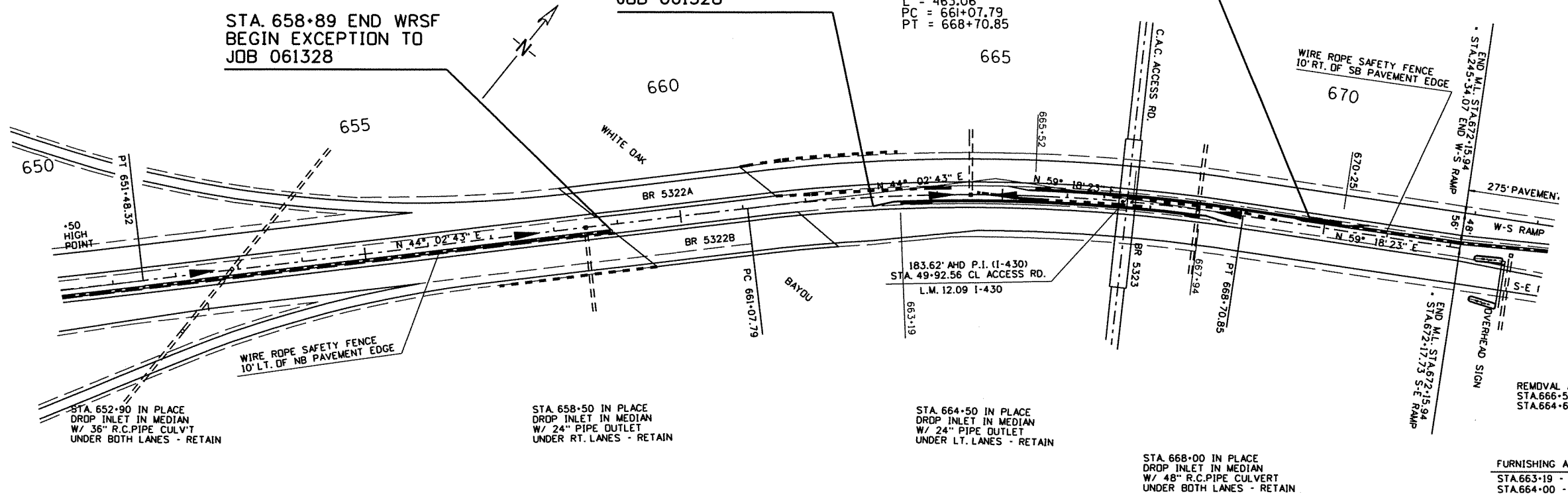
PLAN SHEETS



CL MEDIAN I-430
 PI = 664+91.59
 Δ = 15° 15' 40" RT.
 D = 2° 00'
 T = 383.80'
 L = 463.06'
 PC = 661+07.79
 PT = 668+70.85

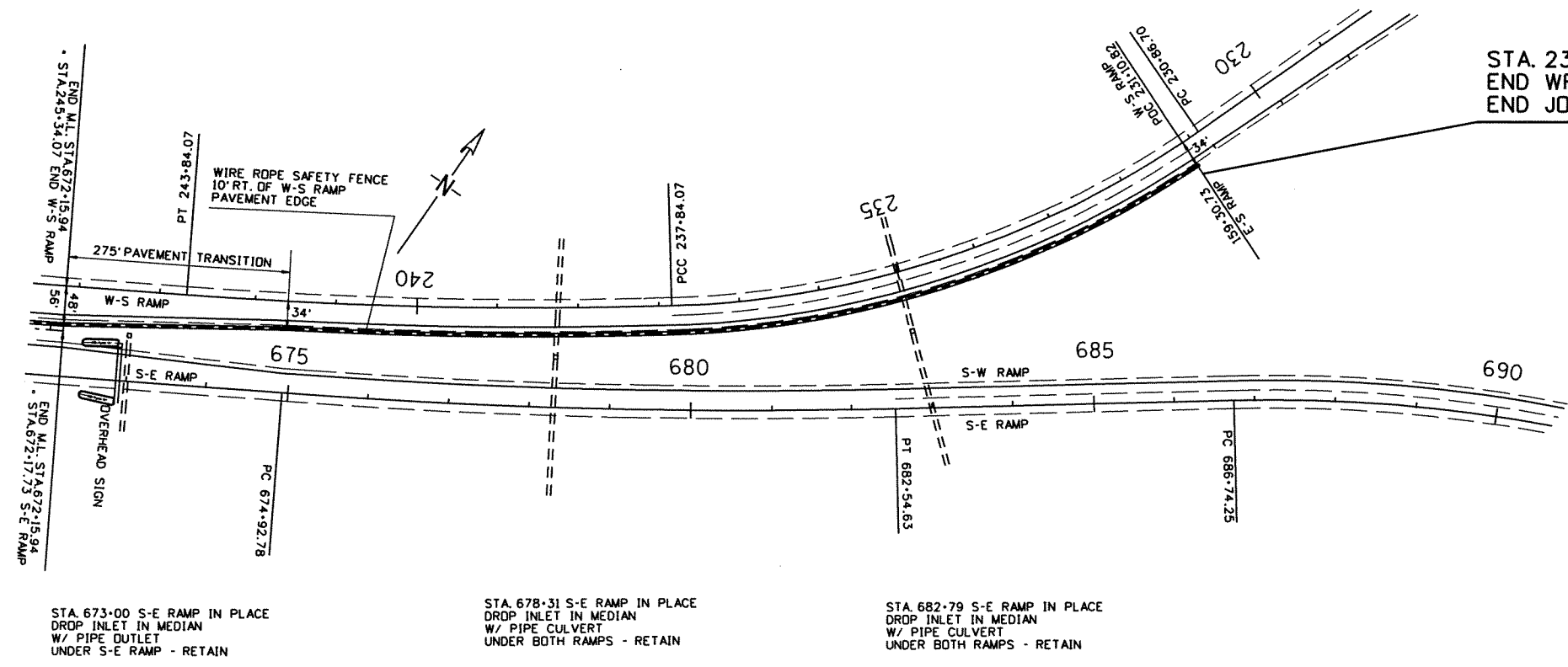
STA. 662+76
 END EXCEPTION TO
 JOB 061328

STA. 669+75 BEGIN WRSF



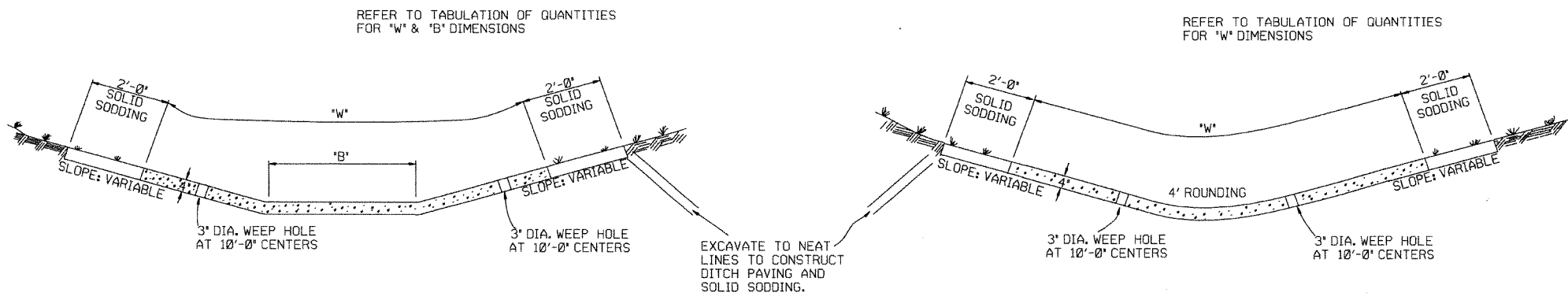
INDICATES DIRECTION OF MEDIAN DRAINAGE

STA. 231+10.82 W-S RAMP
 END WRSF
 END JOB 061328



PLAN SHEET STA. 650+00 - STA. 684+00

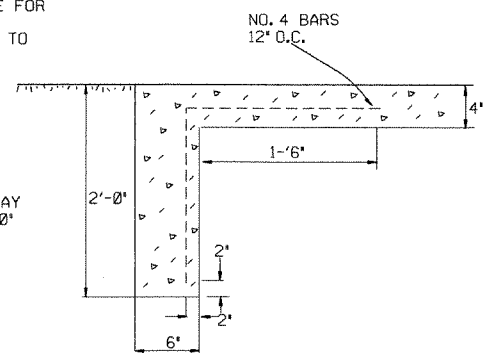
r061328.dgn / plan sheets 03/20/2012



TYPE A

TYPE B

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



TOE WALL DETAIL FOR CONCRETE DITCH PAVING

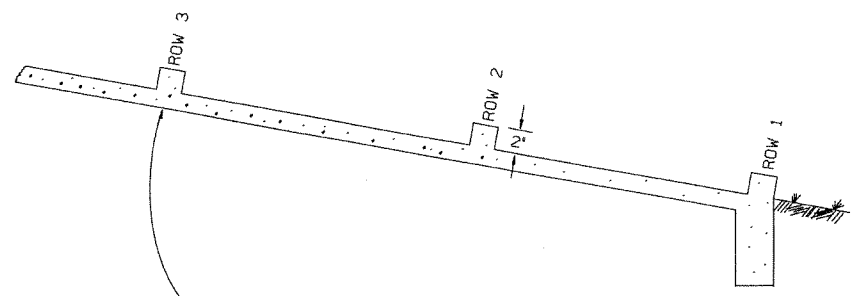
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

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.

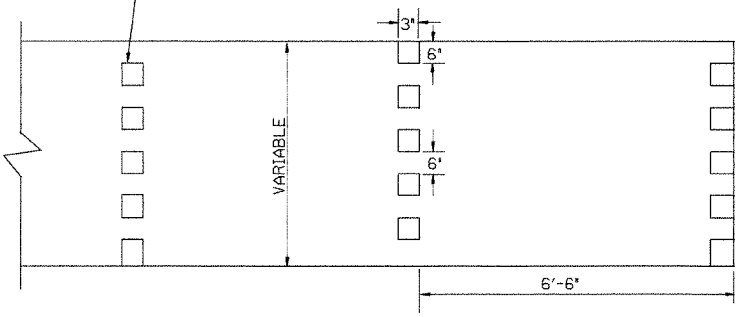
SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

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.



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

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



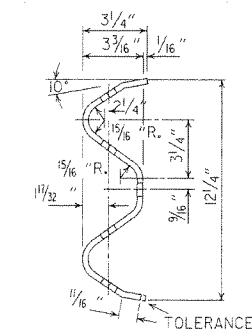
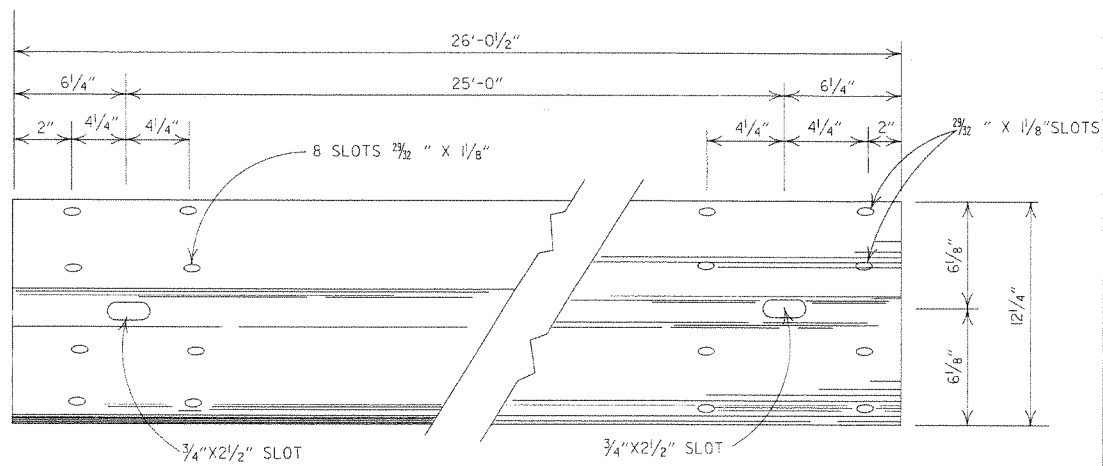
ENERGY DISSIPATORS
(NO SCALE)

11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	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	
11-1-84	EXCAVATION DETAILS ADDED	
	TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72
DATE	REVISION	DATE FILM'D

ARKANSAS STATE HIGHWAY COMMISSION

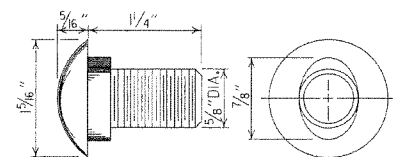
CONCRETE DITCH PAVING

STANDARD DRAWING CDP-1

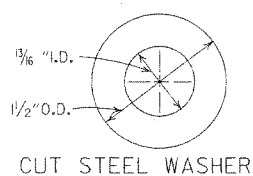


DETAILS OF W-BEAM GUARD RAIL

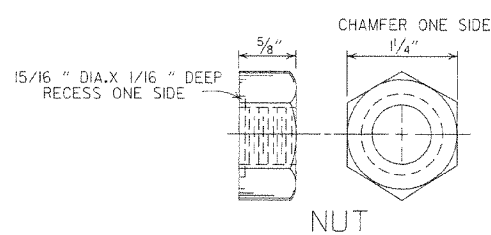
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



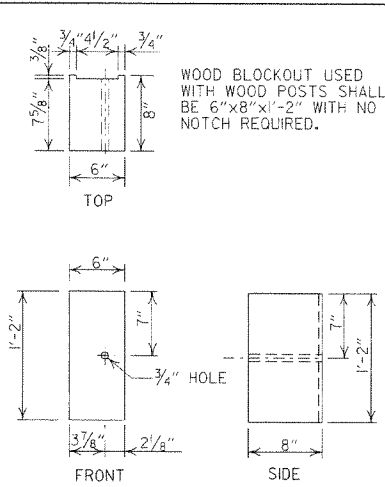
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



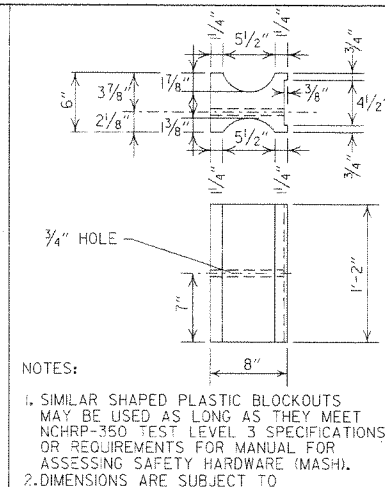
CUT STEEL WASHER



NUT

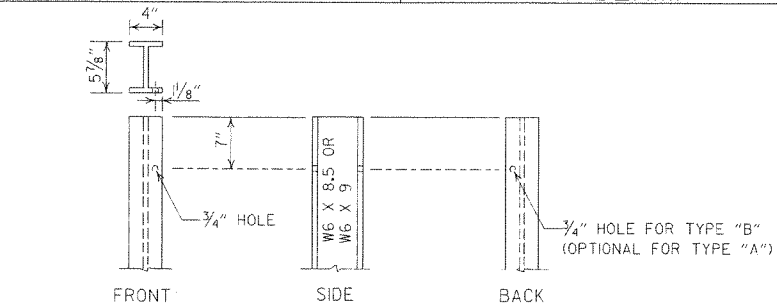


WOOD BLOCKOUT (W-BEAM)

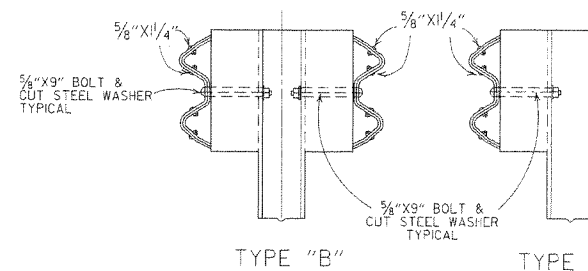


PLASTIC BLOCKOUT (W-BEAM)

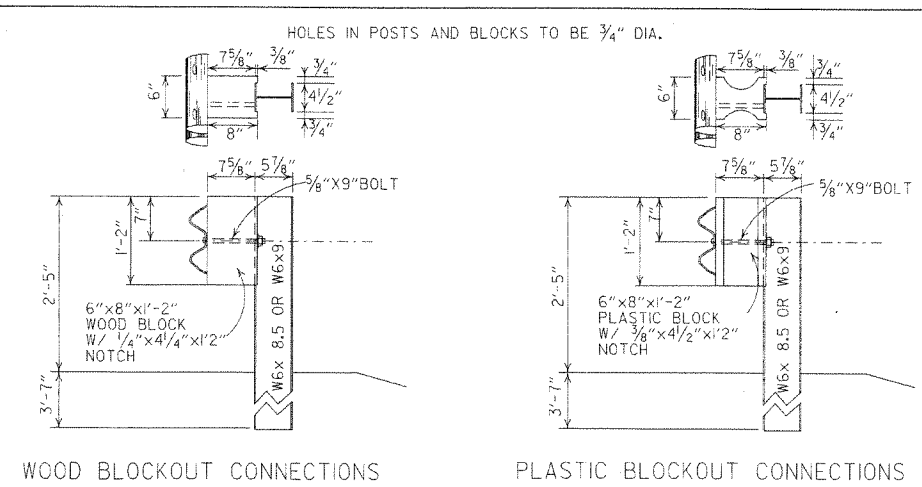
NOTES:
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.



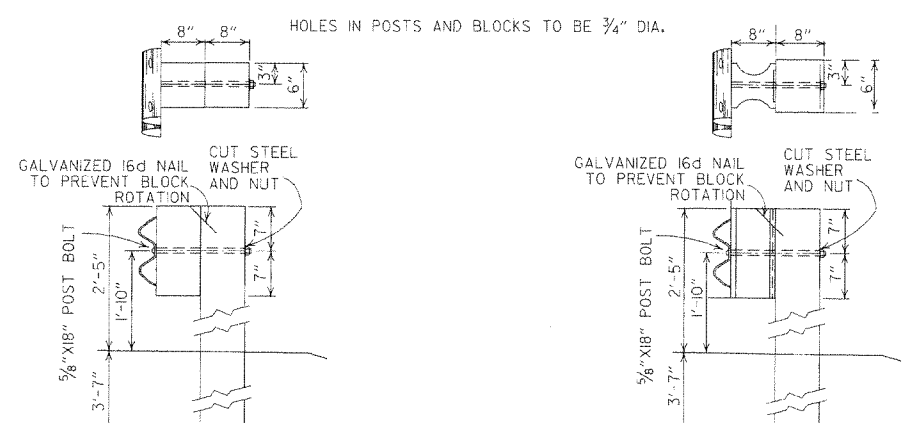
STEEL POST



DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



WOOD BLOCKOUT CONNECTIONS
PLASTIC BLOCKOUT CONNECTIONS
DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



WOOD BLOCKOUT CONNECTIONS
PLASTIC BLOCKOUT CONNECTIONS
DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

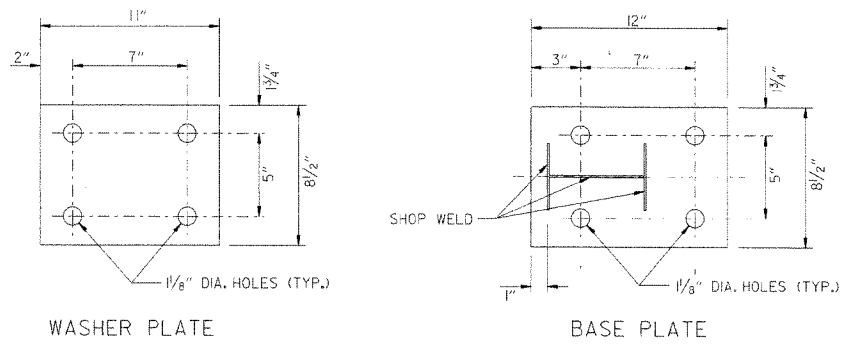
ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.
W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED 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 (1400 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.

7-14-80	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-89	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	
11-2-00	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 ANCH. 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

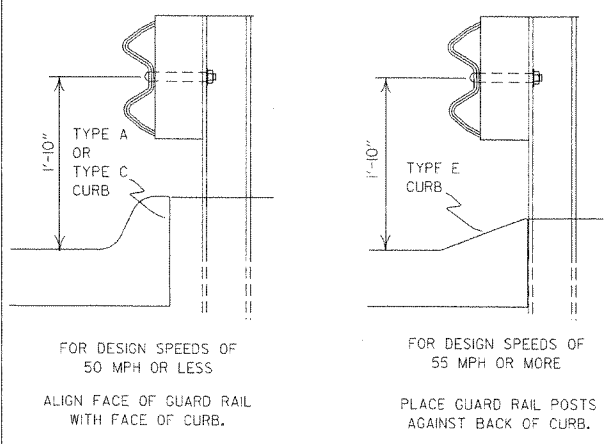
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8

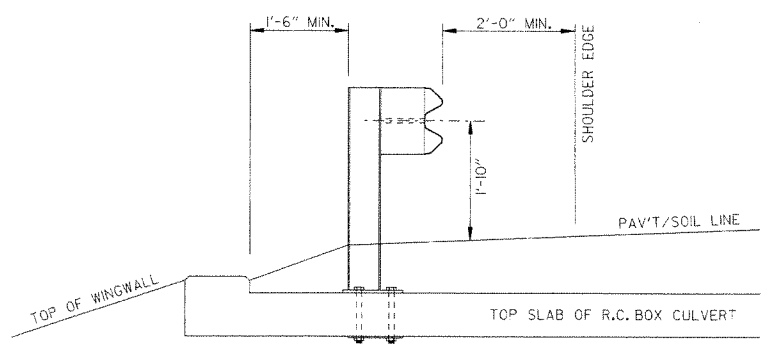


Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.

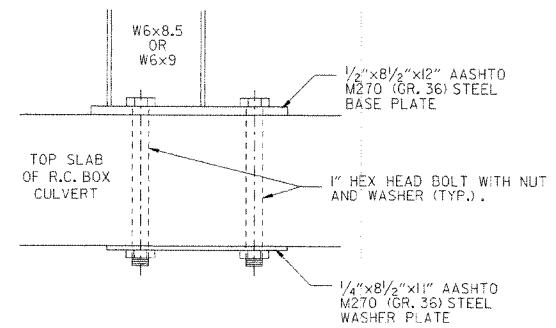


DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

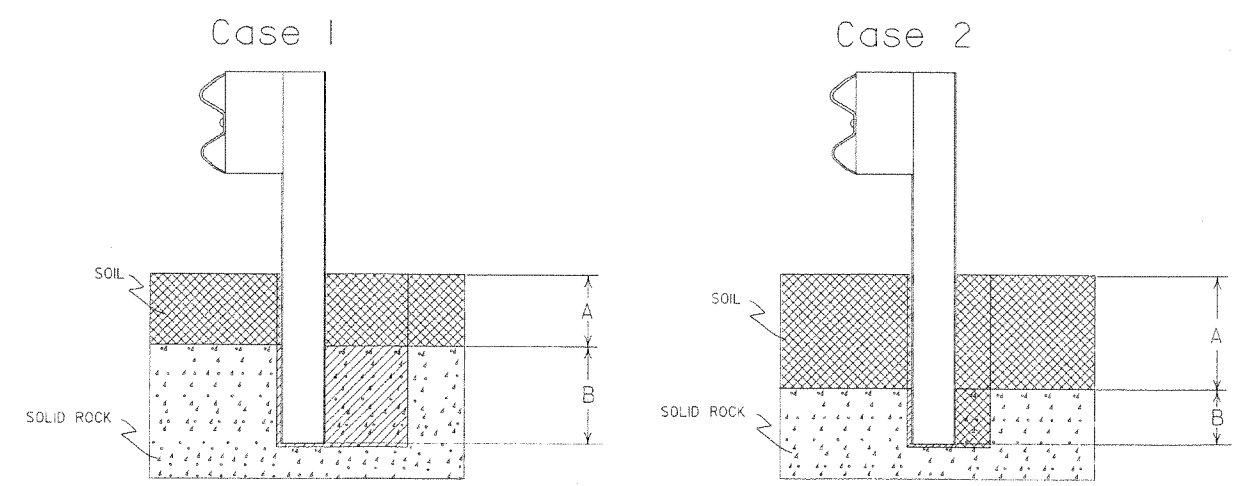
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



SECTION A-A

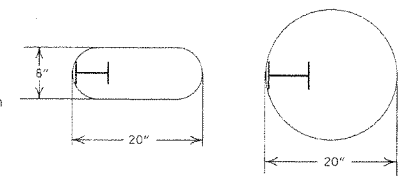


DETAIL OF CONNECTION



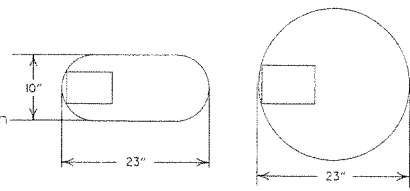
Plan View Steel Posts

Either hole configuration acceptable



Plan View Wood Posts

Either hole configuration acceptable



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

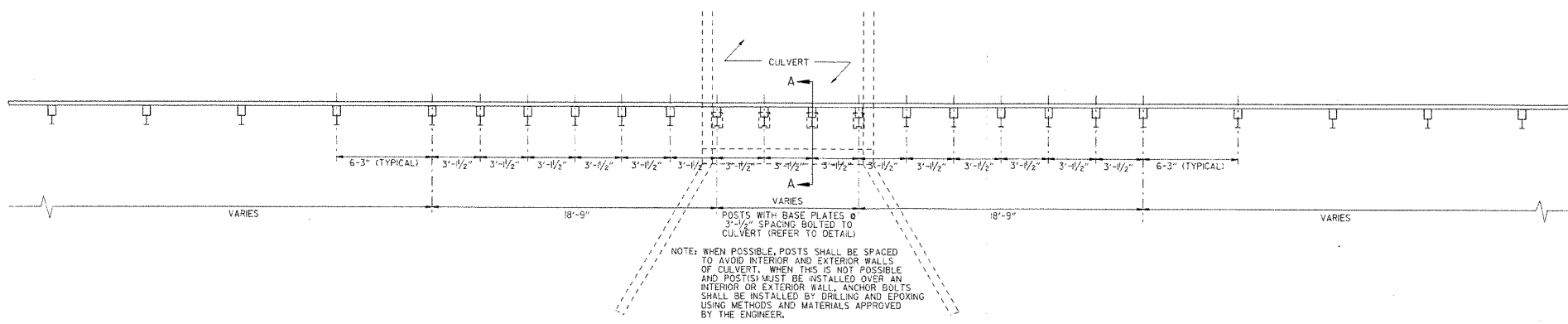
Zone A: Backfill according to Section 617.03(a).

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

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

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

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



NOTE: WHEN POSSIBLE, POSTS SHALL BE SPACED TO AVOID INTERIOR AND EXTERIOR WALLS OF CULVERT. WHEN THIS IS NOT POSSIBLE AND POSTS MUST BE INSTALLED OVER AN INTERIOR OR EXTERIOR WALL, ANCHOR BOLTS SHALL BE INSTALLED BY DRILLING AND EPOXYING USING METHODS AND MATERIALS APPROVED BY THE ENGINEER.

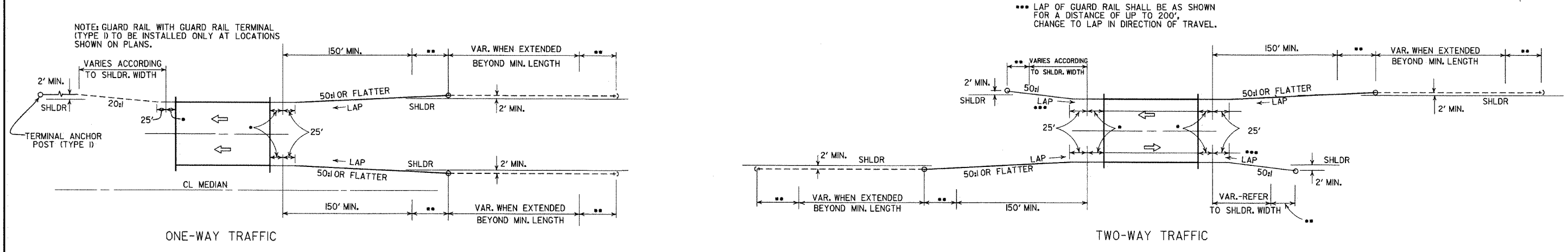
NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DRWG. GR-8.

7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
4-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS	
3-30-00	REMOVED CONCRETE INSERT ANCHOR	
8-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT; ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULVERT; DELETED DET. OF STEEL LINE POST CONN. & ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK	
4-3-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
6-2-94	REVISED ALTERNATE POST SIZE	
8-5-93	REVISED STEEL POST SIZE	
10-1-92	REDRAWN & REVISED	10-1-92
8-2-90	DEL. WASHER ON ANCHOR ASSEMBLY CONFORMED TO 1988 SPECS	8-2-90
7-15-88	CONFORMED TO 1988 SPECS	
3-4-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	712-10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-9-87	REDRAWN & REVISED	803-10-9-87
DATE	REVISION	DATE FILM

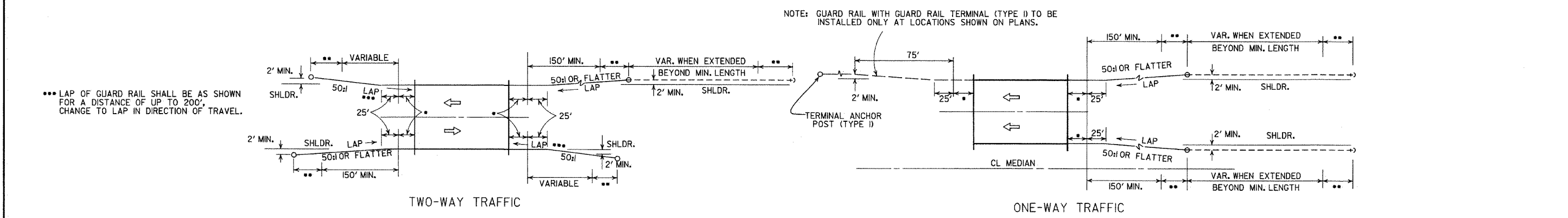
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

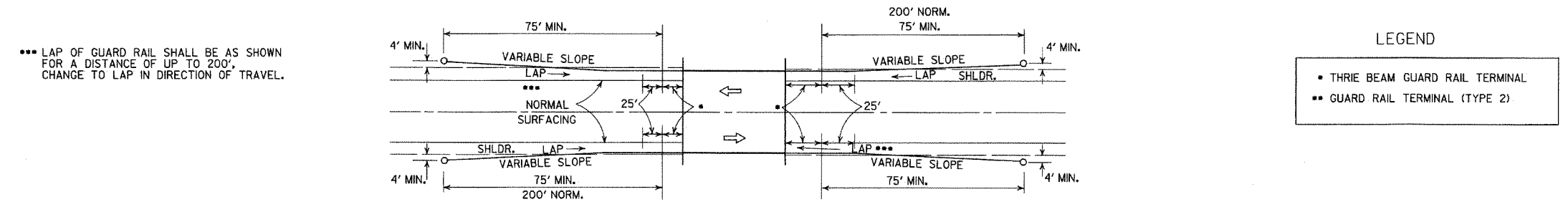
STANDARD DRAWING GR-8A



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

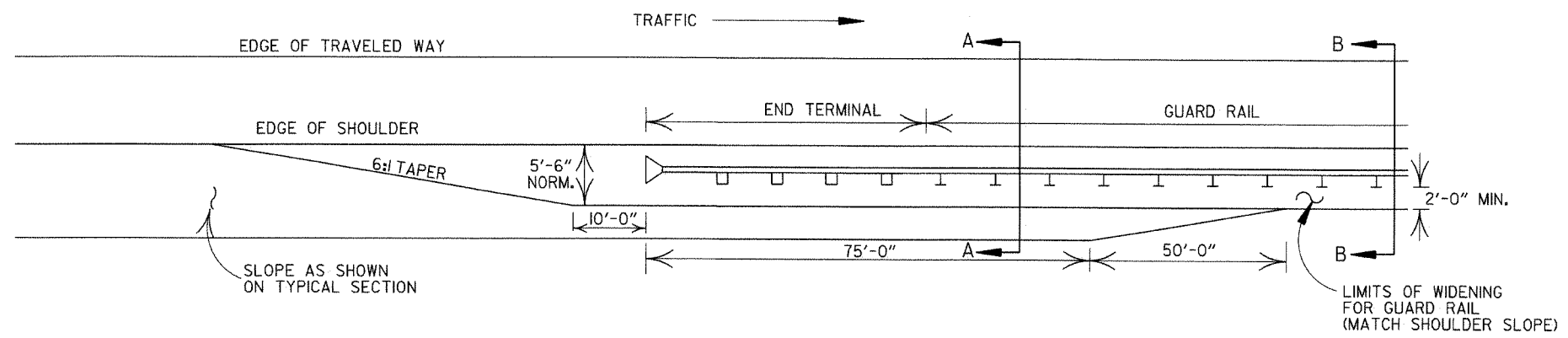


METHOD OF INSTALLATION OF GUARD RAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

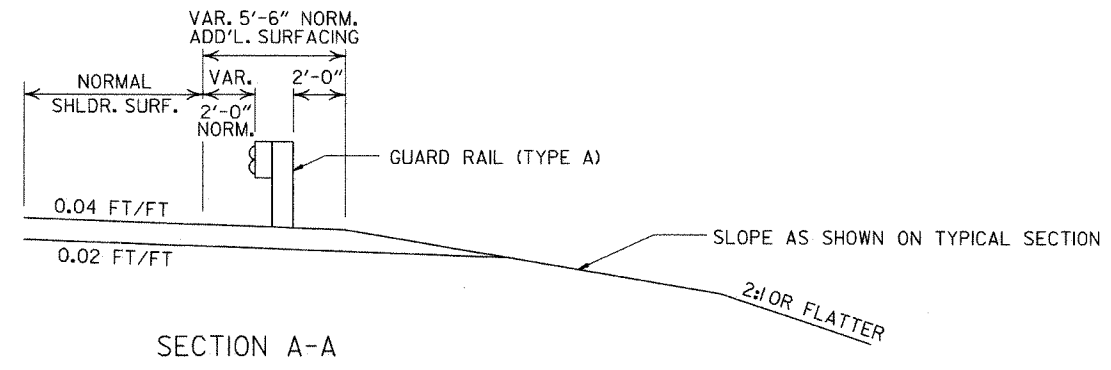


METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

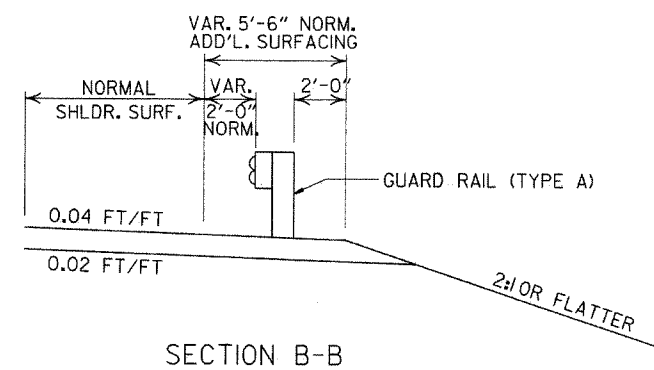
ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GR-9		
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
10-9-87	ADDED NOTE	
10-9-87	REDRAWN & REVISED	
DATE	REVISION	DATE FILM



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

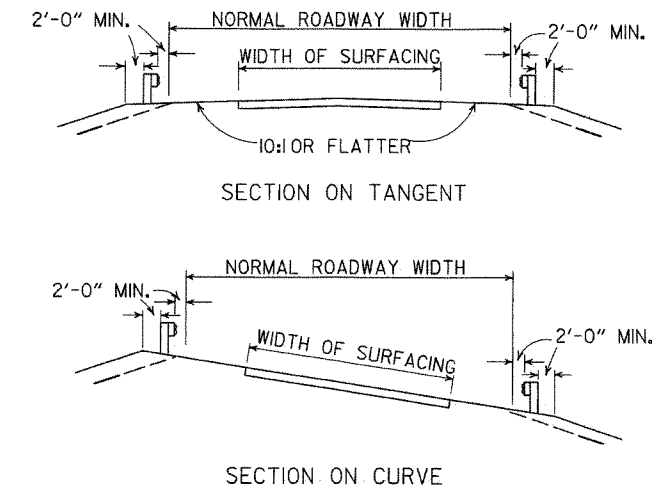


SECTION A-A

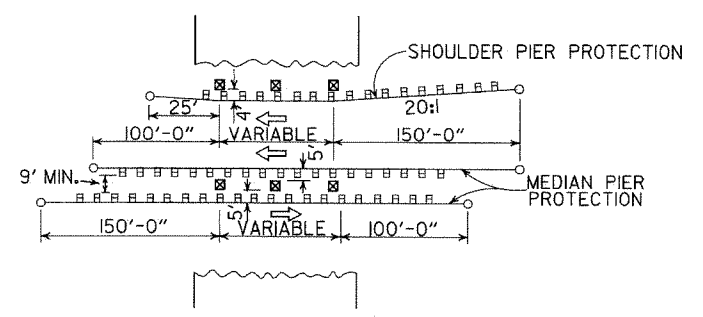


SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

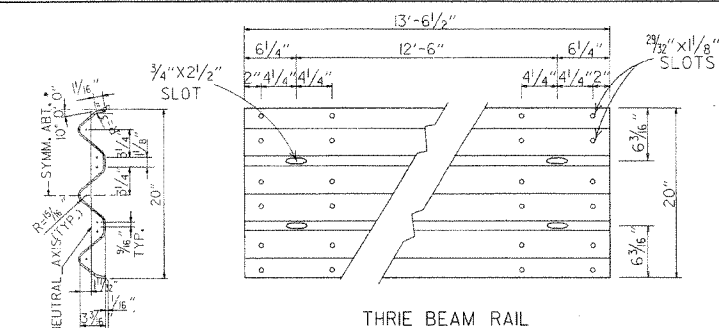


DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

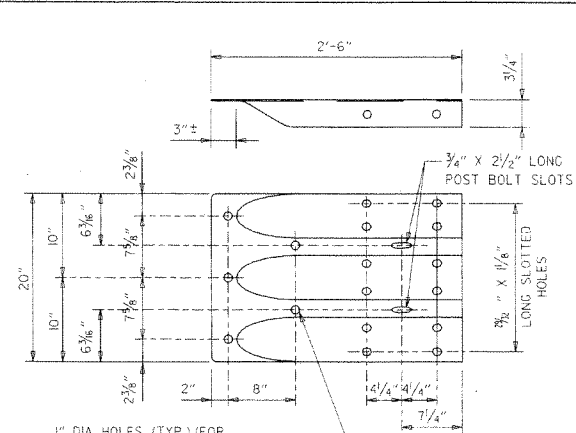


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

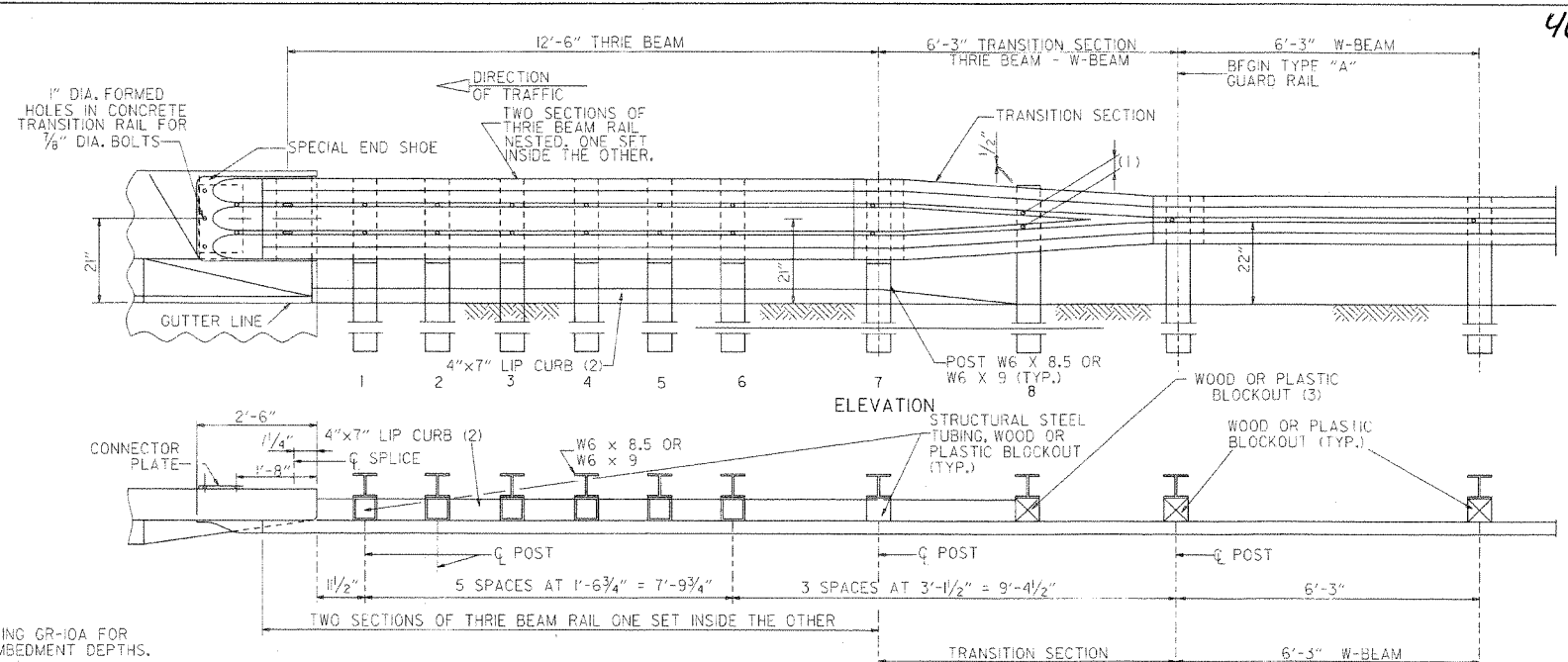
				ARKANSAS STATE HIGHWAY COMMISSION	
				GUARD RAIL DETAILS	
				STANDARD DRAWING GR-9A	
4-17-08	MINOR REVISION				
11-10-05	DRAWN				
DATE	REVISION	DATE	FILE		



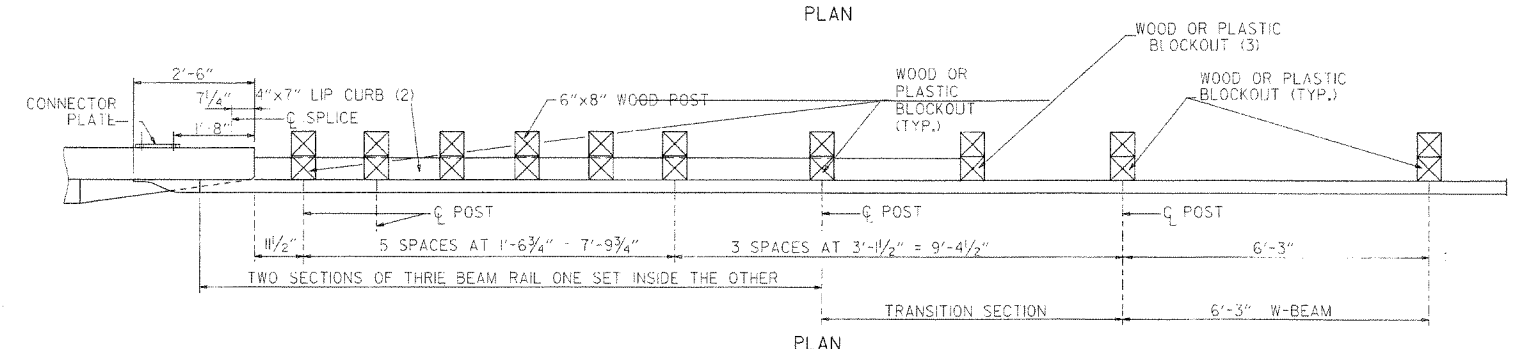
SECTION THRU THRIE BEAM RAIL



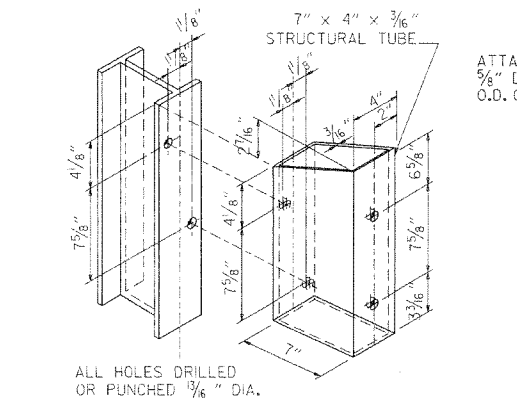
SPECIAL END SHOE



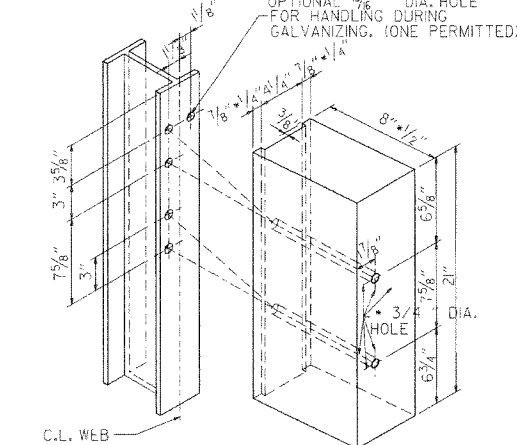
ELEVATION



PLAN



STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

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

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

1" DIA. HOLES (TYP.) FOR 7/8" DIA. HIGH-STRENGTH BOLTS

OPTIONAL 1/8" DIA. HOLE FOR HANDLING DURING GALVANIZING. (ONE PERMITTED)

(2) 2" (TOLERANCE +1/4", -1/4")

(2) 4 1/4" x 4 1/4" (2)

3/8" x 1 1/8" SPLICE BOLT SLOT HOLES

3/4" x 2 1/2" POST BOLT SLOT

DIRECTION OF TRAFFIC

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

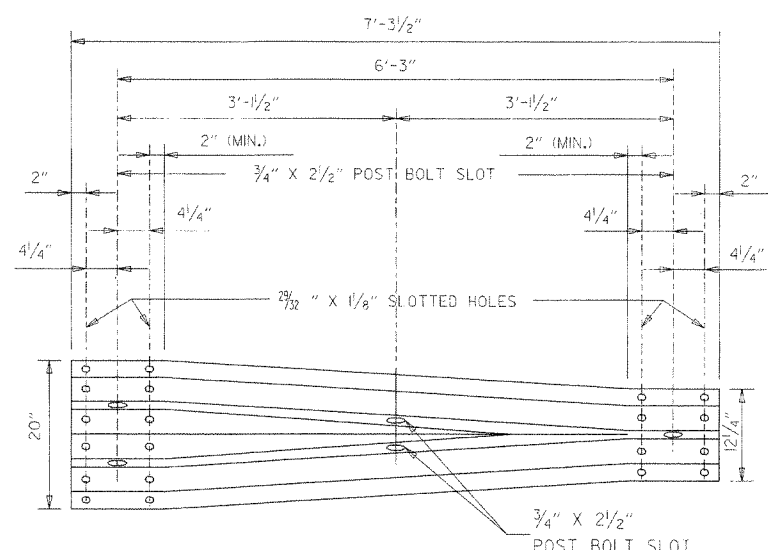
3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

3/4" x 2 1/2" POST BOLT SLOT

THRIE BEAM RAIL SPLICE AT POST



TRANSITION SECTION

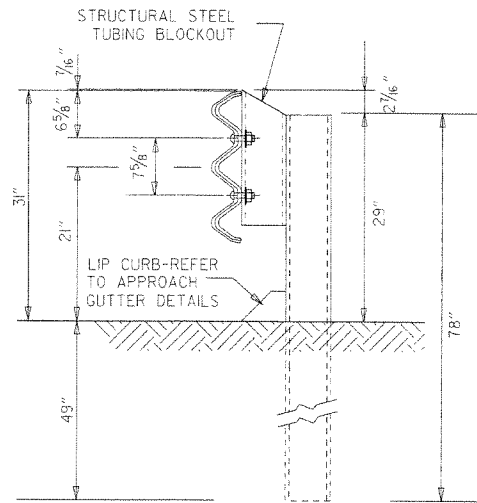
- (1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
- (2) REFER TO APPROACH GUTTER DETAILS.
- (3) LENGTH OF BLOCKOUT ON POST B TO BE MODIFIED TO FIT RAIL WIDTH.

THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

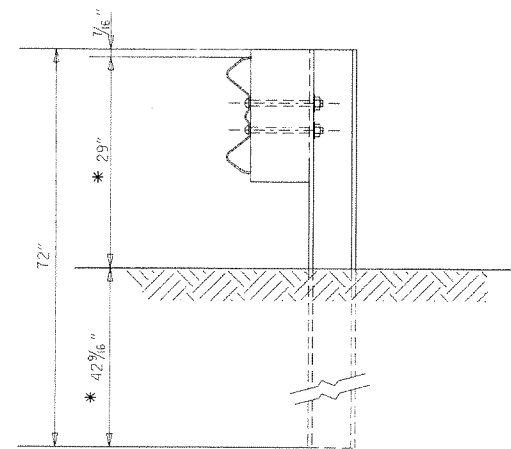
GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I. RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION. ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT. ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11. WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 #) OR NO. 1 1350 f SOUTHERN PINE. REFER TO STD. DRWG. GR-10A FOR POST DETAILS. USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

7-14-10	RAISED HEIGHT OF W-BEAM 1"		ARKANSAS STATE HIGHWAY COMMISSION
11-29-07	ADDED PLASTIC BLOCKOUTS		
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT		GUARD RAIL DETAILS
11-18-04	REVISED GENERAL NOTES		
10-9-03	REVISED GENERAL NOTES		STANDARD DRAWING GR-10
4-10-03	REVISED GENERAL NOTES		
8-22-02	REVISED NOTE (2)		
6-29-00	MOVED DIMENSION LINES		
5-18-00	ADDED NOTE		
3-30-00	DRAWN & ISSUED		
DATE	REVISION	DATE FILM	

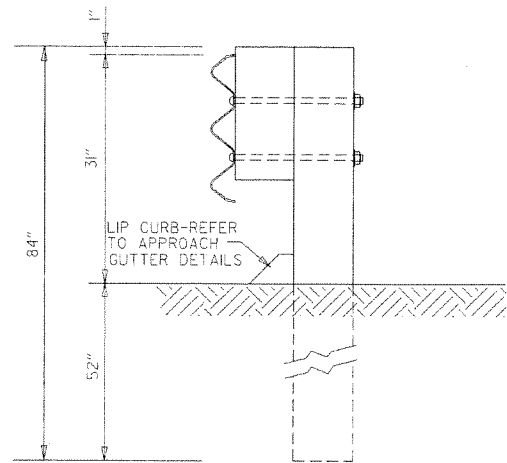


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POST
POSTS 1-7

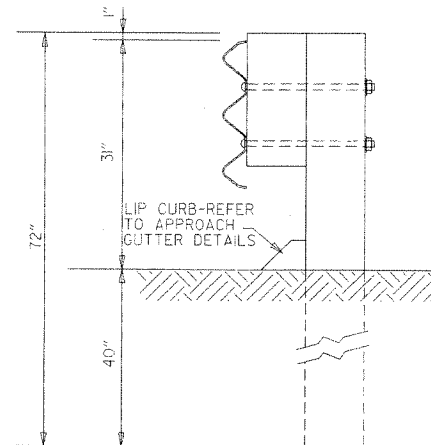


W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

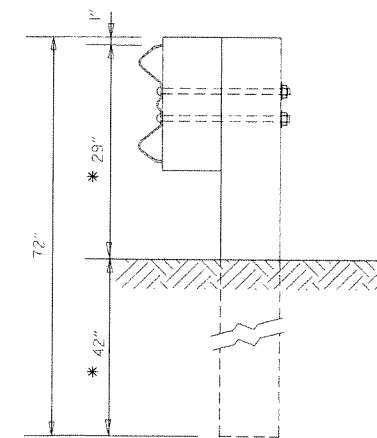
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



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



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



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

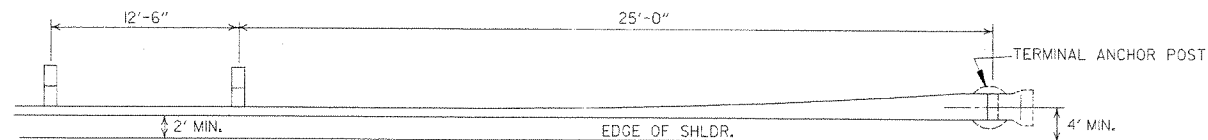
GENERAL NOTES:
RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

ARKANSAS STATE HIGHWAY COMMISSION

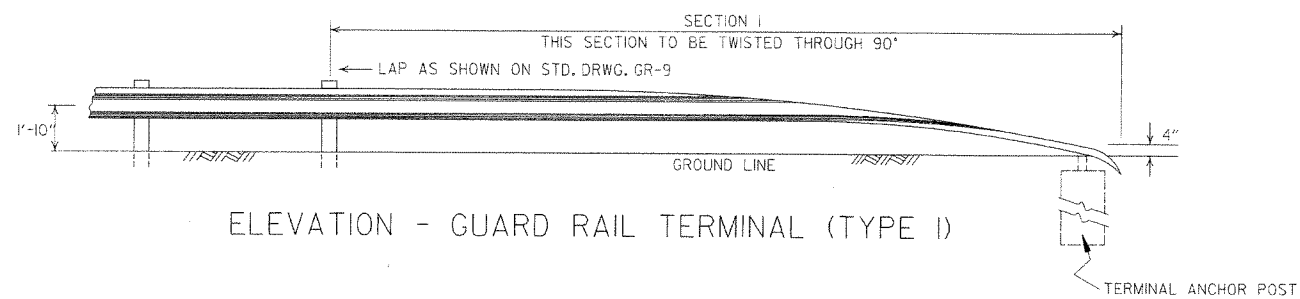
GUARD RAIL DETAILS

STANDARD DRAWING GR-10A

DATE	REVISION	DATE FILM
7-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	

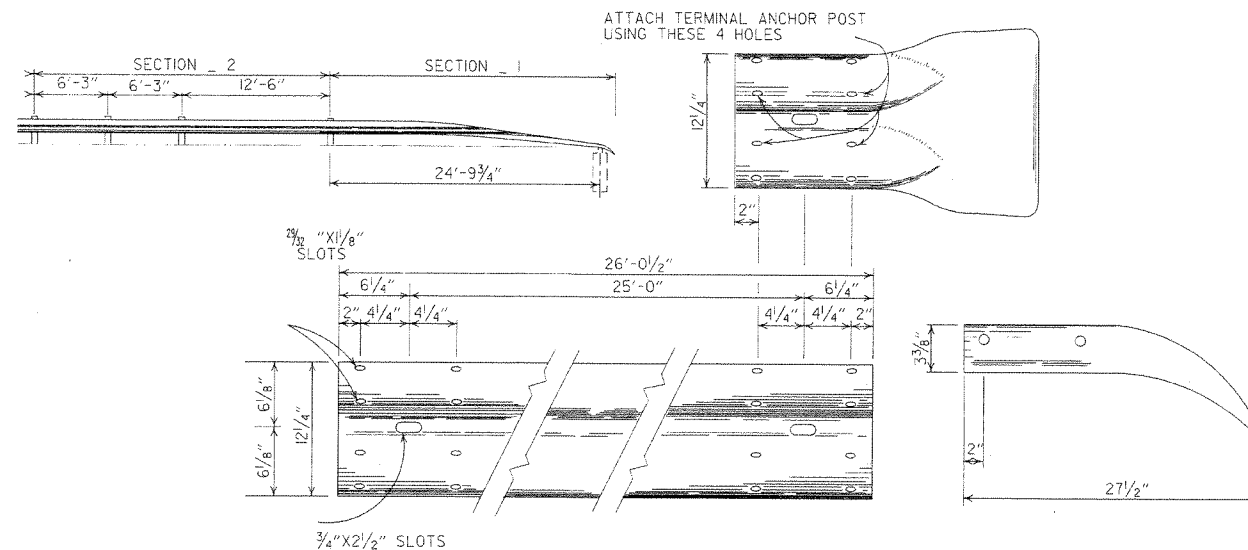


PLAN - GUARD RAIL TERMINAL (TYPE I)



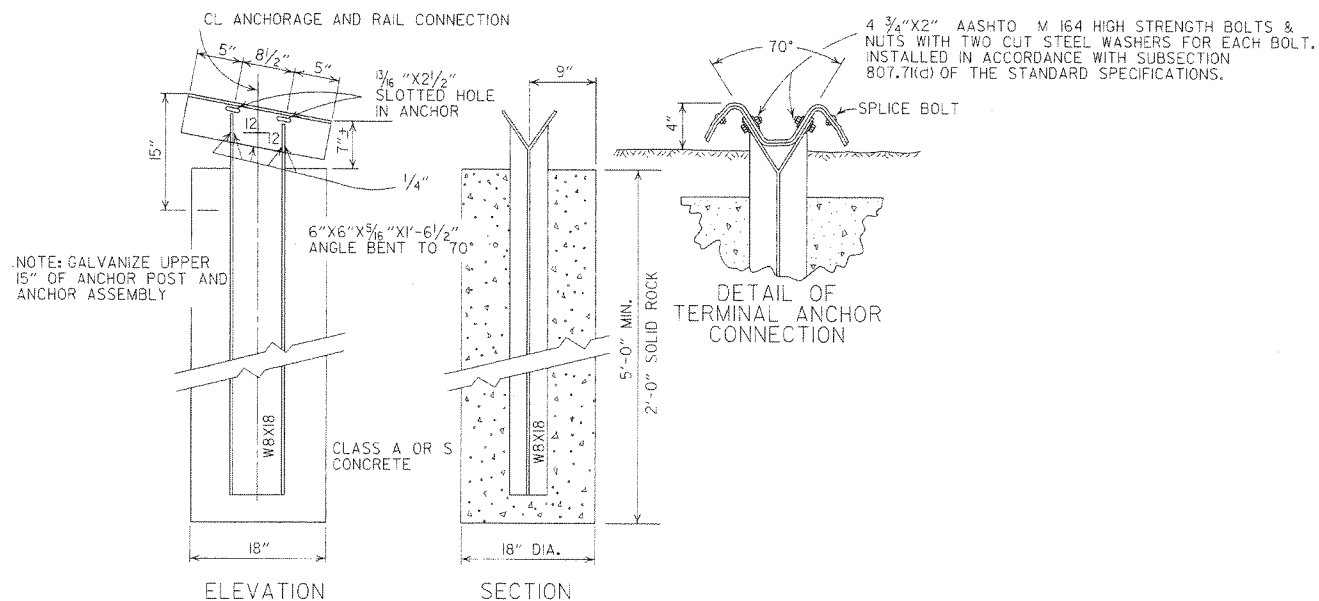
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

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




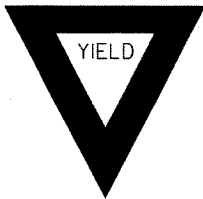

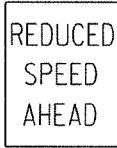

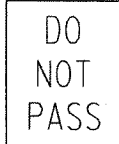
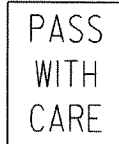

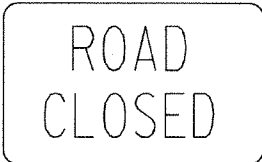
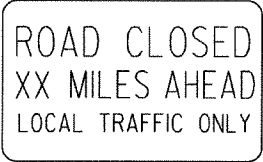
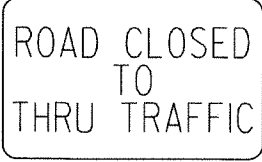
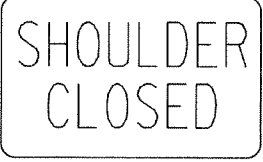
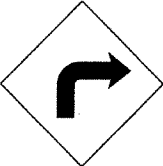





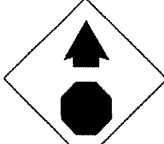
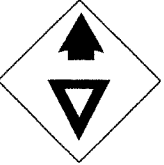
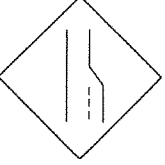



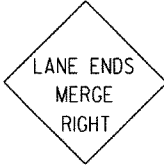


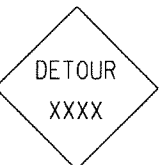







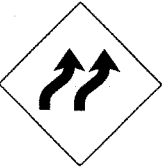


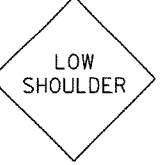
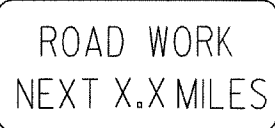
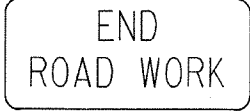
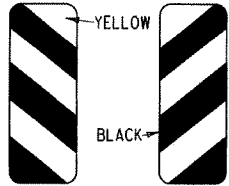
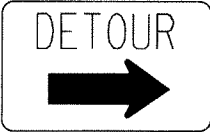

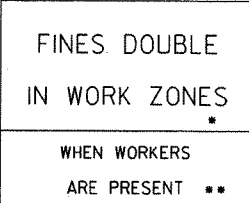
DETAIL OF TERMINAL ANCHOR POST (TYPE I)

NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 WF 17 POST IF CONTRACTOR SO DESIRES.

ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GRT-I		
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	
11-1-92	ADDED NOTE FOR PAYMENT	11-11-92
10-1-92	DRAWN & ISSUED	10-1-92
DATE	REVISION	DATE/FILM

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 W16-2 24"</p> <p>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"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>

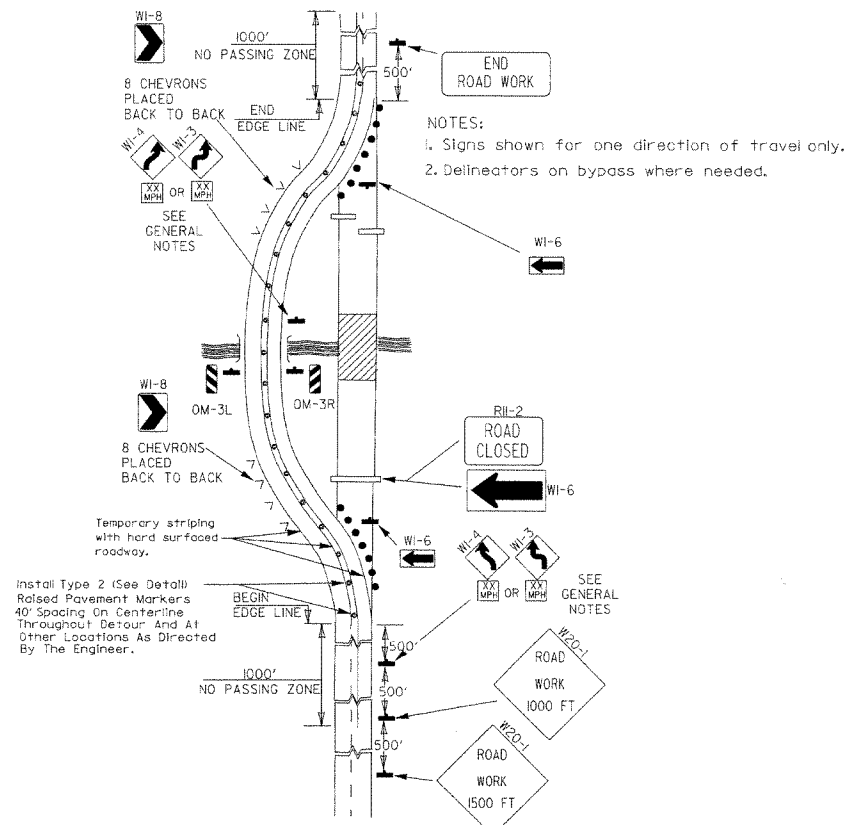
GENERAL NOTES:

- 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.

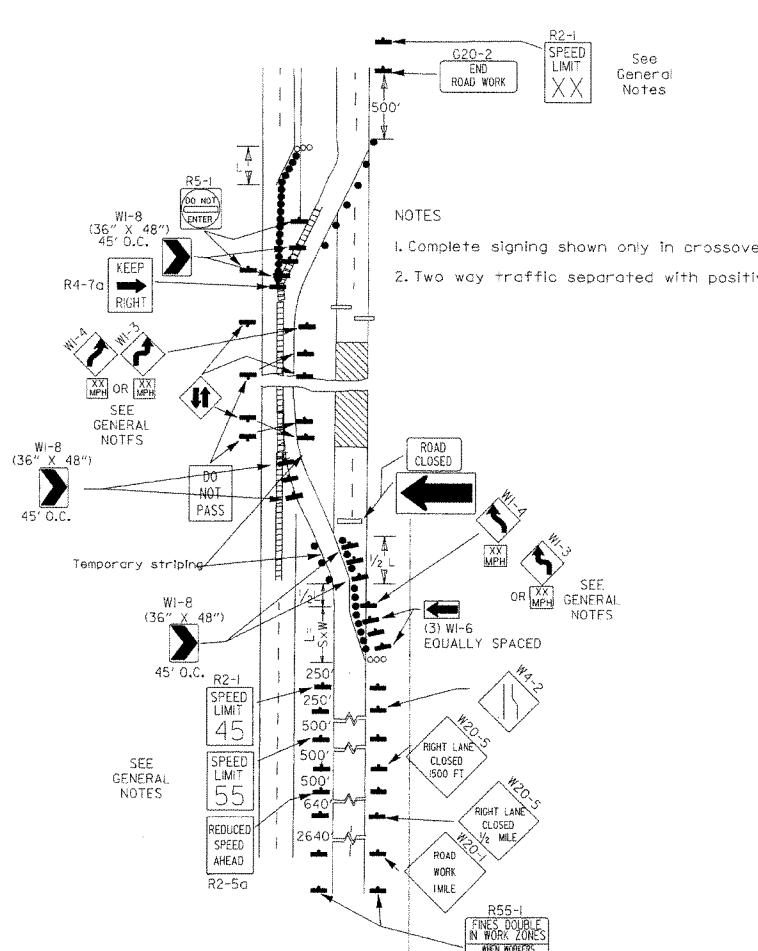
- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER 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.

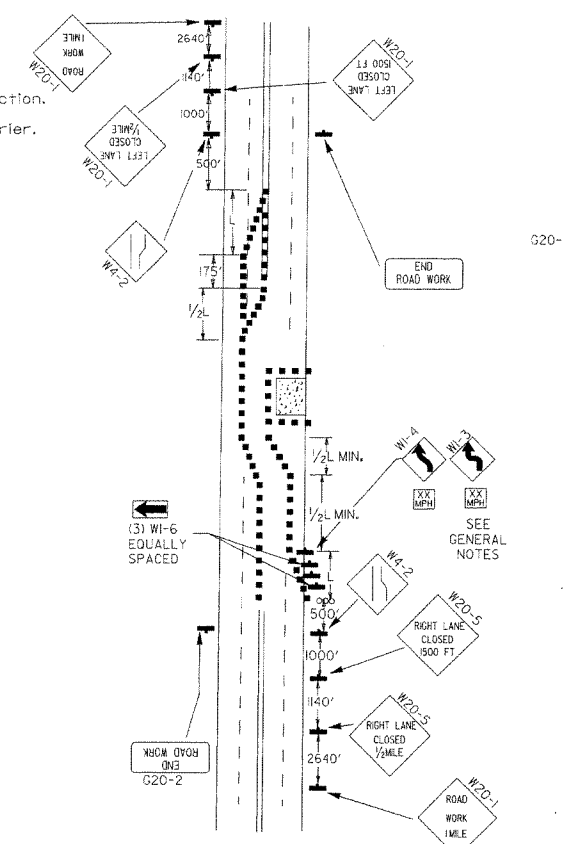
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED 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	FILED



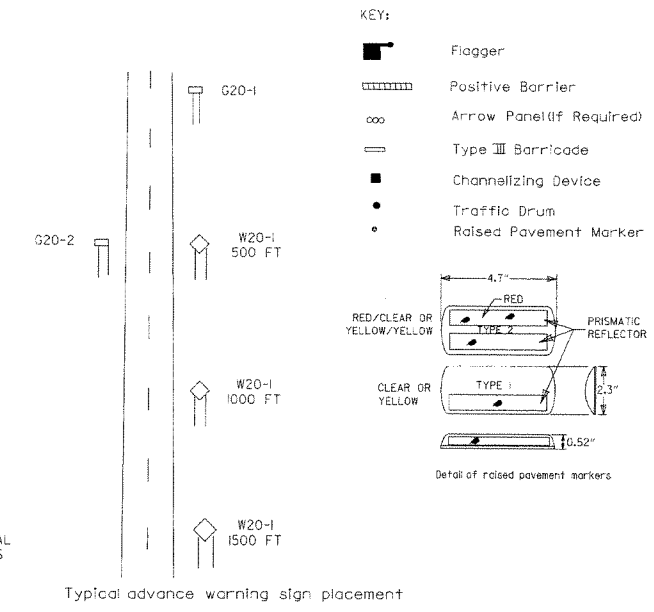
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



(B) Typical application - 4-lane divided roadway where one roadway is closed.



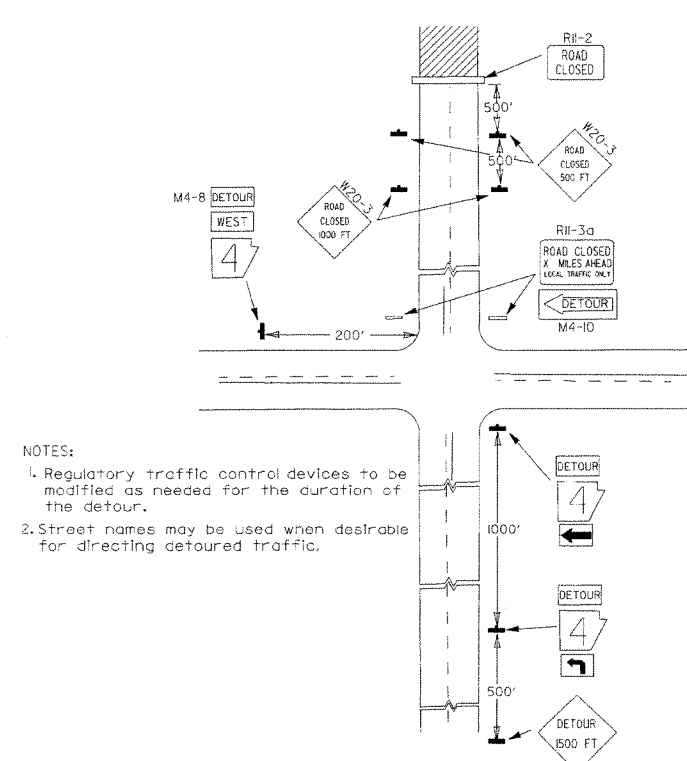
(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



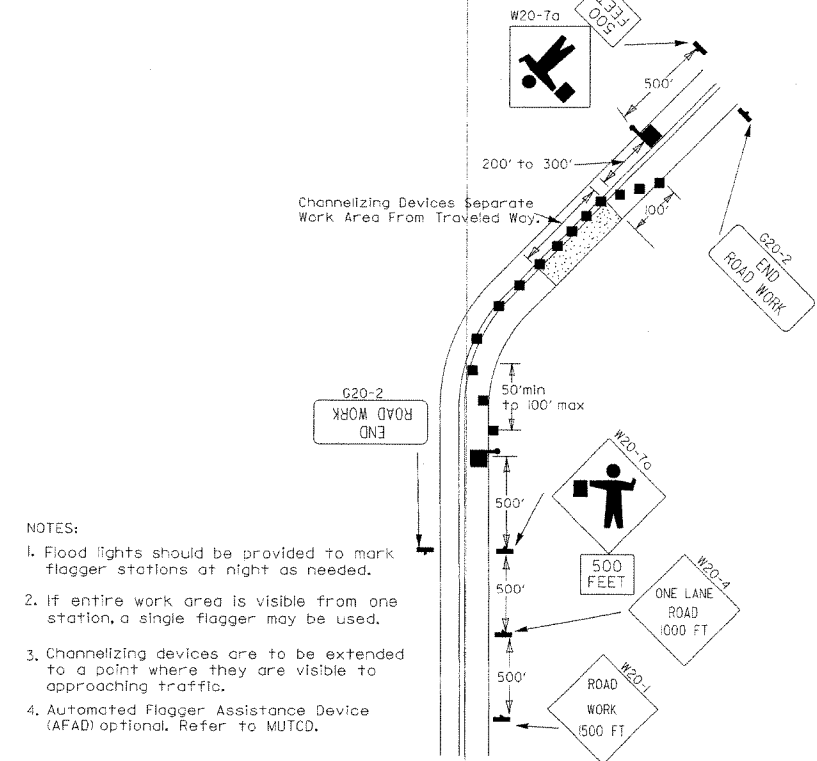
Typical advance warning sign placement

Taper formulae:
 $L = S \times W$ for speeds of 45mph or more.
 $L = \frac{WS^2}{60}$ for speeds of 40mph or less.
 Where:
 L = Minimum length of taper.
 S = Numerical value of posted speed limit prior to work or 85th percentile speed.
 W = Width of offset.

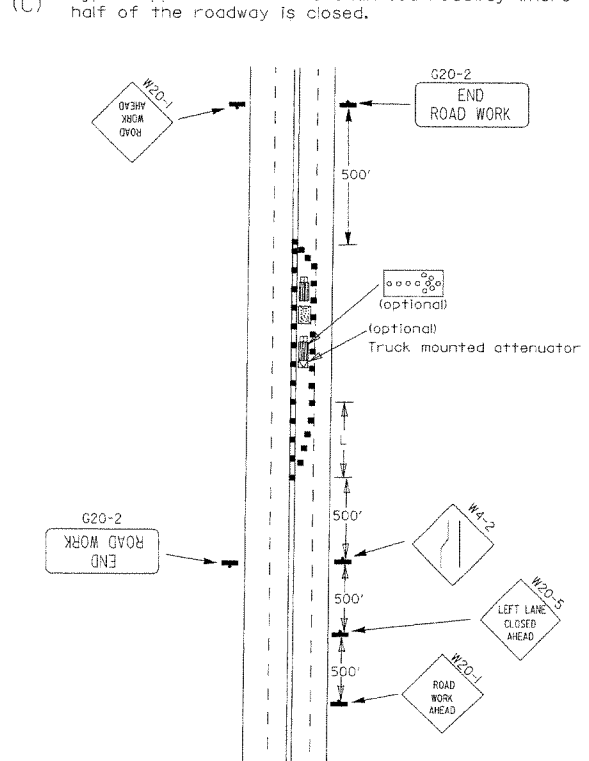
- GENERAL NOTES:
- Advisory speed posted on W1-3 or W1-4 curve warning signs to be determined at site. Use W1-4 when speed is greater than 30mph and W1-3 when 30mph or less.
 - When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-(45) shall be omitted and the R2-5A shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-(45) 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-(45) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-(45) shall be installed to match original speed limit.
 - The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit, or as directed by the Engineer.
 - Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
 - Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
 - Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



(D) Typical application - roadway closed beyond detour point.



(E) Typical application of traffic control devices on 2-lane highway where one lane is closed and flagging is provided.

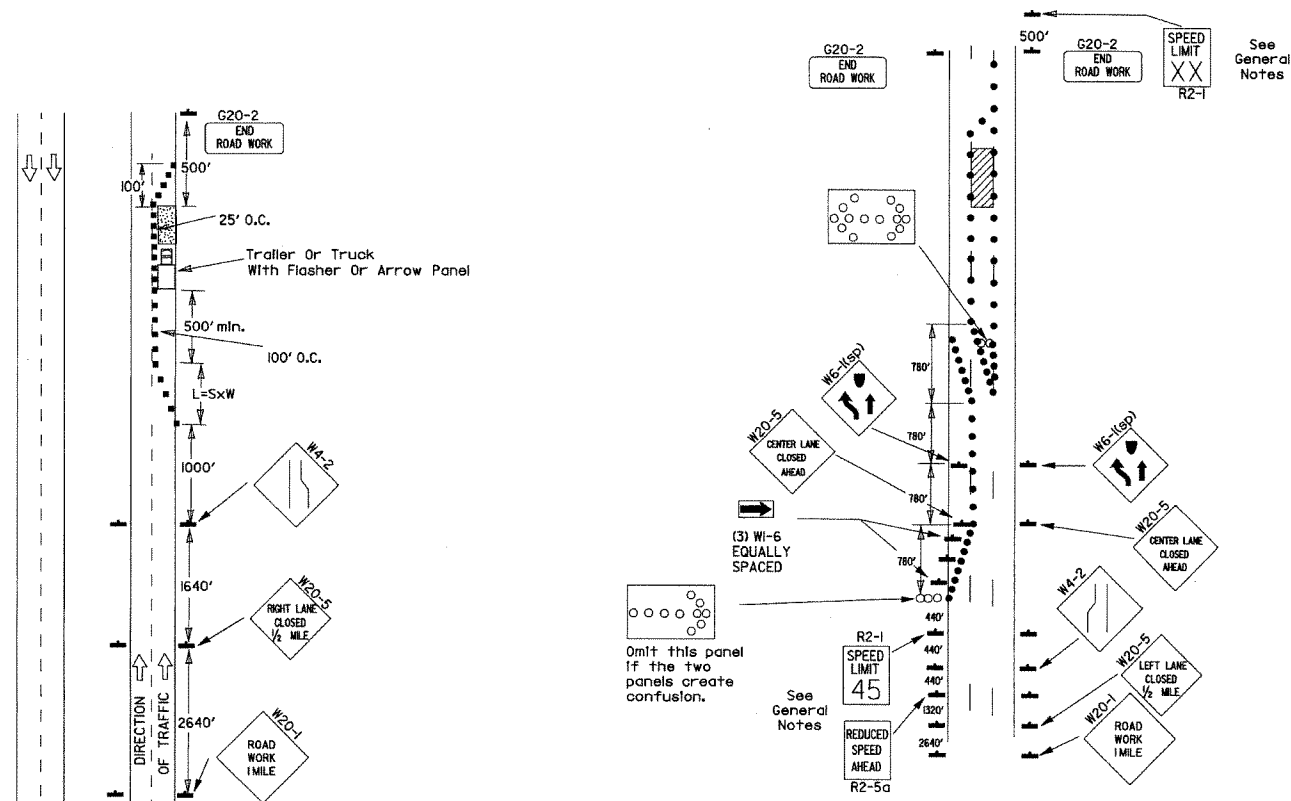


(F) Typical application - 4-lane undivided roadway with inside lane closed.

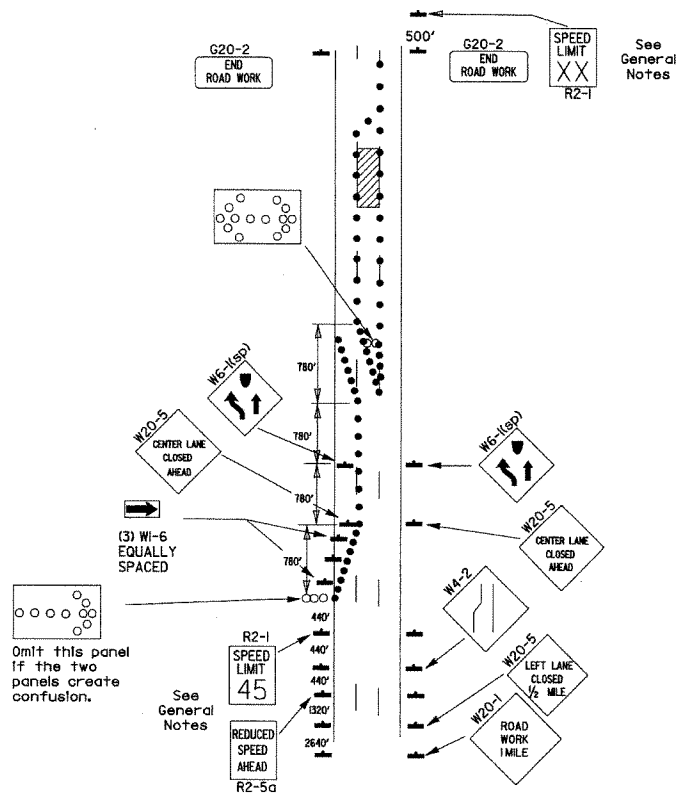
DATE	REVISION	FILMED
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

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

Channelizing devices



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



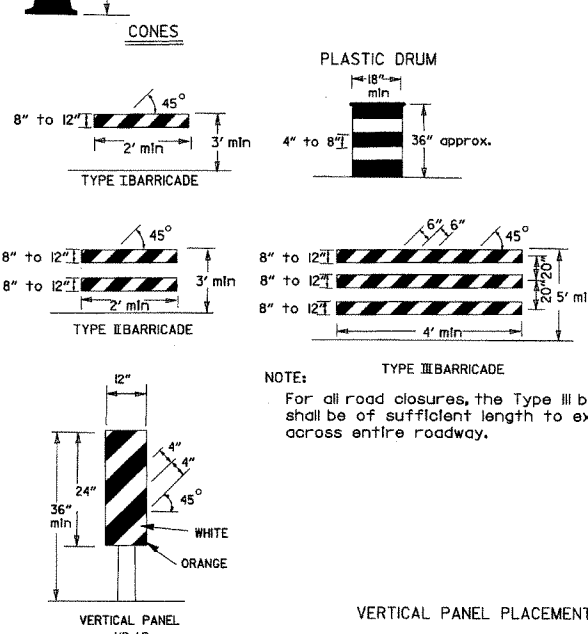
(B) Typical application - 3-lane oneway roadway where center lane is closed.

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

GENERAL NOTES:

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

* 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.

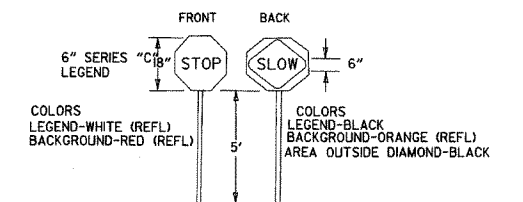
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

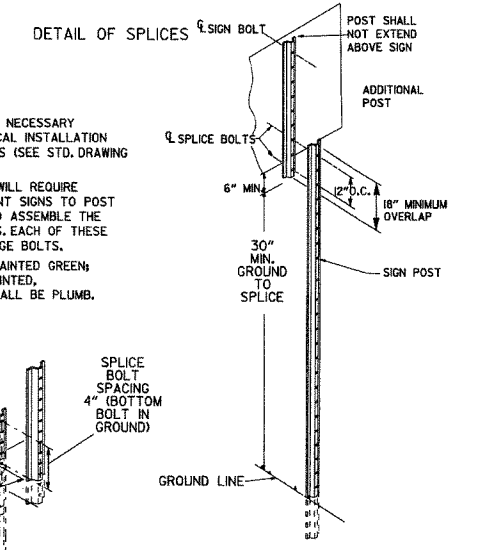
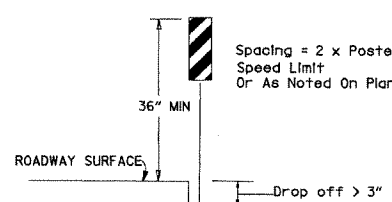
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



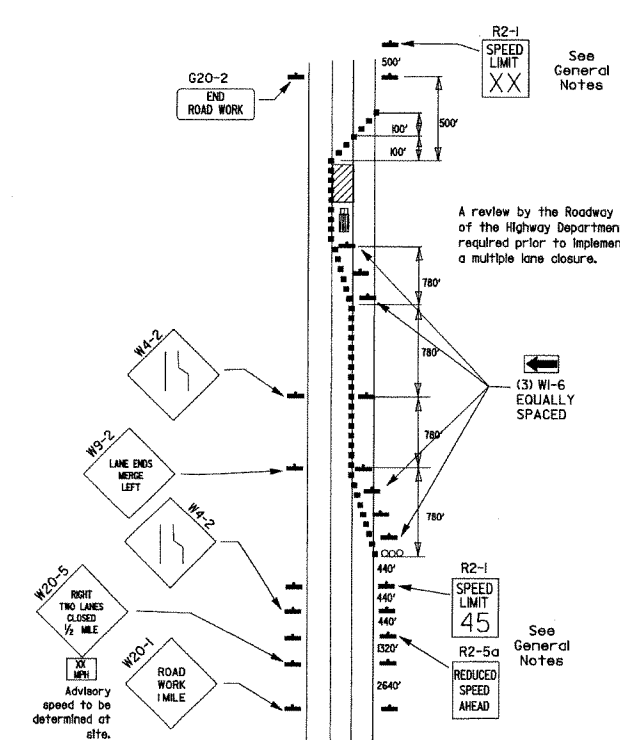
STOP SLOW PADDLE



VERTICAL PANEL PLACEMENT



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



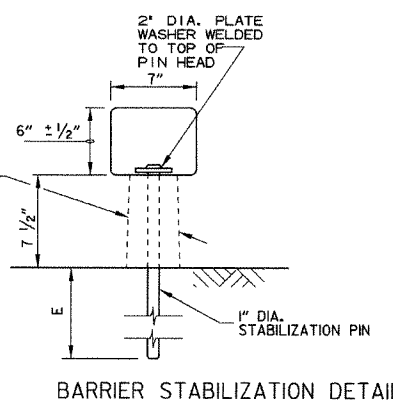
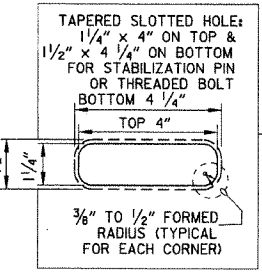
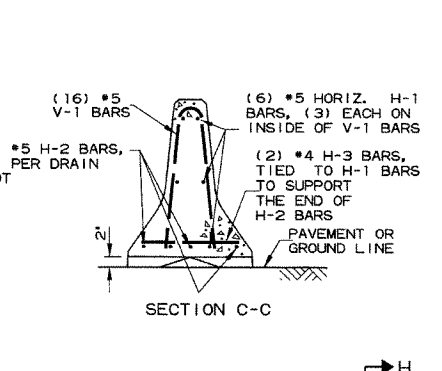
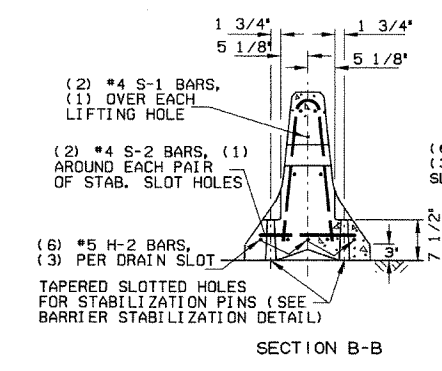
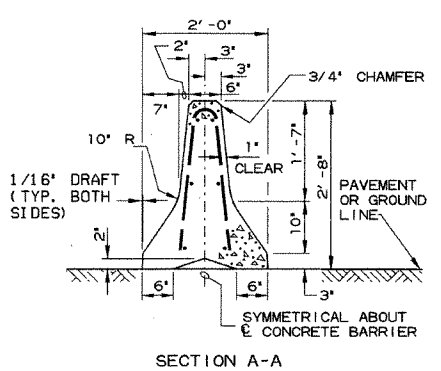
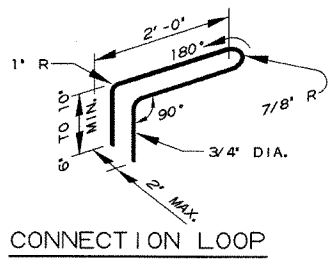
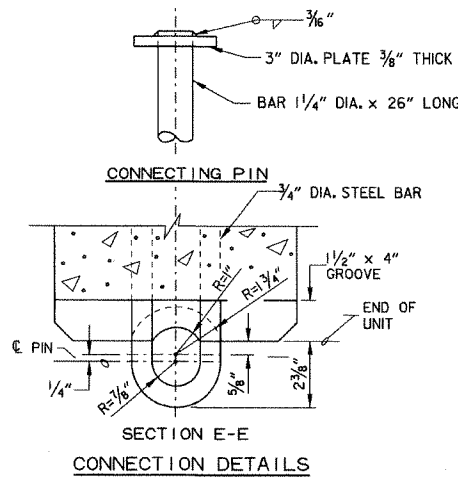
(D) Typical application - closing multiple lanes of a multilane highway.

DATE	REVISION	FILMED
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	

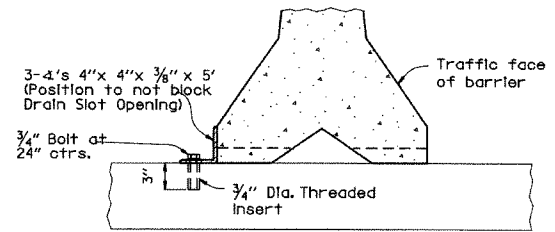
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-3

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

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

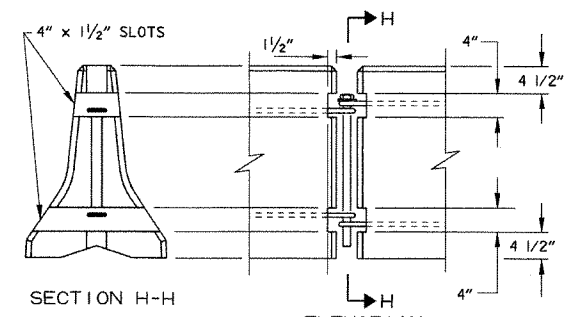


ROADWAY SECTION
 (E) 4" - Concrete Pavement
 8" - Asphalt Pavement
 12" - Shoulder Areas

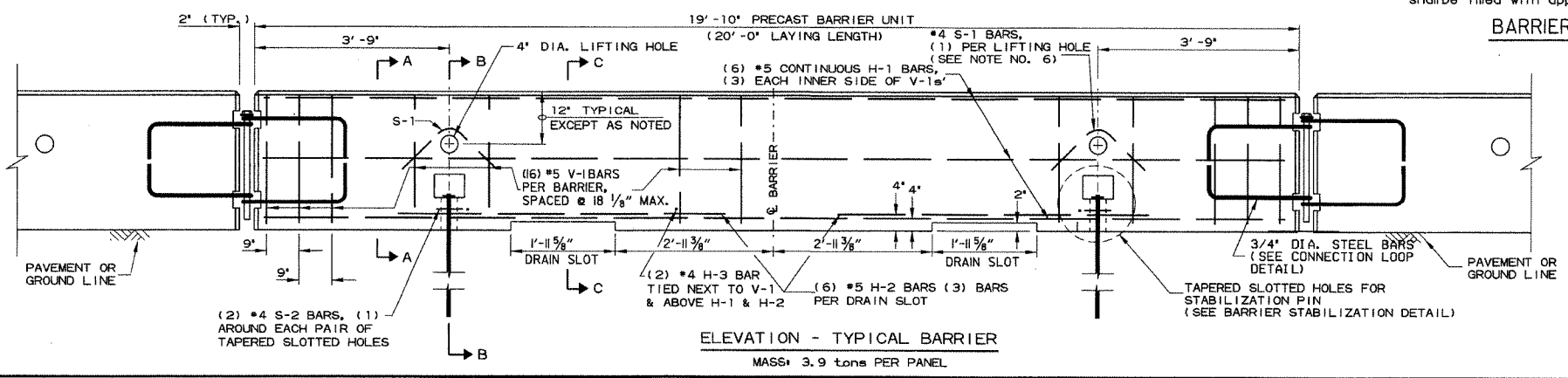
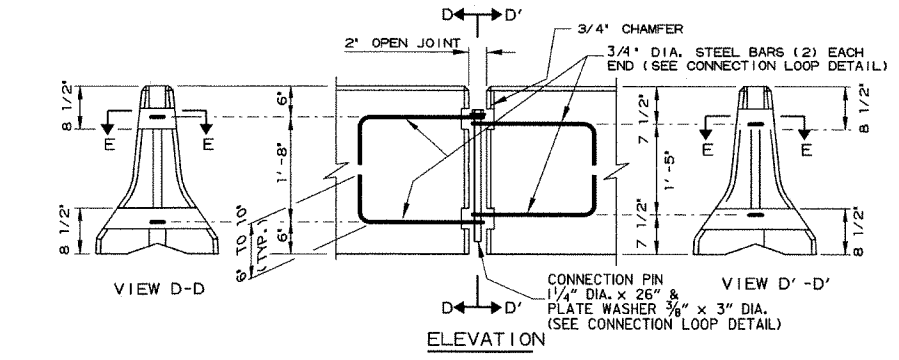


NOTE: 3/4" Threaded inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks to be retained. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved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

BRIDGE DECKS



BARRIER REMOVAL SLOT DETAILS



ELEVATION - TYPICAL BARRIER
 MASS: 3.9 tons PER PANEL

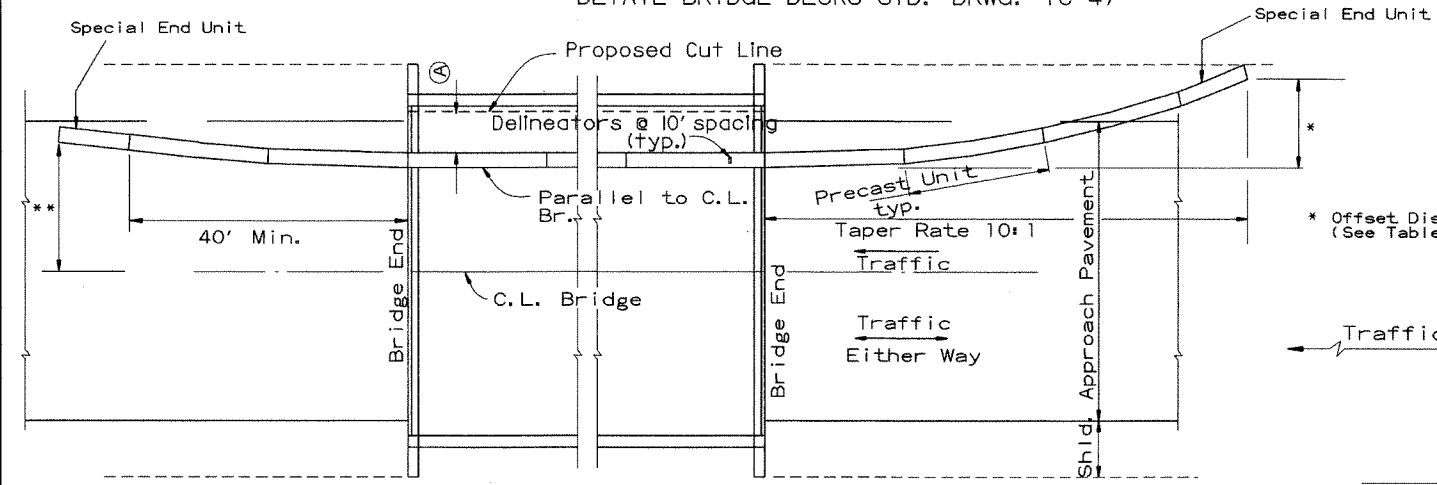
- General Notes**
- The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
 - Materials shall meet the following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

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

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

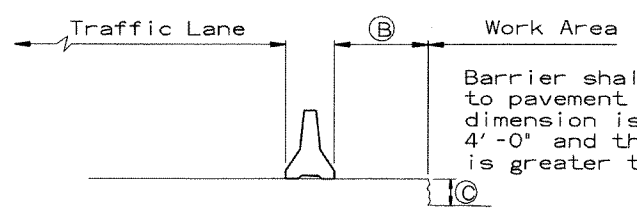
ARKANSAS STATE HIGHWAY COMMISSION
 STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER
 STANDARD DRAWING TC-4

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



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

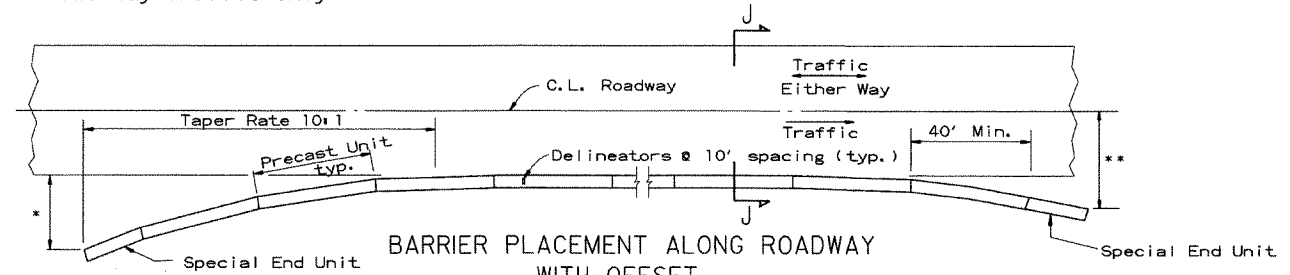
No Scale



SECTION J-J
No Scale

Barrier shall be doweled to pavement when the B dimension is less than 4'-0" and the C dimension is greater than 24 inches.

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

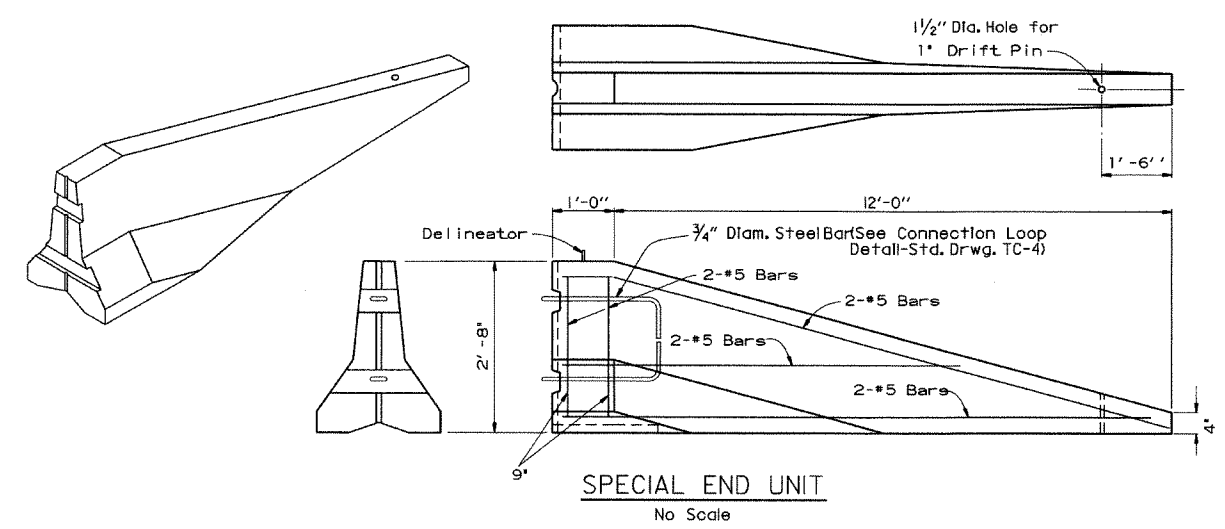
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** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)

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

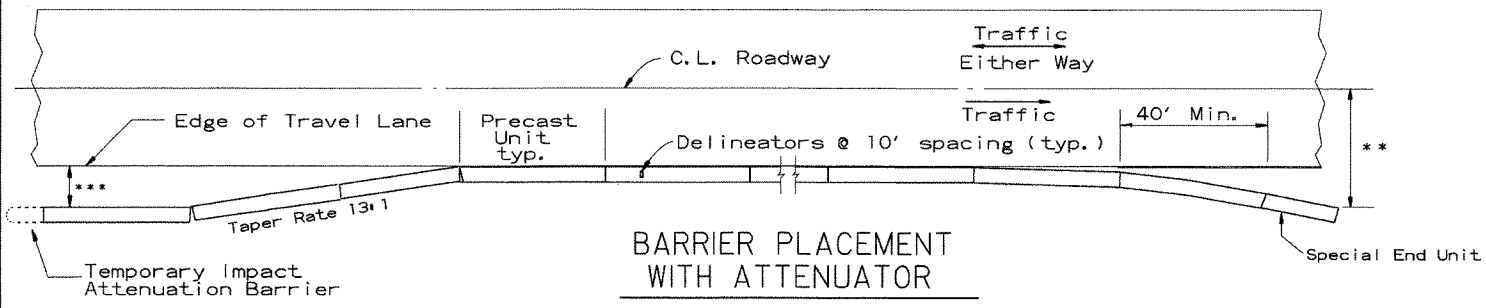
If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.



SPECIAL END UNIT
No Scale

General Notes

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



BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

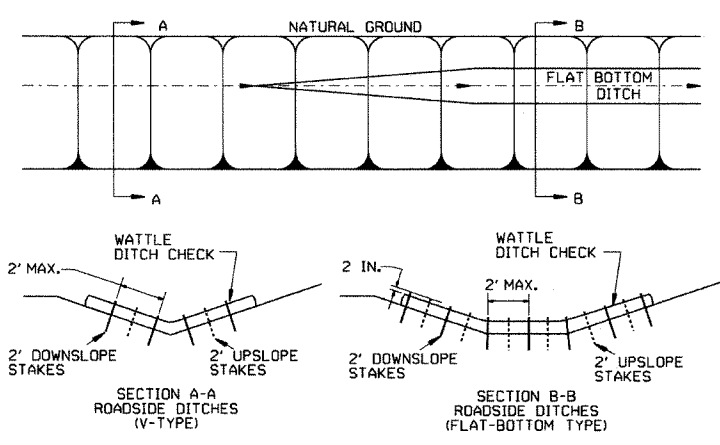
***Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

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

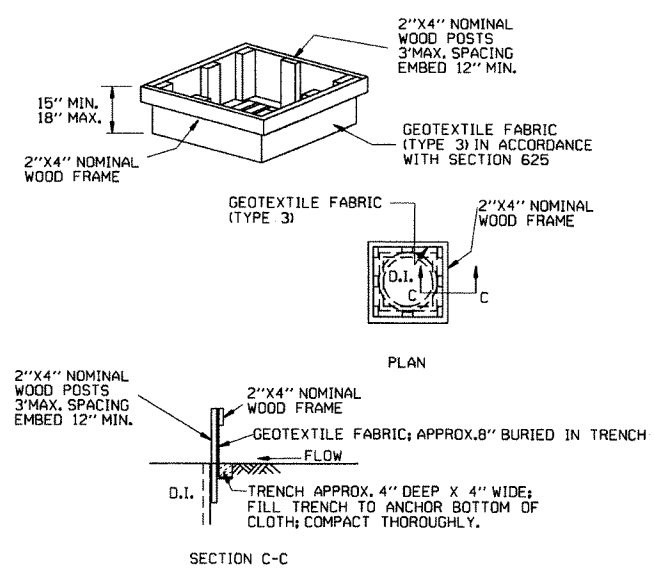
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5

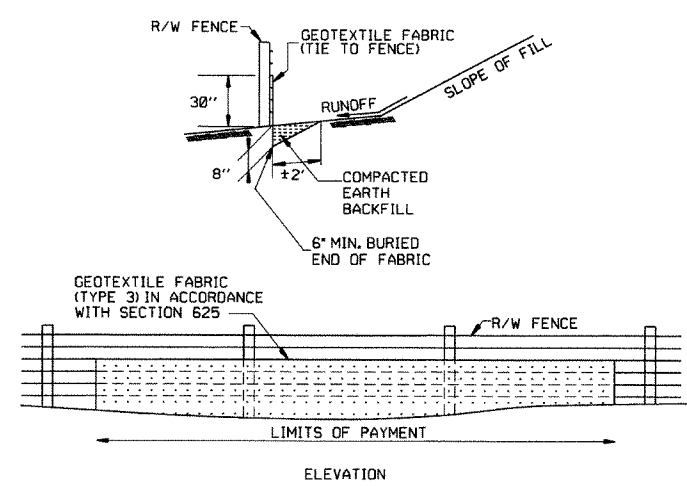
GENERAL NOTES
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



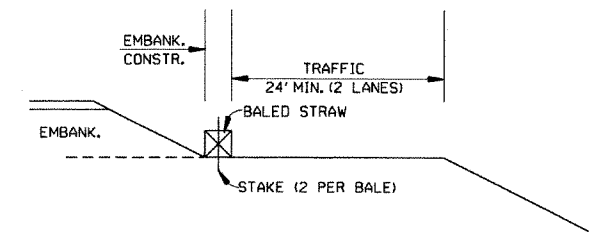
DROP INLET SILT FENCE (E-7)



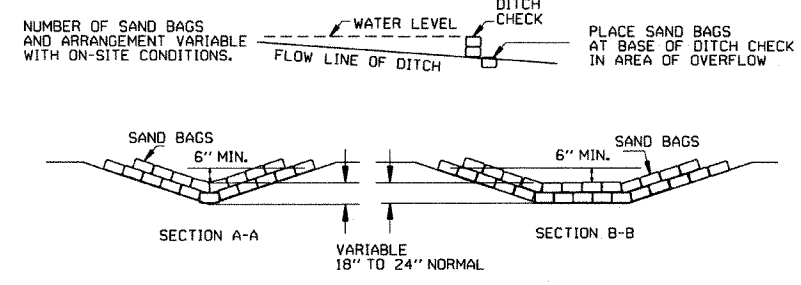
SILT FENCE ON R/W FENCE (E-4)

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.

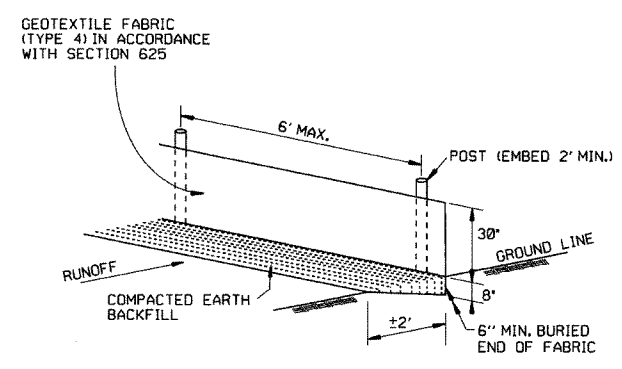
GENERAL NOTES
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)

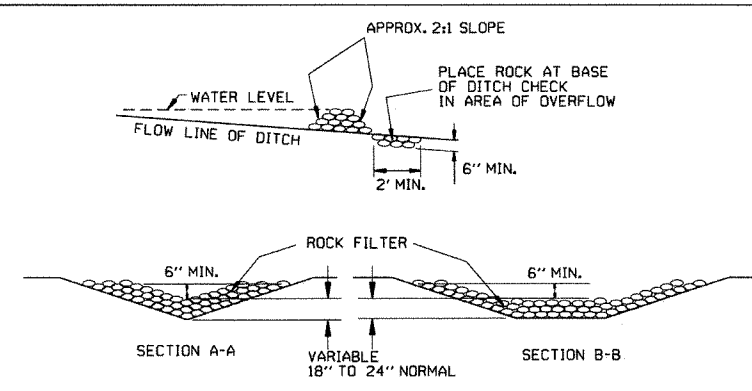


SAND BAG DITCH CHECK (E-5)



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	TEMPORARY EROSION CONTROL DEVICES
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC		
6-2-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94	
4-1-93	REDRAWN		
10-1-92	REDRAWN		
8-2-76	ISSUED R.D.M.	298-7-28-76	STANDARD DRAWING TEC-1
DATE	REVISION	FILMED	