

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. CAO101		SHEET NO. 1		TOTAL SHEETS 224
				CO. RD. 375 - HWY. 147 (WIDENING) (S)				

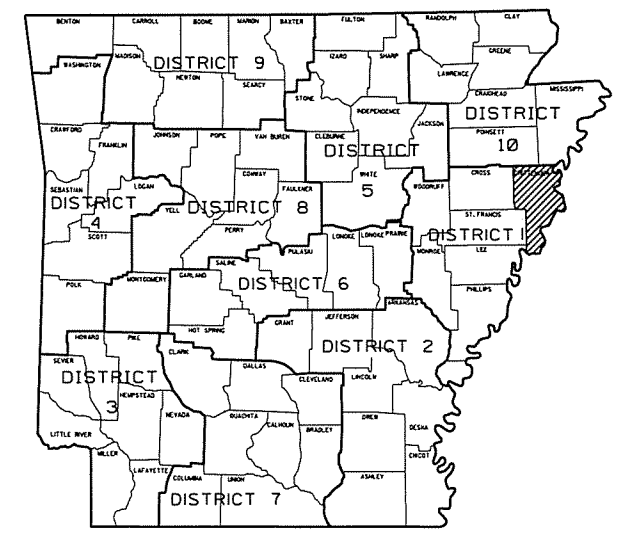
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

**CO. RD. 375 - HWY. 147
(WIDENING) (S)**

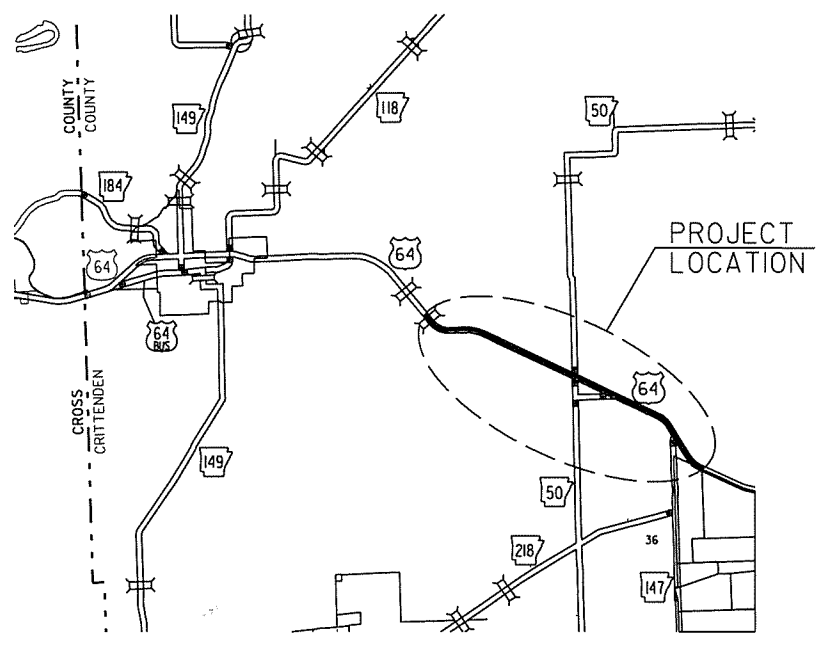
CRITTENDEN COUNTY
ROUTE 64 SECTION 17

JOB CAO101

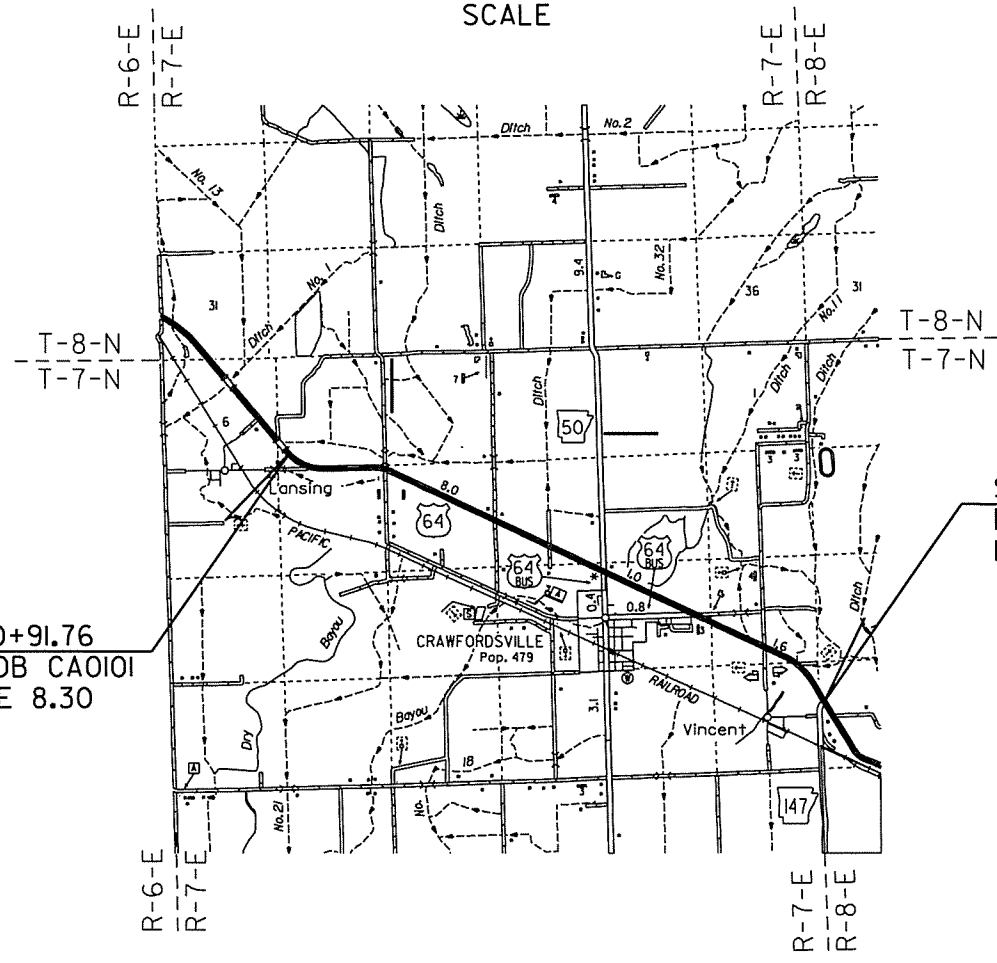
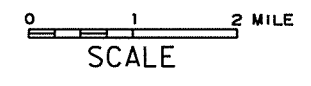
FED. AID PROJ. 9991



ARKANSAS HIGHWAY DIST. 1



VICINITY MAP



STA. 480+91.76
BEGIN JOB CAO101
LOG MILE 8.30

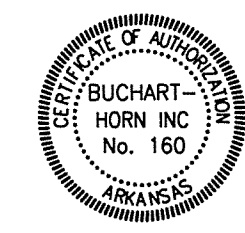
STA. 775+44.56
END JOB CAO101
LOG MILE 13.76

DESIGN TRAFFIC DATA

DESIGN YEAR-----	2036
2016 ADT-----	6,000
2036 ADT-----	7,700
2036 DHV-----	850
DIRECTIONAL DISTRIBUTION-----	0.60
TRUCKS-----	22%
DESIGN SPEED-----	60 MPH

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°15'02"	N 35°14'09"	N 35°12'51"
LONGITUDE	W 90°22'32"	W 90°19'50"	W 90°17'24"

GROSS LENGTH OF PROJECT	29452.80	FEET	OR	5.578	MILES
NET " " ROADWAY	29452.80	" "	" "	5.578	MILES
NET " " BRIDGES	0.00	" "	" "	0.000	MILES
NET " " PROJECT	29452.80	" "	" "	5.578	MILES



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 14929
ANDREW PITKLEY 06/15/16

P.E. JOB CAO101

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				6	ARK.			
				JOB NO.	CA0101		2	224

2 INDEX OF SHEETS, GOVERNING SPECIFICATIONS, & GENERAL NOTES

INDEX OF SHEETS

SHEET NO.	TITLE	DRWG. NO.	DATE
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149	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-145X-0	7-10-64
150	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X453-1	5-10-66
151 - 224	CROSS SECTIONS		

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

GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.
- 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.

GOVERNING SPECIFICATIONS

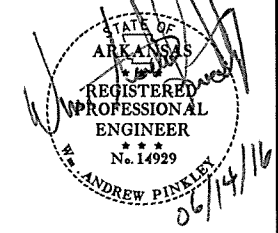
ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - TRAINING PROGRAM - JOB CA0101
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB CA0101	BIDDING REQUIREMENTS AND CONDITIONS
JOB CA0101	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB CA0101	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB CA0101	CARGO PREFERENCE ACT REQUIREMENTS
JOB CA0101	CULVERT CLEAN OUT
JOB CA0101	DELAY IN RIGHT OF WAY OCCUPANCY
JOB CA0101	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB CA0101	EMPLOYMENT REPORTING
JOB CA0101	GOALS FOR ARKANSAS OWNED MINORITY BUSINESS ENTERPRISE
JOB CA0101	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB CA0101	ISSUANCE OF PROPOSALS
JOB CA0101	MANDATORY ELECTRONIC CONTRACT
JOB CA0101	PARTNERING REQUIREMENTS
JOB CA0101	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB CA0101	PLASTIC PIPE
JOB CA0101	PROSECUTION AND PROGRESS - CONNECTING ARKANSAS PROGRAM
JOB CA0101	SHORING FOR CULVERTS
JOB CA0101	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT - CONNECTING ARKANSAS PROGRAM
JOB CA0101	SOIL STABILIZATION
JOB CA0101	STORM WATER POLLUTION PREVENTION PLAN
JOB CA0101	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB CA0101	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB CA0101	UTILITY ADJUSTMENTS
JOB CA0101	VALUE ENGINEERING
JOB CA0101	WARM MIX ASPHALT
JOB CA0101	WELLHEAD PROTECTION

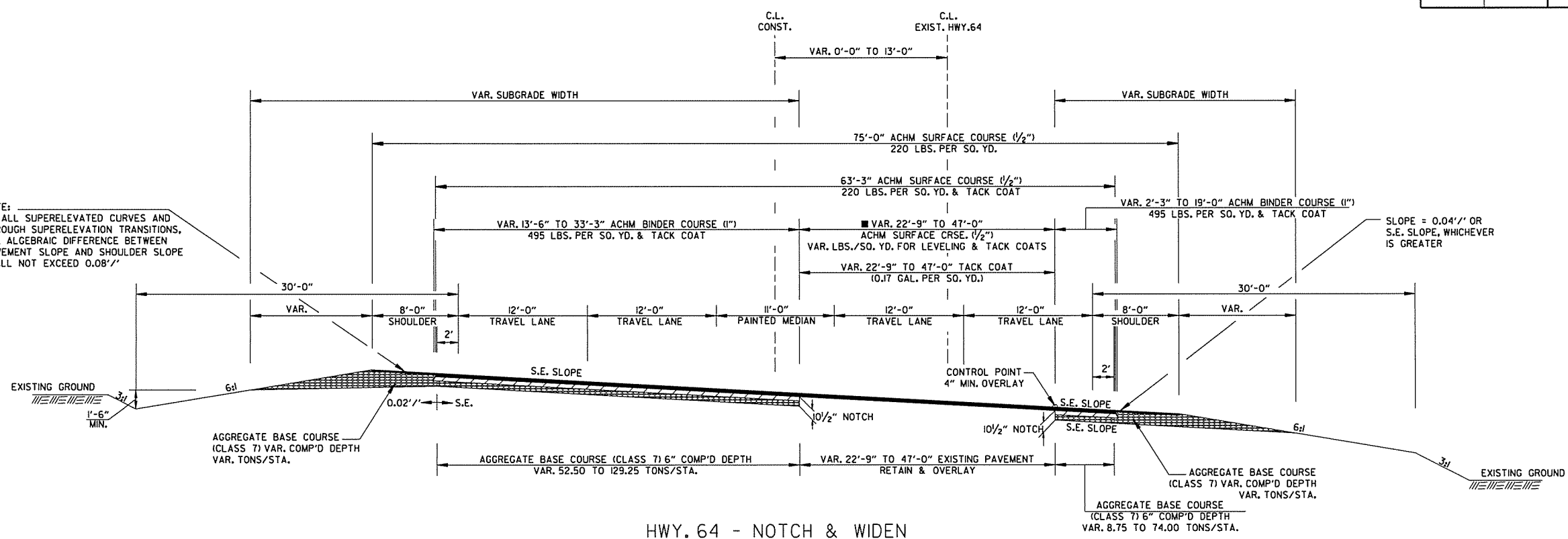


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2 TYPICAL SECTIONS OF IMPROVEMENT



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



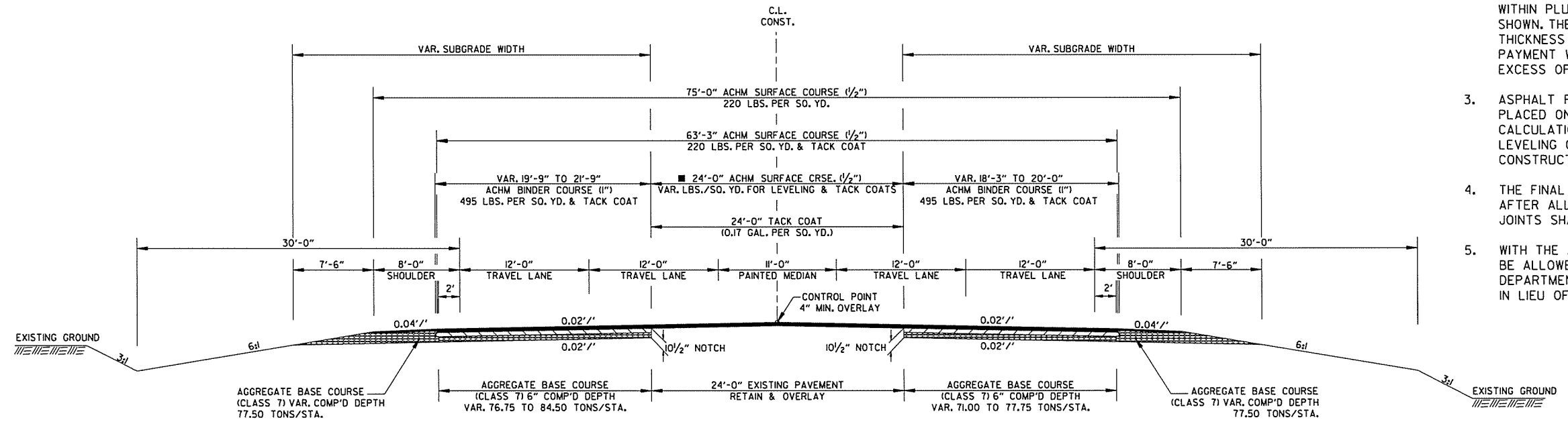
HWY. 64 - NOTCH & WIDEN SUPERELEVATED SECTION

STA. 480+91.76 - STA. 497+85.55
STA. 738+84.22 - STA. 763+48.48

■ LEVELING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
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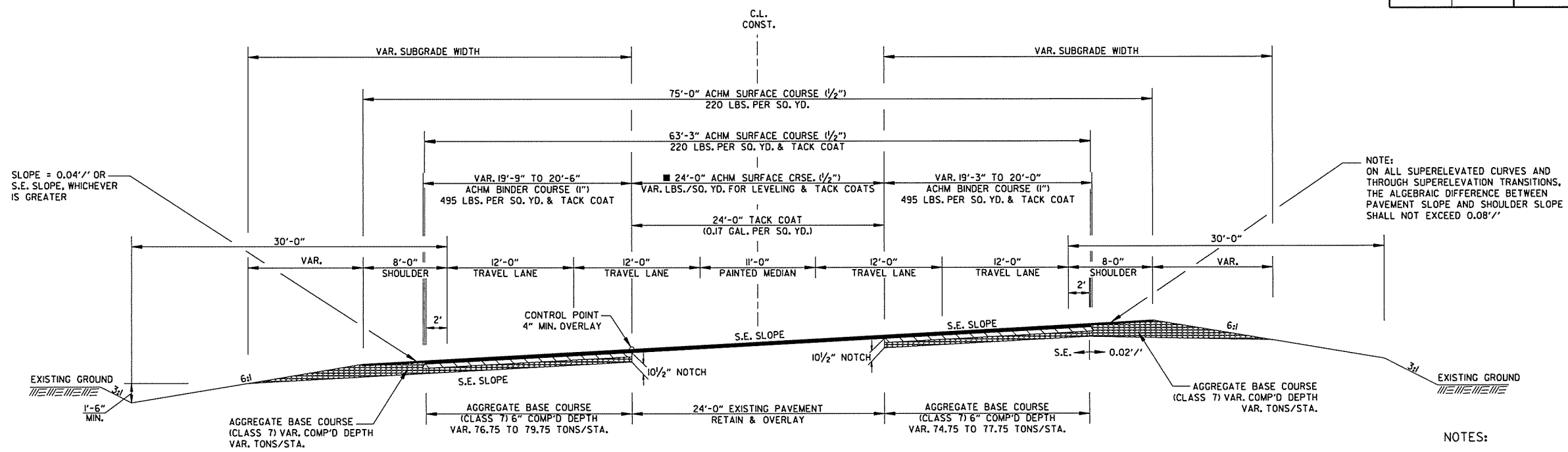
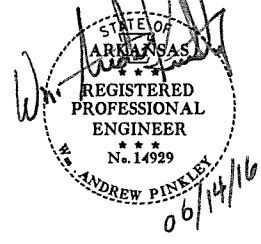
HWY. 64 - NOTCH & WIDEN TANGENT SECTION

STA. 497+85.55 - STA. 512+94.29
STA. 531+75.23 - STA. 552+74.71
STA. 622+39.24 - STA. 629+00.00
STA. 669+00.00 - STA. 688+00.00

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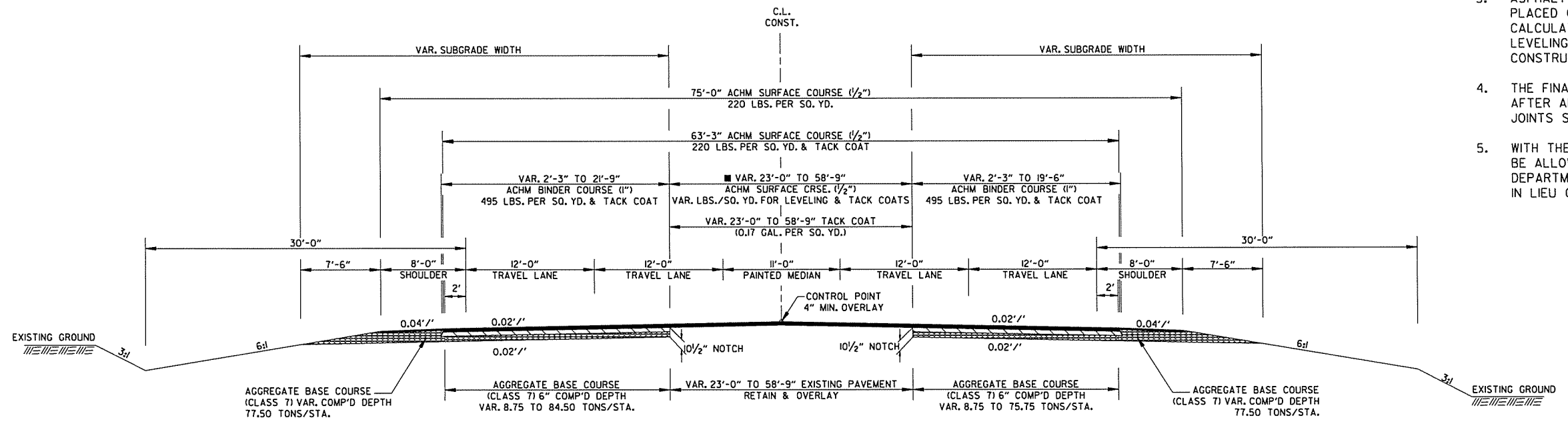
HWY. 64 - NOTCH & WIDEN SUPERELEVATED SECTION

STA. 512+94.29 - STA. 531+75.23

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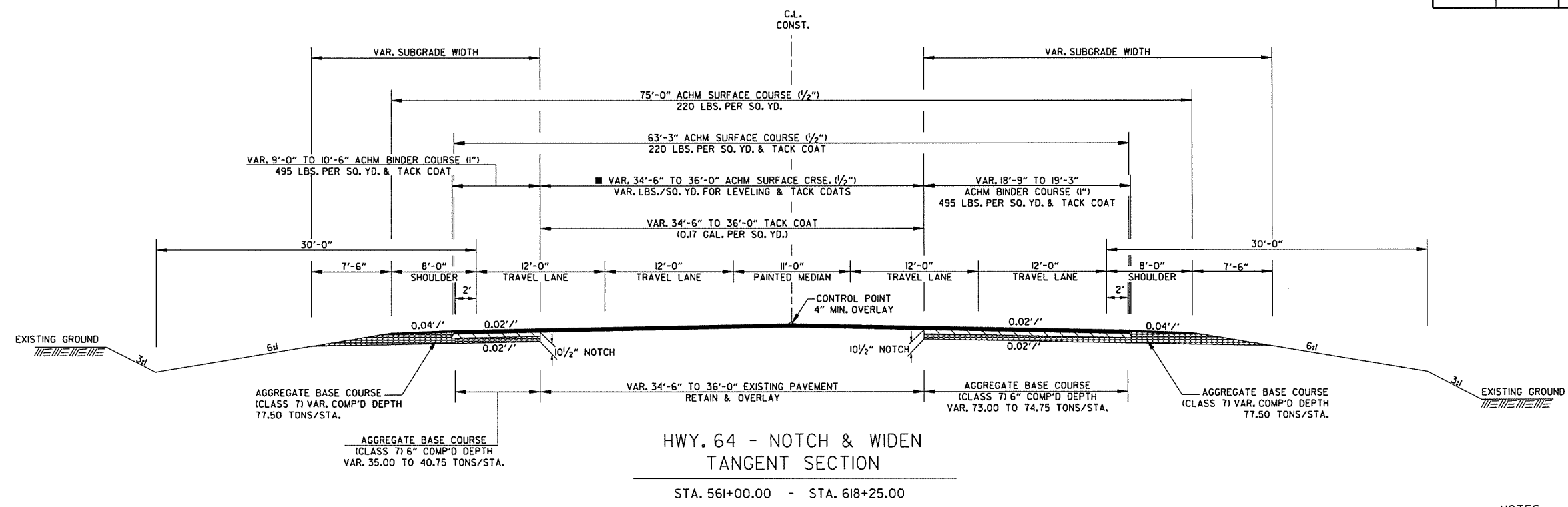
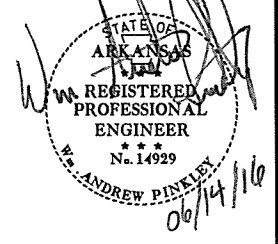
HWY. 64 - NOTCH & WIDEN TANGENT SECTION

STA. 552+74.70 - STA. 561+00.00
 STA. 618+25.00 - STA. 622+39.24
 STA. 629+00.00 - STA. 669+00.00
 STA. 688+00.00 - STA. 710+56.99
 STA. 763+48.48 - STA. 767+94.00
 STA. 771+94.00 - STA. 775+44.56

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2 TYPICAL SECTIONS OF IMPROVEMENT



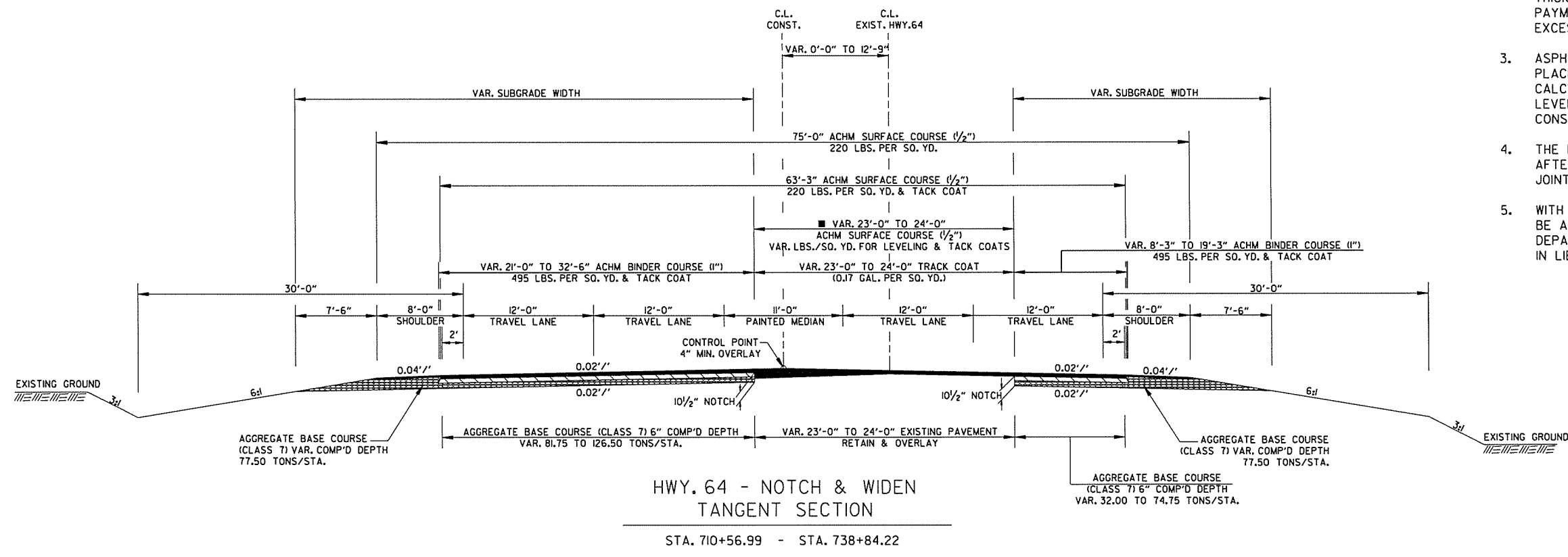
HWY. 64 - NOTCH & WIDEN
TANGENT SECTION

STA. 561+00.00 - STA. 618+25.00

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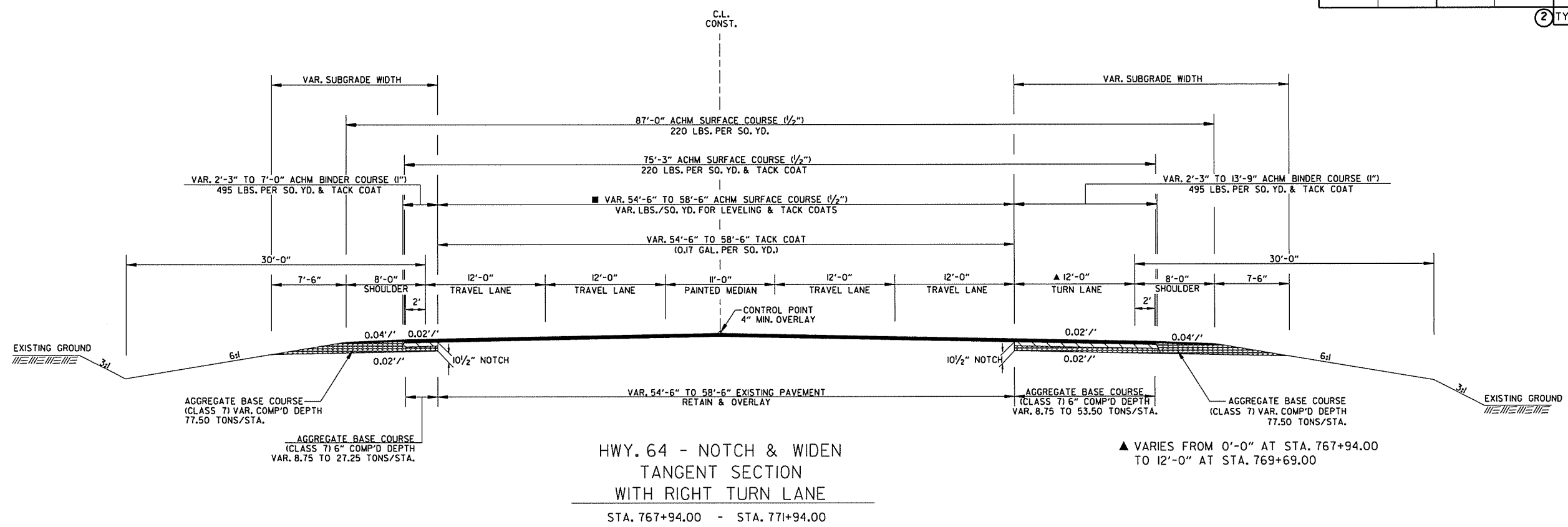
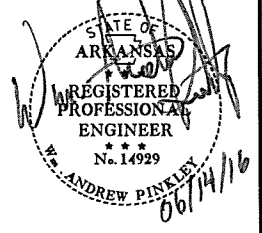
HWY. 64 - NOTCH & WIDEN
TANGENT SECTION

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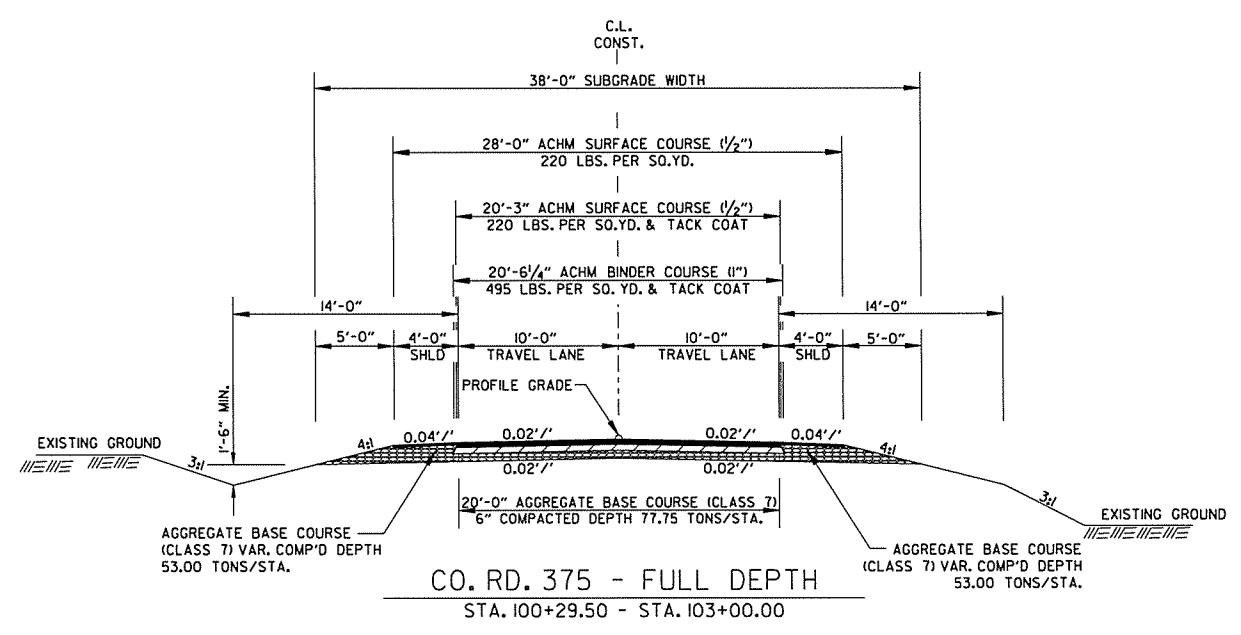
2 TYPICAL SECTIONS OF IMPROVEMENT



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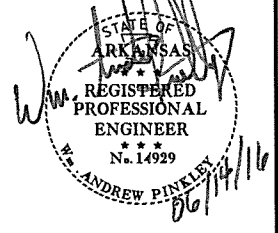
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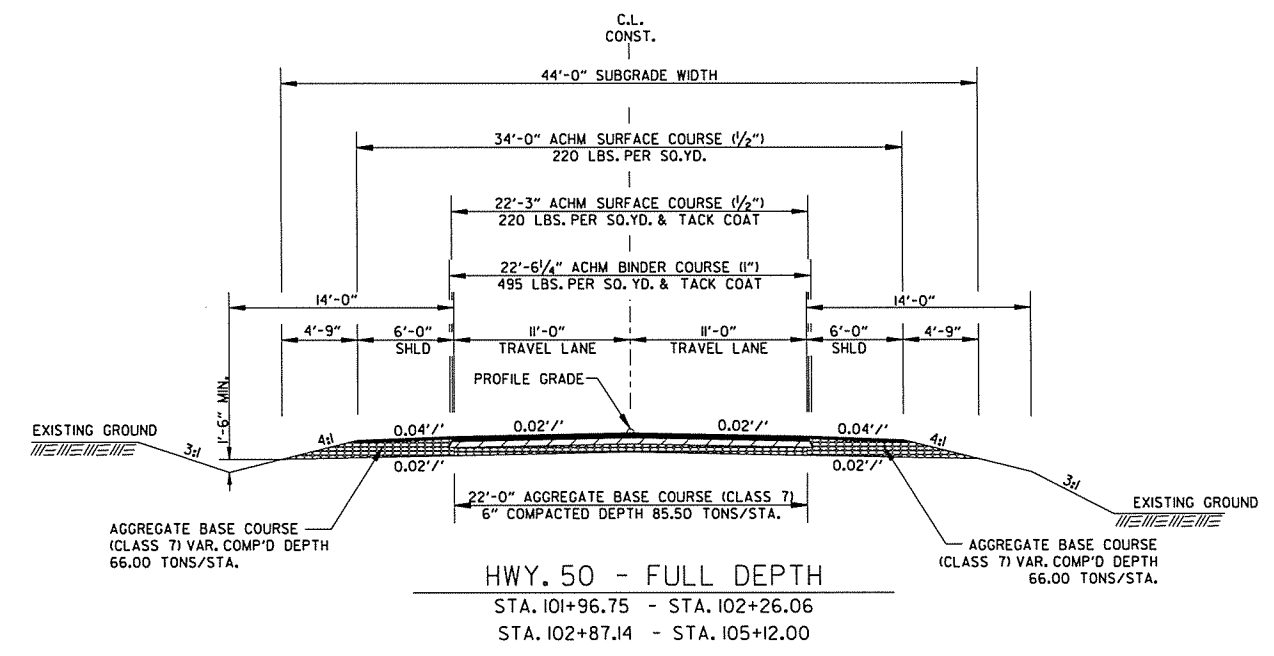
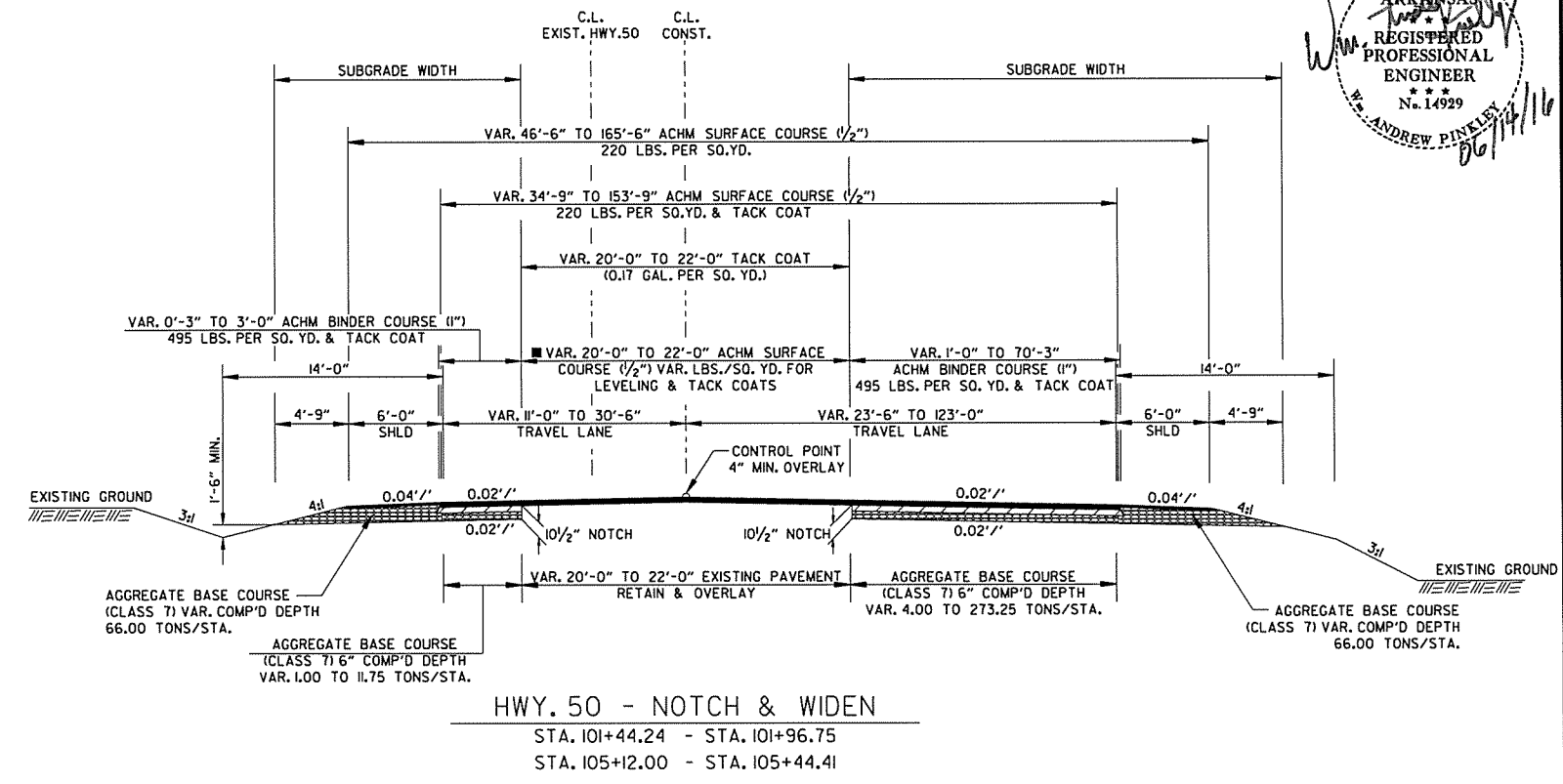
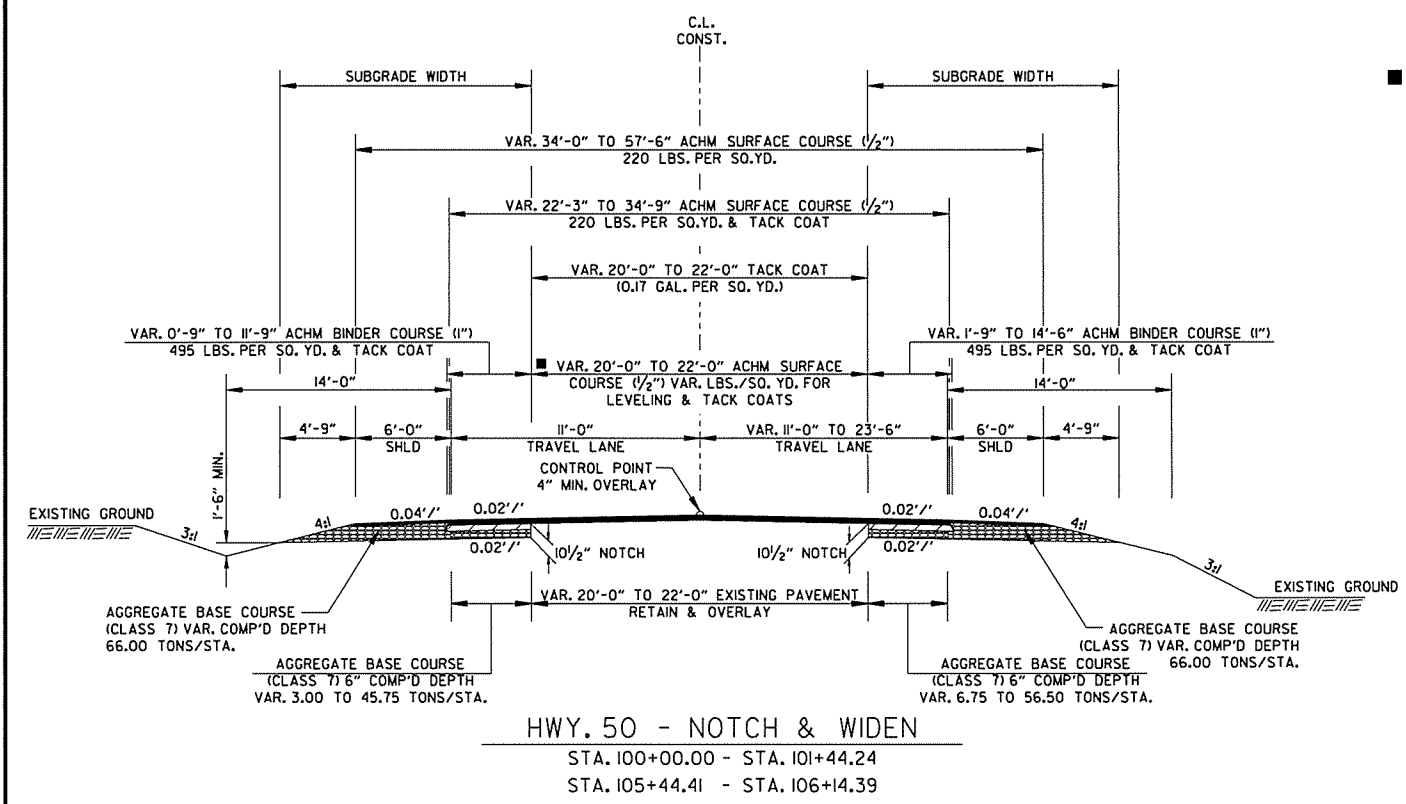


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LEVELING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

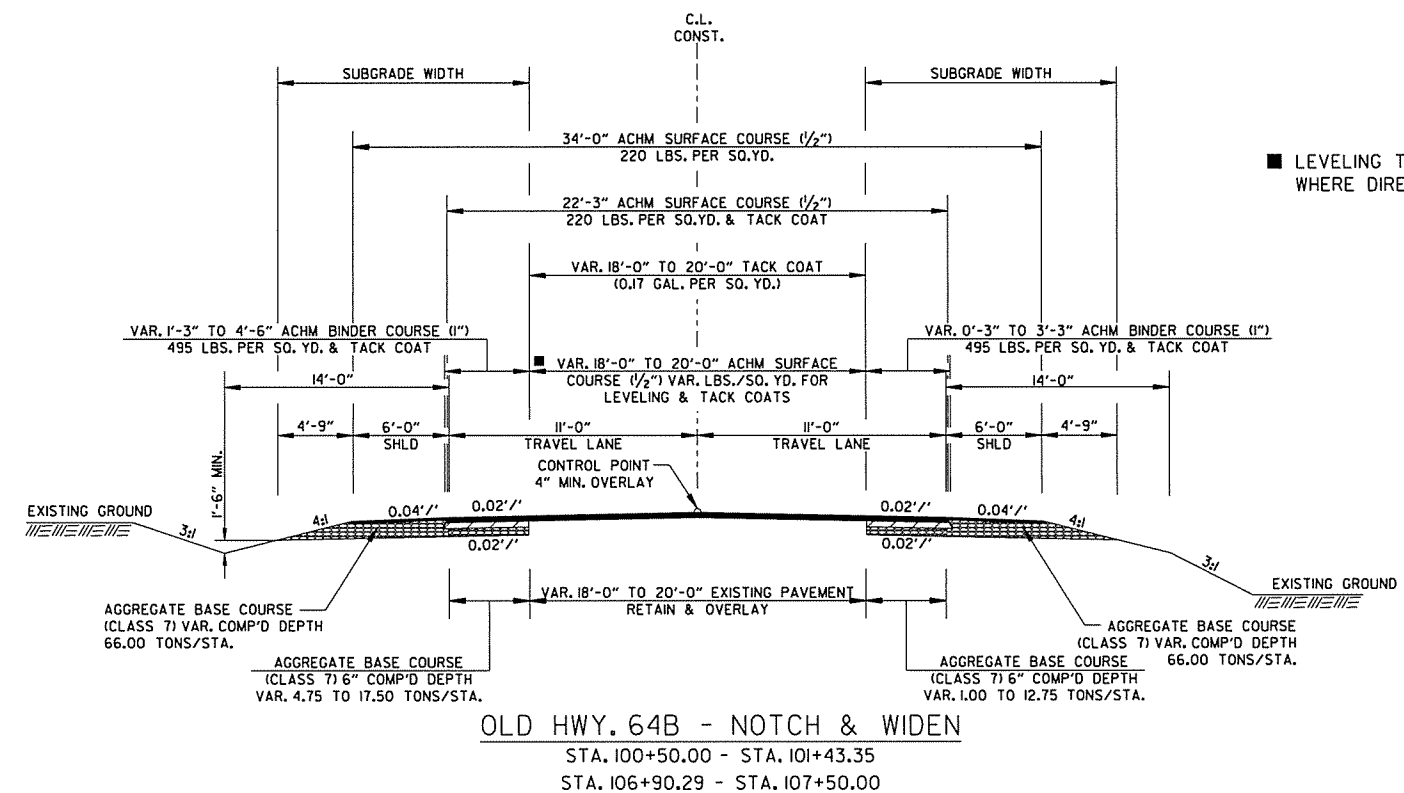
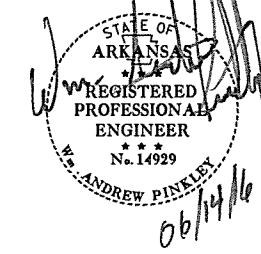


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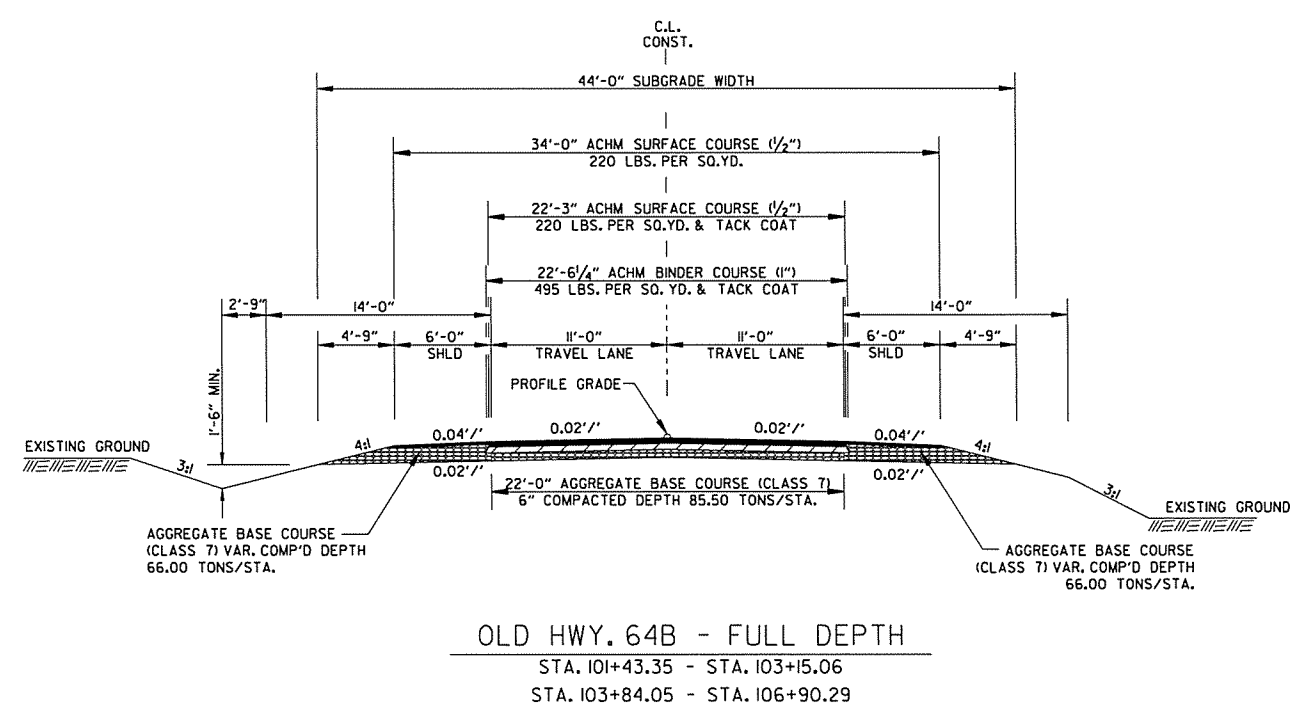
- REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
- ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.
- THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
- WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

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				6	ARK.			
				JOB NO.	CA0101		8	224

2 TYPICAL SECTIONS OF IMPROVEMENT



■ LEVELING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

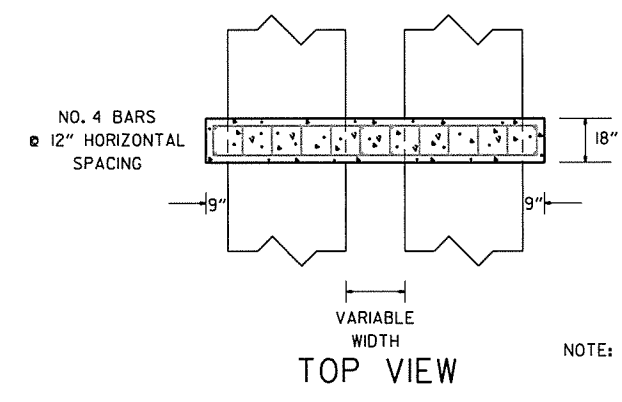
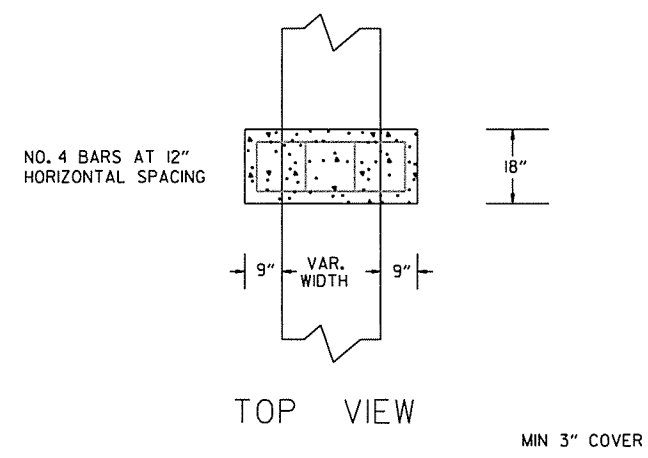
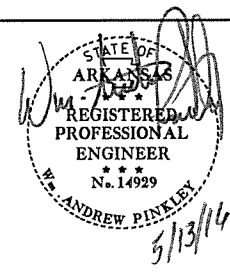


NOTES:

- REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
- ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.
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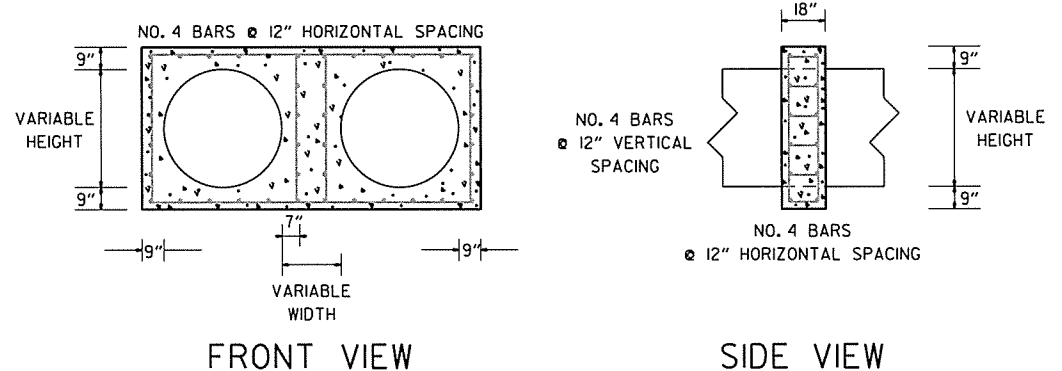
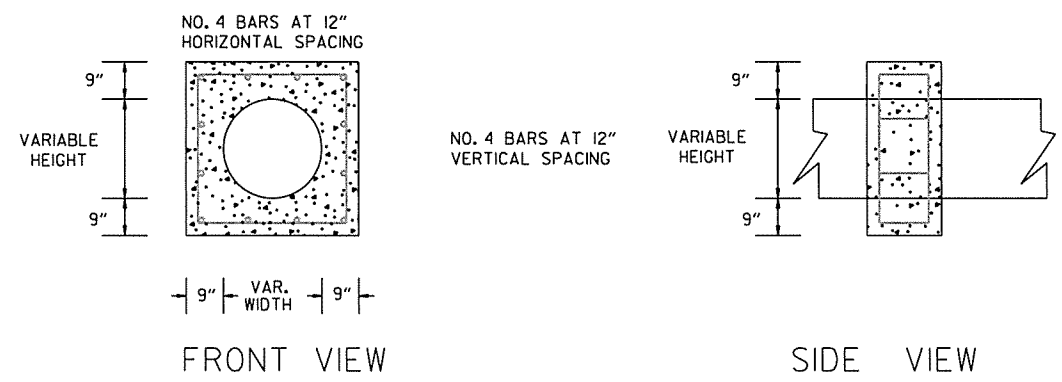
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				6	ARK.			
JOB NO. CA0101							9	224

2 SPECIAL DETAILS



NOTE: PIPE COLLAR TO BE UTILIZED AS APPROVED BY THE ENGINEER.

MIN. 3" COVER

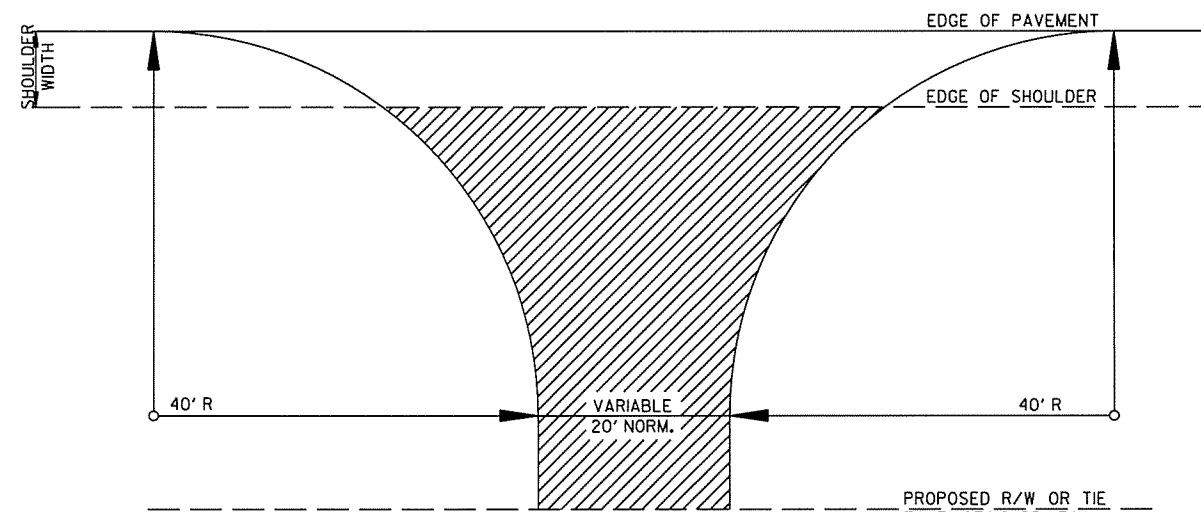
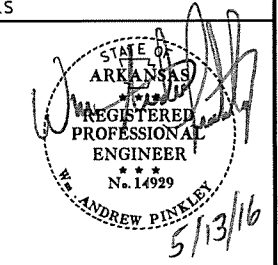


PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL

PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CAOIOI							IO	224

2 SPECIAL DETAILS



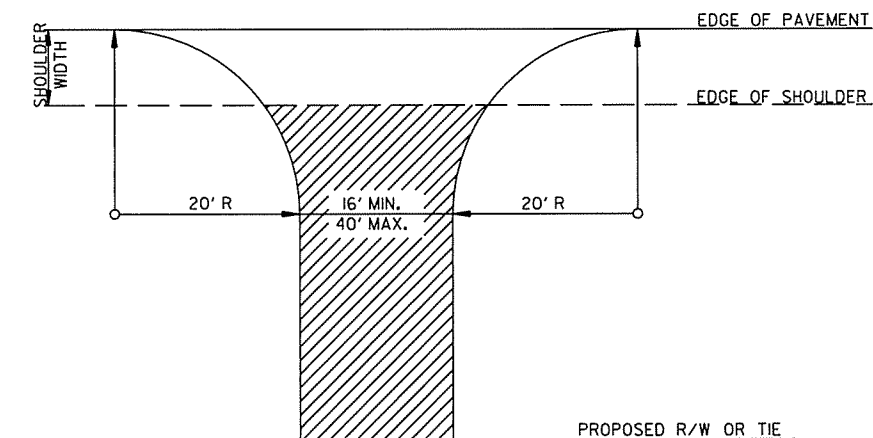
ASPHALT CONCRETE HOT MIX SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMPACTED DEPTH.

PROPOSED R/W OR TIE TO EXISTING DRIVEWAY WHICHEVER IS FURTHER.

NOTE: REFER TO PLAN SHEETS FOR WIDTHS OF COUNTY ROADS.

DETAIL FOR COUNTY ROAD AND LOCAL STREET TURNOUT

OILWELL CORNER RD.
ALPE RD.
DRANE RD.
PECAN GROVE DR.
HWY. 147

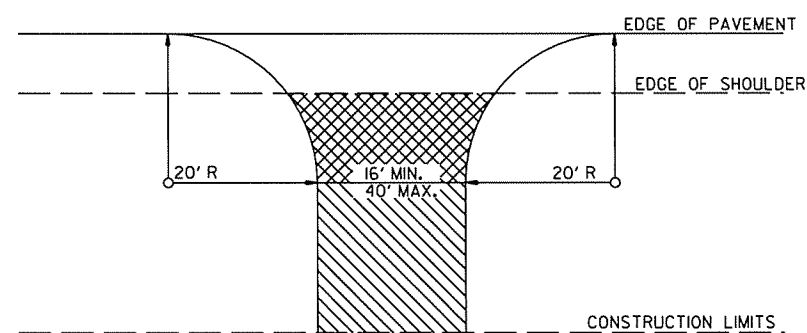


ASPHALT CONCRETE HOT MIX SURFACE COURSE (1/2") (220 LBS./SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMPACTED DEPTH IF ASPHALT DRIVE EXISTS OR 6" CONCRETE IF CONCRETE DRIVE EXISTS.

PROPOSED R/W OR TIE TO EXISTING DRIVEWAY WHICHEVER IS FURTHER.

DETAIL FOR DRIVEWAY TURNOUTS

HWY. 64



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

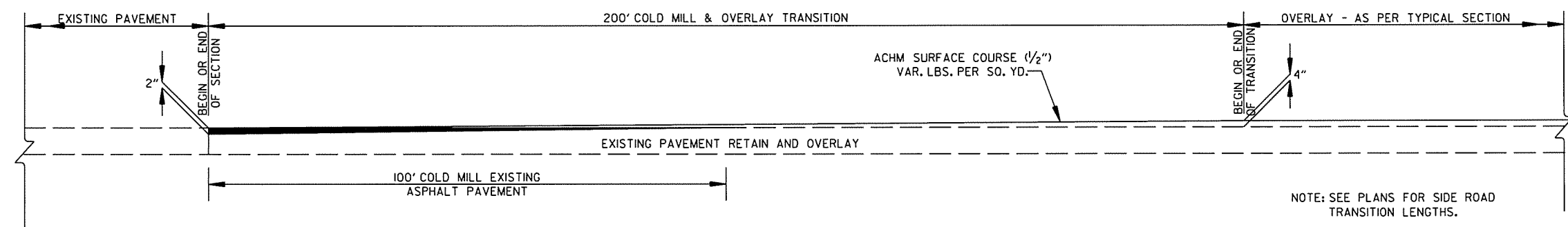
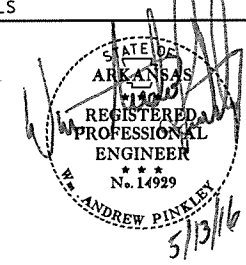
AGGREGATE BASE COURSE (CLASS 7) 9" COMPACTED DEPTH OR CONFORM TO EXISTING DRIVEWAY

DETAIL FOR DRIVEWAY TURNOUTS

HWY. 50
OLD HWY. 64B

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							II	224

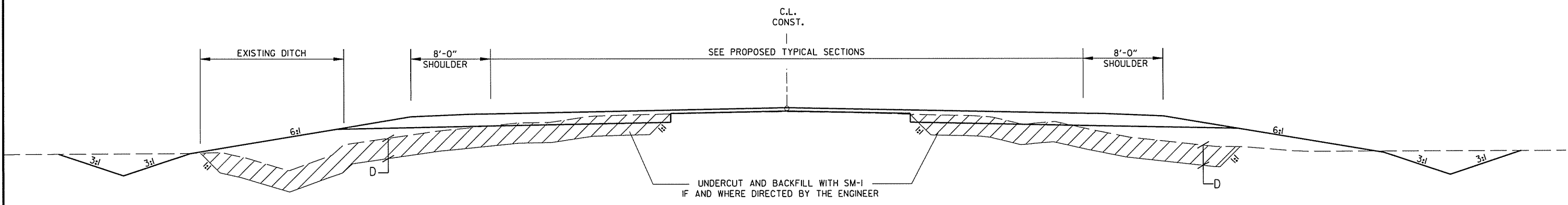
2 SPECIAL DETAILS



PAVEMENT TRANSITION

STA. 478+91.76 TO STA. 480+91.76
 STA. 775+44.56 TO STA. 777+44.56

NOTE: SEE PLANS FOR SIDE ROAD TRANSITION LENGTHS.



DETAIL OF UNDERCUT

NOTE: SEE PLANS FOR SIDE ROAD TRANSITION LENGTHS.

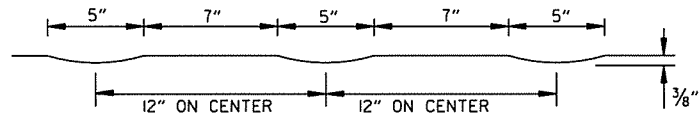
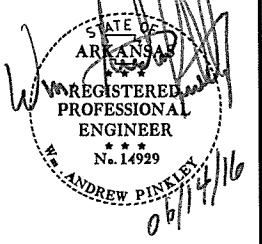
LIMITS OF UNDERCUTTING

FROM	TO	ESTIMATED WEAK SOIL THICKNESS (FT) D
STA. 484+00.00	STA. 540+00.00	2.0
STA. 564+00.00	STA. 596+00.00	3.5
STA. 676+00.00	STA. 700+00.00	2.0
STA. 724+00.00	STA. 740+00.00	3.5
STA. 764+00.00	STA. 775+44.56	>3.5

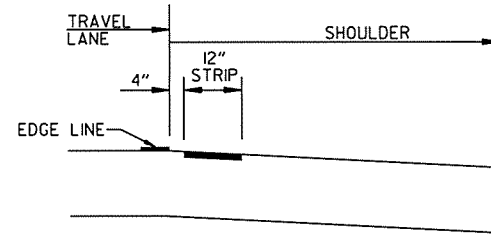
05/06/2015 r-CA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAOIOI	12	224

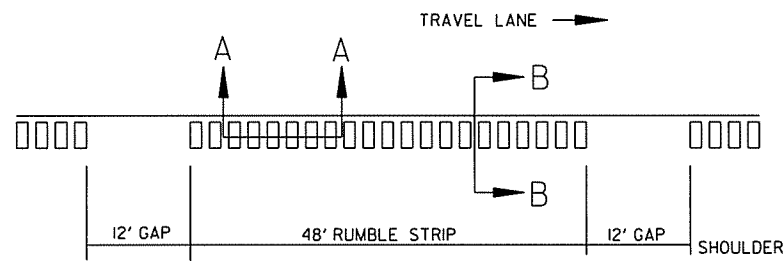
2 SPECIAL DETAILS



SECTION A-A



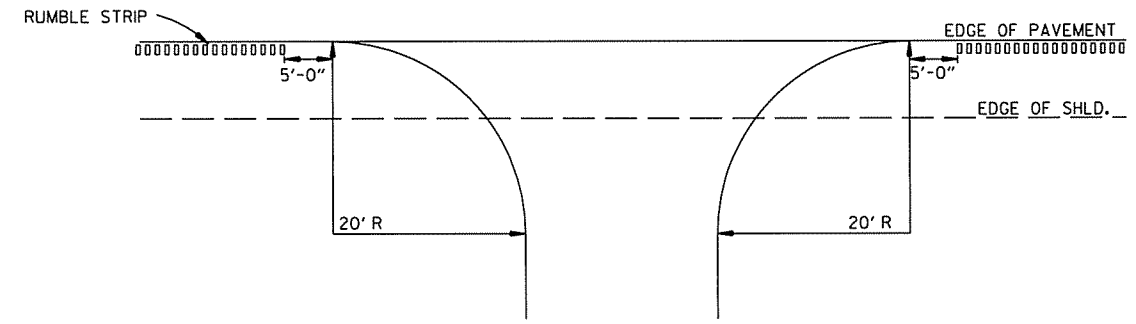
SECTION B-B



PLAN VIEW

NOTES:

- RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
- RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
- THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO MINIMUM.

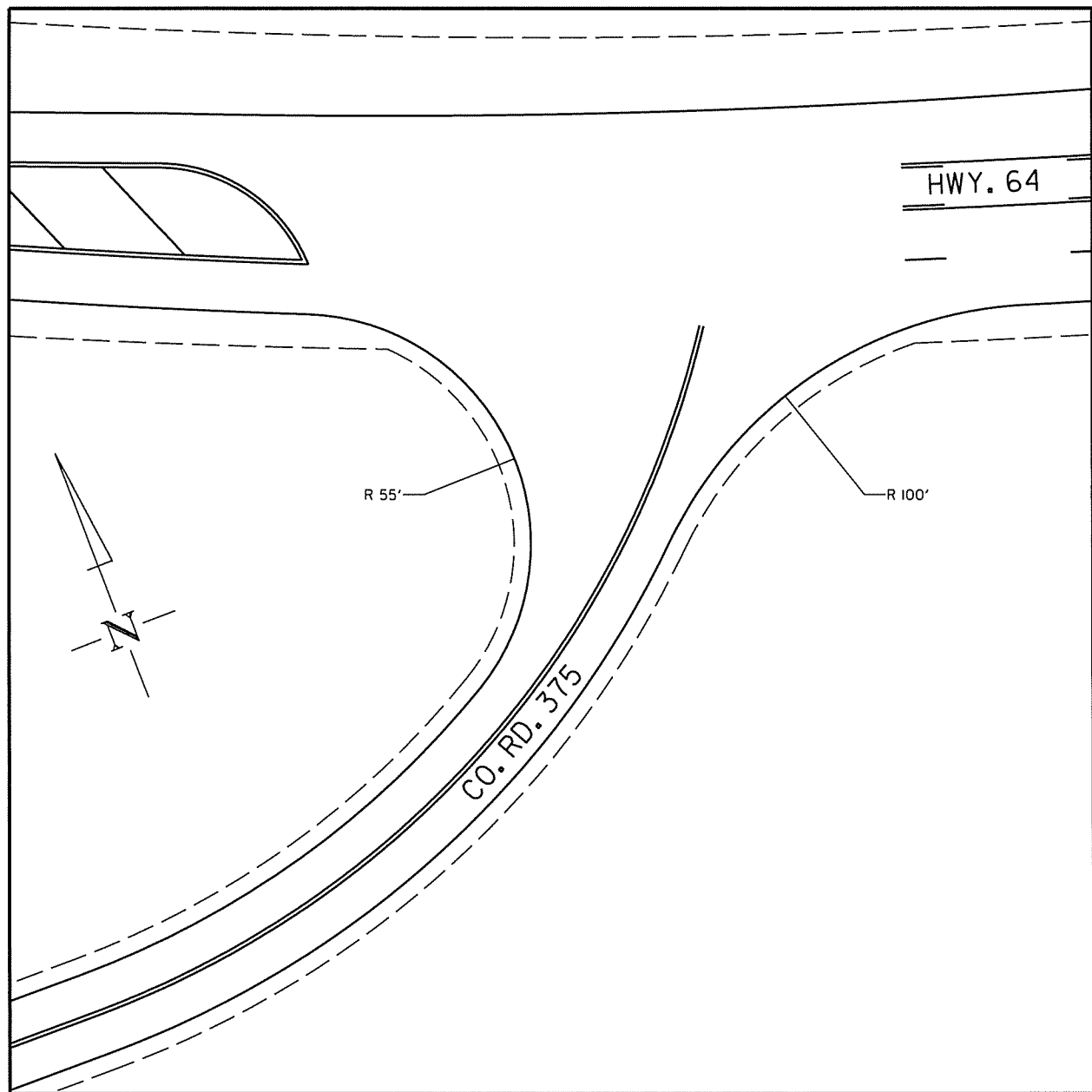
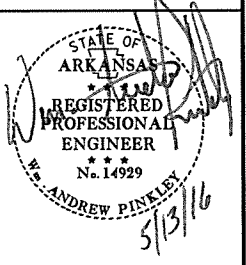


DETAIL FOR RUMBLE STRIP GAP AT DRIVEWAY & LOCAL ROAD TURNOUTS

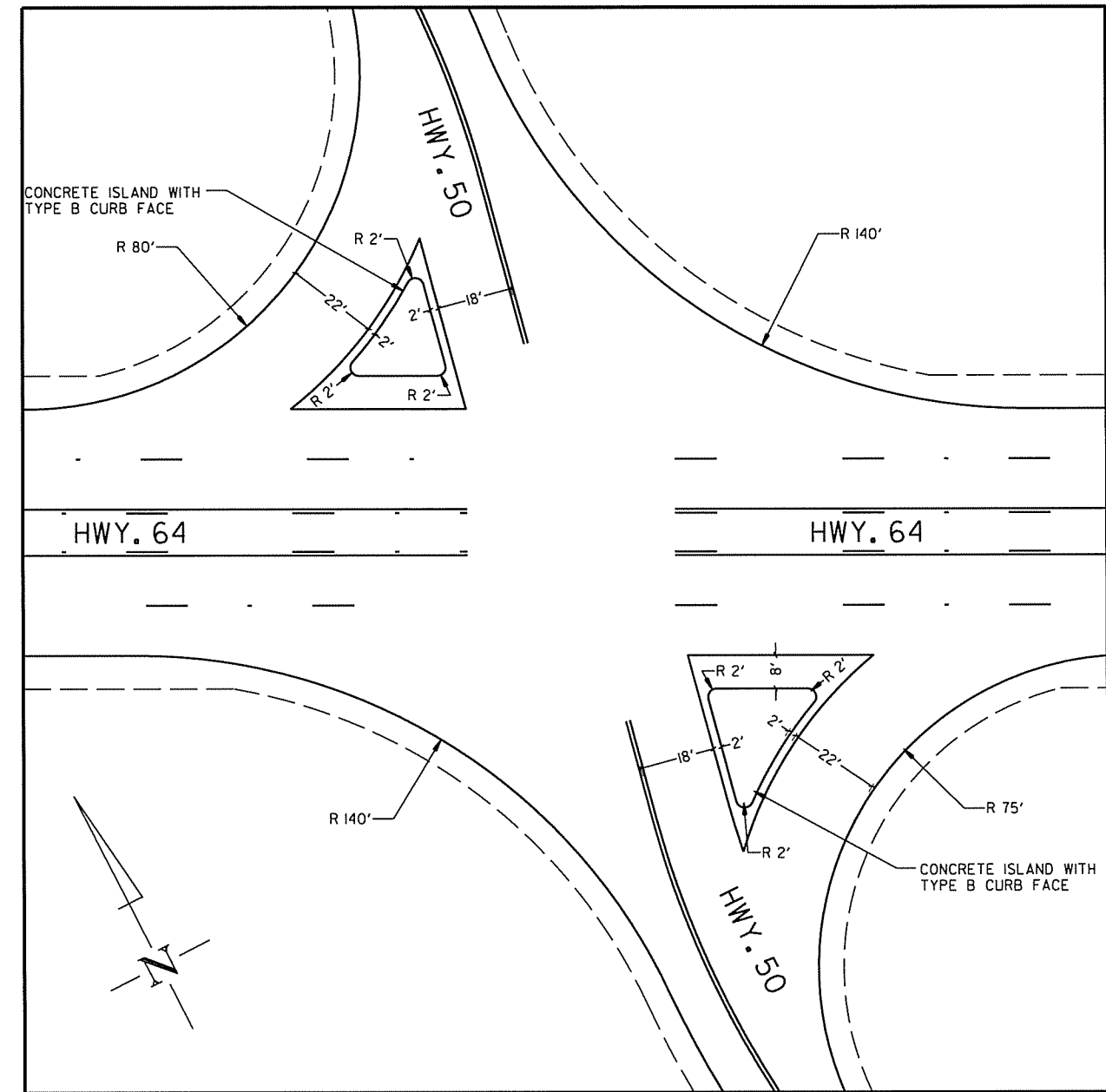
DETAILS OF RUMBLE STRIPS (TYPE 2)

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							13	224

2 SPECIAL DETAILS



STA. 485+90.85 HWY. 64 C.L. =
 STA. 100+00.00 CO. RD. 375 C.L.
 $\Delta = 75^\circ 00' 00''$



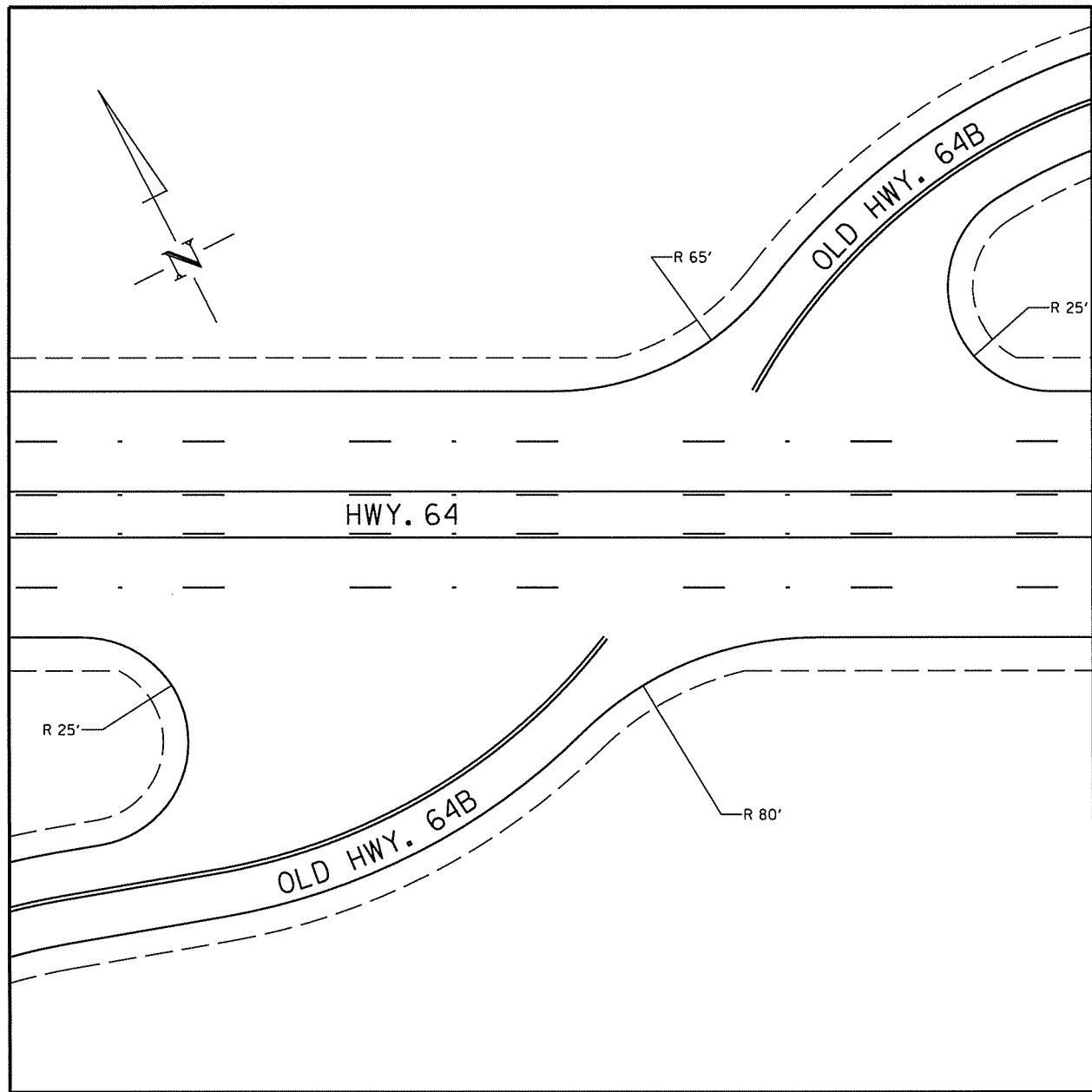
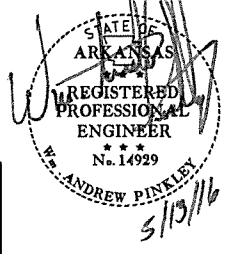
STA. 643+01.34 HWY. 64 C.L. =
 STA. 102+56.55 HWY. 50 C.L.
 $\Delta = 75^\circ 00' 00''$

05/06/2015 r-CA0101.dgn

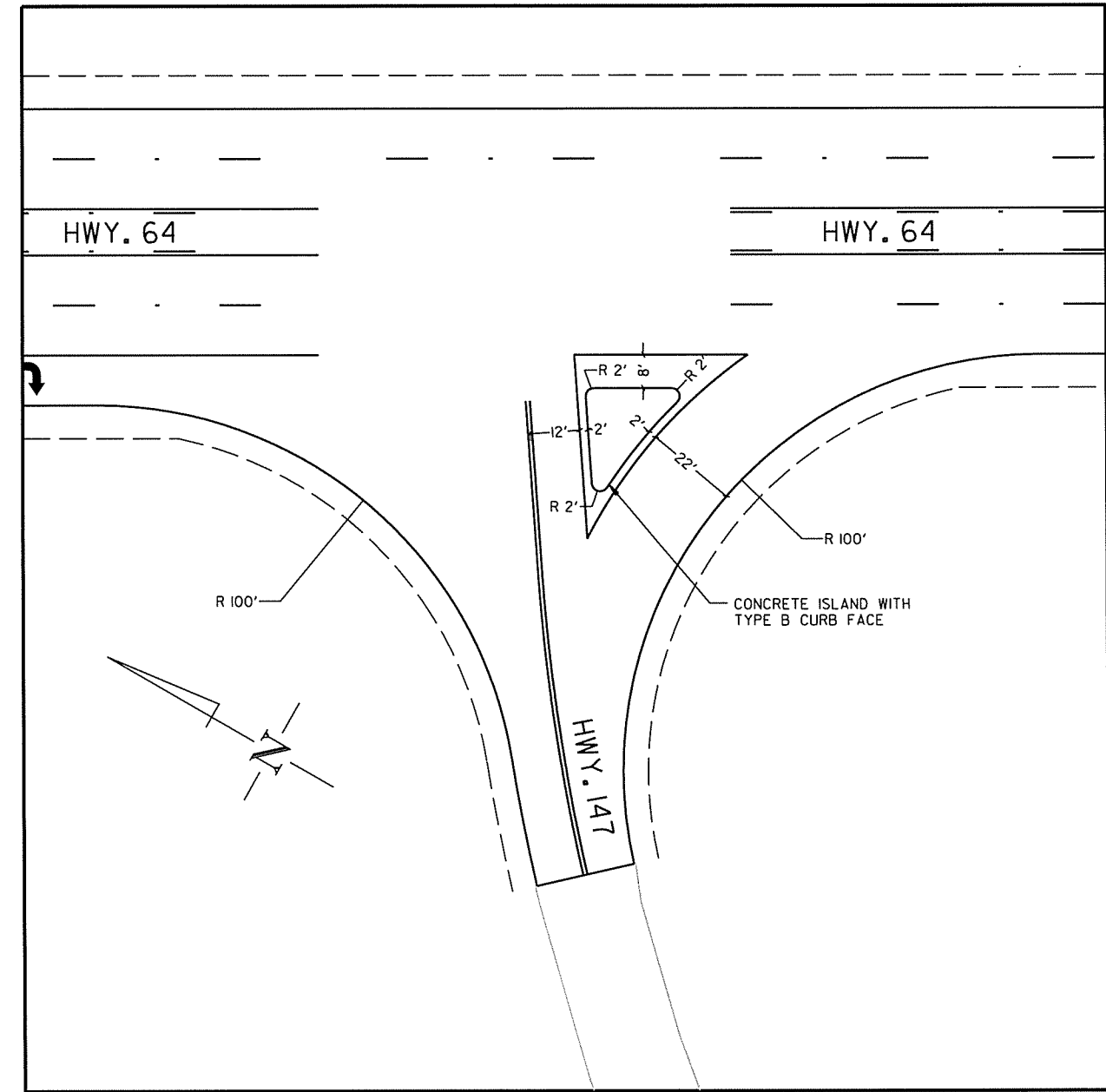
SPECIAL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CAOIQI							14	224

2 SPECIAL DETAILS



STA. 693+25.00 HWY. 64 C.L. =
 STA. 103+50.00 OLD HWY. 64B C.L.
 $\Delta = 60^\circ 00' 00''$



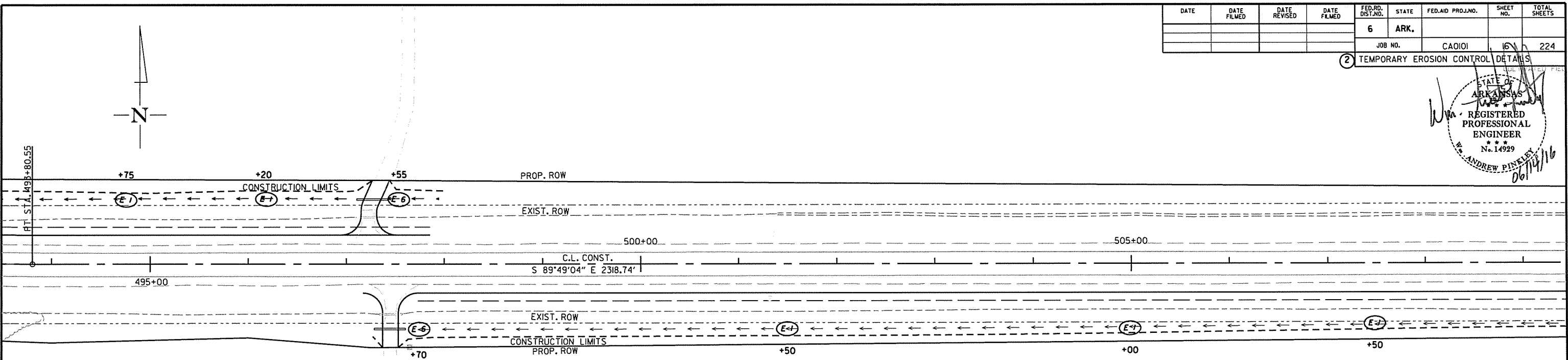
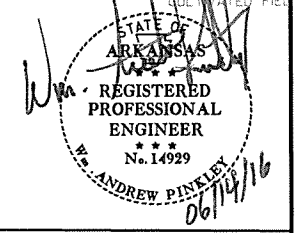
STA. 772+94.45 HWY. 64 C.L.

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SPECIAL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	16	224	

2 TEMPORARY EROSION CONTROL DETAILS



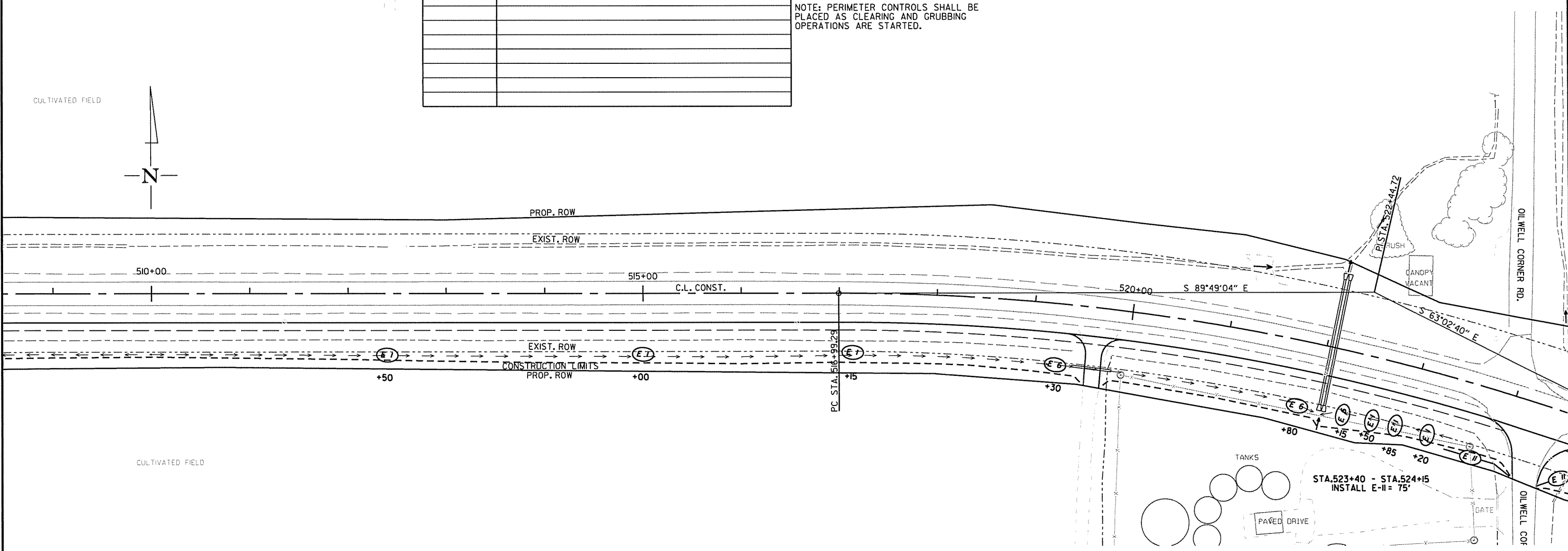
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) = SILT FENCE

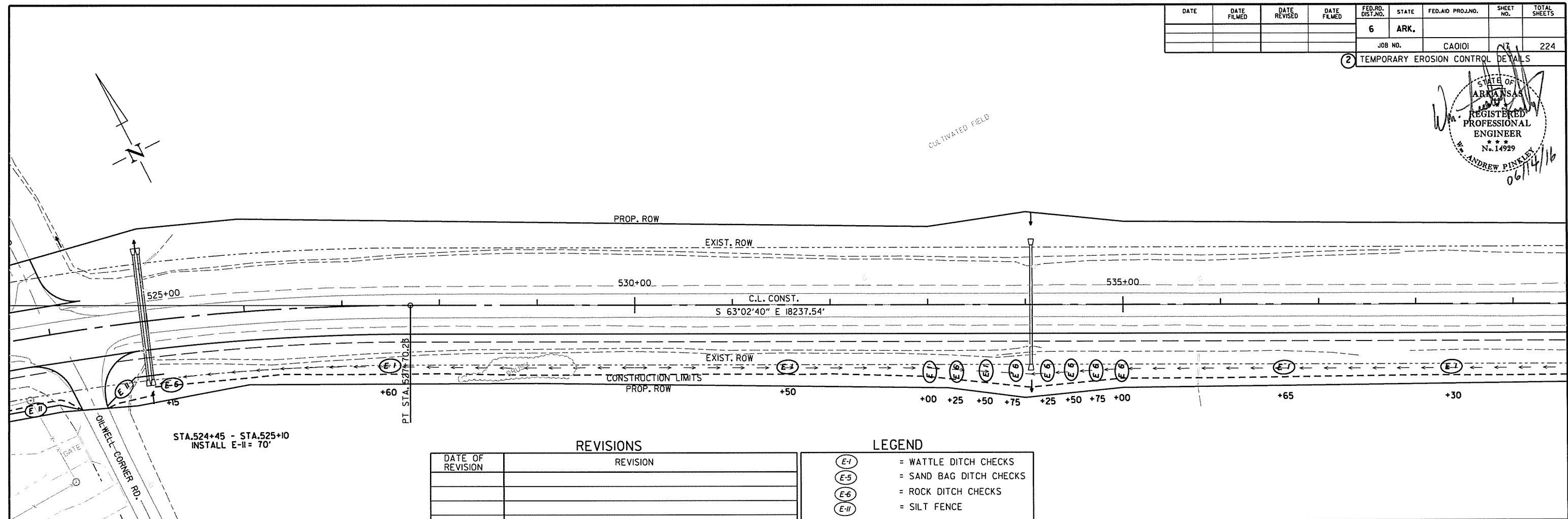
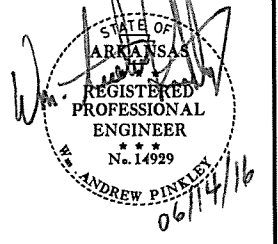
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.



TEMPORARY EROSION CONTROL DETAILS STAGE I

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CAOIOI	224

② TEMPORARY EROSION CONTROL DETAILS



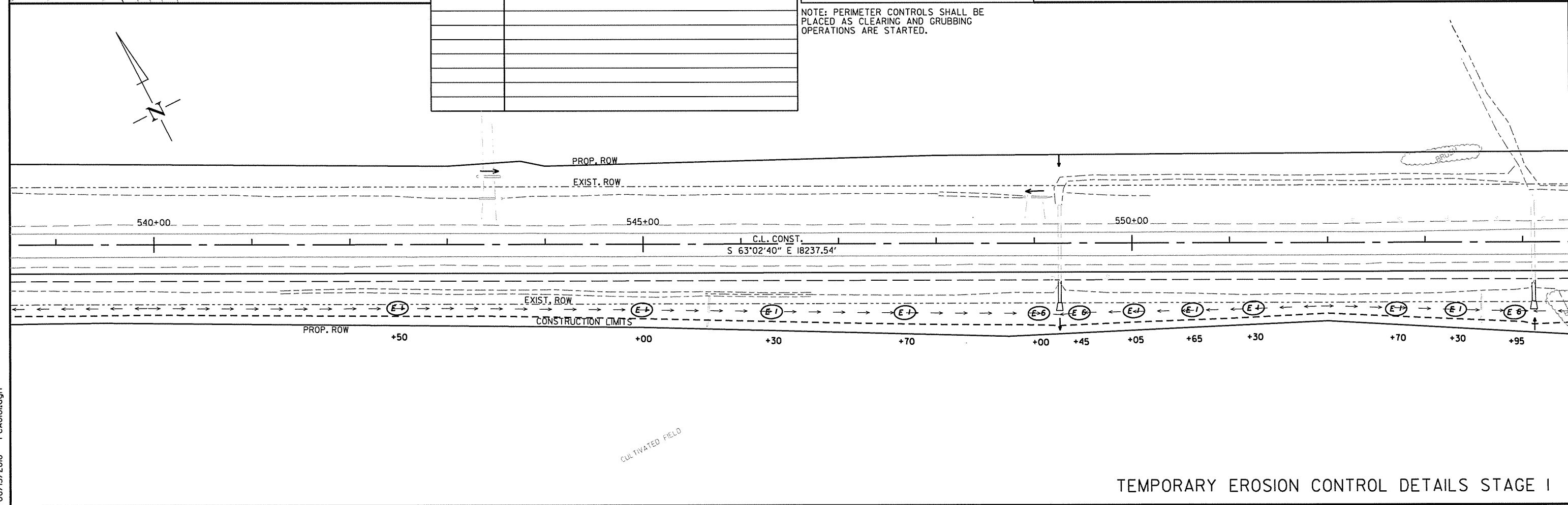
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

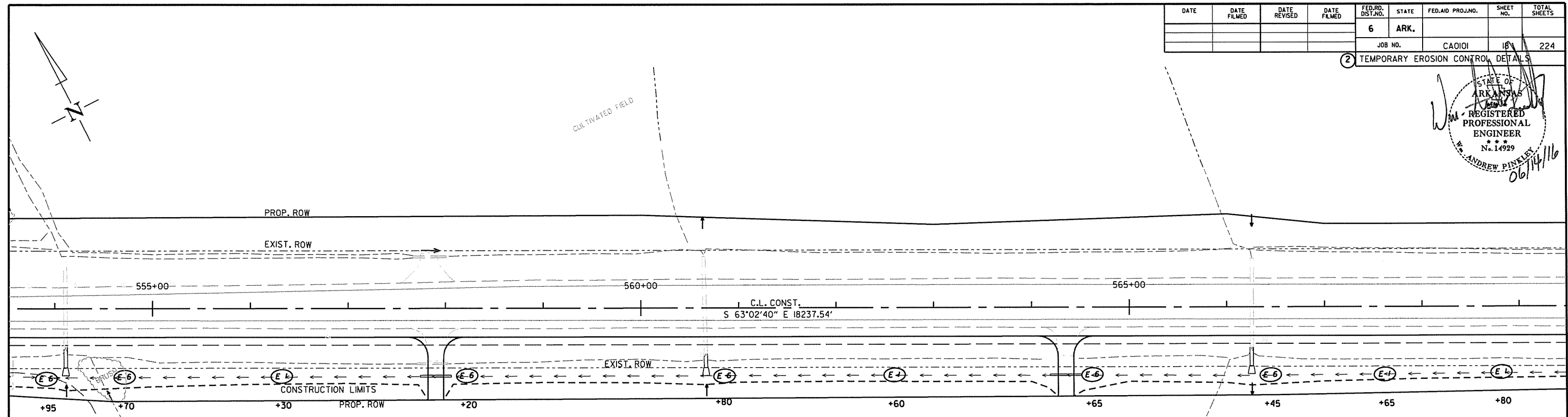
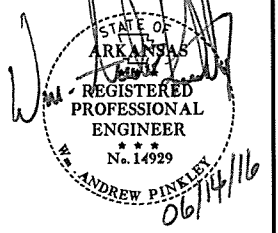
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.



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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	CAOIQI	18	224	

2 TEMPORARY EROSION CONTROL DETAILS



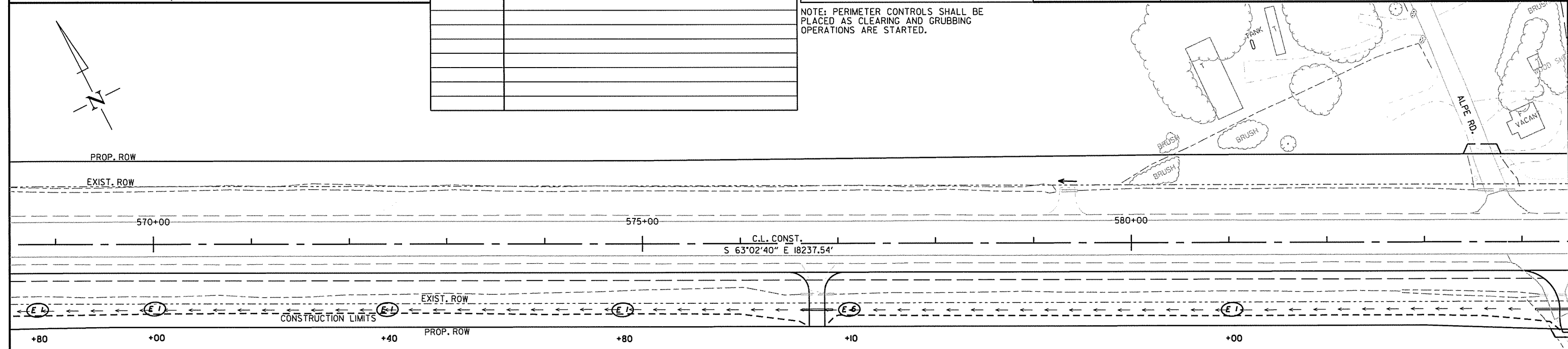
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
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- (E-11) = SILT FENCE

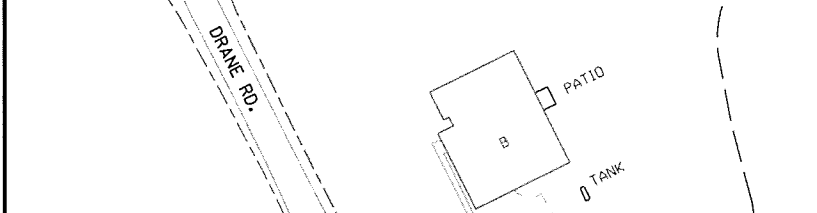
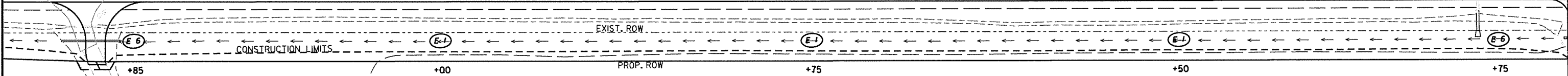
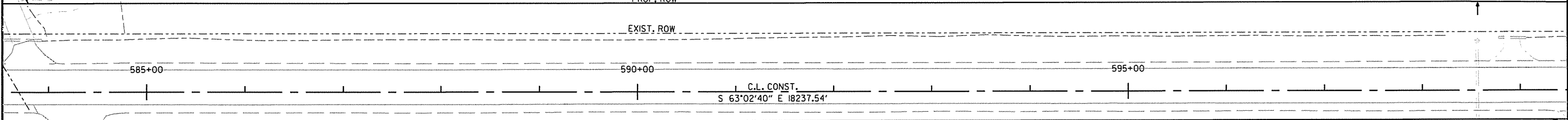
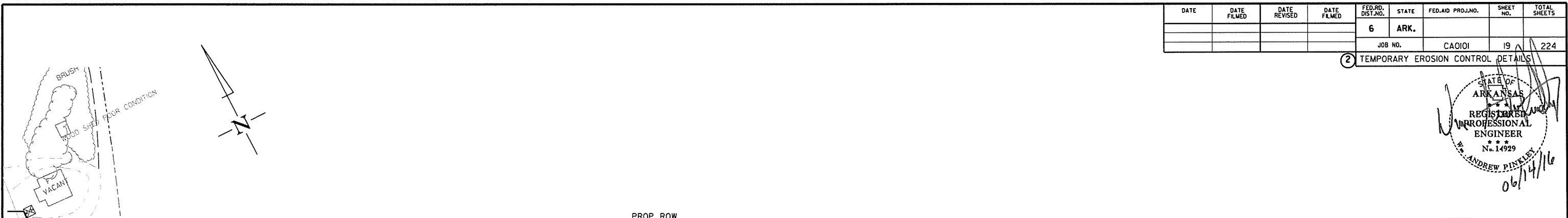
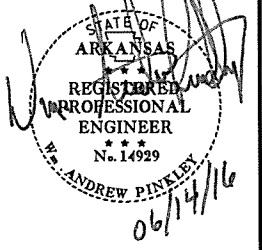
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.



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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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② TEMPORARY EROSION CONTROL DETAILS



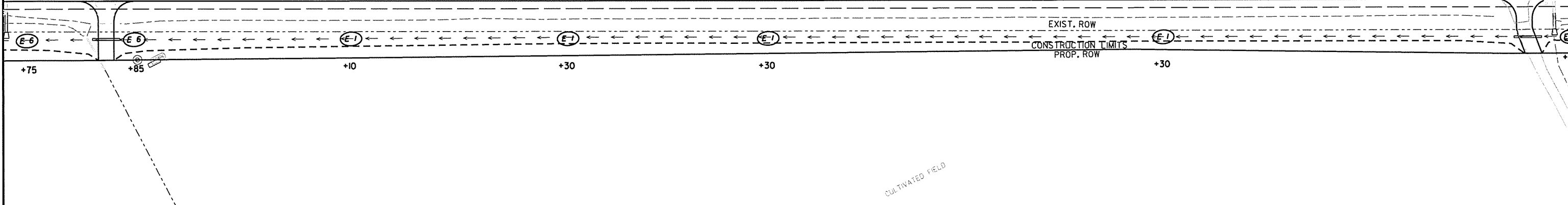
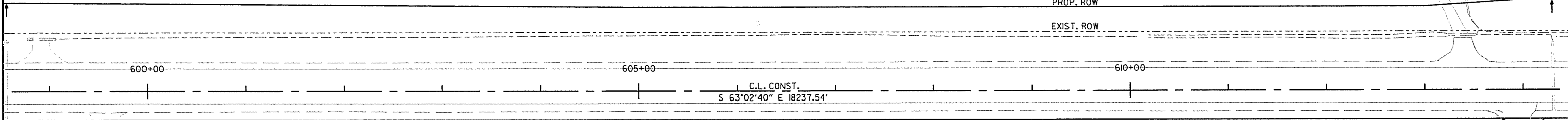
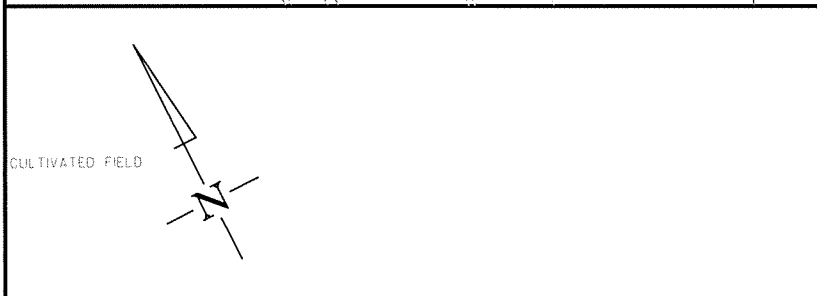
REVISIONS

DATE OF REVISION	REVISION

LEGEND

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- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

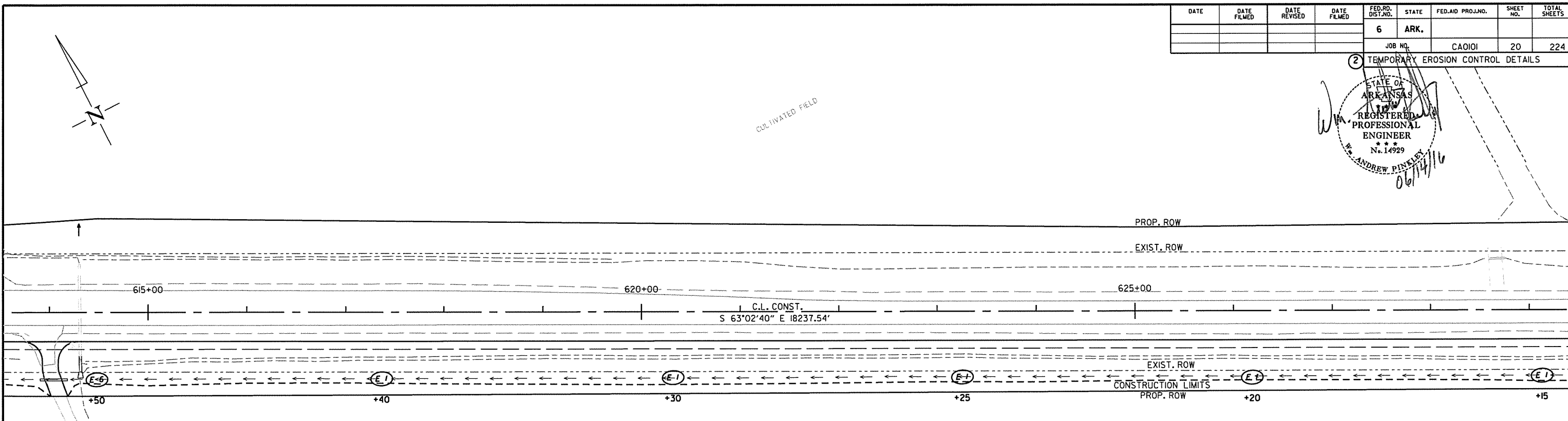
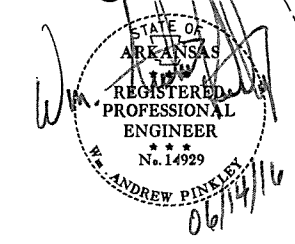
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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 TEMPORARY EROSION CONTROL DETAILS



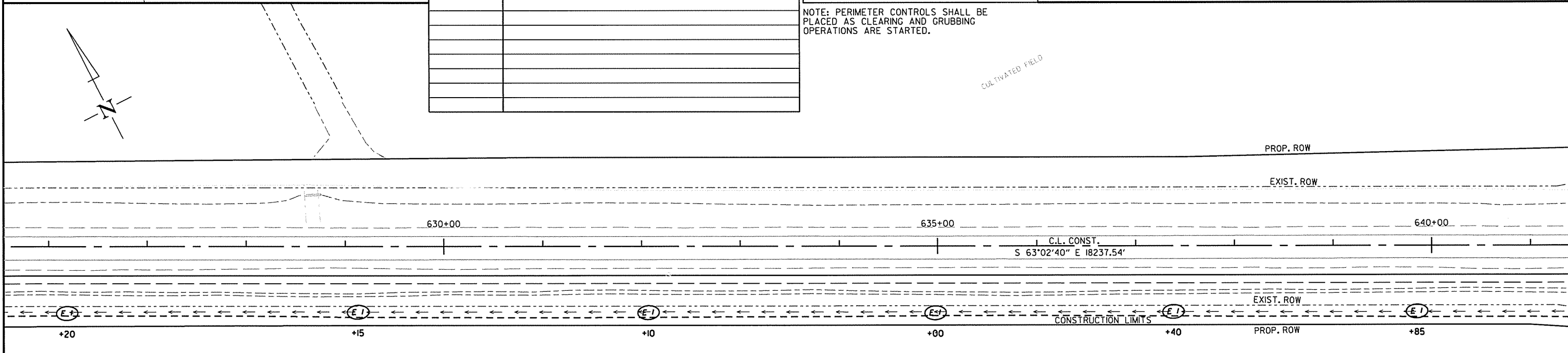
REVISIONS

DATE OF REVISION	REVISION

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- (E-6) = ROCK DITCH CHECKS
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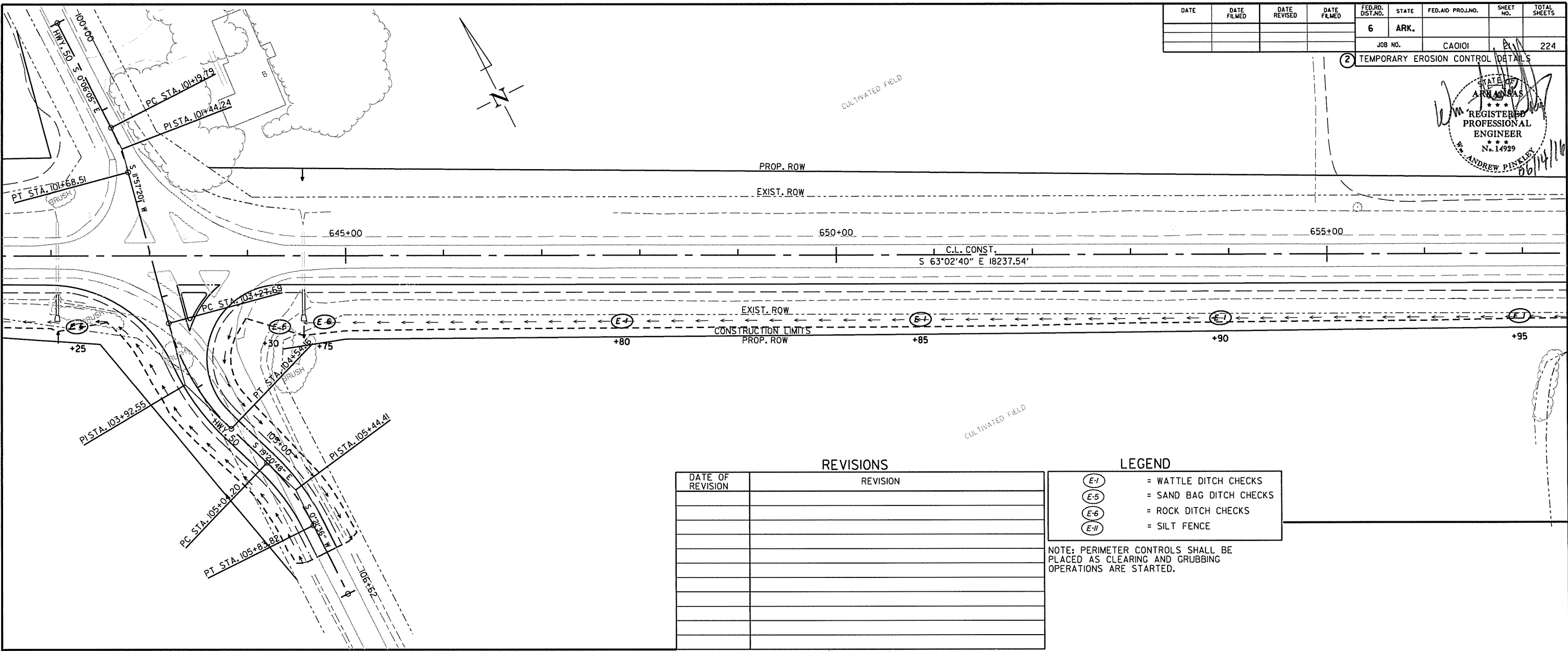
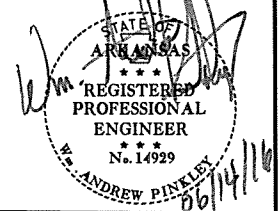
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				JOB NO.	CAOIOI		224	

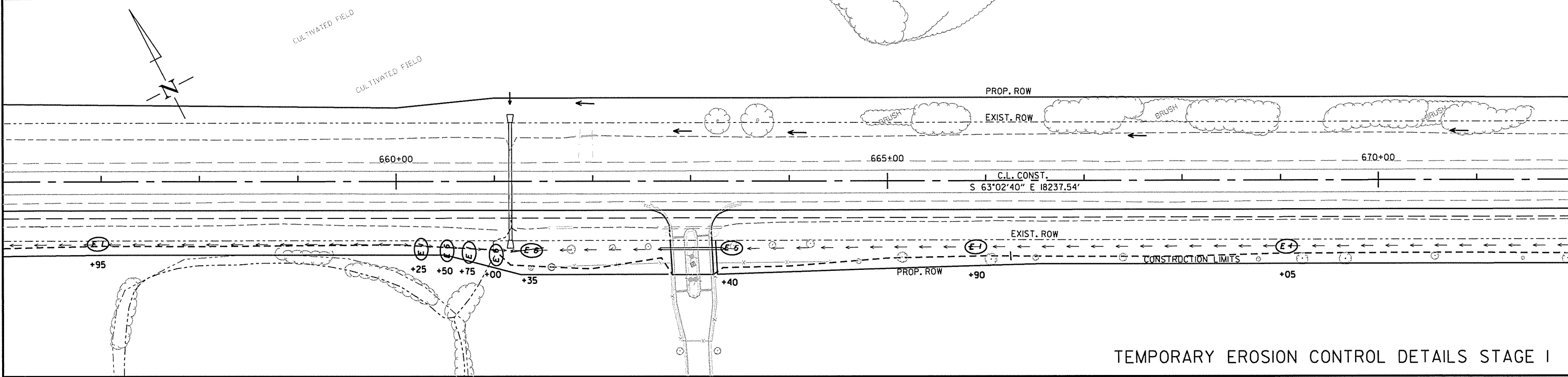
2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND	
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(E-5)	= SAND BAG DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE

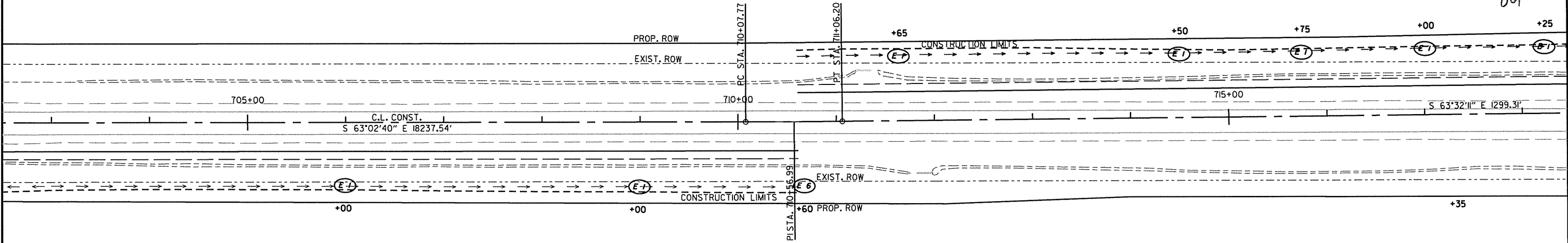
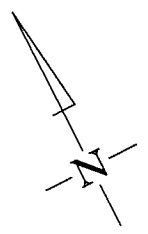
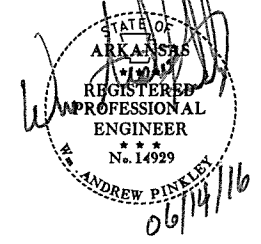
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							JOB NO. CAOIOI	23
								224

2 TEMPORARY EROSION CONTROL DETAILS



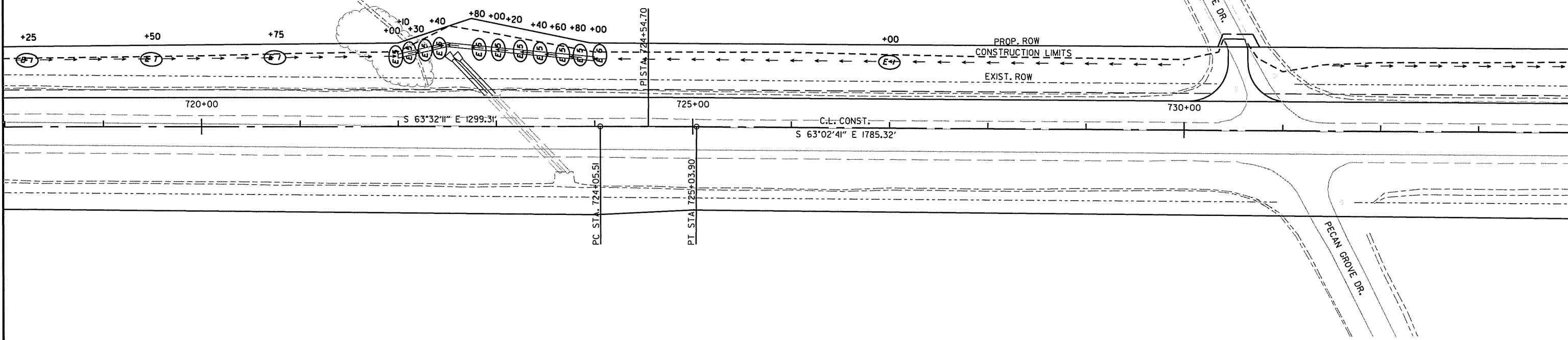
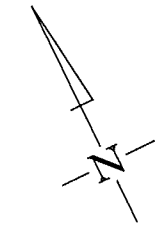
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

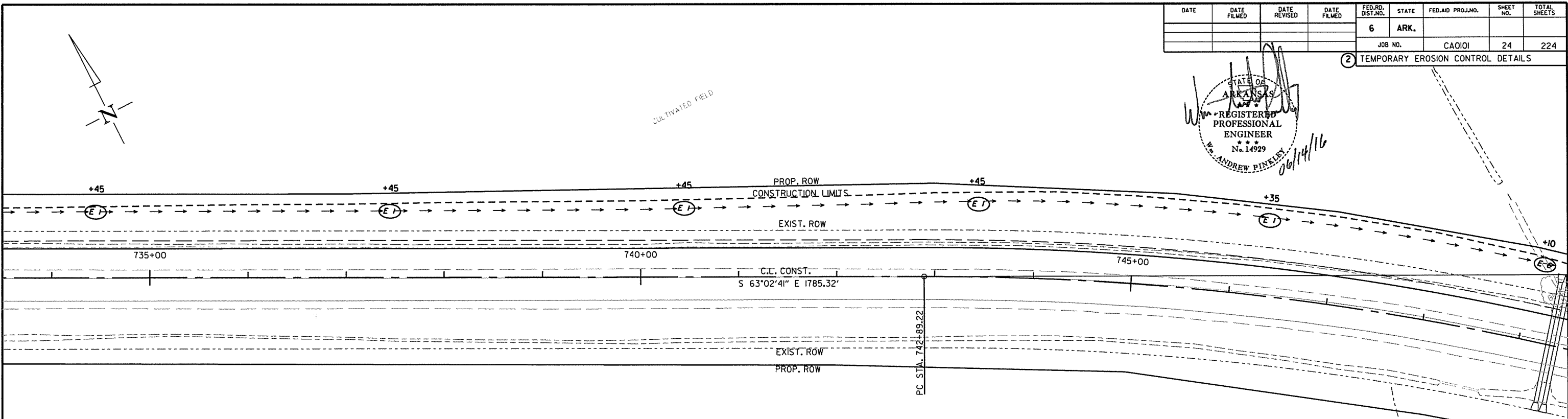
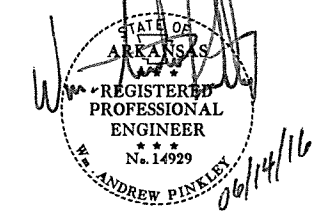
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.



06/13/2016 rcaoi01.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	24	224	

2 TEMPORARY EROSION CONTROL DETAILS



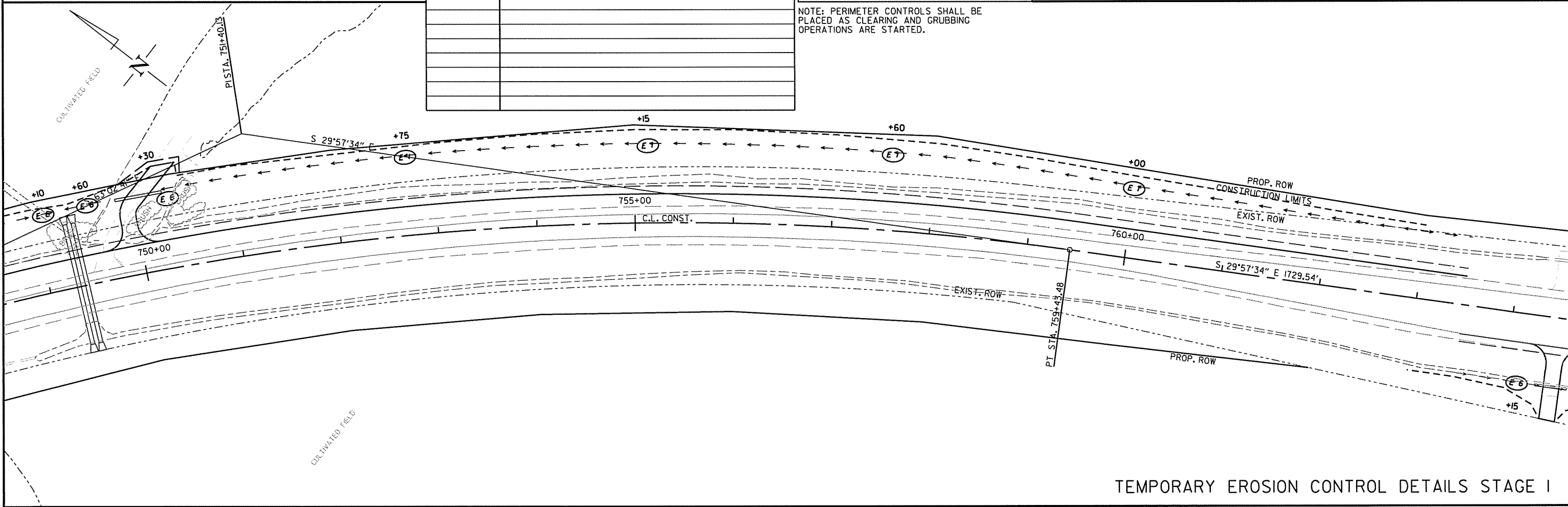
REVISIONS

DATE OF REVISION	REVISION

LEGEND

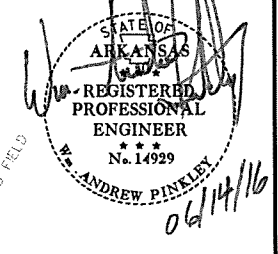
- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

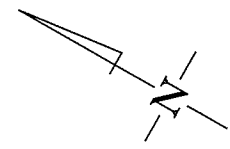


DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CAOIOI							25	224

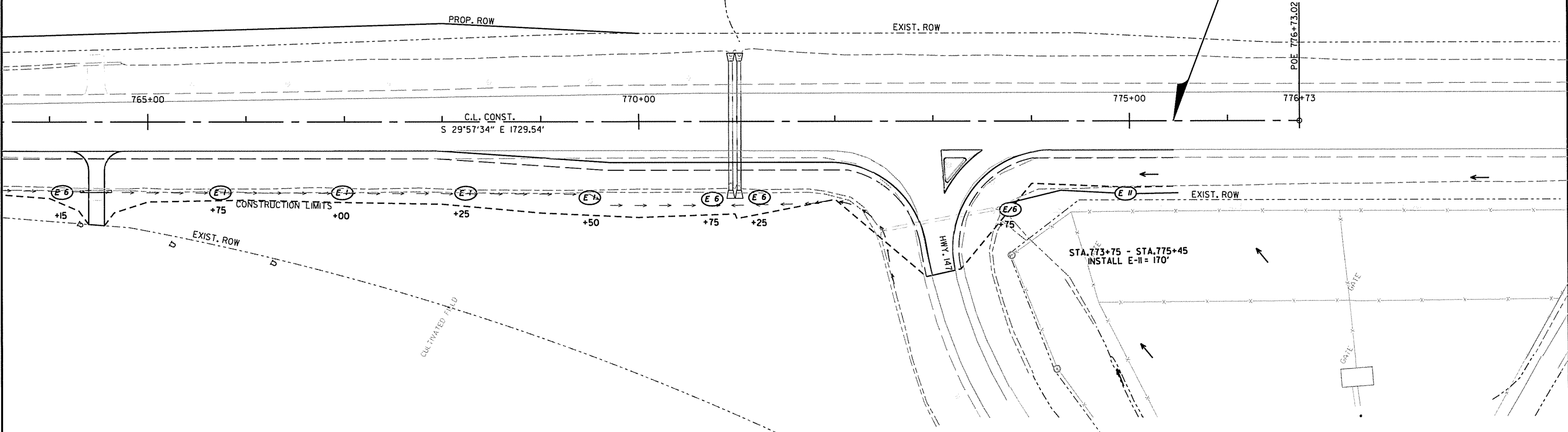
2 TEMPORARY EROSION CONTROL DETAILS



CULTIVATED FIELD



STA. 775+44.56
END JOB CAOIOI
LOG MILE 13.76



REVISIONS

DATE OF REVISION	REVISION

LEGEND

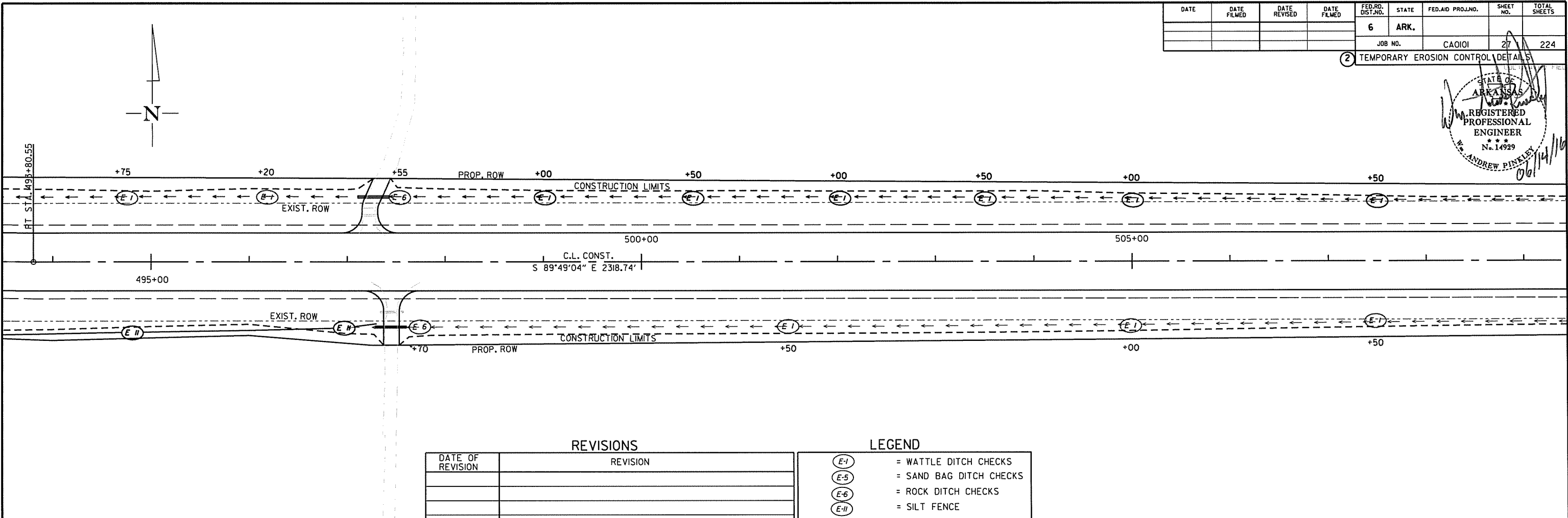
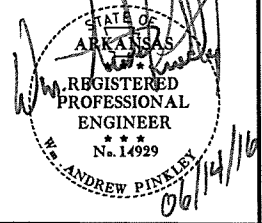
- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

06/13/2016 rCAOIOI.dgn

DATE	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	224
				JOB NO. CA0101				

2 TEMPORARY EROSION CONTROL DETAILS



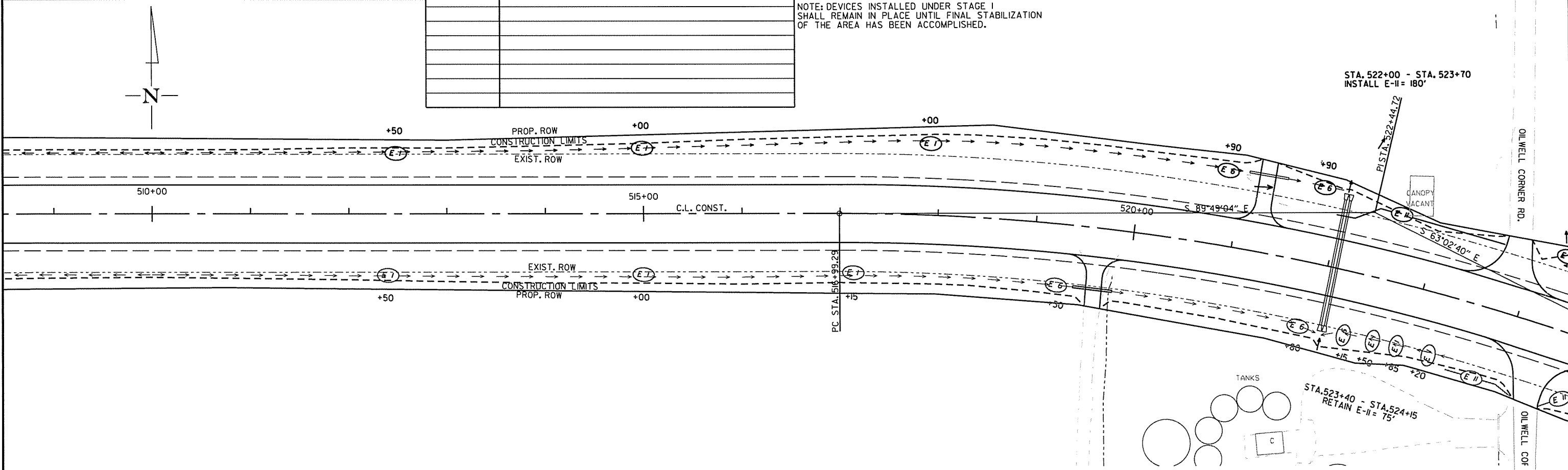
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) = SILT FENCE

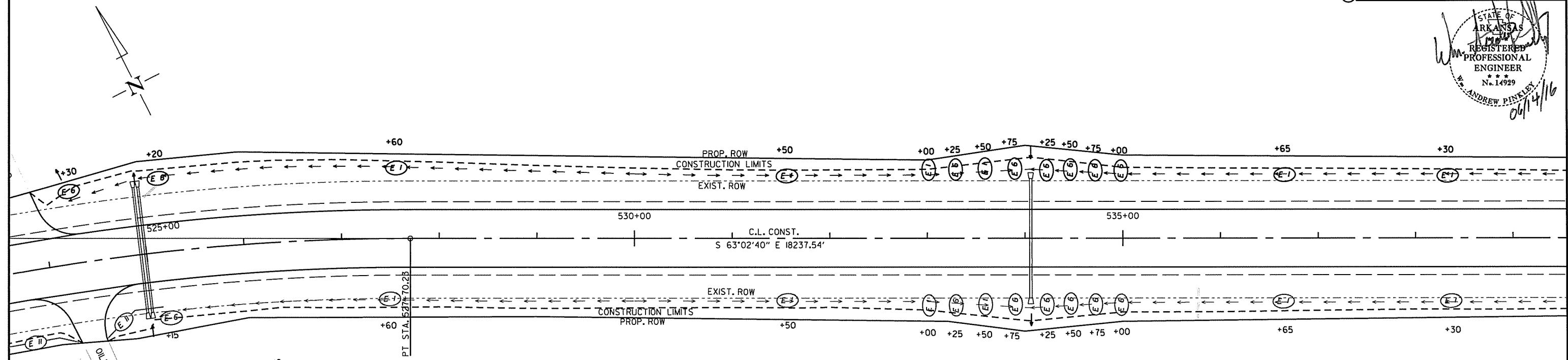
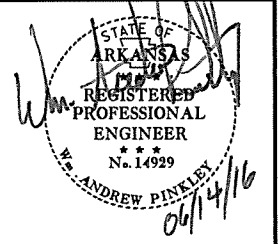
NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



TEMPORARY EROSION CONTROL DETAILS STAGE 2

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. CA0101	28	224

2 TEMPORARY EROSION CONTROL DETAILS



STA. 524+45 - STA. 525+10
RETAIN E-II = 70'

PT. STA. 527+10.25

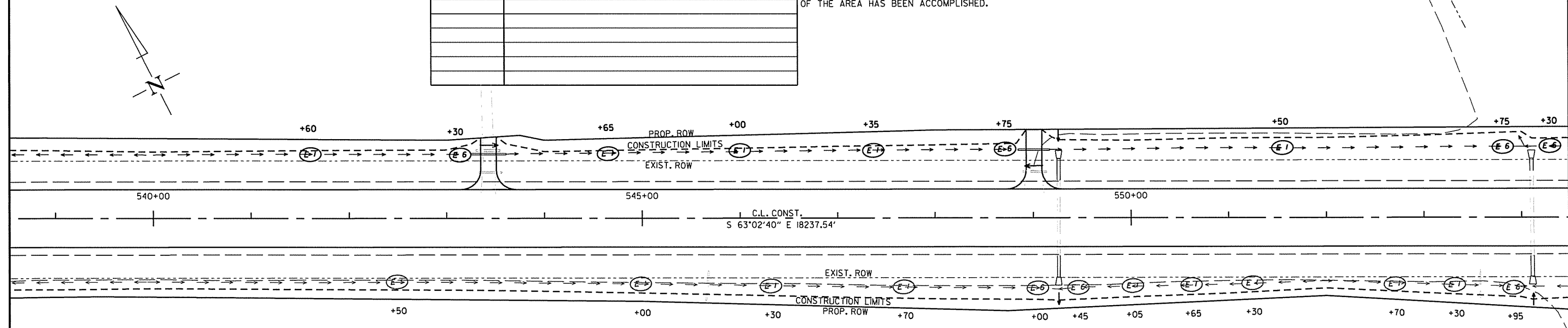
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-II) = SILT FENCE

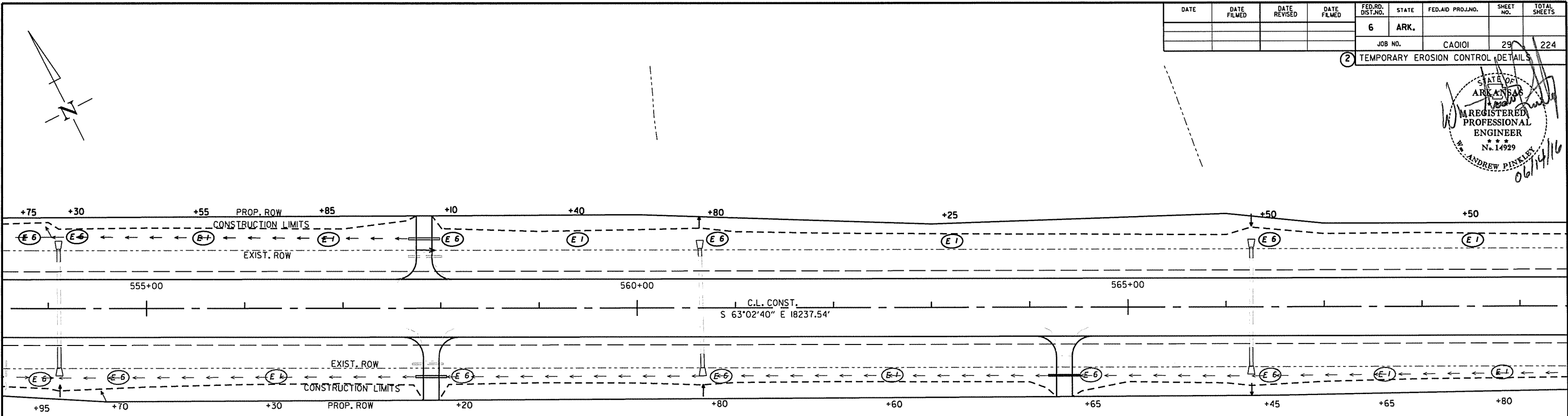
NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



06/13/2016 r-CA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							29	224

2 TEMPORARY EROSION CONTROL DETAILS



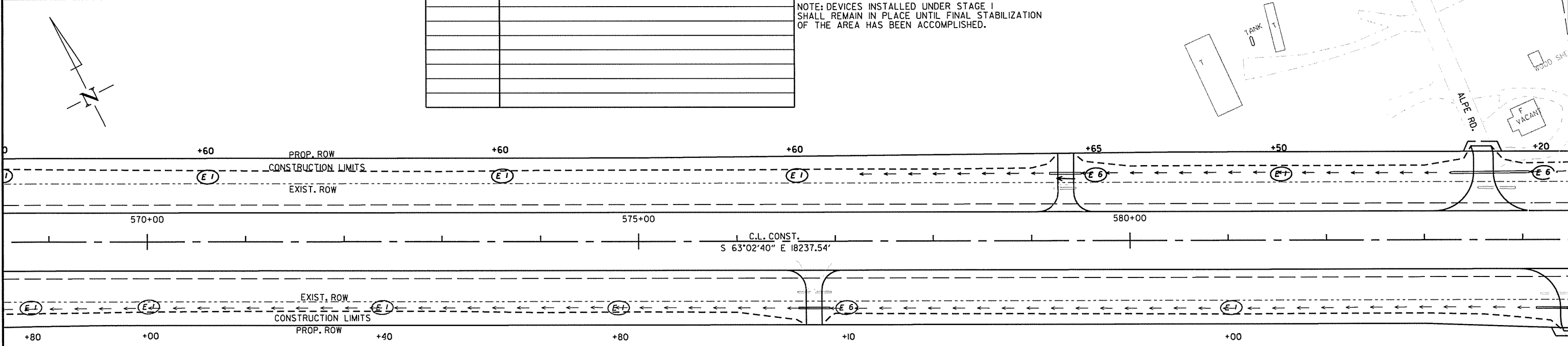
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

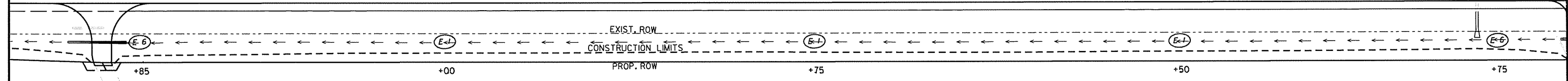
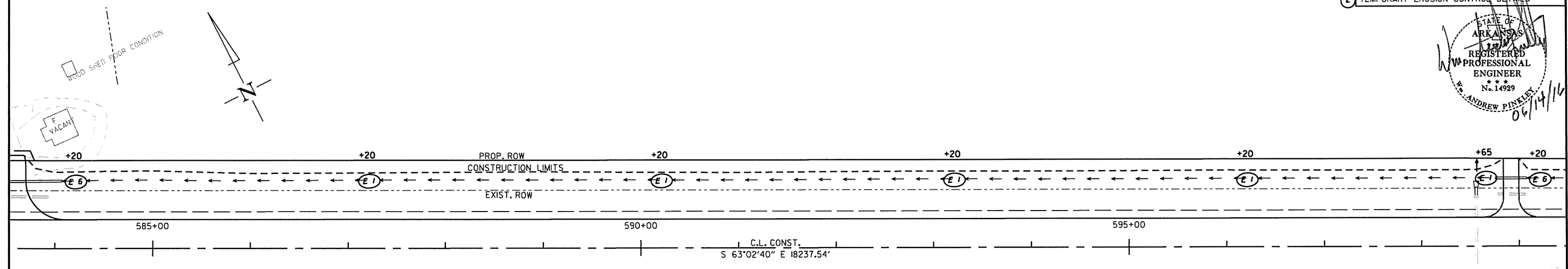
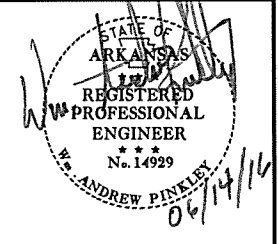
NOTE: DEVICES INSTALLED UNDER STAGE 1 SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. CA0101	224

2 TEMPORARY EROSION CONTROL DETAILS



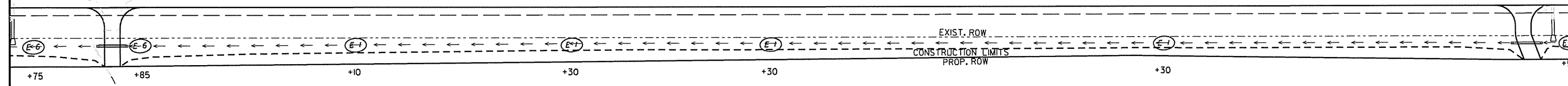
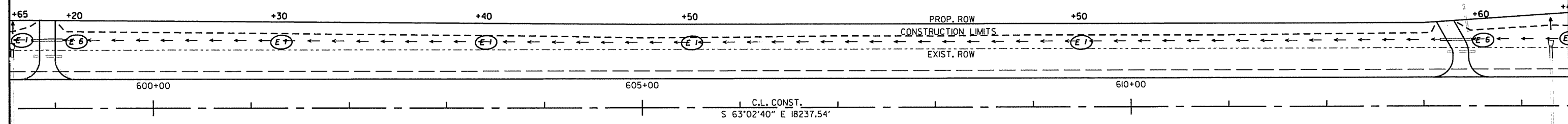
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

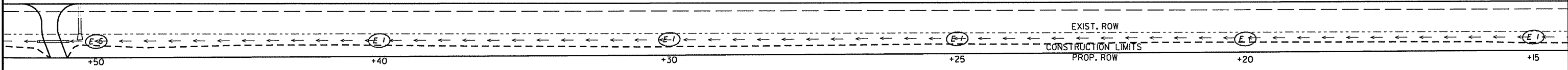
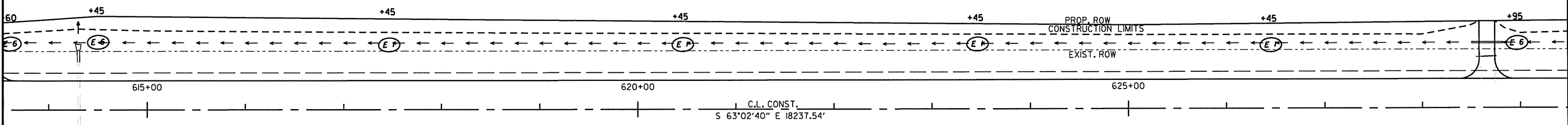
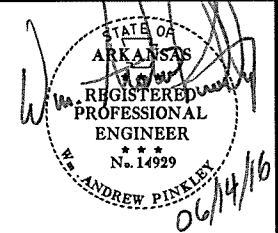
NOTE: DEVICES INSTALLED UNDER STAGE 1 SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							31	224

2 TEMPORARY EROSION CONTROL DETAILS



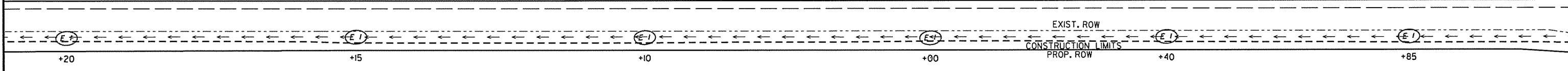
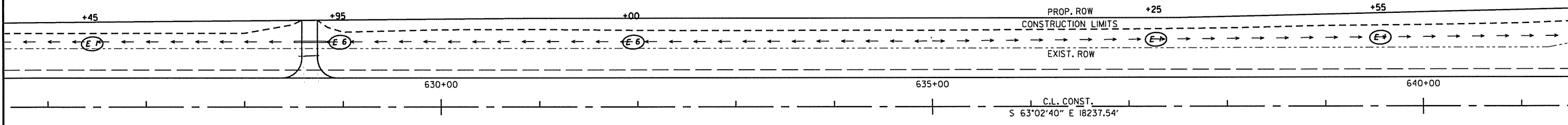
REVISIONS

DATE OF REVISION	REVISION

LEGEND

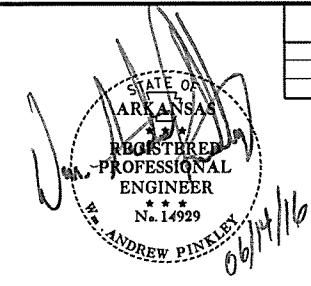
- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

NOTE: DEVICES INSTALLED UNDER STAGE 1 SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.

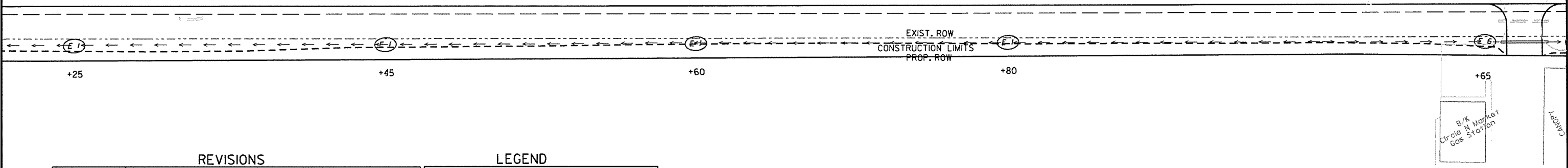
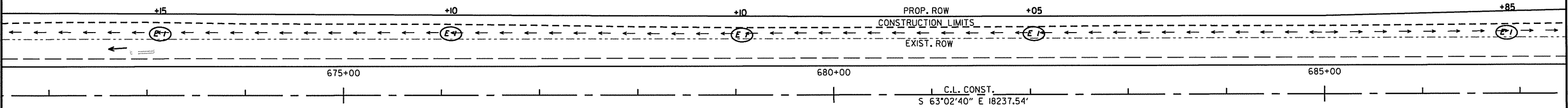
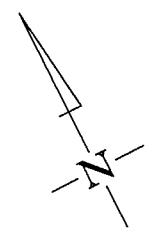


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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							33	224



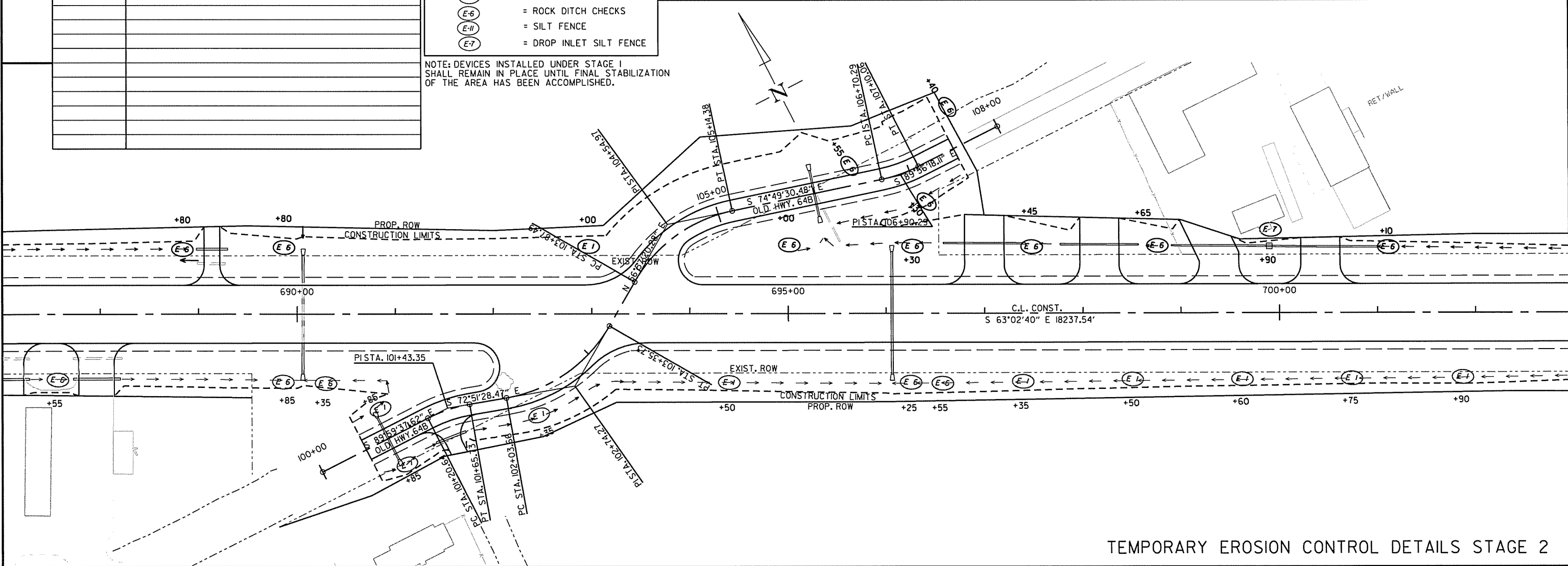
2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

- LEGEND**
- (E-1) = WATTLE DITCH CHECKS
 - (E-5) = SAND BAG DITCH CHECKS
 - (E-6) = ROCK DITCH CHECKS
 - (E-11) = SILT FENCE
 - (E-7) = DROP INLET SILT FENCE

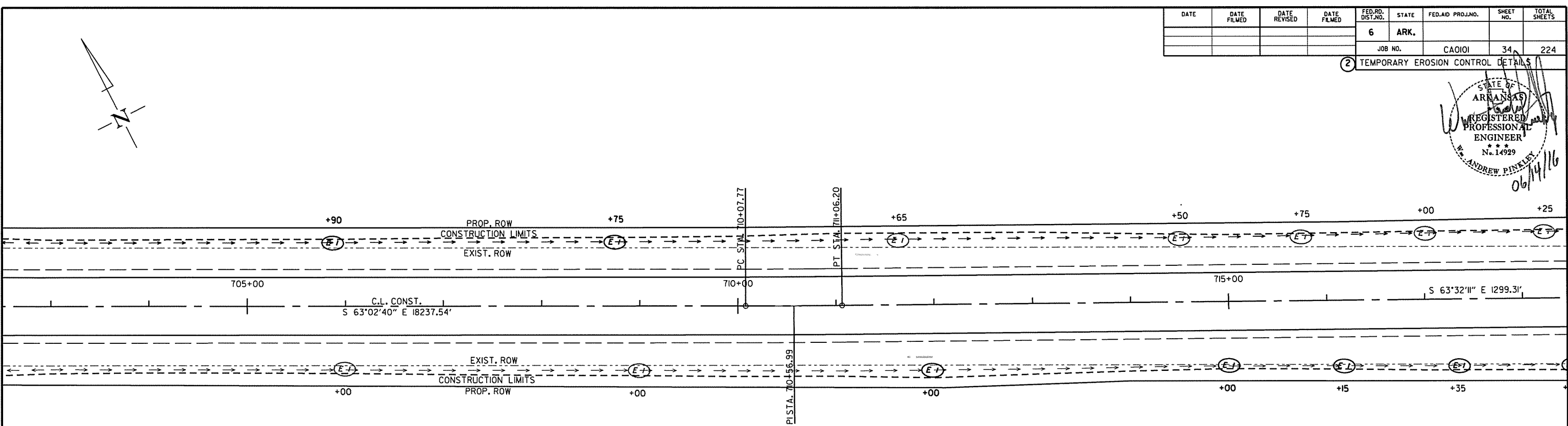
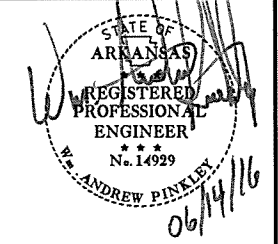
NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



06/13/2016 r-CA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. CA0101	34	224

2 TEMPORARY EROSION CONTROL DETAILS



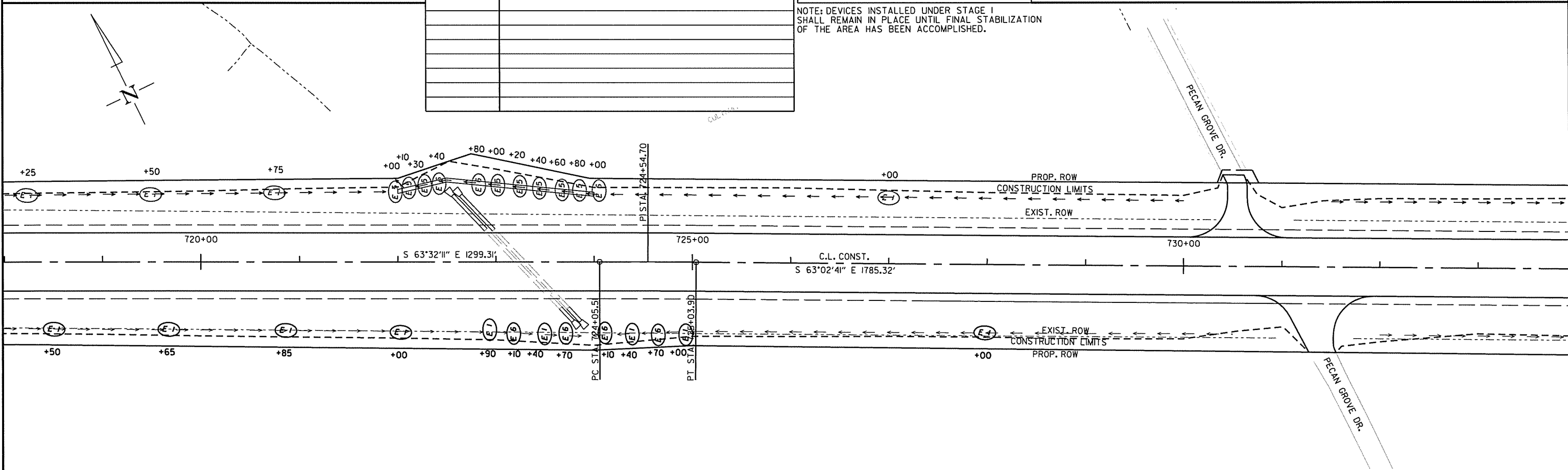
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.

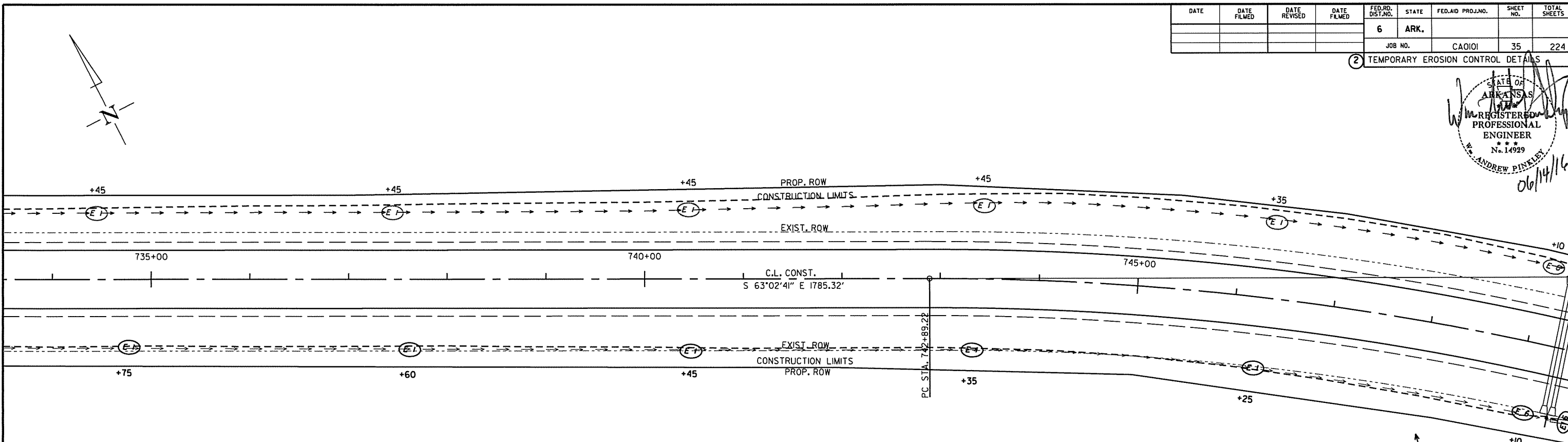


TEMPORARY EROSION CONTROL DETAILS STAGE 2

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							35	224

2 TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 14929
 W. ANDREW PINKLEY
 06/14/16



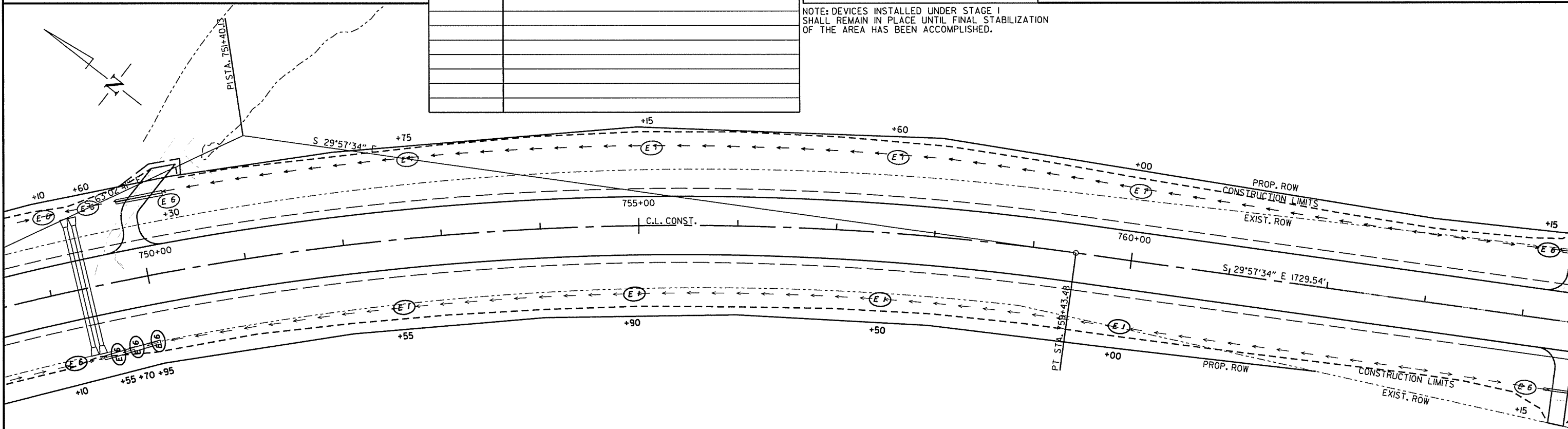
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECKS
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

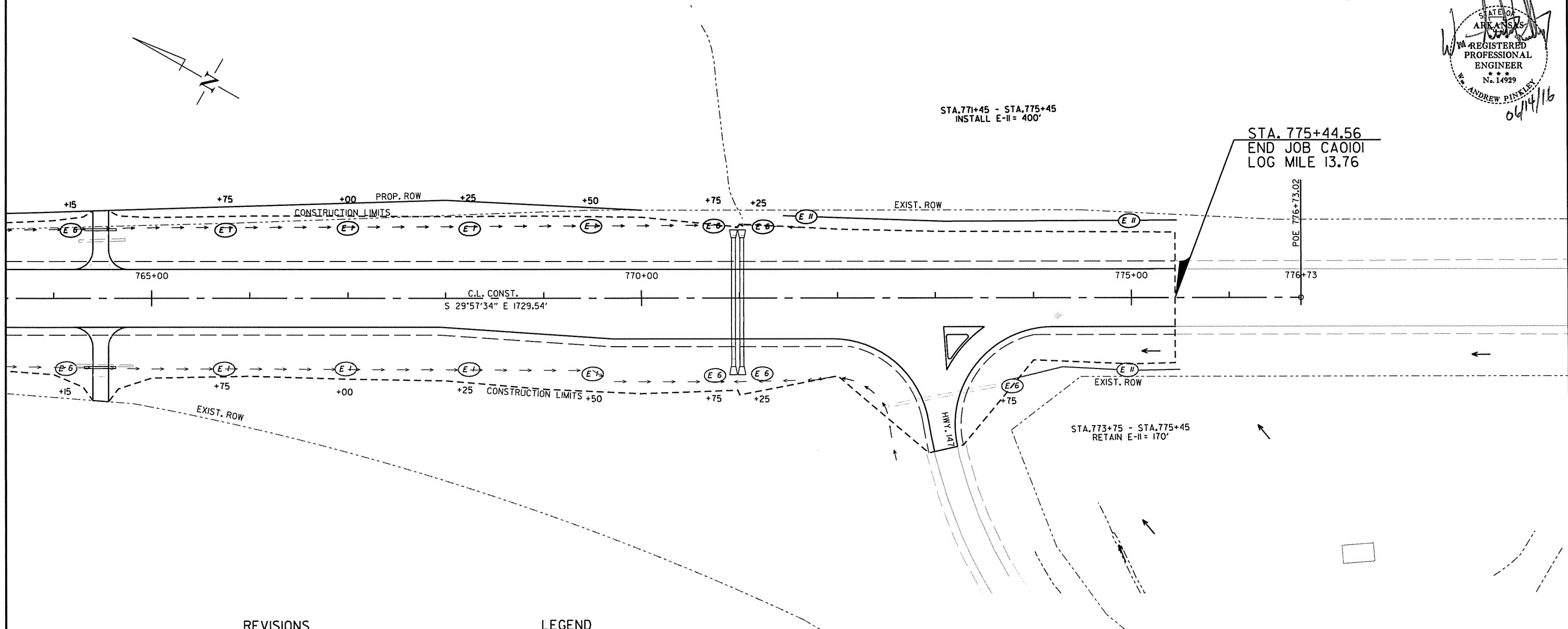
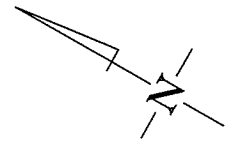
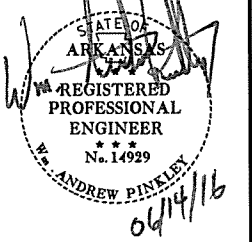
NOTE: DEVICES INSTALLED UNDER STAGE 1 SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



06/13/2016 r-CA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	36	224	

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

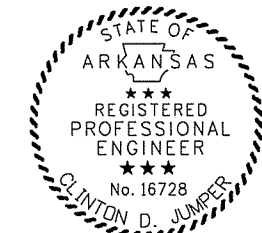
LEGEND

- = WATTLE DITCH CHECKS
- = SAND BAG DITCH CHECKS
- = ROCK DITCH CHECKS
- = SILT FENCE

NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.

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. CA0101	37	224

② MAINTENANCE OF TRAFFIC

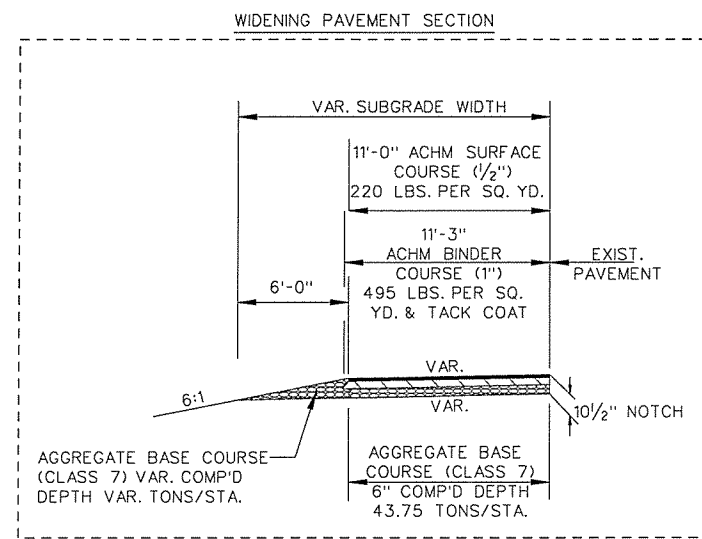


Clinton D. Jumper
6/8/2016

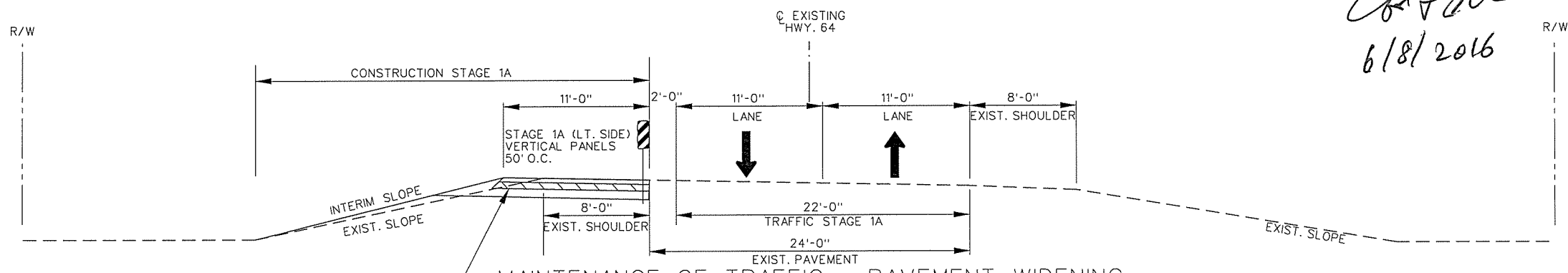
ADVISORY SPEED LIMIT 50 MPH

STAGE 1A:
WIDEN PAVEMENT, LIMITS SHOWN IN MOT PLAN SHEETS AND MOT TYPICAL SECTIONS. MAINTAIN TRAFFIC ON EXISTING ROADWAY.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



* BINDER COURSE TO BE EXTRICATED IN STAGE 2 WITHIN STATION LIMITS DEFINED ON SUPERELEVATED TYPICAL SECTION ON THIS SHEET.

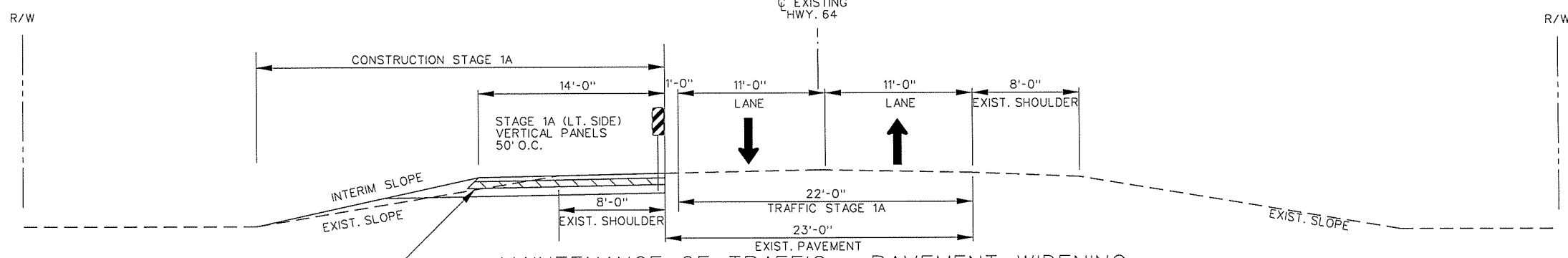
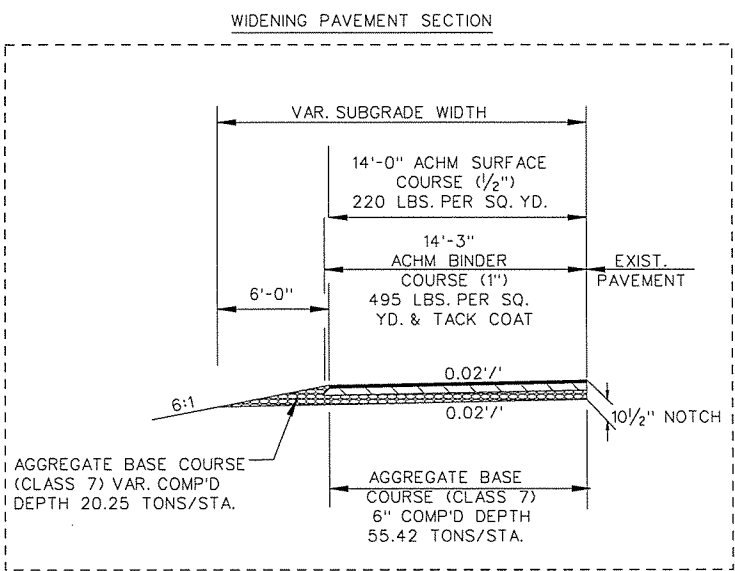


MAINTENANCE OF TRAFFIC - PAVEMENT WIDENING
SUPERELEVATED SECTION
STAGE 1A - TYPICAL SECTION
STA. 514+69.29 TO STA. 537+05.67

TYPICAL NOTCH & WIDEN PAVEMENT SECTION FOR TRAFFIC SHIFTS (SEE PAVEMENT SECTION) STA. 514+69.29 - STA. 531+75.23 (PAVEMENT WIDENING EXTRICATED IN STAGE 2 FOR SUPERELEVATED PORTION) STA. 531+75.23 - STA. 537+05.67 (PAVEMENT WIDENING TO REMAIN AND EXTENDED TO FULL PAVEMENT SECTION IN STAGE 2 FOR NORMAL CROWN PORTION)

CONSTRUCTION PAVEMENT MARKINGS (4" CONTINUOUS WHITE LINE + 4" CONTINUOUS DOUBLE YELLOW). STRIPING SHIFT TRANSITION TO MATCH EXISTING STRIPING 100 FT. FROM BOTH ENDS OF PAVEMENT WIDENING SECTION.

PLACE "SHOULDER CLOSED" SIGN (RSP-1, 48"X30") 500 FT. IN ADVANCE OF WESTBOUND APPROACH TO PAVEMENT WIDENING SECTION.



MAINTENANCE OF TRAFFIC - PAVEMENT WIDENING
TANGENT SECTION
STAGE 1A - TYPICAL SECTION
STA. 657+16.35 TO STA. 665+16.35
STA. 683+00.00 TO STA. 704+00.00

TYPICAL NOTCH & WIDEN PAVEMENT SECTION FOR TRAFFIC SHIFTS (SEE PAVEMENT SECTION) (PAVEMENT WIDENING TO REMAIN AND EXTENDED TO FULL PAVEMENT SECTION IN STAGE 2)

CONSTRUCTION PAVEMENT MARKINGS (4" CONTINUOUS WHITE LINE + 4" CONTINUOUS DOUBLE YELLOW). STRIPING SHIFT TRANSITION TO MATCH EXISTING STRIPING 100 FT. FROM BOTH ENDS OF PAVEMENT WIDENING SECTIONS.

PLACE "SHOULDER CLOSED" SIGN (RSP-1, 48"X30") 500 FT. IN ADVANCE OF WESTBOUND APPROACH TO EACH PAVEMENT WIDENING SECTION.

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.	224
							CA0101	38

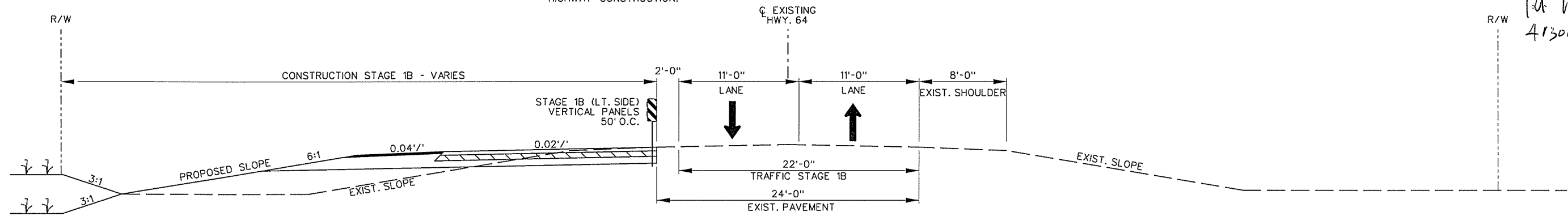
② MAINTENANCE OF TRAFFIC



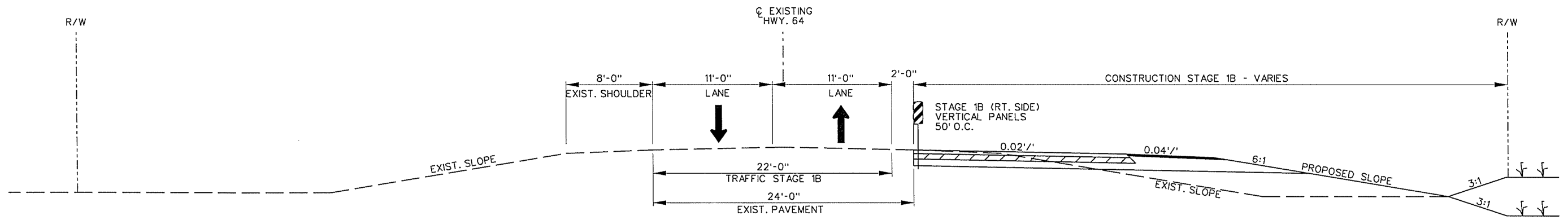
Kenneth Mora, P.E.
413015

STAGE 1B:
NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 1B - TYPICAL SECTION
STA. 480+91.76 TO STA. 498+81.00



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 1B - TYPICAL SECTION
STA. 498+81.00 TO STA. 559+88.49

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA0101	39	224

② MAINTENANCE OF TRAFFIC

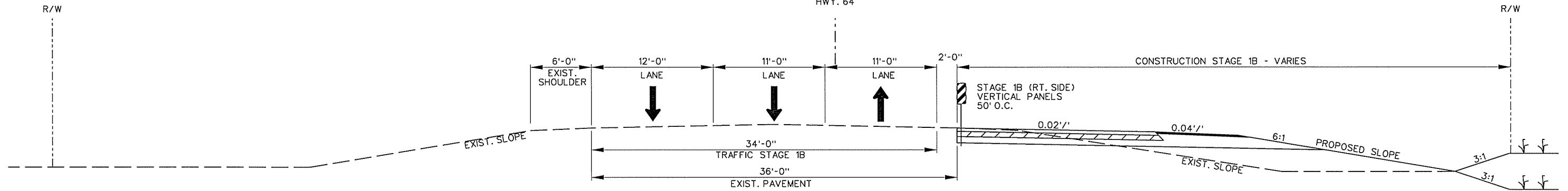


K. Mora, P.E.
Arbuis

STAGE 1B:
NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

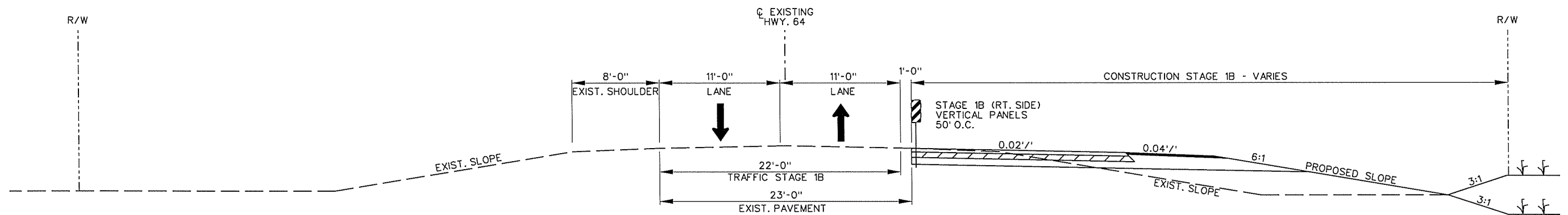
NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

☉ EXISTING HWY. 64



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 1B - TYPICAL SECTION

STA. 559+88.49 TO STA. 615+34.96



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 1B - TYPICAL SECTION

STA. 615+34.96 TO STA. 710+57.00

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.	CA0101	40	224	

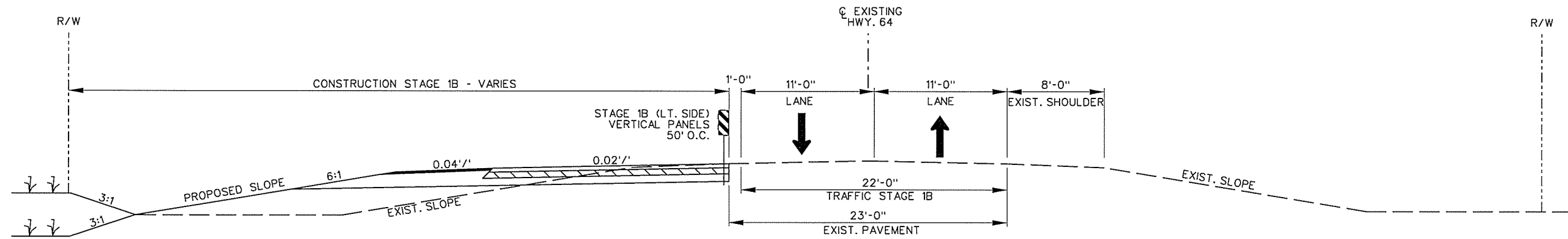
② MAINTENANCE OF TRAFFIC



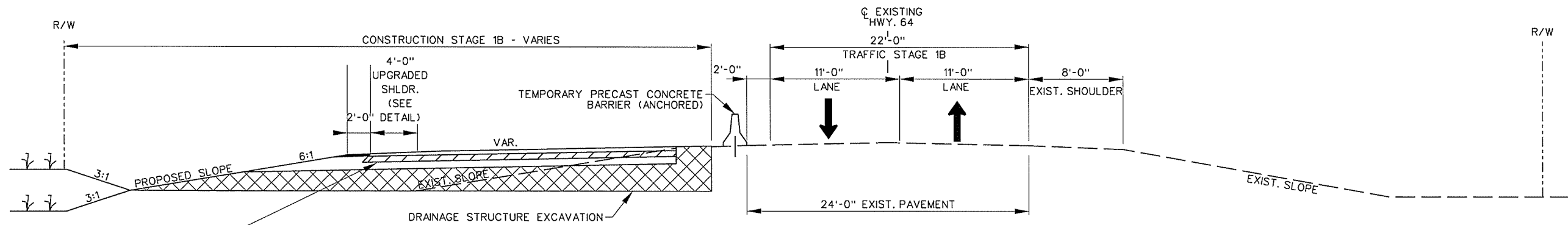
K. Mora, P.E.
4/30/15

STAGE 1B:
NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

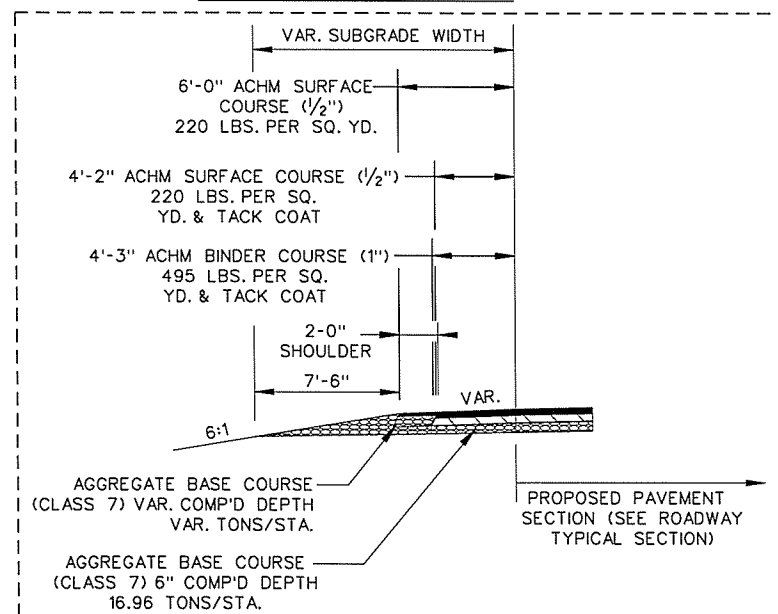


MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 1B - TYPICAL SECTION
STA. 710+57.00 TO STA. 763+48.70



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 1B - TYPICAL SECTION
DRAINAGE STRUCTURE EXCAVATION
STA. 484+72
STA. 749+38

4' UPGRADED SHOULDER SECTION

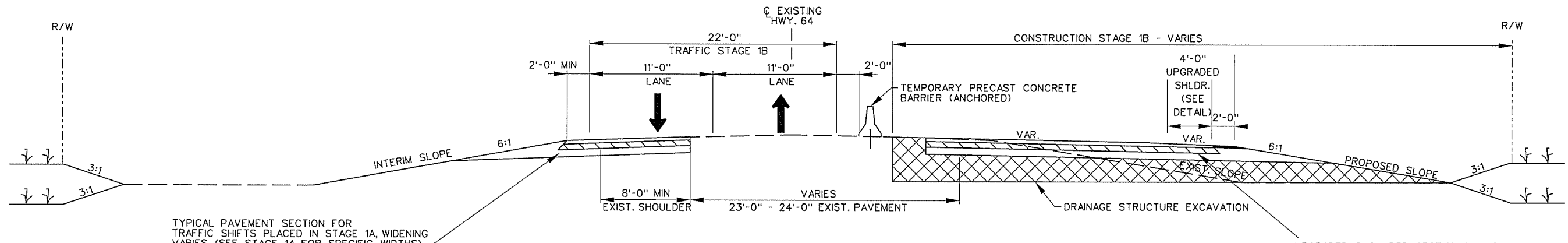


• STATION LIMITS AS DEFINED IN TYPICAL SECTION ON THIS SHEET.

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.	CA0101		41	224
② MAINTENANCE OF TRAFFIC								

STAGE 1B:
NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



TYPICAL PAVEMENT SECTION FOR TRAFFIC SHIFTS PLACED IN STAGE 1A, WIDENING VARIES, (SEE STAGE 1A FOR SPECIFIC WIDTHS)
STA. 514+69.29 - STA. 537+05.67 (SUPERELEVATION END AT 531+75.23)
STA. 657+16.35 - STA. 665+16.35 (NORMAL CROWN)
STA. 683+00.00 - STA. 704+00.00 (NORMAL CROWN)

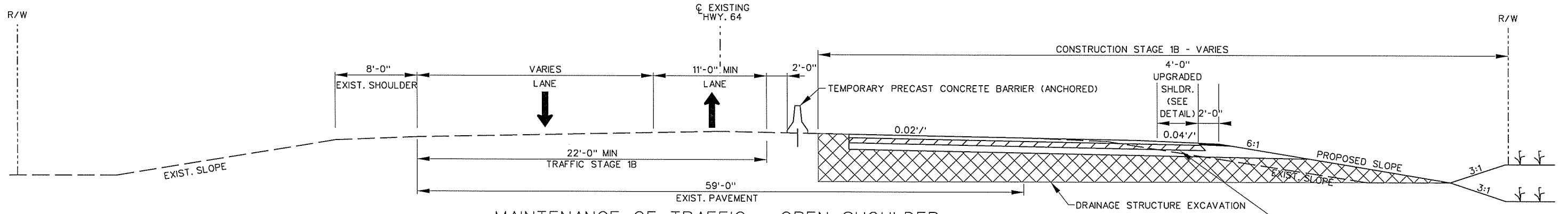
MAINTENANCE OF TRAFFIC - OPEN SHOULDER STAGE 1B - TYPICAL SECTION

DRAINAGE STRUCTURE EXCAVATION
STA. 522+07
STA. 524+97
STA. 534+06
STA. 661+16
STA. 690+06
STA. 696+06

UPGRADED SHOULDER SECTION PLACED TO BEAR TRAFFIC IN STAGE 2. (SEE PAVEMENT SECTION)
STA. 515+40.15 - STA. 537+63.49 (SUPERELEVATION END AT 531+75.23)
STA. 657+96.94 - STA. 664+32.21 (NORMAL CROWN)
STA. 684+63.34 - STA. 702+35.16 (NORMAL CROWN)



K. Mora
4/30/15

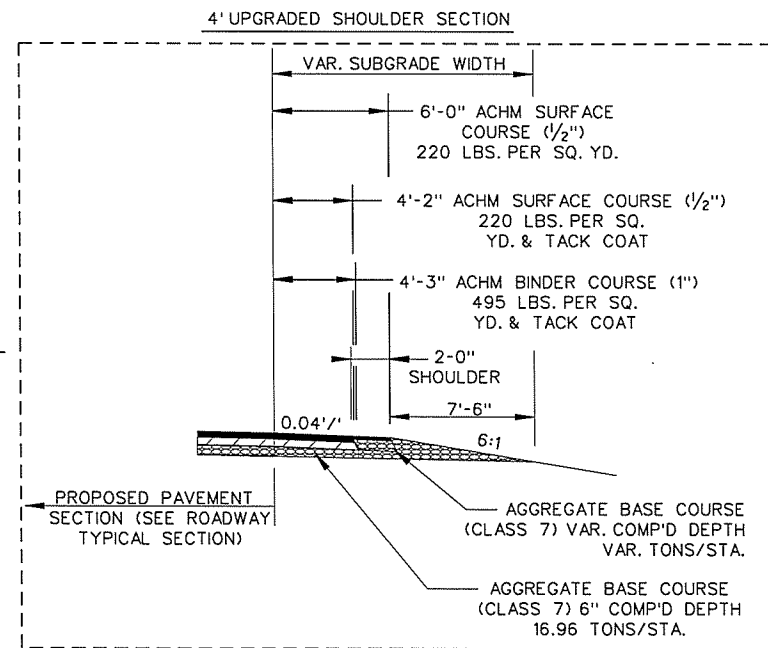


MAINTENANCE OF TRAFFIC - OPEN SHOULDER STAGE 1B - TYPICAL SECTION

STA. 763+48.70 TO STA. 775+44.56
(TRANSITION TO PROJECT END)

DRAINAGE STRUCTURE EXCAVATION
STA. 770+98

UPGRADED SHOULDER SECTION PLACED TO BEAR TRAFFIC IN STAGE 2. (SEE PAVEMENT SECTION)
STA. 766+66.78 - STA. 769+69.22
STA. 773+89.21 - STA. 775+45.20



* STATION LIMITS AS DEFINED IN TYPICAL SECTIONS ON THIS SHEET.

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.	CA0101	42	224	

② MAINTENANCE OF TRAFFIC



Cl Jumper
6/8/2016

LEGEND

- TEMPORARY WIDENING
- VERTICAL PANEL
- TRAFFIC DRUM
- TYPE III BARRICADE
- CONCRETE BARRIER
- STAGE 1 CONST. AREA

SEQUENCE OF CONSTRUCTION:

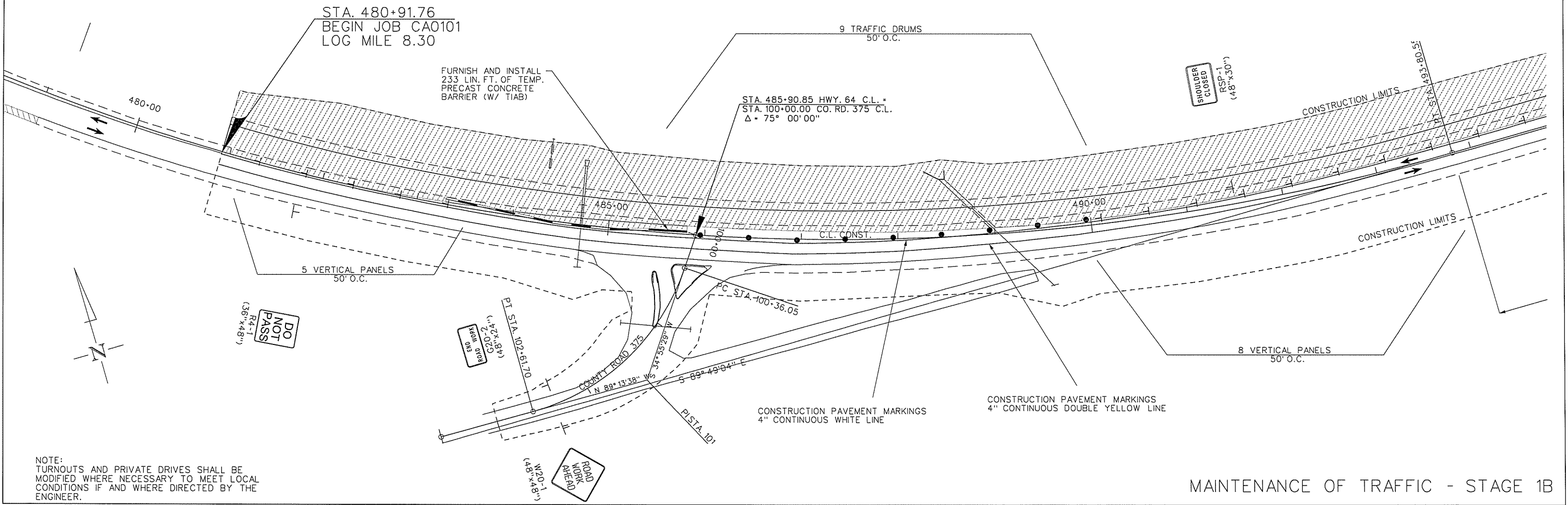
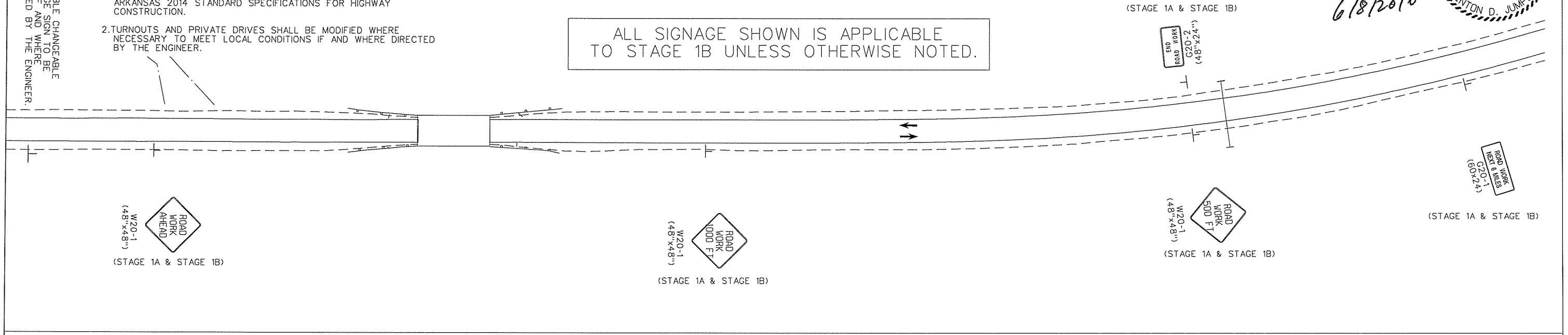
- STAGE 1A:**
WIDEN PAVEMENT, LIMITS SHOWN IN MOT PLAN SHEETS AND MOT TYPICAL SECTIONS. MAINTAIN TRAFFIC ON EXISTING ROADWAY.
- STAGE 1B:**
NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.
- STAGE 2:**
SHIFT TRAFFIC TO STAGE 2 LOCATION. NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

STAGE 3:
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE (CONSTRUCTION PAVEMENT MARKINGS IN FINAL PERMANENT STRIPING LANE CONFIGURATION). PLACE FINAL ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS.

- NOTES:**
1. THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS IS THE MAXIMUM ALLOWED QUANTITY FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 2. TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.

ALL SIGNAGE SHOWN IS APPLICABLE TO STAGE 1B UNLESS OTHERWISE NOTED.

(STAGE 1A & STAGE 1B)
PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.



NOTE:
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MAINTENANCE OF TRAFFIC - STAGE 1B

06/08/2016

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.	CA0101		43	224

② MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 15509
 KENNETH MORA

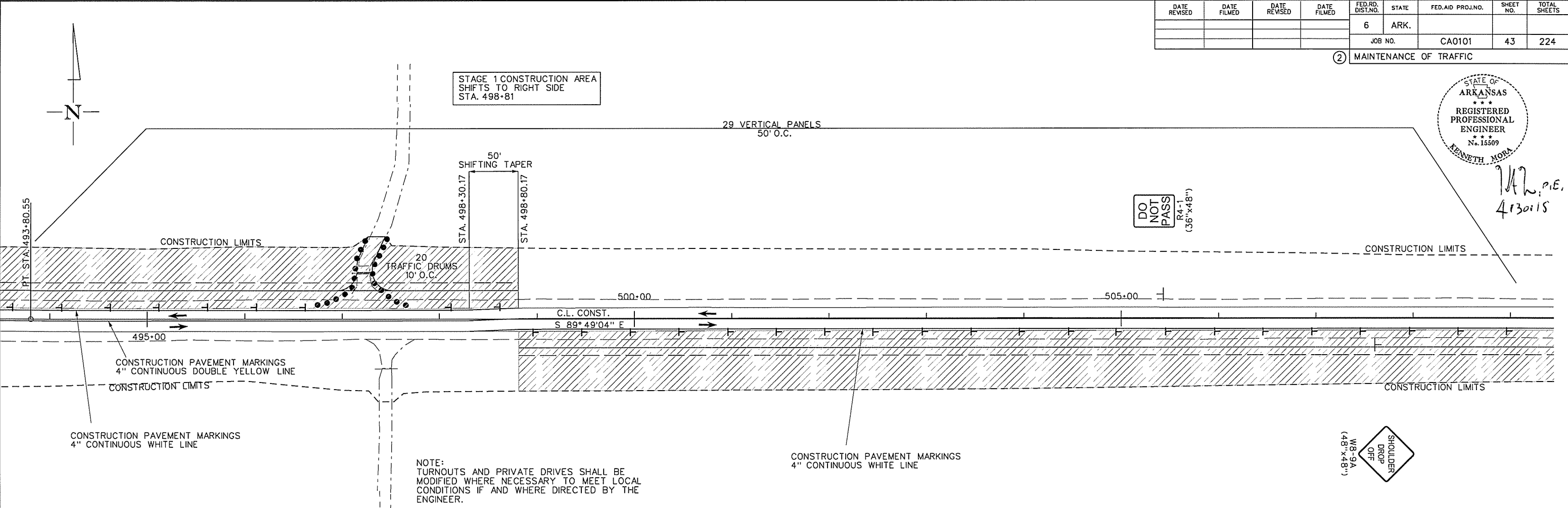
K.M. P.E.
 4/30/15

STAGE 1 CONSTRUCTION AREA
 SHIFTS TO RIGHT SIDE
 STA. 498+81

29 VERTICAL PANELS
 50' O.C.

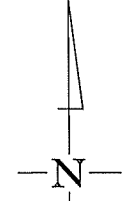
50'
 SHIFTING TAPER
 STA. 498+30.17
 STA. 498+80.17

DO NOT PASS
 R4-1
 (36"x48")



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

SHOULDER
 DROP
 OFF
 W8-9A
 (48"x48")



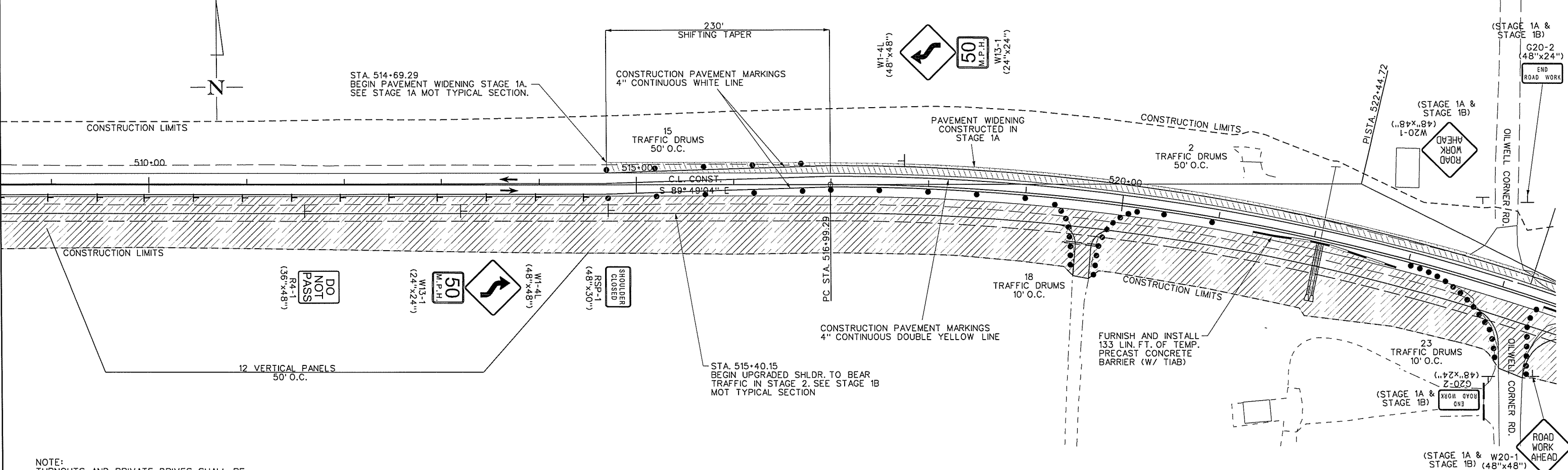
STA. 514+69.29
 BEGIN PAVEMENT WIDENING STAGE 1A.
 SEE STAGE 1A MOT TYPICAL SECTION.

230'
 SHIFTING TAPER

W1-4L
 (48"x48")

50
 M.P.H.

W13-1
 (24"x24")



STA. 515+40.15
 BEGIN UPGRADED SHLDR. TO BEAR
 TRAFFIC IN STAGE 2. SEE STAGE 1B
 MOT TYPICAL SECTION

FURNISH AND INSTALL
 133 LIN. FT. OF TEMP.
 PRECAST CONCRETE
 BARRIER (W/ TIAB)

(STAGE 1A & STAGE 1B) W20-1
 (48"x48")

MAINTENANCE OF TRAFFIC - STAGE 1B

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

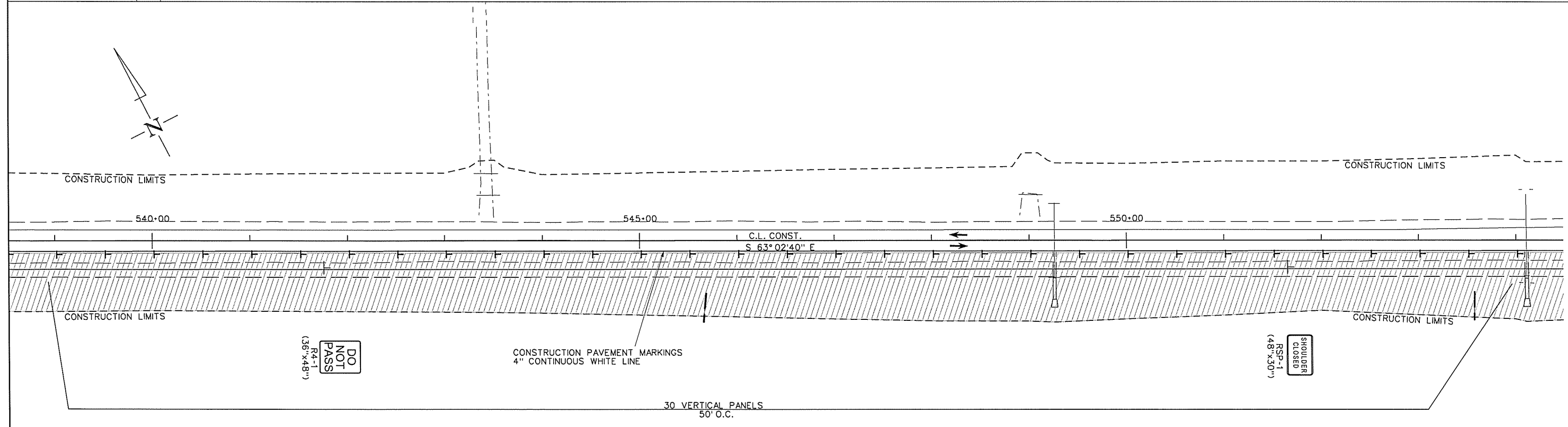
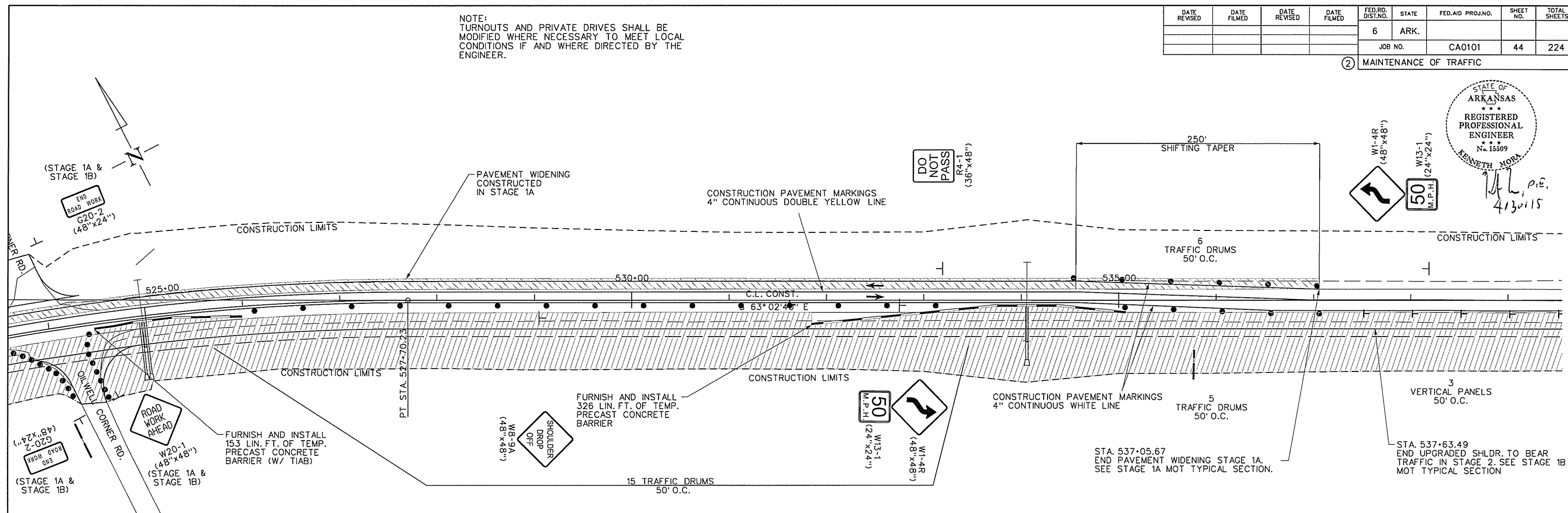
05/06/2015

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.	CA0101	44	224	

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

② MAINTENANCE OF TRAFFIC

STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 15509
KENNETH MORRIS



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

MAINTENANCE OF TRAFFIC - STAGE 1B

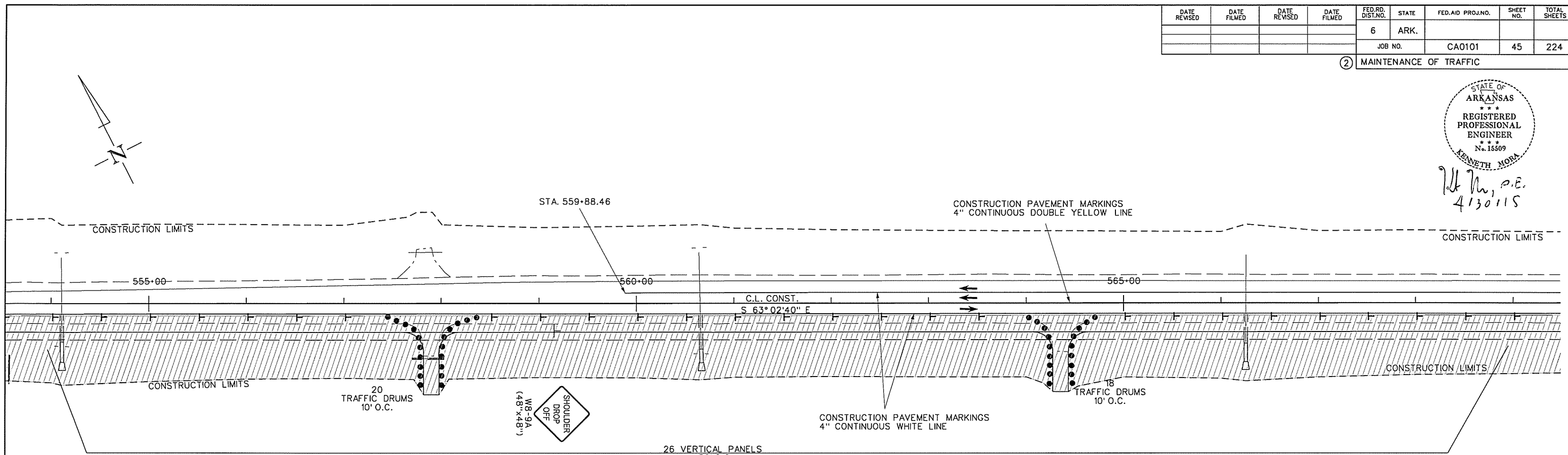
05/06/2015

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.	CA0101		45	224

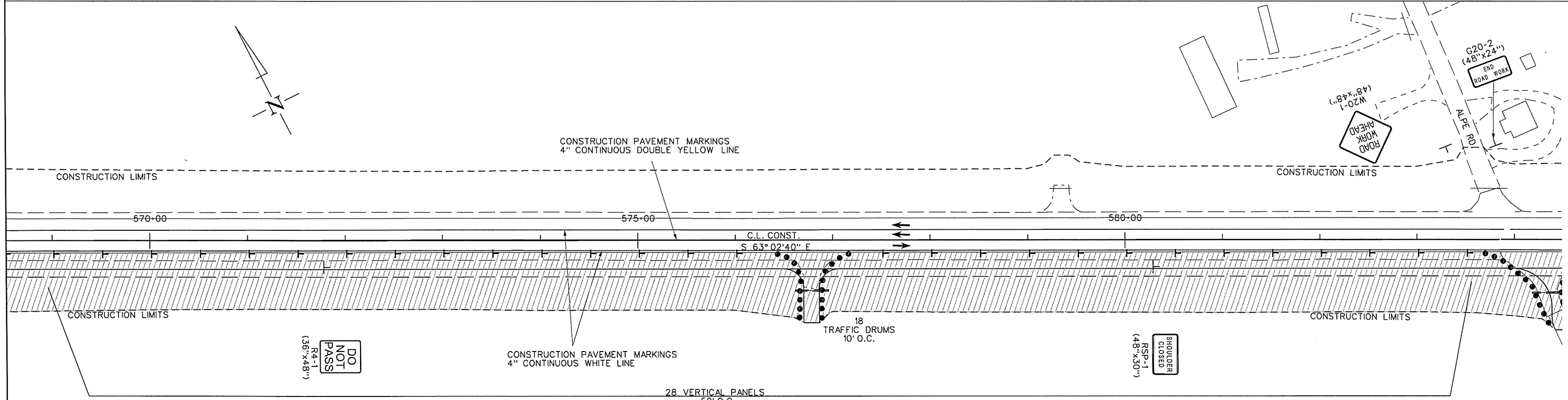
② MAINTENANCE OF TRAFFIC



K. Mora, P.E.
4130115



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



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CONDITIONS IF AND WHERE DIRECTED BY THE
ENGINEER.

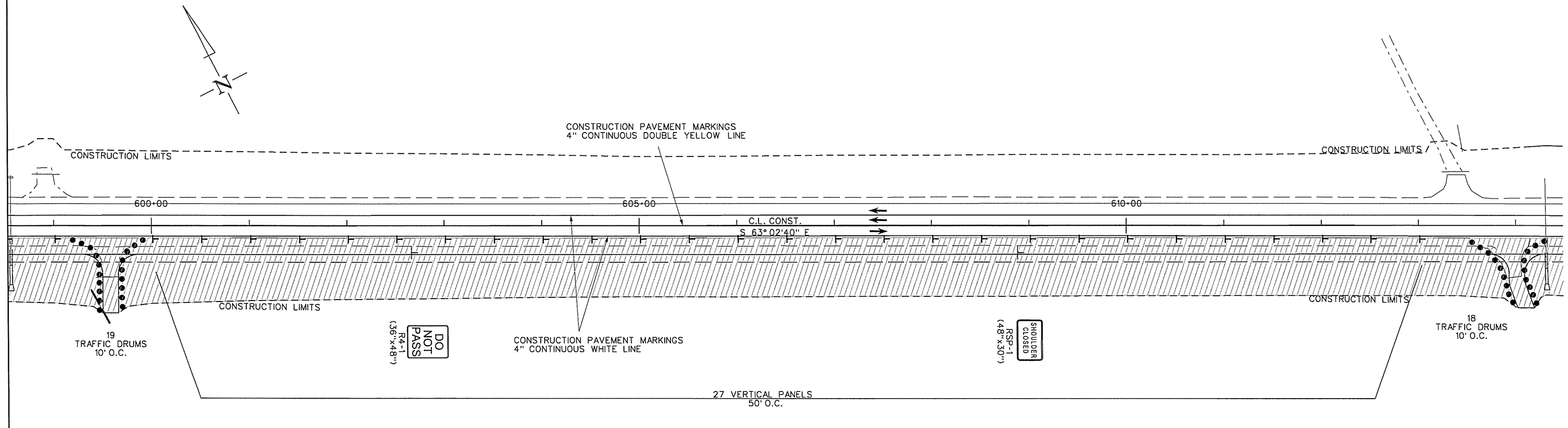
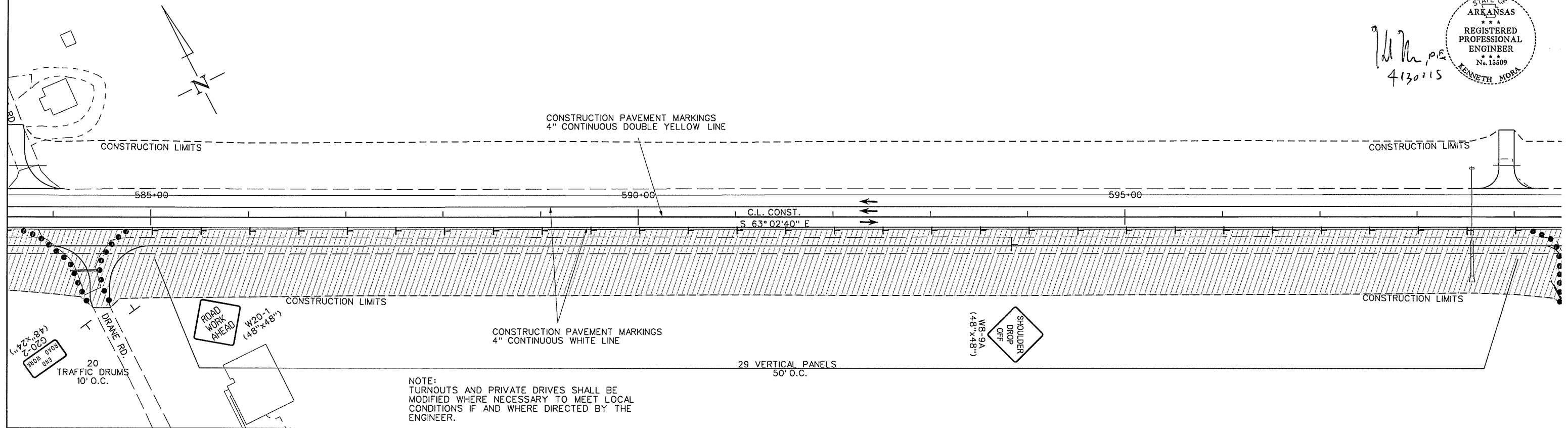
05/06/2015

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.	CA0101		46	224

② MAINTENANCE OF TRAFFIC

W. Mora, P.E.
413015

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORA



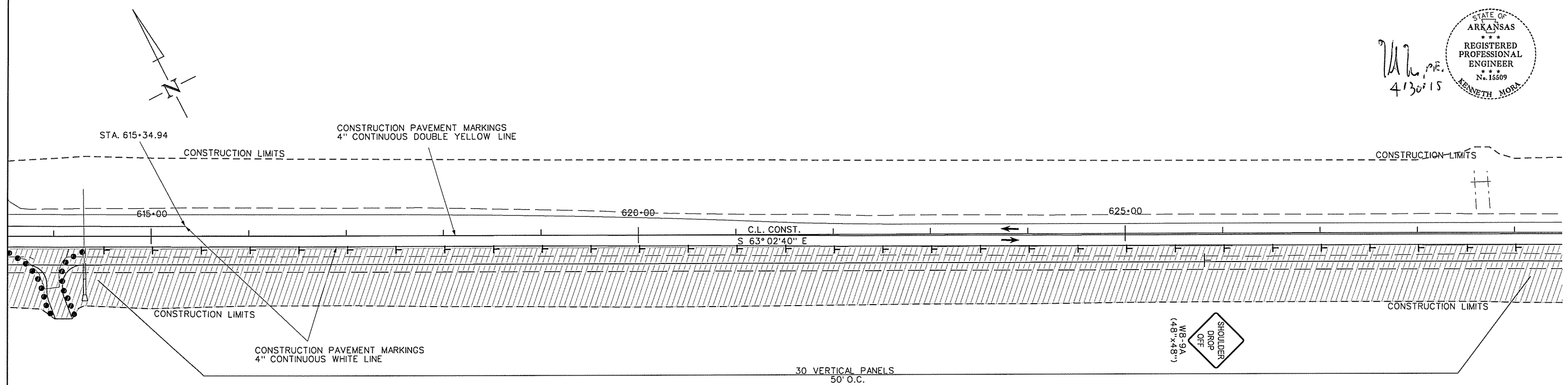
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CONDITIONS IF AND WHERE DIRECTED BY THE
ENGINEER.

05/06/2015

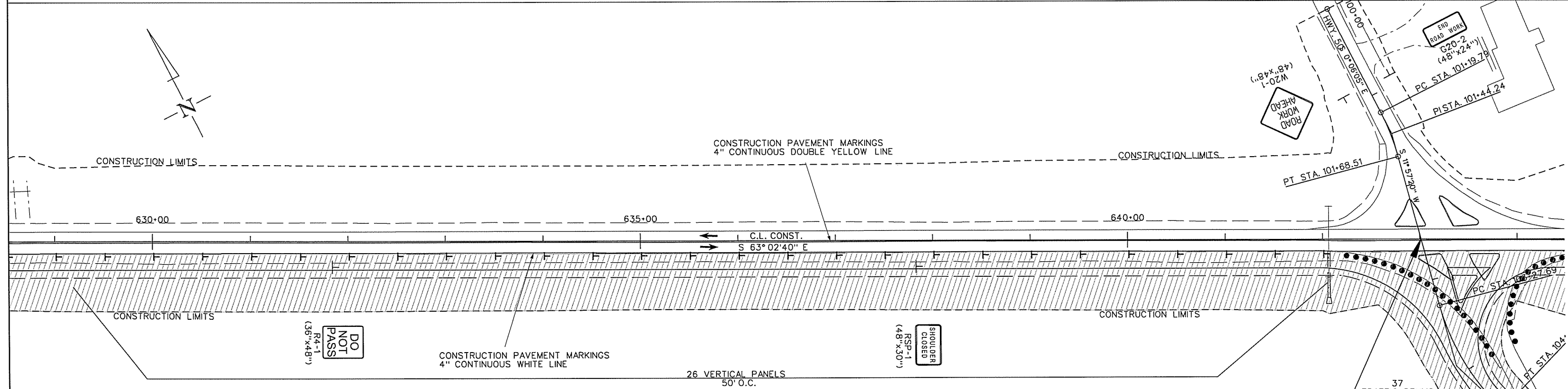
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				6	ARK.			
				JOB NO.	CA0101		47	224

② MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 15509
 KENNETH MORA
 4/30/15



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



STA 643+01.34 HWY. 64 C.L. -
 STA 102+56.55 HWY. 50 C.L.
 Δ = 75° 00' 00"

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

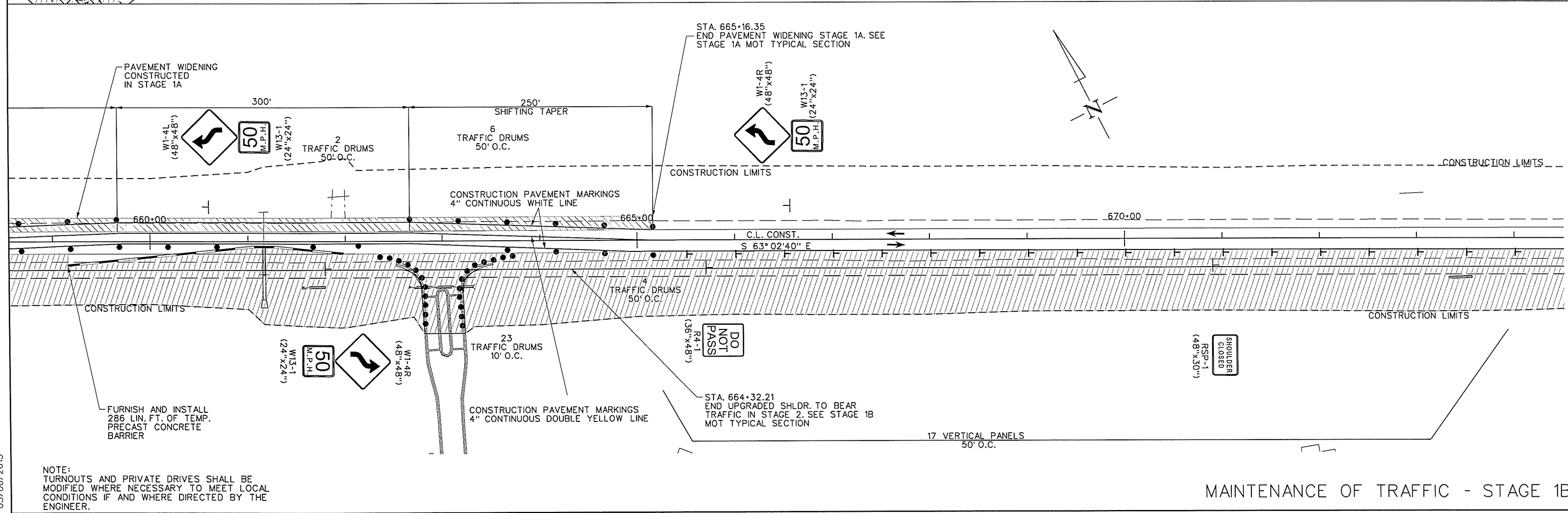
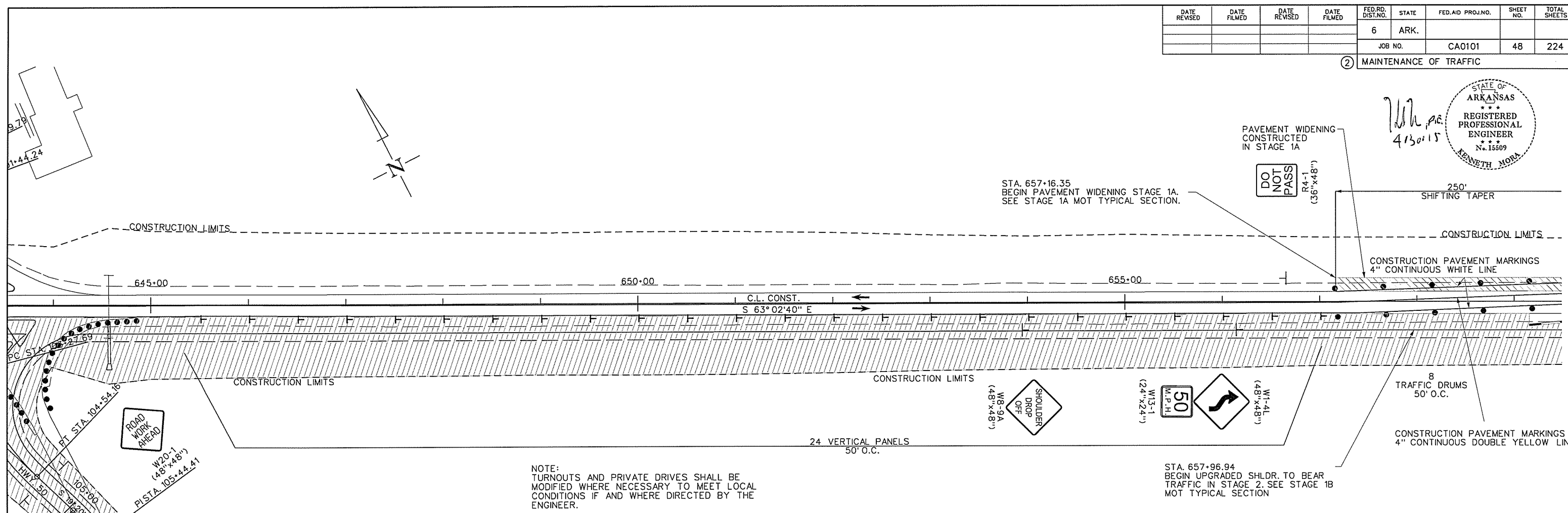
MAINTENANCE OF TRAFFIC - STAGE 1B

05/06/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	CA0101	48	224

② MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 15509
 KENNETH MORA
 4/30/15



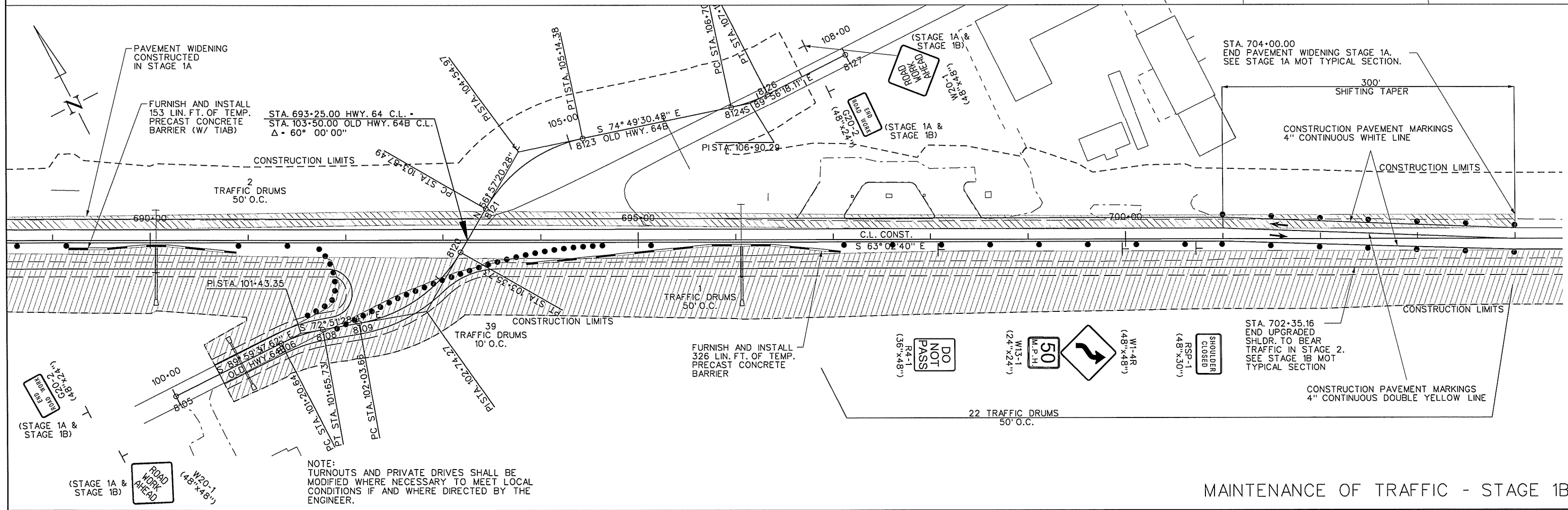
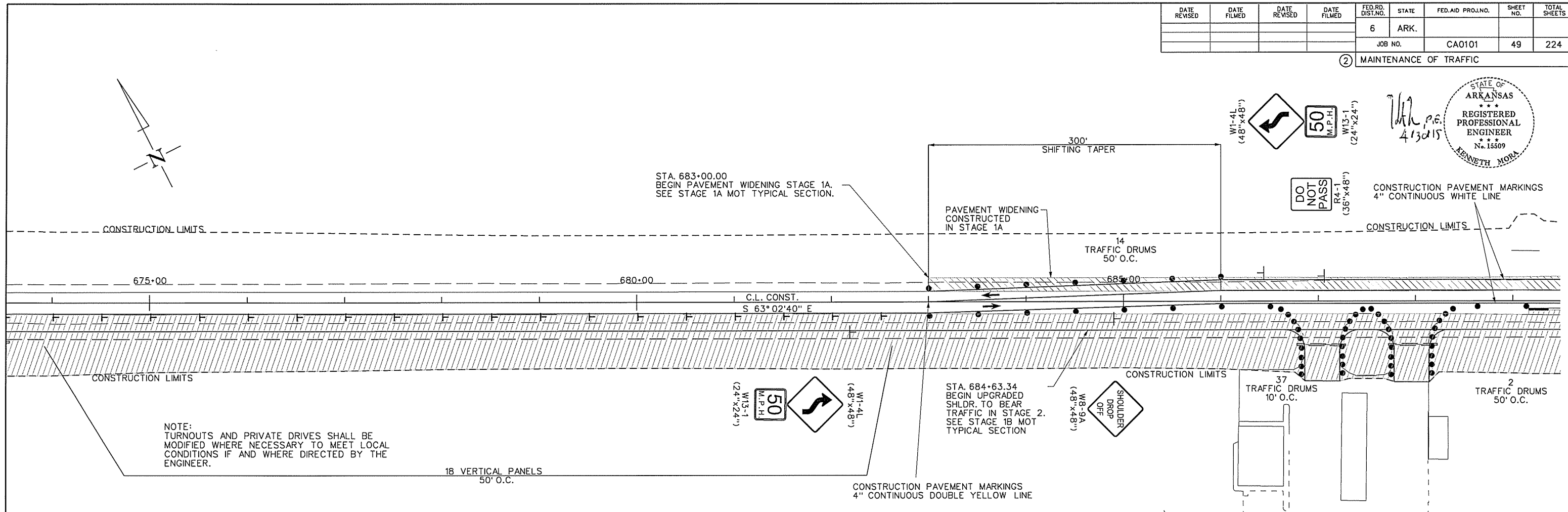
MAINTENANCE OF TRAFFIC - STAGE 1B

05/06/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		49	224

② MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 15509
 KENNETH MORA



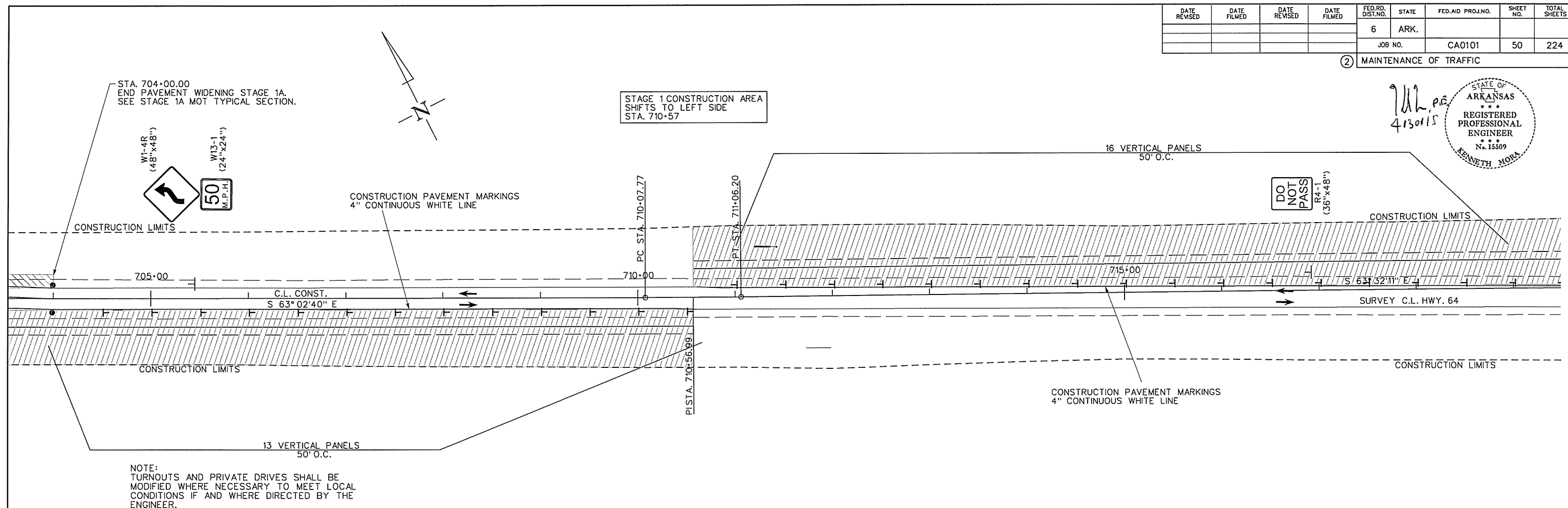
MAINTENANCE OF TRAFFIC - STAGE 1B

05/06/2015

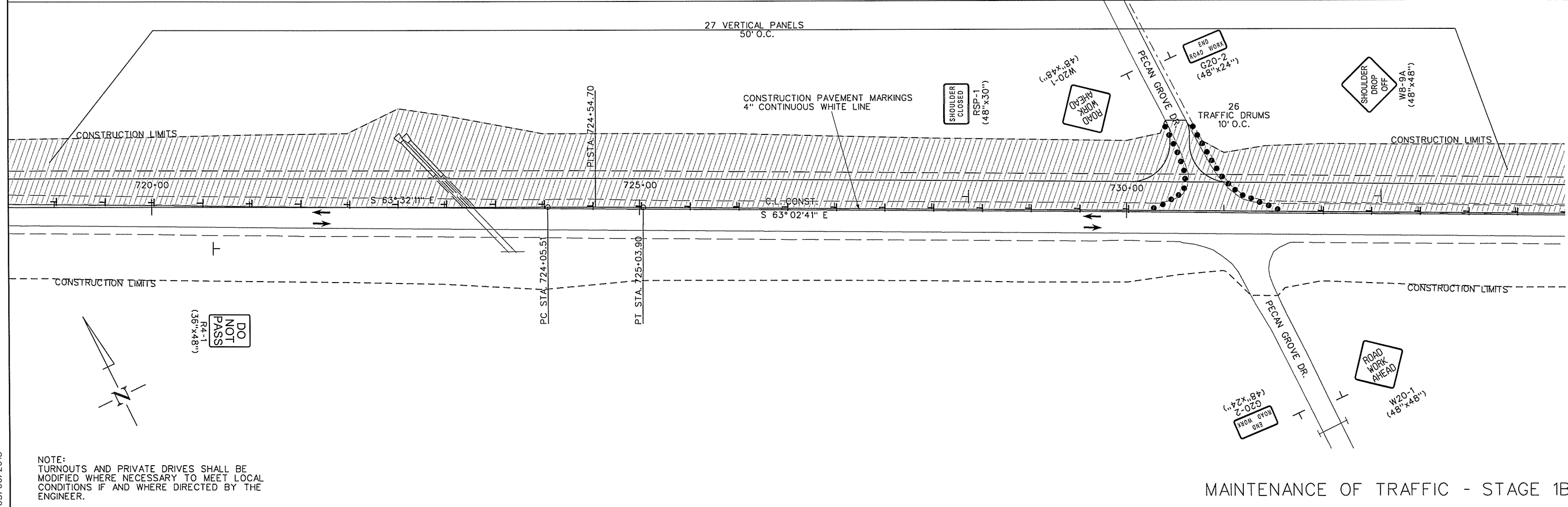
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							50	224

② MAINTENANCE OF TRAFFIC

W.L. P.E.
4/13/15
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORA



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



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MAINTENANCE OF TRAFFIC - STAGE 1B

05/06/2015

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.	CA0101		51	224

② MAINTENANCE OF TRAFFIC

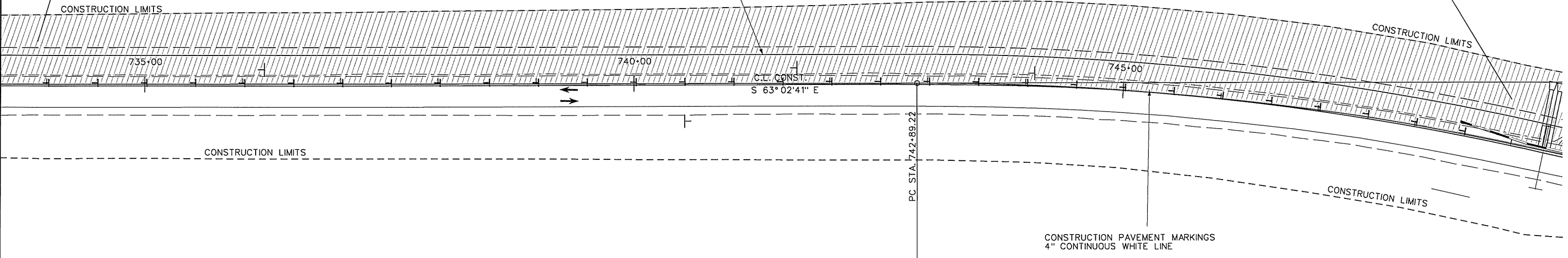
W.M. ME.
4/13/15
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 16509
KENNETH MORA

STA. 741+31.63
BEGIN UPGRADED SHLDR. TO BEAR TRAFFIC IN
STAGE 2. SEE STAGE 1B MOT TYPICAL SECTION

DO NOT PASS
R4-1
(36"x48")

SHOULDER DROP OFF
W8-9A
(48"x48")

30 VERTICAL PANELS
50' O.C.



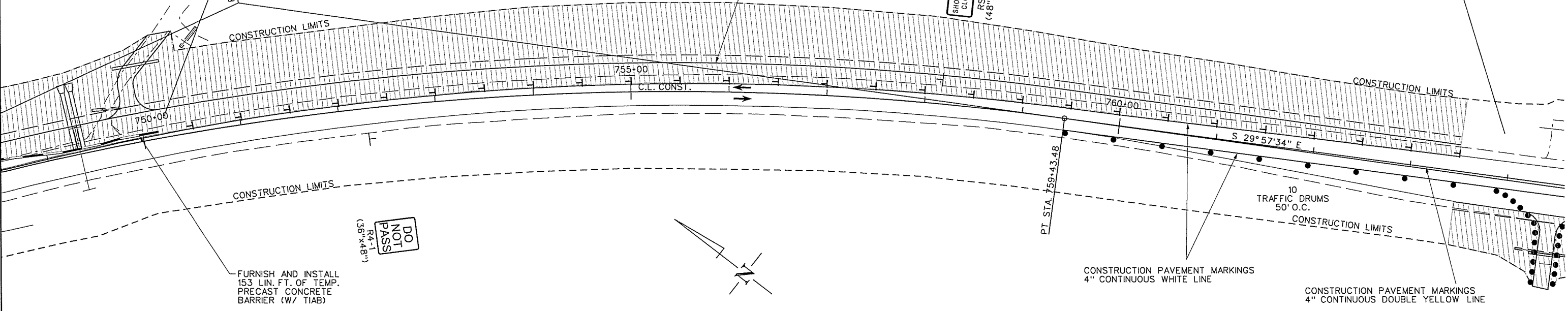
NOTE:
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MODIFIED WHERE NECESSARY TO MEET LOCAL
CONDITIONS IF AND WHERE DIRECTED BY THE
ENGINEER.

STA. 755+86.11
END UPGRADED SHLDR. TO BEAR TRAFFIC IN
STAGE 2. SEE STAGE 1B MOT TYPICAL SECTION

SHOULDER CLOSED
RSP-1
(48"x30")

STAGE 1 CONSTRUCTION AREA
SHIFTS TO RIGHT SIDE
STA. 763+49

27 VERTICAL PANELS
50' O.C.



FURNISH AND INSTALL
153 LIN. FT. OF TEMP.
PRECAST CONCRETE
BARRIER (W/ TIAB)

DO NOT PASS
R4-1
(36"x48")

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

05/06/2015

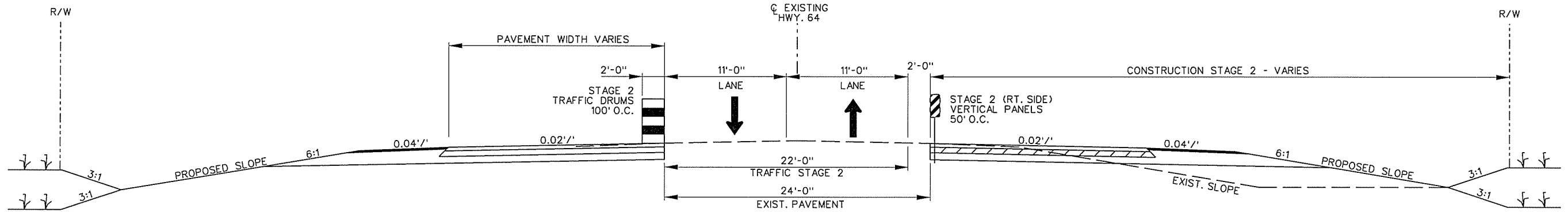
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							53	224
② MAINTENANCE OF TRAFFIC								

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 15509
 KENNETH MORA
 4/30/15

ADVISORY SPEED LIMIT 50 MPH

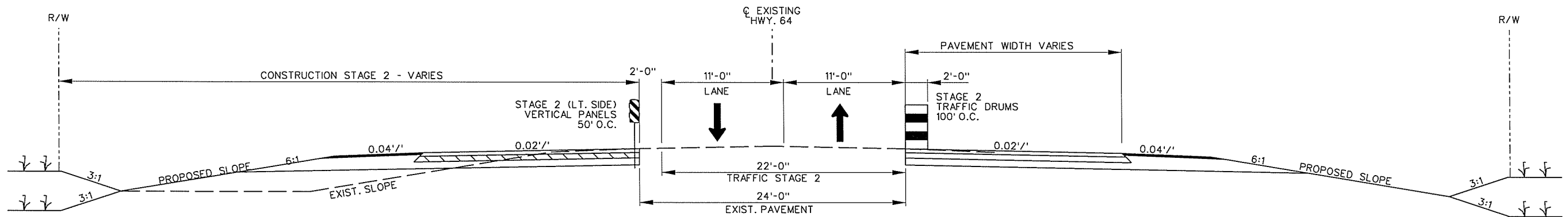
STAGE 2:
 SHIFT TRAFFIC TO STAGE 2 LOCATION. NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
 THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
 STAGE 2 - TYPICAL SECTION

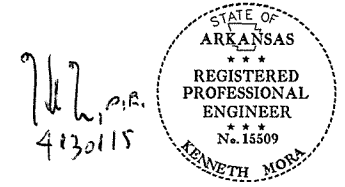
STA. 480+91.76 TO STA. 498+81.00



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
 STAGE 2 - TYPICAL SECTION

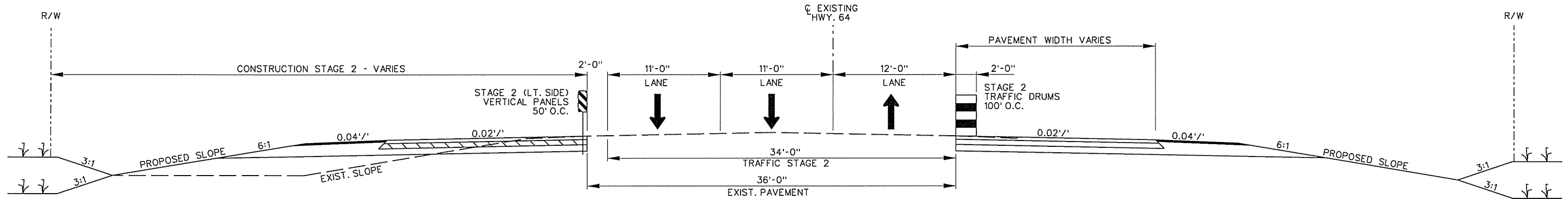
STA. 498+81.00 TO STA. 559+88.49

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		54	224
② MAINTENANCE OF TRAFFIC								



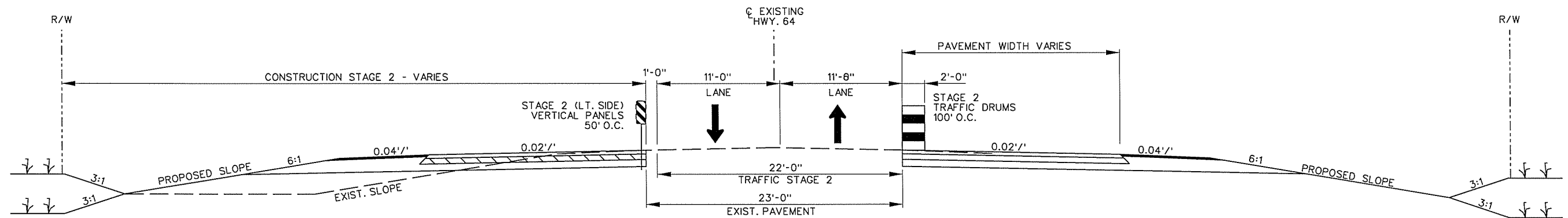
STAGE 2:
SHIFT TRAFFIC TO STAGE 2 LOCATION. NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 2 - TYPICAL SECTION

STA. 559+88.49 TO STA. 615+34.96



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 2 - TYPICAL SECTION

STA. 615+34.96 TO STA. 710+57.00

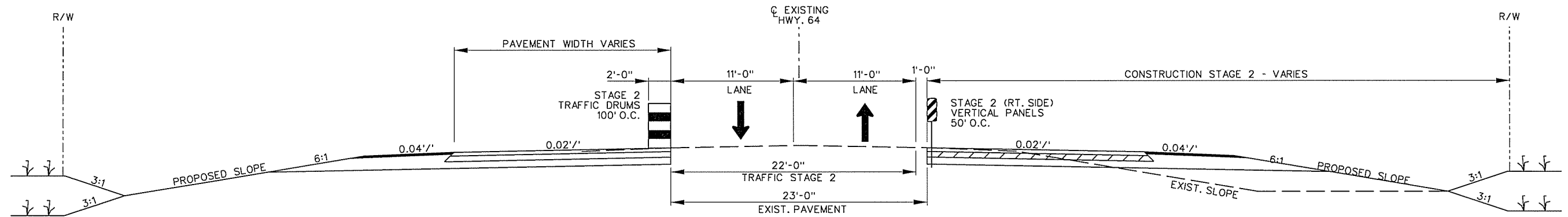
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		55	224
② MAINTENANCE OF TRAFFIC								

W. Mora, P.E.
4130115

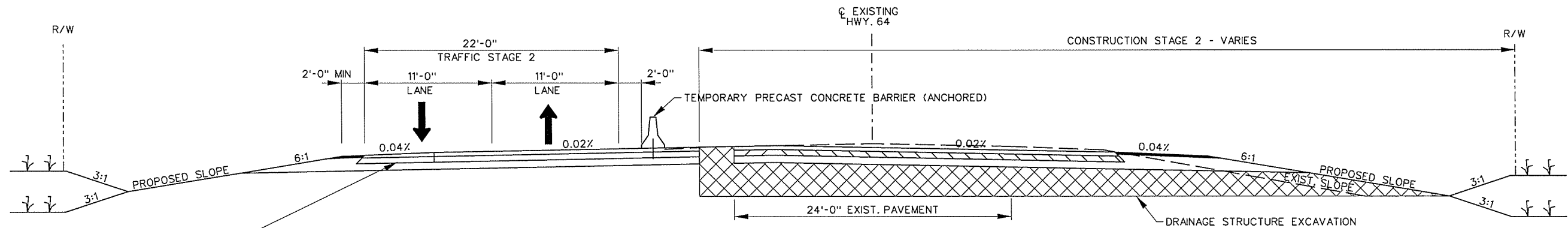
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORRIS

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 LOCATION, NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 2 - TYPICAL SECTION
STA. 710+57.00 TO STA. 763+48.70



UPGRADED SHOULDER SECTION PLACED IN STAGE 1B.
(SEE PAVEMENT SECTION)
STA. 741+31.63 - STA. 755+86.11

MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 2 - TYPICAL SECTION
DRAINAGE STRUCTURE EXCAVATION
STA. 484+72
STA. 749+38

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.	CA0101		56	224

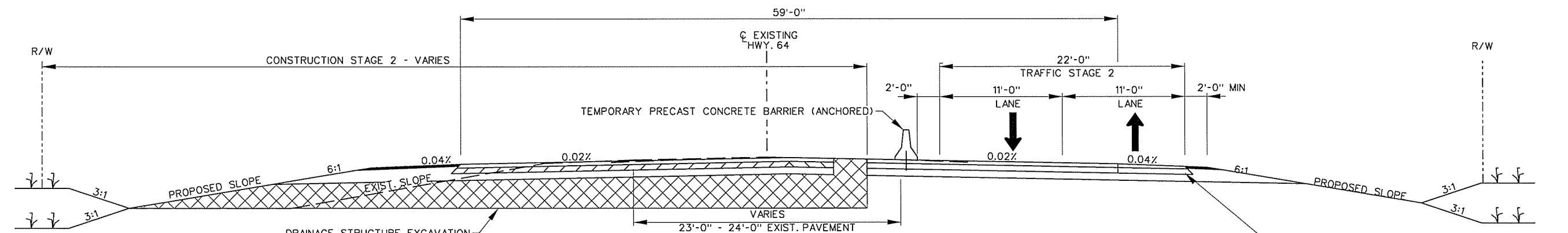
② MAINTENANCE OF TRAFFIC

W. Mora, P.E.
4/30/15

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORA

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 LOCATION. NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 2 - TYPICAL SECTION

DRAINAGE STRUCTURE EXCAVATION
STA. 522+07
STA. 524+97
STA. 534+06
STA. 661+16
STA. 690+06
STA. 696+06

UPGRADED SHOULDER SECTION PLACED IN STAGE 1B.
(SEE PAVEMENT SECTION)
STA. 515+40.15 - STA. 537+63.49
STA. 657+96.94 - STA. 664+32.21
STA. 684+63.34 - STA. 702+35.16

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.	CA0101	57	224	

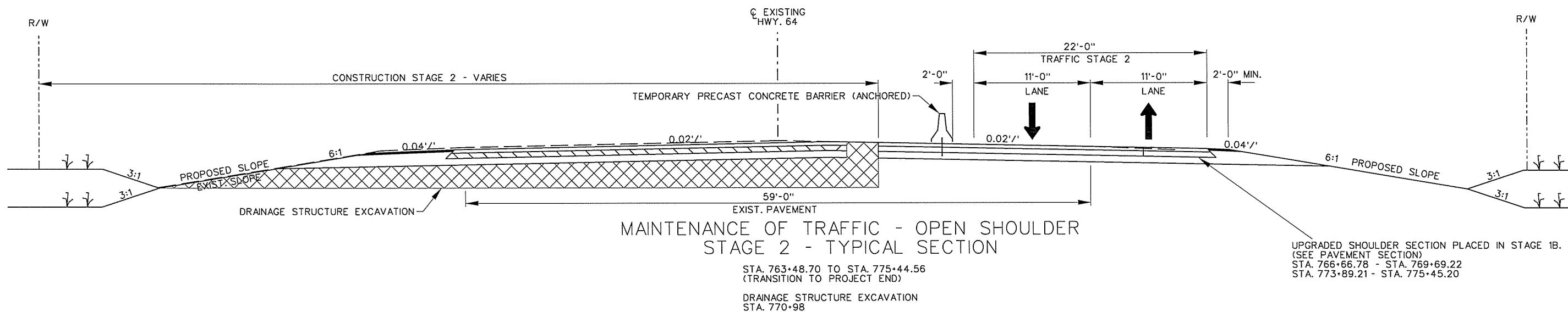
② MAINTENANCE OF TRAFFIC

W. H. Mora, P.E.
413015

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORA

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 LOCATION. NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

NOTE:
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



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.	224
							CA0101	58

② MAINTENANCE OF TRAFFIC



Cl Jumper
6/8/2016

SEQUENCE OF CONSTRUCTION:

STAGE 1A:
WIDEN PAVEMENT, LIMITS SHOWN IN MOT PLAN SHEETS AND MOT TYPICAL SECTIONS. MAINTAIN TRAFFIC ON EXISTING ROADWAY.

STAGE 1B:
NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 LOCATION. NOTCH AND WIDEN ON LEFT OR RIGHT SIDE AS SHOWN IN MOT PLAN SHEETS. DRIVEWAYS, SIDE DRAINS AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE LEFT OR RIGHT SIDE OF EXISTING ROADWAY AS SHOWN IN MOT PLAN SHEETS.

STAGE 3:
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE (CONSTRUCTION PAVEMENT MARKINGS IN FINAL PERMANENT STRIPING LANE CONFIGURATION). PLACE FINAL ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS.

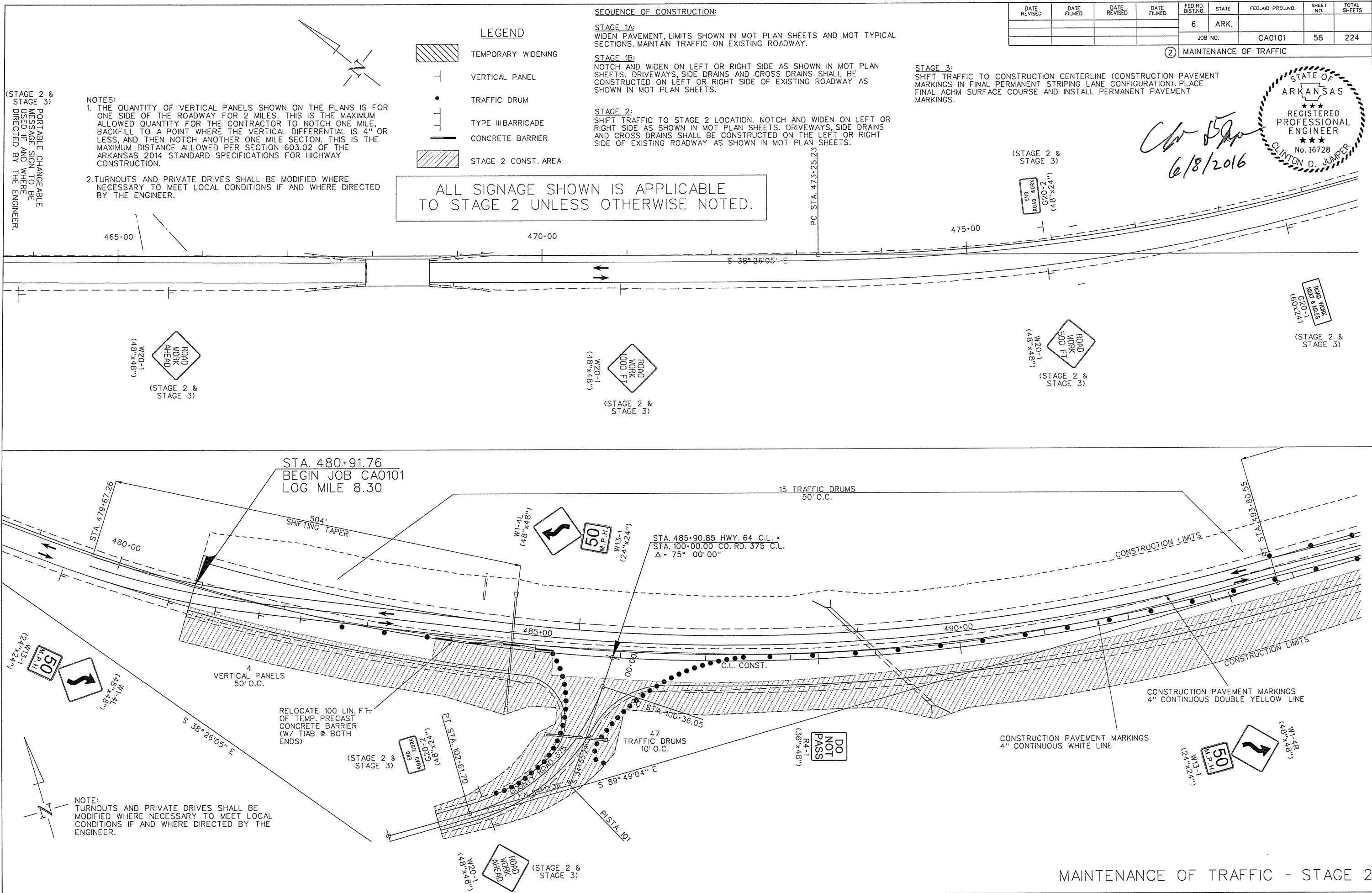
LEGEND

- TEMPORARY WIDENING
- VERTICAL PANEL
- TRAFFIC DRUM
- TYPE III BARRICADE
- CONCRETE BARRIER
- STAGE 2 CONST. AREA

ALL SIGNAGE SHOWN IS APPLICABLE TO STAGE 2 UNLESS OTHERWISE NOTED.

NOTES:
1. THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS IS THE MAXIMUM ALLOWED QUANTITY FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF THE ARKANSAS 2014 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
2. TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.

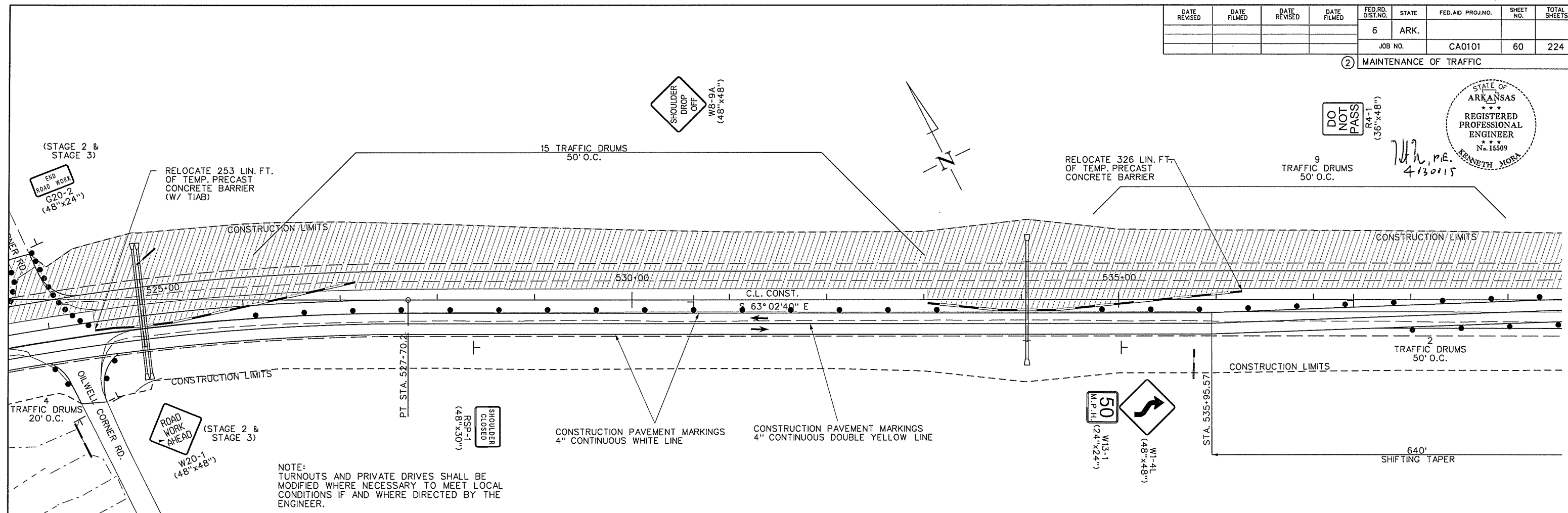
(STAGE 2 & STAGE 3)
PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.



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

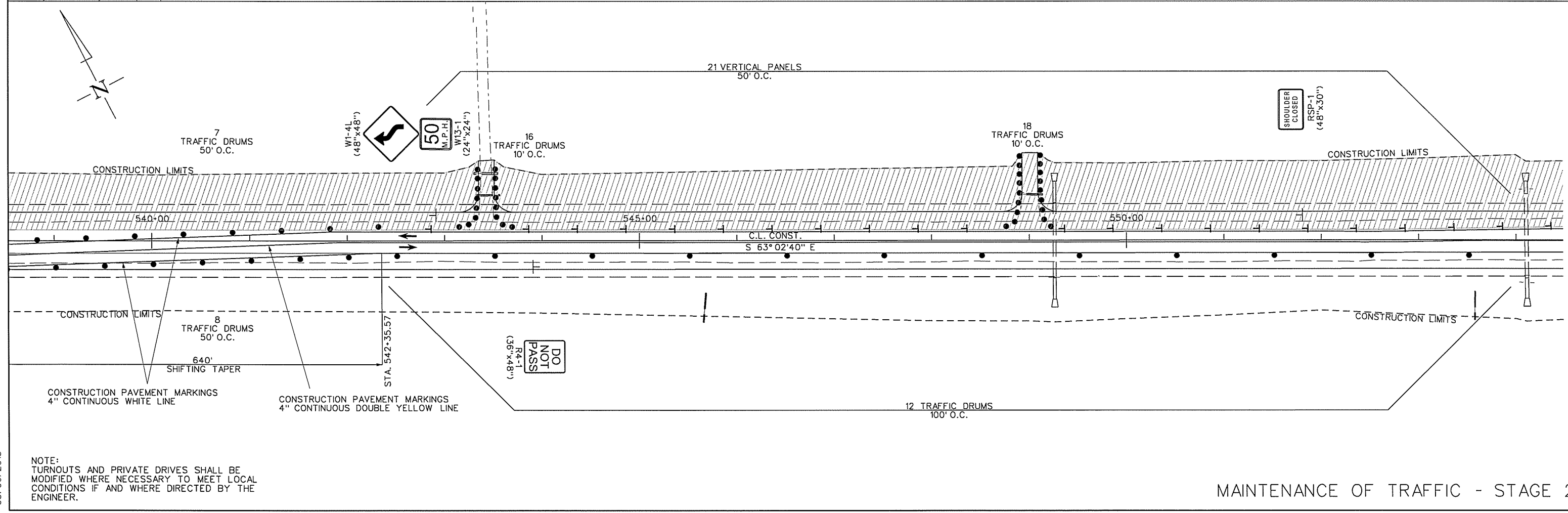
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		60	224

② MAINTENANCE OF TRAFFIC



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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORA
7/12, P.E.
4/30/15



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

MAINTENANCE OF TRAFFIC - STAGE 2

05/06/2015

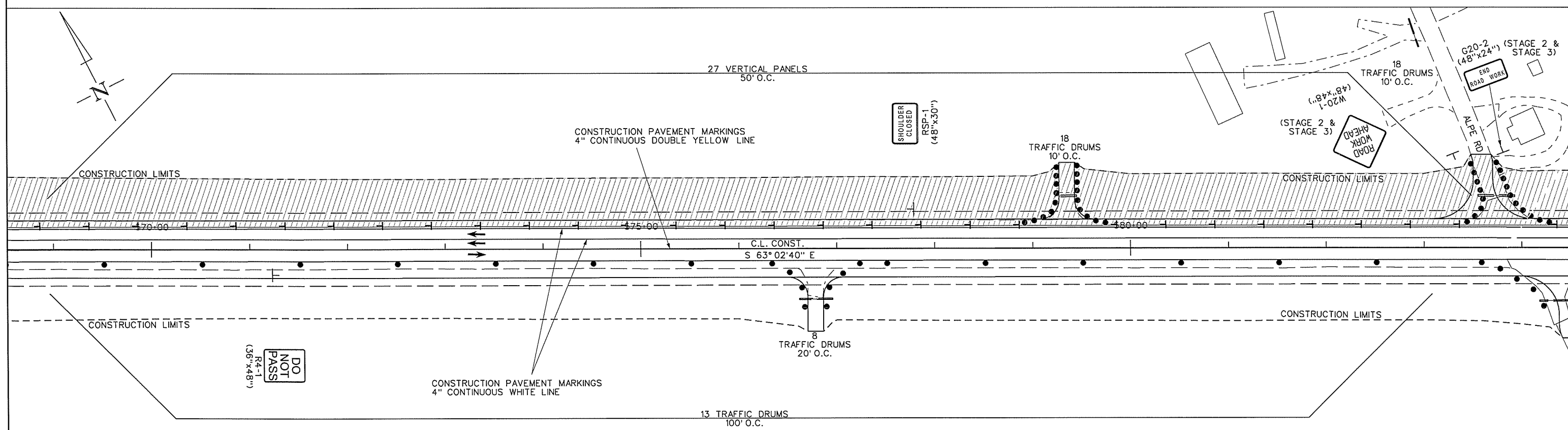
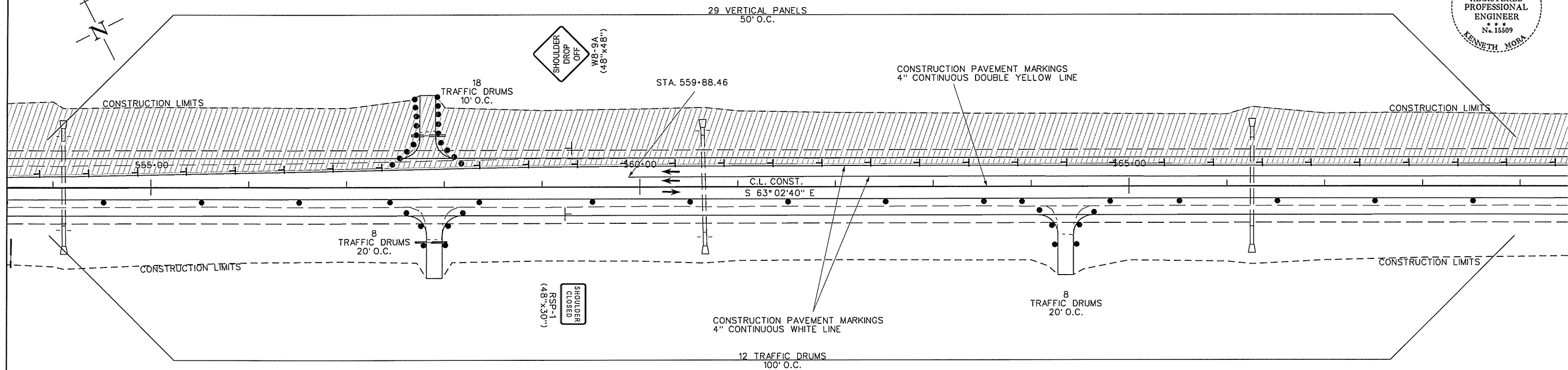
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		61	224

② MAINTENANCE OF TRAFFIC

W.M., P.E.
4/30/15



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



NOTE:
TURNOUTS AND PRIVATE DRIVES SHALL BE
MODIFIED WHERE NECESSARY TO MEET LOCAL
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ENGINEER.

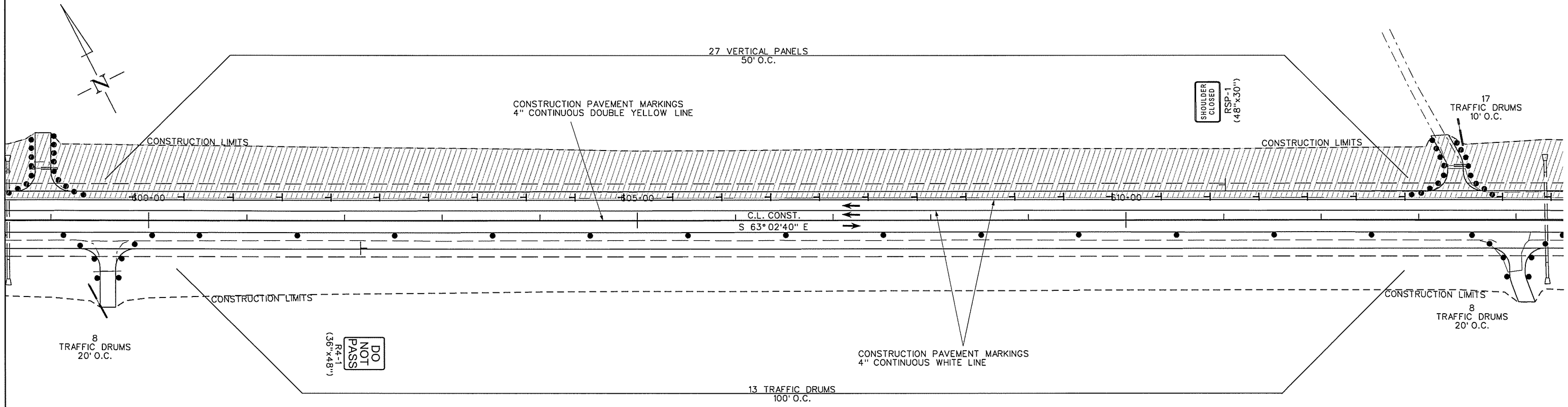
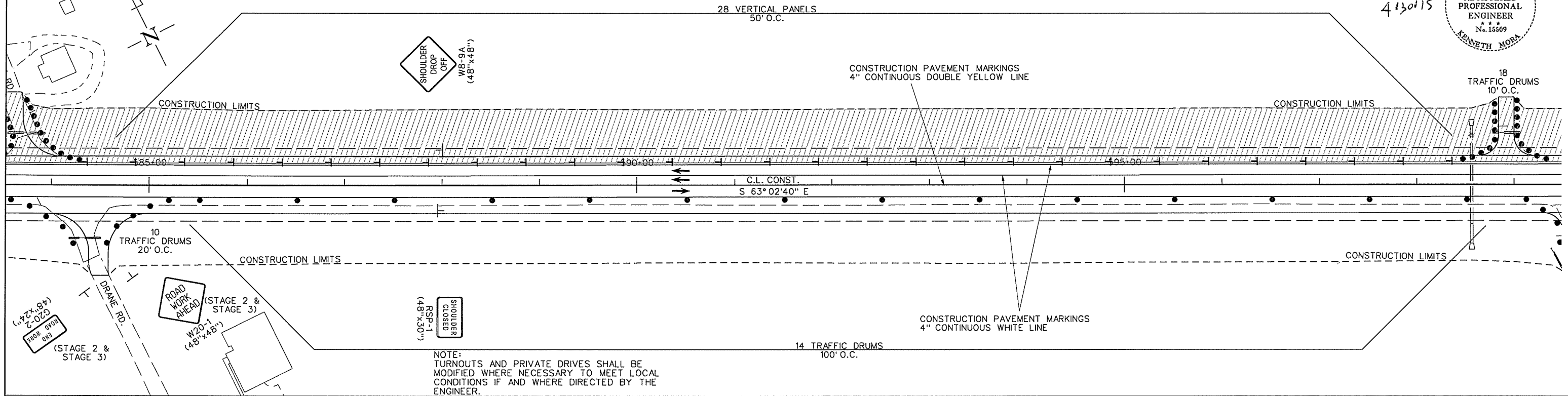
MAINTENANCE OF TRAFFIC - STAGE 2

05/06/2015

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.	CA0101		62	224

② MAINTENANCE OF TRAFFIC

W.A. Mora
4/30/15
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORA



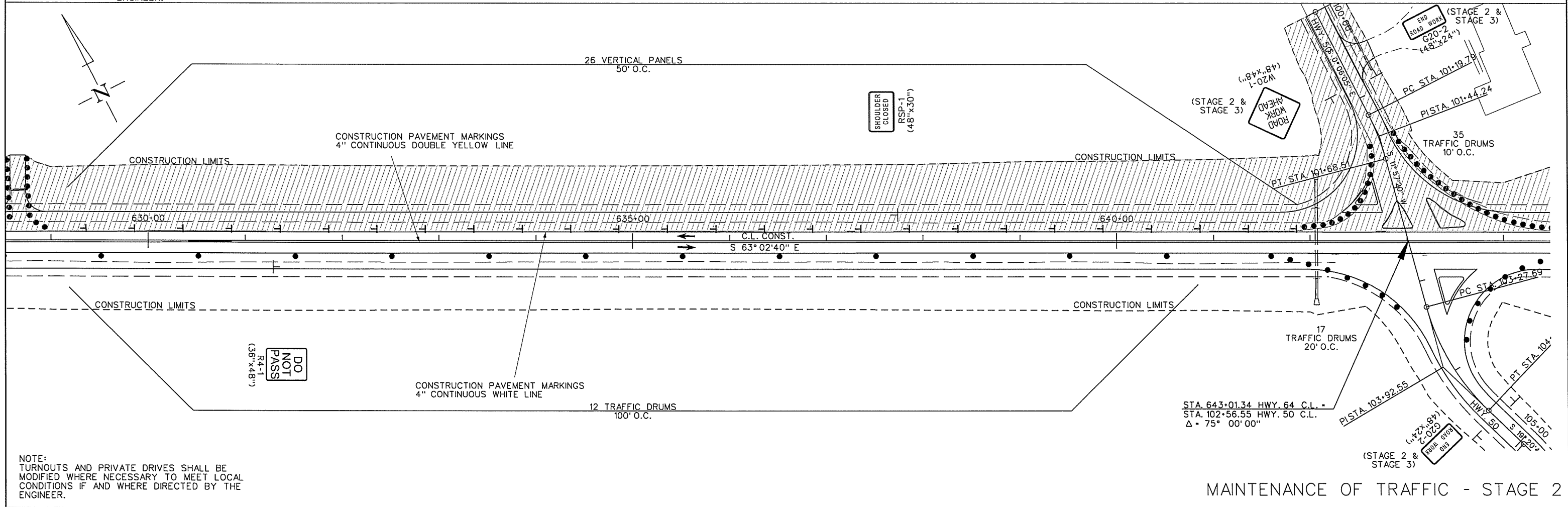
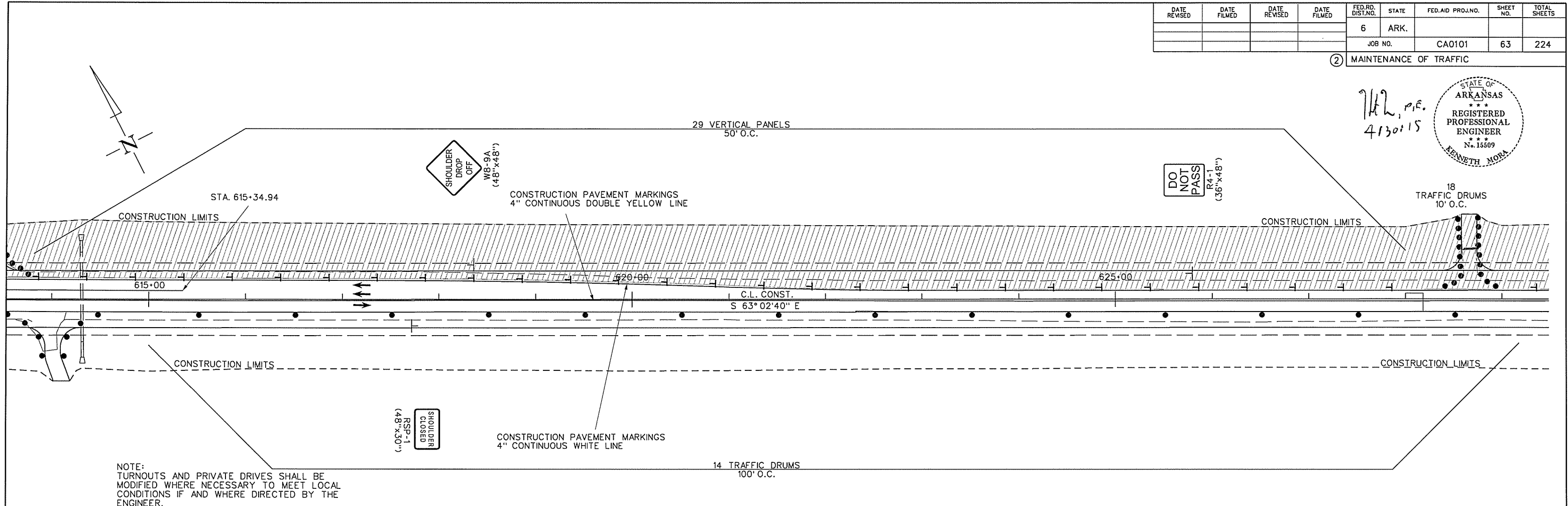
05/06/2015

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.	CA0101	63	224	

② MAINTENANCE OF TRAFFIC

W.L. M.F.
4/30/15

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORA



MAINTENANCE OF TRAFFIC - STAGE 2

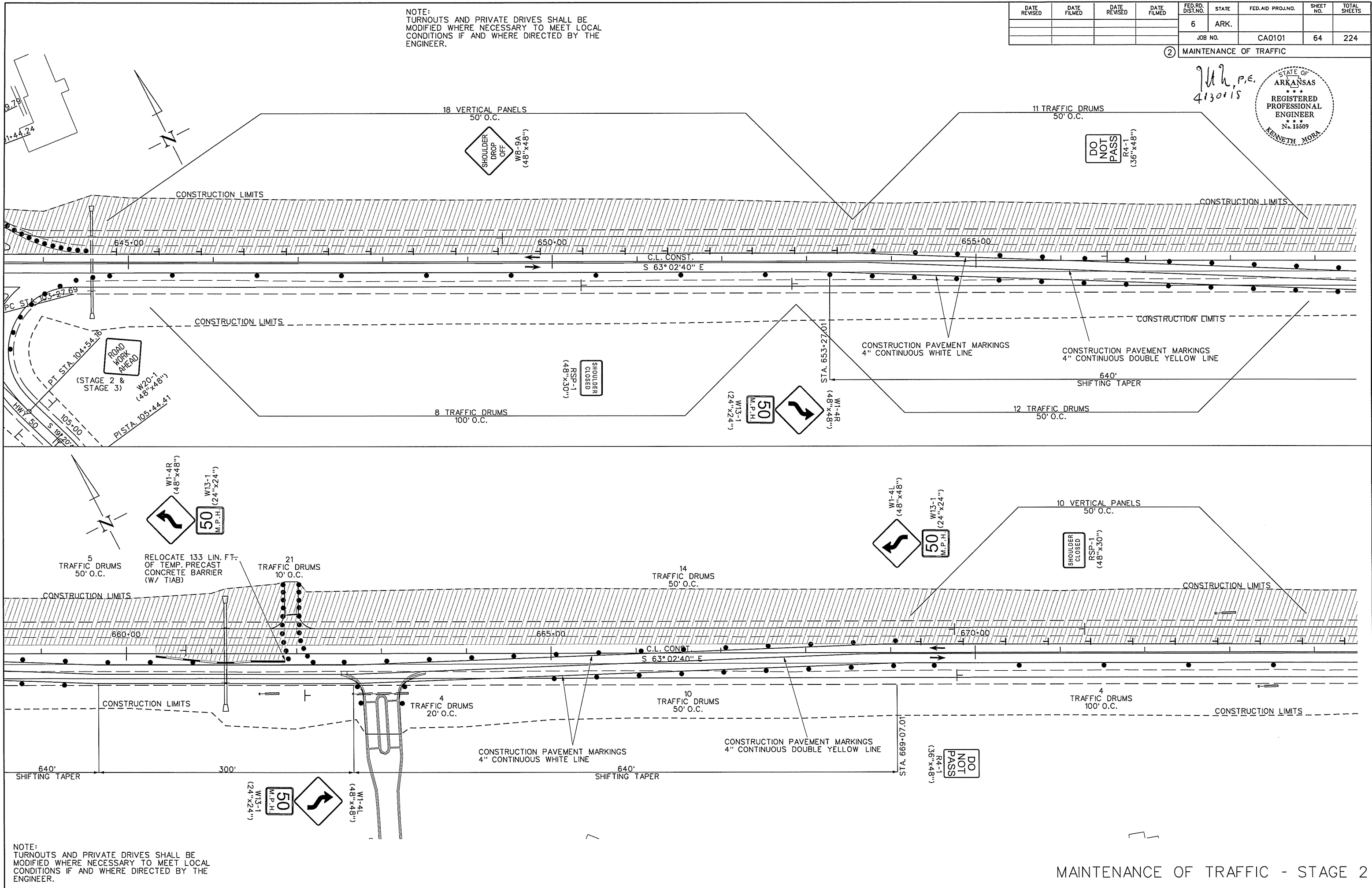
05/06/2015

NOTE:
TURNOUTS AND PRIVATE DRIVES SHALL BE
MODIFIED WHERE NECESSARY TO MEET LOCAL
CONDITIONS IF AND WHERE DIRECTED BY THE
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.	CA0101		64	224

② MAINTENANCE OF TRAFFIC

Mh, P.E.
4130115



05/06/2015

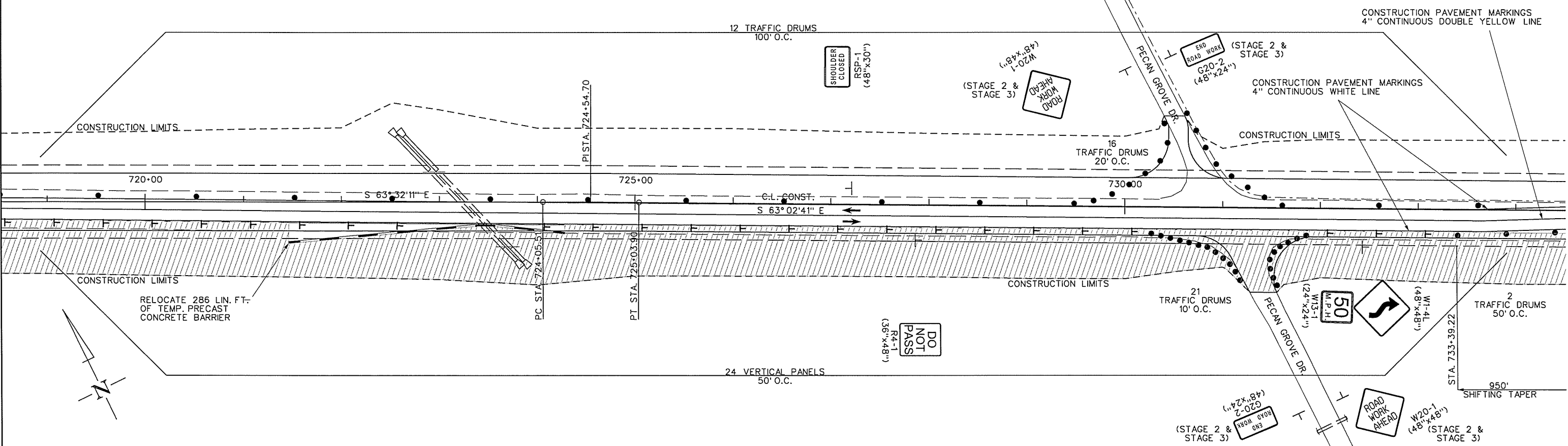
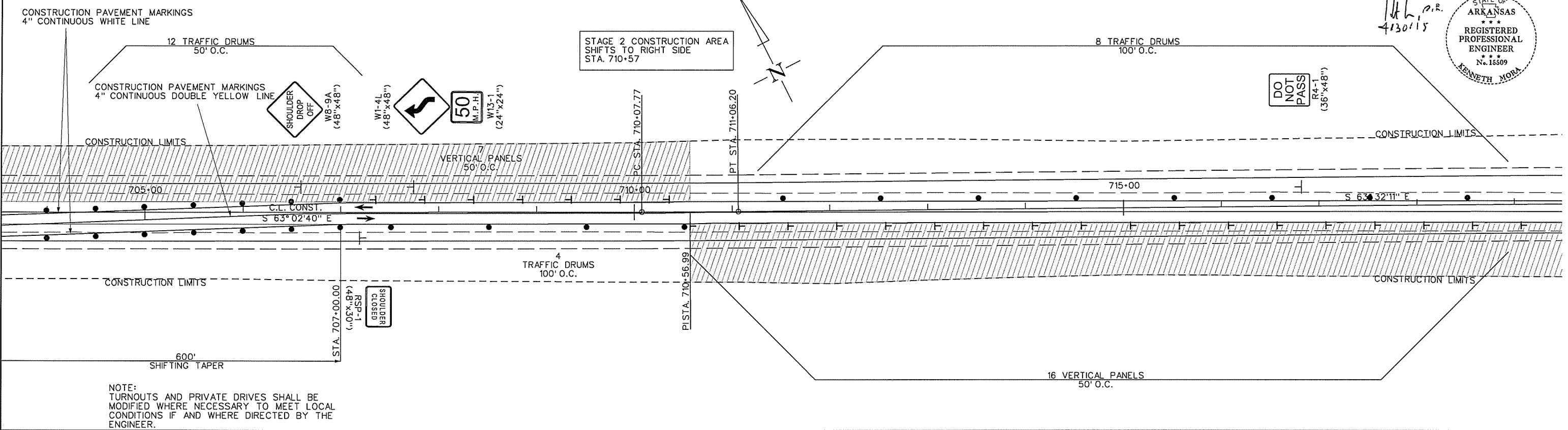
NOTE:
TURNOUTS AND PRIVATE DRIVES SHALL BE
MODIFIED WHERE NECESSARY TO MEET LOCAL
CONDITIONS IF AND WHERE DIRECTED BY THE
ENGINEER.

MAINTENANCE OF TRAFFIC - STAGE 2

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.	CA0101		66	224

② MAINTENANCE OF TRAFFIC

7/21/15
4130115
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15509
KENNETH MORRIS



MAINTENANCE OF TRAFFIC - STAGE 2

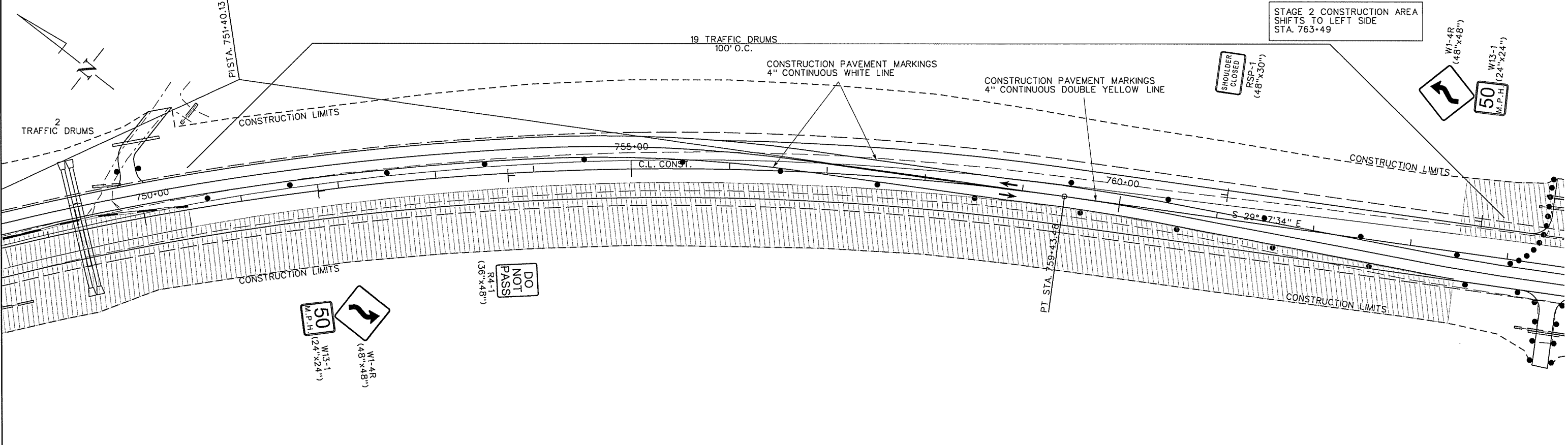
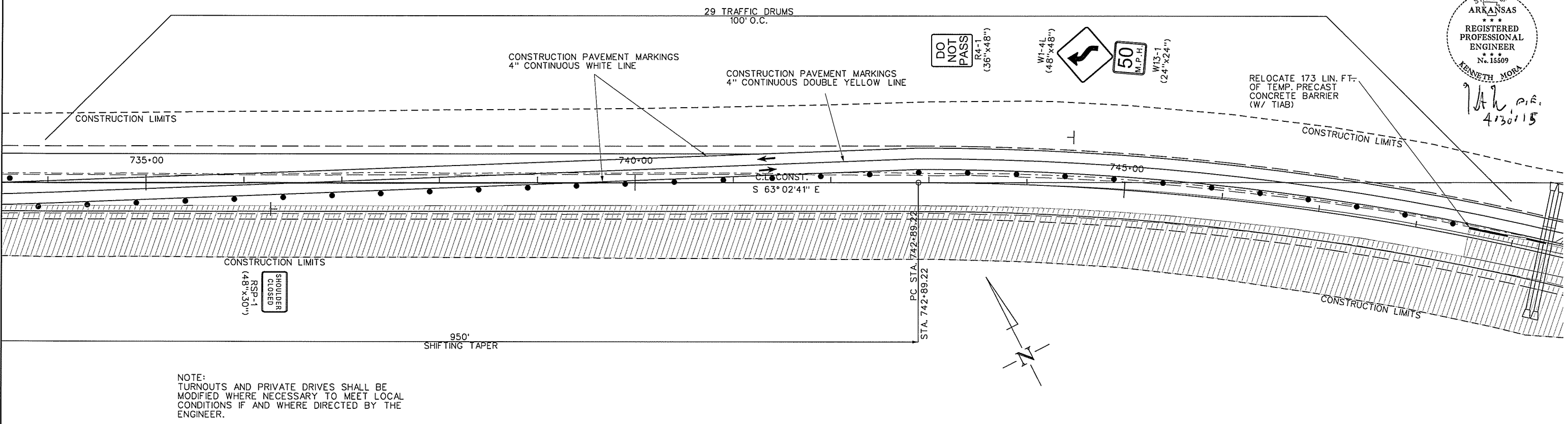
05/06/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		67	224

② MAINTENANCE OF TRAFFIC



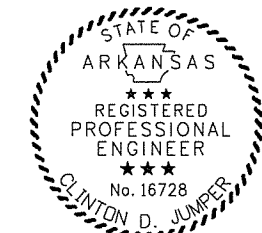
K.M.
4/30/15



05/06/2015

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. CA0101	68	224

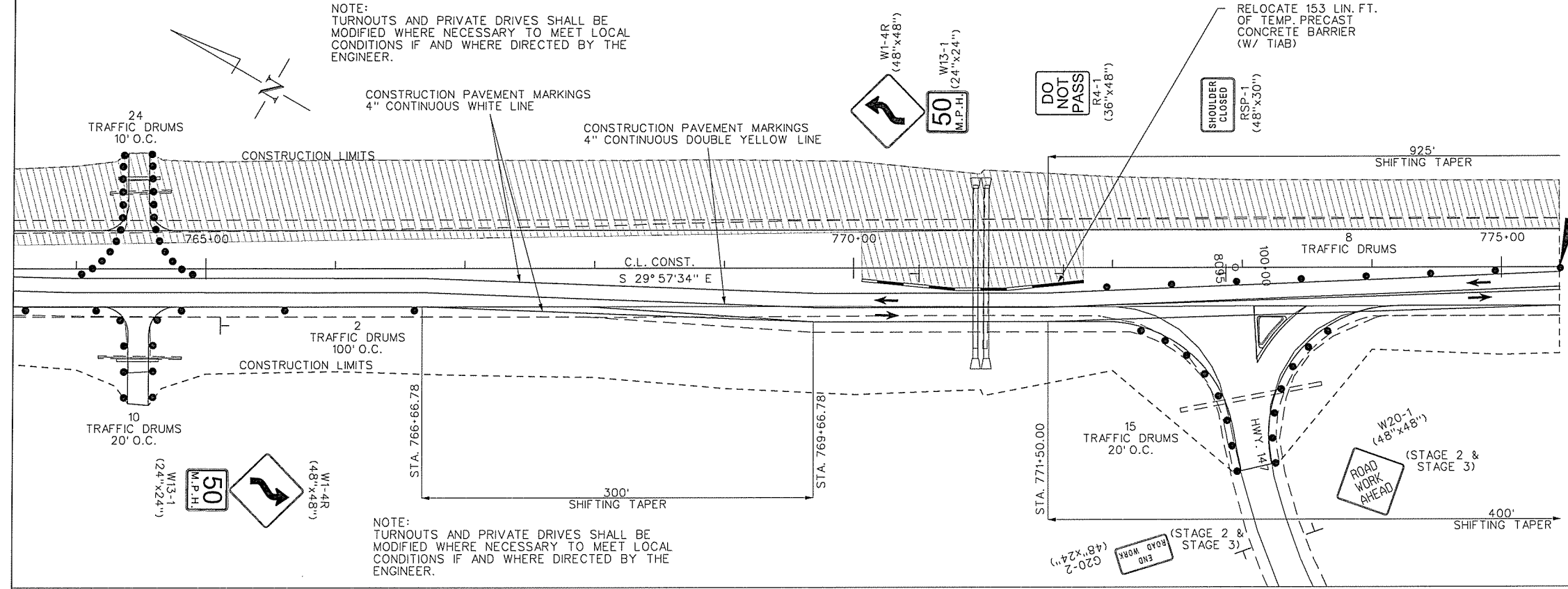
② MAINTENANCE OF TRAFFIC



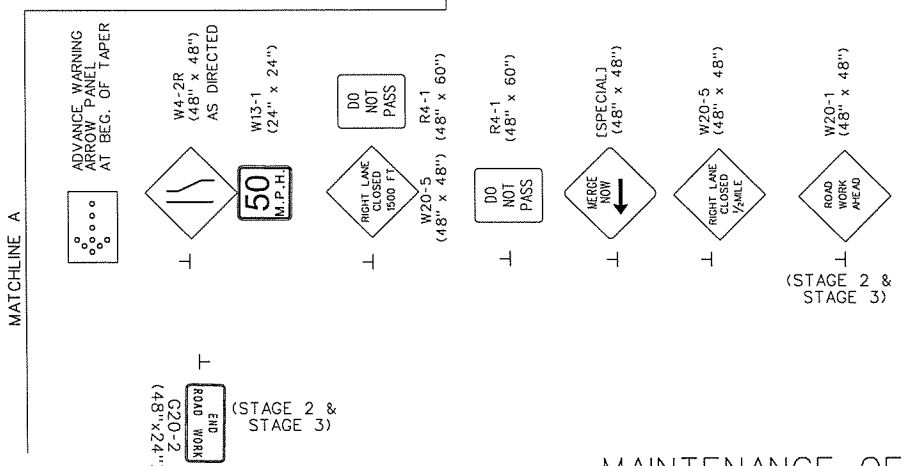
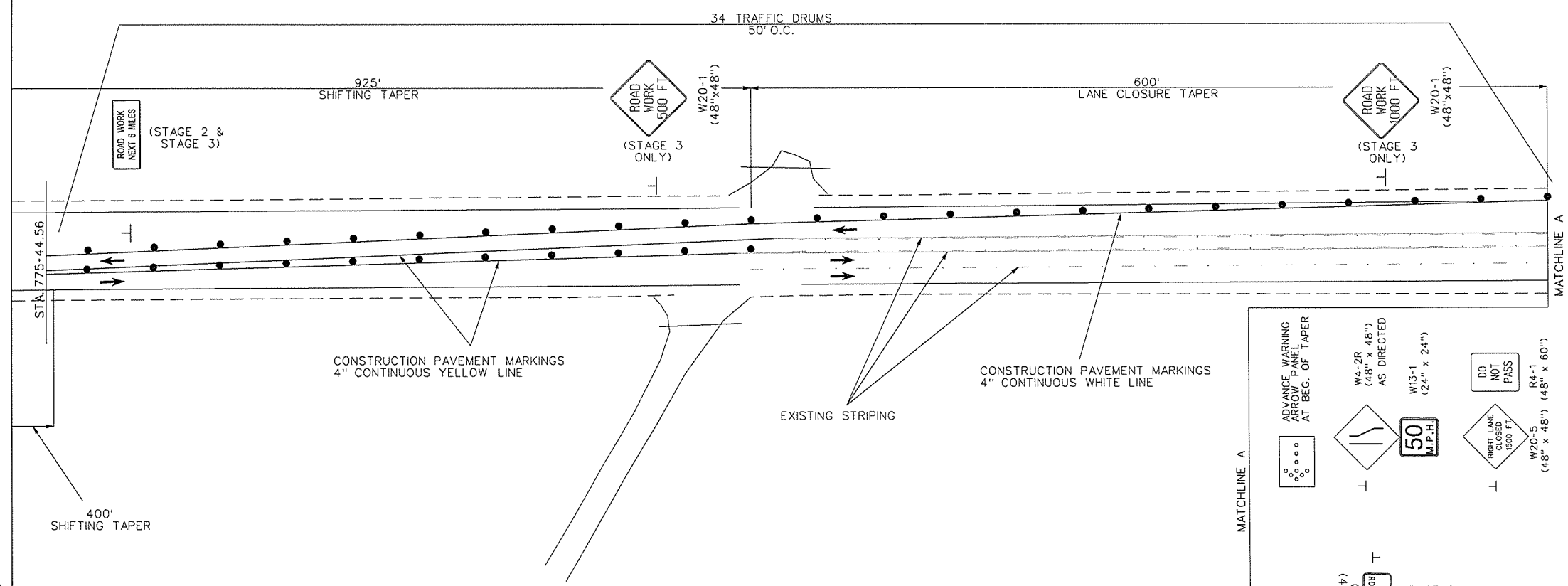
Car 5 per
6/8/2016

STA. 775+44.56
END JOB CA0101
LOG MILE 13.76

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



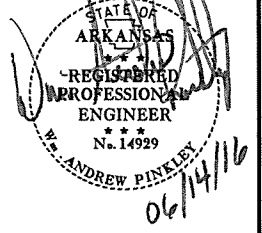
NOTE:
TURNOUTS AND PRIVATE DRIVES SHALL BE
MODIFIED WHERE NECESSARY TO MEET LOCAL
CONDITIONS IF AND WHERE DIRECTED BY THE
ENGINEER.



PORTABLE CHANGEABLE
MESSAGE SIGN TO BE
USED IF AND WHERE
DIRECTED BY THE ENGINEER.
(STAGE 2 &
STAGE 3)

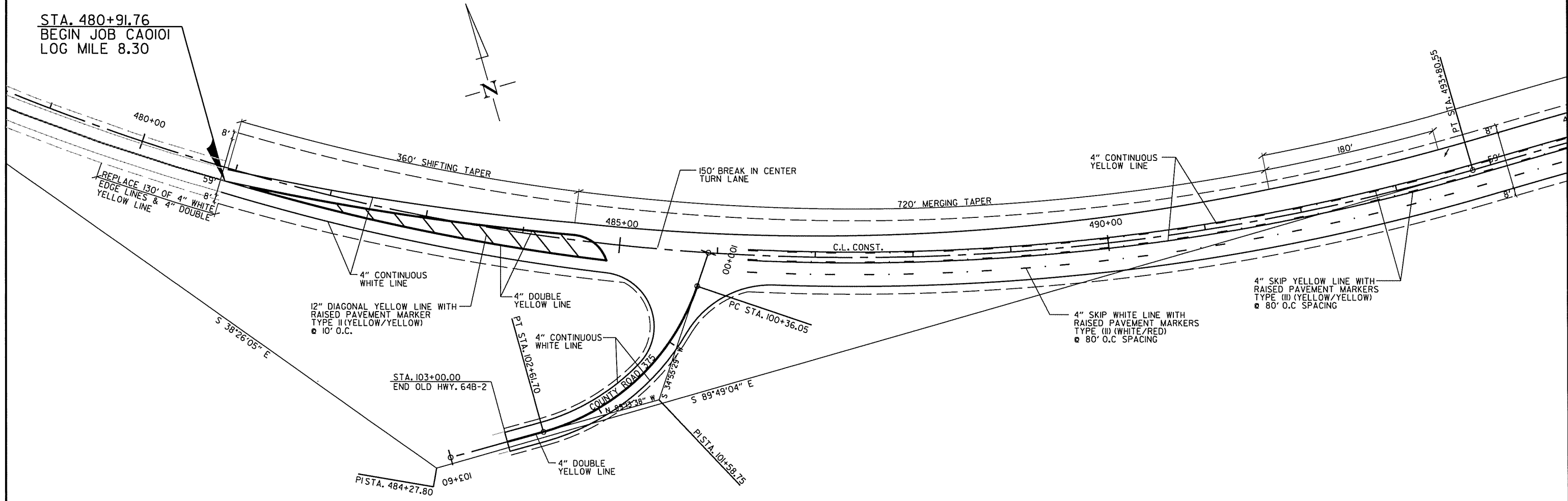
DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	224
							CAOIOI	69

2 PERMANENT PAVEMENT MARKING DETAILS



PERMANENT PAVEMENT MARKING QUANTITIES:

RAISED PAVEMENT MARKERS TYPE II WHITE/RED	=	764	EACH
RAISED PAVEMENT MARKERS TYPE II YELLOW/YELLOW	=	907	EACH
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")	=	80441	LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")	=	80122	LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	=	694	LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (12")	=	187	LIN. FT.
THERMOPLASTIC PAVEMENT MARKINGS (WORDS)	=	2	EACH
THERMOPLASTIC PAVEMENT MARKINGS (ARROW)	=	4	EACH
REFLECTORIZED PAINT PAVEMENT MARKINGS WHITE (10")	=	243	LIN. FT.



STA. 480+91.76
BEGIN JOB CAOIOI
LOG MILE 8.30

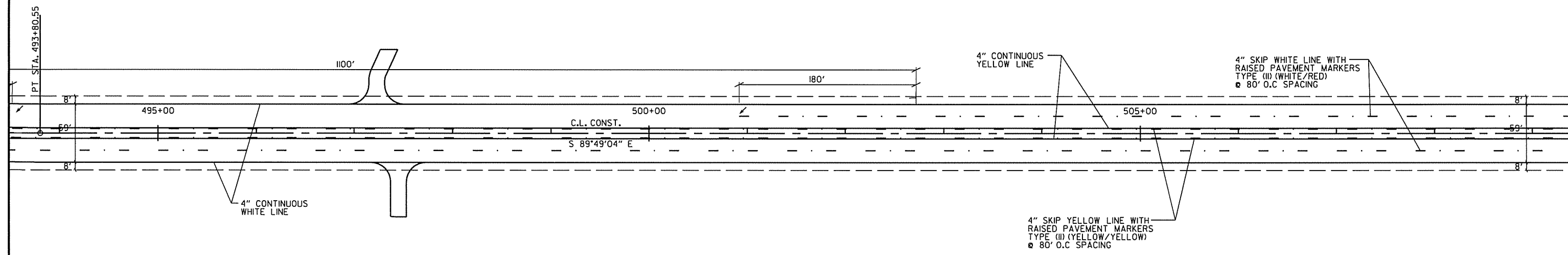
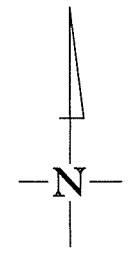
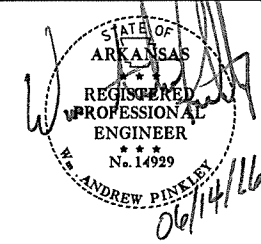
06/13/2016 rCAOIOI.dgn

NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

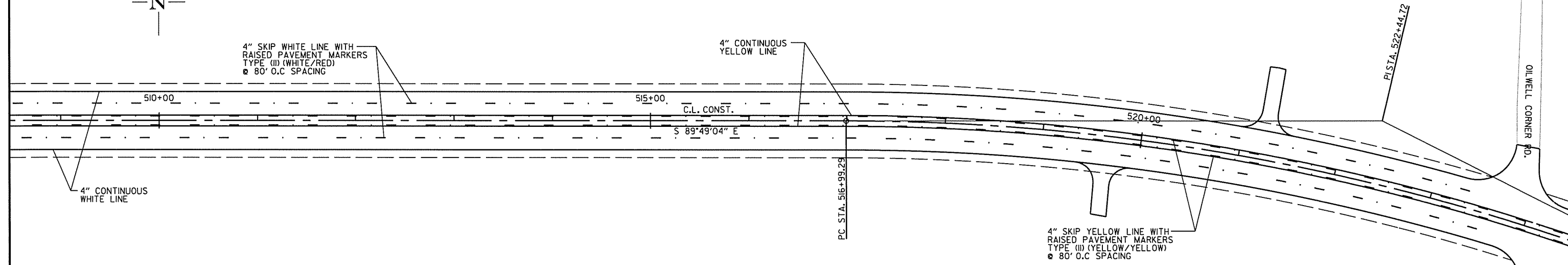
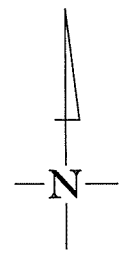
PERMANENT PAVEMENT MARKING DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	224
							CAOIOI	70

2 PERMANENT PAVEMENT MARKING DETAILS



NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.



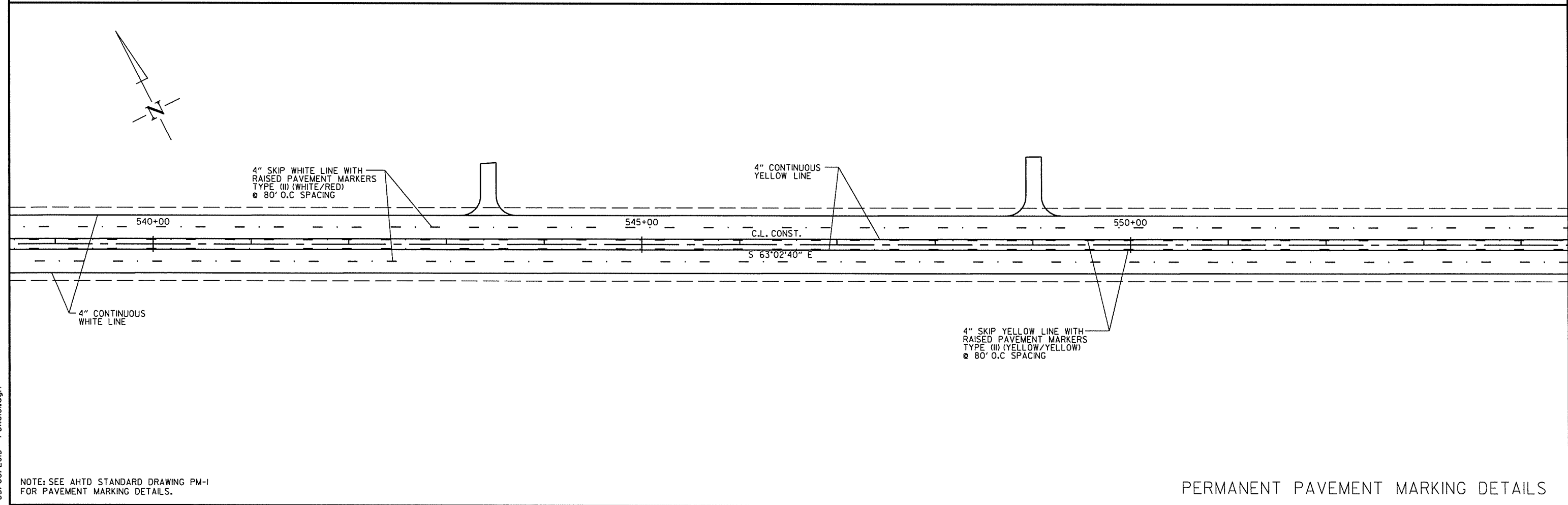
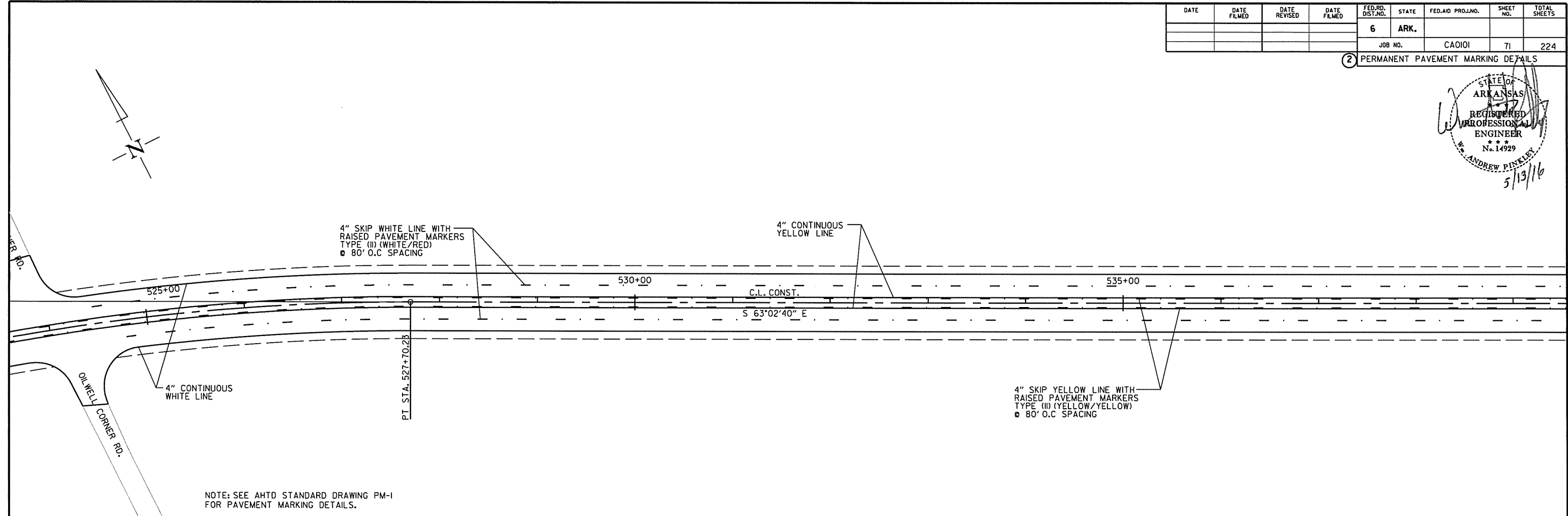
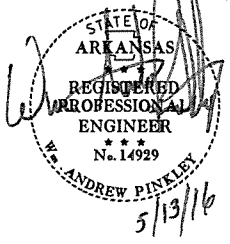
NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

06/13/2016 r:CAOIOI.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	71	224	

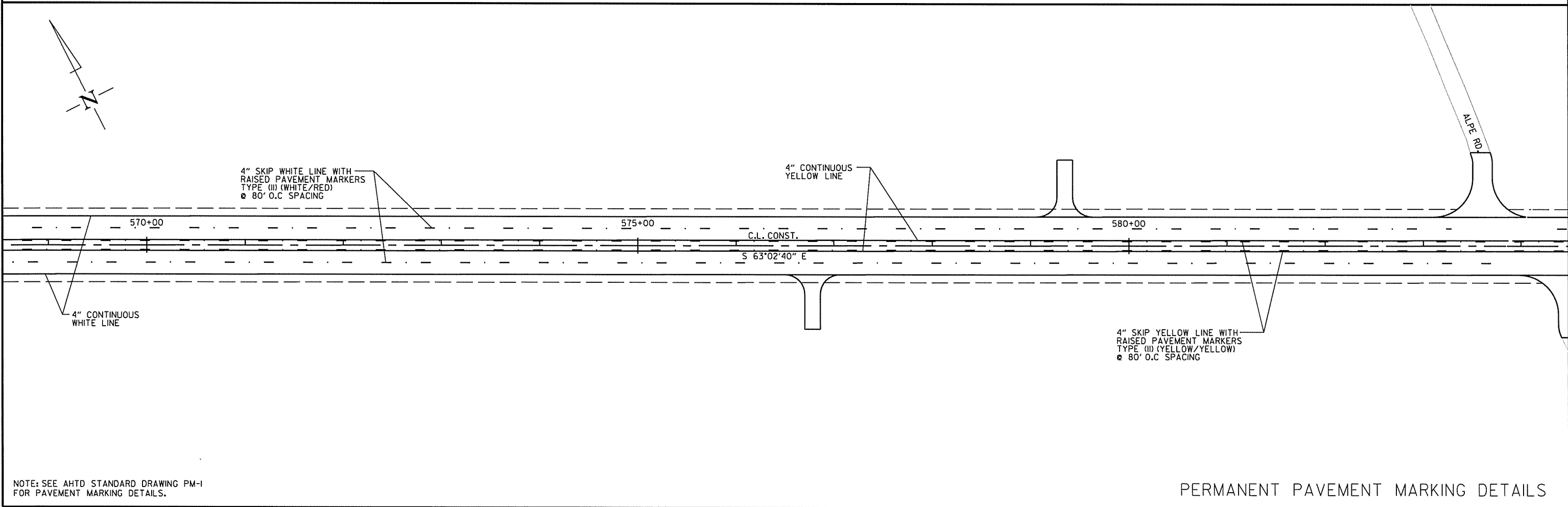
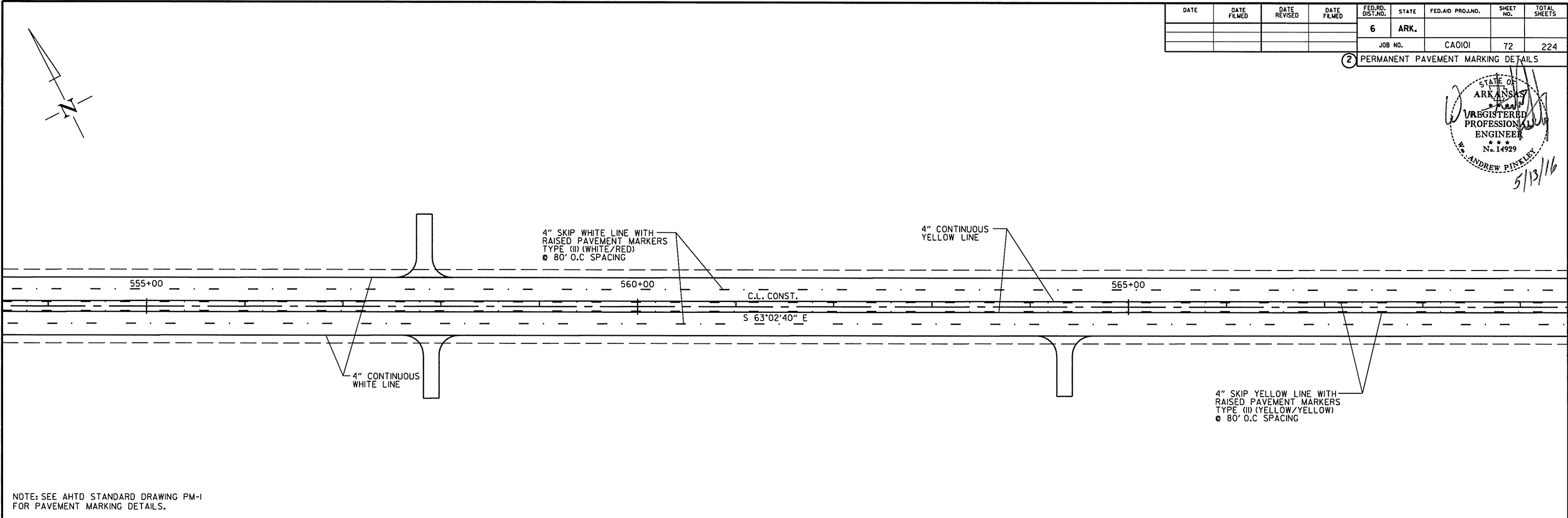
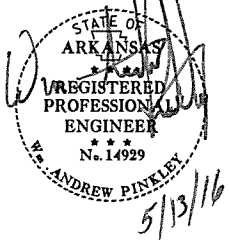
2 PERMANENT PAVEMENT MARKING DETAILS



05/06/2015 rCAOIOI.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							72	224

2 PERMANENT PAVEMENT MARKING DETAILS

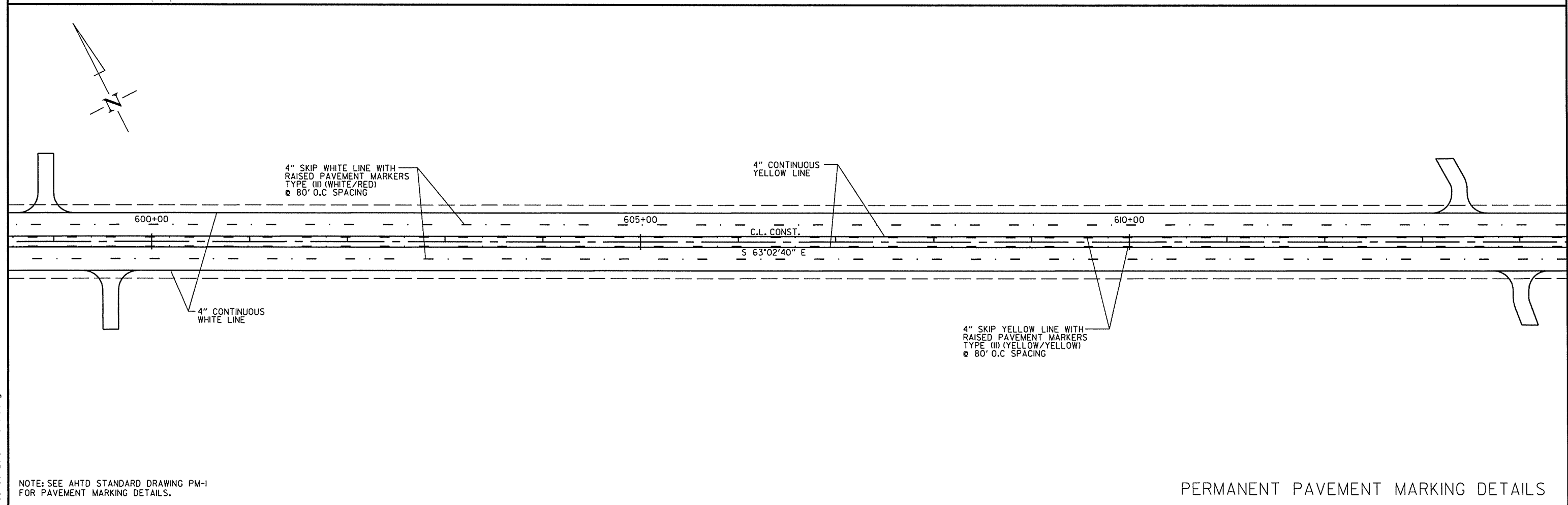
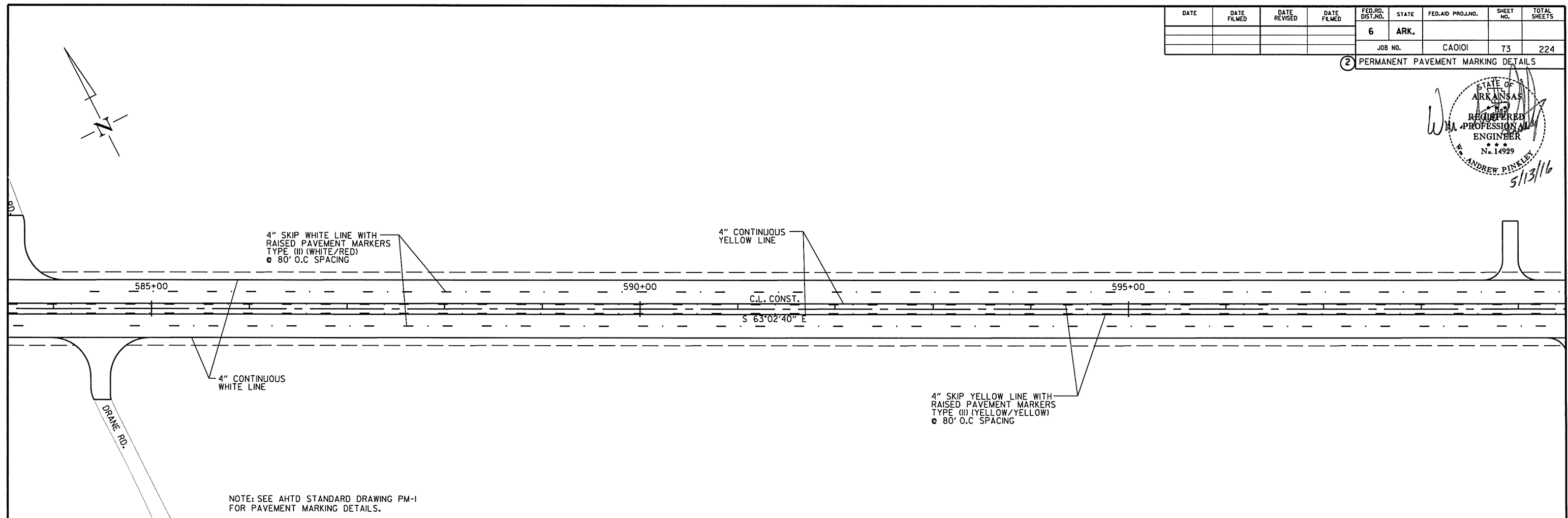
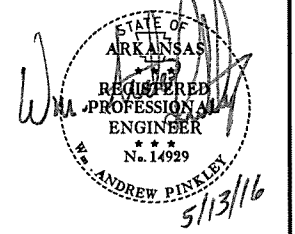


05/06/2015 rca0101.dgn

PERMANENT PAVEMENT MARKING DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CAOIOI	73	224

② PERMANENT PAVEMENT MARKING DETAILS

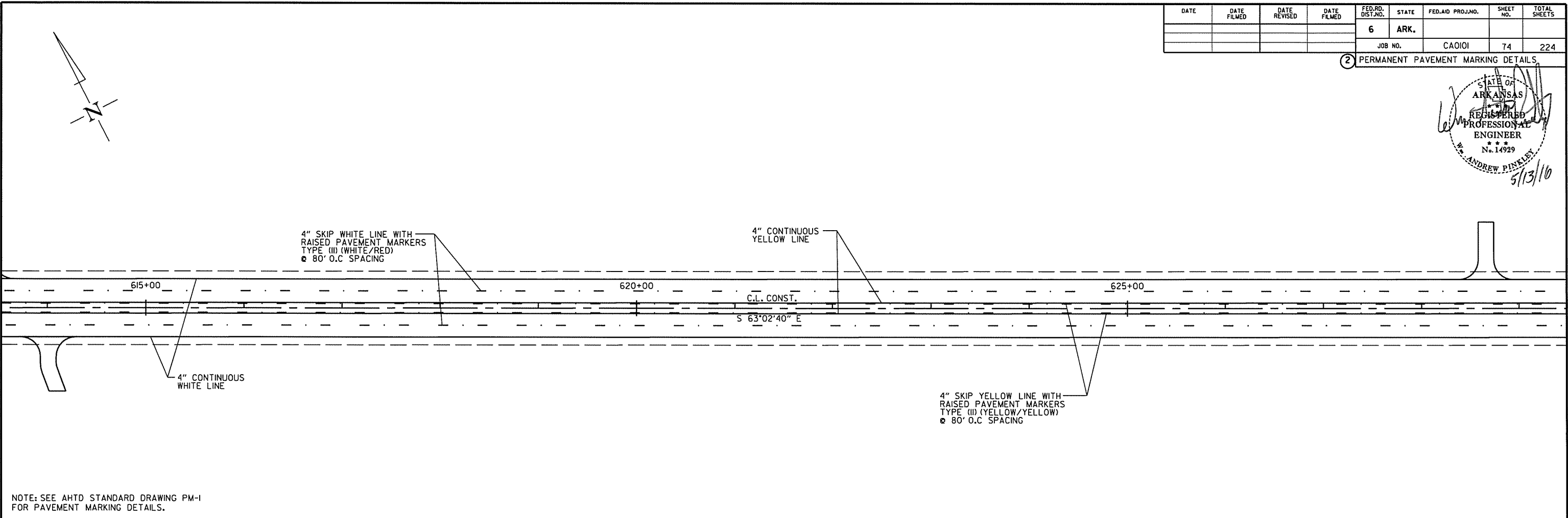
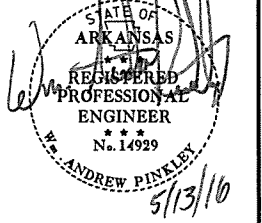


05/06/2015 rCAOIOI.dgn

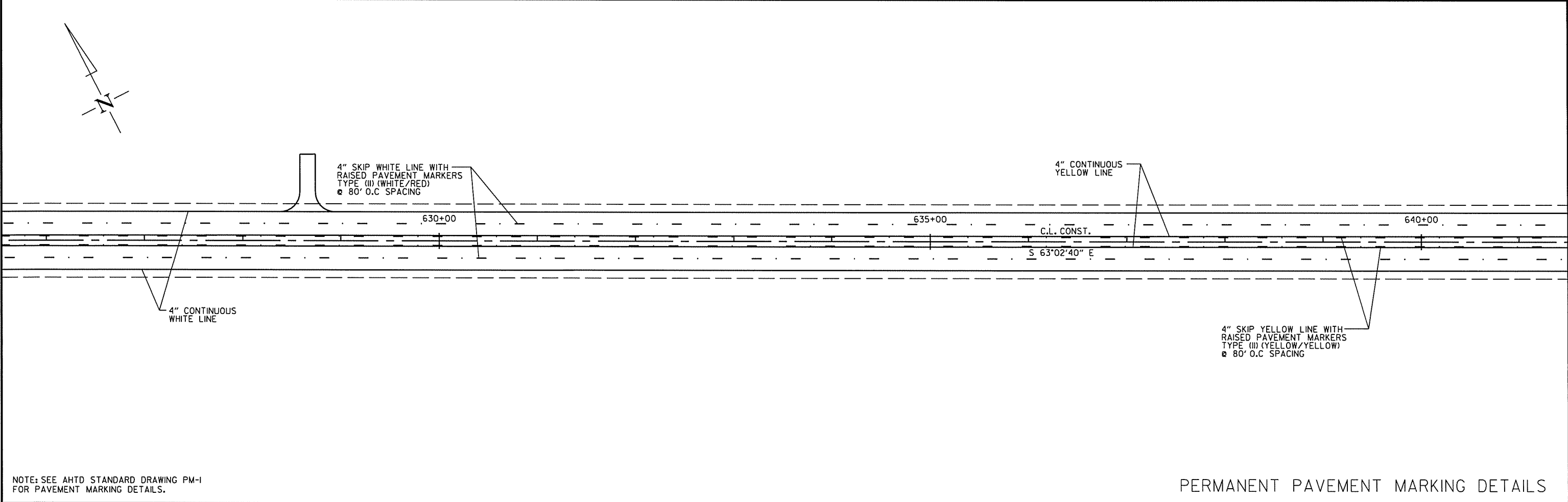
PERMANENT PAVEMENT MARKING DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CAOIOI	74	224

② PERMANENT PAVEMENT MARKING DETAILS



NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.



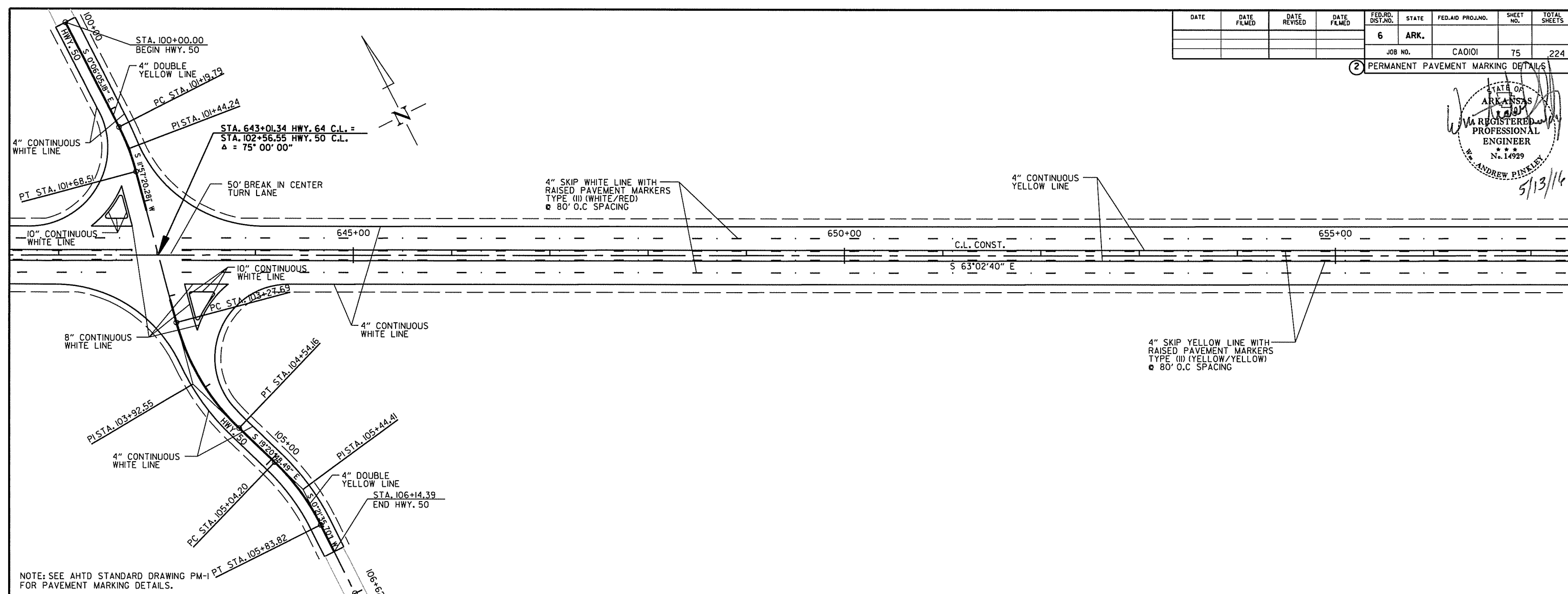
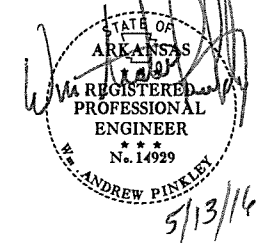
NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

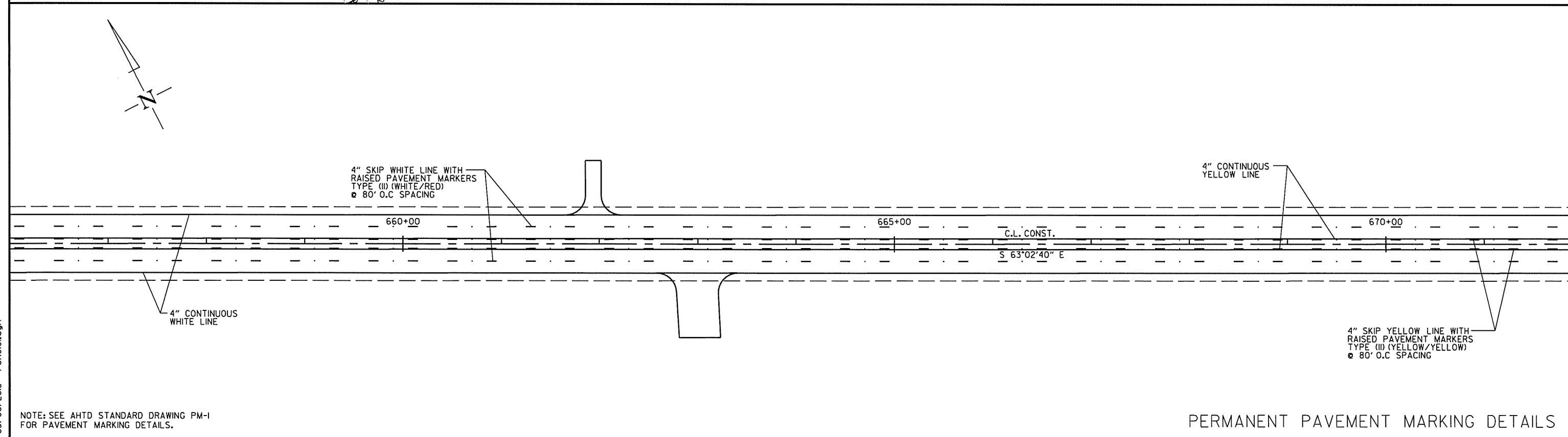
05/06/2015 rCAOIOI.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0101	75	224

② PERMANENT PAVEMENT MARKING DETAILS



NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.



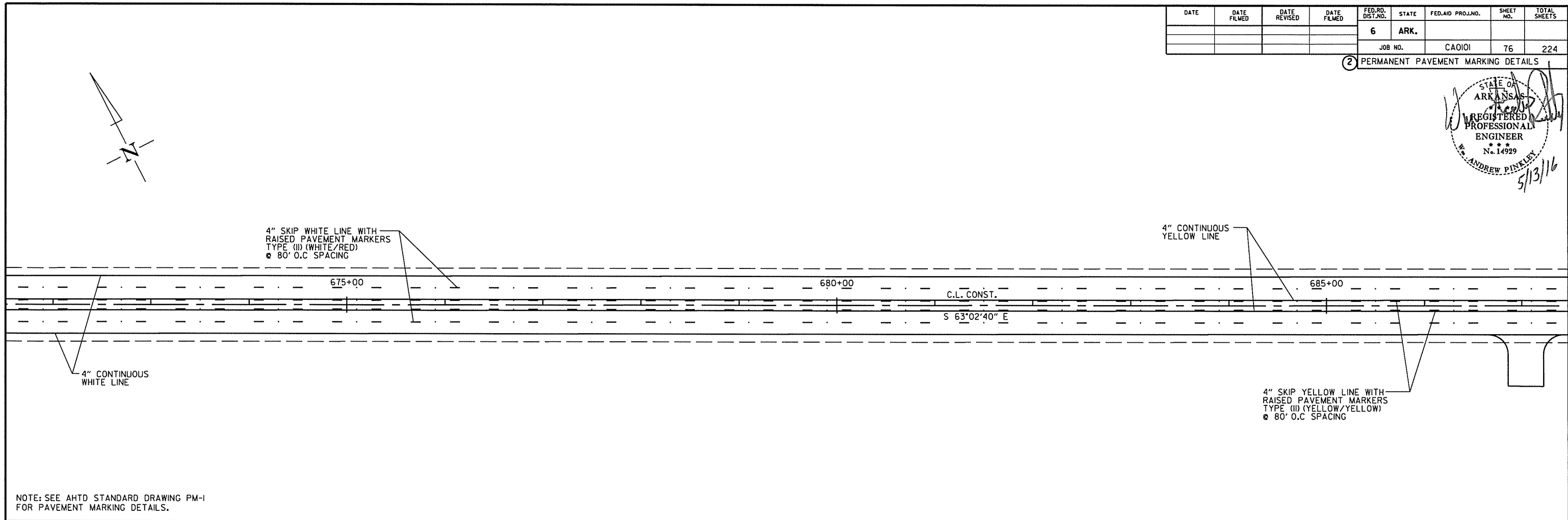
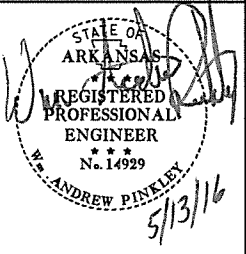
NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

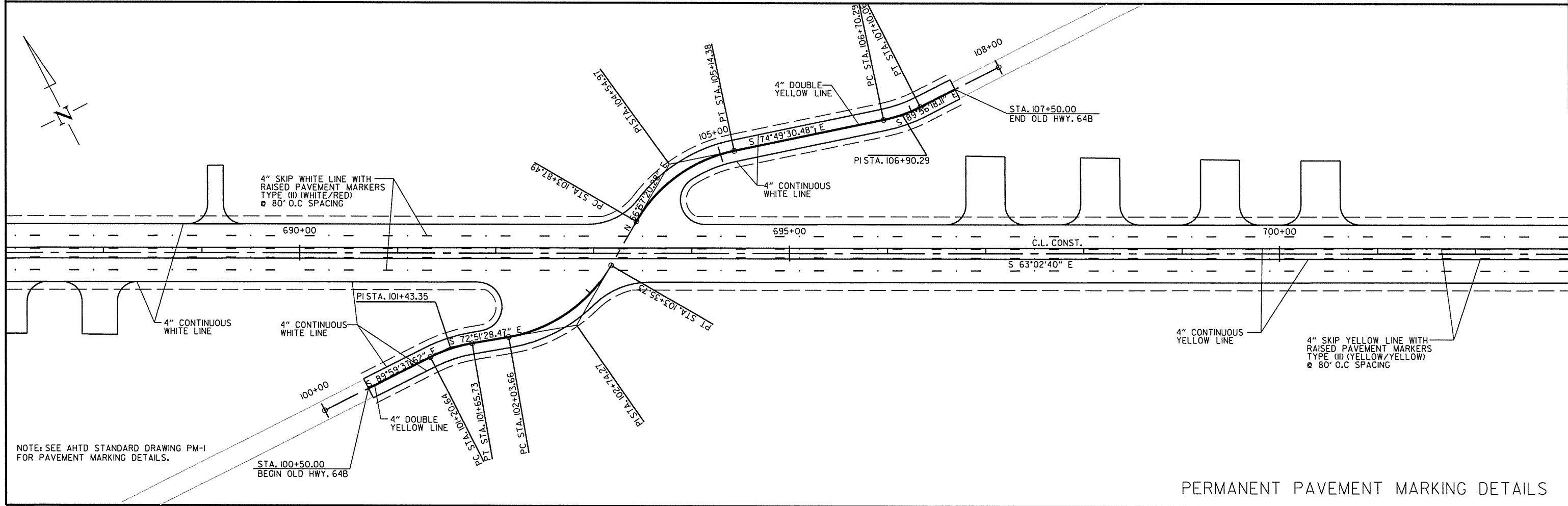
05/06/2015 r-CA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							76	224

2 PERMANENT PAVEMENT MARKING DETAILS



NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.



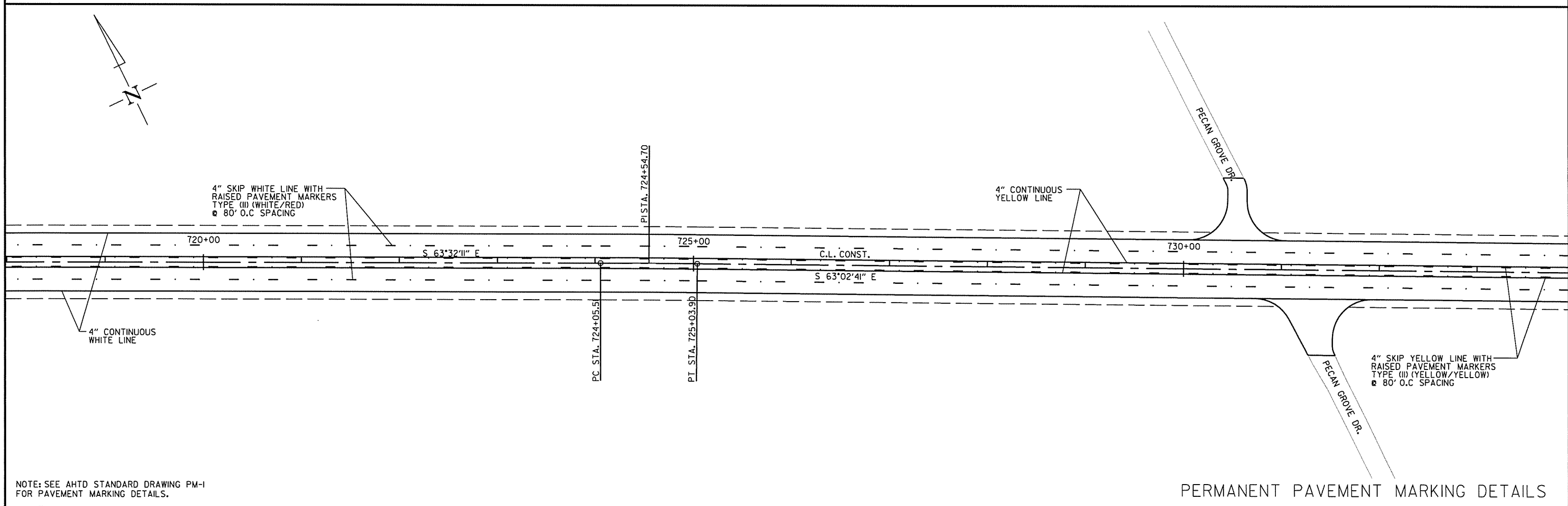
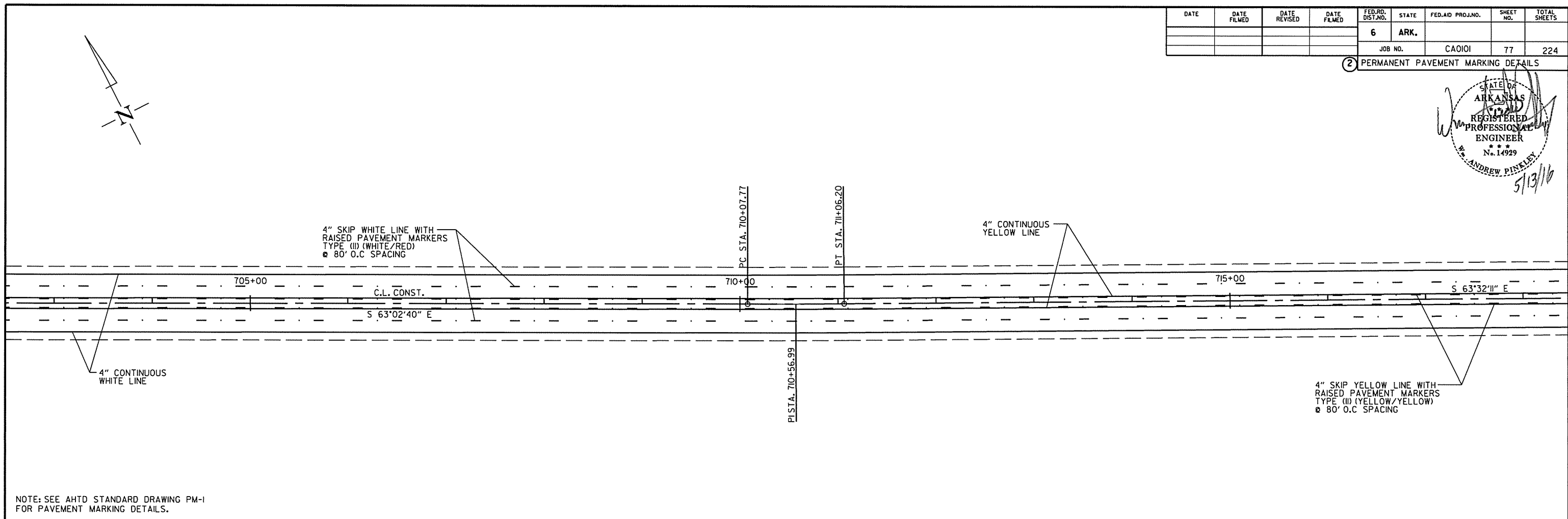
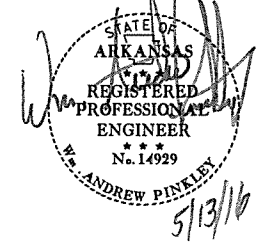
NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

05/06/2015 rCA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CAOIOI	77	224

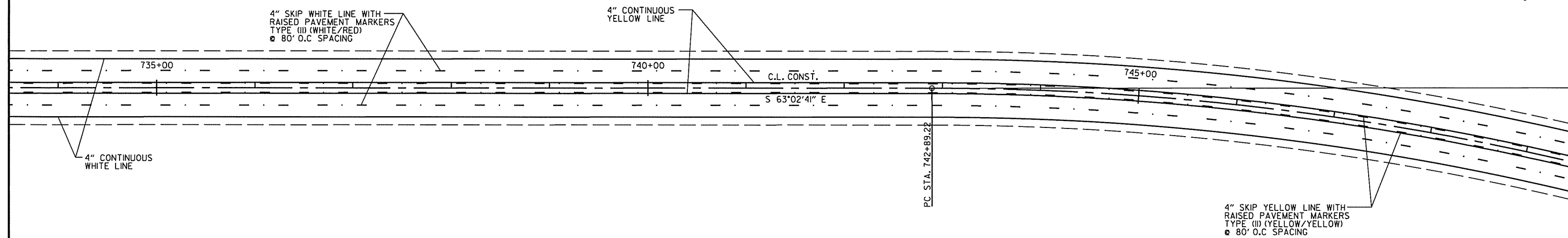
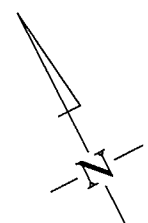
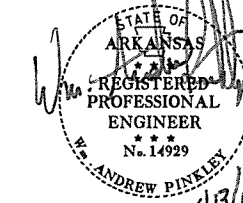
② PERMANENT PAVEMENT MARKING DETAILS



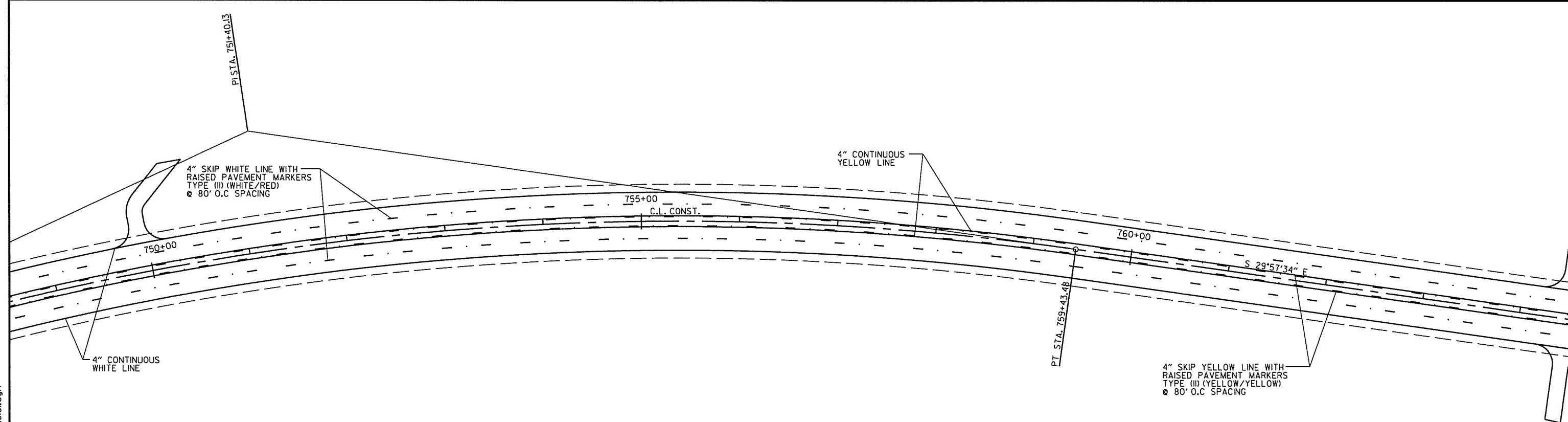
PERMANENT PAVEMENT MARKING DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0101	78	224

② PERMANENT PAVEMENT MARKING DETAILS



NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.



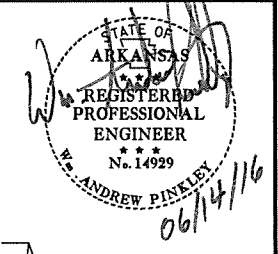
NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

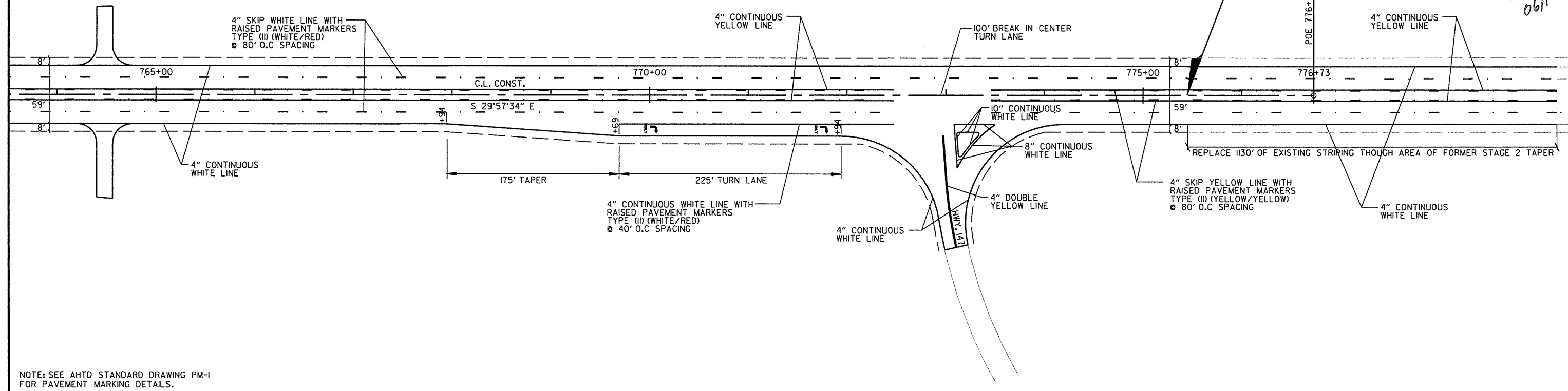
05/06/2015 r-CA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	224
							CAOIOI	79

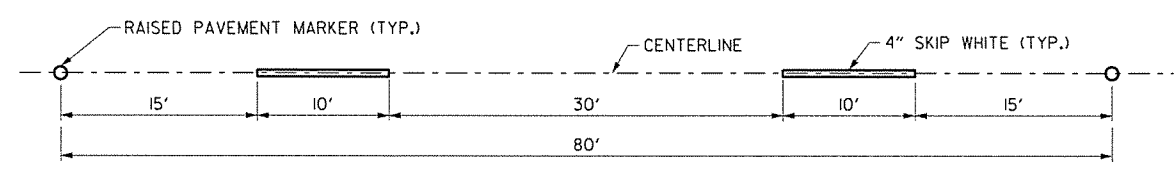
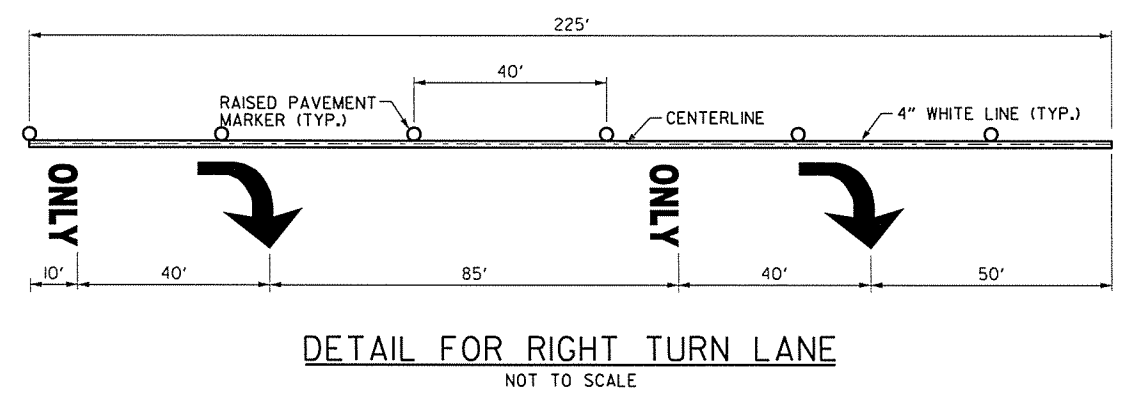
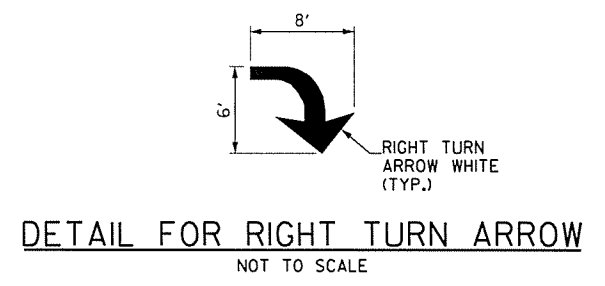
2 PERMANENT PAVEMENT MARKING DETAILS



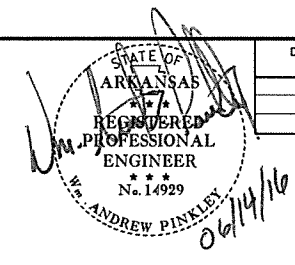
STA. 775+44.56
END JOB CAOIOI
LOG MILE 13.76



NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.



DETAIL FOR SKIP WHITE STRIPING
NOT TO SCALE



DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		80	224
				JOB NO. CA0101				

2 QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1A	STAGE 1B	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN. BARR. (REPAIR)	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN
								NO.	SQ. FT.								
G20-1	ROAD WORK NEXT 6 MILES	60"X24"	2	2	2	2	2	2	20.0								
W20-1	ROAD WORK XX FT	48"X48"	4	4	2	4	4	4	64.0								
R4-1	DO NOT PASS	36"X48"		18	20		20	20	240.0								
G20-2	END ROAD WORK	48"X24"	6	14	14	14	14	14	112.0								
W20-1	ROAD WORK AHEAD	48"X48"	6	14	14	14	14	14	224.0								
RSP-1	SHOULDER CLOSED	48"X30"	3	10	19		19	19	190.0								
W8-9A	SHOULDER DROP OFF	48"X48"		9	8		9	9	144.0								
W1-4L	REVERSE CURVE (LEFT)	48"X48"		6	9		9	9	144.0								
W1-4R	REVERSE CURVE (RIGHT)	48"X48"		6	14		14	14	224.0								
W13-1	50 M.P.H.	24"X24"		12	23		23	23	92.0								
W20-5	RIGHT LANE CLOSED (1500 FT)	48"X48"			1		1	1	16.0								
SPECIAL	MERGE NOW	48"X48"			1		1	1	16.0								
W20-5	RIGHT LANE CLOSED (1/2 MILE)	48"X48"			1		1	1	16.0								
VERTICAL PANELS			104	212	212		212			212							
TRAFFIC DRUMS				437	1089		1089				1089						
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER				2069			2069				2069						
RELOCATING PRECAST CONCRETE BARRIER					1777		1777					1777					
TEMPORARY IMPACT ATTENUATION BARRIER				5	9		14						14				
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)				5	9		14							14			
ADVANCE WARNING ARROW PANEL					152		152								152		
PORTABLE CHANGEABLE MESSAGE SIGN (NON-GATED)			3	41	44		87										87
TOTALS:								1502.0	212	1089	2069	1777	14	14	152	87	

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

NOTE: THE QUANTITY OF TRAFFIC DRUMS PROVIDED IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. HOWEVER, THE INSTALLATION OF TRAFFIC DRUMS SHALL NEVER EXCEED THE ACTUAL WORK AREA BY MORE THAN 1/4 MILE, UNLESS APPROVED BY THE ENGINEER.

THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING					REFLECTORIZED PAINT PAVEMENT MARKING	
									TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	4"			WORDS	ARROWS		10" WHITE
											WHITE	YELLOW	YELLOW				
REMOVAL OF PERMANENT PAVEMENT MARKINGS	17209	62532	22935		102676												
CONSTRUCTION PAVEMENT MARKINGS	17209	84772	124380	147265		373626											
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		17209	55204	146000			218413										
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS			3781					3781									
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)				764					764								
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)				907						907							
THERMOPLASTIC PAVEMENT MARKING WHITE (4")				80441							80441						
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")				80122								80122					
THERMOPLASTIC PAVEMENT MARKING YELLOW (12")				187									187				
THERMOPLASTIC PAVEMENT MARKING WHITE (8")				694										694			
THERMOPLASTIC PAVEMENT MARKING WORDS				2											2		
THERMOPLASTIC PAVEMENT MARKING ARROWS				4												4	
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")				243													243
TOTALS:					102676	373626	218413	3781	764	907	80441	80122	187	694	2	4	243

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

QUANTITIES

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8/3/2016				6	ARK.			
						JOB NO.	CA0101	81
						2 QUANTITIES		



REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CONCRETE ISLANDS	CONCRETE DRIVEWAYS
			LIN. FT.	SQ. YD.	SQ. YD.
485+51	485+55	RT. OF C.L. HWY. 64	122		
485+69	486+09	RT. OF C.L. HWY. 64	118		
642+98	643+21	RT. OF C.L. HWY. 64	100		
643+51	643+82	RT. OF C.L. HWY. 64	95		
642+75	642+90	LT. OF C.L. HWY. 64	95		
643+21	643+61	LT. OF C.L. HWY. 64	110		
662+53	663+52	RT. OF C.L. HWY. 64	165		
696+58	698+58	LT. OF C.L. HWY. 64	270		
773+14	773+30	RT. OF C.L. HWY. 64	70	22	
662+53	663+52	RT. OF C.L. HWY. 64			73
686+75	687+35	RT. OF C.L. HWY. 64			278
687+65	688+25	RT. OF C.L. HWY. 64			229
696+58	698+58	LT. OF C.L. HWY. 64			746
698+63	702+00	LT. OF C.L. HWY. 64			1313
TOTALS:			1145	22	2639

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	EACH
484+72	CROSS DRAIN CULVERT	1	
522+07	CROSS DRAIN CULVERT	1	
524+97	CROSS DRAIN CULVERT	1	
534+06	CROSS DRAIN CULVERT	1	
661+16	CROSS DRAIN CULVERT	1	
696+06	CROSS DRAIN CULVERT	1	
749+34	CROSS DRAIN CULVERT	1	
770+98	CROSS DRAIN CULVERT	2	
484+31	LT. SIDE DRAIN CULVERT	1	
497+23	LT. SIDE DRAIN CULVERT	1	
521+25	LT. SIDE DRAIN CULVERT	1	
525+00	LT. SIDE DRAIN CULVERT	1	
543+43	LT. SIDE DRAIN CULVERT	2	
549+01	LT. SIDE DRAIN CULVERT	2	
557+83	LT. SIDE DRAIN CULVERT	1	
579+35	LT. SIDE DRAIN CULVERT	1	
583+61	LT. SIDE DRAIN CULVERT	1	
598+92	LT. SIDE DRAIN CULVERT	1	
613+38	LT. SIDE DRAIN CULVERT	1	
628+66	LT. SIDE DRAIN CULVERT	1	
661+94	LT. SIDE DRAIN CULVERT	1	
672+95	LT. SIDE DRAIN CULVERT	1	
689+14	LT. SIDE DRAIN CULVERT	1	
749+92	LT. SIDE DRAIN CULVERT	1	
764+48	LT. SIDE DRAIN CULVERT	1	
497+45	RT. SIDE DRAIN CULVERT	1	
519+64	RT. SIDE DRAIN CULVERT	1	
535+77	RT. SIDE DRAIN CULVERT	1	
557+90	RT. SIDE DRAIN CULVERT	1	
576+78	RT. SIDE DRAIN CULVERT	1	
584+10	RT. SIDE DRAIN CULVERT	1	
599+40	RT. SIDE DRAIN CULVERT	1	
599+58	RT. SIDE DRAIN CULVERT	1	
661+69	RT. SIDE DRAIN CULVERT	1	
662+97	RT. SIDE DRAIN CULVERT	1	
673+45	RT. SIDE DRAIN CULVERT	1	
687+04	RT. SIDE DRAIN CULVERT	1	
687+96	RT. SIDE DRAIN CULVERT	1	
748+50	RT. SIDE DRAIN CULVERT	1	
764+48	RT. SIDE DRAIN CULVERT	1	
101+04	CO. RD. 375 CROSS DRAIN CULVERT	1	
106+00	OLD HWY 64B CROSS DRAIN CULVERT	1	
697+20	LT. OF C.L. HWY. 64	1	1
697+58	LT. OF C.L. HWY. 64	1	1
697+94	LT. OF C.L. HWY. 64	1	1
698+33	LT. OF C.L. HWY. 64	1	1
TOTALS:		49	4

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	STATION
483+00	491+00	HWY. 64	8	8
492+00	494+00	HWY. 64	2	2
528+00	529+00	HWY. 64	1	1
552+00	555+00	HWY. 64	3	3
580+00	581+00	HWY. 64	1	1
642+00	645+00	HWY. 64	3	3
655+00	655+00	HWY. 64	1	1
659+00	683+00	HWY. 64	24	24
689+00	699+00	HWY. 64	10	10
721+00	723+00	HWY. 64	2	2
749+00	751+00	HWY. 64	2	2
TOTALS:			57	57

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE
			LIN. FT.
519+96	523+75	RT. OF C.L. HWY. 64	397
661+59	662+80	RT. OF C.L. HWY. 64	132
663+24	664+44	RT. OF C.L. HWY. 64	132
698+84	699+01	LT. OF C.L. HWY. 64	40
TOTAL:			701

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	SELECTED MATERIAL (CLASS SM-1)	* SOIL STABILIZATION
			CU. YD.			TON
ENTIRE	PROJECT	STAGE 1-MAIN LANES	31949	79352		
ENTIRE	PROJECT	STAGE 2-MAIN LANES	26977	61961		
ENTIRE	PROJECT	APPROACHES	85	4105		
ENTIRE	PROJECT	TEMPORARY WIDENING	1562			
ENTIRE	PROJECT	UNDERCUT FOR UNSUITABLE EXISTING MATERIAL	110413		110413	
100+29.50	103+00.00	COUNTY ROAD 375	318	349		
100+00.00	106+14.39	HWY. 50	1162	412		
100+32.67	102+50.00	OLD HWY. 64B	1867	1151		
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER				300
TOTALS:			174333	147330	110413	300

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

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

QUANTITIES

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CAOIOI	82	224

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH		CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
722+00.00	724+00.00	HWY. 64 - LT. DITCH	200.00	6.00	133.33	133.33	1.68
749+35.00	750+00.00	HWY. 64 - RT. DITCH	65.00	6.00	43.33	43.33	0.55
TOTALS:					176.66	176.66	2.23

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

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
489+04	LT. & RT. OF HEADWALL	2
TOTAL:		2

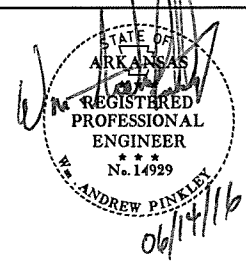
NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YD.	SQ. YD.
484+72	OUTLET OF PIPE CULVERT	5	10
534+06	OUTLET OF PIPE CULVERT	5	10
549+26	OUTLET OF PIPE CULVERT	5	10
554+11	OUTLET OF PIPE CULVERT	5	10
560+65	OUTLET OF PIPE CULVERT	5	10
566+26	OUTLET OF PIPE CULVERT	5	10
598+56	OUTLET OF PIPE CULVERT	5	10
614+31	OUTLET OF PIPE CULVERT	5	10
642+06	OUTLET OF PIPE CULVERT	5	10
644+57	OUTLET OF PIPE CULVERT	5	10
661+16	OUTLET OF PIPE CULVERT	5	10
690+06	OUTLET OF PIPE CULVERT	5	10
696+06	OUTLET OF PIPE CULVERT	5	10
723+25	OUTLET OF PIPE CULVERT	10	20
749+34	OUTLET OF PIPE CULVERT	10	20
770+98	OUTLET OF PIPE CULVERT	10	20
TOTALS:		95	190

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

② QUANTITIES



EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL										
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	WATTLE (20") DITCH CHECKS	SAND BAG DITCH CHECKS	ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	(E-1) LIN. FT.	(E-5) BAG	(E-6) CU.YD.	(E-7) LIN. FT.	(E-11) LIN. FT.	(E-14) CU.YD.	CU.YD.	CU. YD.
ENTIRE PROJECT	STAGE 1		32.37	64.74	32.37	3301.7	32.37	32.37	660.3	918	176	156		315			174	
ENTIRE PROJECT	STAGE 2		33.63	67.26	33.63	3430.3	33.63	33.63	686.1	792		171	20	1875			215	
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER															2000	2000	2000	
TOTALS:			66.00	132.00	66.00	6732.0	66.00	66.00	1346.4	1710	176	327	20	2190	2000	2000	2389	

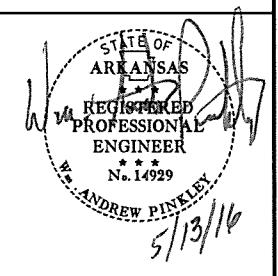
BASIS OF ESTIMATE:
 LIME2 TONS / ACRE OF SEEDING
 WATER.....102.0 M.G. / ACRE OF SEEDING
 WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
 WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION
 SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
 ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

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

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	224
							CA0101	83

② QUANTITIES



CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
642+60	LT. TURNOUT FOR HWY. 50	B	35
643+40	RT. TURNOUT FOR HWY. 50	B	46
773+22	RT. TURNOUT FOR HWY. 147	B	36
TOTAL:			117

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
484+72	HWY. 64	8.50	34	16
522+07	HWY. 64	14.00	24	18
524+97	HWY. 64	19.50	24	26
534+06	HWY. 64	9.08	24	12
661+16	HWY. 64	9.67	24	13
696+06	HWY. 64	8.50	28	13
749+34	HWY. 64	19.67	24	26
770+98	HWY. 64	19.67	58	63
100+75	OLD HWY. 64B	8.50	58	27
106+00	OLD HWY. 64B	8.50	58	27
TOTAL:				241

MAILBOXES

STATION	SIDE	LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
				EACH
100+00	RT.	OLD HWY. 64B RT.	1	1
TOTAL:			1	1

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
478+91.76	479+91.76	HWY. 64	40.00	444.44
776+44.56	777+44.56	HWY. 64	75.00	833.33
103+00.00	103+50.00	COUNTY ROAD 375	28.00	155.56
99+50.00	100+00.00	HWY. 50 NORTH	34.00	188.89
106+14.39	106+64.39	HWY. 50 SOUTH	34.00	188.89
100+00.00	100+50.00	OLD HWY. 64B EAST	34.00	188.89
107+50.00	108+00.00	OLD HWY. 64B WEST	34.00	188.89
TOTAL:				2188.89

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	320
TOTAL:	
	320

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

CULVERT CLEAN OUT

STATION	LOCATION	EACH
489+04	CROSS DRAIN	1
549+26	CROSS DRAIN	1
554+11	CROSS DRAIN	1
560+65	CROSS DRAIN	1
566+26	CROSS DRAIN	1
598+56	CROSS DRAIN	1
614+31	CROSS DRAIN	1
642+06	CROSS DRAIN	1
644+57	CROSS DRAIN	1
690+06	CROSS DRAIN	1
723+25	CROSS DRAIN	1
772+94	HWY. 147 CROSS DRAIN	1
100+59	HWY. 50N LT. SIDE DRAIN	1
TOTAL:		13

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	140	280
TOTALS:		280

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

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	RUMBLE STRIPS IN ASPHALT SHOULDERS
			LIN.FT.
480+92	775+45	LT OF HWY. 64	27879
480+92	775+45	RT OF HWY. 64	28207
TOTAL:			56086

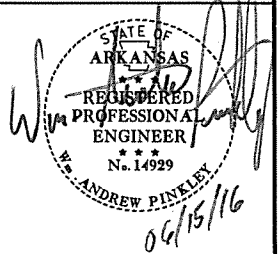
ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100
TOTAL:	100

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

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	224
							CAOIOI	84

2 QUANTITIES



STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT								FLARED END SECTIONS FOR R.C. PIPE CULVERTS				DROP INLETS (TYPE E)	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL. EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		(CLASS III)				(CLASS IV)				EACH													
		24"	30"	36"	42"	24"	30"	36"	48"	24"	30"	36"	42"										
HWY. 64 CROSS DRAINS																							
484+72	INSTALL 1 - 24" R.C. PIPE CULVERT					121				2												PCC-1, FES-1, FES-2	
522+07	INSTALL 2 - 24" R.C. PIPE CULVERTS					260				4												PCC-1, FES-1, FES-2	
524+97	INSTALL 2 - 24" R.C. PIPE CULVERTS					258				4												PCC-1, FES-1, FES-2	
534+06	INSTALL 1 - 30" R.C. PIPE CULVERT		122								2											PCC-1, FES-1, FES-2	
549+26	EXTEND 1 - 36" R.C. PIPE CULVERT 20' LT.			24								1										PCC-1, FES-1, FES-2	
549+26	EXTEND 1 - 36" R.C. PIPE CULVERT 20' RT.			24								1										PCC-1, FES-1, FES-2	
554+11	EXTEND 1 - 42" R.C. PIPE CULVERT 7' LT.				11								1									PCC-1, FES-1, FES-2	
554+11	EXTEND 1 - 42" R.C. PIPE CULVERT 20' RT.				24								1									PCC-1, FES-1, FES-2	
560+65	EXTEND 1 - 42" R.C. PIPE CULVERT 6' LT.				10								1									PCC-1, FES-1, FES-2	
560+65	EXTEND 1 - 42" R.C. PIPE CULVERT 13' RT.				17								1									PCC-1, FES-1, FES-2	
566+26	EXTEND 1 - 42" R.C. PIPE CULVERT 10' LT.				14								1									PCC-1, FES-1, FES-2	
566+26	EXTEND 1 - 42" R.C. PIPE CULVERT 19' RT.				23								1									PCC-1, FES-1, FES-2	
598+56	EXTEND 1 - 30" R.C. PIPE CULVERT 6' LT.		10									1										PCC-1, FES-1, FES-2	
598+56	EXTEND 1 - 30" R.C. PIPE CULVERT 19' RT.		23									1										PCC-1, FES-1, FES-2	
614+31	EXTEND 1 - 30" R.C. PIPE CULVERT 10' LT.		14									1										PCC-1, FES-1, FES-2	
614+31	EXTEND 1 - 30" R.C. PIPE CULVERT 15' RT.		19									1										PCC-1, FES-1, FES-2	
642+06	EXTEND 1 - 30" R.C. PIPE CULVERT 27' LT.						31					1										PCC-1, FES-1, FES-2	
642+06	EXTEND 1 - 30" R.C. PIPE CULVERT 21' RT.						25					1										PCC-1, FES-1, FES-2	
644+57	EXTEND 1 - 30" R.C. PIPE CULVERT 28' LT.		32									1										PCC-1, FES-1, FES-2	
644+57	EXTEND 1 - 30" R.C. PIPE CULVERT 25' RT.		29									1										PCC-1, FES-1, FES-2	
661+16	INSTALL 1 - 36" R.C. PIPE CULVERT						120				2											PCC-1, FES-1, FES-2	
690+06	EXTEND 1 - 24" R.C. PIPE CULVERT 28' LT.	32								1												PCC-1, FES-1, FES-2	
690+06	EXTEND 1 - 24" R.C. PIPE CULVERT 27' RT.	31								1												PCC-1, FES-1, FES-2	
696+06	INSTALL 1 - 24" R.C. PIPE CULVERT	125								2												PCC-1, FES-1, FES-2	
699+90	INSTALL DROP INLET, LT. OF HWY. 64												1										
723+25	EXTEND 2 - 42" R.C. PIPE CULVERTS 49' LT.				106							2										PCC-1, FES-1, FES-2	
723+25	EXTEND 2 - 42" R.C. PIPE CULVERTS 18' RT.				44							2										PCC-1, FES-1, FES-2	
749+34	INSTALL 2 - 48" R.C. PIPE CULVERTS						238					4										PCC-1, FES-1, FES-2	
770+98	INSTALL 2 - 48" R.C. PIPE CULVERTS						256					4										PCC-1, FES-1, FES-2	
SIDE ROAD CROSS DRIANS																							
100+75	OLD HWY. 64B INSTALL 1 - 24" R.C. PIPE CULVERT	50								2												PCC-1, FES-1, FES-2	
106+00	OLD HWY. 64B INSTALL 1 - 24" R.C. PIPE CULVERT	64								2												PCC-1, FES-1, FES-2	
HWY. 64 R.C. BOX CULVERTS																							
489+04	EXTEND 4' X 2' R.C. BOX CULVERT 45' LT.													4	2	45	16.00	1963	9	4	0.05	R145X-0, W-X453-1, RCB-1, RCB-2, RCB-3	
489+04	EXTEND 4' X 2' R.C. BOX CULVERT 10' RT.													4	2	10	5.00	511	2	4	0.05	R145X-0, W-X453-1, RCB-1, RCB-2, RCB-3	
TOTALS:		302	249	48	249	639	56	120	494	18	10	4	10	8	1		21.00	2474	11	8	0.10		

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

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

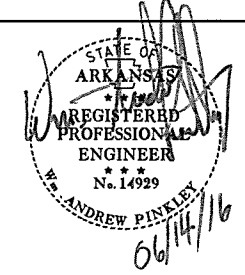
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QUANTITIES

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						CAOIOI	85	224

DRIVEWAYS & TURNOUTS

② QUANTITIES



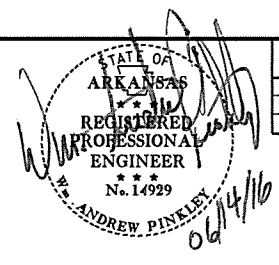
STATION	SIDE	LOCATION	WIDTH FEET	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7) TON	SIDE DRAINS LIN. FT.			STANDARD DRAWINGS	
				SQ. YD.	TON		18"	24"	30"		
497+23	LT.	HWY. 64	16	91.70	10.09	37.44	32			PCC-1, PCM-1, PCP-1, PCP-2	
497+45	RT.	HWY. 64	16	87.60	9.64	35.77	32			PCC-1, PCM-1, PCP-1, PCP-2	
519+64	RT.	HWY. 64	16	80.40	8.84	32.83		40		PCC-1, PCM-1, PCP-1, PCP-2	
521+25	LT.	HWY. 64	16	103.50	11.39	42.26		40		PCC-1, PCM-1, PCP-1, PCP-2	
523+81	LT.	HWY. 64 - OIL WELL CORNER RD.	24	158.60	17.45	64.76					
524+35	RT.	HWY. 64 - OIL WELL CORNER RD.	24	167.30	18.40	68.31					
543+43	LT.	HWY. 64	16	85.00	9.35	34.71	32			PCC-1, PCM-1, PCP-1, PCP-2	
549+01	LT.	HWY. 64	16	97.40	10.71	39.77	32			PCC-1, PCM-1, PCP-1, PCP-2	
557+83	LT.	HWY. 64	16	103.90	11.43	42.43		32		PCC-1, PCM-1, PCP-1, PCP-2	
557+90	RT.	HWY. 64	16	103.20	11.35	42.14		32		PCC-1, PCM-1, PCP-1, PCP-2	
564+35	RT.	HWY. 64	16	98.40	10.82	40.18	32			PCC-1, PCM-1, PCP-1, PCP-2	
576+78	RT.	HWY. 64	16	87.80	9.66	35.85	32			PCC-1, PCM-1, PCP-1, PCP-2	
579+35	LT.	HWY. 64	16	92.40	10.16	37.73		32		PCC-1, PCM-1, PCP-1, PCP-2	
583+61	LT.	HWY. 64 - ALPE RD.	20	162.70	17.90	66.44		80		PCC-1, PCM-1, PCP-1, PCP-2	
584+48	RT.	HWY. 64 - DRANE RD.	20	157.90	17.37	64.48	60			PCC-1, PCM-1, PCP-1, PCP-2	
598+92	LT.	HWY. 64	16	96.10	10.57	39.24		32		PCC-1, PCM-1, PCP-1, PCP-2	
599+58	RT.	HWY. 64	16	96.40	10.60	39.36		32		PCC-1, PCM-1, PCP-1, PCP-2	
613+38	LT.	HWY. 64	16	97.20	10.69	39.69	32			PCC-1, PCM-1, PCP-1, PCP-2	
614+01	RT.	HWY. 64	16	90.40	9.94	36.91		32		PCC-1, PCM-1, PCP-1, PCP-2	
628+66	LT.	HWY. 64	16	93.30	10.26	38.10	32			PCC-1, PCM-1, PCP-1, PCP-2	
661+94	LT.	HWY. 64	16	87.80	9.66	35.85		32		PCC-1, PCM-1, PCP-1, PCP-2	
662+97	RT.	HWY. 64	40	266.30	29.29	108.74		64		PCC-1, PCM-1, PCP-1, PCP-2	
687+04	RT.	HWY. 64	36	182.50	20.08	74.52		48		PCC-1, PCM-1, PCP-1, PCP-2	
687+96	RT.	HWY. 64	36	186.80	20.55	76.28		48		PCC-1, PCM-1, PCP-1, PCP-2	
689+14	LT.	HWY. 64	16	98.20	10.80	40.10		32		PCC-1, PCM-1, PCP-1, PCP-2	
697+00	LT.	HWY. 64	40	279.00	30.69	113.93	82			PCC-1, PCM-1, PCP-1, PCP-2	
698+17	LT.	HWY. 64	40	268.30	29.51	109.56	80			PCC-1, PCM-1, PCP-1, PCP-2	
699+39	LT.	HWY. 64	40	228.20	25.10	93.18	94			PCC-1, PCM-1, PCP-1, PCP-2	
700+42	LT.	HWY. 64	40	179.50	19.75	73.30	108			PCC-1, PCM-1, PCP-1, PCP-2	
730+55	LT.	HWY. 64 - PECAN GROVE DR.	20	159.30	17.52	65.05				PCC-1, PCM-1, PCP-1, PCP-2	
731+42	RT.	HWY. 64 - PECAN GROVE DR.	22	166.50	18.32	67.99				PCC-1, PCM-1, PCP-1, PCP-2	
749+92	LT.	HWY. 64	16	159.00	17.49	64.93		48		PCC-1, PCM-1, PCP-1, PCP-2	
764+48	LT.	HWY. 64	16	96.10	10.57	39.24		32		PCC-1, PCM-1, PCP-1, PCP-2	
764+48	RT.	HWY. 64	16	123.00	13.53	50.23		32		PCC-1, PCM-1, PCP-1, PCP-2	
772+94	RT.	HWY. 64	24	632.80	69.61	258.39				PCC-1, PCM-1, PCP-1, PCP-2	
101+04	LT.	CO. RD. 375	20	28.90	3.18	11.80		62		PCC-1, PCM-1, PCP-1, PCP-2	
100+59	LT.	HWY. 50	20	45.60	5.02	18.62				PCC-1, PCM-1, PCP-1, PCP-2	
101+35	LT.	OLD HWY. 64B	16	55.30	6.08	22.58		32		PCC-1, PCM-1, PCP-1, PCP-2	
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.				200.00					
TOTALS:				5394.30	593.37	2402.69	680	734	48		

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

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

06/13/2016 r:CAO101.dgn



DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		86	224
				JOB NO. CA0101				
				2 QUANTITIES				

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT			ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")																							
				TON / STATION	TON	AVG. WID. FEET	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 70-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 70-22 TON	TOTAL PG 70-22 TON														
MAIN LANES																																				
478+91.76	480+91.76	HWY. 64 (COLD MILL)	200.00																																	
775+44.56	777+44.56	HWY. 64 (COLD MILL)	200.00																																	
480+91.76	767+94.00	HWY. 64 (OVERLAY)	28702.24			63.25	201712.96	0.05	10085.65																											
767+94.00	769+69.00	HWY. 64 (OVERLAY)	175.00			69.13	1344.19	0.05	67.21					75.00	239185.33	220.00	26310.39	63.25	201712.96	220.00	22188.43	48498.82														
769+69.00	771+94.00	HWY. 64 (OVERLAY)	225.00			75.00	1875.00	0.05	93.75					81.00	1575.00	220.00	173.25	69.13	1344.19	220.00	147.86	321.11														
771+94.00	775+44.56	HWY. 64 (OVERLAY)	350.56			63.25	2463.66	0.05	123.18					87.00	2175.00	220.00	239.25	75.00	1875.00	220.00	206.25	445.50														
480+91.76	497+85.55	HWY. 64 - NOTCH & WIDEN (SUPERELEVATION)	1693.79	454.81	7703.53	VAR.	6885.07	0.05	344.25	VAR.	6885.07	495.00	1704.05																							
497+85.55	512+94.29	HWY. 64 - NOTCH & WIDEN	1508.74	309.63	4671.51	VAR.	6647.96	0.05	332.40	VAR.	6647.96	495.00	1645.37																							
512+94.29	531+75.23	HWY. 64 - NOTCH & WIDEN (SUPERELEVATION)	1880.94	455.19	8561.85	VAR.	8284.54	0.05	414.23	VAR.	8284.54	495.00	2050.42																							
531+75.23	552+74.70	HWY. 64 - NOTCH & WIDEN	2099.47	310.13	6511.09	VAR.	9245.82	0.05	462.29	VAR.	9245.82	495.00	2288.34																							
552+74.70	561+00.00	HWY. 64 - NOTCH & WIDEN	825.30	287.75	2374.80	VAR.	3017.83	0.05	150.89	VAR.	3017.83	495.00	746.91																							
561+00.00	618+25.00	HWY. 64 - NOTCH & WIDEN	5725.00	266.75	15271.44	VAR.	17915.29	0.05	895.76	VAR.	17915.29	495.00	4434.03																							
618+25.00	622+39.24	HWY. 64 - NOTCH & WIDEN	414.24	288.75	1196.12	VAR.	1563.70	0.05	78.19	VAR.	1563.70	495.00	387.02																							
622+39.24	629+00.00	HWY. 64 - NOTCH & WIDEN	660.76	310.13	2049.21	VAR.	2933.58	0.05	146.68	VAR.	2933.58	495.00	726.06																							
629+00.00	669+00.00	HWY. 64 - NOTCH & WIDEN	4000.00	310.13	12405.20	VAR.	17898.68	0.05	894.93	VAR.	17898.68	495.00	4429.92																							
669+00.00	688+00.00	HWY. 64 - NOTCH & WIDEN	1900.00	310.13	5892.47	VAR.	8499.04	0.05	424.95	VAR.	8499.04	495.00	2103.51																							
688+00.00	710+56.99	HWY. 64 - NOTCH & WIDEN	2256.99	310.13	6999.60	VAR.	9426.24	0.05	471.31	VAR.	9426.24	495.00	2332.99																							
710+56.99	738+84.22	HWY. 64 - NOTCH & WIDEN	2827.23	312.50	8835.09	VAR.	12735.20	0.05	636.76	VAR.	12735.20	495.00	3151.96																							
738+84.22	763+48.48	HWY. 64 - NOTCH & WIDEN (SUPERELEVATION)	2464.26	393.22	9689.96	VAR.	10505.23	0.05	525.26	VAR.	10505.23	495.00	2600.04																							
763+48.48	767+94.00	HWY. 64 - NOTCH & WIDEN	445.52	203.63	907.21	VAR.	625.02	0.05	31.25	VAR.	625.02	495.00	154.69																							
767+94.00	771+94.00	HWY. 64 - NOTCH & WIDEN WITH RIGHT TURN LANE	400.00	204.13	816.52	VAR.	699.52	0.05	34.98	VAR.	699.52	495.00	173.13																							
771+94.00	775+44.56	HWY. 64 - NOTCH & WIDEN	350.56	194.88	683.17	VAR.	343.81	0.05	17.19	VAR.	343.81	495.00	85.09																							
COUNTY ROAD 375																																				
103+00.00	103+50.00	COLD MILL @ BOP	50.00																																	
100+29.50	103+00.00	COUNTY ROAD 375	270.50	223.38	604.24	70.93	2131.84	0.05	106.59	VAR.	932.90	495.00	230.89	VAR.	904.60	220.00	99.51	VAR.	1199.00	220.00	131.89	231.40														
HWY. 50																																				
99+50.00	100+00.00	COLD MILL @ BOP	50.00																																	
100+00.00	102+26.06	HWY. 50 (LT. OF HWY. 64)	226.06	251.71	569.02	90.72	2278.68	0.05	113.93	VAR.	344.00	495.00	85.14	VAR.	1517.50	220.00	166.93	VAR.	1143.50	220.00	125.79	292.72														
102+26.06	106+14.39	HWY. 50 (RT. OF HWY. 64)	327.25	209.21	684.64	76.93	2797.26	0.05	139.86	VAR.	818.10	495.00	202.48	VAR.	2321.10	220.00	255.32	VAR.	1395.40	220.00	153.49	408.81														
106+14.39	106+64.39	COLD MILL @ EOP	50.00																																	
OLD HWY. 64B																																				
100+00.00	100+50.00	COLD MILL @ BOP	50.00																																	
100+50.00	103+15.06	OLD HWY. 64B (RT. OF HWY. 64)	265.06	204.56	542.21	66.69	1964.09	0.05	98.20	VAR.	365.00	495.00	90.34	VAR.	1306.00	220.00	143.66	VAR.	980.70	220.00	107.88	251.54														
103+15.06	107+50.00	OLD HWY. 64B (LT. OF HWY. 64)	365.95	207.06	757.74	50.48	2052.57	0.05	102.63	VAR.	777.00	495.00	192.31	VAR.	1515.90	220.00	166.75	VAR.	1022.20	220.00	112.44	279.19														
107+50.00	108+00.00	COLD MILL @ EOP	50.00																																	
ADDITIONAL FOR LEVELING																																				
ENTIRE	PROJECT	HWY. 64				VAR.	8759.52	0.17	1489.12										VAR.	132631.58	VAR.	7294.74	7294.74													
ENTIRE	PROJECT	HWY. 64				VAR.	8759.52	0.05	437.98																											
ENTIRE	PROJECT	HWY. 64				VAR.	8759.52	0.05	437.98																											
ENTIRE	PROJECT	HWY. 50				VAR.	780.00	0.17	132.60										VAR.	412.98	VAR.	22.71	22.71													
ENTIRE	PROJECT	OLD HWY. 64B				VAR.	326.06	0.17	55.43										VAR.	759.46	VAR.	41.77	41.77													
ADDITIONAL FOR TRAFFIC CONTROL																																				
ENTIRE	PROJECT	TEMPORARY WIDENING	5136.40			VAR.	2085.00	0.05	104.25	VAR.	2085.00	495.00	516.04	VAR.	2085.00	220.00	229.35	VAR.	2085.00	220.00	229.35	458.70														
515+40.00	537+63.00	HWY. 64 - UPGRADED SHOULDER	2223.00			4.00	988.00	0.05	49.40	4.00	988.00	495.00	244.53	4.00	988.00	220.00	108.68	63.25	15622.75	220.00	1718.50	1827.18														
657+97.00	664+32.00	HWY. 64 - UPGRADED SHOULDER	635.00			4.00	282.22	0.05	14.11	4.00	282.22	495.00	69.85	4.00	282.22	220.00	31.04	63.25	4462.64	220.00	490.89	521.93														
684+63.00	702+35.00	HWY. 64 - UPGRADED SHOULDER	1772.00			4.00	787.56	0.05	39.38	4.00	787.56	495.00	194.92	4.00	787.56	220.00	86.63	63.25	12453.22	220.00	1369.85	1456.48														
741+32.00	755+86.00	HWY. 64 - UPGRADED SHOULDER	1454.00			4.00	646.22	0.05	32.31	4.00	646.22	495.00	159.94	4.00	646.22	220.00	71.08	63.25	10218.39	220.00	1124.02	1195.10														
766+67.00	769+69.00	HWY. 64 - UPGRADED SHOULDER	302.00			4.00	134.22	0.05	6.71	4.00	134.22	495.00	33.22	4.00	134.22	220.00	14.76	63.25	2122.39	220.00	233.46	248.22														
773+89.00	775+45.00	HWY. 64 - UPGRADED SHOULDER	156.00			4.00	69.33	0.05	3.47	4.00	69.33	495.00	17.16	4.00	69.33	220.00	7.63	63.25	1096.33	220.00	120.60	128.23														
TOTALS:						97726.62			368223.95				19595.06							125456.08			31050.35			258414.31			28425.58			398468.03			36472.26	64897.84

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
 ACHM BINDER COURSE (1").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22

QUANTITIES

06/13/2016 r-CA0101.dgn

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	57	STATION
201	GRUBBING	57	STATION
202	REMOVAL AND DISPOSAL OF CURB	1145	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE	701	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	22	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	2639	SQ. YD.
202	REMOVAL AND DISPOSAL OF DROP INLETS	4	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	49	EACH
210	UNCLASSIFIED EXCAVATION	174333	CU. YD.
210	COMPACTED EMBANKMENT	147330	CU. YD.
SP & 210	SOIL STABILIZATION	300	TON
302	SELECTED MATERIAL (CLASS SM-1)	110413	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	100129	TON
SS & 401	TACK COAT	19875	GAL.
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	29715	TON
SP, SS & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	1335	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	62151	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	30	TON
SP, SS & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")	3310	TON
412	COLD MILLING ASPHALT PAVEMENT	2189	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	140	TON
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	100	TON
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	1502	SQ. FT.
SS & 604	TRAFFIC DRUMS	1089	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	2069	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	1777	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	373626	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	3781	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	218413	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	102676	LIN. FT.
604	ADVANCE WARNING ARROW PANEL	152	DAY
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN	87	WEEK
SS & 604	VERTICAL PANELS	212	EACH
605	CONCRETE DITCH PAVING (TYPE B)	177	SQ. YD.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	302	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	639	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	249	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	56	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	48	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	120	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	249	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	494	LIN. FT.
SP, SS & 606	18" SIDE DRAIN	680	LIN. FT.
SP, SS & 606	24" SIDE DRAIN	734	LIN. FT.
SP, SS & 606	30" SIDE DRAIN	48	LIN. FT.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	18	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	10	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	4	EACH
606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	10	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	8	EACH
606	SELECTED PIPE BEDDING	320	CU. YD.
609	DROP INLETS (TYPE E)	1	EACH
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	241	TON
620	LIME	132	TON
SS & 620	SEEDING	66.00	ACRE
620	MULCH COVER	132.00	ACRE
621	WATER	8080.7	M.GAL.
621	TEMPORARY SEEDING	66.00	ACRE
621	SILT FENCE	2190	LIN. FT.
621	SAND BAG DITCH CHECKS	176	BAG
621	DROP INLET SILT FENCE	20	LIN. FT.
621	SEDIMENT BASIN	2000	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	2000	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	2389	CU. YD.
621	ROCK DITCH CHECKS	327	CU. YD.
621	WATTLE (20')	1710	LIN. FT.
623	SECOND SEEDING APPLICATION	66.00	ACRE
624	SOLID SODDING	185	SQ. YD.
632	CONCRETE ISLAND	117	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	1	EACH
637	MAILBOX SUPPORTS (SINGLE)	1	EACH
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	55946	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	243	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	80441	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	694	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	80122	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (12")	187	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	2	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	4	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	1671	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER	14	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	14	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	11	CU. YD.
802	CLASS 5 CONCRETE-ROADWAY	21.00	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	2474	POUND
816	FILTER BLANKET	190	SQ. YD.
816	DUMPED RIPRAP	95	CU. YD.
SP	CULVERT CLEANOUT	13	EACH

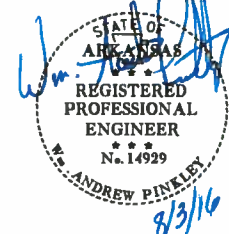
SUMMARY OF QUANTITIES AND REVISIONS

REVISIONS

DATE	REVISION	SHEET NUMBER
8/3/2016	REVISED CLEARING & GRUBBING QUANTITIES.	81 & 87

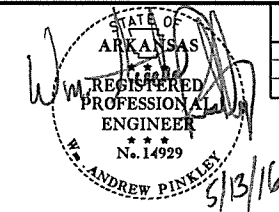
DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8/3/2016				6	ARK.			
						CAO101	87	224

2 SUMMARY OF QUANTITIES AND REVISIONS



SURVEY CONTROL COORDINATES

Project Name: ca0101
 Date: 12/16/2013
 Coordinate System: Arkansas State Plane Coordinates
 Based on AHTD GPS PTS: 180022-180022a,180023-180023a, 180024-180024a, 180025-180025a, 190005a-180004, 180021
 Protected to Ground Coordinates
 U.S. Survey Foot



DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		88	224
(2) SURVEY CONTROL DETAILS								

COORDINATES LISTED BELOW ARE GROUND (Localized) COORDINATES!!!!

Point No.	Northing	SY	Easting	SX	Elevation	SZ	Feature Code	Point Description
55	338059.9759	0.010	1797068.0931	0.009	217.16	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:55
56	337602.2590	0.010	1797889.7856	0.008	215.32	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:56
57	337557.5620	0.010	1798681.2733	0.009	216.24	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:57
58	337556.1791	0.010	1799578.7406	0.009	216.55	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:58
59	337554.8060	0.010	1800505.6026	0.008	216.25	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:59
60	337533.6729	0.010	1801350.1283	0.008	216.09	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:60
61	337132.7355	0.010	1802158.2291	0.008	216.80	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:61
62	336793.6323	0.009	1802827.3940	0.008	217.57	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:62
63	336435.9681	0.009	1803528.7367	0.007	217.58	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:63
64	336070.4919	0.010	1804247.5599	0.008	217.63	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:64
65	335783.7447	0.011	1804808.3326	0.008	217.47	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:65
66	335441.5703	0.011	1805483.0093	0.009	217.97	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:66
67	335066.0200	0.011	1806224.8842	0.009	219.38	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:67
68	334717.4046	0.012	1806909.5055	0.009	220.30	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:68
69	334418.4477	0.010	1807498.1887	0.010	221.02	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:69
70	334064.3647	0.010	1808194.9636	0.009	221.69	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:70
71	333698.0461	0.010	1808916.6419	0.009	222.13	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:71
72	333325.5419	0.010	1809646.0861	0.009	222.90	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:72
73	332953.9840	0.009	1810376.6458	0.008	223.27	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:73
74	332599.1172	0.010	1811068.7808	0.009	223.38	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:74
75	332248.9287	0.009	1811764.1250	0.008	224.21	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:75
76	331941.9249	0.009	1812365.2268	0.007	223.98	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:76
77	331611.5403	0.010	1813019.4900	0.007	224.60	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:77
78	331251.9114	0.010	1813722.8244	0.008	224.10	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:78
79	330878.8812	0.010	1814457.8701	0.007	225.14	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:79
80	330439.7660	0.011	1815323.6095	0.008	225.50	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:80
81	330058.3033	0.012	1816072.2634	0.008	225.79	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:81
82	329717.4117	0.012	1816736.2656	0.008	226.69	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:82
83	329340.0625	0.011	1817484.5041	0.008	228.37	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:83
84	328898.9045	0.012	1818353.6514	0.009	228.35	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:84
85	328493.8549	0.012	1819150.0685	0.009	226.23	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:85
86	328225.1850	0.012	1819678.0327	0.009	226.16	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:86
87	327905.2717	0.012	1820308.5370	0.009	226.30	0.010	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:87
88	327577.6077	0.012	1820950.4811	0.009	226.26	0.009	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:88
89	327189.9401	0.012	1821590.3543	0.009	226.19	0.009	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:89
90	326636.2449	0.012	1822124.1300	0.009	227.66	0.009	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:90
91	325971.9766	0.012	1822504.7570	0.009	227.51	0.009	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:91
92	325286.2620	0.012	1822895.9807	0.009	226.47	0.009	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:92
107	338921.0834	0.015	1796391.2880	0.015	215.93	0.003	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:107
108	337845.0675	0.015	1797366.8864	0.015	217.35	0.003	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:108
109	337506.6235	0.014	1799092.7175	0.014	216.42	0.003	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:109
110	337502.0323	0.014	1800097.6897	0.014	216.63	0.003	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:110
111	337332.6115	0.013	1801753.3840	0.013	216.79	0.002	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:111
112	330651.4770	0.015	1814901.4973	0.015	225.40	0.003	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:112
113	329111.4221	0.016	1817938.7581	0.016	228.62	0.003	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:113
114	328684.7184	0.016	1818777.3734	0.016	227.62	0.003	CTL	5/8" X 24" Rebar with 2" Aluminum cap Stamped PN:114
122	337349.2923	0.000	1801552.9386	0.000	215.17	0.000	GPS	5/8" X 48" Rebar with 2.5" Aluminum cap Stamped PN: 180023
900	325134.0136	30.000	1822935.1391	30.000	223.96	0.009	TBM	
901	327145.7888	0.017	1821640.8648	0.014	224.24	0.009	TBM	
902	328360.1884	0.015	1819392.6357	0.011	223.29	0.010	TBM	
903	329669.0504	0.014	1816986.1387	0.010	226.52	0.010	TBM	
904	331253.6040	0.010	1813846.7005	0.007	222.91	0.010	TBM	
905	331947.0104	0.010	1812341.2980	0.008	222.70	0.010	TBM	

906	334109.4137	0.016	1808275.4293	0.014	219.22	0.010	TBM
907	335740.3870	0.016	1804853.6493	0.011	215.82	0.010	TBM
908	336333.3251	0.013	1803875.4444	0.010	215.19	0.010	TBM
909	336949.6676	0.011	1802486.0202	0.009	213.43	0.010	TBM
910	337541.2584	0.010	1801429.0381	0.008	215.72	0.010	TBM
911	337616.5667	0.010	1798094.0609	0.009	212.26	0.010	TBM

*Standard Primary Control Monument - Rebar and Cap - Standard - 5/8" x 24" Rebar with Aluminum Cap stamped: "(include all common information here)" other markings indicated in the point description of the individual point. AHTD monuments will be stamped "Arkansas Hwy & Trans Dept." with "PN: ####" & "Job #####". Monuments that are set by Consultants will be stamped "Arkansas Hwy & Trans Dept." with "PN:####", "Job#####", & "PS#####". The consultant Professional Land Surveyor in charge will stamp his/her PS license number on the cap.

**Standard GPS Control Point Monument - 5/8" x 48" Rebar with 2.5" Aluminum Camp stamped: "(Include all common information here)" plus other markings indicated in the point description of the individual point. These monuments will be stamped "Ark. State Hwy Trans. Dept.", "GPS Survey, & "Point No. #####".

SX,SY, SZ - Represents the standard error estimate of the coordinate values of each point at the 67% confidential level (one sigma) based on the least squares analysis of the control network. See the AASHTO SDMS Technical Data Guide data tag definition for SX, SY, and SZ: for additional information. These values shall be used when control points are added and the entire network is reprocessed using least square analysis. A value of 0.001 is defined as fixed (no adjustment) in the least square analysis process. A value of 30 is defined as location by handheld GPS device or scaled USGS Quadmap.

Positional Accuracy: Horizontal - GPS (1.0 cm±1PPM) PN: 115-128
 Horizontal - Primary (2.0 cm±20PPM) PN: 1-114
 Horizontal - Secondary (3 cm± 50 PPM): PN: N/A
 Vertical - NGS 1st Order (±4mm x dist in km) PN: 997,999
 Vertical - NGS 2nd Order (±6mm x dist in km) PN: N/A
 Vertical - NGS 3rd Order (±8mm x dist in km) PN: 900-929,998

Horizontal Datum: NAD 1983 (1997) State Plane Zone: 0301 - North Zone

The adjustment year is based on metadata in the SDMS Control file

A project CAF of: 0.999950228 has been used to compute the above coordinates.

The project CAF shall have a minimum precision of 9 digits right of the decimal.

The CAF is intended for use within the project limits only.

Grid Distance = Ground Distance X CAF

If Coordinates are listed as Ground:

To compute Grid Coordinates, multiply the Ground Coordinates by CAF about the origin of X=0 & Y=0

If Coordinates are listed as Grid:

To compute Ground Coordinates, divide the Grid Coordinates by CAF about the origin of X=0 & Y=0

Vertical Datum: NAVD 1988 based NGS BM D314, EARLE, C 5

A project Elevation Factor of: 0.999989664 has been computed and incorporated in the above CAF.

This is based on the average elevation of the project: 216.09 Feet

3-Wire Leveling techniques have been used to establish elevations on

Points: 1-128,900-929 From NGS BM: D 314, EARLE, C5

Basis of Bearing: Grid Bearings based on AHTD GPS poi 180022-180022a,180023-180023a,180024-180024a,180025-180025a,190005a-180004,180021

Convergence Angle is: 00 56 30 R at PN: 52

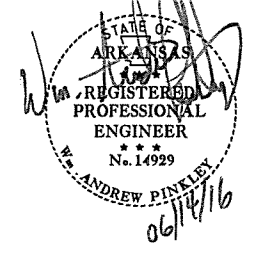
LT: 35-15-22.6 ILG: 90-22-54.2 W

Grid Azimuth = Astronomical Azimuth - Convergence Angle

Note: Information in Italics is for clarification only. It is not to be part of the actual Control Detail Sheets.

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAO101		89	224

2 SURVEY CONTROL DETAILS

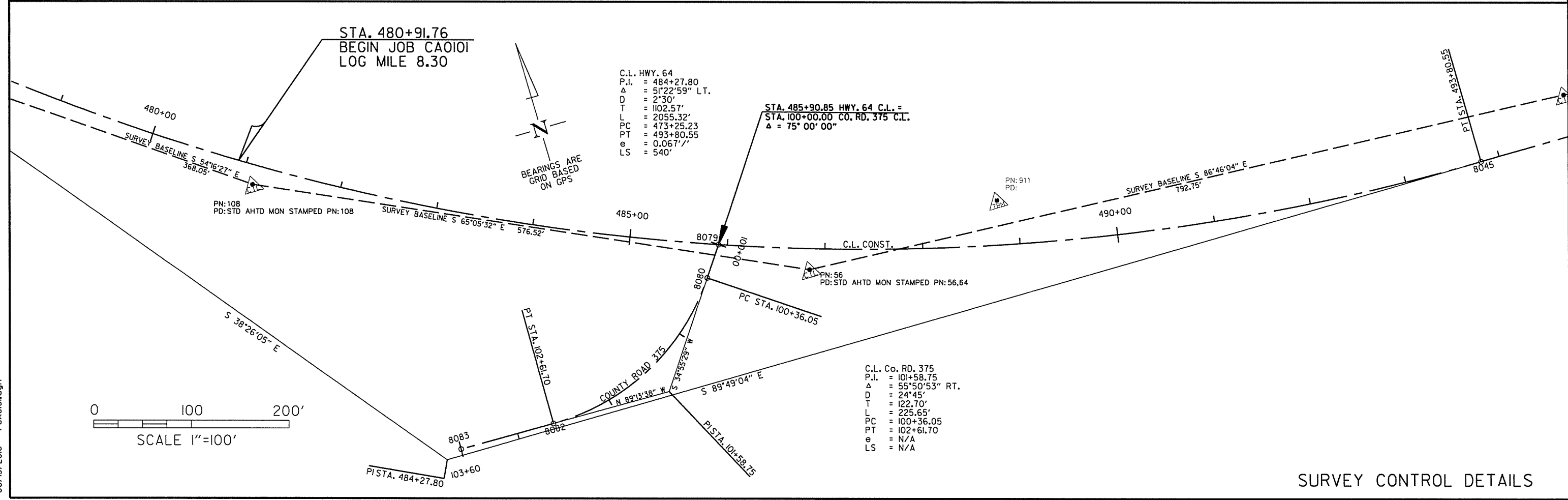
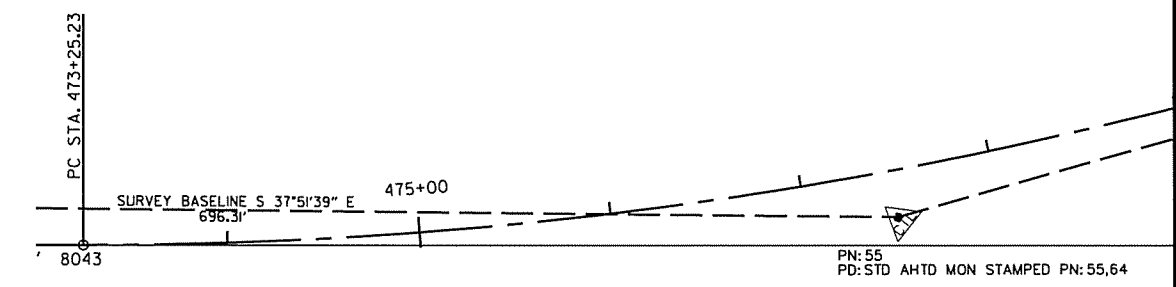


C.L. CONST. HWY. 64				
POINT TYPE	POINT NUMBER	STATION	NORTHING	EASTING
PC	8043	473+25.23	338399.9178	1796798.1789
PI		484+27.80	337536.2612	1797483.5605
PT	8045	493+80.55	337532.7568	1798586.1204
PC	8046	516+99.29	337525.3867	1800904.8449
PI		522+44.72	337523.6531	1801450.2734
PT	8048	527+70.23	337276.4089	1801936.4479
PC	8049	710+07.77	329009.3221	1818192.6254
PI		710+56.99	328987.0136	1818236.4924
PT	8051	711+06.20	328965.0826	1818280.5493
PC	8052	724+05.51	328386.0737	1819443.7166
PI		724+54.70	328364.1524	1819487.7540
PT	8054	725+03.90	328341.8539	1819531.6016
PC	8055	742+89.22	327532.5719	1821122.9670
PI		751+40.13	327146.8578	1821881.4320
PT	8057	759+43.48	326409.6481	1822306.3630
POE	8058	776+73.02	324911.2092	1823170.0699

COUNTY ROAD 375				
POINT TYPE	POINT NUMBER	STATION	NORTHING	EASTING
POB	8079	100+00.00	337669.9302	1797812.3864
PC	8080	100+36.05	337640.3717	1797791.7472
PI		101+58.75	337539.7714	1797721.5031
PT	8082	102+61.70	337541.4261	1797598.8170
POE	8083	103+60.20	337542.7544	1797500.3292

C.L. CONST. HWY. 50				
POINT TYPE	POINT NUMBER	STATION	NORTHING	EASTING
POB	8084	100+00.00	332303.6944	1812237.8477
PC	8085	101+19.79	332183.9036	1812238.0598
PI		101+44.24	332159.4554	1812238.1031
PT	8087	101+68.51	332135.5375	1812233.0385
PC	8088	103+27.69	331979.8083	1812200.0633
PI		103+92.55	331916.3561	1812186.6274
PT	8090	104+54.16	331855.1596	1812208.1143
PC	8091	105+04.20	331807.9487	1812224.6906
PI		105+44.41	331770.0102	1812238.0113
PT	8093	105+83.82	331729.8019	1812237.7587
POE	8094	106+61.77	331651.8595	1812237.2691

OLD HWY. 64B				
POINT TYPE	POINT NUMBER	STATION	NORTHING	EASTING
POB	8095	100+00.00	329764.5400	1816352.7400
PC	8096	101+20.64	329764.5300	1816473.3800
PI		101+43.35	329613.7500	1816473.3600
PT	8098	101+65.73	329757.8300	1816517.8000
PC	8099	102+03.66	329746.6500	1816554.0500
PI		102+74.27	329890.7300	1816598.4900
PT	8101	103+35.73	329764.3400	1816680.7100
PC	8102	103+87.49	329792.5700	1816724.1000
PI		104+54.97	329666.1800	1816806.3100
PT	8104	105+14.38	329811.7000	1816845.7800
PC	8105	106+70.29	329770.8900	1816996.2500
PI		106+90.29	329916.4100	1817035.7200
PT	8107	107+10.06	329765.6300	1817035.5500
POE	8108	108+00.00	329765.5300	1817125.5000

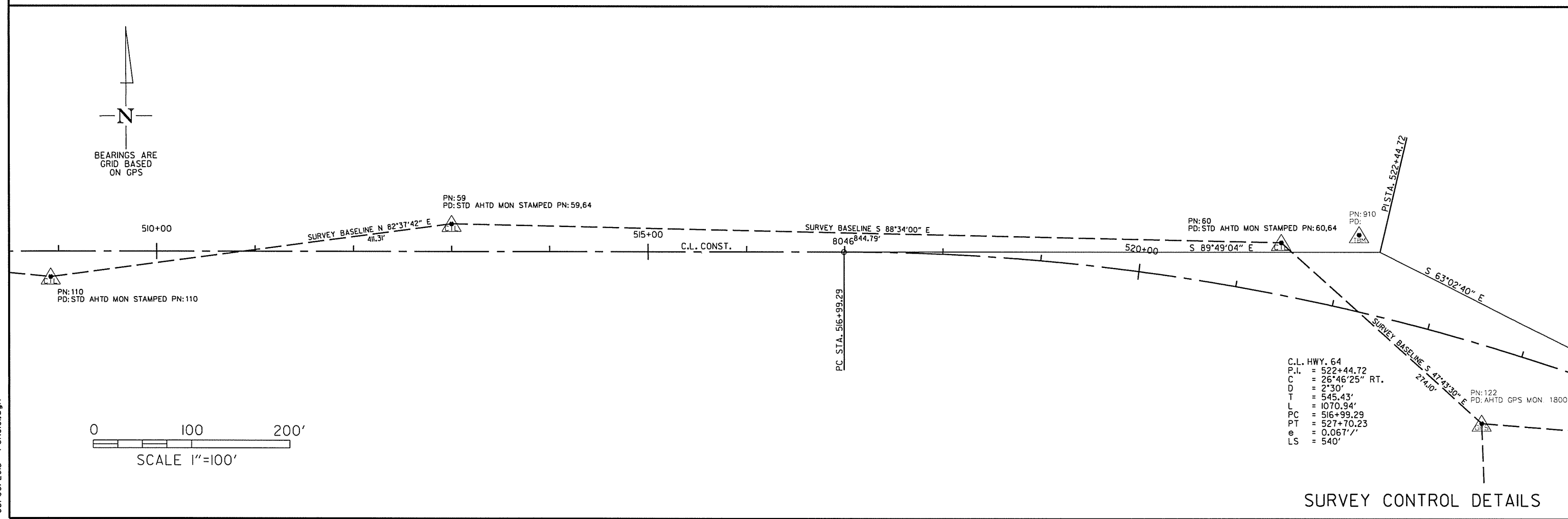
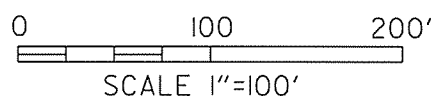
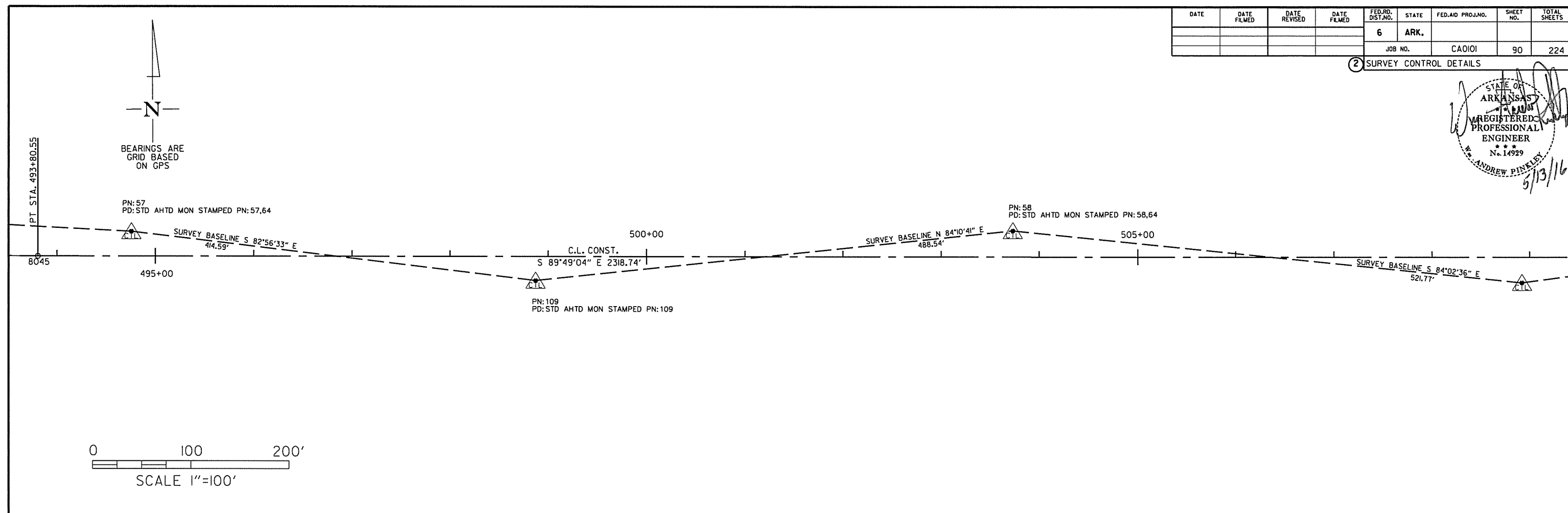
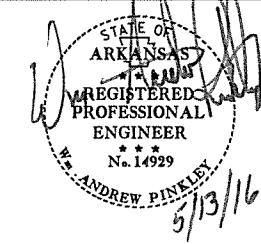


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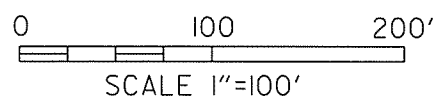
SURVEY CONTROL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							90	224

2 SURVEY CONTROL DETAILS



C.L. HWY. 64
P.I. = 522+44.72
C = 26°46'25" RT.
D = 2°30'
T = 545.43'
L = 1070.94'
PC = 516+99.29
PT = 527+70.23
e = 0.067'/'
LS = 540'

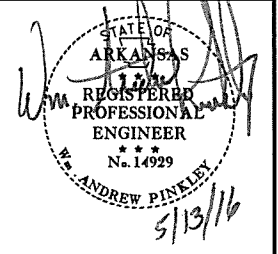


SURVEY CONTROL DETAILS

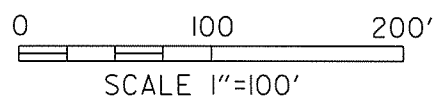
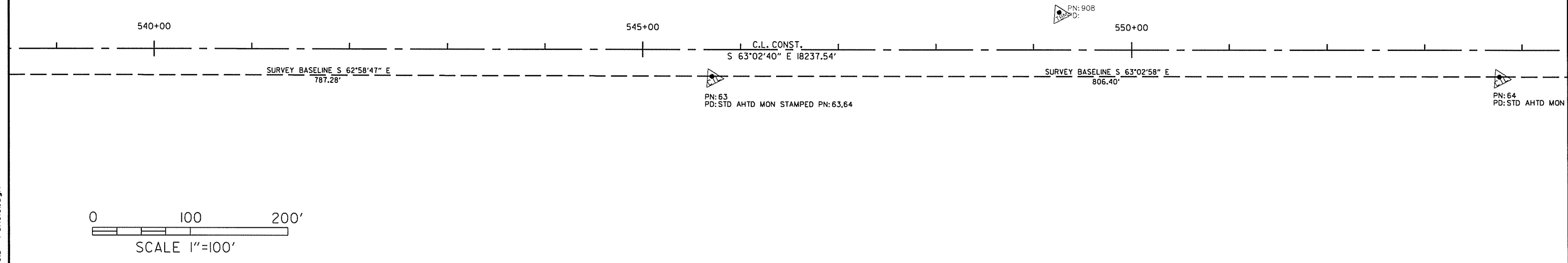
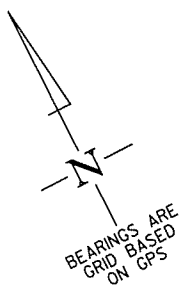
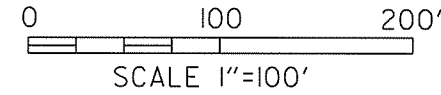
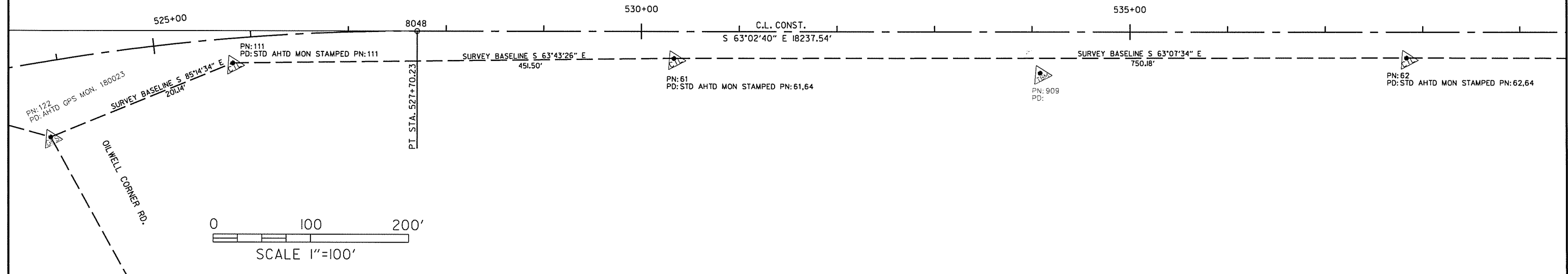
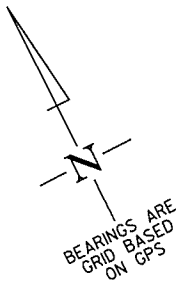
05/06/2015 rCA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	91	224	

2 SURVEY CONTROL DETAILS



C.L. HWY. 64
P.I. = 522+44.72
C = 26'46'25" RT.
D = 2'30'
T = 545.43'
L = 1070.94'
PC = 516+99.29
PT = 527+70.23
e = 0.067'/'
LS = 540'

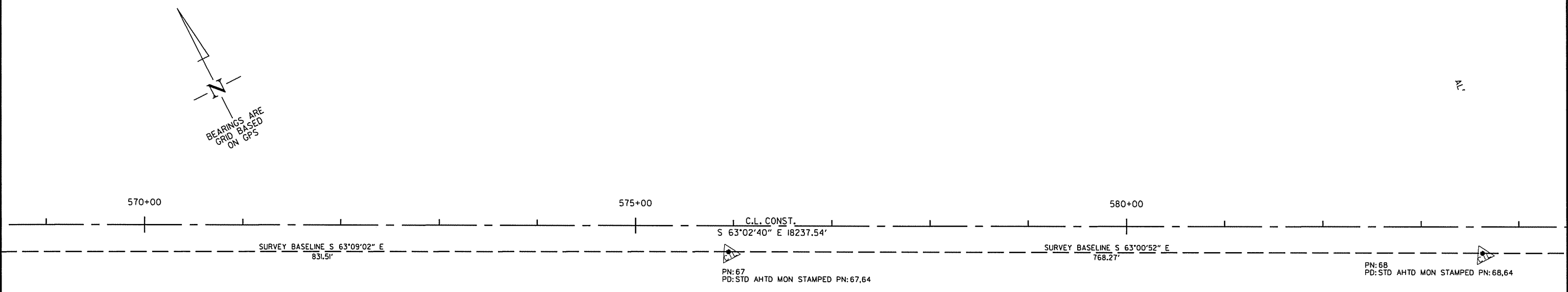
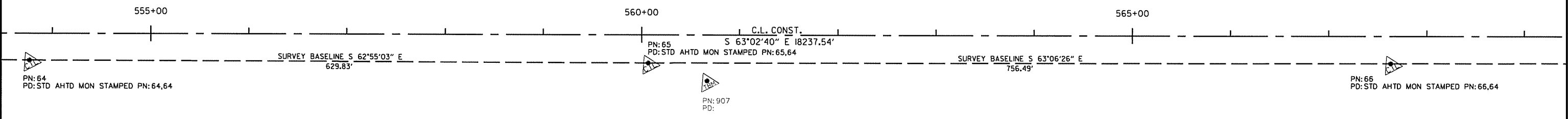
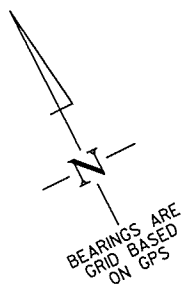
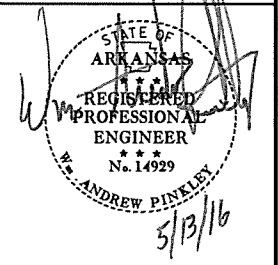


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SURVEY CONTROL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	92	224	

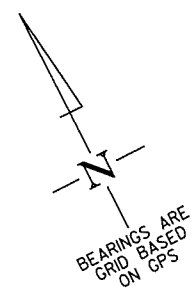
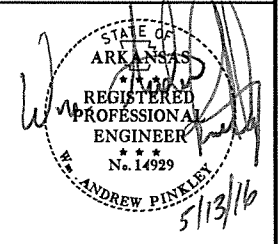
② SURVEY CONTROL DETAILS



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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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2 SURVEY CONTROL DETAILS



585+00

590+00

595+00

PN: 906
PD: STD AHTD MON STAMPED PN: 906,64

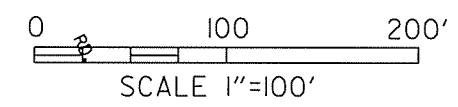
C.L. CONST.
S 63°02'40" E 18237.54'

SURVEY BASELINE S 63°04'36" E
660.24'

SURVEY BASELINE S 63°03'41" E
781.58'

PN: 69
PD: STD AHTD MON STAMPED PN: 69,64

PN: 70
PD: STD AHTD MON STAMPED PN: 70,64



600+00

605+00

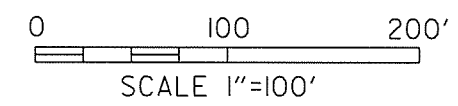
610+00

C.L. CONST.
S 63°02'40" E 18237.54'

SURVEY BASELINE S 63°05'17" E
809.33'

SURVEY BASELINE S 62°56'53" E
819.05'

PN: 71
PD: STD AHTD MON STAMPED PN: 71,64

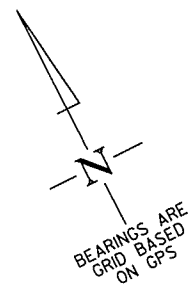
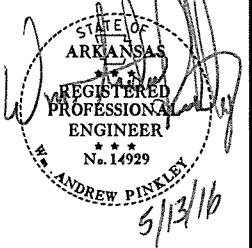


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SURVEY CONTROL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							94	224

2 SURVEY CONTROL DETAILS



615+00

620+00

625+00

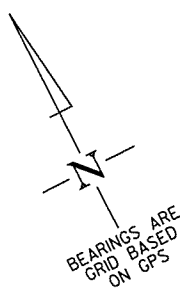
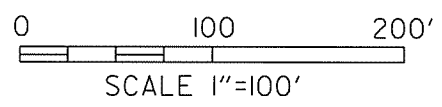
C.L. CONST.
S 63°02'40" E 18237.54'

PN: 72
PD: STD AHTD MON STAMPED PN: 72,64

SURVEY BASELINE S 63°02'33" E
819.62'

PN: 73
PD: STD AHTD MON STAMPED PN: 73,64

SURVEY BASELINE S 62°51'19" E
777.81'



630+00

635+00

640+00

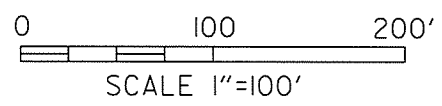
C.L. CONST.
S 63°02'40" E 18237.54'

SURVEY BASELINE S 62°51'19" E
777.81'

PN: 74
PD: STD AHTD MON STAMPED PN: 74,64

SURVEY BASELINE S 63°16'10" E
778.55'

PN: 75
PD: STD AHTD MON STAMPED PN: 75,64

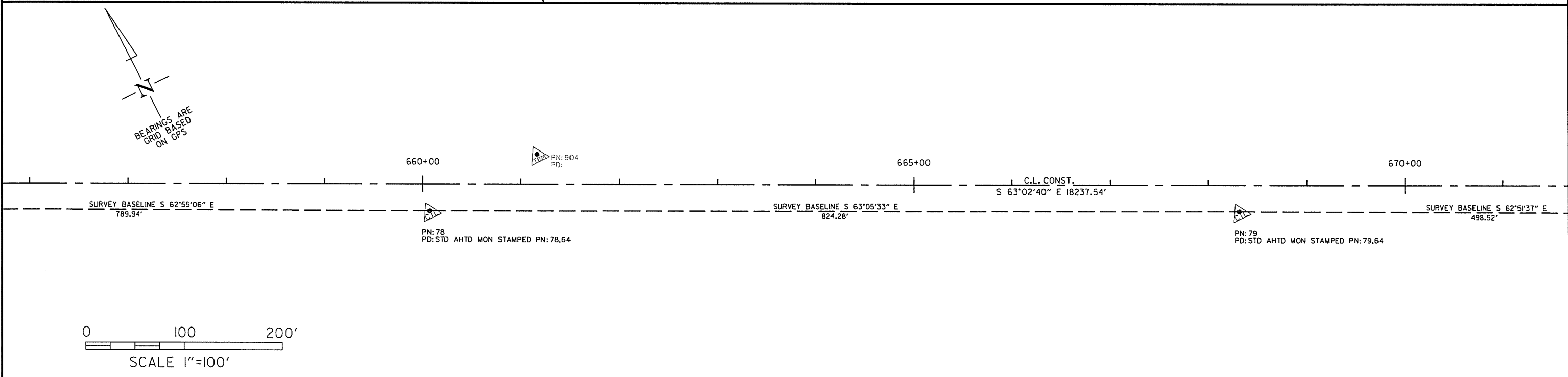
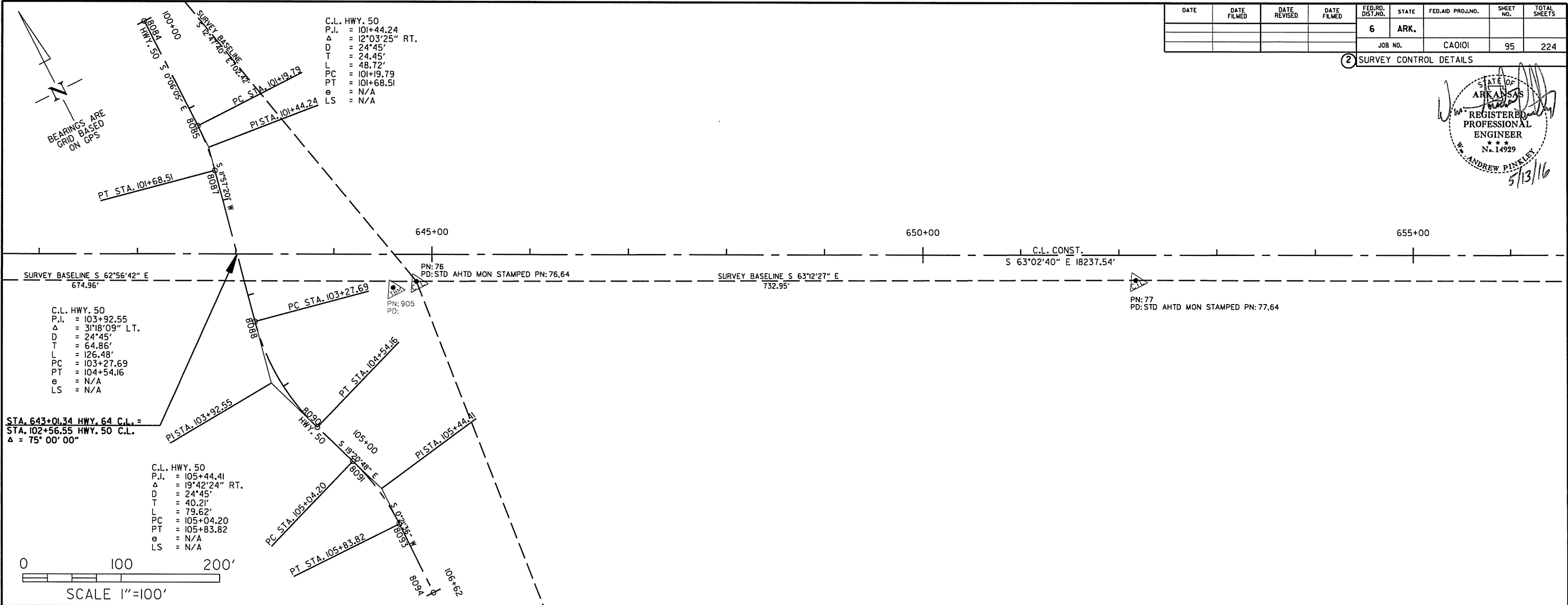
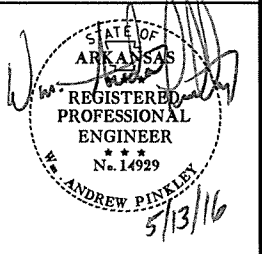


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SURVEY CONTROL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							95	224

2 SURVEY CONTROL DETAILS

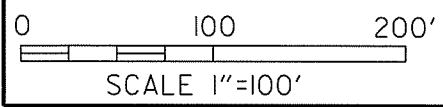
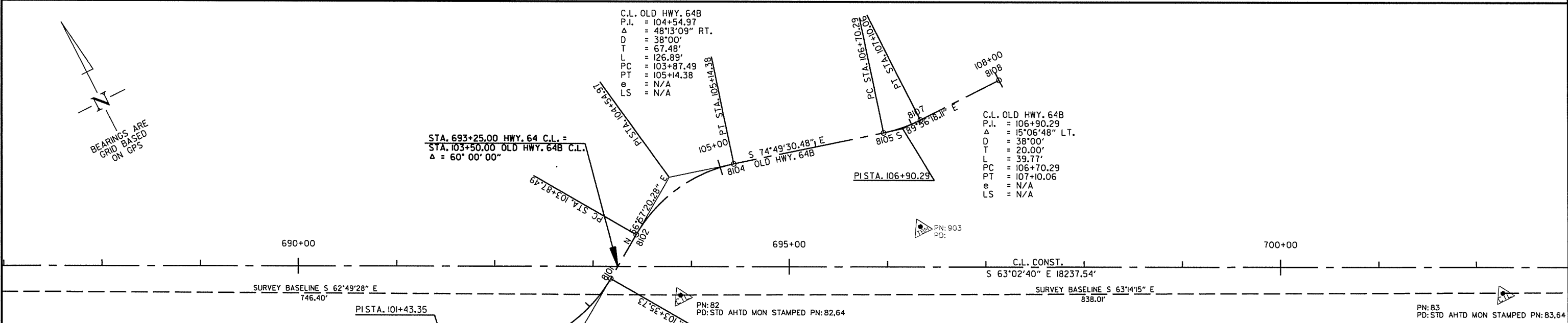
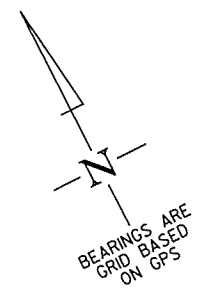
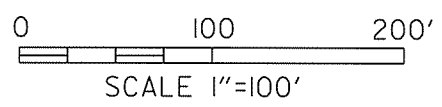
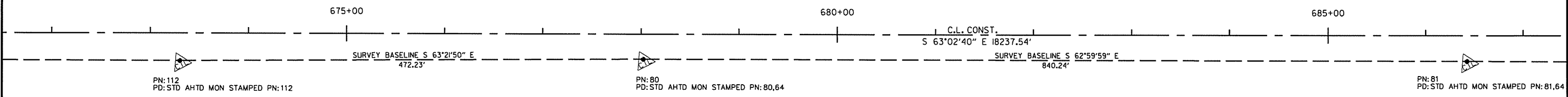
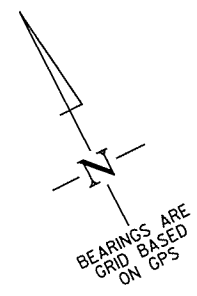
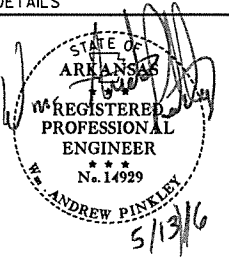


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SURVEY CONTROL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	96	224	

② SURVEY CONTROL DETAILS

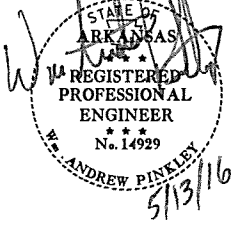


SURVEY CONTROL DETAILS

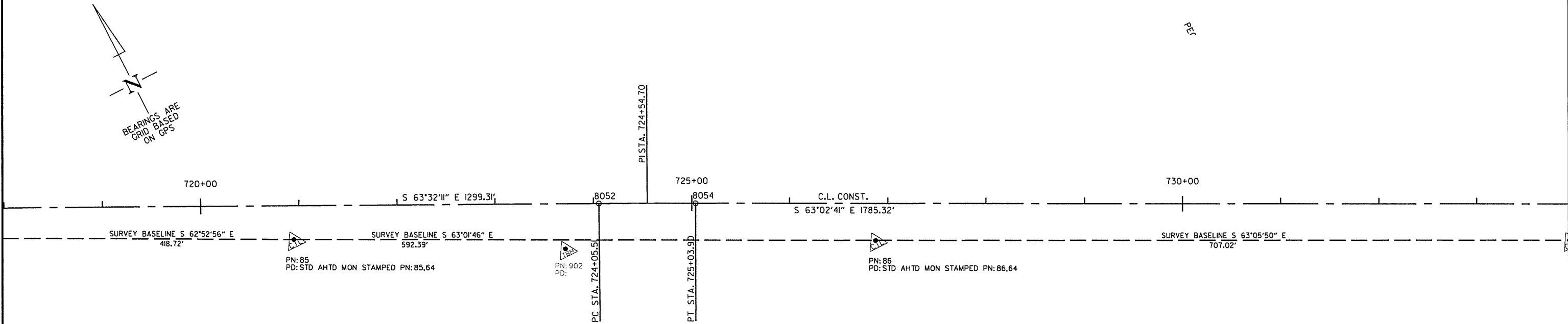
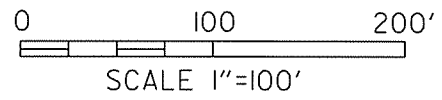
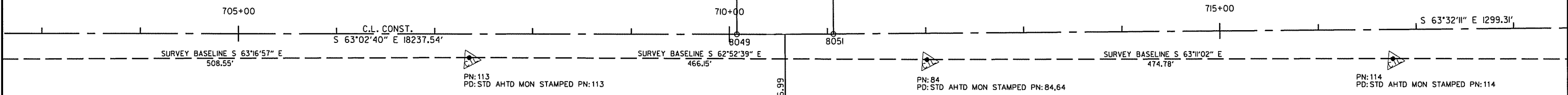
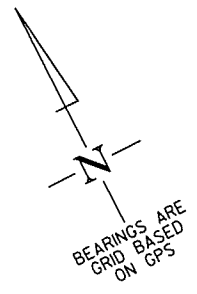
05/06/2015 rCAOIOI.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CAOIOI							97	224

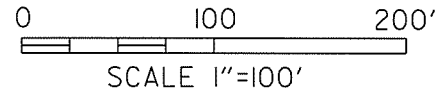
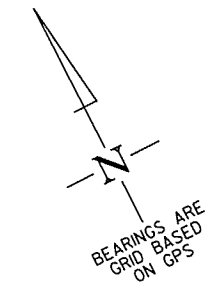
2 SURVEY CONTROL DETAILS



C.L. HWY. 64
P.I. = 710+56.99
Δ = 0°29'32" LT.
D = 0°30'
T = 49.21'
L = 98.43'
PC = 710+07.77
PT = 711+06.20
e = N.C
LS = N/A



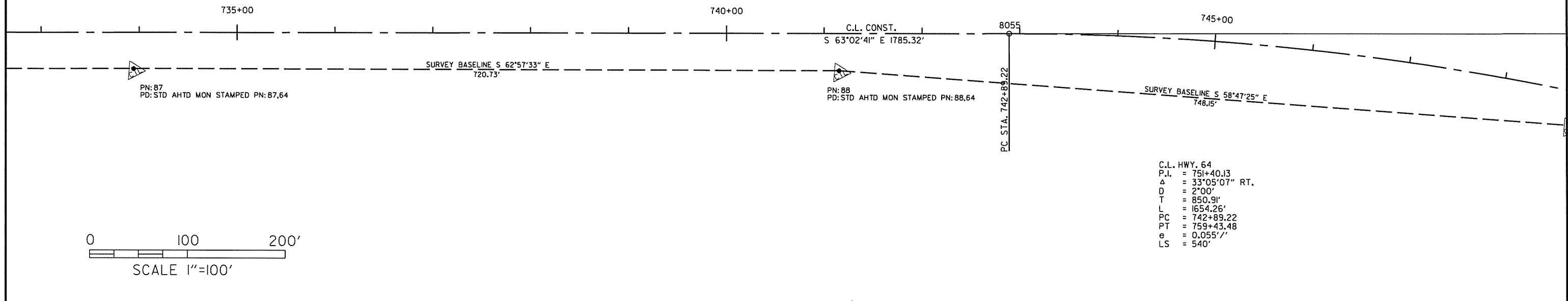
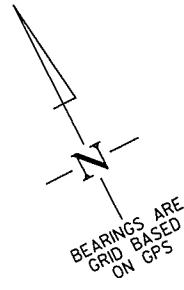
C.L. HWY. 64
P.I. = 724+54.70
CC = 0°29'31" RT.
D = 0°30'
T = 49.19'
L = 98.38'
PC = 724+05.51
PT = 725+03.90
e = N.C
LS = N/A



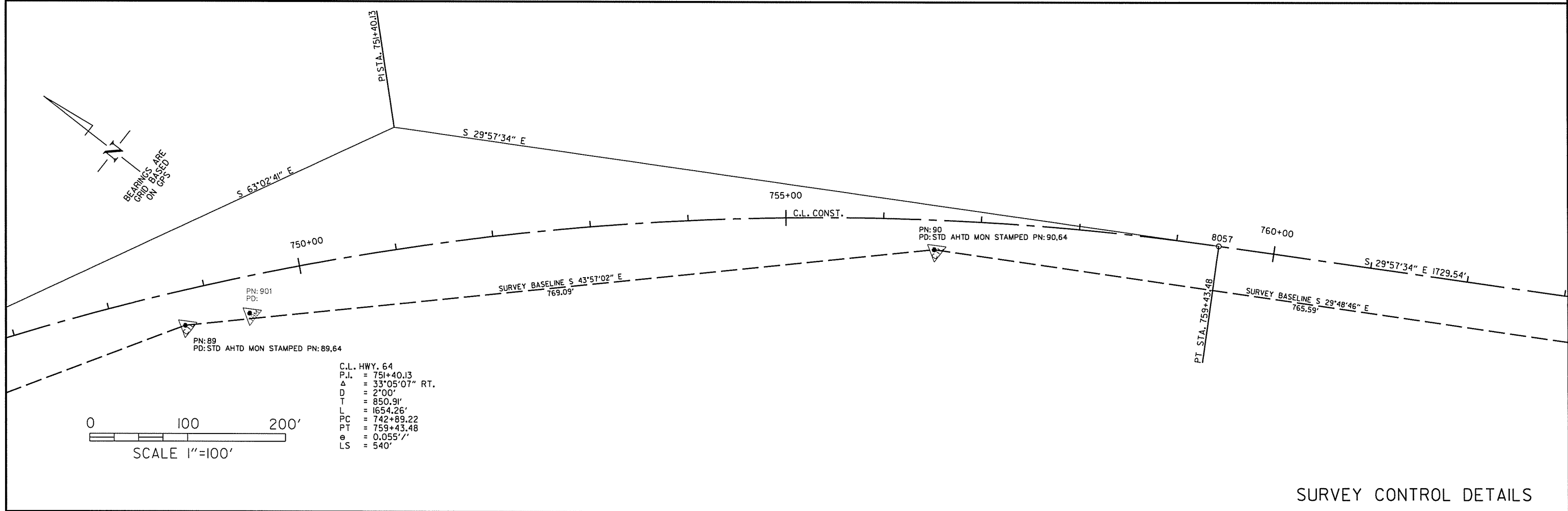
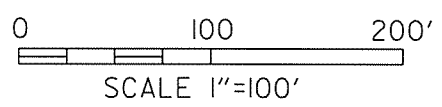
DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CAOIOI	98	224

② SURVEY CONTROL DETAILS

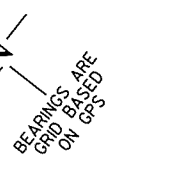
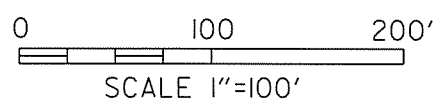
STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 14929
 W. ANDREW PINKLEY
 5/13/16



C.L. HWY. 64
 P.I. = 751+40.13
 Δ = 33°05'07" RT.
 D = 2°00'
 T = 850.91'
 L = 1654.26'
 PC = 742+89.22
 PT = 759+43.48
 e = 0.055'/'
 LS = 540'



C.L. HWY. 64
 P.I. = 751+40.13
 Δ = 33°05'07" RT.
 D = 2°00'
 T = 850.91'
 L = 1654.26'
 PC = 742+89.22
 PT = 759+43.48
 e = 0.055'/'
 LS = 540'



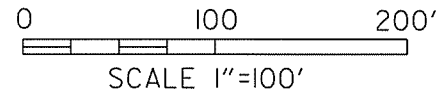
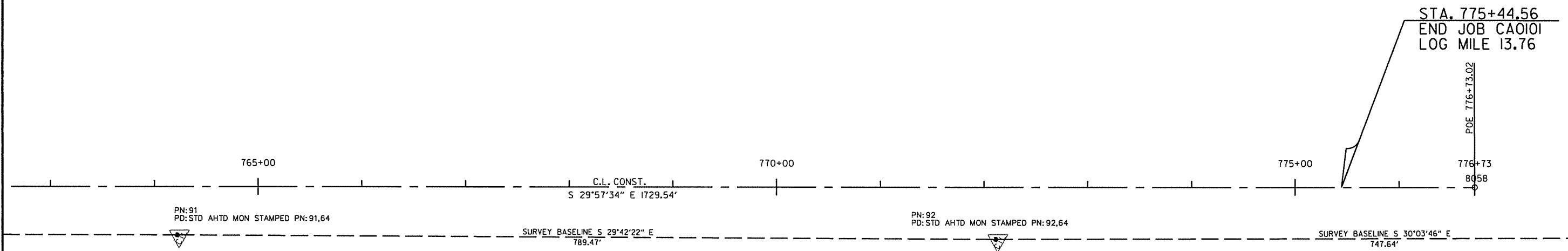
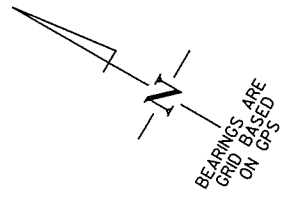
05/06/2015 rCAOIOI.dgn

SURVEY CONTROL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							99	224

2 SURVEY CONTROL DETAILS

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 14929
 A. ANDREW PINKLEY
 06/14/16



06/13/2016 FCA0101.dgn

SURVEY CONTROL DETAILS

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	100	224	

2 SOIL BORING LOG

SOIL LOG

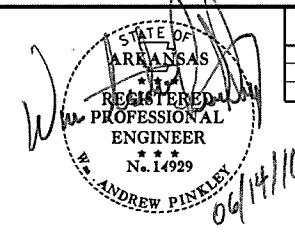


STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC						
486+00	35	14	58	91	37	40	Boring B-60	0.5-2	82	57	A-7-6	BROWN AND GRAYISH BROWN
494+00	35	14	58	91	37	50	Boring B-61	0.5-2	49	28	A-7-6	BROWN AND GRAYISH BROWN
502+00	35	14	58	91	37	59	Boring B-62	0.5-2	96	70	A-7-6	GRAY AND BROWN
510+00	35	14	58	91	38	9	Boring B-63	0.5-2	92	65	A-7-6	BROWN AND GRAYISH BROWN
518+00	35	14	57	91	38	19	Boring B-64	0.5-2	83	58	A-7-6	BROWN AND GRAYISH BROWN
526+00	35	14	53	91	38	27	Boring B-65	0.5-2	61	39	A-7-6	BROWN
534+00	35	14	50	91	38	36	Boring B-66	0.5-2	62	41	A-7-6	BROWN AND GRAYISH BROWN
542+00	35	14	45	91	38	45	Boring B-67	0.5-2	52	28	A-7-6	BROWN AND GRAY
550+00	35	14	42	91	38	54	Boring B-68	0.5-2	87	65	A-7-6	BROWN AND GRAYISH BROWN
558+00	35	14	38	91	39	1	Boring B-69	0.5-2	82	58	A-7-6	BROWN
566+00	35	14	35	91	39	10	Boring B-70	0.5-2	31	17	A-6	BROWN AND GRAYISH BROWN
574+00	35	14	31	91	39	18	Boring B-71	0.5-2	51	27	A-7-6	BROWN
582+00	35	14	28	91	39	27	Boring B-72	0.5-2	35	14	A-6	BROWN AND GRAYISH BROWN
590+00	35	14	23	91	39	35	Boring B-73	---	---	---	ND	BROWN
598+00	35	14	20	91	39	44	Boring B-74	0.5-2	39	22	A-6	BROWN
606+00	35	14	16	91	39	53	Boring B-75	0.5-2	30	14	A-6	BROWN AND GRAYISH BROWN
614+00	35	14	13	91	40	1	Boring B-76	0.5-2	28	12	A-6	BROWN
622+00	35	14	8	91	40	10	Boring B-77	0.5-2	32	12	A-6	BROWN AND GRAYISH BROWN
630+00	35	14	5	91	40	18	Boring B-78	0.5-2	---	---	ND	BROWN
638+00	35	14	1	91	40	27	Boring B-79	0.5-2	---	---	ND	BROWN AND GRAYISH BROWN
646+00	35	13	58	91	40	35	Boring B-80	0.5-2	31	14	A-6	BROWN
654+00	35	13	54	91	40	44	Boring B-81	0.5-2	32	14	A-6	BROWN AND GRAYISH BROWN
662+00	35	13	50	91	40	52	Boring B-82	0.5-2	33	17	A-6	BROWN AND GRAYISH BROWN
670+00	35	13	46	91	41	1	Boring B-83	0.5-2	29	14	A-6	BROWN AND GRAYISH BROWN
678+00	35	13	43	91	41	10	Boring B-84	0.5-2	27	14	A-6	BROWN
686+00	35	13	39	91	41	18	Boring B-85	0.5-2	37	17	A-6	BROWN
694+00	35	13	35	91	41	26	Boring B-86	0.5-2	25	11	A-6	BROWN AND GRAYISH BROWN
702+00	35	13	32	91	41	35	Boring B-87	0.5-2	27	11	A-6	BROWN AND GRAY
710+00	35	13	28	91	41	43	Boring B-88	0.5-2	---	---	ND	BROWN AND GRAYISH BROWN
718+00	35	13	25	91	41	52	Boring B-89	0.5-2	---	---	ND	BROWN
726+00	35	13	20	91	42	0	Boring B-90	0.5-2	---	---	ND	BROWN AND GRAYISH BROWN
734+00	35	13	17	91	42	9	Boring B-91	0.5-2	39	21	A-6	GRAY AND BROWN
742+00	35	13	12	91	42	17	Boring B-92	0.5-2	30	12	A-6	DARK BROWN AND GRAYISH BROWN
750+00	35	13	7	91	42	24	Boring B-93	0.5-2	35	20	A-6	GRAYISH BROWN AND BROWN
758+00	35	12	60	91	42	28	Boring B-94	0.5-2	26	11	A-6	BROWN AND GRAYISH BROWN
766+00	35	12	53	91	42	34	Boring B-95	0.5-2	33	12	A-6	BROWN AND GRAY
774+00	35	12	46	91	42	37	Boring B-96	0.5-2	35	20	A-6	BROWN
782+00	35	12	40	91	42	43	Boring B-97	0.5-2	33	12	A-6	BROWN AND GRAYISH BROWN

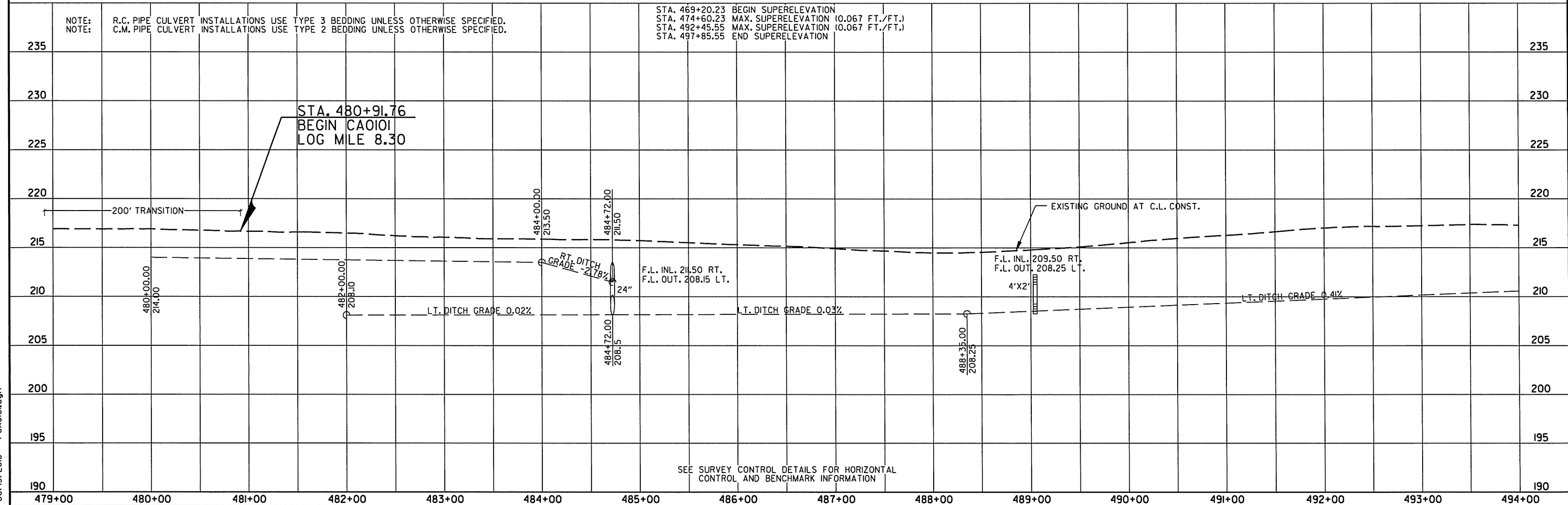
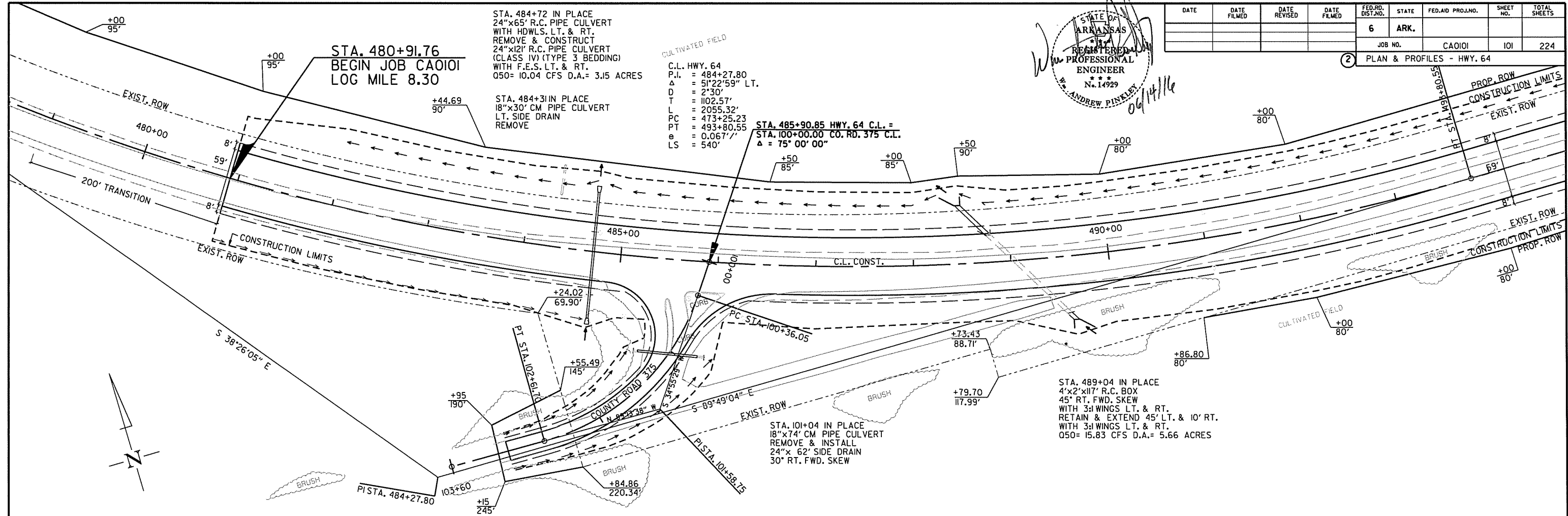
SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING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

Z- AUGER REFUSAL
 NP - NON-PLASTIC
 ND - NOT DETERMINABLE

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							101	224

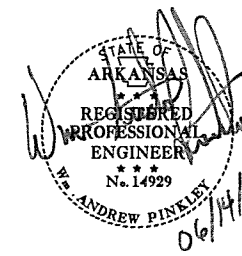


2 PLAN & PROFILES - HWY. 64

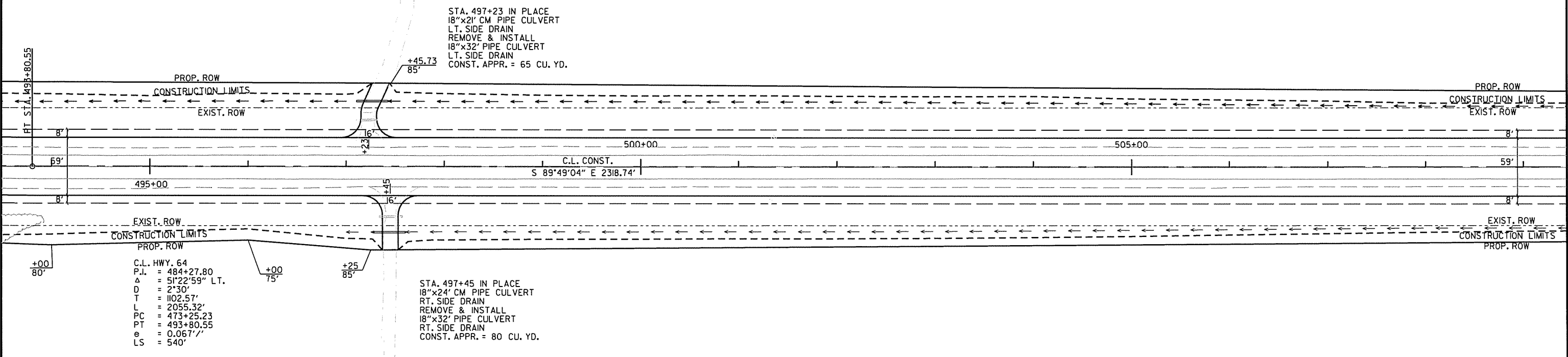


SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

06/13/2016 r-CA0101.dgn



DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. CA0101	102	224
② PLAN & PROFILES - HWY. 64									



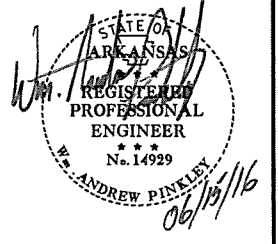
STATION	ELEVATION	DESCRIPTION	STATION	ELEVATION
494+00	210.00	RT. DITCH GRADE 0.10% LT. DITCH GRADE 0.10%	509+00	210.00
495+00	211.00		509+00	210.00
496+00	211.00		509+00	210.00
497+00	211.20		509+00	210.00
498+00	211.50		509+00	210.00
499+00	211.50		509+00	210.00
500+00	211.50		509+00	210.00
501+00	211.50		509+00	210.00
502+00	211.50		509+00	210.00
503+00	211.50		509+00	210.00
504+00	212.00		509+00	210.00
505+00	212.00		509+00	210.00
506+00	212.00		509+00	210.00
507+00	212.00		509+00	210.00
508+00	212.00		509+00	210.00
509+00	212.00		509+00	210.00

06/13/2016 r-CA0101.dgn

SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

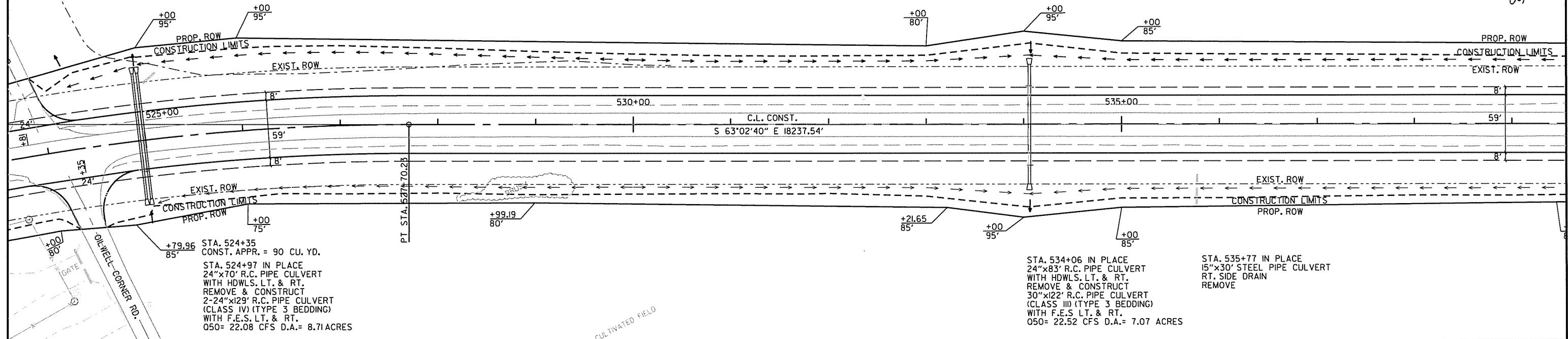
DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIQ	104	224	

2 PLAN & PROFILES - HWY. 64



C.L. HWY. 64
 P.I. = 522+44.72
 C = 26'46'25" RT.
 D = 2'30"
 T = 545.43'
 L = 1070.94'
 PC = 516+99.29
 PT = 527+70.23
 e = 0.067'/'
 LS = 540'

STA. 525+00 IN PLACE
 18"x25' STEEL PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE



+79.96 STA. 524+35
 CONST. APPR. = 90 CU. YD.
 STA. 524+97 IN PLACE
 24"x70' R.C. PIPE CULVERT
 WITH HDWLS. LT. & RT.
 REMOVE & CONSTRUCT
 2-24"x129' R.C. PIPE CULVERT
 (CLASS IV) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050= 22.08 CFS D.A.= 8.71 ACRES

STA. 534+06 IN PLACE
 24"x83' R.C. PIPE CULVERT
 WITH HDWLS. LT. & RT.
 REMOVE & CONSTRUCT
 30"x122' R.C. PIPE CULVERT
 (CLASS III) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050= 22.52 CFS D.A.= 7.07 ACRES

STA. 535+77 IN PLACE
 15"x30' STEEL PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE

STATION	NOTE	RIGHT OF WAY	EXISTING GROUND	PROPOSED GRADE	VERTICAL CURVE DATA	OTHER DATA
524+00						
525+00						
526+00						
527+00						
528+00						
529+00						
530+00						
531+00						
532+00						
533+00						
534+00						
535+00						
536+00						
537+00						
538+00						
539+00						

EXISTING GROUND AT C.L. CONST.

524+97.00
 212.00
 (2)-24"
 524+97.00
 211.50
 F.L. INL. 212.00 RT.
 F.L. OUT. 211.50 LT.

RT. DITCH GRADE 0.05%
 LT. DITCH GRADE 0.15%

RT. DITCH GRADE -0.08%
 LT. DITCH GRADE -0.08%

LT. DITCH GRADE -1.89%
 RT. DITCH GRADE -2.06%

30" LT. DITCH GRADE 1.86%
 RT. DITCH GRADE 2.05%

LT. DITCH GRADE 0.25%
 RT. DITCH GRADE 0.25%

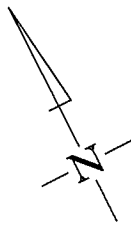
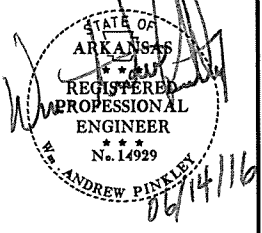
SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

F.L. INL. 210.00 LT.
 F.L. OUT. 209.82 RT.

06/13/2016 rCAOIQ.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							105	224

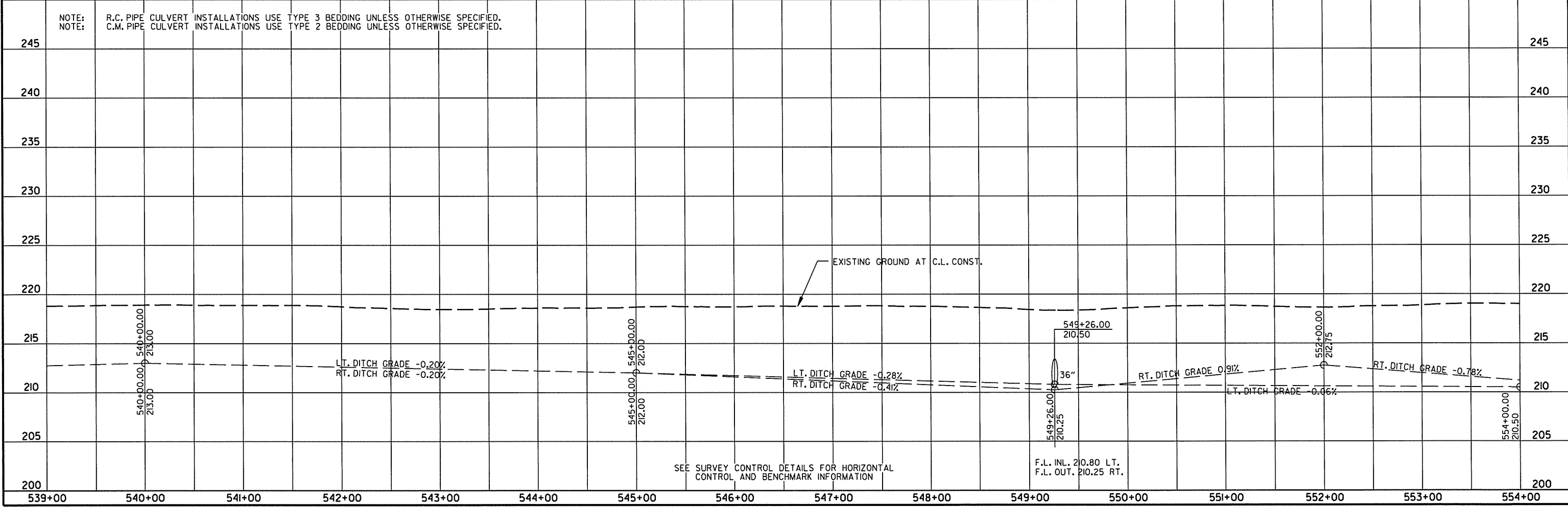
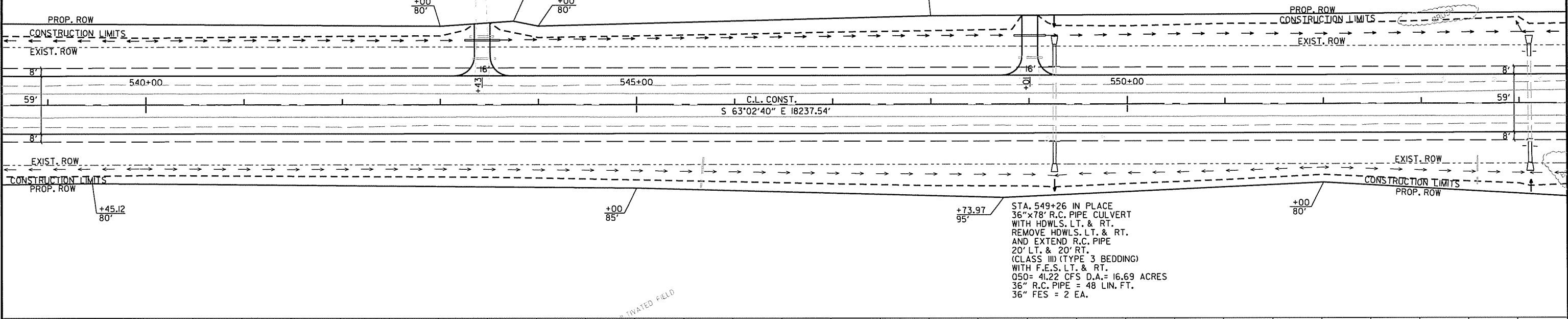
2 PLAN & PROFILES - HWY. 64



STA. 543+43 IN PLACE
24"x25" STEEL PIPE CULVERT
18"x24" CM PIPE CULV'T
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x32" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 80 CU. YD.

STA. 549+01 IN PLACE
24"x25" STEEL PIPE CULVERT
18"x24" CM PIPE CULV'T
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x32" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 85 CU. YD.

STA. 549+26 IN PLACE
36"x78" R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
20' LT. & 20' RT.
(CLASS III) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
Q50 = 41.22 CFS D.A. = 16.69 ACRES
36" R.C. PIPE = 48 LIN. FT.
36" FES = 2 EA.



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

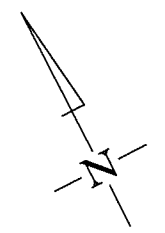
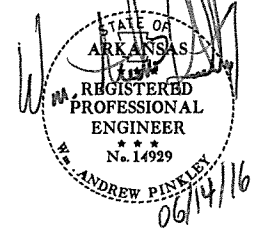
SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

F.L. INL. 20.80 LT.
F.L. OUT. 210.25 RT.

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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							106	224

2 PLAN & PROFILES - HWY. 64



STA. 554+11 IN PLACE
42"x87' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
7' LT. & 20' RT.
(CLASS III) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050= 58.05 CFS D.A.= 26.27 ACRES
42" R.C. PIPE= 35 LIN. FT.
42" F.E.S.= 2 EA.

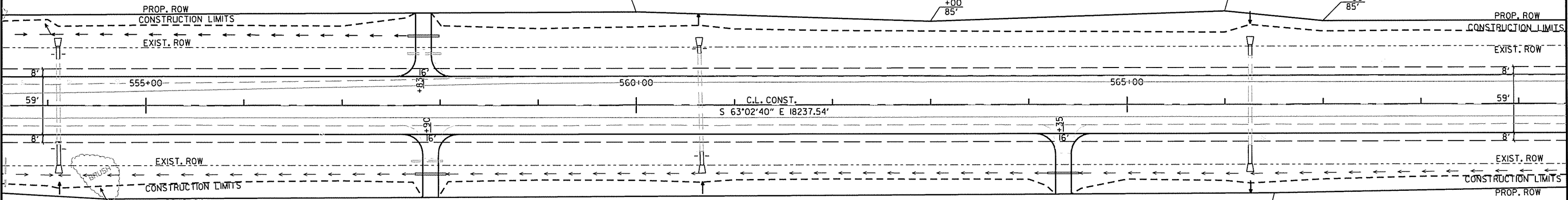
STA. 557+83 IN PLACE
24"x35' CM PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x32' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 100 CU. YD.

+00
95'

+00
85'

+00
95'

+00
85'



+58.86
95'

STA. 557+90 IN PLACE
18"x32' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24"x32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 80 CU. YD.

STA. 560+65 IN PLACE
42"x100' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
6' LT AND 13' RT.
(CLASS III) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050= 40.73 CFS D.A.= 13.92 ACRES
42" R.C. PIPE = 27 LIN. FT.
42" F.E.S. = 2 EA.

STA. 564+35 INSTALL
18"x32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 85 CU. YD.

STA. 566+26 IN PLACE
42"x91' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
10' LT. & 19' RT.
(CLASS III) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050= 54.64 CFS D.A.= 26.27 ACRES
42" R.C. PIPE = 37 LIN. FT.
42" F.E.S. = 2 EA.

+50
90'

STATION	NOTE	RT. DITCH GRADE	LT. DITCH GRADE	EXISTING GROUND AT C.L. CONST.	STATION
245	NOTE: R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. NOTE: C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.				245
240					240
235					235
230					230
225					225
220					220
215					215
210					210
205					205
200					200

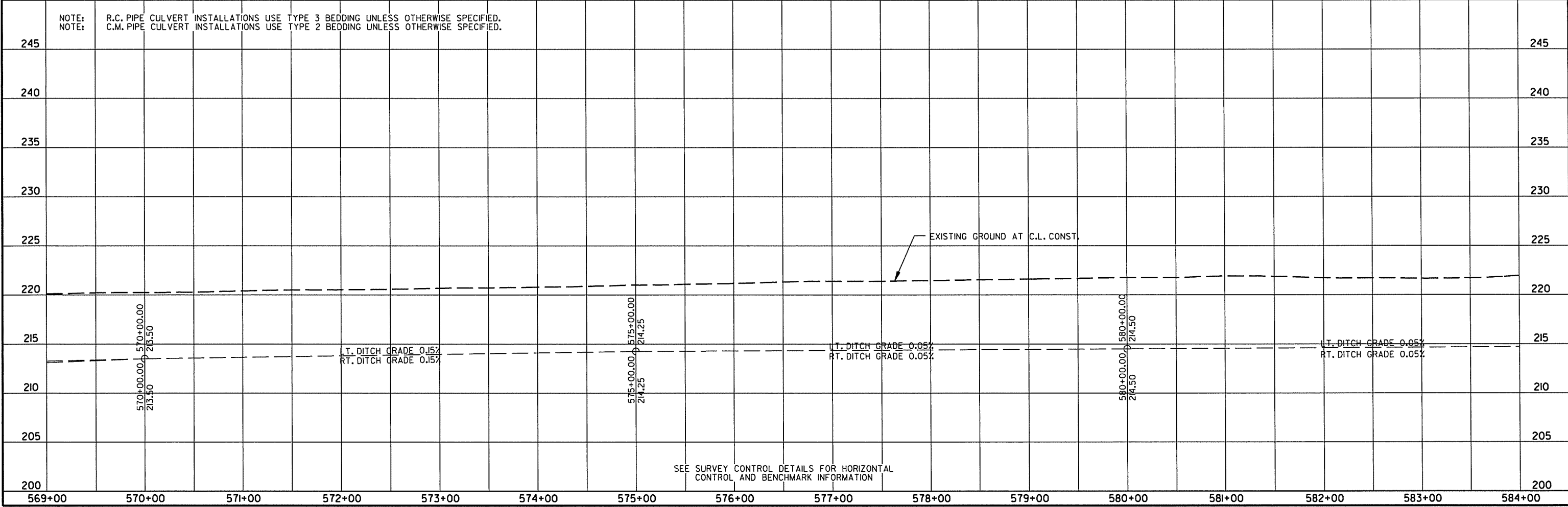
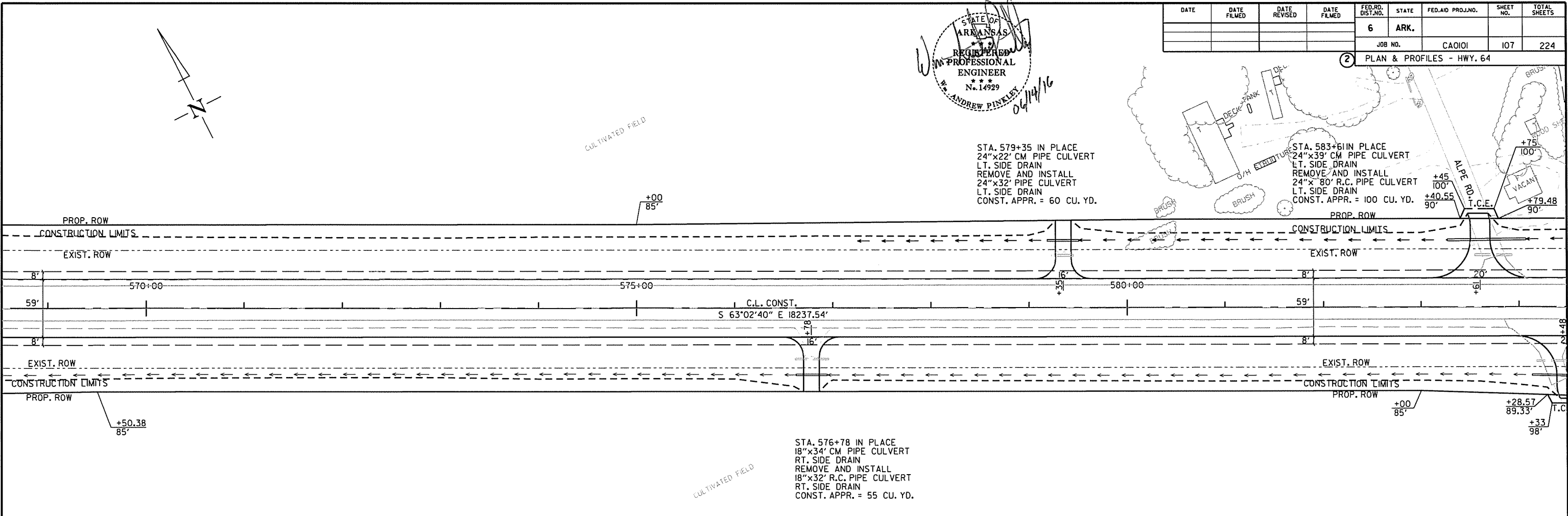
06/13/2016 rCA0101.dgn

554+00 555+00 556+00 557+00 558+00 559+00 560+00 561+00 562+00 563+00 564+00 565+00 566+00 567+00 568+00 569+00

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		107	224
				JOB NO. CA0101				

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 14929
 W. ANDREW PINKLEY
 06/14/16

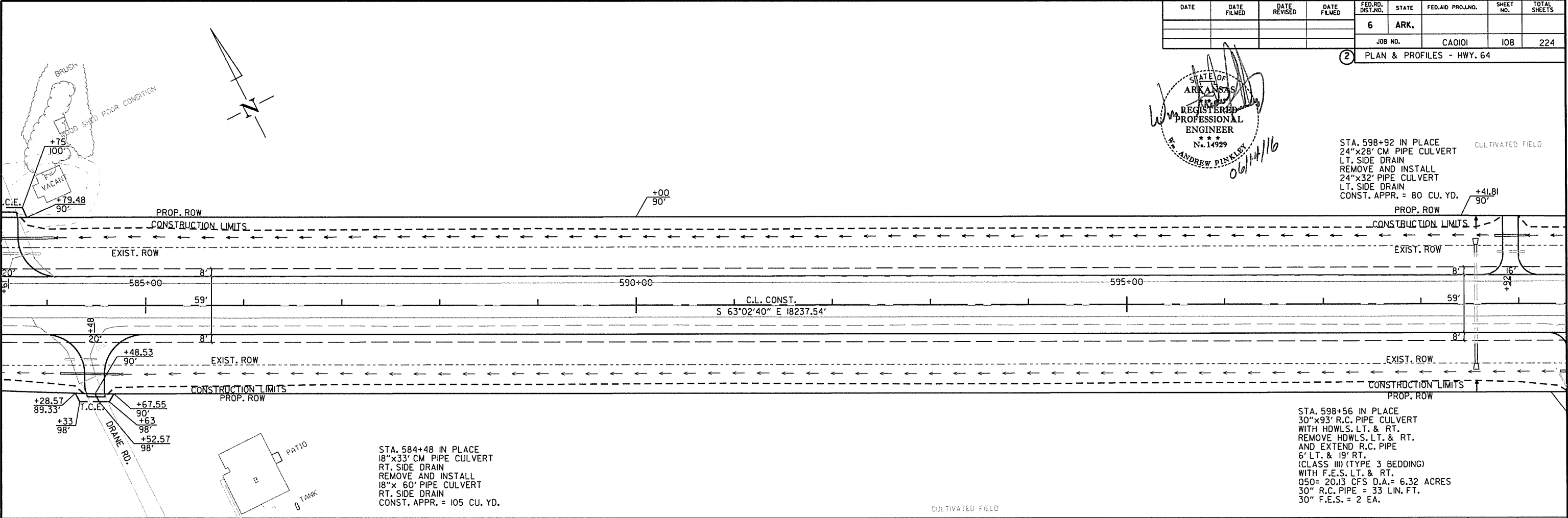
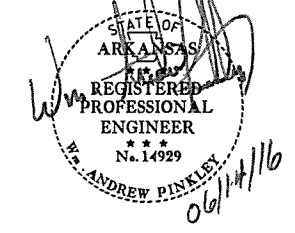
2 PLAN & PROFILES - HWY. 64



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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101	108	224	

2 PLAN & PROFILES - HWY. 64

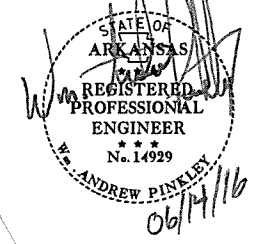


STATION	RIGHT OF WAY	EXISTING GROUND	PROPOSED GRADE	VERTICAL CURVE DATA	NOTES	STATION
245					NOTE: R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. NOTE: C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.	245
240						240
235						235
230						230
225						225
220						220
215					LT. DITCH GRADE 0.05% RT. DITCH GRADE 0.05%	215
210						210
205						205
200					SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION	200

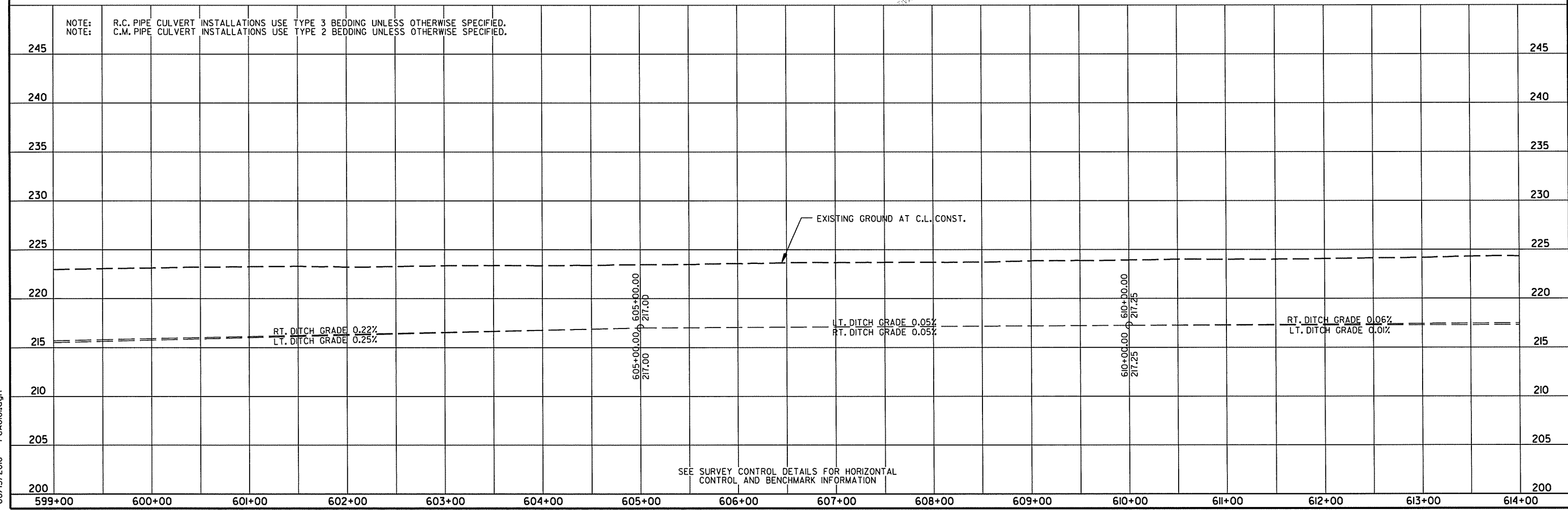
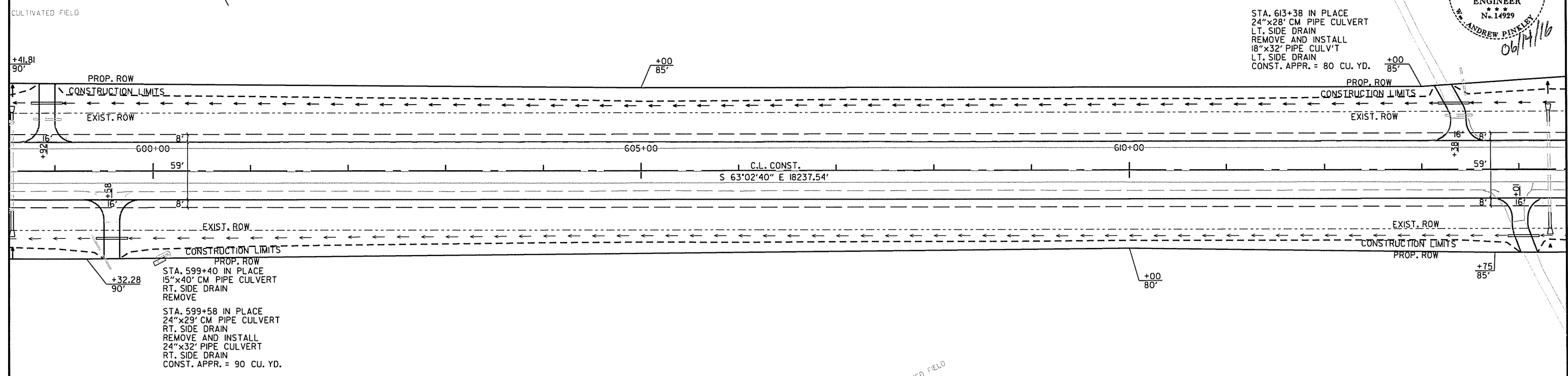
06/13/2016 rCA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		109	224

② PLAN & PROFILES - HWY. 64



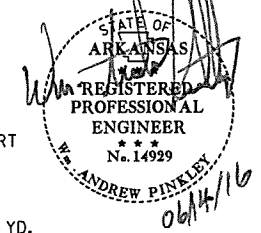
STA. 613+38 IN PLACE
 24"x28' CM PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"x32' PIPE CULV'T
 LT. SIDE DRAIN
 CONST. APPR. = 80 CU. YD.



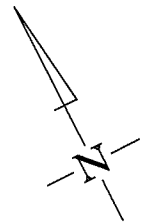
06/13/2016 rCA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CAOIOI							110	224

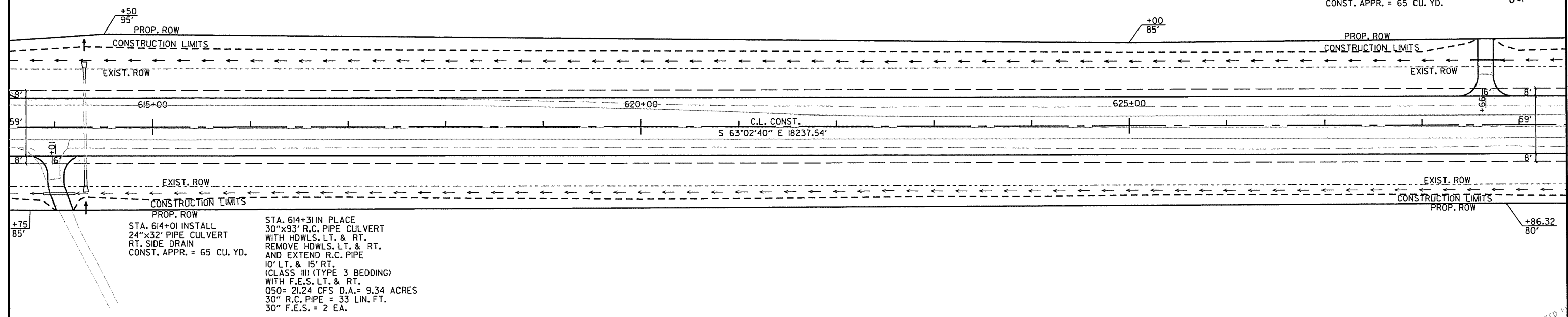
② PLAN & PROFILES - HWY. 64



STA. 628+66 IN PLACE
18"x21" CM PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x32" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 65 CU. YD.



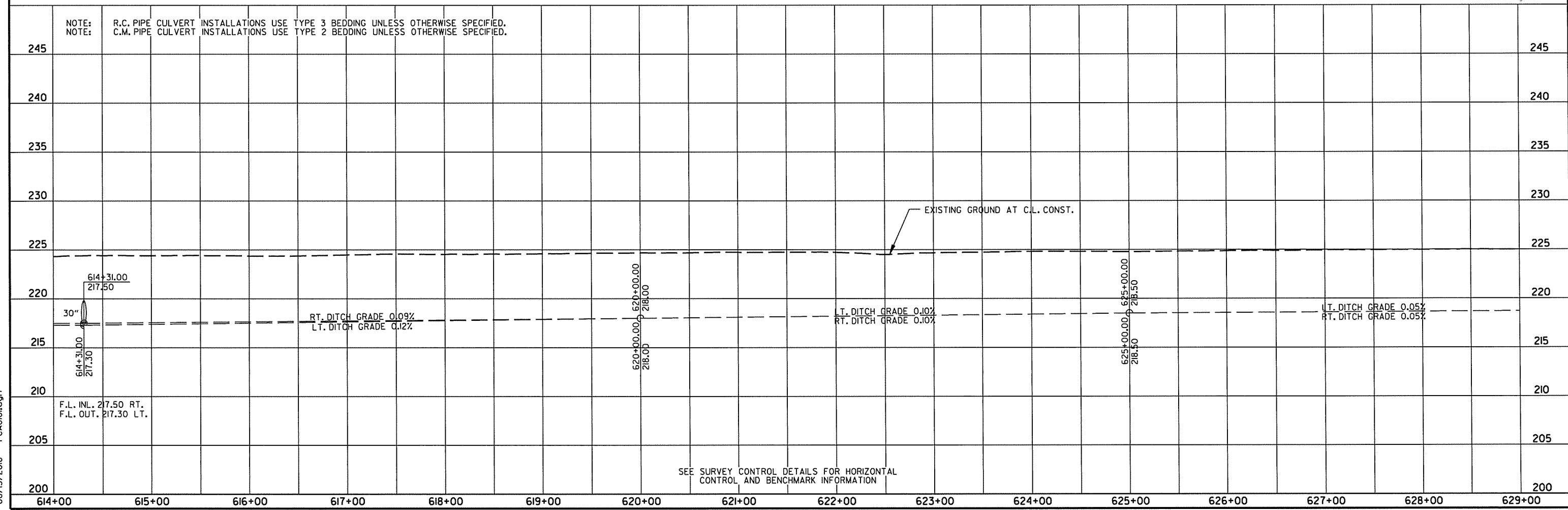
CULTIVATED FIELD



STA. 614+01 INSTALL
24"x32" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 65 CU. YD.

STA. 614+31 IN PLACE
30"x93" R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
10' LT. & 15' RT.
(CLASS III (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
0.50 = 21.24 CFS D.A. = 9.34 ACRES
30" R.C. PIPE = 33 LIN. FT.
30" F.E.S. = 2 EA.

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



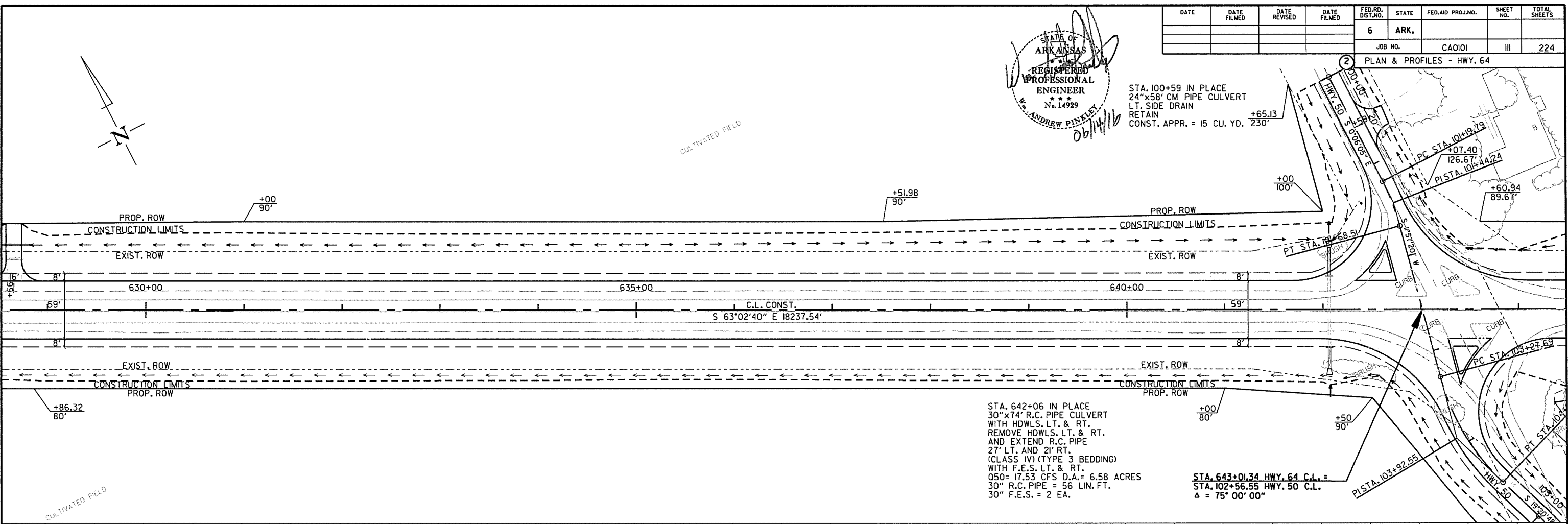
06/13/2016 rCAOIOI.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		III	224
				JOB NO.	CA0101			

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 14929
 W. ANDREW PINKLEY
 06/13/16

STA. 100+59 IN PLACE
 24"x58" CM PIPE CULVERT
 LT. SIDE DRAIN
 RETAIN
 CONST. APPR. = 15 CU. YD. 230'

PLAN & PROFILES - HWY. 64



STA. 642+06 IN PLACE
 30"x74" R.C. PIPE CULVERT
 WITH HDWLS. LT. & RT.
 REMOVE HDWLS. LT. & RT.
 AND EXTEND R.C. PIPE
 27' LT. AND 21' RT.
 (CLASS IV) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050= 17.53 CFS D.A.= 6.58 ACRES
 30" R.C. PIPE = 56 LIN. FT.
 30" F.E.S. = 2 EA.

STA. 643+01.34 HWY. 64 C.L. =
 STA. 102+56.55 HWY. 50 C.L.
 Δ = 75° 00' 00"

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

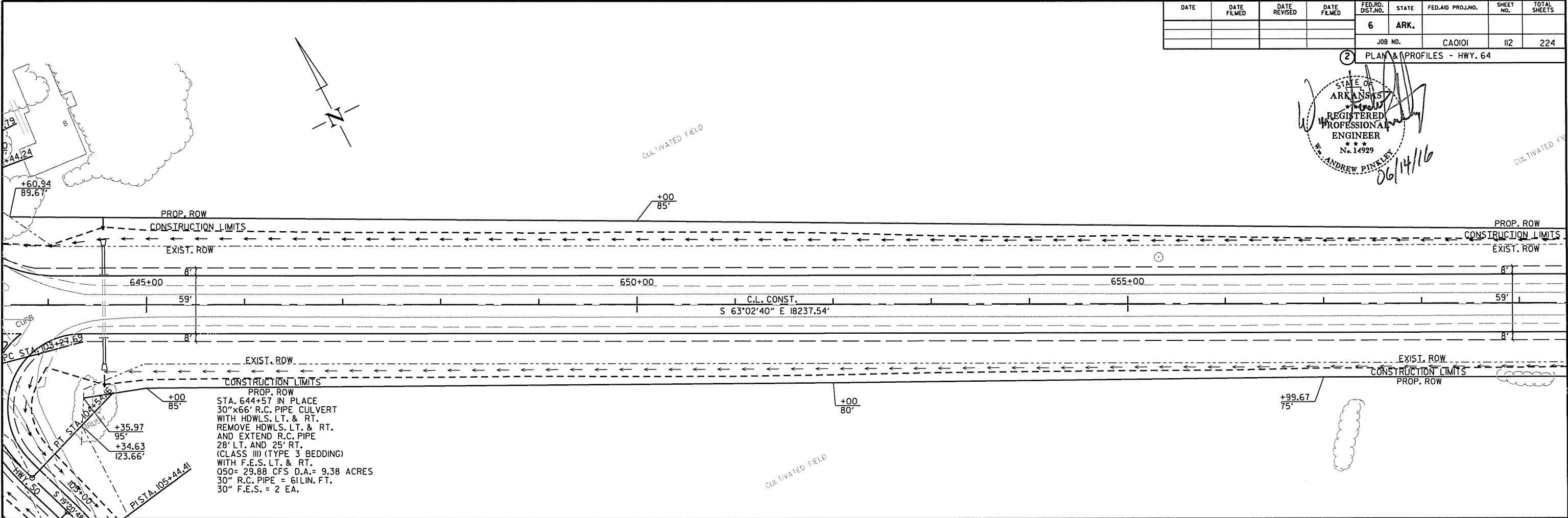
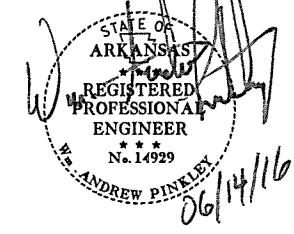
Station	Profile	Notes
245		
240		
235		
230		
225		
220	630+00.00 218.75	EXISTING GROUND AT C.L. CONST.
215	630+00.00 218.75	LT. DITCH GRADE 0.04% RT. DITCH GRADE 0.04%
210	635+00.00 218.95	RT. DITCH GRADE 0.02% LT. DITCH GRADE -0.2%
205	642+06.00 217.50	F.L. INL. 29.10 RT. F.L. OUT. 217.50 LT.
200		

SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAO101	112	224	

2 PLAN & PROFILES - HWY. 64

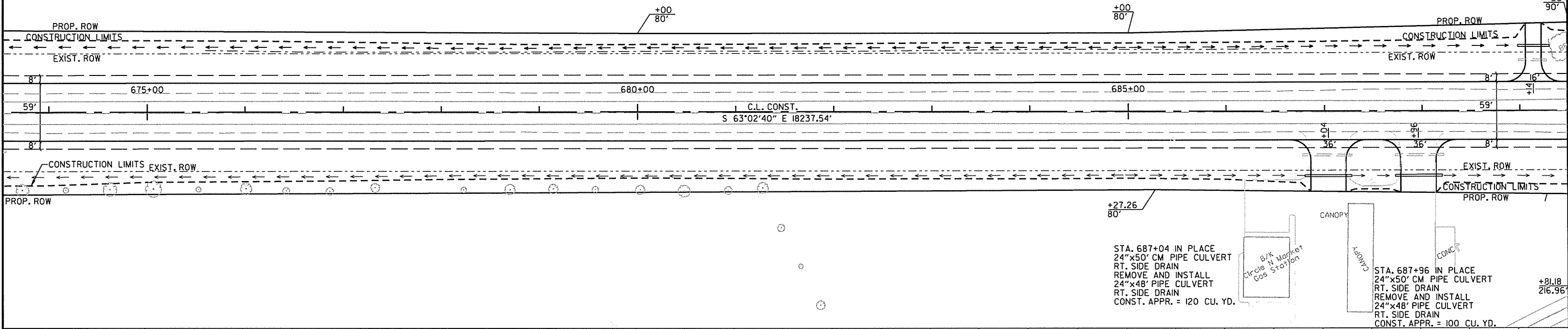
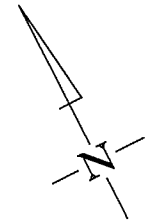
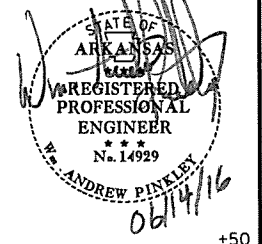


STATION	NOTE:	PROFILES	STATION
245	NOTE: R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. NOTE: C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.		245
240			240
235			235
230			230
225			225
220		644+57.00 219.10 30" 644+57.00 218.75 F.L. INL. 219.10 LT. F.L. OUT. 218.75 RT. LT. DITCH GRADE 0.07% RT. DITCH GRADE 0.14% 650+00.00 219.50 650+00.00 219.50 EXISTING GROUND AT C.L. CONST. LT. DITCH GRADE 0.10% RT. DITCH GRADE 0.10% 655+00.00 220.00 655+00.00 220.00 LT. DITCH GRADE 0.05% RT. DITCH GRADE 0.05%	220
215			215
210			210
205			205
200		SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION	200
644+00			659+00

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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAO101	114	224	

2 PLAN & PROFILES - HWY. 64

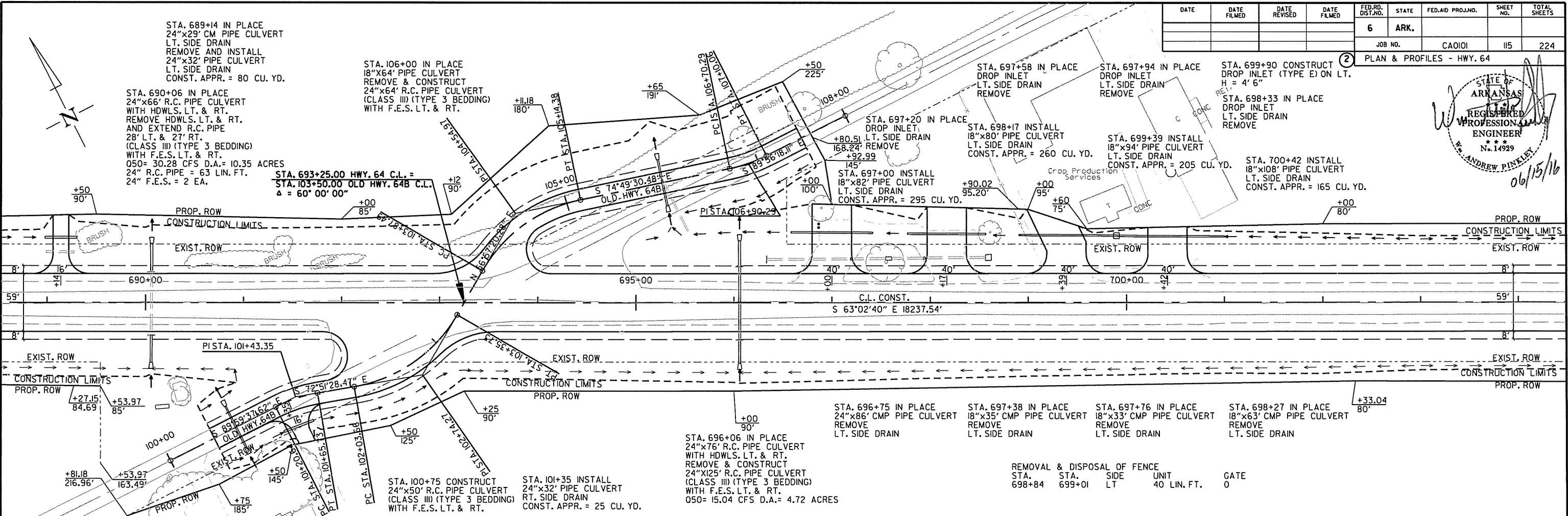
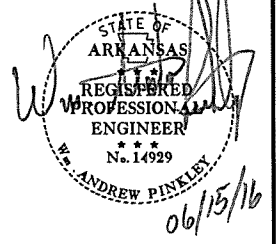


Station	Profile	Notes
245		NOTE: R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. NOTE: C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.
240		
235		
230		
225		
220		EXISTING GROUND AT C.L. CONST.
215		LT. DITCH GRADE 0.10% RT. DITCH GRADE 0.10%
210		LT. DITCH GRADE 0.05% RT. DITCH GRADE 0.05%
205		RT. DITCH GRADE -0.03% LT. DITCH GRADE -0.05%
200		SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		115	224

PLAN & PROFILES - HWY. 64



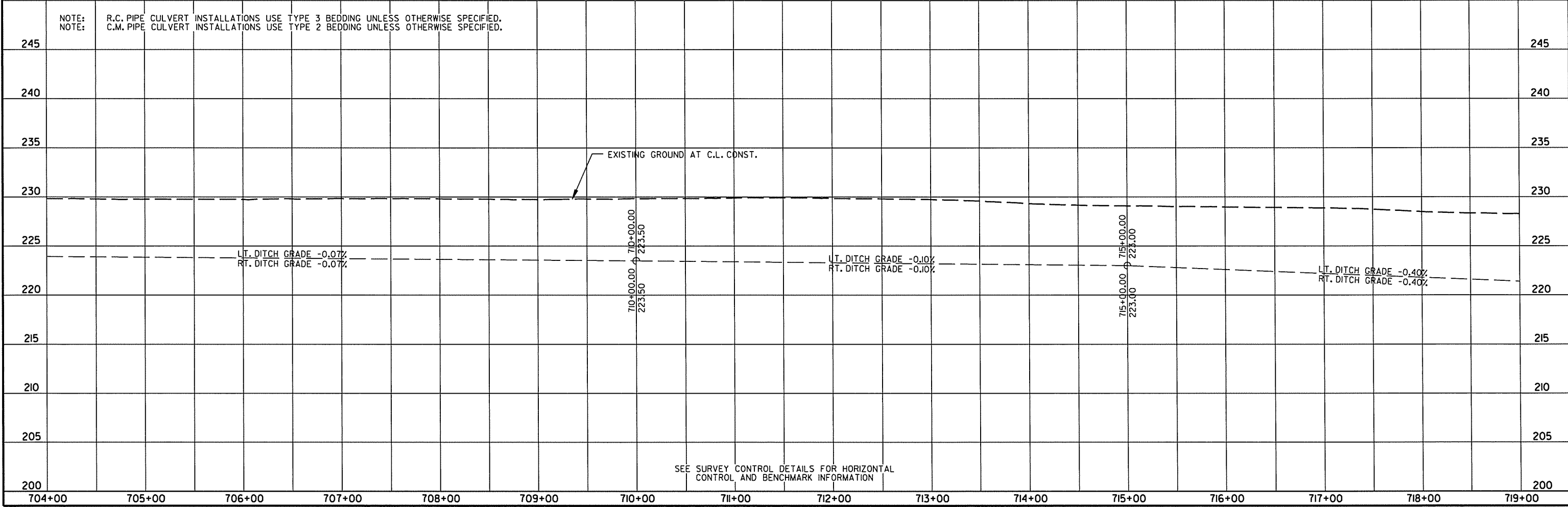
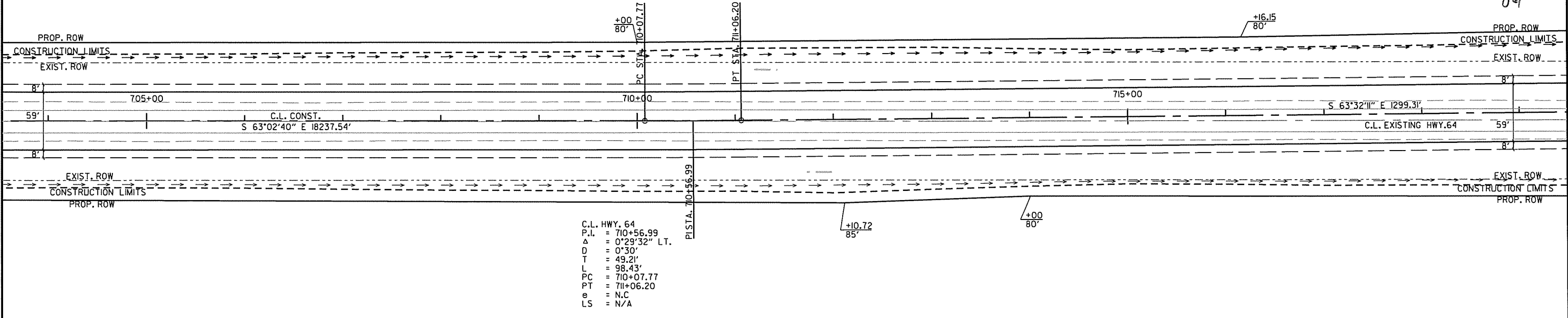
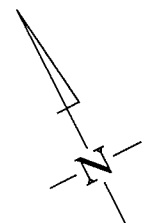
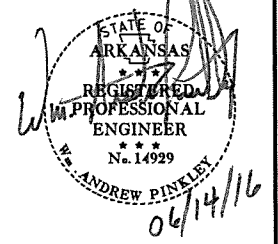
STATION	RT. DITCH GRADE	LT. DITCH GRADE	EXISTING GROUND AT C.L. CONST.	PROF. NO.
689+00				245
690+00				240
691+00				235
692+00				230
693+00				225
694+00				220
695+00				215
696+00				210
697+00				205
698+00				200
699+00				
700+00				
701+00				
702+00				
703+00				
704+00				

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SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101	116	224	

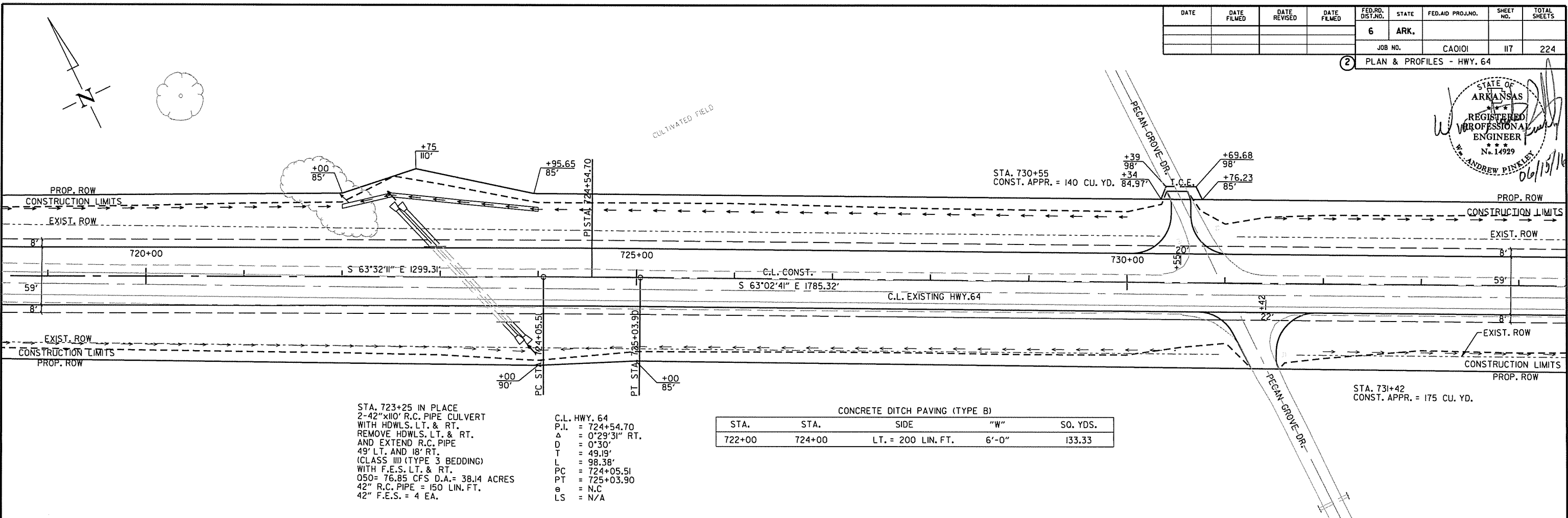
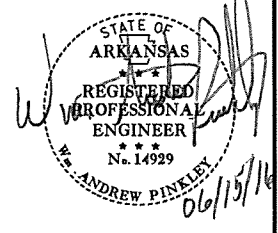
2 PLAN & PROFILES - HWY. 64



06/13/2016 rCA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIQI	IIT	224	

2 PLAN & PROFILES - HWY. 64

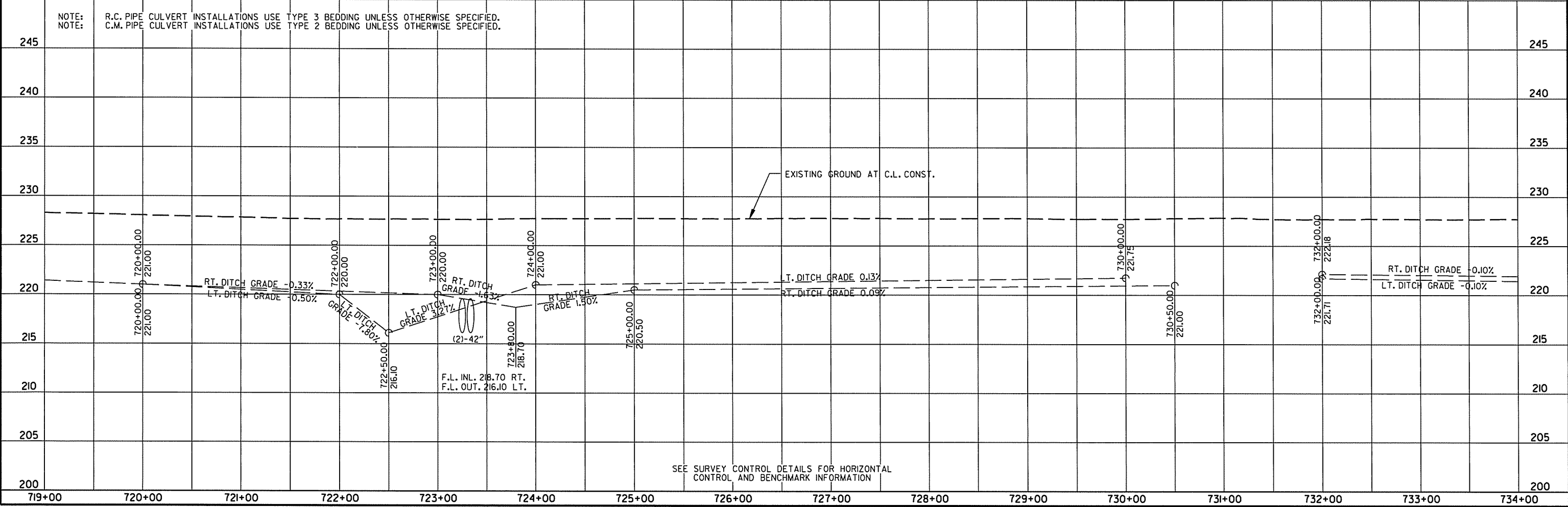


STA. 723+25 IN PLACE
 2-42" x 110' R.C. PIPE CULVERT
 WITH HDWLS. LT. & RT.
 REMOVE HDWLS. LT. & RT.
 AND EXTEND R.C. PIPE
 49' LT. AND 18' RT.
 (CLASS III) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 OSO = 76.85 CFS D.A. = 38.14 ACRES
 42" R.C. PIPE = 150 LIN. FT.
 42" F.E.S. = 4 EA.

C.L. HWY. 64
 P.I. = 724+54.70
 Δ = 0°29'31" RT.
 D = 0°30'
 T = 49.19'
 L = 98.38'
 PC = 724+05.51
 PT = 725+03.90
 e = N.C
 LS = N/A

CONCRETE DITCH PAVING (TYPE B)

STA.	STA.	SIDE	"W"	SQ. YDS.
722+00	724+00	LT. = 200 LIN. FT.	6'-0"	133.33



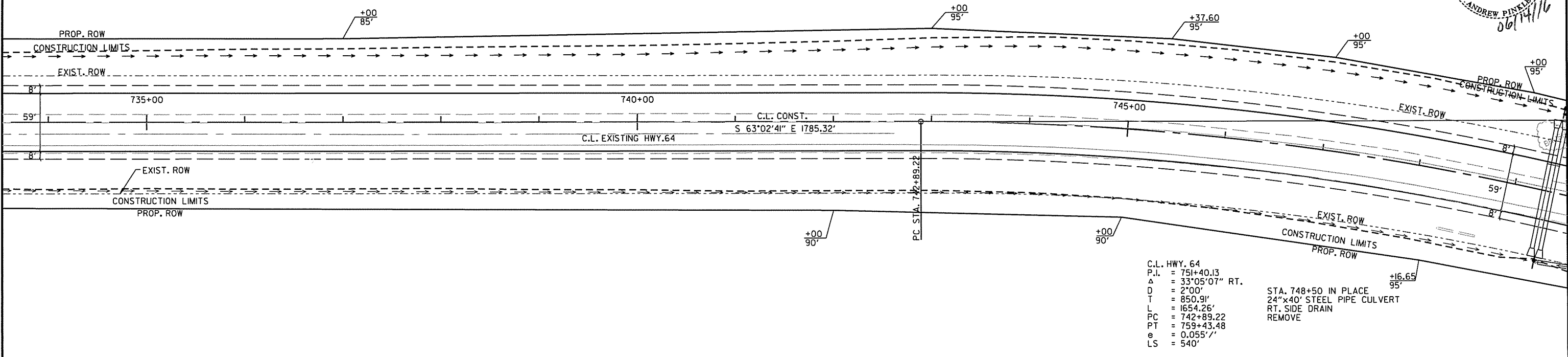
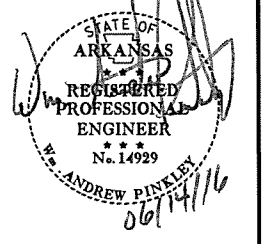
SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

06/13/2016 rCA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101	I18	224	
				② PLAN & PROFILES - HWY. 64				



CULTIVATED FIELD



C.L. HWY. 64
 P.I. = 751+40.13
 Δ = 33°05'07" RT.
 D = 2'00'
 T = 850.91'
 L = 1654.26'
 PC = 742+89.22
 PT = 759+43.48
 e = 0.055'/'
 LS = 540'

STA. 748+50 IN PLACE
 24"x40" STEEL PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE

Station	245	240	235	230	225	220	215	210	205	200
734+00										
735+00										
736+00										
737+00										
738+00										
739+00										
740+00										
741+00										
742+00										
743+00										
744+00										
745+00										
746+00										
747+00										
748+00										
749+00										

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

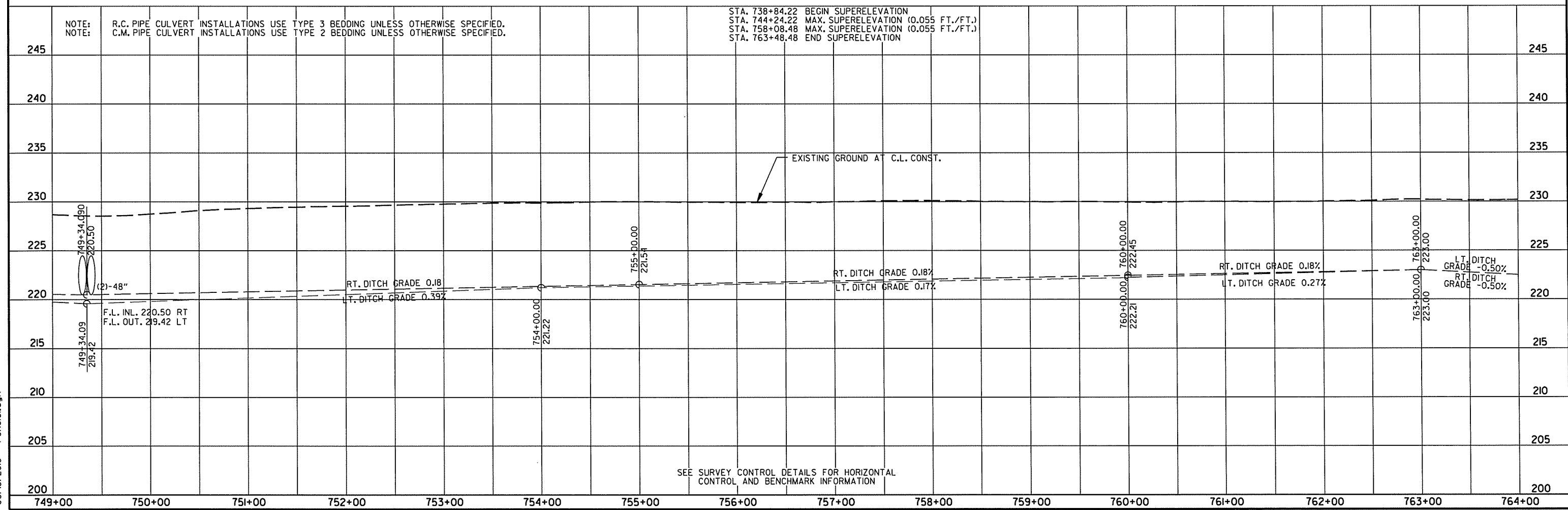
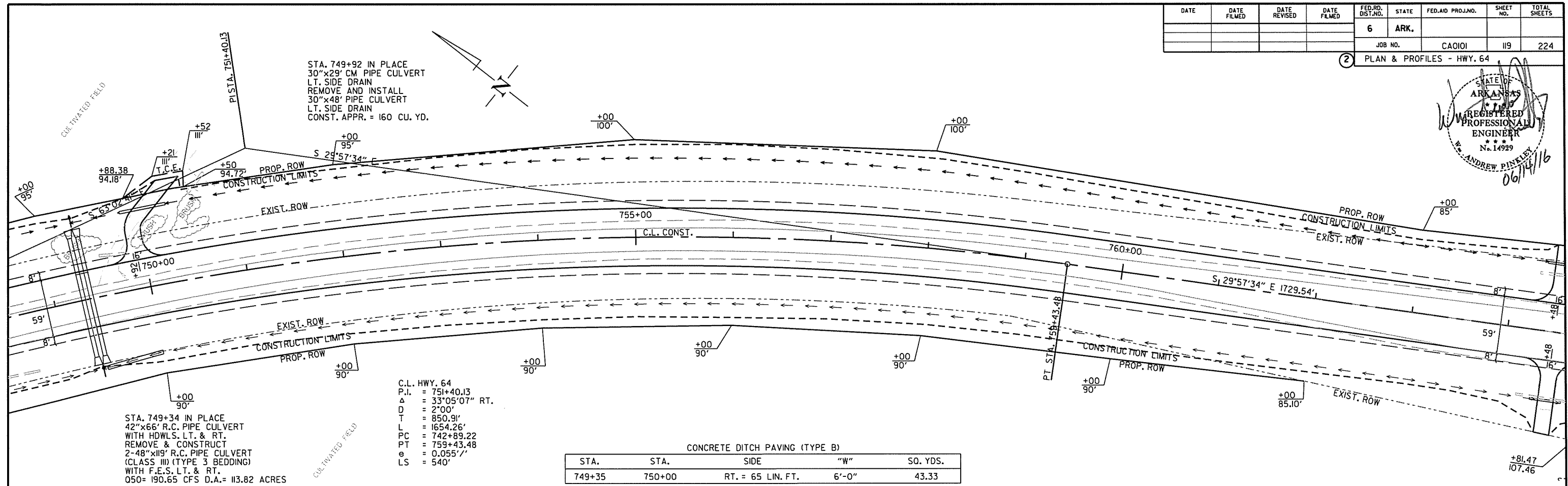
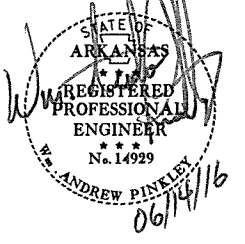
STA. 738+84.22 BEGIN SUPERELEVATION
 STA. 744+24.22 MAX. SUPERELEVATION (0.055 FT./FT.)
 STA. 758+08.48 MAX. SUPERELEVATION (0.055 FT./FT.)
 STA. 763+48.48 END SUPERELEVATION

SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

06/13/2016 rca0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		119	224
				JOB NO. CAOIOI				

PLAN & PROFILES - HWY. 64

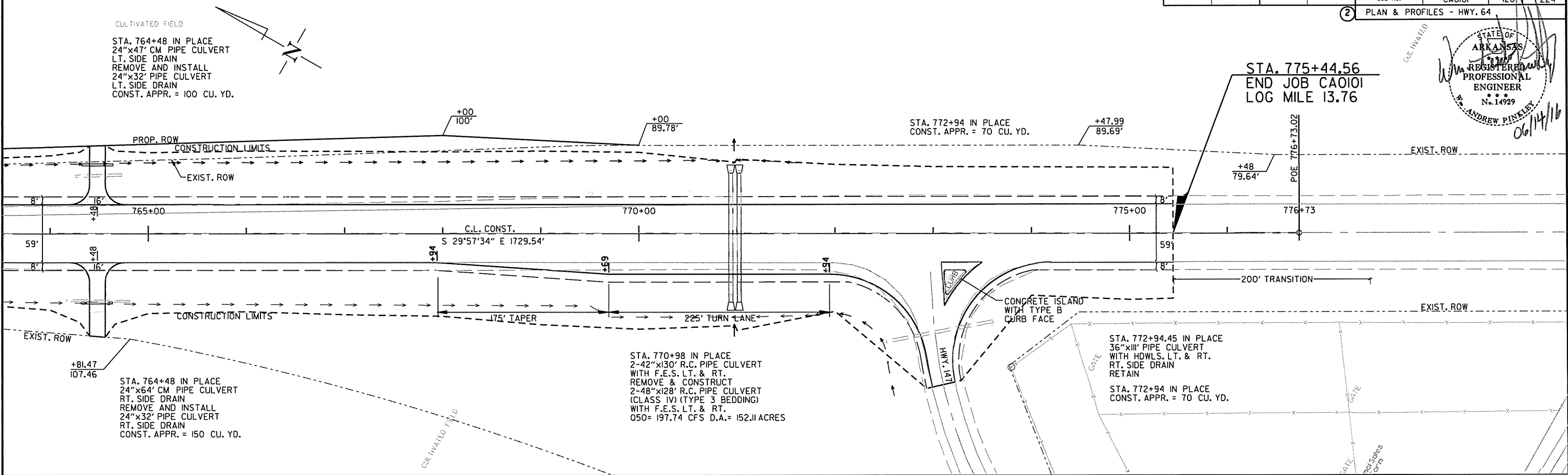


SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

06/13/2016 rCAOIOI.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	120	224	

2 PLAN & PROFILES - HWY. 64

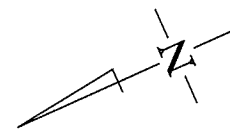
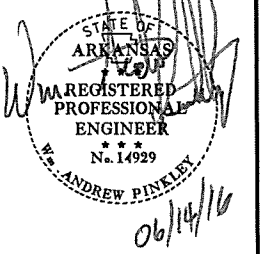


Station	Profile Description	Profile Data	Station
245	NOTE: R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. NOTE: C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.		245
240			240
235			235
230			230
225			225
220	LT. DITCH GRADE -0.50% RT. DITCH GRADE -0.50%	EXISTING GROUND AT C.L. CONST. 770+00.00 220.25 770+98.00 219.75 772+00.00 220.00 772+00.50 220.50 770+98.00 219.75 770+98.00 220.00 (2)-48" RT. DITCH GRADE 0.49% LT. DITCH GRADE 0.25% RT. DITCH GRADE -0.26% LT. DITCH GRADE -0.51%	220
215			215
210		F.L. INL. 220.00 RT. F.L. OUT. 219.75 LT.	210
205			205
200	SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION		200
764+00			779+00

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DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0101							121	224

② PLAN & PROFILES - CO. RD. 375



STA. 485+90.85 HWY. 64 C.L. =
 STA. 100+00.00 CO. RD. 375 C.L.
 $\Delta = 75' 00' 00''$

STA. 484+72 IN PLACE
 24"x65' R.C. PIPE CULVERT
 WITH HDWLS. LT. & RT.
 REMOVE & CONSTRUCT
 24"x121' R.C. PIPE CULVERT
 (CLASS IV) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 Q50= 10.04 CFS D.A.= 3.15 ACRES

STA. 484+31 IN PLACE
 18"x30' CM PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE

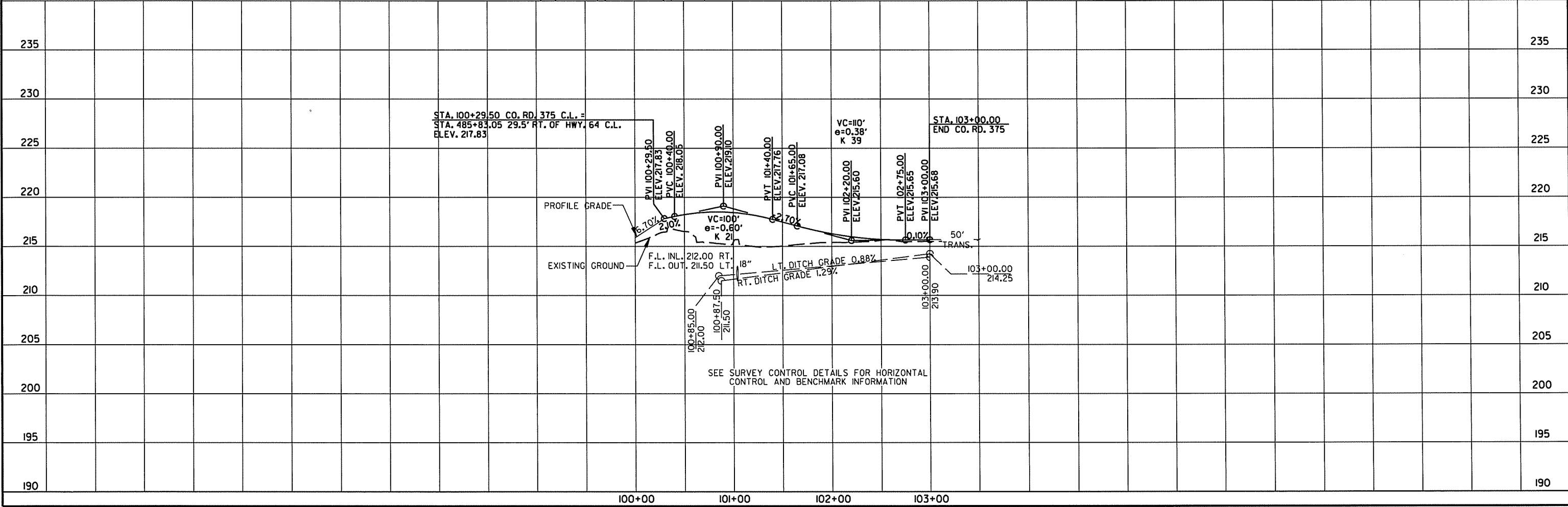
STA. 101+04 IN PLACE
 18"x74' CM PIPE CULVERT
 REMOVE & INSTALL
 24"x 62' SIDE DRAIN
 30° RT. FWD. SKEW

STA. 103+00.00
 END CO. RD. 375

C.L. CO. RD. 375
 P.I. = 101+58.75
 $\Delta = 55' 50' 53''$ RT.
 D = 24' 45"
 T = 122.70'
 L = 225.65'
 PC = 100+36.05
 PT = 102+61.70
 e = N/A
 LS = N/A

HORIZ. DESIGN SPEED 30 MPH
 VERT. DESIGN SPEED 30 MPH

CO. RD. 375



STA. 100+29.50 CO. RD. 375 C.L. =
 STA. 485+83.05 29.5' RT. OF HWY. 64 C.L.
 ELEV. 217.83

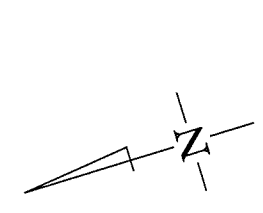
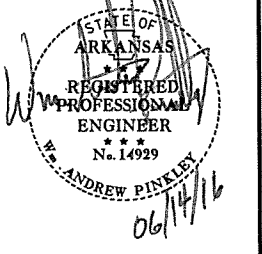
STA. 103+00.00
 END CO. RD. 375

SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

06/13/2016 rCA0101.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAOIOI	122	224	

② PLAN & PROFILES - HWY. 50



STA. 644+57 IN PLACE
30"x66' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
28' LT. AND 25' RT.
(CLASS III) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050= 29.88 CFS D.A.= 9.38 ACRES
30" R.C. PIPE = 61 LIN. FT.
30" F.E.S. = 2 EA.

STA. 643+01.34 HWY. 64 C.L. =
STA. 102+56.55 HWY. 50 C.L.
Δ = 75' 00' 00"

C.L. HWY. 50
P.I. = 105+44.41
Δ = 19'42'24" RT.
D = 24'45'
T = 40.21'
L = 79.62'
PC = 105+04.20
PT = 105+83.82
e = N/A
LS = N/A

STA. 106+14.39
END HWY. 50

STA. 100+59 IN PLACE
24"x58' CM PIPE CULVERT
LT. SIDE DRAIN
RETAIN
CONST. APPR. = 15 CU. YD.

STA. 100+00.00
BEGIN HWY. 50

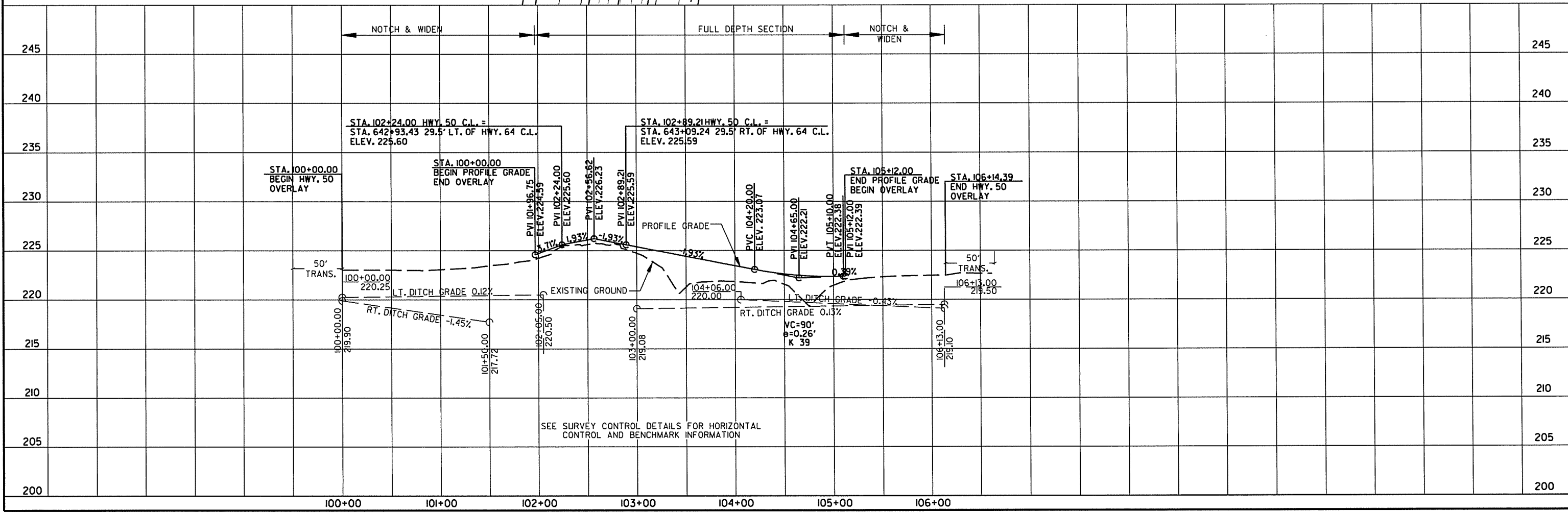
C.L. HWY. 50
P.I. = 101+44.24
Δ = 12'03'25" RT.
D = 24'45'
T = 24.45'
L = 48.72'
PC = 101+19.79
PT = 101+68.51
e = N/A
LS = N/A

C.L. HWY. 50
P.I. = 103+92.55
Δ = 31'18'09" LT.
D = 24'45'
T = 64.86'
L = 126.48'
PC = 103+27.69
PT = 104+54.16
e = N/A
LS = N/A

STA. 642+06 IN PLACE
30"x74' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
27' LT. AND 21' RT.
(CLASS IV) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050= 17.53 CFS D.A.= 6.58 ACRES
30" R.C. PIPE = 56 LIN. FT.
30" F.E.S. = 2 EA.

HORIZ. DESIGN SPEED 30 MPH
VERT. DESIGN SPEED 30 MPH

HWY. 50

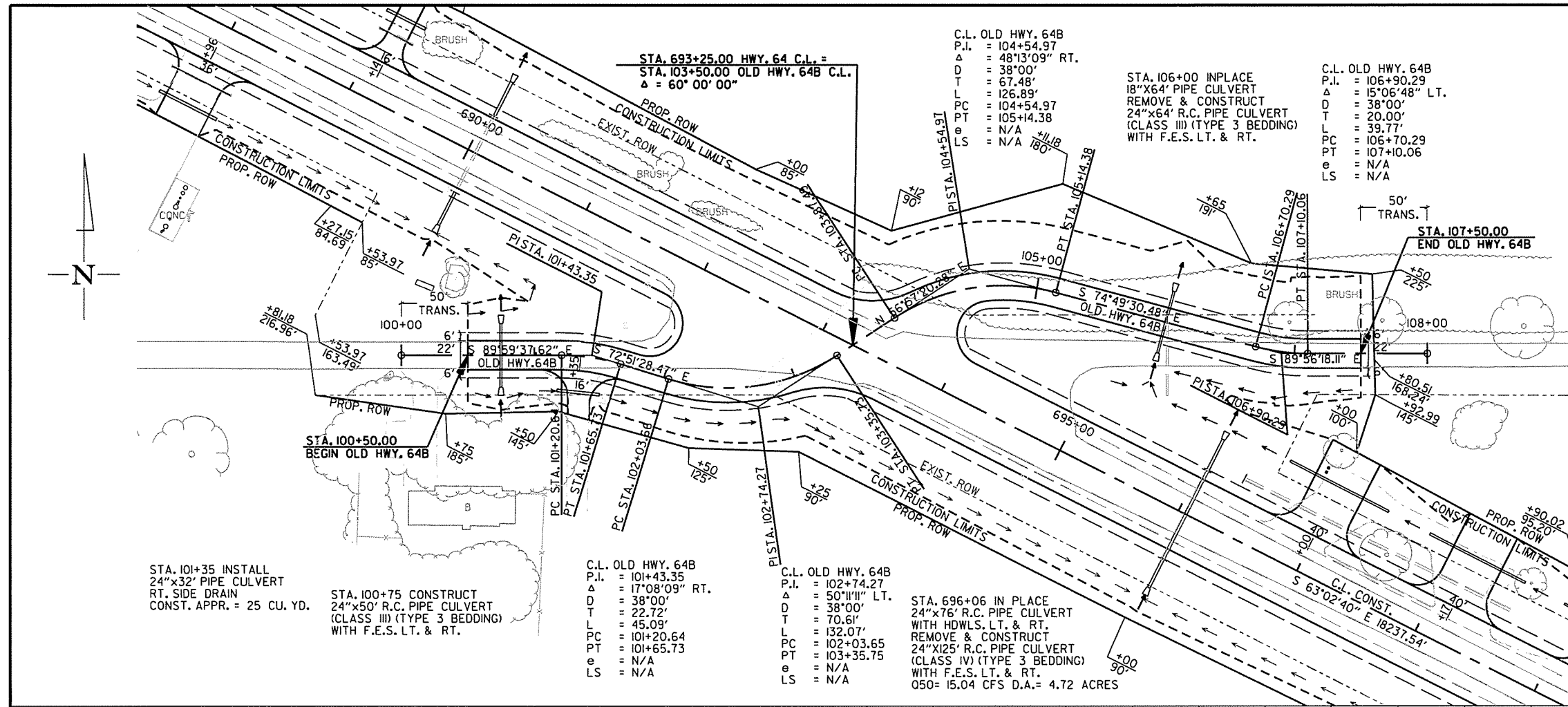
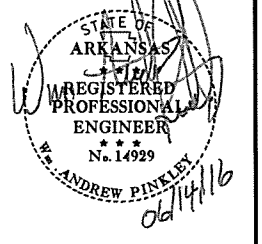


SEE SURVEY CONTROL DETAILS FOR HORIZONTAL CONTROL AND BENCHMARK INFORMATION

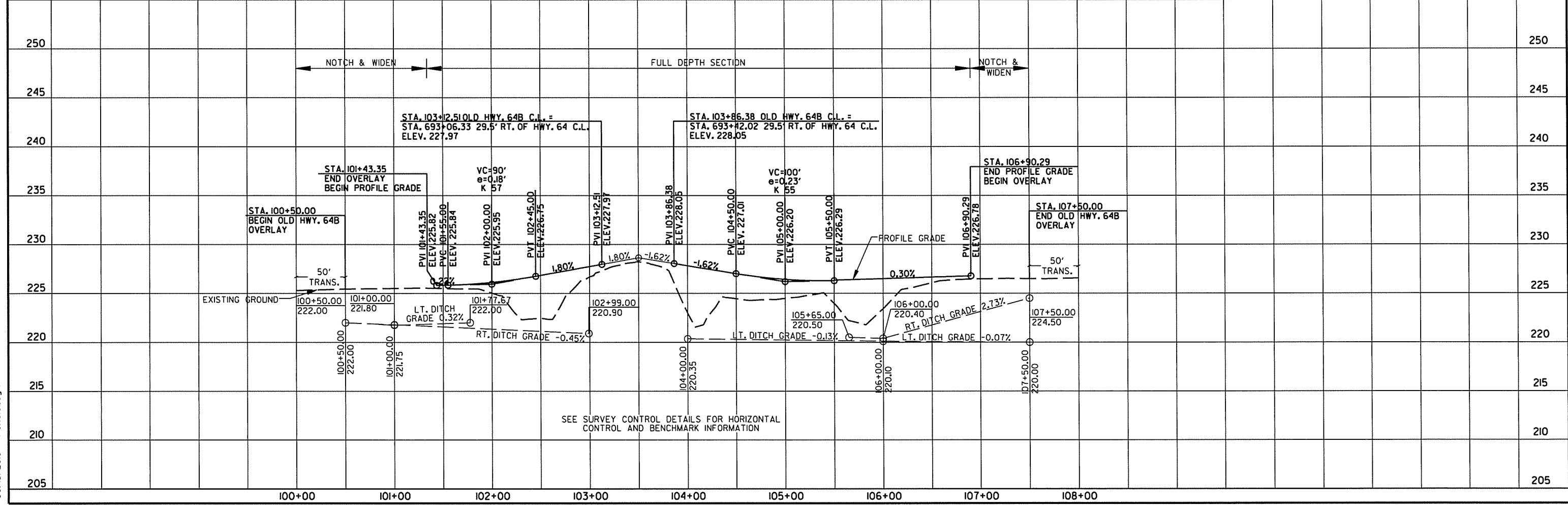
06/13/2016 rCAOIOI.dgn

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101	123	224	

2 PLAN & PROFILES - OLD HWY. 64B

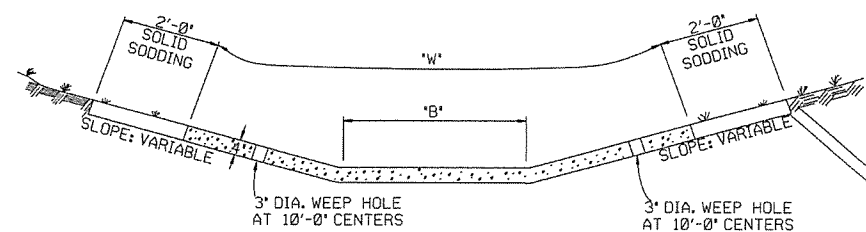


HORIZ. DESIGN SPEED 20 MPH
VERT. DESIGN SPEED 30 MPH
OLD HWY. 64B



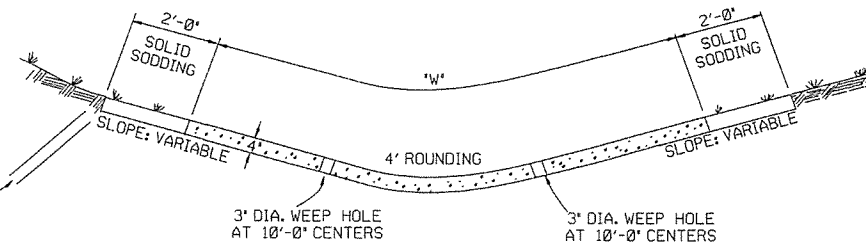
06/13/2016 rca0101.dgn

REFER TO TABULATION OF QUANTITIES FOR 'W' & 'B' DIMENSIONS



TYPE A

REFER TO TABULATION OF QUANTITIES FOR 'W' DIMENSIONS

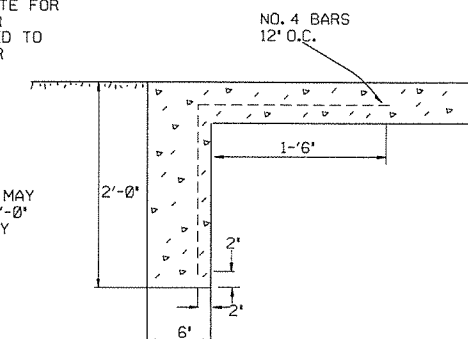


TYPE B

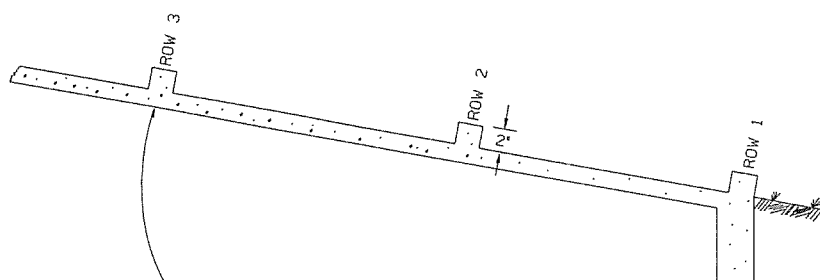
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.

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

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

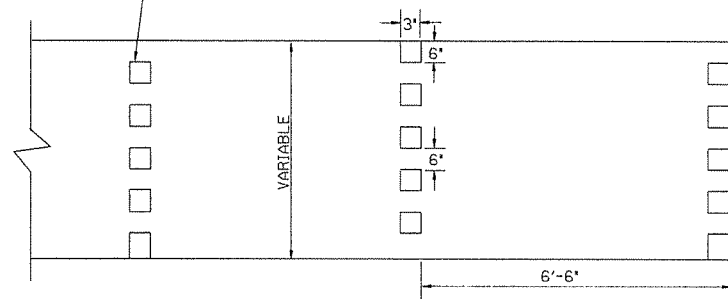


TOE WALL DETAIL FOR CONCRETE DITCH PAVING



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 INCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.



ENERGY DISSIPATORS (NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

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

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

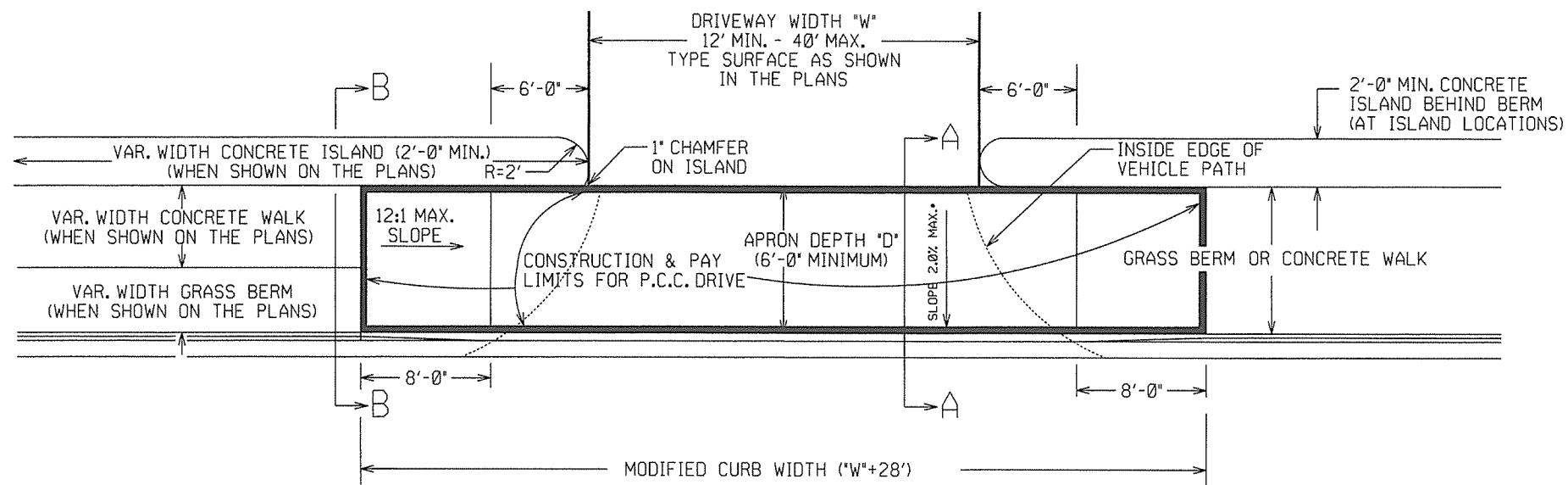
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

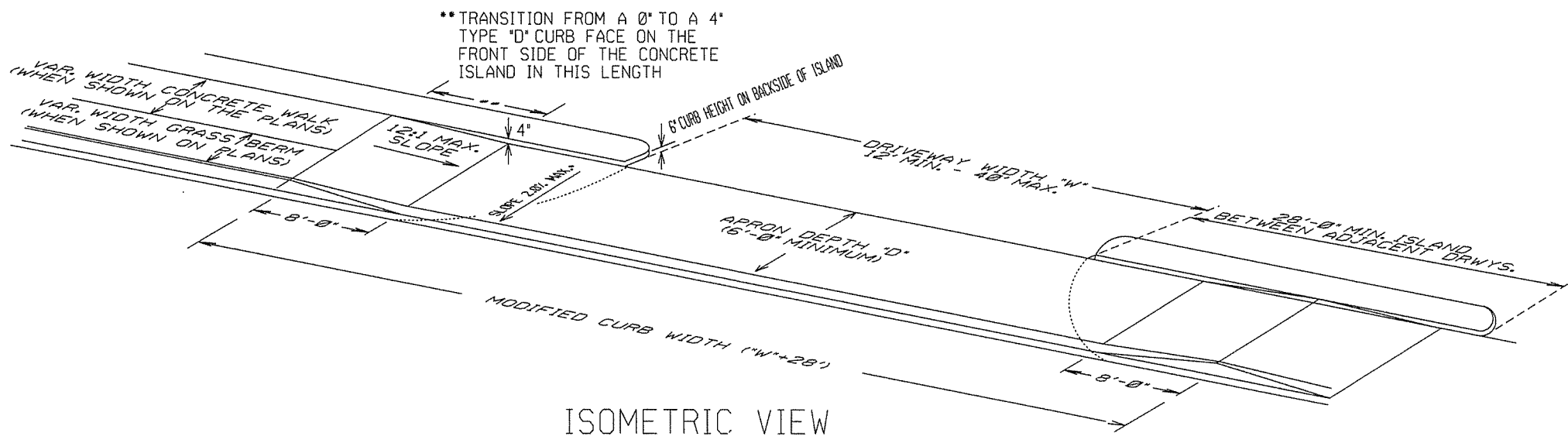
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

STANDARD DRAWING CDP-1

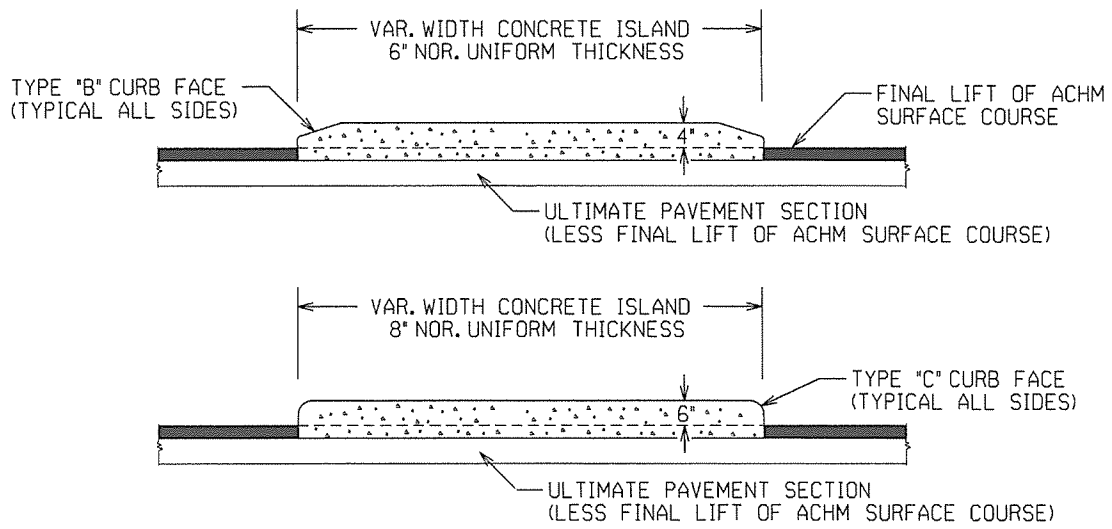


PLAN VIEW

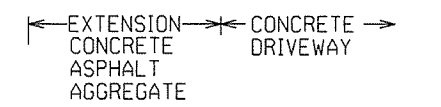


ISOMETRIC VIEW

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED.
NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES
SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB
FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE
ITEM "CONCRETE ISLAND".



CURBED ISLANDS FOR CHANNELIZATION

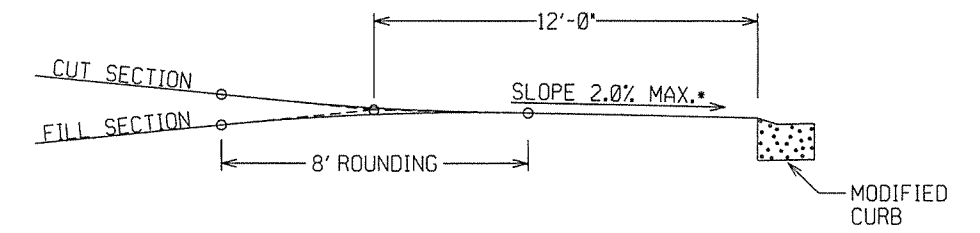


EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

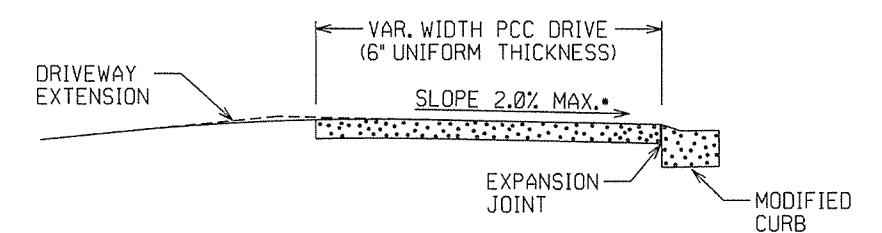
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS.
THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER,
SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU
OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL
COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

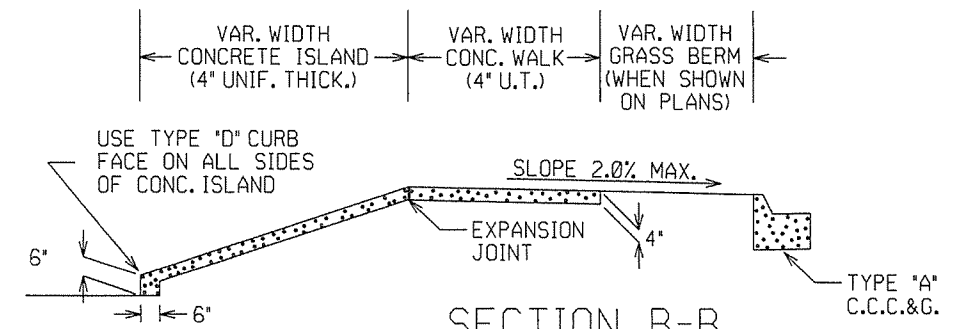


DRIVEWAY VERTICAL ALIGNMENT DETAILS

* NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY
FROM THE ROADWAY UNLESS APPROVED
BY THE ENGINEER.



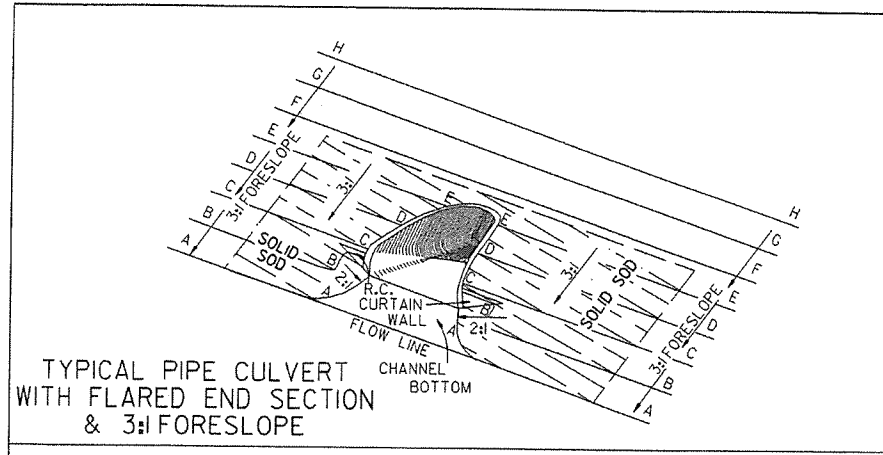
SECTION A-A



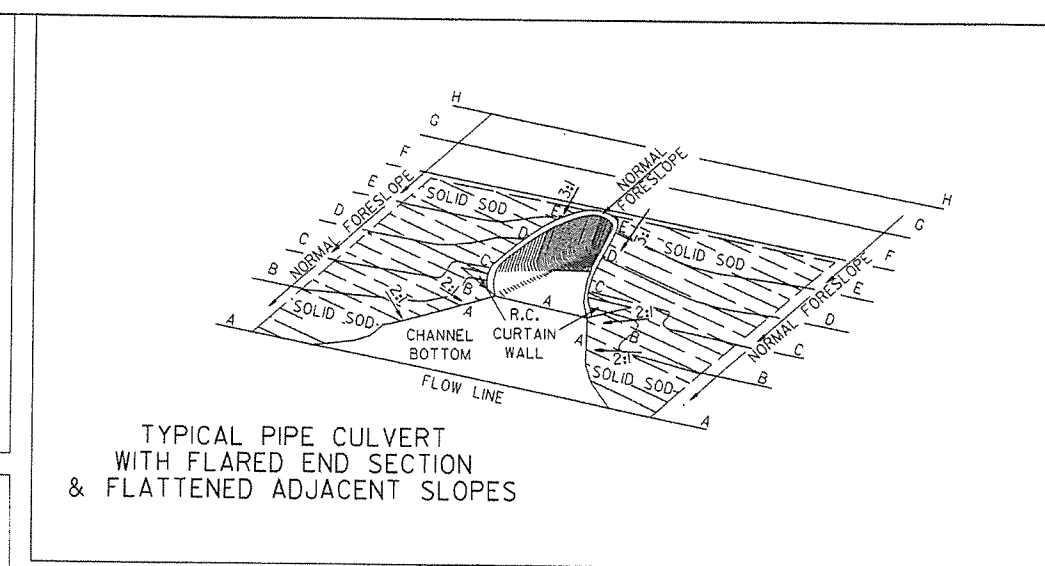
SECTION B-B
CURBED ISLAND BEHIND WALK

DATE	REV	DATE	FILMED	DESCRIPTION
2-27-14				REVISED PLAN & ISOMETRIC VIEW
11-29-07				ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05				REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02				ADDED ISLAND DETAILS & NOTES
3-30-00				REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98				REVISED NOTES
11-18-98				REDRAWN AND REISSUED

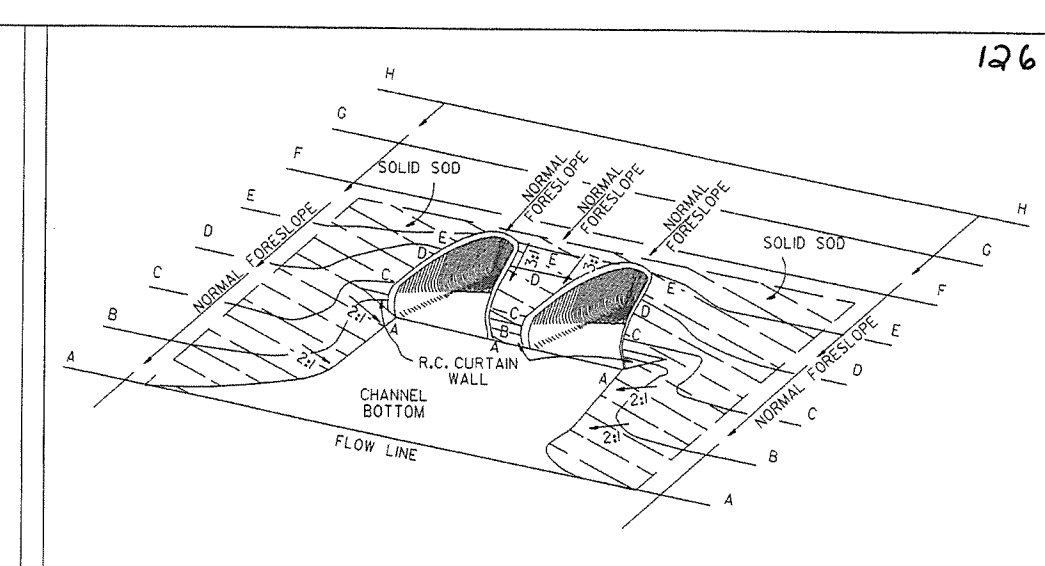
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



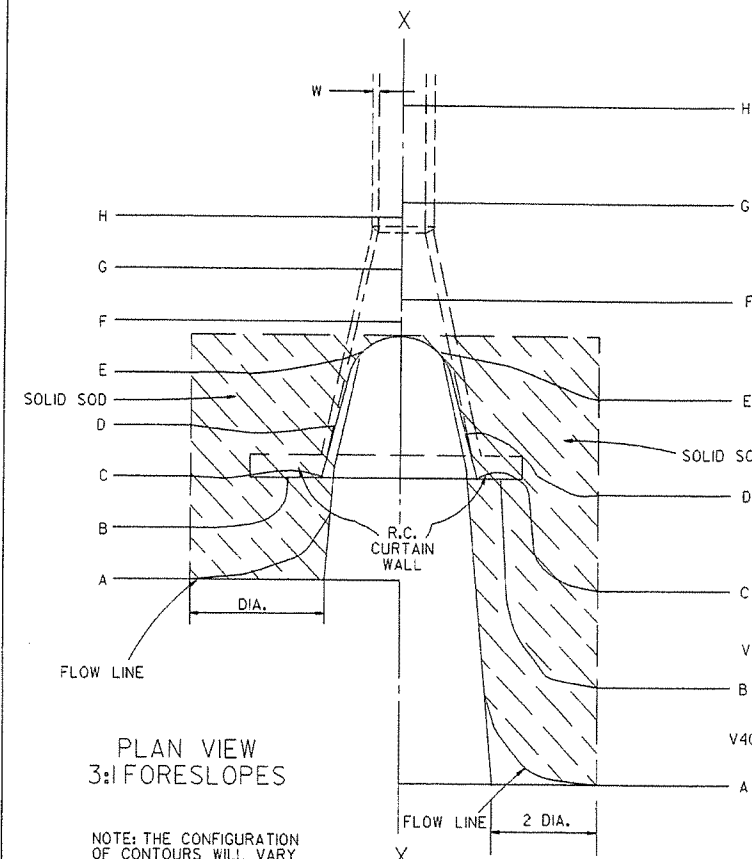
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3:1 FORESLOPES

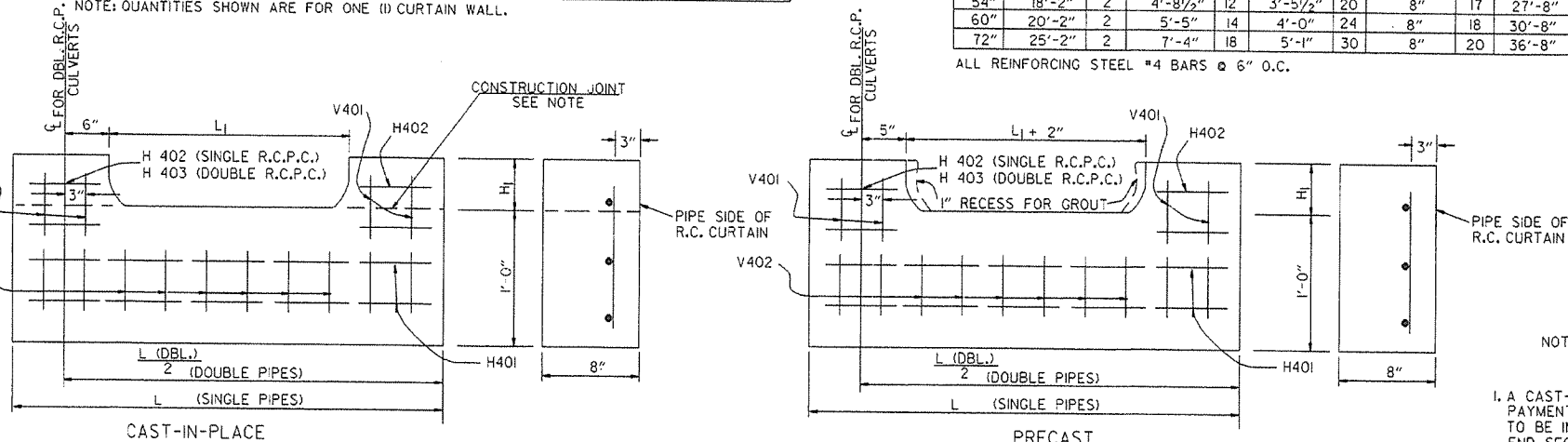
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

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

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



R.C. CURTAIN WALL DETAILS

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

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

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
18"	7'-8"	2	1'-11/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	12	8"	18
30"	10'-8"	2	2'-4 1/2"	4	1'-11 1/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11 1/2"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-8 1/2"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

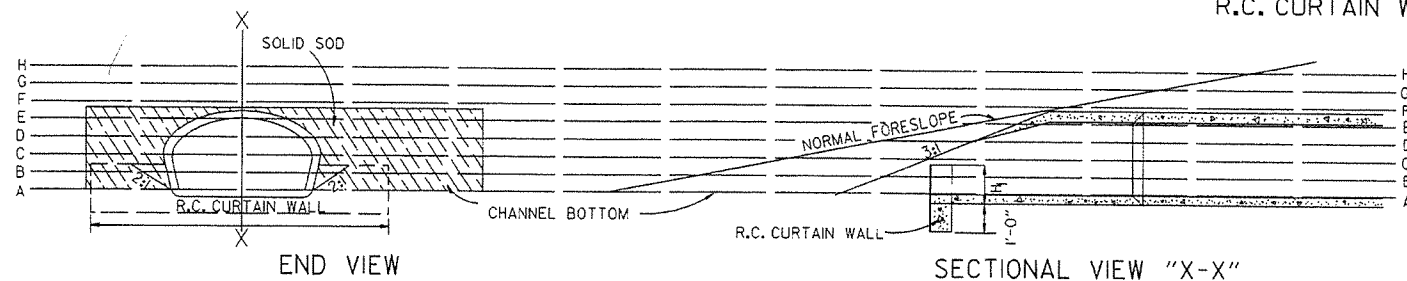
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.					
	3:1		4:1		6:1		3:1		4:1		6:1	
	SQ. YDS.						SQ. YDS.					
18"	5	7	12	6	8	13	5	7	12	6	8	13
24"	8	12	19	9	13	20	8	12	19	9	13	20
30"	13	18	29	14	19	30	13	18	29	14	19	30
36"	17	26	41	18	28	43	17	26	41	18	28	43
42"	23	35	55	25	37	57	23	35	55	25	37	57
48"	29	46	68	31	48	70	29	46	68	31	48	70
54"	35	57	85	37	59	87	35	57	85	37	59	87
60"	45	62	104	48	65	107	45	62	104	48	65	107
72"	64	92	156	67	95	159	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

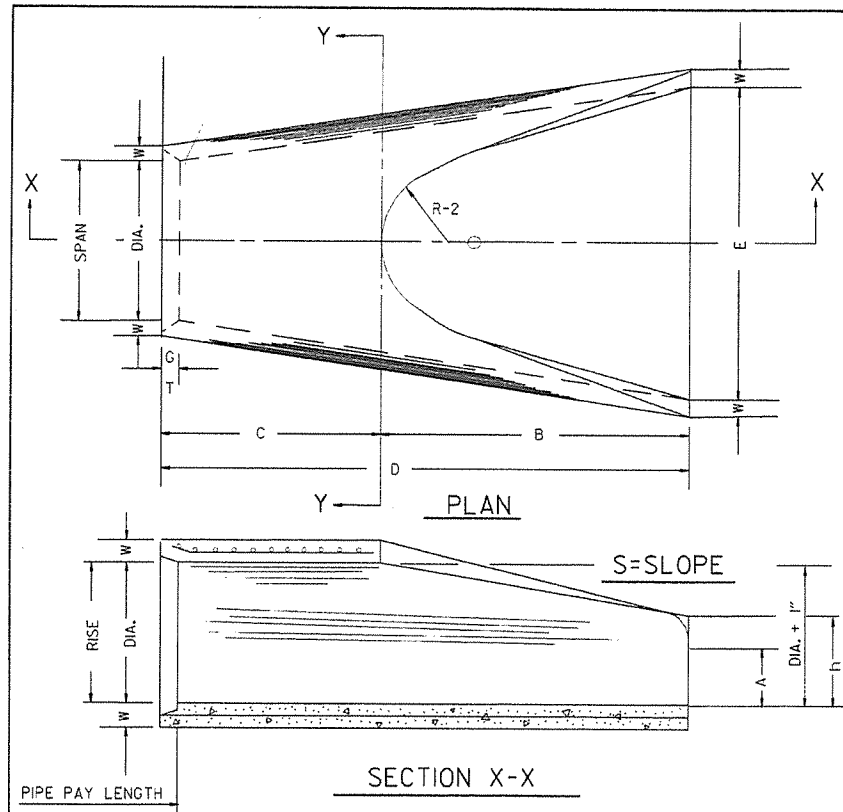
- GENERAL NOTES
- A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
 - CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
 - WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

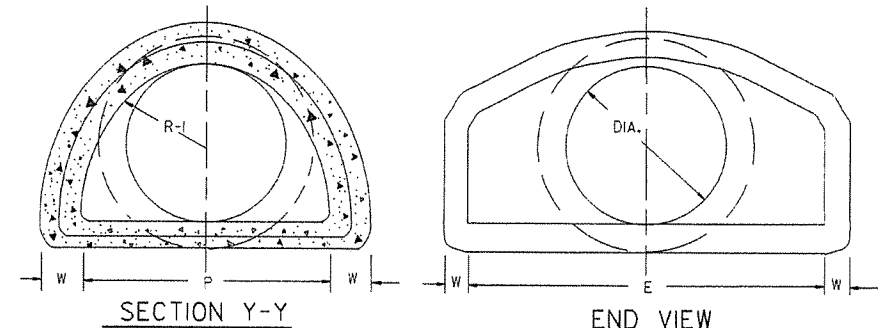
10-18-98	ADDED NOTE TO SOLID SODDING		ARKANSAS STATE HIGHWAY COMMISSION
10-12-95	CORRECTED SPELLING	10-18-98	
11-3-94	ADDED GENERAL NOTE NO. 4		
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.		
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES		
5-15-80	ADDED PRECAST WALL & GENERAL NOTES		
10-2-72	REVISED AND REDRAWN		
DATE	REVISION	FILMED	STANDARD DRAWING FES-1



SECTION X-X
END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 3/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 1/8"	24 5/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-5"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 5/8"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65 1/2"	33 1/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 5/8"	24"	5"	13250	4'-6"

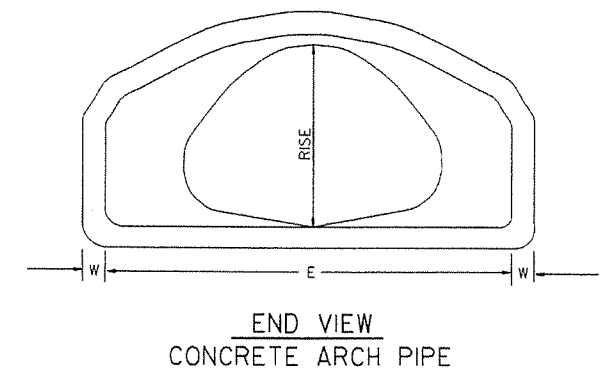


SECTION Y-Y
END VIEW
NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

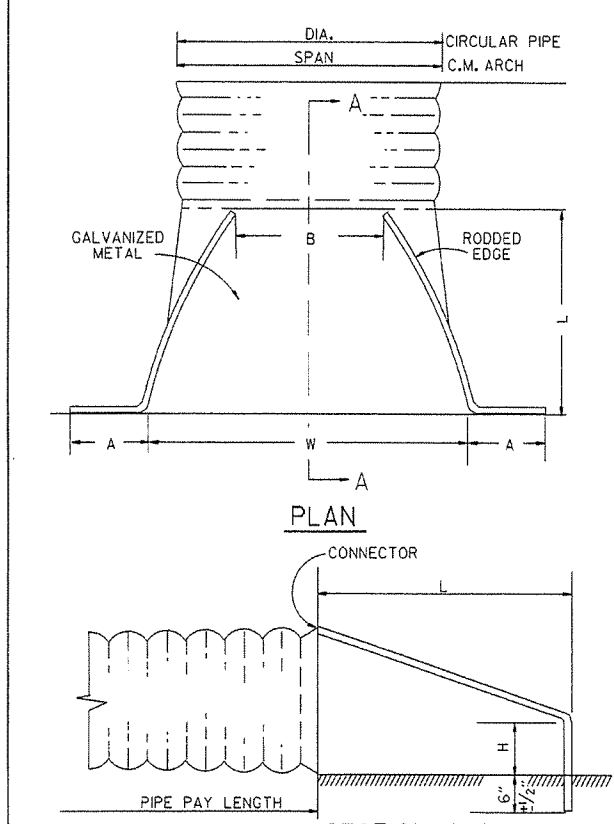
ARCH PIPE

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

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

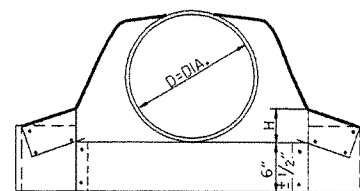


END VIEW
CONCRETE ARCH PIPE

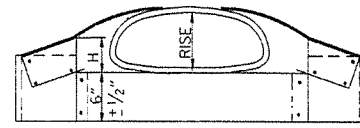


SECTION A-A
END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

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



CIRCULAR PIPE



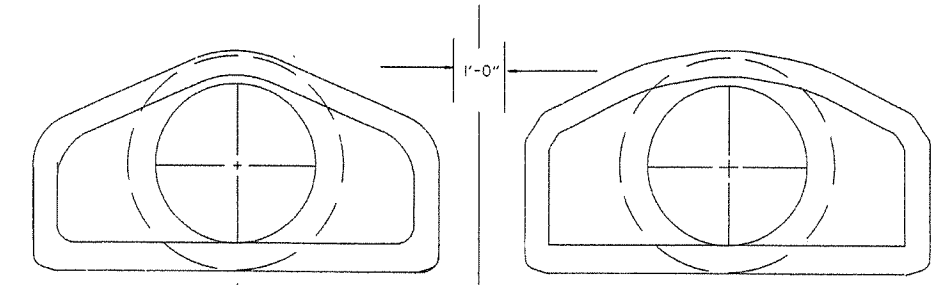
C.M. ARCH PIPE

CIRCULAR PIPE

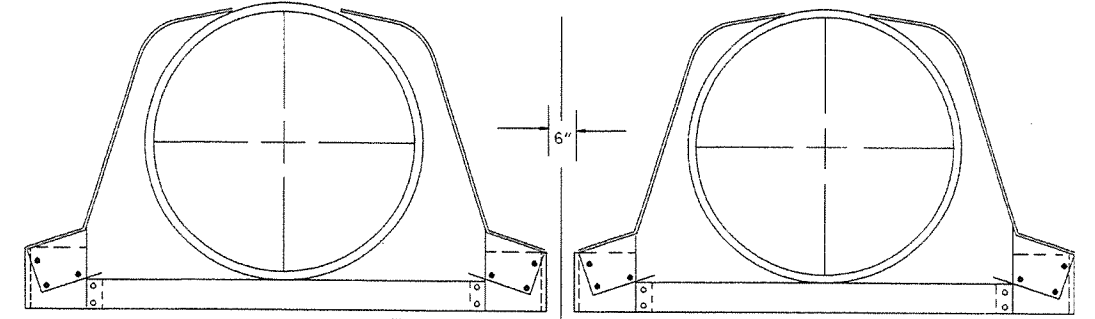
D. DIA.	GAUGE	A ±	B. MAX.	H ±	L ±	W ±	S
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	12	78	90	2 1/2:1
54	12	18	30	12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

C.M. ARCH PIPE

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

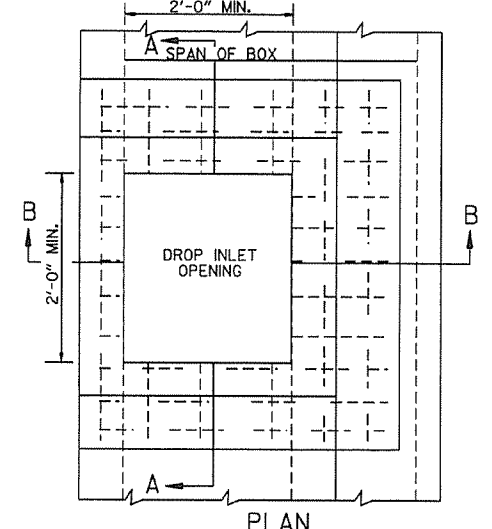
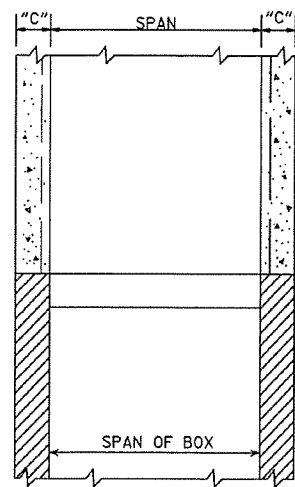


MULTIPLE R.C. PIPE CULVERTS



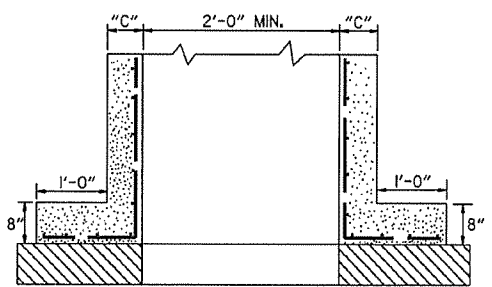
MULTIPLE C.M. PIPE CULVERTS

10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	FLARED END SECTION
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74	
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73	
10-2-72	REVISED AND REDRAWN	760-10-2-72	STANDARD DRAWING FES-2
DATE	REVISION	FILE NO.	

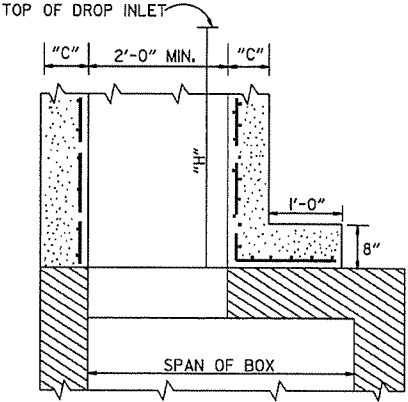


SECTION B-B

PLAN

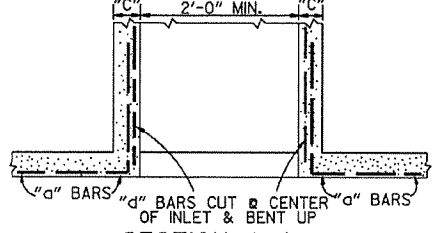


SECTION A-A

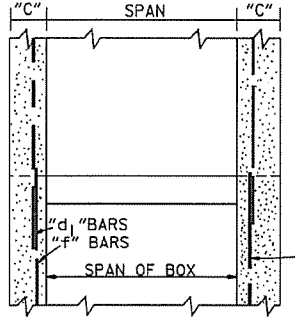


SECTION B-B

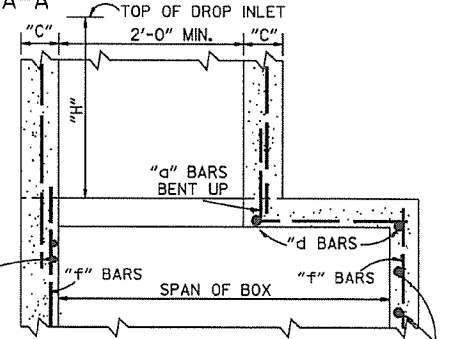
METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



SECTION A-A



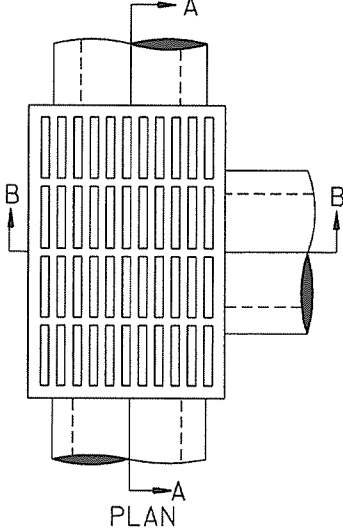
SECTION B-B



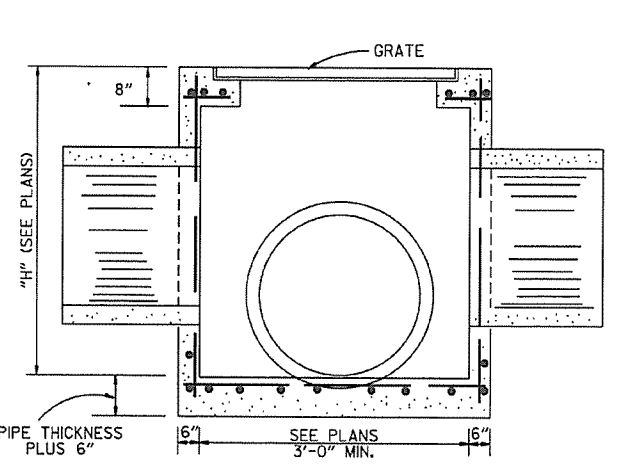
SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.



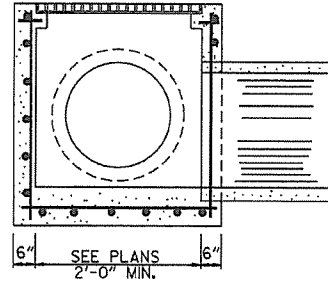
PLAN



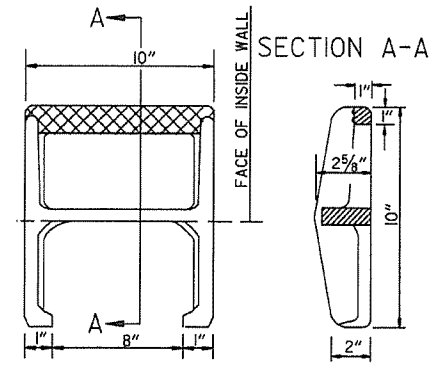
SECTION A-A

DROP INLET (TYPE E)

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



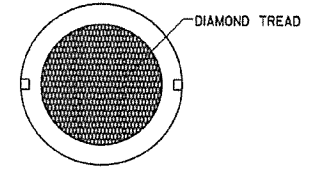
SECTION B-B



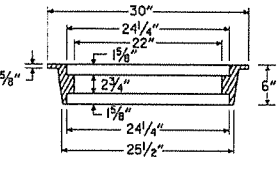
APPROX. WEIGHT = 11 LBS. (CAST IRON)

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

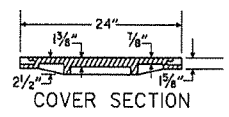
DETAIL OF STEP FOR DROP INLET



COVER FACE



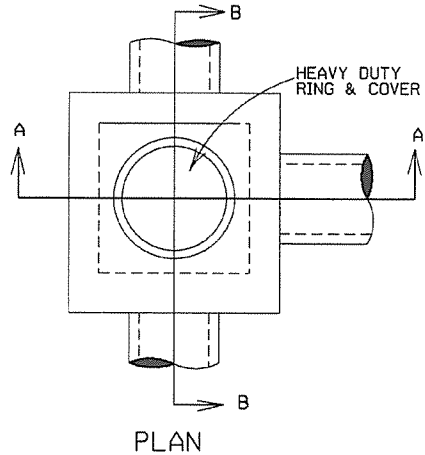
RING SECTION



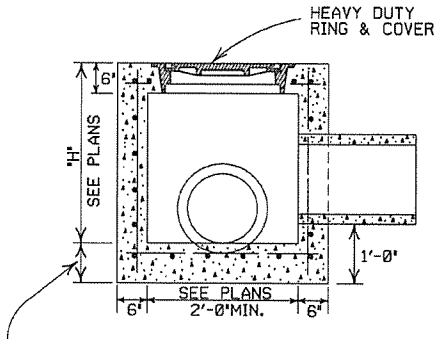
COVER SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



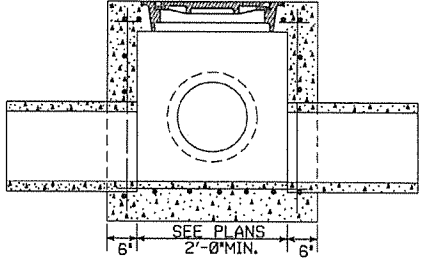
PLAN



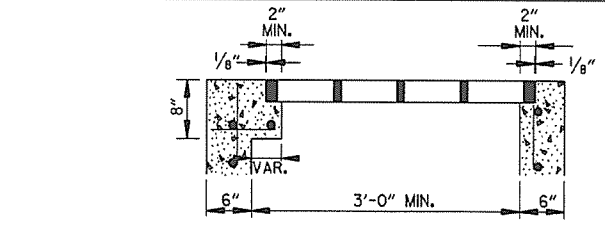
SECTION A-A

JUNCTION BOX (TYPE E)

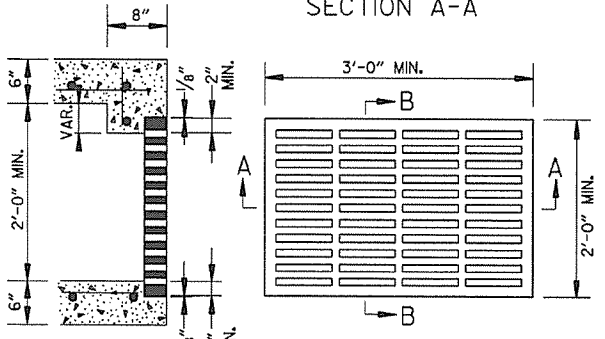
NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B



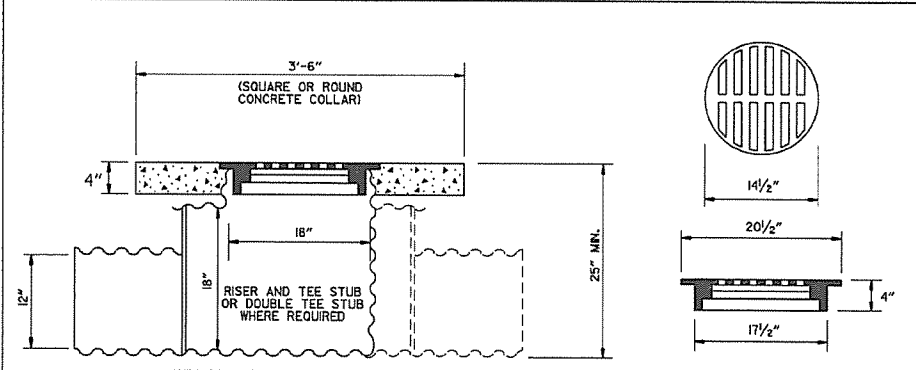
SECTION A-A



SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET



DETAIL OF YARD DRAIN

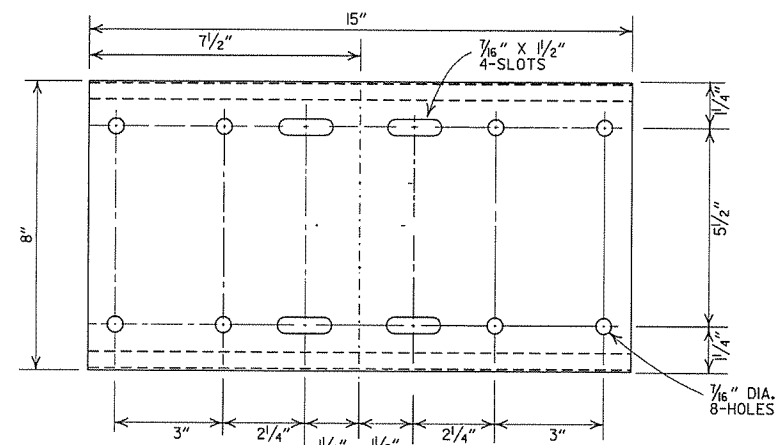
DATE	REV.	REVISION	DATE FILMED
11-16-01		ADDED NOTE 10	
1-12-00		REVISED HEAVY DUTY RING & COVER	
7-02-98		CHANGED GRATE DETAIL, DELETED DITYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97		ADDED DIMENSION TO TYPE IV-A	
10-18-96		ADDED DETAIL OF YARD DRAIN	
8-15-91		DELETE TYPE IV GRATE	
7-15-88		REVISED STEP DETAIL	
5-20-83		REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83		ADDED GENERAL NOTE NO. 4	
3-2-81		ADDED TYPE IV-A GRATE	
5-22-74		DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72		REVISED AND REDRAWN	

- GENERAL NOTES:
- ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
 - STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
 - EXPANSION JOINT MATERIAL SHALL BE 3/4" PREFORMED FIBER.
 - GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
 - GRATE AND FRAME SHALL NOT BE PAINTED.
 - GRATE SHALL BE BICYCLE SAFE.
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

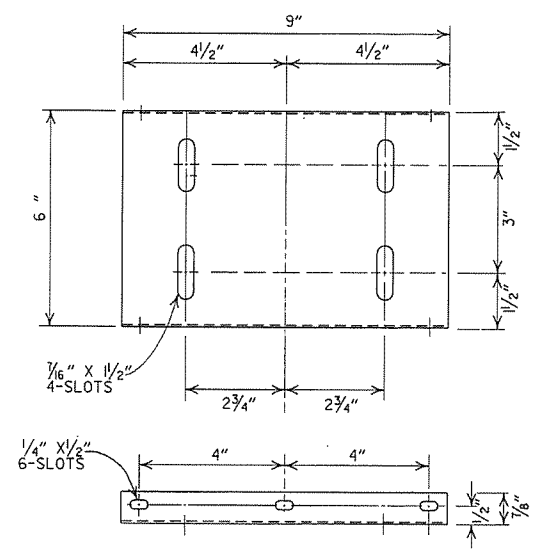
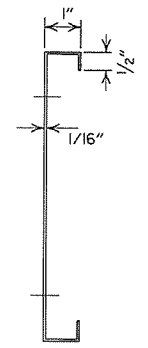
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

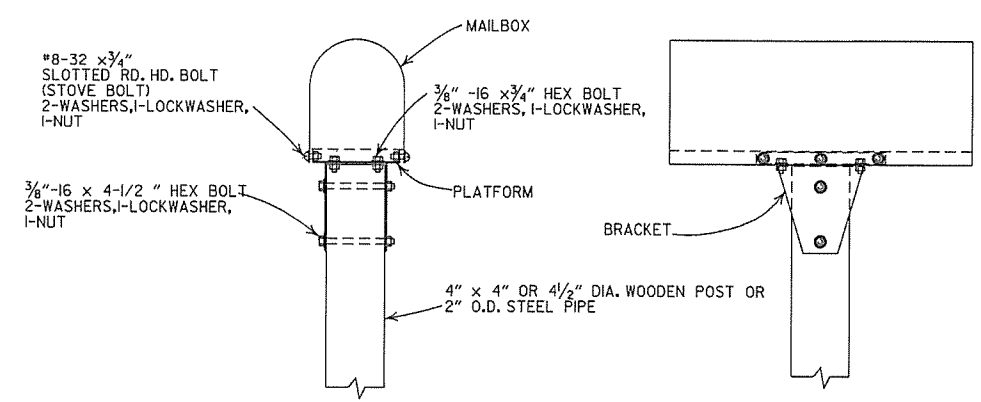
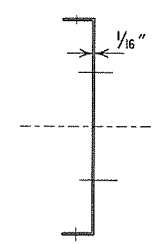
STANDARD DRAWING FPC-9



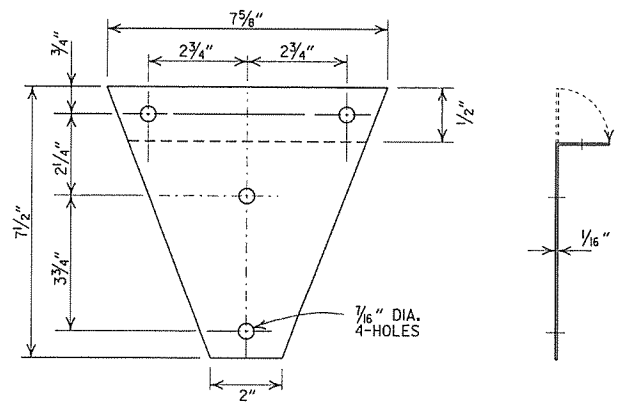
SHELF



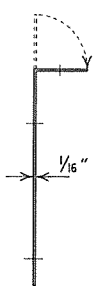
PLATFORM



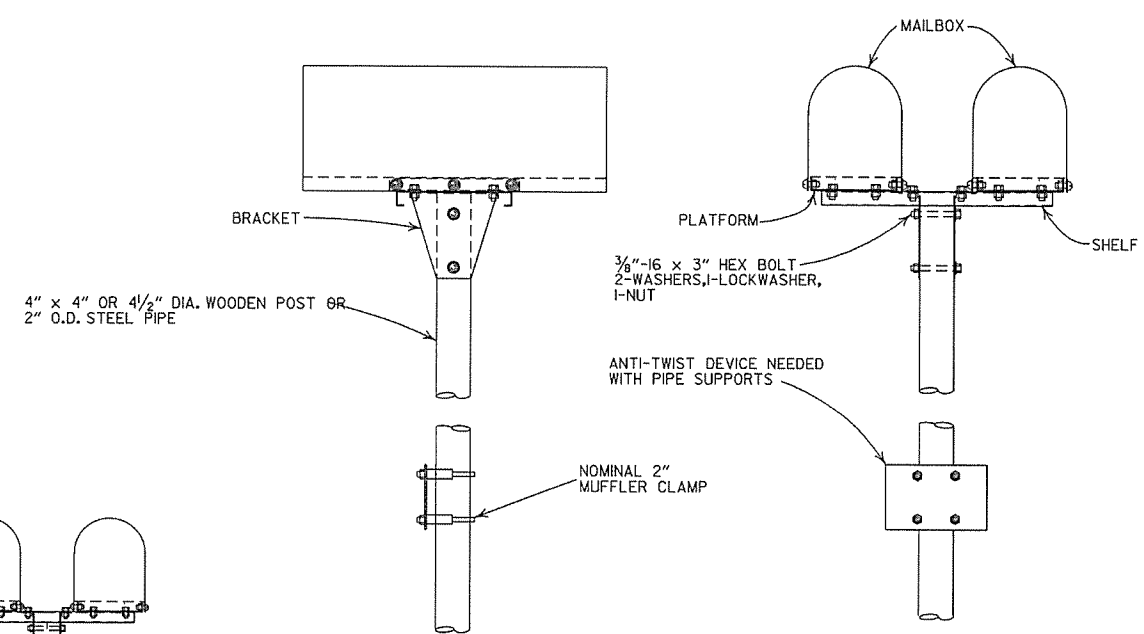
SINGLE INSTALLATION



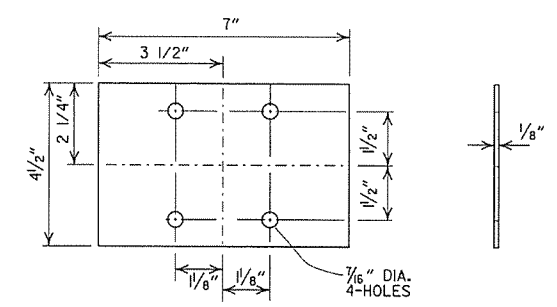
BRACKET



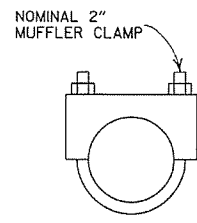
- GENERAL NOTES
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 3/4" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X 3/4" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
 4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
 5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
 6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



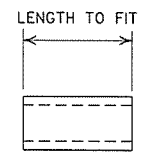
DOUBLE INSTALLATION



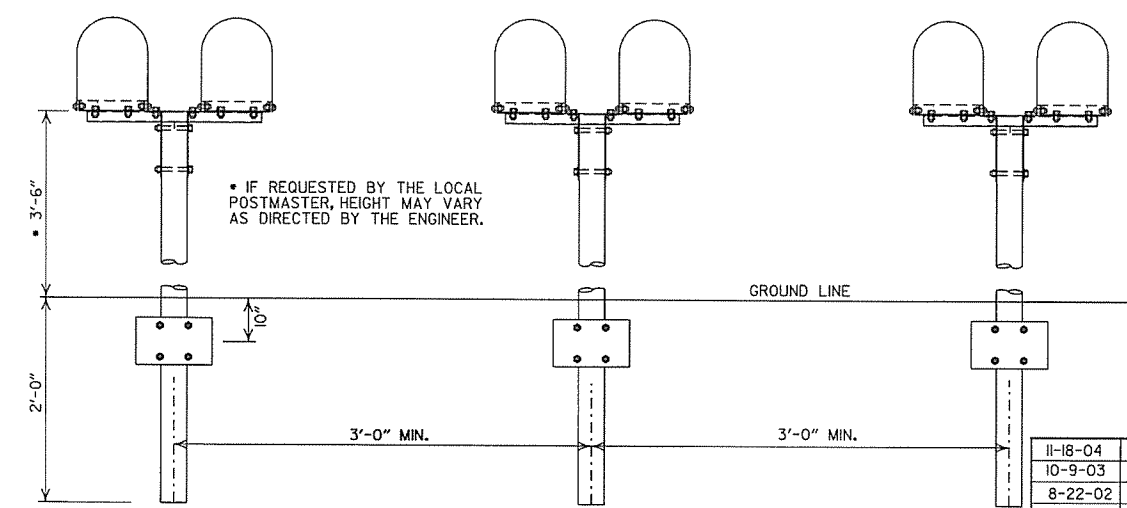
ANTI-TWIST PLATE



CLAMP



SPACER



SPACING FOR MULTIPLE POST INSTALLATION

DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	120-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA. INCHES	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
15	18	18	11	11
18	22	22	13 1/2	14
21	26	26	15 1/2	16
24	28 1/2	29	18	18
30	36 1/4	36	22 1/2	23
36	43 3/8	44	26 5/8	27
42	51 1/8	51	31 1/16	31
48	58 1/2	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77 1/2	77
108	138	138	87 1/8	87
120	154	154	96 7/8	97
132	168 3/4	169	106 1/2	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

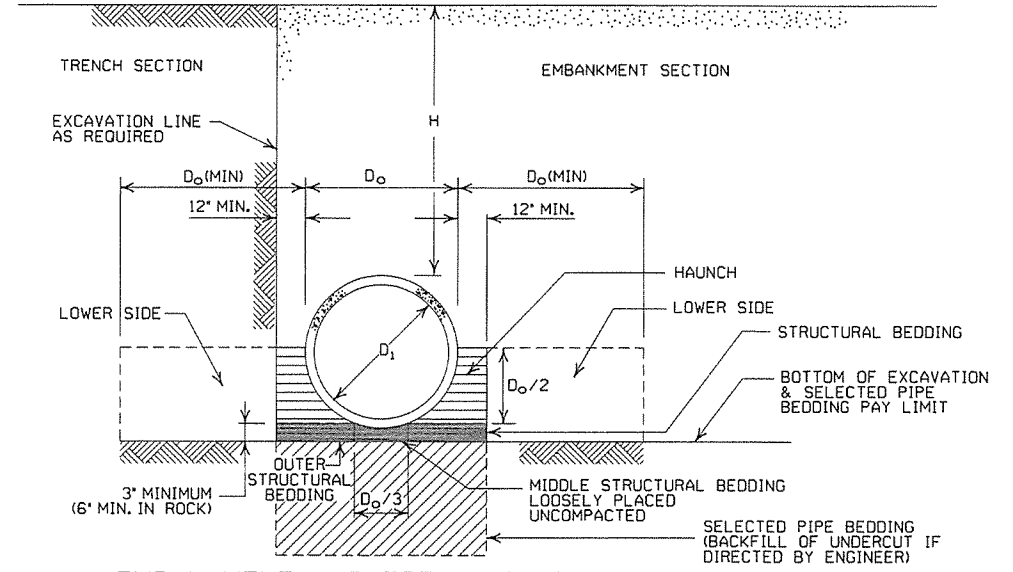
NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

- LEGEND -

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

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

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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION			
CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING			
STANDARD DRAWING PCC-1			
2-27-14	REVISED GENERAL NOTE 1.		
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS		
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE		
3-30-00	REVISED INSTALLATIONS		
11-06-97	ISSUED		
DATE	REVISION	DATE FILMED	

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CONSTRUCTION SEQUENCE

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

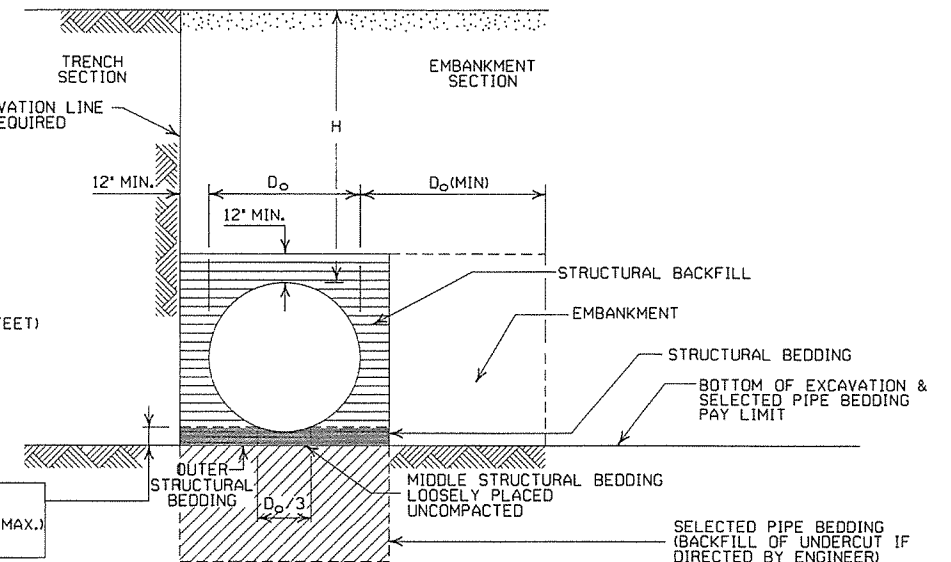
NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

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

③ SM-3 WILL NOT BE ALLOWED.

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/8" x 1/2" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" x 1" OR 5" x 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS, UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER. AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)			
				INSTALLATION			INSTALLATION			
				TYPE 1	TYPE 1		TYPE 1	TYPE 1		
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
15	17x13	3	0.064	2	15	0.060	2	15		
18	21x15	3	0.064	2	15	0.060	2	15		
21	24x18	3	0.064	2,25	15	0.060	2,25	15		
24	28x20	3	0.064	2,5	15	0.075	2,5	15		
30	35x24	3	0.079	3	12	0.075	3	12		
36	42x29	3 1/2	0.079	3	12	0.105	3	12		
42	49x33	4	0.079	3	12	0.105	3	12		
48	57x38	5	0.109	3	13	0.135	3	13		
54	64x43	6	0.109	3	14	0.135	3	14		
60	71x47	7	0.138	3	15	0.135	3	14		
66	77x52	8	0.168	3	15	0.164	3	15		
72	83x57	9	0.168	3	15					
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
			INSTALLATION				INSTALLATION			
			TYPE 2		TYPE 1		TYPE 2		TYPE 1	
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1



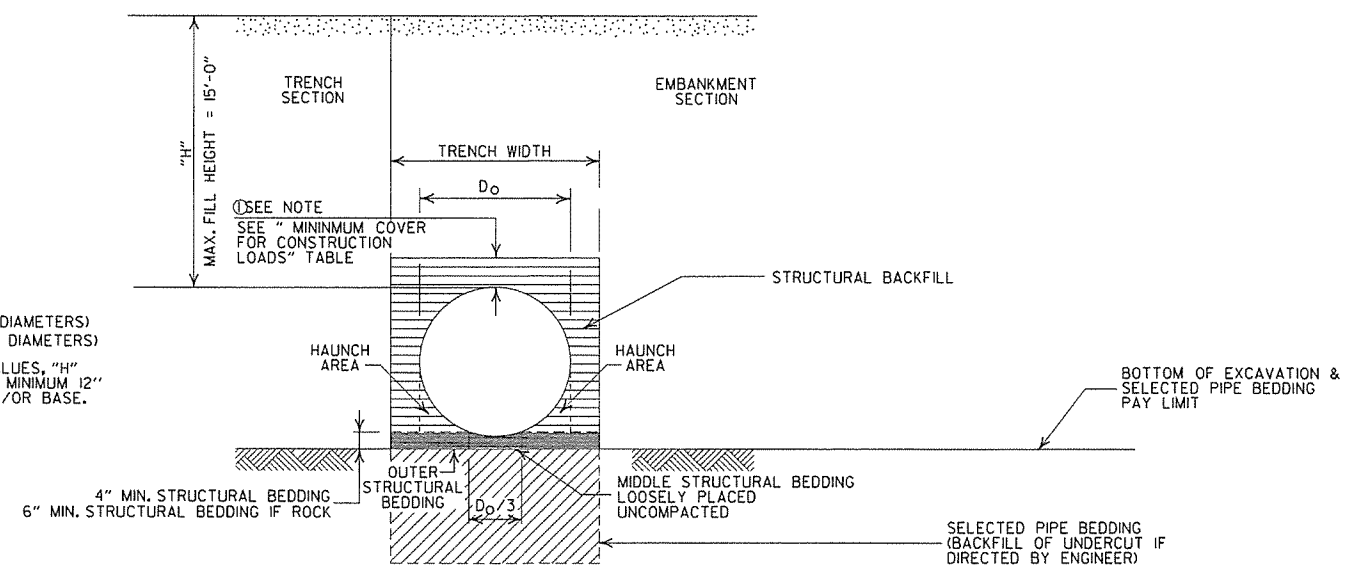
INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
 - SM3 WILL NOT BE ALLOWED.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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

CONSTRUCTION SEQUENCE

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

- LEGEND -

- H = FILL HEIGHT (FT.)
- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Symbol] = STRUCTURAL BACKFILL MATERIAL
- [Symbol] = UNDISTURBED SOIL

GENERAL NOTES

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

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

ARKANSAS STATE HIGHWAY COMMISSION
PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)
STANDARD DRAWING PCP-1

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

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

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/2 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

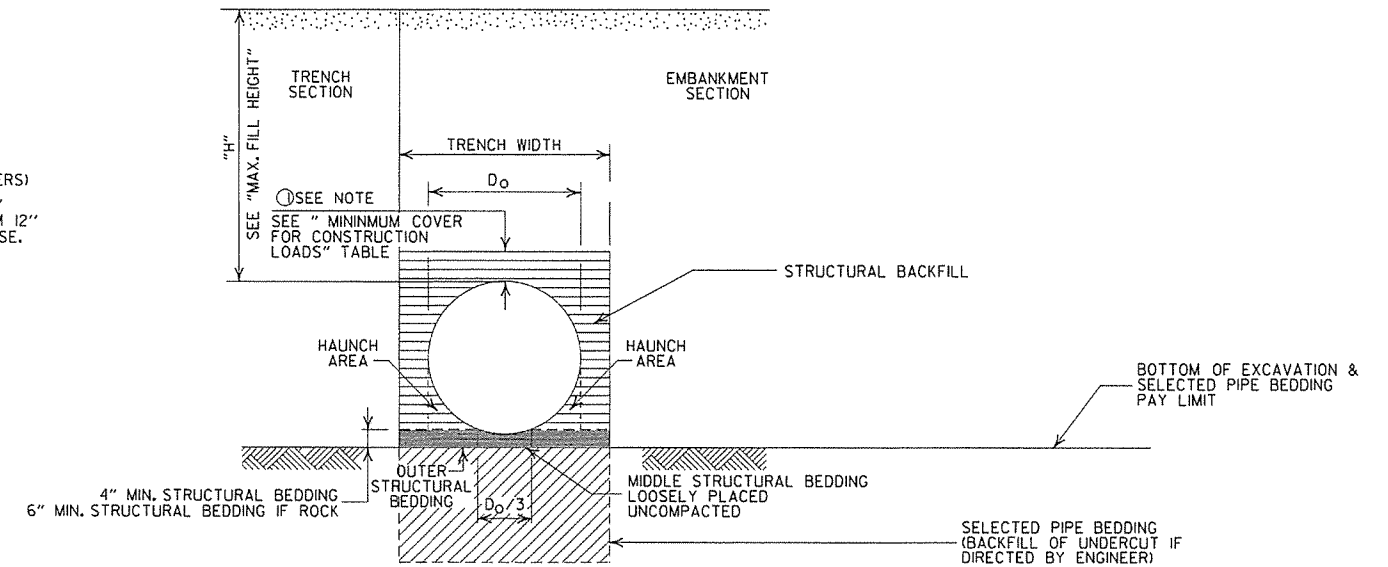
MULTIPLE INSTALLATION OF PVC PIPES

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

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

- LEGEND -

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

==== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

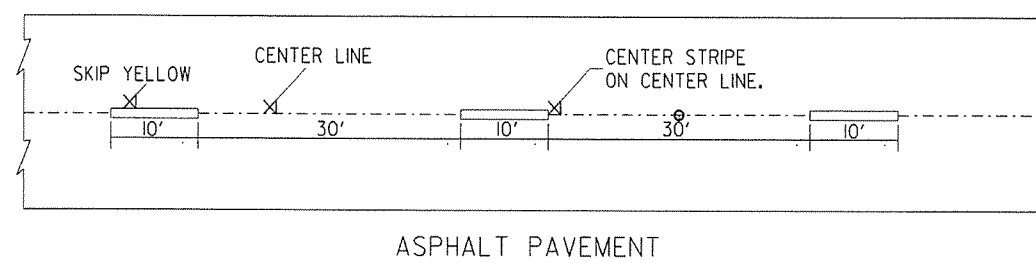
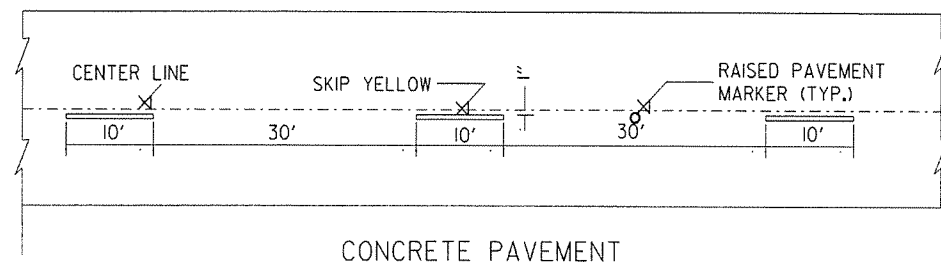
GENERAL NOTES

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

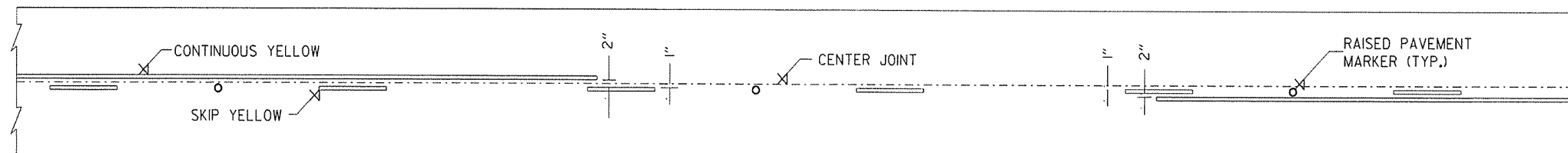
ARKANSAS STATE HIGHWAY COMMISSION		
PLASTIC PIPE CULVERT (PVC F949)		
STANDARD DRAWING PCP-2		
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	
DATE	REVISION	DATE FILMED

NOTES:

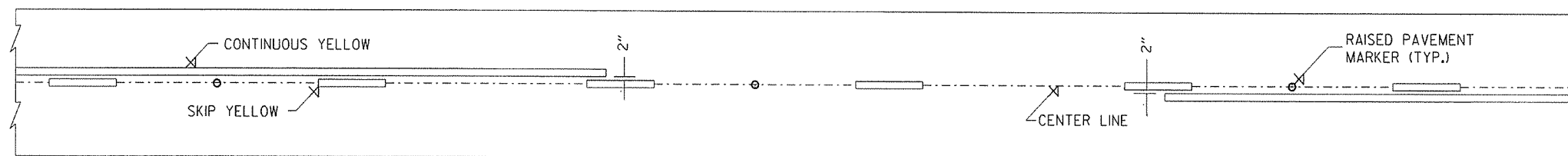
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



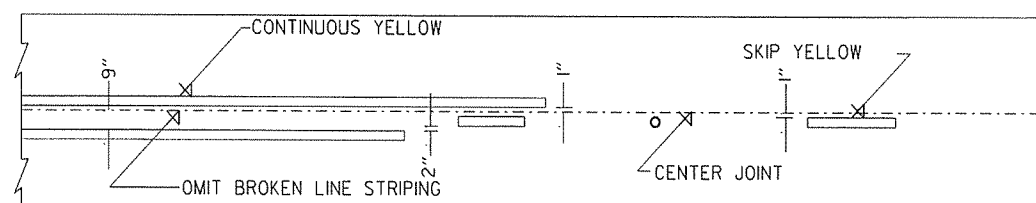
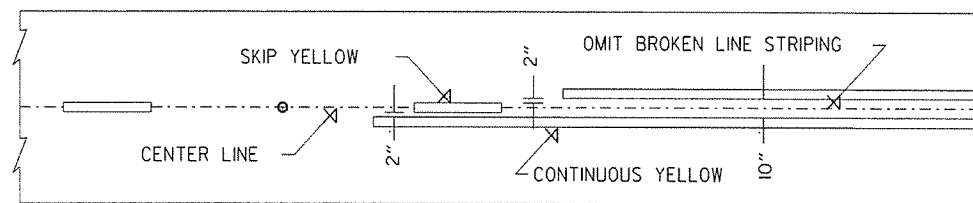
BROKEN LINE STRIPING



SOLID LINE STRIPING ON CONCRETE PAVEMENT



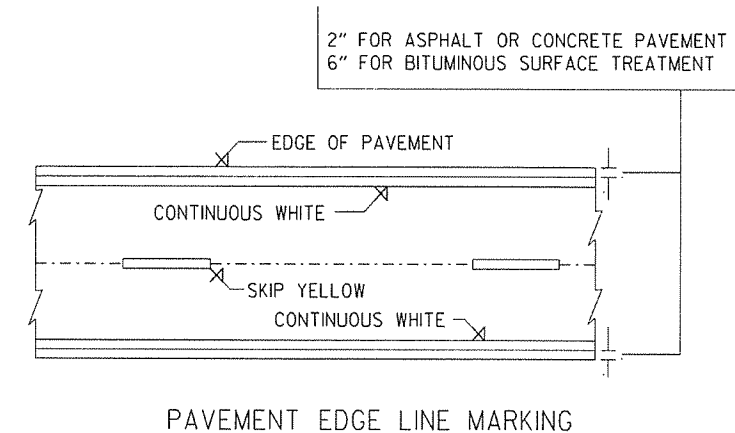
SOLID LINE STRIPING ON ASPHALT PAVEMENT



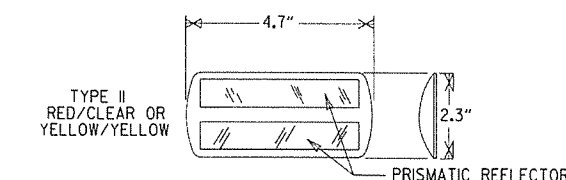
ASPHALT PAVEMENT

CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES



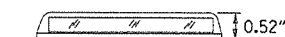
PAVEMENT EDGE LINE MARKING



TYPE II RED/CLEAR OR YELLOW/YELLOW

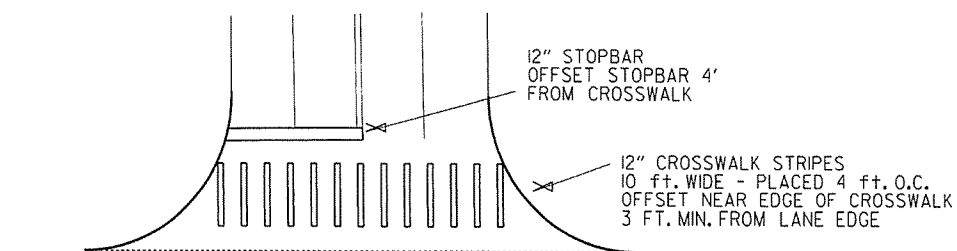
PRISMATIC REFLECTOR

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



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

NOTE: DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.



CROSSWALK AND STOPBAR DETAILS

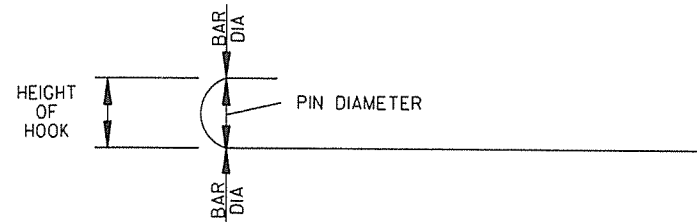
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PAVT. MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAVT. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION	
PAVEMENT MARKING DETAILS	
STANDARD DRAWING PM-1	

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

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2 1/4"	4"
4	3"	4 1/2"
5	3 3/4"	5"
6	4 1/2"	6"
7	5 1/4"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2 3/4 INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



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

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

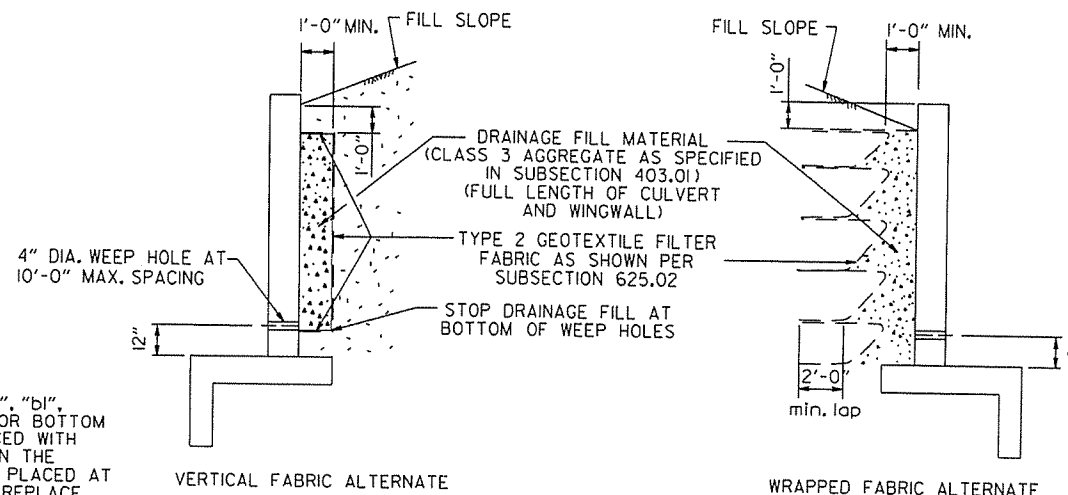
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI. REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

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

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

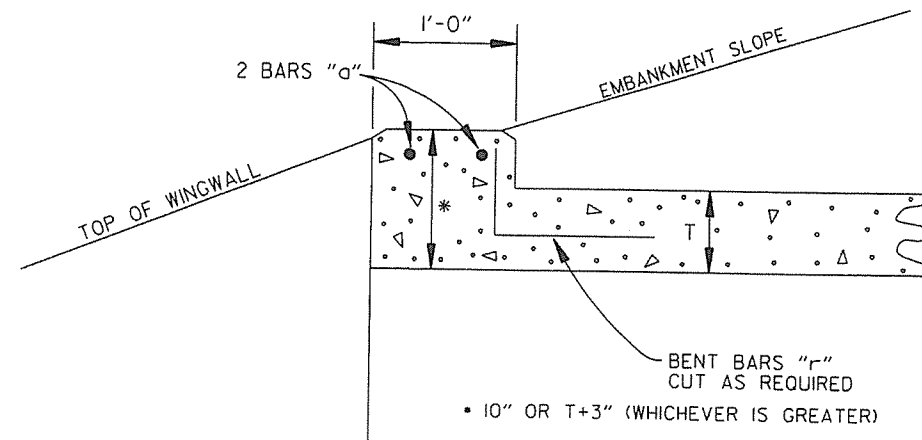
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSIMANUAL SHALL BE MINUS ZERO TO PLUS 1/2 INCH.

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

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

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



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

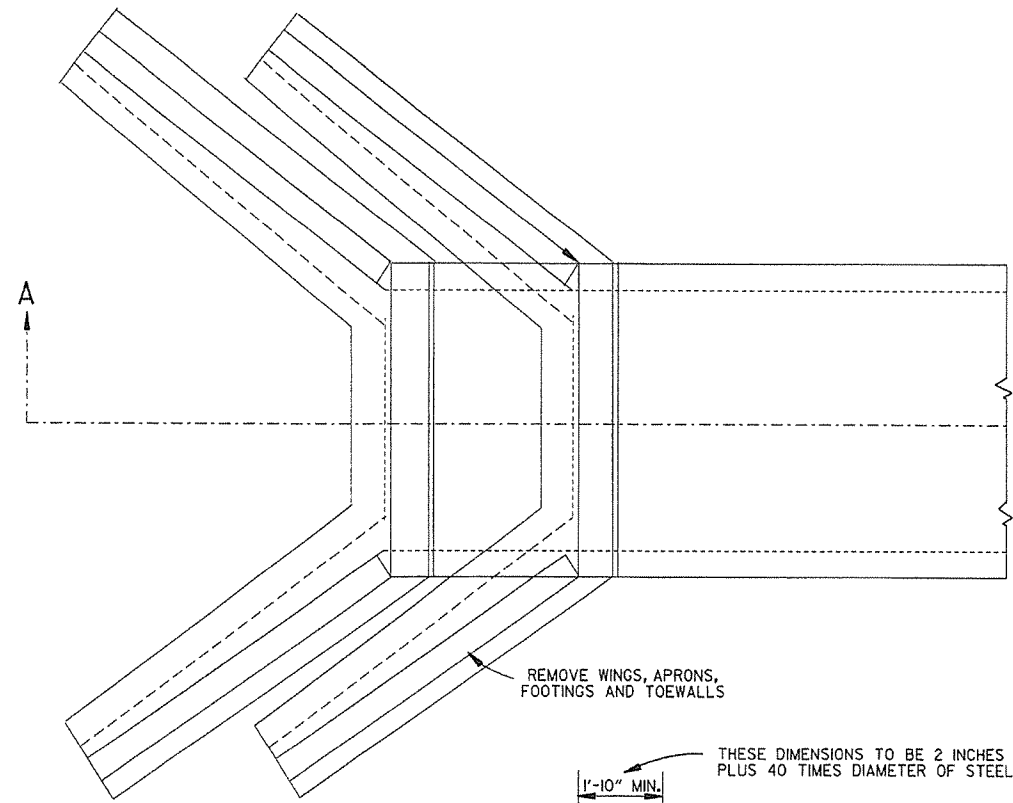
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

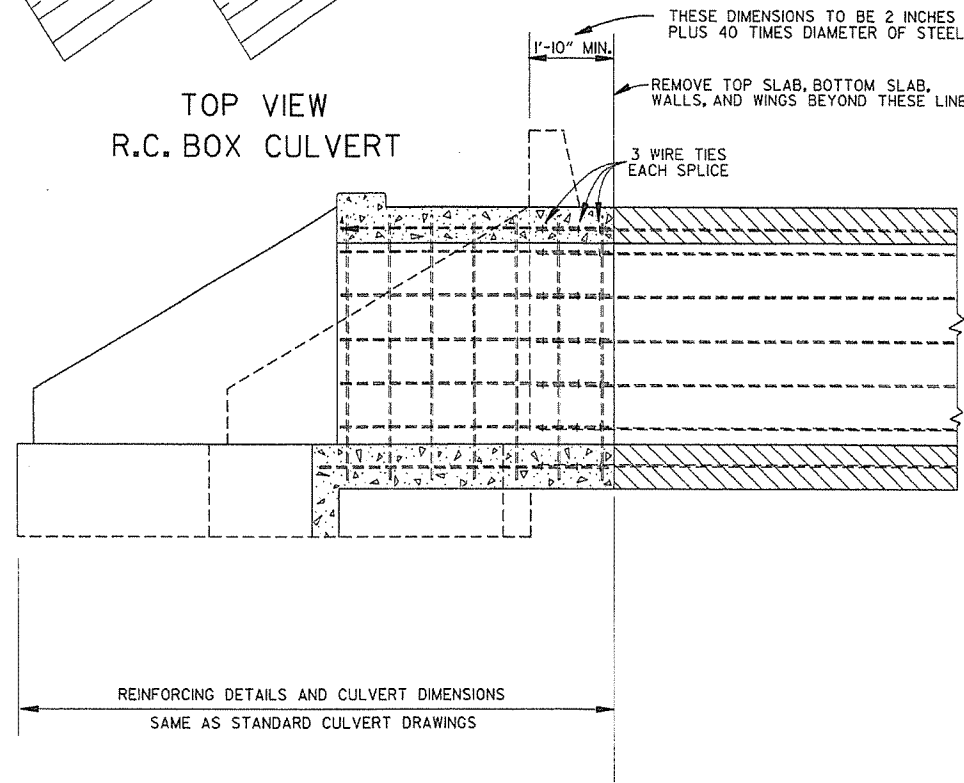
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

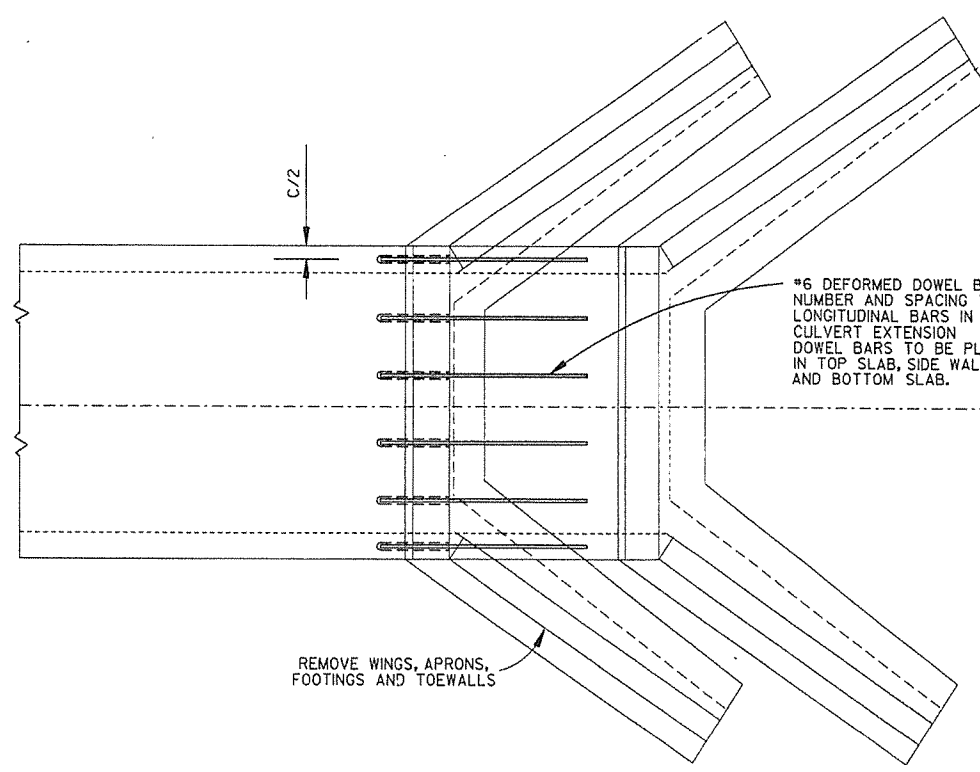
STANDARD DRAWING RCB-1



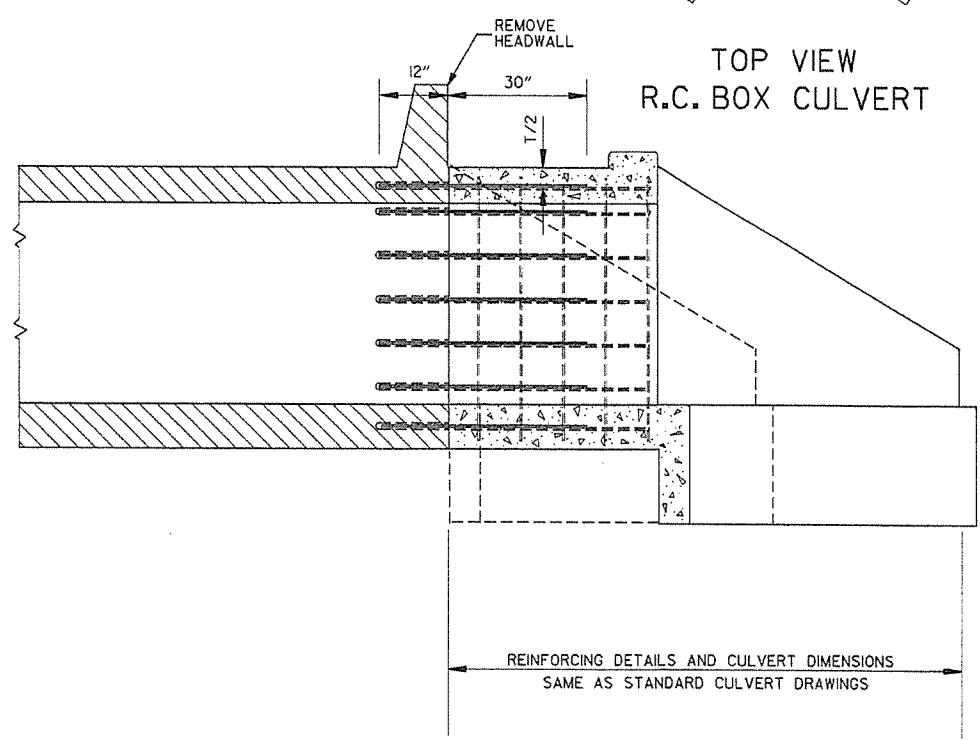
TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 1



TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 2

GENERAL NOTES

USE FOR METHOD

1 THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.

1 IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.

1&2 REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.

1&2 ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

2 MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.

2 DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.

1&2 THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2, REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.
SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

			ARKANSAS STATE HIGHWAY COMMISSION
			METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS
			STANDARD DRAWING RCB-3
10-12-95	CHANGED DRAWING * FROM I44-A		
4-1-93	ADDED GENERAL NOTE		
10-1-92	ADDED ALT. METHOD OF EXTENSION		
11-30-89	REDRAWN		
1-4-83	ELIMINATED CONCRETE CLASS		
12-20-56	RETRACED		
DATE	REVISION	DATE	FILM

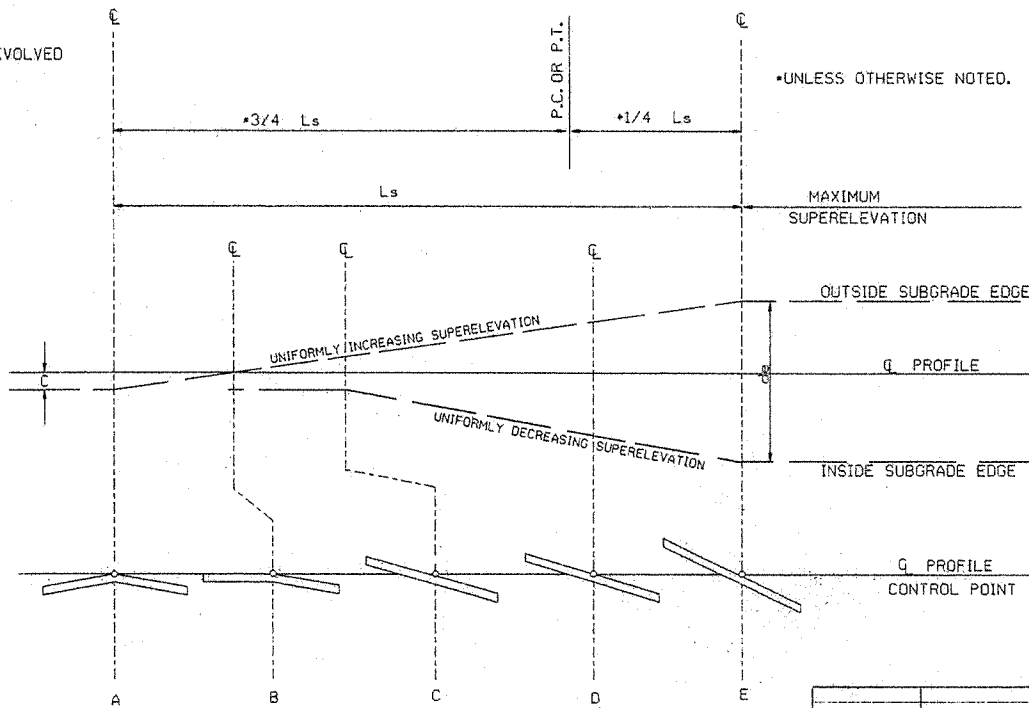
SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		70 MPH	
	Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)	
	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE
0° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 00'	R.C.		0.028		0.037		0.043		0.049		0.055	
2° 15'	R.C.		0.031		0.041		0.048		0.055		0.062	
2° 30'	R.C.		0.034		0.045		0.053		0.061		0.070	
2° 45'	R.C.		0.037		0.049		0.058		0.067		0.078	
3° 00'	R.C.		0.040		0.053		0.063		0.072		0.083	
3° 15'	R.C.		0.043		0.057		0.067		0.077		0.088	
3° 30'	R.C.		0.046		0.061		0.072		0.082		0.093	
3° 45'	R.C.		0.049		0.065		0.076		0.086		0.098	
4° 00'	R.C.		0.051		0.069		0.080		0.090		0.100	
4° 30'	R.C.		0.056		0.072		0.083		0.093		0.100	
5° 00'	R.C.		0.061		0.078		0.087		0.096		0.100	
5° 30'	R.C.		0.066		0.083		0.091		0.098		0.100	
6° 00'	R.C.		0.070		0.088		0.094		0.098		0.100	
6° 30'	R.C.		0.074		0.092		0.096		0.098		0.100	
7° 00'	R.C.		0.078		0.095		0.098		0.098		0.100	
7° 30'	R.C.		0.081		0.098		0.099		0.098		0.100	
8° 00'	R.C.		0.084		0.100		0.100		0.100		0.100	
8° 30'	R.C.		0.087		0.100		0.100		0.100		0.100	
9° 00'	R.C.		0.089		0.100		0.100		0.100		0.100	
9° 30'	R.C.		0.091		0.100		0.100		0.100		0.100	
10° 00'	R.C.		0.093		0.100		0.100		0.100		0.100	
10° 30'	R.C.		0.095		0.100		0.100		0.100		0.100	
11° 00'	R.C.		0.097		0.100		0.100		0.100		0.100	
11° 30'	R.C.		0.098		0.100		0.100		0.100		0.100	
12° 00'	R.C.		0.099		0.100		0.100		0.100		0.100	
12° 30'	R.C.		0.099		0.100		0.100		0.100		0.100	
13° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
13° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
14° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
14° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
15° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
15° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
16° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
16° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
17° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
17° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
18° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
18° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
19° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
19° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
20° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
20° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
21° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
21° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
22° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
22° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
23° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	
23° 30'	R.C.		0.100		0.100		0.100		0.100		0.100	
24° 00'	R.C.		0.100		0.100		0.100		0.100		0.100	

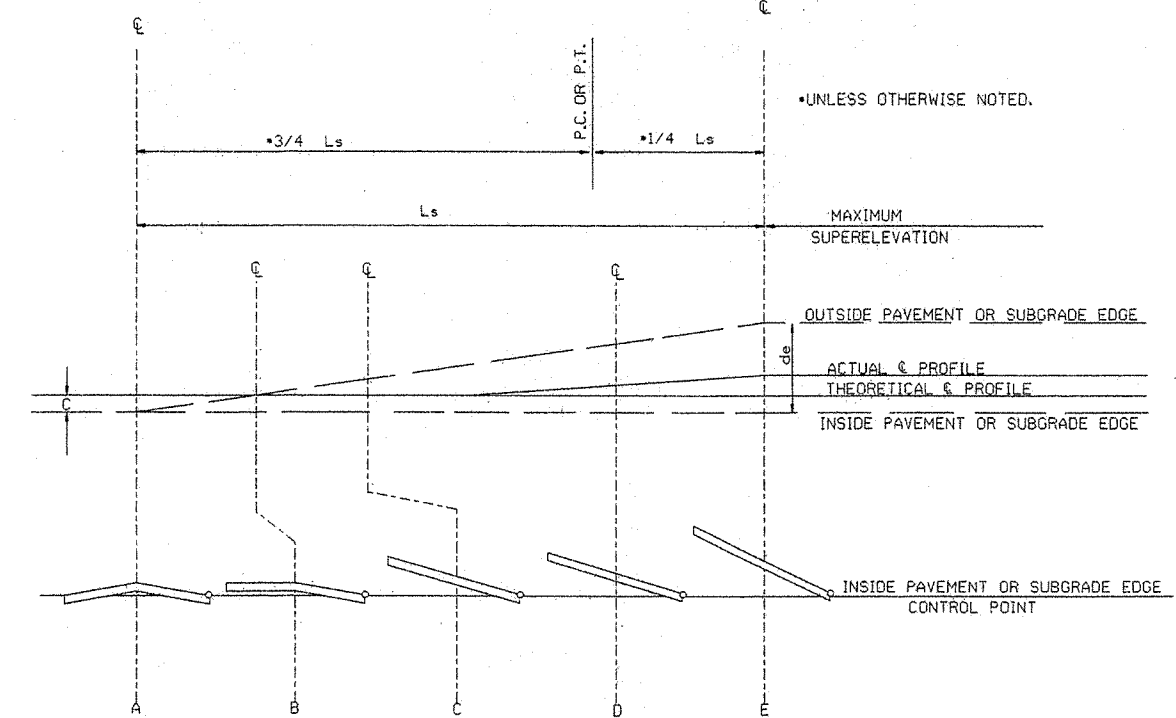
ABBREVIATIONS
 NC - NORMAL CROWN
 RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
 e - RATE OF SUPERELEVATION (FT. PER FT.)
 Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
 L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
 d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE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

- GENERAL NOTES
- ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS.
 - SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
 - LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
 - PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:
 3 LANE UNDIVIDED ----- +20%
 4 LANE UNDIVIDED ----- +50%
 5 LANE UNDIVIDED ----- +80%
 6 LANE UNDIVIDED ----- +100%

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



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE



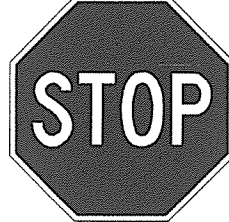
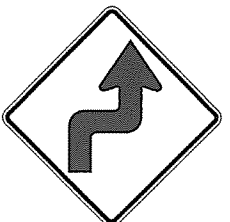
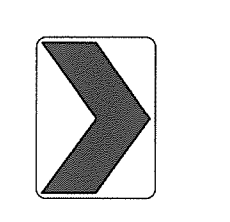

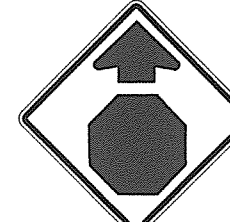

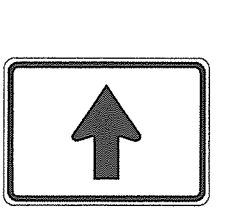
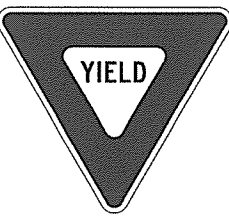
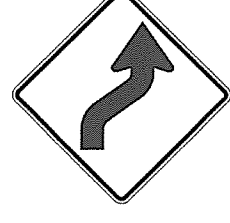
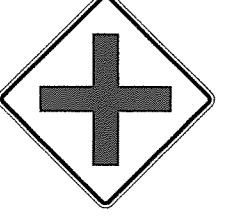

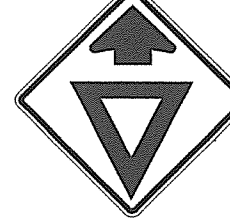
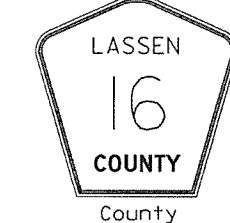
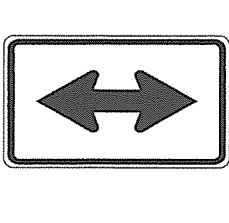

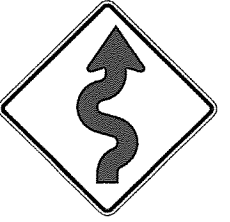
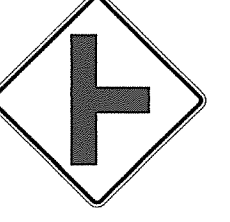


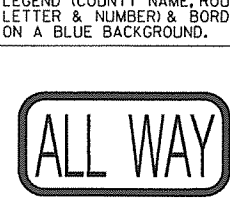
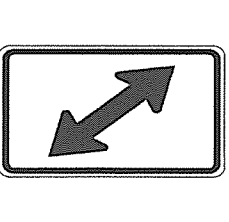
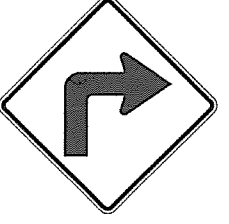
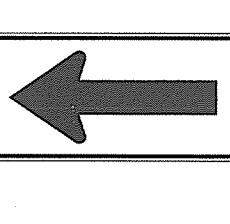
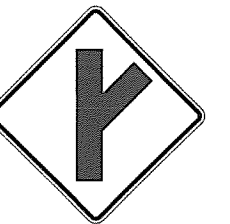

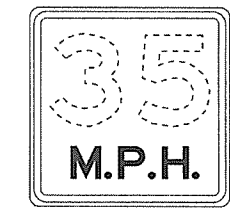
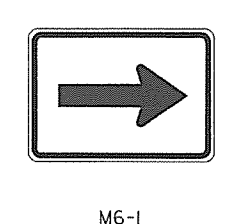
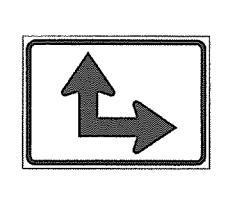

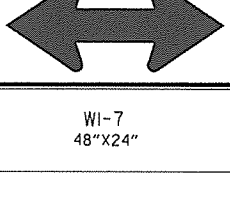
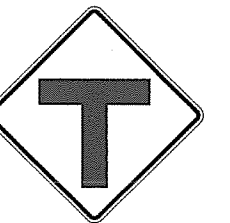
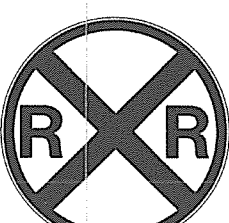
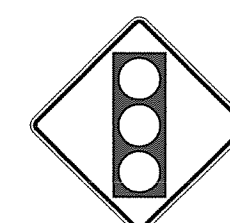
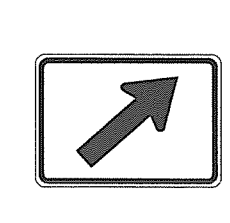
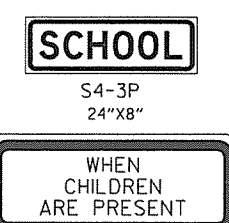
STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

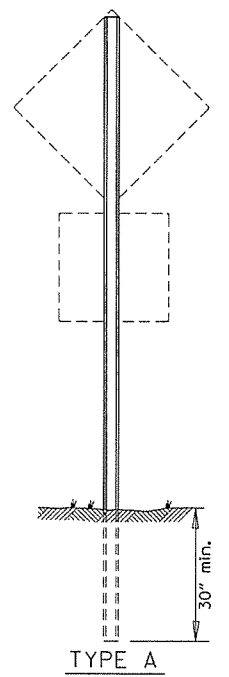
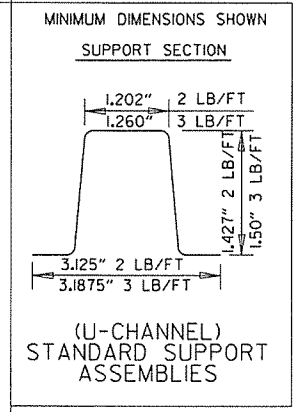
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

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

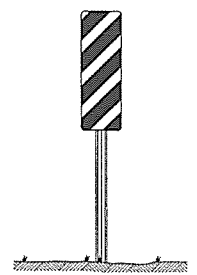
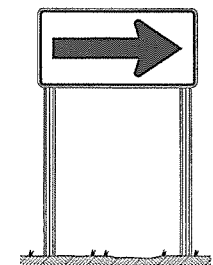
10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION
 TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC
 STANDARD DRAWING SE-2

 RI-1 30"x30"	 WI-3 30"x30" (LT. OR RT.)	 WI-8 18"x24"	 W2-5 30"x30"	 W3-1 36"x36"	 W5-1 36"x36"	 M6-3 21"x15"
 RI-2 36"x36"x36"	 WI-4 30"x30" (LT. OR RT.)	 W2-1 30"x30"	 SI-1 36"x36"	 W3-2 36"x36"	 MI-6 24"x24" County Route Marker	 M6-4 21"x15"
 R2-1 24"x30"	 WI-5 30"x30" (LT. OR RT.)	 W2-2 30"x30"	 W5-2 36"x36"	 W8-3 36"x36"	 RI-3P 18"x6"	 M6-5 21"x15"
 WI-1 30"x30" (LT. OR RT.)	 WI-6 48"x24"	 W2-3 30"x30" (LT. OR RT.)	 W5-3 36"x36"	 WI3-IP 18"x18"	 M6-1 21"x15"	 M6-6 21"x15"
 WI-2 30"x30" (LT. OR RT.)	 WI-7 48"x24"	 W2-4 30"x30"	 W10-1 36" DIAMETER	 W3-3 36"x36"	 M6-2 21"x15"	 S4-3P 24"x8" WHEN CHILDREN ARE PRESENT S4-2P 24"x10"



NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.



TYPE B TYPE C

MINIMUM WEIGHT

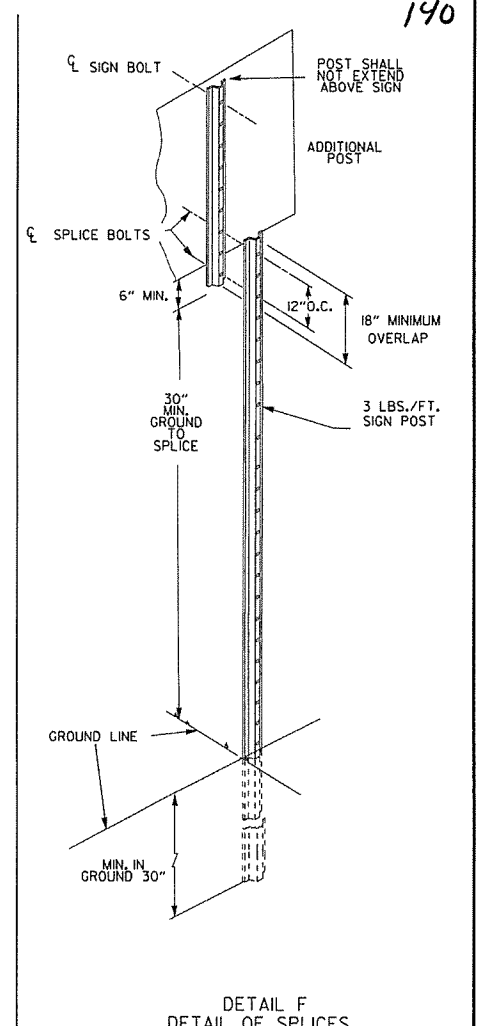
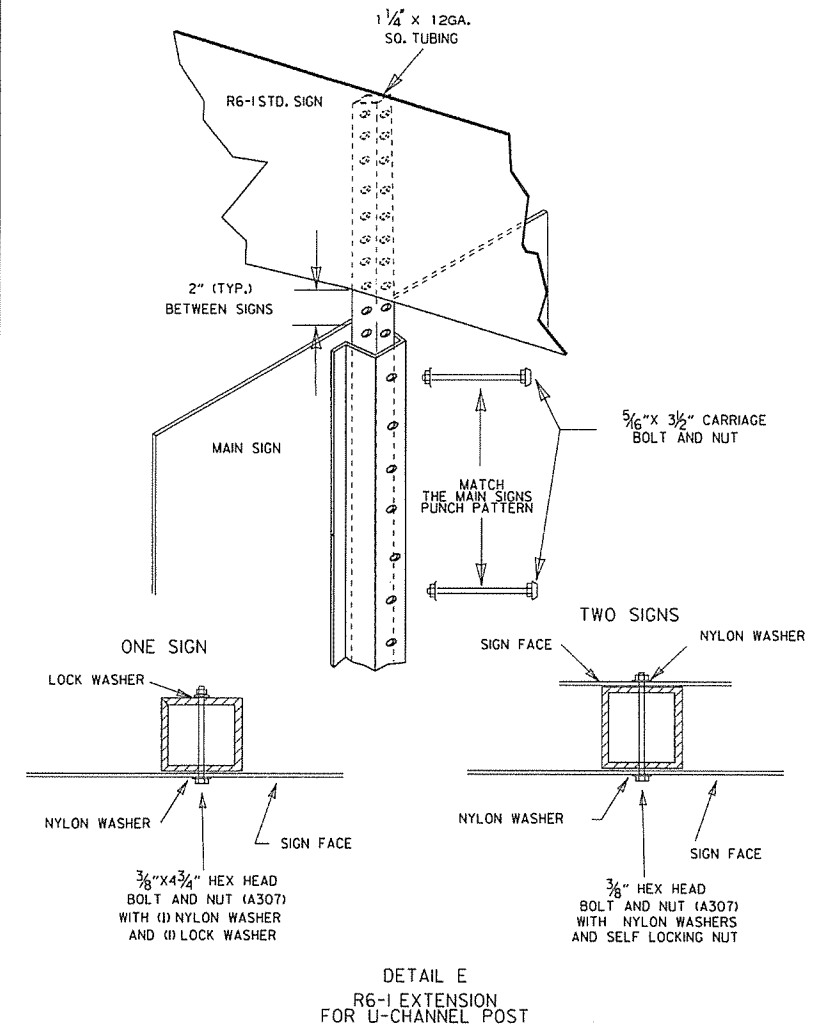
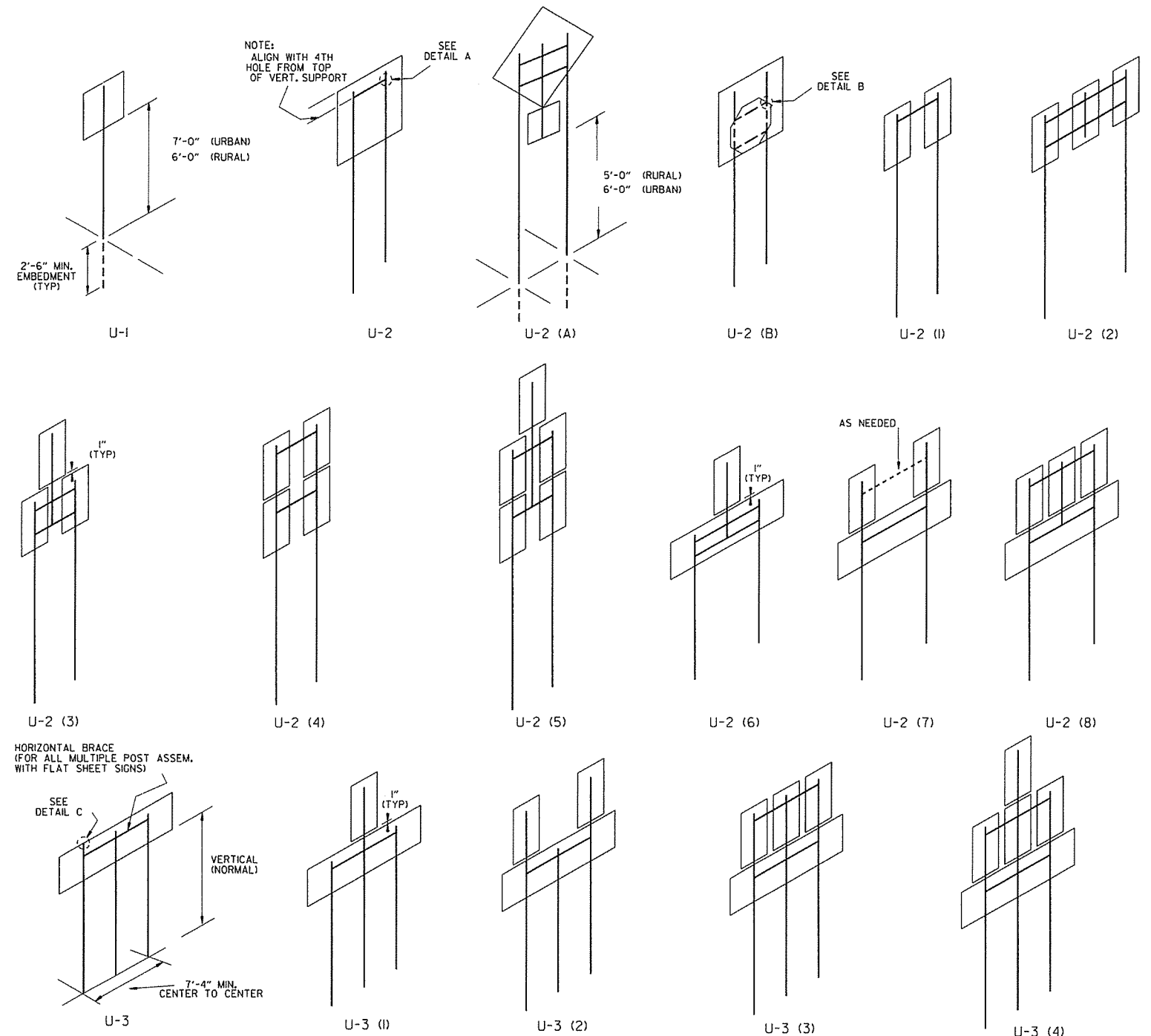
TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

STANDARD HIGHWAY SIGNS

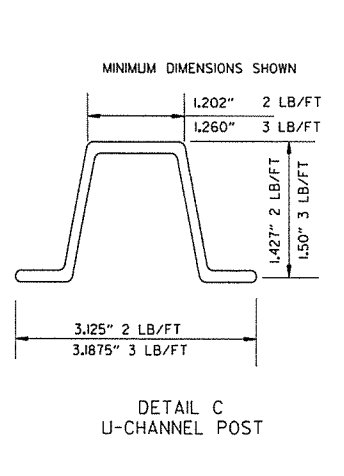
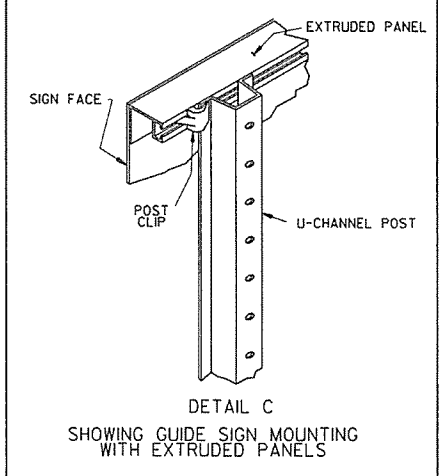
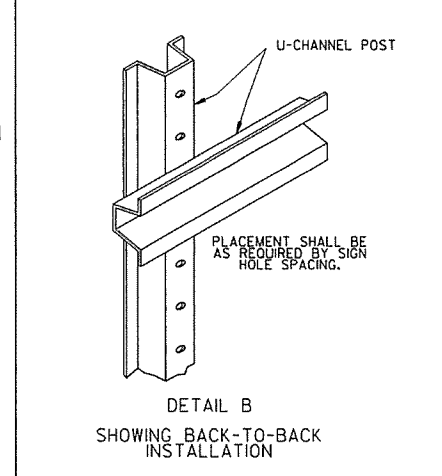
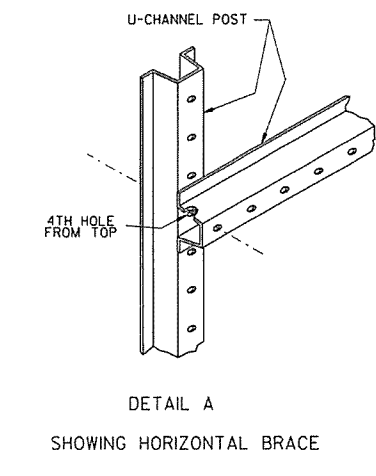
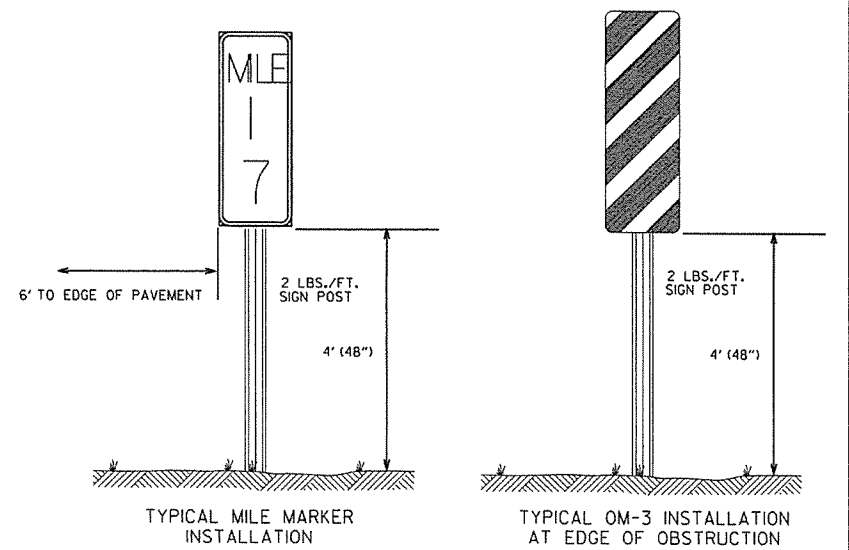
SUPPORT ASSEMBLIES

9-12-13	DELETED JOB NO; BLOCK; REVISED RI-3 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED WI-4-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2"-3"; ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2, 3, 4, 5, 6	500-12-21-72
12-1-72	ISSUED	562-12-1-72
DATE	REVISION	DATE FILMED

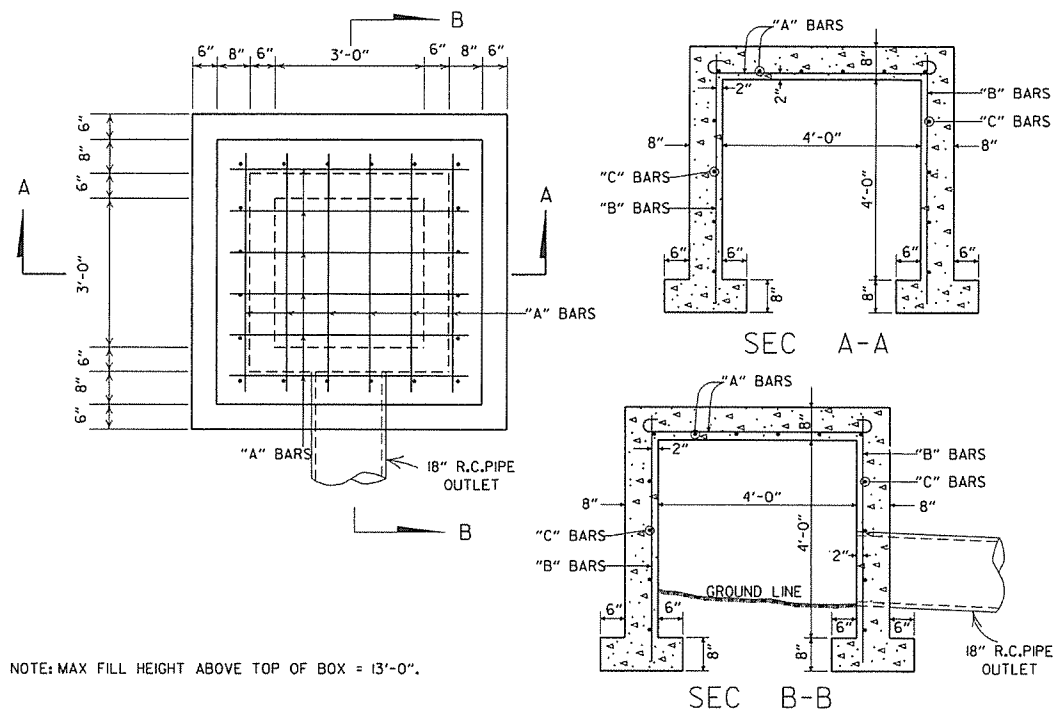
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES
STANDARD DRAWING SHS-1



NOTES:
 SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.
 SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (F).
 NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.
 ALL SIGN POSTS SHALL BE PLUMB.
 THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



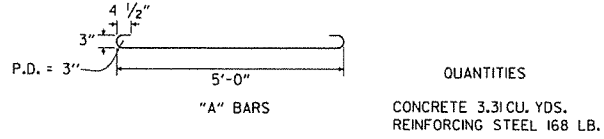
			ARKANSAS STATE HIGHWAY COMMISSION	
			U-CHANNEL POST ASSEMBLIES	
			STANDARD DRAWING SHS-2	
9-12-13	REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS			
10-9-03	REMOVED ROUND POST & REVISED SPACING			
10-12-95	MOVED UPPER SPLICE			
6-8-95	REVISED SPLICE DETAIL	6-8-95		
2-2-95	REDRAWN	2-2-95		
DATE	REVISION			FILMED



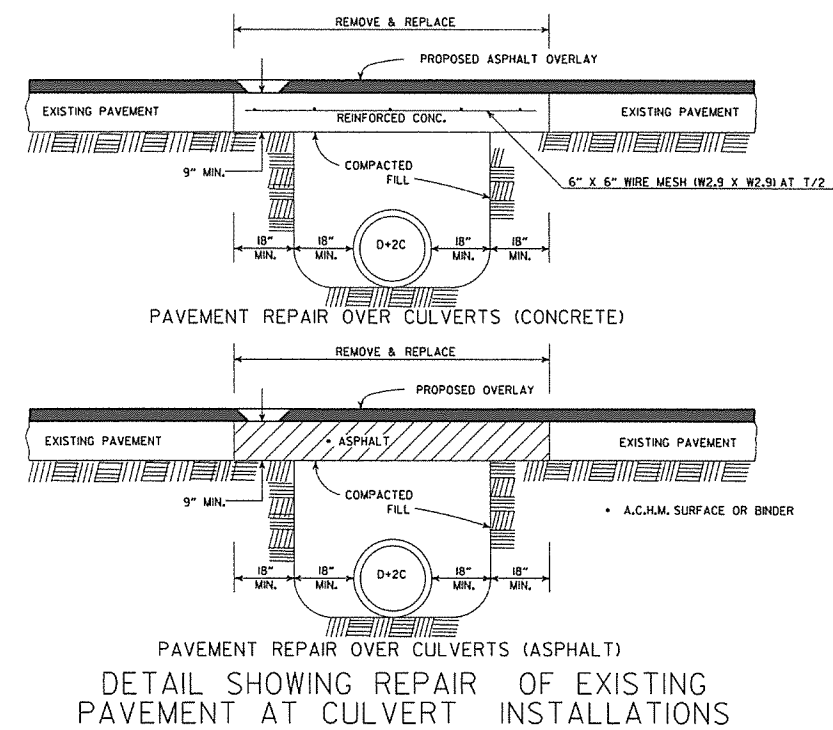
NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE

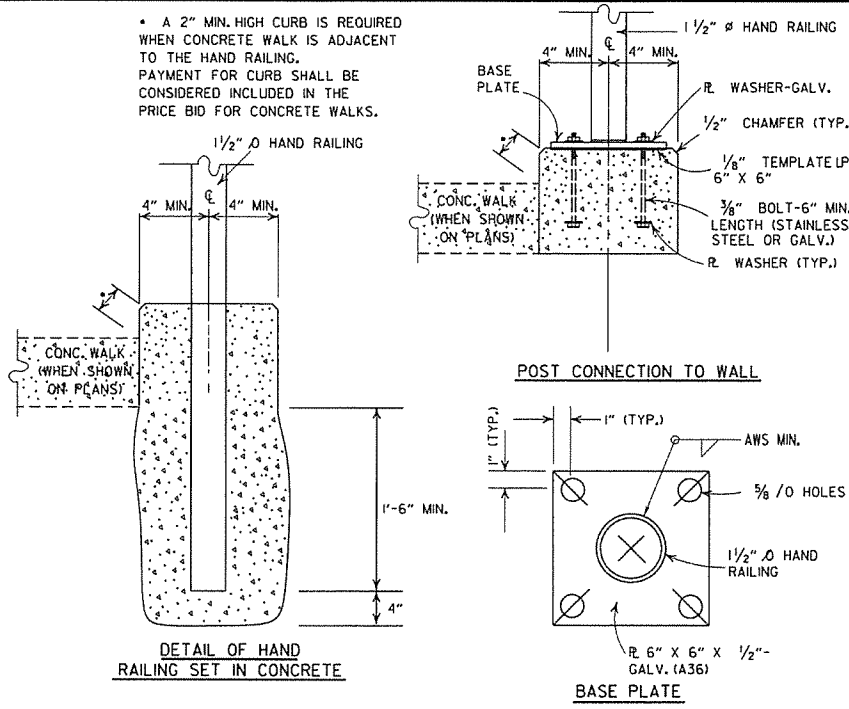
BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"



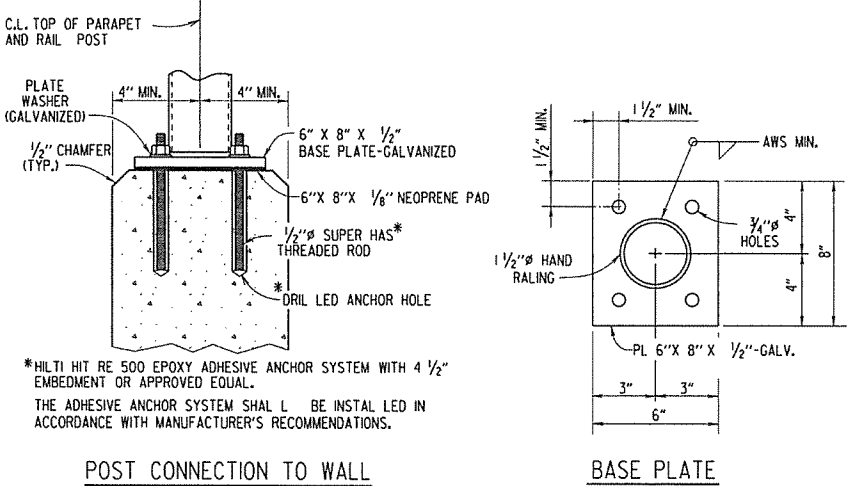
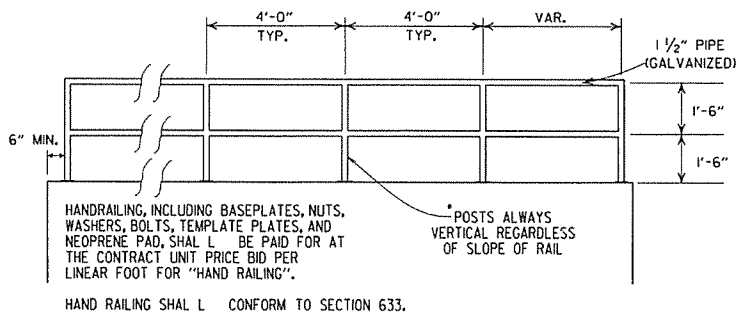
REINFORCED CONCRETE SPRING BOX



DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

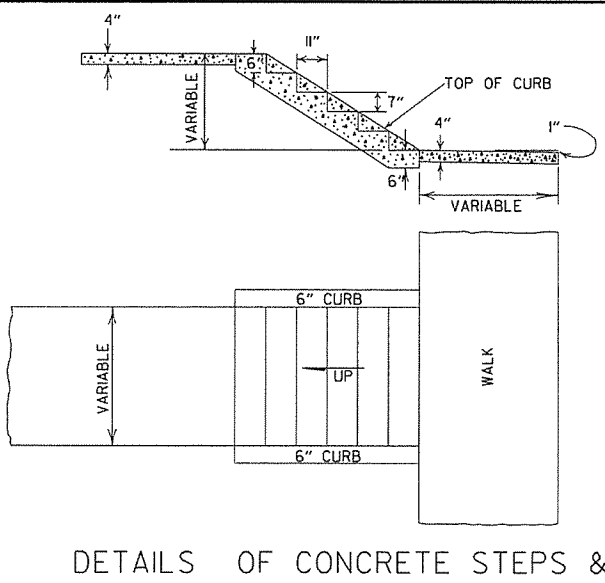


POST CONNECTION DETAILS



DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS




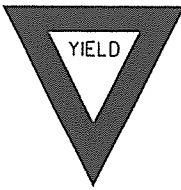
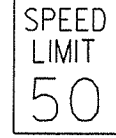


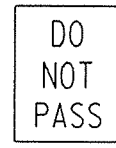
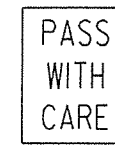


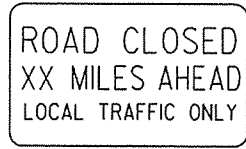
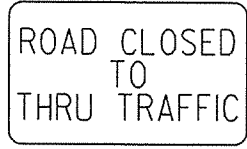
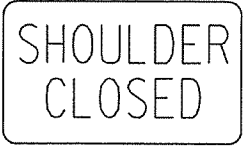
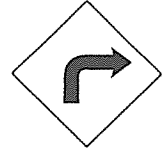
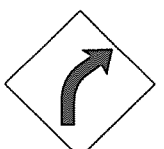
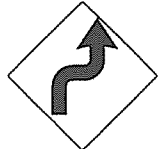
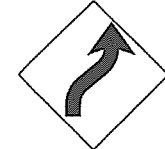
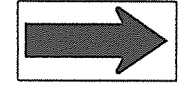
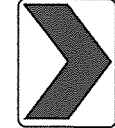
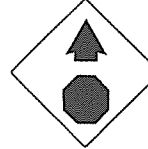
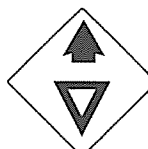
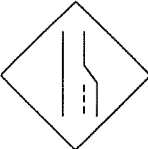

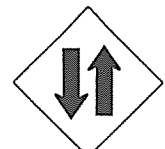


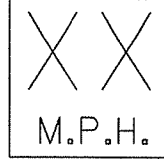



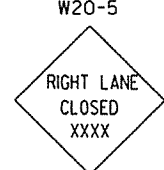



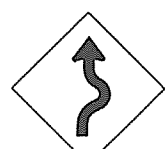


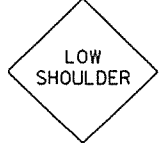
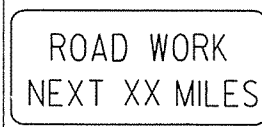
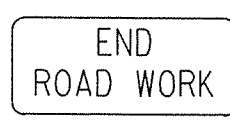
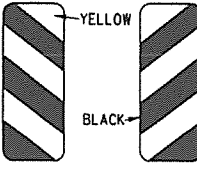
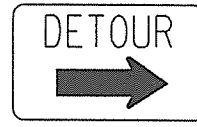
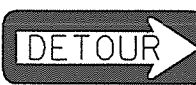
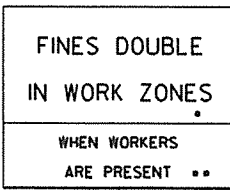
DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL, MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET & PAVEMENT REPAIR	674-4-20-79
2-2-76	12" MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI-1

<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>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</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>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>500 FEET 24" W6-2</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>W1-4b</p>  <p>STD. 48"x48"</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>

ADVANCE DISTANCES (XXX)

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

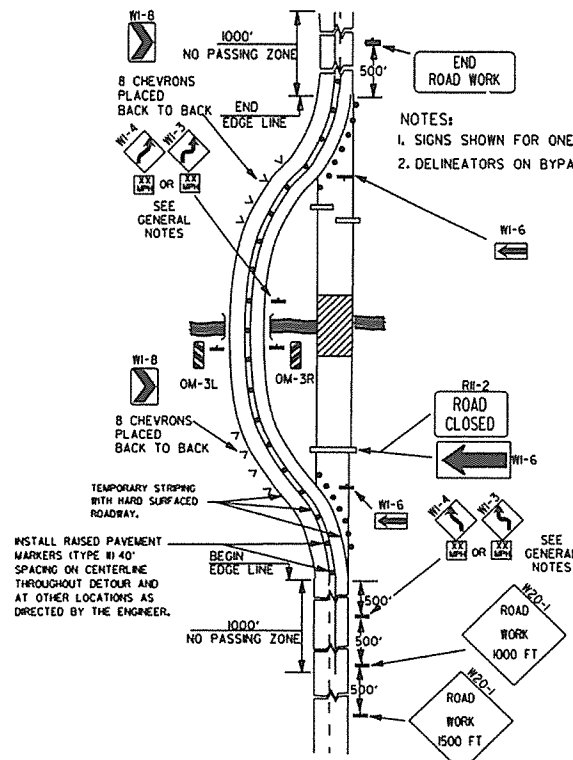
GENERAL NOTES:

- 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.
- SIGN: 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.

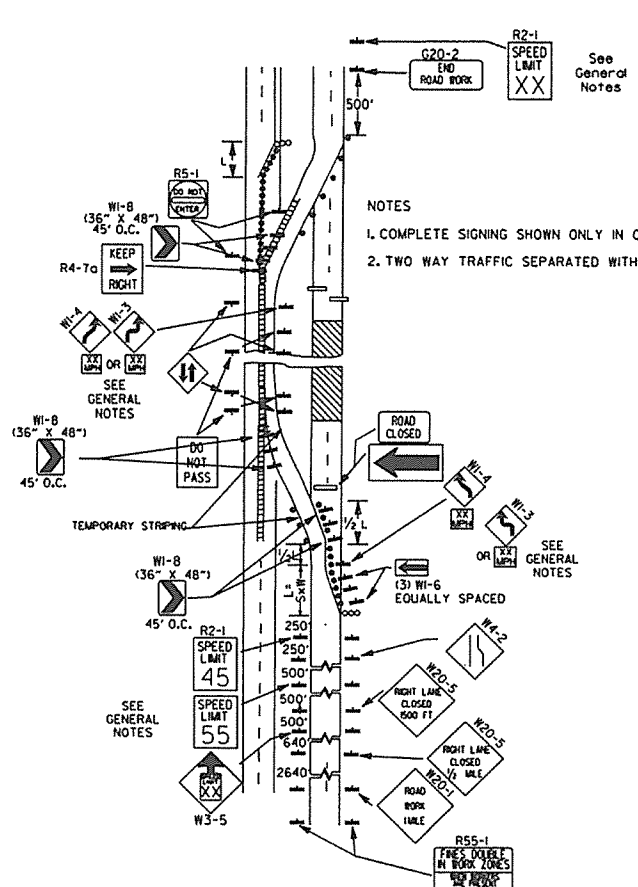
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-8	REVISED W24-1	
4-17-10	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	
1-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	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, MUTED SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

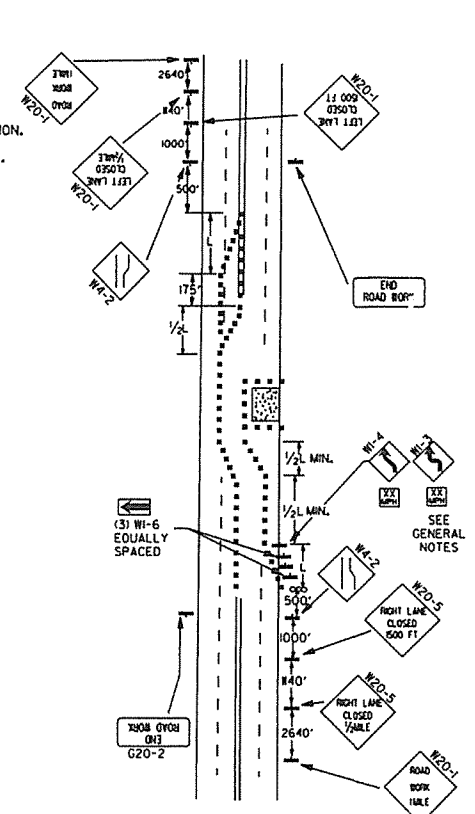
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



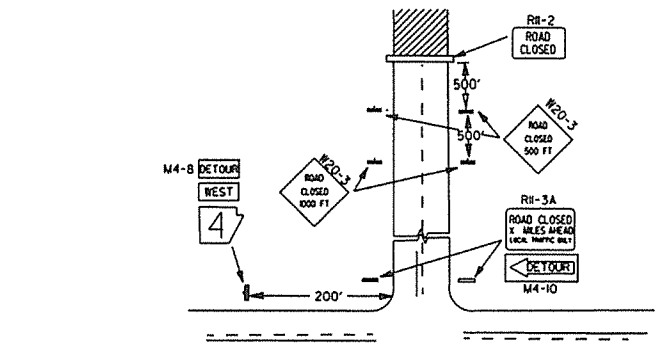
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



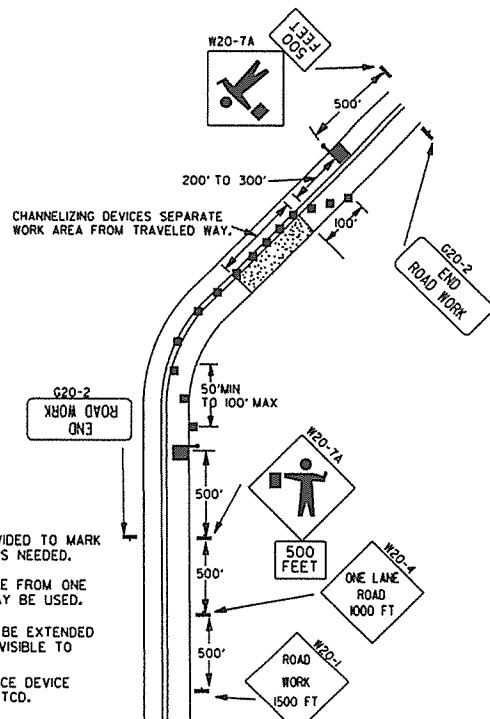
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



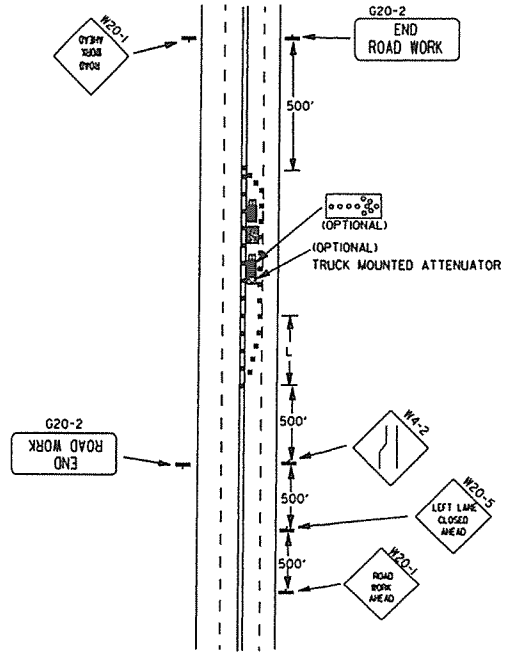
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



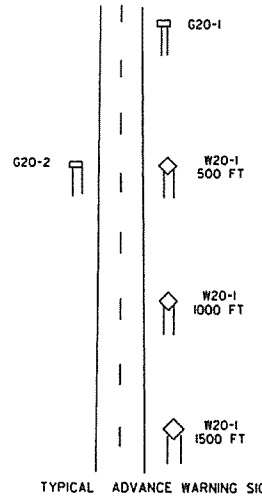
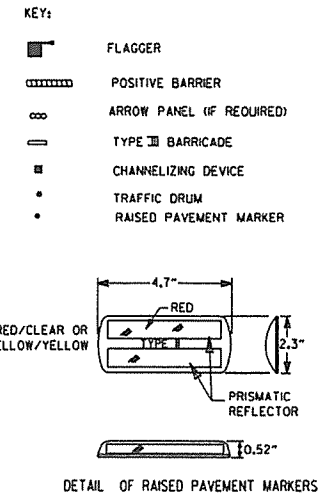
(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



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



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

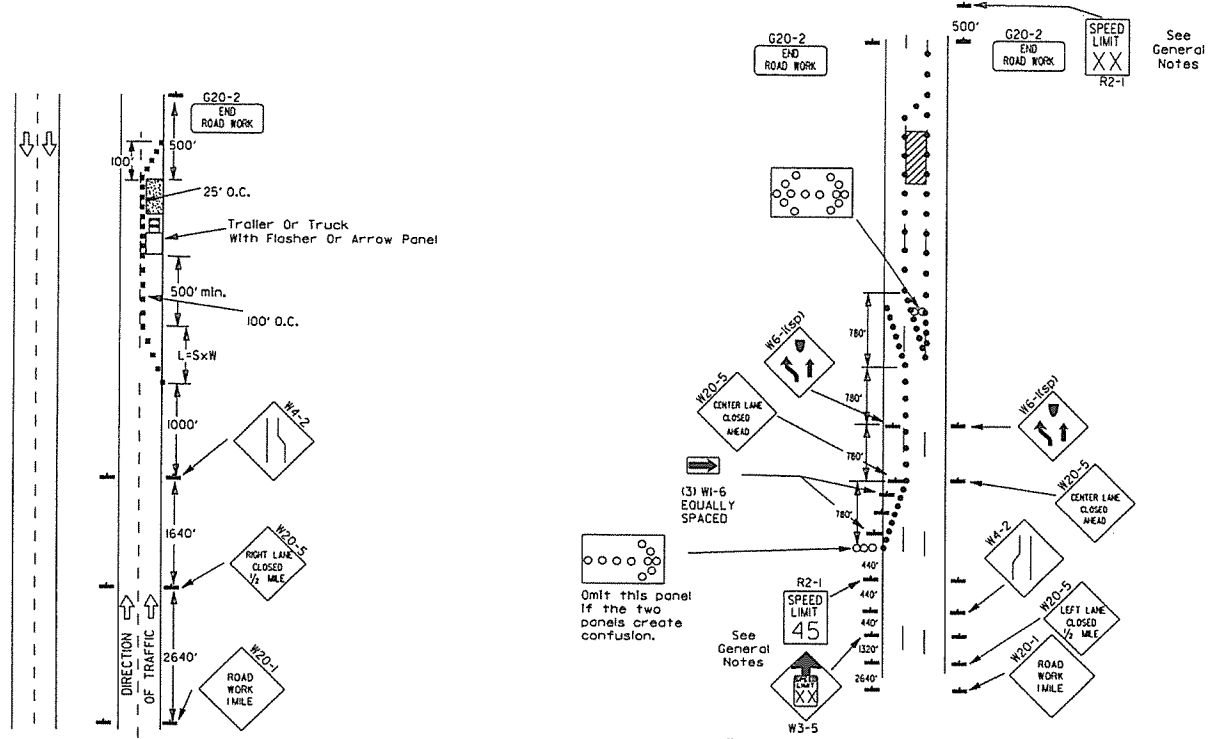


TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W = WIDTH OF OFFSET.

- GENERAL NOTES:
 1. ADVISORY SPEED POSTED ON 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.
 2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(K55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(IXX) 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-(K45) 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-(IXX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
 8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

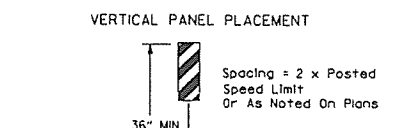
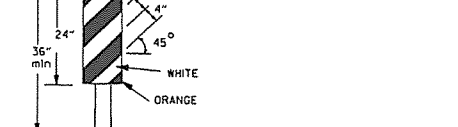
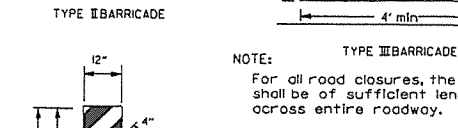
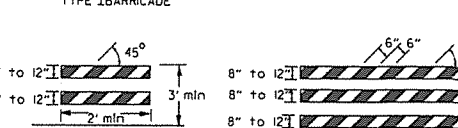
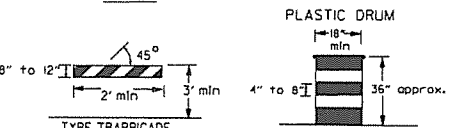
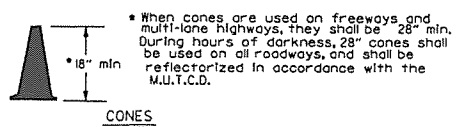
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (c) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT.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

Channelizing devices



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

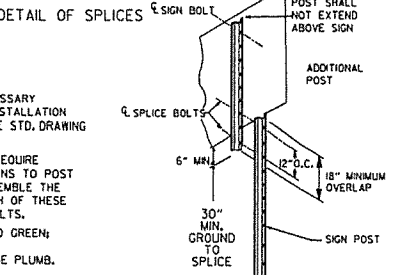
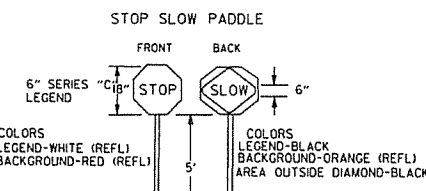
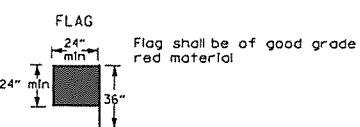
(B) Typical application - 3-lane oneway roadway where center lane is closed.



TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	WB-11
1" to 3"	Edge of shoulder	WB-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

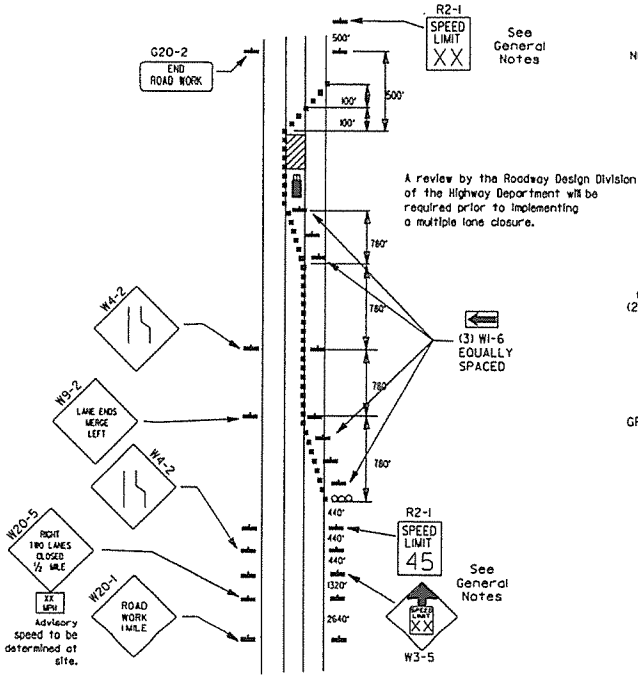
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



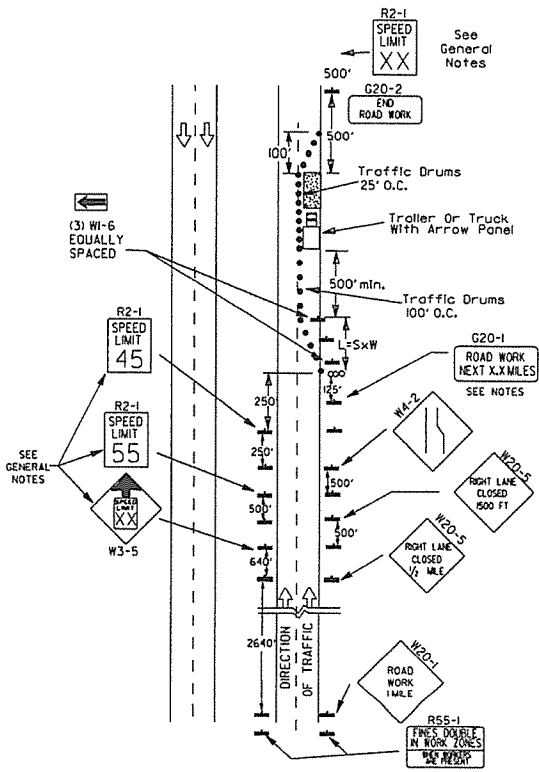
NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2). NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS SIGN SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE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

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

- GENERAL NOTES:
- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
 - When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1(45) speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
 - When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1(55) speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
 - The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
 - Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
 - Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
 - The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1(1/2 MILE) signs are not required in advance of lane closures that begin inside the project limits.
 - Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
 - All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
 - Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



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

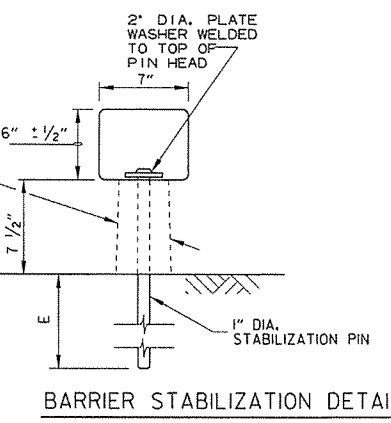
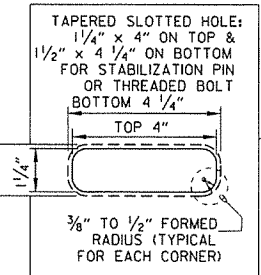
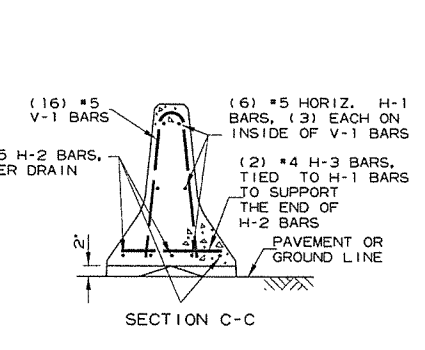
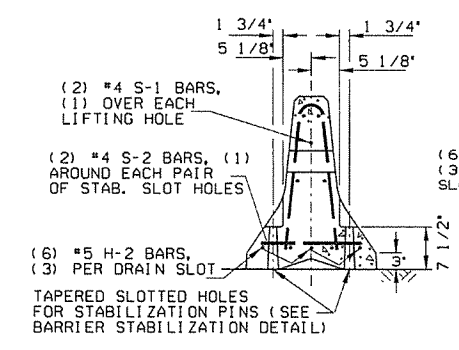
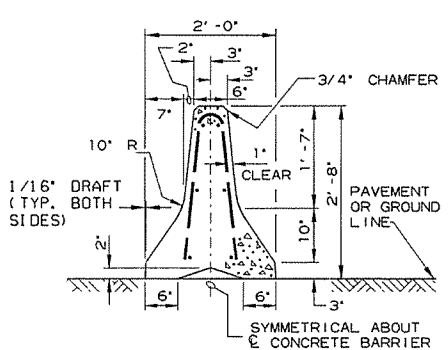
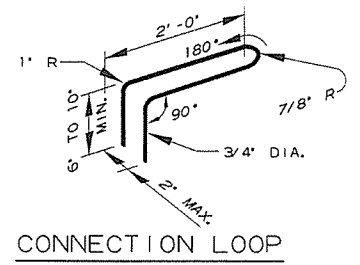
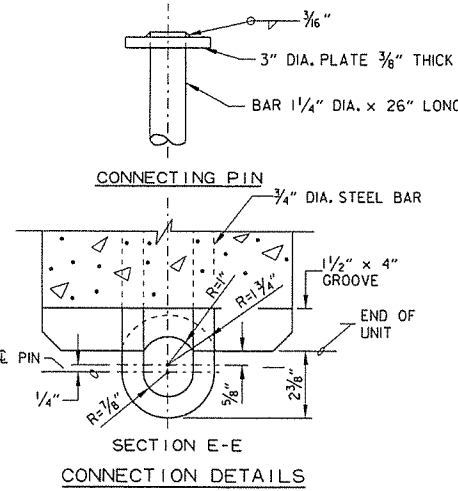


(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.

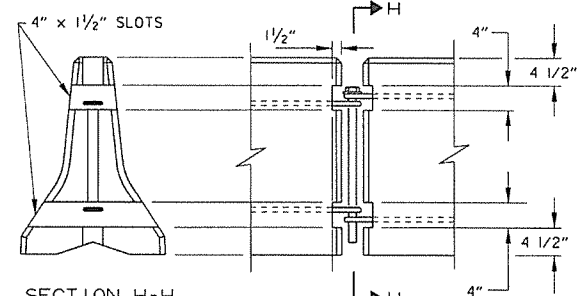
DATE	REVISION	FILED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
8-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP1) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	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

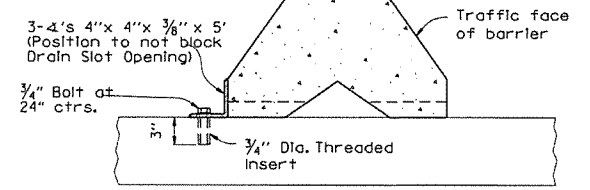
REINFORCING BAR TABLE PER BARRIER UNIT			
MARK	LOCATION	BAR SIZE (NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	*5 (6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	*5 (6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	*4 (2)	1'-6"
S-1	OVER LIFT HOLES	*4 (2)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



BARRIER STABILIZATION DETAIL
ROADWAY SECTION

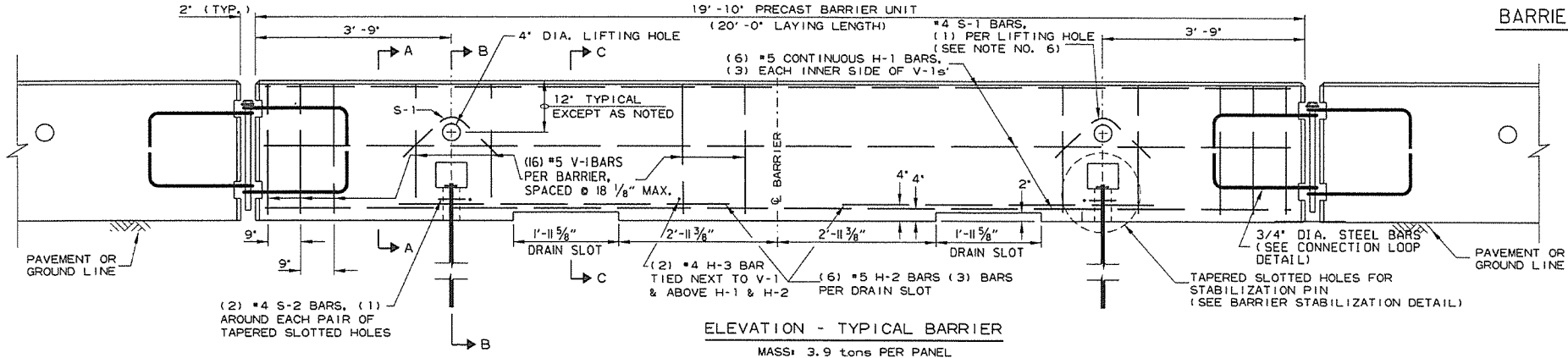


SECTION H-H
ELEVATION
BARRIER REMOVAL SLOT DETAILS



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

BARRIER STABILIZATION DETAIL
BRIDGE DECKS



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 on Uniform Traffic Control Devices.
Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.
 - 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.

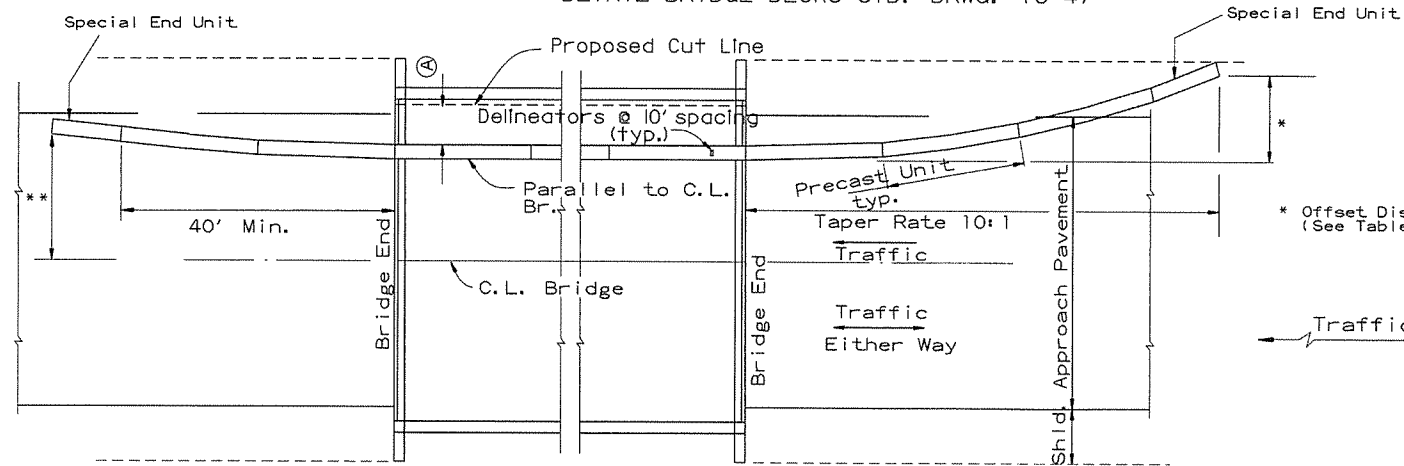
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

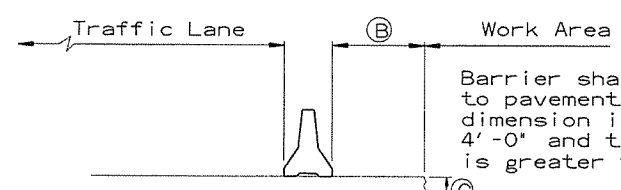
(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

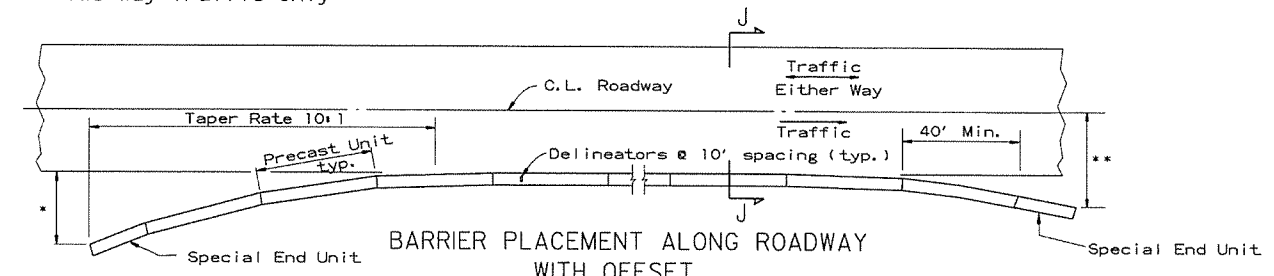
* Offset Distance (See Table)



SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

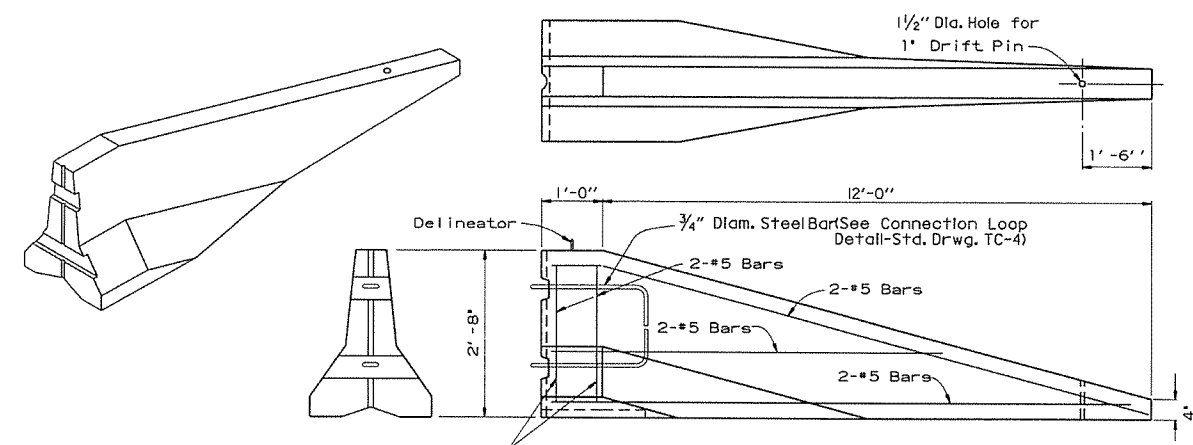
No Scale

** 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.

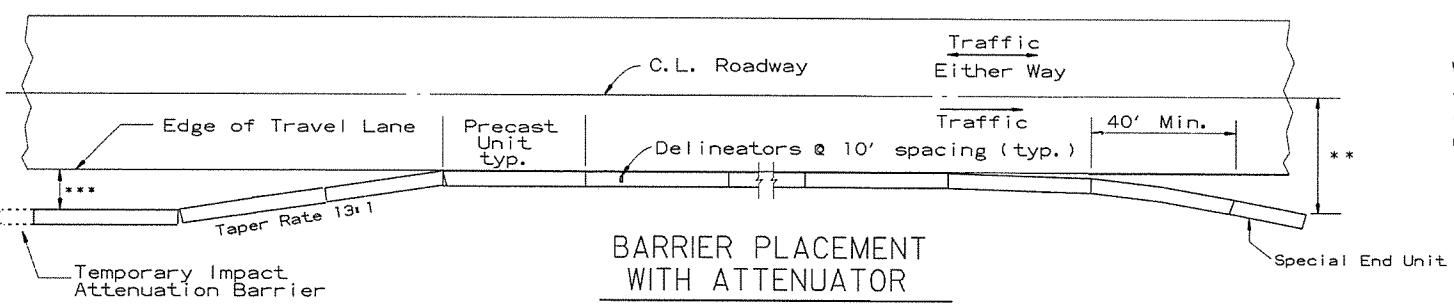


SPECIAL END UNIT

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

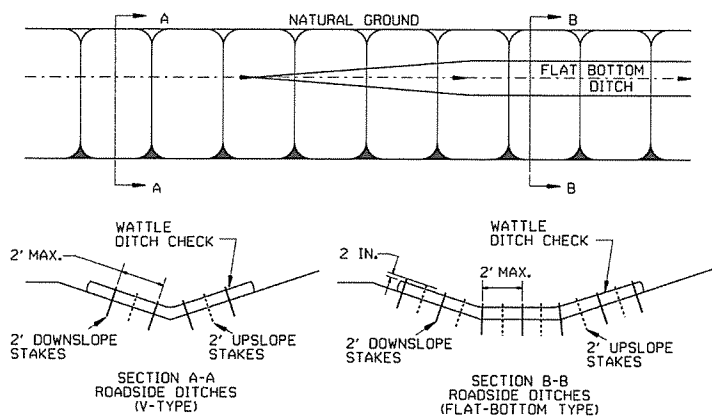
DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

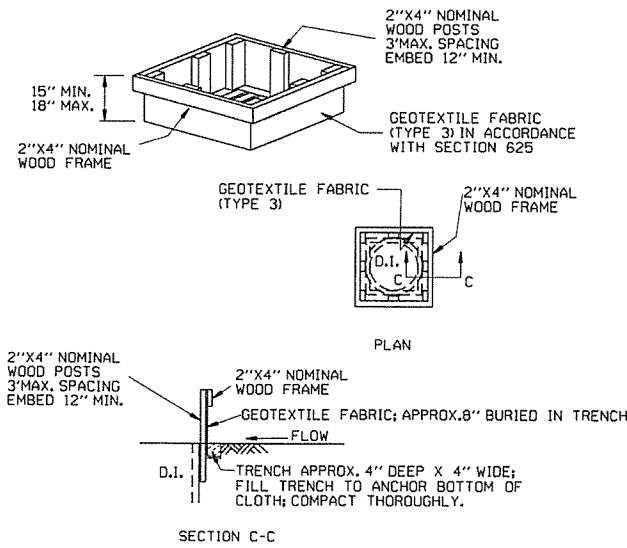
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5

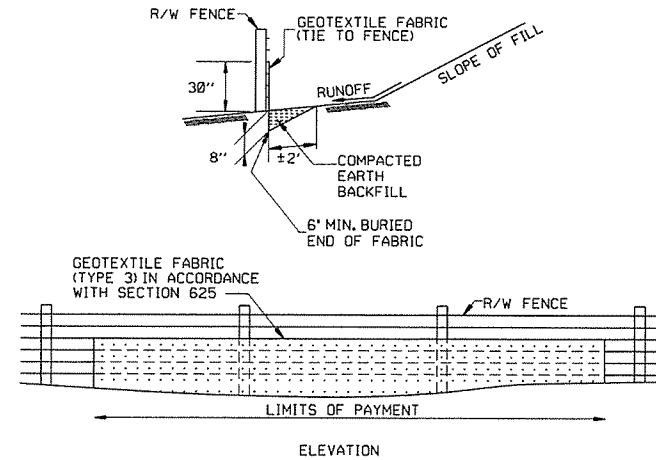
GENERAL NOTES
 INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



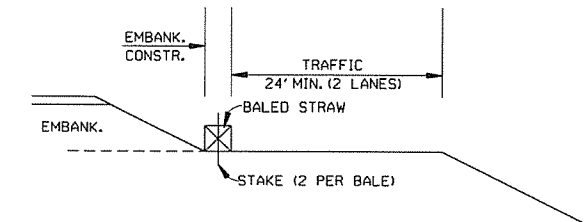
DROP INLET SILT FENCE (E-7)



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

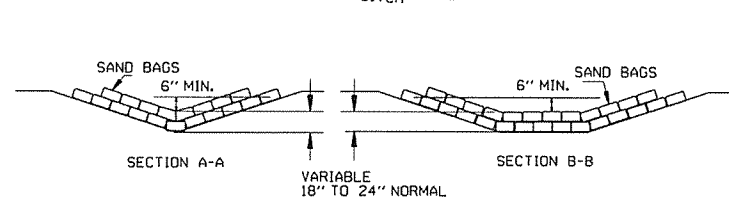
GENERAL NOTES
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

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.

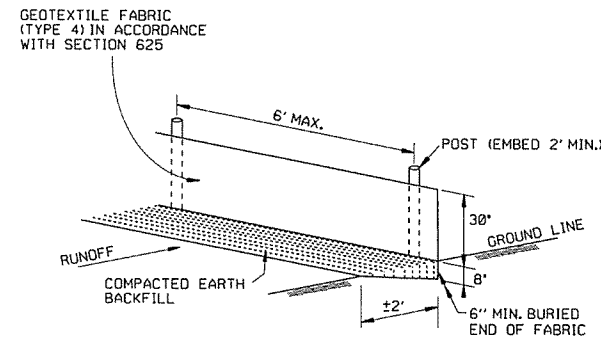


BALED STRAW FILTER BARRIER (E-2)

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

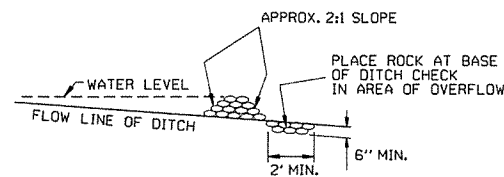


SAND BAG DITCH CHECK (E-5)



SILT FENCE (E-11)

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



ROCK DITCH CHECK (E-6)

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

TEMPORARY EROSION CONTROL DEVICES

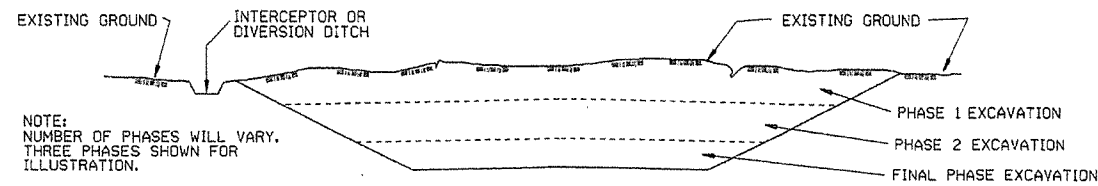
STANDARD DRAWING TEC-1

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

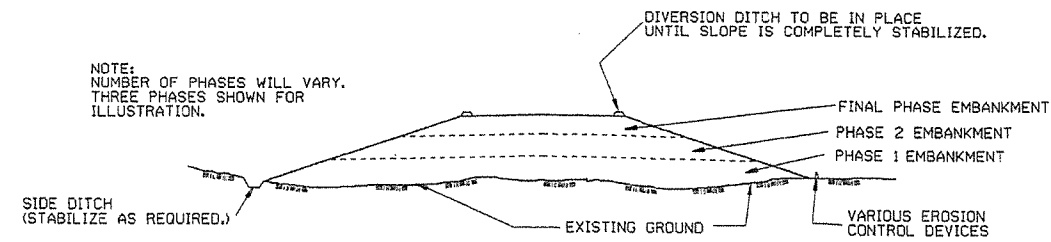
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

GENERAL NOTE

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

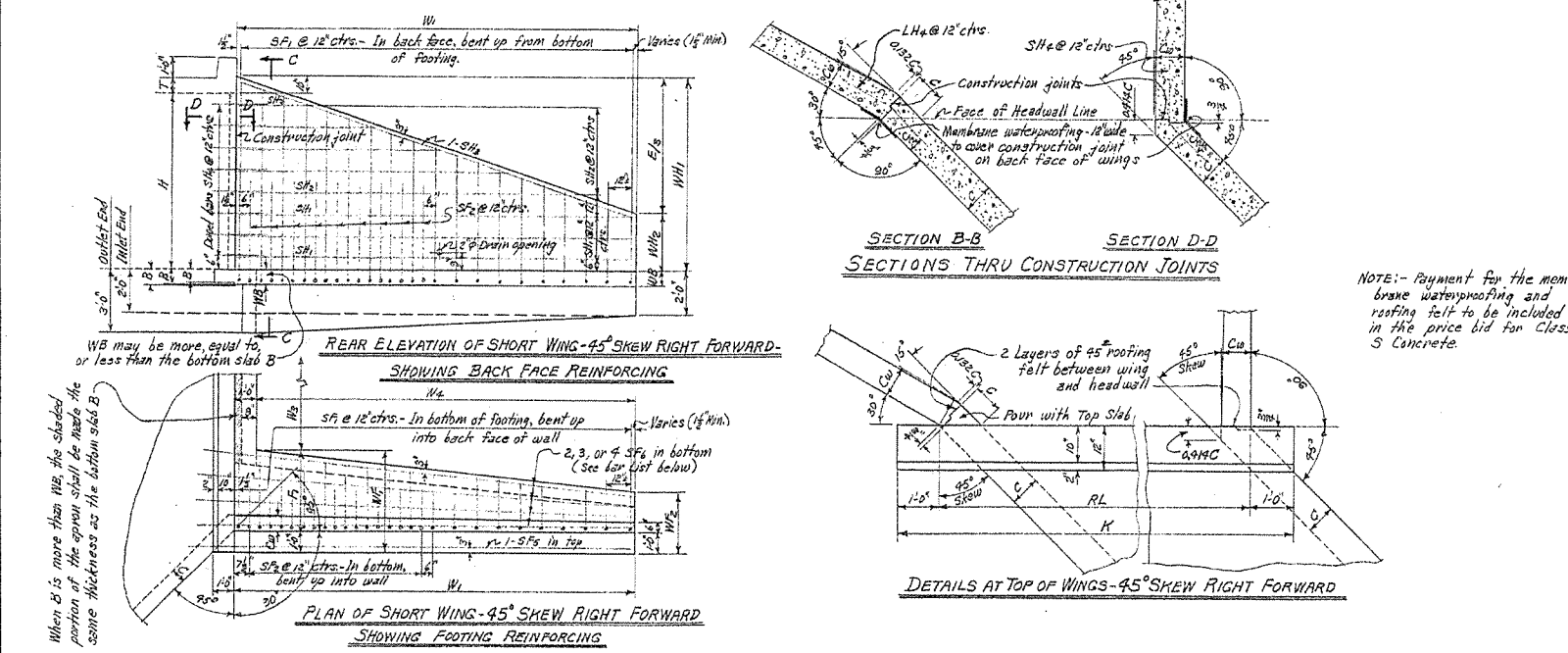
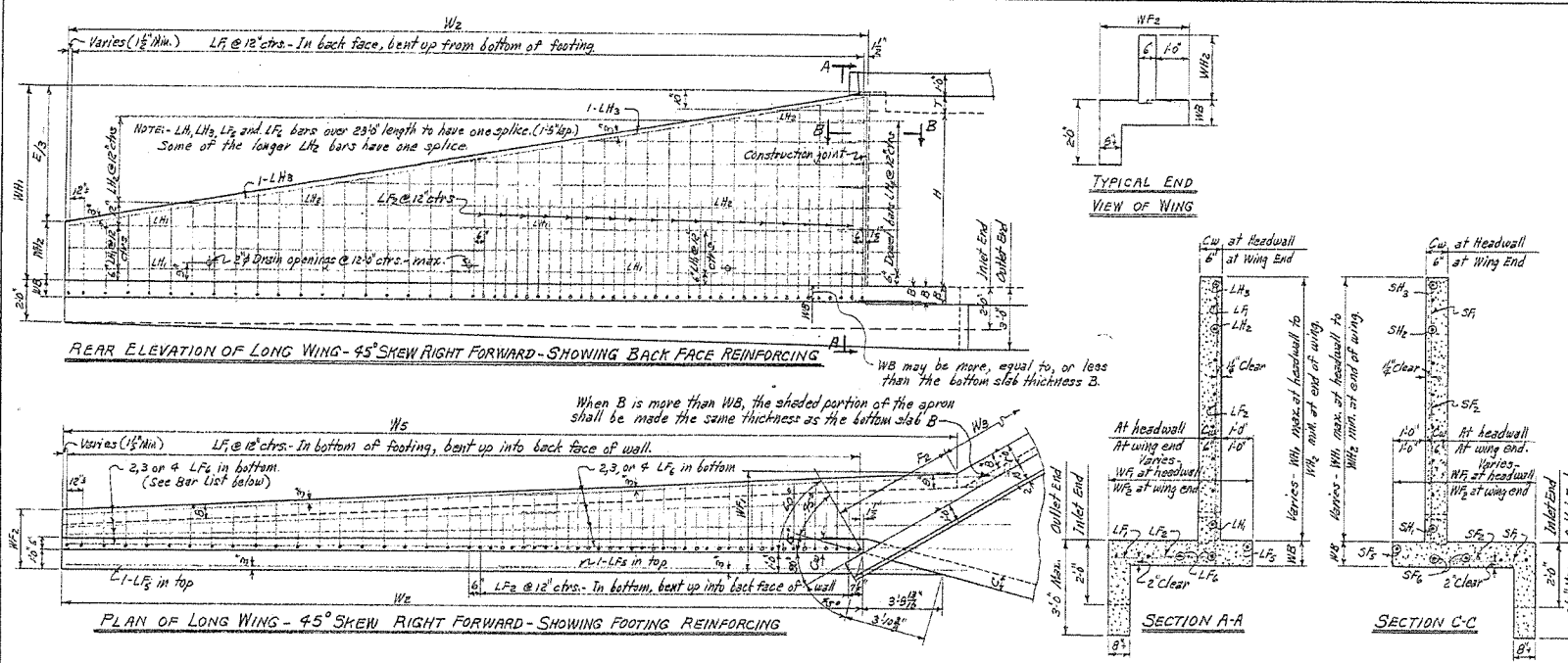
CONSTRUCTION SEQUENCE

1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

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ARKANSAS STATE HIGHWAY COMMISSION			
TEMPORARY EROSION CONTROL DEVICES			
STANDARD DRAWING TEC-3			
11-83-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		6-2-94
DATE	REVISION		FILMED

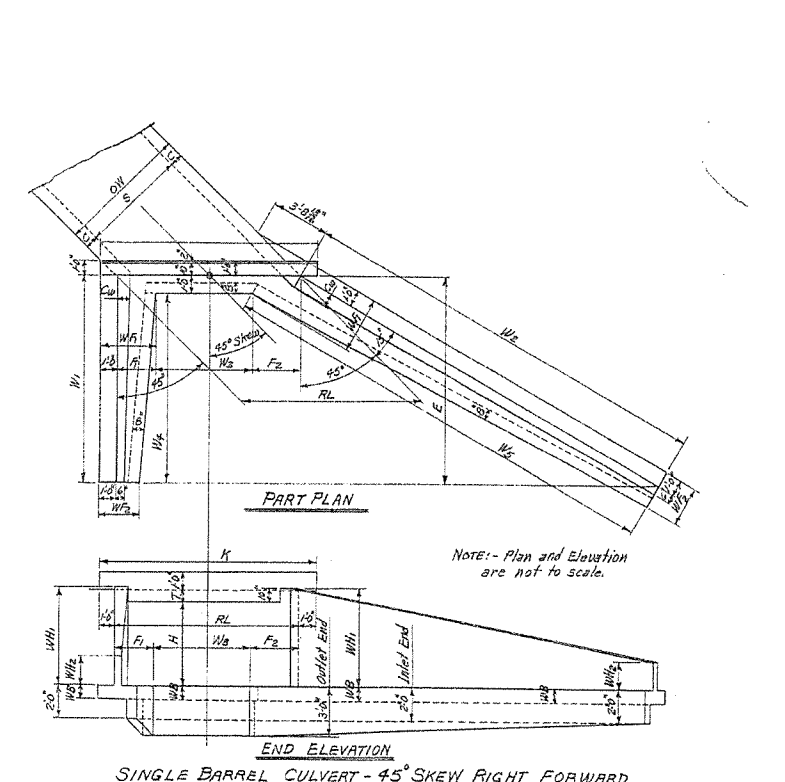
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			150	
JOB No.					



REGULAR WING DIMENSIONS - 3:1 SLOPES

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	WING WALL HEIGHTS		WIDTHS OF WING FOOTINGS		FOOTING DIMENSIONS - PARALLEL WITH HEADWALL		LENGTHS OF WING WALLS		INSIDE FOOTING DIMENSION		QUANTITY PER WING					
		AT HEADWALL	AT END OF WING	AT HEADWALL	AT END OF WING	SHORT WING	LONG WING	SHORT WING	LONG WING	SHORT WING	LONG WING	SHORT WING	LONG WING	SHORT WING	LONG WING		
H	WB	Cu	WH	WF	WF ₂	F ₁	F ₂	E	W ₁	W ₂	W ₃	W ₄	CuYD	CuYD	CuYD	CuYD	
2'	7"	6"	2'10"	0'-8"	2'-4"	2'-0"	1'-4"	0'-11"	6'-6"	6'-6"	13'-0"	5'-6"	13'-3"	0.783	1.572	0.827	1.741
3'	7"	6"	3'10"	1'-0"	2'-8"	2'-10"	1'-8"	1'-7"	8'-6"	8'-6"	17'-0"	7'-6"	17'-0"	1.120	2.240	1.229	2.590
4'	7"	6"	4'10"	1'-4"	3'-0"	2'-3"	2'-0"	2'-3"	10'-6"	10'-6"	21'-0"	9'-6"	21'-5"	1.547	3.094	1.700	3.577
5'	7"	6"	5'10"	1'-8"	3'-4"	2'-4"	2'-4"	2'-4"	12'-6"	12'-6"	25'-0"	11'-6"	27'-0"	2.082	4.164	2.291	4.705
6'	7"	6"	6'10"	2'-0"	3'-8"	2'-6"	2'-6"	2'-6"	14'-6"	14'-6"	29'-0"	13'-6"	31'-0"	2.694	5.388	3.078	6.490
7'	7"	6"	7'10"	2'-4"	4'-2"	2'-8"	2'-8"	2'-8"	16'-6"	16'-6"	33'-0"	15'-6"	36'-0"	3.294	6.588	3.735	7.875
8'	7"	6"	8'10"	2'-8"	4'-6"	3'-2"	3'-2"	3'-2"	18'-6"	18'-6"	37'-0"	17'-6"	41'-0"	3.894	7.788	4.375	9.175

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



SINGLE BARREL CULVERT - 45° SKEW RIGHT FORWARD

Details of Culvert with 45° Skew Left Forward is reversed, see Drawing No. W-X45.

TYPICAL WING DETAILS

NOTE: - For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple and Quintuple Span Culverts, see Std. Drawing No. W-X45. For values of RL, K and W₃ for each box, see above Std. also.

MEMBRANE: A membrane waterproofing 12" wide, consisting of three layers of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

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

BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

CLEAR HEIGHT	WING LOCATION	SF ₁ & LF ₁ BENT				SF ₂ & LF ₂ BENT				SF ₃ & LF ₃ STRAIGHT		SF ₄ & LF ₄ STRAIGHT		SF ₅ & LF ₅ STRAIGHT		SF ₆ & LF ₆ STRAIGHT		BAR BENDING DIAGRAM	QUANTITY			
		In bottom of footing, bent up into back face of wing. One bar (or two bars) of each length.								Longitudinal in bottom of wing footing heel.		Horizontal in back face of wing.		Horizontal in back face of wing at top-on slope.		In back face of wing at top-on slope.						
		SIZE	SPACING	NO. REB.	LENGTH	SIZE	SPACING	NO. REB.	LENGTH	SIZE	SPACING	NO. REB.	LENGTH	SIZE	SPACING	NO. REB.	LENGTH			SIZE	SPACING	NO. REB.
2'	Short	#3	12"	7	1'-7"	3'-11"	0'-8"	1'-0"	#3	12"	1	8'-0"	#3	12"	1	4'-3"	#3	12"	1	3'-3"	29.9	46.3
	Long	#3	12"	14	1'-5"	3'-11"	0'-8"	1'-0"	#3	12"	1	17'-8"	#3	12"	1	12'-8"	#3	12"	1	4'-6"	36.8	70.3
3'	Short	#3	12"	9	2'-1"	5'-3"	0'-10"	1'-4"	#3	12"	1	10'-8"	#3	12"	1	6'-5"	#3	12"	1	8'-8"	56.9	107.9
	Long	#3	12"	18	1'-11"	5'-3"	0'-10"	1'-4"	#3	12"	1	21'-4"	#3	12"	1	18'-6"	#3	12"	1	16'-4"	72.7	153.7
4'	Short	#3	12"	8	2'-6"	6'-7"	0'-11"	1'-8"	#3	12"	1	12'-8"	#3	12"	1	10'-9"	#3	12"	1	10'-9"	122.6	253.9
	Long	#3	12"	23	2'-4"	6'-7"	0'-11"	1'-8"	#3	12"	1	25'-2"	#3	12"	1	20'-8"	#3	12"	1	18'-4"	266.5	491.1
5'	Short	#3	12"	19	2'-10"	7'-10"	0'-11"	2'-0"	#3	12"	3	3'-5"	#3	12"	3	14'-4"	#3	12"	3	12'-4"	222	453.7
	Long	#3	12"	24	2'-9"	7'-10"	0'-11"	2'-0"	#3	12"	3	14'-4"	#3	12"	3	14'-4"	#3	12"	3	12'-4"	272	553.9
6'	Short	#3	12"	15	3'-0"	9'-9"	1'-2"	2'-3"	#3	12"	3	4'-6"	#3	12"	4	18'-4"	#3	12"	4	15'-4"	122.6	253.9
	Long	#3	12"	30	3'-9"	9'-9"	1'-2"	2'-3"	#3	12"	3	17'-8"	#3	12"	4	18'-4"	#3	12"	4	15'-4"	266.5	491.1
7'	Short	#3	12"	17	3'-11"	10'-0"	1'-5"	2'-9"	#3	12"	4	5'-4"	#3	12"	4	18'-4"	#3	12"	4	15'-4"	266.5	491.1
	Long	#3	12"	34	3'-11"	10'-0"	1'-5"	2'-9"	#3	12"	4	18'-4"	#3	12"	4	18'-4"	#3	12"	4	15'-4"	266.5	491.1
8'	Short	#3	12"	19	4'-1"	12'-5"	1'-5"	3'-4"	#3	12"	4	6'-6"	#3	12"	4	20'-4"	#3	12"	4	17'-4"	312.5	623.4
	Long	#3	12"	38	4'-1"	12'-5"	1'-5"	3'-4"	#3	12"	4	20'-4"	#3	12"	4	20'-4"	#3	12"	4	17'-4"	312.5	623.4

NOTE: - Bars for short wing shall be marked with prefix letter 'S', while those for long wing shall be marked with letter 'L'. * Length without splice. Bars over 28'0" length may be spliced (1'-8" sp).

QUANTITIES

CLASS 5 CONCRETE - 4 WINGS

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	REINFORCING STEEL FOR # WINGS	CLASS 5 CONCRETE - 4 WINGS									
					HEADWALLS, WING WALLS, FOOTINGS, TIE WALLS AND APRONS	SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT				
H	Cu	WB	WH	WF	CuYD	CuYD	CuYD	CuYD	CuYD	CuYD	CuYD			
5'	7'	6"	2'10"	0'-8"	192	6.15	12.30	8.84	10.22	11.58	12.94			
4'	7'	6"	3'10"	1'-0"	274	8.94	17.88	11.44	13.20	14.96	16.72			
3'	7'	6"	4'10"	1'-4"	328	11.13	22.26	13.84	15.84	18.16	20.48			
2'	7'	6"	5'10"	1'-8"	463	15.84	31.68	19.84	22.56	25.92	29.28			
5'	6'	7"	6'10"	2'-0"	214	3.74	7.48	5.23	6.02	6.81	7.60			
4'	6'	7"	7'10"	2'-4"	328	5.47	10.94	7.84	8.96	10.08	11.20			
3'	6'	7"	8'10"	2'-8"	443	7.40	14.80	10.64	12.16	13.68	15.20			
2'	6'	7"	9'10"	3'-2"	557	9.33	18.66	13.52	15.36	17.12	18.96			
5'	5'	7"	6'10"	2'-0"	214	3.58	7.16	5.12	5.84	6.56	7.28			
4'	5'	7"	7'10"	2'-4"	328	5.16	10.32	7.44	8.48	9.52	10.56			
3'	5'	7"	8'10"	2'-8"	443	6.95	13.90	10.08	11.52	12.96	14.40			
2'	5'	7"	9'10"	3'-2"	557	8.74	17.48	12.64	14.40	16.16	17.92			
5'	4'	7"	6'10"	2'-0"	214	2.86	5.72	4.16	4.72	5.28	5.84			
4'	4'	7"	7'10"	2'-4"	328	4.11	8.22	5.84	6.64	7.44	8.24			
3'	4'	7"	8'10"	2'-8"	443	5.47	10.94	7.84	8.96	10.08	11.20			
2'	4'	7"	9'10"	3'-2"	557	6.83	13.66	9.92	11.36	12.80	14.24			
5'	3'	7"	6'10"	2'-0"	214	2.29	4.58	3.36	3.84	4.32	4.80			
4'	3'	7"	7'10"	2'-4"	328	3.28	6.56	4.72	5.36	5.92	6.48			
3'	3'	7"	8'10"	2'-8"	443	4.37	8.74	6.32	7.20	7.92	8.80			
2'	3'	7"	9'10"	3'-2"	557	5.47	10.94	7.84	8.96	10.08	11.20			
5'	2'	7"	6'10"	2'-0"	214	1.82	3.64	2.64	3.04	3.44	3.84			
4'	2'	7"	7'10"	2'-4"	328	2.58	5.16	3.76	4.24	4.72	5.20			
3'	2'	7"	8'10"	2'-8"	443	3.44	6.88	5.04	5.76	6.48	7.20			
2'	2'	7"	9'10"	3'-2"	557	4.30	8.60	6.24	7.12	7.92	8.80			

For reinforcing steel in Headwalls and Aprons, see Drawing Nos. of Barrel Sections listed below.

GENERAL NOTES: -

CONCRETE: - All concrete to be Class 5, and shall be poured in the dry. All exposed corners to have 3/4" chamfers.

REINFORCING STEEL: - Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS: - Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS: - Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES: -
Class 5 Concrete (n=10) 1200^{psi}
Reinforcing Steel 20000^{psi}

NOTE: - This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. -
SINGLES DOUBLES TRIPLES QUADRUPLES QUINTUPLES
R-145X-0 R-245X-01 R-345X-01 R-445X-01 R-545X-01
R-145X-1 R-245X-02 R-345X-02 R-445X-02 R-545X-02
R-145X-2 R-245X-03 R-345X-03 R-445X-03 R-545X-03

CLASS 5 CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS

FOR

REINFORCED CONCRETE BOX CULVERTS

45° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS 3:1 SLOPES

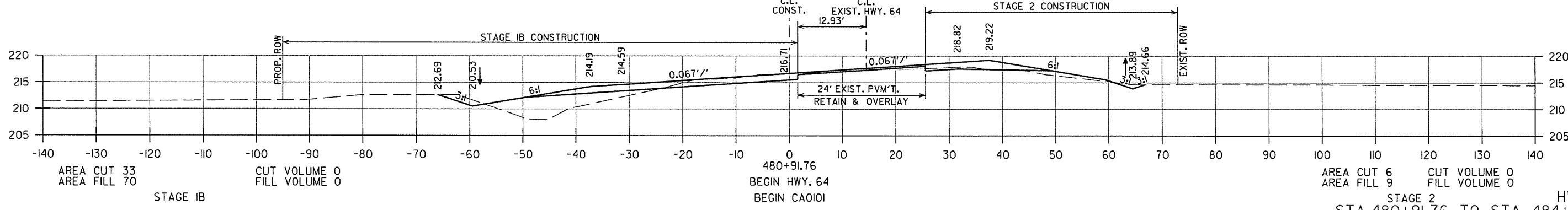
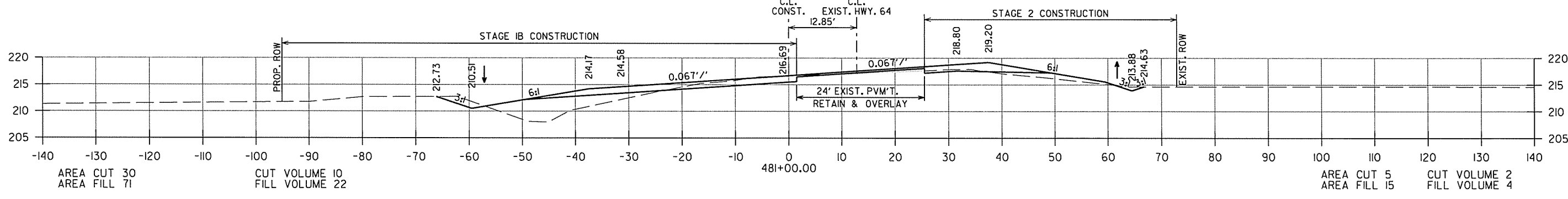
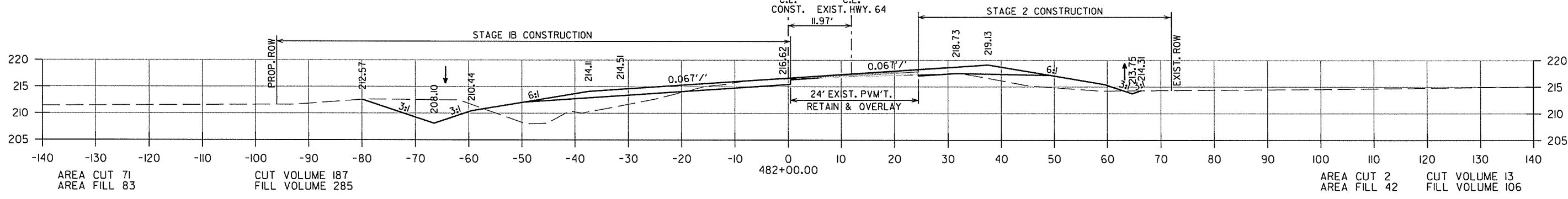
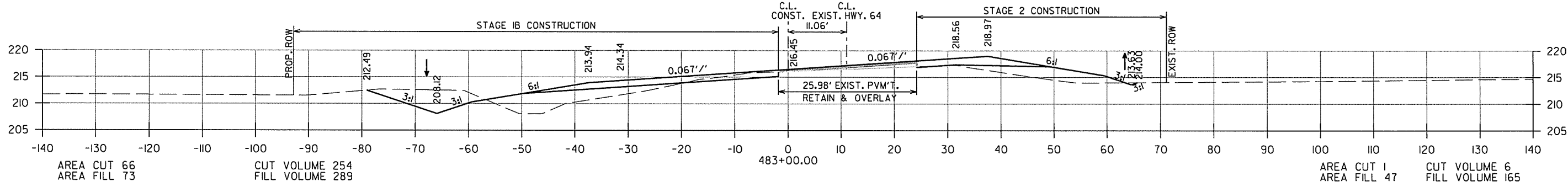
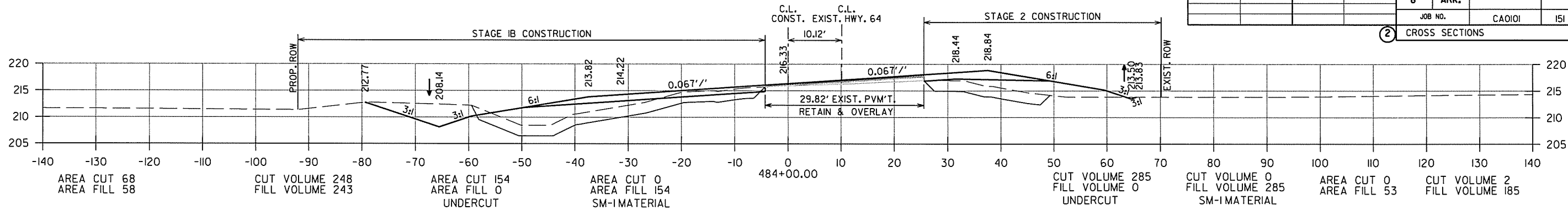
SINGLES, DOUBLES, TRIPLES, ALL DEPTHS OF COVER

QUADRUPLES & QUINTUPLES FOR H = 8'-0" OR LESS

STANDARD DRAWING No. W-X453-1

Designed By: M.C.H. 5-13-63
Checked By: J.E.M. 7-21-64
Drawn By: W.C.H. 6-5-64
Checked By: J.E.M. 7-2-64

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		151	224
				JOB NO. CAO101		CROSS SECTIONS		



STAGE 1B

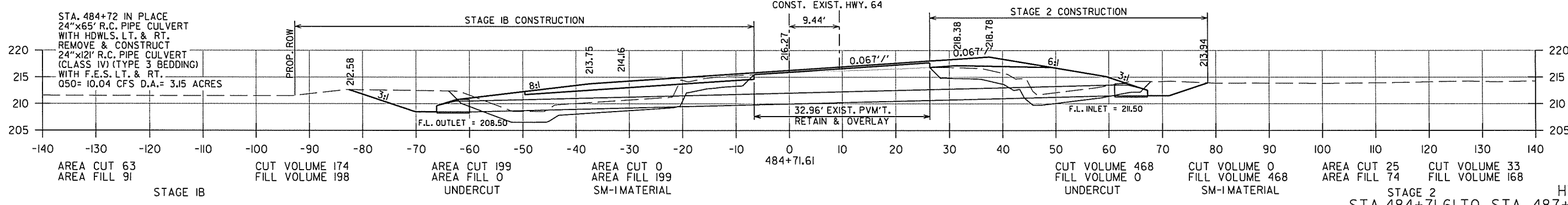
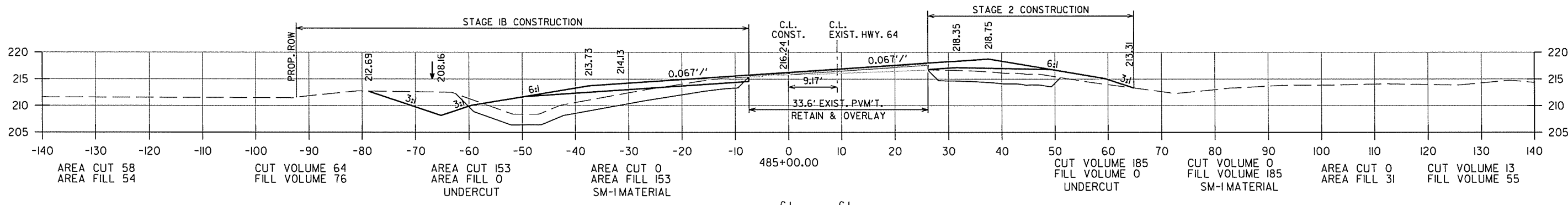
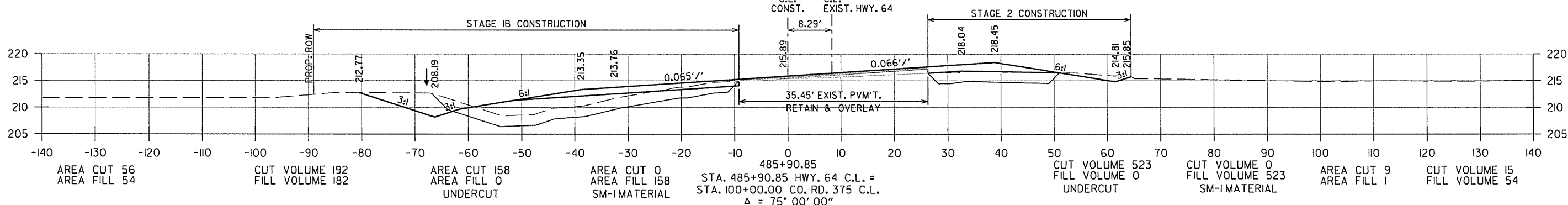
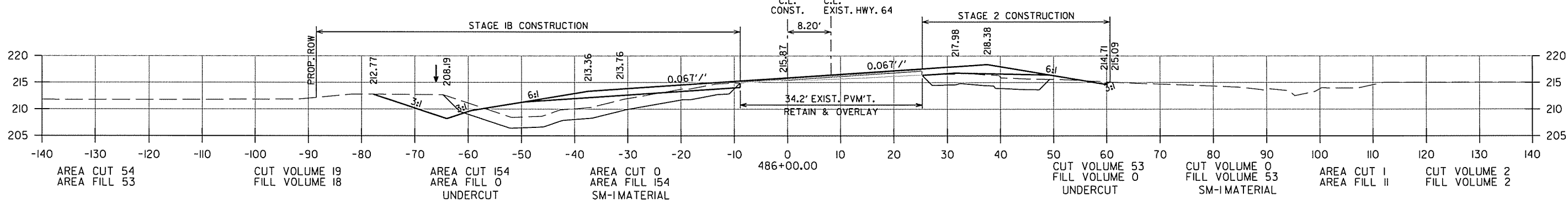
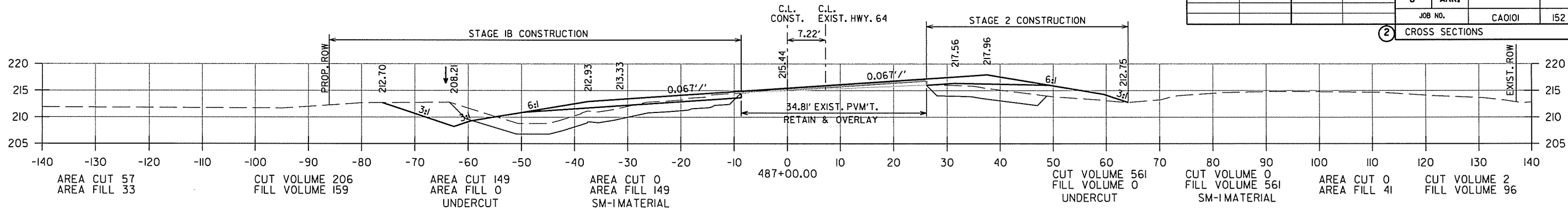
BEGIN HWY. 64
BEGIN CAO101

STAGE 2
STA. 480+91.76 TO STA. 484+00.00
HWY. 64

06/13/2016

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.		CA0101	152	224

2 CROSS SECTIONS



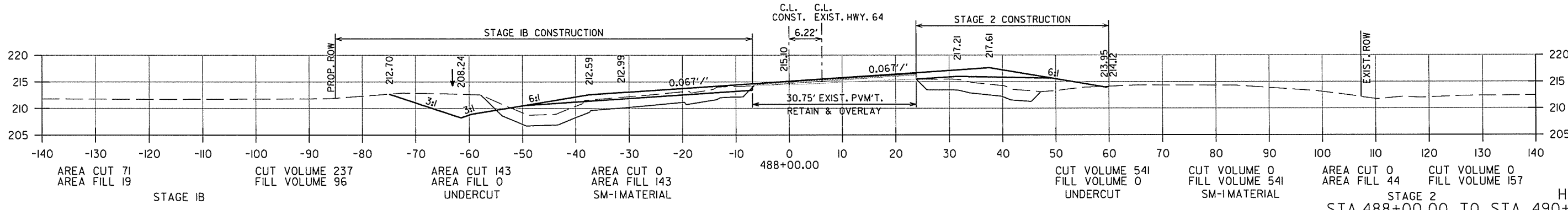
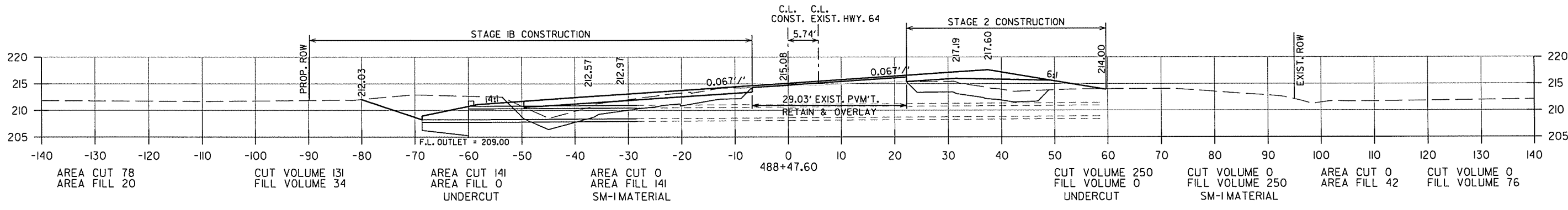
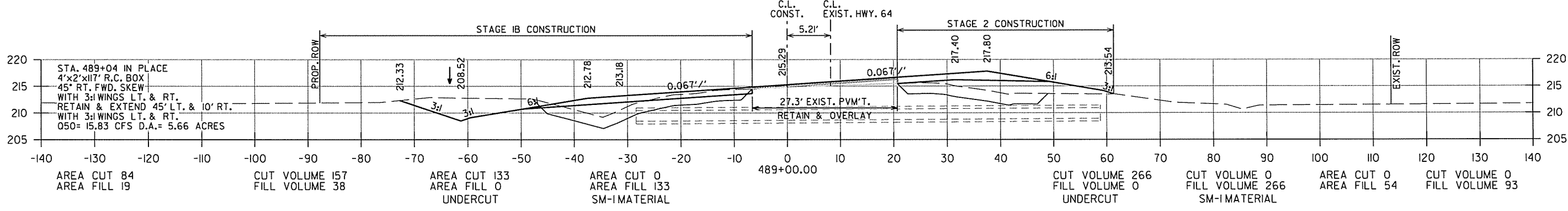
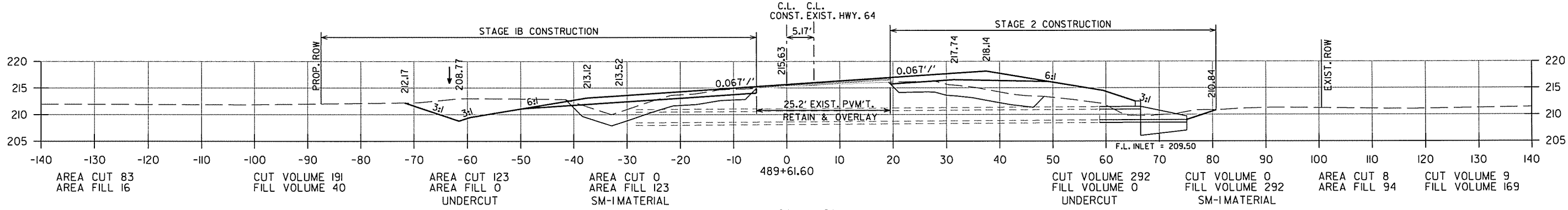
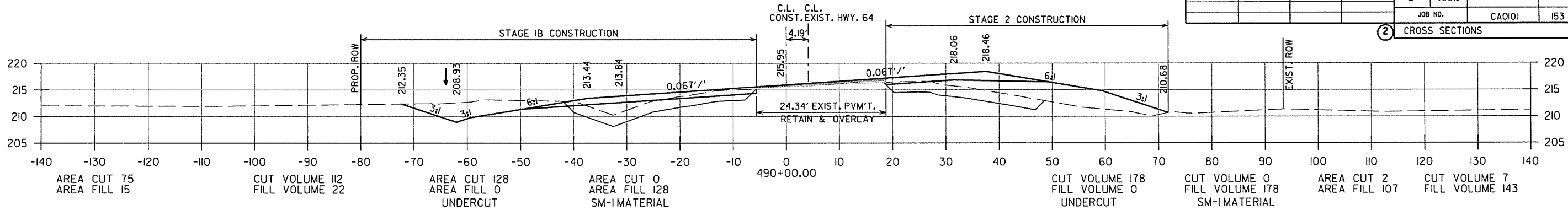
STA. 484+72 IN PLACE
24"x65' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE & CONSTRUCT
24"x121' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
Q50= 10.04 CFS D.A.= 3.15 ACRES

STAGE 1B

STAGE 2
STA. 484+71.61 TO STA. 487+00.00 HWY. 64

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. CAO101		153	224	

2 CROSS SECTIONS

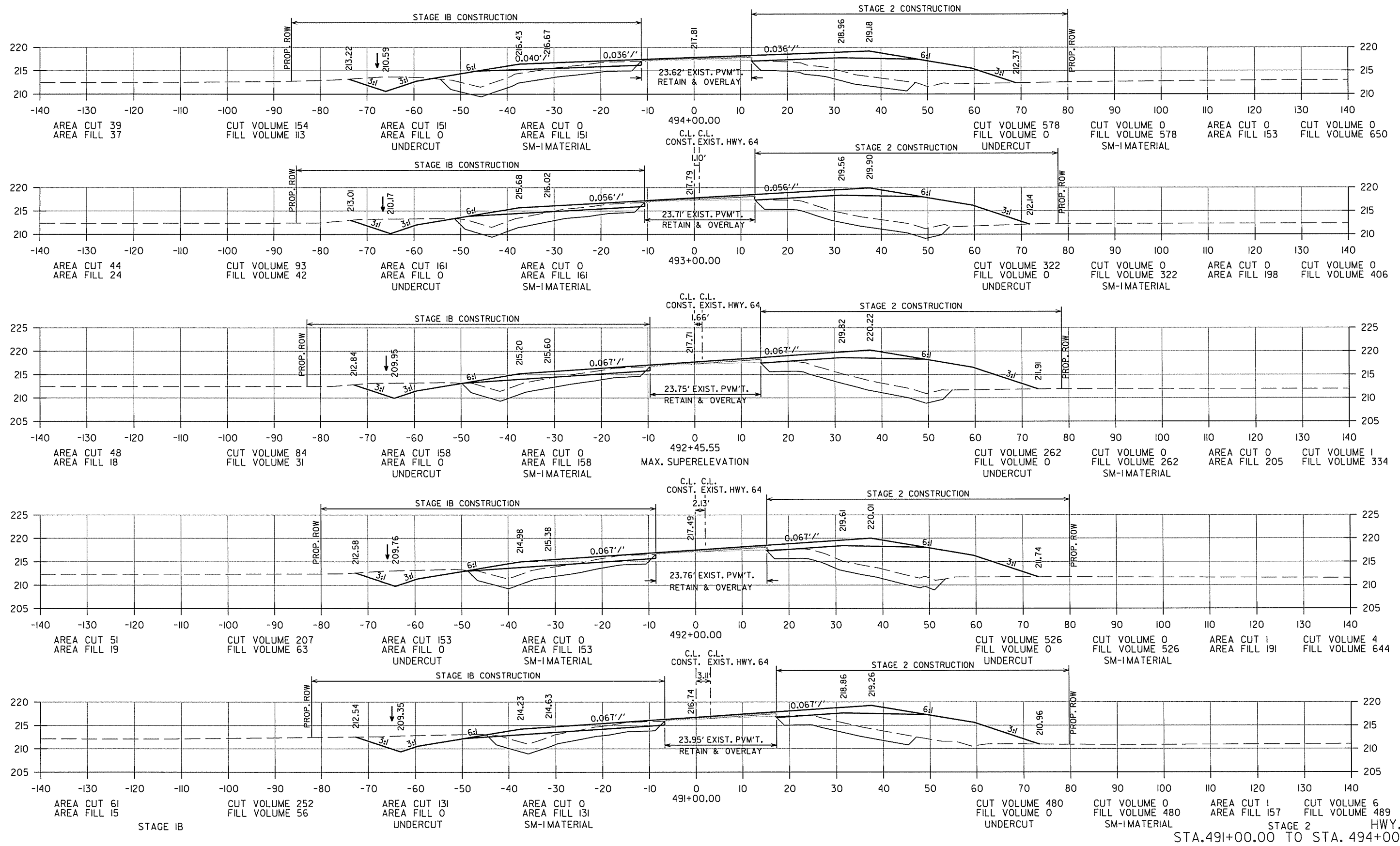


STAGE 2
 STA. 488+00.00 TO STA. 490+00.00
 HWY. 64

06/13/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	CA0101	154	224	

2 CROSS SECTIONS

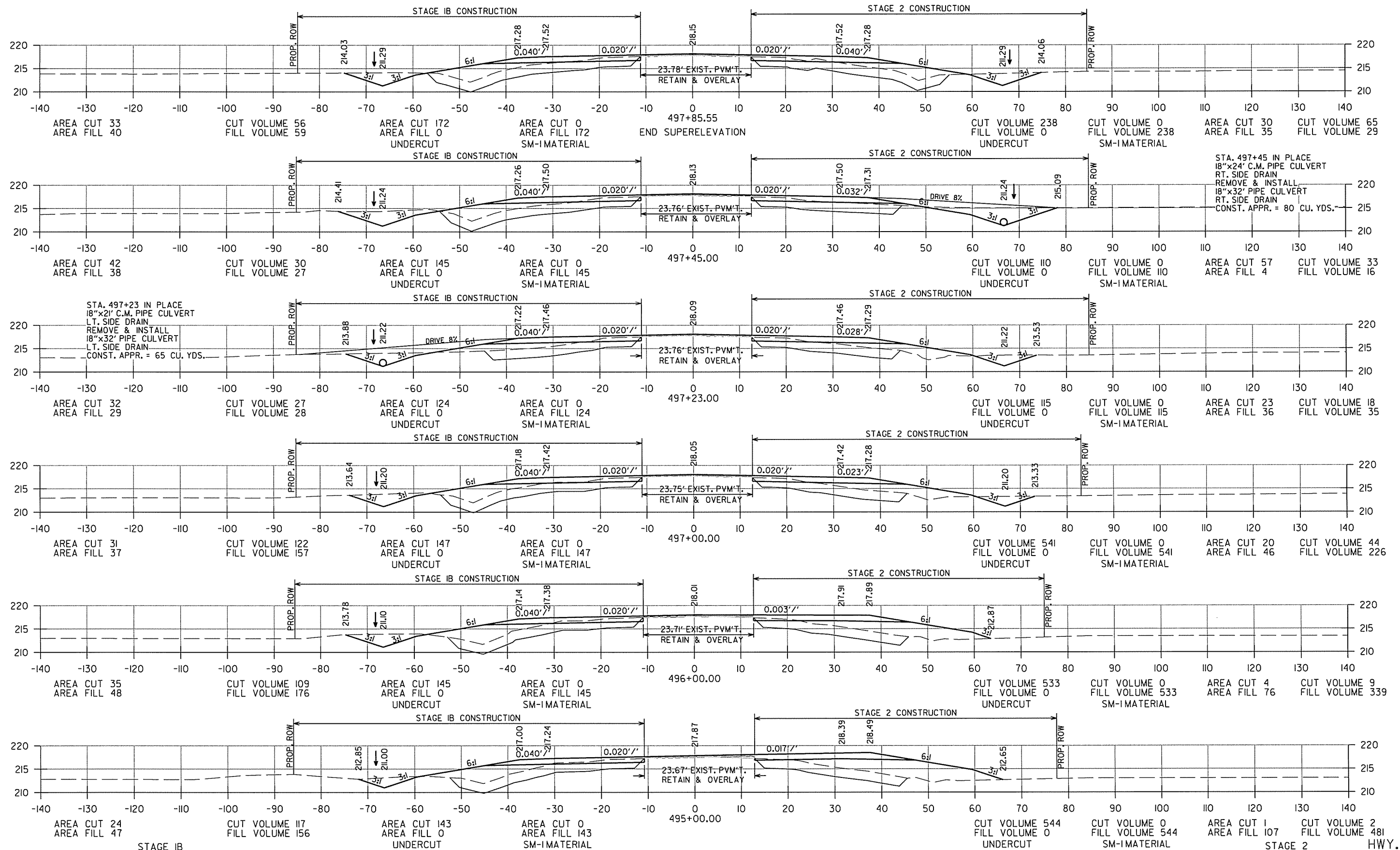


06/13/2016

STA. 491+00.00 TO STA. 494+00.00 HWY. 64

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.	CAOIOI	155	224	

2 CROSS SECTIONS

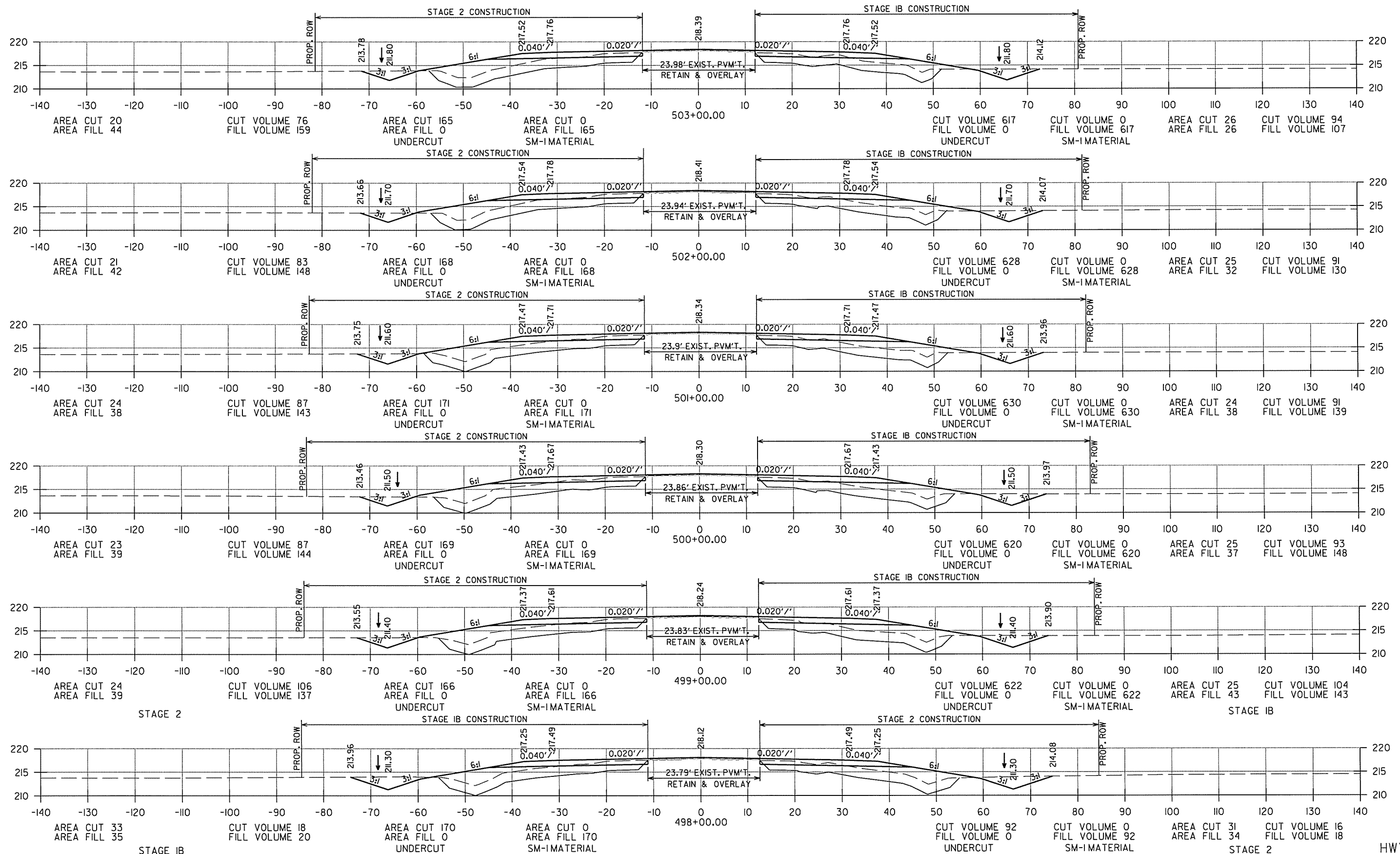


STA. 495+00.00 TO STA. 497+85.55 HWY. 64

06/13/2016

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.	CAOIOI	156

2 CROSS SECTIONS

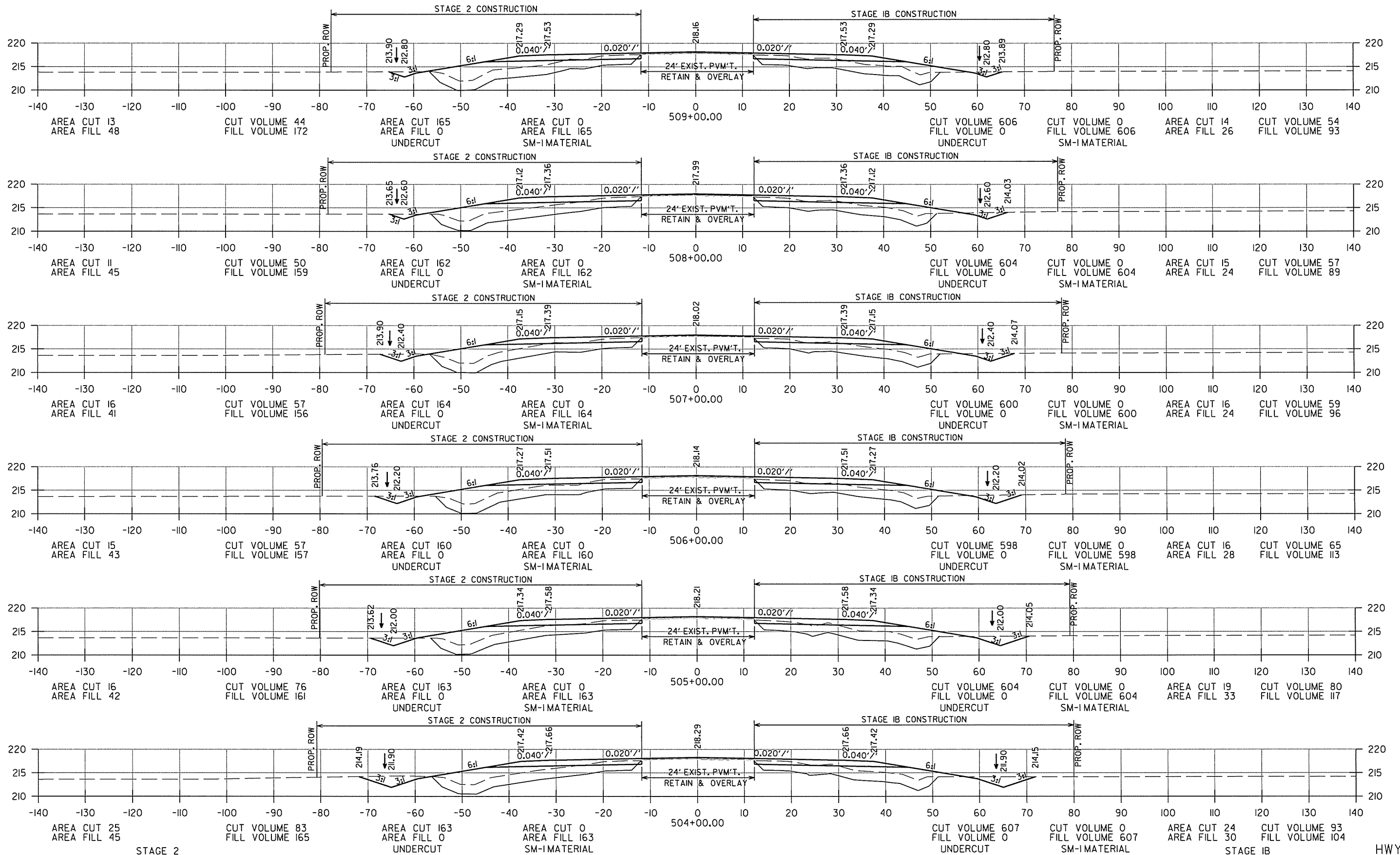


06/13/2016

HWY. 64
STA. 498+00.00 TO STA. 503+00.00

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. CAOIOI		157	224	

2 CROSS SECTIONS

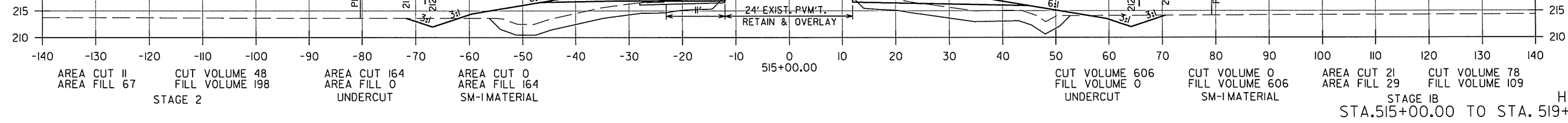
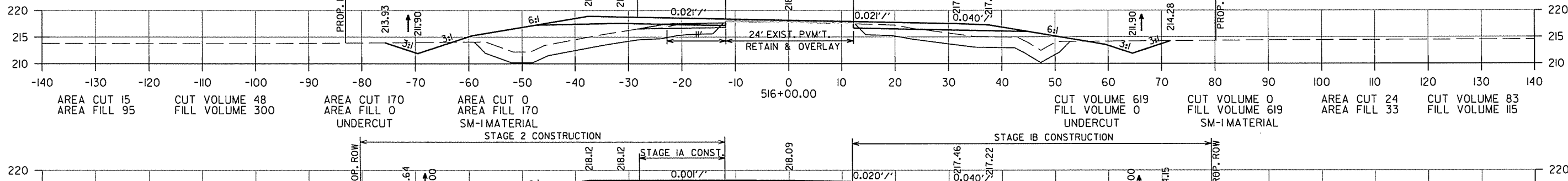
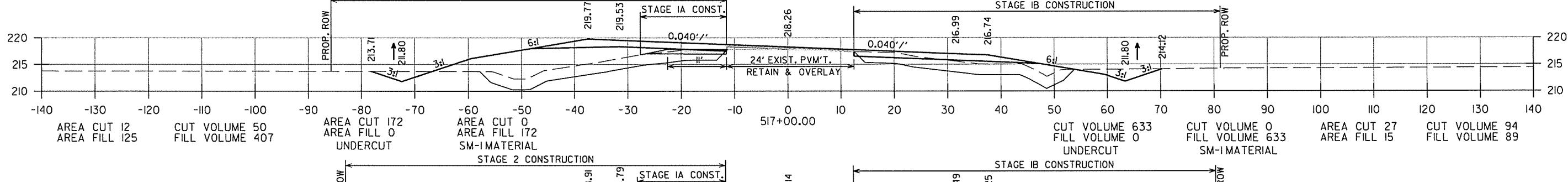
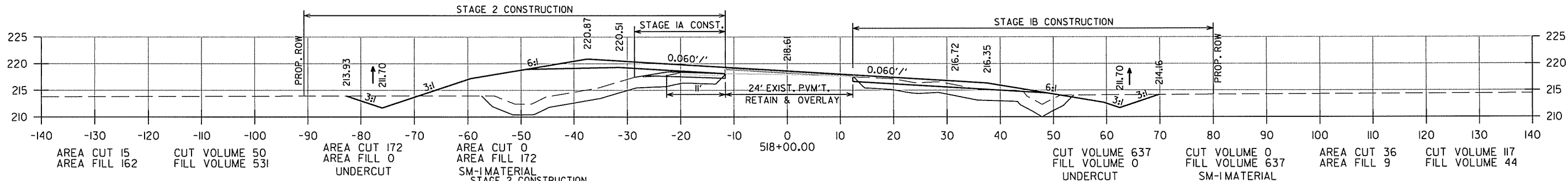
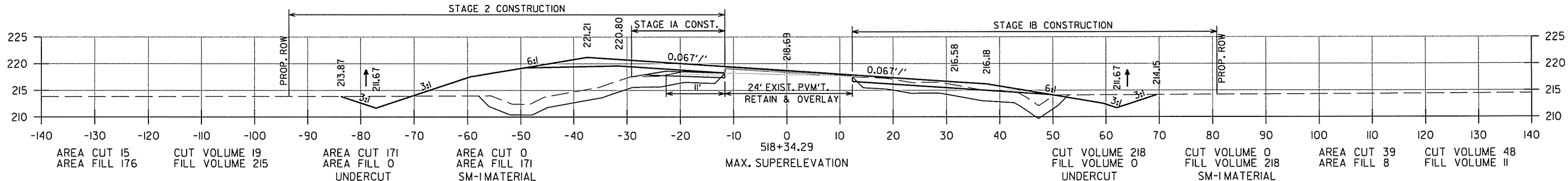
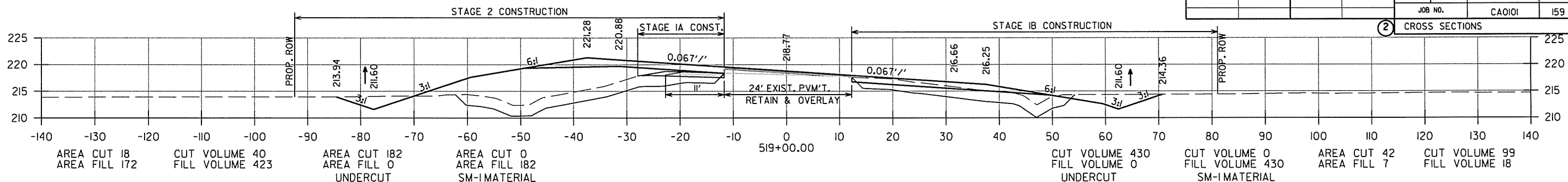


STAGE 2

STAGE 1B
 STA. 504+00.00 TO STA. 509+00.00
 HWY. 64

06/13/2016

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.	CA0101		159	224

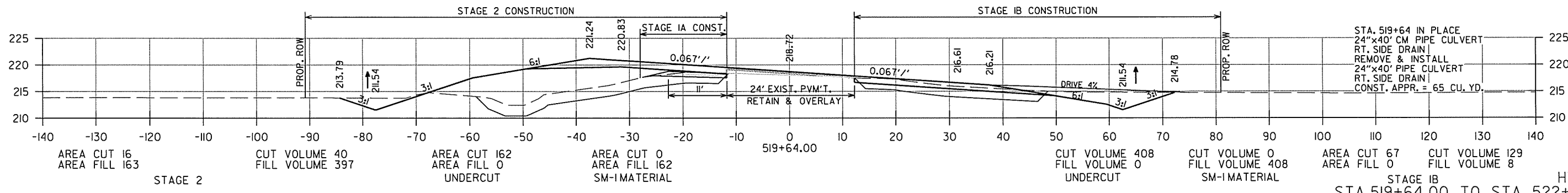
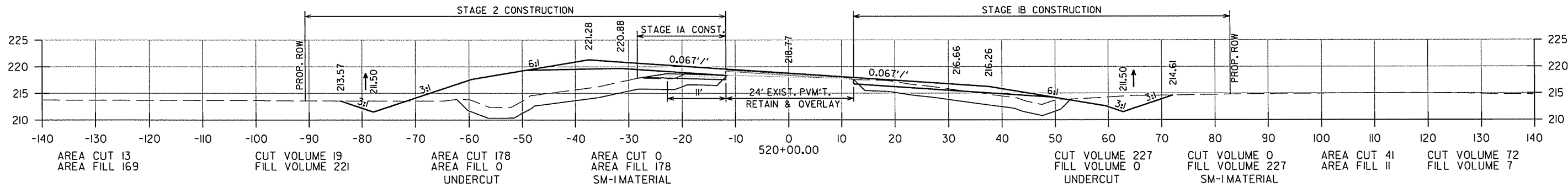
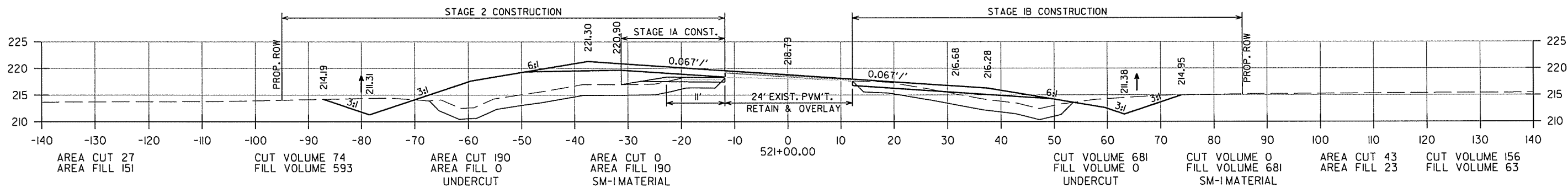
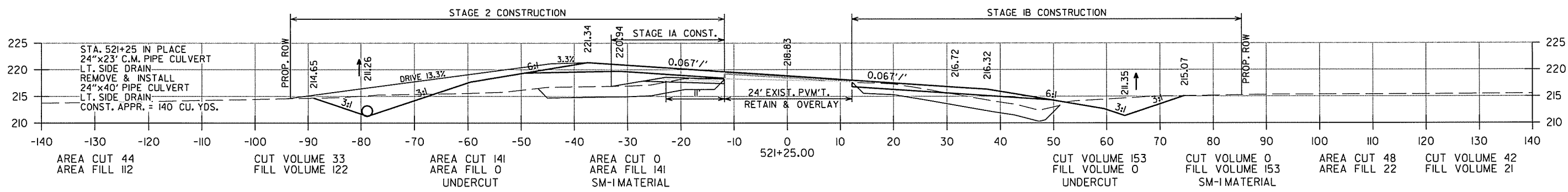
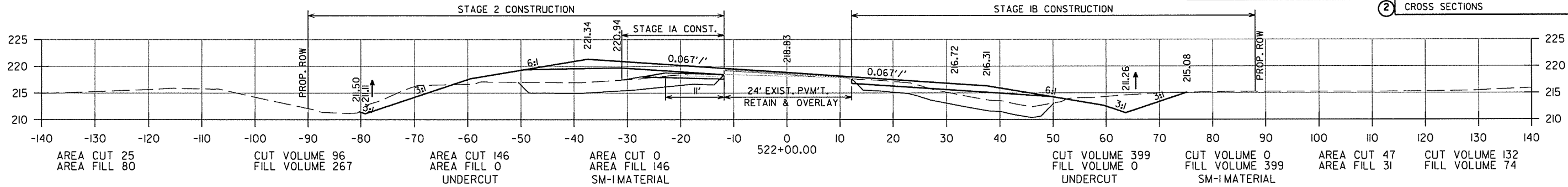


06/13/2016

HWY. 64
 STA. 515+00.00 TO STA. 519+00.00

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.	CAOIOI	160	224	

2 CROSS SECTIONS



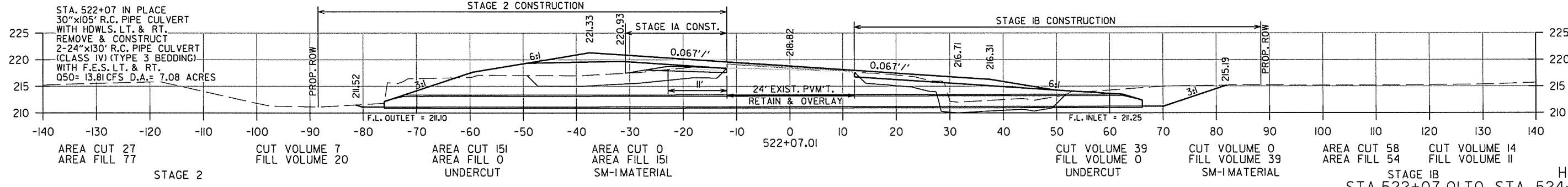
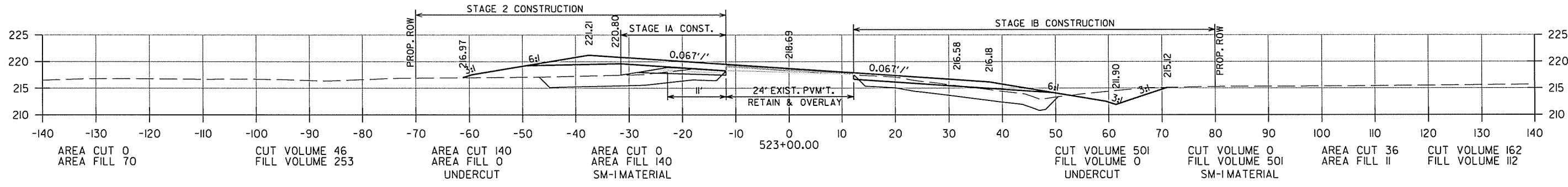
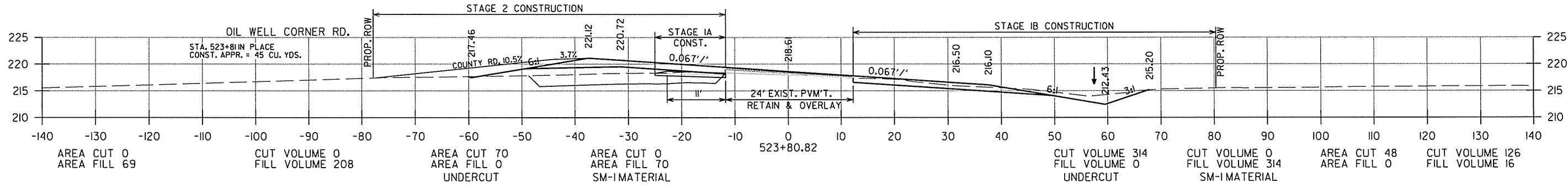
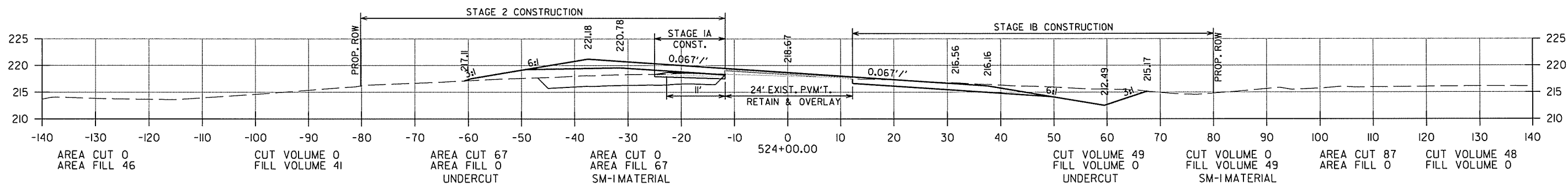
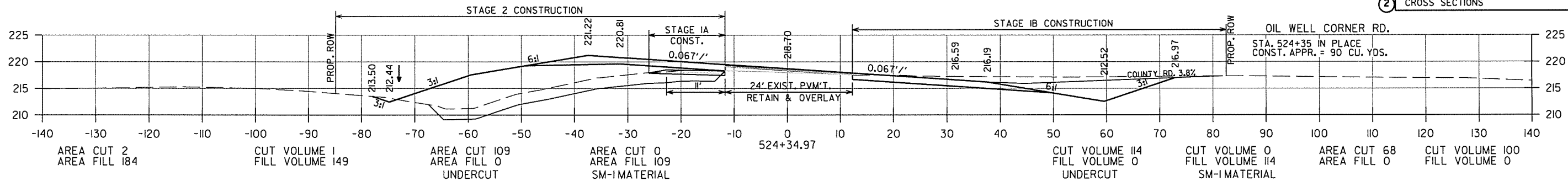
STAGE 2

STAGE IB
HWY. 64
STA. 519+64.00 TO STA. 522+00.00

06/13/2016

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.		CAO101	161	224

2 CROSS SECTIONS



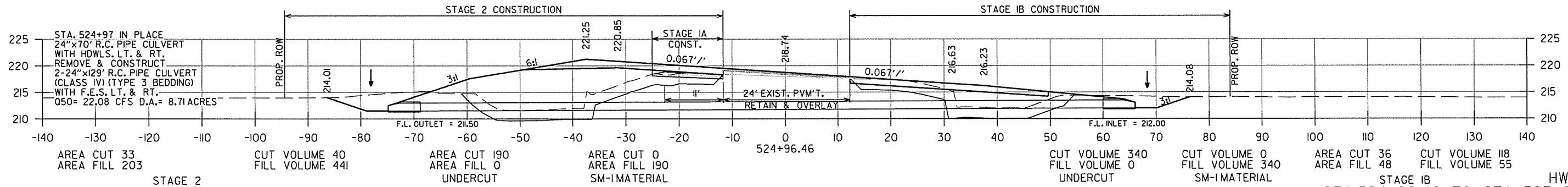
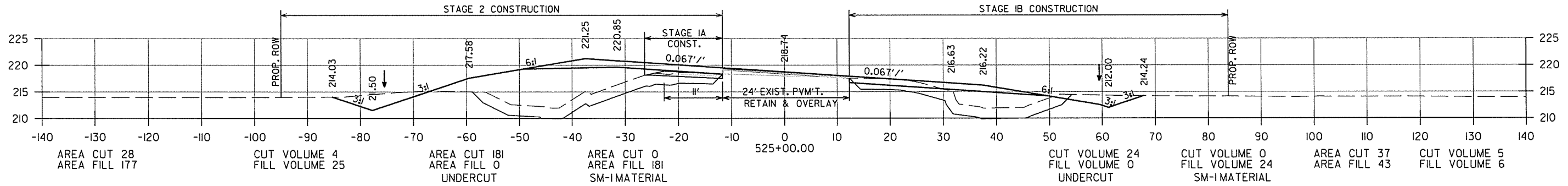
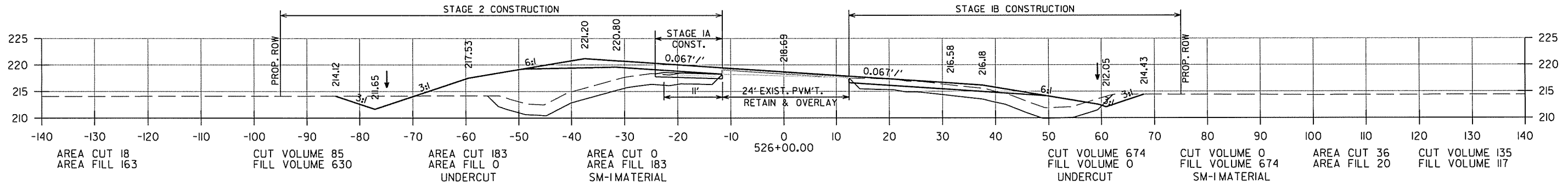
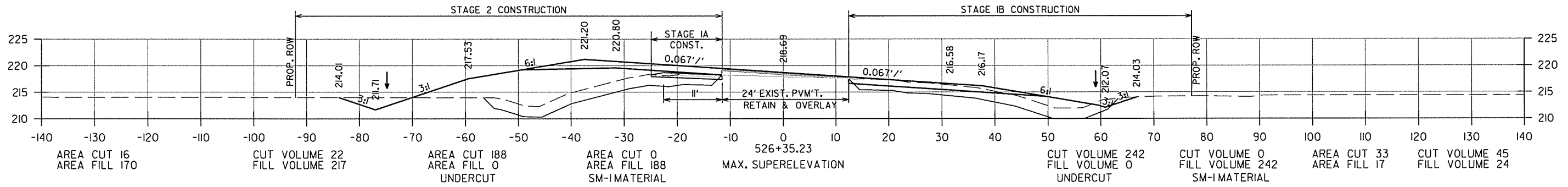
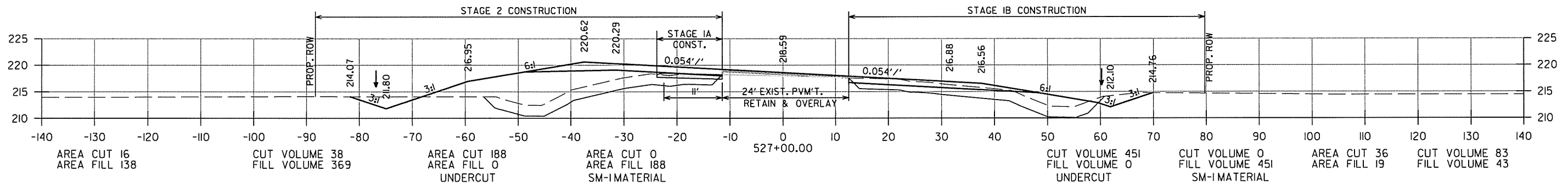
STAGE 2

STAGE IB
STA. 522+07.01 TO STA. 524+34.97

HWY. 64

06/13/2016

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.		CA0101	162	224
② CROSS SECTIONS								

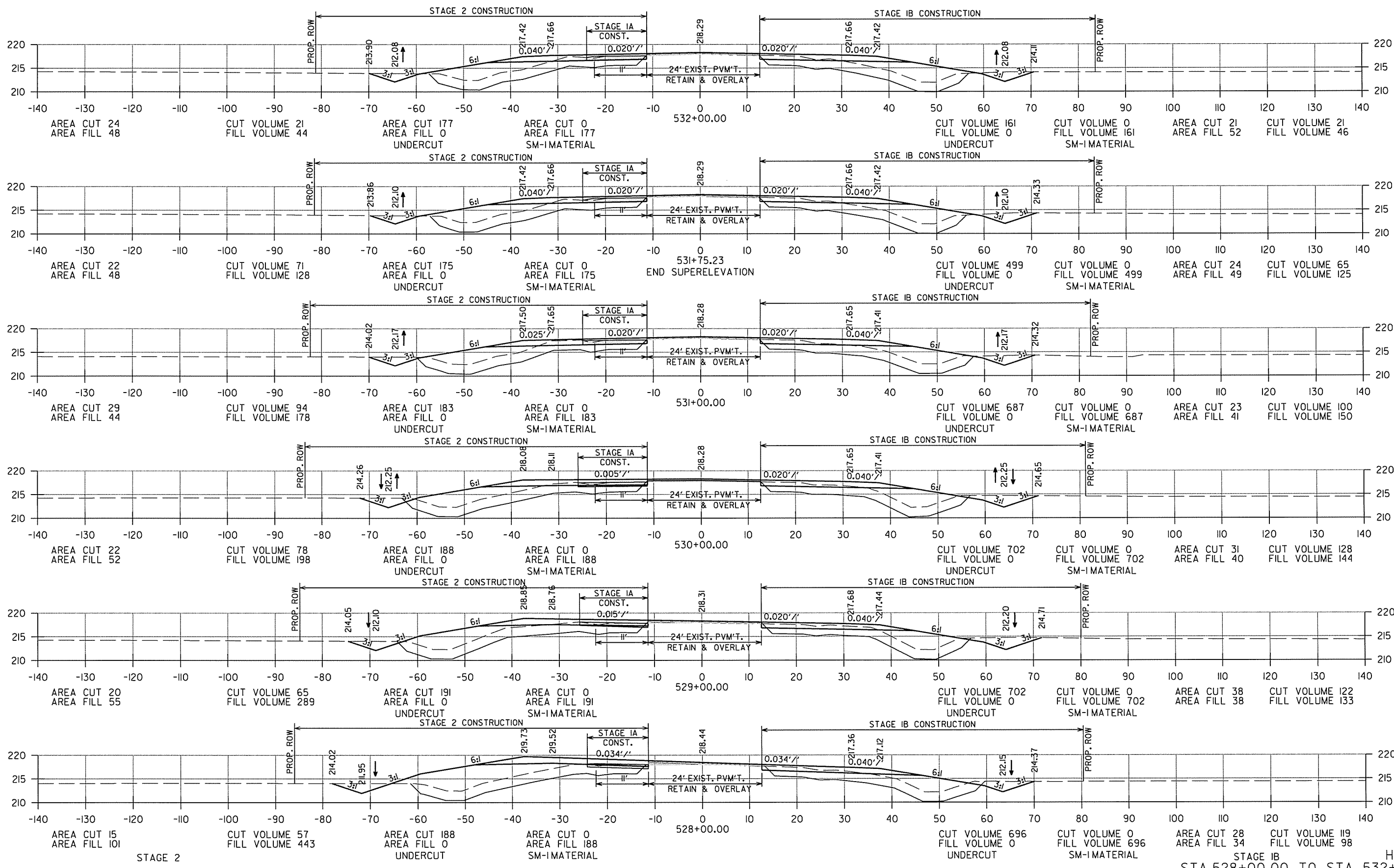


STAGE 2

STAGE 1B
HWY. 64
STA. 524+96.46 TO STA. 527+00.00

06/13/2016

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.	CA0101	163
						2 CROSS SECTIONS		

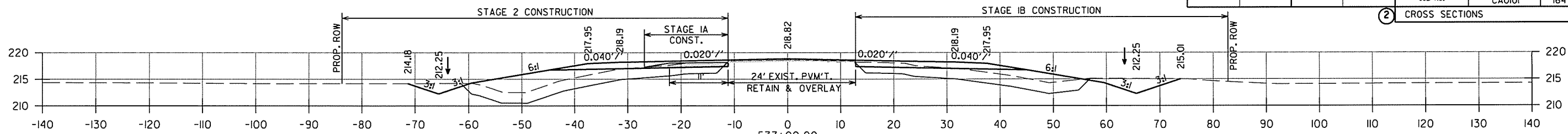


06/13/2016

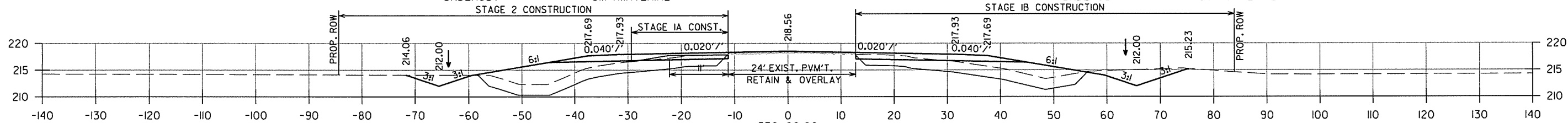
HWY. 64
 STA. 528+00.00 TO STA. 532+00.00

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.	CAO101	164	224	

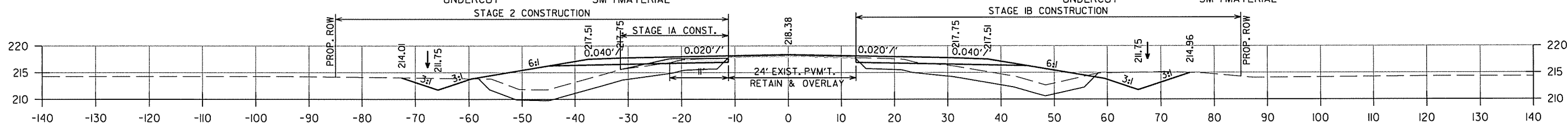
2 CROSS SECTIONS



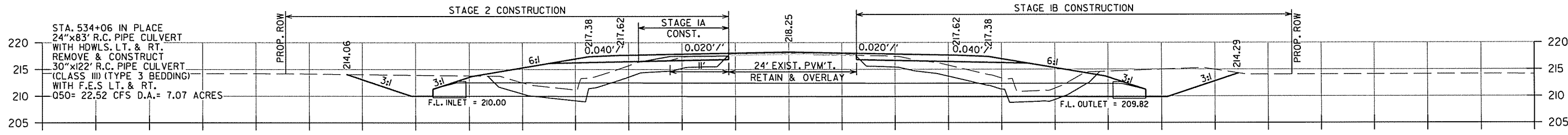
537+00.00
 AREA CUT 21
 AREA FILL 52
 CUT VOLUME 78
 FILL VOLUME 200
 AREA CUT 183
 AREA FILL 0
 UNDERCUT
 AREA CUT 0
 AREA FILL 183
 SM-I MATERIAL
 CUT VOLUME 665
 FILL VOLUME 0
 UNDERCUT
 AREA CUT 35
 AREA FILL 22
 CUT VOLUME 135
 FILL VOLUME 100



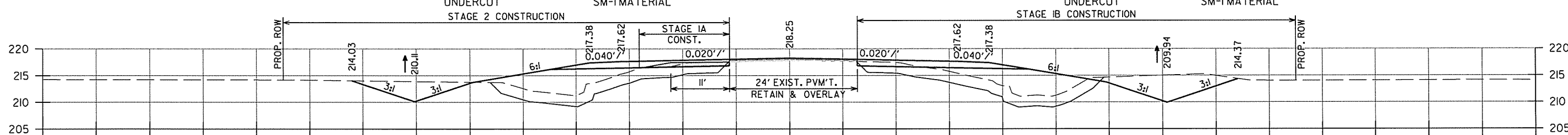
536+00.00
 AREA CUT 21
 AREA FILL 56
 CUT VOLUME 80
 FILL VOLUME 243
 AREA CUT 176
 AREA FILL 0
 UNDERCUT
 AREA CUT 0
 AREA FILL 176
 SM-I MATERIAL
 CUT VOLUME 659
 FILL VOLUME 0
 UNDERCUT
 AREA CUT 38
 AREA FILL 32
 CUT VOLUME 146
 FILL VOLUME 137



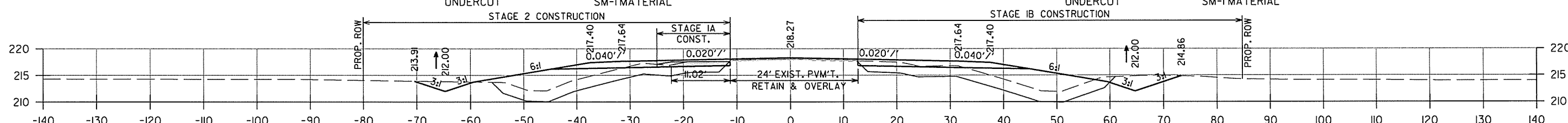
535+00.00
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 AREA FILL 75
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 UNDERCUT
 AREA CUT 0
 AREA FILL 180
 SM-I MATERIAL
 CUT VOLUME 638
 FILL VOLUME 0
 UNDERCUT
 AREA CUT 41
 AREA FILL 42
 CUT VOLUME 224
 FILL VOLUME 203



534+05.59
 AREA CUT 56
 AREA FILL 77
 CUT VOLUME 11
 FILL VOLUME 16
 AREA CUT 185
 AREA FILL 0
 UNDERCUT
 AREA CUT 0
 AREA FILL 185
 SM-I MATERIAL
 CUT VOLUME 38
 FILL VOLUME 0
 UNDERCUT
 AREA CUT 87
 AREA FILL 74
 CUT VOLUME 17
 FILL VOLUME 16



534+00.00
 AREA CUT 50
 AREA FILL 76
 CUT VOLUME 135
 FILL VOLUME 235
 AREA CUT 184
 AREA FILL 0
 UNDERCUT
 AREA CUT 0
 AREA FILL 184
 SM-I MATERIAL
 CUT VOLUME 678
 FILL VOLUME 0
 UNDERCUT
 AREA CUT 81
 AREA FILL 77
 CUT VOLUME 213
 FILL VOLUME 239



533+00.00
 AREA CUT 23
 AREA FILL 51
 CUT VOLUME 87
 FILL VOLUME 183
 AREA CUT 182
 AREA FILL 0
 UNDERCUT
 AREA CUT 0
 AREA FILL 182
 SM-I MATERIAL
 CUT VOLUME 665
 FILL VOLUME 0
 UNDERCUT
 AREA CUT 34
 AREA FILL 52
 CUT VOLUME 102
 FILL VOLUME 193

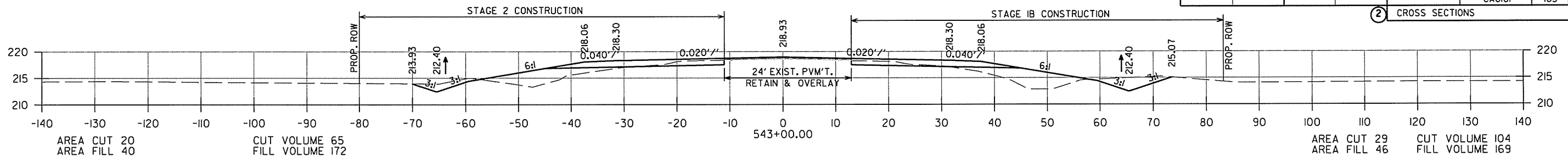
STAGE 2

STAGE 1B
 STA. 533+00.00 TO STA. 537+00.00
 HWY. 64

06/13/2016

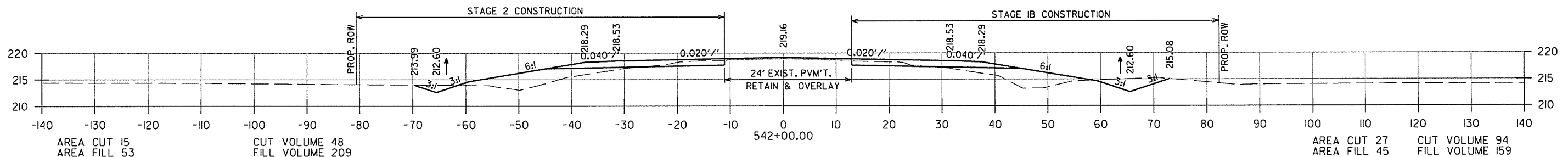
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101	165	224	

2 CROSS SECTIONS



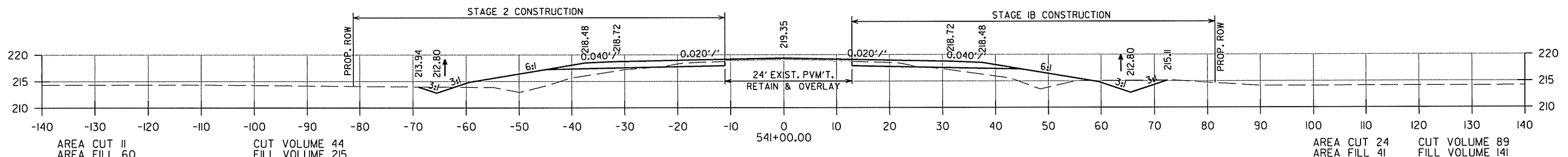
AREA CUT 20
AREA FILL 40
CUT VOLUME 65
FILL VOLUME 172

AREA CUT 29
AREA FILL 46
CUT VOLUME 104
FILL VOLUME 169



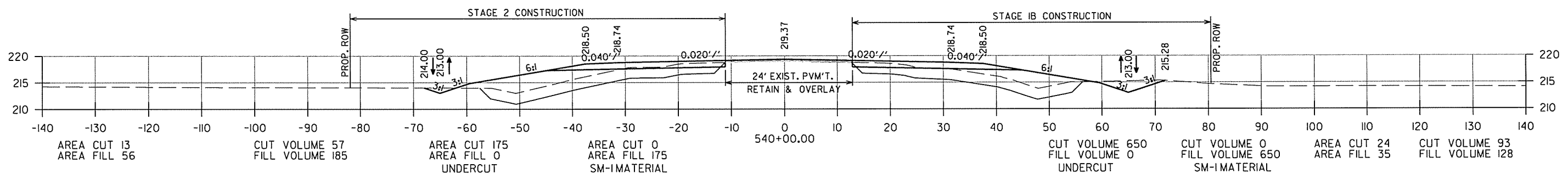
AREA CUT 15
AREA FILL 53
CUT VOLUME 48
FILL VOLUME 209

AREA CUT 27
AREA FILL 45
CUT VOLUME 94
FILL VOLUME 159



AREA CUT 11
AREA FILL 60
CUT VOLUME 44
FILL VOLUME 215

AREA CUT 24
AREA FILL 41
CUT VOLUME 89
FILL VOLUME 141



AREA CUT 13
AREA FILL 56
CUT VOLUME 57
FILL VOLUME 185

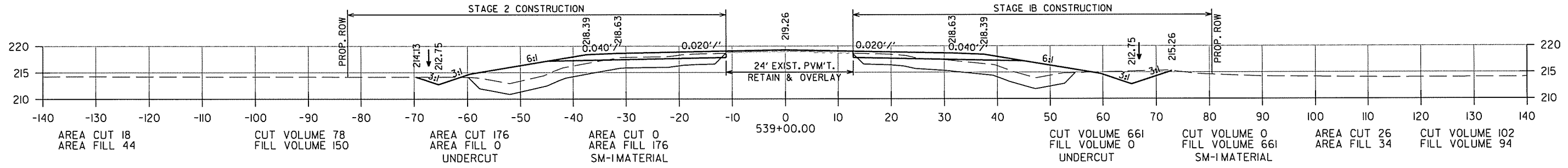
AREA CUT 175
AREA FILL 0
UNDERCUT

AREA CUT 0
AREA FILL 175
SM-1 MATERIAL

CUT VOLUME 650
FILL VOLUME 0
UNDERCUT

CUT VOLUME 0
FILL VOLUME 650
SM-1 MATERIAL

AREA CUT 24
AREA FILL 35
CUT VOLUME 93
FILL VOLUME 128



AREA CUT 18
AREA FILL 44
CUT VOLUME 78
FILL VOLUME 150

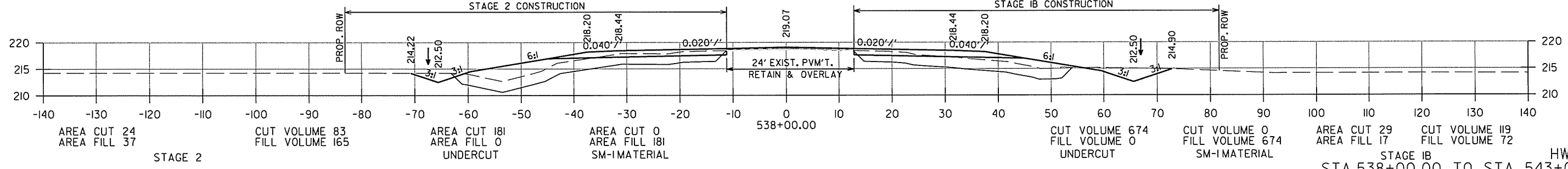
AREA CUT 176
AREA FILL 0
UNDERCUT

AREA CUT 0
AREA FILL 176
SM-1 MATERIAL

CUT VOLUME 661
FILL VOLUME 0
UNDERCUT

CUT VOLUME 0
FILL VOLUME 661
SM-1 MATERIAL

AREA CUT 26
AREA FILL 34
CUT VOLUME 102
FILL VOLUME 94



AREA CUT 24
AREA FILL 37
CUT VOLUME 83
FILL VOLUME 165

AREA CUT 181
AREA FILL 0
UNDERCUT

AREA CUT 0
AREA FILL 181
SM-1 MATERIAL

CUT VOLUME 674
FILL VOLUME 0
UNDERCUT

CUT VOLUME 0
FILL VOLUME 674
SM-1 MATERIAL

AREA CUT 29
AREA FILL 17
CUT VOLUME 119
FILL VOLUME 72

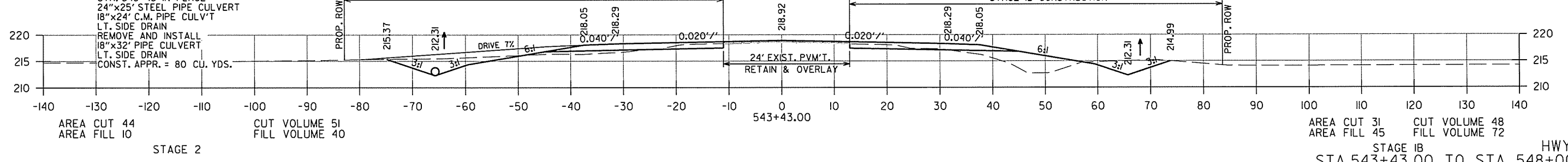
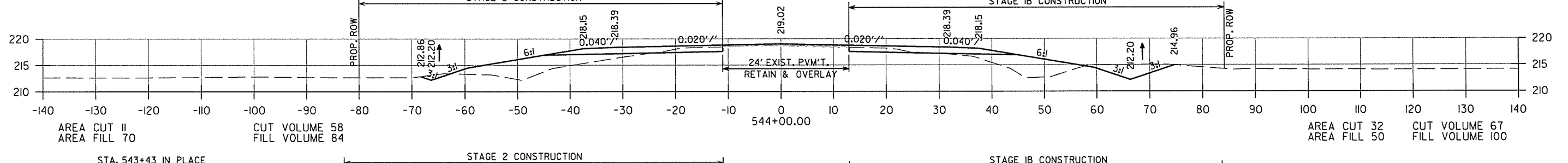
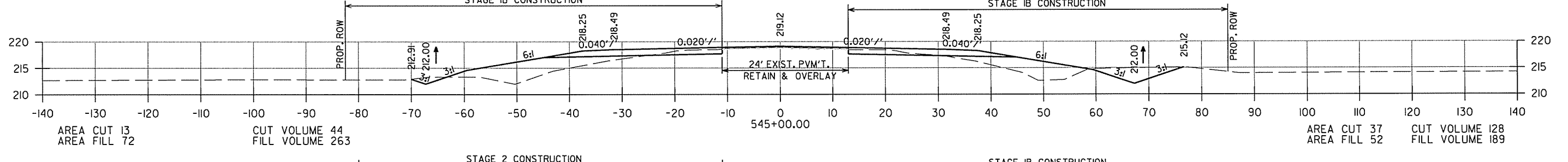
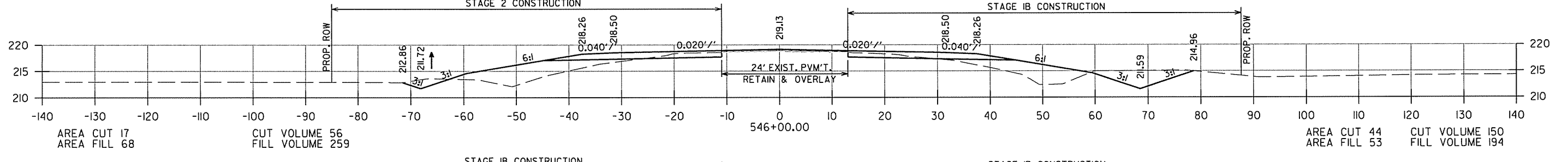
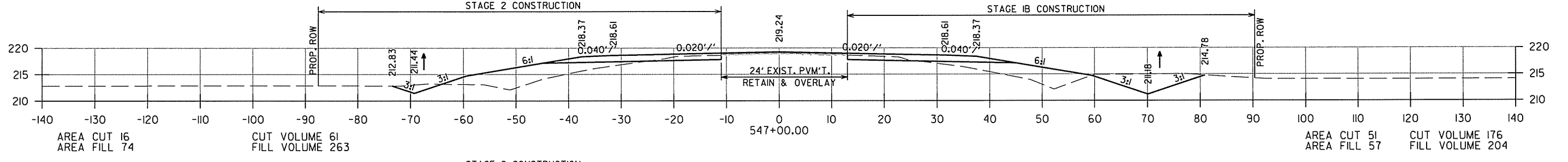
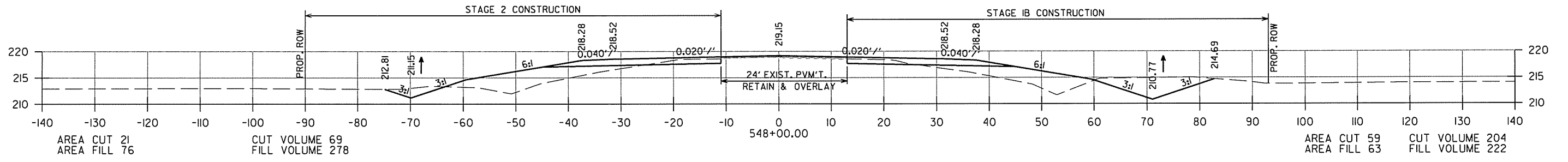
STAGE 2

STAGE 1B
STA. 538+00.00 TO STA. 543+00.00
HWY. 64

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0101	166

2 CROSS SECTIONS



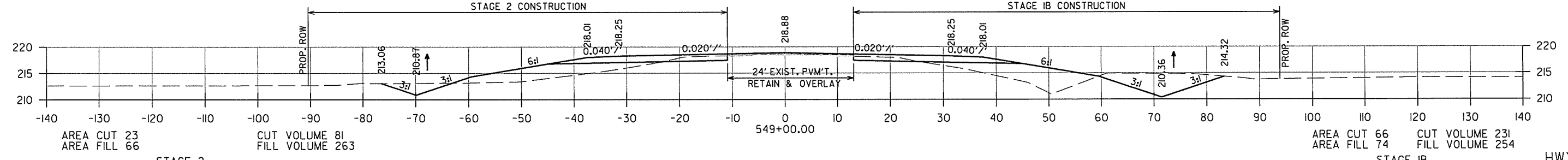
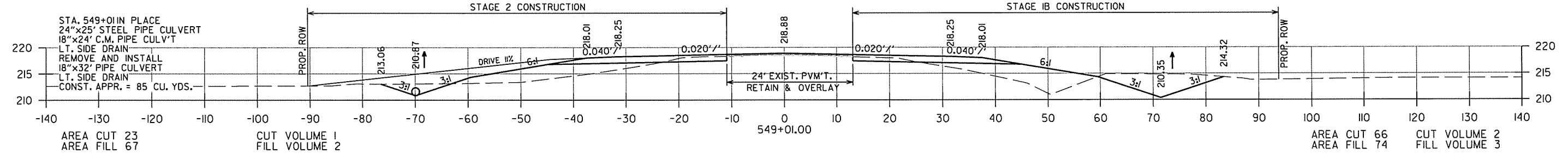
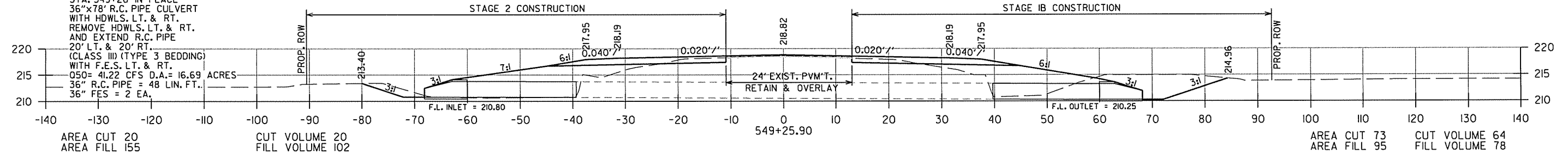
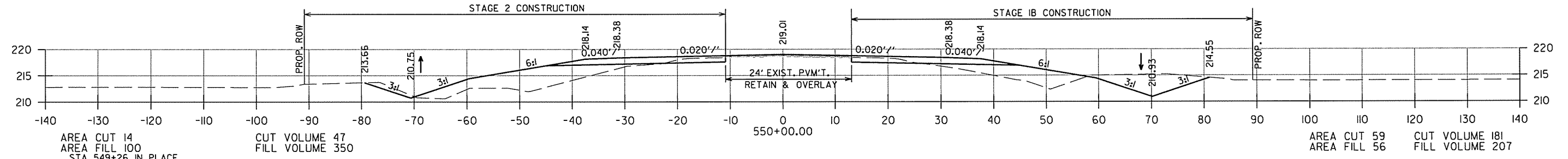
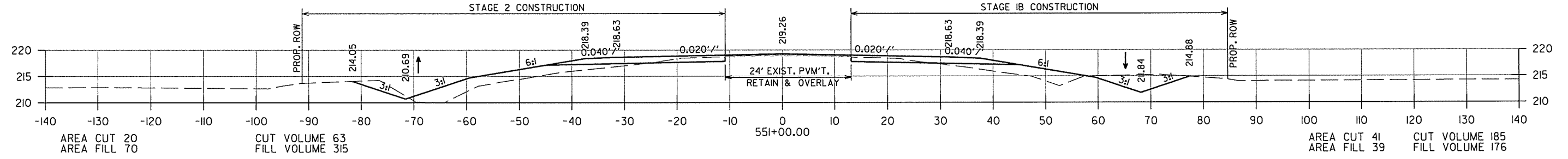
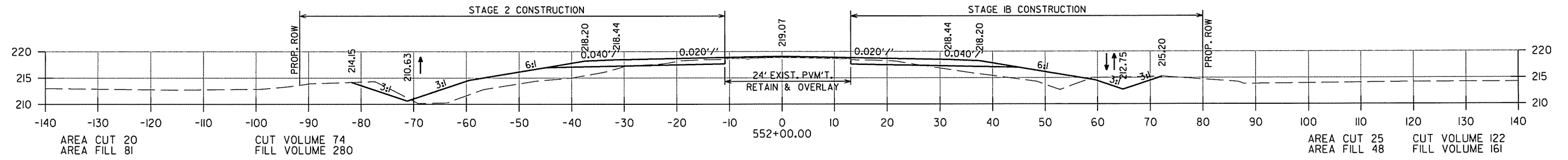
STAGE 2

STAGE 1B
HWY. 64
STA. 543+43.00 TO STA. 548+00.00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAO101	167	224	

2 CROSS SECTIONS



STAGE 2

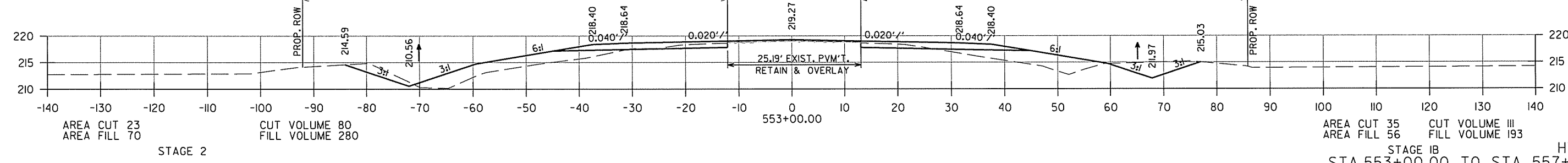
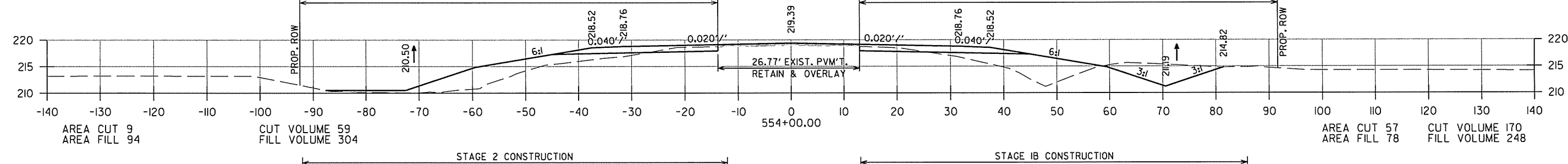
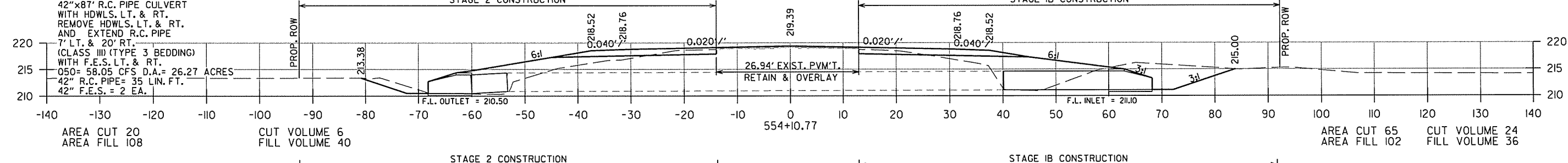
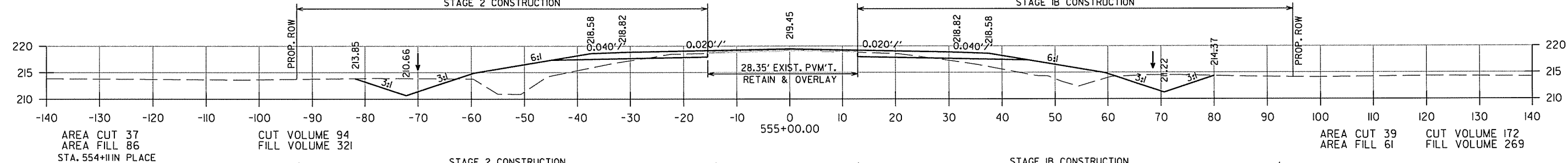
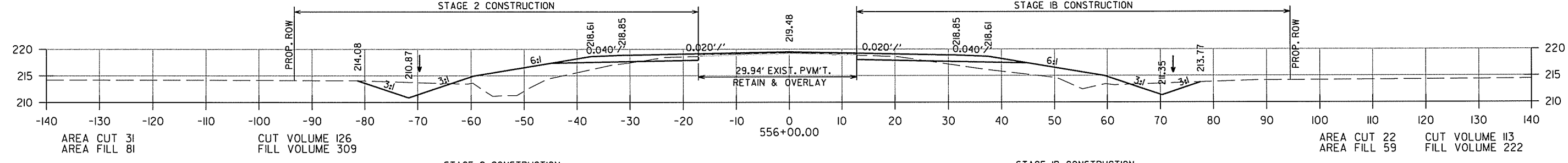
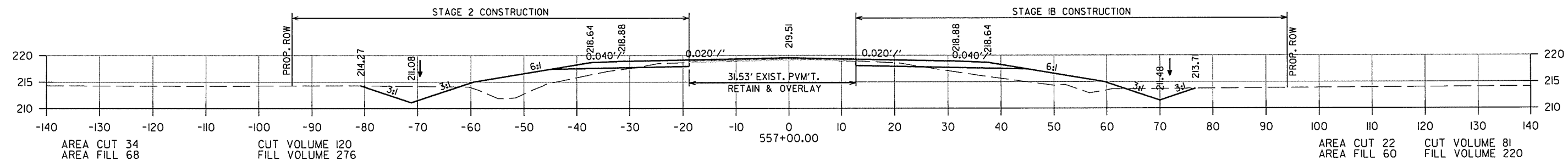
STAGE 1B
STA. 549+00.00 TO STA. 552+00.00

HWY. 64

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				6	ARK.			
				JOB NO.	CA0101	168	224	

2 CROSS SECTIONS



STAGE 2

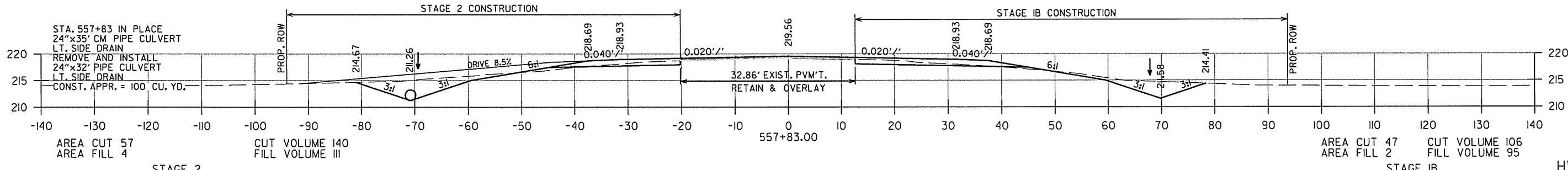
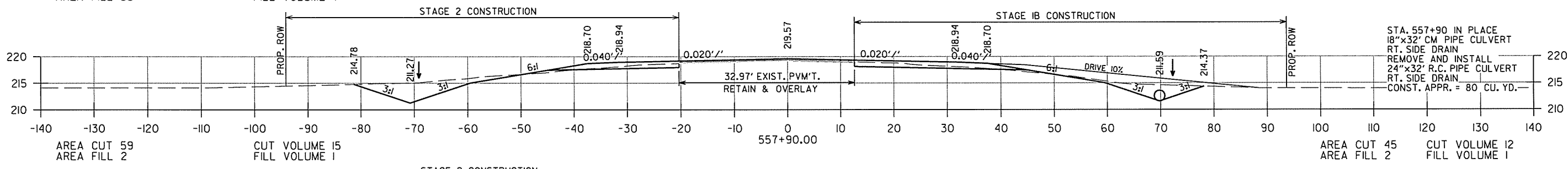
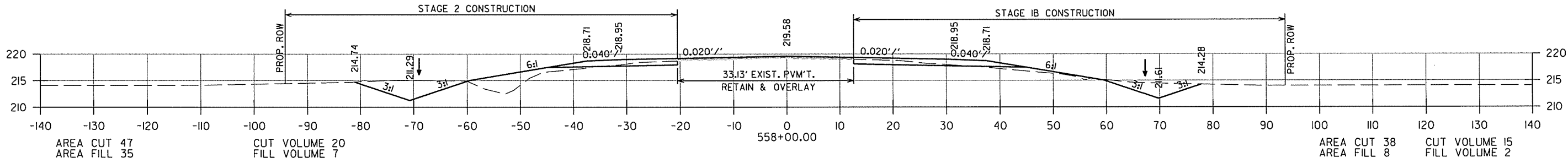
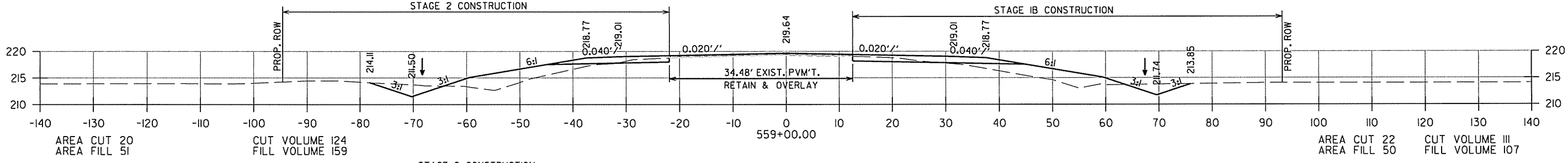
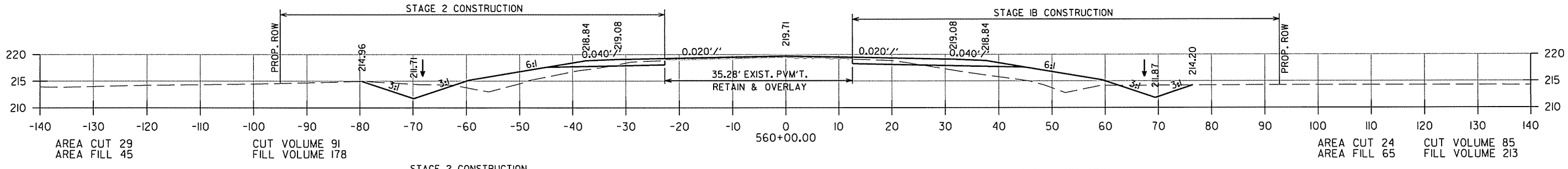
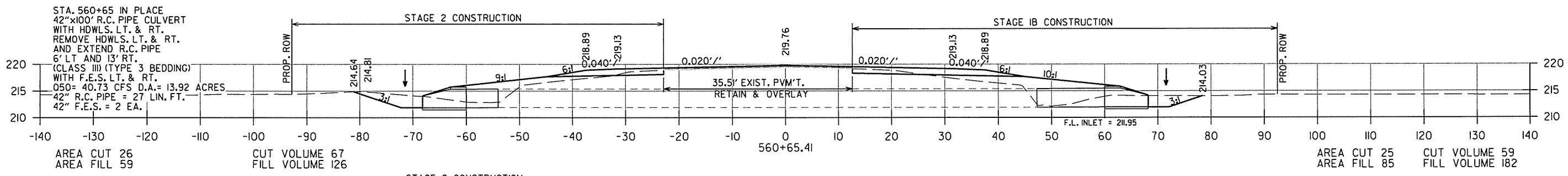
STAGE 1B
STA. 553+00.00 TO STA. 557+00.00

HWY. 64

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				6	ARK.			
						JOB NO. CAO101	169	224

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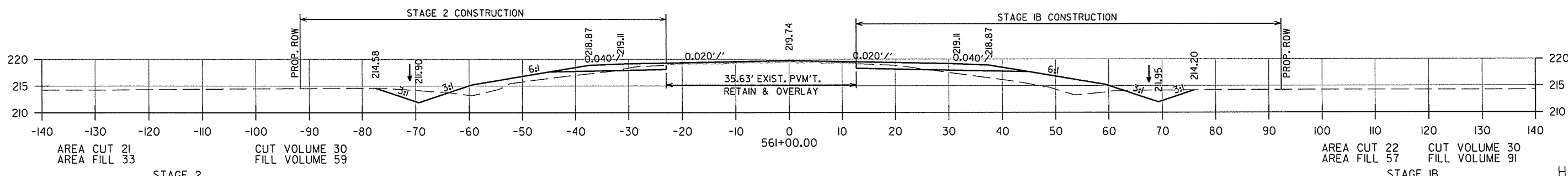
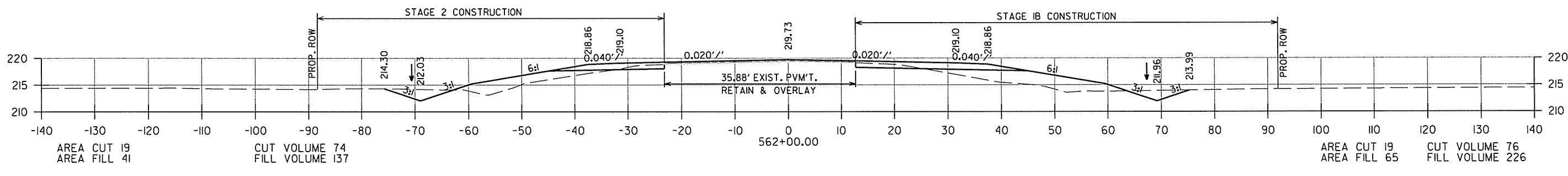
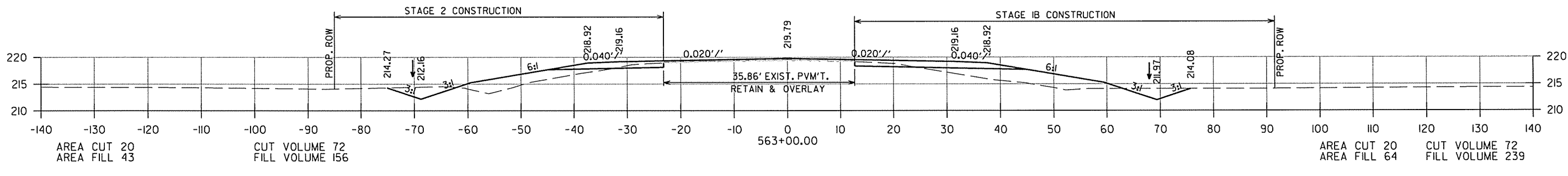
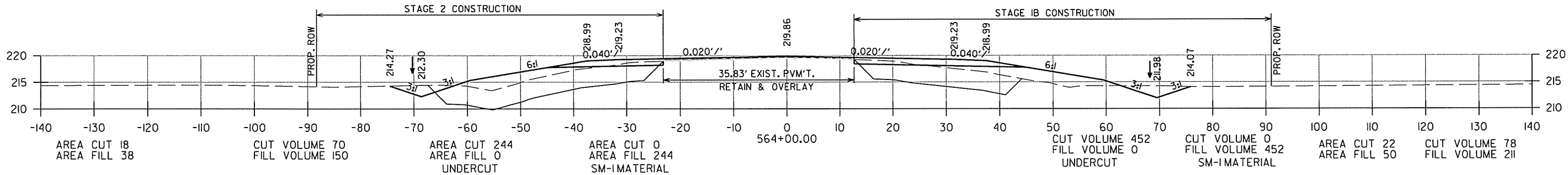
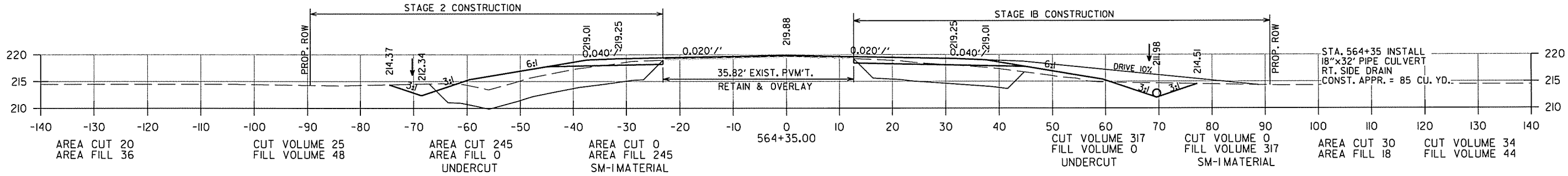
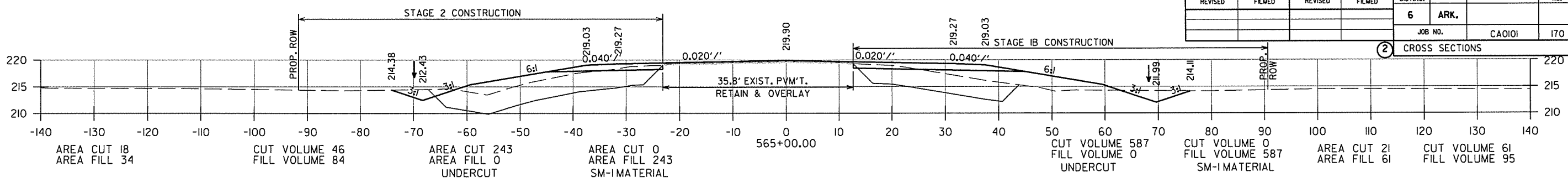


STAGE 2

STAGE 1B
STA. 557+83.00 TO STA. 560+65.41
HWY. 64

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		170	224

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STAGE 2

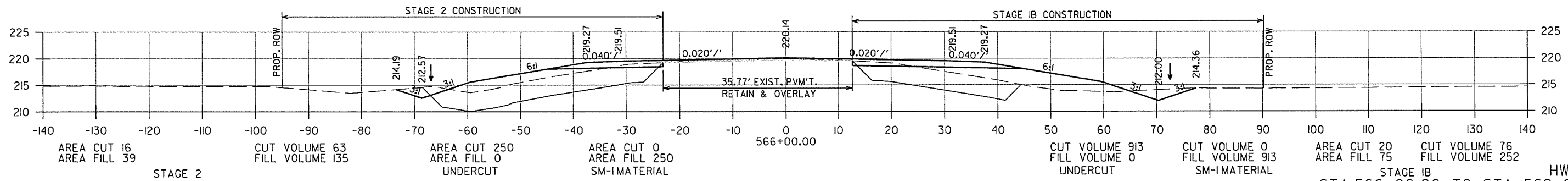
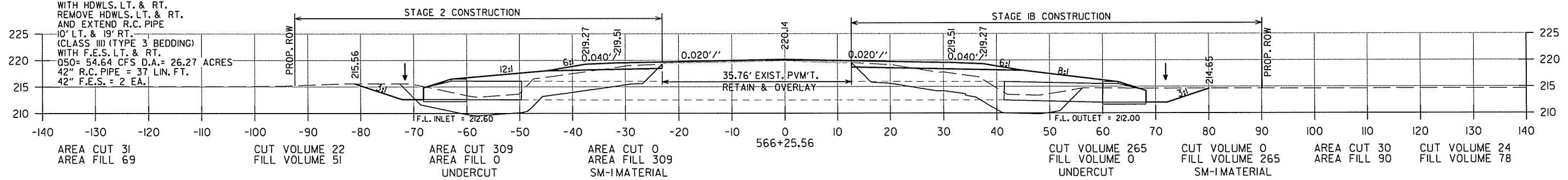
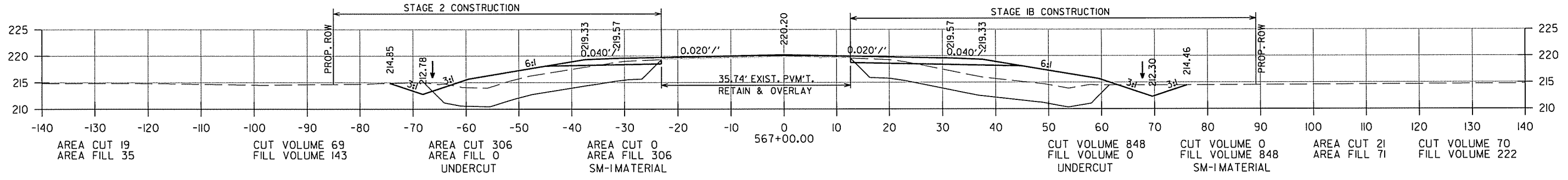
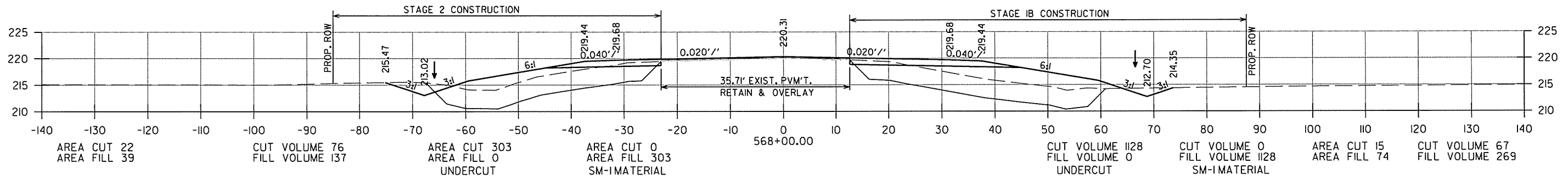
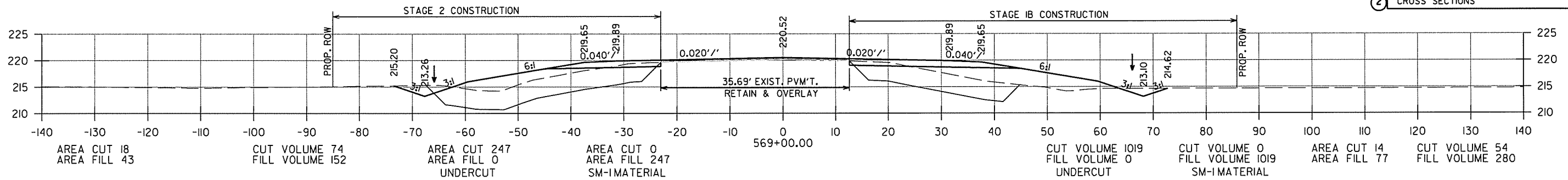
STAGE 1B
STA. 561+00.00 TO STA. 565+00.00

HWY. 64

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CAO101	171	224

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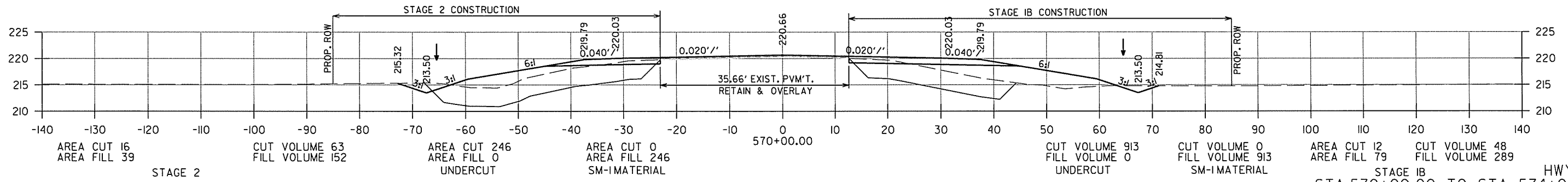
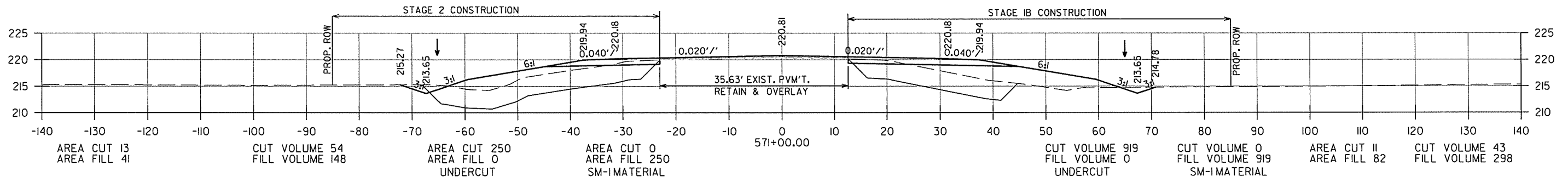
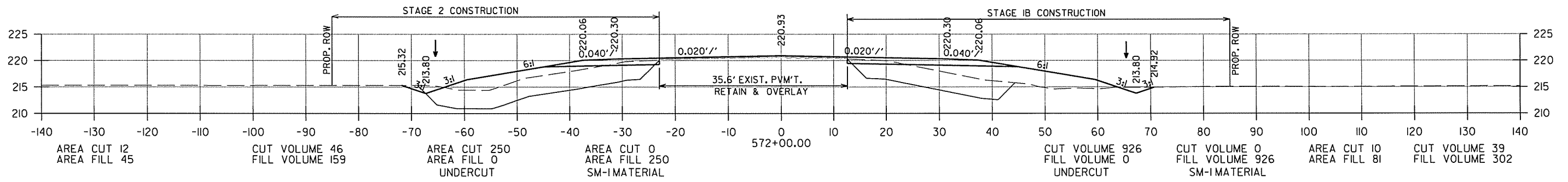
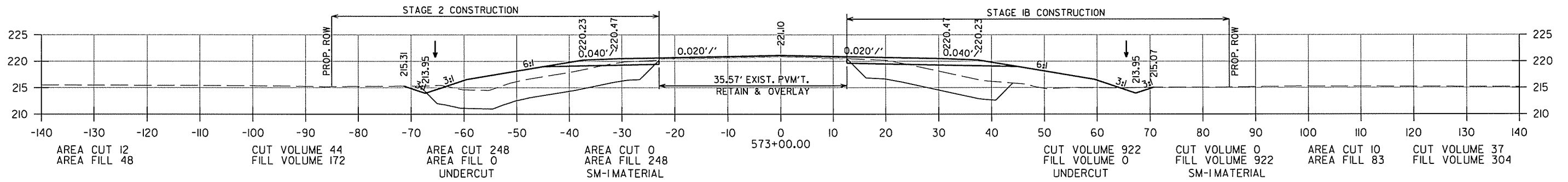
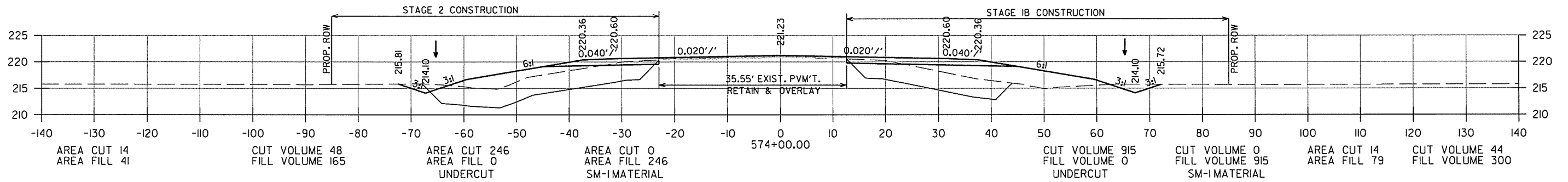
STAGE 2

STAGE 1B
 STA. 566+00.00 TO STA. 569+00.00
 HWY. 64

06/13/2016

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.	CA0101	172	224	

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STAGE 2

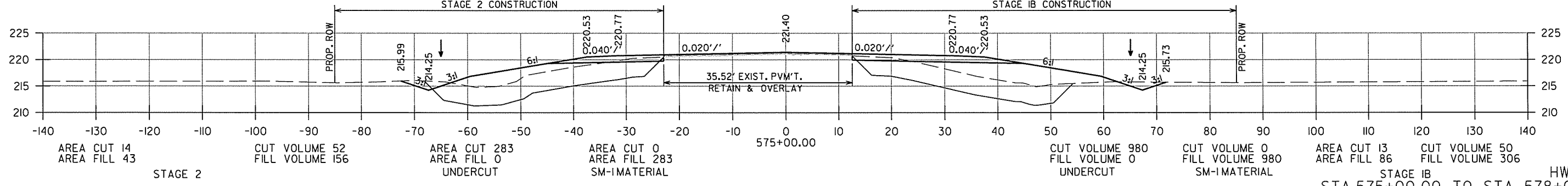
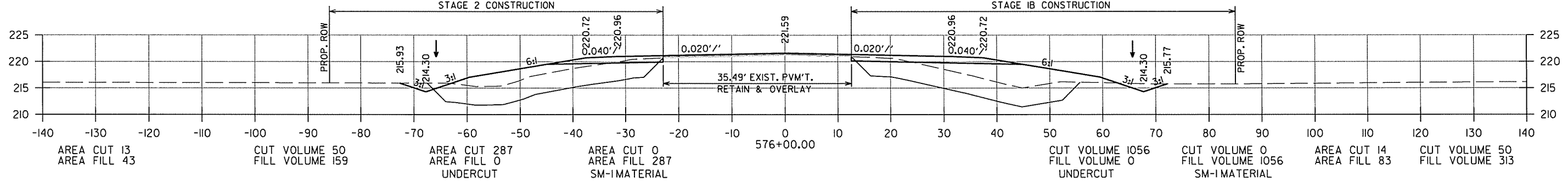
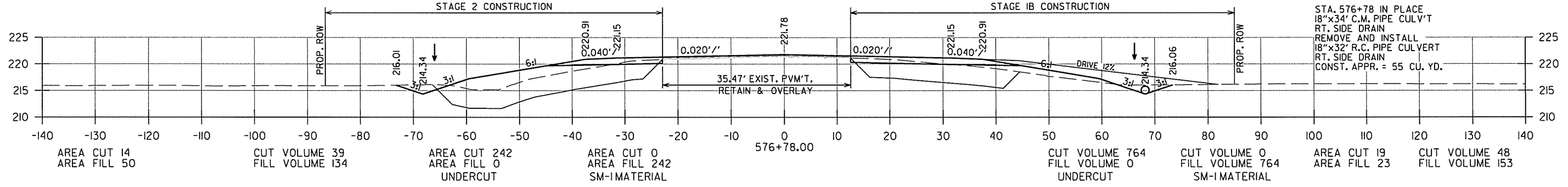
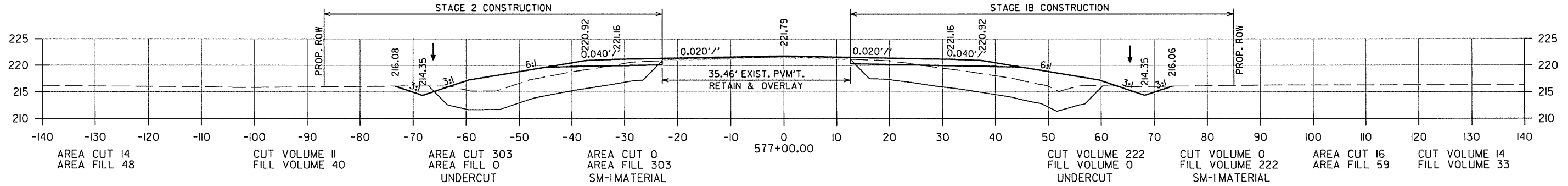
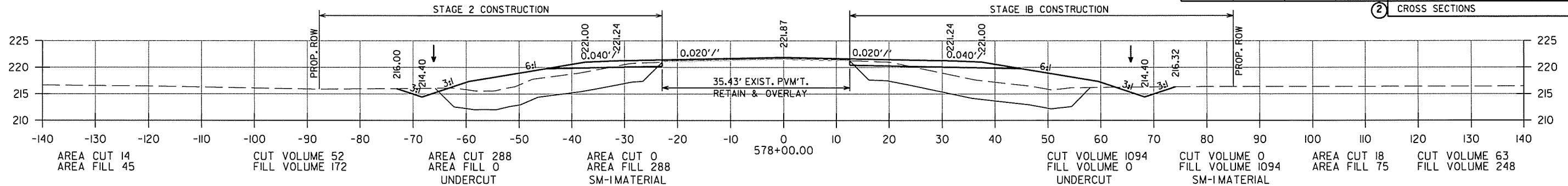
STAGE 1B
STA. 570+00.00 TO STA. 574+00.00

HWY. 64

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				6	ARK.			
						JOB NO. CAO101	173	224

② CROSS SECTIONS



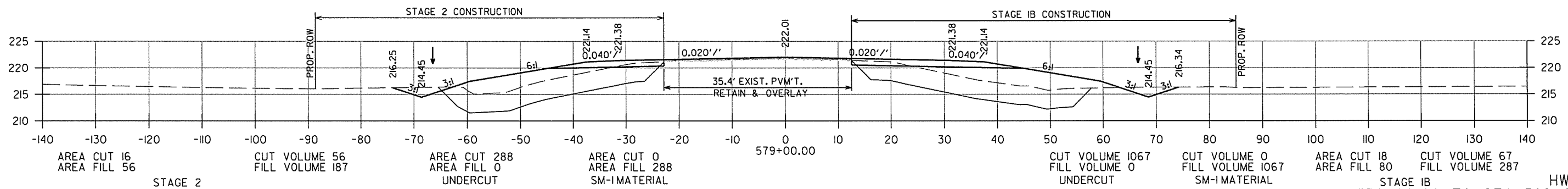
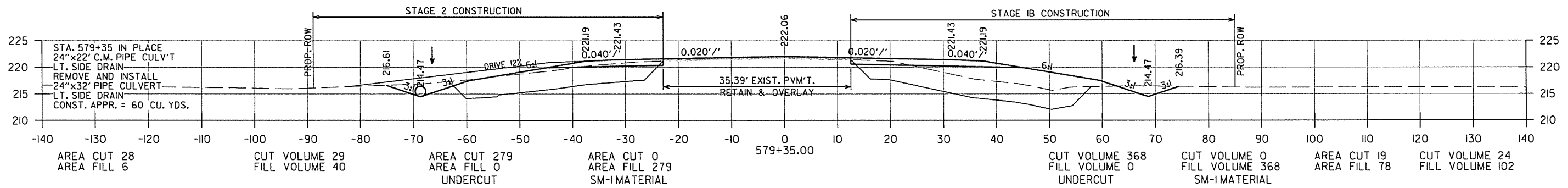
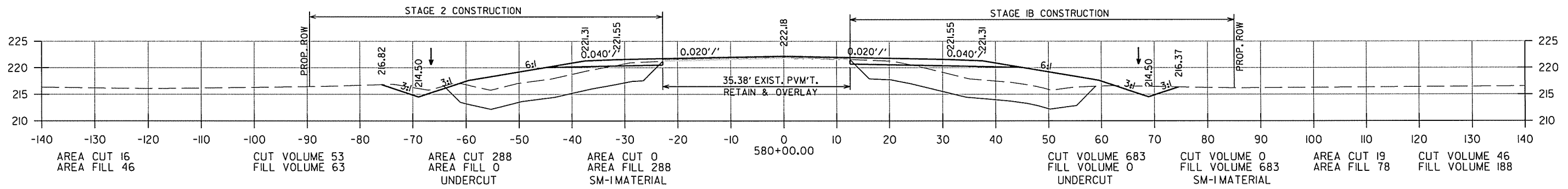
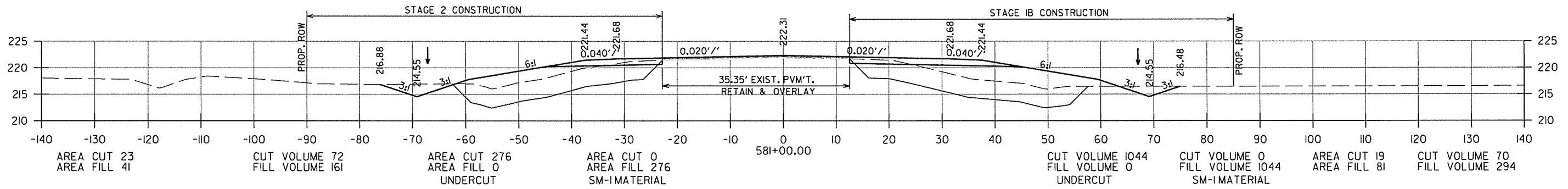
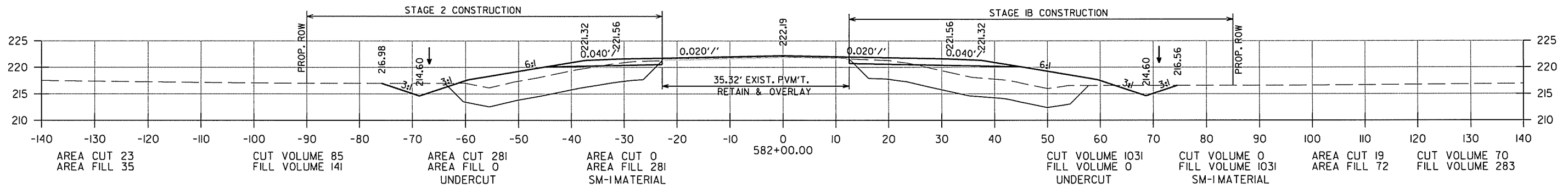
STAGE 2

STAGE 1B
HWY. 64
STA. 575+00.00 TO STA. 578+00.00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101	174	224	

2 CROSS SECTIONS

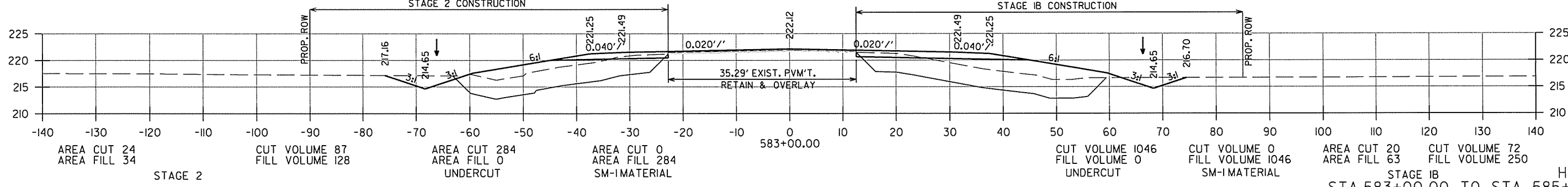
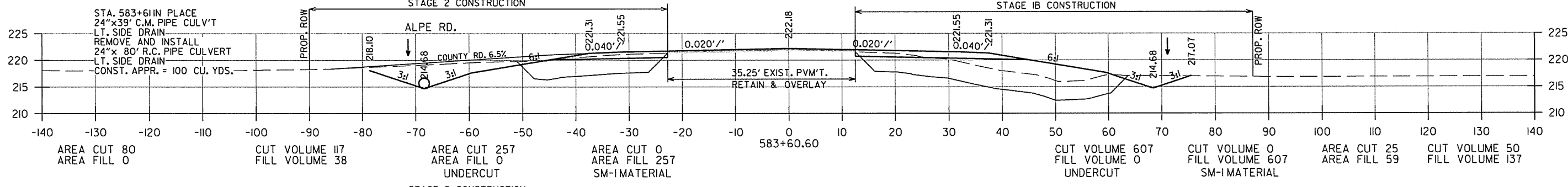
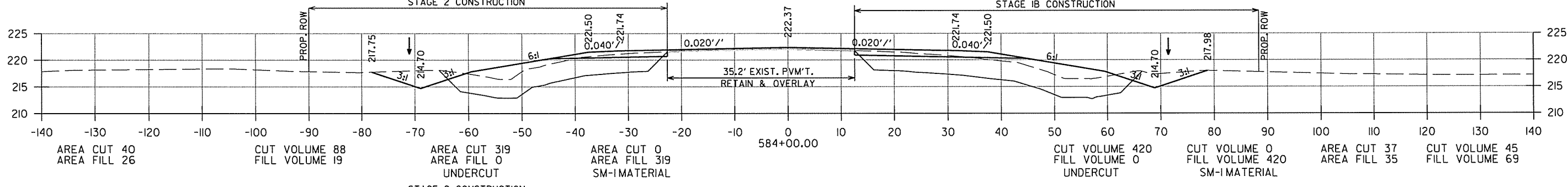
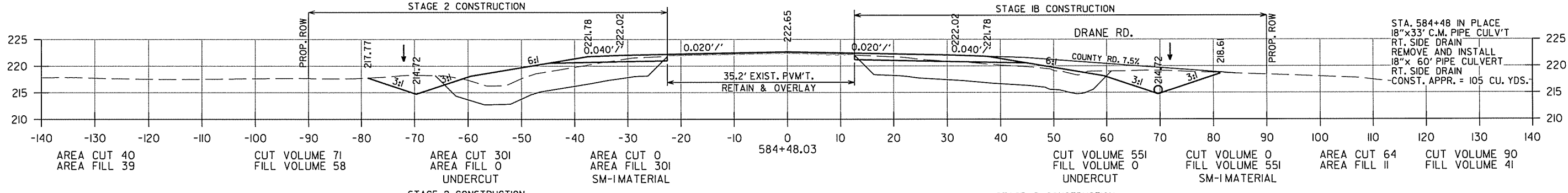
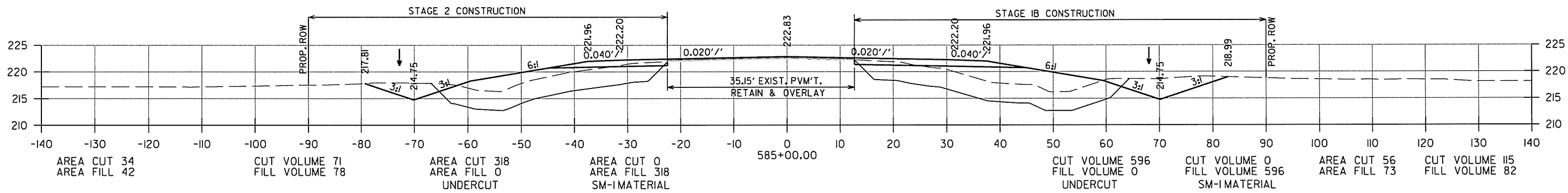


STAGE 2

STAGE 1B
HWY. 64
STA. 579+00.00 TO STA. 582+00.00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0101	175
						2 CROSS SECTIONS		



STAGE 2

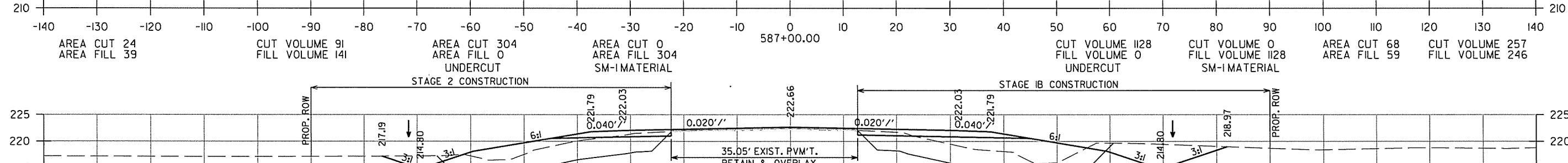
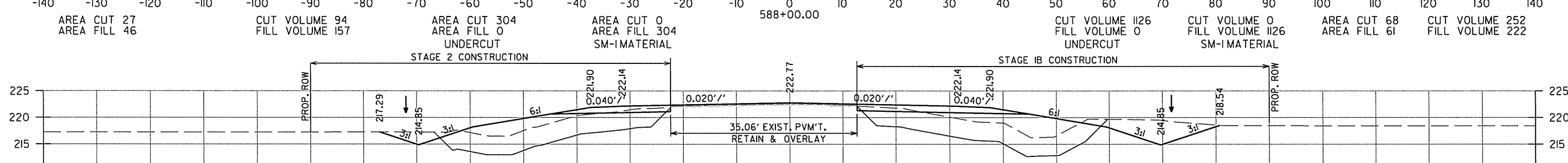
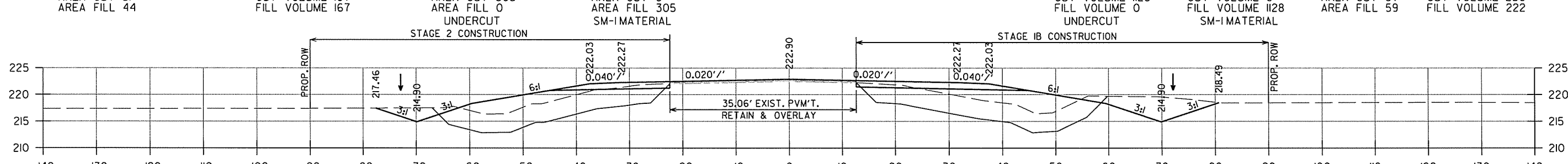
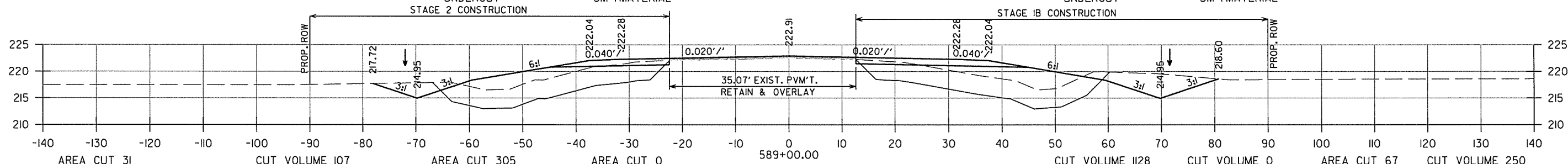
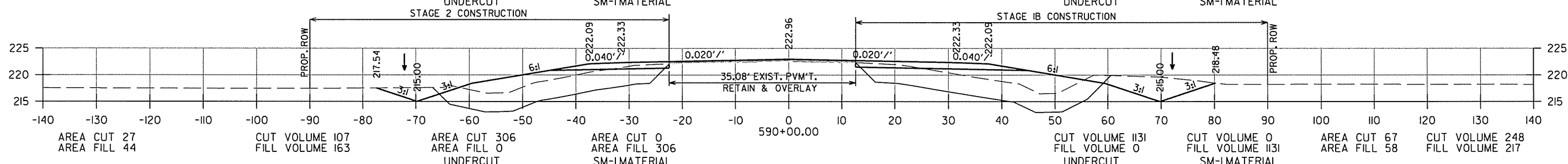
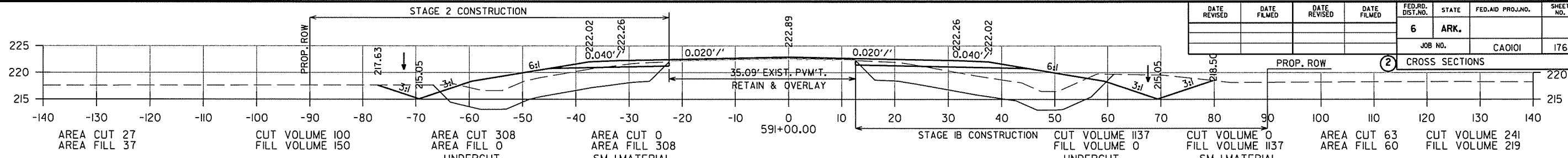
STAGE 1B

HWY. 64
STA. 583+00.00 TO STA. 585+00.00

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				6	ARK.		176	224

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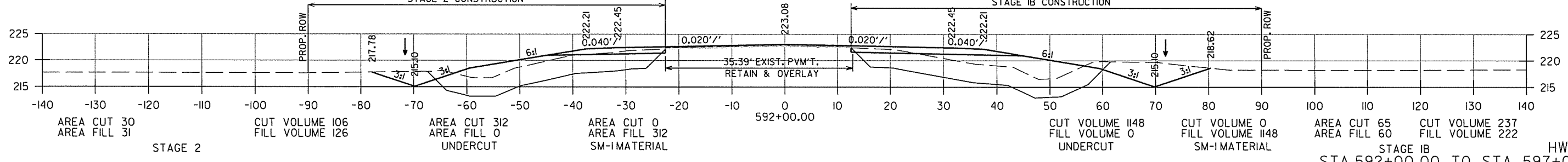
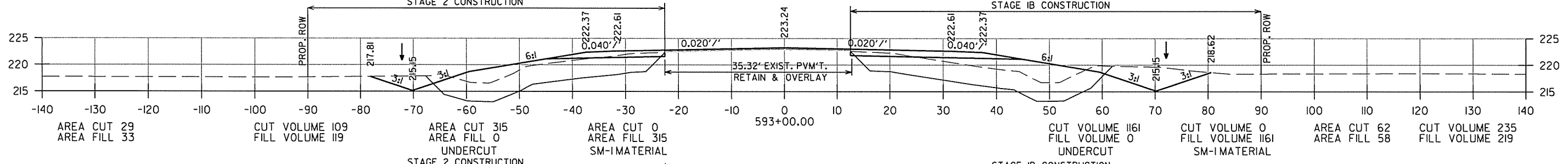
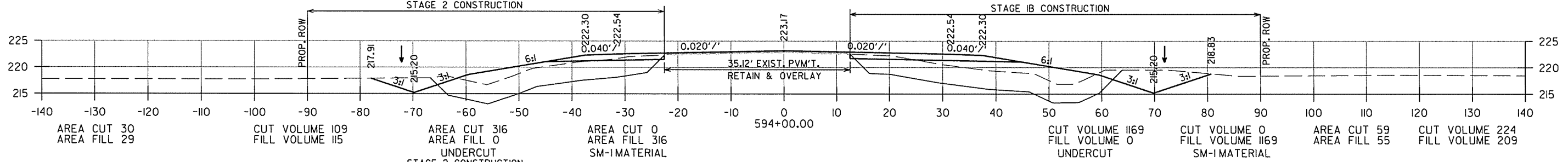
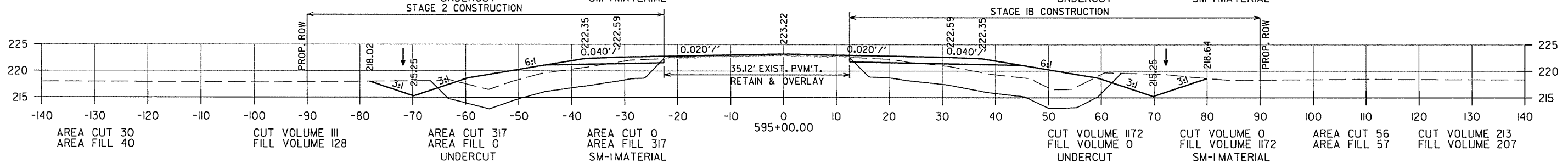
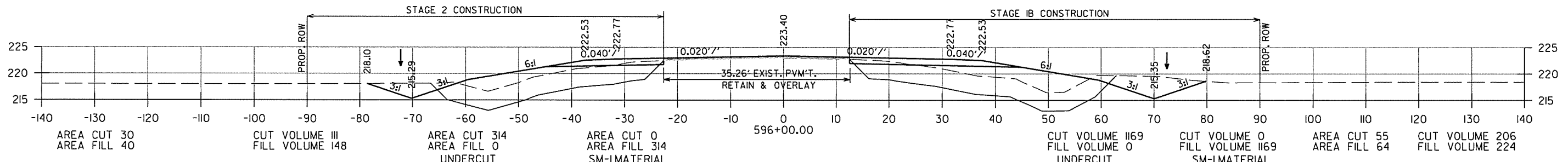
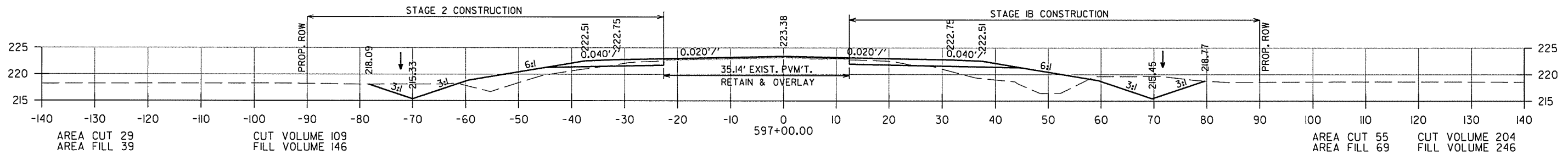
STAGE 2

STAGE 1B
HWY. 64
STA. 586+00.00 TO STA. 591+00.00

06/13/2016

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.		CA0101	177	224

2 CROSS SECTIONS



STAGE 2

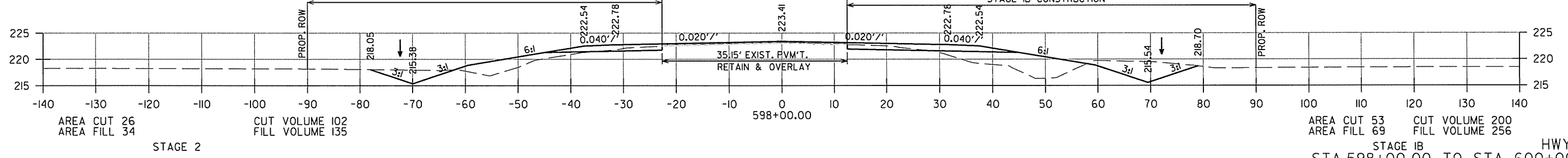
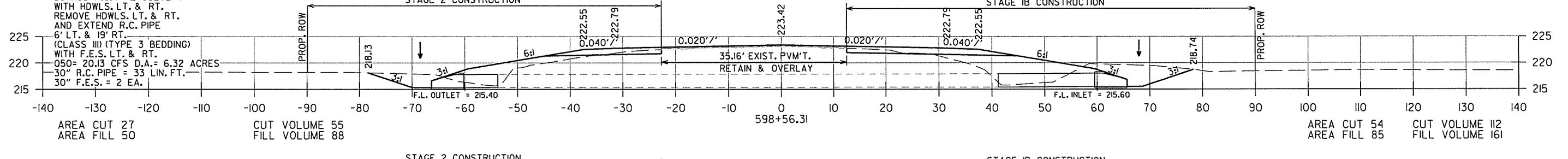
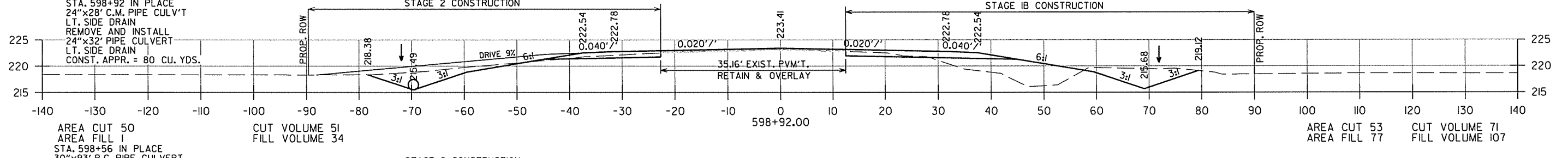
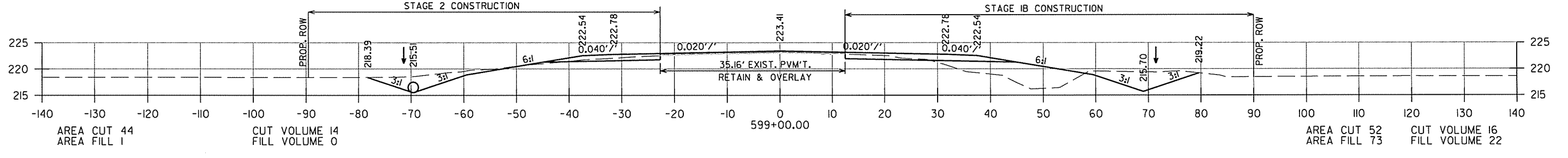
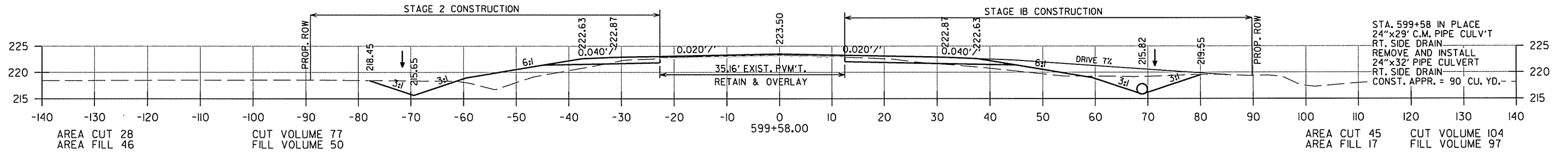
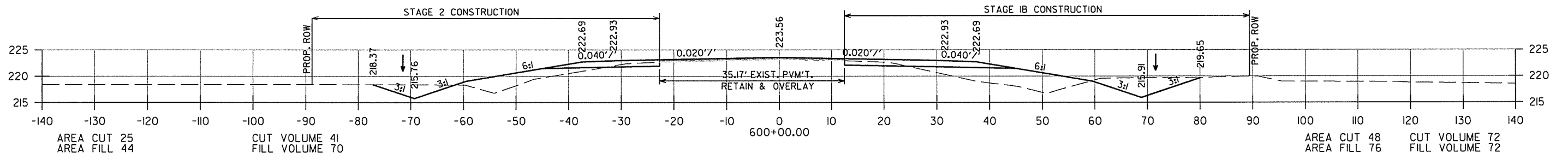
STAGE 1B
STA. 592+00.00 TO STA. 597+00.00

HWY. 64

06/13/2016

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. CAO101		178	224	

2 CROSS SECTIONS

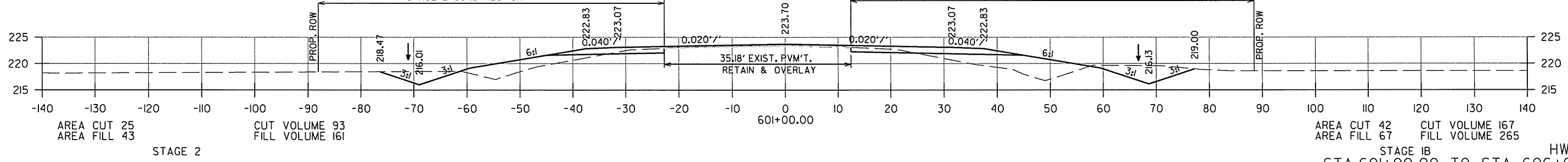
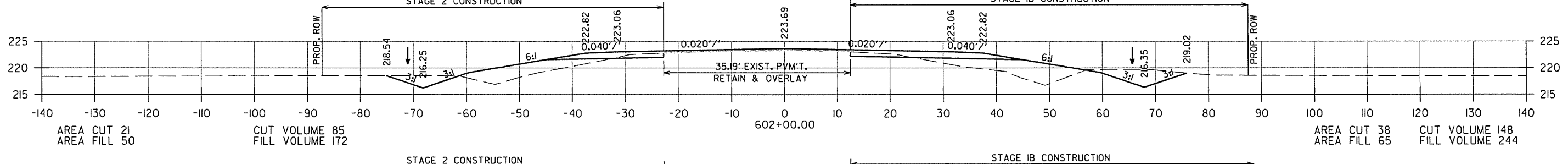
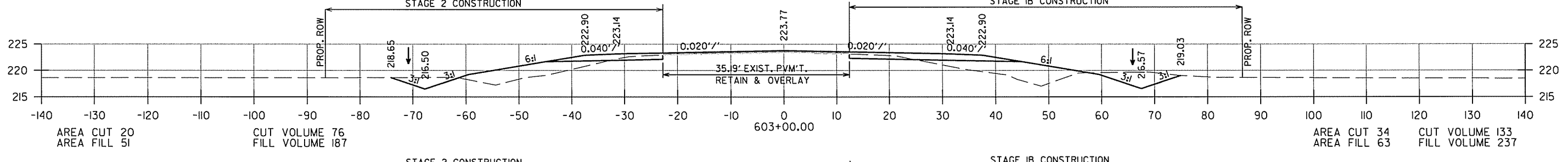
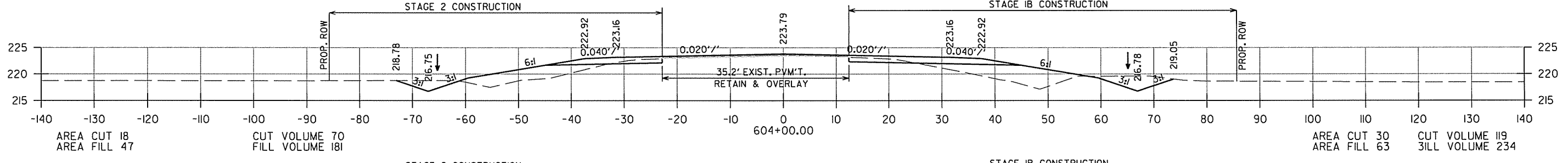
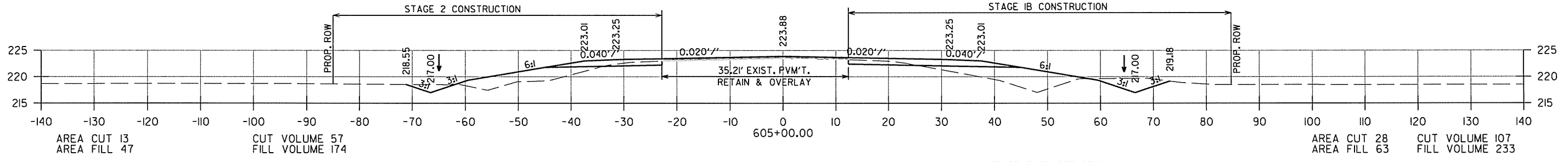
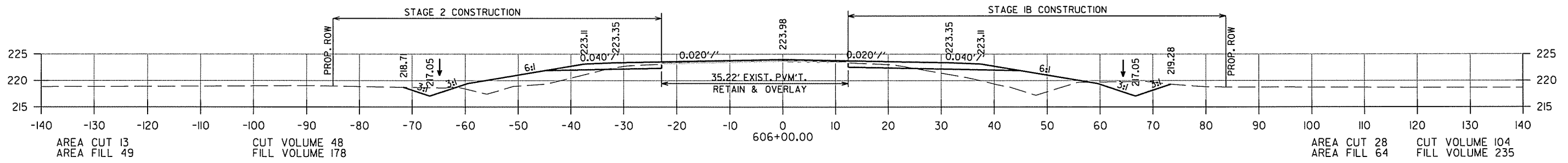


STAGE 2

STAGE 1B
HWY. 64
STA. 598+00.00 TO STA. 600+00.00

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.		CA0101	179	224

2 CROSS SECTIONS



STAGE 2

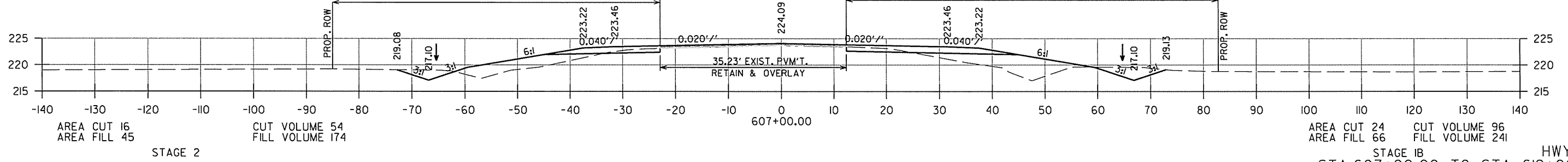
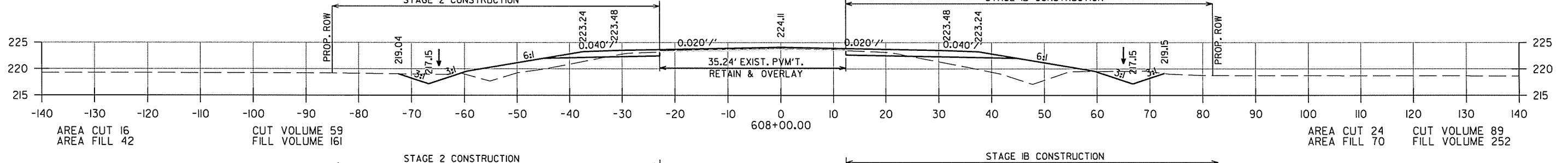
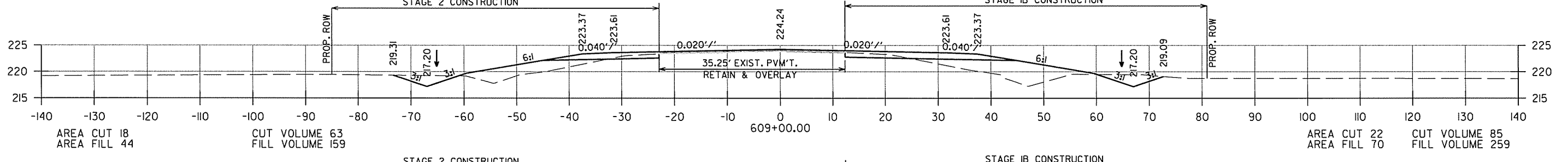
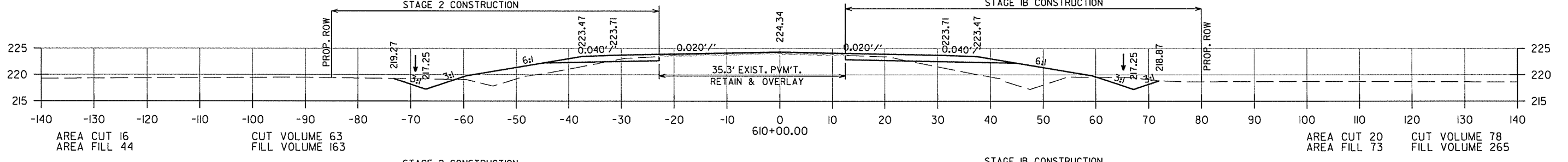
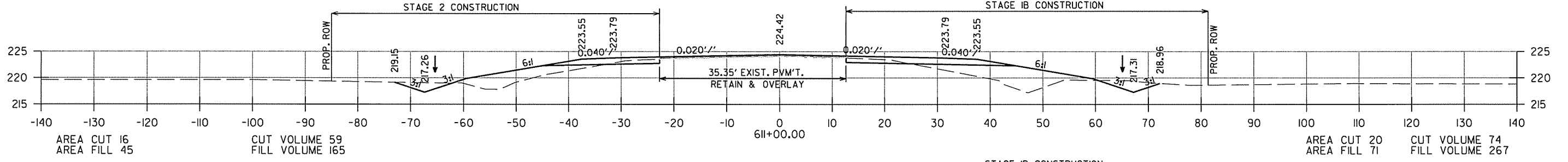
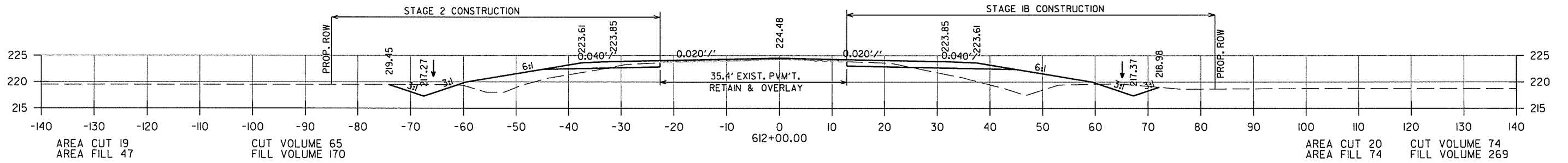
STAGE 1B
STA. 601+00.00 TO STA. 606+00.00

HWY. 64

06/13/2016

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.		CAO101	180	224

2 CROSS SECTIONS



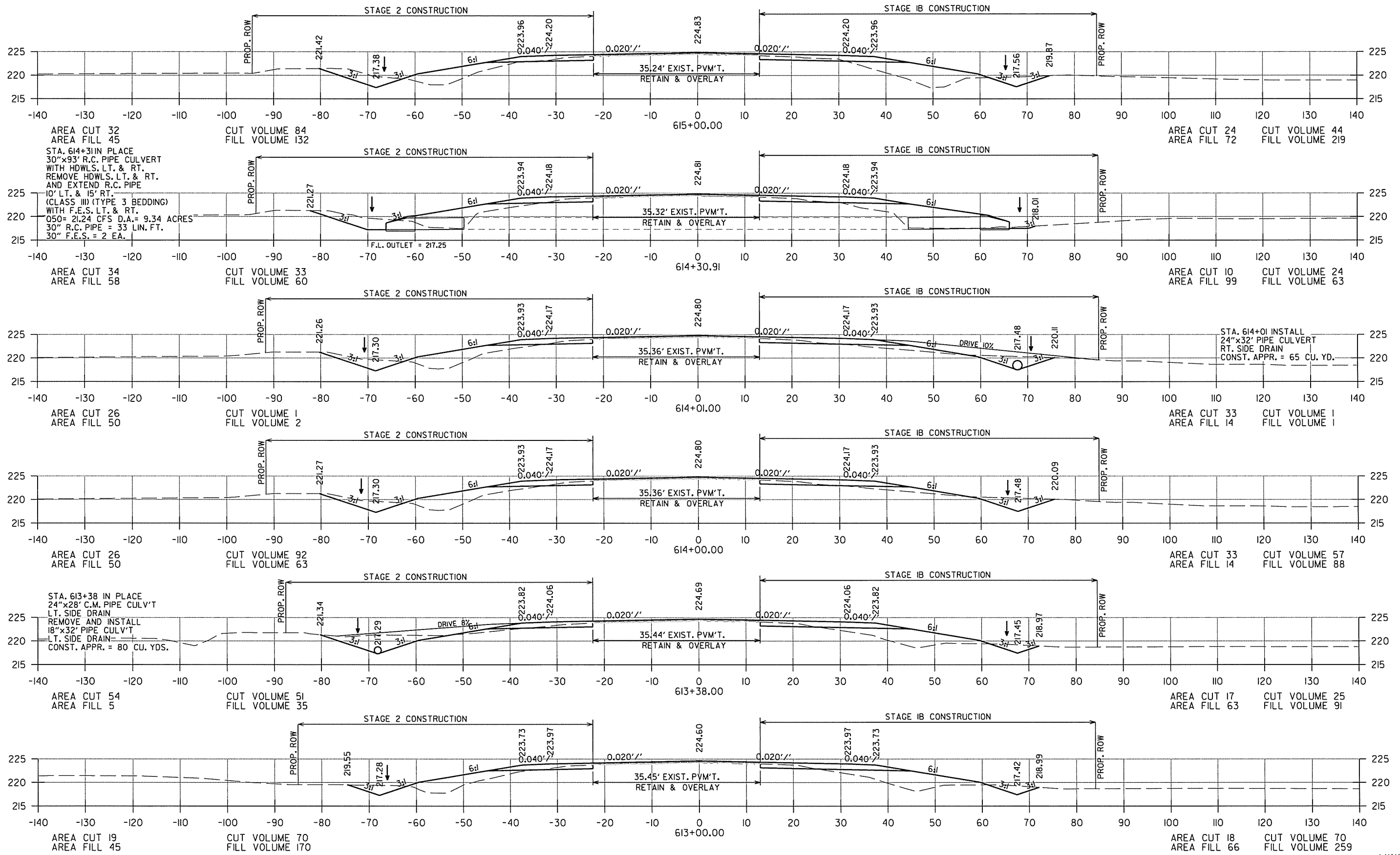
STAGE 2

STAGE 1B
STA. 607+00.00 TO STA. 612+00.00

HWY. 64

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.	224
							CAOIOI	181
							181	224

2 CROSS SECTIONS



STAGE 2

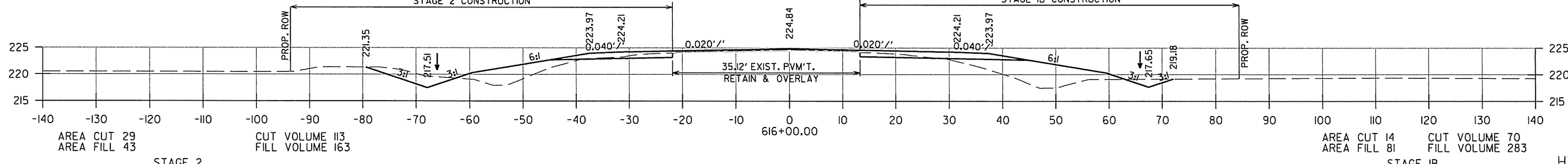
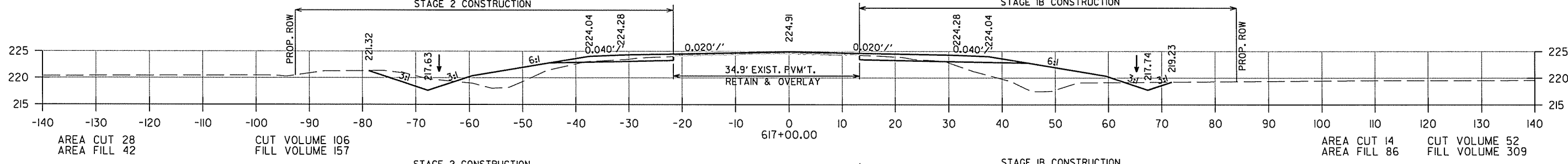
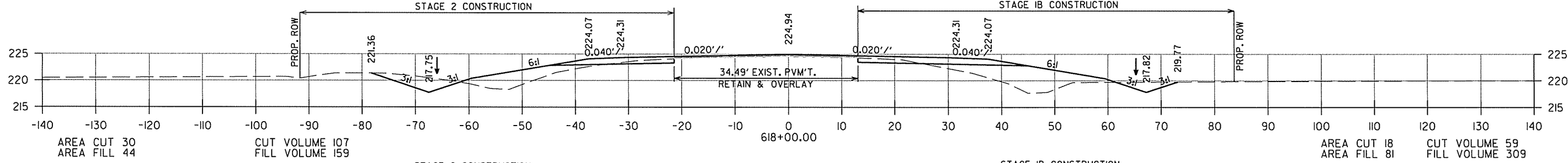
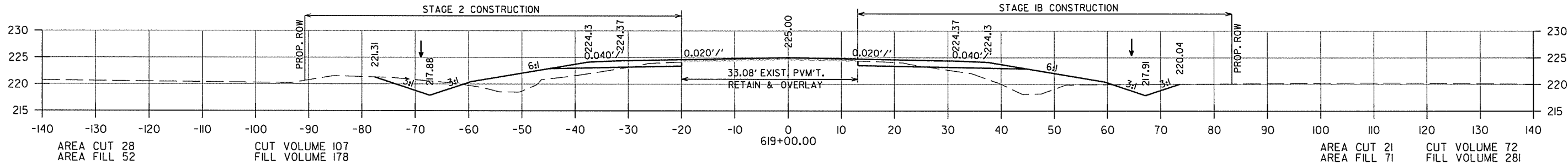
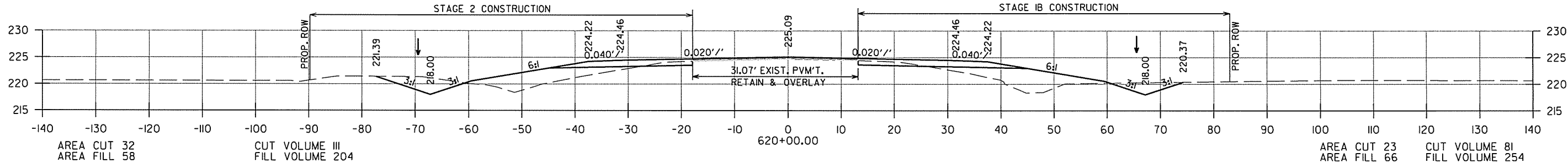
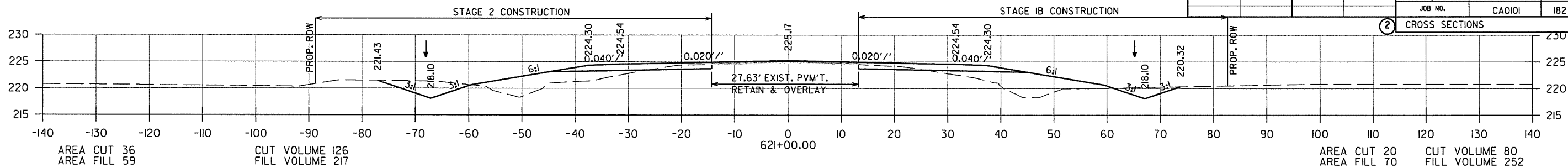
STAGE 1B
STA. 613+00.00 TO STA. 615+00.00

HWY. 64

06/13/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		182	224
				JOB NO.		CA0101	182	224

2 CROSS SECTIONS



STAGE 2

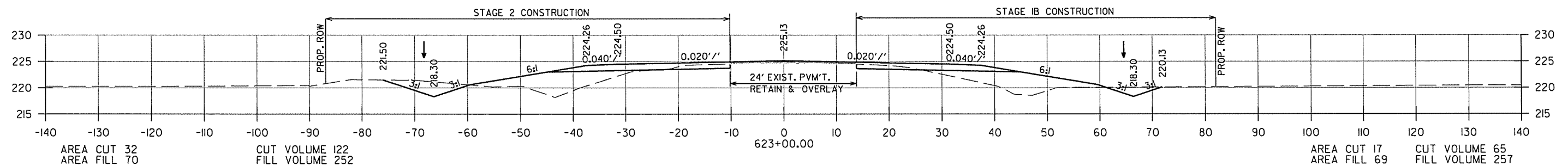
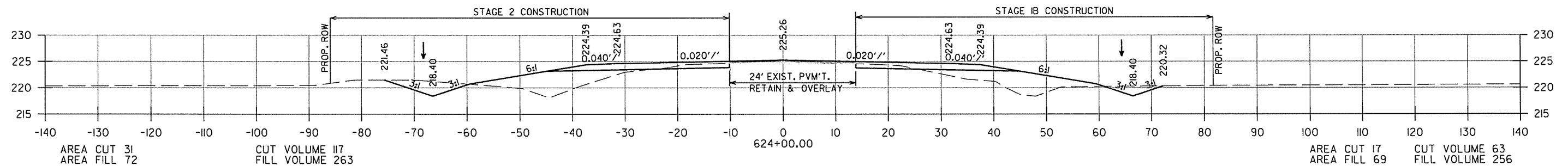
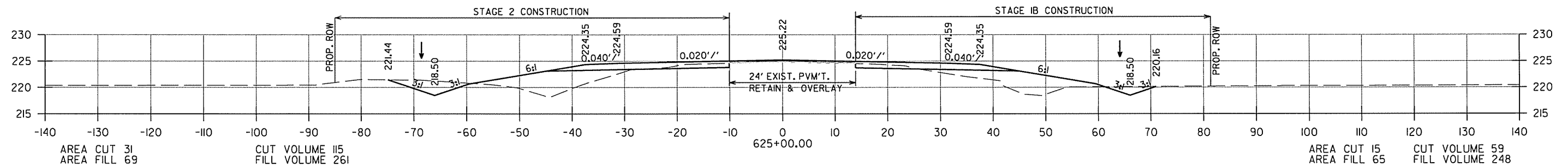
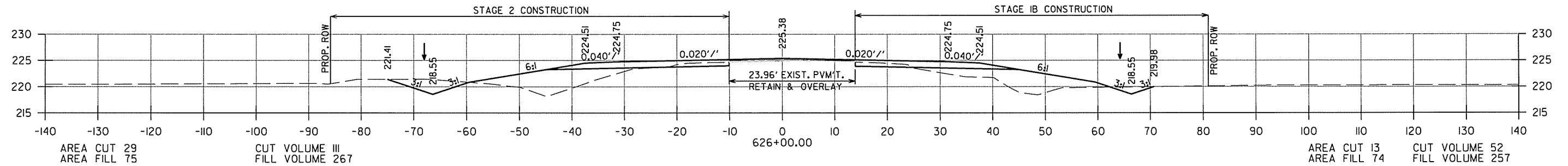
STAGE 1B
STA. 616+00.00 TO STA. 621+00.00

HWY. 64

06/13/2016

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.	CA0101	183	224	

2 CROSS SECTIONS



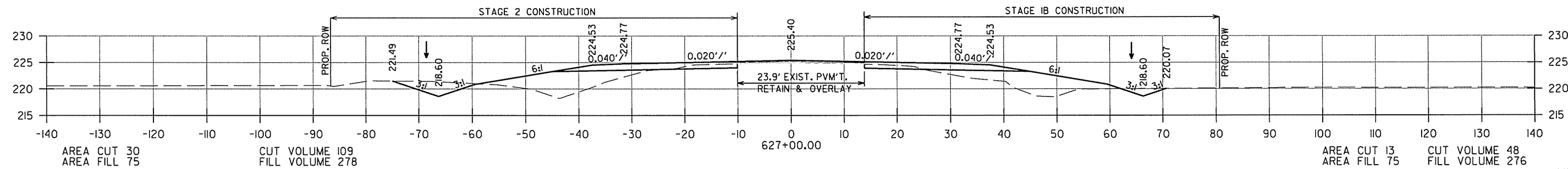
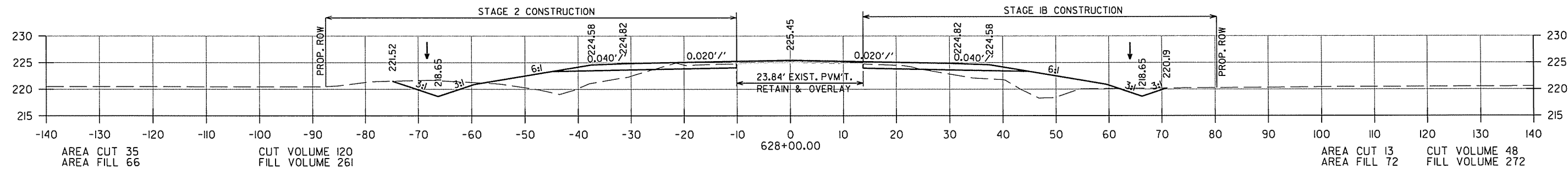
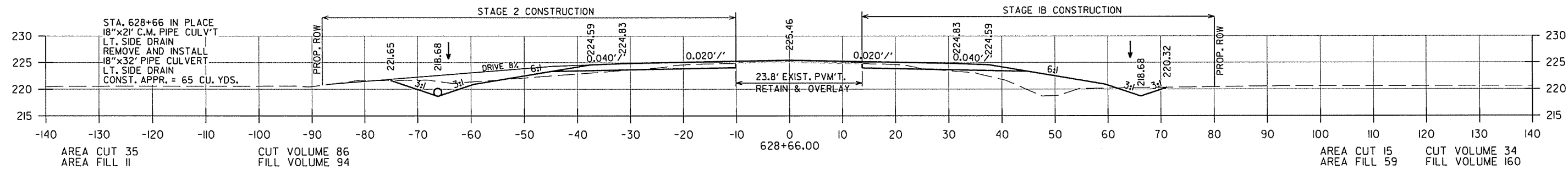
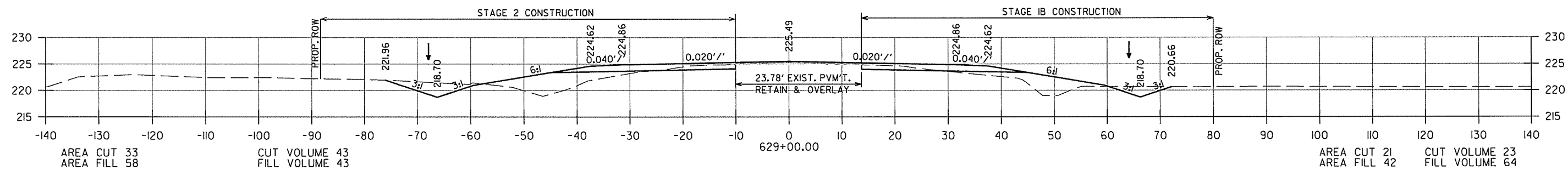
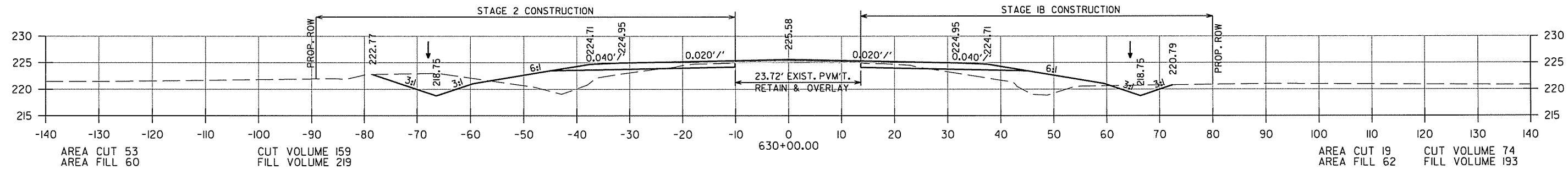
STAGE 2

STAGE 1B
STA. 622+00.00 TO STA. 626+00.00

HWY. 64

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.	CAO101	184	224	

2 CROSS SECTIONS

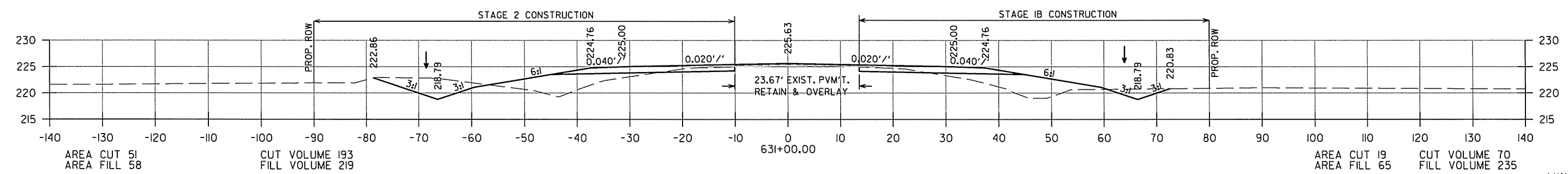
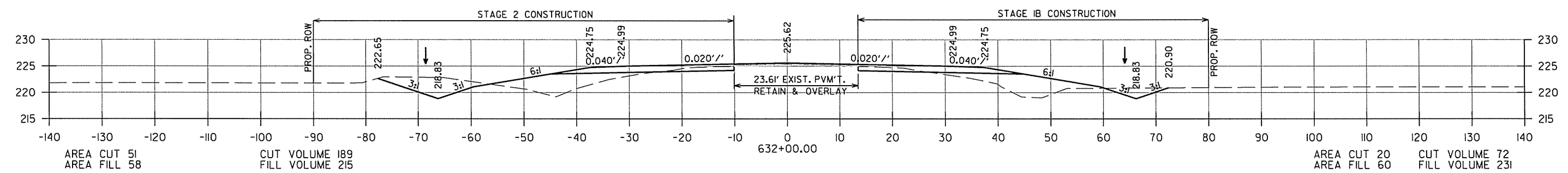
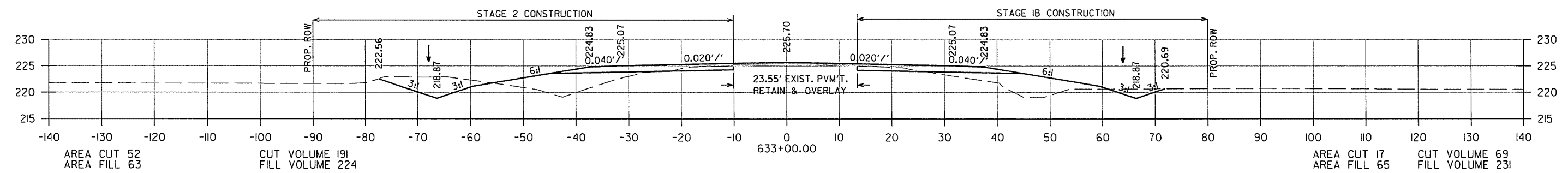
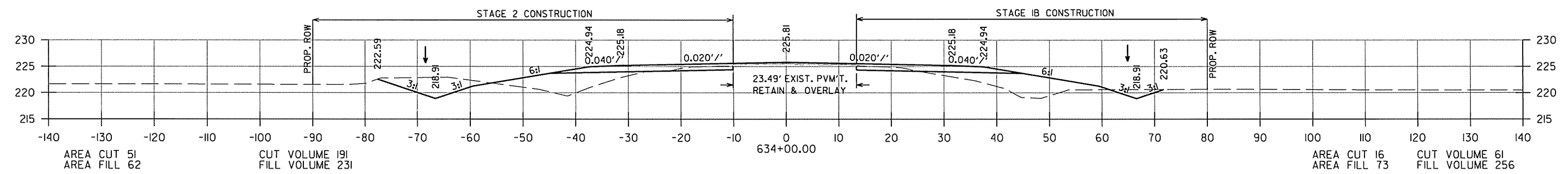
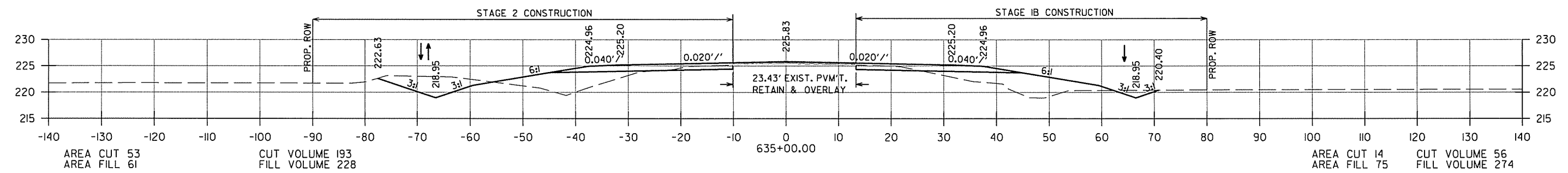


STAGE 2
 STAGE 1B
 STA. 627+00.00 TO STA. 630+00.00
 HWY. 64

06/13/2016

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.	CA0101	185	224	

2 CROSS SECTIONS

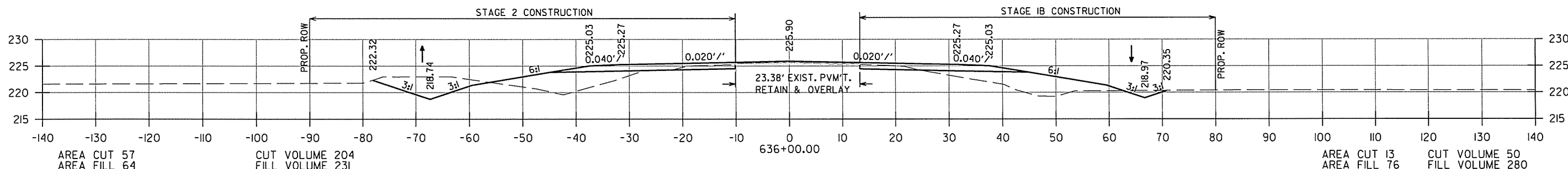
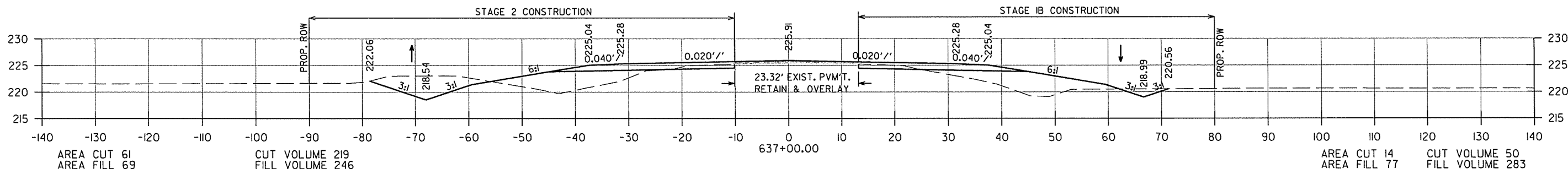
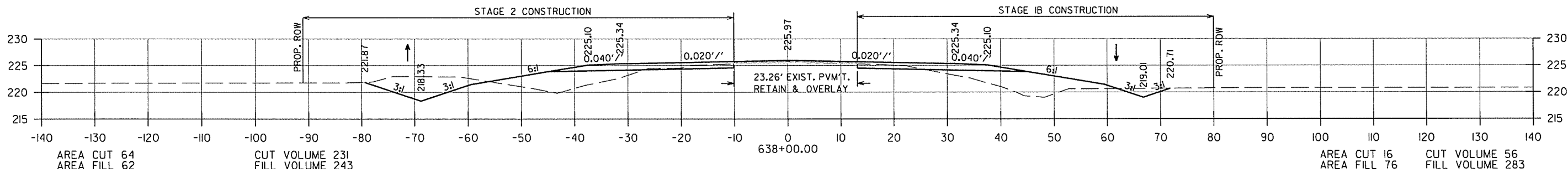
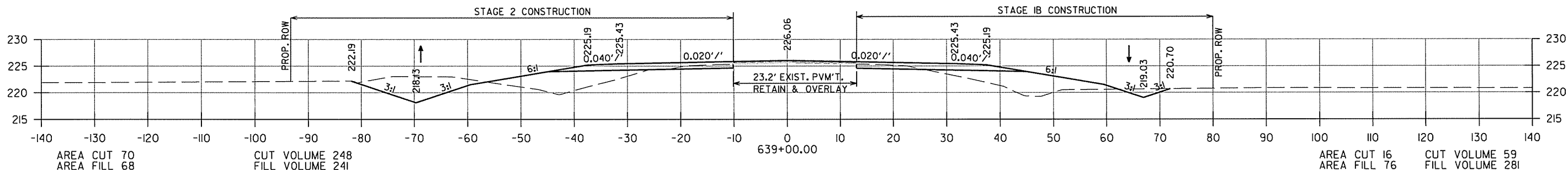
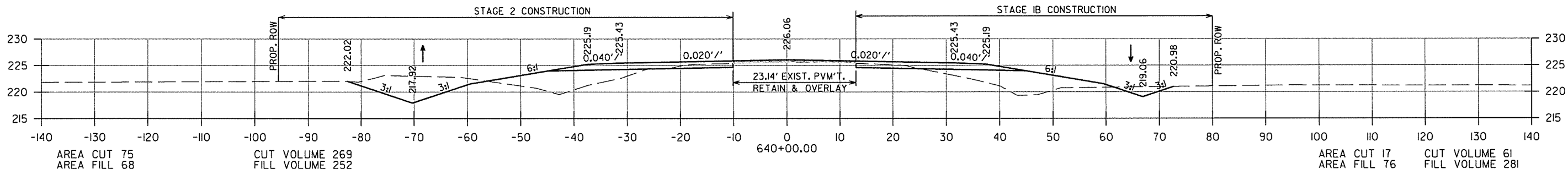


STAGE 2
 STAGE 1B
 STA. 631+00.00 TO STA. 635+00.00
 HWY. 64

06/13/2016

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.	CA0101	186	224	

2 CROSS SECTIONS



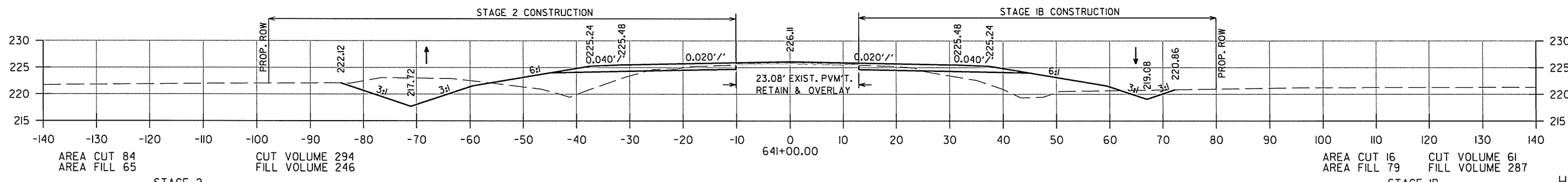
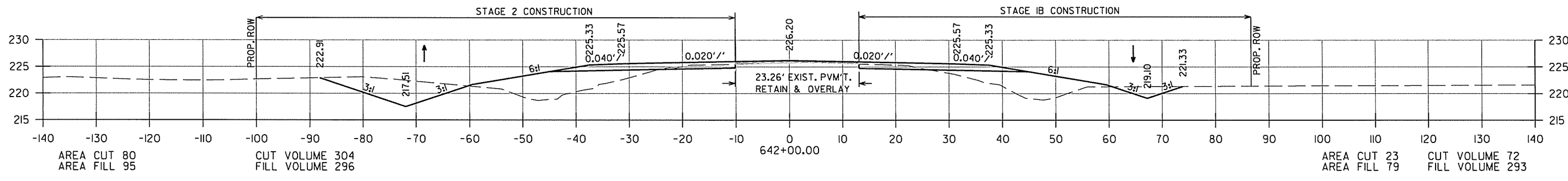
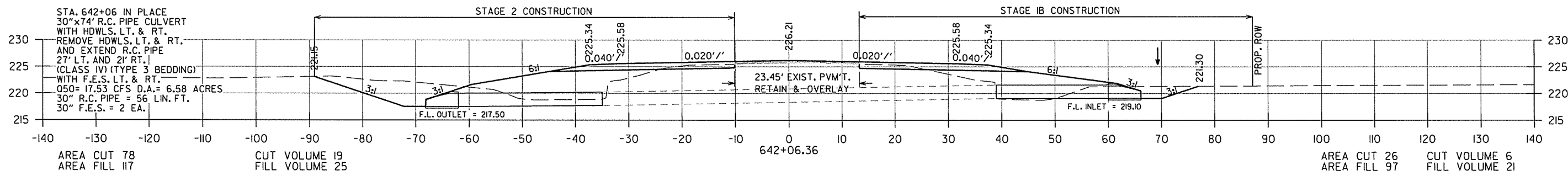
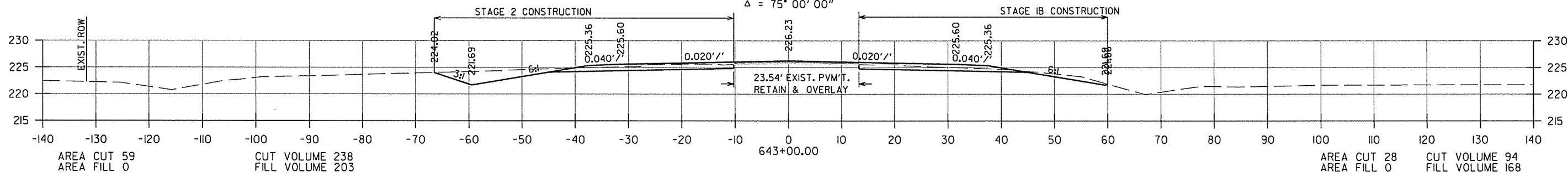
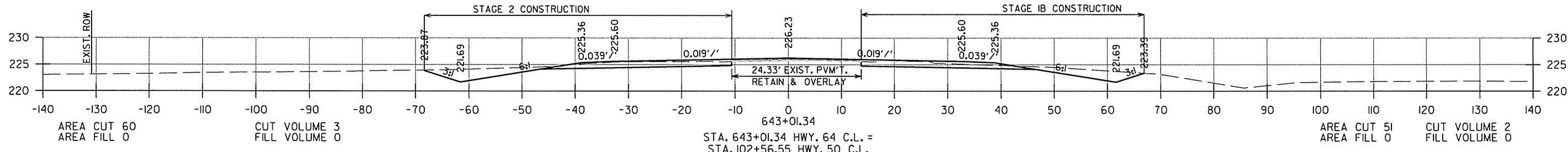
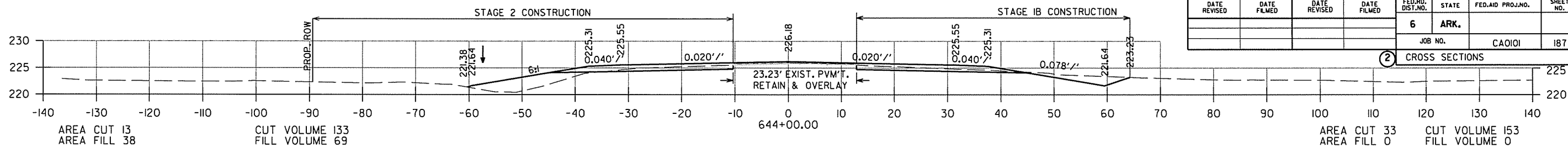
STAGE 2

STAGE 1B
STA. 636+00.00 TO STA. 640+00.00
HWY. 64

06/13/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		187	224

2 CROSS SECTIONS



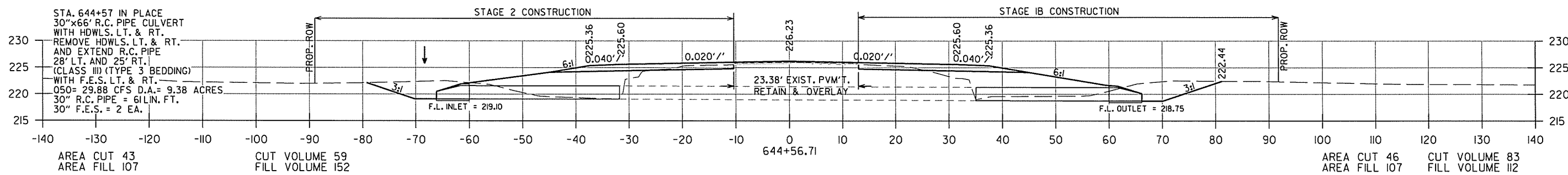
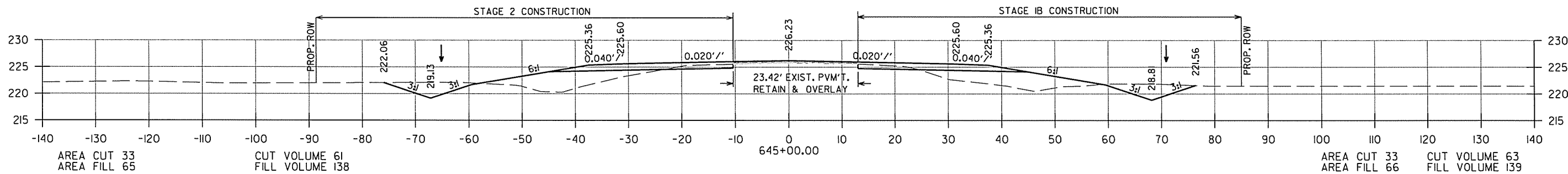
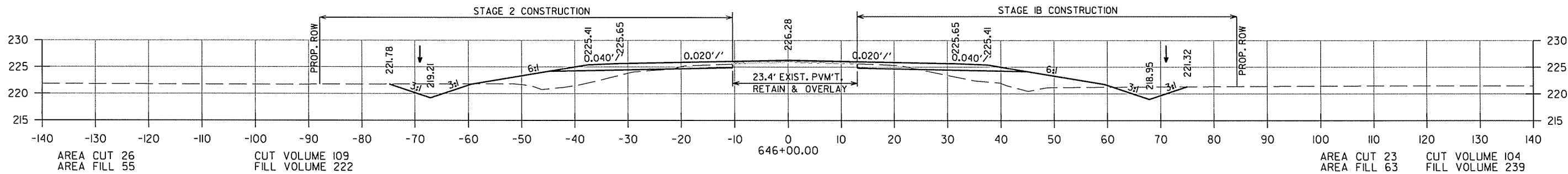
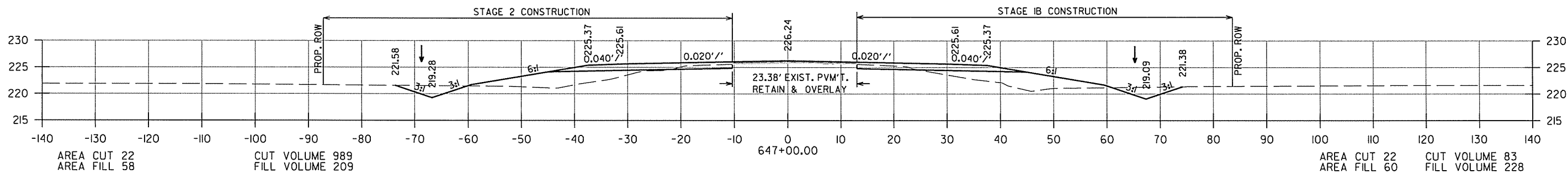
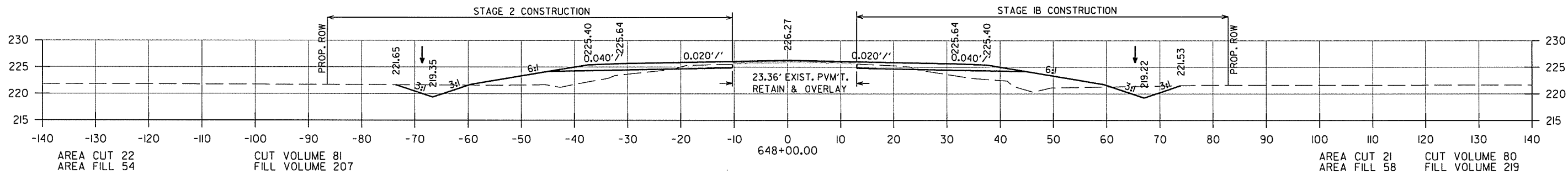
STAGE 2

STAGE 1B
HWY. 64
STA. 641+00.00 TO STA. 644+00.00

06/13/2016

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.	CA0101	188	224	

2 CROSS SECTIONS



STA. 644+57 IN PLACE
30"x66' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
28' LT. AND 25' RT.
(CLASS III) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050- 29.88 CFS D.A. = 9.38 ACRES
30" R.C. PIPE = 61 LIN. FT.
30" F.E.S. = 2 EA.

STAGE 2

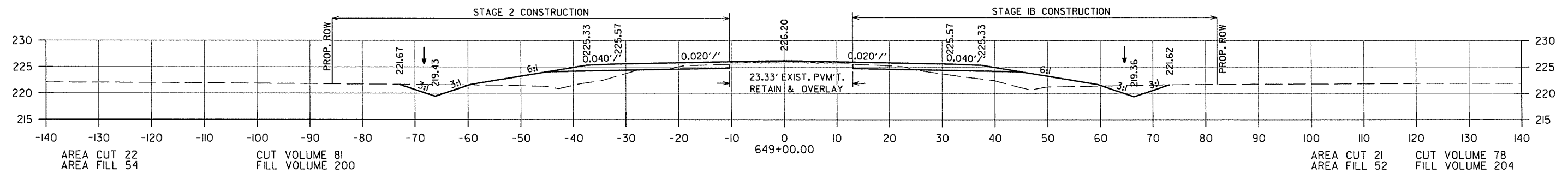
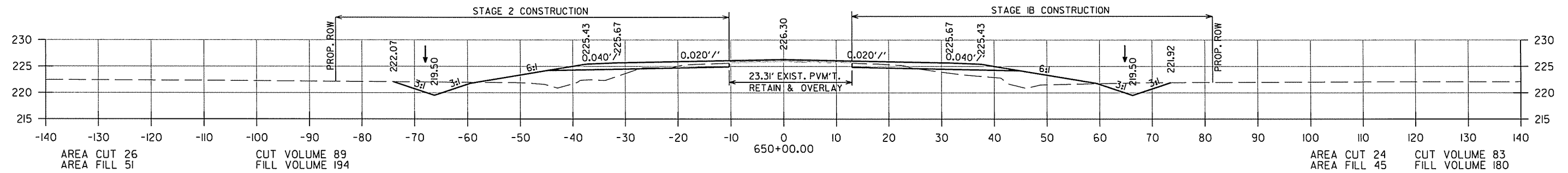
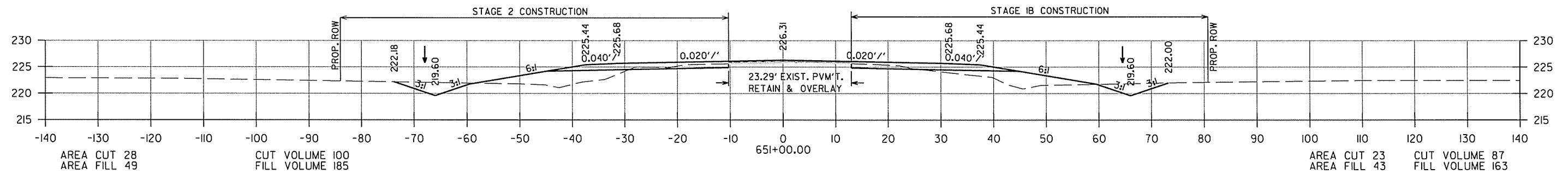
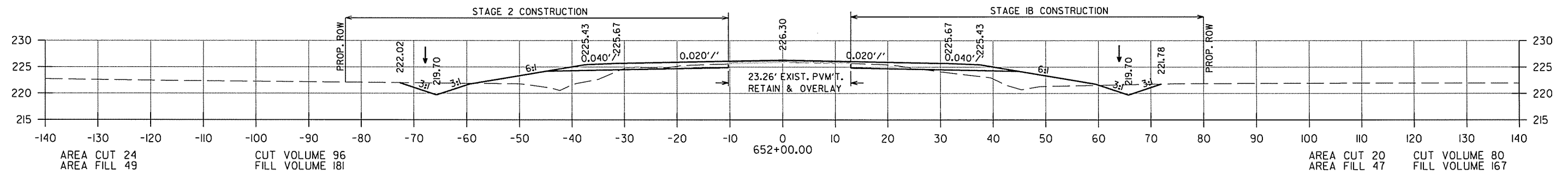
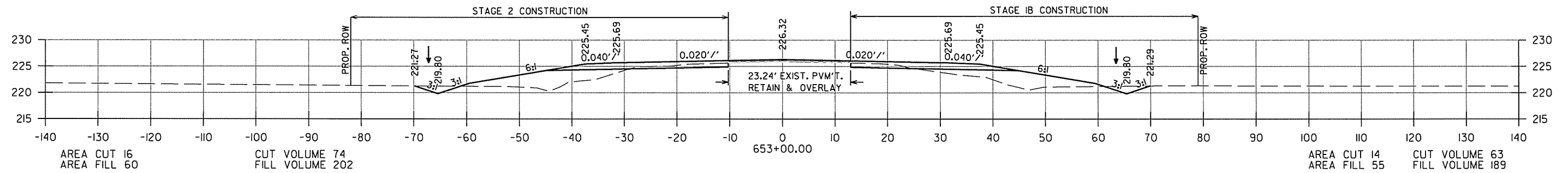
STAGE 1B
STA. 644+56.71 TO STA. 648+00.00

HWY. 64

06/13/2016

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.	CA0101	189

2 CROSS SECTIONS



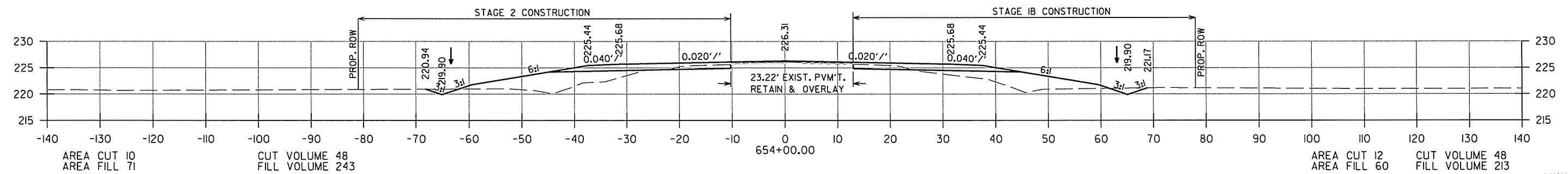
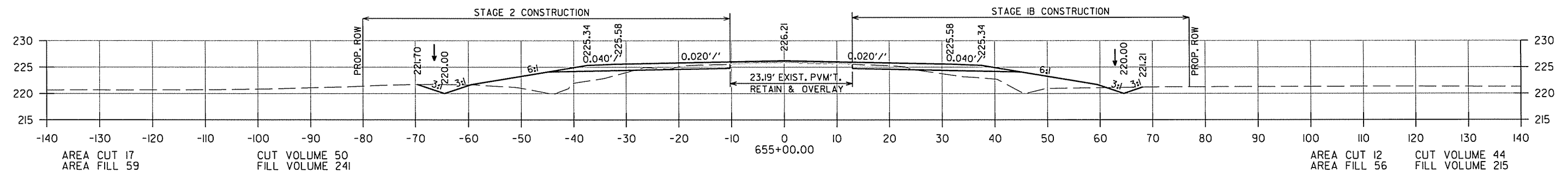
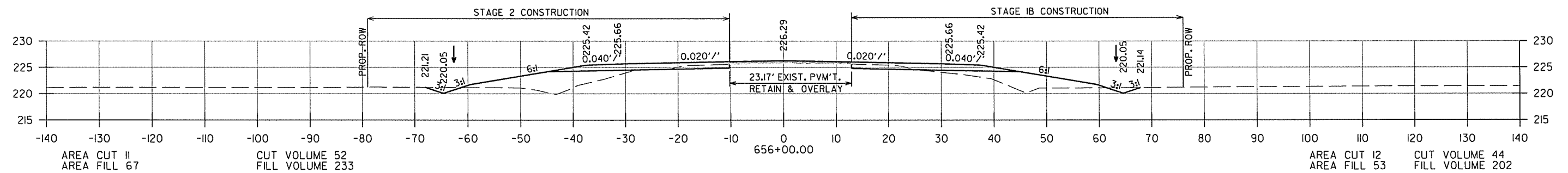
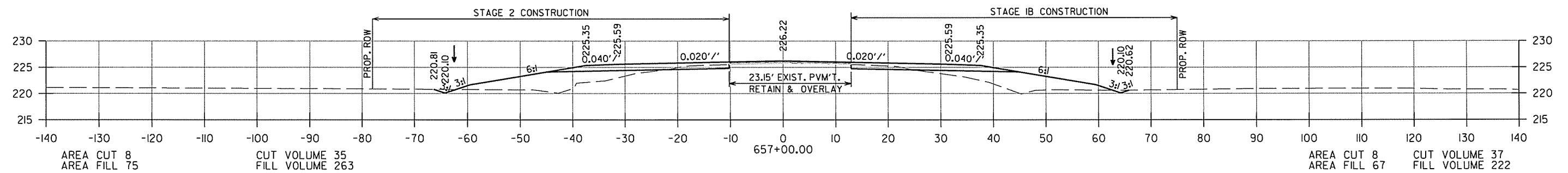
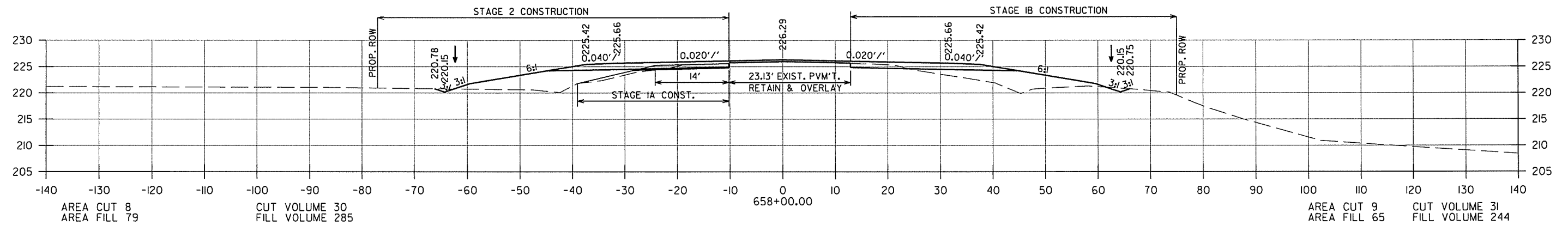
STAGE 2

STAGE 1B
STA. 649+00.00 TO STA. 653+00.00

HWY. 64

06/13/2016

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.	CA0101	190
						2 CROSS SECTIONS		



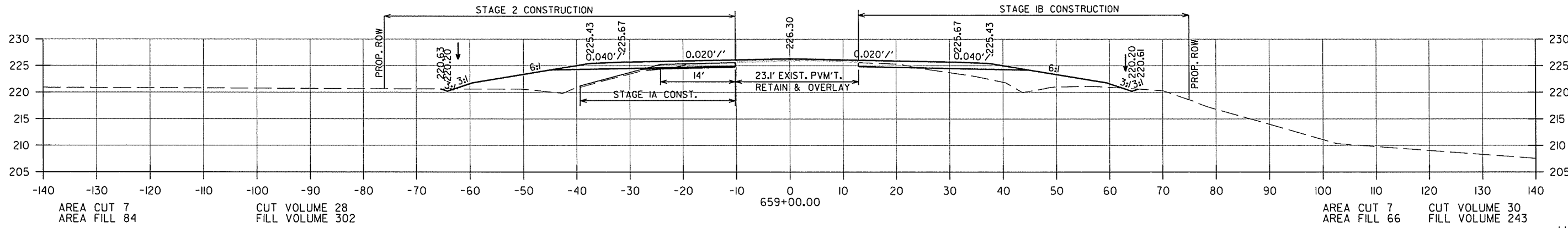
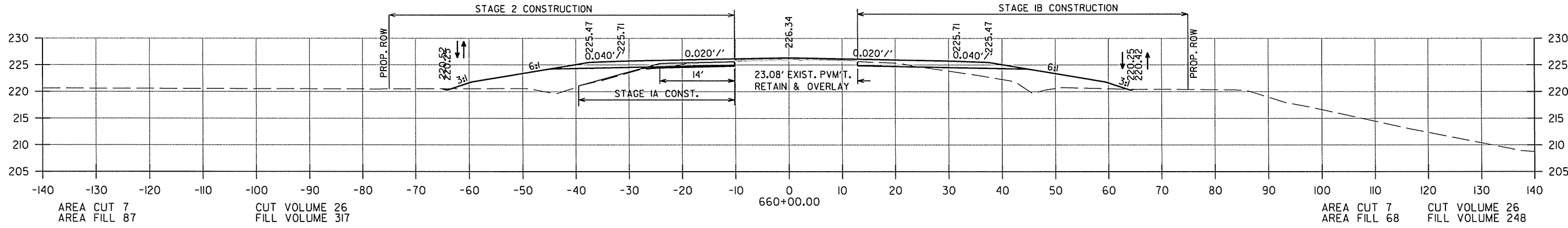
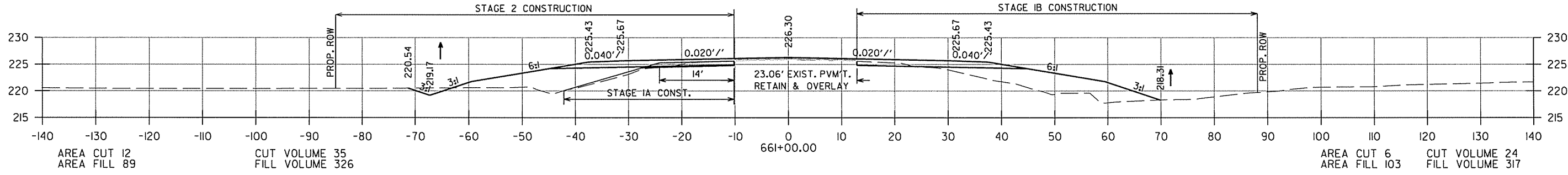
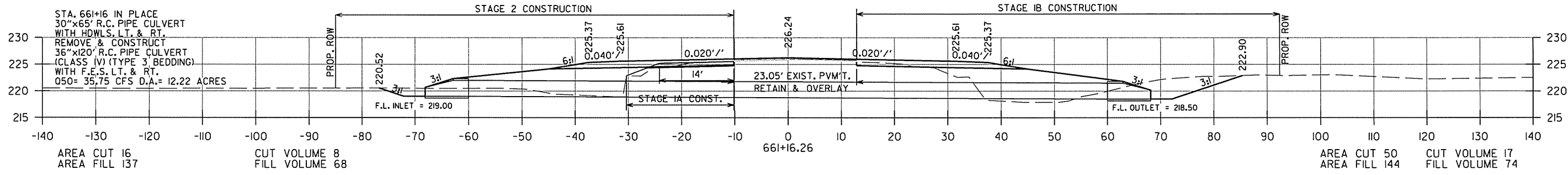
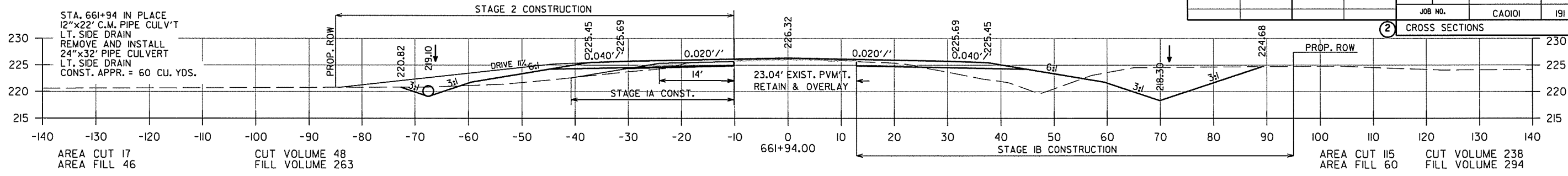
STAGE 2

STAGE 1B
STA. 654+00.00 TO STA. 658+00.00

HWY. 64

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.	CA0101	191	224	

2 CROSS SECTIONS

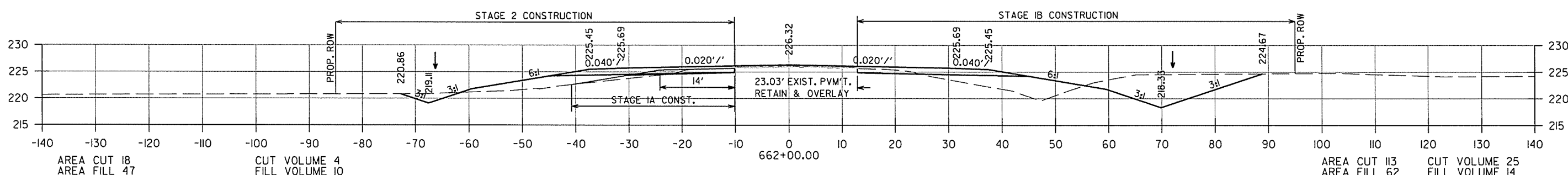
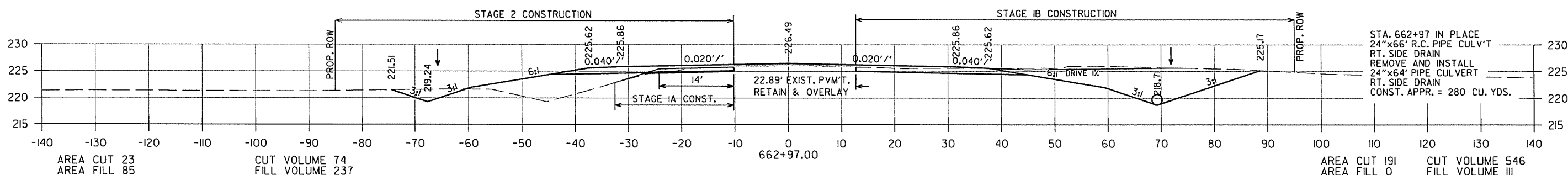
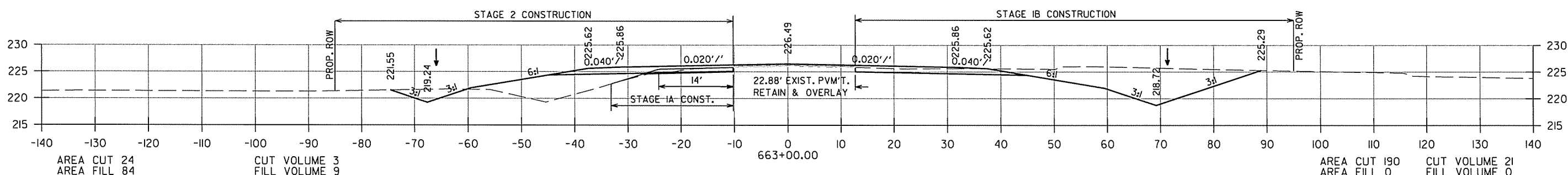
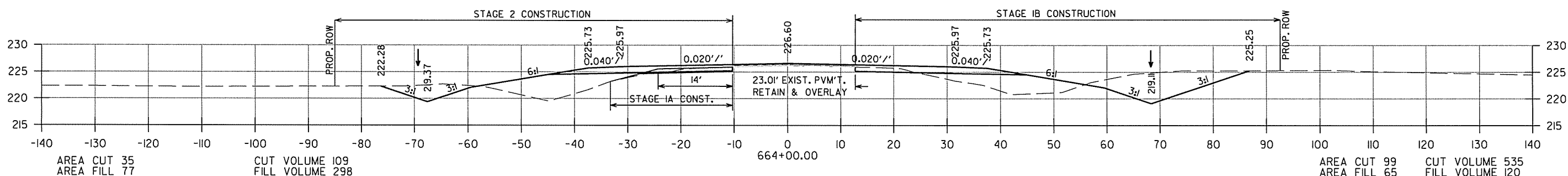
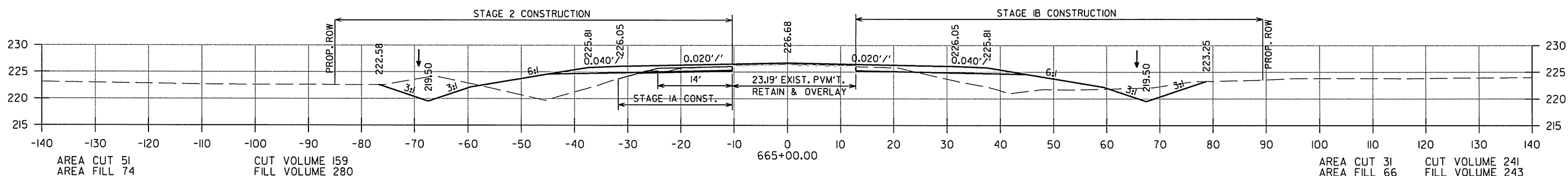


STAGE 2
STAGE 1B
HWY. 64
STA. 659+00.00 TO STA. 661+94.00

06/13/2016

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.	CA0101	192	224	

2 CROSS SECTIONS



STAGE 2

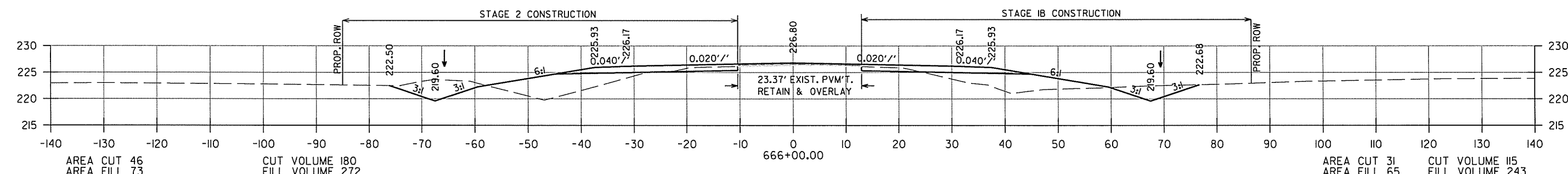
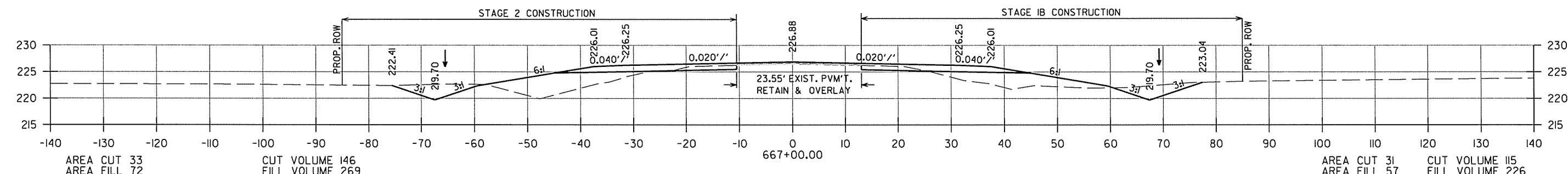
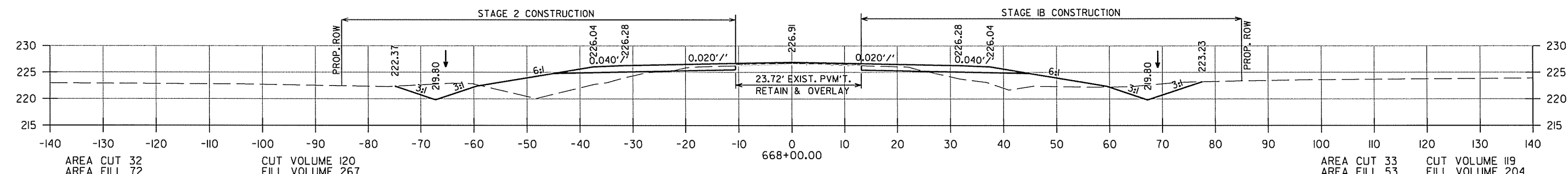
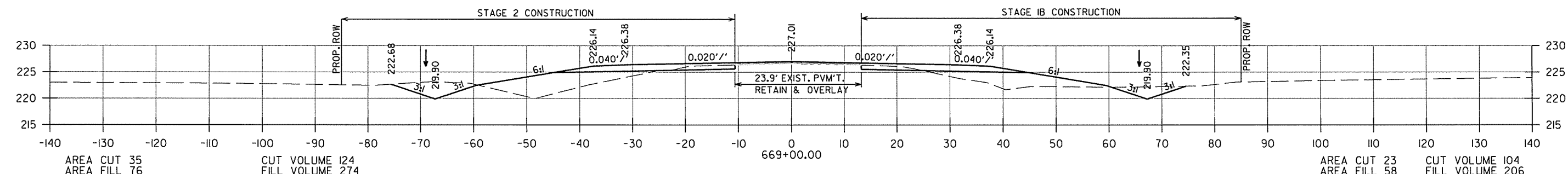
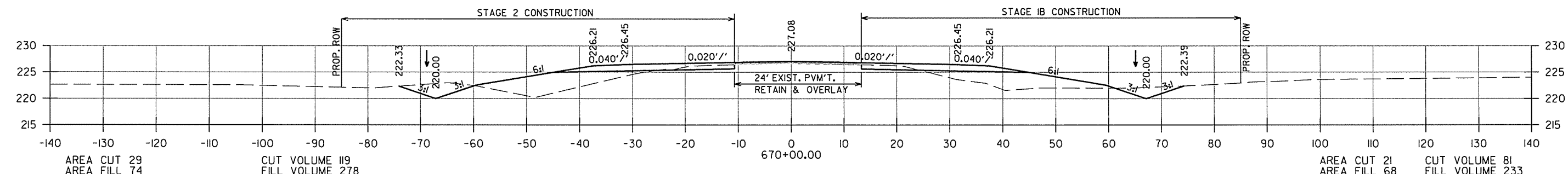
STAGE IB
STA. 662+00.00 TO STA. 665+00.00

HWY. 64

06/13/2016

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.	CA0101	193	224	

2 CROSS SECTIONS



STAGE 2

STAGE 1B

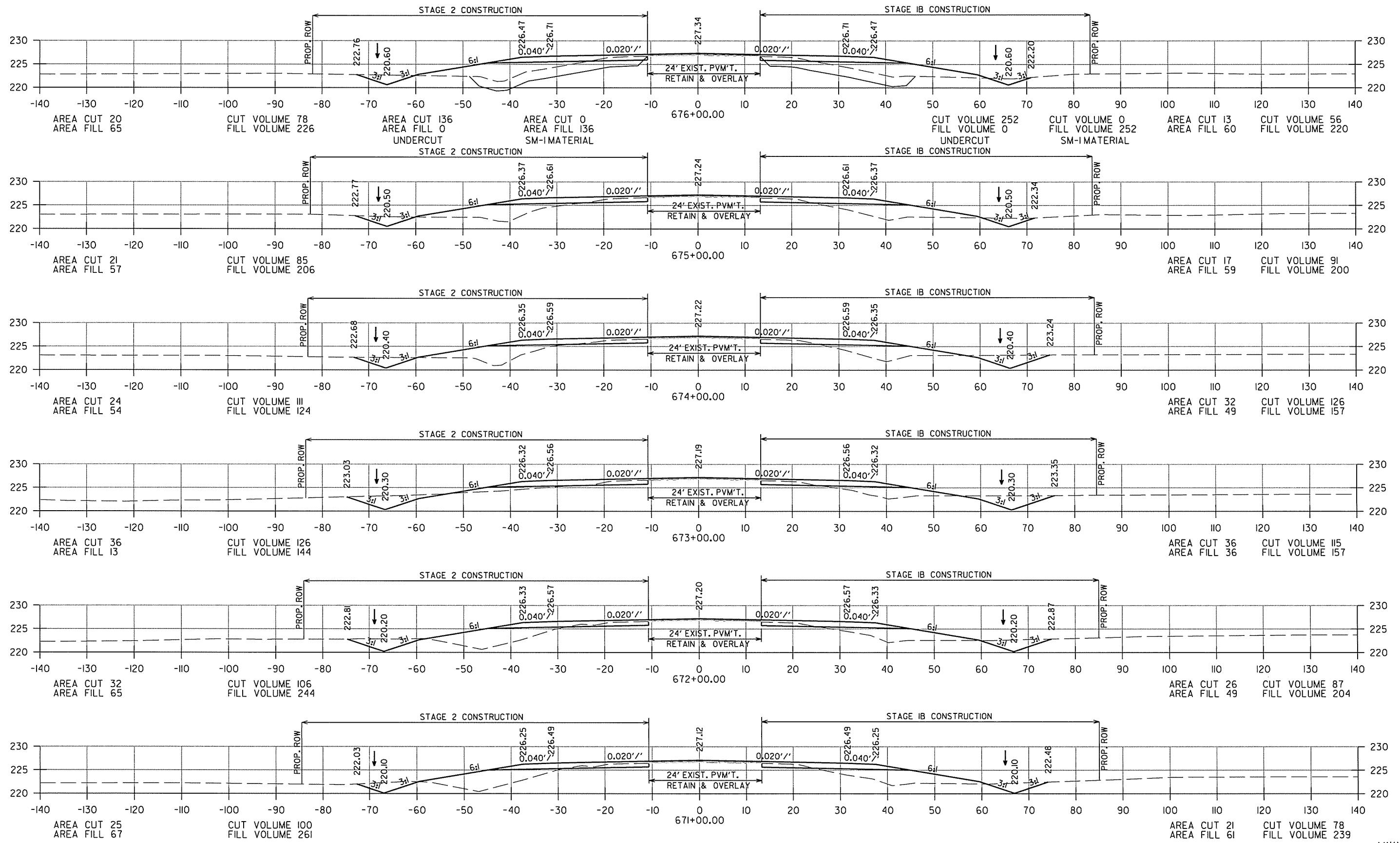
HWY. 64

STA. 666+00.00 TO STA. 670+00.00

06/13/2016

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. CAO101		194	224	

2 CROSS SECTIONS



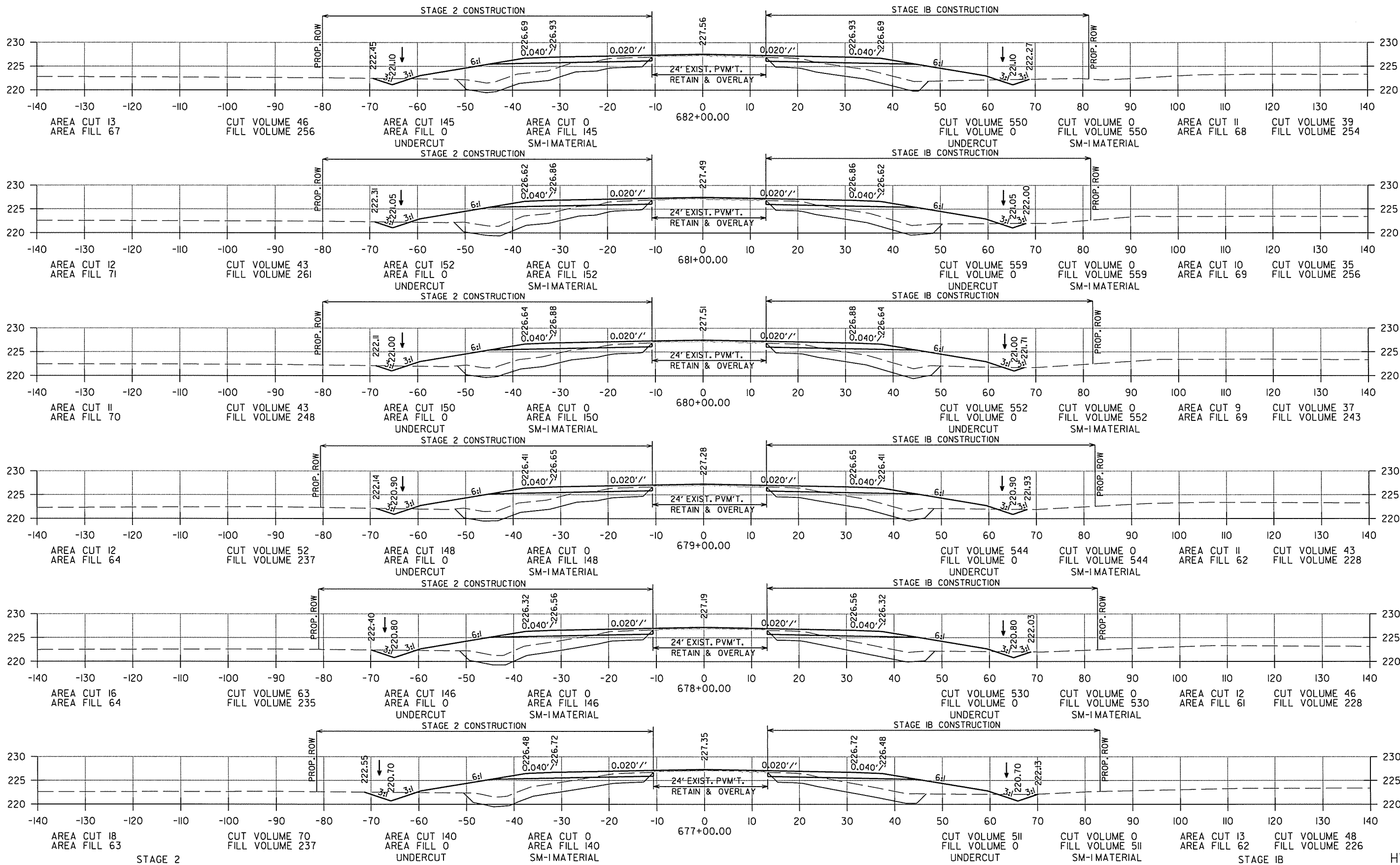
STAGE 2

STAGE 1B
STA. 671+00.00 TO STA. 676+00.00

HWY. 64

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. CAO101		195	224	

2 CROSS SECTIONS



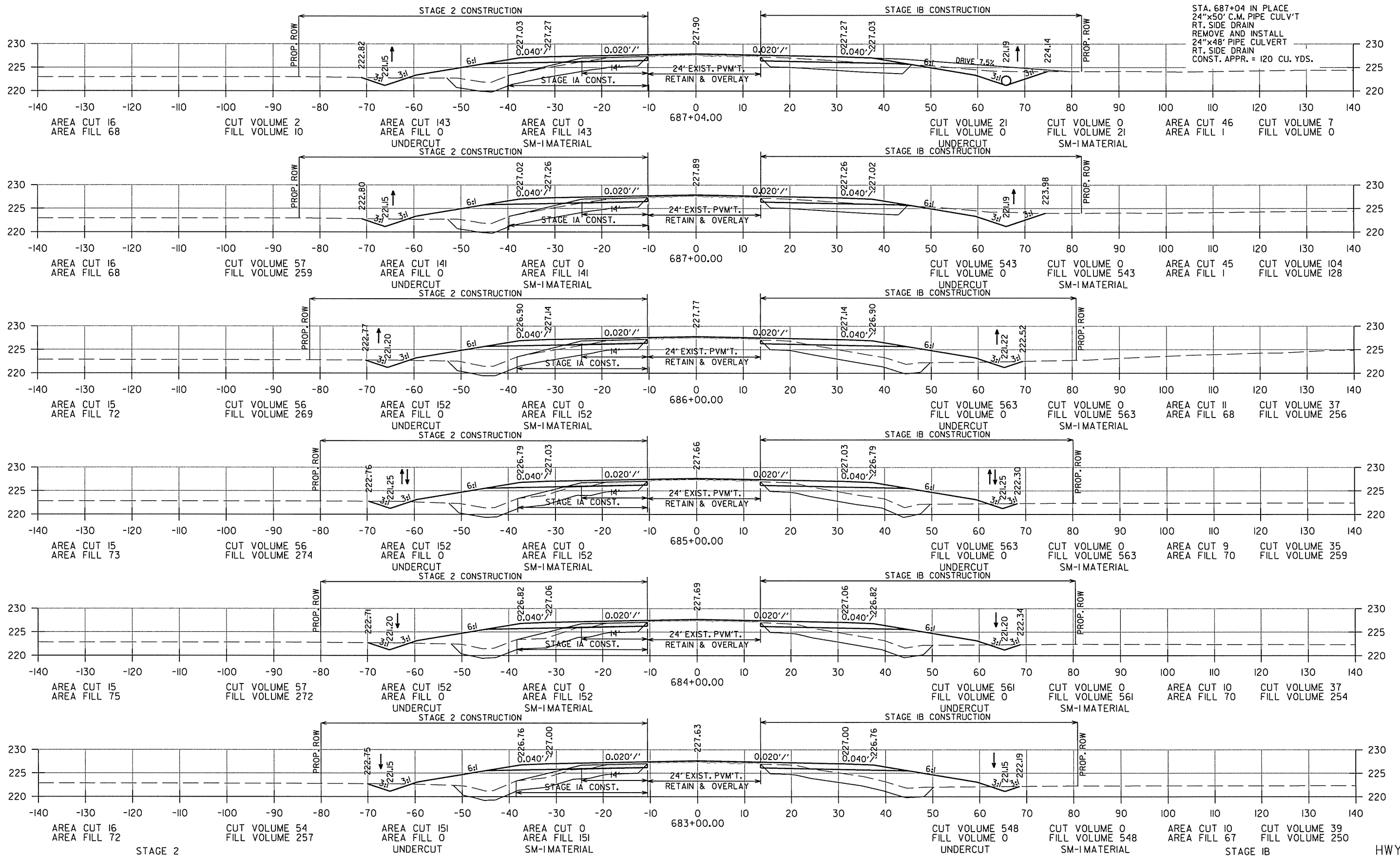
06/13/2016

STAGE 2

STAGE IB
 STA. 677+00.00 TO STA. 682+00.00
 HWY. 64

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.	CA0101		196	224

2 CROSS SECTIONS



STA. 687+04 IN PLACE
 24"x50' C.M. PIPE CULV'T
 RT. SIDE DRAIN
 REMOVE AND INSTALL
 24"x48' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. = 120 CU. YDS.

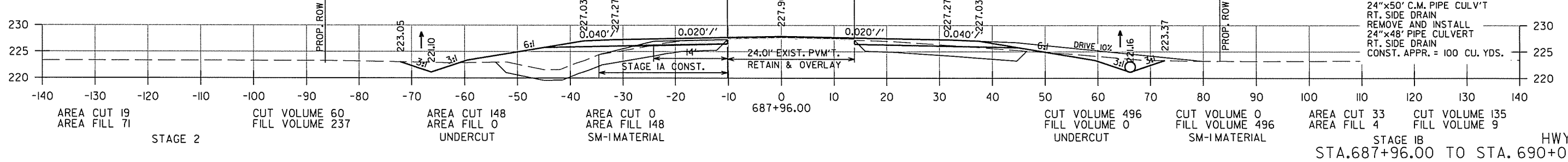
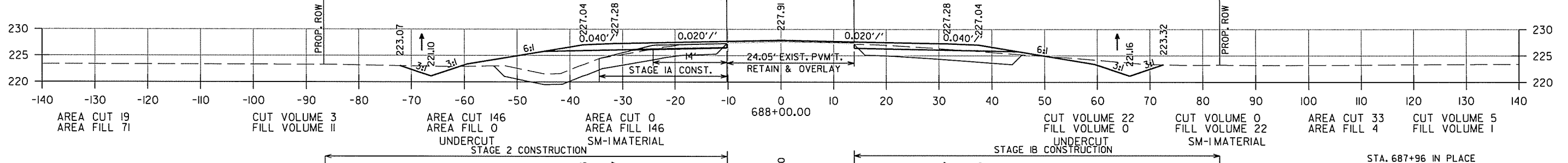
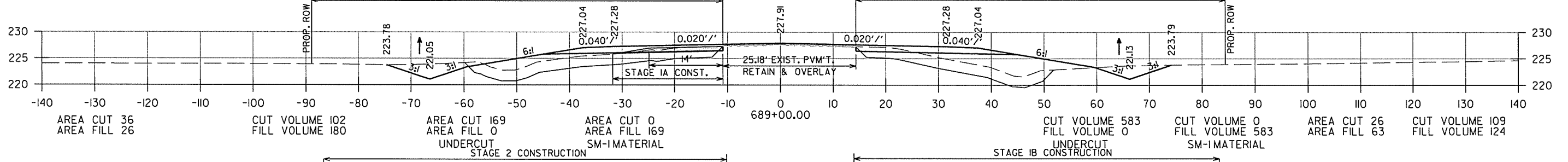
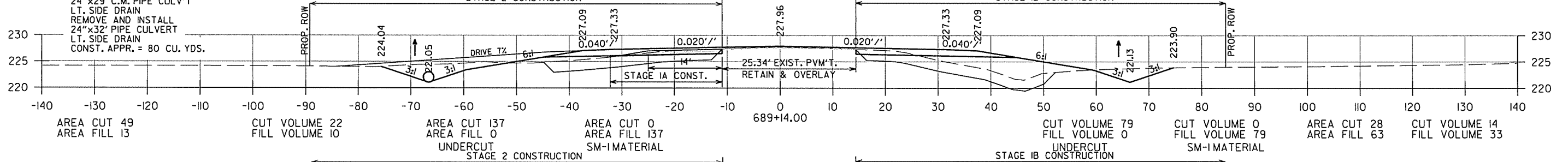
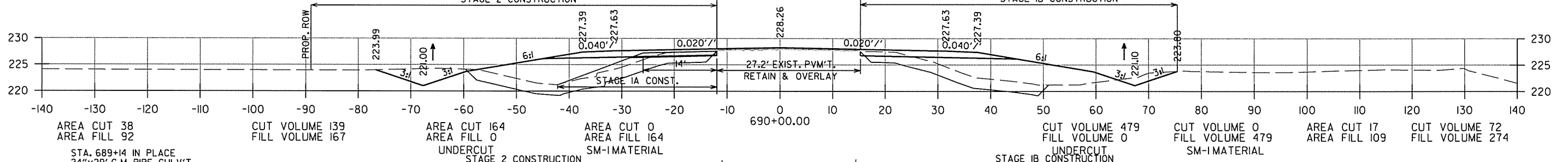
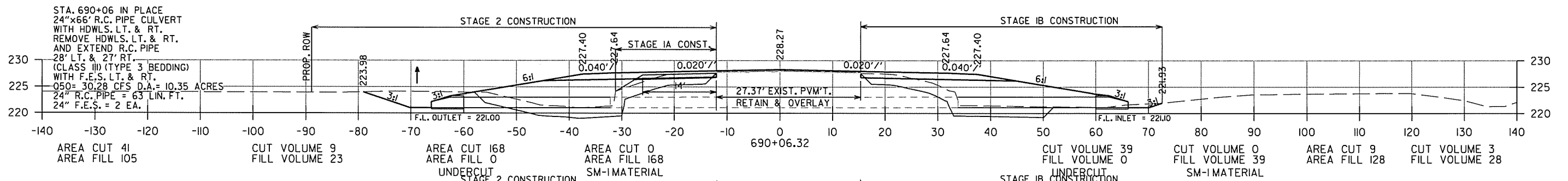
06/13/2016

STAGE 2

STAGE IB
 STA. 683+00.00 TO STA. 687+04.00
 HWY. 64

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.	CA0101	197	224	

2 CROSS SECTIONS



STAGE 2

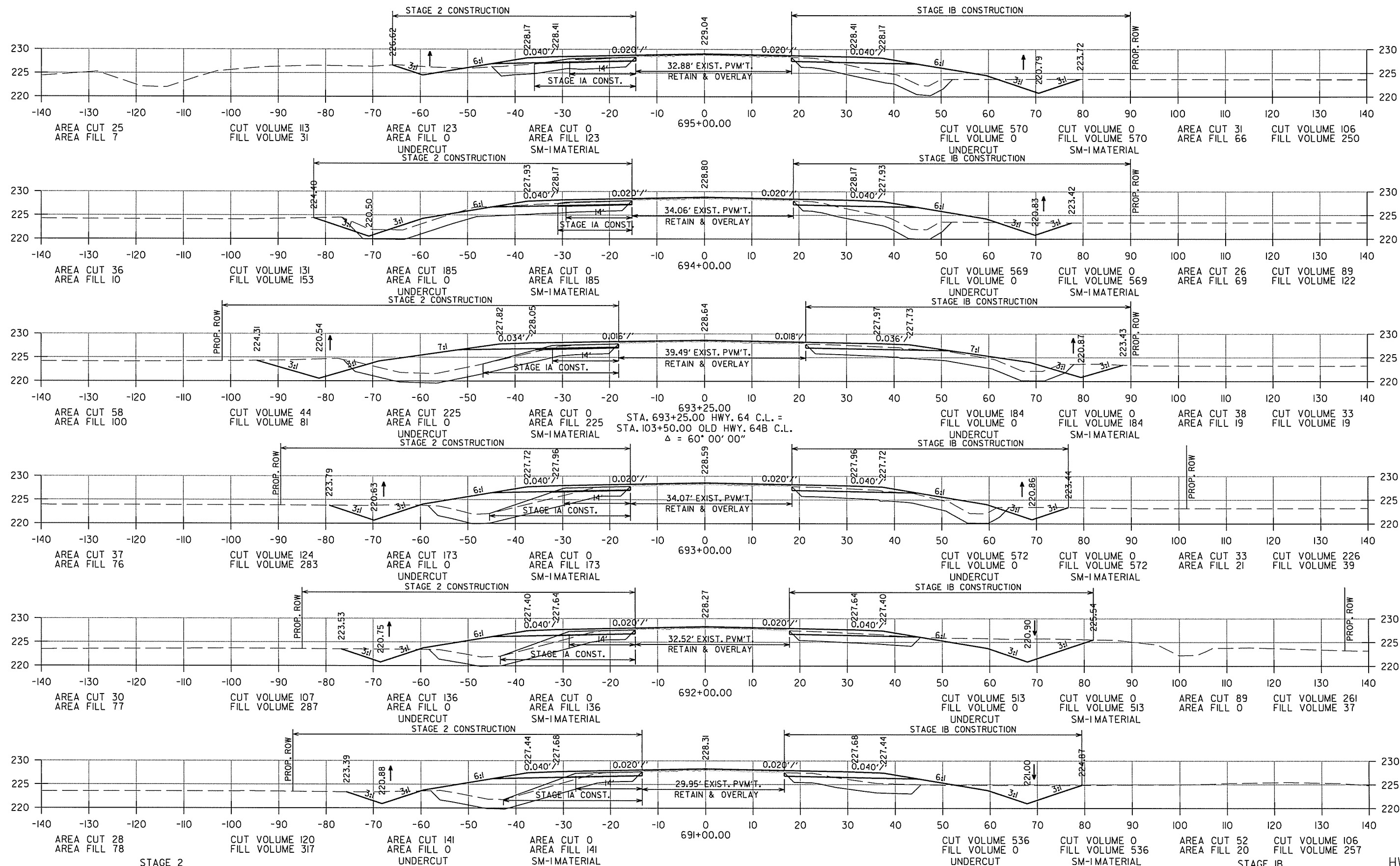
STAGE 1B
STA. 687+96.00 TO STA. 690+06.32

HWY. 64

06/13/2016

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.	CAO101		198	224

2 CROSS SECTIONS



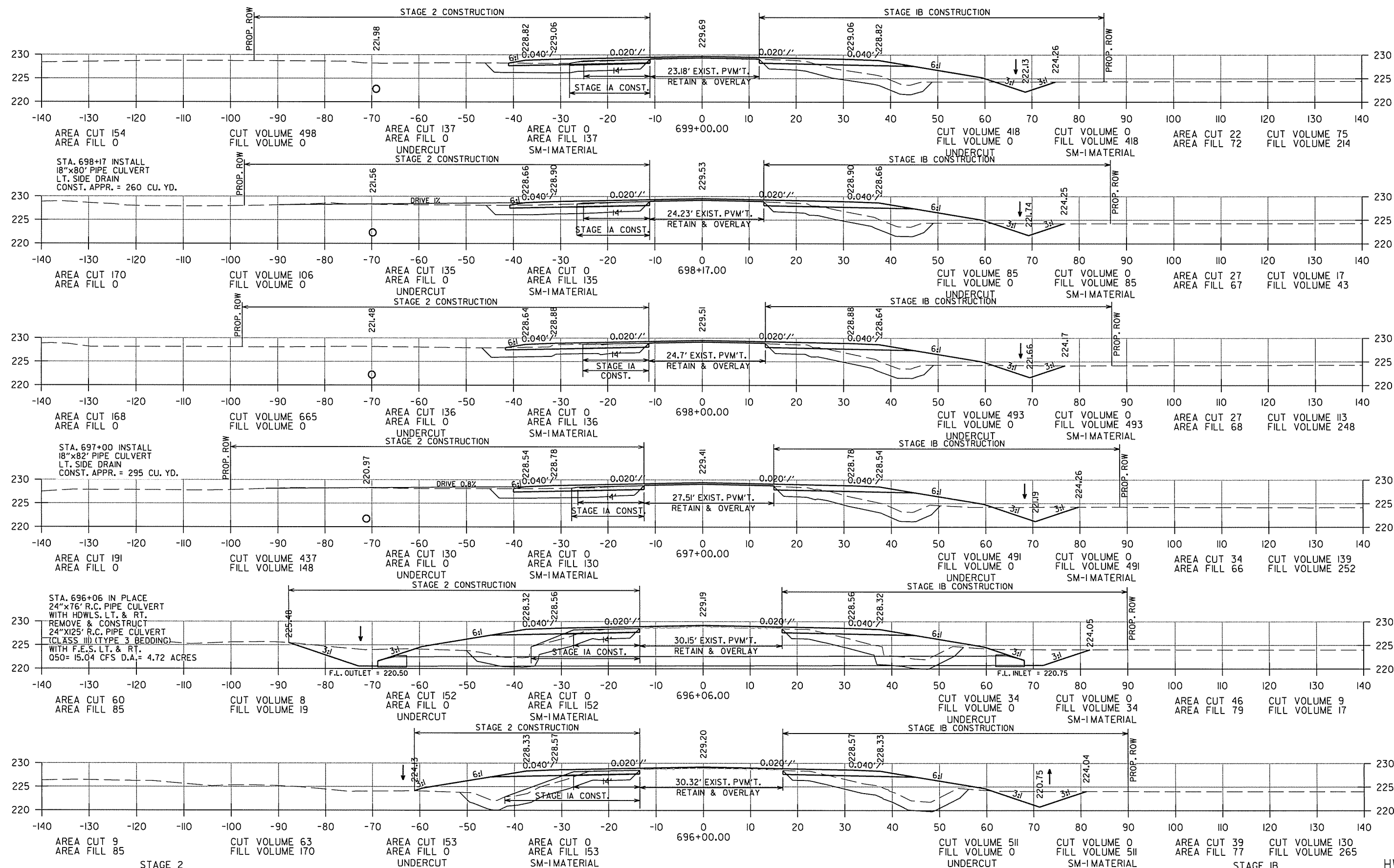
STAGE 2

STAGE IB HWY. 64
STA. 691+00.00 TO STA. 695+00.00

06/13/2016

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.	CA0101	199	224	

2 CROSS SECTIONS



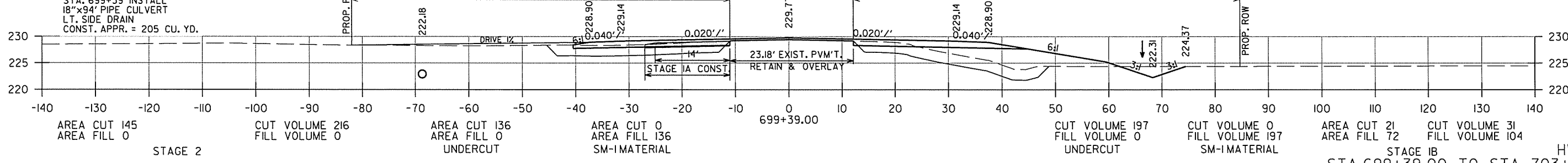
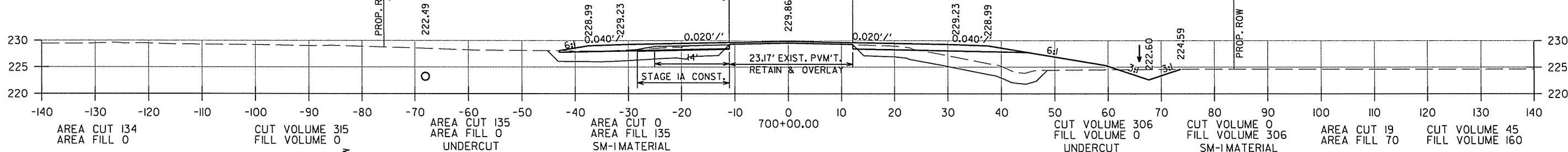
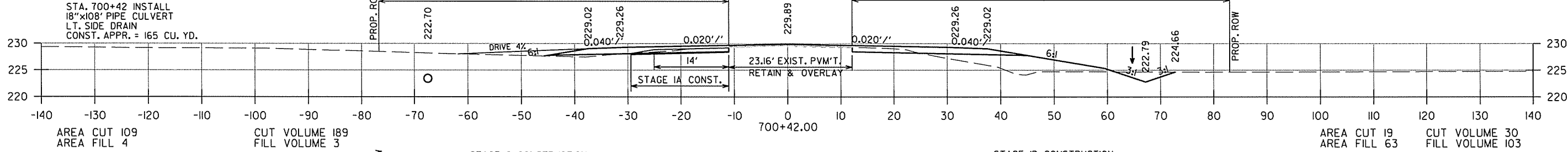
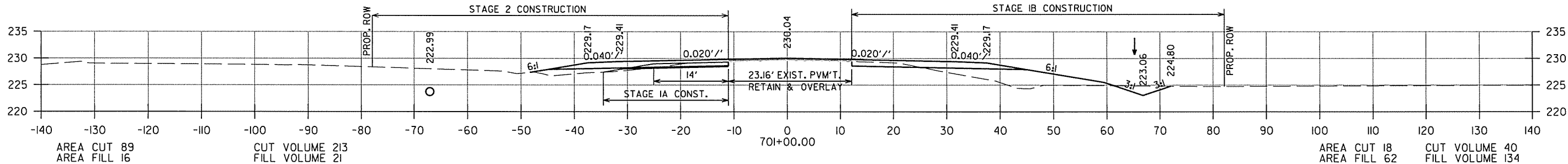
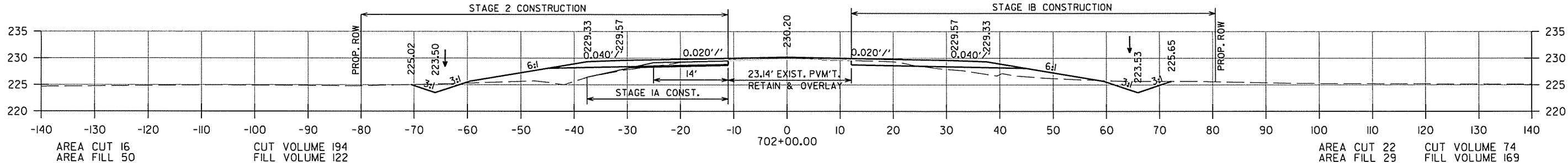
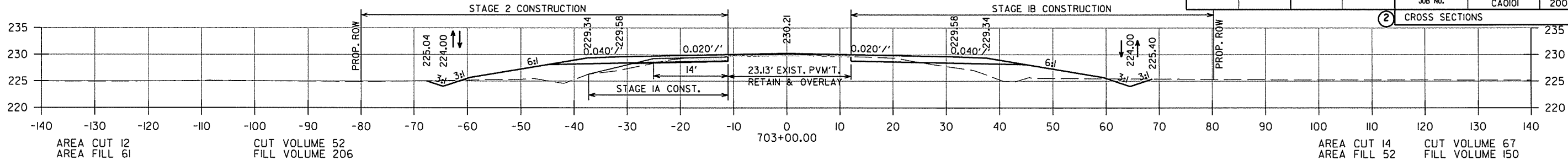
STAGE 2

STAGE IB
 STA. 696+00.00 TO STA. 699+00.00
 HWY. 64

06/13/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		200	224
				JOB NO.		CA0101		

2 CROSS SECTIONS



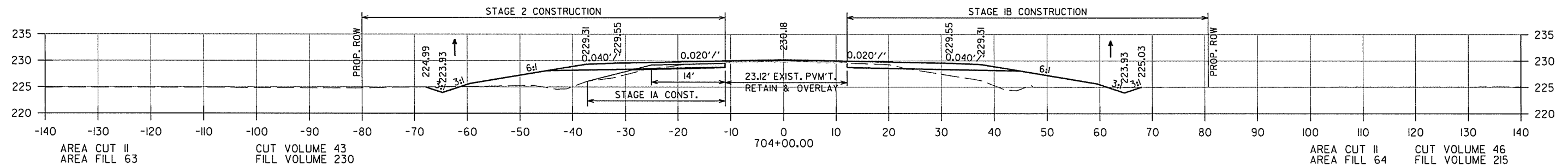
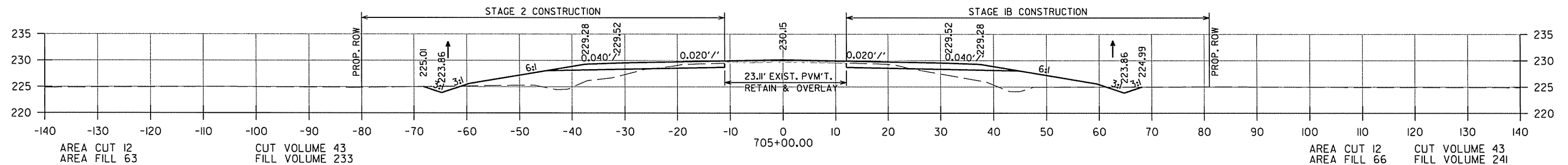
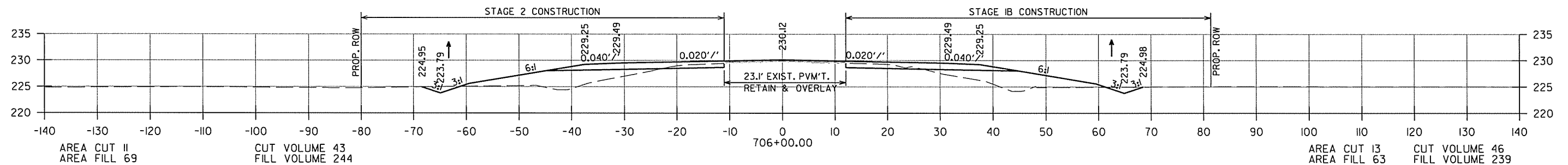
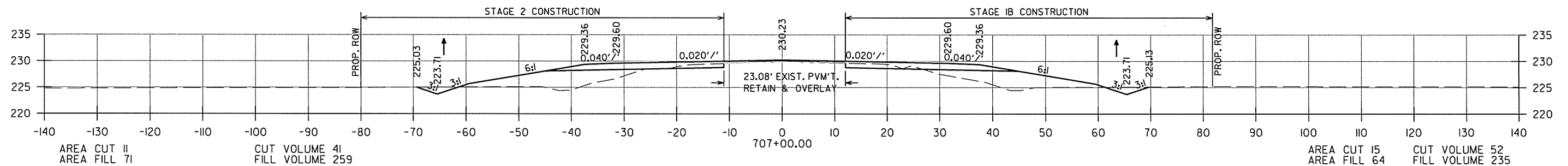
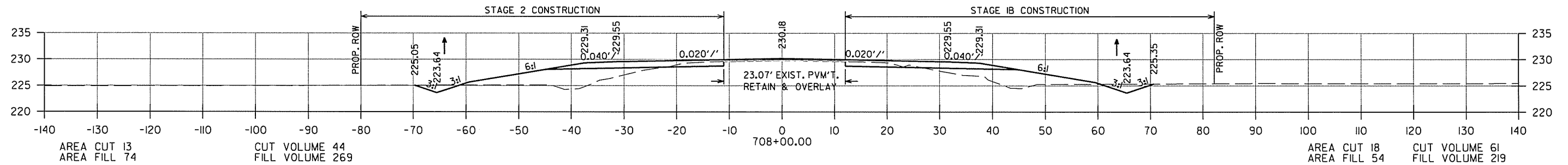
STAGE 2

STAGE 1B
 STA. 699+39.00 TO STA. 703+00.00
 HWY. 64

06/13/2016

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.	CA0101	201	224	

2 CROSS SECTIONS



STAGE 2

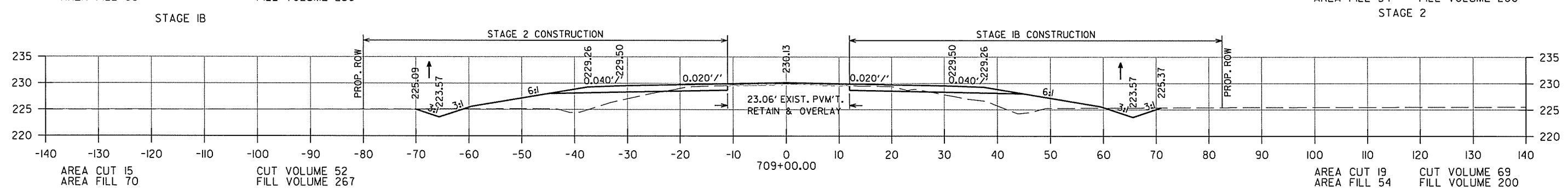
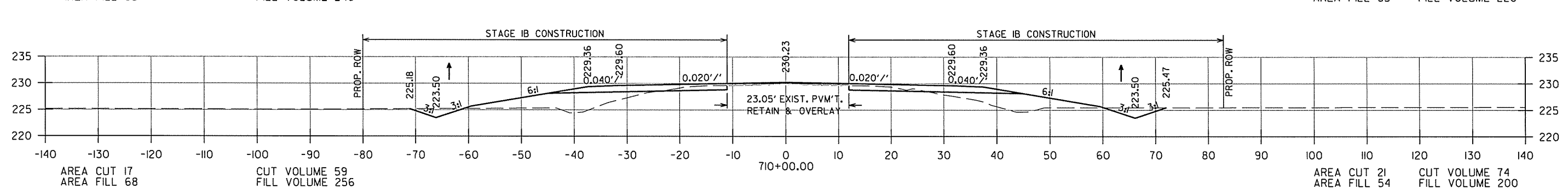
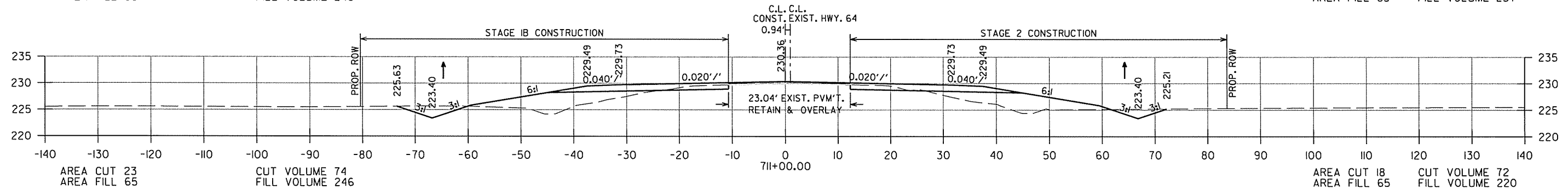
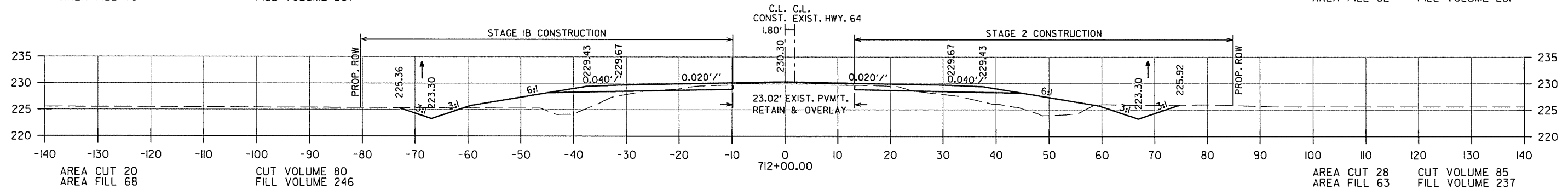
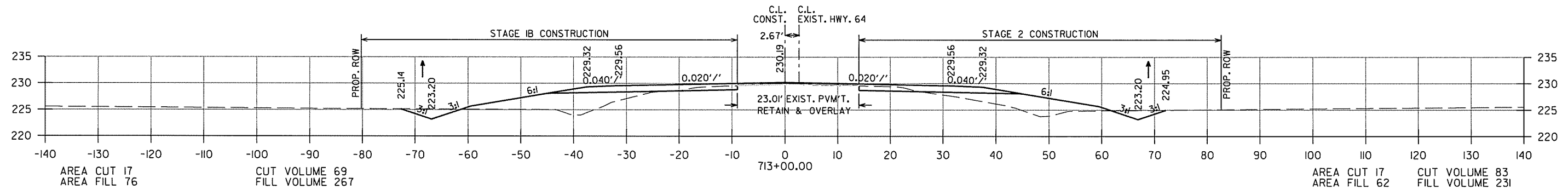
STAGE 1B
STA. 704+00.00 TO STA. 708+00.00

HWY. 64

06/13/2016

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.	CA0101	202	224	

2 CROSS SECTIONS



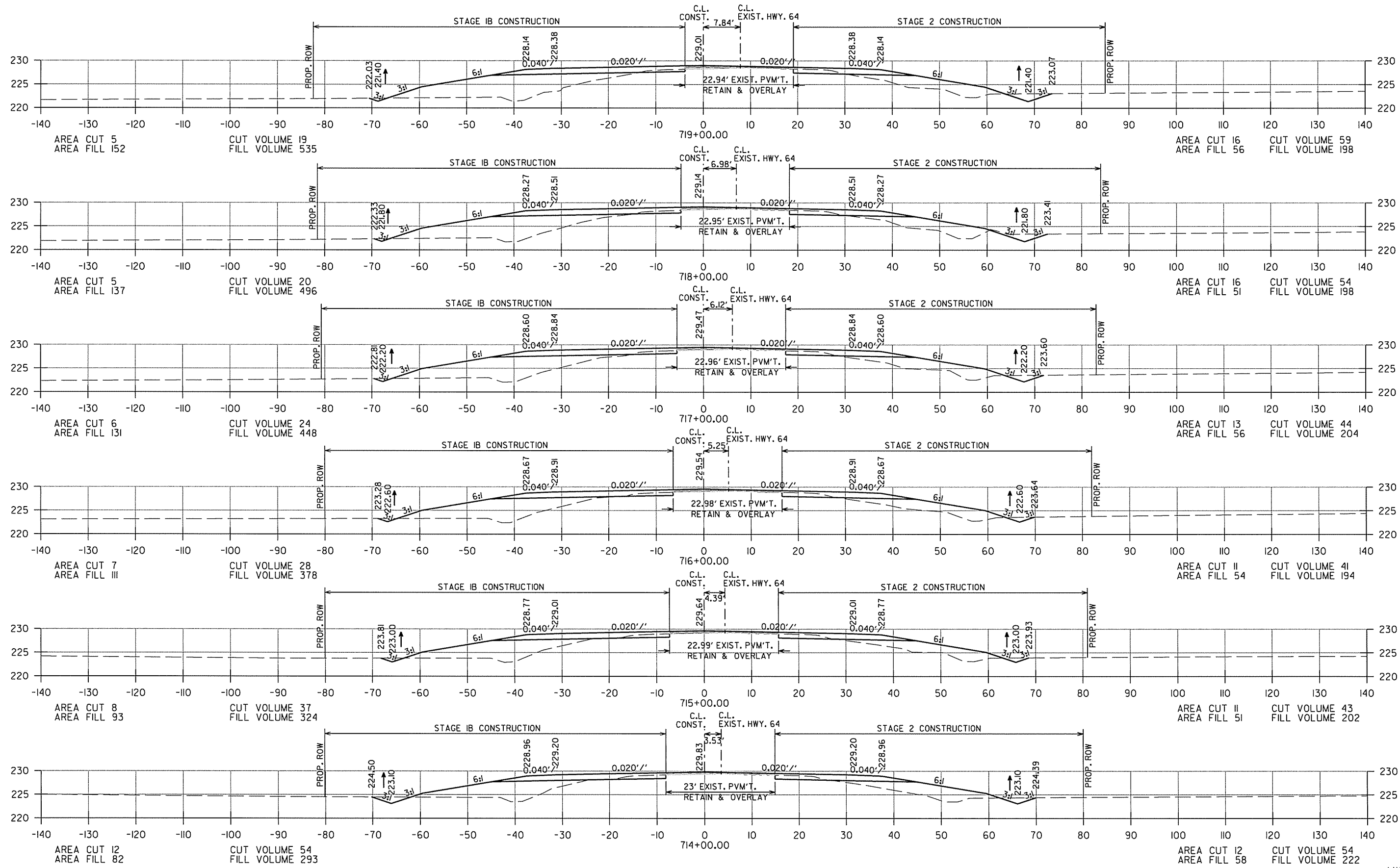
STAGE 1B
STA. 709+00.00 TO STA. 713+00.00

HWY. 64

06/13/2016

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.	CA0101	203	224	

2 CROSS SECTIONS

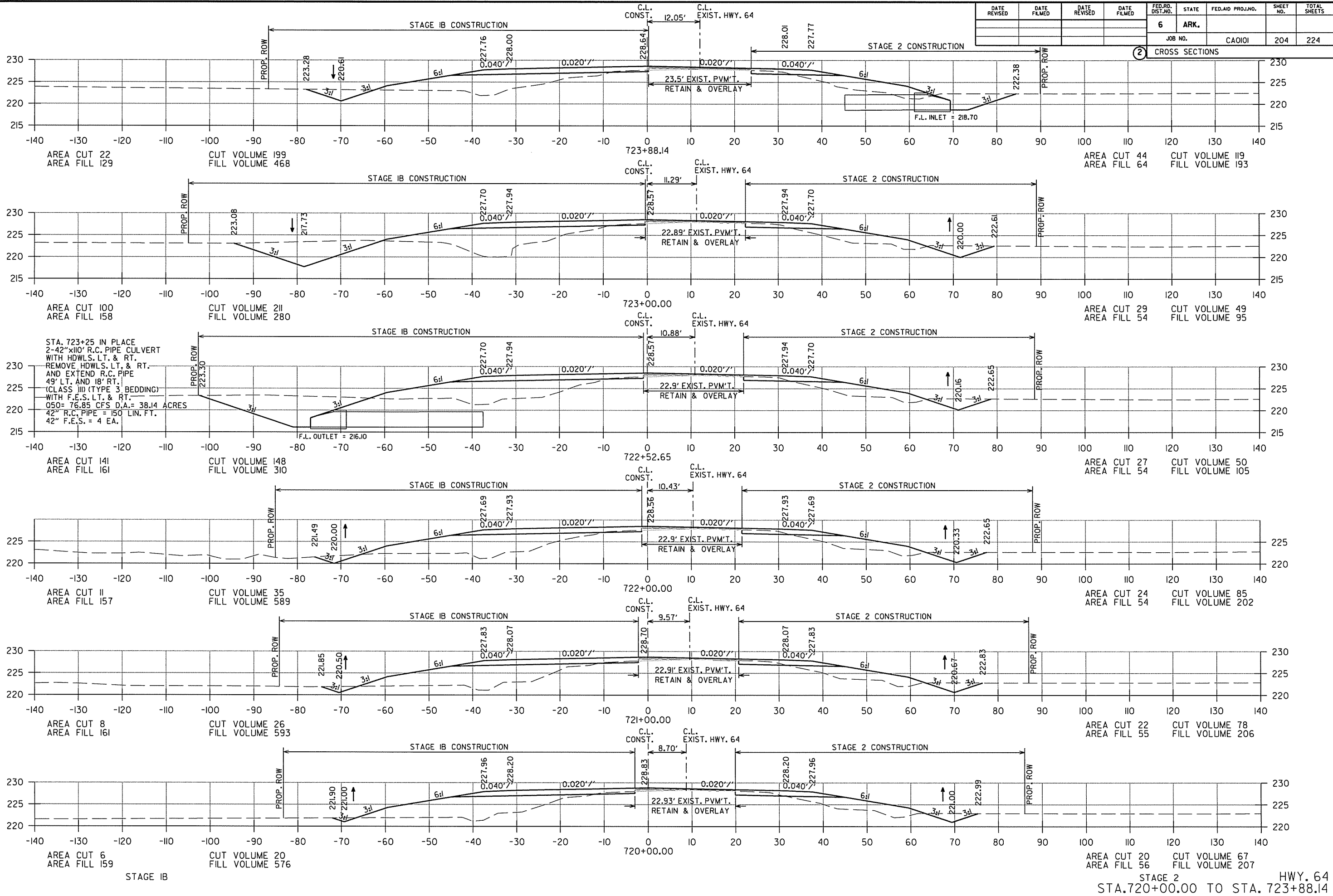


STAGE 1B

STAGE 2
STA. 714+00.00 TO STA. 719+00.00
HWY. 64

06/13/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		204	224
						JOB NO.	CA0101	

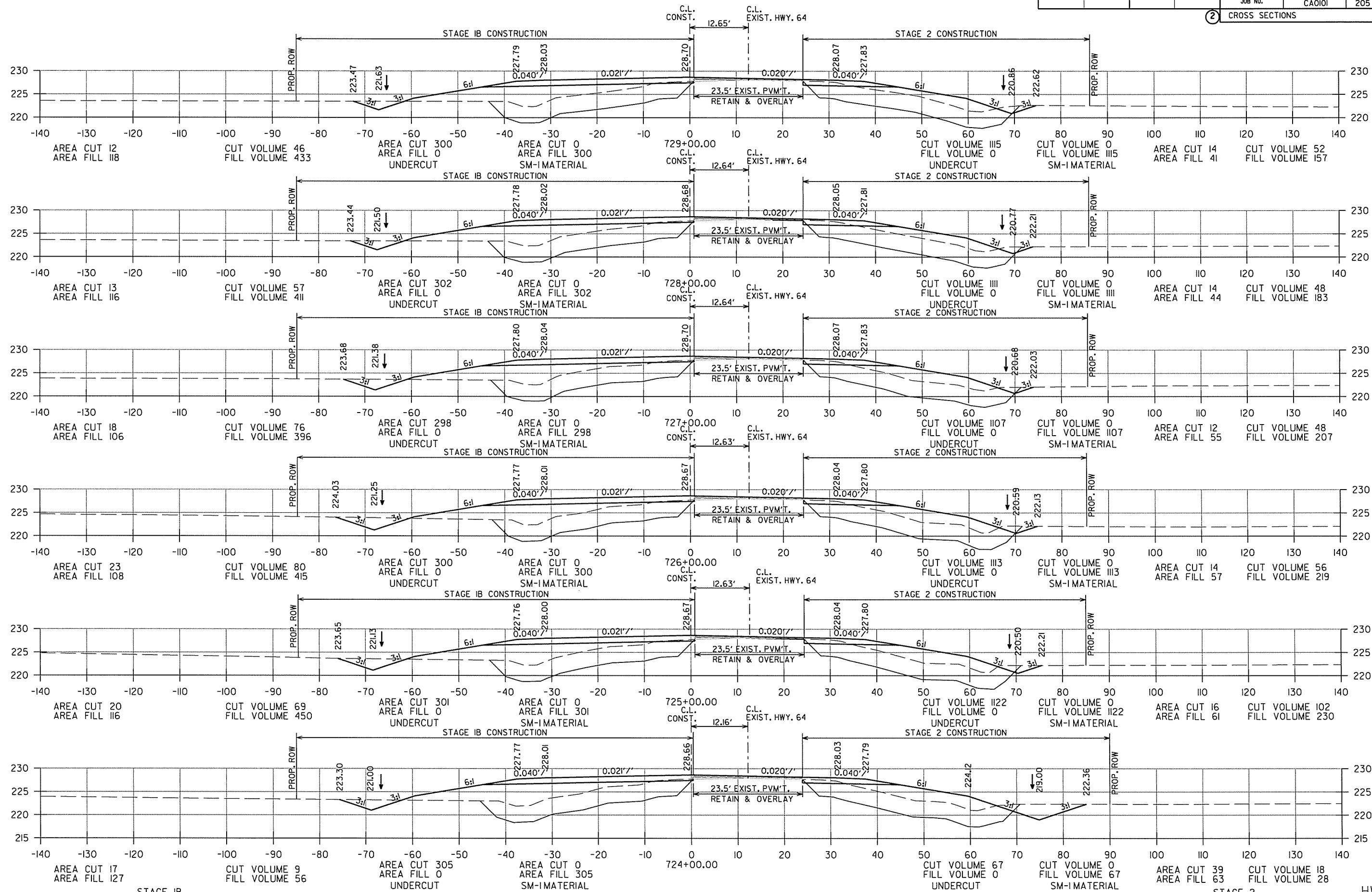


STAGE 2
 STA. 720+00.00 TO STA. 723+88.14
 HWY. 64

06/13/2016

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.	CA0101	205	224	

2 CROSS SECTIONS



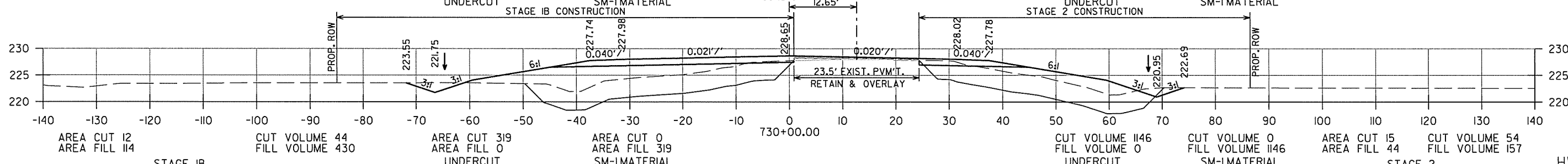
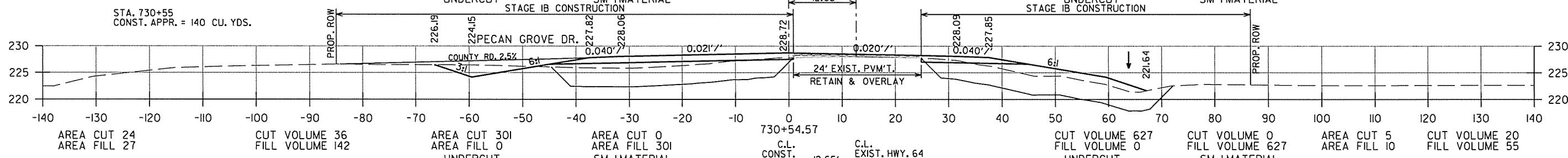
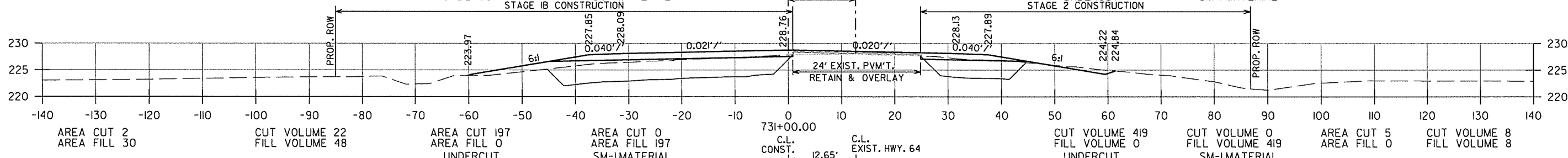
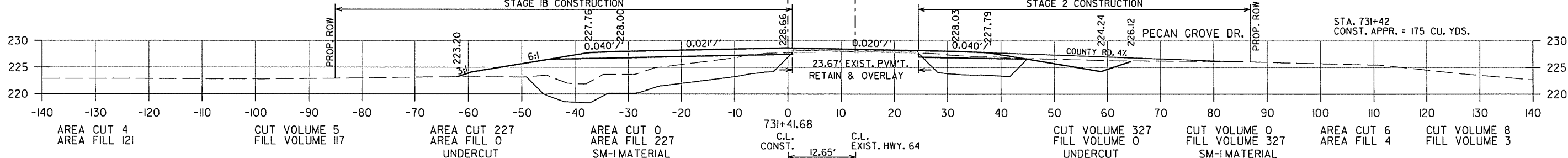
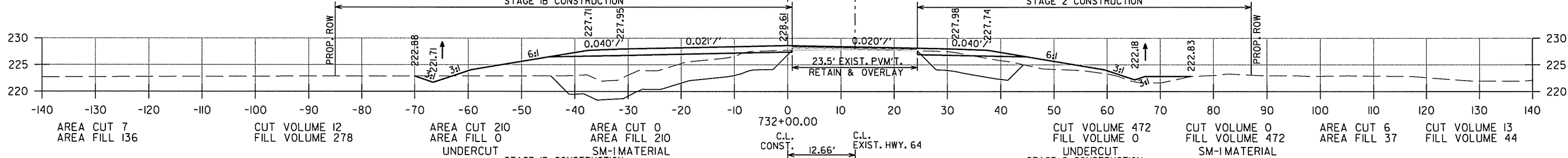
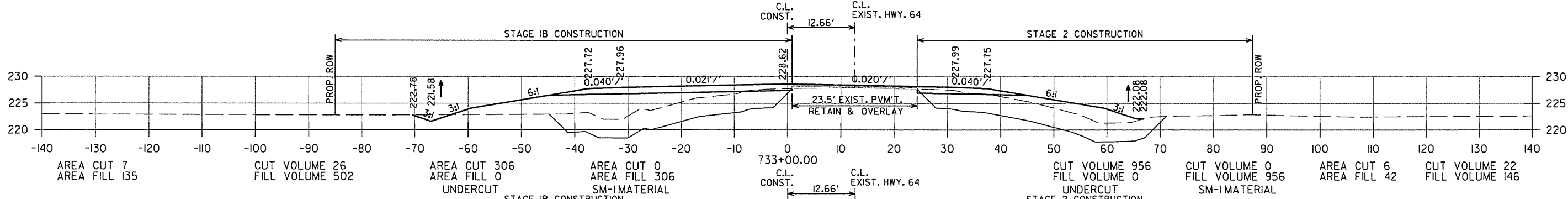
STAGE 1B

STAGE 2 HWY. 64
STA. 724+00.00 TO STA. 729+00.00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CAO101	206	224	

2 CROSS SECTIONS

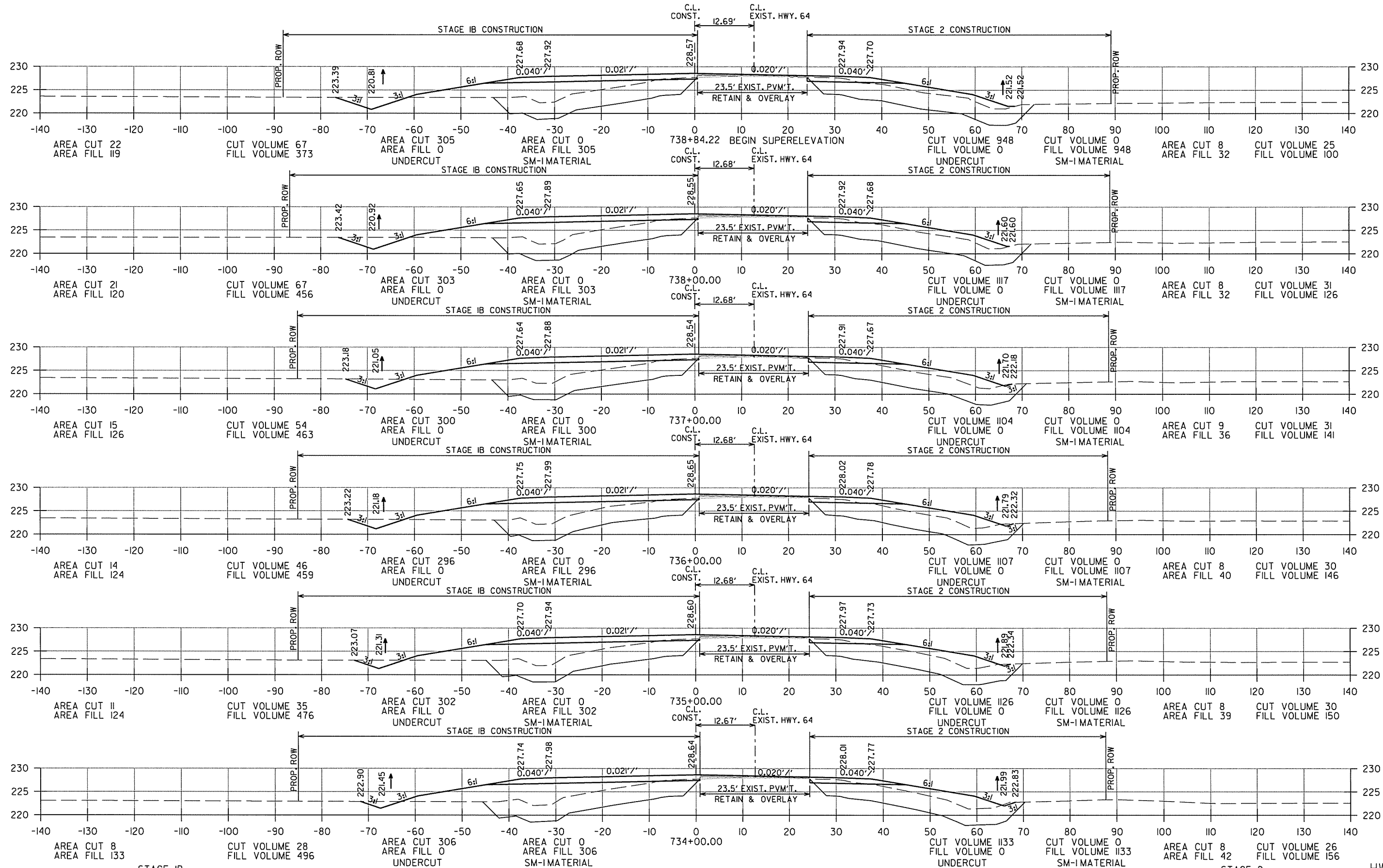


STAGE 1B

STAGE 2
STA. 730+00.00 TO STA. 733+00.00
HWY. 64

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.	CA0101	207	224	

2 CROSS SECTIONS

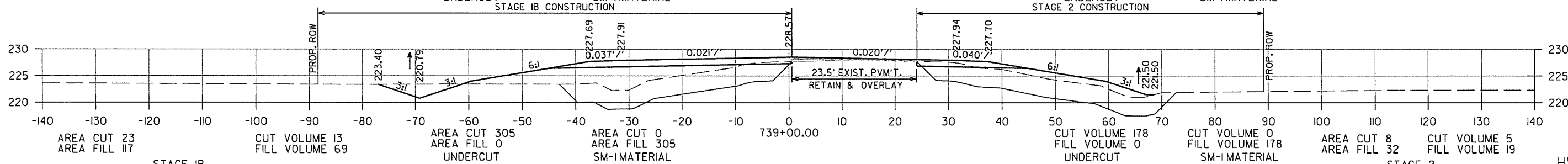
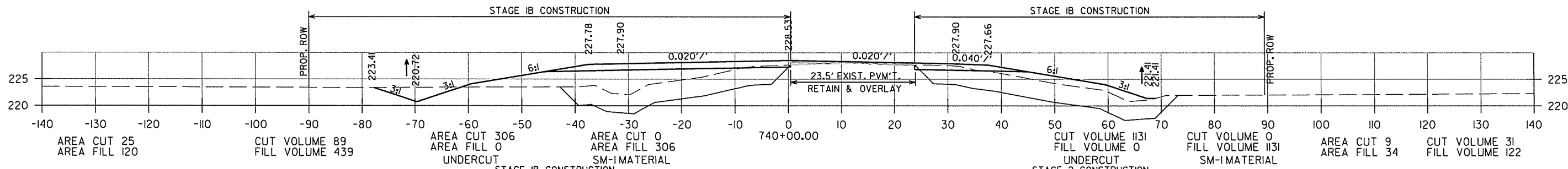
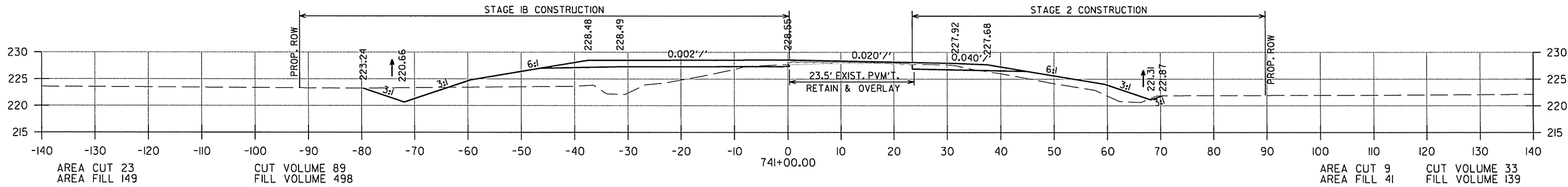
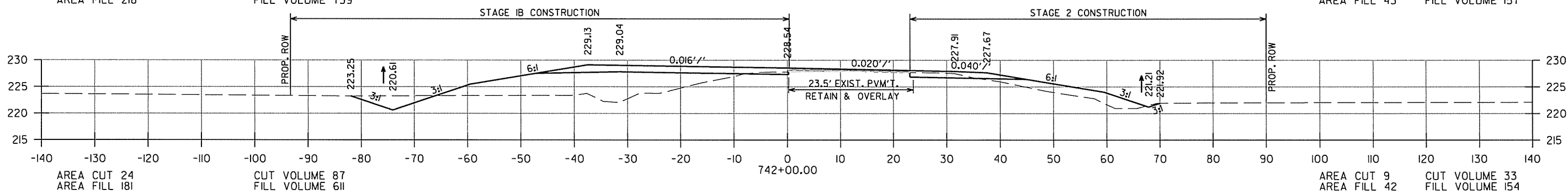
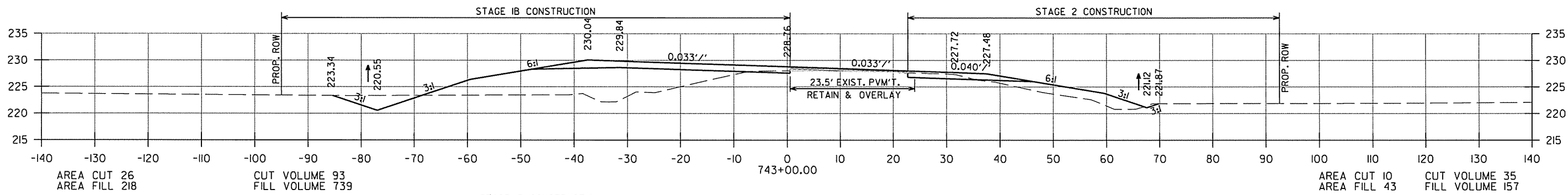


STAGE 1B

STAGE 2
 HWY. 64
 STA. 734+00.00 TO STA. 738+84.22

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.	CAOIOI	208	224	

2 CROSS SECTIONS



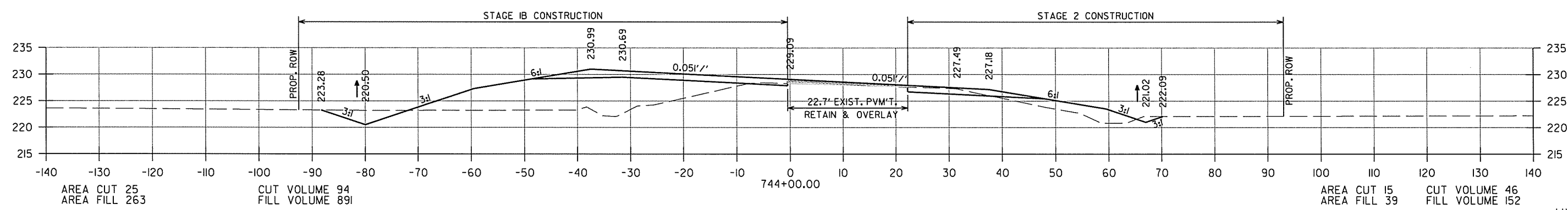
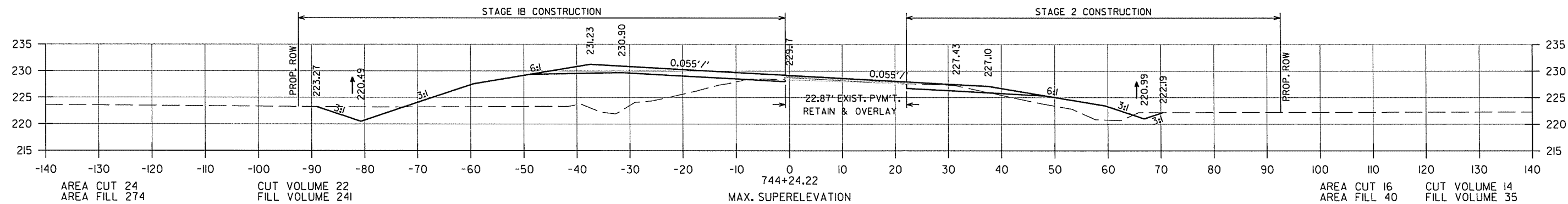
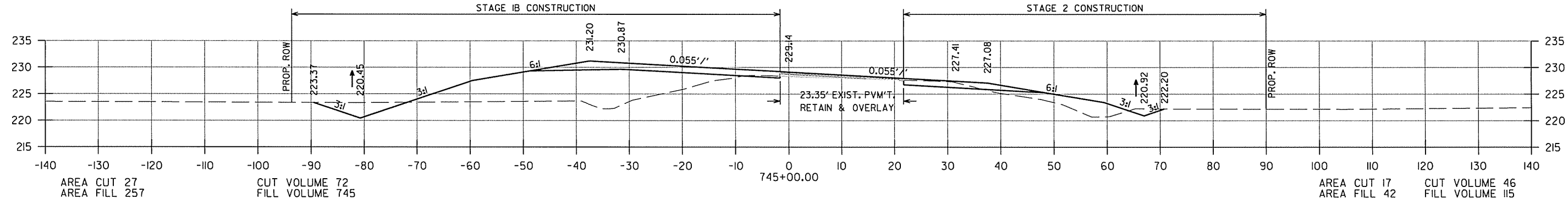
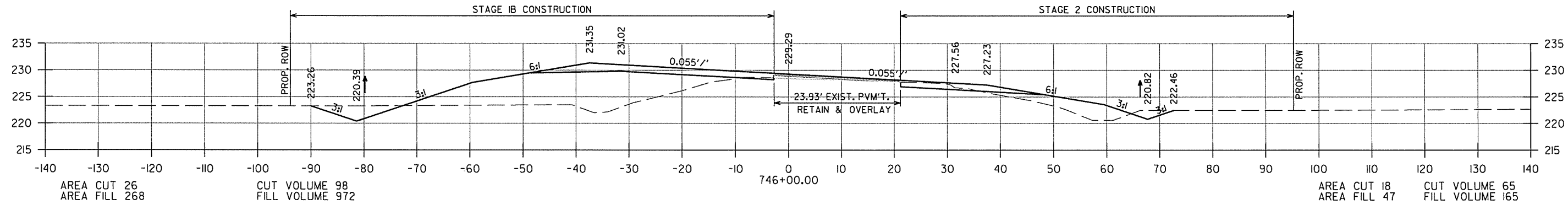
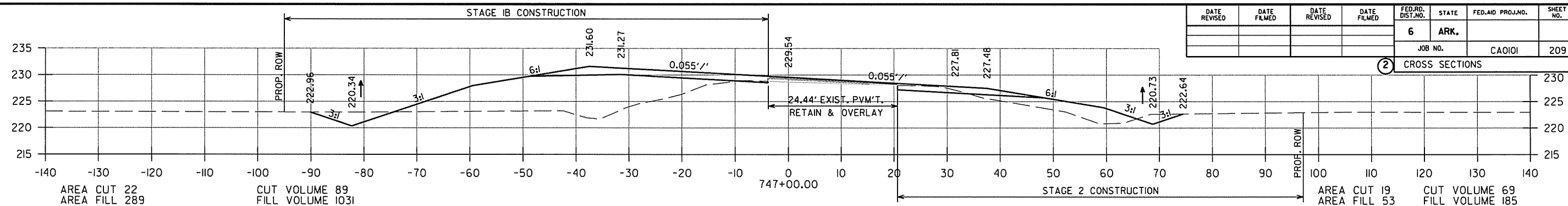
STAGE 1B

STAGE 2
STA. 739+00.00 TO STA. 743+00.00 HWY. 64

06/13/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		209	224
				JOB NO. CA0101				

2 CROSS SECTIONS



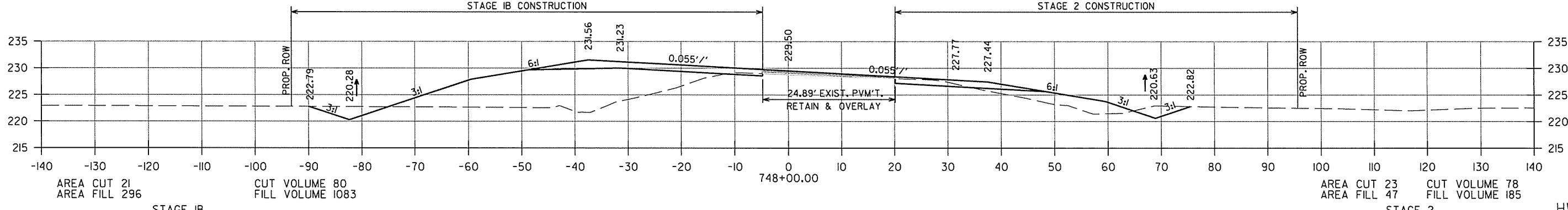
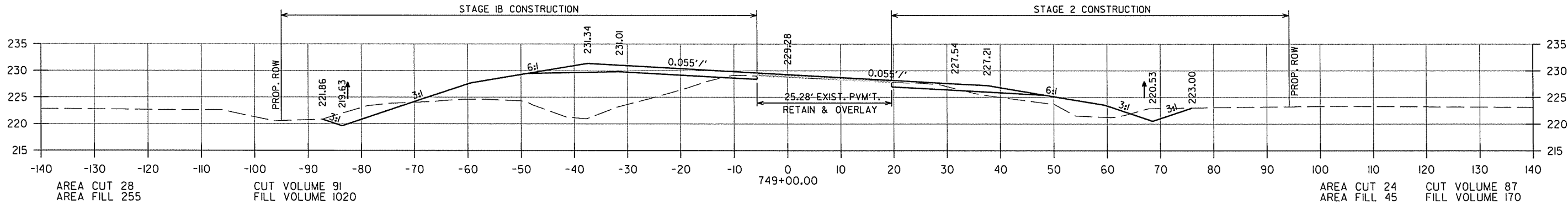
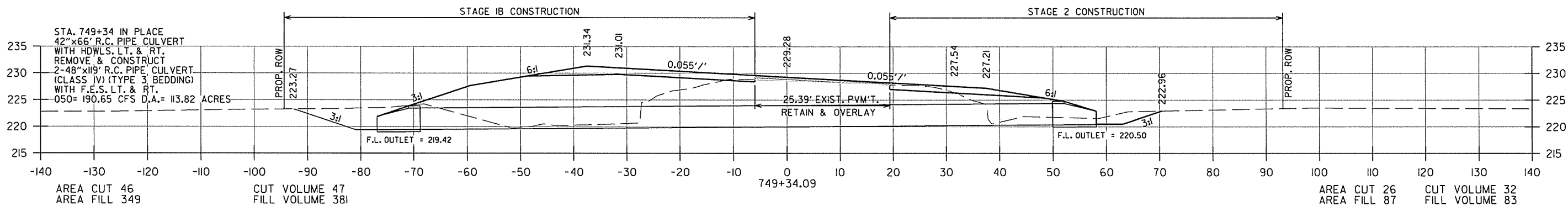
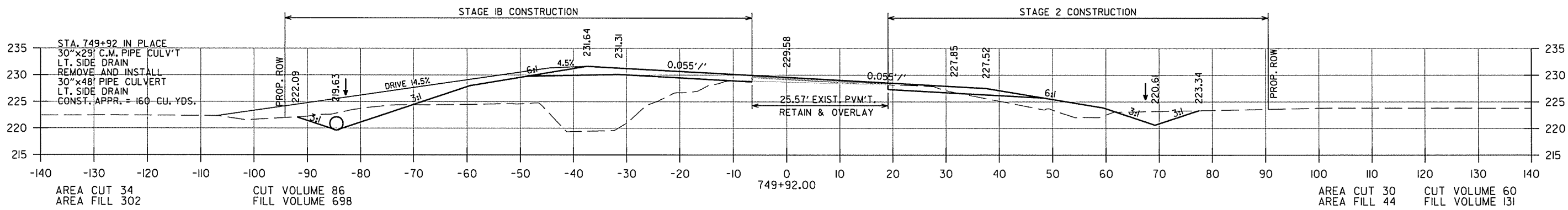
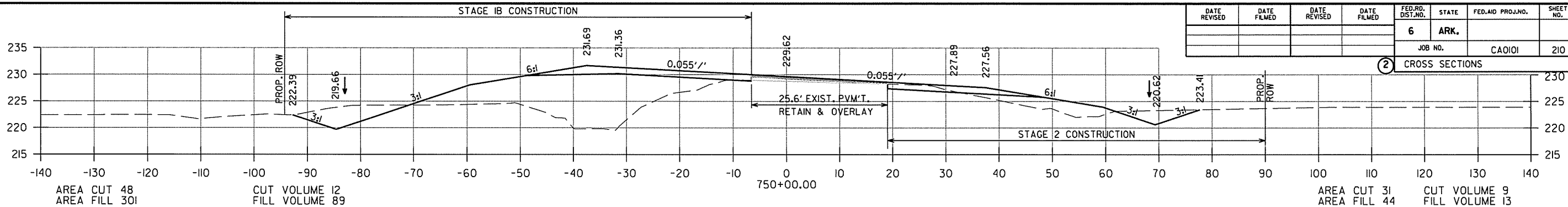
STAGE 1B

STAGE 2
STA. 744+00.00 TO STA. 747+00.00 HWY. 64

06/13/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		210	224
				JOB NO. CAO101				

2 CROSS SECTIONS



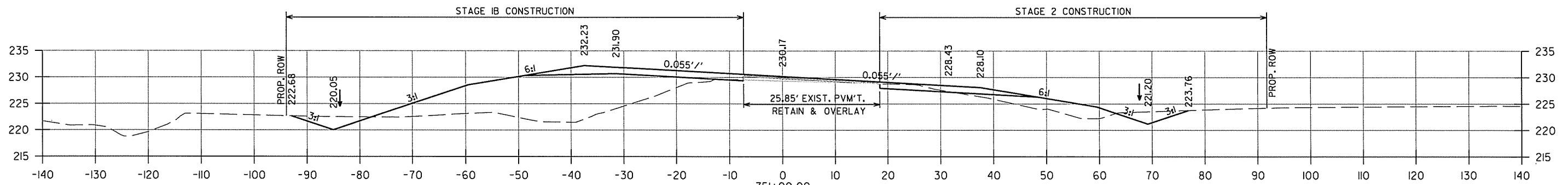
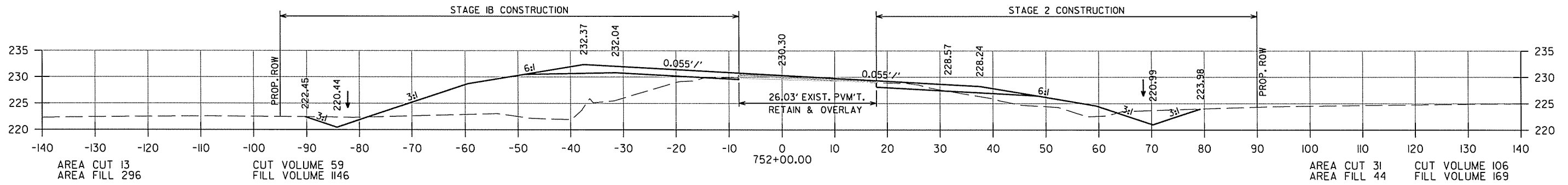
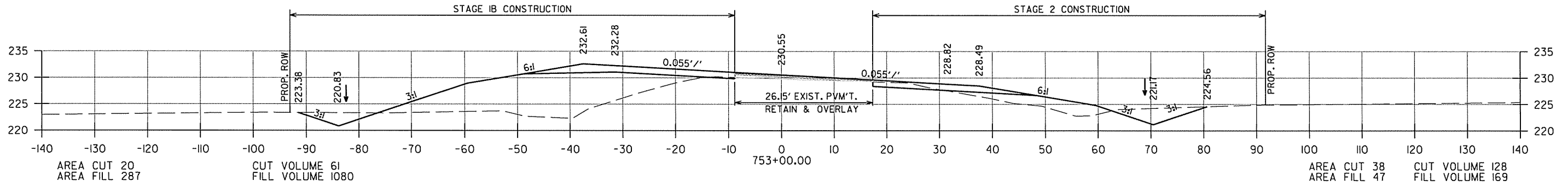
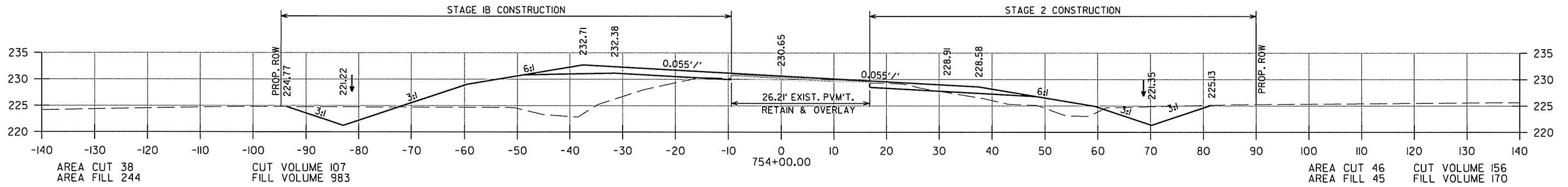
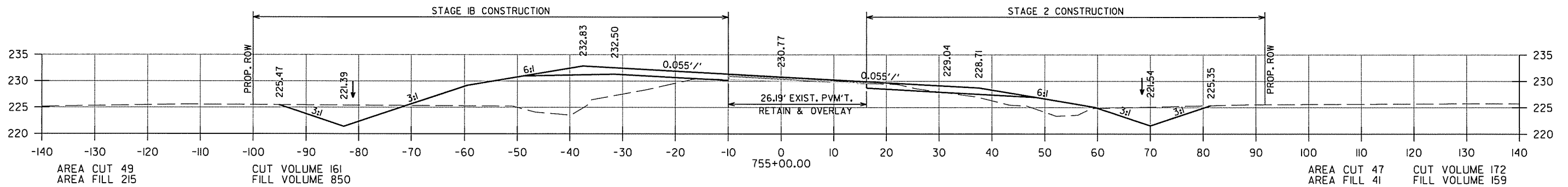
STAGE 1B

STAGE 2
STA. 748+00.00 TO STA. 750+00.00 HWY. 64

06/13/2016

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.	CA0101		211	224

2 CROSS SECTIONS



STAGE 1B

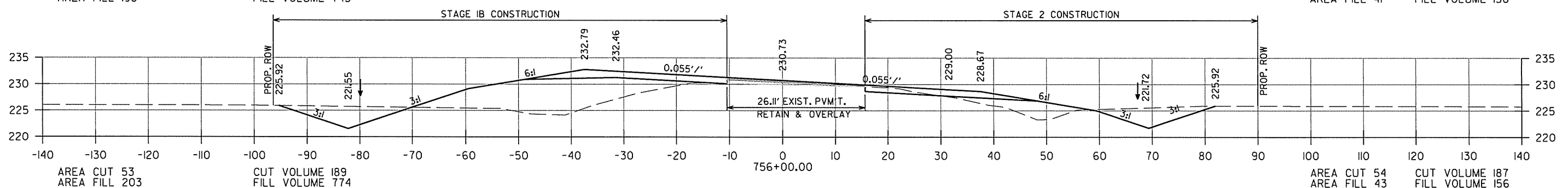
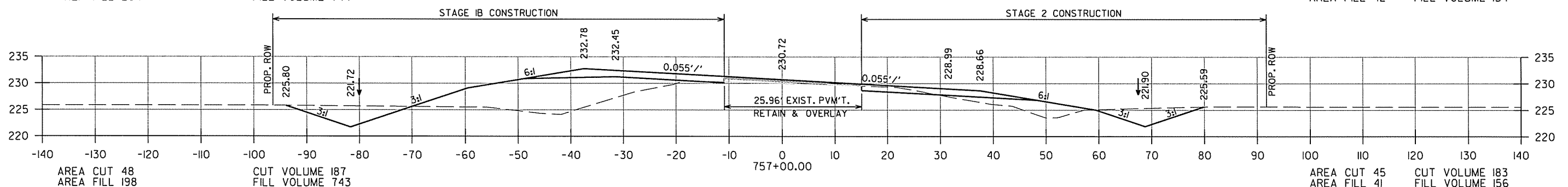
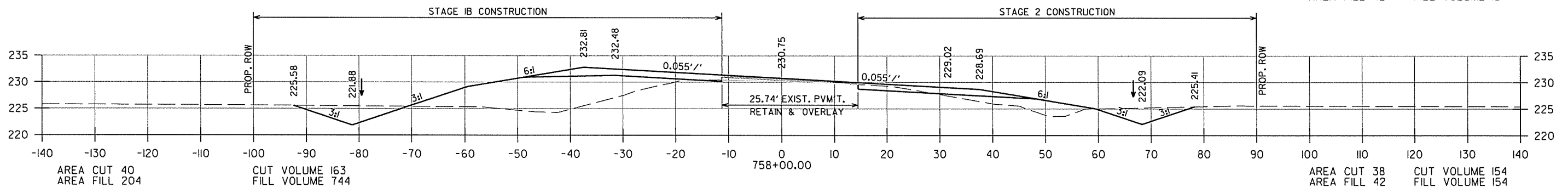
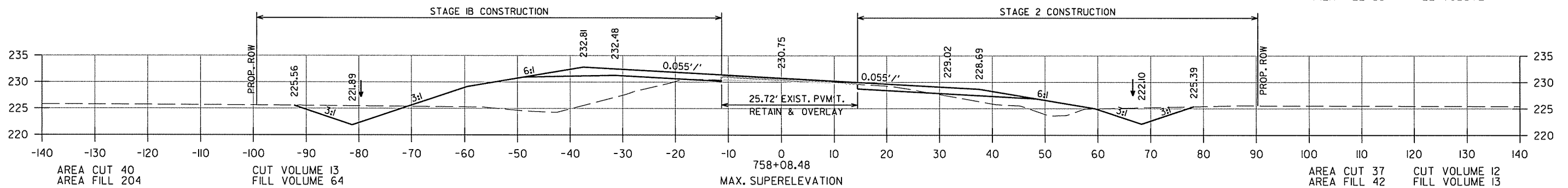
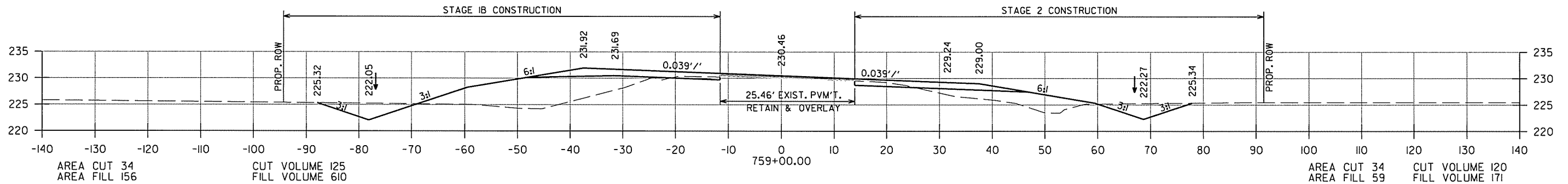
STAGE 2
STA. 751+00.00 TO STA. 755+00.00

HWY. 64

06/13/2016

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.	CA0101	212

2 CROSS SECTIONS

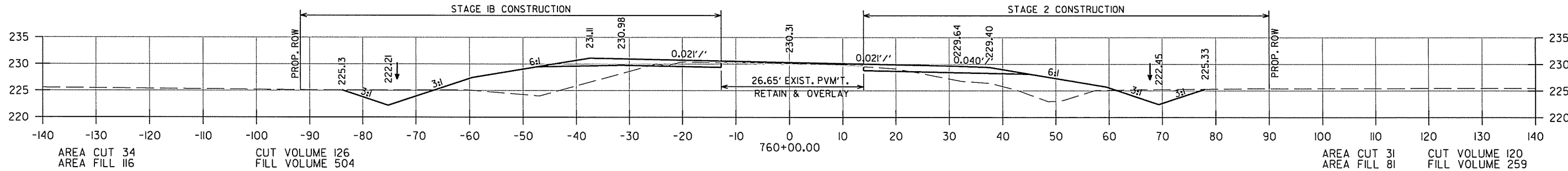
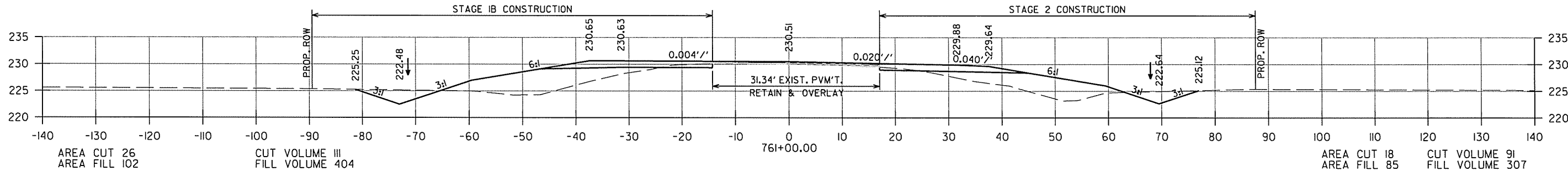
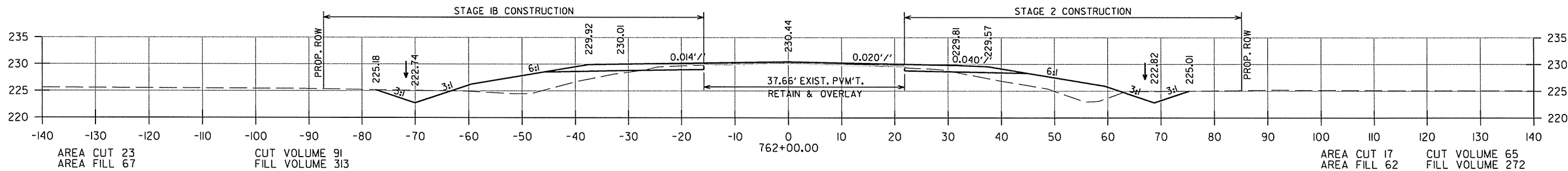
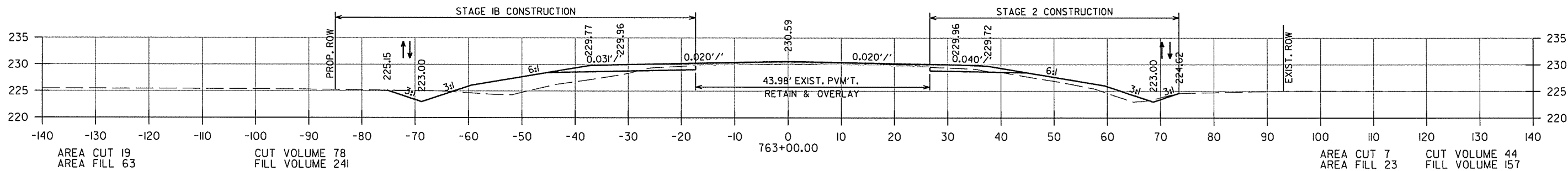
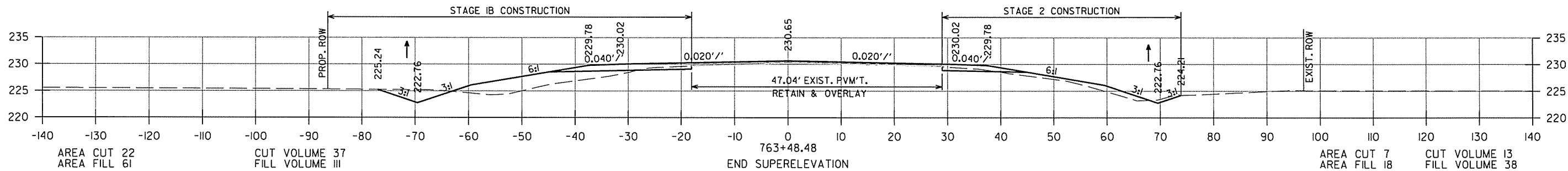


STAGE 1B

STAGE 2
STA. 756+00.00 TO STA. 759+00.00

HWY. 64

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.	CA0101	213
						2 CROSS SECTIONS		



STAGE 1B

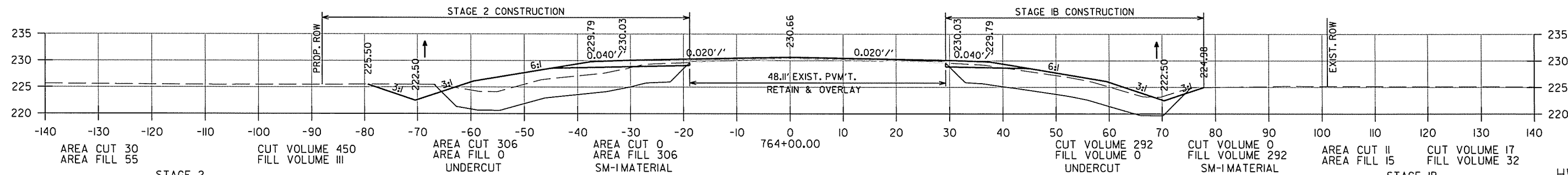
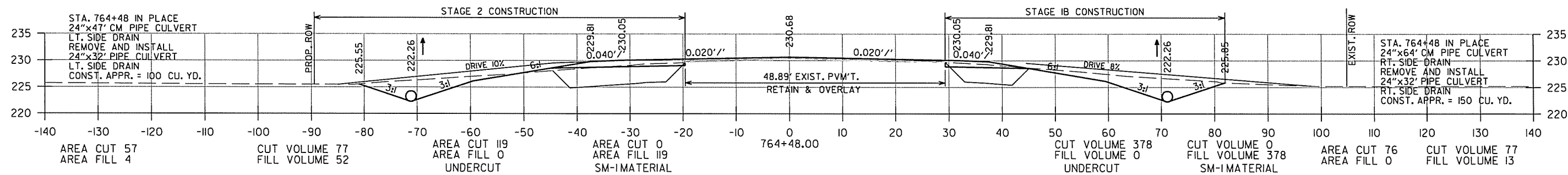
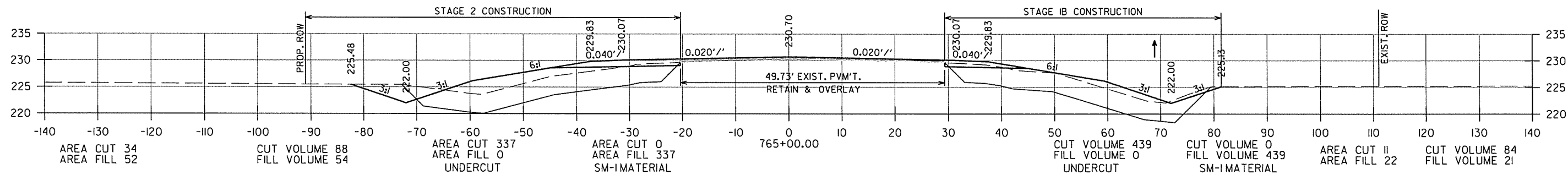
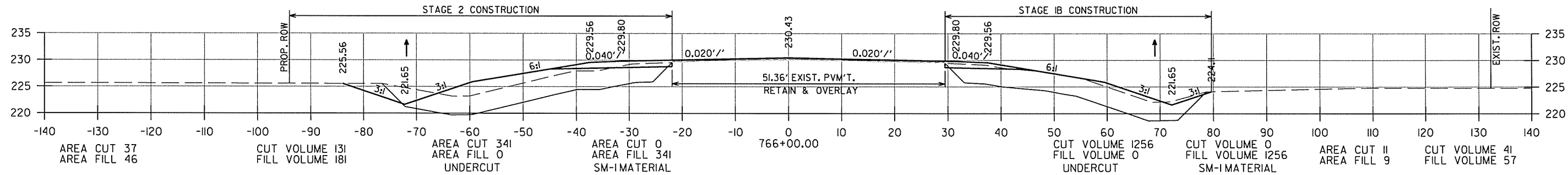
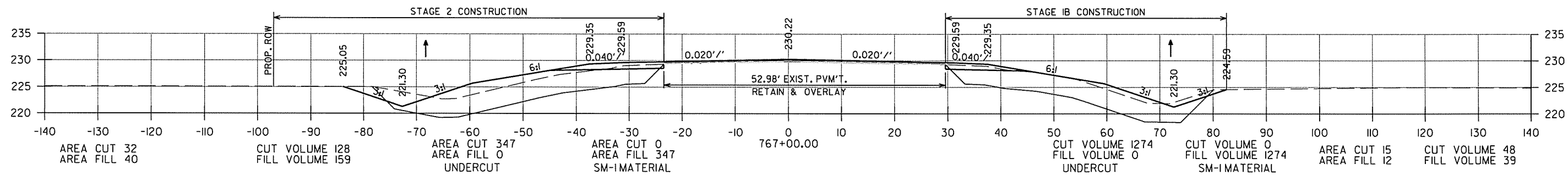
STAGE 2
STA. 760+00.00 TO STA. 763+48.48

HWY. 64

06/13/2016

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.	CAO101		214	224

2 CROSS SECTIONS



STAGE 2

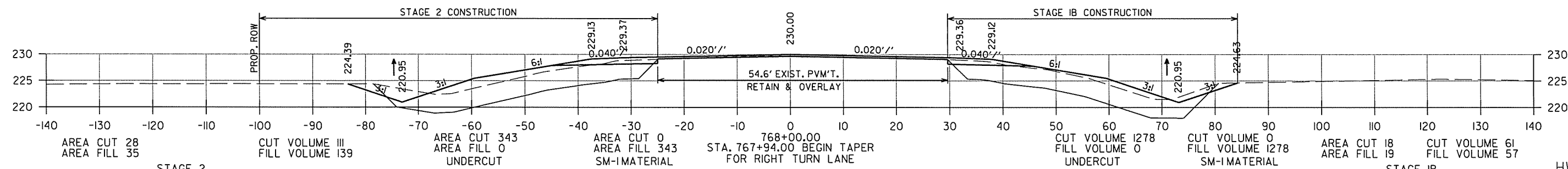
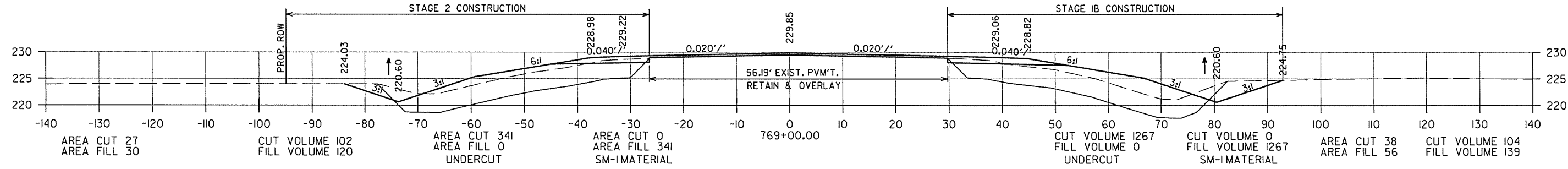
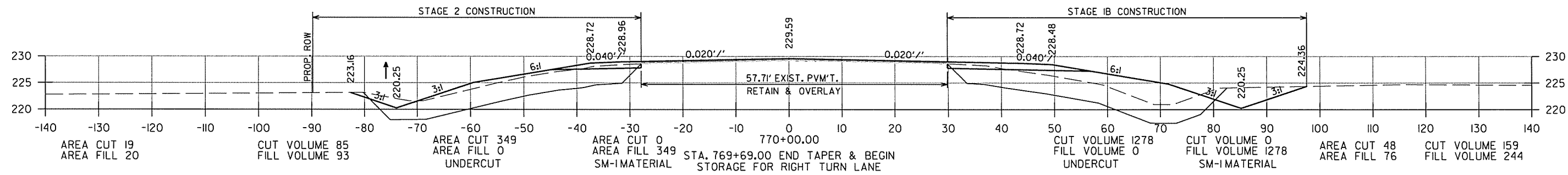
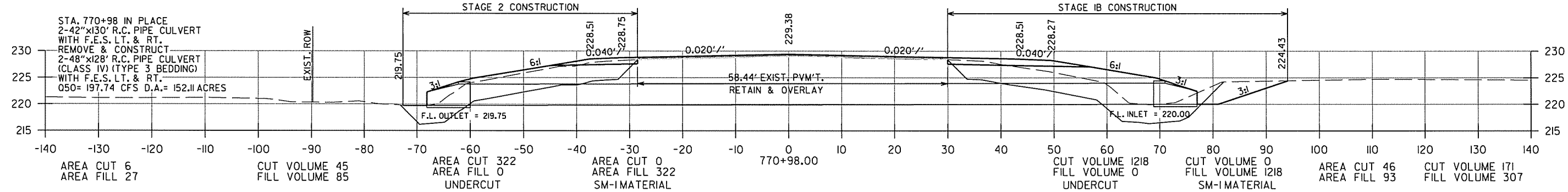
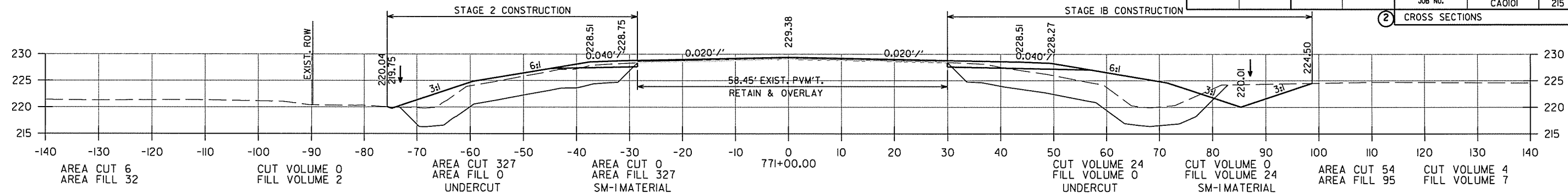
STAGE 1B
STA. 764+00.00 TO STA. 767+00.00

HWY. 64

06/13/2016

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.	CA0101	215	224	

2 CROSS SECTIONS

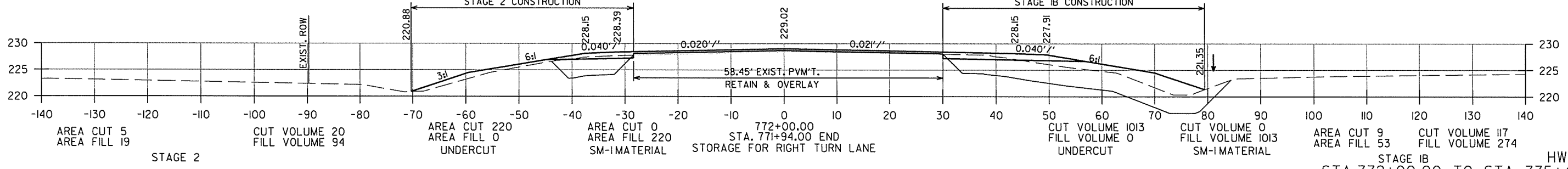
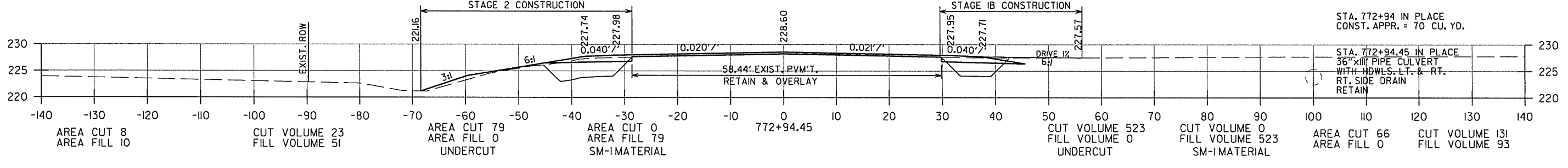
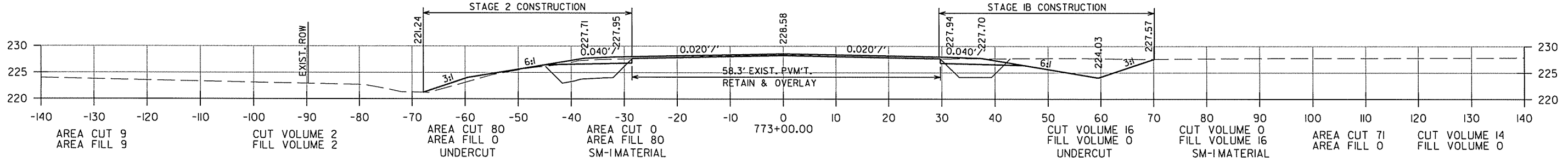
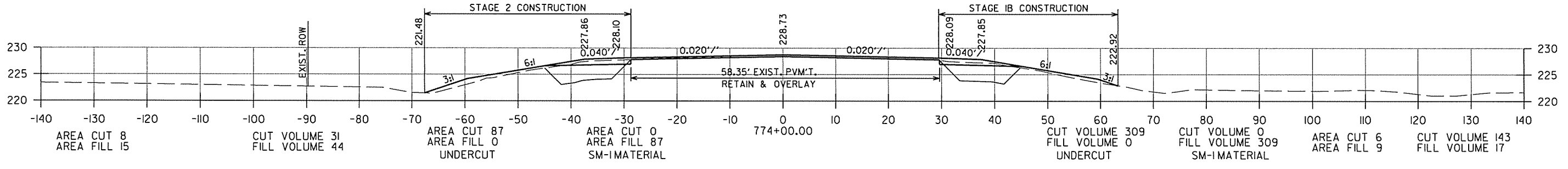
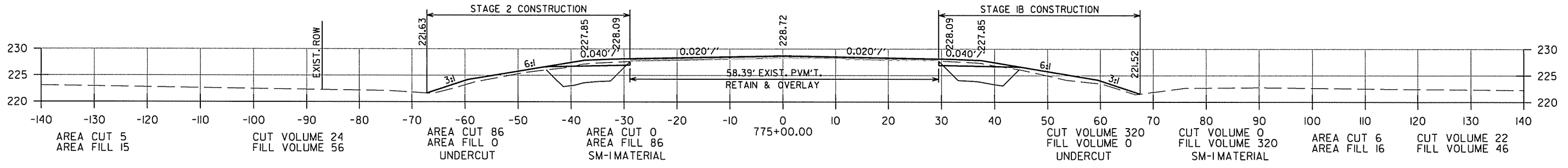
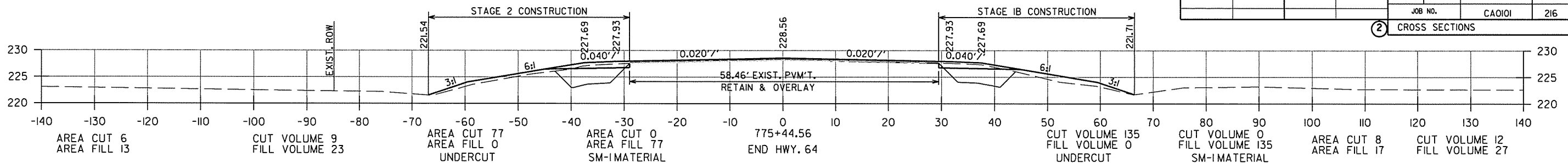


STAGE 2

STAGE IB
HWY. 64
STA. 768+00.00 TO STA. 771+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		216	224
				JOB NO. CAO101				

2 CROSS SECTIONS

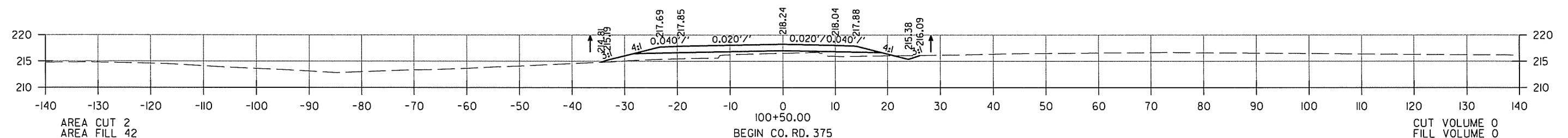
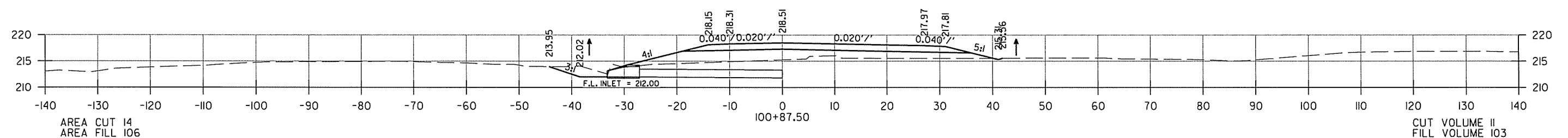
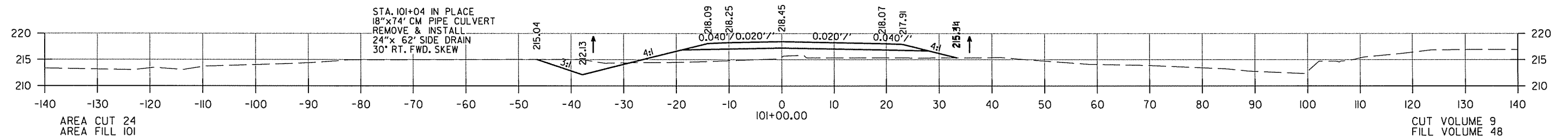
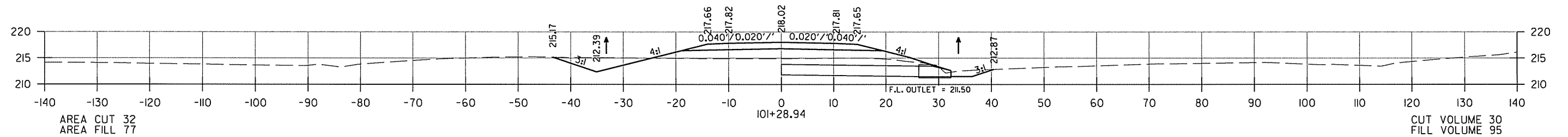
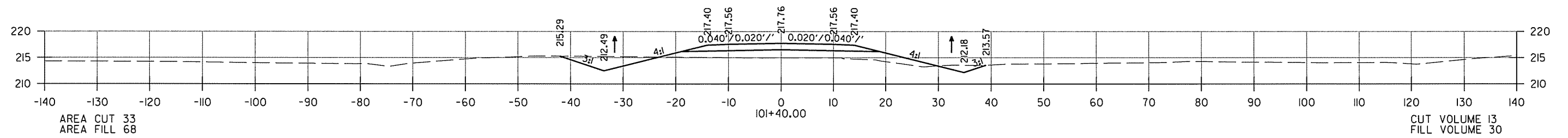
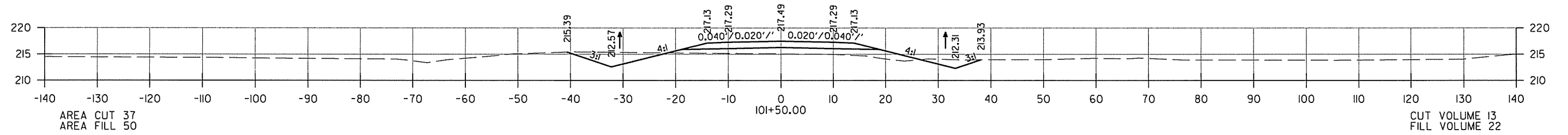


STAGE 2

STAGE 1B
HWY. 64
STA. 772+00.00 TO STA. 775+44.56

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.	CA0101		217	224

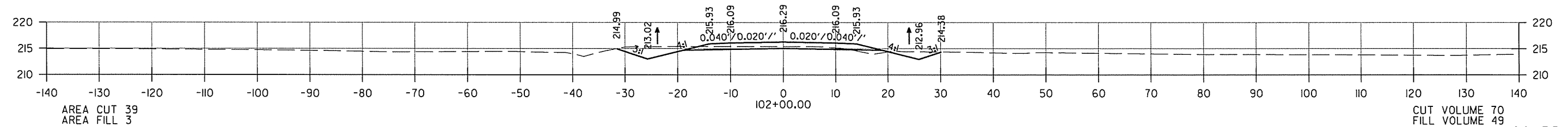
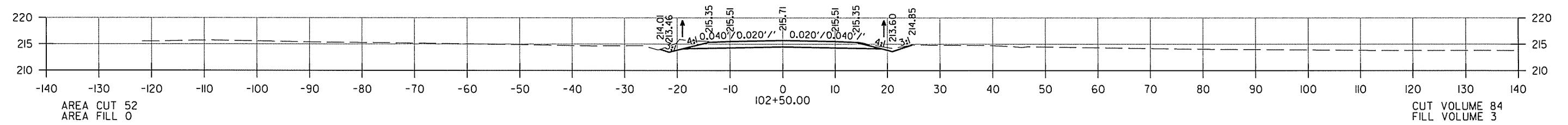
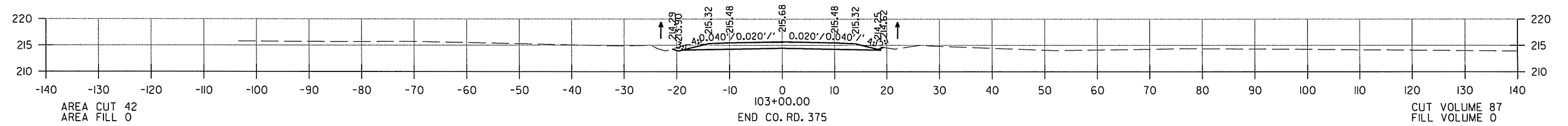
2 CROSS SECTIONS



CO. RD. 375
STA. 100+50.00 TO STA. 101+50.00

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.	CA0101		218	224

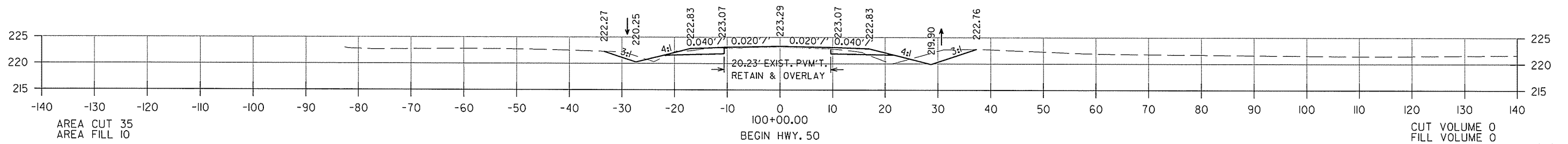
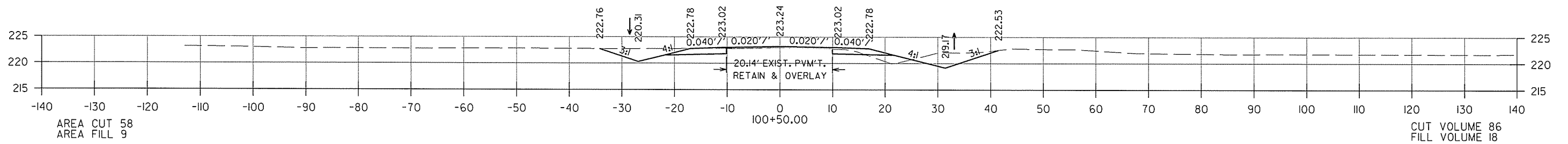
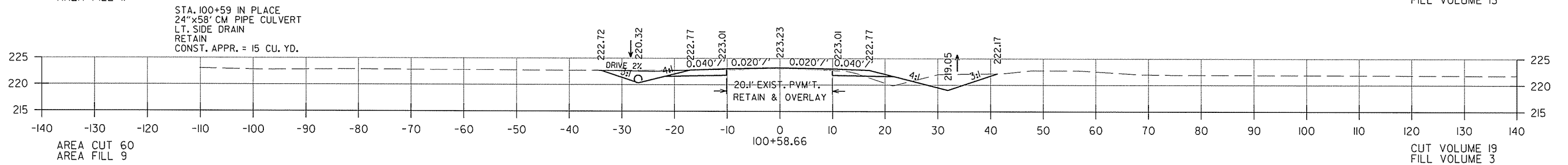
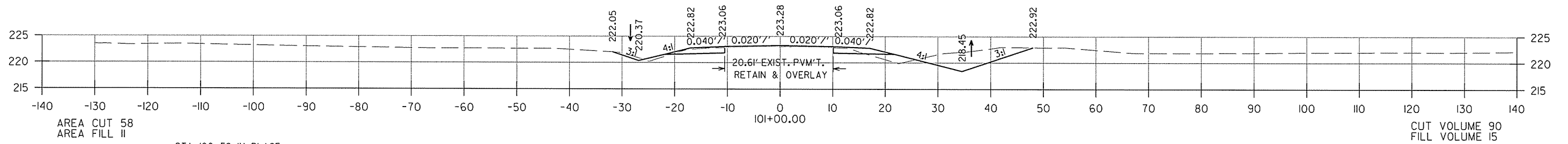
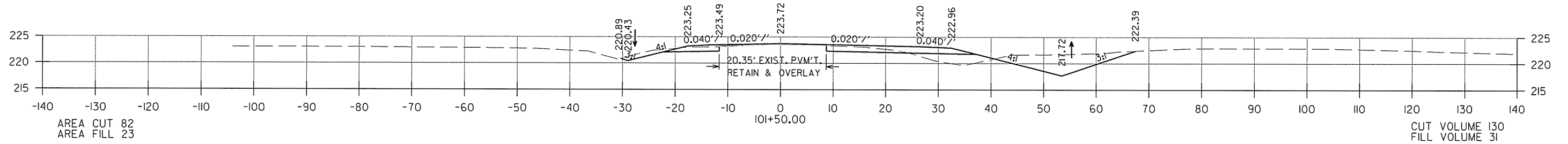
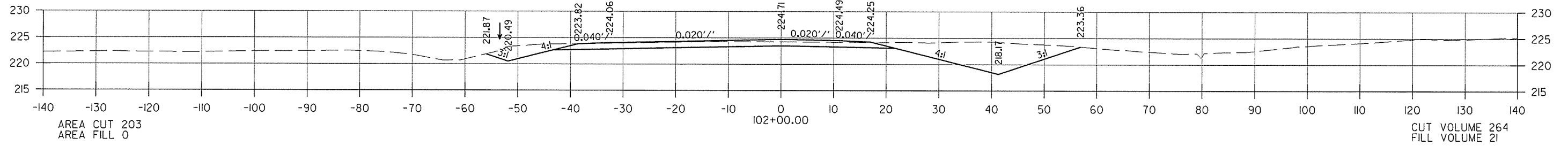
2 CROSS SECTIONS



CO. RD. 375
STA. 102+00.00 TO STA. 103+00.00

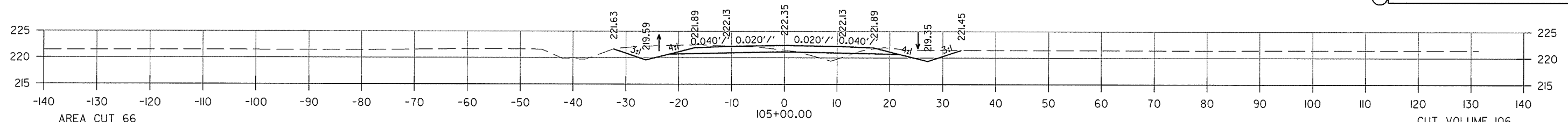
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		219	224

2 CROSS SECTIONS



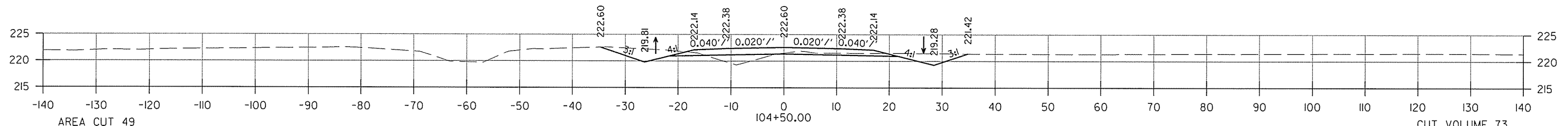
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0101		220	224

2 CROSS SECTIONS



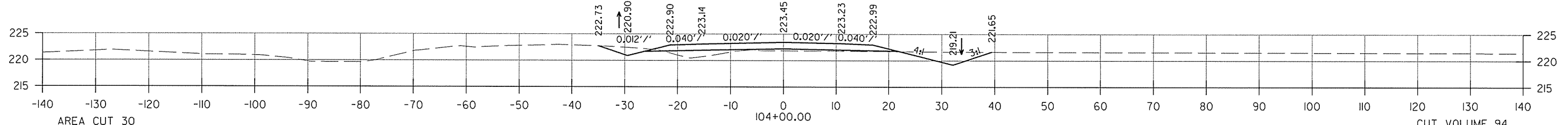
AREA CUT 66
AREA FILL 8

CUT VOLUME 106
FILL VOLUME 19



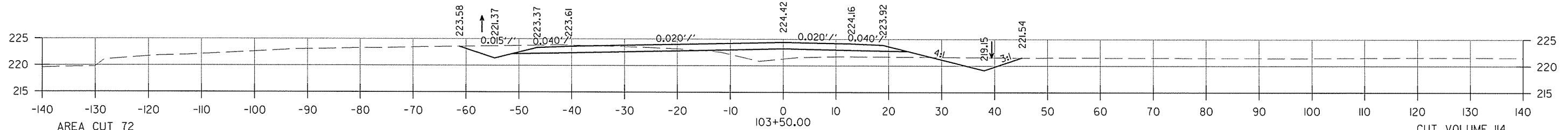
AREA CUT 49
AREA FILL 13

CUT VOLUME 73
FILL VOLUME 30



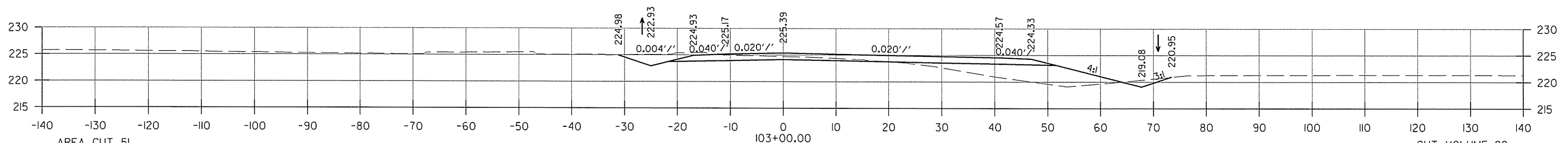
AREA CUT 30
AREA FILL 19

CUT VOLUME 94
FILL VOLUME 68



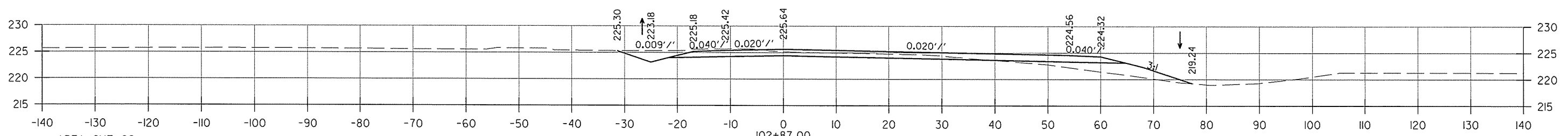
AREA CUT 72
AREA FILL 54

CUT VOLUME 114
FILL VOLUME 126



AREA CUT 51
AREA FILL 82

CUT VOLUME 28
FILL VOLUME 30



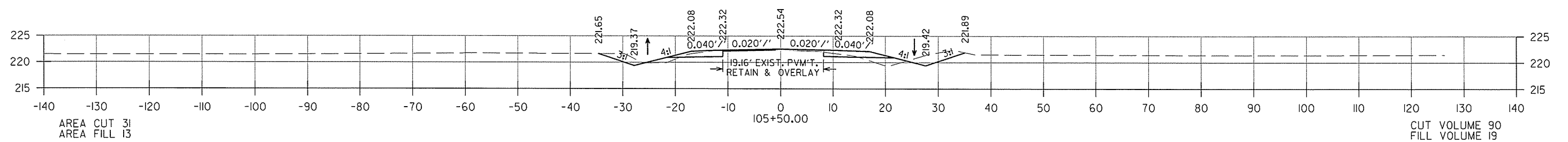
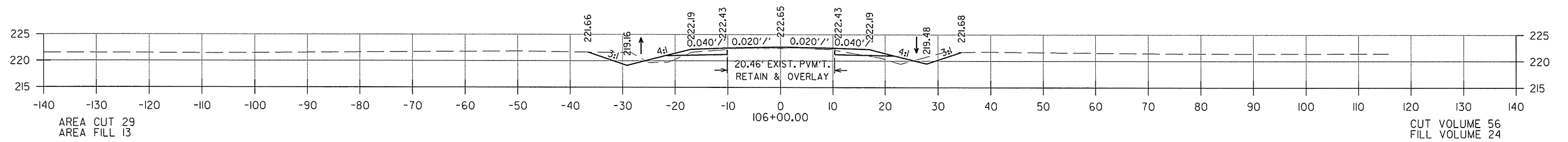
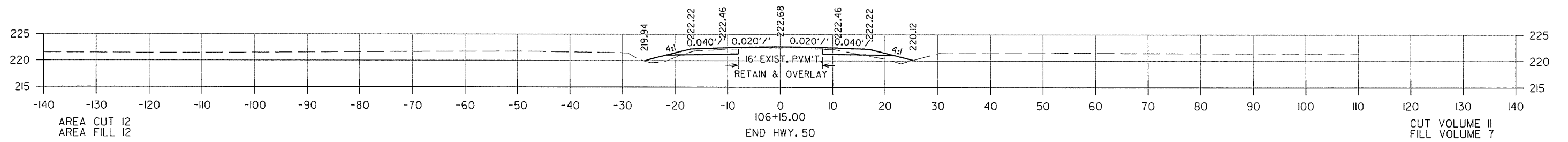
AREA CUT 66
AREA FILL 42

CUT VOLUME 0
FILL VOLUME 0

HWY. 50
STA. 102+87.00 TO STA. 105+00.00

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.	CAOIOI		221	224

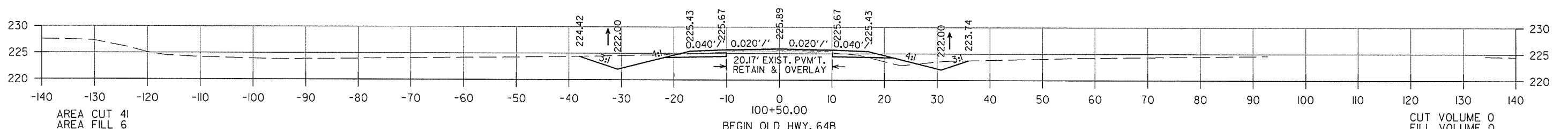
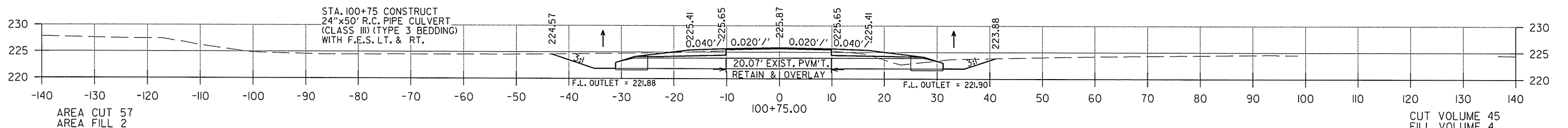
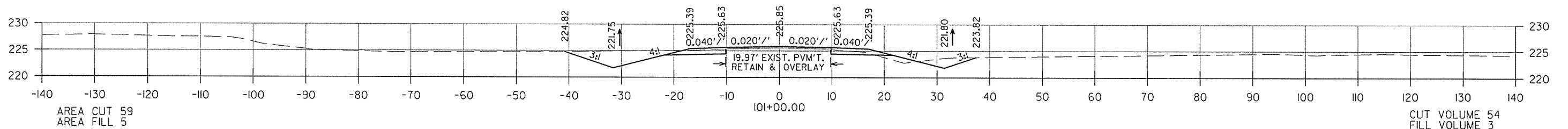
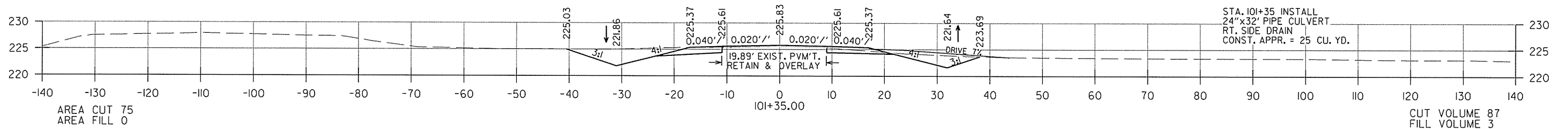
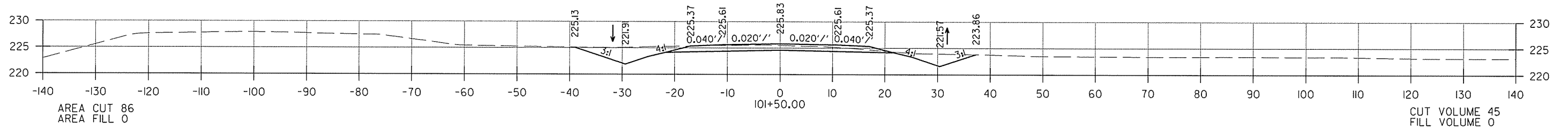
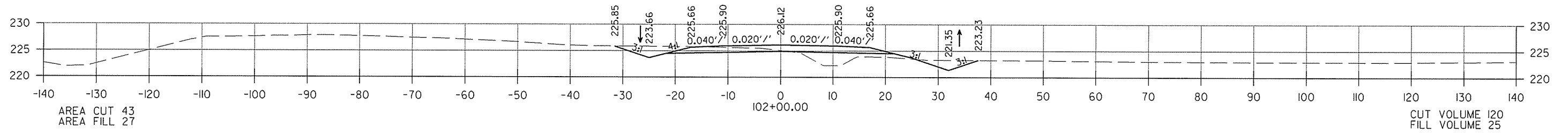
2 CROSS SECTIONS



HWY. 50
STA. 105+50.00 TO STA. 106+15.00

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.	CA0101		222	224

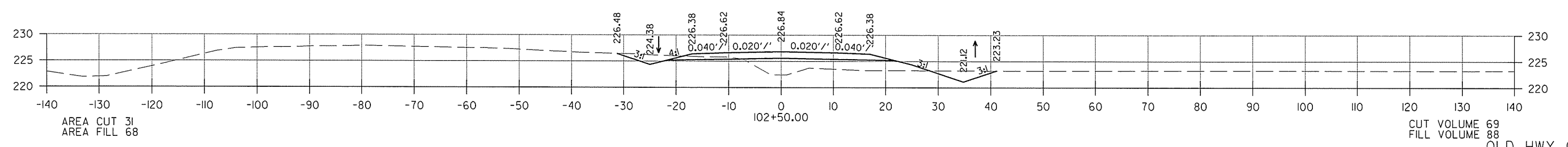
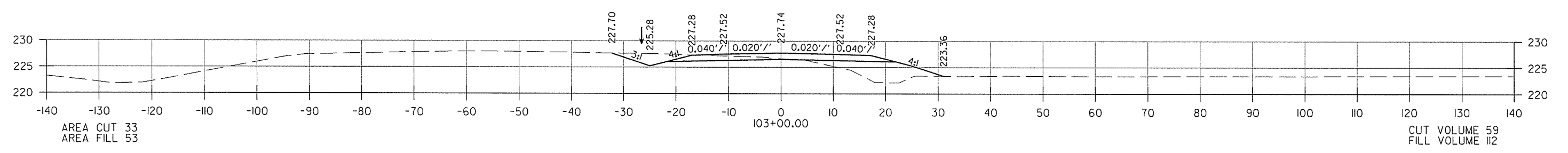
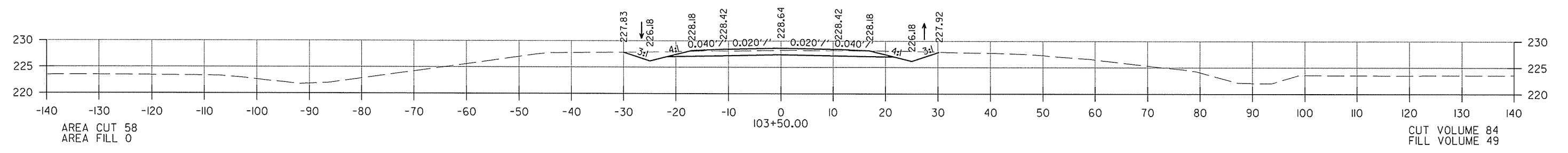
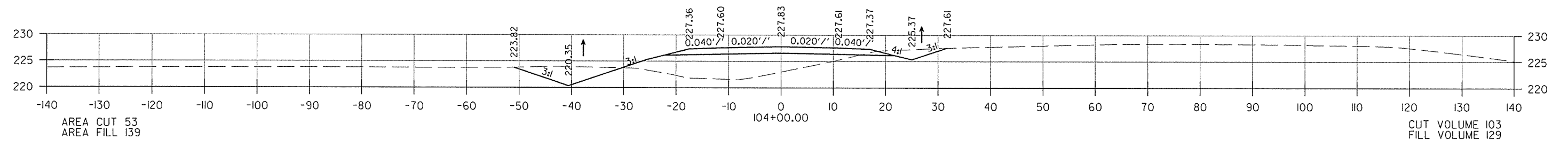
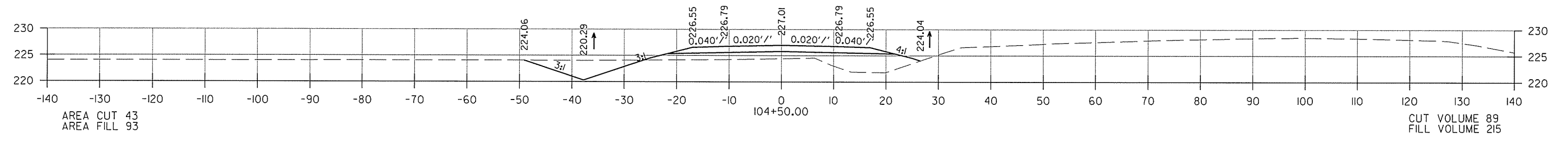
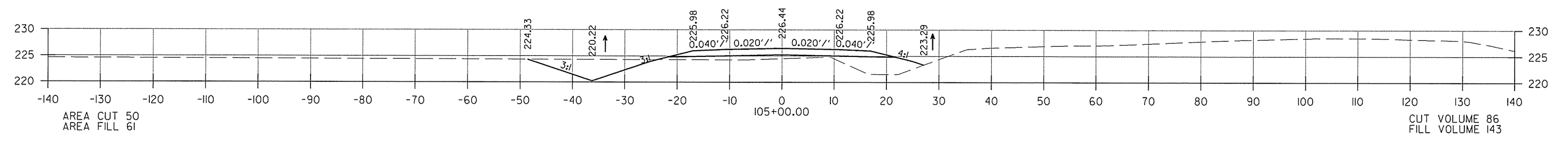
2 CROSS SECTIONS



OLD HWY. 64B
STA. 100+50.00 TO STA. 102+00.00

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.	CA0101		223	224

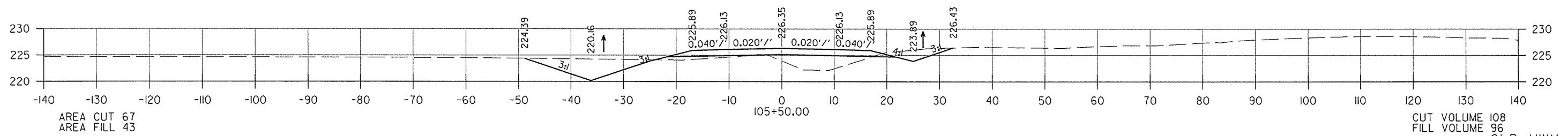
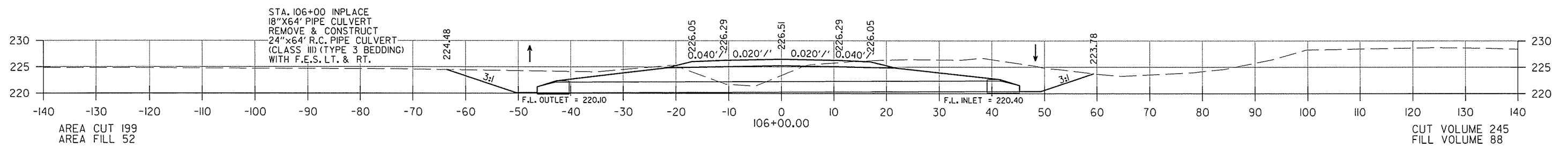
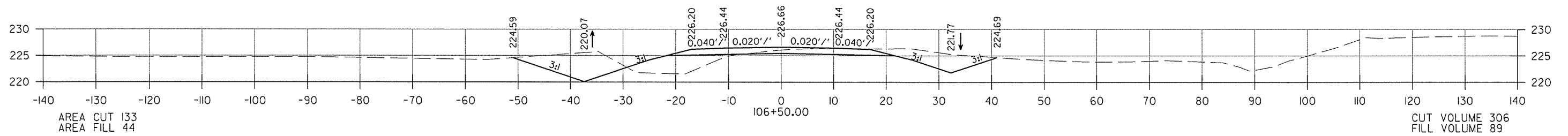
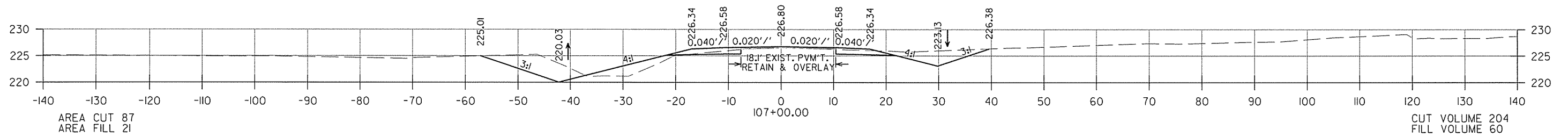
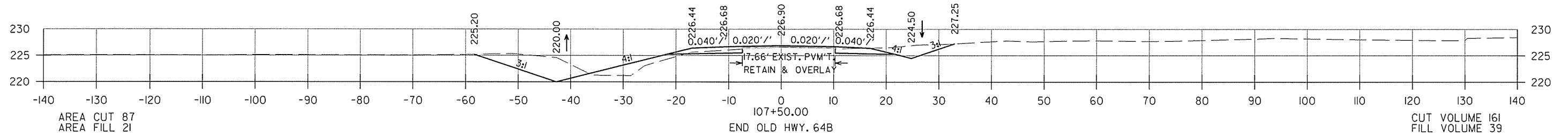
2 CROSS SECTIONS



OLD HWY. 64B
STA. 102+50.00 TO STA. 105+00.00

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.	CA0101	224	224	

② CROSS SECTIONS



OLD HWY. 64B
STA. 105+50.00 TO STA. 107+50.00

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